

SI. # 190 # 8999

ASSESSMENT REPORT

GEOCHEMICAL AND GEOLOGICAL REPORT

ON THE

MESS 1, MESS 2 AND MESS 3 CLAIMS (41 UNITS)

TOODOGGONE RIVER AREA

OMINECA MINING DIVISION

by

SHEILA A. CRAWFORD AND MOHAN R. VULIMIRI

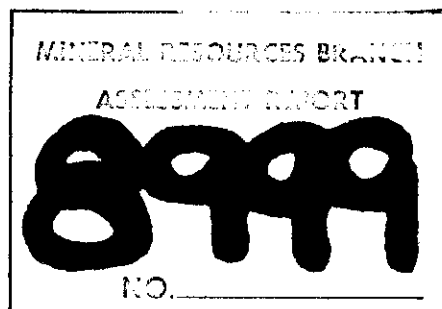
LOCATION: N.T.S. 94E/2E
57°03' to 57°06' N Latitude
126°37' to 126°41' W Longitude

OWNER: SEREM LTD.

OPERATOR: SEREM LTD.

DATES WORK PERFORMED: June 18, 1980
July 1, 1980
August 12, 29, 1980

DATE: March 10, 1981



ABSTRACT

Geochemical silt and soil sampling, along with preliminary geological mapping and prospecting, were carried out on the Mess 1, Mess 2 and Mess 3 claims during the 1980 field season. The claims are located in the Toodoggone River area (N.T.S. 94E/2E), 280 kilometres north of Smithers, B.C. A total of 82 silt and 36 soil samples were analysed for gold, silver, copper, lead and zinc. Several rock samples were analysed or assayed.

The area is underlain by Toodoggone volcanics, veined by quartz and barite. Minor galena and sphalerite is associated with the barite.

One silt sample on the Mess 2 claims returned 3800 ppb gold. Several soil samples are anomalous.

Detailed prospecting and soil sampling are recommended.

TABLE OF CONTENTS

	<u>Page</u>
ABSTRACT	i
TABLE OF CONTENTS	ii
LIST OF ILLUSTRATIONS	ii
INTRODUCTION	1
GEOLOGY	5
ALTERATION AND MINERALIZATION	5
GEOCHEMICAL SILT SAMPLING	5
GEOCHEMICAL SOIL SAMPLING	6
GEOCHEMICAL ROCK SAMPLING	6
GEOCHEMICAL ANALYSIS	6
INTERPRETATION	7
CONCLUSIONS AND RECOMMENDATIONS	10
REFERENCE	10
STATEMENT OF EXPENDITURES	11
CERTIFICATES OF QUALIFICATIONS	13 & 14
<u>LIST OF ILLUSTRATIONS</u>	
Fig. 1. Location of Mess 1, Mess 2 and Mess 3 Claim Groups.	3
Fig. 2. Claims Map: Mess 1, Mess 2 and Mess 3 Claim Groups.	4
Fig. 3. Geology and Rock Sample Localities: Mess 1, Mess 2 and Mess 3 Claims.	In Pocket
Fig. 4a. Gold and Silver in Stream Silts: Mess 1, Mess 2, and Mess 3 Claims.	In Pocket
Fig. 4b. Copper, Lead and Zinc in Stream Silts: Mess 1, Mess 2 and Mess 3 Claims.	In Pocket
Fig. 5a. Gold and Silver in Soils: Mess 1, Mess 2 and Mess 3 Claims.	In Pocket
Fig. 5b. Copper, Lead and Zinc in Soils: Mess 1, Mess 2 and Mess 3 Claims.	In Pocket
Table I. Detailed List of Samples Taken in Each Claim Group.	2
Table IIa. Geochemical Analyses	9
Table IIb. Assays	9

INTRODUCTION

The Mess 1, Mess 2 and Mess 3 claim groups are located between $57^{\circ}03'$ N and $57^{\circ}06'$ N latitude and $126^{\circ}37'$ W and $126^{\circ}41'$ W longitude in the Toodoggone River map sheet area, N.T.S. 94E/2E, Omineca Mining Division (see Figures 1 and 2). Elevation ranges from about 1700 metres (5600 feet) to 1950 metres (6400 feet) above sea level. Most of the property is above treeline. The valleys are covered in glacial till; outcrop is confined to the creeks. Thick accumulations of talus cover the bases of slopes.

Access to the property is by fixed wing plane from Smithers to Sturdee Airstrip, a distance of 280 kilometres and from Sturdee Airstrip to the property by helicopter, a distance of about 27 kilometres.

The Mess 1, Mess 2 and Mess 3 claim groups consist of 9, 12 and 20 units respectively. They are owned and operated by Serem Ltd.

The claims were staked on the basis of an anomalous heavy mineral sample from a stream draining the area. The Audrey claims, owned by Bishop Mines, adjoin the Mess claims to the north (Assessment Report No. 6650). No other previous work has been done on the property.

Work performed in 1980 by Serem Ltd. includes silt sampling of streams draining the property, soil sampling along a contour traverse and preliminary mapping and prospecting. Table 1 details the number of geochemical or assay samples taken in each claim group. The purpose of work in 1980 was to narrow the geochemical target and evaluate the geology for mineralization potential.

