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SML 328

SICCUS RIVER

PROGRESS REPORTS FOR THE PERIOD 1/8/69 TO 31/7/71

Submitted by

M.V. Wright and Arden Mining NL
1971

Enquiries: Customer Services
Ground Floor
101 Grenfell Street, Adelaide 5000

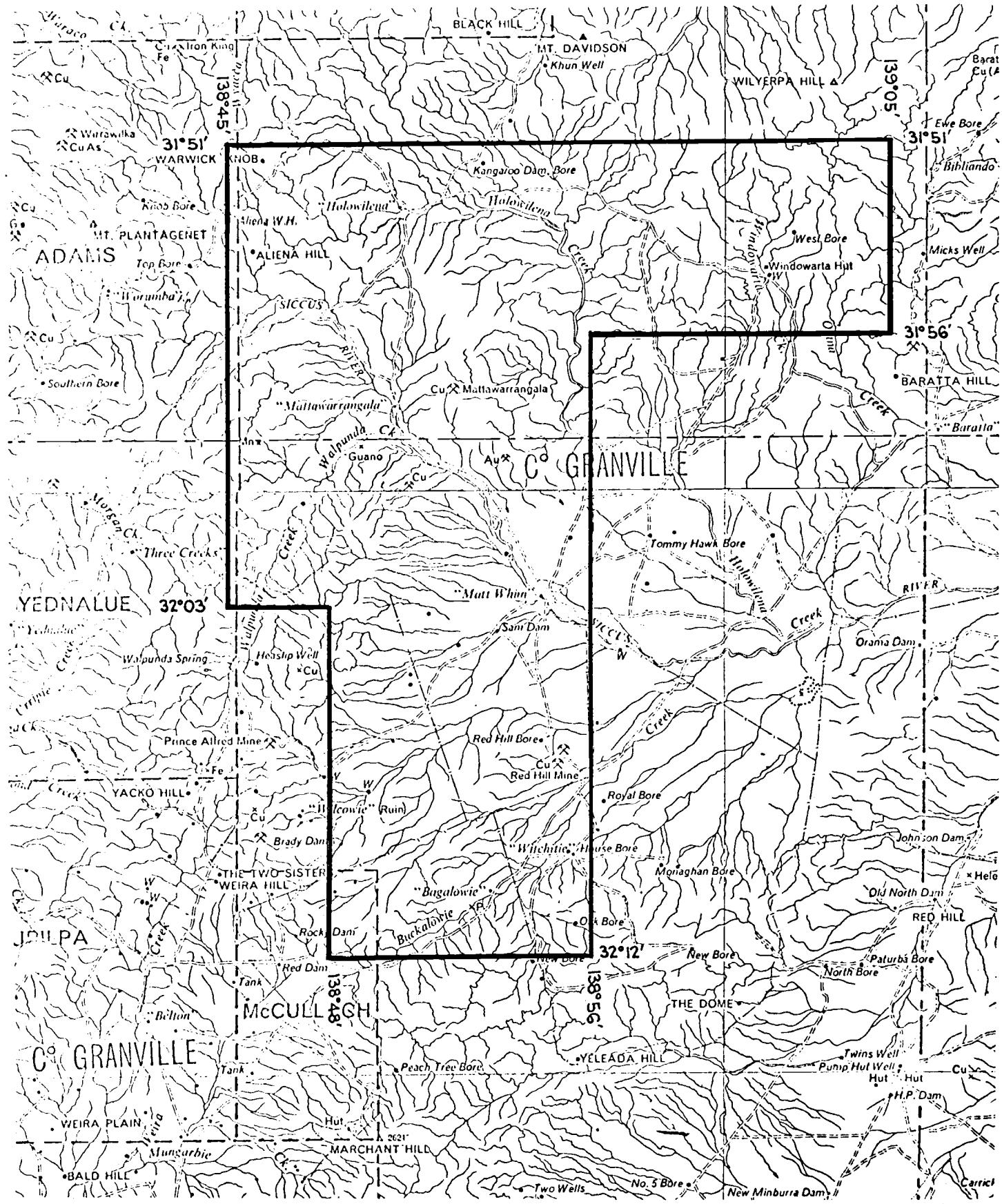
Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880

PRIMARY INDUSTRIES AND RESOURCES SA

CONTENTS ENVELOPE 1136

TENEMENT: S.M.L. - 328.

TENEMENT HOLDER: M.V. Wright.



SCALE 1:250000

M.V. WIGHT

DOCKET D.M. 822/69 AREA 288 SQ MILES

1:250000 PLANS . PARACHILNA

. ORROROO

LOCALITY

S.M.L. No. 328 EXPIRY DATE 31.7.71

McPHAR GEOPHYSICS Pty. Ltd.
50-52 Mary Street, Unley. South Australia.
Postal Address: P.O. Box 42, Unley. S.A. 5061.

MEMORANDUM TO: Mr. M.V. Wight
15 Pier Street,
GLENELG. S.A. 5045

MEMORANDUM FROM: D.H. McCOLL

SUBJECT: General geological reconnaissaince of geochemical anomaly located exactly 3½ miles from Bagalowie Station on a bearing of 295 degrees true, within Special Mining Lease No. 328.

DATE: 15th July, 1970.

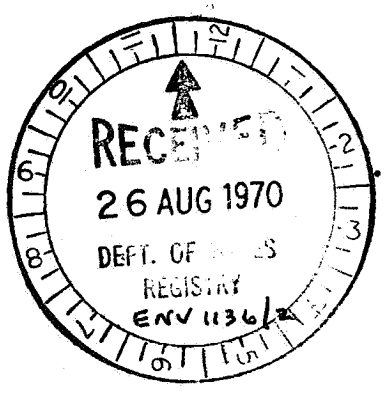
INTRODUCTION:

At the request of Mr. M.V. Wight, and in company with him a visit was made to the area of Special Mining Lease No. 328 on 1st July, 1970.

The purpose was to (1) -briefly investigate the geological setting of a copper-lead-zinc geochemical anomaly obtained by stream sediment and rock sampling at the above given locality, and (2) -to determine the source of the anomaly, and to investigate its economic significance.

GEOLOGY:

The area occurs within sediments mapped by the Mines Department of South Australia on the "Yednalue" sheet of the 1 mile geological series, and described therein as belonging to the Willouran Group of Lower Proterozoic age.



.....2/

The sediments consist of grey massive cherty limestones, shales of varied colours and massive, felspathic quartzites. These beds strike approximately west-south-west to east-north-east and are dipping steeply to the south-east. They comprise the eastern limb of an anticlinal fold structure pitching to the south-west.

The area investigated shows reasonable outcrop in an area of low relief against the more prominent rocks comprising the overlying Rhynie Sandstone Group to the southeast. Minor north-south trending shears have brought about lateral displacement of the sequence, and would appear to have an important bearing upon mineralization.

GEOCHEMISTRY:

The geochemical anomaly centres around a low hill showing outcrop of brecciated shales recemented to varying degrees with manganiferous limonite, with some tendencies to gossanous character. The highest geochemical values appear to occur where this breccia is cut by the more easterly of two shears suggesting that the intersection of the breccia and the shear provides the main mineralising channel.

MINERALISATION:

No actual copper, lead or zinc minerals could be observed in any outcrop material, or in the shallow pits excavated in the brecciated materials.

Geochemical analyses of these materials did however indicate that they are the source of the anomalous stream sediment values. The most promising are those obtained from the ferruginous breccia (Sample R24) which contains 0.29% Cu, 0.18% Zn and 0.43% Pb. The limonitisation of this rock has been very intense along the portion indicated, and shows some tendencies to gossanous texture which could be indicative of a metalliferous lode.

Consistent with Mr. Wight's intention to test the anomaly by relatively shallow percussion drilling, suggested locations and directions of such holes are indicated on the sketch map enclosed. These are numbered in order of priority. These should be drilled to a maximum of 200 feet, and the priorities revised in light of the results from preceeding holes.

D.H. McColl

McPHAR GEOPHYSICS PTY. LTD.

jd

MEMORANDUM TO: Mr. Max Wight,
15 Pier Street,
GLENELG. S.A. 5045.

MEMORANDUM FROM: Mr. D.H. McColl,
McPhar Geophysics Pty.Ltd.,
50 Mary Street,
UNLEY. S.A. 5061.

DATE: AUGUST 27, 1971.

SUBJECT: Copper Mineralisation on Special Mining Lease No. 328.

On the 27th and 28th of July, in company with Mr. Wight, the author made an investigation of s series of copper occurrences on Special Mining Lease 328, two of which were briefly sampled and mapped as follows in this report.

General Geology:

Special Mining Lease 328 occupies the core of an anticlinal structure pitching to the southwest. The core is considerably eroded and peneplaned with alluvial flats and low relief drainage to the northwest past Matt Whim station. Precambrian (Proterozoic) rocks of the Adelaide Series outcrop prominently along each arm of the fold to the north along the western boundary of the lease and to the east along the southern side. Principal rock exposures are along these two parts of the lease and within the network of drainage channels which feed away to the northeast.

...../2

Three main groups of rocks are exposed and have been investigated by various means, these are the lowermost Willouran series of dolomites and shales and the overlying Torrensian and Sturtian groups of quartzites, slates, minor dolomites, and tillitic sediments.

Investigations have comprised geochemical stream sediment sampling and assay with follow-up by standard conventional surface prospecting assisted by some costeaning and shaft sinking on promising or anomalous areas.

Geochemistry:

One distinct geochemical anomaly was found to relate to an outcrop of manganiferous limonite cemented brecciated shales as was previously reported (Memorandum of 15/7/70).

The geochemical results were found to have greater reliability within the steeper sections of country. Further north where drainage channels were more choked with material insignificant results were often obtained in the near vicinity of small but quite rich mineralised veins. This indicated the need for more thorough surface prospecting than may otherwise have been necessary.

Geophysics:

The aeromagnetic map produced by the South Australian Geological survey shows a zone of high magnetic anomalies chiefly located 2½ miles east of "Matt Whim" station. Part of this area is under alluvial cover so that the cause of the anomaly is not entirely evident. Some of the anomaly is known to be due to banded iron-rich sediments.

...../3

Surface magnetic studies of two areas were carried out by Mr. Wight to assess the usefulness of this technique in regard to the minor mineralised shear zones found to occur in the Willouran group rocks. No meaningful results were obtained from its use.

Occurrence of Copper Mineralisation:

This was found to be fairly widespread in minor amounts along scattered shear planes in the Willouran group and in bedded shears at or near the top of the Sturtian group. Most occurrences were too insignificant to warrant more than passing interest but two were mapped in elementary fashion and bulk samples of mineralised material taken for assay. Sinking of a shallow shaft, costeaning and channel sampling were used to obtain representative samples.

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RED HILL MINE LOCALITY : -

4½ miles from Bagalowie Station on a bearing of 25°. (see location diagram)

A series of pits shafts and costeans along a minimum of 1500 feet strikelength. Copper mineralisation shows as encrustations of malachite and azurite with rare nodules of cuprite in a shear zone at a low angle to steeply dipping "Tapley Hill" slates. Slates in the vicinity of the mineralisation are bleached and kaolinised partly by hydrothermal activity and also weathering. Some permeation of this zone with copper carbonates is shown by staining extending along joints up to 12 feet from the main vein channel. Considerable quantity of rejected oxidised ores is scattered around the site - possibly a total of up to 500 tons. Several of these dumps of ore were sampled as indicated on the accompanying map. Channel sampling was carried out across the lode channel where exposed in a costean as also indicated on the map.

Assay Results:

The following assay results were obtained from samples the localities of which are shown on the accompanying map.

Number	Description	Assay (% Cu)
R72	Spoil dumps with copper carbonates in clay shale - total of about 80 tons.	0.78%
R73	Spoil dump around one main shaft (80 tons)	0.58%
R75	Spoil dump around other main shaft (100 tons)	0.35%
R74	Heap of screened and slightly concentrated oxidised ore, about 30 tons total.	2.4%
R76	Spoil dump at small open cut. (30 tons)	1.59%
R78	5 foot channel sample taken from northern bulldozer cut.	0.49%
R79	" " " " " " " " "	0.37%
R80	" " " " " " " " "	0.26%
R81	" " " " " " " " "	0.19%
R82	" " " " " " " " "	0.53%

...../5

Conclusions and recommendations:

The total strike length of the mineralisation could be up to 2,000 feet with more than one mineral vein involved. Good prospects exist for the occurrence of moderately rich oxidised veins at shallow depth. Disseminated copper mineralisation within the kaolinised country rock outside the lode channel is insignificant. Trenching with a "back-hoe" or similar device at 50 foot intervals along the line of lode would best enable meaningful lode widths and grade estimates to be made as outcrop is poor in the almost flat topography.

PROSPECT ONE MILE NORTH OF ANESBURYS CLAIMS:

2.48cm
4 miles from Bagalowie Station on a bearing of 310°.(see location diagram)

This prospect consists of two subparallel (or one contorted) fissure veins in shales interbedded with dolomites in the Willouran group of sediments toward the core of the anticlinal structure. Folds and sharp directional changes in the host rocks and the veins themselves suggest the presence of more than one set of shear planes which may have influenced ore deposition.

Mineralisation consists of malachite and azurite with traces of chalcocite in zoned calcite-siderite-dolomite veins. Although these veins are fairly narrow (they tend to pinch and swell from 3" to 24" wide) they contain fairly abundant copper mineral.

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A series of old pits and shafts are scattered along these veins as shown. A further shaft has been sunk to a depth of twenty feet on quite promising ore at the northern end of the more southerly vein. A bulk sample of this vein was obtained for assay (Sample R84). The vein where sampled is 24" wide and underlying at 70° to the west.

The northerly vein showed an almost complete exposure in a series of minor pits. The vein is generally only about 6" wide and underlies to the west at about 50°. At the northern extremity it divides into at least three veins with widths of 6", 3" and 2". A bulk sample was taken of mineralised carbonate vein material from all along this occurrence (Sample R85).

Assay Results:

Number	Description	Assay (% Cu)
R84	Bulk carbonate ore from exploration shaft 20' below surface	8.6%
R85	Bulk carbonate ore from line of pits on northerly outcrop	6.3%

Conclusions:

Although outcrop is not particularly good the mineralisation is within a few inches of the soil surface where the lode is indicated. It therefore probably fairly accurately indicates the total extent of the deposit. There is approximately 500 feet strike length of mineralisation which has an average width of about 9 inches, which indicates a possible 375 tons of ore per 10 vertical feet of depth, which might be expected to assay 6% to 8% Cu.

...../7

It is unlikely however that such narrow veins, especially where underlying, could be worked to any appreciable depth economically.

Recommendations:

(1) Trenching across each lode where unexposed at 50 feet or closer regular intervals if widths are varying sharply.

(2) Channel sampling of exposed lode, with assay of samples.

(3) Shallow percussion drilling (to approximately 50 feet) to prove downwards continuity and attitude of mineralised zones.

D. H. McColl.

D. H. McCOLL.
Mineralogist.

McPHAR

GEOCHEMICAL RESULTS

ENV 1136
0012

30 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: Max Wight

Area:

Samples of:

Batch No.: G1177

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 13/8/69

Sample Description	Cu ppm	Pb ppm	Zn ppm
1	25	30	70
2	20	30	60
3	20	20	80
4	20	20	75
5	25	30	90
6	20	20	60
7	160	20	40
8	35	<20	40
9	20	<20	60
10	20	<20	50
11	35	<20	50
12	25	20	70
13	15	<20	35
14	10	20	50
15	20	20	75
16	30	25	70
17	35	25	65
18	25	<20	55
19	25	20	50
20	30	30	70
~~21~~	~~20~~	~~70~~	~~360~~
22	10	<20	50
23	15	<20	20
24	45	50	95

ANALYTICAL METHODS:

Cu, Pb and Zn by AAS following hot 25% HNO_3 leach for 1 hour On 0.25gm sample.

Signed: Flower

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0013

Samples from: MAX WIGHT

Area:

Samples of:

Batch No.: G 1217

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 25.8.69

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
25	25	20	50
6	20	20	50
7	20	<20	55
8	20	20	50
9	25	20	50
30	20	25	45
1	20	30	40
2	15	25	40
3	15	<20	40
4	15	35	40
5	15	25	40
6	15	40	40
7	20	<20	40
8	20	20	35
9	20	35	40
40	20	<20	40
1	15	20	35
2	20	20	30
3	30	<20	30
4	35	<20	30
45	20	<20	25

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25 gm sample.

Signed: S.A. Norrish

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: M.V. WIGHT

Area:

Samples of:

Batch No.: G 1428

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 17.10.69

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
46	15	25	50
7	15	20	50
8	10	25	40
9	20	20	55
50	20	30	55
1	10	<20	55
2	10	20	60
3	20	20	55
4	20	20	50
5	30	30	55
6	20	20	40
7	20	20	55
8	15	20	65
9	15	20	60
60	10	30	65
1	25	30	70
2	15	20	55
3	10	30	35
4	10	30	80
5	25	35	60
6	15	40	40
7	15	30	60
8	10	20	35
9	15	20	80
70	15	30	65
1	10	20	40
2	10	20	40
3	15	30	60
4	20	20	55
5	15	20	65
6	15	20	45
7	20	25	50
8	20	20	50
9	15	20	60
80	10	20	45
1	20	25	50
2	20	25	60
3	20	25	110
4	20	30	130
5	20	25	90
6	20	25	150
7	15	25	110
8	20	25	85
9	15	25	75
90	15	20	75
1	15	20	50
2	10	<20	35
3	10	<20	50
4	15	20	60
95	10	20	85

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25 gm sample.

(2 copies sent)

Signed: J.R. Giver

*ol175

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0015

Samples from: M.V. WIGHT

Area:

Samples of:

Sheet No.: 2

Batch No.: G 1428

Date: 17.10.69

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
96	10	<20	90
7	10	<20	90
8	15	<20	70
9	10	<20	45
100	15	20	70
A1 ~~101~~ 102	10	<20	55
A2 ~~102~~	10	20	45

ANALYTICAL METHODS:

Signed: J. Power

GHV 1136.

McPHAR GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0010

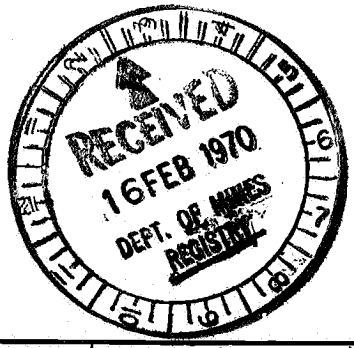
Samples from: MAX WIGHT

Area: SML 328

Samples of:

Batch No.: G 1613

Assay (A)/Geochem (G): G



Sheet No.: 1

Date: 26.11.69

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
A 3	25	20	55
4	20	30	50
5	30	30	65
6	20	20	50
7	20	20	50
8	20	20	50
9	15	20	50
10	45	30	70
1	20	20	60
2	20	20	55
3	25	25	55
4	25	20	50
5	20	<20	55
6	20	<20	50
7	25	30	50
8	25	20	55
9	20	20	50
20	20	20	50
1	20	<20	60
2	25	20	65
3	25	30	55
4	25	20	55
5	25	20	55
6	15	20	45
7	30	20	60
8	25	20	65
9	20	20	60
30	25	30	65
1	25	30	65
2	25	30	60
3	20	20	60
4	25	20	70
5	25	25	55
6	30	30	65
7	15	<20	50
A38	20	20	55

ANALYTICAL METHODS: Cu,Pb,Zn: by AAS following hot 25% HNO_3 leach for 1 hour on 0.25 gm sample.

(2 copies to M. Wight)

Signed: J P Ewer

McPHAR

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

GEOCHEMICAL RESULTS

Samples from: M. V. WRIGHT

Area: 328

Samples of: SEDIMENT

Batch No.: G 1821

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 21.1.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
A 39	20	50	40
40	20	45	45
1	15	45	45
2	20	50	45
3	20	40	50
4	15	50	35
5	15	45	45
6	15	30	35
7	20	55	60
8	10	40	35
9	15	50	40
50	25	60	50
1	20	50	45
2	15	30	40
3	20	45	40
4	20	35	65
5	15	35	35
6	10	35	40
7	15	35	40
8	20	30	45
9	15	40	30
60	20	30	30
1	15	30	25
2	15	50	40
3	15	45	50
4	20	50	55
5	20	50	45
6	20	30	55
7	20	40	45
8	15	30	35
9	15	20	35
70	15	45	45
1	20	50	45
2	15	40	40
3	10	45	30
4	35	50	40
5	25	45	35
6	15	45	30
7	15	50	30
8	15	40	35
9	20	45	30
80	20	55	30
A 81	20	50	45

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25 gm sample.
(2 copies sent to M. V. Wright)

Signed: [signature]

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

U.16

Samples from: MAX WIGHT

Area:

Samples of: SOIL

Batch No.: G 1899

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 10.2.70

Sample Description	Cu,ppm	Pb,ppm	Zn,ppm
A 87	15	50	2
8	10	45	140
9	10	40	70
90	10	30	40
1	15	20	40
2	15	30	50
3	10	25	55
4	15	25	40
5	20	20	35
6	25	30	50
7	15	20	60
8	15	35	35
9	20	30	40
100	20	30	35
1	25	30	25
2	20	40	35
3	25	35	35
4	20	40	30
5	15	30	35
6	20	50	40
7	25	45	40
8	20	40	30
9	15	35	30
10	30	35	45
1	15	35	35
2	30	40	35
3	30	40	50
4	30	40	40
5	20	40	40
6	15	25	45
7	15	45	40
8	10	40	40
9	15	30	30
20	20	35	40
1	20	40	35
2	15	45	40
3	15	50	45
4	15	45	40
5	15	45	40
6	35	45	50
7	20	50	45
8	20	35	40
9	20	30	50
30	20	40	45
1	30	50	55
2	30	40	60
3	25	50	45
4	15	20	40
5	10	30	35
A 136	10	40	40

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.

(1 copy to Mr. Wight, 1 copy to R. Fiddler)

Signed: .....

*ol175

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0019

Samples from: MAX WIGHT

Area:

Sheet No.: 2

Samples of: SOIL

Batch No.: G 1899

Date: 10.2.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
A 137	30	30	35
8	20	30	45
9	25	30	35
40	15	35	35
1	20	40	35
2	15	<20	35
3	15	<20	40
4	15	30	30
5	15	20	40
6	15	<20	40
7	15	30	50
8	20	35	45
9	15	40	45
50	15	35	45
1	15	30	35
2	20	30	40
3	15	30	35
4	20	30	45
5	15	30	45
6	15	<20	40
7	10	50	40
8	10	30	35
9	15	35	60
60	20	50	50
1	15	55	50
2	25	45	50
3	50	45	35
4	15	45	50
5	15	30	35
6	15	30	40
7	25	30	45
8	30	40	45
9	20	40	35
70	35	45	35
1	25	50	35
2	30	50	35
3	45	40	45
4	25	50	35
5	25	40	30
6	25	45	30
7	20	50	35
8	25	35	35
9	25	45	30
80	30	40	30
1	20	30	30
2	30	30	40
3	35	30	35
4	25	30	30
5	20	30	30
A 186	30	30	30

ANALYTICAL METHODS:

Signed: P. Hawkins

*ol175

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MAX WIGHT

Area:

Samples of: SOIL

Batch No.: G 1899

Assay (A)/Geochem (G): G

Sheet No.: 3

Date: 10.2.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
A 187	30	35	35
8	25	30	25
9	30	35	30
90	35	30	30
1	30	30	30
2	30	30	30
3	20	45	35
4	20	25	35
5	35	50	35
6	15	30	40
7	25	25	35
8	20	35	45
9	20	40	45
200	25	30	35
1	15	30	40
2	15	20	35
3	15	20	35
4	15	20	30
5	15	30	20
6	15	30	30
7	15	20	30
8	20	30	40
9	35	50	35
10	25	45	40
1	20	30	35
2	30	40	45
3	25	50	30
4	20	30	30
5	20	20	25
6	15	20	20
7	20	20	20
8	25	40	40
9	20	30	35
20	20	35	35
1	20	30	30
21	15	25	20
3	20	30	25
4	20	30	20
5	65	35	40
6	40	40	35
7	20	30	20
8	20	30	35
9	15	30	30
30	15	30	35
1	15	30	30
2	15	<20	40
3	25	30	55
4	15	30	35
5	20	30	35
A 236	25	30	40

ANALYTICAL METHODS:

Signed: P. Foulis

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

U/24

Samples from: MAX WIGHT

Area:

Sheet No.: 4

Samples of: SOIL

Batch No.: G 1899

Date: 10.2.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
A 237	20	30	55
8	30	<20	45
9	15	25	35
40	15	25	30
1	20	20	65
2	20	55	30
3	20	30	35
4	25	30	40
5	20	30	50
6	15	20	40
7	15	40	35
8	15	35	30
9	15	20	45
50	15	40	35
1	20	35	35
2	15	30	30
3	20	20	45
4	25	30	45
5	30	40	45
6	15	50	30
7	15	45	35
8	25	25	40
9	45	50	45
60	20	50	35
1	25	40	40
2	30	25	40
3	30	45	25
4	35	30	30
5	25	40	25
6	20	40	35
7	20	35	30
8	15	35	30
9	20	30	30
70	15	20	40
1	20	50	35-
2	85	40	50
3	20	45	50
4	20	30	30
5	25	25	40
6	20	20	35
7	20	25	35
8	20	30	30
9	15	25	15
80	55	25	25
1	20	<20	15
2	30	30	15
3	20	20	15
4	15	30	15
5	15	30	15
A 286	15	60	10

ANALYTICAL METHODS:

Signed: R. Fuller

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

U122

Samples from: MAX WIGHT

Area:

Samples of: SOIL

Batch No.: G 1899

Assay (A)/Geochem (G): G

Sheet No.: 5

Date: 10.2.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
A 287	25	45	20
8	20	50	20
9	25	65	10
90	20	40	25
1	25	40	30
2	15	30	40
3	20	40	45
4	25	50	35
5	15	30	15
6	15	30	25
7	20	40	45
8	25	30	40
9	20	30	40
300	25	40	40
1	40	30	55
2	30	30	45
3	60	45	60
4	30	40	20
5	20	35	40
6	35	40	10
7	25	50	40
8	15	40	40
9	20	30	30
10	20	30	30
1	20	30	35
2	15	30	35
3	20	30	45
4	15	30	35
5	20	30	40
6	30	40	45
7	80	40	70
8	35	40	50
9	25	40	45
20	25	30	50
1	20	<20	50
2	25	<20	40
3	30	30	35
4	20	<20	40
5	25	30	35
6	15	30	35
7	15	<20	35
8	15	25	45
9	15	30	40
30	10	30	40
1	20	30	35
2	25	<20	40
3	20	25	35
4	20	<20	40
5	15	30	45
X 336	20	30	50

ANALYTICAL METHODS:

