

THUNDER VALLEY MINES LTD. (N.P.L.)

CATS EYE, HOT AND MONICA CLAIMS

CYPRESS BAY, VANCOUVER ISLAND

ALBERNI MINING DIVISION

BRITISH COLUMBIA

92 F / 5W

3444

20 OCTOBER 1971

THUNDER VALLEY MINES LTD. (N.P.L.)

CATS EYE, HOT AND MONICA CLAIMS  
CYPRESS BAY, VANCOUVER ISLAND  
ALBERNI MINING DIVISION  
BRITISH COLUMBIA

CONTENTS

	<u>Page</u>
1.0 PROPERTY .....	1
2.0 LOCATION .....	2
3.0 ACCESSIBILITY .....	2
4.0 DESCRIPTION .....	2
5.0 CLIMATE .....	3
6.0 PHYSIOGRAPHY .....	3
7.0 LOCAL RESOURCES .....	4
8.0 GEOLOGY .....	4
9.0 EXPLORATION WORK .....	5
10.0 GEOPHYSICAL SURVEYS .....	5
11.0 MINERAL ZONES .....	7
12.0 ORE RESERVES AND ECONOMICS OF PRODUCTION .....	7
13.0 OPINION .....	7
14.0 RECOMMENDATIONS .....	8

### APPENDICES

- ANNEX: A Excerpts from British Columbia Minister of Mines Reports: 1899, 1901 and 1903.
- ANNEX: B Assay Certificate No. 3320, dated 27th September 1971, Crest Laboratories (BC) Ltd., Vancouver, British Columbia.
- ANNEX: C Details: Ronka EM-16 Electromagnetic Instrument.

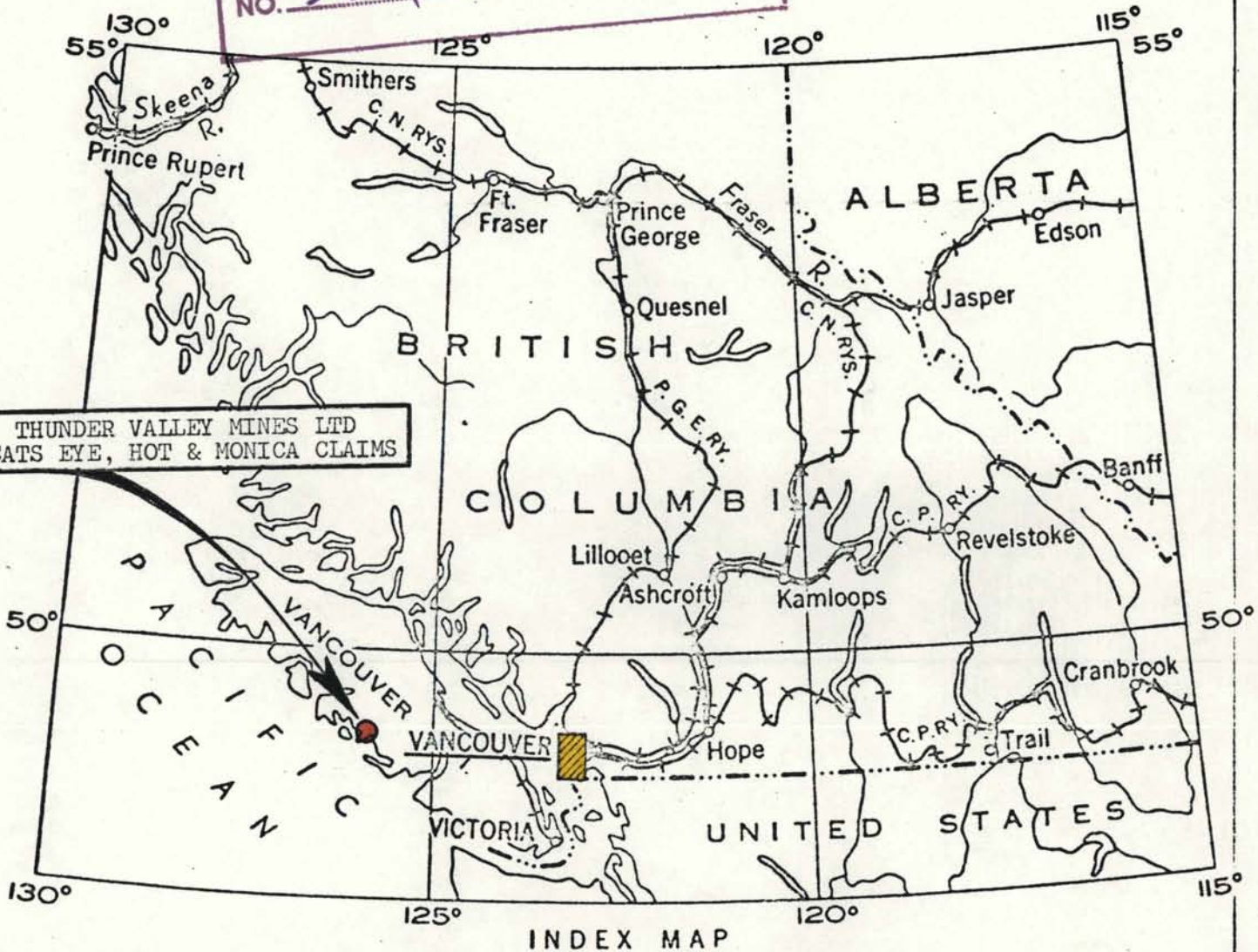
### ILLUSTRATIONS

- 1 Figure: 1 Frontisipiece, General Location
- 2 Figure: 2 Cats Eye, Hot & Monica Claims, General Location
- 3 Figure: 3 Cats Eye, Hot & Monica Claims, Claims Location
- 4 Figure: 4 Cats Eye, Hot & Monica Claims, Access and Location
- 5 Figure: 5 Aerial Photograph Showing Traverses, Anomalous Areas and Geology
- 6 Figure: 6 Cats Eye, Hot & Monica Claims, Topography
- 7 Figure: 7 Cats Eye, Hot & Monica Claims, Nautical Map
- 8 Figure: 8 Cats Eye, Hot & Monica Claims, Regional Geology
- 9 Figure: 9 Cats Eye, Hot & Monica Claims, Geophysical-Geochemical-Geological Profiles

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. 3444

MAP # 1



LOCATION

THUNDER VALLEY MINES LTD. (NPL)  
CATSEYE, HOT & MONICA CLAIMS  
CYPRESS BAY, VANCOUVER ISLAND  
ALBERNI MINING DIVISION  
BRITISH COLUMBIA

WEYMARK ENGINEERING LTD.

*Consulting Engineers*

3310 WESTMOUNT ROAD  
WEST VANCOUVER, B.C.  
CANADA

1.  
TELEPHONE  
922-1536

20 October 1971

Thunder Valley Mines Ltd. (N.P.L.),  
Suite 315, 543 Granville Street,  
VANCOUVER, British Columbia.

Gentlemen,

RE: CATS EYE, HOT AND MONICA CLAIMS  
CYPRESS BAY, VANCOUVER ISLAND  
ALBERNI MINING DIVISION  
BRITISH COLUMBIA

I am pleased to submit for your information this Report on the results of my examination of the Claims Area, of the EM Geophysical and Geological Surveys conducted during the week 13-18 September 1971, combined with my review of the available information relating to the CATS EYE, HOT and MONICA Claims, Cypress Bay, Vancouver Island, Alberni Mining Division, British Columbia.

Reference is to a previous report relating to the claims property - "Geological Report on the Cats Eye 3-20 inclusive and 23, Monica 1-10 inclusive and Hot 1-14 inclusive. Tofino, B.C., Alberni Mining Division", dated July 1971, by F. C. Tomlinson, P.Eng., Consulting Geologist.

1.0 PROPERTY:

The CATS EYE, HOT and MONICA Claims Group of Thunder Valley Mines Ltd. (N.P.L.) consists of 43 located mineral claims, namely CATS EYE 3-20 and 23, Record Nos: 17167-17184 and 17185, HOT 1-14, Record Nos: 12960-12973 and MONICA 1-10, Record Nos: 17531-17540. They are in good standing until 8th December 1971.

The reference Mineral Claims Map of the British Columbia Department of Mines is #92.F/5W. Reference is to Figures: 1, 2 and 3.

No information is available as to the conformity of the staking relative to lines, posts and tags to the requirements of the Mineral Act of the Province of British Columbia. The indicated mineral zones are located within the presently defined boundaries of the Claims Group, see Figure: 5.

There are no structures or equipment on the property.

THUNDER VALLEY MINES: CATS EYE, HOT & MONICA CLAIMS, ALBERNI MINING DIVISION  
20 OCTOBER 1971

2.0 LOCATION:

The CATS EYE, HOT and MONICA Claims Group is situated 8 miles northerly from Tofino, Vancouver Island, British Columbia. Chart references designate water passages as Clayoquot and Bedwell Sounds and Cypress Bay. The geographic reference is Latitude 49°17'30" North - Longitude 125°54' West. The Land District is Clayoquot and the Mining Division is Alberni, Vancouver Island, British Columbia, see Figure: 4.

Indian Reserves Nos: 19 and 20 abut the Claims, see Figure: 3.

3.0 ACCESSIBILITY:

Access to the Claims Group is limited to either float plane from Tofino to Cypress Bay via McCauley Air Charter or by boat, barge or other forms of water transport from Tofino through Heynen - Maurus Channels, Epper Passage to Cypress Bay. Access by these transportation facilities is limited to good weather conditions. Reference is to Figure: 6.

Telephone and telecommunications facilities are available at Tofino - none are available on the claims area. A radio telephone could be set up on the property.

There are no roads or improved trails on the claims; access and travel on the claims area is presently provided by water via the shoreline of Cypress Bay and internally via the Cypre River.

Cypress Bay ranges from shoreline to 15 fathoms in depth, see Figure: 7. To be noted thereon, draft of water vessels is limited because of shallow depths controlling the passages from Tofino.

4.0 DESCRIPTION:

The CATS EYE, HOT and MONICA Claims were staked in December 1970, July 1968 and April 1971. The location lines run generally north-south. The acreage involved is approximately 2000 acres. A Geological Report on these claims, used in the Primary Prospectus of Thunder Valley Mines Ltd. (N.P.L.) dated July 1971, by F. C. Tomlinson, P.Eng., describes particulars of the property and results of certain geophysical-geological surveys. There are no details about historical background of the existing claims group although, because of its geological and geographical setting, the area must have been prospected and staked before. Reference is to Annex: A, recording excerpts from the British Columbia Minister of Mines Reports of 1899, 1901 and 1903, pertaining to the Good Hope Group. Impressive prospect workings are recorded including trenching, and shafts on a vein structure. Recorded values are: Copper 6%; Silver 2 ounces and Gold 6 ounces per ton.

On CatsFace Range, Catface Copper Ltd., a subsidiary of Falconbridge Nickel Mines Ltd. is carrying out exploration work, viz: George Cross Newsletter No. 65, 2 April 1971 (see Figure: 6).

