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SML 366

BOOLOOROO

PROGRESS REPORTS FOR THE PERIOD 18/12/69 TO 17/12/71

Submitted by

Southern Cross Exploration NL
1971

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PRIMARY INDUSTRIES AND RESOURCES SA

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TENEMENT HOLDER: Boolooroo Mining Pty. Ltd.

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ENV 1272.

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CABLE "PHARGEO" ADELAIDE
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JR

MEMORANDUM TO: Mr. P.W. MUNT,
Director,
Boolooroo Mining Co.,
C/- 17 Ayrbank Avenue,
STONYFELL, S.A. 5066.

MEMORANDUM FROM: I.R. PONTIFEX,
McPhar Geophysics Pty. Ltd.,
50 Mary Street,
UNLEY, S.A. 5061.

SUBJECT: REVIEW AND CONCLUSIONS ON MINES DEPARTMENT DATA CONCERNING MT. COFFIN DIAPIR, S.A., AND RECOMMENDATIONS FOR FURTHER EXPLORATION.

DATE: 31ST MARCH, 1970.

I.R. Pontifex

.....

(SIGNED)

INTRODUCTION

At the request of Mr. P. Munt, a review was made of the geological, geochemical, and geophysical data held by the Mines Dept., relating to the Mt. Coffin Diapir, and immediate environment.

This area occurs within S.M.L. No. 366, held by the Boolooroo Mining Co. Two mineral claims covering the Elsie Adair and West Jubilee Mines occur within this area, these are held by Mr. Ross and Dr. Ramdohr and these claims have currently been offered to Rare Earth Corporation of Australia. This review includes information on these claims areas.

Southern Cross Exploration Co. are presently negotiating to obtain rights to the area covered by the S.M.L. 366, (exclusive of the two mineral claims).

This report is intended to summarise the Mines Dept. work, and to comment on this with the aims of :

(1) Indicating the proven reserves of copper ore,

(2) Establishing the potential of copper mineralization in addition to these reserves,

(3) Suggesting the means and cost of proving this potential.

Following is a summary on the information collated by the Mines Dept., together with comments on the results of this work. This forms a basis for conclusions and recommendations given later in this report.

(See list of references for complete, detailed reports)

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1. OLD WORKINGS

Groups of small copper mines, including the Mt. Coffin. Elsie Adair, Diamond Jubilee and West Jubilee were worked between 1880 and 1920. Ore in these mines consisted mainly of secondary copper minerals : malachite, chalcocite, cuprite, and native copper. The grade of hand picked ore assayed up to 35% Cu. Average grade, also of probably hand picked ore, was between 9 and 15% Cu.

Chalcopyrite (primary copper ore) was reported, at depth in the Diamond Jubilee, and Elsie Adair Mine. Primary copper has not been mined from the area.

Production figures are unreliable but appear to be of the order of thousands of tons of ore.

2. MINERALIZATION

Geological mapping by the Mines Dept. provides details on mineralization, which includes occurrences of copper not previously mined.

Copper mineralization occurs:

(a) Within the diapir, as disseminated copper sulphides in blocks of dolomitic marble, the most prominant of which occurs just inside the northern edge of the diapir. Chip sampling at the surface indicates 1.1% Cu here. The maximum extent of this mineralization along strike is not known. One diamond drill hole proves copper to 310 ft. depth, total intersections 18 ft. of 0.9% Cu. This band gives geochemical and induced polarisation anomalies.

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2. MINERALIZATION (CONTD.)

(b) Copper mineralization outside, (essentially in the rim-rocks), of the diapir, include all of the previous workings (noted above).

The Mines Dept. believes that this is epigenetic (hydrothermal-introduced) mineralization. They state that "the primary vein mineralization is widespread, they are uneconomic and have not been worked. However these veins have been responsible for the equally widespread, economic, secondary mineralization", (as mined in the old workings).

This secondary mineralization consists of malachite, chalcocite, cuprite and native copper, distributed along bedding planes and joints. It is mainly restricted to the upper siltstones of the Yudamutana Sub Group, and the Tindelpina Shale Member of the Tapley Hill Formation.

It is also stated by the Mines Dept. that "secondary copper mineralization diminishes greatly below about 100 ft. from the surface, and it is absent below 200 ft. - the deepest level of the mine workings. No primary mineralization is found below the secondary copper.....".

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COMMENTS

The fact that copper mineralization has been found in a different mode of occurrence from that in the old workings obviously gives extra scope for the finding of significant mineralization away from these "known" occurrences. The mineralized dolomitised marble horizon in the north part of the diapir, on geological grounds, warrants further investigation, initially to establish its strike length, its depth down dip, and the continuity of copper in this horizon.

It is possible that similar bands also occur inside the diapir, these may be found by further geological investigations of geochemical and geophysical anomalies (see later).

The mode of occurrence of the predominantly secondary mineralization, outside the diapir, is well exposed in old workings. The horizons in which this occurs is fairly well delineated.

So far the copper in these horizons has been considered to be only in the form of secondary minerals, to a depth of 200 ft. Reasonable reserves of secondary ore have been proven to 150 ft. in the Elsie Adair claims area (see later), and reserves of the same order could be expected to occur along the Mt. Coffin line of workings.

Further, the statement in the Mines Dept. report, that no primary sulphides are found below the secondary copper, is contradicted by earlier observations, that primary copper sulphides occur at depth in at least the Diamond Jubilee and Elsie Adair Mines. Therefore, there is potential mineralization below the secondary copper exploited by old mines, and drilled to 150 ft. by the Mines Dept.

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3. GEOCHEMICAL SURVEY

The soil sampling at 100 ft. intervals on 27 sample lines 800 ft. apart has produced a very good geochemical anomaly map for copper. The anomalies reflect both the mineralization type (a) in dolomites within the diapir, and the type (b) in stratigraphic horizons around the rim of the diapir, including the upper siltstones of the Yudamutana Sub Group, and the Tindelpina Shale Member.

The detail in which this particular survey was done is adequate. However to obtain maximum information from this work, sampling on the same basis needs to be extended south, in the area of the station boundary fence, and south of the Mt. Coffin workings. This is necessary since anomalous zones obviously extend south of the limits of the survey area in these locations.

4. GEOPHYSICAL SURVEYS

Induced Polarisation, self potential and magnetic surveys were carried out over the central part of the diapir, The I.P. did not cover the belt of secondary mineralization between Mt. Coffin and the Silver Jubilee.

Induced Polarisation (I.P.) anomalies have been established in the N.W. of the area and the subsequent drilling of one diamond drill hde indicates that the source of the one anomaly drilled is probably due to disseminated copper sulphides.

An examination of the I.P. data indicates that the other anomalies in this area may well have a similar source. Several anomalies occur on the margin of the area covered by the I.P., indicating that the I.P. work should be extended. Also anomalies within the survey area need further detailed,I.P. coverage, basically to produce more reliable data which may more accurately determine their size and position in space.

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4. GEOPHYSICAL SURVEYS (CONTD.)

This would be necessary before meaningful comments could be given on the probable extent of the anomalous zones, and before drill targets could be confidently suggested.

The secondary sulphides in the Mt. Coffin to West Jubilee belt of secondary mineralization would give a response to I.P.; so would the primary sulphides which occur at depth below this belt.

Therefore it is likely that an I.P. survey over this area would determine anomalous areas which would be worthy of further investigation.

It is our opinion that the self potential survey is not likely to establish meaningful anomalous zones of the type of mineralization known in this environment.

The significance of magnetic anomalies, as indicative of the type of mineralization in this area is doubtful.

5. DIAMOND DRILLING.

The one diamond drill hole (MC 1), in the entire area was aimed principally at intersecting an I.P. anomaly in the north-west of the area at about 250 ft. depth. This anomaly is believed to be due to copper sulphides disseminated through a carbonate horizon inside the diapir.

An examination of the data indicates some doubt as to whether the hole penetrated the genuine source of this anomaly.

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5. DIAMOND DRILLING (CONTD.)

Certainly the coordinates of the collar stated in Appendix 1 Rept. Bk. No. 69/6, are incorrect. Given that the hole was drilled on line 3200E, the stated 4600N coordinate would locate the hole well outside the I.P. survey area. If the location is taken as on the Geological Map (No. 69-211), it is still possible that it missed the main I.P. source, according to the I.P. data given for this line in Rept. Bk. No. 65/120. Hence a check is required here.

This hole did in fact penetrate a total of 18 ft. of disseminated mineralization, averaging 0.9% Cu. This is of sub-economic grade. However the potential strike length of this belt of mineralisation, indicated by I.P. and corresponding geochemical anomalies is of the order of 5600 ft. to the N.W. of this drill hole. This one hole therefore falls very short of adequately testing this zone. It seems likely that this zone is mineralized along this length. No indication however can be given of the exact nature, or grade of this mineralization.

6. SHALLOW ROTARY PERCUSSION DRILLING

A programme of 41 holes, drilled on a grid pattern, each to an average depth of about 150 ft. was carried out to test several geochemically anomalous areas outside the diapir, in the vicinity of the Elsie Adair and West Jubilee Workings.

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6. SHALLOW ROTARY PERCUSSION DRILLING (CONTD.)

It is understood from Mr. Munt (pers. comm.) that the Mines Dept. using the results of A.M.D.E.L., have proven from this drilling programme 400,000 to 800,000 tons of ore at an overall average grade of 1.2% Cu.

From the information received from the Mines Dept. the author could not confirm this figure.

The footages and assays of the drill intersections are given in this data from both areas. The map showing the drill sites for the West Jubilee Workings are given. A similar map showing the sites from the Elsie Adair Workings, although it is referred to in the text of the reports, is missing from the set of data received.

In the West Jubilee area the drilling of 10 holes proved the following intersections of possible economic value:

HOLE NO.	WIDTH AND GRADE	FROM	TO
CW 18	36 ft. @ 1.12% Cu	114 ft.	150 ft.
CW 21	24 ft. @ 1.61% Cu	42 ft.	66 ft.
CW 24	24 ft. @ 1.1 % Cu	30 ft.	54 ft.

These assay values of possible economic interest, when considered in terms of their depth, and their isolated, apparently unconnected occurrences, suggests that in terms of this detail of drilling, the copper mineralization in the area tested near the West Jubilee is not economically viable; assuming that grades of less than 1% are presently not of economic significance.

In the vicinity of the Elsie Adair, and more particularly the Elsie Adair South Workings, more encouraging results were obtained, being the best so far proven in the whole area. The following intersections of possible economic significance were obtained from the 24 holes. These holes were drilled mainly along only one line across the strike of mineralized horizons.

HOLE NO.	WIDTH AND GRADE	FROM (FT.)	TO (FT.)
CW 6	36 ft. @ 1.55% Cu	114	150
	with 6 ft @ 4.0% Cu	138	144
CW 12	116 ft @ 0.58% Cu	0	116
	with 8 ft @ 3.12% Cu	108	116
CW 39	60 ft @ 2.13% Cu	90	150
	with 30 ft @ 4.06% Cu	96	126
	with 6 ft @ 6.5% Cu	108	114
CW 14	108 ft @ 1.5% Cu	0	108
	with 36 ft @ 2.93% Cu	0	36
	with 12 ft @ 4.1% Cu	0	12
CW 36	24 ft @ 2.2% Cu	126	150

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CONCLUSIONS

This area would appear to be one of the best copper prospects of the type associated with diapirs, so far known in South Australia, and it certainly warrants further investigation. From the information available it seems reasonable to expect that tonnages of at least tens of thousands of tons of ore, possibly hundreds of thousands of tons, of the order of 1% Cu could be proven up.

The data on the area obtained by the Mines Dept. is reasonably good as far as it goes. The geological map adequately shows the different rock types and their relationships. It also establishes two different modes of occurrence of copper mineralization, and delineates the zones in which this mineralization occurs. In summary, this map provides adequate geological information on which to base further exploration.

The results of the geochemical survey establish significant anomalies which indicate the extent of potential copper mineralization. To obtain maximum geochemical information, this survey needs to be extended slightly along the southern margin of the area.

The Induced Polarization survey establishes the presence of disseminated sulphides in a dolomite band inside the northern margin of the diapir, (type one mineralization). This zone has a potential strike length of 5600 ~~2400~~ ft. A pronounced geochemical anomaly corresponds to the I.P. anomalies and this zone therefore should be given high priority in further work.

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CONCLUSIONS (CONTD.)

More detailed I.P. is required over this zone to accurately determine the size and location of anomalous zones, before drilling targets can be reliably nominated.

Disseminated sulphides are associated with secondary mineralization in the eastern end of the area, and primary sulphides occur below this secondary mineralization. This is type 2 mineralization, and is more or less restricted to a stratigraphic horizon (largely the Tindelpina Shale Member), extending from the Mt. Coffin Workings to the Diamond Jubilee. This horizon gives rise to a pronounced geochemical anomaly both along the belt between these workings, and also in a belt just outside the north-eastern margin of the diapir.

An I.P. survey should be conducted over these two belts, in an attempt to define relatively concentrated areas of sulphides which may be investigated by drilling. It should be remembered that the Tindelpina Member contains pyrite, this would give an I.P. anomaly, which if due to pyrite only, would not be of economic significance.

On the other hand, shallow percussion drilling near the Elsie Adair workings proved that this Member contains some of the highest grade copper intersected by drilling in the area which justifies further investigation of the horizon.

One diamond drill hole has been drilled in the area. This was to investigate the mineralized dolomite inside the northern margin of the diapir, and aimed at the source of an I.P., and corresponding geochemical anomaly. The results were disappointing, yielding only a total intersection of 18 ft. of average 0.9% Cu. However, there is some doubt that this drill hole intersected the maximum source of the I.P. Also in spite of this result the strike length of

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this zone of some 5600 ft. to the west, which is anomalous in both I.P. and geochemical effects, warrants initially at least another 3 diamond drill holes, each to about 300 ft., on lines 800 ft. apart. Encouraging results should be followed up with more detailed drilling.

The shallow percussion drilling which has been carried out near the Elsie Adair and West Jubilee Workings, suggested some potential of proving significant reserves of secondary copper mineralization near the Elsie Adair South Workings.

~~NOTE~~

It has been reported to the author that the Mines Dept. and A.M.D.E.L. have estimated from 400,000 to 800,000 tons of 1.2% Cu from the percussion drilling. The information in the data reviewed could not substantiate this.

This information at hand, gives the results of the A.M.D.E.L. bulk sample analysis of holes from mainly along one line, to an average depth of about 120 ft. Over a distance of 400 ft. length, and assuming a continuation of the values for 10 ft., both sides of each hole in this 400 ft.; a tonnage of about 40,000 tons, average grade of 0.52% Cu can be estimated.

Therefore it is seen that when bulk tonnage is considered, on the basis of the present drilling data, the sporadically distributed high grade values are substantially diluted to the extent that the possibility of unselectively mining the whole of the mineralized area economically, is probably impossible.

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This drilling proved that the most promising values occur within the Tindelpina Shale Member as secondary malachite, chalcocite and cuprite, surrounding primary quartz-copper sulphide veins.

The erratic nature of the mineralization makes it difficult to determine the overall grade in any area, and further detailed drilling between the existing holes and below the depths presently drilled, is required both in the secondary mineralization and in zones where primary veins are common, close to or within the Tindelpina Shale horizon, to outline limits of possible economically recoverable ore. Initially some of the existing holes should be deepened, since several "bottom" in values of 1% Cu or better. This would suggest a number of ddeper, probably diamond drill holes are required to investigate the possible downward extention of the upper mineralized areas in depth. The continuity of these values along strike would also neeed to bedetermined. This is therefore the second zone in the area which warrants immediate further investigation.

Recommendations

1. That the two zones of mineralization, recognised on geological grounds, and which are geochemically anomalous and also parts of the Tindelpina Shale Member which are also geochemically anomalous should be considered worthy of further investigation.

2. A follow-up IP survey should be carried out over the dolomitic marble along the north-western margin of the diapir. Semi reconnaissance I. P. of appropriate detail should be carried out over the mineralized belt between the Mt. Coffin workings and the Elsie Adair workings, and also over the Tindelpina Shale Member along the North Eastern margin of the diapir.

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Recommendations (Cont'd)

3. The soil geochemical survey should be extended along the southern extent of the survey done by the Mines Department.

4. Significant I.P. anomalies, particularly those which correspond with geochemical anomalies, or those which are continuous with areas of potential ore delineated by previous drilling should be drilled. Percussion drilling may be adequate initially, if a unit is used which can penetrate up to a vertical depth of say 300 ft. Deeper anomalies, which may well includ areas below the area already drilled by shallow percussion drill should be investigated by diamond drill. The amount of drilling will depend largely on the anomalies found. For budgeting purposes it could be anticipated that initially, at least three holes to depths of about 300 ft. will be necessary in each of the 3 areas surveyed by I.P. i.e., a total of 2,700 ft. of drilling.

Budget:

Following are estimated costs for the proposed recommendations:

Induced Polarisation

1.	Check I.P. over the dolomitic marble horizon, semi reconnaissance I.P. - Mt. Coffin to Elsie Adair, semi reconnaissance I.P. - Tindelpina Shale N.E. of the diapir - 9 days operating at $210 per day	$1,890.00
2.	Follow-up detail on dolomitic marble horizon 3 days at $210 per day	$ 630.00
3.	Positioning charge for crew	$ 300.00
4.	Accommodation for crew allowing ~~$80~~ 10 per day, 3 men, 11 days	$ ~~990.00~~ 330.00
5.	Miscellaneous, vehicle in field, etc.	$ 150.00
		~~$3,960.00~~ $3,300.00

Geochemistry

Collection of 100 soil samples, taken from 6" to 9" below ground in extention of existing grid lines of Mines Department. Assuming collection done by Boolooroo Mines - no charge

Analysis of 100 samples for copper only, including sample preparation -- $100.00

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LIST OF DATA REVIEWED

L.C. BARNES 1969

"Report on Exploration - Mt. Coffin Diapir Northern Flinders Ranges",
Vol. I and Vol. II. Dept. of Mines S.A. (D.M. 773/69).
(Including all plans attached to this report, exclusive of plan 69-174 entitled 'Mt. Coffin Diapir - Elsie Adair and South Adair Workings - geology and drill hole locations'.

D. McPHARLIN & B.J. TAYLOR

1967

"Report on Geophysical Surveys in the Mt. Coffin Diapir Area". (Including attached plans).
Dept. Mines S.A. (D.M. 1200/65).

B.J. TAYLOR 1968

"Report on Geophysical Surveys in the Mt. Coffin Diapir Area, Appendix No. I".
Department Mines S.A. (D.M. 1200/65).

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0020

AN3/516/0 208/71

21 July 1970

Bholooroo Mining Co,
C/- Mr M.J. Ross,
18 Moore Street,
SOMERTON PARK SA 5044

REPORT AN208/71

YOUR REFERENCE: Application dated 9/7/70

IDENTIFICATION: As listed

DATE RECEIVED: 13/7/70

Enquiries quoting AN208/71 to Officer in Charge please.

Analysis by: A.E. Francis

Officer in Charge, Analytical Section: A.B. Timms

for N. Draper
Director.

pkm

c.c. Dr R. Ramdohr,
C/- Mr M.J. Ross,
18 Moore Street,
SOMERTON PARK SA 5044

JOB 208/71 AMDEL GEOCHEMICAL SERVICE 0021

FORM 12 BATCH NO. /

TT	Sample No.			Cu					
1	C404/268 - 40°	0 - 5		420					
2		5 - 10		160					
3		10 - 15		90					
4		15 - 20		100					
5		20 - 25 x		200					
6		25 - 30		2800					
7		30 - 35		6600					
8		35 - 40		4600					
9		40 - 45		7000					
10		45 - 50		2600					
11		50 - 55		3200					
12		55 - 60		7200					
13		60 - 65		4200					
14		65 - 70		1620					
15		70 - 75		480					
16	STD: LM 2								
17		75 - 80		540					
18		80 - 85		380					
19	C404/268 - 40°	85 - 90		340					
20		20 - 25 x							

0022

FORM 12 JOB 2051-71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 2

TT	Sample No.			Cu					
1	C404/268 - 40°	90-95		280					
2		95-100		300					
3		100-105		580					
4		105-110		480					
5		110-115		340					
6		115-120		360					
7		120-125	x	400					
8		125-130		800					
9		130-135		760					
10		135-140		620					
11		140-145		620					
12		145-150		720					
13	511, 511								
14	- 60°	0-5	not rec'd	—					
15		5-10		320					
16		10-15		90					
17		15-20		70					
18		20-25		120					
19	C404/268 - 60°	25-30		160					
20		120-125	x						

0023

JOB 208/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 3

FORM 12

TT	Sample No.			Cu					
1	C404/268 - 60°	30-35		940					
2		35-40		1380					
3		40-45		540					
4		45-50		380					
5	STD. LM2								
6		50-55		880					
7		55-60		1060					
8		60-65		3200					
9		65-70		>10,000	2.05 %				
10		70-75		8800					
11		75-80		2400					
12		80-85		1120					
13		85-90 x		1140					
14		90-95		1020					
15		95-100		740					
16		100-105		480					
17		105-110		420					
18		110-115		460					
19	C404/268 - 60°	115-120		440					
20		85-90 x							

FORM 12 JOB 208/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 4

TT	Sample No.			Cu					
1	C404/268 - 60°	120-125		440					
2		125-130		640					
3		130-135		200					
4		135-140		220					
5		140-145		280					
6		145-150		380					
7	STD. 51/1								
8	C405/264 - 40°	0-5		260					
9		5-10		700					
10		10-15		320					
11		15-20		260					
12		20-25		940					
13		25-30		980					
14		30-35		540					
15		35-40		2400					
16		40-45x		3400					
17		45-50		7800					
18		50-55		3200					
19	C405/264 - 40°	55-60		980					
20		40-45x							

FORM 12 JOB 208/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 5

TT	Sample No.			Cu					
1	C405/264 - 40°	60-65		580					
2		65-70		280					
3		70-75		240					
4		75-80		480					
5		80-85		700					
6		85-90		440					
7		90-95		340					
8		95-100		280					
9		100-105	x	240					
10		105-110		440					
11		110-115		280					
12		115-120		180					
13		120-125		160					
14		125-130		180					
15		130-135		200					
16	STD. GM2								
17		135-140		380					
18		140-145		400					
19	C405/264 - 40°	145-150		360					
20		100-105	x						

0026

JOB 208171 AMDEL GEOCHEMICAL SERVICE BATCH NO. 6

FORM 12

TT	Sample No.			Cu					
1	C405/264 - 60°	0-5	not rec'd	—					
2		5-10		1080					
3		10-15		400					
4		15-20		640					
5	STD. 511								
6		20-25		1820					
7		25-30		700					
8		30-35		1080					
9		35-40		900					
10		40-45		7000					
11		45-50		2000					
12		50-55		>10,000	1.16%				
13		55-60 x		4600					
14		60-65		1200					
15		65-70		4200					
16		70-75		560					
17		75-80		540					
18		80-85		220					
19	C405/264 - 60°	85-90		680					
20		55-60x							

JOB 208-71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 7

FORM 12

TT	Sample No.			Cu					
1	C405/164 - 60°	90-95		420					
2		95-100		180					
3		100-105 x		220					
4		105-110		260					
5		110-115		160					
6		115-120	not rec'd	—					
7		120-125		320					
8		125-130		900					
9		130-135		460					
10		135-140		280					
11		140-145		420					
12		145-150		680					
13	STD. LM 2								
14	492/152 - 75°	0-5		500					
15		5-10	not rec'd	—					
16		10-15		720					
17		15-20		440					
18		20-25	not rec'd	—					
19	492/152 - 75°	25-30		620					
20		100-105	x						

FORM 12 JOB 208/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 8

TT	Sample No.			Cu					
1	4921152 - 75°	30-35		700					
2		35-40		6400					
3		40-45		8600					
4		45-50		3000					
5	STD. 511								
6		50-55		7400					
7		55-60		2600					
8		60-65		1160					
9		65-70		880					
10		70-75		1300					
11		75-80		1060					
12		80-85		460					
13		85-90		320					
14		90-95		340					
15		95-100		120					
16		100-105	x	120					
17		105-110		120					
18		110-115		60					
19	4921152 - 75°	115-120		50					
20		100-105	x						

FORM 12 JOB 208/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 9

TT	Sample No.			Cu					
1	492/152 - 75°	120-125		30					
2		125-130		30					
3		130-135	x	60					
4		135-140		50					
5		140-145		80					
6		145-150		50					
7	STD. LM2								
8	Numbers obliterated			420					
9	" not readable			720					
10		130-135	x						
11	BLK.			—					
12									
13									
14									
15									
16									
17								Code C1	
18									
19								Results in ppm	
20									

0030

AN3/516/0 71/71

15 July 1970

Booberoo Mining Co,
C/- Mr M.J. Ross,
18 Moore Street,
SOMERTON PARK SA 5044

REPORT AN71/71

YOUR REFERENCE:	Application dated 6/7/70
IDENTIFICATION:	As listed
DATE RECEIVED:	6/7/70

Enquiries quoting AN71/71 to Officer in Charge please.

Analysis by: A.E. Francis, R.J. Boreham and D.C. Fox

Officer in Charge, Analytical Section: A.B. Timms

for N. Draper
Director.

pkm

c.c. Dr R. Ramdohr,
7 Skipton Avenue,
SOMERTON PARK SA 5044

0031

ANALYSIS

Ozs/Long Ton

Sample Mark	Gold Au
C493/156 55°	
20-25	<0.01
45-50	<0.01
70-75	<0.01
95-100	<0.01
120-125	<0.01
145-150	<0.01

Hole 493/156 55° SW

0032

ANALYSIS
%

Sample Mark		Carbon dioxide CO_2
H5	0-5	1.45
	5-10	0.3
	10-15	0.3
	15-20	0.05
	20-25	0.05
	25-30	0.05
	30-35	0.45
	35-40	3.0
	40-45	6.25
	45-50	4.0
	50-55	7.6
	55-60	17.5
	60-65	10.5
	65-70	11.9
	70-75	11.5
	75-80	11.3
	80-85	10.0
	85-90	11.0
	90-95	7.6
	95-100	7.6
	100-105	7.2
	105-110	7.2
	110-115	7.3
	115-120	8.0
	120-125	6.0
	125-130	5.8
	130-135	6.0
	135-140	5.8
	140-145	6.6
	145-150	7.1

FORM 12

JOB 71/71

AMDEL GEOCHEMICAL SERVICE

0033

BATCH NO. 1

TT	Sample No.			Cu					
1	398/304/35°	0'- 5	not rec'd.	—					
2		5- 10	" "	—					
3		10- 15		710					
4		15- 20		920					
5		20- 25		1200					
6		25- 30 x		2700					
7		30- 35		5400					
8		35- 40		2100					
9		40- 45		2200					
10		45- 50		1800					
11		50- 55		2300					
12		55- 60		850					
13	STD. 511								
14		60- 65		920					
15		65- 70		820					
16		70- 75		1600					
17		75- 80		1500					
18		80- 85		1100					
19	398/304/35°	85- 90		830					
20		25- 30 x							

0034

FORM 12 JOB 11171 AMDEL GEOCHEMICAL SERVICE BATCH NO. 7

TT	Sample No.			Cu					
1	398/304/35°	90-	95	830					
2		95-	100	1100					
3	STD. LM 2								
4		100-	105	2000					
5		105-	110	2700					
6		110-	115	1500					
7		115-	120	590					
8		120-	125	320					
9		125-	130	240					
10		130-	135	230					
11	398/304/35°	135-	140	430					
12	398/304/55°	0-	5	240					
13		5-	10	280					
14		10-	15	170					
15		15-	20	240					
16		20-	25 x	2300					
17		25-	30	3900					
18		30-	35	6700					
19	398/304/55°	35-	40	2900					
20		20-	25 x						

JOB 71/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 3

FORM 12

TT	Sample No.			Cu					
1	398/304/55°	40-	45	980					
2		45-	50	470					
3		50-	55 x	610					
4		55-	60	1500					
5		60-	65	920					
6		65-	70	1700					
7		70-	75	650					
8		75-	80	1700					
9		80-	85	800					
10		85-	90	890					
11		90-	95	600					
12		95-	100	860					
13	STD. 51/1								
14		100-	105	9000					
15		105-	110	2700					
16		110-	115	1800					
17		115-	120	980					
18		120-	125	280					
19	398/304/55°	125-	130	220					
20		50-	55 x						

FORM 12 JOB 71/71 AMDEL GEOCHEMICAL SERVICE 0036 BATCH NO. 4

TT	Sample No.			Cu					
1	398/304/55°	130-	135	230					
2		135-	140	310					
3		140-	145	180					
4		145-	150	150					
5	STD. LM2								
6	397/304/55°	0-	5	1300					
7		5-	10	700					
8		10-	15	160					
9		15-	20	130					
10		20-	25	100					
11		25-	30	190					
12		30-	35	210					
13		35-	40	190					
14		40-	45	460					
15		45-	50 x	370					
16		50-	55	670					
17		55-	60	870					
18		60-	65	950					
19	397/304/55°	65-	70	1.6%					
20		45-	50 x						

FORM 12 JOB 71/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 5

TT	Sample No.			Cu					
1	397/304/55°	70-	75	8800					
2		75-	80	4800					
3		80-	85	4500					
4		85-	90	2300					
5		90-	95	2000					
6		95-	100	3000					
7		100-	105 ✓	4100					
8		105-	110	5400					
9		110-	115	4700					
10		115-	120	1600					
11		120-	125	1200					
12		125-	130	1800					
13		130-	135	2300					
14		135-	140	2600					
15		140-	145	1700					
16	397/304/55°	145-	150	930					
17	STD. 51/1								
18	406/260/35°	0-	5	260					
19	406/260/35°	5-	10	190					
20		100-	105 ✓						

FORM 12 JOB 71/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 6

TT	Sample No.			Cu					
1	406/260/35°	10-15		260					
2		15-20		2800					
3		20-25		3100					
4		25-30 x		2200					
5		30-35		3600					
6		35-40		1·1%					
7		40-45		4400					
8		45-50		2000					
9		50-55		1600					
10		55-60		530					
11		60-65		360					
12		65-70		320					
13		70-75		260					
14		75-80		290					
15	STD-LM2								
16		80-85		210					
17		85-90		190					
18		90-95		180					
19	406/260/35°	95-100		210					
20		95-30 x							

FORM 12 JOB 71/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 0039/

TT	Sample No.			Cu					
1	406/260/35°	100-	105	230					
2		105-	110	200					
3		110-	115	240					
4		115-	120	200					
5	STD. SU1								
6	493/156/55°	0-	5	150					
7		5-	10	150					
8		10-	15	790					
9		15-	20	430					
10		20-	25	770					
11		25-	30	490					
12		30-	35	250					
13		35-	40	590					
14		40-	45 x	230					
15		45-	50	100					
16		50-	55	90					
17		55-	60	6300					
18		60-	65	2000					
19	493/158/55°	65-	70	5200					
20		40-	45 x						

JOB 11/71 AMDEL GEOCHEMICAL SERVICE BATCH NO. 0040

FORM 12

TT	Sample No.				Cu					
1	493/156/55°	70-	75		5900					
2		75-	80		3100					
3		80-	85		1400					
4		85-	90		780					
5		90-	95		480					
6		95-	100		230					
7		100-	105 x		130					
8		105-	110		160					
9		110-	115		430					
10		115-	120		550					
11		120-	125		210					
12		125-	130		140					
13		130-	135		160					
14		135-	140		110					
15		140-	145		70					
16	493/156/55°	145-	150		80					
17	STD. CM 2									
18	493/152/55°	0-	5		220					
19	493/152/55°	5-	10		280					
20		100-	105 x							

3

JOB 71/71

AMDEL GEOCHEMICAL SERVICE

0041

FORM 12

BATCH NO. 9

TT	Sample No.				Cu					
1	493/152/55°	10-	15		300					
2		15-	20		270					
3		20-	25 x		610					
4		25-	30		520					
5		30-	35		380					
6	STD. 511									
7		35-	40		570					
8	493/152/55°	40-	45		1700					
9		20-	25 x							
10	BLK.				—					
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Form 38

THE AUSTRALIAN MINERAL DEVELOPMENT LABORATORIES

0042

REPORT AN 71/71

Sample No.	% CO_2			Sample No.	% CO_2					
H5 0-5	1.45			H5 125-130	5.8					
5-10	0.3			130-135	6.0					
10-15	0.3			135-140	5.8					
15-20	0.05			140-145	6.6					
20-25	0.05			145-150	7.1					
25-30	0.05									
30-35	0.45				RJ Bonham	7 hours				
35-40	3.0									
40-45	6.25									
45-50	4.0									
50-55	7.6									
55-60	17.5									
60-65	10.5									
65-70	11.9									
70-75	11.5									
75-80	11.3									
80-85	10.0									
85-90	11.0									
90-95	7.6									
95-100	7.6									
100-105	7.2									
105-110	7.2									
110-115	7.3									
115-120	8.0									
120-125	6.0									

0043 LOG OF BOREHOLE NO. 397/324 DIAMOND DRILL ?

Area BOOLOOROO Dip 90° Date 15/12/70

Drilled by BORING ENTERPRISES

Depth	Cu. ppm	(Cu%)	Pb. ppm	Ag. ppm	Sb. ppm	Colour	Remarks
5- 10	890					L. Brown	
10- 15	910					"	
15- 20	2300					"	
20- 25	860					"	
25- 30	3400					"	
30- 35	2000					"	No visible copper
35- 40	2000					"	
40- 45	1700					Mauve	
45- 50	1500					L. Brown	
50- 55	1200					"	
55- 60	1500					"	
60- 65	2400					"	
65- 70	1300					Brown	
70- 75	220					"	
75- 80	95					L. Brown	
80- 85	120					"	
85- 90	60					Yellow Brown	
90- 95	45					"	
95-100	280					"	
100-105	40					"	
105-110	780					"	
110-115	430					Off White	
115-120	260					White	
120-125	300					"	
125-130	760					"	
130-135	3200					Off White	
135-140	5100	0.51				Yellowish	Minor Malachite
140-145	2800					Off White	" & Azurite
145-150	780					"	
150-155	1400					L. Brown	
155-160	5000	0.5				Grey	
160-165	920					"	
165-170	2500					"	
170-175	6600	0.53				Brown	Malachite
175-180	5200					Grey	Sulphides
180-185	2900					B. Grey	
185-190	1800					"	Minor Chalcopyrite
190-195	610					"	"
195-200	710					"	"
200-205	5500	0.55	<20	<2	250	"	Minor sulphides
205-210	3100		<20	<2	100	"	"
210-215	4000		<20	<2	230	"	Considerable sulphide
215-220	2900		<20	<2	65	"	"
220-225	650		<20	<2	30	"	"
225-230	750		<20	<2	20	Brown	Core - some tillite some mica
230-235	1000		<20	<2	50	"	"
235-240	20000		<20	<2	600	Grey	Considerable sulphide
240-245	2700	1.26	<20	<2	<20	"	"
245-250	15000		<20	<2	300	"	"
250-255	1400		<20	<2	<20	"	Minor "
255-260	1300		<20	<2	90	"	"
260-265	2500		<20	<2	110	"	Some quartz
265-270	1400		<20	<2	65	"	Sulphides
270-275	2500		<20	<2	120	"	"
275-280	16000		<20	<2	380	"	"

Cont/....

397/324

Depth	Cu, ppm	(Cu%)	Pb, ppm	Ag, ppm	Sb, ppm	Colour	Remarks
280-285	17000		<20	<2	260	"	"
285-290	3400		<20	<2	260	"	"
290-295	4600		<20	<2	430	"	Minor "
295-300	13000	50'P	<20	<2	450	"	"
300-305	42000	1.66	60	4	1900	"	"
305-310	5200		<20	<2	240	"	"
310-315	23000		<20	<2	1100	"	"
315-320	17000		<20	<2	850	"	"
320-325	15000		<20	<2	670	"	"

31st Jan. 71

SUMMARY OF DRILLING WORK MT. COFFIN DIAPIR.

BOOLOOROO.

Borehole No.	Dip	Depth	Cu	No. of Assays for Ag	Au.	Sb	Zn	Pb	CO_2
B 492/140	75° SW	160'	31						
B 492/148	70° W	160'	31						
B 492/152	75°SW	150'	28						
B 493/152	55° SW	45'	9						
B 493/156	55° SW	150'	30		6				30
B410/240	70° N	250'	49						
B406/252	70° N	250'	50						
B404/260	70° N	180'	36						
B406/260	35° N	120'	24						
B404/264	90°	234'	47						
B405/264	40° N	150'	30						
B405/264	60° N	150'	28						
B398/268	90°	500'	97						
B402/268	60° N	180'	36						
B404/268	40° N	150'	30						
B404/268	60° N	150'	29						
B398/272	70° N	250'	49						
B398/276	70° N	250'	49						
B398/280	70° N	250'	49						
B 396/284	70° N	245'	48						
B398 /284	70° N	250'	49						
B396/288	70° N	250'	48						
B398/288	70° N	250'	49						
B396/292	70° N	260'	51						
B398/292	70° N	250'	49						
B396/296	70° N	230'	52				4		
B398/296	70° N	225'	44						
B396/300	70° N	240'	48						
B398/300	70° N	245'	49						
B392/304	90° N	385'	66						
B396/304	80° N	212'	42						
B397/304	55° N	150'	30						
B398/304	35° N	140'	26						
B398/304	55° N	150'	30						
B394/308	70° N	250'	49						
B392/312	90°	450'	89						
B396/312	70° N	210'	41						
B397/316	70° N	230'	45						
B395/320	70° N	250'	49						
B397/320	70° N	210'	33						

SUMMARY OF DRILLING WORK MT. COFFIN DIAPIR.

BOOLOOROO.

Borehole No.	Dip	Depth	Cu	No. of Assays for Ag	Au	Sb	Zn	Pb	CO_2
B397/320	70° N	250'	49						
B397/320	70° N	210'	33						
B397/324	70° N	240'	47						
B397/324	90°	330'	65	26		26		26	
B397/328	70° N	250'	49						
B397/332	70° N	230'	45						
B395/336	90°	500'	99						
B397/336	70° N	250'	49						
B396/340	70° N	190'	37						
B396/344	70° N	235'	46						
B396/348	70° N	180'	35						
B400/396	70° N	240'	45						
DJ416/504	70° S	250'	49						
DJ414/508	70° S	235'	46						
DJ418/508	60° S	240'	47						
53		12,181'	2379	26	6	26	4	26	30

SUMMARY OF DRILLING WORK MT. COFFIN DIAPIR.

TAPLEY.

Borehole No.	Dip	Depth	No. of Assays for Cu	Ag	Au	Sb	Zn	Pb	CO_2
EA 392/352	70° N	250'	49						
EA 396/352	60° N	235'	45						
EA 396/352	90°	500'	97						
EA 390/356	90°	250'	49						
EA 392/356	90°	500'	98						
EA 394/356	90°	250'	45						
EA 396/356	80° N	230'	46						
EA 398/356	80° N	240'	47						
EA 392/360	70° N	250'	49						
EA 396/360	80° N	256'	48						
EA 398/360	70° N	225'	44						
EA 392/364	70° N	230'	45						
EA 396/364	70° N	240'	45						
EA 389/368	90°	485'	94						
EA 392/368	90°	250'	49						
EA 395/368	90°	250'	49						
EA 396/368	70°	230'	45						
EA 398/368	70°	200'	39						
EA 396/372	70° N	235'	46						
EA 397/372	70° N	230'	45						
EA 398/372	70° N	250'	49						
EA 399/372	70° N	235'	45						
EA 397/376	90°	245'	71						
EA 398/376	70° N	245'	46	25					
EA 399/376	60° N	230'	45						
EA 399/376	90°	500'	99						
EA 402/376	70° N	200'	43						
EA 397/380	90°	225'	44						
EA 398/380	70° N	260'	51						
EA 398/380	90°	500'	98						
EA 399/380	70° N	250'	49						
EA 399/384	70° N	250'	49						
EA 400/384	70° N	245'	48						
EA 400/388	70° N	250'	49						
EA 400/392	70° N	240'	47						
WJ 443/404	90°	400'	79						
WA 1	60° N	235'	46						
WB 1	70° N	250'	49						
WC 1	70° N	215'	42						
39		10761	2163	25					
Total;-92 Tapley/Boolooroo		22,942	4542	51	6	26	4	26	30

0048

LOG OF BOREHOLE No. 492/140

Area: DOLOMITE Dip: 70° S.W. Date: 29/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	50		Yellow	
10- 15	40		L. Brown	
15- 20	40		Yellowish	
20- 25	10		L. Brown	
25- 30	10		"	
30- 35	10		"	
35- 40	10		L. Grey	
40- 45	10		Creamy	
45- 50	10		Yellowish	
50- 55	10		Creamy	
55- 60	10		"	
60- 65	2		L. Brown	Minor
65- 70	10		"	
70- 75	2,200		Creamy	Sulphides
75- 80	50		Pinkish	
80- 85	30		"	throughout.
85- 90	20		L. Grey	
90- 95	10		Creamy	
95-100	10		"	
100-105	20		"	
105-110	10		"	
110-115	10		Pinkish	
115-120	15		Creamy	
120-125	20		Yellowish	
125-130	15		L. Brown	
130-135	15		"	
135-140	15		Pinkish	
140-145	10		"	
145-150	10		L. Brown	
150-155	10		"	
155-160	10		"	

0049

LOG OF BOREHOLE No. 492/148

Area: DOLOMITE Dip: 70° S.W. Date: 29/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	50		L. Brown	
10- 15	420		Yellow	
15- 20	30		Pink	
20- 25	20		"	
25- 30	10		"	
30- 35	4,500		L. Brown	
35- 40	2,500		"	
40- 45	80		"	
45- 50	260		"	
50- 55	20		"	
55- 60	20		"	
60- 65	10		"	
65- 70	260		"	
70- 75	10		"	
75- 80	1,300		"	
80- 85	8,500	0.85	"	
85- 90	2,000		"	
90- 95	180		"	
95-100	70		Brown	
100-105	60		Creamy	
105-110	40		L. Brown	
110-115	50		"	
115-120	20		"	
120-125	20		"	
125-130	10		"	
130-135	20		"	
135-140	10		"	
140-145	10		"	
145-150	15		Yellowish	
150-155	2,600		Orange B.	
155-160	110		" "	

LOG OF BOREHOLE No. 492/152

Area: BOOLOOROO Dip: 75° S.W. Date: June/July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu,ppm	Cu(%)	Remarks
0- 5	500		
5- 10	missing		
10- 15	720		
15- 20	440		
20- 25	missing		
25- 30	620		
30- 35	700		
35- 40	6,400		
40- 45	8,600	0.75	
45- 50	3,000		
50- 55	7,400	0.74	
55- 60	2,600		
60- 65	1,160		
65- 70	880		
70- 75	1,300		
75- 80	1,060		
80- 85	460		
85- 90	320		
90- 95	340		
95-100	120		
100-105	120		
105-110	120		
110-115	60		
115-120	50		
120-125	30		
125-130	30		
130-135	60		
135-140	50		
140-145	80		
145-150	50		

0051

LOG OF BOREHOLE No. 493/152

Area: BOOLOOROO Dip: 55° S.W. Date: June/July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu, ppm	Cu (%)	Remarks
0- 5	220		
5- 10	280		
10- 15	390		
15- 20	270		
20- 25	510		
25- 30	520		
30- 35	380		
35- 40	570		
40- 45	1,700		Hole abandoned because of cave-in.

