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**ELECTROLYTIC ZINC COMPANY OF
AUSTRALASIA LIMITED
MINERAL RESOURCES DIVISION**

MINES	
File Ref.	
- 9 SEP 1987	
Doc. Ref.	
Action Officer	Initials
Refer to Letter	
Dated 7.9.87	
Resubmit to	Date

**EXPLORATION LICENCE NO. 15/86
SMITHTON**

ANNUAL REPORT ON EXPLORATION ACTIVITY

OPEN FILE

REPORT NO. T230

N. FERGUSON
I.J. MATHISON,
AUGUST, 1987

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1. INTRODUCTION

1.1. Location, Title and Access

E.L. 15/86 of 56 km² was granted to E.Z. on 27th October, 1986. The E.L. lies between Smithton and the Montagu River and is centred 10 km west of Smithton.

Most of the area lies within State Forest. The remainder is private freehold land used for grazing.

Access to the northern and western portions of the E.L. is from the Barcoo Road while the south eastern corner can be accessed by other gravel roads branching off the Bass Highway.

1.2. Previous Exploration and Mining

No base metal or precious metal deposits have been reported from this area. E.Z.'s interest in the area followed the reports of an poorly exposed ironstone body on a freehold property just south of the quarry on Barcoo Road. Samples of this material assayed at the Rosebery Laboratory reported significant but variable gold and silver contents.

2. WORK COMPLETED

Three costeans of between 36 and 56m long were excavated on Mr. Dodds' property within E.L. 15/86 to test the extent of an ironstone outcrop (see Fig. 1). A Mitsubishi MS120 was used to excavate the costeans which were pegged and sampled at two metre intervals giving a total of 63 samples for the three costeans.

Reconnaissance geological mapping was also undertaken in the immediate area surrounding the costeans.

2.1. Costeaning

Three costeans of 42m, 56m and 36m and trending north-south were excavated in the south western corner of Dodds' property some 40-50m north of the boundary with Mr. R. Billet's property to the south.

Individual details of costeans are tabled below

Costean	Length	Av. Depth	Samples Taken	Mineralization
1.	42m	3.2m	20	Haematitic ironstone bed 1.6m thick, several smaller beds 2cm thick.
2.	56m	2.9m	26	Minor haematitic beds 1-2cm thick, dispersed iron rich soil layer below 'B' horizon.
3.	36m	2.2m	17	Dispersed iron stained soil layer below 'B' horizon <100cm depth.

Costean Main Lithological Type

1. Mudstone - silty mudstone to sandstone.
2. Mudstone - silty mudstone.
3. Silty mudstone to Tertiary gravel.

Each costean was marked out in advance and then pegged at two metre intervals over its length. The costean was then excavated to the required depth and a representative sample scraped off the bottom over the designated two metre interval. Duplicate samples were taken along with the originals.

When sampling of the costean was completed it was then mapped and if possible structural data were obtained. After these processes had been completed on each of the three costeans, they were filled in and covered with the topsoil which had previously been removed to one side.

To gain a better understanding of the area, reconnaissance geological mapping was completed in the area immediately surrounding the costeans.

Samples collected from the costeans, mainly rock chip with a fair percentage of soil were sent for analysis at Analabs in Burnie to be analysed for Cu, Pb, Zn, Fe, Mn, Cr, As, Ag and Au. Au was determined by fire assay with A.A.S. finish (Method 309), As by A.A.S. after vapour hydride generation (Method 114) and other elements by A.A.S. after mixed acid digestion (Method 103).

2.2. Other Samples

Seven samples of alluvial sands were supplied by Mr. J. Malley. These were taken from excavator holes dug by him on alluvial flats just east of the Barcoo Road. These samples were analysed for the same elements as the costean samples using the same methods.

3. RESULTS RECEIVED

3.1. Costean Mapping

Ironstone outcrop was encountered in Costean No. 1 at 24mS. This ironstone appears as a haematite rich conglomerate with rounded (<1cm) well sorted quartz clasts in a finer grained siliceous matrix. Haematite forms up to 80% of the bed which has a maximum width of 1.7m and an unknown down dip extent. Strike length of the ironstone can be conservatively put at 40 to 50m.

Both to the north and south of the ironstone, mudstone outcrops, generally striking 210° and dipping 50° to 70° west. Interbedded with these mudstones, to the north some 20 metres, are sandy siltstones and sandstones which show minor cross-bedding on a millimetric scale. These beds also have concentric iron stained rings overprinting the cross-bedding.