THUNDER VALLEY MINES: CATS EYE, HOT & MONICA CLAIMS, ALBERNI MINING DIVISION  
20 OCTOBER 1971

4.0 Description (continued):

"Exploration by Catface Copper Mines Ltd. at its B.C. property, 8 miles north of Tofino (owned 97.2% by Falconbridge) started February 1970. An exploration adit was driven 2,800 ft. along the long axis of the zone. Close-pattern diamond drilling, will be carried out from the adit in 1971. Considerable metallurgical test work and mineralogical study work were accomplished."

An excerpt from Tomlinson's Report provided the following description:

"The property to the immediate west and located on the peninsula on the Catface Range is the Catface Copper Ltd., a wholly owned subsidiary of Falconbridge. The property was staked by Falconbridge in the early 1960's and they have carried out extensive work on the property. It has been established that upwards of 41 holes and over 33,000' of diamond drilling has proven a body in excess of 200,000,000 tons of .45 to .50% Cu. with 80% in royal metals. The deposit is still open to depth and strike, mineralization to depth is consistent and has possibilities of increasing tonnage vastly. The property is located on a Tertiary intrusive whose eastern extension has not entirely been mapped. The project has not had too much publicity due to the private nature of the company."

5.0 CLIMATE:

Climatic conditions within the claims are marine and would limit working conditions. Rainfall and snow are of the order of 115 inches per annum. Mean temperature is approximately 48° with extremes ranging from 07°F. to 84°F. The reference meteorological station is Estevan Point located 30 miles to the west, see Figure: 2. Certain types of exploration work could be carried out in winter but provision for assured transport facilities would have to be provided.

6.0 PHYSIOGRAPHY:

The claims area is within the Clayoquot Provincial Forest area of Vancouver Island. The general area is coastal representing the outwash basin of the Cypre River and tidal flats of Cypress Bay. The dominant topographical features are the Beddingfield and Catface Ranges. Elevations range from sea level to about 2500 feet on the peaks of the ranges. Surface elevations on the claims area range from sea level to about 250 feet. The area, apart from water surfaces and gravel bars in the Cypre River is densely covered with brush, deciduous trees and coniferous trees which restrict travel on foot. Overburden ranges from rock outcrops in the stream bed to fifty or more feet and unknown depths on the tidal flats.

Exploration work is limited because of overburden conditions. Tractor trails would have to be cut in order to obtain access to areas distant from Cypre River.

6.0 Physiography (continued):

Reference Topographical Maps are: #92.F/4 West Half "Tofino" and #92.F/5 West Half "Bedwell", see Figures: 6 and 7.

7.0 LOCAL RESOURCES:

There is ample timber and sand-gravel resources available on the claims to support the needs of mining exploration work. However, rights to the timber are held under Timber Lease 232. There is a limited supply of labour available in Tofino but skilled labour would have to be obtained in Alberni or elsewhere. Apart from local supplies, equipment and hardware in Tofino, all other support would have to be obtained elsewhere on Vancouver Island and the Mainland. Use of water from Cypre River would be subject to approval as it is a salmon spawning river.

Carrying out of exploration mining work on the claims area is handicapped because of limited resources, support facilities and services. Transportation to the claims area is also a limiting feature.

8.0 GEOLOGY:

GENERAL: The most recent published reference relating to the geological features of the area is Geological Survey of Canada, Paper 68-50, entitled "Geology and Mineral Deposits of Alberni Map Area, British Columbia (92F)" by J. E. Muller and D. J. T. Carson, 1969, see Figure: 8. Reference is made also to Tomlinson's Report of July 1971 for his interpretation. *Differs from ...*

Base formations are volcanic breccia tuff, argillite, greenstone-andesite porphyry which have been intruded by gabbro-peridotite and hornblende quartz diorite-granodiorite plutons. Tectonically, the area has been subjected to considerable folding and faulting and related deformations, see Figure: 8.

Metallic mineralization, classified as porphyry copper type deposits, such as at Catface occurs within or adjacent to intrusive complexes of quartz diorite, dacite porphyry and breccia. Quartz monzonite is also present at Catface. To date, no production, in the area, has occurred from these deposits but, according to reports, exploration at Catface is indicating worthwhile results.

LOCAL GEOLOGY: The bed rocks of the general area are of Lower Jurassic or Upper Jurassic Age represented by andesites, andesitic porphyries and andesitic tuffs of the Vancouver Group.

At the south end of the claims bordering Cypress Bay, a medium to coarse grained gabbro sill-like body is found. It borders with the andesites forming a hybrid type of rock with greater shearing which has been subsequently filled with quartz and sulphide mineralization. Within the gabbro body there are



THUNDER VALLEY MINES: CATS EYE, HOT & MONICA CLAIMS, ALBERNI MINING DIVISION  
20 OCTOBER 1971

8.0 Geology:

Local Geology (continued):

intermediate volcanic dykes with various strikes but definitely a post-gabbro phase. Along the banks of Cypre River to its headwaters, occasional groups of andesite and gabbro-andesites are found. It appears that the gabbro depicted by an elliptical shape has a more amorphous interfingering border with the andesite. Most of the outcrops encountered along the north part of the Hot Claims and the Cats Eye Claims are andesite and andesitic porphyry along with some dioritic intrusive outcrops which may be outliers of the main body to the east or west towards Catface.

The quartz diorite series, with which the Catface Copper deposit is related, outcrops to the west of the claims area. Whether this formation appears on the Cats Eye Claims is a subject that can only be determined by detailed investigation.

The local jointing patterns in the andesites appear to be in line with the regional tectonic influences with the majority shearing being parallel to the Cypre River with complimentary shearing and jointing.

Reference is to Figures: 5, 8 and 9.

9.0 EXPLORATION WORK:

To date, exploration on the claims area by Thunder Valley Mines has been limited to prospecting, airborne magnetic, electromagnetic and radioactivity geophysical surveys and a ground fluxgate magnetometer survey. Grid lines were established as controls for these surveys. In addition, a geochemical survey was carried out. The results of these surveys are given in Tomlinson's July 1971 Report.

Correlation of these surveys was also made with the Ronka EM-16 ground survey conducted during the examination relative to this report.

Geological mapping has been carried out along the Cypress Bay shoreline and along the banks of Cypre River, see Figure: 5.

As noted in Annex: A, considerable exploration work was done in 1899, 1901 and 1903 on showings of the Good Hope Prospect, see Figure: 5.

10.0 GEOPHYSICAL SURVEYS:

A Ground EM Geophysical Control Survey using a Ronka EM-16 was conducted to locate target areas, conductors or formation discontinuities as a supplementary test to the previously conducted Aerial Magnetometer, EM and Radioactivity and the Ground Magnetometer Geophysical, Geochemical Surveys, see Tomlinson's Report.

The EM survey was conducted along the same traverse lines as the previous ground surveys, see Figure: 5.

THUNDER VALLEY MINES: CATS EYE, HOT & MONICA CLAIMS, ALBERNI MINING DIVISION,  
20 OCTOBER 1971

10.0 Geophysical Surveys (continued):

The details of the Ronka EM-16 are given in Annex: C. Particulars relating to the instrumentation used on the other surveys are given in Tomlinson's Report.

Interpretation of the results of the geophysical traverses and geochemical surveys (see Figure: 9) would include the following:

- (1) TRAVERSE "A": Referring to the profiles (Figure: 9) and aerial map (Figure: 5), it will be noted that three anomalous sections have been indicated along this traverse which extend from footages 300 - 1500', from 2700 - 3200' and 4700 - 5000'. The most significant occurs near the contact between the gabbro-peridotite and the andesites (at 2700 - 3200') and where some copper mineralization float has been located. The results of the assays are given on Annex: B. The other zones are covered with overburden and so can not be assessed until subsurface exploration is done.
- (2) TRAVERSE "B": An anomalous zone is indicated along this traverse in the same section (2700-3200') as in Traverse "A" and represents the same section but on the opposite bank of Cypre River.
- (3) TRAVERSE "C": Indicates some irregularity in the pattern of results. Confirmation would have to be made by subsurface investigation.
- (4) TRAVERSE "D": Two anomalous zones are indicated, footages 200 - 800' and 2700 - 4400'. The 200 - 800' zone overlies a fractured andesitic section with contained chalcopyrite. The 2700 - 4400' section occurs within the gabbro-peridotite body.
- (5) TRAVERSE "E": Nothing significant.
- (6) TRAVERSE "F": Two zones are indicated along this traverse, footages 1700 - 3200' and 3700 - 4000'. The 1700 - 3200' zone confirms the anomalous area indicated by the Aerial Magnetometer-EM Surveys and the featuring Good Hope (Annex: A) workings which occur to the north. Geophysically, this zone presents an opportunity of interest, as the Good Hope deposit appears to occur on the flank of the gradients.
- (7) TRAVERSE "G": The anomalous section along this traverse occurs between footages 600 - 1000'. Significantly, this zone corresponds with irregularities indicated in the Geochemical Survey.

Further surface and subsurface exploration is required to assess the significance of these anomalous areas. Because of the close relationship pattern exhibited between the aerial and ground surveys, it would appear that further close-spaced surveys are justifiable.

THUNDER VALLEY MINES: CATS EYE, HOT & MONICA CLAIMS, ALBERNI MINING DIVISION,  
20 OCTOBER 1971

11.0 MINERAL ZONES:

Several sulphide containing zones have been revealed in contact and shear-fissure zones. Results of sampling by Tomlinson are:

Grab Samples, Hot-10 Claim:

Copper 2.36%	Gold .02ozs	Silver .5ozs
Copper 1.60%	Gold .01ozs	Silver .5ozs

Grab Samples, Hot-9 Claim:

Copper 1.72%	Gold Trace	Silver .3ozs
Copper 1.20%	Gold Trace	Silver .2ozs

Float Samples, Cats Eye 7 and 8 Claims:

Copper 2.76%	Gold .02ozs	Silver .5ozs
Copper 4.75%	Gold Trace	Silver .7ozs

A grab sample of float, located near the contact between gabbroic intrusives and the andesites, yielded the results given below. Reference is to Figure: 5.

Sample #36635: Copper 5.84% Gold 0.02ozs Silver 0.6ozs Zinc 0.15%

Reference is to Crest Laboratories (BC) Ltd. Certificate No. 3320 (Annex: B).

Further prospecting in the indicated anomalous zones may locate zones of significance. Attention should be directed to these areas which have the similar geological setting as obtains at the Catface discovery.

12.0 ORE RESERVES AND ECONOMICS OF PRODUCTION:

Because of the preliminary extent of the exploration done to date, no assessment may be made with reference to possible ore reserves or to the scope of economic controlling factors. There are no operating metal mines in the immediate vicinity. The property of Catface Copper Ltd. is being explored by surface and subsurface procedures. No major difficulties are reported in carrying out this work, apart from limiting transportation and supply facilities.

Similar experience would obtain in carrying out exploration work on the CATS EYE, HOT and MONICA Claims as at Catface.

