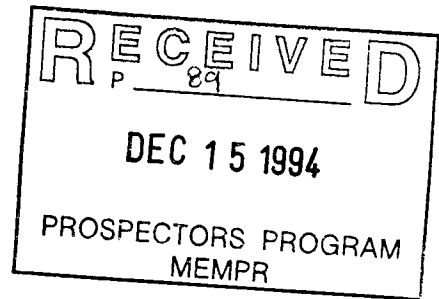


**BRITISH COLUMBIA**  
**PROSPECTORS ASSISTANCE PROGRAM**  
**MINISTRY OF ENERGY AND MINES**  
**GEOLOGICAL SURVEY BRANCH**

PROGRAM YEAR: 1994/95

REPORT #: PAP 94-28

NAME: DON SUTHERLAND



# **REPORT**

## **ZN CLAIM GROUP**

### **1994 EXPLORATION PROGRAM**

**by**

**W. Don Sutherland  
Geological Engineer**

**December, 1994**

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**REPORT**  
**ZN CLAIM GROUP**  
**1994 EXPLORATION PROGRAM**

**Introduction**

This report is prepared in compliance with the British Columbia Prospector's Assistance Program Reference No.94-95-P89. It documents the work performed, results obtained, conclusions derived therefrom and the expenditures incurred. The work was performed in accordance with the Letter of Agreement dated August 31, 1994.

**Property**

The subject property is located on the east side of Duncan Lake, Slocan Mining Division, British Columbia, N.T.S. 82K/7. It consists of 22 two post claims and 5 four post claims making 100 claim units in total. The claims are ZN-1 through ZN-8 and ZN-11 through ZN-29 inclusive. The claims are owned 50% by W. Don Sutherland of Cochrane, Alberta, and 50% by E. Allan Tipman of Calgary, Alberta.

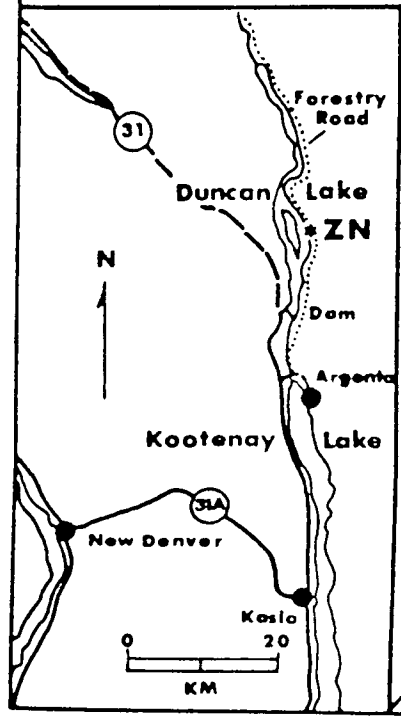
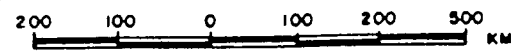
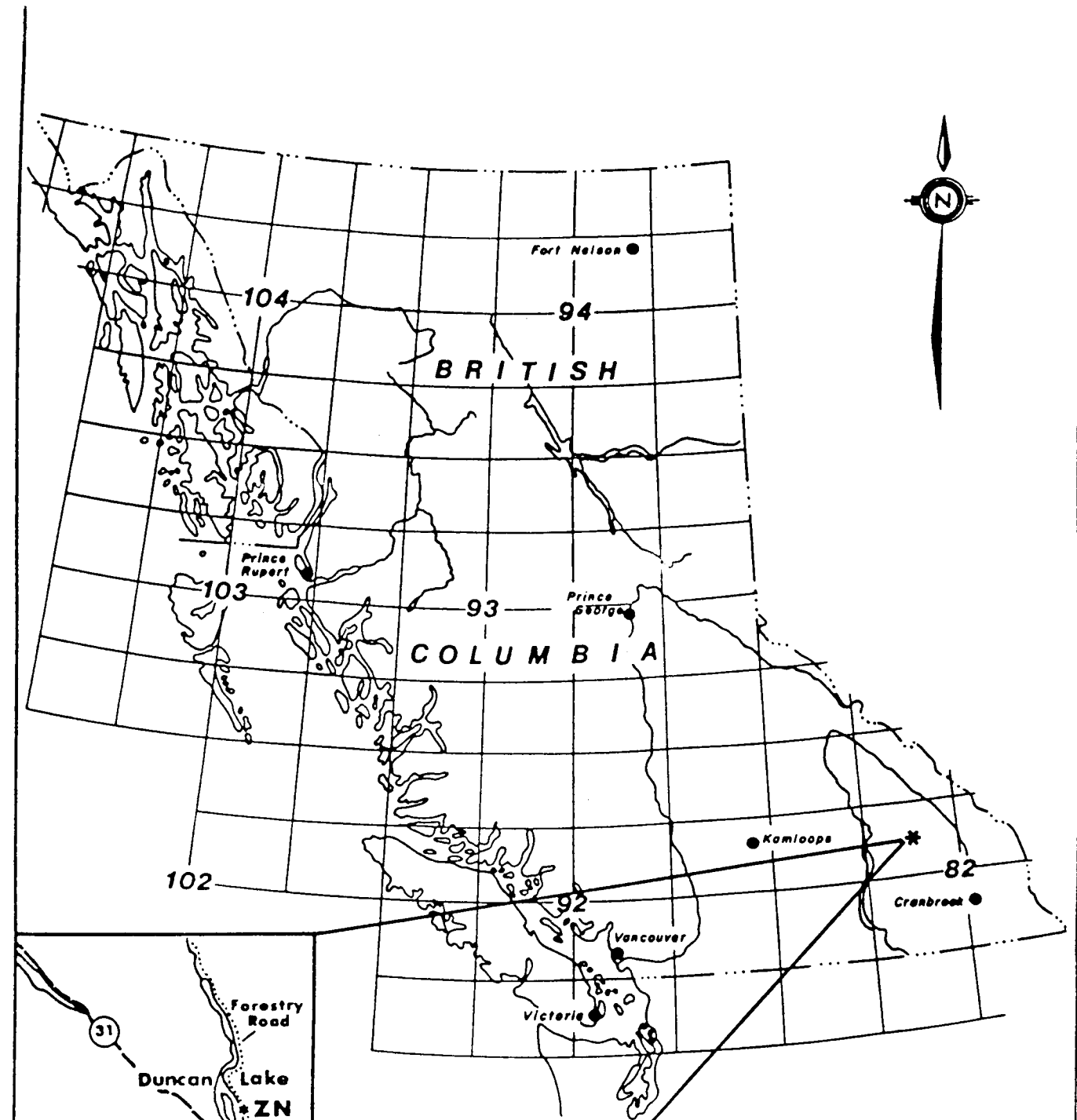
Access to the property is by way of the Duncan Lake Forestry Road north from Cooper Creek. The 17 km marker is 100m south of the hub of the geophysical and geochemical grid. This base station is coincident with the common location post for Claims ZN-25, ZN-26, ZN-28 and ZN-29. Cooper Creek is a small logging settlement on paved Provincial Highway No. 31, 40 km north of Kaslo.

**Geology**

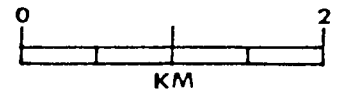
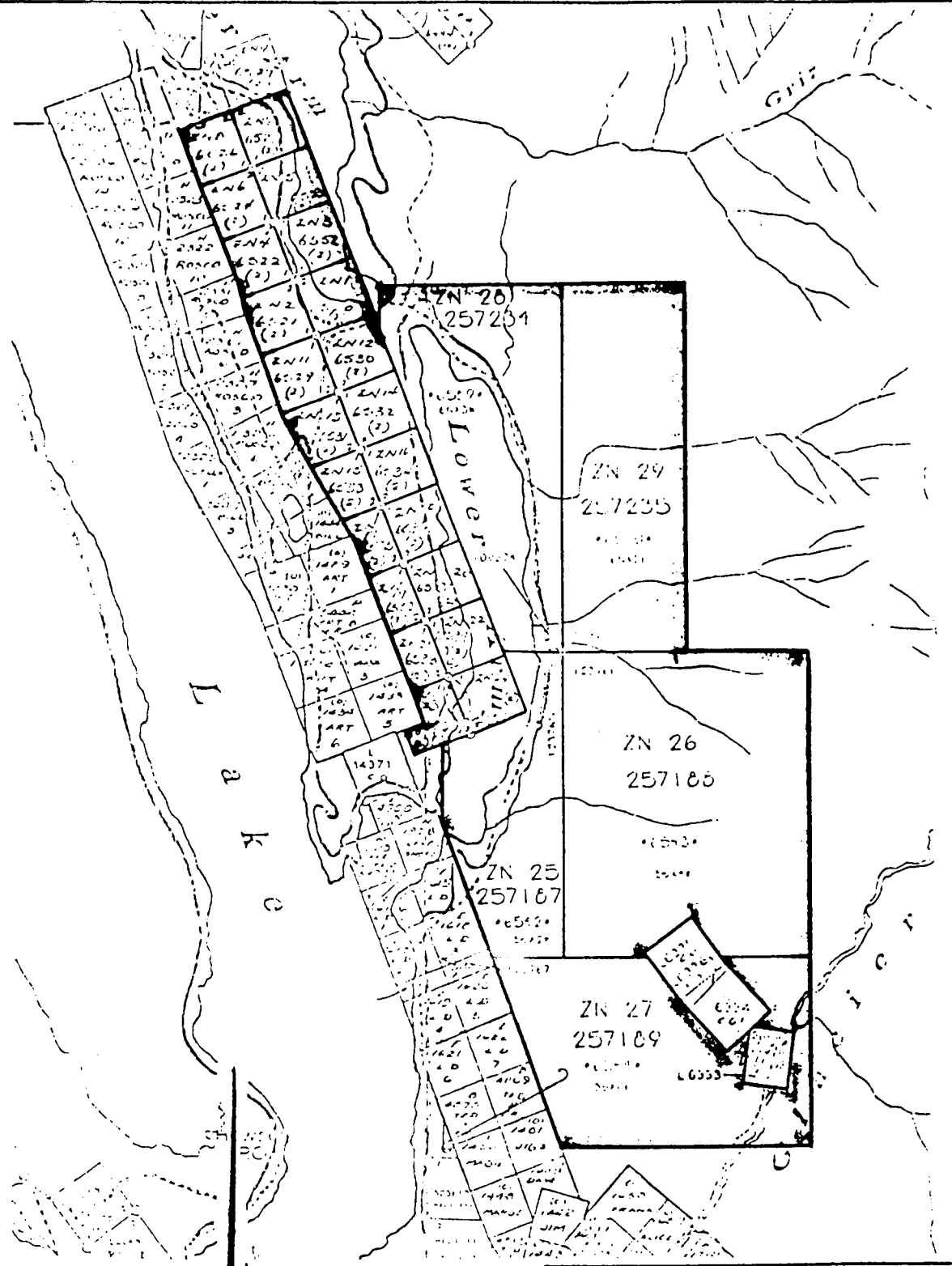
The Duncan Lake area lies within the Kootenay tectonic terrain of the Ominica Belt structural subdivision of the Columbian orogen.

The Duncan Anticline and the Howser Syncline are the principal structural elements of the area. The property covers the west limb of the Duncan Anticline, and both the core and east limb of the Howser Syncline.

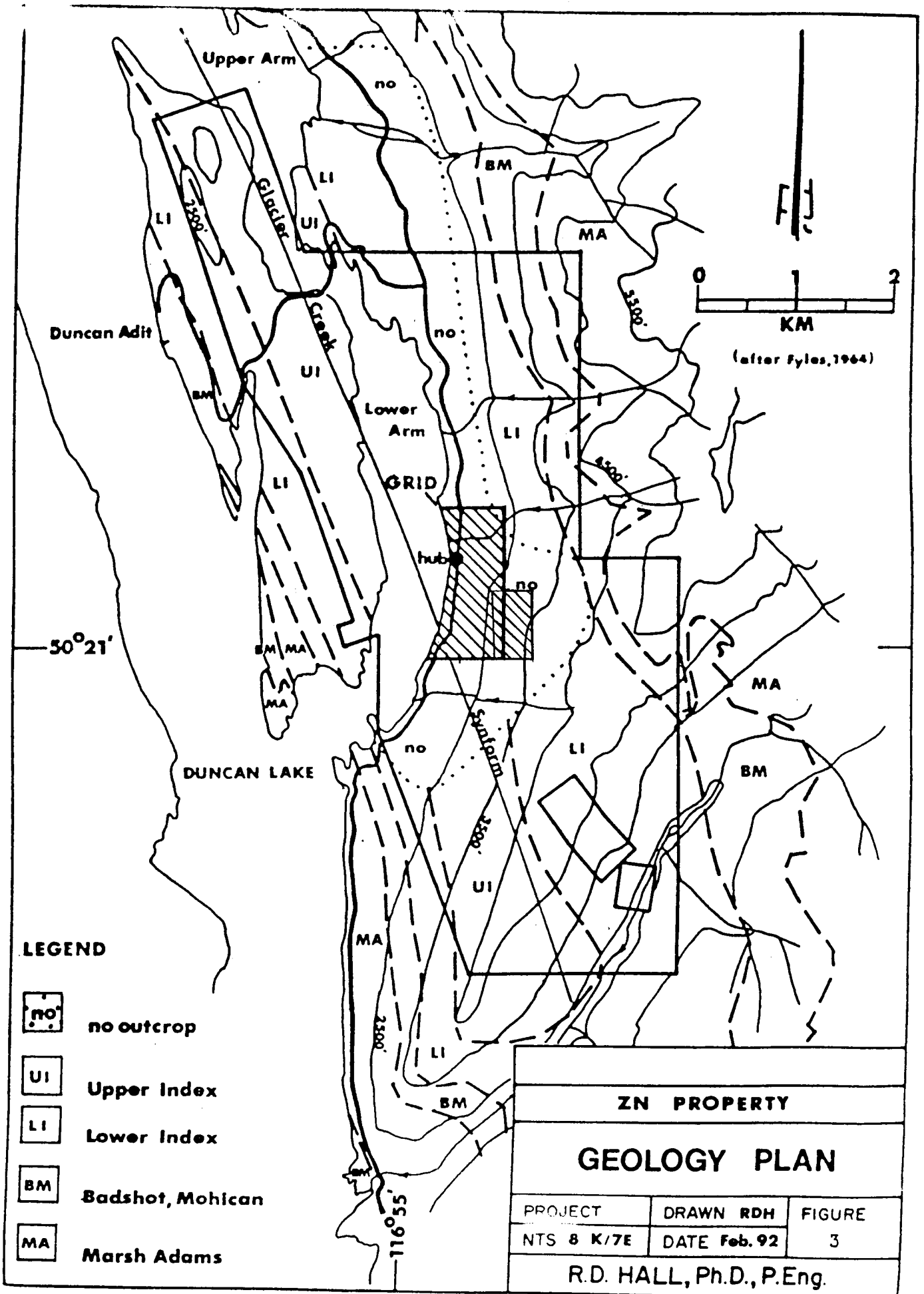
Quartzite of the Marsh Adams Formation and carbonates of the Badshot-Mohican formations, defining the east limb of the Howser Syncline are exposed along east perimeter of the property (Figure 3). The remainder of the property is thought to be underlain by younger strata of the Index Formation of the Lardeau Group as mapped by Fyles (1964). However, much of the property at lower elevations and in proximity to Duncan Lake has little or no outcrop, and the structural relationships within the Howser



<b>ZN PROPERTY</b>		
<b>LOCATION MAP</b>		
geology by	drawn by RDH	date Feb. 92
scale	nt # 82K/7	FIGURE 1



<b>ZN GROUP</b>		
<b>CLAIM MAP</b>		
PROJECT	DRAWN RDH	FIGURE
NTS 82K/7E	DATE Feb.92	2
<b>R.D. HALL, Ph.D., P.Eng.</b>		



**LEGEND**

- no no outcrop
- UI Upper Index
- LI Lower Index
- BM Badshot, Mohican
- MA Marsh Adams

<b>ZN PROPERTY</b>		
<b>GEOLOGY PLAN</b>		
PROJECT	DRAWN RDH	FIGURE
NTS 8 K/7E	DATE Feb. 92	3
R.D. HALL, Ph.D., P.Eng.		

Syncline are complex. The Index Formation is subdivided into an upper division of green chloritic schists and a lower division of grey carbonaceous schists. Both strata and cleavage strike approximately 340° and dip moderately to steeply east. The dominant lineation plunges 10° to the north by northwest.

Figure 3 shows the relationship of the property to the prominent geological features. It also shows the location of the geophysical-geochemical sampling grid to the property boundary and main topographic features.

### **History**

The property was staked in early 1991 as a geological exploration target. The claims were located to encompass the eastern limb of the Howser syncline which hosts the Duncan Mine zinc deposit on the western limb. It was postulated that the Duncan Mine deposit would project onto the claim group at depth and that similar deposits may occur along the eastern limb of the syncline.

A large caliche gossan was discovered along the east shore of Duncan Lake in 1991. The exposure resulted from shoreline erosion caused by the flooding of the Duncan Dam reservoir. This caliche would not have been exposed during the period of exploration and development of the Duncan Mine, which pre-dated the dam building and flooding. The caliche gossan, which is actively expanding, supports the hypothesis that other sulphide deposits existed up-slope to the east, i.e., along the east limb of the Howser Anticline.

Subsequent exploration has concentrated on the area immediately up-slope from the caliche gossan. A grid was established up slope from the gossan and geophysical and geochemical surveys were performed. One diamond drill hole was drilled in 1993 to test a magnetic trend which coincided with a moderate copper geochemical anomaly. Disseminated magnetite and elevated copper values were intersected in schistose volcanics but nothing of economic significance was encountered. Reconnaissance soil sampling up-slope from the diamond drill site returned highly anomalous zinc values at the higher elevations. This reinforced the hypothesis that a Duncan Mine type zinc deposit may occur along the eastern limb of the Howser Syncline.

### **1994 Program**

The 1994 exploration program was designed to test the area up-slope from that explored in 1991, 1992 and 1993. The objective of the program was to discover a volcanogenic multi-element sulphide deposit.

The existing grid was expanded to 700m east along lines 400m south through 1000m



south. Soil sampling and geochemical surveys were performed over the expanded grid area. Soil samples were taken at 10m intervals and geophysical readings taken at 5m intervals along the newly established grid lines. Lines were run by compass and hip chain with flagged stations every 10m. 100m stations were double flagged (red + blue) for ease of identification and to facilitate retrievability in the future. Terrain in the grid area is very steep, varying from 60% slopes on the west to 100% slopes on the east with the occasional vertical rock face. No allowance was made for elevational differences and the grid is "uncorrected" for slope. The area explored is +95% overburden covered. Most rock exposures are in the extreme south-east corner of the grid.

One test pit was dug to bedrock on line 3+00S at 5+20E. The pit was dug to check an anomalous copper geochemical result obtained at the site in 1992.

## **Program Results**

### **Geochemical Sampling**

The geochemical results for copper, lead, zinc, gold and silver are shown in plan in the accompanying Appendix I. Values for copper, lead and zinc are shown in composite on grid line assay profiles in Appendix II. Stacked assay profiles for copper, lead and zinc are shown individually in Appendix III. Sample particulars with corresponding assays and assay certificates are presented in Appendix IV.

The assay results show a consistently high zinc environment with soil geochemical values exceeding 1,000 ppm Zinc on five consecutive lines from 5+00S to 10+00S i.e., over 500m and still continuing to the south. The highest value was 1730 ppm Zinc on line 6+00S. Anomalous copper and lead values accompany the high zinc values on all six lines.

Anomalous copper values in the plus 100 ppm range occur on all grid lines, with the highest value of 314 ppm Cu on line 4+00S. The stacked assay profiles for copper show three possible anomalous trends striking slightly east of south.

Anomalous lead values show a more subdued but similar trend to the anomalous copper values. The highest lead value recorded was 274 ppm Pb on line 5+00S. Given that the mobility of lead in ground water is less than that of copper and markedly less than zinc, it may be that the anomalous lead values in the soils are a better indication of the precise location of mineralization in the bedrock than either copper or zinc. Three en echelon mineralized zones are inferred from the stacked geochemical profiles for lead. Follow-up trenching is warranted on at least three of the grid lines. The assay results for these are presented below. The assays for the sample highest up slope is listed on the top line of each table followed by successive down slope samples.

<u>Line</u>	<u>Station</u>	<u>Copper ppm</u>	<u>Lead ppm</u>	<u>Zinc ppm</u>
5+00S	4+60E	41	17	435
	4+50E	192	274	1390
	4+40E	118	69	531
	4+30E	90	109	733
	4+20E	197	83	770
6+00S	4+60E*	7	7	94
	4+50E	120	129	1530
	4+40E	78	131	1430
	4+30E	56	52	1070
	4+20E	95	30	660
9+00S	6+70E*	14	52	17
	6+60E	224	142	823
	6+50E	145	101	818
	6+40E	109	237	920
	6+30E	50	73	650

\* Outcrop

### Geophysical Surveys

Geophysical results are plotted in profile for each of the grid lines and are shown in Appendix V.

Readings were recorded at 5m intervals along the grid for Magnetic Total Field, VLF InPhase, VLF Quadriture and VLF Total Field. The instrument used was an Omni Plus. Readings were automatically stored by the instrument, then downloaded into a computer each evening. Computer print-outs of each traverse line were produced daily as the survey progressed. Compiled data was processed to produce a Fraser Filter profile for each traverse upon completion of the field work.

There is no apparent co-relation between the Total Field Magnetics and the geochemical results. There are no significant magnetic trends evident except a slight general decrease in Total Field Magnetics along most of the lines proceeding up slope to the east. This is contrary to expectations since the depth to bedrock may be expected to decrease from west to east as the traverse line proceeds easterly up the mountain slope.

VLF In Phase and Quadriture profiles do not show any distinct features. The Fraser Filter profiles however do show zones of enhanced conductivity. These correspond to the geochemical soil profiles for lead on all lines except Line 7+00S. This supports the assumption that the lead anomalies define the location of elevated copper, lead and zinc values in bedrock.

