

NTS - 92E 8E

Report

on the

521079

**Moly and Lead Mineral Claims**

(a total of 40 units)

Situated on

Flores Island

20 air km northwest of

TOFINO

off the West Coast of Vancouver Island

Alberni Mining Division

British Columbia

on behalf of

**TOTAL RESOURCES LTD.**

Vancouver, B. C.

Report by —

D. R. Cochrane, P. Eng.,

March 1, 1980,

Delta, B. C.



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Geotechnical Consulting / Exploration Services

geology  
geophysics  
geochemistry

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**A. INTRODUCTION**

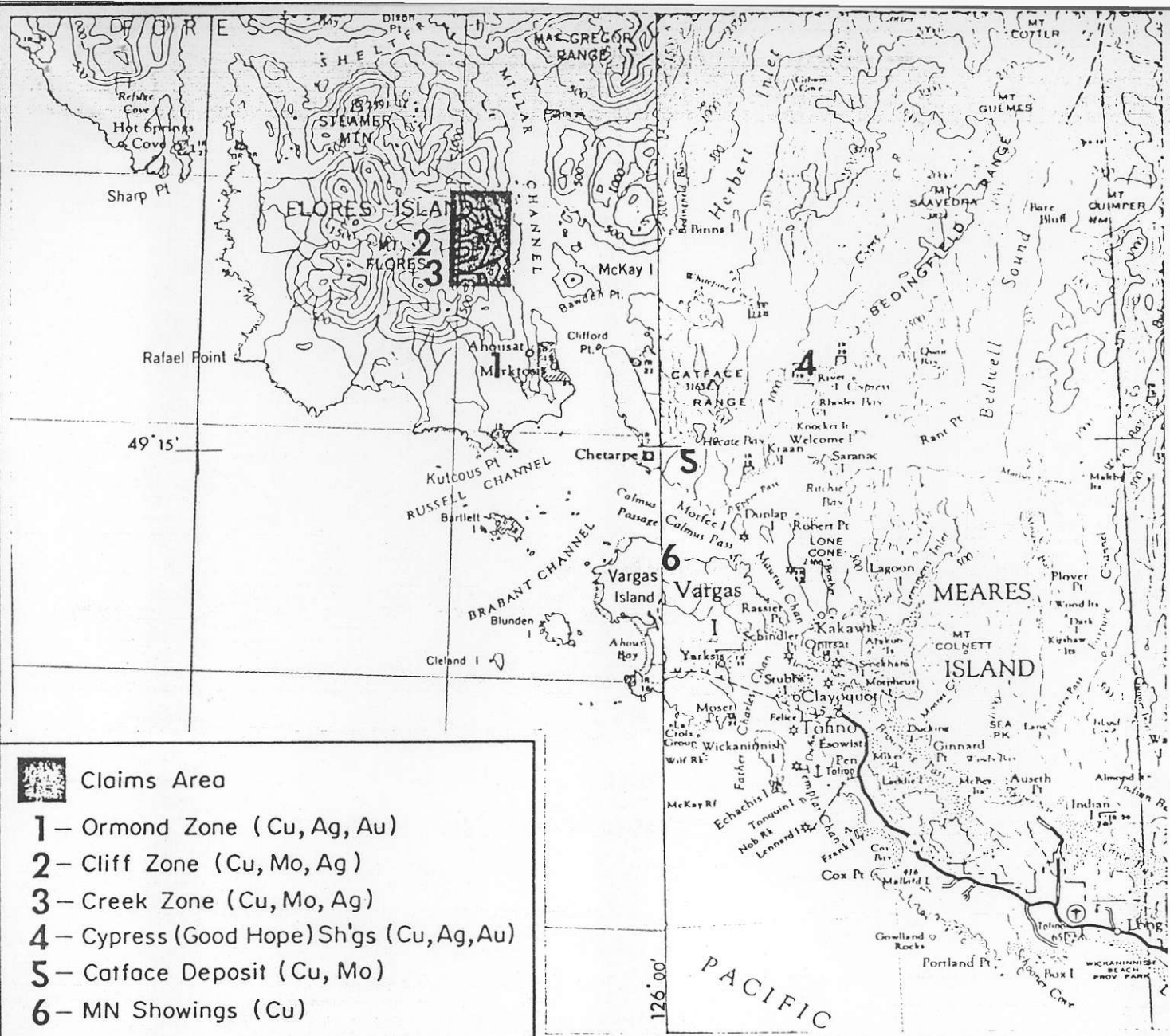
On April 2, 1979, the author inspected mineral showings on Flores Island, located just north of Tofino, off the west coast of Vancouver Island. Subsequent to the field examination a report was prepared and dated April 30, 1979.

