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SML 128

BALCANOONA SOUTH

**PROGRESS AND FINAL REPORTS TO LICENCE
EXPIRY/SURRENDER, FOR THE PERIOD
1/9/1966 TO 28/2/1967**

Submitted by
Kennecott Explorations (Aust.) Pty Ltd
1967

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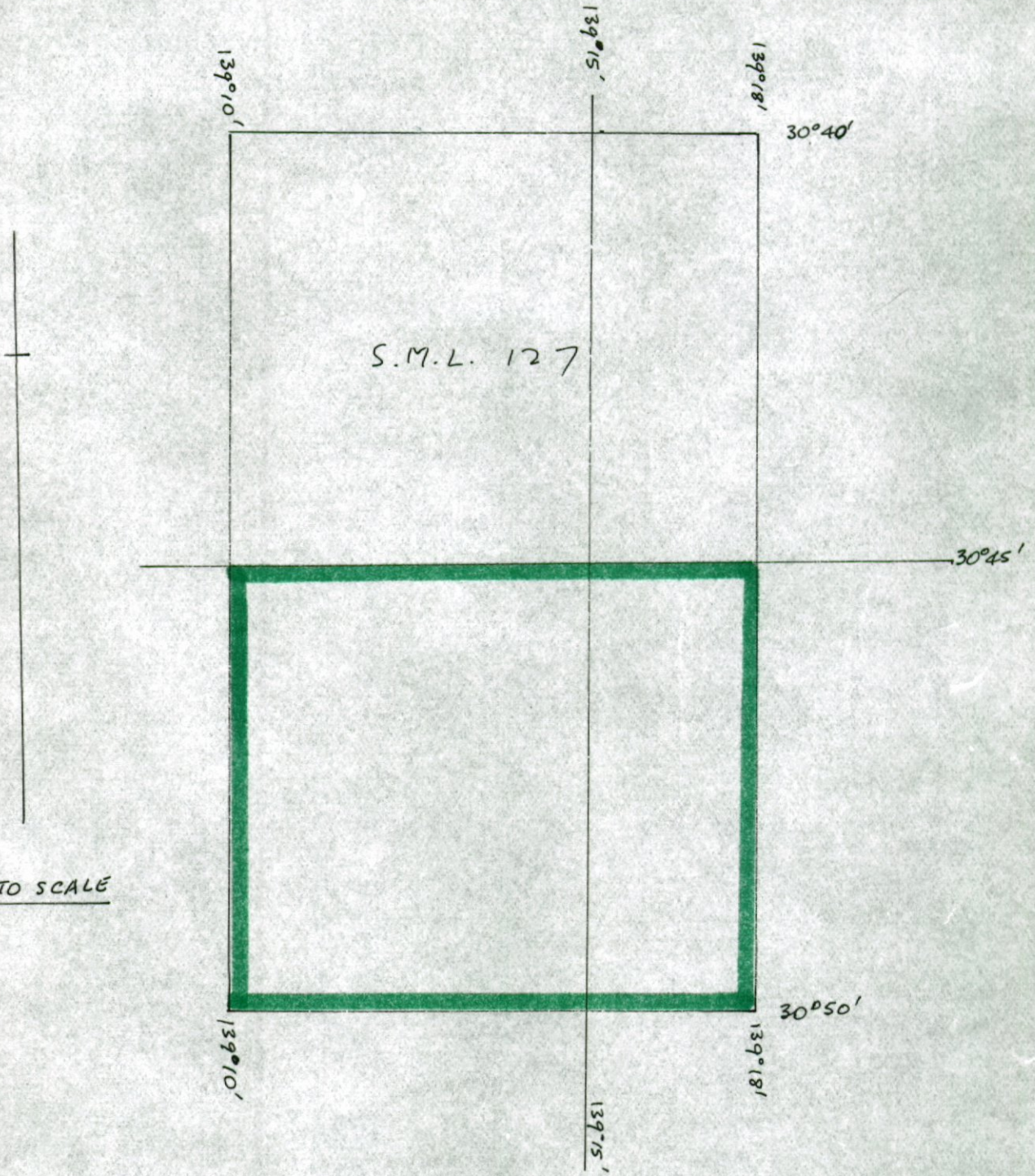
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Government of South Australia
Department for Manufacturing,
Innovation, Trade, Resources and Energy