13.0 OPINION:

On the basis of the information relating to the geological - structural-mineralogical features obtaining on the CATS EYE, HOT and MONICA Claims Area, considered in conjunction with the results of the Geophysical - Geochemical Surveys carried out to date, I am of the opinion that further tests and

THUNDER VALLEY MINES: CATS EYE, HOT & MONICA CLAIMS, ALBERNI MINING DIVISION,  
20 OCTOBER 1971

13.0 Opinion (continued):

exploration of the gold-silver-copper possibilities of the claims area are warranted.

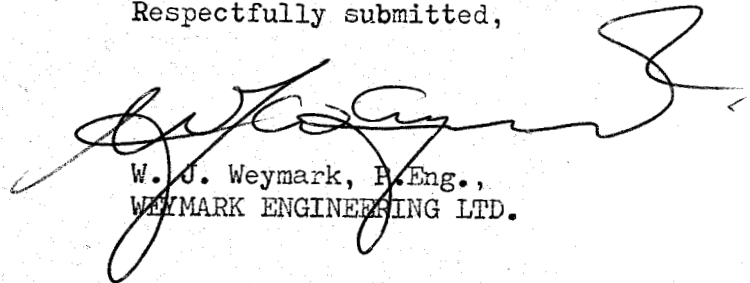
14. RECOMMENDATIONS:

It is proposed that the next phase of the exploration programme, as recommended in Tomlinson's Report of July 1971 be proceeded with. The objective of these works would be to permit definitive assessment of the target anomalous sulphide mineral-bearing zones.

1.	Geological Mapping.....	\$ 1,000.00
2.	Geophysical Surveys.....	2,000.00
3.	Line Cutting.....	1,000.00
4.	Trenching.....	2,000.00
5.	Diamond Drilling.....	6,000.00
6.	Administrative, Establishment & Miscellaneous...	<u>3,000.00</u>
		\$15,000.00

Allowances should be made for some variation in the carrying out of this programme corresponding with the results obtained. On completion, an assessment should be made as to the economic significance of the metalliferous possibilities to permit determination of the scope and nature of future courses of action.

Respectfully submitted,



W. J. Weymark, P. Eng.,  
 WEYMARK ENGINEERING LTD.

WJW/et

A P P E N D I C E S

EXCERPTS FROM GOVERNMENTAL REPORTSA. B.C. MINISTER OF MINES REPORT 1899, PAGE 63.VICT.791:

TROUT RIVER: Trout River flows into Cypress Bay on Bedwell Sound, one of the arms of Clayoquot Sound.

GOOD HOPE GROUP This group consists of the GOOD HOPE, GOOD HOPE FRACTION, HUNTER, LEA, NELLY and FLORA mineral claims, situated on Trout River, at a short distance from the sea beach. It is owned by the Helga Gold and Copper Mining Co. of Seattle; agent F. Jacobsen of Clayoquot.

At a point about 550 feet from the beach, at an elevation of 245 feet, there has been exposed, by a series of open cuts, a vein some 3 or 4 feet wide, with strike N.80°W., dip 37°S.W., and with poorly-defined and "frozen" walls. On this vein, No.1 incline has been sunk for some 60 feet. The vein-matter consists of quartz, mixed with diabasic rock and the ore is a mixture of copper pyrites and pyrrhotite scattered through the quartzose gangue. The vein is said to widen to 5 feet at the bottom of the shaft, but this I was unable to verify, owing to the presence therein of from 10 to 15 feet of water.

A short distance to the east of this No.1 incline, a shaft has been sunk 25 feet on another quartz vein, which has a strike N.75°W. with a dip 75° southerly, showing the vein to be from 2 to 3 feet wide. The ore is copper pyrites scattered through a quartzose gangue and the value of that taken out is said to be - copper 6%; silver 2ozs and gold \$6 per ton.

B. B.C. MINISTER OF MINES REPORT 1901, PAGE: 1100:

"Work is being continued in the long cross-cut tunnel on the GOOD HOPE mine at Trout River".

C. B.C. MINISTER OF MINES REPORT 1903, PAGE H.193:

TROUT RIVER: The GOOD HOPE GROUP, owned by the Helga Gold and Copper Co. of Seattle, has had a large amount of work done on it in tunnelling to strike the lead. At the expiration of the last contract which was let, a large body of ore was uncovered.

# CREST LABORATORIES (B.C.) LTD.

1068 HOMER STREET  
VANCOUVER 3, B.C.  
PHONE 688-2586

CREST LABORATORIES LTD.  
7911 ARGYLL ROAD  
EDMONTON 82, ALBERTA  
PHONE 469-2391

## CERTIFICATE OF ASSAY

TO Thunder Valley Mines Ltd.

Sept. 27, 1971

c/o Weymark Engineering, 1063 Balfour Street,

Lab No. 3320

Vancouver, B.C.


**I hereby certify** THAT THE FOLLOWING ARE THE RESULTS OF ASSAYS MADE BY US UPON THE HEREIN DESCRIBED SAMPLES.

MARKED	GOLD		SILVER	COPPER	ZINC						TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent						
36635	0.02	\$0.70	0.6	5.84	0.15						

Annex B

NOTE:  
Rejects Retained One Month  
Pulps Retained Three Months  
Unless Otherwise Arranged.

Gold calculated at \$ 35.00 per ounce

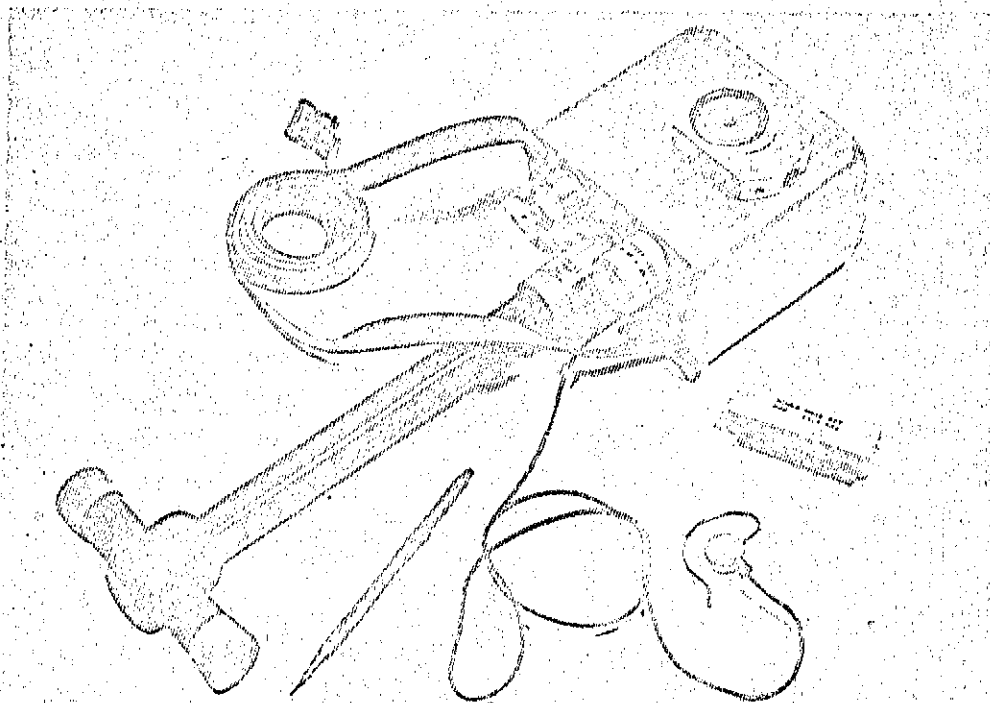
  
 \_\_\_\_\_  
 Registered Assayer, Province of British Columbia

## RONKA EM 16 ELECTROMAGNETIC INSTRUMENT

### SALES, RENTAL AND SURVEYS

Electromagnetic prospecting has been very successful in mine exploration. Instrumentation and methodology has progressed rapidly, from early units requiring several technicians and several hundred pounds of equipment, to a recent instrument requiring one operator and a compactly designed unit weighing 2.5 pounds. It is now possible to have accurate, easily taken readings more efficiently, rapidly and with less manpower than with older and heavier equipment. Consequently, the cost of surveys is greatly reduced, and the mobility and ease of operation is greatly increased.

The Ronka EM 16 is a VLF radio receiver with two search coils at right angles, employing primary fields between 15 and 25 kilocycles. The real (or in-phase) and imaginary (or quadrature) components of the resultant field are measured by an audible null method. The Ronka EM 16 employs Governmental VLF transmitters for primary field use. These stations, in various parts of the U.S.A. and Europe have vertical antennae with outputs between 85 and 1,000 kilowatts. The inclination of the resultant field at any point is measured by orienting the EM 16 vertical coil in the plane of the resultant field and measuring the attitude of the coil. A second coil, horizontal and at right angles to the vertical coil, receives a perpendicular field, shifts the signal 90 degrees, and is nulled by a dial (quadrature dial).





# SPECIFICATIONS

- Primary Field: Horizontal from any selected VLF transmitting station.
- Frequency Range: Approximately 15-25 kc.
- Station Selection: By plug-in units. Two stations selected by a switch on front panel.
- Measured Field: Vertical field, in-phase and quadrature components.
- Accuracy of Readings:  $\pm 1\%$  resolution.
- Range of Measurements: In-Phase  $\pm 150\%$  or  $\pm 90^\circ$ , quadrature  $\pm 40\%$
- Output Readout: Null-detection by an earphone, real and quadrature components from mechanical dials.
- Batteries: 6, size AA penlight cells. Life about 200 hours.
- Size: 16 x 5.5 x 3.5 in. (42 x 14 x 12 cm)
- Weight: 2.4 lbs. (1.1 kg)

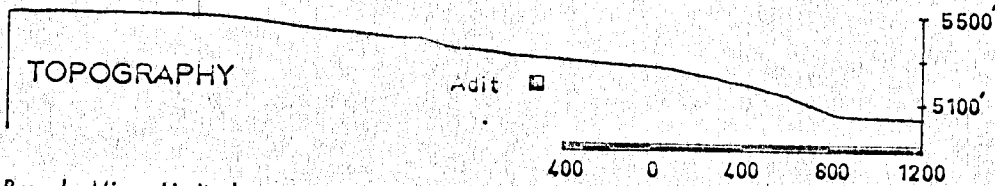
## RONKA EM16 PROFILE



Northwest

Southeast

← AREA PREPARED FOR PIT →



Brenda Mines Limited.

A. Care of the Instrument:

1. When packing or transporting EM 16, always pack it in the wooden case lined with foam.
2. When travelling to and from job site, place it in the cloth carrying case.
3. This is an electronic instrument and must be kept dry at all times. A good procedure is to use masking tape over upper screw, and around lower case lip if rain threatens.

B. Checking:

1. Battery test: Turn switch on, press small black button on lower part of head and an irritating squeal indicates the batteries are up. If there is very little noise, replace batteries by unscrewing top screw on head and lifting off outer head case.
2. Check into a base station in the morning and out at night to make sure same reading is obtained (instrument working).

C. Field Procedure:

1. Plug in earphones. Turn instrument on, and select station you wish to use by tuning station dial.
2. Find direction of station. Turn instrument on it's side with the quadrature coil (small coil) up and down (vertical). Turn instrument in the horizontal plane until noise level is lowest. In this position the instrument will be aligned in the direction of the station.
3. Take a reading: tilt instrument upright so you and instrument face perpendicular (at right angles) to the direction of station. It is best to try and face either east or north, depending on the station direction. In this direction you should be facing almost down the line.  
  
