Progress Report

EL 597 "Amelia Springs"

OPEN FILE

CR1974-0130

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LIST OF PLANS

Plan 1 1

CARPENTARIA EXPLORATION COMPANY PTY. LTD.

EXPLORATION LICENCE NO.597 'AMELIA SPRING'

PROGRESS REPORT FOR QUARTER ENDED 20TH DECEMBER, 1973

1. INTRODUCTION

This report sets out the exploration results obtained during the quarter ended 20th December, 1973, for the area covered by Exploration Licence No.597 'Amelia Spring' and also summarizes the result obtained during 1973.

The information contained in this report and that for the adjoining Exploration Licence No.598 'Barney Hill' comprizes the result for the 1973 field season in the McArthur District.

2. GEOCHEMICAL SURVEY

Stream sediment sampling over the area has outlined several anomalous areas (see plan 1). A number of lead (minor zinc) anomalies occur along a north-south line along the Emu Fault Zone. Some of these can be attributed to known mineralization and are marked by old workings, e.g. Cooks, Coxs, Turnbulls and Squib. Several copper anomalies have been detected to the west of this line of lead-zinc anomalies.

3. FOLLOW-UP LEAD ANOMALIES

General mapping and prospecting has been carried out in the area to determine the cause of the anomalies.

The lead occurs as galena in dolomites. The dolomites are extensively fractured and capped by chert (silicified

3. FOLLOW-UP LEAD ANOMALIES (CONT.)

dolomite). Silicification, fracturing and mineralization appear to be related to fault belonging to the Emu Fault Zone. An induced polarization survey was carried out over an area immediately surrounding the old Cooks and Coxs workings and several anomalies were located away from the old workings. An evaluation of all available data is presently being made to plan further surface exploration and possible drilling.

4. FOLLOW-UP COPPER ANOMALIES

Two anomalous copper areas were detected west of the line of lead anomalies. One occurs near Cattle Creek and a second about 3 km to the north, known as Cowdreys Copper.

The Cattle Creek anomaly as originally detected is only a low order anomaly outlined by three stream sediment samples. Geological traverses and general prospecting were carried out in the catchment area. The only rocks outcropping in the area are dolomites. No surface indications such as gossanous outcrops were found and the area is regarded to have very little potential.

4.1. Cowdreys Copper

4.1-1. Geochemistry

The area was sampled during a stream sediment sampling programme (see plans 2 to 4). Anomalous copper values up to 215 p.p.m. were found. The area was re-sampled and the

4. FOLLOW-UP COPPER ANOMALIES (CONT.)

anomalous values repeated. Subsequently, soil samples were collected along lines 100 m apart with 50 m spacing between samples. Anomalous copper values up to 1700 p.p.m. were detected. Values for lead and zinc were background (15 to 25 p.p.m.) only. Results for copper are shown on plan 5.

4.1-2. Geology

The anomalous area occurs between the headwaters of two creek systems, one flowing north-west, the other north-east. It is an area of very low relief with only a light rise separating the two creeks. The area is densely covered with low vegetation. Consequently outcrop is very poor.

The area is underlain by a dolomitic sequence mapped as Cattle Creek Beds. Dips are low, 10° to 15° to the south. Three different lithologies occur -

(1) interbedded well bedded laminated dolomites and algal (collenial) dolomites overlain by

(2) gritty and brecciated, partly ferruginous dolomites. This unit outcrops best in the western part of the area. Along strikes to the east it disappears under sand and soil cover. The anomalous soil values occur over this unit.

(3) Flaggy sandstone, dolomitic sandstones and dolomites.

4. FOLLOW-UP COPPER ANOMALIES (CONT.)

No accurate estimate of these units can be made because of the poor outcrop and shallow dip. The ferruginous ("gossan") strip is approximately 30 m wide on the surface.

On the western side the dolomitic sequence is cut off by a fault. Steeper dips (up to 40°) occur near this fault. The fault is marked by discontinuous occurrences of baryte veins. Several samples were assayed spectrographically. Sample QT 14 138 was a baryte rich dolomite; sample QT 14 139 was taken from one of the gossanous outcrops.

	14 138	14 139
Co	100	1 000
Ni	20	800
Ce	20	20
V	10	10
Mn	800	3 000
Cu	200	10 000
Pb	5	5
Zn	X	60
Bi	5	80
As	50	300
Ba	10 000	1 500
Sc	10 000	X
Ti	800	300

X - below limit of detection

4. FOLLOW-UP COPPER ANOMALIES (CONT.)

4.1-3. Discussion

Several explanations can be offered from the evidence available as to the mode of occurrence of the copper. The soil anomaly suggests it is stratabound, but the possibility that the copper was introduced along the western fault can not be rejected. Evaluation of data is continuing before deciding on further exploration in the area.

