81-1079

ASSESSMENT REPORT

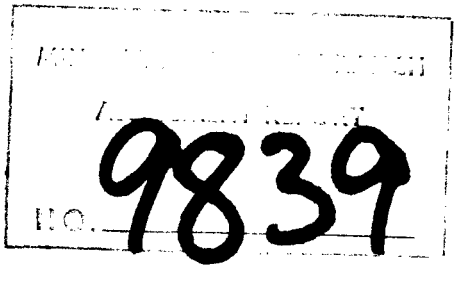
GEOCHEMICAL REPORT
ON THE
ORANGE CLAIM (20 UNITS)
TOODOGGONE RIVER AREA

OMINECA MINING DIVISION

by

SHEILA A. CRAWFORD

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



OWNER: SEREM LTD.

OPERATOR: SEREM LTD.

DATES WORK PERFORMED: August 15, 25, 1981

DATE: NOVEMBER 27, 1981

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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 area, N.T.S. 94E/7W (Figures 1 and 2). About two-thirds of the property lies above treeline and topography is moderately rugged. Exposed rock consists of felsenmeer and badly fractured outcrop on approximately one third of the claim. Elevation ranges from about 1480 to 1983 metres above sea level.

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 15 kilometres.

Previous work carried out on the property is described in the 1980 assessment report. During the 1981 field season, fifty-one soil samples were taken on a grid and analysed for gold, silver, copper, lead and molybdenum. The grid occurs 100 to 150 metres south of a 1980 soil grid and tests for extensions of anomalies (Figure 3).

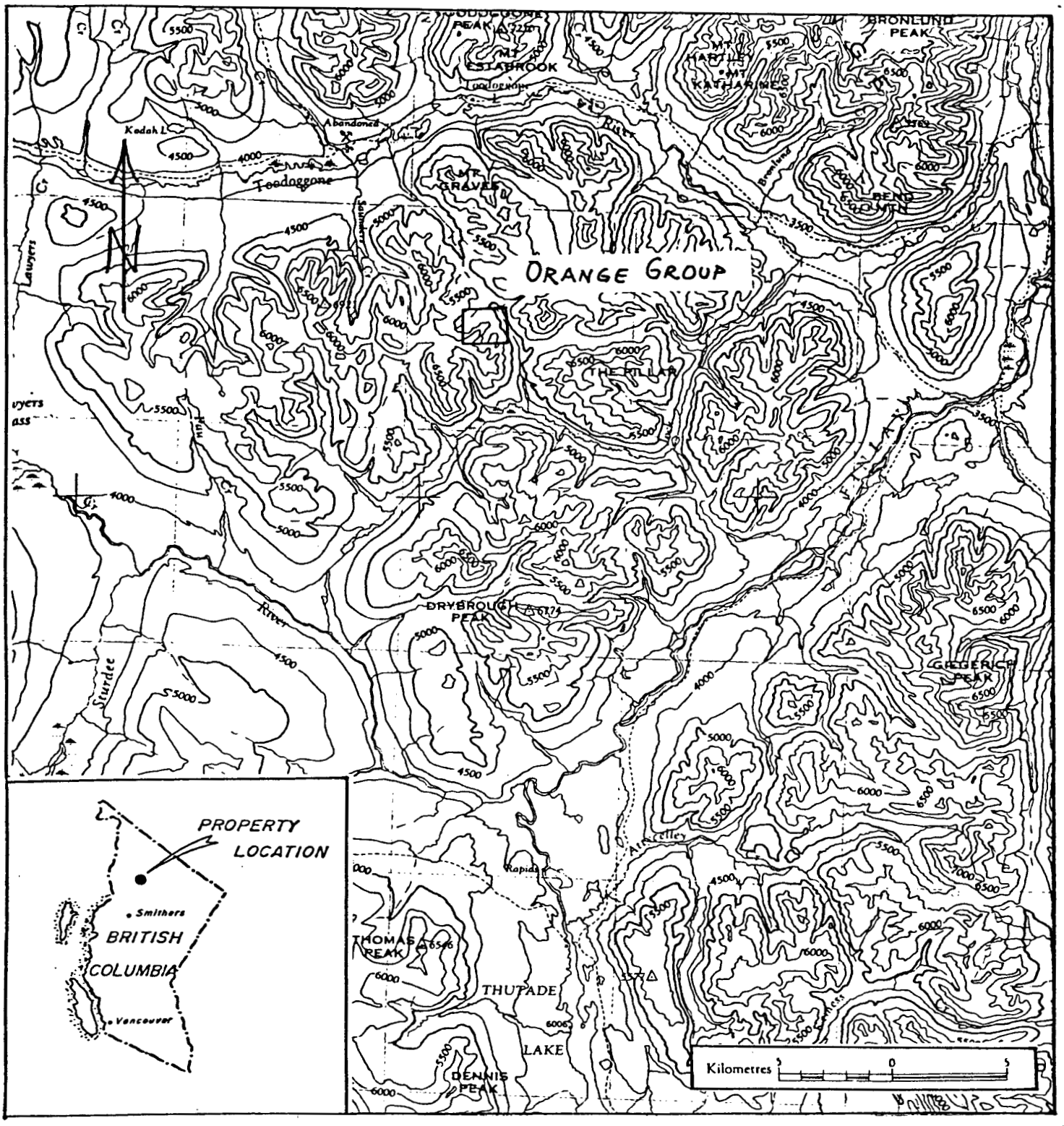


Fig. 1. Location Map of Orange Claim.