## Test Pitting

One test pit was dug at a location where prior soil sampling had recorded copper values of 368 ppm. Bedrock of graphitic argillite with rust seams was reached at a depth of 1m. The soil profile and bedrock were sampled and yielded the following results:

<b>Sample</b>	<b>Number</b>	<b>Cu ppm</b>	<b>Pb ppm</b>	<b>Zn ppm</b>	<b>Au ppb</b>
1992 Soil	D-377	368	11	310	
0-20 cm	D-735	42	16	415	17
20-75 cm	D-736	151	6	385	14
75-100 cm	D-737	93	2	51	7
Bedrock	D-715	42	<2	31	7

## Field Diary

1994

September 6

Sutherland travelled from Cochrane to Kaslo.

September 7

Sutherland established 5+00E base line from 3+00S to 10+00S.  
Established Line 10+00S from 3+00E to 5+00E.

September 8

Sutherland established grid line 10+00S from 5+00E to 7+00E,  
Line 9+00S from 3+00E to 7+00E  
Line 8+00S from 3+00E to 5+00E

September 9

Sutherland established grid line 8+00S from 5+00E to 7+00E.  
Line 7+00S from 3+00E to 7+00E

September 10

Sutherland established grid line 4+00S from 6+00E to 7+00E.  
Line 5+00E from 3+00E to 7+00E  
Soil sampled Line 4+00S from 6+00E to 7+00E.  
Line 5+00S from 5+00E to 7+00E

September 11

Sutherland established grid line 6+00S from 5+00E to 7+00E.  
Soil sampled Line 6+00S from 5+00E to 7+00E.

September 12

Sutherland soil sampled Line 5+00S from 4+00E to 5+00E.

Line 6+00S from 4+00E to 5+00E.  
Tipman travelled from Calgary to Kaslo.

September 13

Sutherland established grid line 7+00S from 5+00E to 7+00E.  
Soil Sampled Line 7+00S from 5+00E to 7+00E. (3)

Tipman ran magnetometer and VLF geophysical survey on Line 4+00S from 2+50E to 7+00E.

September 14

Sutherland soil sampled Line 8+200S from 5+00E to 7+00E. (5)

Tipman ran magnetometer and VLF geophysical survey on Line 5+00S from 3+00E to 7+00E.

Line 6+00S from 3+75E to 7+00E.

September 15

Sutherland soil sampled Line 10+00S from 5+00E to 6+00E.

Trenched at 3+00S, 5+00E 1 m deep to bed rock. Sampled test pit. (3)

Tipman ran magnetometer and VLF geophysical survey on Line 7+00S from 3+00E to 7+00E.

Line 8+00S from 3+00E to 7+00E.

September 16

Sutherland soil sampled Line 9+00S from 5+00E to 7+00E. (3)

Tipman ran magnetometer and VLF geophysical survey on Line 9+00S from 3+00E to 7+00E.

Line 10+00S from 3+00E to 7+00E.

September 17

Sutherland soil sampled Line 7+00S from 4+00E to 5+00E.

Line 8+00S from 4+00E to 5+00E. (1)

Tipman travelled from Kaslo to Calgary.

September 18

Sutherland soil sampled Line 9+00S from 4+00E to 5+00E.

Line 10+00S from 4+00E to 5+00E. (1)

September 19

Sutherland travelled from Kaslo to Cochrane.

## Conclusions

Results from soil sample analyses were highly anomalous in zinc. The high zinc values are supported by elevated copper values which indicate three possible en echelon mineralized zones within the broad zinc anomaly. This is reinforced by lead values which show three discrete anomalies co-incident with the copper anomalies.

Fraser Filter profiles of the VLF In Phase readings show enhanced conductivity over the lead anomalies on five of the six grid lines. It is concluded that the Fraser Filter-Lead Geochemistry combination defines the position of enhanced mineralization in bedrock. The inferred mineralized zones are up slope from the extensive caliche gossan exposed along the eastern shoreline of Duncan Lake. The calcium carbonate and iron in the gossan are probably sourced by the same mineralized zones that contribute the copper, lead and zinc to the soil geochemical anomalies.

The geochemical and geophysical indications continue southerly beyond the existing grid and there is another 3 km of untested strike in this direction on the ZN Claim Group.

Additional field work is warranted as follows:

1. Test pitting in the following locations-

Line 9+00S from 6+40E to 6+60E

Line 6+00S from 4+30E to 4+50E

Line 5+00S from 4+30E to 4+50E

2. Outcrop sampling for gold to the south and west of 10+00S 6+00E.

3. Expansion of the present geochemical and geophysical surveys to the south of Line 10+00S.

Respectfully submitted,



W. Don Sutherland  
Geological Engineer

December 12, 1994

## Statement of Qualifications

I, W. Don Sutherland of Glenbow Road, R.R. #2 Cochrane, Alberta hereby certify:

1. That I am a graduate of the Faculty of Applied Science and Engineering of the University of Toronto.
2. That I graduated with the degree of Bachelor of Applied Science (BASc) in 1949.
3. That my profession is that of Geological Engineer and that I have practiced my profession continuously since graduation.
4. That my undergraduate studies included mining geophysics and that I have been actively engaged in the application of mining geophysics since 1953.
5. That I am familiar with the use of geochemistry in mineral exploration and have personal experience relating thereto dating back to 1955.
6. That I conducted the soil sampling program and supervised the geophysical program on which this report is based.

Signed



W. Don Sutherland  
Geological Engineer

December 12, 1994

## **APPENDIX I**

### **GEOCHEMICAL RESULTS PLANS**

Copper

Lead

Zinc

Gold

Silver

# ZN CLAIM GROUP SAMPLING DATA 1994

## PPM SILVER

METRES EAST	LINE 400S	LINE 500S	LINE 600S	LINE 700S	LINE 800S	LINE 900S	LINE 1000S	METRES EAST
700	0.5	0.2	0.4	0.4	1.6	1.2		700
690		0.2	0.3	0.3		1.7		690
680	0.4	0.2	0.2	0.2	0.4	0.8		680
670	0.2	0.3	0.2	0.2	0.5			670
660	0.4	0.2	0.2	0.2	0.6	2.1		660
650	0.3	0.6	0.2	0.2	0.5	1.0	1.5	650
640	0.5	0.5	0.4	0.2	0.5	1.9		640
630	0.7	1.3	0.2	0.3	0.4	0.5	0.4	630
620	0.2	0.3	2.6	0.6	0.9	0.9	0.7	620
610	0.9	0.3	1.4	0.7	0.2	0.9	0.2	610
600	0.3	0.4	2.3	0.6	0.3	0.2	0.2	600
590		0.6	0.2	1.0	0.4	0.4	0.3	590
580		0.9	0.2	0.4	0.2	0.6	0.5	580
570		1.0	0.6	0.3	0.6	0.9	0.6	570
560		0.4	0.8	0.2	0.2	0.8	0.4	560
550		0.2	0.7	0.2	0.5	0.3	0.2	550
540		1.3	0.4	0.7	0.9	0.4	0.2	540
530		0.8	1.0	2.3	3.2	0.5	0.3	530
520		0.7	1.2	2.6	1.4	0.2	0.2	520
510		1.4	1.1	1.0	0.8	1.1	0.2	510
500		0.5	0.5	2.2	0.3	0.7	0.2	500
490		0.2	0.4	2.0	0.4	0.8	0.3	490
480		1.2	2.6	1.2	0.6	0.4	0.6	480
470		1.0	4.4	0.8	0.2	0.9	0.7	470
460		0.9	1.9	0.3	0.2	1.5	0.6	460
450		1.8		0.4	0.2	0.6	0.4	450
440		14.0	1.1	0.8	0.7	0.5	0.8	440
430		3.4	0.9	0.5	0.5	0.5	1.0	430
420		1.6	0.6	0.9	0.8	1.2	0.7	420
410		0.5	0.4	0.4	1.1	0.2	0.3	410
400		0.6	0.3	0.3	0.7	0.4	0.5	400
	1.3	0.6	0.6	0.2	0.6	0.5	0.4	
	LINE 400S	LINE 500S	LINE 600S	LINE 700S	LINE 800S	LINE 900S	LINE 1000S	

**ZN CLAIM GROUP**  
 DUNCAN LAKE, B.C. NTS 82K/7  
 SOIL SAMPLE ANALYSIS - SILVER  
 GRID LINE SPACING 100 M  
 SEPTEMBER, 1994



# ZN CLAIM GROUP SAMPLING DATA 1994 PPB GOLD

METRES EAST	LINE 400S	LINE 500S	LINE 600S	LINE 700S	LINE 800S	LINE 900S	LINE 1000S	METRES EAST
700	15	15	3	12	17	13		690
690	14	5	7	18	8	18		680
680	9	7	9	11	16	11	10	670
670	6	4	10	6	12	6	9	660
660	13	9	14	8	11	10	11	650
650	12	10	8	15	14	17	12	640
640	18	7	14	14	10	14	108	630
630	12	11	7	9	16	15	6	620
620	4	8	8	10	14	16	14	610
610	18	12	15	7	8	11	11	600
600		7	17	18	7	18	15	590
590		9	13	11	11	17	10	580
580		11	10	6	12	15	17	570
570		6	9	14	9	12	8	560
560		8	11	17	3	10	7	550
550		7	4	12	14	9	14	540
540		12	10	6	10	10	9	530
530		5	8	10	11	8	15	520
520		8	7	11	6	7	16	510
510		10	9	17	7	12	18	500
500		4	12	18	9	10	14	490
490		10	17	12	11	9	8	480
480		16	12	9	6	10	4	470
470		13	14	7	7	5	11	460
460		10		8	7	7	6	450
450		18	10	10	12	12	7	440
440		6	8	7	14	10	15	430
430		11	11	11	9	9	9	420
420		16	6	10	8	7	7	410
410		9	11	11	10	8	9	400
400		15	7	6	6	7	5	

**ZN CLAIM GROUP**  
 DUNCAN LAKE, B.C. NTS 82K/7  
 SOIL SAMPLE ANALYSIS - GOLD  
 GRID LINE SPACING 100 M  
 SEPTEMBER, 1994

# ZN CLAIM GROUP SAMPLING DATA 1994 PPM COPPER

METRES EAST	LINE 400S	LINE 500S	LINE 600S	LINE 700S	LINE 800S	LINE 900S	LINE 1000S	METRES EAST
700	14	15	28	58	139	159		700
690	12	18	32	51	93	177	19	690
680	13	19	31	56	110	122	28	680
670	27	18	46	66	85	14	107	670
660	21	32	44	48	144	220	119	660
650	17	48	30	45	102	145	32	650
640	21	65	91	36	73	109	60	640
630	15	42	39	90	134	50	63	630
620	51	41	37	83	102	59	44	620
610	79	38	110	59	66	43	34	610
600	70	22	28	57	65	45	49	600
590	61	24	20	58	59	74	30	590
580	45	25	83	48	81	116	23	580
570	17	17	47	47	63	128	64	570
560	31	26	40	28	76	115	30	560
550	32	22	41	37	88	54	43	550
540	58	34	48	51	91	47	32	540
530	25	49	90	117	137	46	42	530
520	18	78	73	38	105	50	53	520
510	33	40	77	95	94	55	34	510
500	31	45	31	93	92	53	81	500
490	30	27	40	63	45	58	64	490
480	54	28	120	60	74	45	33	480
470	295	36	38	36	57	76	53	470
460	314	41	7	38	56	45	99	460
450	86	192	120	37	51	57	79	450
440	57	118	78	28	28	43	32	440
430	42	90	58	43	35	44	47	430
420	155	197	95	34	39	41	58	420
410	84	30	60	52	64	35	24	410
400	60	49	107	49	37	42		400

**ZN CLAIM GROUP**  
 DUNCAN LAKE, B.C. NTS 82K/7  
 SOIL SAMPLE ANALYSIS - COPPER  
 GRID LINE SPACING 100 M  
 SEPTEMBER, 1994

# ZN CLAIM GROUP SAMPLING DATA 1994

## PPM LEAD

METRES EAST	LINE 400S	LINE 500S	LINE 600S	LINE 700S	LINE 800S	LINE 900S	LINE 1000S	METRES EAST
700	14	17	10	18	28	28		690
690	15	13	11	18	12	24	8	680
680	15	15	19	15	25	31	8	670
670	17	14	20	15	15	52	2	660
660	21	13	18	16	17	142		650
650	15	11	18	13	21	101	34	640
640	18	13	9	12	18	287	5	630
630	13	11	8	13	20	73	50	620
620	18	9	15	11	24	150	59	610
610	16	12	14	15	17	74	48	600
600	18	11	8	28	19	37	46	590
590	14	10	11	17	16	35	53	580
580	12	11	10	14	17	40	37	570
570	13	12	13	11	18	38	35	560
560	9	14	12	10	18	41	28	550
550	11	11	13	13	20	44	16	540
540	14	13	13	20	29	42	20	530
530	28	14	11	31	75	28	15	520
520	11	15	10	17	40	37	12	510
510	13	14	12	19	65	55	13	500
500	14	12	14	16	41	32	11	490
490	12	14	12	55	46	32	18	480
480	13	13	23	22	23	34	21	470
470	18	14	24	19	21	41	20	460
460	23	17	7	23	19	35	17	450
450	23	274	129	24	28	37	20	440
440	19	69	131	35	25	30	28	430
430	20	109	52	32	23	36	19	420
420	18	83	30	23	22	30	15	410
410	61	58	24	22	20	25	20	400
400	34	42	68	20	19	33	22	400

**ZN CLAIM GROUP**  
 DUNCAN LAKE, B.C. NTS 82K/7  
 SOIL SAMPLE ANALYSIS - LEAD  
 GRID LINE SPACING 100 M  
 SEPTEMBER, 1994

# ZN CLAIM GROUP SAMPLING DATA 1994

## PPM ZINC

METRES EAST	LINE 400S	LINE 500S	LINE 600S	LINE 700S	LINE 800S	LINE 900S	LINE 1000S	METRES EAST
700	113	128	139	157	938	697		700
690	147	104	148	192	287	610		690
680	127	119	156	283	474	705	205	680
670	124	104	141	284	413	17	298	670
660	162	191	288	270	324	623	56	660
650	226	293	340	287	337	818	1020	650
640	195	314	445	330	540	920	139	640
630	280	348	314	645	577	650	854	630
620	345	352	670	677	490	652	1130	620
610	575	315	807	732	372	700	820	610
600	496	362	450	810	540	644	855	600
590	493	240	351	506	522	666	946	590
580	520	339	419	520	507	925	673	580
570	476	190	595	229	495	1010	710	570
560	342	300	503	344	554	820	425	560
550	638	311	395	402	610	675	286	550
540	605	480	610	655	735	781	300	540
530	510	414	473	1120	1120	527	342	530
520	399	465	500	721	650	745	313	520
510	270	464	416	605	615	656	357	510
500	242	230	457	414	582	500	280	500
490	171	252	532	711	700	652	360	490
480	259	365	1200	560	376	473	324	480
470	422	454	1010	335	389	605	345	470
460	440	435	94	545	335	442	330	460
450	581	1390	1730	565	396	679	370	450
440	598	531	1530	722	360	440	365	440
430	814	733	1070	570	458	395	276	430
420	212	770	660	526	314	423	198	420
410	850	655	755	330	237	467	265	410
400	616	1220	798	255	584	430	373	400
	LINE 400S	LINE 500S	LINE 600S	LINE 700S	LINE 800S	LINE 900S	LINE 1000S	

**ZN CLAIM GROUP**  
 DUNCAN LAKE, B.C. NTS 82K/7  
 SOIL SAMPLE ANALYSIS - ZINC  
 GRID LINE SPACING 100 M  
 SEPTEMBER, 1994