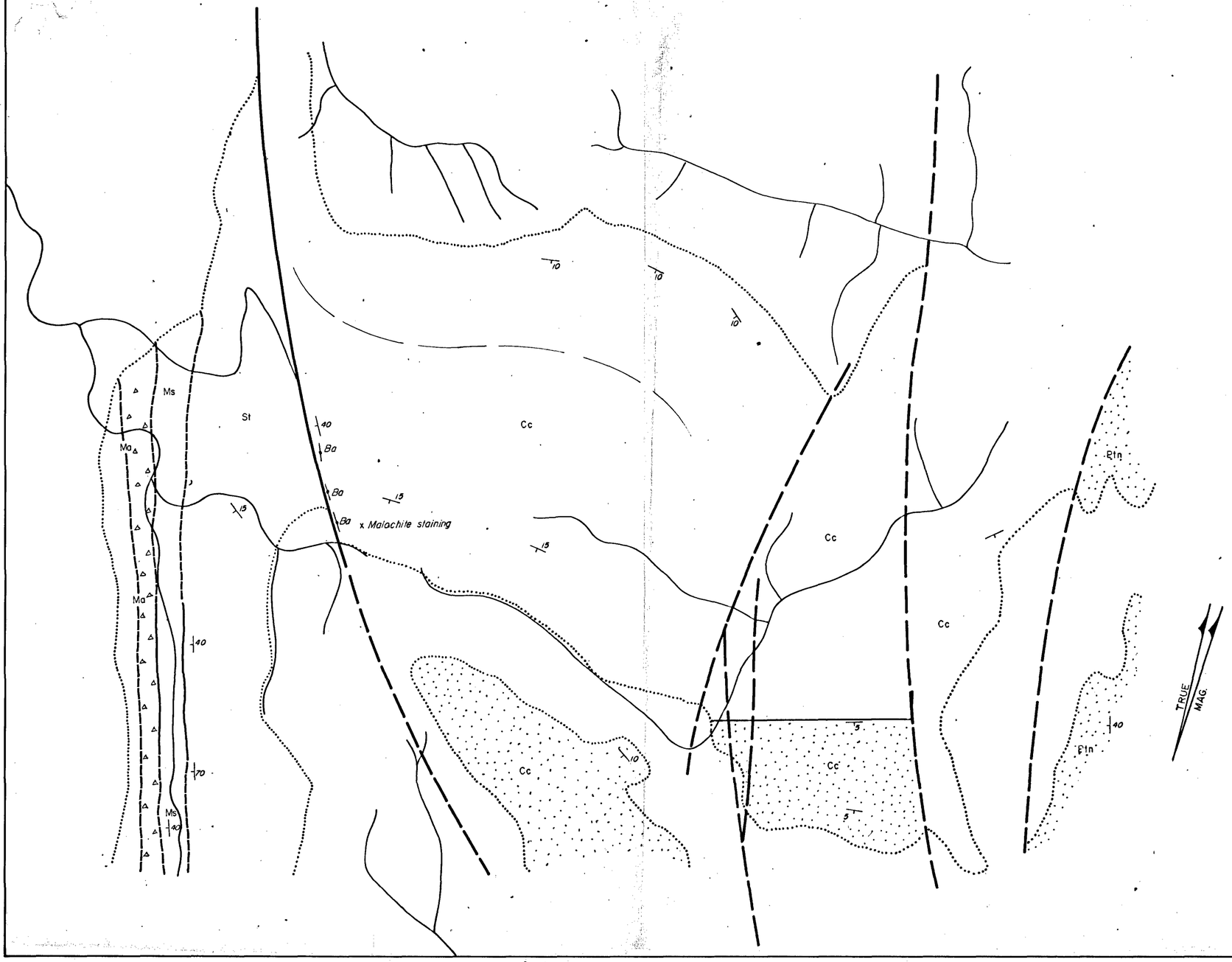
5. EXPENDITURE

	$
Administration	519
Operating Labour	1 086
Freight & Cartage	95
Stores & Provisions	1 062
Transportation	62
This Period	$ 2 824
Previously Reported	$69 208
TOTAL TO DATE	$72 032

