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INDUSTRIAL & MINING  
INVESTIGATIONS PTY LTD

Quarterly Report on Field  
Investigations within EL 4/61  
West Coast, Tasmania

Period ended 24 November 1981

Doc 915001

915002

INDUSTRIAL AND MINING INVESTIGATIONS PTY. LIMITED

D. of M.	A.O.	C.S.	E.O.	D.S.M.F.
				Register
Received Answered				18 DEC 1981
DEPT. OF MINES				E & I
PER. NO. 10966/81				

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- ON FIELD INVESTIGATIONS ~~PTD~~  
MAST - TAS 24 NOV 1981

81-1100

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INDUSTRIAL & MINING INVESTIGATIONS PTY LTDQUARTERLY REPORTFOR PERIOD ENDED 24 NOVEMBER 1981EL4/61 - WEST COAST TASMANIA

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Appendix A : Statistical Evaluation of Davis Creek-Specimen Creek 50 metre stream sediment survey - Analyses and Graphs.		

## Plans

- Proposed Exploration for the 1981-82 Field Season, outlining small aeromagnetic highs.
- Davis Creek-Specimen Creek  
Geochemical Survey - Sample Location
- " " " " - Copper Analyses
- " " " " - Zinc Analyses
- " " " " - Lead Analyses

A. INTRODUCTION

Field activities within EL4/61 recommenced on 10 October, 1981. Over the past six weeks, persistent westerly weather, with associated heavy rainfalls, has severely restricted operations. A 50-metre stream sediment sampling programme along Specimen Creek has been completed. Copper and zinc anomalous values were recorded. The vehicle track, as constructed last year along the ridge to the south of the Little Donaldson River, has been cleared and re-graded for some 3.0 kilometres, to the point of the western extension. (See plan No 1) Clearing of this extension will commence as soon as weather permits. Drilling of the Specimen Reef workings is planned to commence on Monday, 30 November. This drilling has also been delayed for a month by weather.

B. DAVIS CREEK-SPECIMEN CREEK BASE METAL SURVEY (Plans 2,3,4,5)

As outlined in Sections C(vi) and H(1.) of my six-monthly report for the period ended 24 August, 1981, a 50-metre stream sediment survey was undertaken along Specimen Creek, from just downstream of the Davis Creek junction east of the eastern margin of the 'old silver-lead leases'. Some 46 samples were collected. A statistical evaluation was undertaken for copper, lead and zinc on results obtained for all 85 samples in the Davis Creek-Specimen Creek survey area. Two anomalous readings were obtained for copper and seven anomalous readings for zinc. (See plans 3 and 4)

The samples calculated as anomalous, using the Cumulative Frequency method, are as follows: (See Appendix A)

<u>Element</u>	<u>Sample</u>	<u>p.p.m.</u>
Copper (Cu)	106	205
	107	175
	87	605
Zinc (Zn)	105	775
	106	3050
	107	975
	108	1650
	109	2150
	112	1300

Samples 105 to 109 represent a distance, along Specimen Creek, of some 200 metres.

A grid is presently being cut and surveyed over the area between Davis Creek and Specimen Creek, to check out the anomalous stream sediment samples by way of a soil sampling programme, and if necessary, an Induced Potential Survey.

Full details of the stream sediment survey, soil sampling survey, and any additional investigations, will be outlined in the six-monthly report due on 24 February, 1982.

C. AEROMAGNETIC HIGHS (Plan 2)

Several minor magnetic highs, as outlined in the Rio Tinto aeromagnetic survey of 1956, occur in the area north of the Savage River magnetite deposits, and within EL4/61. Three more significant anomalies have been plotted on Plan 2 of this report.

The anomaly between Davis Creek and Specimen Creek is probably due to a northern extension of the Savage River magnetite zone, as magnetite has been located within chloritic schists and altered amphibolites in the Specimen Creek area. A magnetometer survey will be carried out over the Davis Creek-Specimen Creek soil sampling grid to outline this anomaly on the ground. It may well be that the open-ended magnetic anomaly of the Specimen Reef grid (see my report on the Specimen Reef, 24/2/81) is a ground representation of part of this particular aeromagnetic anomaly.

The other two anomalies shall be investigated by ground traverses off the proposed Little Donaldson track extension.

D. SPECIMEN REEF DRILLING

Drilling of the first borehole of Specimen Reef is planned to commence on Monday, 30 November, 1981.

E. ERECTION OF PROSPECTING CAMP

It is hoped that a field camp, to accommodate 3 geologists and 3 field assistants, can be established on the buttongrass area of the western end of the proposed Little Donaldson track extension (see plan 2), before Christmas. However, this will be determined by track progress, which is controlled entirely by the weather conditions.

APPENDIX A

Statistical Evaluation of Davis Creek-  
Specimen Creek 50 metre Stream Sediment  
Survey (with analyses and graphs).

