

REPORT ON COPPER KING MINE

CUPRONA

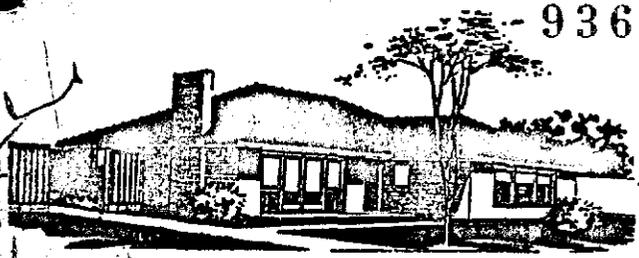
70_703

A. RAY BUTLER ESTATE AGENT

Commissioner for taking Affidavits.

220 BROADWAY, RESERVOIR, TAS

Phone: 46 2006, 46 3114
After Hours: 47 2162



RECEIVED	14 MAY 1968	REGISTRAR
ANSWERED	14 MAY 1968	EST
DEPT. OF MINES	2861/68	

9th May. 1968.

Director of Mines,
G.P.O. Box 177E,
HOBART, TASMANIA. 7001.

Dear Sir,

Attention Mr. Symons.

I have pleasure in forwarding to you detailed plans of the Copper King Mine Cuprona to your files.

This lease was under option to Pichard Mathers for six months, but they declined not to take up the option for reasons of their own.

I have discussed the matter this day with Mr. Ian Potter & Co's. office, who was very helpfull, and we feel quite confident that we can put this mine into operation in the very near future.

I enclose also some of the original reports obtained from Mr. Clark Jnr., who now lives in Delaraine, Tasmania.

Trusting this meets with your approval, I remain,

Yours faithfully,

A. R. Butler
.....
A. RAY BUTLER.

REGISTERED

936003
003

Report on Mine Copper King

- 1904 Copper mining started - Copper King "putting out ore" - L.S. Clark & Sons 915 m of 63 acres
- 1905 taken over by an Adelside Co.
- 1906 Ore extracted on feet
- 1907 Main shaft 12' x 4' 8" down to 150 feet & equipped with steam winding plant etc as a temporary plant to be replaced if O.K.
- 1908 Operations ceased September - taken over by a small syndicate from Denver to extract metal left in various levels. Worked to 208 feet - "shoot of ore started going south at the bottom level," and the work finished somewhat underfoot. Last production June 1909.

Production

1904	42	5.28	12.0%	1909	Jan 80	13.36	16.3%
1905	183	34.55	19.2%	Total 1331 221.8%			
1906	105	14.88	14.8%				
1907	27	4.51	18.5%	16.7%			
1908	894	149.29	16.7%				

Q15M

L. J. Clarke.

transferred	Bumie Coffe Union N.H.	15-11-1906
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	W. McGrath & F. Satter, Calumet	10-12-1908
--	---------------------------------	------------

"	F. Satter & Astobel Bumie	18-2-1909
---	---------------------------	-----------

"	A. Abbott	10-11-1909
---	-----------	------------

"	W. P. Steene & A. Abbott	17-1-1910
---	--------------------------	-----------

V. root 20-4-15

002

Production - Copper King

936005

Year	Ore tons	Metal tons	%
1904	42	5.26	12.0
1905	183	34.55	19.2
1906	105	14.88	14.3
1907	27	4.51	18.5
1908	894	149.29	16.7
1909	80	13.36	16.3
	<hr/>	<hr/>	<hr/>
	1331	221.84	16.7

Sept. 30 / 68 visit to Cas Key

312	2690	117m/68	
240	8191	52m/66	111m/68
188 1/2	1/4		8"
199		52	
<u>939 1/2</u>	26-2-69		
111m/68	52m/66	J.G.W. Woll	1923-1924
8956 m	8956m		
8436 m	P.J. O'Connor		1919 - 1922
7056 m	W.P. Stearn		1915 - 1919
915 m	L.J. Clark		23-2-1905 granite
			1-11-1904 asphalt

003

936007

DRILL SITE 2 ———
2 - - - - -

R.M.
BASELINE

20 1/11"

00'

43'

62'

82'

02'

35° angle

Target Level

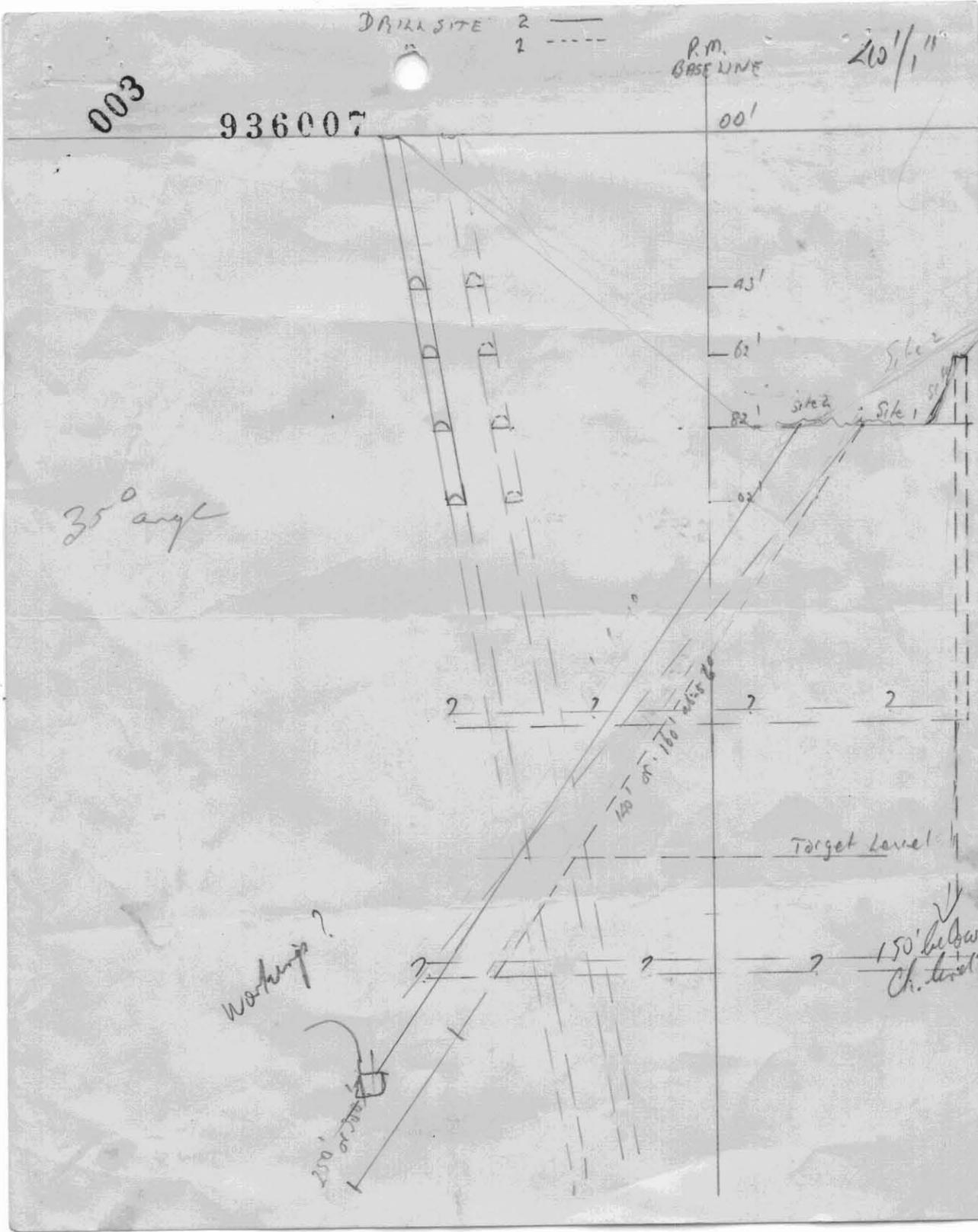
Workings?

