

90-40-A 8574

ASSESSMENT REPORT

GEOCHEMICAL AND PROSPECTING REPORT

ON THE ORANGE CLAIM (20 UNITS)

TOODOGGONE RIVER AREA

OMINECA MINING DIVISION

by

MOHAN R. VULIMIRI

AND

SHEILA A. CRAWFORD

LOCATION:

N.T.S. 94E/7W
57°18' N Latitude
126°58' W Longitude

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

OWNER:

SEREM LTD.

OPERATOR:

SEREM LTD.

8574

DATES WORK PERFORMED: June 6, July 12, August 11 and 14, 1980

DATE:

NOVEMBER 28, 1980

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
GEOLOGY	1
MINERALIZATION AND ALTERATION	2
GEOCHEMICAL SILT SAMPLING	3
GEOCHEMICAL SOIL SAMPLING	3
GEOCHEMICAL ANALYSIS	4
INTERPRETATION	4
CONCLUSIONS AND RECOMMENDATIONS	5
REFERENCE	6
STATEMENT OF EXPENDITURES	7
CERTIFICATES OF QUALIFICATIONS	9 & 10

List of Figures

- Fig. 1. Location Map of Orange Claim.
- Fig. 2. Claim Map - Orange Claim.
- Fig. 3. Prospecting and Geology.
- Fig. 4. Silt and Soil Sample Location Map Showing Values in Gold and Silver.
- Fig. 5. Silt and Soil Sample Location Map Showing Values in Copper, Lead and Zinc.
- Fig. 6. Grid Soil Sample Location Map With Values in Gold.
- Fig. 7. Grid Soil Sample Location Map With Values in Silver.
- Fig. 8. Grid Soil Sample Location Map With Values in Copper.
- Fig. 9. Grid Soil Sample Location Map With Values in Lead.
- Fig. 10. Grid Soil Sample Location Map With Values in Zinc.

INTRODUCTION

The Orange claim, consisting of 20 units, is located approximately at 57°18' N Latitude, and 126°58' W longitude in the Toodoggone River map sheet, N.T.S. 94E/7W (Figures 1 and 2). The elevation of the property ranges from 1500 metres to 2000 metres above sea level.

Access to the property is by fixed wing plane from Smithers to Sturdee Airstrip, a distance of about 280 kilometres, and from Sturdee Airstrip to the property by helicopter, a distance of 15 kilometres.

The work consists of geochemical silt sampling, soil sampling based on a grid and contour traverse, with some prospecting. The geochemical work was conducted by R. Stowe, J. Rushton, J. Sweeney and R. MacRae, and the prospecting was carried out by S.A. Crawford, under the supervision of Mohan R. Vulimiri. The work is part of a follow up of favourable results obtained in 1979. A total of 8 silt samples, 155 soil samples and 3 rocks were sent for geochemical analysis for copper, lead, zinc, gold and silver.

The purpose of the present work was to determine the presence and nature of any base or precious metal mineralization on the property.

GEOLOGY

The claim group is underlain predominantly by multi-phase intrusion. The different phases are hornblende diorite, porphyritic monzonite and aplite dikes. The earliest phase is hornblende diorite intruded by porphyritic monzonite. These phases in turn are intruded by aplite dikes. According to Gabrielse (1975) these intrusions are

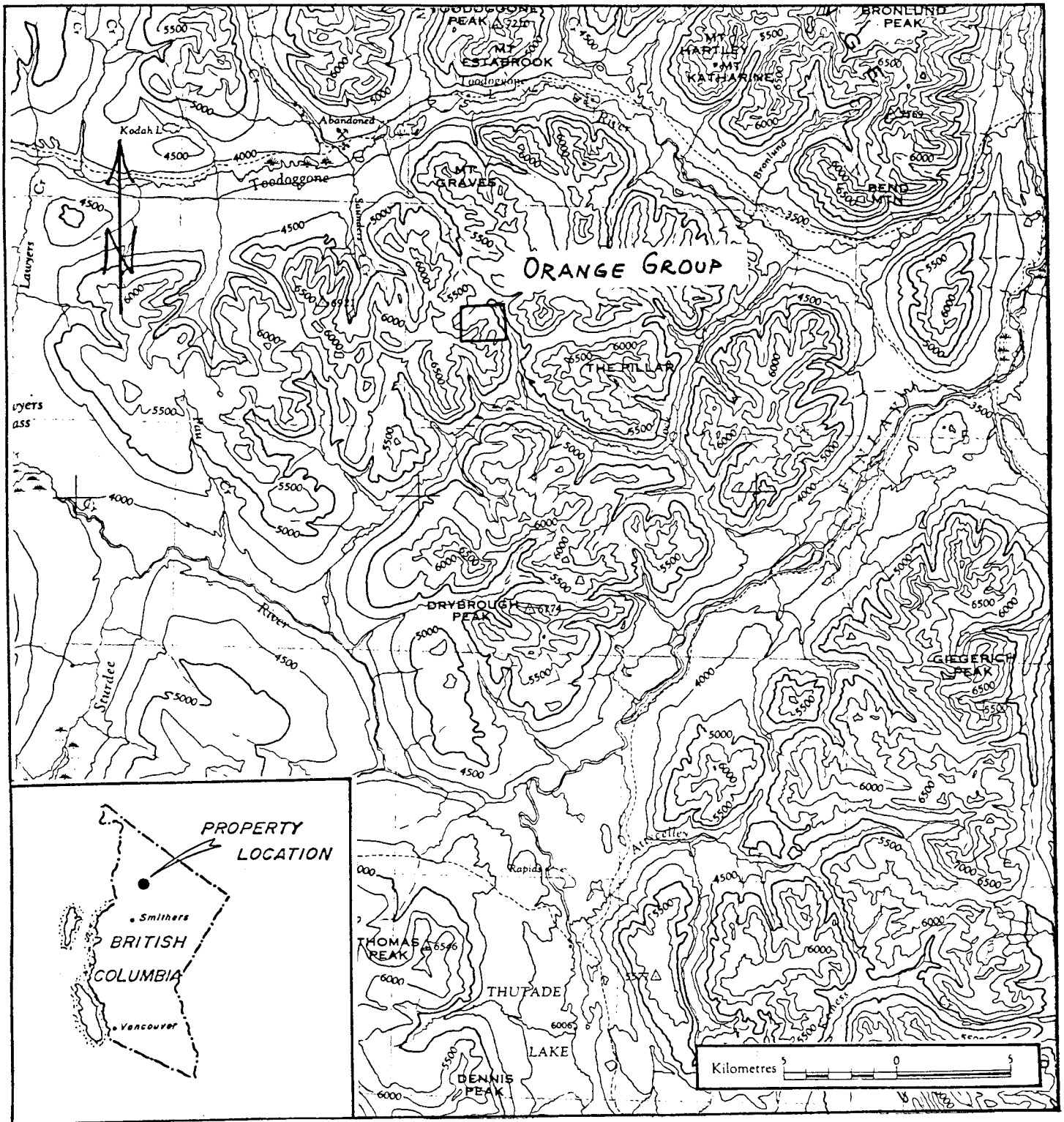


Fig. 1. Location Map of Orange Claim.