# ANALABS

A DIVISION OF MACDONALD HAMILTON & CO. PTY. LTD.  
52 Murray Road, Welshpool, W.A. 6106  
Phone (09) 458 7999

915007

## ANALYTICAL REPORT

This report must be read in conjunction with the results given for JOB No. 999 0 08 640

Client: Industrial & Mining Investigations  
(1) 1st Floor, A.M.P. Building  
46 St John St  
Lanncoston

Order No. .... Date Received: 23/10/81  
Reference ..... Results Required .....  
Delivered by ..... Total No. of Samples: 24

(2) SAMPLE NUMBERS	STATE OF SAMPLES	Average Weight	PRE-TREATMENT							None	Refer to section (b) for terminology	Apparatus	Method	Coefficient of variation (%)
	Refer to section (5) for terminology		Dry	Crush	Split	Pulverize	Sieve	Fusion	Other (specify)					
50 66-84	PU								1	Cu Pb Zn Ag	A41			
50 86-90										Au	L65			

(3) Number of pages of results: 2  
Date Reported: 24/10/81  
Results to: (1) As Above (2) .....  
Per: M.A.I.  
Number of Copies: 3

(4) Remarks: .....

(5) STATE OF SAMPLES		ANALYSIS - PREPARATION				ANALYSIS - METHOD	
whole core	WC	perchloric acid	A1	carb acid	CA	atomic absorption	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	X-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	MA	spectrophotometry	SPEC
rock	RO	acetic, regia	A4	alkalimattack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	dressed powder (XRF)	PF	other chemical means	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM						

Authorized Officer: B. Dora

ATTENTION Please advise us regarding the disposal of your samples. JOB No. ....  
 DISCARD IMMEDIATELY  
 DISCARD AFTER 3 MONTHS  
 KEEP UNTIL ADVISED (A STORAGE CHARGE WILL BE MADE)  
 RETURN TO .....

# ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.  
52 Murray Road, Welshpool, W.A. 6106 (Reg. Office)

915008

Phone (09) 468 7999

Code No.

999 0 08640

Division Cooper, Tasmania

Phone 316837

Rack No.

R-18

Page No.

1

Order No.

## RESULT SHEET

TUBE No.	SAMPLE No.		Cu	Pb	Zn	Ag			
1	50	66	55	15	160	x			
2		67	45	10	175	0.5			
3		68	50	10	180	x			
4		69	45	15	165	x			
5		70	35	5	140	0.5			
6		71	25	5	75	x			
7		72	20	5	65	x			
8		73	25	5	95	x			
9		74	35	10	125	x			
10		75	35	10	140	0.5			
11		76	45	5	170	x			
12		77	50	15	195	x			
13		78	80	5	275	x			
14		79	70	5	190	x			
15		80	30	x	95	0.5			
16		81	40	x	110	0.5			
17		82	70	5	265	x			
18		83	55	5	300	0.5			
19		84	60	x	285	x			
20	50	86	20	x	50	x			
21		87	100	10	605	x			
22		88	70	5	440	x			
23		89	75	5	440	x			
24	50	90	90	5	380	0.5			
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
Detection			5	5	5	0.5			
Standard	ASS5		435	325	110	0.5			
Repeat -	50	66	35	10	150	x			
Repeat -	50	86	20	x	45	x			
Method			All						

RESPONSIBLE OFFICER B. Dave  
26.10.81

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

# ANALABS

A division of MacDonald-Hamilton & Co. Pty. Ltd.  
52 Murray Road, Welshpool, W.A. 6106 (Reg. Office)

915009

Phone (09) 458 7999

Code No. 999.0 08640

Division Copec, Tasmania

Phone 31837

Rack No. \_\_\_\_\_

Page No. 2

Order No. \_\_\_\_\_

## RESULT SHEET

TUBE No.	SAMPLE No.	Au	wt assayed (g)
1	50	66	INSUFFICIENT SAMPLE
2		67	0.80
3		68	X
4		69	X
5		70	1.98
6		71	0.06
7		72	X
8		73	X
9		74	0.03
10		75	X
11		76	X
12		77	INSUFFICIENT SAMPLE
13		78	X
14		79	X
15		80	X
16		81	X
17		82	0.28
18		83	0.80
19		84	X
20		86	X
21		87	0.24
22		88	0.32
23		89	X
24	50	90	X
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
Detection		0.03	
Standard			
Repeat—			
Repeat—			
Method		LA5	

RESPONSIBLE OFFICER B. Down  
27/10/81

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

# ANALABS

915010

Phone (09) 458 7999

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

Telex AA92560

**ANALYTICAL REPORT No** 999.0 08 649

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

Industrial & Mining Investigations  
1st Floor AMP Building  
46 St John Street  
Launceston Tas 7250

ORDER No.

PROJECT

DATE RECEIVED

RESULTS REQUIRED

27.10.81

No. OF PAGES OF RESULTS

DATE REPORTED

No. OF COPIES

TOTAL No. OF SAMPLES

2

28.10.81

3

22

STATE OF SAMPLES	REFER BELOW	SAMPLE NUMBERS	PRE-TREATMENT					OTHER SPEC. REMARKS	ANALYSIS			
			DRY	CRUSH	SPLIT	PULVERISE	SIEVE		REFER TO ANALYTICAL SECTION	PREPARATION	METHOD	
	PU	50 91 / 50 112							1	Cu Pb Zn Ag Au	A1	AAS L05

RESULTS

TO

As Above

RESULTS

TO

REMARKS

STATE OF SAMPLES	ANALYSIS — PREPARATION				ANALYSIS — METHOD		
whole core	WC	perchloric acid	A1	cold acid	CA	atomic absorption	AAS
split core	SC	hydrochloric acid	A2	specific sulphide	SS	X-ray fluorescence	XRF
cutting	CU	nitric acid	A3	other mixed acids	MA	spectrophotometry	SPEC
rock	RO	aqua regia	A4	alkaline attack	AA	colorimetry	COL
soil	SO	nitric-perchloric	A5	volatilization	VO	chromatography	CHR
pulp	PU	HF mixture	A6	ignition	IG	titration	TTN
water	WA	HF under pressure	A7	pressed powder (XRF)	PP	other chemical means	CHEM
tissue	TI	fusion	A8	glass fusion (XRF)	GF	miscellaneous	MISC
stream sediment	SS					fluorescence	FLUOR
heavy mineral	HM					inductively coupled plasma	ICP

