

MINERAL TITLES BRANCH  
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VANCOUVER, B.C.

## **Geochemical and Geophysical Report**

**(In two parts;**

### **Part 1; Results of an Experimental Sampling Program for Deeply Buried Mineralization**

By: B.W.Smee, 1997

### **Part 2; Geophysical Report consisting of I.P. Resistivity, Self Potential and Borehole E.M.**

By: Delta GeoScience Ltd., 1997

Paul-Mike Claims  
Fort Steele Mining Division  
NTS# 82G 12,13  
Lat; 40° 46' N , Long 115° 41.5'E

For: Diamet Minerals Ltd.  
1695 Powick Rd.,  
Kelowna, B.C. V1X 4L1

October 1997

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

**25,571**

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**Part 2: Geophysical Report**

**Fig. 1A : Geochemical and Geophysical Compilation Map (1:10,000) . . . . . in pocket**

**Fig. 1B : Claim Map (1:31,680) . . . . . “ ”**

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SEP - 8 1998

Gold Commissioner's Office  
VANCOUVER, B.C.

**RESULTS OF AN EXPERIMENTAL  
SAMPLING PROGRAM FOR  
DEEPLY BURIED MINERALIZATION**

**Paul and Mike Claims  
Fort Steele Mining Division  
NTS 82G 12/13  
Latitude 49° 46' N Longitude 115° 41.5' W**

Prepared for:

Diamet Minerals Ltd.  
1695 Powick Road  
Kelowna, BC  
V1X 4L1

Prepared by:

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October, 1997

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

25,631

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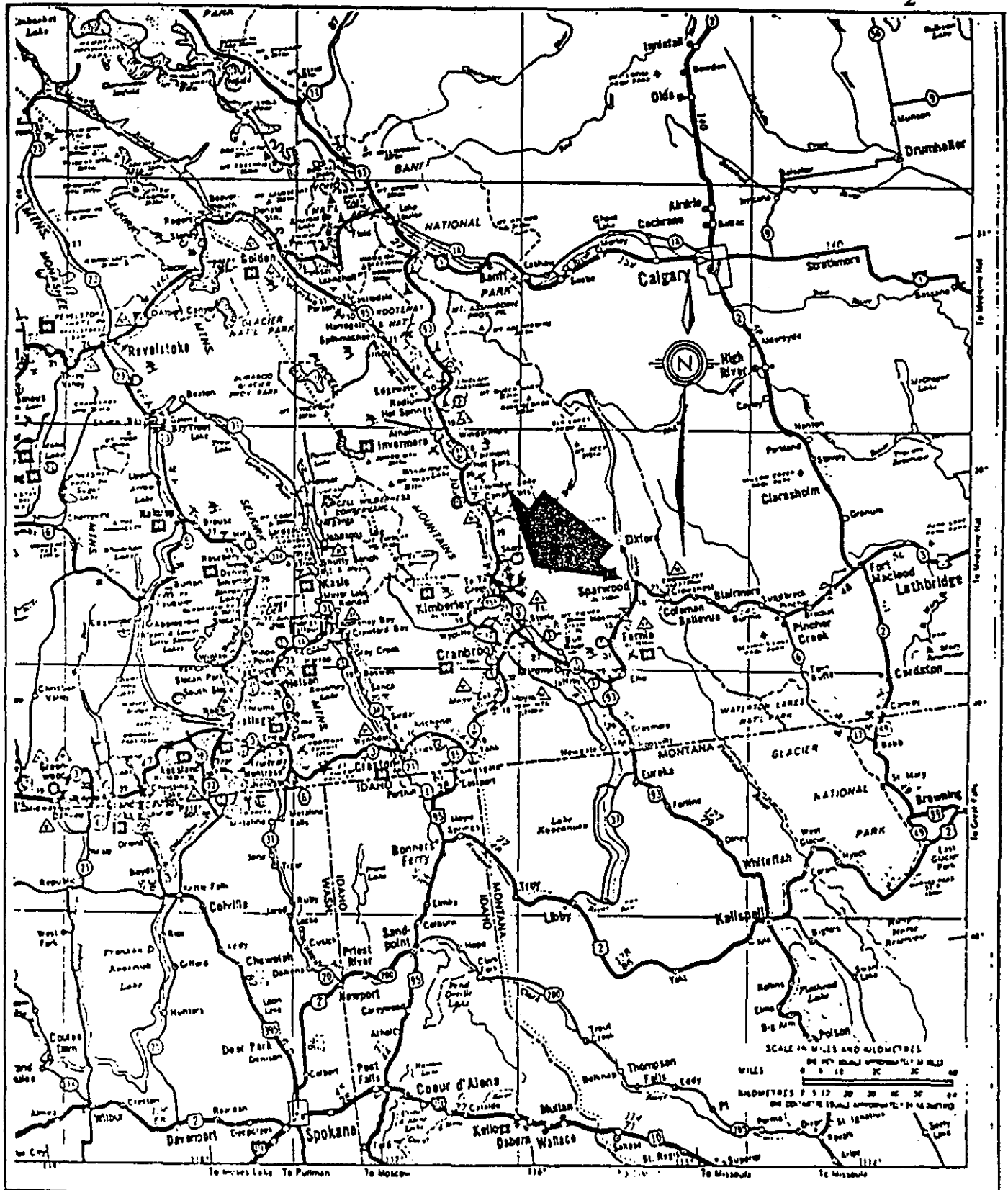
## 1. INTRODUCTION

DiaMet Minerals Ltd. began exploring for the faulted extension of the Sullivan lead-zinc orebody in the early 1980's. The best available geological information, compiled from private and government sources, placed the most likely position of this extension east of the confluence of Lewis Creek and the Kootenay River, about 30 km northeast of Cranbrook B.C.. The Paul and Mike claims were staked in 1981-1983 to cover this area.

A portion of the subsequent exploration consisted of drilling reverse circulation holes to bedrock. These holes showed an overburden thickness ranging from 279 to 570 m. These thicknesses pose a formidable obstacle to conventional methods of geophysical and geochemical exploration techniques. In the Fall of 1996, Mr. Charles Fipke of DiaMet Minerals requested that the author review the existing data from the Paul-Mike claims, comment on the conclusions, and suggest other exploration methods which may detect a massive sulphide target through these overburden thicknesses. This review resulted in a proposal to use a combination of strong and weak chemical extractions on soil samples. These different extractions were designed to detect the direct or indirect movement and subsequent redistribution in the soil of elements which may have originated from an oxidizing sulphide at depth. The soil survey, in conjunction with a geophysical survey carried out by Delta Geophysics Ltd., was completed in the summer of 1997. This report presents the results of the soil survey and makes recommendations for additional work.

## 2. LOCATION, ACCESS AND PHYSIOGRAPHY

The Paul and Mike claims are located 23 km northeast of Kimberley, B.C. at Latitude 49° 46'north and Longitude 115° 41.5'west on NTS map sheets 82G/12 and 13 (Figure 1 and 2). The claims lie east of Wasa Lake on the east margin of the Rocky Mountain Trench.



**DIA MET MINERALS LTD  
INDEX MAP  
PAUL AND MIKE CLAIMS**

FIGURE 1

B2G/12E & B2G/13E

49° 46' N 115° 41.5' W

GOWER, THOMPSON & ASSOCIATES  
Drawn J. F. B.

K. E. NORTHCOTE AND ASSOCIATES LTD  
April 30 1983

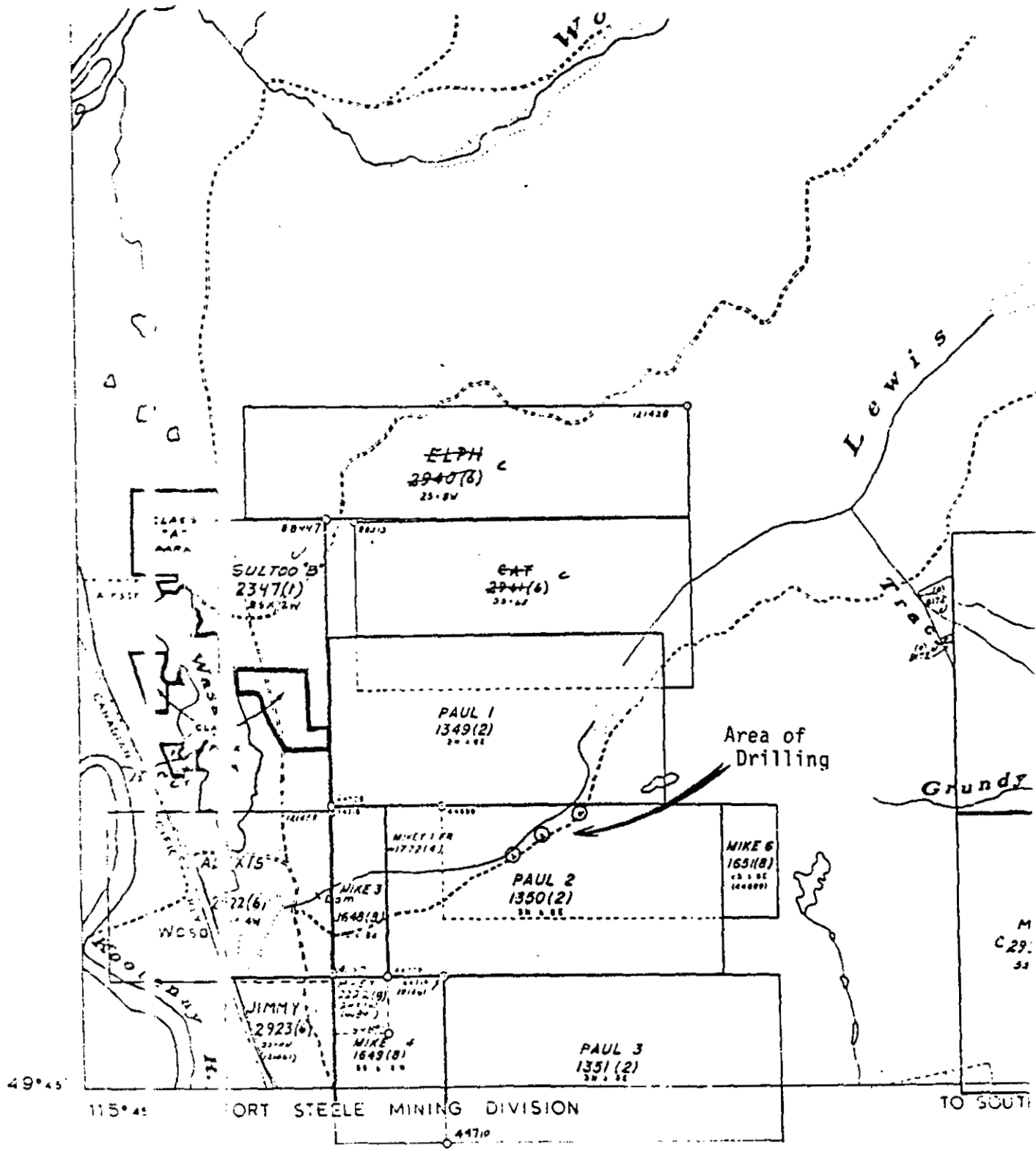


Figure 2. Paul - Mike Claim Group Showing Location of Drilling

Scale 1: 50,000

Topography is moderate to steep, with elevations ranging from 800 to 1100 m. Most of the claim block is covered by forests of fir, larch and pine, with some portions of the lower elevations open grasslands and cultivated hay fields. The east portion of the claims encompass the west-facing slope of the Hughes Range. A field examination showed that the soils in uncultivated areas were alkaline, with a reaction to 10% HCl occurring at a depth of 15-20 cm. Cultivated fields which had fertilizer were more acidic.

Access to the claims is provided by Highway 93/95, the all weather road leading up Lewis Creek, and numerous logging roads and bush tracks.

### 3. PROPERTY DESCRIPTION

The Paul-Mike claim group consists of 66 units in 5 claims and are wholly owned by DiaMet Minerals Ltd. of Kelowna, B.C.

CLAIM	RECORD NO.	TITLE NO.	UNITS	DATE OF RECORD
Paul 1	1349	209863	18	February 17, 1981
Paul 2	1350	209864	18	February 17, 1981
Paul 3	1351	209865	18	February 17, 1981
Mike 3	1648	209914	3	August 9, 1982
Mike 4	1649	209915	6	August 9, 1982
Mike 7	2222	210056	2	August 22, 1984
Mikey No. 1 Fr.	1772	209946	1	April 26, 1983

### 4. HISTORY OF PREVIOUS WORK

The history of previous work has been summarized from Northcote (1983) and Klewchuk (1992). The first recorded work on the Paul-Mike group, other than the geological compilation which lead



to the location of the claims, was a Dighem airborne resistivity, electromagnetic (EM) and magnetic survey, flown in 1982. This survey outlined a resistivity anomaly on the eastern edge of the claims and a weak EM conductor in the southeast. The western portion of the claims were characterized by low resistivity (high conductivity) in the order of 75 to 100 ohm meters. (This conductive area was attributed to a greater thickness of overburden.) The magnetics revealed a northerly trending anomaly along the eastern edge of the claim block, roughly following the boundary between the resistive and conductive zones.

A heavy mineral in till geochemical survey was conducted roughly concurrent with the Dighem geophysics. About 30 pounds of till was sieved and concentrated using heavy liquids, and the concentrates analyzed for Pb, Zn, Cu, Ag, As, Mo, Cd and Co using atomic absorption. Samples were taken on approximately 800 m line spacings and 200 m centres. This survey revealed several significant lead, zinc and copper anomalies. In general, the zinc and copper responses were coincident with each other, but the lead responses were not. The anomalies were contoured to show a northwesterly trend; however, this northerly elongation could also be created by the asymmetric line spacing. The lead anomalies covered both the highland in the east and the flatter land in the west of the claim block. Northcote (1983) correctly points out that the interpretation of source for heavy mineral anomalies from till samples will be strongly influenced by the thickness and nature of overburden. Subsequent work has shown the overburden to be greater than 300 m in thickness in the vicinity of many of the till anomalies.

In 1985, an induced polarization survey outlined two anomalous zones which coincided with several of the till anomalies. Three rotary holes totalling 546 m were drilled, and heavy mineral concentrates were prepared from several till samples obtained from 3 m intervals. Several samples contained appreciable lead and silver concentrations.

DiaMet drilled three deep rotary holes through overburden to reach bedrock in 1987 and 1988. Two of the holes reached bedrock and were cased, while the third was lost. Till samples were again taken for heavy mineral separation. Peculiar lead nodules, consisting of almost pure metallic lead,

were found in several till samples in two of the drill holes. Analysis of the concentrates revealed up to 3.66% lead. The source of these nodules was not immediately evident.

The cased holes were re-entered in 1991 with a diamond drill core rig, and bedrock was successfully recovered. The 54.9 m of core recovered quartzites and siltstones attributed to the Fort Steele Formation, which is considered to be approximately equivalent to the stratigraphic position which is host to the Sullivan deposit. The core appeared to be altered, and contained pyrite.

The thick overburden encountered in the drilling essentially relegated the surface till anomalies to glacial smearing from up ice sources, and the geophysical anomalies to groundwater or clay layers. The possibility of a sulphide source underlying the Paul-Mike claims had yet to be thoroughly tested. An attempt was made to "see" through the overburden by performing a high sensitivity soil mercury survey after an orientation over nearby mineralization. Over 1200 soil samples were collected from the base of the "H" horizon on 500 m lines and 30 m stations. These samples were analyzed for mercury using a proprietary analytical technique.

The results of the mercury analysis were plotted and contoured. Mercury in the west portion of the property was very low in concentration, hovering around the 0.2 - 1.0 ppb level. Anomalies up to 7 ppb, but more frequently 3-4 ppb, were found on the eastern portion of the property, and extended over a north-south length of several kilometres. This concentration may be related to the proximity of outcrop, thus a change in background.

## **5. REGIONAL GEOLOGY**

The following description is taken directly from Klewchuk (1992):

"Recent work by Leech (1960), Hoy (1979, 1984) and McMechan (1981) has provided a good understanding of the geology in the region of the Paul-Mike claims.

The area is underlain by clastic rocks of the Helikian age Purcell Supergroup which includes the following units:

Formation	Description
Creston	Green and purple argillite and siltstone, white and green quartzite; minor dark argillite
Aldridge	
Upper	Dark gray finely laminated argillite; minor siltstone
Middle	Siltstone and impure quartzite; interlayered with dark laminated argillite
Lower	Finely laminated argillite, siltstone; minor dolomitic siltstone and quartzite
Fort Steele	White cross-bedded quartzite, mud-cracked siltstone, argillite

Descriptions from Hoy (1979) with minor modifications.

The Fort Steele Formation is stratigraphically equivalent to the Lower and Lower-Middle Aldridge Formation and the Aldridge Formation is transitionally overlain by the Creston Formation. A diagrammatic cross section from the Sullivan deposit across the Rocky Mountain Trench to the Paul-Mike claims area is provided as Figure 3.

Voluminous intrusions of diorite and gabbro composition sills and dikes occur within this stratigraphy, concentrated in the Lower Aldridge Formation and diminishing upward.

All the known lead-zinc-silver deposits in the region are hosted by the Aldridge Formation. The large Sullivan deposit occurs at the transition from Lower to Middle Aldridge, and, although stratiform deposits are known from other

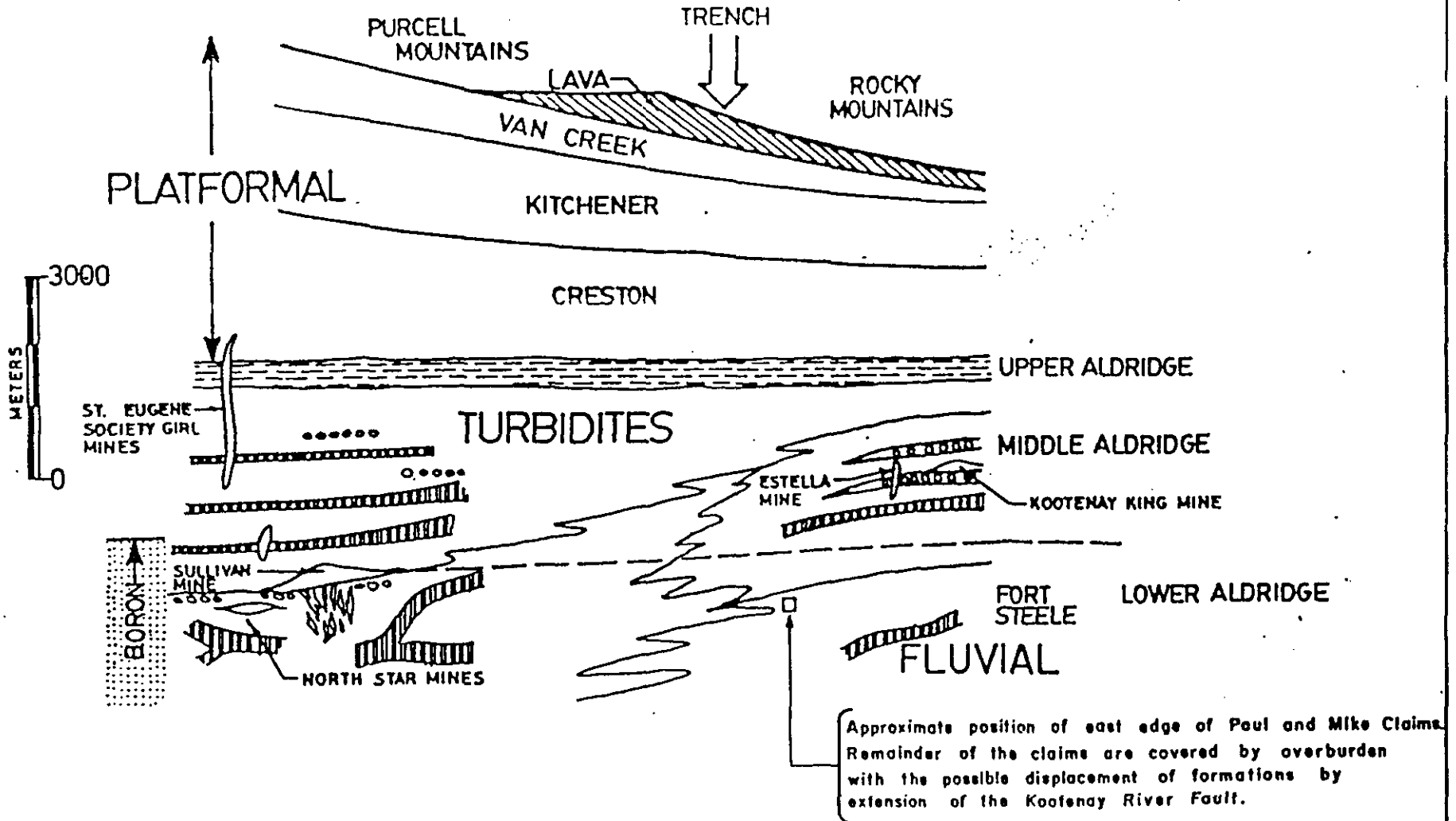
# DIAGRAMMATIC SECTION

## PURCELL SUPERGROUP

Figure 3

WEST

EAST



Diagrams Minerals Ltd. - Paul Mike Claims

Figure 3

From I. Hoy, 1978 & unpublished data

stratigraphy in the Aldridge, this 'Lower-Middle Aldridge contact' remains the favoured stratigraphy for exploration.

Mapping by Hoy (1984) inferred a regional Rocky Mountain Trench Fault on the east side of the Rocky Mountain Trench. This fault could bring the favourable 'Lower-Middle Aldridge contact' close to surface in the region of the Paul-Mike claims, as earlier postulated."

## 6. PROPERTY GEOLOGY

This description is also taken from Klewchuk (1992):

"The Paul-Mike claim group is largely underlain by unconsolidated material which covers the position of the Rocky Mountain Trench Fault.

The Fort Steele Formation crops out on the east edge of the claims area and has moderate westerly dip toward the centre of the claims. Here, the Fort Steele Formation represents the upper limb of a recumbent fold whose axial plane strikes north-north westerly and dips westerly (Hoy, 1979).

If the projection of the Rocky Mountain Trench Fault passes through the claims area it would transect and displace the upper limb of the recumbent fold. Because the direction and magnitude of movement on the fault is unknown, it is impossible to predict what formation underlies the overburden on the west half of the Paul-Mike claims."

## 7. GEOCHEMICAL METHODS

### 7.2 *Field and Analytical Methods*

A soil grid was placed over the Paul-Mike claims which consisted of 14 east-west lines spaced at 400 m with soil sampling stations at 25 m. Soil was obtained using a shovel or mattock from the poorly developed B horizon in undisturbed forested areas, or from below the tilled layer in cultivated fields. At least two duplicate samples were obtained from each line as a check on sampling and analytical variability.

Soils were air dried in kraft paper bags, then sent to Chemex Laboratories in Vancouver for analysis. A soil pH was done every 25 samples. Aqua regia soluble elements were determined by ICP, including the major elements. A sodium acetate/acetic acid extraction with an ICP-MS detection was used to liberate ions weakly bound with carbonate components. These compounds are found in soils with a pH above 7.5 – mostly the west portion of the gridded area. All analytical data used for interpretation is shown in Appendix 1.

## **7.2 Analytical Quality**

The duplicate samples have been plotted for the most important elements, and are shown in Appendix 2. The aqua regia soluble elements are prefixed by “HA” for “Hot Acid”. One of the duplicate pairs is obviously not a duplicate, but the remainder of the pairs repeat very well for Ca, Fe, Sr and Zn. The acetic acid (HOAc) ICP-MS attack for the same elements show a slightly poorer precision for Ca, Sr, and Fe. The HOAc Zn has a much poorer precision and should not be used alone to locate anomalies.

## **7.3 Data Plots**

The absolute concentration of pH sensitive ions in the near surface soils will be controlled by the pH of the soil. In addition, the pattern of element distribution in soils underlain by deep overburden and influenced by an oxidizing sulphide should take the form of a “double peak” or “rabbit ear” with each peak over the contact of the sulphide with the country rock, and the negative between the peaks is the actual target (Smee, 1983); (Smee, 1997). The pH sensitive elements Ca, Sr and Fe were plotted in profile format using a spreadsheet program. Zn was plotted to detect anomalous dispersion from shallow buried targets on the eastern edge of the property. Both the strong and weak extracts, then their ratios are plotted for each line, and are shown in Appendix 3. The HOAc divided by the hot acid (HA) soluble components corrects for variable concentrations of each particular element in the soil. An ideal anomaly will have an

excess of weakly soluble elements, therefore the ratio will rise. A combination of a double peak pattern and a high HOAc/HA ratio is the ideal anomaly pattern.

## 8. RESULTS

A compilation map (not to scale) showing the distribution of pH and the position of interpreted anomalous element patterns is shown in Figure 4.

The distribution of soil pH on the Paul Mike claims ranges from 8.5 to 5.1, more than a 1000 fold difference in  $H^+$  concentration. The pattern clearly shows a north easterly trend, with the higher pH soils occurring to the west. This wide range of soil pH dramatically influences the concentration and pattern of distribution of the pH sensitive elements. The Ca and Sr were examined in detail in areas with  $pH > 7.5$ , while the Fe was closely examined in areas with a pH of  $< 7.5$ .

Anomalous patterns for each of the pH sensitive elements were picked from the profile plots, and the position of the central "low" between the double peaks was located on Figure 4. A group of Ca, Sr and Fe anomalies trend northeast from Line 5200S to Line 800S. The central portion of this trend, which extends from Line 2000S to Line 2800S contains the strongest double-peak responses in all pH sensitive elements, and has been selected as the prime target area for follow-up. However, these responses also occur in the area of greatest pH change - 8.4 to 7.1 - more than a 10-fold difference in  $H^+$ . This is the critical pH range where the stability of both Ca and Fe compounds changes from being essentially non-mobile to being at least moderately mobile. These anomalies could therefore simply be an artifact of the soil pH change.

The east portion of the claim group has a band of higher Zn values which extends intermittently from L1600 to L5200. This higher Zn may be simply reflecting a higher background caused by proximity to bedrock, or may be mineralization in the sedimentary rocks. All of this data is to be plotted in plan stacked profile format to scale by Diamet.

# DIAMET MINERALS INC. PAUL-MIKE SOIL GEOCHEMISTRY

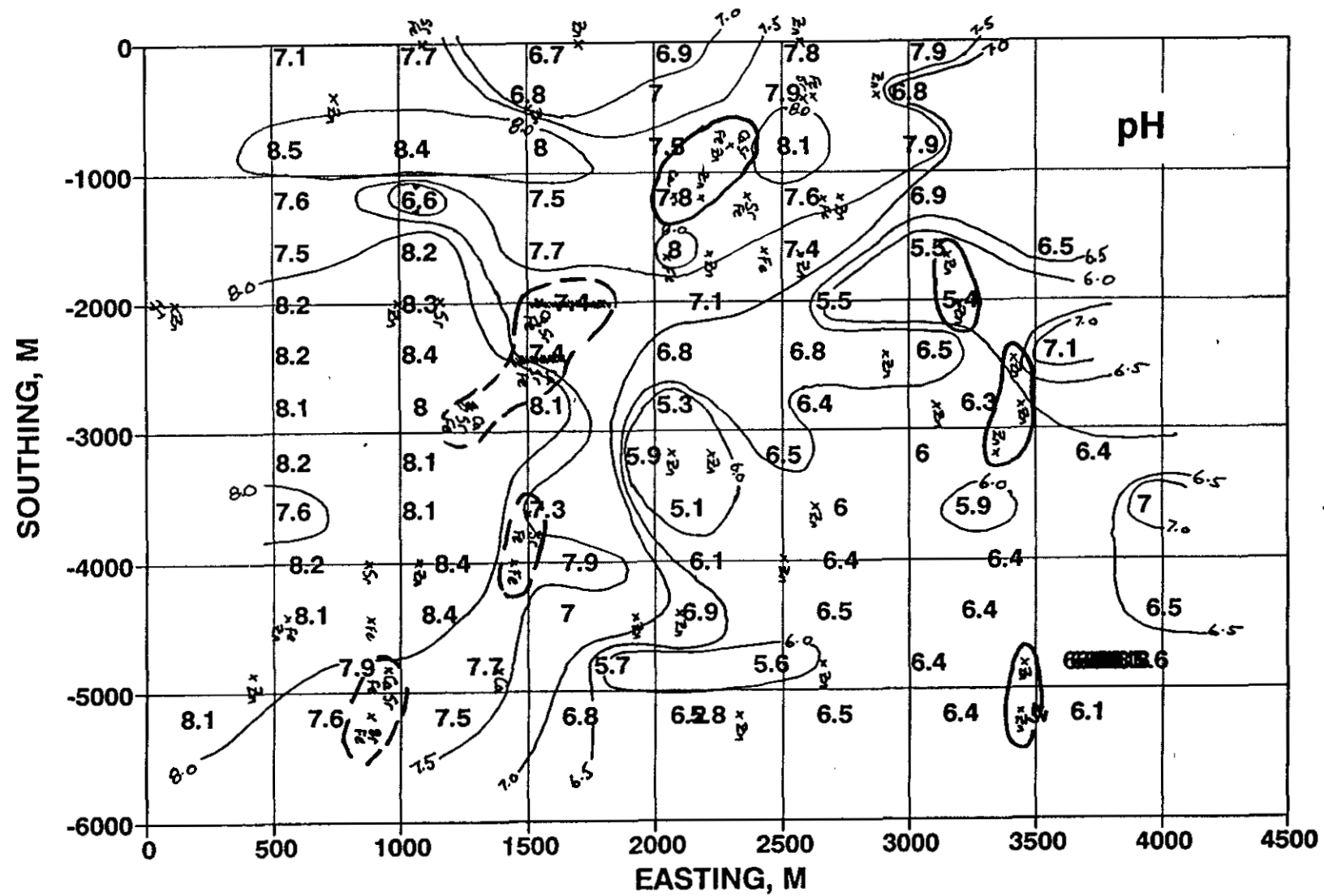


FIGURE 4 COMPILATION MAP



## 9. RECOMMENDATIONS

The clear double peak anomalies in Ca, Sr and Fe on Lines 2000-2800 must be field checked. Should these anomalies not coincide with obvious surface features, such as the start of tilled fields, drainages or seepages, or changes in vegetation, they must be considered as valid responses.

The expected depth of overburden is in excess of 300 m. A detailed examination of all exploration data, including the self potential, IP and magnetic geophysical surveys and a plot of the location of the lead nodules should be incorporated into the final exploration plan.

Several lines of seismic could be very revealing as to the location of a suspected massive sulphide target. Recent advances in high energy seismic profiling for mineral exploration were outlined in the recent Exploration 97 Conference. These papers suggest that massive sulphides can be revealed through a thickness in excess of 1 km of cover.

Respectfully submitted by:



Barry W. Smee, Ph.D., P.Geo.

## 10. AUTHOR'S QUALIFICATIONS

As author of this report, I, Barry W. Smee, do certify that:

- I am an independent consulting geochemist residing at 1011 Seaside Drive, Sooke, BC.
- I am a graduate geologist with a BSc degree (1969) from the University of Alberta and a PhD degree (1982) from the University of New Brunswick.
- I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, membership number 18421.
- I have been actively engaged in mineral exploration for 27 years.

Dated at Sooke, British Columbia, this 31 day of October, 1996.

  
Barry W. Smee, P. Geo

## 11. REFERENCES

Smee, B.W., 1983 Laboratory and Field Evidence in Support of the Electrogeochemically Enhanced Migration of Ions Through Glaciolacustrine Sediment. *J. Geochem. Explor.*, V19, p. 277-304.

Smee, B.W., 1997 The Formation of Surficial Geochemical Patterns Over Buried Epithermal Gold Deposits in Desert Environments: Results of a Test of Partial Extraction Techniques. In *Exploration 97*, in press.

APPENDIX 1  
Plotted Analytical Data

## Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		ppm HA Zn	HOAC Zn/ HA Zn*100
			ppm	%				ppm	ppm					HOAC Fe/ HA Fe*100	ppm		ppm	HOAC Zn		
100	100	4.10	33600	3.360	0.82		69	52.6	0.76				2.04	160	0.784		0.25	46	0.543	
100	125	7.78	60400	6.040	0.78		77	54.8	0.71				1.91	250	1.309		0.25	50	0.500	
100	150	5.24	36400	3.640	0.69	0.755	45	27.9	0.62	0.692			1.92	160	0.833	0.904	0.75	44	1.705	
100	175	3.41	21100	2.110	0.62	0.742	52	33.2	0.64	0.693			1.99	210	1.055	1.085	0.25	46	0.543	
100	200	2.88	25000	2.500	0.87	0.762	38	27.6	0.73	0.692			2.04	110	0.539	0.958	0.10	42	0.238	
100	225	7.30	55000	5.500	0.75	0.773	76	58.3	0.77	0.714			1.42	240	1.690	1.134	0.25	38	0.658	
100	250	3.27	28600	2.860	0.87	0.797	48	34.0	0.71	0.697			1.94	130	0.670	0.985	0.10	44	0.227	
100	275	7.81	58400	5.840	0.75	0.751	108	78.6	0.73	0.651			1.40	240	1.714	0.910	0.50	38	1.316	
100	300	1.61	11920	1.192	0.74	0.741	34	18.9	0.56	0.589			2.25	70	0.311	0.587	0.10	44	0.227	
100	325	0.57	3630	0.363	0.64	0.738	19	9.4	0.49	0.594			2.47	40	0.162	0.585	0.10	52	0.192	
100	350	0.41	2900	0.290	0.71	0.736	20	9.2	0.46	0.554			2.51	20	0.080	0.265	0.10	52	0.192	
100	375	3.62	31100	3.110	0.86	0.691	62	45.5	0.73	0.518			2.13	140	0.657	0.210	0.25	46	0.543	
100	400	0.56	4130	0.413	0.74	0.703	26	13.7	0.53	0.527			2.63	30	0.114	0.186	0.10	54	0.185	
100	425	0.34	1740	0.174	0.51	0.669	19	7.2	0.38	0.534			2.55	10	0.039	0.200	0.10	54	0.185	
100	450	0.30	2100	0.210	0.70	0.676	18	9.7	0.54	0.521			2.61	10	0.038	0.111	0.10	58	0.172	
100	475	0.77	4120	0.412	0.54	0.660	24	11.8	0.49	0.501			2.63	40	0.152	0.102	0.10	54	0.185	
100	500	1.05	9400	0.940	0.90	0.716	24	16.1	0.67	0.523			2.39	50	0.209	0.101	1.50	48	3.125	
100	525	0.30	1970	0.197	0.66	0.728	19	8.1	0.43	0.541			2.87	20	0.070	0.101	0.10	56	0.179	
100	550	0.29	2300	0.230	0.79	0.776	15	7.4	0.49	0.544	7.1		2.75	10	0.036	0.079	0.25	48	0.521	
100	575	0.28	2130	0.213	0.76	0.738	19	11.9	0.63	0.513			2.64	10	0.038	0.046	0.10	54	0.185	
100	600	0.24	1860	0.186	0.78	0.778	15	7.7	0.51	0.536			2.38	10	0.042	0.115	0.25	44	0.568	
100	625	0.25	1760	0.176	0.70	0.753	18	9.3	0.51	0.527			2.30	10	0.043	0.114	0.50	46	1.087	
100	650	1.32	11290	1.129	0.86	0.728	25	13.5	0.54	0.496			1.93	80	0.415	0.114	0.10	34	0.294	
100	675	0.27	1810	0.181	0.67	0.681	14	6.2	0.44	0.500			2.94	10	0.034	0.114	0.10	54	0.185	
100	700	0.23	1460	0.146	0.63	0.685	19	9.0	0.47	0.481			2.63	10	0.038	0.113	0.10	46	0.217	
100	725	0.38	2050	0.205	0.54	0.624	18	9.5	0.53	0.469			2.52	10	0.040	0.039	0.10	46	0.217	
100	750	0.26	1890	0.189	0.73	0.664	14	5.9	0.42	0.530			2.59	10	0.039	0.121	0.25	48	0.521	
100	775	0.39	2140	0.214	0.55	0.668	14	6.7	0.48	0.534			2.35	10	0.043	0.129	0.10	56	0.179	
100	800	2.29	19970	1.997	0.87	0.714	21	15.7	0.75	0.522			2.01	90	0.448	0.129	0.10	52	0.192	
100	825	0.44	2870	0.287	0.65	0.718	15	7.5	0.50	0.609			2.60	20	0.077	0.325	0.10	54	0.185	
100	850	0.33	2540	0.254	0.77	0.781	11	5.2	0.47	0.639			2.46	10	0.041	0.360	0.25	56	0.446	
100	875	5.78	43300	4.330	0.75	0.743	62	52.8	0.85	0.592			1.77	180	1.017	0.286	0.10	44	0.227	
100	900	1.02	8780	0.878	0.86	0.777	18	11.4	0.63	0.609			2.32	50	0.216	0.279	0.25	68	0.368	
100	925	0.38	2590	0.259	0.68	0.761	15	7.7	0.51	0.626			2.55	20	0.078	0.278	0.10	48	0.208	
100	950	0.23	1890	0.189	0.82	0.735	13	7.6	0.58	0.556			2.44	10	0.041	0.100	0.25	48	0.521	
100	975	0.36	2490	0.249	0.69	0.689	11	6.1	0.55	0.528			2.50	10	0.040	0.065	0.10	44	0.227	
100	1000	0.33	2040	0.204	0.62	0.702	16	8.1	0.50	0.515			2.39	30	0.126	0.065	0.10	42	0.238	
100	1025	0.39	2470	0.247	0.63	0.695	15	7.4	0.49	0.501			2.51	10	0.040	0.096	0.50	44	1.136	
100	1050	0.37	2750	0.275	0.74	0.694	11	4.9	0.45	0.485	7.7		2.51	20	0.080	0.106	0.10	52	0.192	
100	1075	0.84	6630	0.663	0.79	0.738	14	7.2	0.51	0.485			2.56	50	0.195	0.097	0.10	56	0.179	

Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100	
			ppm HOAC Ca	% HOAC Ca			ppm HOAC Sr	ppm HOAC Sr				% HOAC Fe	ppm HOAC Fe		ppm HOAC Zn	ppm HA Zn		
100	1100	0.21	1440	0.144	0.69	0.753	19	9.0	0.47	0.481		2.21	20	0.090	0.106	0.10	36	0.278
100	1125	0.27	2260	0.226	0.84	0.775	15	7.6	0.50	0.524		2.55	20	0.078	0.151	0.10	56	0.179
100	1150	0.36	2550	0.255	0.71	0.792	15	7.2	0.48	0.545		2.38	20	0.084	0.142	1.00	50	2.000
100	1175	1.59	13580	1.358	0.85	0.811	17	11.2	0.66	0.618		2.27	70	0.308	0.690	0.25	48	0.521
100	1200	0.37	3230	0.323	0.87	0.764	13	8.1	0.62	0.610		2.02	30	0.149	0.722	0.10	58	0.172
100	1225	9.41	73800	7.380	0.78	0.760	80	66.6	0.83	0.608		1.06	300	2.830	0.721	0.75	24	3.125
100	1250	1.01	6040	0.604	0.60	0.725	14	6.5	0.46	0.560		2.09	50	0.239	0.667	0.10	46	0.217
100	1275	0.37	2550	0.255	0.69	0.701	17	8.0	0.47	0.514		2.53	20	0.079	0.645	0.10	46	0.217
100	1300	0.29	1980	0.198	0.68	0.691	14	5.8	0.41	0.416		2.65	10	0.038	0.095	0.10	64	0.156
100	1325	0.27	2030	0.203	0.75	0.698	16	6.3	0.39	0.409		2.64	10	0.038	0.055	0.10	52	0.192
100	1350	0.23	1690	0.169	0.73	0.721	15	5.2	0.34	0.402		2.53	20	0.079	0.065	0.25	70	0.357
100	1375	0.33	2090	0.209	0.63	0.741	17	7.3	0.43	0.417		2.51	10	0.040	0.074	0.75	82	0.915
100	1400	0.23	1840	0.184	0.80	0.714	15	6.5	0.43	0.429		2.30	30	0.130	0.090	2.00	82	2.439
100	1425	0.24	1890	0.189	0.79	0.703	15	7.4	0.49	0.451		2.48	20	0.081	0.099	0.10	56	0.179
100	1450	0.28	1720	0.172	0.61	0.701	15	6.8	0.45	0.463		2.55	30	0.118	0.114	0.50	62	0.806
100	1475	0.33	2240	0.224	0.68	0.639	16	7.3	0.45	0.480		2.36	30	0.127	0.132	0.50	52	0.962
100	1500	0.46	2870	0.287	0.62	0.575	17	8.3	0.49	0.463		2.60	30	0.115	0.138	0.10	60	0.167
100	1525	0.74	3620	0.362	0.49	0.578	18	9.3	0.52	0.448		2.74	60	0.219	0.125	0.50	76	0.658
100	1550	0.51	2400	0.240	0.47	0.563	18	7.3	0.41	0.459	6.7	2.68	30	0.112	0.124	0.25	88	0.284
100	1575	0.31	1950	0.195	0.63	0.531	28	10.5	0.38	0.454		1.93	10	0.052	0.117	0.25	40	0.625
100	1600	0.53	3190	0.319	0.60	0.578	15	7.7	0.51	0.499		2.44	30	0.123	0.170	0.10	48	0.208
100	1625	0.51	2360	0.236	0.46	0.582	12	5.6	0.46	0.500		2.52	20	0.079	0.168	0.50	58	0.862
100	1650	2.86	20700	2.070	0.72	0.541	32	23.7	0.74	0.514		2.06	100	0.485	0.179	1.25	44	2.841
100	1675	0.57	2800	0.280	0.49	0.581	16	6.6	0.41	0.575		3.04	30	0.099	0.241	11.25	60	18.750
100	1700	0.77	3270	0.327	0.42	0.610	17	7.6	0.45	0.576		2.73	30	0.110	0.255	1.25	72	1.736
100	1725	2.77	22300	2.230	0.81	0.626	32	26.1	0.82	0.523		2.31	100	0.433	0.173	0.10	48	0.208
100	1750	0.56	3390	0.339	0.61	0.633	14	6.6	0.47	0.525		2.66	40	0.150	0.161	0.10	66	0.152
100	1775	0.48	3860	0.386	0.80	0.669	16	7.6	0.48	0.523		2.82	20	0.071	0.164	0.10	54	0.185
100	1800	0.40	2100	0.210	0.53	0.605	14	5.9	0.42	0.475		2.50	10	0.040	0.101	0.25	56	0.446
100	1825	0.31	1880	0.188	0.61	0.594	15	6.6	0.44	0.467		2.38	30	0.126	0.093	0.75	74	1.014
100	1850	0.92	4450	0.445	0.48	0.534	18	10.3	0.57	0.458		2.51	30	0.120	0.087	1.25	64	1.953
100	1875	0.44	2420	0.242	0.55	0.597	13	5.6	0.43	0.499		2.74	30	0.109	0.098	0.75	70	1.071
100	1900	0.46	2320	0.232	0.50	0.569	18	7.7	0.43	0.504		2.45	10	0.041	0.100	0.75	46	1.630
100	1925	0.29	2440	0.244	0.84	0.615	11	6.9	0.63	0.494		2.12	20	0.094	0.100	0.75	70	1.071
100	1950	0.36	1680	0.168	0.47	0.580	13	6.0	0.46	0.494		2.22	30	0.135	0.101	0.25	60	0.417
100	1975	0.40	2860	0.286	0.71	0.593	10	5.3	0.53	0.492		2.54	30	0.118	0.116	1.50	50	3.000
100	2000	0.63	2340	0.234	0.37	0.532	14	6.0	0.43	0.450		2.58	30	0.116	0.112	1.25	66	1.894
100	2025	0.50	2860	0.286	0.57	0.559	15	6.3	0.42	0.443		2.57	30	0.117	0.102	0.10	48	0.208
100	2050	0.45	2400	0.240	0.53	0.567	16	6.7	0.42	0.437	6.9	2.65	20	0.075	0.119	2.25	66	3.409
100	2075	0.28	1690	0.169	0.60	0.588	15	6.4	0.42	0.443		2.37	20	0.084	0.120	1.25	92	1.359

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS			PASTE	%	ICP-MS			ICP-MS		
			HA Ca	HOAC Ca				HOAC Ca	HA Sr	HOAC Sr			HA SR	AVERAG	HA Fe	HOAC Fe	HA Fe*100	AVERAG
100	2100	0.27	2040	0.204	0.76	0.608	15	7.5	0.50	0.433		2.48	50	0.202	0.104	2.75	98	2.806
100	2125	0.49	2330	0.233	0.48	0.633	13	6.0	0.46	0.450		2.51	30	0.120	0.129	0.10	44	0.227
100	2150	0.35	2350	0.235	0.67	0.627	18	6.6	0.37	0.442		2.65	10	0.038	0.119	0.10	42	0.238
100	2175	0.70	4600	0.460	0.66	0.620	16	8.0	0.50	0.441		2.49	50	0.201	0.118	0.25	52	0.481
100	2200	0.31	1780	0.178	0.57	0.525	13	5.0	0.38	0.348		2.73	10	0.037	0.094	0.10	46	0.217
100	2225	0.36	2600	0.260	0.72	0.536	15	7.4	0.49	0.380		2.54	50	0.197	0.117	0.10	70	0.143
100	2250	0.29				0.506	11			0.379		2.82	delay	0.000	0.091	delay	46	0.000
100	2275	0.25	1810	0.181	0.72	0.513	11	5.8	0.53	0.385		2.65	40	0.151	0.107	0.10	50	0.200
100	2300	0.52	2660	0.266	0.51	0.523	14	6.9	0.49	0.372		2.74	20	0.073	0.082	0.10	58	0.172
100	2325	0.41	2490	0.249	0.61	0.667	15	6.3	0.42	0.456		2.60	30	0.115	0.120	0.10	42	0.238
100	2350	0.26	2010	0.201	0.77	0.659	14	6.0	0.43	0.481		2.76	20	0.072	0.161	0.10	52	0.192
100	2375	0.70	5030	0.503	0.72	0.680	21	8.8	0.42	0.450		2.65	50	0.189	0.169	0.25	58	0.431
100	2400	2.84	19380	1.938	0.68	0.669	41	26.8	0.65	0.474		2.52	90	0.357	0.177	0.25	46	0.543
100	2425	0.35	2170	0.217	0.62	0.644	17	5.7	0.34	0.490		2.64	30	0.114	0.197	0.10	46	0.217
100	2450	1.02	5630	0.563	0.55	0.645	20	10.7	0.54	0.504		2.62	40	0.153	0.206	0.10	46	0.217
100	2475	0.63	4080	0.408	0.65	0.653	18	9.2	0.51	0.473		2.30	40	0.174	0.157	0.25	48	0.521
100	2500	0.52	3770	0.377	0.73	0.639	15	7.3	0.49	0.484		2.17	50	0.230	0.149	0.10	38	0.263
100	2525	0.31	2240	0.224	0.72	0.692	16	8.0	0.50	0.522		2.67	30	0.112	0.697	0.10	50	0.200
100	2550	0.32	1750	0.175	0.55	0.729	19	7.5	0.39	0.528	7.8	2.66	20	0.075	0.684	0.10	50	0.200
100	2575	11.30	92400	9.240	0.82	0.730	105	75.7	0.72	0.563		1.14	330	2.895	0.731	4.00	22	18.182
100	2600	0.23	1910	0.191	0.83	0.715	17	9.2	0.54	0.563		2.79	30	0.108	0.740	0.10	52	0.192
100	2625	3.15	23000	2.300	0.73	0.776	33	21.9	0.66	0.617		2.15	100	0.465	0.871	0.10	40	0.250
100	2650	0.46	2990	0.299	0.65	0.785	22	11.0	0.50	0.625		2.51	40	0.159	0.670	0.10	46	0.217
100	2675	4.04	34500	3.450	0.85	0.797	38	25.2	0.66	0.668		2.08	150	0.728	1.083	0.10	40	0.250
100	2700	8.74	75400	7.540	0.86	0.764	81	61.4	0.76	0.674		1.64	310	1.890	1.260	0.75	34	2.206
100	2725	10.05	89300	8.930	0.89	0.794	80	60.4	0.76	0.720		1.38	300	2.174	1.570	0.25	28	0.893
100	2750	7.62	43200	4.320	0.57	0.790	76	52.7	0.69	0.723		1.78	240	1.348	1.472	0.75	42	1.786
100	2775	10.45	83300	8.330	0.80	0.805	82	59.7	0.73	0.751		2.34	400	1.709	1.346	0.25	46	0.543
100	2800	1.02	8530	0.853	0.84	0.788	26	17.7	0.68	0.710		2.51	60	0.239	0.942	0.10	68	0.147
100	2825	7.75	72500	7.250	0.94	0.839	72	64.7	0.90	0.715		2.22	280	1.261	1.035	0.25	46	0.543
100	2850	1.47	11810	1.181	0.80	0.900	21	11.6	0.55	0.798		3.31	50	0.151	0.799	1.00	76	1.316
100	2875	7.84	64500	6.450	0.82	0.860	148	106.0	0.72	0.807		1.49	270	1.812	0.807	3.00	54	5.556
100	2900	1.47	16170	1.617	1.10	0.808	18	20.6	1.14	0.763		2.07	110	0.531	0.586	0.25	50	0.500
100	2925	2.02	12920	1.292	0.64	0.787	26	18.8	0.72	0.755		2.49	70	0.281	0.588	0.25	54	0.463
100	2950	0.68	4580	0.458	0.67	0.754	17	11.6	0.68	0.737		2.61	40	0.153	0.260	0.75	86	0.872
100	2975	0.95	6630	0.663	0.70	0.659	19	9.8	0.52	0.631		2.49	40	0.161	0.187	0.10	60	0.167
100	3000	1.35	8920	0.892	0.66	0.664	23	14.3	0.62	0.588		2.28	40	0.175	0.155	0.75	74	1.014
100	3025	1.27	7900	0.790	0.62	0.686	24	14.9	0.62	0.598		2.42	40	0.165	0.449	0.25	58	0.431
100	3050	0.61	4050	0.405	0.66	0.681	23	11.6	0.50	0.603	7.9	2.45	30	0.122	0.457	1.00	68	1.471
100	3075	7.52	59000	5.900	0.78	0.680	88	64.0	0.73	0.604		1.48	240	1.622	0.441	0.50	36	1.389

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SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS		5 PT AVERAG	PASTE pH	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100	
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Sr			ppm HOAC Sr	ppm HOAC Sr			% HA Fe	ppm HOAC Fe		ppm HOAC Fe*100	ppm HOAC Zn		ppm HA Zn
100	3100	0.79	5310	0.531	0.67			41	22.3	0.54		2.02	40	0.198		0.10	48	0.208
100	3125	0.53	3490	0.349	0.66			53	33.2	0.63		3.04	30	0.099		0.25	66	0.379
400	100	4.88	43100	4.310	0.88			68	57.4	0.84		2.25	230	1.022		0.10	36	0.278
400	125	1.01	7150	0.715	0.71			20	11.0	0.55		2.63	90	0.342		1.00	50	2.000
400	150	0.44	2730	0.273	0.62	0.728		18	9.2	0.51	0.675	2.56	30	0.117	0.769	0.25	56	0.446
400	175	5.18	32500	3.250	0.63	0.694		60	39.0	0.65	0.646	1.99	160	0.804	0.653	0.25	42	0.595
400	200	6.18	49600	4.960	0.80	0.677		101	83.2	0.82	0.649	1.67	260	1.557	0.613	0.25	32	0.781
400	225	2.50	17740	1.774	0.71	0.696		48	33.5	0.70	0.669	2.24	100	0.446	0.618	0.10	46	0.217
400	250	0.57	3550	0.355	0.62	0.705		25	14.1	0.56	0.646	2.10	30	0.143	0.466	0.10	48	0.208
400	275	0.85	6110	0.611	0.72	0.707		22	13.4	0.61	0.623	2.13	30	0.141	0.312	0.75	52	1.442
400	300	0.45	3010	0.301	0.67	0.716		16	8.6	0.54	0.639	2.29	10	0.044	0.532	0.75	58	1.293
400	325	3.32	27100	2.710	0.82	0.727		37	26.1	0.71	0.668	1.91	150	0.785	0.823	0.75	46	1.630
400	350	7.23	54500	5.450	0.75	0.713		83	64.5	0.78	0.683	1.42	220	1.549	0.857	0.75	28	2.679
400	375	7.57	51300	5.130	0.68	0.735		89	63.1	0.71	0.738	1.63	260	1.595	0.921	0.25	36	0.694
400	400	1.40	9060	0.906	0.65	0.712		33	22.7	0.69	0.741	2.23	70	0.314	1.021	0.10	50	0.200
400	425	2.35	18290	1.829	0.78	0.722		45	36.4	0.81	0.729	2.22	80	0.360	0.831	0.10	46	0.217
400	450	6.26	43900	4.390	0.70	0.715		81	58.3	0.72	0.693	1.71	220	1.287	0.536	0.25	36	0.694
400	475	4.00	32300	3.230	0.81	0.693		57	40.9	0.72	0.666	2.01	120	0.597	0.483	0.10	40	0.250
400	500	0.74	4750	0.475	0.64	0.704		22	11.7	0.53	0.629	2.41	30	0.124	0.436	0.10	48	0.208
400	525	0.53	2850	0.285	0.54	0.668		16	8.8	0.55	0.574	2.24	10	0.045	0.188	0.75	48	1.563
400	550	0.77	6420	0.642	0.83	0.619		16	10.0	0.63	0.530	2.40	30	0.125	0.122	0.10	44	0.227
400	575	0.21	1090	0.109	0.52	0.674		14	6.3	0.45	0.583	2.14	10	0.047	0.188	0.10	46	0.217
400	600	0.20	1130	0.113	0.57	0.697		25	12.4	0.50	0.569	1.49	40	0.268	0.202	0.10	48	0.208
400	625	2.89	26400	2.640	0.91	0.672		41	32.6	0.80	0.538	2.41	110	0.456	0.209	0.10	42	0.238
400	650	0.74	4840	0.484	0.65	0.691		20	9.7	0.48	0.531	2.60	30	0.115	0.207	0.25	44	0.568
400	675	0.73	5170	0.517	0.71	0.717		16	7.6	0.47	0.521	2.51	40	0.159	0.168	0.10	62	0.161
400	700	0.31	1900	0.190	0.61	0.658		19	7.8	0.41	0.456	2.85	10	0.035	0.084	0.10	54	0.185
400	725	0.24	1670	0.167	0.70	0.629		19	8.5	0.45	0.446	2.74	20	0.073	0.089	2.50	50	5.000
400	750	0.28	1730	0.173	0.62	0.635		14	6.6	0.47	0.496	2.65	10	0.038	0.147	0.25	48	0.521
400	775	0.25	1270	0.127	0.51	0.661		16	7.0	0.43	0.569	2.17	30	0.138	0.581	0.10	40	0.250
400	800	2.99	22200	2.220	0.74	0.641		34	24.5	0.72	0.569	2.21	100	0.452	0.625	0.10	42	0.238
400	825	9.47	70200	7.020	0.74	0.646		87	67.5	0.78	0.561	1.27	280	2.205	0.639	1.75	34	5.147
400	850	1.22	7290	0.729	0.60	0.702		17	7.6	0.45	0.572	2.06	60	0.291	0.627	0.25	58	0.431
400	875	0.33	2120	0.212	0.64	0.681		18	7.7	0.43	0.532	2.82	30	0.106	0.577	0.10	64	0.156
400	900	0.33	2590	0.259	0.78	0.678		11	5.4	0.49	0.505	2.53	20	0.079	0.167	0.25	50	0.500
400	925	0.50	3200	0.320	0.64	0.696		14	7.3	0.52	0.551	2.44	50	0.205	0.204	0.75	50	1.500
400	950	0.47	3410	0.341	0.73	0.722		14	9.0	0.64	0.619	2.64	40	0.152	0.408	0.25	50	0.500
400	975	2.66	18250	1.825	0.69	0.705		30	20.2	0.67	0.617	2.09	100	0.478	0.429	0.75	52	1.442
400	1000	5.48	42300	4.230	0.77	0.750		49	37.6	0.77	0.652	1.69	190	1.124	0.528	1.00	42	2.381
400	1025	0.18	1260	0.126	0.70	0.765		17	8.2	0.48	0.640	2.14	40	0.187	0.573	0.75	76	0.987



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SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm Ca	% Ca	ppm Ca	HOAC HA	5 PT AVERAG	ppm Sr	ppm Sr	HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	% HA Fe	ppm Fe	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm Zn	
400	1050	3.63	31500	3.150	0.87	0.802	37	25.6	0.69	0.653		2.14	150	0.701	0.593	1.25	46	2.717
400	1075	1.62	12920	1.292	0.80	0.805	24	14.0	0.58	0.591		2.15	80	0.372	0.423	1.00	50	2.000
400	1100	2.14	18640	1.864	0.87	0.827	28	20.7	0.74	0.607		1.72	100	0.581	0.441	0.10	36	0.278
400	1125	0.90	7100	0.710	0.79	0.784	26	11.9	0.46	0.614		1.82	50	0.275	0.573	0.10	32	0.313
400	1150	0.61	4930	0.493	0.81	0.730	15	8.5	0.56	0.582		2.56	70	0.273	0.530	0.25	50	0.500
400	1175	7.70	50300	5.030	0.65	0.718	81	58.7	0.72	0.539		1.54	210	1.364	0.443	0.75	38	1.974
400	1200	0.59	3130	0.313	0.53	0.693	12	5.1	0.43	0.543		2.54	40	0.157	0.397	0.50	48	1.042
400	1225	0.26	2100	0.210	0.81	0.680	16	8.4	0.53	0.539		2.04	30	0.147	0.350	1.75	68	2.574
400	1250	0.31	2070	0.207	0.67	0.687	16	7.7	0.48	0.463		2.30	10	0.043	0.101	0.25	64	0.391
400	1275	0.31	2300	0.230	0.74	0.726	14	7.2	0.51	0.495		2.50	10	0.040	0.152	0.25	56	0.446
400	1300	0.28	1920	0.192	0.69	0.696	17	6.3	0.37	0.462		2.52	30	0.119	0.160	0.50	48	1.042
400	1325	2.71	19730	1.973	0.73	0.677	32	18.9	0.59	0.443		2.19	90	0.411	0.181	0.25	44	0.568
400	1350	0.37	2430	0.243	0.66	0.667	19	6.8	0.36	0.432		2.17	40	0.184	0.195	0.25	46	0.543
400	1375	0.38	2180	0.218	0.57	0.678	17	6.5	0.38	0.514		2.69	40	0.149	0.440	0.10	60	0.167
400	1400	0.36	2490	0.249	0.69	0.681	16	7.4	0.46	0.541		2.68	30	0.112	0.588	0.25	58	0.431
400	1425	7.09	52600	5.260	0.74	0.550	71	55.3	0.78	0.469		1.71	230	1.345	0.551	0.25	34	0.735
400	1450	6.52	48300	4.830	0.74	0.555	60	43.3	0.72	0.478		1.74	200	1.149	0.558	0.50	44	1.136
400	1475	0.27	delay	0.000		0.554	26	delay		0.454	6.8	1.55	delay			delay	42	0.000
400	1500	0.38	2280	0.228	0.60	0.546	17	7.3	0.43	0.408		2.69	50	0.186	0.347	2.00	54	3.704
400	1525	0.30	2060	0.206	0.69	0.556	18	6.2	0.34	0.362		2.94	50	0.170	0.160	0.25	58	0.431
400	1550	0.50	3510	0.351	0.70	0.707	18	9.9	0.55	0.452		2.17	50	0.230	0.194	0.25	52	0.481
400	1575	0.38	3010	0.301	0.79	0.767	15	7.4	0.49	0.428		2.33	50	0.215	0.208	0.10	50	0.200
400	1600	0.30	2260	0.226	0.75	0.741	14	6.3	0.45	0.441		2.39	40	0.167	0.211	0.10	44	0.227
400	1625	0.25	2250	0.225	0.90	0.735	24	7.5	0.31	0.404		1.54	40	0.260	0.214	0.25	30	0.833
400	1650	0.39	2180	0.218	0.56	0.735	16	6.6	0.41	0.392		2.17	40	0.184	0.252	0.50	46	1.087
400	1675	0.53	3560	0.356	0.67	0.706	15	5.4	0.36	0.390		2.46	60	0.244	0.256	0.75	54	1.389
400	1700	0.59	4670	0.467	0.79	0.660	15	6.5	0.43	0.419		2.46	100	0.407	0.242	0.50	68	0.735
400	1725	0.52	3160	0.316	0.61	0.714	15	6.6	0.44	0.440		2.67	50	0.187	0.236	0.25	48	0.521
400	1750	0.32	2140	0.214	0.67	0.726	13	5.9	0.45	0.457		2.68	50	0.187	0.231	0.50	48	1.042
400	1775	0.34	2820	0.282	0.83	0.719	17	8.8	0.52	0.447		2.54	40	0.157	0.182	0.25	60	0.417
400	1800	0.29	2130	0.213	0.73	0.597	13	5.8	0.44	0.359		2.28	50	0.219	0.145	0.25	46	0.543
400	1825	0.36	2710	0.271	0.75	0.613	15	5.7	0.38	0.351		2.48	40	0.161	0.156	1.00	44	2.273
400	1850	0.32	delay	0.000		0.574	15	delay		0.333		2.23	delay			delay	46	0.000
400	1875	0.28	2090	0.209	0.75	0.575	13	5.4	0.42	0.334		2.08	50	0.240	0.130	0.75	44	1.705
400	1900	0.51	3250	0.325	0.64	0.548	16	6.9	0.43	0.367		2.52	30	0.119	0.162	0.25	44	0.568
400	1925	0.25	1850	0.185	0.74	0.689	14	6.3	0.45	0.467		2.29	30	0.131	0.206	0.25	50	0.500
400	1950	1.43	8840	0.884	0.62	0.682	23	12.5	0.54	0.482		2.18	70	0.321	0.194	0.10	42	0.238
400	1975	0.60	4210	0.421	0.70	0.712	15	7.5	0.50	0.495	7	2.27	50	0.220	0.215	0.50	48	1.042
400	2000	0.46	3280	0.328	0.71	0.729	14	6.9	0.49	0.499		2.24	40	0.179	0.221	0.25	54	0.463
400	2025	0.39	3060	0.306	0.78	0.751	16	7.9	0.49	0.482		2.24	50	0.223	0.197	1.25	88	1.420

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/	5 PT	PASTE	%	ICP-MS		ICP-MS		HOAC Zn/										
			ppm	%			ppm	ppm					ppm	HOAC Fe/	5 PT	ppm		ppm									
		HA	Ca	Ca	Ca	HA	CA	AVERAG	HA	Sr	HOAC	Sr	AVERAG	pH	HA	Fe	HOAC	Fe	HA	Fe*100	AVERAG	HOAC	Zn	HA	Zn	HA	Zn*100
400	2050	0.27	2240	0.224	0.83	0.768	13	6.1	0.47	0.477		2.45	40	0.163	0.187	0.25	92	0.272									
400	2075	0.52	3770	0.377	0.73	0.759	15	6.9	0.46	0.461		2.52	50	0.198	0.185	0.10	54	0.185									
400	2100	0.39	3070	0.307	0.79	0.769	14	6.7	0.48	0.462		2.36	40	0.169	0.181	1.00	62	1.613									
400	2125	0.34	2280	0.228	0.67	0.751	13	5.4	0.41	0.451		2.36	40	0.169	0.184	0.75	48	1.563									
400	2150	0.37	3080	0.308	0.83	0.768	13	6.5	0.50	0.452		2.44	50	0.205	0.179	0.75	54	1.389									
400	2175	0.32	2370	0.237	0.74	0.757	17	7.0	0.41	0.450		2.22	40	0.180	0.187	0.75	56	1.339									
400	2200	0.34	2750	0.275	0.81	0.762	16	7.4	0.46	0.481		2.36	40	0.169	0.202	0.75	62	1.210									
400	2225	0.36	2630	0.263	0.73	0.762	16	7.5	0.47	0.507		2.36	50	0.212	0.255	0.25	56	0.446									
400	2250	0.35	2440	0.244	0.70	0.761	15	8.5	0.57	0.530		2.04	50	0.245	0.247	0.10	54	0.185									
400	2275	1.19	9920	0.992	0.83	0.756	17	10.7	0.63	0.593		1.92	90	0.469	0.362	0.25	42	0.595									
400	2300	0.30	2200	0.220	0.73	0.723	17	8.9	0.52	0.584		2.12	30	0.142	0.360	1.00	60	1.667									
400	2325	3.45	27100	2.710	0.79	0.729	38	29.5	0.78	0.568		2.02	150	0.743	0.352	1.25	54	2.315									
400	2350	0.40	2270	0.227	0.57	0.739	16	6.8	0.42	0.591		2.50	50	0.200	0.784	0.25	44	0.568									
400	2375	0.45	3260	0.326	0.72	0.767	18	8.8	0.49	0.623		2.40	50	0.208	0.914	0.10	50	0.200									
400	2400	9.72	86100	8.610	0.89	0.811	76	56.7	0.75	0.620		1.37	360	2.628	0.876	0.25	30	0.833									
400	2425	3.97	34600	3.460	0.87	0.851	34	23.2	0.68	0.634		2.02	160	0.792	0.901	0.10	48	0.208									
400	2450	2.01	20200	2.020	1.00	0.899	24	18.3	0.76	0.682		2.73	150	0.549	1.335	0.25	66	0.379									
400	2475	1.46	11220	1.122	0.77	0.892	28	13.7	0.49	0.635	7.9	2.43	80	0.329	0.852	0.50	58	0.862									
400	2500	8.35	80600	8.060	0.97	0.843	62	45.4	0.73	0.571		1.43	340	2.378	0.721	0.75	34	2.206									
400	2525	0.90	7640	0.764	0.85	0.804	20	10.2	0.51	0.559		2.36	50	0.212	0.674	0.25	54	0.463									
400	2550	0.34	2130	0.213	0.63	0.763	22	8.0	0.36	0.551		2.21	30	0.136	0.625	0.25	42	0.595									
400	2575	1.46	11840	1.184	0.81	0.710	23	16.1	0.70	0.506		2.23	70	0.314	0.182	0.10	42	0.238									
400	2600	0.46	2600	0.260	0.57	0.668	14	6.4	0.45	0.496		2.39	20	0.084	0.164	0.25	44	0.568									
400	2625	0.78	5440	0.544	0.70	0.707	20	10.1	0.51	0.572		2.46	40	0.163	0.376	0.10	46	0.217									
400	2650	0.45	2890	0.289	0.64	0.721	19	8.7	0.46	0.565		2.42	30	0.124	0.415	0.25	46	0.543									
400	2675	6.92	56700	5.670	0.82	0.771	81	60.1	0.74	0.629		1.92	230	1.198	0.619	0.75	44	1.705									
400	2700	2.88	25400	2.540	0.88	0.788	35	23.3	0.67	0.651		2.16	110	0.509	0.620	0.25	58	0.431									
400	2725	6.62	53800	5.380	0.81	0.829	87	67.5	0.78	0.723		2.00	220	1.100	0.981	0.10	42	0.238									
400	2750	0.88	6900	0.690	0.78	0.848	25	15.4	0.61	0.744		2.38	40	0.168	1.078	0.10	56	0.179									
400	2775	8.07	68300	6.830	0.85	0.809	136	111.5	0.82	0.735		1.45	280	1.931	1.004	0.10	34	0.294									
400	2800	5.39	49400	4.940	0.92	0.778	330	279.0	0.85	0.688		1.19	200	1.681	0.816	5.50	76	7.237									
400	2825	0.61	4180	0.418	0.69	0.761	58	36.0	0.62	0.680		2.17	30	0.138	0.825	0.25	62	0.403									
400	2850	0.76	4990	0.499	0.66	0.731	78	42.1	0.54	0.645		2.50	40	0.160	0.490	1.50	78	1.923									
400	2875	0.83	5820	0.582	0.70	0.697	76	43.6	0.57	0.601		2.32	50	0.216	0.174	1.25	78	1.603									
400	2900	0.97	6740	0.674	0.69	0.705	91	58.8	0.65	0.595		2.36	60	0.254	0.166	1.50	74	2.027									
400	2925	0.51	3810	0.381	0.75	0.728	54	33.8	0.63	0.625		2.97	30	0.101	0.154	0.75	72	1.042									
400	2950	0.47	3410	0.341	0.73	0.725	49	28.8	0.59	0.633		2.99	30	0.100	0.143	0.75	68	1.103									
400	2975	0.48	3710	0.371	0.77	0.716	48	33.1	0.69	0.619	6.8	2.96	30	0.101	0.128	0.25	68	0.368									
400	3000	0.57	3910	0.391	0.69	0.700	57	35.0	0.61	0.605		2.57	40	0.156	0.159	0.25	74	0.338									
400	3025	0.91	5910	0.591	0.65	0.636	89	51.6	0.58	0.605		2.78	50	0.180	0.171	0.75	82	0.915									

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS			5 PT AVERAG	PASTE pH	%	ICP-MS			ICP-MS		
			ppm	%			ppm	HOAC SR/ HA SR	ppm				HOAC Fe/ HA Fe	ppm	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm	HOAC Zn/ HA Zn
400	3050	1.10	7320	0.732	0.67	0.625	100	55.3	0.55	0.582		2.35	60	0.255	0.212	3.25	100	3.250
400	3075	1.09	4430	0.443	0.41		60	35.3	0.59			2.49	40	0.161	ERR	0.75	64	1.172
400	3100	0.57	4100	0.410	0.72		48	27.5	0.57			2.27	70	0.308	ERR	2.00	120	1.667
800	100	3.86	30800	3.080	0.80		55	48.5	0.88			2.29	190	0.830		0.75	54	1.389
800	125	6.31	61300	6.130	0.97		219	223.0	1.02			1.47	290	1.973		0.50	28	1.786
800	150	5.87	50300	5.030	0.86	0.876	226	209.0	0.92	0.957		1.49	280	1.879	1.953	0.50	32	1.563
800	175	7.51	77800	7.780	1.04	0.850	266	284.0	1.07	0.954		1.44	450	3.125	2.086	1.25	22	5.682
800	200	7.60	54500	5.450	0.72	0.749	91	81.3	0.89	0.882		1.53	300	1.961	1.767	1.00	32	3.125
800	225	5.25	35200	3.520	0.67	0.724	67	58.1	0.87	0.862		1.61	240	1.491	1.541	0.75	36	2.083
800	250	2.07	9640	0.964	0.47	0.682	35	23.0	0.66	0.826		2.11	80	0.379	1.352	0.25	42	0.595
800	275	2.94	21500	2.150	0.73	0.715	42	34.7	0.83	0.843		2.13	160	0.751	1.319	1.50	46	3.261
800	300	7.52	62200	6.220	0.83	0.767	98	87.0	0.89	0.853		1.70	370	2.176	1.426	0.75	36	2.083
800	325	5.92	52100	5.210	0.88	0.834	82	79.9	0.97	0.875		1.89	340	1.799	1.568	1.00	38	2.632
800	350	7.07	65900	6.590	0.93	0.825	96	88.1	0.92	0.832		1.73	350	2.023	1.505	0.75	36	2.083
800	375	3.78	30200	3.020	0.80	0.876	52	39.9	0.77	0.866		1.93	210	1.088	1.363	0.50	42	1.190
800	400	0.69	4750	0.475	0.69	0.831	21	12.9	0.61	0.863		2.29	100	0.437	1.197	0.25	54	0.463
800	425	4.62	49900	4.990	1.08	0.812	67	70.8	1.06	0.869		1.84	270	1.467	1.178	0.75	42	1.786
800	450	4.03	26500	2.650	0.66	0.798	72	68.9	0.96	0.906		2.16	210	0.972	1.362	1.75	46	3.804
800	475	7.48	62500	6.250	0.84	0.809	109	103.5	0.95	0.884		1.87	360	1.925	1.336	0.50	38	1.316
800	500	6.96	50600	5.060	0.73	0.785	118	112.5	0.95	0.833		1.94	390	2.010	1.193	1.00	36	2.778
800	525	0.43	3200	0.320	0.74	0.845	17	8.6	0.50	0.839	8.5	2.29	70	0.306	1.426	0.25	44	0.568
800	550	1.45	13920	1.392	0.96	0.826	26	20.9	0.80	0.824		2.00	150	0.750	1.151	1.25	42	2.976
800	575	6.37	60900	6.090	0.96	0.860	79	77.8	0.98	0.832		1.73	370	2.139	1.178	1.00	38	2.632
800	600	2.46	18260	1.826	0.74	0.824	37	32.3	0.87	0.827		2.19	120	0.548	1.149	0.50	38	1.316
800	625	6.81	61000	6.100	0.90	0.746	89	88.5	0.99	0.760		1.77	380	2.147	1.018	0.75	34	2.206
800	650	0.29	1640	0.164	0.57	0.693	18	8.7	0.48	0.668		2.46	40	0.163	0.649	0.75	56	1.339
800	675	0.64	3640	0.364	0.57	0.636	19	8.9	0.47	0.598		4.16	40	0.096	0.654	0.50	64	0.781
800	700	0.42	2910	0.291	0.69	0.597	16	8.4	0.52	0.516		2.42	70	0.289	0.270	0.50	62	0.806
800	725	0.75	3410	0.341	0.45	0.616	16	8.4	0.53	0.520		1.74	100	0.575	0.306	0.75	30	2.500
800	750	0.22	1550	0.155	0.70	0.640	17	10.0	0.59	0.537		2.62	60	0.229	0.352	0.50	44	1.136
800	775	0.45	2960	0.296	0.66	0.662	18	9.0	0.50	0.562		2.35	80	0.340	0.333	0.50	50	1.000
800	800	0.50	3450	0.345	0.69	0.699	19	10.6	0.56	0.558		2.44	80	0.328	0.267	0.25	54	0.483
800	825	0.25	2010	0.201	0.80	0.696	21	13.6	0.65	0.555		2.60	50	0.192	0.287	0.25	46	0.543
800	850	0.36	2300	0.230	0.64	0.683	19	9.6	0.51	0.555		2.44	60	0.246	0.261	0.50	48	1.042
800	875	0.23	1590	0.159	0.69	0.642	17	9.7	0.57	0.518		2.74	90	0.328	0.218	0.75	50	1.500
800	900	0.22	1300	0.130	0.59	0.620	20	10.0	0.50	0.488		2.37	50	0.211	0.216	0.25	44	0.568
800	925	0.22	1070	0.107	0.49	0.658	22	8.2	0.37	0.523		2.63	30	0.114	0.305	0.50	62	0.806
800	950	0.27	1870	0.187	0.69	0.638	17	8.4	0.49	0.499		2.21	40	0.181	0.278	0.25	46	0.543
800	975	2.20	18200	1.820	0.83	0.614	32	21.8	0.68	0.471		2.03	140	0.690	0.258	0.50	46	1.087
800	1000	0.43	2550	0.255	0.59	0.658	20	9.0	0.45	0.557		2.56	50	0.195	0.433	0.25	56	0.446

Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	% HA Ca	ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	% HA Fe	ICP-MS		5 PT AVERAG	ICP-MS		ppm HA Zn	HOAC Zn/ HA Zn*100
			ppm HOAC Ca	% HOAC Ca			ppm HOAC Sr	ppm HOAC Sr					ppm HOAC Fe	HOAC Fe/ HA Fe*100		ppm HOAC Zn	ppm HA Zn		
800	1025	0.37	1750	0.175	0.47	0.634	17	6.1	0.36	0.554	8.4	2.74	30	0.109	0.436	0.25	52	0.481	
800	1050	4.01	28200	2.820	0.70	0.604	48	38.5	0.80	0.515		1.92	190	0.990	0.337	0.75	40	1.875	
800	1075	0.69	3950	0.395	0.57	0.639	22	10.6	0.48	0.554		2.57	50	0.195	0.366	1.25	60	2.083	
800	1100	0.31	2100	0.210	0.68	0.688	18	8.7	0.48	0.577		2.57	50	0.195	0.382	0.75	54	1.389	
800	1125	1.28	9840	0.984	0.77	0.677	23	14.9	0.65	0.508		2.33	80	0.343	0.218	0.75	42	1.786	
800	1150	0.29	2080	0.208	0.72	0.676	16	7.5	0.47	0.492		2.67	50	0.187	0.203	0.75	52	1.442	
800	1175	0.40	2600	0.260	0.65	0.668	19	8.8	0.46	0.489		2.35	40	0.170	0.204	0.25	50	0.500	
800	1200	0.35	1990	0.199	0.57	0.662	19	7.6	0.40	0.454		2.47	30	0.121	0.180	0.25	48	0.521	
800	1225	0.33	2100	0.210	0.64	0.664	18	8.4	0.47	0.465		2.50	50	0.200	0.213	0.50	48	1.042	
800	1250	0.33	2440	0.244	0.74	0.632	20	9.5	0.47	0.454		2.28	50	0.219	0.212	0.25	50	0.500	
800	1275	0.69	5000	0.500	0.72	0.617	19	10.0	0.52	0.455		2.26	80	0.354	0.204	0.10	44	0.227	
800	1300	0.30	1470	0.147	0.49	0.631	19	7.7	0.41	0.462		2.41	40	0.166	0.249	0.50	46	1.087	
800	1325	0.36	1780	0.178	0.49	0.593	16	6.6	0.41	0.484		2.55	20	0.078	0.273	0.25	44	0.568	
800	1350	0.31	2190	0.219	0.71	0.586	16	8.0	0.50	0.471		2.34	100	0.427	0.234	0.25	50	0.500	
800	1375	1.18	6470	0.647	0.55	0.630	28	16.4	0.58	0.485		2.36	80	0.339	0.247	0.75	50	1.500	
800	1400	0.29	2000	0.200	0.69	0.661	19	8.8	0.46	0.493		2.50	40	0.160	0.264	0.50	46	1.087	
800	1425	0.24	1710	0.171	0.71	0.654	18	8.6	0.48	0.489		2.63	60	0.228	0.203	0.75	48	1.563	
800	1450	0.28	1820	0.182	0.65	0.670	18	8.1	0.45	0.464		2.43	40	0.165	0.167	0.25	44	0.568	
800	1475	0.31	2070	0.207	0.67	0.682	22	10.5	0.48	0.468		2.42	30	0.124	0.159	0.50	48	1.042	
800	1500	0.25	1570	0.157	0.63	0.701	27	12.4	0.46	0.488		1.91	30	0.157	0.155	0.25	40	0.625	
800	1525	0.26	1960	0.196	0.75	0.701	17	8.2	0.48	0.496	8	2.48	30	0.121	0.166	0.25	46	0.543	
800	1550	0.74	5960	0.596	0.81	0.687	16	9.3	0.58	0.469		2.40	50	0.208	0.183	0.10	48	0.208	
800	1575	0.50	3250	0.325	0.65	0.679	17	8.3	0.49	0.456		2.29	50	0.218	0.175	0.25	42	0.595	
800	1600	0.38	2280	0.228	0.60	0.630	21	7.2	0.34	0.497		2.38	50	0.210	0.272	0.25	44	0.568	
800	1625	0.37	2160	0.216	0.58	0.581	22	8.7	0.40	0.446		2.60	30	0.115	0.254	0.25	46	0.543	
800	1650	4.45	22800	2.280	0.51	0.550	54	36.8	0.68	0.442		2.14	130	0.607	0.240	1.00	40	2.500	
800	1675	0.36	2010	0.201	0.56	0.537	20	6.5	0.32	0.464		2.50	30	0.120	0.247	0.25	50	0.500	
800	1700	0.54	2670	0.267	0.49	0.592	18	8.5	0.47	0.495		2.75	40	0.145	0.247	0.50	52	0.962	
800	1725	0.48	2570	0.257	0.54	0.619	18	8.1	0.45	0.458		2.43	60	0.247	0.158	0.25	44	0.568	
800	1750	0.27	2320	0.232	0.86	0.622	17	9.4	0.55	0.490		2.55	30	0.118	0.159	0.25	48	0.521	
800	1775	0.37	2390	0.239	0.65	0.673	18	9.0	0.50	0.507		2.49	40	0.161	0.164	0.25	48	0.521	
800	1800	0.34	1950	0.195	0.57	0.681	26	12.5	0.48	0.525		2.40	30	0.125	0.156	0.50	54	0.926	
800	1825	0.21	1580	0.158	0.75	0.640	17	9.5	0.56	0.527		2.39	40	0.167	0.165	0.25	46	0.543	
800	1850	0.63	3630	0.363	0.58	0.598	19	10.3	0.54	0.529		2.37	50	0.211	0.176	0.25	46	0.543	
800	1875	0.43	2800	0.280	0.65	0.643	16	9.0	0.56	0.541		2.46	40	0.163	0.182	0.25	40	0.625	
800	1900	0.59	2590	0.259	0.44	0.578	19	9.7	0.51	0.534		2.36	50	0.212	0.189	0.25	44	0.568	
800	1925	0.29	2310	0.231	0.80	0.590	17	9.1	0.54	0.588		2.52	40	0.159	0.292	0.50	44	1.136	
800	1950	0.68	2920	0.292	0.43	0.649	18	9.4	0.52	0.638		2.48	50	0.202	0.421	1.00	48	2.083	
800	1975	4.60	29200	2.920	0.63	0.698	50	40.7	0.81	0.684		1.93	140	0.725	0.590	0.50	36	1.389	
800	2000	2.82	26700	2.670	0.95	0.685	31	25.1	0.81	0.678		1.98	160	0.808	0.595	0.25	42	0.595	

SOUTH LINE	EAST STATIO	ICP-MS		HOAC HA CA	5 PT AVERAG	ppm HA Sr	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca				ppm HOAC Sr	ppm HOAC Fe					ppm HOAC Zn						
800	2025	3.76	25700	0.68	0.737	38	28.1	0.74	0.699	7.5	1.80	190	1.056	0.608	0.25	34	0.735		
800	2050	0.43	3150	0.73	0.742	15	7.6	0.50	0.639		2.68	50	0.187	0.501	0.75	58	1.293		
800	2075	0.54	3710	0.371	0.69	19	12.0	0.63	0.659		2.28	60	0.263	0.821	1.50	80	1.875		
800	2100	0.36	2380	0.238	0.66	18	9.2	0.51	0.663		2.64	50	0.189	0.868	0.75	52	1.442		
800	2125	8.11	59200	0.73	0.740	71	64.9	0.91	0.733		1.41	340	2.411	1.127	0.75	28	2.679		
800	2150	4.24	35400	0.83	0.765	32	24.3	0.76	0.805		1.86	240	1.290	1.776	0.25	40	0.625		
800	2175	4.93	38900	0.79	0.771	38	32.3	0.85	0.809		1.62	240	1.481	1.794	0.25	30	0.833		
800	2200	9.53	77400	0.81	0.799	83	82.4	0.99	0.739		1.14	400	3.509	1.429	1.00	26	3.846		
800	2225	0.56	3870	0.387	0.69	16	8.5	0.53	0.669		2.15	60	0.279	1.202	0.50	48	1.042		
800	2250	2.19	18980	1.898	0.87	27	15.2	0.56	0.574		2.23	130	0.583	0.946	0.50	52	0.962		
800	2275	0.36	1770	0.177	0.49	22	9.0	0.41	0.469		1.93	30	0.155	0.280	0.50	42	1.190		
800	2300	0.58	3400	0.340	0.59	20	7.6	0.38	0.460		1.96	40	0.204	0.315	0.10	44	0.227		
800	2325	0.50	2730	0.273	0.55	22	10.3	0.47	0.464		2.25	40	0.178	0.308	0.10	50	0.200		
800	2350	2.41	13040	1.304	0.634	28	13.6	0.49	0.564		1.98	90	0.455	0.742	0.25	52	0.481		
800	2375	2.39	16620	1.662	0.70	26	15.1	0.58	0.676		2.01	110	0.547	1.276	0.10	40	0.250		
800	2400	4.89	39200	3.920	0.80	260	236.0	0.91	0.713		0.86	200	2.326	1.426	0.25	36	0.694		
800	2425	7.61	62600	6.260	0.82	139	130.5	0.94	0.736		1.53	440	2.876	1.517	1.75	32	5.469		
800	2450	3.49	28000	2.800	0.80	43	28.0	0.65	0.763		1.94	180	0.928	1.626	0.50	50	1.000		
800	2475	4.21	27500	2.750	0.65	48	28.9	0.60	0.726		1.87	170	0.909	1.282	0.50	48	1.042		
800	2500	3.38	29900	2.990	0.88	41	29.3	0.71	0.650		1.92	210	1.094	0.777	1.25	56	2.232		
800	2525	2.97	20200	2.020	0.68	41	29.6	0.72	0.712	8.1	1.99	120	0.603	0.907	0.50	54	0.926		
800	2550	1.02	9010	0.901	0.88	24	13.5	0.56	0.706		1.99	70	0.352	0.800	0.25	56	0.448		
800	2575	5.45	45600	4.560	0.84	46	44.0	0.96	0.666		1.65	260	1.576	0.609	0.25	42	0.595		
800	2600	0.69	5510	0.551	0.80	19	10.9	0.57	0.662		2.12	80	0.377	0.591	0.10	48	0.208		
800	2625	0.47	2860	0.286	0.61	20	10.3	0.52	0.692		2.15	30	0.140	0.562	0.25	62	0.403		
800	2650	1.41	9200	0.920	0.65	28	19.7	0.70	0.622		1.95	100	0.513	0.277	1.00	62	1.613		
800	2675	0.61	3830	0.383	0.63	54	38.4	0.71	0.646		2.42	50	0.207	0.246	2.00	66	3.030		
800	2700	0.64	3480	0.348	0.54	67	40.9	0.61	0.660		2.73	40	0.147	0.257	0.75	72	1.042		
800	2725	0.69	4720	0.472	0.68	72	49.7	0.69	0.656		2.70	60	0.222	0.188	1.00	84	1.190		
800	2750	0.35	2060	0.206	0.59	44	25.7	0.58	0.655		2.57	50	0.195	0.186	0.50	62	0.806		
800	2775	1.00	5820	0.582	0.58	80	54.9	0.69	0.675		2.94	50	0.170	0.205	0.75	82	0.915		
800	2800	2.22	4640	0.464	0.21	74	52.1	0.70	0.697		2.52	50	0.198	0.203	1.00	72	1.389		
800	2825	0.81	5240	0.524	0.65	85	60.5	0.71	0.727		2.89	70	0.242	0.246	2.25	98	2.296		
800	2850	0.55	4110	0.411	0.75	59	47.2	0.80	0.753		2.41	50	0.207	0.378	1.25	74	1.689		
800	2875	2.85	8770	0.877	0.31	66	48.3	0.73	0.712		1.95	80	0.410	0.363	0.50	42	1.190		
800	2900	2.31	17220	1.722	0.75	118	96.5	0.82	0.694		1.32	110	0.833	0.369	3.00	38	7.895		
800	2925	0.52	2410	0.241	0.46	19	9.5	0.50	0.642		2.47	30	0.121	0.371	0.50	62	0.806		
800	2950	0.67	4020	0.402	0.60	20	12.4	0.62	0.613		2.58	70	0.271	0.319	0.75	64	1.172		
800	2975	0.63	3980	0.398	0.63	25	13.5	0.54	0.546		2.76	60	0.217	0.202	2.25	64	3.516		
800	3000	0.41	3050	0.305	0.74	21	12.4	0.59	0.566	7.9	2.65	40	0.151	0.214	0.25	56	0.446		

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT AVERAG	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%				ppm	ppm					ppm	HOAC Fe/ HA Fe*100		ppm	ppm	
800	3050	0.90	4940	0.494	0.55	0.642	32	15.5	0.48	0.576		2.40	60	0.250	0.202	2.25	66	3.409	
800	3075	1.15	7550	0.755	0.66		36	21.6	0.60			2.19	40	0.183		2.00	56	3.571	
800	3100	0.69	4350	0.435	0.63		37	24.7	0.67			2.42	50	0.207		6.25	148	4.223	
1200	100	2.87	22900	2.290	0.80		52	39.0	0.75			2.41	280	1.162		1.00	42	2.381	
1200	125	4.00	31100	3.110	0.78		47	34.4	0.73			2.63	180	0.684		1.50	66	2.273	
1200	150	8.20	55000	5.500	0.67	0.677	120	85.3	0.71	0.730		1.93	260	1.347	0.936	0.75	46	1.630	
1200	175	5.25	39700	3.970	0.76	0.641	61	46.0	0.75	0.737		2.07	220	1.063	0.972	0.75	48	1.563	
1200	200	3.47	13220	1.322	0.38	0.610	75	52.7	0.70	0.738		1.89	80	0.423	1.060	2.00	44	4.545	
1200	225	8.60	53200	5.320	0.62	0.600	109	85.4	0.78	0.685		1.86	250	1.344	0.855	1.00	42	2.381	
1200	250	7.47	46700	4.670	0.63	0.589	83	61.4	0.74	0.648		1.69	190	1.124	0.736	1.00	40	2.500	
1200	275	0.63	3910	0.391	0.62	0.636	27	12.1	0.45	0.643		2.49	80	0.321	0.831	0.25	66	0.379	
1200	300	1.62	11370	1.137	0.70	0.663	24	13.7	0.57	0.645		2.15	100	0.465	0.758	0.25	54	0.463	
1200	325	4.77	29200	2.920	0.61	0.660	35	23.6	0.67	0.616		2.00	180	0.900	0.605	0.75	50	1.500	
1200	350	4.10	30900	3.090	0.75	0.699	44	35.1	0.80	0.691		1.84	180	0.978	0.913	1.25	54	2.315	
1200	375	1.17	7180	0.718	0.61	0.716	27	16.0	0.59	0.748		2.51	90	0.359	1.076	0.75	66	1.136	
1200	400	8.32	67600	6.760	0.81	0.743	116	95.8	0.83	0.768		1.77	330	1.864	1.147	0.75	38	1.974	
1200	425	6.63	52200	5.220	0.79	0.710	139	118.5	0.85	0.697		1.88	240	1.277	0.979	0.75	44	1.705	
1200	450	6.98	52200	5.220	0.75	0.713	84	65.1	0.78	0.663		1.99	250	1.256	0.953	1.00	40	2.500	
1200	475	0.32	1880	0.188	0.59	0.691	20	8.8	0.44	0.637		2.91	40	0.137	0.704	0.25	56	0.446	
1200	500	0.47	2960	0.296	0.63	0.690	23	9.7	0.42	0.605		2.63	60	0.228	0.634	0.50	54	0.926	
1200	525	2.88	20300	2.030	0.70	0.662	45	31.3	0.70	0.529		2.26	140	0.619	0.418	0.25	48	0.521	
1200	550	4.48	35000	3.500	0.78	0.670	56	39.0	0.70	0.555	7.6	2.05	190	0.927	0.468	0.50	50	1.000	
1200	575	0.41	2490	0.249	0.61	0.713	22	8.7	0.40	0.630		2.79	50	0.179	0.528	0.25	52	0.481	
1200	600	1.79	11210	1.121	0.63	0.697	41	23.3	0.57	0.585		2.33	90	0.386	0.430	0.25	52	0.481	
1200	625	1.76	14910	1.491	0.85	0.684	24	19.1	0.79	0.548		2.08	110	0.529	0.268	0.50	44	1.136	
1200	650	0.30	1670	0.167	0.62	0.694	20	9.5	0.47	0.562		2.32	30	0.129	0.256	0.75	64	1.172	
1200	675	0.36	2570	0.257	0.71	0.690	17	8.7	0.51	0.529		2.56	30	0.117	0.202	0.25	50	0.500	
1200	700	0.23	1520	0.152	0.66	0.657	17	7.9	0.46	0.483		2.49	30	0.120	0.133	0.50	50	1.000	
1200	725	0.26	1570	0.157	0.60	0.648	20	8.1	0.41	0.478		2.66	30	0.113	0.123	0.75	58	1.293	
1200	750	0.90	6170	0.617	0.69	0.615	25	14.1	0.56	0.431		2.69	50	0.186	0.122	0.50	54	0.926	
1200	775	0.28	1610	0.161	0.58	0.607	19	8.6	0.45	0.454		2.56	20	0.078	0.161	0.50	70	0.714	
1200	800	0.26	1430	0.143	0.55	0.619	19	5.2	0.27	0.444		2.64	30	0.114	0.161	0.50	56	0.893	
1200	825	1.49	9250	0.925	0.62	0.619	32	18.7	0.58	0.421		2.54	80	0.315	0.149	0.25	52	0.481	
1200	850	0.32	2120	0.212	0.66	0.633	18	6.4	0.36	0.411		2.72	30	0.110	0.148	0.25	60	0.417	
1200	875	0.22	1510	0.151	0.69	0.663	16	7.1	0.44	0.452		2.34	30	0.128	0.141	2.00	104	1.923	
1200	900	0.25	1610	0.161	0.64	0.688	18	7.3	0.40	0.422		2.69	20	0.074	0.085	0.50	50	1.000	
1200	925	0.25	1750	0.175	0.70	0.671	16	7.6	0.48	0.442		2.61	20	0.077	0.071	0.50	58	0.862	
1200	950	0.27	2020	0.202	0.75	0.648	18	7.8	0.43	0.426		2.66	10	0.038	0.078	0.25	62	0.403	
1200	975	0.44	2530	0.253	0.58	0.677	18	8.2	0.46	0.445		2.79	10	0.036	0.072	1.25	70	1.786	
1200	1000	0.46	2630	0.263	0.57	0.695	19	7.0	0.37	0.435		2.39	40	0.167	0.074	0.75	58	1.293	