Early this year the author was engaged by Total Resources Ltd., to review available information on claims adjacent to the showings.

This report describes the setting and previous work done and contains recommendations for additional exploration work and an estimate of the cost of same.

The author's certificate is appended.





**Claims Area**

- 1 - Ormond Zone (Cu, Ag, Au)
- 2 - Cliff Zone (Cu, Mo, Ag)
- 3 - Creek Zone (Cu, Mo, Ag)
- 4 - Cypress (Good Hope) Sh'gs (Cu, Ag, Au)
- 5 - Catface Deposit (Cu, Mo)
- 6 - MN Showings (Cu)



**TOTAL RESOURCES LTD.**

Moly & Lead Claims                      Flores Island  
near Tofino, British Columbia.                      92E/8E.

Figure 1  
Location Map

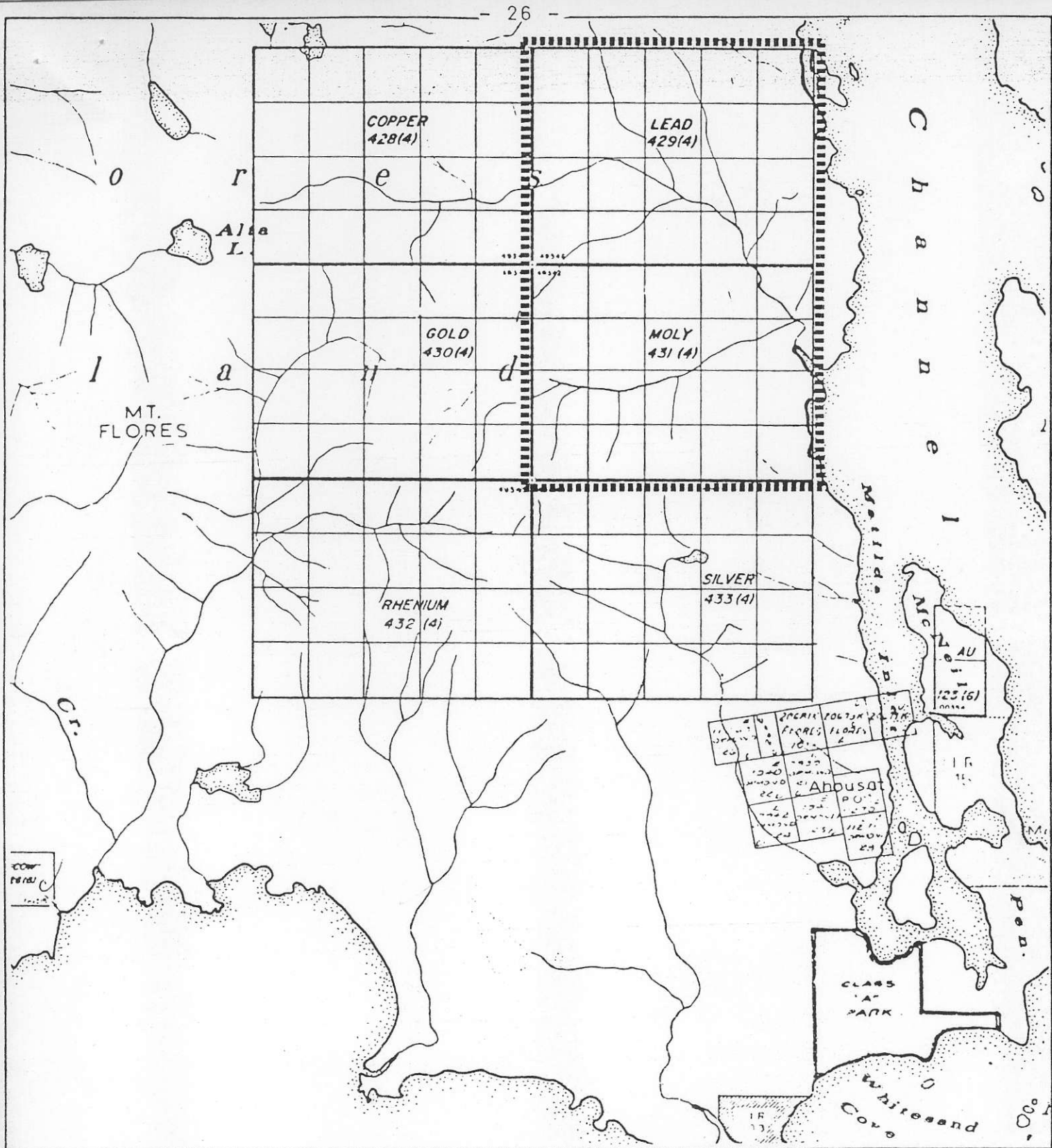
Scale : 1 to 250,000 or 1 inch equals approx. 4 miles.



