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SML 433

UROONDA

PROGRESS AND FINAL REPORTS TO LICENCE SURRENDER FOR THE PERIOD 18/6/1970 TO 17/12/1971

Submitted by
Gold Copper Exploration Ltd
1971

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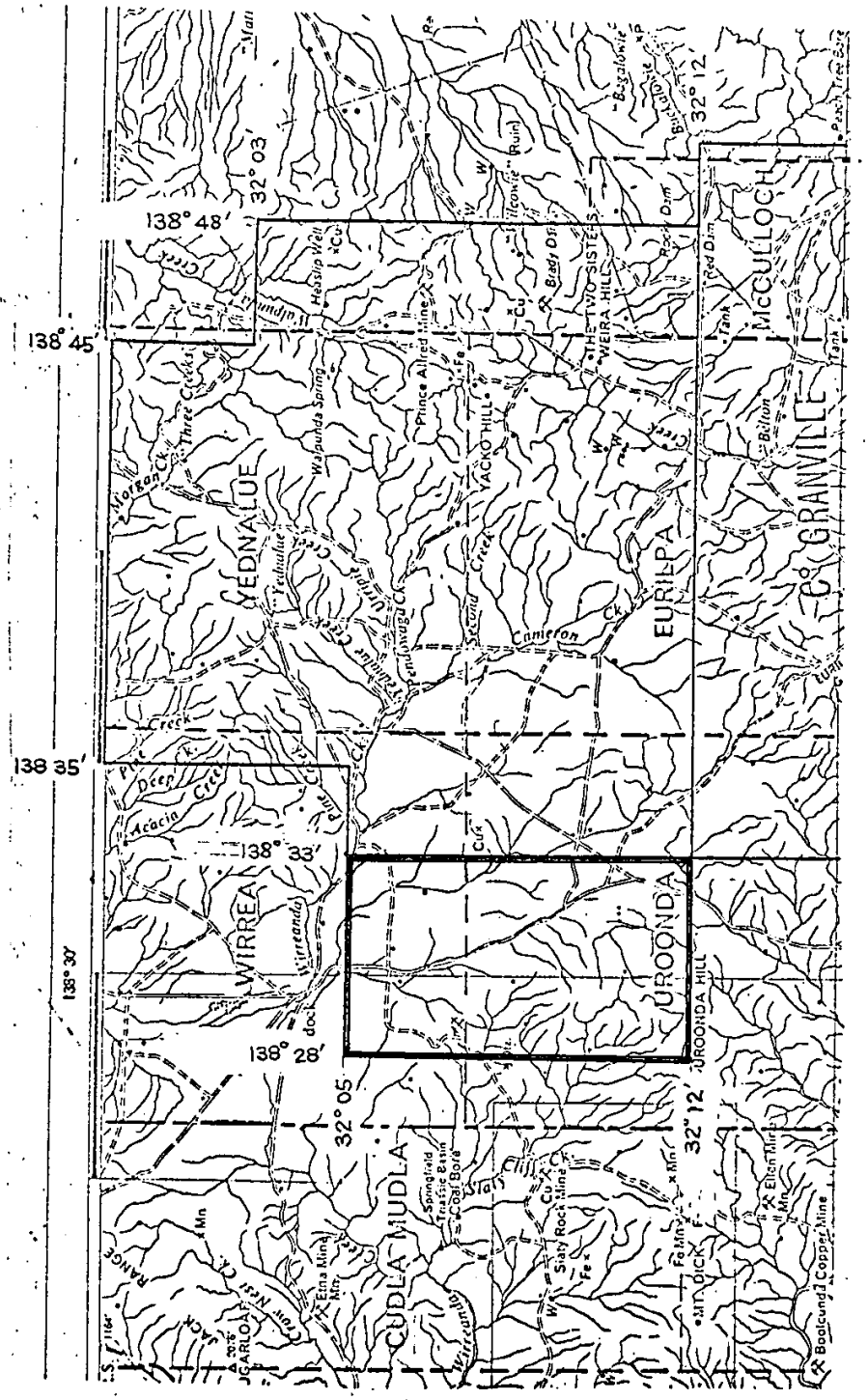
Government of South Australia
Primary Industries and Resources SA



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GOLD COPPER EXPLORATION PTY. LTD.

DOCKET DM. 127/70 AREA 39 SQ MILES

1:250000 PLANS ORROROO

LOCALITY..

S.M.L. No. 433 EXPIRY DATE 18·12·70

CONTENTS ENVELOPE 1417

TENEMENT: S.M.L. 433

TENEMENT HOLDER: Gold Copper Exploration Ltd.

INTERIM 3 MONTHLY PROGRESS REPORT ON S.M.L. 433 (Uroonda)
FOR GOLD COPPER EXPLORATION LTD.
(18th JUNE - 18th SEPTEMBER 1970)

Due to the changeover in Geological Consultants retained by Gold Copper Exploration Ltd., little exploration work has been carried out on this area during the period.

Robertson Research (Australia) Pty. Ltd. briefly visited the area to locate known mineral occurrences and to decide on an exploration programme which will be carried out during the next 3 months.

The exploration programme will involve:-

(1) Semi-quantitative analyses of selected samples for wide range of elements.

(2) A geochemical stream sediment programme will be carried out over areas of interest for Cu, Zn, Pb, Ba, and other elements suggested by stage (1).

(3) In the vicinity of known bedrock mineralisation, surface geological and structural mapping will be carried out. Limited soil geochemical sampling will be employed to attempt to define the extent of mineralisation at the surface.

(4) Aerial photography will be employed as an aid to geological interpretation.

Yours faithfully,

Alastair G. Brown.

ALASTAIR G. BROWN
Senior Geologist
Robertson Research (Australia) Pty. Ltd.

ROBERTSON RESEARCH (AUSTRALIA) PTY. LTD.

SIX-MONTH REPORT ON SPECIAL MINING LEASE 433 (UROONDA) ON BEHALF OF GOLD COPPER EXPLORATION LTD. FOR THE PERIOD 18th JUNE-18th DECEMBER, 1970.

by

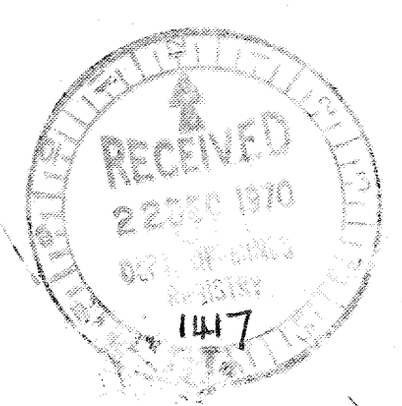
Alastair G. Brown, B.Sc., M.Sc., D.I.C., Ph.D.

David A.A. O'Connor, B.Sc.

December, 1970.

Prepared for:

Gold Copper Exploration Ltd.,
28 Gover Street,
North Adelaide, Sth. Aust. 5006.



CONTENTS

Accompanying Figures

1. INTRODUCTION

Special Mining Lease No. 433 covers an area of 33 square miles. The lease area is located 1 mile south of the township of Cradock and 190 miles north of Adelaide.

Although only one prospect is noted in the area, no comprehensive exploration programme has been previously conducted.

During the latter period of the lease tenure, geologists from Robertson Research (Australia) Pty. Ltd. have carried out an exploration programme which has included aerial photographic interpretation of geological structures, prospect investigation, and sampling and a regional geochemical stream sediment sampling programme.

Dr. Brown has carried out the prospect examination and supervised the geochemical programme while Mr. O'Connor has made a structural interpretation of the geology from aerial photographs.

2. PREVIOUS WORK

Although three prospects are now known in the area and probably belong to the pre-1900 era of mining, no literature has been located referring to these workings.

The area was geologically mapped on a scale of 4 mile to the inch during a regional geological mapping programme by the South Australian Department of Mines. The emphasis of the study was on stratigraphic identification and correlation and no mineralisation was recorded in the Uroonda area (Binks, 1966).

3. GEOLOGY

3.1 Descriptive Geology (Fig1)

The rocks of the south-central part of the area comprise the north-easterly nose of an elongate synclinal trough of Marinoan sediments. The rocks belong to the following formations:-

Brachina Formation
Nuccaleena Formation } Wilpena Group

Elatina Formation
Uroonda Siltstone
Tarcowie Siltstone
Tapley Hill Formation
Tindelpina Shale Member } Umberatana Group

} Adelaide System of Proterozoic age.

A small parasitic synclinal structure protrudes northwards from the major synclinal closure, while an anticline with steeply dipping limbs parallels the southern edge of the synclinal closure nose.

The above fold structures terminate northwards where a NW-SE trending overturnedanticline occurs, made up of the formations:-

Appila Tillite - Yudnamutana Sub-Group
Cradock Quartzite - Burra Group } Adelaide System of Proterozoic age.

A diapiric structure is intruded through the core of the anticlinal dome and arcs southwards around the nose of the syncline occurring to the south. Although there is a widespread Quaternary cover, the diapiric matrix could occupy an area of 5 square miles.
Two areas of highly contorted beds occur immediately beyond the lease area, one directly north of the lease boundary, and the other approximately 2 miles east of the south-east corner of the lease. The fold axes in the former area appear curved.

One joint set prevails throughout the lease area striking NW-SE. Little faulting has been detected but the north-west limb of the major syncline appears slightly offset by a possible fault parallel to the jointing. There is some evidence of a radial joint set developed on the nose of the major syncline and indicated by the drainage pattern but it is not very pronounced.

3.2 Structural Interpretation

The dominant local structural trend is the set of fold axes striking NE-SW which is indicative of a maximum stress direction running NW-SE. This stress direction would have caused the joints perpendicular to the fold axis (a-c jointing) which occur throughout the S.M.L. A second maximum stress direction runs NE-SW and is suggested by the NW-SE anticlinal axis. This anticline approximately parallels a major fold axis at Wilpena Pound, 35 miles to the north of the area, and on a broader scale is parallel to the Torrens Hinge. The strength of this stress appears to increase northwards in the Flinders area.

The contorted bedding which occurs along the NW-SE anticlinal axis, was probably caused by the interference of the two main fold axis directions and complicated locally by the intrusion of the diapir into the resulting elongate dome.

3.3. Influence of Structure on Mineralisation

Much of the mineralisation in the Flinders Ranges is related to diapiric breccias, and to the sedimentary sequences around these diapiric intrusions.

The Uroonda diapiric environmentis thus a potential area for Fe, Mn, Ba, Cu, Zn, Pb, Au, or Ag mineralisation.

Mineralised veining was found at prospect No.1 which is situated on the northern side of the syncline. It may be associated with a small fault traversing northwards towards the diapir, although the veining was found to be parallel to the bedding. A copper prospect immediately beyond the eastern edge of the lease area occurs near the NW-SE trending anticlinal axis suggesting at least local axial control over mineralisation. Insufficient evidence is available within the area as yet to assign the dominant control of mineralisation to any one structural feature.

4. EXPLORATION PROGRAMME

4.1 Geochemical stream sediment survey.

4.1a Orientation Work

Although no orientation work has been carried out in the lease area, a preliminary survey of the dispersion of Cu has been completed near known mineralisation eight miles south of the lease area, and also at other locations of similar environment within tenements currently leased by Gold Copper Exploration Ltd.
Results of these surveys indicate that a sample interval of at least 5 samples per mile is required to detect anomalous Cu, while Pb would require double that sample density. Consequently for a regional sampling programme a sample interval of 0.1 mile along stream beds has been selected with a stream density of 2 streams per mile. This will produce an overall regional sample density of 20-30 samples per square mile.