150' below
Ch. level?

250' or 300'

140' or 160' or 155'

Site 2
Site 1



002
 Lines cut and chained: 31,800 feet
 Soils samples taken: 357
 Stream samples taken: 16

GEOLOGICAL MAPPING. has been completed over the grid system. Thick vegetation and sparse outcrop make mapping difficult.

GEOPHYSICAL WORK.

Magnetics: Two lines (4N and 8N) were covered using a Sharpe vertical magnetometer. Because of the low magnetic relief observed a nuclear precession magnetometer was used for one day to check readings along line 4N.

E.M. coverage: The whole grid was covered using Broadside method (14,000').

RESULTS OF GEOPHYSICS:

Magnetics: A very narrow magnetic anomaly of 450 gammas was encountered at 4N & 6W; this probably has no significance. A smaller anomaly of 70 gammas from 4E to 6E on line 4N may be significant. The general increase in magnetic intensity to the east reflects the large magnetic gradient detected by the Bureau's air magnetic survey.

E.M.: 3 small cross-overs are located ranging along the strike of the ore body in the mine area. Effects produced by the rough terrain and lack of visual contact between transmitter and receiver probably cause the extremely erratic profiles in the remainder of the area.

SUMMARY OF GEOLOGY.

The rocks of the Cuprona area belong to the Burnie Group (Precambrian), and consists of slates and quartzites showing gentle concentric folding (wavelength 500' approx), with tight drag folding on a small scale in the slates. In the mine area strike is NE, and dip is to the east. Dips are apparently steeper (80°) on the east side of the mine than on the west where it is as low as 45°. The main part of the grid is taken by quartzites. Thin interbedded slates become more abundant towards the mine, and the ore body itself occurs in a thick series of folding and smashed slates. The outcrop shape is consistent with a plunging syncline; the orebody would then occupy a position just east of its axis, possibly in a shear, or fault zone.

In old reports the ore zone is described as sub-vertical, dike-like, 30 feet in width, and part of an intermittent line of copper mineralization running NE to the coast and SW towards Devonian granite. The lode material is variable in nature, mainly consisting of massive quartzose rock with veins of copper-bearing ore at intervals. Elsewhere it consists of chalcopyrite in a gangue of slate,

-2-
Went?

with veins and patches of quartz and siderite and disseminations of pyrite. Oxidation to cuprite, native copper, and carbonates is common. Payable ore is mainly confined to the footwall (east side) and in places occurs in the graphite slates outside the footwall. The workings extend 500' along strike. The original shaft sunk to 150' is filled, but a smaller shaft 100' to the north has been uncovered and evidence of good values has been shown.

Production was sporadic between 1905 and 1917. Parcels of ore sent out when the mine was first developed previous to 1905, assayed as follows:

10 tons	...	13.7%	copper
12 "	...	11.7%	"
20 "	...	13.2%	"
20 "	...	15.0%	" (Twelve trees, 1905)
23 "	...	24.7%	"

Silver and gold are apparently absent.

CONCLUSIONS AND RECOMMENDATIONS.

The detailed magnetic survey remains to be completed. An Induced Polarization survey is recommended across the centre of the Copper King Mine and across the north and south "extensions" of the ore zone, although the presence of graphitic shale will probably complicate interpretation. No diamond drilling is recommended without further geophysical (magnetic and I.P.) results with the possible exception of one drill hole to test the vertical extensions of the ore zone at the Mine.

Pickens Mother?

009

936010

L. J. Clark Esq

West India
in the with

Jamaica

Account Sales 194 bags Copper Ore

Lot 4

<u>Gross Weight</u>	<u>7. 15. 3. 9</u>
<u>No return</u>	<u>7.</u>
<u>Net Dry Weight</u>	<u>7. 8. 3. 9</u>

Assay copper 19.875%

Price of copper on date of sampling 29/6/05 = £66.5

copper 19.875% - 1.25% = 18.625%

- 13/3 - 1/4 - 12/3 p. mit

11 8 2

Reckoning Charge

4 . . .

Per ton

£ 7 8 2

7. 8. 3. 9 @ £78.2 p ton

£ 54 19 8

- 6-0-6 -

Account
17/7/05

010

L. J. Clark Esq. West Pine Tas.
in 1/2 with

AUSTRALIAN METAL CO. LTD.

Account Sales 300 Bags Copper Ore

Lot 5

^{210.0.0}
 Gross Weight 11.10.
 Moisture 15.
Net Dry Weight 10.16.

Assay Copper 15.07%

Price of copper on date of sampling 19/9/05 - £68.17.6

Copper 15.07% - 1.25 = 13.82%

= 13/9.2 = 1/- - 12/9.2 p. unit 8 16 4

Returning Charge 4

Value Per ton 21 ^{cut} £ 4 16 4

^{210.0.0}
10.16. - @ £4.16.4 p. ton

£51 16 9

E.O.C.