## **APPENDIX II**

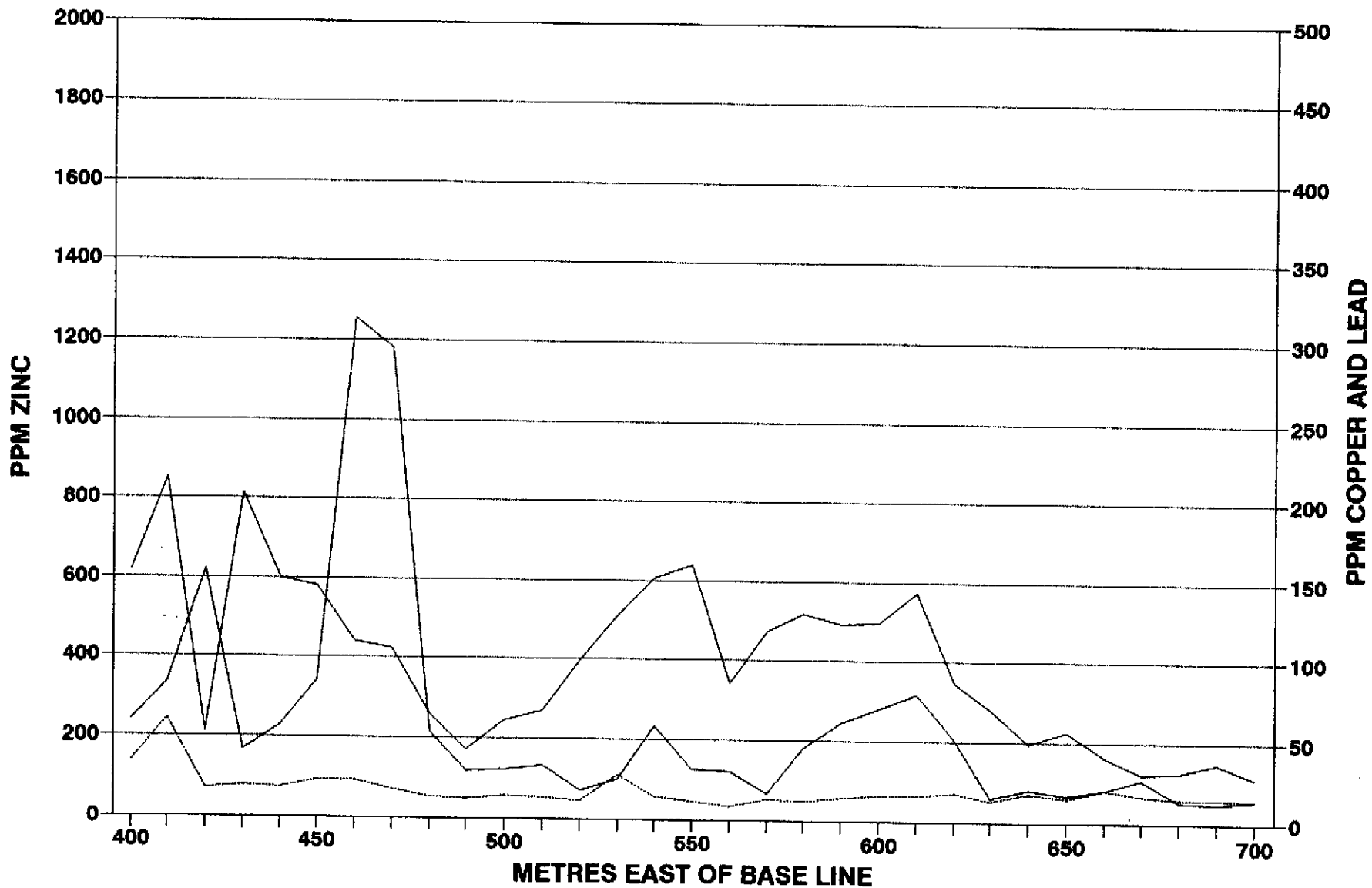
### **COMPOSITE ASSAY PROFILES**

**Copper**

**Lead**

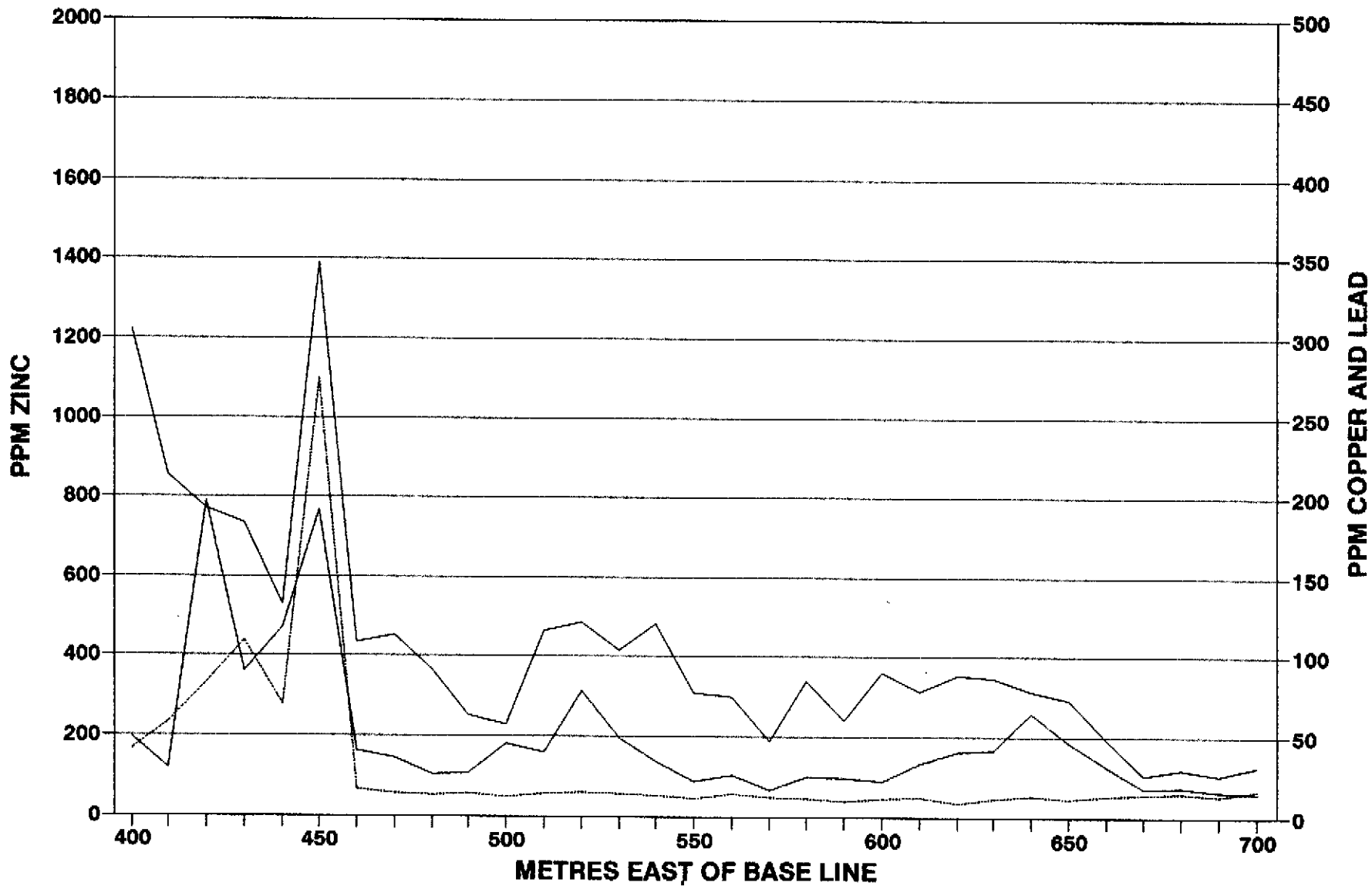
**Zinc**

# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEMICAL VALUES LINE 400S



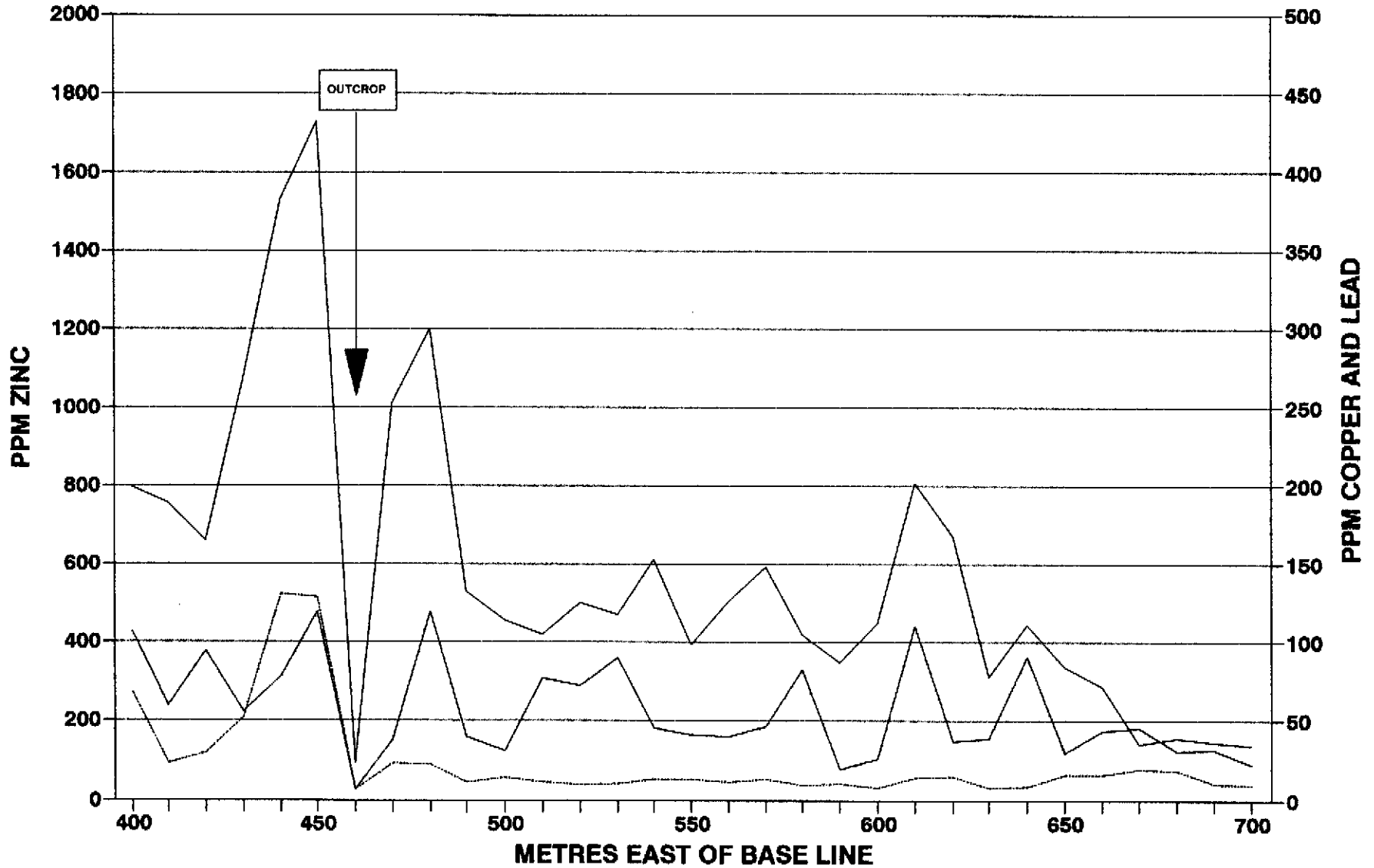
— PPM ZINC — PPM COPPER — PPM LEAD

# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEMICAL VALUES LINE 500S



— PPM ZINC    — PPM COPPER    — PPM LEAD

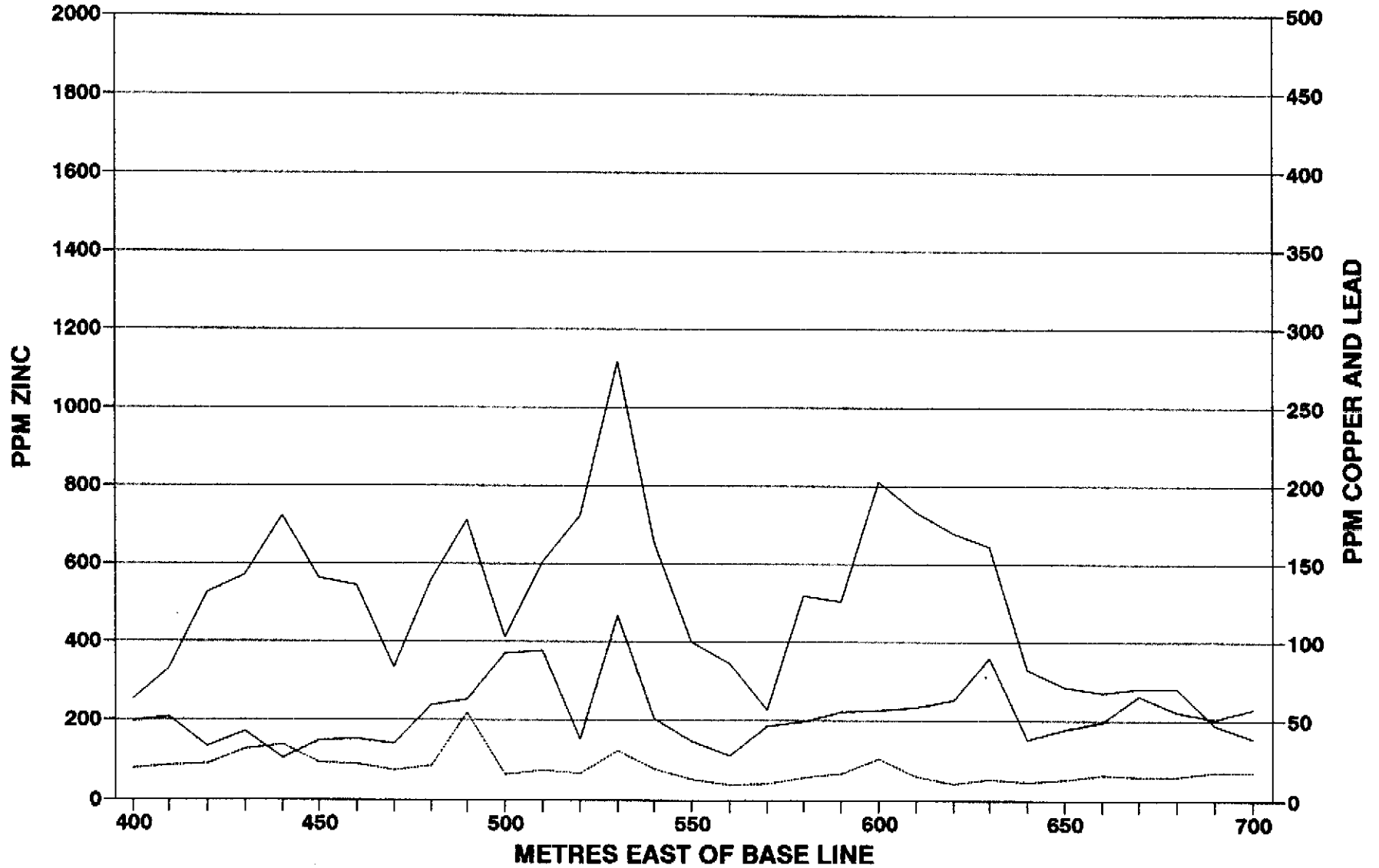
# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEMICAL VALUES LINE 600S



— PPM ZINC    — PPM COPPER    - - - PPM LEAD

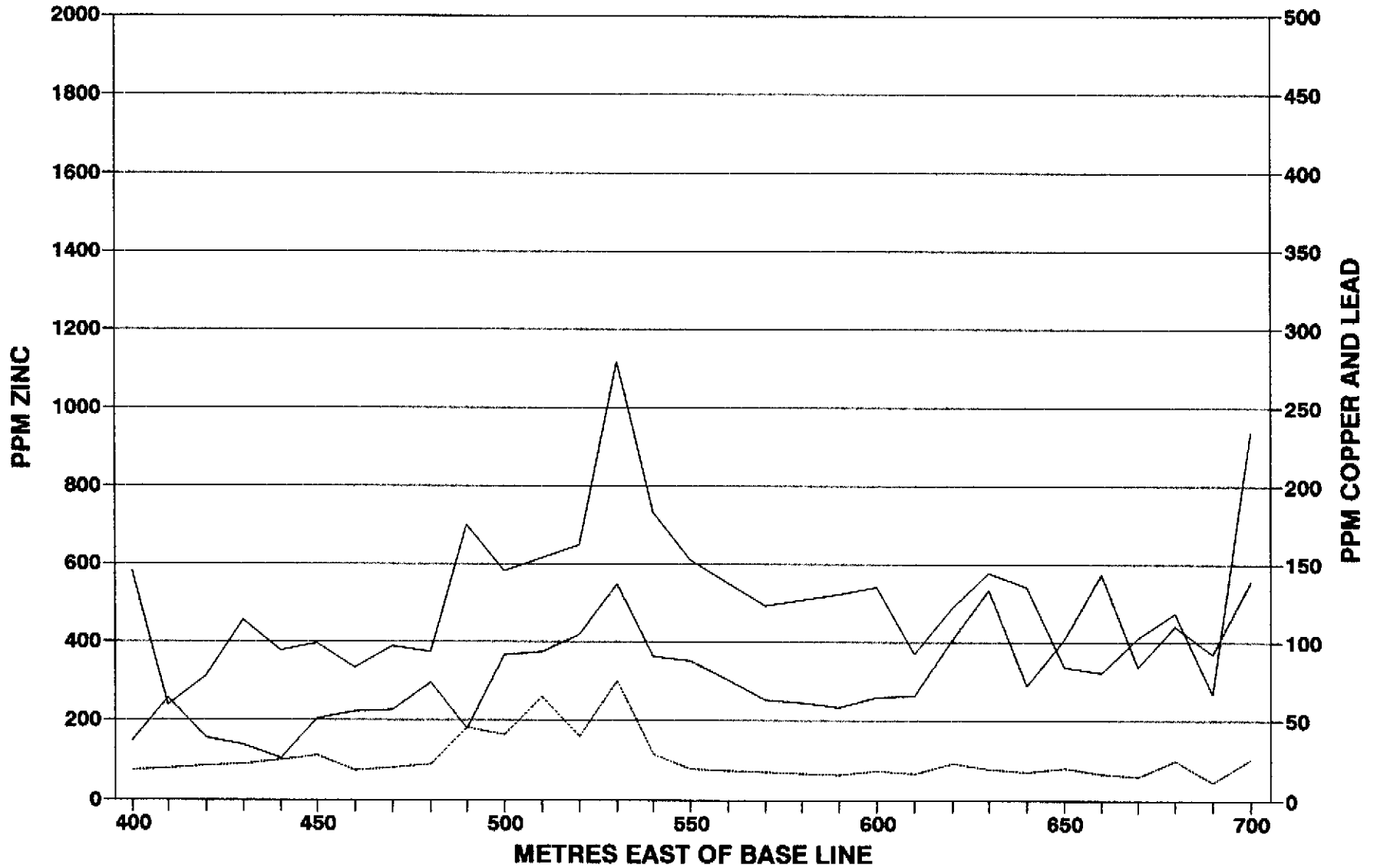


# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEMICAL VALUES LINE 700S



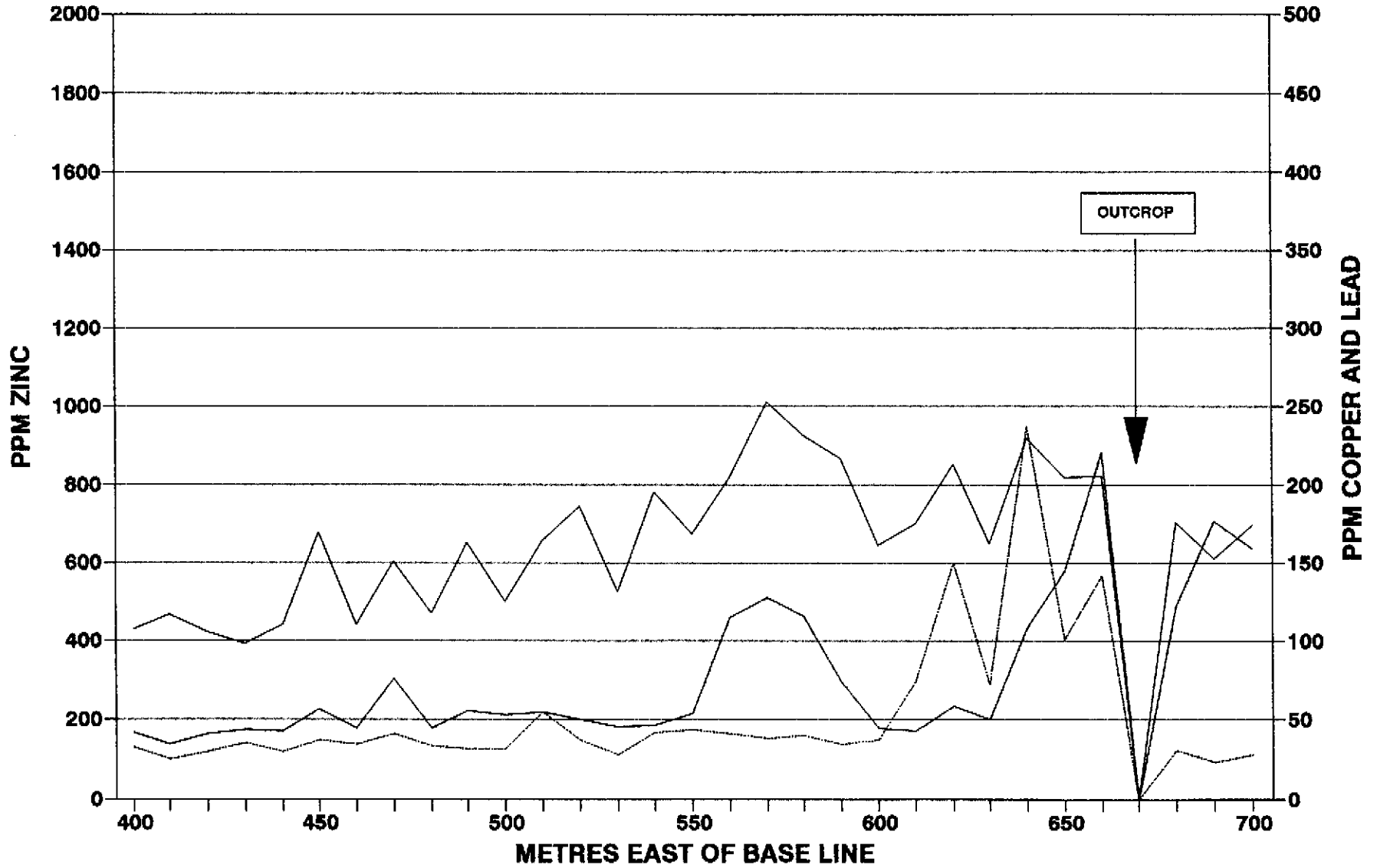
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# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEMICAL VALUES LINE 800S



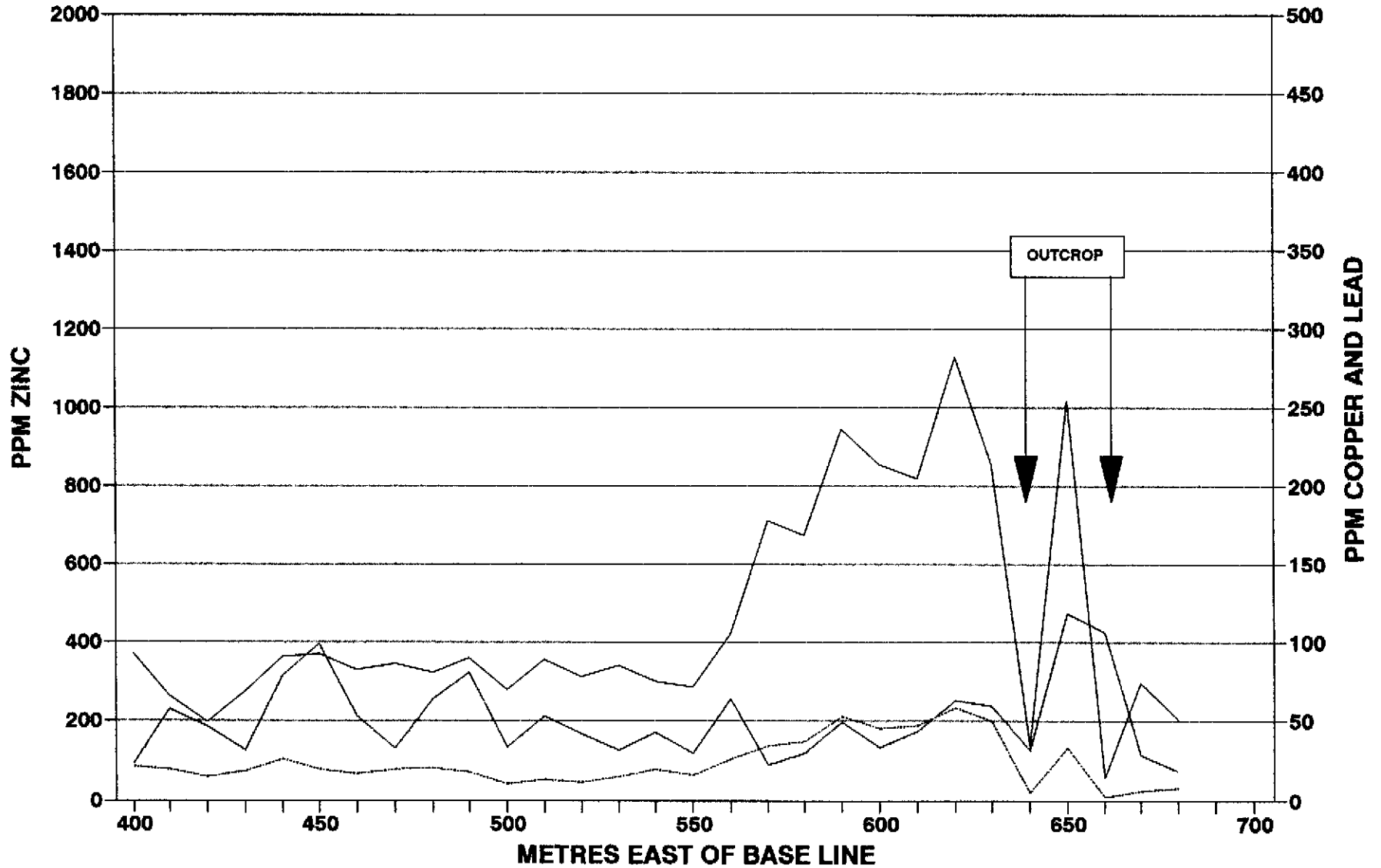
— PPM ZINC    — PPM COPPER    — PPM LEAD

# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEMICAL VALUES LINE 900S



— PPM ZINC    — PPM COPPER    — PPM LEAD

# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEMICAL VALUES LINE 1000S



— PPM ZINC    — PPM COPPER    - - - PPM LEAD

## **APPENDIX III**

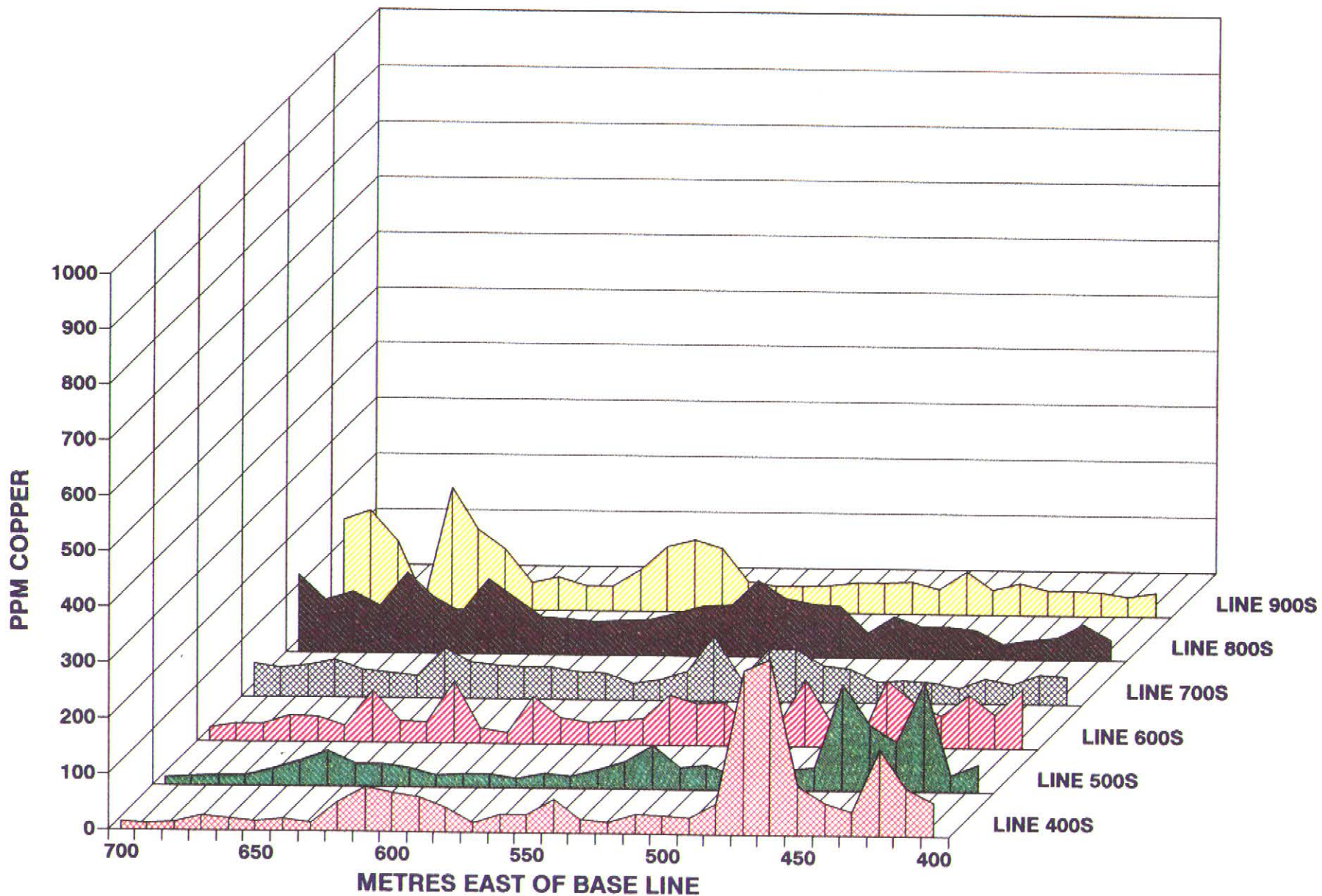
### **STACKED ASSAY PROFILES**

**Copper**

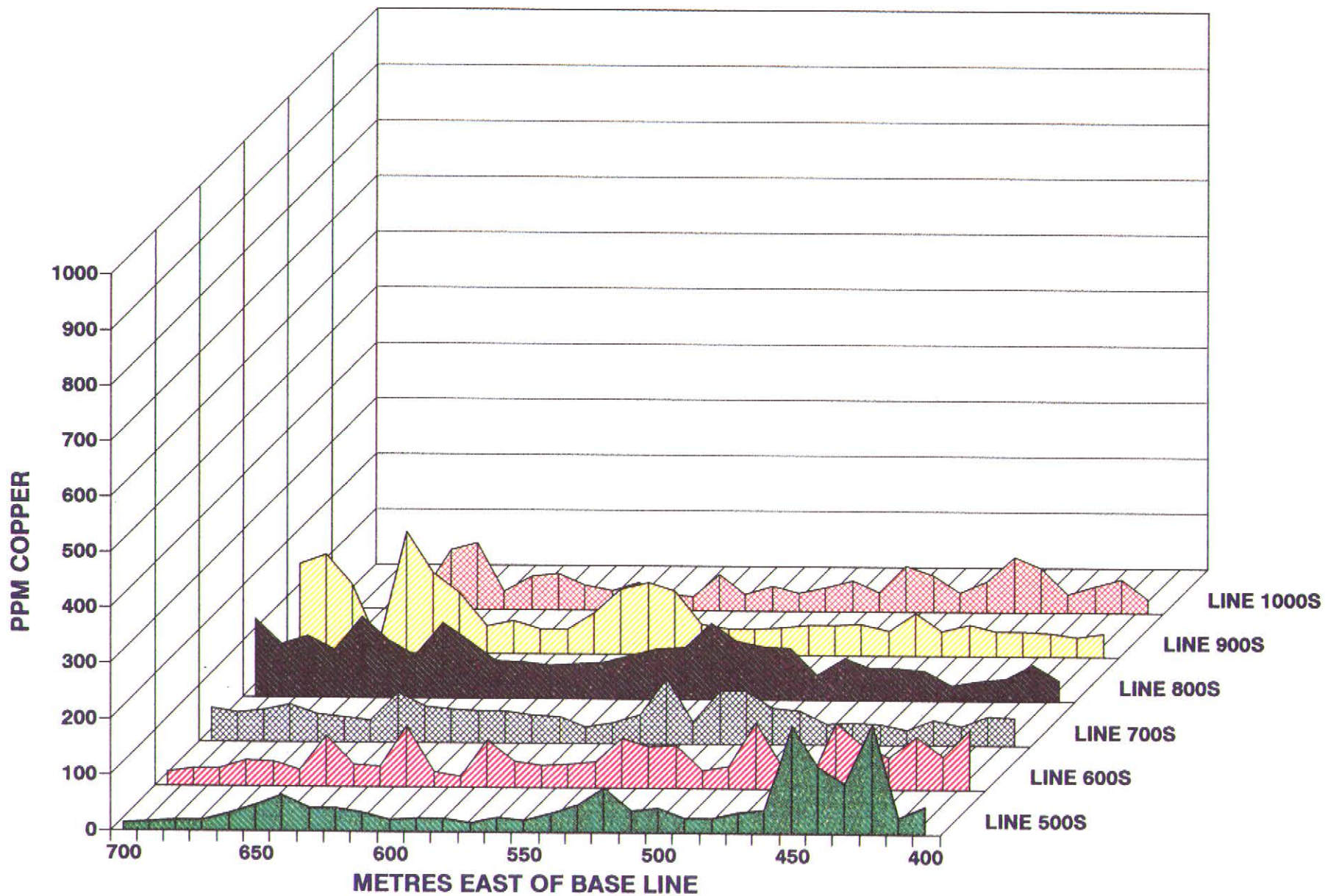
**Lead**

**Zinc**

# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEM VALUES LINES 400S TO 900S



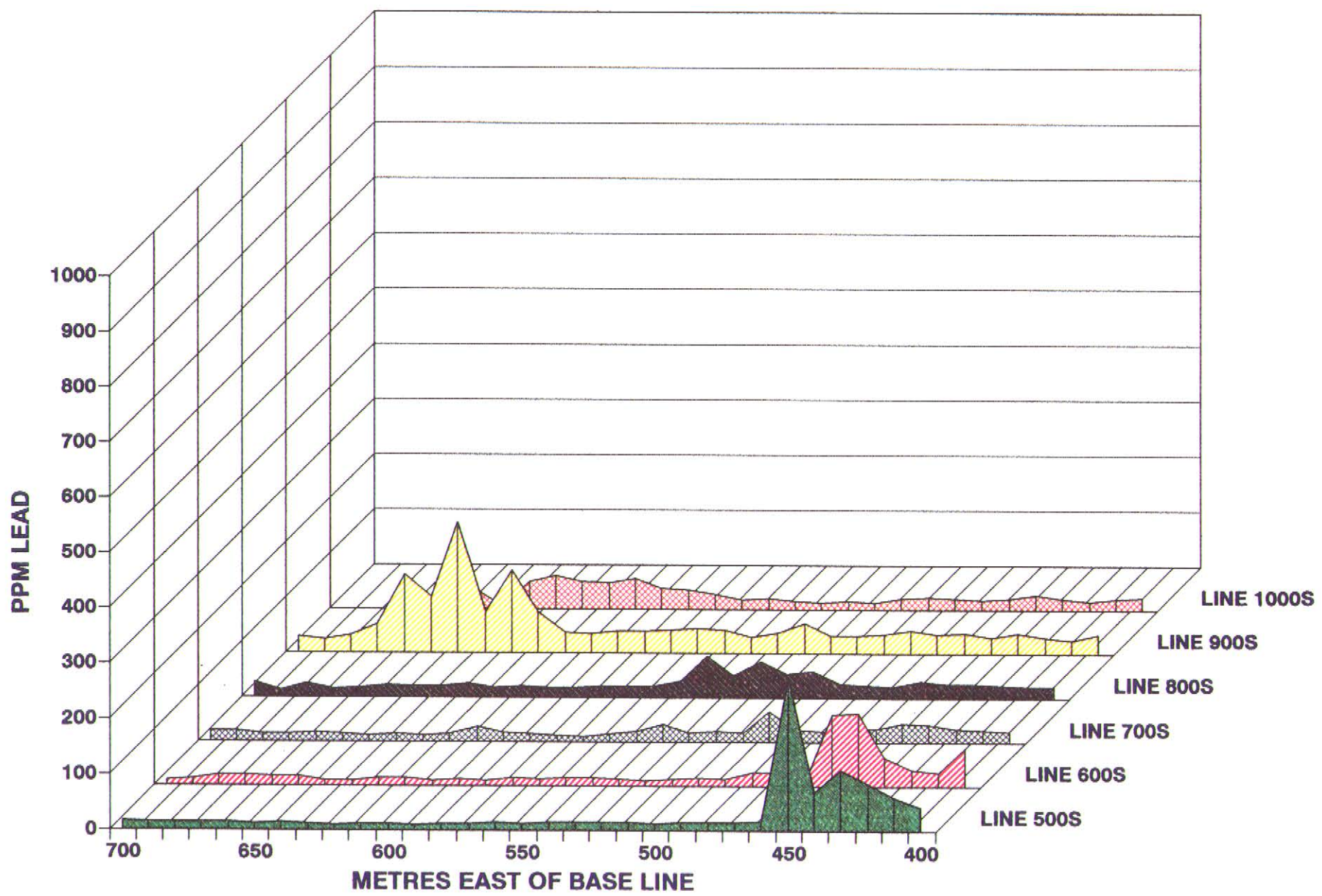
# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEM VALUES LINES 500S TO 1000S



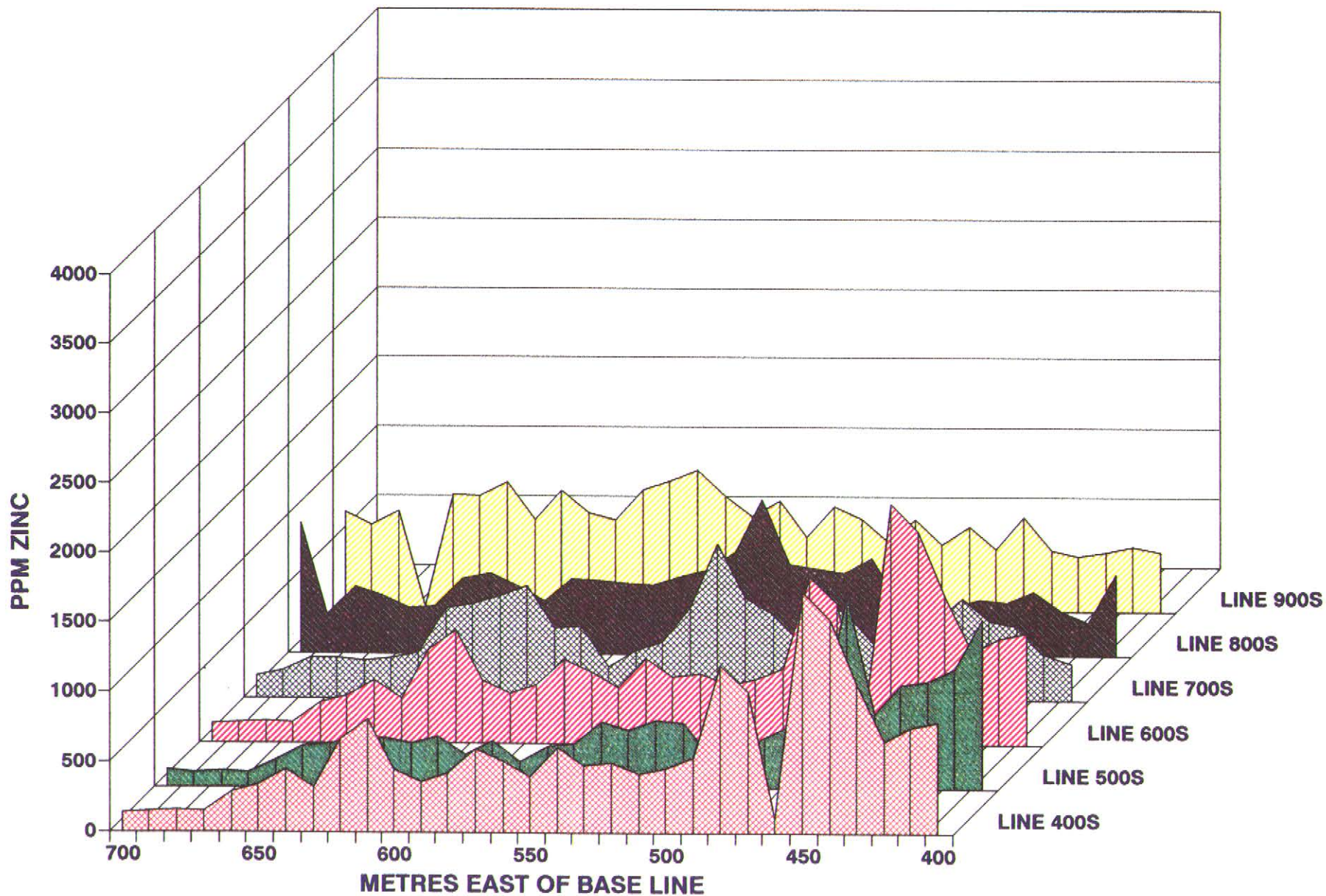




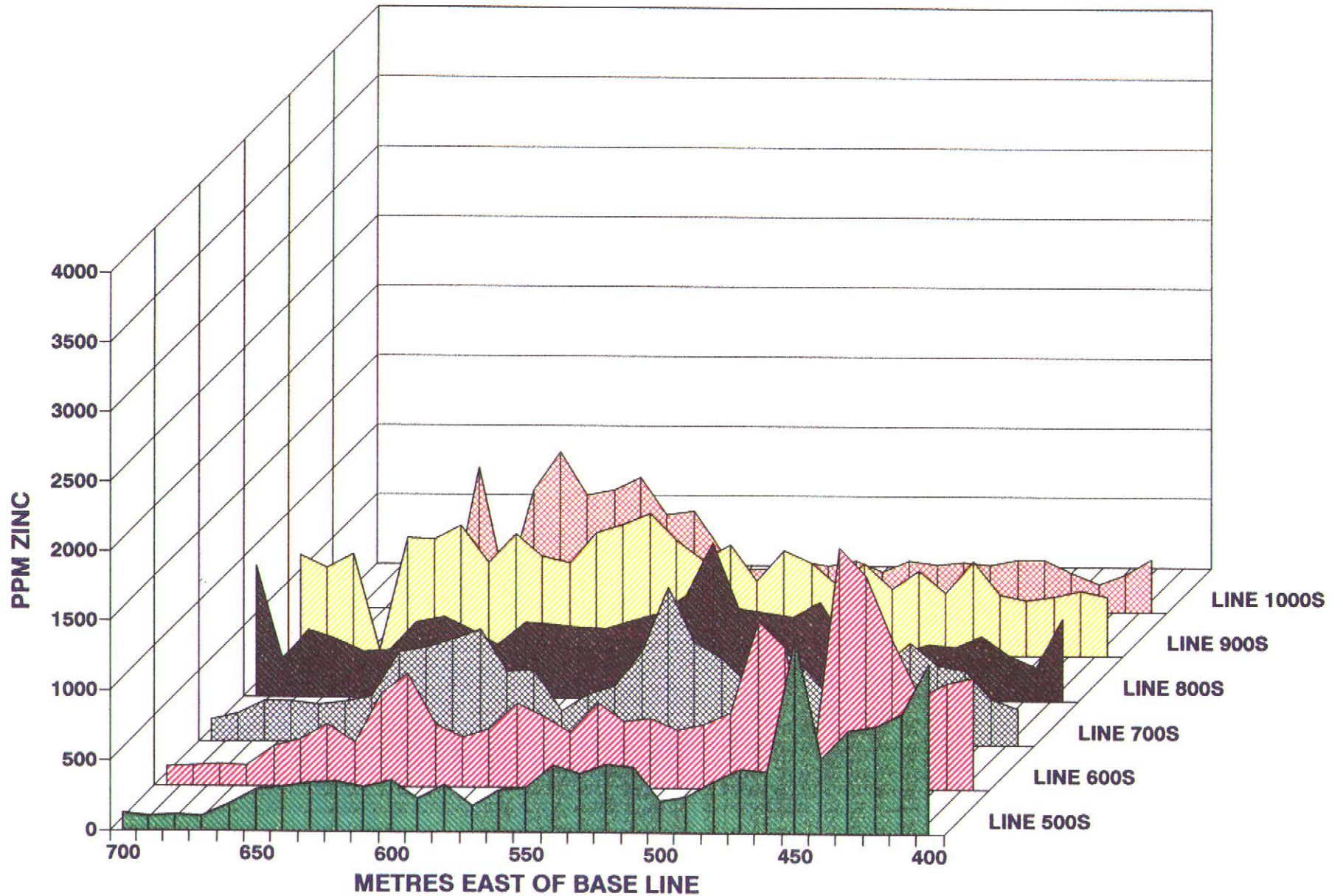
# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEM VALUES LINES 500S TO 1000S



# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEM VALUES LINES 400S TO 900S



# 1994 SOILS SURVEY: ZN CLAIMS GEOCHEM VALUES LINES 500S TO 1000S



**APPENDIX IV**

**SAMPLE DATA**

**ASSAY CERTIFICATES**

Line 4+00SSAMPLE DATA

<u>Station</u>	<u>Sample</u>	<u>Depth cm</u>	<u>Description</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Au ppb</u>	<u>Ag ppm</u>
4+00E	D-413	40	Dark Grey	60	34	616		
10	414	35	Dark Grey	84	61	850		
20	415	40	Dark Grey + Brown	155	18	812		
30	416	35	Grey	42	20	814		
40	417	35	Grey	57	19	598		
50	418	40	Grey	86	23	581		
60	419	40	Grey	314	23	440		
70	420	40	Grey	295	18	422		
80	421	30	Grey	54	13	259		
90	422	35	Grey	30	12	171		
5+00E	423	30	Grey-Brown	31	14	242		
10	424	30	Light Brown	33	13	270		
20	425	35	Light Brown	18	11	399		
30	426	30	Grey-Brown	25	28	510		
40	427	35	Grey-Brown	58	14	605		
50	428	30	Dark Grey-Brown	32	11	638		
60	429	35	Grey-Brown	31	9	342		
70	430	25	Grey	17	13	476		
80	431	40	Dark Grey-Brown	45	12	520		
90	432	40	Black	61	14	493		
6+00E	433	40	Dark Grey	70	16	496		
10	610	42	Grey	79	16	575	18	0.3
20	609	42	Grey-Brown	51	18	345	4	0.9
30	608	44	Light Brown	15	13	280	12	0.2
40	607	40	Light Brown	21	18	195	16	0.7
50	606	41	Light Brown	27	15	226	12	0.5
60	605	34	Orange-Brown	21	21	162	13	0.3
70	604	42	Light Brown	27	17	124	6	0.4
80	603	40	Light Brown	13	15	127	9	0.2
90	602	37	Orange-Brown	12	15	147	14	0.4
7+00E	601	38	Light Brown	14	14	113	15	0.5

Line 5+00SSAMPLE DATA

<u>Station</u>	<u>Sample</u>	<u>Depth cm</u>	<u>Description</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Au ppb</u>	<u>Ag ppm</u>
4+00E	D-663	44	Grey	49	42	1220	15	1.3
10	664	40	Grey	30	58	855	9	0.6
20	665	36	Grey-Brown	197	83	770	16	0.5
30	666	43	Dark Grey	90	109	733	11	1.6
40	667	40	Grey	118	69	531	6	3.4
50	668	40	Grey	192	274	1390	16	14.0
60	669	40	Grey-Brown	41	17	435	10	1.8
70	670	32	Grey-Brown	36	14	454	13	0.9
80	671	34	Brown	26	13	365	16	1.0
90	672	38	Brown	27	14	252	10	1.2
5+00E	631	43	Grey-Brown	45	12	230	4	<0.2
10	630	36	Grey-Brown	40	14	464	10	0.5
20	629	32	Grey-Brown	78	15	485	8	1.4
30	628	40	Grey	49	14	1414	5	0.7
40	627	38	Grey-Green	34	13	480	12	0.8
50	626	34	Brown + Grey	22	11	311	7	1.3
60	625	35	Grey-Green	26	14	300	8	0.2
70	624	34	Grey-Green	17	12	190	6	0.4
80	623	48	Grey-Green	25	11	339	11	1.0
90	622	41	Grey-Green	24	10	240	9	0.9
6+00E	621	37	Grey-Green	22	11	362	7	0.6
10	620	46	Grey-Green	33	12	315	12	0.4
20	619	47	Grey	41	9	352	8	0.3
30	618	38	Grey	42	11	346	11	0.3
40	617	50	Grey-Green	65	13	314	7	1.3
50	616	41	Grey	46	11	293	10	0.5
60	615	36	Grey-Brown	32	13	191	9	0.6
70	614	32	Brown	18	14	104	4	0.2
80	613	37	Brown	19	15	119	7	0.3
90	612	40	Light Brown	16	13	104	5	<0.2
7+00E	611	38	Brown	15	17	126	15	0.2