Costean No. 2 exposed the siltstones seen in Costean No. 1 and mudstone with thin (<2cm) beds of haematite in the northern section of the costean. Beds have a general strike of 016° and dip between 36° and 44° to the west. Grey-blue mudstones within the costean exhibit excellent cross-bedding and possibly some scour and fill structures.

Costean No. 3 exposed more of the cream and brown mudstone found in the other costeans but also encountered angular quartz gravels which cover half of the costean. Iron staining was found to be concentrated in the top 100cm below the topsoil in an unsorted angular quartz gravel. Minor iron staining was sampled at depth some 14mS.

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3.2. Local Mapping

Tertiary quartz gravels were traced for 180m to the north and south of Costean No. 3. The ironstone could only be followed to the west some 30-40m and was not intersected in Costean No. 2. Its extent to the east is not traceable further than 10m. A contact can be inferred, to the north of Costean No. 3, between a cream brown mudstone and an orange brown siltstone.

Mudstone was also encountered to the north of Costean No. 2.

3.3. Mineralization

Ironstone as encountered in Costean No. 1 appears to be confined to quartz conglomerate beds with haematite cement. The body can be traced for some 40-50m and appears to be a discrete pod.

Thin (<2cm) haematite beds were mapped in Costean No. 2 and appear to be part of the sedimentary sequence.

3.4. Geochemistry - Costeans

Sample results are listed in the Appendix and summarized below. No responses indicating precious metal or base metal mineralization are evident.

N = 63 samples

Element	Range	Estimated Mean	Anomalous	No. Anomalous
Cu	15-130	50	-	-
Pb	10- 90	50	-	-
Zn	20- 95	50	-	-
Fe	1.2-36%	5%	>15%	4
Mn	10-325	40	>300	1
Ag	<0.5-0.5	<0.5	-	-
Cr	85-270	150	-	-
As	2-170	20	> 40	3
Au	<0.008-0.017	<0.008	-	-

3.5. Pit Samples

Of the seven samples analysed, only one, No. 44292, was in any way anomalous. This sample reported 6ppm Ag and 16% Fe. However, base metal values were only very slightly elevated.

4. DISCUSSION AND CONCLUSIONS

Costean No. 1 tested the ironstone body. Sampling indicated that the ironstone was not associated with any precious metal or base metal mineralization. The weakly anomalous arsenic values from the ironstone body and the anomalous silver in the sand do not warrant follow-up without additional support.

5. RECOMMENDATIONS

No further work in this area is recommended. E.L. 15/86
should not be renewed.

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887008

Phone (09) 458 7999

A division of MacDonald Hamilton & Co. Pty. Ltd.
52 Murray Road, Welshpool, W.A. 6106
TLX: AA 59224

Telex AA92560

ANALYTICAL REPORT No. 27.1.08.04619

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Electrolytic Zinc Co. of Aust.
P.O. Box 21
Rosebery
Tasmania 7470

ORDER No.	PROJECT
700856	Smithton
DATE RECEIVED	RESULTS REQUIRED
15/07/87	ASAP

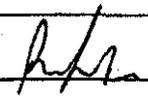
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			DRY	CRUSH	SPLIT	PUL-VERISE	SIEVE	OTHER SEE REMARKS		NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD				
	1	24/07/87	1						7								
REF. BE																	
	44290/96		SS	Prep: 006	013,015								Cu, Pb, Zn, Cr, Mn, Fe, Ag/103				
	44290/96		SS										As/114				
	44290/96		SS										Au/309				

RESULTS TO
Electrolytic Zinc Co. of Aust.
P.O. Box 21
Rosebery
Tasmania 7470

RESULTS TO

REMARKS

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	titration TTN
water WA	HF under pressure A7	other chemicals means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

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ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

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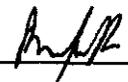
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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Cr	Mn	Fe	Ag	As	Au	
1	44290	15	10	10	65	25	2150	0.5	2	0.008	
2	44291	20	<5	10	60	20	2975	1.0	2	0.008	
3	44292	65	25	75	270	115	60000	6.0	4	0.008	
4	44293	20	<5	15	145	20	2850	0.5	2	0.008	
5	44294	15	10	15	85	440	14500	0.5	2	0.008	
6	44295	15	5	10	80	415	11500	0.5	1	0.008	
7	44296	15	5	10	125	25	3750	<0.5	1	0.008	
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21											
22											
23	DETECTION	5	5	5	5	5	5	0.5	1	0.008	
24	UNITS	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	
25	METHOD	103	103	103	103	103	103	103	114	309	