0052

LOG OF BOREHOLE No. 493/156

Area: BOOLOOROO Dip: 55° S.W. Date: June/July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu, ppm	Cu (%)	CO_2 %	Au (ozs) Longton	Remarks
0- 5	150		1·45		
5- 10	150		·3		
10- 15	790		·3		
15- 20	430		·05		
20- 25	770		·05	<0·01	
25- 30	490		·05		
30- 35	250		·45		
35- 40	590		3·0		
40- 45	230		6·25		
45- 50	100		4·0	<0·01	
50- 55	90		7·6		
55- 60	6,300	0.63	17·5		
60- 65	2,000		10·5		
65- 70	5,200		11·9		
70- 75	5,900		11·5	<0·01	
75- 80	3,100		11·3		
80- 85	1,400		10·8		
85- 90	780		11·0		
90- 95	480		7·6		
95-100	230		7·6	<0·01	
100-105	130		7·2		
105-110	160		7·2		
110-115	430		7·3		
115-120	550		8·0		
120-125	210		6·0	<0·01	
125-130	140		5·8		
130-135	160		6·0		
135-140	110		5·8		
140-145	70		6·6		
145-150	80		7·1	<0·01	

0053

LOG OF BOREHOLE No. 410/240

Area: BOOLOOROO Dip: 70° N Date: 21/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	75		Mauve	
10- 15	50		L. Pink	
15- 20	55		"	
20- 25	45		"	
25- 30	50		L. Grey	
30- 35	50		"	
35- 40	45		"	
40- 45	55		Mauve	
45- 50	50		"	
50- 55	45		"	
55- 60	50		"	
60- 65	40		Pink	
65- 70	50		Mauve	
70- 75	55		White	
75- 80	55		Pink	
80- 85	70		"	
85- 90	60		"	
90- 95	50		Yellowish	
95-100	130		Pink	
100-105	120		"	
105-110	210		L. Brown	
110-115	90		"	
115-120	150		Red Brown	
120-125	180		Red	
125-130	1,600		"	
130-135	400		Yellow	Tr Oxide Copper
135-140	210		"	
140-145	140		"	
145-150	130		Red Brown	
150-155	95		L. Brown	Tr Oxide Copper
155-160	50		Yellowish	
160-165	50		"	
165-170	55		"	
170-175	100		"	
175-180	35		Red	
180-185	50		Pink	
185-190	55		"	
190-195	20		"	
195-200	30		"	
200-205	30		L. Brown	
205-210	80		Orange	
210-215	80		"	
215-220	65		"	
220-225	50		"	
225-230	45		"	
230-235	70		"	
235-240	50		"	
240-245	45		"	
245-250	45		"	

0054

LOG OF BOREHOLE No. 406/252

Area: BOOLOOROO Dip: 70° N Date: 21/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	150		Creamy	
10- 15	50		White	
15- 20	40		Mauve	
20- 25	50		"	
25- 30	15		"	
30- 35	60		Creamy	
35- 40	60		"	
40- 45	30		Mauve	
45- 50	45		V.Light Brown	
50- 55	50		"	
55- 60	30		Mauve	
60- 65	40		"	
65- 70	30		"	
70- 75	40		Light Brown	
75- 80	30		Mauve	
80- 85	40		Light Grey	
85- 90	35		L. Brown	
90- 95	30		"	
95-100	35		Grey	
100-105	45		"	
105-110	80		Dark Grey	
110-115	90		"	Tr Oxides
115-120	80		Black	"
120-125	190		"	Pyritic Sulphides 1%
125-130	380		"	"
130-135	1,200		"	"
135-140	1,600		"	"
140-145	600		"	"
145-150	450		"	"
150-155	720		V. Dark Brown	"
155-160	350		"	"
160-165	300		Brown	"
165-170	420		Light Brown	
170-175	480		"	
175-180	250		"	
180-185	220		"	
185-190	200		Creamy	
190-195	100		"	
195-200	90		Light Pink	
200-205	100		Yellowish	
205-210 A	95		Light Grey	
205-210 B	90		"	
210-215	60		"	
215-220	80		"	
220-225	70		"	
225-230	95		Light Grey	
230-235	150		Creamy	
235-240	110		Yellowish	
240-245	70		Creamy	
245-250	70		White	

0055

LOG OF BOREHOLE No. 404/260

Area: BOOLOOROO Dip: 70° N Date: 8/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
0- 5	130		Pink	Siltstone
5- 10	180		"	
10- 15	180		"	
15- 20	90		Grey	
20- 25	50		"	
25- 30	50		"	
30- 35	60		"	
35- 40	75		"	
40- 45	40		Pink	
45- 50	70		"	
50- 55	45		"	
55- 60	35		"	
60- 65	70		"	
65- 70	45		Grey	
70- 75	50		Pink	
75- 80	80		"	
80- 85	80		Dark Grey	[illegible]
85- 90	420		" "	
90- 95	370		Brown	
95-100	1,500		"	
100-105	3,400	0.44	"	
105-110	3,200		"	
110-115	1,500		"	
115-120	2,400		Black	[illegible]
120-125	490		Red	Siltstone
125-130	7,700		"	
130-135	4,200	0.6	"	
135-140	1,300		Pink	
140-145	330		"	
145-150	250		"	
150-155	190		"	
155-160	150		"	
160-165	200		Yellow	
165-170	160		Pink	
170-175	140		"	
175-180	150		"	Hole completed.

0056

LOG OF BOREHOLE No. 406/260

Area: BOOLOOROO Dip: 35° N Date: June,July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu,ppm	Cu(%)	Remarks
0- 5	260		
5- 10	190		
10- 15	260		
15- 20	2,800		
20- 25	3,100		
25- 30	2,200		
30- 35	3,600		
35- 40	11,000	1.1	
40- 45	4,400		
45- 50	2,000		
50- 55	1,600		
55- 60	530		
60- 65	360		
65- 70	320		
70- 75	260		
75- 80	290		
80- 85	210		
85- 90	190		
90- 95	180		
95-100	210		
100-105	230		
105-110	200		
110-115	240		
115-120	200		

0057

LOG OF BOREHOLE No. 404/264

Area: BOOLOOROO Dip: 90° Date: 7/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
0- 5	120		Grey	
5- 10	180		Pink	
10- 15	980		"	
15- 20	90		Red Brown	
20- 25	45		"	
25- 30	35		Dark Grey	
30- 35	30		Pink	
35- 40	25		"	
40- 45	45		"	
45- 50	60		"	
50- 55	85		Grey	
55- 60	270		L. Brown	
60- 65	530		"	
65- 70	3,400	0.51	"	
70- 75	6,700		"	
75- 80	2,300		Grey	
80- 85	1,800		and some Red	
85- 90	860		Grey	
90- 95	1,300		Brown	
95-100	440		Grey	
100-105	870		L. Brown	
105-110	860		"	
110-115	970		"	
115-120	2,500		"	
120-125	2,000		Grey	
125-130	1,300		Black	Oxide
130-135	7,400	0.73	"	
135-140	1,600		Deep Red	
140-145	1,000		Red	
145-150	450		Pink	
150-155	470		L. Pink	
155-160	380		Grey	
160-165	270		"	
165-170	1,200		L. Brown	
170-175	1,100		"	
175-180	5,800	0.58	"	
180-185	1,200		Pink	
185-190	5,500	0.58	"	
190-195	6,000		L. Brown	
195-200	2,500		Yellow	
200-205	1,400		"	
205-210	1,200		"	
210-215	2,700		Grey	
215-220	1,700		"	
220-225	1,100		Pink	
225-230	940		Pale Yellow	
230-234	missing		-	Contaminated and small recovery.

0058

LOG OF BOREHOLE No. 405/26

Area: BOOLOOROO Dip: 40° N Date: June/July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu, ppm	Cu (%)
0- 5	260	
5- 10	700	
10- 15	320	
15- 20	260	
20- 25	940	
25- 30	980	
30- 35	540	
35- 40	2,400	
40- 45	3,400	
45- 50	7,800	0.78
50- 55	3,200	
55- 60	980	
60- 65	580	
65- 70	280	
70- 75	240	
75- 80	480	
80- 85	700	
85- 90	340	
90- 95	340	
95-100	280	
100-105	240	
105-110	440	
110-115	280	
115-120	180	
120-125	160	
125-130	180	
130-135	200	
135-140	380	
140-145	400	
145-150	360	

LOG OF BOREHOLE No. 405/264

Area: BOOLOOROO Dip: 60° N Date: June/July 1970.

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu,ppm	Cu(%)	Remarks
0- 5	missing		
5- 10	1,080		
10- 15	400		
15- 20	640		
20- 25	1,820		
25- 30	700		
30- 35	1,080		
35- 40	900		
40- 45	7,000	0.7	
45- 50	2,000		
50- 55	11,600	1.16	
55- 60	4,600		
60- 65	1,200		
65- 70	4,200		
70- 75	560		
75- 80	540		
80- 95	220		
85- 90	680		
90- 95	420		
95-100	180		
100-105	220		
105-110	260		
110-115	160		
115-120	missing		
120-125	320		
125-130	900		
130-135	460		
135-140	280		
140-145	420		
145-150	680		

0060 LOG OF BOREHOLE No. 398/268

Area: BOOLOOROO Dip 90° Date 16-1-71

Drilled by: BORING ENTERPRISES.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5-10	340		Mauve	No visible mineralisation
10-15	220		"	" "
15-20	70		"	" "
20-25	60		"	" "
25-30	50		"	" "
30-35	70		"	" "
35-40	70		"	" "
40-45	60		"	" "
45-50	50		"	" "
50-55	60		"	" "
55-60	60		"	" "
60-65	60		"	" "
65-70	60		L. Grey	" "
70-75	60		"	" "
75-80	90		Grey	" "
80-85	85		"	" "
85-90	70		"	" "
90-95	100		Grey Brown	" "
95-100	95		Grey	" "
100-105	85		"	" "
105-110	80		Blue Grey	Tr Pyritic sulphides
110-115	210		"	Tr poss. Red Oxides
115-120	90		"	Tr pyritic sulphides
120-125	1,300		"	Minor " "
125-130	3,300		"	" " "
130-135	2,600		"	Tr " "
135-140	1,400		"	Minor " "
140-145	900		"	" " "
145-150	550		"	" " "
150-155	220		"	" " "
155-160	170		"	" " "
160-165	150		"	" " "
165-170	530		"	" " "
170-175	170		"	" " "
175-180	50		"	Tr " "
180-185	100		"	" " "
185-190	60		"	Minor " " Quartz grains
190-195	900		"	" " " "
195-200	190		"	" " " "
200-205	95		"	" " " "
205-210	530		"	" " " -
210-215	95		"	" " "
215-220	75		"	Increasing pyritic sulph.
220-225	45		"	" " "
225-230	50		"	Considerable " quartz grains
230-235	190		"	" " " "
235-240	50		"	" " " "
240-245	50		"	Minor " " "
245-250	50		"	" " " "
250-255	50		"	" " " "
255-260	70		"	" " " "
260-265	80		"	" " " "
265-270	150		"	Increased " " "
270-275	220		"	" " " "
275-280	140		"	" " " "
280-285	60		"	Minor " " "

LOG OF BOREHOLE Nos. 398/268 Dip. 90° Date: 16-1-71

Depth	Cu,ppm	Cu (%)	Colour	Remarks.
285-290	50		B. Grey	Minor pyritic sulphides
290-295	40		"	" " "
295-300	80		"	" " "
305-310	90		"	" " "
310-315	missing		"	Core
315-320	50		"	Minor " "
320-325	40		"	" thin quartz seams
325-330	80		"	" " " "
330-335	50		"	" " " "
335-340	60		"	" " " "
340-345	50		"	" " " "
345-350	340		"	Increas. pyrite sulphides
350-355	170		"	" thin quartz seams'
355-360	90		"	" " " "
360-365	35		"	" " " "
365-370	50		"	Minor pyritic sulphides
370-375	90		"	Consid. " "
375-380	80		"	" " "
380-385	800		"	Some iron staining & quartz chips
385-390	200		"	" "
390-395	150		"	" "
395-400	70		"	" "
400-405	400		"	" "
405-410	230		"	" "
410-415	1,700		"	decreasing
415-420	900		"	"
420-425	280		"	"
425-430	80		"	"
430-435	missing		"	Core
435-440	60		"	Consid. Pyritic sulphides
440-445	150		"	" "
445-450	1,200		"	" "
450-455	1,900		"	" "
455-460	310		Dk. Brown	" "
460-465	70		Grey	decreasing sulphide
465-470	250		"	Minor pyritic sulphides
470-475	220		"	" " "
475-480	800		"	" " "
480-485	900		"	" "
485-490	100		"	Increasing "
490-495	90		"	Minor sulphides
495-500	190		"	Minor "

Hole completed to 500 feet - Cores 310-315'
" 430-435'

6" Button bit throughout.

0062

LOG OF BOREHOLE No. 402/263

Area: BOOLOOROO Dip: 60° N Date: 6/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
0- 5	220		Grey	Mudstone
5- 10	55		"	
10- 15	40		"	
15- 20	35		"	
20- 25	25		"	
25- 30	40		"	
30- 35	35		"	
35- 40	30		"	
40- 45	65		"	
45- 50	20		"	
50- 55	55		Pink	
55- 60	45		"	
60- 65	30		"	
65- 70	55		Grey	
70- 75	170		"	
75- 80	120		"	
80- 85	360		"	
85- 90	3,700		"	
90- 95	1,800		L. Brown	
95-100	530		"	
100-105	460		Brown	
105-110	270		Red Brown	
110-115	310		"	
115-120	2,000		Red	
120-125	15,000		"	
125-130	16,000	1.55	"	Possible contaminatic
130-135	6,700	0.67	"	
135-140	2,400		Pink	
140-145	1,400		"	
145-150	1,000		"	
150-155	500		"	
155-160	290		"	
160-165	580		Yellow	
165-170	310		"	
170-175	310		"	
175-180	2,100		"	Hole completed.

0063

LOG OF BOREHOLE No. 404/268

Area: BOOLOOROO Dip: 40° N Date: June/July 1970.

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu, ppm	Cu (%)	Remarks
0- 5	420		
5- 10	160		
10- 15	90		
15- 20	100		
20- 25	200		
25- 30	2,800		
30- 35	6,600	-	
35- 40	4,600	0.6	
40- 45	7,000		
45- 50	2,600	-	
50- 55	3,200		
55- 60	7,200	0.72	
60- 65	4,200		
65- 70	1,620		
70- 75	480		
75- 80	540		
80- 85	380		
85- 90	340		
90- 95	280		
95-100	300		
100-105	580		
105-110	480		
110-115	340		
115-120	360		
120-125	400		
125-130	800		
130-135	760		
135-140	620		
140-145	620		
145-150	720		

0064

LOG OF BOREHOLE No. 404/263

Area: BOOLOOROO Dip: 60° N Date: June/July 1970.

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu, ppm	Cu (%)	Remarks
0- 5	missing		
5- 10	320		
10- 15	90		
15- 20	70		
20- 25	120		
25- 30	160		
30- 35	940		
35- 40	1,380		
40- 45	540		
45- 50	380		
50- 55	880		
55- 60	1,060		
60- 65	3,200		
65- 70	20,500	1.42	
70- 75	8,800		
75- 80	2,400		
80- 85	1,120		
85- 90	1,140		
90- 95	1,020		
95-100	740		
100-105	480		
105-110	420		
110-115	460		
115-120	440		
120-125	440		
125-130	640		
130-135	200		
135-140	220		
140-145	280		
145-150	380		

0065

LOG OF BOREHOLE NO. 398/272

Area: BOOLOOROO Dip: 70° Date: 15-12-70

Drilled by: INVESTIGATION DRILLING PTYL LTD

Depth	Cu'ppm (Cu%)	Colour	Remarks
5- 10	70	White	
10- 15	25	"	
15- 20	20	"	
20- 25	40	"	
25- 30	40	Pale Pink	No
30- 35	30	White	
35- 40	40	"	
X40- 45	50	Pale Pink	Visible
45- 50	60	"	
50- 55	50	White	
55- 60	55	"	Sulphides
60- 65	60	"	
65- 70	70	"	
70- 75	90X	V.L. Brown	
75- 80	220	Brown	
80- 85	80	"	Sulphides
85- 90	970	"	
90- 95	1600	"	
95-100	320	"	
100-105	420	"	
105-110	120	Grey	Minor sulphides
110-115	130	Brown	
115-120	50	"	
120-125	140	"	
125-130	150	Grey	Considerable pyritic sulph's
130-135	55	"	Minor "
135-140	80	"	
140-145	60	"	
145-150	95	"	
150-155	"40	"	
155-160	90	"	
160-165	50	Brown	Minor "
165-170	100	Grey	"
170-175	45	Brown	"
175-180	65	"	"
180-185	50	"	Minor "
185-190	60	Grey	"
190-195	55	"	"
195-200	75	Brown	"
200-205	70	"	"
205-210	100	"	"
210-215	50	"	"
215-220	70	"	"
220-225	80	"	Minor
225-230	60	Brown	Sulphides
230-235	100	"	"
235-240	75	"	"
240-245	75	"	"
245-250	210	"	"

0066

LOG OF BOREHOLE No. 398/276

Area: BOOLOOROO Dip: 70°N Date: 14-12-70
Drilled by: R.W. O'Neill

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5 - 10	40		Mauve	
10 - 15	40		Mauve	
15 - 20	40		Mauve	
20 - 25	45		Mauve	
25 - 30	110		Brown	
30 - 35	150		Brown	
35 - 40	110		Yellow Brown	
40 - 45	75		L. Brown	
45 - 50	65		Pink	No evidence of mineralisation
50 - 55	60		"	
55 - 60	80		L. Brown	
60 - 65	100		L. Brown	
65 - 70	85		Pink	
70 - 75	90		Pink	
75 - 80	90		Pink	
80 - 85	100		Pink	
85 - 90	80		Mauve	
90 - 95	80		Mauve	
95 - 100	40		Pink	
100- 105	35		Off White	
105- 110	30		White	
110- 115	30		Creamy	
115- 120	50		White	
120- 125	30		White	
125- 130	25		B. Grey	
130- 135	50		B. Grey	Minor pyritic sulphides
135- 140	200		B. Grey	" "
140- 145	980		Dark Brown	" "
145- 150	170		Dark Brown	" "
150- 155	55		Dark Brown	" "
155- 160	50		Dark Brown	" "
160- 165	85		Dark Brown	" "
165- 170	45		" "	" "
170- 175	60		" "	" "
175- 180	50		" "	" "
180- 185	65		" "	" "
185- 190	55		" "	" "
190- 195	65		" "	" "
195- 200	50		" "	" "
200- 205	45		Dark Grey	" "
205- 210	70		" "	" "
210- 215	1,000		" "	" "
215- 220	430		L. Brown	" "
220- 225	260		V.L. Brown	" "
225- 230	130		V.L. Brown	Minor pyritic sulphides
230- 235	2,400		" "	" "
235- 240	3,300		Off White	" "
240- 245	1,700		Off White	" "
245- 250	930		Off White	" "

0067

LOG OF BOREHOLE No. 398/280

Area: BOOLOOROO Dip: 70°N Date: 13-12-70

Drilled by: R.W. O'Neill

Depth	Cu,ppm (Cu)%	Colour	Remarks
5- 10	25	White	
10- 15	20	Mauve	
15- 20	25	Mauve	
20- 25	25	Pink	
25- 30	20	Mauve	
30- 35	20	Mauve	
35- 40	20	Mauve	
40- 45	25	White	
45- 50	45	Mauve	
50- 55	25	Pink	No visible mineralisation
55- 60	35	Mauve	
60- 65	55	Mauve	
65- 70	85	Mauve	
70- 75	45	Mauve	
75- 80	55	Mauve	
80- 85	65	Mauve	
85- 90	95	Mauve	
90- 95	100	Pink	
95-100	60	Pink	
100-110	40	Pink	
110-115	40	Red	
115-120	30	Red	
120-125	30	Dark Brown	Carbonaceous shale
125-130	30	Dark Brown	
130-135	35	Dark Brown	
135-140	40	Dark Brown	Pyritic Sulphides .5%
140-145	85	Dark Brown	" " .5%
145-150	55	"	" " .17%
150-155	40	"	" " .3%
155-160	90	"	" " 27.%
160-165	70	"	" " .75%
165-170	90	"	" " 3.%
170-175	90	"	" " 2.5%
175-180	110	B. Grey	" " 1.5%
180-185	220	"	" " 17.%
185-190	880	Brown	" " .5%
195-200	460	L. Brown	Minor Sulphides
200-205	170	V.L. Brown	" "
205-210	230	"	" "
210-215	250	L. Brown	" "
215-220	440	L. Brown	" "
220-225	350	L. Brown	" "
225-230	390	V.L. Brown	" "
230-235	250	L. Brown	" "
235-240	190	L. Brown	
240-245	120	L. Brown	Sulphides
245-250	180	V.L. Grey	

0068

LOG OF BOREHOLE No. 396/284

Area: BOOLOOROO Dip: 70° N Date: 24/25-10-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	40		L. Brown	
10- 15	40		Pink	
15- 20	110		L. Brown	
20- 25	120		"	
25- 30	100		"	
30- 35	250		"	
35- 40	20		Pinkish	
40- 45	40		L. Brown	
45- 50	10		"	
50- 55	10		Creamy	
55- 60	10		"	Sulphides as quoted
60- 65	20		L. Brown	below are Total
65- 70	30		Creamy	Sulphides of a
70- 75	10		Pinkish	Pyritic nature sug-
75- 80	10		M. Brown	gestive of
80- 85	20		"	Chalcopyrite
85- 90	20		Creamy	
90- 95	10		L. Brown	
95-100	15		"	
100-105	20		Brown	
105-110	30		"	
110-115	35		"	
115-120	30		Pinkish	
120-125	30		Brown	
125-130	40		B. Grey	Sulphide
130-135	35		D. Grey	"
135-140	45		"	"
140-145	90		D. Brown	"
145-150	90		D. Grey	"
150-155	270		D. Brown	Minor Sulphides
155-160	210		Brown	Considerable "
160-165	300		D. Brown	Minor "
165-170	240		"	"
170-175	190		"	"
175-180	130		"	Considerable Sulphides
180-185	65		"	"
185-190	55		"	"
190-195	70		"	"
195-200	80		"	"
200-205	50		"	"
205-210	65		"	"
210-215	70		"	"
215-220	60		"	"
220-225	55		"	"
225-230	240		"	"
230-235	2,000		Blue Grey	
235-240	3,100		L.B. Grey	
240-245	3,300		" "	

LOG OF BOREHOLE No. 399/284

Area: BOOLOOROO Dip: 70°N Date: 12/13-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu.PPm (Cu %)	Colour	Remarks
5- 10	45	Pale Mauve	
10- 15	35	Mauve	
15- 20	35	Mauve	
20- 25	40	Mauve	
25- 30	110	L. Brown	
30- 35	35	Pinkish	
35- 40	50	L. Brown	
40- 45	30	V.L. Brown	
45- 50	30	V.L. Brown	
50- 55	30	V.L. Brown	
55- 60	50	White	No
60- 65	45	White	visible
65- 70	35	L. Brown	mineral-
70- 75	30	Pinkish	isation
75- 80	25	Pinkish	
80- 85	45	R. Brown	
85- 90	45	R. Brown	
90- 95	50	R. Brown	
95-100	95	R. Brown	
100-105	50	R. Brown	
105-110	55	Brown	
110-115	120	D. Brown	Sulphides
115-120	65	D. Brown	Sulphides
120-125	80	D. Brown	Sulphides
125-130	50	Black	Sulphides
130-135	75	B. Grey	Considerable pyritic sulph's
135-140	80	B. Grey	" " "
140-145	170	B. Grey	" " "
145-150	520	B. Grey	" " "
150-155	2500	B. Grey	Minor chalcocite
155-160	21000 2.1	"	" "
160-165	1100	L. Brown	" "
165-170	870	V.L. Brown	
170-175	380	V.L. Brown	
175-180	380	V.L. Brown	
180-185	400	Creamy	
185-190	480	Creamy	
190-195	560	Creamy	
195-200	980	Creamy	
200-205	630	Off White	
205-210	380	V.L. Grey	Malachite
210-215	3100	V.L. Grey	" Sulphides
215-220	4600	V.L. Grey	"
220-225	.....	Off White	
225-230	1300	Off White	Sulphides
230-235	.....	Off White	
235-240	2200	Off White	
240-245	1400	Off White	
245-250	1700	Off White	

0070

LOG OF BOREHOLE No. 396/288

Area: BOOLOOROO Dip: 70° N Date: 23/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	30		Pink	
10- 15	50		L. Brown	
15- 20	150		Creamy	
20- 25	220		"	
25- 30	250		Pinkish	
30- 35	200		Creamy	
35- 40	540		"	
40- 45	380		"	
45- 50	240		L. Brown	
50- 55	120		Pinkish	
55- 60	150		"	
60- 65	1,600		Brown	
65- 70	290		"	
70- 75	150		L. Brown	Sulphides Quoted
75- 80	270		"	below are Total
80- 85	1,500		"	Sulphides
85- 90	220		"	Pyritic Sulphides
90- 95	130		"	Chalcopyrite appear-
95-100	100		"	ance.
100-105	280		"	
105-110	90		"	
110-115	140		Brown	
115-120	60		"	Minor Sulphides
120-125	720		D. Brown	Considerable Sulphides
125-130	980		D. "	" "
130-135	1,500		D. "	" "
135-140	1,400		D. Brown	" "
140-145	230		Brown	" "
145-150	180		L. Brown	Minor Sulphides
150-155	170		R. Brown	Tr
155-160	110		Red	Tr
160-165	90		Red	-
165-170	70		Brown	Tr
170-175	240		D. Brown	Considerable Sulphides
175-180	90		"	" "
180-185	60		"	" "
185-190	50		D. Blue Grey	" "
190-195	45		D. Brown	" "
195-200	45		D. "	" "
200-205	90		D. "	" "
205-210	240		V.D. Brown	" "
210-215	950		D. Blue	" "
215-220	10,000	1.0	D.B. Grey	Chalcocite
220-225	7,800	0.78	B. Grey	"
225-230	1,600		L. Brown	Tr
230-235	1,200		V.L. Brown	Tr
235-240	440		L. Pink	Tr
240-245	270		"	Tr
245-250	150		"	-

0071

LOG OF BOREHOLE No. 398/288

Area: BOOLOOROO Dip: 70°N Date 11-12-80

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu,ppm	(Cu %)	Colour	Remarks
5- 10	60		L. Brown	
10- 15	65		L. Brown	
15- 20	45		L. Brown	
20-25	55		Mauve	
25- 30	20		Mauve	
30- 35	30		Mauve	
35- 40	20		Brown	
40- 45	40		L. Brown	
45- 50	30		V.L. Brown	
50- 55	50		Y. Brown	
55- 60	55		L. Brown	
60- 65	75		L. Brown	
65- 70	140		Pinkish	
70- 75	170		Pinkish	
75- 80	90		Pink	
80- 85	150		Pink	No visible mineral-isation
85- 90	80		Creamy	
90- 95	70		Creamy	
95-100	75		Off White	
100-105	400		L. Brown	
105-110	080		Off White	
110-115	460		Off Brown	
115-120	680		Pink	
120-125	530		V.L. Brown	
125-130	340		Off White	
130-135	300		Off White	
135-140	240		Off White	
140-145	2800		L. Brown	
145-150	10000	1.0	L. Brown	
150-155	1500		Mauve	
155-160	520		Pink	
160-165	400		Pink	
165-170	410		V.L. Brown	
170-175	920		V.L. Brown	Malachite
175-180	530		Pale Pink	
180-185	400		Off White	
185-190	680		Creamy	
190-195	750		Creamy	
195-200	3300		Creamy	Minor Malachite
200-205	830		Pale Pink	"
205-210	470	Pink	Pale Pink	"
210-215	1700		White	"
215-220	920		White	"
220-225	1400		Creamy	
225-230	2500		Creamy	
230-235	1400		Creamy	
235-240	1000		Creamy	
240-245	550		Creamy	
245-250	540		Creamy	

0072

LOG OF BOREHOLE No. 396/292

Area: BOOLOOROO Dip: 70° N Date: 23/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	250		L. Brown	This hole is a
10- 15	450		"	redrill due to Cave-
15- 20	480		"	in.
20- 25	800		"	
25- 30	1,200		"	
30- 35	700		Brown	Exact position
35- 40	240		L. Brown	20 feet east of
40- 45	280		"	396/292.
45- 50	280		"	
50- 55	710		"	
55- 60	55		"	
60- 65	50		"	
65- 70	35		"	
70- 75	40		Pinkish	
75- 80	40		"	
80- 85	45		L. Brown	
85- 90	40		"	
90- 95	45		"	
95-100	40		"	
100-105	85		"	
105-110	60		"	
110-115	25		Pinkish	
115-120	30		L. Brown	
120-125	30		Pinkish	
125-130	35		"	
130-135	35		Pinkish	
135-140	60		Pink	
140-145	70		"	
145-150	55		"	Possible Tr Sulphides
150-155	40		"	
155-160	50		"	
160-165	40		D. Brown	Tr Sulphides
165-170	40		D. Grey	Minor Sulphides
170-175	60		"	Pyritic Sulphides
175-180	90		D. Brown	1% Chalcocite
180-185	45		D. Grey	"
185-190	70		"	"
190-195	170		D. Brown	"
195-200	1,100		D. Grey	"
200-205	1,000		"	"
205-210	1,700		"	"
210-215	2,800		Grey	"
215-220	4,100		"	"
220-225	400		L. Grey	Minor "
225-230	320		L. Grey	Minor Sulphides
230-235	560		"	" "
235-240	2,500		L. Grey	.5% "
240-245	4,700		"	.5% "
245-250	960		"	Minor "
250-255	1,000		L. Brown	.5% "
255-260	740		L. Grey	Minor "

LOG OF BOREHOLE No. 398/292

Area: BOOLCOROO Dip: 70°N Date 10/11-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu,ppm	(Cu %)	Colour	Remarks
5- 10	260		Y. Brown	
10- 15	100		Y. Brown	
15- 20	300		L. Brown	
20- 25	530		L. Brown	
25- 30	120		L. Brown	
30- 35	75		L. Brown	
35- 40	60		P. Mauve	
40- 45	150		L. Brown	
45- 50	370		Mauve	
50- 55	400		Mauve	
55- 60	90		P. Mauve	No visible mineral-isation
60- 65	801		L. Brown	
65 - 70	130		L. Mauve	
70- 75	110		Mauve	
75- 80	75		L. Brown	
80- 85	130		L. Pink	
85 -90	120		L. Pink	
90- 95	220		Pink	
95-100	160		Pink	
100-105	130		L. Brown	
105-110	310		L. Pink	
110-115	700		White	
115-120	1800		Creamy	
120-125	3400		White	Minor Malachite
125-130	670		L. Grey	"
130-135	300		Off White	
135-140	8200	0.82	Off White	Minor Malachite
140-145	1900		Off White	"
145-150	2200		Off White	
150-155	1100		Off White	"
155-160	1100		L. Brown	"
160-165	510		Off White	"
165-170	230		Creamy	
170-175	1000		Y. Brown	
175-180	650		Pale Y. Brown	
180-185	740		Creamy	
185-190	4100		Creamy	
190-195	3400		Creamy	
195-200	2300		Creamy	
200-205	1800		Creamy	
205-210	1200		Creamy	
210-215	780		Creamy	
215-220	600		Creamy	
220-225	470		L. Brown	
225-230	310		L. Brown	
230-235	270		L. Brown	
235-240	240		L. Brown	
240-245	170		L. Brown	
245-250	140		L. Brown	

0074

LOG OF BOREHOLE No. 396/296

Area: BOOLOOROO Dip: 70° N Date: 15/16-10-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Zn(%)	Colour	Remarks
5- 10	40			L. Brown	
10- 15	25			"	
15- 20	15			"	
20- 25	15			"	
25- 30	20			"	
30- 35	25			"	
35- 40	35			"	
40- 45	20			"	
45- 50	35			"	
50- 55	20			"	
55- 60	60			Grey	
60- 65	30			"	
65- 70	30			"	
70- 75	30			"	
75- 80	35			B. Grey	
80- 85	30			"	Cavity necessary to
85- 90	25			Brown	plaster hole before
90- 95	60			"	continuing drilling
95-100	90			"	
100-105	75			R. Brown	
105-110	50			Red	
110-115	60			"	
115-120	50			R. Brown	Possible Chalcocite
120-125	50			"	
125-130	20			L. Brown	throughout (Minor)
130-135	30			"	
135-140	50			M. Brown	Pyrite
140-145	40			D. Brown	"
145-150	50			Black	"
150-155	60			D. Brown	"
155-160	55			"	"
160-165	45	Cu% (Amdel)	Zn% (Amdel)	Black	"
165-170	40	.008	0.005	D. Brown	"
170-175	80	.005	< 0.005	"	"
175-180	1,300	.14	< 0.005	Black	"
180-185	1,400	.15	< 0.005	Grey	"
185-190	2,000			L. Grey	" Chalcocite .5%
190-195				"	" .53%
195-200	850			"	Minor Sulphides
200-205	2,600	.30		Pinkish	"
205-210	2,800	.33		"	"
210-215	3,600	.37		"	"
215-220	850	.10		"	"
220-225	520			"	"
225-230	520			Brown	Hole abandoned due to water.

0075

LOG OF BOREHOLE No. 398/296

Area: WOOLOOROO Dip: 70°N Date: 9-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu.ppm	(Cu %)	Colour	Remarks
5- 10	60		Mauve	
10- 15	55		Mauve	
15- 20	50		Pink	
20- 25	60		Pink	
25- 30	45		L. Brown	
30- 35	260		L. Brown	
35- 40	1000		L. Brown	
40- 45	170		L. Brown	
45- 50	50		L. Brown	
50- 55	50		L. Brown	
55- 60	50		L. Brown	
60- 65	50		L. Brown	Azurite
65- 70	35		Pink	
70- 75	190		Pink	
75- 80	600		L. Brown	
80- 85	3400		L. Brown	
85- 90	1500		V.L. Brown	
90- 95	3100		V.L. Grey	
95-100	8800	0.88	L. Brown	Azurite
100-105	800		L. Brown	
105-110	1800		V.L. Brown	
110-115	8200	0.82	V.L. Brown	Malachite
115-120	1600		V.L. Brown	Malachite
120-125	24000)		Off White	Malachite
125-130	8000)	1.34	L. Brown	Minor Malachite
130-135	8400)		Y. Brown	"
135-140	6500	0.65	Creamy	"
140-145	3300		Y. Brown	
145-150	4500		Y. Brown	"
150-155	2300		V.L. Brown	Minor Malachite
155-160	2700		L. Brown	"
160-165	1700		V.L.Y. Brown	"
165-170	1900		"	
170-175	1700		V.L. Brown	
175-180	460		"	
180-185	1100		"	
185-190	910		Y. Brown	
190-195	700		L.Y. Brown	
195-200	1300		Off White	
200-205	710		L. Brown	
205-210	530		"	
210-215	350		Off White	
215-220	170		"	
220-225	190		L. Grey	

0076

LOG OF BOREHOLE No. 396/300

Area: BOOLOOROO Dip: 70° N Date: 21/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	20		L. Brown	
10- 15	20		"	
15- 20	20		"	
20- 25	15		"	
25- 30	20		"	
30- 35	10		"	
35- 40	10		"	
40- 45	10		"	
45- 50	15		"	
50- 55	130		"	
55- 60	110		"	
60- 65	350		"	
65- 70	160		Pink	
70- 75	100		L. Brown	
75- 80	60		R. Brown	
80- 85	130		"	
85- 90	110		"	
90- 95	70		Pinkish	
95-100	50		"	
100-105	35		"	
105-110	40		"	
110-115	20		"	
115-120	100		"	
120-125	200		"	
125-130	60		R. Brown	
130-135	300		L. Brown	
135-140	480		"	
140-145	800		"	
145-150	1,600		Brown	
150-155	1,200		"	
155-160	1,400		L. Brown	Tr Pyrite
160-165	1,200		V.L. Brown	"
165-170	4,800		Pinkish	"
170-175	1,300		V.L. Pink	"
175-180	1,300		"	
180-185	400		"	
185-190	1,600		Creamy	
190-195	760		"	
195-200	480		"	
200-205	760		L. Pink	
205-210	600		"	Tr
210-215	600		Creamy	
215-220	400		"	
220-225	460		"	Tr
225-230	350		Creamy	Pyrite
230-235	170		"	"
235-240	100		"	"

0077

LOG OF BOREHOLE No. 398/300

Area: BOOLOOROO Dip: 70°N Date: 9-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu.ppm	(Cu%)	Colour	Remarks
5- 10	50		L. Brown	
10- 15	40		L. Brown	
15- 20	50		L. Brown	
20- 25	50		L. Brown	
25- 30	90		Pink	
30- 35	120		Pink	
35- 40	60		Pink	
40- 45	110		Pink	
45- 50	110		Pink	
50- 55	70		Pink	
55- 60	120		Pink	
60- 65	130		L. Brown	
65- 70	240		L. Brown	
70- 75	780		L. Brown	
75- 80	2300		L. Brown	Malachite
80- 85	580		V.L. Brown	
85- 90	4000		V.L. Brown	"
90- 95	500		White	
95-100	550		White	Malachite
100-105	3300		Creamy	"
105-110	6300)	0.56	White	Minor Malachite
110-115	4800)		White	
115-120	2200		White	"
120-125	1500		Creamy	"
125-130	450		Creamy	"
130-135	370		Creamy	"
135-140	1900		L. Brown	Sample damp ground
140-145	200		L. Brown	
145-150	320		L. Brown	
150-155	270		L. Brown	
155-160	950		L. Brown	
160-165	300		L. Brown	
165-170	440		L. Brown	
170-175	80		L. Brown	
175-180	65		L. Brown	
180-185	230		L. Brown	
185-190	540		L. Brown	
190-195	240		L. Brown	
195-200	140		L. Brown	
200-205	110		L. Brown	
205-210	85		L. Brown	
210-215	190		L. Brown	
215-220	70		L. Brown	
220-225	80		L. Brown	
225-230	45		V.L. Brown	No visible mineral-isation
230-235	75		V.L. Brown	
235-240	70		V.L. Brown	
240-245	80		V.L. Brown	
245-250	600		V.L. Brown	

0078 LOG OF BOREHOLE No. 394/304

Area: BOOLOOROO Dip 90° Date 21-1-71

Drilled by: BORING ENTERPRISES

(percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
0-10	40		Very L. Brown	-
10-15	40		"	-
15-20	30		"	Minor Limonite
20-25	30		"	-
25-30	40		Ginger Brown	Some Hematate
30-35	30		"	"
35-40	40		Lt. Brown	-
40-45	30		mid. Brown	-
45-50	10		"	Lge pieces Hematite
50-55	15		"	-
55-60	15		"	-
60-65	10		Ginger brown	-
65-70	10		"	-
70-75	20		"	-
75-80	20		"	-
80-85	10		Mid. Brown	-
85-90	10		Lt. Brown	-
90-95	10		"	Hematite pieces
95-100	15		"	-
100-105	20		"	-
105-110	20		mid. brown	Minor Hematite
110-115	20		"	"
115-120	25		"	Large pieces Hematite
120-125	30		"	Minor Hematite
125-130	30		Lt. brown	-
130-135	20		"	" "
135-140	35		"	-
140-145	40		"	-
145-150	60		"	-
150-155	40		"	Minor Hematite
155-160	40		mid. brown	consid. "
160-165	70		"	
165-170	180		Dark grey	Minor pyritic sulphides
170-175	1,500		"	" " "
175-180	1,200		"	" " "
180-185	2,000		Dark Brown	some Hematite
185-190	1,600		" (Water)	" pyritic sulphides
190-195	1,200		Blue Grey	" " "
195-200	7,800	0.78	"	" " "
200-205	1,900		"	1½% " "
205-210	920		Brown	5% " "
210-215	5,000	0.5	"	3% " "
215-220	1,300		"	1% " "
220-225	2,200		Blue grey	1% " "
225-230	800		"	Minor " "
230-235	900		"	" " "
235-240	290		"	" " "
240-245	460		"	" " "
245-250	1,200		"	" " "
250-255	800		"	" " "
255-260	700		"	" " "
260-265	1,000		"	" " "
265-270	3,000		"	" " "
270-275	1,300		"	" " "
275-280	500		"	" " "
280-285	2,300		"	" " "
285-290	600		"	" " "

LOG OF BOREHOLE No. 33/30 Dip 90° Date 21-1-71

Depth	Cu, ppm	Cu (%)	Colour	Remarks
290-295	1,000		Blue grey	Minor pyritic sulphides
295-300	850		"	" " "
300-305	1,100		"	" " "
305-310	800		"	Considerable sulphides
310-315	55,000		mid brown	3% Malachite, azurite, nat. copper & Red Oxide
315-320	9,000	2.85	L. Brown	.5% Malachite
320-325	11,000		"	1% "
325-330	28,000		Mauve	2% "
330-335	900		L. Brown	Minor "
335-340	190		"	Tr "
340-345	260		"	.5% "
345-350	15,000	1.5	"	Minor "
350-355	500		Mauve	-
355-360	1,100		"	Contaminated
360-365	1,000		"	- "
365-370	500		pale Mauve	- "
370-375	2,300		"	"
375-380	1,200		"	"
380-385	7,000	Ø 7	"	"

Hole abandoned due to caving below 350 ft.
5'" Button Bit throughout
Water estimated 5000 G.P.H.
No cores taken.

0080

LOG OF BOREHOLE No. 396/304

Area: BOOLOOROO Dip: 80° N Date: 6/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
3- 5'	65		L. Brown	Silstone
5- 10	50		"	
10- 15	50		"	
15- 20	45		Brown	
20- 25	65		"	
25- 30	65		D. Brown	
30- 35	160		Red Brown	Ironstained
35- 40	80		"	
40- 45	340		"	
45- 50	290		Red	
50- 55	290		"	
55- 60	200		"	
60- 65	130		"	
65- 70	170		"	
70- 75	360		"	
75- 80	170		"	
80- 85	100		"	
85- 90	200		Brick Red	
90- 95	250		"	
95-100	130		Red	
100-105	390		"	
105-110	2,100		"	
110-115	1,500		"	
115-120	1,300		Red Brown	
120-125	1,500		Ironised	
125-130	4,400	-	"	
130-135	8,700		L. Brown	
135-140	2,400		"	
140-145	6,700	0.52	"	
145-150	2,300		"	
150-155	6,700		"	
155-160	6,700		"	
160-165	3,900		Light Pink	
165-170	1,400	-	" "	
170-175	670		" "	
175-180	490		Brown	
180-185	780		Light Brown	
185-190	320		" "	
190-195	430		" "	
195-200	350		" "	
200-205	430		" "	
205-210	680		" "	
210-212	missing		" "	Hole abandoned due to cave-in at depth.