TABLE 1. DETAILED LIST OF SAMPLES TAKEN IN EACH CLAIM GROUP.

<u>Sample Type</u>	<u>Claim Group</u>	<u>No. of Samples</u>
Silt, streams	Mess 1	24
	Mess 2	23
	Mess 3	<u>35</u>
	Total	82
Soil, contour traverse	Mess 1	12
	Mess 2	14
	Mess 3	<u>10</u>
	Total	36
Rock, geochemical analysis assay	Mess 2	2
	Mess 3	2
	Mess 3	<u>6</u>
	Total	10



Fig. 1. Location of Mess 1, Mess 2 and Mess 3 Claim Groups.

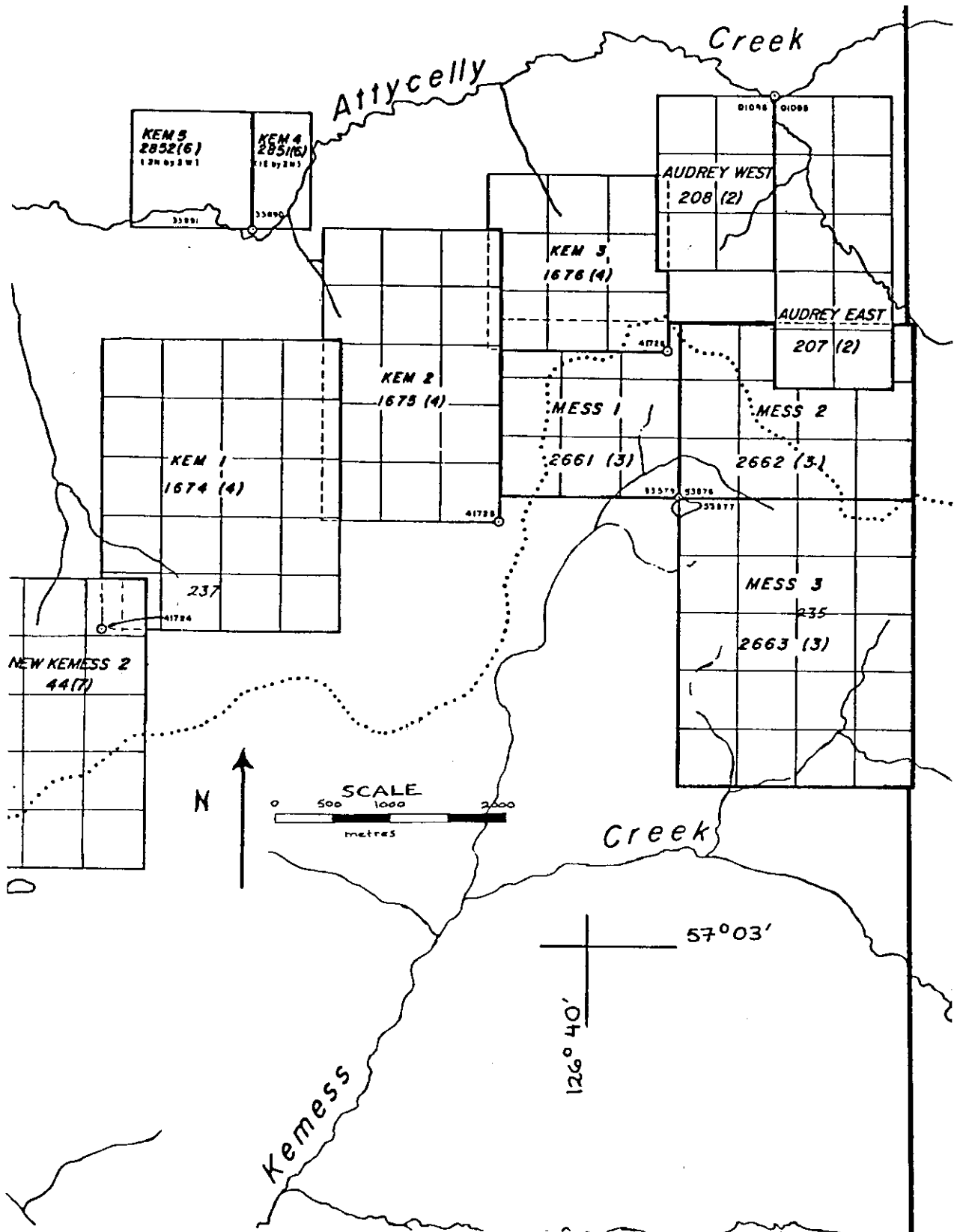


Fig. 2. Claims map: Mess 1, Mess 2 and Mess 3 Claim Groups.

GEOLOGY

The claims are underlain by volcanics and associated sediments, probably of the Middle Jurassic Toodoggone Group (see Gabrielse et al, 1975).

The older mafic volcanics consist of dark green flows and tuffs with coarse plagioclase phenocrysts. They are in fault contact with dark red, hematitic crystal tuffs and derived greywacke and conglomerate which are composed of 20% feldspar, 10-30% rock fragments, 2-5% biotite and 2-5% quartz.

The beds strike 050-095° and dip 38-50° to the north. Steeply dipping, north to northwest-trending faults cut the stratigraphy.