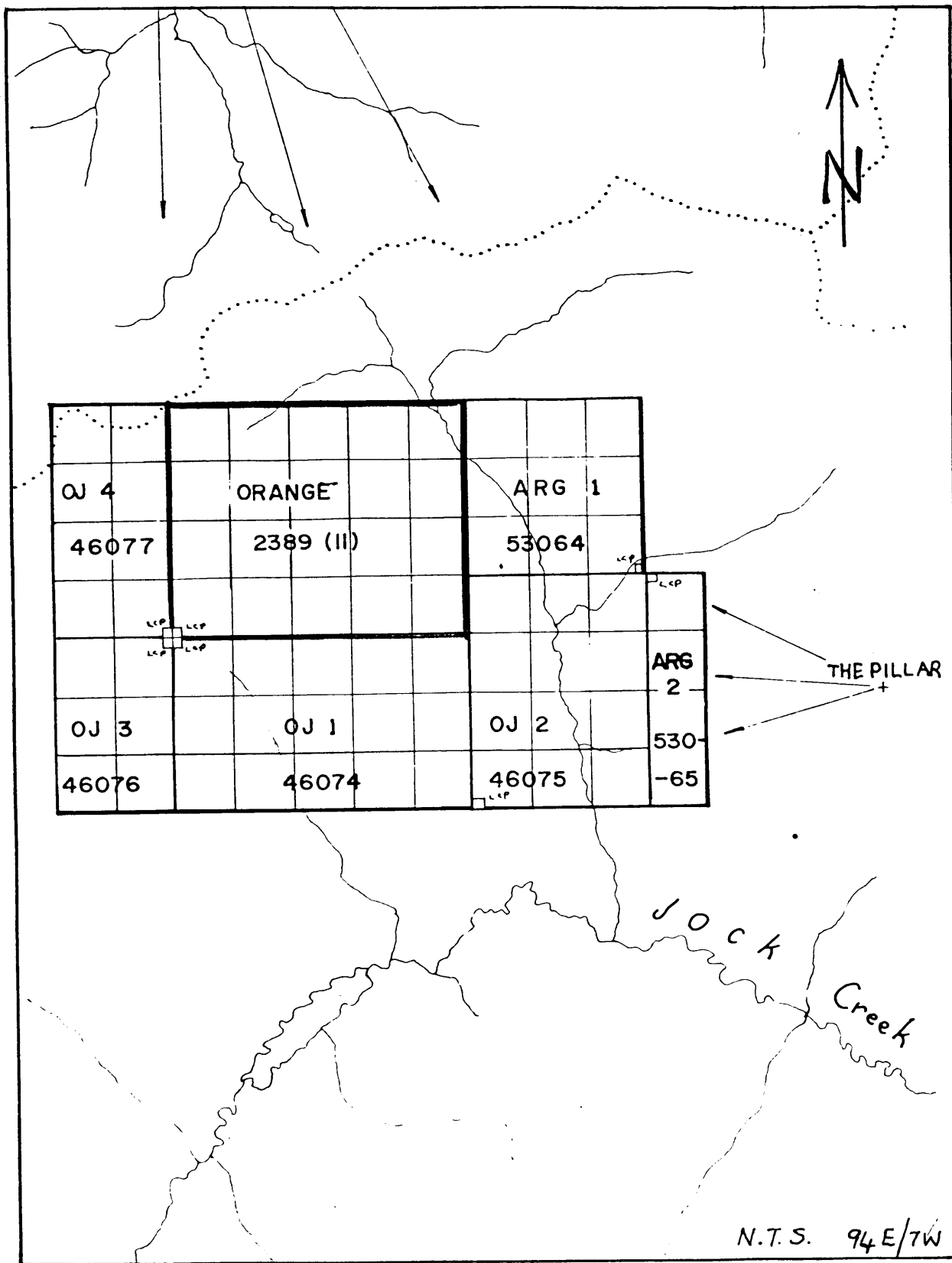


Fig. 2. Claim Map - Orange Claim

Lower Jurassic in age. Xenoliths of volcanic rocks were observed in the quartz monzonite.

Hornblende diorite is equigranular in texture, whereas the monzonite is porphyritic with euhedral grains of plagioclase, K-feldspar and biotite in fine-grained groundmass. Extensive veining, consisting of vuggy quartz, was observed in the monzonite.

Feldspar porphyry assigned to the Lower Jurassic Toodoggone volcanic rocks is intruded by the above mentioned multiphase pluton to the west of the claim block.

MINERALIZATION AND ALTERATION

The area underlain by the claims is extremely gossanous. The colour of the gossan varies from yellow-orange to rust brown. Pyrite occurs as disseminated grains throughout. Minor chalcopyrite is observed in fractures in quartz monzonite. Minor malachite and azurite occurs in the gossanous areas (Figure 3).

The mineralization is associated with strong silicification zones, extensive veining with vuggy quartz in the northeastern part of the claim block. Propylitic alteration consisting of chlorite and epidote occurs throughout the claim block.

Geochemical analysis data for individual rock grab samples is given in Table 1.

Table I. Geochemical analysis data for individual rock grab samples.

	<u>Au</u> (ppb)	<u>Ag</u> (ppm)	<u>Cu</u> (ppm)	<u>Pb</u> (ppm)	<u>Zn</u> (ppm)
SC 40-80-11	75	3.9	800	186	464
	15	330	4.3	380	5500
	20	300	5.7	28	515
					34

GEOCHEMICAL SILT SAMPLING

The silt samples were collected at 150 metre intervals depending on where suitable silt could be found. Samples of fine-grained active material, that is, under flowing water, were collected and placed in brown paper envelopes. The sample site and number were plotted on a map with a scale of 1 cm to 100 m. The gradient and flow of the stream were noted (Figures 4 and 5).