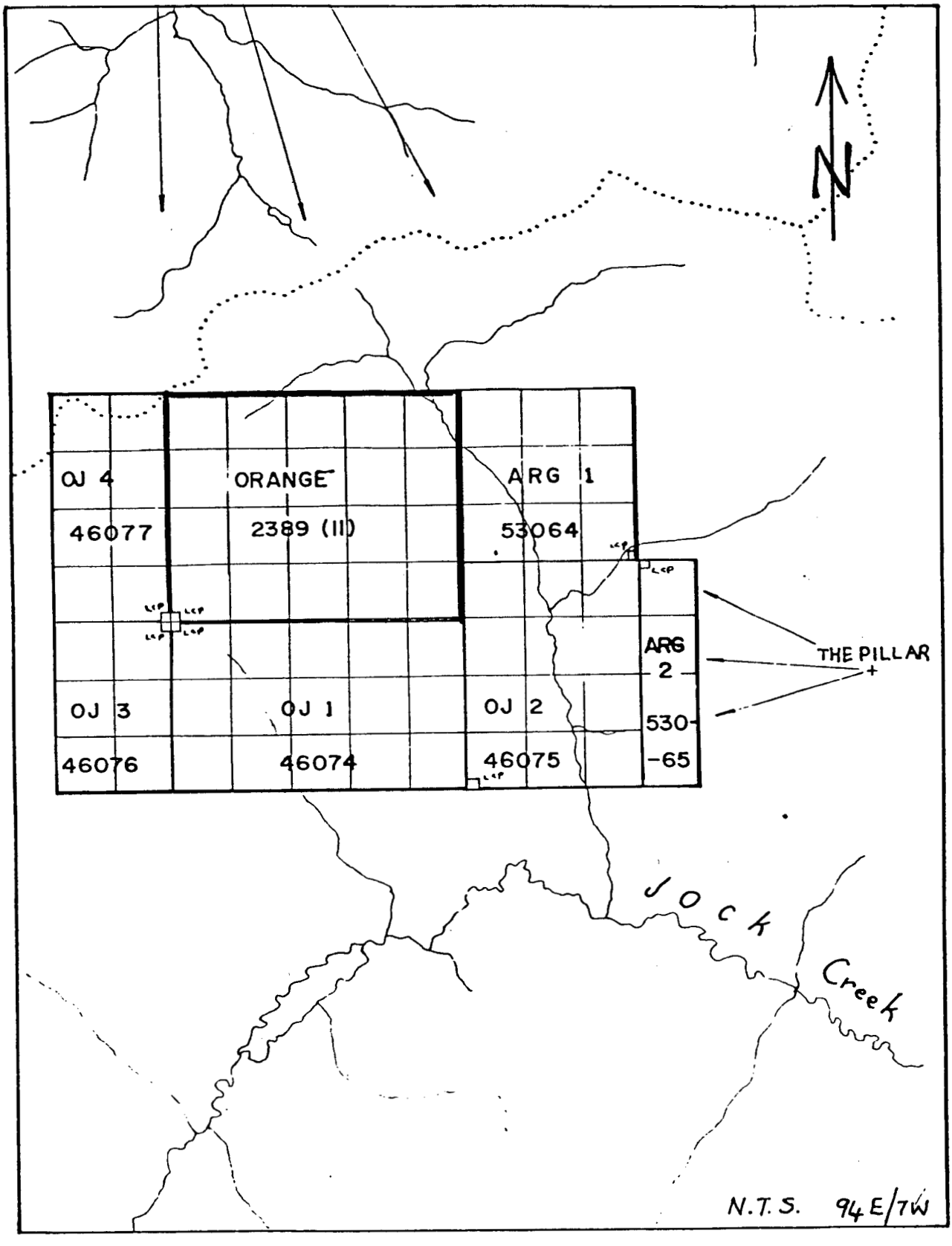
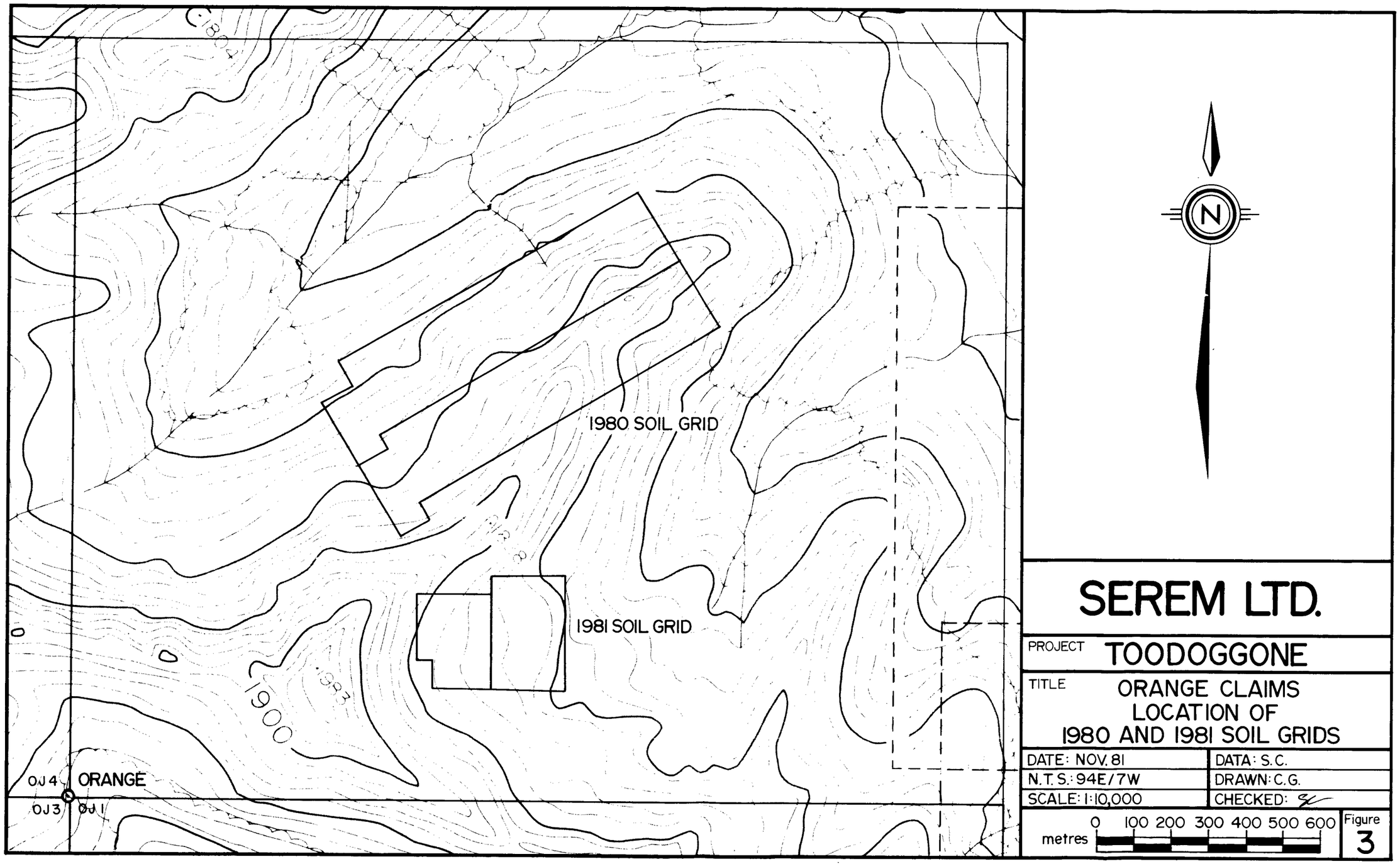


