

85-1187-14370  
12/86

GEOLOGICAL AND GEOPHYSICAL  
REPORT ON THE TROUT CREEK GROUP LULU GRID  
CASSIAR DISTRICT  
LIARD MINING DIVISION

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**14,370**

OWNER: Erickson Gold Mining Corporation

OPERATOR: Erickson Gold Mining Corporation

WORK DONE ON: Camp, Diane Fr., Panda, Lu Fr., Katie 5 Fr.,  
Katie 6 Fr., Winggold 1, Winggold 2

WORK PERFORMED: 24 July - 17 August, 1985

LOCATED: NTS 104 P/4E, 104P/5E

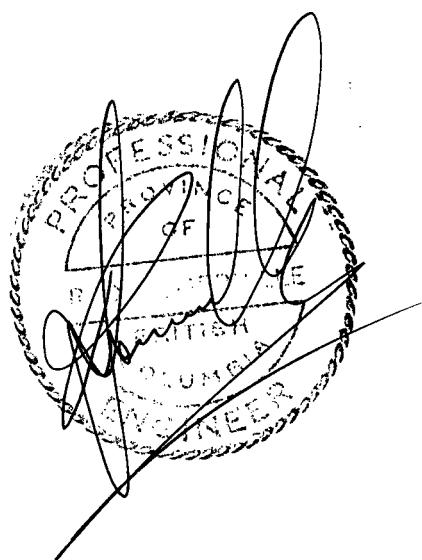
*Lat.* 59° 15' E  
*Long.* 129° ~~00'~~ 40'

FILMED

BY: H. Smit, B.Sc., and E. Dussell, M.Sc., under  
the direction of R. Somerville, P.Eng.

DATE: February 20, 1986

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES	
Rec'd	MAR 19 1986
SUBJECT	_____
FILE	_____
VANCOUVER, B.C.	

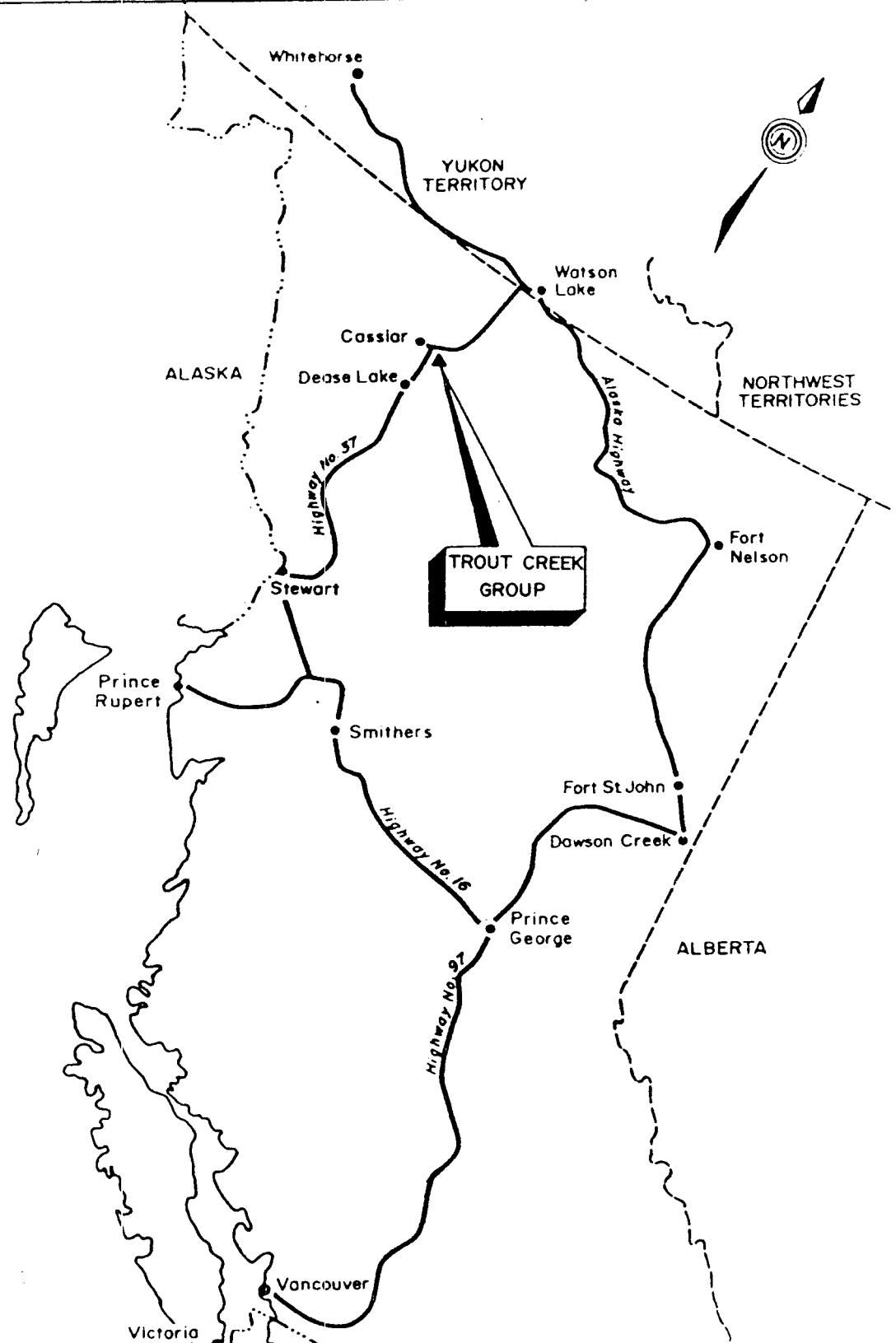


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" 16-III-a      "      "      "	"
" 17-III-a      "      "      "	"
" 17-IV-a      "      "      "	"
" 18-III-a      "      "      "	"
" 18-IV-a      "      "      "	"
" 4-I-b      Magnetometer Geophysical Survey (gradient) Scale - 1:2,500	"
" 5-II-b      "      "      "      "	"
" 17-III-b      "      "      "      "	"
" 18-IV-b      "      "      "      "	"
" 4-I-c      Magnetometer Geophysical Survey (total field) Scale - 1:2,500	"
" 5-II-c      "      "      "      "	"
" 17-III-c      "      "      "      "	"
" 18-IV-c      "      "      "      "	"



