

REPORT ON  
A GEOCHEMICAL SURVEY

by

G.R. Peatfield - P.Eng.

on the

BOYA NO. 3 MINERAL CLAIM

Situated west of Graveyard Lake  
in the Liard Mining Division

59°15'N, 127°30'W

owned by

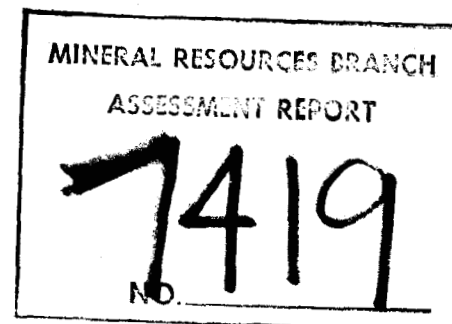
TEXASGULF CANADA LTD.

work by

TEXASGULF, INC.

July 1979

Vancouver, B.C.



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5e	Soil Geochemistry-Zn in Soils (ppm)	1:5,000	in pocket

## INTRODUCTION

### Location, Access and Terrain

The BOYA property is located immediately northeast of the confluence of the Kechika and Turnagain Rivers, in northeastern British Columbia (see Figure 1). The nearest supply and transportation centre is Watson Lake, Yukon, some 115 km to the northwest.

Access to the claims is presently by helicopter from various points on the Alaska Highway, the nearest being the settlement of Fireside, near the confluence of the Kechika and Liard Rivers some 50 km to the north-northeast. Fixed-wing aircraft can land at Graveyard Lake (see Figure 2). There is no road access to the area.

The claims are located in the extreme southwestern corner of the Liard Plain and cover most of a small hill rising some 300 m above a surrounding gravel-covered area. The maximum elevation on the hill is approximately 1050 m. Local relief is abrupt, especially along the eastern side of the hill (the 'Main Face' area), but the surface is subdued in areas of extensive overburden. Forest cover is essentially complete, commonly comprising dense second growth, in large burned areas, which makes foot travel difficult. Open grass-covered slopes are found on the southern and southeastern portions of the hill. Water on the property is scarce, but abundant supplies are available within a few kilometres.

### Property History and Definition

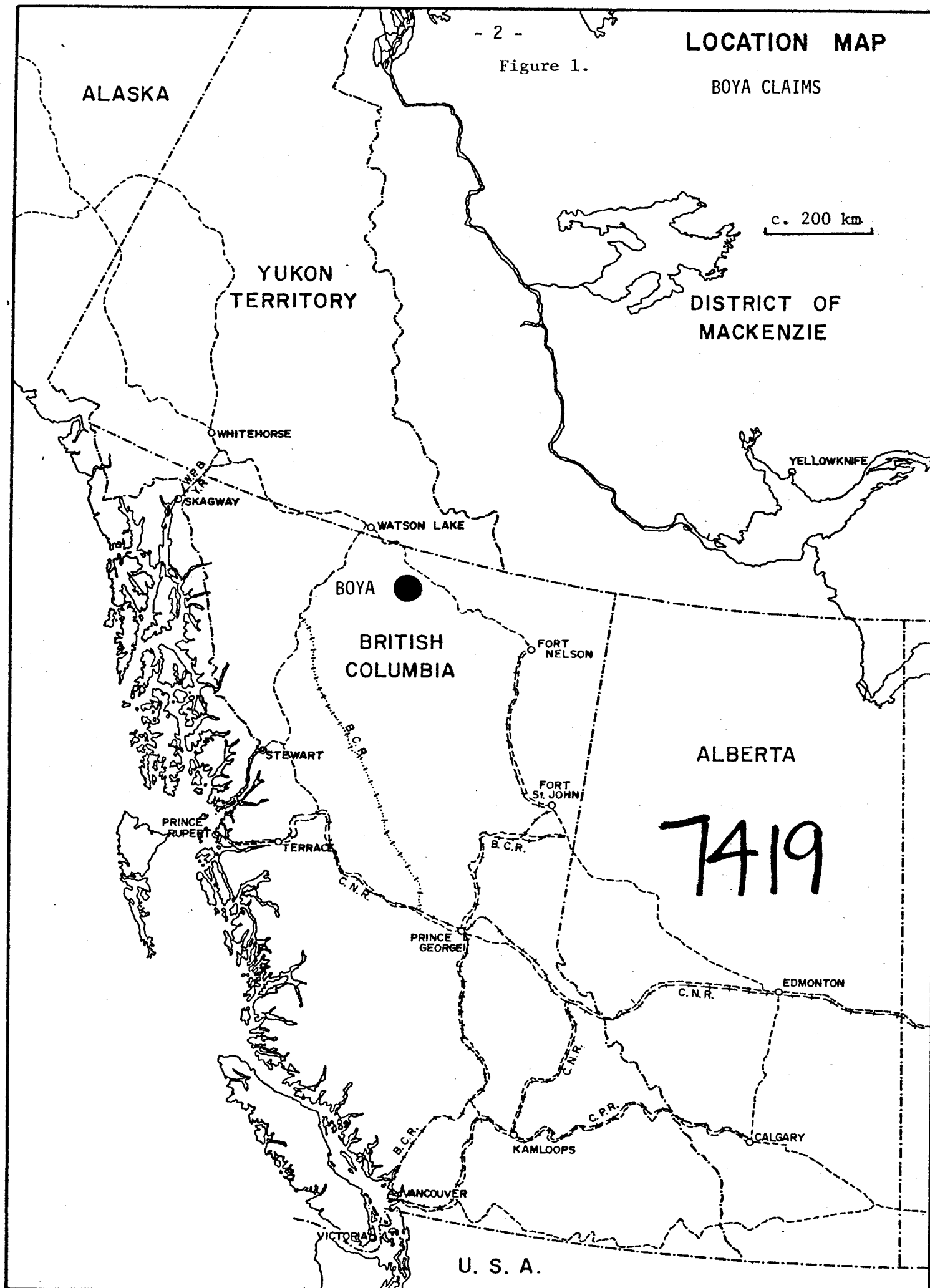
The first BOYA claims were located in June 1977, with additional staking during 1978 and 1979. Work on the property has been completed by Texasgulf, Inc., on behalf of its wholly owned subsidiary, Texasgulf Canada Ltd., the registered owner of the claims. The investigations undertaken during 1978 have been previously reported on (Peatfield, et al, 1978; Peatfield, 1979).

# LOCATION MAP

Figure 1.