ALTERATION AND MINERALIZATION

Quartz veins occur in the mafic volcanics, perpendicular to the fault contact. Barite veins, bearing galena and sphalerite, parallel a northwest fault in the mafic volcanics. Chlorite-epidote alteration envelopes both quartz and barite. Sulphides are generally rare in the rocks.

GEOCHEMICAL SILT SAMPLING

Silt samples were collected along streams at 150 to 250 metre intervals, depending on where suitable silt could be found. Samples were taken from active material, that is, under flowing water, and placed in brown paper envelopes. The sample site and number were plotted on a map with a scale of 1 centimetre to 500 metres. Stream gradient and flow rate were noted.

GEOCHEMICAL SOIL SAMPLING

Samples were taken at 100 to 150 metre intervals on a traverse at approximately constant elevation. Pacing was used to control distance and the locations were plotted at a scale of 1 centimetre to 500 metres.

The soil was placed in brown paper envelopes and the locality, depth of sampling, horizon, colour, grain size and amount of organic material were noted. All sample sites were marked with surveyor's flagging.

All samples were from the C horizon since no B horizon is developed. Organic content is low.

GEOCHEMICAL ROCK SAMPLING

Grab samples were selected from outcrops or talus of favourable geology. Half of each sample was sent for geochemical analysis or assay. Sample locality, rock type and presence of sulphides were recorded.

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 briefly described 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

Geochemical analyses of stream silt samples are plotted on Figure 4a for gold and silver and Figure 4b for copper, lead and zinc. One silt sample on the Mess 2 claim runs 3800 ppb gold.

Results from the soil contour traverse are plotted on Figure 5a for gold and silver and Figure 5b for copper, lead and zinc. The highest values obtained are 335 ppb gold, 38.0 ppm silver, 71 ppm copper, 433 ppm lead, and 217 ppm zinc.

Frequency histograms were used to estimate lower threshold and anomalous limits for each element, treating silt and soil samples as separate populations. Background values are lower than normal in this area. Threshold values are underlined and anomalous values circled in the figures.

Most of the rocks analysed or assayed returned background values. A few have notable gold and silver values, up to 0.023 ounces per ton (0.79 grams per tonne) and 1.31 ounces per ton (9.5 grams per tonne) respectively. Analyses are listed in Tables 2a and 2b.

Anomalous values on the property are within the mafic volcanics, adjacent to major structures.

TABLE IIa. GEOCHEMICAL ANALYSES

<u>Sample No.</u>	<u>Rock Type</u>	<u>Gold ppb</u>	<u>Silver ppm</u>
JC-14-80-6	Quartz vein float	10	1.2
JC-14-80-7	Mafic volcanics with quartz vein	15	1.0
JC-14-80-14	Quartz vein	5	0.7
JC-14-80-15	Greywacke with quartz- calcite vein	5	0.3

TABLE IIb. ASSAYS

<u>Sample No.</u>	<u>Rock Type</u>	<u>Gold</u>		<u>Silver</u>	
		<u>Oz/Ton</u>	<u>G/Tonne</u>	<u>Oz/Ton</u>	<u>G/Tonne</u>
JC-14-80-21	Quartz vein float	0.023	0.79	1.31	9.5
JC-14-80-22	Quartz vein float	0.002	0.07	0.40	2.9
JC-14-80-23	Quartz vein float	0.002	0.07	0.24	1.7
JC-14-80-24	Quartz vein float	0.002	0.07	0.20	1.5
RM-31-80-R1	Grey, iron stained quartz vein with epidote border (float)	0.002	0.07	0.01	0.1
RM-31-80-R2	Brown-stained, grey vuggy quartz	0.003	0.10	0.83	6.0

CONCLUSIONS AND RECOMMENDATIONS

Quartz and barite veins with alteration envelopes and minor galena and sphalerite are present near major structures in the volcanics. The 3800 ppb gold silt sample and several anomalous soils indicate that some mineralization source is present. Detailed prospecting is required to locate the source. Further soil sampling on a grid pattern may help to narrow the target where rock exposure is poor.

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 EXPENDITURESAnalyses:

Soils and silts:

	118 analysed for Au, Ag, Cu, Pb, Zn @ \$ 8.85	\$1,044.30
Rocks:	4 " " Au, Ag @ \$ 8.00	32.00
	6 assayed for Au, Ag @ \$16.50	99.00
Shipping cost from Smithers to Vancouver Laboratory:		
	128 samples @ \$ 0.30	<u>38.40</u>
		\$1,213.70

Wages:

Geochemical sampling:

July 1, August 12, 29, 1980

R. MacRae	1½ days @ \$ 40	\$ 60.00
R. Stowe	½ day @ \$ 40	20.00
J. Sweeney	1 day @ \$ 40	40.00

Geology:

June 18, August 29, 1980

J. Carne	1 day @ \$100	100.00
S. Crawford	½ day @ \$ 70	35.00
M. Vulimiri	½ day @ \$100	50.00

Report writing:

S. Crawford	1 day @ \$ 70	70.00
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Drafting:

S. Crawford	2 days @ \$ 70	<u>140.00</u>
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\$ 515.00

Board, Lodging and Field ExpensesPer Man Day

Food	\$10.80
Expediting	3.00
Equipment (lumber, hardware, generator, radio telephone)	10.43
Fixed wing support (does not include mobilization or JP-4 fuel hauls)	13.19
Helicopter support "	5.50
Fuel (propane, oil stoves)	<u>4.12</u>
	\$47.04

5 man days @ \$47.04

\$ 235.20

Continued

STATEMENT OF EXPENDITURES (Continued)Transportation

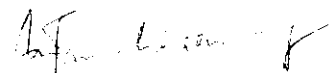
Helicopter	
3:20 hours @ \$310 + \$102 fuel	<u>\$1,373.20</u>
Total	<u><u>\$3,337.10</u></u>

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 have been 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. I personally examined the property.
6. The information contained in this report was obtained under my supervision.