TROUT CREEK GROUP

INDEX MAP

# ERICKSON GOLD CAMP

FEB. 20, 1986

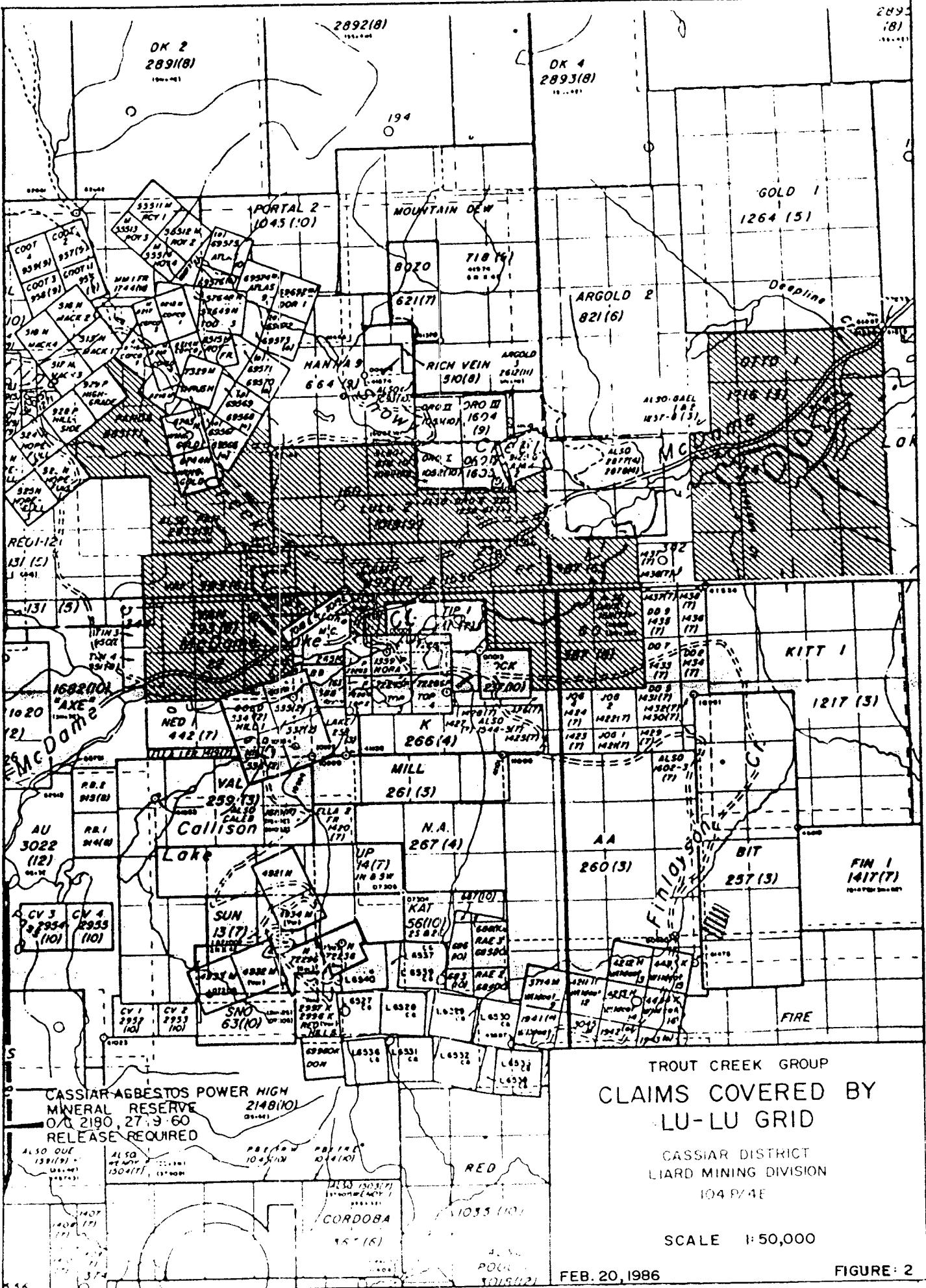
100 50 0 100 200 km

SCALE 1:7,500,000

FIGURE 1

## 1.0 CLAIM RECORD - TROUT CREEK GROUP

Claim Name	Record No.	Record Date	Owner	Units
Camp	0897	30/Jul/79	EGM	8
Diane Fr.	3137	3/Jul/84	EGM	1
Panda	0885	20/Jul/79	EGM	20
Lu Fr.	3362	2/Jul/85	EGM	1
Winggold 1	6743	10/Oct/57	EGM	1
Winggold 2	6744	10/Oct/57	EGM	1
Katie #6 Fr.	7018	22/May/58	EGM	1
Katie #5 Fr.	7019	22/May/58	EGM	1



## 2.0 INTRODUCTION

During the 1985 field season a reconnaissance-level geological mapping and geophysics program was undertaken by Erickson Gold Mining Corp. on the Lulu grid. This grid is centered on the Camp claim but also covers part of the Panda, Diane Fr., Katie 5 Fr., Katie 6 Fr. and Panda claims of the Trout Creek Group. This report describes the methods and results of this work.

## 3.0 LOCATION AND ACCESS

The claims which are covered by the Lulu grid are located in northern-most central British Columbia, 10 kilometres east of the Cassiar townsite (Figure 1). The grid is centered at latitude 59° 15' north and longitude 129° 39' east. Access is by Highway 37 along the southern portion of the grid and by the Cassiar Highway which transects the northern portion. Four-wheel drive and bulldozer tracks allow access to the interior portions.

## 4.0 TOPOGRAPHY AND VEGETATION

The Lulu grid covers a treed area of moderate relief north of McDame Lake. Elevations vary from 920 to 1,060 metres. Troutline Creek cuts through the southwest corner of the grid within a steep ravine. Elevation change is gradual except for low bluffs in the area just north of Highway 37.

Moderate to dense growth of spruce, pine, poplar and alder covers the area. Outcrop within the grid area is sparse except for along Troutline Creek and the bluffs north of Highway 37.

## 5.0 HISTORY

Placer gold was initially discovered in the area by Henry McDame in 1874. During the next 20 years, over 65,000 ounces of gold is reported to

have been recovered from the creeks. The first mineral claims for lode gold were not staked until 1934. By 1935, most of the known showings in the area had been discovered.

There is little evidence of work done on the claims which are covered by the soil grid prior to 1984.

## 6.0 SUMMARY OF WORK

The work described by this report was performed during the period from July 24 to August 17, 1985. On August 16 and 17 two geologists mapped along grid lines of the Lulu grid and along the banks of Troutline Creek. Geology was compiled on 1:2,500 scale maps.

One geologist spent ten days of this period performing a magnetometer survey over the grid area. Results were plotted on 1:2,500 scale maps.

## 7.0 PURPOSE OF WORK

The geological mapping was undertaken to outline the basic geology within the grid area and to determine if there were structural or lithological phenomenon conducive to gold and silver bearing quartz veins.

The magnetometer survey was undertaken to delineate structures or areas which would be favourable to gold-silver bearing vein mineralization.

## 8.0 GEOLOGY AND MINERALIZATION

The area covered by the Lulu grid is predominantly underlain by Upper Devonian to Lower Mississippian Sylvester Group metavolcanics and argillite. A metasomatically altered ultramafic called listwanite also occurs within the area.

The metavolcanics exposed in outcrop north of the Cassiar Highway and in the bluffs north of Highway 37 are medium green, chlorite rich andesites which have undergone regional greenschist facies metamorphism. Carbonate alteration is commonly associated with quartz veins and stringers.

Argillite outcrops in the Troutline Creek ravine and along Snowy Creek of the grid. The argillite is dark grey to black, well bedded and weakly schistose.

Subcrop of listwanite occurs at the argillite-andesite contact along Troutline Creek. It is massive to weakly foliated, grey-green and composed of carbonate, quartz and mariposite, a chromiferous mica.

Northeasterly trending quartz veins and stringers are occassionally present in the andesites at various locations throughout the grid area. Numerous east-west trending quartz veins containing minor pyrite and tetrahedrite occur in the andesite along Troutline Creek near the argillite-andesite contact.

## 9.0 GEOPHYSICS

### 9.1 Field Procedures

The magnetometer survey was run on the central part of the Lulu grid which consists of 1800 metres of E-W baseline and eleven N-S lines. A map of the grid location is included with this report. Work was performed by one geologist over 10 days during the period July 24 to August 3, 1985.

Two EDA Omnimag IV Magnetometers were used simultaneously for the survey. One Omnimag IV magnetometer was set up as a stationary base station taking total magnetic field readings at ten second intervals using a total field remote sensor. The second magnetometer was carried around the grid and used to take readings at ten meter stations. This magnetometer was used with a gradiometer probe containing a top sensor

LEGEND - SYLVESTER GROUPMISSISSIPPIAN TO (?) PERMIAN

## SYLVESTER GROUP

## Interbedded Sediments - 5D

- 5Da** Greywacke
- 5Db** Siltstone
- 5Dc** Sandstone
- 5Dd** Argillite
- 5De** Limestone (continuous pods)
- 5Df** Chert, ribbon chert, interbedded chert and argillite

## Interbedded Volcanics - 5C

- 5Ca** Massive meta-basalt to andesite flows, without pillows, occasional local phenocrysts of feldspar or pyroxene.
- 5Cb** Meta-basalt to andesite tuff breccia and/or flow breccia, with local phenocrysts of feldspar or pyroxene, pillow volcanics.
- 5Cc** Rhyolite, sills and/or dykes.
- 5Cd** Argillaceous tuff and breccia.
- 5Ce** Cherty tuff, tuffaceous chert.
- 5B** Undifferentiated metasediments: Chert, tuff chert, includes some argillite, in northeast well layered chert - phyllite, ribboned chert and argillite.
- 5A** Argillite, siltstone, chert, quartzite limestone pebble conglomerate, tuff includes numerous diabase and andesite sills.

which measured total magnetic field and a lower sensor which, in conjunction with the top sensor, measures the vertical gradient of the magnetic flux lines. Since the top sensor of the gradiometer probe measures total magnetic field it is affected by diurnal drift. To compensate for this drift the magnetometer is synchronized with the base station to read at the same ten second intervals. Synchronization allows the readings taken by the field magnetometer to be fed into the base station which then corrects them for diurnal drift according to the variations in its own set of magnetic field readings. This correction occurs at the end of the day when the two magnetometers are hooked together to a printer using an interconnect cable. The readings from the field magnetometer are dumped into the base station, corrected, and then printed onto thermal paper to form a hard copy.

## 9.2 Interpretation

Contouring and interpretation of the magnetic data is precluded by the wide spacing between grid lines (200 metres) and the intervals between magnetic field readings. Since the entire area underlain by the grid is too large to be adequately mapped on the scale necessary, magnetometer surveys might better be employed at a later stage when target areas are more clearly delimited.

## 10.0 CONCLUSIONS AND RECOMMENDATIONS

A programme of follow-up soil geochemistry to better delineate anomalies within the grid area is recommended. An orientation magnetometer survey should be undertaken to determine the optimum interval for taking magnetic field readings and to determine a typical pattern encountered across mineralized quartz veins of 1-2 metres thickness.

## 11.0 LULU GRID COST STATEMENT

### GEOPHYSICAL:

A magnetometer survey was performed on a grid previously established which is centered on the camp claim but covers parts of the Lu Fraction, Diane Fraction, Katie #5 Fraction, Katie #6 Fraction, Panda, Winggold 1 and Winggold 2 Claims.

Work performed: July 24-27, 29-31, 1985 (1 man/day)  
August 1-3, 1985 (1 man/day)

### Cost:

10 man days geologist	@ \$165/day	\$ 1,650.00
1 man day report writing	@ \$165/day	165.00
1 man day drafting	@ \$140/day	140.00
12 days room and board	@ \$ 50/day	600.00
10 days magnetometer rental	@ \$150/day	\$ 1,500.00
5 days truck rental	@ \$ 50/day	250.00

TOTAL GEOPHYSICAL

4305.00  
\$18280.00  
=====

### GEOLOGICAL:

The grid upon which the magnetometer survey was performed was mapped over 2 days by 2 geologists.