The orientation studies havealso indicated that the -80 mesh fraction of stream sediment samples gives adequate analytical precision and an adequate metal detection.

4.1b Regional Programme

The regional programme for stream sediments in the lease area has been completed. A total of 1080 samples was collected giving a density of 30 samples per square mile (Fig. 2). The samples have been dispatched for analyses for Cu, Zn, Pb, Ba, Mn, Fe and Ag by atomic absorption. A selected batch of 33 samples is being analysed by semi-quantitative spectrography for 26 elements. No results for these samples have yet been received.

4.2 Prospect Examination

4.2b One mine was previously known and is noted on the geological 4 mile to the inch map of the South Australian Mines Department (Orroroo Sheet). The mine (32^{0} 07', 138^{0} 28') is sited approximately 4 miles south of Cradock. There are no records of previous workings. A 60 foot inclined shaft has been sunk on a quartz vein in brown-grey siltstone of the Tapley Hill Formation (Fig.2). The vein comprises quartz-hematite - manganese - goethite - pyrite and is parallel to the siltstone bedding which strikes at 215^{0} northwestwards and dips 55^{0} southwards. The vein extends with uniform width to 60 foot depth, while laterally it extends 780ft. northeastwards and 350ft. southwestwards from the shaft. At the extremities of the outcrop, the vein decreases to 1-2 foot in width and subdivides into several stringer veins.

Within 500ft. to the north across the siltstone strike, 5 similar parallel quartz veins of 1ft. width are located.

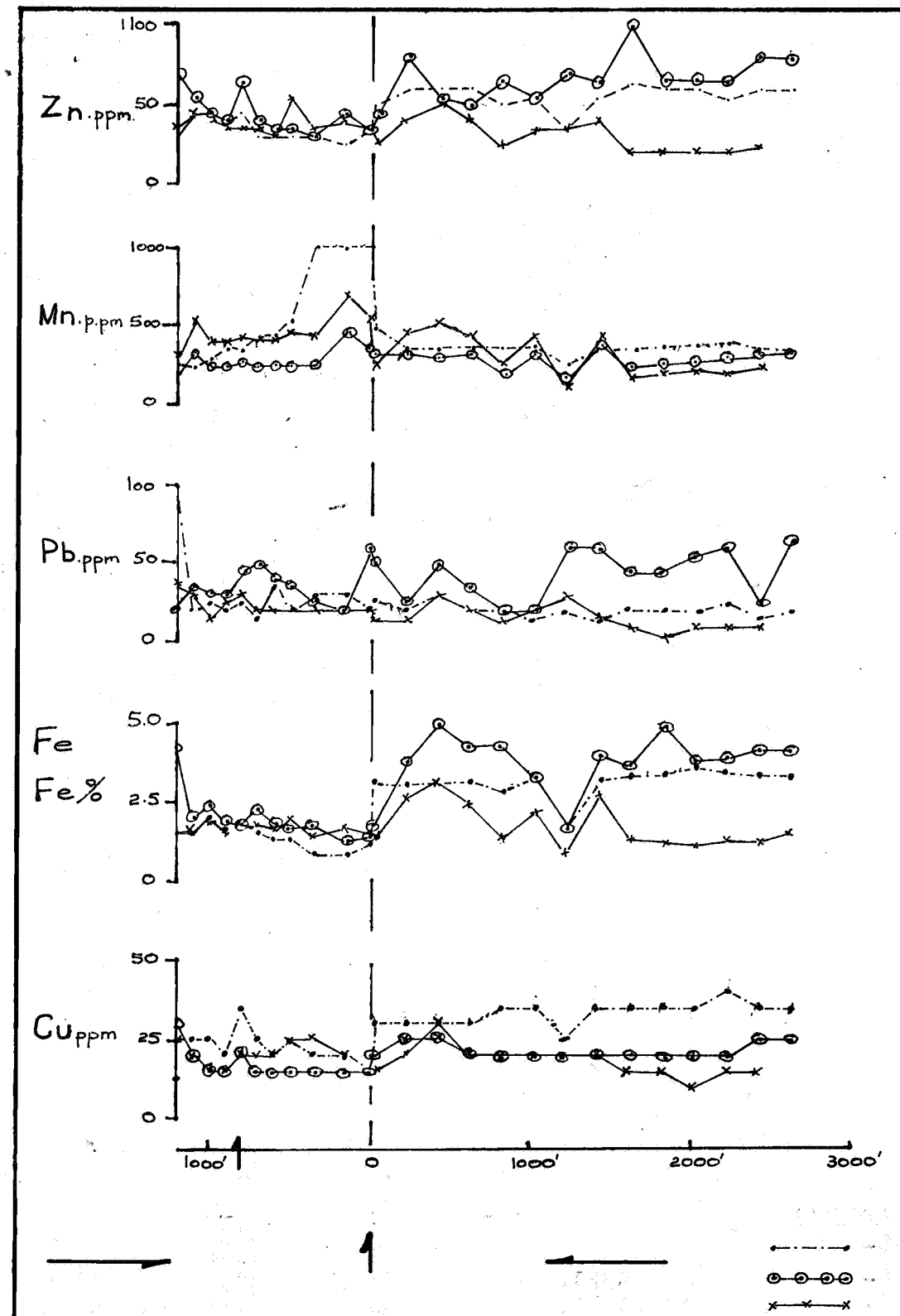

1100
Zn.ppm.
50
0
1000
Mn.p.pm
500
0
100
Pb.ppm
50
0
5.0
Fe
Fe%
2.5
0
50
Cu ppm
25
0
1000'
0
1000'
2000'
3000'

Fig. 3

The main vein has been sampled by 8 channel samples (Fig. 2) and one ½ ton dump sample.
Only spectrographic analyses of the vein material have as yet been received:-

Sample No.	Cu	Pb	Zn	Ni	Co	Sn	W	Mo	Bi	As	Sb	Be	Mn	Cr	V	Fe	Nb	Ag
GCE																		
1140	180	6	40	100	20	5	<15	<1	1	<30	<30	1	180	65	5	1%	<15	1
1145	170	5	40	50	10	<5	<15	<1	5	<30	<30	1.5	350	110	3	>1%	<15	1

None of the listed elements show any economic concentration. Vein analyses for Au have not been received.

4.2b During the regional geochemical sampling programme, two further prospects were located in the southern section of the lease area (Fig. 2) but as yet have not been examined.

5. FUTURE PROGRAMME

5.1 Prospect examination and sampling will be completed. Depending on results of analyses, lateral extensions of the mineralisation will be determined by geochemical or geophysical methods, while depth extensions may be tested by geophysics or by a limited percussion drilling programme.

5.2. Pending the results of the regional stream sediment programme, a comprehensive follow-up will be carried out on any significant metal anomalies. This may involve limited close-spaced stream sediment sampling, while soil sampling will be implemented beyond the stream banks to be followed by augering, trenching or costeaning, and later by percussion drilling where required.

6. REFERENCES

Binks, P.J. 1966 Progress of mapping on the Orroroo 1:250,000 sheet area.
Report Dept. Mines S. Aust. No Bk 62/25.

011

Interim 3 Month Report on Special Mining Lease 433 (Uroonda) on behalf of Gold Copper Exploration Ltd. for the period 18 December, 1970-18 March, 1971.

1. Introduction

A regional geochemical stream sediment sampling programme was completed during the last quarter and resulted in 1080 samples, giving an overall density of 30 samples per square mile. Some of the analytical results have been received and have been assessed.

2. Results of the stream sediment geochemical survey.

2.1 Cu (Map 1)

Over much of the area, the values are uniformly low (40 ppm).

Two areas with anomalous values are present.

(a) A northern zone lies adjacent and due west of Acacia Valley homestead. The maximum anomalous value obtained is 250 ppm high values extends ½ a mile downstream. In a second creek, a further 1 mile to the south - west, a maximum value of 70 ppm occurs. Immediately east of Acacia Valley homestead a zone with values of 40 - 60 occur.

This northern zone is superimposed on an area underlain by diapiric breccia (geological 4 mile sheet, Orroroo Sheet, 1968). Due to the poor stream density in the area, further stream sediment sampling has been conducted in the wide diffuse creeks to delineate the anomalous zones. It would appear that the Cu mineralisation is probably associated with veins connected with the diapiric breccia.

(b) A second zone occurs in the extreme south - east of the lease area. Higher values are sporadic with a maximum of 80 ppm in a creek 1¼ miles north-west of Clifden homestead; the values suggest patchy lower grade mineralisation. Two old Cu prospects are known in this zone immediately west of Clifden homestead.

This zone is situated on siltstones of the Tapley Hill Formation but as a zone of diapiric breccia occurs in the extreme south - east of the lease area, and as the rock dip is northwestwards, it is probable that the breccia partly underlies the zone, and is probably responsible for the higher Cu values.

The mineralisation in this southern zone is probably minor vein type.

2.2 Zn (MAP.3)

The complete results have not been received from the laboratories.

Zn values are generally low (30 - 75 ppm). Within the sedimentary succession of the central area, a few sporadic values up to 90 ppm occur but show no significant trend relative to the geology. A further zone of higher values, with up to 175 ppm Zn occurs in the extreme south - east. This zone does show a spacial relationship with the south - east diapiric

outcrop.

There is little correlation of high Zn values with the northern diapiric mass.

2.3 Pb

The complete results have not been received from the laboratories.

Pb values are uniformly low (60 ppm). A zone of higher values appear in the south - east with a maximum of 120 ppm.

In the north, a single high value occurs 2 miles west of Acacia Valley homestead in the vicinity of the high Cu values.

The Pb values do indicate slight enrichment associated with the diapiric masses but no significant mineralisation is suggested.

2.4 Mn (Map 2)

The Mn content has been determined to indicate zones of base-metal mineralisation, rather than for any economic Mn mineralisation. The general level of concentration of 300 - 600 ppm can be regarded as indicating general background values.

A zone with up to 1370 ppm forms an arcuate pattern and is superimposed on rocks of the Tarcowie Siltstone group and suggests a general higher level of Mn in these rocks.

Further higher values are located both in the north and in the south - east, and coincide the zones of Cu anomalies related to the diapiric breccia. In both zones values of 1200 - 1400 ppm occur.

The independance of Mn and Cu values in other zones implies that higher Cu values are not due to general scavanging effects of Mn minerals in the creeks.

2.5 Ag

The complete results have not been received from the laboatories.

Values are generally near the detection limit of the method (2 ppm). to 8 ppm. The higher values occur in areas of differing lithologies and appear to bear little relationship to the geology.

2.6 Ba & Fe

No Ba nor Fe results have been received.

2.7 Conclusions.

Zones of base metal anomalies have been outlined by the survey. There is a direct relationship of Cu with zones of diapiric breccia, and mineralisation can be anticipated either within or marginal to these zones.

2.8 Future Work.

Pending the reception of all the analytical data, follow-up work is anticipated to detect the source of metal anomalies. This will involve close - spaced creek sampling, possibly followed by soil sampling.