Hollourni
6/10/05

011

L. J. Clark Esq. West Mine Farm

in 40 with

AUSTRALIAN METAL CO. LTD

Account Sales 290 Bags Copper Ore

Lot 6

Gross Weight	²¹ 11. 6. 2 ✓
Moisture	2. 3 ✓
<u>Net Dry Weight</u>	<u>11. 3. 3 ✓</u>

Assay copper 16.3125%

Price of copper on date of Sampling £71.5/-

Copper 16.3125% - 1.25% = 15.0625%

= 14/3 - 1/- = 13/3 p. unit

Allowing charge

9197 ✓

4 ✓

Value p. ton of 21^{ous}

£ 5197 ✓

²¹ 11. 3. 3 @ £5.19.7 p. ton

£ 66 16 11 ✓

C.O.C.

McLennan
16/10/05

R.

012

TELEPHONE No 1375.
P. O. BOX No 221.

1 St. James Buildings.
113 William Street.
Melbourne 4th Nov. 1905

M. L. J. Clark Esq. West Point Tas.

By The Australian Metal Co. Ltd

Each 1/2 Weight Limit

Lot 7	264 Bags Copper Ore	(2 Bags in excess of advice)		
	<u>Gross Weight</u>	11.10		
	<u>Moisture</u>	2.1		
	<u>Net Dry Weight</u>	11.7.3		
	<u>Assay Copper</u> 18.34%			
	<u>Price of Standard Copper on date of Sampling</u> £92.15/			
	<u>Copper</u> 18.34% - 1.25% = 17.09%			
	= 14/6.6 - 1/ = 13/6.6 p unit		11	11 6'
	<u>Returning Charge</u>		4	
	<u>Per ton of 21 cwt</u>		£ 7	11 6'
<u>11.7.3 c £9.11.6 p ton</u>		£ 86	25'	
6.06.				

013

TELEPHONE N91375.
P. O. BOX - N9221.

1 St. James Buildings,
113 William Street.
Melbourne 16th Nov. 1905

M. L. J. Clark Esq. West Tine. Tas

Cr. by The Australian Metal Co. Ltd.

Size A 27 Dept. 12/10/05

Lot 8	<u>234 Bags copper Ore</u>			
	<u>Gross Weight</u>	9.15		
	<u>Moisture</u>	2		
	<u>Net Dry Weight</u>	9.14.2		
	<u>Assay Copper</u>	22.97%		
	<u>Price of Standard Copper on date of Sampling £71.7.6</u>			(31/10/05)
	<u>Copper</u>	22.97% - 1.5% = 21.47%		
		= 14/3.2 - 1% = 13/3.2 p unit	14	4 10
		<u>Returning Charge</u>	4	
		Per ton of 21 cwt.	10	4 10
		<u>9.14.2 at £10.4.10 p ton</u>		
			£99	5 2
	C.O.C.			

014

936015

TELEPHONE NR 1375

P.O. BOX NR 221

10 James Building

115 William Street

Hobart

11th Dec. 1905

X L. J. Clark Esq. West Pine Tas.

By The Australian Metal Co. Ltd

Lot 9

227 Bags Copper Ore

Gross Weight 9.5

No ash 2

Net Weight 9.3

Assay Copper 25.33%

Price of Standard Copper on date of Sampling £75.5/- 24/11/05

Copper 25.33% - 1.5 = 23.83%

- 15/- = 14/- 6 p. unit 16 14 9

Returning Charge 4

Port of 21 cwt. £ 12 14 9

9.3 - c £12.49 p ton

£116 9 1

- 606 -

R.

015

936016

MILLEN & JACKSON
ASSAYERS

Linncon
17th Nov 1905

Certificates
Assay of sample submitted by L. J.
Clark Esq

Result

Copper 22.14%

A. B. Jackson
Assayer

To L. J. Clark Esq
West Pine

TELEPHONE No 1375.
P. O. Box No 221.

1 St. James Buildings,
113 William Street.

Melbourne 11th January 1906

M L. J. Clark Esq West Point Tas.

Cr by The Australian Metal Co Ltd

Amended

Lot 10

205 Bags copper ore

Gross Weight	8. 8. -
Moisture	2. - -
<u>Nett Dry Weight</u>	<u>8. 6. -</u>

Assay copper 33.23%

Price of Standard copper on date of Sampling £79.15/-

<u>Copper</u> 33.23% - 1.5 = 31.73%	
- 15/11.4 - 1/- - 14/11.4 per unit	23 14 5-

Reaming Charge	4 - -
Per ton of 21 cub.	£ 19 14 5-

8. 6. - @ £19.14.5	
--------------------	--

£ 163 8 -

606.

607

TELEPHONE No 1375
P.O. BOX No 221

Original
P.C.
6/

1 St. James Buildings,
113 William Street,

Melbourne 18th April 1906

M. L. J. Clark Esq West Pine Tasmania
C^r by The Australian Metal Co. Ltd

Lot 12

303 Bags Copper Ore

Gross Weight 11.11
Tare 3.1
Net Weight 11.7.3

Assay copper 24.91%

Price of ^{Tasmania} Standard copper on date of Sampling £79.10/- (28/3/06)

Copper 24.91% - 1.5 = 23.41%
= 15/10.8 = 1/- = 14/10.8 p unit 17 8 9

Returning Charge 4
Per ton of 21 cwt. £ 13 8 9

11.7.3 @ £13.8.9 p ton

£ 152 15 11

C.O.C.

208

936019

TELEPH 91375
P.O. BOX 221

1 St. James Buildings.
113 William Street.

Melbourne 16th May 1906

M. L. J. Clark Esq. West Pine Tasmania

C. by The Australian Metal Co. Ltd

88 Bag Copper Ore.

	²¹⁰ →
Gross Weight	3.19
Moisture	4.3
<u>Net Dry Weight</u>	<u>3.14.1</u>

Away Copper 25.425%

Price of Standard Copper at three months on date of Sampling £14.7.11

Copper 25.425% - 1.5% = 23.925%
- 16/4.5 - 1/- = 15/4.5 p unit

18 7 11

Returning Charge
Per ton of 21 cwt.