Signed: P. Tuckett

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0025

RECEIVED 21 MAY 1970 DEPT. OF MINES REGISTRY

ENV. 1136/2

Samples from: MR. M. V. WIGHT

Area: SML 328

Samples of: SEDIMENT

Batch No.: G 2107

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 25.3.70

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm
A	392	15	45	55
	3	45	30	50
	4	40	35	35
	5	50	30	35
	6	15	30	25
	7	15	40	45
	8	10	30	45
	9	770✓	30	60✓
A	400	380	45 ✓	45
B	1	70	45	70
	2	15	20	40
	3	120✓	30	85✓
	4	10	40	35
	5	10	30	30
	6	15	<20	45
	7	15	20	55
	8	15	30	45
	9	15	30	40
	10	15	30	60
	1	15	25	75
	2	40	30	35
	3	25	30	30
	4	15	30	40
	5	15	25	35
	6	10	30	50
	7	10	30	50
	8	10	30	50
	9	15	25	40
	20	10	30	55
	1	10	30	45
	2	10	30	50
	3	10	30	50
	4	10	30	55
	5	15	35	45
	6	10	30	50
	7	10	20	45
	8	10	20	40
	9	10	20	50
	30	10	20	35
	1	15	20	50
	2	15	20	30
	3	15	30	40
	4	15	20	45
	5	15	20	40
	6	10	<20	50
	7	10	<20	35
	8	10	25	40
	9	15	<20	45
	40	10	<20	40
B	41	15 ✓	20	80 ✓

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.
(2 copies to Mr. Wight)

Signed: J Bauer

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0020

Samples from: MR. M. V. WIGHT

Area: SML 328

Samples of: SEDIMENT

Batch No.: G 2107

Assay (A)/Geochem (G): G

Sheet No.: 2

Date: 25.3.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
B C 42	35	25	75
3	20	30	65
4	15	20	80
5	25	30	50
6	20	20	55
7	15	25	45
8	40	20	50
9	20	30	55
50	25	20	120 ✓
1	20	20	50
2	15	30	50
3	15	20	40
4	15	20	50
B 55	20 ✓	20	50 ✓

ANALYTICAL METHODS:

Signed: J. P. Lewer

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SOIL

Batch No.: G 2172

Assay (A)/Geochem (G): G

U027

Sheet No.: 1

Date: 9.4.70

ENV. 1136/2

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm
B	56	10	<20	30
	7	10	<20	25
	8	15	<20	25
	9	15	<20	30
	60	15	20	30
	1	10	20	30
	2	10	25	35
	3	10	<20	30
	4	15	<20	25
	5	10	<20	30
	6	10	35	30
	7	10	25	40
	8	10	30	40
	9	10	30	35
	70	5	25	45
	1	5	<20	35
	2	5	20	30
	3	10	20	30
	4	10	20	45
	5	5	20	40
	6	10	20	50
	7	10	20	40
	8	10	20	35
	9	10	<20	30
	80	10	<20	35
	1	10	<20	30
	2	15	20	55
	3	10	30	45
	4	10	20	40
	5	10	20	45
	6	15	<20	50
	7	10	<20	45
	8	15	20	45
	9	5	<20	35
	90	10	20	40
	1	10	<20	25
	2	15	20	35
	3	10	20	30
	4	10	20	30
	5	15	20	40
	6	10	<20	30
	7	10	20	35
	8	15	25	35
B	99	10	20	35
C	1	20	30	50
	2	10	20	40
	3	10	20	35
	4	10	40	5
	5	10	20	45
C	6	10	<20	25

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample. Au results to follow.
(2 copies to Mr. M.V. Wight)

Signed: B H Fraynes

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0020

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Sheet No.: 2

Samples of: SOIL

Batch No.: G 2172

Date: j 9.4.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
C 7	10	<20	25
8	5	<20	25
9	10	<20	25
10	5	<20	20
1	5	<20	20
2	5	20	25
3	5	<20	20
4	5	<20	15
5	5	<20	20
6	5	25	15
7	5	20	25
8	10	<20	25
9	10	<20	15
20	5	20	15
1	5	20	25
2	10	<20	20
3	5	20	25
4	5	20	25
5	2	20	15
6	5	45	30
7	10	20	20
8	10	20	20
9	10	35	35
30	10	40	35
1	10	20	20
2	10	150	55
3	5	25	25
4	10	20	20
5	5	<20	15
6	10	20	30
7	10	<20	30
8	5	20	20
9	5	20	20
40	5	20	10
1	5	<20	15
2	5	20	25
3	5	25	30
4	5	20	20
5	10	20	25
6	10	20	25
7	5	20	20
8	120	30	40
9	90	30	40
50	10	20	15
1	5	20	20
2	10	25	30
3	5	25	20
4	5	<20	20
5	5	<20	20
C 56	5	<20	15

ANALYTICAL METHODS:

Signed: B.H. Frayne

tro/175

McPHAR

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

GEOCHEMICAL RESULTS

0029

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SOIL

Batch No.: G 2172

Assay (A)/Geochem (G): G

Sheet No.: 3

Date: 9.4.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
C 56A	5	<20	20
7	5	20	20
8	5	<20	25
9	10	<20	25
60	5	20	20
1	10	<20	15
2	20	<20	15
3	5	20	15
4	10	<20	15
5	10	<20	20
6	10	<20	20
7	10	<20	20
8	10	<20	25
9	10	<20	15
70	10	<20	15
1	5	<20	10
2	10	20	25
3	10	20	20
4	10	<20	20
5	10	20	25
6	10	20	25
C 77	5	20	25

ANALYTICAL METHODS:

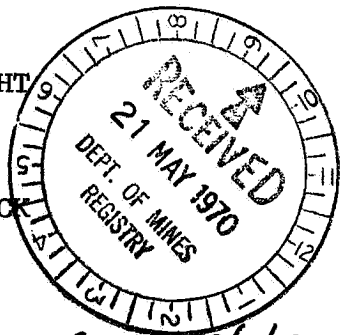
Signed: B. H. Frayne

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0050



ENV. 1136/2

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SEDIMENT & ROCK

Batch No.: G 2220

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 21.4.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
C 78	10	25	25
9	15	30	25
80	10	30	30
1	15	30	30
2	15	25	30
3	10	20	25
4	10	25	25
5	10	20	25
6	5	25	35
7	5	25	30
8	10	25	25
9	10	30	35
90	10	25	25
1	5	20	30
2	10	25	25
3	5	20	25
4	10	20	30
5	10	20	25
6	5	20	30
7	10	25	30
8	10	20	30
C 99	10 ✓	25 ✓	25
D 1	10	20	30
2	10	25	30
3	10	30	35
4	10	30	30
5	10	20	30
6	10	25	30
7	10	30	30
8	10	30	40
9	15	40	50
10	15	30	45
1	15	40	50
2	15	40	45
3	15	30	30
4	15	40	40
5	15	30	45
6	20	40	55
7	20	20	30
8	15	25	40
9	15	30	35
20	15	30	35
1	15	30	35
2	15	25	35
3	10	30	40
4	10	30	40
5	10	25	35
6	20	20	35
7	20	30	50
D 28	15 ✓	25 ✓	50 ✓

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following/25% HNO_3 leach for 1 hour on 0.25gm sample.
(2 copies to Mr. M.V. Wight)

Signed: B. H. Frayne

McPHAR

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

GEOCHEMICAL RESULTS

0051

Samples from: MR. M. V. WIGHT

Area: N S.M.L. 328

Samples of: SEDIMENT & ROCK

Batch No.: G 2220

Assay (A)/Geochem (G): G

Sheet No.: 2

Date: 21.4.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
D 29	20	20	60
30	10	20	45
1	10	20	50
2	10	20	45
3	10	20	45
4	5	20	40
5	10	20	45
6	10	20	40
7	15	40	50
8	15	20	40
9	10	20	50
40	15	20	60
1	10	<20	45
2	15	<20	50
3	10	25	50
4	10	20	35
5	10	20	50
6	10	20	50
7	15	30	60
8	5	<20	35
9	10	20	50
50	15	20	55
1	10	20	45
2	10	<20	50
3	10	<20	40
4	5	<20	30
5	20	20	60
6	20	30	65
7	55	25	55
8	75	<20	55
9	120	30	90
60	170	30	80
1	15	40	85
2	10	30	45
3	80	<20	80
4	35	35	45
5	20	20	35
6	5	20	30
7	5	20	30
8	10	25	30
9	10	20	35
70	10	30	40
1	10	20	30
2	10	20	30
3	20	20	60
4	15	20	50
5	15	20	65
6	15	35	30
7	15	20	35
D 78	10	25	45

ANALYTICAL METHODS:

Signed: B.H. Fraser

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

U052

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Sheet No.: 3

Samples of: SEDIMENT & ROCK

Batch No.: G 2220

Date: 21.4.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
D 79	10	20	50
80	15	20	45
1	10	30	45
2	15	30	45
3	10	20	45
4	10	20	40
5	10	<20	40
6	10	25	45
7	10	25	40
8	10	20	45
9	15	30	40
90	10	20	45
1	15	25	45
2	15	25	50
3	10	20	40
4	15	20	35
5	10	20	35
6	10	<20	45
7	15	20	40
8	15	30	45
D 99	15	20	40
E 1	40	20	50
2	15	20	35
31	20	20	40
4	10	20	30
5	20	40	60
6	15	20	35
7	15	20	40
8	10	20	45
9	15	25	55
10	15	20	35
1	15	30	45
2	20	30	50
3	20	40	50
4	20	35	45
5	20	20	35
6	15	20	40
7	20	30	45
8	15	25	45
9	10	20	45
20	10	25	45
1	10	20	55
2	15	30	55
3	10	20	55
4	10	20	50
5	15	30	60
6	10	30	60
7	15	30	55
8	15	35	60
E 29	10	20	60

ANALYTICAL METHODS:

Signed: B.H. Frayne

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0053

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SEDIMENT & ROCK

Batch No.: G 2220

Assay (A)/Geochem (G): G

Sheet No.: 4

Date: 21.4.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
E 30	10	30	60
1	10	30	55
2	10	25	45
3	10	20	40
4	10	20	50
5	10	20	55
6	10	25	50
7	10	25	40
8	5	35	40
9	15	25	50
40	5	30	50
1	5	20	45
2	10	20	40
3	15	20	45
4	10	20	50
5	10	20	40
6	10	<20	35
7	10	<20	45
8	15	30	45
9	5	30	35
50	10	20	60
1	10	30	50
2	5	25	40
3	10	30	50
E 54	10	30	45
R 19	25	40	45
R 20	5000	55	15

ANALYTICAL METHODS:

Signed: B.H. Frayne

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0054

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SEDIMENT & ROCK

Batch No.: G 2319

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 11.5.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm	Ag, ppm
E 55	250	35	100	
6	35	20	45	
7	25	<20	45	
8	30	20	40	
9	20	20	45	
60	20	20	40	
1	25	20	50	
2	20	20	35	
3	20	20	35	
4	25	20	40	
5	20	20	45	
6	20	20	35	
7	20	20	45	
8	20	35	40	
9	20	20	40	
70	20	35	40	
1	20	20	40	
2	15	20	45	
3	15	20	40	
4	15	20	40	
5	20	20	40	
6	40	20	35	
7	20	<20	30	
E 78	15	<20	35	
R 21	2,500	40	40	2
2	2,200	30	35	5
3	400	20	35	2
4	2,900	4,300	1800	2
5	70	20	25	<2
6	200	40	90	<2
7	35	30	230	<2
8	40	20	35	<2
9	2,000	380	6800	5
30	50	40	45	5
R 31	90	20	40	<2

ANALYTICAL METHODS: E55-E78, Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample. R21-31 Cu, Pb, Zn, Ag, by AAS following hot HCl leach and HCl/HNO_3 in latter stages for 1 hour on 0.25gm sample. ~~Au~~ Au, to follow.

(2 copies to Mr. M.V. Wight)

Signed: P. Jurkett

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0050

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SEDIMENT & ROCK

Batch No.: G 2363

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 20.5.70

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm	Ag, ppm	Au, ppm
E	79	10	20	30		
	80	10	25	30		
	1	15	20	20		
E	82	15	20	25		
R	32	540	25	150	<2	<0.5
	33	400	<20	150	<2	<0.5
	34	850	25	230	<2	<0.5
	35	1200	50	140	<2	<0.5
R	36	2000	45	40	<2	<0.5

ANALYTICAL METHODS: E 79-82 Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample. R 32-36, Cu, Pb, Zn, Ag, by AAS following hot HCl/leach and HCl/HNO_3 in latter stages for 1 hour on 0.25gm sample. Au, by solvent extraction/AAS following aqua regia leach on 2.5gm sample.

(2 copies to Mr. Wight)

Signed: J. Bower

*ro/175

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GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

U/50

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Sheet No.: 1

Samples of: SEDIMENT & ROCK

Batch No.: G 2559

Date: 30.6.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
E 83	15	25	60
4	10	20	60
5	20	25	70
6	20	20	60
7	20	25	55
8	10	20	55
9	10	30	50
90	10	20	45
1	20	35	50
2	20	20	40
3	20	20	35
4	20	25	40
5	20	20	35
6	35	20	45
7	30	25	65
8	25	25	55
E 99	15	20	50
F 1	20	35	75
2	20	20	50
3	20	40	80
4	20	30	65
5	20	30	55
6	15	25	60
7	20	25	55
8	20	<20	45
9	20	25	55
10	15	20	50
1	25	35	75
2	20	20	45
3	15	20	50
4	15	35	45
5	15	30	35
6	15	40	40
7	15	30	45
8	25	25	60
9	10	25	40
20	20	30	50
1	20	30	85
2	15	35	55
3	15	20	40
4	15	<20	35
5	15	20	40
6	15	<20	30
7	20	<20	35
8	15	<20	40
9	15	20	45
30	20	20	40
1	20	20	45
2	35	20	35
F 33	20	20	40

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.

(2 copies to Mr. M.V. Wight)

Signed: B.H Fraser

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0057

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Sheet No.: 2

Samples of: SEDIMENTS & ROCK

Batch No.: G 2559

Date: 30.6.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
F 34	15	20	35
5	15	<20	35
6	25	<20	40
7	25	20	55
8	30	25	60
9	30	20	45
40	30	20	50
1	30	20	65
2	20	20	55
3	25	25	50
4	25	20	55
5	15	30	65
6	15	20	60
7	25	25	60
8	25	20	70
9	20	20	50
50	20	<20	40
1	20	<20	40
2	15	20	40
3	15	<20	40
4	15	30	50
5	20	25	50
6	15	<20	50
7	25	25	50
8	25	<20	40
9	25	25	50
60	30	20	50
1	25	20	40
2	20	20	85
3	20	<20	50
4	20	<20	50
5	15	<20	70
6	30	<20	45
7	20	20	45
8	25	<20	40
9	25	20	45
70	25	<20	45
1	25	<20	50
2	20	<20	50
3	20	<20	45
4	20	<20	45
5	20	<20	50
6	25	20	50
7	20	20	50
8	15	20	45
9	20	20	50
80	10	20	45
1	10	<20	40
2	15	20	50
F 83	15	30	55

ANALYTICAL METHODS:

Signed: B.H. Frayne

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

37A

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SEDIMENTS & ROCK

Batch No.: G 2559

Assay (A)/Geochem (G): G

Sheet No.: 3

Date: 30.6.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
F 84	15	25	45
5	10	20	40
6	10	30	40
7	15	25	50
8	25	40	75
9	15	30	65
90	15	30	65
1	10	30	50
2	5	30	50
3	10	20	50
4	15	20	50
5	15	25	50
6	15	25	60
7	5	20	55
8	10	20	35
F 99	15	20	50
G 1	10	20	50
2	5	<20	40
3	10	<20	35
4	10	25	40
5	15	20	40
6	10	20	40
7	10	<20	40
8	15	20	40
9	15	20	40
10	15	<20	35
1	15	<20	40
2	15	<20	30
3	10	<20	40
4	10	<20	40
5	10	<20	40
6	15	<20	35
7	15	<20	40
8	15	<20	40
9	20	<20	40
20	20	<20	35
1	20	20	40
2	10	<20	15
3	25	<20	30
4	15	<20	25
5	25	<20	30
6	20	<20	25
7	15	55	80
8	15	20	55
9	20	<20	25
30	15	<20	25
1	30	<20	30
2	30	<20	30
3	20	<20	35
G 34	20	<20	20

ANALYTICAL METHODS:

Signed: B.H. Fraser

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SEDIMENT & ROCK

Batch No.: G 2559

Assay (A)/Geochem (G): G

Sheet No.: 4

Date: 30.6.70

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
G 35	20	<20	20
A R	1700	<20	15
A L	5800	<20	10
B R	2000	<20	15
B L	2700	<20	15
R 37	70	<20	5
R 38	850	120	120

ANALYTICAL METHODS:

Signed: B. H. Frayne

GEOCHEMICAL RESULTS

McPHAR

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: SEDIMENT & ROCK

Batch No.: CH 0268

Assay (A)/Geochem (G): G

0059

Sheet No.: 1

Date: 20/8/70

	Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
G	36	10	35	35
	7	10	50	30
	8	10	40	30
	9	10	40	25
	40	10	45	30
	1	10	35	30
	2	10	65	30
	3	10	45	25
	4	10	35	25
	5	10	40	20
	6	10	35	30
	7	10	25	30
	8	5	30	15
	9	5	30	20
	50	5	30	15
	1	5	30	25
	2	10	40	30
	3	5	30	25
	4	5	30	25
	5	5	30	30
	6	10	30	25
	7	5	20	15
	8	5	30	15
	9	10	20	15
	60	10	30	15
	1	10	25	15
	2	10	25	15
	3	10	20	25
	4	5	40	15
	5	10	35	25
	6	10	30	15
	7	5	25	15
	8	10	35	15
	9	10	30	20
	70	5	40	30
	1	10	25	20
	2	5	20	15
	3	10	20	10
	4	5	20	15
	5	5	20	15
	6	10	20	15
	7	5	20	20
	8	5	20	15
	9	5	<20	15
	80	5	<20	10
	1	5	20	15
	2	10	20	15
	3	15	<20	15
	4	15	<20	20
G	85	10	20	20

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.

(2 copies to Mr. M.V. Wight, 1 copy to Mr. G. Semmens)

Signed: B.H Frayne

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Sheet No.: 2

Samples of: SEDIMENT & ROCK

Batch No.: CH 0268

Date: 20/8/70

Assay (A)/Geochem (G): G

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm
G	86	5	20	25
	7	10	20	20
	8	10	25	20
	9	5	20	15
	90	10	<20	15
	1	5	20	15
	2	10	20	20
	3	10	20	20
	4	10	20	15
	5	10	20	30
	6	10	30	45
	7	10	20	30
	8	10	20	20
G	99	10	20	25
H	1	10	20	25
	2	10	20	25
	3	10	20	30
	4	5	<20	25
	5	5	20	25
	6	5	<20	20
	7	10	<20	20
	8	10	20	20
	9	35	20	30
	10	20	20	30
	1	10	20	20
	2	5	20	15
	3	10	25	25
	4	10	20	30
	5	5	20	20
	6	15	25	30
	7	10	20	25
	8	10	25	30
	9	5	20	20
	20	10	20	30
	1	5	20	25
	2	5	20	25
	3	5	25	30
	4	5	25	30
	5	5	20	30
	6	5	20	30
	7	5	20	30
	8	5	20	25
	9	5	25	30
	30	5	25	30
	1	10	30	40
	2	10	20	40
	3	5	40	45
	4	10	30	40
	5	10	30	50
H	36	10	35	55

ANALYTICAL METHODS:

Signed: B H Frayne

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GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

U741

Sheet No.: 3

Samples of: SEDIMENT & ROCK

Batch No.: CH 0268

Date: 20/8/70

Assay (A)/Geochem (G): G

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm
H	37	10	30	45
	8	10	25	45
	9	10	35	40
	40	10	25	40
	1	10	25	45
	2	10	30	50
	3	15	40	50
H	44	10	30	40
R	48	280 ✓	1500 ✓	680 ✓

ANALYTICAL METHODS:

Signed: B.H. Fraser

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

0042

Sheet No.: 1

Samples of: ROCK

Batch No.: G 2319

Date: 12.5.70

Assay (A)/Geochem (G): G

Sample Description	Au, ppm
R 21	0.5
2	0.5
3	<0.5
4	<0.5
5	<0.5
6	<0.5
7	<0.5
8	<0.5
9	0.5
30	0.5
R 31	0.5

ANALYTICAL METHODS: Au, by solvent extraction/AAS following aqua regia leach on 2.5gm sample.

(2 copies to Mr. M. V. Wight)

Signed: J. P. Power

*o/175

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GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

0045

Area: SML 328

Sheet No.: 3

Samples of: ROCK CHIPS

Batch No.: G 2107

Date: 25.3.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm	Ag, ppm	Au, ppm
R 6	25	40	70		<0.5
7	28,000	30	100	25	
8	78,000	30	90	2	
9	320	20	30		
10	1,200	20	20		
R 11	190	20	15	2	

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample. Ag, by AAS following hot HCl leach and HCl/HNO_3 in latter stages for 1 hour on 0.25gm sample. Au, by solvent extraction/AAS following aqua regia leach on 2.5gm sample.

Signed: J Power

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: ROCK

Batch No.: G 2172

Assay (A)/Geochem (G): G

0744

Sheet No.: 1

Date: 9.4.70

ENV. 1136/2

Sample Description	Cu, ppm	Zn, ppm	Pb, ppm	Ag, ppm
R 12	470	25	50	<2
14	130	15	25	<2
15	1,500	1,600	200	<2
16A	110	15	40	<2
16B	190,000	50	50	2
17	50,000	90	30	2
18A	2,500	10	30	<2
18B	420	10	35	2
18C	270	15	35	<2

ANALYTICAL METHODS: Cu, Zn, Pb, Ag, by AAS following conc. HCl leach and HCl/HNO_3 in latter stages for 1 hour on 0.25gm sample.

Signed: B. H. Frayne

McPHAR

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

GEOCHEMICAL RESULTS

0045

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: ROCK

Batch No.: G 2172

Assay (A)/Geochem (G): G

Sheet No.: 1

Date: 13.4.70

ENV. 1136/2

Sample Description		Au, ppm
R	12	<0.5
	14	<0.5
	15	<0.5
	16 A	<0.5
	16 B	<0.5
	17	<0.5
	18 A	<0.5
	18 B	<0.5
	18 C	<0.5

ANALYTICAL METHODS: Au, by solvent extraction/AAS following aqua regia leach on 2.5gm sample.
(2 copies to Mr. M.V. WIGHT)

Signed: J.P. Power

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: MR. M. V. WIGHT

0040

Area: SML 328

Sheet No.: 1

Samples of: ROCK

Batch No.: E CH 0018

Date: 7.7.70

Assay (A)/Geochem (G): G

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
R 39	50	<20	15
R 40	45	<20	15
R 41	300	<20	20

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.

(2 copies to Mr. M.V. Wight)

Signed:

McPHAR

GEOCHEMICAL RESULTS

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

0047

Samples from: MR. M. V. WIGHT,

Area: S.M.L. 328

Sheet No.: 1

Samples of: ROCK

Batch No.: CH 0119

Date: 23/7/70

Assay (A)/Geochem (G): G

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm
R	42	300	<20	20
	43	70	<20	15
	44	40	<20	20
	45	11,000	25	20
	46	380	25	15
R	47	32,000	<20	10

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.

(2 copies to Mr. M.V. Wight)

Signed: B H Frayne

0046

McPHAR

GEOCHEMICAL RESULTS

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE
TELEX: "PHARGEO"
AA82623

Samples from: MR. M. V. WIGHT
Area: S.M.L. 328
Samples of: ROCKS
Batch No.: CH 0310

Sheet No.: 1
Date: 28/8/70

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm	Au, ppm
R 49	30	20	20	
R 51	55	35	20	
R 52	55	<20	15	
R 53	60	<20	20	
R 54	45	<20	25	<0.5

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample. Au, by solvent extraction/AAS following aqua regia leach on 2.5gm sample.

(2 copies to Mr. M.V. Wight)

Signed: B H Fraser

★36161

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GEOCHEMICAL RESULTS

0049

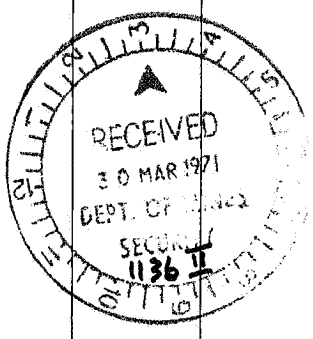
50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE
TELEX: "PHARGEO"
AA82623

Samples from: MR. M. V. WIGHT
Area: S.M.L. 328
Samples of: ROCKS
Batch No.: CH 0511

Sheet No.: 1
Date: 30/9/70

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm
R	55	260	55	35
	6	150	50	15
	7	45	45	60
	8	30	25	15
	9	75	30	50
	60	330	40	40
1	1	400	45	580 ✓
	2	75	35	55
R	63	390	40	15



ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.
(2 copies to MR. M. V. Wight)

Signed: B.H. Frayne

★36161

McPHAR

GEOCHEMICAL RESULTS

0000

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE
TELEX: "PHARGEO"
AA82623

Samples from: MR. M. V. WIGHT
Area:
Samples of: ROCKS
Batch No.: CH 0787

Sheet No.: 1
Date: 9/11/70

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
R 68	11,000	20	25
R 69	110	<20	15

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach. for 1 hour on 0.25gm sample.

(2 copies to Mr. M.V. Wight)

Signed: [signature]

★36161

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GEOCHEMICAL RESULTS

0061

50 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE

Samples from: M.W. WIGHT

Area:

Samples of:

Sheet No.: 1

Batch No.: G 1315

Date: 23.9.69

Assay (A)/Geochem (G): A & G

Sample Description	Cu, %	Pb, ppm	Zn, ppm	Ag, ppm
SML 328	1.56	3800	90	55

ANALYTICAL METHODS: Cu, assays by AAS following conc. HCl leach and HCl/HNO_3 leach in latter stages on 1.0 gm sample.

Pb, Zn, Ag, by AAS following conc. HCl leach and HCl/HNO_3 leach in latter stages on 0.25 gm sample.

(Two copies

Signed: J Rowes

McPHAR

GEOCHEMICAL RESULTS

0052

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE
TELEX: "PHARGEO"
AA82623

Samples from: M. M.V. WIGHT

Area: S.N.L. 328

Samples of: SOIL

Batch No.: CH 13 1

Sheet No.: 1

Date: 15/11/72

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

	Sample Description	Ni, ppm	Cu, ppm	Mn, ppm				
	[illegible]	261	3	40.5				

ANALYTICAL METHODS:

Signed:.....

McPHAR

GEOCHEMICAL RESULTS

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE
TELEX: "PHARGEO"
AA82623

0055

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: ROCK

Batch No.: CH 1911

Sheet No.: 1

Date: 29/3/71

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
Na S	30	25	15
K	20	40	15
	60	35	25
	120	50	15
	30	<30	30

ANALYTICAL METHODS:

Signed:.....

★36161

McPHAR

GEOCHEMICAL RESULTS

0054

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE
TELEX: "PHARGEO"
AA82623

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: ROCK

Sheet No.: 1

Batch No.: CH 2152

Date: 5/6/71

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm	Au, ppm
N A 20	10	<20	10	<0.5
N A 21	30	<20		
N A 22	40	<20	20	<0.5

ANALYTICAL METHODS:

Signed:.....