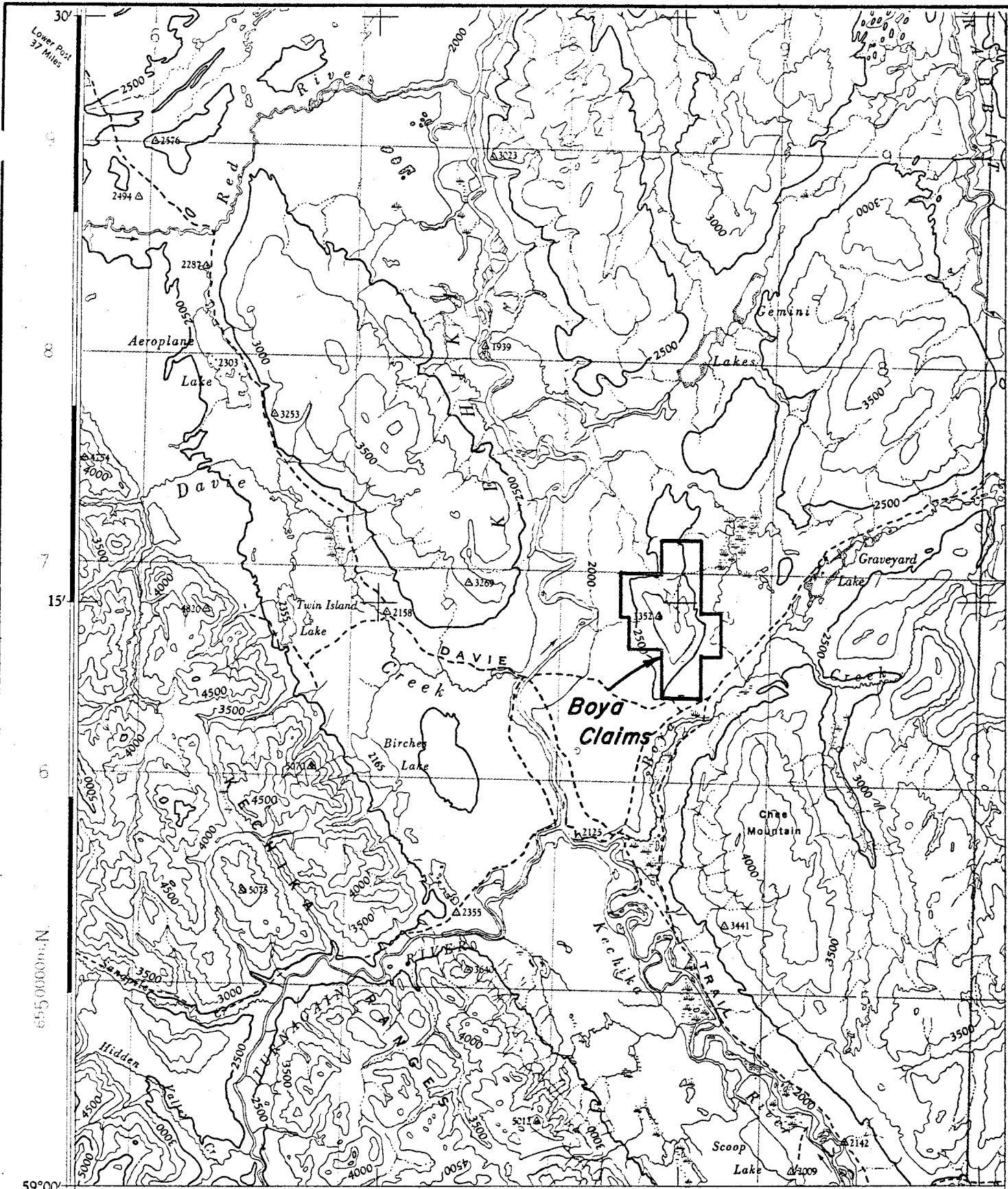
BOYA CLAIMS

c. 200 km



7419

U. S. A.



30'  
Lower Post  
37 Miles

59°00'

Major Hart R.

Map Sheet 94 M - "Rabbit River"

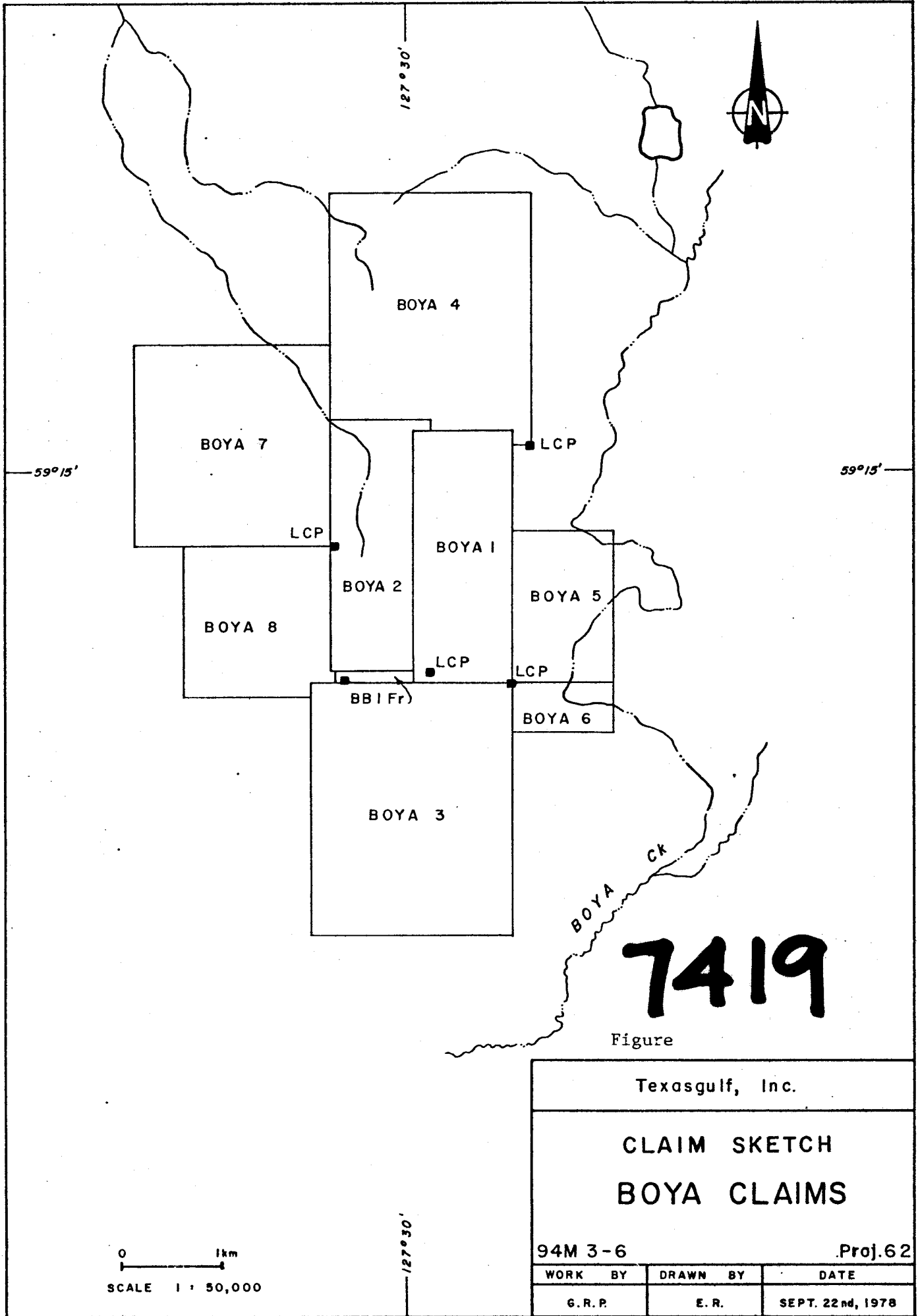
7419

**Texasgulf Inc.**

**Figure 2**  
Detailed Location Map  
**BOYA CLAIMS**

WORK BY	DRAWN BY	DATE	DRWG NO.

2500 0 2500 5000 7500 10,000  
Scale in Metres



7419

Figure

Texasgulf, Inc.

CLAIM SKETCH  
BOYA CLAIMS

94M 3-6

Proj.62

WORK BY	DRAWN BY	DATE
G. R. P.	E. R.	SEPT. 22nd, 1978

0 1km  
SCALE 1 : 50,000

At the time this work was completed, the property consisted of eight MGS claims and one fractional claim, totalling 94 units (see Figure 3), covering a raw molybdenum-tungsten prospect on which further work is contemplated. Further staking has recently been completed to the north of the original claims.