Fig. 2. Claim Map - Orange Claim


1980 SOIL GRID
1981 SOIL GRID
1900
1983
OJ4
ORANGE
OJ3
OJ1
N
SEREM LTD.
PROJECT TOODOGGONE
TITLE ORANGE CLAIMS LOCATION OF 1980 AND 1981 SOIL GRIDS
DATE: NOV. 81
DATA: S.C.
N.T.S.: 94E/7W
DRAWN: C.G.
SCALE: 1:10,000
CHECKED:
0 100 200 300 400 500 600
metres
Figure 3

GEOLOGY, ALTERATION AND MINERALIZATION

A brief description of the geology, alteration and mineralization is contained in the 1980 report. Follow-up prospecting in 1981 failed to discover any significant precious or base metal mineralization. However, intense alteration of the rocks indicates that sulphides have probably been leached away and/or converted to secondary minerals, which are difficult to identify and evaluate. Hydrozincite and malachite do occur in places.

GEOCHEMICAL SOIL SAMPLING

The grid was established using surveyor's chain, compass and flagged pickets to mark the baseline. Cross-lines were run with Topofil and compass, and each sample site was marked with surveyor's flagging. Samples were taken at fifty-metre intervals on lines fifty metres apart. Soil was placed in brown paper envelopes and grid locality and pertinent observations were recorded. Soil is generally thin and is developed on talus or alluvium. Since B horizons are rare to absent, most samples were taken from the C horizon.