LOG OF BOREHOLE No. 397/304

Area: BOOLOOROO Dip: 55° N Date: June/July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu, ppm	Cu (%)	Remarks
0- 5	1,300		
5- 10	700		
10- 15	160		
15- 20	130		
20- 25	100		
25- 30	190		
30- 35	210		
35- 40	190		
40- 45	460		
45- 50	370		
50- 55	670		
55- 60	870		
60- 65	950		
65- 70	16,000	1.24	
70- 75	8,800		
75- 80	4,800		
80- 85	4,500		
85- 90	2,300		
90- 95	2,000		
95-100	3,000		
100-105	4,100		
105-110	5,400	0.54	
110-115	4,700		
115-120	1,600		
120-125	1,200		
125-130	1,800		
130-135	2,300		
135-140	2,600		
140-145	1,700		
145-150	930		

0082

LOG OF BOREHOLE No. 398/304

Area: BOOLOOROO Dip: 35° N Date: June/July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu,ppm	Cu(%)	Remarks
0- 5	missing		
5- 10	"		
10- 15	710		
15- 20	920		
20- 25	1,200		
25- 30	2,700		
30- 35	5,400	-0.54	
35- 40	2,100		
40- 45	2,200		
45- 50	1,800		
50- 55	2,300		
55- 60	850		
60- 65	920		
65- 70	820		
70- 75	1,600		
75- 80	1,500		
80- 85	1,100		
85- 90	830		
90- 95	830		
95-100	1,100		
100-105	2,000		
105-110	2,700		
110-115	1,500		
115-120	590		
120-125	320		
125-130	240		
130-135	230		
135-140	430		

0083

LOG OF BOREHOLE No. 398/304

Area: BOOLOOROO Dip: 55° N Date: June/July 1970

Drilled by: S.A. DEPARTMENT OF MINES

Depth	Cu,ppm	Cu(%)	Remarks
0- 5	240		
5- 10	280		
10- 15	170		
15- 20	240		
20- 25	2,300		
25- 30	3,900		
30- 35	5,700	~0.57	
35- 40	2,900		
40- 45	980		
45- 50	470		
50- 55	610		
55- 60	1,500		
60- 65	920		
65- 70	1,700		
70- 75	650		
75- 80	1,700		
80- 85	800		
85- 90	890		
90- 95	600		
95-100	860		
100-105	9,000	~0.9	
105-110	2,700		
110-115	1,800		
115-120	980		
120-125	280		
125-130	220		
130-135	230		
135-140	310		
140-145	180		
145-150	150		

0084

LOG OF BOREHOLE No. 394/308

Area: BOOLOOROO Dip: 70° N Date: [illegible]

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	600		Light Brown	
10- 15	650		"	
15- 20	420		"	
20- 25	450		Yellow Brown	
25- 30	50		"	
30- 35	50		"	
35- 40	90		"	
40- 45	150		"	
45- 50	150		"	
50- 55	140		"	
55- 60	100		"	
60- 65	90		"	
65- 70	80		"	
70- 75	200		"	
75- 80	420		"	
80- 85	600		"	
85- 90	700		Brown	
90- 95	400		Red Brown	
95-100	550		"	
100-105	580		"	
105-110	1,500		"	
110-115	900		"	
115-120	1,200		"	
120-125	900		"	
125-130	950		"	
130-135	1,300		"	
135-140	1,200		"	
140-145	1,000		Red Brown	
145-150	1,600		V.Dark Brown	
150-155	450		Dark Grey	Pyritic Sulphides
155-160	850		" Brown	" "
160-165	2,600		V.Dark Brown	Minor Sulph & Oxides
165-170	13,000	1.3	"	" "
170-175	1,300		Light Brown	Minor Oxides
175-180	1,100		" "	Tr "
180-185	700		" "	
185-190	250		" "	
190-195	700		" "	
195-200	550		" "	
200-205	700		" "	
205-210	360		" "	
210-215	430		" "	
215-220	350		" "	
220-225	360		" "	
225-230	360		" "	
230-235	300		" "	
235-240	250		" "	
240-245	250		" "	
245-250	320		" "	

0085

LOG OF BOREHOLE No. 392/312.

Area: BOOLOOROO Dip 90° Date 23/27-1-71

Drilled by: BORING ENTERPRISES

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5-10	560		Mauve	-
10-15	180		Off white	Some Hematite
15-20	180		Creamy	-
20-25	290		"	-
25-30	220		White	-
30-35	500		"	-
35-40	650		L. Brown	-
40-45	330		White	-
45-50	130		"	-
50-55	280		Creamy	-
55-60	370		L. Brown	-
60-65	600		"	-
65-70	1,700		"	Tr Malachite
70-75	8,000	0.8	mid Brown	Minor "
75-80	10,000	1.0	"	" "
80-85	2,000		"	- -
85-90	2,300		Yellow brown	- -
90-95	700		"	- -
95-100	1,000		"	- -
100-105	600		"	- -
105-110	780		"	- -
110-115	310		Creamy	- -
115-120	300		"	- -
120-125	330		"	- -
125-130	220		Off white	- -
130-135	40		"	- -
135-140	310		"	Tr Malachite
140-145	900		L. Brown	-
145-150	330		"	-
150-155	140		"	-
155-160	110		Off white	-
160-165	70		"	-
165-170	500		L. Brown	-
170-175	160		Off white	-
175-180	170		"	-
180-185	150		V. L. Grey	-
185-190	200		L. Grey	-
190-195	180		"	-
195-200	60		"	-
200-205	2,800		Grey	Tr Pyritic sulphides
205-210	1,100		B. Grey	Tr " "
210-215	200		"	Tr " "
215-220	4,500		"	Minor copper
220-225	3,400		"	" " Trc metallic copper
225-230	650		"	Minor copper " "
230-235	140		"	Tr pyritic sulphides
235-240	140		"	Minor copper
240-245	240		"	Tr pyritic sulphides
245-250	230		"	" " "
250-255	480		"	Minor " "
255-260	120		"	" " "
260-265	440		R. Brown	" " "
265-270	100		B. Grey	" " "
270-275	210		"	" " "
275-280	390		R. Brown	Moderate " "
280-285	560		"	Minor " "
285-290	2,200		"	Minor " "
290-295	2,000		"	" " "

Log of Borehole No. 392/312 Dip 90° Date 23/27 -1-71

Depth	Cu,ppm	Cu(%)	Colour	Remarks
295-300	7,600 -	0.58	B. Grey	Moderate pyritic sulph.
300-305	4,100 -		"	Minor " "
305-310	2,200		"	Consid. " "
310-315	800		"	Moderate " "
315-320	550		"	Minor " "
320-325	2,000		R. Brown	Moderate " "
325-330	2,400		"	" " "
330-335	2,800		"	Minor " "
335-340	2,000		"	" " "
340-345	1,900		B. Grey	Consid. " "
345-350	1,400		"	" " "
350-355	3,100		"	Minor " "
355-360	4,000		"	Tr " "
360-365	1,000		Grey & Mauve	-
365-370	500 -		V.L. Brown	Tr malachite, Quartzchip
370-375	12,000		some mauve L. Brown	-
375-380	11,000		Mauve	.5% Malachite
380-385	2,200	1.13	"	Minor " some Limonite
385-390	10,000		"	" " " "
390-395	5,000		"	.5% "
395-400	27,000 -		"	Tr "
400-405	1,300		"	Tr "
405-410	300		Grey & Mauve	- Some Hematite
410-415	400		L. Grey	Minor sulphides
415-420	600		V.L. Grey	" "
420-425	800		"	Tr "
425-430	350		"	Tr "
430-435	450		"	Minor "
435-440	120		"	" "
440-445	210		"	Tr "
445-450	280		"	" "
450-455				

5 5/8" Button Bit o' - 350ft
5" Casing to 350ft.
4" Roller Cone 350' - 450 ft.
Coring not possible. Hole abandoned after passing through one zone and drilling 35 ft into V.L. Grey sandstone. Sulphides as listed 410-450 ft in Sandstone possible black pyrite.

0087

LOG OF BOREHOLE No. 396/312

Area: BOOLOOROO Dip: 70°N Date:

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	1,100			
10- 15	700			
15- 20	320			
20- 25	missing			
25- 30	410			
30- 35	500	-		
35- 40	30,000			
40- 45	8,500	1.62		
45- 50	10,000	-		
50- 55	2,200			
55- 60	3,600			
60- 65	3,600			
65- 70	1,800			
70- 75	1,300			
75- 80	1,200			
80- 85	980			
85- 90	900			
90- 95	700			
95-100	900			
100-105	920			
105-110	820			
110-115	600			
115-120	550			
120-125	600			
125-130	750			
130-135	800			
135-140	800			
140-145	500			
145-150	880			
150-155	550			
155-160	1,100			

0088 LOG OF BOREHOLE No. 396/312

Area: BOOLOOROO Dip: 70°N Date: 9-12-70

Drilled by: R.W. O'Neill

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5 - 10	1,100		White	
10 - 15	700		Creamy	
15-- 20	320		"	
20 - 25	missing		Pink	
25 - 30	410		"	
30 - 35	500		Off White	Malachite
35 - 40	30,000		Lt. Pink	Azurite & Malachite
40 - 45	8,500	1.62	"	.5 Azurite
45 - 50	10,000		Pink	.5 Malachite
50 - 55	2,200		"	Minor "
55 - 60	3,600		Lt. Brown	.4 "
60 - 65	3,600		V.L. Brown	Minor "
65 - 70	1,800		L. Brown	" "
70 - 75	1,300		V.L. Brown	
75 - 80	1,200		"	
80 - 85	980		"	
85 - 90	900		"	
90 - 95	700		"	No further mineralisation evident
95 - 100	900		"	
100 - 105	920		"	
105 - 110	820		"	
110 - 115	600		"	
115 - 120	550		"	
120 - 125	600		"	
125 - 130	750		"	
130 - 135	800		"	
135 - 140	800		"	
140 - 145	500		"	
145 - 150	880		"	
150 - 155	550		"	
155 - 160	1,100		"	
160 - 165	520		"	
165 - 170	650		"	
170 - 175	700		"	
175 - 180	1,500		"	
180 - 185	1,900		"	
185 - 190	1,900		"	
190 - 195	1,700		"	
195 - 200	1,200		"	
100 - 205	950		"	
200 - 210	1,400		"	

0089

LOG OF BOREHOLE No. 397/316

Area: BOOLOOROO Dip: 70° N Date: 19/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	660		Light Pink	
10- 15	1,500		" Brown	
15- 20	1,100		Pinkish	
20- 25	1,200		Light Brown	
25- 30	610		Pinkish	
30- 35	490		Pink	
35- 40	450		"	
40- 45	400		"	
45- 50	450		"	
50- 55	1,000		Light Brown	
55- 60	520		Pink	
60- 65	900		Pinkish	No Visible Copper
65- 70	1,500		Brown	detected
70- 75	1,300		Yellowish	(5-225')
75- 80	1,300		"	
80- 85	1,300		"	
85- 90	1,200		Pink	Tr Sulphides
90- 95	1,000		"	(225'-230')
95-100	1,300		"	
100-105	1,700		Light Brown	
105-110	1,000		Brownish	
110-115	400		"	
115-120	1,100		"	
120-125	900		"	Hole abandoned
125-130	600		"	at 230 feet, due to
130-135	500		"	water.
135-140	650		"	Small Recovery
140-145	900		"	
145-150	320		Creamy	
150-155	460		Pinkish	
155-160	430		Yellow Brown	
160-165	490		" "	
165-170	370		" "	
170-175	330		Creamy	
175-180	260		"	
180-185	350		"	
185-190	420		"	
190-195	420		"	
195-200	400		"	
200-205	390		"	
205-210	350		"	
210-215	350		"	
215-220	400		"	
220-225	440		"	
225-230	500		Light Brown	Tr Sulphides

0090

LOG OF BOREHOLE No. 395/320

Area: BOOLOOROO Dip: 70° N Date: 7/12/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	2,200		L. Brown	
10- 15	430		"	
15- 20	2,800		"	
20- 25	2,900		"	
25- 30	400		V.L. Brown	
30- 35	500		"	
35- 40	800		"	
40- 45	900		"	
45- 50	2,300		Mid Brown	
50- 55	2,400		"	
55- 60	2,900		"	
60- 65	1,200		"	No Visible
65- 70	1,000		"	
70- 75	1,000		"	Copper
75- 80	3,900		Yellow Brown	
80- 85	1,700		V.L. Brown	throughout
85- 90	1,500		"	
90- 95	1,600		"	5' - 235'
95-100	4,000		Ginger Brown	
100-105	2,300		"	
105-110	6,000	~0.6	"	
110-115	3,300		Yellow Brown	
115-120	3,400		"	
120-125	3,400		Ginger Brown	
125-130	2,600		"	
130-135	2,500		"	
135-140	2,000		Yellow Brown	
140-145	1,900		"	
145-150	2,000		"	
150-155	2,200		"	
155-160	2,100		"	
160-165	1,800		"	
165-170	1,700		"	
170-175	1,000		"	
175-180	1,100		"	
180-185	1,100		"	
185-190	1,000		"	
190-195	1,400		"	
195-200	1,200		"	
200-205	1,300		"	
205-210	1,200		"	
210-215	1,300		"	
215-220	2,000		"	
220-225	2,500		"	
225-230	1,800		"	
230-235	1,900		"	
235-240	1,400		"	
240-245	1,700		"	
245-250	1,500		"	

0091

LOG OF BOREHOLE No. 397/320

Area: BOOLOOROO Dip: 70° N Date: 22-11-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	22,000	-	Pink	Min. Malachite
10- 15	11,000		Red	" "
15- 20	18,000		"	" "
20- 25	14,000		Mauve	.75% Malachite
25- 30	9,200		"	1% "
30- 35	2,100	1.68	Orange	Minor "
35- 40	29,000		Mauve	2% "
40- 45	28,000		V.L. Brown	1% "
45- 50	15,000		L. Brown	.5% "
50- 55	18,000		"	1% "
55- 60	18,000		V.L.Brown	1% "
60- 65	4,000	-	L. Brown	Minor "
65- 70	3,500		"	" "
70- 75	3,500		Orange	" "
75- 80	3,600		L. Brown	Tr "
80- 85	4,000		"	" "
85- 90	2,500		Orange	Iron stained Quartz
90- 95	2,300		"	" " "
95-100	2,400		"	" "
100-105	2,400		Y. Brown	" "
105-110	2,100		"	" "
110-115	1,900		"	" "
115-120	2,400		"	" "
120-125	1,900		"	" "
125-130	2,800		"	Tr "
130-135	2,500		"	" "
135-140	3,000		"	Minor "
140-145	1,700		"	Tr "
145-150	2,400		"	Tr "
150-155	2,500		"	Tr "
155-160	2,300		"	Tr "
160-165	1,700		"	Tr "
165-170	1,700		"	Tr "
170-175	1,700		"	Tr "
175-180	2,000		"	Tr "
180-185	3,600		"	Minor "
185-190	3,500		L. Brown	" "
190-195	4,200		"	" "
195-200	3,500		Brown	" "
200-205	3,900		"	small recovery
205-210	3,200		"	" " (DAMP)

Hole abandoned due to water. 3" Hammer Bit throughout.

0092

LOG OF BOREHOLE No. 397/324

Area: BOOLOOROO Dip: 70° N Date: 18/19-11-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	400		Light Brown	
10- 15	700		" "	
15- 20	10,000	1.0	Brown	Tr Oxide Copper
20- 25	1,000		Light Brown	
25- 30	850		" "	
30- 35	800		" "	
35- 40	1,200		" "	
40- 45	950		" "	
45- 50	500		" "	
50- 55	800		Brown	
55- 60	750		Light Brown	
60- 65	1,000		Creamy	
65- 70	4,200		R Brown	Tr Oxide Copper
70- 75	1,700		Brown	
75- 80	430		"	
80- 85	320		Yellow Brown	Sulphides
85- 90	260		" "	" Considerable
90- 95	150		" "	"
95-100	80		" "	" Quartz
100-105	60		" "	"
105-110	100		" "	" Chips
110-115	60		" "	"
115-120	50		Brown	" Some
120-125	930		"	"
125-130	200		Yellow Brown	" Mica
130-135	40		" "	"
135-140	50		" "	"
140-145	3,000		" "	"
145-150	500		" "	" Minor
150-155	420		Creamy	" Tr
155-160	250		"	" Tr
160-165	450		"	" -
165-170	350		"	" Tr
170-175	270		L Grey	" Tr
175-180	320		Light Brown	" Tr
180-185	2,500		Grey	" Minor
185-190	7,000	0.56	Dark Grey	" "
190-195	4,200		Blue Grey	" "
195-200	10,000	1.0	" "	" "
200-205	8,500	0.64	" "	" "
205-210	4,400		Light Brown	- 0
210-215	3,100		Pink	Native Copper
215-220	2,200		Pinkish	Minor Amounts
220-225	2,700		Pink	210'-225'
225-230	2,800		"	Native Copper
230-235	4,300		"	evident and increas-
235-240	2,100		"	ing towards bottom of hole 210'-240'

0093

LOG OF BOREHOLE NO. 397/328

Area: BOOLOOROO Dip: 70° Date: 15-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu,ppm (Cu%)	Colour	Remarks
5- 10	210	L. Brown	
10- 15	210	"	
15- 20	550	"	
20- 25	100	"	
25- 30	250	"	
30- 35	590	"	
35- 40	320	"	
40- 45	390	"	
45- 50	350	"	
50- 55	490	"	
55- 60	510	"	
60- 65	250	"	
65- 70	510	"	
70- 75	620	"	
75- 80	680	"	
80- 85	870	"	
85- 90	2100	"	
90- 95	1500	"	
95-100	650	"	
100-105	680	"	
105-110	560	"	
110-115	460	"	
115-120	300	"	
120-125	340	"	
125-130	900	"	
130-135	580	"	
135-140	210	V.L. Brown	
140-145	450	L. Brown	
145-150	340	Brown	
150-155	340	"	
155-160	320	"	
160-165	320	"	
165-170	1000	1. Brown	
170-175	940	V.L. Brown	
175-180	440	Off White	
180-185	440	"	
185-190	330	"	
190-195	250	Mauve	
195-200	310	"	
200-205	400	"	
205-210	590	Pinkish	
210-215	870	Brown	
215-220	15000)	Grey	Sulphide
220-225	16000)	D. Brown	
225-230	17000)	Brown	Malachite
230-235	24000) 1.86	Pink	"
235-240	22000)	L. Brown	"
240-245	20000)	"	Malachite
245-250	16000)	"	Minor malachite

LOG OF BOREHOLE No. 397/332

Area: BOOLOOROO Dip: 70° N Date: 17/18-11-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	110		Light Brown	
10- 15	140		" "	
15- 20	210		" "	
20- 25	1,100		Yellow Brown	
25- 30	650		" "	
30- 35	4,700		Brown	Ironized Siltstone
35- 40	120		"	
40- 45	850		Yellow Brown	Some Quartz chips
45- 50	580		" "	" " "
50- 55	330		" "	" " "
55- 60	380		Creamy	
60- 65	200		Light Brown	
65- 70	170		" "	
70- 75	650		Brown	
75- 80	240		Pinkish	
80- 85	410		Brown	
85- 90	190		Pinkish	
90- 95	350		Brown	
95-100	200		Light Brown	
100-105	150		" "	
105-110	280		Pink	
110-115	200		"	
115-120	200		"	(minor)
120-125	1,800		Light Brown	Copper Carbonates/
125-130	550		" "	Tr "
130-135	250		Yellow Brown	Tr "
135-140	200		" "	Tr "
140-145	290		Brown	" "
145-150	200		Pink	" "
150-155	3,200		"	" "
155-160	150		Light Grey	" " or)
160-165	820		Blue Grey	Copper Sulphides (min-
165-170	420		Dark Grey	Tr "
170-175	300		" "	Tr Oxides Cu
175-180	200		Grey	Tr Sulphides
180-185	200		"	Tr "
185-190	200	-	"	" "
190-195	7,500	0.59	Purple	" "
195-200	4,300	-	Light Brown	Tr Oxides Cu
200-205	3,100		" "	Tr " "
205-210	1,800		Yellowish	Tr " "
210-215	1,400		Creamy	Tr " "
215-220	880		Light Brown	Tr " "
220-225	550		Creamy	
225-230	600		"	

0095

LOG OF BOREHOLE 395/336

Area: BOOLOOROO Dip 90° Date 27-1-71

Drilled by: BORING ENTERPRISES

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5-10	70		V.L. Brown	-
10-15	100		"	-
15-20	40		L Brown	-
20-25	50		Ginger Brown	-
25-30	60		"	-
30-35	40		"	-
35-40	50		"	-
40-45	45		L. Brown	-
45-50	35		"	-
50-55	30		"	-
55-60	25		Ginger Brown	-
60-65	25		Mauve	-
65-70	30		"	-
70-75	120		"	-
75-80	170		Pale Mauve	-
80-85	170		V.L. Brown	-
85-90	360		"	-
90-95	280		"	-
95-100	160		"	-
100-105	380		"	-
105-110	540		"	-
110-115	1,000		"	-
115-120	520		"	-
120-125	50		"	-
125-130	35		"	-
130-135	25		"	-
135-140	80		"	-
140-145	60		"	-
145-150	40		"	-
150-155	35		"	-
155-160	60		"	-
160-165	100		"	-
165-170	45		Mauve	-
170-175	520		"	-
175-180	290		"	-
180-185	85		"	-
185-190	50		"	-
190-195	75		Grey & Brown	-
195-200	150		"	-
200-205	1.0		B. Grey	Carbonated
205-210	55		"	-
210-215	160		"	Tr pyritic sulphides
215-220	210		"	Minor " "
220-225	300		"	" " "
225-230	100		Blue Grey	" " "
230-235	380		"	Poss. minor chalcopyrite
235-240	45		"	Minor pyritic sulphides
240-245	240		"	" " "
245-250	230		"	" " "
250-255	610		"	Tr " "
255-260	400		"	Possib. minor chalcopyrite
260-265	140		"	Minor pyritic sulphides
265-270	550		"	Tr " "
270-275	270		"	Minor " "
275-280	240		"	" " "

LOG OF BOREHOLE No. 395/396 Dip 90° Date 28/2[illegible]-71

Depth	Cu, ppm	Cu (%)	Colour	Remarks
380-[illegible]	[illegible],000		Blue Grey	Pos[illegible]. minor chalcopyrite
[illegible]-[illegible]	[illegible]70		"	Tr " "
[illegible]-[illegible]	[illegible]0		"	Minor pyritic sulphides
[illegible]-[illegible]	[illegible]0		"	" " "
[illegible]-[illegible]	[illegible],000		"	" " "
[illegible]-[illegible]	5,000		"	" chalcopyrite
[illegible]-[illegible]	[illegible]80		"	" pyritic sulphides
[illegible]-[illegible]	1,000		"	" " "
[illegible]-[illegible]	[illegible]00		"	" " "
[illegible]-[illegible]	[illegible]0		"	" " "
[illegible]-[illegible]	700		"	Tr " "
[illegible]-[illegible]	700		"	Tr " "
[illegible]-[illegible]	800		"	Tr " "
[illegible]-[illegible]	280		"	Minor " "
[illegible]-[illegible]	[illegible]00		"	No recovery & core
[illegible]-[illegible]	160		"	Tr pyritic sulphides
360-[illegible]	9,000 -	0.7[illegible]	Blue & Brown	" " "
[illegible]-370	5,[illegible]00 -		Deep Red	" " "
370-[illegible]	300		Deep Mauve	"
[illegible]-[illegible]	300		" Mauve	Minor " "
[illegible]-[illegible]	900		" "	Tr " "
[illegible]-390	650		L. Brown	Tr " "
[illegible]-[illegible]	1,[illegible]00		"	Minor Malachite
[illegible]-[illegible]	700		"	" "
[illegible]-[illegible]	[illegible],[illegible]00		L. Brown & Mauve	" "
[illegible]-[illegible]	[illegible]0,000 ✓		Pale Mauve	Tr " Minor Sulph.
[illegible]-[illegible]	7,200	[illegible].2	L. Grey	Minor Malachite
[illegible]-[illegible]	8,000		Grey & Mauve	" "
[illegible]-[illegible]	20,000 ✓		Mauve	Tr "
[illegible]-[illegible]	20,000		"	-
[illegible]-[illegible]	2,[illegible]00		"	-
[illegible]-[illegible]	700		Pale Mauve	
[illegible]-[illegible]	[illegible],[illegible]00		Grey & Mauve	Minor Malachite
[illegible]-[illegible]	7,000 -	0.57	L. Grey	" Sulph. Tr Malach.
[illegible]-[illegible]	[illegible],[illegible]00		Grey & Mauve	" Pyritic sulphides
[illegible]-[illegible]	2,[illegible]00		Mauve	Tr " "
[illegible]-[illegible]	900		"	Tr " "
[illegible]-[illegible]	900		L. Brown	Minor "
[illegible]-[illegible]	[illegible]50		"	Tr "
[illegible]-[illegible]	800		Grey & Mauve	Minor sulphides
[illegible]-[illegible]	700		L. Mauve	Tr "
[illegible] - 90	9,000		Grey & Mauve	Tr "
[illegible]-[illegible]	1,200		Mauve	Tr "
[illegible]-500	[illegible]50		"	Tr "

Attempts to core at [illegible]0' - [illegible]' resulted in no recovery; the material was however recovered as an ordinary sample. It is clear that attempts to core in this material with a percussion drill is an absolute failure.

Thin Siderite bands are very prevalent throughout the Black Shale area some minor chalcopyrite is also present; minor malachite beyond [illegible]00 ft

0097 log of borehole No. 397/336

Area: ELSIE ADAIR Dip: 70°N Date: 16-12-70

Drilledby: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu'ppm (Cu%)	Colour	Remarks
5- 10	140	Y. Brown	
10- 15	150	"	
15- 20	140	"	
20- 25	180	"	
25- 30	200	"	
30- 35	130	L. Brown	
350 40	290	"	
40- 45	240	"	
45- 50	110	"	
50- 55	85	"	
55- 60	190	"	
60- 65	180	V.L. Grey	
65- 70	160	L. Brown	
70- 75	400	"	
75- 80	560	"	
80- 85	340	"	
85- 90	490	V. Brown	
90- 95	320	Off White	
95-100	500	Creamy	
100-105	2000	L. Brown	
105-110	5000)	"	Minor Malachite
110-115	4000) 0.53	V.L. Brown	"
115-120	3000)	L. Brown	"
120-125	2800	Y. Brown	Minor malachite
125-130	2300	V.L. Brown	"
130-135	11000)	Y. Brown	Minor "
135-140	14000) 1.15	V.L. Grey	"
140-145	3400)	"	"
145-150	3900)	"	"
150-155	25,000)	Mauve	"
155-160	3100	L. Red Brown	
160-165	1100	Off White	
165-170	950	"	"
170-175	540	Creamy	
175-180	300	"	"
180-185	800	"	"
185-190	700	"	
190-195	840	"	
195-200	900	"	Malachite
200-205	1000	"	
205-210	750	"	Malachite
210-215	700	"	
215-220	600	"	
220-225	1000	"	
225-230	600	Creamy	
230-235	900	"	
235-240	1000	"	
240-245	1300	"	
245-250	780	"	

0098

LOG OF BOREHOLE No. 396/340

Area: BOOLOOROO Dip: 70° N Date: 4/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	550		L. Brown	
10- 15	450		"	
15- 20	330		"	
20- 25	190		Pinkish	
25- 30	320		L. Brown	
30- 35	390		"	
35- 40	360		"	
40- 45	300		"	
45- 50	160		"	
50- 55	110		"	
55- 60	90		"	
60- 65	160		Pink	
65- 70	50		"	
70- 75	40		Pinkish	
75- 80	35		"	
80- 85	70		Pink	
85- 90	80		"	
90- 95	100		"	
95-100	85		"	
100-105	90		"	
105-110	90		"	
105-110	60		"	
110-115	75		Creamy	
115-120	90		L. Brown	
120-125	90		"	
125-130	80		"	
130-135	70		Brown	
135-140	130		"	Sulphides
140-145	3,400		"	"
145-150	1,600		D. Grey	"
150-155	2,300		"	"
155-160	9,000	0.9	"	"
160-165	1,000		"	Contaminated
165-170	5,600	0.56	"	Some Oxide Copper
170-175	5,700		D. Brown	"
175-180	1,200		M. Brown	
180-185	2,600		L. Brown	
185-190	1,800		Creamy	

0093

LOG OF BOREHOLE No. 396/344

Area: BOOLOOROO Dip: 70° N Date: 28/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	60		Pink	
10- 15	40		"	
15- 20	30		"	
20- 25	30		"	
25- 30	20		"	
30- 35	20		"	
35- 40	20		"	
40- 45	40		"	No Visible Copper
45- 50	30		"	detected
50- 55	20		Light Brown	
55- 60	20		Pink	
60- 65	30		"	
65- 70	40		"	
70- 75	10		"	
75- 80	20		"	
80- 85	30		Light Brown	
85- 90	30		Creamy	
90- 95	50		Pale Pink	
95-100	55		Creamy	
100-105	70		Light Brown	
105-110	70		Creamy	
110-115	70		Light Brown	
115-120	70		" "	
120-125	120		L. Grey	seams
125-130	280		D. Grey	Carbonaceous Shale
130-135	420		"	
135-140	3,000	-	"	Pyritic Sulphides
140-145	12,000		"	" "
145-150	13,000	1.25	"	" "
150-155	2,800	-	"	" "
155-160	640		Dark Brown	
160-165	520		" "	
165-170	320		Yellow Brown	
170-175	280		L. Brown	
175-180	410		Y. Brown	
180-185	300		Pinkish	
185-190	360		"	
190-195	180		"	
195-200	160		"	
200-205	200		"	
205-210	260		"	
210-215	380		Creamy	
215-220	580		Pinkish	
220-225	560		L. Brown	
225-230	460		Creamy	
230-235	440		"	Small Recovery due to wet conditions.

0100
Boolooroo

LOG OF BOREHOLE No. 396/348

Area: ~~ELSIE ADAIR~~ Dip: 70° N Date: 27/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks	
5- 10	75		L. Brown		
10- 15	130		Pinkish		
15- 20	75		"		
20- 25	50		White		
25- 30	75		"		
30- 35	55		"		
35- 40	55		"		
40- 45	65		"		
45- 50	40		Pinkish		
50- 55	20		Pink		
55- 60	25		"		
60- 65	25		"	No Visible	
65- 70	95		"		
70- 75	70		"	Copper 5' - 165'	
75- 80	120		White		
80- 85	140		"		
85- 90	75		L. Brown		
90- 95	90		"		
95-100	90		"		
100-105	95		"		
105-110	110		"		
110-115	120		"		
115-120	95		"		
120-125	140		"		
125-130	110		"		
130-135	170		"		
135-140	220		L. Grey		
140-145	310		"		
145-150	320		Grey		
150-155	370		"		
155-160	1,000		"		
160-165	6,000		"		
165-170	6,500	0.62	"	Sulphides)	0.63
175-180			D. Grey	")	

0101 LOG OF BOREHOLE No. 396/352

Area: ELSIE ADAIR Dip: 90° Date: 9-12-70

Drilled by: BORING ENTERPRISES

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5 - 10	260		White	
10 - 15	280		White	
15 - 20	160		White	
20 - 25	320		White	
25 - 30	330		White	
30 - 35	280		White	
35 - 40	230		White	
40 - 45	290		White	
45 - 50	470		Creamy	
50 - 55	730		White	
55 - 60	1,200		White	
60 - 65	280		Creamy	
65 - 70	250		White	
70 - 75	100		White	
75 - 80	120		L. Brown	
80 - 85	170		White	
85 - 90	170		White	
90 - 95	400		White	
95 - 100	5,600	0.56	L. Brown	Malachite
100 - 105	880		V.L. Brown	Min. "
105 - 110	400		"	"
110 - 115	640		Brown	
115 - 120	450		L. Brown	Malachite
120 - 125	900		"	
125 - 130	1,100		Pink	
130 - 135	470		P. Mauve	
135 - 140	700		L. Brown	
140 - 145	790		Pink	
145 - 150	550		Pink	
150 - 155	700		Pink	
155 - 160	380		V. Pink	
160 - 165	240		"	
165 - 170	500		"	
170 - 175	700		Red	
175 - 180	700		Brown	
180 - 185	510		Brown	
185 - 190	230		Grey	
190 - 195	240		Brown	
195 - 200	370		Brown	
200 - 205	480		L. Brown	
205 - 210	520		L. Brown	
210 - 215	250		Off White	
215 - 220	450		L. Brown	
220 - 225	200		Mauve	
225 - 230	180		L. Brown	
230 - 235	480		Pink	
235 - 240	430		P. Mauve	
240 - 245	380		L. Brown	Some iron - damp
245 - 250	210		Off Brown	Quartz chips - some Limonite
250 - 255	550		Y. Brown	Large Iron Stained Quartz chips
255 - 260	450		"	"

0102

LOG OF BOREHOLE No. 392/352

Area: ELSIE ADAIR Dip: 70° N Date: 9/10-11-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	110		White	No Visible Copper
10- 15	230		Creamy	"
15- 20	210		"	" "
20- 25	130		Pink	"
25- 30	80		Pale Pink	"
30- 35	30		" "	"
35- 40	50		" "	"
40- 45	120		" "	"
45- 50	130		" "	"
50- 55	140		" "	"
55- 60	90		" "	"
60- 65	110		" "	"
65- 70	55		" "	"
70- 75	70		Light Brown	"
75- 80	140		Yellowish	"
80- 85	180		"	"
85- 90	120		Pinkish	"
90- 95	150		"	"
95-100	310		"	"
100-105	700		"	"
105-110	900		Light Brown	Tr Oxide Copper
110-115	1,400		Yellowish	Tr " "
115-120	1,600		"	Tr " "
120-125	1,100		"	Tr " "
125-130	3,900		"	Minor Oxide Copper
130-135	3,100		Pink	.5 " "
135-140	2,500		"	.5 " "
140-145	2,500		Creamy	.5 " "
145-150	1,600		L. Brown	Minor " "
150-155	1,500		Pink	" " "
155-160	3,000		"	" " "
160-165	750		Pinkish	" " "
165-170	340		"	" " "
170-175	300		"	Tr " "
175-180	420		Light Brown	Tr " "
180-185	410		" "	Tr " "
185-190	980		" "	Minor " "
190-195	950		Pinkish	" " "
195-200	1,800		Yellowish	" " "
200-205	2,900		Light Brown	Oxide Copper .75%
205-210	2,400		Pinkish	" " .75%
210-215	2,700		"	" " .75%
215-220	2,200		"	" " .75%
220-225	2,700		Brown	Minor Oxide Copper
225-230	29,000	2.9	Dark Grey	" " "
230-235	4,500		Brown	" " "
235-240	2,100		Light Brown	" " "
240-245	1,000		Pinkish	Tr Oxide Copper
245-250	700		Pink	Tr " "

CE045

Carbona[redacted] Zone
225'-240'

Oxide Copper showing
110'-250'

0103

LOG OF BOREHOLE No. 396/352

Area: ELSIE ADAIR Dip: 60° N Date: 8/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
0- 5	170		White	
5- 10	200		"	
10- 15	100		"	
15- 20	120		Pink	
20- 25	110		White	
25- 30	200		"	
30- 35	370		"	
35- 40	270		"	
40- 45	270		"	
45- 50	1,100		"	
50- 55	500		"	
55- 60	270		"	
60- 65	130		"	
65- 70	150		"	
70- 75	160		Pink	
75- 80	1,500		"	
80- 85	130		Red	
85- 90	120		"	
90- 95	220		"	
95-100	250		"	
100-105	210		Dull Red	
105-110	260		" "	
110-115	280		Grey	
115-120	130		Dull Red	
120-125	150		" "	
125-130	170		" "	
130-135	2,800		Grey	
135-140	1,000	-	Dark Grey	
140-145	2,200	0.58	Black	[illegible]
145-150	9,000	-	Red (dark)	
150-155	570		Red (bright)	
160-165	270		" "	
165-170	300		" "	
170-175	200	-	" "	
175-180	2,500		Brown	
180-185	12,000	0.6	Dark Grey	
185-190	2,500		Dark Brown	
190-195	7,000	-	" "	
195-200	19,000		" "	
200-205	29,000		Dark Grey	
205-210	28,000	2.24	Black	[illegible]
210-215	18,000		"	"
215-220	18,000	-	Brown	"
220-225	6,300	0.53	"	Siltstone
225-230	4,300	-	"	"
230-235	missing		-	Hole abandoned due to cave-in below 200'

Cont. 0104

No. 396/352

Depth	Cu,ppm	Cu(%)	Colour	Remarks
260 - 265	4,200		L. Brown	Much iron - minor Malachite
265 - 270	3,200		"	"
270 - 275	670		"	V. Much Iron minor quartz
275 - 280	760		Red	Much iron TV Malachite quartz
280 - 285	950		D. Mauve	V. Much iron TR Malachite
285 - 290	6,800	0.66	Brown	Some iron 5% Malachite
290 - 295	8,800		L. Brown	Some Iron 1% Malachite
295 - 300	4,300		"	1% Malachite
300 - 305	2,300		"	Minor Tillite 5% Malachite
305 - 310	1,400		"	"
310 - 315	900		"	Much iron some quartz TV Malachite
315 - 320	730		"	Some quartz
320 - 325	280		"	Some tillite some iron - minor Malachite
325 - 330	260		"	Minor "
330 - 335	150		"	"
335 - 340	430		L. Brown	Much iron Tillite TV Malachite
340 - 345	260		"	Siltstone
345 - 350	430		"	Some tillite Minor Iron
350 - 355	700		V.L. Brown	TV Malachite
355 - 360	9,500	0.95	Grey & Red	
360 - 365	310		L. Brown	
365 - 370	300		"	Malachite
370 - 375	1,000		"	"
375 - 380	310		"	"
380 - 385	150		"	----
385 - 390	350		"	----
390 - 395	340		"	Some Limonite
395 - 400	390		Brown	Malachite
400 - 405	300		"	Some Tillite Mal.
405 - 410	540		L. Brown	Some Tillite Mal.
410 - 415	390		L. Brown	Minor Quartz "
415 - 420	480		L. Brown	Some Iron "
420 - 425	410		L. Brown	Minor Malachite
425 - 430	980		L. Brown	"
430 - 435	240		L. Brown	"
435 - 440	600		V.L. Brown	Minor Limonite
440 - 445	430		L. Brown	"
445 - 450	280		"	Minor iron Malachit
450 - 455	650		"	" "
455 - 460	500		"	" "
460 - 465	400		Mauve Some Br.	" "
465 - 470	630		Brown Light.	Some Limonite

Cont. 0105

No. 396/352

Depth	Cu,ppm	Cu(%)	Colour	Remarks
470 - 475	800		L. Brown	Some Limonite
475 - 480	1,900		Very Brown	Much Limonite
485 - 490	620		Light Brown	Minor "
480 - 485	290		Very Brown	Gritty Some "
490 - 495	Missing		Light Brown	" "
495 - 500	Missing		Very Brown	Much Limonite

0106

LOG OF BOREHOLE No. 390/356

Area: ELSIE ADAIR Dip: 90° Date: 8/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	120		White	
10- 15	130		"	
15- 20	95		"	
20- 25	310		Pinkish	
25- 30	170		"	
30- 35	190		Very Pink	
35- 40	350		Pink	
40- 45	85		Red	
45- 50	110		"	
50- 55	200		Pink	
55- 60	490		"	
60- 65	470		"	
65- 70	900		Yellowish	
70- 75	370		"	
75- 80	800		Creamy	
80- 85	780		White	
85- 90	700		"	
90- 95	240		Yellowish	
95-100	140		"	
100-105	240		V.Light Brown	
105-110	240		" " "	
110-115	110		White	
115-120	150		Brownish	
120-125	180		Dark Grey	(Carbonated) Coca Cola?
125-130	200		" "	
130-135	180		" "	Tr Copper Sulphides
135-140	850	-	D.Blue Grey	" " "
140-145	6,000		" " "	" " "
145-150	10,000	1.15	" " "	" " "
150-155	19,000		" " "	" " "
155-160	11,000	-	Dark Brown	" " "
160-165	750		Red Brown	
165-170	600		Red	
170-175	390		Pink	
175-180	410		"	
180-185	380		Light Brown	
185-190	290		" "	
190-195	310		" "	
195-200	430		" "	
200-205	330		" "	
205-210	950		" "	
210-215	1,200		" "	Tr Oxide Copper
215-220	1,000		Pinkish	" " "
220-225	1,200		"	" " "
225-230	2,300		"	" " "
230-235	600		"	" " "
235-240	700			
240-245	650			
245-250	760			

0107 LOG OF BOREHOLE NO. 392/356

Area: ELSIE ADAIR Dip: 90° Date: 6/12/70

Drilled by: BORING ENTERPRISES

Depth	Cu,ppm (Cu%)	Colour	Remarks
5- 10	35	Pink	
10- 15	20	"	
15- 20	90	White	
20- 25	60	"	
25- 30	50	"	
30- 35	120	Creamy	
35- 40	80	L. Brown	
40- 45	100	White	
45- 50	210	"	
50- 55	170	L. Brown	
55- 60	260	"	
60- 65	280	"	
65- 70	250	White	
70- 75	330	Yellow	
75- 80	200	White	
80- 85	490	V.L. Brown	
85- 90	800	L. Brown	
90- 95	800	Yellow	Malachite
95-100	440	L.Brown	
100-105	380	"	
105-110	500	Y. Brown	
110-115	460	L. Brown	
115-120	1000	"	
120-125	1300	R. Brown	
125-130	950	L. Brown	Malachite
130-135	1500	"	
135-140	180	"	
140-145	150	"	
145-150	180	"	
150-155	220	"	
155-160	100	"	
160-165	160	L. Brown	
165-170	300	"	
170-175	300	"	
175-180	160	Pink	
180-185	100	"	
185-190	110	"	
190-195	180	"	
195-200	200	L. Brown	
200-205	190	"	
205-210	150	"	
210-215	160	"	
215-220	110	"	
220-225	140	"	
225-230	150	Pink	
230-235	240	L. Brown	
235-240	260	"	
240-245	250	"	
245-250	290	"	
250-255	270	Y. Brown	Some Limonite
255-260	350	"	"

No. 392/356

Depth	Cu.ppm	(Cu%)	Colour	Remarks
260-265	170		Brown	
265-270	200		"	
270-275	430		"	
275-280	300		"	
280-285	500		"	
285-290	300		"	
290-295	590		"	
295-300	530		"	
300-305	680		"	
305-310	700		"	
310-315	800		"	
315-320	920		Y. Brown	moist Limonised
320-325	940		"	"
325-330	950		"	"
330-335	1000		"	Quartz chips
335-340	880		"	"
340-345	940		"	"
345-350	770		Red Brown	Very much Quartz
350-355	810		Y. Brown	"
355-360	1000		"	"
360-365	1000		"	"
365-370	880		"	
370-375	610		"	Native copper
375-380	2900		Pinkish	"
380-385	940		"	Hard shale Native copper
385-390	400		"	"
390-395	2100		"	Metallic copper clearly evident
395-400	2700		"	"
400-405	8600	0.86	"	"
405-410	3300		"	"
410-415	530		Brown	Con. Limonite - Minor copper some malachite
415-420	770		"	"
420-425	380		"	"
425-430	940		"	Native copper
430-435	1200		" Some mauve	Minor limonite
435-440	800		"	Minor copper
440-445	940		"	
445-450	810		Brown some mauve/minor limonite	
450-455	1600		"	"
455-460	1500		Mauve	"
460-465	1400		Mauve	"
465-470	1300		"	"
470-475	1500		"	"
475-480	1400		Brown	"
480-485	860		"	"
485-490	770		"	≈50% Limonite
490-495	750		"	"
495-500	270		"	"

0109

LOG OF BOREHOLE No. 394/356

Area: ELSIE ADAIR Dip: 90° Date: 9/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	150		White	
10- 15	240		Pink	
15- 20	340		Pale Pink	
20- 25	130		" "	
25- 30	130		Pink	
30- 35	120		"	
35- 40	400		"	
40- 45	350		Light Brown	
45- 50	380		Pink	
50- 55	110		Light Brown	
55- 60	40		White	
60- 65	35		Light Brown	
65- 70	30		White	
70- 75	50		"	
75- 80	110		Pink	
80- 85	140		Red	
85- 90	300		"	
90- 95	340		"	
95-100	170		Pink	
100-105	200		Light Brown	
105-110	510		Pinkish	
110-115	800		Light Brown	Tr Oxides
115-120	1,200		" "	Tr "
120-125	1,000		" "	Tr "
125-130	1,400		" "	Tr "
130-135	1,200		Creamy	Tr "
135-140	650		Yellowish	Tr "
140-145	750		"	Tr "
145-150	1,200		"	Tr "
150-155	1,000		"	
155-160	550		"	
160-165	1,000		Light Brown	
165-170	750		Pinkish	
170-175	550		"	
175-180	350		Brownish	
180-185	600		Light Brown	
185-190	430		" "	Tr Oxides
190-195	250		Pinkish	
195-200	380		"	
200-205	270		"	
205-210	150		"	
210-215	230		"	
215-220	260		"	Wet Conditions
220-225	280		"	10 ft sample 220'-230'
225-230	220		"	