Line 6+00SSAMPLE DATA

<u>Station</u>	<u>Sample</u>	<u>Depth cm</u>	<u>Description</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Au ppb</u>	<u>Ag ppm</u>
4+00E	D-653	43	Grey	107	68	798	7	0.6
10	654	38	Grey	60	24	755	11	0.3
20	655	40	Grey	95	30	660	6	0.4
30	656	38	Grey	56	52	1070	11	0.6
40	657	44	Grey	78	131	1530	8	0.9
50	658	30	Dark Grey-Brown	120	129	1730	10	1.1
60	659	o.c.	Argillite	7	7	94	12	
70	660	30	Grey-Brown	38	24	1010	14	1.9
80	661	34	Grey	120	23	1200	12	4.4
90	662	38	Grey-Green	40	12	532	17	2.6
5+00E	652	34	Grey	31	14	457	12	0.4
10	651	42	Grey	77	12	418	9	0.5
20	650	32	Grey-Brown	73	10	500	7	1.1
30	649	36	Grey	90	11	473	8	1.2
40	648	40	Grey-Brown	46	13	610	10	1.0
50	647	32	Grey	41	13	395	4	0.4
60	646	45	Grey	40	12	503	11	0.7
70	645	43	Grey	47	13	595	9	0.8
80	644	38	Grey	83	10	419	10	0.6
90	643	32	Grey-Green	20	11	351	13	<0.2
6+00E	642	38	Grey-Green	26	8	450	17	0.2
10	641	32	Grey	110	14	807	15	2.3
20	640	38	Grey	37	15	670	8	1.4
30	639	36	Dark Grey	39	8	314	7	2.6
40	638	30	Dark Grey	91	9	445	14	0.2
50	037	36	Dark Grey	30	16	340	8	0.4
60	636	38	Grey-Brown	44	16	288	14	0.2
70	635	40	Brown	46	20	141	10	<0.2
80	634	38	Brown	31	14	156	9	<0.2
90	633	42	Brown	32	11	146	7	0.3
7+00E	632	40	Brown	23	10	139	3	0.4

Line 7+00ESAMPLE DATA

<u>Station</u>	<u>Sample</u>	<u>Depth cm</u>	<u>Description</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Au ppb</u>	<u>Ag ppm</u>
4+00E	D-759	32	Brown	49	20	255	6	0.2
10	760	32	Brown-Grey	52	22	330	11	0.3
20	761	34	Grey-Brown	34	23	526	10	0.4
30	762	36	Grey-Brown	43	32	570	11	0.9
40	763	38	Light Brown	26	35	722	7	0.5
50	764	38	Light Brown	37	24	565	10	0.8
60	765	32	Brown-Grey	38	23	545	8	0.4
70	766	28	Grey	36	19	335	7	0.3
80	767	30	Grey	60	22	560	9	0.8
90	768	32	Grey-Brown	63	55	711	12	1.2
5+00E	693	34	Grey-Brown	93	16	414	18	2.0
10	692	42	Grey-Brown	95	19	605	17	2.2
20	691	38	Grey-Brown	38	17	721	11	1.0
30	690	36	Dark Brown	117	31	1120	10	2.6
40	689	38	Grey-Brown	51	20	655	6	2.3
50	688	40	Grey-Brown	37	13	402	12	0.7
60	687	38	Grey-Brown	28	10	344	17	0.2
70	686	34	Grey-Brown	47	11	229	14	<0.2
80	685	50	Grey-Brown	49	14	520	6	0.3
90	684	38	Grey	56	17	506	11	0.4
6+00E	683	40	Grey-Brown	57	26	810	19	1.0
10	682	50	Grey	59	15	732	7	0.6
20	681	34	Grey	63	11	677	10	0.7
30	680	34	Grey-Brown	90	13	645	9	0.6
40	679	38	Brown-Grey	38	12	330	14	0.3
50	678	32	Grey	45	13	287	16	0.2
60	677	30	Grey	49	16	270	8	0.2
70	676	40	Grey	66	15	284	6	<0.2
80	675	45	Grey	56	15	283	11	0.2
90	674	36	Grey-Brown	51	18	192	18	0.3
7+00E	673	48	Brown	58	18	157	12	0.4



Line 8+00SSAMPLE DATA

<u>Station</u>	<u>Sample</u>	<u>Depth cm</u>	<u>Description</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Au ppb</u>	<u>Ag ppm</u>
4+00E	D-778	36	Brown-Grey	37	19	584	6	0.6
10	777	40	Grey	64	20	237	10	0.7
20	776	40	Grey + Brown	39	22	314	8	1.1
30	775	36	Brown-Grey	35	23	458	9	0.8
40	774	38	Grey + Brown	26	25	380	14	0.5
50	773	30	Grey + Brown	51	28	396	12	0.7
60	772	30	Grey + Brown	56	19	335	7	0.2
70	771	36	Grey + Brown	57	21	398	7	<0.2
80	770	32	Grey	74	23	376	6	0.2
90	769	34	Grey	45	46	700	11	0.6
5+00E	714	30	Grey	92	41	582	9	0.4
10	713	26	Grey-Brown	94	65	615	7	0.3
20	712	34	Grey	105	40	650	6	0.8
30	711	36	Dark Brown	137	75	1120	11	1.4
40	710	30	Grey	91	29	735	10	3.2
50	709	38	Dark Grey	88	20	610	14	0.9
60	708	30	Dark Brown	76	19	554	3	0.5
70	707	30	Grey + Brown	63	18	495	9	0.2
80	706	28	Grey + Brown	61	17	507	12	0.6
90	705	38	Grey	59	16	522	11	0.2
6+00E	704	30	Dark Grey	65	19	540	7	0.4
10	703	36	Grey	66	17	372	8	0.3
20	702	36	Grey-Brown	102	24	490	14	0.2
30	701	43	Grey	134	20	577	16	0.9
40	700	40	Grey-Brown	73	18	540	10	0.4
50	699	46	Dark Brown	102	21	337	14	0.5
60	698	40	Brown-Grey	144	17	324	11	0.6
70	697	38	Grey-Brown	85	15	413	12	0.5
80	696	46	Grey	110	25	474	16	0.4
90	695	o.c.	Argillite	93	12	267	8	
7+00E	694	36	Black	139	26	936	17	1.8

Line 9+00SSAMPLE DATA

<u>Station</u>	<u>Sample</u>	<u>Depth cm</u>	<u>Description</u>	<u>Cu ppm</u>	<u>Pb ppm</u>	<u>Zn ppm</u>	<u>Au ppb</u>	<u>Ag ppm</u>
4+00E	D-798	38	Brown-Grey	42	33	430	7	0.5
10	797	40	Grey-Brown	35	25	467	8	0.4
20	796	30	Grey	41	30	423	7	<0.2
30	795	38	Light Grey	44	36	395	9	1.2
40	794	38	Grey + Brown	43	30	440	10	0.5
50	793	48	Brown	57	37	679	12	0.5
60	792	48	Grey	45	35	442	7	0.6
70	791	45	Brown-grey	76	41	605	5	1.5
80	790	44	Grey	45	34	473	10	0.9
90	789	35	Grey-Brown	56	32	652	9	0.4
5+00E	758	42	Grey-Brown	53	32	500	10	0.8
10	757	40	Grey-Brown	55	55	656	12	0.7
20	756	38	Dark Grey	50	37	745	7	1.1
30	755	40	Brown-Grey	46	28	527	8	0.2
40	754	38	Dark Grey	47	42	781	10	0.5
50	753	30	Grey	54	44	675	9	0.4
60	752	42	Dark Grey	115	41	820	10	0.3
70	751	40	Dark Grey	128	38	1010	12	0.8
80	750	48	Grey	116	40	925	15	0.9
90	749	50	Dark Grey	74	35	866	17	0.6
6+00E	748	36	Dark Grey	45	37	644	18	0.4
10	747	34	Dark Brown	43	74	700	11	0.2
20	746	34	Dark Grey	59	150	852	16	0.9
30	745	36	Grey-Brown	50	73	650	15	0.5
40	744	38	Grey	109	237	920	14	1.9
50	743	38	Grey	145	101	818	17	1.0
60	742	32	Dark Brown	224	142	823	10	2.1
70	741	o.c.	Chert	14	52	17	6	
80	740	32	Grey-Brown	122	31	705	11	0.8
90	739	40	Dark Grey	177	24	610	18	1.7
7+00E	738	33	Black	159	28	697	13	1.2





4200B - 10 Street N.E.  
Calgary, Alberta  
Canada T2E 6K3  
Tel (403) 250-1901  
Fax (403) 250-8265

Kleine Waterstraat 2-6  
Box 2510  
Paramaribo - Suriname  
Tel (597) 421523  
Fax (597) 421533

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PAGE: 1 OF 9  
COPY: 1 OF 2

AUTHORITY: D. SUTHERLAND

MR. DON SUTHERLAND  
R.R. # 2, GLENBOW ROAD  
COCHRANE, ALBERTA T0L 0W0

WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

### GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: SOIL

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM
D-: 601	14.0	14.0	113.0
D-: 602	12.0	15.0	147.0
D-: 603	13.0	15.0	127.0
D-: 604	27.0	17.0	124.0
D-: 605	21.0	21.0	162.0
D-: 606	17.0	15.0	226.0
D-: 607	21.0	18.0	195.0
D-: 608	15.0	13.0	280.0
D-: 609	51.0	18.0	345.0
D-: 610	79.0	16.0	575.0
D-: 611	15.0	17.0	126.0
D-: 612	16.0	13.0	104.0
D-: 613	19.0	15.0	119.0
D-: 614	18.0	14.0	104.0
D-: 615	32.0	13.0	191.0
D-: 616	46.0	11.0	293.0
D-: 617	65.0	13.0	314.0
D-: 618	42.0	11.0	346.0
D-: 619	41.0	9.0	352.0
D-: 620	33.0	12.0	315.0
D-: 621	22.0	11.0	362.0
D-: 622	24.0	10.0	240.0
D-: 623	25.0	11.0	339.0
D-: 624	17.0	12.0	190.0
D-: 625	26.0	14.0	300.0
D-: 626	22.0	11.0	311.0
D-: 627	34.0	13.0	480.0
D-: 628	49.0	14.0	414.0
D-: 629	78.0	15.0	485.0
D-: 630	40.0	14.0	464.0

AUTHORITY: D. SUTHERLAND

 MR. DON SUTHERLAND  
 R.R. # 2, GLENBOW ROAD  
 COCHRANE, ALBERTA T0L 0W0

WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM
D-: 631	45.0	12.0	230.0
D-: 632	23.0	10.0	139.0
D-: 633	32.0	11.0	146.0
D-: 634	31.0	14.0	156.0
D-: 635	46.0	20.0	141.0
D-: 636	44.0	16.0	288.0
D-: 637	30.0	16.0	340.0
D-: 638	91.0	9.0	445.0
D-: 639	39.0	8.0	314.0
D-: 640	37.0	15.0	670.0
D-: 641	110.0	14.0	807.0
D-: 642	26.0	8.0	450.0
D-: 643	20.0	11.0	351.0
D-: 644	83.0	10.0	419.0
D-: 645	47.0	13.0	595.0
D-: 646	40.0	12.0	503.0
D-: 647	41.0	13.0	395.0
D-: 648	46.0	13.0	610.0
D-: 649	90.0	11.0	473.0
D-: 650	73.0	10.0	500.0
D-: 651	77.0	12.0	418.0
D-: 652	31.0	14.0	457.0
D-: 653	107.0	68.0	798.0
D-: 654	60.0	24.0	755.0
D-: 655	95.0	30.0	660.0
D-: 656	56.0	52.0	1070.0
D-: 657	78.0	131.0	1530.0
D-: 658	120.0	129.0	1730.0
D-: 660	38.0	24.0	1010.0
D-: 661	120.0	23.0	1200.0

AUTHORITY: D. SUTHERLAND

**MR. DON SUTHERLAND**  
 R.R. # 2, GLENBOW ROAD  
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WORK ORDER: 93350-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM
D-: 662	40.0	12.0	532.0
D-: 663	49.0	42.0	1220.0
D-: 664	30.0	58.0	855.0
D-: 665	197.0	83.0	770.0
D-: 666	90.0	109.0	733.0
D-: 667	118.0	69.0	531.0
D-: 668	192.0	274.0	1390.0
D-: 669	41.0	17.0	435.0
D-: 670	36.0	14.0	454.0
D-: 671	26.0	13.0	365.0
D-: 672	27.0	14.0	252.0
D-: 673	58.0	18.0	157.0
D-: 674	51.0	18.0	192.0
D-: 675	56.0	15.0	283.0
D-: 676	66.0	15.0	284.0
D-: 677	49.0	16.0	270.0
D-: 678	45.0	13.0	287.0
D-: 679	38.0	12.0	330.0
D-: 680	90.0	13.0	645.0
D-: 681	63.0	11.0	677.0
D-: 682	59.0	15.0	732.0
D-: 683	57.0	26.0	810.0
D-: 684	56.0	17.0	506.0
D-: 685	49.0	14.0	520.0
D-: 686	47.0	11.0	229.0
D-: 687	28.0	10.0	344.0
D-: 688	37.0	13.0	402.0
D-: 689	51.0	20.0	655.0
D-: 690	117.0	31.0	1120.0
D-: 691	38.0	17.0	721.0

AUTHORITY: D. SUTHERLAND

**MR. DON SUTHERLAND**  
 R.R. # 2, GLENBOW ROAD  
 COCHRANE, ALBERTA T0L 0W0

WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM
D-: 692	95.0	16.0	414.0
D-: 693	98.0	19.0	605.0
D-: 694	139.0	26.0	936.0
D-: 696	110.0	25.0	474.0
D-: 697	85.0	15.0	413.0
D-: 698	144.0	17.0	324.0
D-: 699	102.0	21.0	337.0
D-: 700	73.0	18.0	540.0
D-: 701	134.0	20.0	577.0
D-: 702	102.0	24.0	490.0
D-: 703	66.0	17.0	372.0
D-: 704	65.0	19.0	540.0
D-: 705	59.0	16.0	522.0
D-: 706	61.0	17.0	507.0
D-: 707	63.0	18.0	495.0
D-: 708	76.0	19.0	554.0
D-: 709	88.0	20.0	610.0
D-: 710	91.0	29.0	735.0
D-: 711	137.0	75.0	1120.0
D-: 712	105.0	40.0	650.0
D-: 713	94.0	65.0	615.0
D-: 714	92.0	41.0	582.0
D-: 719	119.0	34.0	1020.0
D-: 721	60.0	50.0	854.0
D-: 722	63.0	59.0	1130.0
D-: 723	44.0	48.0	820.0
D-: 724	34.0	46.0	855.0
D-: 725	49.0	53.0	946.0
D-: 726	30.0	37.0	673.0
D-: 727	23.0	35.0	710.0



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Canada T2E 6K3  
Tel (403) 250-1901  
Fax (403) 250-8265

Kleine Waterstraat 2-6  
Box 2510  
Paramaribo - Suriname  
Tel (597) 421523  
Fax (597) 421533

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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

### GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: SOIL

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM
D-: 728	64.0	26.0	425.0
D-: 729	30.0	16.0	286.0
D-: 730	43.0	20.0	300.0
D-: 731	32.0	15.0	342.0
D-: 732	42.0	12.0	313.0
D-: 733	53.0	13.0	357.0
D-: 734	34.0	11.0	280.0
D-: 735	42.0	16.0	415.0
D-: 738	159.0	28.0	697.0
D-: 739	177.0	24.0	610.0
D-: 740	122.0	31.0	705.0
D-: 742	224.0	142.0	823.0
D-: 743	145.0	101.0	818.0
D-: 744	109.0	237.0	920.0
D-: 745	50.0	73.0	650.0
D-: 746	59.0	150.0	852.0
D-: 747	43.0	74.0	700.0
D-: 748	45.0	37.0	644.0
D-: 749	74.0	35.0	866.0
D-: 750	116.0	40.0	925.0
D-: 751	128.0	38.0	1010.0
D-: 752	115.0	41.0	820.0
D-: 753	54.0	44.0	675.0
D-: 754	47.0	42.0	781.0
D-: 755	46.0	28.0	527.0
D-: 756	50.0	37.0	745.0
D-: 757	55.0	55.0	656.0
D-: 758	53.0	32.0	500.0
D-: 759	49.0	20.0	255.0
D-: 760	52.0	22.0	330.0





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 Paramaribo - Suriname  
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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM
D-: 761	34.0	23.0	526.0
D-: 762	43.0	32.0	570.0
D-: 763	26.0	35.0	722.0
D-: 764	37.0	24.0	565.0
D-: 765	38.0	23.0	545.0
D-: 766	36.0	19.0	335.0
D-: 767	60.0	22.0	560.0
D-: 768	63.0	55.0	711.0
D-: 769	45.0	46.0	700.0
D-: 770	74.0	23.0	376.0
D-: 771	57.0	21.0	398.0
D-: 772	56.0	19.0	335.0
D-: 773	51.0	28.0	396.0
D-: 774	26.0	25.0	380.0
D-: 775	35.0	23.0	458.0
D-: 776	39.0	22.0	314.0
D-: 777	64.0	20.0	237.0
D-: 778	37.0	19.0	584.0
D-: 779	24.0	22.0	373.0
D-: 780	58.0	20.0	265.0
D-: 781	47.0	15.0	198.0
D-: 782	32.0	19.0	276.0
D-: 783	79.0	26.0	365.0
D-: 784	99.0	20.0	370.0
D-: 785	53.0	17.0	330.0
D-: 786	33.0	20.0	345.0
D-: 787	64.0	21.0	324.0
D-: 788	81.0	18.0	360.0
D-: 789	56.0	32.0	652.0
D-: 790	45.0	34.0	473.0



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Calgary, Alberta  
Canada T2E 6K3  
Tel (403) 250-1901  
Fax (403) 250-6265

Kleine Waterstraat 2-6  
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Paramaribo - Suriname  
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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

### GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: SOIL

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM
D-: 791	76.0	41.0	605.0
D-: 792	45.0	35.0	442.0
D-: 793	57.0	37.0	679.0
D-: 794	43.0	30.0	440.0
D-: 795	44.0	36.0	395.0
D-: 796	41.0	30.0	423.0
D-: 797	35.0	25.0	467.0
D-: 798	42.0	33.0	430.0



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Tel (403) 250-1901  
Fax (403) 250-8265

Kleine Waterstraat 2-6  
Box 2510  
Paramaribo - Suriname  
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**MR. DON SUTHERLAND**  
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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

### GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	CU PPM	PB PPM	ZN PPM	AU PPB
D- :659	7.0	7.0	94.0	12.0
D- :695	93.0	12.0	267.0	8.0
D- :715	42.0	<2.0	31.0	7.0
D- :716	19.0	8.0	205.0	10.0
D- :717	29.0	6.0	298.0	9.0
D- :718	107.0	2.0	56.0	11.0
D- :720	32.0	5.0	139.0	108.0
D- :736	151.0	6.0	395.0	14.0
D- :737	93.0	2.0	51.0	7.0
D- :741	14.0	52.0	17.0	6.0



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MR. DON SUTHERLAND  
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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

### GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: ROCK

SAMPLE NUMBER	AG PPM
D- :659	<0.2
D- :695	0.4
D- :715	0.3
D- :716	<0.2
D- :717	<0.2
D- :718	0.2
D- :720	0.3
D- :736	1.0
D- :737	0.3
D- :741	0.2

SIGNED: \_\_\_\_\_

*C. Douglas Read*  
C. Douglas Read,  
LABORATORY MANAGER

FOOTNOTES:

P=QUESTIONABLE PRECISION; \* = INTERFERENCE; TR=TRACE; ND=NOT DETECTED;  
IS=INSUFFICIENT SAMPLE; NA=NOT ANALYZED; MS=MISSING SAMPLE

AUTHORITY: DON SUTHERLAND

MR. DON SUTHERLAND  
 R.R. # 2, GLENBOW ROAD  
 COCHRANE, ALBERTA T0L 0W0

WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	AU PPB	AG PPM
D-: 601	15.0	0.5
D-: 602	14.0	0.4
D-: 603	9.0	0.2
D-: 604	6.0	0.4
D-: 605	13.0	0.3
D-: 606	12.0	0.5
D-: 607	16.0	0.7
D-: 608	12.0	0.2
D-: 609	4.0	0.9
D-: 610	18.0	0.3
D-: 611	15.0	0.2
D-: 612	5.0	<0.2
D-: 613	7.0	0.3
D-: 614	4.0	0.2
D-: 615	9.0	0.6
D-: 616	10.0	0.5
D-: 617	7.0	1.3
D-: 618	11.0	0.3
D-: 619	8.0	0.3
D-: 620	12.0	0.4
D-: 621	7.0	0.6
D-: 622	9.0	0.9
D-: 623	11.0	1.0
D-: 624	6.0	0.4
D-: 625	8.0	0.2
D-: 626	7.0	1.3
D-: 627	12.0	0.8
D-: 628	5.0	0.7
D-: 629	8.0	1.4
D-: 630	10.0	0.5



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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

### GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: SOIL

SAMPLE NUMBER	AU PPB	AG PPM
D-: 631	4.0	<0.2
D-: 632	3.0	0.4
D-: 633	7.0	0.3
D-: 634	9.0	<0.2
D-: 635	10.0	<0.2
D-: 636	14.0	0.2
D-: 637	8.0	0.4
D-: 638	14.0	0.2
D-: 639	7.0	2.6
D-: 640	8.0	1.4
D-: 641	15.0	2.3
D-: 642	17.0	0.2
D-: 643	13.0	<0.2
D-: 644	10.0	0.6
D-: 645	9.0	0.8
D-: 646	11.0	0.7
D-: 647	4.0	0.4
D-: 648	10.0	1.0
D-: 649	8.0	1.2
D-: 650	7.0	1.1
D-: 651	9.0	0.5
D-: 652	12.0	0.4
D-: 653	7.0	0.6
D-: 654	11.0	0.3
D-: 655	6.0	0.4
D-: 656	11.0	0.6
D-: 657	8.0	0.9
D-: 658	10.0	1.1
D-: 660	14.0	1.9
D-: 661	12.0	4.4