Rock instrument back and forth, and twist quadrature dial until all signal sound is gone (or nearly so). Record the in phase reading (angle of tilt on the inclinometer) and the sign of the reading (either + or -) and record the quadrature reading and sign.
4. Move to next station, orient, tilt and read again.

417

D. Field Note Keeping:

Standard Ronka EM 16 field notes are supplied. These are designed to be read by keypunch operators for computer plotting. They must be neat, legible and in pencil.

1. Fill out page number, property, date, Job # and operator's initials.

2. Fill out Trans. (transmitter stations) you are using, (ie: NPG) it's bear. (bearing or direction) and face (which way you are facing when taking a reading).

3. Fill in X (line), Y (station), and your readings (in phase [Z], and quadrature [Z]).

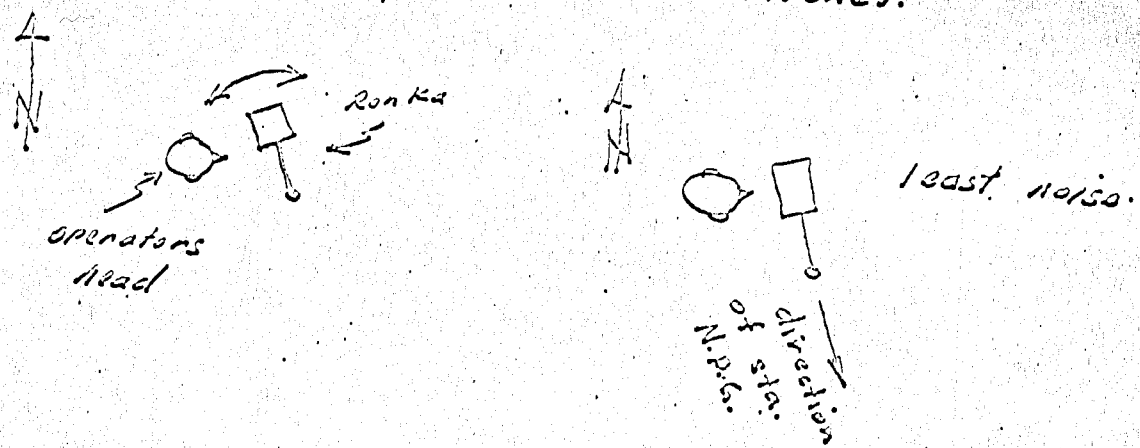
4. If the area is rugged, always measure the slope from the station you are at to the station you are going to with inclinometer on instrument.

5. In remarks column, note the topographic features, roads, fences, etc.

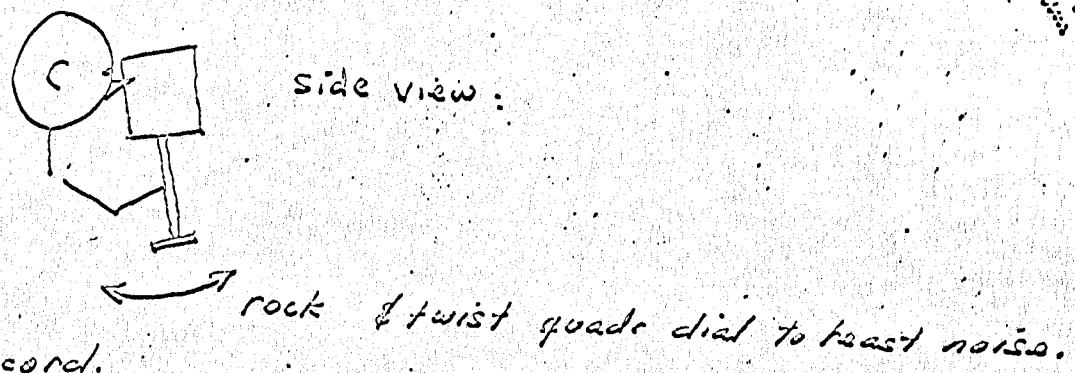
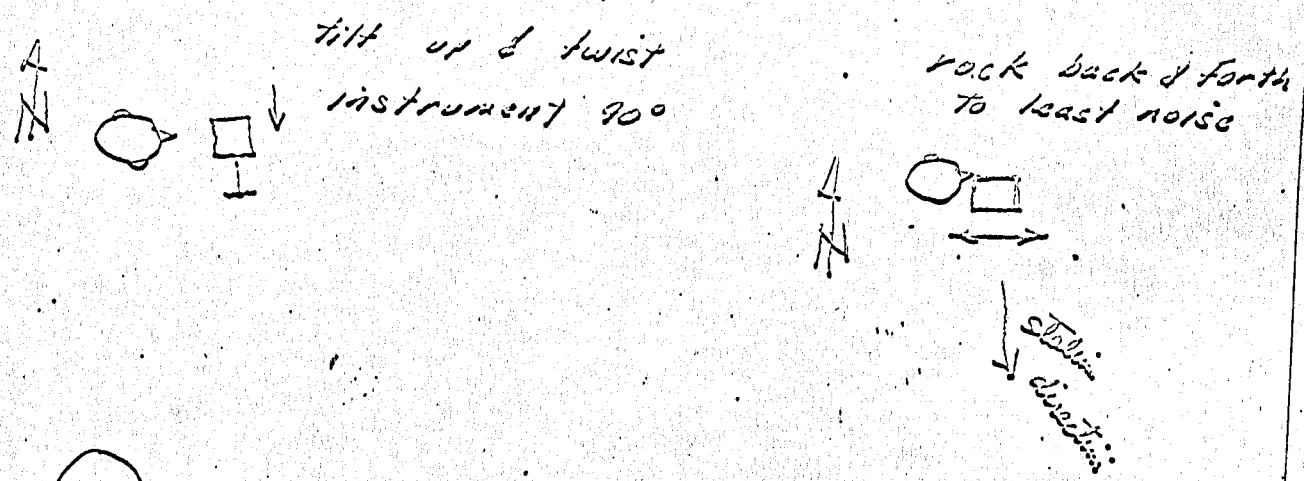
# EM FIELD PROCEDURE.

995

1. To locate direction of Station.  
(looking down on someone).



2. To Take Reading.



Record.

Line	Sta.	In Ph.	Quad	Remarks
BL	IN	+10	-2	Near road.

Trans NPG Bear South Face East.

Geotronics Surveys Ltd.

627 HORNBY ST., VANCOUVER 1, B.C.

EML6 OWNERS

March 3, 1967.

NOTES ON VLF-TRANSMISSIONS:

NAA- Cutler, Maine, 17.8 Kc/s.  
Power-1000 kw.  
Maintainance period - 1400 to 1800 UT (GMT) each  
Friday.

NBA- Balboa, C.Z., 24.0 Kc/s, 150 kw.  
Maintainance - 1200 to 1800 UT each Wednesday.

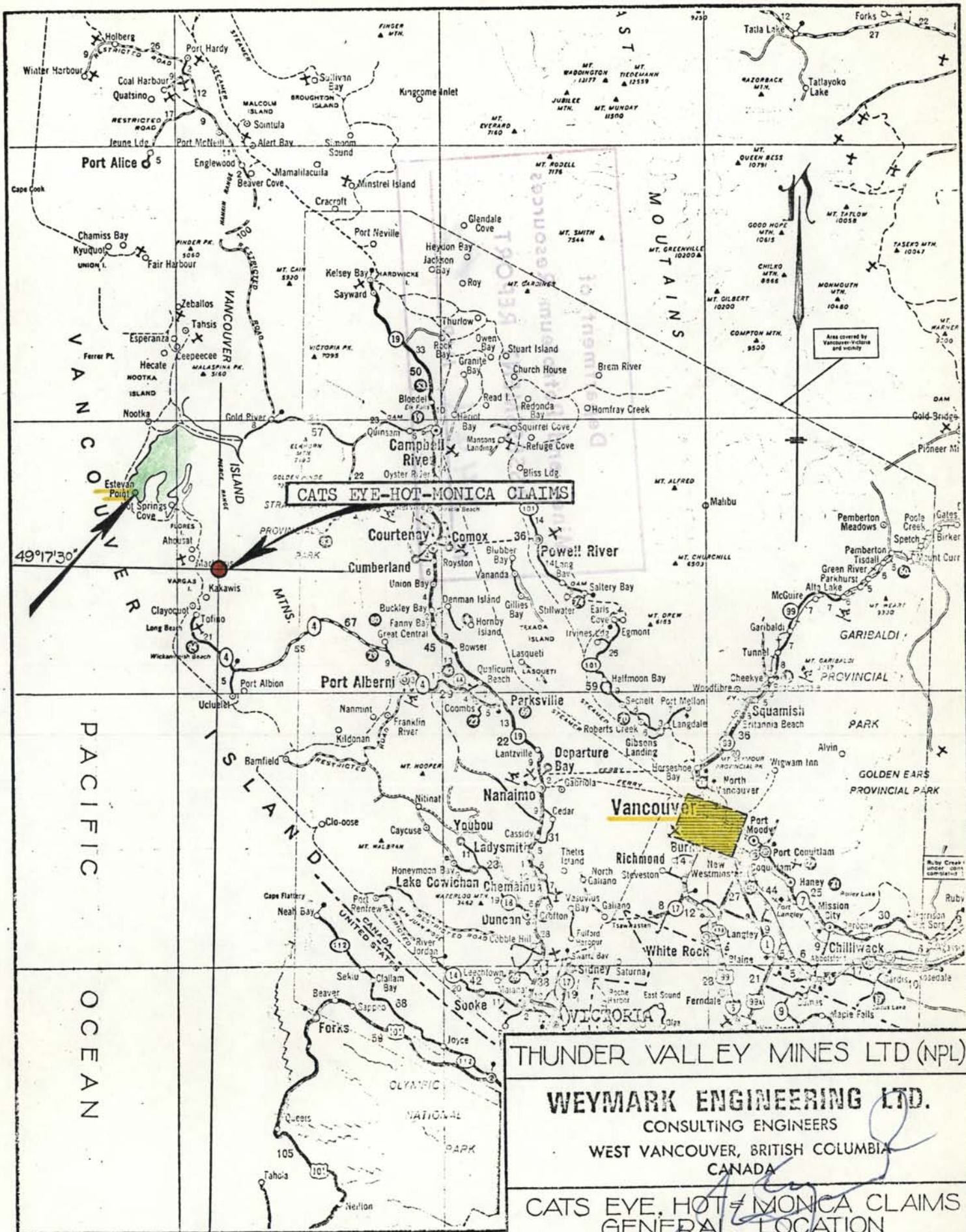
NLK/NPC - Jim Creek, Wash., (Seattle) 18.6 Kc/s, 250 kw.  
Maintainance - 1600 to 2400 UT each Thursday.

NSS- Annapolis, Md., 21.4 Kc/s, 85 kw.  
Maintainance - 1300 to 1900 UT each Monday.