D.M.		S.A. DEPT. OF MINES	Date
Tcd.			
SCALE			

Please indicate approximate location of bore and return sketch to—DEPARTMENT OF MINES,
169 RUNDLE ST., ADELAIDE



**KENNECOTT EXPLORATIONS
(AUST) PTY. LTD**

D.M. 1260/66 S.M.L. 128

CONTENTS ENVELOPE 721 DM 1260/66

TENEMENT: S.M.L. 128

TENEMENT HOLDER: KENNECOTT EXPLORATIONS (AUST). PTY. LTD.

REPORTS:

1. CLEMA, J.M. 1966 Progress Report on Special Mining Lease No. 128. September 1966- December 1966. (pgs2-4)
No Plans.

2. CLEMA, J.M., 1967. Progress Report on Special Mining Lease No. 128. Ironstone Bore December, 1966- February 28, 1967 (pgs5-7)

Plans:

- | | | |
|---------|--|---------|
| Plate 1 | Portion of Arrowie Sheet. Lead values in P.P.M. | (721-1) |
| Plate 2 | Portion of Arrowie Sheet. Copper values in in P.P.M. | (721-2) |
| Plate 3 | Portion of Arrowie Sheet; Zinc values in in P.P.M. | (712-3) |

3. BROOKS, C.C. 1967 Final Report on Special Mining Lease No. 128. September 1966- February 1967. (pgs8-12)

Plans:

- | | | |
|---------|-------------------------------|--------|
| Plate 1 | S.M.L. Applications Lease Map | (pg10) |
|---------|-------------------------------|--------|

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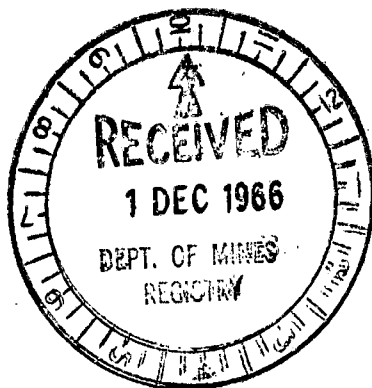
KENNECOTT EXPLORATIONS (AUSTRALIA) PROPRIETARY LIMITED

PROGRESS REPORT

ON

SPECIAL MINING LEASE NO. 128

SEPTEMBER 1966 - DECEMBER 1966



BY: J.M. CLEMA

GEOLOGIST

SUMMARY:

An exploration programme testing Special Mining Lease No. 128 for base metal mineralization is being carried out by Kennecott Explorations (Australia) Proprietary Limited.

So far, results from this programme of geological reconnaissance and geochemical stream sediment sampling, are not available.

INTRODUCTION:

Special Mining Lease No. 91 was split into two leases on 1st September, 1966 - Special Mining Lease No. 128 - the Southern half and Special Mining Lease No. 127 - the Northern half (See Brooks, C.C., Balcoona Examination, Progress Report for 1965 and Clema, J.M., Special Report on Special Mining Lease No. 91 September 1965 - August 1966.)

Further photos and maps of this area were obtained, an aerial reconnaissance by fixed wing aircraft was carried out and followed up, then a stream sediment programme by helicopter.

Approximately 130 samples were taken over this Special Mining Lease.

None of the results are available as yet.

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PROGRESS REPORT ON

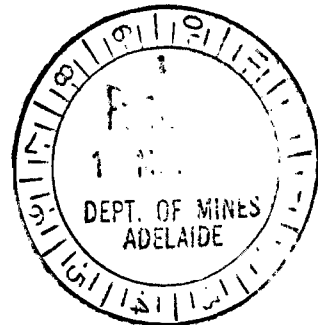
SPECIAL MINING LEASE NO. 128

IRONSTONE BORE

DECEMBER 1, 1966 - FEBRUARY 28, 1967

by

J. M. CLEMA INR.



ADELAIDE, S.A.