GEOCHEMICAL SOIL SAMPLING

The soil samples were collected on a contour traverse and based on a grid as part of a follow up of the silt sample results. The results are discussed later in the report. The sampling is spaced at 150 metre intervals on the contour traverse and is spaced at 50 metre and 100 metre intervals on a grid. The samples of soil were collected from the "B" horizon, where developed, or above "C" horizon, location and number plotted on a map (1 cm to 100 m) and site was marked with flagging tape (Figures 4, 5, 6, 7, 8, 9 and 10).

GEOCHEMICAL ANALYSIS

Samples were sent to Min-En Laboratories and were analysed for gold, silver, lead, zinc and copper. The analytical procedure for each element is described briefly below:

The samples are dried at 95° C. Soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

For gold, a suitable sample, weight 5 or 10 grams, is pretreated with HNO₃ and HClO₄ mixture.

After pretreatment the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

Sample solutions are prepared with Methyl Iso-Butyl Ketone for the extraction of gold.

With a set of suitable standard solutions, gold is analysed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.

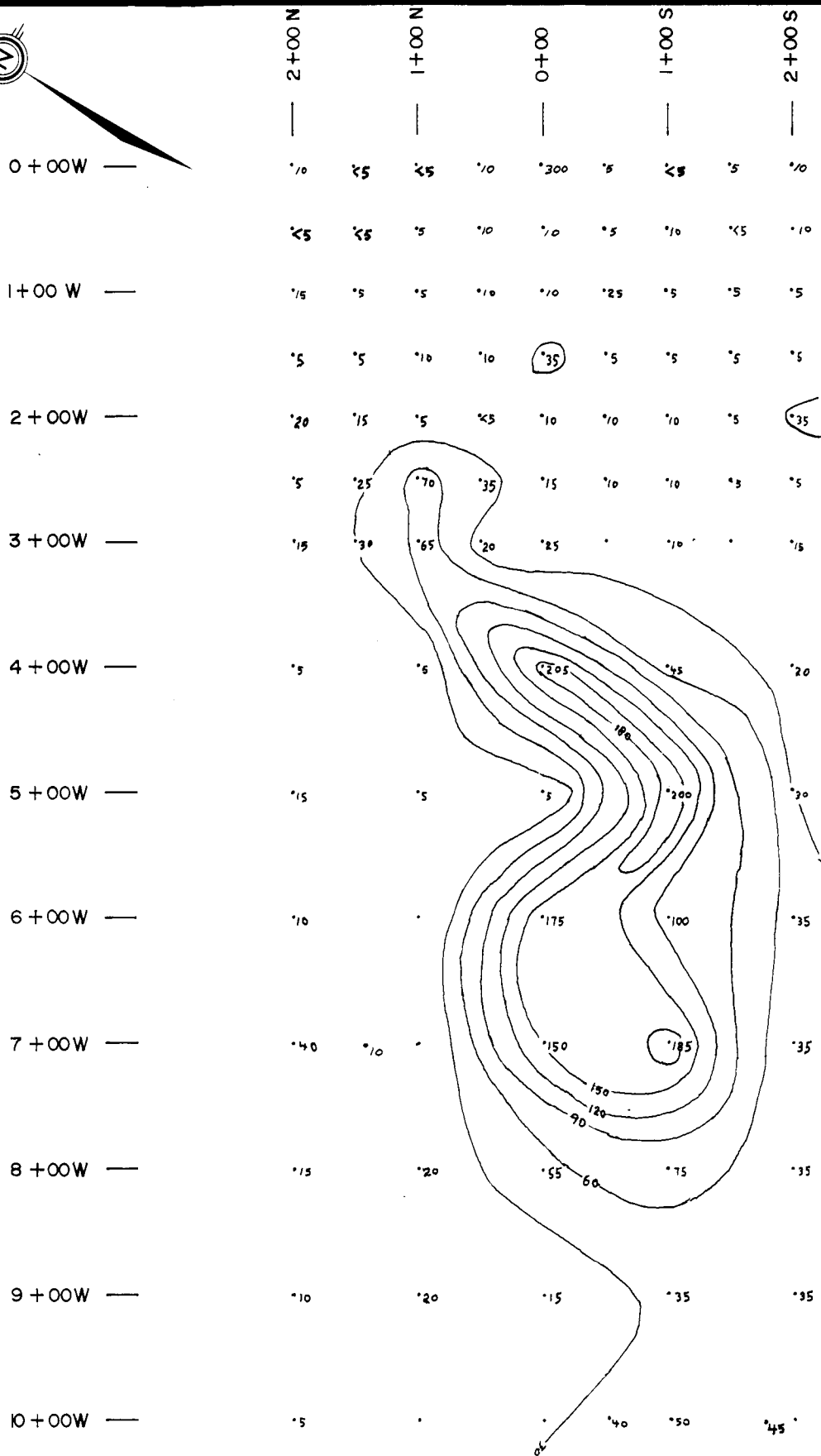
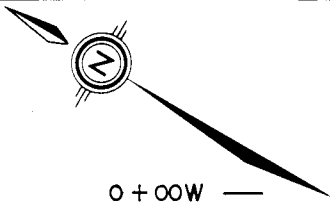
For silver, lead, zinc, and copper, samples weighing 1.0 gram are digested for 6 hours with HNO₃ and HClO₄ mixture.

After cooling, the samples are diluted to standard volume. The solutions are analysed by Atomic Absorption Spectrophotometers using the CH₂H₂-Air Flame combination.

INTERPRETATION

Silt samples returned values up to 305 ppb gold and 2.7 ppm silver, 217 ppm copper, 138 ppm lead and 635 ppm zinc. Copper is in the high background range (Figures 4 and 5).