4
£ 14 7 11

²¹⁰ →
3.14.1 @ £14.7.11 p ton

£ 52 19 1

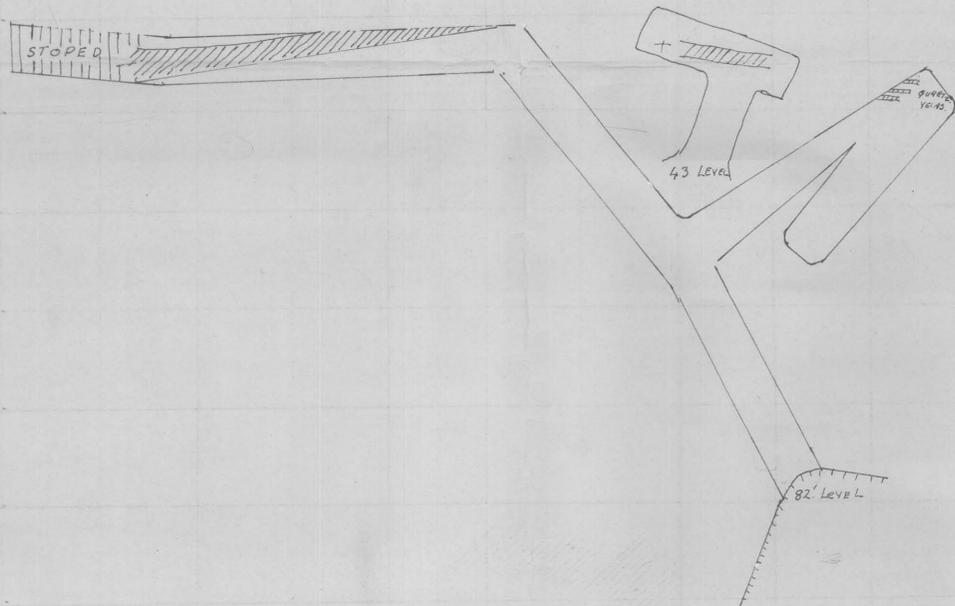
C.O.C.

List of Plans:

1. Plan of surface workings, Main Adit (-82') & Small Adit (-43')
2. Copper King Area 400' : 1"
3. Plan -62' Level
4. Plan -85' Level
5. Section X - X' : Looking S
6. Magnetic Profile Line 4 + 00 N
7. Arsenic Soils
8. Copper Soils
9. Lead Soils
10. Nickel Soils
11. Zinc Soils

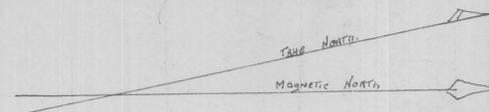
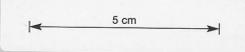
028

Main (0 level)
Winge



COPPER KING MINE - CUPRONA
PLAN OF SURFACE WORKINGS, MAIN ADIT (-82' Level)
AND SMALL ADIT (-43 Level)

ORE LOSE
 CAVED AREA
 Elevation datum - collar of main Winge
 Scale 1 inch = 10 feet
 (MAP data from R. GOK)



200 N

Forwarded by
 P. R. BUTNER - lease holder
 May 1968
 work by
 VICKARDS?
 Alan Clark
 [Signature]

outcrop & cut at
 -82' elevation

P.M.I. Baseline

CREEK APPROX.

Winge ^{at} surface
 (Water level)
 -17'
 Drives reported N. + S. at
 20' level

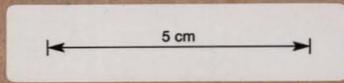
Shaft (approx)
 Reported > 90' depth
 R.L. Collar approx 60' level
 Probably ≈ 150' level workings

936021

PLAN I

017

017

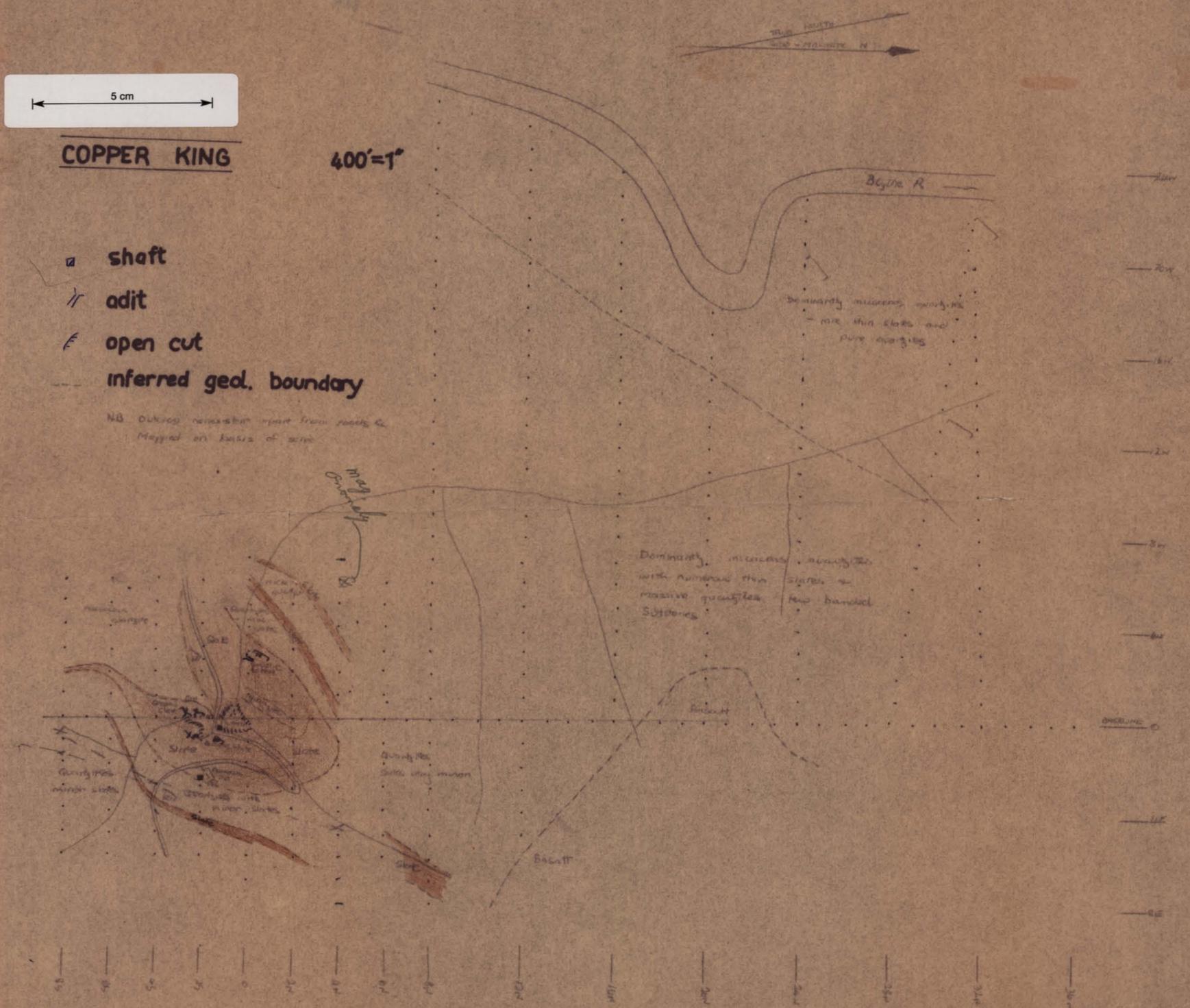


COPPER KING

400' = 1"