Work performed: August 16, 17 (2 men)

## Cost:

4 man days geologist	@ \$165/day	\$ 660.00
1 day report writing/drafting	@ \$165/day	165.00
5 days room and board	@ \$ 50/day	250.00
2 days truck rental	@ \$ 50/day	100.00
Drafting supplies		25.00

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TOTAL GEOLOGICAL	\$ 1,200.00
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GRAND TOTAL	\$ 5,505.00
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## 12.0 STATEMENT OF QUALIFICATIONS

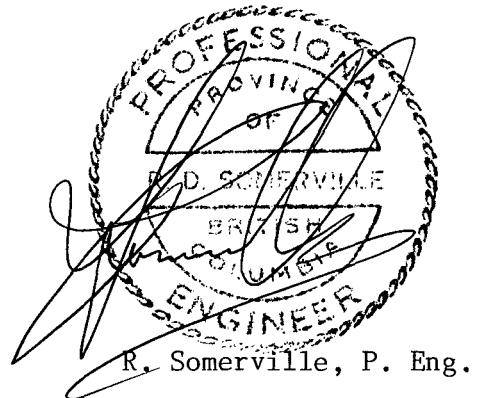
I, Eric Dussell, of 9 - 2157 Banbury Road, North Vancouver, B.C., do hereby certify that:

I hold a B.Sc. degree in Geology obtained at the University of Washington, Seattle, and an M.Sc. degree in Geology from Western Washington University, Bellingham. I have practiced my profession for six years.

I am author of this report, which is based upon work conducted under the supervision of R. Somerville, P. Eng., during the 1985 field season on the claims covered by the Trout Creek Group for Erickson Gold Mining Corp. near Cassiar, British Columbia.



E. Dussell, M.Sc.



R. Somerville, P. Eng.

STATEMENT OF QUALIFICATIONS

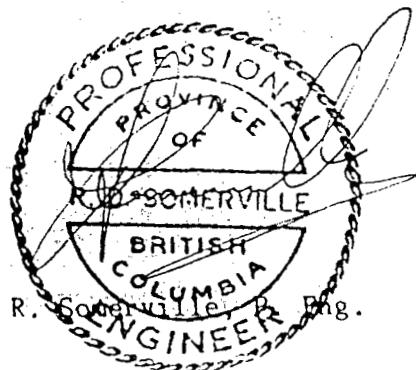
I, Hans Smit, of 500 - 151 West Esplanade Street, North Vancouver, British Columbia, do hereby certify that:

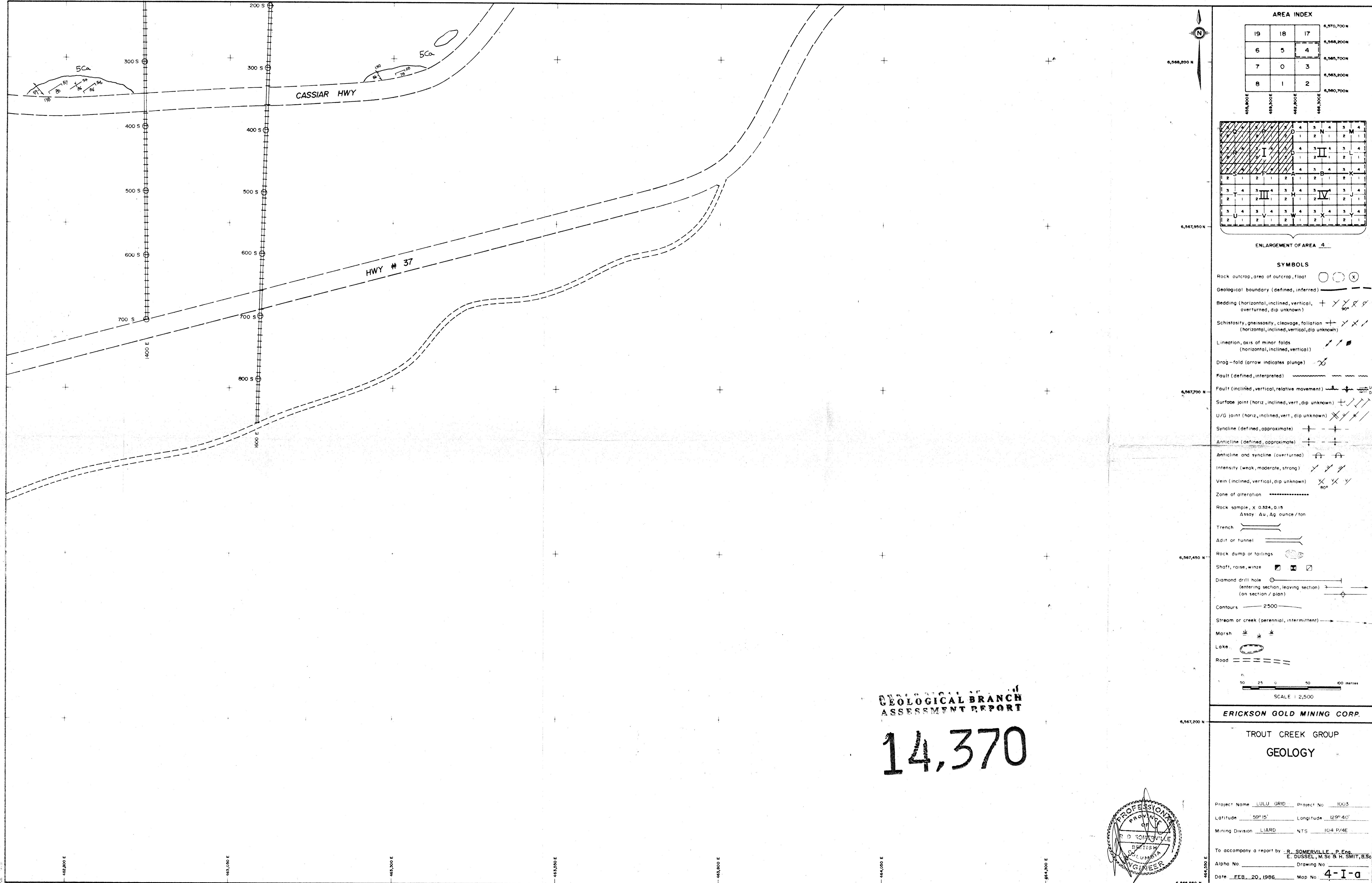
I hold a B.Sc. degree in Geology obtained at the University of British Columbia, Vancouver. I have practiced my profession for four years.

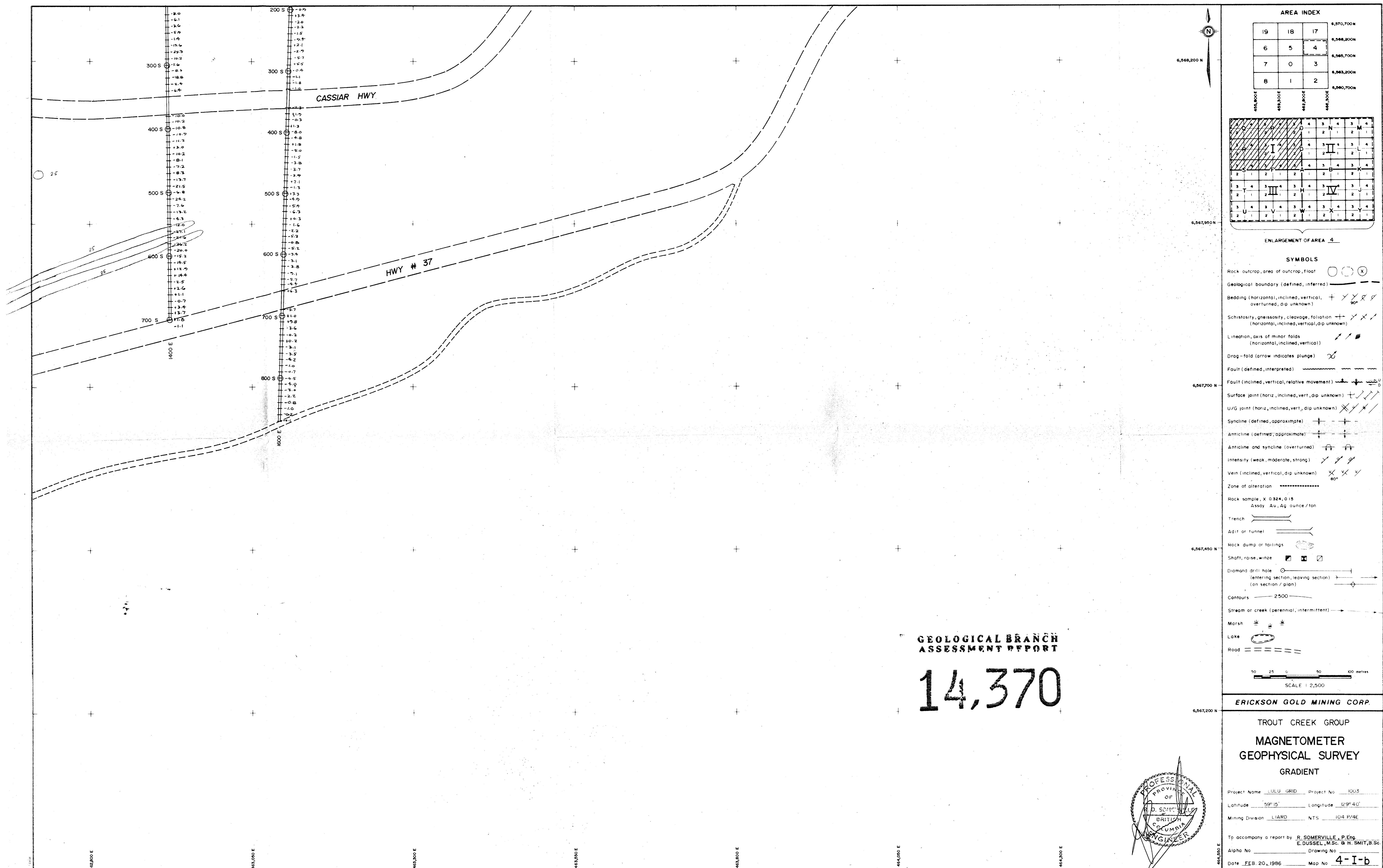
I am author of this report, which is based upon work conducted under the supervision of R. Somerville, P. Eng., during the 1985 field season on the Beaver Claims for Erickson Gold Mining Corp. near Cassiar, British Columbia.