0110

LOG OF BOREHOLE No. 396/356

Area: ELSIE ADAIR Dip: 80° N Date: 9/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
3- 5	500		L. Brown	Mudstone
5- 10	240		"	
10- 15	290		"	
15- 20	260		"	
20- 25	230		"	
25- 30	250		"	
30- 35	290		Pink	
35- 40	200		"	
40- 45	330		"	
45- 50	540		Yellow	
50- 55	1,300		Yellow Brown	
55- 60	2,800		" "	
60- 65	540		" "	
65- 70	370		Pinkish	
70- 75	440		Pink	
75- 80	300		"	
80- 85	170		"	
85- 90	470		"	
90- 95	440		"	
95-100	470		"	
100-105	380		"	
105-110	560		Pink & Brown	
110-115	350		Pink	
115-120	310		"	
120-125	140		"	
125-130	210		Pink	Black Carbon Staining
130-135	340		Yellow Brown	
135-140	290		Pink	
140-145	290		"	
145-150	240		"	
150-155	250		"	
155-160	2,200	-	Grey	Carbonaceous
160-165	14,000	1.4	"	
165-170	1,200	-	Brown	
170-175	950		"	
175-180	8,100	-	"	
180-185	16,000		Black	Carbonaceous Siltstone
185-190	15,000		"	"
190-195	10,000	1.1	"	
195-200	6,600		"	
200-205	7,500		"	
205-210	13,000		"	
210-215	2,000	-	Red	Siltstone
215-220	1,900		"	
220-225	19,000	-	Red	Carbonaceous Siltstone
225-230	23,000	2.1	Black	"

0111

LOG OF BOREHOLE No. 398/356

Area: ELSIE ADAIR Dip: 80° N Date: 23/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	110		White	
10- 15	70		Pinkish	
15- 20	missing		White	
20- 25	30		"	
25- 30	95		"	
30- 35	240		Creamy	
35- 40	170		"	
40- 45	100		Pale Mauve	
45- 50	85		" "	
50- 55	90		White	
55- 60	60		"	
60- 65	80		Mauve	
65- 70	80		L. Brown	
70- 75	75		White	
75- 80	60		L. Grey	
80- 85	60		V.L Brown	
85- 90	70		L. Grey	
90- 95	95		"	
95-100	140		Creamy	
100-105	140		"	
105-110	160		L. Grey	
110-115	200		D. Grey	Carbonaceous
115-120	150		"	
120-125	230		"	
125-130	3,600	-	"	Tr Chalcocite
130-135	9,500		"	Minor Chalcopyrite
135-140	7,800		"	.5% "
140-145	7,000	0.78	"	.75% "
145-150	7,000		"	.5% "
150-155	2,500	-	"	"
155-160	2,400		"	"
160-165	3,500		"	"
165-170	2,300		"	"
170-175	25,000	-	"	"
175-180	7,200	1.61	R Brown	Minor Chalcocite
180-185	2,500	-	"	Tr "
185-190	1,100		Red	Tr "
190-195	850		"	Tr "
195-200	650		Pink	Tr "
200-205	750		"	Tr "
205-210	2,400		"	Minor Carbonates Malachi
210-215	3,200		R. Brown	Tr "
215-220	1,600		"	Tr "
220-225	1,100		Brown	Tr "
225-230	950		Brown	Tr Malachites
230-235	1,000		"	Tr "
235-240	1,400		L. Brown	Tr "

0112

LOG OF BOREHOLE No. 392/360

Area: ELSIE ADAIR Dip: 70° N Date: 28/29-11-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	2,800		Pink	Tr Malachite
10- 15	2,700		"	" "
15- 20	3,000		Yellow	Minor "
20- 25	1,100		Pink	Tr "
25- 30	240		"	" "
30- 35	200		"	
35- 40	120		"	
40- 45	100		Pale Pink	No Visible
45- 50	140		" "	
50- 55	150		Creamy	Mineralisation
55- 60	100		"	
60- 65	90		Off White	below 30 feet.
65- 70	200		Very Pink	
70- 75	160		" "	
75- 80	100		" "	
80- 85	60		" "	
85- 90	190		" "	
90- 95	180		Light Brown	
95-100	180		" "	
100-105	180		" "	
105-110	160		Light Pink	
110-115	190		" "	
115-120	190		" "	
120-125	150		V.Light Brown	
125-130	150		Pink	
130-135	200		Light Pink	
135-140	200		Pink	
140-145	150		"	
145-150	200		"	
150-155	200		"	
155-160	150		Light Brown	
160-165	300		" "	
165-170	300		" "	
170-175	150		Pink	
175-180	150		"	
180-185	100		"	
185-190	100		"	
190-195	85		"	
195-200	170		"	
200-205	170		Yellowish	
205-210	140		V.L. Brown	
210-215	100		" "	
215-220	150		" "	
220-225	160		" "	
225-230	130		Pink	
230-235	85		Light Brown	
235-240	160		Pink	
240-245	140		"	
245-250	160		"	

0113

LOG OF BOREHOLE No. 396/360

Area: ELSIE ADAIR Dip: 80° N Date: 11/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	1,200		White	
10- 15	1,200	-	Pink	
15- 20	8,000		White	
20- 25	8,000		"	
25- 30	2,700	2.2	Pink	
30- 35	86,000		Yellow	
35- 40	5,100	-	Pink	
40- 45	2,800		"	
45- 50	4,200		Yellow	
50- 55	4,900		Yellowish	
55- 60	1,200		Pink	
60- 65	230		"	
65- 70	n260		"	
70- 75	350		Yellow	
75- 80	340		Pink	
80- 85	850		Red	
85- 90	2,000		"	
90- 95	3,000		"	
95-100	4,300		"	
100-105	4,500		"	
105-110	3,500		Red	
110-115	3,800		Pink	
115-120	2,800		"	
120-125	1,400		Red	
125-130	1,300		Pink	Hole stopped at
130-135	310		D. Pink	4.30 p.m. to prevent
135-140	550		Red	water entering O/night
140-145	270		"	
145-150	200		"	
150-155	180		"	
155-160	200		"	
160-165	250		"	
165-170	250		"	
170-175	430		"	Tr [redacted]
175-180	270		"	
180-185	280		"	
185-190	440		Pink	
190-195	310		"	Tr
195-200	220		"	
200-205	190		"	
205-210	220		"	
210-215	290		"	
215-220	200		"	Tr
220-225	200		Pink	Tr
225-230	360		"	
230-235	250		"	
235-240	190		"	
240-256	700		"	Sulphides minor oxides (Chalcocite)

0114

LOG OF BOREHOLE No. 398/360

Area: TAPLEYS (ELSIE ADAIR) Dip: 70° N Date: 24/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	280		Pink	
10- 15	190		L Brown	
15- 20	120		"	
20- 25	150		"	
25- 30	190		Pink	
30- 35	380		"	
35- 40	820		Red	Malachite
40- 45	1,700		"	"
45- 50	900		Pink	
50- 55	320		White	Minor Malachite
55- 60	290		"	Tr "
60- 65	220		"	
65- 70	650		Mauve	
70- 75	390		"	Tr "
75- 80	1,400		"	Minor "
80- 85	8,000	-	V.L Brown	1% "
85- 90	5,600	0.78	White	1% "
90- 95	9,800		V. L Brown	1% "
95-100	1,500	-	Light "	Minor "
100-105	800		" "	" "
105-110	450		" "	" "
110-115	790		Red Brown	Tr "
115-120	380		" "	Minor "
120-125	280		Light Grey	
125-130	290		Grey	
130-135	360		L. Grey	
135-140	250		Brown	
140-145	490		"	
145-150	1,800		"	Minor Malachite
150-155	2,400		"	" "
155-160	1,500		"	" "
160-165	1,200		"	Tr "
165-170	430		Pink	Tr "
170-175	500		Light Brown	Tr "
175-180	240		Pinkish	
180-185	250		V.L Brown	
185-190	250		"	
190-195	240		"	Tr "
195-200	250		"	Tr "
200-205	290		Pinkish	Tr "
205-210	220		Light Brown	Tr "
210-215	450		" "	Small Recovery (damp)
215-220	450		" "	Tr Malachite
220-225	440		" "	Tr Small Recovery (damp)

LOG OF BOREHOLE No. 392/364

Area: ELSIE ADAIR Dip: 70° N Date: 4/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	25,000	±2.5	Pink	Oxide Copper
10- 15	390		"	" "
15- 20	500		Creamy	
20- 25	300		"	
25- 30	300		Pinkish	
30- 35	200		"	
35- 40	300		Pink	
40- 45	250		"	
45- 50	180		"	
50- 55	210		"	
55- 60	490		L. Brown	
60- 65	500		"	
65- 70	550		"	
70- 75	340		Pinkish	
75- 80	280		"	No Visible
80- 85	230		Pink	Mineralisation
85- 90	180		"	beyond 15 ft.
90- 95	190		"	
95-100A	380		"	
95-100B	250		"	
100-105	470		"	
105-110	320		"	
110-115	500		"	
115-120	440		"	
120-125	420		"	
125-130	580		"	
130-135	580		"	
135-140	500		L. Brown	
140-145	600		"	
145-150	850		"	
150-155	1,100		Yellow Brown	
155-160	200		Pink	
160-165	390		Pinkish	
165-170A	470		"	
165-170B	500		"	
170-175	360		"	
175-180	380		"	
180-185	820		"	
185-190	520		"	
190-195	410		"	
195-200	890		"	
200-205	600		Red	
205-210	350		R. Brown	
210-215	280		"	
215-220	350		"	
220-225	500		"	
225-230	450		"	

0116

LOG OF BOREHOLE NO. 396/364

Area: TAPLEYS (ELSIE ADAIR) Dip: 70° N Date: 27/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	450		Red	
10- 15	450		"	
15- 20	500		Pink	
20- 25	360		Red	
25- 30	130		"	
30- 35	200		Pink	
35- 40	400		L. Brown	
40- 45	400		Creamy	No visible
45- 50	320		L. Brown	
50- 55	350		Mauve	Mineralisation
55- 60	400		Creamy	
60- 65	170		L. Brown	5 - 235 ft.
65- 70	300		"	
70- 75	300		Brown	
75- 80	430		"	Iron stained Quartz Chips
80- 85	390		"	
85- 90	1,200		V.L Brown	
90- 95	300		"	
95-100	350		"	
100-105	290		"	
105-110	300		Brown	
110-115	400		"	
115-120	240		"	
120-125	250		"	
125-130	240		Brown	
130-135	160		Mauve	
135-140	300		Brown	
140-145	400		"	
145-150	250		"	
150-155	300		Yellow	
155-160	190		Pinkish	
160-165	200		Yellow Brown	
165-170	420		" "	
170-175	450		" "	
175-180	250		Mauve	
180-185	400		Yellow Brown	
185-190	300		Brown	
190-195	390		Mauve	
195-200	370		Red	
200-205	550		Brown	
205-210	550		Mauve	
210-215	550		"	
215-220	540		Brown	
220-225	550		L. Brown	
225-230	820		Light Brown	

LOG OF BOREHOLE NO. 389/368

Area: ELSIE ADAIR Dip 90° Date: 13/14/1-71

Drilled by: BORING ENTERPRISES

(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu (%)	Colour	Remarks
5-10	4,500		Mauve	.5% Malachite
10-15	1,500		"	Tr "
15-20	1,400		"	- -
20-25	8,000 -		"	Tr "
25-30	3,500	0.64	Pink	Tr "
30-35	7,900 -		Brownish	Minor some Cuprite
35-40	1,900		L. Brown	- -
40-45	1,000		Dk Brown	Tr Malachite
45-50	1,500		Off White	Tr "
50-55	10,000 -	1.5	L. Mauve	.5 % "
55-60	20,000 -		"	Minor "
60-65	3,500		Mauve	Tr "
65-70	980		Brownish	Tr "
70-75	170		L. Yellow	- -
75-80	320		White	-
80-85	55		"	
85-90	80		"	
90-95	120		"	
95-100	150		Off white	-
100-105	1,000-	0.71	Mauve	-
105-110	7,100 -		Brown	Minor Malachite
110-115	1,300		"	Tr " some Limonite
115-120	1,500		L. Brown	Tr "
120-125	4,300 -	0.56	"	.5% " some Azurite
125-130	7,000 -		Mauve	.75% " "
130-135	2,000		"	Minor " "
135-140	500		"	Tr " some Limonite
140-145	1,000		L.Brown	- - "
145-150	1,400		"	Tr " -
150-155	2,400		Brown	Tr " -
155-160	1,800		L. Brown	- -
160-165	900		"	- -
165-170	900		"	- -
170-175	530		"	- -
175-180	140		"	- -
180-185	130		White	- -
185-190	120		L. Brown	
190-195	180		Grey Carbonated	
195-200	240		"	Tr Pyritic sulphides
200-205	2,800		Blue grey	Tr " " Red some oxides
205-210	2,400		"	Minor " "
210-215	2,100		"	Tr " "
215-220	1,300		"	Tr " "
220-225	600		"	Minor " "
225-230	480		"	Pyritic sulph. some chalcoci
230-235	210		"	Minor Pyr. sulph.
235-240	170		"	" " "
240-245	4,700		"	" " "
245-250	13,000 -		Brown	" Metallic copper
250-255	13,000		"	Consid. metal.copp
255-260	16,000	1.12	"	" " "
260-265	5,600		"	Minor " "
265-270	5,600		" Water	Tr " "
270-275	14,000 -			Tr

LOG OF BOREHOLE No. 389/369 Dip: 90° Date: 13/14-1-71

Depth	Cu,ppm	Cu (%)	Colour	Remarks
275-280	2,500		B. Grey	Minor Py. sulph. Tr. M. Copper
280-285	800		"	" " " "
285-290	790		"	" " " "
290-295	230		"	" " " "
295-300	190		"	" " " "
300-305	100		"	" " " "
305-310	310		"	" " " "
310-315	270		"	" " " "
315-320	350		"	" " " "
320-325	240		"	" " " "
325-330	190		"	" " " "
330-335	780		"	" " " " possible
335-340	150		"	" " " " Antimony
340-345	170		"	" " " " " "
345-350	110		"	" " " " some qutz.
350-355	180		"	" " " " " "
355-360	70		"	" " " " " "
360-365	290		"	" " " " " "
365-370	80		"	" " " " " "
370-375	70		"	" " " " " "
375-380	70		"	" " " " " "
380-385	130		"	" " " " " "
385-390	65		"	" " " " " "
390-395	70		"	" " " " " "
395-400	85		"	" " " " " "
400-405	80			Core
405-410	150		"	Py. sulph. some chalcocite
410-415	120		"	Minor pyritic sulphides
415-420	330		"	" " " "
420-425	390		"	" " " " quartz
425-430	180		"	" " " " " "
430-435	230		"	" " " " " "
435-440	90		"	" " " " " "
440-445	140		"	" " " " " "
445-450	85		"	" " " " " "
450-455	80		"	" " " " " "
455-460	70		"	" " " " " "
460-465	80		"	" " " " -
465-470	220		"	" " " "
470-475	720		"	" " " "
475-480			"	" " " " " "
480-485			"	" " " " " "

490' ~~Core~~ Hole abandoned at 485 feet (No recovery)
Target depth 500 ft.
Depth reached 485 ft.
Coring 400' - 405' Two foot recovery
Coring 480' - 485' No recovery
Water flow tested at 2 gallons per second. 4¾" button bit throughout
Although drilling was possible beyond 480' recovery was small and cuttings were coming up rounded indicating cavitation at depth.

0119

LOG OF BOREHOLE No. 392/363

Area: ELSIE ADAIR Dip: 90° Date: 9/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
0- 5	3,000		Brown	Siltstone
5- 10	1,700		Pink	
10- 15	1,400		"	
15- 20	550		"	
20- 25	450		"	
25- 30	1,200		"	
30- 35	13,000		"	
35- 40	10,000	1.15	White	
40- 45	1,100		Pink	
45- 50	1,700		"	
50- 55	2,500		"	
55- 60	2,600		Red	
60- 65	1,400		Pink	
65- 70	2,200		Red	
70- 75	3,600		Pink	
75- 80	2,900		"	
80- 85	2,900		"	
85- 90	1,600		Yellow	
90- 95	5,600	0.56	Red	
95-100	9,100		"	
100-105	9,800		"	
105-110	18,000	1.04	Pink	
110-115	3,100		"	
115-120	12,000		Red	
120-125	1,700		"	
125-130	14,000		Pink	
130-135	8,100	1.04	"	
135-140	9,200		"	
140-145	6,700	0.58	Red	
145-150	4,800		"	
150-155	1,900		Pink	
155-160	1,900		"	
160-165	2,000		"	
165-170	2,500		"	
170-175	1,100		"	
175-180	4,500		Grey	Carbonaceous Shale
180-185	13,000	0.65	"	Pyrite
185-190	2,100		Brown	appears
190-195	16,000		D. Grey	evident
195-200	26,000		Red	throughout
200-205	5,200		D. Brown	Carbonated
205-210	9,200	1.74	Red & D. Brown	Zone.
210-215	24,000		"	
215-220	29,000		"	Copper Sulphides
220-225	17,000		"	also present
225-230	13,000		"	below Carbonated
230-235	8,600		"	band
235-240	7,800	0.66	"	(Chalcocite)
240-245	5,600		D. Grey	(Chalcopyrite)
245-250	4,400		"	

0120

LOG OF BOREHOLE No. 395/368

Area: ELSIE ADAIR Dip: 90° Date: 10/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	17,000	-	L. Grey	
10- 15	4,500	0.93	White	
15- 20	6,500	-	L. Grey	
20- 25	1,400		"	
25- 30	1,200		"	
30- 35	360		"	
35- 40	170		White	
40- 45	110		"	
45- 50	120		Yellow	
50- 55	190		Pink	
55- 60	2,100		White	
60- 65	2,000		Creamy	
65- 70	1,500		"	
70- 75	2,500		Pink	
75- 80	4,600		Yellow	
80- 85	3,500		Pink	
85- 90	1,900		White	
90- 95	1,000		Creamy	
95-100	580		Pink	
100-105	580		White	
105-110	700		"	
110-115	500		Pink	
115-120	240		"	
120-125	240		L. Brown	
125-130	350		"	
130-135	340		"	
135-140	320		"	
140-145	260		Pink	
145-150	250		L. Pink	
150-155	200		Grey	
155-160	260		Black	
160-165	300		Sulphides	Carbonated
165-170	540	-	"	"
170-175	7,000		"	"
175-180	6,800	0.69	"	"
180-185	3,900	-	"	"
185-190	1,500	-	D. Grey	Carbonated Shale
190-195	6,000	o.6	"	" " Side water or the rock?
195-200	2,700		"	" "
200-205	1,500		"	" "
205-210	700		Brown	" "
210-215	1,200		D. Grey	" "
215-220	360		"	" "
220-225	280		"	" "
225-230	230		"	" "
230-235	2,800		"	" "
235-240	1,400		"	" "
240-245	1,100		"	" "
245-250	700		"	Target depth 250' Wet no Samples

Pyrite appears evident throughout the Carbonated Zone

0121

LOG OF BOREHOLE No. 396/368

Area: TAPLEYS (ELSIE ADAIR) Dip: 70° N Date: 26/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	3,000	-	L. Brown	Minor Malachite
10- 15	12,000		Pale Mauve	" "
15- 20	20,000		White	.75 "
20- 25	16,000		Pale Mauve	.75 "
25- 30	12,600		V.L Brown	Minor "
30- 35	2,900		Pink	" "
35- 40	8,000	1.26	Pale Mauve	.25 "
40- 45	39,000		" "	1.5% "
45- 50	4,900		Off White	.35 "
50- 55	4,500		Pale Pink	.25 "
55- 60	5,000		Off White	.25 "
60- 65	14,000	=	V.L Brown	.5 "
65- 70	5,000	0.48	Red Brown	Minor "
70- 75	4,500	-	Brown	" "
75- 80	600		Pinkish	Te "
80- 85	340		L. Brown	Te "
85- 90	1,400		"	
90- 95	2,000		Red	
95-100	2,800		Red Brown	Minor "
100-105	1,200		Red	
105-110	430		Brown	
110-115	230		L. Brown	TR "
115-120	150		"	
120-125	150		"	
125-130	120		L. Grey	
130-135	190		V.L. Brown	
135-140	150		"	
140-145	240		"	
145-150	200		Grey	
150-155	340		"	
155-160	240		R Brown	
160-165	350		Pinkish	Minor Malachite
165-170	890		B Grey	Carbonated Minor Oxides
170-175	3,400		Brown	
175-180	16,000	- 1.6	B Grey	Minor Sulph & Oxides
180-185	3,300		Dark Brown	
185-190	6,500	- 0.65	" "	Minor Sulphides
190-195	2,900		B. Grey	Minor Pyritic Sulphides
195-200	2,000		"	Minor Sulph & Oxides
200-205	1,600	-	"	.5% " "
205-210	25,000		"	5.7% Sulphides
210-215	6,200		"	.75% "
215-220	49,000	2.18	"	1.5% "
220-225	8,000		V.D Brown	Minor Sulphides
225-230	21,000	-	B. Grey	.5% "

12e

LOG OF BOREHOLE No. 398/368

Area: TAREEYS (EBBIE ADAIR) Dip: 70° N Date: 25/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	510		Pink	
10- 15	450		Brown	
15- 20	410		"	
20- 25	350		"	
25- 30	460		Dark Brown	
30- 35	290		Red Brown	
35- 40	260		" "	
40- 45	460		Dark "	
45- 50	490		Brown	
50- 55	210		Red	
55- 60	140		Pink	
60- 65	220		Brown	
65- 70	220		"	
70- 75	150		Pink	
75- 80	160		Red Brown	
80- 85	230		Yellow Brown	
85- 90	160		Red Brown	
90- 95	300		" "	
95-100	300		" "	
100-105	500	-	" "	
105-110	11,000	1.0	" "	Tr Malachite
110-115	9,000	-	Red	Tr "
115-120	700		Pink	
120-125	600		"	
125-130	340		White	
130-135	270		Pale Mauve	
135-140	400		Pink	
140-145	390		"	
145-150	430		"	
150-155	400		V.Pink	
155-160	590		V Pink	
160-165	620		Brown	
165-170	800		L. Brown	Considerable Quartz
170-175	750		"	
175-180	650		"	
180-185	520		"	
185-190	450		"	
190-195	590		Yellow Brown	
195-200	510		Creamy	

0123

LOG OF BOREHOLE No. 396/372

Area: ELSIE ADAIR Dip: 70° N Date: 7/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	450		White	
10- 15	700		P. Yellow	
15- 20	380		Creamy	
20- 25	340		"	
25- 30	340		"	
30- 35	170		"	
35- 40	110		"	
40- 45	90		Pinkish	
45- 50	55		White	
50- 55	80		"	
55- 60	200		Creamy	
60- 65	160		White	
65- 70	350		"	Tr Oxide Copper
70- 75	220		"	
75- 80	630		Pinkish	
80- 85	700		"	
85- 90	1,000		"	
90- 95	1,000		Creamy	Minor Oxide Copper
95-100	940		White	" " "
100-105	510		"	
105-110	710		Pinkish	Tr " "
110-115	750		Creamy	
115-120	500		"	
120-125	530		"	
125-130	500		"	
130-135	500		"	
135-140	380		"	
140-145	290		"	
145-150	250		Pinkish	Copper Sulphides
150-155	350		L Grey	Throughout
155-160	560		L Brown	
160-165	360		Grey	Carbonated
165-170	2,800	-	D Grey	Zone 160-235
170-175	7,000		" "	
175-180	4,400	0.57	" "	
180-185	2,900	-	" "	
185-190	3,800		" "	
190-195	2,700		" "	
195-200	1,800		" "	
200-205	900		" "	
205-210	850		" "	
210-215	350		" "	
215-220	1,300		" "	
220-225	840		" "	
225-230	960		" "	
230-235	2,200		" "	

0124

LOG OF BOREHOLE No. 397/372

Area: TAPLEYS (ELSIE ADAIR) Dip: 70° N Date: 27/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	300		Light Brown	
10- 15	1,000		Pink	
15- 20	700		Yellow Brown	
20- 25	16,000	-	Light Brown	Malachite
25- 30	3,900		"	"
30- 35	22,000	1.8	Creamy	"
35- 40	30,000	-	Pale Mauve	"
40- 45	1,000		"	"
45- 50	1,200		Creamy	"
50- 55	35,000	-	White	"
55- 60	7,000	- 2.6	Pale Pink	"
60- 65	1,200		Yellow Brown	"
65- 70	1,400		Pinkish	"
70- 75	20,000	-	Pale Mauve	Malachite & Azurite
75- 80	15,000		Light Brown	" "
80- 85	28,000		"	" "
85- 90	7,500		Pale Mauve	" "
90- 95	25,000	1.82	Pink	" "
95-100	36,000		Light Brown	" "
100-105	14,000		Pink	" "
105-110	9,200		Red	" "
110-115	9,000	-	"	" "
115-120	4,900	- 0.49	"	" "
120-125	3,000		"	"
125-130	1,400		Brown	"
130-135	800		Mauve	"
135-140	600		"	"
140-145	530		Light Brown	
145-150	820		Dark Grey	
150-155	500		Dark Mauve	
155-160	720		Red Brown	
160-165	15,000	-	Black	Carbonated Shale
165-170	12,000		Blue Black	Minor Sulphides
170-175	11,000	1.2	"	" "
175-180	9,800	-	"	" "
180-185	7,800	0.56	"	" "
185-190	3,500	-	"	" "
190-195	1,300		"	Pyritic Sulphides .5%
195-200	1,000		"	" " "
200-205	1,000		Dark Grey	Minor Sulphides
205-210	2,800		"	Pyritic " .5%
210-215	3,900		"	" " "
215-220	1,000		Black	Considerable Pyritic Sulph
220-225	1,600		"	" " "
225-230	900		"	Considerable Sulphides

LOG OF BOREHOLE No. 398/372

Area: ELSIE ADAIR Dip: 70° N Date: 26/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	450		L. Brown	
10- 15	600		"	
15- 20	550		"	
20- 25	720		"	
25- 30	1,700		Brown	
30- 35	620		L. Brown	
35- 40	420		L. Pink	
40- 45	1,400		L. Brown	
45- 50	1,400		"	
50- 55	1,100		"	
55- 60	620		Y. Brown	
60- 65	1,100		L. Brown	
65- 70	1,300		Pink	
70- 75	1,300		"	
75- 80	1,000		"	
80- 85	1,400		"	
85- 90	14,200	1.04	L. Brown	
90- 95	6,500		"	
95-100	2,200		L. Pink	
100-105	2,200		L. Brown	
105-110	7,200	1.61	Y. Brown	
110-115	25,000		Creamy	
115-120	3,000		Pink	
120-125	5,600	0.56	L. Brown	
125-130	2,200		Pink	
130-135	1,800		Y. Brown	
135-140	2,700		Red	
140-145	2,100		"	
145-150	2,400		R. Brown	
150-155	8,000		Red	
155-160	15,000		"	
160-165	11,500	1.0	Brown	
165-170	4,600		Pink	Only Minor Pyritic
170-175	11,100		Brown	Sulphides detected
175-180	2,800		R. Brown	180' - 210'
180-185	5,000	0.5	D. Grey	
185-190	4,300		"	
(a) 190-195	1,600		L. Brown	
(b) 190-195	4,500		Creamy	
195-200	3,700		L. Brown	
200-205	1,300		L. Grey	
205-210	950		Red	
210-215	740		"	
215-220	1,300		L. Brown	
220-225	600		L. Brown	
225-230	630		"	
230-235	800		Y. Brown	
235-240	700		"	
240-245	1,300		"	
245-250	1,500		"	

0126

LOG OF BOREHOLE No. 399/372

Area: ELSIE ADAIR Dip: 70° N Date: 6-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	250		White	No visible
10- 15	440		L. Brown	mineralisation
15- 20	600		R. Brown	"
20- 25	250		P. Mauve	"
25- 30	260		"	"
30- 35	90		White	"
35- 40	190		Mauve	"
40- 45	700		L Brown	"
45- 50	410		P. Mauve	"
50- 55	350		L. Brown	"
55- 60	680		"	"
60- 65	800		"	"
65- 70	1,100		"	"
70- 75	1,200		P.Pink	"
75- 80	620		Pink	"
80- 85	900		"	"
85- 90	2,000		Brown	"
90- 95	1,200		"	"
95-100	650		P. Pink	"
100-105	600		L. Brown	"
105-110	350		"	"
110-115	280		Y. Brown	"
115-120	220		White	"
120-125	410		V.L. Pink	"
125-130	520		Red	"
130-135	780		"	"
135-140	720		D. Pink	"
140-145	240		L. Pink	"
145-150	150		"	"
150-155	260		"	"
155-160	420		"	"
160-165	320		"	"
165-170	320		Pink	"
170-175	380		L. Pink	"
175-180	280		Creamy	"
180-185	270		White	"
185-190	280		Creamy	"
190-195	290		"	"
195-200	440		L. Brown	"
200-205	350		"	"
205-210	680		"	"
210-215	260		"	"
215-220	190		"	"
220-225	200		"	"
225-230	190		P. Mauve	-
230-235	missing		L. Brown	-

Wet conditions. Hole abandoned at 235 ft. 3" Hammer Bit.

0127

LOG OF BOREHOLE No. 397/376

Area: ELSIE ADAIR Dip: 90° Date: 5/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Cu (check)	Colour	Remarks
5- 10	45			Creamy	
10- 15	50			L. Brown	
15- 20	60			Pinkish	
20- 25	10			Yellowish	
25- 30	10			"	
30- 35	10			"	
35- 40	10			"	
40- 45	15			"	
45- 50	10			"	
50- 55	10			"	
55- 60	10			L. Brown	
60- 65	15			"	
65- 70	15			"	
70- 75	15			"	
75- 80	15			"	
80- 85	15			"	
85- 90	15			"	
90- 95	15			"	
95-100	20			"	
100-105	130			"	
105-110	15			Yellow Brown	
110-115	35			"	
115-120	20			"	
120-125	15		30	"	
125-130	10		30	Brown	
130-135	10		25	"	
135-140	20		30	Grey	Sulphides Tr
140-145	20		45	"	
145-150	20		35	Blue Grey	
150-155	20		300	"	
155-160	20		30	"	Sulphides Tr
160-165	30		25	"	"
165-170	30		30	"	"
170-175	25		35	"	"
175-180	50		35	"	"
180-185	50		50	"	"
185-190	30		90	"	"
190-195	70		45	"	"
195-200	45		60	"	"
200-205	75		65	"	"
205-210	50		45	D. Grey	Samples taken 5/11/70
210-215	60		80	"	Blocked Bit 10' samp
220-225	70		60	D. Brown	"
225-230	50		50	D. Grey	Sulphides
230-235	60		250	D.B. Grey	"
235-240	300		40	"	"
240-245	250		170	"	"
					Small recovery.

0128

LOG OF BOREHOLE No. 398/376

Area: ELSIE ADAIR Dip: 70° N Date: 13/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Ag, ppm	Colour	Remarks
5- 10	1,100			L. Brown	
10- 15	80			L. Pink	
15- 20	310			"	
20- 25	390			"	
25- 30	270			"	
30- 35	200			"	
35- 40	330			"	
40- 45	1,500			Pink	
45- 50	1,100			Y. Pink	
50- 55	1,300			Yellow	
55- 60	600			L. Pink	
60- 65	1,300			"	
65- 70	1,800			Y. Pink	
70- 75	1,900			"	
75- 80	570			"	
80- 85	310			"	
85- 90	180			"	Samples missing.
100-105	340			D. Grey	
105-110	370			"	
110-115	270			"	Considerable
115-120	560	-		Blue Grey	Sulphides
120-125	6,000		2	" "	ranging from 1.0% -
125-130	6,100		2	" "	7.0% between
130-135	6,100	0.63	2	" "	100' and 445'
135-140	6,500		2	D. Grey	
140-145	7,100		2	Blue Grey	
145-150	9,800	-	2	Brown	(Chalcocite and
150-155	13,000		2	"	Chalcopyrites)
155-160	11,000		3	Blue Grey	
160-165	18,000		4	Brown	
165-170	40,000			Blue Grey	
170-175	31,000	2.4	4	" "	
175-180	25,000		2	" "	
180-185	11,000		2	" "	
185-190	78,000		2	" "	
190-195	11,000		2	" "	
195-200	3,200	-	2	" "	
200-205	2,800		3	" "	
205-210	7,200	-	4	" "	
210-215	7,100	0.71	2	" "	
215-220	12,000	-	4	D. Grey	
220-225	15,000	1.57	4	L. Brown	
225-230	26,000		4	Brown	Considerable Copper
230-235	10,000		1.37 4	Orange Brown	Sulphides (Chalcocite
235-240	8,000	-	4	Yellow Brown	5-7% (Covellites)
240-245	11,000		2	L. Brown	" "

0129

LOG OF BOREHOLE No. 399/376

Area: TAPLEYS (ELSIE ADAIR) Dip: 60° N Date: 25/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	240		Yellow Brown	
10- 15	350		" "	
15- 20	900		R Brown	
20- 25	990		Brown	
25- 30	1,400		Pink	Tr Malachite
30- 35	1,400		Brown	Tr "
35- 40	2,000		Pink	Tr "
40- 45	900		Brown	
45- 50	250		Pink	
50- 55	320		Red Brown	
55- 60	150		Yellow Brown	
60- 65	130		Pink	
65- 70	160		"	
70- 75	160		Yellow Brown	
75- 80	150		Brown	
80- 85	180		"	Tr Malachite
85- 90	150		Pink	
90- 95	190		Red	
95-100	350		"	
100-105	490		Red Brown	
105-110	340		" "	
110-115	260		Red	
115-120	270		Dark Pink	
120-125	200		Pale Mauve	
125-130	250		Pink	
130-135	350		Light Brown	
135-140	330		" "	
140-145	210		Red Brown	
145-150	130		Yellow Brown	
150-155	90		Yellow	
155-160	110		"	Quartz chips
160-165	120		Yellow Brown	
165-170	360		" "	
170-175	600		Yellow	
175-180	1,600		"	Tr Malachite
180-185	2,400		Yellow Brown	Tr "
185-190	1,900		Light Brown	Minor "
190-195	1,400		Pale Yellow	" "
195-200	700		Light Brown	" "
200-205	430		Creamy	Tr "
205-210	410		"	
210-215	330		Light Brown	
215-220	310		Yellowish	Tr "
220-225	270		Creamy	
225-230	250		"	Tr "

0130

LOG OF BOREHOLE No. 399/376

Area: ELSIE ADAIR Dip: 90° Date: 3/4-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	260		L. Brown	5½ Button Bit
10- 15	330		"	(Hammer)
15- 20	680		"	
20- 25	510		White	No
25- 30	650		"	
30- 35	1,600		"	Visible
35- 40	1,900		"	
40- 45	600		"	Copper
45- 50	280		L. Brown	5' - 110'
50- 55	310		"	
55- 60	250		"	
60- 65	240		Brown	
65- 70	230		White	
70- 75	280		"	
75- 80	200		Mauve	
80- 85	200		"	
85- 90	230		L. Brown	
90- 95	210		L. Grey	Carbonated Shale
95-100	250		"	
100-105	300		"	
105-110	240		Grey	
110-115	300		"	Tr Sulphides
115-120	4,600		Blue Grey	Minor Sulphides
120-125	5,600		" "	" "
125-130	7,800		" "	" "
130-135	4,800		" "	1.0% Chalcocite
135-140	8,500		" "	Minor Sulphides
140-145	3,800		" "	" "
145-150	5,800	0.55	Grey	.5% "
150-155	5,000		Brown	Minor "
155-160	4,600		Blue Grey	" "
160-165	3,500		" "	Tr "
165-170	5,300		" "	Tr "
170-175	7,000			Core 170' - 175'
175-180	5,600		Blue Grey	Minor Sulphides
180-185	3,800		" "	" "
185-190	3,200		" "	" "
190-195	1,900		" "	" "
195-200A	1,300		Core	195' - 200'
195-200B	1,600			Bit.
200-205	1,100		Blue Grey	Contaminated, Roller/
205-210	900		" "	Minor Sulphides
210-215	380		" "	" "
215-220	280		" "	" "
220-225	160		Dark Brown	" "
225-230	250		Dark Brown	Minor Sulphides
230-235	220		" "	" "
235-240	180		" "	" "
240-245	140		" "	" "
245-250	140		Black	" "
250-255	140		"	.5% "
255-260	160		Y. Brown	Minor "
260-265	27,000	1.63	"	" "
265-270	5,600		Y.R. Brown	" "
270-275	400		Y. Brown	Tr "
275-280	500		"	Tr "
280-285	190		"	Tr "
285-290	160		"	Tr "

LOG OF BOREHOLE No. 399/376 Dip: 90° Date: 3/4-12-70

Depth	Cu,ppm	Cu(%)	Colour	Remarks
Cont. 285-290				
290-295	150		Y. Brown	
295-300	210		Yellow	Tr Sulphides
300-305	180		Y. Brown	Minor "
305-310	3,500		Brown	Considerable Pyritic Sul/
310-315	3,000	-	D. Grey	" " phide.
315-320	8,500	0.82	Black	" " "
320-325	8,000	-	D. Brown	" " "
325-330	2,800		D. Brown	" " "
330-335	800		L. Brown	" " "
335-340	600		"	Tillite Chips Tr Sulph.
340-345	700		"	" " " "
345-350	850		"	" " " "
350-355	900		"	" " " "
355-360	1,000		"	" " Minor "
360-365	1,100		"	Contaminated
365-370	1,600		"	Necessary to case 0-340'
370-375	600		"	Caving.
375-380	400		"	Tr Sulphides
380-385	290		L. Yellow	Tr "
385-390	140		"	Tr "
390-395	600		"	
395-400	1,300		L. Brown	
400-405	350		"	Tr Sulphides
405-410	440		"	
410-415	100		L. Yellow	
415-420	320		Pinkish	Some Siltstone
420-425	800		L. Brown	" "
425-430	120		"	" "
430-435	220		Pinkish	" "
435-440	200		"	" "
440-445	300		White	" "
445-450	250		L. Brown	Some Tillite Chips
450-455	450		Pinkish	" " "
455-460	380		L. Brown	
460-465	240		"	Quartz Chips
465-470	250		Redish	Minor Tillite
470-475	200		Pink	Tr Sulphides
475-480	160		"	Minor Shale Tr Sulphides
480-485	380		"	" " " " ite.
485-490	290		"	V. Hard Some Quartz Cons.Limor
490-495	50		L. Brown	Tr Sulphides
495-500	40		L. Brown	Tr "

5½" Button Bit 0-365'
4¾" Roller " 365-500

0132

LOG OF BOREHOLE No. 402/376

Area: ELSIE ADAIR Dip: 70° N Date: 12/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	5,200	-	White	
10- 15	8,000	0.78%	Pink	
15- 20	14,000		Light Pink	
20- 25	4,100		"	
25- 30	2,600	-	"	
30- 35	800		"	
35- 40	2,600		White)	Possible .5%
40- 45	2,400		Light Pink)	
45- 50	4,200		White)	
50- 55	500		Light Brown	
55- 60	560		Red Brown	
60- 65	500		"	
65- 70	750		"	
70- 75	120		White	
75- 80	50		"	
80- 85	65		"	
85- 90	55		Pinkish	
90- 95	100		Pink	
95-100	390		Red	
100-105	390		Pink	
105-110	360		Yellowish	
110-115	430		Light Brown	
115-120	350		Yellowish	
120-125	450		Brown	
125-130	480		"	
130-135	380		"	
135-140	1,900		"	Possible Contamination
140-145	200		"	
145-150	2,000		"	14/10/70
150-155	850		Yellow	
155-160	580		"	
160-165	430		"	
165-170	220		"	
170-175	230		"	
175-180	Cu% (ANOD) 250		"	
180-185	0.03 220		"	
185-190	0.02 160		"	
190-195	0.02 110		Pinkish	
195-200	0.02 100		Yellowish	

0133

LOG OF BOREHOLE No. 397/380

Area: ELSIE ADAIR Dip: 90° Date: 6/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	cu,ppm	Cu(%)	Colour	Remarks
5- 10	100		Yellow Brown	
10- 15	25		"	
15- 20	15		"	
20- 25	15		"	
25- 30	15		"	
30- 35	15		"	
35- 40	25		"	
40- 45	20		"	
45- 50	15		"	
50- 55	15		"	
55- 60	35		"	
60- 65	35		"	
65- 70	35		"	
70- 75	35		"	
75- 80	100		"	
80- 85	70		L. Grey	
85- 90	30		"	
90- 95	25		Grey	
95-100	40		"	
100-105	25		Yellow Brown	
105-110	15		"	
110-115	10		"	
115-120	30		"	
120-125	35		B. Grey	
125-130	30		"	
130-135	20		L. Brown	
135-140	30		"	
140-145	25		Grey	
145-150	35		"	
150-155	30		"	
155-160	50		B. Grey	
160-165	35		"	
165-170	55		"	
170-175	30		Brown	
175-180	70		"	
180-185	45		"	Sulphides throughout
185-190	45		"	Carbonated Zone
190-195	35		B. Grey	Approx. 130'-225'
195-200	65		"	Sulphides continue
200-205	60		"	beyond 225 ft.
205-210	70		"	vertical
210-215	70		"	
215-220	65		"	
220-225	55		"	

LOG OF BOREHOLE No. 398/380

Area: ELSIE ADAIR Dip: 70° N Date: 25/26-10-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks	
5- 10	45		L. Brown		
10- 15	40		"		
15- 20	30		"		
20- 25	30		"		
25- 30	30		"		
30- 35	25		"		
35- 40	20		"		
40- 45	25		"		
45- 50	15		"		
50- 55	15		Pinkish		
55- 60	20		Y. Brown		
60- 65	30		Creamy		
65- 70	25		"		
70- 75	35		L. Brown		
75- 80	45		Creamy		
80- 85	30		"		
85- 90	45		"		
90- 95	50		"		
95-100	50		"		
100-105	40		L. Brown		
105-110	40		"		
110-115	40		"		
115-120	50		Grey		
120-125	70		Brown		
125-130	45		D. Grey		
130-135	40		"	Pyritic	
135-140	340		B. Grey	Sulphides	
140-145	370		D.B. Grey	"	
145-150	500		"	"	
150-155	100		"	"	
155-160	75		"	"	
160-165	65		"	"	
165-170	100		"	"	
170-175	70		"	"	
175-180	2,200		"	"	
180-185	2,600		D. Brown	"	
185-190	7,700		D.B. Grey	"	
190-195	14,800	1.5	"	"	
195-200	22,800		D. Brown	"	
200-205	3,500		M. Brown	"	
205-210	1,400		Red	"	Tr
210-215	650		D. Pink	"	Tr
215-220	640		"	-	
220-225	700		"	"	Tr
225-230	22,000		D. Brown	Sulphides	Tr
230-235	23,800		D.B. Grey	"	Chalcocite
235-240	25,300		"	"	"
240-245	22,300	2.07	"	"	"
245-250	18,500		"	"	Minor
250-255	16,500		"	"	
255-260	16,600		"	"	

0135

LOG OF BOREHOLE No. 398/380

Area: ELSIE ADAIR Dip: 90° Date 12-12-70

Drilled by: BOREING ENTERPRISES

Depth	Cu,ppm (Cu%)	Colour	Remarks
5- 10	35	Yellow	
10- 15	20	"	
15- 20	20	"	N o
20- 25	25	"	v i s i b l e
25- 30	20	"	
30- 35	20	"	c o p p e r
35- 40	25	"	
40- 45	80	L. Brown	
45- 50	110	"	
50- 55	110	L. Pink	
55- 60	300	Creamy	
60- 65	680	Y. Brown	
65- 70	780	Yellow	
70- 75	60	Yellow	
75- 80	35	"	
80- 85	35	"	
85- 90	35	L. Brown	
90- 95	35	Y. Brown	Some black shale
95-100	30	"	"
100-105	35	"	Some Limonite
105-110	50	Pink	"
110-115	60	"	
115-120	130	Creamy	Some brown shale
120-125	110	Yellowish	
125-130	160	Brown	
130-135	190	B. Grey	Pyritic sulphides
135-140	180	"	"
140-145	100	"	"
145-150	65	"	"
150-155	60	"	"
155-160	65	"	"
160-165	90	"	"
165-170	60	"	"
170-175	40	"	"
175-180	45	"	"
180-185	50	"	Minor "
185-190	30	"	"
190-195	65	"	"
195-200	60	"	Minor "
200-205	60	"	1% "
205-210	65	"	Minor "
210-215	370	"	"
215-220	110	"	Minor "
220-225	85	"	Considerable "
225-230	85	B. Grey	Con. pyritic sulphides
230-235	120	"	"
235-240	Missing	"	Minor pyritic sulphides
240-245	110	"	5% "
245-250	300	"	Minor "
250-255	430	"	5% "
255-260	100	"	5% "
260-265	80	"	Minor "
265-270	190	"	
270-275	120	"	