★36161

McPHAR

GEOCHEMICAL RESULTS

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO" ADELAIDE
TELEX: "PHARGEO" [illegible]2623

Samples from: MR. M. V. WIGHT

Area: S.M.L. 328

Samples of: ROCK

Batch No.: CH 1221

Sheet No.: 1

Date: 18/12/7[illegible]

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE INSTRUCTED OTHERWISE

Sample Description				
N A 1	1	2	78,000	

ANALYTICAL METHODS: EAg, Zn, Pb, by AAS following hot HCl leach and HCl/HNO$_3$ leach in latter stages for 1 hour on 0.25gm sample.

(2 copies to Mr. M.V. Wight)

Signed: B H Teague

★36161

McPHAR

GEOCHEMICAL RESULTS 0056

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO" ADELAIDE
TELEX: "PHARGEO" AA82623

Samples from: MR. M. V. WIGHT
Area: S.M.L. 328
Samples of: SEDIMENT AND ROCK
Batch No.: CH 0716

Sheet No.: 1
Date: 3/11/70

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description		Cu, ppm	Pb, ppm	Zn, ppm
H	45	10	<20	40
	6	10	20	50
	7	10	20	60
	8	10	30	60
	9	10	20	50
	50	10	30	60
	1	10	20	55
	2	10	<20	60
	3	10	<20	60
	4	10	<20	70
	5	20	20	60
	6	10	20	50
	7	10	20	70
	8	20	20	70
	9	20	20	70
	60	20	20	70
	1	20	20	60
	2	20	<20	50
	3	20	<20	60
	4	15	<20	55
	5	15	<20	70
	6	20	<20	70
	7	10	20	70
	8	20	<20	65
	9	20	<20	70
	70	20	<20	70
	1	10	<20	65
	2	15	<20	60
	3	15	<20	50
	4	15	<20	60
	5	15	20	60
	6	15	20	60
	7	20	<20	60
	8	20	<20	50
	9	20	20	55
	80	10	<20	70
	1	15	20	60
	2	15	<20	60
	3	15	20	50
	4	15	<20	60
	5	10	<20	60
	6	15	<20	60
	7	15	<20	55
	8	15	<20	50
	9	15	<20	50
	90	15	20	50
	1	10	<20	50
	2	20	<20	50
	3	10	30	45
H	94	10	<20	45

ANALYTICAL METHODS: Cu, Pb, Zn, by AAS following hot 25% HNO_3 leach for 1 hour on 0.25gm sample.

(2 copies to Mr. M.V. Wight)

Signed: J. Ballinger

McPHAR

GEOCHEMICAL RESULTS 0057

50-52 MARY STREET
UNLEY, S.A. 5061
PHONE: 72 2133
CABLE: "PHARGEO"
ADELAIDE
TELEX: "PHARGEO"
AA82623

Samples from: MR. M. V. WIGHT
Area: S.M.L. 328
Samples of: SEDIMENT AND ROCK
Batch No.: CH 0716

Sheet No.: 2
Date: 3/11/70

SAMPLES DISPOSED OF AFTER TWO MONTHS UNLESS WE ARE OTHERWISE ADVISED

Sample Description	Cu, ppm	Pb, ppm	Zn, ppm
H 95	10	<20	55
6	15	30	70
7	10	<20	60
H 99	10	20	65
J 1	10	<20	50
2	10	<20	40
3	10	<20	40
4	10	<20	35
5	10	<20	50
6	10	<20	50
7	10	<20	40
8	10	<20	50
J 9	15	30	50
R 64	100	<20	30
5	560	<20	170
6	10	<20	40
R 67	10	<20	100
H.L.	120	<20	85

ANALYTICAL METHODS:

Signed: J. Ballinger

McPHAR GEOPHYSICS PTY. LTD.

TELEPHONE 72 2133

50-52 MARY STREET, UNLEY, SOUTH AUSTRALIA
POSTAL ADDRESS: P.O. BOX 42, UNLEY, SOUTH AUSTRALIA 5061

CABLE
"PHARGEO" ADELAIDE
TELEX
"PHARGEO" AA82623

bl

MINERALOGICAL REPORT NO. 705

by: Dr. A.W.G. Whittle 14th September, 1971

TO: Mr. Max Wight,
15 Pier Street,
GLENELG. S.A. 5045

YOUR REFERENCE: Supplement to Memorandum of 27/8/71

MATERIAL: Rock sample submitted on your behalf by D.H. McColl

IDENTIFICATION: Number R71 or R24

The geochemically anomalous limonitic rock with gossanous appearance referred to in Memorandum of 15/7/70.

WORK REQUESTED: Polished section preparation, with description of boxworks or other relict ore mineral textures.

SAMPLE & SECTION: To be returned to you

McPHAR GEOPHYSICS PTY. LTD.

D.H. McColl

A.W.G. Whittle, PhD.
Mineralogical Consultant for
McPhar Geophysics Pty. Ltd.

R 71 - brecciated quartz-mica-pyrite-sphalerite lode.

The hand specimen is irregularly mottled black and brown rock with visible quartz of moderate grain size. The black areas are non-cellular and strongly manganiferous, whereas the brown areas are incoherent, limonitic and finely cellular.

The general aspect of the structure in polished section is that of a breccia. However, the following features establish it as lode material, and it is considered to be either (1) mineralised breccia, or (2) brecciated-subsequently mineralised former lode material. The latter is favoured.

Most of the quartz is moderately coarse grained and often subhedral to euhedral. Close examination revealed the presence of copious pyrite and sparse sphalerite of 0.005-0.02 mm. grain size within much of the quartz where it was protected from oxidation. Throughout all of the quartz there are goethite pseudomorphs of coarser pyrite euhedra, and in the rock itself, pyrite pseudomorphs in lamellar goethite are prominent.

Throughout most of the rock there are intergranular aggregates of the pyrolusite pseudomorphs of former hydromicas which can be regarded as an original lode component associated with the quartz and pyrite. In areas where leaching occurred there are either cellular goethite sponge boxworks of 1-2 mm. width; or larger areas of microcrystalline formless limonite. The former is

characteristic of sphalerite cellular sponge, whereas the latter is subsequent open space filling by exotic limonite.

This is considered to have been quartz-mica-pyrite-sphalerite lode which contained a small amount of sphalerite of 0.02 - 2.0 mm. grain size. It was brecciated and subsequently mineralised in the near-surface zone by pyrolusite deposited from vadose waters.

REPORT NO. EAW 71/31

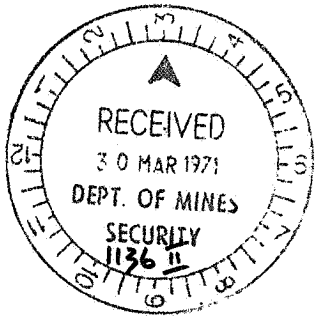
ARDEN MINING N.L.

INTERIM REPORT ON SML. 328, YEDNALUE

TO 31ST JANUARY, 1971

by

B. Cozens, B.Sc. (Spc.Hons.), A.R.C.S., A.M.I.M.M.



March 19th, 1971.

E.A. Webb & Associates Pty.Ltd.,
152 Little Lonsdale Street,
Melbourne, Victoria, 3000.

INTERIM REPORT ON SML. 328, YEDNALUE

TO 31ST JANUARY, 1971

By the end of January, 1971 preliminary stream sediment sampling had been completed and analyses for copper, lead and zinc had been carried out on all samples. The possibility of structural control and the effect of lithological types upon mineralization was outlined and further work in this direction is programmed.

GENERAL

SML. 328 covers the larger part of the diapiric Yednalue dome structure of the Southern Flinders Ranges. Copper mineralization is known in the area and some gold mining has been undertaken in the past. Current work is biased towards copper, though any mineralization found will be investigated.

The recorded copper mineralizations of the area are located within the Appila Tillite horizon of the Umberatana Group of the Proterozoic, or within the underlying Buna Group or overlying Tapley Hill formation close to the Appila Tillites. Copper has also been recorded in the diapiric Callanna ? beds of the dome structure.

The Prince Alfred Mine, some 1½ miles west of the SML boundary, was the largest copper producer in the area but production has been recorded from the Red Hill Mine and various other smaller shows have been worked within SML 328.

..2/

STREAM SEDIMENT SURVEY

The stream sediment survey has been based upon the known pattern of copper occurrence, concentrating upon the drainage pattern off the Apilla Tillite and associated sediments off the diapiric areas. Analyses for copper, lead and zinc were carried out on all samples.

A cursory examination of the value distribution shows that the area naturally falls into three geochemical provinces (see Drawing A4-9). The southern zone carries highest background values and the central zone carries lowest background values. Histograms for each of the three zones were plotted for each of the three elements analysed and compared with the histogram for the entire area (Drawings A1-25, A1-28 and A1-29). In comparison, the minor deviation of the norm of individual areas from the norm of the whole area was insignificant compared with the range of the background values and the average curve was adopted to establish a threshold value for the whole area.

The histogram plot of the lead-zinc values showed an anlytical bias towards even numbers. Modified curves were plotted for these elements to obtain a threshold value (see Drawings A1-25, A1-28).

The threshold values obtained were Copper 32 ppm, Lead 50 ppm, Zinc 70 ppm.

For convenience, the stream sediment analytical results have been plotted on three plans at the scale of 1 inch to half a mile. These are the southern area, covering the south eastern limb of the Yednalue Dome (Drawing A1-26), the north central area, covering the bulk of the central geochemical province (Drawing A1-24) and the north eastern area (Drawing A2-10). Geological boundaries have been superimposed upon the geochemical plans.

..3/

North Eastern Area:

Analytical results for the three elements have been low in this case. Only one value of more than the threshold value of copper has been recorded, that being next to the road from Matt Whim to Windowarta Hut. Zinc analyses show a loose zone of values of between threshold and twice threshold around the Windowarta Hut and another smaller group, containing one value of 150 ppm, approximately 3½ miles west of Windowarta Hut. These values are too low to be considered anomalous. An isolated lead value of twice threshold has been recorded 2 miles south-east of Windowarta Hut, which may be of significance.

North Central Area:

A few scattered values of between threshold and twice threshold are found for all three metals. These show no pattern and cannot be considered anomalous. It is noted that old copper prospects two miles east and 2½ miles south of Mattawarrangala have not been indicated by anomalous copper lead or zinc values. No anomalous indications were obtained in the drainage off the north-eastern continuation of the Prince Alfred line of mineralization.

Southern Area:

Anomalous copper occurrences have been recorded in an area between half-a-mile and 1½ miles east of Brady Dam, some 5 miles west of Bagalowie, in the River Wakefield group of beds; two isolated anomalous values were recorded close to a road 1½ miles south-east of the dam and only one anomalous value was located in the vicinity of the Red Hill mine. The former occurrence is located some eight miles from the nearest stratigraphical position of the Appila Tillite and some 12 miles from the nearest known occurrence of the tillite.

..4/

Validity of Stream Sediment Sampling

In the southern area, as elsewhere, known copper occurrences have not been reflected in the stream sediment sampling. This lack of correlation is illustrated in Drawing A3-8. Details of rock sampling assays and stream sediment results in three selected areas are plotted.

In the western area, very high stream sediment analyses can be seen in the gully draining directly from the Prince Alfred Mine. These anomalous results, all over 8 times threshold, are thought to be due to contamination from the mine, though a rock sample of 2.8% Cu has been collected close to the gully within the SML 328 boundary.

To the east of this gully, rock samples showing assays as high as 5%, 7.8% and 19.0% copper are surrounded by stream sediment samples which are, ignoring that from the Prince Alfred Mine gully, without exception, less than the threshold value of the area.

In the southern portion of the western area, however, rock samples of much lesser value have been reflected in the stream sediment results. Hence a value of 0.15% Cu in a rock sample is reflected by stream sediment assays of over eight times threshold. It is possible, of course, that the rock samples do not represent the true copper content of the area, but it must be remembered that these samples are selective.

Both the other areas, in which the stream sediment results do not reflect the rock sample assays, have rock values of 1.1% or over, surrounded by sediment samples all less than threshold value.

It would appear that stream sediment sampling has been an unreliable tool in the delineation of areas of copper mineralization. Further work is obviously warranted in areas where anomalous values have been recorded but the lack of stream sediment anomalies elsewhere cannot be considered as an indication that no more potential copper zones exist in the lease.

..5/

Rock Sampling

Selective rock samples have been taken from gossanous outcrops and from old mine workings. Copper emerges as the most important metal tested so far, high values being recorded in both the gossans and ore material from old mine workings. Lead and zinc values, however, are generally low. There appears to be no definite relation between either of the three metals (see Appendix). Copper anomalies are not necessarily accompanied by anomalous lead or zinc values, high lead values normally have associated anomalous zinc and copper values but a number of samples carrying anomalous zinc have no corresponding anomalous lead or copper values. Much more information is required before a picture of the true relationship between the three metals is obtained, but it would appear from this early stage of investigation that copper mineralization is both stronger and more widely spread than both lead and zinc.

STRUCTURAL GEOLOGY

It has been established that the copper mineralization is associated with the Yednalue diapiric dome structure. Previous thought has tended to relate the copper deposition with one specific horizon within the limbs of the dome and with the diapiric rock of the centre of the dome.

The geochemical investigation to date has indicated that copper occurs at distances far greater removed from these "controlling" factors than previously thought, and it is apparent that controls other than those of a lithological nature are operative in the emplacement of the copper enrichments.

A close study of the maps produced by the Geological Survey of South Australia indicates that the Yednalue Dome has been subjected to a form of cross folding, probably post-dating the fold axial formation of the dome itself.

Thus it is probable that at least in the southern area of the SML copper occurrences are controlled to a certain extent by the locations of the superimposed folds.

Drawing No. A3-9 illustrates a structural interpretation of information plotted upon the map compiled by the South Australian Geological Department. The map only covers the southern portion of the lease but illustrates the correlation between the copper occurrences and the superimposed structure.

Cross folding at the Prince Alfred Mine itself is only obvious from a slight warping of the steeply dipping stratigraphy but this anticlinal trend can be projected across the area to a definite anticline delineated by bedding with divergent dips and discordant strikes west of the Red Hill Mine.

To the south of the Prince Alfred Mine, anticlinal folding is indicated by a westerly bulge of the underlying westerly dipping rocks into the western limb of the dome. On the south-eastern limb of the dome, the trace of dolomitic beds indicate a minor dome structure and an anticlinal fold along the continuation of the axis. To the east of the Red Hill mine, a change of dip from 60° through 5° and back to 60° probably locates the continuation of this anticlinal trend through the area. If this is the case, the Red Hill mine would fall about this anticlinal axis. The high copper values obtained in the Prince Alfred Mine gully area would fall close to this axial position.

Still further south, in the region of the Brady Dam, measured dips and strikes indicate the occurrence of a minor dome upon the south-east limb in the same locality as the main sedimentary copper anomaly. The continuation of this axis to the west is suggested by strike deviations on the western limb, but its continuation to the east is obscure.

The presence of two minor dome structures within the south-east limb of the main diapiric dome suggests that yet a third fold system is operative in the area.

The fore-going structural interpretation is tentative, based upon limited geological data, but in considering the importance of superimposed folding in the location of ore deposits elsewhere, this approach to the subject warrants some serious thought.

..7/

POTENTIAL

Insufficient is known of the area to hazard a guess at the actual potential of SML 328. The structural environment favours mineralization and the apparent correspondence between copper occurrences and the probable superimposed structures is encouraging. Further encouragement arises from copper now being found over a larger area than previously indicated. These factors, together with a past mining history, are a promising indication that copper mineralization of economic importance might be located in the area.

FUTURE WORK

The possibility of stream sediment survey as a tool in the rapid location of potential areas should be investigated further. It is suggested that controlled auger sampling of sediments at varying depths be carried out in the drainage pattern of a known mineralized area that has not previously shown a stream sediment response. Should this work have favourable results, stream sampling over selected areas controlled by the results of the investigation, should be carried out. The areas selected for further stream work would be based upon the results of further structural and geological investigation.

The knowledge of the structural geology of the area is as yet embryonic. It is recommended that an air photograph interpretation, followed by detailed ground work over selected areas, should cover the entire lease area. Outcrop is generally good over the lease and much geological information should be quickly and cheaply gleaned from the photograph. If the line of structural thought is substantiated by air photo work, detailed field study for final structural evaluation should be carried out in areas of theoretical economic importance.

..8/

It is already possible to delineate a number of areas to be covered by detailed geochemical soil sampling. These basically are those in the vicinity of Brady's Dam, the area around and to the east of the gully draining Prince Alfred Mine, the areas north and west of Bagalowie, and the area around the Red Hill Mine. Further areas for geochemical investigation will emerge as the structural work gets under way.

It is recommended that the structural survey, geochemical work, any further sampling and complete mapping of known gossans, be completed prior to commencing any costeaning, pitting or drilling programme. Not only will a fuller assessment of the entire lease be possible prior to any major expenditure, but the more complete knowledge of the area will ensure that equipment is used to its fullest advantage.

CONCLUSIONS

Although the stream sediment survey has located only a few anomalous areas, examination of the results in relation to known copper occurrences has shown that stream sediment sampling has to date proven an unreliable tool in the investigation of the area.

Copper has emerged as the principle mineral of those tested in SML 328.

Initial structural investigation suggests that superimposed structures play a dominant role in the location of copper enrichments.

Although it is not yet possible to think in terms of potential, there is sufficient encouragement to warrant further work in the area.

E.A. WEBB & ASSOCIATES PTY.LTD.

B. Cozens
March 19th, 1971.

LIST OF DRAWINGS

Drawing Number	Subject
A4-9	Geochemical Sub-Areas
A1-25	Statistical Analysis of Zinc Stream Sediment Samples
A1-28	" " " Lead " " "
A1-29	" " " Copper " " "
A2-10	North-eastern Portion, Stream Sediment Sampling Results
A1-24	North Portion, " " " "
A1-26	South Portion. " " " "
A3-8	Plan showing relationship between Rock and Stream Sediment Assays.
A3-9	Preliminary Structural Interpretation, Southern Portion of Leases.

APPENDIX 1.

ROCK SAMPLE ANALYSES

Sample No.	Cu ppm	Pb ppm	Zn ppm	Location
R 6	25	40	70	On gully draining Prince Alfred mine.
R 7	28,000	30	100	
R 8	78,000	30	90	
R16a	110	15	40	
R16b	190,000	50	50	3 miles N.W. Bagalowie.
R17	50,000	90	30	
R20	5,000	20	15	
R10	1,200	20	20	
R12	470	25	50	2½ miles east Bagalowie.
R13	N.A.	40	25	
R14	130	15	20	
R11	190	20	15	½ mile north R10.
R42	300	< 20	20	
R43	70	< 20	10	
R44	40	30	20	1 mile N.W. Bagalowie.
R45	11,000	25	20	
R46	380	25	15	
R47	32,000	< 20	10	
R48	280	1,500	680	4.3/4 miles N.W. Bagalowie.
R18a	2,500	10	30	
R18b	420	10	35	Copper gold prospect S.E. Mattawarrangala.
R18c	270	15	35	
R27	35	30	230	
R28	40	20	350	
R29	2,000	320	6,800	Windowarta Hut area.
R30	50	40	45	
R31	90	20	95	

.../2

Sample No.	Cu ppm	Pb ppm	Zn ppm	Location
R15	1,500	1,600	45	Brady's Dam and Anesbury's Claim area.
R19	25	40	45	
R21	2,500	40	40	
R22	2,200	50	35	
R23	400	20	35	
R24	2,900	4,300	1,800	
R25	70	20	25	
R26	200	40	90	
R32	540	25	100	
R33	400	< 20	150	
R34	850	25	150	
R35	1,200	50	140	
R36	2,000	45	40	
R37	70	< 20	5	
R38	850	120	120	

APPENDIX 2

FURTHER EXPLORATION

The following programme will involve a month of office work and from two to three months' field work. Office and field work could be carried concurrently, giving an effective programme of from two to three months.

Air Photo Investigation

(a) Preliminary study of air photos covering area south of and including the Prince Alfred and Red Hill mines at standard photo scale.

(b) Further study of selected areas of interest at a scale suitable for detailed work. Photo coverage and desirable scale yet to be determined.

Time: 10 to 15 days.

Geochemical Survey

(a) Further investigation of stream sediment survey by controlled sampling of streams around Prince Alfred Mine gully area. Determination of effects of contamination by mining and dilution by wind erosion and flash flooding and possibilities of overcoming these problems.

(b) Controlled geochemical soil surveys over known anomalous areas and, where possible, in the locality of the Red Hill Mine. These surveys should cover known copper occurrences and gossanous zones in the Prince Alfred Mine gully, Brady's Dam-Anesbury claim, North and West Bagalowie and the Red

Hill Mine areas in the first instance.

Time: 2 - 3 months, to continue concurrently with geological mapping.

(Extension of the soil survey over other known copper occurrences and/or gossanous outcrops and over areas considered favourable to copper mineralisation, as delineated by photo study and geological investigation, should continue into the next phase of exploration.

Geological Mapping

(a) General.

Geological mapping of structures noted in air photo work to obtain additional information for the complete understanding of the structure of the area.

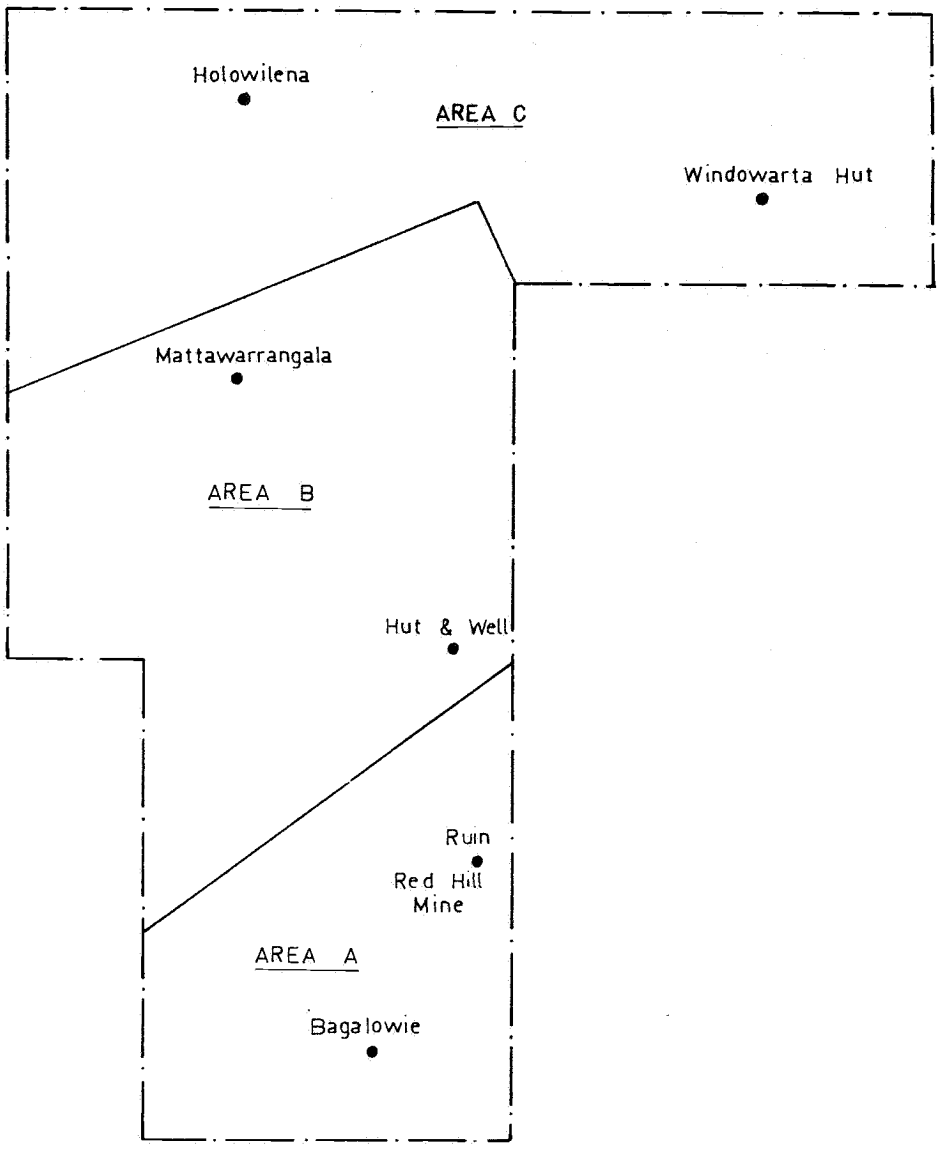
(b) Detailed.

Geological mapping and establishment of spatial relationship of known copper and gossanous occurrences. Mapping should include information on:-

Type and orientation of mineralisation
Lithological associations
Structural environment
All evidence of previous work
Precise relationship with geochemical grid.

Time: 2 - 3 months, to run concurrently with geochemical work.

0075



SCALE 1 inch = 300 chains.

300 150 0 300 600

E. A. WEBB & ASSOCIATES PTY. LTD.
for
ARDEN MINING N.L..

S.M.L. 328

GEOCHEMICAL SUBAREAS.

Prepared by P. RUSH.	**Drawn by** P. RUSH.
Checked by	**Date** 12-3-1971.
Drawing No. A4 - 9.	**Project No.** S.M.L. 328-5.

McPHAR GEOPHYSICS PTY. LTD.