AUTHORISED OFFICER

*B. Dora*

# ANALABS

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## ANALYTICAL DATA

SAMPLE PREFIX      REPORT NUMBER      REPORT DATE      CLIENT ORDER No.      PAGE

50		999.0 08 649				28.10.81				1 OF 2
TUBE No.	SAMPLE No.	Cu	Zn	Pb	Hg	As	ppm			
1	91	55	225	X	1.4	20	5.00			
2	92	45	65	X	0.16	30	1.00			
3	93	25	35	X	0.03	10	5.00			
4	94	20	30	X	X	15	5.00			
5	95	90	115	X	X	25	4.00			
6	96	65	85	X	X	25	5.00			
7	97	40	55	X	0.03	40	5.00			
8	98	40	50	X	0.03	25	5.00			
9	99	25	40	X	X	30	5.00			
10	100	10	25	X	1.1	20	5.00			
11	101	10	35	X	X	15	4.00			
12	102	40	50	X	X	25	4.00			
13	103	40	45	X	X	20	5.00			
14	104	60	90	X	X	20	5.00			
15	105	110	775	X	1.9	20	3.00			
16	106	205	3050	X	0.64	35	1.00			
17	107	105	975	X	X	25	1.00			
18	108	175	1650	0.5	0.08	30	2.00			
19	109	160	2150	X	0.32	35	1.00			
20	110	90	345	X	2.7	15	3.00			
21	111	115	200	X	1.6	20	4.00			
22	112	160	1300	X	1.4	25	5.00			
23										
24										
25										

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

AUTHORISED OFFICER *B. Dan*

# ANALABS

A division of MacDonald Hamilton & Co.

## ANALYTICAL DATA

SAMPLE PREFIX

REPORT NUMBER

REPORT DATE

CLIENT ORDER No.

PAGE

50		999.0 08 649				28, 10, 81				20F 2	
TUBE No.	SAMPLE No.	Cu	Zn	Pb	Ag	As	Bi	Co	Cr	Fe	Mn
1	ASS5	435	110	1.0		330					
2	50 91	55	220	X		15					
3	50 110	90	340	0.5		10					
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23	DETECTION	5	5	0.5	0.03	5					
24	DIGESTION	A1	A1	A1		A1					
25	METHOD	A1/1	A1/1	A1/1	LG5	A1/1					