Vancouver, B.C.


Mohan R. Vulimiri.

CERTIFICATE OF QUALIFICATIONS

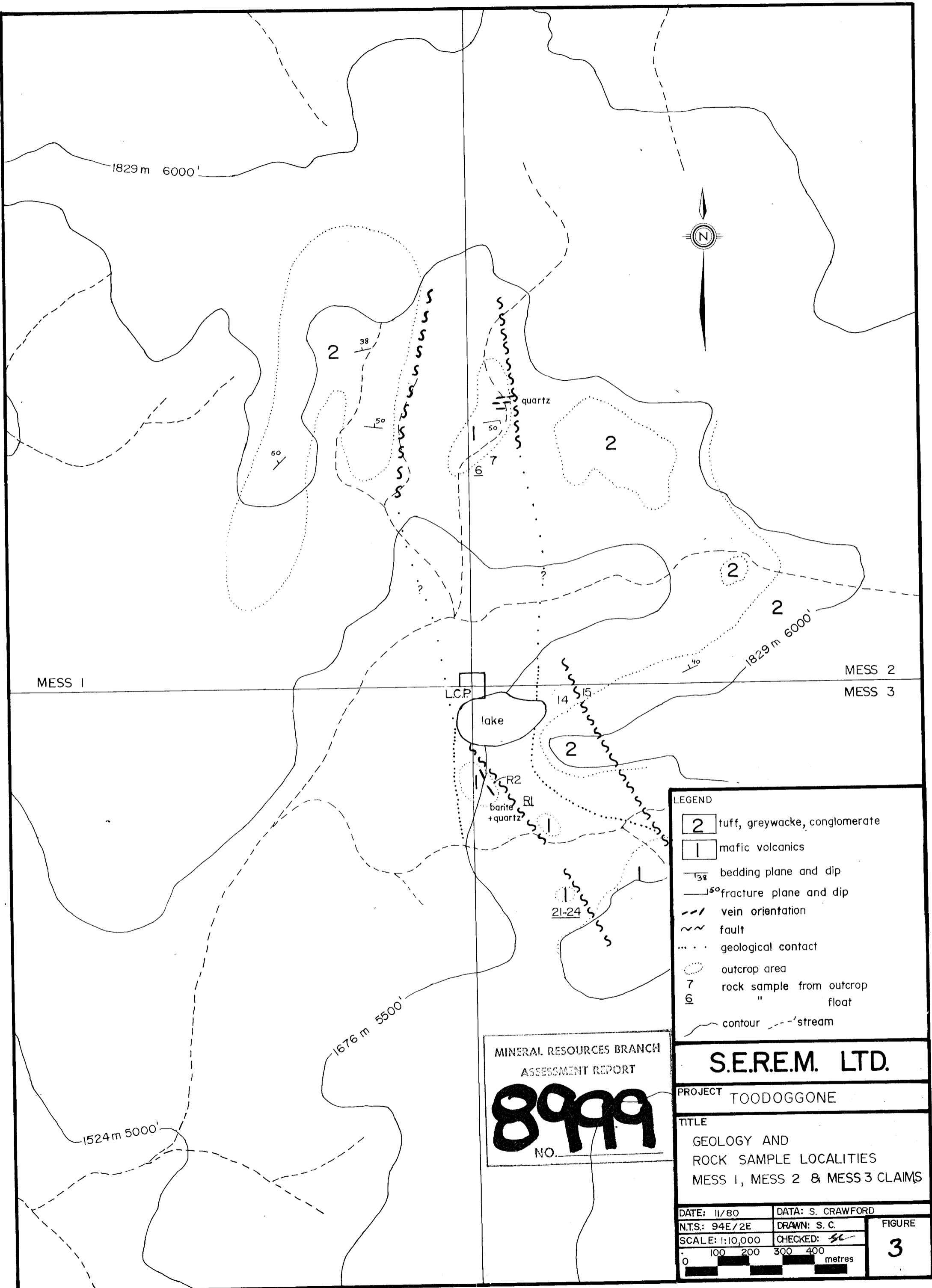
I, Sheila A. Crawford, certify that:

1. I am a geologist, employed by Serem Ltd.
2. I have an Honours Bachelor of Science degree (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.