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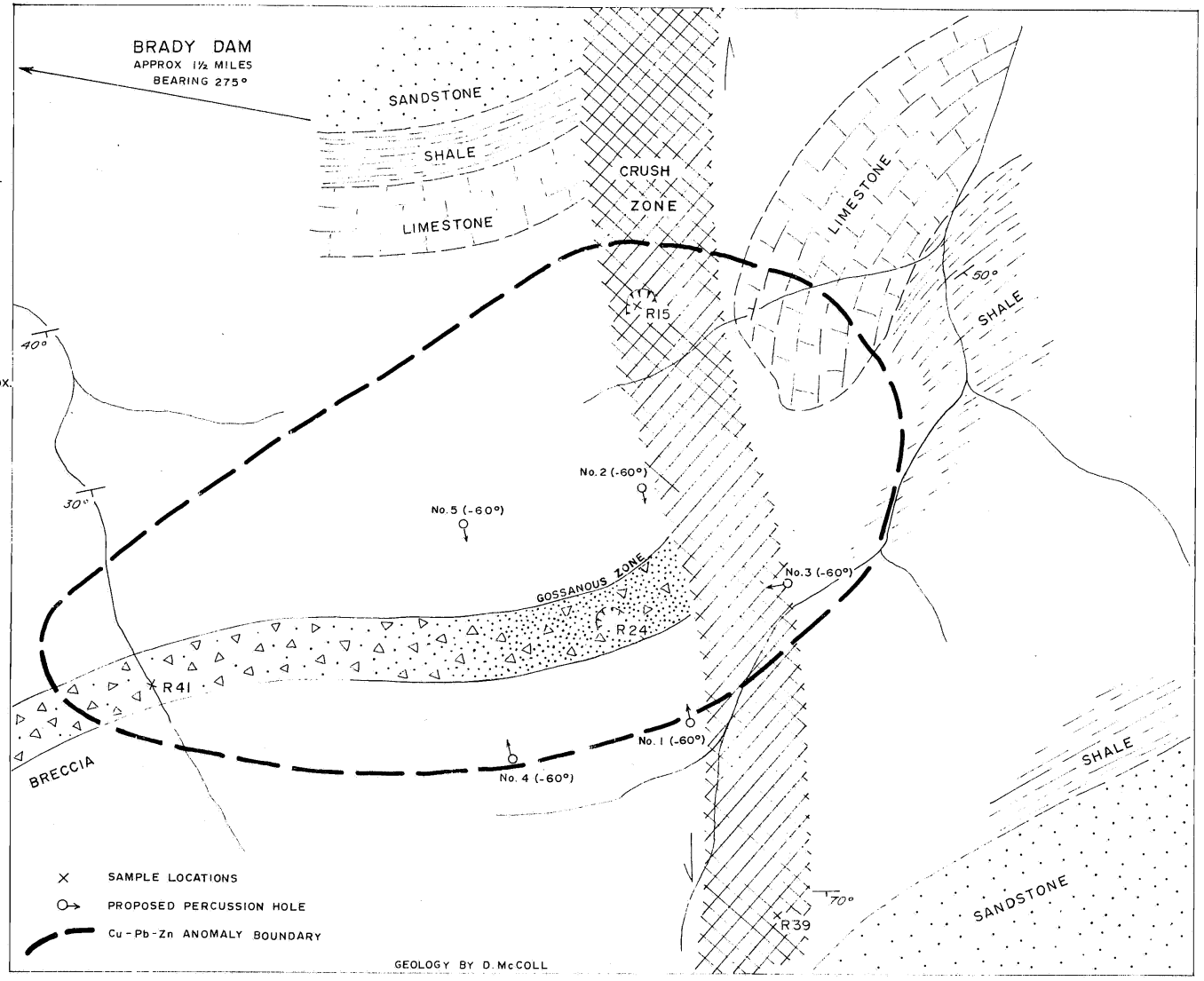


M.V. WIGHT (S.M.L. 328)

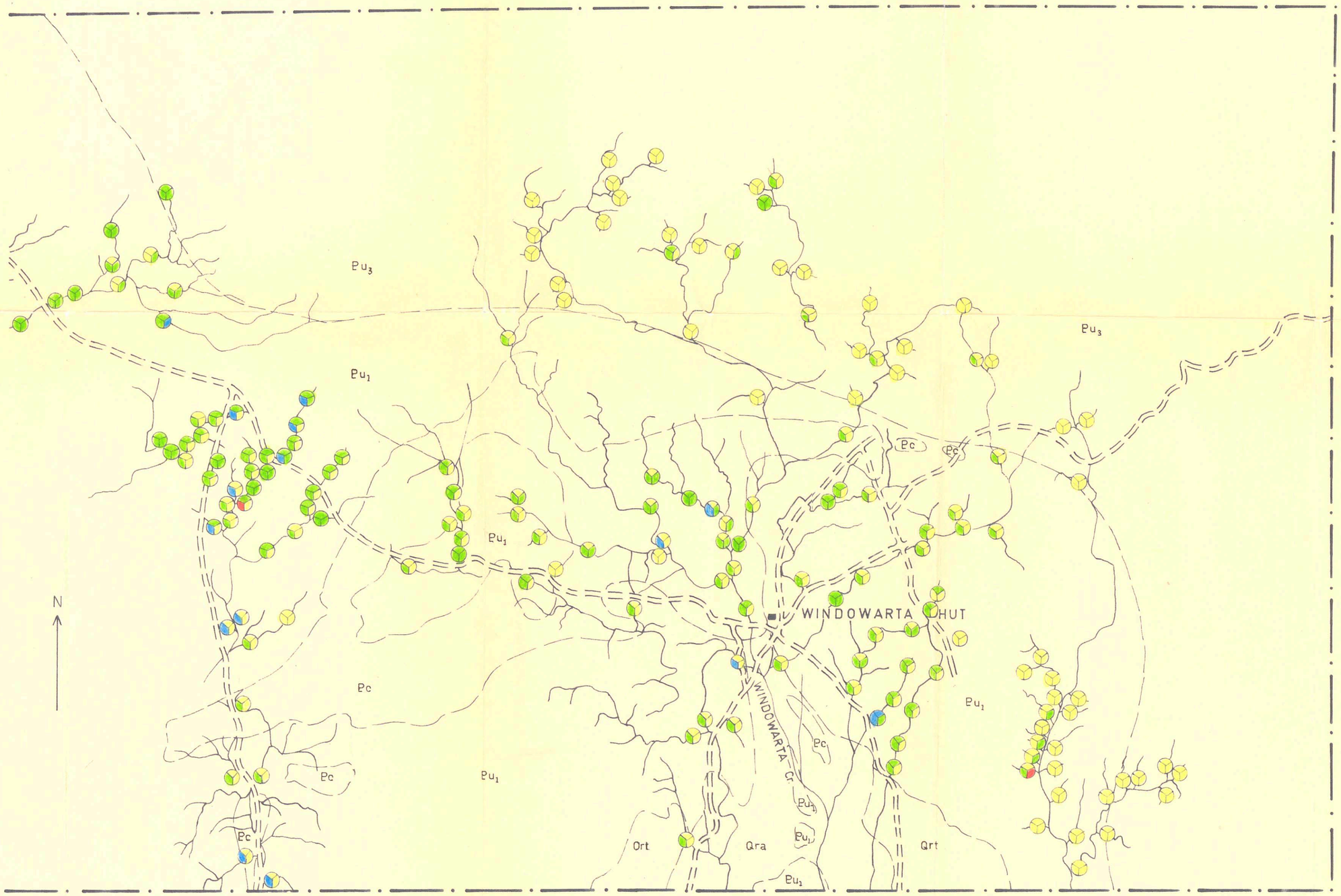
GEOLOGICAL SKETCH MAP

COPPER-LEAD-ZINC GEOCHEMICAL ANOMALY

BAGALOWIE STATION, ORRORO, S. AUST.

SCALE: APPROX. 1 INCH = 100 FEET

DWG: G·00013A



LEGEND

- LEASE BOUNDARY
- TRACK
- GEOLOGICAL BOUNDARY
- Cu / Zn / Pb — ELEMENTS REPRESENTED BY EACH SECTOR

THRESHOLD VALUES

Cu 32 ppM

Pb 50ppM

Zn 70ppM

COLOUR CODE

- 0 - 0·5 T
- 0·5 - 1 T
- 1 - 2 T
- 2 - 4 T
- 4 - 8 T
- > 8 T

GEOLOGICAL LEGEND

Cainozoic
- Qra - Quaternary alluvium of flood plains
- Qrt - Quaternary low angle slope deposits

Proterozoic
- Pw - Wilpena group
- Pu_1 - Elatina formation
  - Trezona formation
  - Enorma shale
  - Etina formation
  - Wockerawirra dolomite
  - Tapley Hill formation (shales)
- Pu_2 - Yudnamutana sub-group
- Pu_3 - Appila tillite
- Pb - Burra group
- Pc - Callana beds
- Pr - River Wakefield group

SCALE: 1inch = 40 chains.

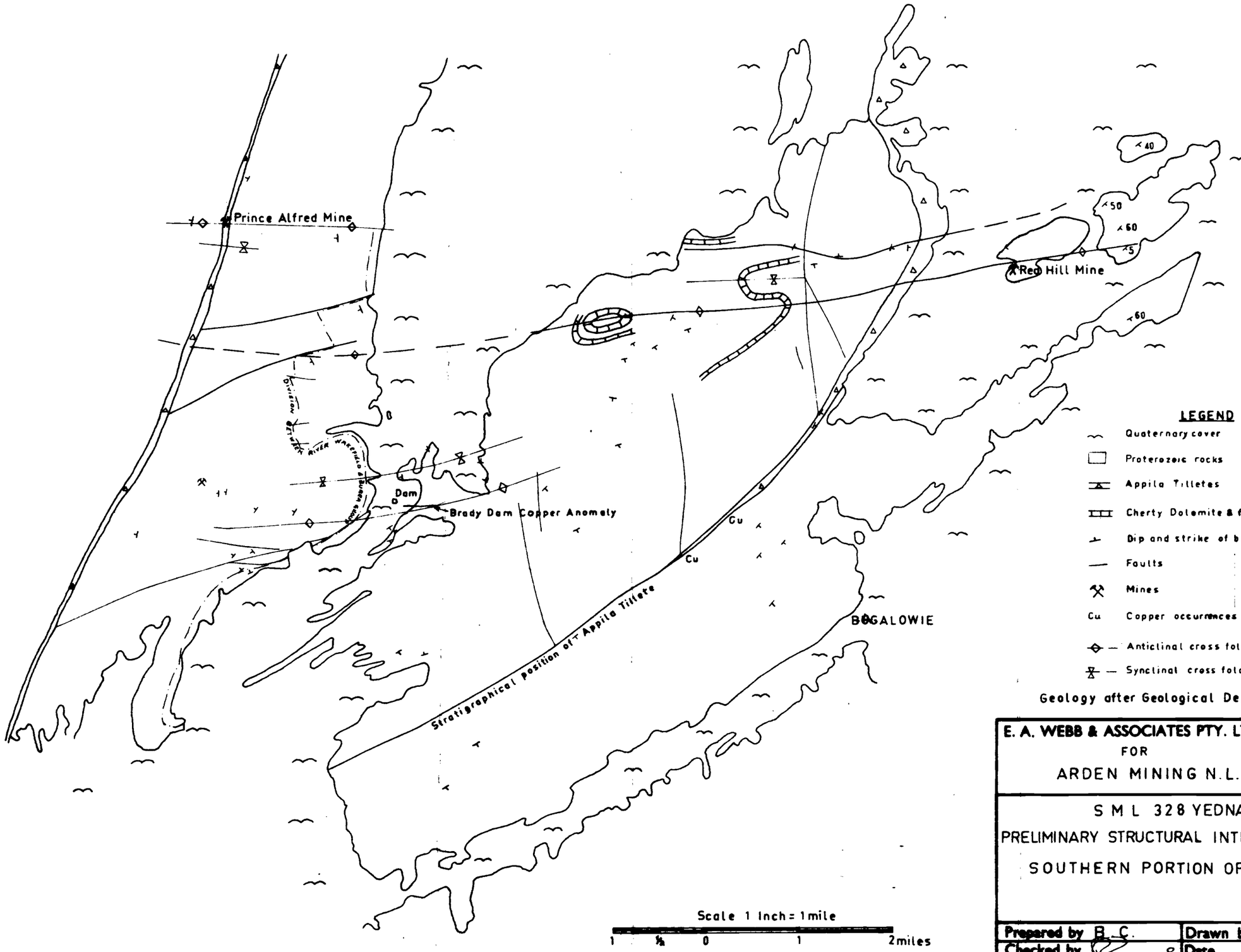
40 20 0 40 80 120

E.A.WEBB & ASSOCIATES PTY. LTD.
FOR
ARDEN MINING N.L.

PLAN NORTH EASTERN PORTION OF S.M.L. 328 SHOWING GEOLOGY & STREAM SEDIMENT SAMPLING RESULTS.

PREPARED BY: G. WEBER.	DRAWN BY: P. RUSH.
CHECKED BY:	DATE: 9 - 3 - 1971.
DRAWING No.: A2 - 10.	PROJECT No.: S.M.L. 328-1.

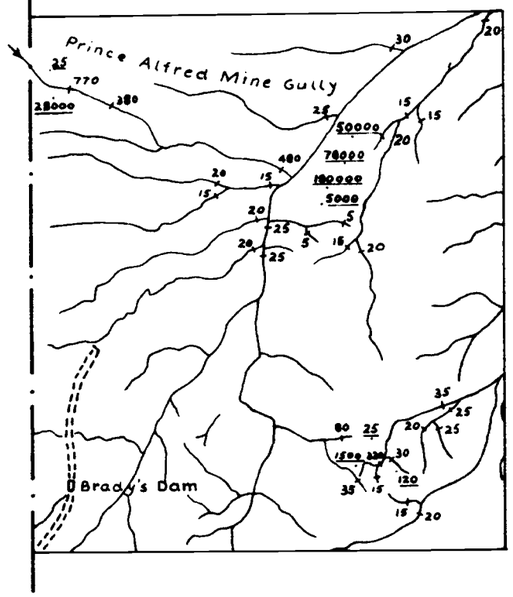
1136-1


Prince Alfred Mine
Red Hill Mine
Dam
Brady Dam Copper Anomaly
Stratigraphical Position of Appila Tillites
BOOLALOWIE
Cu
Cu
Cu
40
50
60
5
60
Scale 1 Inch = 1 mile
1
½
0
1
2 miles
LEGEND
Quaternary cover
Proterozoic rocks
Appila Tillites
Cherty Dolomite & felspathic sandstone beds
Dip and strike of bedding
Faults
Mines
Cu Copper occurrences
Anticlinal cross folds
Synclinal cross folds
Geology after Geological Department of S.A.
E. A. WEBB & ASSOCIATES PTY. LTD.
FOR
ARDEN MINING N.L.
S M L 328 YEDNALUE
PRELIMINARY STRUCTURAL INTERPRETATION
SOUTHERN PORTION OF LEASE
Prepared by B. C.
Drawn by T. J. H.
Checked by
Date 19-3-71
Drawing No. A3 - 9
Project No. SML 328 - 9

1136-2

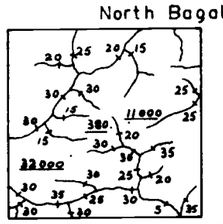
PRINCE ALFRED MINE

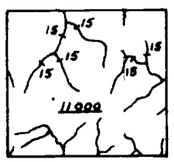
3·6 km.



RUIN

RED HILL MINE





BAGALOWIE

1·6 km = 1 mile

LEGEND

20 STREAM SEDIMENT ASSAY (ppm)

11000 ROCK ASSAY (ppm)

===== TRACK

—·— LEASE BOUNDARY

80 = 1
60 = x
2·25 miles

80 chain = 1 mile

60 30 0 60 120 180

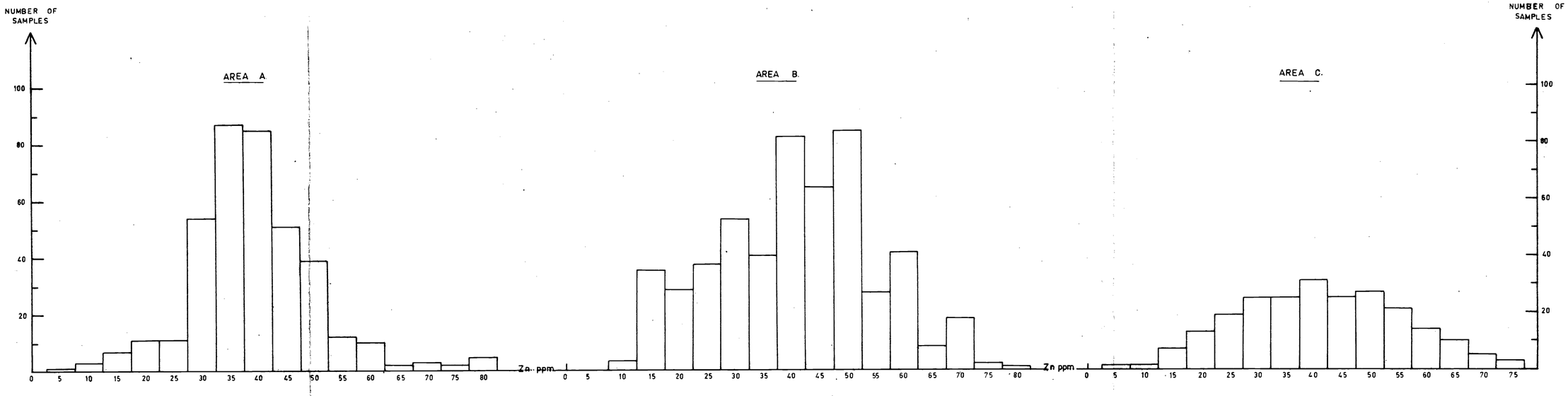
Scale: 1 inch = 60 chains

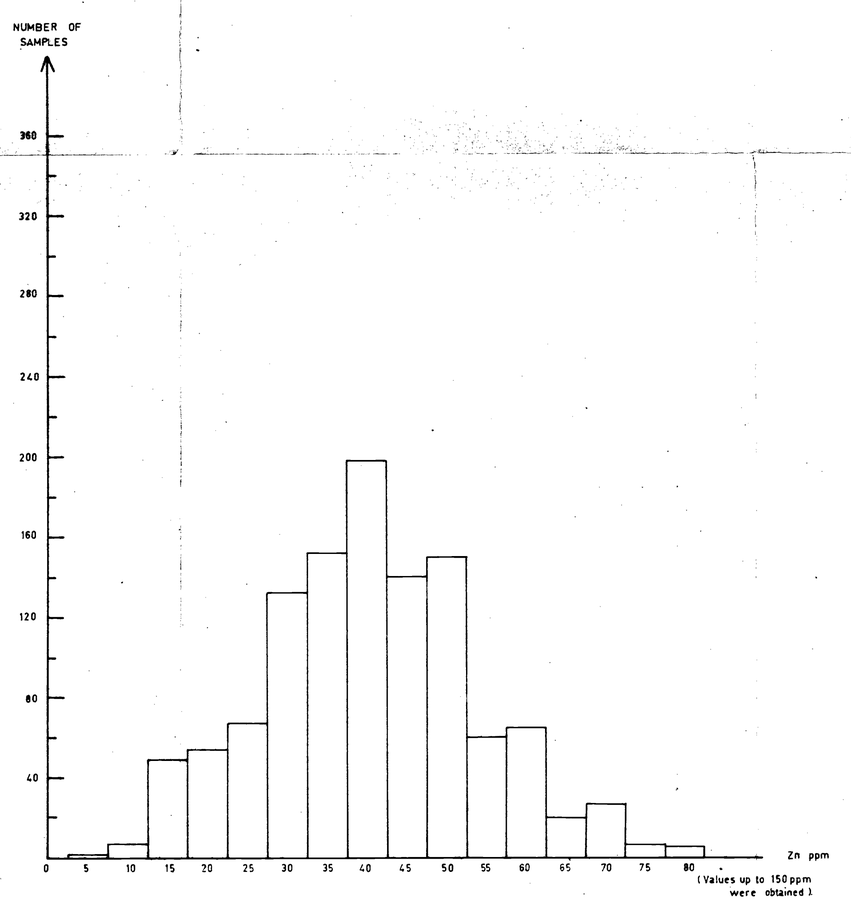
1136-3

E. A. WEBB & ASSOCIATES PTY. LTD.
for
ARDEN MINING N.L.

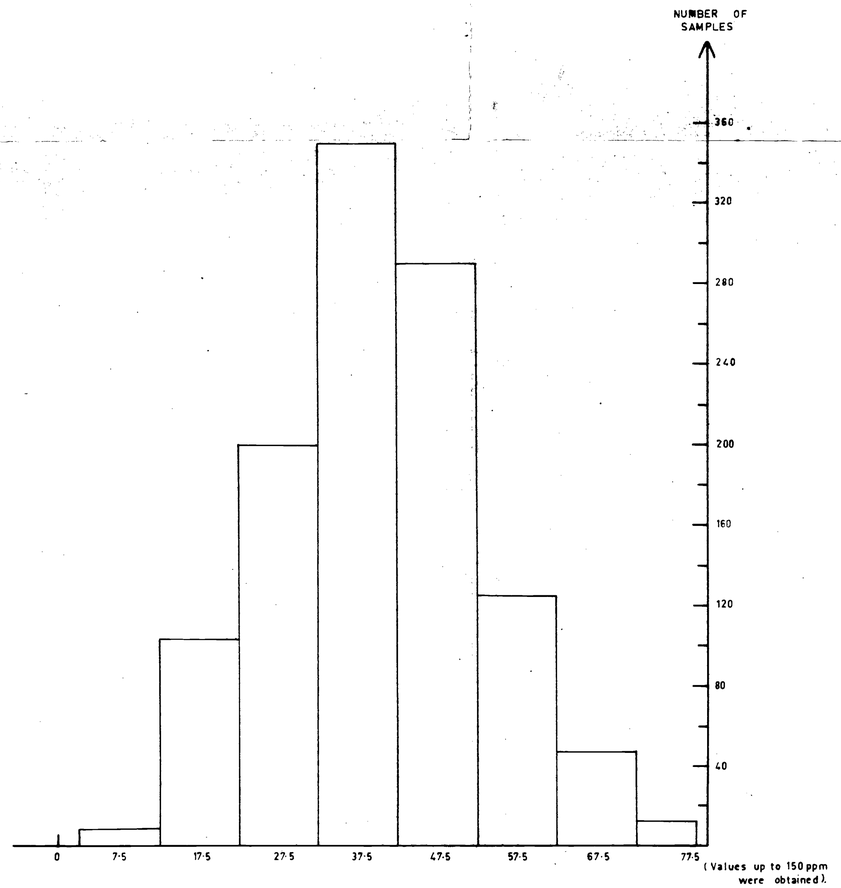
S.M.L. 328
PLAN SHOWING RELATIONSHIP
BETWEEN ROCK & STREAM SEDIMENT
ASSAYS FOR COPPER

Prepared by P.RUSH	Drawn by T. J. H.
Checked by [illegible]	Date 22 - 3 - 71
Drawing No. A3 - 8.	Project No. SML 328 - 8.





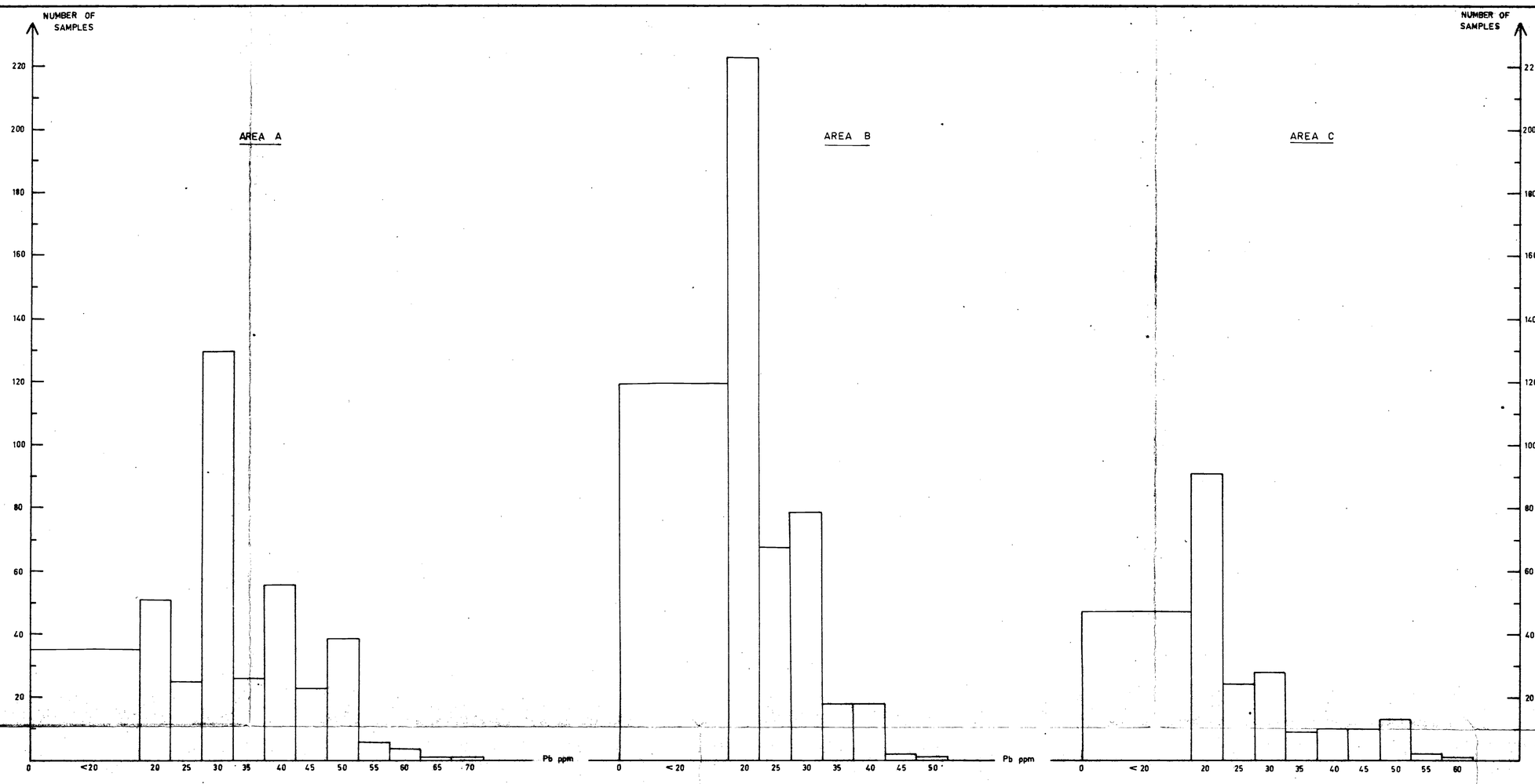
ZINC VALUES

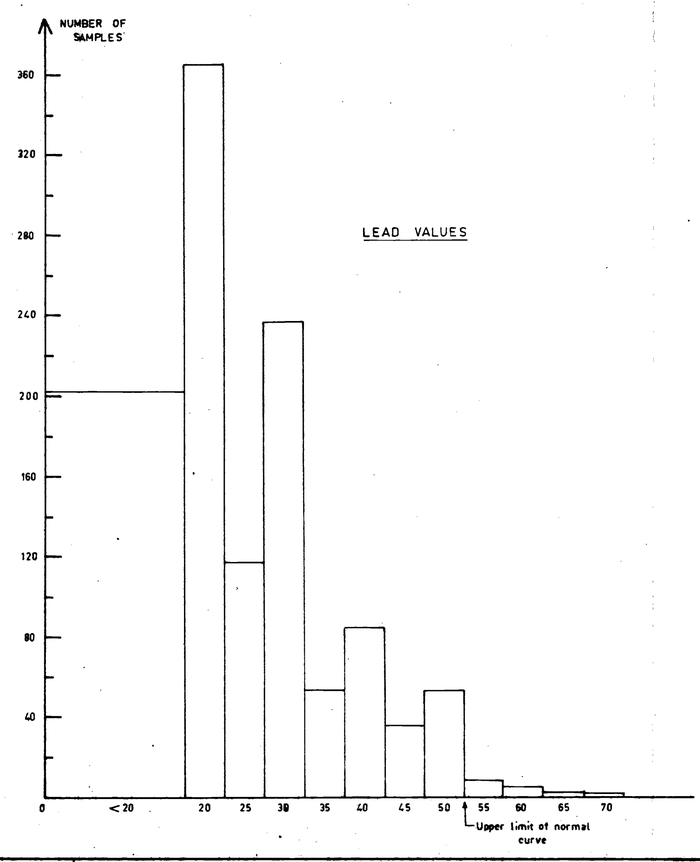


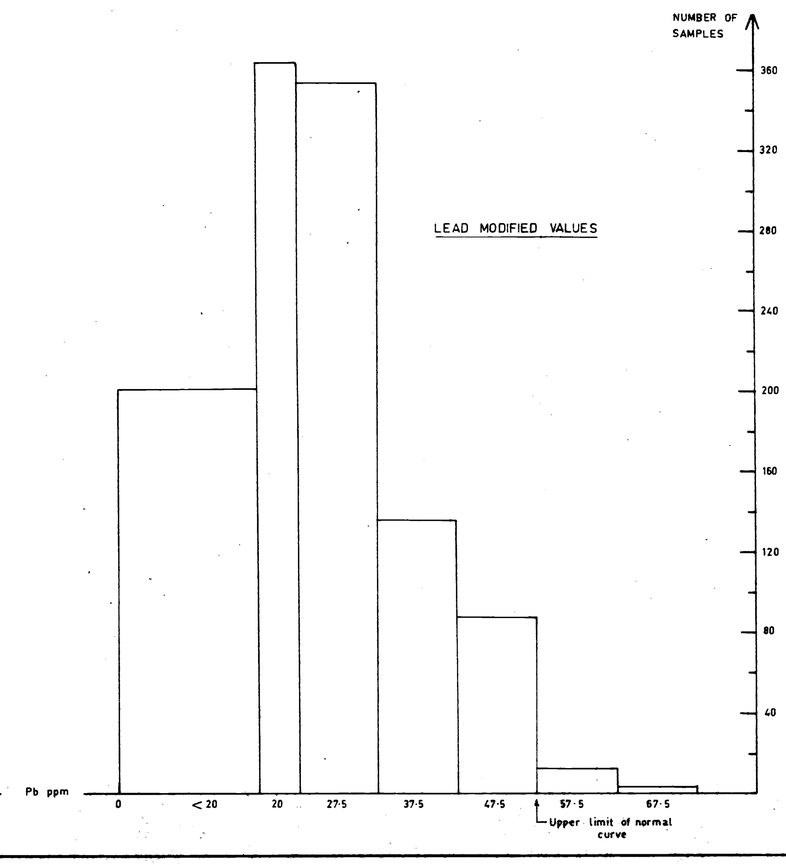
ZINC MODIFIED VALUES

1136-4

E. A. WEBB & ASSOCIATES PTY. LTD. for ARDEN MINING N.L.	
S.M.L. 328	3-7
STATISTICAL ANALYSIS OF ZINC STREAM SEDIMENT SAMPLES.	
Prepared by G. WEBER	Drawn by PRUSH.
Checked by	Date 12-3-1971.
Drawing No. A1 - 25.	Project No. S.M.L. 328-3.







