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GEOLOGICAL REPORT  
on the  
TAGETOCHLAIN LAKE PROPERTY  
OMINECA MINING DIVISION  
BRITISH COLUMBIA

for

DUAL RESOURCES LTD. (N.P.L.)

N.T.S. 93E

August 4, 1976  
Vancouver, B.C.

Thomas R. Tough, P.Eng.,  
Consulting Geologist

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MAP INDEX

LOCATION MAP  
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GEOLOGY

1" = 136 miles  
Bar Scale  
Bar Scale

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PART "A"

SUMMARY

The Tagetochlain Lake property consists of 17 located mineral claims comprising 289 units situated east of Tagetochlain Lake about 48 kilometers south-southwest of Houston, in the Omineca Mining Division, central British Columbia.

The logistics involved in all phases of exploration, development and production are excellent.

There are no records of previous work carried out on the property until recently when a reconnaissance soil sampling survey was carried out along roads which pass through the property.

The property appears to be underlain by rocks of the Hazelton Group which have been intruded by stocks and plugs of porphyritic diorite of the Coast Intrusions.

### CONCLUSIONS

The available geological information and government exploration records pertaining to the areas in the vicinity of the property suggests that the property is a favourable exploration target for a porphyry copper-type of deposit and warrants detailed exploration.

The property is in close proximity to that of Utah Mines Ltd adjoining to the west where drilling is currently being carried out on a porphyry copper deposit.

### RECOMMENDATIONS

It is recommended that a programme consisting of an induced polarization survey and a geochemical survey be undertaken in conjunction with geological mapping.

It is further recommended that Dual Resources Ltd (N.P.L.) allocate the sum of \$63,500.00 to implement and execute the recommended exploration programme.

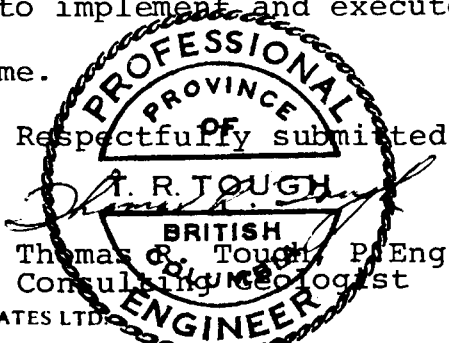
August 4, 1976  
Vancouver, B.C.

Respectfully submitted,

T. R. TOUGH

Thomas R. Tough, P.Eng.  
Consulting Geologist

T. R. TOUGH & ASSOCIATES LTD



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on the  
TAGETOCHLAIN LAKE PROPERTY  
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BRITISH COLUMBIA  
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PART "B"

INTRODUCTION

The following report is based upon information obtained by the writer from a study of a report on the property written by Willard D. Tompson, M. Sc. and Alan N. Campbell, Ph.D. July 7, 1976, from available government reports and the writer's personal experience in the area. The purpose of the study was to assess the potential of and to recommend an exploration programme on the property.

PROPERTY

The property consists of 17 located mineral claims comprised of 289 units. They are as follows:

<u>Claim Name</u>	<u>Unit</u>	<u>Record No.</u>	<u>Record Date</u>
Duck	20	267	May 6, 1976
Sheila	8	301	May 26, 1976
Mary-O	20	268	May 6, 1976
Mary-C	15	300	May 26, 1976
Mary-R	20	266	May 6, 1976
Joe	16	265	May 6, 1976
Mike	16	264	May 6, 1976
Peter	16	263	May 6, 1976
Aspen	20	262A	May 6, 1976
Dilys	20	186	Nov 10, 1975
Inn	20	296	May 26, 1976
Tom	4	234	Feb 11, 1976
Vali	20	297	May 26, 1976
Ross	18	295	May 26, 1976
Blain	20	345	July 12, 1976
Joey	20	346	July 12, 1976
Jackie	16	347	July 12, 1976

The claims cover an area which is geologically favourable as an exploration target for a porphyry copper deposit. The claims adjoin the property of Utah Mines Ltd to the south and east. Utah is presently drilling a porphyry copper deposit on their property.

OWNERSHIP

The claims are owned by Dual Resources Ltd. (NPL) of Vancouver, British Columbia.

LOCATION (53° - 128°N)

The claims are located 48 kilometers SSW of Houston, in the Omineca Mining Division in Central British Columbia.

ACCESS

The claims are accessible by highway and secondary road some 48 kilometers SSW from Houston, B.C.