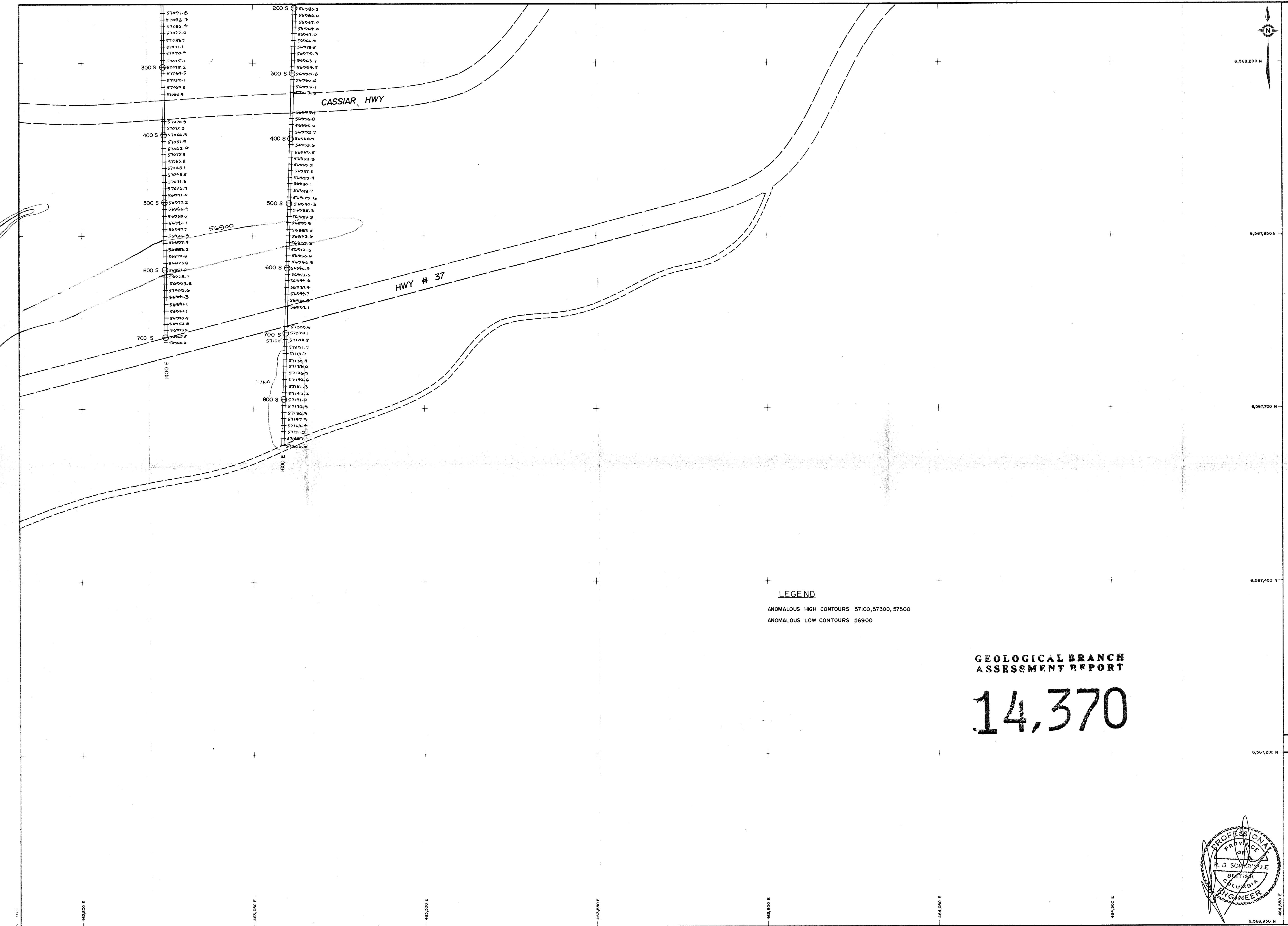


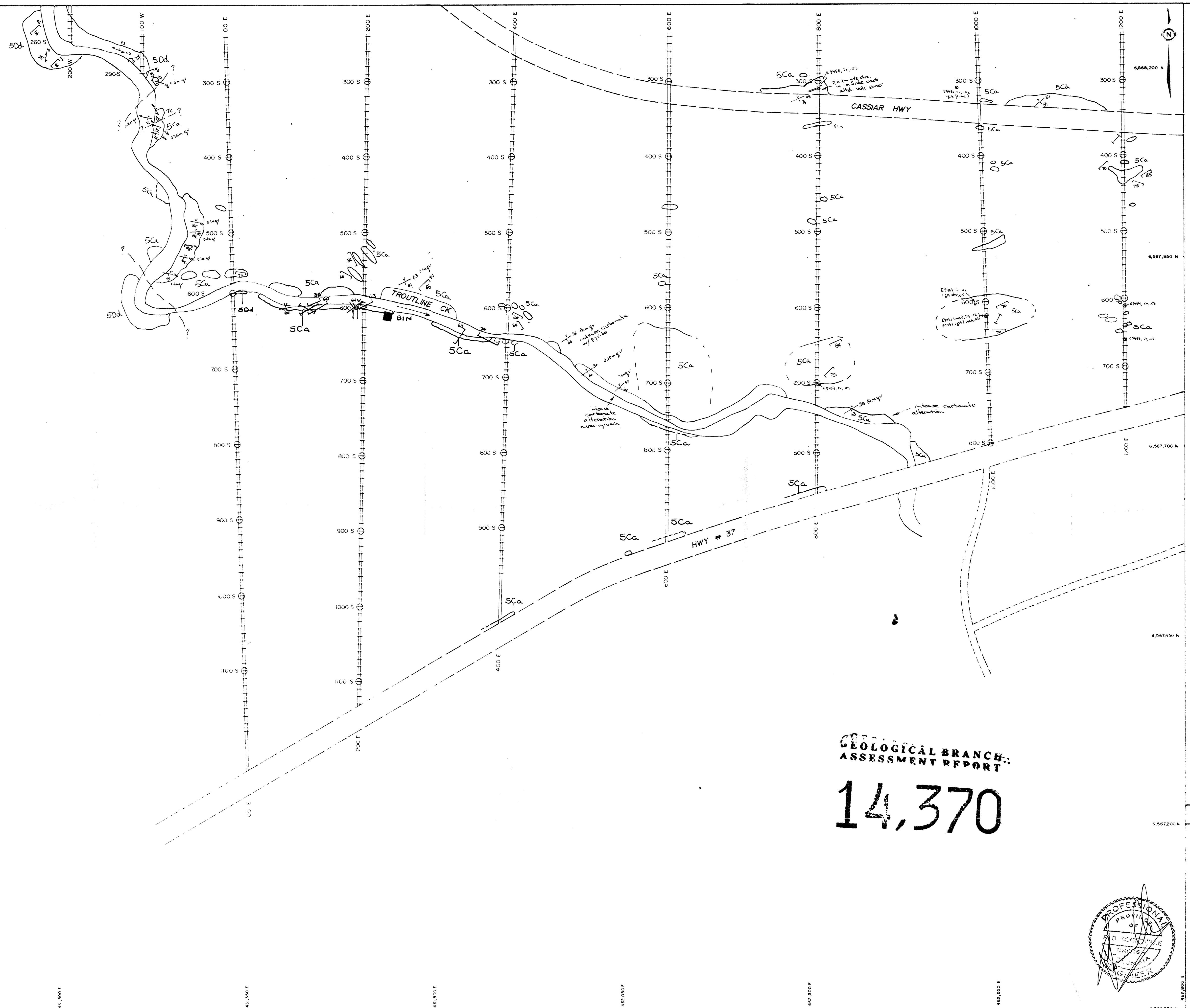
H. Smit, B.Sc.