FEBRUARY 28, 1967

SUMMARY

An exploration programme of geological reconnaissance and geochemical stream sediment sampling is being carried out on Special Mining Lease No. 128.

Thus far, no major base metal mineralisation has been located.

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PROGRESS

All of the stream sediment sample analytical results were received from Australian Mineral Development Laboratories during this period. These results for the minus 80 mesh fraction are plotted on Plates 1, 2 and 3 (see Clema, J.M., Progress Report on S.M.L. 128, September 1966- December 1966).

In addition, a rock chip sample line, sampling at 10 foot intervals, was run over the Wearing member of the Bunyerroo Formation. These values are also plotted on Plates 1, 2 and 3. .

A ground geological reconnaissance is now being carried out over part of this area.

J. M. Clema, Jnr

February 28, 1967

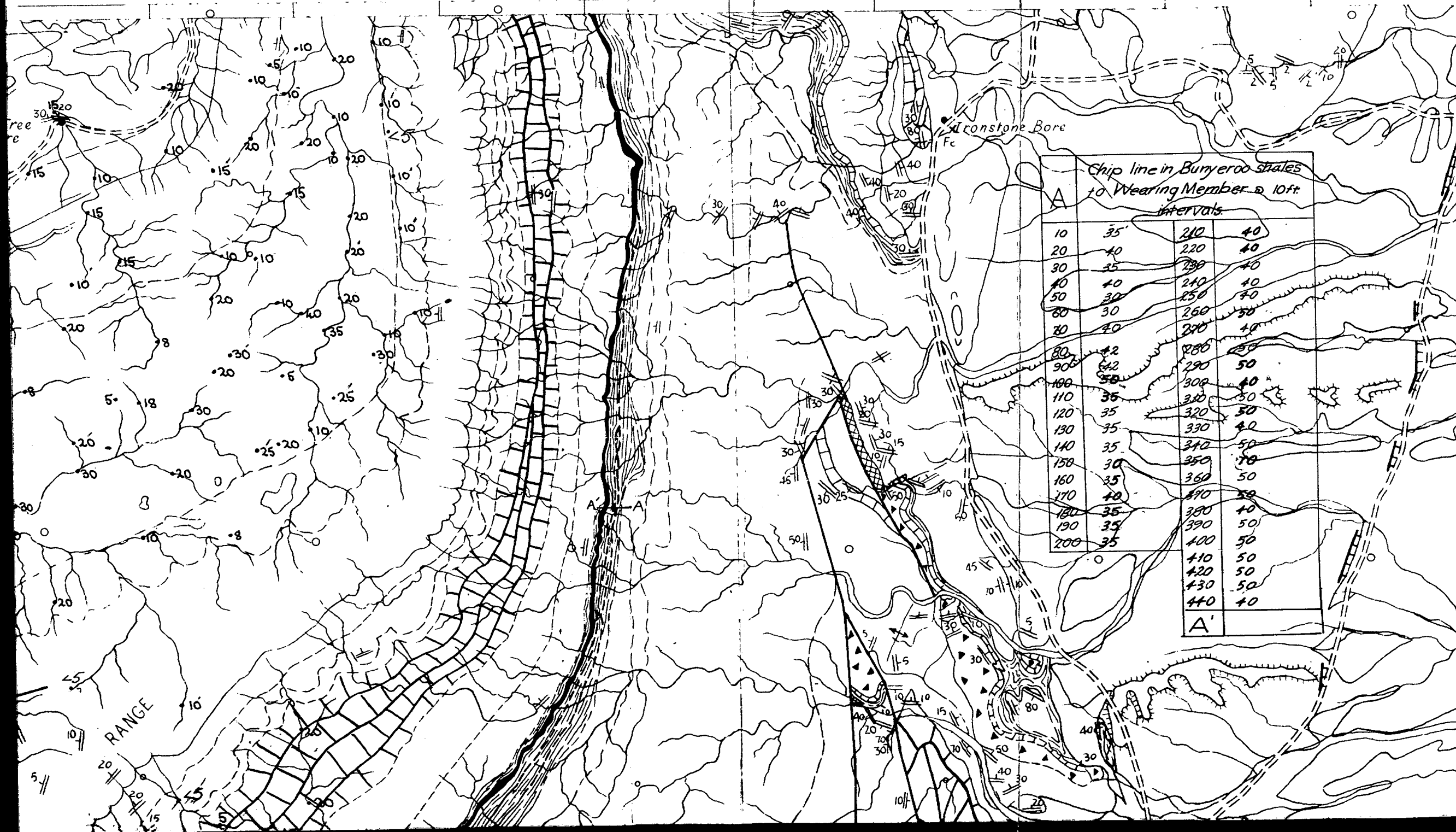
Portion of Arrowie Sheet.