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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ANALYTICAL REPORT No. 27.1.08.04618

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Electrolytic Zinc Co. of Aust.
P.O. Box 21
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Tasmania 7470

ORDER No.	PROJECT
900858	Smithton
DATE RECEIVED	RESULTS REQUIRED
15/07/87	ASAP

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
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			DRY	CRUSH	SPLIT	PUL-VERSE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD		
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		8401/63	SC									As/114		
		8401/63	SC									Au/309		

RESULTS TO
Electrolytic Zinc Co. of Aust.
P.O. Box 21
Rosebery
Tasmania 7470

RESULTS TO

REMARKS

STATE OF SAMPLES	ANALYSIS — PREPARATION	ANALYSIS — METHOD
whole core WC	perchloric acid A1	atomic absorption AAS
split core SC	hydrochloric acid A2	x-ray fluorescence XRF
cutting CU	nitric acid A3	spectrophotometry SPEC
rock Ro	aqua regia A4	colorimetry COL
soil SO	nitric-perchloric A5	chromatography CHR
pulp PU	HF mixture A6	filtration ITN
water WA	HF under pressure A7	other chemicals means CHEM
tissue TI	fusion A8	miscellaneous MISC
stream sediment SS		fluorescence FLUOR
heavy mineral HM		inductively coupled plasma ICP

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ANALYTICAL DATA

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28/07/87

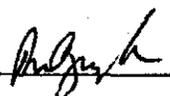
900858

1 OF 3

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Ag	Cr	As	Au
1	8401	50	75	60	7.80	50	<0.5	190	18	0.008
2	8402	50	60	45	7.20	50	<0.5	170	15	0.008
3	8403	45	35	45	6.80	40	<0.5	155	18	0.008
4	8404	35	45	35	6.25	25	<0.5	150	20	0.008
5	8405	25	55	30	5.40	20	<0.5	190	20	0.008
6	8406	35	60	35	10.50	20	<0.5	195	17	0.008
7	8407	75	55	35	7.95	25	<0.5	195	20	0.008
8	8408	35	90	30	2.80	30	<0.5	230	11	0.008
9	8409	45	70	40	4.05	25	<0.5	235	16	0.008
10	8410	90	50	45	5.65	30	<0.5	175	32	0.008
11	8411	95	65	55	15.70	75	<0.5	215	89	0.008
12	8412	60	50	55	25.00	250	<0.5	125	93	0.008
13	8413	70	55	65	35.70	175	0.5	160	170	0.008
14	8414	80	55	50	4.80	95	<0.5	170	13	0.008
15	8415	100	60	60	11.70	40	<0.5	170	29	0.008
16	8416	100	60	60	9.50	35	0.5	170	20	0.008
17	8417	90	65	45	7.35	30	<0.5	200	12	0.008
18	8418	90	60	40	7.65	20	<0.5	190	13	0.008
19	8419	65	65	35	4.40	20	<0.5	175	9	0.008
20	8420	80	65	40	6.50	20	<0.5	175	10	0.017
21	8421	110	75	50	13.40	25	0.5	230	20	0.008
22	8422	60	55	45	6.20	30	0.5	195	37	0.008
23	8423	60	65	40	6.75	20	<0.5	210	27	0.008
24	8424	60	55	35	5.15	20	0.5	205	27	0.008
25	8425	75	55	50	6.45	20	<0.5	205	20	0.008

Results in ppm unless otherwise specified
 T = element present; but concentration too low to measure
 X = element concentration is below detection limit
 -- = element not determined