- shaft
- // adit
- open cut
- - - inferred geol. boundary

NB Outcrop near shaft 1 part from road & mapped on basis of air photo

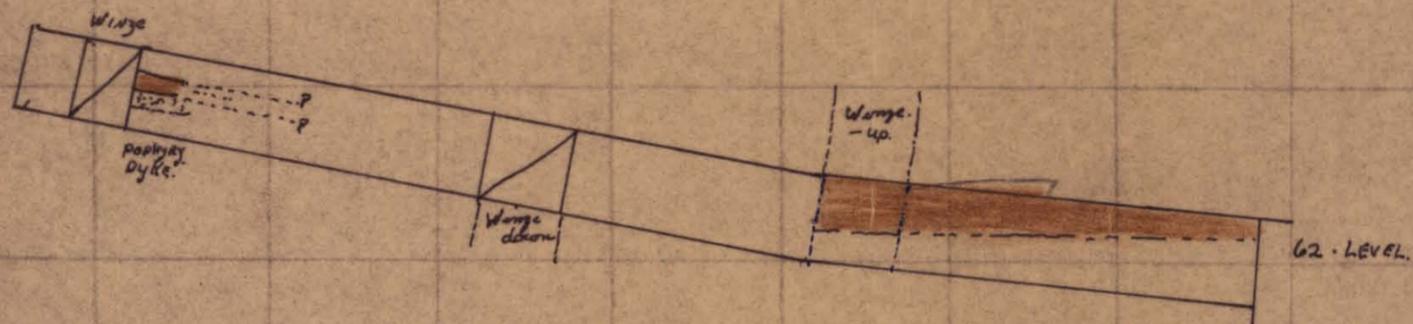


Plan 2

936022

016

016

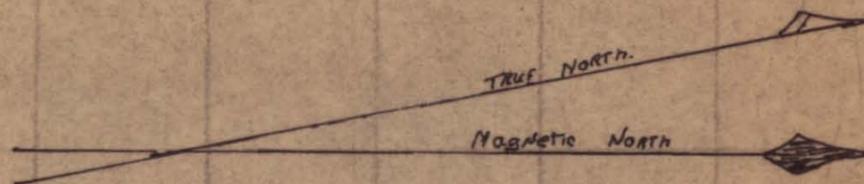


COPPER KING MINE Plan -62' Level

Scale 1 inch = 10 feet

(map data from R Cox)

70-703



5 cm

936023

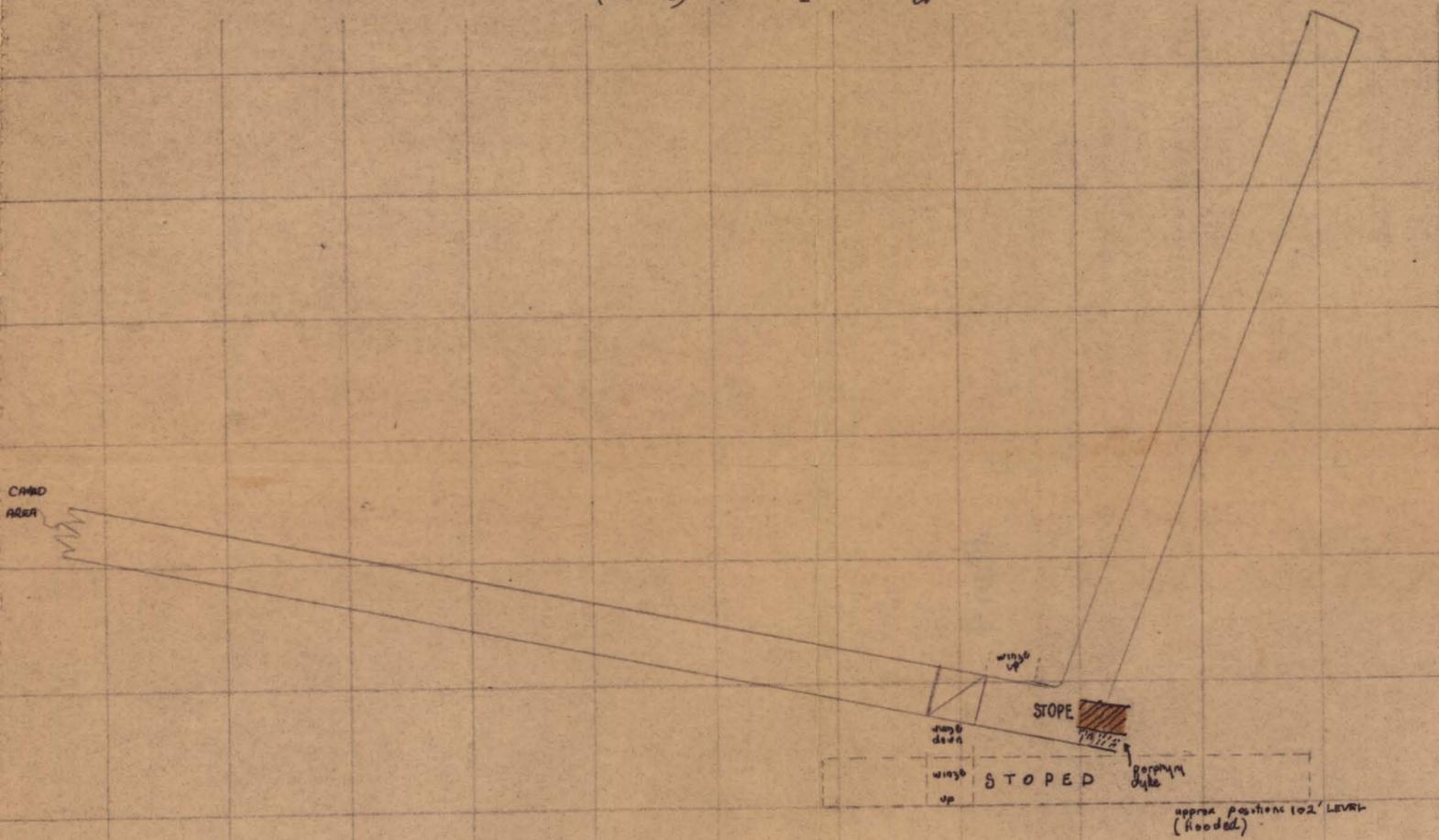
R.M.I. BASELINE

Plan 3

019

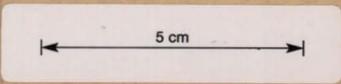
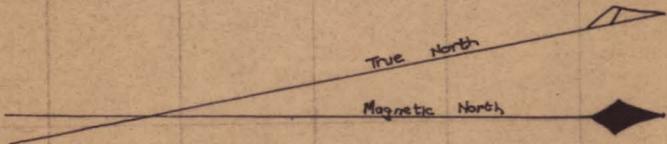
MAGNETIC INTENSITY (GAMMAS)