AUTHORITY: DON SUTHERLAND

**MR. DON SUTHERLAND**  
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WORK ORDER: 93350-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	AU PPB	AG PPM
D-: 662	17.0	2.6
D-: 663	15.0	1.3
D-: 664	9.0	0.6
D-: 665	16.0	0.5
D-: 666	11.0	1.6
D-: 667	6.0	3.4
D-: 668	16.0	14.0
D-: 669	10.0	1.8
D-: 670	13.0	0.9
D-: 671	16.0	1.0
D-: 672	10.0	1.2
D-: 673	12.0	0.4
D-: 674	18.0	0.3
D-: 675	11.0	0.2
D-: 676	6.0	<0.2
D-: 677	8.0	0.2
D-: 678	16.0	0.2
D-: 679	14.0	0.3
D-: 680	9.0	0.6
D-: 681	10.0	0.7
D-: 682	7.0	0.6
D-: 683	19.0	1.0
D-: 684	11.0	0.4
D-: 685	6.0	0.3
D-: 686	14.0	<0.2
D-: 687	17.0	0.2
D-: 688	12.0	0.7
D-: 689	6.0	2.3
D-: 690	10.0	2.6
D-: 691	11.0	1.0

AUTHORITY: DON SUTHERLAND

**MR. DON SUTHERLAND**  
 R.R. # 2, GLENBOW ROAD  
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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	AU PPB	AG PPM
D-: 692	17.0	2.2
D-: 693	18.0	2.0
D-: 694	17.0	1.8
D-: 696	16.0	0.4
D-: 697	12.0	0.5
D-: 698	11.0	0.6
D-: 699	14.0	0.5
D-: 700	10.0	0.4
D-: 701	16.0	0.9
D-: 702	14.0	0.2
D-: 703	8.0	0.3
D-: 704	7.0	0.4
D-: 705	11.0	0.2
D-: 706	12.0	0.6
D-: 707	9.0	0.2
D-: 708	3.0	0.5
D-: 709	14.0	0.9
D-: 710	10.0	3.2
D-: 711	11.0	1.4
D-: 712	6.0	0.8
D-: 713	7.0	0.3
D-: 714	9.0	0.4
D-: 719	12.0	1.5
D-: 721	6.0	0.4
D-: 722	14.0	0.7
D-: 723	11.0	0.2
D-: 724	15.0	0.3
D-: 725	10.0	0.3
D-: 726	17.0	0.5
D-: 727	8.0	0.6



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WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	AU PPB	AG PPM
D-: 728	7.0	0.4
D-: 729	14.0	<0.2
D-: 730	9.0	0.2
D-: 731	15.0	0.3
D-: 732	16.0	<0.2
D-: 733	18.0	0.2
D-: 734	14.0	0.3
D-: 735	17.0	0.5
D-: 738	13.0	1.2
D-: 739	18.0	1.7
D-: 740	11.0	0.8
D-: 742	10.0	2.1
D-: 743	17.0	1.0
D-: 744	14.0	1.9
D-: 745	15.0	0.5
D-: 746	16.0	0.9
D-: 747	11.0	0.2
D-: 748	18.0	0.4
D-: 749	17.0	0.6
D-: 750	15.0	0.9
D-: 751	12.0	0.8
D-: 752	10.0	0.3
D-: 753	9.0	0.4
D-: 754	10.0	0.5
D-: 755	8.0	0.2
D-: 756	7.0	1.1
D-: 757	12.0	0.7
D-: 758	10.0	0.8
D-: 759	6.0	0.2
D-: 760	11.0	0.3



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Canada T2E 6K3  
Tel (403) 250-1901  
Fax (403) 250-8265

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Box 2510  
Paramaribo - Suriname  
Tel (597) 421523  
Fax (597) 421533

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WORK ORDER: 9335D-94

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### GEOCHEMICAL LABORATORY REPORT

SAMPLE TYPE: SOIL

SAMPLE NUMBER	AU PPB	AG PPM
D-: 761	10.0	0.4
D-: 762	11.0	0.9
D-: 763	7.0	0.5
D-: 764	10.0	0.8
D-: 765	8.0	0.4
D-: 766	7.0	0.3
D-: 767	9.0	0.8
D-: 768	12.0	1.2
D-: 769	11.0	0.6
D-: 770	6.0	0.2
D-: 771	7.0	<0.2
D-: 772	7.0	0.2
D-: 773	12.0	0.7
D-: 774	14.0	0.5
D-: 775	9.0	0.8
D-: 776	8.0	1.1
D-: 777	10.0	0.7
D-: 778	6.0	0.6
D-: 779	5.0	0.4
D-: 780	9.0	0.5
D-: 781	7.0	0.3
D-: 782	9.0	0.7
D-: 783	15.0	1.0
D-: 784	7.0	0.8
D-: 785	6.0	0.4
D-: 786	11.0	0.6
D-: 787	4.0	0.7
D-: 788	8.0	0.6
D-: 789	9.0	0.4
D-: 790	10.0	0.9

AUTHORITY: DON SUTHERLAND

**MR. DON SUTHERLAND**  
 R.R. # 2, GLENBOW ROAD  
 COCHRANE, ALBERTA T0L 0W0

WORK ORDER: 9335D-94

\*\*\* FINAL REPORT \*\*\*

**GEOCHEMICAL LABORATORY REPORT**

SAMPLE TYPE: SOIL

SAMPLE NUMBER	AU PPB	AG PPM
D-: 791	5.0	1.5
D-: 792	7.0	0.6
D-: 793	12.0	0.5
D-: 794	10.0	0.5
D-: 795	9.0	1.2
D-: 796	7.0	<0.2
D-: 797	8.0	0.4
D-: 798	7.0	0.5

SIGNED: \_\_\_\_\_

*C. Douglas Read*  
 C. Douglas Read,  
 LABORATORY MANAGER

FOOTNOTES:

P=QUESTIONABLE PRECISION; \* = INTERFERENCE; TR=TRACE; ND=NOT DETECTED;  
 IS=INSUFFICIENT SAMPLE; NA=NOT ANALYZED; MS=MISSING SAMPLE

## **APPENDIX V**

### **GEOPHYSICAL PROFILES**

**Composite: VLF In Phase**

**VLF Quadriture**

**VLF Total Field**

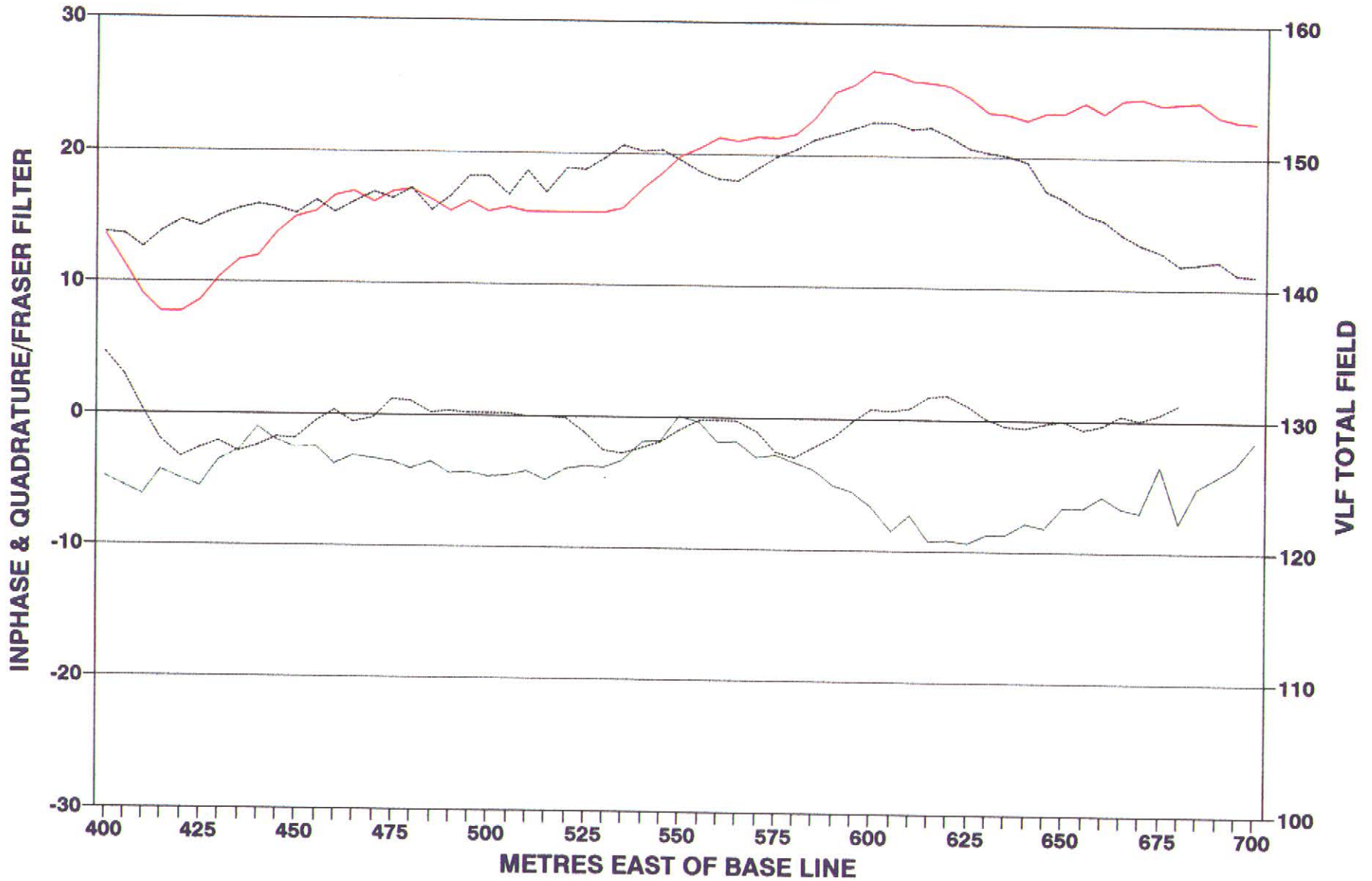
**VLF Fraser Filter**

**Individual: Magnetic**

**Stacked: Magnetic**

# 1994 VLF SURVEY: ZN CLAIMS

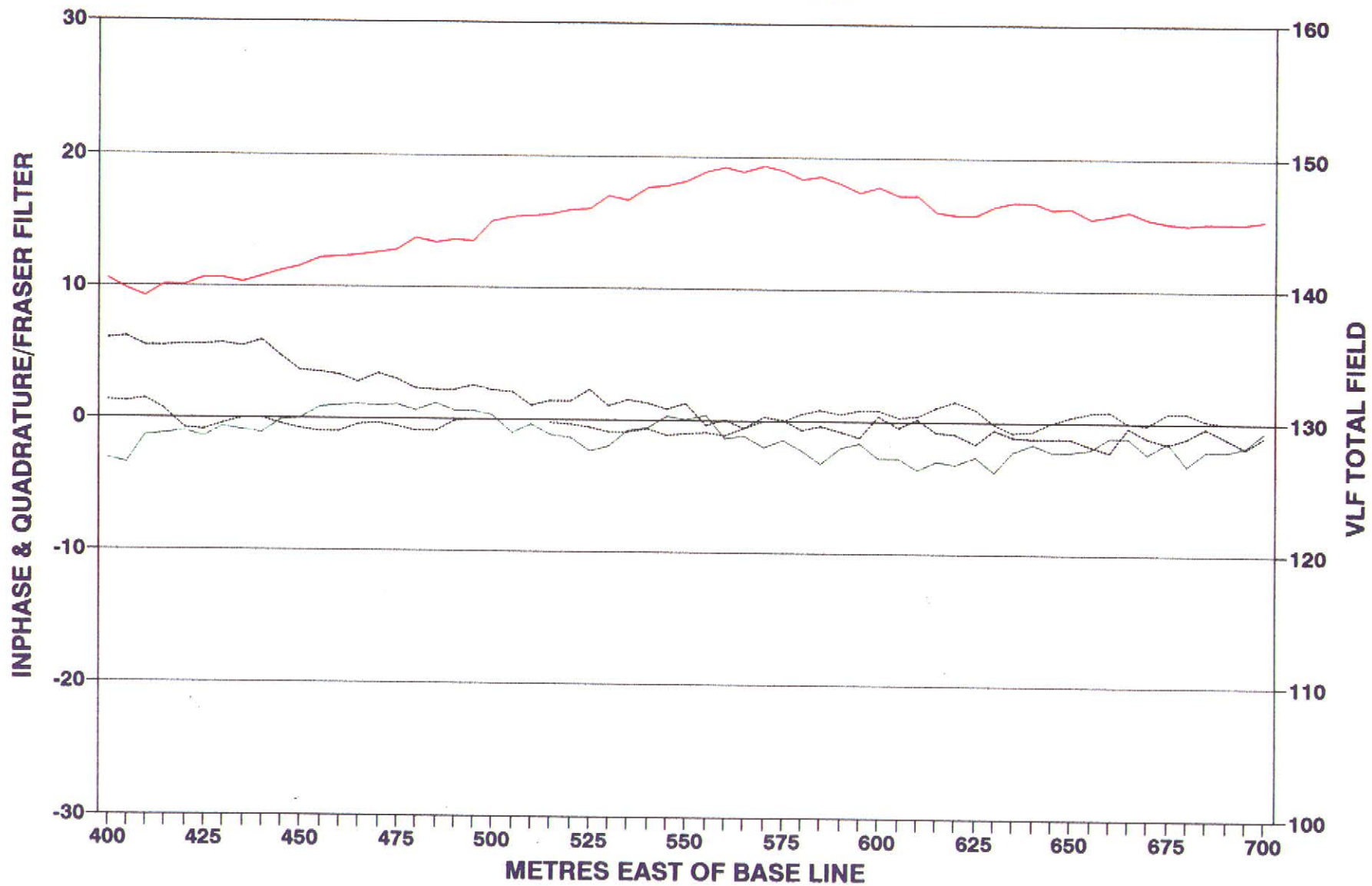
## VLF VALUES LINE 400S



— INPHASE     
 — QUADRATURE     
 - - - - VLF TOTAL FIELD     
 ····· FRASER FILTER

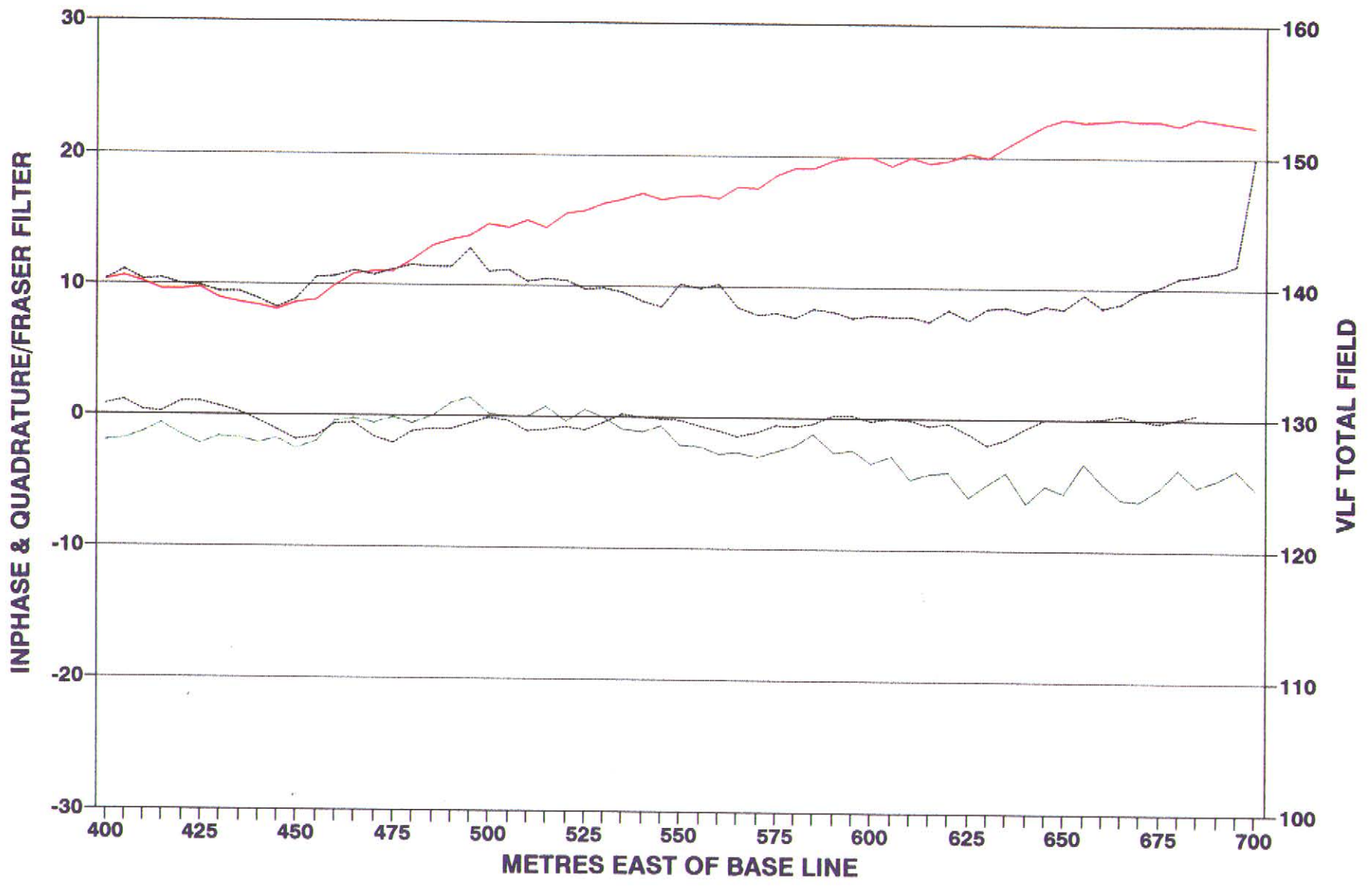
# 1994 VLF SURVEY: ZN CLAIMS

## VLF VALUES LINE 500S



— INPHASE      — QUADRATURE      ..... VLF TOTAL FIELD      - - - - FRASER FILTER

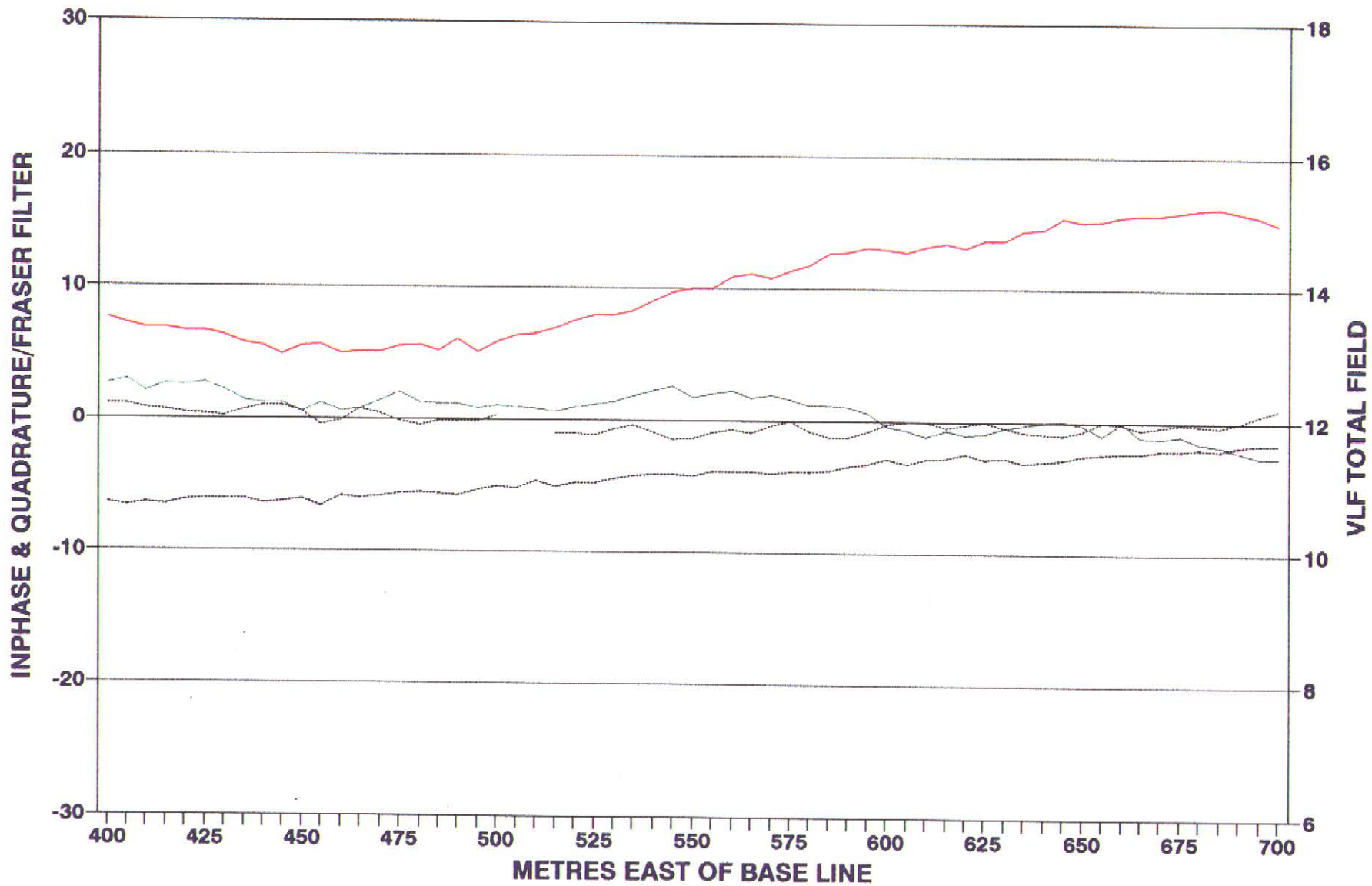
### 1994 VLF SURVEY: ZN CLAIMS VLF VALUES LINE 600S