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ANALYTICAL DATA

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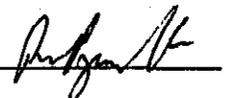
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TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Ag	Cr	As	Au	
1	68426	60	55	30	6.50	20	0.5	225	14	0.008	
2	68427	60	50	35	4.05	15	0.5	200	17	0.008	
3	68428	60	55	30	2.75	10	0.5	190	16	0.008	
4	68429	45	60	30	3.50	20	0.5	230	11	0.008	
5	68430	70	55	30	3.90	15	<0.5	205	10	0.008	
6	68431	55	50	30	3.50	10	<0.5	215	10	0.008	
7	68432	105	60	60	10.10	40	<0.5	205	10	0.008	
8	68433	65	50	40	6.10	15	<0.5	210	10	0.008	
9	68434	60	40	45	6.65	30	<0.5	210	9	0.008	
10	68435	45	30	20	2.20	10	<0.5	195	12	0.008	
11	68436	50	30	40	4.85	20	<0.5	205	17	0.008	
12	68437	60	50	60	9.95	25	<0.5	230	15	0.008	
13	68438	70	35	40	5.75	20	<0.5	220	18	0.008	
14	68439	55	25	30	6.15	25	<0.5	215	8	0.008	
15	68440	130	60	95	25.80	325	<0.5	235	12	0.008	
16	68441	55	45	55	4.25	65	<0.5	210	10	0.008	
17	68442	40	55	35	2.95	30	0.5	270	9	0.008	
18	68443	50	40	30	3.70	20	<0.5	200	19	0.008	
19	68444	80	55	60	12.40	95	<0.5	230	31	0.008	
20	68445	40	30	25	4.25	10	<0.5	190	13	0.008	
21	68446	45	25	30	5.90	15	<0.5	185	12	0.008	
22	68447	40	20	25	4.45	35	<0.5	150	7	0.008	
23	68448	30	15	20	3.60	20	<0.5	180	7	0.008	
24	68449	30	15	25	3.60	25	<0.5	140	6	0.008	
25	68450	45	20	40	5.90	15	<0.5	185	10	0.008	

Results in ppm unless otherwise specified

T = element present; but concentration too low to measure

X = element concentration is below detection limit

- = element not determined

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28/07/87

900858

3 OF 3

TUBE No.	SAMPLE No.	Cu	Pb	Zn	Fe	Mn	Ag	Cr	As	Au
1	8451	35	25	25	2.95	20	<0.5	180	9	<0.008
2	8452	40	20	45	6.20	15	<0.5	180	14	<0.008
3	8453	35	20	25	4.00	20	<0.5	150	9	<0.008
4	8454	40	15	55	2.30	15	<0.5	200	5	<0.008
5	8455	35	30	30	6.90	10	<0.5	165	6	<0.008
6	8456	20	15	20	1.90	55	<0.5	120	4	<0.008
7	8457	25	15	25	1.75	35	<0.5	90	4	<0.008
8	8458	20	15	20	1.25	35	<0.5	100	2	<0.008
9	8459	15	15	20	3.90	35	<0.5	105	10	<0.008
10	8460	20	15	35	4.35	65	<0.5	120	7	<0.008
11	8461	30	15	35	3.10	55	0.5	85	5	<0.008
12	8462	25	10	50	2.00	40	<0.5	100	4	<0.008
13	8463	30	10	20	2.60	60	0.5	115	6	<0.008
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	0.05	5	0.5	5	1	0.008
24	UNITS	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM
25	METHOD	103	103	103	103	103	103	103	114	309

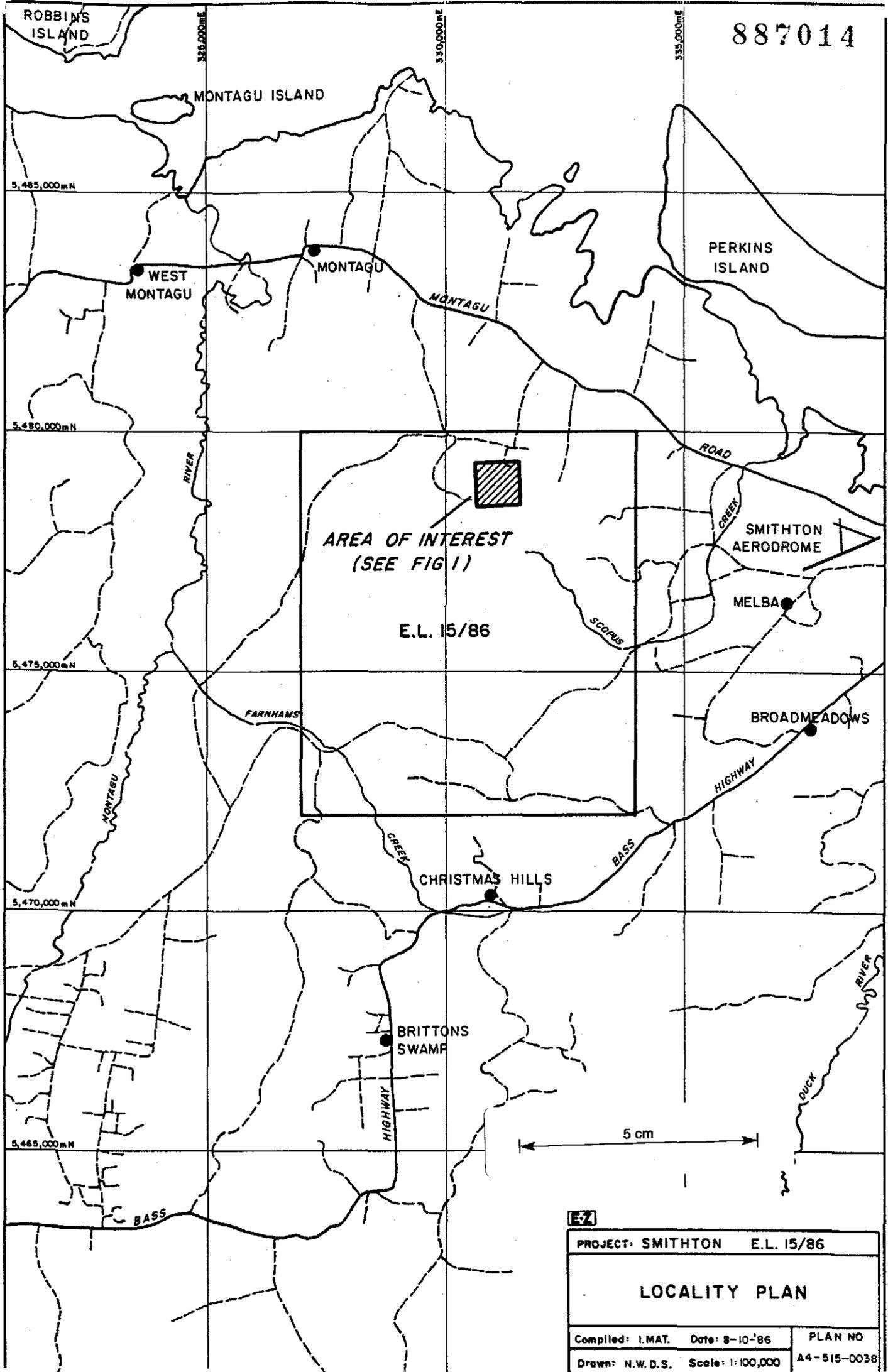
Results in ppm unless otherwise specified