The programme beyond this stage will be developed at the completion of the follow - up stage.

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Robertson Research (Australia) Pty. Ltd.
16/3/71

INTERIM THREE MONTHLY REPORT ON SPECIAL MINING LEASE 433 (UROONDA) OF GOLD COPPER EXPLORATION LTD. FOR THE PERIOD 19th MARCH, 1971 - 18th JUNE, 1971

REGIONAL GEOCHEMICAL STREAM SEDIMENT SURVEY

Introduction

The 33 square miles of the lease area were sampled and resulted in 1090 samples giving an overall density of 30 samples per square mile (Fig. 9.1).

Copper (Fig. 9.2).

Copper values generally range from 10 - 25 ppm.

Three anomalous zones occur with values in excess of 60 ppm.

A diapiric zone outcrops sporadically through heavy alluvial cover in the northern section of the lease over an area one mile in width. Although drainage density is poor in this flat-lying zone, anomalous values of 70 ppm (6½'S/29'E), 250 ppm (6'S/30'E) and 60 ppm (6'S/32'E) have been obtained. In addition, a value of 190 ppm (7'S/28½'E) is located in alluvial cover overlying Tapley Hill Formation siltstone immediately adjacent to the diapir zone.

A second zone of anomalous values occurs in the extreme south-east, with a maximum value of 80 ppm (11½'S/31½'E). These values occur in streams crossing rocks of the Tapley Hill Formation and Uroonda Siltstones, but are marginal to a diapiric zone. This zone trends north-eastwards in the extreme south-east of the lease, and probably underlies the sediments to the west. Two old copper prospects are known in this area.

A third zone of anomalous values is lithologically controlled by the Tarcowie Silstone formation. Moderately anomalous values of 50 ppm (8½'S/29½'E), 70 ppm (8½'S/31'E) and 60 ppm (11'S/31'E) are present.

Zinc (Fig. 9.3).

Zinc values are generally less than 100,ppm.

A wide zone of values ranging from 100 to 160 ppm occurs in the south-east of the lease, located over several rock formations. This zone also coincides with samples analysed by a single laboratory (Robertson Research, U.K.) and suggests analytical bias with a higher level of Zn extraction than the other analytical results.

The maximum value of 160 ppm (11½'S/31'E) is only moderately anomalous. Several values of over 135 ppm occur in the vicinity over rocks of the Tarcowie Siltstone Formation. Sporadic weakly anomalous values of up to 90 ppm (9'S/30'E). occur over the same Formation and suggest a slightly zinc-enriched lithology.

Two isolated anomalous values occur in the diapiric zones. A value of 290 ppm (6½'S/29'E) occurs in the northern diapir zone while a value of 240 ppm (11'S/32½'E) occurs in the south-east diapir zone.

Lead (Fig. 9.4).

Values are generally low throughout the area and average 15-40 ppm.

Low anomalous values occur at two areas.

On the northern diapir margin, a single value of 130 ppm occurs at 6'S/30'E, in the same samples from which an anomalous copper value was obtained.

A zone with values of 100 to 110 ppm 11½-12'S/32-33'E) occurs adjacent to the south-east diapir. This zone has also returned anomalous values.

Isolated values of 10C to 170 ppm occur in the Tarcowie Siltstone at 11'S/31'E.

Silver (Fig. 9.5)

Values are generally less than 2 ppm.

Anomalous values of 1-8 ppm occur in the south-east over an area of 4 square miles. The values are distributed marginal to the south-east diapir and also in the Tarcowie Silstone.

Isolated values of 6 ppm (7½'S/29'E) and 15 ppm (32'S/7½'E) are located in Tapley Hill Formation siltstones adjacent to the northern diapir.

The random scatter of isolated, highly anomalous values of up to 20 ppm in other formations may relate to contamination.

Barium (Fig. 9.6).

The analytical extraction techniques of the various laboratories differ for this element. The analytical results of Amdel and Robertson Research (U.K.) are equivalent and approximately double the level of values from Robertson Research (Australia) Pty. Limited.

The general threshold of anomalous values for Amdel and Robertson Research (U.K.) is 800 ppm and is approximately equivalent to 500 ppm from Robertson Research (Australia) Pty. Limited.

Maximum anomalies are located in the Tapley Hill and Uroonda Siltstones. Values of 620 ppm (7½'S/29½'E) and 640 ppm (9'S/32½'E) (Robertson Research (Australia) Pty. Limited and of 800 ppm (11'S/31½'E) and 650 (11½'S/31½'E) (Robertson Rearch, U.K.) are sporadically located in these Formations.

Two low anomalous values of 600 ppm (11½'S/29½'E) (Robertson Research (Australia) Pty. Limited) and 1100 ppm (12'S/28½'E) (Amdel), occur in the Brachina Formation.

A single value of 1300 ppm (5½'S/32½'E) (Robertson Research U.K.) is located in a diapiric zone.

Iron (Fig. 9.7)

No iron values are available for the south-east corner of the area.

Iron values generally range from 2.0 to 3.0%. Anomalous values occur associated with the northern diapir where values of over 4.0% occur at 7'S/29'E, 6'S/30'E and 5½'S/32'E in the same areas as anomalous copper values.

Moderately anomalous values of 4.0% (7½'S/32½'E) and 4.0% - 4.5% (7-8'S/30'E) relate to the Tapley Hill

Formation.

Isolated values in excess of 4.0% occur in the Tarcowie Silstone while the Brachina Formation shows a general lithological correlation with higher iron values.

Manganese (Fig. 9,8)

Values are generally less than 700 ppm.

Three anomalous zones occur.

In the northern diapir, values of over 1200 ppm occur at 6'S/30'E and 7'S/29'E in the same zones as anomalous copper values.

In the Uroonda Silstone, values of over 1,000 ppm are located 19 9'S/32½'E, 8'S/30'E and 11'S.31½'E while a zone of up to 1200 ppm (8½'S/30'E) occurs in the Tarcowie Silstone in the same vicinity as anomalous iron values.

Conclusions

Four anomalous copper zones exist, two in the northern diapir zone, one near the south-eastern diapir zone and one in Tarcowie Siltstone. In the north of the area, these copper anomalies are developed through thick alluvial cover.

No significant zinc or lead anomalies are present. High silver values may relate to contamination.

Barium values show a single high anomaly in the northern diapir.

Isolated higher iron values correlate with copper or manganese anomalies, and suggest associated iron/manganese/copper vein type mineralisation.

Alastair G. Brown.

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Gold Copper Exploration Ltd.

28th June, 1971.

INTERIM THREE MONTHLY REPORT ON SPECIAL MINING LEASE 433 (UROONDA) OF GOLD COPPER EXPLORATION LTD. FOR THE PERIOD 18th JUNE, 1971 - 18th SEPTEMBER, 1971.

Geological follow-up of stream sediment anomalies of copper, lead, zinc, barytes and manganese which were located during a regional stream sediment programme, has commenced. This work initially involves visual inspection by a geologist. Dependant on his assessment, further detailed sampling may be required to identify the exact source of any anomaly.

A comprehensive geological follow-up programme will be applied in any zone of further interest.

Alastair G. Brown.

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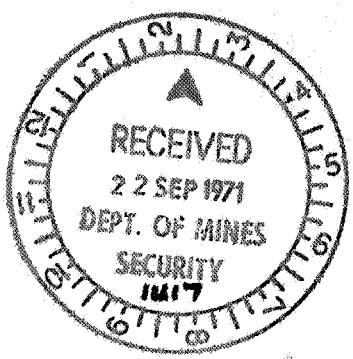
Gold Copper Exploration Ltd.
17th September, 1971.



URUONDA COPPER PROSPECT (Heylon Claim)

Situated at approximately 32° 07' 45" - 138° 33' 25" on the Yednalue 1 mile sheet. The area is shown as being diapiric but little evidence of brecciation has been noted and locally bedding is little disturbed. There is evidence of veinlets of haematite with little copper, which often is associated in the Worumba region with diapiric masses.

Some 200 yards north-east of the main shaft (see attached sketch plan) there is a very small patch of dolerite also often associated with diapirs in the zone.

Geologist M. Boots and K.D. Price have been unable to select percussion drilling sites due to the narrowness of the ore veins and the apparent lack of suitable loci where veins intersect.

Dr. A. Brown, geologist, will later decide whether soil geochem. is worthwhile in the area or near the contacts of the dolerite.

FINAL REPORT ON THE SPECIAL MINING LEASE 433 (UROONDA) OF GOLD COPPER EXPLORATION LTD. FOR THE PERIOD 18TH DECEMBER, 1970 TO 18TH DECEMBER, 1971.

1. Geochemical stream sediment programme (see Report 19th March - 18th June, 1971)

The 33 square miles of the lease area were comprehensively stream sediment sampled resulting in 1,090 samples giving an overall density of 30 samples per square mile. The samples were analysed for copper, lead, zinc, iron, manganese, barytes and silver.

1.1 Two zones of generally higher copper values were found associated with diapir zones, in the north and south-east corner of the lease respectively. Follow-up work has not located any significant source for the anomalies.

1.2 No zinc or lead values were regarded as significantly anomalous.

1.3 The silver analyses indicated a random scatter of anomalous values, believed to be due to contamination.

1.4 Barium anomalies were located in the Tapley Hill, Uroonda Siltstone and the diapir zone, but no significant barytes mineralisation was found in later follow-up work.

1.5 The iron values were sporadically high in the diapir, Tapley Hill and Tarcowie Siltstone Formations but do not indicate large scale mineralisation.

1.6 The manganese is only moderately anomalous in the diapir, Uroonda Siltstone and Tarcowie Siltstone Formations. No significant manganese occurrences have been found in the follow-up work.

2. Prospect Examination

All known prospects in the area were geologically examined but none were regarded to have economic potential. (See Report 18th June - 18th December, 1970).