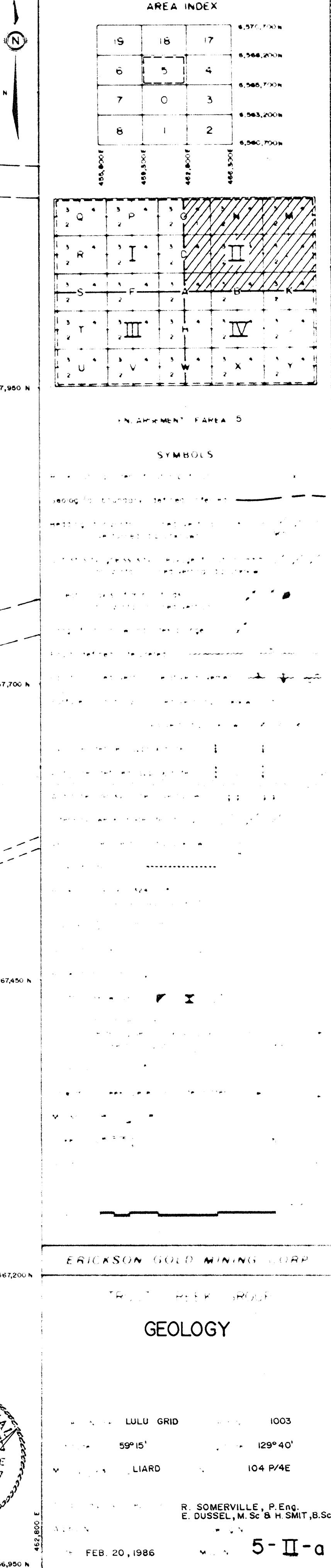
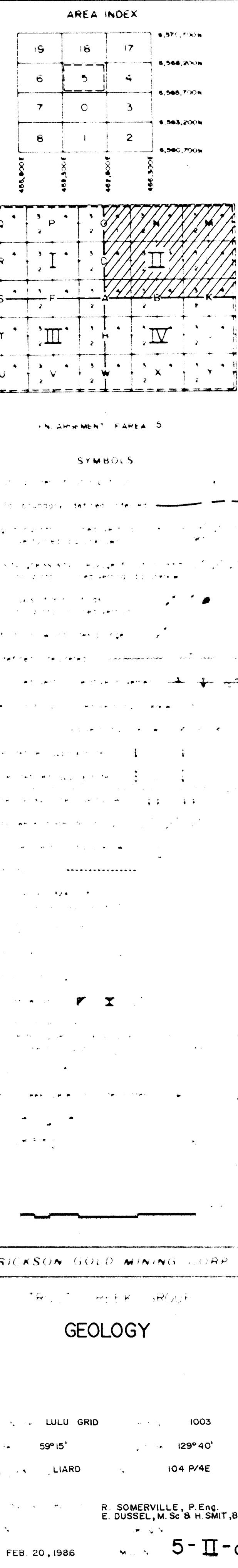