63400 -
63300 -
63200 -
63100 -
63000 -
62900 -
62800 -



COPPER KING MINE
Plan -85' level

Scale 1 inch = 10 feet
(map data from R. Cox)



200 S

100 S

P.M.F. BASELINE

Plan 4

936024

019

018

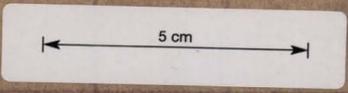
018

0 LEVEL

-62 LEVEL

-85 LEVEL

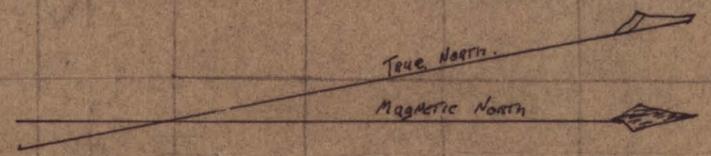
-102 LEVEL



COPPER KING MINE
section X-X': looking S.

Scale 1 inch = 10 feet

LODE: quartz & sulphides
(map data from R Cox)

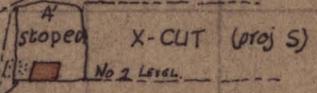


MAIN
WINZE

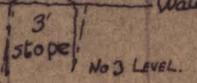


RISING
X-CUT

-82' MAIN ADIT LEVEL



Water Level



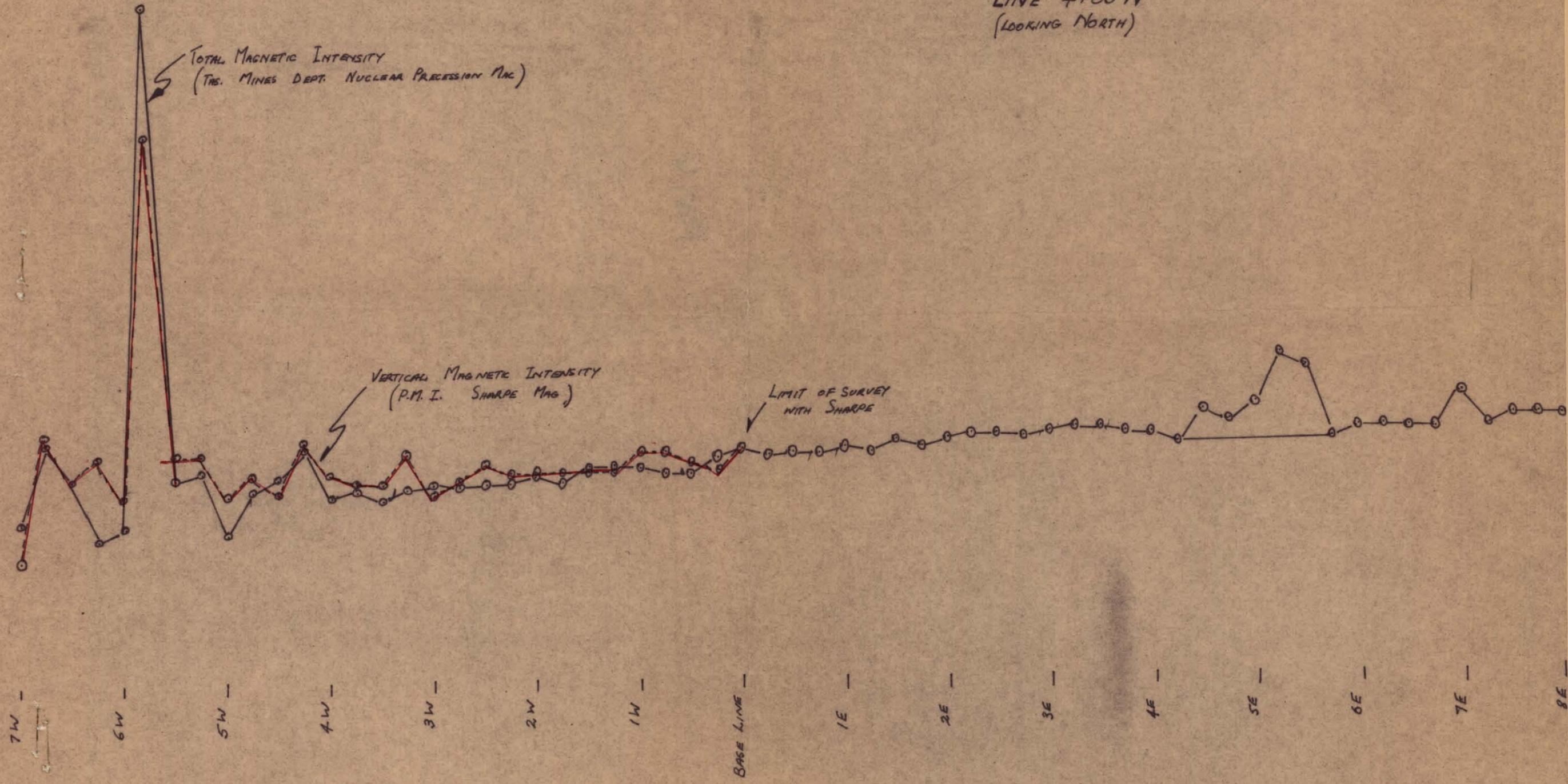
X-X'

25?