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS			5 PT	PASTE pH	%	ICP-MS		5 PT	ICP-MS	
			ppm	%				ppm	ppm	HOAC SR/ HA SR				ppm	HOAC Fe/ HA Fe*100		ppm	ppm
HA Ca	HOAC Ca	HOAC Ca	HA CA	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG	HA Fe	HOAC Fe	HA Fe*100	AVERAG	HOAC Zn	HA Zn	HA Zn*100			
1200	1025	0.30	2370	0.237	0.79	0.648	14	7.0	0.50	0.437		2.25	10	0.044	0.082	0.75	68	1.103
1200	1050	0.30	2370	0.237	0.79	0.676	16	6.8	0.43	0.435	6.6	2.39	20	0.084	0.082	0.50	62	0.806
1200	1075	0.35	1790	0.179	0.51	0.692	16	7.1	0.44	0.443		2.52	20	0.079	0.065	0.75	70	1.071
1200	1100	0.26	1870	0.187	0.72	0.680	18	8.0	0.44	0.509		2.84	10	0.035	0.249	0.50	54	0.926
1200	1125	0.29	1890	0.189	0.65	0.678	18	7.4	0.41	0.567		2.41	20	0.083	0.328	1.00	70	1.429
1200	1150	5.49	39900	3.990	0.73	0.722	53	43.8	0.83	0.588		1.76	170	0.966	0.367	0.75	38	1.974
1200	1175	1.90	14820	1.482	0.78	0.691	29	20.7	0.71	0.582		1.88	90	0.479	0.369	0.75	46	1.630
1200	1200	1.03	7540	0.754	0.73	0.676	23	12.6	0.55	0.579		2.19	60	0.274	0.372	0.50	48	1.042
1200	1225	0.27	1530	0.153	0.57	0.665	22	9.1	0.41	0.495		2.43	10	0.041	0.203	0.25	56	0.446
1200	1250	0.26	1500	0.150	0.58	0.639	26	10.4	0.40	0.433		2.02	20	0.099	0.131	0.75	38	1.974
1200	1275	0.34	2270	0.227	0.67	0.613	16	6.5	0.41	0.426		2.42	30	0.124	0.102	1.00	62	1.613
1200	1300	0.38	2480	0.248	0.65	0.619	16	6.4	0.40	0.434		2.55	30	0.118	0.110	0.75	64	1.172
1200	1325	0.44	2640	0.264	0.60	0.643	16	8.2	0.51	0.455		2.37	30	0.127	0.114	0.50	52	0.962
1200	1350	0.42	2520	0.252	0.60	0.627	16	7.3	0.45	0.462		2.36	20	0.085	0.124	0.25	52	0.481
1200	1375	0.32	2220	0.222	0.69	0.643	20	10.1	0.51	0.460		2.51	30	0.120	0.124	0.25	56	0.446
1200	1400	0.33	1940	0.194	0.59	0.635	21	9.3	0.44	0.496		2.33	40	0.172	0.188	0.25	52	0.481
1200	1425	0.31	2270	0.227	0.73	0.649	16	6.3	0.39	0.484		2.59	30	0.116	0.198	0.75	60	1.250
1200	1450	3.15	17750	1.775	0.56	0.645	41	28.3	0.69	0.469		2.23	100	0.448	0.208	0.25	42	0.595
1200	1475	0.32	2140	0.214	0.67	0.662	21	8.3	0.40	0.455		2.20	30	0.136	0.188	0.50	42	1.190
1200	1500	0.40	2690	0.269	0.67	0.611	18	7.7	0.43	0.455		2.37	40	0.169	0.197	0.75	56	1.339
1200	1525	0.32	2160	0.216	0.68	0.680	17	6.3	0.37	0.417		2.82	20	0.071	0.133	0.25	58	0.431
1200	1550	0.30	1420	0.142	0.47	0.694	17	6.7	0.39	0.426	7.5	2.49	40	0.161	0.158	1.00	78	1.282
1200	1575	0.33	3010	0.301	0.91	0.659	12	6.0	0.50	0.410		2.38	30	0.126	0.145	0.25	44	0.568
1200	1600	0.34	2500	0.250	0.74	0.646	14	6.2	0.44	0.430		2.27	60	0.264	0.148	0.75	50	1.500
1200	1625	0.36	1790	0.179	0.50	0.716	17	5.9	0.34	0.448		2.86	30	0.105	0.132	0.25	56	0.446
1200	1650	0.32	1960	0.196	0.61	0.678	17	8.0	0.47	0.436		2.40	20	0.083	0.132	0.50	44	1.136
1200	1675	0.29	2380	0.238	0.82	0.719	12	5.8	0.48	0.462		2.50	20	0.080	0.113	0.75	58	1.293
1200	1700	0.30	2180	0.218	0.73	0.765	15	6.6	0.44	0.540		2.40	30	0.125	0.167	0.25	46	0.543
1200	1725	0.34	3190	0.319	0.94	0.782	17	9.7	0.57	0.530		2.34	40	0.171	0.176	2.25	52	4.327
1200	1750	1.64	11920	1.192	0.73	0.760	27	19.8	0.73	0.511		2.14	80	0.374	0.185	0.75	44	1.705
1200	1775	0.27	1890	0.189	0.70	0.739	17	7.2	0.42	0.497		2.34	30	0.128	0.178	0.50	68	0.735
1200	1800	0.22	1560	0.156	0.71	0.704	17	6.6	0.39	0.471		2.34	30	0.128	0.160	0.75	58	1.293
1200	1825	0.20	1240	0.124	0.62	0.702	16	6.0	0.37	0.411		2.22	20	0.090	0.111	0.25	44	0.568
1200	1850	0.28	2140	0.214	0.76	0.693	18	7.9	0.44	0.418		2.49	20	0.080	0.103	0.25	52	0.481
1200	1875	0.28	2000	0.200	0.71	0.714	19	8.3	0.44	0.461		2.35	30	0.128	0.186	0.25	44	0.568
1200	1900	0.27	1770	0.177	0.66	0.789	20	9.2	0.46	0.594		2.21	20	0.090	0.538	0.50	48	1.042
1200	1925	1.77	14400	1.440	0.81	0.810	26	15.6	0.60	0.647		1.84	100	0.543	0.608	0.50	36	1.389
1200	1950	5.66	56500	5.650	1.00	0.886	45	46.6	1.04	0.682		1.46	270	1.849	0.628	1.25	38	3.289
1200	1975	2.34	20300	2.030	0.87	0.914	20	14.2	0.71	0.727		2.10	90	0.429	0.652	0.25	60	0.417
1200	2000	0.52	5700	0.570	1.10	0.881	15	9.2	0.61	0.750		2.19	50	0.228	0.575	0.50	54	0.926

SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS	
		% HA	ppm Ca	% HOAC	ppm Ca	% HOAC	5 PT AVERAG	ppm HA Sr	ppm HOAC Sr	HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	% HA Fe	ppm HOAC Fe	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm HOAC Zn	ppm HA Zn	HOAC Zn/ HA Zn*100
1200	2025	0.52	4120	0.412	0.79	0.816	15	10.2	0.68	0.646		1.91	40	0.209	0.236	0.50	48	1.042	
1200	2050	0.69	4500	0.450	0.65	0.806	16	11.5	0.72	0.672	7.8	1.89	30	0.159	0.299	1.00	56	1.786	
1200	2075	0.87	5860	0.586	0.67	0.717	17	8.7	0.51	0.639		1.92	30	0.156	0.275	0.25	42	0.595	
1200	2100	4.17	34000	3.400	0.82	0.681	43	36.2	0.84	0.581		2.15	160	0.744	0.289	0.50	52	0.962	
1200	2125	0.64	4170	0.417	0.65	0.689	23	10.2	0.44	0.591		2.77	30	0.108	0.314	0.75	58	1.293	
1200	2150	0.80	4880	0.488	0.61	0.697	33	13.0	0.39	0.607		2.51	70	0.279	0.329	0.75	70	1.071	
1200	2175	2.53	17600	1.760	0.70	0.686	49	37.6	0.77	0.541		2.47	70	0.283	0.199	0.25	58	0.431	
1200	2200	1.08	7700	0.770	0.71	0.729	38	22.5	0.59	0.623		2.19	50	0.228	0.251	0.75	50	1.500	
1200	2225	0.33	2510	0.251	0.76	0.766	21	10.8	0.51	0.649		2.13	20	0.094	0.204	7.50	48	15.625	
1200	2250	2.16	18670	1.867	0.86	0.758	44	37.4	0.85	0.580		2.15	80	0.372	0.166	0.50	60	0.833	
1200	2275	0.22	1750	0.175	0.80	0.746	15	7.9	0.52	0.541		2.43	10	0.041	0.165	1.00	100	1.000	
1200	2300	0.30	1970	0.197	0.66	0.740	22	9.3	0.42	0.532		2.11	20	0.095	0.176	0.75	64	1.172	
1200	2325	0.66	4310	0.431	0.65	0.721	27	10.7	0.40	0.463		2.23	50	0.224	0.159	0.50	56	0.893	
1200	2350	0.32	2330	0.233	0.73	0.711	22	10.3	0.47	0.465		2.00	30	0.150	0.255	0.50	50	1.000	
1200	2375	0.47	3620	0.362	0.77	0.765	23	11.6	0.50	0.530		2.11	60	0.284	0.396	0.25	58	0.431	
1200	2400	1.42	10580	1.058	0.75	0.811	30	16.1	0.54	0.620		2.10	110	0.524	0.512	0.25	56	0.446	
1200	2425	3.47	32200	3.220	0.93	0.823	44	32.9	0.75	0.659		1.88	150	0.798	0.582	0.50	58	0.862	
1200	2450	3.01	26600	2.660	0.88	0.886	40	33.8	0.85	0.730		2.11	170	0.806	0.665	3.25	68	4.779	
1200	2475	0.97	7620	0.762	0.79	0.874	36	23.8	0.66	0.763		2.21	110	0.498	0.594	1.25	64	1.953	
1200	2500	2.05	22300	2.230	1.09	0.831	141	121.0	0.86	0.764		2.29	160	0.699	0.457	7.50	104	7.212	
1200	2525	0.82	5600	0.560	0.68	0.781	74	51.9	0.70	0.734		2.33	40	0.172	0.327	1.50	78	1.923	
1200	2550	0.62	4420	0.442	0.71	0.776	58	43.8	0.76	0.759	7.6	2.72	30	0.110	0.266	1.00	76	1.316	
1200	2575	0.65	4120	0.412	0.63	0.716	55	38.3	0.70	0.730		2.52	40	0.159	0.148	0.75	68	1.103	
1200	2600	0.56	4280	0.428	0.76	0.746	51	39.9	0.78	0.760		2.08	40	0.192	0.147	1.50	70	2.143	
1200	2625	0.38	2980	0.298	0.78	0.743	41	29.4	0.72	0.765		2.76	30	0.109	0.154	0.25	64	0.391	
1200	2650	0.52	4330	0.433	0.83	0.762	54	45.9	0.85	0.782		2.43	40	0.165	0.231	1.00	68	1.471	
1200	2675	0.42	2940	0.294	0.70	0.740	52	40.4	0.78	0.787		2.08	30	0.144	0.268	1.00	56	1.786	
1200	2700	2.72	19790	1.979	0.73	0.716	64	50.1	0.78	0.810		2.01	110	0.547	0.284	12.25	100	12.250	
1200	2725	2.59	16930	1.693	0.65	0.710	69	55.6	0.81	0.843		2.14	80	0.374	0.922	4.00	80	5.000	
1200	2750	1.09	7280	0.728	0.67	0.754	46	38.3	0.83	0.899		2.12	40	0.189	1.033	1.75	54	3.241	
1200	2775	11.05	88400	8.840	0.80	0.795	191	194.5	1.02	0.903		1.37	460	3.358	0.964	1.00	34	2.941	
1200	2800	3.66	33700	3.370	0.92	0.786	44	46.5	1.06	0.852		2.15	150	0.698	0.914	0.75	42	1.786	
1200	2825	1.01	9420	0.942	0.93	0.795	20	16.0	0.80	0.813		2.47	50	0.202	0.894	0.25	52	0.481	
1200	2850	0.76	4630	0.463	0.61	0.792	14	7.8	0.55	0.726		2.38	30	0.126	0.232	0.50	40	1.250	
1200	2875	0.39	2780	0.278	0.71	0.788	14	8.9	0.64	0.691		2.36	20	0.085	0.222	0.50	52	0.962	
1200	2900	0.26	2040	0.204	0.78	0.763	17	10.0	0.59	0.628		2.07	10	0.048	0.190	0.50	38	1.316	
1200	2925	2.89	26100	2.610	0.90	0.774	32	28.1	0.88	0.650		1.70	110	0.647	0.212	0.50	46	1.087	
1200	2950	0.30	2410	0.241	0.80	0.743	15	7.3	0.49	0.634		2.19	10	0.046	0.220	0.25	44	0.568	
1200	2975	1.44	9620	0.962	0.67	0.690	17	11.3	0.66	0.621		2.15	50	0.233	0.239	0.25	42	0.595	
1200	3000	0.64	3560	0.356	0.56	0.626	17	9.5	0.56	0.586		2.36	30	0.127	0.135	0.25	48	0.521	



Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%			ppm	ppm					ppm	HOAC Fe/ HA Fe*100		ppm	ppm	
		HA Ca	HOAC Ca	HOAC Ca	HA CA	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG		HA Fe	HOAC Fe	HA Fe*100	AVERAG	HOAC Zn	HA Zn	HA Zn*100
1200	3025	0.46	2390	0.239	0.52	0.585	14	7.3	0.52	0.600		2.11	30	0.142	0.143	0.75	46	1.630
1200	3050	0.54	3140	0.314	0.58	0.575	13	9.2	0.70	0.584	6.9	2.38	30	0.126	0.112	0.50	48	1.042
1200	3075	0.40	2390	0.239	0.60		12	6.7	0.56			2.35	20	0.085		0.75	48	1.563
1200	3100	0.46	2850	0.285	0.62		16	9.3	0.58			2.52	20	0.079		0.75	42	1.786
1600	100	5.04	36000	3.600	0.71		49	34.7	0.71			2.36	240	1.017		2.00	70	2.857
1600	125	9.40	66200	6.620	0.70		136	106.5	0.78			1.73	340	1.965		0.75	44	1.705
1600	150	7.93	54300	5.430	0.68	0.693	134	103.0	0.77	0.749		1.79	280	1.564	1.268	1.00	48	2.083
1600	175	2.11	12620	1.262	0.60	0.674	48	29.5	0.61	0.748		2.50	70	0.280	1.230	0.50	62	0.806
1600	200	6.04	46200	4.620	0.76	0.692	112	97.3	0.87	0.774		1.65	250	1.515	1.217	1.00	48	2.083
1600	225	4.63	28500	2.850	0.62	0.695	80	56.5	0.71	0.779		1.94	160	0.825	1.127	0.75	52	1.442
1600	250	7.74	61700	6.170	0.80	0.720	199	181.0	0.91	0.822		1.58	300	1.899	1.384	1.00	46	2.174
1600	275	5.93	41500	4.150	0.70	0.714	109	86.9	0.80	0.820		1.88	210	1.117	1.650	1.50	52	2.885
1600	300	7.66	55500	5.550	0.72	0.715	170	141.0	0.83	0.814		1.79	280	1.564	1.867	1.00	50	2.000
1600	325	10.30	75600	7.560	0.73	0.689	250	215.0	0.86	0.793		1.51	430	2.848	1.857	0.75	36	2.083
1600	350	8.91	55000	5.500	0.62	0.690	170	114.5	0.67	0.806		1.73	330	1.908	2.104	0.50	42	1.190
1600	375	9.04	60300	6.030	0.67	0.688	247	199.0	0.81	0.812		1.73	320	1.850	2.044	1.00	44	2.273
1600	400	9.99	70600	7.060	0.71	0.681	237	204.0	0.86	0.808		1.70	400	2.353	1.850	1.25	44	2.841
1600	425	6.89	49400	4.940	0.72	0.708	159	137.0	0.86	0.845		1.90	240	1.263	1.844	1.00	50	2.000
1600	450	8.55	59500	5.950	0.70	0.735	210	176.0	0.84	0.862		1.65	310	1.879	1.947	1.25	44	2.841
1600	475	8.76	66200	6.620	0.76	0.712	266	229.0	0.86	0.808		1.76	330	1.875	1.522	1.00	48	2.083
1600	500	8.83	70700	7.070	0.80	0.698	202	179.5	0.89	0.731		1.65	390	2.364	1.341	2.25	42	5.357
1600	525	1.01	5960	0.596	0.59	0.661	31	18.4	0.59	0.671		2.64	60	0.227	1.000	0.75	62	1.210
1600	550	1.24	8030	0.803	0.65	0.679	37	17.5	0.47	0.643	7.5	1.66	60	0.361	0.788	0.50	38	1.316
1600	575	0.93	4770	0.477	0.51	0.652	28	15.2	0.54	0.627		2.35	40	0.170	0.580	0.50	60	0.833
1600	600	3.70	31300	3.130	0.85	0.686	44	31.8	0.72	0.665		2.08	170	0.817	0.713	0.75	58	1.293
1600	625	7.31	48600	4.860	0.66	0.641	74	59.6	0.81	0.698		1.89	250	1.323	0.767	2.00	60	3.333
1600	650	5.13	39000	3.900	0.76	0.596	38	29.7	0.78	0.667		2.35	210	0.894	0.787	0.75	58	1.293
1600	675	6.78	28400	2.840	0.42	0.539	49	31.2	0.64	0.651		2.21	140	0.633	0.759	0.75	54	1.389
1600	700	2.16	6230	0.623	0.29	0.556	28	10.9	0.39	0.645		2.25	60	0.267	0.812	1.00	62	1.613
1600	725	5.03	28200	2.820	0.56	0.551	50	32.3	0.65	0.623		2.07	140	0.676	0.839	0.75	44	1.705
1600	750	6.84	51400	5.140	0.75	0.596	60	46.3	0.77	0.648		1.70	270	1.588	1.082	0.50	38	1.316
1600	775	3.98	29200	2.920	0.73	0.676	32	21.5	0.67	0.732		1.75	180	1.029	1.261	0.50	40	1.250
1600	800	8.54	55100	5.510	0.65	0.702	70	53.5	0.76	0.752		1.46	270	1.849	1.311	0.75	38	1.974
1600	825	5.98	41100	4.110	0.69	0.700	48	38.7	0.81	0.756		1.72	200	1.163	1.208	0.75	44	1.705
1600	850	4.69	32400	3.240	0.69	0.722	39	29.1	0.75	0.800		2.05	190	0.927	1.266	1.25	52	2.404
1600	875	5.40	40100	4.010	0.74	0.728	43	34.0	0.79	0.795		1.96	210	1.071	1.019	1.25	46	2.717
1600	900	5.47	46200	4.620	0.84	0.743	46	41.1	0.89	0.796		1.82	240	1.319	0.956	0.75	44	1.705
1600	925	3.35	22600	2.260	0.67	0.759	33	24.4	0.74	0.772		2.12	130	0.613	0.821	1.00	62	1.613
1600	950	5.05	38400	3.840	0.76	0.724	51	41.4	0.81	0.705		2.47	210	0.850	0.631	1.00	58	1.724
1600	975	0.82	6320	0.632	0.77	0.639	27	16.9	0.63	0.622		2.39	60	0.251	0.390	0.75	78	0.962

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT AVERAG	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		ppm	HOAC Zn/ HA Zn*100
			ppm	%				ppm	ppm					HOAC Fe/ HA Fe*100	ppm		ppm	HOAC Zn		
1600	1000	0.61	3470	0.347	0.57	0.619	22	10.0	0.45	0.576		2.45	30	0.122	0.304	2.75	78	3.526		
1600	1025	0.63	2650	0.265	0.42	0.629	15	7.2	0.48	0.577		2.69	30	0.112	0.276	0.75	64	1.172		
1600	1050	0.95	5460	0.546	0.57	0.620	26	13.2	0.51	0.603	8.2	2.70	50	0.185	0.402	1.25	92	1.359		
1600	1075	4.12	33300	3.330	0.81	0.675	40	32.7	0.82	0.680		2.67	190	0.712	0.575	0.75	64	1.172		
1600	1100	4.48	32500	3.250	0.73	0.731	51	38.5	0.75	0.720		2.28	200	0.877	0.649	0.75	58	1.293		
1600	1125	4.96	42000	4.200	0.85	0.760	39	32.8	0.84	0.763		2.22	220	0.991	0.805	0.75	54	1.389		
1600	1150	2.65	18530	1.853	0.70	0.758	26	17.6	0.68	0.743		2.08	100	0.481	0.892	0.25	56	0.446		
1600	1175	4.49	32300	3.230	0.72	0.783	41	29.7	0.72	0.751		1.97	190	0.964	1.127	1.00	60	1.667		
1600	1200	5.29	42200	4.220	0.80	0.767	40	28.8	0.72	0.723		1.83	210	1.148	1.033	0.75	48	1.563		
1600	1225	6.67	56800	5.680	0.85	0.746	53	42.0	0.79	0.705		1.61	330	2.050	0.992	1.00	42	2.381		
1600	1250	2.53	19470	1.947	0.77	0.743	26	18.2	0.70	0.678		1.91	100	0.524	0.855	0.75	56	1.339		
1600	1275	1.38	8150	0.815	0.59	0.727	21	12.3	0.59	0.665		2.18	60	0.275	0.729	1.50	82	1.829		
1600	1300	0.64	4500	0.450	0.70	0.669	23	13.6	0.59	0.586		2.15	60	0.279	0.338	1.00	84	1.190		
1600	1325	2.30	16610	1.661	0.72	0.687	25	16.4	0.66	0.556		1.93	100	0.518	0.288	1.25	52	2.404		
1600	1350	0.47	2630	0.263	0.56	0.706	21	8.4	0.40	0.528		2.08	20	0.096	0.251	0.25	54	0.463		
1600	1375	1.00	8600	0.860	0.86	0.714	26	14.3	0.55	0.572		2.22	60	0.270	0.496	0.25	46	0.543		
1600	1400	0.42	2870	0.287	0.68	0.670	19	8.5	0.44	0.533		2.22	20	0.090	0.402	0.25	50	0.500		
1600	1425	6.07	45100	4.510	0.74	0.691	71	57.8	0.81	0.543		1.46	220	1.507	0.445	0.75	38	1.974		
1600	1450	0.59	2970	0.297	0.50	0.647	20	9.2	0.46	0.511		2.11	10	0.047	0.429	0.25	76	0.329		
1600	1475	0.74	4930	0.493	0.67	0.642	17	7.6	0.44	0.499		2.24	70	0.312	0.459	1.00	56	1.786		
1600	1500	0.57	3640	0.364	0.64	0.588	18	7.1	0.39	0.426		2.10	40	0.190	0.207	1.00	64	1.563		
1600	1525	0.49	3230	0.323	0.66	0.621	26	10.0	0.38	0.438		1.70	40	0.235	0.278	0.25	44	0.568		
1600	1550	0.32	1510	0.151	0.47	0.590	25	11.2	0.45	0.447	7.7	1.61	40	0.248	0.245	0.25	38	0.658		
1600	1575	0.53	3550	0.355	0.67	0.601	24	12.5	0.52	0.482		1.99	80	0.402	0.308	0.25	50	0.500		
1600	1600	0.41	2100	0.210	0.51	0.620	22	10.8	0.49	0.547		2.04	30	0.147	0.381	0.25	48	0.521		
1600	1625	1.59	11000	1.100	0.69	0.677	27	15.4	0.57	0.613		1.58	80	0.506	0.724	0.75	34	2.206		
1600	1650	2.14	16140	1.614	0.75	0.696	29	20.6	0.71	0.632		1.83	110	0.601	0.697	0.50	42	1.190		
1600	1675	7.92	59900	5.990	0.76	0.730	76	59.2	0.78	0.655		1.63	320	1.963	0.721	1.00	44	2.273		
1600	1700	1.37	10470	1.047	0.76	0.729	25	15.3	0.61	0.651		2.63	70	0.266	0.651	1.00	80	1.250		
1600	1725	1.77	12060	1.206	0.68	0.688	26	15.7	0.60	0.585		3.00	80	0.267	0.561	0.75	102	0.735		
1600	1750	0.67	4610	0.461	0.69	0.642	28	15.5	0.55	0.550		2.57	40	0.156	0.212	4.50	102	4.412		
1600	1775	0.38	2090	0.209	0.55	0.637	20	7.6	0.38	0.600		1.95	30	0.154	0.799	0.25	44	0.568		
1600	1800	1.09	5720	0.572	0.52	0.630	23	13.9	0.60	0.583		1.84	40	0.217	0.777	1.25	58	2.155		
1600	1825	11.05	82000	8.200	0.74	0.640	175	151.0	0.86	0.643		1.25	400	3.200	1.056	1.00	34	2.941		
1600	1850	0.65	4190	0.419	0.64	0.661	25	12.9	0.52	0.679		1.90	30	0.158	1.102	0.75	44	1.705		
1600	1875	6.13	45400	4.540	0.74	0.711	85	72.7	0.86	0.719		1.42	220	1.549	1.270	0.50	38	1.316		
1600	1900	1.27	8320	0.832	0.66	0.688	29	16.3	0.56	0.642		1.82	70	0.385	0.669	1.00	46	2.174		
1600	1925	4.40	33900	3.390	0.77	0.725	50	40.1	0.80	0.680		1.61	170	1.056	0.753	0.75	42	1.786		
1600	1950	0.57	3580	0.358	0.63	0.727	26	12.4	0.48	0.683		2.03	40	0.197	0.663	0.50	60	0.833		
1600	1975	2.88	23900	2.390	0.83	0.729	40	28.2	0.71	0.681		2.07	120	0.580	0.609	0.75	58	1.293		

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SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		5 PT AVERAG	ICP-MS		5 PT AVERAG	PASTE pH	ICP-MS		ICP-MS		5 PT AVERAG	ICP-MS		ppm HA Zn	ppm HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Ca		ppm HOAC Sr	ppm HOAC Sr			% HA Fe	ppm HOAC Fe	ppm HOAC Fe/ HA Fe*100	ppm HOAC Zn		ppm HA Zn			
1600	2000	6.80	51200	5.120	0.75	0.706	67	58.3	0.87	0.648		2.00	220	1.100	0.432	0.75	52	1.442	
1600	2025	0.65	4310	0.431	0.66	0.736	23	12.7	0.55	0.713		2.69	30	0.112	0.520	0.75	64	1.172	
1600	2050	0.76	5000	0.500	0.66	0.670	28	17.9	0.64	0.707	8	2.36	40	0.169	0.460	3.25	74	4.392	
1600	2075	3.26	25300	2.530	0.78	0.612	91	73.0	0.80	0.667		2.04	130	0.637	0.286	1.50	58	2.586	
1600	2100	1.75	8750	0.875	0.50	0.603	81	54.5	0.67	0.710		2.12	60	0.283	0.425	9.00	116	7.759	
1600	2125	1.56	7210	0.721	0.46	0.603	60	40.3	0.67	0.731		2.17	50	0.230	0.456	2.00	70	2.857	
1600	2150	4.56	28200	2.820	0.62	0.577	92	70.5	0.77	0.721		1.99	160	0.804	0.513	1.50	56	2.679	
1600	2175	1.63	10730	1.073	0.66	0.620	69	51.3	0.74	0.752		1.85	60	0.324	0.709	1.00	54	1.852	
1600	2200	5.87	38000	3.800	0.65	0.641	117	87.7	0.75	0.752		1.84	170	0.924	0.706	3.50	48	7.292	
1600	2225	6.60	47200	4.720	0.72	0.653	146	121.0	0.83	0.756		1.90	240	1.263	0.730	1.75	48	3.646	
1600	2250	1.80	10140	1.014	0.56	0.668	98	66.0	0.67	0.782		2.35	50	0.213	1.080	1.25	74	1.689	
1600	2275	6.34	43100	4.310	0.68	0.678	148	116.5	0.79	0.816		2.05	190	0.927	1.338	1.00	54	1.852	
1600	2300	8.97	65800	6.580	0.73	0.643	282	246.0	0.87	0.776		1.64	340	2.073	1.115	0.75	44	1.705	
1600	2325	8.91	62200	6.220	0.70	0.659	227	209.0	0.92	0.781		1.85	410	2.216	1.094	1.25	40	3.125	
1600	2350	1.62	8760	0.876	0.54	0.636	121	75.9	0.63	0.738		3.40	50	0.147	0.929	1.00	140	0.714	
1600	2375	0.82	5270	0.527	0.64	0.616	76	53.1	0.70	0.692		3.74	40	0.107	0.540	1.25	186	0.672	
1600	2400	0.60	3380	0.338	0.56	0.625	67	38.1	0.57	0.652		2.97	30	0.101	0.138	1.00	68	1.136	
1600	2425	0.59	3760	0.376	0.64	0.647	65	41.8	0.64	0.652		3.16	40	0.127	0.120	1.50	120	1.250	
1600	2450	0.89	6580	0.658	0.74	0.637	89	64.1	0.72	0.632		2.91	60	0.206	0.114	1.75	100	1.750	
1600	2475	0.37	2410	0.241	0.65	0.665	49	30.8	0.63	0.664		3.37	20	0.059	0.165	0.75	78	0.962	
1600	2500	0.38	2250	0.225	0.59	0.705	52	31.3	0.60	0.721		2.52	20	0.079	1.129	0.25	66	0.379	
1600	2525	1.93	13650	1.365	0.71	0.674	130	94.5	0.73	0.662		2.26	80	0.354	1.126	1.50	66	2.273	
1600	2550	11.95	>100000	10.000	0.84	0.683	540	500.0	0.93	0.644	7.4	0.95	470	4.947	1.173	3.25	30	10.833	
1600	2575	0.40	2320	0.232	0.58	0.686	26	11.1	0.43	0.655		2.08	40	0.192	1.238	1.75	84	2.083	
1600	2600	0.56	3920	0.392	0.70	0.668	23	12.4	0.54	0.620		2.41	70	0.290	1.199	1.00	46	2.174	
1600	2625	2.28	13770	1.377	0.60	0.634	35	23.0	0.66	0.537		2.22	90	0.405	0.253	1.00	40	2.500	
1600	2650	0.27	1670	0.167	0.62	0.633	19	10.5	0.55	0.558		1.91	30	0.157	0.297	1.50	80	1.875	
1600	2675	0.35	2340	0.234	0.67	0.622	20	10.2	0.51	0.546		2.30	50	0.217	0.262	1.25	72	1.736	
1600	2700	1.12	6440	0.644	0.58	0.631	25	13.3	0.53	0.503		2.18	90	0.413	0.205	0.75	46	1.630	
1600	2725	0.50	3230	0.323	0.65	0.600	20	9.7	0.48	0.475		2.58	30	0.116	0.202	0.75	46	1.630	
1600	2750	0.40	2580	0.258	0.65	0.596	20	8.8	0.44	0.512		2.52	30	0.119	0.308	0.75	46	1.630	
1600	2775	0.57	2640	0.264	0.46	0.594	20	8.3	0.42	0.485		2.78	40	0.144	0.248	0.75	46	1.630	
1600	2800	3.76	24400	2.440	0.65	0.564	42	29.2	0.70	0.475		2.00	150	0.750	0.252	0.75	42	1.786	
1600	2825	0.37	2090	0.209	0.56	0.515	21	8.3	0.40	0.454		2.71	30	0.111	0.251	0.75	52	1.442	
1600	2850	0.55	2750	0.275	0.50	0.545	22	9.5	0.43	0.457		2.89	40	0.138	0.265	0.25	58	0.431	
1600	2875	0.73	2920	0.292	0.40	0.524	25	8.4	0.33	0.407		2.66	30	0.113	0.144	0.50	52	0.962	
1600	2900	0.90	5510	0.551	0.61	0.504	20	8.6	0.43	0.419		2.36	50	0.212	0.130	0.50	54	0.926	
1600	2925	0.50	2710	0.271	0.54	0.534	15	6.7	0.45	0.428		2.76	40	0.145	0.127	0.75	50	1.500	
1600	2950	0.42	1960	0.196	0.47	0.545	16	7.3	0.45	0.460		2.38	10	0.042	0.146	0.75	44	1.705	
1600	2975	0.39	2530	0.253	0.65	0.564	18	8.6	0.48	0.485		2.45	30	0.122	0.139	1.25	76	1.645	

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LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC	5 PT AVERAG	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	ICP-MS		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Ca			ppm HOAC Sr	ppm HOAC Sr				ppm HOAC Fe	ppm HOAC Fe			ppm HOAC Zn	ppm HOAC Zn	
1600	3000	0.85	3860	0.386	0.45	0.595	21	10.4	0.49	0.486			2.87	60	0.209	0.152	1.50	66	2.273
1600	3025	0.48	3390	0.339	0.71	0.639	26	14.6	0.56	0.491			2.29	40	0.175	0.191	2.00	68	2.941
1600	3050	0.25	1750	0.175	0.70	0.622	17	7.6	0.45	0.490	5.5		2.34	50	0.214	0.212	0.50	54	0.926
1600	3075	0.25	1710	0.171	0.68	0.679	17	8.2	0.48	0.510			2.53	60	0.237	0.207	1.75	76	2.303
1600	3100	0.53	3000	0.300	0.57	0.633	19	9.0	0.47	0.483			2.64	60	0.227	0.191	1.25	54	2.315
1600	3125	0.28	2070	0.207	0.74	0.620	19	11.3	0.59	0.475			2.20	40	0.182	0.173	1.75	64	2.734
1600	3150	0.31	1480	0.148	0.48	0.570	16	6.8	0.43	0.482			2.13	20	0.094	0.155	2.75	64	4.297
1600	3175	0.34	2150	0.215	0.63	0.603	21	8.5	0.40	0.475			2.38	30	0.126	0.136	9.25	62	14.919
1600	3200	0.61	2660	0.266	0.44	0.589	20	10.4	0.52	0.449			2.09	30	0.144	0.125	2.00	80	2.500
1600	3225	0.30	2190	0.219	0.73	0.620	18	7.9	0.44	0.454			2.22	30	0.135	0.133	1.00	52	1.923
1600	3250	0.27	1810	0.181	0.67	0.616	11	5.1	0.46	0.466			2.40	30	0.125	0.150	1.25	54	2.315
1600	3275	0.28	1770	0.177	0.63	0.663	18	8.1	0.45	0.471			2.23	30	0.135	0.153	1.00	46	2.174
1600	3300	0.25	1530	0.153	0.61	0.615	22	10.2	0.46	0.475			1.88	40	0.213	0.205	4.25	72	5.903
1600	3325	0.37	2480	0.248	0.67	0.582	28	15.1	0.54	0.445			1.93	30	0.155	0.207	2.25	66	3.409
1600	3350	0.27	1330	0.133	0.49	0.574	33	15.1	0.46	0.451			1.77	70	0.395	0.226	1.75	100	1.750
1600	3375	0.27	1360	0.136	0.50	0.586	32	10.1	0.31	0.474			2.16	30	0.139	0.232	0.25	46	0.543
1600	3400	0.35	2070	0.207	0.59	0.576	28	13.4	0.48	0.463			1.75	40	0.229	0.223	1.50	92	1.630
1600	3425	0.33	2220	0.222	0.67	0.607	23	13.3	0.58	0.478			2.08	50	0.240	0.190	1.75	48	3.646
1600	3450	0.42	2600	0.260	0.62	0.650	21	10.3	0.49	0.510			2.66	30	0.113	0.194	0.25	46	0.543
1600	3475	1.26	8180	0.818	0.65	0.685	22	11.7	0.53	0.523			2.61	60	0.230	0.172	0.25	52	0.481
1600	3500	0.31	2230	0.223	0.72	0.637	14	6.6	0.47	0.500			2.49	40	0.161	0.163	0.75	56	1.339
1600	3525	0.32	2440	0.244	0.76	0.635	15	8.2	0.54	0.472			2.59	30	0.116	0.181	1.25	48	2.604
1600	3550	0.54	2340	0.234	0.43	0.622	15	7.0	0.46	0.456	6.5		2.58	50	0.194	0.223	0.50	58	0.862
1600	3575	0.33	2020	0.202	0.61		14	4.9	0.35				2.44	50	0.205		0.25	38	0.658
1600	3600	0.19	1110	0.111	0.58		10	4.5	0.45				1.59	70	0.440		1.50	50	3.000
2000	100	8.03	60300	6.030	0.75		165	136.5	0.83				1.80	440	2.444		400.00	830	48.193
2000	125	9.85	68700	6.870	0.70		170	144.0	0.85				1.56	380	2.436		3.25	36	9.028
2000	150	8.00	65100	6.510	0.81	0.759	153	130.5	0.85	0.816			1.81	350	1.934	2.134	1.75	38	4.605
2000	175	9.20	75400	7.540	0.82	0.754	133	100.5	0.76	0.800			1.55	360	2.323	1.840	1.00	30	3.333
2000	200	6.58	47000	4.700	0.71	0.772	96	76.7	0.80	0.790			1.50	230	1.533	1.488	1.50	32	4.888
2000	225	4.62	33400	3.340	0.72	0.774	83	61.9	0.75	0.767			1.85	180	0.973	1.584	2.00	46	4.348
2000	250	3.23	25500	2.550	0.79	0.775	70	55.8	0.80	0.782			1.92	130	0.677	1.505	2.75	52	5.288
2000	275	9.33	76800	7.680	0.82	0.801	194	143.0	0.74	0.793			1.49	360	2.416	1.539	1.50	36	4.167
2000	300	8.48	70100	7.010	0.83	0.844	213	176.5	0.83	0.808			1.56	300	1.923	1.760	1.25	38	3.289
2000	325	7.55	63600	6.360	0.84	0.847	188	161.0	0.86	0.792			1.64	280	1.707	1.830	1.75	42	4.167
2000	350	7.60	71400	7.140	0.94	0.842	127	104.5	0.82	0.815			1.59	330	2.075	1.693	1.25	38	3.289
2000	375	5.22	42000	4.200	0.80	0.837	112	80.2	0.72	0.810			1.95	200	1.026	1.492	1.00	50	2.000
2000	400	6.99	55600	5.560	0.80	0.820	159	135.5	0.85	0.801			1.73	300	1.734	1.378	1.50	42	3.571
2000	425	4.48	36000	3.600	0.80	0.794	110	88.2	0.80	0.799			1.85	170	0.919	1.119	1.75	48	3.646
2000	450	5.64	42600	4.260	0.76	0.820	137	111.5	0.81	0.827			1.94	220	1.134	1.005	1.25	48	2.604

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LINE	SOUTH EAST STATIO	ICP-MS %		ICP-MS ppm		HOAC HA CA	5 PT AVERAG	ICP-MS ppm		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	% HA Fe	ICP-MS ppm		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS ppm		HOAC Zn/ HA Zn*100
		HA Ca	Ca	HOAC Ca	Ca			HOAC Sr	Sr					HOAC Zn	Zn			HA Zn	Zn	
2000	475	4.63	37500	3.750	0.81	0.826	111	90.3	0.81	0.807			2.05	160	0.780	0.901	1.25	52	2.404	
2000	500	2.29	21400	2.140	0.93	0.826	66	56.2	0.85	0.795			2.19	100	0.457	0.882	1.00	52	1.923	
2000	525	6.00	49700	4.970	0.83	0.837	143	108.0	0.76	0.799			1.73	210	1.214	0.928	1.75	48	3.646	
2000	550	4.41	35400	3.540	0.80	0.812	105	77.6	0.74	0.773	8.2		1.94	160	0.825	0.862	1.25	52	2.404	
2000	575	6.78	54800	5.480	0.81	0.798	167	139.5	0.84	0.759			1.76	240	1.364	1.244	1.50	46	3.261	
2000	600	2.77	19050	1.905	0.69	0.776	77	52.8	0.69	0.752			2.21	100	0.452	1.110	1.50	58	2.586	
2000	625	9.43	81200	8.120	0.86	0.779	193	150.5	0.78	0.761			1.65	390	2.364	1.146	1.25	38	3.289	
2000	650	3.32	23900	2.390	0.72	0.773	80	57.5	0.72	0.755			2.02	110	0.545	1.145	1.25	50	2.500	
2000	675	4.47	36500	3.650	0.82	0.789	95	74.5	0.78	0.771			1.89	190	1.005	1.243	2.25	46	4.891	
2000	700	6.43	50100	5.010	0.78	0.784	155	125.0	0.81	0.769			1.69	230	1.361	1.060	2.00	44	4.545	
2000	725	5.12	39300	3.930	0.77	0.801	126	96.5	0.77	0.795			1.91	180	0.942	1.180	1.00	50	2.000	
2000	750	7.07	59300	5.930	0.84	0.785	179	138.0	0.77	0.772			1.73	250	1.445	1.053	1.25	44	2.841	
2000	775	5.36	43000	4.300	0.80	0.788	129	109.5	0.85	0.759			1.92	220	1.146	0.945	2.25	52	4.327	
2000	800	2.34	17300	1.730	0.74	0.803	72	48.2	0.67	0.759			2.42	90	0.372	1.111	1.50	60	2.500	
2000	825	4.86	38500	3.850	0.79	0.803	109	80.4	0.74	0.767			2.08	170	0.817	1.121	1.25	52	2.404	
2000	850	8.30	69900	6.990	0.84	0.798	210	161.5	0.77	0.764			1.69	300	1.775	1.127	1.00	40	2.500	
2000	875	7.21	60600	6.060	0.84	0.812	226	183.5	0.81	0.798			1.67	250	1.497	1.507	1.25	44	2.841	
2000	900	5.88	45700	4.570	0.78	0.808	232	192.5	0.83	0.804			1.79	210	1.173	1.549	1.25	48	2.604	
2000	925	8.98	72400	7.240	0.81	0.798	575	485.0	0.84	0.813			1.54	350	2.273	1.601	1.25	36	3.472	
2000	950	5.51	42700	4.270	0.77	0.804	192	147.0	0.77	0.810			1.85	190	1.027	1.603	1.00	46	2.174	
2000	975	8.57	67600	6.760	0.79	0.816	253	206.0	0.81	0.825			1.62	330	2.037	1.638	1.25	40	3.125	
2000	1000	6.27	54600	5.460	0.87	0.829	180	143.5	0.80	0.838			1.53	230	1.503	1.475	4.50	38	11.842	
2000	1025	6.64	55700	5.570	0.84	0.826	160	144.5	0.90	0.851			1.78	240	1.348	1.625	1.00	44	2.273	
2000	1050	7.03	61300	6.130	0.87	0.822	186	169.5	0.91	0.834	8.3		1.85	270	1.459	1.311	0.75	48	1.563	
2000	1075	7.52	57000	5.700	0.76	0.800	196	162.5	0.83	0.823			1.63	290	1.779	1.159	1.25	40	3.125	
2000	1100	2.72	20900	2.090	0.77	0.790	95	69.4	0.73	0.810			2.36	110	0.466	1.121	1.00	50	2.000	
2000	1125	4.77	36400	3.640	0.76	0.776	126	93.5	0.74	0.772			2.29	170	0.742	1.205	0.50	50	1.000	
2000	1150	6.49	51100	5.110	0.79	0.789	190	159.5	0.84	0.766			1.81	210	1.160	1.171	1.25	50	2.500	
2000	1175	8.95	71700	7.170	0.80	0.808	261	188.0	0.72	0.778			1.76	330	1.875	1.350	1.00	44	2.273	
2000	1200	8.46	70000	7.000	0.83	0.840	236	188.5	0.80	0.810			1.80	290	1.611	1.581	1.25	50	2.500	
2000	1225	6.20	53300	5.330	0.86	0.862	169	133.5	0.79	0.818			1.91	260	1.361	1.866	0.75	50	1.500	
2000	1250	8.10	75000	7.500	0.93	0.863	309	278.0	0.90	0.832			1.53	290	1.895	1.923	0.75	42	1.786	
2000	1275	9.42	84500	8.450	0.90	0.895	326	287.0	0.88	0.857			1.43	370	2.587	2.097	0.75	36	2.083	
2000	1300	9.39	75600	7.560	0.81	0.917	319	252.0	0.79	0.888			1.39	300	2.158	2.307	0.75	36	2.083	
2000	1325	8.68	85900	8.590	0.99	0.919	404	373.0	0.92	0.883			1.29	320	2.481	2.625	1.00	34	2.941	
2000	1350	8.39	81300	8.130	0.97	0.933	482	457.0	0.95	0.874			1.16	280	2.414	2.733	0.50	34	1.471	
2000	1375	9.69	90700	9.070	0.94	0.957	558	486.0	0.87	0.907			1.09	380	3.486	2.980	0.75	34	2.206	
2000	1400	9.21	88900	8.890	0.97	0.949	481	402.0	0.84	0.871			1.12	350	3.125	3.293	0.50	34	1.471	
2000	1425	10.70	98900	9.890	0.92	0.881	461	440.0	0.95	0.837			1.09	370	3.394	2.889	0.50	32	1.563	
2000	1450	9.04	85700	8.570	0.95	0.794	670	500.0	0.75	0.793			0.84	340	4.048	2.223	0.75	44	1.705	

LINE	SOUTH EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		HOAC SR/	5 PT	PASTE	%	ICP-MS		ICP-MS		ppm	ppm	HOAC Zn/
			HA Ca	HOAC Ca				HA Ca	AVERAG					HA Sr	HOAC Sr	HA SR	AVERAG			
2000	1475	2.52	15890	1.589	0.63	0.762	134	104.5	0.78	0.759			2.30	90	0.391	1.630	1.50	64	2.344	
2000	1500	0.58	2920	0.292	0.50	0.721	37	24.0	0.65	0.697			2.58	40	0.155	0.979	1.25	64	1.953	
2000	1525	0.78	6270	0.627	0.80	0.719	79	52.4	0.66	0.682			3.13	50	0.160	0.191	3.00	98	3.061	
2000	1550	0.56	4030	0.403	0.72	0.757	51	32.9	0.65	0.644	7.4		2.86	40	0.140	0.152	2.00	86	2.326	
2000	1675	0.43	4040	0.404	0.94	0.810	61	41.1	0.67	0.643			2.78	30	0.108	0.142	2.25	116	1.940	
2000	1700	0.39	3190	0.319	0.82	0.797	63	37.0	0.59	0.638			3.01	60	0.199	0.144	6.75	130	5.192	
2000	1725	0.55	4240	0.424	0.77	0.889	63	40.8	0.65	0.652			2.86	30	0.105	0.137	1.25	102	1.225	
2000	1750	0.39	2880	0.288	0.74	0.872	59	37.5	0.64	0.651			3.02	50	0.166	0.137	0.50	92	0.543	
2000	1775	0.35	4130	0.413	1.18	0.895	49	35.1	0.72	0.675			2.77	30	0.108	0.121	0.75	102	0.735	
2000	1800	0.44	3750	0.375	0.85	0.951	53	35.5	0.67	0.699			2.78	30	0.108	0.131	0.75	96	0.781	
2000	1825	0.48	4490	0.449	0.94	1.001	54	38.2	0.71	0.717			2.52	30	0.119	0.129	1.00	80	1.250	
2000	1850	0.51	5360	0.536	1.05	0.903	56	42.9	0.77	0.736			2.56	40	0.156	0.945	1.25	72	1.736	
2000	1875	0.64	6310	0.631	0.99	0.874	61	44.4	0.73	0.726			2.61	40	0.153	0.976	1.50	88	1.705	
2000	1925	11.25	77500	7.750	0.69	0.872	174	140.5	0.81	0.712			1.17	490	4.188	0.998	1.50	24	6.250	
2000	1950	0.62	4400	0.440	0.71	0.815	26	16.2	0.62	0.689			2.29	60	0.262	1.024	3.00	94	3.191	
2000	1975	0.50	4630	0.463	0.93	0.792	22	14.0	0.63	0.702			2.58	60	0.233	1.170	1.00	64	1.563	
2000	2000	0.67	5110	0.511	0.76	0.826	24	15.7	0.65	0.667			2.45	70	0.286	0.383	1.00	50	2.000	
2000	2025	3.62	31600	3.160	0.87	0.807	49	38.9	0.79	0.630			1.81	160	0.884	0.445	1.00	36	2.778	
2000	2050	0.64	5510	0.551	0.86	0.795	32	20.2	0.63	0.645			2.41	60	0.249	0.482	0.50	54	0.926	
2000	2075	0.69	4230	0.423	0.61	0.840	31	13.7	0.44	0.652			1.39	80	0.576	0.465	1.00	66	1.515	
2000	2100	0.62	5370	0.537	0.87	0.841	26	18.4	0.71	0.646			2.41	100	0.415	0.446	1.25	52	2.404	
2000	2125	0.44	4350	0.435	0.99	0.880	22	15.1	0.69	0.655			2.51	50	0.199	0.448	0.25	44	0.568	
2000	2150	3.90	34200	3.420	0.88	0.931	35	26.8	0.77	0.724			2.15	170	0.791	0.376	0.25	40	0.625	
2000	2175	0.88	9280	0.928	1.05	0.933	19	12.9	0.68	0.753	7.1		2.33	60	0.258	0.595	0.25	50	0.500	
2000	2200	0.63	5470	0.547	0.87	0.904	18	14.1	0.78	0.771			2.28	50	0.219	0.733	1.00	42	2.381	
2000	2225	6.44	56300	5.630	0.87	0.880	76	64.7	0.85	0.725			1.59	240	1.509	0.647	2.75	42	6.548	
2000	2250	4.07	34500	3.450	0.85	0.866	43	33.5	0.78	0.706			2.03	180	0.887	0.622	1.75	56	3.125	
2000	2275	1.21	9150	0.915	0.76	0.859	21	11.3	0.54	0.712			2.20	80	0.364	0.753	0.25	48	0.521	
2000	2300	0.26	2560	0.256	0.98	0.867	22	12.8	0.58	0.674			2.29	30	0.131	0.477	0.25	58	0.431	
2000	2325	4.10	34100	3.410	0.83	0.860	39	31.6	0.81	0.602			1.83	160	0.874	0.320	1.00	44	2.273	
2000	2350	0.40	3660	0.366	0.92	0.859	15	10.0	0.66	0.613			2.33	30	0.129	0.323	1.00	82	1.220	
2000	2375	0.26	2110	0.211	0.81	0.877	22	9.2	0.42	0.617			1.94	20	0.103	0.344	0.75	48	1.563	
2000	2400	1.93	14490	1.449	0.75	0.912	32	19.0	0.59	0.576			2.12	80	0.377	0.201	1.50	58	2.586	
2000	2425	0.22	2370	0.237	1.08	0.889	16	9.6	0.60	0.560			2.12	50	0.236	0.201	2.50	62	4.032	
2000	2450	0.24	2410	0.241	1.00	0.912	14	8.5	0.60	0.581			1.86	30	0.161	0.198	3.75	132	2.841	
2000	2475	0.54	4330	0.433	0.80	0.971	23	13.5	0.58	0.608			2.37	30	0.127	0.148	0.75	62	1.210	
2000	2500	0.32	2970	0.297	0.93	0.900	22	11.5	0.52	0.595			2.19	20	0.091	0.118	1.25	62	2.016	
2000	2525	0.34	3550	0.355	1.04	0.936	17	12.4	0.73	0.597			2.36	30	0.127	0.114	0.50	48	1.042	
2000	2550	0.46	3330	0.333	0.72	0.944	15	8.1	0.54	0.591			2.36	20	0.085	0.115	0.75	56	1.339	
2000	2575	0.24	2840	0.284	1.18	0.918	16	9.8	0.61	0.585			2.12	30	0.142	0.131	0.75	54	1.389	

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%				ppm	ppm					ppm	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm	
		HA Ca	HOAC Ca	HOAC Ca	HA CA	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG		HA Fe	HOAC Fe	HA Fe*100	AVERAG	HOAC Zn	HA Zn	
2000	2600	0.39	3270	0.327	0.84	0.904	17	9.5	0.56	0.554		2.31	30	0.130	0.250	0.75	52	1.442
2000	2625	0.35	2800	0.280	0.80	0.928	22	10.8	0.49	0.560		2.33	40	0.172	0.273	1.75	70	2.500
2000	2650	0.26	2530	0.253	0.97	0.852	26	15.0	0.58	0.556		1.94	140	0.722	0.324	1.75	84	2.083
2000	2675	0.39	3300	0.330	0.85	0.819	22	12.4	0.56	0.526	5.5	1.99	40	0.201	0.343	2.00	40	5.000
2000	2700	0.21	1680	0.168	0.80	0.808	22	13.1	0.59	0.542		1.77	70	0.395	0.364	2.25	48	4.688
2000	2725	0.25	1690	0.169	0.68	0.720	24	9.8	0.41	0.515		1.79	40	0.223	0.357	0.75	40	1.875
2000	2750	0.39	2910	0.291	0.75	0.698	49	27.9	0.57	0.511		1.80	50	0.278	0.420	2.50	64	3.906
2000	2775	0.34	1800	0.180	0.53	0.687	46	20.2	0.44	0.513		1.89	130	0.688	0.464	3.00	90	3.333
2000	2800	0.26	1920	0.192	0.74	0.684	28	15.2	0.54	0.527		1.94	100	0.515	0.603	1.50	48	3.125
2000	2825	0.27	2010	0.201	0.74	0.654	32	19.4	0.61	0.490		1.46	90	0.616	0.801	1.50	64	2.344
2000	2850	0.29	1920	0.192	0.66	0.612	32	15.3	0.48	0.432		1.53	140	0.915	0.696	1.00	60	1.667
2000	2875	0.20	1190	0.119	0.60	0.540	24	9.3	0.39	0.358		1.34	170	1.269	0.629	0.75	52	1.442
2000	2900	0.63	2010	0.201	0.32	0.512	85	12.5	0.15	0.302		3.01	50	0.166	0.547	1.25	84	1.488
2000	2925	0.57	2150	0.215	0.38	0.521	83	14.4	0.17	0.284		2.78	50	0.180	0.416	1.00	68	1.471
2000	2950	0.45	2720	0.272	0.60	0.539	47	15.3	0.32	0.302		2.91	60	0.206	0.234	1.75	60	2.917
2000	2975	0.28	1990	0.199	0.71	0.591	34	13.2	0.39	0.335		2.33	60	0.258	0.229	2.00	60	3.333
2000	3000	0.41	2810	0.281	0.69	0.631	41	19.7	0.48	0.377		2.49	90	0.361	0.232	1.25	62	2.016
2000	3025	0.44	2550	0.255	0.58	0.585	44	13.6	0.31	0.355		2.82	40	0.142	0.283	1.50	52	2.885
2000	3050	0.40	2300	0.230	0.58	0.526	45	17.3	0.38	0.320		2.57	50	0.195	0.259	0.75	60	1.250
2000	3075	0.45	1690	0.169	0.38	0.480	58	12.4	0.21	0.276		2.60	120	0.462	0.217	1.75	88	1.989
2000	3100	0.64	2660	0.266	0.42	0.444	80	17.4	0.22	0.265		3.72	50	0.134	0.221	0.75	60	1.250
2000	3125	0.52	2360	0.236	0.45	0.483	58	14.9	0.26	0.298		2.59	40	0.154	0.247	0.25	52	0.481
2000	3150	0.53	2130	0.213	0.40	0.547	62	15.8	0.25	0.331		3.13	50	0.160	0.238	0.75	58	1.293
2000	3175	0.37	2840	0.284	0.77	0.633	43	23.5	0.55	0.412	5.4	2.14	70	0.327	0.365	21.50	140	15.357
2000	3200	0.29	2020	0.202	0.70	0.668	37	14.2	0.38	0.428		2.16	90	0.417	0.360	1.50	44	3.409
2000	3225	0.27	2280	0.228	0.84	0.718	41	25.4	0.62	0.458		1.56	120	0.769	0.384	0.75	82	0.915
2000	3250	0.74	4660	0.466	0.63	0.675	63	21.2	0.34	0.411		3.93	50	0.127	0.364	1.75	62	2.823
2000	3275	0.33	2150	0.215	0.65	0.635	46	18.6	0.40	0.383		2.16	60	0.278	0.330	0.25	56	0.446
2000	3300	0.31	1710	0.171	0.55	0.582	42	13.2	0.31	0.326		2.19	50	0.228	0.224	1.50	58	2.586
2000	3325	0.80	4000	0.400	0.50	0.567	101	24.5	0.24	0.321		3.24	80	0.247	0.232	0.25	40	0.625
2000	3350	0.48	2760	0.276	0.58	0.575	51	17.1	0.33	0.345		2.92	70	0.240	0.275	0.75	46	1.630
2000	3375	0.46	2570	0.257	0.56	0.620	56	17.3	0.31	0.401		3.58	60	0.168	0.328	1.50	52	2.885
2000	3400	0.34	2350	0.235	0.69	0.663	41	21.6	0.53	0.469		1.82	90	0.495	0.369	2.75	208	1.322
2000	3425	0.30	2320	0.232	0.77	0.685	36	21.4	0.59	0.514		1.83	90	0.492	0.336	1.50	92	1.630
2000	3450	0.37	2660	0.266	0.72	0.723	54	31.3	0.58	0.571		1.33	60	0.451	0.364	3.00	102	2.941
2000	3475	0.45	3070	0.307	0.68	0.742	38	21.3	0.56	0.599		2.70	20	0.074	0.306	2.00	72	2.778
2000	3500	0.33	2470	0.247	0.75	0.732	29	17.2	0.59	0.609		2.26	70	0.310	0.262	1.25	82	1.524
2000	3525	0.38	2990	0.299	0.79	0.731	27	18.0	0.67	0.579		2.96	60	0.203	0.361	1.00	58	1.724
2000	3550	0.39	2820	0.282	0.72	0.717	27	17.4	0.64	0.533		2.95	80	0.271	0.402	0.75	50	1.500
2000	3575	0.19	1360	0.136	0.72		33	14.3	0.43			1.37	130	0.949		0.75	50	1.500

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT AVERAG	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%				ppm	ppm					ppm	HOAC Fe/ HA Fe*100		ppm	ppm	
2000	3600	0.32	1960	0.196	0.61		46	15.2	0.33				2.51	70	0.279		1.00	46	2.174
2400	100	4.51	28200	2.820	0.63		91	65.7	0.72				1.83	160	0.874		2.50	44	5.682
2400	125	1.00	7220	0.722	0.72		37	25.6	0.69				1.99	50	0.251		1.50	48	3.125
2400	150	0.47	3280	0.328	0.70	0.751	23	17.3	0.75	0.780			2.11	20	0.095	0.841	1.00	44	2.273
2400	175	6.06	51600	5.160	0.85	0.782	113	114.5	1.01	0.795			1.39	350	2.518	0.868	1.00	26	3.846
2400	200	1.63	13960	1.396	0.86	0.806	40	29.0	0.73	0.828			2.14	100	0.467	1.216	1.00	46	2.174
2400	225	3.98	31100	3.110	0.78	0.830	65	51.8	0.80	0.844			1.88	190	1.011	1.656	0.75	42	1.786
2400	250	7.73	65300	6.530	0.84	0.806	142	121.5	0.86	0.793			1.61	320	1.988	1.216	1.50	38	3.947
2400	275	8.37	68400	6.840	0.82	0.824	191	158.5	0.83	0.837			1.61	370	2.298	1.466	1.50	38	3.947
2400	300	1.82	13260	1.326	0.73	0.836	62	47.0	0.76	0.842			2.20	70	0.318	1.395	1.50	54	2.778
2400	325	5.53	52300	5.230	0.95	0.820	110	104.0	0.95	0.849			1.75	300	1.714	1.442	1.50	42	3.571
2400	350	3.17	26800	2.680	0.85	0.828	81	66.3	0.82	0.852			2.13	140	0.657	1.433	1.50	50	3.000
2400	375	7.96	60600	6.060	0.76	0.861	188	167.5	0.89	0.864			1.53	340	2.222	1.542	2.50	38	6.579
2400	400	8.02	68800	6.880	0.86	0.814	186	157.5	0.85	0.841			1.73	390	2.254	1.763	1.00	40	2.500
2400	425	4.11	36800	3.680	0.90	0.798	101	82.9	0.82	0.838			2.20	190	0.864	1.908	1.00	54	1.852
2400	450	10.15	72300	7.230	0.71	0.827	235	194.5	0.83	0.811			1.42	400	2.817	1.657	1.75	34	5.147
2400	475	6.26	47900	4.790	0.77	0.819	119	95.9	0.81	0.803			1.95	270	1.385	1.712	1.00	46	2.174
2400	500	4.16	37600	3.760	0.90	0.767	102	76.8	0.75	0.770			2.07	200	0.966	1.601	1.00	50	2.000
2400	525	9.10	74300	7.430	0.82	0.783	173	139.5	0.81	0.745			1.66	420	2.530	1.350	1.25	36	3.472
2400	550	1.75	11170	1.117	0.64	0.748	67	44.0	0.66	0.710	8.2		2.27	70	0.308	1.105	1.00	58	1.724
2400	575	7.68	60600	6.060	0.79	0.750	121	85.0	0.70	0.753			1.92	300	1.563	1.769	1.50	44	3.409
2400	600	0.58	3440	0.344	0.59	0.735	45	28.5	0.63	0.748			2.56	40	0.156	1.458	0.50	62	0.806
2400	625	10.80	98700	9.870	0.91	0.784	388	375.0	0.97	0.800			1.12	480	4.286	1.878	1.25	26	4.808
2400	650	4.79	35400	3.540	0.74	0.813	109	85.1	0.78	0.842			1.84	180	0.978	2.053	1.25	48	2.604
2400	675	8.20	72600	7.260	0.89	0.857	225	206.0	0.92	0.894			1.66	400	2.410	2.297	1.25	40	3.125
2400	700	8.23	76800	7.680	0.93	0.848	256	234.0	0.91	0.878			1.60	390	2.438	1.955	1.75	40	4.375
2400	725	5.92	48100	4.810	0.81	0.833	162	145.0	0.90	0.896			1.89	260	1.376	2.460	1.50	48	3.125
2400	750	9.02	78400	7.840	0.87	0.804	250	221.0	0.88	0.881			1.67	430	2.575	2.152	1.00	40	2.500
2400	775	8.78	58400	5.840	0.67	0.765	190	165.5	0.87	0.856			1.40	490	3.500	1.819	1.00	30	3.333
2400	800	4.50	33400	3.340	0.74	0.758	118	99.2	0.84	0.856			1.84	160	0.870	2.085	1.75	50	3.500
2400	825	4.28	31600	3.160	0.74	0.769	117	92.1	0.79	0.866			1.94	150	0.773	2.097	1.50	50	3.000
2400	850	8.62	66800	6.680	0.77	0.805	173	155.0	0.90	0.873			1.44	390	2.708	2.024	1.25	32	3.906
2400	875	8.35	77200	7.720	0.92	0.814	210	196.5	0.94	0.871			1.48	390	2.635	2.334	1.25	34	3.676
2400	900	10.05	84800	8.480	0.84	0.828	294	266.0	0.90	0.872			1.50	470	3.133	2.571	0.75	32	2.344
2400	925	8.42	66500	6.650	0.79	0.837	182	151.5	0.83	0.847			1.61	390	2.422	2.484	1.25	38	3.289
2400	950	8.61	69400	6.940	0.81	0.847	219	173.5	0.79	0.843			1.74	340	1.954	2.559	1.25	42	2.976
2400	975	9.01	74000	7.400	0.82	0.833	218	167.5	0.77	0.848			1.76	400	2.273	2.443	1.00	44	2.273
2400	1000	9.02	87700	8.770	0.97	0.817	183	167.5	0.92	0.871			1.56	470	3.013	2.381	1.00	36	2.778
2400	1025	7.98	61800	6.180	0.77	0.878	170	158.0	0.93	0.878			1.41	360	2.553	2.674	1.00	32	3.125
2400	1050	10.25	72800	7.280	0.71	0.884	274	260.0	0.95	0.888	8.4		1.61	340	2.112	2.528	1.25	38	3.289



SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC	5 PT AVERAG	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100	
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Sr			ppm HOAC Fe	HOAC Fe/ HA Fe*100				5 PT AVERAG	ppm HOAC Zn				
2400	1075	7.73	86100	8.610	1.11	0.844	273	226.0	0.83	0.848		1.52	520	3.421	2.085	1.00	40	2.500
2400	1100	6.63	56200	5.620	0.85	0.867	193	157.5	0.82	0.826		1.88	290	1.543	2.090	1.50	46	3.261
2400	1125	4.47	34700	3.470	0.78	0.881	129	92.6	0.72	0.801		2.26	180	0.796	2.196	0.75	52	1.442
2400	1150	9.68	85900	8.590	0.89	0.809	307	252.0	0.82	0.789		1.63	420	2.577	1.766	1.50	40	3.750
2400	1175	9.40	73400	7.340	0.78	0.801	284	234.0	0.82	0.793		1.55	410	2.645	1.715	1.00	36	2.778
2400	1200	6.73	50500	5.050	0.75	0.794	179	137.5	0.77	0.819		2.05	260	1.268	1.839	0.75	46	1.630
2400	1225	6.79	55100	5.510	0.81	0.779	178	148.5	0.83	0.827		1.86	240	1.290	1.687	1.00	46	2.174
2400	1250	6.76	49900	4.990	0.74	0.764	198	168.0	0.85	0.815		1.77	250	1.412	1.278	0.75	48	1.563
2400	1275	7.64	62300	6.230	0.82	0.821	195	168.0	0.86	0.855		1.76	320	1.818	1.225	0.75	42	1.786
2400	1300	3.70	26100	2.610	0.71	0.806	111	84.8	0.76	0.879		1.99	120	0.603	1.806	1.50	50	3.000
2400	1325	3.66	37800	3.780	1.03	0.827	101	97.7	0.97	0.837		1.80	180	1.000	1.551	1.00	40	2.500
2400	1350	11.10	81800	8.180	0.74	0.797	192	183.5	0.96	0.775		1.43	600	4.196	1.226	1.50	28	5.357
2400	1375	0.37	3120	0.312	0.84	0.787	17	10.8	0.64	0.709		2.85	40	0.140	1.143	0.50	44	1.136
2400	1400	0.61	4070	0.407	0.67	0.721	22	12.2	0.55	0.636		2.65	50	0.189	0.974	0.75	72	1.042
2400	1425	0.59	3860	0.386	0.65	0.682	27	11.7	0.43	0.546		2.60	50	0.192	0.177	1.00	74	1.351
2400	1450	0.60	4230	0.423	0.71	0.685	26	15.7	0.60	0.525		2.66	40	0.150	0.189	1.25	84	1.488
2400	1475	0.75	4050	0.405	0.54	0.655	27	13.6	0.50	0.481		2.79	60	0.215	0.175	1.75	110	1.591
2400	1500	0.37	3170	0.317	0.86	0.659	24	12.8	0.53	0.480		2.53	50	0.198	0.170	1.00	60	1.667
2400	1525	0.49	2540	0.254	0.52	0.655	21	7.0	0.33	0.465		2.56	30	0.117	0.181	0.75	74	1.014
2400	1550	0.39	2630	0.263	0.67	0.689	20	8.6	0.43	0.443	7.4	2.35	40	0.170	0.178	0.50	58	0.862
2400	1575	0.52	3560	0.356	0.68	0.668	21	11.1	0.53	0.442		2.45	50	0.204	0.164	1.00	76	1.316
2400	1600	0.46	3280	0.328	0.71	0.720	23	9.1	0.39	0.482		2.47	50	0.202	0.197	0.75	68	1.103
2400	1625	0.27	2030	0.203	0.75	0.732	23	12.1	0.53	0.524		2.39	30	0.126	0.479	1.00	52	1.923
2400	1650	0.66	5130	0.513	0.78	0.743	25	13.4	0.53	0.526		2.11	60	0.284	0.530	0.75	50	1.500
2400	1675	2.48	18130	1.813	0.73	0.772	50	31.9	0.64	0.575		2.28	360	1.579	0.664	1.50	70	2.143
2400	1700	1.31	9740	0.974	0.74	0.791	40	21.6	0.54	0.624		2.18	100	0.459	0.979	0.75	56	1.339
2400	1725	3.36	28700	2.870	0.85	0.806	47	29.9	0.64	0.631		1.95	170	0.872	1.021	0.50	52	0.962
2400	1750	6.95	58900	5.890	0.85	0.856	92	70.8	0.77	0.626		1.82	310	1.703	0.837	1.00	44	2.273
2400	1775	1.51	12900	1.290	0.85	0.859	41	23.5	0.57	0.615		2.23	110	0.493	0.789	1.00	60	1.667
2400	1800	2.51	24600	2.460	0.98	0.845	37	22.7	0.61	0.586		2.13	140	0.657	0.657	0.75	54	1.389
2400	1825	0.47	3560	0.356	0.76	0.868	25	12.1	0.48	0.549		2.29	50	0.218	0.366	0.50	56	0.893
2400	1850	0.42	3310	0.331	0.79	0.869	23	11.4	0.49	0.618		2.36	50	0.212	0.586	0.50	56	0.893
2400	1875	0.48	4620	0.462	0.96	0.845	16	9.3	0.58	0.662		2.42	60	0.248	0.675	0.50	54	0.926
2400	1900	6.37	54500	5.450	0.86	0.848	62	57.0	0.92	0.671		1.57	250	1.592	0.691	1.00	36	2.778
2400	1925	4.62	39900	3.990	0.86	0.848	39	32.5	0.83	0.670		1.99	220	1.106	0.680	1.00	44	2.273
2400	1950	0.81	6240	0.624	0.77	0.858	17	9.0	0.53	0.662		2.34	70	0.299	0.670	0.75	54	1.389
2400	1975	0.28	2200	0.220	0.79	0.910	21	10.3	0.49	0.599		1.95	30	0.154	0.376	0.25	54	0.463
2400	2000	0.37	3750	0.375	1.01	0.856	19	10.3	0.54	0.549		2.52	50	0.198	0.184	0.75	54	1.389
2400	2025	0.35	3900	0.390	1.11	0.902	17	10.3	0.60	0.581		2.41	30	0.124	0.211	0.75	54	1.389
2400	2050	0.50	2990	0.299	0.60	0.975	18	10.5	0.58	0.606	6.8	2.11	30	0.142	0.222	0.75	52	1.442

Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%				ppm	ppm					ppm	ppm			ppm	ppm	
2400	2075	0.23	2300	0.230	1.00	0.930	18	12.4	0.69	0.622		2.06	90	0.437	0.217	0.75	40	1.875		
2400	2100	0.25	2870	0.287	1.15	0.867	20	12.3	0.62	0.616		2.41	50	0.207	0.219	1.00	68	1.471		
2400	2125	0.47	3720	0.372	0.79	0.937	39	24.3	0.62	0.637		2.29	40	0.175	0.231	2.00	80	2.500		
2400	2150	0.24	1920	0.192	0.80	0.900	28	16.0	0.57	0.622		2.25	30	0.133	0.172	1.00	54	1.852		
2400	2175	0.33	3120	0.312	0.95	0.880	44	30.3	0.69	0.665		1.98	40	0.202	0.190	0.75	42	1.786		
2400	2200	0.35	2850	0.285	0.81	0.856	44	27.0	0.61	0.625		2.10	30	0.143	0.182	0.75	48	1.563		
2400	2225	0.27	2830	0.283	1.05	0.849	24	19.9	0.83	0.587		2.01	60	0.299	0.192	1.25	68	1.838		
2400	2250	0.41	2750	0.275	0.67	0.833	45	19.0	0.42	0.573		2.25	30	0.133	0.218	0.50	66	0.758		
2400	2275	0.33	2530	0.253	0.77	0.841	36	13.8	0.38	0.574		2.16	40	0.185	0.217	0.75	50	1.500		
2400	2300	0.27	2340	0.234	0.87	0.804	29	17.9	0.62	0.543		2.12	70	0.330	0.283	1.75	72	2.431		
2400	2325	0.28	2390	0.239	0.85	0.912	29	17.9	0.62	0.618		2.15	30	0.140	0.301	0.75	46	1.630		
2400	2350	0.31	2670	0.267	0.86	0.945	35	23.6	0.67	0.701		1.76	110	0.625	0.365	1.75	100	1.750		
2400	2400	0.19	2300	0.230	1.21	0.965	18	14.4	0.80	0.707		1.76	40	0.227	0.430	0.25	36	0.694		
2400	2425	0.28	2610	0.261	0.93	0.961	38	30.2	0.79	0.716		1.39	70	0.504	0.443	1.25	48	2.604		
2400	2450	0.28	2710	0.271	0.97	1.034	34	22.1	0.65	0.747		1.37	90	0.657	0.388	1.75	72	2.431		
2400	2475	0.26	2170	0.217	0.83	0.963	24	15.9	0.66	0.706		1.49	30	0.201	0.455	1.25	94	1.330		
2400	2500	0.19	2330	0.233	1.23	0.962	24	19.9	0.83	0.672		1.72	60	0.349	0.522	0.75	38	1.974		
2400	2525	0.32	2740	0.274	0.86	0.921	41	24.3	0.59	0.673		1.78	100	0.562	0.488	1.75	88	1.989		
2400	2550	0.26	2410	0.241	0.93	0.944	27	16.9	0.62	0.692		1.43	120	0.839	0.579	1.00	64	1.563		
2400	2575	0.49	3740	0.374	0.76	0.871	54	35.5	0.66	0.652	6.8	1.63	80	0.491	0.670	5.75	268	2.146		
2400	2600	0.31	2940	0.294	0.95	0.870	41	31.1	0.76	0.700		1.07	70	0.654	0.650	2.50	96	2.604		
2400	2625	0.28	2410	0.241	0.86	0.907	30	18.8	0.63	0.716		1.62	130	0.802	0.565	1.25	114	1.096		
2400	2650	0.32	2730	0.273	0.85	0.936	35	29.3	0.84	0.696		0.65	30	0.462	0.655	14.00	70	20.000		
2400	2675	0.17	1890	0.189	1.11	0.912	19	13.3	0.70	0.676		1.69	70	0.414	0.632	1.25	32	3.906		
2400	2700	0.19	1720	0.172	0.91	0.929	26	14.6	0.56	0.700		1.38	130	0.942	0.514	1.75	134	1.306		
2400	2725	0.30	2480	0.248	0.83	0.887	44	29.0	0.66	0.633		2.22	120	0.541	0.504	1.75	88	1.989		
2400	2750	0.26	2470	0.247	0.95	0.791	26	19.4	0.74	0.582		2.37	50	0.211	0.537	1.00	46	2.174		
2400	2775	0.38	2430	0.243	0.64	0.753	41	20.6	0.50	0.594		1.22	50	0.410	0.418	2.50	108	2.315		
2400	2800	0.19	1200	0.120	0.63	0.732	30	13.4	0.45	0.572		1.20	70	0.583	0.385	1.00	86	1.163		
2400	2825	0.36	2580	0.258	0.72	0.718	45	27.8	0.62	0.541		2.32	80	0.345	0.432	1.25	64	1.953		
2400	2850	0.25	1800	0.180	0.72	0.729	29	15.9	0.55	0.550		2.39	90	0.377	0.459	1.50	52	2.885		
2400	2875	0.26	2300	0.230	0.88	0.785	25	14.8	0.59	0.603		1.80	80	0.444	0.446	18.00	66	27.273		
2400	2900	0.26	1800	0.180	0.69	0.796	31	17.0	0.55	0.606		2.20	120	0.545	0.462	1.75	48	3.646		
2400	2925	0.23	2100	0.210	0.91	0.817	31	22.0	0.71	0.641		1.92	100	0.521	0.501	1.50	62	2.419		
2400	2950	0.25	1920	0.192	0.77	0.793	29	18.4	0.63	0.642		1.90	80	0.421	0.442	2.00	60	3.333		
2400	2975	0.71	5880	0.588	0.83	0.783	64	46.3	0.72	0.633		1.75	100	0.571	0.366	16.25	160	10.156		
2400	3000	0.26	1980	0.198	0.76	0.706	35	20.8	0.59	0.545		2.00	30	0.150	0.290	1.00	42	2.381		
2400	3025	0.31	1990	0.199	0.64	0.725	30	15.1	0.50	0.558		2.43	40	0.165	0.269	0.75	40	1.875		
2400	3050	0.60	3180	0.318	0.53	0.733	81	22.0	0.27	0.541		3.50	50	0.143	0.187	1.50	70	2.143		
2400	3075	0.26	2240	0.224	0.86	0.708	28	19.6	0.70	0.539	6.5	2.21	70	0.317	0.199	1.25	70	1.786		

LINE	EAST STATIO	ICP-MS		ICP-MS		5 PT AVERAG	ICP-MS		5 PT AVERAG	PASTE pH	ICP-MS		ICP-MS		5 PT AVERAG	ICP-MS		
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Ca		ppm HA Sr	ppm HOAC Sr			ppm HOAC Fe	% HA Fe	ppm HOAC Fe	% HA Fe*100		ppm HOAC Zn	ppm HA Zn	% HA Zn*100
2400	3100	0.41	3560	0.356	0.87	0.734	42	26.7	0.64	0.544		1.89	30	0.159	0.199	1.50	62	2.419
2400	3125	0.31	1980	0.198	0.64	0.773	30	17.6	0.59	0.587		2.84	60	0.211	0.249	1.00	66	1.515
2400	3150	0.38	2940	0.294	0.77	0.753	37	19.6	0.53	0.522		3.04	50	0.164	0.229	2.25	72	3.125
2400	3175	0.73	5280	0.528	0.72	0.678	71	34.4	0.48	0.445		2.02	80	0.396	0.228	8.00	114	7.018
2400	3200	0.42	3200	0.320	0.76	0.653	43	16.0	0.37	0.392		2.32	50	0.216	0.220	1.00	46	2.174
2400	3225	0.57	2810	0.281	0.49	0.635	62	15.7	0.25	0.370		3.24	50	0.154	0.240	3.75	82	4.573
2400	3250	0.71	3630	0.363	0.51	0.586	83	26.6	0.32	0.322		2.94	50	0.170	0.199	1.00	66	1.515
2400	3275	0.98	6740	0.674	0.69	0.520	113	47.6	0.42	0.281		2.67	70	0.262	0.198	2.25	100	2.250
2400	3300	0.61	2910	0.291	0.48	0.572	72	17.7	0.25	0.342		2.57	50	0.195	0.279	3.00	64	4.688
2400	3325	0.50	2150	0.215	0.43	0.580	64	10.5	0.16	0.338		2.39	50	0.209	0.268	1.50	56	2.679
2400	3350	0.50	3780	0.378	0.76	0.549	43	24.1	0.56	0.321		1.43	80	0.559	0.254	5.25	84	6.250
2400	3375	0.63	3460	0.346	0.55	0.578	82	24.4	0.30	0.375		2.64	30	0.114	0.296	1.50	64	2.344
2400	3400	0.62	3300	0.330	0.53	0.637	69	23.2	0.34	0.442		3.07	60	0.195	0.364	2.50	74	3.378
2400	3425	0.40	2490	0.249	0.62	0.616	38	19.6	0.52	0.413		1.73	70	0.405	0.344	4.00	148	2.703
2400	3450	0.45	3260	0.326	0.72	0.653	40	20.0	0.50	0.448		1.65	90	0.545	0.376	6.75	142	4.754
2400	3475	0.40	2600	0.260	0.65	0.679	51	21.3	0.42	0.490		2.16	100	0.463	0.377	1.00	58	1.724
2400	3500	0.34	2510	0.251	0.74	0.693	37	17.5	0.47	0.494		2.20	60	0.273	0.393	0.75	50	1.500
2400	3525	0.37	2440	0.244	0.66	0.704	38	20.8	0.55	0.516		2.02	40	0.198	0.320	1.75	78	2.244
2400	3550	0.30	2080	0.208	0.69	0.723	46	24.7	0.54	0.553		2.05	100	0.488	0.274	3.75	178	2.107
2400	3575	0.30	2340	0.234	0.78		38	23.1	0.61		7.1	1.67	30	0.180		2.00	84	2.381
2400	3600	0.50	3710	0.371	0.74		42	25.2	0.60			2.16	50	0.231		3.00	68	4.412
2800	100	0.28	2530	0.253	0.90		19	10.2	0.54			2.74	20	0.073		0.50	56	0.893
2800	125	0.41	3090	0.309	0.75		21	11.7	0.55			2.57	50	0.195		0.25	68	0.368
2800	150	7.28	59600	5.960	0.82	0.805	119	97.6	0.82	0.663		1.80	270	1.500	0.724	0.75	44	1.705
2800	175	7.09	63800	6.380	0.90	0.780	106	96.7	0.91	0.647		1.91	300	1.571	0.717	1.00	42	2.381
2800	200	0.45	2930	0.293	0.65	0.775	17	8.4	0.49	0.638		2.49	70	0.281	0.723	0.25	50	0.500
2800	225	0.31	2410	0.241	0.78	0.793	15	6.9	0.46	0.649		2.62	10	0.038	0.768	0.10	50	0.200
2800	250	0.90	6570	0.657	0.73	0.766	26	13.3	0.51	0.608		2.23	50	0.224	0.597	0.10	46	0.217
2800	275	6.78	61500	6.150	0.91	0.780	101	88.1	0.87	0.643		1.74	300	1.724	0.664	0.75	42	1.786
2800	300	3.71	28400	2.840	0.77	0.779	58	41.0	0.71	0.701		2.09	150	0.718	0.934	0.75	44	1.705
2800	325	3.73	26900	2.690	0.72	0.774	60	40.1	0.67	0.734		2.11	130	0.616	1.476	0.75	48	1.563
2800	350	6.36	49000	4.900	0.77	0.754	92	68.8	0.75	0.706		1.73	240	1.387	1.315	1.00	42	2.381
2800	375	12.15	85700	8.570	0.71	0.780	240	162.5	0.68	0.751		1.33	390	2.932	1.622	1.00	30	3.333
2800	400	3.56	28800	2.880	0.81	0.801	44	32.1	0.73	0.782		1.74	160	0.920	1.712	0.10	40	0.250
2800	425	7.28	65200	6.520	0.90	0.805	112	104.5	0.93	0.798		1.42	320	2.254	1.696	1.25	36	3.472
2800	450	5.07	41900	4.190	0.83	0.831	100	82.1	0.82	0.809		1.69	180	1.065	1.290	0.75	40	1.875
2800	475	6.58	51900	5.190	0.79	0.794	103	85.4	0.83	0.759		1.91	250	1.309	1.150	0.75	46	1.630
2800	500	4.79	40100	4.010	0.84	0.776	85	62.3	0.73	0.742		1.88	170	0.904	0.952	0.75	50	1.500
2800	525	1.35	8410	0.841	0.62	0.787	36	17.3	0.48	0.746		2.29	50	0.218	1.232	0.10	58	0.172
2800	550	5.48	44100	4.410	0.80	0.774	87	73.8	0.85	0.741	8.1	1.58	200	1.266	1.209	0.75	42	1.786

Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	HOAC CA	5 PT AVERAG	ppm HA Sr	ppm HOAC Sr	HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	% HA Fe	ppm HOAC Fe	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm HOAC Zn	ppm HA Zn	
2800	575	8.12	71500	7.150	0.88	0.744	133	111.5	0.84	0.730		1.38	340	2.464	1.185	0.75	34	2.206
2800	600	5.21	37700	3.770	0.72	0.776	75	60.3	0.80	0.789		1.51	180	1.192	1.410	0.50	40	1.250
2800	625	4.83	33300	3.330	0.69	0.754	81	55.1	0.68	0.779		1.78	140	0.787	1.421	1.00	48	2.083
2800	650	6.41	50200	5.020	0.78	0.738	111	86.2	0.78	0.750		1.64	220	1.341	1.047	0.75	42	1.786
2800	675	6.56	45600	4.560	0.70	0.746	121	96.1	0.79	0.735		1.74	230	1.322	1.093	0.75	44	1.705
2800	700	2.94	23500	2.350	0.80	0.709	51	35.4	0.69	0.712		2.02	120	0.594	0.987	1.00	54	1.852
2800	725	7.29	55700	5.570	0.76	0.696	134	97.6	0.73	0.708		1.69	240	1.420	0.939	0.75	44	1.705
2800	750	1.83	9240	0.924	0.50	0.664	43	24.3	0.57	0.673		2.35	60	0.255	0.746	0.10	56	0.179
2800	775	5.82	41700	4.170	0.72	0.665	99	75.2	0.76	0.689		1.90	210	1.105	0.895	0.25	50	0.500
2800	800	2.77	14830	1.483	0.54	0.674	59	36.4	0.62	0.701		2.24	80	0.357	0.778	0.10	54	0.185
2800	825	7.07	56900	5.690	0.80	0.744	130	101.0	0.78	0.742		1.87	250	1.337	0.899	1.50	48	3.125
2800	850	4.88	39400	3.940	0.81	0.765	83	65.2	0.79	0.749		1.92	160	0.833	1.051	0.75	52	1.442
2800	875	4.53	38800	3.880	0.86	0.792	84	64.7	0.77	0.774		1.97	170	0.863	1.157	0.50	52	0.962
2800	900	8.27	67900	6.790	0.82	0.761	164	130.5	0.80	0.766		1.77	330	1.864	1.018	1.00	44	2.273
2800	925	5.84	39100	3.910	0.67	0.746	97	72.0	0.74	0.726		2.03	180	0.887	1.001	0.50	54	0.926
2800	950	4.21	27300	2.730	0.65	0.756	77	56.5	0.73	0.753		2.18	140	0.642	1.271	0.75	52	1.442
2800	975	3.42	25200	2.520	0.74	0.681	72	42.3	0.59	0.661		2.01	150	0.746	0.918	5.75	70	8.214
2800	1000	8.35	75700	7.570	0.91	0.700	142	128.5	0.90	0.662		1.76	390	2.216	0.977	1.00	42	2.381
2800	1025	0.79	3490	0.349	0.44	0.729	28	9.5	0.34	0.659		5.16	50	0.097	1.121	0.25	78	0.321
2800	1050	6.18	47500	4.750	0.77	0.710	109	81.2	0.74	0.625	8	1.86	220	1.183	0.995	0.25	48	0.521
2800	1075	6.95	54900	5.490	0.79	0.719	114	82.0	0.72	0.604		1.76	240	1.364	1.024	1.25	46	2.717
2800	1100	0.44	2830	0.283	0.64	0.801	24	10.0	0.42	0.692		2.64	30	0.114	1.278	0.25	64	0.391
2800	1125	9.72	92400	9.240	0.95	0.804	115	92.4	0.80	0.678		1.65	390	2.364	1.124	0.50	38	1.316
2800	1150	6.44	54800	5.480	0.85	0.820	100	77.8	0.78	0.680		1.83	250	1.366	0.997	0.25	44	0.568
2800	1175	1.91	15040	1.504	0.79	0.849	42	28.2	0.67	0.703		2.17	90	0.415	1.058	0.10	54	0.185
2800	1200	3.48	30200	3.020	0.87	0.760	60	43.7	0.73	0.634		2.06	150	0.728	0.622	0.25	50	0.500
2800	1225	0.40	3160	0.316	0.79	0.711	23	12.3	0.53	0.558		2.41	100	0.415	0.408	0.50	96	0.521
2800	1250	0.49	2480	0.248	0.51	0.696	24	11.0	0.46	0.526		2.71	50	0.185	0.351	0.25	60	0.417
2800	1275	0.37	2230	0.223	0.60	0.665	30	12.0	0.40	0.479		2.35	70	0.298	0.248	0.25	56	0.446
2800	1300	0.35	2500	0.250	0.71	0.659	27	13.9	0.51	0.490		2.34	30	0.128	0.294	0.50	58	0.862
2800	1325	0.48	3420	0.342	0.71	0.730	23	11.4	0.49	0.544		2.82	60	0.213	0.541	0.50	54	0.926
2800	1350	2.66	20200	2.020	0.76	0.730	37	21.8	0.59	0.564		2.16	140	0.648	0.605	0.75	54	1.389
2800	1375	6.39	54900	5.490	0.86	0.715	79	57.5	0.73	0.577		1.62	230	1.420	0.723	0.25	48	0.521
2800	1400	4.40	26700	2.670	0.61	0.713	61	30.3	0.50	0.619		1.79	110	0.615	0.818	0.10	54	0.185
2800	1425	4.69	29900	2.990	0.64	0.702	62	35.9	0.58	0.635		1.81	130	0.718	0.865	1.00	56	1.786
2800	1450	4.29	30100	3.010	0.70	0.708	67	46.9	0.70	0.659		1.89	130	0.688	0.808	0.50	52	0.962
2800	1475	5.19	36700	3.670	0.71	0.736	80	53.6	0.67	0.688		1.92	170	0.885	0.805	0.25	54	0.463
2800	1500	5.77	51300	5.130	0.89	0.749	97	82.4	0.85	0.685		1.85	210	1.135	0.735	0.25	52	0.481
2800	1525	3.73	27800	2.780	0.75	0.732	60	38.5	0.64	0.641		2.00	120	0.600	0.682	1.00	58	1.724
2800	1550	2.87	20200	2.020	0.70	0.742	42	23.6	0.56	0.638	8.1	2.19	80	0.365	0.639	0.25	62	0.403

## Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	% HA	ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS			PASTE pH	% HA Fe	ICP-MS		ICP-MS				
			ppm HOAC Ca	% HOAC Ca			ppm HA Sr	ppm HOAC Sr	HOAC SR/ HA SR			ppm HOAC Fe	HOAC Fe/ HA Fe*100	ppm HOAC Zn	ppm HA Zn	HOAC Zn/ HA Zn*100		
2800	1575	3.65	22400	2.240	0.61	0.725	54	26.1	0.48	0.582		2.13	90	0.423	0.557	0.25	60	0.417
2800	1600	3.87	29300	2.930	0.76	0.710	60	39.2	0.65	0.536		1.94	130	0.670	0.530	0.25	52	0.481
2800	1625	2.59	20800	2.080	0.80	0.708	40	22.8	0.57	0.516		2.07	150	0.725	0.501	0.25	50	0.500
2800	1650	0.44	2950	0.295	0.67	0.756	26	10.7	0.41	0.521		2.36	110	0.466	0.446	0.10	56	0.179
2800	1675	0.46	3210	0.321	0.70	0.756	26	12.1	0.46	0.521		2.28	50	0.219	0.471	0.75	60	1.250
2800	1700	0.29	2470	0.247	0.85	0.763	22	11.2	0.51	0.511		1.98	30	0.152	0.351	0.10	48	0.208
2800	1725	3.88	29400	2.940	0.76	0.781	36	23.5	0.65	0.547		1.77	140	0.791	0.304	0.50	42	1.190
2800	1750	0.28	2350	0.235	0.84	0.766	18	9.4	0.52	0.577		2.39	30	0.126	0.297	0.25	54	0.463
2800	1775	0.98	7450	0.745	0.76	0.744	19	11.2	0.59	0.598		2.14	50	0.234	0.296	1.00	54	1.852
2800	1800	0.60	3720	0.372	0.62	0.727	26	16.0	0.62	0.543		2.21	40	0.181	0.174	2.75	82	3.354
2800	1825	0.33	2450	0.245	0.74	0.719	18	11.1	0.61	0.535		2.03	30	0.148	0.185	1.25	44	2.841
2800	1850	0.39	2630	0.263	0.67	0.717	20	7.5	0.38	0.506		2.20	40	0.182	0.187	0.25	56	0.446
2800	1875	0.24	1920	0.192	0.80	0.752	21	10.2	0.48	0.488		2.24	40	0.179	0.249	0.10	48	0.208
2800	1900	0.33	2470	0.247	0.75	0.774	17	7.6	0.44	0.503		2.43	60	0.247	0.368	0.75	60	1.250
2800	1925	0.18	1430	0.143	0.79	0.752	11	5.8	0.52	0.515		2.04	100	0.490	0.358	1.00	56	1.786
2800	1950	3.82	32600	3.260	0.85	0.735	33	22.8	0.69	0.483		2.02	150	0.743	0.338	0.10	42	0.238
2800	1975	0.54	3040	0.304	0.56	0.690	21	9.1	0.43	0.451		2.30	30	0.130	0.362	1.00	64	1.563
2800	2000	0.26	1860	0.186	0.72	0.667	16	5.2	0.32	0.436		2.55	20	0.078	0.297	0.50	62	0.806
2800	2025	0.36	1890	0.189	0.53	0.639	17	4.9	0.29	0.402		2.17	80	0.369	0.225	4.00	48	8.333
2800	2050	0.32	2170	0.217	0.68	0.670	17	7.7	0.45	0.419	5.3	2.43	40	0.165	0.279	0.50	60	0.833
2800	2075	0.22	1570	0.157	0.71	0.675	19	9.9	0.52	0.478		1.82	70	0.385	0.363	4.00	102	3.922
2800	2100	0.25	1790	0.179	0.72	0.673	17	8.8	0.51	0.508		1.76	70	0.398	0.439	2.25	76	2.961
2800	2125	0.29	2150	0.215	0.74	0.683	28	17.4	0.62	0.534		1.61	80	0.497	0.538	2.25	118	1.907
2800	2150	0.14	720	0.072	0.51	0.661	12	5.2	0.43	0.531		1.73	130	0.751	0.556	2.50	28	8.929
2800	2175	0.29	2120	0.212	0.73	0.644	36	20.8	0.58	0.537		1.36	90	0.662	0.546	4.75	130	3.654
2800	2200	0.24	1440	0.144	0.60	0.638	32	16.3	0.51	0.537		2.11	100	0.474	0.576	0.75	60	1.250
2800	2225	0.34	2150	0.215	0.63	0.697	33	18.0	0.55	0.586		1.45	50	0.345	0.600	0.25	48	0.521
2800	2250	0.19	1350	0.135	0.71	0.693	31	19.3	0.62	0.598		1.70	110	0.647	0.553	0.75	58	1.293
2800	2275	0.32	2600	0.260	0.81	0.739	48	32.6	0.68	0.641		1.72	150	0.872	0.546	0.75	82	0.915
2800	2300	0.25	1780	0.178	0.71	0.744	32	20.3	0.63	0.644		1.63	70	0.429	0.566	1.25	60	2.083
2800	2325	0.18	1490	0.149	0.83	0.731	17	12.3	0.72	0.631		1.61	70	0.435	0.481	0.25	24	1.042
2800	2350	0.29	1910	0.191	0.66	0.730	45	25.2	0.56	0.642		1.57	70	0.446	0.382	0.25	66	0.379
2800	2375	0.33	2120	0.212	0.64	0.738	41	22.8	0.56	0.641		1.80	40	0.222	0.398	2.50	50	5.000
2800	2425	0.42	3390	0.339	0.81	0.730	51	37.5	0.74	0.615		1.59	60	0.377	0.480	3.25	74	4.392
2800	2450	0.43	3240	0.324	0.75	0.736	69	43.5	0.63	0.616		1.18	60	0.508	0.430	9.25	102	9.069
2800	2500	0.33	2600	0.260	0.79	0.741	36	21.3	0.59	0.615		1.18	100	0.847	0.468	2.75	86	3.198
2800	2525	0.23	1580	0.158	0.69	0.696	31	17.6	0.57	0.559		1.55	30	0.194	0.534	1.25	38	3.289
2800	2550	0.25	1670	0.167	0.67	0.659	35	19.3	0.55	0.539		1.93	80	0.415	0.490	0.10	56	0.179
2800	2575	0.16	930	0.093	0.58	0.621	22	10.1	0.46	0.508		1.56	110	0.705	0.390	0.10	42	0.238
2800	2600	0.41	2350	0.235	0.57	0.600	43	22.8	0.53	0.509	6.4	3.45	100	0.290	0.414	1.50	84	1.786

SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC	5 PT AVERAG	ICP-MS		5 PT AVERAG	PASTE pH	ICP-MS		5 PT AVERAG	ICP-MS		ppm HA Zn	HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Sr			ppm HOAC Sr	ppm HOAC Sr			% HA Fe	ppm HOAC Fe		% HOAC Fe/100	ppm HOAC Zn		
2800	2625	0.38	2270	0.227	0.60	0.598	50	21.8	0.44	0.520		1.73	60	0.347	0.431	1.75	50	3.500
2800	2650	0.17	990	0.099	0.58	0.634	23	13.2	0.57	0.554		1.91	60	0.314	0.369	0.10	28	0.357
2800	2675	0.31	2030	0.203	0.65	0.652	38	22.9	0.60	0.560		2.01	100	0.498	0.440	1.75	128	1.367
2800	2700	0.28	2130	0.213	0.76	0.695	35	22.1	0.63	0.620		1.51	60	0.397	0.405	1.00	66	1.515
2800	2725	0.27	1790	0.179	0.66	0.732	32	17.8	0.56	0.627		1.86	120	0.645	0.474	1.75	100	1.750
2800	2775	0.34	2760	0.276	0.81	0.757	38	28.0	0.74	0.639		2.90	50	0.172	0.586	2.25	58	3.879
2800	2800	0.28	2150	0.215	0.77	0.734	35	21.3	0.61	0.615		1.37	90	0.657	0.613	1.50	52	2.885
2800	2825	0.28	2190	0.219	0.78	0.741	35	23.2	0.66	0.620		1.51	160	1.060	0.586	1.50	98	1.531
2800	2850	0.28	1800	0.180	0.64	0.733	35	17.9	0.51	0.598		2.08	110	0.529	0.608	0.10	62	0.161
2800	2875	0.42	2940	0.294	0.70	0.712	40	23.3	0.58	0.599		1.56	80	0.513	0.611	1.00	84	1.190
2800	2900	0.28	2160	0.216	0.77	0.709	38	23.7	0.62	0.597		2.12	60	0.283	0.486	0.25	54	0.463
2800	2925	0.31	2050	0.205	0.66	0.744	55	33.9	0.62	0.615		1.34	90	0.672	0.457	0.75	58	1.293
2800	2950	0.42	3240	0.324	0.77	0.736	45	29.4	0.65	0.613		1.84	80	0.435	0.445	6.75	64	10.547
2800	2975	0.29	2370	0.237	0.82	0.746	38	22.7	0.60	0.624		1.56	60	0.385	0.475	6.00	92	6.522
2800	3025	0.34	2240	0.224	0.66	0.749	49	28.1	0.57	0.623		1.77	80	0.452	0.379	0.25	98	0.255
2800	3075	0.73	6010	0.601	0.82	0.710	114	77.7	0.68	0.602		1.62	70	0.432	0.352	6.25	136	4.596
2800	3100	0.64	4310	0.431	0.67	0.643	84	51.0	0.61	0.576		2.10	40	0.190	0.293	13.50	244	5.533
2800	3125	0.49	2840	0.284	0.58	0.654	46	25.3	0.55	0.597		3.68	110	0.299	0.326	2.25	104	2.163
2800	3175	0.73	3500	0.350	0.48	0.644	41	19.1	0.47	0.590		5.39	50	0.093	0.343	0.25	54	0.463
2800	3250	0.41	2920	0.292	0.71	0.626	52	35.3	0.68	0.732	6.3	1.95	120	0.615	0.394	0.25	64	0.391
2800	3275	0.45	3480	0.348	0.77	0.632	50	32.3	0.65	0.733		2.71	140	0.517	0.364	1.50	82	1.829
2800	3325	0.24	1400	0.140	0.58	0.682	28	36.9	1.32	0.755		1.80	80	0.444	0.401	1.50	68	2.206
2800	3350	0.54	3310	0.331	0.61	0.704	57	31.6	0.55	0.752		5.39	80	0.148	0.350	2.25	156	1.442
2800	3375	0.37	2700	0.270	0.73	0.681	37	21.4	0.58	0.750		1.78	50	0.281	0.324	1.00	44	2.273
2800	3400	0.33	2710	0.271	0.82	0.720	37	24.6	0.66	0.622		1.96	70	0.357	0.300	1.75	68	2.574
2800	3425	0.30	1980	0.198	0.66	0.723	31	19.7	0.64	0.619		2.31	90	0.390	0.315	0.75	36	2.083
2800	3450	0.31	2410	0.241	0.78	0.709	41	27.7	0.68	0.615		1.54	50	0.325	0.298	19.00	64	29.688
2800	3475	0.34	2130	0.213	0.63	0.694	37	20.0	0.54	0.608		2.69	60	0.223	0.345	0.50	54	0.926
2800	3500	0.26	1720	0.172	0.66	0.731	38	21.3	0.56	0.627		2.02	40	0.198	0.370	0.25	48	0.521
2800	3525	0.28	2090	0.209	0.75	0.709	39	24.5	0.63	0.620		1.70	100	0.588	0.470	1.25	64	1.953
2800	3550	0.17	1430	0.143	0.84	0.769	20	14.7	0.73	0.677		1.16	60	0.517	0.479	1.25	28	4.464
2800	3575	0.14	940	0.094	0.67		29	18.6	0.64			1.46	120	0.822		1.00	48	2.083
2800	3600	0.24	2220	0.222	0.93		32	26.4	0.83			1.11	30	0.270		2.25	52	4.327
3225	100	0.70	5420	0.542	0.77		21	11.1	0.53			2.10	60	0.286		0.25	54	0.463
3225	125	0.30	1880	0.188	0.63		19	6.3	0.33			2.21	40	0.181		0.10	64	0.156
3225	150	1.76	11900	1.190	0.68	0.764	33	23.3	0.71	0.631		2.14	90	0.421	0.631	0.10	50	0.200
3225	175	1.03	9420	0.942	0.91	0.782	29	22.8	0.79	0.651		2.48	60	0.242	0.658	0.50	54	0.926
3225	200	8.22	68000	6.800	0.83	0.807	122	98.3	0.81	0.738		1.58	320	2.025	0.965	0.50	36	1.389
3225	225	1.30	11270	1.127	0.87	0.811	24	15.1	0.63	0.671		2.13	90	0.423	0.908	0.10	50	0.200
3225	250	7.06	53000	5.300	0.75	0.799	112	85.5	0.76	0.667		1.46	250	1.712	0.976	0.50	30	1.667

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SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	ICP-MS		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm Ca	% HOAC Ca	ppm Ca			ppm Sr	ppm Sr				% HA Fe	ppm Fe			ppm Zn	ppm Zn	
3225	275	0.23	1600	0.160	0.70	0.797	11	4.1	0.37	0.643		2.18	30	0.138	0.689	0.10	44	0.227	
3225	300	2.01	17180	1.718	0.85	0.801	37	28.3	0.76	0.688		2.07	120	0.580	0.855	0.25	42	0.595	
3225	325	2.58	21100	2.110	0.82	0.811	36	24.6	0.68	0.694		1.85	110	0.595	0.724	0.10	42	0.238	
3225	350	4.90	43400	4.340	0.89	0.835	68	58.1	0.85	0.774		1.68	210	1.250	0.977	0.25	36	0.694	
3225	375	4.93	39500	3.950	0.80	0.847	73	57.9	0.79	0.781		1.70	180	1.059	1.074	1.00	40	2.500	
3225	400	6.73	54800	5.480	0.81	0.865	95	73.4	0.77	0.770		1.64	230	1.402	1.002	0.25	36	0.694	
3225	425	4.56	41700	4.170	0.91	0.828	51	40.8	0.80	0.703		1.88	200	1.064	0.807	0.10	42	0.238	
3225	450	1.51	13700	1.370	0.91	0.839	21	13.2	0.63	0.655		2.54	60	0.236	0.681	0.10	58	0.172	
3225	475	1.22	8550	0.855	0.70	0.850	23	12.0	0.52	0.631		2.56	70	0.273	0.480	1.75	60	2.917	
3225	500	1.82	15630	1.563	0.86	0.836	27	14.9	0.55	0.615		2.34	100	0.427	0.438	0.10	54	0.185	
3225	525	2.69	23300	2.330	0.87	0.803	37	24.1	0.65	0.631		2.26	90	0.398	0.534	0.50	60	0.833	
3225	550	5.13	43500	4.350	0.85	0.802	76	55.0	0.72	0.618	8.2	1.87	160	0.856	0.526	0.25	46	0.543	
3225	575	4.05	30000	3.000	0.74	0.797	60	42.3	0.71	0.668		2.09	150	0.718	0.829	0.25	46	0.543	
3225	600	0.70	4890	0.489	0.70	0.776	19	8.8	0.46	0.660		3.04	70	0.230	0.801	0.10	62	0.161	
3225	625	10.75	89400	8.940	0.83	0.707	147	117.5	0.80	0.619		1.70	330	1.941	0.645	0.75	36	2.083	
3225	650	1.29	9830	0.983	0.76	0.701	28	17.2	0.61	0.587		2.68	70	0.261	0.554	0.10	56	0.179	
3225	675	0.50	2500	0.250	0.50	0.701	15	7.8	0.52	0.633		2.72	20	0.074	0.736	0.10	52	0.192	
3225	700	1.03	7320	0.732	0.71	0.690	22	12.1	0.55	0.626		2.65	70	0.264	0.681	0.10	64	0.156	
3225	725	7.60	53100	5.310	0.70	0.678	109	75.3	0.69	0.641		1.93	220	1.140	0.769	1.25	44	2.841	
3225	750	10.40	81000	8.100	0.78	0.742	169	128.5	0.76	0.695		1.80	300	1.667	0.919	0.25	40	0.625	
3225	775	4.89	34300	3.430	0.70	0.731	72	49.6	0.69	0.678		2.14	150	0.701	0.908	0.25	50	0.500	
3225	800	5.87	48300	4.830	0.82	0.773	113	88.8	0.79	0.725		2.06	170	0.825	0.925	0.25	46	0.543	
3225	825	0.59	3840	0.384	0.65	0.739	25	11.6	0.46	0.663		2.44	50	0.205	0.625	0.10	56	0.179	
3225	850	6.99	63800	6.380	0.91	0.772	174	161.5	0.93	0.705		1.79	220	1.229	0.859	1.25	54	2.315	
3225	875	0.45	2730	0.273	0.61	0.758	24	10.9	0.45	0.678		2.40	40	0.167	0.749	1.00	66	1.515	
3225	900	10.65	92100	9.210	0.86	0.777	298	268.0	0.90	0.697		1.50	280	1.867	0.824	1.25	36	3.472	
3225	925	1.61	12120	1.212	0.75	0.712	34	22.1	0.65	0.634		2.52	70	0.278	0.661	0.25	52	0.481	
3225	950	3.35	25000	2.500	0.75	0.719	40	22.3	0.56	0.692		2.58	150	0.581	0.744	0.25	62	0.403	
3225	975	4.34	25500	2.550	0.59	0.656	67	40.8	0.61	0.647		2.42	100	0.413	0.456	0.10	58	0.172	
3225	1000	4.76	30700	3.070	0.64	0.663	79	58.8	0.74	0.668		2.23	130	0.583	0.573	0.50	56	0.893	
3225	1025	4.32	23700	2.370	0.55	0.654	76	51.3	0.68	0.687		2.35	100	0.426	0.595	0.10	56	0.179	
3225	1050	6.33	49900	4.990	0.79	0.680	88	66.5	0.76	0.693	8.1	2.09	180	0.861	0.673	0.25	54	0.463	
3225	1075	5.24	36800	3.680	0.70	0.721	72	46.9	0.65	0.708		1.88	130	0.691	0.954	0.10	52	0.192	
3225	1100	5.76	41200	4.120	0.72	0.739	86	54.9	0.64	0.713		1.99	160	0.804	0.989	0.25	54	0.463	
3225	1125	10.40	88400	8.840	0.85	0.740	184	150.5	0.82	0.713		1.76	350	1.989	1.093	0.25	42	0.595	
3225	1150	5.67	36200	3.620	0.64	0.736	89	62.6	0.70	0.719		2.16	130	0.602	1.097	0.25	54	0.463	
3225	1175	8.14	64500	6.450	0.79	0.745	134	101.0	0.75	0.738		1.81	250	1.381	1.121	0.75	44	1.705	
3225	1200	5.85	40000	4.000	0.68	0.700	78	53.1	0.68	0.689		1.97	140	0.711	0.824	0.25	54	0.463	
3225	1225	6.75	51200	5.120	0.76	0.692	151	111.0	0.74	0.660		1.84	170	0.924	0.792	0.50	54	0.926	
3225	1250	5.00	31400	3.140	0.63	0.643	69	39.5	0.57	0.624		2.00	100	0.500	0.611	0.75	56	1.339	

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SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC	5 PT AVERAG	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	ICP-MS		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Ca			ppm HOAC Sr	ppm HOAC Sr				ppm HOAC Fe	ppm HOAC Fe			ppm HOAC Zn	ppm HOAC Zn	
3225	1275	4.34	25900	2.590	0.60	0.658	59	32.9	0.56	0.646			2.03	90	0.443	0.739	0.10	56	0.179
3225	1300	4.47	24500	2.450	0.55	0.659	69	39.5	0.57	0.653			2.10	100	0.476	0.790	0.10	54	0.185
3225	1325	7.64	58100	5.810	0.76	0.666	112	89.0	0.79	0.663			1.70	230	1.353	0.836	0.10	40	0.250
3225	1350	7.22	55000	5.500	0.76	0.690	103	79.1	0.77	0.699			1.87	220	1.176	0.941	0.10	46	0.217
3225	1375	5.67	37700	3.770	0.66	0.727	77	47.8	0.62	0.731			1.92	140	0.729	1.049	0.10	50	0.200
3225	1400	6.42	46000	4.600	0.72	0.730	91	67.2	0.74	0.717			1.75	170	0.971	0.993	0.10	44	0.227
3225	1425	6.22	45600	4.560	0.73	0.698	86	62.9	0.73	0.700			1.77	180	1.017	0.957	0.25	46	0.543
3225	1448	7.23	56000	5.600	0.77	0.698	91	66.3	0.73	0.679			1.68	180	1.071	0.918	0.10	42	0.238
3200	1475	5.94	35700	3.570	0.60	0.695	90	61.3	0.68	0.643			2.01	200	0.995	0.853	0.10	48	0.208
3200	1500	3.42	22700	2.270	0.66	0.686	45	23.1	0.51	0.628			2.24	120	0.536	0.834	0.10	54	0.185
3200	1525	3.45	24300	2.430	0.70	0.658	46	25.7	0.56	0.563			2.33	150	0.644	0.691	0.10	58	0.172
3200	1550	5.38	36800	3.680	0.68	0.638	68	44.6	0.66	0.500			2.06	190	0.922	0.529	0.25	52	0.481
3200	1575	1.20	7660	0.766	0.64	0.638	32	13.0	0.40	0.516			2.51	90	0.359	0.537	0.10	60	0.167
3200	1600	0.37	1850	0.185	0.50	0.607	24	8.8	0.37	0.483			2.71	50	0.185	0.431	0.10	62	0.161
3200	1625	3.10	20600	2.060	0.66	0.581	41	24.4	0.60	0.426			2.43	140	0.576	0.276	0.10	52	0.192
3200	1650	0.42	2300	0.230	0.55	0.587	24	9.4	0.39	0.435			2.66	30	0.113	0.231	0.10	56	0.179
3200	1675	0.29	1610	0.161	0.56	0.618	21	7.9	0.37	0.457			2.72	40	0.147	0.223	0.10	72	0.139
3200	1700	0.35	2330	0.233	0.67	0.620	17	7.7	0.45	0.429			2.92	40	0.137	0.137	0.10	58	0.172
3200	1725	0.49	3210	0.321	0.66	0.653	18	8.6	0.48	0.457			2.82	40	0.142	0.138	0.50	68	0.735
3200	1750	0.43	2910	0.291	0.68	0.694	16	7.3	0.46	0.471			2.69	40	0.149	0.147	0.75	64	1.172
3200	1775	0.35	2500	0.250	0.71	0.698	20	10.6	0.53	0.476			2.55	30	0.118	0.165	1.00	78	1.282
3200	1800	0.31	2350	0.235	0.76	0.683	20	8.9	0.45	0.485			2.65	50	0.189	0.191	1.00	70	1.429
3200	1825	0.42	2870	0.287	0.68	0.668	31	14.8	0.48	0.481			2.19	50	0.228	0.211	5.00	86	5.814
3200	1850	0.64	3730	0.373	0.58	0.661	30	15.6	0.52	0.465			1.85	50	0.270	0.231	5.00	98	5.102
3200	1875	0.35	2100	0.210	0.60	0.636	27	11.8	0.44	0.475			1.98	50	0.253	0.254	1.50	66	2.273
3200	1900	0.33	2250	0.225	0.68	0.632	29	12.9	0.44	0.496			2.35	50	0.213	0.269	3.25	120	2.708
3200	1925	0.43	2720	0.272	0.63	0.660	53	26.3	0.50	0.511	5.9		2.29	70	0.306	0.243	4.00	124	3.226
3200	1950	0.35	2320	0.232	0.66	0.677	28	16.4	0.59	0.553			1.97	60	0.305	0.324	0.25	78	0.321
3200	1975	0.29	2100	0.210	0.72	0.669	24	14.2	0.59	0.569			1.46	20	0.137	0.346	3.00	44	6.818
3200	2000	0.41	2810	0.281	0.69	0.693	33	21.4	0.65	0.583			1.52	100	0.658	0.325	12.75	174	7.328
3200	2025	0.28	1790	0.179	0.64	0.704	32	16.8	0.53	0.590			1.86	60	0.323	0.333	1.00	64	1.563
3200	2050	0.28	2110	0.211	0.75	0.699	30	17.1	0.57	0.601			1.95	40	0.205	0.441	1.50	60	2.500
3200	2075	0.36	2580	0.258	0.72	0.735	44	27.3	0.62	0.604			1.47	50	0.340	0.356	2.75	86	3.198
3200	2125	0.41	2880	0.288	0.70	0.756	46	29.5	0.64	0.629			1.18	80	0.678	0.354	3.25	102	3.186
3200	2150	0.26	2240	0.224	0.86	0.730	25	16.7	0.67	0.622			1.72	40	0.233	0.374	1.25	54	2.315
3200	2175	0.39	2900	0.290	0.74	0.718	37	24.1	0.65	0.614			1.58	50	0.316	0.449	2.00	66	3.030
3200	2200	0.50	3120	0.312	0.62	0.715	46	24.4	0.53	0.618			1.65	50	0.303	0.392	12.50	202	6.188
3200	2225	0.33	2180	0.218	0.66	0.675	42	24.3	0.58	0.606			1.40	100	0.714	0.462	2.75	92	2.989
3200	2250	0.35	2390	0.239	0.68	0.654	43	28.6	0.67	0.595			1.77	70	0.395	0.469	5.25	88	5.966
3200	2275	0.37	2450	0.245	0.66	0.674	50	30.3	0.61	0.622			1.89	110	0.582	0.462	3.25	98	3.316



Paul-Mike Soil Geochemistry

LINE	SOUTH EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		HOAC SR/	5 PT	PASTE	%	ICP-MS		5 PT	ICP-MS		HOAC Zn/
			HA Ca	HOAC Ca				HOAC Sr	HA Sr					HOAC Fe	HOAC Fe*		HOAC Zn	HA Zn	
3200	2300	0.34	2180	0.218	0.64	0.689	40	23.8	0.60	0.640			1.99	70	0.352	0.422	1.50	108	1.389
3200	2325	0.26	1880	0.188	0.72	0.688	27	17.9	0.66	0.623			1.88	50	0.266	0.461	1.25	40	3.125
3200	2350	0.39	2860	0.286	0.73	0.694	39	26.2	0.67	0.623			1.75	90	0.514	0.433	2.75	106	2.594
3200	2375	0.28	1900	0.190	0.68	0.691	33	19.1	0.58	0.615			1.86	110	0.591	0.465	1.75	92	1.902
3200	2400	0.44	3050	0.305	0.69	0.687	50	30.3	0.61	0.617			1.58	70	0.443	0.464	5.75	80	7.188
3200	2425	0.23	1440	0.144	0.63	0.681	33	18.4	0.56	0.619			1.77	90	0.508	0.444	2.50	74	3.378
3200	2450	0.17	1200	0.120	0.71	0.703	22	14.8	0.67	0.628			2.28	60	0.263	0.495	0.10	54	0.185
3200	2475	0.21	1470	0.147	0.70	0.688	30	20.5	0.68	0.615	6.5		1.70	70	0.412	0.489	0.50	38	1.316
3200	2500	0.35	2770	0.277	0.79	0.695	38	23.7	0.62	0.610			1.53	130	0.850	0.417	0.50	76	0.658
3200	2525	0.22	1360	0.136	0.62	0.661	29	15.7	0.54	0.573			1.46	60	0.411	0.391	0.50	62	0.806
3200	2550	0.31	2040	0.204	0.66	0.630	34	18.0	0.53	0.538			2.02	30	0.149	0.359	0.75	52	1.442
3200	2575	0.33	1780	0.178	0.54	0.602	29	14.1	0.49	0.534			3.71	50	0.135	0.241	2.25	60	3.750
3200	2600	0.32	1740	0.174	0.54	0.581	34	17.5	0.51	0.507			2.79	70	0.251	0.398	0.25	54	0.463
3200	2650	0.64	4150	0.415	0.65	0.567	54	32.6	0.60	0.526			2.33	60	0.258	0.416	5.25	104	5.048
3200	2675	0.23	1190	0.119	0.52	0.584	23	9.3	0.40	0.537			1.67	200	1.198	0.461	0.25	90	0.278
3200	2700	0.41	2400	0.240	0.59	0.613	32	19.9	0.62	0.551			2.92	70	0.240	0.446	2.50	66	3.788
3200	2725	0.44	2750	0.275	0.63	0.610	42	22.8	0.54	0.553			2.52	90	0.357	0.499	1.25	94	1.330
3200	2750	0.41	2830	0.283	0.69	0.615	43	25.2	0.59	0.575			2.23	40	0.179	0.378	0.10	30	0.333
3200	2775	0.41	2600	0.260	0.63	0.627	47	28.7	0.61	0.581			2.30	120	0.522	0.391	1.75	62	2.823
3200	2800	0.22	1190	0.119	0.54	0.582	35	18.0	0.51	0.510			1.18	70	0.593	0.367	1.00	74	1.351
3200	2825	0.35	2260	0.226	0.65	0.582	35	22.8	0.65	0.533			2.63	80	0.304	0.372	0.75	64	1.172
3200	2850	0.31	1230	0.123	0.40	0.589	52	9.8	0.19	0.529			2.53	60	0.237	0.308	0.10	62	0.161
3200	2875	0.28	1940	0.194	0.69	0.619	25	17.6	0.70	0.546			1.96	40	0.204	0.229	0.75	42	1.786
3200	2900	0.24	1610	0.161	0.67	0.626	26	15.3	0.59	0.516			1.97	40	0.203	0.318	1.25	50	2.500
3200	2925	0.48	3300	0.330	0.69	0.634	47	28.3	0.60	0.583			2.52	50	0.198	0.312	2.00	70	2.857
3200	2950	0.38	2590	0.259	0.68	0.609	44	22.1	0.50	0.539			2.01	150	0.746	0.318	1.50	60	2.500
3200	2975	0.43	1870	0.187	0.43	0.602	35	18.2	0.52	0.532			3.85	80	0.208	0.310	5.50	94	5.851
3200	3000	0.27	1540	0.154	0.57	0.576	34	16.4	0.48	0.533			1.72	40	0.233	0.322	0.75	60	1.250
3200	3025	0.39	2480	0.248	0.64	0.535	44	24.5	0.56	0.530	6		2.46	40	0.163	0.226	0.75	50	1.500
3200	3050	0.30	1670	0.167	0.56	0.566	40	24.1	0.60	0.535			2.30	60	0.261	0.297	0.25	74	0.338
3200	3075	0.34	1620	0.162	0.48	0.550	41	20.1	0.49	0.550			2.65	70	0.264	0.305	5.75	86	6.686
3200	3100	0.26	1540	0.154	0.59	0.566	38	20.6	0.54	0.579			1.60	90	0.563	0.325	0.25	64	0.391
3200	3125	0.33	1610	0.161	0.49	0.596	38	21.2	0.56	0.604			2.20	60	0.273	0.326	0.25	48	0.521
3200	3150	0.44	3150	0.315	0.72	0.639	44	30.8	0.70	0.622			2.66	70	0.263	0.391	0.25	60	0.417
3200	3175	0.40	2820	0.282	0.70	0.669	35	25.6	0.73	0.645			2.61	70	0.268	0.399	3.00	70	4.286
3200	3200	0.32	2220	0.222	0.69	0.711	41	23.8	0.58	0.657			1.70	100	0.588	0.398	1.25	90	1.389
3200	3225	0.43	3190	0.319	0.74	0.721	50	32.7	0.65	0.648			1.66	100	0.602	0.376	1.25	106	1.179
3200	3250	0.38	2650	0.265	0.70	0.732	52	32.3	0.62	0.614			1.49	40	0.268	0.492	0.75	50	1.500
3200	3275	0.28	2150	0.215	0.77	0.719	29	18.9	0.65	0.596			1.99	30	0.151	0.495	1.50	46	3.261
3200	3325	0.30	2280	0.228	0.76	0.702	33	18.5	0.56	0.570			1.65	140	0.848	0.478	1.50	76	1.974

Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100	
			ppm	%				ppm	ppm				%	ppm	ppm	5 PT AVERAG		ppm
		HA Ca	HOAC Ca	HOAC Ca	HA CA	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG		HA Fe	HOAC Fe	HA Fe*100	AVERAG	HOAC Zn	HA Zn	
3200	3350	0.43	2710	0.271	0.63	0.703	50	24.7	0.49	0.555		1.66	100	0.602	0.516	17.25	274	6.296
3200	3375	0.43	2820	0.282	0.66	0.675	50	26.1	0.52	0.525		1.73	90	0.520	0.573	2.75	114	2.412
3200	3400	0.29	2040	0.204	0.70	0.675	37	20.2	0.55	0.536		1.96	90	0.459	0.519	1.75	68	2.574
3200	3425	0.22	1380	0.138	0.63	0.702	27	13.6	0.50	0.565		1.84	80	0.435	0.468	2.75	60	4.583
3200	3450	0.28	2130	0.213	0.76	0.698	32	19.8	0.62	0.581		1.73	100	0.578	0.408	1.25	62	2.016
3200	3475	0.33	2510	0.251	0.76	0.684	34	21.7	0.64	0.590		2.00	70	0.350	0.510	1.50	86	1.744
3200	3500	0.30	1910	0.191	0.64	0.721	39	23.4	0.60	0.627		1.84	40	0.217	0.450	1.25	56	2.232
3200	3525	0.18	1140	0.114	0.63	0.715	26	15.4	0.59	0.632		1.24	120	0.968	0.410	0.75	70	1.071
3200	3575	0.40	3250	0.325	0.81	0.692	46	31.5	0.68	0.623		3.61	50	0.139	0.552	1.00	80	1.250
3200	3650	0.35	2570	0.257	0.73	0.668	35	22.6	0.65	0.593		1.86	70	0.376	0.586	2.00	74	2.703
3200	3675	0.42	2700	0.270	0.64	0.685	53	31.4	0.59	0.603	6.4	1.04	110	1.058	0.433	2.50	122	2.049
3200	3725	0.32	1660	0.166	0.52	0.659	44	19.7	0.45	0.591		1.54	60	0.390	0.489	0.50	68	0.735
3200	3775	0.38	2730	0.273	0.72	0.651	29	18.8	0.65	0.583		2.44	50	0.205	0.489	0.25	36	0.694
3200	3800	0.53	3620	0.362	0.68	0.670	49	30.4	0.62	0.606		1.44	60	0.417	0.309	1.50	54	2.778
3200	3825	0.42	2910	0.291	0.69	0.696	49	29.9	0.61	0.624		1.60	60	0.375	0.239	2.50	116	2.155
3200	3850	0.39	2880	0.288	0.74	0.687	36	25.3	0.70	0.628		2.48	40	0.161	0.257	1.50	66	2.273
3200	3875	0.45	2910	0.291	0.65	0.678	37	19.9	0.54	0.625		2.70	10	0.037	0.210	1.00	70	1.429
3200	3925	0.38	2560	0.256	0.67	0.656	40	26.8	0.67	0.605		2.38	70	0.294	0.242	2.00	74	2.703
3200	3950	0.69	4420	0.442	0.64	0.639	59	35.6	0.60	0.587		3.32	60	0.181	0.426	1.75	98	1.786
3200	4000	0.34	1970	0.197	0.58	0.661	44	22.4	0.51	0.631		1.67	90	0.539	0.526	0.25	78	0.321
3200	4025	0.51	3340	0.334	0.65		72	44.4	0.62			2.50	270	1.080		8.50	132	6.439
3200	4100	0.28	2120	0.212	0.76		45	34.1	0.76			1.87	100	0.535		1.25	124	1.008
3600	100	3.34	29500	2.950	0.88		53	37.7	0.71			1.75	170	0.971		1.25	40	3.125
3600	125	2.47	17770	1.777	0.72		45	25.9	0.58			2.24	100	0.446		1.25	54	2.315
3600	150	1.57	12460	1.246	0.79	0.815	31	18.6	0.60	0.651		1.75	150	0.857	0.913	1.50	46	3.261
3600	175	6.93	58100	5.810	0.84	0.787	110	87.5	0.80	0.654		1.44	310	2.153	0.871	1.00	32	3.125
3600	200	0.34	2850	0.285	0.84	0.826	20	11.5	0.57	0.705		2.19	30	0.137	1.302	0.75	58	1.293
3600	225	3.48	25900	2.590	0.74	0.843	37	26.8	0.72	0.724		2.10	160	0.762	1.279	0.75	48	1.563
3600	250	8.00	73400	7.340	0.92	0.817	130	108.5	0.83	0.703		1.50	390	2.600	1.088	1.00	28	3.571
3600	275	2.33	20400	2.040	0.88	0.768	33	22.9	0.69	0.664		2.28	170	0.746	1.086	0.50	50	1.000
3600	300	5.87	41500	4.150	0.71	0.770	82	56.7	0.69	0.631		1.84	220	1.196	1.003	0.75	38	1.974
3600	325	0.34	2020	0.202	0.59	0.758	18	6.8	0.38	0.624		2.34	30	0.128	0.745	0.10	42	0.238
3600	350	1.64	12370	1.237	0.75	0.743	33	18.4	0.56	0.652		2.30	80	0.348	0.801	0.25	48	0.521
3600	375	5.24	44900	4.490	0.86	0.760	75	60.1	0.80	0.661		1.76	230	1.307	0.760	0.50	36	1.389
3600	400	4.45	35700	3.570	0.80	0.783	64	53.3	0.83	0.672		1.75	180	1.029	0.783	1.00	40	2.500
3600	425	3.99	31700	3.170	0.79	0.797	55	40.6	0.74	0.677		1.82	180	0.989	0.774	1.25	42	2.976
3600	450	0.35	2480	0.248	0.71	0.818	15	6.5	0.43	0.672		2.48	60	0.242	0.696	0.25	50	0.500
3600	475	0.37	3040	0.304	0.82	0.816	13	7.5	0.58	0.640		2.31	70	0.303	0.715	0.50	46	1.087
3600	500	3.07	29600	2.960	0.96	0.820	43	33.5	0.78	0.642		2.07	190	0.918	0.647	0.25	40	0.625
3600	525	4.63	36600	3.660	0.79	0.851	60	40.2	0.67	0.717		1.87	210	1.123	0.689	1.00	40	2.500

LINE	STATIO	SOUTH EAST %	ICP-MS ppm		ICP-MS %		HOAC 5 PT AVERAG	ppm	ICP-MS ppm	HOAC SR/ HA SR	5 PT AVERAG	PASTE %	ICP-MS ppm	HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS ppm	HOAC Zn HA Zn	ppm	HOAC Zn HA Zn*100
			HA Ca	HOAC Ca	HOAC Ca	HOAC Ca													
3600	550	2.78	22700	2.270	0.82	0.825	44	33.1	0.75	0.689	7.6	2.00	130	0.650	0.652	0.50	44	1.136	
3600	575	1.67	14370	1.437	0.86	0.809	33	26.7	0.81	0.678		2.22	100	0.450	0.589	0.25	44	0.568	
3600	600	0.26	1800	0.180	0.69	0.811	18	7.9	0.44	0.648		2.52	30	0.119	0.395	0.25	46	0.543	
3600	625	2.17	19170	1.917	0.88	0.814	43	31.0	0.72	0.617		2.32	140	0.603	0.319	0.50	44	1.136	
3600	650	0.26	2080	0.208	0.80	0.769	22	11.5	0.52	0.550		1.99	30	0.151	0.276	0.25	36	0.694	
3600	675	0.83	6940	0.694	0.84	0.789	25	14.9	0.60	0.604		2.56	70	0.273	0.537	0.25	52	0.481	
3600	700	0.68	4300	0.430	0.63	0.777	25	11.8	0.47	0.600		2.55	60	0.235	0.736	0.50	58	0.862	
3600	725	6.08	48300	4.830	0.79	0.810	98	69.2	0.71	0.671		1.97	280	1.421	1.111	0.50	40	1.250	
3600	750	7.94	65400	6.540	0.82	0.819	131	92.3	0.70	0.696		2.00	320	1.600	1.339	0.75	40	1.875	
3600	775	7.61	73200	7.320	0.96	0.845	140	122.5	0.88	0.730		1.73	350	2.023	1.572	1.25	32	3.906	
3600	800	6.26	55400	5.540	0.88	0.823	94	68.0	0.72	0.693		1.91	270	1.414	1.380	0.25	38	0.658	
3600	825	1.48	11280	1.128	0.76	0.818	40	25.7	0.64	0.710		2.50	350	1.400	1.355	0.50	54	0.926	
3600	850	2.20	14960	1.496	0.68	0.813	31	16.1	0.52	0.699		2.38	110	0.462	1.440	0.25	58	0.431	
3600	875	7.38	59200	5.920	0.80	0.821	126	99.5	0.79	0.722		1.90	280	1.474	1.414	0.50	40	1.250	
3600	900	9.46	88500	8.850	0.94	0.799	177	145.5	0.82	0.711		1.59	390	2.453	1.345	0.75	34	2.206	
3600	925	5.83	53900	5.390	0.92	0.800	93	78.1	0.84	0.728		1.95	250	1.282	1.528	0.25	52	0.481	
3600	950	6.74	44100	4.410	0.65	0.785	111	64.8	0.58	0.706		1.90	200	1.053	1.352	1.00	42	2.381	
3600	975	9.30	63600	6.360	0.68	0.754	167	101.0	0.60	0.697		2.32	320	1.379	1.069	0.75	48	1.563	
3600	1000	4.13	30000	3.000	0.73	0.748	72	48.9	0.68	0.689		2.19	130	0.594	1.079	0.25	52	0.481	
3600	1025	6.23	48500	4.850	0.78	0.761	106	82.3	0.78	0.705		2.02	210	1.040	0.996	1.00	52	1.923	
3600	1050	5.54	58700	5.870	0.90	0.813	129	103.5	0.80	0.735	8.1	1.73	230	1.329	1.009	0.75	42	1.786	
3600	1075	5.18	37300	3.730	0.72	0.825	64	42.4	0.66	0.724		2.19	140	0.639	1.123	1.00	64	1.563	
3600	1100	6.11	57500	5.750	0.94	0.835	67	50.5	0.75	0.714		1.94	280	1.443	1.310	0.75	46	1.630	
3600	1125	6.44	50800	5.080	0.79	0.791	76	47.6	0.63	0.681		1.98	230	1.162	1.178	1.50	50	3.000	
3600	1150	9.31	76900	7.690	0.83	0.803	152	110.5	0.73	0.693		1.72	340	1.977	1.465	1.00	40	2.500	
3600	1175	4.50	30600	3.060	0.68	0.762	66	41.9	0.63	0.689		1.64	130	0.670	1.392	1.00	52	1.923	
3600	1200	8.51	66400	6.640	0.78	0.757	151	109.5	0.73	0.717		1.76	340	2.073	1.484	0.75	36	2.083	
3600	1225	5.80	42600	4.260	0.73	0.745	89	65.2	0.73	0.708		1.79	190	1.080	1.311	1.00	46	2.174	
3600	1250	7.48	57300	5.730	0.77	0.762	125	95.6	0.76	0.720		1.89	290	1.620	1.369	0.25	40	0.625	
3600	1275	6.24	47800	4.780	0.77	0.777	98	67.1	0.68	0.736		1.87	180	1.111	1.239	0.25	48	0.521	
3600	1300	5.40	41100	4.110	0.76	0.783	98	67.7	0.69	0.731		1.83	260	0.963	1.194	0.50	48	1.042	
3600	1325	6.53	56000	5.600	0.86	0.788	117	94.2	0.81	0.731		1.87	160	1.421	1.085	1.50	46	3.261	
3600	1350	5.57	42700	4.270	0.77	0.774	94	66.8	0.71	0.732		1.87	160	0.856	1.041	0.50	46	1.087	
3600	1375	6.20	48900	4.890	0.79	0.622	102	77.8	0.76	0.594		1.95	210	1.077	0.964	1.50	46	3.261	
3600	1400	5.47	38200	3.820	0.70	0.659	93	64.1	0.69	0.592		2.03	180	0.887	0.869	0.25	48	0.521	
3600	1425	0.59	29400?			0.616	24	39.5?		0.548		2.42	140	0.579	0.841	0.75	66	1.136	
3600	1450	4.18	43600	4.360	1.04	0.654	63	50.1	0.80	0.567		2.11	200	0.948	0.850	0.75	54	1.389	
3600	1475	5.06	27700	2.770	0.55	0.581	68	33.4	0.49	0.492		1.96	140	0.714	0.794	0.50	46	1.087	
3600	1500	4.48	43900	4.390	0.98	0.581	63	54.2	0.86	0.492		1.87	210	1.123	0.678	0.25	44	0.568	
3600	1525	5.26	17610	1.761	0.33	0.508	81	25.4	0.31	0.390		1.82	110	0.604	0.540	0.25	42	0.595	

Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	HOAC HA CA	5 PT AVERAG	ppm HA Sr	ppm HOAC Sr	HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	% HA Fe	ppm HOAC Fe	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm HOAC Zn	ppm HA Zn	
3600	1550	2.22	n/s			0.579	39			0.381	7.3	2.03			0.435	n/s	44	0.000
3600	1575	0.34	2310	0.231	0.68	0.557	20	5.7	0.29	0.289		1.94	50	0.258	0.264	0.25	42	0.595
3600	1600	0.43	3880	0.388	0.90	0.609	16	7.2	0.45	0.321		2.65	50	0.189	0.181	0.25	58	0.431
3600	1625	0.56	4870	0.487	0.87	0.768	17	6.8	0.40	0.425		2.58	70	0.271	0.227	0.25	54	0.463
3600	1650	0.55	3270	0.327	0.59	0.632	16	7.6	0.48	0.368		2.67	50	0.187	0.175	0.25	54	0.463
3600	1675	0.45	3580	0.358	0.80	0.608	18	9.4	0.52	0.356		2.61	60	0.230	0.170	0.25	52	0.481
3600	1700	0.37	not/ss			0.599	16			0.368		2.49			0.163	not/ss	58	0.000
3600	1725	0.28	2180	0.218	0.78	0.653	15	5.8	0.39	0.376		2.47	40	0.162	0.164	0.25	54	0.463
3600	1750	0.28	2310	0.231	0.83	0.661	19	8.7	0.46	0.379		2.56	60	0.234	0.161	0.50	56	0.893
3600	1775	0.31	2690	0.269	0.87	0.843	15	7.7	0.51	0.496		2.59	50	0.193	0.262	1.00	72	1.389
3600	1800	0.35	2910	0.291	0.83	0.873	20	10.7	0.54	0.540		1.84	40	0.217	0.321	4.25	80	5.313
3600	1825	0.30	2740	0.274	0.91	0.869	25	14.7	0.59	0.560		1.79	90	0.503	0.341	2.00	86	2.326
3600	1850	0.32	2960	0.296	0.93	0.859	27	16.4	0.61	0.570		1.96	90	0.459	0.350	1.00	56	1.786
3600	1875	0.38	3070	0.307	0.81	0.862	40	22.2	0.56	0.569		2.09	70	0.335	0.406	1.00	80	1.250
3600	1925	0.41	3360	0.336	0.82	0.816	29	16.4	0.57	0.544		2.57	60	0.233	0.473	2.50	54	4.630
3600	1950	0.30	2530	0.253	0.84	0.744	32	16.9	0.53	0.504		1.40	70	0.500	0.472	4.75	98	4.847
3600	1975	0.22	1500	0.150	0.68	0.745	27	12.6	0.46	0.490		1.43	120	0.839	0.613	1.00	88	1.136
3600	2000	0.71	4030	0.403	0.57	0.743	98	40.0	0.41	0.496		1.99	90	0.452	0.718	5.00	190	2.632
3600	2025	0.27	2200	0.220	0.81	0.745	29	14.0	0.48	0.511		1.54	160	1.039	0.777	0.25	78	0.321
3600	2050	0.33	2660	0.266	0.81	0.780	37	22.0	0.59	0.533		1.45	110	0.759	0.727	1.50	104	1.442
3600	2075	0.22	1880	0.188	0.85	0.847	23	13.9	0.60	0.585	5.1	1.63	130	0.798	0.784	1.00	68	1.471
3600	2125	0.22	1880	0.188	0.85	0.857	20	11.5	0.58	0.611		2.05	120	0.585	0.657	1.75	50	3.500
3600	2150	0.29	2620	0.262	0.90	0.892	38	25.4	0.67	0.630		1.76	130	0.739	0.538	0.75	80	0.938
3600	2200	0.31	2680	0.268	0.86	0.899	35	21.6	0.62	0.636		1.72	70	0.407	0.601	3.50	84	4.167
3600	2225	0.24	2360	0.236	0.98	0.915	24	16.6	0.69	0.663		2.47	40	0.162	0.568	1.00	48	2.083
3600	2250	0.30	2670	0.267	0.89	0.898	34	21.4	0.63	0.644		1.62	180	1.111	0.552	1.25	54	2.315
3600	2275	0.34	3170	0.317	0.93	0.869	36	25.6	0.71	0.620		1.67	70	0.419	0.656	3.50	106	3.302
3600	2300	0.45	3680	0.368	0.82	0.819	54	30.8	0.57	0.590		1.51	100	0.662	0.731	1.25	124	1.008
3600	2350	0.28	2020	0.202	0.72	0.824	34	16.9	0.50	0.581		1.84	170	0.924	0.562	1.00	104	0.962
3600	2375	0.72	5290	0.529	0.73	0.825	80	43.5	0.54	0.563		1.85	100	0.541	0.571	3.25	130	2.500
3600	2400	0.34	3100	0.310	0.91	0.855	42	24.4	0.58	0.593		1.89	50	0.265	0.469	1.75	184	0.951
3600	2450	0.32	3010	0.301	0.94	0.856	30	18.8	0.63	0.596		1.73	80	0.462	0.342	1.00	38	2.632
3600	2475	0.20	1930	0.193	0.97	0.882	21	15.1	0.72	0.622		1.95	30	0.154	0.297	0.75	36	2.083
3600	2525	0.41	2980	0.298	0.73	0.891	45	23.1	0.51	0.650		2.08	60	0.288	0.318	1.25	42	2.976
3600	2550	0.22	1900	0.190	0.86	0.841	23	15.5	0.67	0.588		1.58	50	0.316	0.269	1.50	50	3.000
3600	2575	0.36	3460	0.346	0.96	0.847	40	28.9	0.72	0.587		1.91	70	0.366	0.282	0.75	36	2.083
3600	2600	0.53	3660	0.366	0.69	0.883	78	24.6	0.32	0.616		2.26	50	0.221	0.266	2.50	104	2.404
3600	2625	0.29	2880	0.288	0.99	0.872	26	18.5	0.71	0.607		3.21	70	0.218	0.354	1.00	84	1.190
3600	2650	0.36	3260	0.326	0.91	0.853	40	26.4	0.66	0.576		2.38	50	0.210	0.319	3.25	120	2.708
3600	2675	0.65	5270	0.527	0.81	0.882	71	44.3	0.62	0.638		1.06	80	0.755	0.322	11.50	124	9.274

## Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%				ppm	ppm					ppm	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm	
		HA Ca	HOAC Ca	HOAC Ca	HA CA	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG		HA Fe	HOAC Fe	HA Fe*100	AVERAG	HOAC Zn	HA Zn	
3600	2700	0.41	3550	0.355	0.87	0.854	41	23.4	0.57	0.614	6	2.12	40	0.189	0.319	0.75	58	1.293
3600	2725	0.33	2750	0.275	0.83	0.841	46	28.6	0.62	0.609		2.94	70	0.238	0.294	1.25	90	1.389
3600	2750	0.42	3580	0.358	0.85	0.826	37	22.0	0.59	0.596		2.94	60	0.204	0.186	3.00	92	3.261
3600	2775	0.42	3530	0.353	0.84	0.828	44	27.9	0.63	0.574		3.50	30	0.086	0.161	1.25	60	2.083
3600	2800	0.31	2290	0.229	0.74	0.804	37	20.6	0.56	0.567		2.35	50	0.213	0.184	1.00	62	1.613
3600	2825	0.38	3320	0.332	0.87	0.746	39	18.1	0.46	0.561		3.07	20	0.065	0.203	0.25	46	0.543
3600	2850	0.32	2280	0.228	0.71	0.720	41	24.0	0.59	0.576		2.27	80	0.352	0.336	3.25	240	1.354
3600	2900	0.44	2480	0.248	0.56	0.726	39	22.1	0.57	0.583		2.67	80	0.300	0.385	1.25	60	2.083
3600	2925	0.20	1420	0.142	0.71	0.695	22	15.6	0.71	0.601		2.14	160	0.748	0.488	1.00	50	2.000
3600	2950	0.30	2310	0.231	0.77	0.659	40	23.7	0.59	0.598		1.74	80	0.460	0.438	1.25	70	1.786
3600	2975	0.38	2740	0.274	0.72	0.662	39	21.5	0.55	0.603		1.90	110	0.579	0.403	1.75	168	1.042
3600	3000	0.57	3030	0.303	0.53	0.629	36	20.6	0.57	0.565		3.91	40	0.102	0.292	1.25	64	1.953
3600	3025	0.39	2260	0.226	0.58	0.543	28	16.5	0.59	0.542		3.16	40	0.127	0.242	1.25	62	2.016
3600	3050	0.52	2820	0.282	0.54	0.558	40	20.8	0.52	0.561		3.66	70	0.191	0.193	4.25	98	4.337
3600	3075	0.56	1920	0.192	0.34	0.583	34	16.3	0.48	0.556		4.22	90	0.213	0.416	0.75	42	1.786
3600	3100	0.51	4040	0.404	0.79	0.640	55	35.4	0.64	0.579		2.12	70	0.330	0.446	4.75	106	4.481
3600	3125	0.14	920	0.092	0.66	0.662	22	12.1	0.55	0.585		1.89	230	1.217	0.510	0.75	66	1.136
3600	3150	0.22	1900	0.190	0.86	0.745	23	16.3	0.71	0.613		1.80	50	0.278	0.594	1.00	56	1.786
3600	3175	0.30	1960	0.196	0.65	0.734	33	18.1	0.55	0.608		1.96	100	0.510	0.617	1.00	66	1.515
3600	3200	0.32	2430	0.243	0.76	0.790	35	21.7	0.62	0.667		1.73	110	0.636	0.424	0.25	64	0.391
3600	3225	0.31	2290	0.229	0.74	0.777	26	16.2	0.62	0.635	5.9	1.57	70	0.446	0.399	1.25	28	4.464
3600	3250	0.27	2520	0.252	0.93	0.823	22	18.5	0.84	0.658		2.01	50	0.249	0.339	0.75	32	2.344
3600	3275	0.38	3050	0.305	0.80	0.763	41	22.4	0.55	0.626		2.58	40	0.155	0.248	0.50	52	0.962
3600	3300	0.41	3620	0.362	0.88	0.751	41	27.3	0.67	0.638		2.41	50	0.207	0.213	1.00	54	1.852
3600	3325	0.34	1550	0.155	0.46	0.716	19	8.7	0.46	0.589		2.73	50	0.183	0.235	0.25	34	0.735
3600	3350	0.42	2860	0.286	0.68	0.753	32	21.8	0.68	0.608		2.95	80	0.271	0.251	0.75	40	1.875
3600	3375	0.36	2720	0.272	0.76	0.725	40	23.7	0.59	0.595		2.22	80	0.360	0.233	1.50	88	1.705
3600	3500	0.28	2770	0.277	0.99	0.782	48	30.8	0.64	0.614		2.14	50	0.234	0.224	1.75	92	1.902
3600	3550	0.32	2380	0.238	0.74	0.827	38	22.9	0.60	0.623		2.62	30	0.115	0.215	0.25	40	0.625
3600	3575	0.47	3470	0.347	0.74	0.842	46	25.3	0.55	0.657		3.61	50	0.139	0.303	0.25	36	0.694
3600	3600	0.34	3090	0.309	0.91	0.767	35	25.4	0.73	0.636		2.65	60	0.226	0.515	1.00	44	2.273
3600	3625	0.16	1330	0.133	0.83	0.770	12	9.2	0.76	0.632		1.37	110	0.803	0.572	0.25	18	1.389
3600	3675	0.44	2700	0.270	0.61	0.715	39	21.0	0.54	0.640		2.09	270	1.292	0.579	0.25	44	0.568
3600	3700	0.29	2200	0.220	0.76	0.641	33	19.2	0.58	0.605		2.24	90	0.402	0.696	0.75	46	1.630
3600	3725	0.40	1860	0.186	0.47	0.612	29	17.2	0.59	0.570		3.52	60	0.170	0.669	0.50	44	1.136
3600	3750	0.19	1020	0.102	0.54	0.634	32	17.7	0.55	0.567		1.85	150	0.811	0.517	0.50	84	0.595
3600	3775	0.17	1170	0.117	0.69	0.667	25	14.6	0.58	0.585		2.09	140	0.670	0.481	0.75	70	1.071
3600	3800	0.25	1800	0.180	0.72	0.738	36	18.9	0.53	0.582		1.51	80	0.530	0.478	0.25	42	0.595
3600	3850	0.46	4260	0.426	0.93	0.791	50	33.5	0.67	0.585		2.65	60	0.226	0.335	1.50	74	2.027
3600	3875	0.37	3030	0.303	0.82	0.849	44	25.5	0.58	0.590		1.93	30	0.155	0.233	1.25	54	2.315

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT AVERAG	ppm	ICP-MS		5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%				ppm	HOAC SR/ HA SR				ppm	HOAC Fe/ HA Fe*100		ppm	ppm	
3600	3900	0.38	3050	0.305	0.80	0.853	38	21.6	0.57	0.604	7	4.36	40	0.092	0.200	0.25	52	0.481
3600	3925	0.37	3620	0.362	0.98	0.798	32	19.4	0.61	0.557		4.96	80	0.161	0.186	1.50	82	1.829
3600	3950	0.19	1400	0.140	0.74	0.718	18	10.8	0.60	0.526		1.37	50	0.365	0.188	0.50	32	1.563
3600	3975	0.13	850	0.085	0.65	0.653	13	5.7	0.43	0.509		1.92	30	0.156	0.196	0.10	24	0.417
3600	4000	0.36	1510	0.151	0.42	0.569	26	11.1	0.43	0.479		3.05	50	0.164	0.222	0.75	38	1.974
3600	4025	0.32	1530	0.153	0.48	0.589	25	12.1	0.48	0.490		2.24	30	0.134	0.254	0.50	34	1.471
3600	4050	0.22	1220	0.122	0.55	0.616	21	9.6	0.46	0.533		1.71	50	0.292	0.287	0.50	18	2.778
3600	4100	0.33	2770	0.277	0.84	0.683	48	31.3	0.65	0.562		1.72	90	0.523	0.300	2.75	140	1.964
3600	4125	0.32	2530	0.253	0.79	0.709	39	25.3	0.65	0.564		2.17	70	0.323	0.369	1.00	96	1.042
3600	4150	0.36	2700	0.270	0.75	0.796	63	35.8	0.57	0.589		3.09	70	0.227	0.439	0.75	78	0.962
3600	4175	0.51	3110	0.311	0.61	0.807	64	31.6	0.49	0.591		1.25	60	0.480	0.371	0.75	74	1.014
3600	4200	0.28	2770	0.277	0.99	0.813	43	25.0	0.58	0.584		1.87	120	0.642	0.398	0.50	56	0.893
3600	4225	0.39	3490	0.349	0.89		50	33.2	0.66			2.19	40	0.183		1.25	46	2.717
3600	4250	0.26	2130	0.213	0.82		37	22.7	0.61			1.74	80	0.460		0.50	58	0.862
4000	100	0.94	6210	0.621	0.66		29	13.05	0.45			2.08	40	0.192		0.25	64	0.391
4000	125	1.41	8860	0.886	0.63		32	14	0.44			2.07	40	0.193		0.75	68	1.103
4000	150	2.73	17150	1.715	0.63	0.636	37	20.2	0.55	0.537		1.7	70	0.412	0.486	0.50	48	1.042
4000	175	4.19	24300	2.430	0.58	0.649	39	24.5	0.63	0.553		1.6	120	0.750	0.499	1.00	40	2.500
4000	200	4.79	32600	3.260	0.68	0.697	48	29.9	0.62	0.628		1.47	130	0.884	0.779	1.00	42	2.381
4000	225	0.19	1380	0.138	0.73	0.698	23	12.15	0.53	0.671		2.37	60	0.253	0.938	0.25	34	0.735
4000	250	5.83	50600	5.060	0.87	0.735	63	51.3	0.81	0.702		1.38	220	1.594	1.066	0.75	36	2.083
4000	275	6.18	39200	3.920	0.63	0.765	58	44.2	0.76	0.697		1.49	180	1.208	0.962	0.50	36	1.389
4000	300	6.16	47300	4.730	0.77	0.767	71	55.5	0.78	0.714		1.51	210	1.391	1.193	1.00	42	2.381
4000	325	1.6	13220	1.322	0.83	0.734	33	19.8	0.60	0.683		2.21	80	0.362	1.010	0.50	52	0.962
4000	350	7.57	55900	5.590	0.74	0.786	82	50	0.61	0.659		1.56	220	1.410	0.887	0.75	40	1.875
4000	375	3.34	23500	2.350	0.70	0.795	52	34.3	0.66	0.659		1.62	110	0.679	0.756	0.25	36	0.694
4000	400	0.97	8670	0.867	0.89	0.819	44	28.3	0.64	0.700		1.01	60	0.594	1.211	0.25	22	1.136
4000	425	3.24	26300	2.630	0.81	0.848	46	35.9	0.78	0.732		1.77	130	0.734	1.073	0.75	40	1.875
4000	450	9.45	89500	8.950	0.95	0.904	196	158	0.81	0.761	8.2	1.29	340	2.636	1.186	1.25	34	3.676
4000	475	3.02	26700	2.670	0.88	0.888	41	31.6	0.77	0.765		1.94	140	0.722	1.167	1.00	50	2.000
4000	500	5.53	54500	5.450	0.99	0.888	59	47.4	0.80	0.714		1.69	210	1.243	1.043	0.75	40	1.875
4000	525	1.82	14750	1.475	0.81	0.857	31	20.6	0.66	0.687		1.8	90	0.500	0.593	0.75	42	1.786
4000	550	0.39	3170	0.317	0.81	0.855	11	5.8	0.53	0.691		1.76	20	0.114	0.849	0.25	44	0.568
4000	575	1.52	12070	1.207	0.79	0.813	21	14.05	0.67	0.688		2.06	80	0.388	1.138	1.25	50	2.500
4000	600	9.19	80000	8.000	0.87	0.803	109	86.4	0.79	0.712		1.75	350	2.000	1.285	0.25	32	0.781
4000	625	9.93	77300	7.730	0.78	0.797	150	118	0.79	0.774		1.6	430	2.688	1.539	0.75	28	2.679
4000	650	5.23	39800	3.980	0.76	0.813	72	56.5	0.78	0.819		1.54	190	1.234	1.736	0.75	34	2.206
4000	675	6.1	47600	4.760	0.78	0.803	83	69.5	0.84	0.814		1.66	230	1.386	1.462	0.25	34	0.735
4000	700	5.25	46000	4.600	0.88	0.824	68	60.8	0.89	0.805		1.82	250	1.374	1.527	0.25	38	0.658
4000	725	2.51	20500	2.050	0.82	0.825	32	24.6	0.77	0.804		1.91	120	0.628	1.605	0.25	42	0.595

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%			ppm	ppm					ppm	ppm		HOAC Fe/ HA Fe*100	ppm	
4000	750	10.75	95300	9.530	0.89	0.842	165	122	0.74	0.785		1.46	440	3.014	1.613	0.75	32	2.344
4000	775	8.13	62400	6.240	0.77	0.824	113	88.1	0.78	0.697		1.85	300	1.622	1.381	0.75	40	1.875
4000	800	6.38	55000	5.500	0.86	0.831	63	46.7	0.74	0.657		1.82	260	1.429	1.283	0.25	40	0.625
4000	825	0.35	2750	0.275	0.79	0.773	14	6.35	0.45	0.673		2.35	50	0.213	1.406	0.25	52	0.481
4000	850	0.46	3920	0.392	0.85	0.783	16	9.15	0.57	0.639		2.18	30	0.138	1.107	0.25	50	0.500
4000	875	10.95	65700	6.570	0.60	0.733	173	142	0.82	0.662		1.35	490	3.630	1.645	2.00	30	6.667
4000	900	0.35	2860	0.286	0.82	0.746	18	10.95	0.61	0.725		2.36	30	0.127	1.982	0.25	42	0.595
4000	925	12.6	76700	7.670	0.61	0.718	182	156	0.86	0.782		1.36	560	4.118	2.535	1.25	28	4.464
4000	1025	8.3	70700	7.070	0.85	0.767	103	79.2	0.77	0.768	8.4	1.58	300	1.899	2.024	1.00	38	2.632
4000	1050	11.8	84100	8.410	0.71	0.746	204	174	0.85	0.824		1.55	450	2.903	2.256	1.00	32	3.125
4000	1075	4.16	35100	3.510	0.84	0.743	69	51.9	0.75	0.814		1.68	180	1.071	1.702	8.00	104	7.692
4000	1100	8.62	61500	6.150	0.71	0.743	146	130	0.89	0.807		1.86	240	1.290	1.586	0.25	48	0.521
4000	1125	9.27	54800	5.480	0.59	0.751	120	96.9	0.81	0.790		1.78	240	1.348	1.509	4.50	42	10.714
4000	1150	6.93	59300	5.930	0.86	0.727	105	76.6	0.73	0.801		1.82	240	1.319	1.757	0.75	42	1.786
4000	1175	11.15	83700	8.370	0.75	0.732	262	202	0.77	0.754		1.59	400	2.516	1.723	0.50	38	1.316
4000	1200	11.35	82200	8.220	0.72	0.751	197	159	0.81	0.725		1.86	430	2.312	1.705	0.75	36	1.974
4000	1225	7.21	53100	5.310	0.74	0.694	97	63.7	0.66	0.691		2.14	240	1.121	1.713	0.25	54	0.463
4000	1250	7.94	54500	5.450	0.69	0.694	108	71.1	0.66	0.695		1.99	250	1.256	1.644	0.25	50	0.500
4000	1275	9.82	56300	5.630	0.57	0.682	101	56.5	0.56	0.634		1.62	220	1.358	1.248	0.75	44	1.705
4000	1300	11.15	83800	8.380	0.75	0.689	128	101.5	0.79	0.637		1.52	330	2.171	1.242	1.00	40	2.500
4000	1325	1.8	11940	1.194	0.66	0.698	35	17.55	0.50	0.652		2.41	80	0.332	1.191	0.25	64	0.391
4000	1350	6.65	51100	5.110	0.77	0.721	92	61.7	0.67	0.635		1.92	210	1.094	0.996	0.25	52	0.481
4000	1375	5.6	41200	4.120	0.74	0.712	75	55	0.73	0.610		1.9	190	1.000	0.718	0.25	52	0.481
4000	1400	3.36	23000	2.300	0.68	0.678	43	20.4	0.47	0.624		2.09	80	0.383	0.720	0.25	66	0.379
4000	1425	5.66	40000	4.000	0.71	0.694	79	52.8	0.67	0.603		2.05	160	0.780	0.638	0.50	54	0.926
4000	1450	2.98	14760	1.476	0.50	0.693	51	29.3	0.57	0.561		2.33	80	0.343	0.504	0.25	52	0.481
4000	1475	3.49	29500	2.950	0.85	0.753	38	21.4	0.56	0.634		2.05	140	0.683	0.748	0.25	54	0.463
4000	1500	1.81	13250	1.325	0.73	0.757	36	18.85	0.52	0.633		2.41	80	0.332	0.640	0.25	60	0.417
4000	1525	6.36	62700	6.270	0.99	0.836	75	63	0.84	0.621	7.9	1.81	290	1.602	0.601	2.00	42	4.762
4000	1550	0.88	6390	0.639	0.73	0.842	29	19.25	0.66	0.668		2.48	60	0.242	0.784	0.25	58	0.431
4000	1575	0.3	2670	0.267	0.89	0.844	20	10.3	0.52	0.658		2.09	30	0.144	0.736	0.25	50	0.500
4000	1600	6.11	53600	5.360	0.88	0.812	62	49.4	0.80	0.654		1.56	250	1.603	0.730	0.25	36	0.694
4000	1625	0.42	3120	0.312	0.74	0.849	15	7.15	0.48	0.699		2.21	20	0.090	1.011	0.25	48	0.521
4000	1650	7.25	59700	5.970	0.82	0.833	57	46.6	0.82	0.735		1.59	250	1.572	1.073	0.75	38	1.974
4000	1675	6.69	61000	6.100	0.91	0.800	50	44.4	0.89	0.678		1.58	260	1.646	0.784	0.25	32	0.781
4000	1700	2.47	20000	2.000	0.81	0.787	32	22.2	0.69	0.690		2.2	100	0.455	0.790	0.25	44	0.568
4000	1725	0.48	3420	0.342	0.71	0.788	16	8.2	0.51	0.631		2.58	40	0.155	0.507	0.25	48	0.521
4000	1750	0.63	4270	0.427	0.68	0.762	16	8.6	0.54	0.583		2.49	30	0.120	0.228	0.50	60	0.833
4000	1775	0.35	2900	0.290	0.83	0.752	14	7.35	0.53	0.536		2.49	40	0.161	0.159	0.25	54	0.463
4000	1800	0.61	4780	0.478	0.78	0.748	18	11.6	0.64	0.570		2.42	60	0.248	0.227	2.00	68	2.941

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ppm	ICP-MS		5 PT	PASTE	%	ICP-MS		ICP-MS		ppm	HOAC Zn/ HA Zn	HOAC Zn/ HA Zn*100
			ppm	%				ppm	HOAC Sr/ HA SR				ppm	HOAC Fe/ HA Fe	ppm	HOAC Fe/ HA Fe*100			
4000	1825	0.39	2960	0.296	0.76	0.776	14	6.45	0.46	0.546		2.71	30	0.111	0.236	0.25	60	0.417	
4000	1850	2.81	19420	1.942	0.69	0.762	26	17.75	0.68	0.540		2.23	110	0.493	0.270	0.25	42	0.595	
4000	1875	0.29	2370	0.237	0.82	0.747	21	8.8	0.42	0.498		2.42	40	0.165	0.256	0.50	58	0.862	
4000	1900	0.25	1900	0.190	0.76	0.711	23	11.3	0.49	0.483		2.09	70	0.335	0.272	0.75	70	1.071	
4000	1925	0.26	1840	0.184	0.71	0.747	25	10.95	0.44	0.478		2.3	40	0.174	0.289	0.25	60	0.417	
4000	1950	0.41	2380	0.238	0.58	0.761	38	14.55	0.38	0.514		2.63	50	0.190	0.294	1.25	66	1.894	
4000	1975	0.26	2260	0.226	0.87	0.795	26	17.15	0.66	0.549		2.06	120	0.583	0.300	1.00	84	1.190	
4000	2000	0.29	2570	0.257	0.89	0.799	21	12.6	0.60	0.594		2.14	40	0.187	0.388	1.25	58	2.155	
4000	2025	0.26	2420	0.242	0.93	0.861	23	15.25	0.66	0.651	6.1	1.92	70	0.365	0.376	0.75	50	1.500	
4000	2050	2.56	18650	1.865	0.73	0.847	43	28.5	0.66	0.639		1.62	100	0.617	0.285	3.50	66	5.303	
4000	2075	0.25	2220	0.222	0.89	0.823	19	12.75	0.67	0.626		2.32	30	0.129	0.282	0.75	48	1.563	
4000	2100	0.29	2320	0.232	0.80	0.808	21	12.6	0.60	0.617		2.35	30	0.128	0.252	1.25	56	2.232	
4000	2125	0.38	2920	0.292	0.77	0.830	34	18.2	0.54	0.591		2.33	40	0.172	0.157	3.00	74	4.054	
4000	2150	0.51	4350	0.435	0.85	0.810	40	24.7	0.62	0.557		2.34	50	0.214	0.202	3.25	86	3.779	
4000	2175	0.27	2270	0.227	0.84	0.824	24	12.8	0.53	0.550		2.13	30	0.141	0.201	1.75	72	2.431	
4000	2200	0.25	1970	0.197	0.79	0.821	32	16	0.50	0.538		1.96	70	0.357	0.212	0.75	54	1.389	
4000	2225	0.37	3220	0.322	0.87	0.788	31	17.45	0.56	0.498		2.43	30	0.123	0.189	1.50	66	2.273	
4000	2250	0.21	1580	0.158	0.75	0.765	24	11.45	0.48	0.490		2.2	50	0.227	0.200	0.25	46	0.543	
4000	2275	0.27	1860	0.186	0.69	0.760	29	12.15	0.42	0.499		2.13	20	0.094	0.224	0.25	52	0.481	
4000	2300	0.19	1380	0.138	0.73	0.745	18	8.85	0.49	0.498		2	40	0.200	0.312	0.25	38	0.658	
4000	2325	0.28	2140	0.214	0.76	0.748	27	14.75	0.55	0.522		2.32	110	0.474	0.325	1.00	48	2.083	
4000	2350	0.22	1750	0.175	0.80	0.753	26	14.5	0.56	0.553		1.6	90	0.563	0.368	3.25	54	6.019	
4000	2375	0.25	1910	0.191	0.76	0.768	28	16.65	0.59	0.581		1.7	50	0.294	0.353	1.25	64	1.953	
4000	2400	0.28	2000	0.200	0.71	0.783	27	15.45	0.57	0.598		1.94	60	0.309	0.292	1.25	40	3.125	
4000	2425	0.33	2640	0.264	0.80	0.788	36	22.9	0.64	0.614		2.37	30	0.127	0.292	0.75	62	1.210	
4000	2450	0.42	3540	0.354	0.84	0.792	37	23.3	0.63	0.635		2.4	40	0.167	0.296	3.75	86	4.360	
4000	2475	0.41	3350	0.335	0.82	0.813	54	34.3	0.64	0.640		1.6	90	0.563	0.342	5.50	232	2.371	
4000	2500	0.34	2670	0.267	0.79	0.793	35	24.6	0.70	0.644		1.59	50	0.314	0.451	4.00	50	8.000	
4000	2525	0.24	1970	0.197	0.82	0.787	39	23.3	0.60	0.647	6.4	1.3	70	0.538	0.457	1.25	76	1.645	
4000	2550	0.21	1470	0.147	0.70	0.759	24	15.75	0.66	0.623		1.78	120	0.674	0.441	0.75	60	1.250	
4000	2575	0.17	1380	0.138	0.81	0.752	20	12.9	0.65	0.611		1.54	30	0.195	0.513	0.25	32	0.781	
4000	2600	0.27	1830	0.183	0.68	0.744	41	21.1	0.51	0.629		2.06	100	0.485	0.460	0.25	56	0.446	
4000	2625	0.23	1720	0.172	0.75	0.764	39	25	0.64	0.631		1.34	90	0.672	0.460	0.50	74	0.676	
4000	2650	0.52	4080	0.408	0.78	0.744	44	30.2	0.69	0.645		2.54	70	0.276	0.516	1.00	54	1.852	
4000	2675	0.35	2790	0.279	0.80	0.730	39	26.1	0.67	0.661		1.64	110	0.671	0.588	4.25	112	3.795	
4000	2725	0.61	4360	0.436	0.71	0.742	43	30.7	0.71	0.673		3.16	150	0.475	0.540	3.50	80	4.375	
4000	2775	0.4	2430	0.243	0.61	0.691	50	29.8	0.60	0.642		3.07	260	0.847	0.533	1.75	118	1.483	
4000	2800	0.43	3470	0.347	0.81	0.651	37	25.8	0.70	0.619		2.54	110	0.433	0.523	2.75	106	2.594	
4000	2825	0.47	2480	0.248	0.53	0.617	38	20.3	0.53	0.579		3.74	90	0.241	0.518	0.75	72	1.042	
4000	2850	0.33	1980	0.198	0.60	0.640	36	19.9	0.55	0.555		2.26	140	0.619	0.442	1.75	88	1.989	



Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%			ppm	ppm					ppm	ppm			ppm	ppm	
4000	2875	0.26	1410	0.141	0.54	0.635	30	15.5	0.52	0.544		2	90	0.450	0.462	0.25	48	0.521	
4000	2900	0.24	1730	0.173	0.72	0.597	33	15.6	0.47	0.500		1.5	70	0.467	0.505	0.25	38	0.658	
4000	2925	0.41	3220	0.322	0.79	0.692	34	21.8	0.64	0.590		1.5	80	0.533	0.443	1.00	114	0.877	
4000	2950	0.42	1420	0.142	0.34	0.727	42	13.35	0.32	0.603		2.62	120	0.458	0.424	0.25	98	0.255	
4000	2975	0.28	3010	0.301	1.08	0.674	28	28	1.00	0.599		2.27	70	0.308	0.455	3.25	72	4.514	
4000	3025	0.27	1930	0.193	0.71	0.605	30	17.5	0.58	0.597		1.69	60	0.355	0.400	0.25	38	0.658	
4000	3100	0.21	960	0.096	0.46	0.680	29	13.1	0.45	0.666		1.94	120	0.619	0.360	0.75	74	1.014	
4000	3125	0.45	1990	0.199	0.44	0.623	27	17.05	0.63	0.607		3.47	90	0.259	0.382	0.75	40	1.875	
4000	3150	0.25	1780	0.178	0.71	0.646	29	19.3	0.67	0.634		2.31	60	0.260	0.378	0.25	36	0.694	
4000	3175	0.26	2050	0.205	0.79	0.684	33	23.2	0.70	0.638	6.4	1.92	80	0.417	0.330	0.25	42	0.595	
4000	3200	0.27	2240	0.224	0.83	0.736	31	22.3	0.72	0.616		2.08	70	0.337	0.299	0.75	54	1.389	
4000	3225	0.28	1810	0.181	0.65	0.714	24	11.25	0.47	0.602		2.11	80	0.379	0.273	0.25	42	0.595	
4000	3275	0.4	2820	0.282	0.70	0.674	37	19.45	0.53	0.576		2.88	30	0.104	0.207	0.25	48	0.521	
325 4000	3300	0.38	2280	0.228	0.60	0.639	29	17.15	0.59	0.546		3.94	50	0.127	0.160	0.25	52	0.481	
4000	3325	0.29	1710	0.171	0.59	0.663	18	10.35	0.58	0.594		2.28	20	0.088	0.118	0.25	38	0.658	
4000	3350	0.35	2290	0.229	0.65	0.643	22	12.5	0.57	0.587		2.95	30	0.102	0.146	2.25	44	5.114	
4000	3375	0.35	2680	0.268	0.77	0.686	27	19.15	0.71	0.593		1.75	30	0.171	0.147	3.25	68	4.779	
4000	3400	0.26	1580	0.158	0.61	0.746	23	11.35	0.49	0.604		2.91	70	0.241	0.157	0.25	48	0.521	
4000	3425	0.48	3910	0.391	0.81	0.776	53	32.8	0.62	0.612		2.27	30	0.132	0.182	1.50	78	1.923	
4000	3450	0.34	3020	0.302	0.89	0.773	37	23.4	0.63	0.594		2.15	30	0.140	0.230	1.25	60	2.083	
4000	3475	0.39	3140	0.314	0.81	0.791	47	28.4	0.60	0.599		1.76	40	0.227	0.274	1.00	66	1.515	
4000	3500	0.49	3680	0.368	0.75	0.816	60	37.3	0.62	0.613		1.7	70	0.412	0.290	1.00	80	1.250	
4000	3525	0.39	2710	0.271	0.69	0.799	73	37.7	0.52	0.602		1.09	50	0.459	0.360	1.00	88	1.136	
4000	3550	0.3	2820	0.282	0.94	0.792	38	26.2	0.69	0.593		1.87	40	0.214	0.369	0.75	46	1.630	
4000	3575	0.31	2490	0.249	0.80	0.818	41	23.7	0.58	0.627		1.64	80	0.488	0.344	0.25	44	0.568	
4000	3600	0.22	1700	0.170	0.77	0.828	32	17.95	0.56	0.644		1.82	50	0.275	0.335	0.25	34	0.735	
4000	3625	0.21	1850	0.185	0.88	0.782	21	16.55	0.79	0.620		1.77	50	0.282	0.386	0.25	28	0.893	
4000	3650	0.32	2370	0.237	0.74	0.770	46	27.7	0.60	0.599		1.69	70	0.414	0.331	1.00	46	2.174	
4000	3675	0.33	2350	0.235	0.71	0.804	46	26.2	0.57	0.626		1.49	70	0.470	0.391	2.25	98	2.296	
4000	3700	0.44	3270	0.327	0.74	0.801	54	25.7	0.48	0.622		1.87	40	0.214	0.391	1.75	84	2.083	
4000	3725	0.19	1790	0.179	0.94	0.809	20	13.85	0.69	0.606		0.87	50	0.575	0.376	0.75	14	5.357	
4000	3750	0.32	2770	0.277	0.87	0.802	31	23.9	0.77	0.596		3.21	90	0.280	0.371	0.50	32	1.563	
4000	3775	0.3	2340	0.234	0.78	0.746	39	20.3	0.52	0.586		2.35	80	0.340	0.486	0.25	44	0.568	
4000	3800	0.27	1840	0.184	0.68	0.722	37	19.25	0.52	0.569		1.34	60	0.448	0.437	0.25	50	0.500	
4000	3850	0.08	370	0.037	0.46	0.658	12	5.1	0.43	0.501		2.03	160	0.788	0.440	0.25	18	1.389	
4000	3875	0.25	2050	0.205	0.82	0.679	47	28.7	0.61	0.544		2.45	80	0.327	0.443	0.25	36	0.694	
4000	3900	0.41	2240	0.224	0.55	0.706	57	24.5	0.43	0.559		2.01	60	0.299	0.440	2.00	132	1.515	
4000	3925	0.54	4790	0.479	0.89	0.713	63	46.3	0.73	0.538		1.98	70	0.354	0.298	4.75	68	6.985	
4000	3950	0.26	2120	0.212	0.82	0.689	30	17.9	0.60	0.530		1.62	70	0.432	0.378	1.75	60	2.917	
4000	3975	0.39	1940	0.194	0.50	0.715	50	15.8	0.32	0.529		2.51	20	0.080	0.360	0.25	44	0.568	

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/	5 PT	PASTE	%	ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100	
			ppm	%			ppm	ppm					ppm	HOAC Fe/	5 PT	ppm		ppm
		HA Ca	HOAC Ca	HOAC Ca	HA CA	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG	pH	HA Fe	HOAC Fe	HA Fe*100	AVERAG	HOAC Zn	HA Zn	
4000	4000	0.29	2030	0.203	0.70	0.699	37	21.1	0.57	0.506		1.52	110	0.724	0.342	1.00	84	1.190
4000	4025	0.43	2900	0.290	0.67	0.688	40	17.05	0.43	0.506		3.75	80	0.213	0.318	0.75	38	1.974
4000	4050	0.38	3060	0.306	0.81	0.737	36	22.3	0.62	0.553		3.42	90	0.263	0.352	0.75	36	2.083
4000	4075	0.22	1680	0.168	0.76		26	15.55	0.60			2.56	80	0.313		0.25	34	0.735
4000	4100	0.19	1410	0.141	0.74		22	12.1	0.55			2.43	60	0.247		0.25	34	0.735
4400	175	6.20	49200	4.920	0.79		92	73.3	0.80			1.63	210	1.288		1.75	42	4.167
4400	200	3.22	19920	1.992	0.62		51	34.0	0.67			1.71	110	0.643		1.25	48	2.604
4400	225	3.35	23100	2.310	0.69	0.748	53	34.9	0.66	0.692		1.87	120	0.642	0.902	0.75	46	1.630
4400	250	3.11	23800	2.380	0.77	0.748	41	26.0	0.63	0.657		1.90	130	0.684	0.774	0.75	44	1.705
4400	275	4.61	40200	4.020	0.87	0.764	59	41.6	0.71	0.701		1.52	190	1.250	1.183	1.00	36	2.778
4400	300	1.92	15240	1.524	0.79	0.759	36	22.4	0.62	0.713		1.85	120	0.649	1.531	1.50	48	3.125
4400	325	7.38	51500	5.150	0.70	0.740	132	116.5	0.88	0.730		1.30	350	2.692	1.546	1.50	26	5.769
4400	350	8.19	54500	5.450	0.67	0.732	150	108.0	0.72	0.751		1.43	340	2.378	1.527	1.25	26	4.808
4400	375	3.86	25900	2.590	0.67	0.724	50	36.0	0.72	0.778		1.84	140	0.761	1.664	1.25	40	3.125
4400	400	4.88	40500	4.050	0.83	0.731	50	40.4	0.81	0.722		1.82	210	1.154	1.290	0.25	32	0.781
4400	425	5.11	38700	3.870	0.76	0.771	65	49.4	0.76	0.728		1.72	230	1.337	1.053	1.00	32	3.125
4400	450	4.64	33900	3.390	0.73	0.813	60	36.1	0.60	0.707		1.95	160	0.821	1.103	0.75	42	1.786
4400	475	4.49	38800	3.880	0.86	0.804	59	44.4	0.75	0.676		1.68	200	1.190	1.055	1.00	40	2.500
4400	500	4.29	37900	3.790	0.88	0.828	55	33.6	0.61	0.643		1.68	170	1.012	0.889	1.25	42	2.976
4400	525	5.20	40900	4.090	0.79	0.820	65	42.7	0.66	0.605		1.97	180	0.914	0.756	1.00	42	2.381
4400	550	2.43	21300	2.130	0.88	0.825	32	19.0	0.59	0.568		2.35	120	0.511	0.605	7.25	46	15.761
4400	575	0.35	2410	0.241	0.69	0.827	13	5.4	0.41	0.584		2.62	40	0.153	0.574	0.25	50	0.500
4400	600	1.54	13720	1.372	0.89	0.847	23	13.1	0.57	0.598		2.29	100	0.437	0.714	4.00	56	7.143
4400	625	4.36	38900	3.890	0.89	0.860	35	24.3	0.69	0.629	8.1	2.10	180	0.857	0.971	1.00	44	2.273
4400	650	7.93	70500	7.050	0.89	0.907	88	63.7	0.72	0.692		1.86	300	1.613	1.243	1.25	44	2.841
4400	675	8.08	75700	7.570	0.94	0.860	102	76.2	0.75	0.679		1.84	330	1.793	1.200	2.25	36	6.250
4400	700	5.86	54200	5.420	0.92	0.862	81	58.8	0.73	0.682		1.65	250	1.515	1.107	0.50	34	1.471
4400	725	0.94	6180	0.618	0.66	0.824	20	10.1	0.50	0.649		2.25	50	0.222	0.831	0.25	48	0.521
4400	750	1.26	11380	1.138	0.90	0.789	24	17.1	0.71	0.664		2.04	80	0.392	0.611	1.00	44	2.273
4400	775	0.85	5920	0.592	0.70	0.735	19	10.7	0.56	0.598		2.15	50	0.233	0.345	0.25	44	0.568
4400	800	3.07	23500	2.350	0.77	0.733	44	36.1	0.82	0.581		1.87	130	0.695	0.317	0.50	40	1.250
4400	825	0.20	1300	0.130	0.65	0.681	12	4.8	0.40	0.520		2.17	40	0.184	0.263	0.10	46	0.217
4400	850	0.21	1360	0.136	0.65	0.682	12	5.0	0.42	0.512		2.44	20	0.082	0.326	0.25	42	0.595
4400	875	0.31	2000	0.200	0.65	0.708	16	6.5	0.41	0.504		2.45	30	0.122	0.432	1.25	56	2.232
4400	900	1.61	11290	1.129	0.70	0.720	31	16.1	0.52	0.560		2.37	130	0.549	0.521	0.75	50	1.500
4400	925	4.82	43200	4.320	0.90	0.757	73	57.1	0.78	0.615		1.88	230	1.223	0.604	1.00	44	2.273
4400	950	3.42	24300	2.430	0.71	0.766	57	38.6	0.68	0.644		2.22	140	0.631	0.637	0.75	46	1.630
4400	975	2.20	18270	1.827	0.83	0.826	46	31.7	0.69	0.699		2.42	120	0.496	0.763	0.75	60	1.250
4400	1000	0.96	6630	0.663	0.69	0.797	34	18.8	0.55	0.675		2.43	70	0.288	0.724	0.25	58	0.431
4400	1025	4.73	47400	4.740	1.00	0.814	62	49.4	0.80	0.679		2.12	250	1.179	0.774	0.50	48	1.042

SOUTH EAST	LINE	STATIO	%	ICP-MS			5 PT	ppm	ICP-MS			PASTE	%	ICP-MS			5 PT	ppm	HOAC Zn/	
				HA Ca	HOAC Ca	HOAC Ca			HA Sr	HOAC Sr	HA SR			AVERAG	HA Fe	HOAC Fe				HA Fe*100
4400	1050	5.43	40900	4.090	0.75	0.792	66	43.7	0.66	0.669			2.05	210	1.024	0.805	1.00	62	1.613	
4400	1075	5.04	40100	4.010	0.80	0.815	81	56.2	0.69	0.708			1.93	170	0.881	0.960	0.25	48	0.521	
4400	1100	4.44	31800	3.180	0.72	0.744	77	49.4	0.64	0.653			1.99	130	0.653	0.776	0.25	52	0.481	
4400	1125	5.36	43200	4.320	0.81	0.751	92	68.4	0.74	0.622	8.4		1.88	200	1.064	0.599	0.25	48	0.521	
4400	1150	1.67	10850	1.085	0.65	0.772	47	24.7	0.53	0.634			2.35	60	0.255	0.599	0.10	56	0.179	
4400	1175	0.27	2130	0.213	0.79	0.788	19	9.6	0.51	0.622			2.10	30	0.143	0.571	0.10	48	0.208	
4400	1200	3.25	29200	2.920	0.90	0.820	58	43.7	0.75	0.623			1.82	160	0.879	0.557	1.00	48	2.083	
4400	1225	1.76	14070	1.407	0.80	0.839	38	22.1	0.58	0.604			2.34	120	0.513	0.567	0.10	66	0.152	
4400	1250	4.19	40400	4.040	0.96	0.820	66	49.3	0.75	0.584			2.01	200	0.995	0.563	0.25	48	0.521	
4400	1275	0.82	6110	0.611	0.75	0.791	31	13.4	0.43	0.555			2.31	70	0.303	0.523	0.25	56	0.446	
4400	1300	0.33	2280	0.228	0.69	0.796	26	10.6	0.41	0.565			2.38	30	0.126	0.535	0.25	56	0.446	
4400	1325	3.54	26700	2.670	0.75	0.749	58	35.5	0.61	0.504			2.07	140	0.676	0.387	0.25	50	0.500	
4400	1350	2.15	17800	1.780	0.83	0.719	40	25.2	0.63	0.498			2.09	120	0.574	0.350	0.25	50	0.500	
4400	1375	0.65	4710	0.471	0.72	0.723	27	12.0	0.44	0.492			2.34	60	0.256	0.358	0.25	56	0.446	
4400	1400	0.30	1790	0.179	0.60	0.735	21	8.4	0.40	0.463			2.55	30	0.118	0.268	1.25	58	2.155	
4400	1425	0.24	1710	0.171	0.71	0.780	22	8.3	0.38	0.527			2.39	40	0.167	0.439	0.25	52	0.481	
4400	1450	0.27	2200	0.220	0.81	0.815	17	8.0	0.47	0.578			2.21	50	0.226	0.447	2.25	76	2.961	
4400	1475	5.24	55100	5.510	1.05	0.902	90	85.4	0.95	0.609			1.75	250	1.429	0.470	1.00	32	3.125	
4400	1500	1.08	9740	0.974	0.90	0.924	20	14.0	0.70	0.642			2.38	70	0.294	0.478	0.25	44	0.568	
4400	1525	0.33	3400	0.340	1.03	0.921	22	12.2	0.55	0.663			2.14	50	0.234	0.495	0.75	46	1.630	
4400	1550	0.30	2460	0.246	0.82	0.858	19	10.3	0.54	0.577			2.42	50	0.207	0.225	0.75	50	1.500	
4400	1575	1.28	10270	1.027	0.80	0.817	22	12.6	0.57	0.524			1.92	60	0.313	0.189	0.10	42	0.238	
4400	1600	0.24	1770	0.177	0.74	0.759	17	8.9	0.52	0.515			2.51	20	0.080	0.233	0.25	50	0.500	
4400	1625	0.26	1810	0.181	0.70	0.744	16	7.0	0.43	0.492	7		2.67	30	0.112	0.217	0.50	60	0.833	
4400	1650	0.41	3020	0.302	0.74	0.765	19	9.7	0.51	0.489			2.42	110	0.455	0.182	3.50	98	3.571	
4400	1675	0.39	2920	0.292	0.75	0.822	16	6.8	0.43	0.545			2.41	30	0.124	0.585	1.00	60	1.667	
4400	1700	0.30	2720	0.272	0.91	0.837	21	11.7	0.56	0.565			2.16	30	0.139	0.585	1.50	62	2.419	
4400	1725	7.27	74200	7.420	1.02	0.791	74	59.2	0.80	0.516			1.48	310	2.095	0.518	0.75	36	2.083	
4400	1750	0.25	1930	0.193	0.77	0.778	17	9.1	0.54	0.530			1.76	20	0.114	0.555	0.25	46	0.543	
4400	1775	0.67	3400	0.340	0.51	0.750	42	11.0	0.26	0.539			2.58	30	0.116	0.624	0.75	60	1.250	
4400	1800	0.28	1910	0.191	0.68	0.684	36	17.9	0.50	0.496			1.93	60	0.311	0.335	1.00	64	1.563	
4400	1825	0.65	5000	0.500	0.77	0.659	66	39.8	0.60	0.491			1.86	90	0.484	0.413	5.75	246	2.337	
4400	1850	0.32	2200	0.220	0.69	0.691	57	33.3	0.58	0.529			1.23	80	0.650	0.439	7.25	232	3.125	
4400	1900	0.28	1820	0.182	0.65	0.555	48	24.5	0.51	0.430			1.19	60	0.504	0.377	2.00	282	0.709	
4400	1925	0.19	1270	0.127	0.67	0.570	18	8.2	0.45	0.432			1.63	40	0.245	0.375	0.25	40	0.625	
4400	1950																0.194	5.50	146	3.767
4400	1975	0.45	3800	0.380	0.84	0.595	49	30.0	0.61	0.407			1.68	80	0.476	0.195	1.00	66	1.515	
4400	2000	0.23	1730	0.173	0.75	0.566	22	11.6	0.53	0.370			1.93	30	0.155	0.241	0.25	58	0.431	
4400	2025	0.27	1920	0.192	0.71	0.697	28	12.4	0.44	0.474			2.10	20	0.095	0.188	6.00	100	6.000	
4400	2050	0.77	4010	0.401	0.52	0.676	96	25.9	0.27	0.469			2.44	60	0.246	0.188				

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SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	HOAC HA CA	5 PT AVERAG	ppm HA Sr	ppm HOAC Sr	HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	% HA Fe	ppm HOAC Fe	HOAC Fe/ HA Fe*100	5 PT AVERAG	ppm HOAC Zn	ppm HA Zn	
4400	2075	0.54	3540	0.354	0.66	0.662	48	24.9	0.52	0.467		2.14	50	0.234	0.219	4.00	100	4.000
4400	2100	0.38	2820	0.282	0.74	0.679	39	22.8	0.58	0.487		1.90	40	0.211	0.228	17.00	116	14.655
4400	2125	0.49	3340	0.334	0.68	0.729	52	27.1	0.52	0.552		2.26	70	0.310	0.224	2.75	134	2.052
4400	2150	0.37	2940	0.294	0.79	0.770	33	17.8	0.54	0.573	6.9	2.11	30	0.142	0.241	1.75	60	2.917
4400	2175	0.37	2860	0.286	0.77	0.820	33	19.8	0.60	0.586		1.78	40	0.225	0.271	3.50	68	5.147
4400	2200	0.31	2660	0.266	0.86	0.864	25	15.6	0.62	0.615		1.89	60	0.317	0.297	3.75	74	5.068
4400	2225	0.19	1890	0.189	0.99	0.878	17	11.0	0.65	0.638		1.67	60	0.359	0.440	2.00	48	4.167
4400	2250	0.16	1440	0.144	0.90	0.859	15	10.1	0.67	0.622		1.59	70	0.440	0.505	0.75	34	2.206
4400	2275	0.28	2420	0.242	0.86	0.859	34	22.2	0.65	0.620		1.86	160	0.860	0.471	4.75	170	2.794
4400	2300	0.20	1360	0.136	0.68	0.794	37	19.2	0.52	0.609		1.10	60	0.545	0.464	0.50	68	0.735
4400	2325	0.26	2220	0.222	0.85	0.781	25	15.3	0.61	0.593		2.02	30	0.149	0.417	1.50	40	3.750
4400	2350	0.20	1340	0.134	0.67	0.758	20	11.9	0.59	0.573		1.53	50	0.327	0.289	1.25	40	3.125
4400	2375	0.29	2430	0.243	0.84	0.770	26	15.4	0.59	0.602		1.95	40	0.205	0.231	2.75	44	6.250
4400	2400	0.29	2170	0.217	0.75	0.765	31	17.2	0.55	0.610		1.81	40	0.221	0.240	1.50	54	2.778
4400	2425	0.25	1850	0.185	0.74	0.794	25	16.6	0.66	0.614		1.97	50	0.254	0.204	1.25	40	3.125
4400	2450	0.34	2810	0.281	0.83	0.795	35	22.7	0.65	0.617		2.05	40	0.195	0.193	2.75	64	4.297
4400	2475	0.27	2210	0.221	0.82	0.782	33	20.3	0.62	0.601		2.05	30	0.146	0.300	0.50	34	1.471
4400	2500	0.29	2440	0.244	0.84	0.775	30	18.1	0.60	0.579		1.99	30	0.151	0.297	1.75	64	2.734
4400	2525	0.23	1570	0.157	0.68	0.764	29	13.8	0.48	0.566		1.19	90	0.756	0.335	2.25	106	2.123
4400	2550	0.27	1910	0.191	0.71	0.772	31	17.1	0.55	0.589		1.70	40	0.235	0.392	1.00	54	1.852
4400	2575	0.34	2620	0.262	0.77	0.793	36	21.0	0.58	0.616		1.56	60	0.385	0.471	1.25	56	2.232
4400	2600	0.25	2140	0.214	0.86	0.826	33	24.2	0.73	0.652		1.62	70	0.432	0.463	2.50	80	3.125
4400	2625	0.26	2460	0.246	0.95	0.848	29	21.4	0.74	0.679		1.47	80	0.544	0.481	1.75	158	1.108
4400	2675	0.25	2130	0.213	0.85	0.851	32	21.0	0.66	0.697	6.5	1.25	90	0.720	0.438	5.50	92	5.978
4400	2700	0.28	2280	0.228	0.81	0.816	28	19.1	0.68	0.663		1.85	60	0.324	0.451	2.75	58	4.741
4400	2725	0.33	2600	0.260	0.79	0.764	38	25.6	0.67	0.620		1.76	30	0.170	0.417	3.00	126	2.381
4400	2775	0.29	1970	0.197	0.68	0.749	32	18.0	0.56	0.617		1.61	80	0.497	0.353	0.75	36	2.083
4400	2800	0.28	1920	0.192	0.69	0.733	28	14.7	0.52	0.583		1.88	70	0.372	0.321	0.75	60	1.250
4400	2825	0.49	3810	0.381	0.78	0.755	51	32.7	0.64	0.602		1.74	70	0.402	0.340	1.50	114	1.316
4400	2875	0.24	1760	0.176	0.73	0.782	30	15.5	0.52	0.617		1.86	30	0.161	0.264	0.75	70	1.071
4400	2900	0.32	2880	0.288	0.90	0.814	33	25.4	0.77	0.647		1.50	40	0.267	0.284	2.50	48	5.208
4400	2925	0.32	2600	0.260	0.81	0.797	35	22.2	0.63	0.638		2.56	30	0.117	0.311	1.50	62	2.419
4400	2950	0.30	2540	0.254	0.85	0.822	36	24.3	0.68	0.682		1.70	80	0.471	0.346	3.75	102	3.676
4400	3000	0.26	1800	0.180	0.69	0.789	38	22.6	0.59	0.652		1.49	80	0.537	0.339	0.50	50	1.000
4400	3025	0.25	2150	0.215	0.86	0.778	33	24.3	0.74	0.655		1.47	50	0.340	0.399	2.75	58	4.741
4400	3050	0.32	2350	0.235	0.73	0.723	23	14.3	0.62	0.624		4.35	100	0.230	0.366	1.25	50	2.500
4400	3075	0.34	2570	0.257	0.76	0.755	31	20.1	0.65	0.661		2.62	110	0.420	0.299	1.00	42	2.381
4400	3100	0.19	1090	0.109	0.57	0.716	23	11.9	0.52	0.629		1.65	50	0.303	0.358	0.25	42	0.595
4400	3125	0.30	2550	0.255	0.85	0.700	35	27.3	0.78	0.614		2.49	50	0.201	0.373	2.50	44	5.682
4400	3150	0.22	1460	0.146	0.66	0.704	33	19.1	0.58	0.627		1.26	80	0.635	0.347	0.50	50	1.000

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SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS		5 PT AVERAG	PASTE pH	ICP-MS		5 PT AVERAG	ICP-MS		ppm HA Zn	HOAC Zn/ HA Zn*100
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Ca			ppm HOAC Sr	ppm HOAC Sr			ppm HOAC Fe	ppm HOAC Fe		% HOAC Fe/100	ppm AVERAG		
4400	3175	0.32	2100	0.210	0.66	0.735	33	18.0	0.55	0.659		2.30	70	0.304	0.318	0.25	44	0.568
4400	3200	0.28	2170	0.217	0.78	0.726	45	32.1	0.71	0.655		1.37	40	0.292	0.346	4.00	100	4.000
4400	3225	0.25	1820	0.182	0.73	0.752	27	18.4	0.68	0.682		2.50	40	0.160	0.331	0.75	48	1.563
4400	3250	0.26	2100	0.210	0.81	0.768	25	18.9	0.76	0.694	6.4	2.07	70	0.338	0.291	0.75	46	1.630
4400	3275	0.35	2780	0.278	0.79	0.767	42	30.1	0.72	0.664		1.43	80	0.559	0.270	1.75	52	3.365
4400	3300	0.29	2130	0.213	0.73	0.742	32	19.3	0.60	0.635		2.85	30	0.105	0.360	1.00	52	1.923
4400	3325	0.30	2310	0.231	0.77	0.721	28	15.9	0.57	0.612		2.16	40	0.185	0.492	1.75	48	3.646
4400	3350	0.25	1510	0.151	0.60	0.703	34	18.1	0.53	0.604		1.31	80	0.611	0.428	0.50	88	0.568
4400	3375	0.23	1620	0.162	0.70	0.709	30	19.3	0.64	0.595		1.20	120	1.000	0.432	0.75	60	1.250
4400	3400	0.21	1470	0.147	0.70	0.674	20	13.6	0.68	0.578		1.69	40	0.237	0.561	0.25	24	1.042
4400	3450	0.18	1380	0.138	0.77	0.699	21	11.7	0.56	0.595		1.60	20	0.125	0.522	0.75	40	1.875
4400	3475	0.20	1190	0.119	0.60	0.717	26	12.5	0.48	0.602		1.08	90	0.833	0.353	0.25	54	0.463
4400	3500	0.25	1820	0.182	0.73	0.757	35	21.7	0.62	0.621		1.68	70	0.417	0.421	1.75	66	2.652
4400	3525	0.29	2310	0.231	0.80	0.758	31	21.0	0.68	0.642		1.95	30	0.154	0.455	1.25	52	2.404
4400	3550	0.36	3230	0.323	0.90	0.778	44	33.9	0.77	0.658		1.39	80	0.576	0.447	1.50	74	2.027
4400	3575	0.28	2170	0.217	0.78	0.783	32	21.2	0.66	0.672		1.70	50	0.294	0.458	1.75	58	3.017
4400	3600	0.23	1600	0.160	0.70	0.749	33	18.6	0.56	0.634		1.26	100	0.794	0.499	4.25	136	3.125
4400	3650	0.20	1500	0.150	0.75	0.733	33	22.7	0.69	0.602		1.48	70	0.473	0.448	0.50	38	1.316
4400	3675	0.24	1510	0.151	0.63	0.759	30	14.6	0.49	0.616		1.94	70	0.361	0.469	0.75	60	1.250
4400	3700	0.27	2200	0.220	0.81	0.780	34	20.9	0.61	0.632		1.58	50	0.316	0.434	1.00	42	2.381
4400	3725	0.23	2080	0.208	0.90	0.788	33	24.1	0.73	0.613		2.48	100	0.403	0.554	0.50	36	1.389
4400	3750	0.22	1760	0.176	0.80	0.832	23	14.8	0.64	0.659		1.78	110	0.618	0.635	0.75	34	2.206
4400	3775	0.17	1350	0.135	0.79	0.847	24	14.3	0.59	0.687		1.49	160	1.074	0.732	0.25	38	0.658
4400	3875	0.35	2970	0.297	0.85	0.817	45	32.0	0.71	0.681	6.5	1.05	80	0.762	0.760	3.75	122	3.074
4400	4000	0.36	3190	0.319	0.89		50	37.9	0.76			1.62	130	0.802		2.50	76	3.289
4400	4100	0.28	2120	0.212	0.76		44	30.8	0.70			1.66	90	0.542		0.75	52	1.442
4800	300	9.97	74900	7.490	0.75		195	146.0	0.75			1.27	310	2.441		1.75	32	5.469
4800	325	2.19	15850	1.585	0.72		44	28.5	0.65			1.91	90	0.471		1.00	50	2.000
4800	350	3.71	27000	2.700	0.73	0.723	72	52.5	0.73	0.675		1.62	130	0.802	0.996	3.00	46	6.522
4800	375	2.89	21000	2.100	0.73	0.692	55	36.7	0.67	0.648		1.66	100	0.602	0.603	1.75	46	3.804
4800	400	3.22	22000	2.200	0.68	0.692	58	33.7	0.58	0.662		1.51	100	0.662	0.916	1.00	48	2.083
4800	425	3.17	19020	1.902	0.60	0.682	54	33.3	0.62	0.672		1.68	80	0.476	1.111	1.75	60	2.917
4800	500	7.97	57600	5.760	0.72	0.653	149	106.5	0.71	0.610		1.62	330	2.037	1.016	0.75	34	2.206
4800	525	7.58	51300	5.130	0.68	0.641	153	119.0	0.78	0.580		1.69	300	1.775	0.921	0.75	34	2.206
4800	550	0.45	2620	0.262	0.58	0.700	16	5.8	0.36	0.570		2.34	30	0.128	0.886	0.10	52	0.192
4800	575	0.98	6120	0.612	0.62	0.671	26	11.3	0.43	0.493		2.10	40	0.190	0.496	0.10	46	0.217
4800	600	0.80	7150	0.715	0.89	0.707	19	10.8	0.57	0.493		2.02	60	0.297	0.526	0.25	44	0.568
4800	625	0.19	1100	0.110	0.58	0.753	12	4.0	0.33	0.574		2.20	20	0.091	0.714	0.25	48	0.521
4800	650	7.46	63900	6.390	0.86	0.798	134	104.0	0.78	0.622		1.56	300	1.923	1.129	0.75	32	2.344
4800	675	5.06	41100	4.110	0.81	0.790	73	55.9	0.77	0.650		1.87	200	1.070	1.190	0.10	36	0.278