#### Summary of Work Completed

##### Geochemical survey

During the period May 23-29, 1979, a total of 61 soil samples were collected. These were analyzed for Cu, Zn, Mo and W.

##### Line-cutting

A limited amount of line-cutting was undertaken in order to provide control for the above described sampling. A baseline totalling 420 metres in length was cut, other lines were established by compass and flagging.

##### Work Distribution

The work described in this report was restricted to the BOYA 3 mineral claim.

#### GEOLOGY

The geology of the property has been described in a previously submitted assessment work report (Peatfield, 1979). The geology map of the relevant portion of the property is included with this report as a convenience for the reader (Figure 4S).

#### GEOCHEMISTRY

A minimal programme of soil sampling was undertaken in an attempt to substantiate a weak geochemical anomaly detected in an earlier survey.

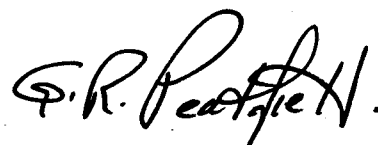
The distribution of samples is shown on Figure 5a. A total of 61 samples of B-zone material were taken at regular intervals, mostly on traverses controlled by compass and chain and tied to a cut base-line.

The minus 80 mesh portions of these samples were analyzed, by Bondar-Clegg and Company Ltd. in North Vancouver, for Cu, Zn, Mo and W.

Details of extraction techniques and analytical methods are as follows:

for Cu, Zn, Mo - hot aqua regia; atomic absorption  
for W - basic fusion; colourmetric.

The results of the analyses are shown on Figures 5b-e. There are no anomalous values for tungsten, and only a few weakly anomalous results for zinc. A well defined but subtle anomaly in copper, and two smaller anomalies in molybdenum, have been outlined; the sources of these values have not been defined. The lack of supporting tungsten values tends to downgrade this situation.



G.R. Peatfield, P.Eng.

20/07/79



## BIBLIOGRAPHY

PEATFIELD, G.R. 1979. Report on geological, geochemical and geophysical surveys and line-cutting on the BOYA NO. 1-8, B.B. 1 Fr. Mineral Claims. Report submitted to the British Columbia Ministry of Energy, Mines and Petroleum Resources for assessment work credit, May 1979.

PEATFIELD, G.R., NEWELL, J.M., and BOYLE, P.J.S. 1978. Report on geological and geochemical surveys and topographic mapping on the BOYA NO. 1 to 4 Mineral Claims. Report submitted to the British Columbia Ministry of Mines and Petroleum Resources for assessment work credit, June 1978.

APPENDIX A

Statements of Qualification

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
7419  
NO.

STATEMENTS OF QUALIFICATION

P.C. Hubacheck - Geologist

P.C. Hubacheck holds a B. Eng. degree from the South Dakota School of Mines, granted in 1977. He has had several seasons' field experience with Texasgulf, and is now on permanent staff with the Company, based in Calgary, Alberta.

H.R. Schmitt - Geologist

H.R. Schmitt obtained his B.Sc. degree in Geology from the University of British Columbia in 1977. He has been employed in a variety of positions by Texasgulf, for summer seasons from 1975, and has been continuously employed by the Company from April 1978 to the present.

G.D. Dillabough - Assistant

G.D. Dillabough is a senior undergraduate student in Geology at Waterloo University. This is his second season of employment with Texasgulf.

J. Gosselin - Assistant

J. Gosselin is an undergraduate student in Geography and Geology at Université de Sherbrooke. This is his second field season of employment with Texasgulf.

*G.P. Reatje H.*  
20/07/79

APPENDIX B

Statements of Expenditures

STATEMENT OF EXPENDITURES

HAWK GROUP

(LINE CUTTING)

SALARIES AND FRINGE BENEFITS - TEXASGULF, INC.

P.C. Hubacheck - B. Eng.  
Period May 21-23. 1 day @ \$85.00 85.00

H.R. Schmitt - B.Sc.  
Period May 21-23. 1 1/2 days @ \$65.00 97.50

182.50 182.50

ROOM AND BOARD

2 1/2 man-days @ \$50.00/day 125.00  
(includes fixed-wing mob. & re-supply charges)

HELICOPTER (Texasgulf Bell 206B)

1/4 hr. @ \$305 76.25

383.75

G.R. Peatfield -  
20/07/79

STATEMENT OF EXPENDITURES

HAWK GROUP

(SOIL GEOCHEMISTRY)

SALARIES AND FRINGE BENEFITS - TEXASGULF, INC.

G.R. Peatfield - P.Eng. May 23. 1/2 day @ \$150.00	75.00	
P.C. Hubacheck, B.Eng. Period May 24-29. 3 days @ \$85.00	255.00	
H.R. Schmitt, B.Sc. Period May 25-29. 2 1/2 days @ \$65.00	162.50	
G.D. Dillabough - Assistant Period May 24-25. 1 1/2 days @ \$45.00	67.50	
J. Gosselin - Assistant May 25. 1/2 day @ \$40.00	<u>20.00</u>	
	580.00	580.00

ROOM AND BOARD

8 man-days @ \$50.00/day (includes fixed-wing mob. & re-supply charges)	400.00
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HELICOPTER (Texasgulf Bell 206B)

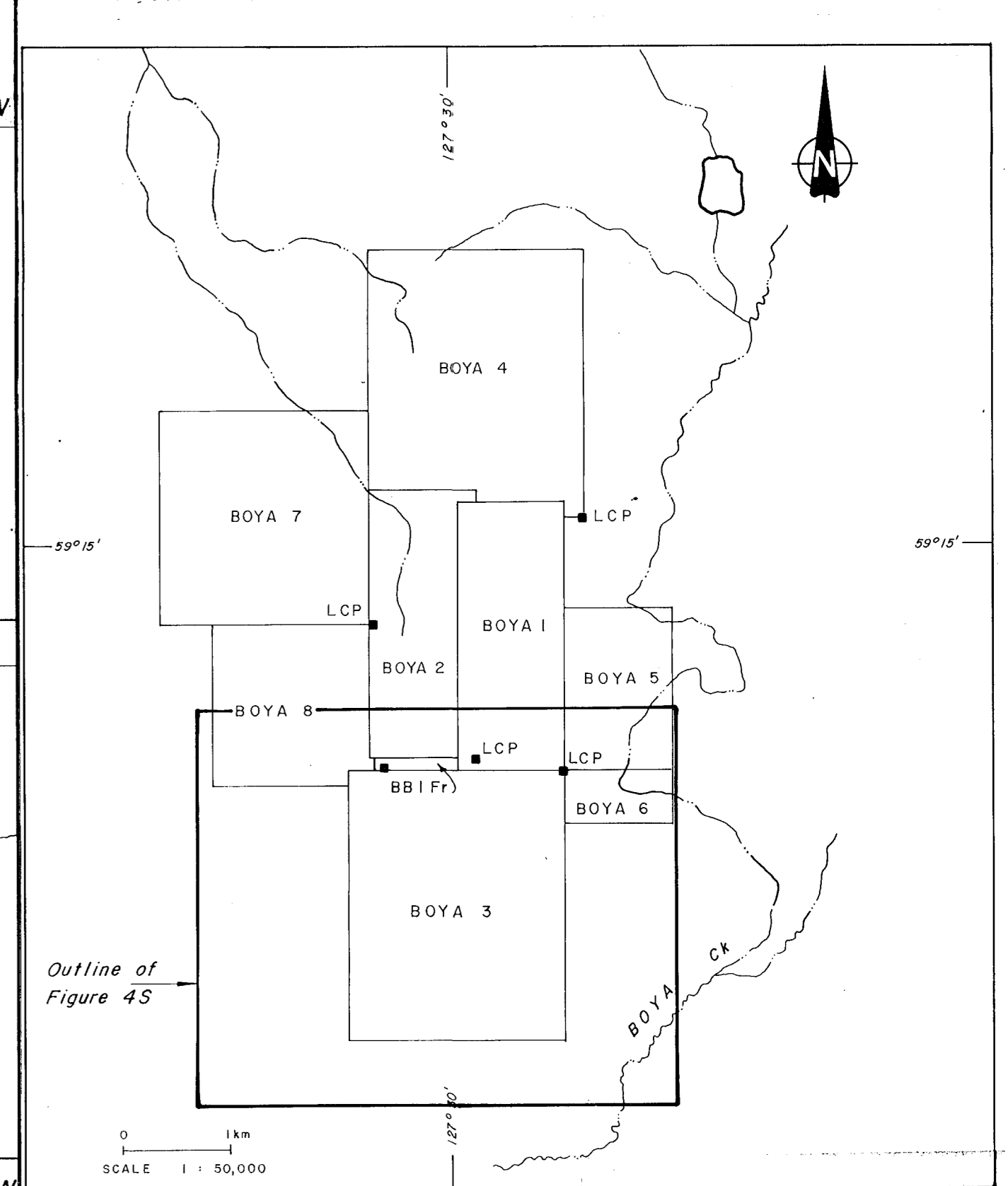
1 hr. @ \$305.00/hr	305.00
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ANALYTICAL COSTS