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

AUTHORISED OFFICER

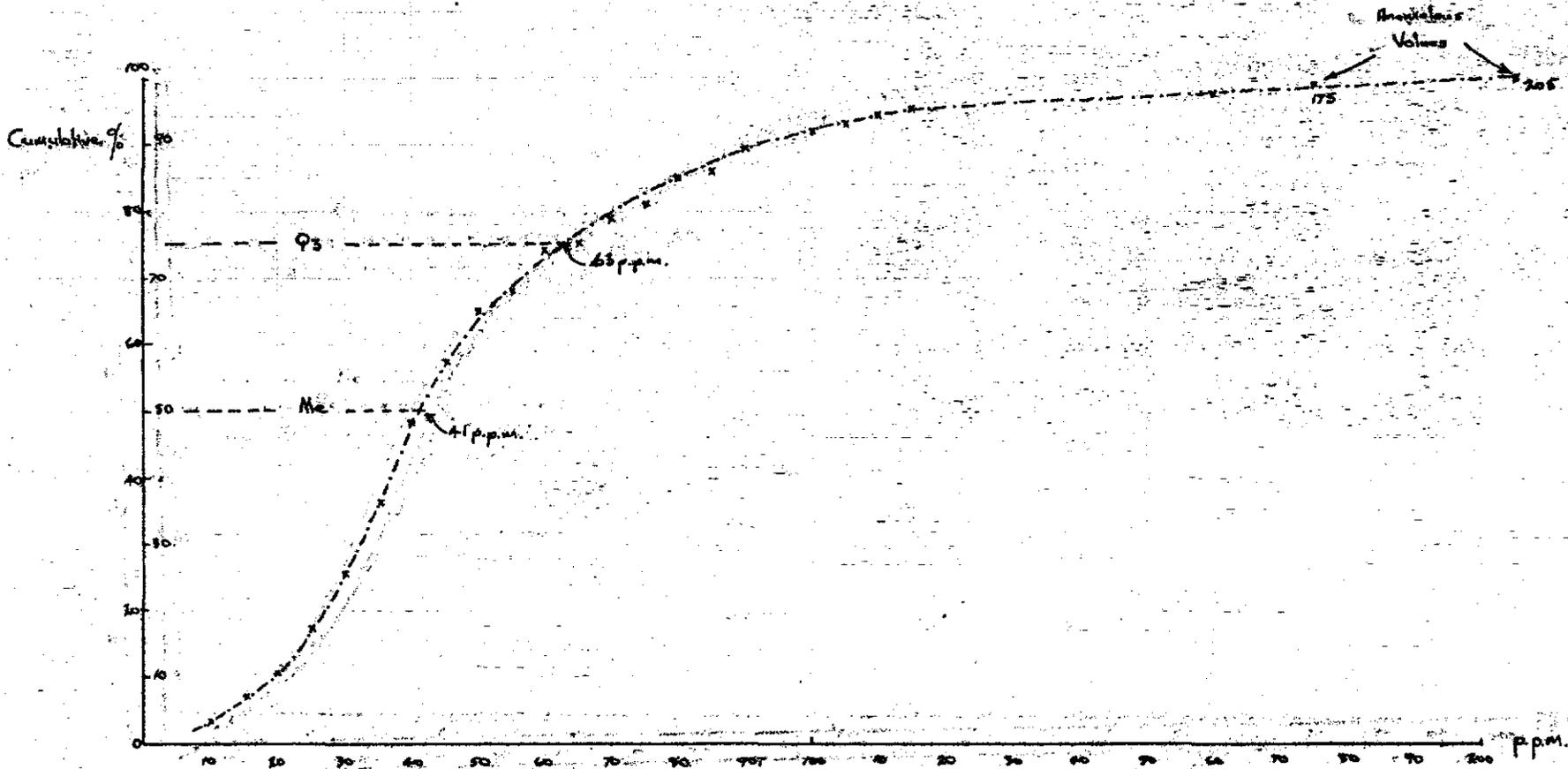
*B. D.*

## STATISTICAL EVALUATION (COPPER) DAVIS-SPECIMEN CK SURVEY

ppm	10	15	20	25	30	35	40	45	50	55	60	65
Frequency	3	3	3	6	7	9	10	9	6	3	5	1
Cumulative Frequency	3	6	9	15	22	31	41	50	56	59	63	64
Cumulative %	3.5	7.1	10.6	17.6	25.9	36.5	47.2	57.6	64.7	69.2	74.1	75.3

ppm	70	75	80	85	90	100	105	110	115	160	175	205
Frequency	3	2	3	1	3	2	1	1	1	2	1	1
Cumulative Frequency	69	69	72	73	76	78	79	80	81	83	84	85
Cumulative %	79.8	81.2	84.7	85.9	89.4	91.8	92.9	94.1	95.3	97.6	98.8	100.0

Statistical Evaluation Copper: Davis Creek - Specimen CK. 50 Meter Stream Sediment Survey (85 samples: 5027-84, 5086-112.)



$Q_3 = 75\% = 63 \text{ p.p.m.}$

$Me = 50\% = 41 \text{ p.p.m.}$

Std. Deviation =  $1.5(Q_3 - Me) = 1.5(22) = 33 \text{ p.p.m.}$

Normal Distribution =  $Me + Std. Dev. = 41 + 33 = 74 \text{ p.p.m.}$

Anomalous Value =  $Me + 4 \text{ Std. Dev.} = 41 + 132 = 173 \text{ p.p.m.}$

Rebutious Samples: No. 106 = 205 p.p.m.

No. 108 = 175 p.p.m.

STATISTICAL EVALUATION (ZINC) DAVIS-SPECIMEN CK SURVEY

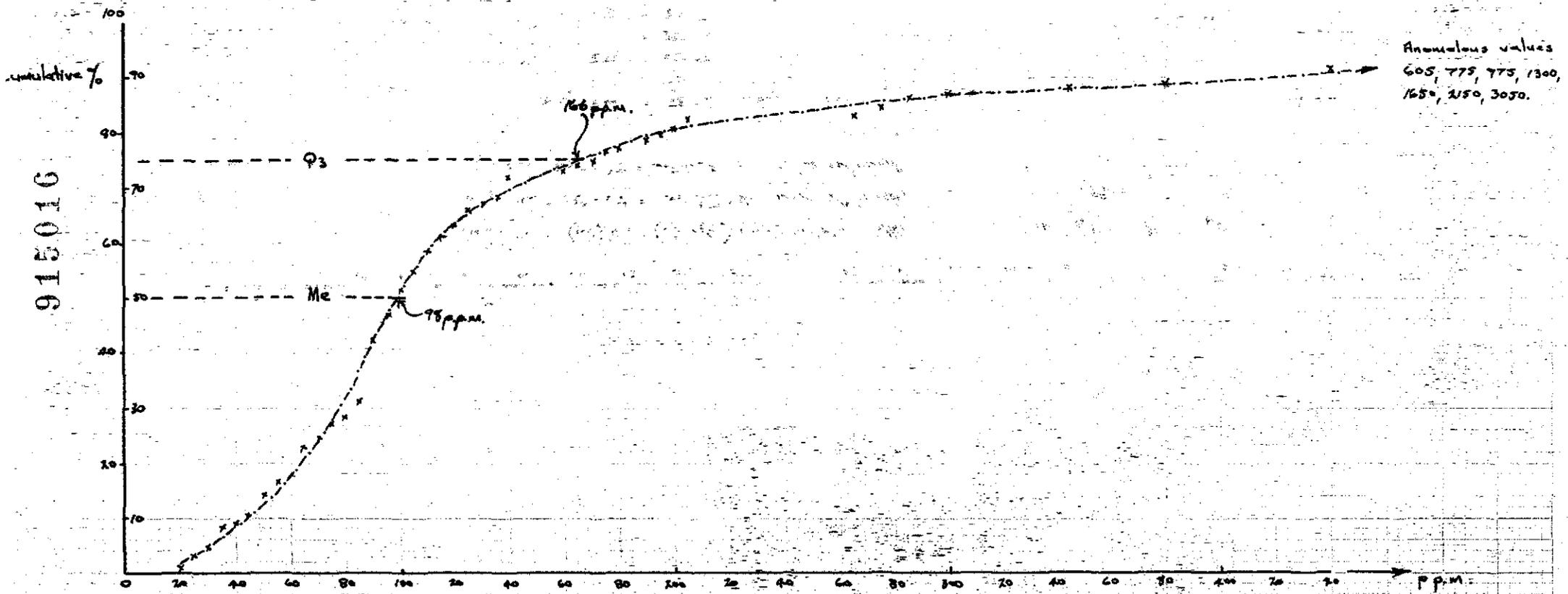
p.p.m.	20	25	30	35	40	45	50	55	65	70	75	80	85	90	95
Frequency	1	2	1	3	1	1	3	2	6	1	2	1	3	9	4
Cumulative Frequency	1	3	4	7	8	9	12	14	20	21	23	24	27	36	40
Cumulative %	1.2	3.5	4.7	8.2	9.4	10.6	14.1	16.5	23.5	24.7	27.1	28.2	31.7	42.4	47.1