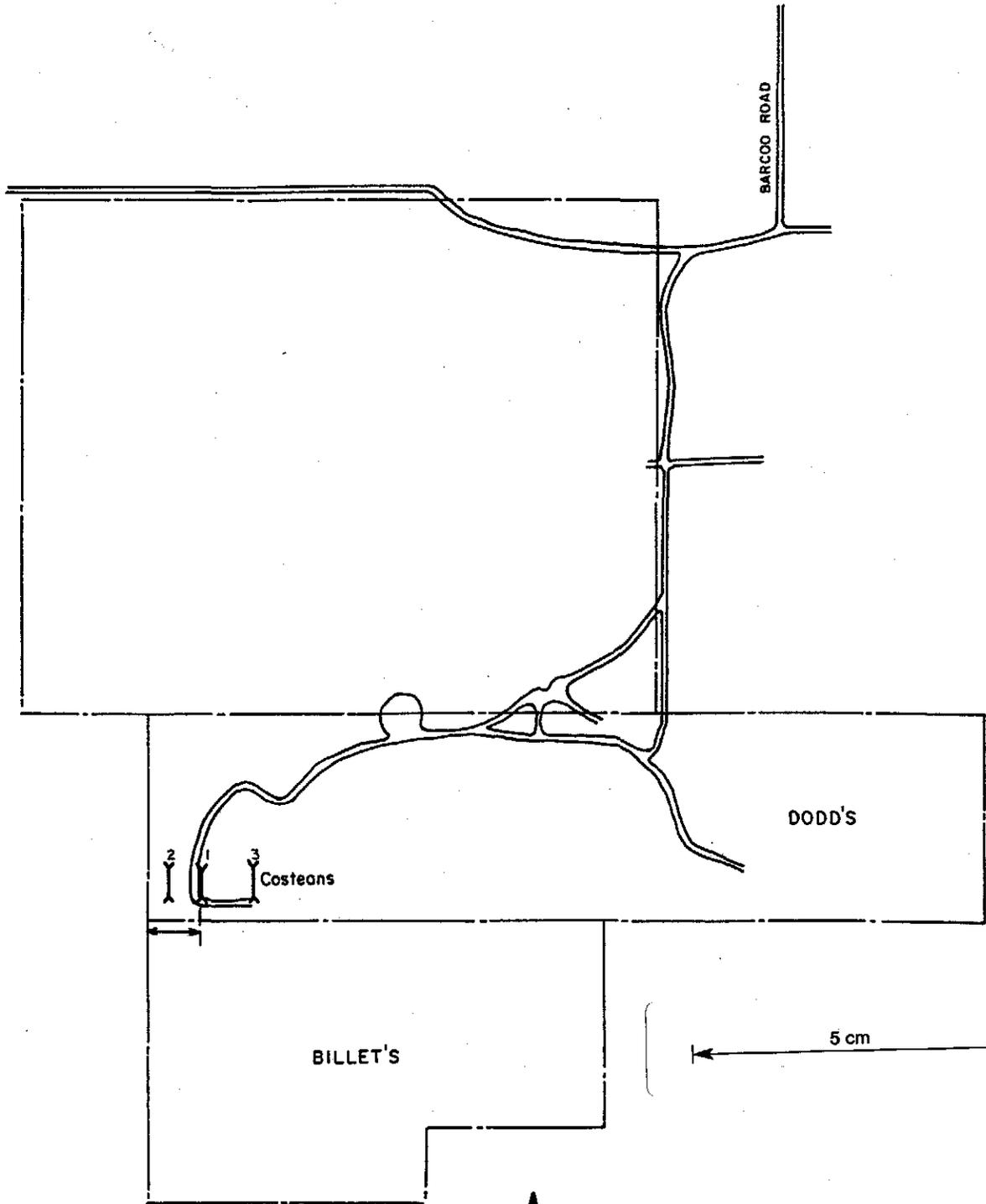
T = element present, but concentration too low to measure