Alastair G Brown

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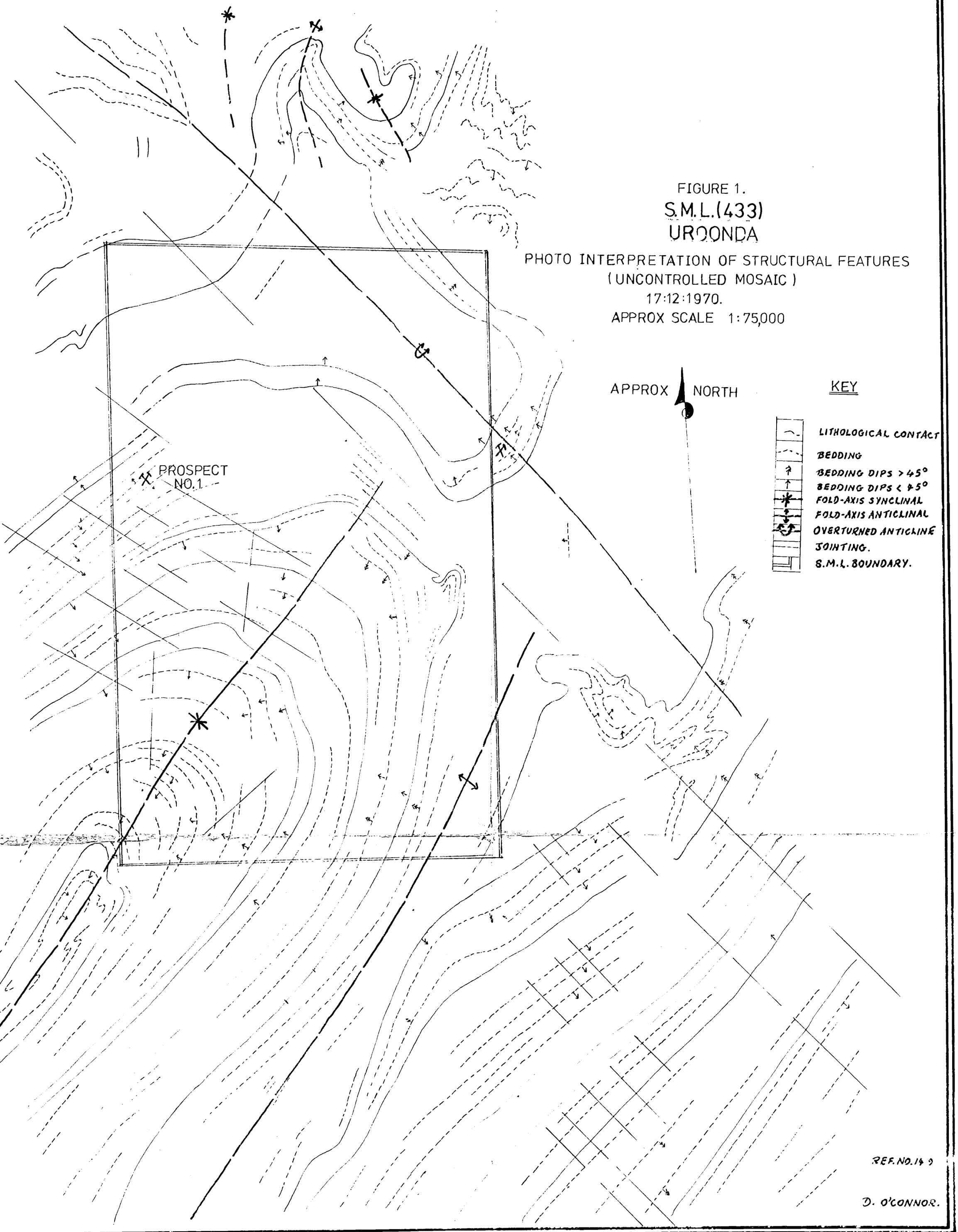
Senior Geologist
GOLD COPPER EXPLORATION LTD.

23rd December, 1971.

FIGURE 1.

S.M.L.(433)
URQONDA

PHOTO INTERPRETATION OF STRUCTURAL FEATURES
(UNCONTROLLED MOSAIC)
17:12:1970.
APPROX SCALE 1:75,000



REF. NO. 14 9

D. O'CONNOR.

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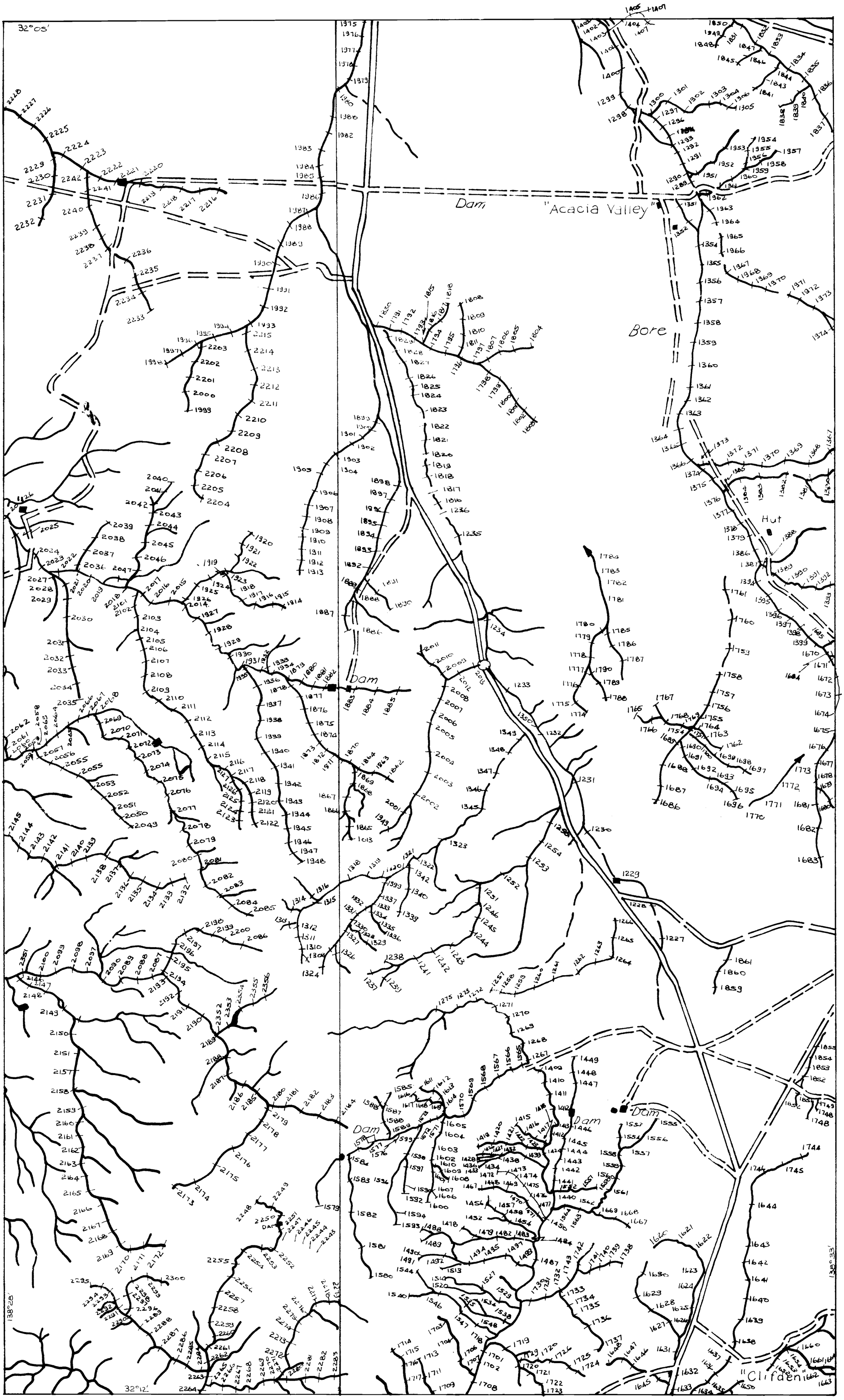

FIGURE 2.

S.M.L. 433 (UROONDA)

REGIONAL GEOCHEMICAL STREAM SEDIMENT SURVEY SAMPLE LOCATION MAP

APPROXIMATE SCALE 1:24,000

17 : 12 : 1970

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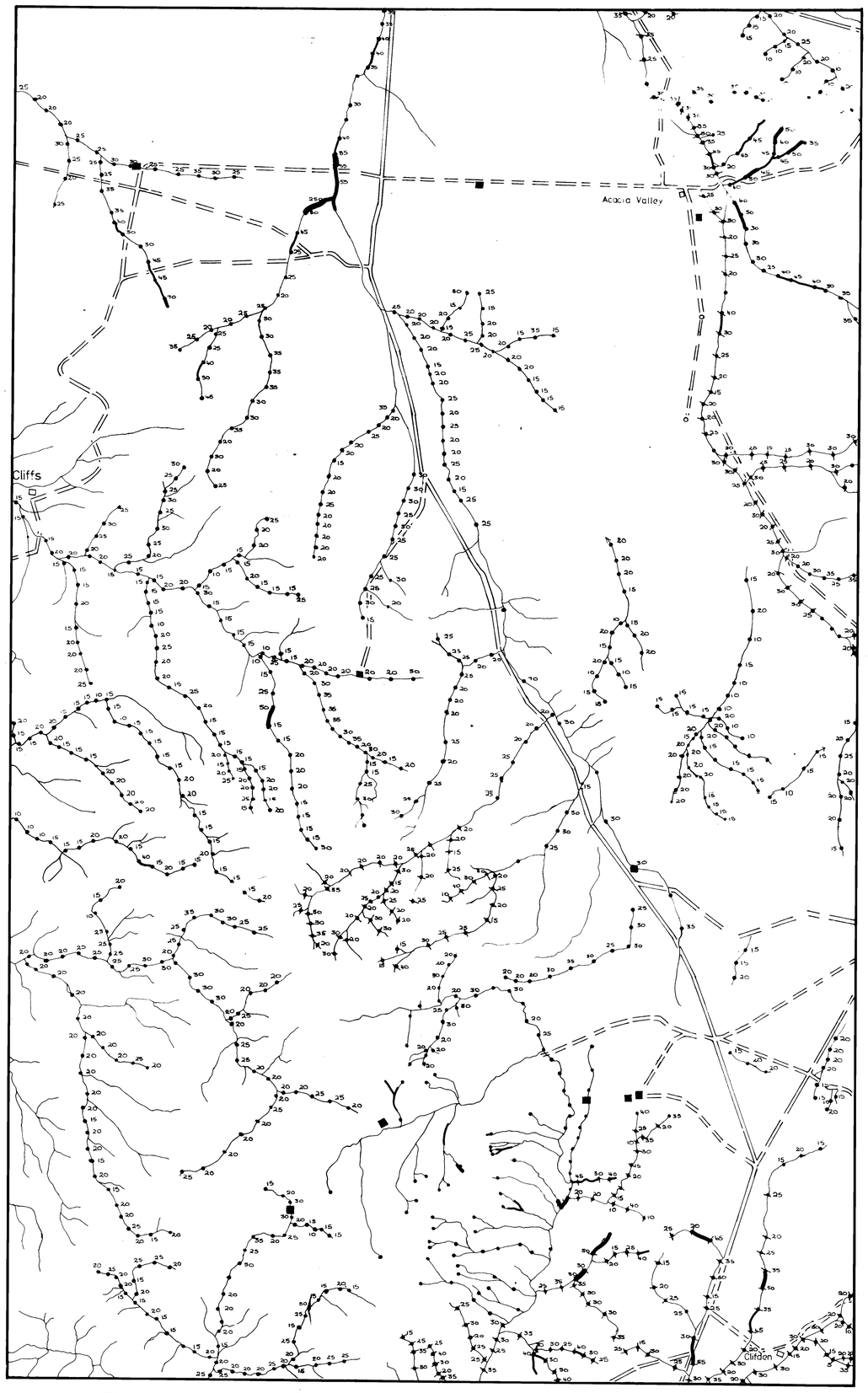
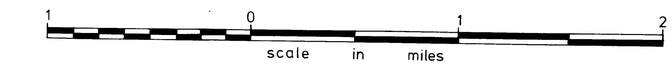
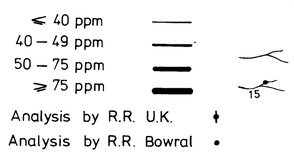


Fig. 1 Distribution of Cu (ppm) in stream sediments, Special Mining Lease 433 (Uroonda)