TOPOGRAPHY

The claims cover an area of moderate relief with elevations ranging from 3,000 to 3,500 feet above sea level. Nadina Mountain, 10 kilometers to the north, reaches an elevation of 6970 feet.

WATER

The Nadina River, Tagetochlain Creek and their tributaries pass through the property and have sufficient flowage for all phases of exploration, development and domestic use.



### CLIMATE

The area experiences relatively cold winters with moderate snowfall, whereas the summer months are warm.

### POWER

Diesel electric power would be required for the initial phases of development and hydroelectric power would be available if future requirements warrant it.

### TRANSPORTATION

Rail services are available in Houston and good daily truck transportation would also be available.

### SUPPLIES

Most supplies would be available from Houston and Smithers. Locally unobtainable supplies would be procurable from major centres in the Province.

### HISTORY

There are no records of previous work having been carried out on the ground now covered by the claims. During the 1970's exploration has been carried on adjoining and nearby properties. Utah Mines Ltd is currently carrying out a drill programme on their adjoining property.

### GENERAL GEOLOGY

The following description of the regional geology is taken from a report written by Tompson and Campbell (July 7, 1976);

### REGIONAL GEOLOGY

"Regional geology of the map area was compiled from Duffell (1959) Church (1973) and Carter and Kirkham (open file). The oldest rocks are the middle Jurassic Hazelton group, an inter-layered series of volcanic and near shore, fine grained marine sedimentary rocks. Porphyritic diorite plugs intrude the Hazelton group. The plugs probably represent upper Jurassic and later Coast intrusions.

A non-conformity separates the Hazeltons and intrusives from the overlying Cretaceous to Oligocene Ootsa Lake group. These rocks are rhyolitic to basaltic volcanics with associated tuffs, breccias, minor conglomerates, sandstone and coal.

An unconformity separates the Ootsa Lake group from overlying but sparsely occurring tertiary basalts and tuffs. Finally, Pleistocene to recent till, gravel, sand, clay and alluvium unconformably overlies all other rocks.

Structurally, the rock units trend northwesterly as do small scale folds and anticlines in the Hazelton group. No faults have been mapped.

Three general topographic features are noted in the map area; the valley transecting the map area is filled with till and gravel, higher areas have a distinctive undulate weathering pattern typical of volcanics, and the porphyritic diorite intrusives stand out as domes and circular features wherever they occur. Outcrops occur in about ten percent of the map area.

Investigation of assessment records for claims in the map area revealed the existence of quartz monzonite porphyry to quartz diorite porphyry intrusives with related copper mineralization. These findings were the result of much more detailed geological work than is available in government publications."

#### LOCAL GEOLOGY

The property, although not yet geologically mapped, appears to be underlain by rocks of the Hazelton Group which have been intruded by stocks and plugs of porphyritic diorite of the Coast Intrusions. Much of the area is covered by Quaternary gravels.

### GEOPHYSICAL AND GEOCHEMICAL SURVEYS

There are no records of a geophysical survey having been carried out on the property.

A reconnaissance soil sampling survey was carried out along the roads that pass through the property. A total of 284 samples were collected and assayed for copper, molybdenum and silver. Only five samples ran greater than 100 ppm of copper, 17 ran greater than 0.1 ppm of silver, and 67 samples assayed greater than 1 ppm Molybdenum and ran as high as 15 ppm.

### EXPLORATION PROGRAMME

Geological mapping should be carried out in conjunction with an induced polarization and geochemical surveys in order to facilitate the interpretation of the surveys.

Contingent upon the results of the exploration programme a diamond drill programme should follow.

ESTIMATE OF COSTS OF EXPLORATION PROGRAMME

Linecutting, 50 line miles @ \$150/line mile	\$ 7,500.00
Induced Polarization Survey 50 line miles @ \$500/line mile	25,000.00
Geochemical Survey, 2000 samples @ \$5/sample	10,000.00
Geological Mapping	5,000.00
Engineering and Supervision	6,000.00
Travel and Living Expenses	3,000.00
Contingencies	7,000.00
	<hr/>
	\$63,500.00
	<hr/> <hr/>

It is estimated that the above programme should take approximately three months to complete.

Respectfully submitted,

*T. R. TOUGH*  
 Thomas R. Tough, .Eng.,  
 Consulting Geologist

August 4, 1976

Vancouver, B.C.