For a period of 1200 to 2000 UT each Wednesday and Thursday,  
station NAA operates at half power for limited maintainance.  
The same applies for NBA, 1200 to 2000 UT on each Tuesday.  
This will not affect the operation of the EML6 in any way  
except in remote areas the null width may be wider.



I L L U S T R A T I O N S



49°17'30"

125°54'W.

NOTE: LOCATION OF CLAIMS IS APPROXIMATE

REFERENCE: BRITISH COLUMBIA ROAD MAP 1969-1970, DEPARTMENT OF TRAVEL INDUSTRY, VICTORIA, BRITISH COLUMBIA.

THUNDER VALLEY MINES LTD (NPL)

**WEYMARK ENGINEERING LTD.**  
 CONSULTING ENGINEERS  
 WEST VANCOUVER, BRITISH COLUMBIA  
 CANADA

CATS EYE, HOT-MONICA CLAIMS  
 GENERAL LOCATION

DATE 20 OCTOBER 1971.  
 SUBMITTED W.J.W.  
 DRAWN E.Taylor  
 TRACED

SCALE 1" = 3/4 M. APPROX.  
 CHECKED W.J.W.  
 FILE No. TVM-1.  
 CONTRACT TVM-1.

DOMINION OF CANADA:  
PROVINCE OF BRITISH COLUMBIA.

In the Matter of

To Wit:

affidavit on application  
for certificate of work.

I, Edward Asano

of 590 W 29<sup>th</sup>  
Vancouver 9, BC

in the Province of British Columbia, do solemnly declare that

The \$3760.<sup>00</sup> claimed for  
geophysical work on the Cats Eye 3-20+23  
& Monica 1-10 is broken down

as follows:

- \$2600.<sup>00</sup> Weymouth Eng. Ltd.  
Bellison St. Vancouver BC  
(contract price)
- 210.<sup>00</sup> Robert Schumaker
- 230.<sup>00</sup> Charles Beaulieu
- 240.<sup>00</sup> Francisco Posa-Percera
- 480.<sup>00</sup> Python Industries Ltd.

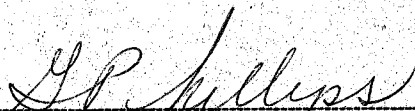
\$3760.<sup>00</sup>

all of Vancouver BC

Have invoices & Receipts.

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

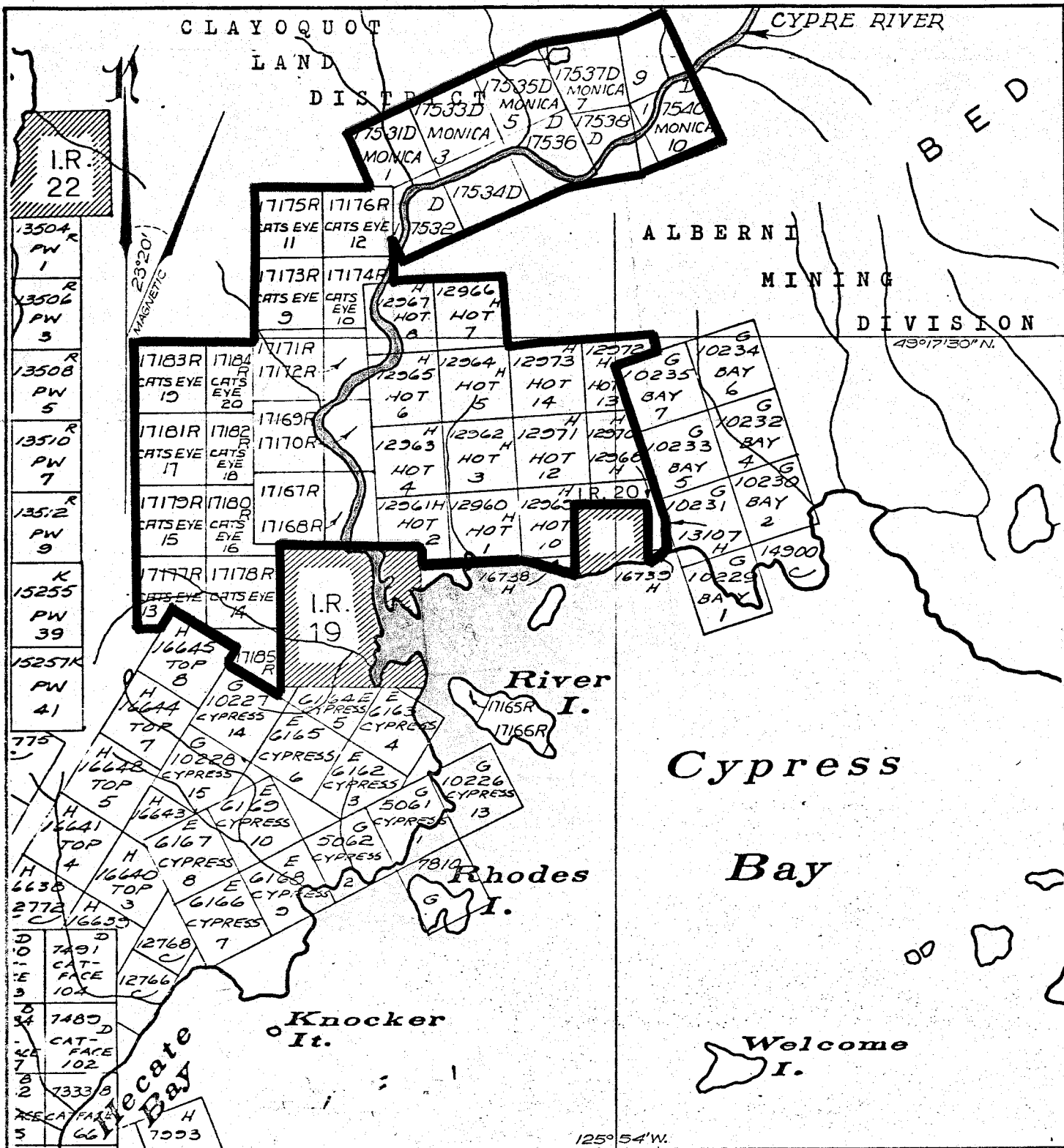
Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 3<sup>rd</sup>  
day of December 1971, A.D.



A Commissioner for taking Affidavits for British Columbia or  
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder





REFERENCE: MINERAL CLAIMS MAP 92.F/SW,  
DEPT. MINES & PETROLEUM RESOURCES,  
VICTORIA, B.C.

THUNDER VALLEY MINES LTD (NPL)

**WEYMARK ENGINEERING LTD.**

CONSULTING ENGINEERS

WEST VANCOUVER, BRITISH COLUMBIA  
CANADA

CATS EYE, HOT & MONICA CLAIMS  
CLAIMS LOCATION

DATE 20 OCTOBER 1971

SUBMITTED W.J.W.

DRAWN E Taylor

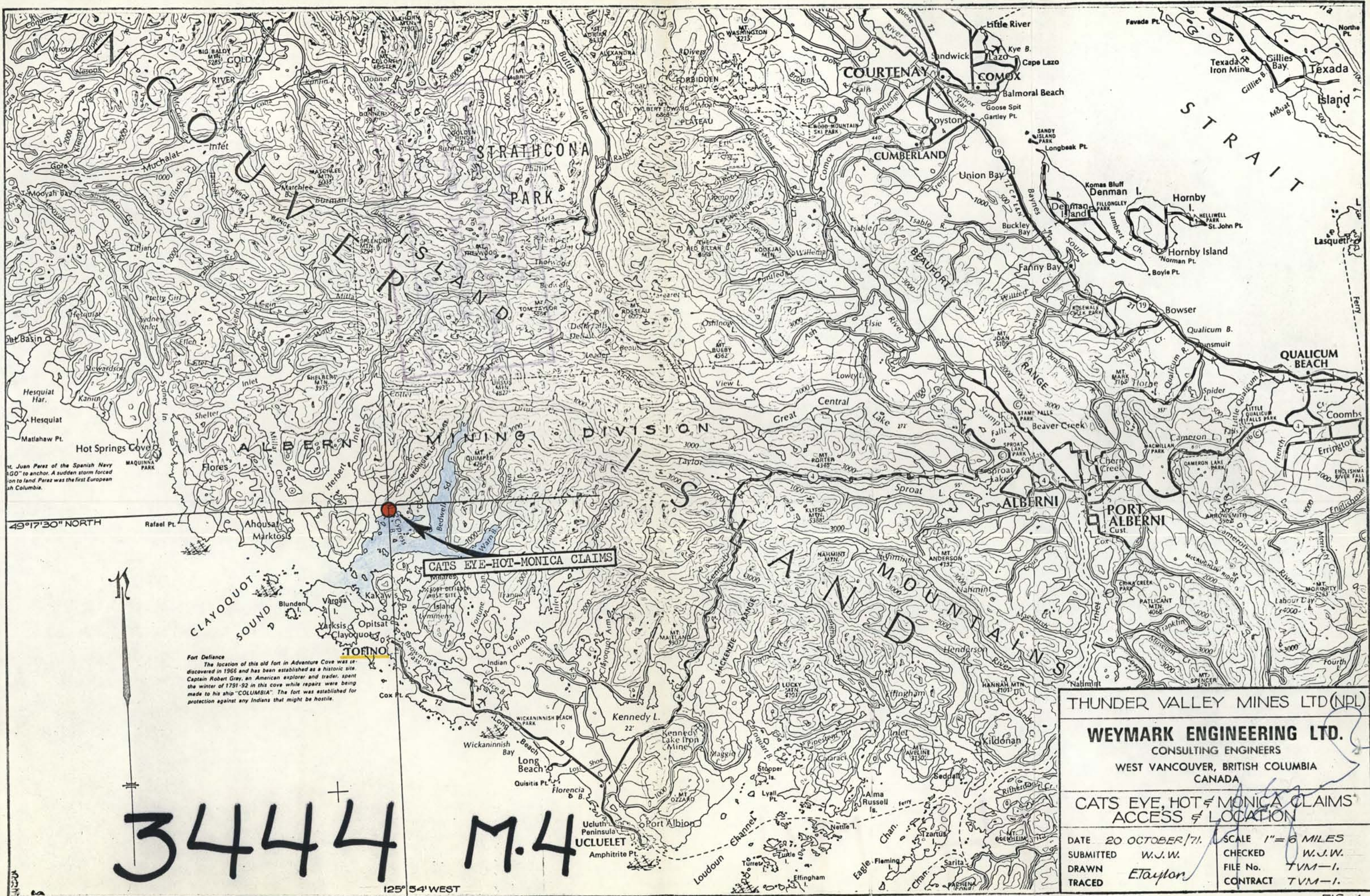
TRACED

SCALE 1" = 3000' APPROX.

CHECKED W.J.W.

FILE No. TVM-1.

CONTRACT TVM-1.