— INPHASE      — QUADRATURE      — VLF TOTAL FIELD      — FRASER FILTER

# 1994 VLF SURVEY: ZN CLAIMS

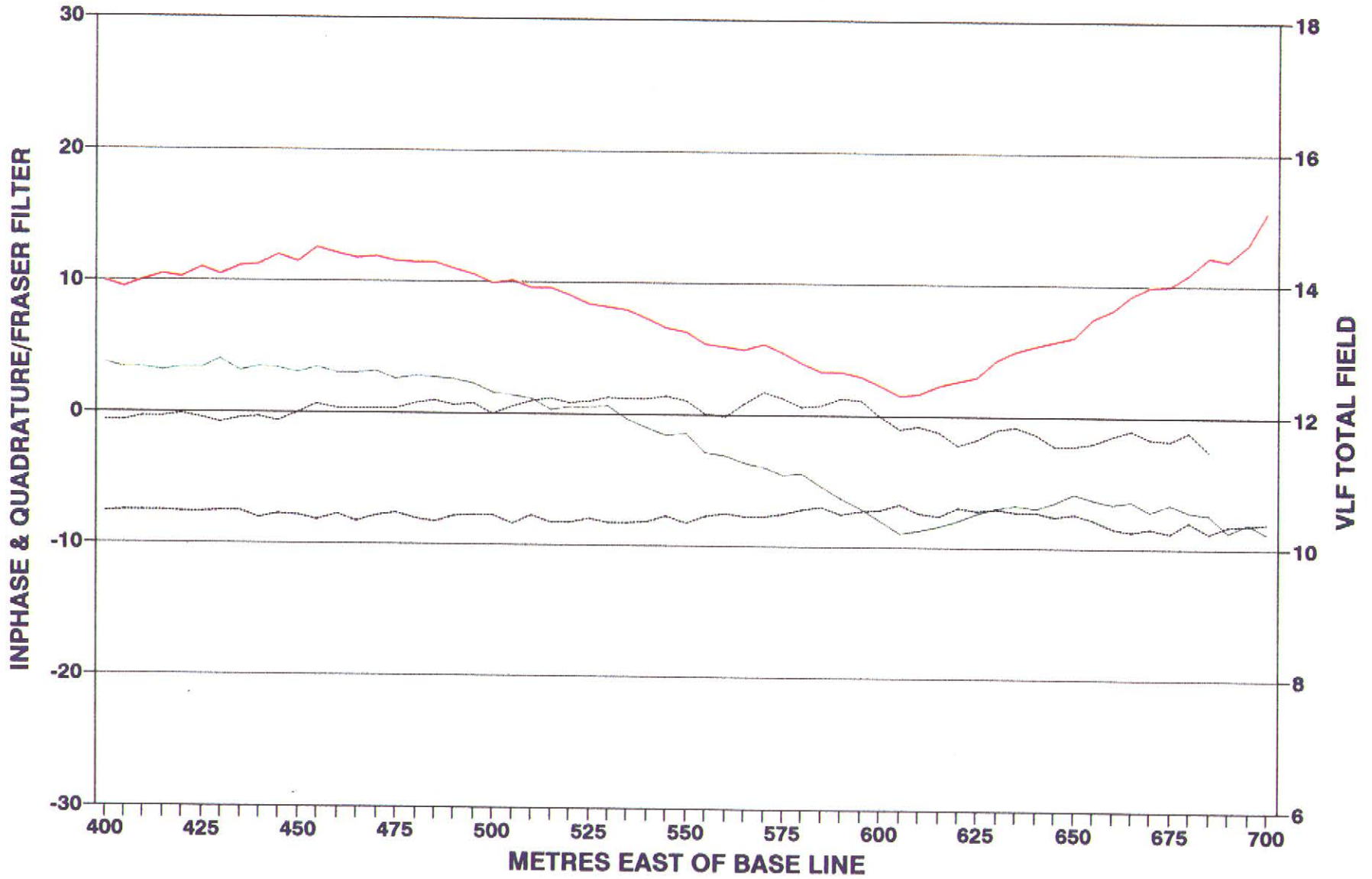
## VLF VALUES LINE 700S



— INPHASE      — QUADRATURE      — VLF TOTAL FIELD      — FRASER FILTER

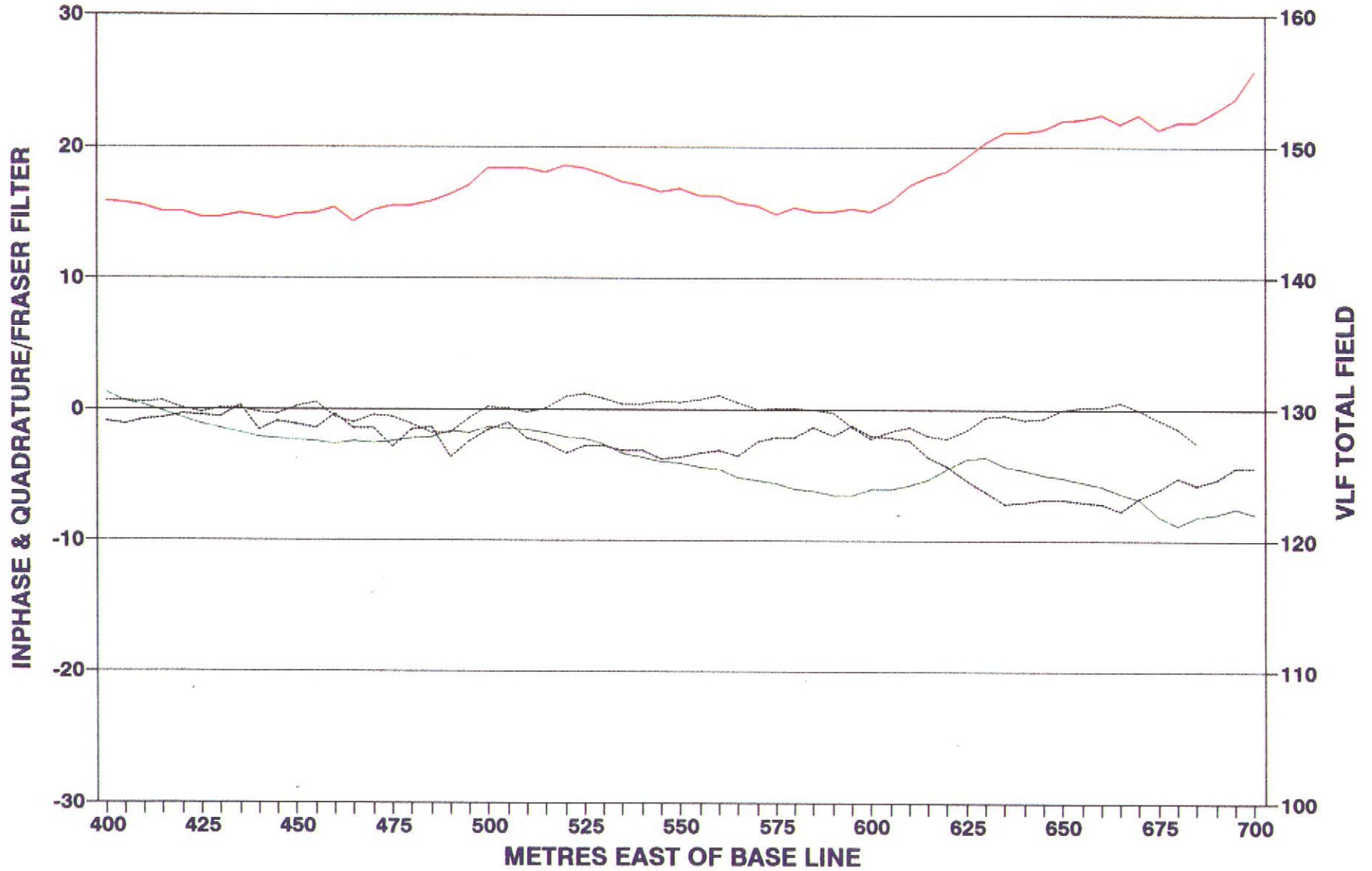


**1994 VLF SURVEY: ZN CLAIMS**  
**VLF VALUES LINE 800S**



— INPHASE      — QUADRATURE      - - - - - VLFF TOTAL FIELD      - - - - - FRASER FILTER

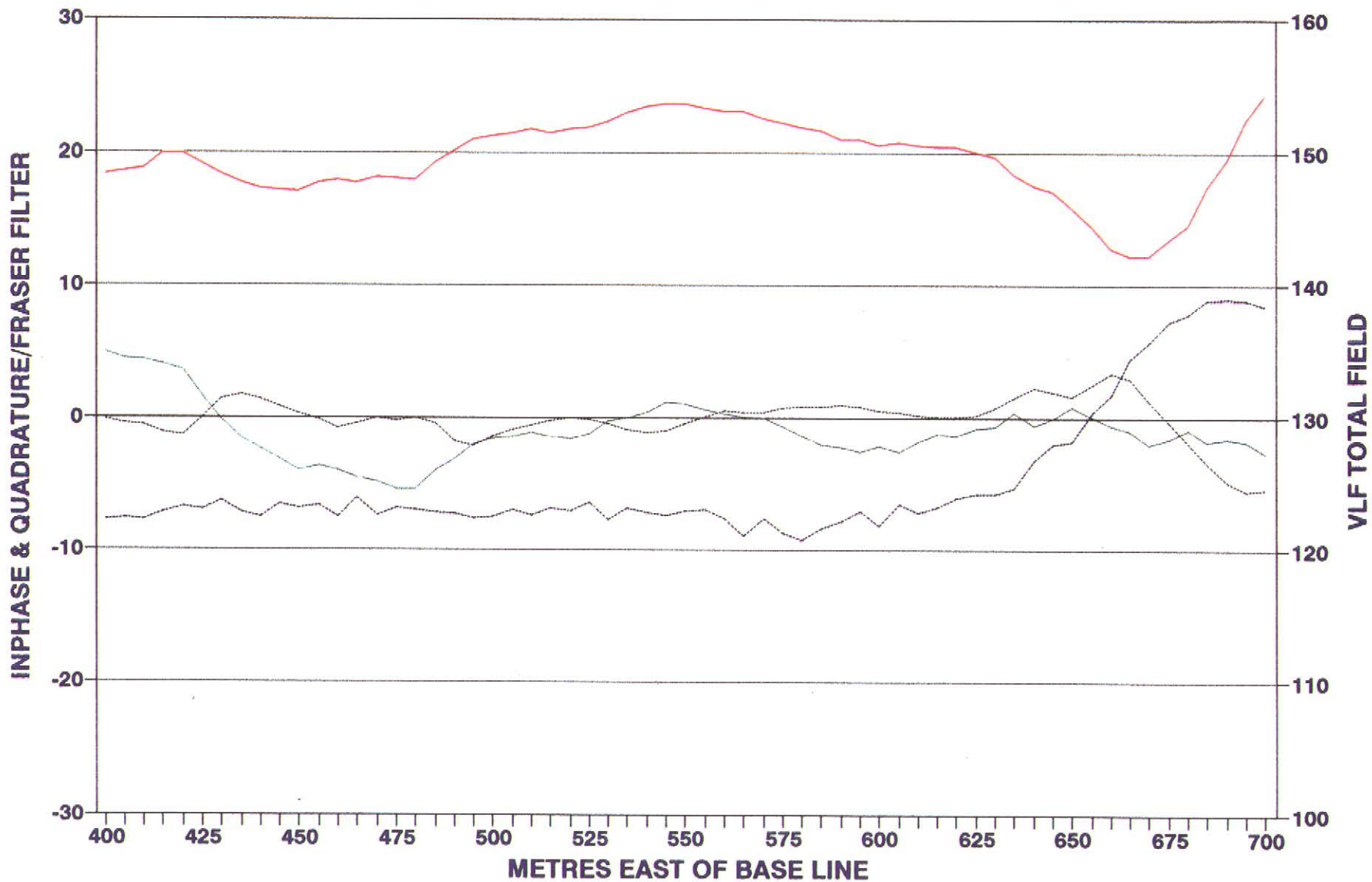
**1994 VLF SURVEY: ZN CLAIMS**  
**VLF VALUES LINE 900S**



— INPHASE      — QUADRATURE      ..... VLF TOTAL FIELD      ..... FRASER FILTER

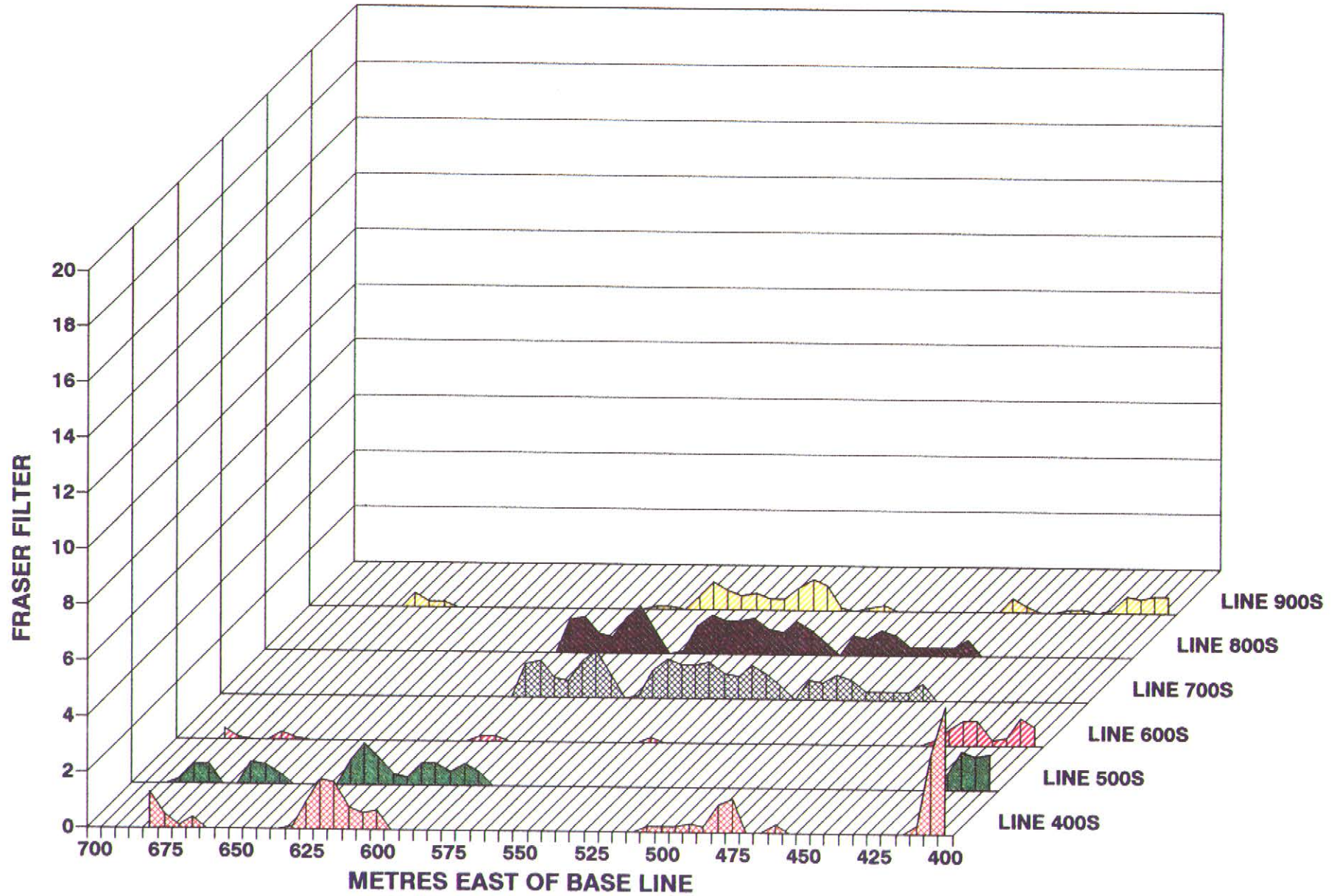
# 1994 VLF SURVEY: ZN CLAIMS

## VLF VALUES LINE 1000S



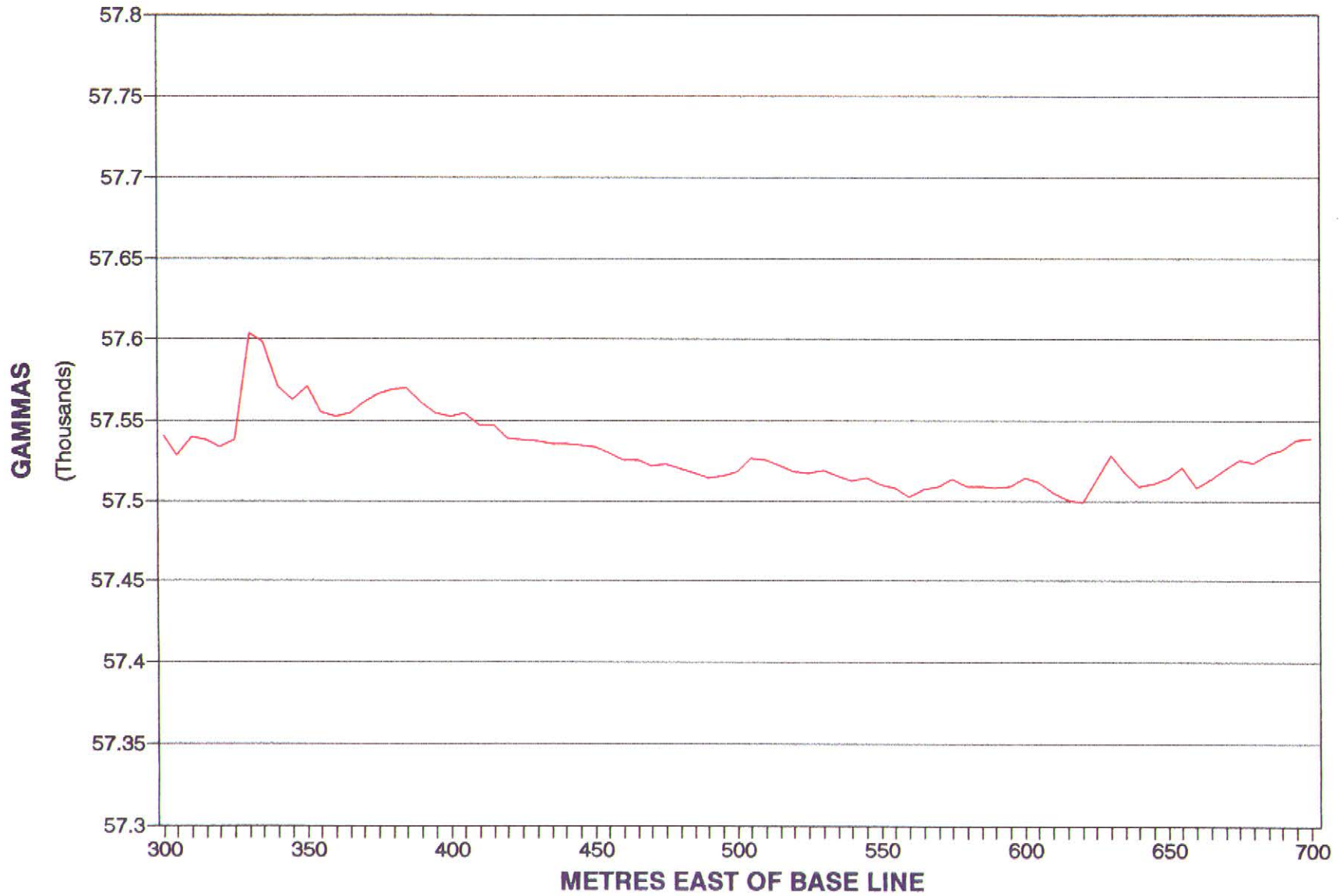
— INPHASE      — QUADRATURE      — VLF TOTAL FIELD      — FRASER FILTER