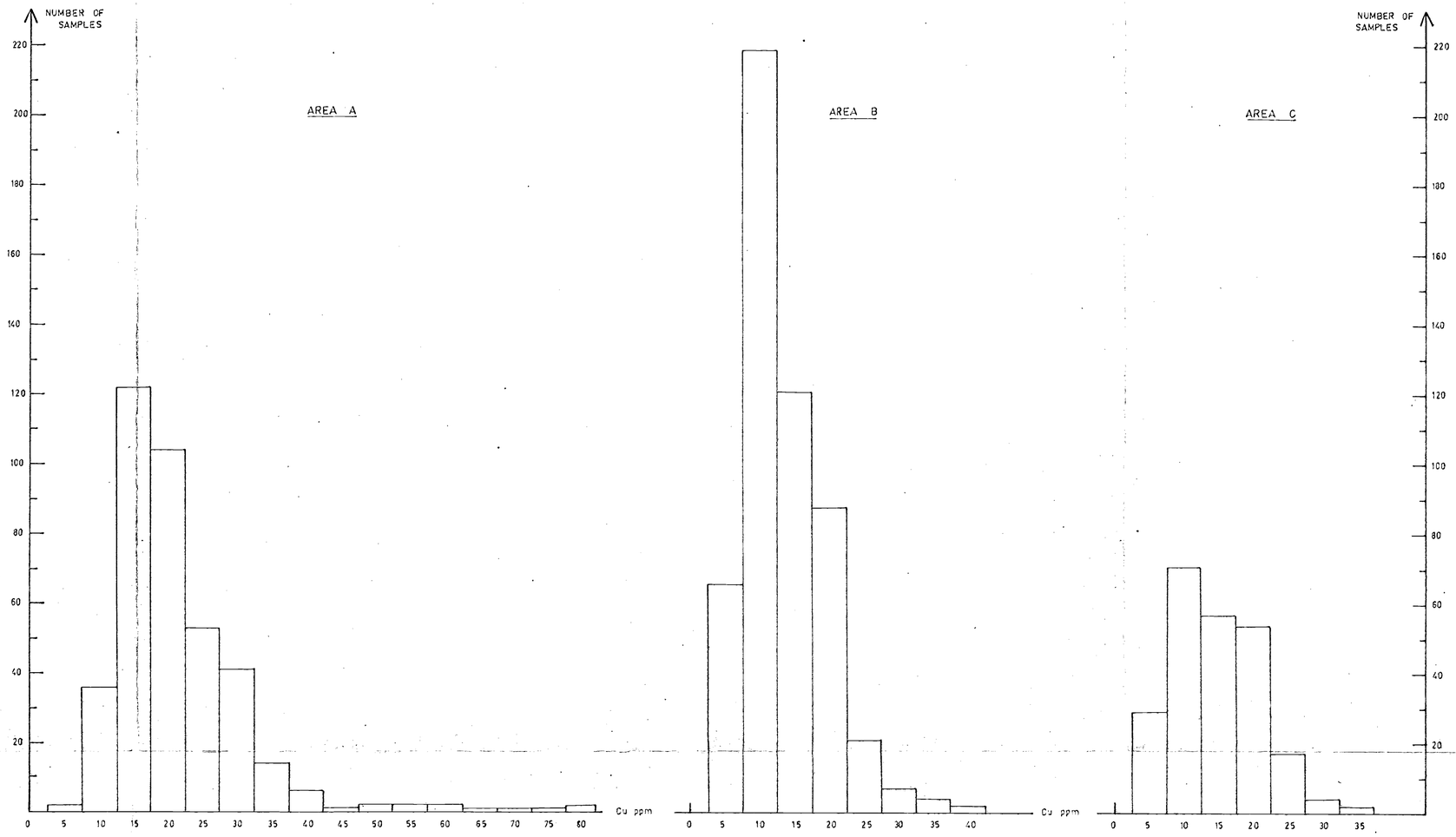
1136-5

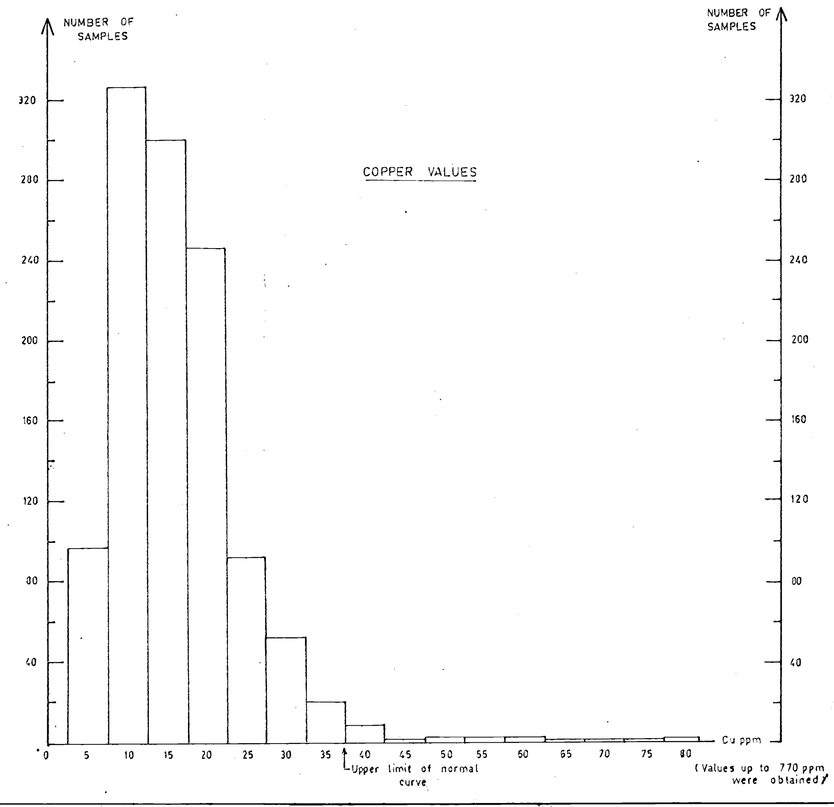
E. A. WEBB & ASSOCIATES PTY. LTD.
for
ARDEN MINING N.L.

S.M.L. 328 3-6

STATISTICAL ANALYSIS OF
LEAD STREAM SEDIMENT SAMPLES.

Prepared by G. WEBER.	Drawn by P. RUSH.
Checked by	Date 15-3-1971.
Drawing No. A1-28.	Project No. S.M.L. 328-6.





1136-6

E. A. WEBB & ASSOCIATES PTY. LTD.
for
ARDEN MINING NL.

S.M.L. 328

STATISTICAL ANALYSIS OF

COPPER STREAM SEDIMENT SAMPLES.

Prepared by G. WEBER.	Drawn by P. RUSH.
Checked by	Date 15-3-1971.
Drawing No. A1 - 29.	Project No. S.M.L. 328-7.

GEOLOGICAL LEGEND

Cainozoic
- Qra – Quaternary alluvium of flood plains
- Qrt – Quaternary low angle slope deposits

Proterozoic
- Pw – Wilpena group
- P u_1 – Elatina formation
  - – Trezona formation
  - – Enorma shale
  - – Etina formation
  - – Wockerawirra dolomite
  - – Tapley Hill formation (shales)
- P u_2 – Yudnamutana sub-group
- P u_3 – Appila tillite
- Pb – Burra group
- Pc – Collana beds
- Pr – River Wakefield group

N

HOLOWILENA

HOLOWILENA CREEK

P u_1

HOLOWILENA SOUTH
MATTAWARRANGALA

P u_2

Qra

Pb

Qrt

P u_3

STUCCUS RIVER

P u_1

Pr

Pr

P u_2

Pb

P u_3

Qra

Pb

Qrt

Pr

HUT & WELL

LEGEND

- LEASE BOUNDARY
- TRACK
- GEOLOGICAL BOUNDARY
- Cu / Pb / Zn – ELEMENTS REPRESENTED BY EACH SECTOR

THRESHOLD VALUES

Cu	32 ppm
Pb	50 ppm
Zn	70 ppm

COLOUR CODE

	0 - 0·5T
	0·5 - 1T
	1 - 2T
	2 - 4T
	4 - 8T
	> 8T

Scale. 1 Inch = 40 Chains

40 20 0 40 80

E. A. WEBB & ASSOCIATES PTY. LTD.
FOR
ARDEN MINING N.L.

PLAN. NORTH PORTION OF S.M.L. 328
SHOWING GEOLOGY & STREAM SEDIMENT
SAMPLING RESULTS

PREPARED BY	
CHECKED BY	DRAWN BY T. J. H.
DRAWING Nº A1-24	DATE 8-3-71
	PROJECT Nº SML328-2

1136-7

N

LEGEND

LEASE BOUNDARY

TRACK

GEOLOGICAL BOUNDARY

Cu / Zn Pb — ELEMENTS REPRESENTED BY EACH SECTOR

THRESHOLD VALUES

Cu	32 ppm
Pb	50 ppm
Zn	70 ppm

COLOUR CODE

	0 - 0·5T
	0·5 - 1T
	1 - 2T
	2 - 4T
	4 - 8T
	> 8T

40 20 0 40 80

Scale. 1 Inch = 40 Chains

Cainozoic
- Qra – Quaternary alluvium of flood plains
- Qrt – Quaternary low angle slope deposits
- Pw – WILPENA Group

Proterozoic
- P_{u_1} – Elatina formation
  - Trezona formation
  - Enorma shale
  - Etina formation
  - Wockerawirra dolomite
  - Tapley Hill formation (shales)
- P_{u_2} – Yudnamutana sub-group
- P_{u_3} – Appila tillite
- Pb – Burra group
- Pc – Callanna beds
- Pr – River Wakefield group

RED HILL MINE

RUIN

BAGALOWIE

BUCKALOWIE

CREEK

Dam

Dam

1136-8

E. A. WEBB & ASSOCIATES PTY. LTD.
FOR
ARDEN MINING N.L.

PLAN. SOUTH PORTION OF S.M.L. 328
SHOWING GEOLOGY & STREAM SEDIMENT
SAMPLING RESULTS

PREPARED BY: G. W.	DRAWN BY: T. J. H.
CHECKED BY:	DATE: 12 - 3 - 71.
DRAWING N°: A1 - 26	PROJECT N°: SML 328 - 4

N

HOLOWILENA

Holowilena Creek

WINDOWARTA HUT

MATTAWARRANGALA

Alpunna Creek

Frome River

HUT & WELL

QUIN

Cu REEF HILL MINE

BAGALOWIE

Dam

S.M.L. 328.

ENLARGEMENT

Scale: 1 inch = 20 chains, approx.

Brady Dam

ANESBURYS CLAIMS

Dam

Zn, by AAS following hot 25% HNO3 leach for 1 hour on 0·25 gm sample of minus 80 mesh.

RECEIVED
23 NOV 1970
DEPT. OF MINES
REGISTRY
1136

M.V. WIGHT
S.M.L. – 328
YEDNALUE – HOLOWILENA AREA
STREAM SEDIMENT RECONNAISSANCE SURVEY
ZINC RESULTS p.p.m.

SCALE: 1 INCH = 60 CHAINS

DRAWN BY McPHAR GEOPHYSICS ON BEHALF OF MR. M.V. WIGHT.

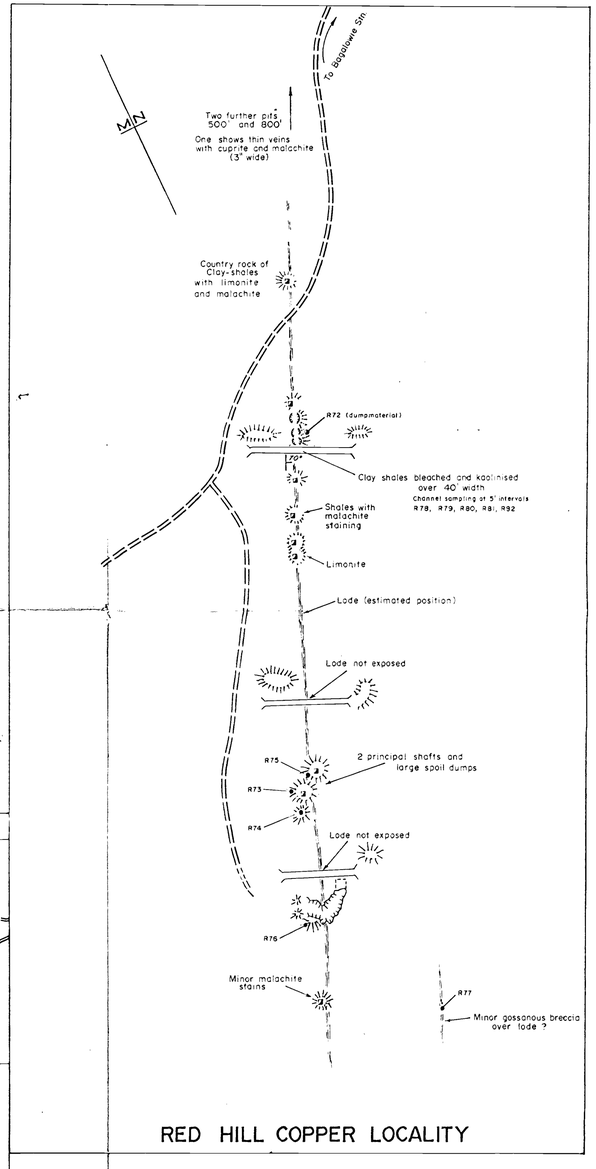
1136-9

DRAWN: I.S.
DATE: 30 10 69
APPROVED:

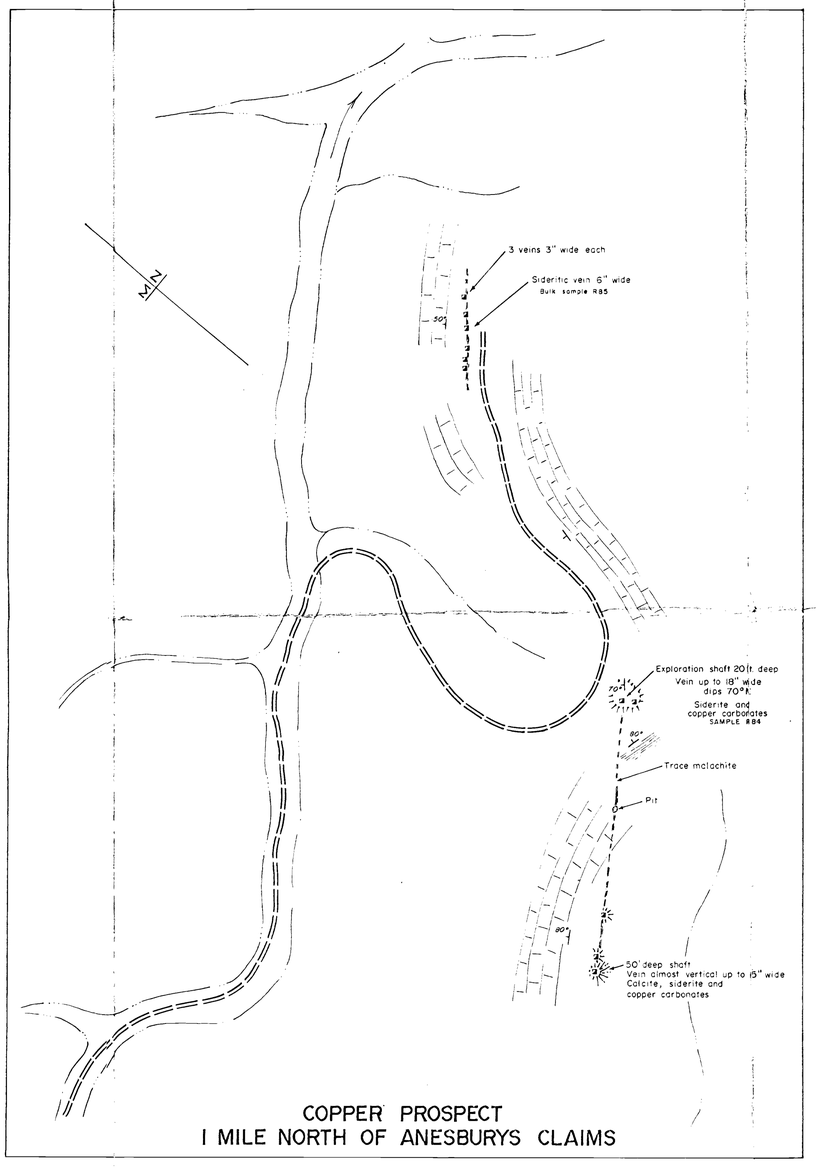
DATE:

DWG: G.C. 4039 A.

McPHAR GEOPHYSICS PTY. LTD.



RED HILL COPPER LOCALITY

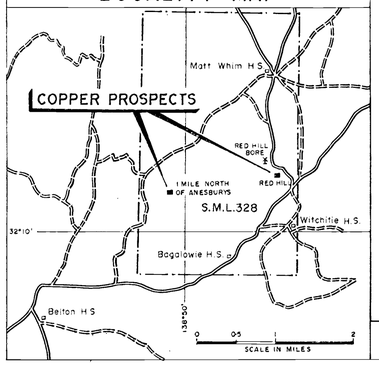


COPPER PROSPECT
I MILE NORTH OF ANESBURYS CLAIMS

REFERENCE

- Limestone
- Shaly limestone
- Lode channel (position often assumed)
- R84 — Sample number and location
- 70° — Strike and dip
- Bulldozer cut
- Shaft
- Pit
- Spoil heap
- Track
- Creek

LOCALITY MAP



M.V. WIGHT
S.M.L.328

GEOLOGICAL SKETCH MAP OF 2 COPPER PROSPECTS

SCALE 100 50 0 100 200 300 FEET

1136-10

DRAWN: R.G.Z.
DATE: 25·8·71·
APPROVED: D.McColl

DATE: 26·8·71·

DWG: G-3200A

N

HOLOWILENA

Holowilena

Creek

WINDOWARTA HUT 2000

Windowarta Ck

MATTAWARRANGALA

Mattawarrangala Creek

Sturt Highway

Stuart Highway

HUT & WELL

RUIN

Cu

REID HILL MINE

BAGALOWIE

Bagalowie Creek

S.M.L. 328

ENLARGEMENT

Scale: 1 inch = 20 chains, approx.

Brady Dam

ANESBURYS CLAIMS

Dam

Cu, by AAS following hot 25% HNO_3 leach for 1 hour on 0·25 gm sample of minus 80 mesh.

M.V. WIGHT.
S.M.L. – 328
YEDNALUE – HOLOWILENA AREA
STREAM SEDIMENT RECONNAISSANCE SURVEY
COPPER RESULTS p.p.m.

SCALE: 1 INCH = 60 CHAINS

1136-11

DRAWN: I.S.
DATE: 30 10 69
APPROVED:

DATE:

DRAWN BY McPHAR GEOPHYSICS ON BEHALF OF MR. M.V. WIGHT.

DWG: G.C. 4037 A.

N

HOLOWILENA

Holowilena

WINDOWARTA HUT

Windowarta

MATTAWARRANGALA

Creek

Sturt's River

HUT & WELL

RUIN

Cu

RED HILL MINE

BAGALOWIE

Buckalowie

Dam

S.M.L. 328.

Brady Dam

ANESBURYS CLAIMS

Dam

ENLARGEMENT

Scale: 1 inch = 20 chains, approx.

Pb, by AAS following hot 25% HNO3 leach for 1 hour on 0·25 gm sample of minus 80 mesh.

M.V. WIGHT.

S.M.L. – 328

YEDNALUE – HOLOWILENA AREA

STREAM SEDIMENT RECONNAISSANCE SURVEY

LEAD RESULTS p.p.m.

SCALE: 1 INCH = 60 CHAINS

1136-12

DRAWN BY McPHAR GEOPHYSICS
ON BEHALF OF MR. M.V. WIGHT.

DRAWN: I.S.
DATE: 30 10 69
APPROVED:

DATE:

DWG: G.C. 4038 A.

N

HOLOWILENA

MATTAWARRANGALA

HUT & WELL

WINDOWARTANHUT

ANESBURYS CLAIMS

RUIN

CU
IRED HILL
MINE

BAGALOWIE

Holowilena Creek

Brady Dam

Dam

S.M.L. 328.

ENLARGEMENT

Scale: 1 inch = 20 chains, approx.

NOTE:
SAMPLE LOCATIONS SHOWN / 65 PLOTTED 12.2.70
SAMPLE LOCATIONS SHOWN / 53 PLOTTED 30.10.69

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23 NOV 1970
DEPT. OF MINES
REGISTRY
1136 II

M.V. WIGHT.
S.M.L. – 328
YEDNALUE – HOLOWILENA AREA
STREAM SEDIMENT RECONNAISSANCE SURVEY
SAMPLE LOCATION MAP

SCALE: 1 INCH = 60 CHAINS

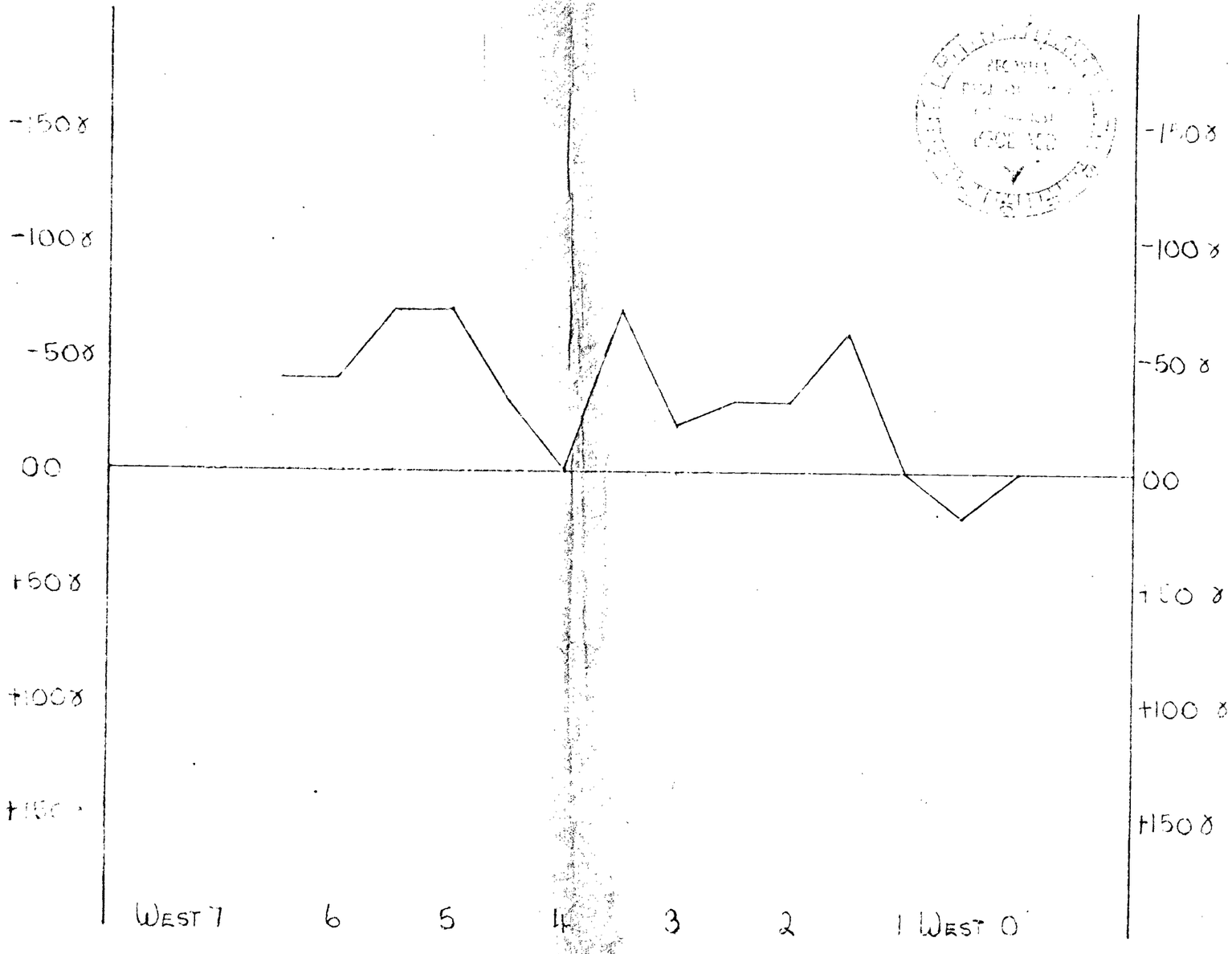
DRAWN BY McPHAR GEOPHYSICS
ON BEHALF OF MR. M.V. WIGHT.