No. 398/380

Depth	Cu,ppm	(Cu%)	Colour	Remarks
275-280	150		B. Grey	Consid. pyritic sulphides
280-285	150			Minor "
285-290	60		"	"
290-295	90		"	"
295-300	70		"	"
300-305	1900		"	"
305-310	10000	1.0	"	"
310-315	10000		"	"
315-320	480		R. Brown	"
320-325	220		Pink	Minor native copper
325-330	550		Mauve Brown	Native Copper
330-335	260		"	Minor "
335-340	570		"	"
340-345	570		"	"
345-350	180		L. Brown	Core
350-355	310		Contaminated due to casing	
355-360	70		mauve & Brown	
360-365	190		"	
365-370	220		L. Brown	
370-375	190		"	
375-380	310		"	
380-385	440		"	
385-390	690		Mauve	
390-395	1300		L. Brown	Quartz Malachite
395-400560	560		"	"
400-405	820		Pale Pink	Much Linionite
405-410	410		"	
410-415	1100		L. Brown	Some Limonite Quartz & Mal.
415-420	1100		Pink Gritty	" & Malachite
420-425	760		"	"
425-430	950		White & Mauve	Minor Malachite
430-435	270		L. Brown	
435-440	280		"	
440-445	260		"	
445-450	360		Pink	Minor tillite
450-455	320		L. Brown	
455-460	300		"	Some pink
460-465	350		"	Some Limonite
465-470	240		"	
470-475	100		"	
175-480	160		"	"
480-485	170		"	
485-490	85		"	Minor shale
490-495	220		Pink	
495-500	190		L. Brown	Minor tillite

0137 LOG OF BOREHOLE No. 399/380

Area: ELSIE ADAIR Dip: 70°N Date: 17-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	cu'ppm	(Cu%)	Colour	Remarks
5-10	5		L. Brown	
10-15	10		"	
15-20	10		"	
20-25	10		"	
25-30	10		"	
30-35	10		" (Y)	
35-40	10		"	
40-45	10		"	No visible copper
45-50	15		"	
50-55	20		"	
55-60	15		L. Brown	
60-65	20		Y. Brown	
65-70	30		Pinkish	
70-75	35		Y. Brown	
75-80	35		"	Malachite
80-85	30		"	
85-90	50		"	
90-95	50		Orange	
95-100	700		L. Brown	
100-105	000		Grey	Sulphides
105-110	2300		B. Grey	Minor sulphides
110-115	2400		"	"
115-120	3300		"	"
120-125	3400		"	No visible copper
125-130	3000		"	"
130-135	3100		"	"
135-140	2900		"	"
140-145	3600		"	"
145-150	4200		"	"
150-155	7500)		"	"
155-160	35000)	1.89	"	"
160-165	15000)		"	"
165-170	18000)		Brown	No visible copper
170-175	3900		" (Y)	"
175-180	1500		"	"
180-185	1400		"	"
185-190	1100		"	"
190-195	1100		"	"
195-200	700		L. Brown	"
200-205	450		Y. Brown	"
205-210	500		"	"
210-215	520		"	"
215-220	560		"	"
220-225	560		"	"
225-230	550		Y. Brown	"
230-235	550		"	"
235240	550		"	"
240-245	540		"	"
245-250	810		"	"

0138

LOG OF BOREHOLE No. 399/304

Area: ELSIE ADAIR Dip: 70°N Date: 18-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu'ppm	(Cu%)	Colour	Remarks
5- 10	20		L. Brown	
10- 15	20		"	
15- 20	20		"	
20- 25	25		"	
25- 30	180		"	
30- 35	50		"	
35- 40	90		"	
40- 45	170		"	
45- 50	20		M. Brown	
50- 55	30		"	
55- 60	35		"	No visible mineralisation
60- 65	30		"	
65- 70	40		"	
70- 75	40		"	
75- 80	25		L. Grey	
80- 85	20		MrBrown	
85- 801	30		Brown	
90- 95	30		B. Grey	
95-100	150		"	
100-105	80		"	
105-110	50		"	
110-115	50		"	
115-120	40		"	
120-125	40		"	
125-130	40		"	
130-135	40		"	
135-140	40		"	
140-145	80		"	Minor sulphides
145-150	120		"	
150-155	70		"	
155-160	5200	0.52	"	
160-165	490		L. Grey	
165-170	220		Pale Mauve	
170-175	2000		"	
175-180	11000	1.1	Mauve	
180-185	900		"	
185-190	490		Y. Brown	
190-195	230		"	No visible mineralisation
195-200	250		"	
200-205	270		"	
205-210	250		"	
210-215	290		"	
215-220	180		"	
220-225	180		"	
225-230	380		Off Brown	
230-235	750		"	
235-240	330		L.Y. Brown	
240-245	540		"	
245-250	750		"	

0139

LOG OF BOREHOLE No. 400/384

Area: ELSIE ADAIR Dip: 70° N Date: 3/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	25		L. Brown	
10- 15	20		"	
15- 20	20		Brown	
20- 25	20		"	
25- 30	20		L. Brown	
30- 35	30		Yellow	
35- 40	30		Brown	
40- 45	65		Pink	
45- 50	70		Brown	
50- 55	40		R. Brown	
55- 60	45		Brown	
60- 65	40		Grey	
65- 70	50		D. Grey	
70- 75	85		"	
75- 80	50		"	
80- 85	80		"	
95- 90	70		"	
90- 95	80		"	Sulphide Tr
95-100	85		"	
100-105	1,400		"	
105-110	1,900		"	Pyrite
110-115	1,200		"	Possible Chalcopyrite
115-120	500		"	
120-125	520		"	
125-130	480		"	Small Recovery (damp)
130-135	920		"	"
135-140	1,300		"	Pyritic Sulphides
140-145	2,300		"	Chalcocite possible
145-150	3,400		"	
150-155	9,000	1.35	"	"
155-160	18,000		"	
160-165	1,600		Brown	
165-170	900		"	
170-175	450		Red	
175-180	900		R. Brown	
180-185	700		Y. Brown	
185-190	500		"	
190-195	320		"	
195-200	220		"	
200-205	310		Red	
205-210	460		Y. Brown	
210-215	400		Yellish	
215-220	480		L. Brown	
220-225	320		L. Pink	
225-230	490		Pink	
230-235	900		"	
235-240	1,000		"	
240-245	1,000		"	

0140

LOG OF BOREHOLE No. 400/388

Area: Elsie Adair Dip: 70° N Date: 2/11/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	110		Light Brown	
10- 15	80		" "	
15- 20	80		" "	
20- 25	40		" "	
25- 30	20		Creamy	
30- 35	20		"	
35- 40	30		Light Brown	
40- 45	30		White	
45- 50	150		Pink	
50- 55	140		Light Brown	
55- 60	140		Yellowish	
60- 65	380		L. Brown	
65- 70	320		M. Brown	
70- 75	100		Pinkish	
75- 80	280		"	
80- 85	340		Grey	
85- 90	440		D. Grey	Tr
90- 95	260		"	
95-100	200		M. Brown	
100-105	140		L. Grey	
105-110	160	-	D. Grey	
110-115	9,000	1.0	D.B. Grey	Sulphides
115-120	10,800	-	" "	
120-125	720		R. Brown	Tr
125-130	900		D.Y. Brown	Tr
130-135	340		D. Pink	
135-140	340		"	
140-145	480		Y. Brown	Tr
145-150	400		Brown	
150-155	340		Pinkish	
155-160	180		L. Brown	
160-165	260		Pinkish	
165-170	140		L. Brown	
170-175	280		Pink	
175-180	320		"	
180-185	280		L. Brown	
185-190	340		"	
190-195	150		Creamy	
195-200	320		Brown	
200-205	320		Pink	
205-210	240		"	
210-215	480		L. Brown	
215-220	480		"	
220-225	480		"	
225-230	500		"	
230-235	480		"	
235-240	330		"	
240-245	320		"	
245-250	340		"	

0141

LOG OF BOREHOLE No. 400/392

Area: ELSIE ADAIR Dip: 70°N Date: 18-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu'ppm (Cu%)	Colour	Remarks
5- 10	80	Off White	
10- 15	60	"	
15- 20	100	White	
20-25	210	"	
25- 30	140	"	
30- 35	180	"	
35- 40	150	"	
40- 45	210	Off White	
45- 50	350	"	
50- 55	290	White	
55- 60	200	Off white	No evidence of mineralisation throughout
60- 65	210	White	
65- 70	100	"	
70- 75	90	Off White	
75- 80	100	"	
80- 85	190	"	
85- 90	140	Mauve	
90- 95	90	Off White	
95- 100	120	Creamy Brown	
100-105	210	Dark Creamy	
105-110	140	L. Brown	
110-115	60	Mauve	
115-120	250	Creamy Brown	
120-125	180	L. Brown	
125-130	160	"	
130-135	250	"	
135-140	330	"	
140-145	310	"	
145-150	280	"	
150-155	150	Off White	
155-160	160	Creamy Brown	
160-165	180	"	
165-170	190	"	
170-175	150	Mauve Brown	
175-180	110	Off White	
180-185	310	L. Brown	
185-190	480	"	
190-195	370	L. Brown	
195-200	380	"	
200-205	430	"	
205-210	380	"	
210-215	290	"	
215-220	210	Creamy	
220-225	210	"	
225-230	180	Creamy	
230-235	190	"	
235-240	260	"	

0142

LOG OF BOREHOLE No. 400/396

Area: BOOLOOROO Dip: 70° Date: 18-12-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.

Depth	Cu'ppm (Cu%)	Colour	Remarks
5- 10	60	Off White	
10- 15	90	"	
15- 20	55	"	
20- 25	60	"	
25- 30	40	White	
30- 35	40	"	
35- 40	30	"	
40- 45	20	"	
45- 50	20	Off White	
50- 55	20	"	No
55- 60	30	"	Visible
60- 65	30	"	Copper
65- 70	40	"	
70- 75	45	"	
75- 80	60	L. Brown	
80- 85	45	L. Mauve	
85- 90	60	L. Brown	
90- 95	60	"	
95-100	90	Y. Brown	
100-105	70	L. Brown	
105-110	50	L. Mauve	
110-115	230	Grey	
115-120	150	B. Grey	
120-125	150	"	
125-130	490	"	Sulphides
130-135	3600	"	
135-140	1900	"	Minor "
140-145	220	"	"
145-150	4200	"	"
150-155	160	"	No visible copper
155-160	170	R. Brown	"
160-165	70	L. Brown/Grey	"
165-170	70	Brown	"
170-175	70	L. Grey	"
175-180	50	Off White	"
180-185	50	L. Brown	
185-190	45	V.L. Brown	
190-195	40	Off White	
195-200	140	L. Brown	
200-205	130	Yellow	
205-210	140	"	
210-215	110	"	
215-220	190	"	
220-225	140	"	
225-230	250	"	
230-235	Missing	"	
235-240	Missing	"	

0143

LOG OF BOREHOLE No. 443/404

Area: TAPLEY Dip 90° Date: 31-1-71

Drilled by: BORING ENTERPRISES.

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	130		Pale Mauve	
10- 15	190		V.L. Brown	
15- 20	270		P. Mauve	
20- 25	430		V.L. Brown	
25- 30	540		"	Tr Malachite
30- 35	290		"	
35- 40	360		"	
40- 45	380		"	
45- 50	310		"	
50- 55	340		"	
555- 60	240		P.Y. Brown	
60- 65	420		V.L. Brown	
65- 70	700		L. Brown	
70- 75	360		Creamy	
75- 80	270		"	
80- 85	200		"	
85- 90	430		L. Y. Brown	
90- 95	360		Y.Brown	
95-100	1,500		L. Brown	
100-105	900		Y. Brown	
105-110	680		"	
110-115	1,100		Off White	Tr Malachite
115-120	700		"	"
120-125	800		Creamy	"
125-130	500		"	
130-135	700		"	
135-140	350		"	
140-145	210		"	
145-150	150		"	
150-155	140		Off White	
155-160	270		Creamy	
160-165	110		"	
165-170	120		"	
170-175	250		"	
175-180	310		L. Brown	Minor Limonite
180-185	260		Off White	
185-190	270		Creamy	
190-195	150		"	
195-200	80		"	
200-205	80		"	
205-210	50		Off White	
210-215	90		Creamy	
215-220	70		"	Minor Limonite
220-225	80		"	
225-230	290		L. Brown	Minor Limonite
230-235	80		Creamy	
235-240	100		L. Yellow	
240-245	80		Mauve	
245-250	100		Y. Brown	
250-255	90		"	
255-260	100		"	
260-265	150		L. Brown	
265-270	90		Yellow & Mauve	No visible
270-275	45		P.Y. Brown	mineralisation
275-280	30		"	
280-285	50		"	
285-290	40		"	
290-295	40		L. Pink	

LOG OF BOREHOLE NO. 443/404 Dip 90° Date: 31-1-71

Depth	Cu,ppm	Cu (%)	Colour	Remarks
295-300	60		Pink & Brown	
300-305	40		L. Brown	TILLITE
305-310	25		"	"
310-315	30		"	"
315-320	40		"	Some Limonite
320-325	25		"	" "
325-330	30		"	" "
330-335	60		"	" "
335-340	20		Off White	
340-345	40		"	No visible
345-350	30		"	mineralisation
350-355	25		"	
355-360	90		"	
360-365	200		"	
365-370	70		Creamy	
370-375	220		"	
375-380	210		"	
380-385	100		"	
385-390	120		"	
390-395	30		"	
395-400	100		"	Hole abandoned at 400ft 6" Button Bit throughout.

0145

LOG OF BOREHOLE No. 416/504

Area: DIAMOND JUBILEE Dip: 70° S Date:

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	20			
10- 15	30			
15- 20	15			
20- 25	25			
25- 30	85			
30- 35	10			
35- 40	10			
40- 45	10			
45- 50	45			
50- 55	15			
55- 60	30			
60- 65	100			
65- 70	20			
70- 75	30			
75- 80	20			
80- 85	15			
85- 90	10			
90- 95	15			
95-100	120			
100-105	180			
105-110	40			
110-115	40			
115-120	400			
120-125	40			
125-130	20			
130-135	70			
135-140	20			
140-145	30			
145-150	20			
150-155	10			
155-160	50			
160-165	15			
165-170	2,400			
170-175	150			
175-180	120			
180-185	40			
185-190	110			
190-195	80			
195-200	70			
200-205	40			
205-210	80			
210-215	25			
215-220	25			
220-225	20			
225-230	30			
230-235	40			
235-240	20			
240-245	20			
245-250	35			

0146

LOG OF BOREHOLE No. 414/508

Area: DIAMOND JUBILEE Dip: 70° S Date: 5/12/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu,ppm	Cu(%)	Colour	Remarks
5- 10	50		Yellow Brown	
10- 15	20		" "	
15- 20	25		" "	
20- 25	60		" "	
25- 30	20		" "	
30- 35	35		" "	
35- 40	60		" "	
40- 45	30		" "	No Visible
45- 50	15		" "	
50- 55	20		" "	Copper
55- 60	20		" "	
60- 65	20		" "	5' - 125'
65- 70	25		" "	
70- 75	60		" "	
75- 80	35		" "	
80- 85	70		" "	
85- 90	180		" "	
90- 95	30		" "	
95-100	60		" "	
100-105	50		" "	
105-110	35		" "	
110-115	20		" "	
115-120	20		Light Brown	
120-125	50		" "	
125-230	30		Grey	Considerable Pyrite
130-135	45		"	Sulphides throughout
135-140	370		"	125' - 235'
140-145	260		"	
145-150	50		"	
150-155	500		"	
155-160	40		"	
160-165	40		"	Listed depth 250'
165-170	40		"	
170-175	100		"	Hole stopped due to
175-180	95		"	no return after 235'
180-185	80		"	
185-190	160		"	
190-195	160		"	
195-200	140		"	
200-205	95		"	
205-210	140		"	
210-215	150		"	
215-220	120		"	
220-225	75		"	
225-230	150		"	
230-235	120		"	

0147

LOG OF BOREHOLE No. 418/508

Area: DIAMOND JUBILEE Dip: 60° S Date: 29/30-11-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	160		Light Brown	
10- 15	50		" "	
15- 20	10		Yellowish	
20- 25	15		"	
25- 30	50		Light Brown	
30- 35	20		Yellowish	
35- 40	30		Yellow	
40- 45	50		"	Minor Malachite
45- 50	20		Brown	Tr Malachite & Azur-
50- 55	10		"	Tr " " ite
55- 60	15		"	Tr "
60- 65	20		"	
65- 70	15		Yellowish	
70- 75	25		Light Brown	
75- 80	50		Yellowish	
80- 85	30		V.L. Brown	
85- 90	65		Grey	
90- 95	180		"	
95-100	20		L. Brown	
100-105	50		"	Tr Malachite
105-110	40		Yellowish	Tr Sulphides
110-115	30		Grey	Minor Carbonates Cu
115-120	15		Dark Grey	Tr Malachite
120-125	15		Brown	1.0% Pyritic Sulph.
125-130	40		"	.5% " "
130-135	25		Blue Slates	Minor " "
135-140	40		Grey "	" " "
140-145	340		" "	Considerable Sulph.
145-150	260		Blue	" "
150-155	50		" "	" "
155-160	450		" "	" "
160-165	50		" "	" "
165-170	40		" "	Minor Sulphides
170-175	40		" "	" "
175-180	400		" "	" "
180-185	1,000		" "	.5% "
185-190	550		" "	.5% "
190-195	450		" "	Minor "
195-200	260		" "	" "
200-205	300		" "	" "
205-210	170		" "	Very clear Quartz/ Chip
210-215	350		" "	" " " "
215-220	220		" "	" " " "
220-225	450		" "	" " " "
225-230	450		" "	Pyritic Sulphides
230-235	360		" "	" "
235-240	290		" "	" "

0148

LOG OF BOREHOLE No. W.A.1

Area: TAPLEY (WEST JUBILEE) Dip: 60° N Date: 14/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Porcussion Drilling with 3" bit)

Depth	Cu, ppm	Cu(%)	Colour	Remarks
5- 10	380		L. Brown	
10- 15	180		"	
15- 20	150		L. Pink	
20- 25	380		Red Brown	
25- 30	130		"	
30- 35	85		"	
35- 40	120		Red	
40- 45	190		Dark Pink	
45- 50	180		Red	No Visible
50- 55	180		Pink	
55- 60	320		L. Brown	Mineralisation
60- 65	230		Yellowish	
65- 70	120		"	detected
70- 75	160		"	
75- 80	140		Creamy	throughout
80- 85	130		"	
85- 90	120		Yellowish	
90- 95	100		Brown	
95-100	170		Pale Yellow	
100-105	210		Pink	
105-110	320		L. Brown	
110-115	160		"	
115-120	180		"	
120-125	140		"	
125-130	200		Yellow Brown	
130-135	290		" "	
135-140	340		L. Brown	
140-145	130		Y. Brown	
145-150	230		L. Brown	
150-155	160		Y. Brown	
155-160	200		L. Brown	
160-165	230		"	
165-170	340		"	
170-175	280		"	
175-180	120		Pink	
180-185	190		Brown	
185-190	150		Orange Brown	
190-195	220		L. Brown	
195-200	240		"	
200-205	170		"	
205-210	170		"	
210-215	200		"	
215-220	150		Pinkish	
220-225	140		"	
225-230	150		"	
230-235	230		Pink	Contaminated

0149

LOG OF BOREHOLE No. W.D.1

Area: TAPLEY (WEST JUBILEE) Dip: 60° N Date: 14/10/70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu(%)	Colour	Remarks
5- 10	110		Yellow Brown	
10- 15	100		" "	
15- 20	220		" "	
20- 25	160		" "	Quartz Chips
25- 30	90		" "	
30- 35	110		Pink	
35- 40	130		Orange	
40- 45	85		Pink	
45- 50	310		Yellow Brown	No Mineralisation
50- 55	220		" "	Visible
55- 60	200		Light Brown	
60- 65	75		Light Yellow	
65- 70	100		" "	
70- 75	100		" "	
75- 80	160		Yellow Brown	
80- 85	95		Creamy	
85- 90	200		Brown	
90- 95	170		Medium Brown	
95-100	190		Yellow Brown	
100-105	160		" "	
105-110	120		Yellow	
110-115	100		"	
115-120	150		Yellow Brown	
120-125	140		Pale Yellow	
125-130	80		" "	
130-135	120		" "	
135-140	120		" "	
140-145	130		" "	
145-150	120		" "	
150-155	160		" "	
155-160	100		" "	
160-165	65		Creamy	
165-170	110		Yellow	
170-175	160		"	
175-180	170		"	
180-185	200		"	
185-190	130		"	
190-195	150		"	
195-200	160		"	
200-205	190		"	
205-210	240		Yellow Brown	
210-215	90		Pinkish	
215-220	120		Yellow	
220-225	140		"	
225-230	150		Yellowish	
230-235	230		Yellow	
235-240	140		"	
240-245	100		Pink	
245-250	160		"	

0150

LOG OF BOREHOLE No. W.C.1

Area: TAPLEY (WEST JUBILEE) Dip: 70° N Date: 14/15-10-70

Drilled by: INVESTIGATION DRILLING PTY. LTD.
(Percussion Drilling with 3" bit)

Depth	Cu, ppm	Cu (%)	Colour	Remarks
5- 10	140		L. Brown	
10- 15	300		"	
15- 20	250		P. Yellow	
20- 25	280		"	
25- 30	340		Yellow	
30- 35	220		P. Yellow	
35- 40	120		Creamy	
40- 45	250		L. Brown	
45- 50	270		Yellow Brown	
50- 55	190		Yellow	
55- 60	150		"	No
60- 65	170		L. Brown	
65- 70	400		Brown	Mineralisation
70- 75	420		Orange Brown	
75- 80	380		" "	Detected
80- 85	500		Rusty Brown	
85- 90	210		Orange Pink	Throughout
90- 95	280		Brown	
95-100	210		R. Brown	
100-105	270		Yellow	
105-110	180		L. Yellow	
110-115	180		"	
115-120	310		"	
120-125	320		"	
125-130	160		"	
130-135	200		Yellow	
135-140	200		"	
140-145	280		"	
145-150	200		Brown	
150-155	190		L. Pink	
155-160	200		L. Brown	
160-165	180		"	
165-170	230		"	
170-175	250		Pink	
175-180	260		"	
180-185	210		"	
185-190	320		Yellow	
190-195	240		Red Brown	
195-200	340		Orange Brown	
200-205	240		" "	Hole abandoned
205-210	230		Brown	at 215' due to
210-215	200		-	wet conditions.

QUARTERLY REPORT FOR BOOLOOROO, SML 366.

Quarter Ending June 17, 1971.

During this quarter a diamond drilling programme and a geophysical survey programme was carried out.

Diamond drilling programme was carried out to test the primary copper sulphides encountered in the percussion drill holes to the south of Mount Coffin Diapir. Two drilling rigs operated by "Associated Diamond Drillers" were employed from February 1971 to April 1971. Drilling Rig No. 1 was engaged to drill a hole at position 397N 324E where primary copper was encountered in the Percussion drill hole. The hole at 90° at this location proved impossible to drill beyond 240 feet depth. The highly fractured ground proved very difficult to penetrate further and the hole had to be abandoned.

To get the required information about the primary ore encountered in the percussion drill hole at this location, it was decided to drill at least one deep drill hole here. To reduce the expenditure it was decided to deepen the 397/324, 70° inclined percussion drill hole. The hole was deepened to 305 feet and due to broken and fractured ground could not be drilled any further and hence was abandoned.

To test the same zone another 90° hole was drilled at location 397/325, parallel to the percussion hole 397/324. It had to be abandoned due to the same reasons at 295 feet depth.

To pass the broken and fractured mineralised zone another hole was planned about 50 feet to the east of drill hole 397/324 at an angle of 70°. The hole was abandoned when at 40 feet depth, because at that time it was realised that it would run into the same difficulties.

Rig No. 2 was employed to drill a hole at position 393/336. This hole was a stratigraphic hole and was intended to locate the contact of shales and Tillites and to see if the contact was mineralised. The hole was abandoned at 657 feet, before it reached its target.

Study of drill cores showed that weathering zone extends up to 150 feet depth and that the primary sulphides occur at various levels below 240 feet depth. In all cases the Primary copper sulphides are associated with a stockwork of siderite.

The cores from the mineralised sections of the drill holes were sent to McPhar Geophysics Pty. Ltd. to be assayed for Copper, Silver, Gold, Antimony and Arsenic.

The following table shows some of the best intersections in the individual drill holes:

Hole No.	From	To	Width	Percentage of copper
397/324 90°	154'9"	173'9"	19'	0.43 %
397/324 70°	240'	264'	24'	1.3 %
397/325 90°	190'	200'	10 '	0.5 %
393/336 90°	378'	390'	12 '	0.1 %

Drill hole 393/336 showed dissiminated chalcopyrite from 300 feet up to 657 feet, but the assay results showed very low copper. Again a very high arsenic (4,000 PPM) value occurs in the drill hole assays.

An I.P survey was carried out for about two weeks by Seigel Associates (Aust.) Pty. Ltd. on the following pattern.

Expanders were carried out in the area of interest to examine the resistivity conditions within the oxidised zone. The expanders were capable of showing the depth of the oxidised zone in the area and were confirmed by the comparison of the drill hole information.

Based on the assumption that there would be a significant contrast in the apparent resistivity between the oxidised zone and the sulphide zone, a "Gradient Array Technique" was selected to be the best approach. A 3,000 feet gradient array was set up over the area of interest and lines over 200 feet and 400 feet spacing were surveyed at approximately 100 feet interval. In addition, three array were surveyed over some of the lines using 200 and 400 feet spacing, with reading every 200 feet at each spacing.

A highly conductor zone has been delineated towards the south of the present drilling lines, over the siltstone area. The strike of this conductor zone is N-NW to S-SW, and varies in depth from the surface at various survey stations.

The report on this survey is awaited from the geophysical consultant and would be sent to the Department of Mines when available.

ZAHIR SHAH.

SOUTHERN CROSS EXPLORATION N.L.

REPORT ON AN INDUCED POLARIZATION SURVEY COPLEY, SOUTH AUSTRALIA AREA

ON BEHALF OF
SOUTHERN CROSS EXPLORATION N. L.

PRIVATE & CONFIDENTIAL

0154

REPORT ON AN INDUCED POLARIZATION SURVEY COPLEY, SOUTH AUSTRALIA AREA ON BEHALF OF SOUTHERN CORSS EXPLORATION N. L.

by

John L. Irvine, B.Sc., P.Geoph.

Geophysicist

SYDNEY NEW SOUTH WALES

JULY, 1971

SEIGEL ASSOCIATES AUSTRALASIA PTY. LTD.
GEOPHYSICAL CONSULTANTS AND CONTRACTORS
234 ROCKY POINT ROAD, RAMSGATE, N.S.W. 2217
TELEPHONES: 529 7336 AND 29 2684
AFTER HOURS 451 1330
TELEX – AA21417 TELEGRAMS SCINTREX, SYDNEY

SUMMARY

This test survey revealed the presence of an extensive zone with an abnormally high I.P. response. An investigation of the drill hole results revealed this response was due to carbonaceous shales which exist above the known zone of mineralization.

Further I.P. work is recommended, especially the drill hole technique to obtain representative results from the mineralized zone.

CONTENTS

REPORT ON

AN INDUCED POLARIZATION SURVEY

COPLEY, SOUTH AUSTRALIA AREA

ON BEHALF OF

SOUTHERN CROSS EXPLORATION N.L.

INTRODUCTION

During the period from May 21 to May 27. 1971, Seigel Associates Australasia Pty.Ltd. executed an induced polarization survey in the Copley, South Australia area on behalf of Southern Cross Exploration N.L. The field work was under the supervision of J.Walters while John L. Irvine, B.Sc., P.Geoph. provided overall geophysical supervison.

The Boolooroo/Tapley grid is located about five miles east of Copley, and is readily accessible by road. The ground surface is generally gentle hills with a rocky surface.

The attached appendix discusses the purpose of induced polarization surveys, the instrumentation used for the present survey as well as the electrode arrays normally employed.

The purpose of this present survey was to test the area with the induced polarization technique, to check the response expected and to ascertain its usefulness in the possibility of future work.

Two gradient set-ups were employed plus three Schlumberger expanders and one Wenner three-array expander. The gradient set-ups employed a current electrode spacing of approximately 910 metres (3000-ft) and a potential dipole spacing of 25 metres with readings taken every 25 metres. The expander arrays utilized spacings, varying from 10-feet to 2000-feet. The expander arrays require no grid and all necessary chaining was performed by Seigel personnel.

GEOLOGY

The geology of the survey area consists of the Mt.Coffin diapir intruding the Tapley hill formation, Tindlepina member and Yudnamutana sub group. West of the survey area is the Balcanoona formation which is a massive dolomite.

The Tindelpina member is a carbonaceous shale lying above the mineralized zone. Drilling results would indicate a thickness exceeding 200-feet.

The main target of the present survey would be the copper-bearing sediments lying below the carbonaceous shales but above the diapir contact.

PRESENTATION OF THE RESULTS

The presentation of the results are at a horizontal scale of 1 inch = 50 metres for the gradient results, and the expander results are at a logarithmic scale of 5 inches per cycle. The vertical scales for the gradient results are at the following scales:

Apparent chargeability:		1 inch = 10.0 milliseconds
Apparent resistivity	:	Logarithmic at 5 inches/cycle; base level at 100 - 2 metres.
L/M ratio	:	1 inch = 1.0

Examples of these scales are given on all plates.

DISCUSSION OF THE RESULTS

The chargeability profiles clearly indicate the high chargeability resulting from the carbonaceous shales. This is confirmed by the Wenner three-array expander which gave a calculated response of 64.0. milliseconds. This response is open to the west at line 288E and

eastward to line 328E. Lines 332E to 348E exhibit a much different nature in that the responses are open to the south. Also the contact with the diapir becomes readily apparent at the extreme north end of the lines, and the L/M ratio is indicative of undesirable coupling effects obtained from distortion of the gradient field across the contact. This arises from the fact that the M (chargeability) values change drastically across the contact.

All the apparent resistivity results indicate a general increase in resistivity to the south and hence a general change in character of the sediments. The local changes along each profile are most probably the changes in the near surface material.

The expanders yield a very interesting feature in that there was practically no change in the resistivity from surface materials to those at depth. Spread #1 (centred at 397N - 324E) was the only expander which yielded results that were previously expected. These results would

indicate the absence of a weathered and oxidized zone plus the fact that there is no alteration related to the surface material.

The expanding arrays have calculated depths to the I.P. source varying from 150-feet in depth to approximately 250-feet in depth. The intrinsic chargeability of the source is exceptionally strong (calculated at 64.0 milliseconds) from the Wenner three-array and the previous drilling suggests the carbonaceous shales as the source material. The arrays would consequently have to be of abnormally large dimensions to effectively see below these shales and the very large chargeability results from the shales would effectively "mask" anything situated immediately below.

From the known geology, Spread #3 should have yielded the shallowest depth to source but instead yielded the deepest. No geological explanation can be given and geophysically, the results are the least conclusive of all expanders, as the plotted results of the I.P. response are the most irregular of the four expanders.

CONCLUSIONS AND RECOMMENDATIONS

The present induced polarization survey has revealed the presence of an extensive area exhibiting a very high chargeability response. The cuttings from the percussion drilling verified that the source material was carbonaceous shales.

It is recommended that the association between the carbonaceous shales and copper mineralization be examined. If there is a direct association between the two, further I.P. work is recommended utilizing the shales as a "marker" to indicate the presence of copper mineralization which may occur below it.

It is also recommended that some drill hole I.P. be executed to determine the geophysical nature and possibly the extent of the sulphide mineralization.

Further I.P. surveying is recommended to the west towards the dolomites and north over the diapir to determine what kind of response exists from the mineralization that was observed in these areas. The present grid would have to be extended to the north to cover the diapir.

Seigel Associates Australasia Pty.Ltd. would be pleased to review the present results in the light of further information and participate in the laying out of any drill holes that may be requested by Southern Cross and to assist them in the planning of any future programme.

Respectfully submitted,

SEIGEL ASSOCIATES AUSTRALASIA PTY.LTD.

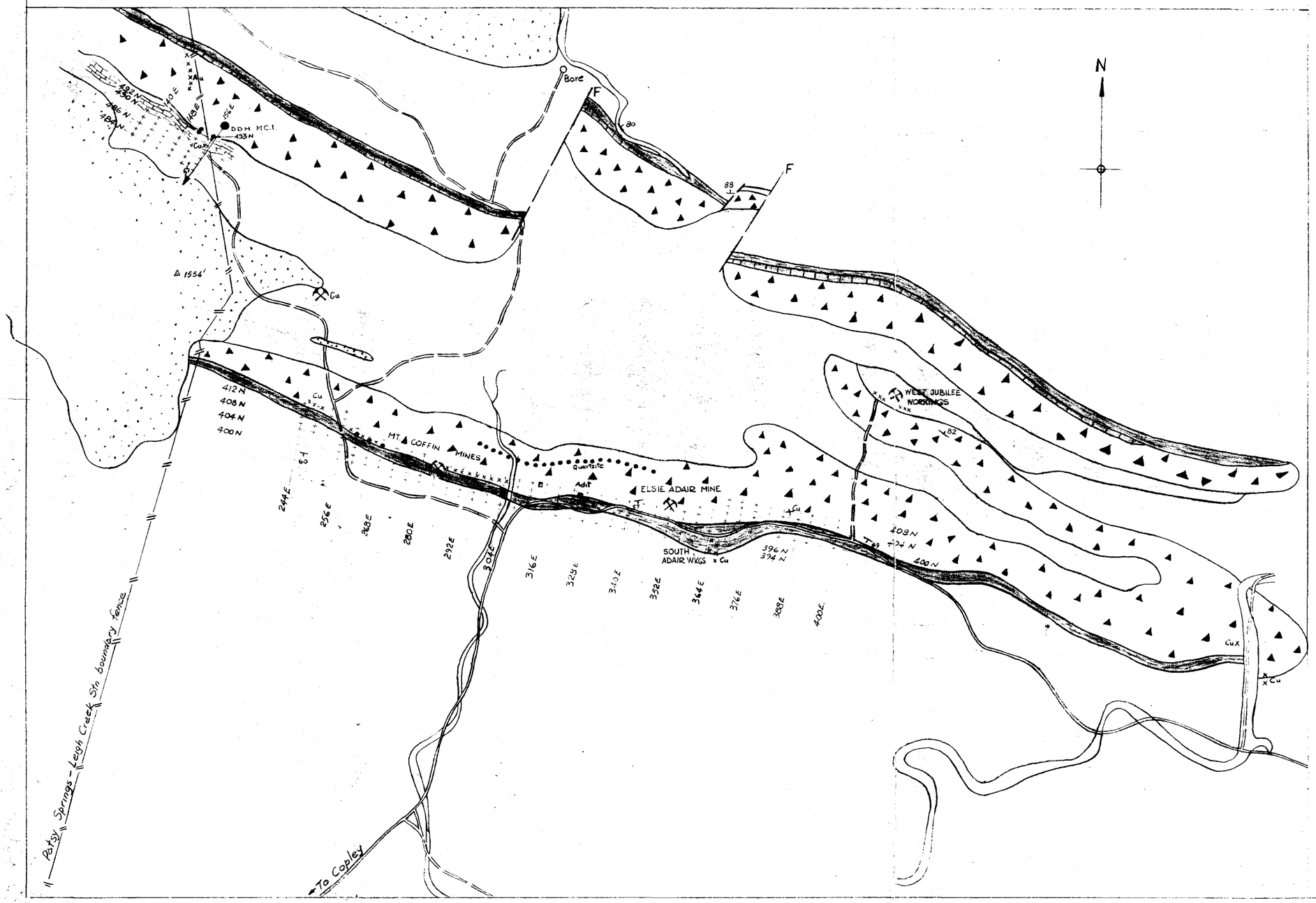
John L. Irvine

JOHN L. IRVINE,B.Sc.,P.Geoph

GEOPHYSICIST & MANAGER - EASTERN AUSTRALIA

MT. COFFIN DIAPIR

DRILLING PATTERN



LEGEND

- Creek bed alluvium and gravels
- AMBEROONA FORMATION Finely laminated green silty shales with minor lenticular limestones
- BALCANOONA FORMATION: Massive dolomite with some grey limestone
- TAPLEY HILL FORMATION: Laminated shales and siltstones with interbedded yellow-brown dolomites
  TINDELPINA MEMBER: Black carbonaceous, pyritic shale with basal yellow dolomite
- YUDNAMUTANA SUB-GROUP: Pebbly siltstone and shale Some arkose and grit Some lensing sandstones with occasional pebbles
- Silicified sandstones and carbonate breccia
- Massive dolomitic marble with disseminated copper sulphides
  Diapiric siltstone and dolomitic breccia Some sandstone with halite casts
- Geological boundary
- F —— Fault.
- /80 Strike and dip of bedding
- Main road and track
- Mine locality
- xxxxCu Minor Copper workings
- xxxxAu Alluvial Gold workings
- Mine shaft or adit
- · 1519' Barometric height
- △ Trig point
- ● M.C.1. Diamond drill hole
- • Drill hole site

SCALE

FEET
800 400 0 800 1600 2400 3200

Original Geology by Department of Mines - South Australia.

1272(1)-1

BOOLOOROO, MT. COFFIN.

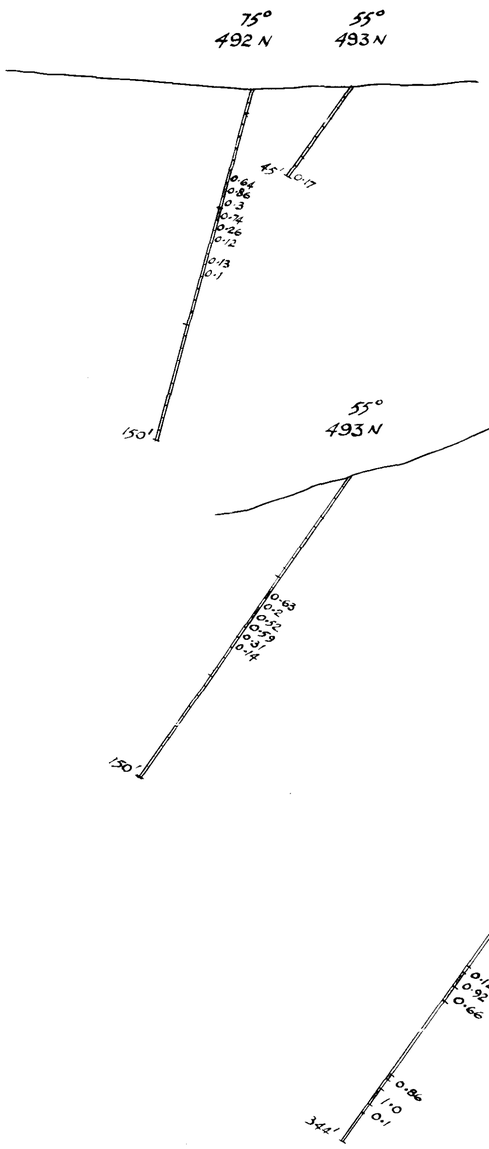
PERCUSSION DRILL HOLES

Copper Assay Values in %

scale ~ 1:480

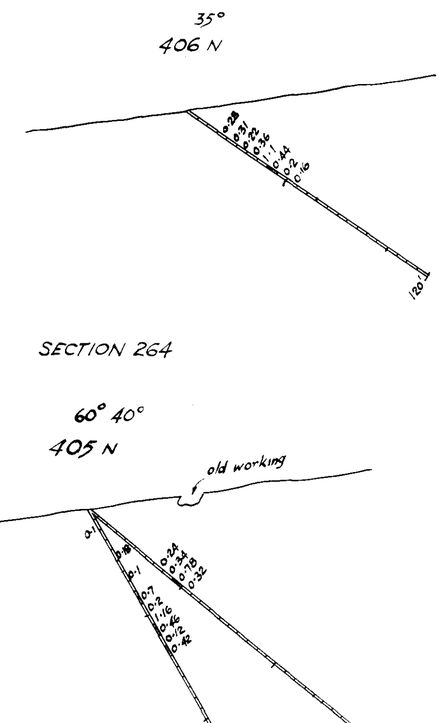
only Cu. values > 0·1% are plotted.
values > 0·4% coloured red.