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		HOAC Fe/ HA Fe*100	5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%			ppm	ppm					ppm	ppm			ppm	ppm	
4800	700	8.14	68900	6.890	0.85	0.807	146	98.5	0.67	0.667		1.37	310	2.263	1.211	0.25	26	0.962	
4800	725	2.37	20300	2.030	0.86	0.777	40	28.1	0.70	0.649		1.82	110	0.604	0.975	0.10	38	0.263	
4800	750	0.14	930	0.093	0.66	0.784	10	4.2	0.42	0.632		2.03	40	0.197	0.858	0.10	42	0.238	
4800	775	2.93	20600	2.060	0.70	0.770	40	27.5	0.69	0.622		1.62	120	0.741	0.500	0.50	38	1.316	
4800	800	1.73	14710	1.471	0.85	0.738	28	19.0	0.68	0.569	7.9	1.86	90	0.484	0.416	0.10	42	0.238	
4800	825	1.64	12700	1.270	0.77	0.734	30	18.8	0.63	0.572		1.90	90	0.474	0.413	0.25	44	0.568	
4800	850	0.30	2090	0.209	0.70	0.729	17	7.4	0.44	0.531		2.19	40	0.183	0.281	0.10	46	0.217	
4800	875	0.24	1550	0.155	0.65	0.681	17	7.4	0.43	0.488		2.17	40	0.184	0.193	0.25	50	0.500	
4800	900	0.22	1490	0.149	0.68	0.684	17	8.2	0.48	0.474		2.46	20	0.081	0.138	0.10	62	0.161	
4800	925	0.21	1280	0.128	0.61	0.715	18	8.4	0.46	0.554		2.37	10	0.042	0.338	0.10	56	0.179	
4800	950	0.37	2920	0.292	0.79	0.734	20	11.1	0.56	0.567		2.53	50	0.198	0.309	0.50	68	0.735	
4800	975	5.03	42900	4.290	0.85	0.778	70	58.5	0.84	0.589		1.94	230	1.186	0.351	0.75	50	1.500	
4800	1000	0.24	1780	0.178	0.74	0.818	16	8.0	0.50	0.621		2.69	10	0.037	0.441	0.10	58	0.172	
4800	1025	1.34	12000	1.200	0.90	0.815	28	16.6	0.59	0.655		2.39	70	0.293	0.595	0.10	54	0.185	
4800	1050	3.01	24400	2.440	0.81	0.833	43	27.0	0.63	0.631		2.44	120	0.492	0.492	0.10	52	0.192	
4800	1075	5.70	44100	4.410	0.77	0.845	89	64.6	0.73	0.667		1.96	190	0.969	0.692	0.25	52	0.481	
4800	1100	3.26	30700	3.070	0.94	0.832	64	45.5	0.71	0.694		1.80	120	0.667	0.821	0.25	50	0.500	
4800	1125	5.23	42000	4.200	0.80	0.823	85	57.7	0.68	0.683		1.73	180	1.040	0.806	0.50	48	1.042	
4800	1150	5.27	43700	4.370	0.83	0.815	112	81.4	0.73	0.653		1.71	160	0.936	0.690	0.25	46	0.543	
4800	1175	3.12	24000	2.400	0.77	0.800	63	36.1	0.57	0.657		2.15	90	0.419	0.709	0.10	56	0.179	
4800	1200	2.73	19930	1.993	0.73	0.799	60	34.6	0.58	0.609		2.07	80	0.386	0.570	0.25	58	0.446	
4800	1225	4.11	35600	3.560	0.87	0.794	71	51.9	0.73	0.602		2.09	160	0.766	0.511	0.50	54	0.926	
4800	1250	1.03	8230	0.823	0.80	0.787	28	12.2	0.44	0.580		2.33	80	0.343	0.450	0.25	70	0.357	
4800	1275	3.10	24900	2.490	0.80	0.797	61	42.4	0.70	0.579		2.03	130	0.640	0.435	0.75	54	1.389	
4800	1300	0.34	2500	0.250	0.74	0.767	21	9.7	0.46	0.508	7.7	2.59	30	0.116	0.324	0.10	52	0.192	
4800	1325	1.83	14260	1.426	0.78	0.748	33	19.0	0.58	0.504		2.26	70	0.310	0.278	0.10	52	0.192	
4800	1350	0.63	4540	0.454	0.72	0.762	18	6.7	0.37	0.484		2.37	50	0.211	0.213	0.10	54	0.185	
4800	1375	0.38	2660	0.266	0.70	0.762	18	7.5	0.42	0.488		2.70	30	0.111	0.237	0.10	52	0.192	
4800	1400	1.64	14320	1.432	0.87	0.770	18	10.7	0.59	0.550		2.20	70	0.318	0.614	0.10	52	0.192	
4800	1425	1.17	8600	0.860	0.74	0.751	27	13.1	0.48	0.545		2.11	50	0.237	0.579	0.10	42	0.238	
4800	1450	8.90	73200	7.320	0.82	0.769	144	127.5	0.89	0.550		1.46	320	2.192	0.580	1.00	34	2.941	
4800	1475	0.29	1810	0.181	0.62	0.756	20	7.0	0.35	0.516		2.58	10	0.039	0.531	0.10	52	0.192	
4800	1500	0.37	2930	0.293	0.79	0.788	19	8.4	0.44	0.565		2.58	30	0.116	0.611	0.10	60	0.167	
4800	1525	0.25	2010	0.201	0.80	0.784	18	7.7	0.43	0.492		2.74	20	0.073	0.180	1.00	60	1.667	
4800	1550	3.52	31600	3.160	0.90	0.836	47	34.3	0.73	0.527		2.04	130	0.637	0.205	1.00	52	1.923	
4800	1575	0.30	2400	0.240	0.80	0.850	18	9.4	0.52	0.556		2.72	10	0.037	0.262	0.10	58	0.172	
4800	1600	0.56	4970	0.497	0.89	0.864	16	8.4	0.52	0.584		2.46	40	0.163	0.308	0.10	48	0.208	
4800	1625	1.72	14810	1.481	0.86	0.818	18	10.6	0.59	0.526		2.26	90	0.398	0.203	0.10	46	0.217	
4800	1650	2.08	18210	1.821	0.88	0.840	22	12.4	0.56	0.519		2.29	70	0.306	0.210	0.10	48	0.208	
4800	1675	0.48	3200	0.320	0.67	0.830	15	6.6	0.44	0.520		2.73	30	0.110	0.222	0.10	54	0.185	

Paul-Mike Soil Geochemistry

SOUTH LINE	EAST STATIO	ICP-MS		ICP-MS		HOAC HA CA	5 PT AVERAG	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100	
		% HA Ca	ppm HOAC Ca	% HOAC Ca	ppm HOAC Sr			ppm HOAC Sr	% HA Fe				ppm HOAC Fe	ppm HOAC Fe*100	ppm HOAC Zn	ppm HA Zn		
4800	1700	0.27	2460	0.246	0.91	0.842	18	8.8	0.49	0.499		2.75	20	0.073	0.191	0.25	56	0.446
4800	1725	0.24	2010	0.201	0.84	0.804	15	7.9	0.53	0.475		2.23	50	0.224	0.155	1.00	92	1.087
4800	1750	0.34	3120	0.312	0.92	0.789	27	13.1	0.48	0.485		2.45	60	0.245	0.157	0.50	56	0.893
4800	1775	0.47	3240	0.324	0.69	0.725	15	6.6	0.44	0.493		2.41	30	0.124	0.214	0.25	48	0.521
4800	1800	0.56	3300	0.330	0.59	0.704	17	8.3	0.49	0.510	5.7	2.48	30	0.121	0.233	3.25	96	3.385
4800	1825	0.30	1780	0.178	0.59	0.659	28	14.8	0.53	0.529		1.98	70	0.354	0.230	1.00	84	1.190
4800	1850	0.35	2550	0.255	0.73	0.661	37	22.5	0.61	0.548		1.87	60	0.321	0.278	0.75	58	1.293
4800	1875	0.21	1460	0.146	0.70	0.682	26	15.1	0.58	0.567		2.16	50	0.231	0.306	0.75	48	1.563
4800	1900	0.21	1470	0.147	0.70	0.730	27	14.5	0.54	0.580		1.94	70	0.361	0.295	0.75	52	1.442
4800	1925	0.20	1390	0.139	0.70	0.753	24	14.0	0.58	0.587		1.90	50	0.263	0.326	1.00	44	2.273
4800	1950	0.21	1750	0.175	0.83	0.783	24	14.3	0.59	0.590		1.67	50	0.299	0.300	2.25	82	2.744
4800	1975	0.23	1930	0.193	0.84	0.775	27	17.4	0.64	0.587		1.68	80	0.476	0.279	1.25	48	2.604
4800	2000	0.22	1870	0.187	0.85	0.784	20	12.0	0.60	0.589		2.04	20	0.098	0.259	0.10	26	0.385
4800	2025	0.35	2310	0.231	0.66	0.765	33	17.1	0.52	0.579		1.94	50	0.258	0.238	2.00	80	2.500
4800	2050	0.35	2580	0.258	0.74	0.716	38	22.5	0.59	0.548		1.86	30	0.161	0.164	2.00	60	3.333
4800	2075	0.24	1770	0.177	0.74	0.705	22	12.0	0.55	0.559		1.52	30	0.197	0.190	0.10	20	0.500
4800	2100	0.15	890	0.089	0.59	0.716	16	7.9	0.49	0.571		1.87	20	0.107	0.267	0.25	30	0.833
4800	2125	0.24	1910	0.191	0.80	0.691	24	15.7	0.65	0.574		1.76	40	0.227	0.344	2.00	50	4.000
4800	2150	0.20	1430	0.143	0.71	0.705	30	17.2	0.57	0.606		1.40	90	0.643	0.430	3.00	90	3.333
4800	2175	0.17	1040	0.104	0.61	0.729	25	15.2	0.61	0.635		1.65	90	0.545	0.442	0.75	44	1.705
4800	2200	0.24	1940	0.194	0.81	0.717	26	18.4	0.71	0.616		1.27	80	0.630	0.454	0.25	18	1.389
4800	2275	0.62	4420	0.442	0.71	0.713	56	35.5	0.63	0.602		1.80	30	0.167	0.342	0.75	32	2.344
4800	2300	0.37	2730	0.273	0.74	0.722	44	24.7	0.56	0.597		1.06	30	0.283	0.287	0.10	46	0.217
4800	2325	0.18	1250	0.125	0.69	0.693	16	8.1	0.50	0.564		1.17	10	0.085	0.248	0.75	20	3.750
4800	2425	0.45	2950	0.295	0.66	0.691	48	27.9	0.58	0.562	5.6	1.12	30	0.268	0.303	0.10	24	0.417
4800	2450	0.26	1730	0.173	0.67	0.678	35	19.0	0.54	0.574		1.83	80	0.437	0.279	0.75	46	1.630
4800	2475	0.27	1900	0.190	0.70	0.686	32	20.0	0.63	0.598		1.82	80	0.440	0.336	0.50	70	0.714
4800	2500	0.23	1540	0.154	0.67	0.682	27	16.8	0.62	0.593		1.84	30	0.163	0.476	0.25	36	0.694
4800	2525	0.29	2140	0.214	0.74	0.694	47	29.3	0.62	0.629		1.88	70	0.372	0.484	0.50	66	0.758
4800	2550	0.22	1390	0.139	0.63	0.697	25	13.9	0.55	0.612		1.86	180	0.968	0.428	1.50	136	1.103
4800	2600	0.16	1160	0.116	0.73	0.716	22	15.9	0.72	0.618		1.68	80	0.476	0.482	0.10	30	0.333
4800	2625	0.43	3090	0.309	0.72	0.714	42	22.7	0.54	0.607		2.49	40	0.161	0.491	0.50	42	1.190
4800	2650	0.35	2680	0.268	0.77	0.719	45	29.3	0.65	0.606		1.62	70	0.432	0.375	0.25	74	0.338
4800	2675	0.26	1890	0.189	0.73	0.700	37	21.1	0.57	0.567		1.67	70	0.419	0.466	1.50	90	1.667
4800	2700	0.69	4560	0.456	0.66	0.721	80	43.8	0.55	0.581		1.56	60	0.385	0.535	7.50	142	5.282
4800	2750	0.30	1880	0.188	0.63	0.691	39	20.5	0.53	0.548		1.61	150	0.932	0.526	1.75	98	1.786
4800	2775	0.45	3720	0.372	0.83	0.697	57	34.9	0.61	0.550		1.77	90	0.508	0.525	0.75	80	0.938
4800	2850	0.32	1960	0.196	0.61	0.743	58	28.1	0.48	0.600		1.55	60	0.387	0.483	0.75	110	0.682
4800	2875	0.19	1440	0.144	0.76	0.766	31	18.1	0.58	0.616		1.93	80	0.415	0.329	3.25	60	5.417
4800	2900	0.23	2050	0.205	0.89	0.744	30	23.8	0.79	0.610		1.73	30	0.173	0.377	0.50	30	1.667

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/ HA SR	5 PT AVERAG	PASTE pH	%	ICP-MS		5 PT AVERAG	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%			ppm	ppm					ppm	ppm		ppm	ppm	
		HA Ca	HOAC Ca	HOAC Ca	HA Ca	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG		HA Fe	HOAC Fe/ HA Fe*100	AVERAG	HOAC Zn	HA Zn	HA Zn*100	
4800	2950	0.28	2070	0.207	0.74	0.792	37	22.4	0.61	0.631		1.87	30	0.160	0.322	0.25	56	0.446
4800	2975	0.30	2160	0.216	0.72	0.801	39	22.7	0.58	0.650		1.47	110	0.748	0.345	1.50	56	2.679
4800	3000	0.26	2220	0.222	0.85	0.795	31	18.4	0.59	0.634		2.64	30	0.114	0.394	0.10	34	0.294
4800	3025	0.24	1920	0.192	0.80	0.799	34	23.0	0.68	0.646		1.70	90	0.529	0.390	0.10	38	0.263
4800	3050	0.30	2590	0.259	0.86	0.805	31	22.1	0.71	0.666	6.4	2.40	100	0.417	0.288	2.00	58	3.448
4800	3075	0.35	2660	0.266	0.76	0.796	36	23.9	0.66	0.657		2.82	40	0.142	0.295	0.50	48	1.042
4800	3100	0.30	2250	0.225	0.75	0.759	26	17.8	0.68	0.625		2.92	70	0.240	0.218	1.00	36	2.778
4800	3125	0.49	3950	0.395	0.81	0.720	41	22.5	0.55	0.604		3.38	50	0.148	0.167	0.25	34	0.735
4800	3150	0.41	2520	0.252	0.61	0.715	50	25.7	0.51	0.609		2.10	30	0.143	0.205	0.75	90	0.833
4800	3175	0.37	2480	0.248	0.67	0.704	54	32.9	0.61	0.614		1.85	30	0.162	0.218	0.75	76	0.987
4800	3200	0.39	2860	0.286	0.73	0.690	59	40.5	0.69	0.630		1.80	60	0.333	0.284	0.75	80	0.938
4800	3225	0.30	2090	0.209	0.70	0.684	69	49.1	0.71	0.652		1.98	60	0.303	0.276	0.25	50	0.500
4800	3275	0.43	3170	0.317	0.74	0.666	47	29.6	0.63	0.645		3.15	150	0.476	0.298	1.00	132	0.758
4800	3300	0.69	4010	0.401	0.58	0.653	43	26.8	0.62	0.620		4.80	50	0.104	0.314	0.25	52	0.481
4800	3325	0.29	1690	0.169	0.58	0.628	32	18.4	0.57	0.594		2.18	60	0.275	0.361	0.25	44	0.568
4800	3350	0.32	2130	0.213	0.67	0.613	40	22.5	0.56	0.609		2.19	90	0.411	0.327	0.50	74	0.676
4800	3375	0.18	1030	0.103	0.57	0.615	29	16.9	0.58	0.587		1.48	80	0.541	0.446	1.00	46	2.174
4800	3400	0.36	2390	0.239	0.66	0.617	32	22.5	0.70	0.579		2.63	80	0.304	0.465	1.00	48	2.083
4800	3425	0.20	1180	0.118	0.59	0.628	34	17.6	0.52	0.579		1.72	120	0.698	0.472	1.00	60	1.667
4800	3450	0.33	1950	0.195	0.59	0.690	40	21.2	0.53	0.606		2.15	80	0.372	0.416	0.25	64	0.391
4800	3475	0.46	3320	0.332	0.72	0.731	52	29.3	0.56	0.626		1.79	80	0.447	0.394	3.00	194	1.546
4800	3500	0.41	3630	0.363	0.89	0.747	47	33.8	0.72	0.643		1.92	50	0.260	0.334	0.50	80	0.625
4800	3525	0.29	2510	0.251	0.87	0.744	37	29.7	0.80	0.667		2.06	40	0.194	0.377	0.75	38	1.974
4800	3550	0.40	2680	0.268	0.67	0.771	66	39.6	0.60	0.698		1.51	60	0.397	0.330	1.00	60	1.667
4800	3575	0.24	1380	0.138	0.58	0.766	48	31.2	0.65	0.691	6.2	1.36	80	0.588	0.338	0.75	54	1.389
4800	3675	0.39	3350	0.335	0.86	0.753	57	41.0	0.72	0.657	6.8	1.91	40	0.209	0.330	1.25	78	1.603
4800	3700	0.44	3790	0.379	0.86	0.787	59	40.2	0.68	0.671	6.2	1.66	50	0.301	0.285	1.00	44	2.273
4800	3725	0.34	2720	0.272	0.80	0.828	59	37.4	0.63	0.682	6.7	3.20	50	0.156	0.190	0.25	56	0.446
4800	3750	0.44	3690	0.369	0.84	0.800	60	40.2	0.67	0.667	5.8	2.96	50	0.169	0.245	3.00	86	3.488
4800	3775	0.45	3520	0.352	0.78	0.733	64	45.0	0.70	0.635	6.8	3.54	40	0.113	0.324	3.50	84	4.167
4800	3800	0.30	2160	0.216	0.72	0.692	36	23.2	0.64	0.621	6.1	1.44	70	0.486	0.387	0.25	52	0.481
4800	3825	0.18	940	0.094	0.52	0.643	29	15.2	0.52	0.606	6.3	2.01	140	0.697	0.497	0.10	58	0.172
4800	3850	0.30	1790	0.179	0.60	0.618	54	30.6	0.57	0.590	6.3	1.06	50	0.472	0.513	0.25	38	0.658
4800	3875	0.29	1720	0.172	0.59		45	26.6	0.59		6.6	1.95	140	0.718		1.00	98	1.020
4800	3950	0.44	2900	0.290	0.66		67	42.0	0.63		8.1	1.55	30	0.194		3.25	118	2.754
5200	200	7.82	68600	6.860	0.88		254	226.0	0.89			2.29	300	1.310		1.25	76	1.645
5200	225	6.08	43200	4.320	0.71		142	106.0	0.75			2.41	210	0.871		3.50	84	4.167
5200	250	4.54	30400	3.040	0.67	0.714	86	60.5	0.70	0.766		2.61	140	0.536	1.648	1.50	90	1.667
5200	275	9.60	63800	6.380	0.66	0.667	201	155.0	0.77	0.730		1.34	410	3.060	1.807	1.00	26	3.846
5200	300	10.05	65300	6.530	0.65	0.649	171	123.0	0.72	0.703		1.42	350	2.465	2.068	1.00	26	3.846



SOUTH EAST LINE	STATIO	ICP-MS		ICP-MS		HOAC	5 PT AVERAG	ICP-MS		5 PT AVERAG	PASTE pH	%	ICP-MS		ICP-MS		HOAC Zn/ HA Zn*100	
		% HA Ca	ppm Ca	% HOAC Ca	ppm Ca			ppm Sr	ppm Sr				HOAC Fe/ HA Fe*100	ppm Fe	ppm Zn	ppm Zn		
5200	325	9.96	64000	6.400	0.64	0.639	151	107.5	0.71	0.715		1.38	290	2.101	2.232	1.50	28	5.357
5200	350	9.94	61700	6.170	0.62	0.638	142	86.8	0.61	0.669		1.47	320	2.177	1.753	1.25	30	4.167
5200	375	7.15	44200	4.420	0.62	0.644	106	80.7	0.76	0.641		1.77	240	1.356	1.349	0.75	36	2.083
5200	400	3.25	21400	2.140	0.66	0.647	40	21.6	0.54	0.633		1.80	120	0.667	1.070	0.25	38	0.658
5200	425	2.11	14360	1.436	0.68	0.686	33	19.1	0.58	0.647		1.81	80	0.442	0.797	0.25	38	0.658
5200	450	3.67	24200	2.420	0.66	0.708	58	39.2	0.68	0.599		1.69	120	0.710	0.610	1.50	42	3.571
5200	475	3.55	28900	2.890	0.81	0.712	46	31.3	0.68	0.626		1.73	140	0.809	0.740	1.25	42	2.976
5200	500	1.04	7540	0.754	0.73	0.716	22	11.4	0.52	0.618		2.14	90	0.421	0.724	0.50	58	0.862
5200	525	7.47	50700	5.070	0.68	0.722	84	56.7	0.68	0.568		1.67	220	1.317	0.615	1.25	40	3.125
5200	550	1.60	11220	1.122	0.70	0.685	30	16.2	0.54	0.543		1.93	70	0.363	0.506	0.75	42	1.786
5200	575	0.22	1520	0.152	0.69	0.697	13	5.6	0.43	0.546		2.42	40	0.165	0.453	1.00	46	2.174
5200	600	1.08	6770	0.677	0.63	0.720	18	10.0	0.55	0.576		2.28	60	0.263	0.481	1.00	56	1.786
5200	625	0.35	2760	0.276	0.79	0.700	14	7.5	0.54	0.550		2.55	40	0.157	0.449	0.50	74	0.676
5200	650	6.63	52700	5.270	0.79	0.671	101	83.4	0.83	0.576		1.85	270	1.459	0.476	1.75	40	4.375
5200	675	0.28	1680	0.168	0.60	0.666	16	6.6	0.41	0.618	7.6	2.02	40	0.198	0.570	0.25	44	0.568
5200	700	1.30	7090	0.709	0.55	0.639	28	15.6	0.56	0.608		1.97	60	0.305	0.548	0.75	36	2.083
5200	725	3.64	21900	2.190	0.60	0.611	53	40.5	0.76	0.535		1.91	140	0.733	0.265	0.75	38	1.974
5200	750	0.20	1310	0.131	0.66	0.591	16	7.8	0.49	0.524		2.24	10	0.045	0.234	0.25	48	0.521
5200	775	0.22	1440	0.144	0.65	0.576	15	6.9	0.46	0.474		2.24	10	0.045	0.182	1.50	62	2.419
5200	800	0.23	1150	0.115	0.50	0.568	18	6.4	0.35	0.402		2.20	10	0.045	0.063	0.25	50	0.500
5200	825	0.28	1310	0.131	0.47	0.547	15	4.6	0.31	0.382		2.37	10	0.042	0.078	0.50	42	1.190
5200	850	0.37	2080	0.208	0.56	0.564	19	7.7	0.40	0.449		2.15	30	0.140	0.262	0.25	46	0.543
5200	875	0.35	1920	0.192	0.55	0.604	14	5.5	0.39	0.507		2.53	30	0.119	0.368	0.50	54	0.926
5200	900	4.98	36800	3.680	0.74	0.647	61	48.5	0.80	0.598		1.97	190	0.964	0.543	2.25	44	5.114
5200	925	3.30	23100	2.310	0.70	0.665	48	30.9	0.64	0.672		2.09	120	0.574	0.863	1.50	58	2.586
5200	950	5.40	36900	3.690	0.68	0.688	61	46.4	0.76	0.752		1.96	180	0.918	1.166	1.00	46	2.174
5200	975	10.80	70900	7.090	0.66	0.669	113	86.9	0.77	0.699		1.84	320	1.739	1.006	1.00	38	2.632
5200	1000	7.60	50300	5.030	0.66	0.678	106	83.9	0.79	0.724		1.59	260	1.635	1.046	1.00	36	2.778
5200	1025	0.53	3400	0.340	0.64	0.652	27	14.3	0.53	0.722		2.45	40	0.163	1.029	0.75	52	1.442
5200	1050	4.05	30200	3.020	0.75	0.655	62	47.8	0.77	0.667		2.20	170	0.773	0.705	1.00	52	1.923
5200	1075	4.76	26300	2.630	0.55	0.633	86	64.3	0.75	0.596		2.04	170	0.833	0.400	0.75	42	1.786
5200	1100	0.21	1410	0.141	0.67	0.624	17	8.5	0.50	0.588		2.48	30	0.121	0.412	0.25	48	0.521
5200	1125	0.24	1330	0.133	0.55	0.606	18	7.8	0.43	0.543		2.72	30	0.110	0.280	1.00	68	1.471
5200	1150	0.38	2270	0.227	0.60	0.635	21	10.3	0.49	0.514		2.72	60	0.221	0.161	0.50	54	0.926
5200	1175	0.25	1640	0.164	0.66	0.629	21	11.5	0.55	0.504	7.5	2.61	30	0.115	0.175	0.75	56	1.339
5200	1200	1.13	7840	0.784	0.69	0.658	27	16.3	0.60	0.523		2.50	60	0.240	0.178	0.75	62	1.210
5200	1225	0.44	2840	0.284	0.65	0.698	15	6.7	0.44	0.576		2.61	50	0.192	0.343	0.50	56	0.893
5200	1250	0.26	1810	0.181	0.70	0.696	19	10.1	0.53	0.570		2.40	30	0.125	0.345	0.25	44	0.568
5200	1275	3.99	31900	3.190	0.80	0.710	54	40.7	0.75	0.568		1.82	190	1.044	0.331	1.00	42	2.381
5200	1300	0.19	1230	0.123	0.65	0.709	16	8.3	0.52	0.571		2.44	30	0.123	0.325	0.50	56	0.893

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SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/ HA SR	5 PT	PASTE pH	%	ICP-MS		5 PT	ICP-MS		HOAC Zn/ HA Zn*100
			ppm	%			ppm	ppm					ppm	HOAC Fe/ HA Fe*100		ppm	ppm	
		HA Ca	HOAC Ca	HOAC Ca	HA CA	AVERAG	HA Sr	HOAC Sr	HA SR	AVERAG		HA Fe	HOAC Fe	HA Fe*100	AVERAG	HOAC Zn	HA Zn	HA Zn*100
5200	1325	0.34	2590	0.259	0.76	0.719	24	14.3	0.59	0.592		2.35	40	0.170	0.407	0.25	42	0.595
5200	1350	0.76	4860	0.486	0.64	0.683	17	7.9	0.46	0.529		2.42	40	0.165	0.223	0.25	54	0.463
5200	1375	2.83	21100	2.110	0.75	0.698	39	24.8	0.64	0.569		2.26	120	0.531	0.354	0.50	48	1.042
5200	1400	0.35	2180	0.218	0.62	0.703	18	7.9	0.44	0.555		2.36	30	0.127	0.345	0.75	66	1.136
5200	1425	3.63	26100	2.610	0.72	0.712	49	35.0	0.71	0.598		1.80	140	0.778	0.359	0.75	44	1.705
5200	1450	0.23	1810	0.181	0.79	0.692	16	8.4	0.53	0.579		2.44	30	0.123	0.274	1.00	64	1.563
5200	1475	1.03	7050	0.705	0.68	0.689	22	14.9	0.68	0.588		2.53	60	0.237	0.256	0.75	46	1.630
5200	1500	0.33	2130	0.213	0.65	0.633	16	8.7	0.54	0.540		2.82	30	0.106	0.131	0.75	60	1.250
5200	1525	0.38	2310	0.231	0.61	0.596	16	7.8	0.49	0.527		2.91	10	0.034	0.129	0.25	52	0.481
5200	1550	0.66	2920	0.292	0.44	0.587	14	6.6	0.47	0.543		2.59	40	0.154	0.187	1.00	54	1.852
500	1575	0.37	2210	0.221	0.60	0.591	18	8.3	0.46	0.527		2.63	30	0.114	0.189	0.75	64	1.172
5200	1600	4.05	25900	2.590	0.64	0.633	49	37.0	0.76	0.540		1.90	100	0.526	0.190	0.75	46	1.630
5200	1625	0.36	2400	0.240	0.67	0.656	14	6.5	0.46	0.527		2.59	30	0.116	0.184	0.50	58	0.862
5200	1650	0.30	2460	0.246	0.82	0.671	15	8.3	0.55	0.524		2.58	10	0.039	0.184	0.75	54	1.389
5200	1675	0.38	2110	0.211	0.56	0.668	13	5.3	0.41	0.526	6.8	2.43	30	0.123	0.527	0.10	56	0.179
5200	1700	0.32	2150	0.215	0.67	0.634	17	7.6	0.45	0.508		2.57	30	0.117	0.585	1.00	86	1.163
5200	1725	9.77	61300	6.130	0.63	0.598	112	85.6	0.76	0.483		1.16	260	2.241	0.593	1.25	30	4.167
5200	1750	0.25	1240	0.124	0.50	0.626	31	11.6	0.37	0.492		1.74	70	0.402	0.593	0.75	66	1.136
5200	1775	0.28	1790	0.179	0.64	0.621	18	7.6	0.42	0.485		2.52	20	0.079	0.577	0.75	68	1.103
5200	1800	0.24	1670	0.167	0.70	0.641	16	7.3	0.46	0.414		2.40	30	0.125	0.144	1.50	68	2.206
5200	1825	0.34	2200	0.220	0.65	0.683	15	6.2	0.41	0.426		2.64	10	0.038	0.080	0.75	78	0.962
5200	1850	0.25	1820	0.182	0.73	0.682	15	6.1	0.41	0.432		2.58	20	0.078	0.082	1.25	74	1.689
5200	1875	0.26	1830	0.183	0.70	0.634	18	7.8	0.43	0.450		2.47	20	0.081	0.090	0.75	74	1.014
5200	1900	0.30	1910	0.191	0.64	0.660	14	6.4	0.45	0.465		2.25	20	0.089	0.100	1.25	66	1.894
5200	1925	0.72	3280	0.328	0.46	0.672	13	7.1	0.55	0.484		2.46	40	0.163	0.093	1.50	80	1.875
5200	1950	0.23	1790	0.179	0.78	0.668	16	7.8	0.49	0.501		2.26	20	0.088	0.103	1.25	80	1.563
5200	1975	0.19	1490	0.149	0.78	0.681	13	6.5	0.50	0.509		2.38	10	0.042	0.124	0.25	46	0.543
5200	2000	0.38	2600	0.260	0.68	0.731	10	5.2	0.52	0.496		2.28	30	0.132	0.113	1.50	68	2.206
5200	2025	0.22	1550	0.155	0.70	0.718	21	10.3	0.49	0.500		2.07	40	0.193	0.132	1.25	64	1.953
5200	2050	0.36	2540	0.254	0.71	0.694	19	9.2	0.48	0.506		2.72	30	0.110	0.185	0.25	46	0.543
5200	2075	0.22	1570	0.157	0.71	0.693	22	11.1	0.50	0.501		2.16	40	0.185	0.197	1.50	66	2.273
5200	2100	0.30	1990	0.199	0.66	0.719	27	14.4	0.53	0.512		1.65	50	0.303	0.177	3.25	98	3.316
5200	2125	0.18	1220	0.122	0.68	0.676	14	6.9	0.49	0.495	6.2	2.06	40	0.194	0.245	1.00	42	2.381
5200	2125	0.25	2090	0.209	0.84	0.634	18	9.9	0.55	0.476		2.11	20	0.095	0.333	0.25	38	0.658
5200	2150	0.24	1170	0.117	0.49	0.643	31	12.4	0.40	0.491		1.57	70	0.446	0.366	0.75	70	1.071
5200	2175	0.20	1010	0.101	0.51	0.638	23	9.4	0.41	0.505	5.8	1.44	90	0.625	0.372	1.00	66	1.515
5200	2200	0.27	1920	0.192	0.71	0.603	30	18.2	0.61	0.517		1.49	70	0.470	0.406	2.25	92	2.446
5200	2225	0.30	1950	0.195	0.65	0.645	28	15.8	0.56	0.565		1.80	40	0.222	0.350	3.75	122	3.074
5200	2250	0.27	1780	0.178	0.66	0.695	35	21.4	0.61	0.620		2.24	60	0.268	0.276	1.25	66	1.894
5200	2275	0.32	2240	0.224	0.70	0.693	35	22.3	0.64	0.633		2.40	40	0.167	0.223	1.25	70	1.786

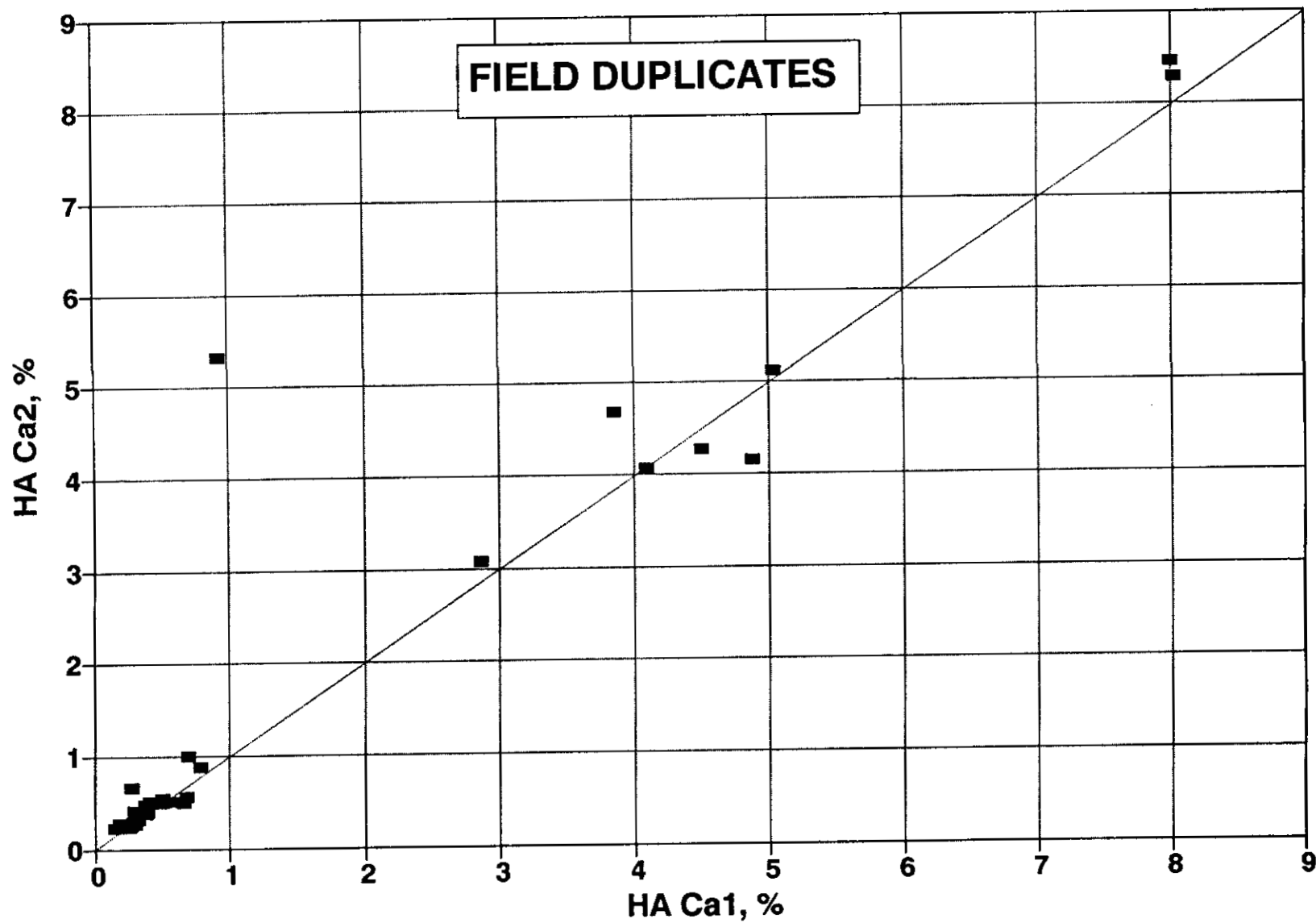
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			ppm	%				ppm	HA SR/ HA SR				ppm	HOAC Fe/ HA Fe*100	ppm	HOAC Zn			
5200	2300	0.28	2110	0.211	0.75	0.691	35	23.8	0.68	0.623		1.19	30	0.252	0.264	2.25	76	2.961	
5200	2325	0.26	1820	0.182	0.70	0.664	35	23.5	0.67	0.592		1.45	30	0.207	0.241	1.75	72	2.431	
5200	2350	0.48	3080	0.308	0.64	0.661	64	33.0	0.52	0.575		1.40	60	0.429	0.246	4.25	148	2.872	
5200	2375	0.15	790	0.079	0.53	0.641	14	6.4	0.45	0.548		1.98	30	0.152	0.238	1.00	34	2.941	
5200	2400	0.27	1840	0.184	0.68	0.636	35	19.4	0.55	0.540		2.12	40	0.189	0.216	1.50	52	2.885	
5200	2425	0.23	1510	0.151	0.66	0.633	28	15.3	0.54	0.547		1.88	40	0.213	0.204	3.25	62	5.242	
5200	2450	0.29	1950	0.195	0.67	0.617	30	18.9	0.63	0.537		2.07	20	0.097	0.263	1.00	32	3.125	
5200	2475	0.32	2010	0.201	0.63	0.590	34	18.8	0.55	0.540		1.63	60	0.368	0.294	3.75	116	3.233	
5200	2500	0.19	850	0.085	0.45	0.580	28	11.3	0.40	0.550		1.34	60	0.448	0.291	0.50	42	1.190	
5200	2525	0.30	1630	0.163	0.54	0.568	39	22.3	0.57	0.530		2.33	80	0.343	0.315	3.75	62	6.048	
5200	2550	0.27	1640	0.164	0.61	0.576	38	22.5	0.59	0.543		2.51	50	0.199	0.273	1.25	66	1.894	
5200	2575	0.23	1410	0.141	0.61	0.640	24	12.8	0.53	0.586		1.83	40	0.219	0.207	0.75	36	2.083	
5200	2600	0.24	1600	0.160	0.67	0.667	30	18.5	0.62	0.600		1.91	30	0.157	0.215	0.75	50	1.500	
5200	2625	0.24	1850	0.185	0.77	0.688	30	18.6	0.62	0.600		2.56	30	0.117	0.233	0.50	44	1.136	
5200	2650	0.24	1630	0.163	0.68	0.729	35	22.3	0.64	0.633		1.83	70	0.383	0.213	1.00	44	2.273	
5200	2675	0.25	1780	0.178	0.71	0.722	32	19.0	0.59	0.614	6.5	1.37	40	0.292	0.240	1.50	58	2.586	
5200	2700	0.26	2120	0.212	0.82	0.687	26	18.3	0.70	0.591		2.61	30	0.115	0.246	1.25	44	2.841	
5200	2725	0.35	2220	0.222	0.63	0.682	38	19.7	0.52	0.574		2.75	80	0.291	0.204	4.50	94	4.787	
5200	2750	0.28	1670	0.167	0.60	0.665	28	14.2	0.51	0.558		3.30	50	0.152	0.184	0.75	76	0.987	
5200	2775	0.27	1760	0.176	0.65	0.604	30	16.5	0.55	0.471		2.92	50	0.171	0.183	0.75	58	1.293	
5200	2800	0.41	2570	0.257	0.63	0.600	36	18.5	0.51	0.479		2.58	50	0.194	0.181	1.25	86	1.453	
5200	2825	0.48	2460	0.246	0.51	0.615	67	18.0	0.27	0.494		3.69	40	0.108	0.192	1.25	78	1.603	
5200	2850	0.32	1960	0.196	0.61	0.638	36	20.1	0.56	0.520		1.43	40	0.280	0.198	1.50	44	3.409	
5200	2875	0.29	1950	0.195	0.67	0.641	30	17.5	0.58	0.523		2.42	50	0.207	0.196	2.25	56	4.018	
5200	2900	0.25	1910	0.191	0.76	0.678	32	21.8	0.68	0.587		2.99	60	0.201	0.179	1.25	48	2.604	
5200	2925	0.34	2180	0.218	0.64	0.708	39	20.6	0.53	0.608		2.71	50	0.185	0.144	0.25	86	0.291	
5200	2950	0.21	1470	0.147	0.70	0.690	20	11.7	0.59	0.596		4.24	10	0.024	0.158	1.00	56	1.786	
5200	2975	0.36	2740	0.274	0.76	0.664	36	23.9	0.66	0.578		2.84	30	0.106	0.221	1.25	56	2.232	
5200	3000	0.28	1640	0.164	0.59	0.688	36	18.8	0.52	0.610		2.88	80	0.278	0.236	1.00	78	1.282	
5200	3025	0.22	1390	0.139	0.63	0.698	35	20.6	0.59	0.614		1.36	70	0.515	0.287	0.75	52	1.442	
5200	3050	0.37	2820	0.282	0.76	0.700	45	31.0	0.69	0.609		2.34	60	0.256	0.284	1.25	58	2.155	
5200	3075	0.30	2250	0.225	0.75	0.728	34	20.7	0.61	0.625		2.83	80	0.283	0.295	1.25	90	1.389	
5200	3100	0.24	1850	0.185	0.77	0.754	27	17.2	0.64	0.647		3.40	30	0.088	0.282	0.75	50	1.500	
5200	3125	0.31	2250	0.225	0.73	0.715	36	21.6	0.60	0.618		3.00	100	0.333	0.290	1.50	94	1.596	
5200	3150	0.19	1450	0.145	0.76	0.726	27	19.0	0.70	0.633		2.22	100	0.450	0.281	0.75	48	1.563	
5200	3175	0.18	1020	0.102	0.57	0.693	26	14.2	0.54	0.586	6.4	1.69	50	0.296	0.287	0.25	28	0.893	
5200	3200	0.23	1850	0.185	0.80	0.694	24	16.4	0.68	0.567		2.10	50	0.238	0.251	1.50	42	3.571	
5200	3225	0.21	1270	0.127	0.60	0.675	28	11.2	0.40	0.530		2.57	30	0.117	0.168	0.75	36	2.083	
5200	3250	0.26	1900	0.190	0.73	0.709	28	14.2	0.51	0.545		2.64	40	0.152	0.126	0.25	32	0.781	
5200	3275	0.34	2280	0.228	0.67	0.701	44	22.7	0.52	0.530		2.78	10	0.036	0.132	0.75	52	1.442	

## Paul-Mike Soil Geochemistry

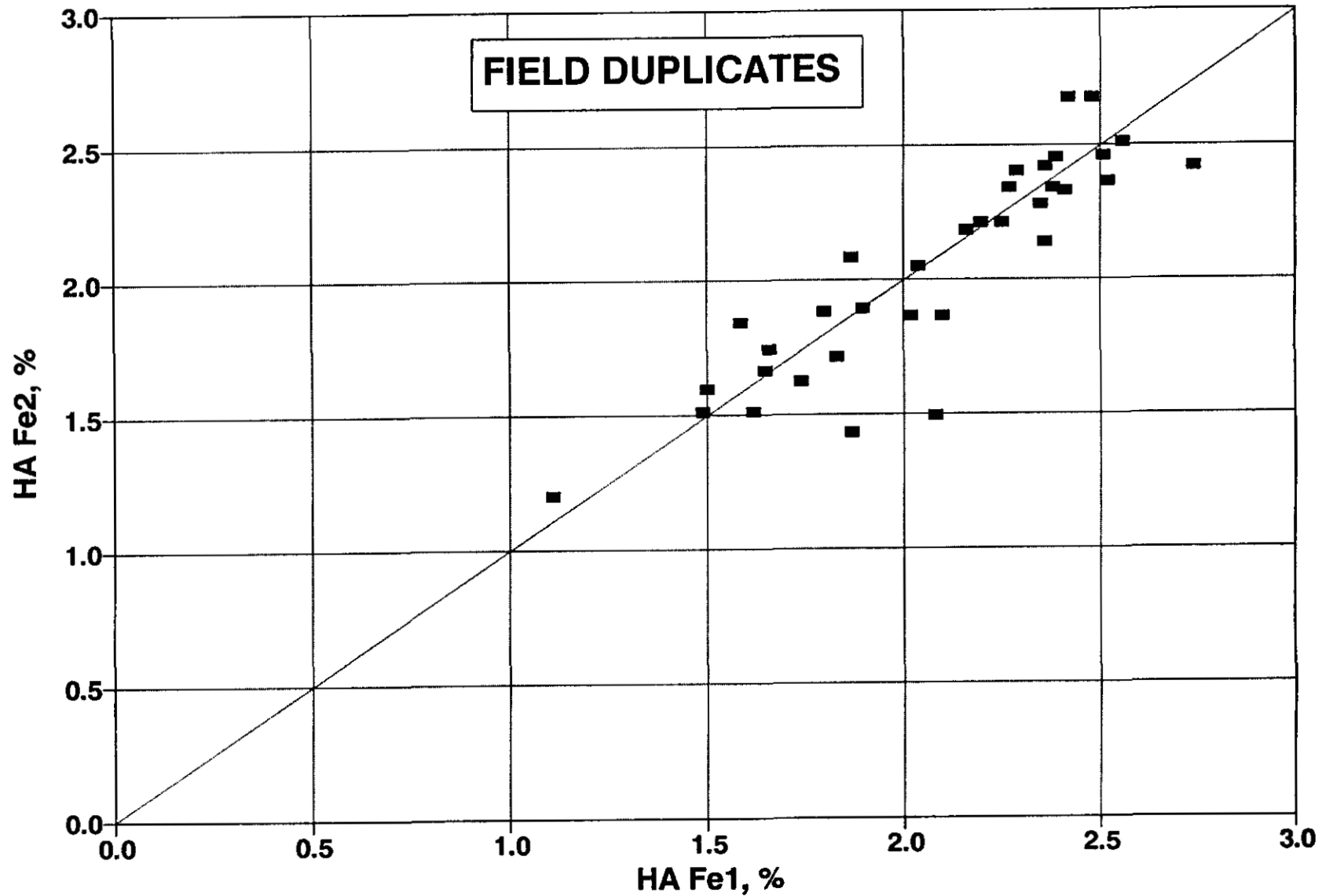
SOUTH LINE	EAST STATIO	%	ICP-MS		HOAC	5 PT	ICP-MS		HOAC SR/ HA SR	5 PT	PASTE pH	%	ICP-MS		HOAC Fe/ HA Fe*100	5 PT	ICP-MS		ppm HA Zn	HOAC Zn/ HA Zn*100
			ppm	%			ppm	ppm					ppm	ppm			ppm	ppm		
5200	3300	0.42	3080	0.308	0.73	0.745	45	27.9	0.62	0.588		2.30	20	0.087	0.155	4.25	94	4.521		
5200	3325	0.14	1070	0.107	0.76	0.715	17	10.4	0.61	0.601		1.87	50	0.267	0.348	0.50	32	1.563		
5200	3350	0.25	2070	0.207	0.83	0.712	29	20.0	0.69	0.631		1.73	40	0.231	0.404	0.75	62	1.210		
5200	3375	0.15	870	0.087	0.58	0.707	30	17.2	0.57	0.651		1.34	150	1.119	0.446	2.25	154	1.461		
5200	3400	0.38	2480	0.248	0.65	0.667	35	23.2	0.66	0.635		2.22	70	0.315	0.498	2.25	82	2.744		
5200	3425	0.26	1850	0.185	0.71	0.622	24	17.3	0.72	0.618		2.01	60	0.299	0.499	0.75	38	1.974		
5200	3450	0.23	1290	0.129	0.56	0.615	37	19.6	0.53	0.641		1.52	80	0.526	0.408	1.00	78	1.282		
5200	3475	0.29	1750	0.175	0.60	0.613	24	14.6	0.61	0.624		2.13	50	0.235	0.448	0.75	30	2.500		
5200	3500	0.17	930	0.093	0.55	0.585	17	11.7	0.69	0.599		2.41	160	0.664	0.582	0.50	48	1.042		
5200	3525	0.22	1410	0.141	0.64	0.616	34	19.6	0.58	0.629		1.94	100	0.515	0.596	0.75	54	1.389		
5200	3550	0.23	1320	0.132	0.57	0.621	41	24.4	0.60	0.623		1.24	120	0.968	0.651	2.00	78	2.564		
5200	3575	0.27	1930	0.193	0.71	0.654	44	29.9	0.68	0.621		1.84	110	0.598	0.590	1.00	66	1.515		
5200	3600	0.23	1450	0.145	0.63	0.648	34	19.7	0.58	0.625		1.96	100	0.510	0.644	2.00	58	3.448		
5200	3625	0.24	1700	0.170	0.71	0.713	34	23.0	0.68	0.676		1.67	60	0.359	0.534	0.75	50	1.500		
5200	3650	0.19	1160	0.116	0.61	0.671	30	17.9	0.60	0.649		1.27	100	0.787	0.539	0.75	40	1.875		
5200	3675	0.12	1080	0.108	0.90	0.688	16	13.6	0.85	0.673	6.1	1.45	60	0.414	0.562	0.50	28	1.786		
5200	3700	0.18	910	0.091	0.51	0.700	31	16.8	0.54	0.676		1.44	90	0.625	0.560	0.25	34	0.735		
5200	3725	0.22	1570	0.157	0.71	0.700	31	21.7	0.70	0.675		1.60	100	0.625	0.550	1.00	56	1.786		
5200	3750	0.21	1620	0.162	0.77	0.630	28	19.5	0.69	0.604		2.00	70	0.350	0.554	0.75	52	1.442		
5200	3775	0.26	1590	0.159	0.61	0.663	41	24.2	0.59	0.567		1.77	130	0.734	4.121	1.25	68	1.838		
5200	3800	0.22	1210	0.121	0.55	0.670	30	14.8	0.49	0.558		1.38	60	0.435	4.060	1.00	38	2.632		
5200	3825	15.00	100000	10.000	0.67	0.671	1135	405.0	0.36	0.557		0.26	480	18.462	4.037	0.50	8	6.250		
5200	3900	0.48	3600	0.360	0.75	0.708	59	38.7	0.66	0.597		2.19	70	0.320	4.073	2.25	68	3.309		
5200	3925	0.65	5050	0.505	0.78	0.732	75	51.5	0.69	0.632		2.15	50	0.233	4.104	2.25	76	2.961		
5200	3950	0.20	1590	0.159	0.80	0.729	26	20.6	0.79	0.684		1.31	120	0.916	0.554	2.25	74	3.041		
5200	3975	0.68	4580	0.458	0.67	0.713	98	65.4	0.67	0.662		1.53	90	0.588	0.525	3.25	126	2.579		
5200	4025	0.32	2080	0.208	0.65	0.677	51	31.4	0.62	0.643		1.54	110	0.714	0.640	5.00	126	3.968		
5200	4075	0.40	2670	0.267	0.67		55	30.2	0.55			2.27	40	0.176		1.25	56	2.232		
5200	4100	0.27	1620	0.162	0.60		41	24.2	0.59			1.49	120	0.805		1.25	82	1.524		

APPENDIX 2  
Field Duplicate Analysis

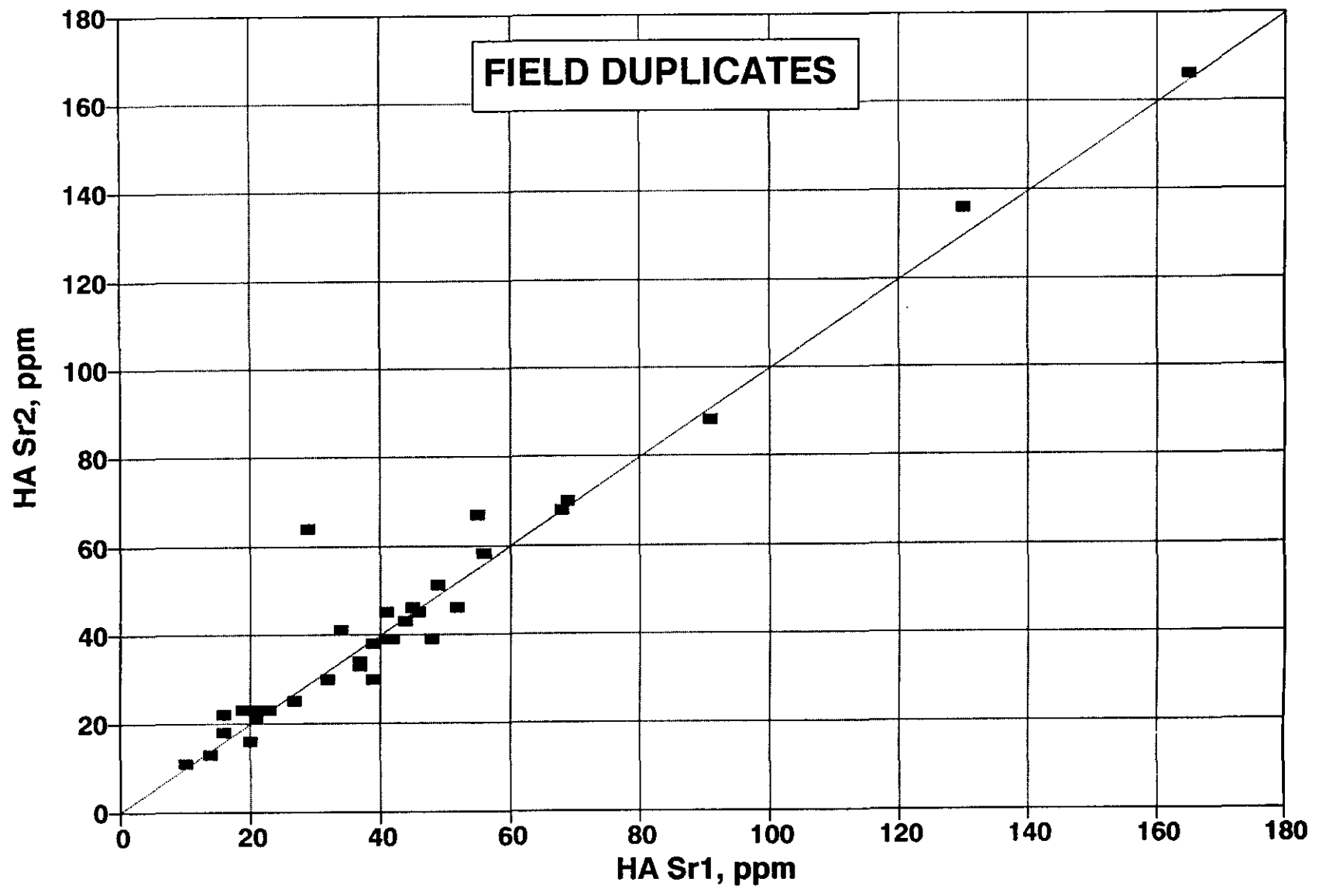
**DIAMET MINERALS INC.  
PAUL-MIKE SOIL GEOCHEMISTRY**



**DIAMET MINERALS INC.  
PAUL-MIKE SOIL GEOCHEMISTRY**

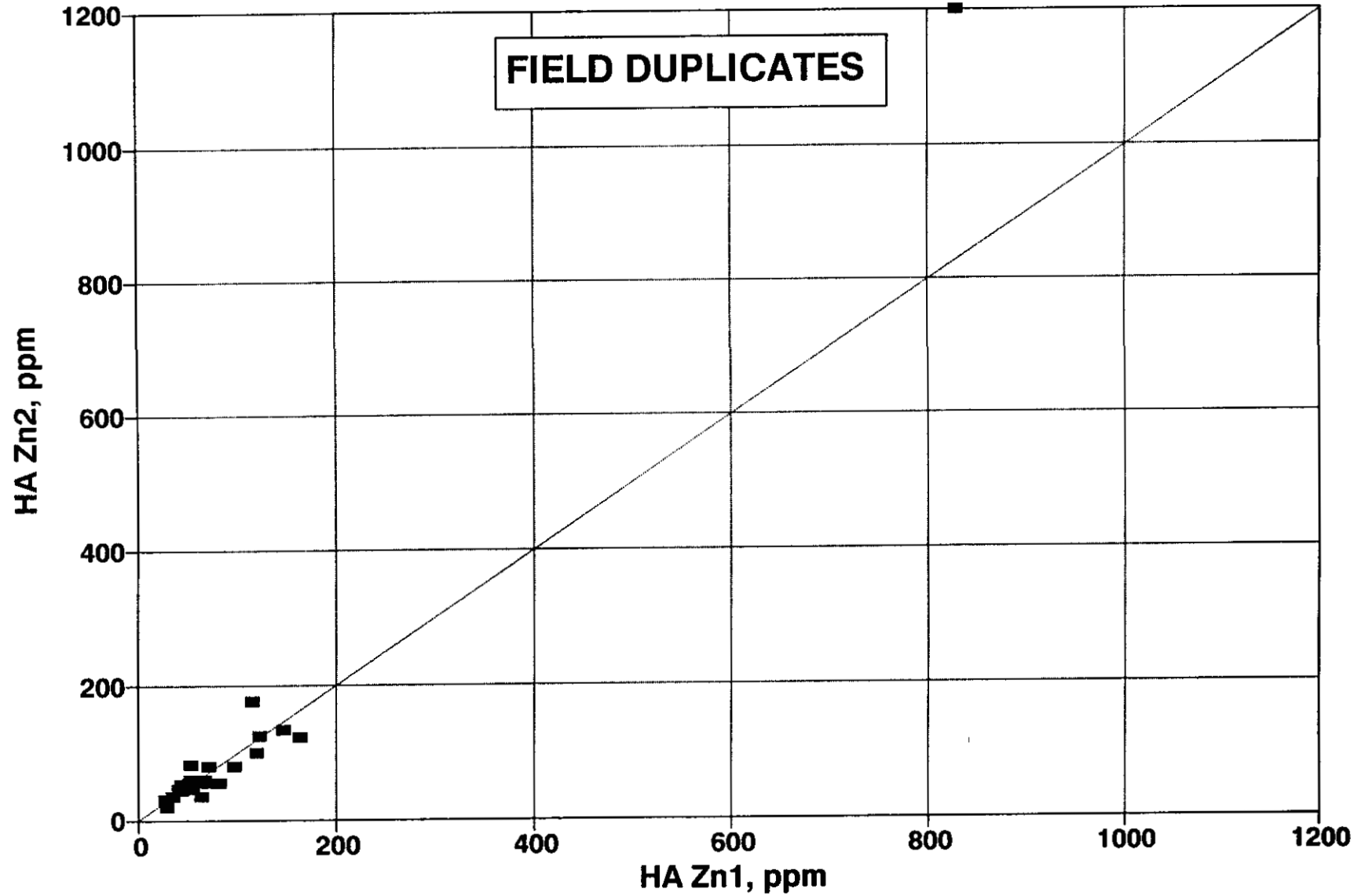


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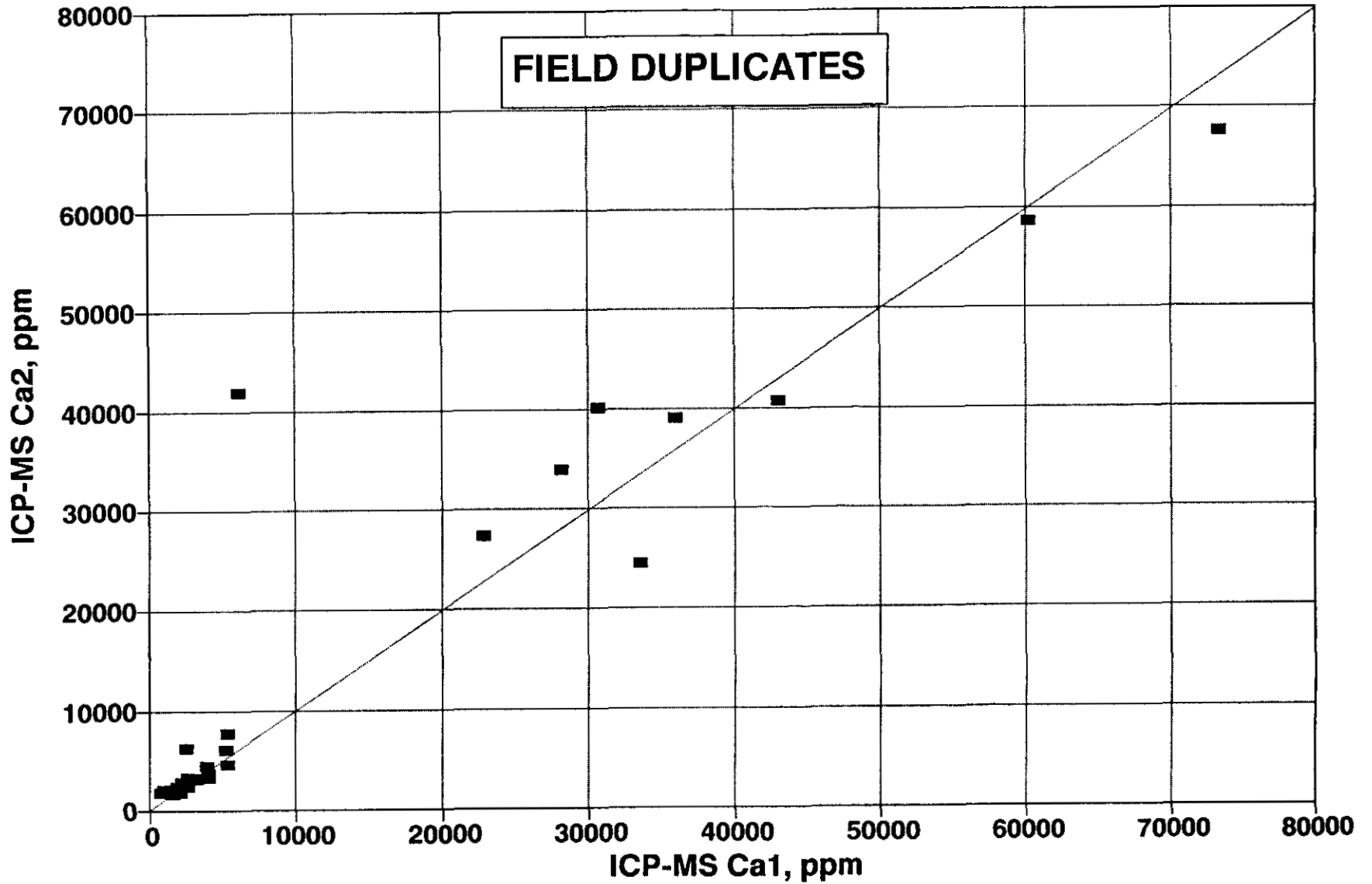




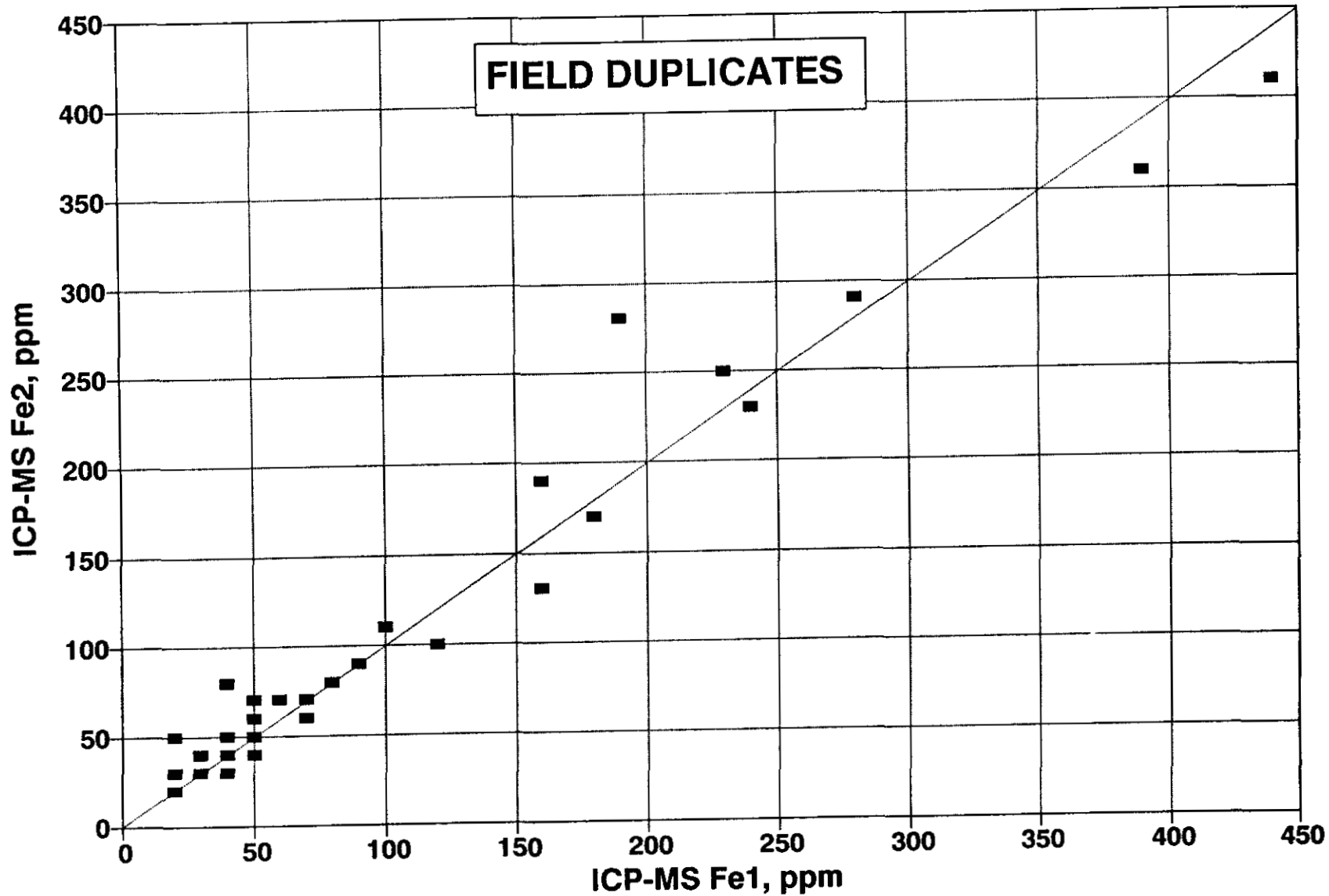
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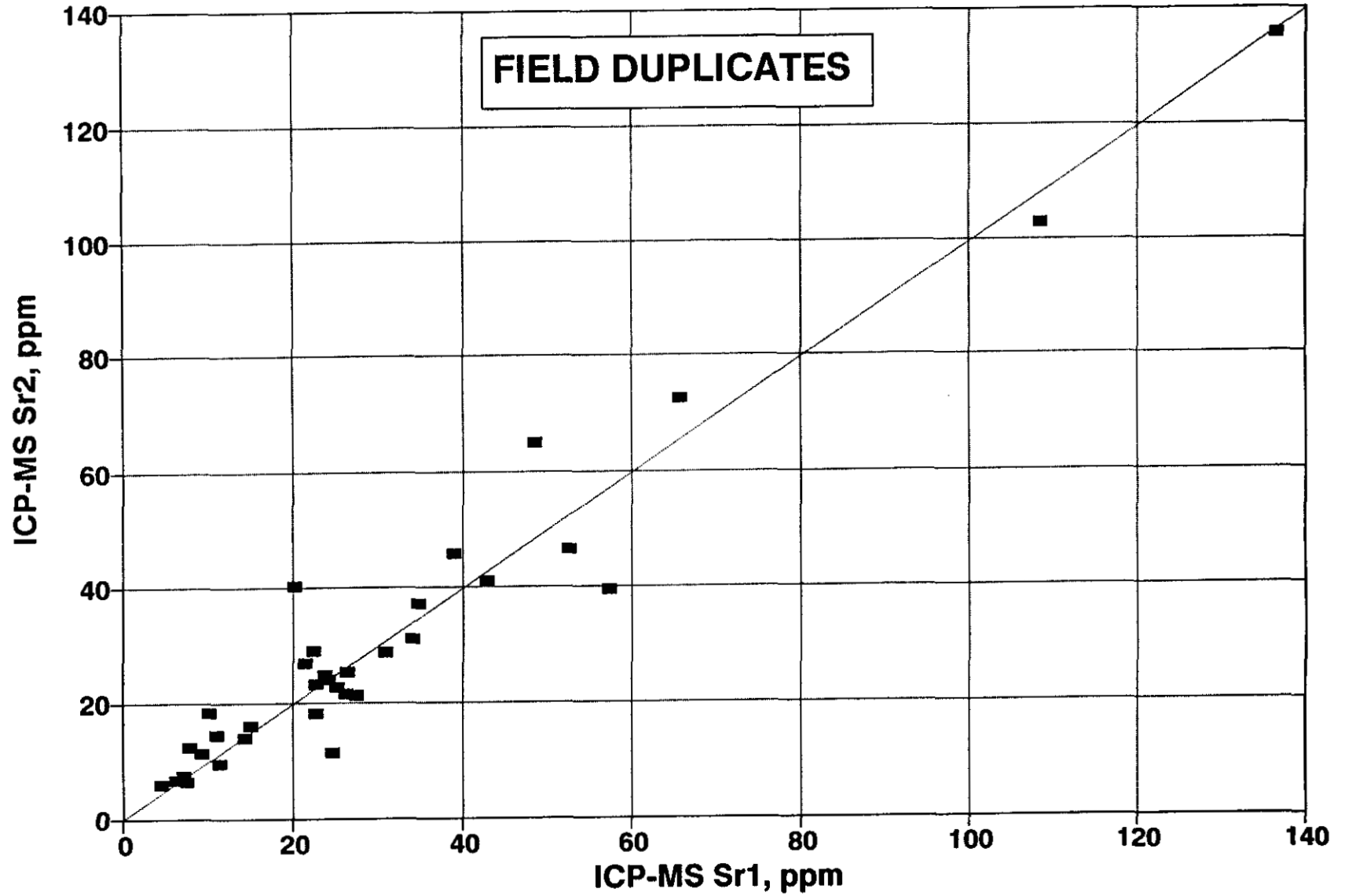
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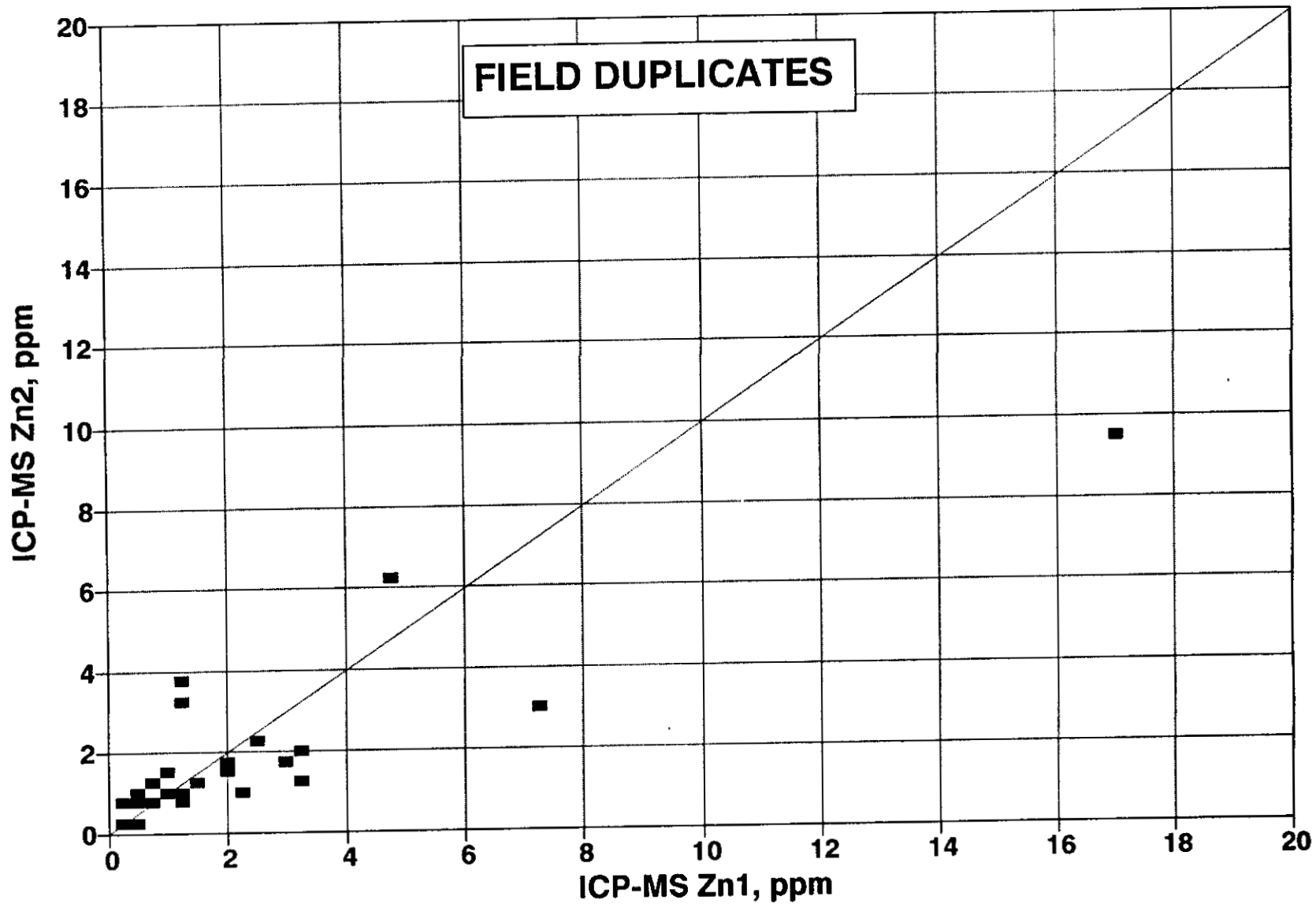
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PAUL-MIKE SOIL GEOCHEMISTRY**



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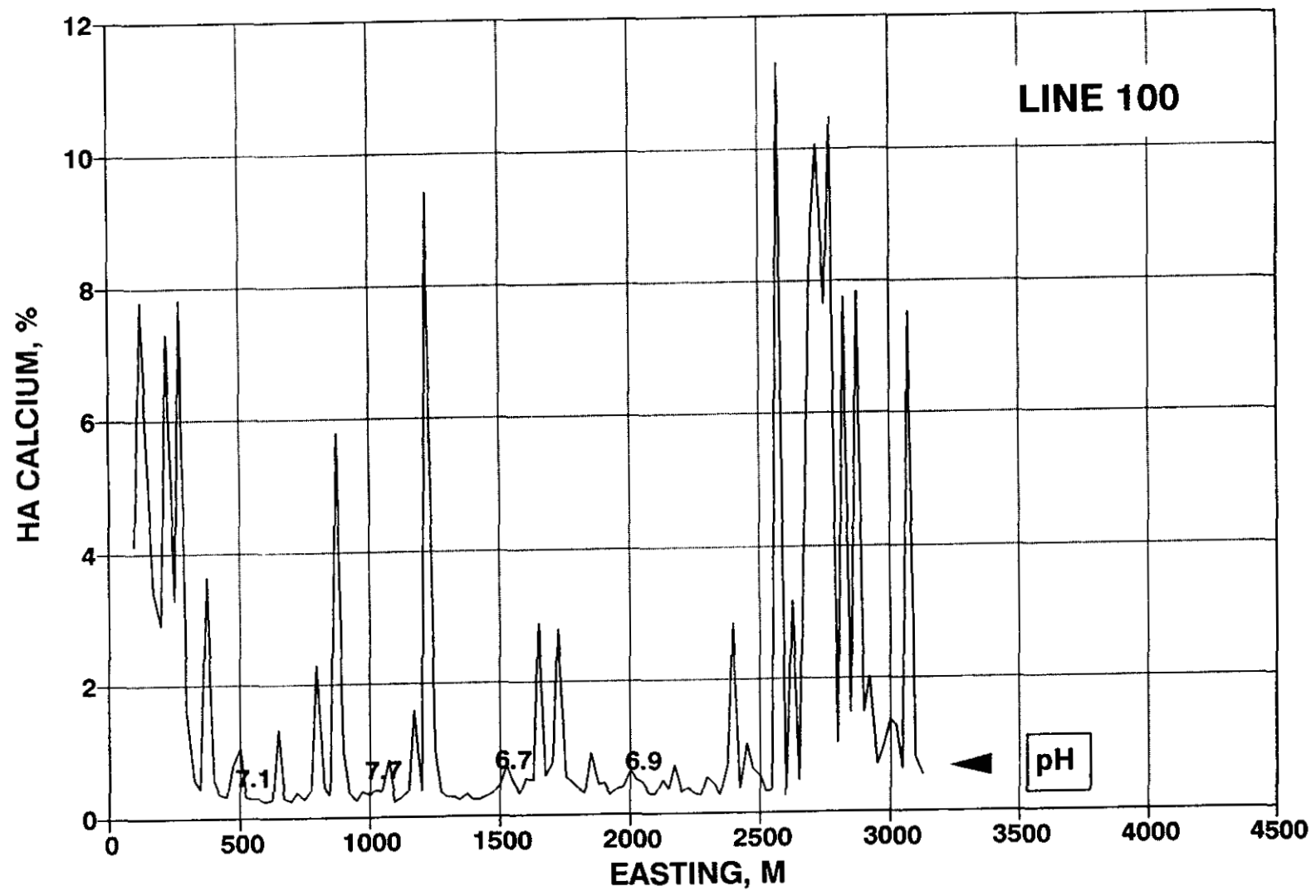
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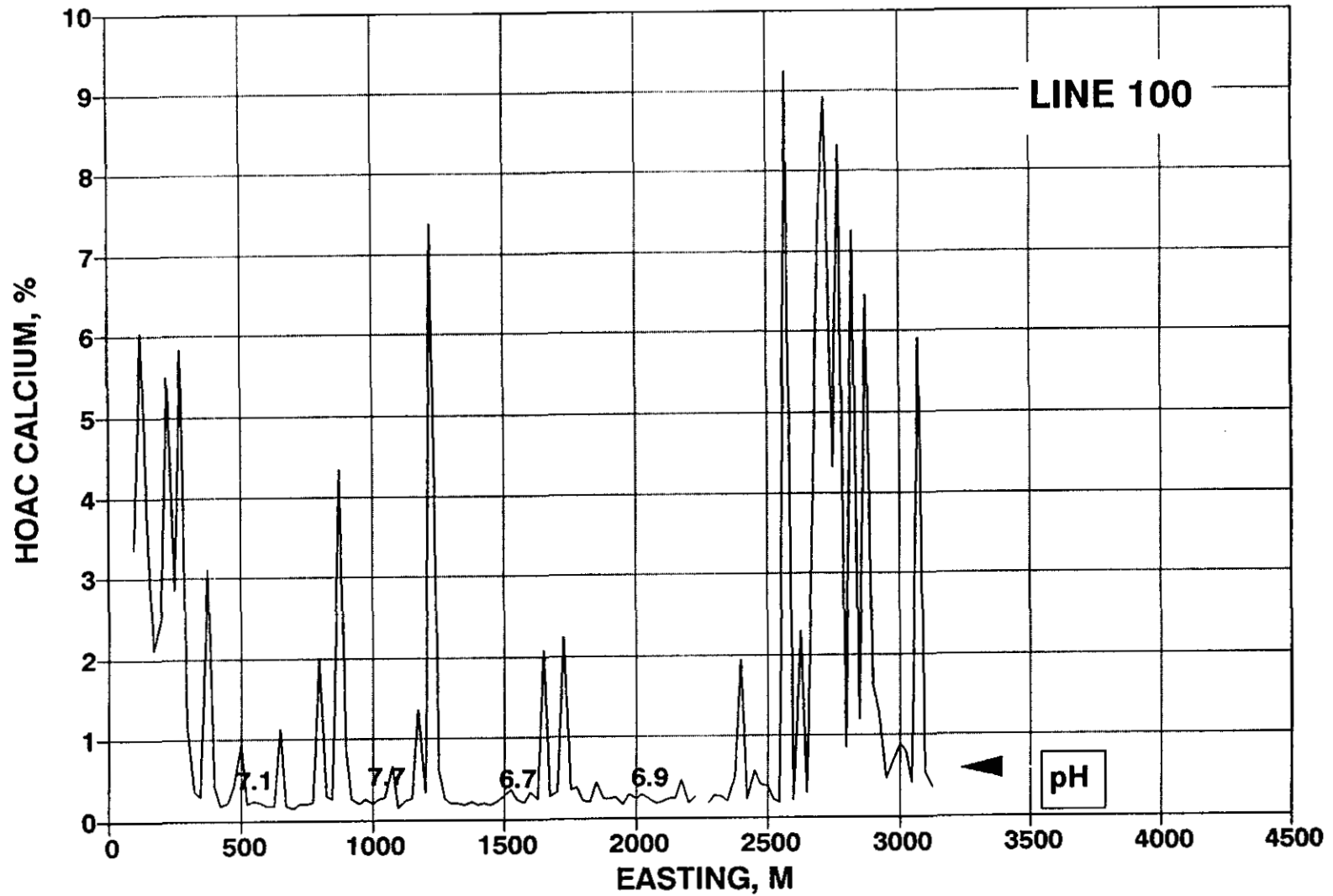
APPENDIX 3

Profile Plots for  
Lines 100 - 5200

**DIAMET MINERALS INC.  
PAUL-MIKE SOIL GEOCHEMISTRY**

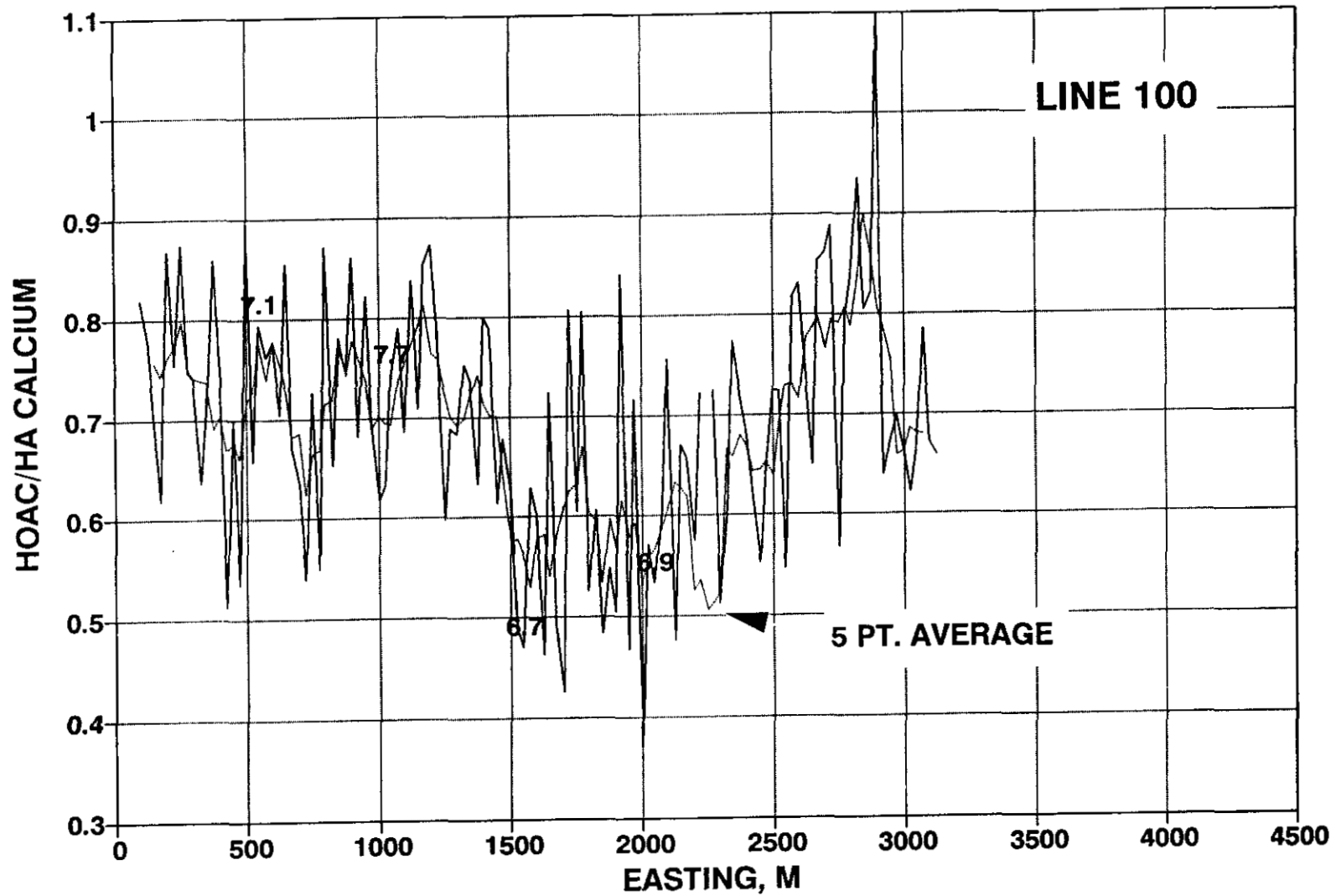


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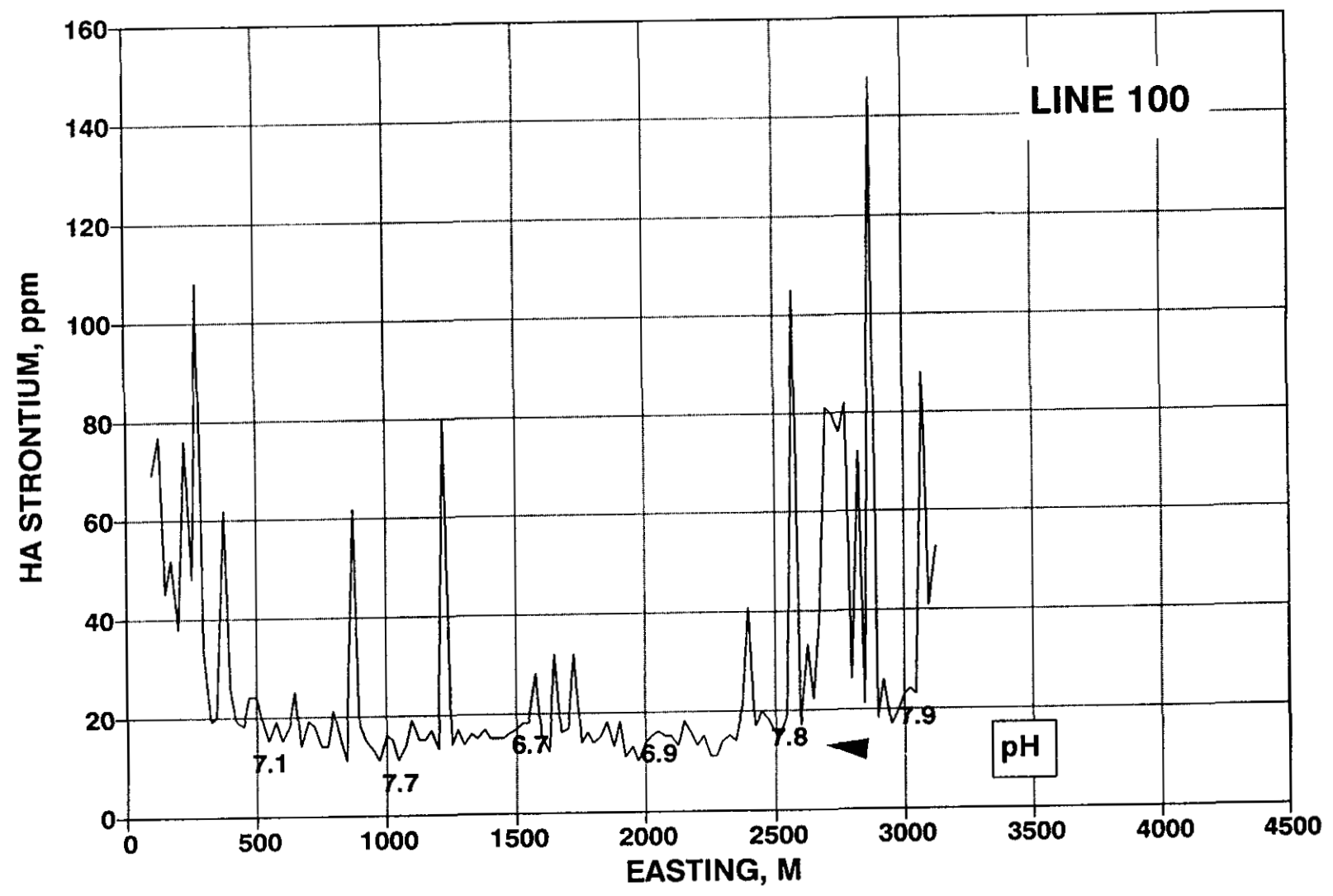