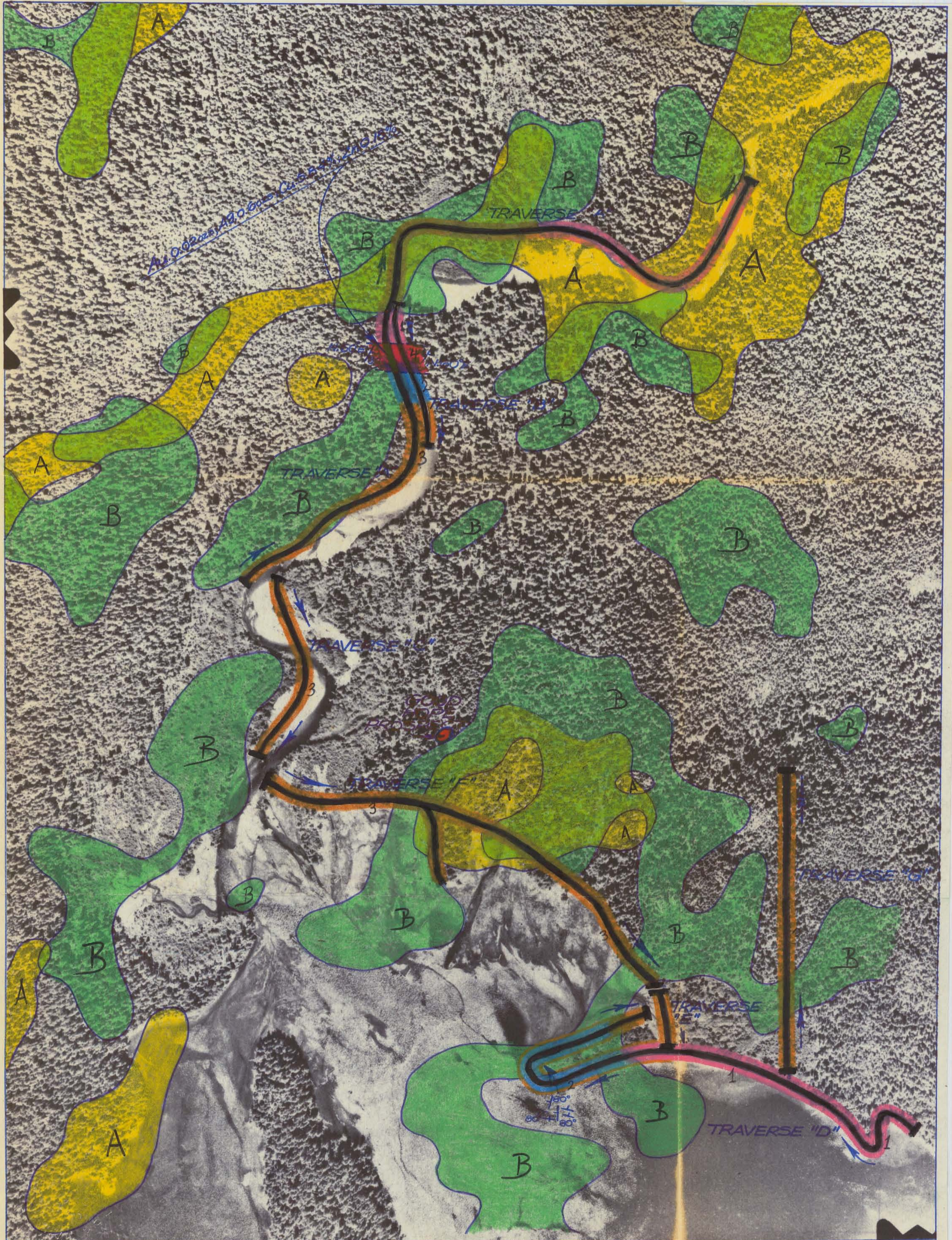
St. Juan Perez of the Spanish Navy (1500) to anchor. A sudden storm forced him to land. Perez was the first European to see Columbia.

**Fort Defiance**  
 The location of this old fort in Adventure Cove was first discovered in 1966 and has been established as a historic site. Captain Robert Gray, an American explorer and trader, spent the winter of 1791-92 in this cove while repairs were being made to his ship "COLUMBIA". The fort was established for protection against any Indians that might be hostile.

3444 M.4

THUNDER VALLEY MINES LTD (NPL)	
<b>WEYMARK ENGINEERING LTD.</b>	
CONSULTING ENGINEERS	
WEST VANCOUVER, BRITISH COLUMBIA	
CANADA	
CATS EYE, HOT & MONICA CLAIMS	
ACCESS & LOCATION	
DATE 20 OCTOBER /71.	SCALE 1" = 6 MILES
SUBMITTED W.J.W.	CHECKED W.J.W.
DRAWN E. Taylor	FILE No. TVM-1.
TRACED	CONTRACT TVM-1.

FIG. 4.



REFERENCE: AERIAL PHOTO. BC7233-016, AIR SURVEY DIVISION, DEPT. OF LANDS, FORESTS & WATER RESOURCES, VICTORIA, B.C.

CATS EYE, HOT & MONICA CLAIMS

SCALE: 1" = 600 FT. APPROX.