GEOCHEMICAL ANALYSIS

The samples were sent to Min-En Laboratories in North Vancouver where they were analysed for gold, silver, copper, lead and molybdenum. The analytical procedures are 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 HNO_3 and $HClO_4$ 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, copper and molybdenum, samples weighing 1.0 gram are digested for 6 hours with HNO_3 and $HClO_4$ mixture.

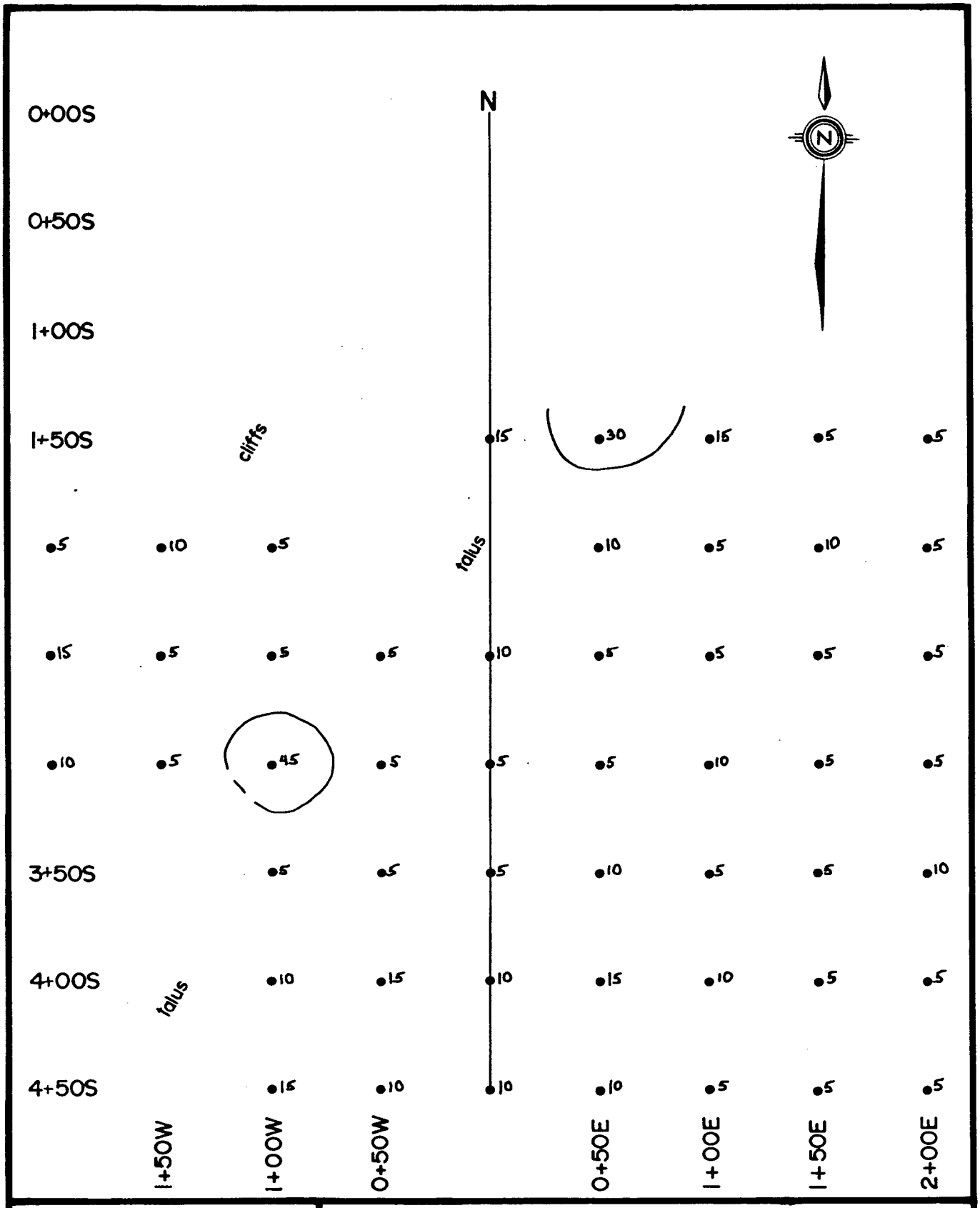
After cooling, the samples are diluted to standard volume. The solutions are analysed by Atomic Absorption Spectrophotometers using the CH_2H_2-Air Flame combination for silver, copper and lead. The C_2H_2-NO_2 mixture is used for molybdenum.

INTERPRETATION

Gold, silver, copper, lead and molybdenum values are plotted on Figures 4a to 4e respectively. The values are contoured. Only marginal anomalies occur in gold, silver, copper and molybdenum. A large weak molybdenum anomaly occurs in the southeast portion of the grid. An anomaly in all five elements occurs at the north end of the grid: the trend is probably due to down-slope dispersion. Lead is anomalous to highly anomalous in the northern portion of the grid: the background level is high compared to regionaly background levels. This may be in part residual concentration due to formation of the gossan and preferential leaching of other elements.