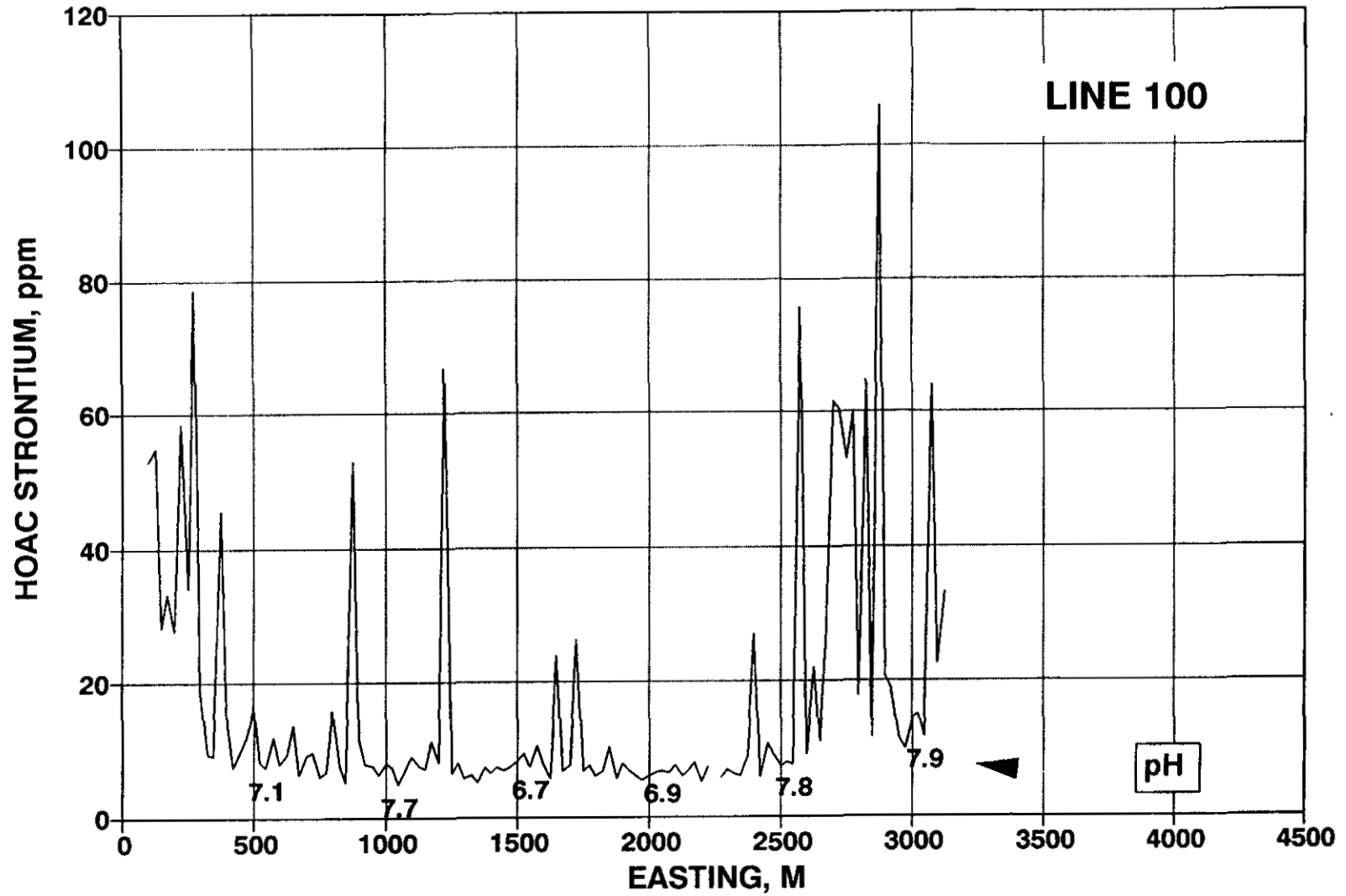
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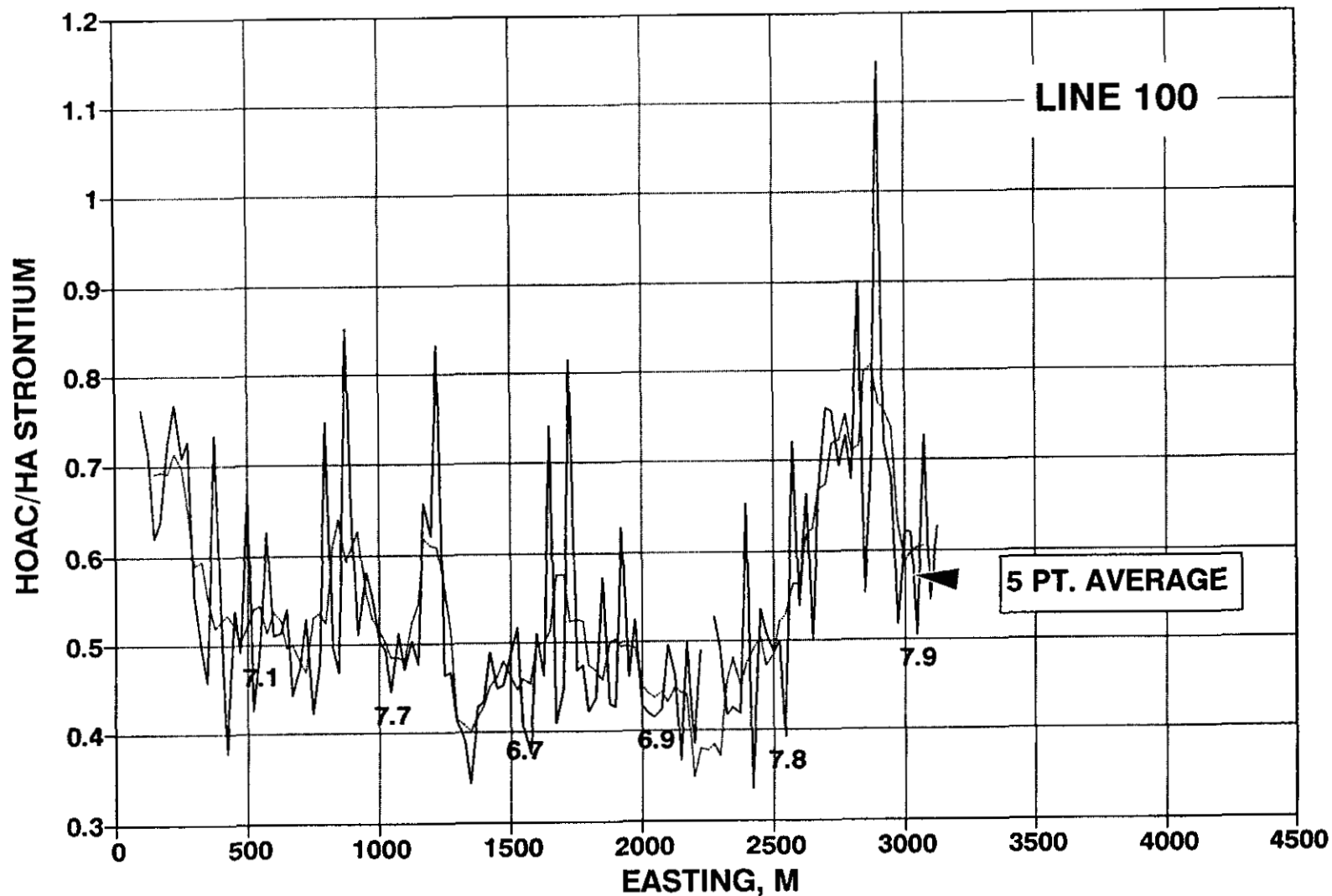
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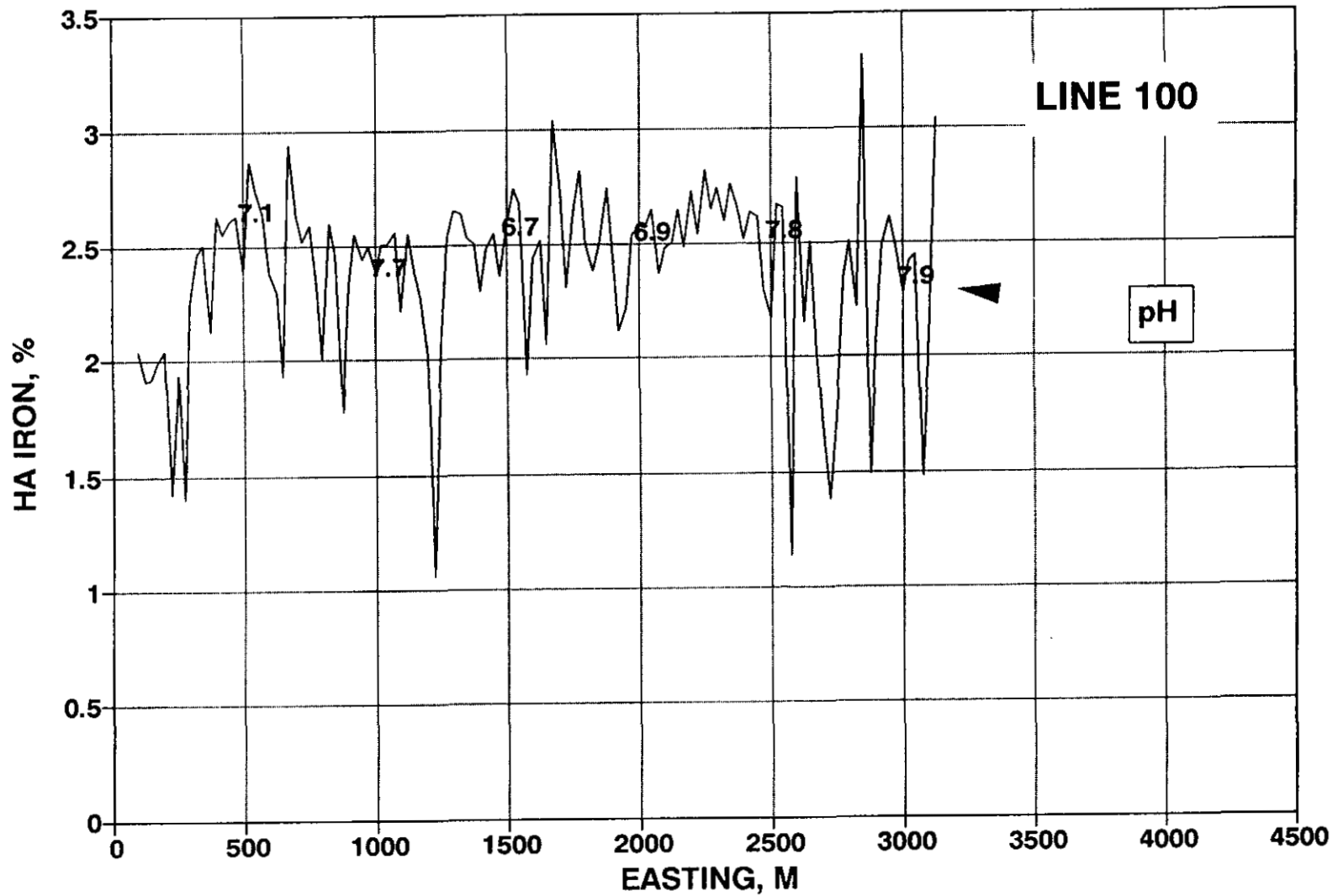
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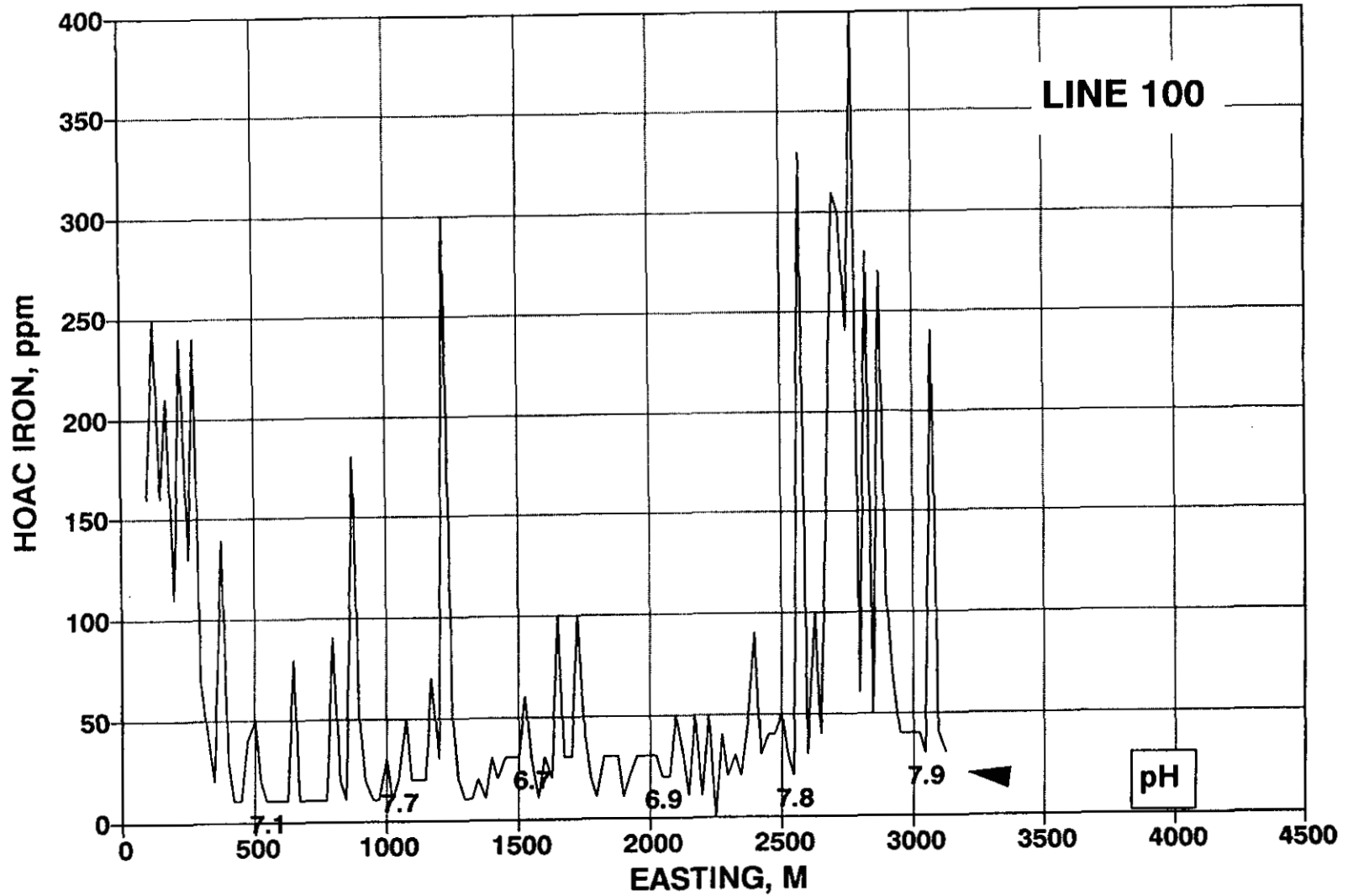
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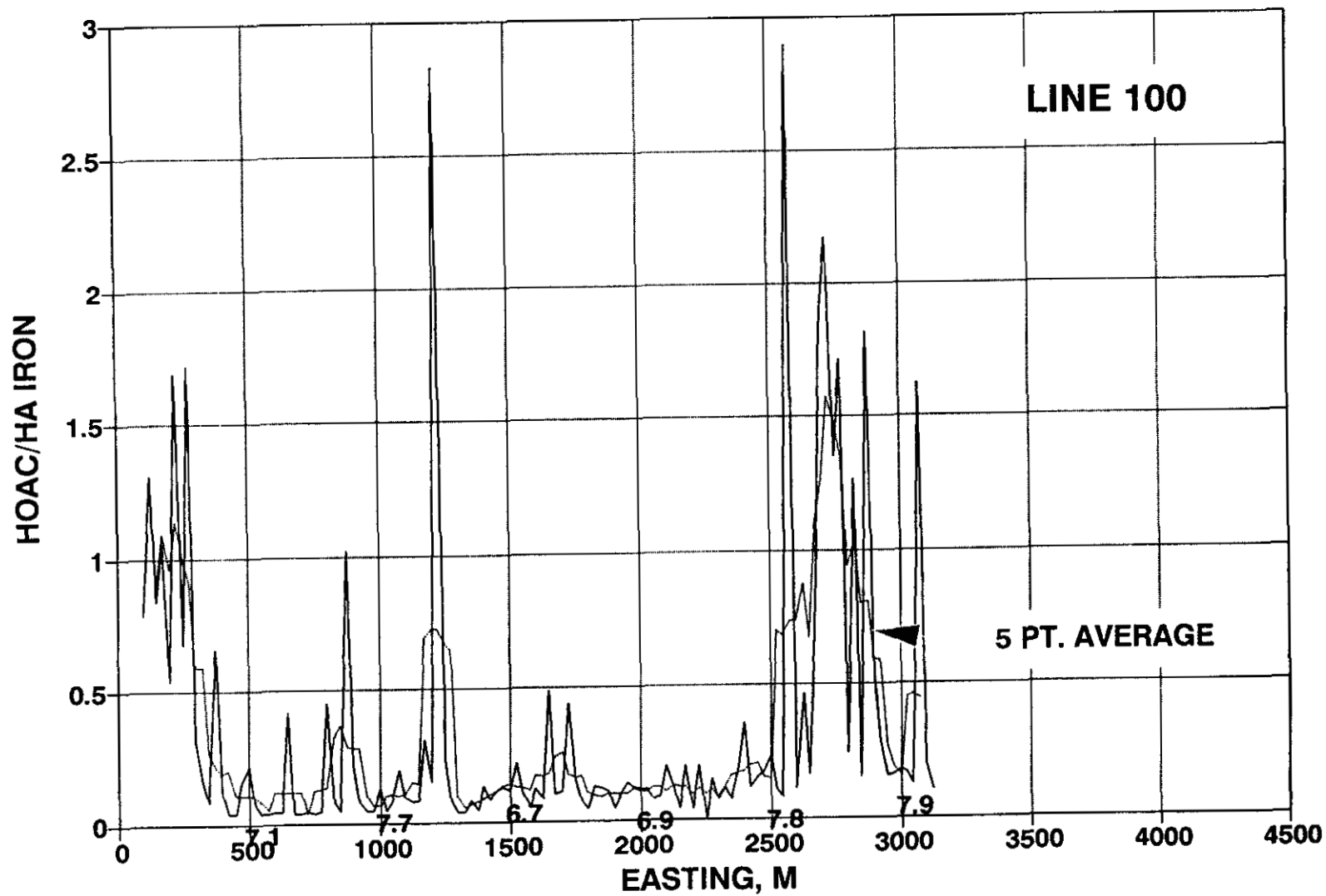
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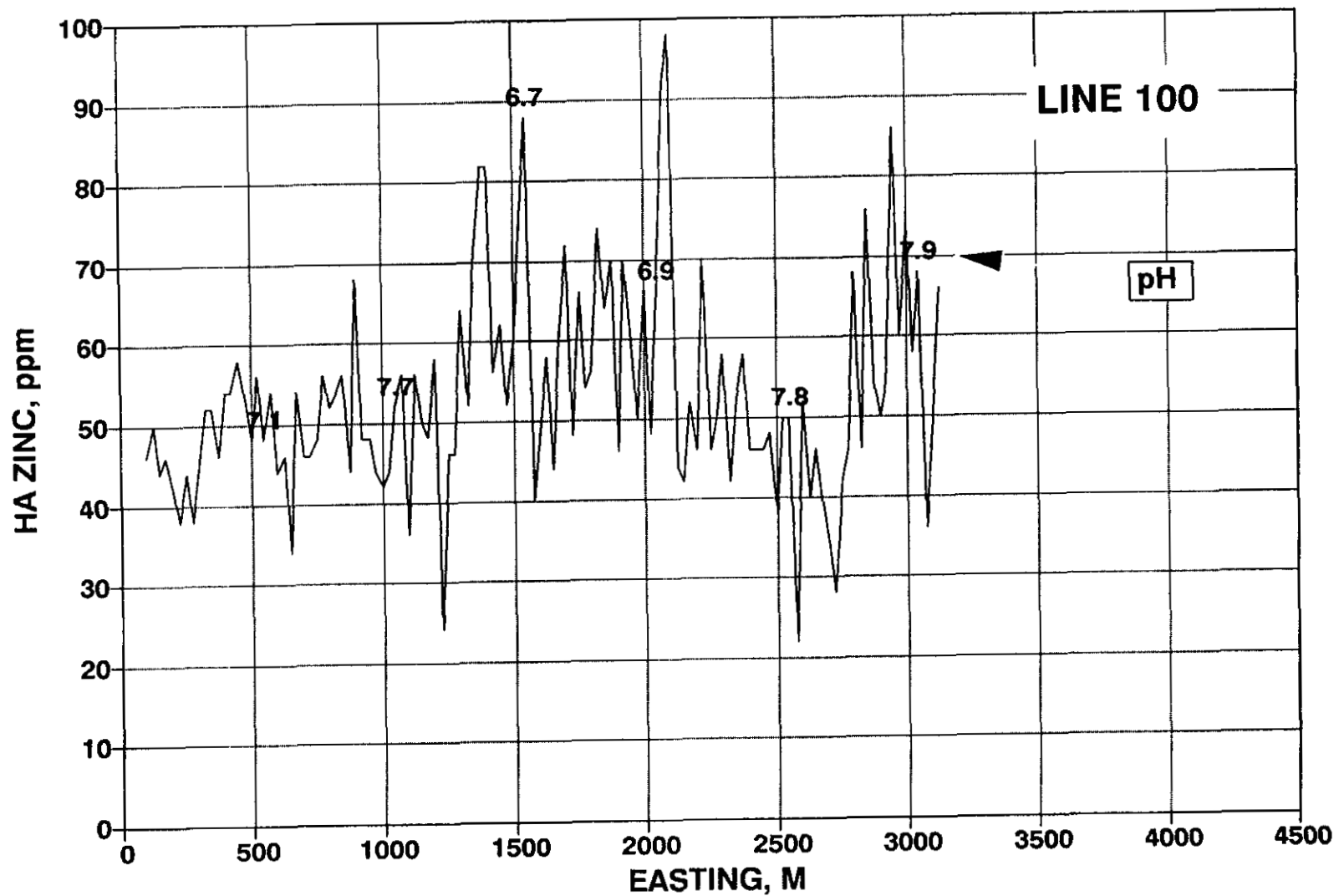
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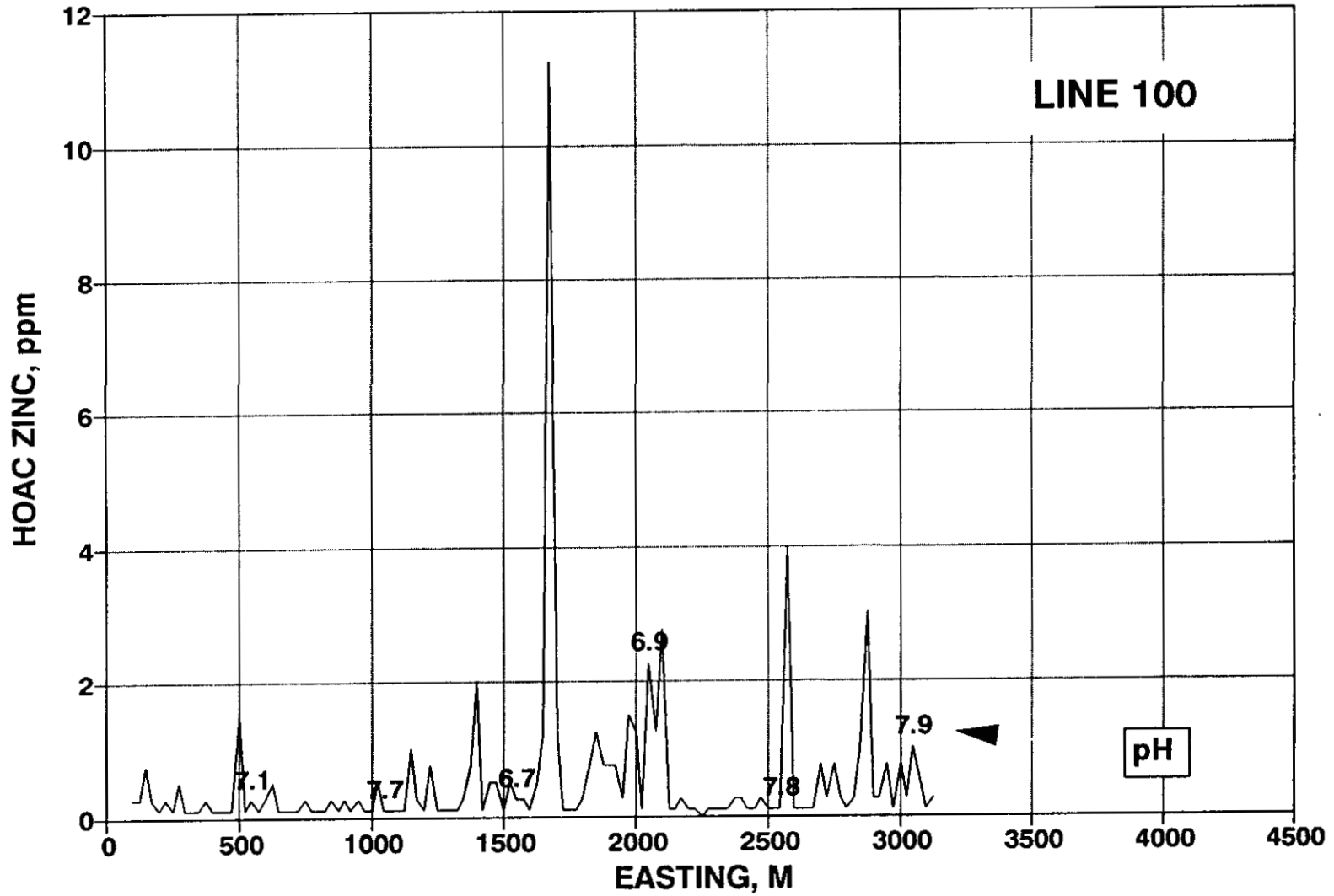


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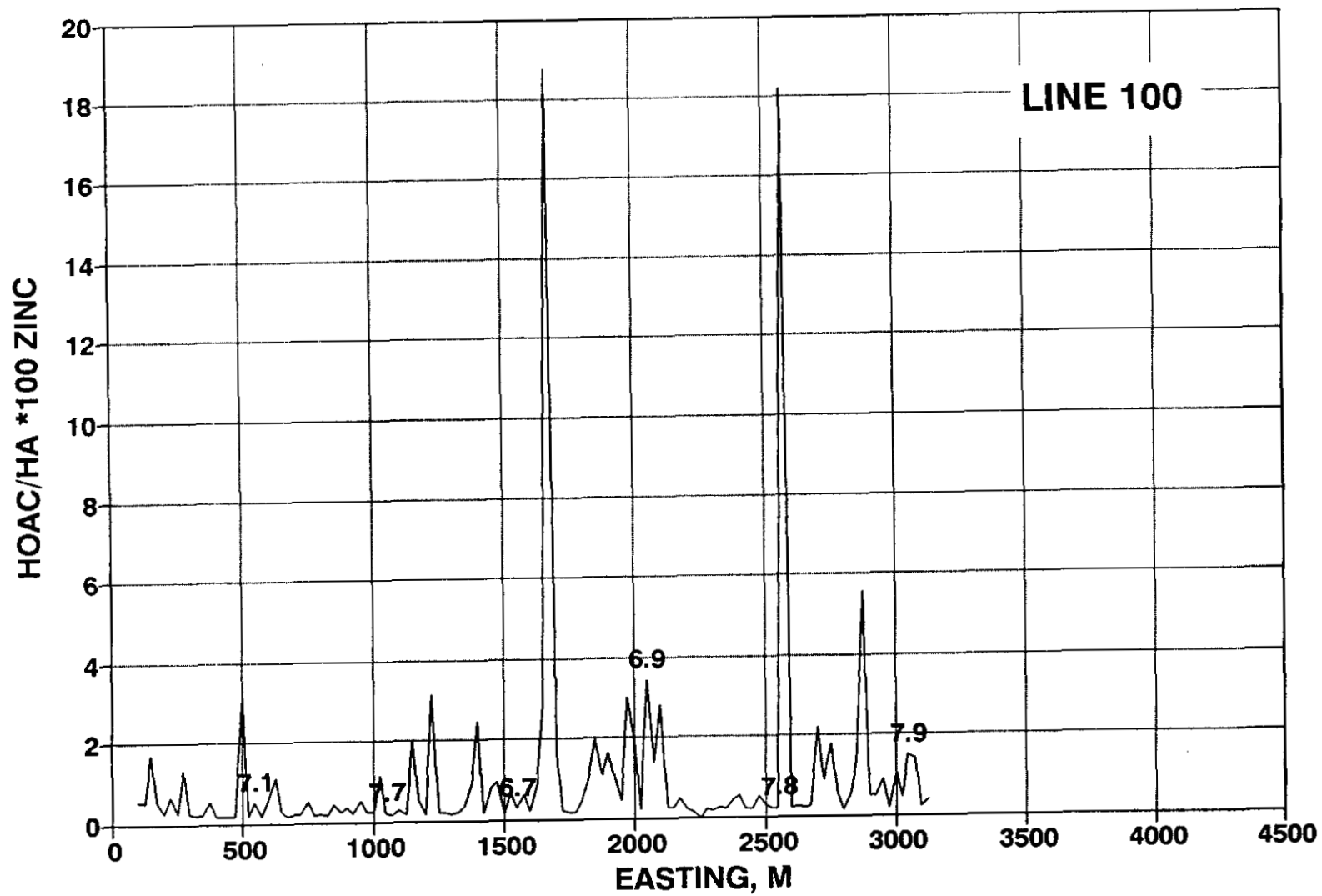




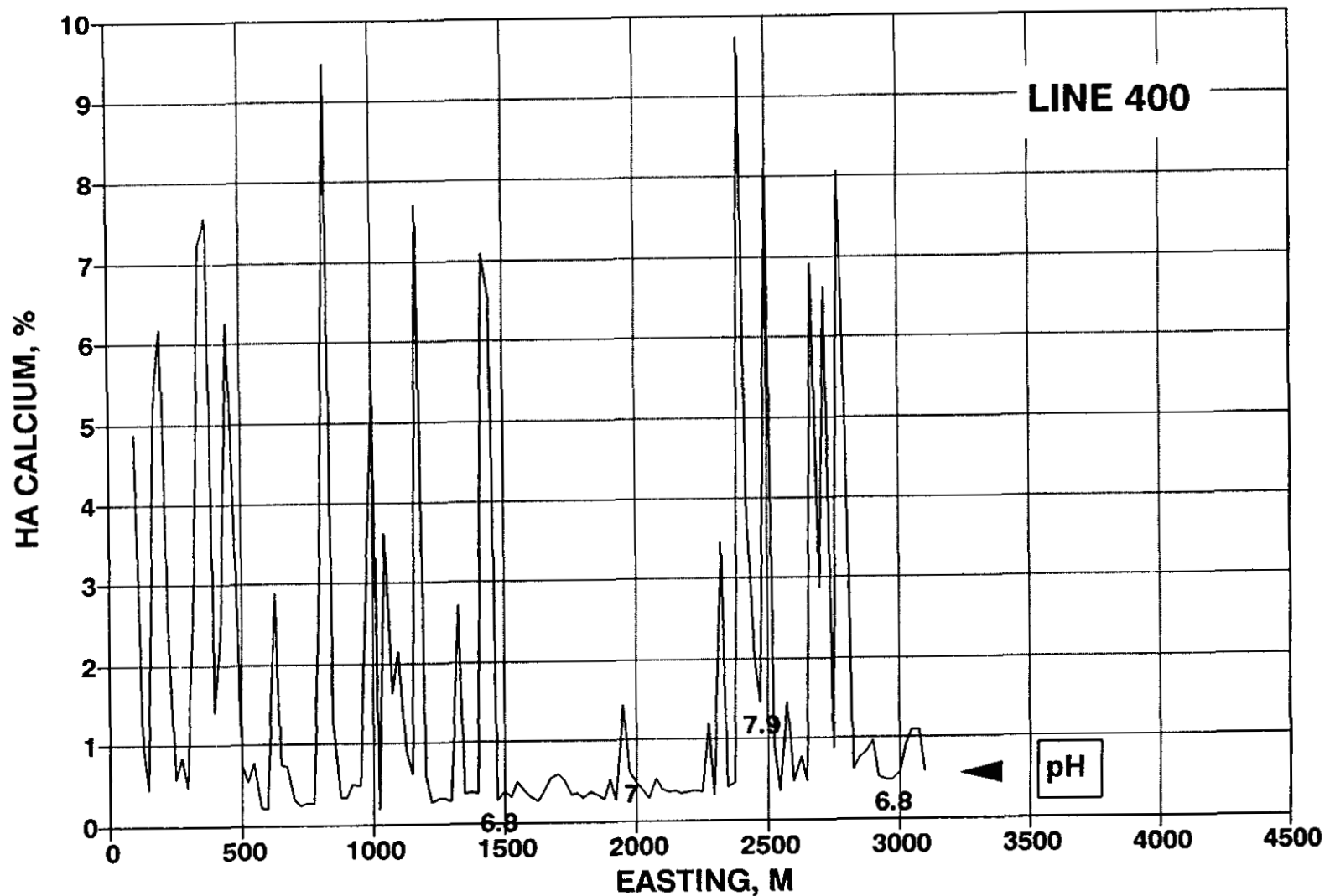
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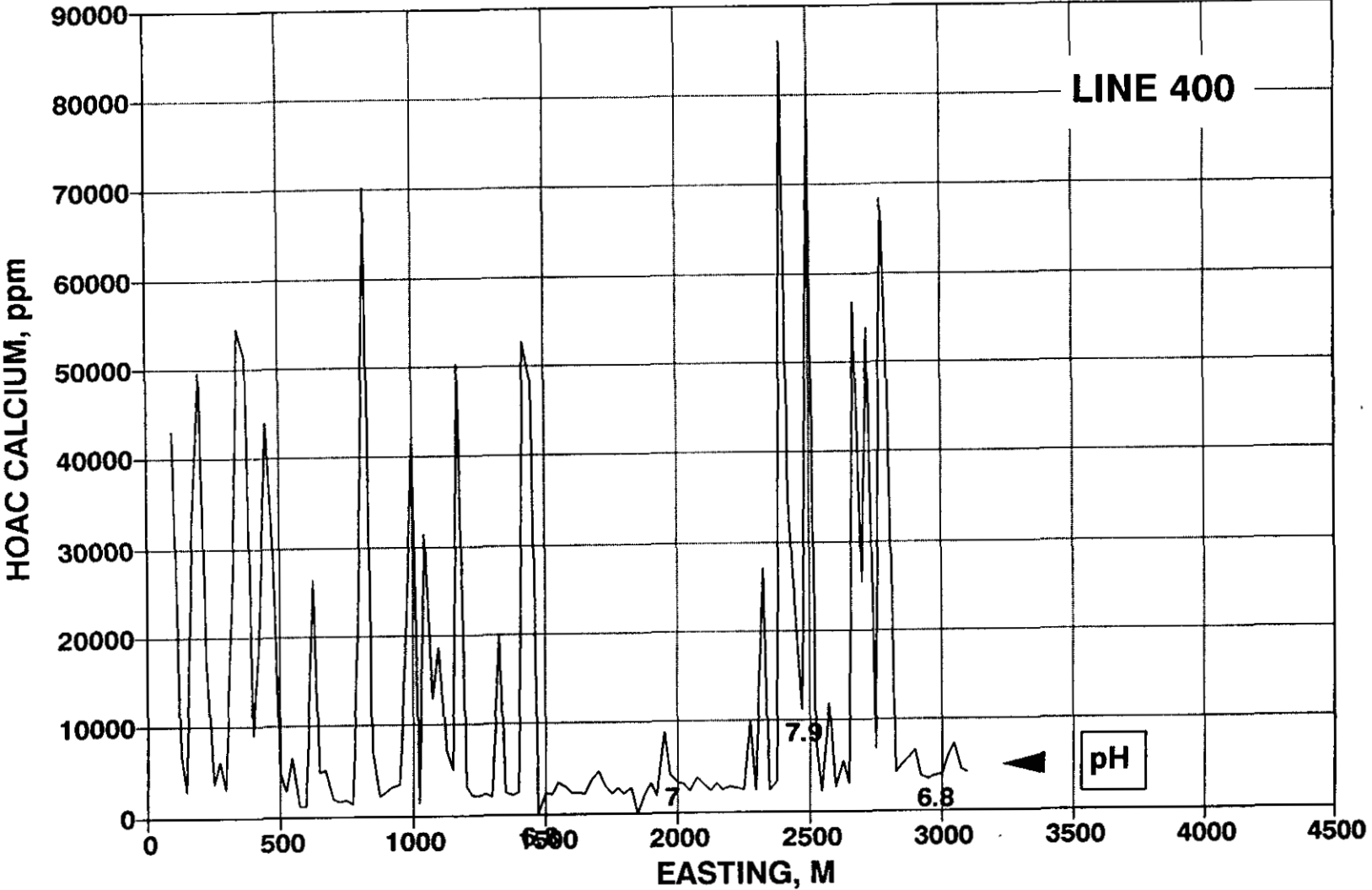
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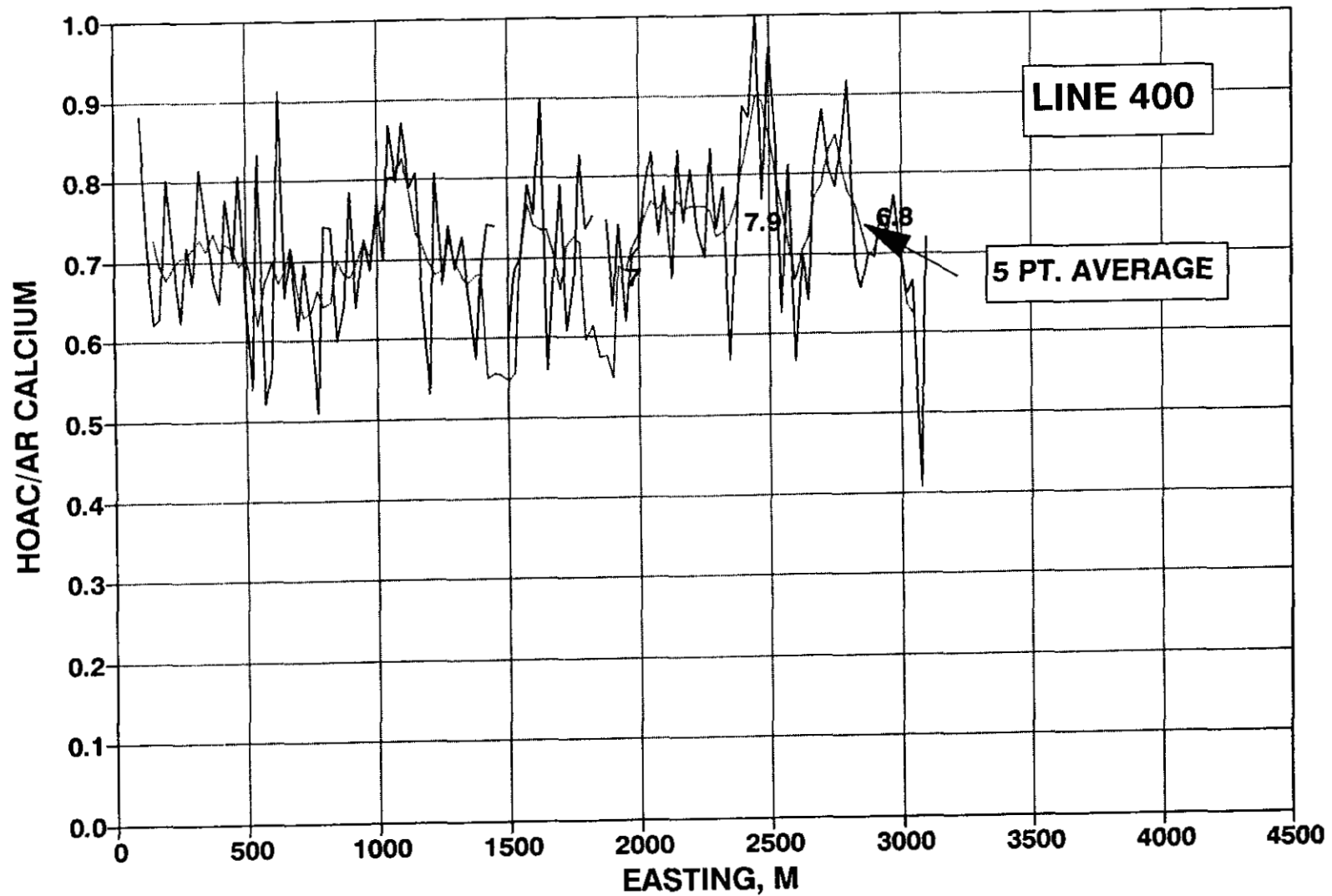
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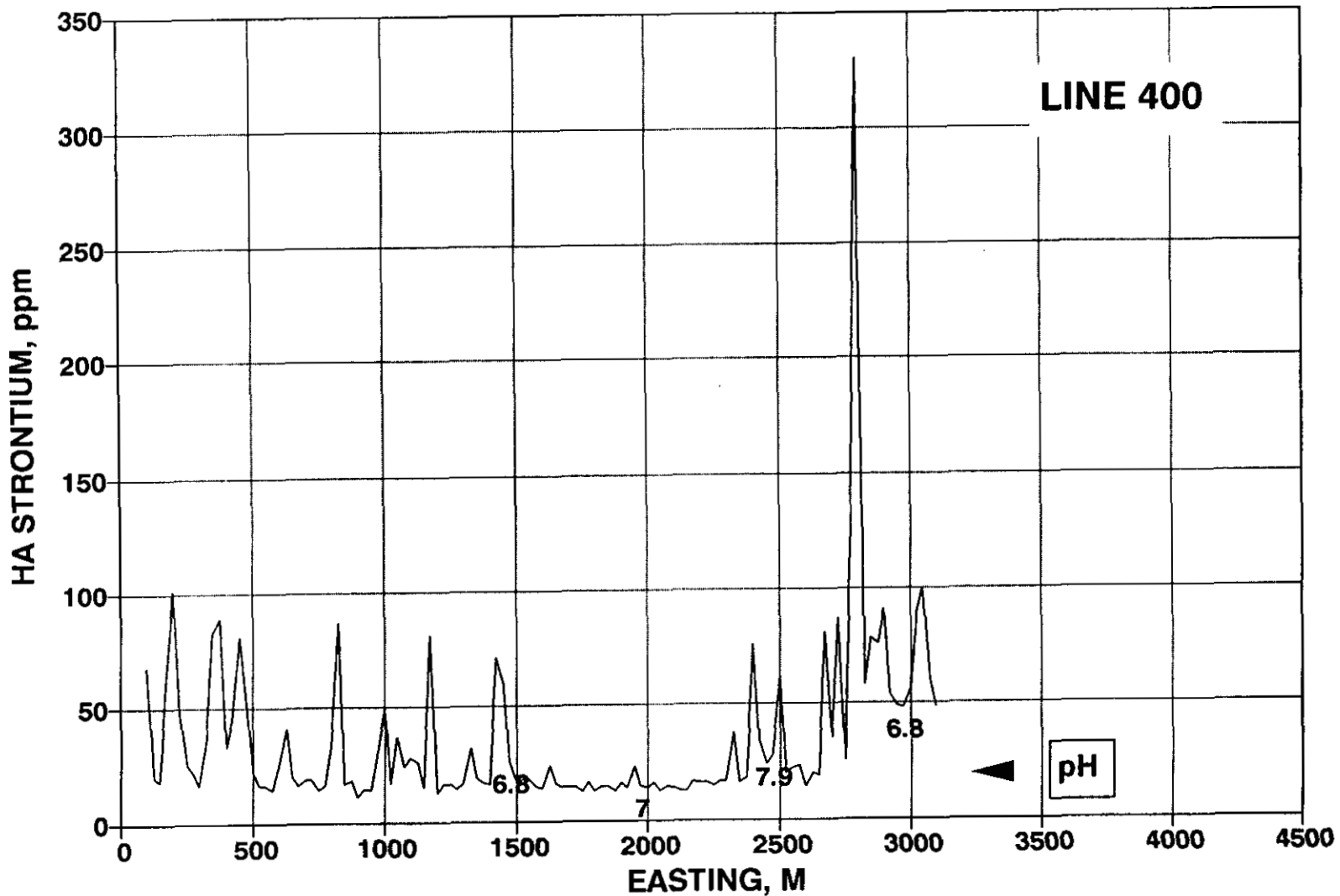
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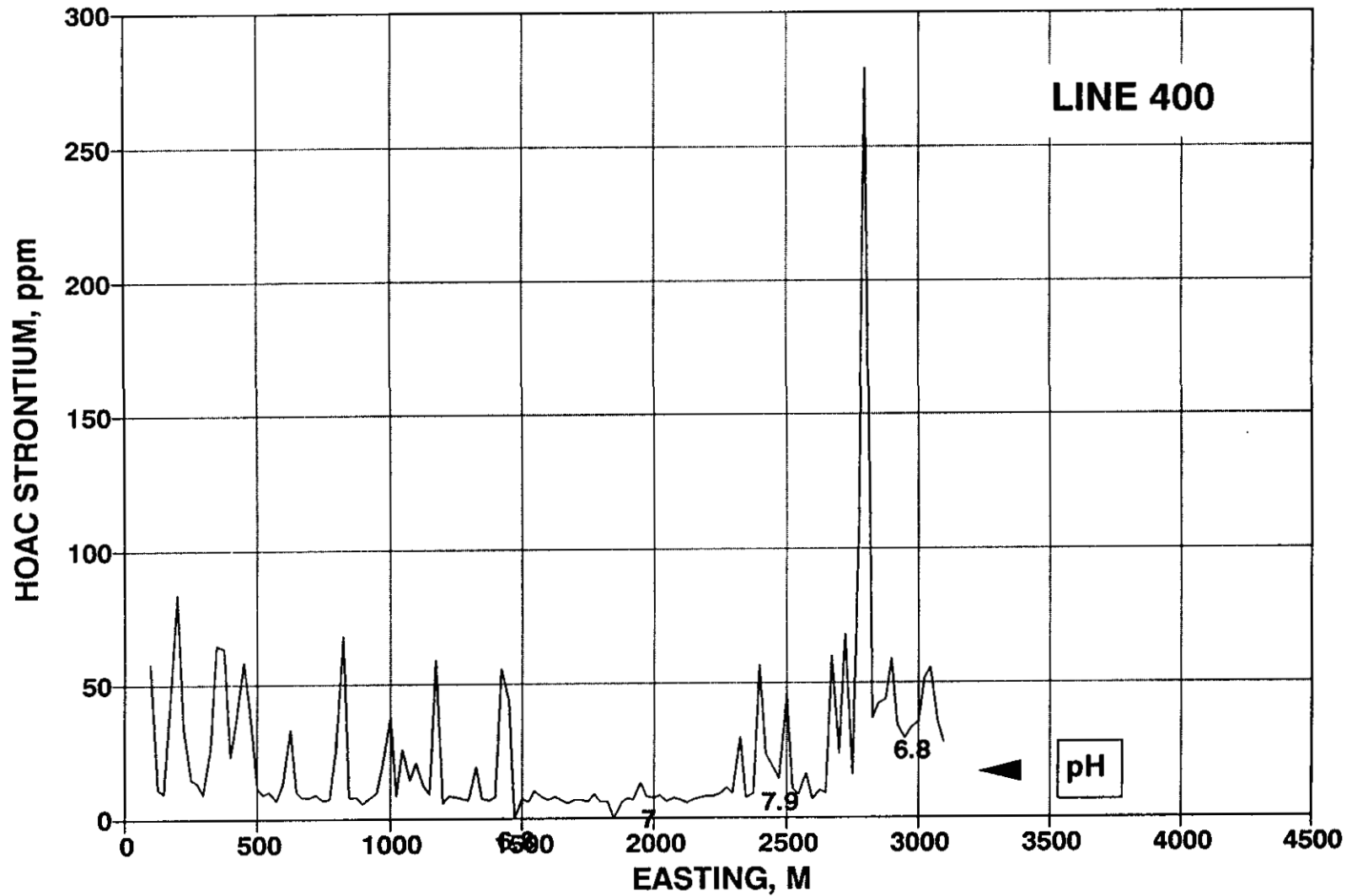
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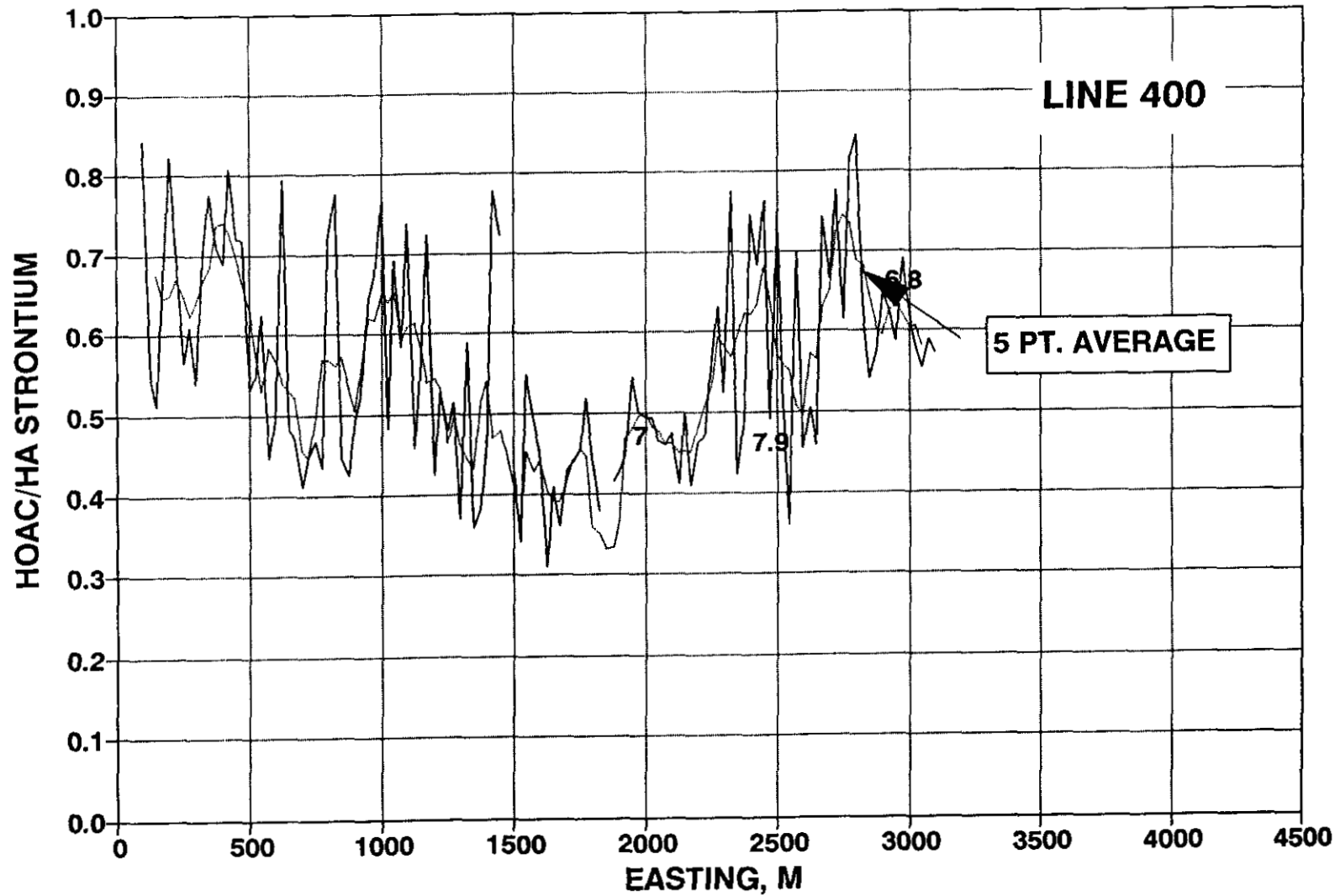
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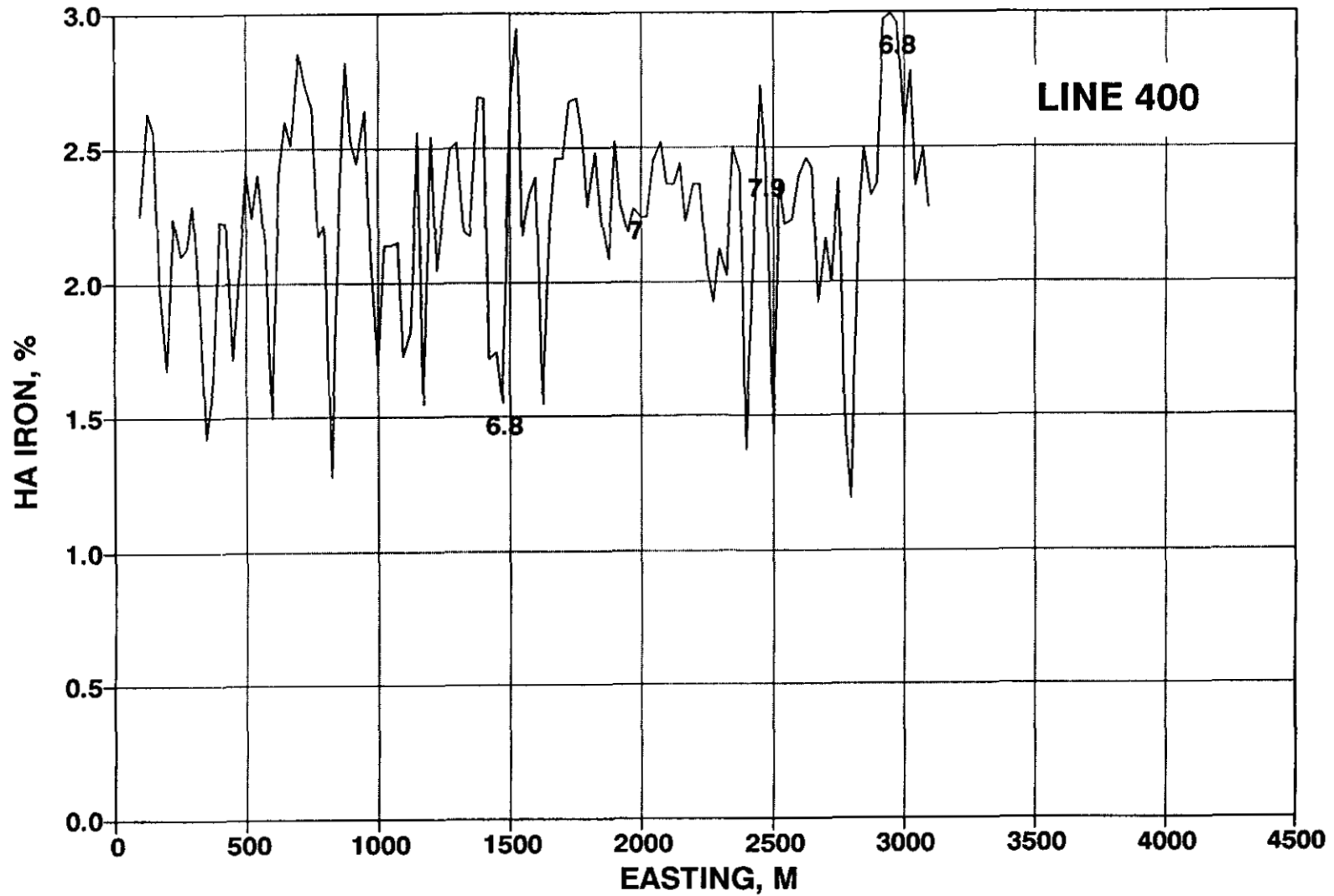


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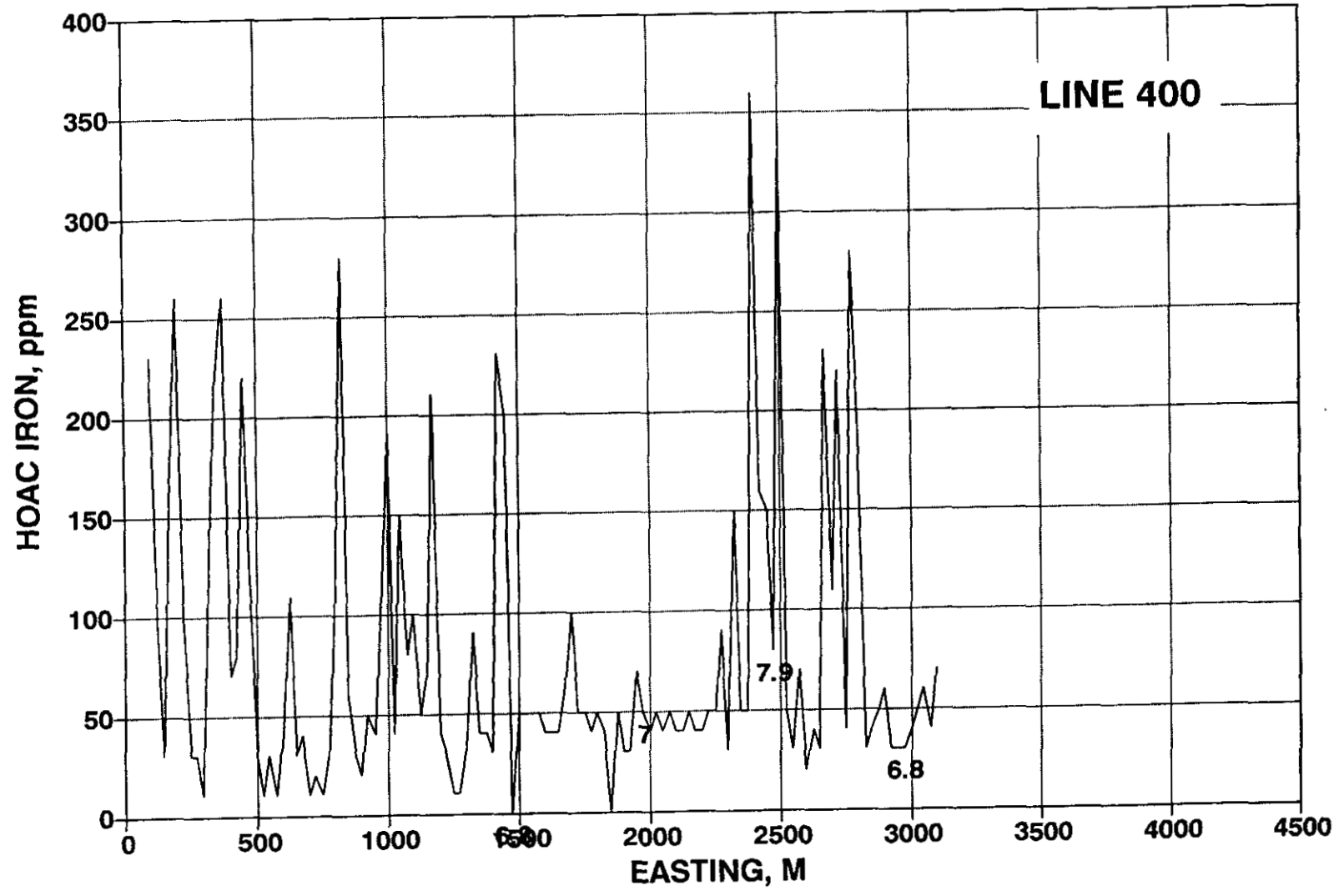




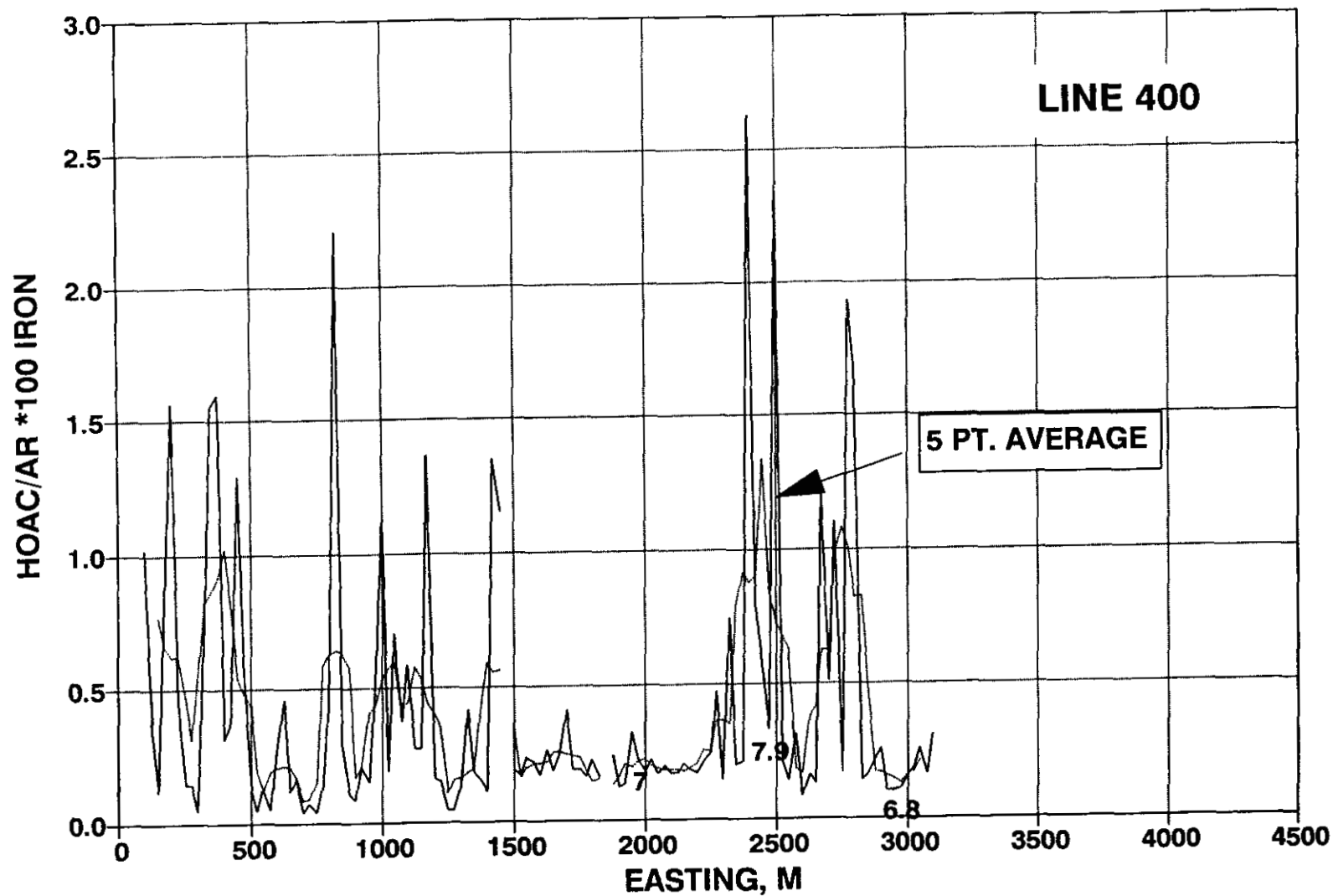
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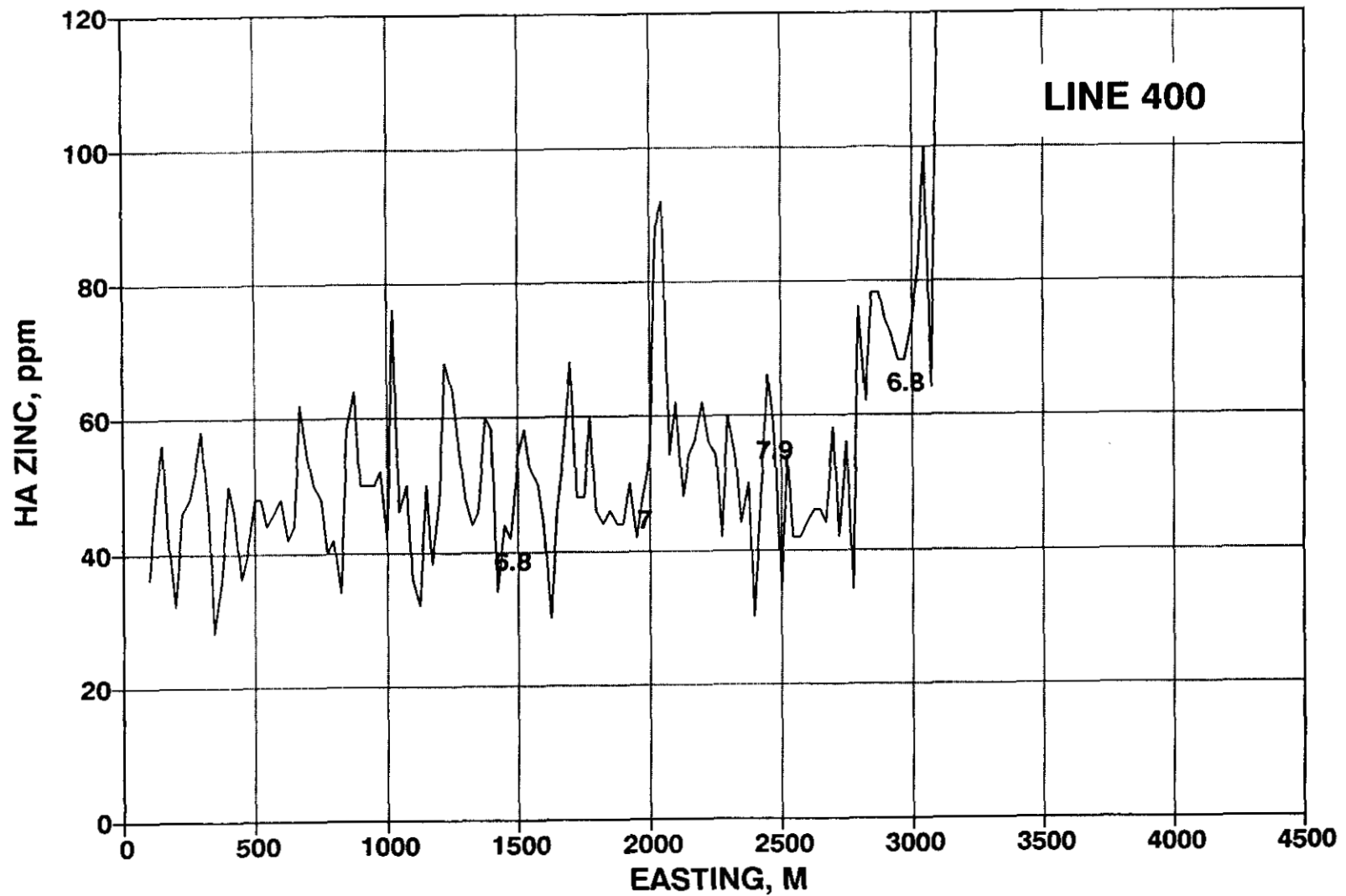
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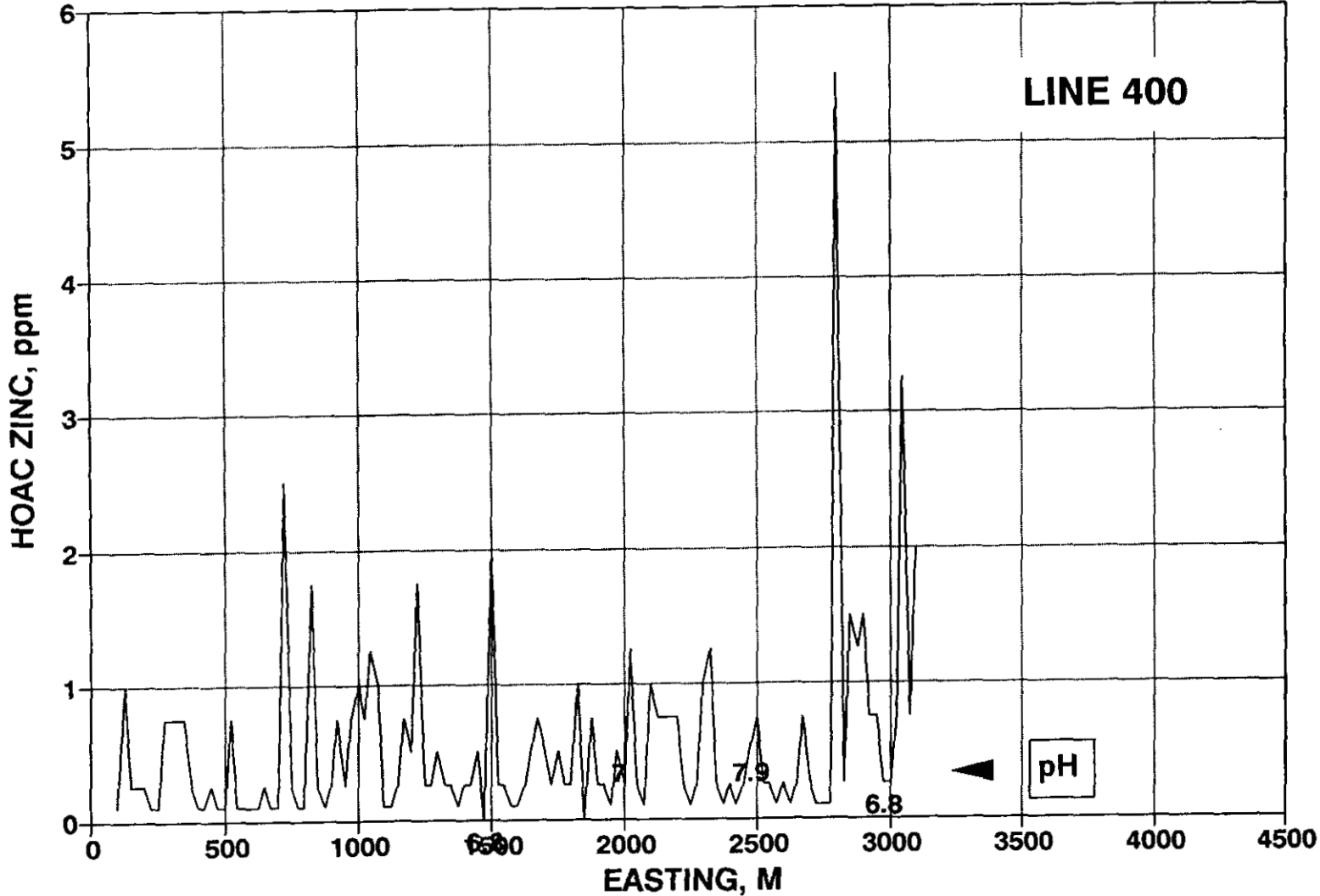
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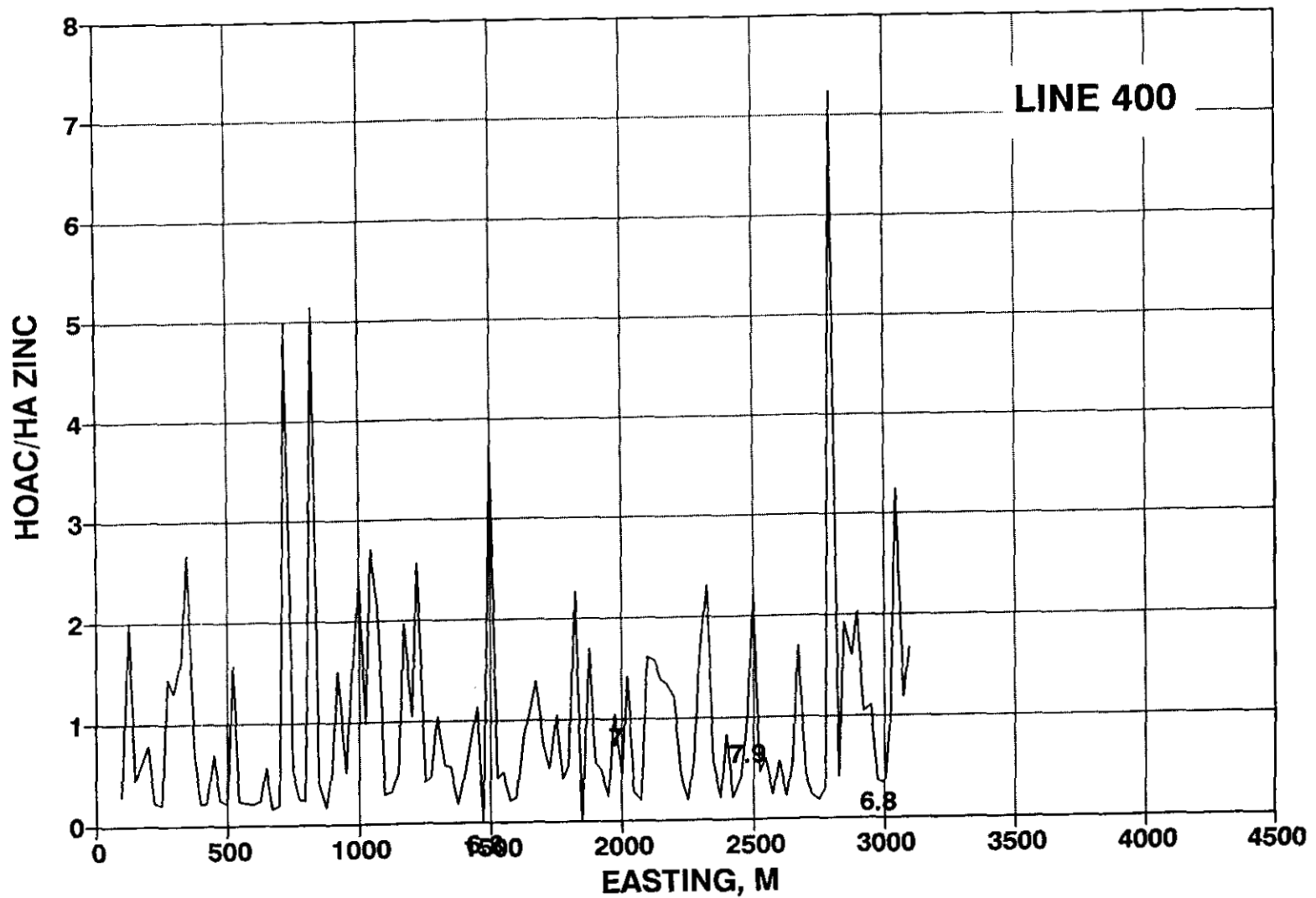
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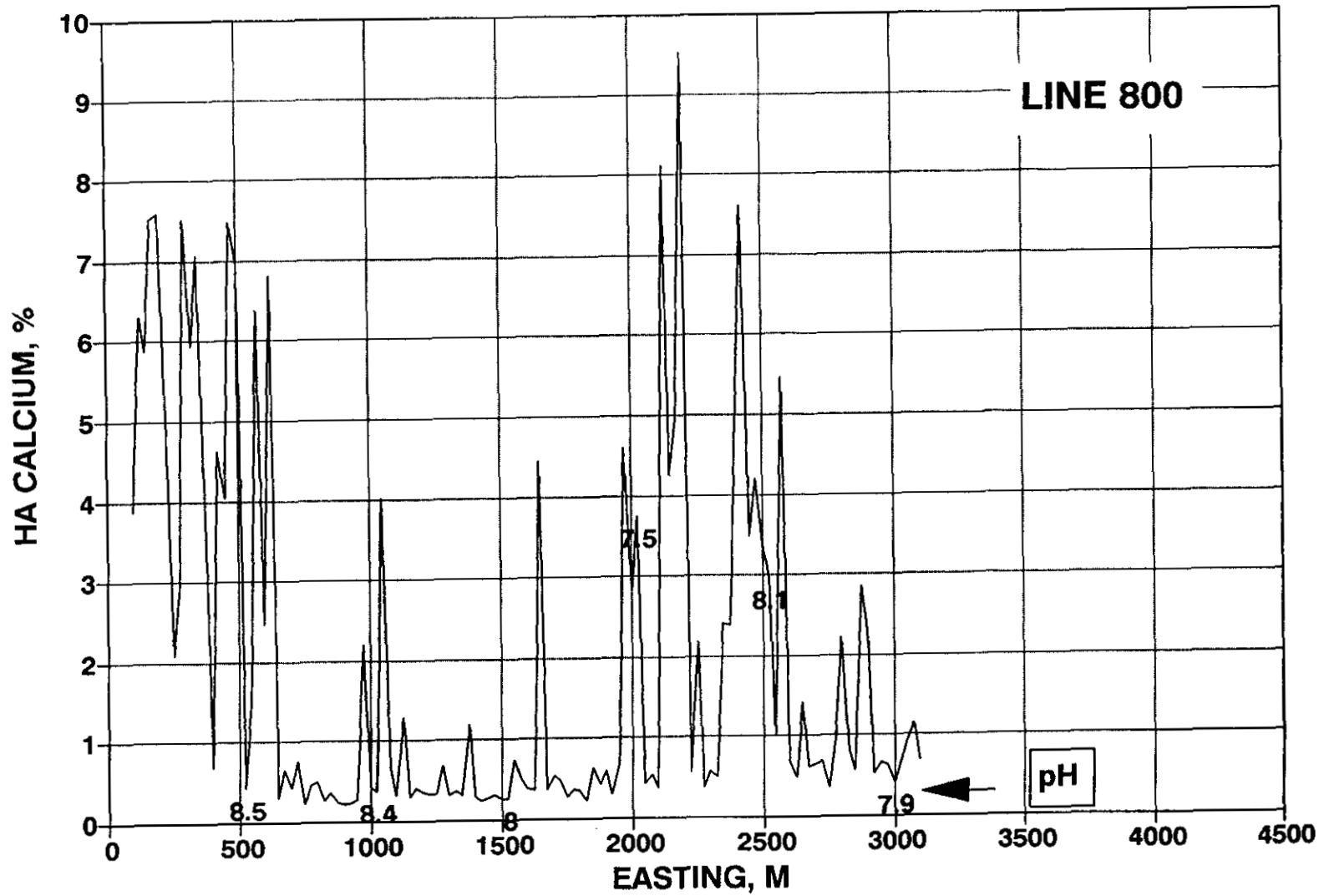
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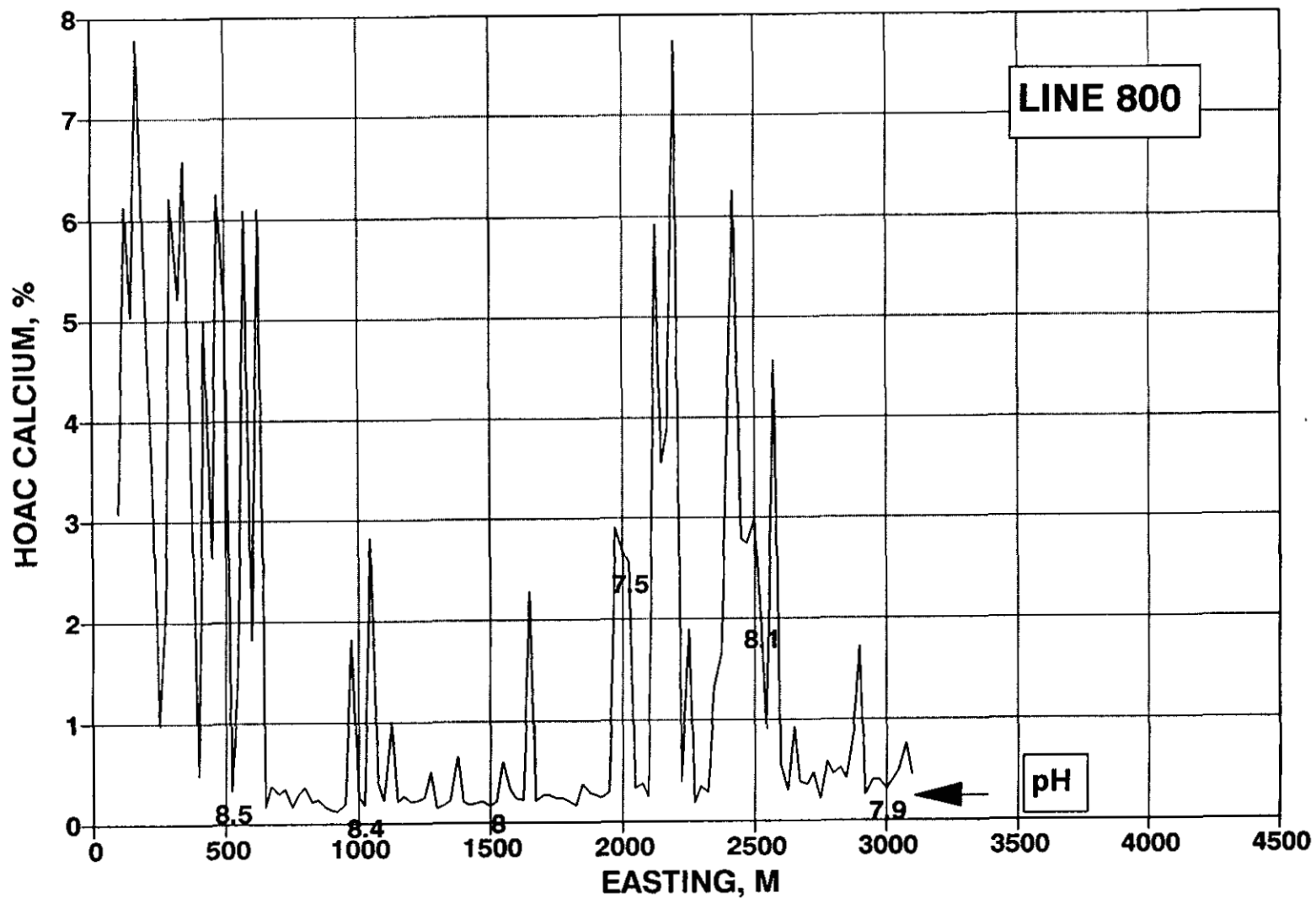
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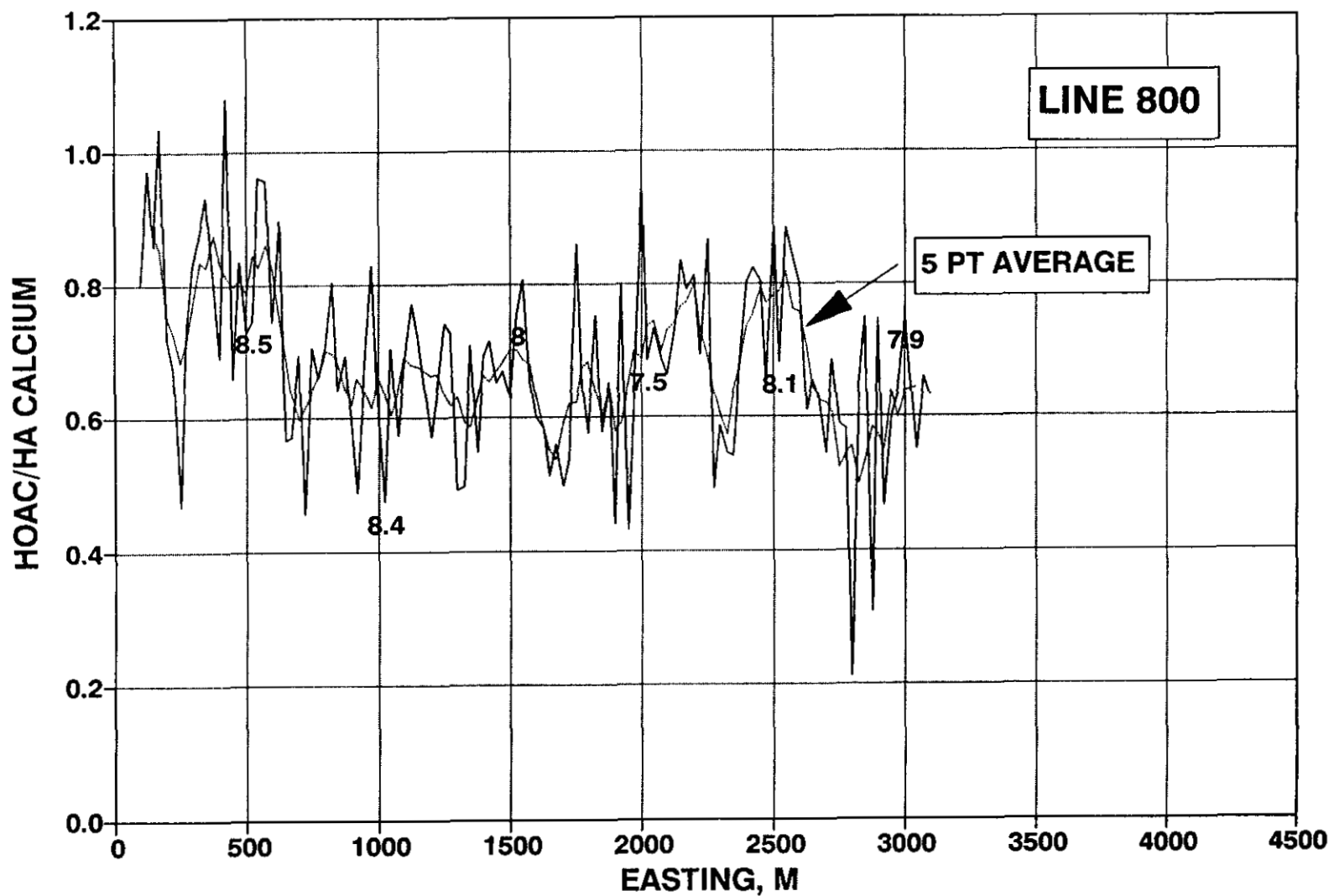


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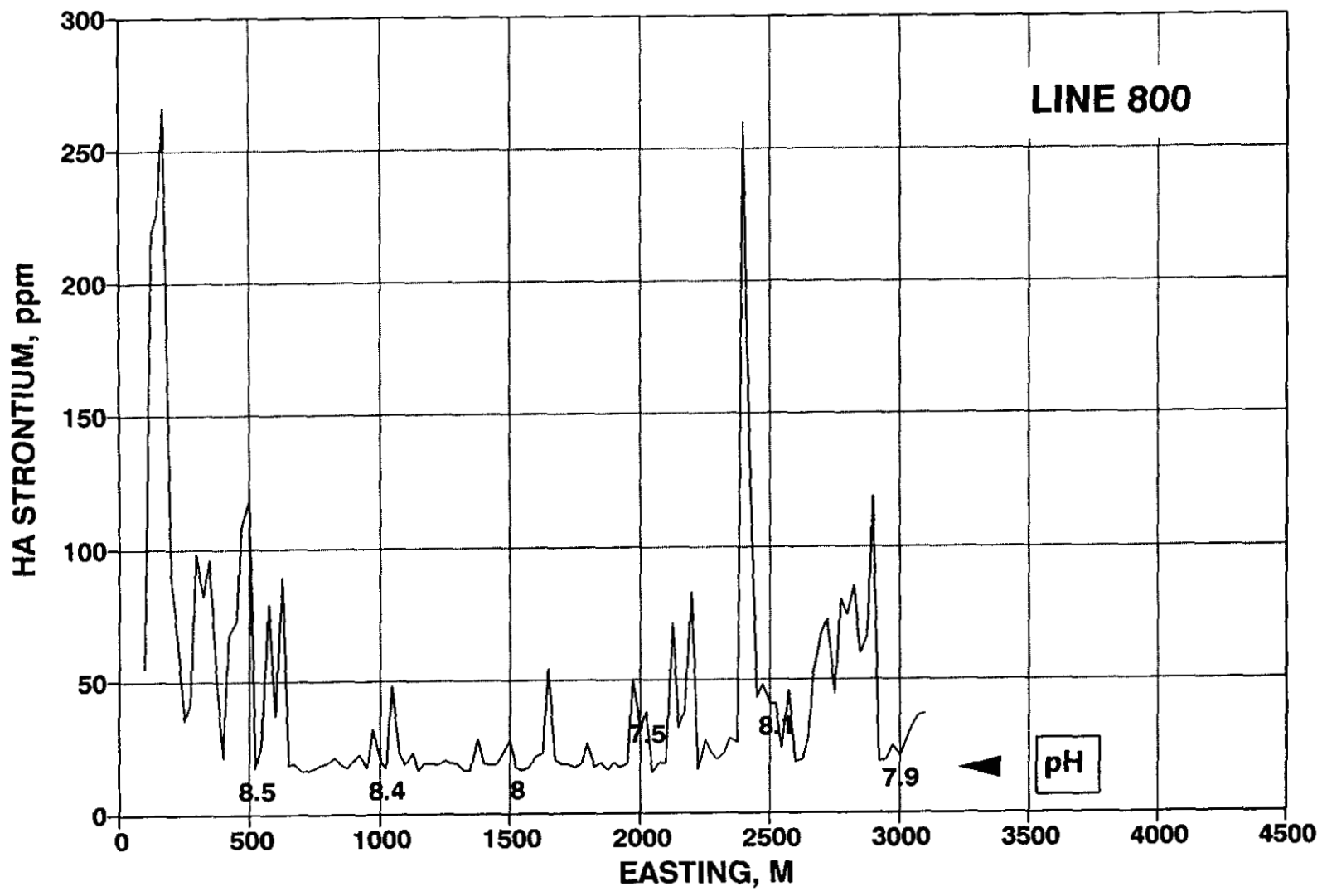