MESS 1

MESS 2
MESS 3

L.C.P.

lake

R2

barite + quartz

R1

21-24

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

8999
NO.

LEGEND

- 2 tuff, greywacke, conglomerate
- 1 mafic volcanics
- $\frac{38}{-}$ bedding plane and dip
- $\frac{50}{-}$ fracture plane and dip
- vein orientation
- ~ fault
- ... geological contact
- outcrop area
- 7 rock sample from outcrop
- 6 " float
- contour
- - - stream

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

PROJECT TOODOGGONE

TITLE
GEOLOGY AND
ROCK SAMPLE LOCALITIES
MESS 1, MESS 2 & MESS 3 CLAIMS

DATE: 11/80	DATA: S. CRAWFORD
N.T.S.: 94E/2E	DRAWN: S. C.
SCALE: 1:10,000	CHECKED: <i>sc</i>

0 100 200 300 400 metres

FIGURE
3

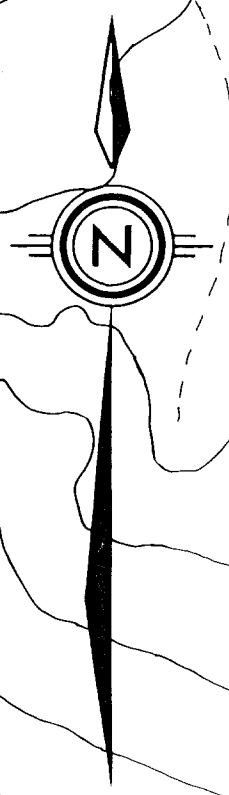
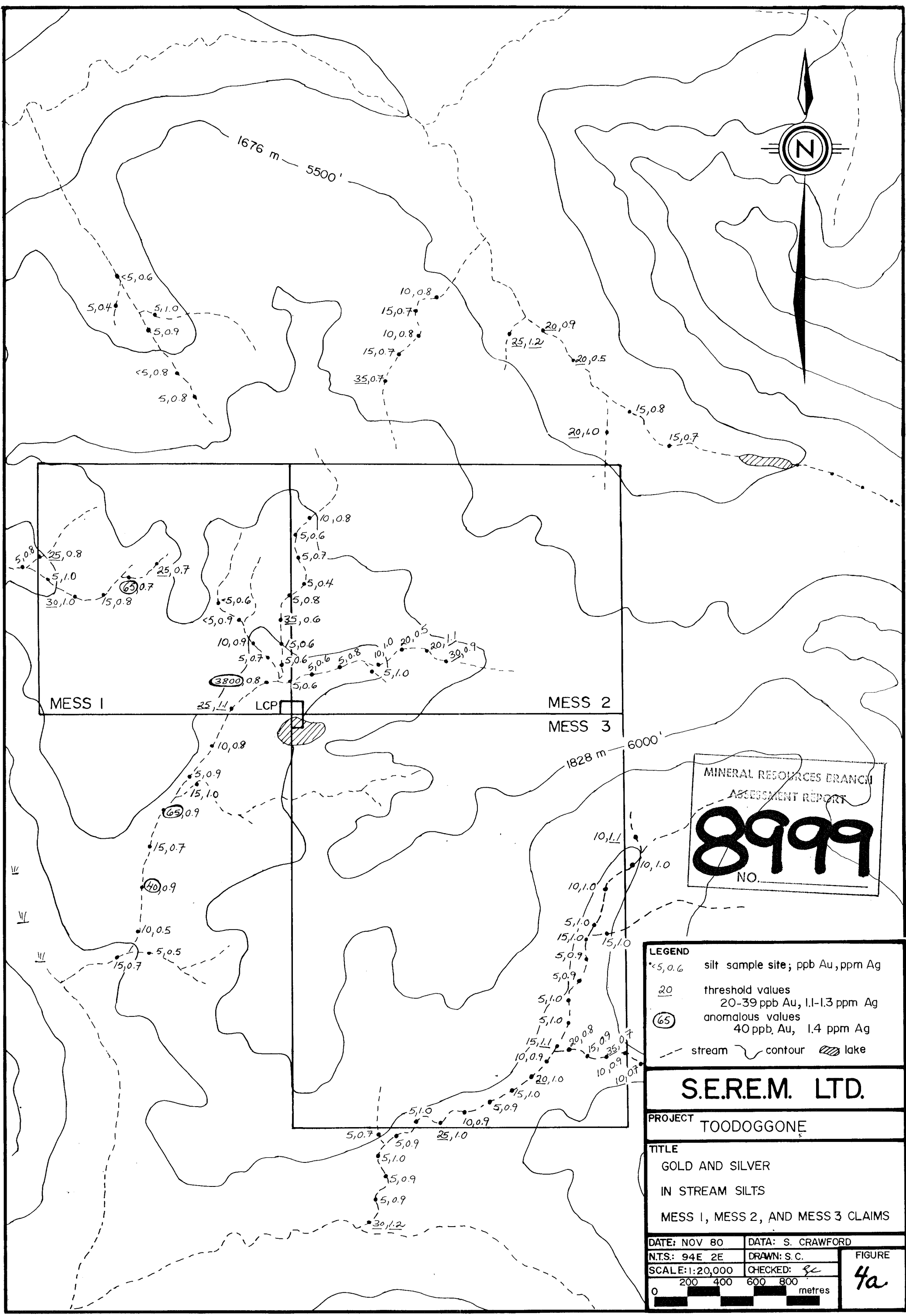
1829 m 6000'



1676 m 5500'

1524 m 5000'

1829 m 6000'



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
89999
NO.