ppm	100	105	110	115	120	125	130	135	140	160	165	170	175	180	190
Frequency	4	3	3	2	2	2	1	1	3	1	1	1	1	1	1
Cumulative Frequency	44	47	50	52	54	56	57	58	61	62	63	64	65	66	67
Cumulative %	57.8	58.3	59.4	61.2	63.5	65.9	67.1	68.2	71.8	72.9	74.1	75.3	76.5	77.6	78.8

p.p.m.	175	200	225	265	275	285	300	345	380	440	605	775	775	1300	1650	2150
Frequency	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1
Cumulative Frequency	68	69	70	71	72	73	74	75	76	78	79	80	81	82	83	84
Cumulative %	90	91.2	91.4	93.6	94.8	95.9	97.1	98.3	99.4	99.8	99.9	99.9	99.9	99.9	99.9	99.9

ppm	3050
Frequency	1
Cumulative Frequency	85
Cumulative %	100.0

Statistical Evaluation Zinc: Davis Creek-Specimen Creek 50 Metre Stream Sediment Survey (85 Samples: SO 27-34, SO 86-112)



915016

$Q_3 = 75\% = 164 \text{ p.p.m.}$   
 $Me = 50\% = 98 \text{ p.p.m.}$

Std. Deviation =  $1.5 (Q_3 - Me) = 1.5 (68) = 102 \text{ p.p.m.}$   
 Normal Distribution =  $Me + \text{Std. Dev.} = 98 + 102 = 200 \text{ p.p.m.}$   
 Anomalous Value =  $Me + 4 \text{ Std. Dev.} = 98 + 408 = 506 \text{ p.p.m.}$

Anomalous Samples:

N <sup>o</sup> 87	=	605 p.p.m.
N <sup>o</sup> 105	=	775 "
N <sup>o</sup> 107	=	775 "
N <sup>o</sup> 112	=	1300 "
N <sup>o</sup> 108	=	1650 "
N <sup>o</sup> 109	=	2150 "
N <sup>o</sup> 106	=	3050 "