## CERTIFICATE

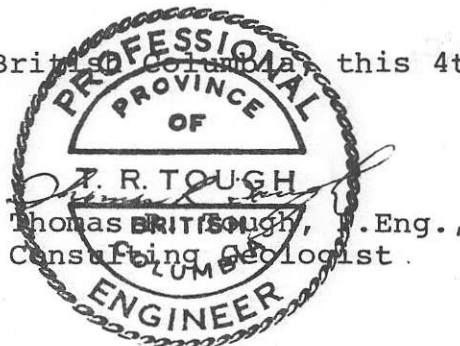
I, Thomas R. Tough, of the City of Richmond, in the Province of British Columbia, do hereby certify:

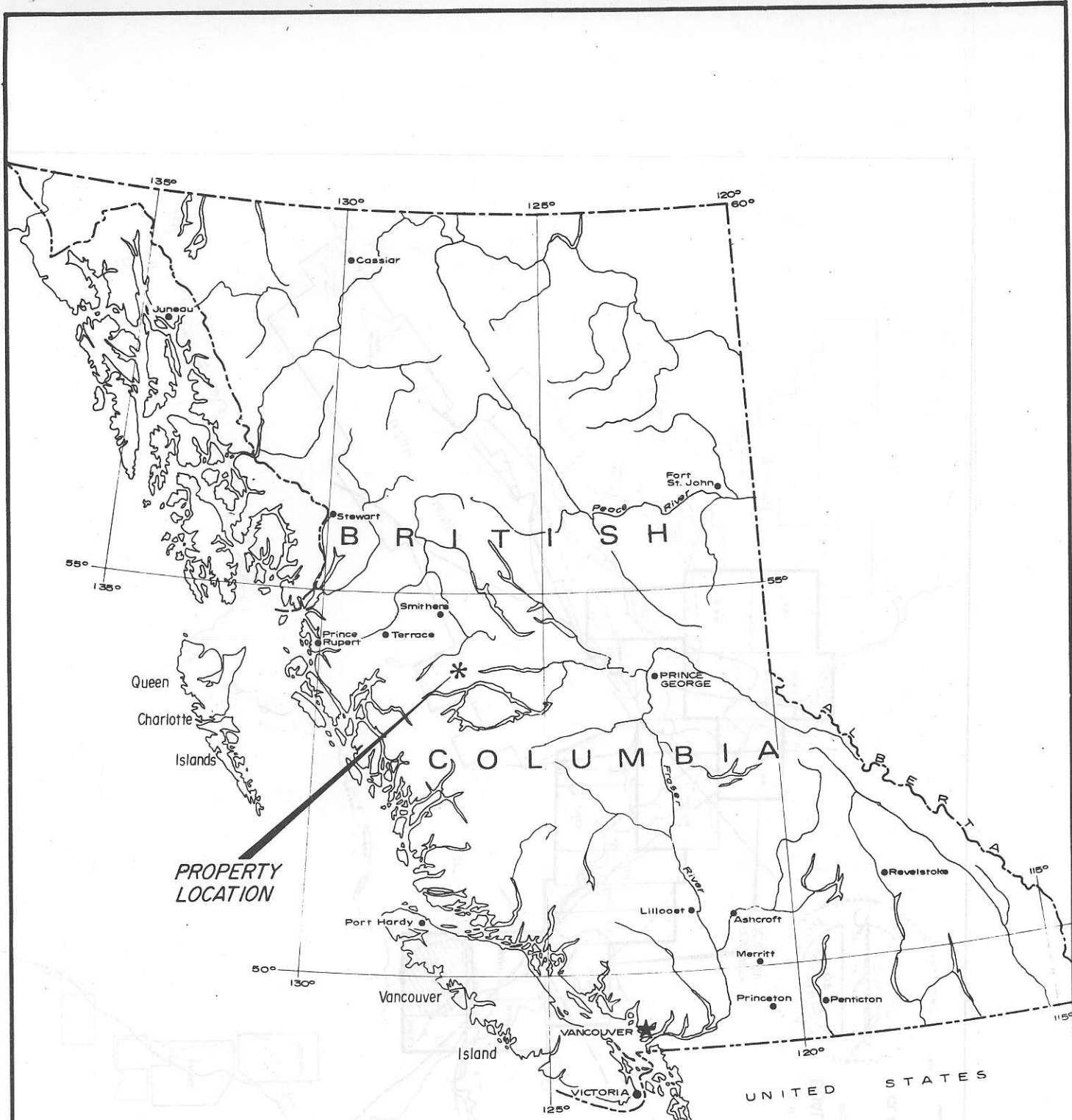
That I am a Consulting Geologist with offices located at 500-1075 Melville Street, Vancouver, British Columbia.