L.M. Sweet

for E.M. Bennett
Manager

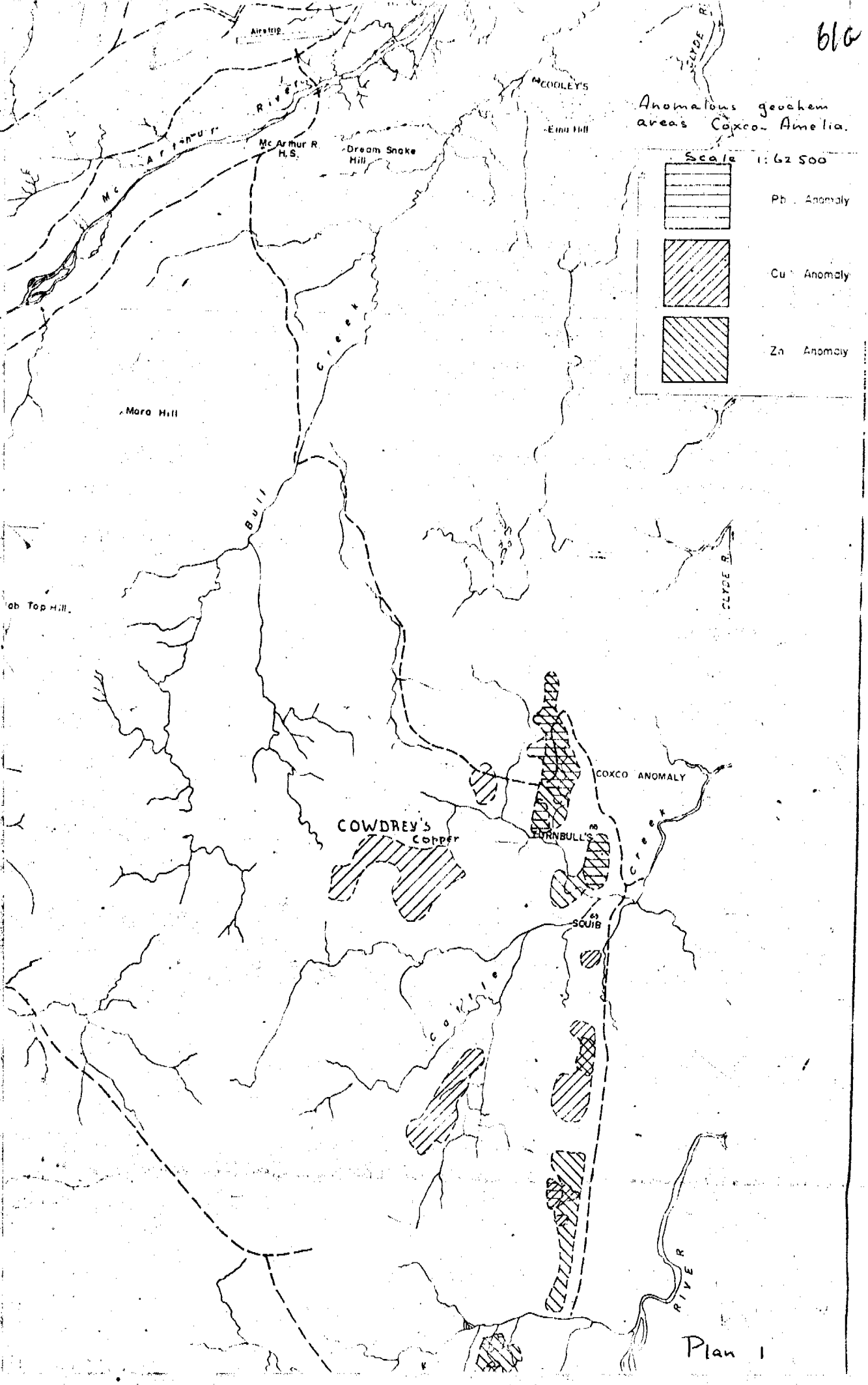
- oOo -



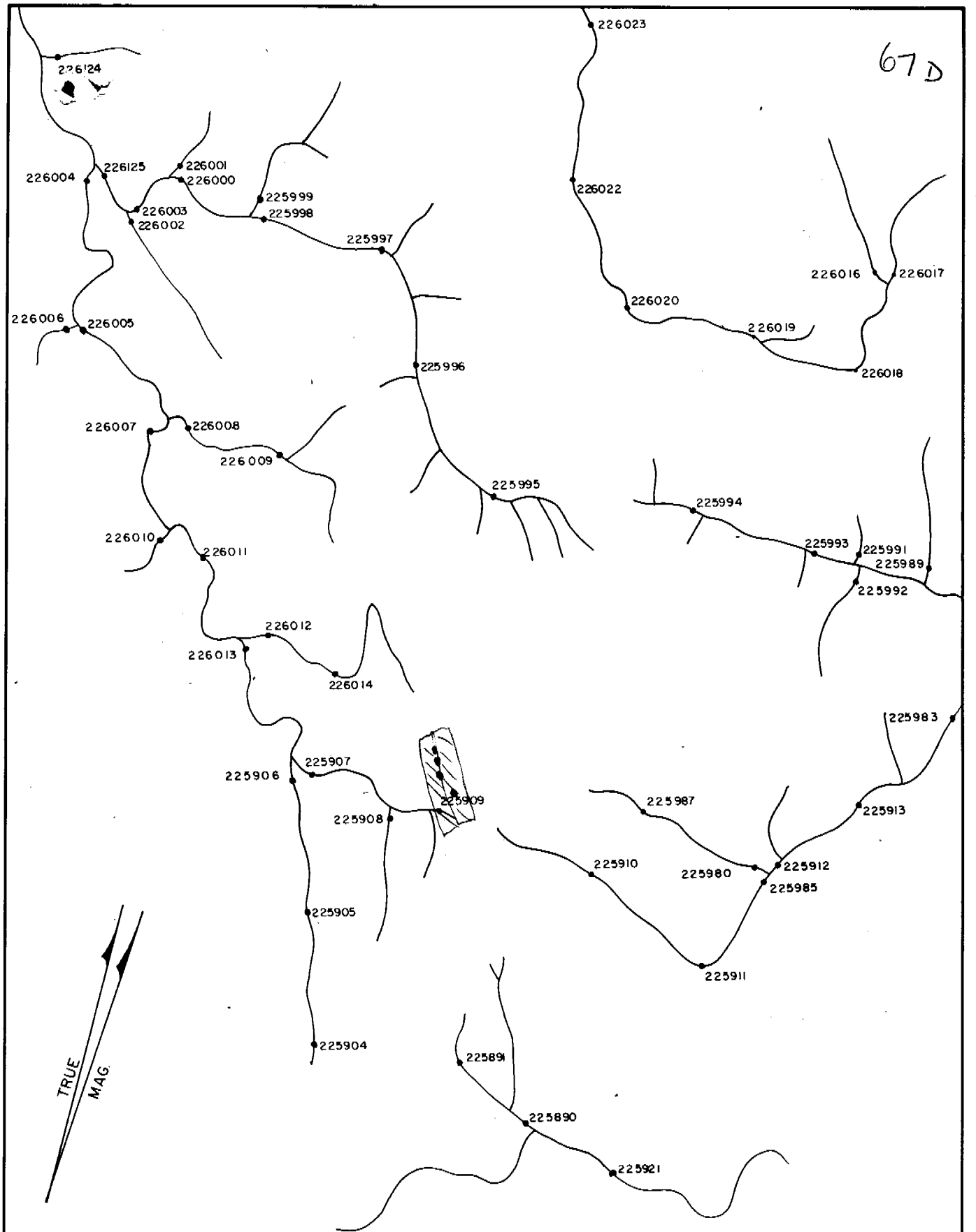
Ma	MARA DOLOMITE
Ms	MYRTLE SHALE
St	SLAB TOP DOLOMITE
Cc	CATTLE CREEK BEDS
Ptn	MASTERTON FORMATION

- Geological boundaries – position accurate
- " " " approximate
- " " outcrop
- Strike and dip of strata
- Fault – position accurate
- " " approximate
- Baryte veining