SECTION 152

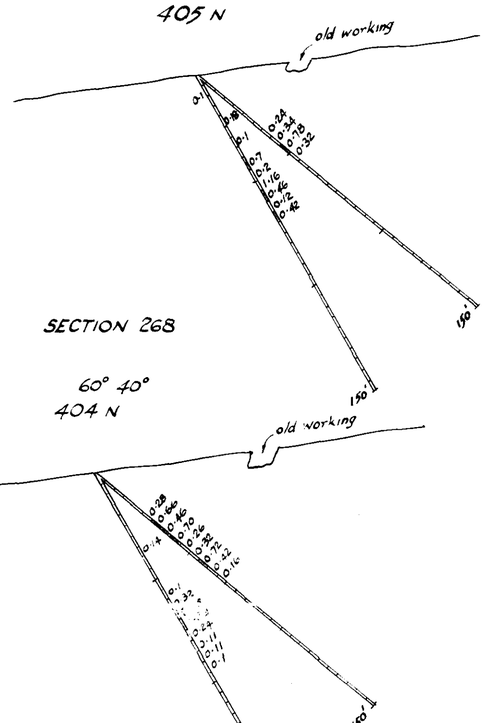


SECTION 156

SECTION 260

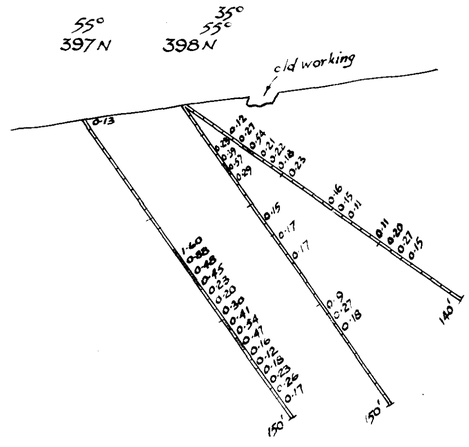


SECTION 264



SECTION 268

SECTION 304

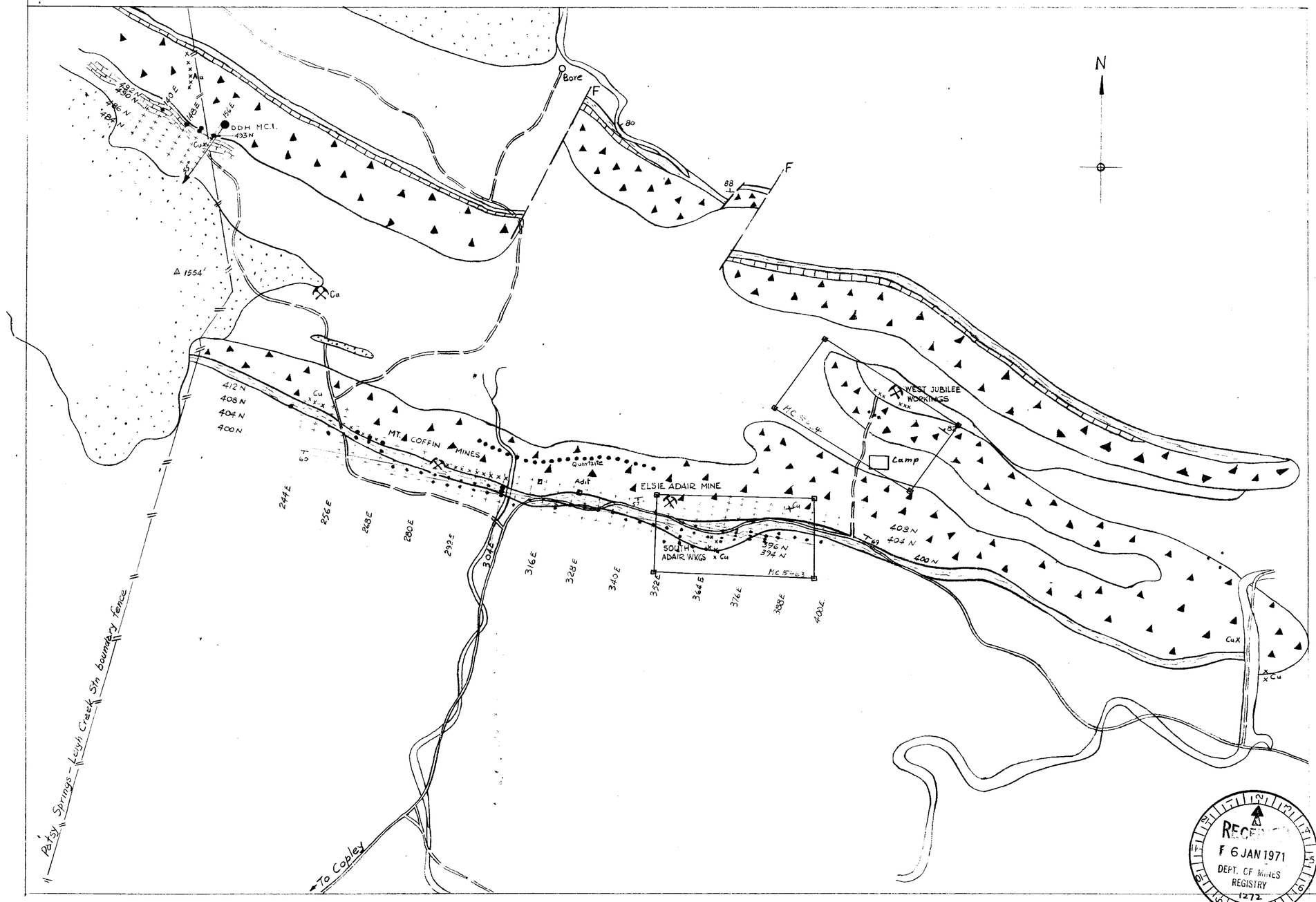


Client: SOUTHERN CROSS EXPLORATION N.L.			
Title, Project & Part Name: BOOLOOROO / TAPLEY Mt. COFFIN DIAPIR SOUTH FLANK			
SHIERS DRAUGHTING CONTRACTORS 38 Valiant Road Holden Hill S.A. 5088 · P.O. BOX 54 Greenacres S.A. 5086 · Phone 61 5155 Two Lines			SHIERS D/O Project Nº 768
Member Drafting Contractors Association of S.A. · Scales 1 : 1000	Drawn KCM · Checked · Approved · Rel. Date DEC. 1970	Drg Nº 1	Size R 26"x112"

1272(1)-3

MT. COFFIN DIAPIR

DRILLING PATTERN



LEGEND

- Creek bed alluvium and gravels
- AMBEROONA FORMATION Finely laminated green silty shales with minor lenticular limestones
- BALCANOONA FORMATION: Massive dolomite with some grey limestone
- TAPLEY HILL FORMATION: Laminated shales and siltstones with interbedded yellow-brown dolomites
  TINDELPINA MEMBER: Black carbonaceous, pyritic shale with basal yellow dolomite
- YUDNAMUTANA SUB-GROUP: Pebbly siltstone and shale Some arkose and grit Some lensing sandstones with occasional pebbles
- Silicified sandstones and carbonate breccia
- Massive dolomitic marble with disseminated copper sulphides
  Diapiric siltstone and dolomitic breccia Some sandstone with halite casts
- Geological boundary
- F —— Fault.
- /80 Strike and dip of bedding
- Main road and track
- Mine locality
- xxxxCu Minor Copper workings
- xxxxAu Alluvial Gold workings
- Mine shaft or adit
- · 1519' Barometric height
- △ Trig point
- ● M.C.1 Diamond drill hole
- ○ Drill hole site

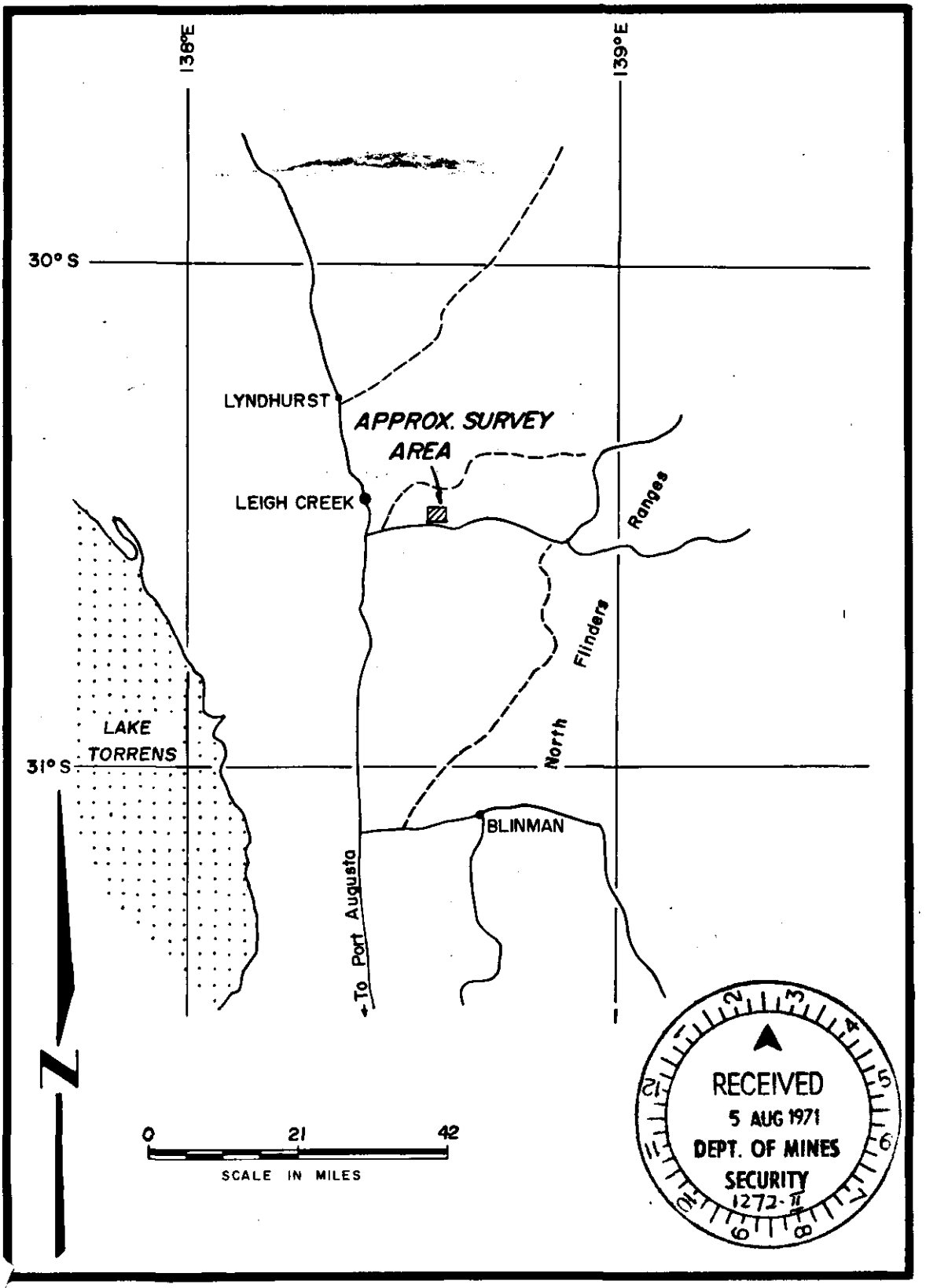
SCALE

FEET
800 400 0 800 1600 2400 3200

Original Geology by Department of Mines - South Australia.

1272(1)-4

BOOLOOROO – TAPLEY PROSPECT
LOCALITY PLAN



1272(2)-1

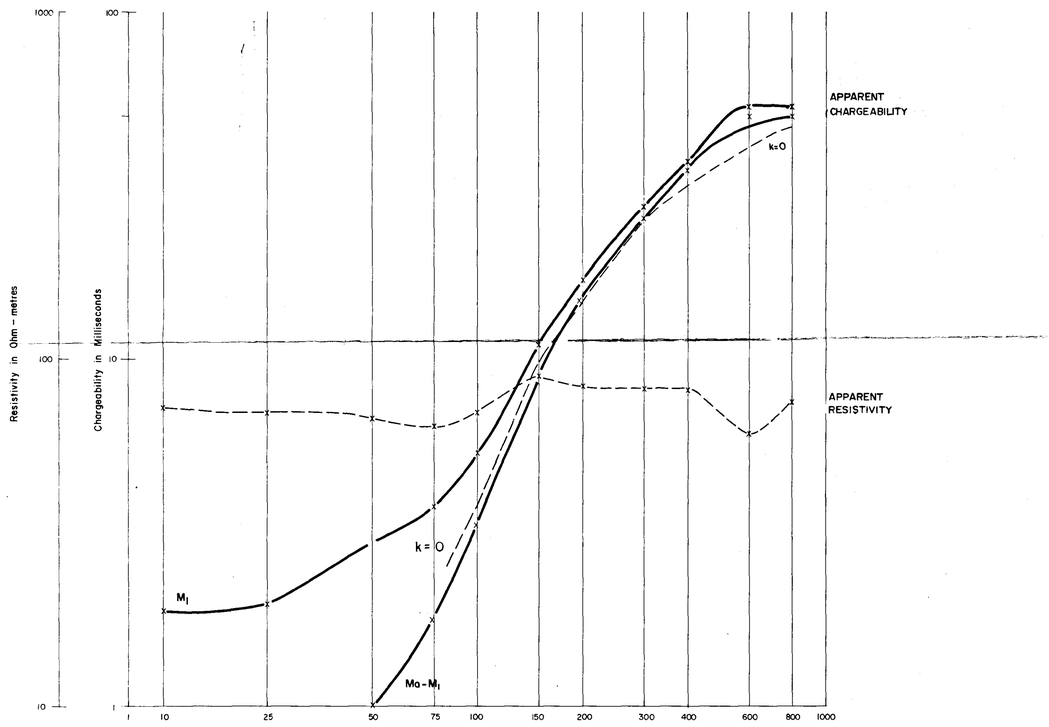
K = 0

M_1 = 2 | = 180'

M_2 = 64

EXPANDER A

389N, LINE 312E



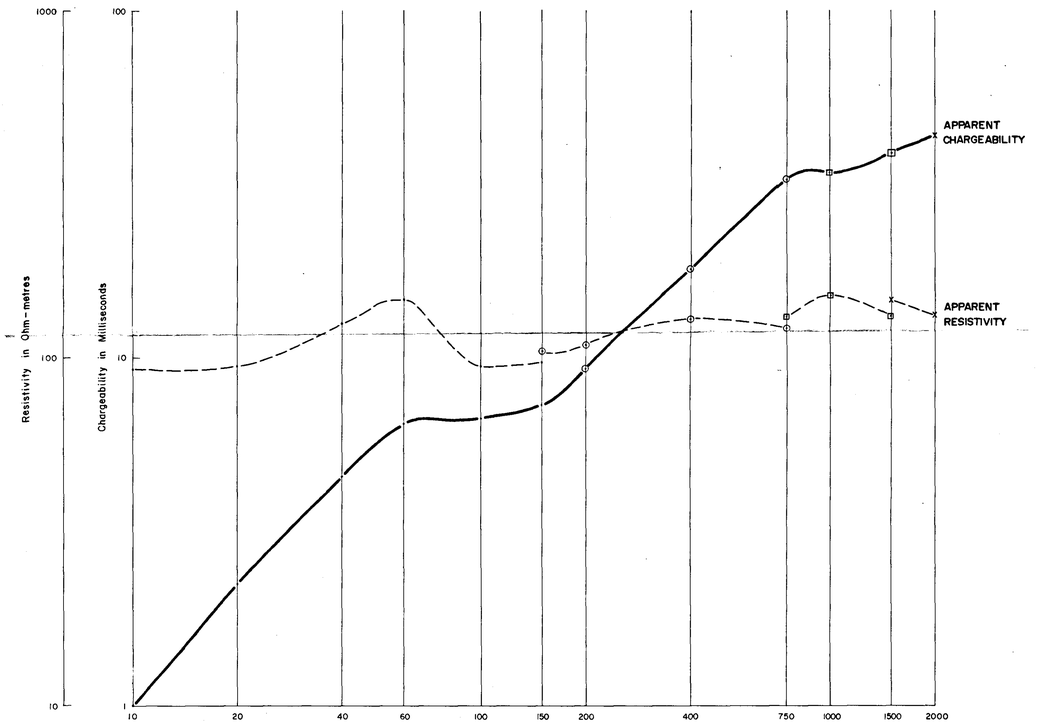
ELECTRODE SPACING 'A' IN FEET

M_1 = 1 | = 140'

M = 45

SPREAD 2

388N, LINE 324E



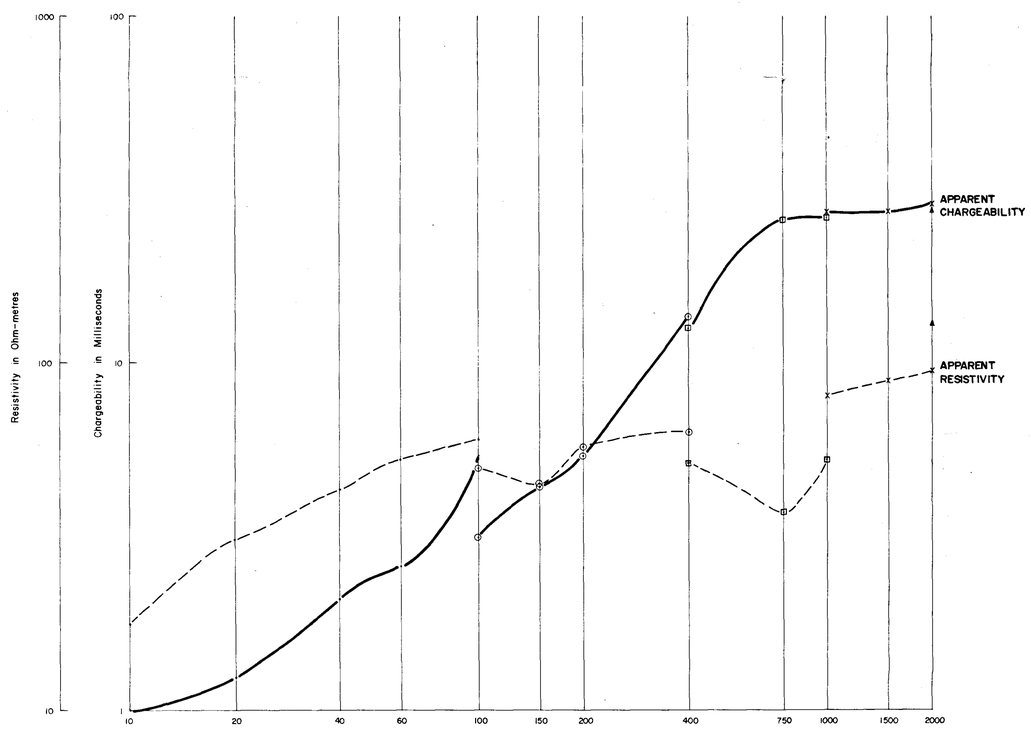
ELECTRODE SPACING 'A' IN FEET

M_1 = 1 | = 220'

M = 28

SPREAD 1

397N, LINE 324E



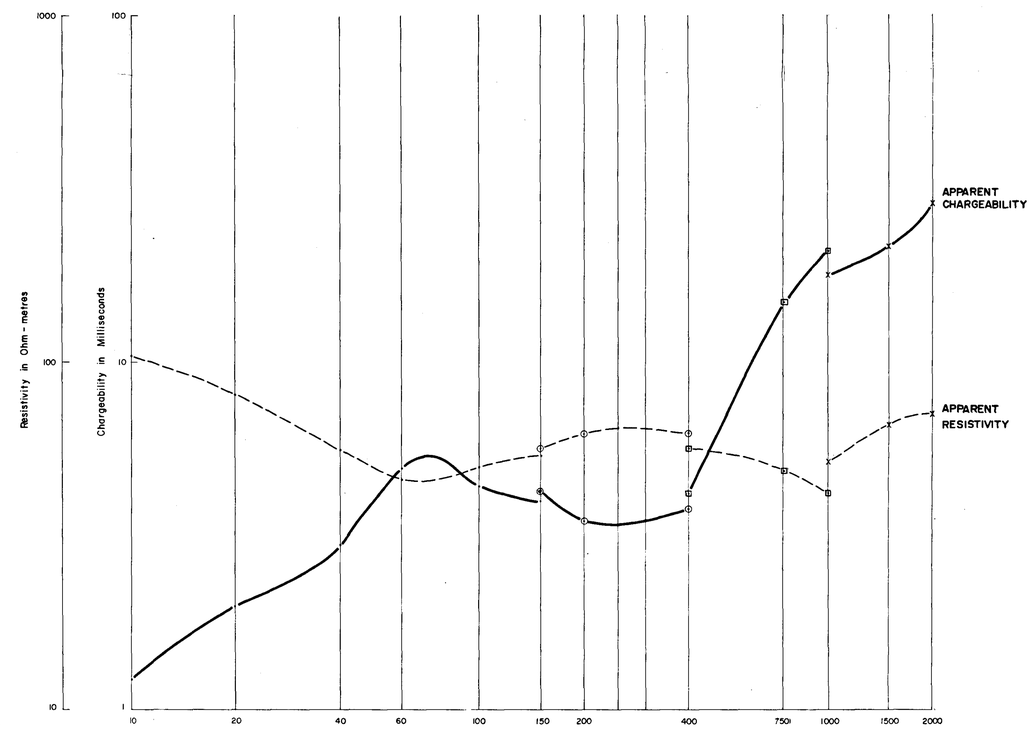
ELECTRODE SPACING 'A' IN FEET

M_1 = 1 | = 250'

M_2 = 30

SPREAD 3

405N, LINE 324E



ELECTRODE SPACING 'A' IN FEET

LEGEND

b = 3'
b = 10'
b = 50'
b = 100'
b = 200'

SOUTHERN CROSS EXPLORATION N.L.

BOOLOOROO-TAPLEY PROSPECT

COPLEY AREA

SOUTH AUSTRALIA

INDUCED POLARIZATION SURVEY

EXPANDER DEPTH DETERMINATION

SURVEYED AND COMPILED BY

SEIGEL ASSOCIATES AUSTRALASIA PTY. LTD.

MAY 1971

10 20 30 40 50 70 100

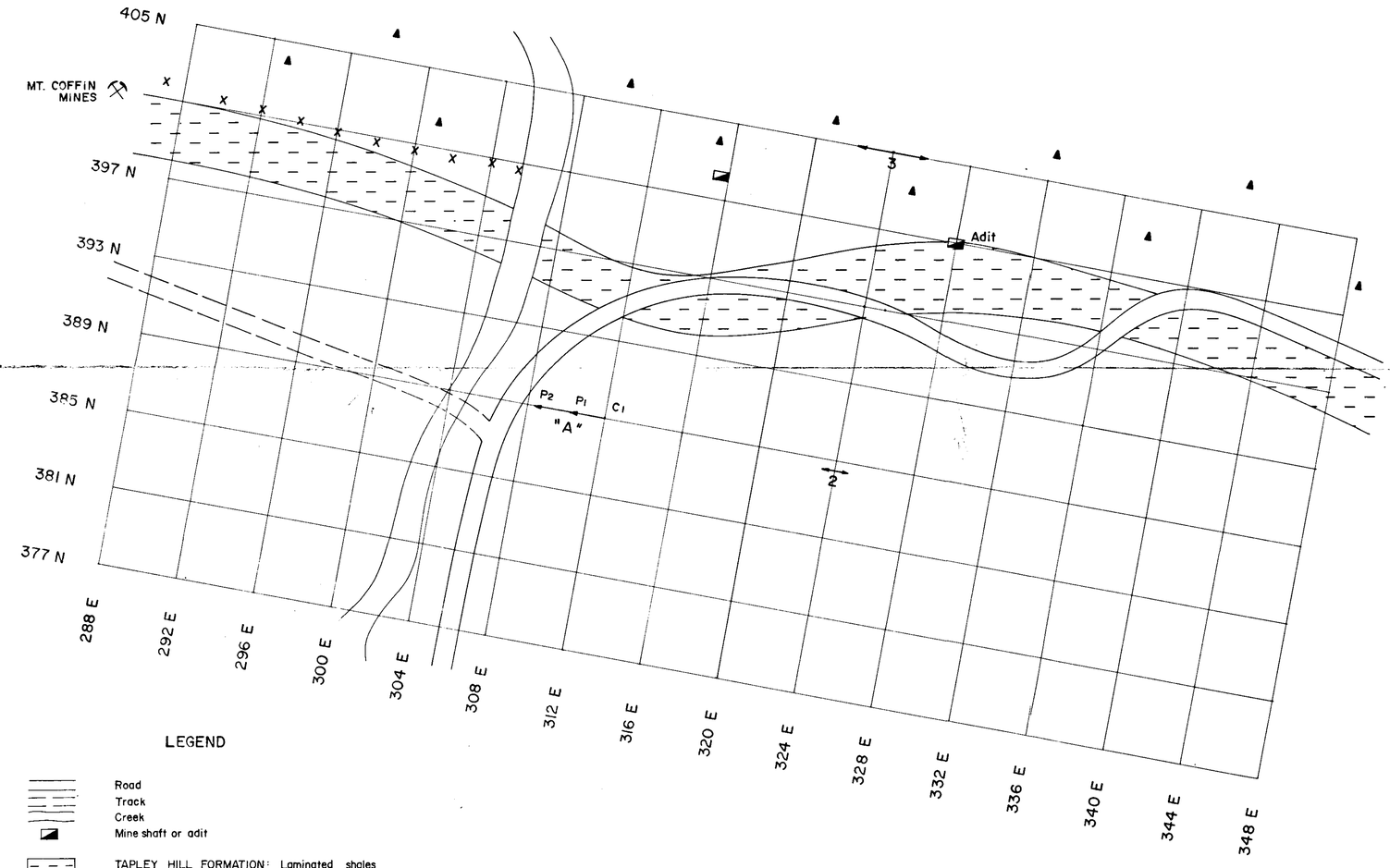
SCALE: 5" = 1 LOGARITHMIC CYCLE

JOB No. SA 002

SHEET 1 OF 1

1272(2)-2

PLATE 3



SOUTHERN CROSS EXPLORATION N.L.

BOOLOOROO-TAPLEY PROSPECT
COPLEY AREA
SOUTH AUSTRALIA

INDUCED POLARIZATION SURVEY

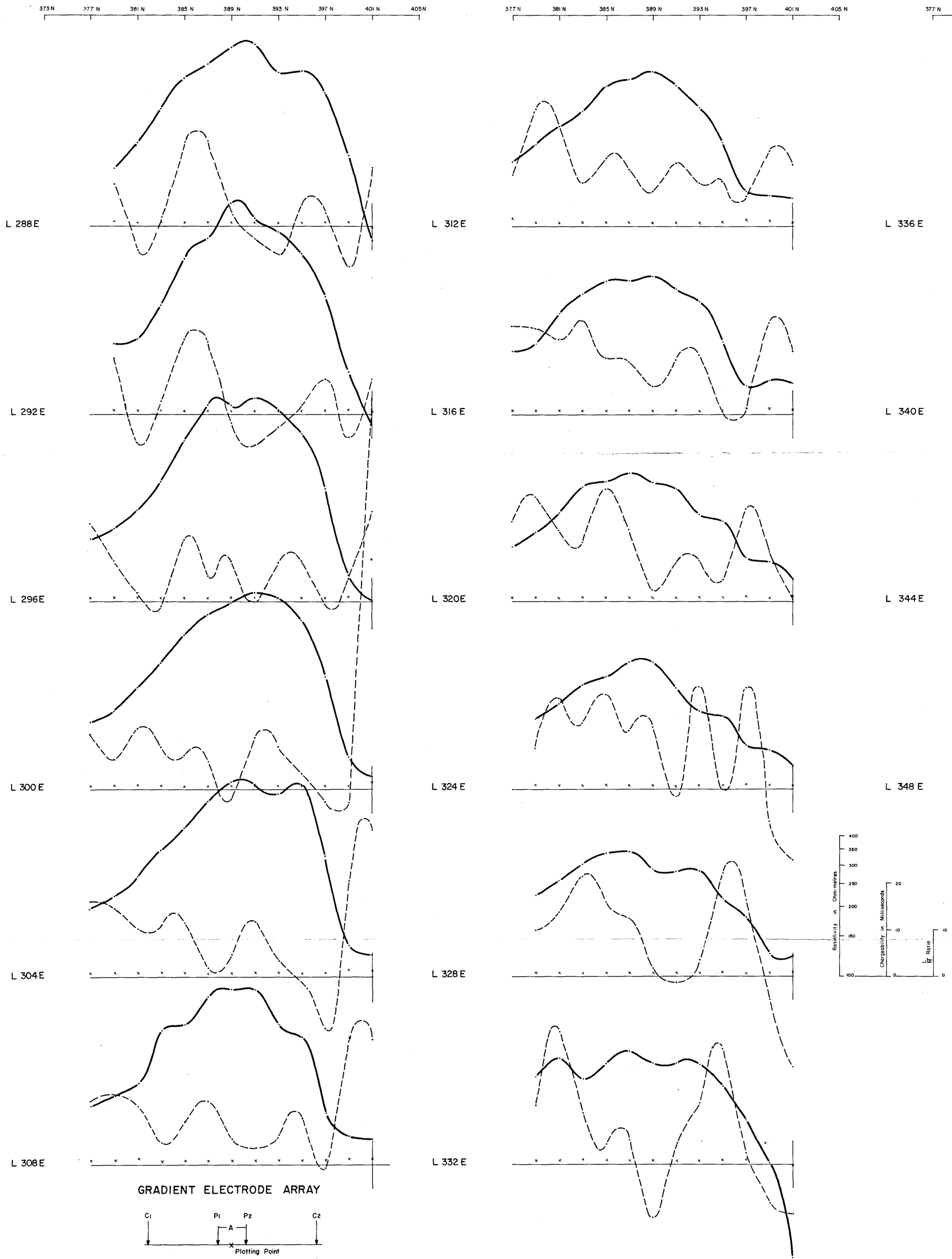
GRID MAP

SURVEYED AND COMPILED BY
SEIGEL ASSOCIATES AUSTRALASIA PTY. LTD.
MAY 1971

60 0 50 100
SCALE OF METRES

12-72(2)-3

JOB No. SA 002 SHEET 1 OF 1 PLATE 1



GRADIENT ELECTRODE ARRAY

AB = 910m (3000')
A = 25 m (83')

CHARGEABILITY SCALE :- 1" = 10 Milliseconds
Base Level = 0
Symbol – •——•

RESISTIVITY SCALE :- 5" = 1 Logarithmic Cycle
Base Level = 100 Ohm metres
Symbol – ·—·—·

L/M RATIO SCALE :- 1" = 10 Units
Base Level = 0 Units
Symbol - x

SOUTHERN CROSS EXPLORATION N.L.

BOOLOOROO-TAPLEY PROSPECT
COPLEY AREA
SOUTH AUSTRALIA

INDUCED POLARIZATION SURVEY

DATA PROFILES

SURVEYED AND COMPILED BY
SEIGEL ASSOCIATES AUSTRALASIA PTY. LTD.
MAY, 1971

50 0 50 100
SCALE OF METRES

JOB No. SA 002 SHEET 1 OF 1 1272(2)-4 PLATE 2

SERLE

CORNEY

BALCANOONA

CADNIA

138°30'

139°00'

30°30'

30°45'

A

B

SOUTHERN CROSS EXPLORATION NL

STREAM SAMPLES - COPPER

COPPER VALUES - PPM

	OVER 60
	31 - 60
	0 - 30

SA. DEPT. OF MINES

ANGEPENA 2

60 CHAINS TO 1 INCH

1272(2)-5


SERLE
COPLEY
BALCANOONA
CADNIA
30°30'
30°45'
138°30'
139°00'
A
B
MT COFFIN
Wandoomintra Bore
Candeena Well
West Jubilee Workings
Diamond Jubilee
East Diamond Jubilee
Patsy Springs
Depot Springs
PATSY HILL
Landing Ground
Nevada
MT JEFFERY
CASTLE ROCK
CAMEL GAP
MT SERLE
New Mt Serle Well
MT ROWE
Mt Serle
White Virgin
CONSTITUTION HILL
Frome Well
Angepena
FROME
RIVER
Boulder Well
Eveline
NEPABUNNA MISSION
Mt McKinlay Creek
Leigh Creek
Nobbler W&T
Horseshoe Bore
Gorge Well
MT MORRIS
Maynards Well
Creek
CAMPBELL BALD HILL
MT WALLACE
Anzac Bore
North Moolooloo
Woolshed
Windy Creek
Gutsache Bore
Grump Bore
Manners Well
Windy Hut
Hut
Bald Hill Bore
Evans O.S.
Aliootа B
Alerumba Spring
Pernana Well (N/V)
Mucatoona Bore
Lady Milicent
Mucatoona Mines
Emu Creek
Plitzney Well
MUCATOONA HILL
Christmas Bore
ANGEPENA ALLUVIAL GOLDFIELD
New Diggings Bore
Helling Well
ANGEPENA HILL
Pinda
Cable Creek Bore
Old Angepena
Angepena Treasure
Fountain Spring
MT GODDARD
Native Well
Soft Well Sps
Puttapa Creek
MT GREIG
Christmas
Hill's Camp Spring
Sliding Rock
Sliding Rock Creek

SOUTHERN CROSS EXPLORATION NL
STREAM SAMPLES - ZINC

ZINC VALUES-PPM	
	+150
	71-150
	0-70

SA. DEPT. OF MINES
ANGEPENA
60 CHAINS TO 1 INCH

1272(2)-6

LYNDHURST

FLOOD PLAIN
Tower Gap Hut
Nichols Nob Extended
Nichols Nob
NICHOLS NOB
Big Lode Mine (Mont Pelee)
Clive Copper Mine (Black Harry's)
Mt Ogilvie
MT OGILVIE
MT BURR
Mt Burr
Benelick Well
Ultimo Bore & Tank
South Creek
Broken Range
Paulls Nth
Federal
MT BOURNE
Dead Finish Mine
Victory
Paulls Consolidated
Burr or Finke River
Burr Well
Bedowie W.
Victory Bore
Nindipinna Bore
Weedna
MT CLIVE
Old Hut
Mandarin
Mandarin Bore
MANDARIN HILL
Yudnabookna Bore
Douglas Hut
Imperial Well
FORTRESS HILL
Reedy Hole
Apex Well
Apex Mine
APEX HILL
VOCOVACANA WELL
Rose Mine
MT ROSE
Winyagunna Hut
Arcoona Creek
ARCOONA BLUFF
Owieandana Hut
Mallee Well Bore
Ruins
KATE HILL
Mundy
Pigeon Box Bore
Round Hill Well
Boolooroo Mines
BUNYAROO HILL
Boolooroo Woolshed
Wundowie Bore
John Well
Old Well

E. B. TANZER JUL. 1963

Zn

SOUTHERN CROSS EXPLORATION NL.

STREAM SAMPLE - ZINC.

ANGEPENA

Zn

ZINC VALUES - PPM

■	+ 150
◐	71 — 150
○	0 — 70

S.A. DEPT. OF MINES

SERLE

60 CHNS TO 1 INCH

1272(2)-7

LYNDHURST

ANGEPENA

MYRTLE

WOOLTANA

SOUTHERN CROSS EXPLORATION NL
STREAM SAMPLES - COPPER

E.B. TRAZER JUL 1963

Cu VALUES - PPM

	OVER 60
	31 - 60
	0 - 30

4%

S.A. DEPT. OF MINES

SERLE Cu

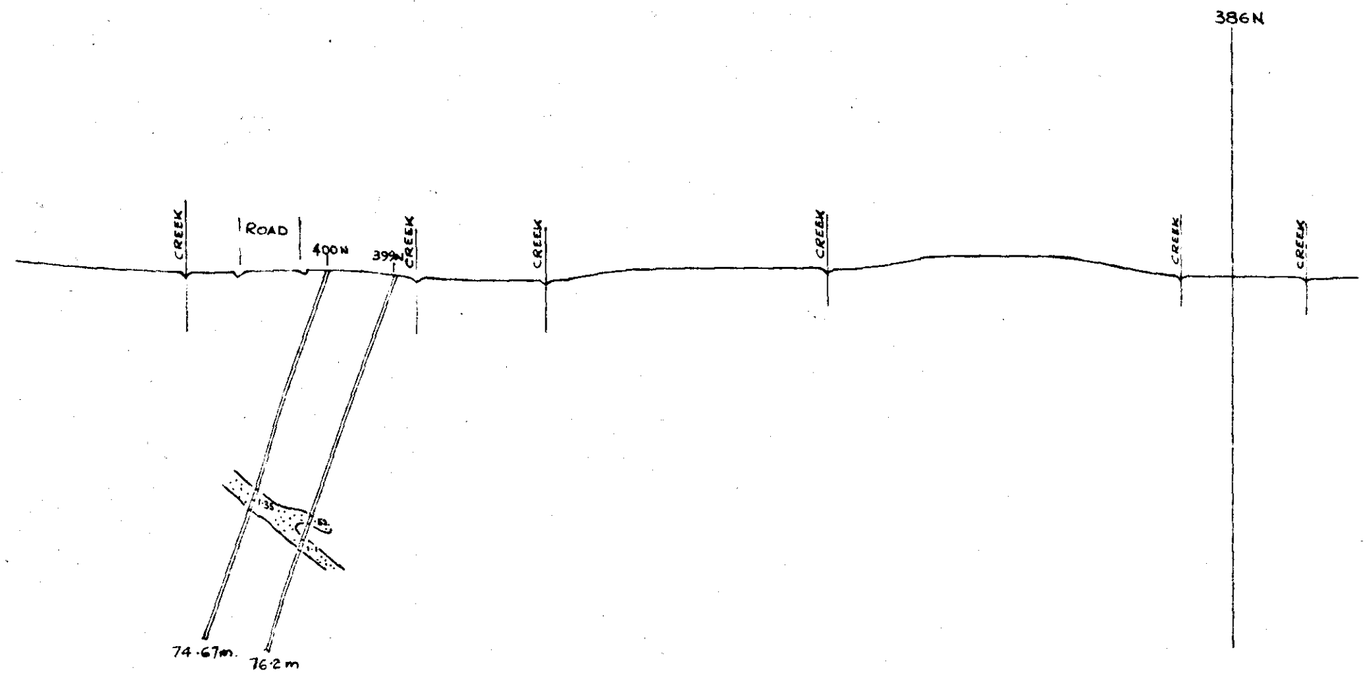
60 CHNS TO 1 INCH

REF'D 25 MAR 1971 DEPT. OF MINES SECURITY 1272 II

Same data as drawing G-C 3087A

ENVELOPE 1272 Vol II

1272(2)-8

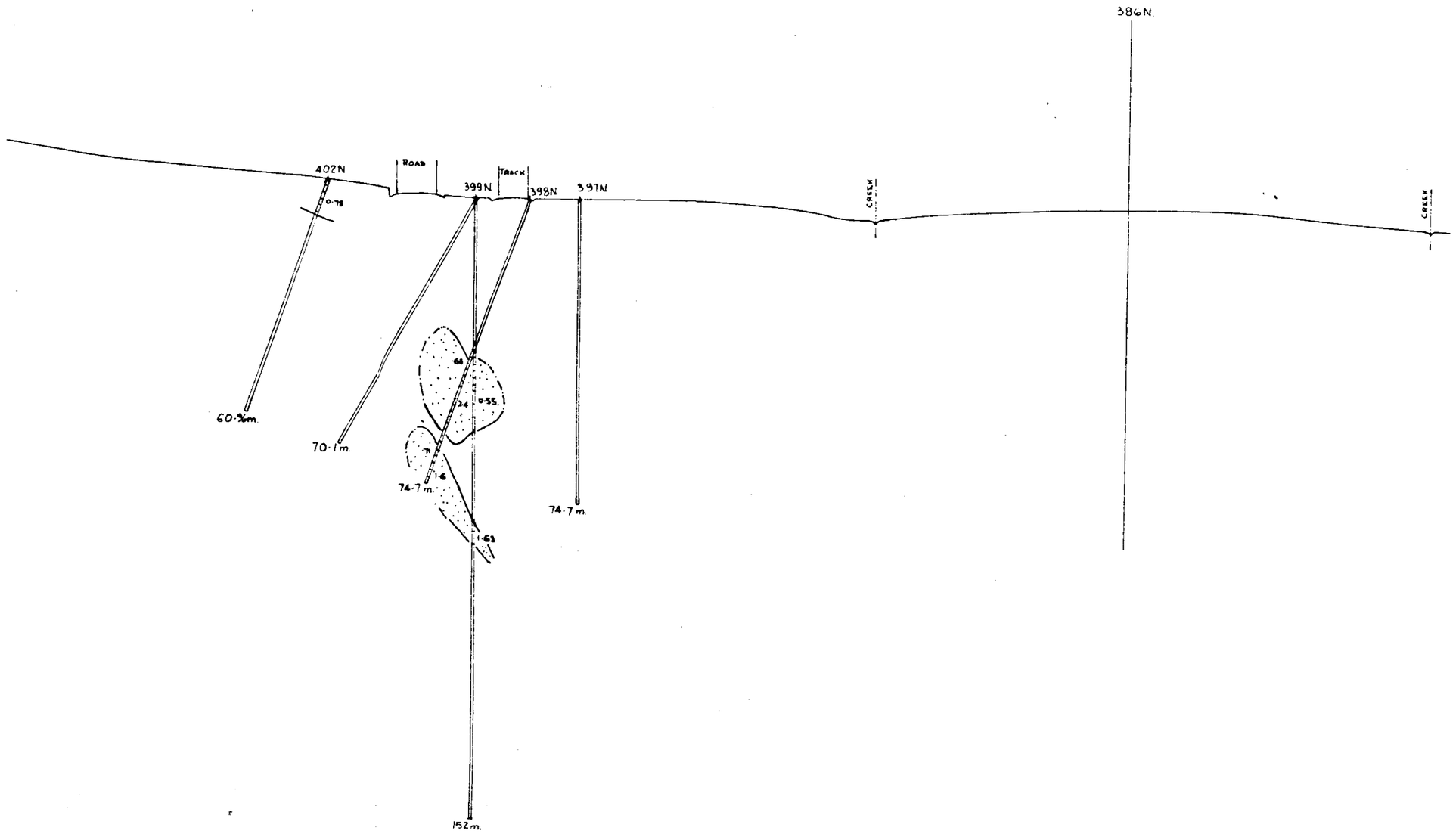


M
370
360
350
340

1272 1272(209)