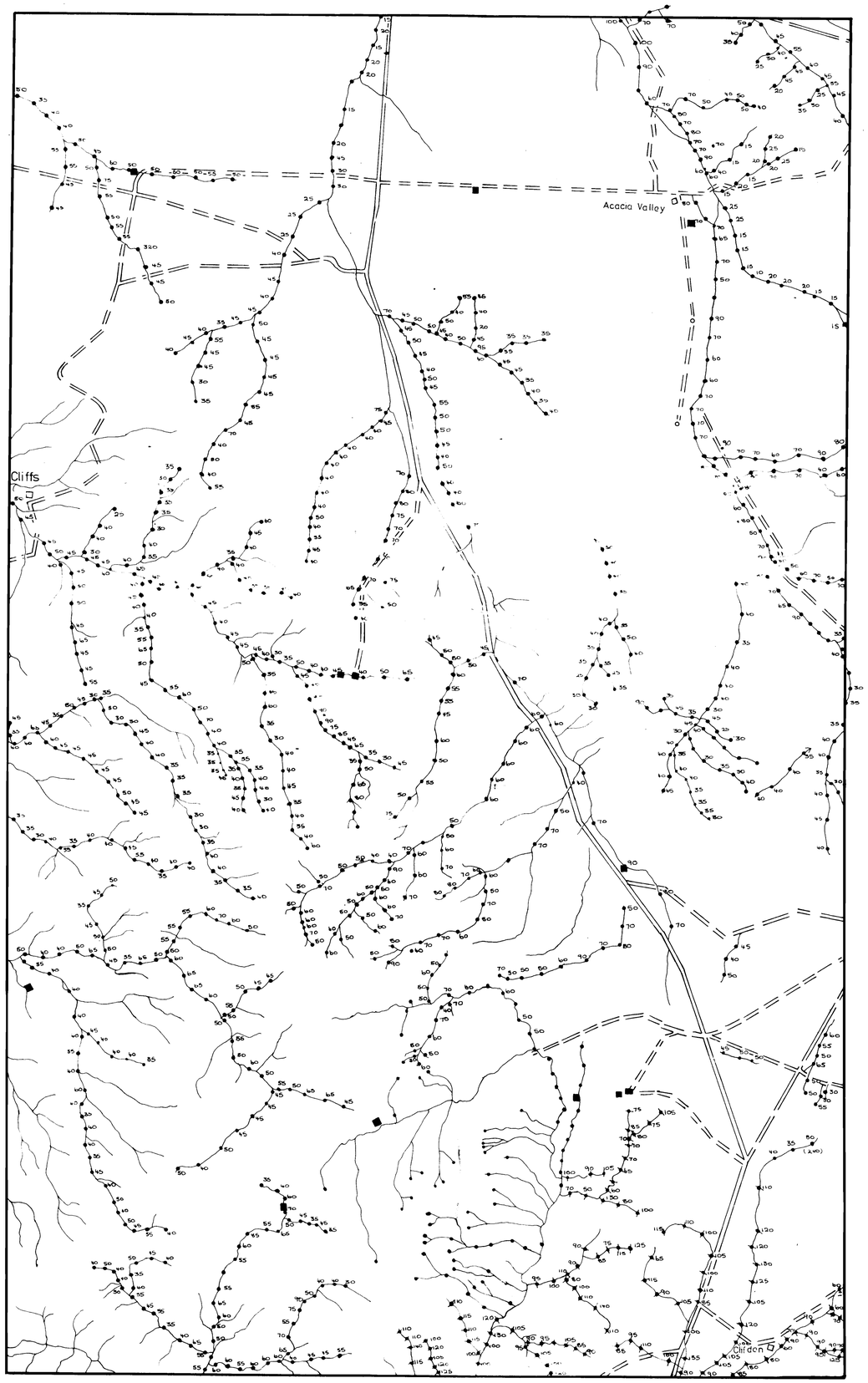
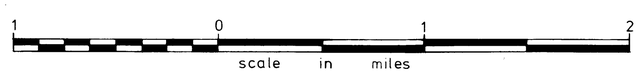
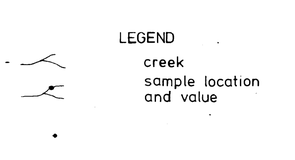


Fig. 3 Distribution of Zn (ppm) in stream sediments, Special Mining Lease 433 (Uroonda)





ENV 1417 - 3

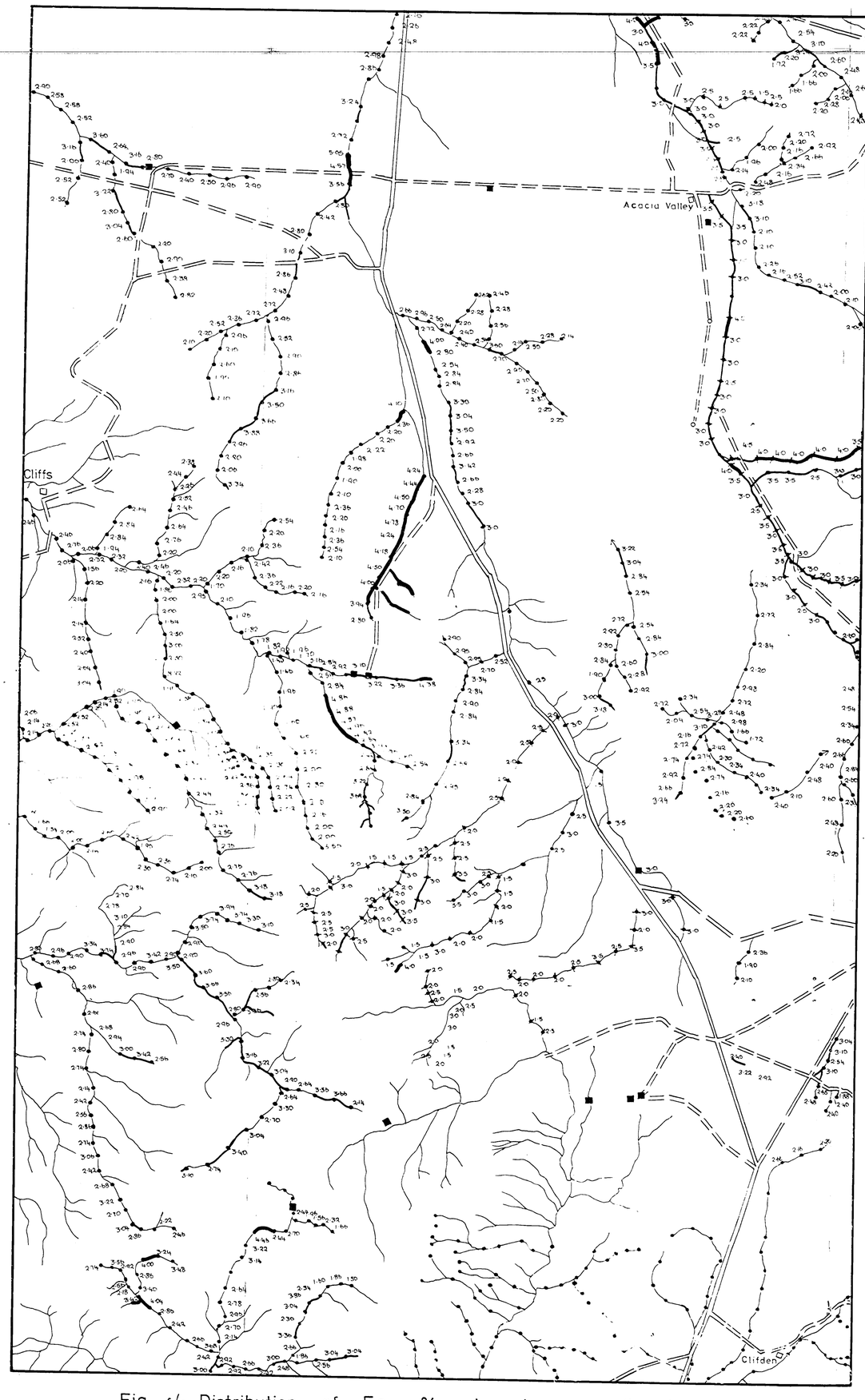
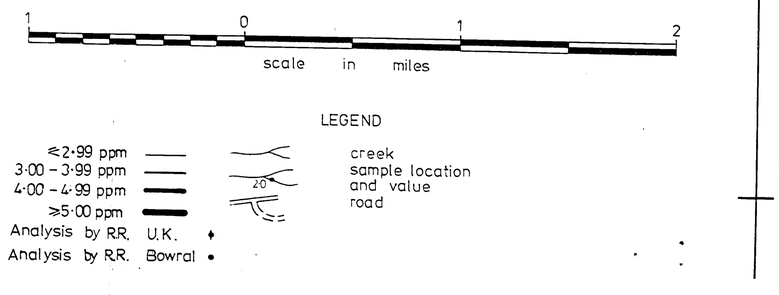


Fig. 4 Distribution of Fe % in stream sediments, Special Mining Lease 433 (Uroonda).



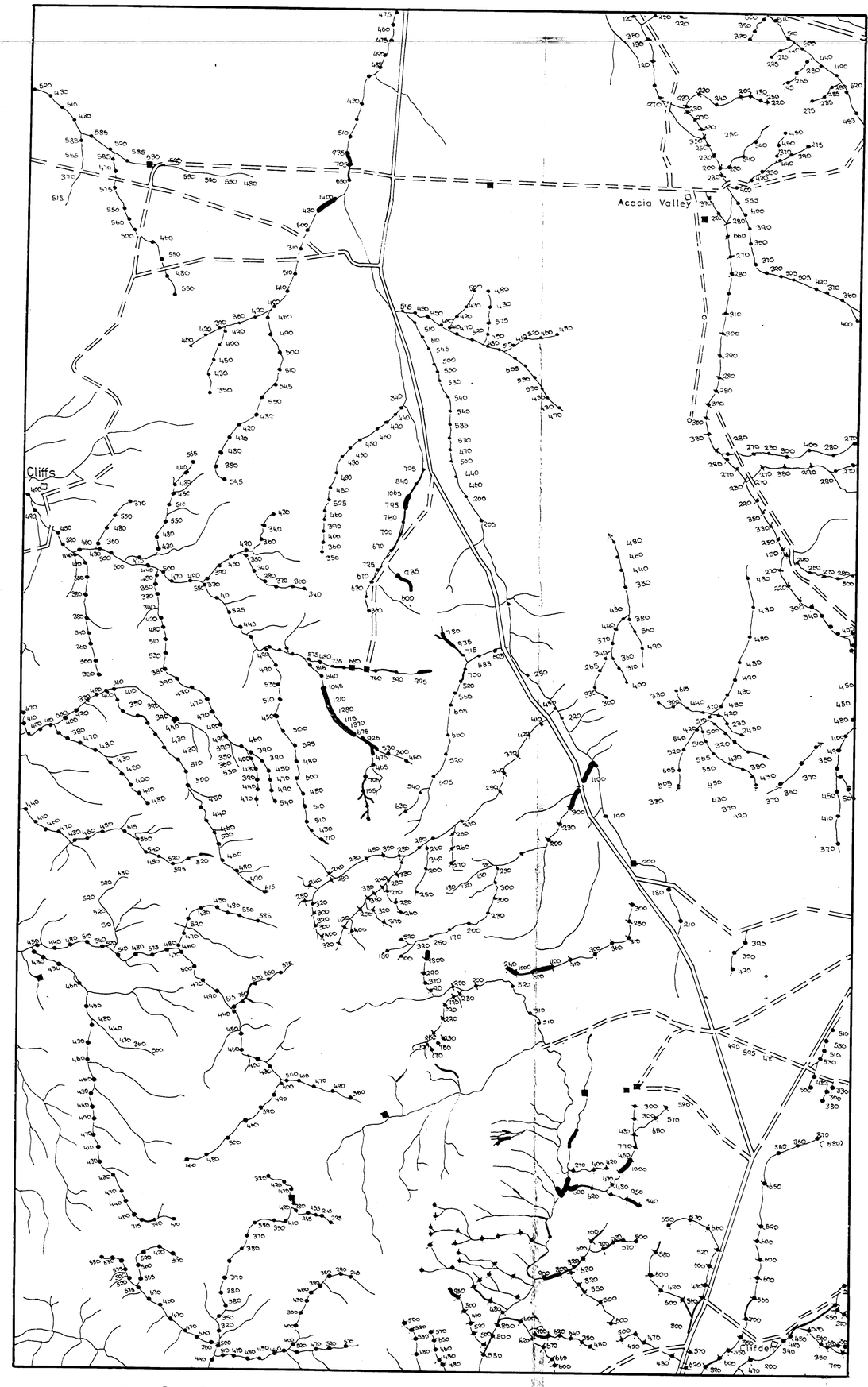
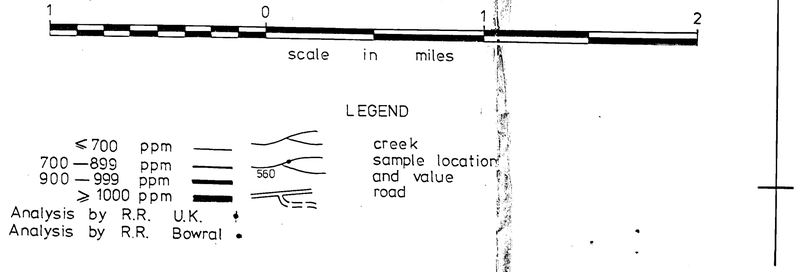