**B. LOCATION AND ACCESS**

The Moly and Lead mineral claims are located on Flores Island just off the west coast of Vancouver Island, in Southwestern British Columbia. Normal access is via highway No. 4 from Port Alberni to Tofino, a distance of approximately 120 road km. Tofino is a small coastal fishing and resort town with food stores, restaurants, a hotel and motel. Access from Tofino is by either boat, or fixed or rotary winged aircraft northerly to the Island, a distance of 20 kilometres. The claims are centered some four (4) kilometres northwest of the native settlement of Marktosis, (Ahousat) located on the southeast corner of Flores Island.

The N.T.S. code for the area is 92E/8 (east half).



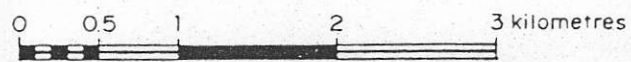
**TOTAL RESOURCES LTD.**

Moly & Lead Claims      Flores Island  
 near Tofino, British Columbia      92E/8E.

Figure 2

Claims Map

Scale 1:50,000



B.A.C. Feb. '80

**Cochrane Consultants Limited**  
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**C. PROPERTY INFORMATION**

The Moly and Lead mineral claims consist of twenty (20) units each (a total of forty units) covering an area 8 units north (4 km) and 5 units west ( 2 1/2 km). They were located by Mr. Jim McLeod of Vancouver, B. C., late in March in 1979. The author understands that the claims are currently being transferred to Total Resources Ltd., of Vancouver, B. C.

The record number of the Lead Mineral claim is 429 and that of the Moly Mineral claim is 431.

The claims are located in the Alberni Mining Division and are plotted on B. C. Dept. of Mines Mineral Titles Map 92E/8E.

**D. HISTORY**

The B. C. Minister of Mines Annual Report for 1916 contains a rather lengthy description of exploration on Flores Island. Apparently work dates back to 1902 when a prospector named James Beck discovered gossan outcrops on the beach near the south-east corner of the island. Additional prospecting over the years led to the discovery of iron and copper occurrences on the island with associated gold and silver values. Eventually sufficient work was completed by 1910, to allow the crown granting of the Ormond Group. (Minister of Mines reports for 1910, 1917, 1919, 1928 and 1930). The Ormond property lies a few kilometres south of the claims under consideration.

Exploration activity in the area increased substantially in the late 1950's and early 1960's and was aimed predominantly at iron and iron-copper skarn types of deposits. This eventually led to developments such as Brynor Mine, and the further development of CATFACE, located a few kilometres south-east of Flores Island. Late in the 60's and





early 70's Falconbridge Nickel Mines Ltd., conducted work on the mineral claims under consideration and work included geochemical and geological surveys. The claims came open in January, 1979, and were staked by Mr. McLeod.

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## E. GENERAL SETTING

Flores Island lies immediately east of Vancouver Island and the Island Mountain Range. The Island is approximately 12 km in diameter and the highest peak is Steamer Mountain, with an elevation of close to 790 metres above sea level.