Scale 1:1000

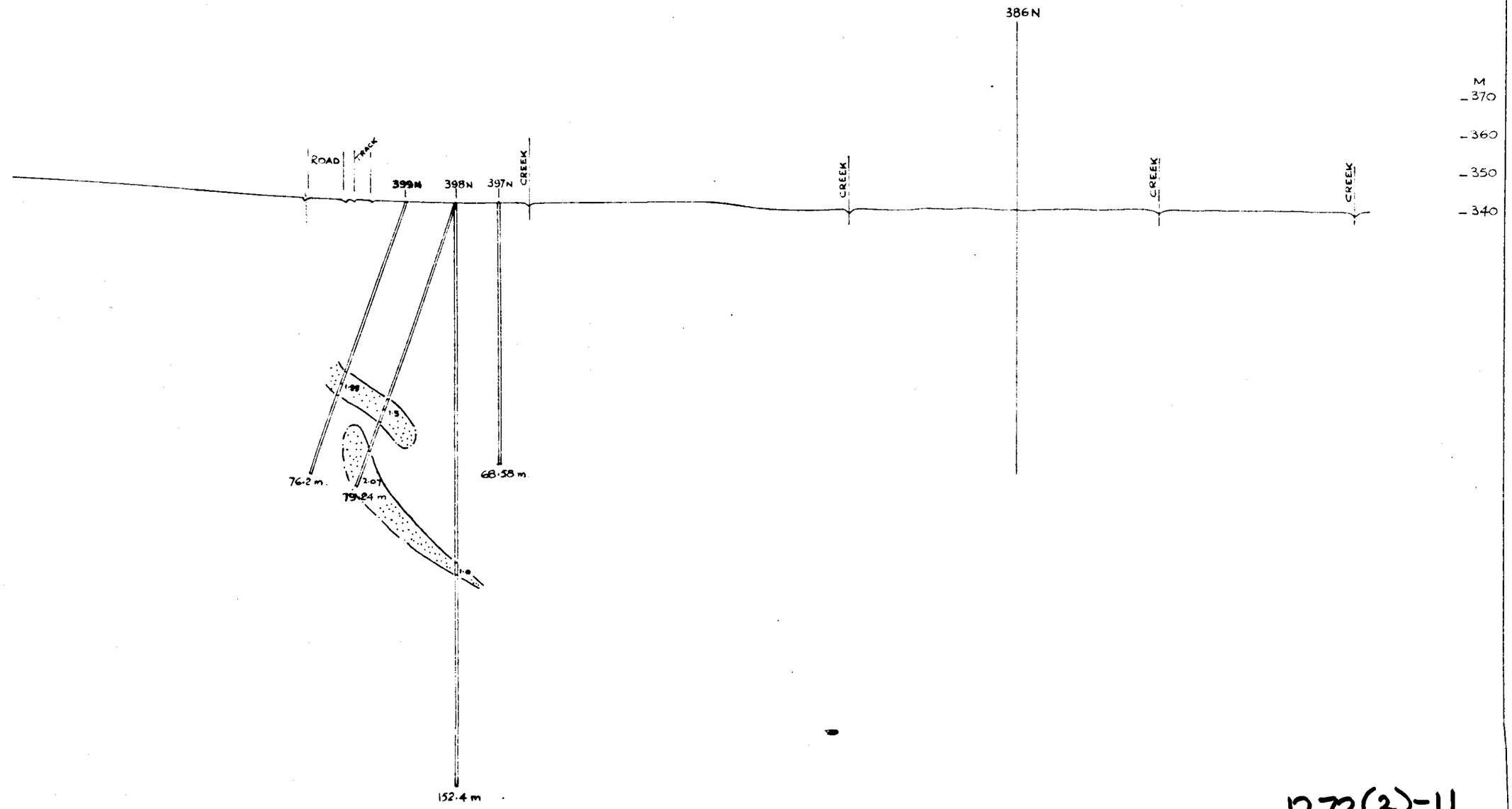
ELSIE ADAIR — PROFILE 384E



Scale 1:1000

1272(2)-10

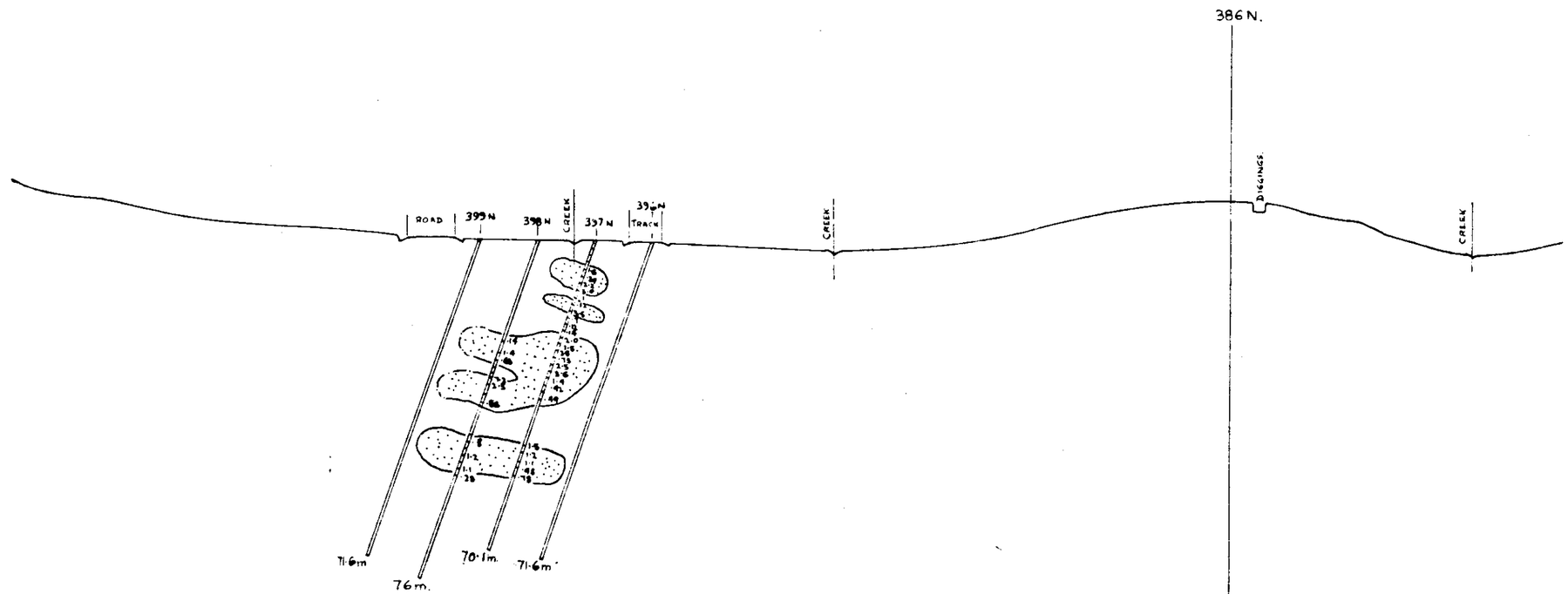
ELSIE ADAIR — PROFILE 376E



1272(2)-11

Scale 1:1000

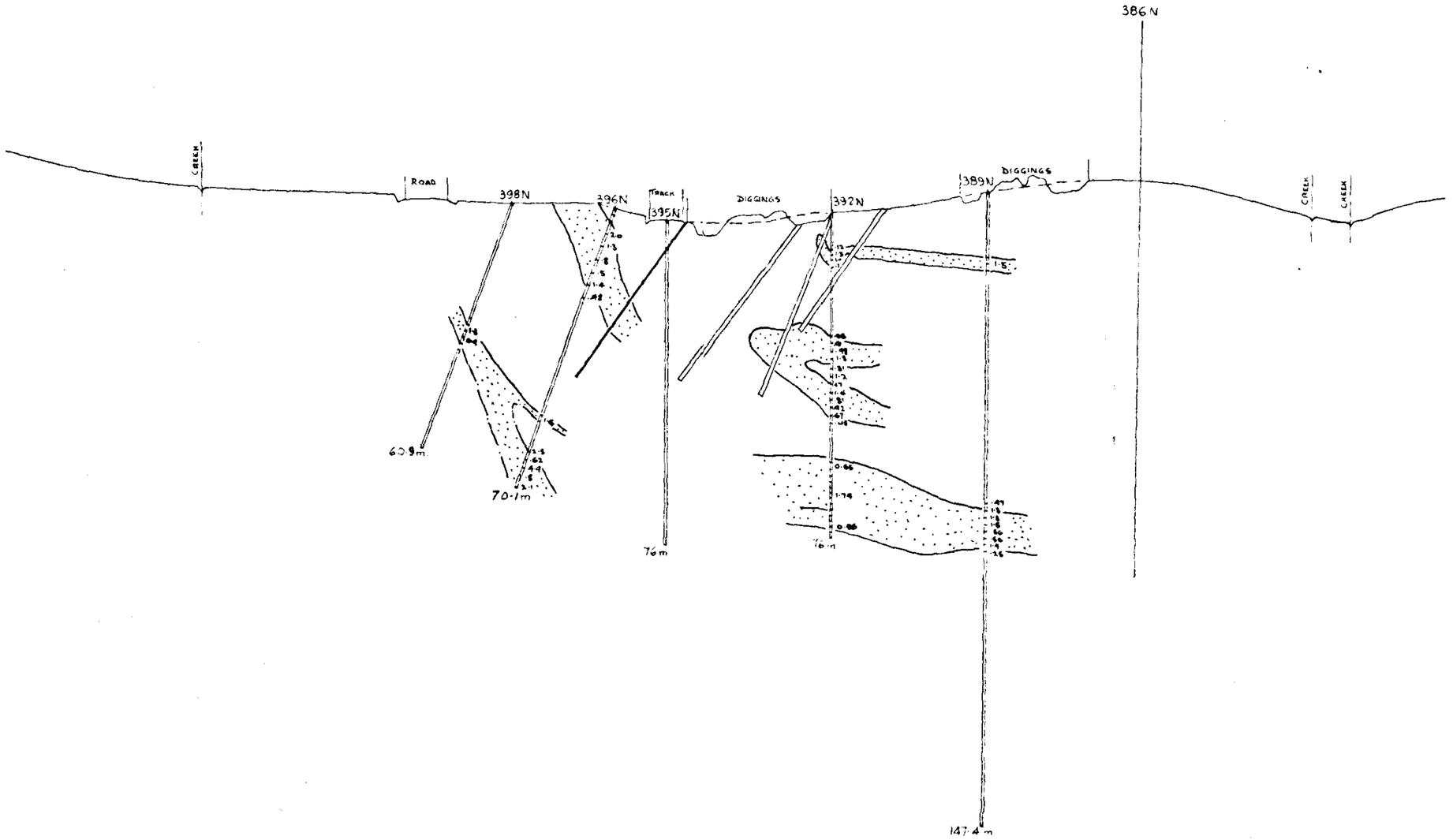
ELSIE ADAIR — PROFILE 380E



Scale 1:1000

1272(2)-12
1272 "

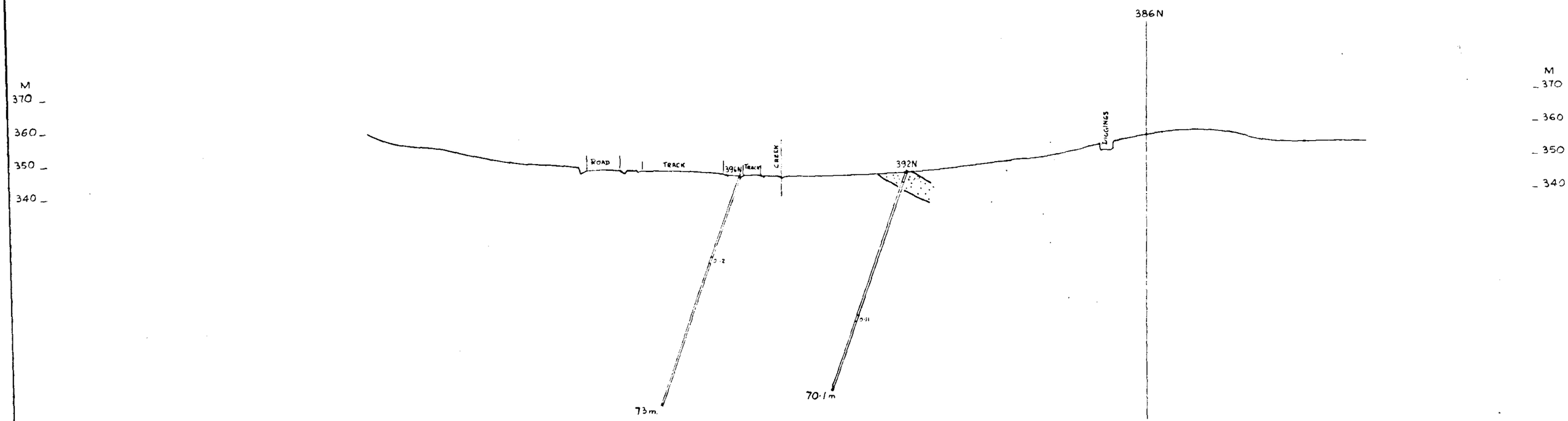
ELSIE ADAIR — PROFILE 372E



Scale 1:1000

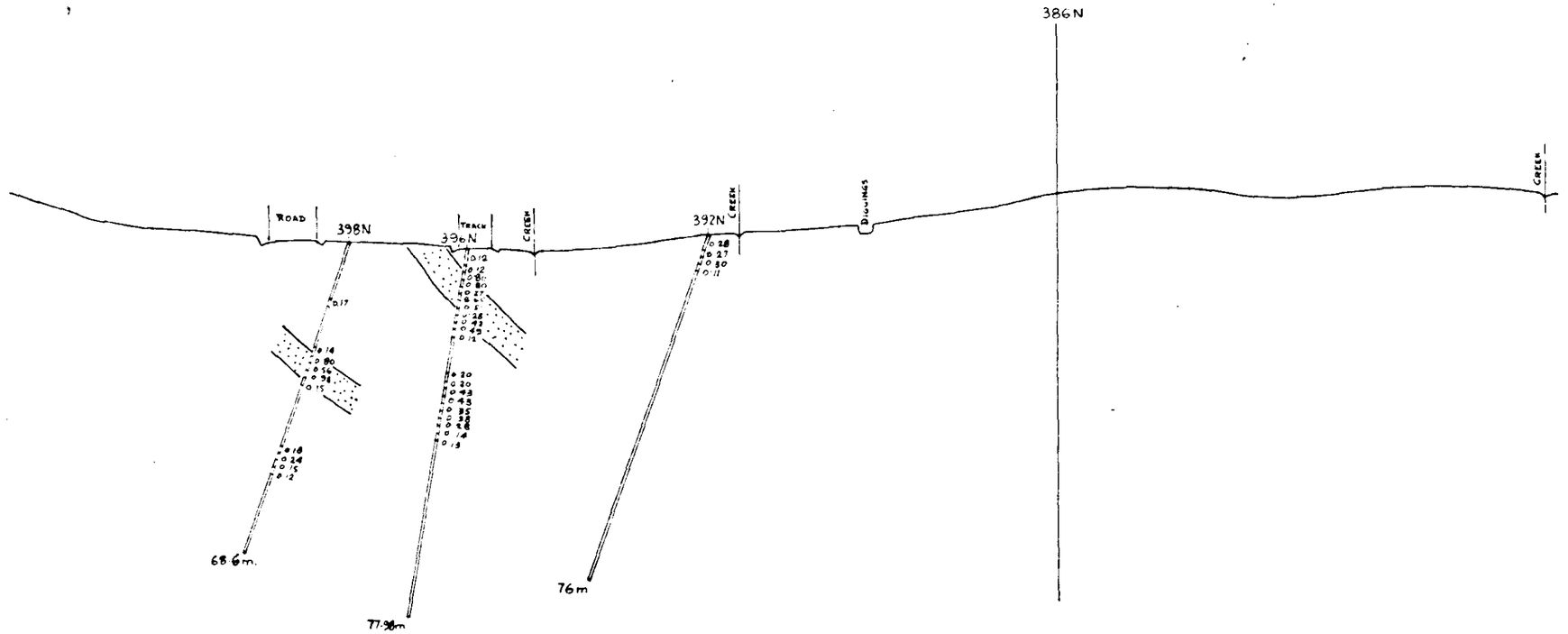
1272(2)-13

ELSIE ADAIR — PROFILE 368E



12-72(2)-14

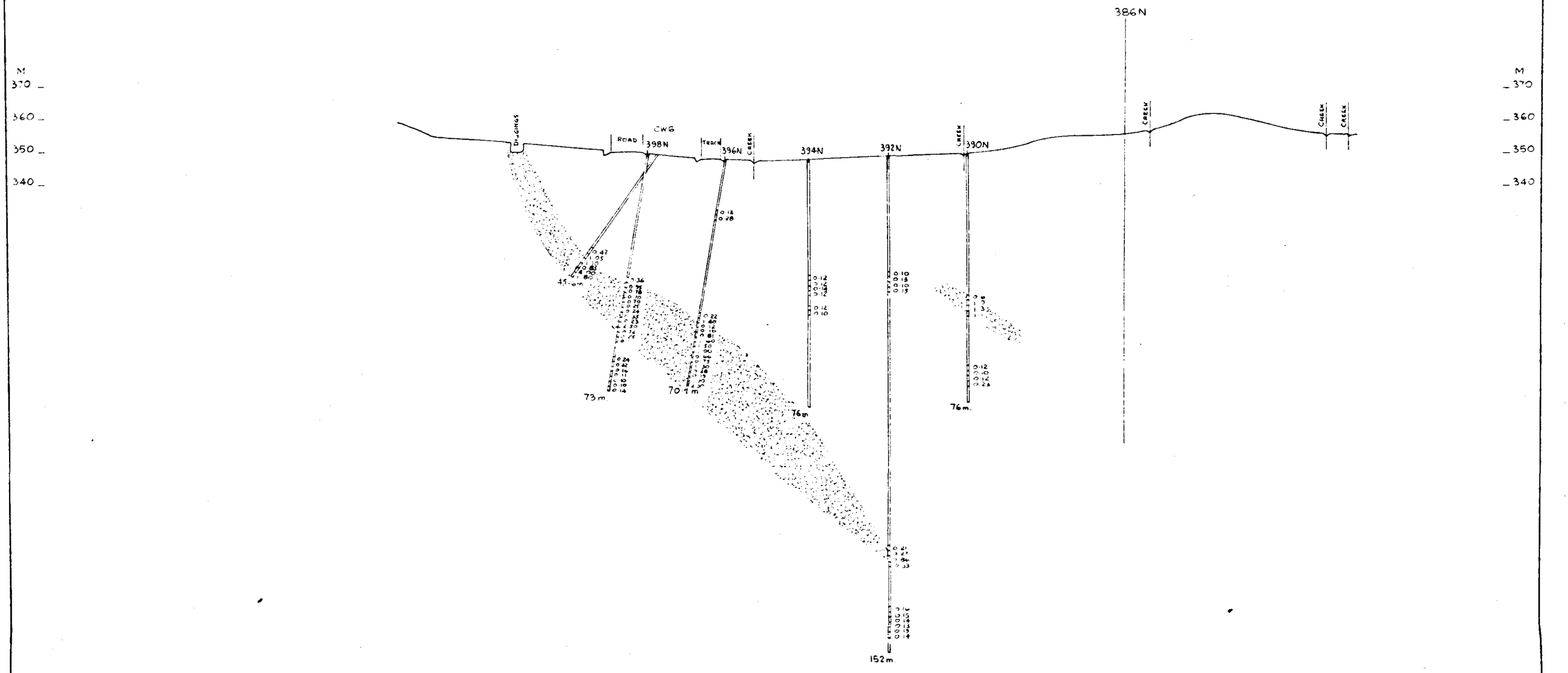
ELSIE ADAIR — PROFILE 364E



Scale 1:1000

1272(2)-15

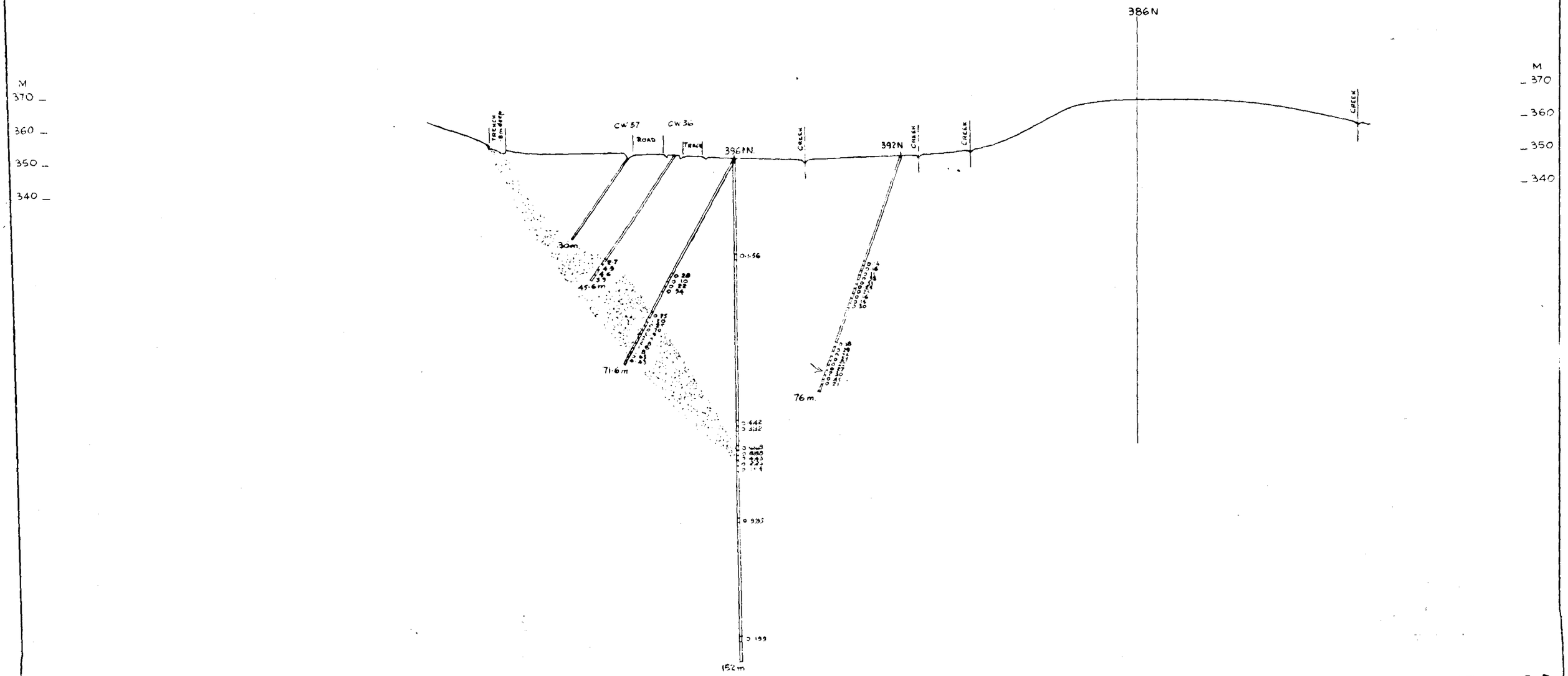
ELSIE ADAIR — PROFILE 360E



Scale 1:1000

1272(2)16

ELSIE ADAIR — PROFILE 356E

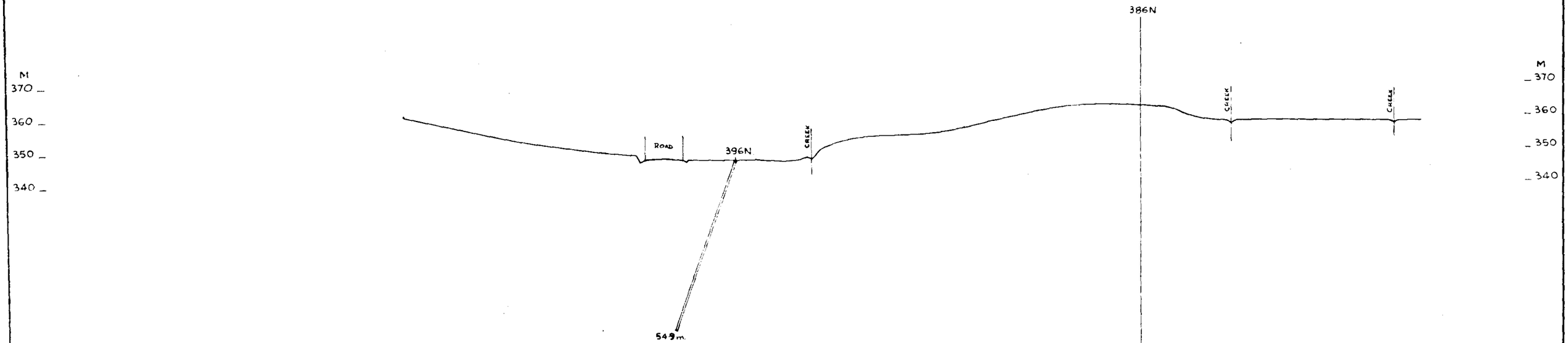


Scale 1:1000

12.72 ft

12.72(2)-17

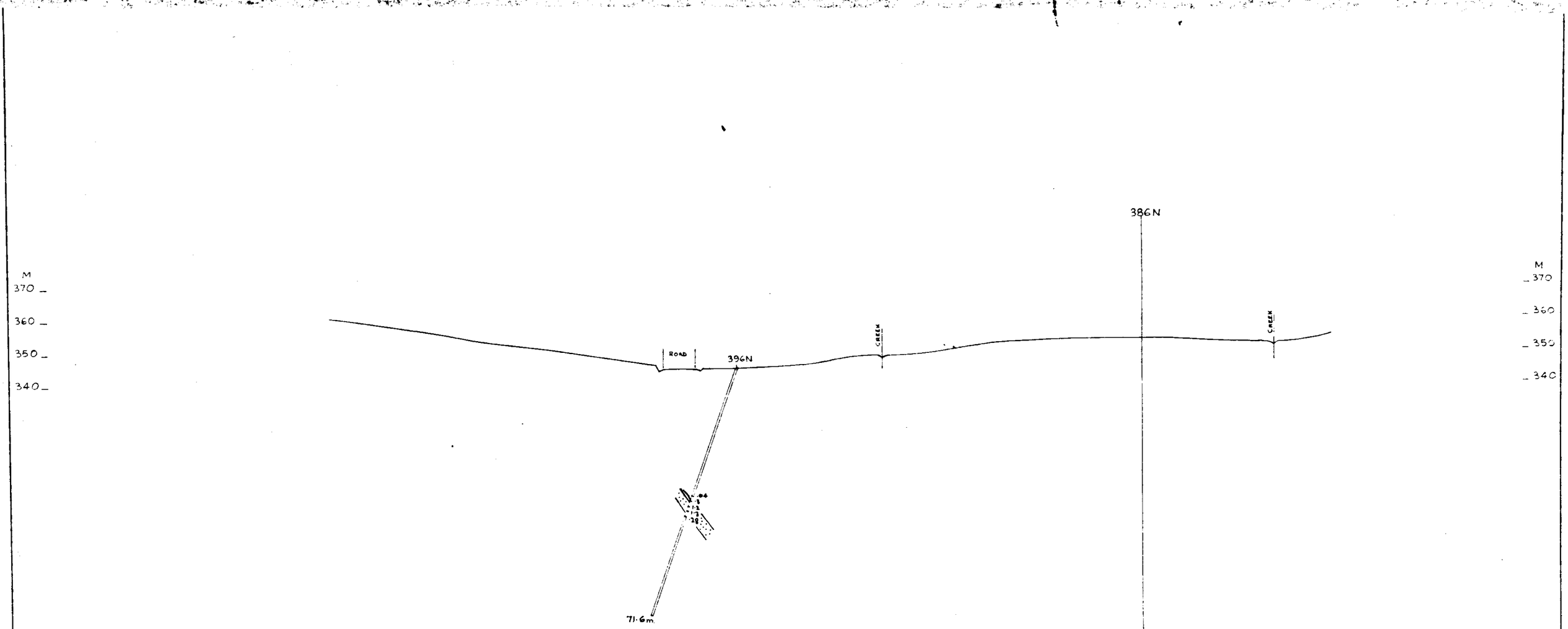
ELSIE ADAIR – PROFILE 352E



Scale 1:1000

1272(2)-18

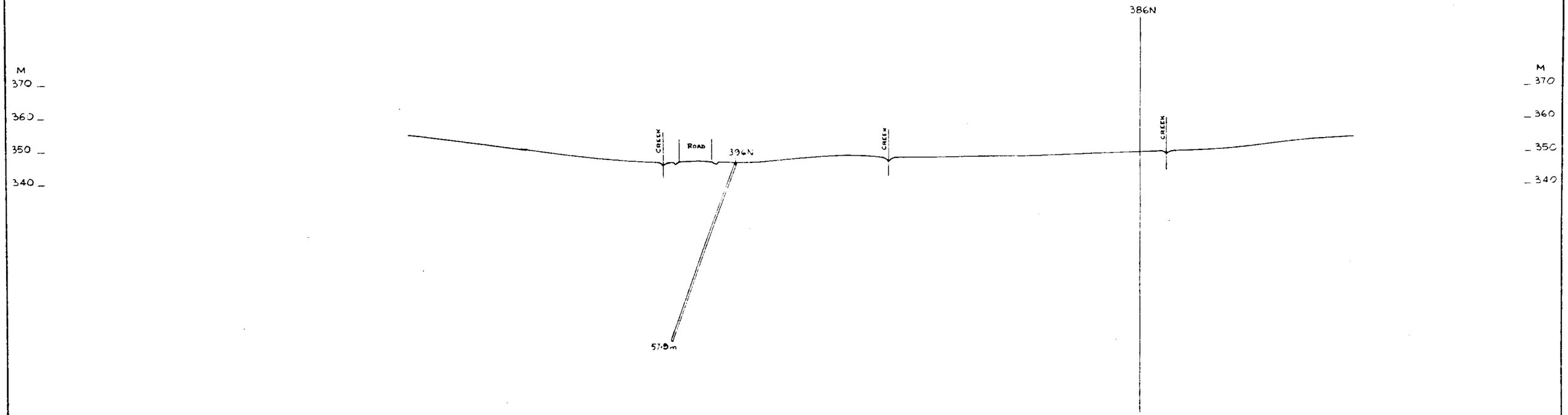
ELSIE ADAIR — PROFILE 348E



19
1272(2)

Scale 1:1000

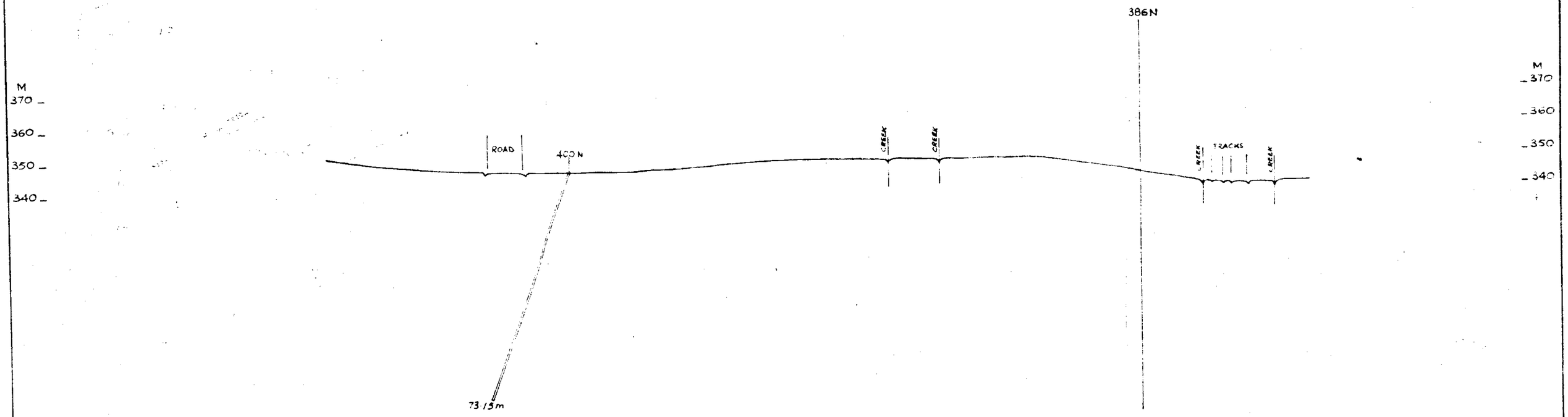
BOOLOOROO – PROFILE 344E



20
1272(2)-84

Scale 1:1000

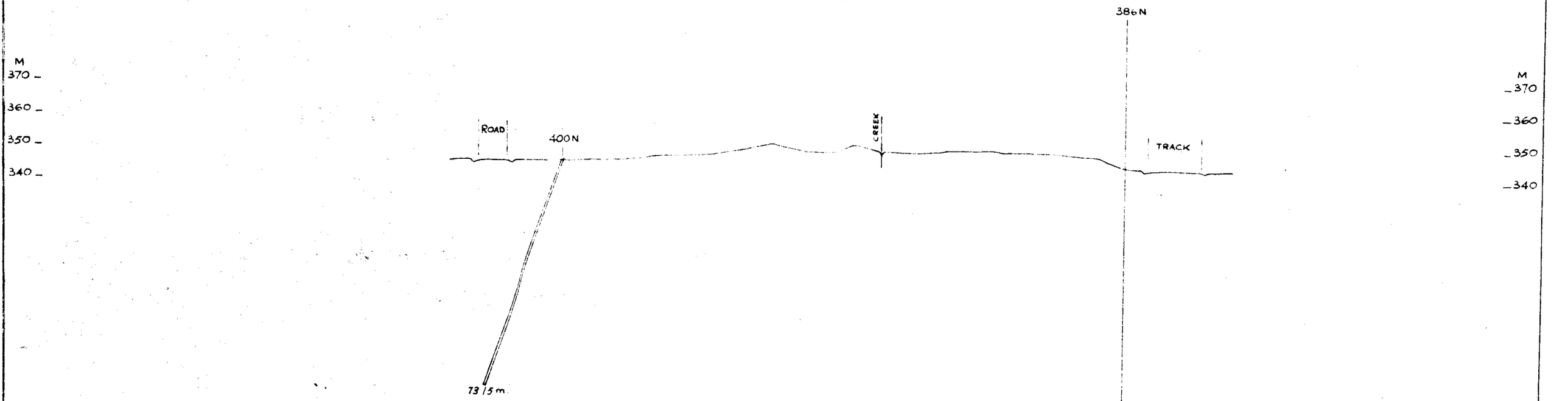
BOOLOOROO — PROFILE 340E



1272"(2)-24

BOOLOOROO -- PROFILE 396E

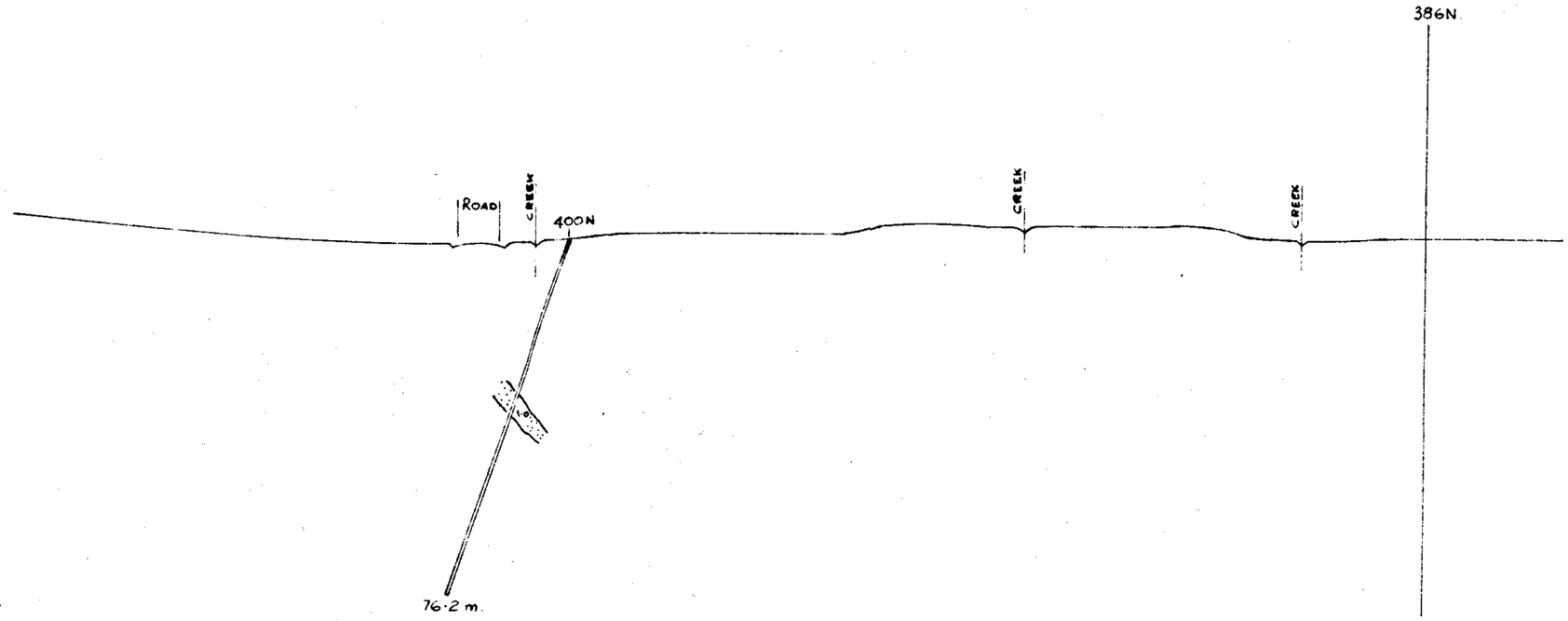
Scale 1:4,000



Scale 1:1,000

1272(2)

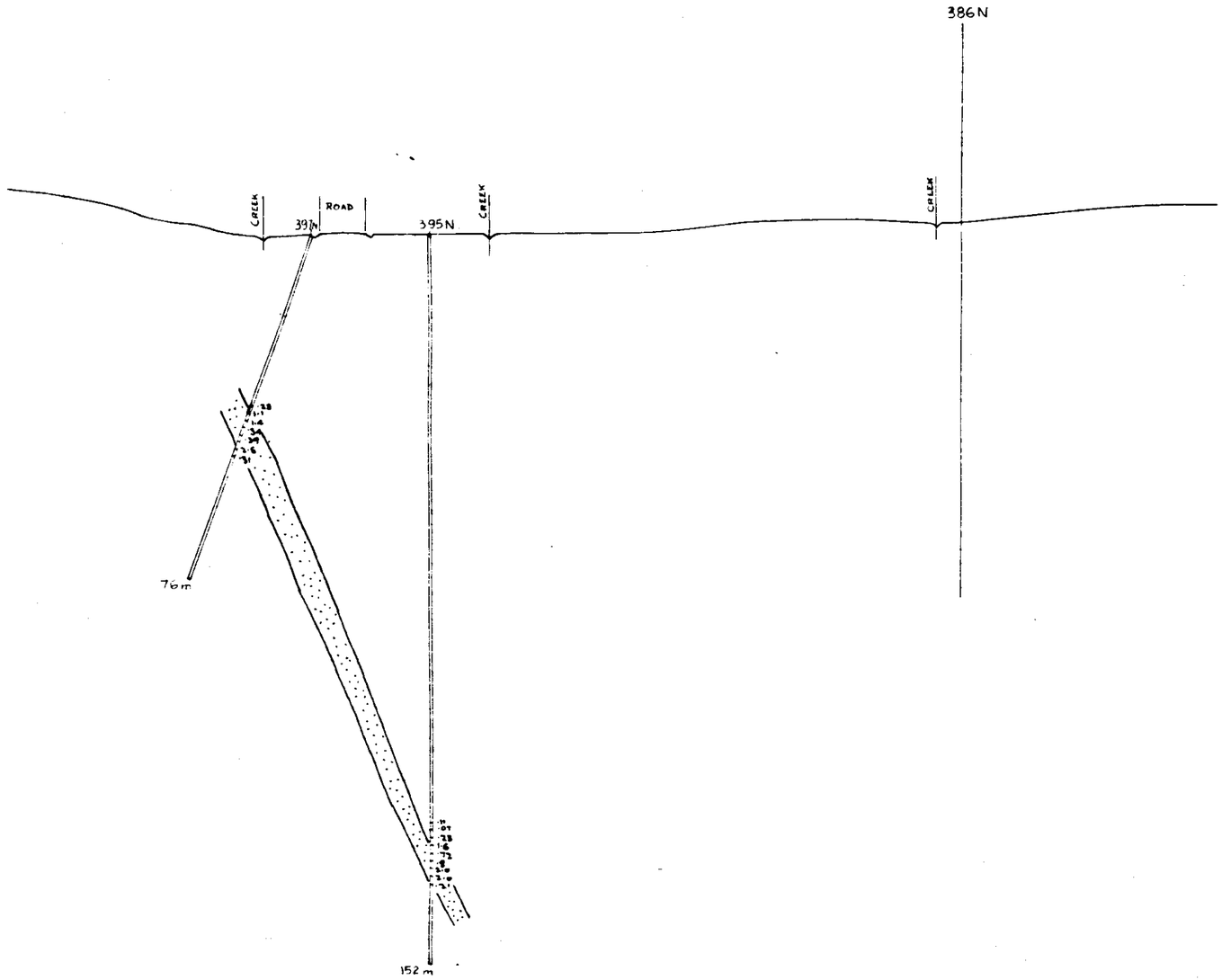
ELSIE ADAIR — PROFILE 392E



Scale 1/1000

12-72(2)