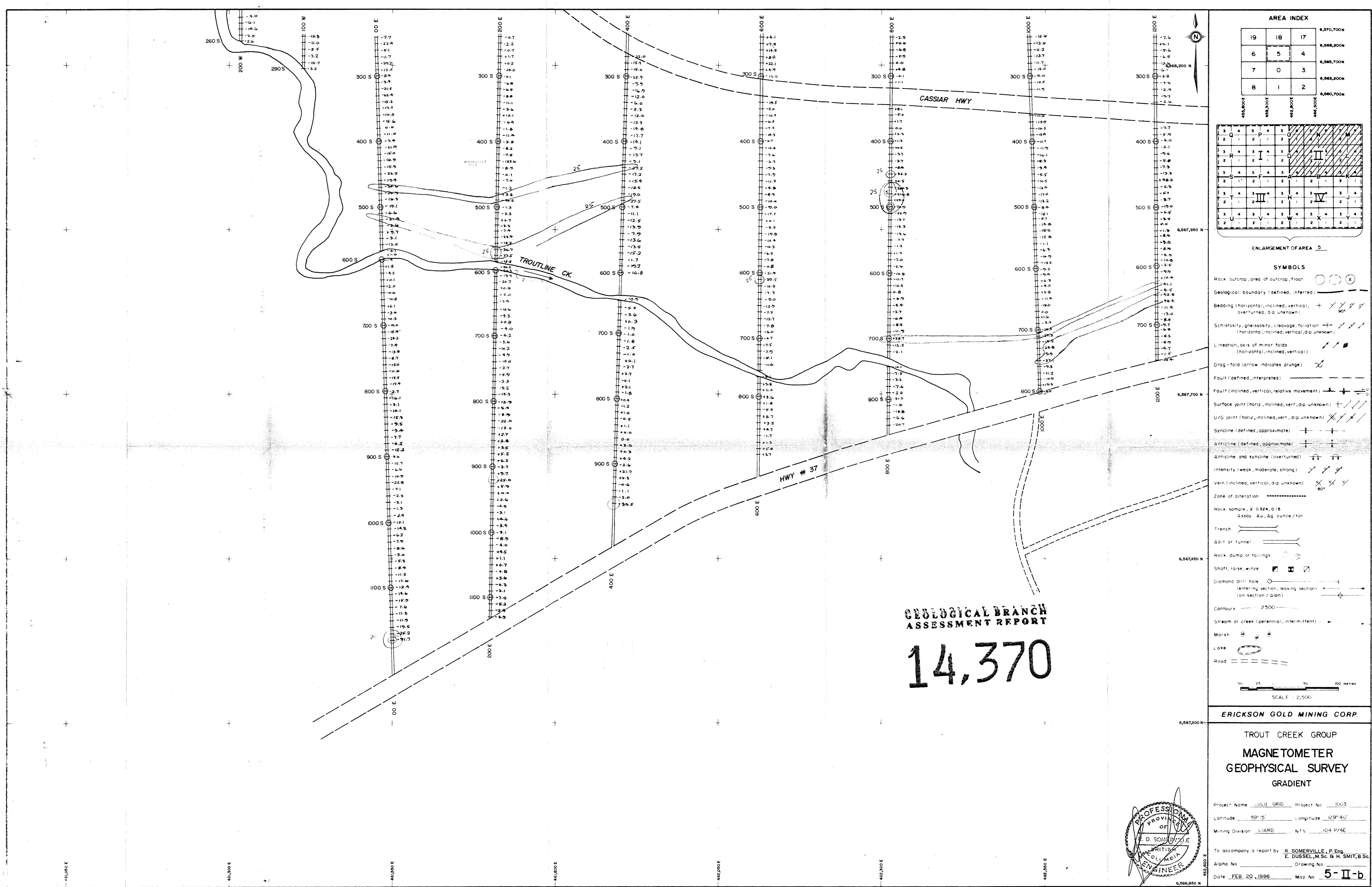


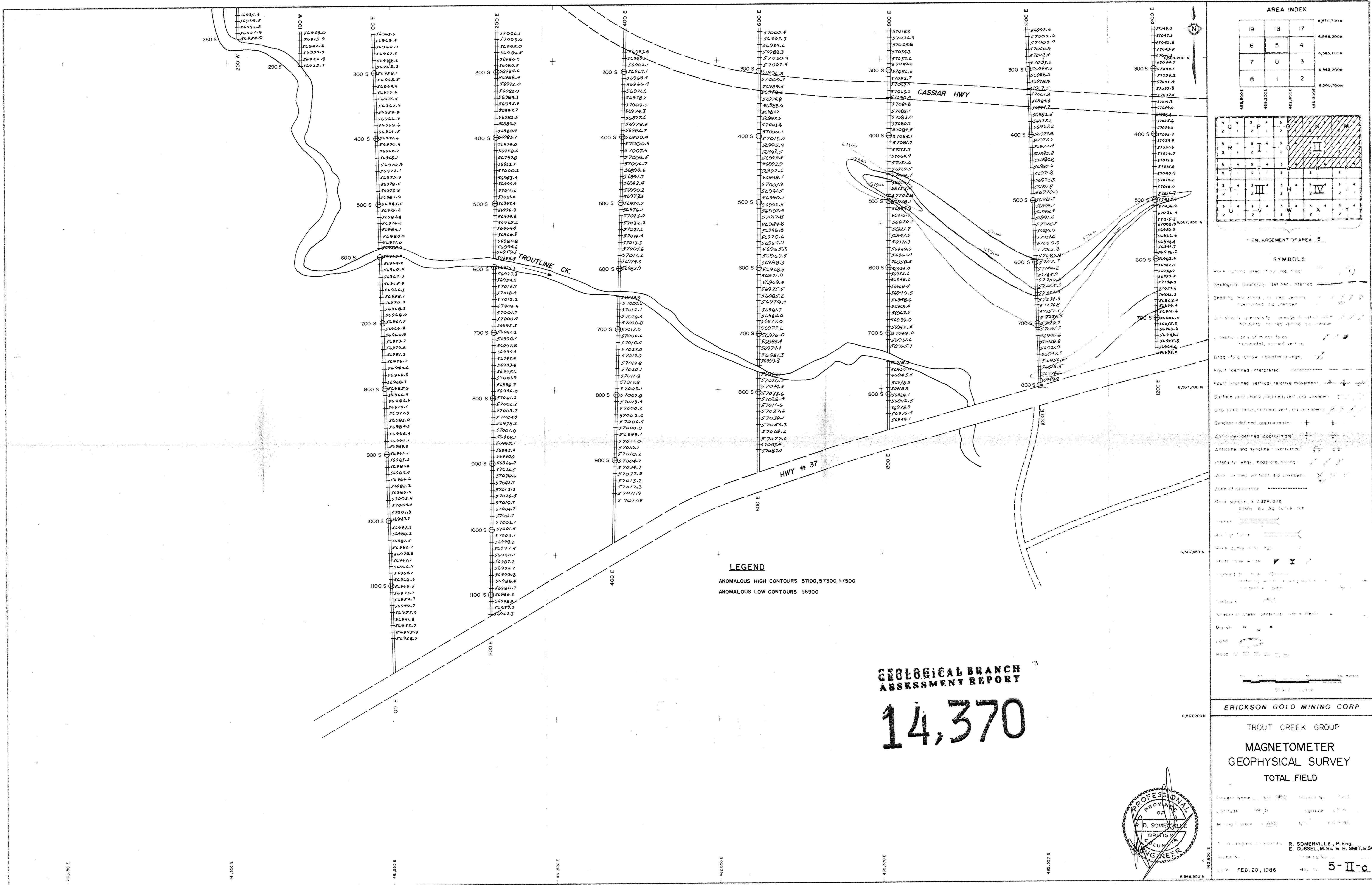


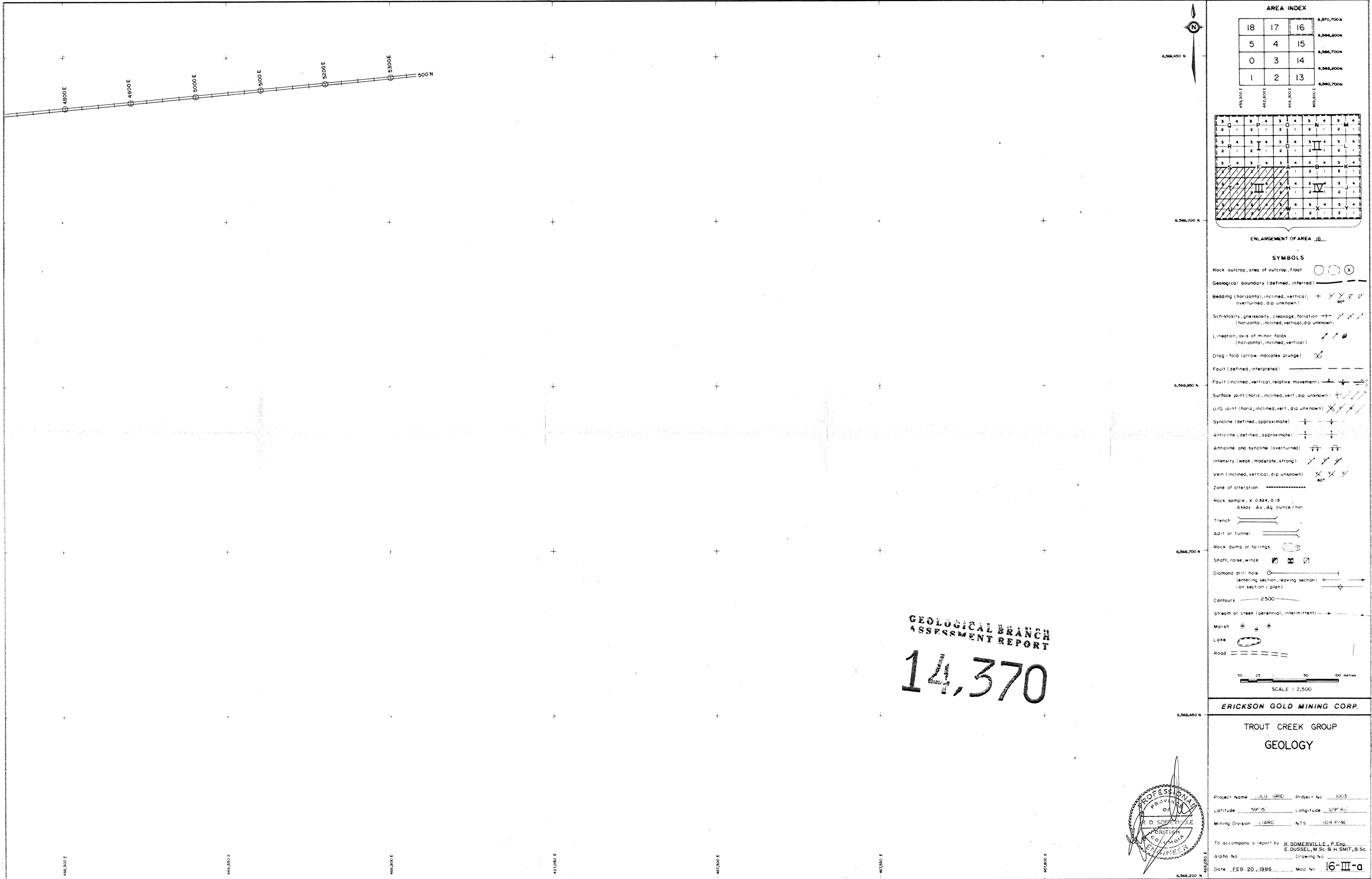
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

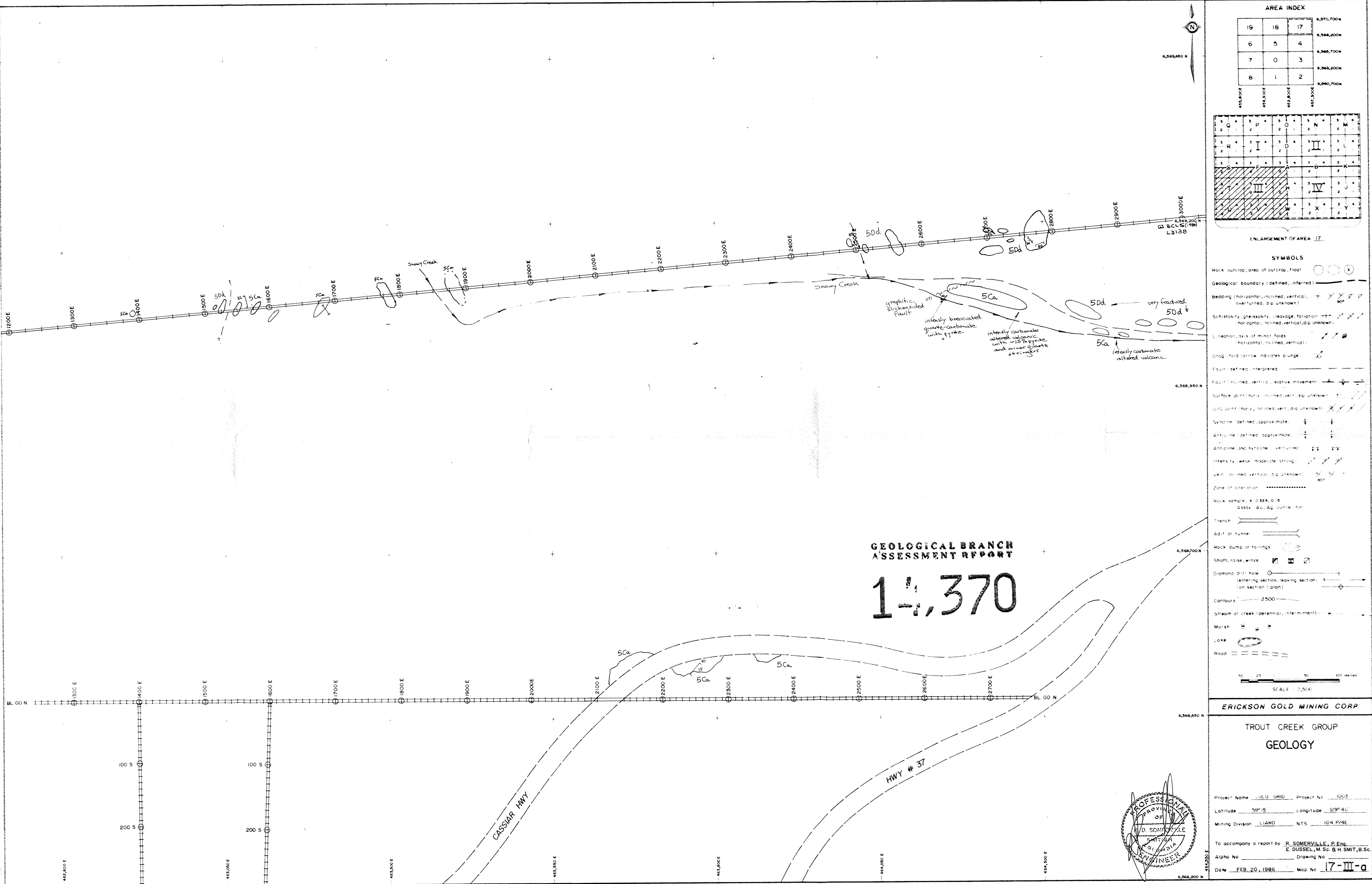
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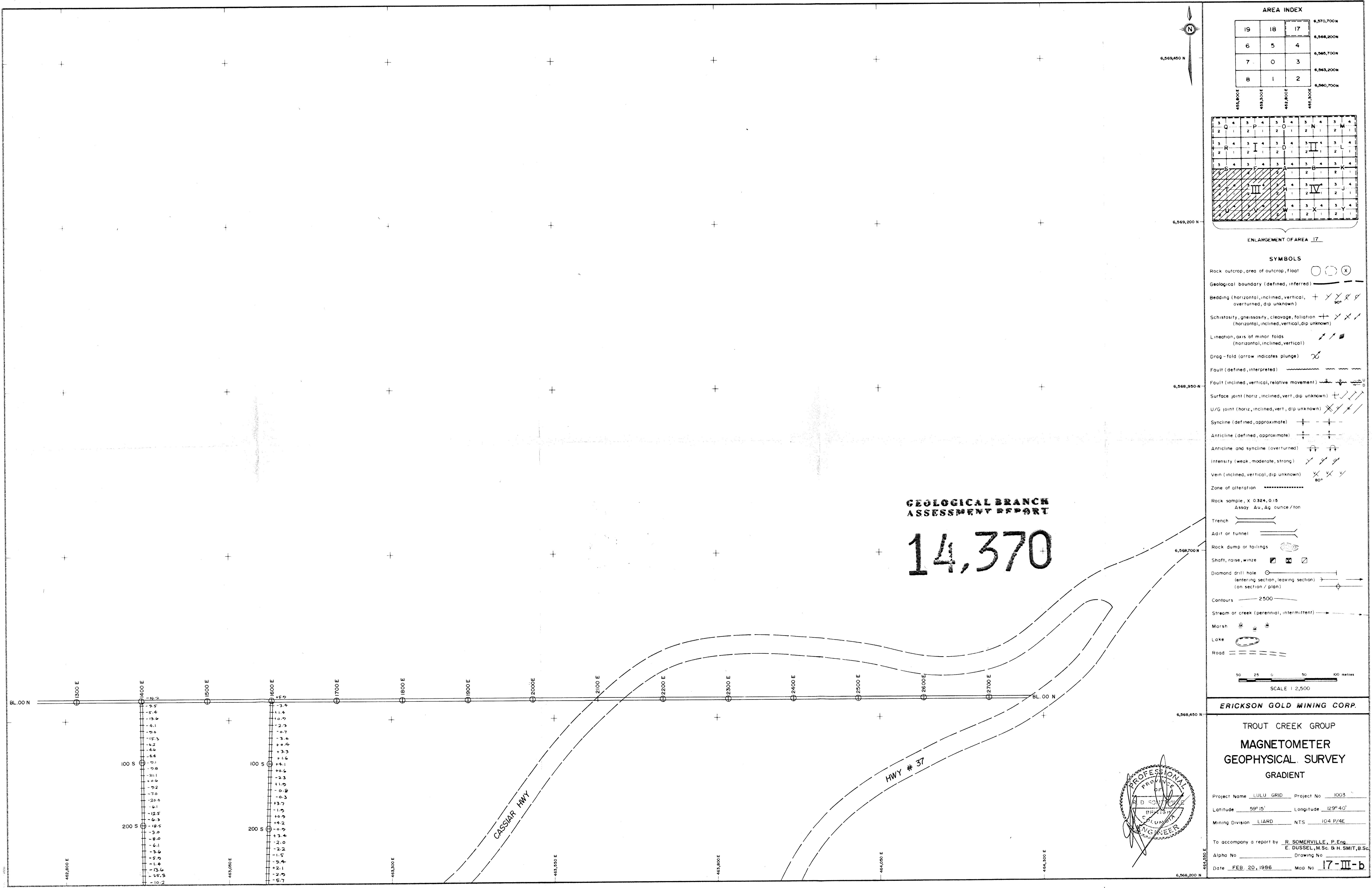