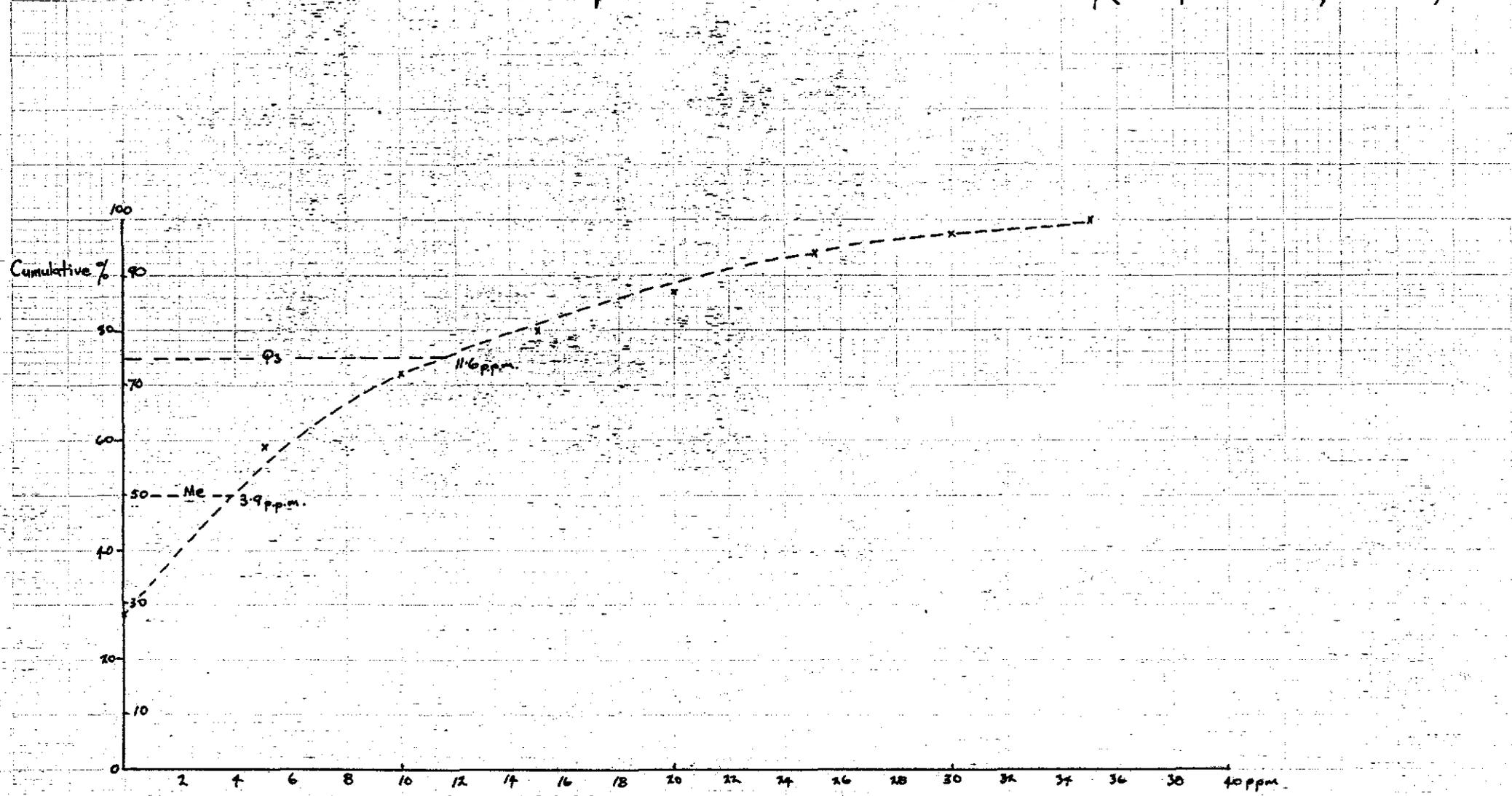
915017

STATISTICAL EVALUATION (LEAD) JAVIS-SPECIMEN CK SURVEY

ppm	NIL	5	10	15	20	25	30	35
Frequency	24	26	11	7	6	6	3	2
Cumulative Frequency	24	50	61	68	74	80	83	85
Cumulative %	28.2	58.8	72	80	87	94	97.5	100

915018

Statistical Evaluation Lead: Davis Creek-Specimen Creek 50 metre Stream Sediment Survey (85 Samples: 5027-84, 5086-112)



$Q_3 = 75\% = 11.6 \text{ ppm.}$   
 $Me = 50\% = 3.9 \text{ ppm.}$

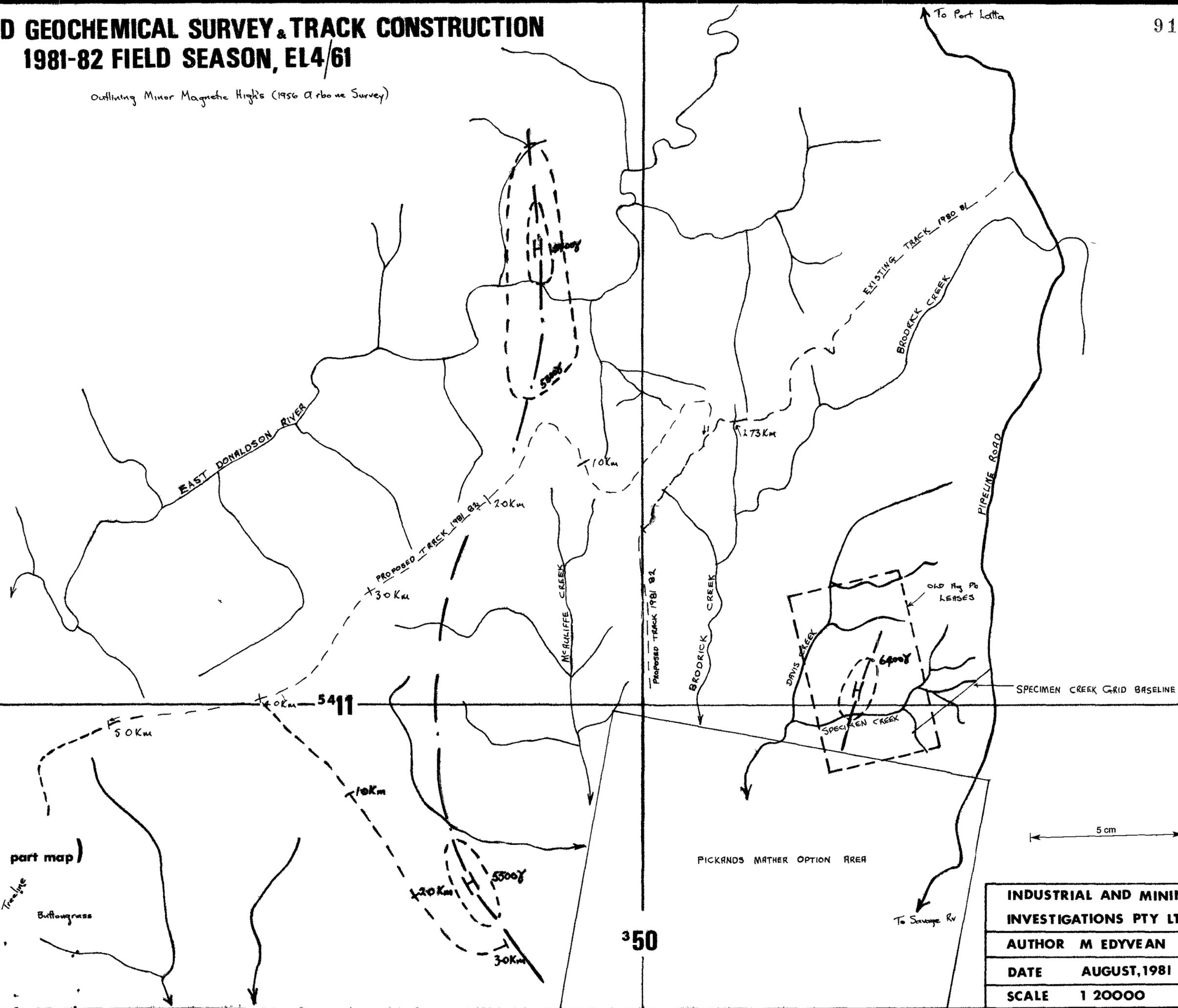
Std. Deviation =  $1.5(Q_3 - Me) = 1.5(7.7) = 11.55 \text{ ppm.}$   
 Normal Distribution =  $Me + \text{Std. Dev.} = 3.9 + 11.55 = 15.45 \text{ ppm.}$   
 Anomalous Value =  $Me + 4 \text{ Std. Dev.} = 3.9 + 46.2 = 50.10 \text{ ppm.}$