ELSIE ADAIR — PROFILE 388E

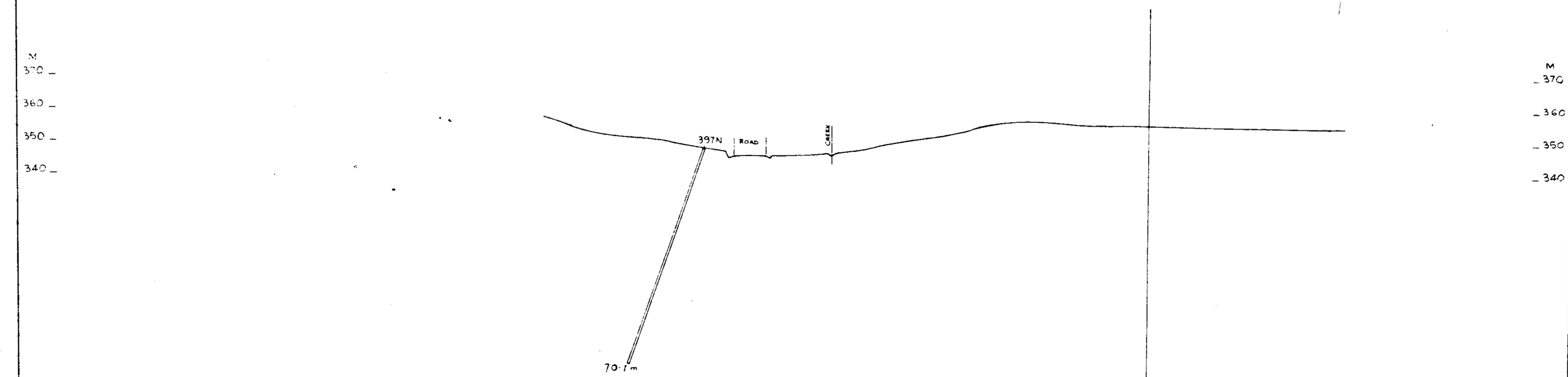


Scale 1:1,000

1272(2)-24

1272 II

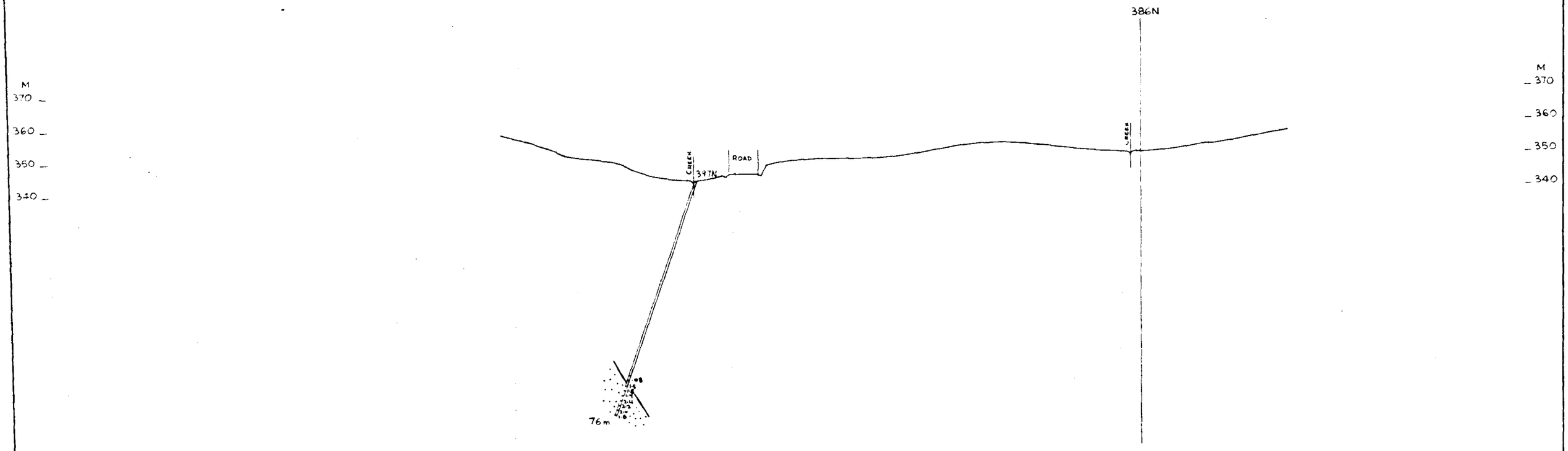
BOOLOOROO — PROFILE 336E



Scale 1:1000

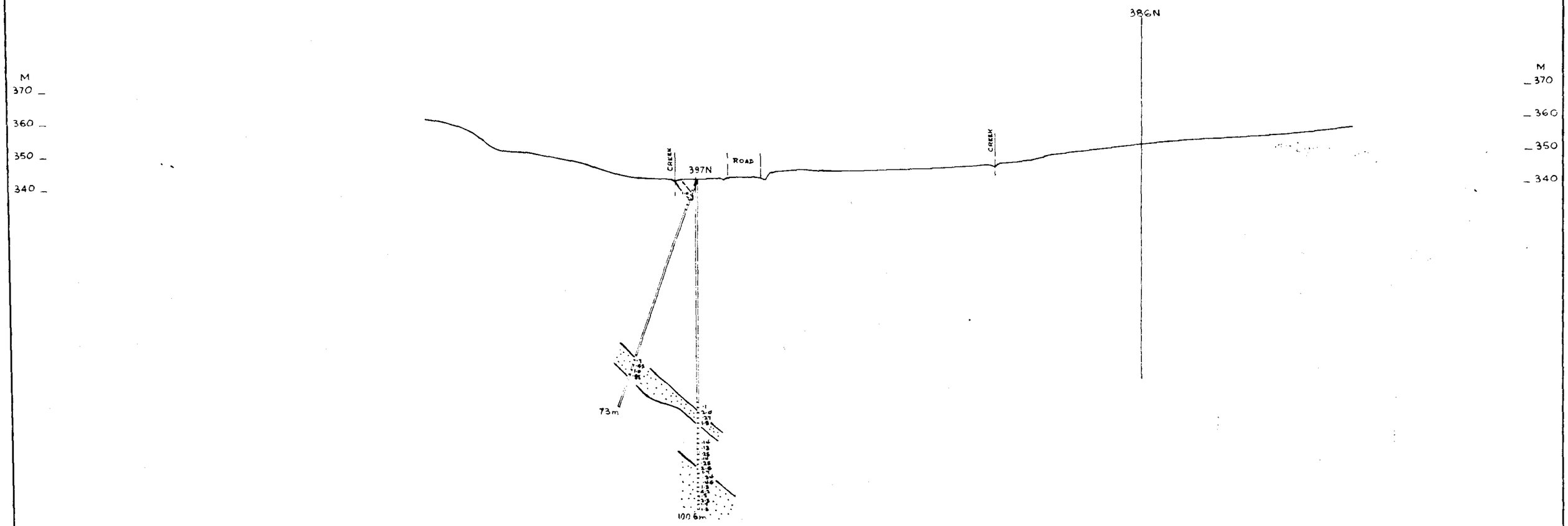
1272(2)-25

BOOLOOROO - PROFILE 332E



1272(2)-26

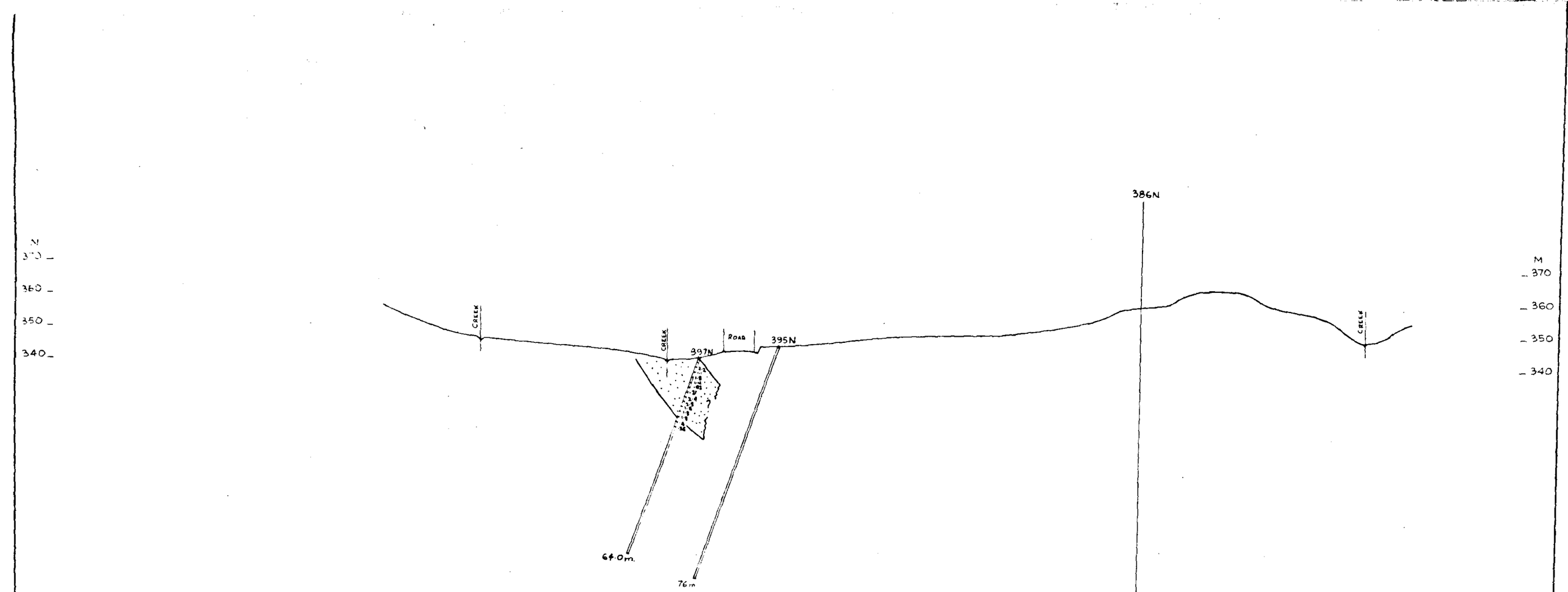
BOOLOOROO— PROFILE 328



Scale 1:1,000

1272(2)-27

BOOLOOROO – PROFILE 324E

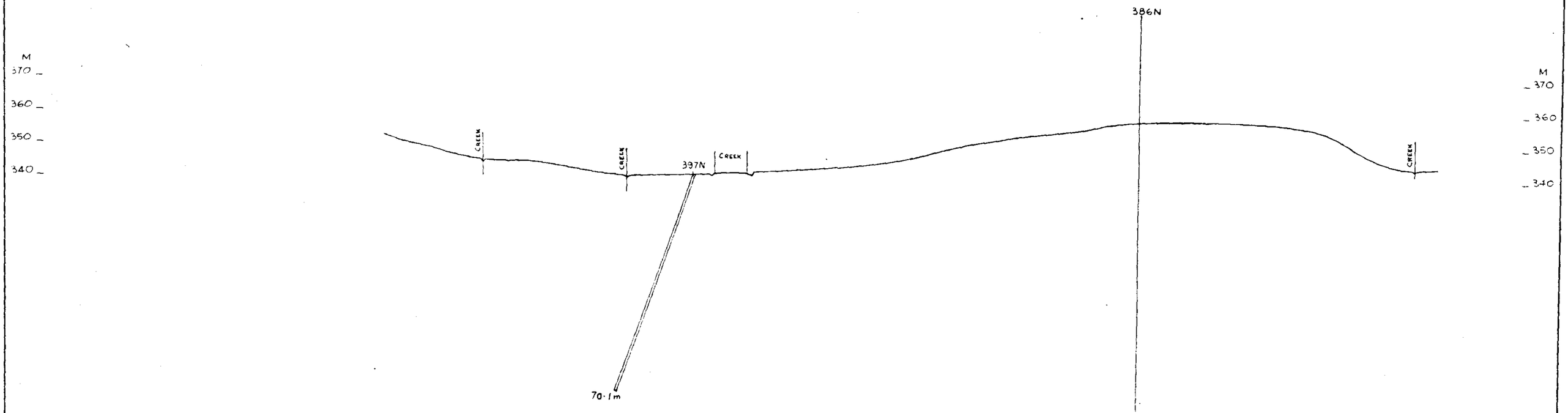


Scale 1 : 1000

1272 A

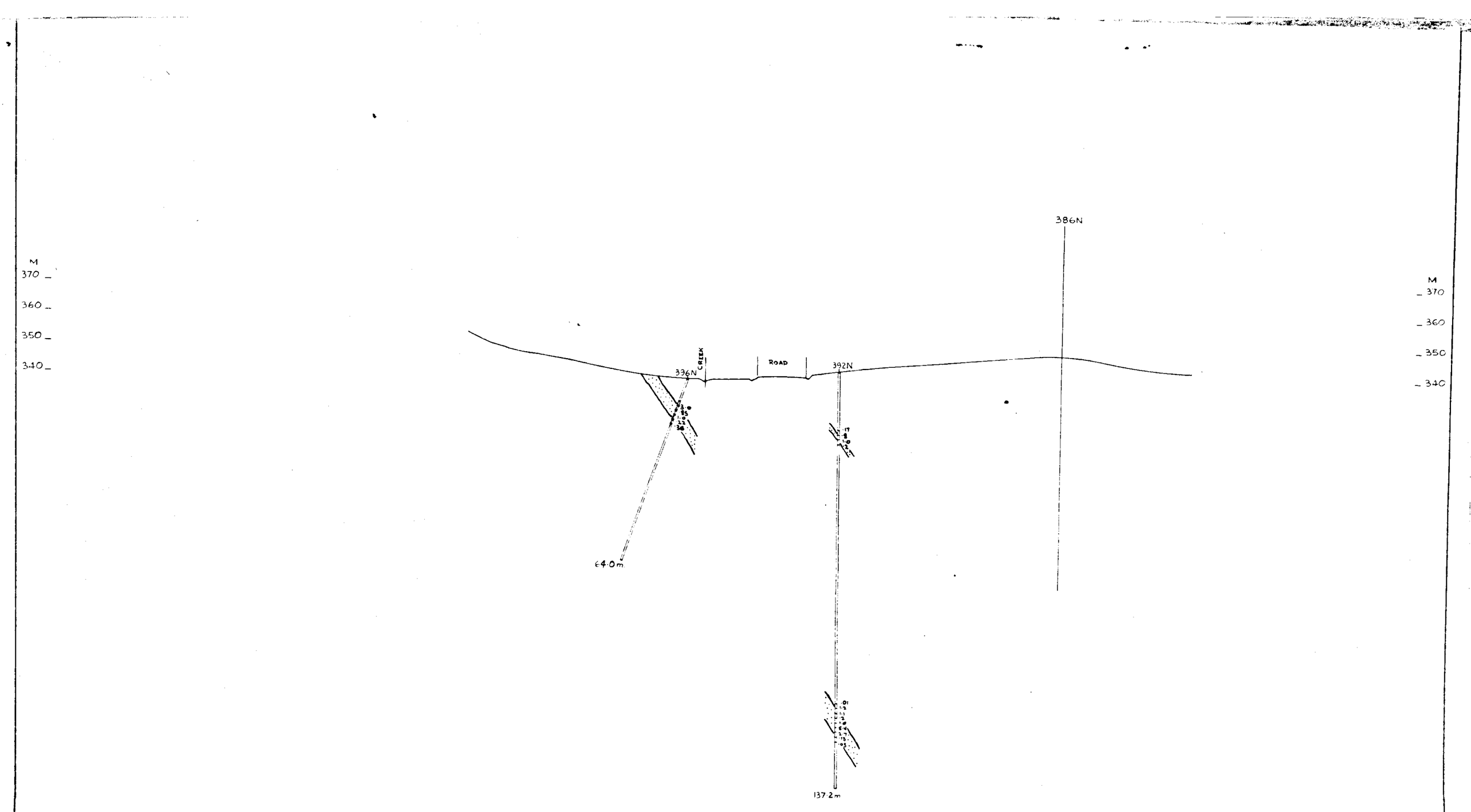
1272(2)-28

BOOLOOROO – PROFILE 320E



1272(2)-29

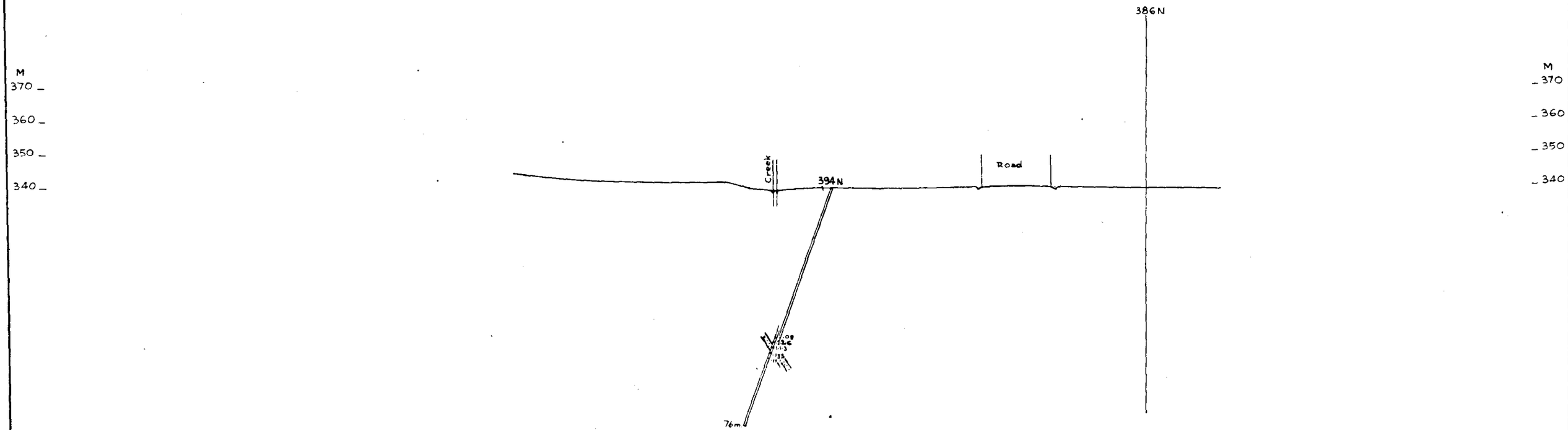
BOOLOOROO - PROFILE 316E



Scale 1:1000

1272(2)-30

BOOLOOROO – PROFILE 312E

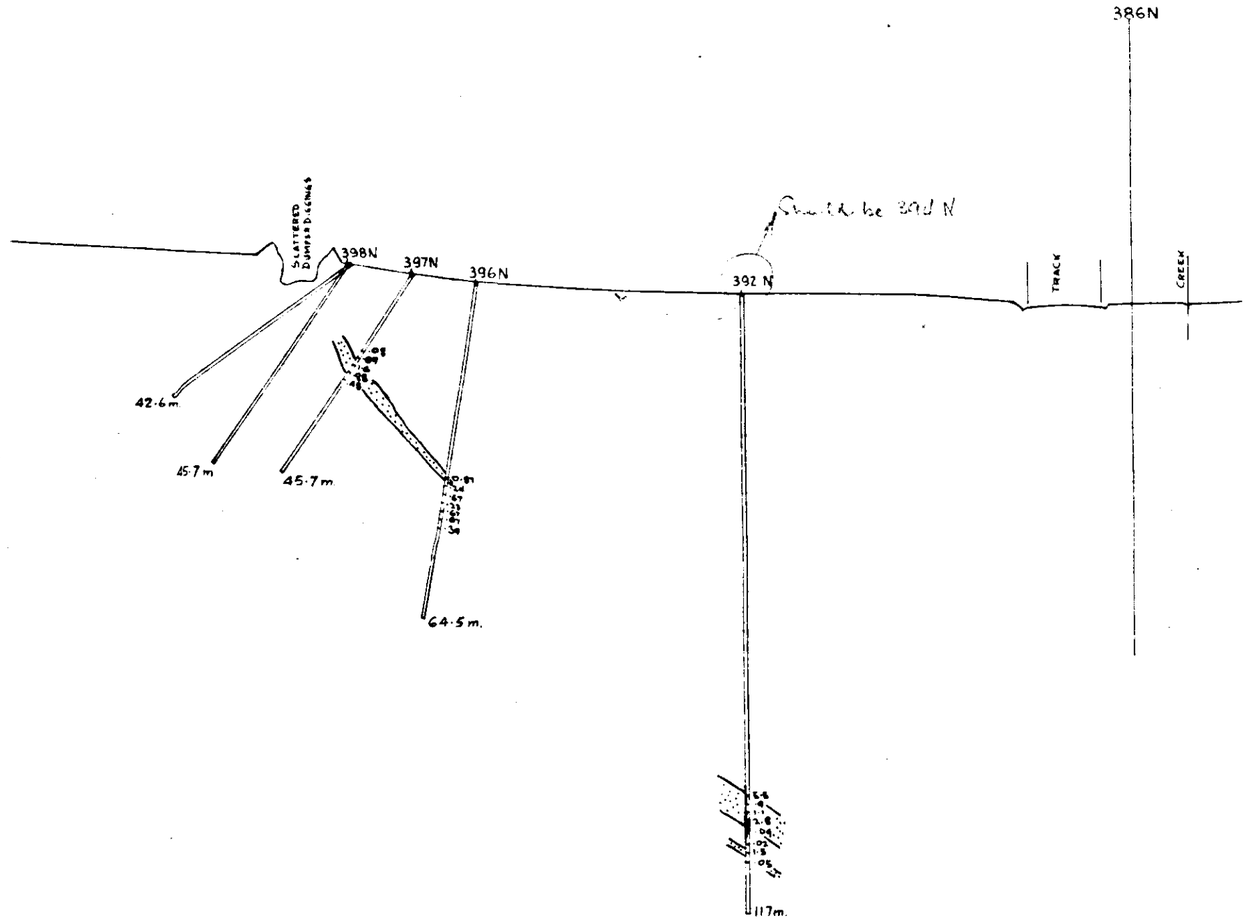


Scale 1:1000

1272(2)-31

BOOLOOROO – PROFILE 308E

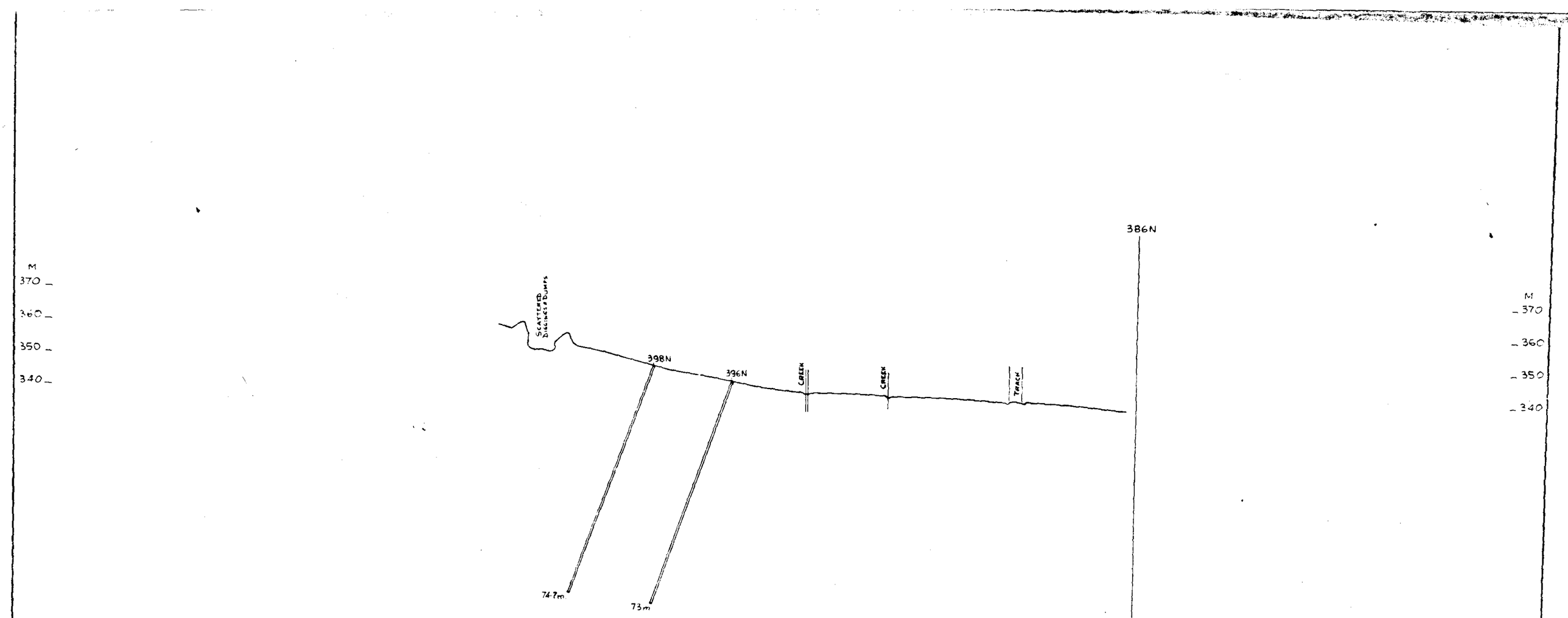
M
370
360
350
340



M
370
360
350
340

Scale 1:1000

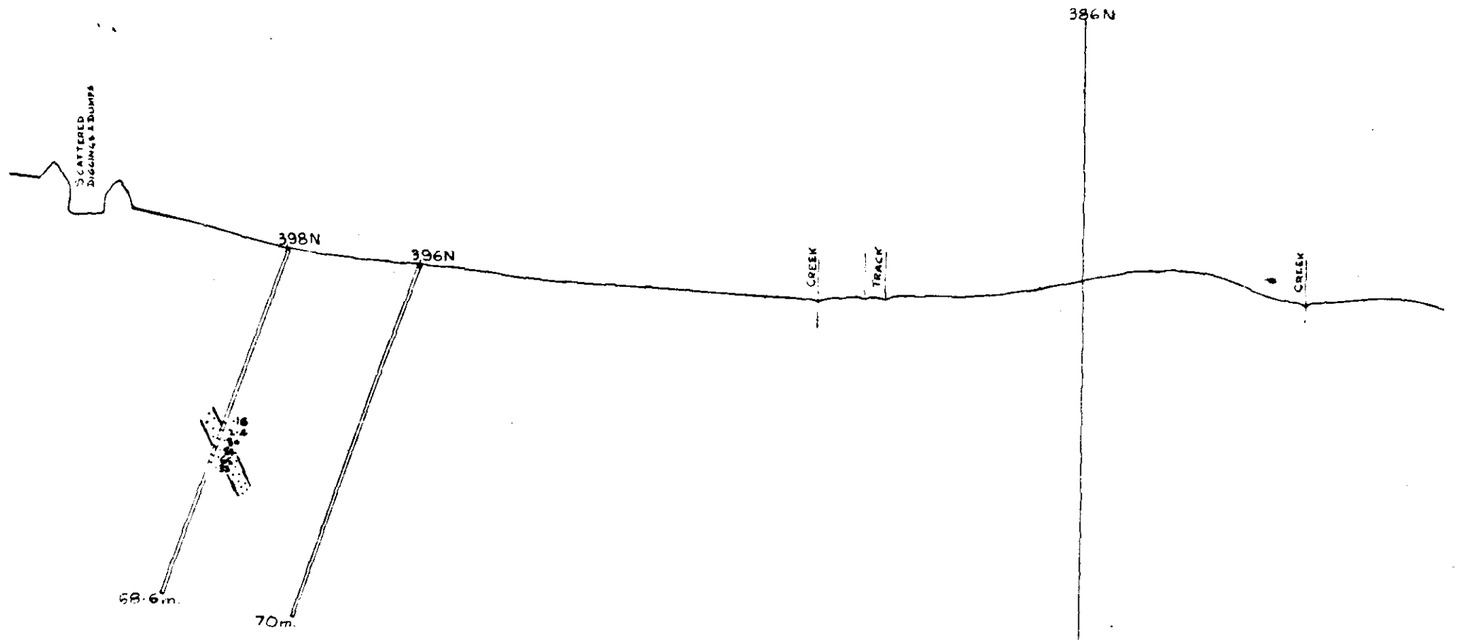
1272 II
1272(2)-32
BOOLOOROO - PROFILE 304 E



Scale 1:1000

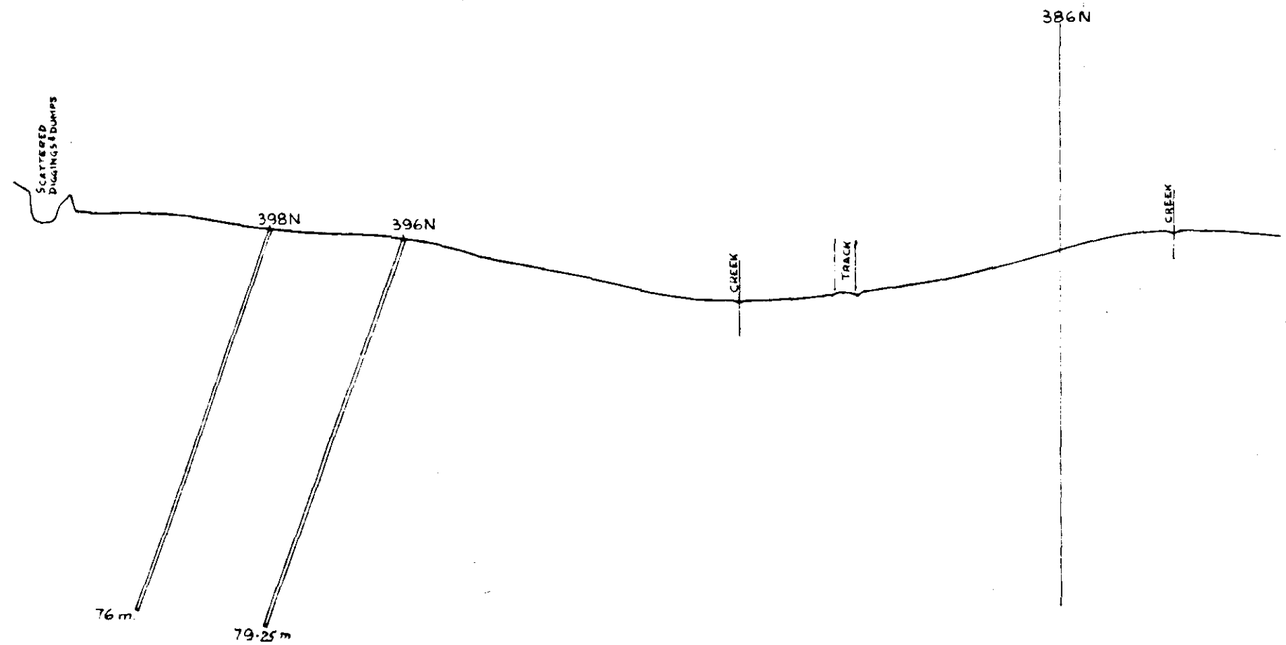
1272(2)-33

BOOLOOROO – PROFILE 300E



Scale 1·1000

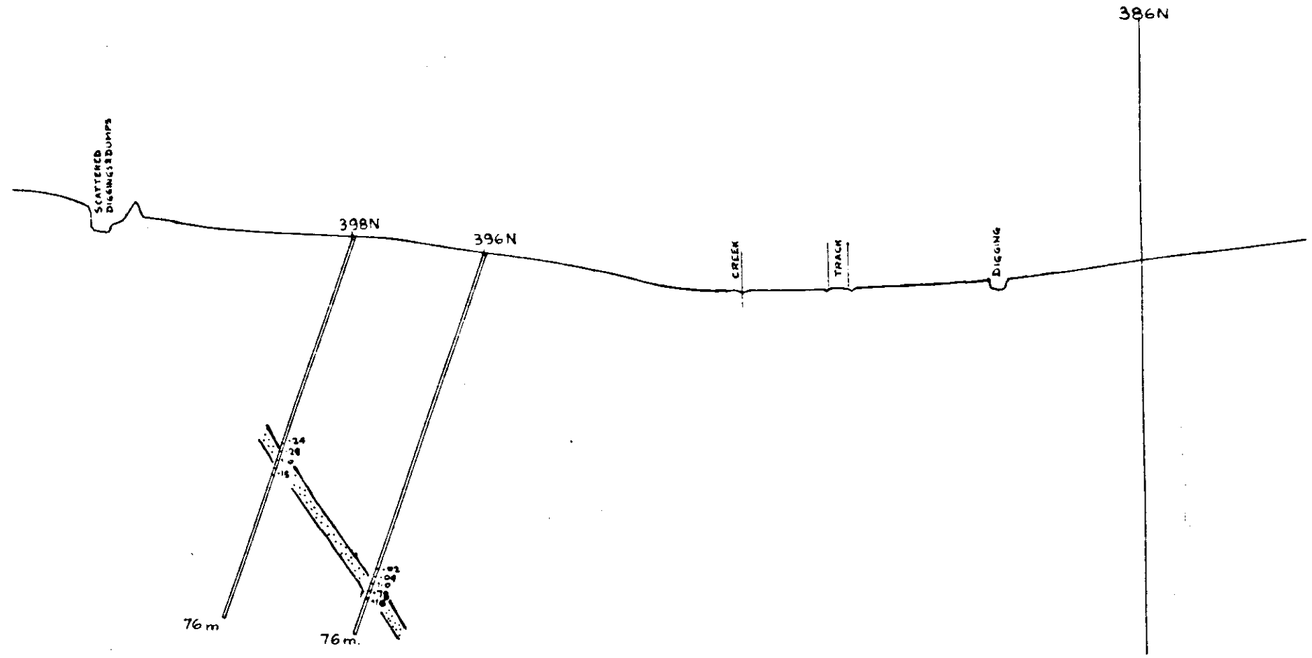
1272(2)-34
BOOLOOROO — PROFILE 296E



Scale 1:1000

1272(2)-35

BOOLOOROO – PROFILE 292 E

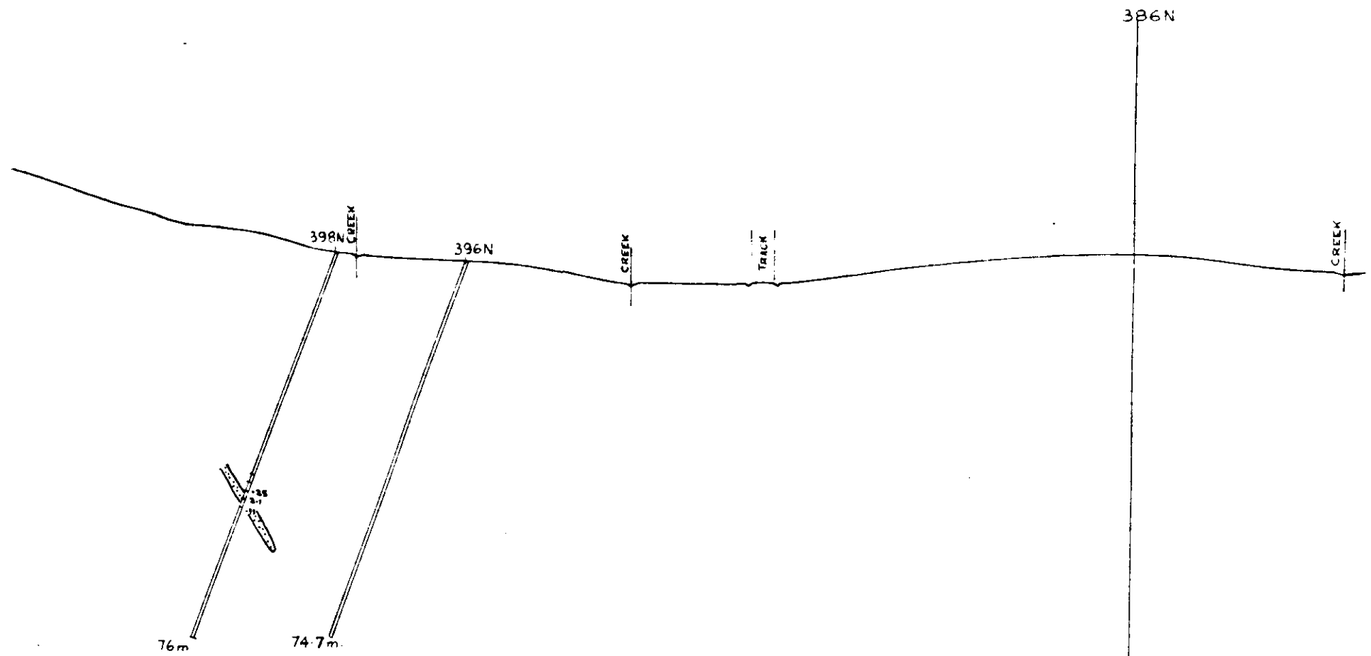


Scale · 1:1000

1272 II

1272(2)-36

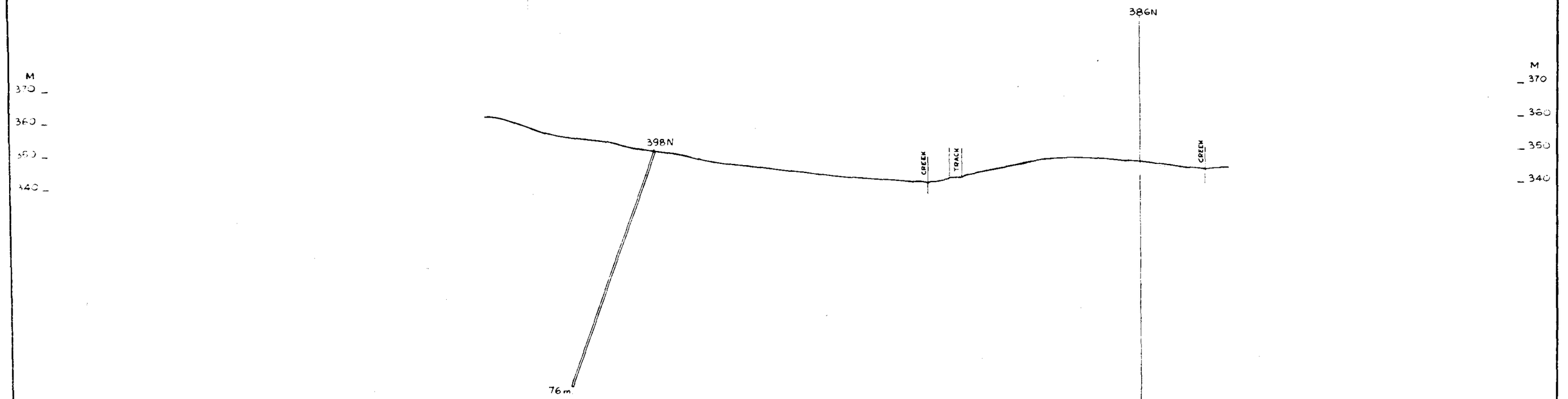
BOOLOOROO – PROFILE 288 E



Scale 1:1000

1272(2)-37

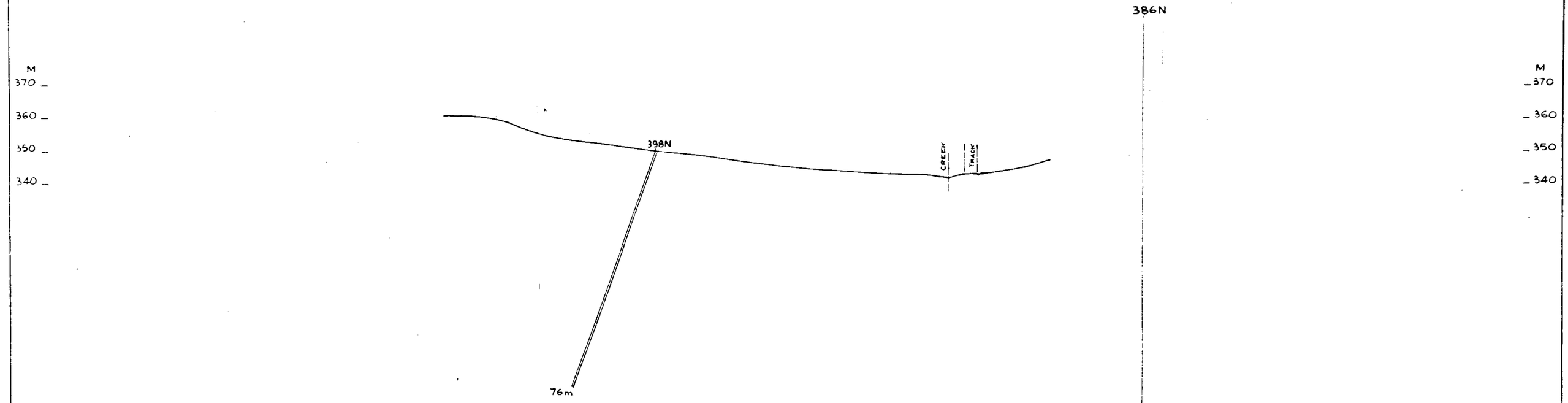
BOOLOOROO – PROFILE 284E



Scale 1:1000

1272(2)-38

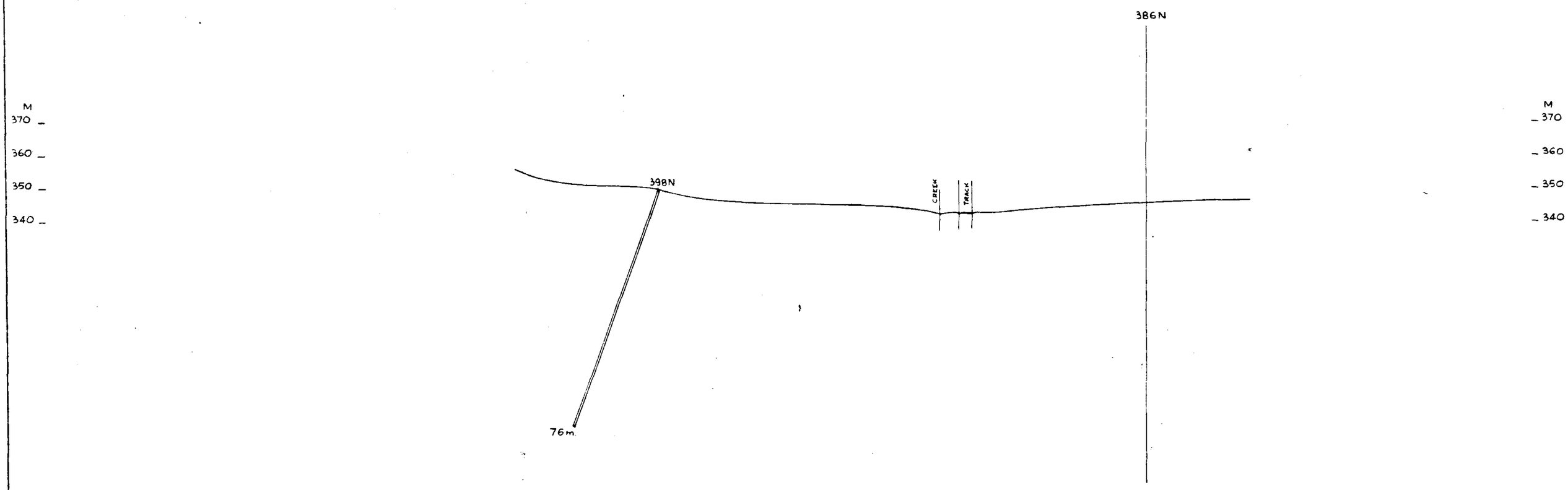
BOOLOOROO – PROFILE 280E



Scale 1:1000

1272(2)-39

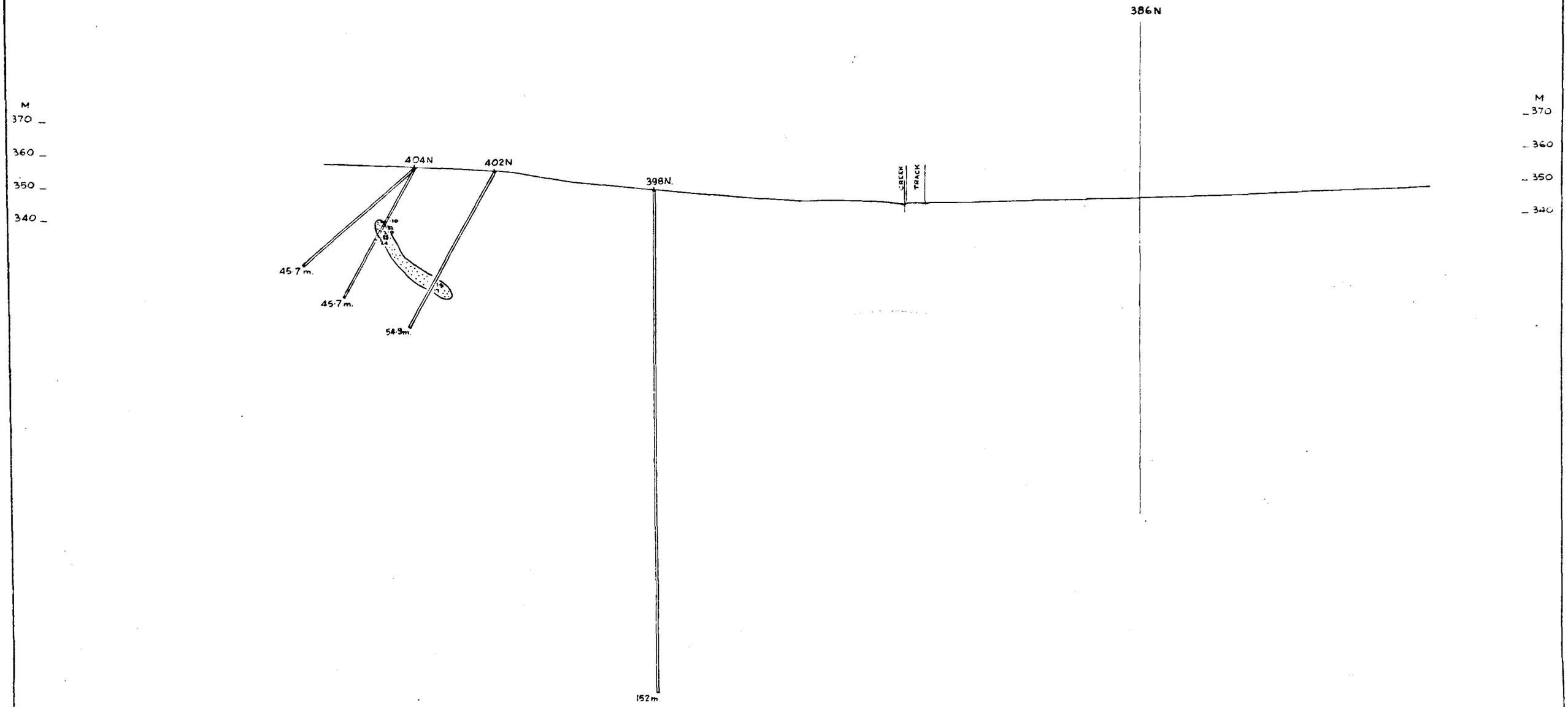
BOOLOOROO — PROFILE 276 E



Scale 1:1000

1272(2)-40

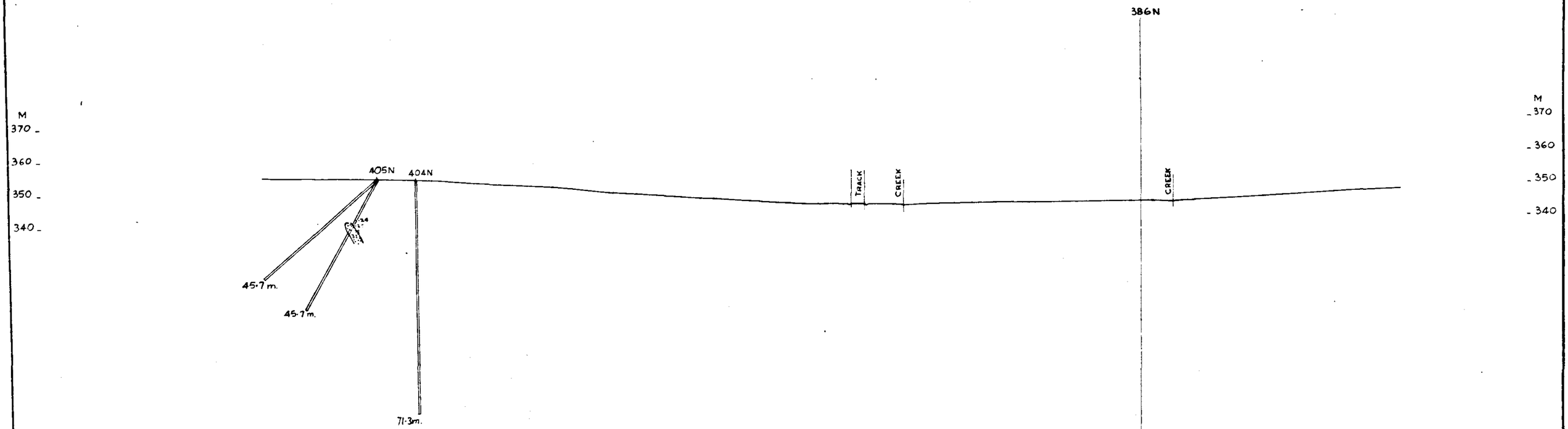
BOOLOOROO – PROFILE 272E



Scale 1:1000

1272(2)-41

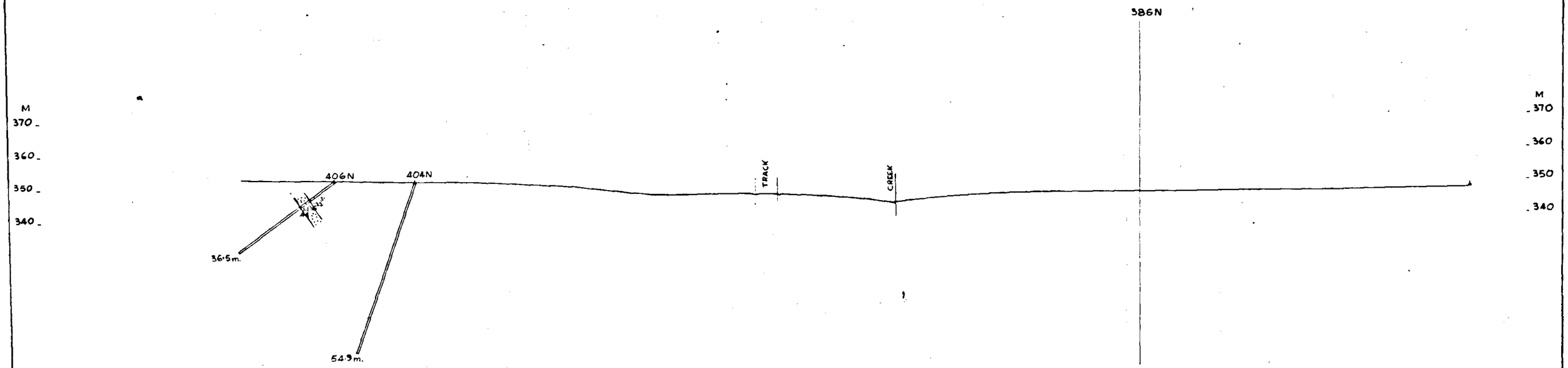
BOOLOORO – PROFILE 268E



Scale 1:1000

1272(2)-42

BOOLOOROO – PROFILE 264 E



Scale 1:1,000

1272(2)-43

BOOLOOROO – PROFILE 260E