The local relief is somewhat varied and ranges from flat sandy beaches to sheer rock cliffs such as those on the adjacent Gold Claim to the east. Topography on the claims, however, is moderate.

The climate is wet coastal and the vegetation lush and in places quite thick.

The 1916 Minister of Mines Report contains a good description of the island and excerpts from this report are reproduced below.

"On the north-east and north-west sides of



Flores Island, including Steamer Cove and Rocky Passage and south to within two miles and a half from the mouth of Matilda Creek, fine grained granites are met with. Thence southward, including Matilda Creek and the shore past Ahousat Village, on to White Sand bay, only greenstones of the Vancouver series are exposed."

"Flores Island has an area of about thirty-six square miles and is on the west coast of Vancouver Island, on the north side of Clayoquot sound. It is separated from Vancouver Island by the fiord called Sidney inlet. The west side of Flores Island is open to the Pacific ocean and has no harbours: but on the south-east side Matilda Creek affords a safe deep-water shelter and good anchorage."

"Flores Island is mountainous and thickly wooded, the shores are steep, rugged cliffs, except for a short distance in front of the Indian village of Ahousat, where there is a white sandy beach."



## F. DISCUSSION

The Moly and Lead claims lie between the Ormond Group (to the south) and the Gold claim (to the west). The Ormond group is described in the 1928 Minister of Mines Report (pg 294):

"The prevailing country-rocks are the volcanics of the Vancouver series, the mineralization occurring in a shear-zone apparently about 25 feet wide, in which are bands of light-coloured feldspathic rock and parallel hornblende dykes. The shear has had a number of open-cuts put across it at various intervals for a few hundred feet, showing, in general, bands of associated pyrite, chalcopyrite, and pyrrhotite; and disseminated pyrite through the hornblende dykes. The pyrite-chalcopyrite veins are up to 6 feet in width and certainly warrant some deeper development. A sample of ore taken to ascertain the gold and silver contents, and not as an average sample, assayed: \* Gold, \$1.60 to the ton; copper, 8.8 per cent." (\* Gold at \$20.67 per oz.)



"On the south side of the hill there is an excellent opportunity for gaining depth by drifting on the vein. The property is ideally situated and altogether has favourable possibilities."

To the west of the claims, two mineralized zones are present, the "Cliff" zone and the "Creek" zone.

The Cliff zone lies close to the common boundary of the Gold and Copper claims and mineralization is exposed along a series of rock bluffs close to the 600 metre level. Metallic mineralization consists of chalcopyrite, magnetite, pyrite, pyrrhotite, bornite, native copper and minor molybdenite in an altered, brecciated monzonite. The best section which is presently exposed is approximately 30 metres wide along the base of a cliff some 25 metres in height. The best grab sample collected by the author ran 2.84% copper, 0.17 troy ounces of silver, and 0.008 ounces of gold per ton.



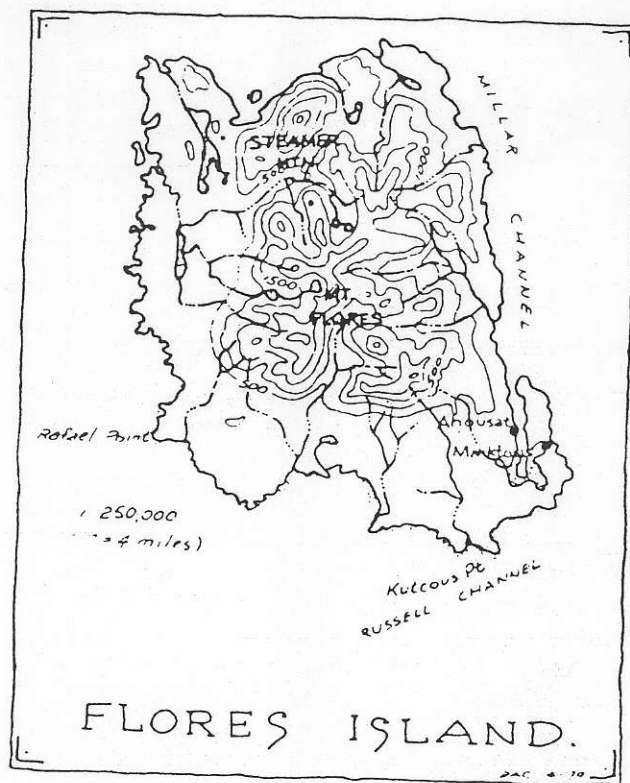
The Creek zone on the Gold claim is not well exposed, however mineralized float similar to the Cliff zone is observable in the creek bed.