1136-13

DRAWN: I.S.
DATE: 30.10.69
APPROVED:

DATE:

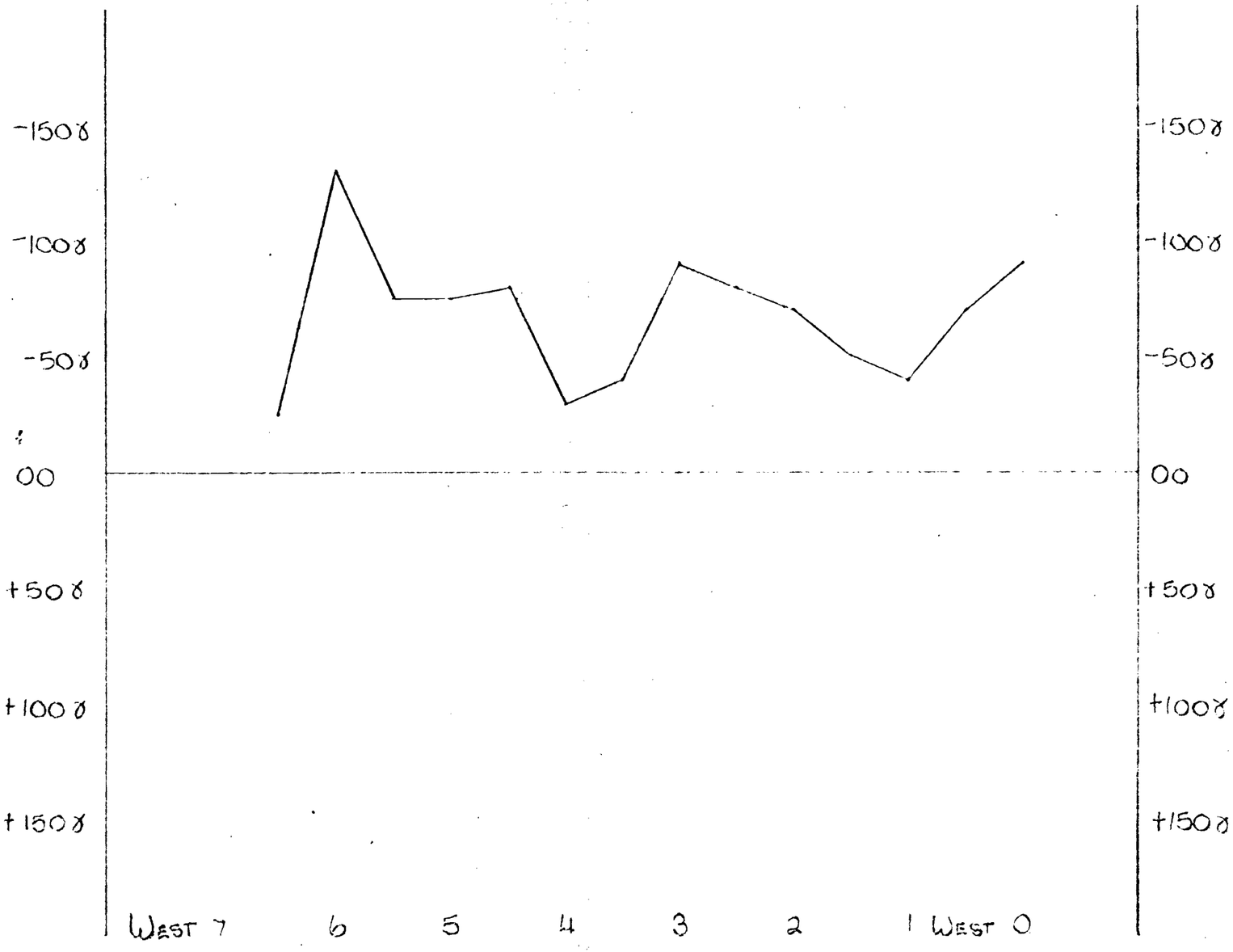
DWG: G.C. 4036A.



Magnetic Survey

Client M V Wight
Area SML 328 (Grid I)
Line 1
Unit No
Operator
Plotted by Shel Healey
Checked by Vivienne Ball
Date 8-7-71

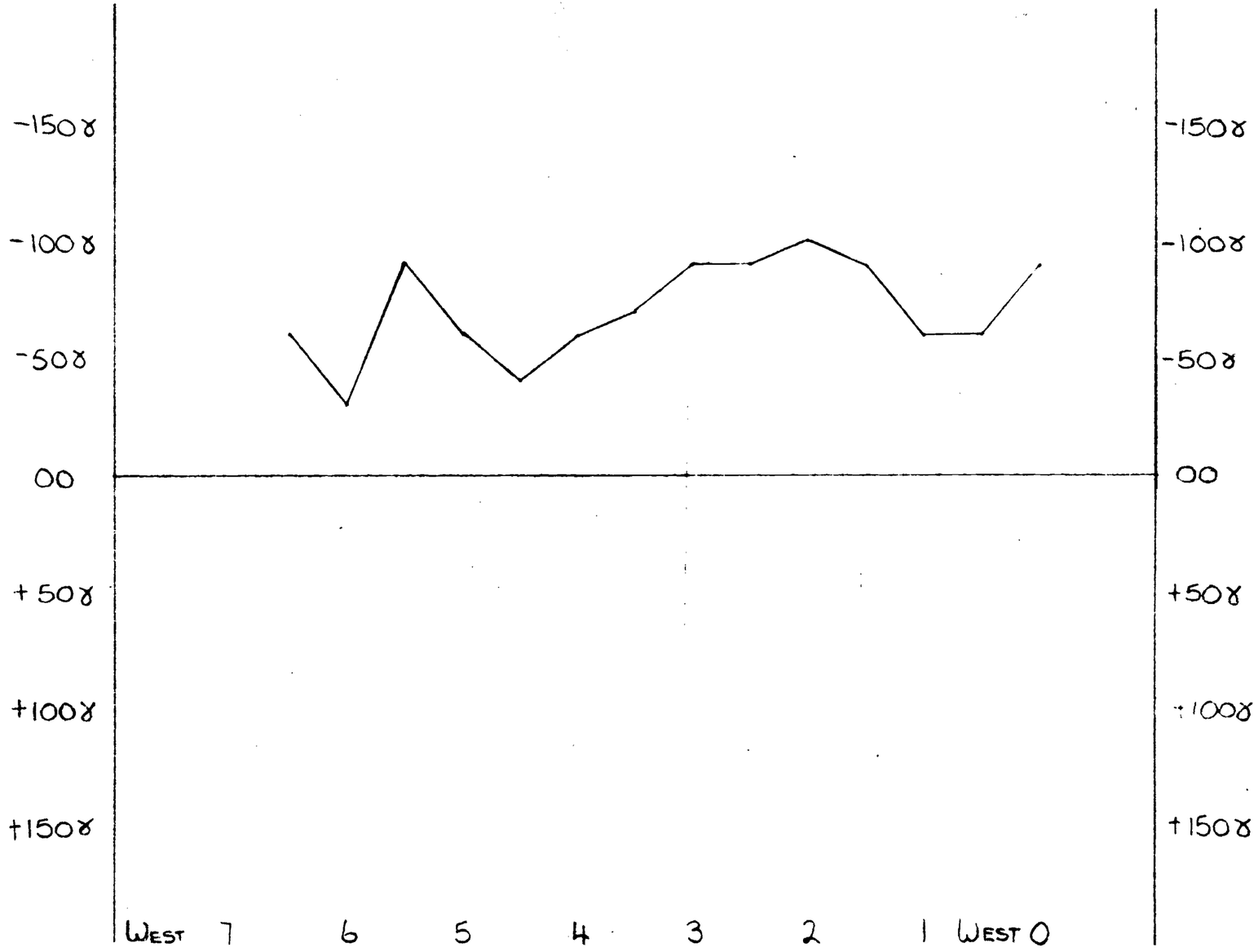
1136-14



MAGNETIC SURVEY

CLIENT M V WIGHT
AREA SML 328 (GRID I)
LINE 2
UNIT No
OPERATOR
PLOTTED BY GAEL HEALEY
CHECKED BY VIVIENNE BALL
DATE 8-7-71

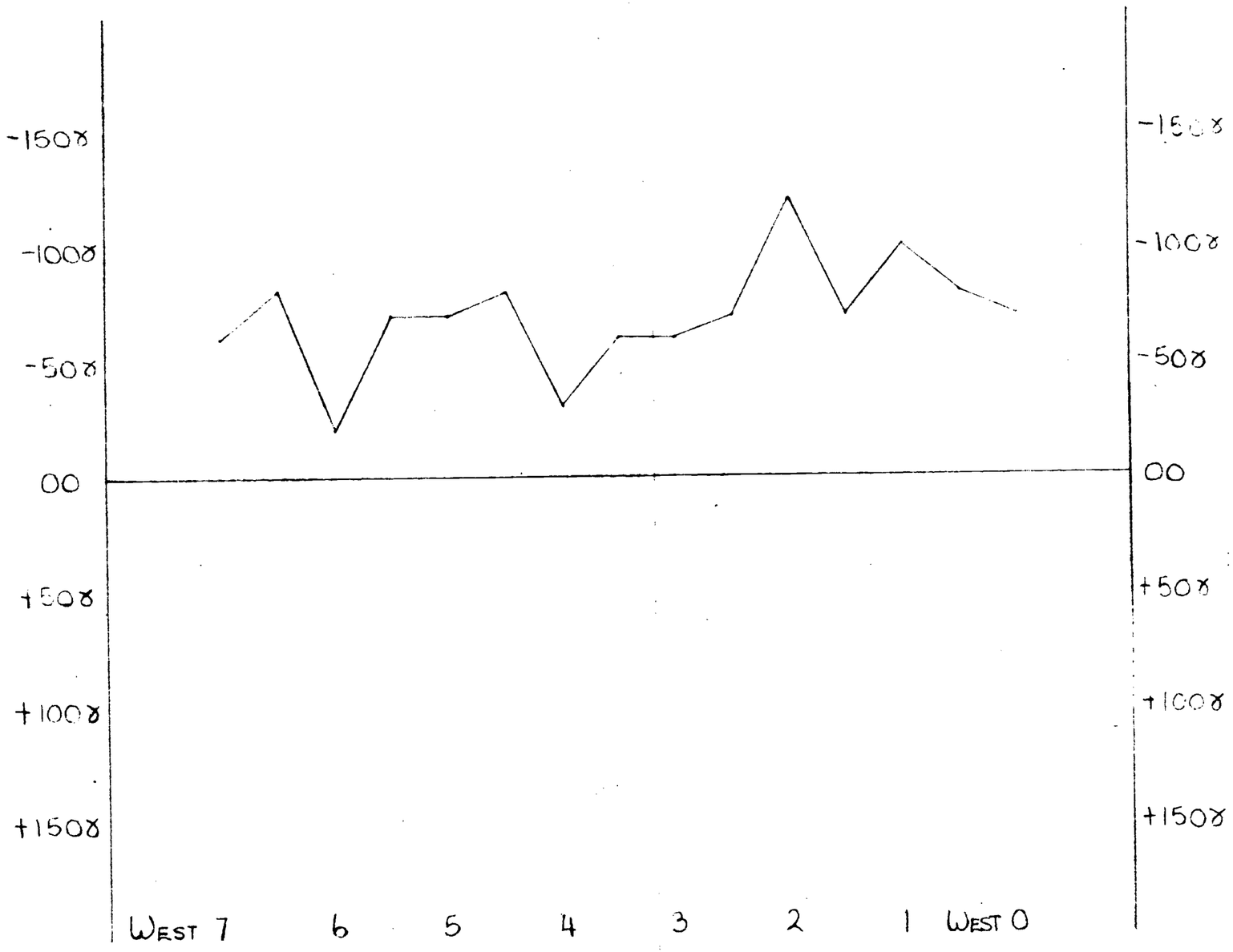
1136-15



MAGNETIC SURVEY

CLIENT M V WIGHT
AREA SML 328 (GRID I)
LINE 3
UNIT NO
OPERATOR
PLOTTED BY GAEL HEALEY
CHECKED BY VIVIENNE BALL
DATE 8-7-71

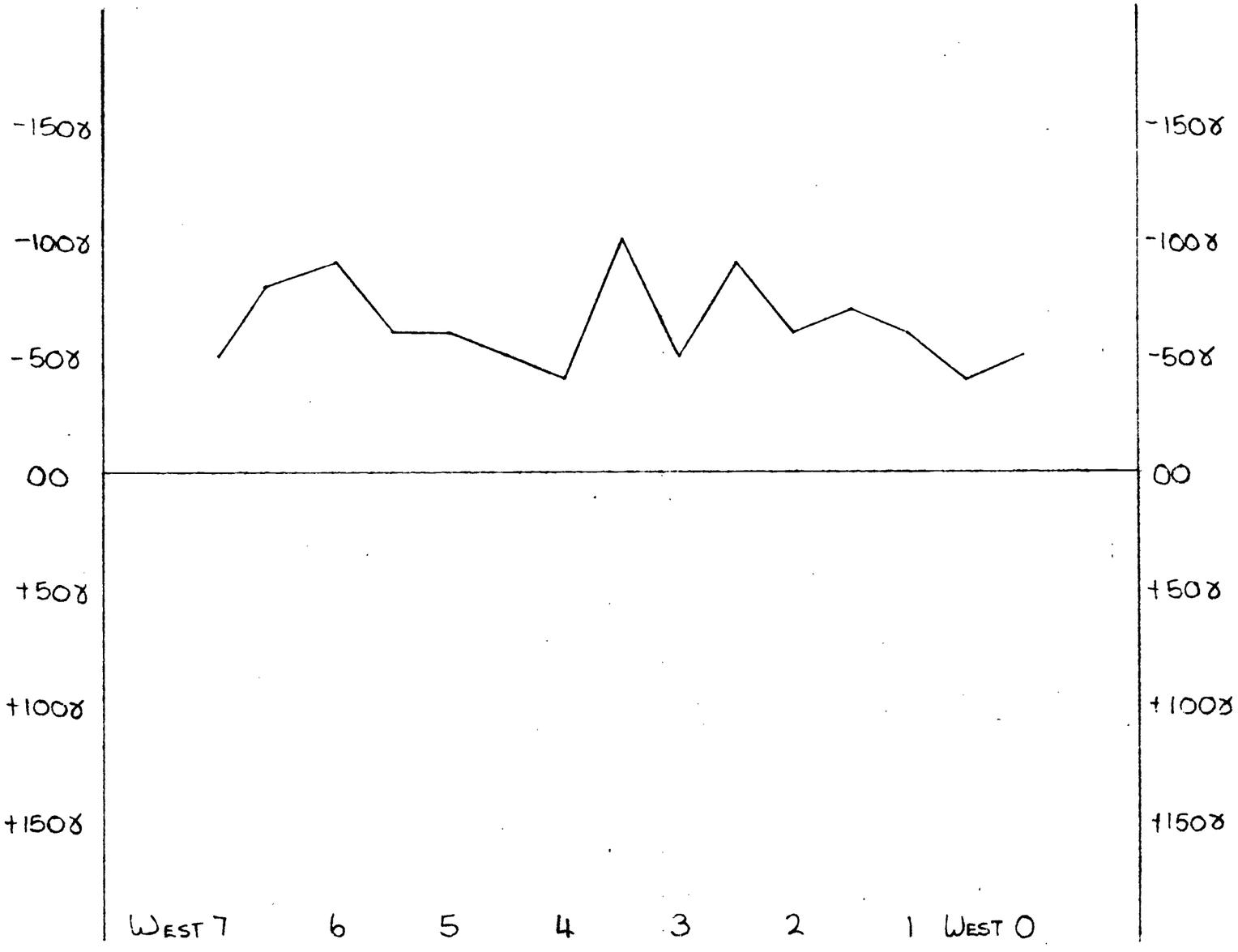
1136-16



MAGNETIC SURVEY

CLIENT M V WIGHT
AREA SML 328 (GRID I)
LINE 4
UNIT NO
OPERATOR
PLOTTED BY GAEL HEALEY
CHECKED BY VIVIENNE BALL
DATE 8-7-71

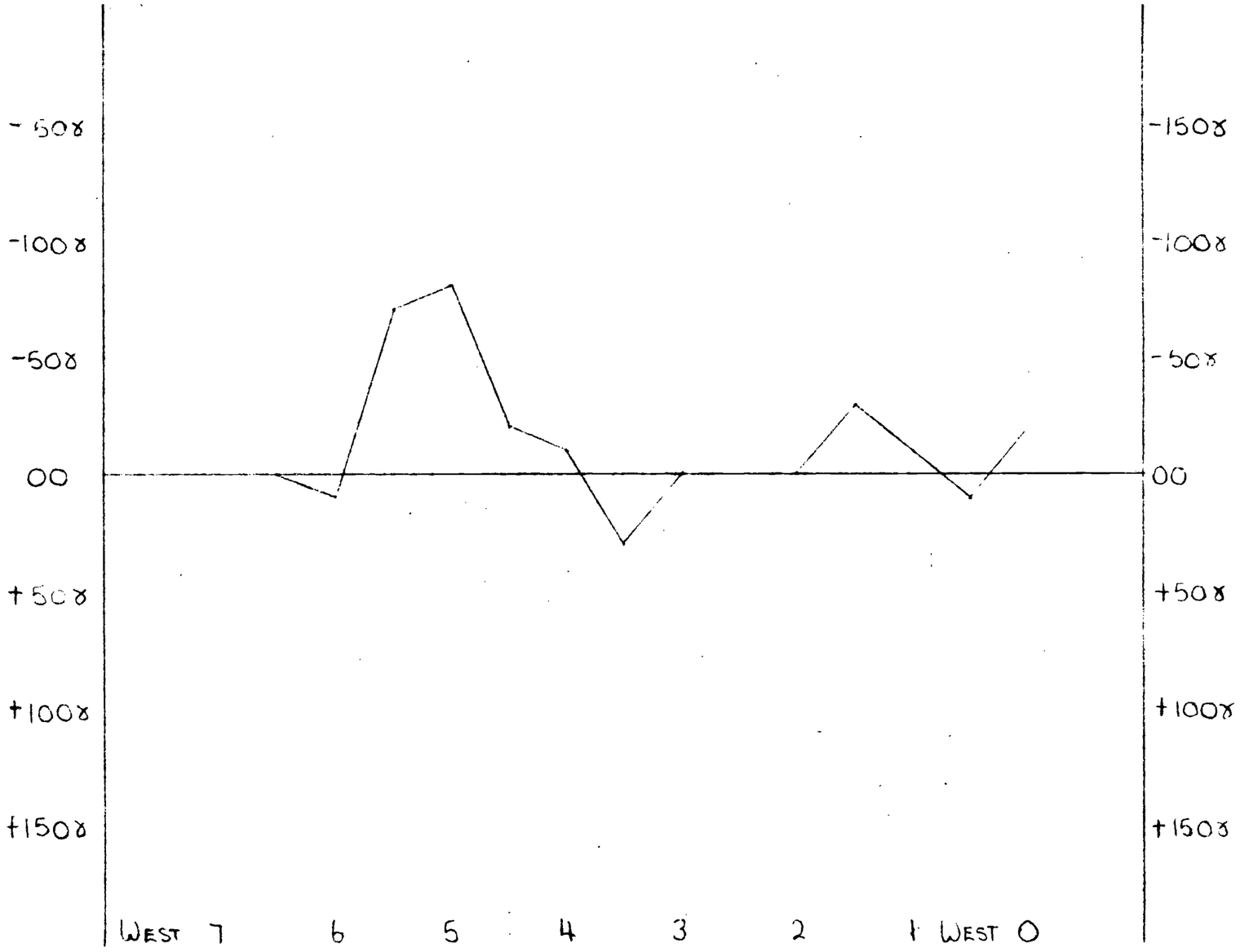
1136-17



MAGNETIC SURVEY

CLIENT	M V WIGHT
AREA	SML 328 (GRID I)
LINE	5
UNIT NO	
OPERATOR	
PLOTTED BY	GAEL HEALEY
CHECKED BY	VIVIENNE BALL
DATE	8-7-71

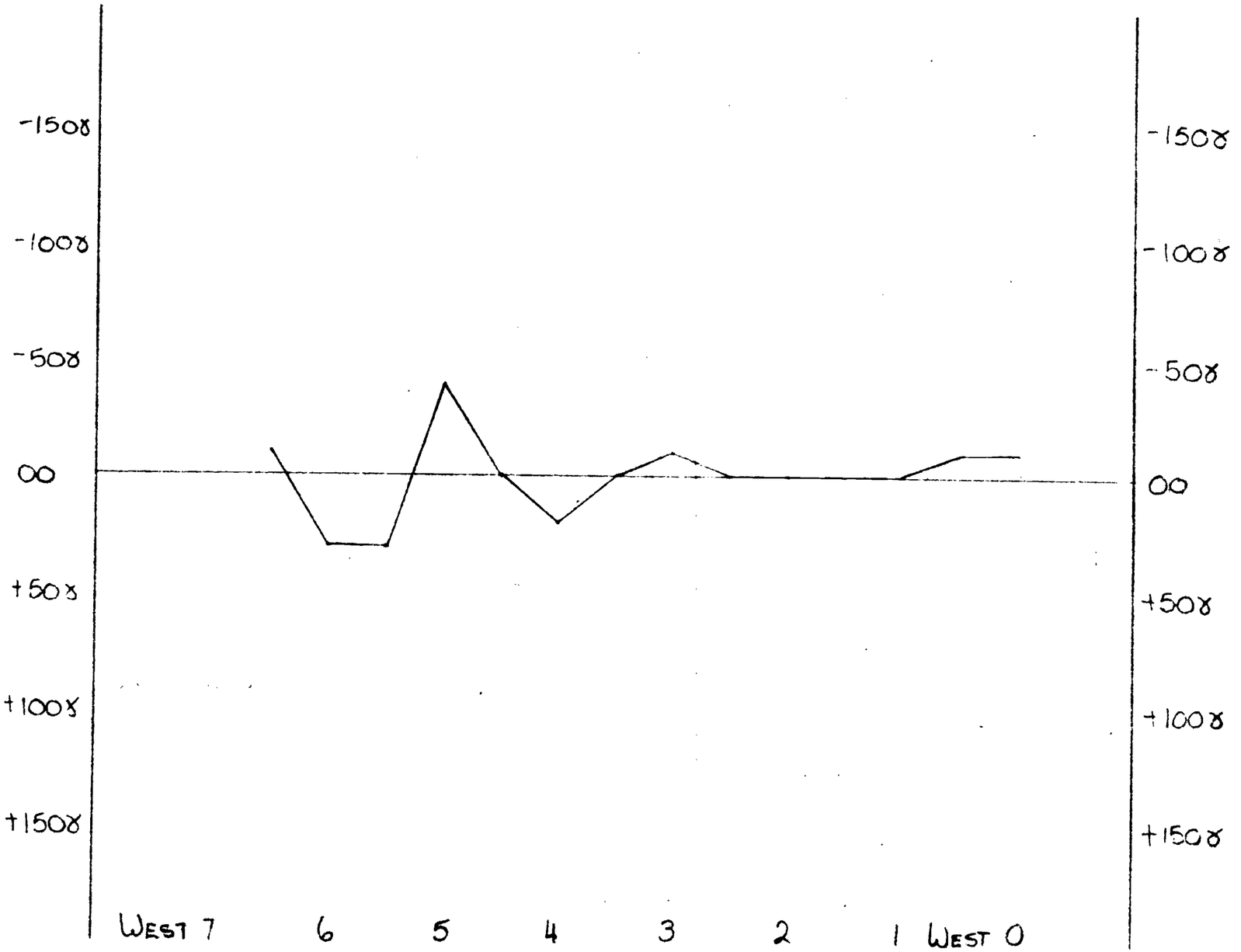
1136-18



MAGNETIC SURVEY

CLIENT M V WIGHT
AREA SML 328 (GRID I)
LINE 6
UNIT NO
OPERATOR
PLOTTED BY GAEL HEALEY
CHECKED BY VIVIENNE BALL
DATE 8-7-71

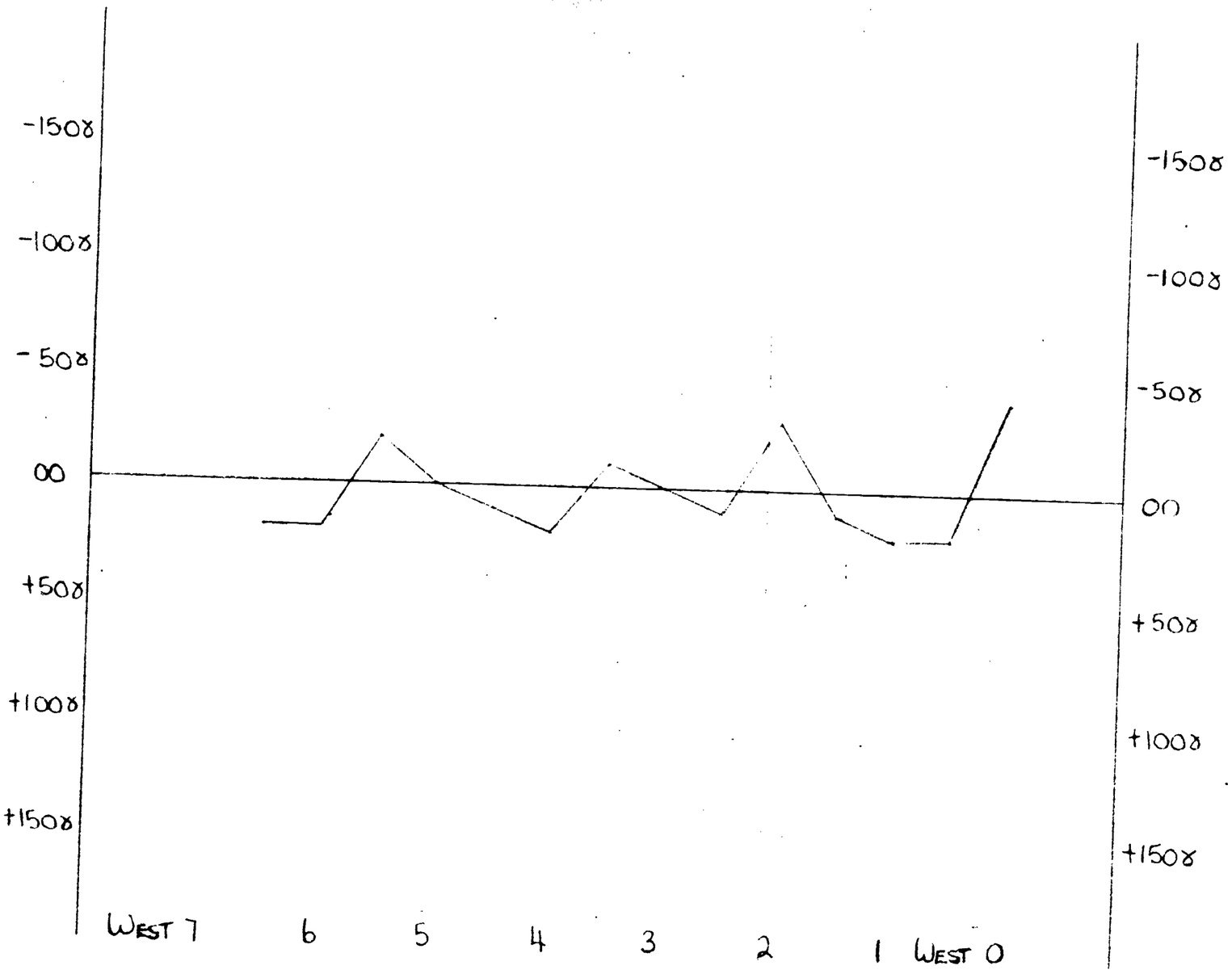
1136-19



MAGNETIC SURVEY

CLIENT MV WIGHT
AREA SML 328 (GRID I)
LINE 7
UNIT NO
OPERATOR
PLOTTED BY GAEL HEALEY
CHECKED BY VIVIENNE BALL
DATE 8-7-71