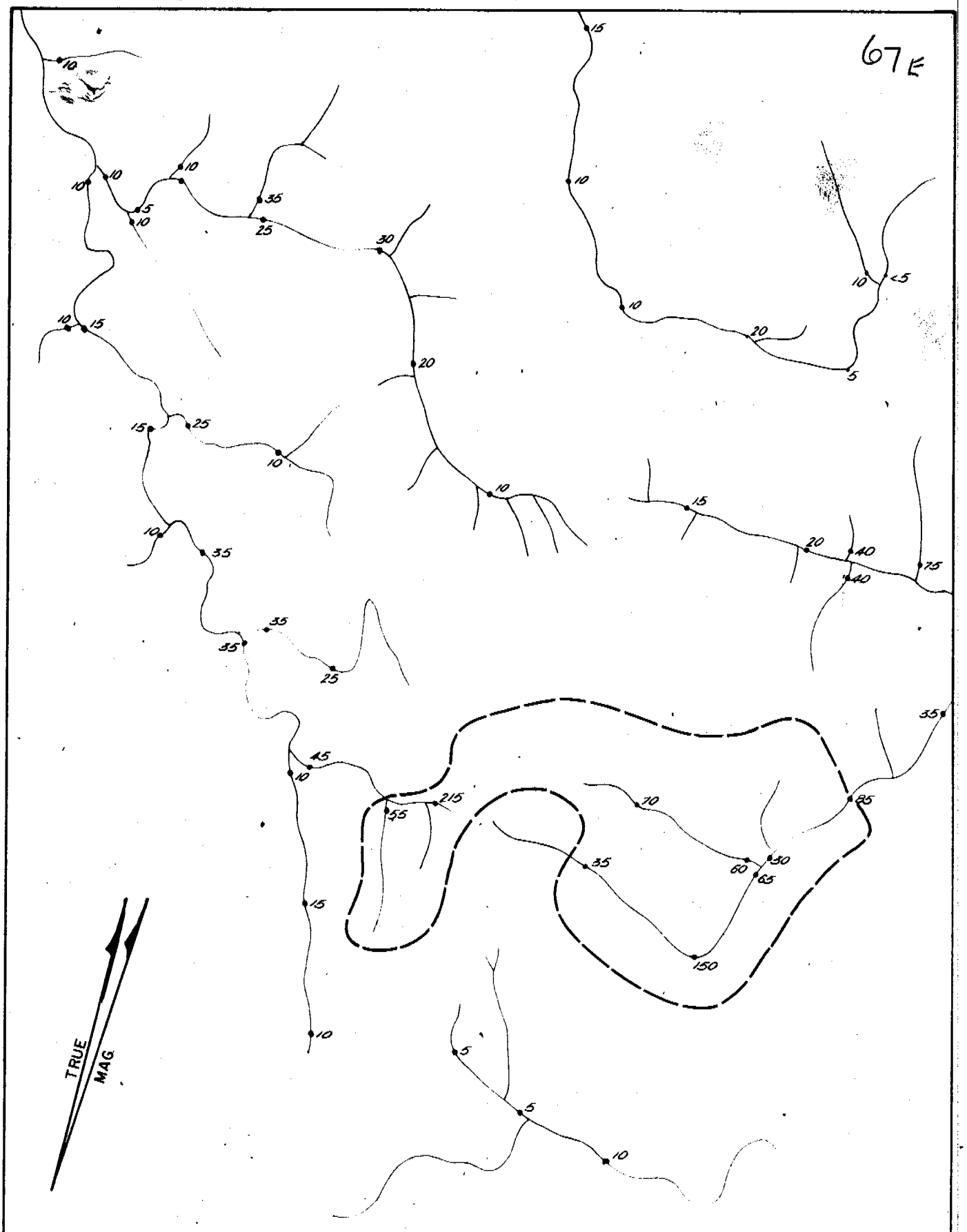
REVISION			
		SCALE: 1: 10 000	CARPENTARIA EXPLORATION COMPANY PTY LTD.
		GEOL. : J.G.B.	
		DRAWN: R.C.T.	COWDREY'S COPPER
		CHECKED:	
		DATE: February 1974	
		MICROFILMED:	GEOLOGY
		ROLL N°:	
		MINING FIELD or DISTRICT:	DRG. N°: 9371


Airstrip
McCOOLEY'S
Emu Hill
CLYDE R.
Anomalous geochem areas Coxco-Amelia.
Scale 1:62 500
Pb Anomaly
Cu Anomaly
Zn Anomaly
McArthur River
McArthur R. H.S.
Dream Snake Hill
Bull Creek
Mara Hill
Lab Top Hill
COXCO ANOMALY
COWDREY'S Copper
TURNBULL'S
SQUIB
CLYDE R.
RIVER R.
Plan 1

67 D



REVISION		SCALE: 1" = 1600'	CARPENTARIA EXPLORATION COMPANY PTY LTD.
		GEOL:	COWDREY'S COPPER
		DRAWN: R.C.T.	
		CHECKED:	GEOCHEMICAL STREAM SEDIMENT SAMPLING
		DATE: February 1974	
		MICROFILMED:	LOCATIONS
		ROLL N°:	
		MINING FIELD or DISTRICT:	DRG. N°: 1/1717