Contour soil sampling was performed in areas which returned high silt sample values. The contour soil samples



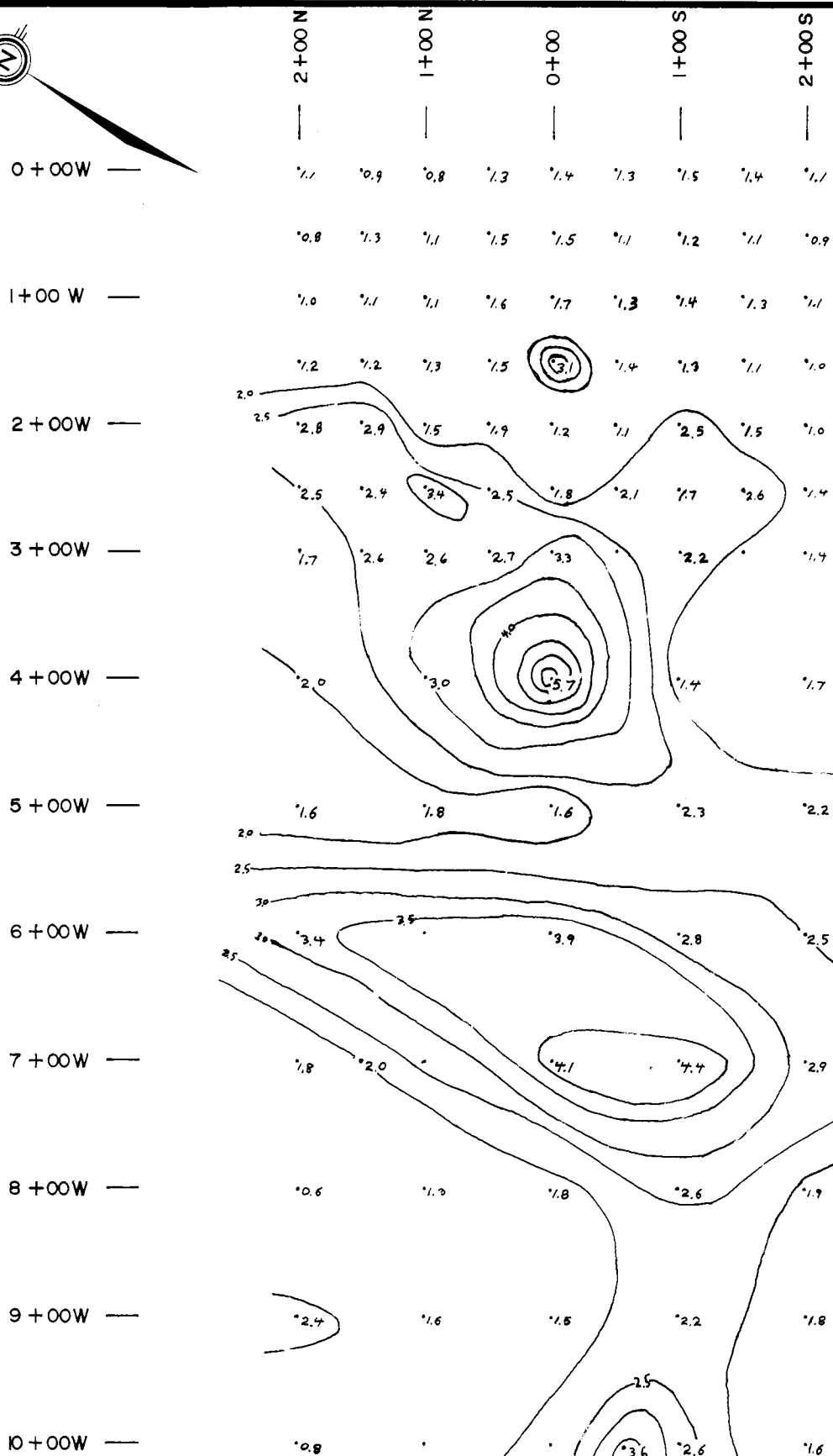
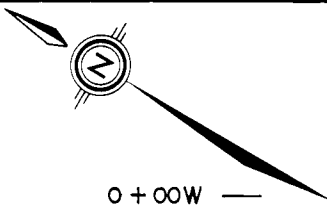
CONTOUR INTERVAL 30 ppb

S.E.R.E.M. LTD.
TOODOGGONE REGIONAL

ORANGE CLAIM
 OR. GRID
 SOIL GEOCHEMISTRY:
 GOLD

DATE: OCT. 80	DATA: M.V., SC.
N.T.S.: 94E 7W	DRAWN: DGD
SCALE: 1: 5 000	CHECKED:

FIGURE
6



CONTOUR INTERVAL 0.5 ppm
 -starting at 2.0 ppm

S.E.R.E.M. LTD.

TOODOGGONE REGIONAL

ORANGE CLAIM
OR. GRID
SOIL GEOCHEMISTRY:
SILVER

DATE: OCT. 80 DATA: M.V., S.C.

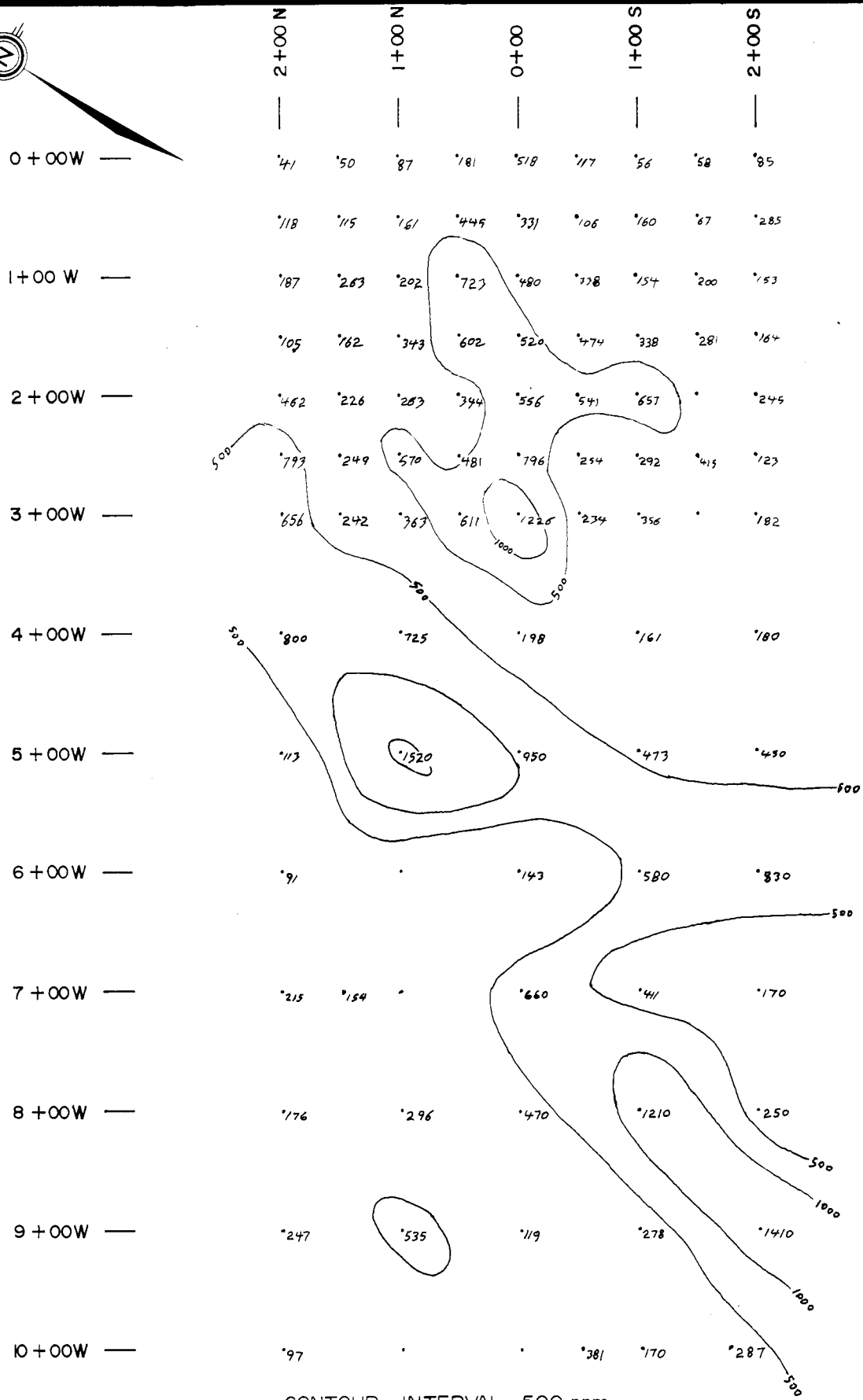
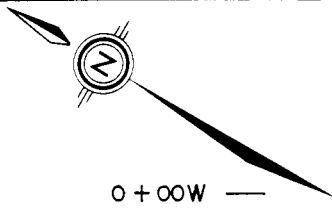
N.T.S.: 94E 7W DRAWN: DGD