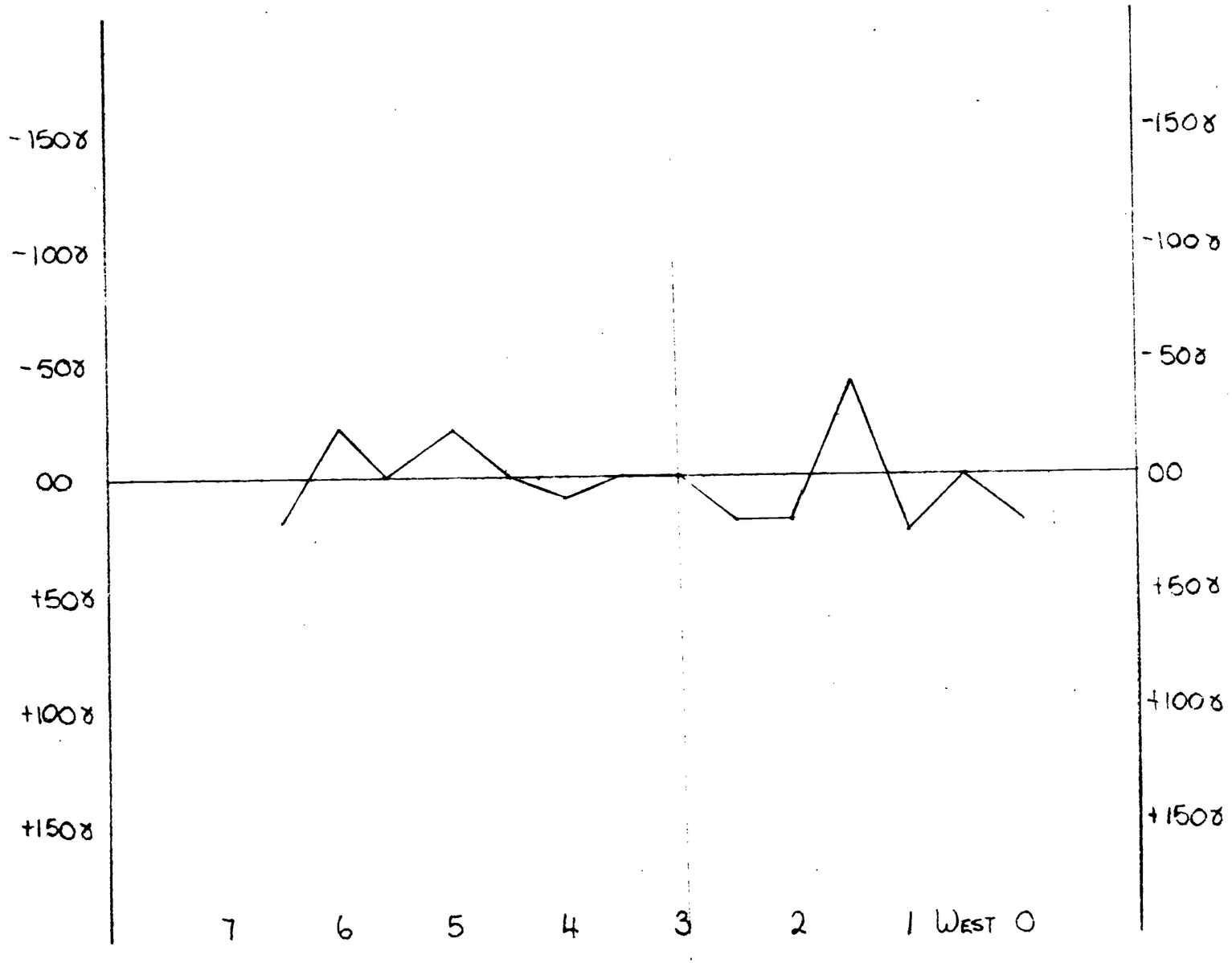
1136-20



MAGNETIC SURVEY

CLIENT M V WIGHT
AREA SML 328 (GRID I)
LINE 8
UNIT No
OPERATOR
PLOTTED BY GAEL HEALEY
CHECKED BY VIVIENNE BALL
DATE 8-7-71

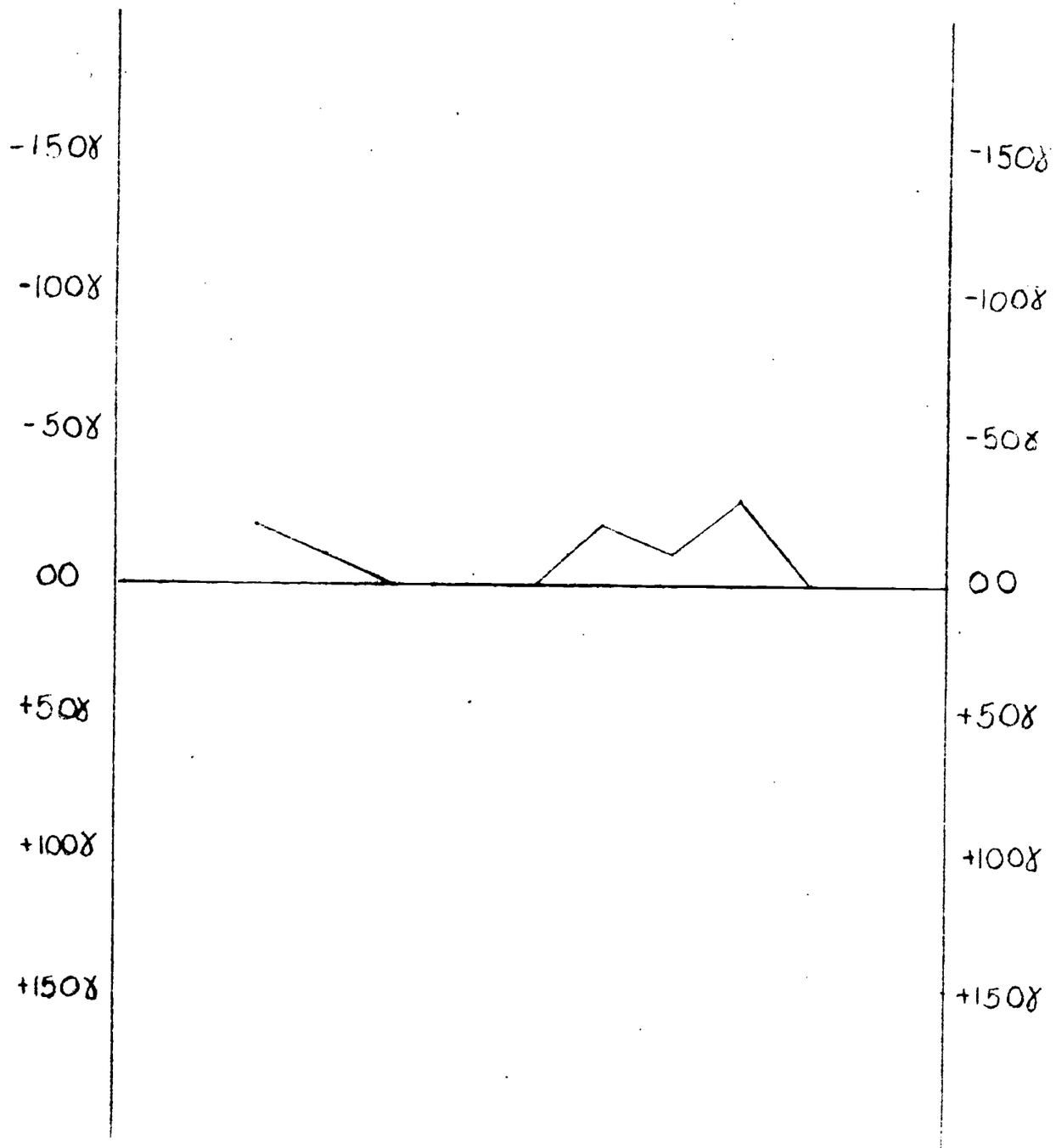
1136-21



MAGNETIC SURVEY

CLIENT M V WIGHT
AREA SML 328 (GRIDI)
LINE 9
UNIT No
OPERATOR
PLOTTED BY GAEL HEALEY
CHECKED BY VIVIENNE BALL
DATE 8-7-71

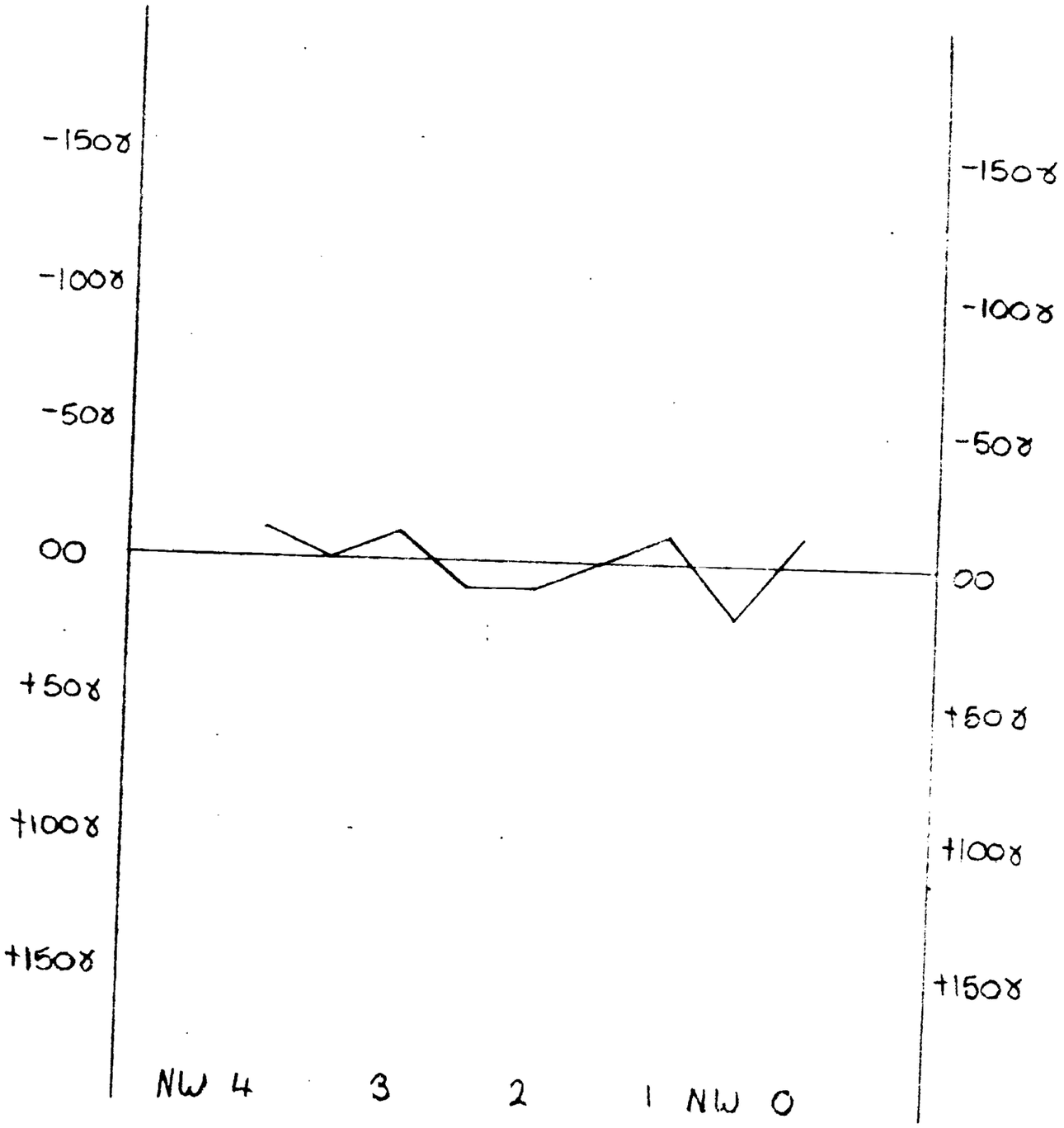
1136-22



MAGNETIC SURVEY

CLIENT	M. V. WIGHT
AREA	SML 328 (GRID II)
LINE	10
UNIT NO	
OPERATOR	
PLOTTED BY	V BALL
CHECKED BY	G HEADLEY
DATE	8-7-71

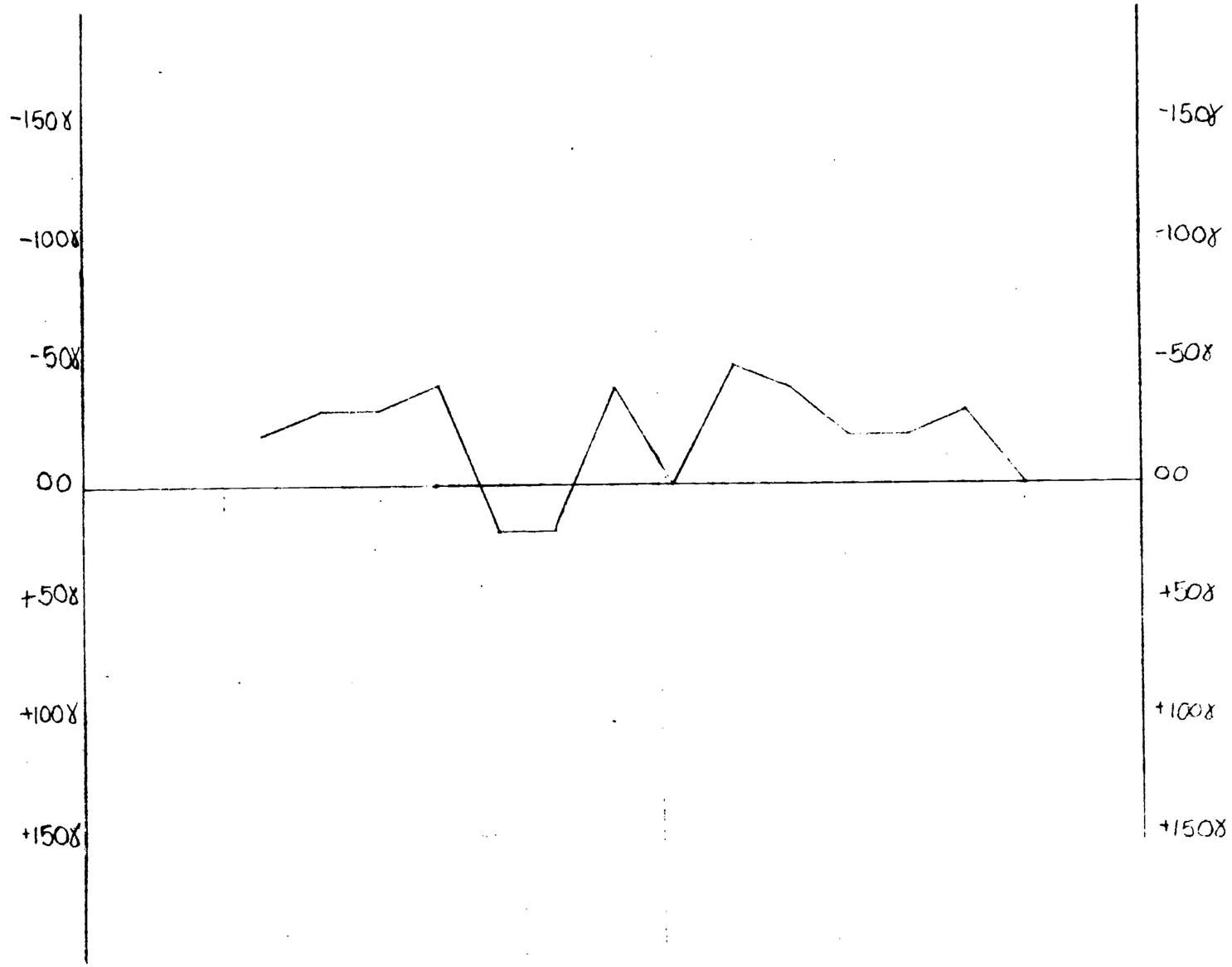
1136-23



MAGNETIC SURUEY

CLIENT	M V WIGHT
AREA	SML 328 (GRID II)
LINE	11
UNIT NO	
OPERATOR	
PLOTTED BY	GAIL HENLEY
CHECKED BY	VIVIENNE BALL
DATE	8-7-71

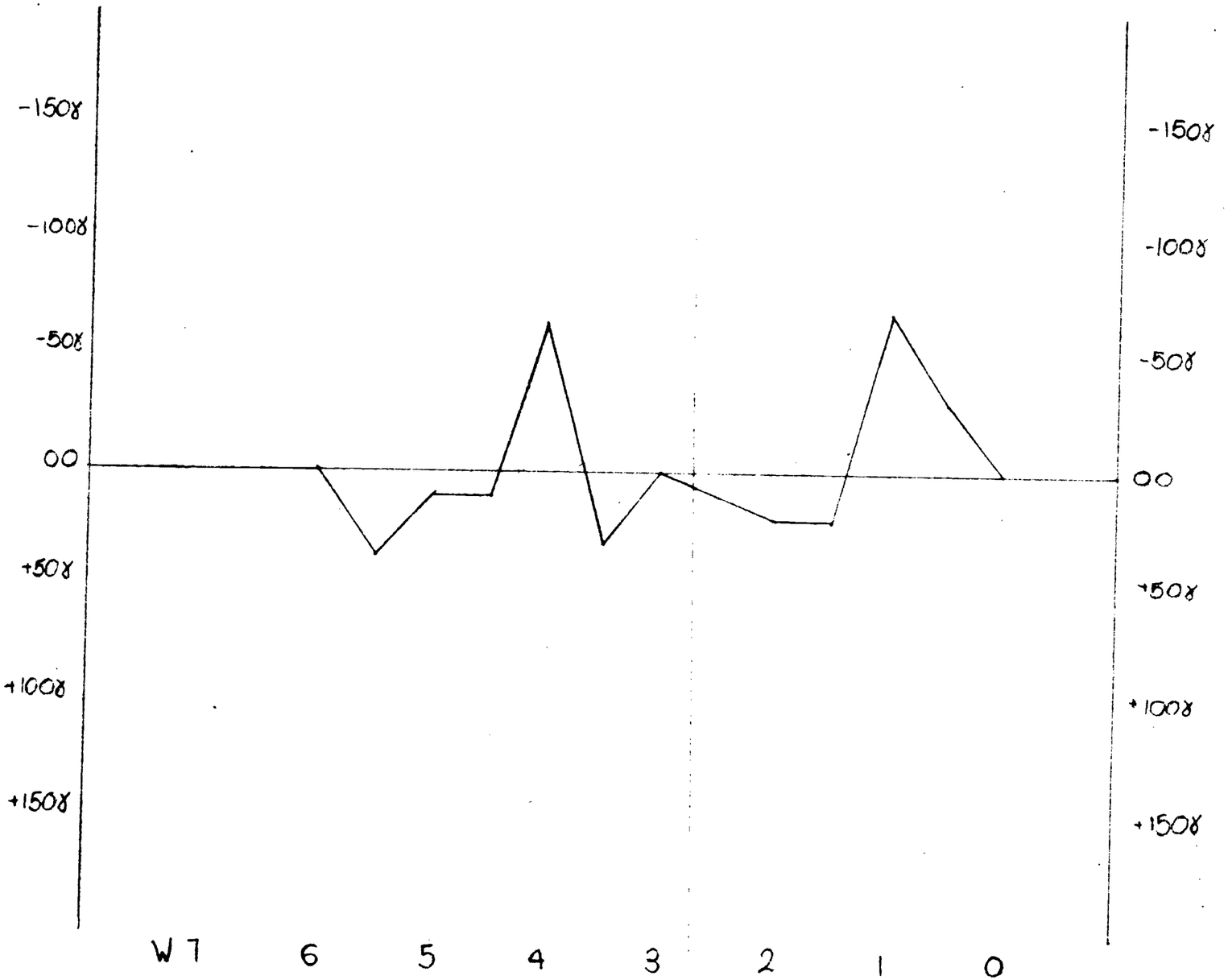
1136-24



MAGNETIC SURVEY

CLIENT M.V. WIGHT
AREA SML 328 (GRID I)
LINE 13
UNIT NO.
OPERATOR
PLOTTED BY V. BALL
CHECKED BY G. HEALEY
DATE 8-7-71

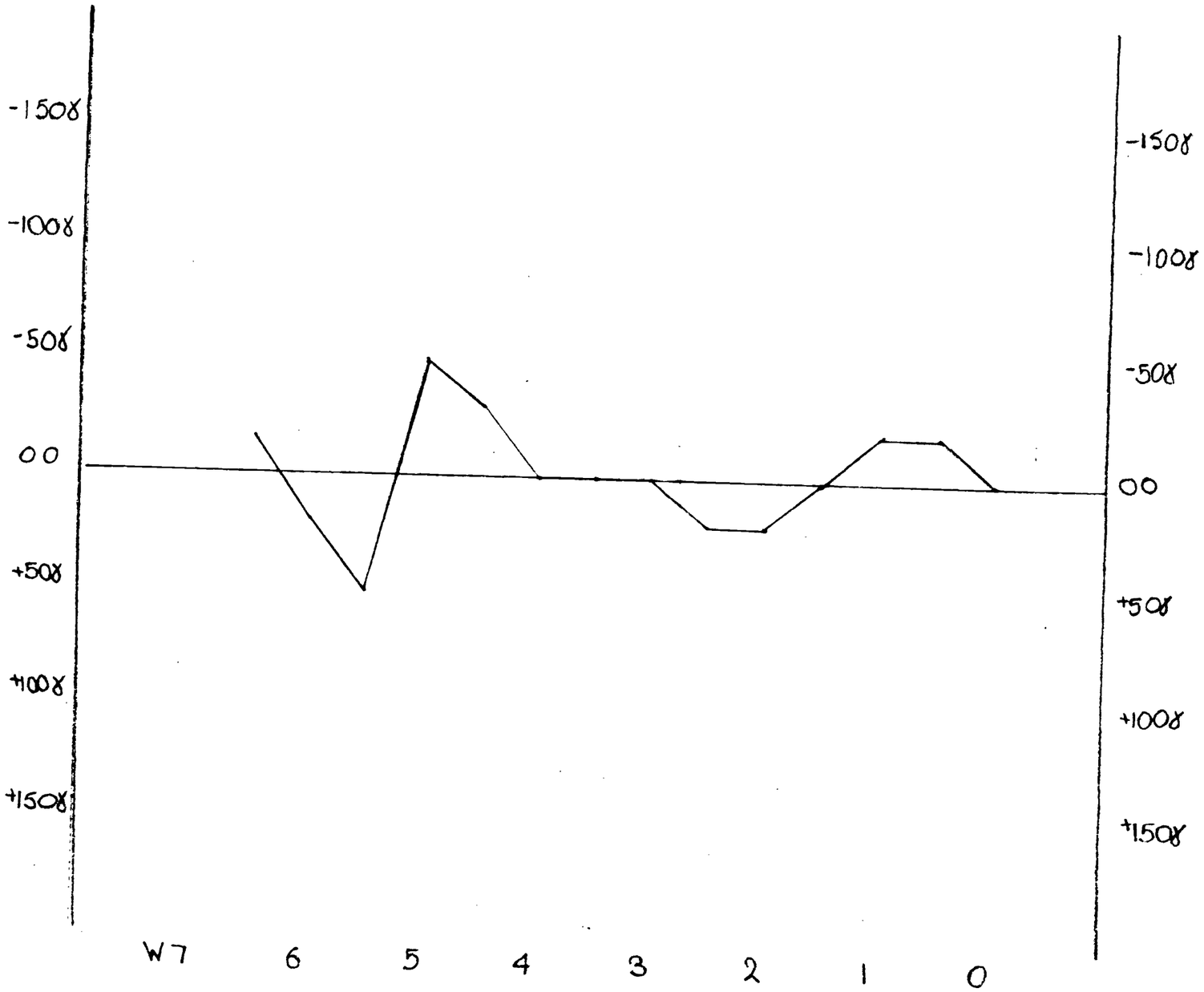
1136-25



MAGNETIC SURVEY

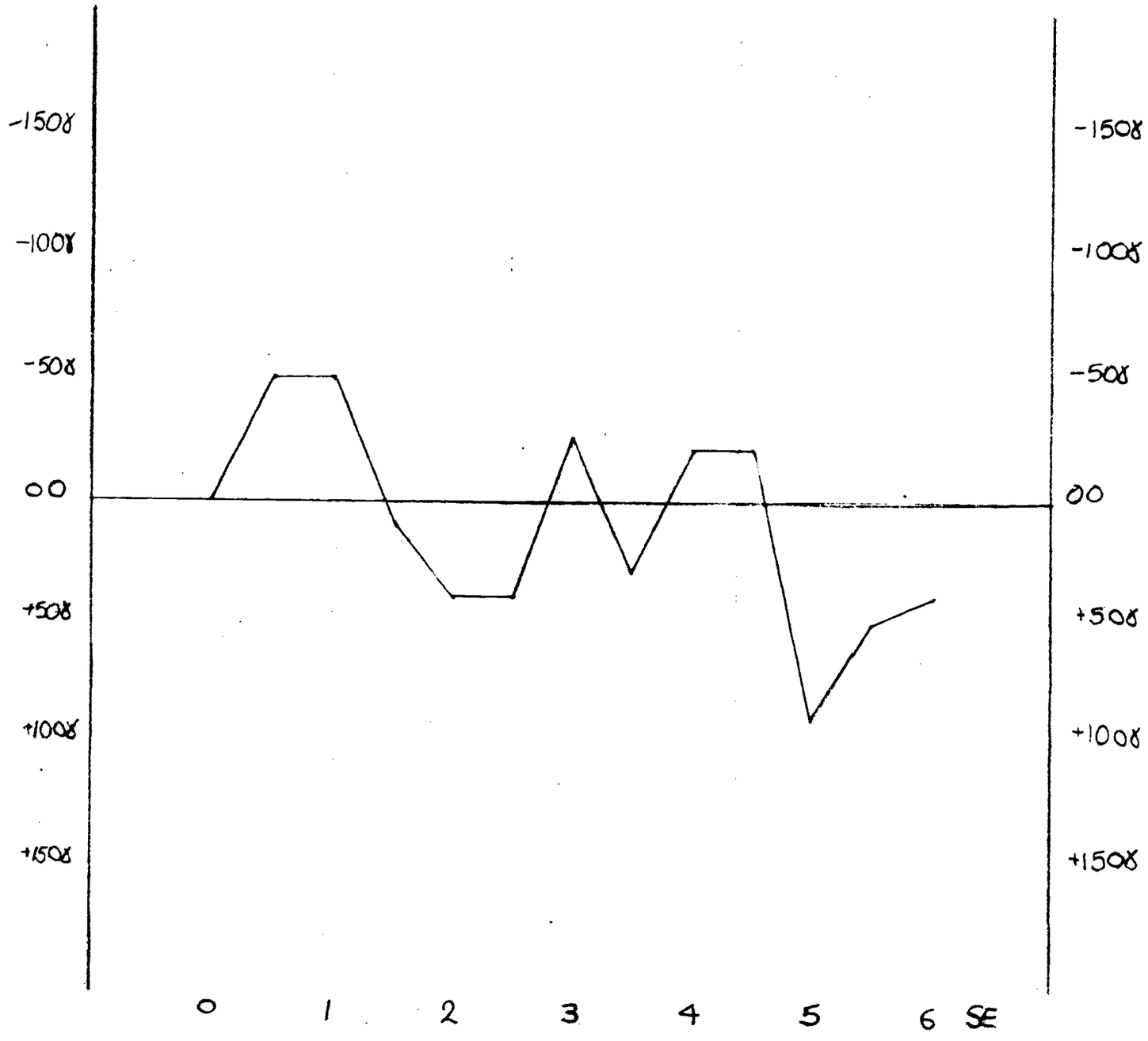
CLIENT M V WIGHT
AREA SML 328 (GRID I)
LINE 14
UNIT NO
OPERATOR
PLOTTED BY V.B ALL
CHECKED G. HEALEY
DATE 8-7-71