57 analyses for Cu, Zn, Mo, W @ \$6.75	<u>384.75</u>
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1,669.75

*G. R. Peatfield*  
20/07/79



**LEGEND**

**INTRUSIVE ROCKS**

- Quartz-feldspar porphyry dykes.
- Quartz porphyry, aplite.
- Quartz-biotite-feldspar porphyry.

**METAMORPHIC ROCKS (WITHIN THE THERMAL AUREOLE OF UNITS 7a-c)**

- 'Porcellanite' - fine, banded siliceous skarn, alternating layers of quartz and diopside.
- Coarse diopside-quartz skarn, often with appreciable pyrrhotite.
- Coarse garnet skarn.
- Hornfels.

note: Marbles are not mapped separately, but are included with unit 5 below.

**UNMETAMORPHISED SEDIMENTARY STRATA**

**MAIN FACE SECTION**  
(use Figure 5 for detailed column)

- Massive limestone; a: thin-bedded limestone, sandy limestone.
- Dark shale; a: massive white-weathering limestone.
- 'Volcanic unit' - flows, breccias, tuffs, tuffaceous shales, chert.
- Thinly interbedded limestone and limey shale.
- Thinly banded shale, limey shale, siliceous shale, fine sandstone.
- Quartzite (seen only in the metamorphic zone).

note: units 2a-c are intercalated.

**NORTHEAST AREA SECTION**

- Dark shale.
- Massive limestone and marble.
- Shale, sandy shale, fine sandstone.

correlation uncertain

**HAWK PAD SECTION**

- Grit, pebble conglomerate.
- Dolomite -
- Limestone -
- Shales -

**CUT LIP HILL SECTION**

- Dolomite -
- Limestone -
- Shales -

**SYMBOLS**

- bedding
- cleavage
- jointing
- joints with quartz veins
- sub-outcrop
- Legal Corner Post for Mineral Claims
- Apparent limit of transition to porcellanite in shales and silty rocks, or to hornfels in more quartz-rich clastic rocks.
- Apparent limit of complete transition of all rocks except quartzite to porcellanite.

Scale 1:5,000

MINERAL RESOURCES BRANCH  
CONTOUR INTERVAL 60 m  
ASSESSMENT REPORT

**7419**  
NO.

Figure 4S

**Texasgulf Inc.**

**BOYA CLAIMS  
GEOLOGY - SOUTH SHEET**

NTS 94M/3W, 4E Proj. 62

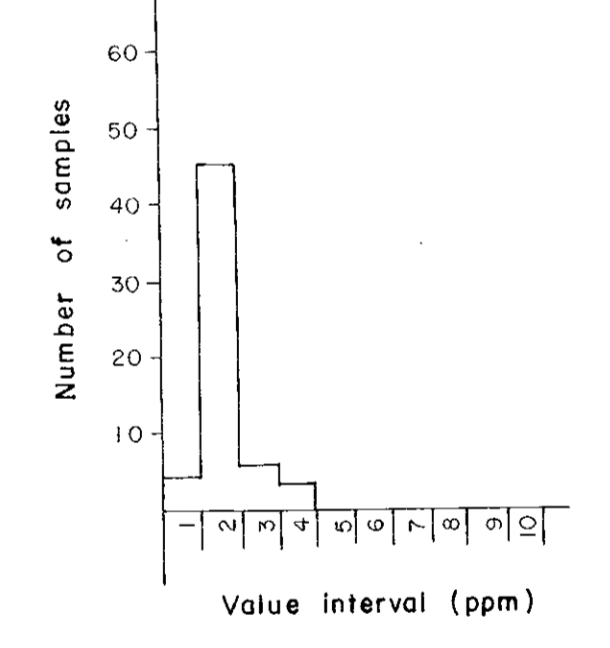
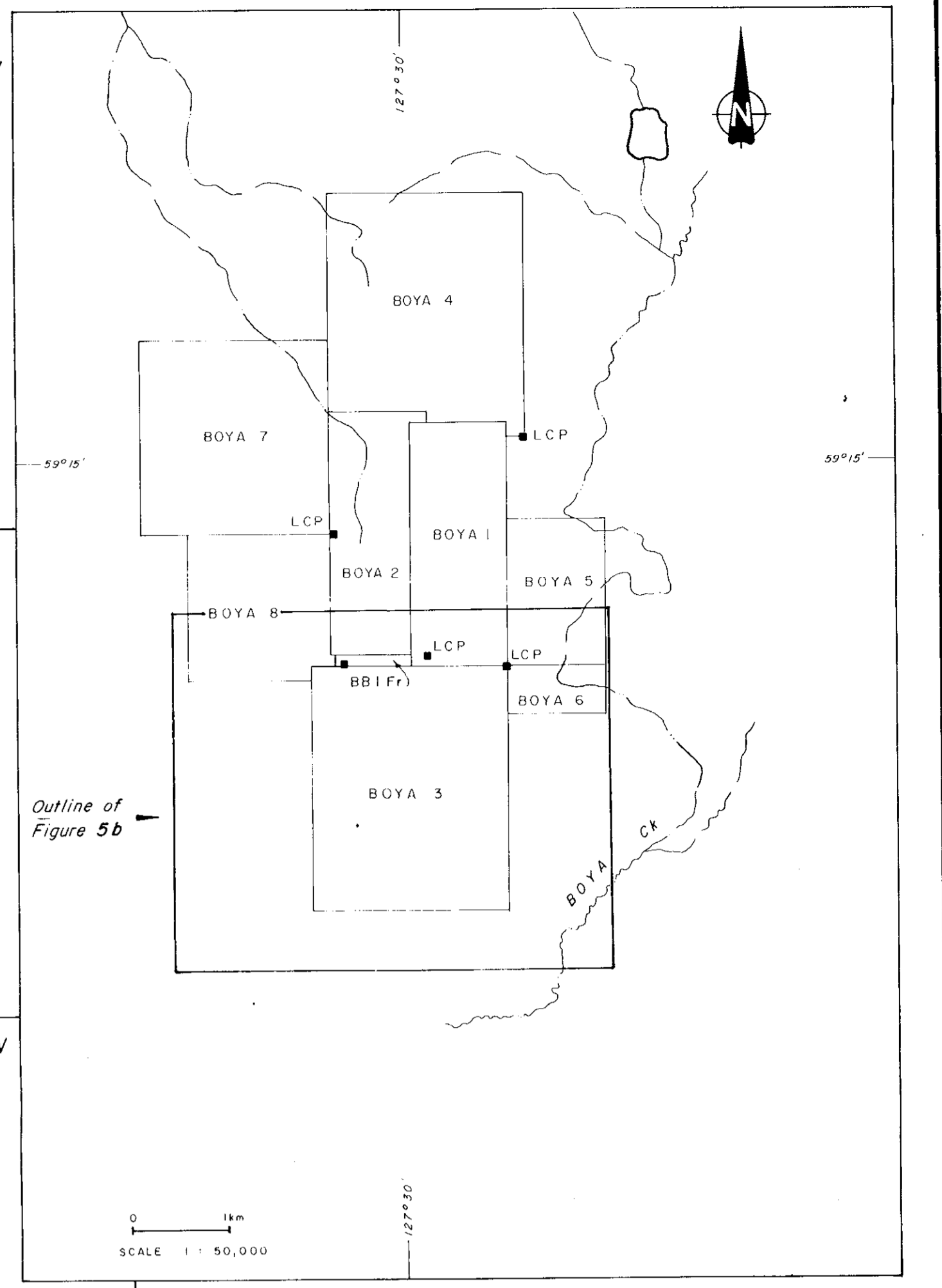
WORK BY	DRAWN BY	DATE	DRWG NO.
G.R.P., C.R.	E.R.	December 1978	