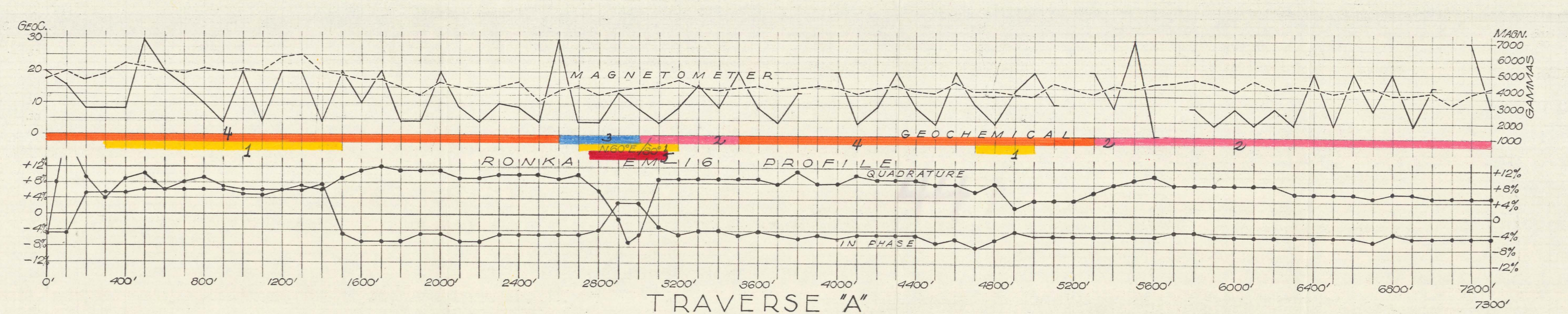
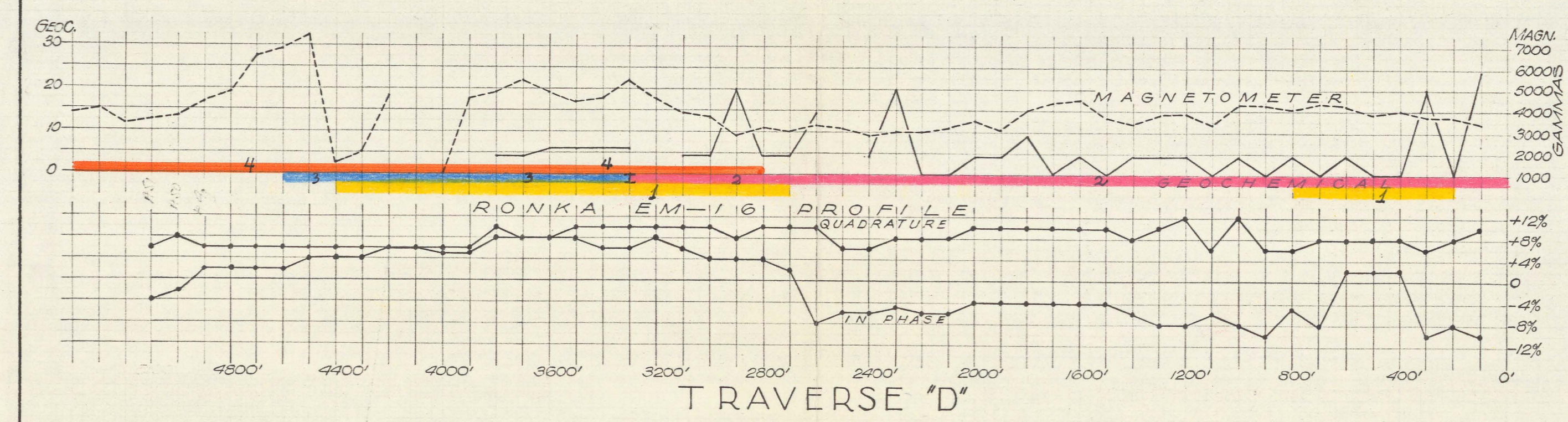
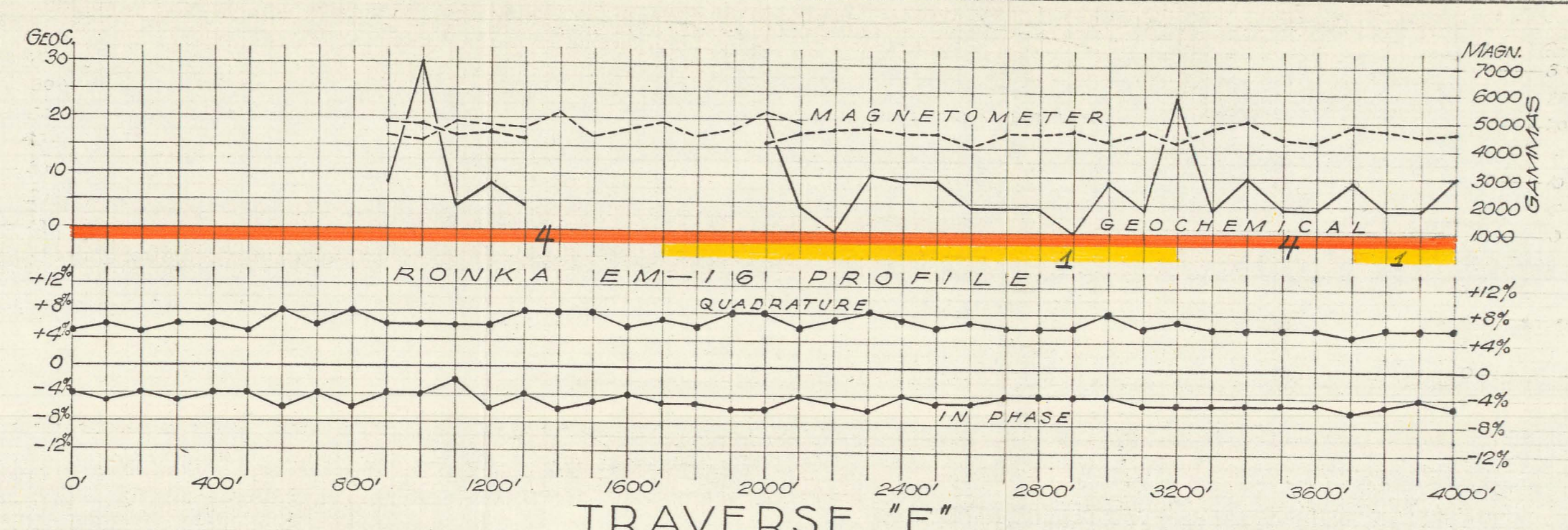
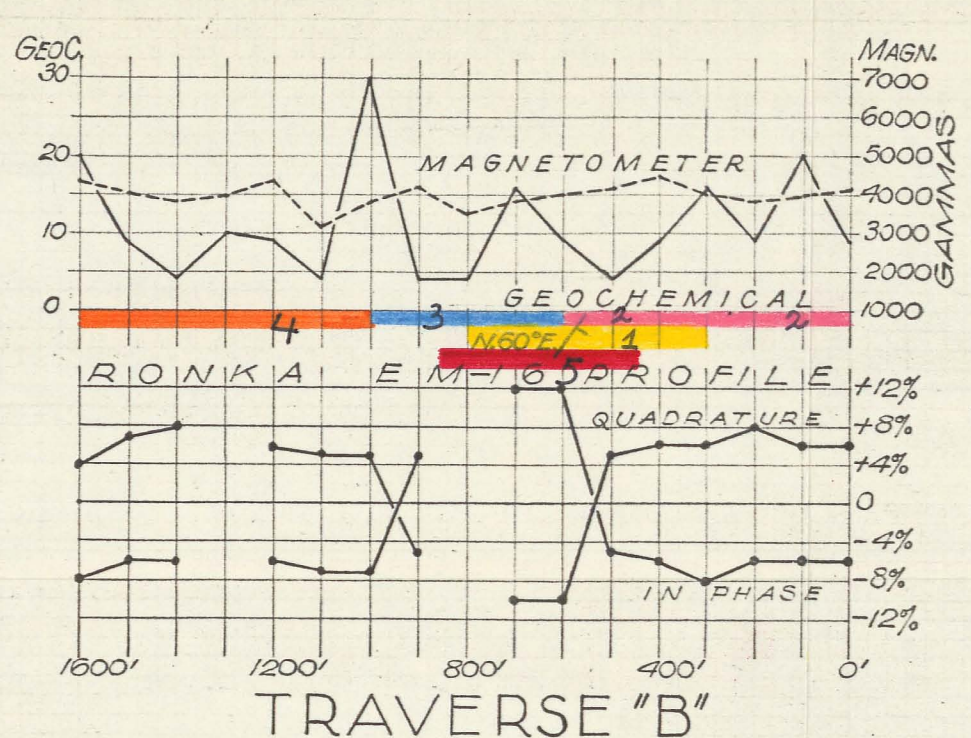
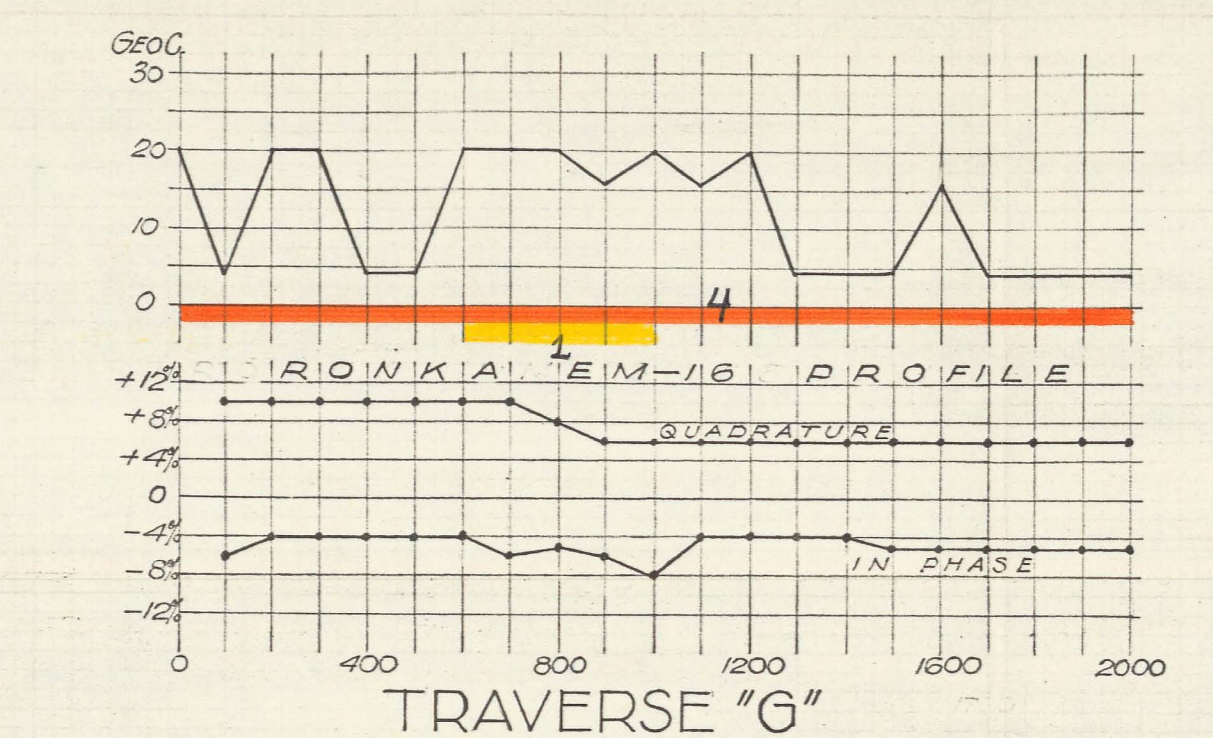
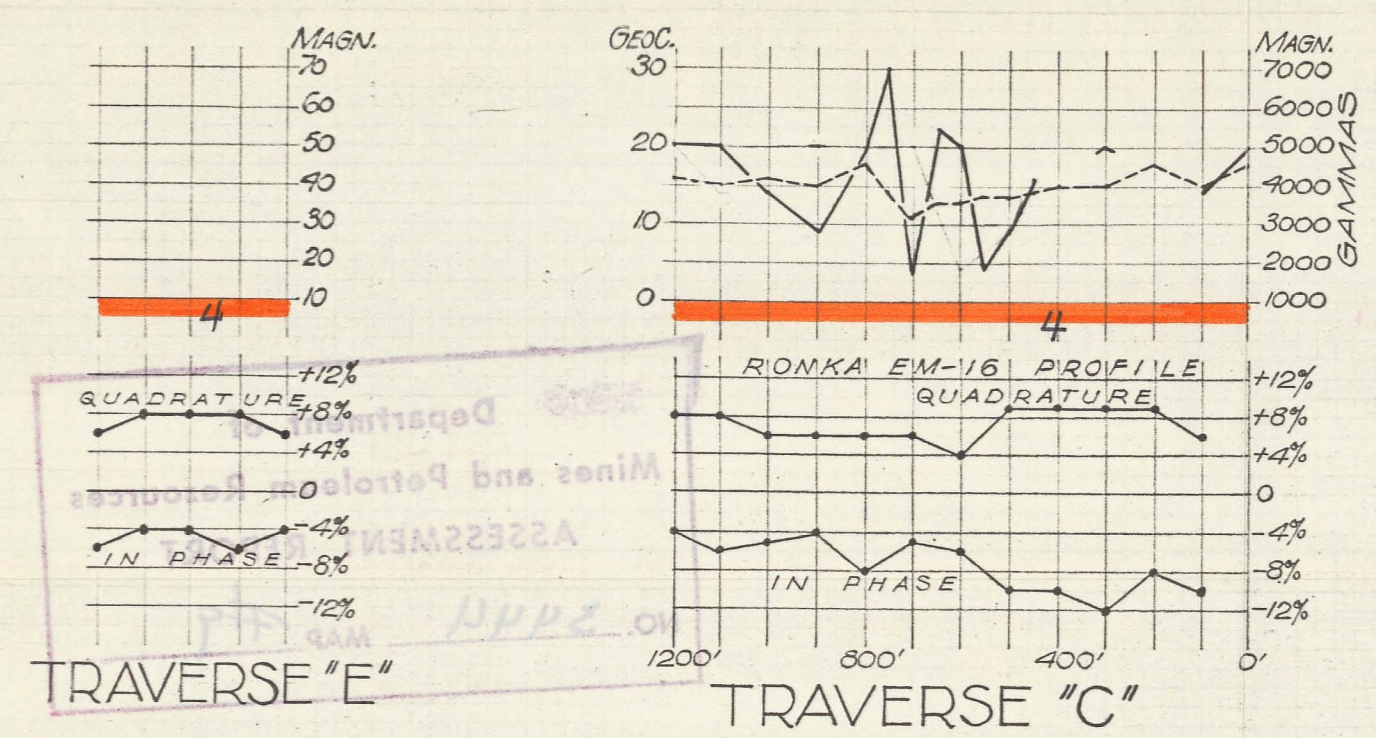
- █ MINERAL SHOWINGS
- █ OVERBURDEN
- █ GABBRO-PERIDOTITE COMPLEX
- █ VOLCANICS-ANDESITE + HYBRID

- █ B AIRBORNE ELECTROMAGNETIC ANOMALY
- █ A AIRBORNE MAGNETOMETER ANOMALY

FIG. 5.

3444

M-5



- GEOLOGICAL LEGEND**
- 5 MINERAL SHOWINGS
  - 4 OVERBURDEN
  - 3 GABBRO-PERIDOTITE COMPLEX
  - 2 VOLCANICS-ANDESITE & HYBRID
  - 1 ANOMALIES

**INSTRUMENTS USED:**  
 RIONKA EM-16 ELECTROMAGNETIC INSTRUMENT No. 55 (FOR DETAILS REFER TO ANNEX 1B)  
 MAGNETOMETER SURVEY SHARPE RMF-3 FLUXGATE (REFER TO REPORT BY F.C. TOMLINSON, P.ENG., JULY 1971)  
 GEOCHEMICAL SURVEY E-1 HORIZON SAMPLING, DITHAZONE-COLORIMETRIC (REFER TO REPORT BY F.C. TOMLINSON, P.ENG., JULY 1971).