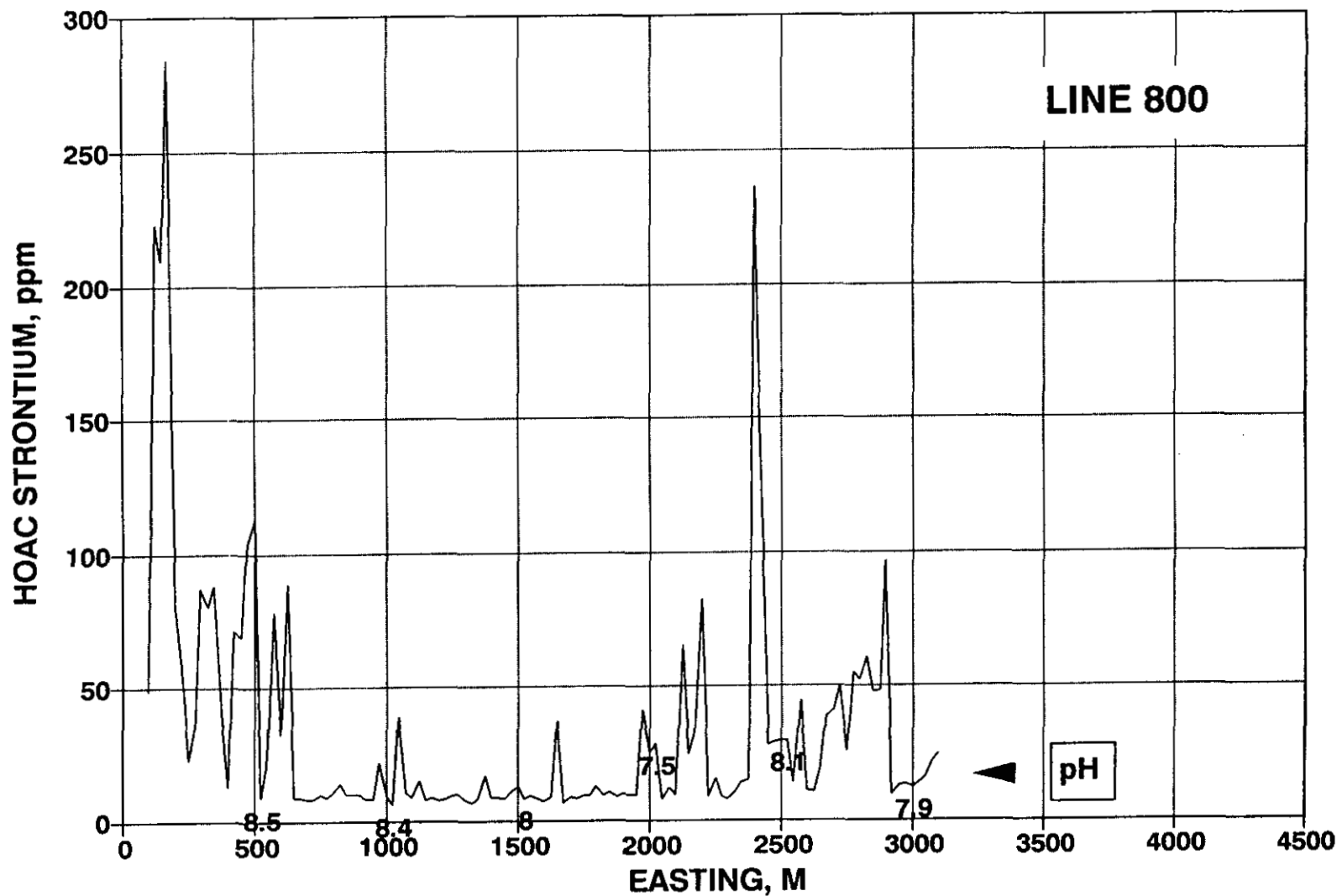
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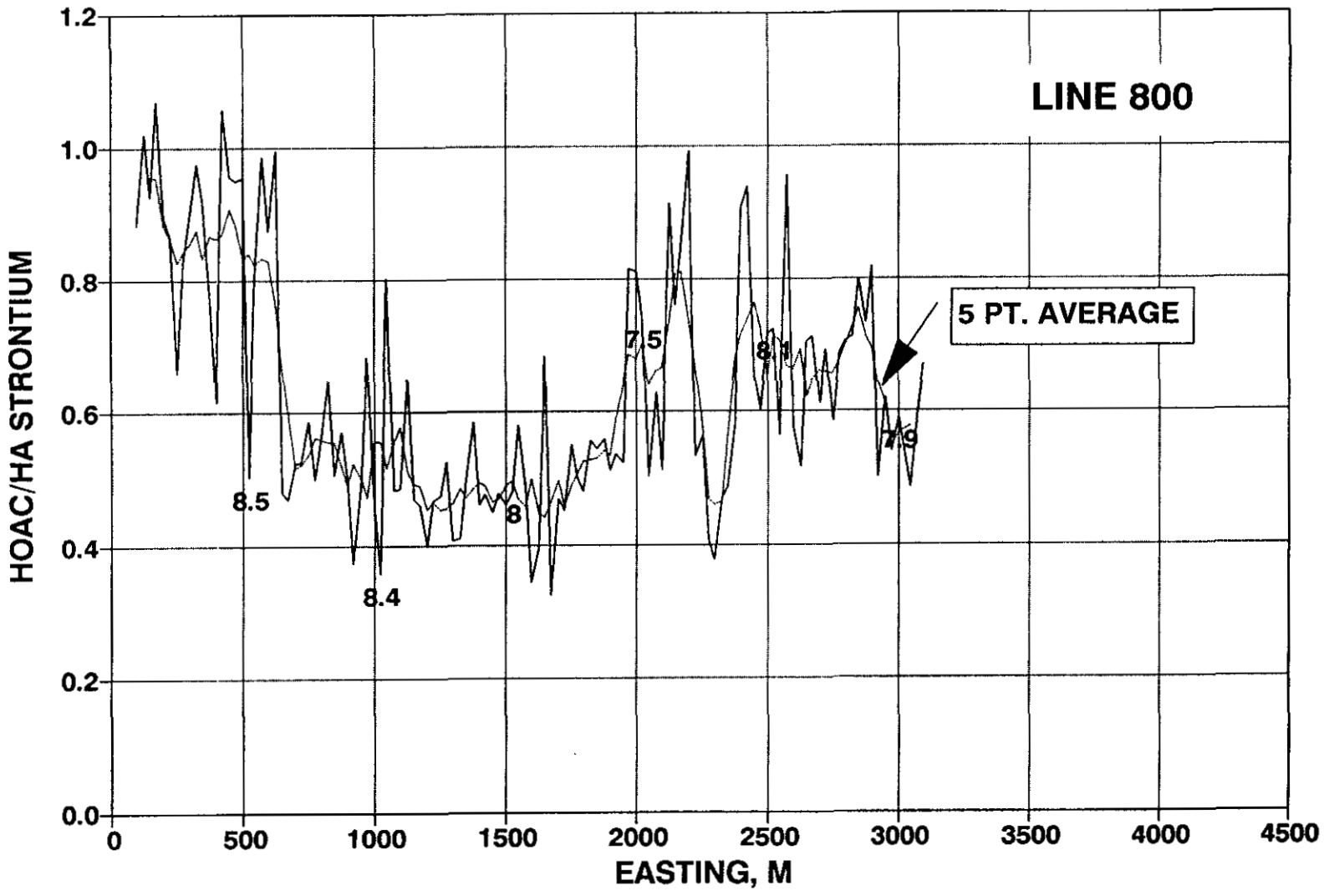
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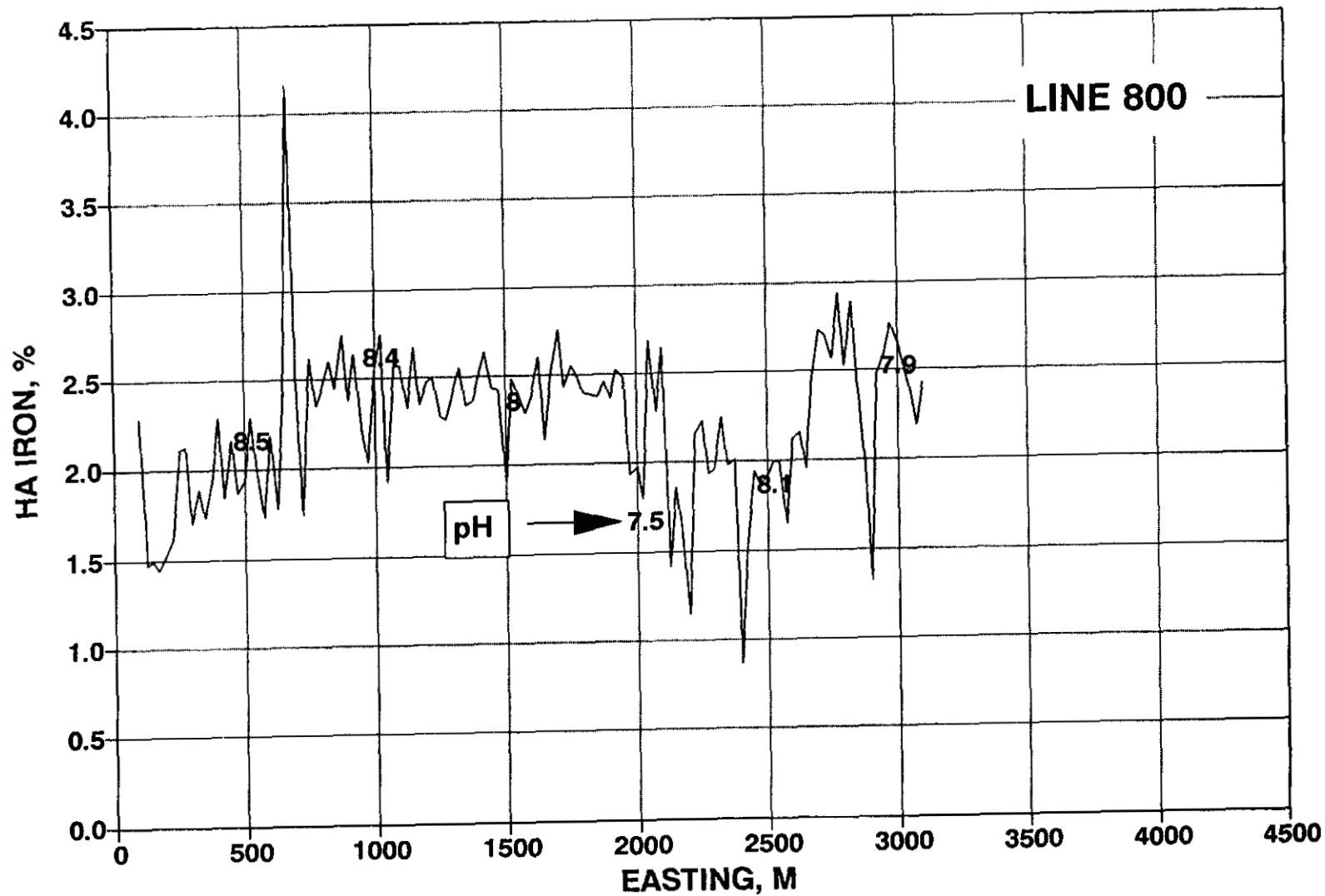
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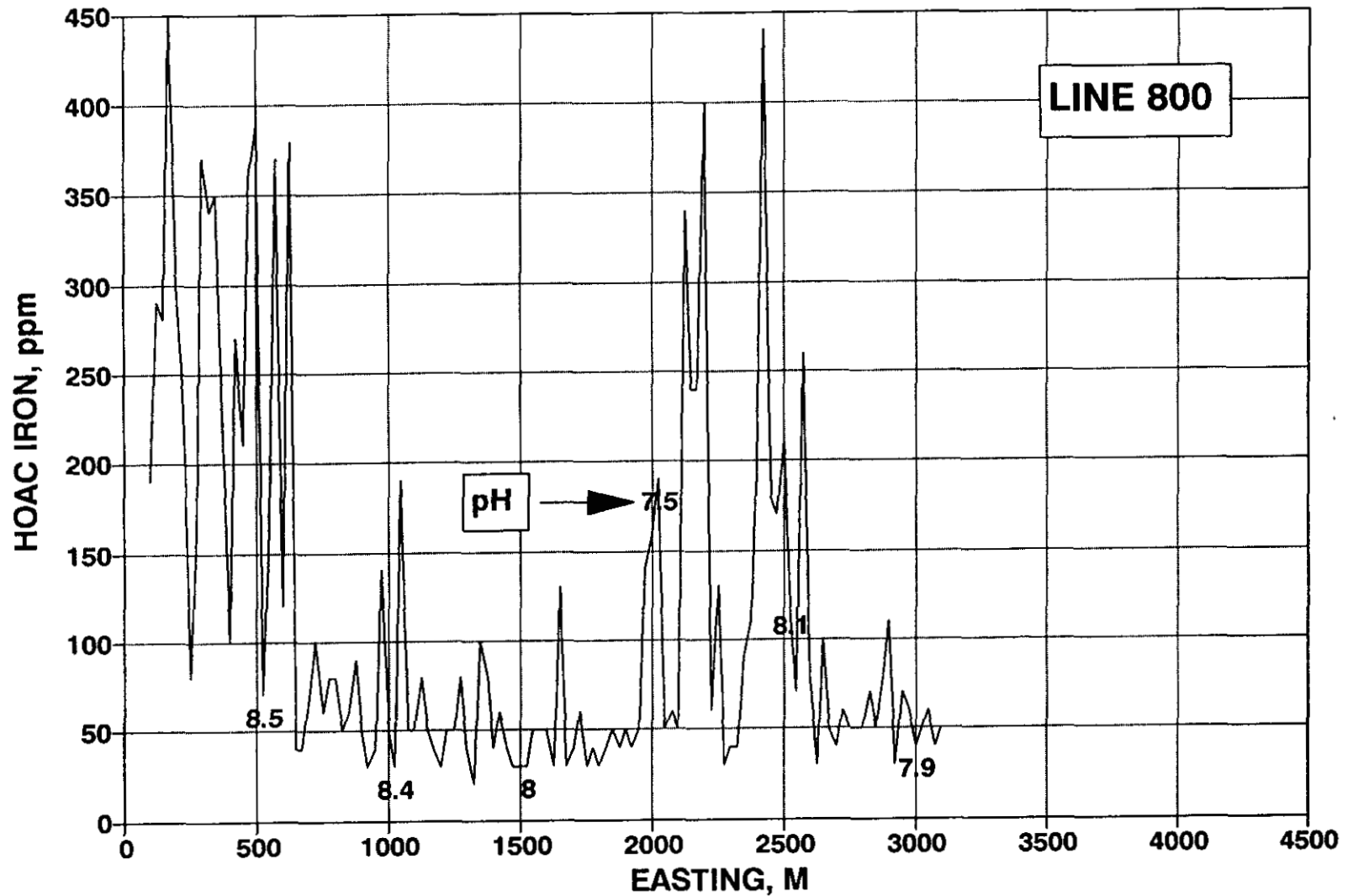
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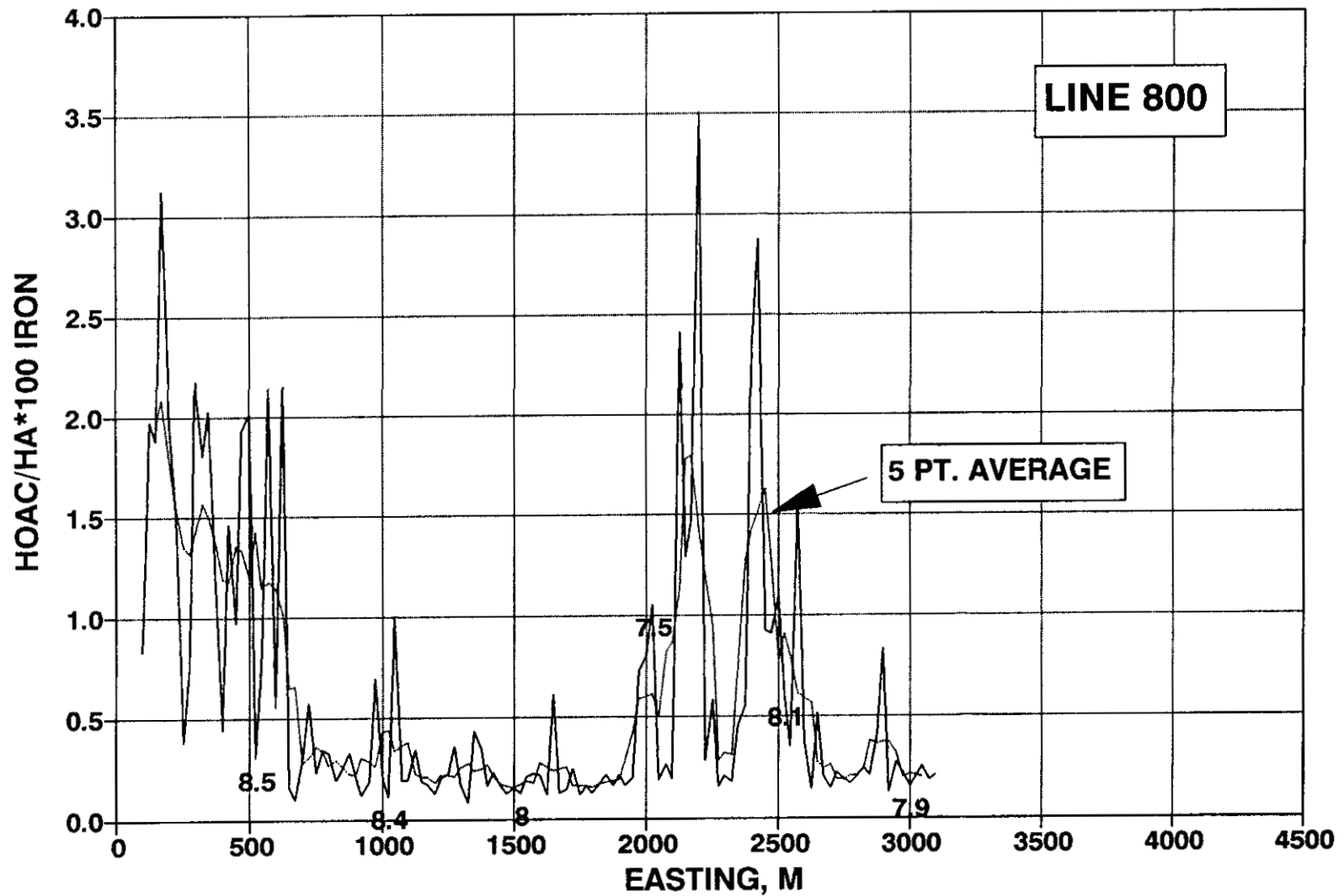
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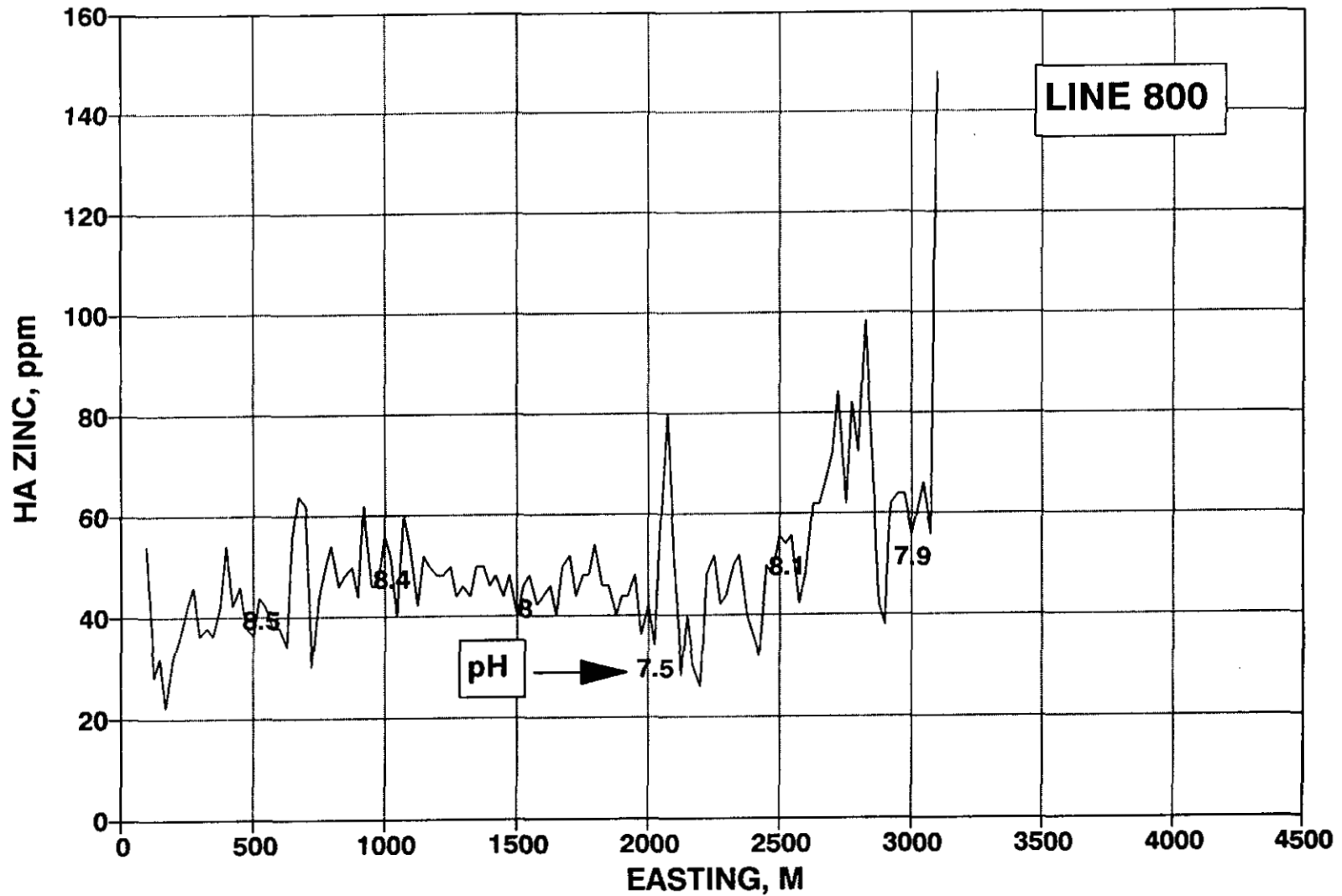
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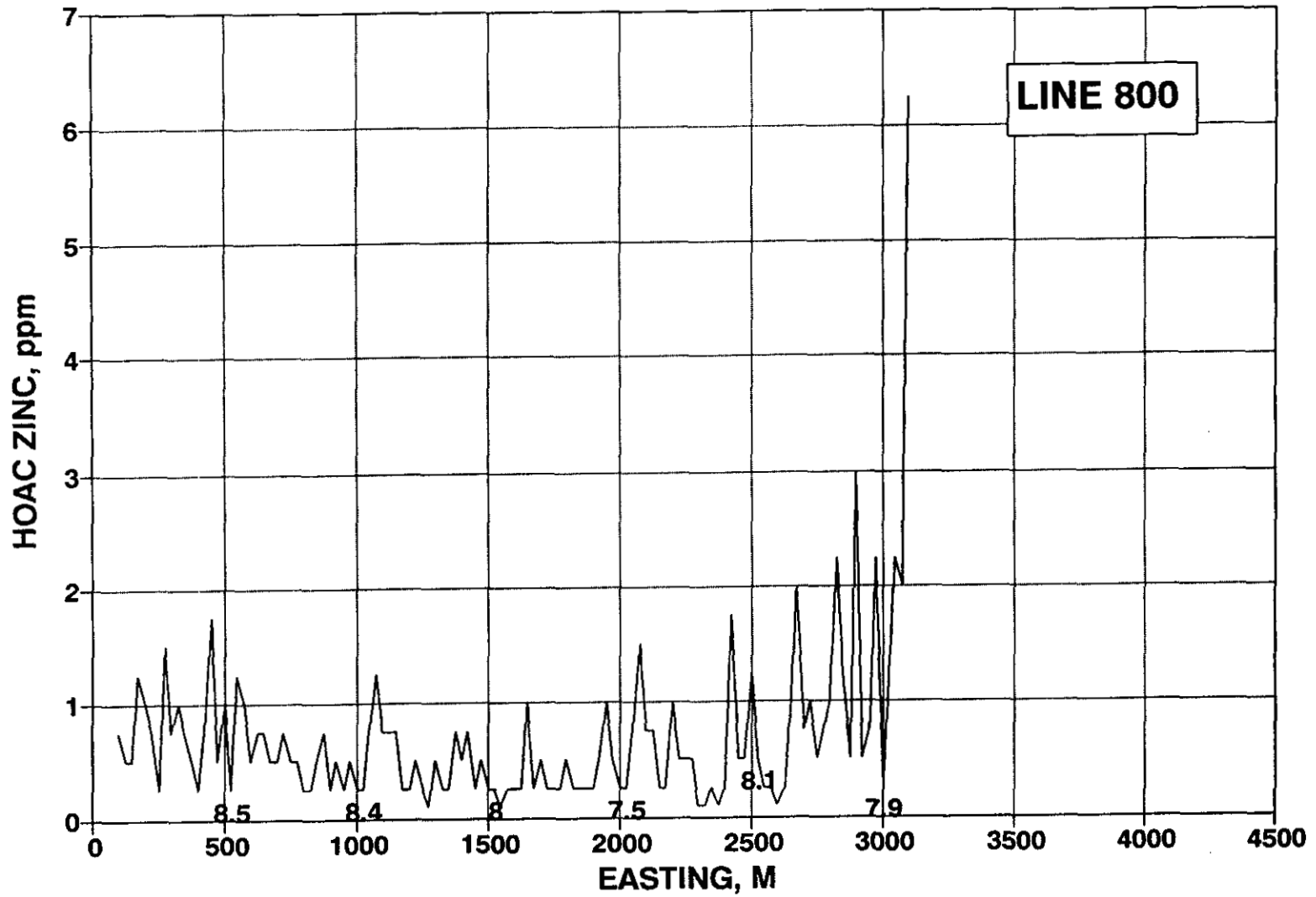


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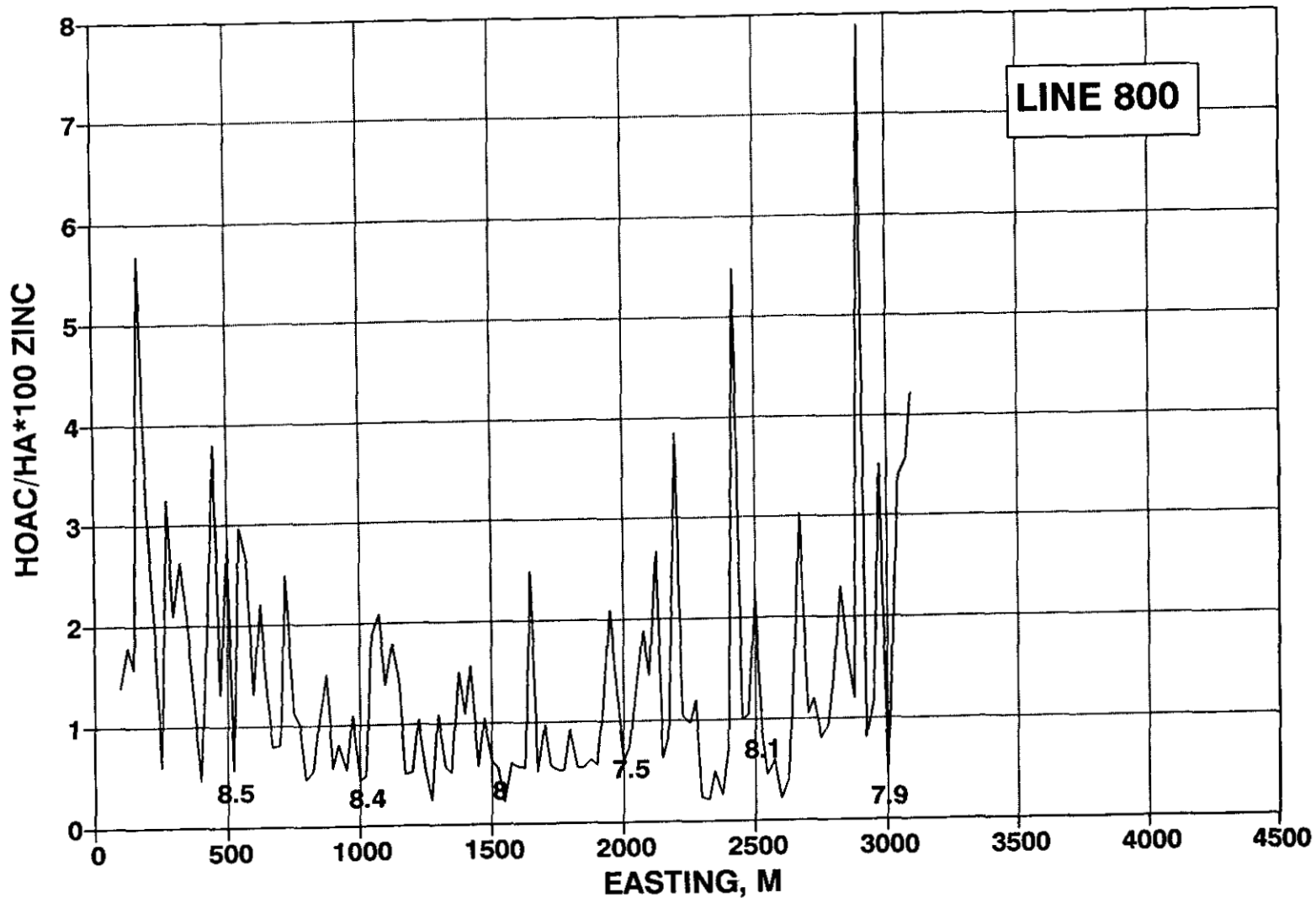




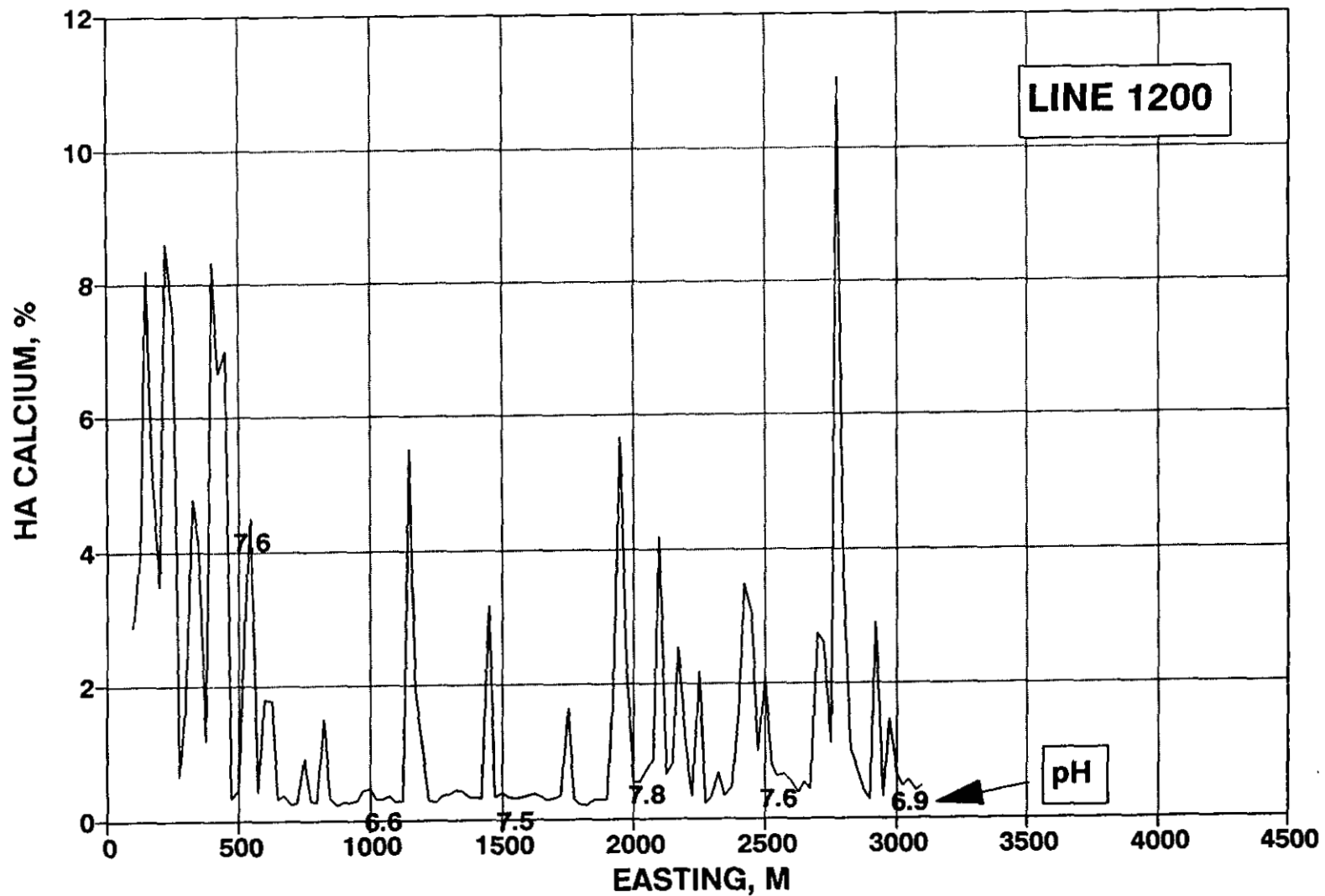
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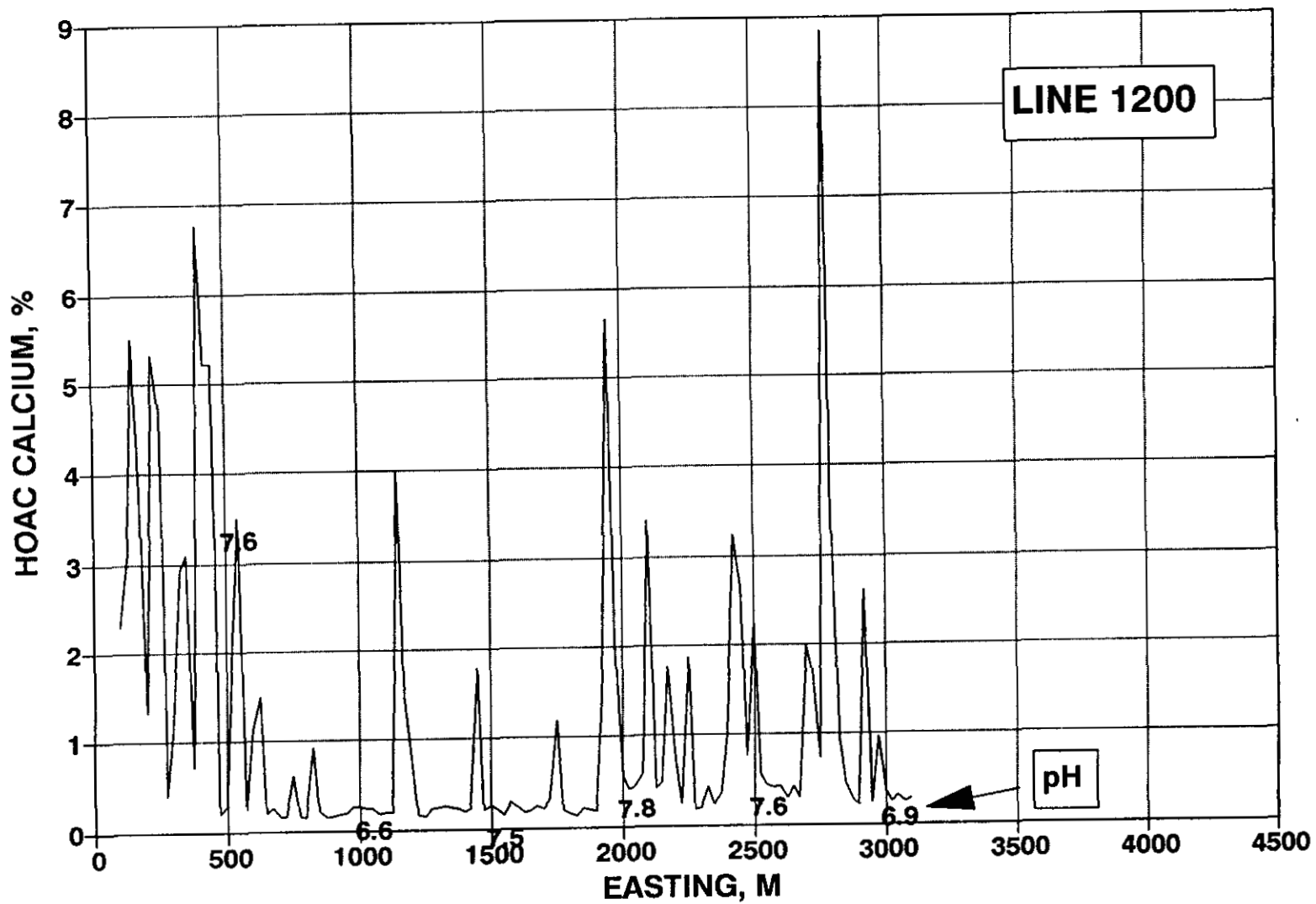
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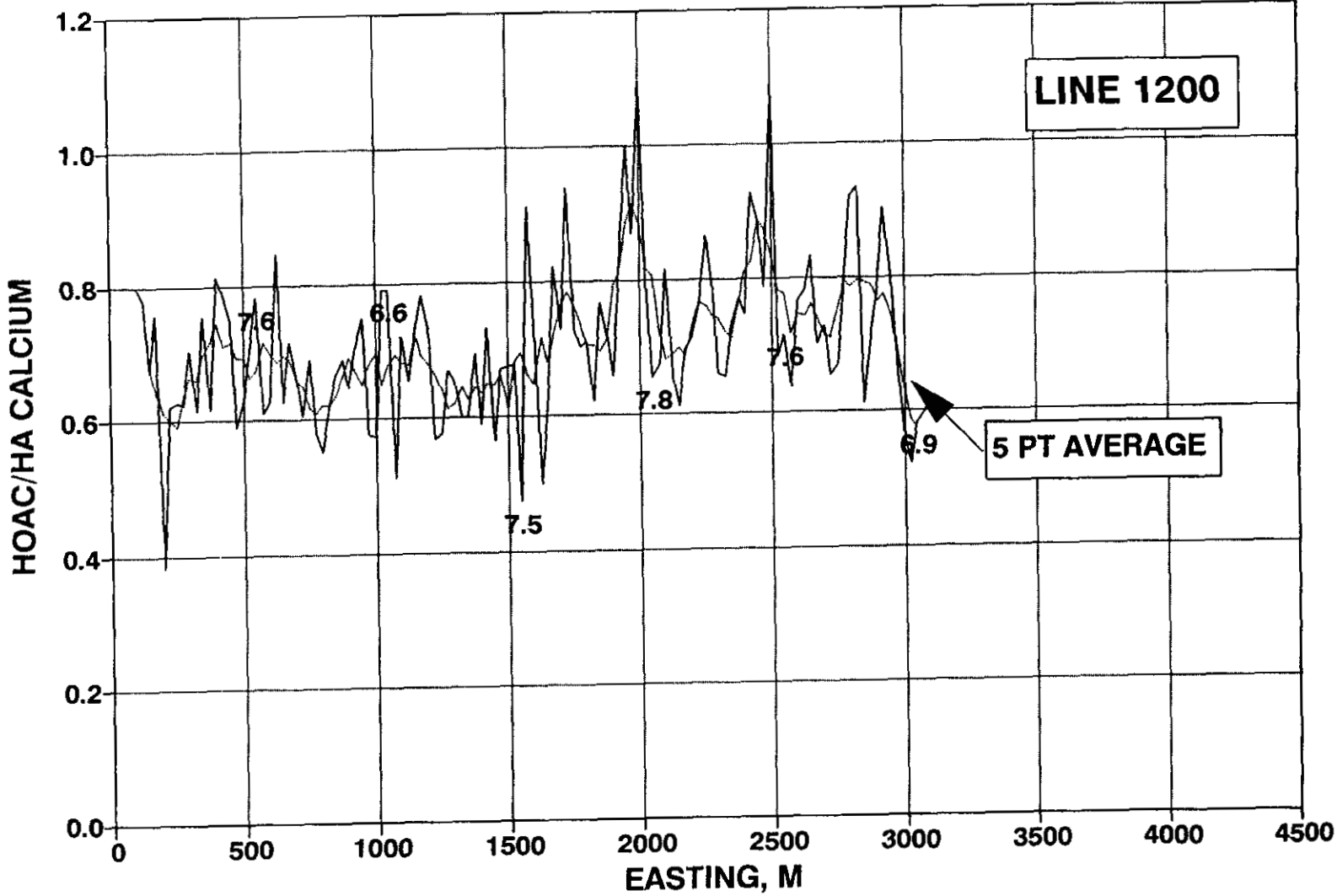
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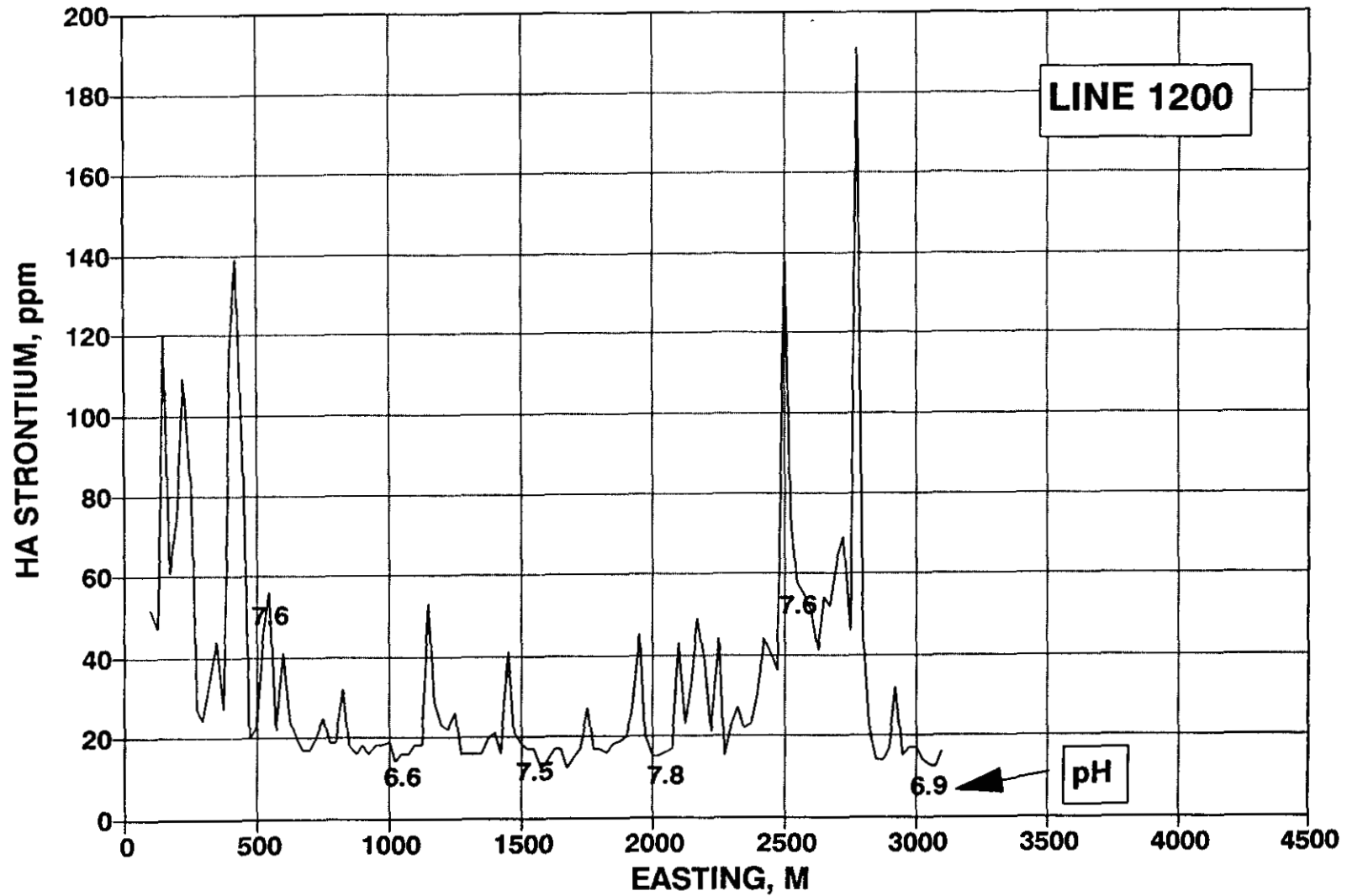
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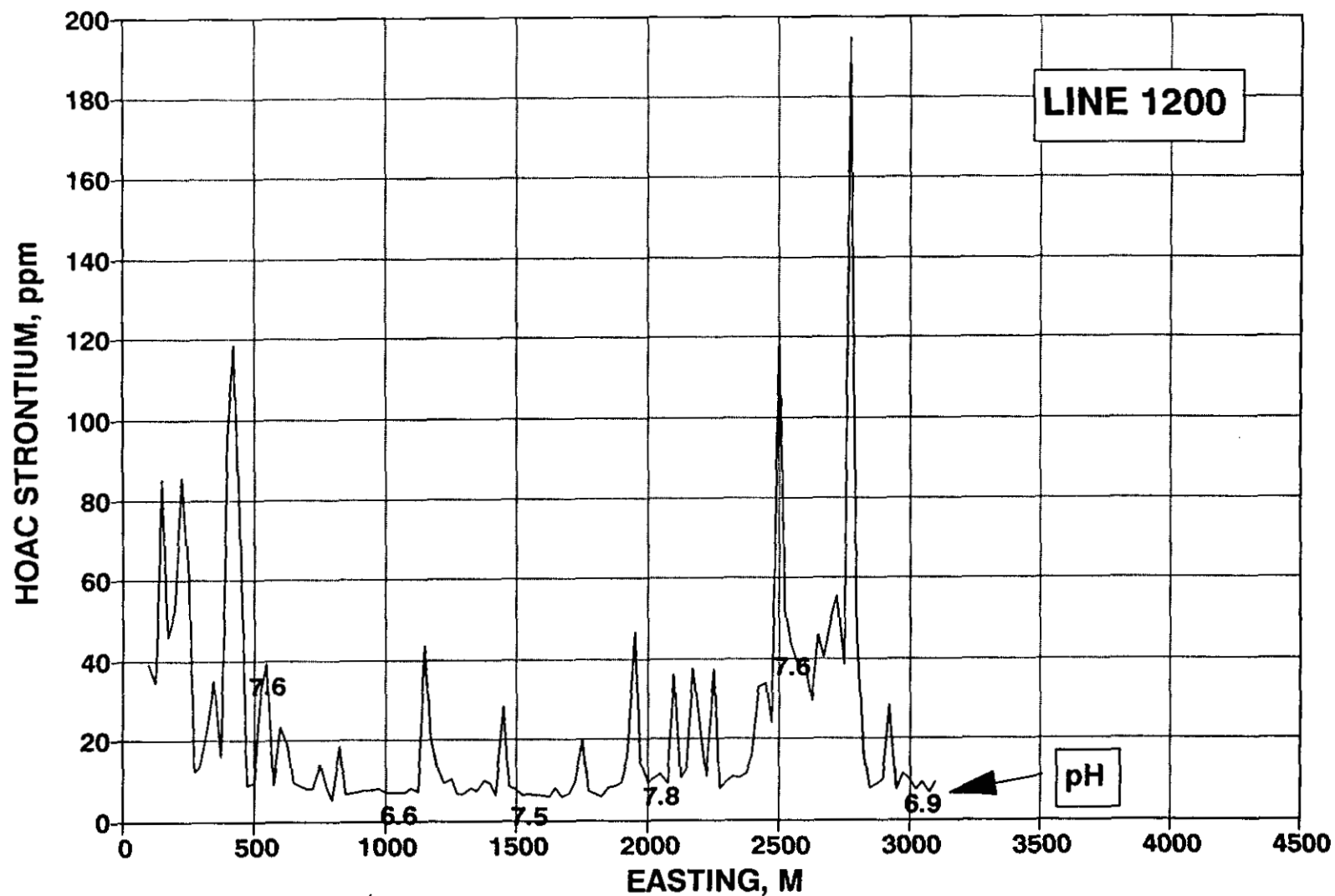
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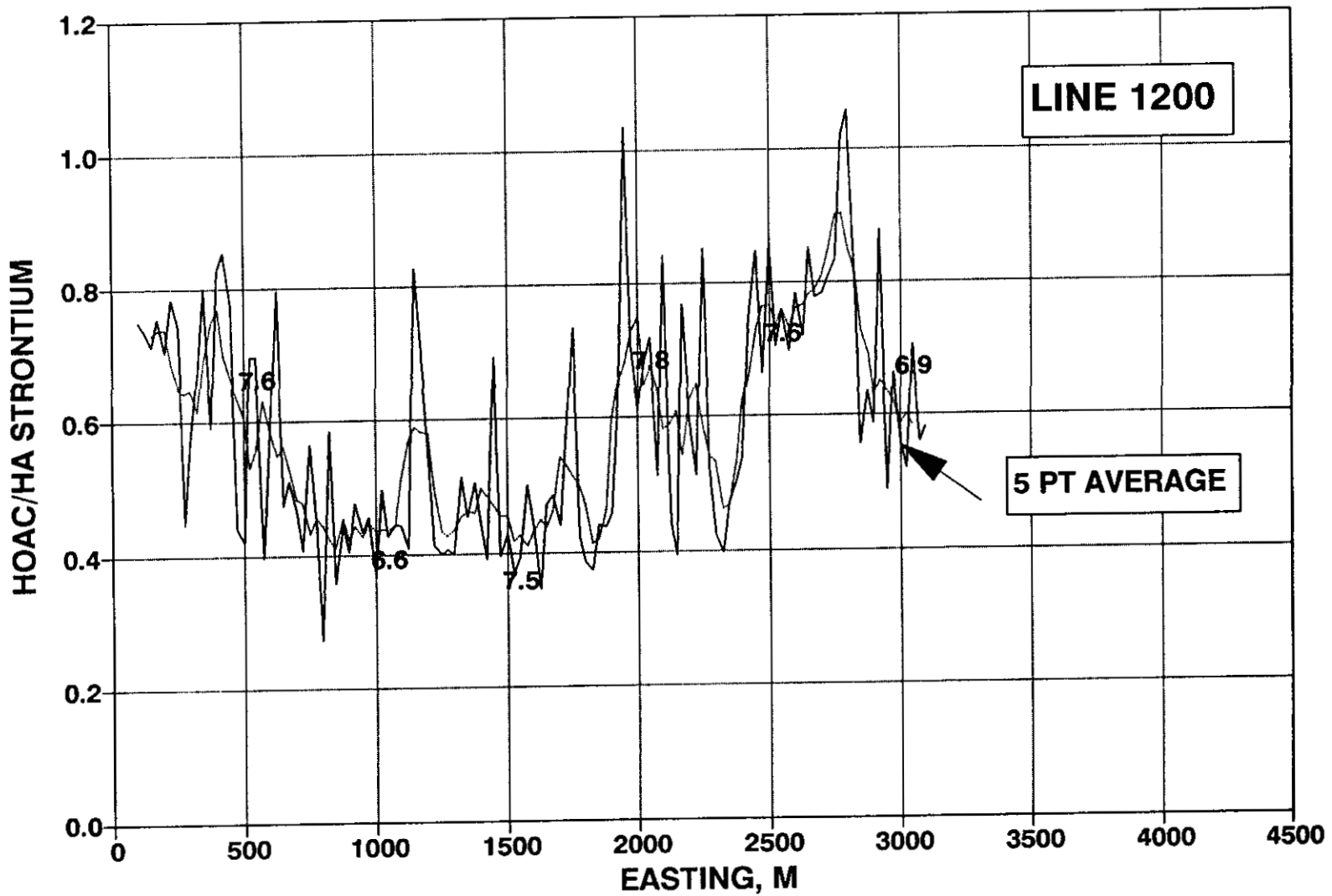
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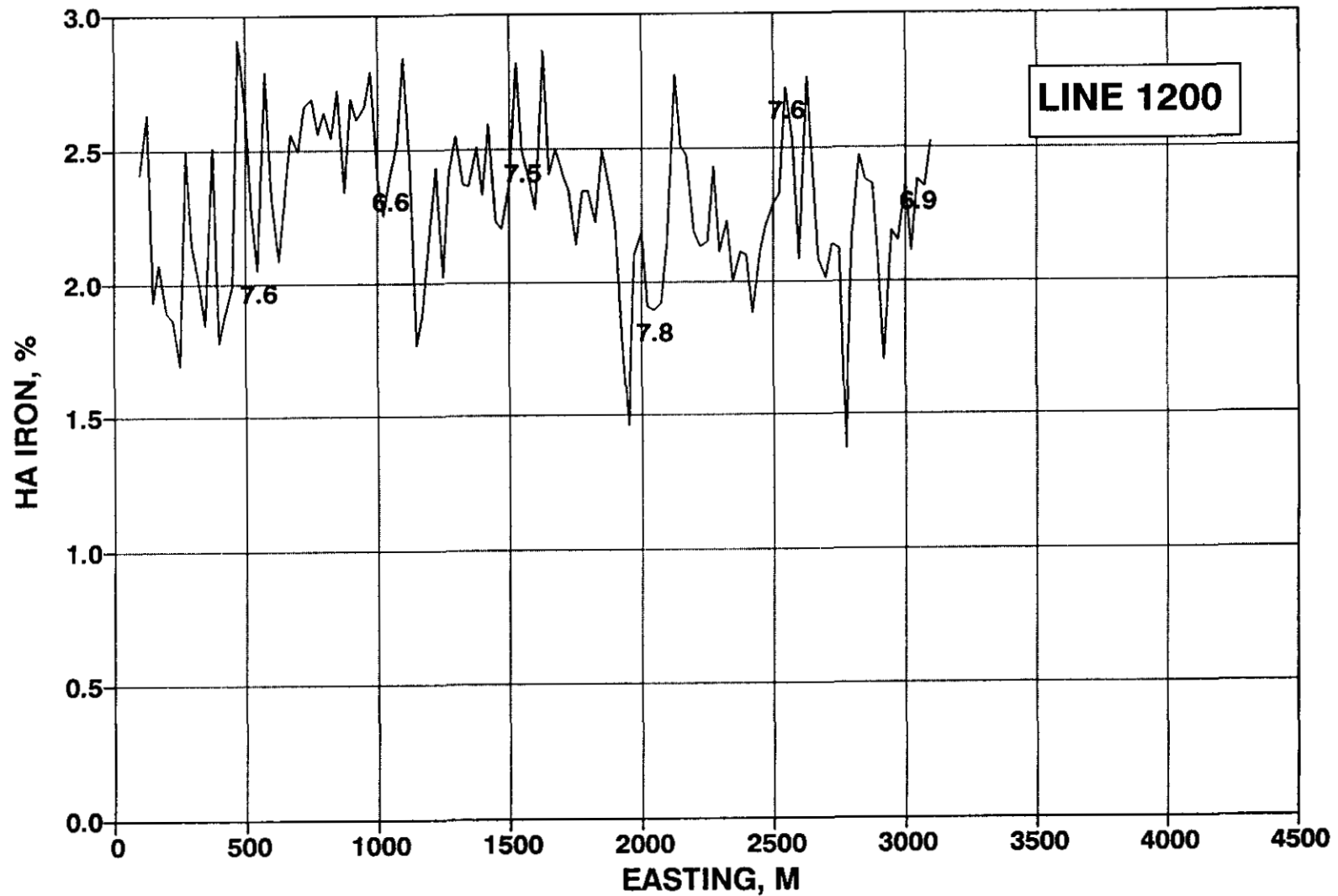


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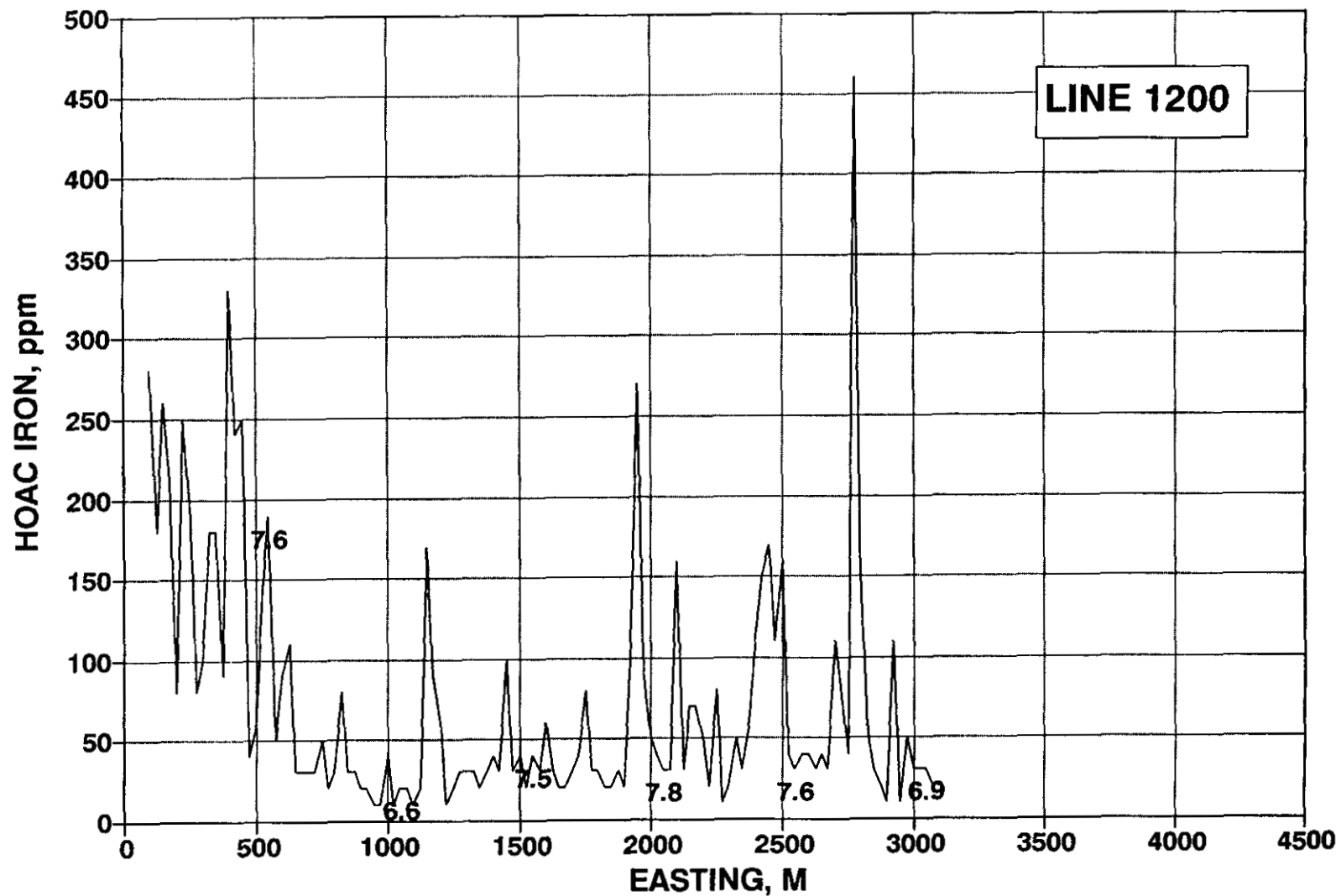




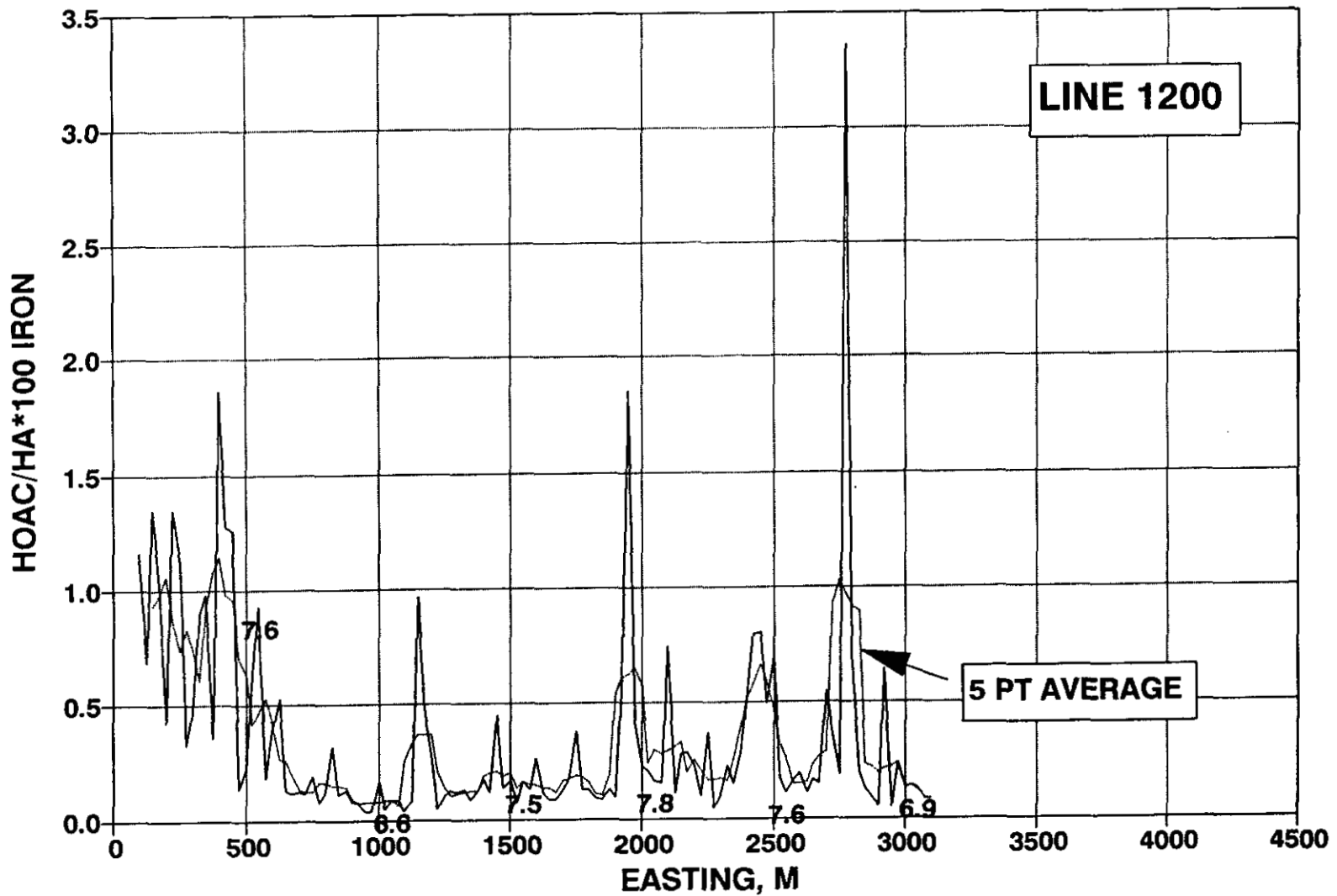
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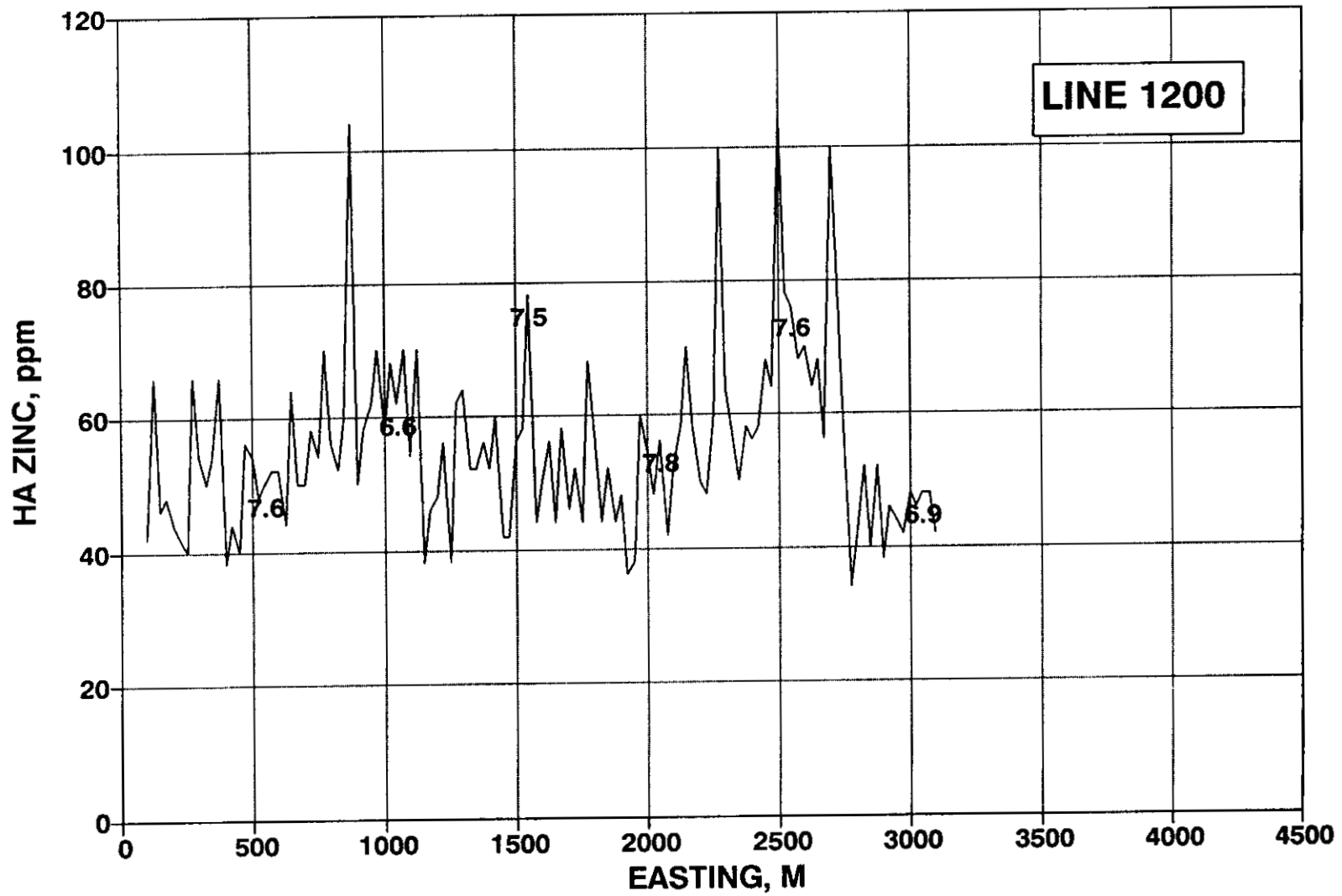
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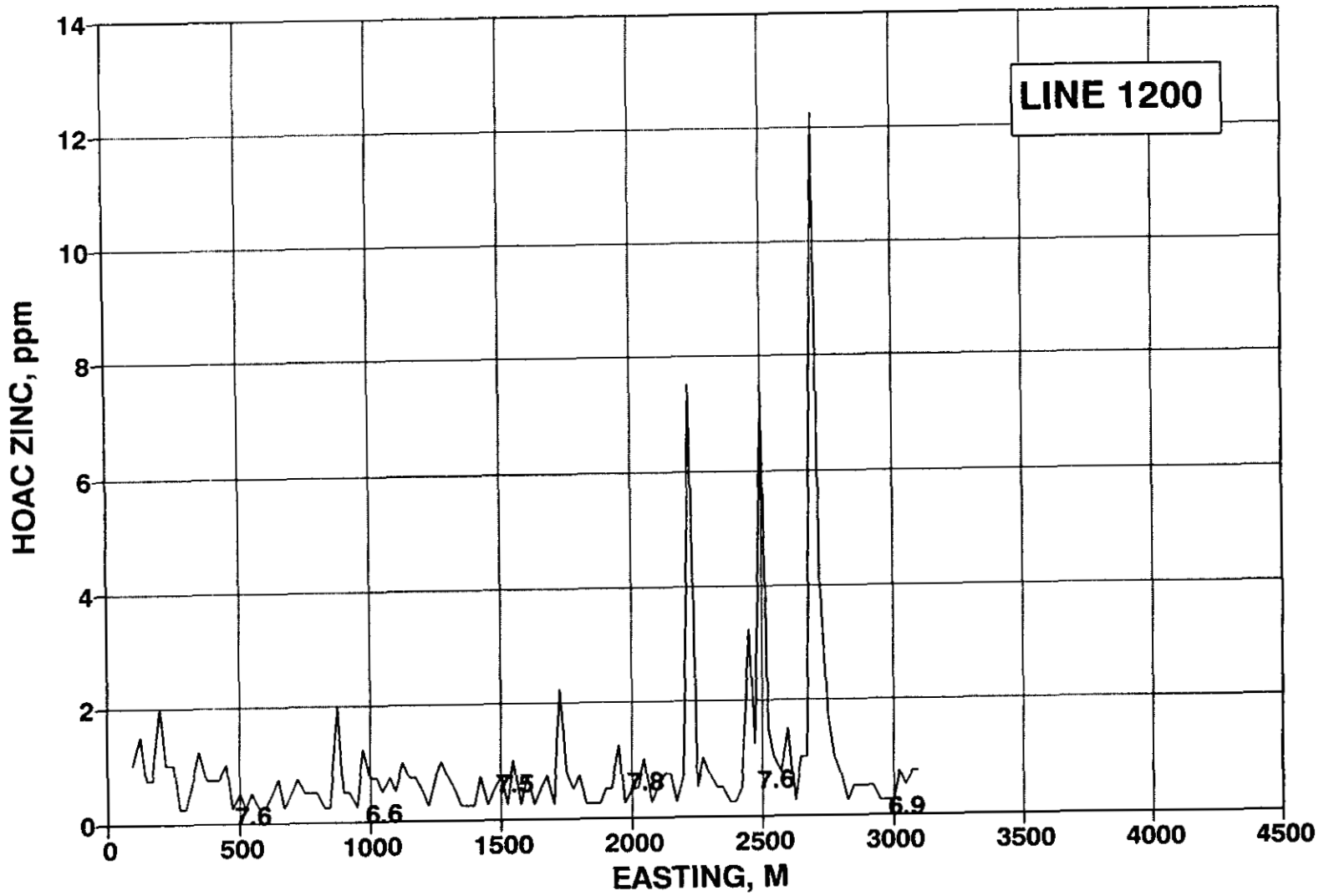
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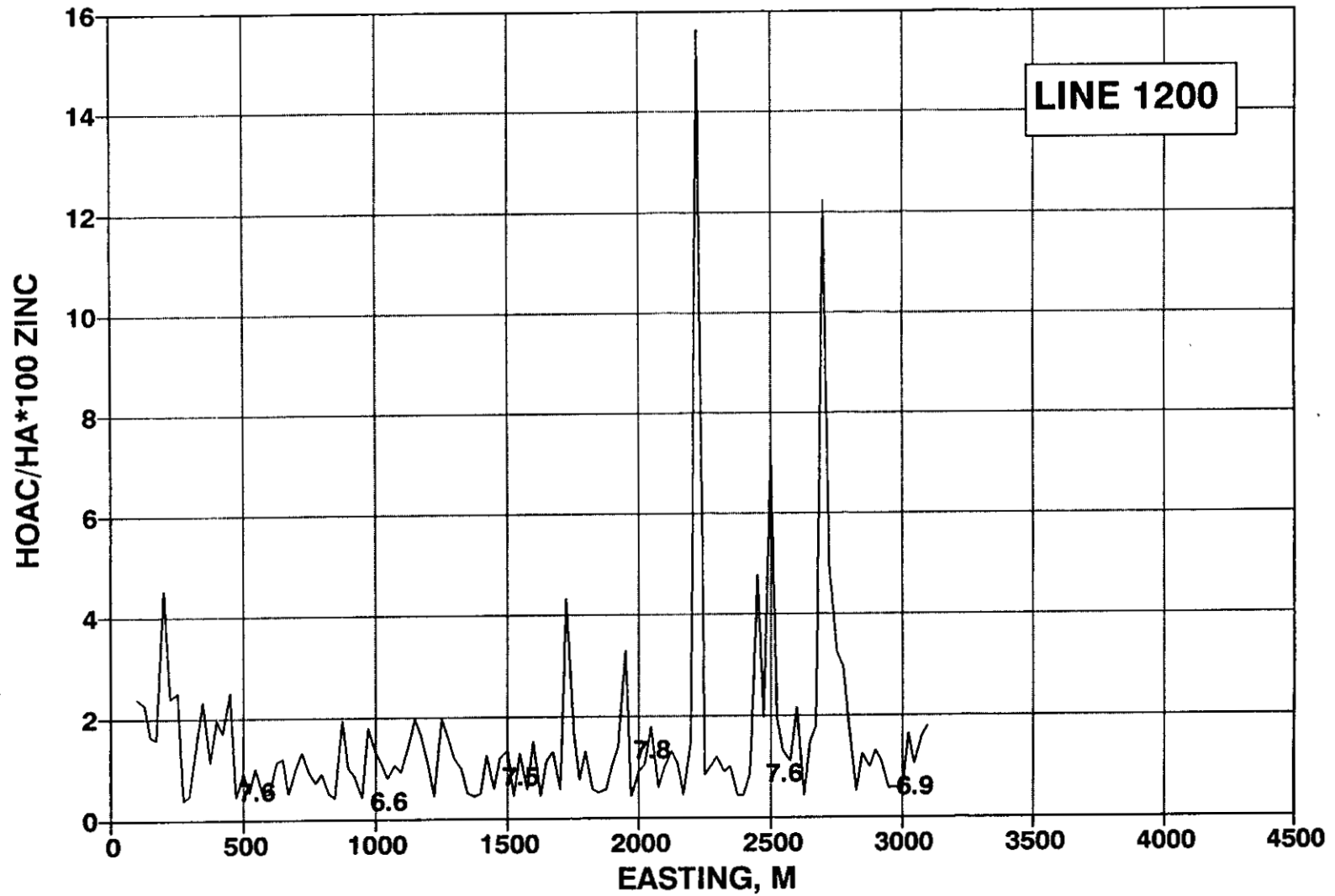
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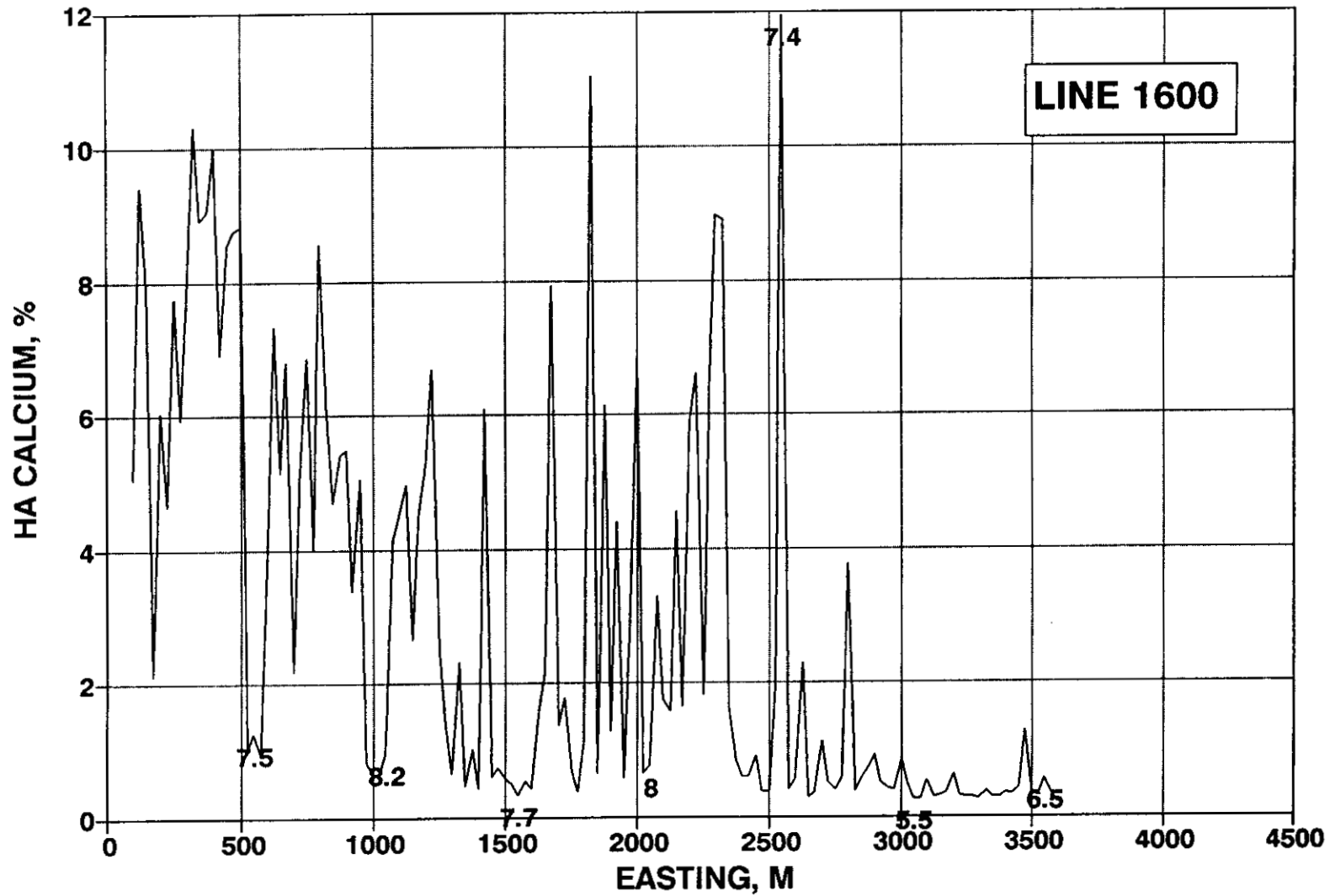
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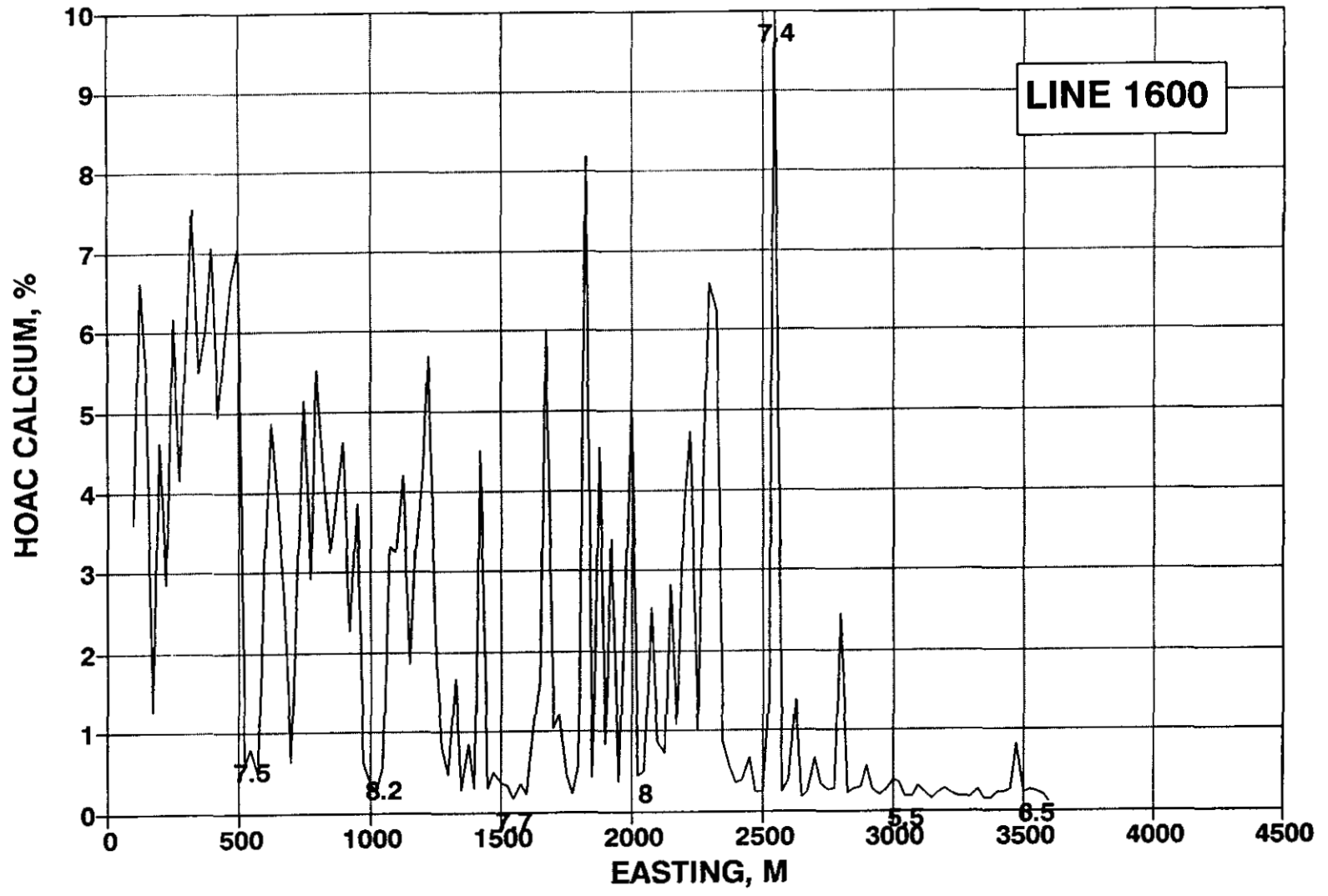
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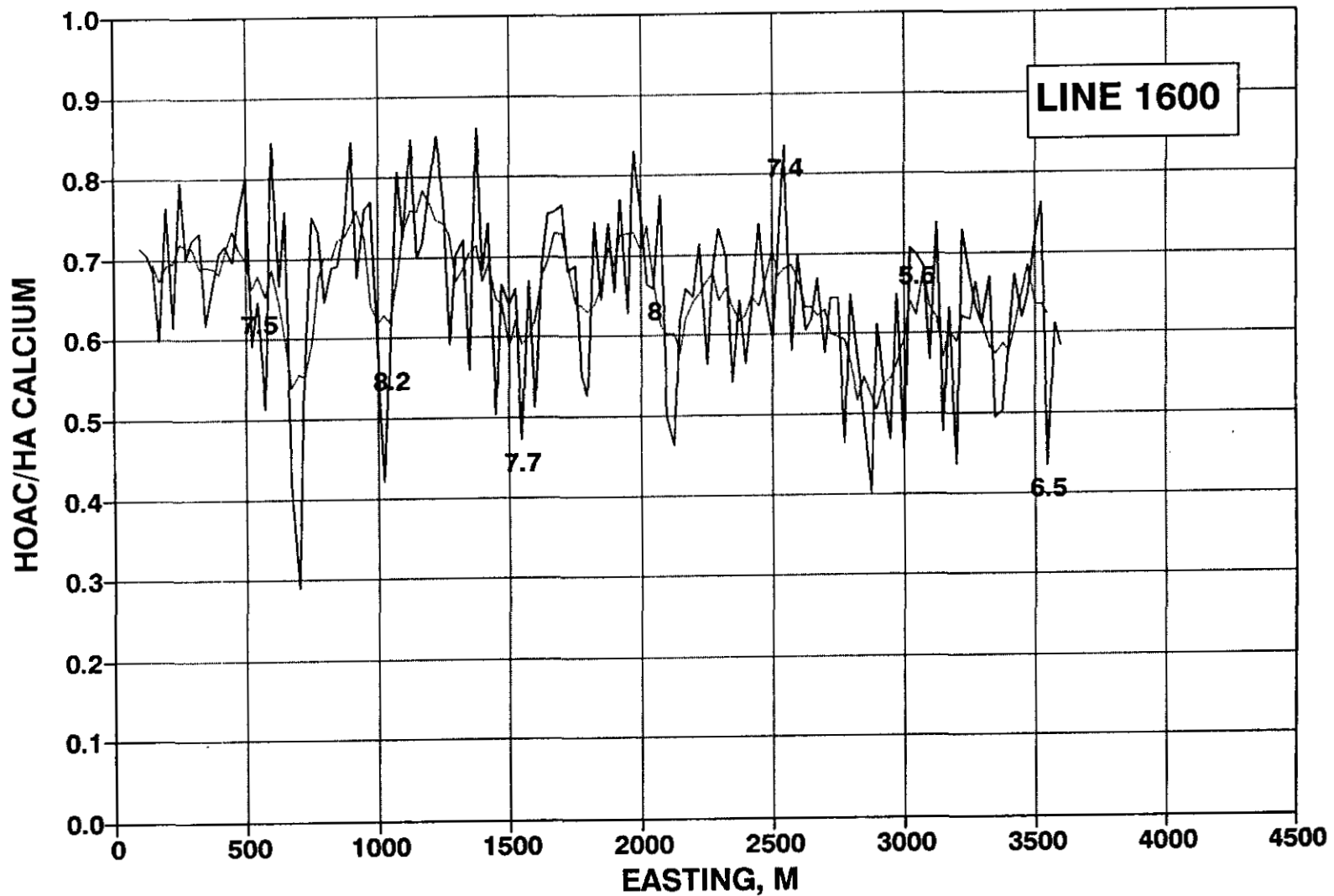


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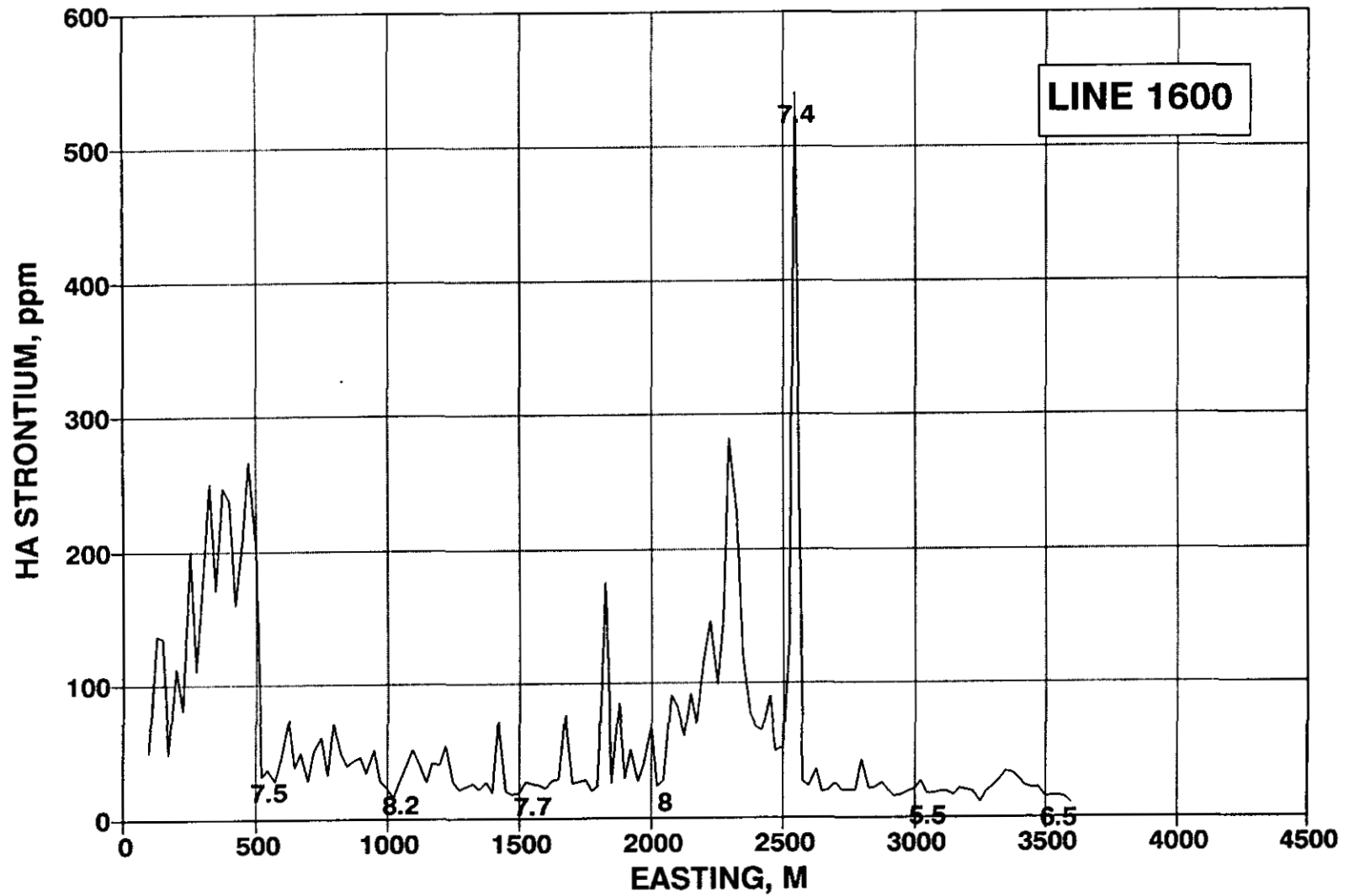




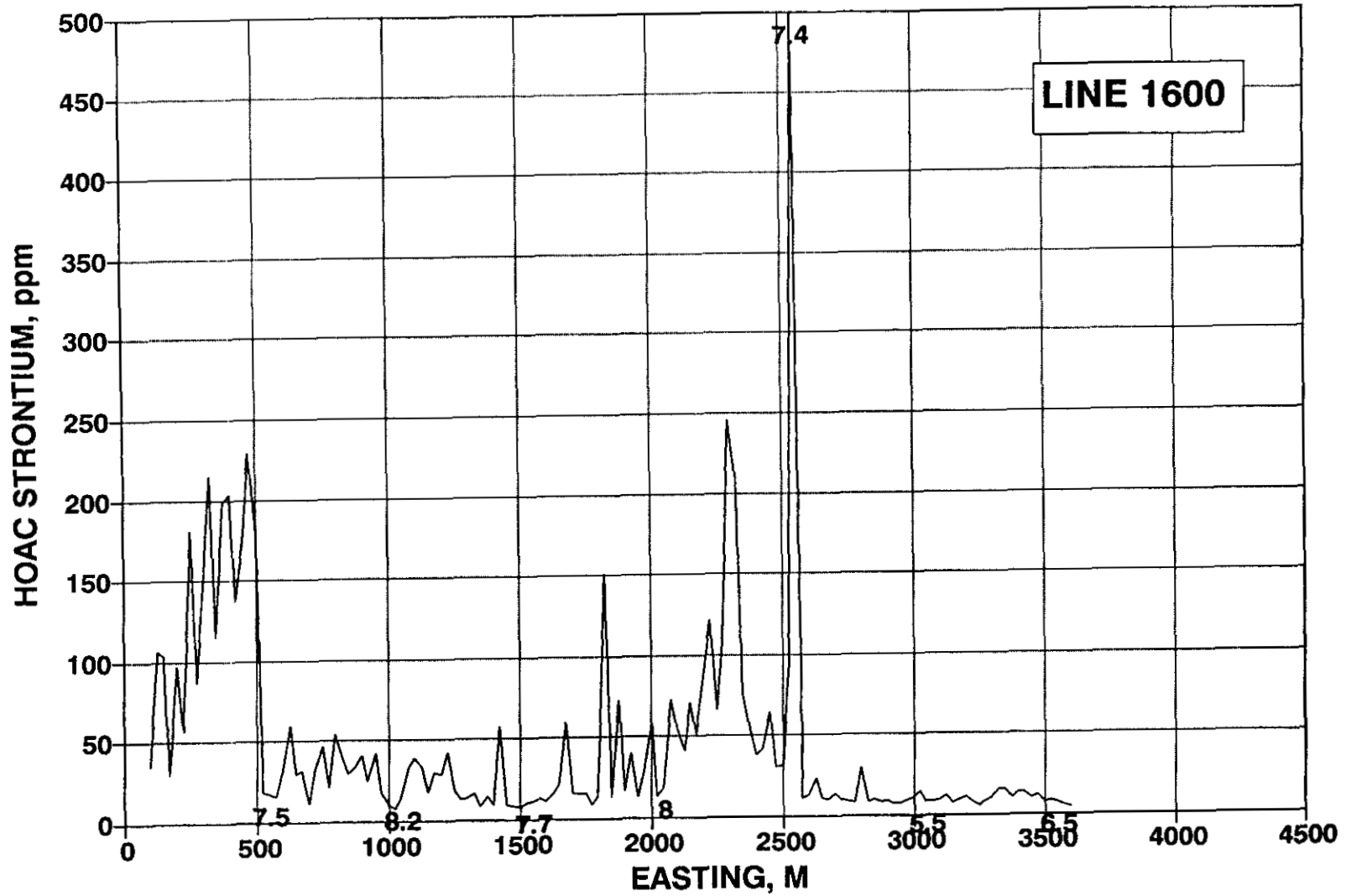
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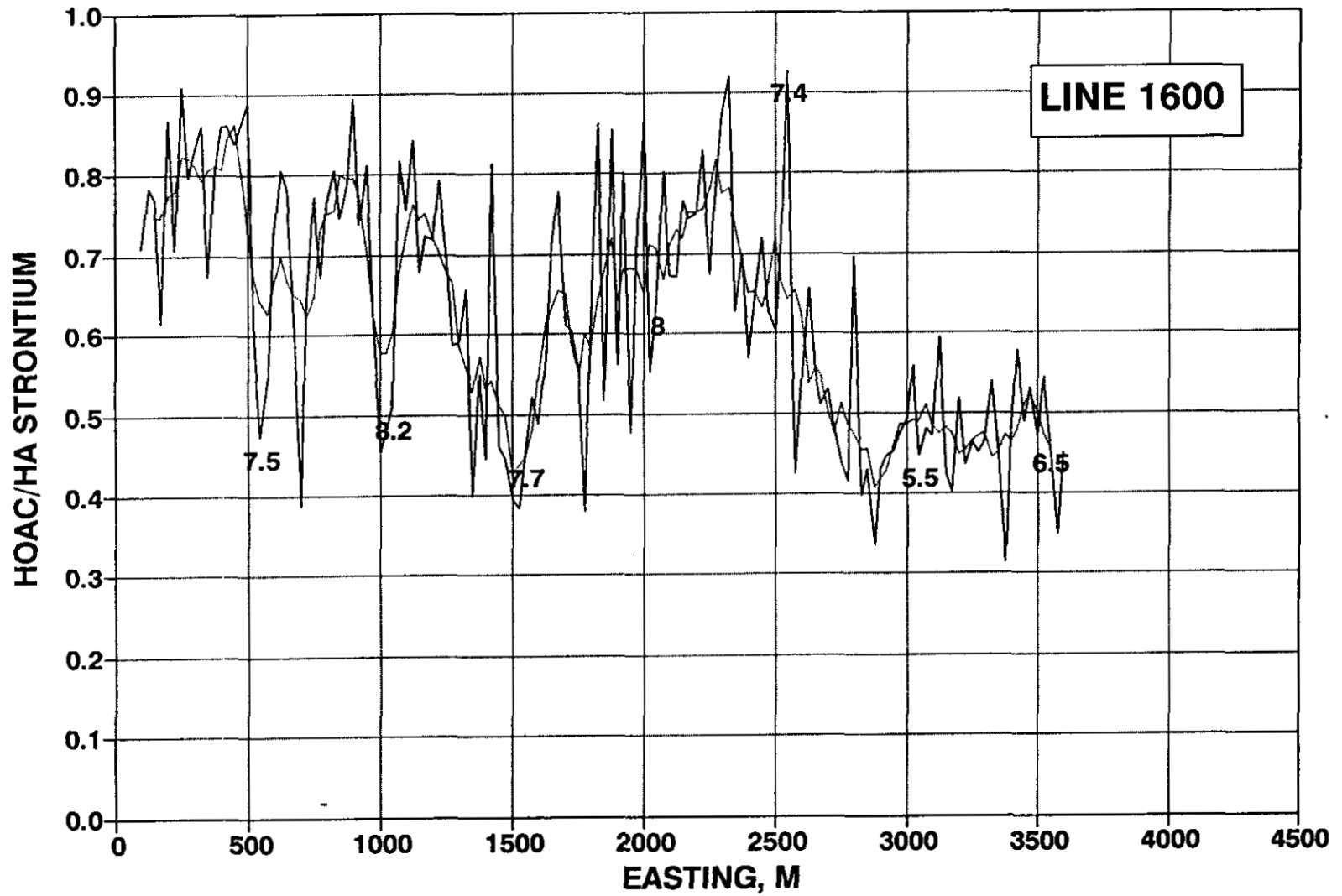
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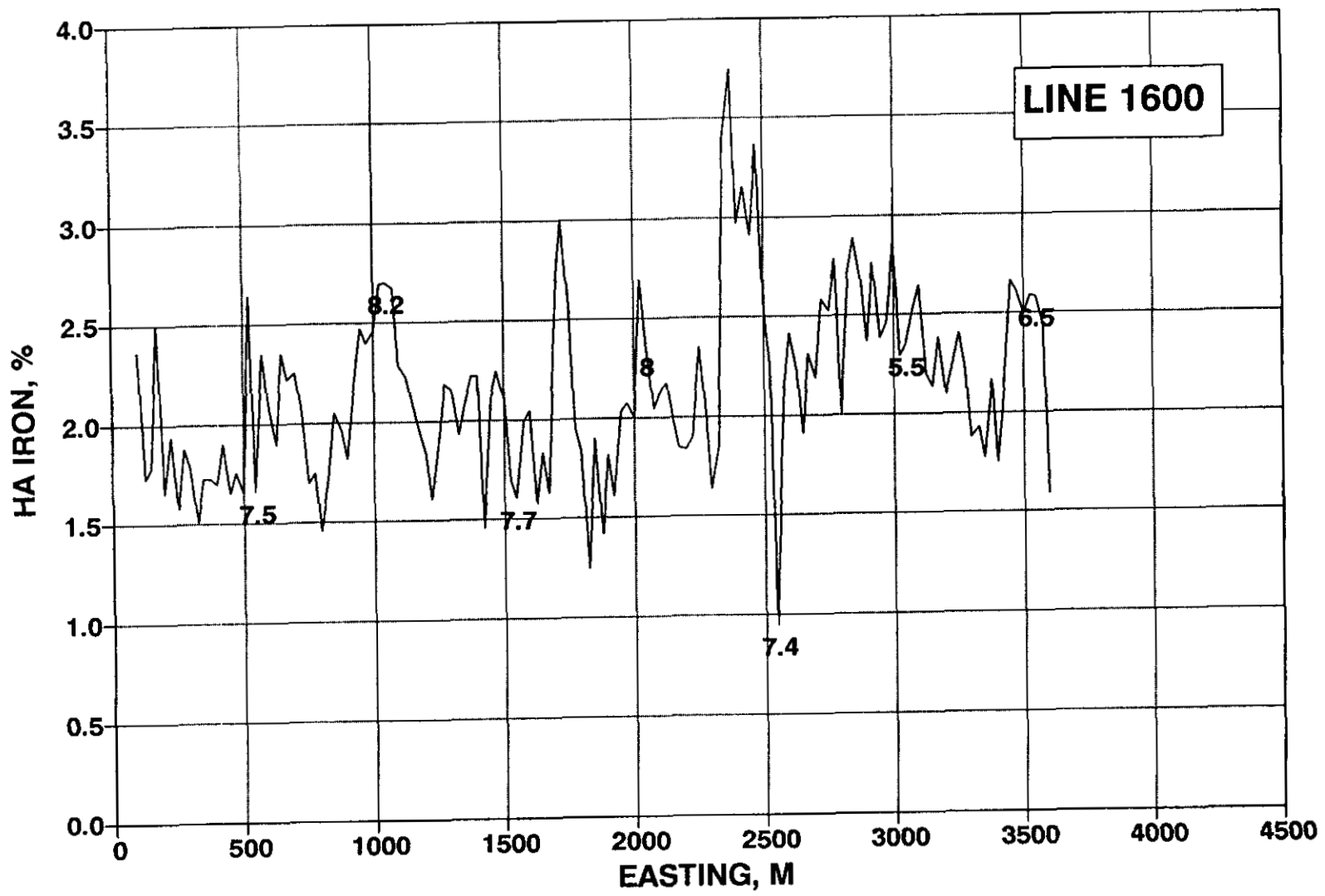
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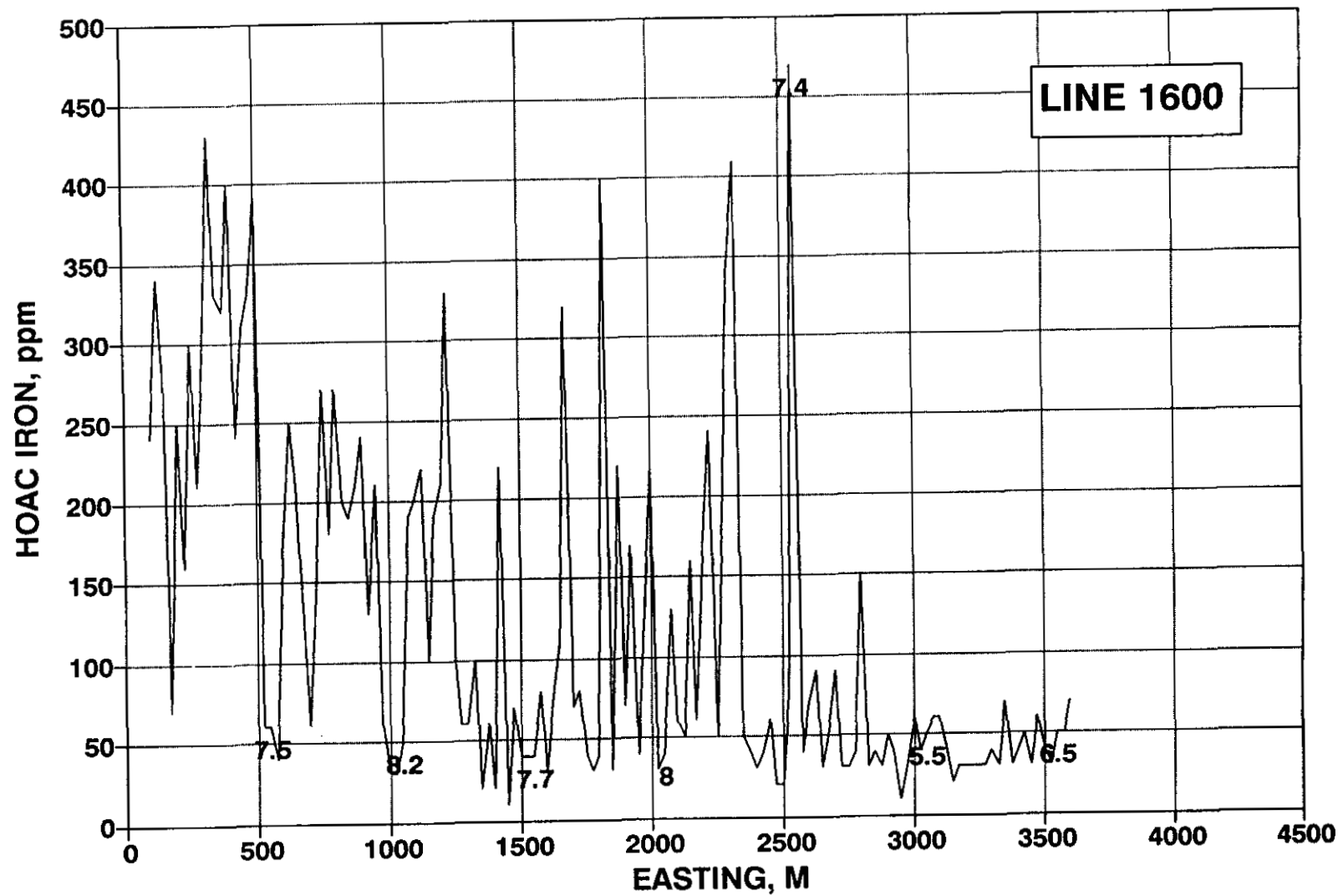
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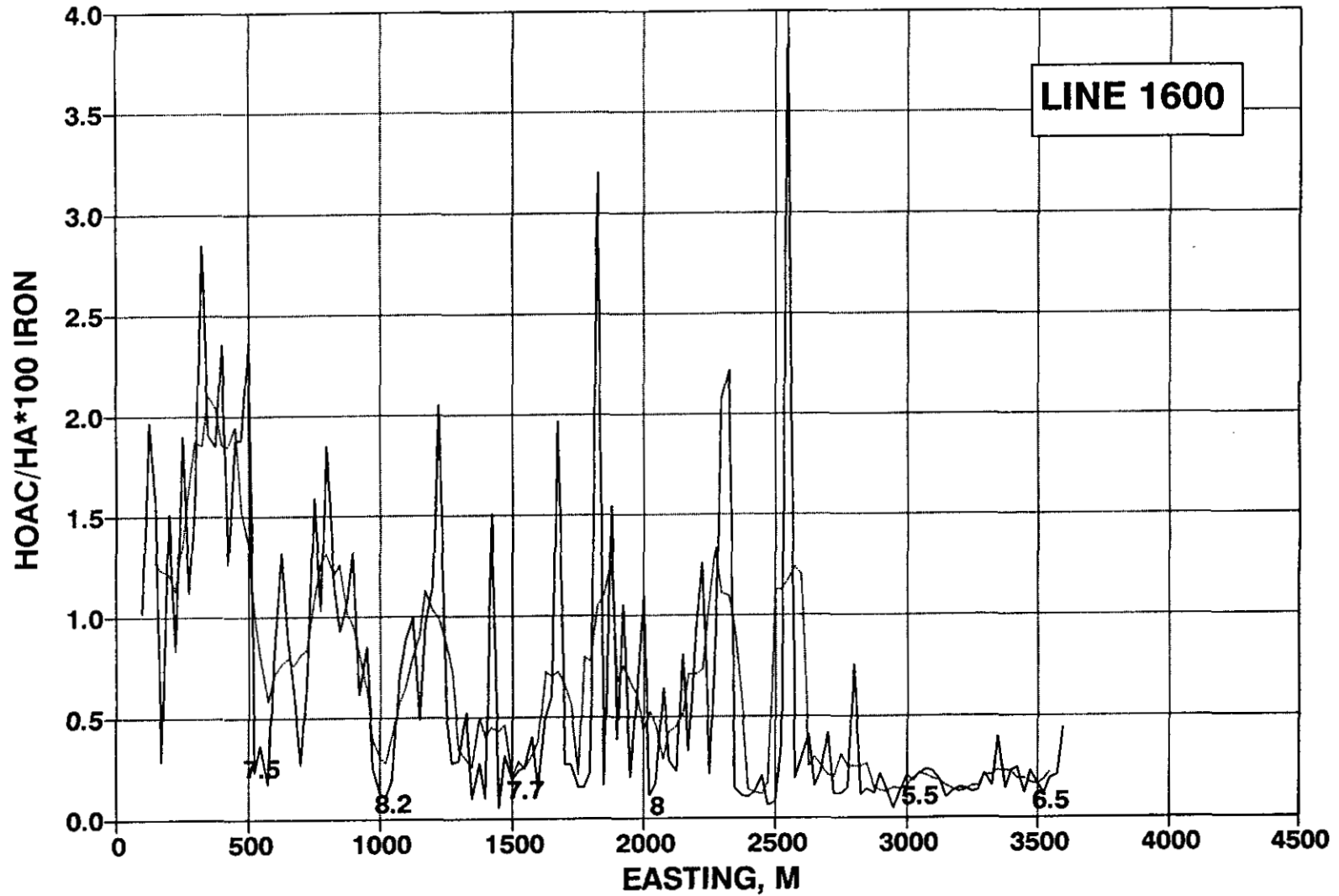
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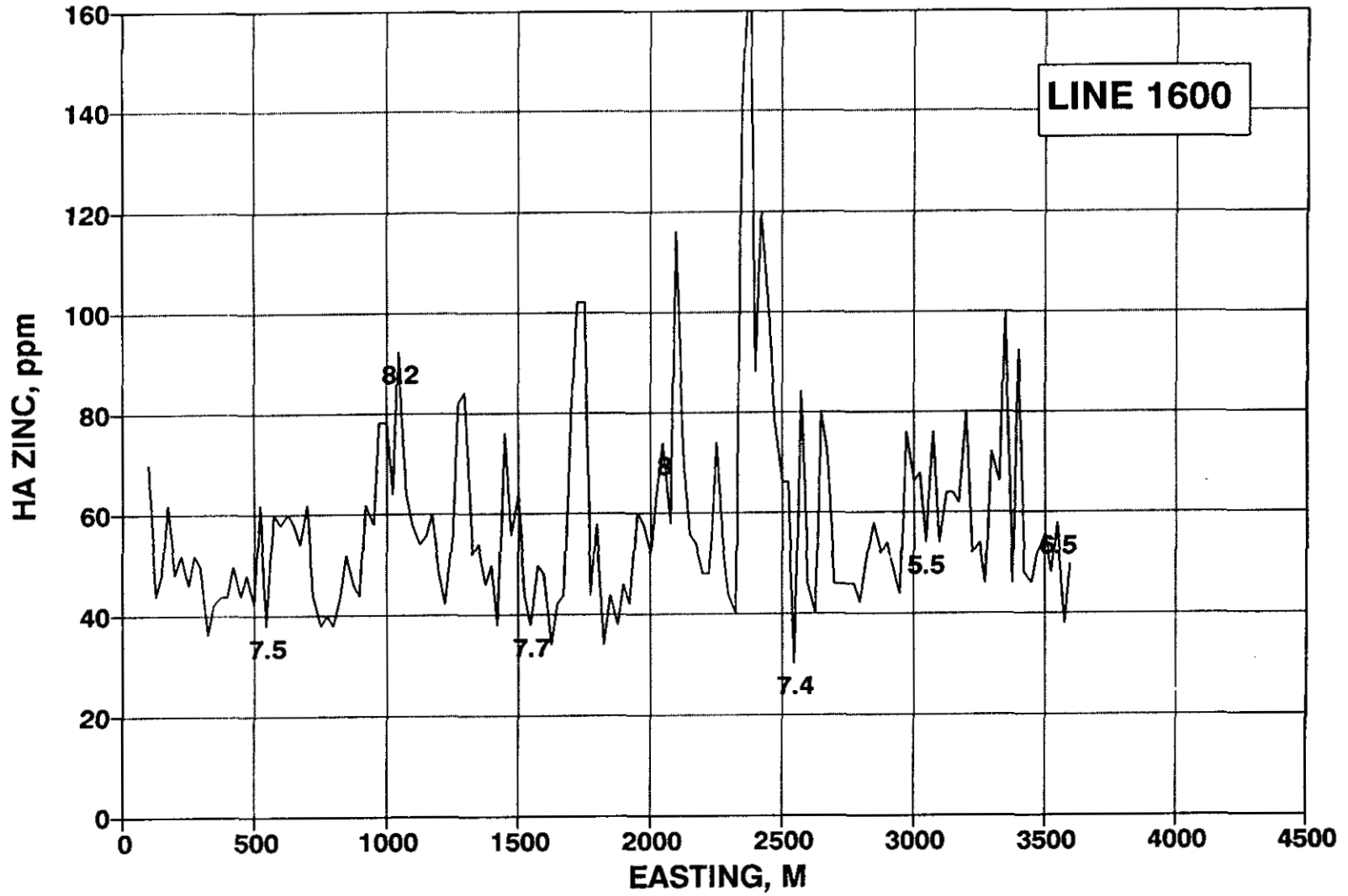
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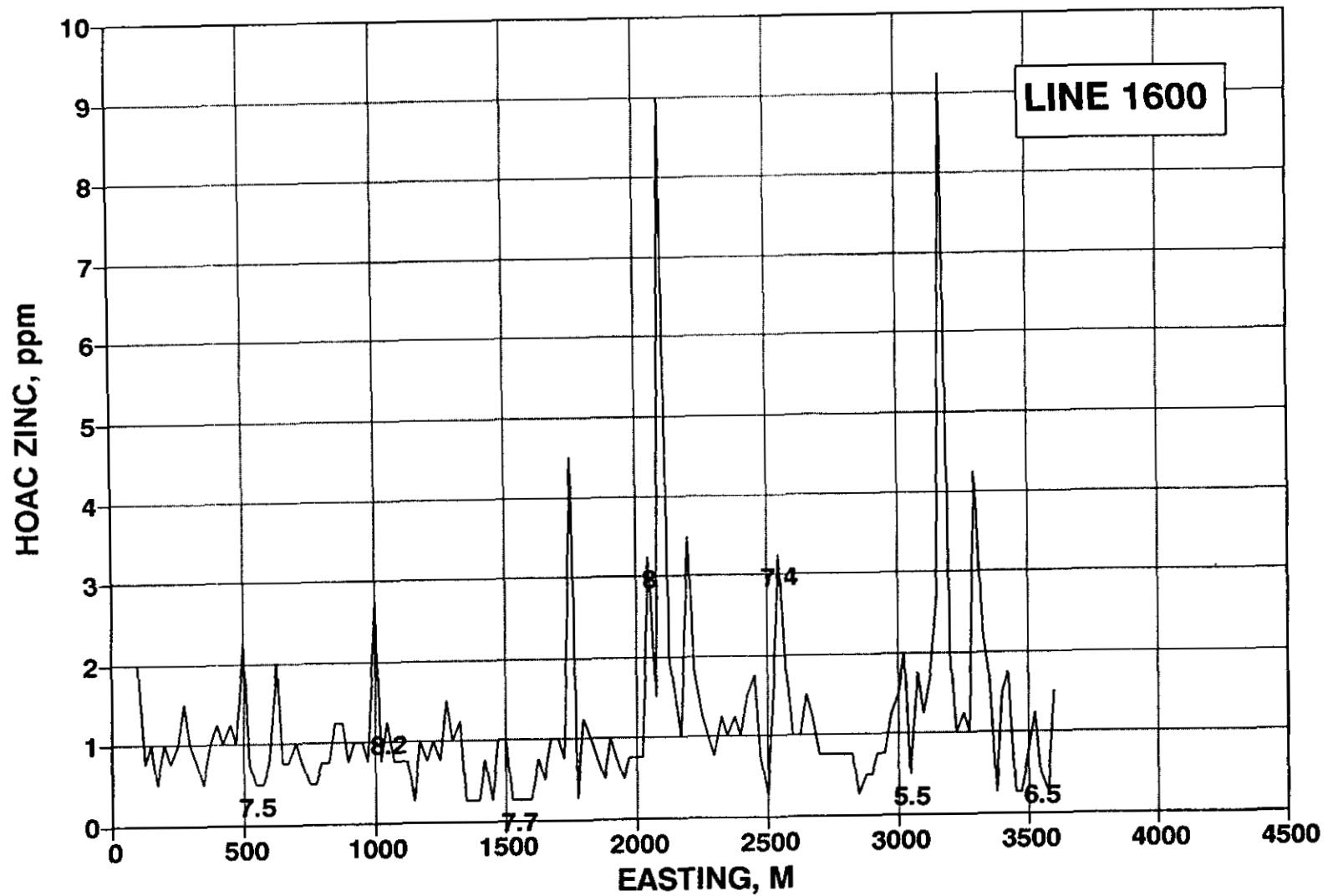