936025

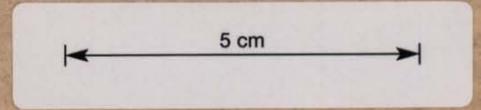
Plan 5

COPPER KING
 MAGNETIC PROFILE
 LINE 4+00 N
 (LOOKING NORTH)



020

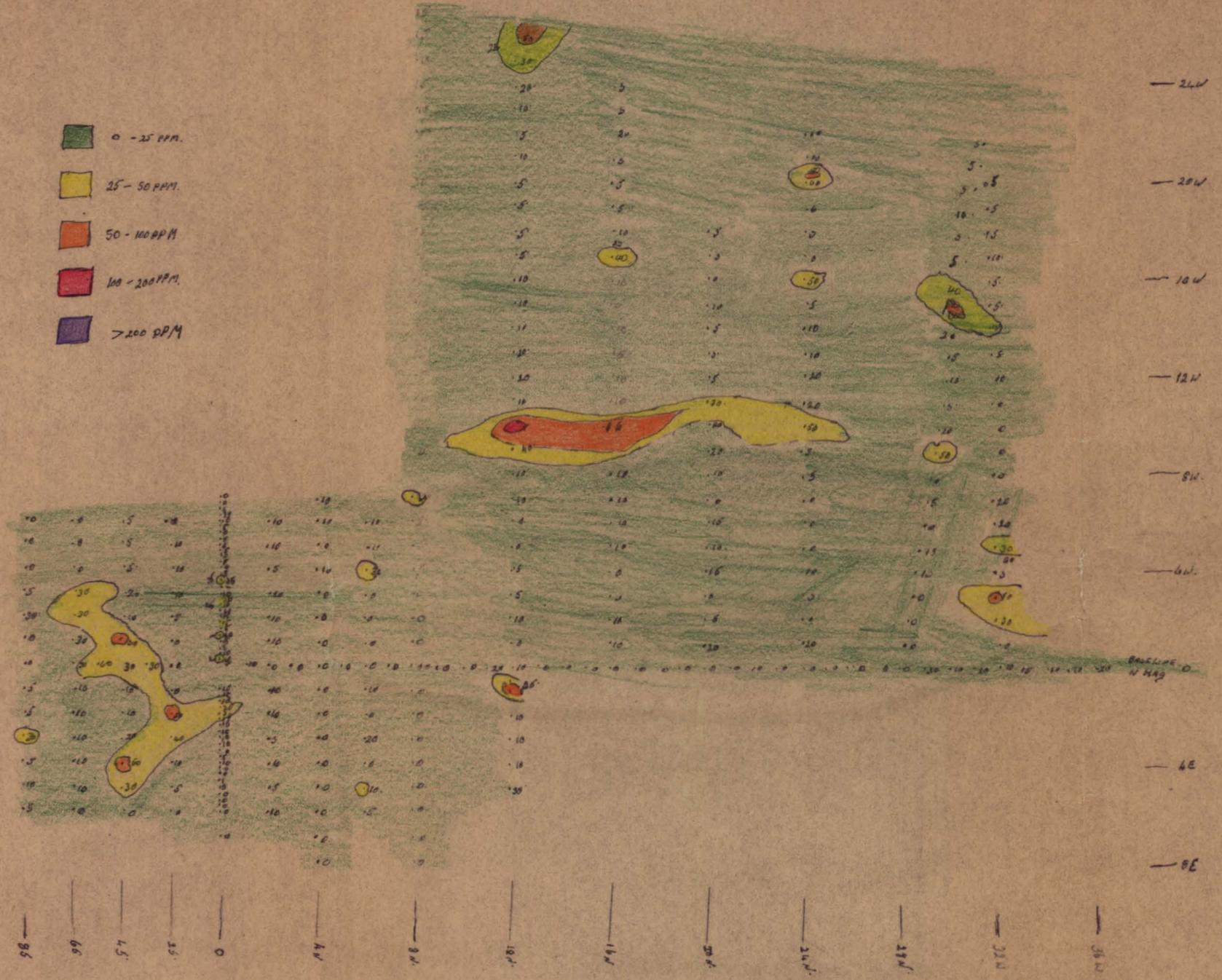
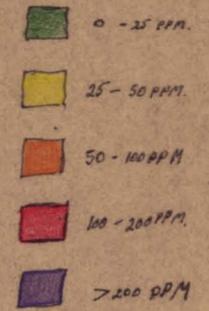
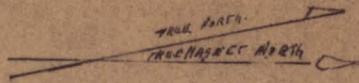
936026



Plan 6

024

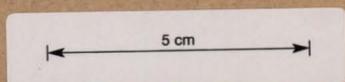
024



COPPER KING

ARSENIC SOILS

400' = 1"