I further certify that:

1. I am a graduate of the University of British Columbia (1965) and hold a B.Sc., degree in Geology.
2. I have been practising my profession for the past eleven years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. The information for this report was obtained from a private report, and pertinent government publications and from the writer's personal knowledge and experience in the area.
5. I have no direct or indirect interest whatsoever in the property described herein, nor in the securities of Dual Resources Ltd (NPL) and do not expect to receive any interest therein.

DATED at Vancouver, British Columbia, this 4th day of August, 1976.





**PROPERTY  
LOCATION**

T. R. TOUGH & ASSOCIATES LTD.  
*Thomas R. Tough*  
**DUAL RESOURCES LTD.**  
**LOCATION MAP**







**LEGEND**

**1** QUATERNARY  
PLEISTOCENE & RECENT, Till, gravel, sand, clay, alluvium

unconformity

**2** TERTIARY  
OLIGOCENE OR LATER, Basalt, Tuff

unconformity

**3** CRETACEOUS TO OLIGOCENE  
UPPER CRETACEOUS TO OLIGOCENE, OOTSA LAKE GROUP,  
Rhyolite, dacite, andesite, basalt, associated tuffs & breccias,  
minor conglomerates, sandstone & coal.

nonconformity

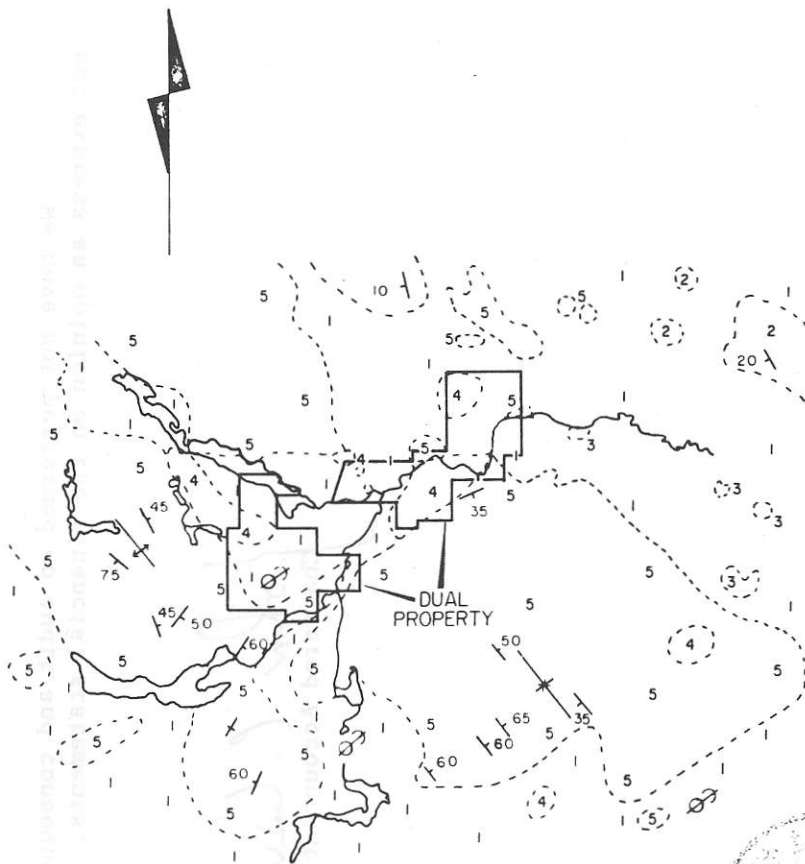
**4** JURASSIC (?) AND LATER  
JURASSIC (?) AND LATER, COAST INTRUSION,  
Porphyritic diorite.

intrusive  
contact

**5** JURASSIC  
MIDDLE JURASSIC (MAINLY), HAZELTON GROUP,  
Brecci, tuff, andesite, dacite, rhyolite, basalt, argelite,  
greywacke, chert, conglomerate, minor limestone

FIGURE 4  
GEOLOGY OF  
NADINA RIVER TAGETOCHLAIN LAKE AREA

Composite geological map after Duffell (1958), Church (1973) and  
Carter & Kirkham (open file)



T. R. TOUGH & ASSOCIATES LTD.

DUAL RESOURCES LTD.