CONCLUSIONS AND RECOMMENDATIONS

Prospecting failed to discover any significant mineralized veins or fracture-controlled mineralization. Geochemical results are marginal except for lead. These techniques are hampered by the highly leached nature of the rocks, and trenching anomalies on the soil grids could expose fresher rock for sampling and evaluation.



LEGEND

●10 sample site, ppb Au

≥ 20 ppb Au

≥ 50 ppb Au

≥ 100 ppb Au

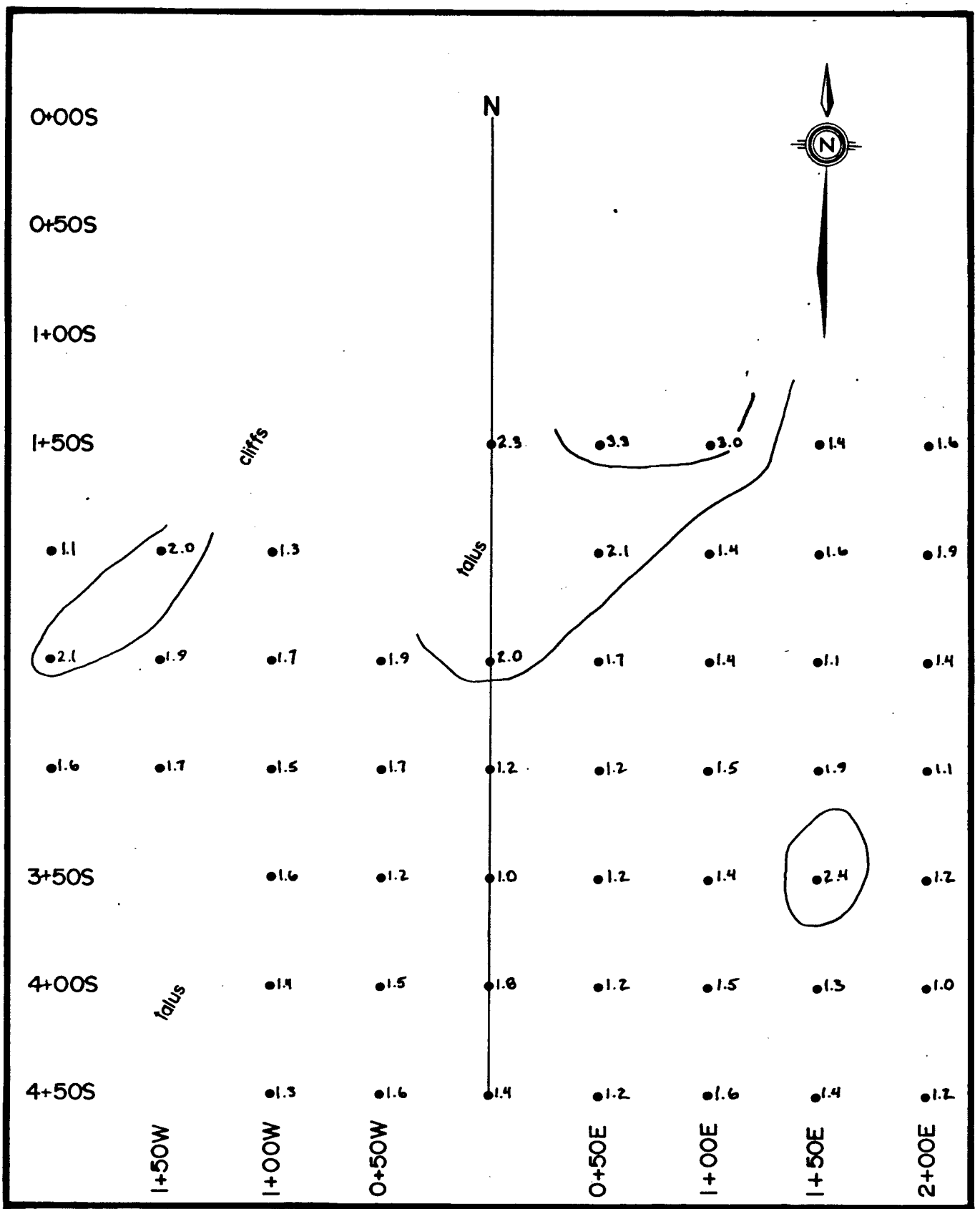
TITLE:

ORANGE CLAIMS, SOIL GRID
GOLD IN SOILS

DATE: NOV. 1981	DATA: S.C.
N.T.S.: 94E/7W	DRAWN: C.G.
SCALE: 1:2,500	CHECKED:

25 0 50 100 150
metres

FIGURE: 4a



LEGEND

●1.6 sample site, ppm Ag

≥ 2.0 ppm Ag

≥ 3.0 ppm Ag

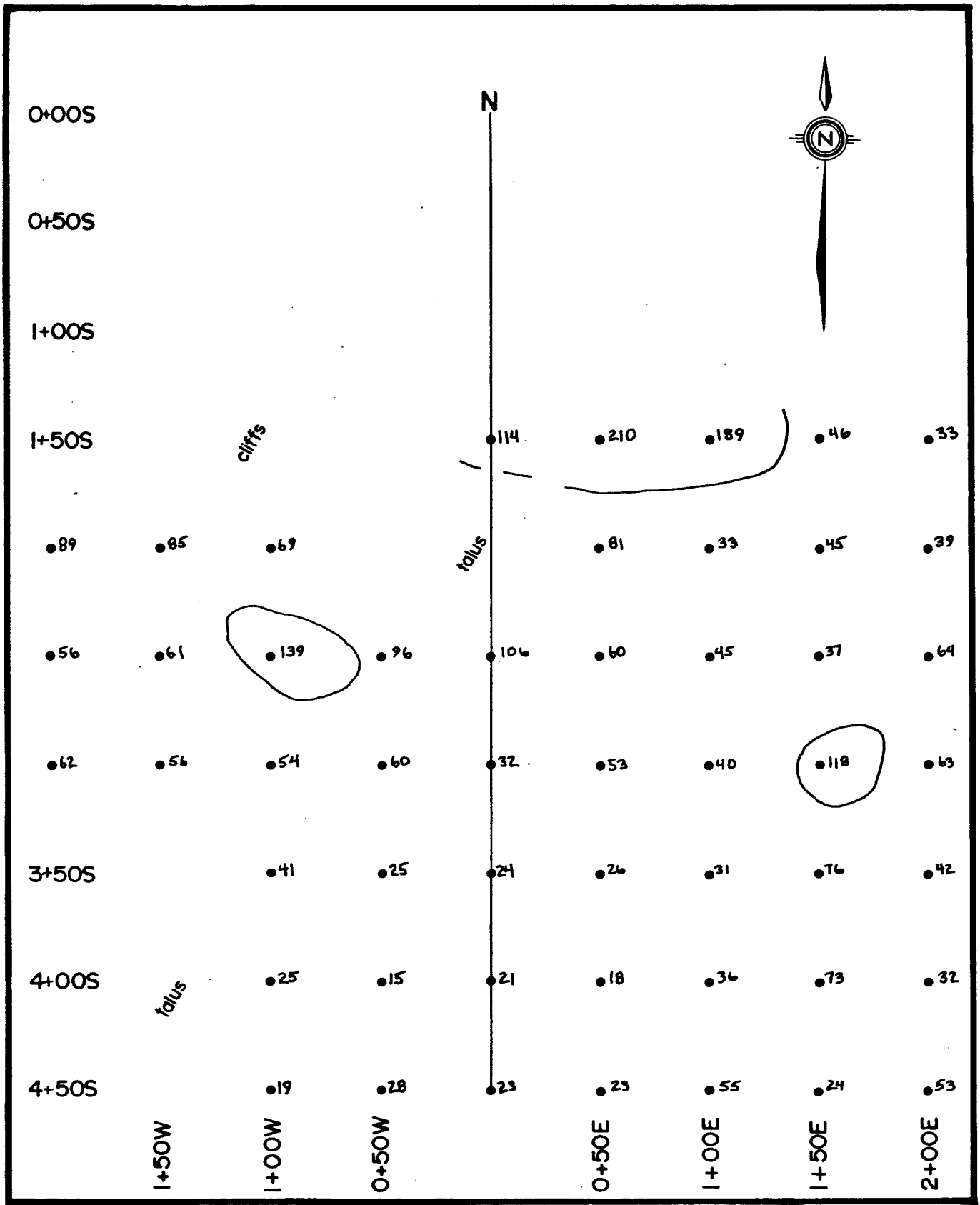
≥ 4.0 ppm Ag

TITLE: ORANGE CLAIMS, SOIL GRID
SILVER IN SOILS

DATE: NOV. 1981	DATA: S.C.
N.T.S.: 94E/7W	DRAWN: C.G.
SCALE: 1:2,500	CHECKED: Sc

25 0 50 100 150
metres

FIGURE: 4b



LEGEND

●114 sample site, ppm Cu