Scale 1" = 60 chains

Lead Values in p.p.m.

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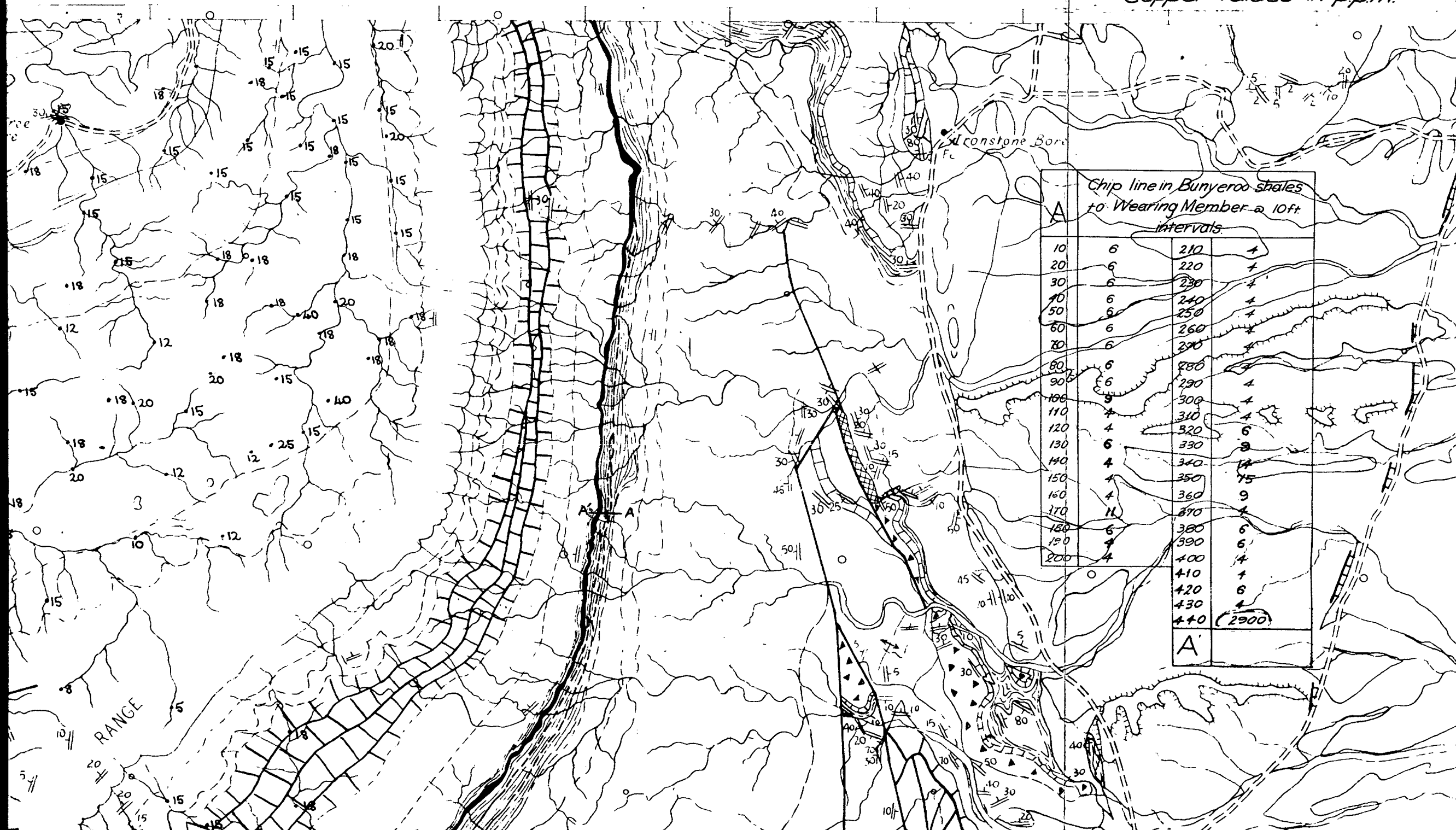
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PLATE 2

Portion of Arrowie sheet.