REVISION	SCALE 1" = 1600'	CARPENTARIA EXPLORATION COMPANY PTY LTD
	GEOL.	COWDREY'S COPPER
	DRAWN R.C.T.	GEOCHEMICAL STREAM SEDIMENT SAMPLING
	CHECKED	COPPER
	DATE February 1974	
	MICROFILMED	
	ROLL No.	
	MINING FIELD or DISTRICT	DRG No. V1718

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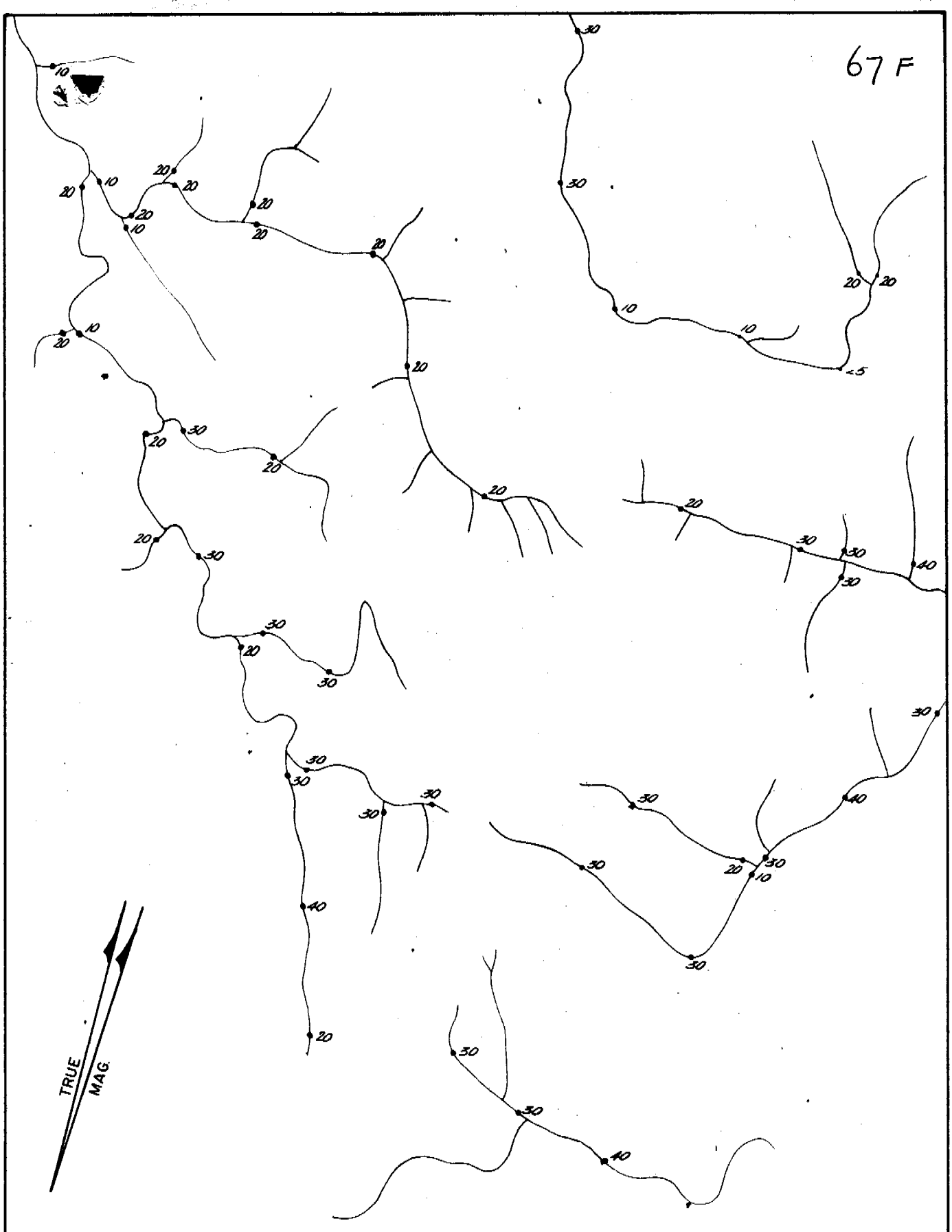
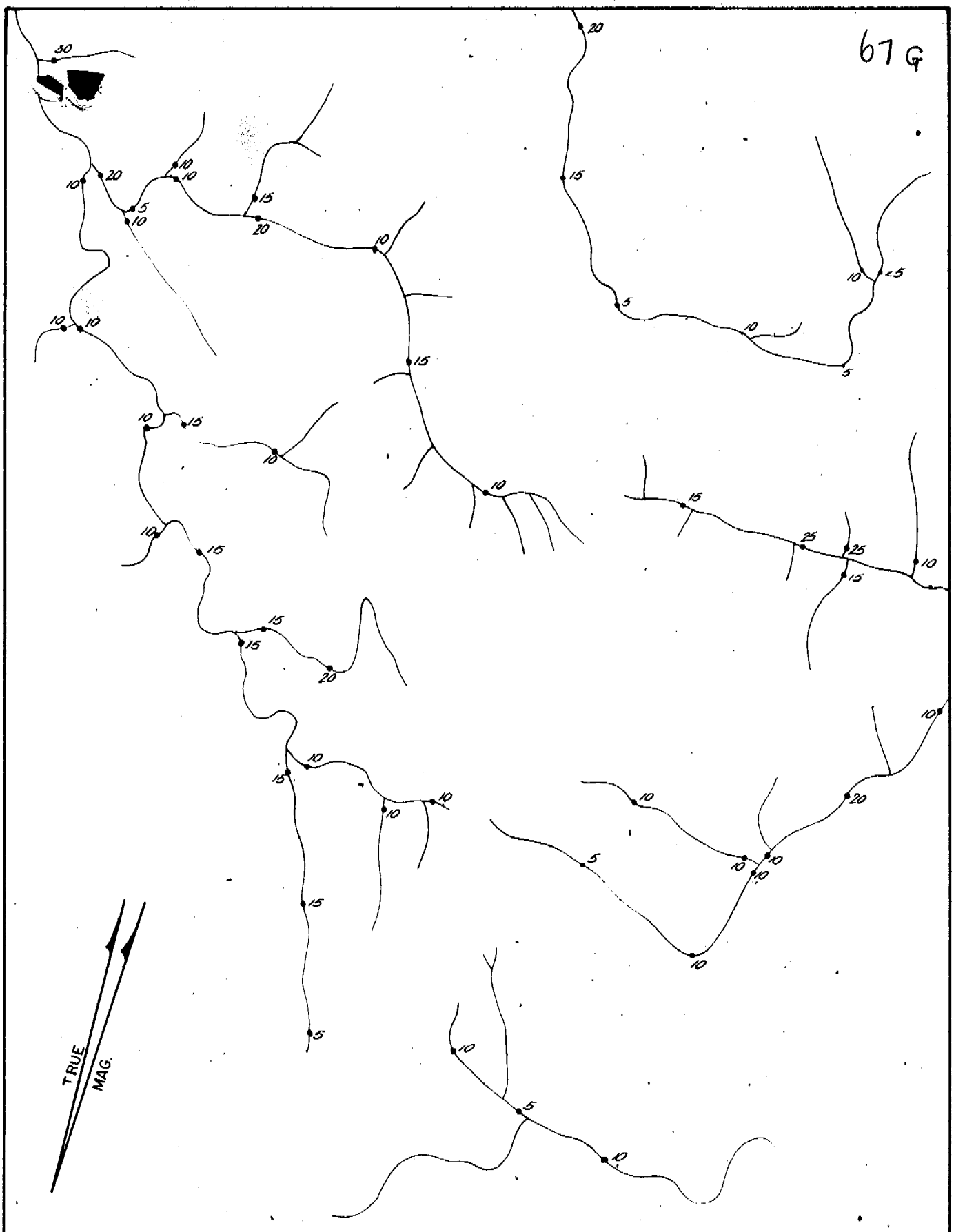