Fig. 2 Distribution of Mn (ppm) in stream sediments Special Mining Lease 433 (Uroonda)

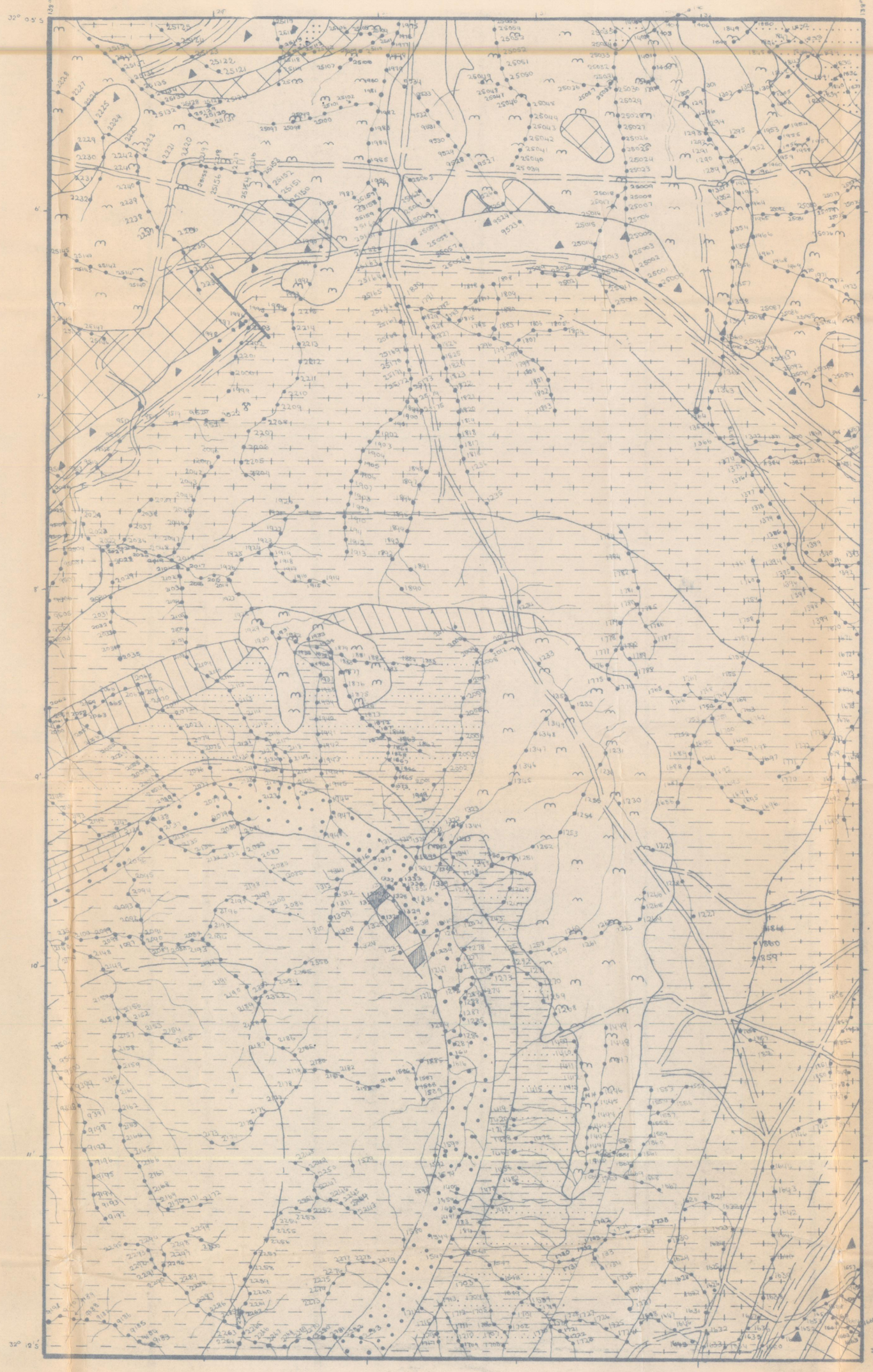


59-9

ENV 1417-4

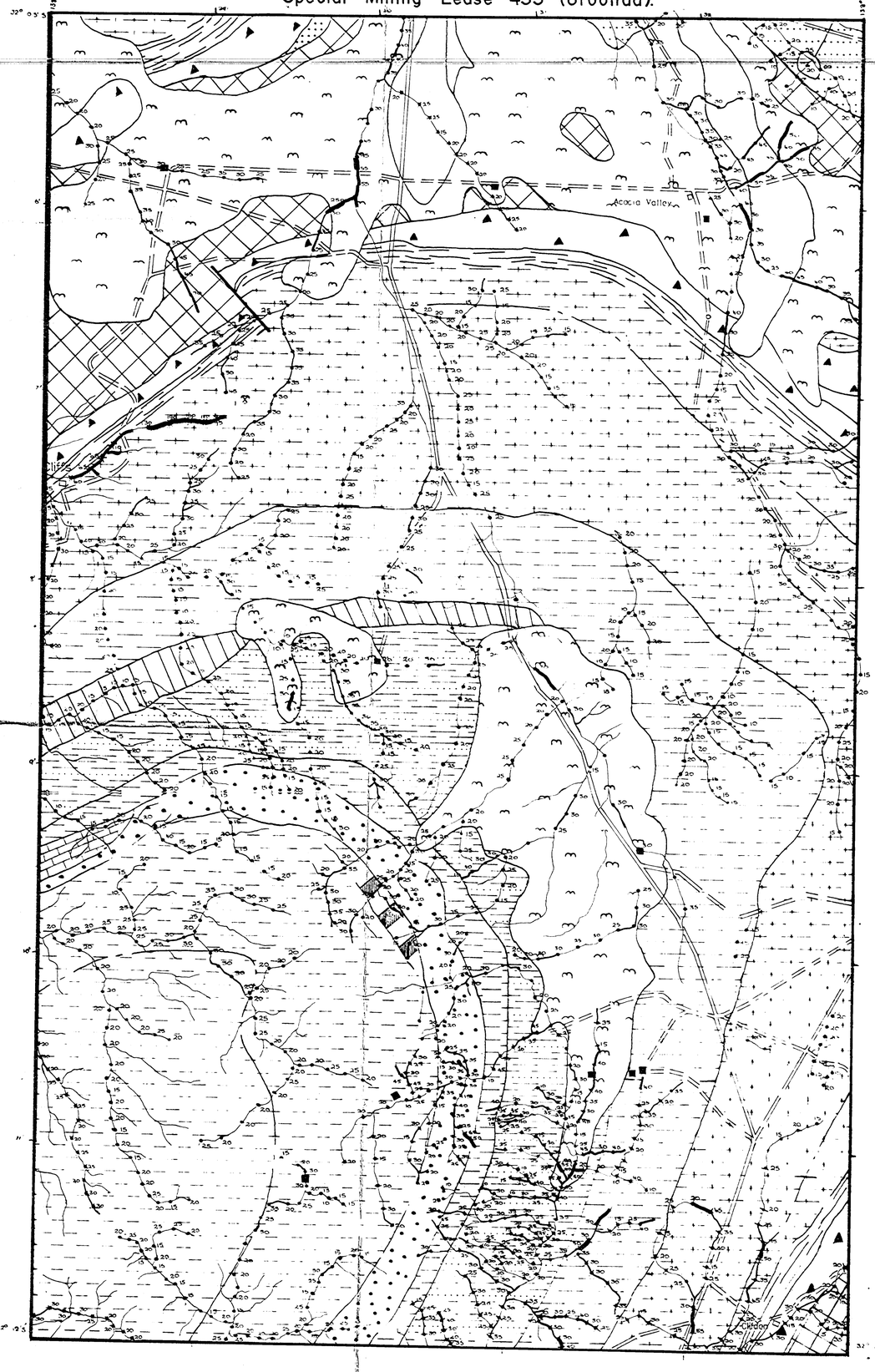
Fig. 9·1

Geology and sample location, Special Mining Lease 433 (Uroonda).



ENV 1417-5

Fig. 9·2
Geology and distribution of Cu (p.p.m.) in stream sediments,
Special Mining Lease 433 (Uroonda).