SCALE: 1: 5 000 CHECKED:



FIGURE

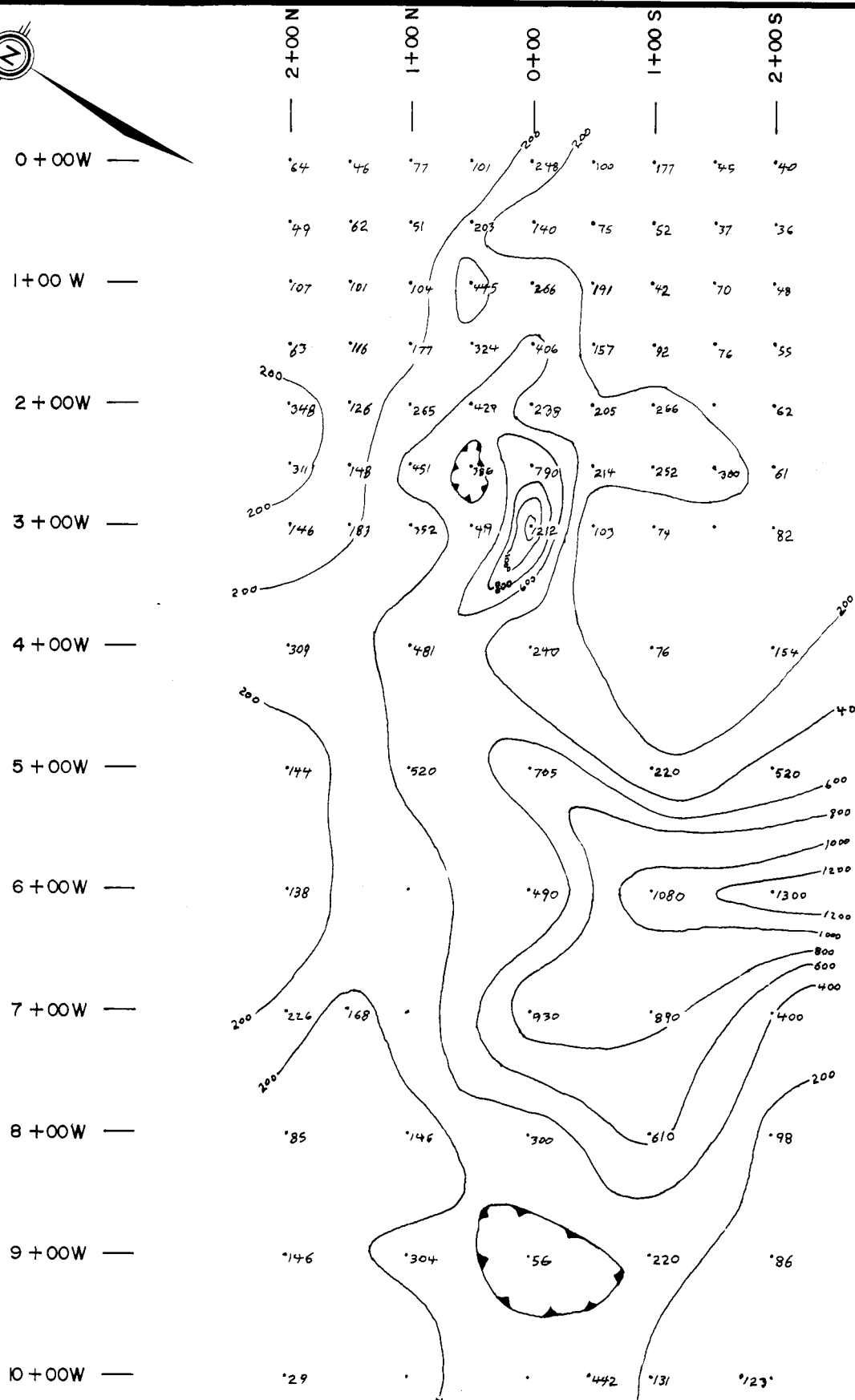
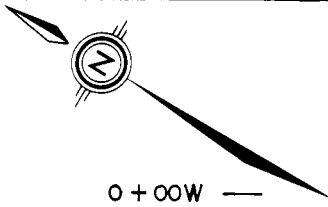
7



CONTOUR INTERVAL 500 ppm

S.E.R.E.M. LTD. TOODOGGONE REGIONAL	ORANGE CLAIM OR. GRID SOIL GEOCHEMISTRY: <u>ZINC</u>	DATE: OCT 80	DATA: M.V. SC.	FIGURE 8
		N.T.S: 94E 7W	DRAWN: DGD	
SCALE: 1: 5 000	CHECKED:			