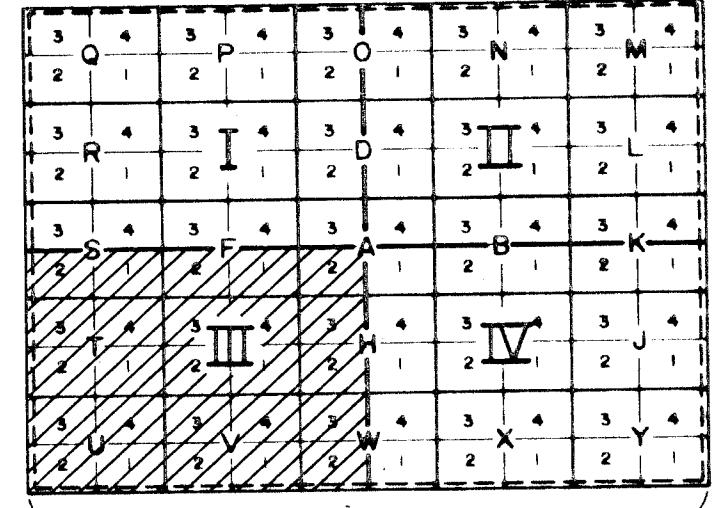






## AREA INDEX

19	18	17
6	5	4
7	0	3
8	1	2



ENLARGEMENT OF AREA 17

## SYMBOLS

- Rock outcrop, area of outcrop, float
- Geological boundary (defined, inferred)
- Bedding (horizontal, inclined, vertical, + Y X S 90° overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation ++ X X (horizontal, inclined, vertical, dip unknown)
- Lineation, axis of minor folds (horizontal, inclined, vertical) ↗ ↘ ↙ ↘
- Drag-fold (arrow indicates plunge) ↘ ↖ ↗ ↖
- Fault (defined, interpreted)
- Fault (inclined, vertical, relative movement) ↗ ↖ ↗ ↖
- Surface joint (horiz, inclined, vert, dip unknown) + / / /
- U/G joint (horiz, inclined, vert, dip unknown) X X X X
- Syncline (defined, approximate)
- Anticline (defined, approximate)
- Anticline and syncline (overturned) ↗ ↖ ↗ ↖
- Intensity (weak, moderate, strong) X X X X
- Vein (inclined, vertical, dip unknown) X X X X 80°
- Zone of alteration -----
- Rock sample, X 0.324, 0.15 Assay Au, Ag ounce/ton
- Trench
- Adit or tunnel
- Rock dump or tailings
- Shaft, raise, winze
- Diamond drill hole (entering section, leaving section) ↗ ↖ ↗ ↖
- Contours — 2500
- Stream or creek (perennial, intermittent)
- Marsh
- Lake
- Road

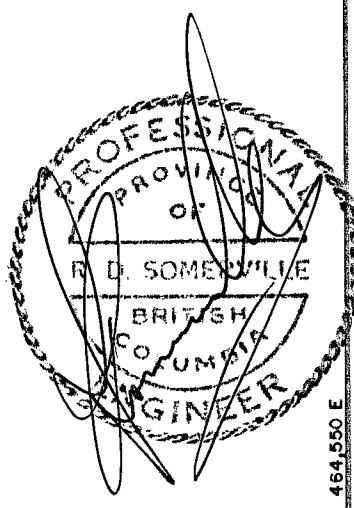
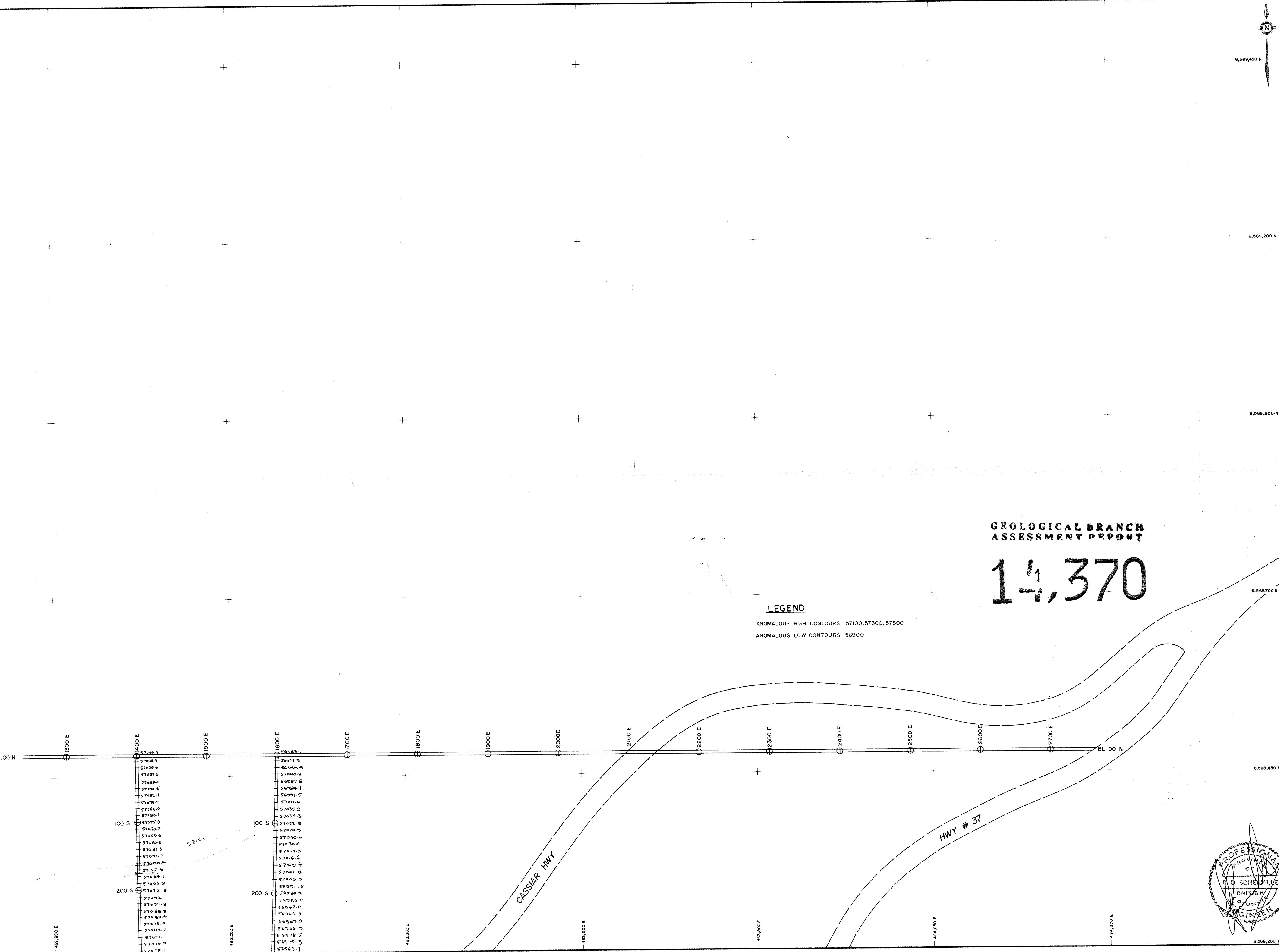
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SCALE 1:2,500