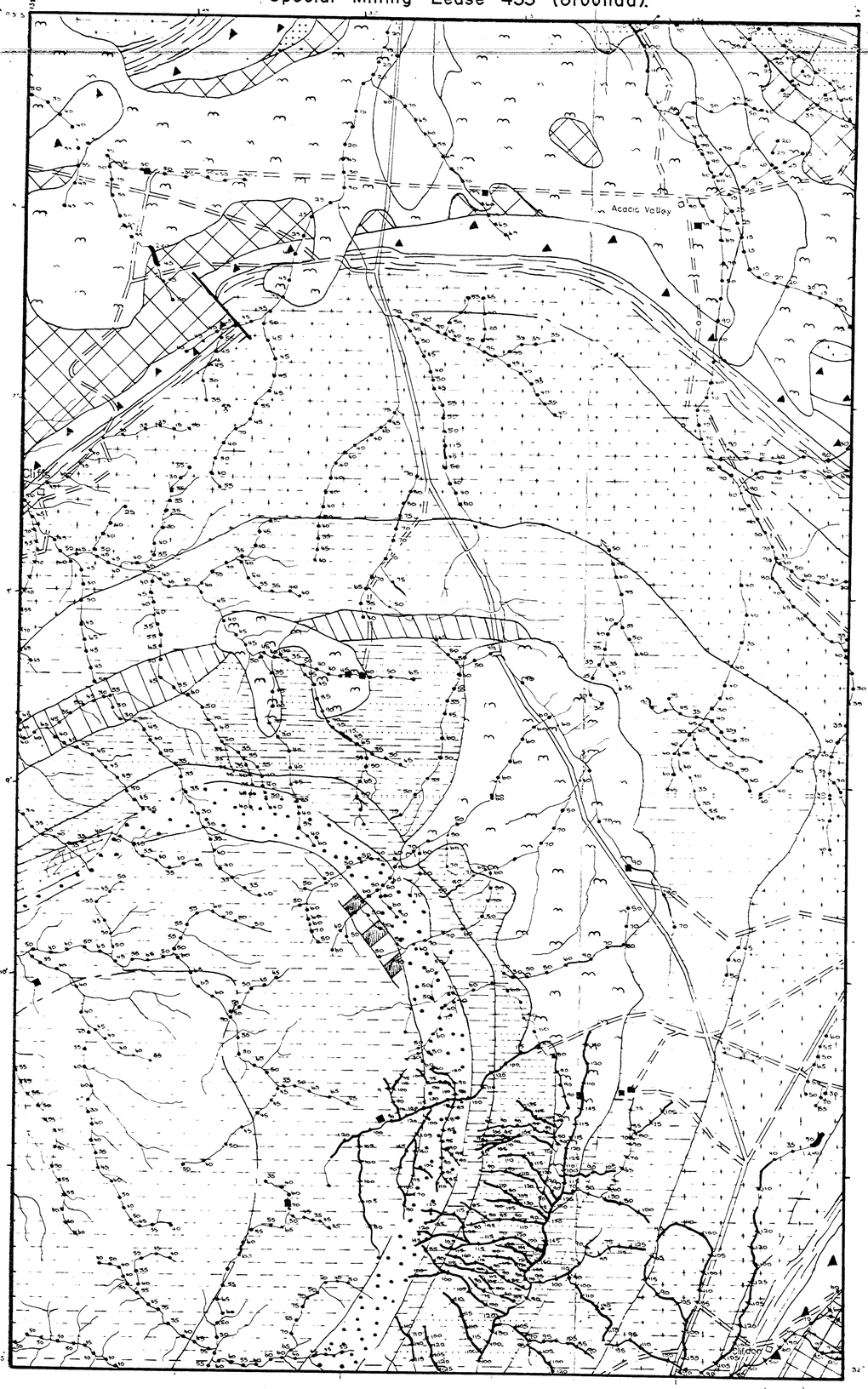
1 0 1 2
scale in miles

ppm
< 29
30 — 39
40 — 49
50 — 75
> 75

Analysis by RR. Bowral.
Analysis by R.R. UK.
Analysis by Amdel.

LEGEND
creek
sample location and value
road
dam
station

Fig 9·3
Geology and distribution of Zn (p.p.m.) in stream sediments,
Special Mining Lease 433 (Uroonda).



Gypsiferous Clay
Alluvium etc
Brachina Fm.
Nuccaleena Fm
Elatina Fm
Tarcowie Siltstone
Etina Fm
Uroonda Siltstone
Tapley Hill Fm
Tindelpina Shale
Appila Tillite
Cradock Quartzite
Diapir Breccia

1 0 1 2
scale in miles

ppm
< 75
75 — 99
100 — 124
125 — 149
150 — 175
> 175

Analysis by R.R. Bowral.
Analysis by R.R. U.K.
Analysis by Amdel.

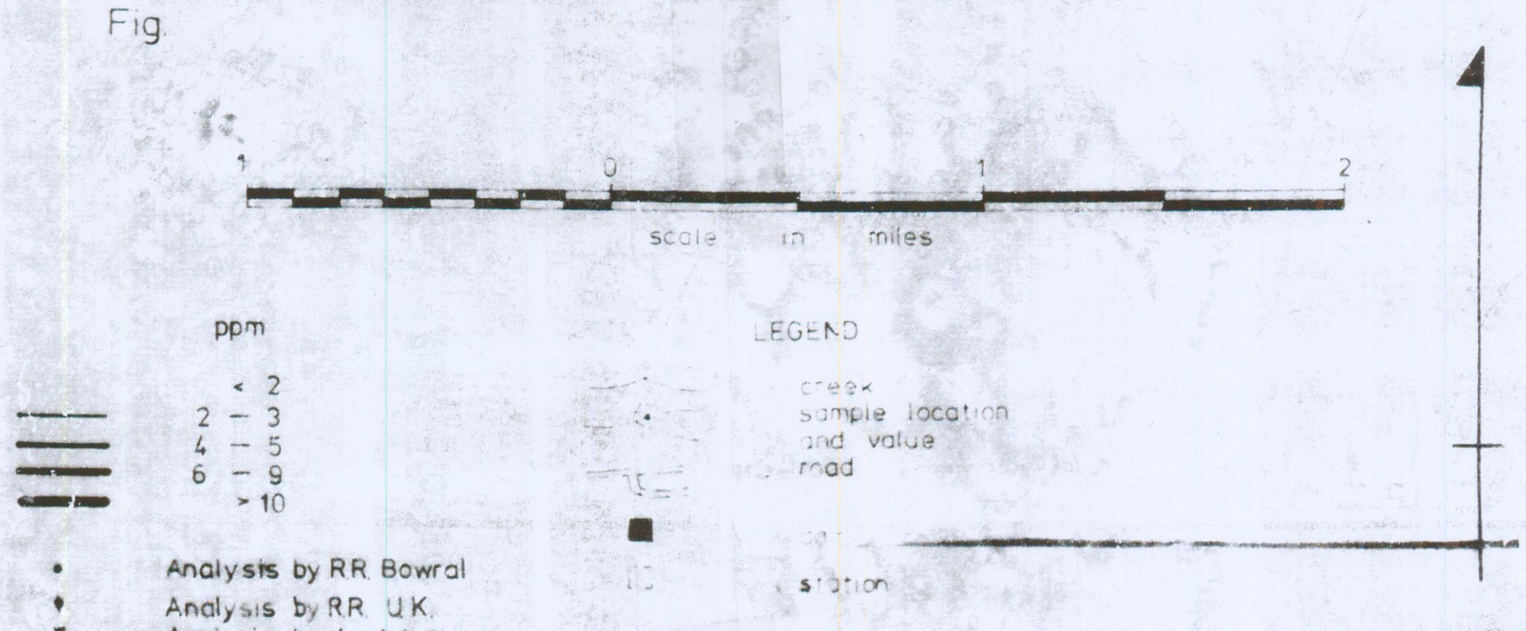
LEGEND
creek
sample location and value
road
dam
station

ENV 1417-6

Fig. 9·5

Geology and distribution of Ag (p.p.m.) in stream sediments, Special Mining Lease 433 (Uroonda).

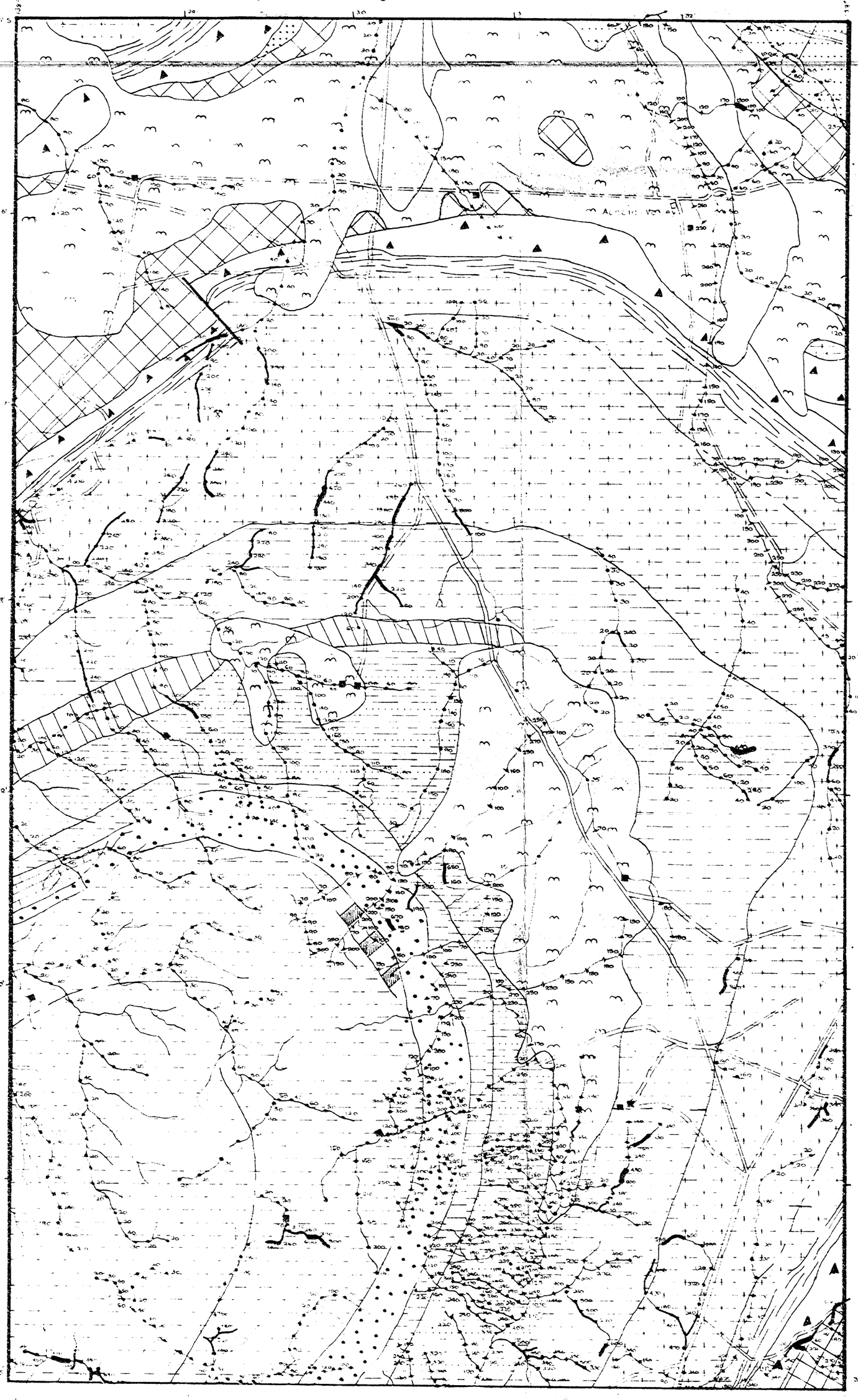
Fig.



ENV 1417-7

Fig. 9-6

Geology and distribution of Ba (p.p.m.) in stream sediments, Special Mining Lease 433 (Uroonda).



Gypseous Clays etc

Alluvium etc.

Brachina Fm.

Nuccaleena Fm.

Elatina Fm.

Tarcowie Siltstone

Etina Fm.

Uroonda Siltstone

Tapley Hill Fm.