CONTOUR INTERVAL 200 ppm

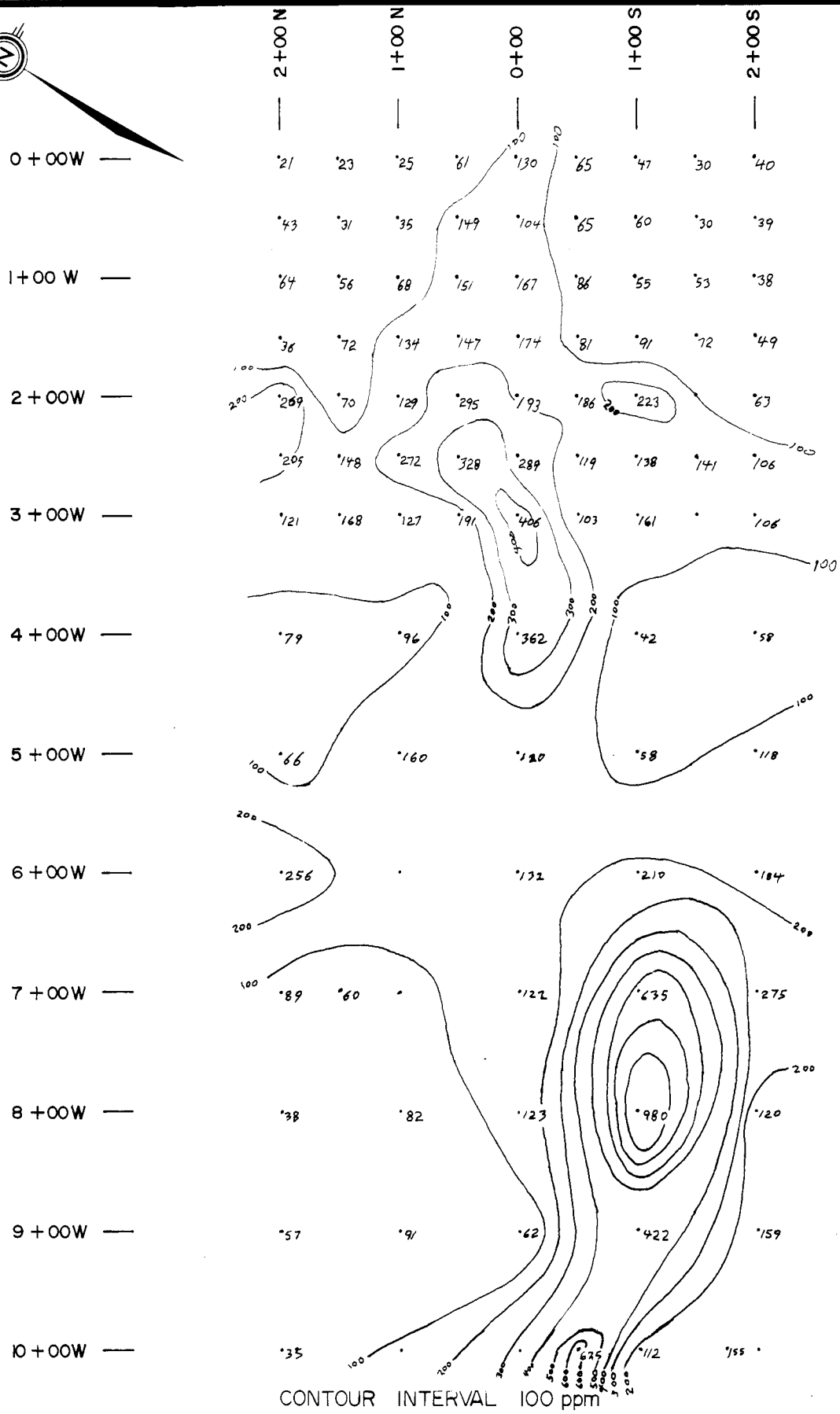
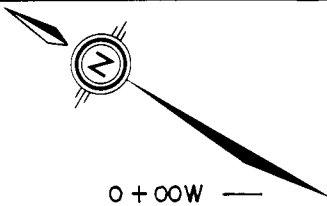
S.E.R.E.M. LTD.
TOODOGGONE REGIONAL

ORANGE CLAIM
OR. GRID
SOIL GEOCHEMISTRY:
COPPER

DATE: OCT. 80	DATE: M.V., S.C.
N.T.S.: 94E 7W	DRAWN: DGD
SCALE: 1: 5 000	CHECKED:

0 200 m

FIGURE
9



S.E.R.E.M. LTD.
TOODOGGONE REGIONAL

ORANGE CLAIM
 OR. GRID
 SOIL GEOCHEMISTRY:
LEAD

DATE: OCT. 80	DATA: M.V., SC.
N.T.S.: 94E 7W	DRAWN: DGD
SCALE: 1: 5 000	CHECKED:

0 200 m

FIGURE
10

returned up to 120 ppb gold, 5.8 ppm silver, 1080 ppm copper, 770 ppm lead and 1930 ppm zinc. The main area of interest is located by contour soil sampling in the centre of the claim. This area was covered by soil sampling based on a grid.

The grid soil sample data for gold, silver, copper, lead and zinc were contoured (see Figures 6, 7, 8, 9 and 10). Several anomalies were outlined. The anomalies trend approximately North-South and N 70° E. These trends may be coincident with major fracture systems. Several zones of silicification were observed to be coincident with the geochemical anomalies.

An anomalous zone was delineated about 200 metres long and 20 metres wide with values greater than 200 ppb gold. The zone has anomalous copper values (greater than 400 ppm with values of up to 1300 ppm) and is about 800 metres long and up to 400 metres wide. Coincident zones of lead and silver anomalies with values up to 1080 ppm lead and 5.7 ppm silver were also delineated.

The rock samples listed in Table I with their corresponding geochemical analyses show no significant values.

CONCLUSIONS AND RECOMMENDATIONS

The geochemical results indicate the possibility of chalcopyrite and galena mineralization in veins or fractures in the intrusive and volcanic country rocks. The claim area is highly gossanous. The rocks are intensively hydrothermally altered with silicification and propylitic (chlorite and epidote) alteration zones.

More detailed mapping and prospecting should be carried out in the areas of geochemical soil anomalies.

REFERENCE

Gabrielse, H.; Dodds, C.J.; Mansy, J.L. and Eisbacher, G.H. 1975: Geology of Toadoggone River (94 E) and Ware West-half; G.S.C. Open File 483, Geological Survey of Canada.

STATEMENT OF EXPENDITURESWages:

Geochemical Sampling:

June 6, July 12, August 11 and 14, 1980.