**1994 VLF SURVEY: ZN CLAIMS  
FRASER FILTER VALUES LINES 400S TO 900S**



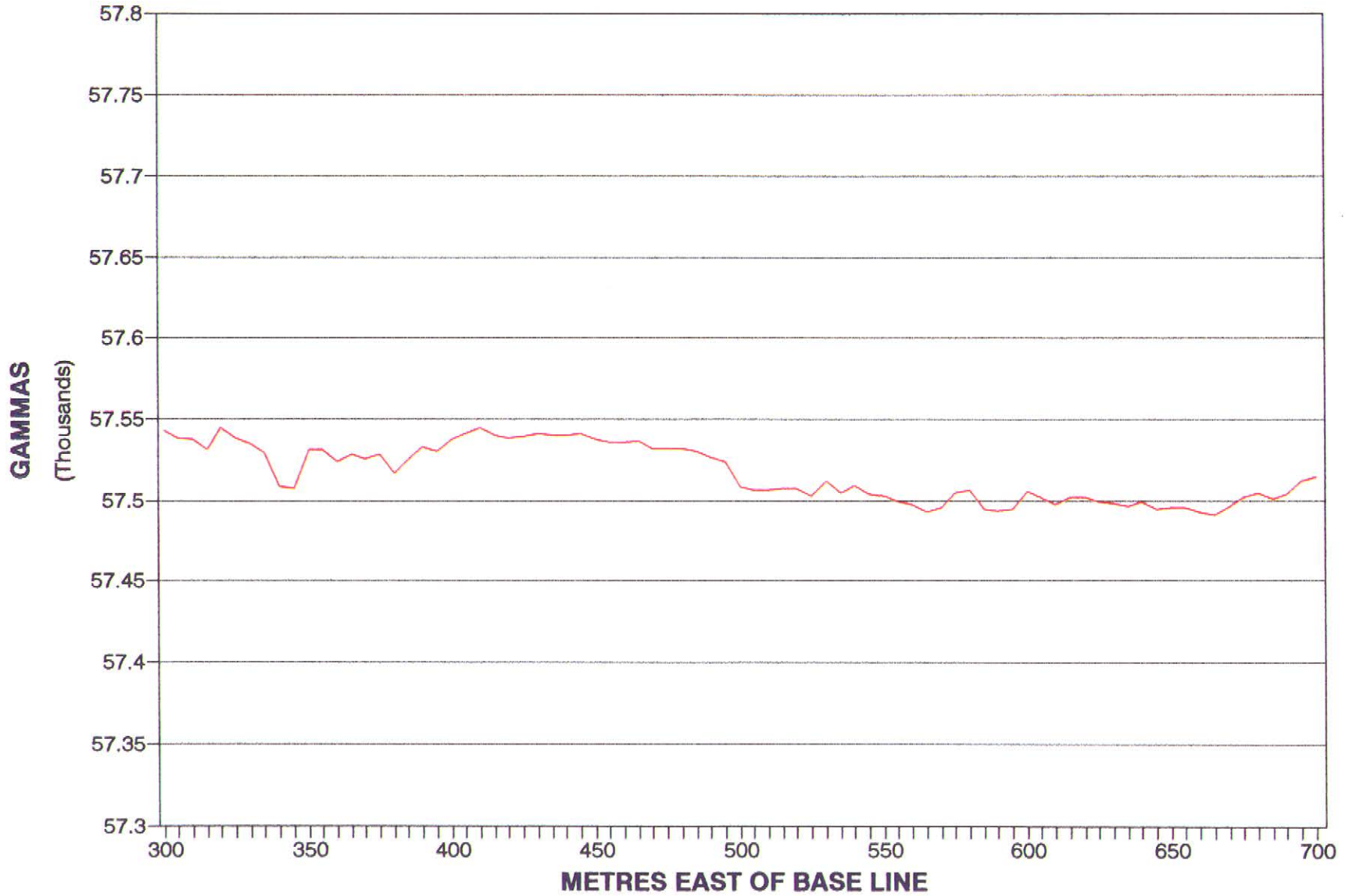


**1994 VLF/MAG SURVEY: ZN CLAIM GROUP  
MAGNETOMETER VALUES LINE 400S**



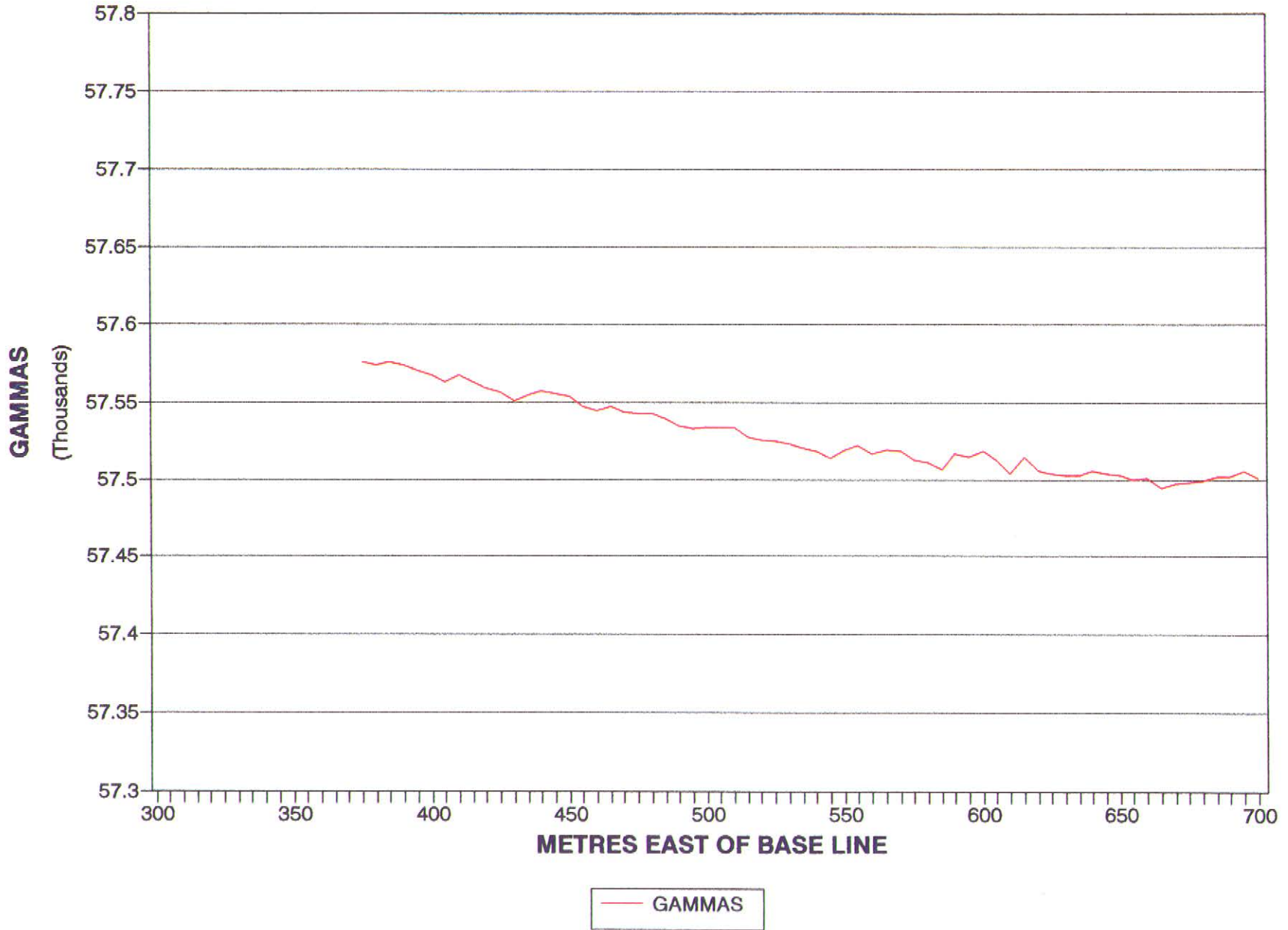
— GAMMAS

# 1994 VLF/MAG SURVEY: ZN CLAIM GROUP MAGNETOMETER VALUES LINE 500S



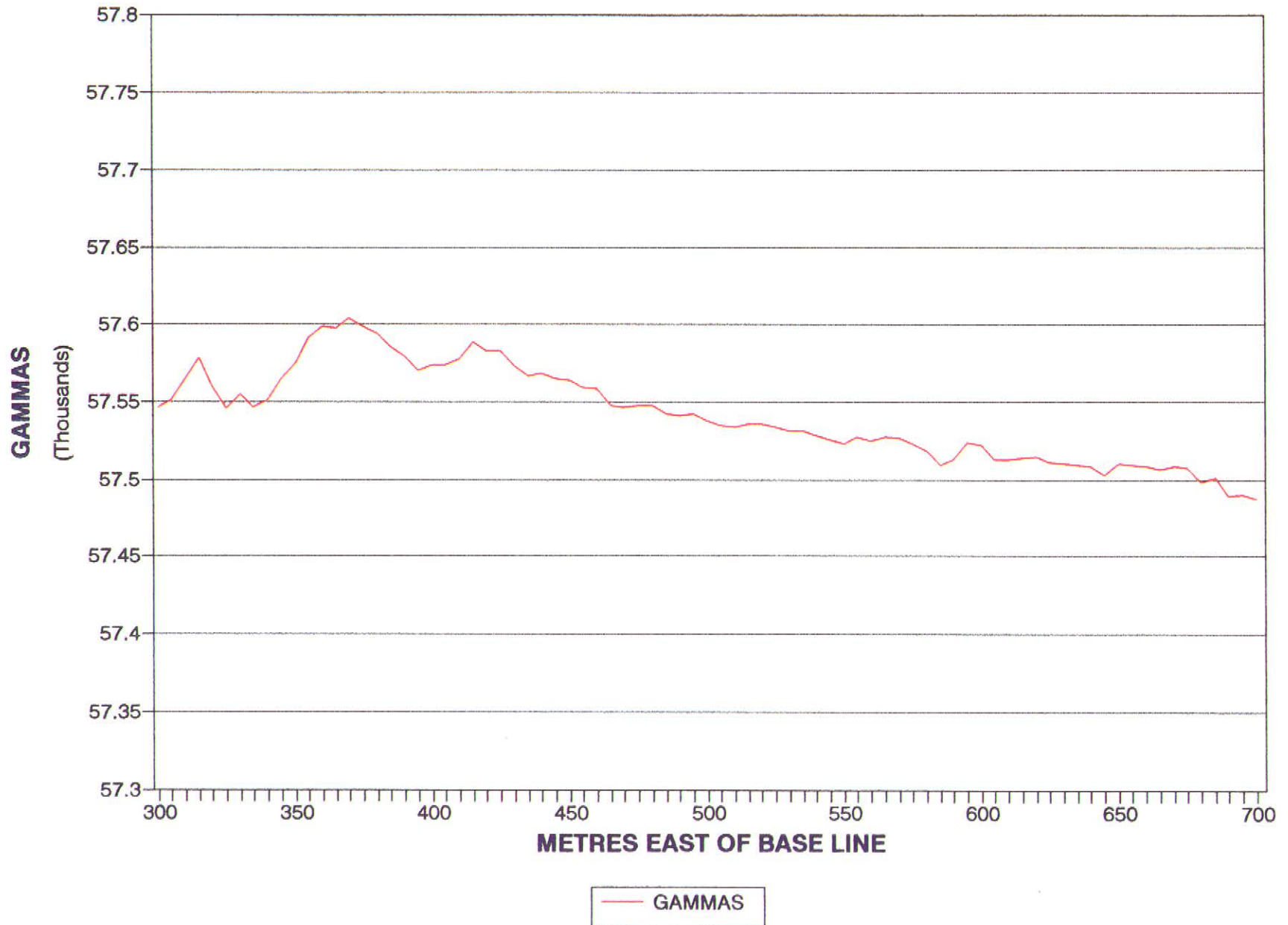
GAMMAS

**1994 VLF/MAG SURVEY: ZN CLAIM GROUP  
MAGNETOMETER VALUES LINE 600S**

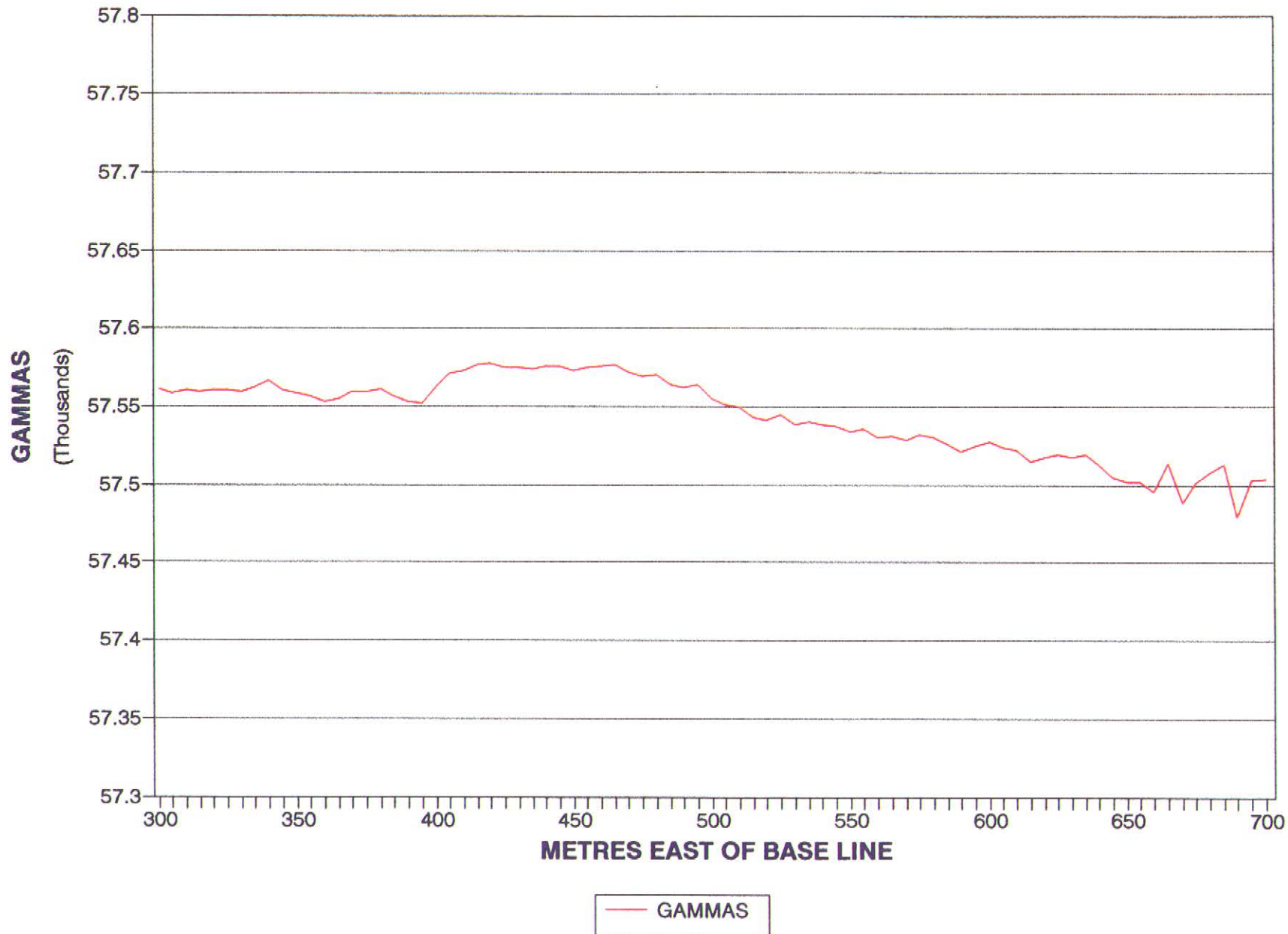




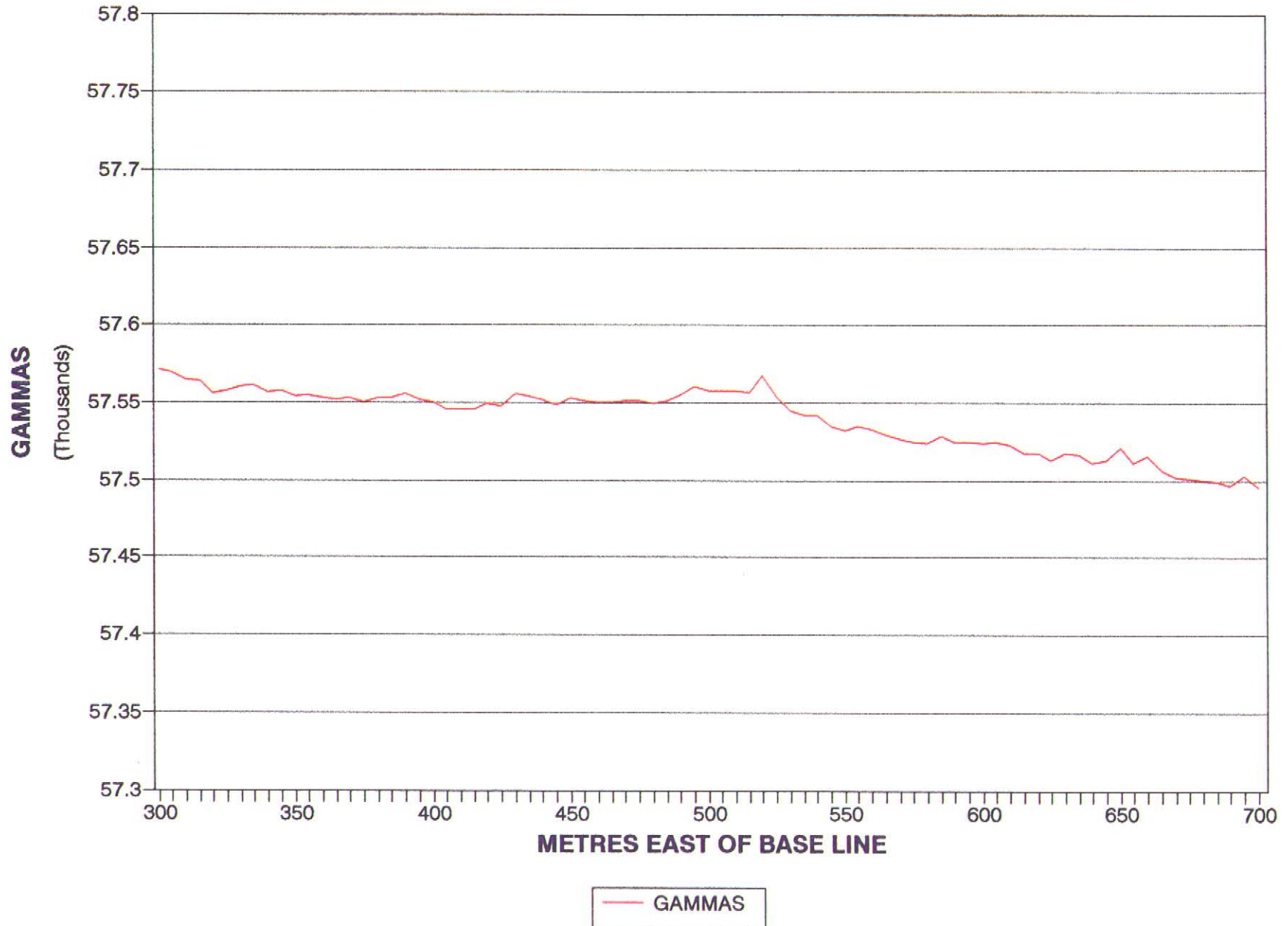
**1994 VLF/MAG SURVEY: ZN CLAIM GROUP  
MAGNETOMETER VALUES LINE 700S**



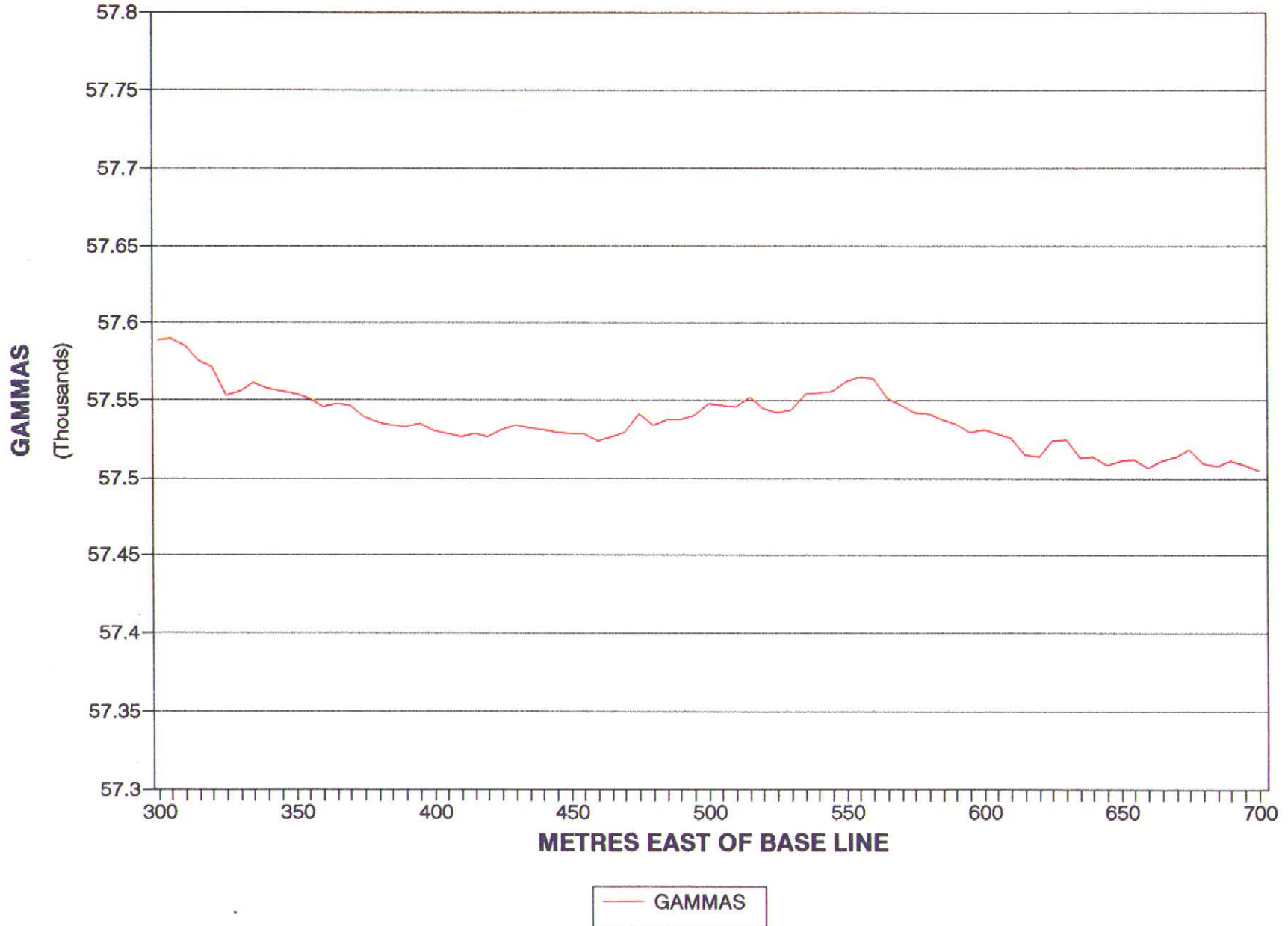
**1994 VLF/MAG SURVEY: ZN CLAIM GROUP  
MAGNETOMETER VALUES LINE 800S**



### 1994 VLF/MAG SURVEY: ZN CLAIM GROUP MAGNETOMETER VALUES LINE 900S



**1994 VLF/MAG SURVEY: ZN CLAIM GROUP  
MAGNETOMETER VALUES LINE 1000S**



# 1994 GEOPHYSICAL SURVEY: ZN CLAIMS MAGNETOMETER VALUES LINES 400S TO 900S