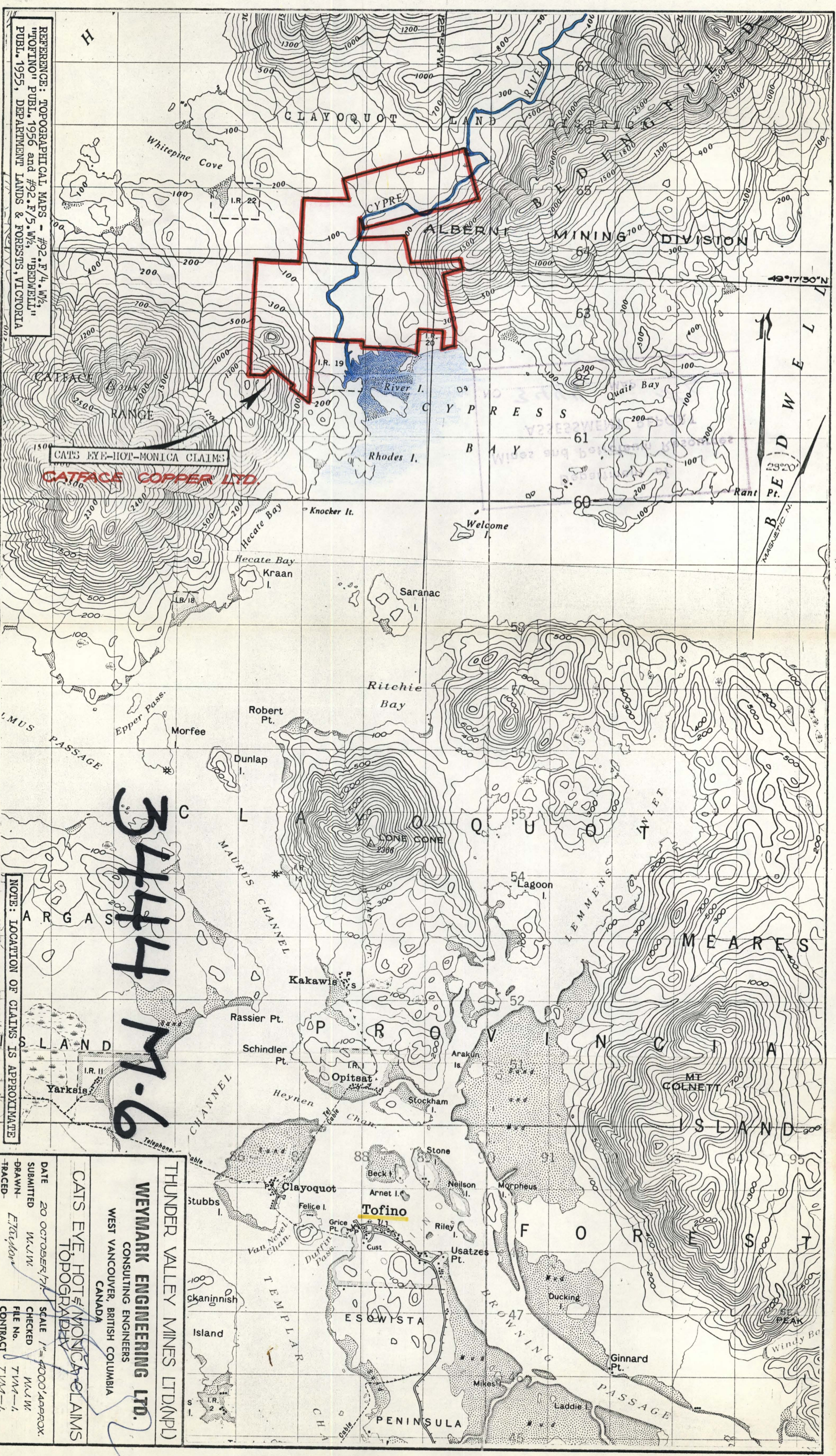
FOR LOCATION OF TRAVERSES SEE FIGURE 5.  
 EM TRANSMITTER: JIM CREEK, WASH.

THUNDER VALLEY MINES LTD. (NPL)

**WEYMARK ENGINEERING LTD.**  
 CONSULTING ENGINEERS  
 WEST VANCOUVER, BRITISH COLUMBIA  
 CANADA

CATS EYE, HOT & MONICA CLAIMS  
 GEOPHYSICAL-GEOCHEMICAL GEOLOGICAL PROFILES

DATE 20 OCTOBER 71. SCALE AS SHOWN.  
 SUBMITTED W.J.W. CHECKED W.J.W.  
 DRAWN E. Taylor FILE No. TVM-1.  
 TRACED CONTRACT TVM-1.



REFERENCE: TOPOGRAPHICAL MAPS - #92.F/4.W/2,  
 "TOFINO" PUBL. 1956 and #92.F/5.W/2, "BEDWELL"  
 PUBL. 1955, DEPARTMENT LANDS & FORESTS, VICTORIA

**CATS EYE-HOT-MONICA CLAIMS**  
**CATFACE COPPER LTD.**

NOTE: LOCATION OF CLAIMS IS APPROXIMATE

**3444 M-6**

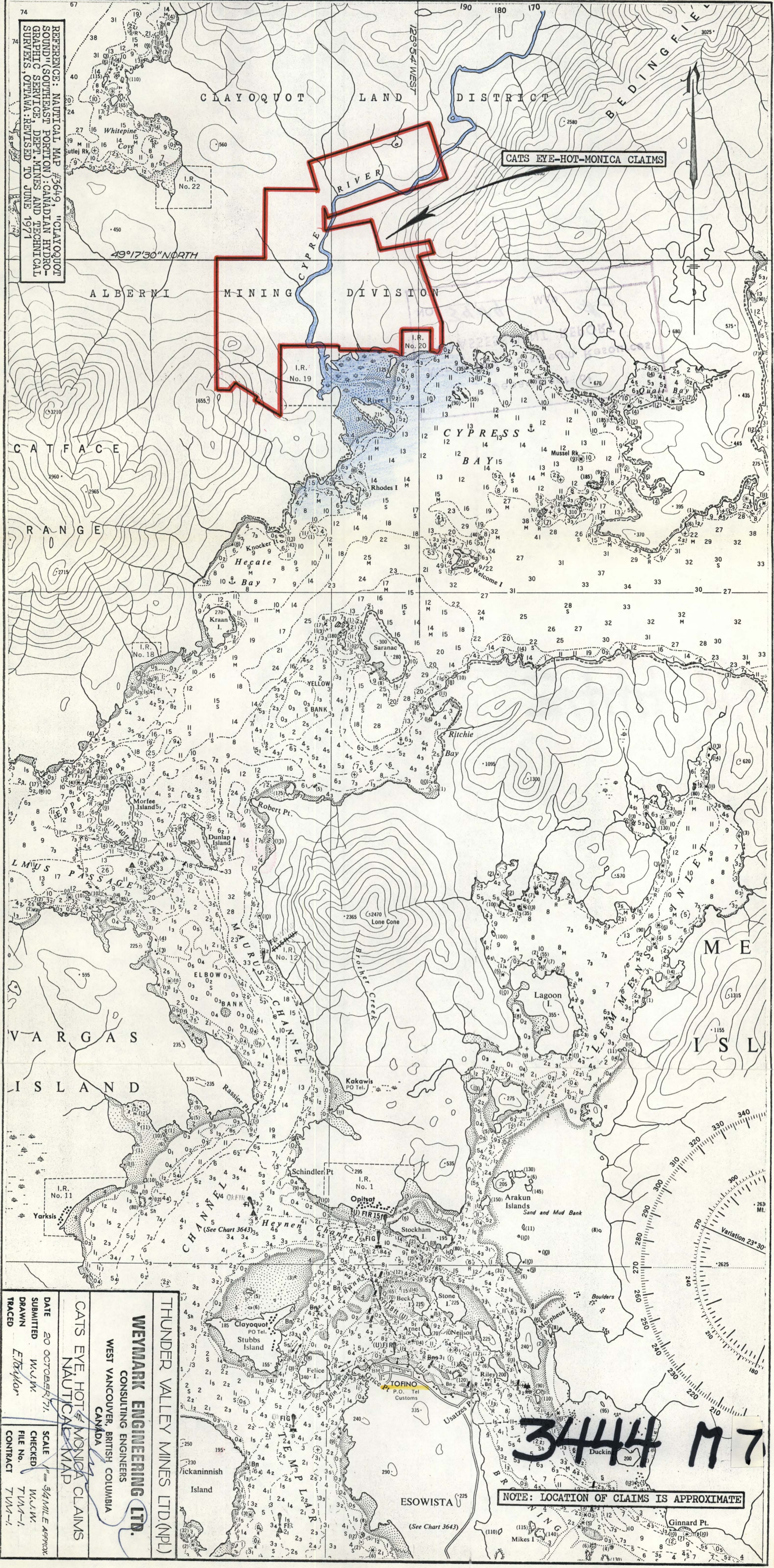
THUNDER VALLEY MINES LTD.(NPL)  
**WEYMARK ENGINEERING LTD.**  
 CONSULTING ENGINEERS  
 WEST VANCOUVER, BRITISH COLUMBIA  
 CANADA

CATS EYE-HOT-MONICA CLAIMS  
 TOPOGRAPHY

DATE 20 OCTOBER/71  
 SUBMITTED W.J.W.  
 DRAWN W.J.W.  
 CHECKED T.V.M.-1  
 FILE No. T.V.M.-1  
 CONTRACT T.V.M.-1

FIG. 6.

REFERENCE: NAUTICAL MAP #3649, "CLAYOQUOT SOUND" (SOUTHEAST PORTION); CANADIAN HYDROGRAPHIC SERVICE, DEPT. OF MINES AND TECHNICAL SURVEYS, OTTAWA; REVISED TO JUNE 1971



THUNDER VALLEY MINES LTD.(P.L.)  
**WEYMARK ENGINEERING LTD.**  
 CONSULTING ENGINEERS  
 WEST VANCOUVER, BRITISH COLUMBIA  
 CANADA

**CATS EYE-HOT-MONICA CLAIMS**  
 NAUTICAL MAP

DATE: 20 OCTOBER 1971  
 SUBMITTED: W.J.W.  
 DRAWN: E.Taylor  
 TRACED: E.Taylor

SCALE: 1" = 3/4 MILE APPROX.  
 CHECKED: W.J.W.  
 FILE No.: TVM-1  
 CONTRACT: TVM-1

NOTE: LOCATION OF CLAIMS IS APPROXIMATE

3444 M 7



CATS EYE-HOT-MONICA CLAIMS

ALBERNI MINING DIVISION

3444 M-8

NOTE: LOCATION OF CLAIMS IS APPROXIMATE

GEOLOGICAL LEGEND

- 4 PALEOZOIC: MIDDLE PENNSYLVANIAN; ARGILLITE, GREY WACKE, CONGLOMERATE, MINOR LIMESTONE, TUFF.
- 3 PALEOZOIC: PENNSYLVANIAN & OLDER; VOLCANIC BRECCIA, TUFF, ARGILLITE, GREENSTONE, GREENSCHIST, DYKES & SILLS OF ANDESITE PORPHYRY.
- 2 WESTCOAST CRYSTALLINE COMPLEX; BAS. C ROCKS: GABBRO, PERIDOTITE.
- 1 CENOZOIC: TERTIARY; HORNBLENDE QUARTZ DIORITE, LEUCOQUARTZ MONZONITE, PORPHYRYTIC DACITE, BRECCIA.

REFERENCE: GEOLOGICAL MAP, PRELIM. SERIES, #17-1368, PAPER 68-50 "ALBERNI", DEPT. ENERGY MINES & RESOURCES, OTTAWA; G.S.C. PUBL. 1962.

THUNDER VALLEY MINES LTD.(NPL)

**WEYMARK ENGINEERING LTD.**  
CONSULTING ENGINEERS  
WEST VANCOUVER, BRITISH COLUMBIA  
CANADA

CATS EYE, HOT & MONICA CLAIMS  
REGIONAL GEOLOGY

DATE	20 OCTOBER, 71.	SCALE	1" = 4 miles.
SUBMITTED	W.V.W.	CHECKED	W.V.W.
DRAWN	E. Taylor	FILE No.	TVM-1.
TRACED		CONTRACT	TVM-1.