In 1969 Falconbridge Nickel Mines conducted a reconnaissance type geochemical program in the area, in general, and work covered the south portion of the Moly claim. Anomalous amounts of copper were found in several small streams draining the Moly claim. The samples were analyzed for copper and values ranged to 93 ppm copper. To the author's knowledge, the north section of the Moly claim, and most sections of the Lead claim have not been investigated to date.

The Moly and Lead claims are covered with an extensive cover of drift and therefore indirect methods of exploration, such as geophysical and geochemical surveys will have to be heavily relied upon to locate mineralized zones. However, the author believes the claims should be explored by these methods, in view of the



geological setting, anomalous values encountered by previous workers, and in view of the current price of gold, silver, copper, and molybdenum.



**G. RECOMMENDATIONS AND COST ESTIMATE**

In view of the foregoing, the author recommends a reconnaissance type, integrated exploration program on the Moly and Lead claims.

The following lists recommended work and estimates the cost of same:

1. Establish camp and radio communications ..... \$ 5,000.00
  
2. Reconnaissance type ground control grid over claims under consideration (blazed, flagged, chain and compass lines):  
55 line km at \$100/km ..... \$ 5,500.00
  
3. Ground magnetometer and self-potential survey over grid area:  
55 line km at \$110/km ..... \$ 6,050.00

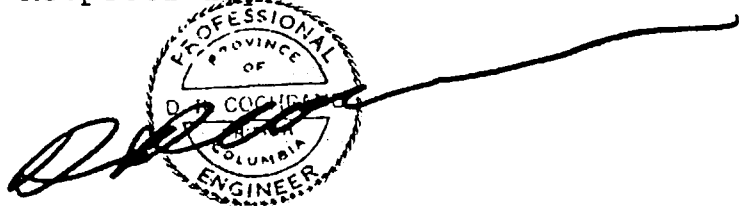
Cont'd...





4.	Geochemical orientation work followed by geochemical survey over grid area .....	\$ 12,500.00
5.	Geological mapping and sampling .....	\$ 7,000.00
6.	Transportation and communications	\$ 4,000.00
7.	Supervision .....	\$ 5,000.00
8.	Contingencies at 10% of sub- total of \$45,050.00.....	\$ 4,505.00
	Total .....	\$ 49,555.00
	Say .....	\$ 50,000.00

Respectfully submitted



D. R. Cochrane, P. Eng.,

March 1, 1980,

Delta, B. C.




APPENDIX I

CERTIFICATE

I, Donald Robert Cochrane, of the Municipality of Delta, British Columbia, do hereby certify that:

1. I am a consulting geological engineer with an office at 4882 Delta Street, Delta, B. C.
2. I am a graduate of the University of Toronto (1962) with a degree in Applied Geology (B.A.Sc.) and a graduate of Queen's University (1965) with a Master of Science Degree in Geological Sciences (Engineering).
3. I have practiced my profession continuously since graduation while being employed by such companies as Noranda Exploration Co. Ltd., Quebec Cartier Mines, and Meridian Explorations Syndicate. I have been in private independent practice since 1969.
4. I have no interest, either direct or indirect in the properties or securities of Total Resources Ltd., nor do I expect to acquire any such interest.
5. I am a member in good standing of the Association of Professional Engineers (A.P.E.) of the Province of British Columbia, and also a member of the A.P.E. in the Province of Ontario, Saskatchewan, Alberta and the Yukon Territories.

A circular stamp from the Professional Engineers Association of the Province of British Columbia. The stamp contains the text "PROFESSIONAL ENGINEERS OF THE PROVINCE OF BRITISH COLUMBIA". A handwritten signature, "D. R. Cochrane", is written across the stamp.

D. R. Cochrane, P. Eng.,  
March 1, 1980,  
Delta, B. C.



APPENDIX II

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