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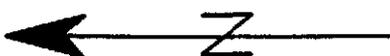
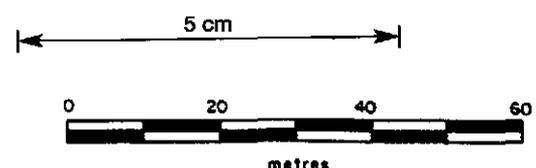
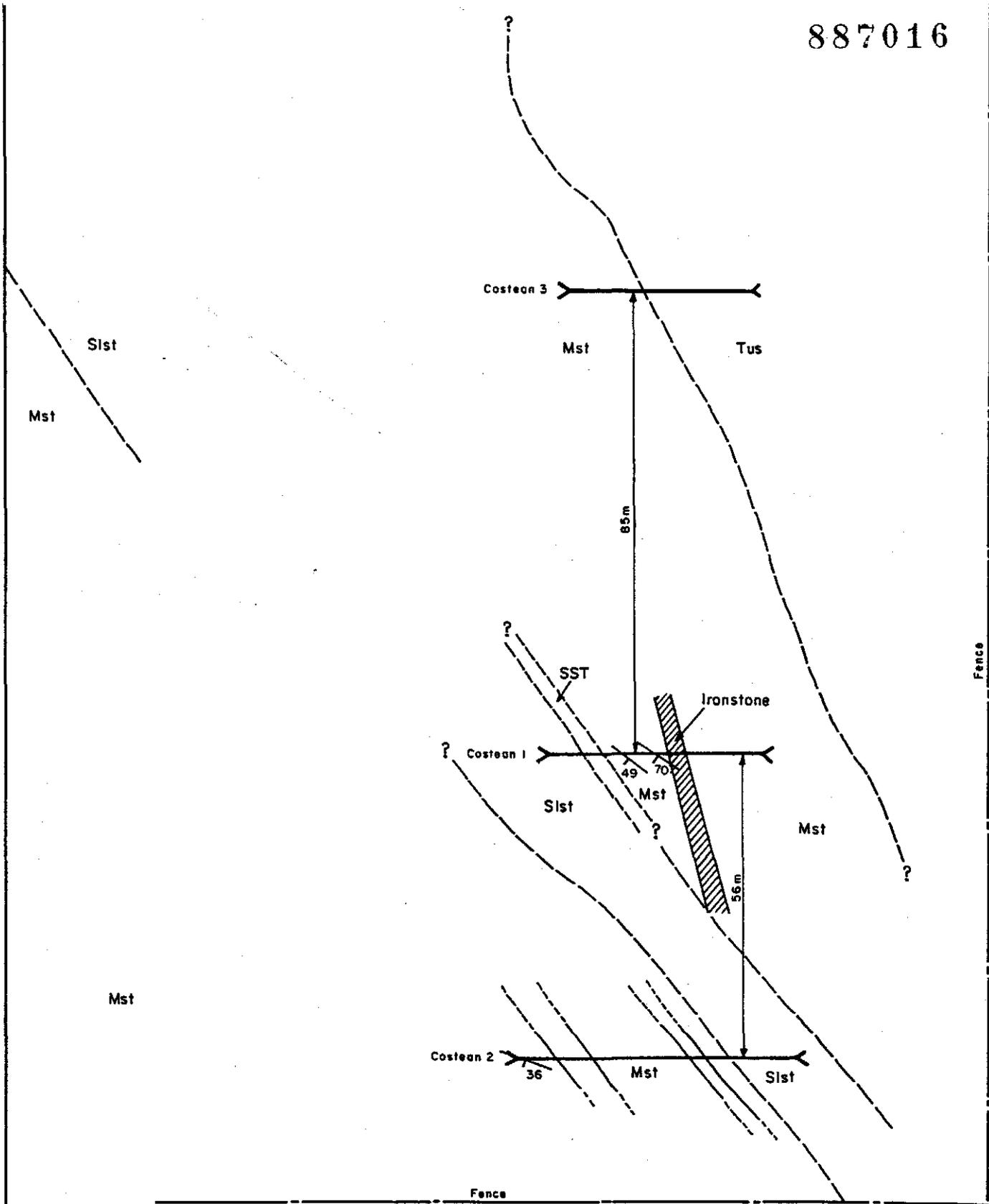
- = element not determined