R. MacRae	1 day @ \$ 40.00	\$ 40.00
J. Rushton	½ day @ \$ 50.00	25.00
R. Stowe	1½ days @ \$ 40.00	60.00
J. Sweeney	1 day @ \$ 40.00	40.00

Prospecting:

S. Crawford	1 day @ \$ 70.00	70.00
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Report Writing:

M. Vulimiri	2 days @ \$100.00	200.00
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Drafting:

D. Dolsen	2 days @ \$ 70.00	<u>140.00</u>
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\$ 575.00

Geochemical Analyses:

8 silts analysed for Cu, Pb, Zn, Au, Ag @ \$8.85	\$ 70.80
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155 soils analysed for Cu, Pb, Zn, Au, Ag @ \$8.85	1,371.75
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3 rocks analysed for Cu, Pb, Zn, Au, Ag @ \$10.25	30.75
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Shipping cost, Smithers to Vancouver, 166 samples	<u>49.80</u>
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\$1,523.10

Board, Lodging and Field Expenses:

Food	\$ 10.80
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Expediting	3.00
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Equipment (lumber, hardware, generator, radio telephone)	10.45
---	-------

Fixed Wing support (does not include mobilization or JP-4 hauls)	13.19
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Helicopter Support	5.50
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Fuel (propane, oil stoves)	<u>4.12</u>
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\$ 47.06

5 man-days	\$ 235.30
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STATEMENT OF EXPENDITURES (Continued)Transportation

Helicopter

1 hr 20 min @ \$310 + \$102.00 fuel

\$ 549.30

Total Expenditures


\$2,882.70

CERTIFICATE OF QUALIFICATIONS

I, Mohan R. Vulimiri, certify that:

1. I am a geologist, employed by Serem Ltd.
2. I am a graduate with a Master of Science degree in Economic Geology from the University of Washington.
3. I am involved in mineral exploration in British Columbia since 1970 and have acted in responsible positions since 1974.
4. I have no financial interest, either direct or indirect, in the property.
5. The information contained in this report was obtained under my supervision.

Vancouver, B.C.


Mohan R. Vulimiri.

CERTIFICATE OF QUALIFICATIONS

I, Sheila A. Crawford, certify that:

1. I am a geologist, employed by Serem Ltd.
2. I have an Honours Bachelor of Science (First Class) in Geology from Carleton University in Ottawa, Ontario.
3. I have worked in mineral exploration or geological mapping since 1975 and have acted in responsible positions since 1979.
4. I personally examined the property and directed the geochemical survey.
5. I have no financial interest, either direct or indirect, in the property.

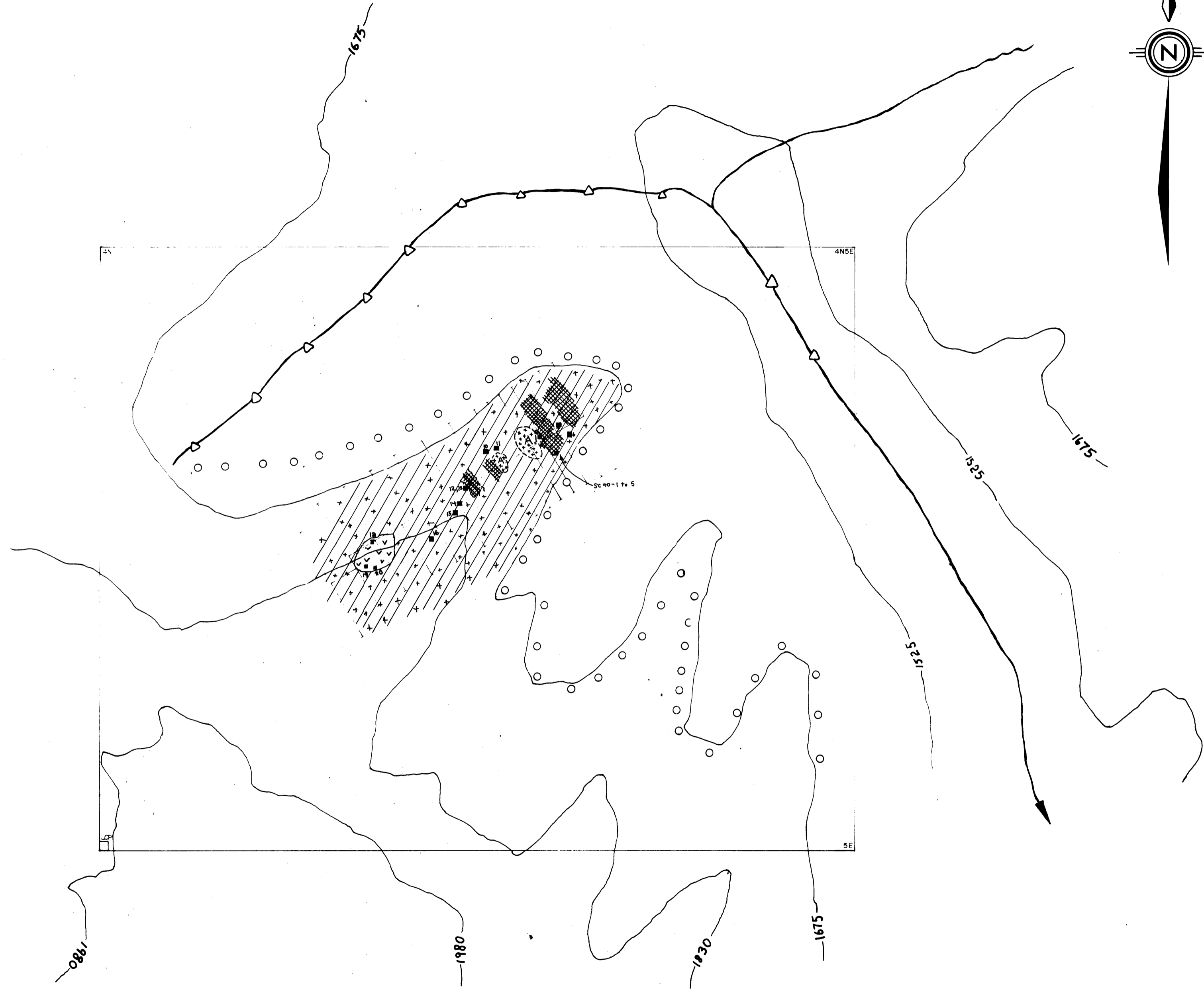
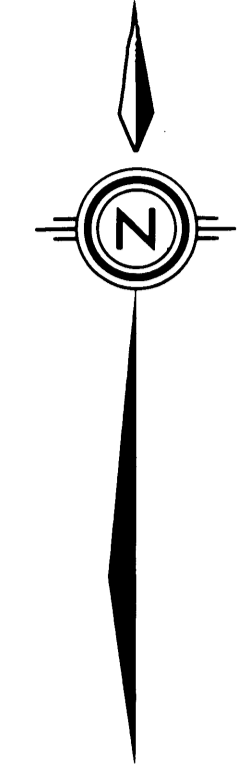


Vancouver, B.C.