Scale in Metres

*G.R. Patten*  
23/07/79







**LEGEND**

- All sample numbers on report sheets are of the form 62-#-79
- Chain and compass traverse
- Paced contour traverse

MINERAL RESOURCES DIVISION  
ASSESSMENT REPORT  
**7419**  
NO.

*G. R. [Signature]*  
23/07/79

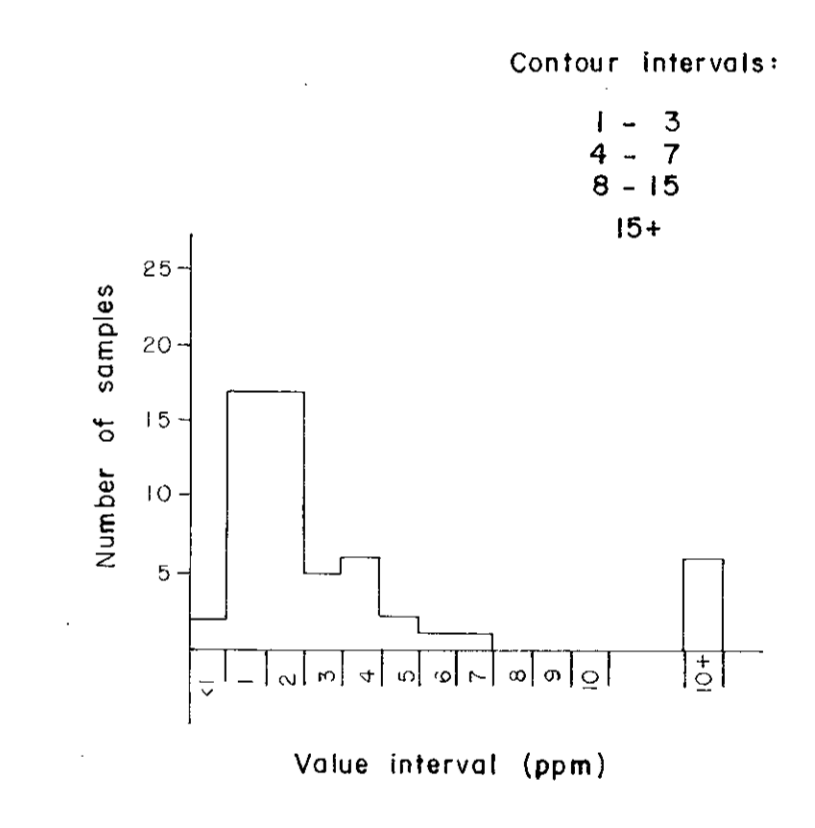
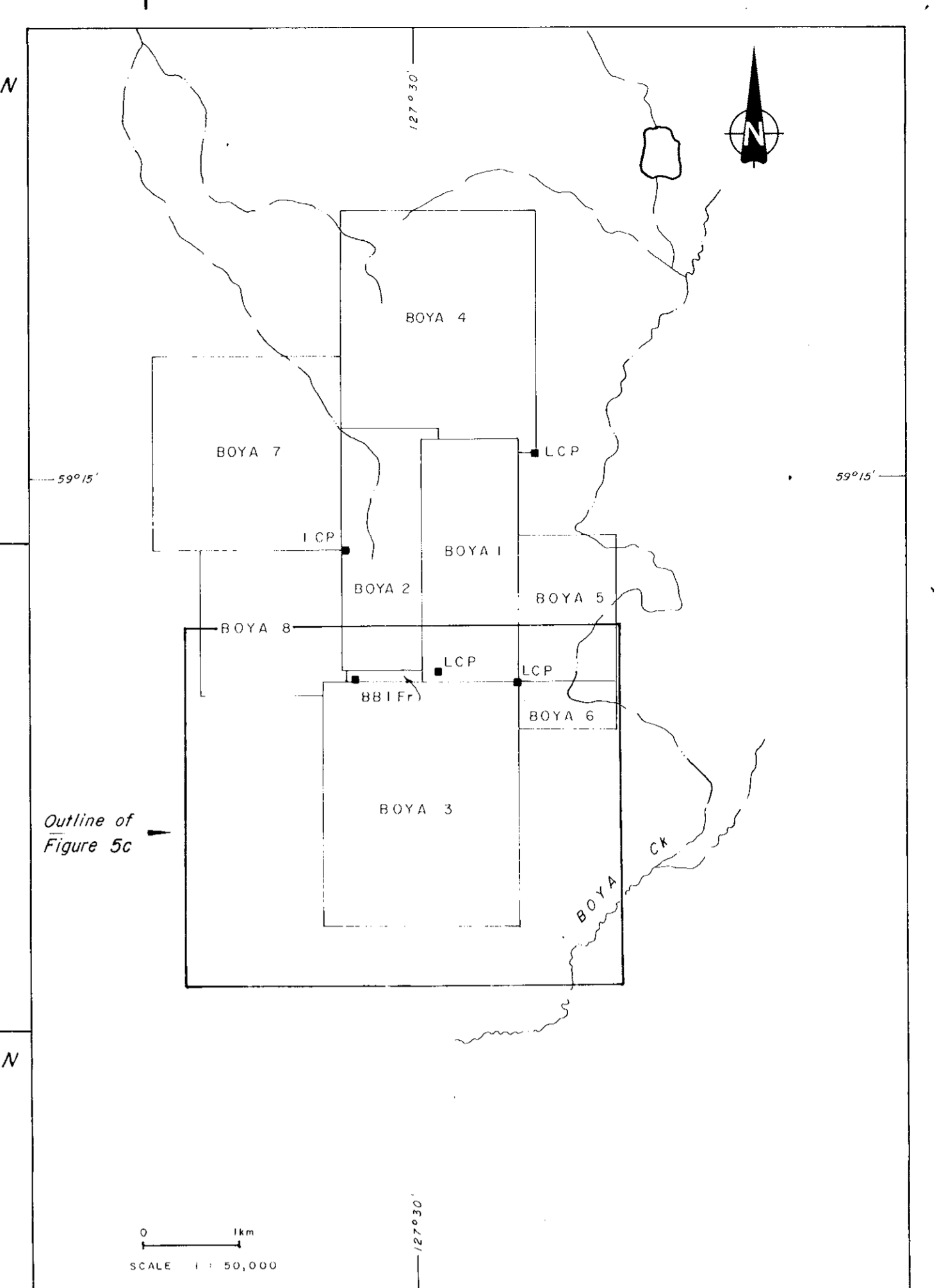
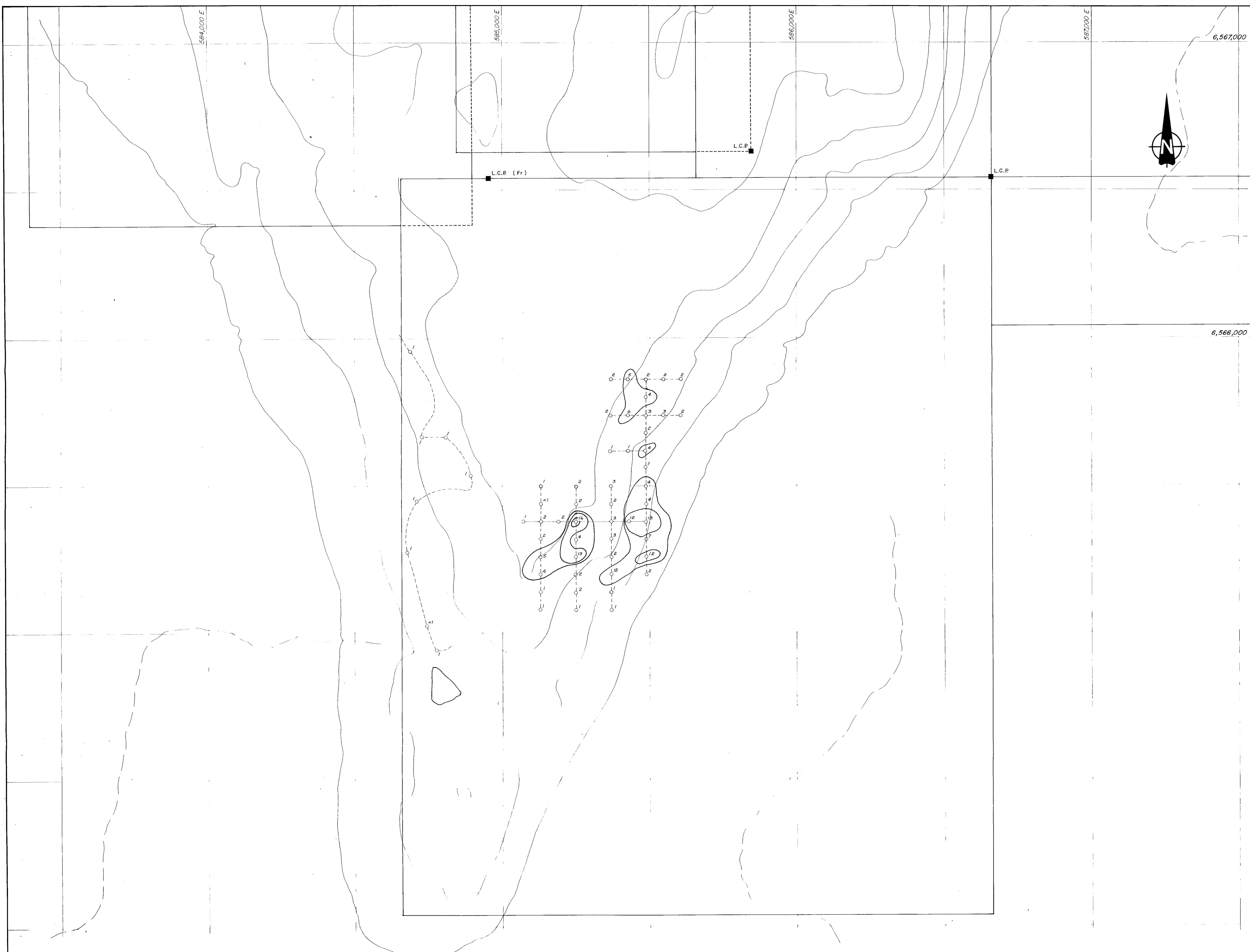
Scale 1:5,000 Contour interval 60 m