LEGEND
 * <u>5,0.6</u> silt sample site; ppb Au, ppm Ag
 <u>20</u> threshold values
 20-39 ppb Au, 1.1-1.3 ppm Ag
 <u>65</u> anomalous values
 40 ppb Au, 1.4 ppm Ag
 - - - stream ~~~~~ contour ▨ lake

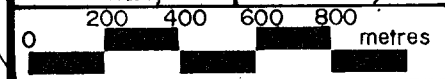
S.E.R.E.M. LTD.

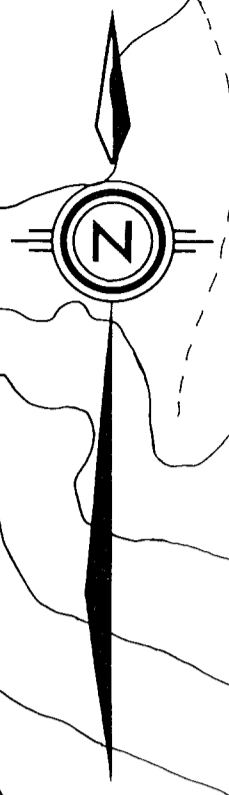
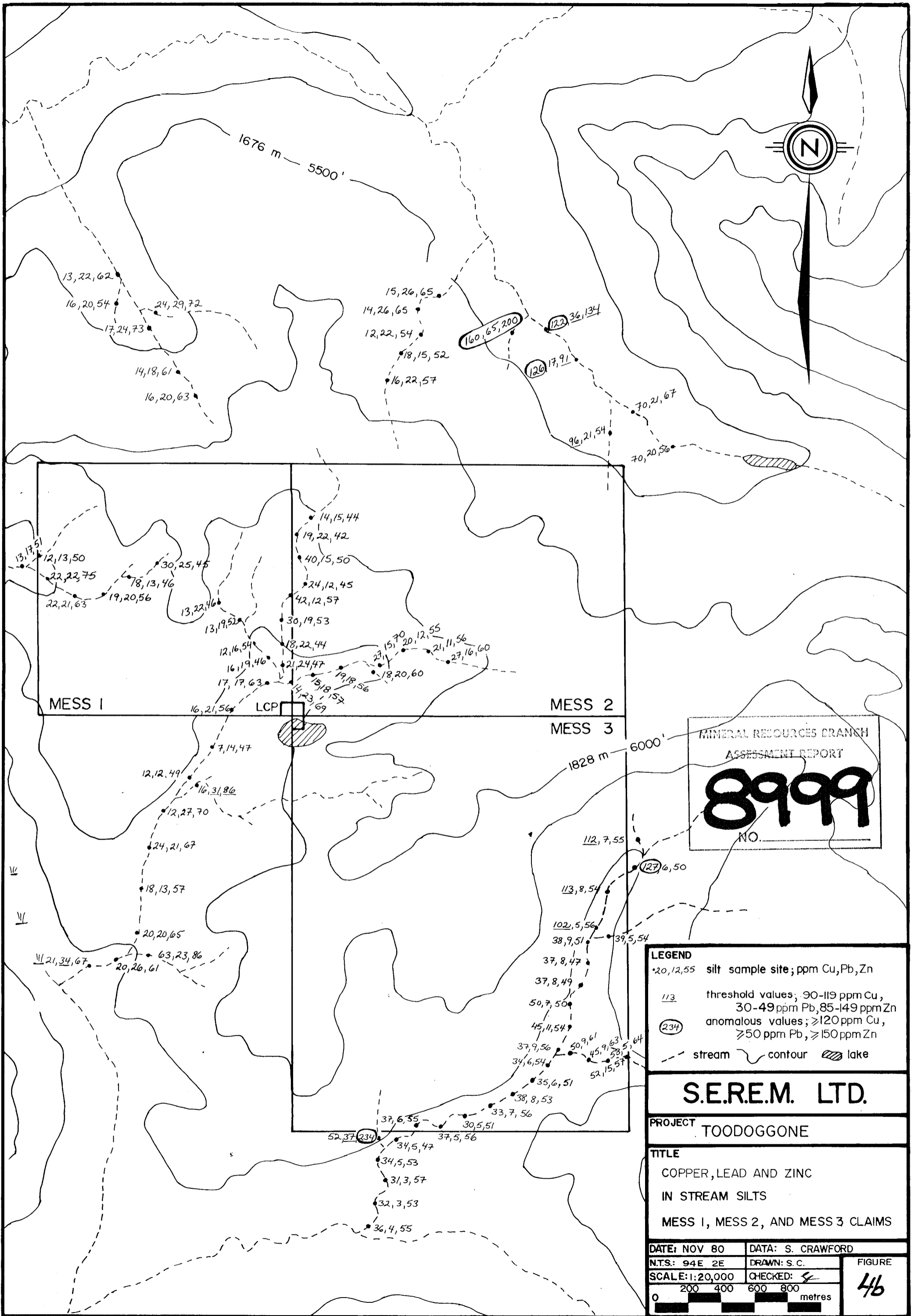
PROJECT TOODOGGONE