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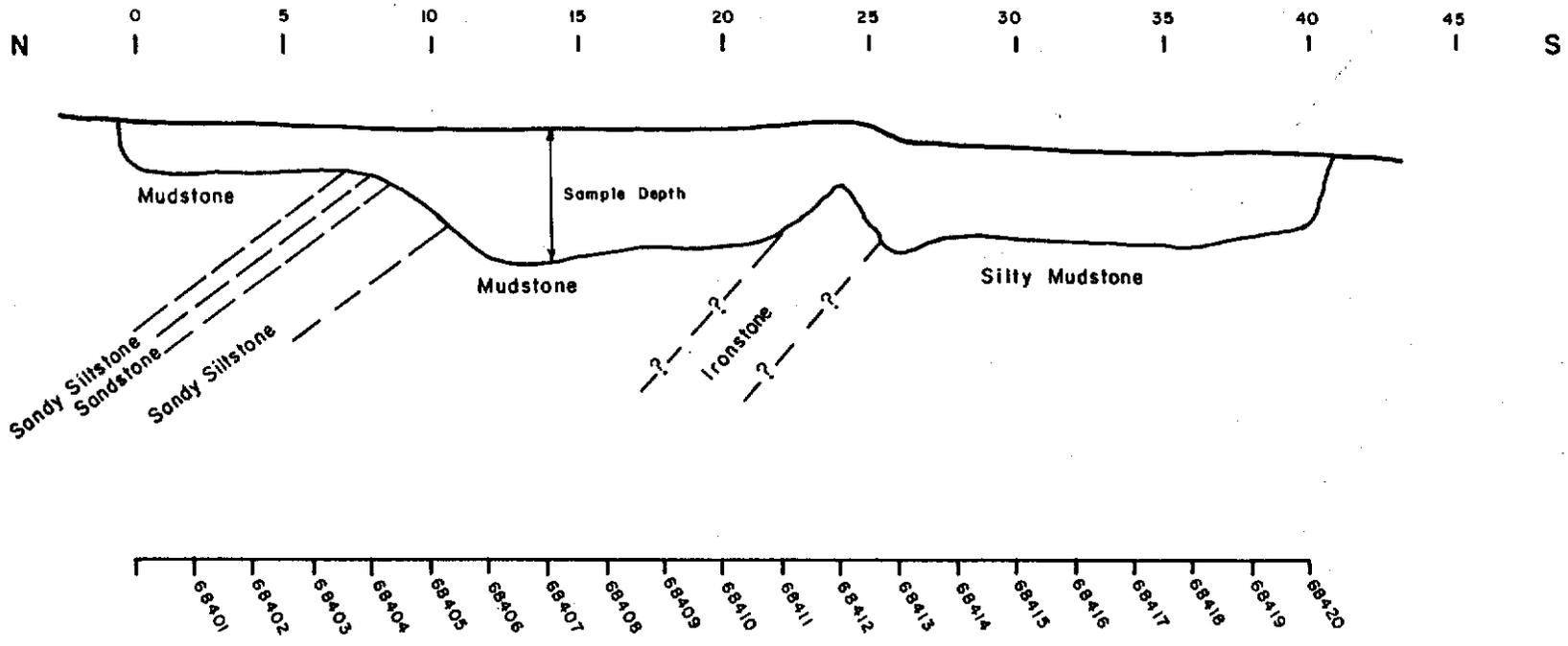