Figure 5b

**Texasgulf Inc.**  
BOYA CLAIMS  
SOIL GEOCHEMISTRY (SOUTH SHEET)  
W in soils (ppm)

NTS 94M/3W,4E,5E,6W		Proj. 62	
WORK BY	DRAWN BY	DATE	DRWG NO.
PCH., HRS.	E. R.	JUNE 1979	

Scale in Metres



**LEGEND**

All sample numbers on report sheets are of the form 62 - M - 79

—○—○— Cut line traverse

—○—○— Chain and compass traverse

—○—○— Paced-contour-traverse

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**7419**  
NO.

E.R. Patten  
23/07/79

Scale 1 : 5,000      Contour interval 60m

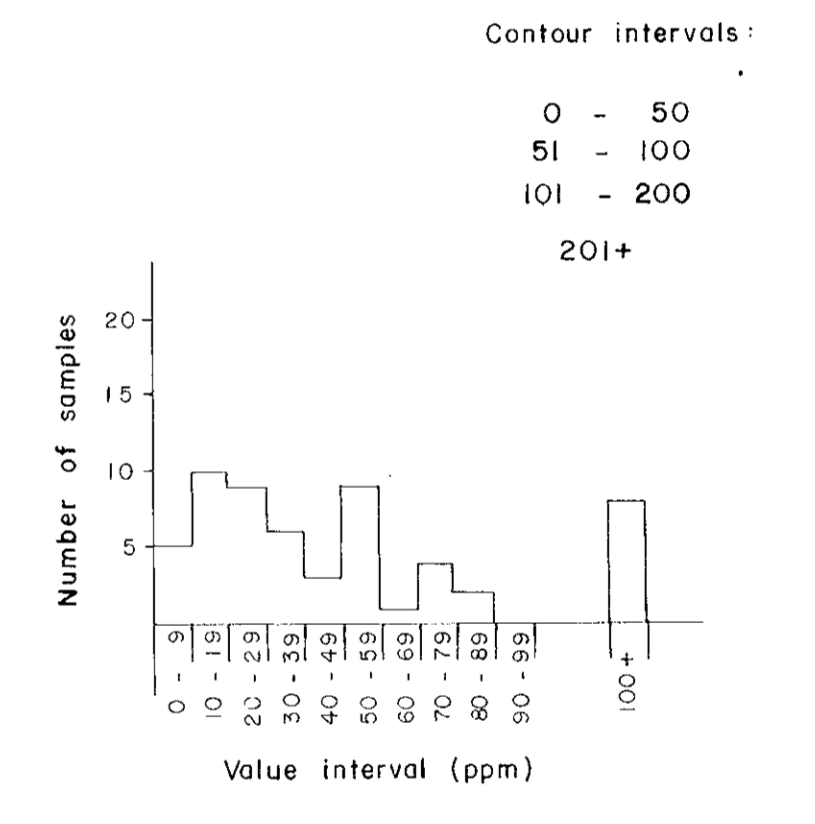
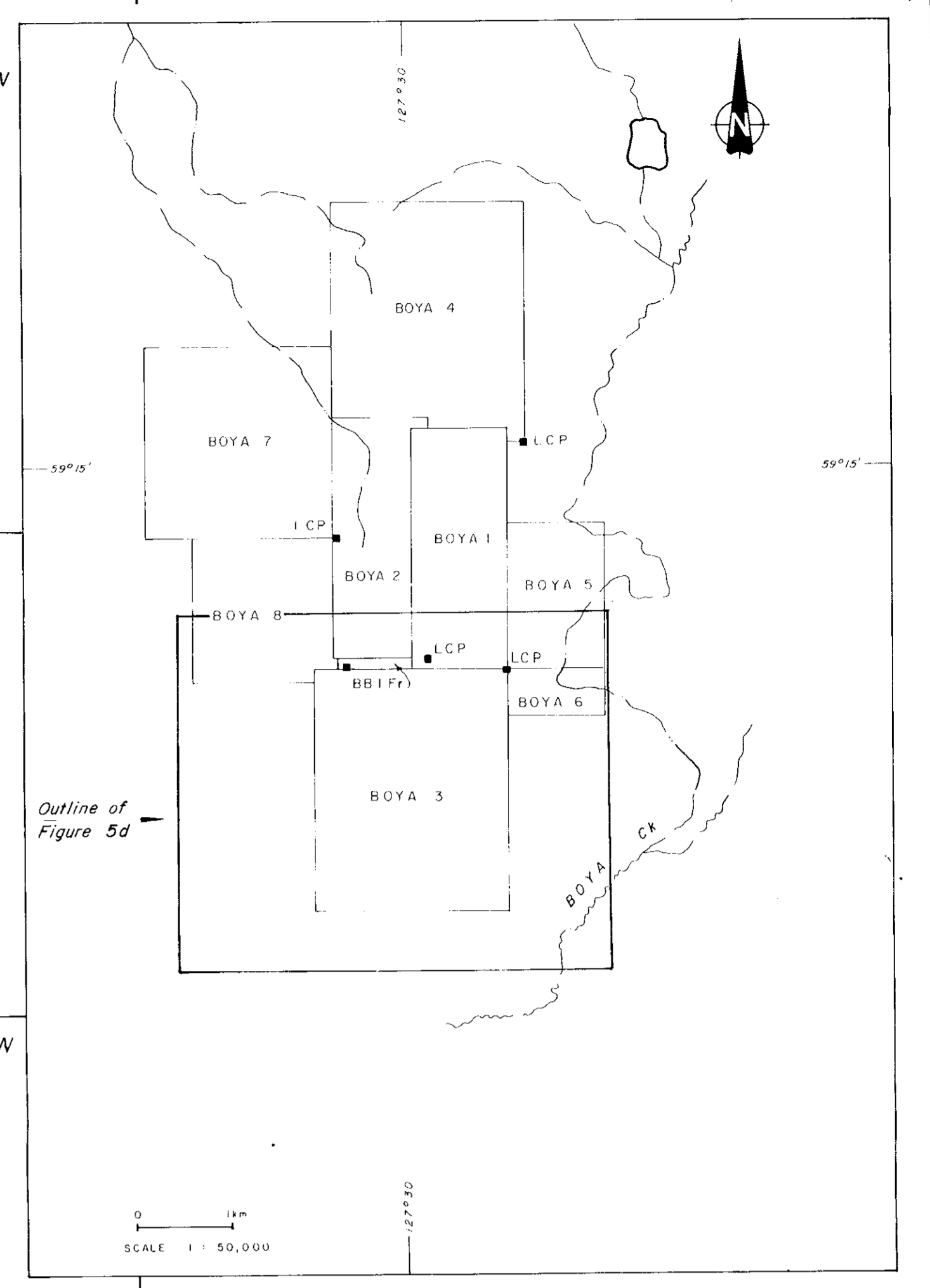
Figure 5c