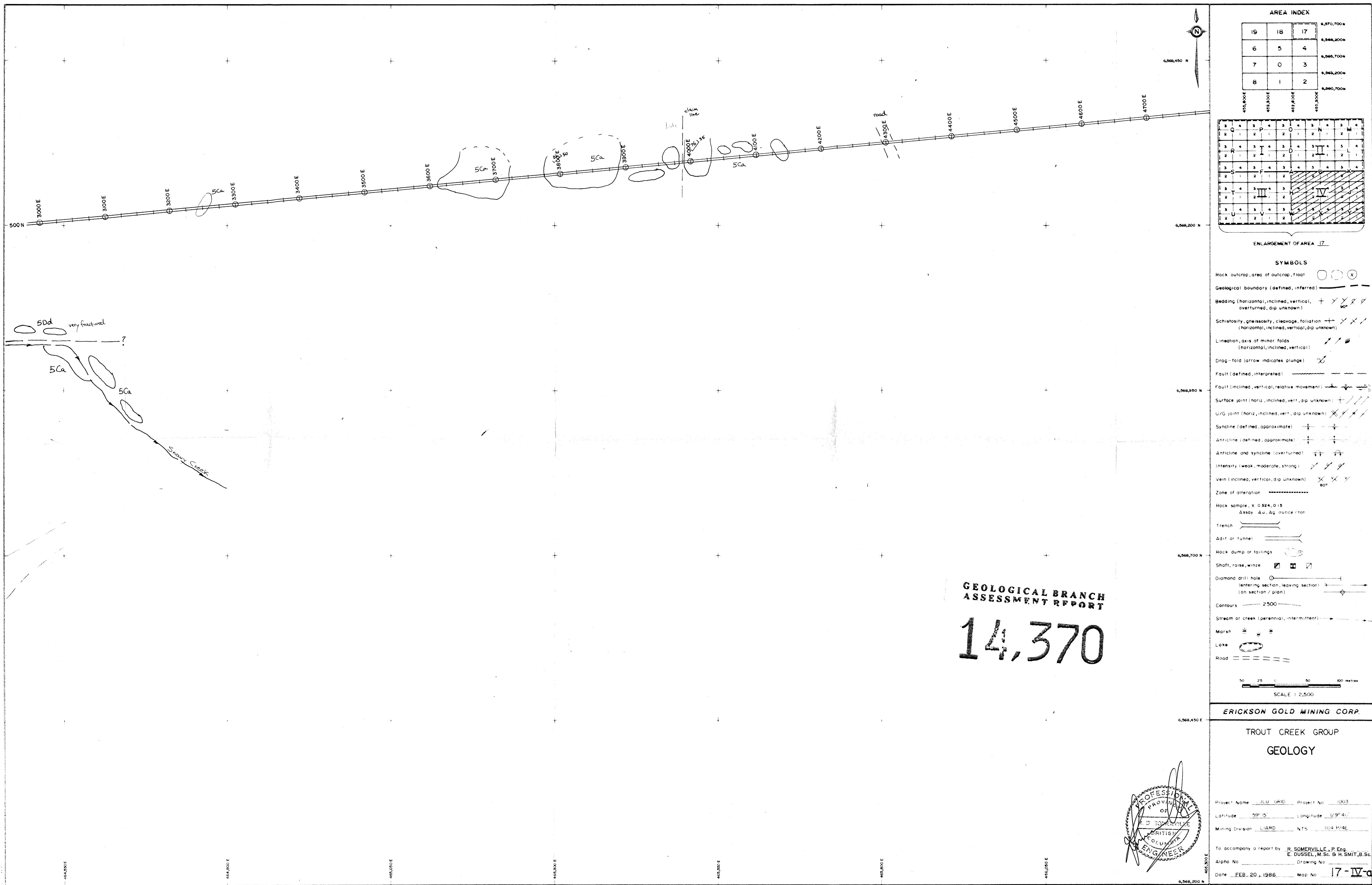
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GEOLOGICAL BRANCH  
ASSESSMENT REPORT

## LEGEND

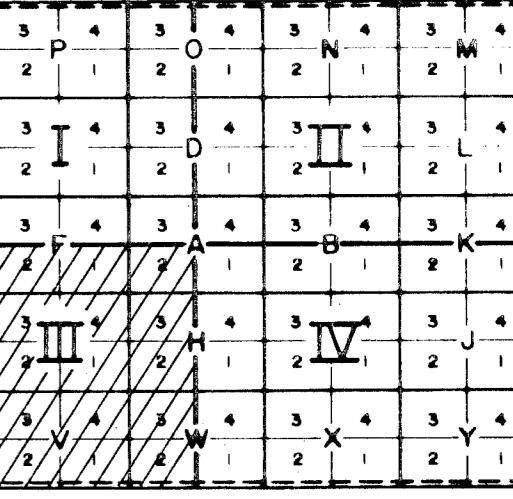
ANOMALOUS HIGH CONTOURS 57100, 57300, 57500  
ANOMALOUS LOW CONTOURS 56900





## AREA INDEX

19	18	17
6	5	4
7	0	3
8	1	2



ENLARGEMENT OF AREA 18

## SYMBOLS

- Rock outcrop, area of outcrop, float
- Geological boundary (horizontal, inferred)
- Bedding (horizontal, inclined, vertical, overturned, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal, inclined, vertical, dip unknown)
- Lineation, axis of minor folds (horizontal, inclined, vertical)
- Drag-fold (arrow indicates plunge)
- Fault (defined, interpreted)
- Fault (inclined, vertical, relative movement)
- Surface joint (horiz., inclined, vert., dip unknown)
- U/G joint (horiz., inclined, vert., dip unknown)
- Syncine (defined, approximate)
- Anticline (defined, approximate)
- Anticline and syncline (overturned)
- Intensity (weak, moderate, strong)
- Vein (inclined, vertical, dip unknown)
- Zone of alteration

Rock sample, X 0324, 015  
Assay: Au, Ag ounce/ton

Trench

Adit or tunnel

Rock dump or tailings

Shaft, raise, winze

Diamond drill hole

(entering section, leaving section)

(on section / plan)

Contours 2500

Stream or creek (perennial, intermittent)

Marsh

Lake

Road

50 25 0 50 100 metres

SCALE 1:2,500

ERICKSON GOLD MINING CORP.

TROUT CREEK GROUP

GEOLOGY

Project Name: LULU GRID Project No: 1003  
 Latitude: 59°15' Longitude: 129°40'  
 Mining Division: LIARD NTS: 104 P/24E  
 To accompany report by: R. SOMERVILLE, P.Eng.  
 E. DUSSEL, M.Sc. B.H. SMITH, B.Sc.  
 Alpha No: Drawing No:  
 Date: FEB. 20, 1986 Map No: 18-III-a

PROFESSIONAL  
 PRIVATE  
 PRACTICE  
 R.D. SOMERVILLE  
 BRITISH  
 COLUMBIA  
 ENGINEER

14,370

5Ca?

66-555

5Dd

? 2500

Stream or creek (perennial, intermittent)

Marsh

Lake

Road

50 25 0 50 100 metres

SCALE 1:2,500

ERICKSON GOLD MINING CORP.

TROUT CREEK GROUP

GEOLOGY

Project Name: LULU GRID Project No: 1003  
 Latitude: 59°15' Longitude: 129°40'  
 Mining Division: LIARD NTS: 104 P/24E  
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 Date: FEB. 20, 1986 Map No: 18-III-aPROFESSIONAL  
 PRIVATE  
 PRACTICE  
 R.D. SOMERVILLE  
 BRITISH  
 COLUMBIA  
 ENGINEER