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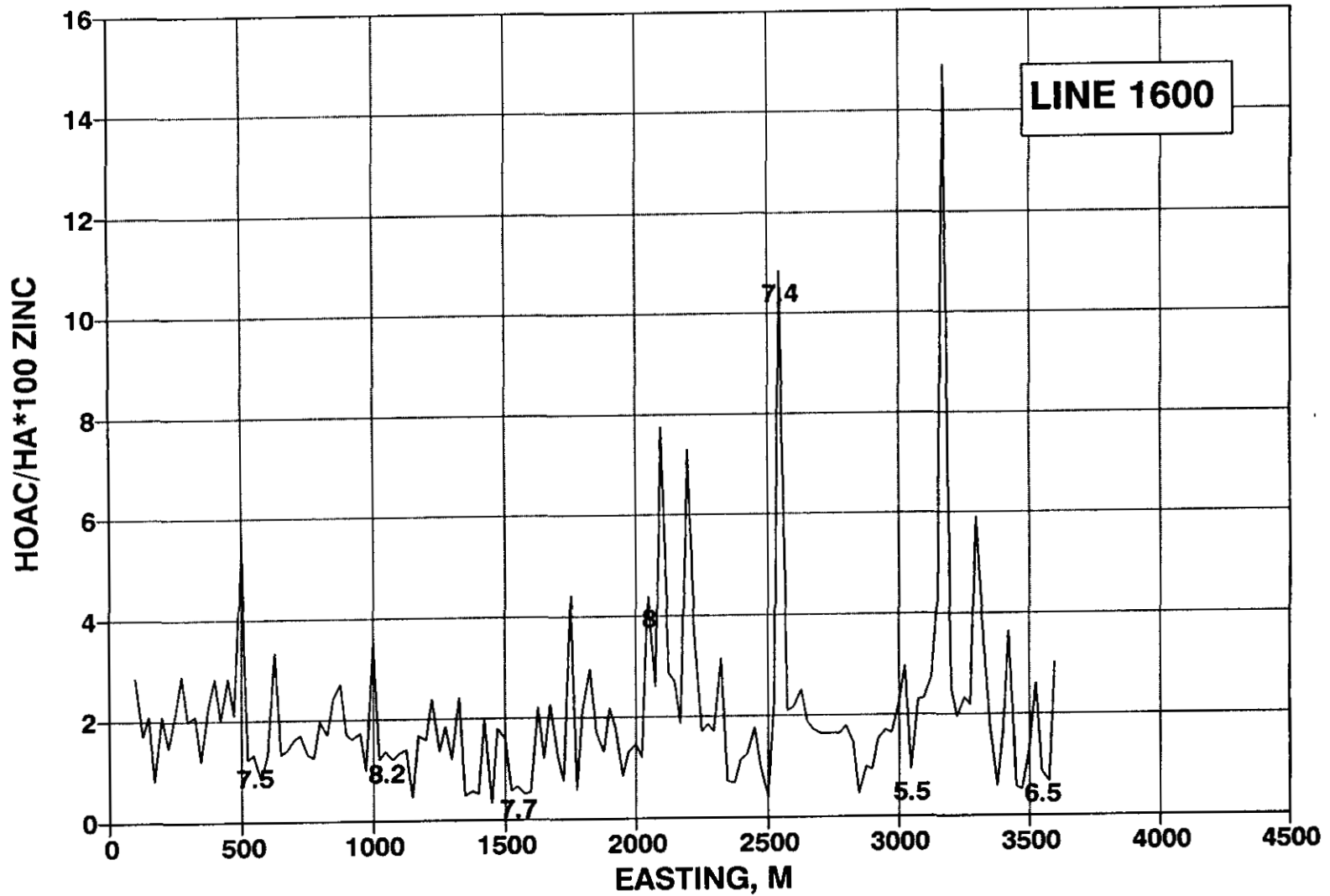




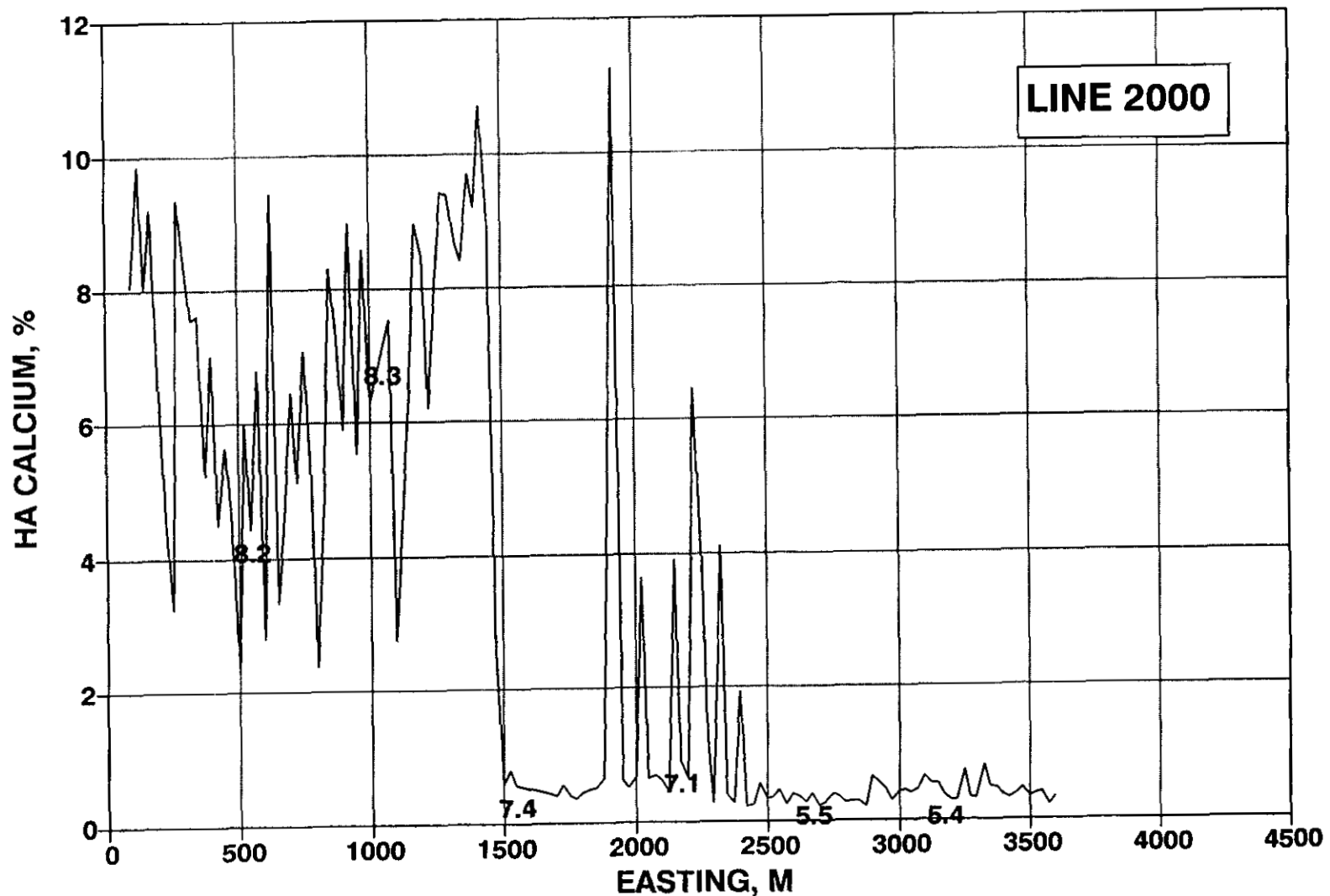
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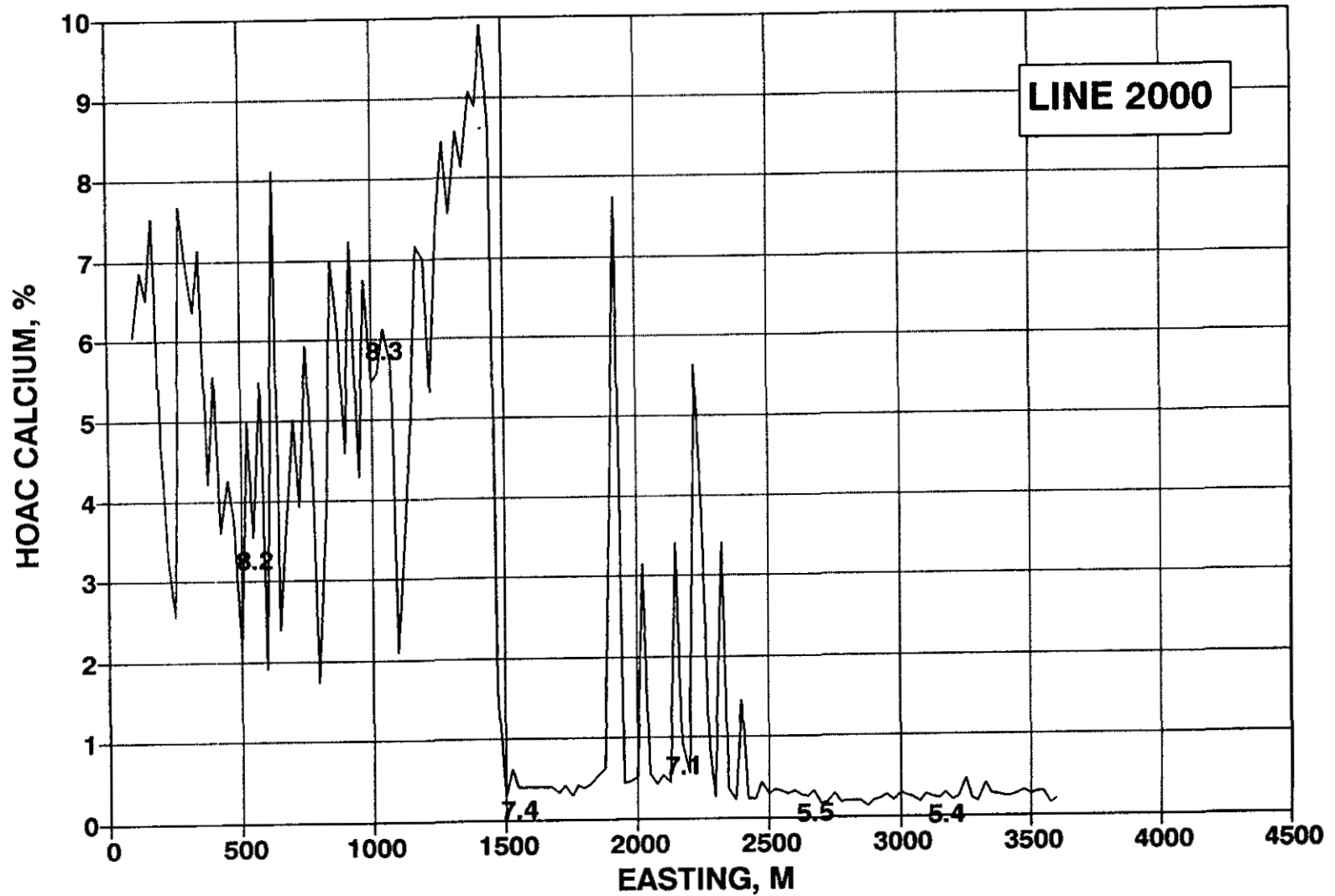
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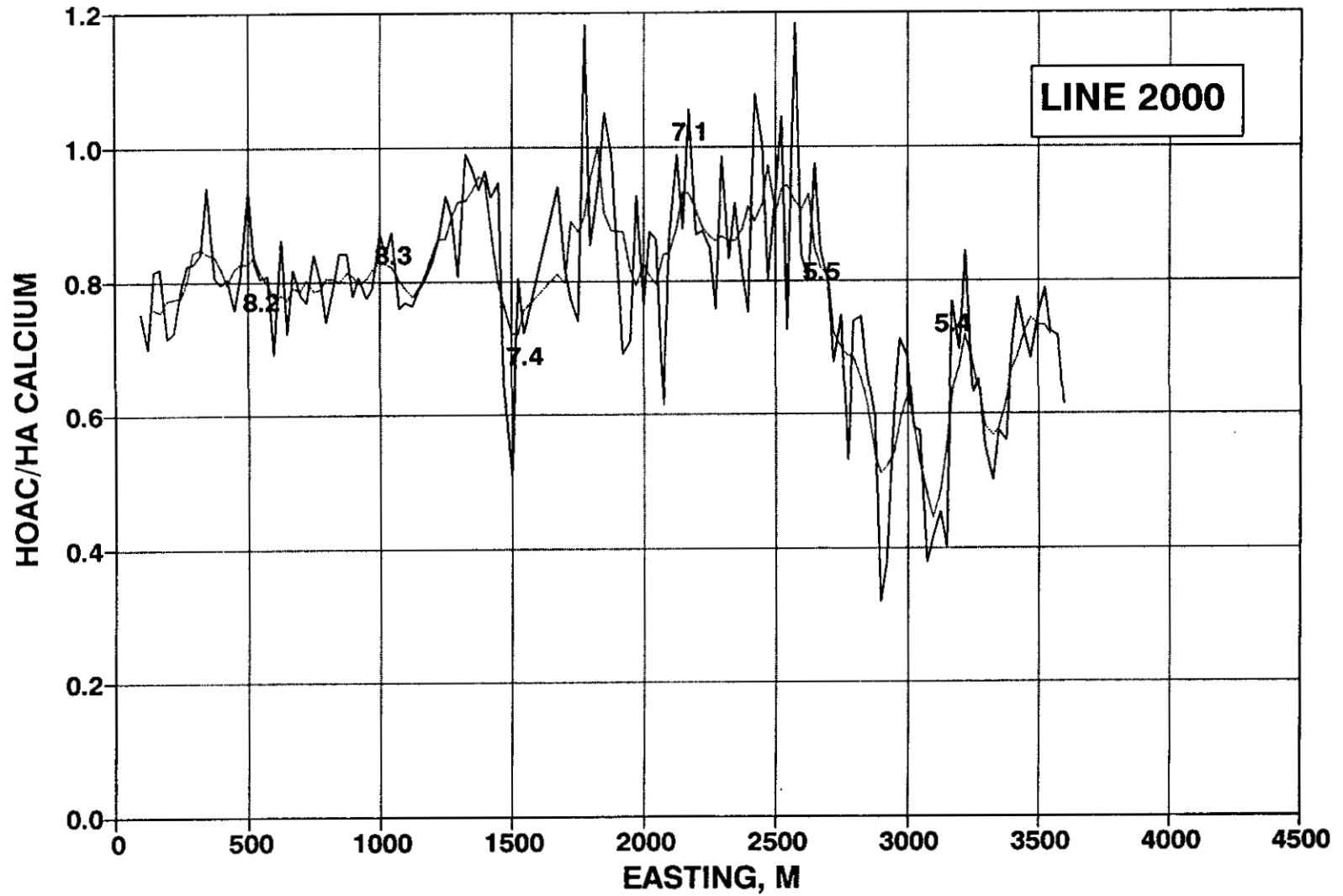
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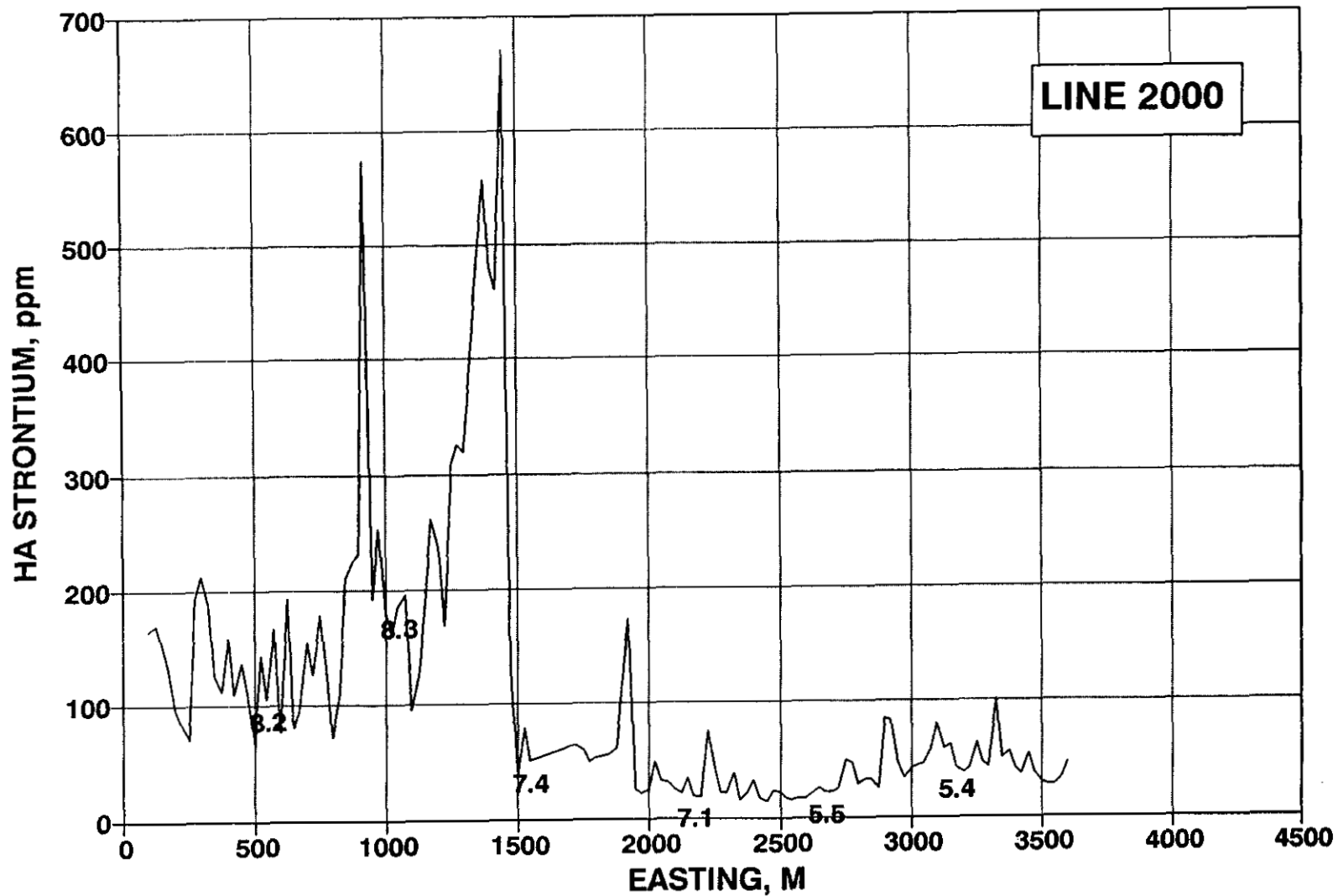
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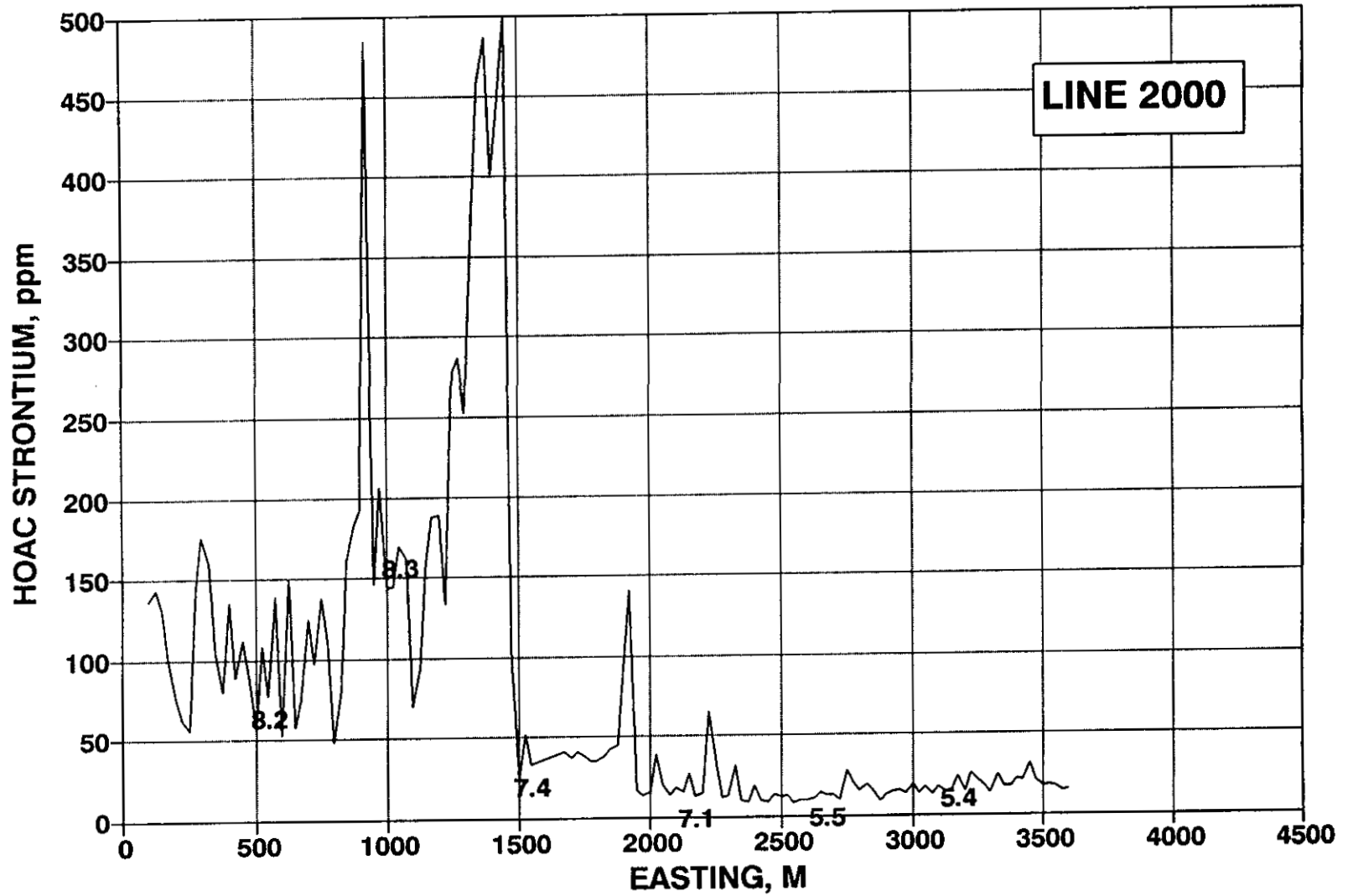
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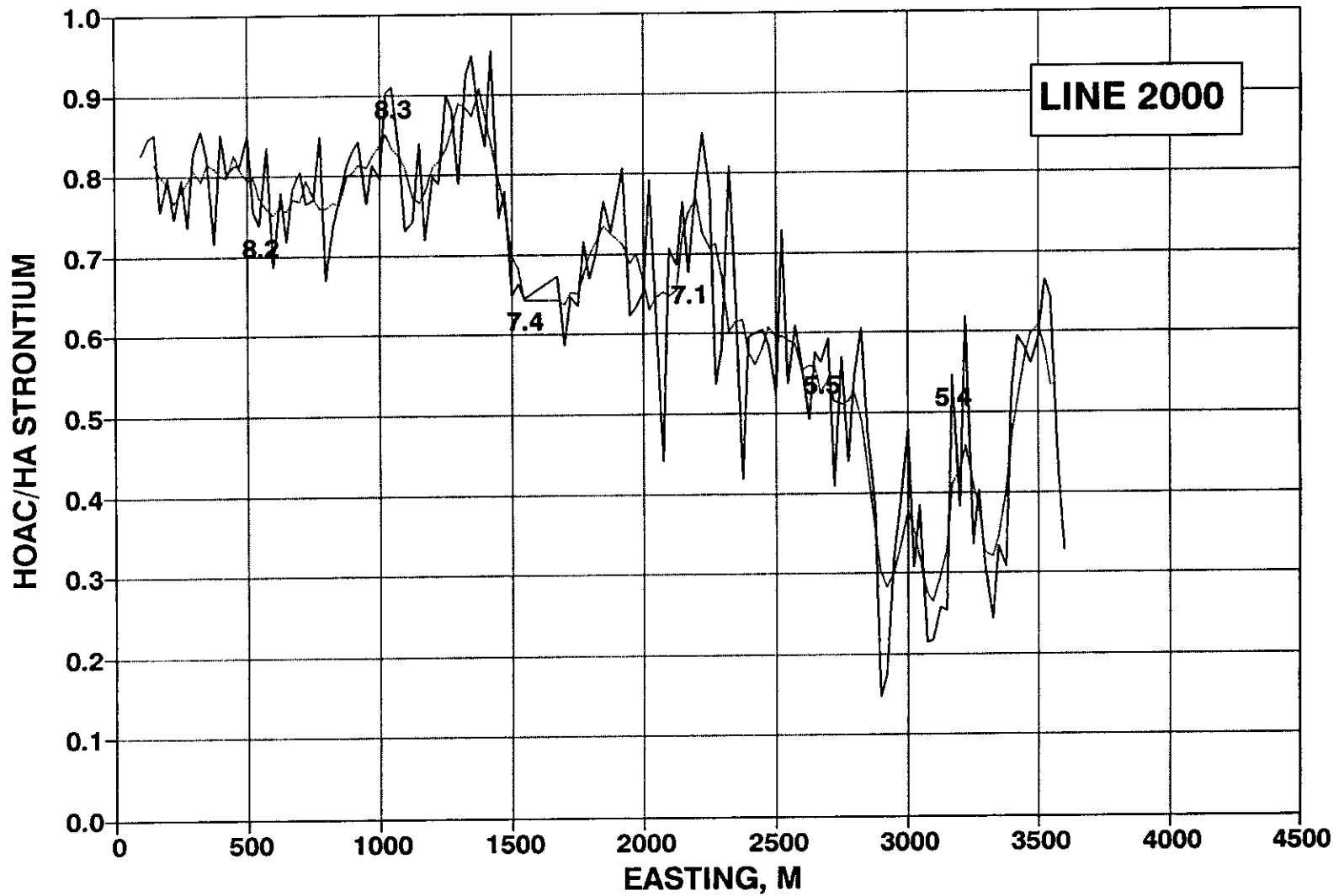
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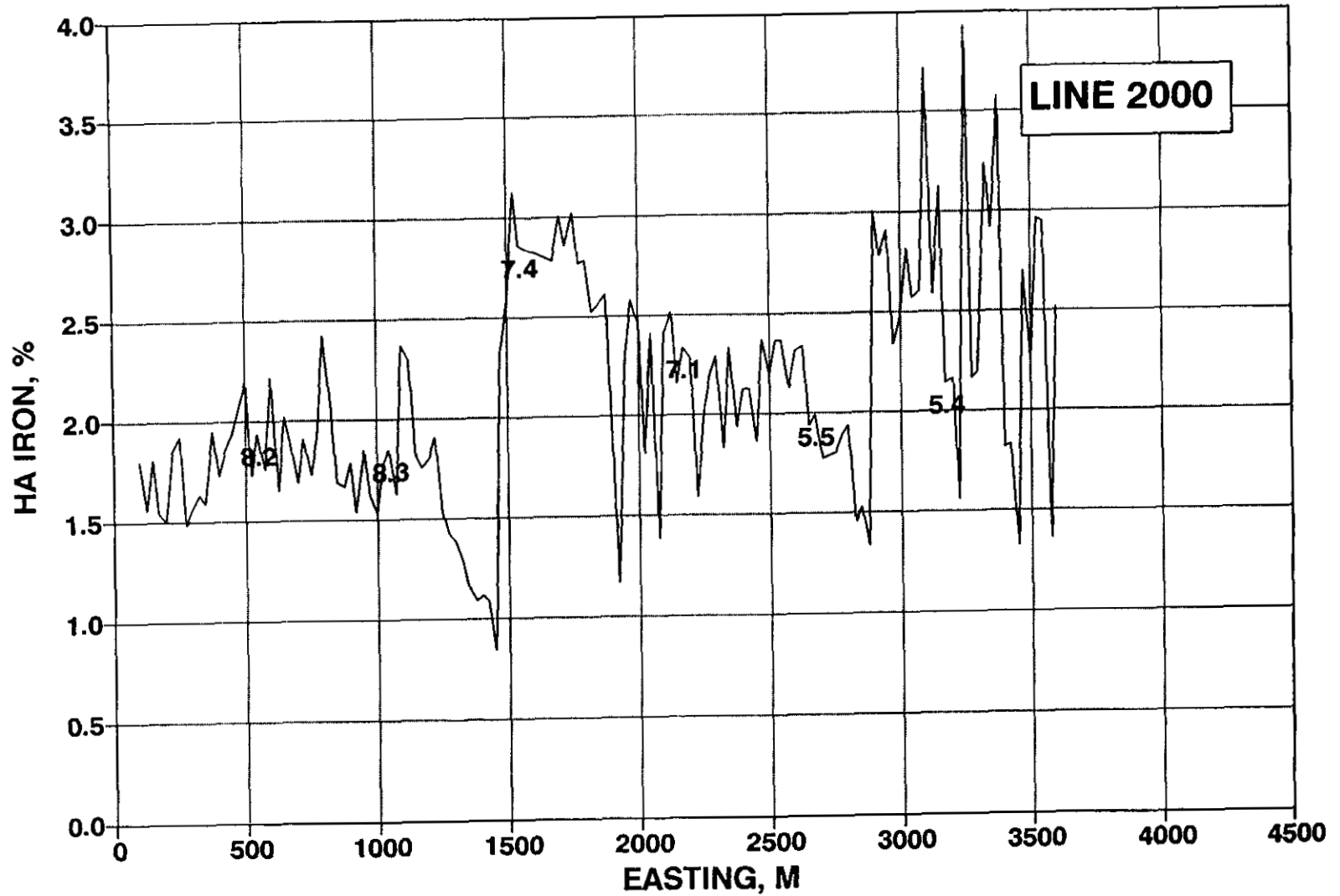


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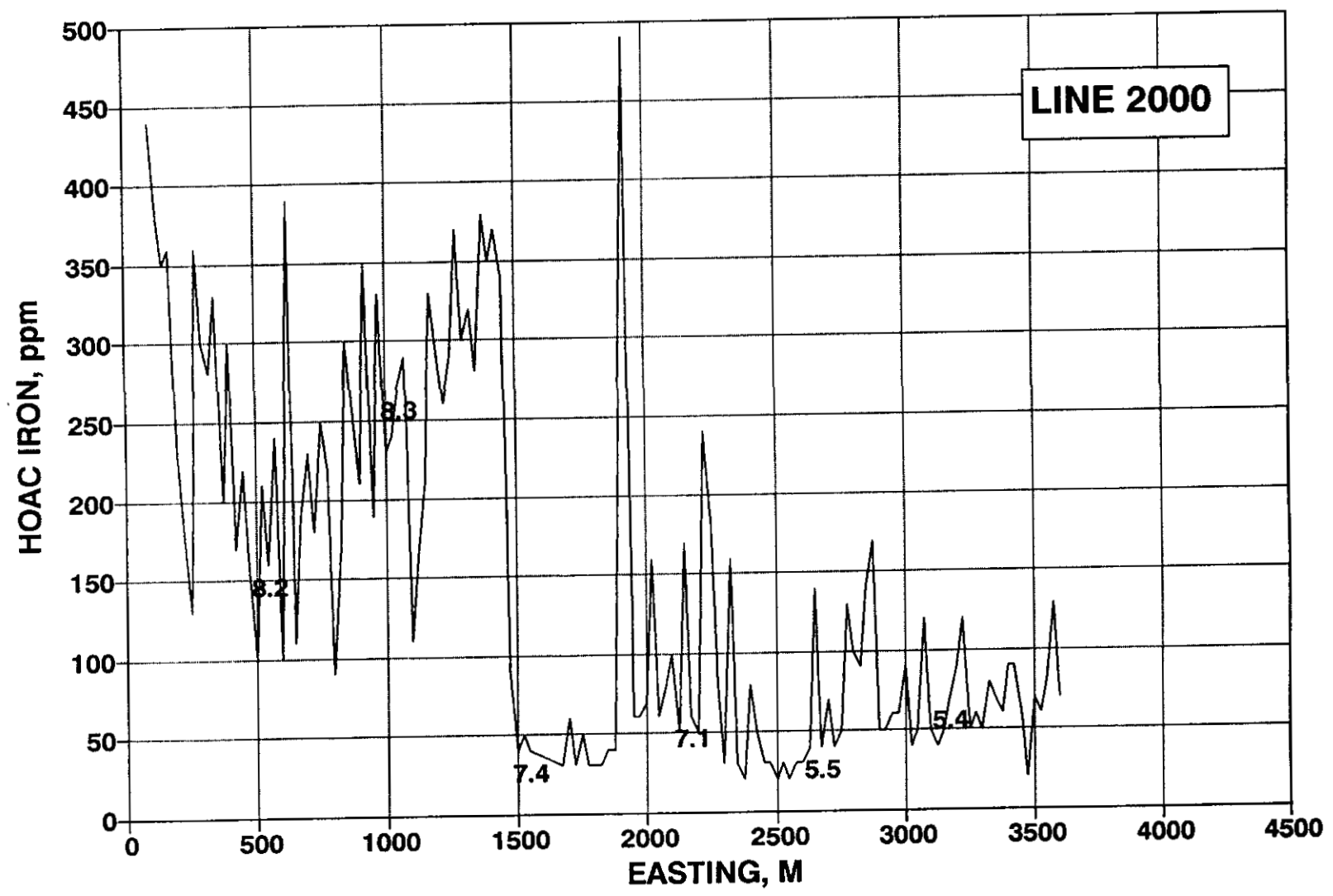




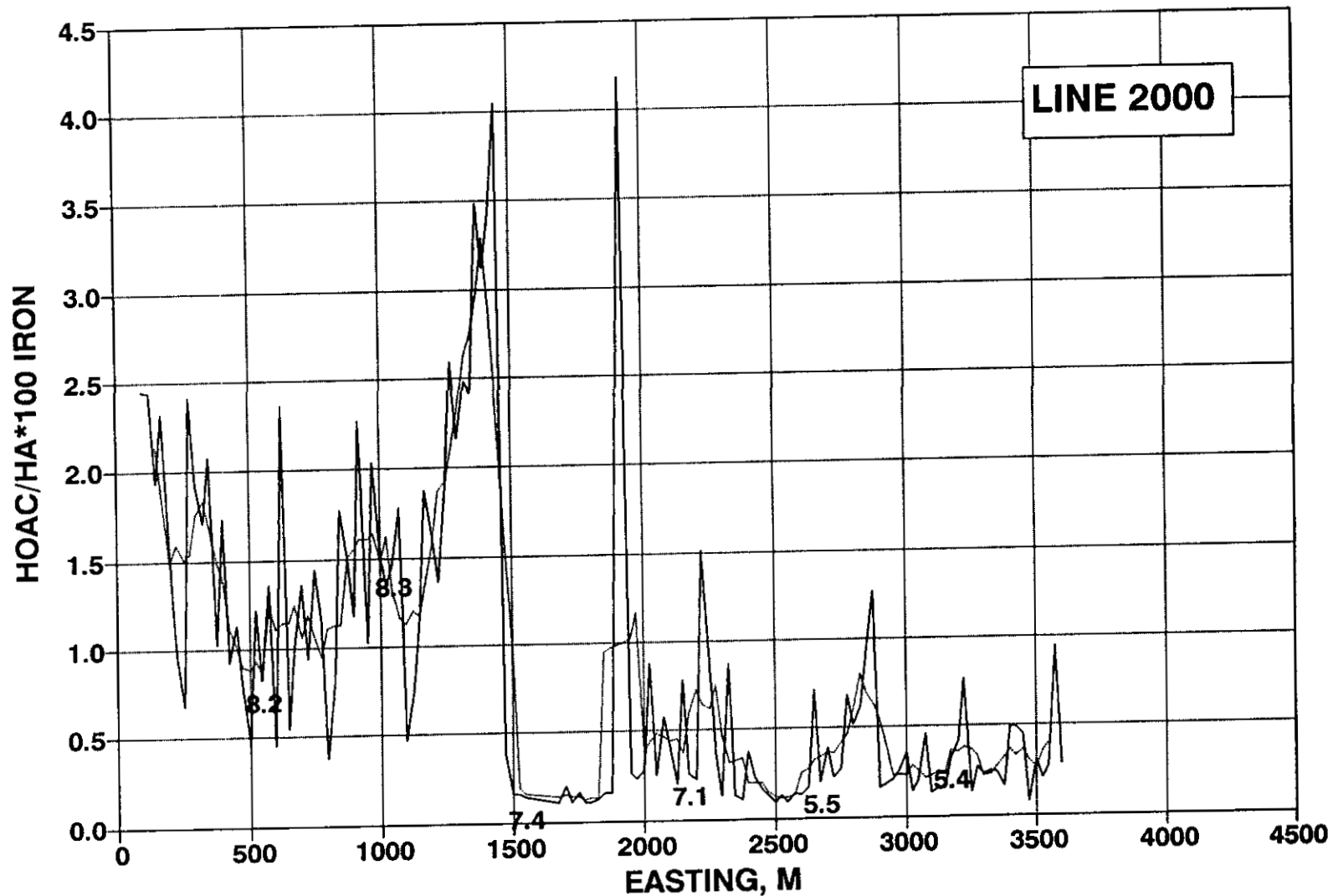
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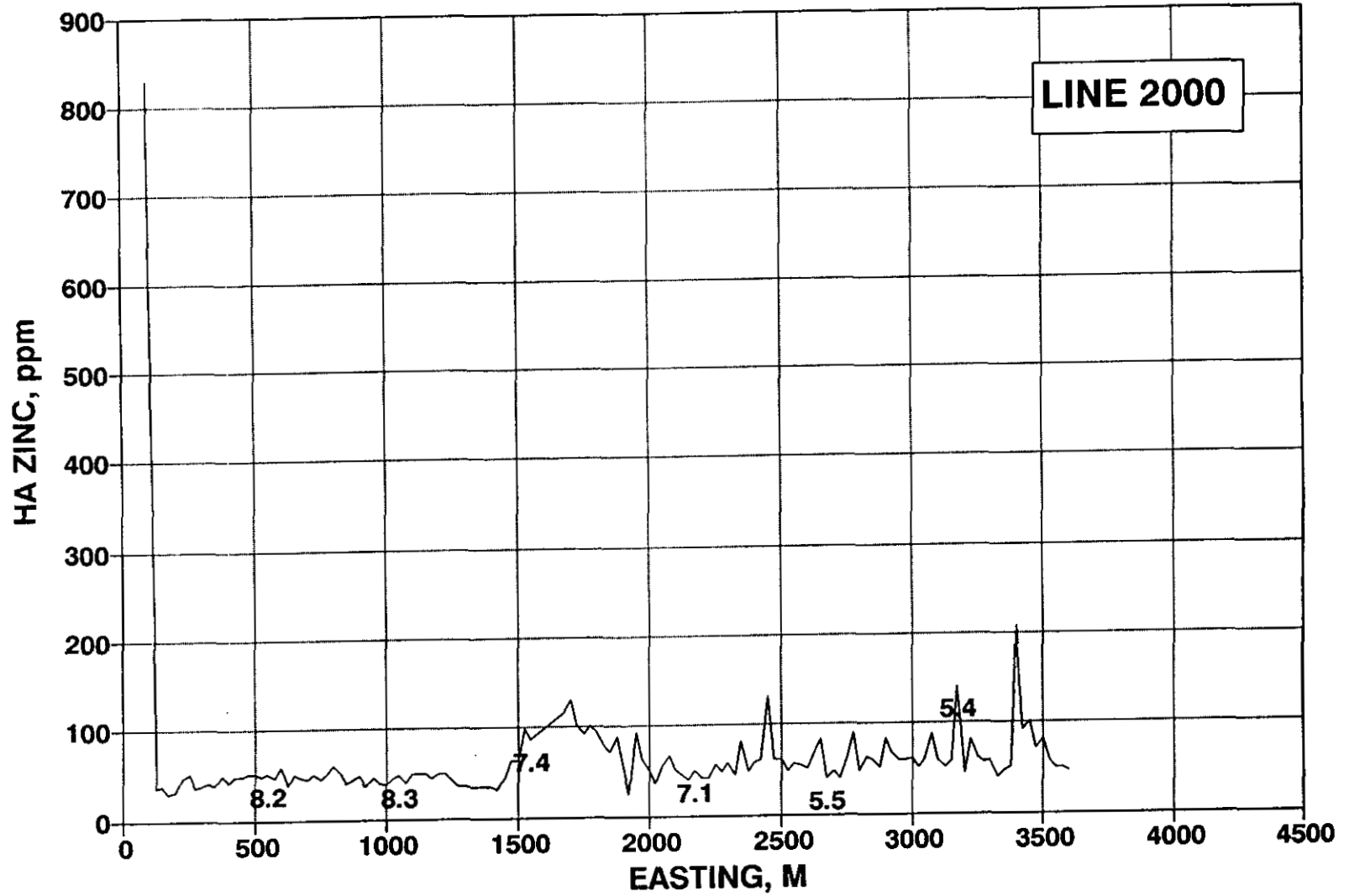
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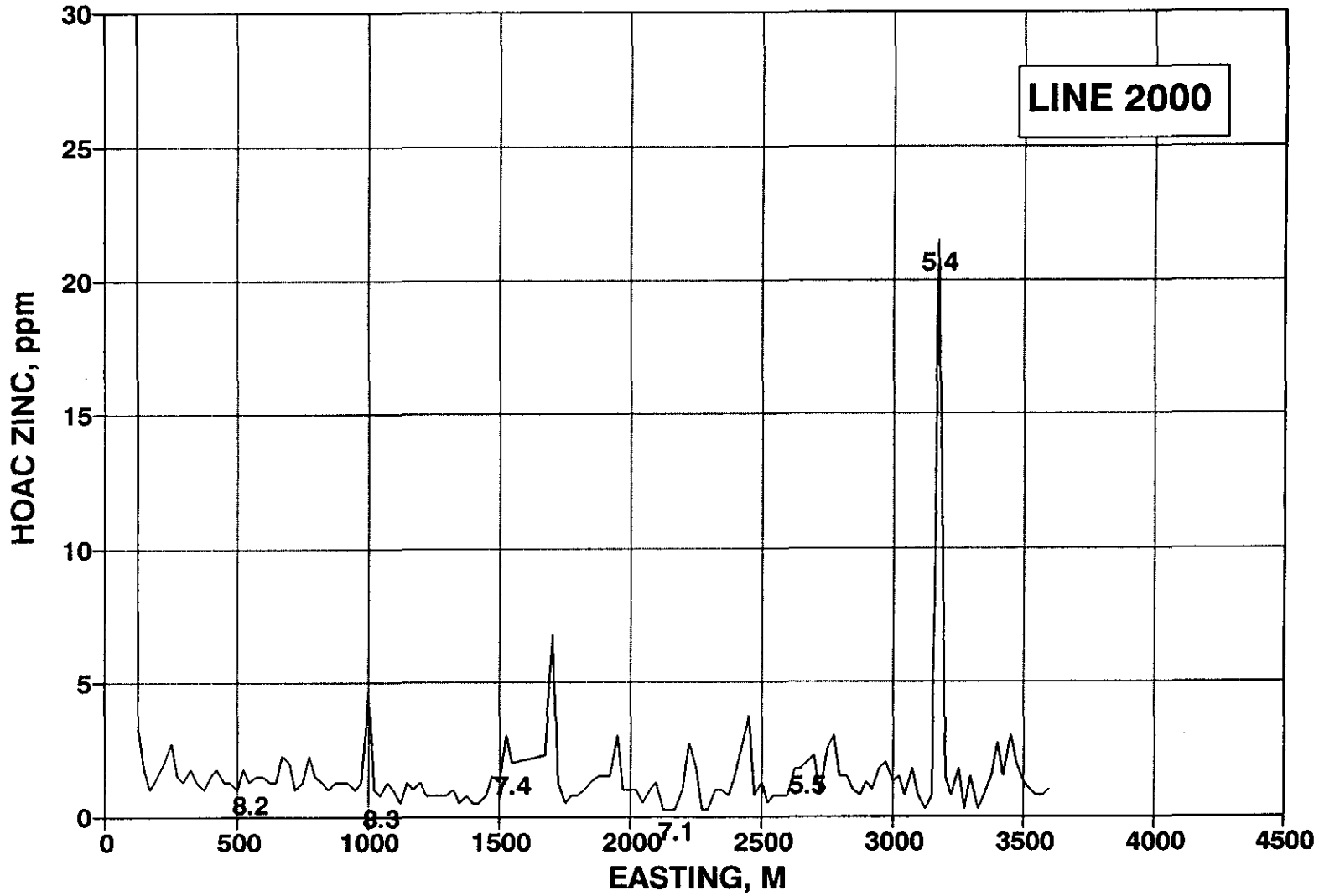
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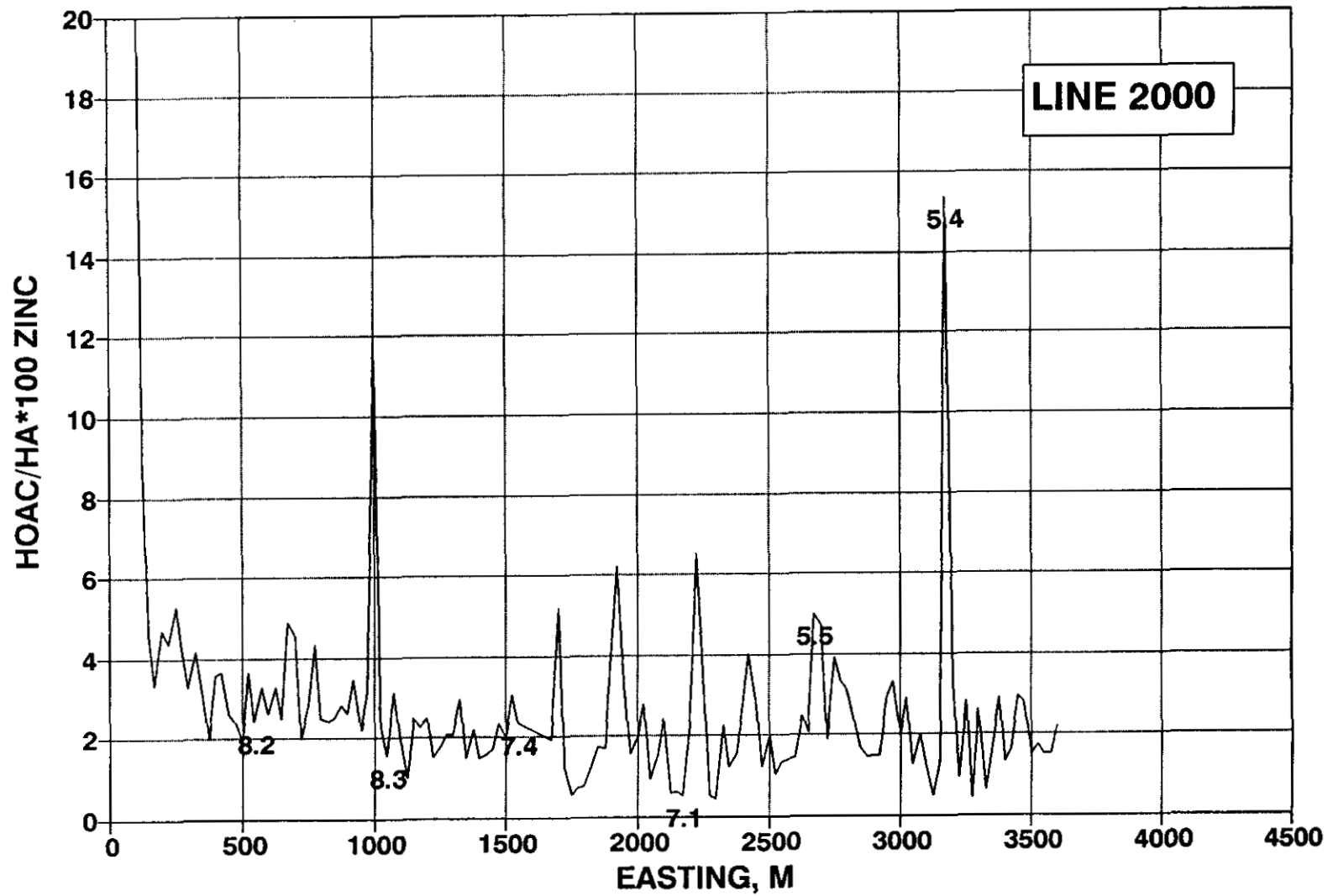
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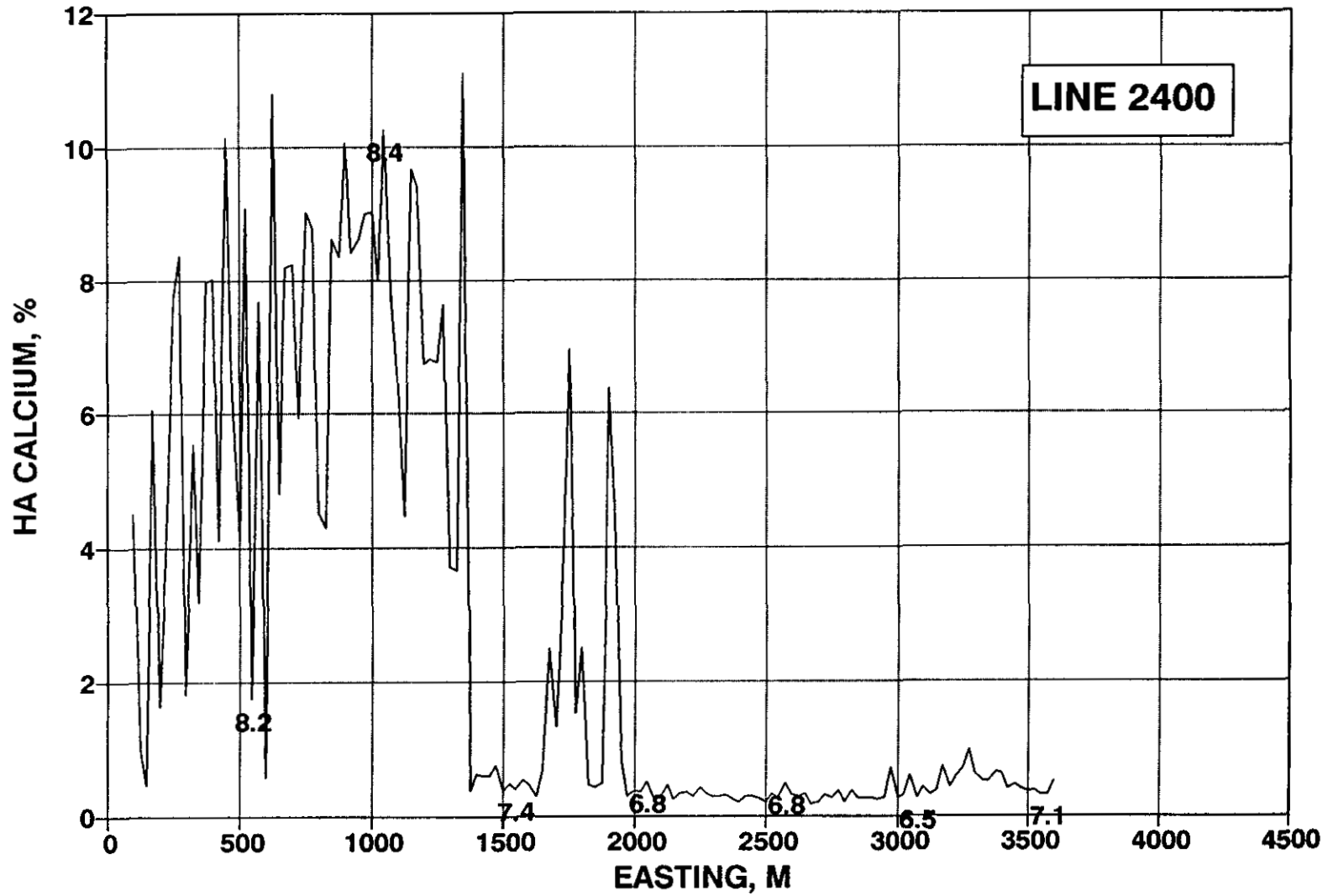
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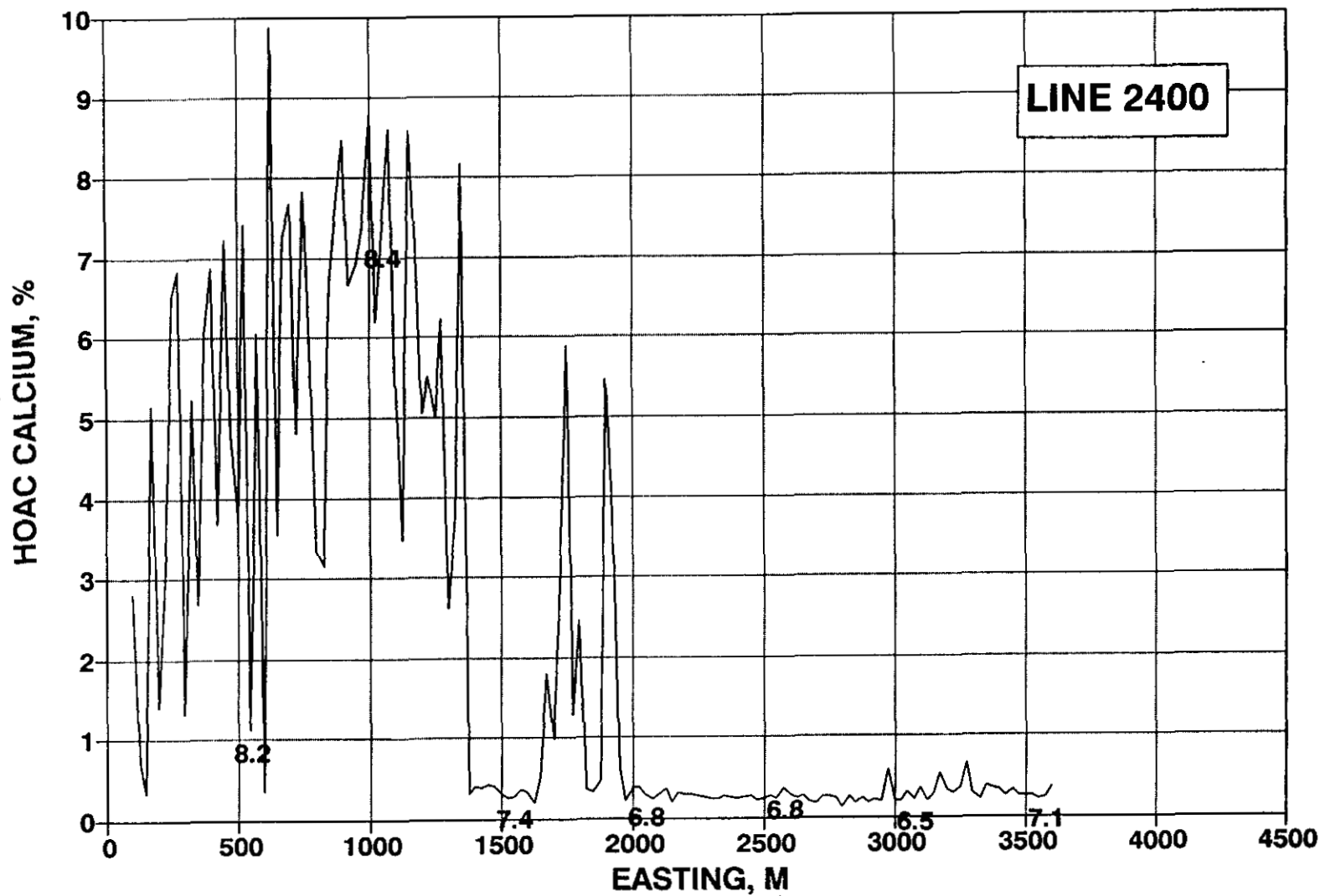
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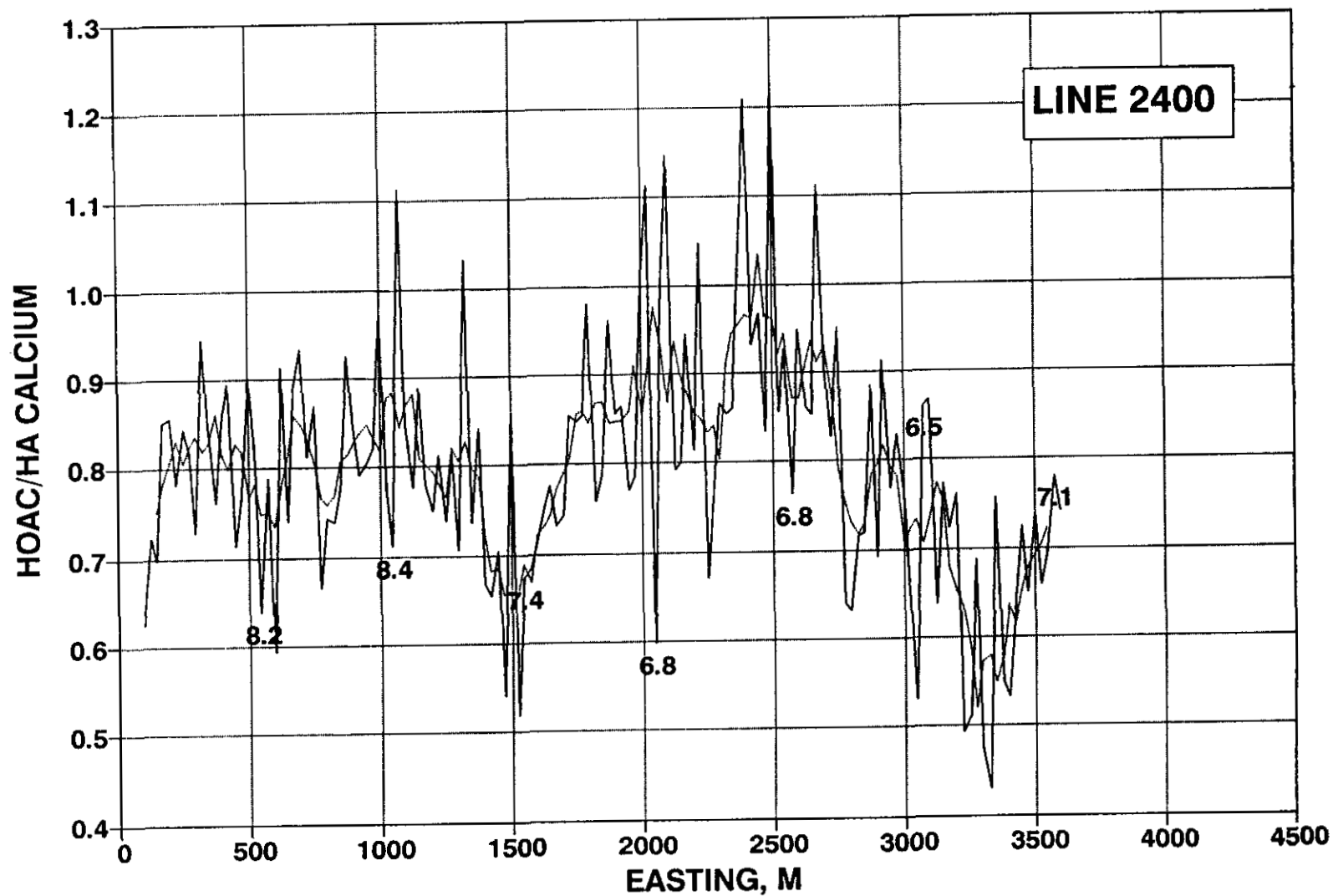


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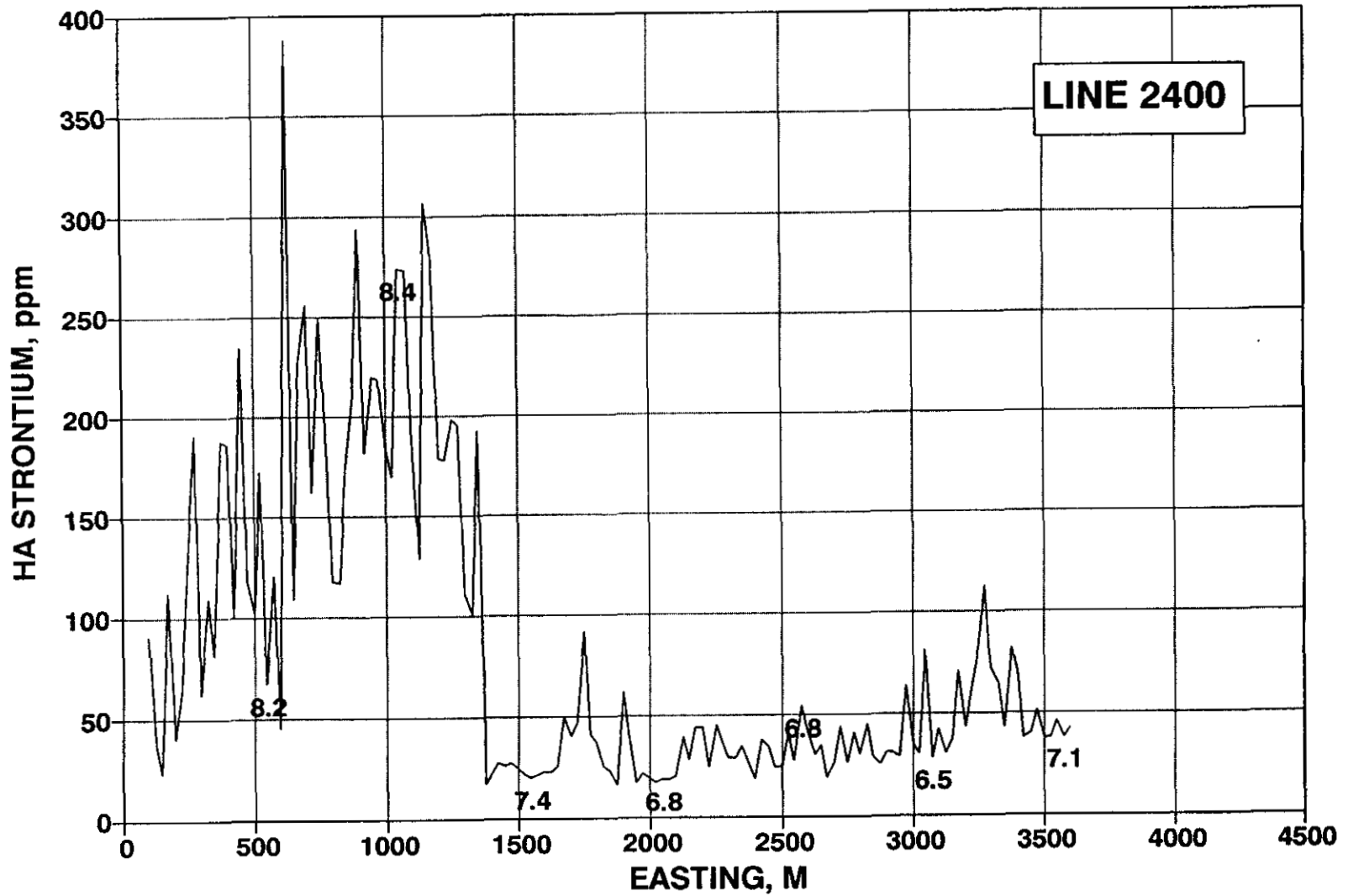




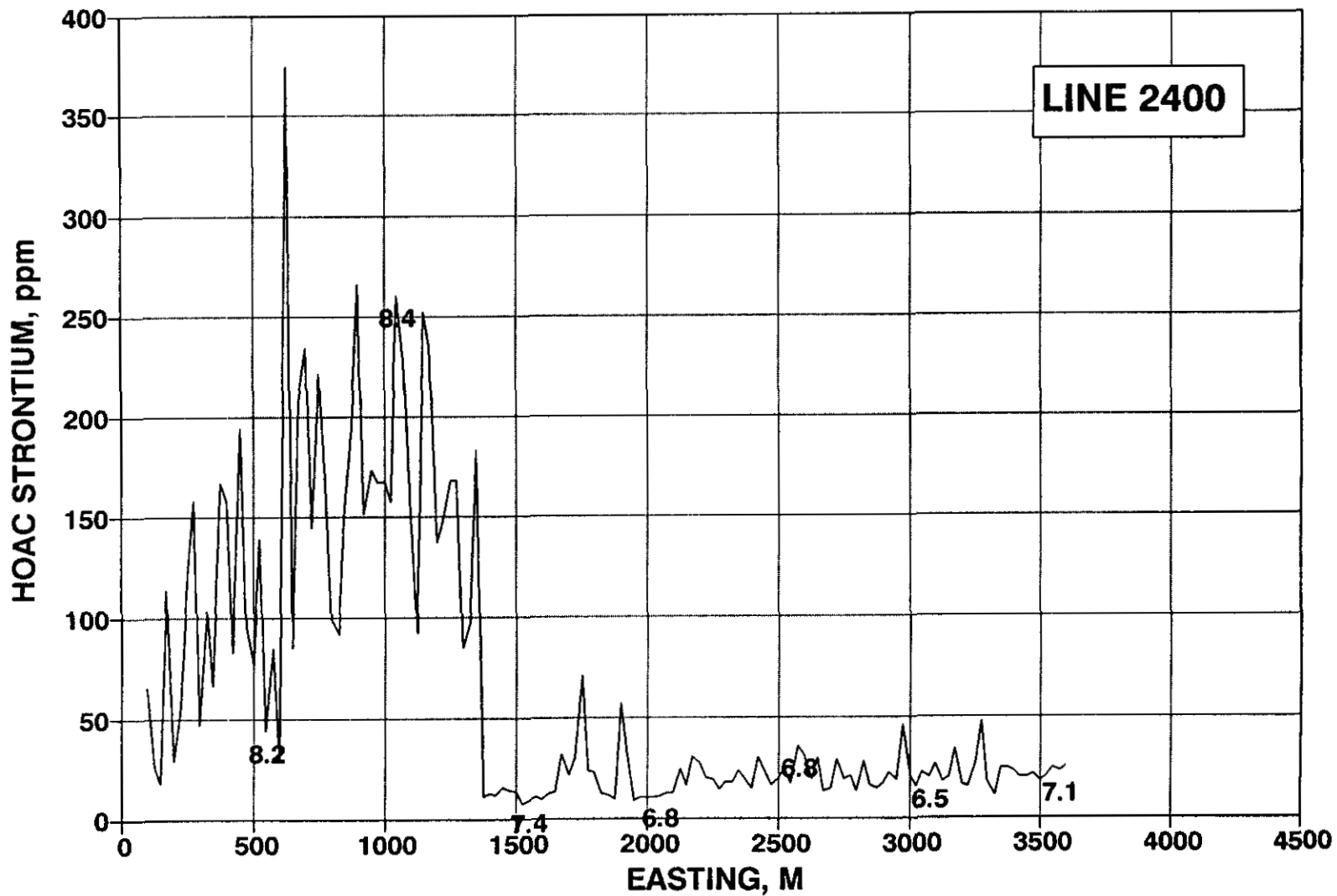
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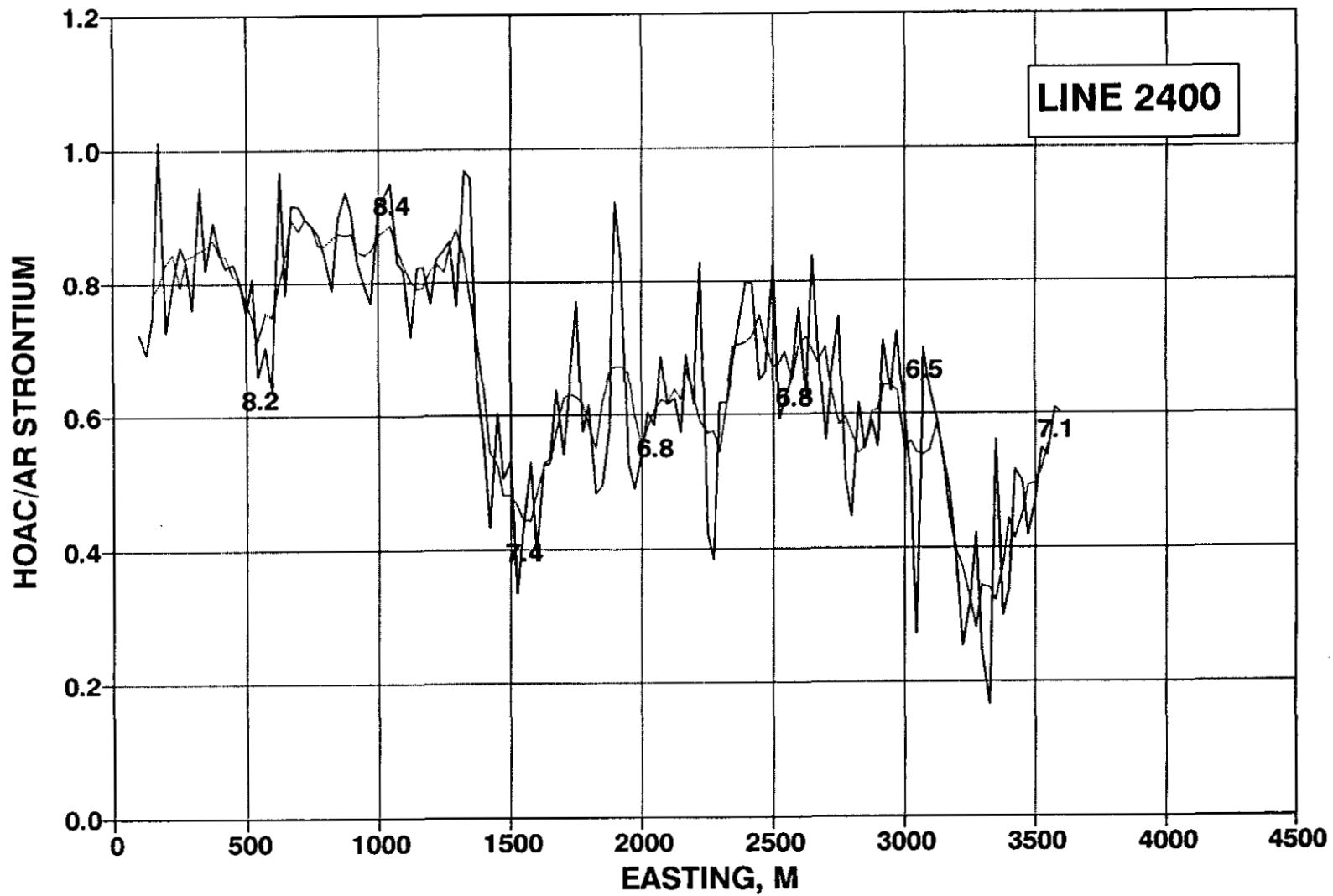
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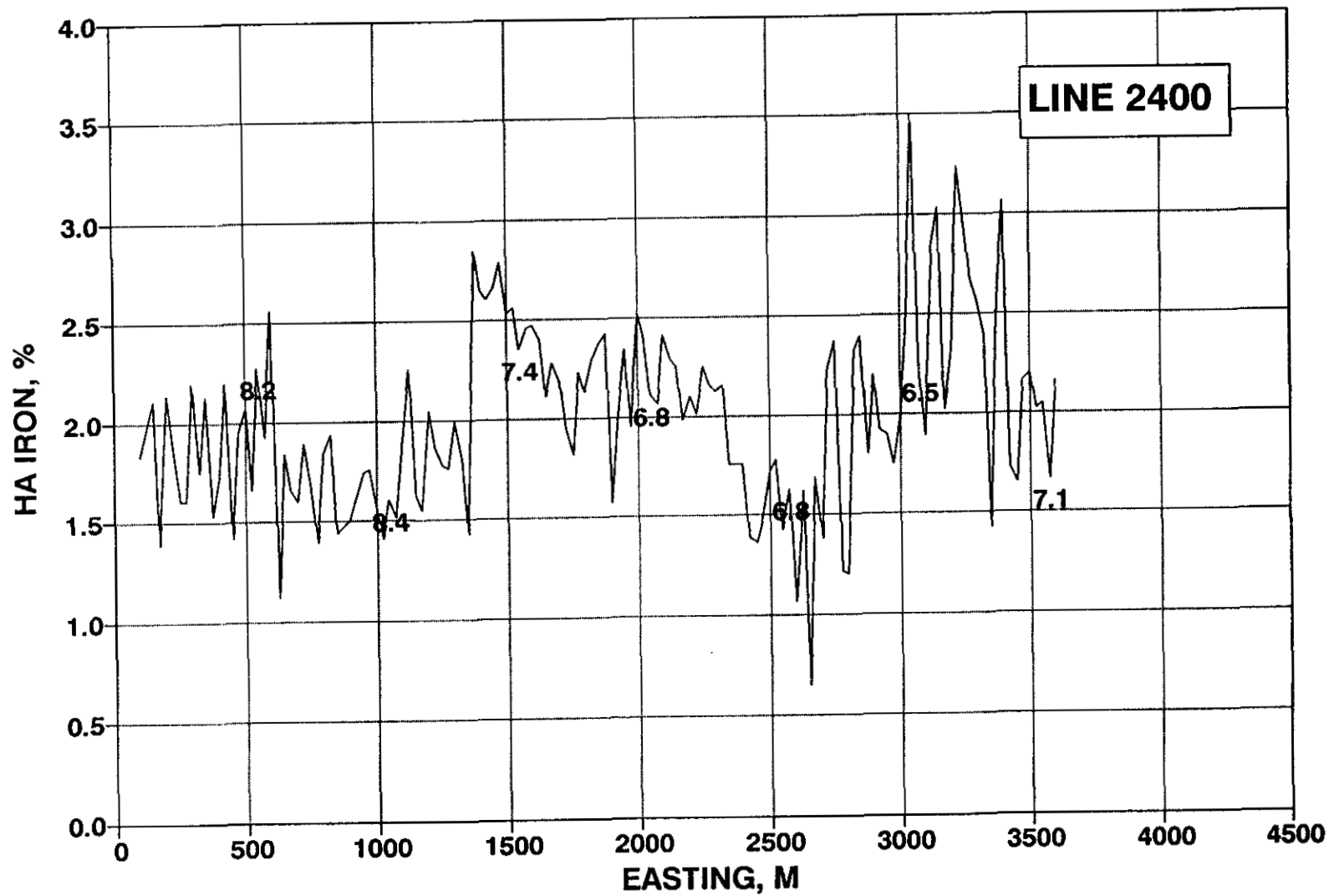
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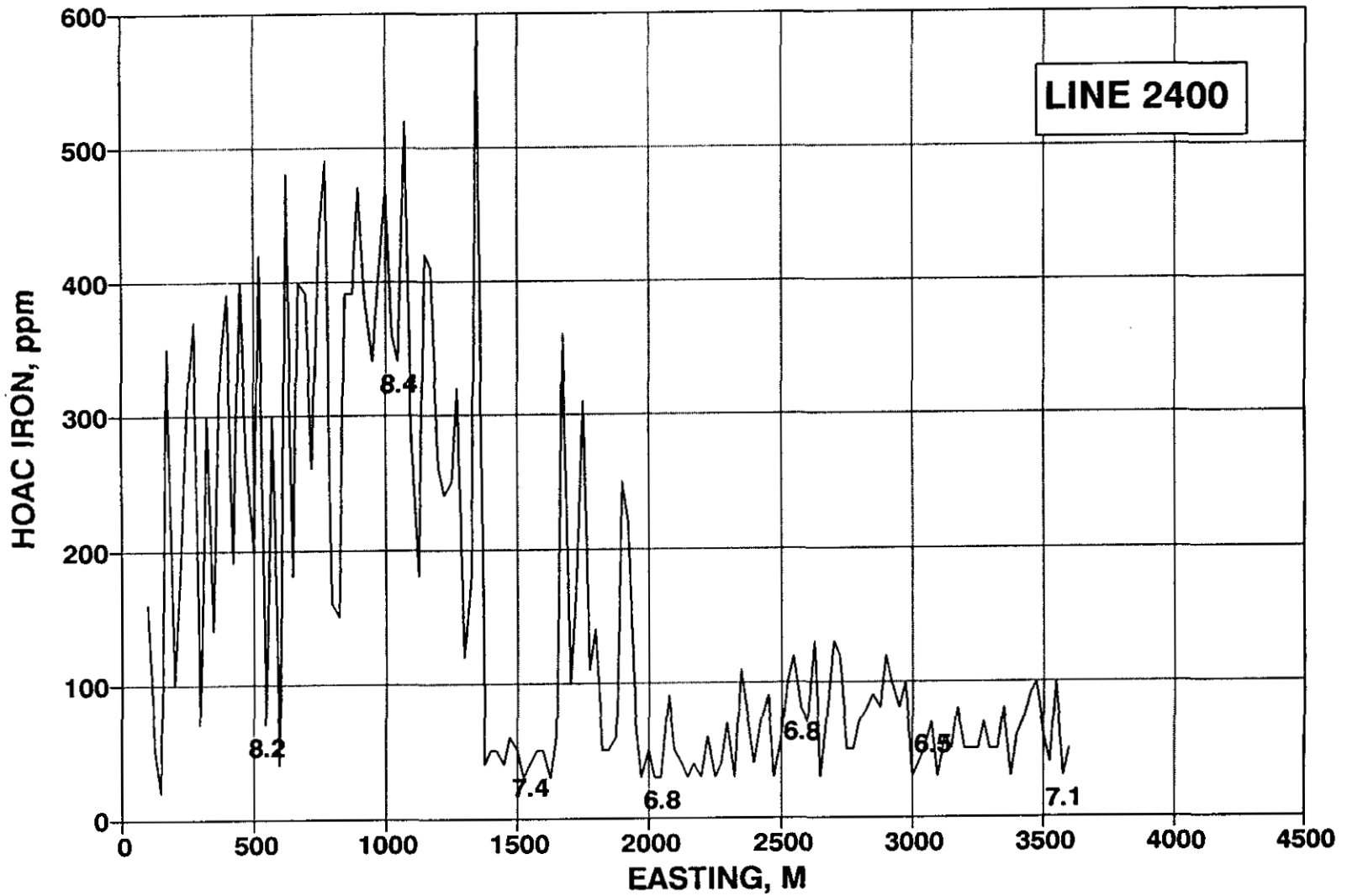
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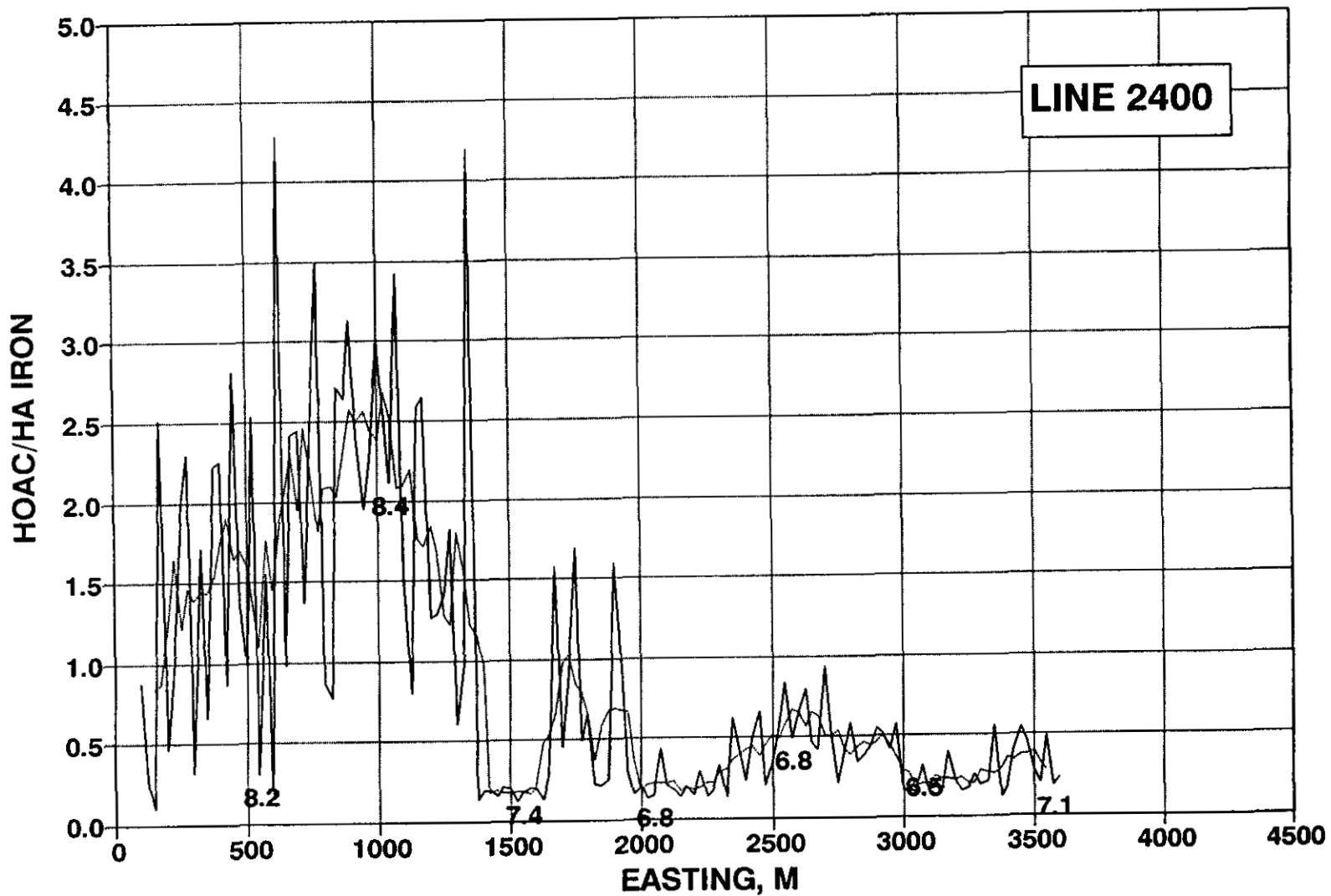
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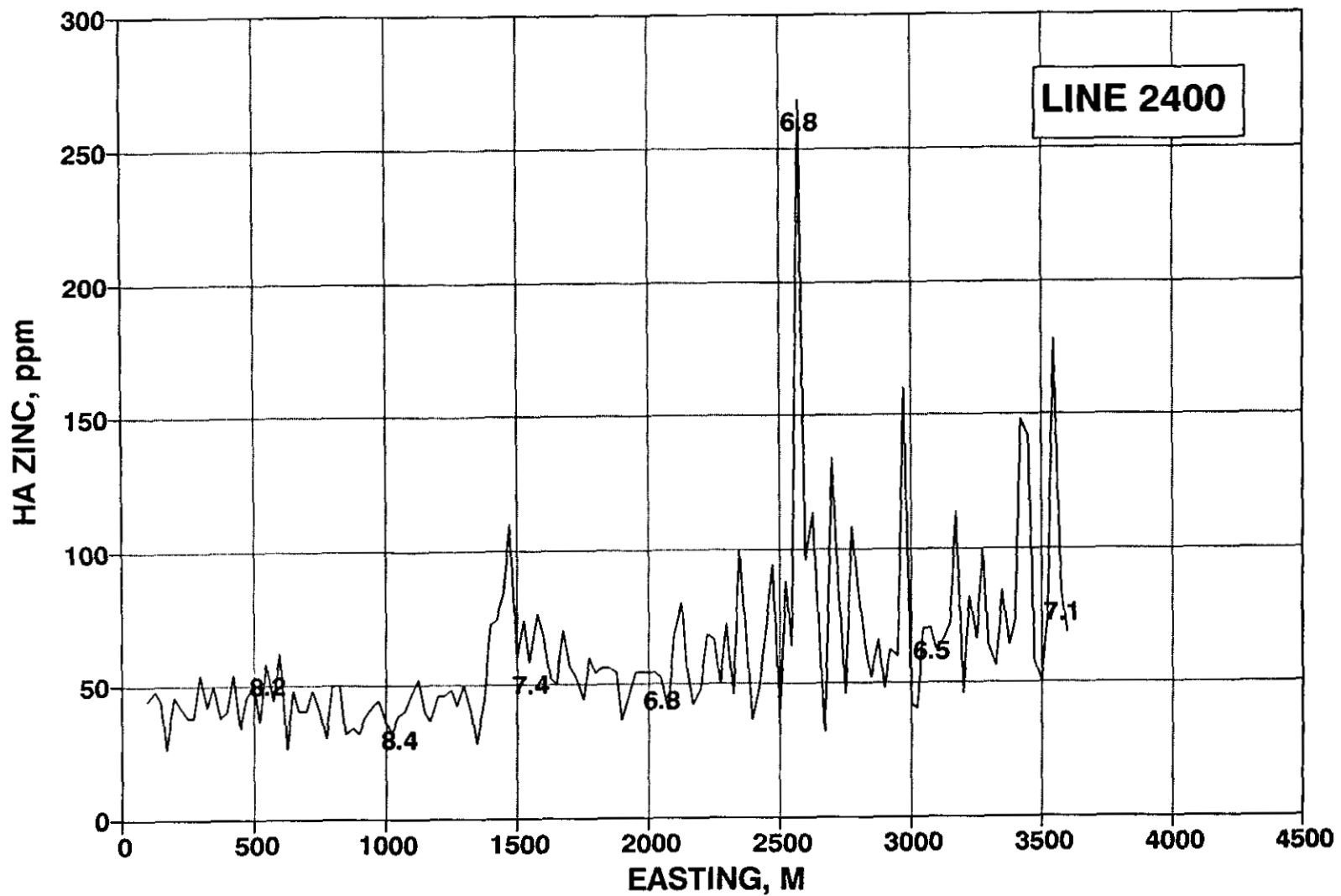
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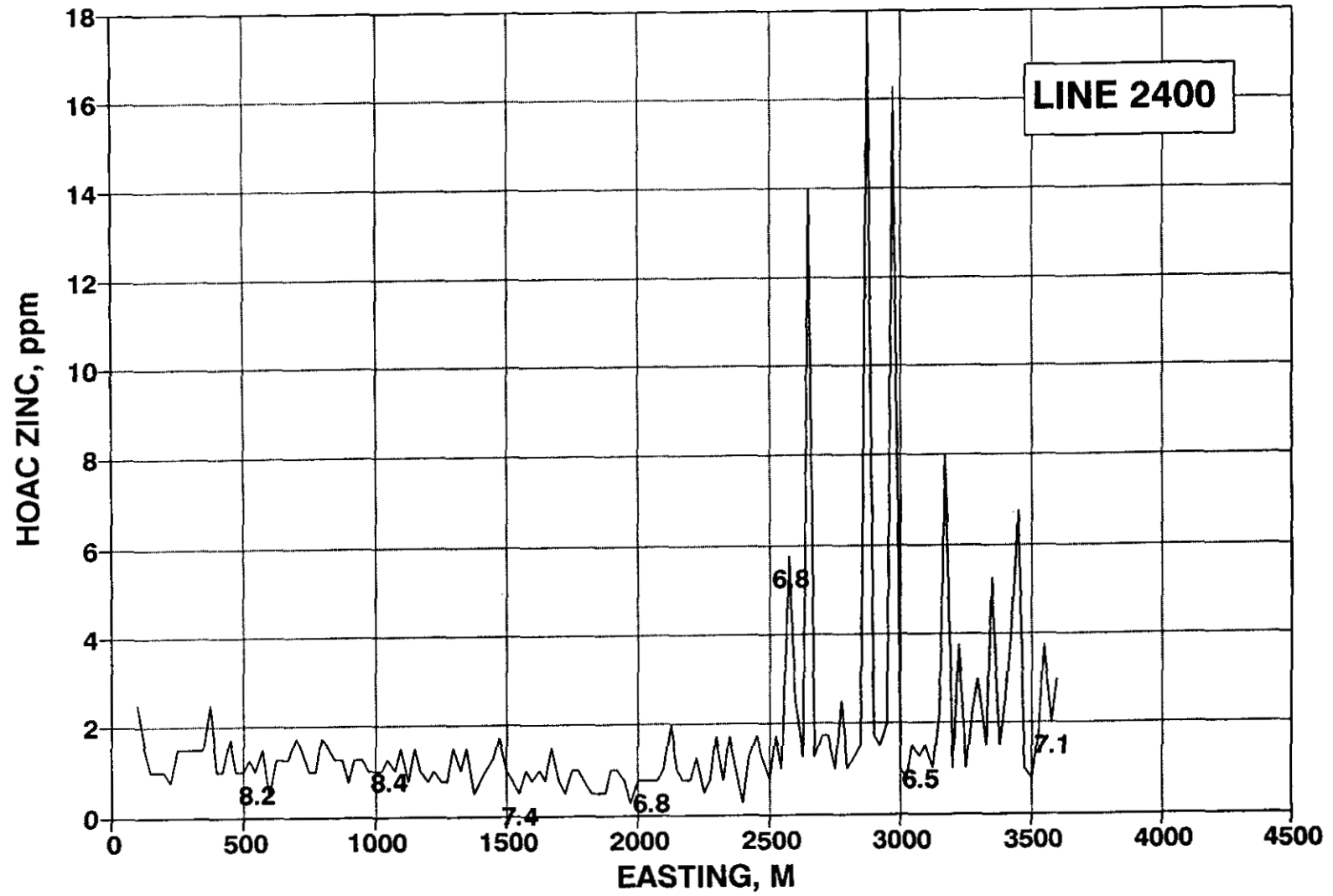