/ ≥ 110 ppm Cu

/ ≥ 220 ppm Cu

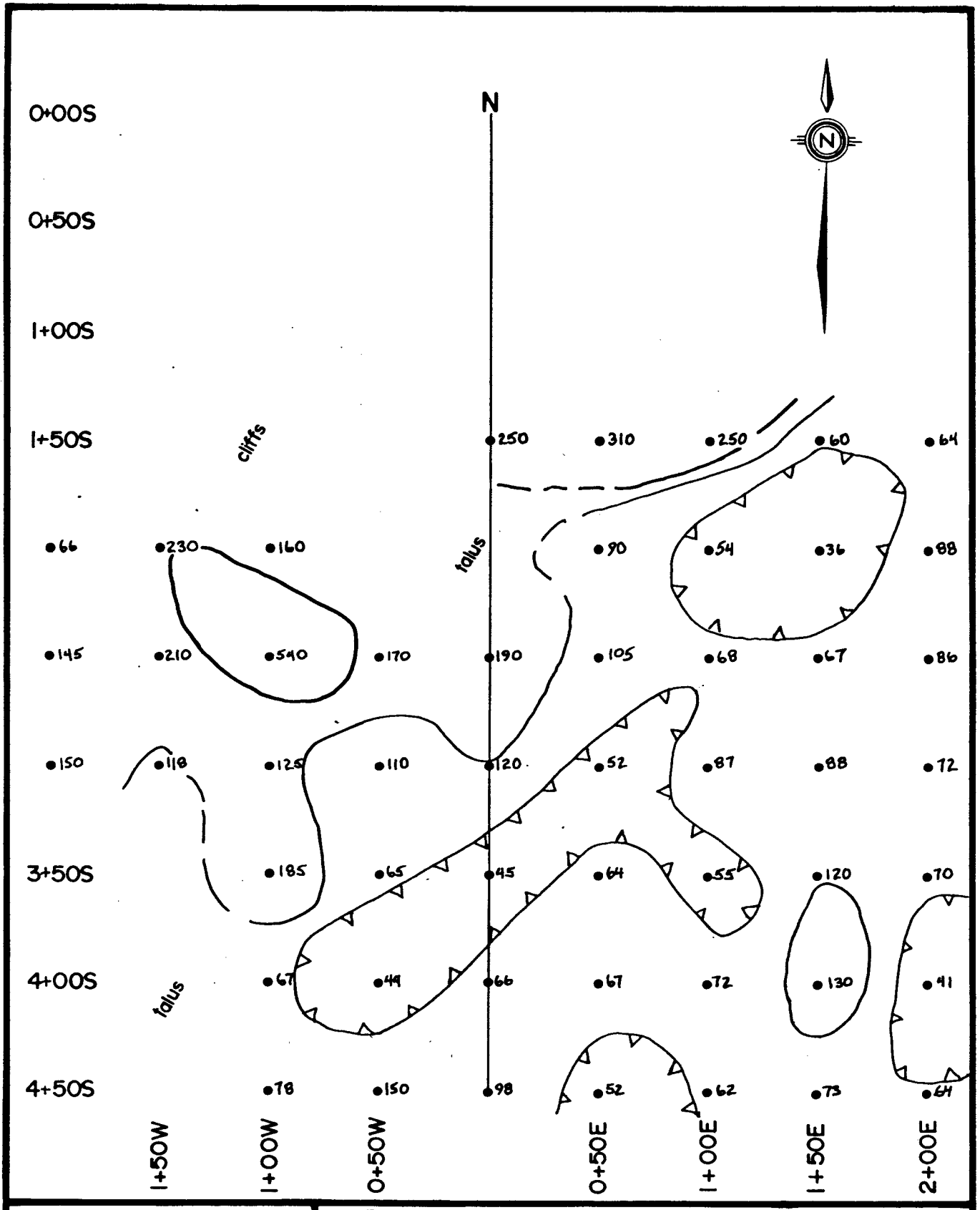
/ ≥ 440 ppm Cu

TITLE: ORANGE CLAIMS, SOIL GRID
COPPER IN SOILS

DATE: NOV. 1981	DATA: S.C.
N.T.S.: 94E/7W	DRAWN: C.G.
SCALE: 1:2,500	CHECKED:

25 0 50 100 150
metres

FIGURE: 4c



LEGEND

●72 sample site, ppm Pb

≥ 60 ppm Pb

≥ 120 ppm Pb

≥ 240 ppm Pb

TITLE:

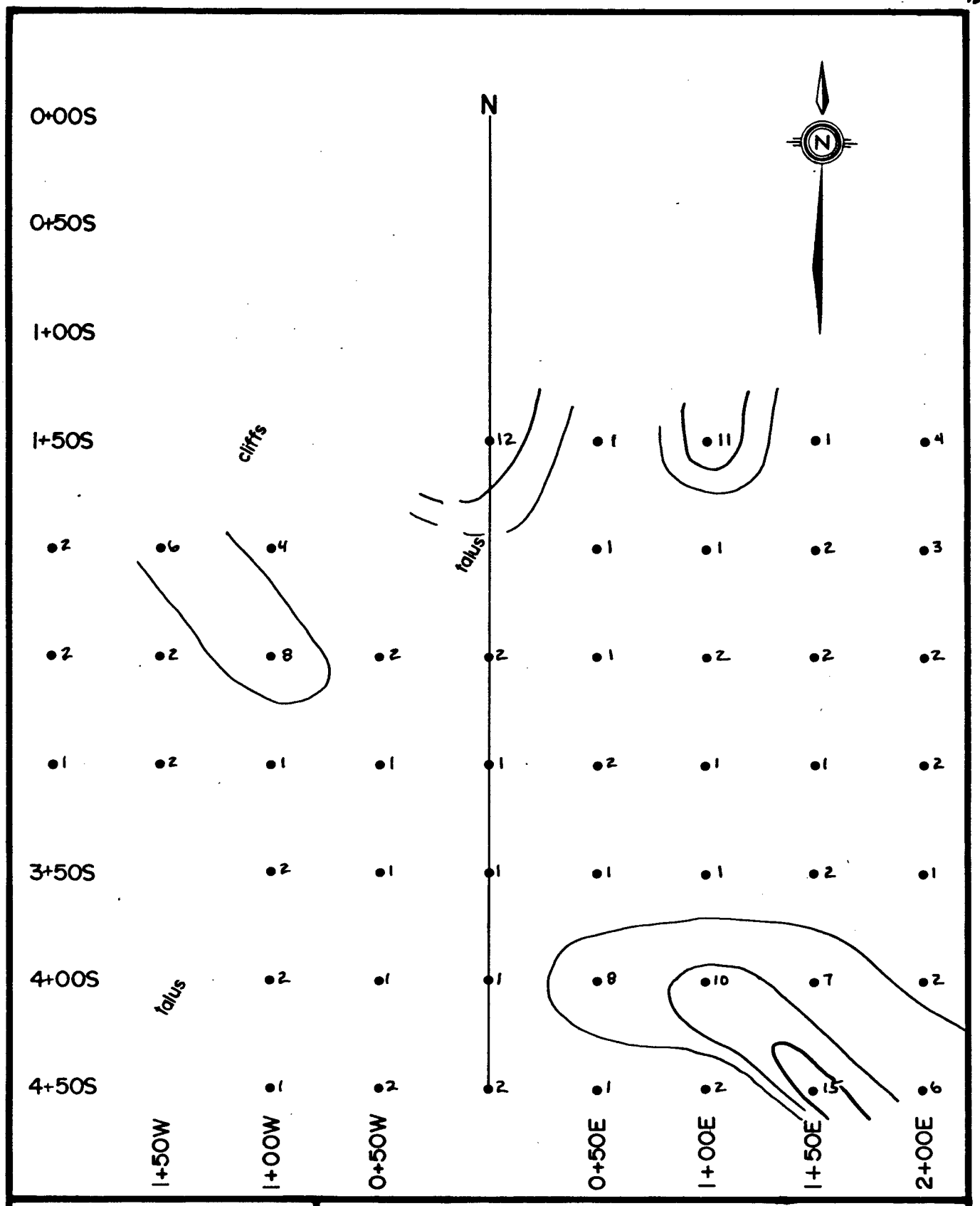
ORANGE CLAIMS, SOIL GRID
LEAD IN SOILS

DATE: NOV. 1981	DATA: S.C.
N.T.S.: 94E/7W	DRAWN: C.G.
SCALE: 1:2,500	CHECKED:

25 0 50 100 150
metres

FIGURE:

4d



LEGEND

- ●² sample site, ppm Mo
- ≥ 6 ppm Mo
- ≥ 10 ppm Mo
- ≥ 14 ppm Mo

TITLE:

ORANGE CLAIMS, SOIL GRID
MOLYBDENUM IN SOILS

DATE: NOV. 1981	DATA: S.C.
N.T.S.: 94E/7W	DRAWN: C.G.
SCALE: 1:2500	CHECKED:

25 0 50 100 150
metres

FIGURE: **4e**

CERTIFICATE OF QUALIFICATIONS

I, Sheila A. Crawford, certify that:

1. I am a geologist, employed by Serem Ltd.

2. I have a 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 1976 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.

STATEMENT OF EXPENDITURES

Analyses

51 soil samples analysed for Au, Ag, Cu, Pb, Mo	@ $10.55	$538.05	
Shipping cost from Smithers to North Vancouver:			
51 samples	@ $ .30	15.30	
			$550.35

Wages

Geochemical sampling, August 25, 1981			
C. Chisholm	1 day @ $58.00	$ 58.00	
C. Lormand	1 day @ $50.00	50.00	
Evaluation & supervision, August 15, 25, 1981			
S. Crawford	1 day @ $92.00	92.00	
Report writing			
S. Crawford	1 day @ $92.00	92.00	
Drafting			
C. Greig	1 day @ $56.00	56.00	
			$348.00

Board, Lodging, and Field Expenses

Estimated cost 1981:	$52 per day	
	$52 x 3 man days	$156.00

Transportation

Helicopter: $475 per hour, including fuel (estimated)		
	40 minutes	$317.00

Topographic Map - Burnett Resources

1:10,000 scale with 20 m contours		$240.00
	TOTAL	$1,614.35