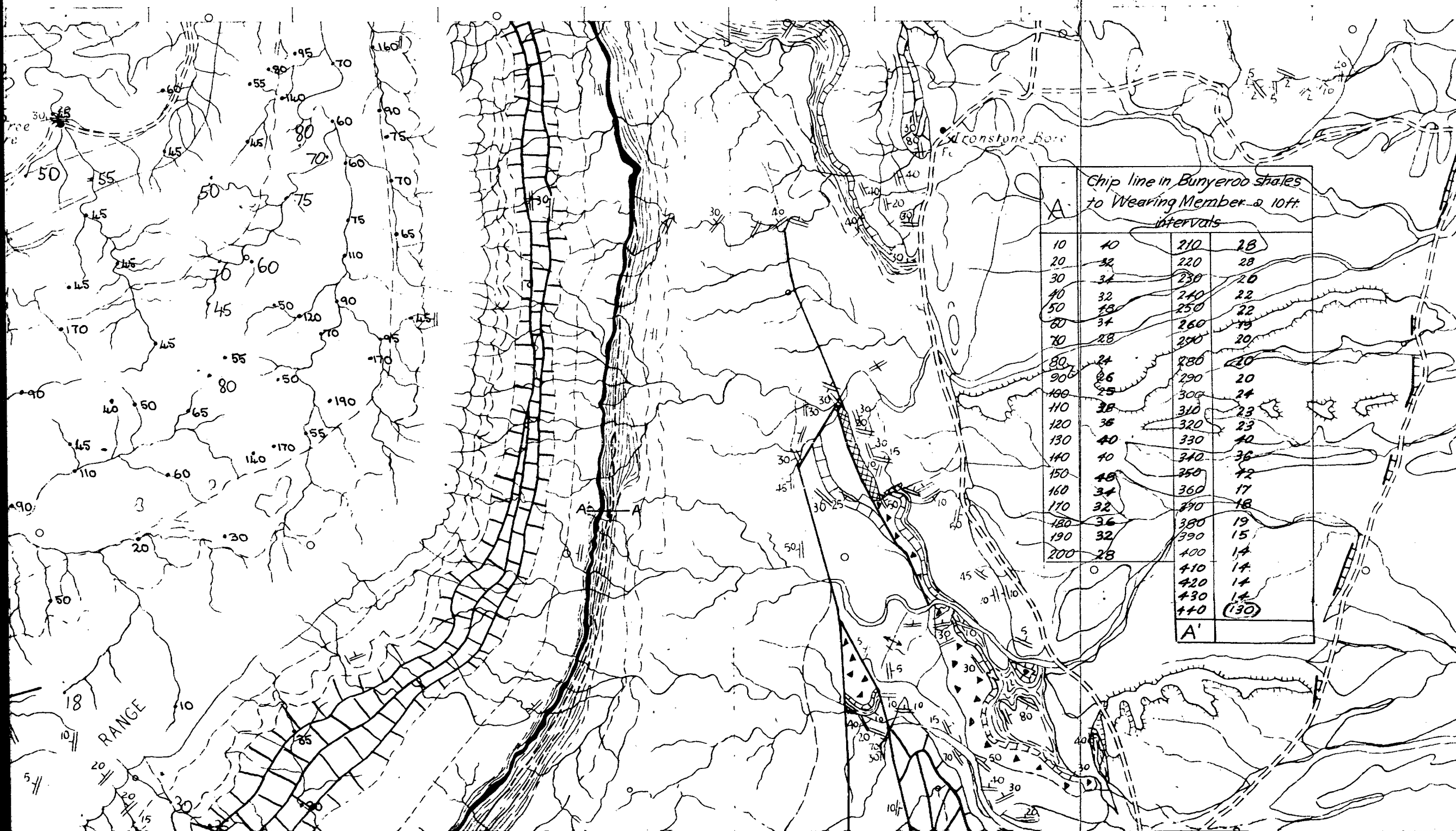
Scale 1" = 60 chains

Copper Values in ppm.