TITLE
 GOLD AND SILVER
 IN STREAM SILTS
 MESS 1, MESS 2, AND MESS 3 CLAIMS

DATE: NOV 80 DATA: S. CRAWFORD
 N.T.S.: 94E 2E DRAWN: S.C.
 SCALE: 1:20,000 CHECKED: *sc*

FIGURE
4a





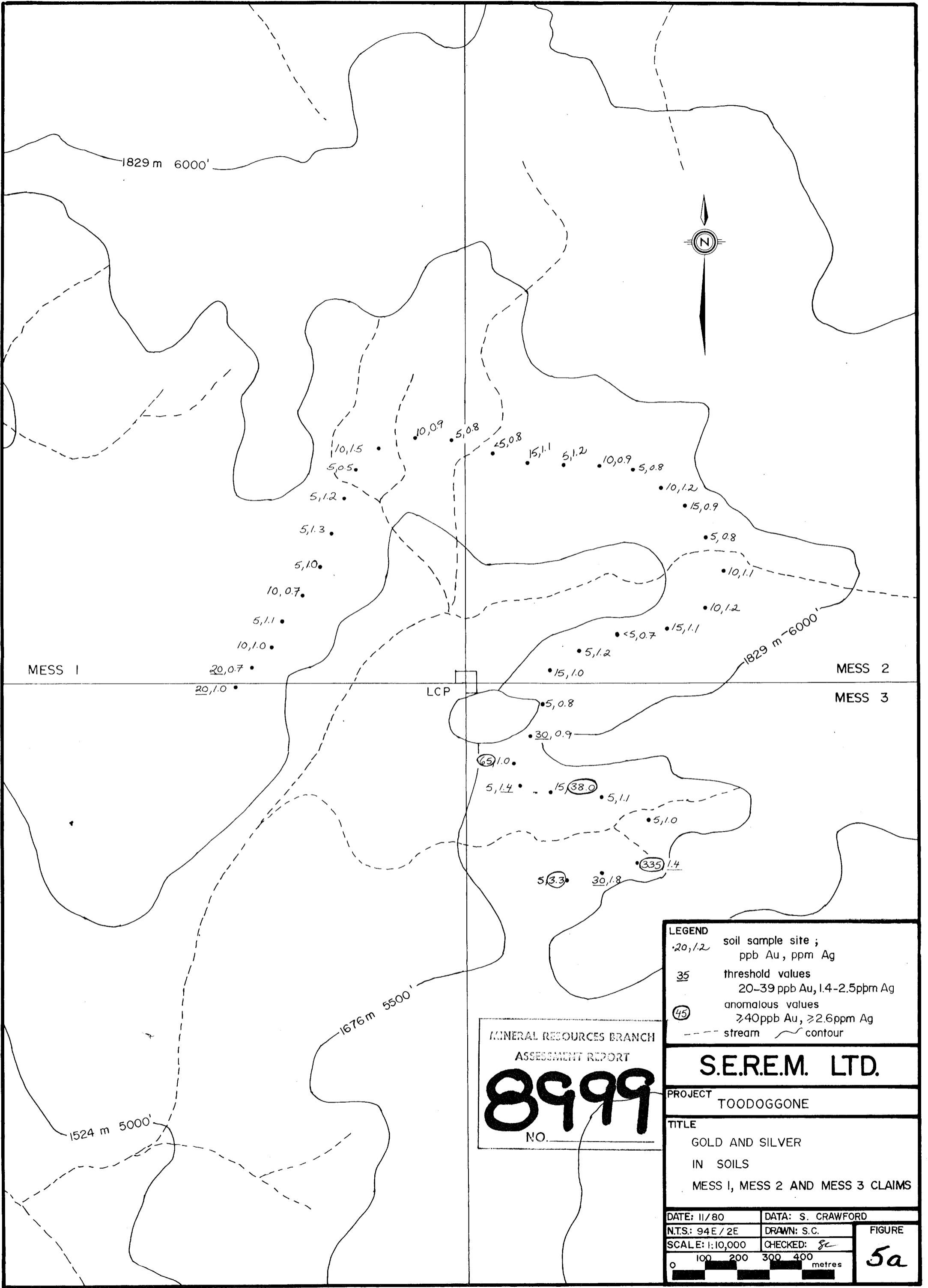
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8999
NO. _____

LEGEND
 •20,12,55 silt sample site; ppm Cu,Pb,Zn
 113 threshold values; 90-119 ppm Cu, 30-49 ppm Pb, 85-149 ppm Zn
 (234) anomalous values; ≥120 ppm Cu, ≥50 ppm Pb, ≥150 ppm Zn
 --- stream ~~~~~ contour ▨ lake