Anomalous Samples: NIL

# PROPOSED GEOCHEMICAL SURVEY & TRACK CONSTRUCTION 1981-82 FIELD SEASON, EL4/61

915019

Outlining Minor Magnetic High's (1956 airborne Survey)



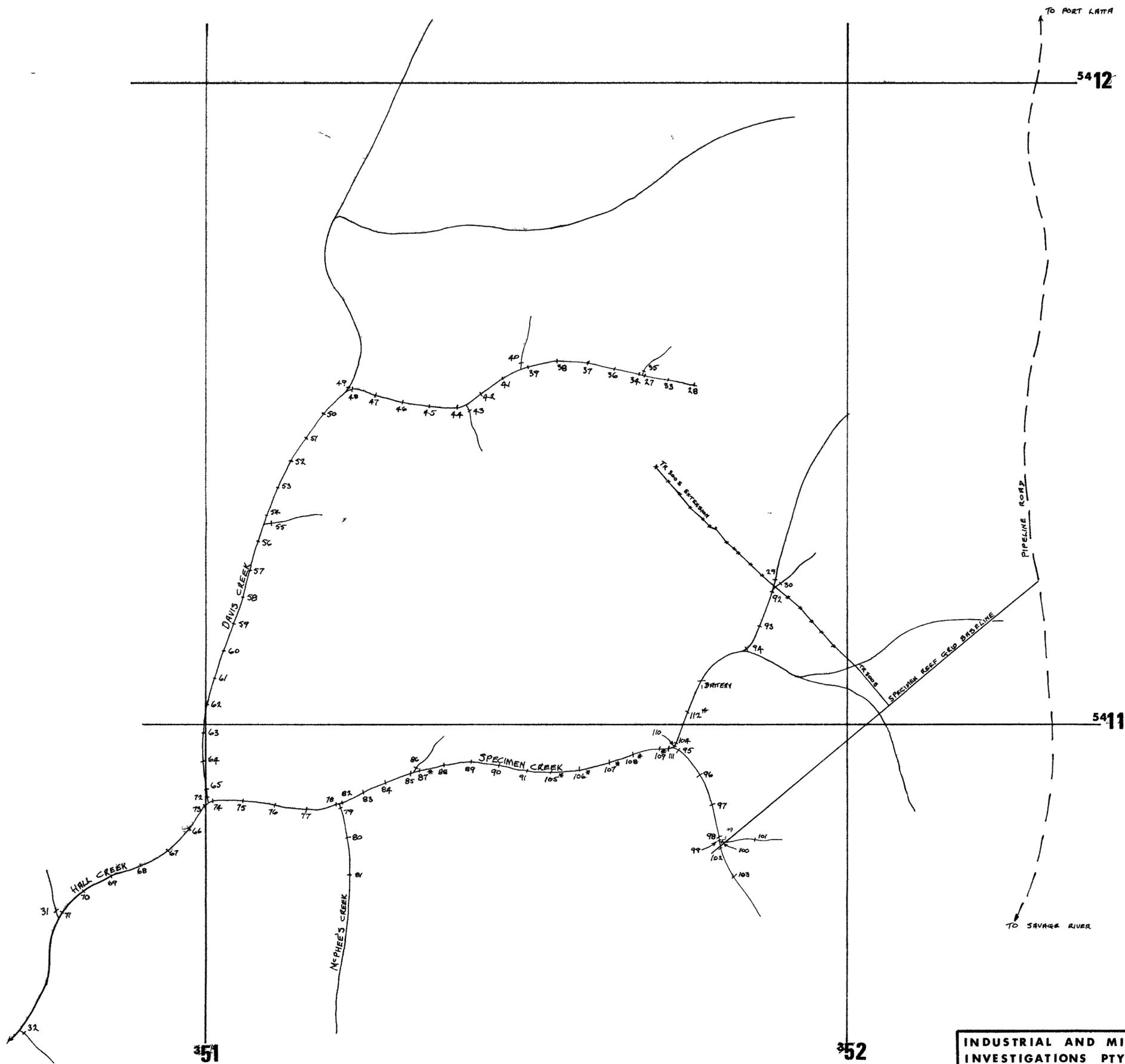
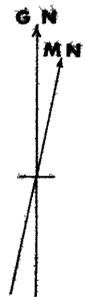
**HORTON** part map)