PROJECT: SMITHTON E.L. 15/86	
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Drawn: N.W.D.S. Scale: 1:10,000	Fig. 1



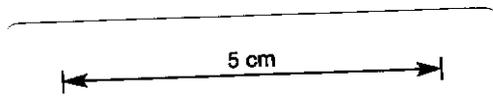
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GEOLOGY	
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PLAN NO Fig. 2	

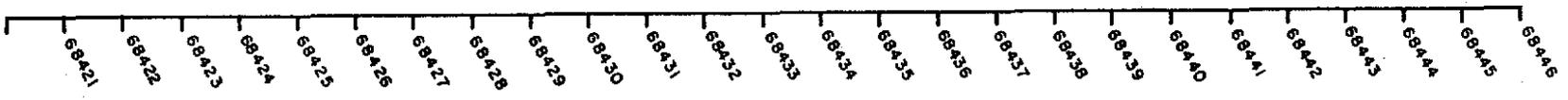
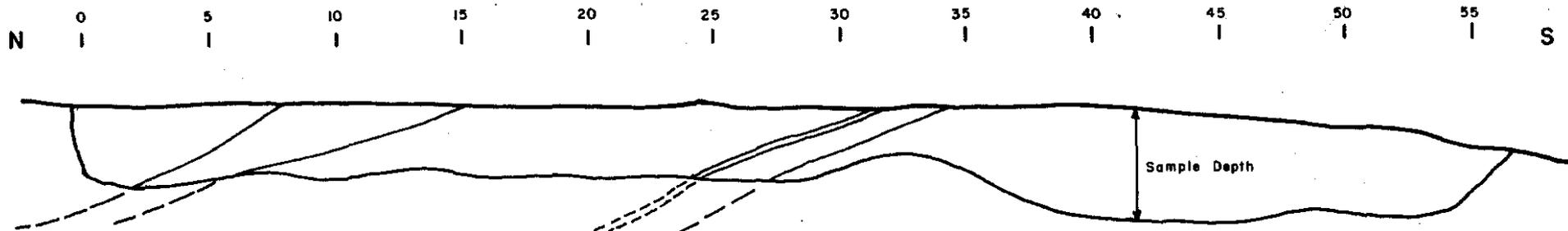


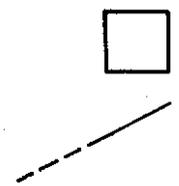
887017



EZ	
PROJECT SMITHTON E.L. 15/86	
COSTEAN 1	
Compiled LMAT. Date 25-6-87	PLAN NO
Drawn N.W.D.S. Scale 1:250	Fig. 3

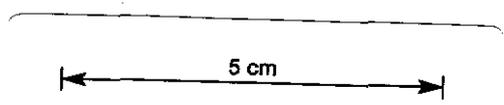






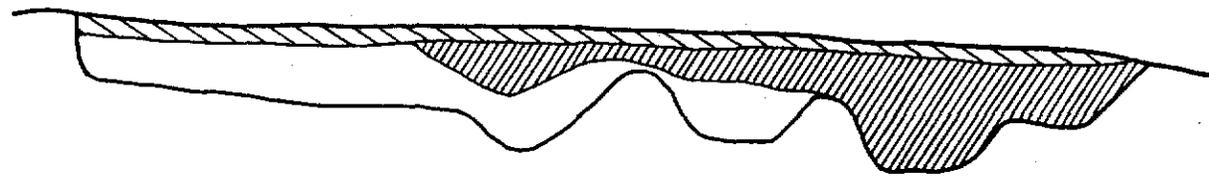
 Silty Mudstone.

 Haematite Bed.



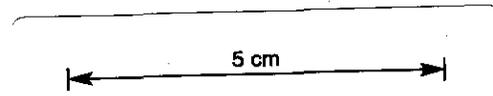
PROJECT SMITHTON E.L.15/86	
COSTEAN 2	
Compiled I. MAT Date 25-8-'87	PLAN NO
Drawn N.W.D.S. Scale 1:250	Fig 4

N 0 5 10 15 20 25 30 35 S



68447 68448 68449 68450 68451 68452 68453 68454 68455 68456 68457 68458 68459 68460 68461 68462 68463

-  Fe. Stained Gravel Overburden.
-  Quartz Gravels: angular, <1cm. grain size.
-  Silty Mudstone.



887019

PROJECT SMITHTON E.L. 15/86	
COSTEAN 3	
Compiled I.MAT. Date: 25-8-87	PLAN NO
Drawn N.W.D.S. Scale 1:250	Fig. 5