Sheila A. Crawford.

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MINERAL RESOURCES BRANCH
ASSESSMENT REPORT



LEGEND

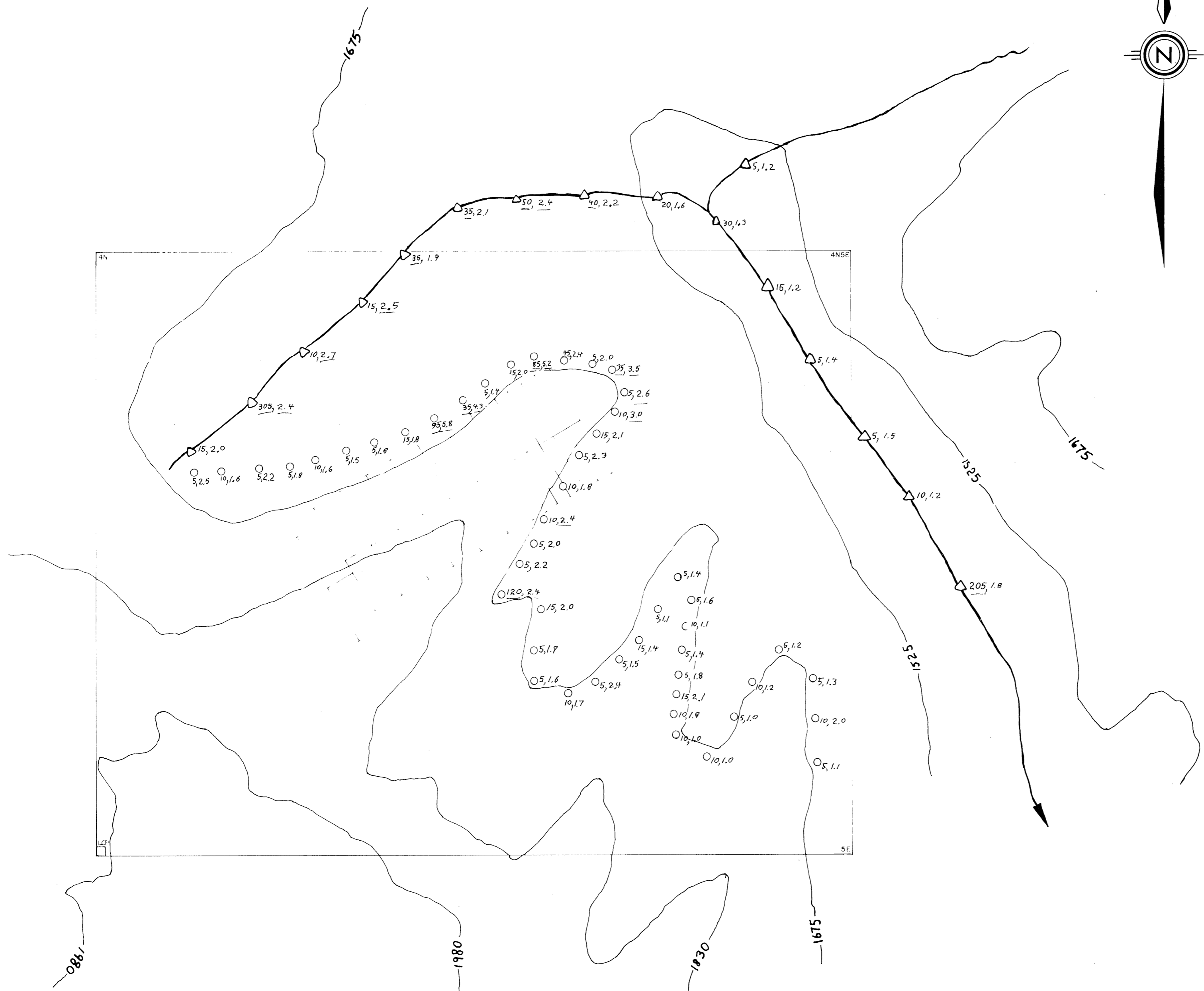
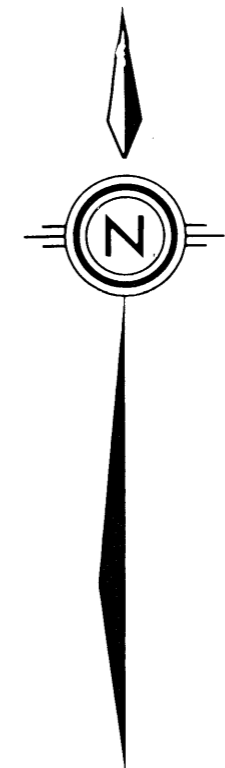
	FELDSPAR PORPHYRY (Toodoggone volcanic rocks)
	MULTIPLE PHASE INTRUSION: Hornblende diorite, Porphyritic monzonite, &
	APLITE DYKES
	PROPYLITIC ALTERATION (Epidote & Chlorite)
	SILICIFICATION AND QUARTZ VEINING
	Rock sample location
	Soil sample location
	Silt sample location

S.E.R.E.M. LTD.
 PROJECT TOODOGGONE REGIONAL
 TITLE ORANGE CLAIM
 PROSPECTING & GEOLOGY

DATE	SEPT 1980	DATA	M.V., S.C.	FIGURE 3
NTS.	94E 7W	DRAWN	M.V., D.G.D.	
SCALE	1:10 000	CHECKED		
0 500 1000m				

7/198

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
N.O.



LEGEND

- SILT SAMPLE LOCATION
- SOIL SAMPLE LOCATION
- SOIL GRID
- GEOCHEMICAL DATA, WITH:
Au (ppb), Ag (ppm); ANOMALOUS
VALUES UNDERLINED.

S.E.R.E.M. LTD.
PROJECT TOODOGGONE REGIONAL
TITLE ORANGE CLAIM
SILT & SOIL GEOCHEMICAL DATA
GOLD & SILVER

DATE	SEPT 1980	DATA	M.V., S.C.	FIGURE 5
N.T.S.	94E 7W	DRAWN	M.V., D.G.D.	
SCALE	1:10 000	CHECKED		