Teahe  
Buffongrass

<b>INDUSTRIAL AND MINING INVESTIGATIONS PTY LTD</b>	
<b>AUTHOR</b>	<b>M EDYVEAN</b>
<b>DATE</b>	<b>AUGUST, 1981</b>
<b>SCALE</b>	<b>1 20000</b>

# DAVIS CREEK-SPECIMEN CREEK GEOCHEMICAL SURVEY-(EL4/61)

## SAMPLE LOCATION

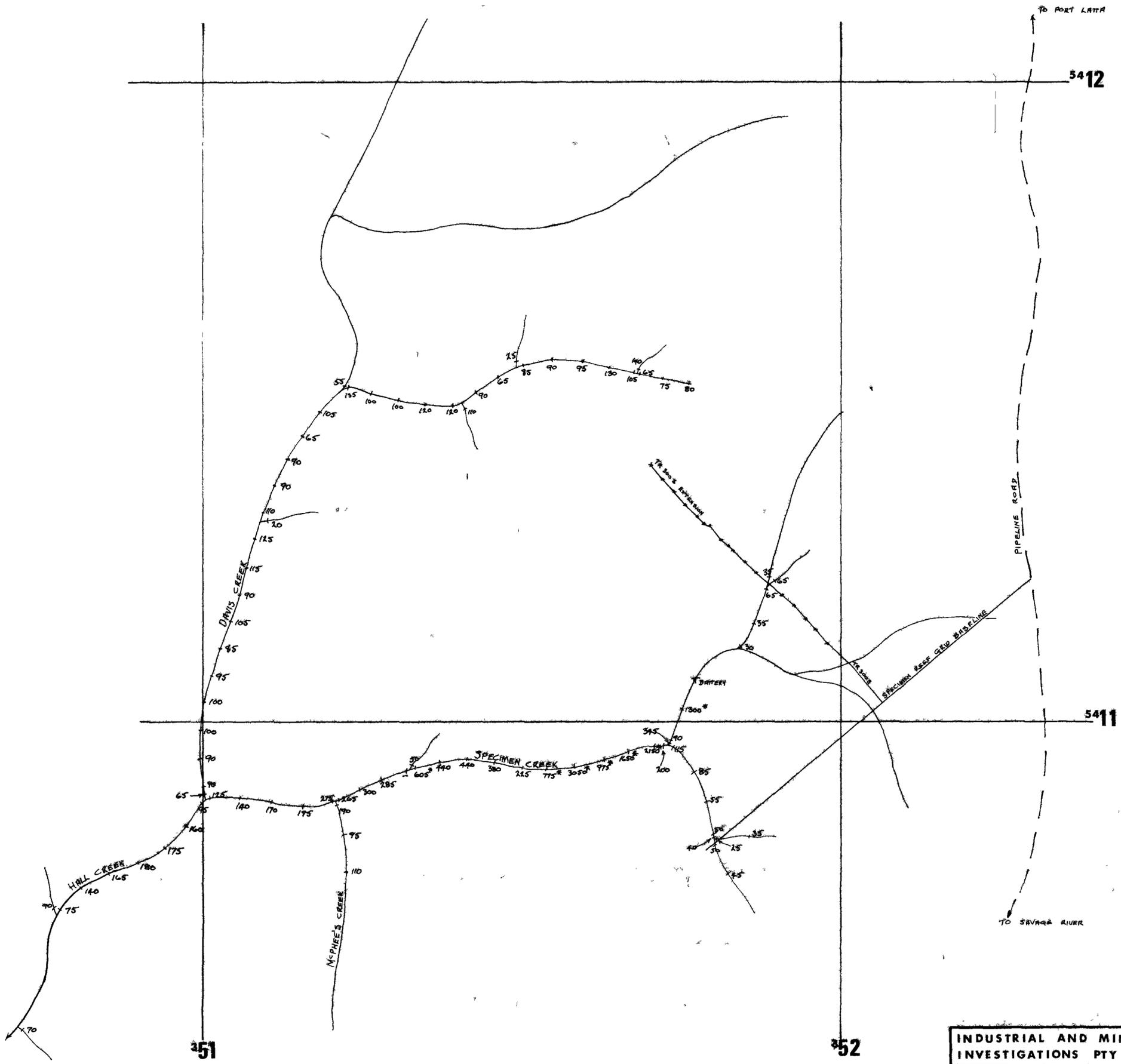
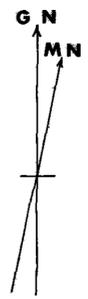


INDUSTRIAL AND MINING INVESTIGATIONS PTY LTD.
SCALE 1 4000
AUTHOR M EDYVEAN, P COVER, E DUBOWSKI
DATE NOVEMBER, 1981
ANOMALOUS SAMPLE *



# DAVIS CREEK-SPECIMEN CREEK GEOCHEMICAL SURVEY-(EL4/61)

## ZINC<sub>ppm</sub>



INDUSTRIAL AND MINING INVESTIGATIONS PTY LTD.
SCALE 1: 4000
AUTHOR M EDYVEAN
DATE. NOVEMBER, 1981
ANOMALOUS VALUE *