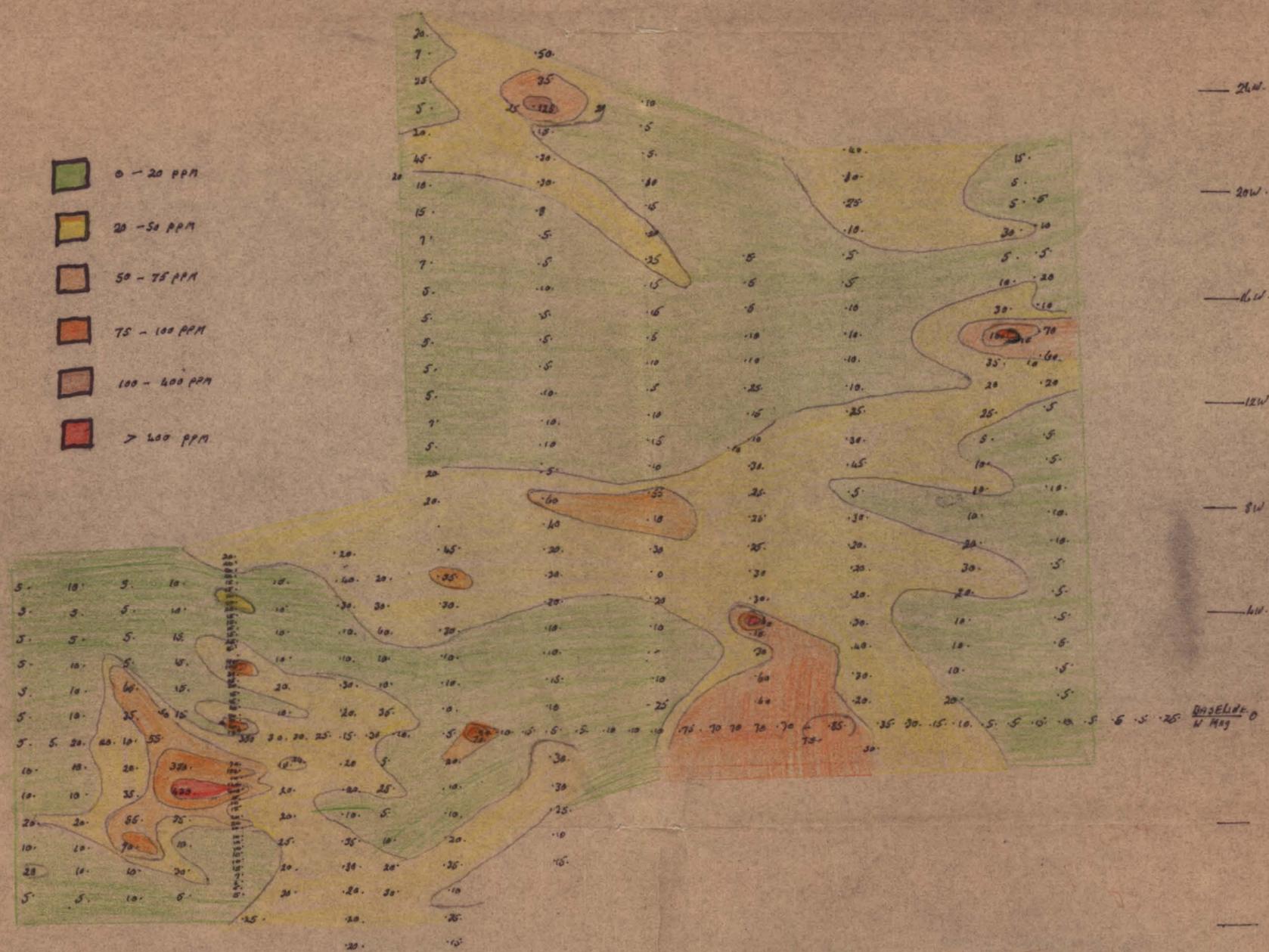


936027

Plan 7

TRUE NORTH
MAGNETIC NORTH

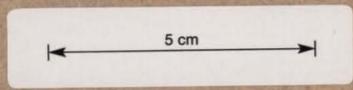
- 0 - 20 PPM
- 20 - 50 PPM
- 50 - 75 PPM
- 75 - 100 PPM
- 100 - 400 PPM
- > 400 PPM



COPPER KING

COPPER SOILS

400' = 1"



936028

Plan 8

025



COPPER KING - LEAD SOILS

400' = 1"

5 cm

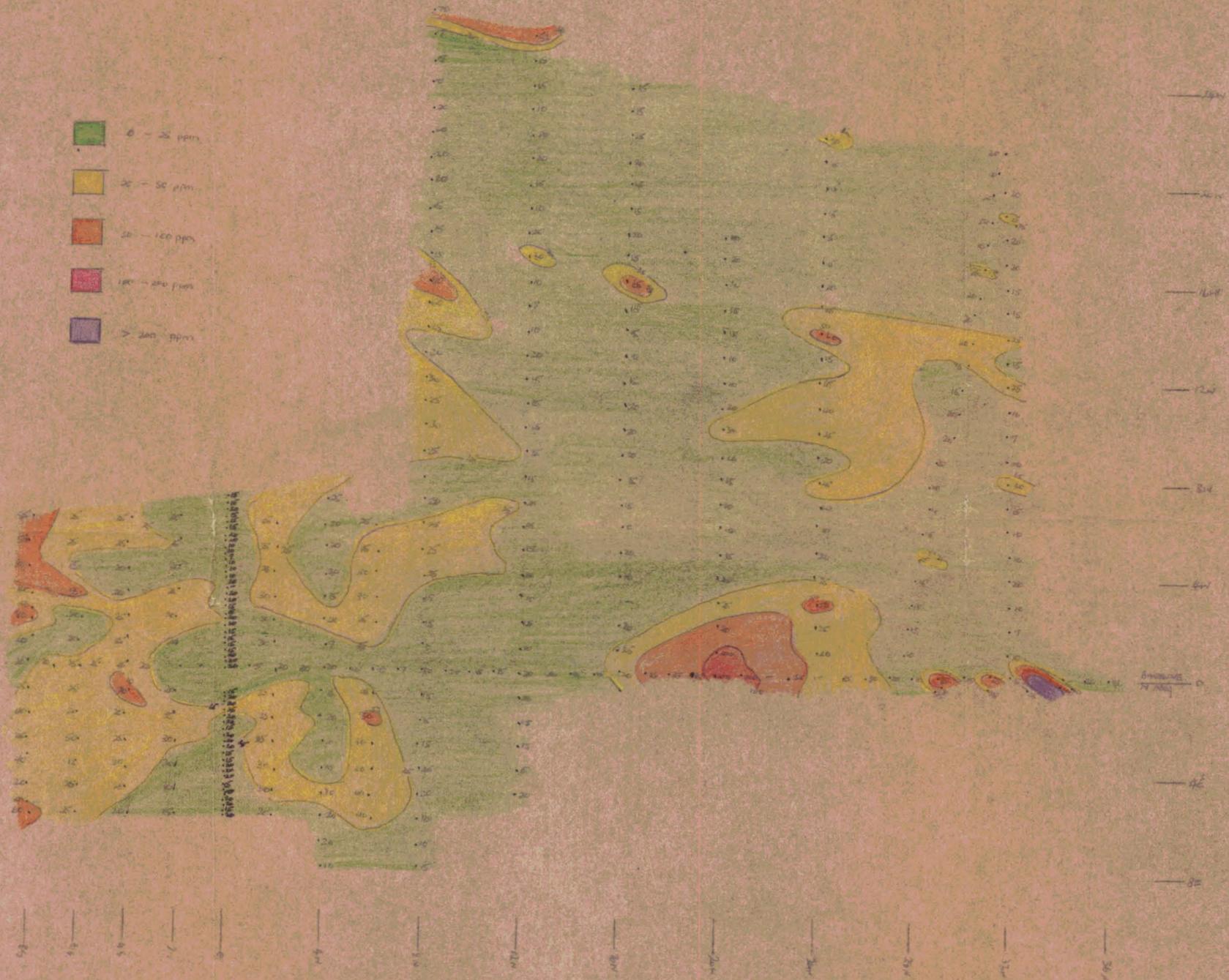
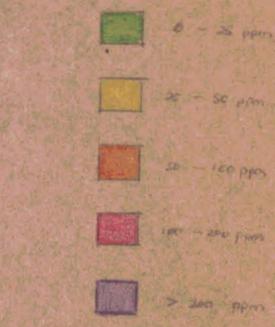
Plan 9

936030

025

023

023



COPPER KING - ZINC SOILS

400' = 1"



Plan 11