**Texasgulf Inc.**

**BOYA CLAIMS**  
**SOIL GEOCHEMISTRY (SOUTH SHEET)**  
**Mo in soils (ppm)**

NTS 94 M/3W 4E, 5E, 6W	Proj. 62		
WORK BY	DRAWN BY	DATE	DRWG. NO.
PCH., HRS.	E.R.	JUNE 1979	

Scale in Metres



**LEGEND**

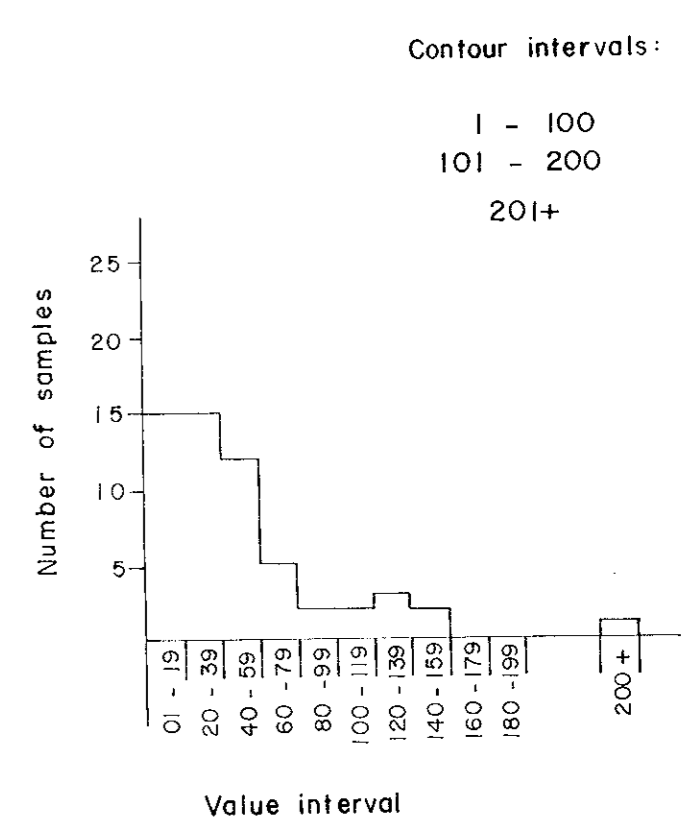
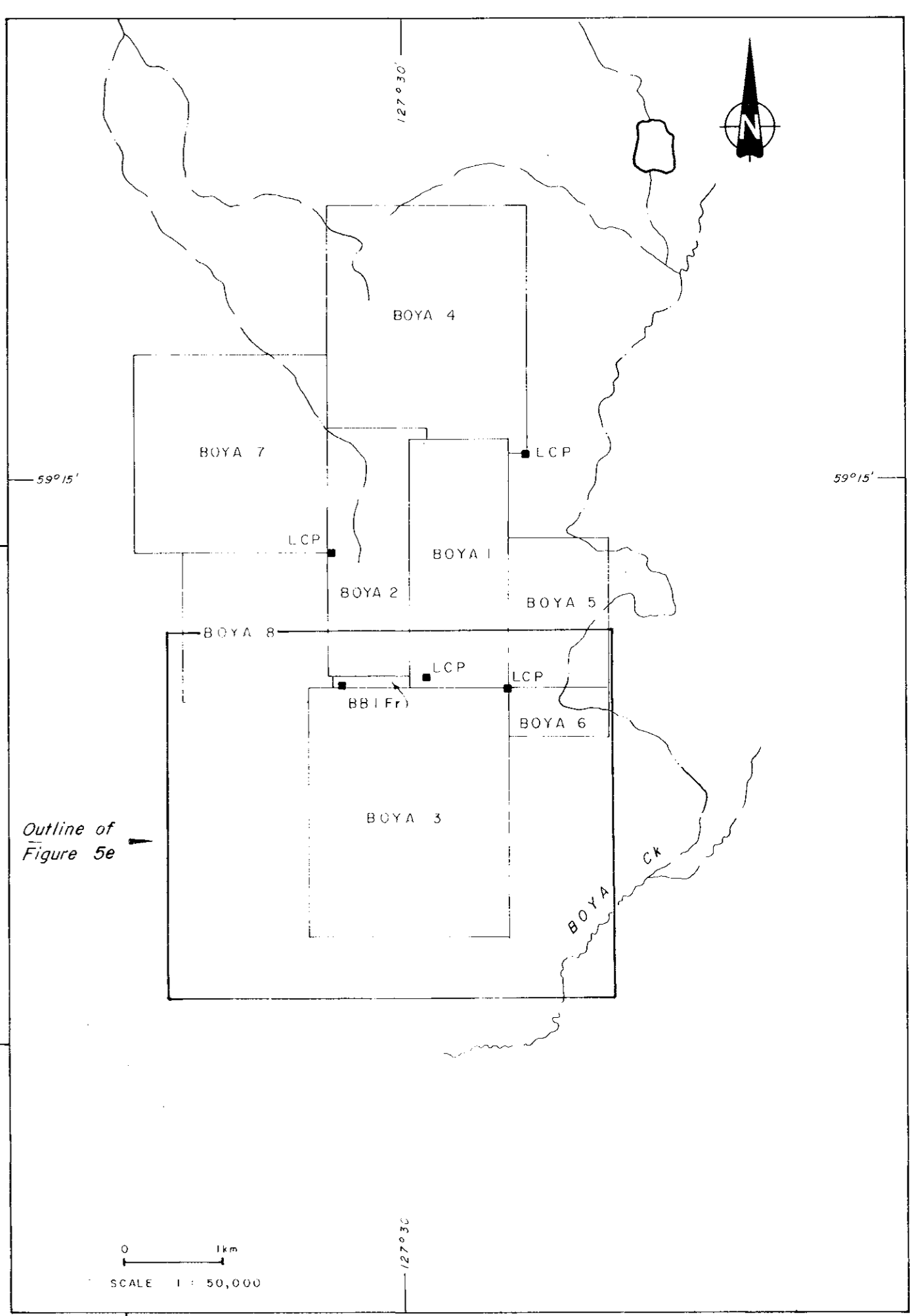
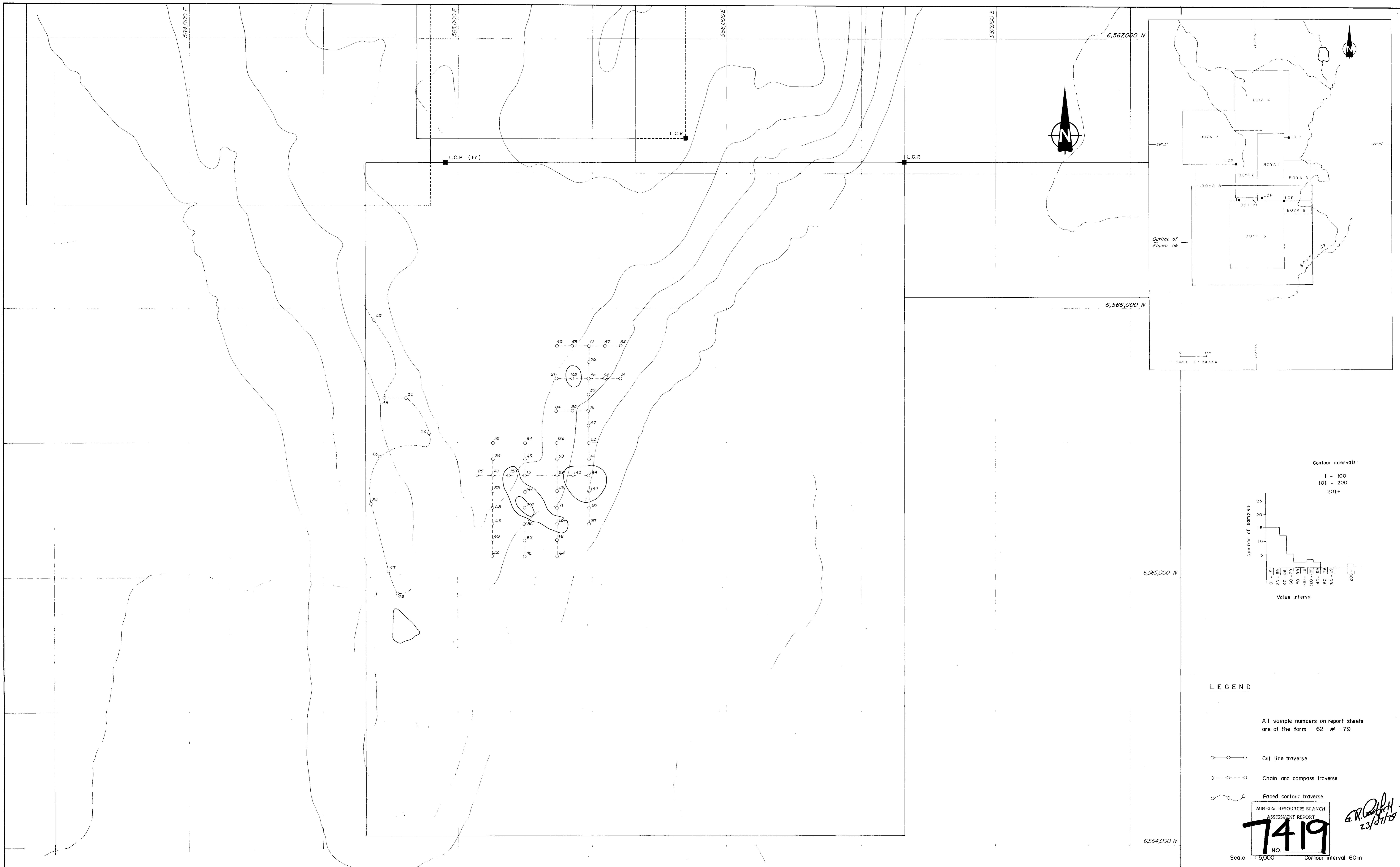
- All sample numbers on report sheets are of the form 62-#-79
- Cut line traverse
- Chain and compass traverse
- Paced contour traverse

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**7419**  
NO. 7419  
Scale 1:5,000 Contour Interval 60m

*G.R. Beath*  
23/07/79

Figure 5d

<b>Texasgulf Inc.</b>			
<b>BOYA CLAIMS</b>			
<b>SOIL GEOCHEMISTRY (SOUTH SHEET)</b>			
<b>Cu in soils (ppm)</b>			
NTS 94 M/3W 4E, 5E, 6W			Proj. 62
WORK BY	DRAWN BY	DATE	DRWG. NO.
E.R.		JUNE 1979	
 Scale in Metres			



**LEGEND**

- All sample numbers on report sheets are of the form 62-#-79
- Cut line traverse
  - Chain and compass traverse
  - Paced contour traverse

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**7419**  
NO.

*G.R. [Signature]*  
23/8/79

Scale 1:5,000 Contour interval 60m

Figure 5e

**Texasgulf Inc.**  
BOYA CLAIMS  
SOIL GEOCHEMISTRY (SOUTH SHEET)  
Zn in soils (ppm)

NTS 94M/3W,4E,5E,6W Proj. 62

WORK BY	DRAWN BY	DATE	DRW.G. NO.
PCH, H.R.S.	E.R.	JUNE 1979	

Scale in Metres