Scale 1" = 60 chains.

Zinc Values in p.p.m.



Chip line in Bunyeroo shales to Wearing Member at 10ft intervals

10	40	210	28
20	32	220	28
30	34	230	26
40	32	240	22
50	18	250	22
60	34	260	19
70	28	270	20
80	24	280	20
90	26	290	20
100	25	300	24
110	38	310	23
120	36	320	23
130	40	330	40
140	40	340	36
150	48	350	42
160	34	360	17
170	32	370	18
180	36	380	19
190	32	390	15
200	28	400	14
		410	14
		420	14
		430	14
		440	(130)

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KENNECOTT EXPLORATIONS (AUSTRALIA) PTY. LTD.

FINAL REPORT

ON

SPECIAL MINING LEASE NO. 128

SEPTEMBER 1966 - FEBRUARY 1967

BY: C.C. BROOKS.
GEOLOGIST.

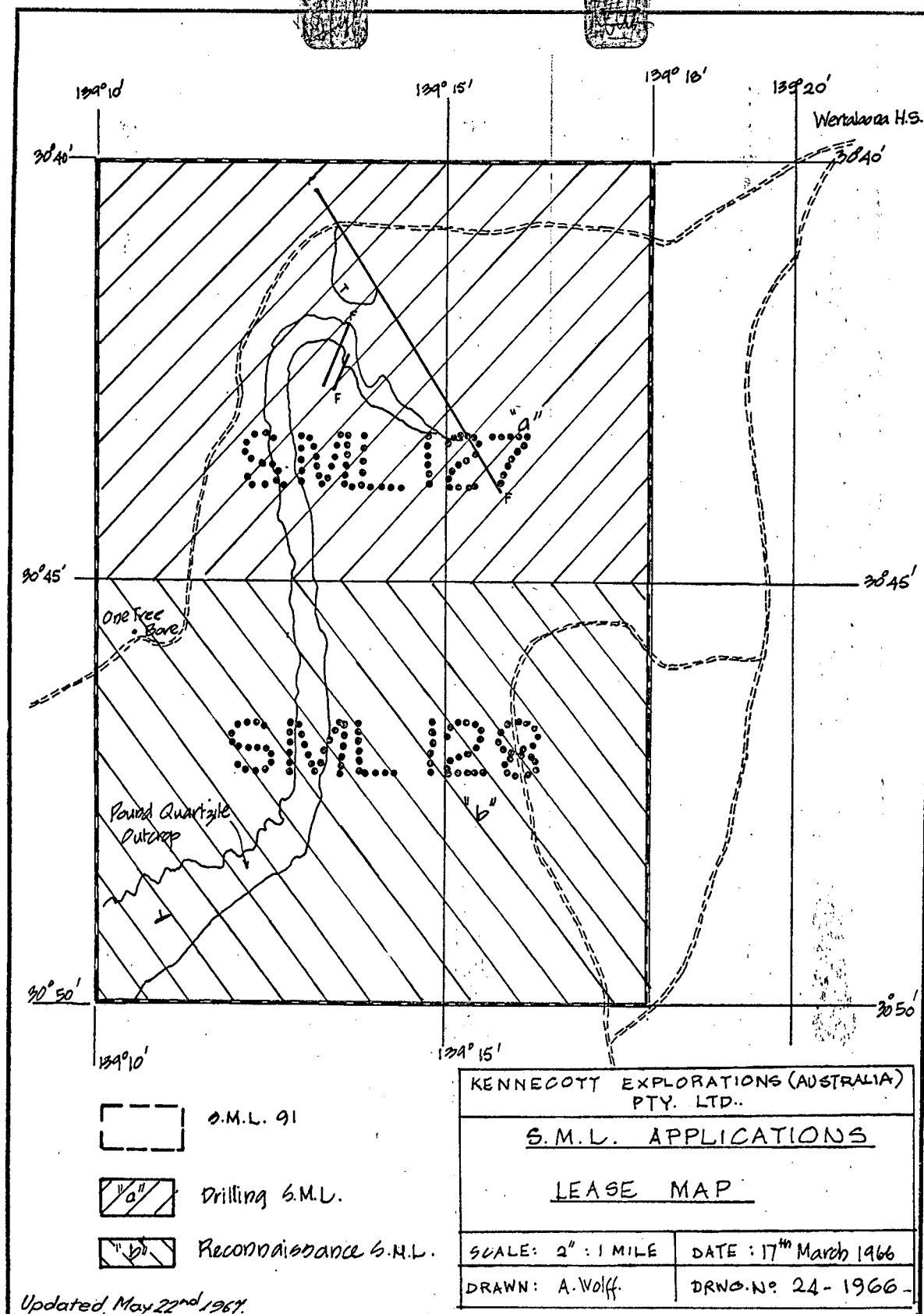
SUMMARY:

This is the final report on abandoning S.M.L. 128 which embraces some 45 square miles between latitudes $30^{\circ}45'S$ and $30^{\circ}50'S$ and longitudes $139^{\circ}10'E$ and $139^{\circ}18'E$, leased from 1st September 1966 to 28th February 1967.

The western portion of the area was tested by stream sediment sampling, but no anomalous copper, lead or zinc values were found.

The eastern portion was tested for the same metals in the vicinity of the copper-bearing Wearing Member of the Bunyerroo Formation by rock chip sampling after visual appraisal by a qualified geologist.

As nothing was found which would indicate the presence of appreciable tonnages of economically mineable base metal accumulations the area has been relinquished.



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LEASING:

Special Mining Lease No. 91 was relinquished on 31st August 1966 (its expiry date), the eastern quarter of the area was abandoned and the western three quarters was equally divided by latitude $30^{\circ}45'S$. The northern portion was leased as S.M.L. 127 (q.v.) while the southern portion was leased as S.M.L. 128 which warranted initial reconnaissance testing only. c.f. PLATE 1.

REPORT:

Work done during September, October and November 1966 was briefly outlined in a progress report by J.M. Clema. This was submitted to the Department of Mines on 30th November 1966.

GEOLOGY:

Geological mapping by the S.A. Department of Mines published on the Arrowie 1 mile sheet (Zone 6, No. 651) was deemed to be adequate for reconnaissance purposes.

GEOCHEMICAL SAMPLING:

This was carried out in three phases to test two geological targets.

Firstly, a few random hand specimens of the Wearing Member of the Bunyeroo Formation in the Upper Precambrian Wilpena Group were analysed to confirm that appreciable amounts of copper were present as malachite and chalcocite. Some of these

specimens assayed as high as 2% Cu.

To follow this up, the best looking section was chip-channel sampled in 10 foot lengths but the results of analysis for copper, lead and zinc were not high enough to warrant any further work. Assuming a dip of 30° for the area, the best result represents a true width of five (5) feet of 0.3% copper contained in a reactive rock, leaving little chance that this is the leached top of any further mineralization.

The third phase of reconnaissance was a check of the base metal content of streams draining the Pound Quartzite, Parachilna Formation and Wilkawillina Limestone. This was carried out as part of a broader sampling programme using a helicopter. From this seven values greater than 100 p.p.m. zinc were recorded but in view of the known zinc content of the subjacent Wilkawillina Limestone being of the order of 1,000 p.p.m. these were not deemed to be anomalous.

The results of this programme are such that the area is considered to have been exhaustively tested for the presence of large low-grade base metal occurrences in outcrop. The S.M.L. was therefore abandoned.

Results of the sampling programme are attached on three plans drawn to a scale of 1 inch represents 60 chains. The geology shown on these plans is that shown on the coloured 1 inch to 1 mile geological map produced by the Mines Department, thus no legend nor geological explanation is thought to be necessary for this report.