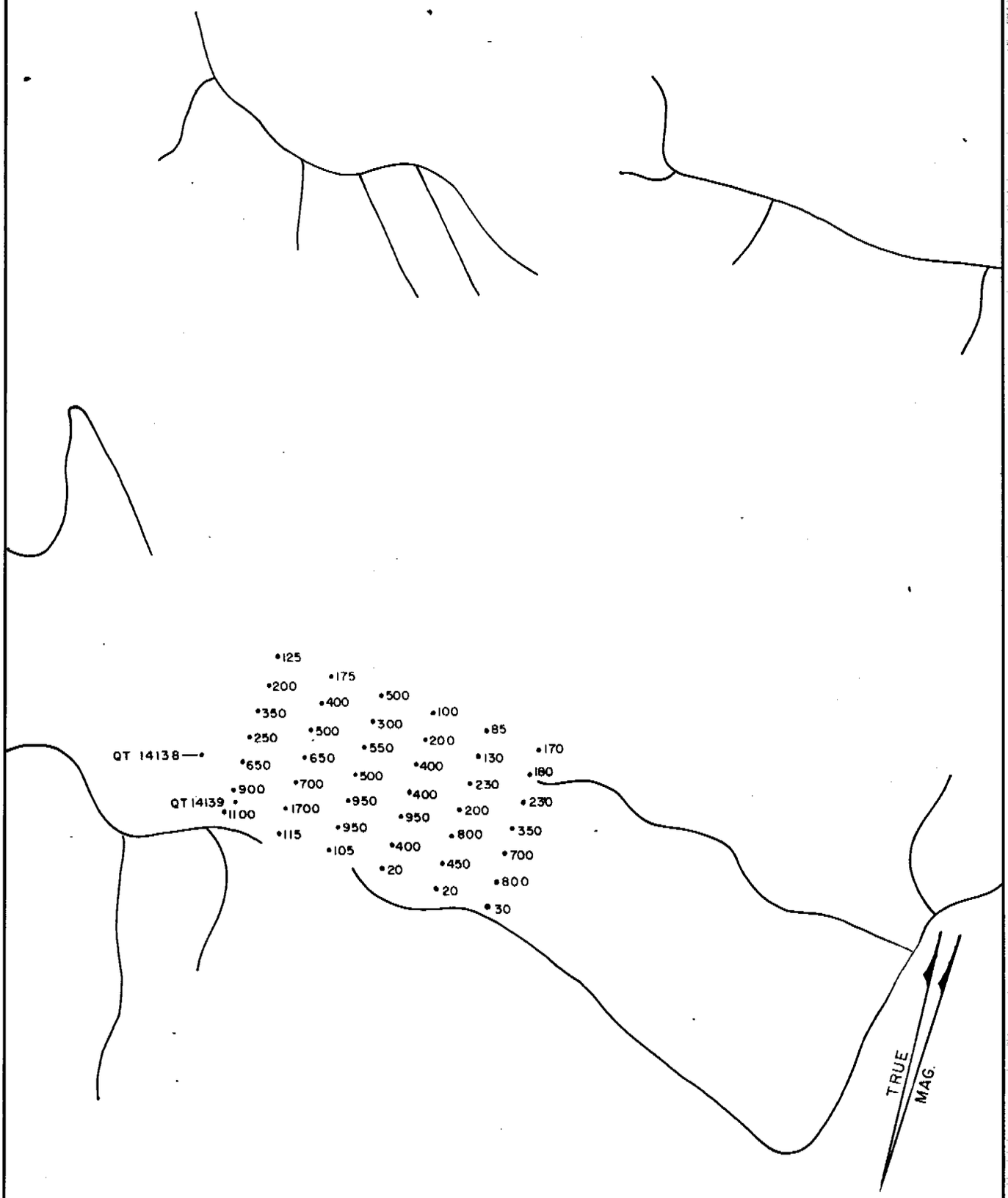
REVISION		SCALE: 1" = 1600'	CARPENTARIA EXPLORATION COMPANY PTY LTD
		GEOL.:	COWDREY'S COPPER
		DRAWN: R.C.T.	
		CHECKED:	GEOCHEMICAL STREAM SEDIMENT SAMPLING
		DATE: February 1974.	
		MICROFILMED:	LEAD
		ROLL N°:	
		MINING FIELD or DISTRICT:	DRG N°: 1/ 1719

67 G



REVISION		SCALE: 1" = 1600'	CARPENTARIA EXPLORATION COMPANY PTY LTD
		GEOL.	COWDREY'S COPPER
		DRAWN: R.C.T.	GEOCHEMICAL STREAM SEDIMENT SAMPLING
		CHECKED	ZINC.
		DATE: February 1974	
		MICROFILMED	
		ROLL N°	
		MINING FIELD or DISTRICT	DRG N° 1/1720

67c



REVISION		SCALE: 1: 10 000	CARPENTARIA EXPLORATION COMPANY PTY. LTD.
		GEOL. : J.G.B.	COWDREY'S COPPER
		DRAWN: R.C.T.	
		CHECKED:	SOIL AND ROCK CHIP ASSAYS
		DATE: February 1974	
		MICROFILMED:	COPPER
		ROLL N°:	
		MINING FIELD or DISTRICT:	DRG. N°: 1/1716