JOHN C. OSWALD & CO.

Chartered Accountants

Vancouver, Canada

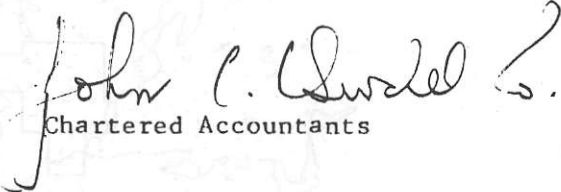
July 23, 1976

ACCOUNTANTS' COMMENTS

To the Shareholders of  
Dual Resources Ltd.

We have prepared the accompanying balance sheet and the statements of deficit, deferred exploration and other expenditures and changes in financial position for the four months ended June 30, 1976 from the records of Dual Resources Ltd. and from information given to us.

We have not performed an audit and consequently do not express an opinion on the financial statements.

  
Chartered Accountants

programme set out in the report of the Tagetochlain Lake Property in the Omineca Mining Division of British Columbia, by Thomas R. Tough, P. Eng., consulting geologist, and dated August 4, 1976, a copy of which is attached hereto and forms a part of this Statement of Material Facts.

- (c) The balance of the proceeds will be used for general corporate purposes.

In the event all of the shares are not sold, priority will be given to the payment of \$35,000.00 to Tom Rolston.

ITEM 5 THE FULL NAME, HOME ADDRESS, AND CHIEF OCCUPATION, THE NUMBER OF SHARES OF THE COMPANY BENEFICIALLY OWNED, DIRECTLY OR INDIRECTLY, BY EACH SENIOR OFFICER OR DIRECTOR OF THE COMPANY, AND, IF EMPLOYED DURING THE PAST FIVE YEARS, THE NAME OF EACH EMPLOYER

<u>Full Name and Address</u>	<u>Chief Occupation and Employer</u>	<u>Number of Shares</u>
Dennis Vigouret 5316 Fleming Street Vancouver, B. C.	Securities Salesman, Davidson & Co. Ltd.	425,000
Ross Tikinoff 5151 Clarendon Street Vancouver, B. C.	Businessman, Canadian Kenworth Co.	425,000
Victor Gordon Haggart 5328 Eglinton Street Burnaby, B. C.	Systems Engineer, I. B. M.	1

ITEM 6 PARTICULARS OF THE CORPORATE STANDING OF THE COMPANY

The Company was incorporated in British Columbia on March 5, 1973, by Memorandum and Articles.

The date to which the last annual report was filed with the Registrar of Companies is March 5, 1976. All filings required to be made by the Company under the Securities Act

and the Companies Act of British Columbia are up to date.

The date of the latest, audited financial statements placed before the last annual general meeting is February 29, 1976. The annual general meeting was held on May 21, 1976.

The Company is engaged in the business of acquisition and exploration of natural resource properties.

ITEM 7 THE AUTHORIZED AND ISSUED SHARE CAPITAL OF THE COMPANY

The authorized capital of the Company consists of 3,000,000 shares without par value, of which 1,375,005 have been issued as fully paid. There are no conversion rights, no special liquidation rights, no pre-emptory rights, nor subscription rights attached to the shares of the Company.

ITEM 8 THE PRICES AT WHICH SECURITIES OF THE COMPANY HAVE BEEN ISSUED DURING THE PAST YEAR

During the past year 100,500 shares of the Company have been issued at 30¢ per share, and 174,500 shares of the Company have been issued at 40¢ per share.

ITEM 9 PARTICULARS OF ANY BONDS, DEBENTURES, NOTES, MORTGAGES, CHARGES, LIENS OR HYPOTHECATIONS OF THE COMPANY

The Company has no debt obligations outstanding.

ITEM 10 PARTICULARS OF IMPORTANT PROPERTIES PRESENTLY OWNED, LEASED, HELD UNDER OPTION, OR OPERATED BY THE COMPANY OR ANY SUBSIDIARY THEREOF, OR PROPOSED TO BE OWNED, LEASED, HELD UNDER OPTION, OR OPERATED BY THE COMPANY OR ANY SUBSIDIARY THEREOF

- (a) The Company owns a one-hundred-percent interest in the following located mineral claims situated in the Watson Lake Mining District of the Yukon