S.E.R.E.M. LTD.
PROJECT TOODOGGONE
TITLE
 COPPER, LEAD AND ZINC
 IN STREAM SILTS
 MESS 1, MESS 2, AND MESS 3 CLAIMS

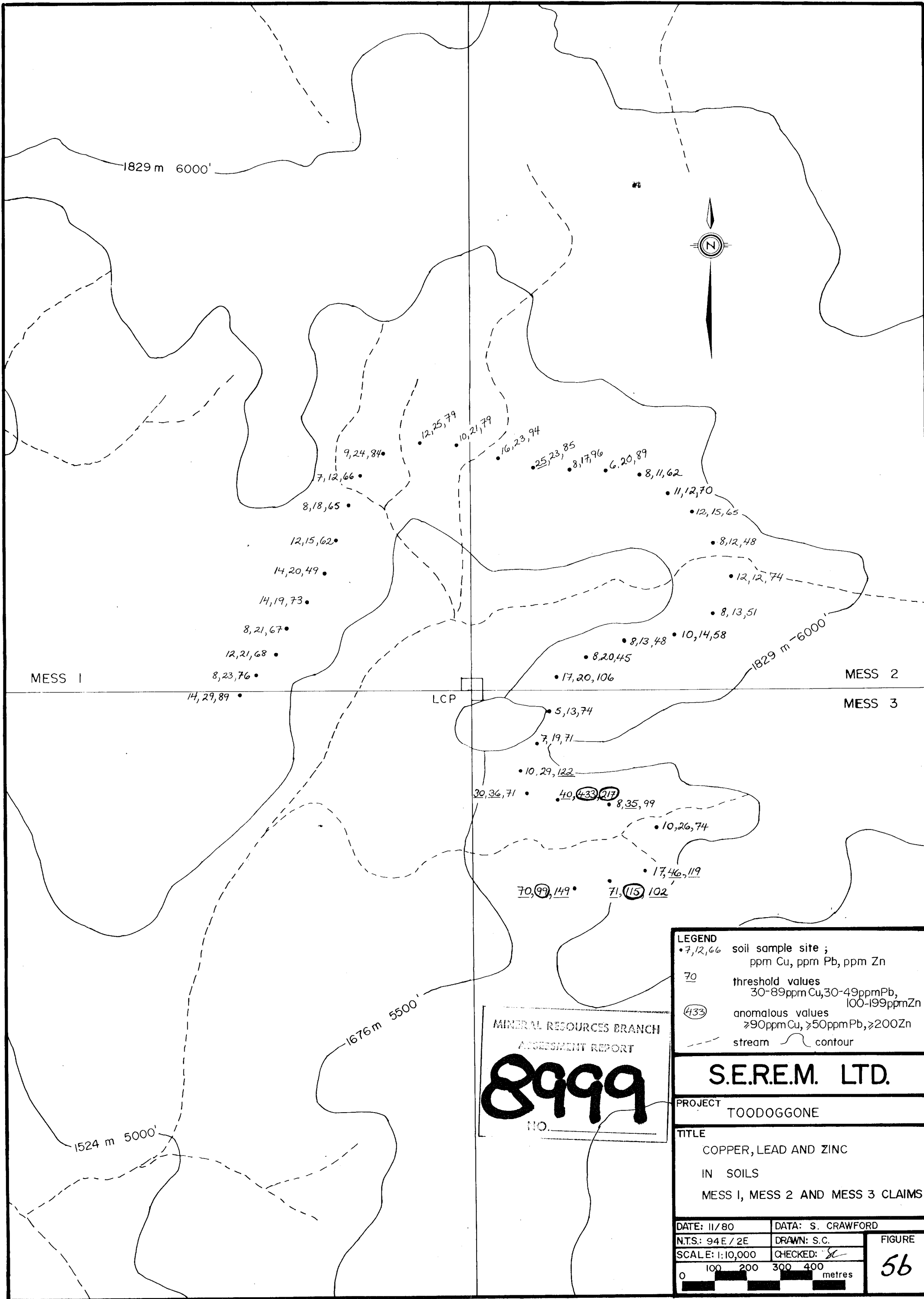
DATE: NOV 80	DATA: S. CRAWFORD	FIGURE 46
N.T.S.: 94E 2E	DRAWN: S.C.	
SCALE: 1:20,000	CHECKED: <i>S</i>	

0 200 400 600 800 metres



MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
8999
 NO. _____

LEGEND	
•20,1.2	soil sample site ; ppb Au, ppm Ag
<u>35</u>	threshold values 20-39 ppb Au, 1.4-2.5ppm Ag
(45)	anomalous values ≥40ppb Au, ≥2.6ppm Ag
- - -	stream
~	contour
S.E.R.E.M. LTD.	
PROJECT TOODOGGONE	
TITLE GOLD AND SILVER IN SOILS MESS I, MESS 2 AND MESS 3 CLAIMS	
DATE: 11/80	DATA: S. CRAWFORD
N.T.S.: 94E/2E	DRAWN: S.C.
SCALE: 1:10,000	CHECKED: <i>sc</i>
0 100 200 300 400 metres	
FIGURE 5a	



MESS 1

MESS 2

MESS 3

LCP

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8999
NO.

LEGEND	
• 7,12,66	soil sample site ; ppm Cu, ppm Pb, ppm Zn
70	threshold values 30-89ppm Cu, 30-49ppm Pb, 100-199ppm Zn
(433)	anomalous values ≥90ppm Cu, ≥50ppm Pb, ≥200Zn
- - -	stream
~ ~ ~	contour
S.E.R.E.M. LTD.	
PROJECT TOODOGGONE	
TITLE COPPER, LEAD AND ZINC IN SOILS MESS 1, MESS 2 AND MESS 3 CLAIMS	
DATE: 11/80	DATA: S. CRAWFORD
N.T.S.: 94E/2E	DRAWN: S.C.
SCALE: 1:10,000	CHECKED: <i>sc</i>
0 100 200 300 400 metres	
FIGURE 56	