Tindelpina Shale

Appila Tillite

Cradock Quartzite

Diapir - Breccia

Analysis by Amdel ×

Analysis by R.R. Bowrai •

ppm

<400

400 – 599

600 – 799

>800

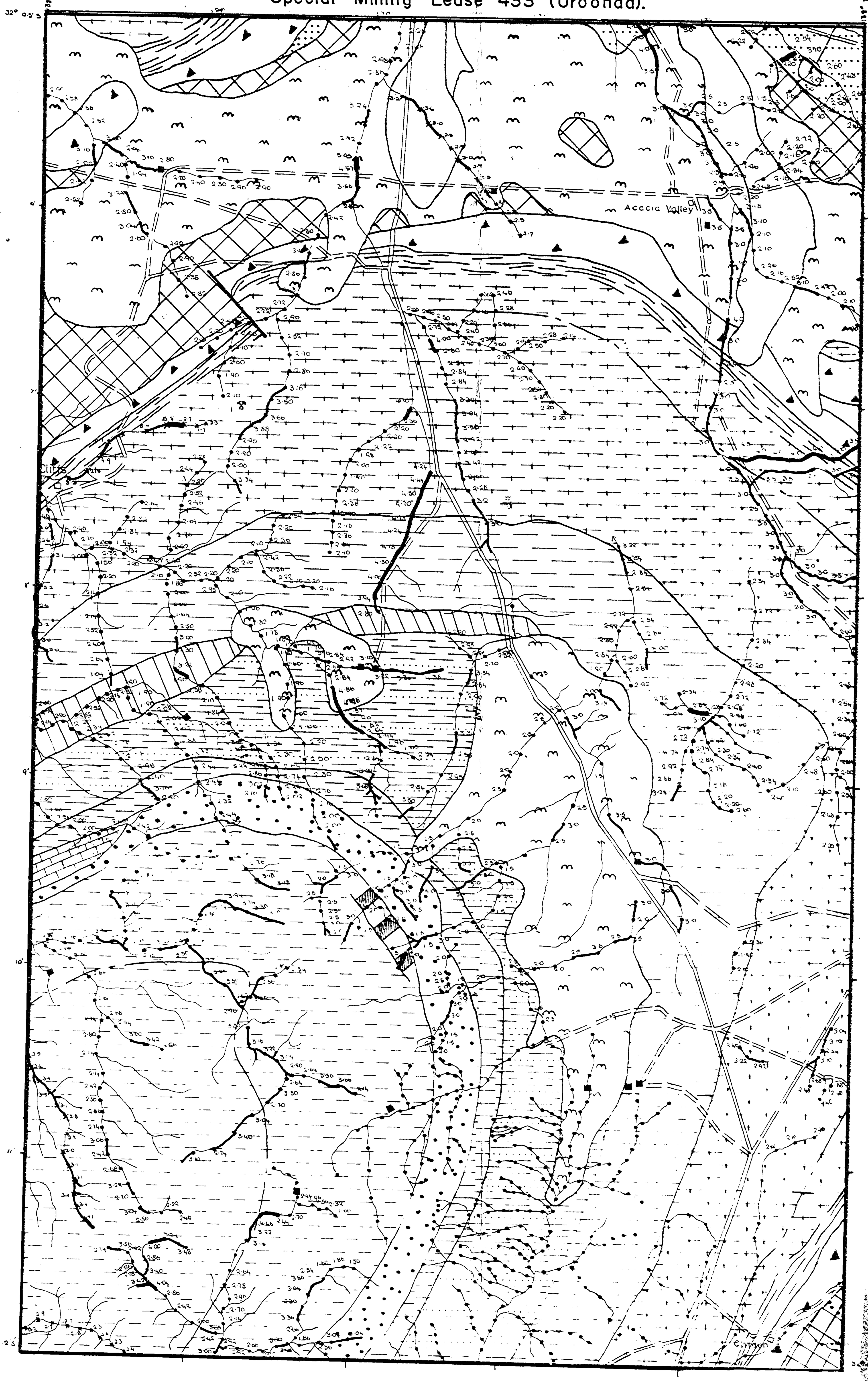
location

dam

station

ENV 1417-8

Fig. 9·7
Geology and distribution of Fe (%) in stream sediments,
Special Mining Lease 433 (Uroonda).



1 0 1 2
scale in miles

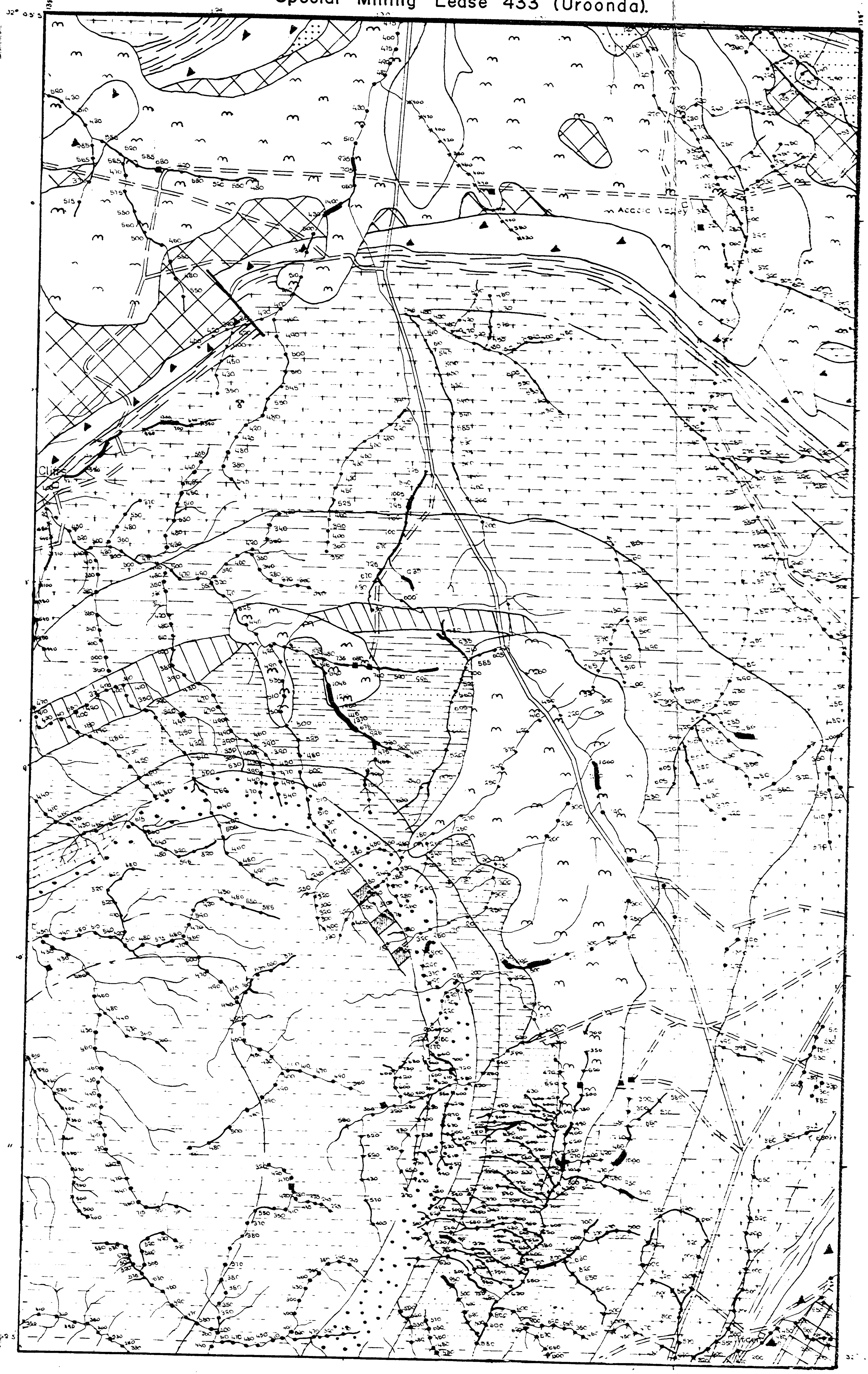
LEGEND

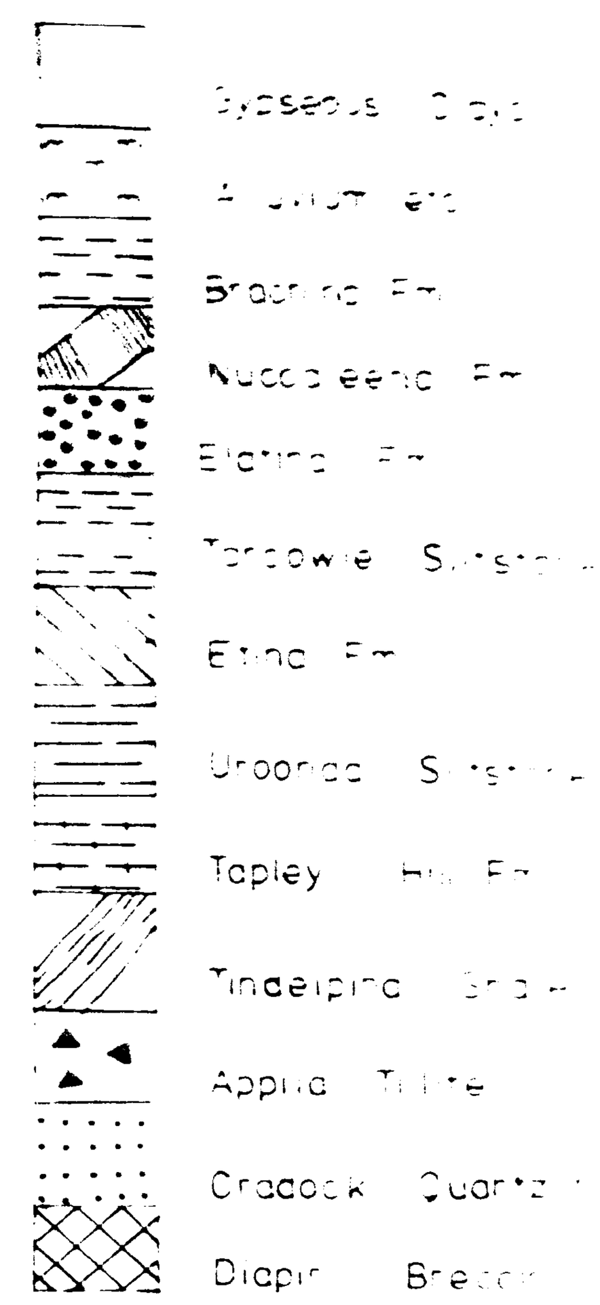
%
< 2·99
3·00 – 3·99
4·00 – 4·99
> 5·00

creek
sample location and value
road
dam
station

Analysis by R.R. Bowral.
Analysis by Amdel.

Fig. 9·8
Geology and distribution of Mn (p.p.m.) in stream sediments,
Special Mining Lease 433 (Uroonda).





1 0 1 2
scale in miles

LEGEND

ppm
< 500
500 – 699
700 – 899
900 – 999
> 1000

creek
sample location and value
road
dam
station

Analysis by R.R Bowral.
Analysis by R.R. U.K.
Analysis by Amdel.

ENV 1417 - 9