1136-26



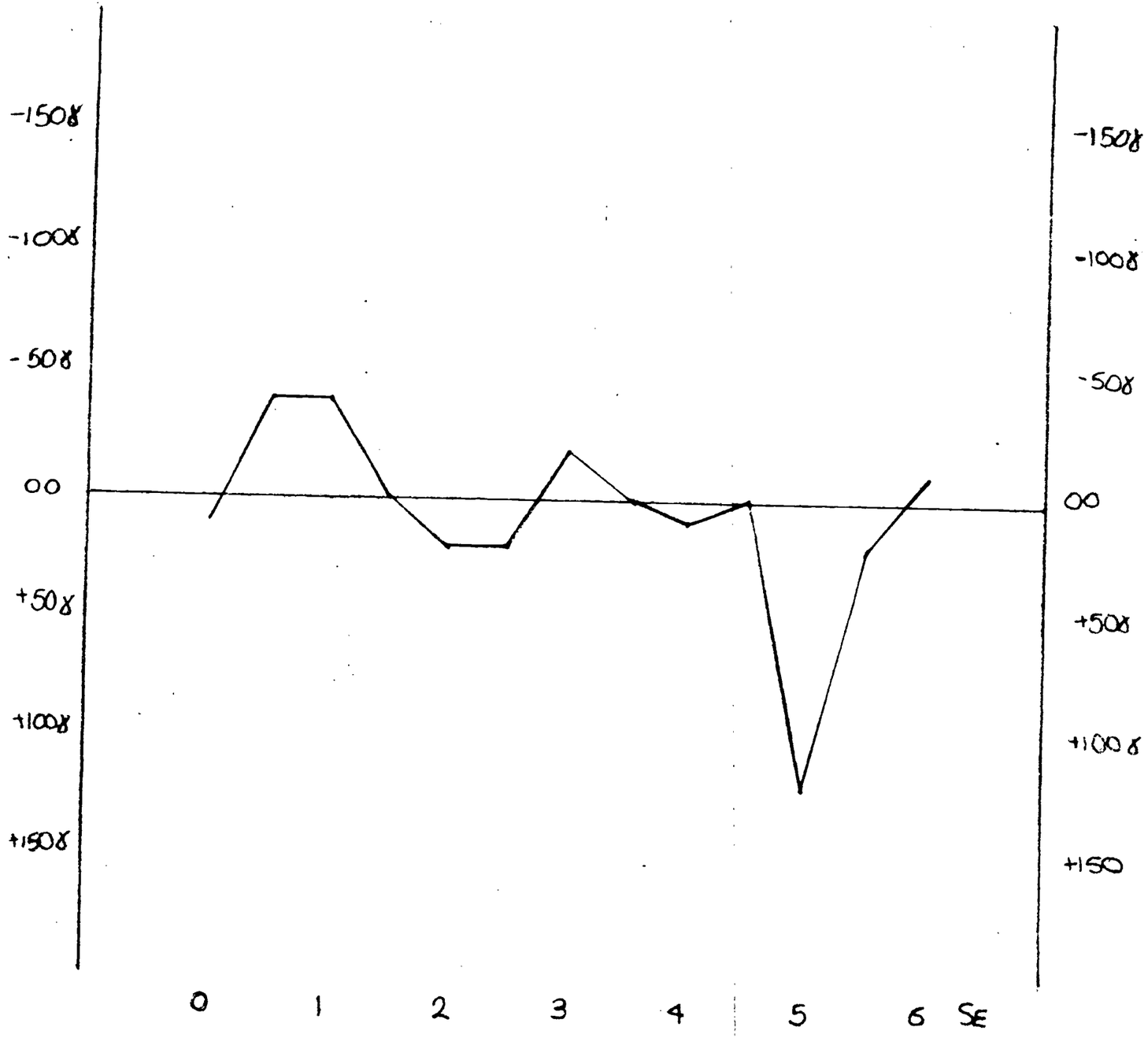
Client	M V. Wight
Area	SM L 328 (Grid T)
Line	15
Unit no	
Operator	
Plotted by	V Ball
Checked by	G Healey
Date	8-7-71

1136-27



CLIENT	M V WIGHT
AREA	SML 328 (GRID III)
LINE	16
UNIT NO	
OPERATOR	
PLOTTED BY	V BALL
CHECKED BY	G. HEALEY
DATE	8-7-71

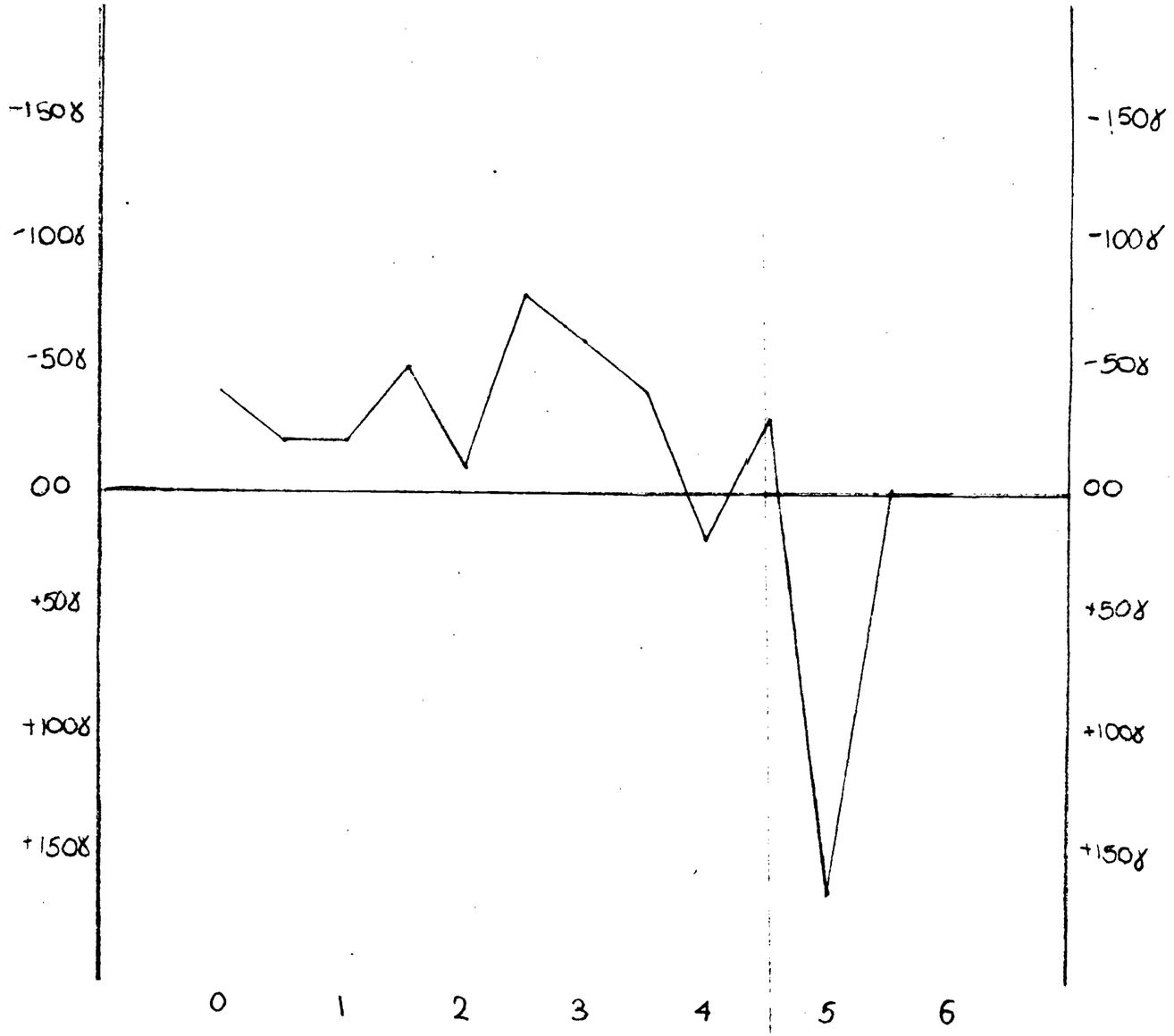
1136-28



MAGNETIC SURVEY

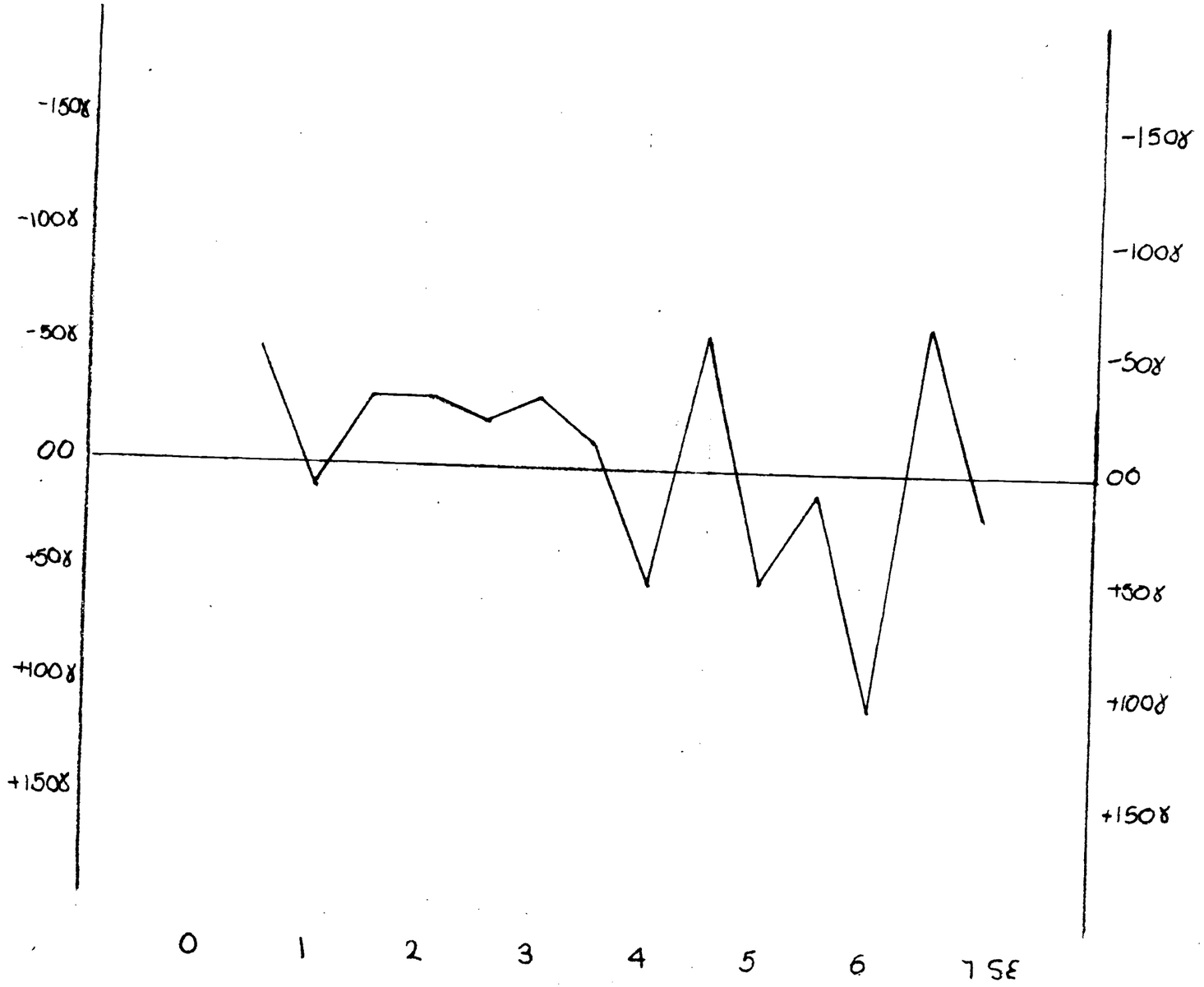
CLIENT	M V WIGHT
AREA	S M L 32 B (GRID III)
LINE	17
UNIT NO	
OPERATOR	
PLOTTED BY	V BALL
CHECKED BY	G. HEALEY
DATE	8-7-71

1136-29



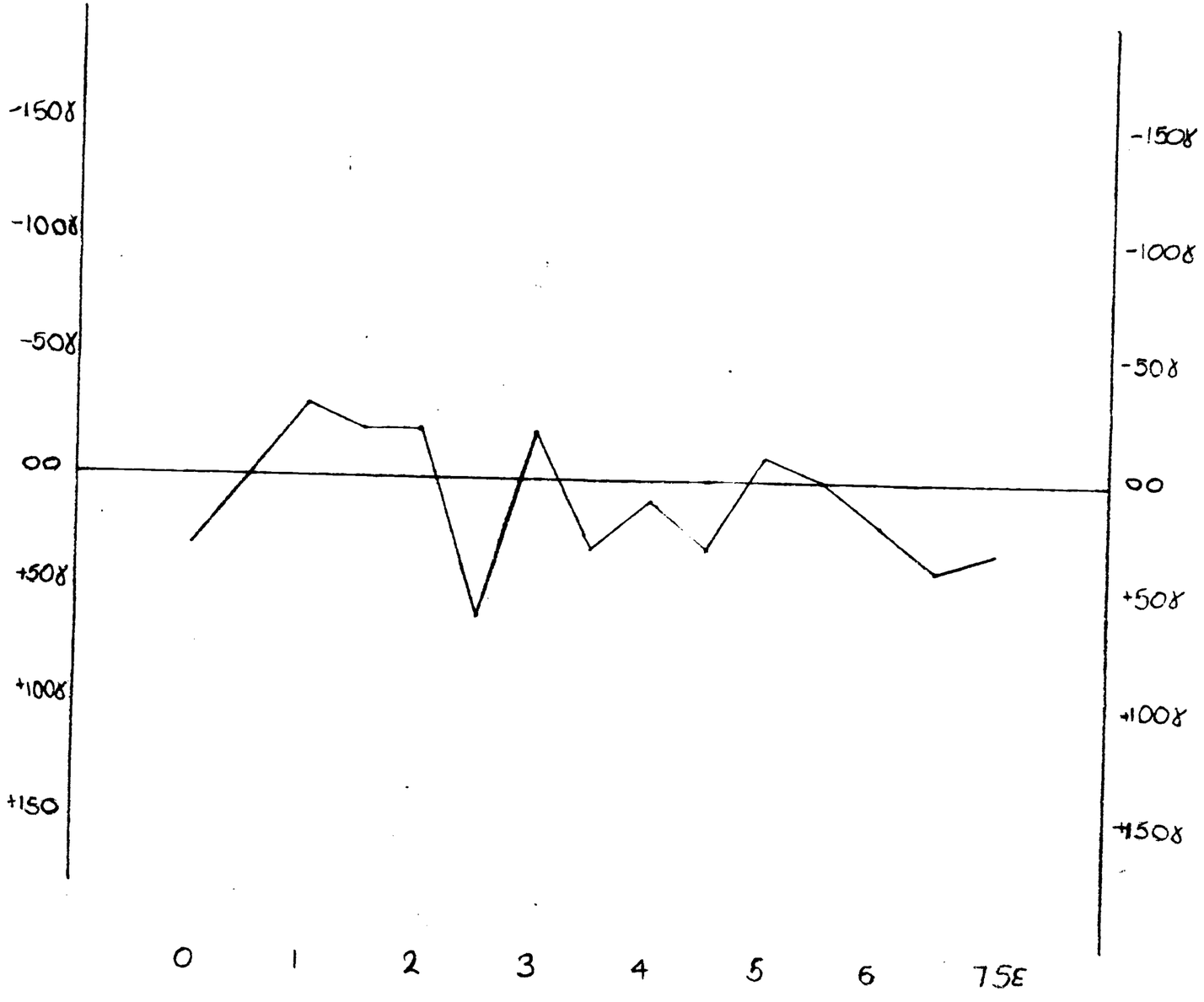
Client	M V Wight
Area	S ML 328 (Grid III)
Line	18
Unit No	
Operator	
Plotted by	V Ball
Checked by	G Healey
Date	8-7-71

1136-30



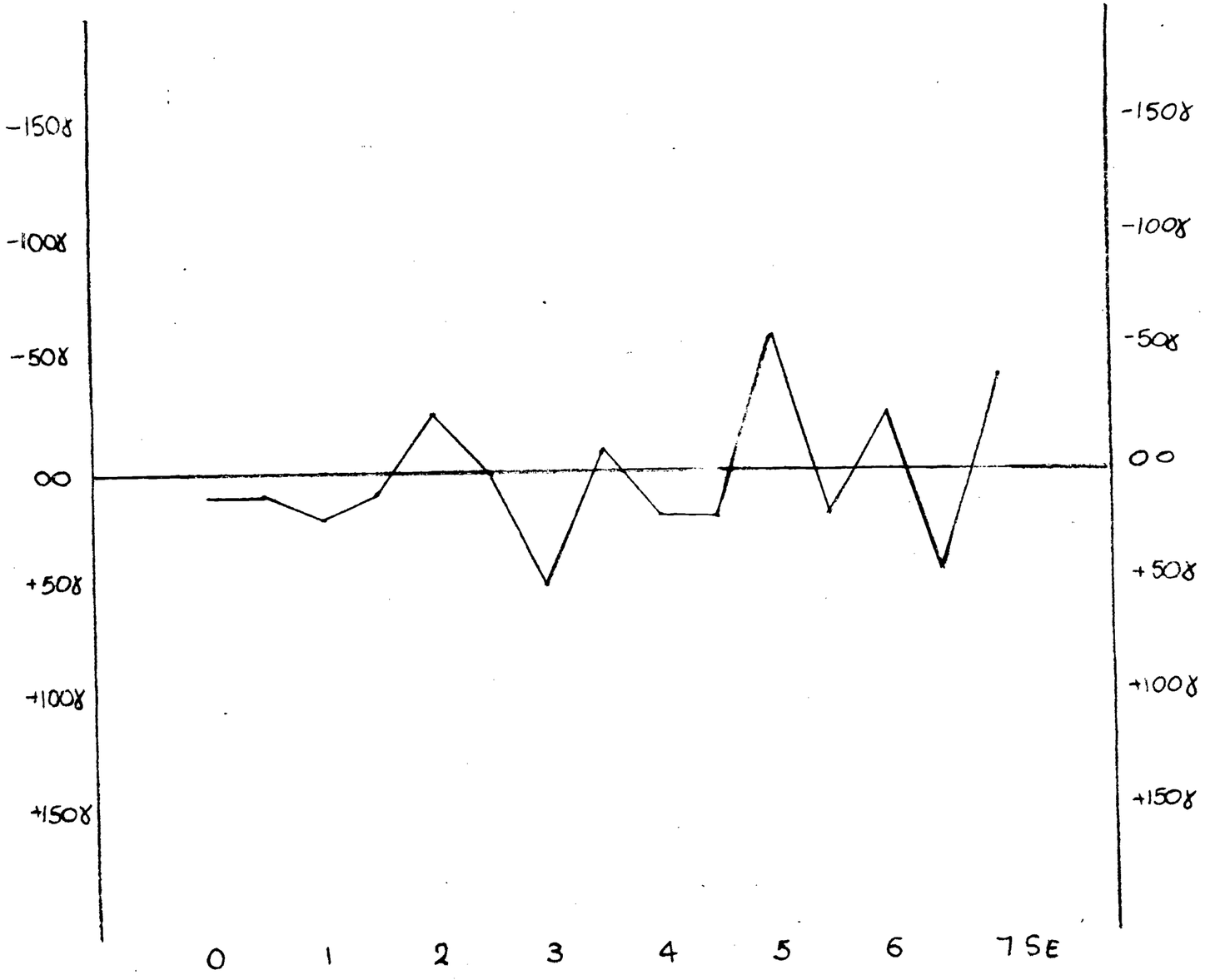
CLIENT	M V WIGHT
AREA	SML 328 (GRID 18)
LINE	19
UNIT NO	
OPERATOR	
PLOTTED BY	V. BALL
CHECKED BY	G HEALEY
DATE	8-7-71

1136-31



CLIENT	M.V. WIGHT
AREA	SML. 328 (GRID III)
LINE	20
UNIT NO	
OPERATOR	
PLOTTED BY	V BALL
CHECKED BY	G HEALEY
DATE	8-7-71

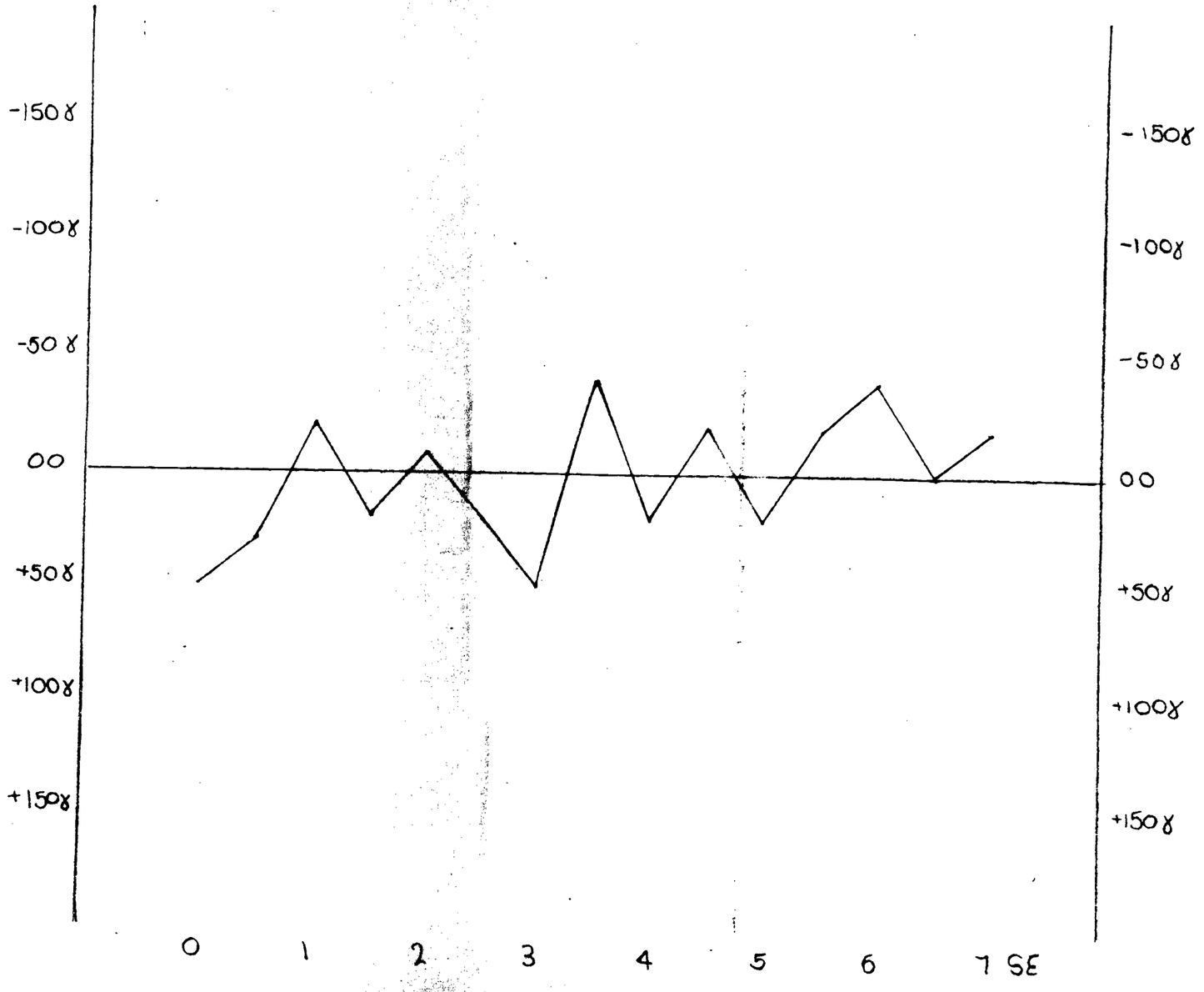
1136-32



MAGNETIC SURVEY

CLIENT M V WIGHT
AREA SML 328 (GRID III)
LINE 21
UNIT NO
OPERATOR
PLOTTED BY V BALL
CHECKED BY G. HEALEY
DATE 8-7-71

1136-33



MARINE SURVEY

CLIENT	M V WIGHT
AREA	SML 328 (GRID III)
LINE	22
UNIT N-	
OPERATOR	
PLOTTED BY	V BALL
CHECKED BY	G HEALEY
DATE	8-7-71

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