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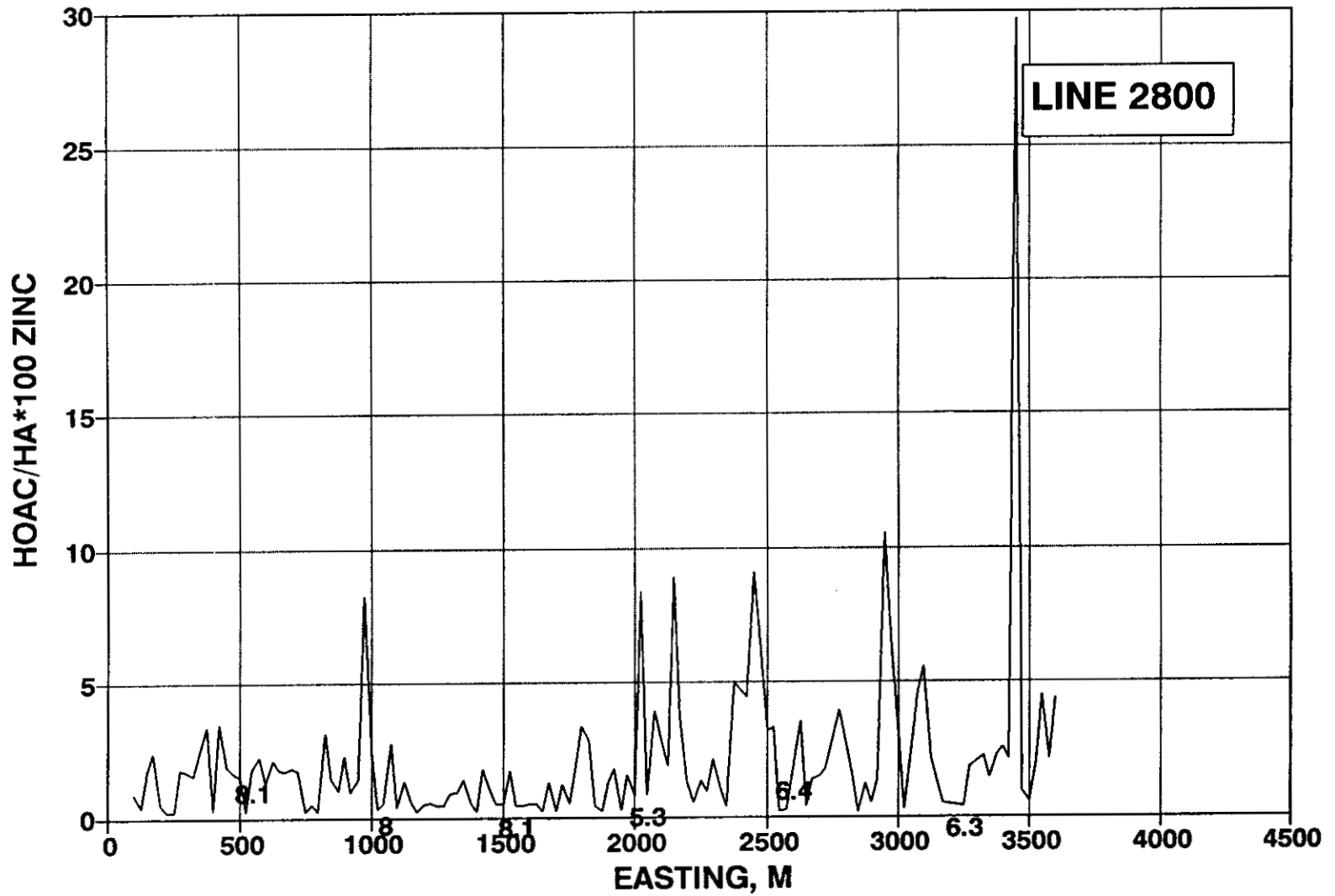




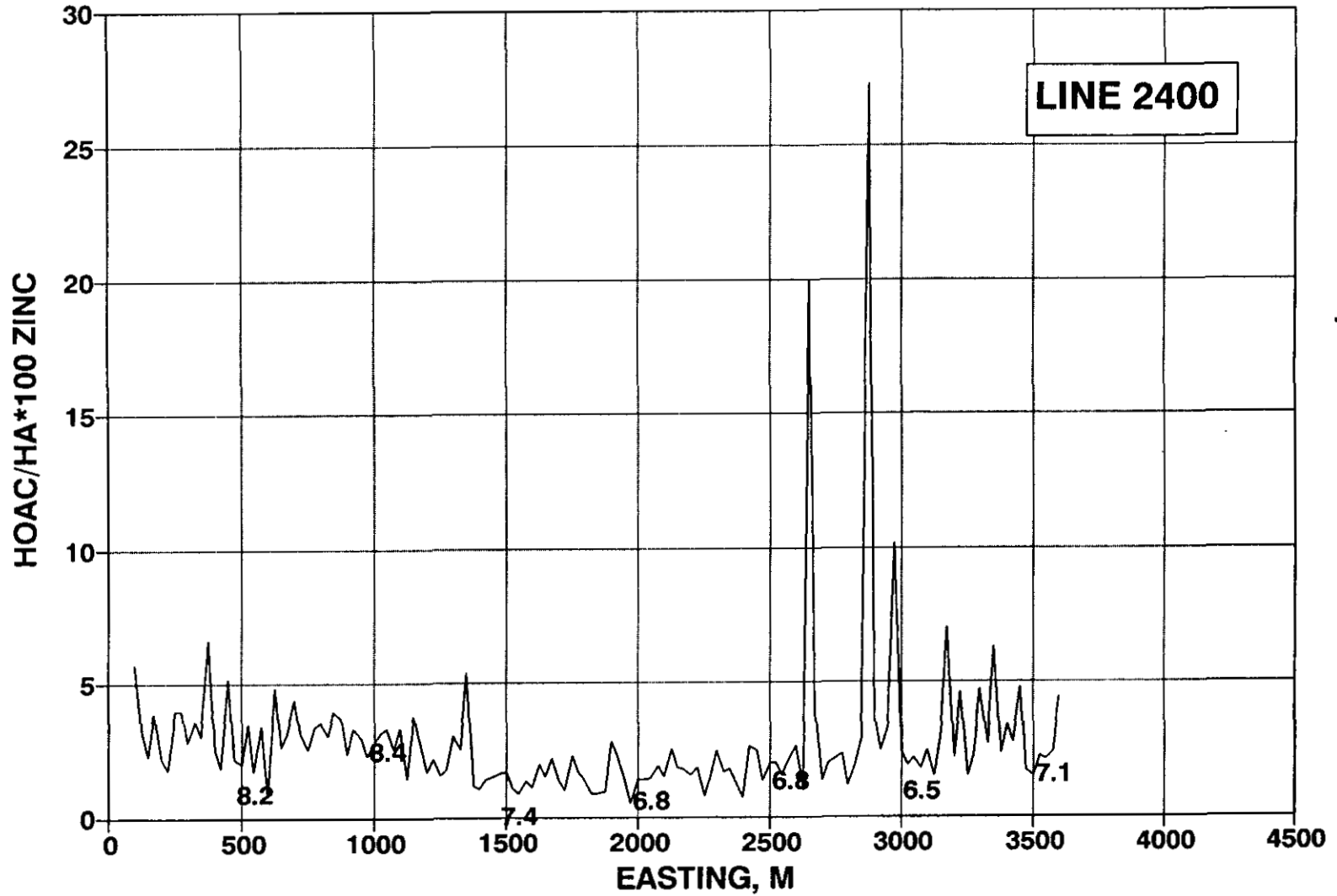
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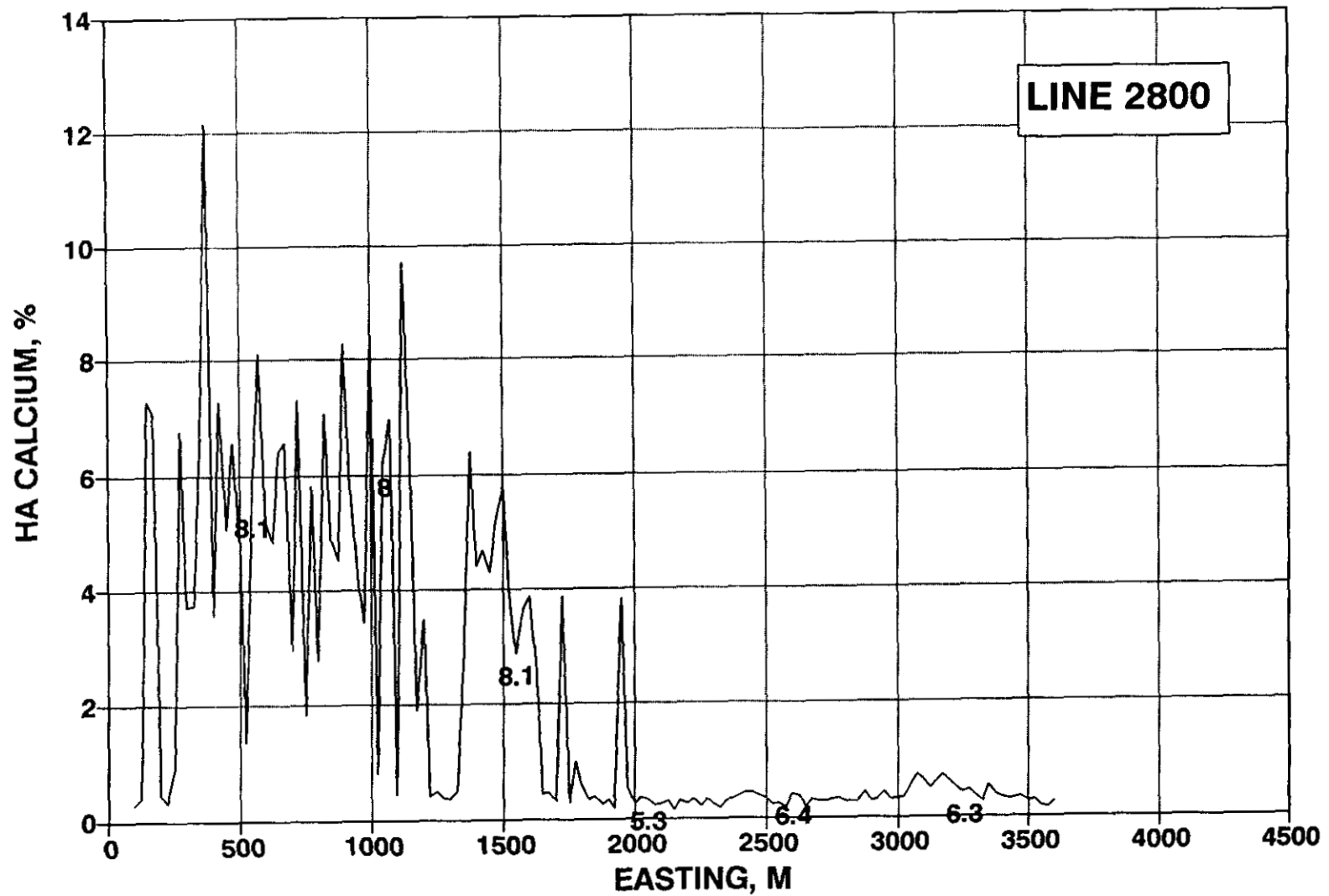
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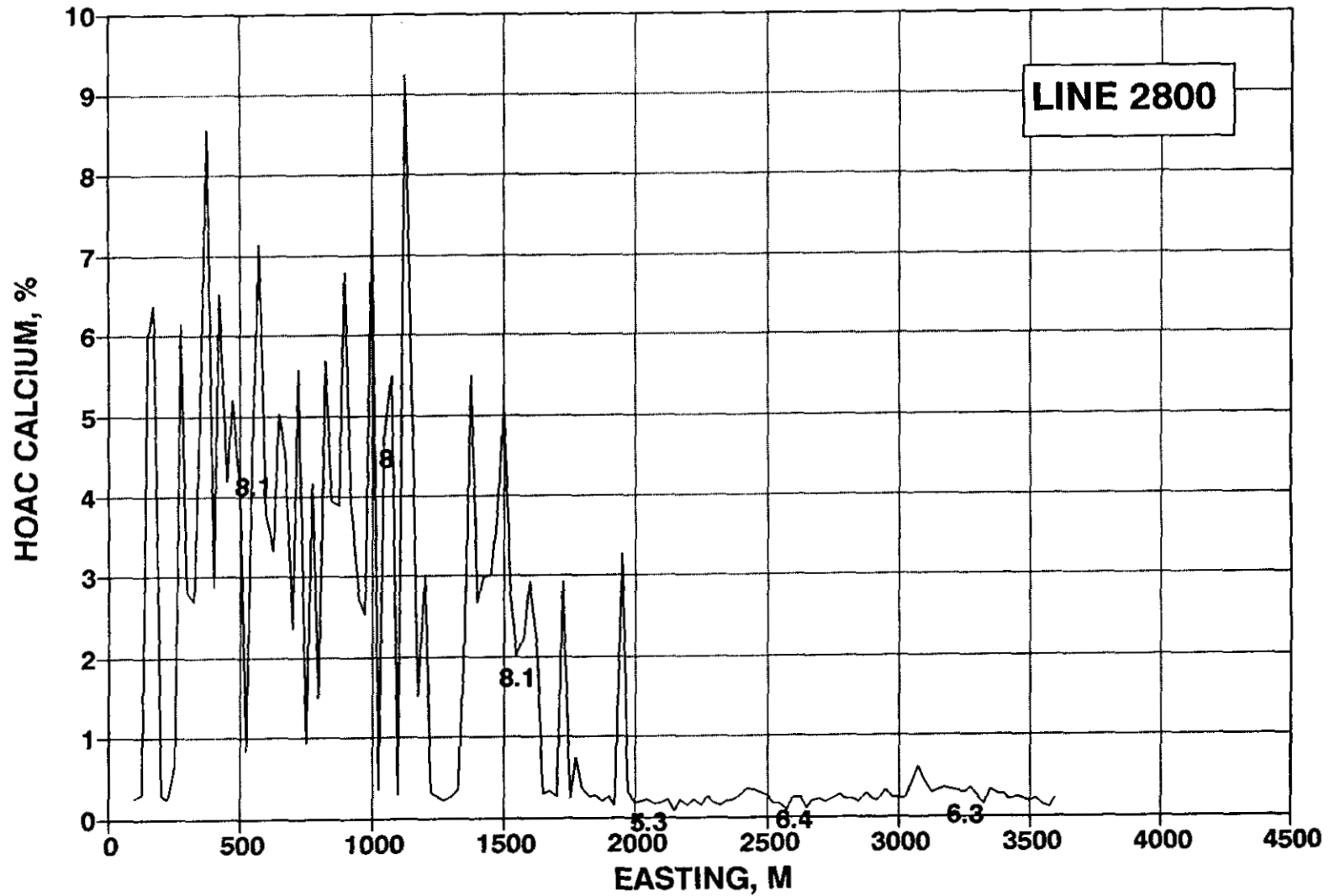
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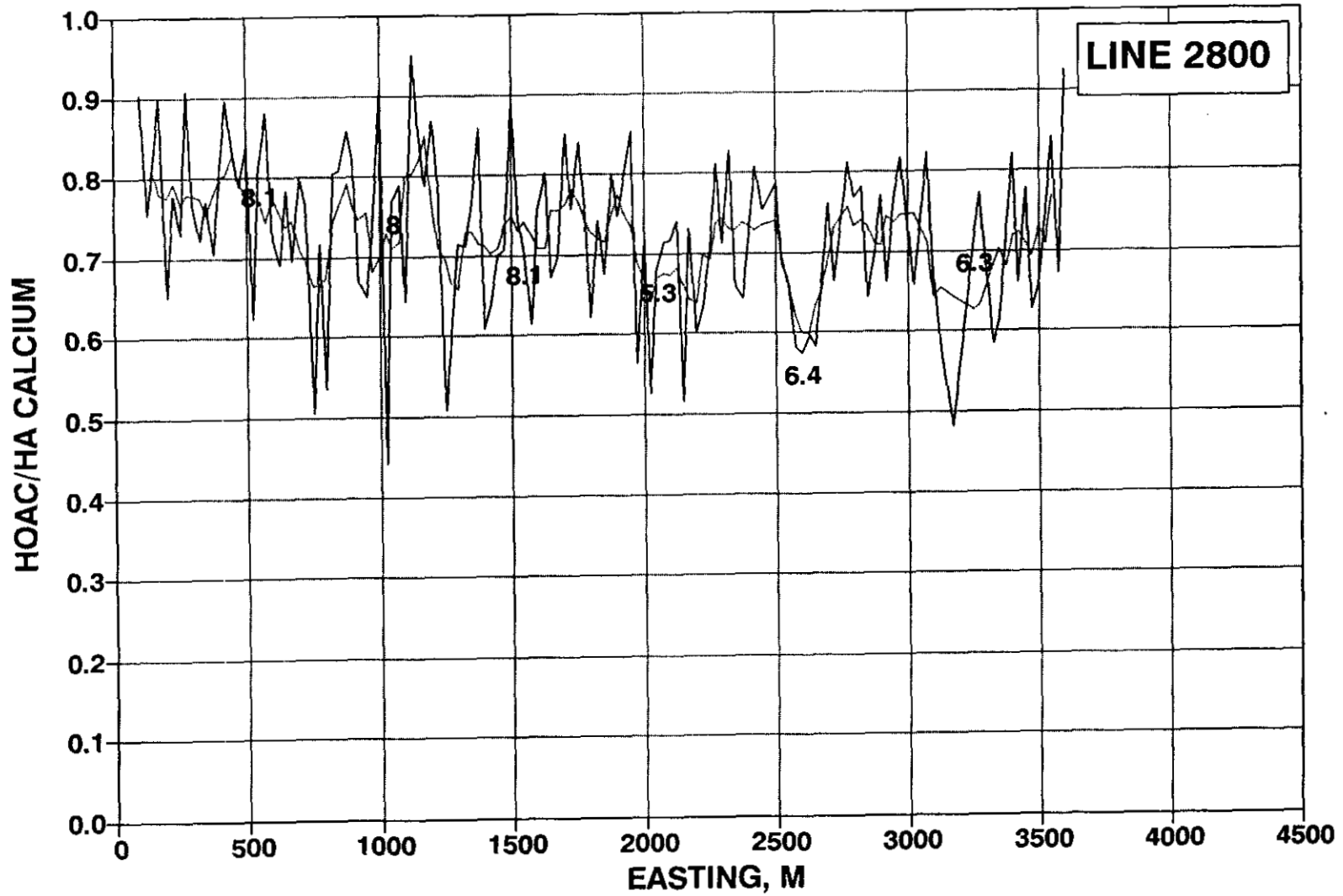
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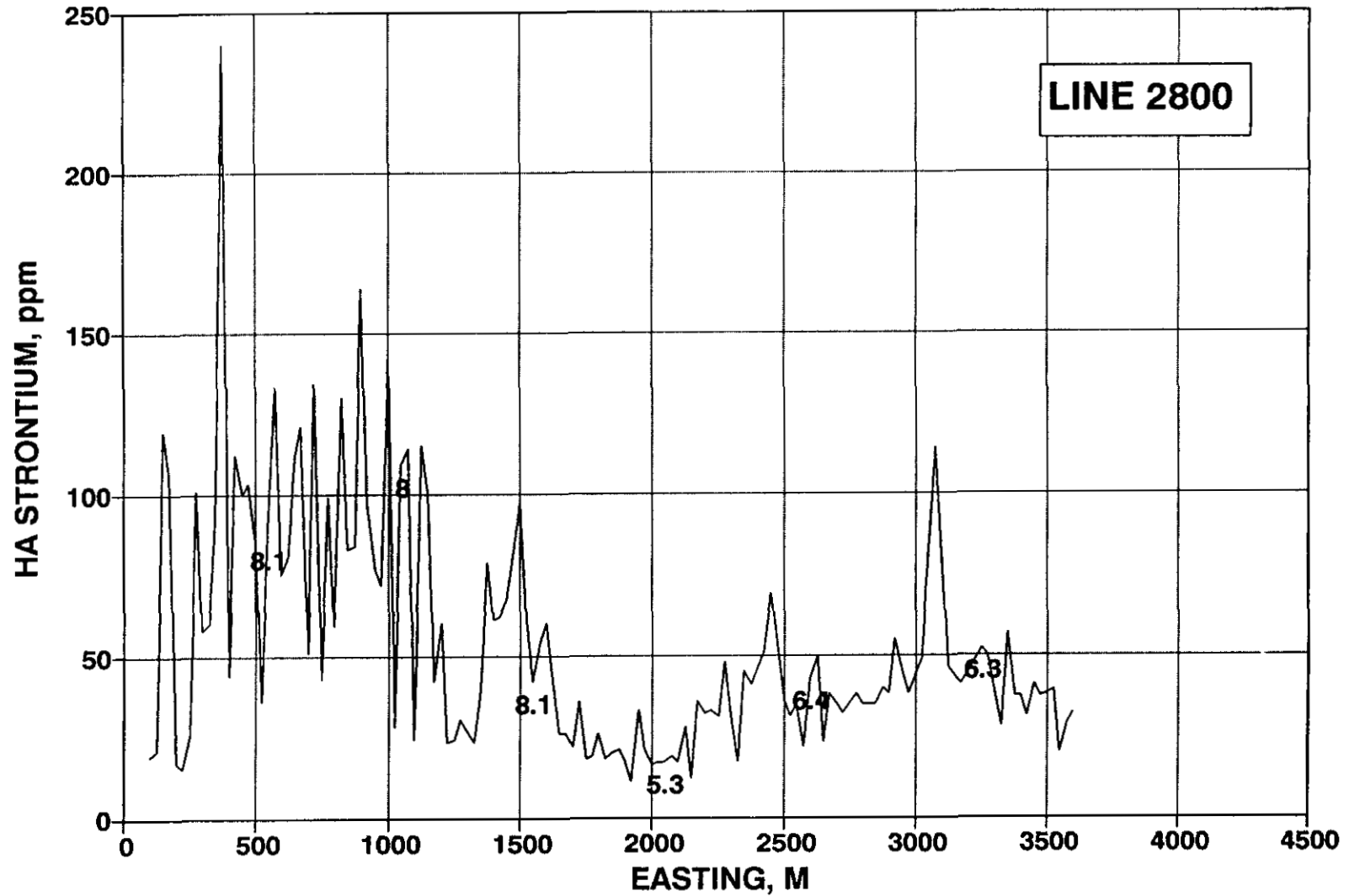
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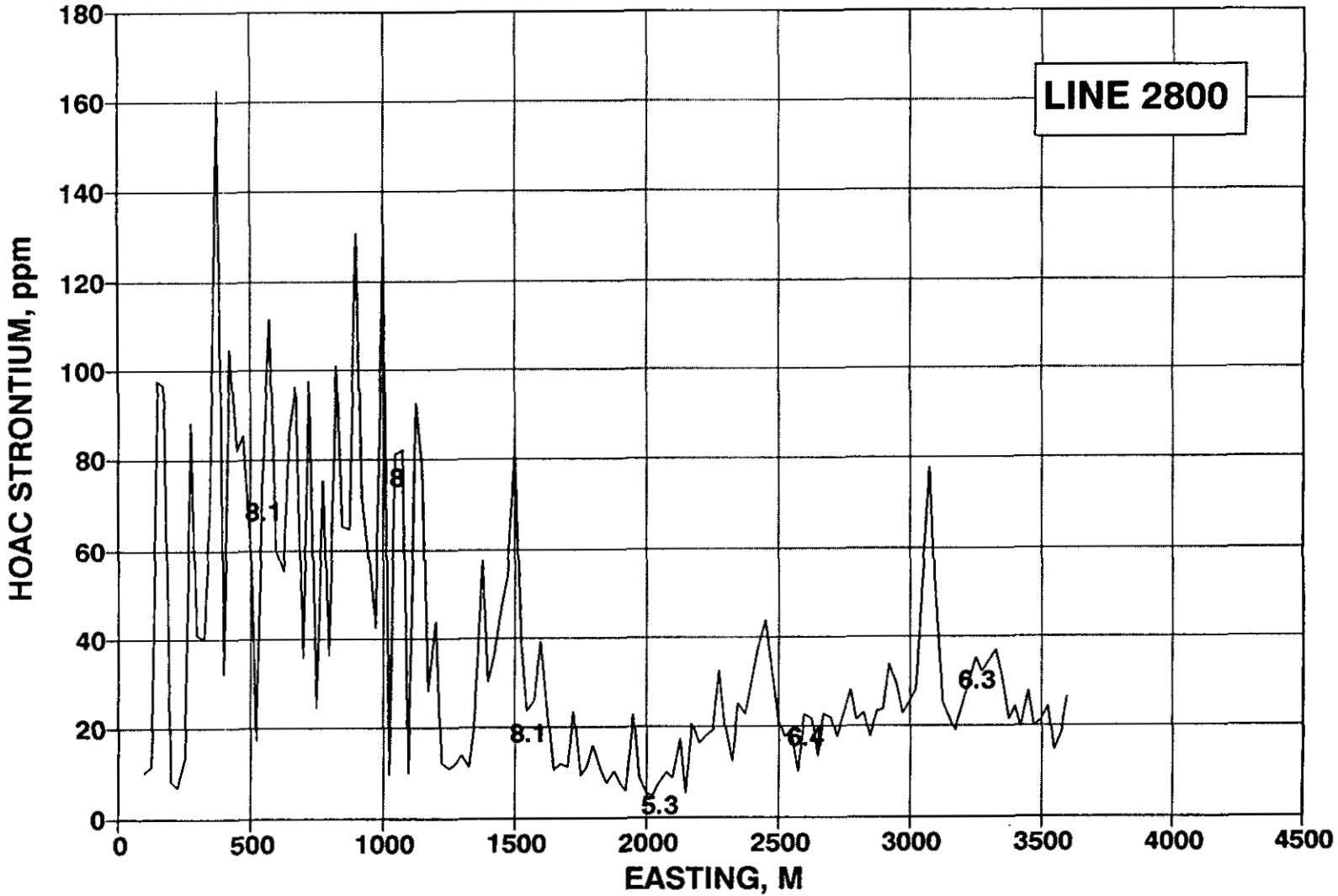
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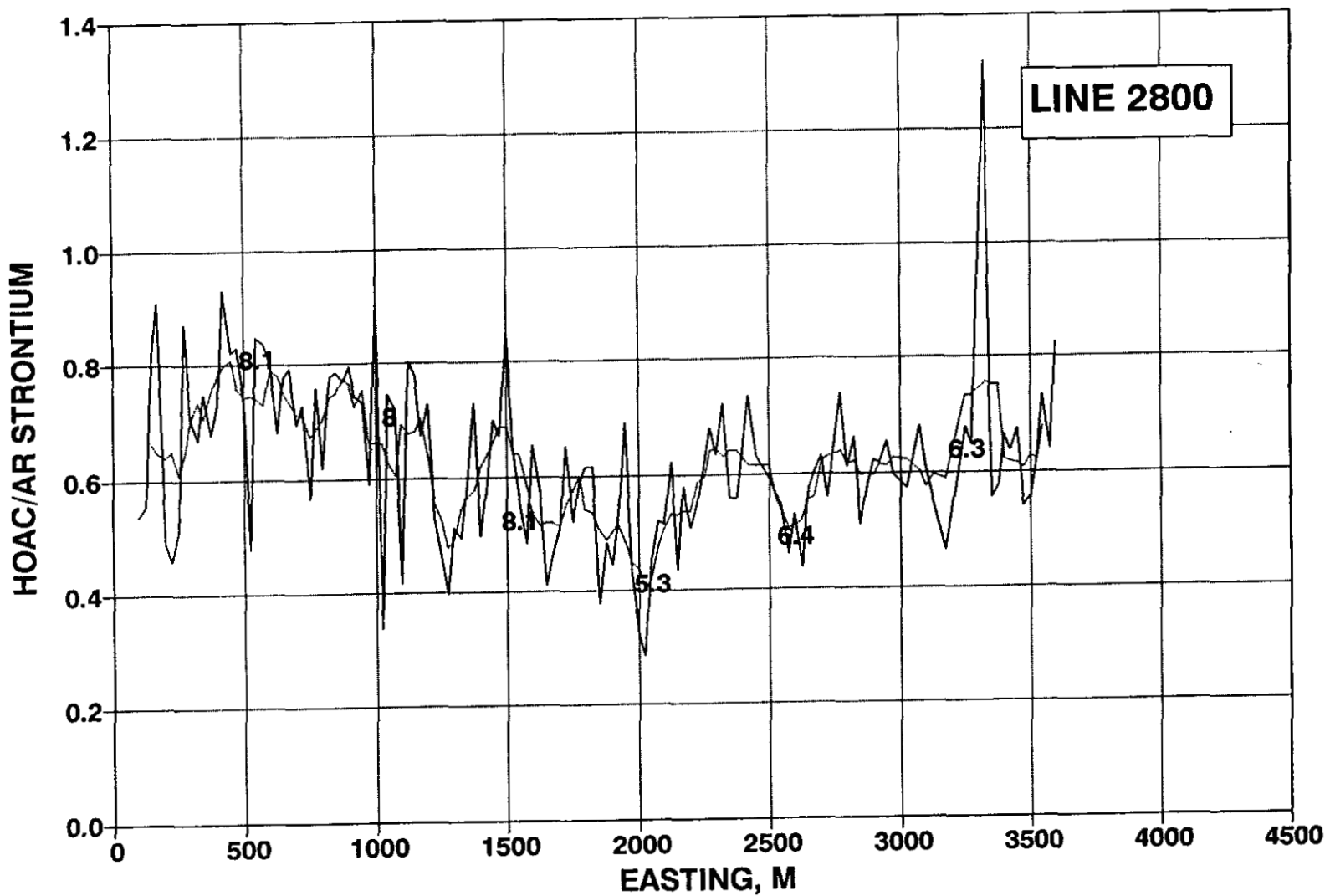


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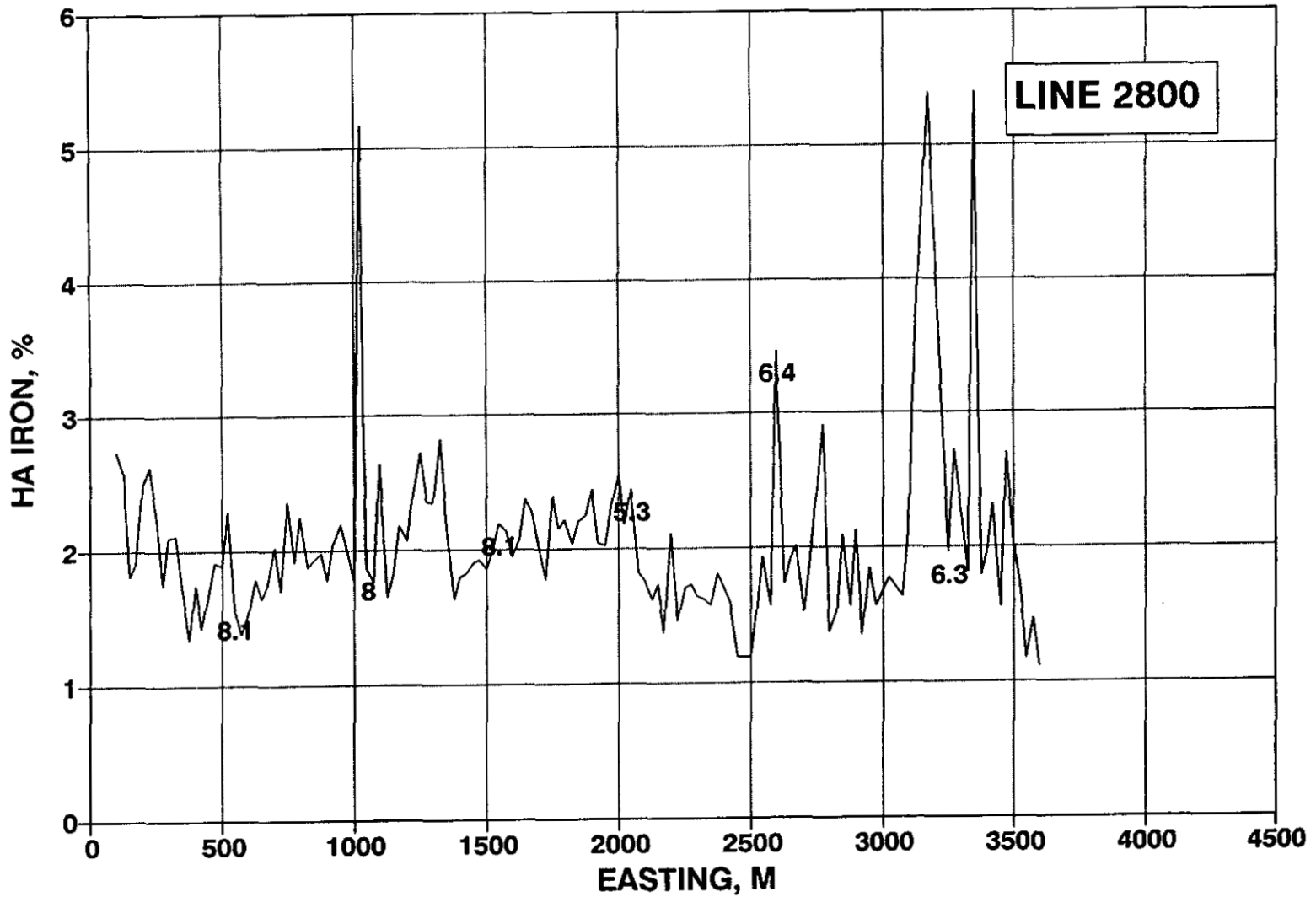




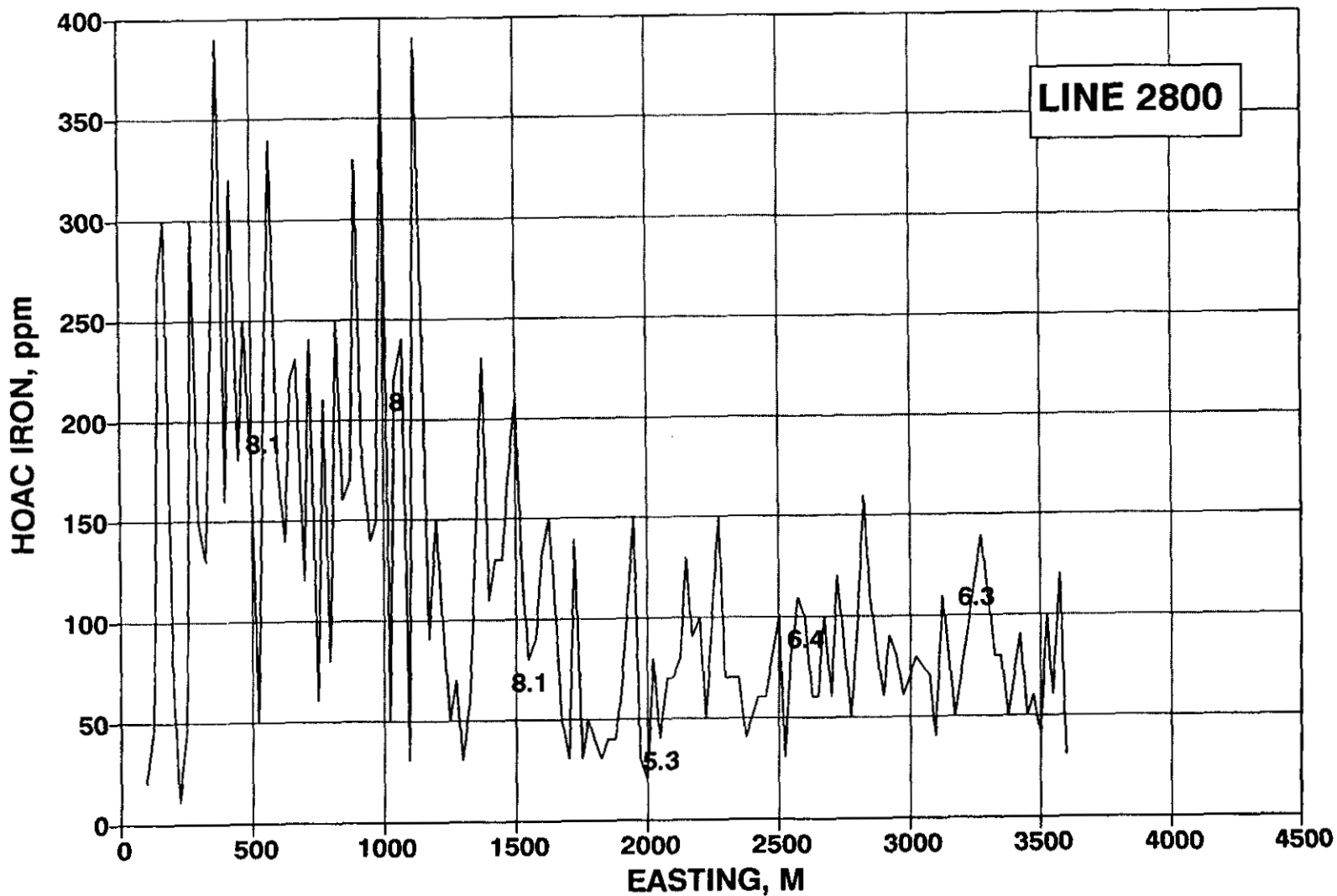
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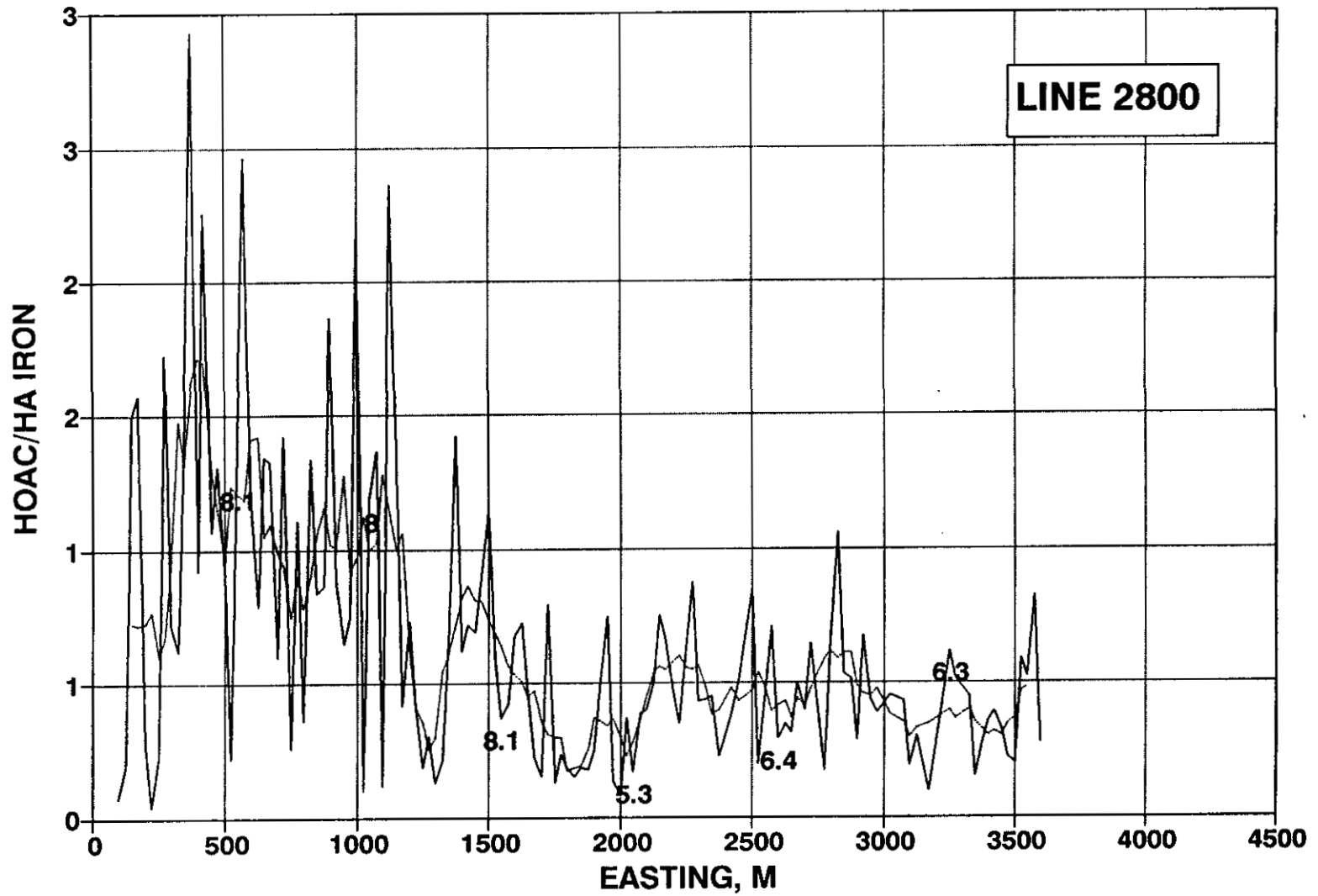
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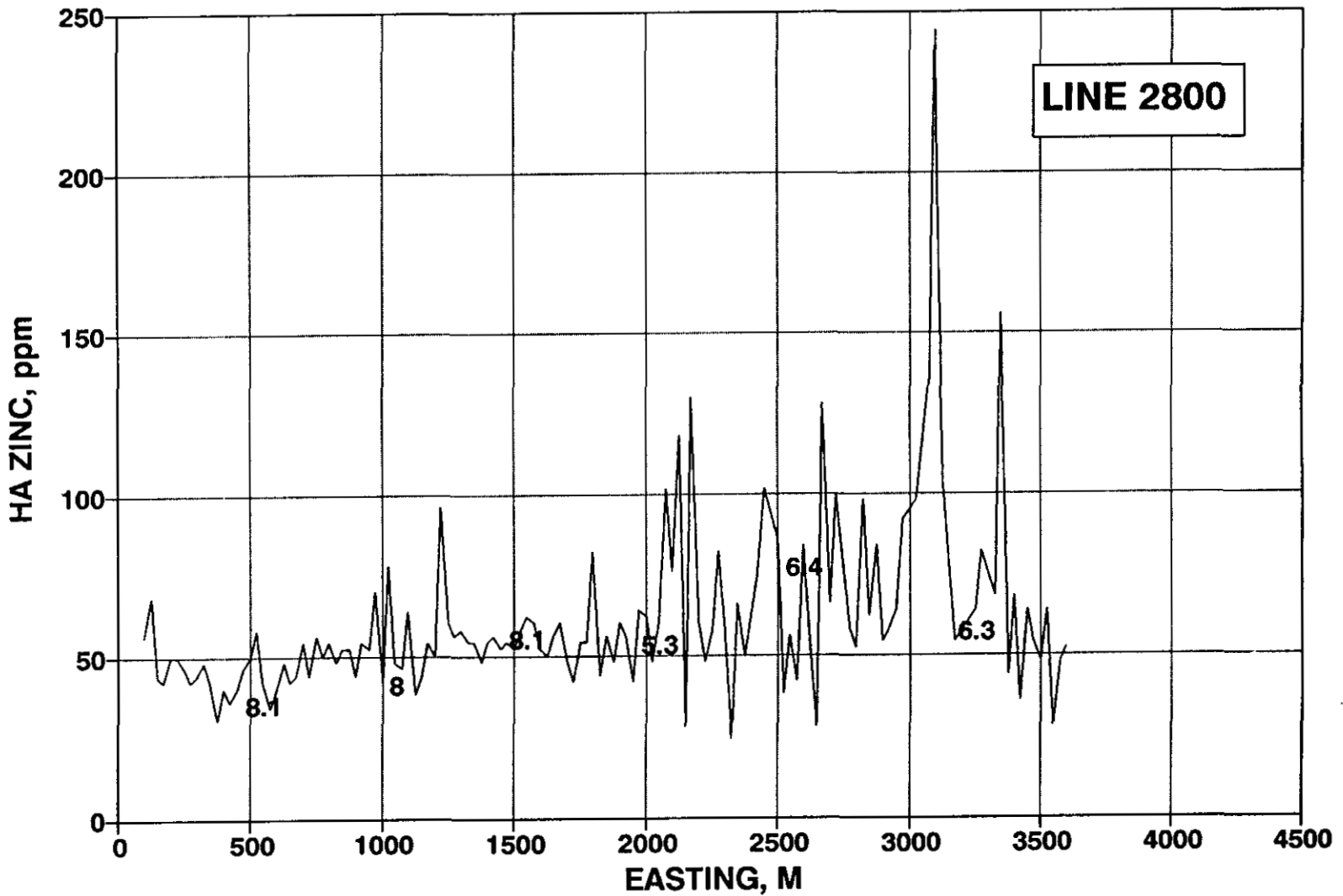
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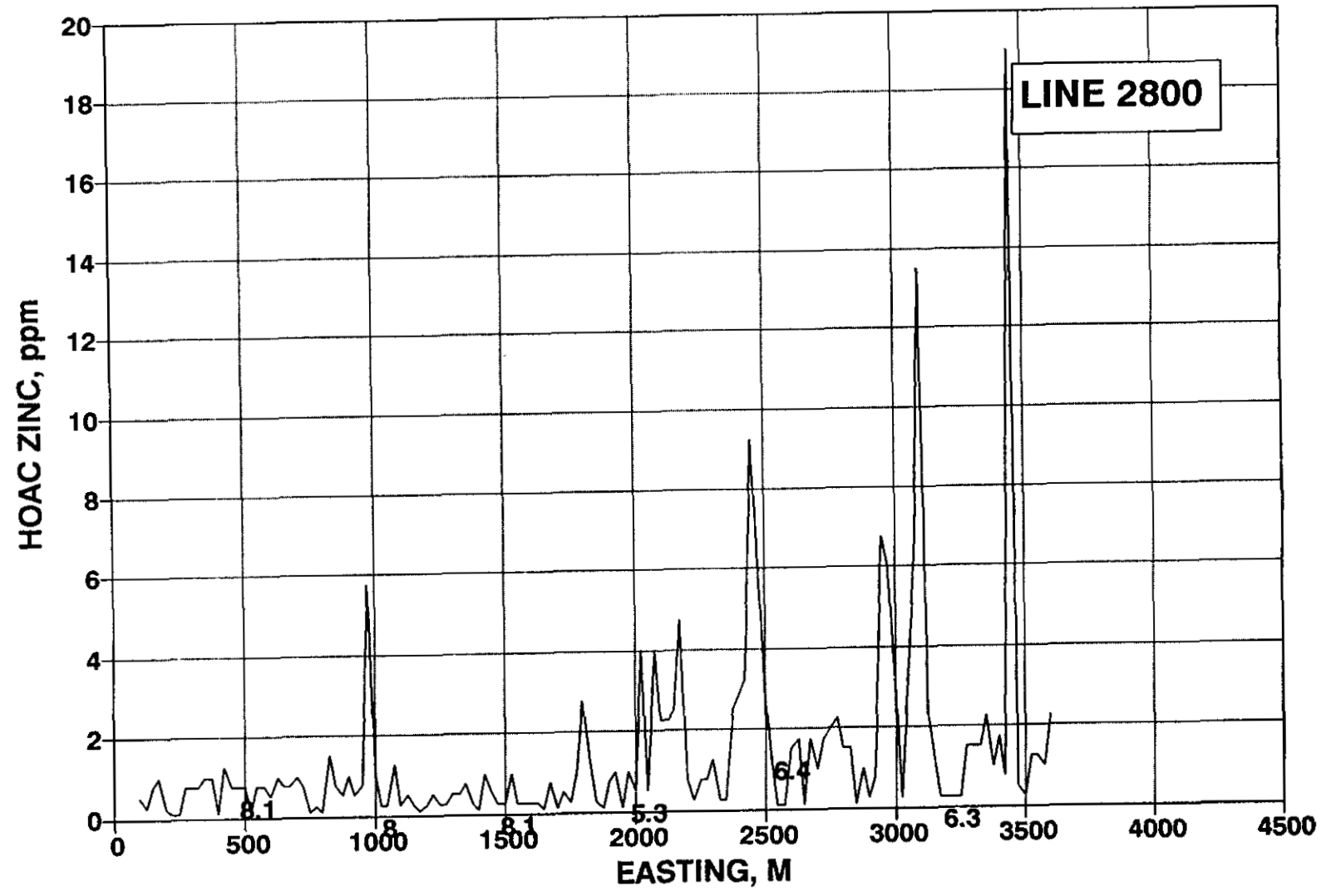
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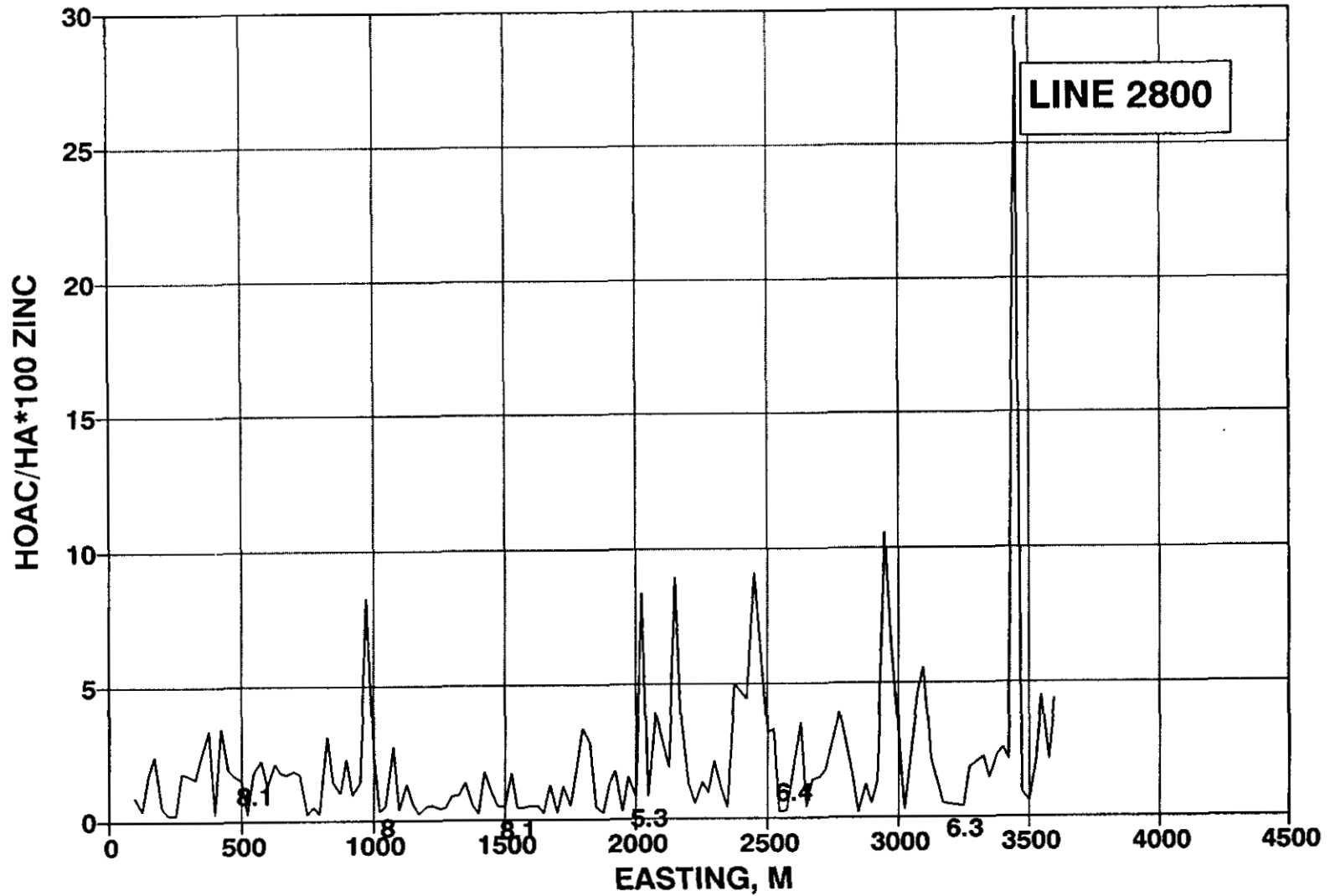
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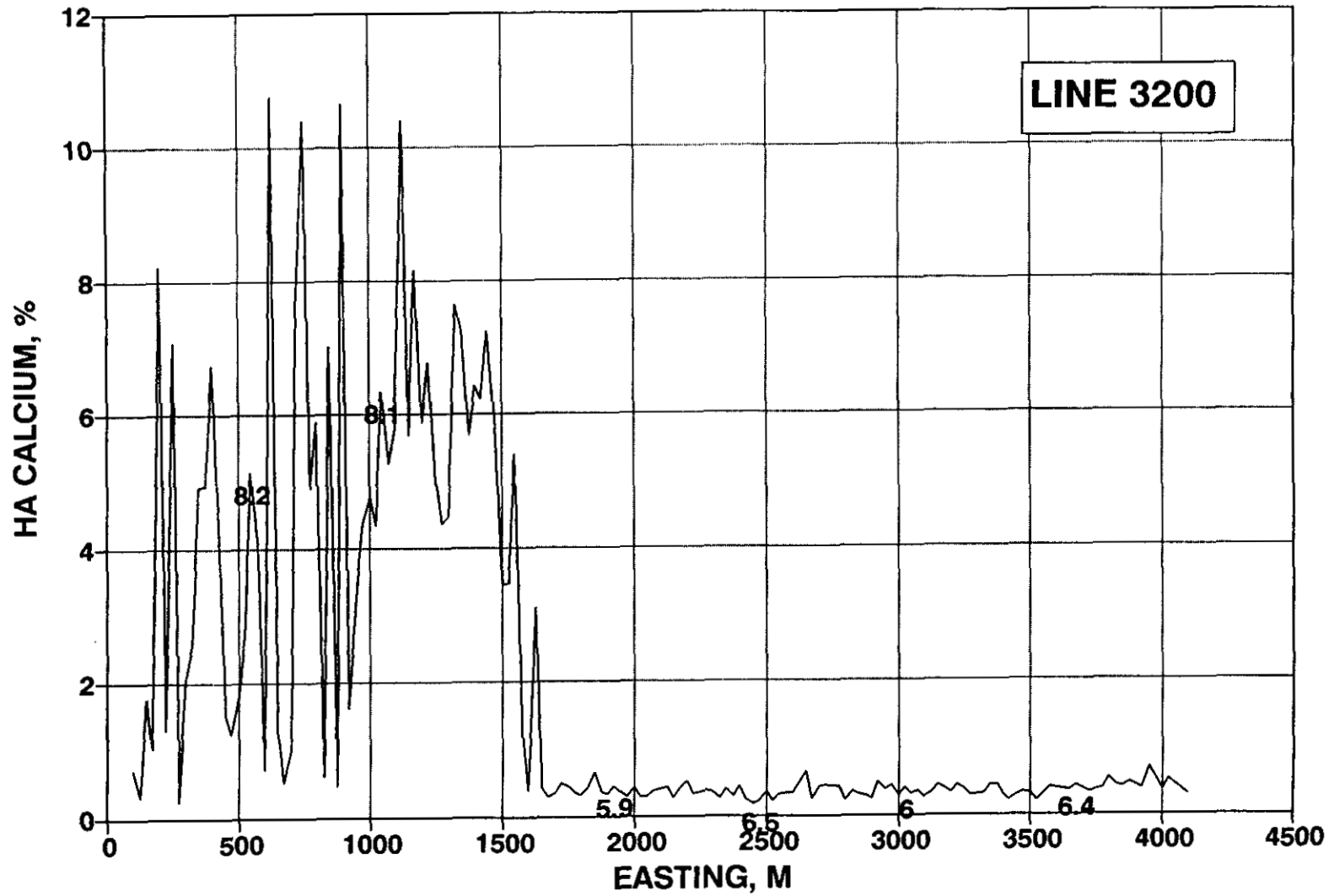
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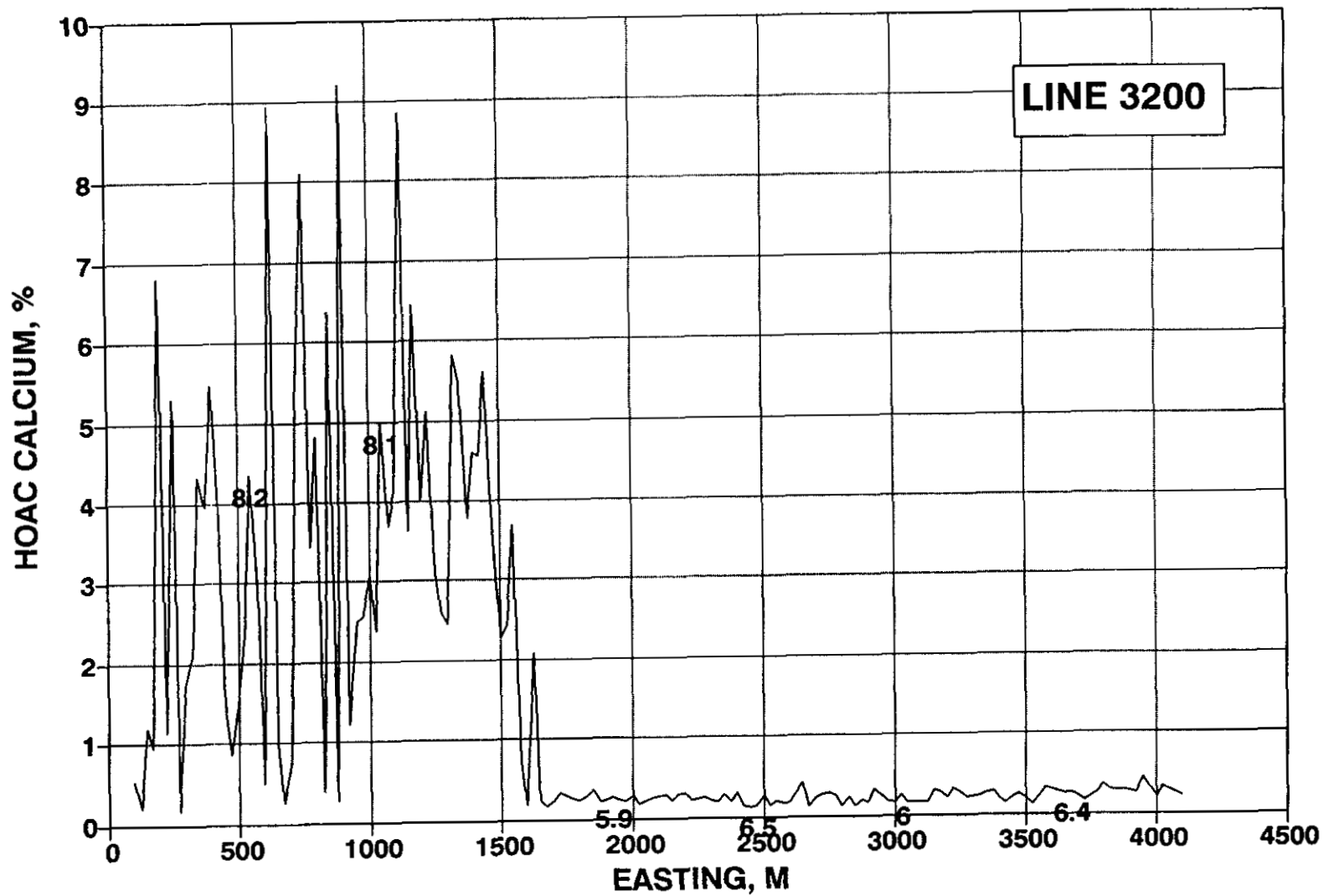


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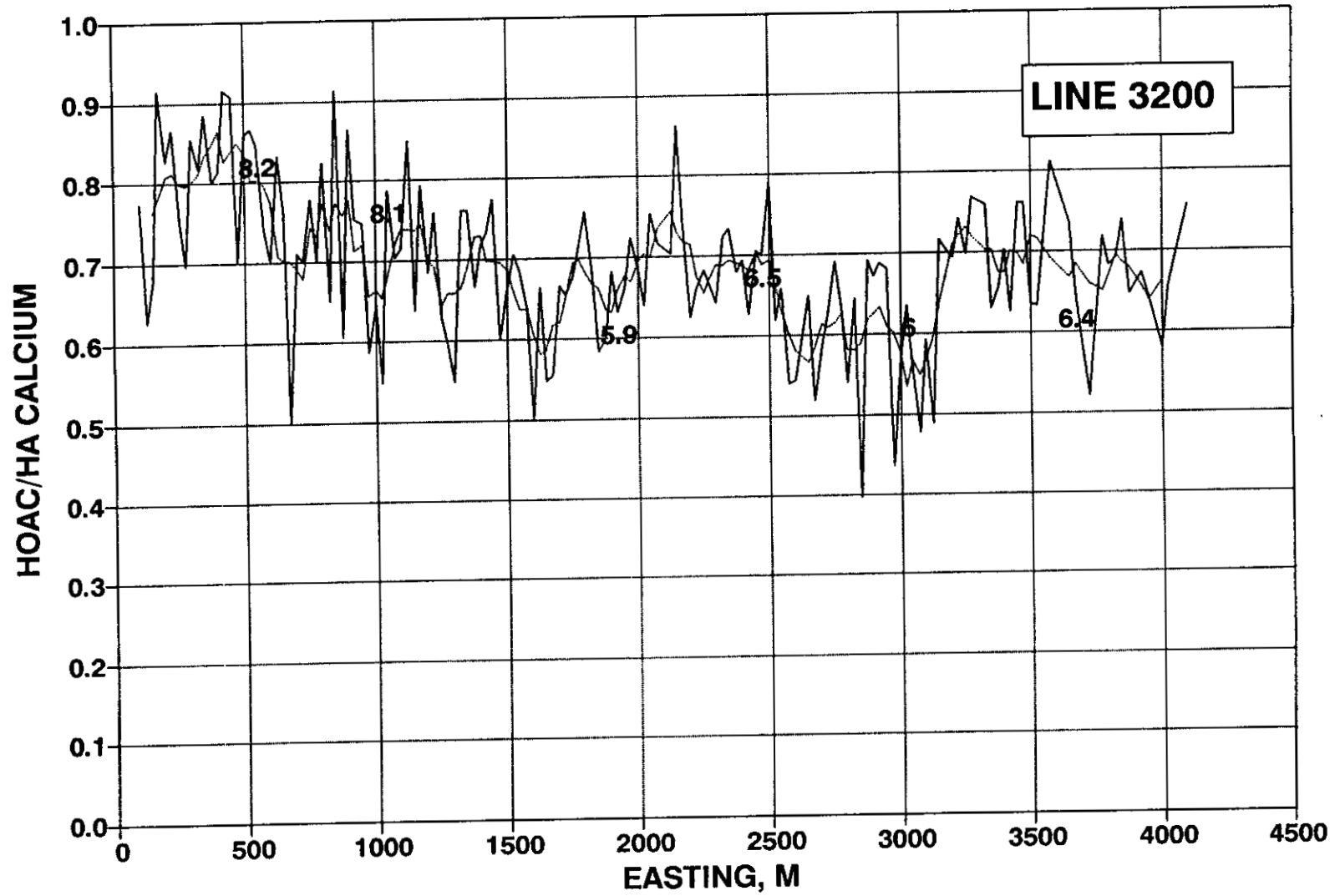




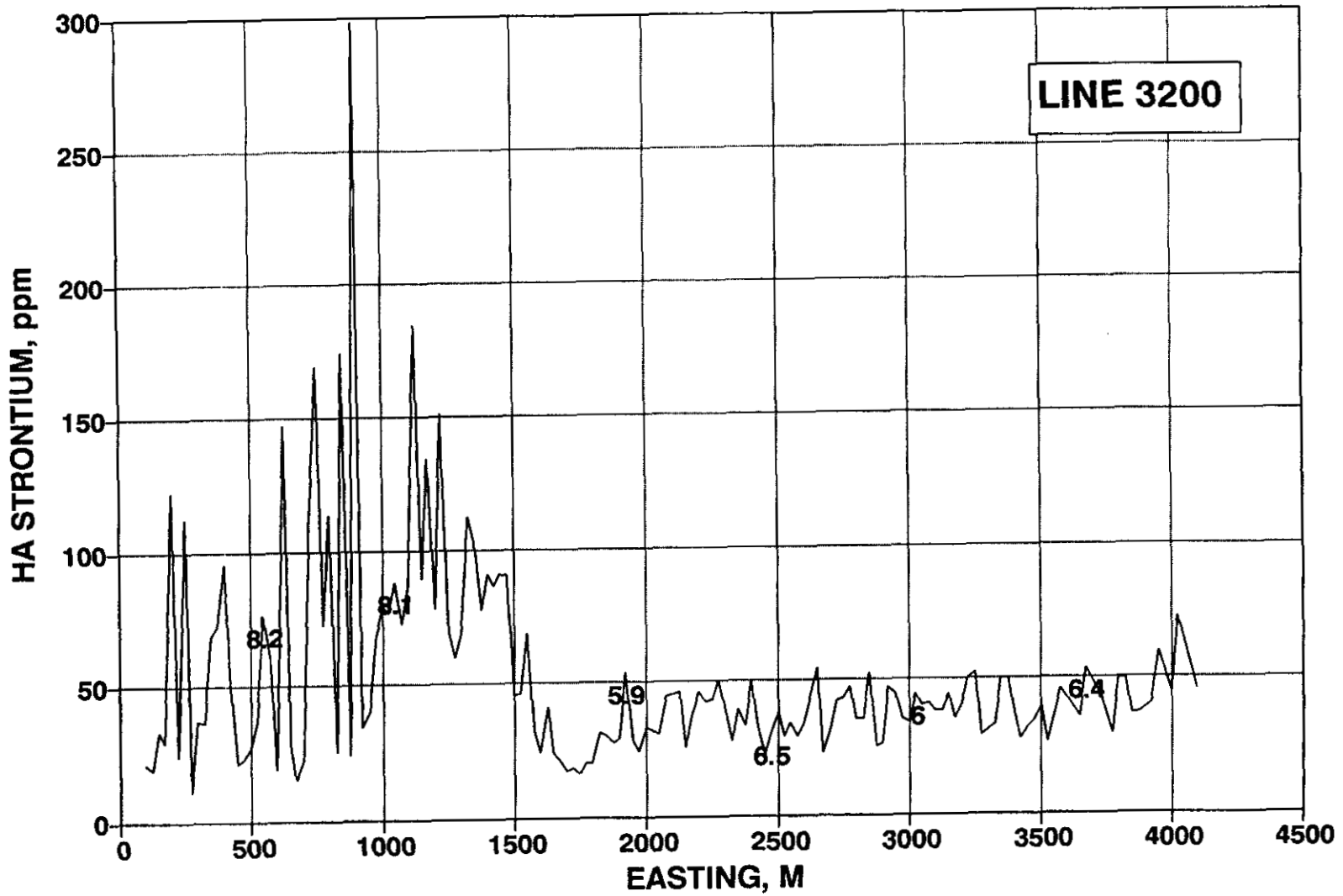
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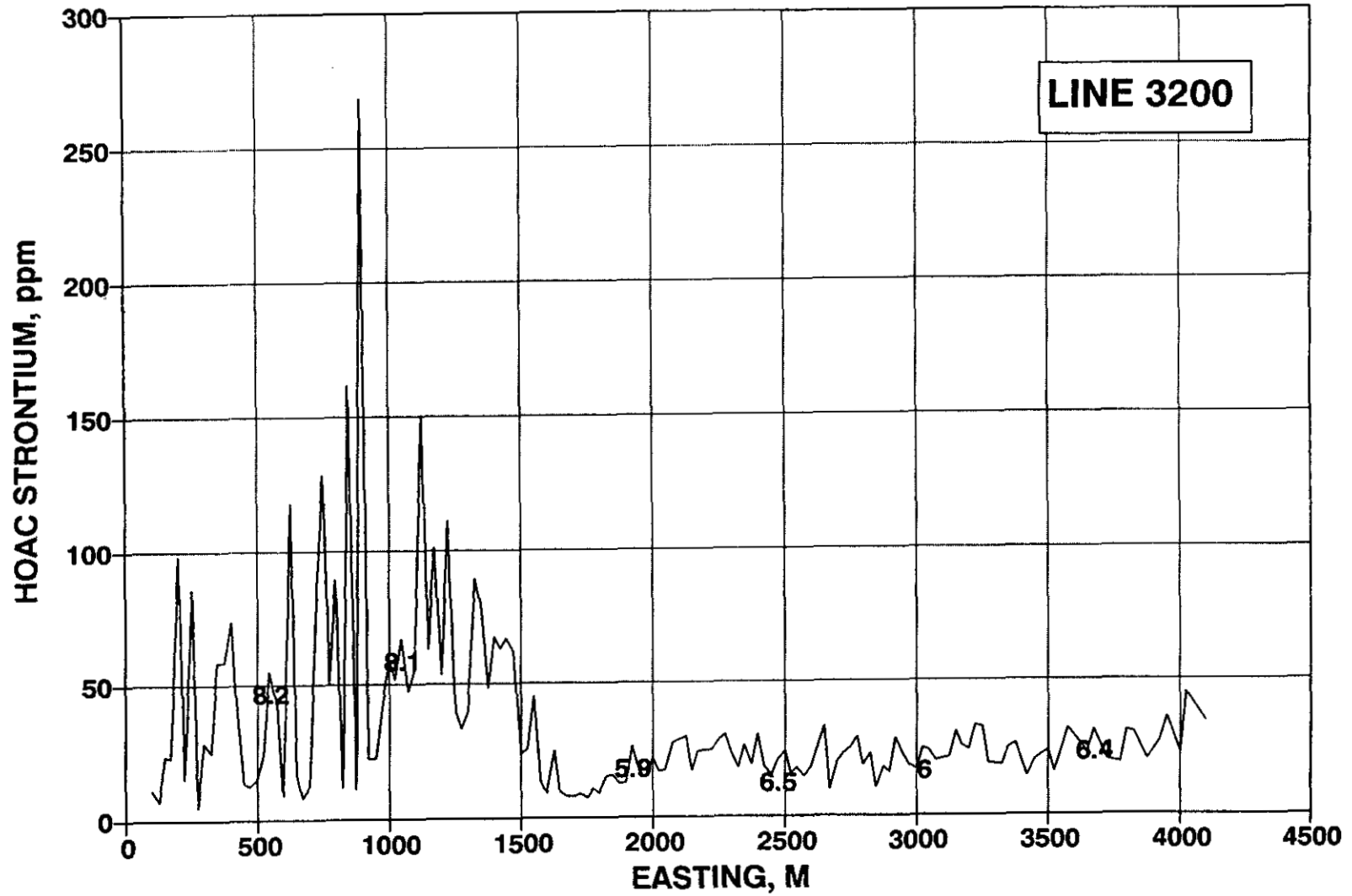
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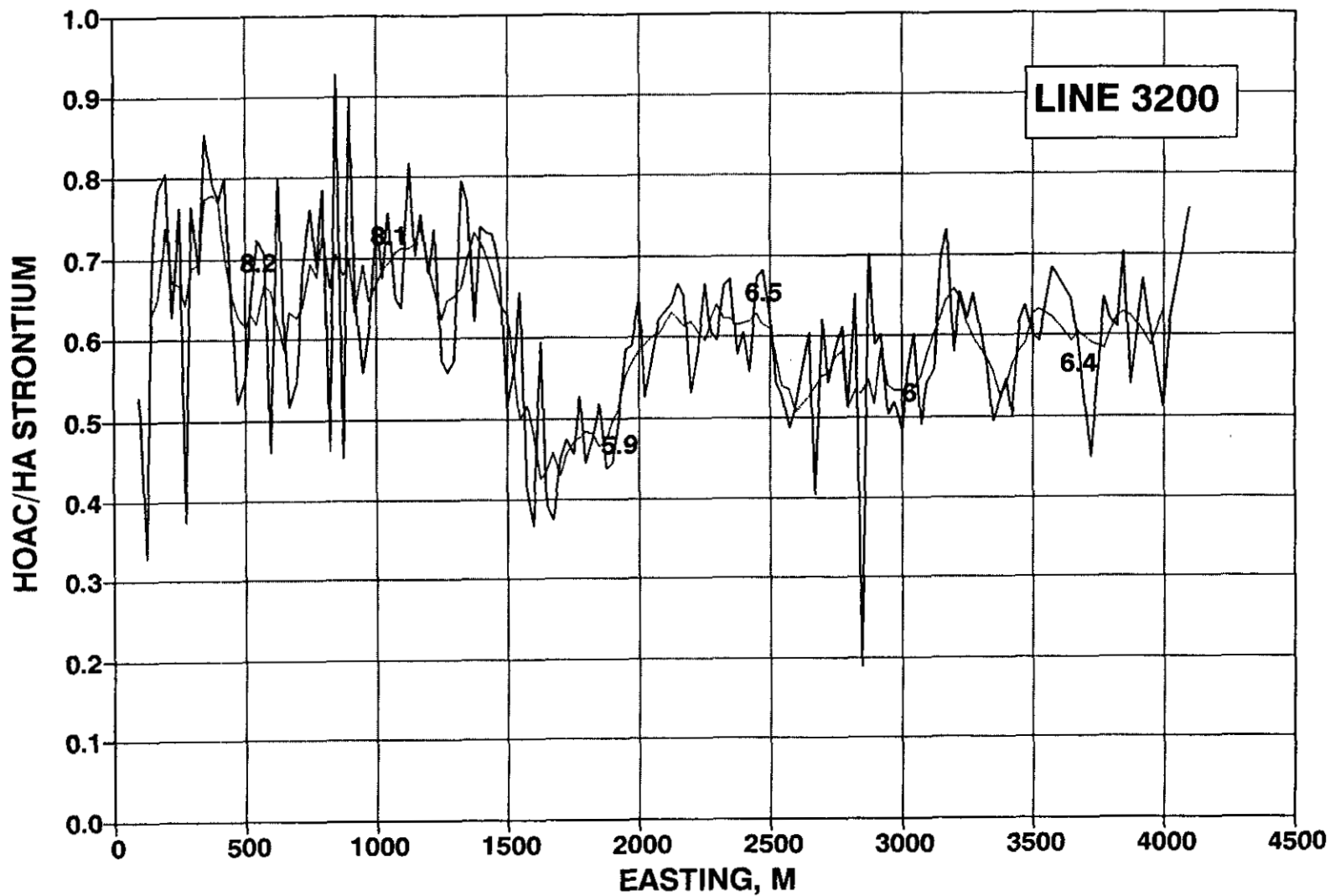
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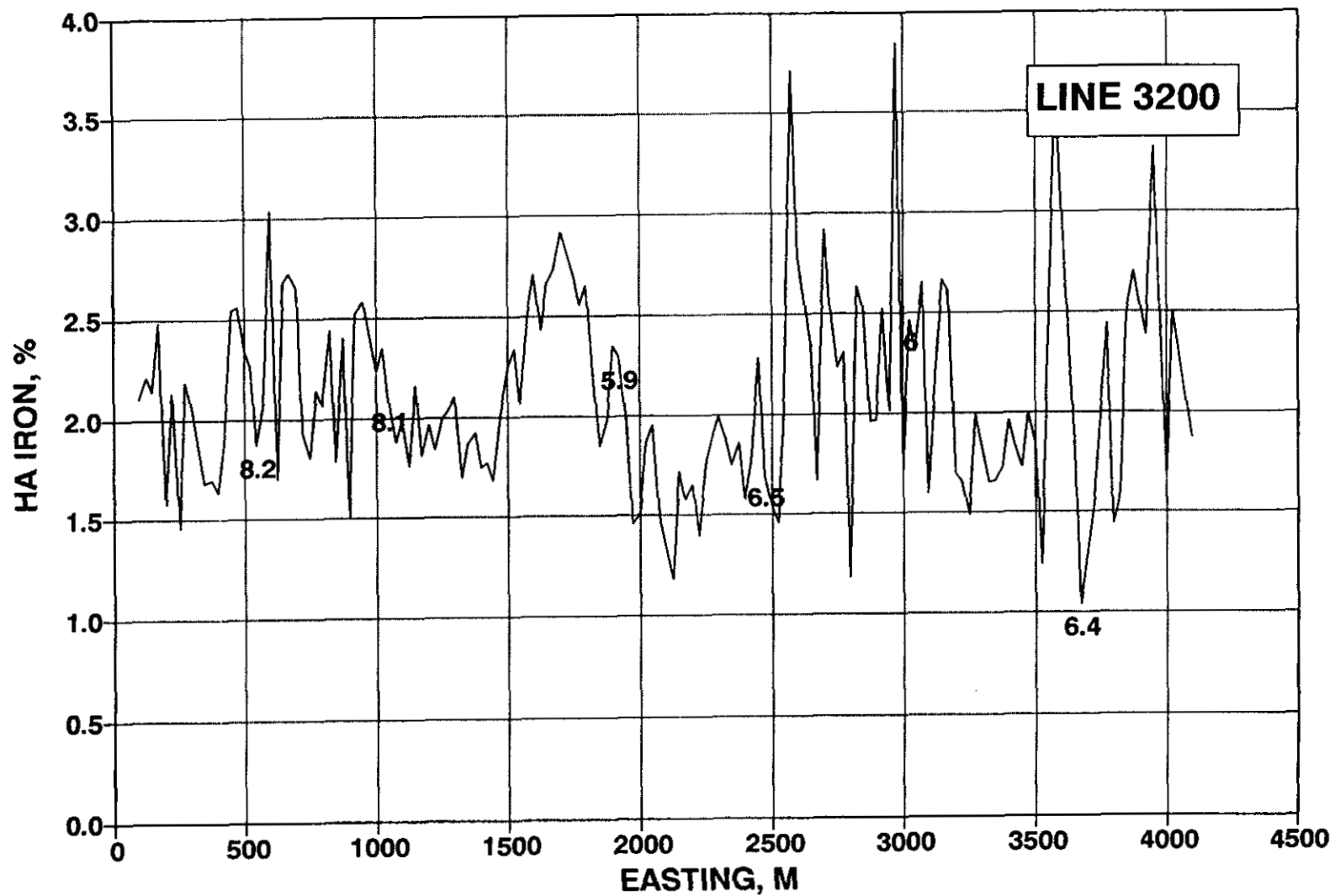
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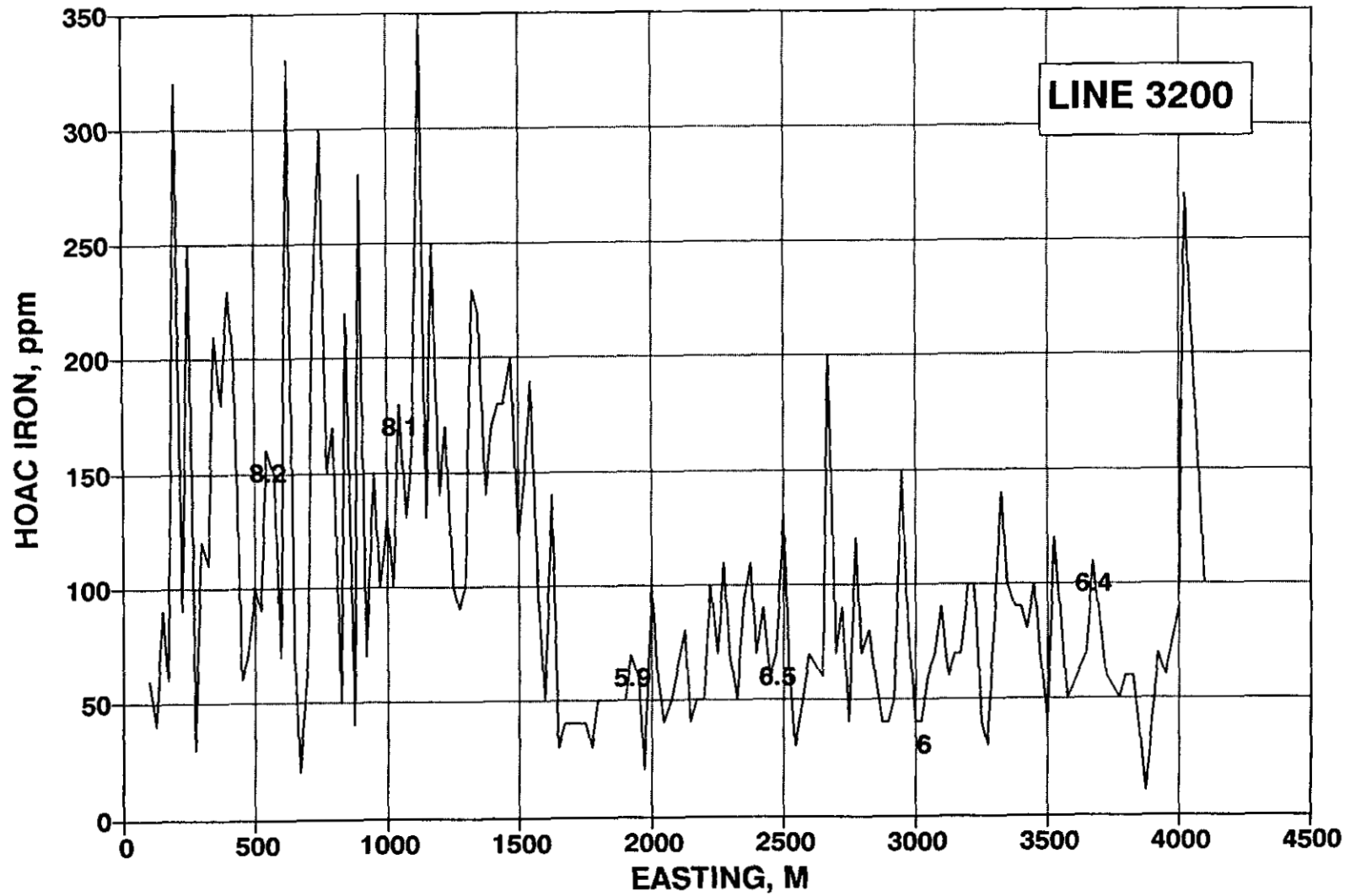
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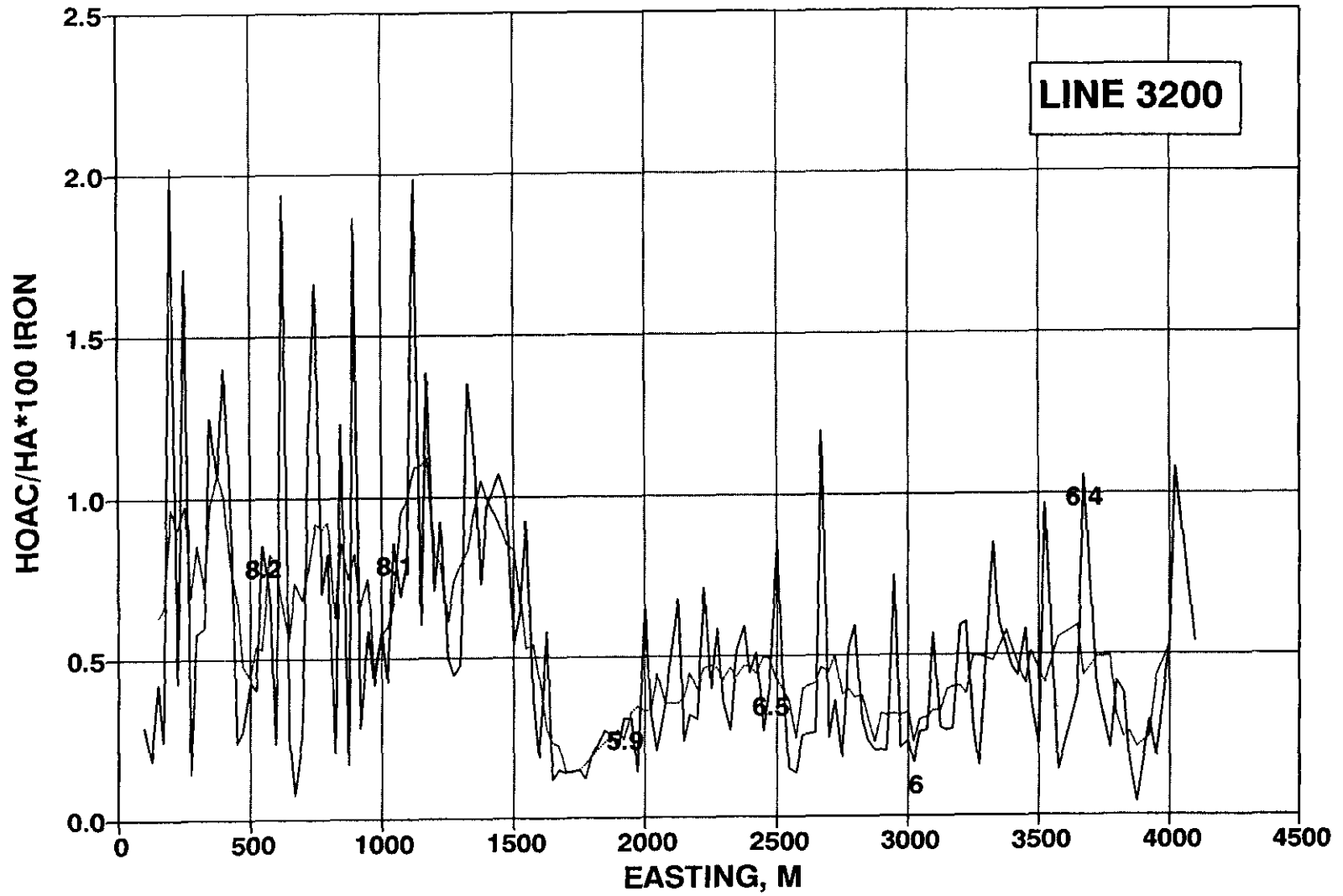
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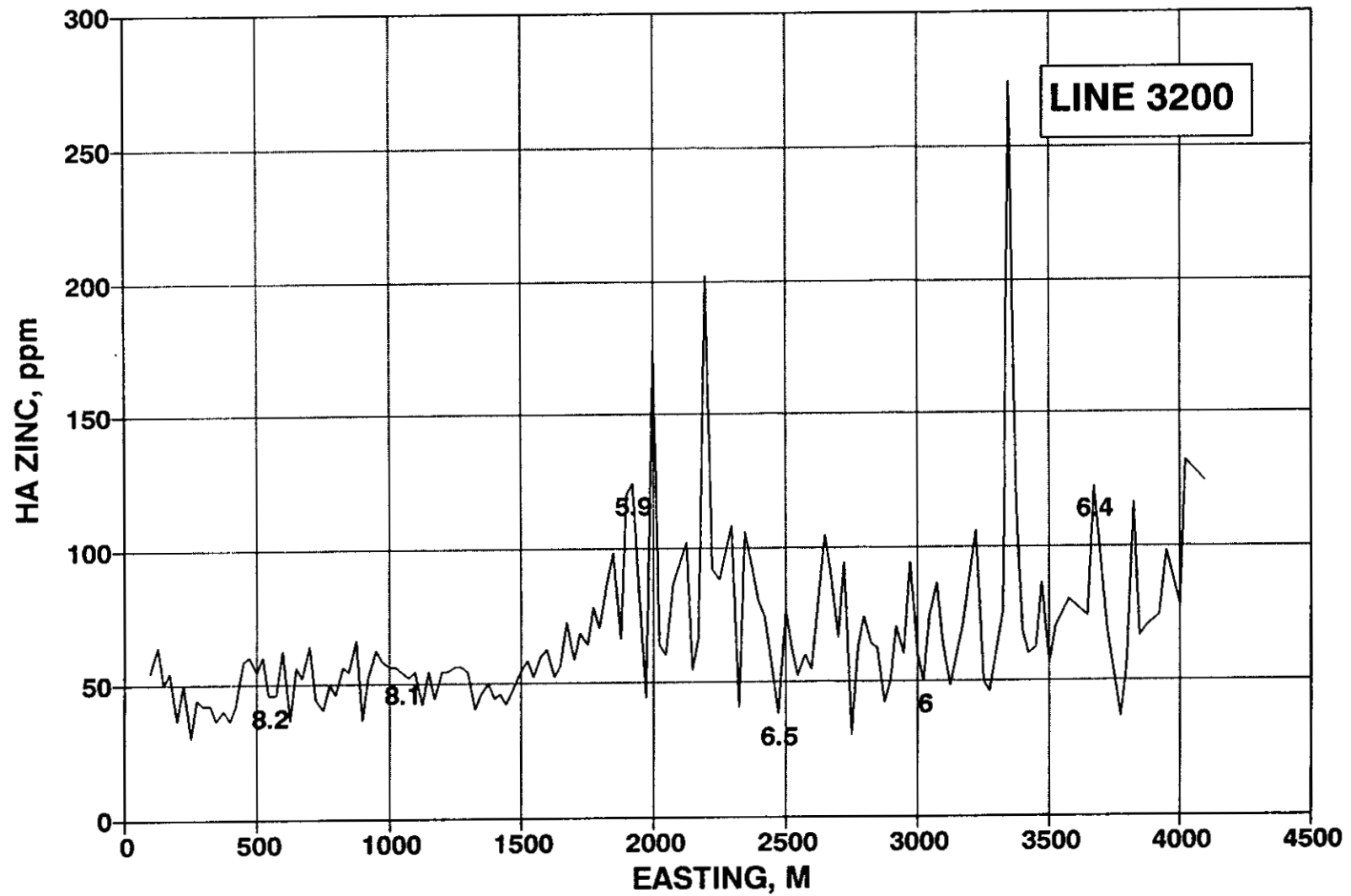


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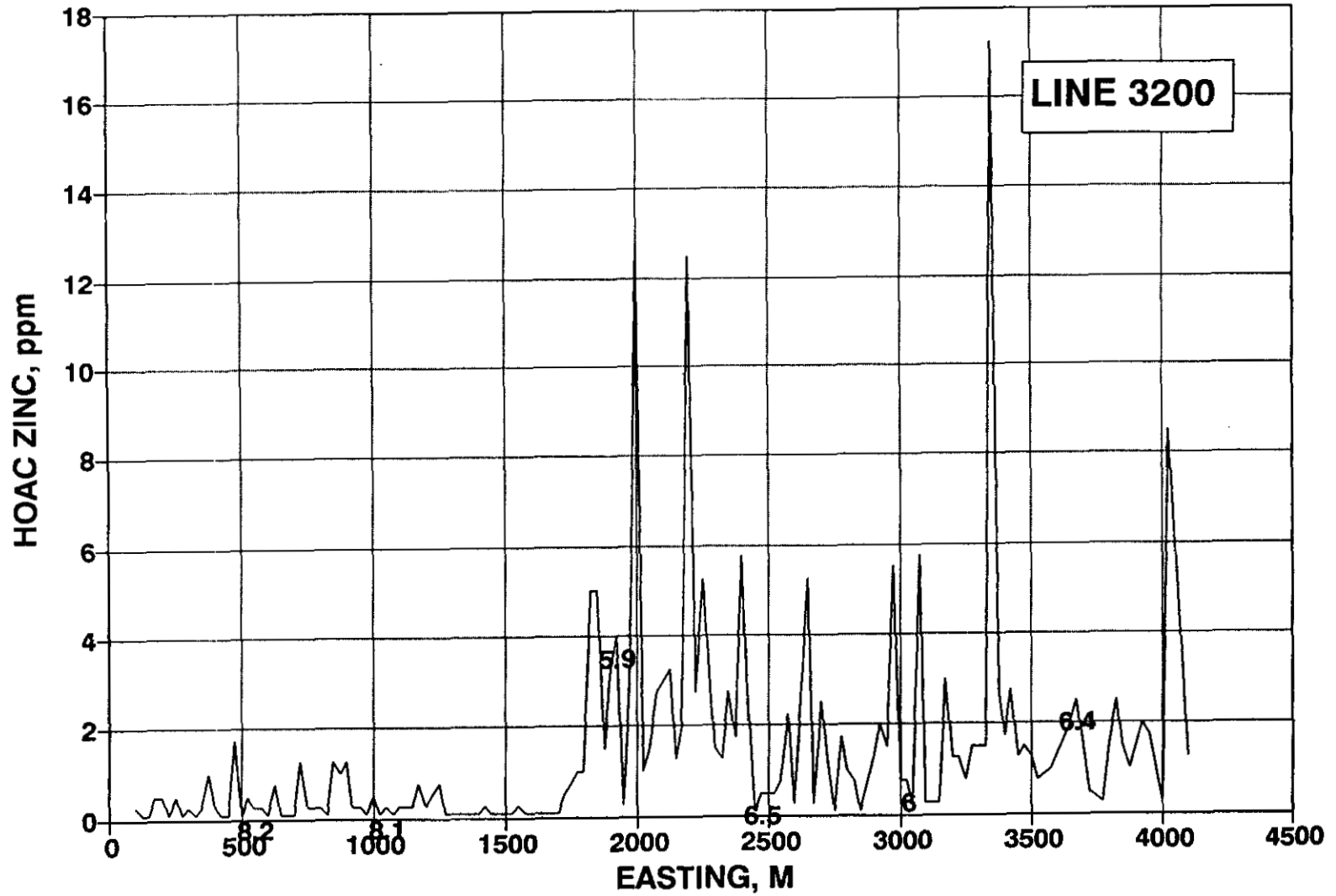




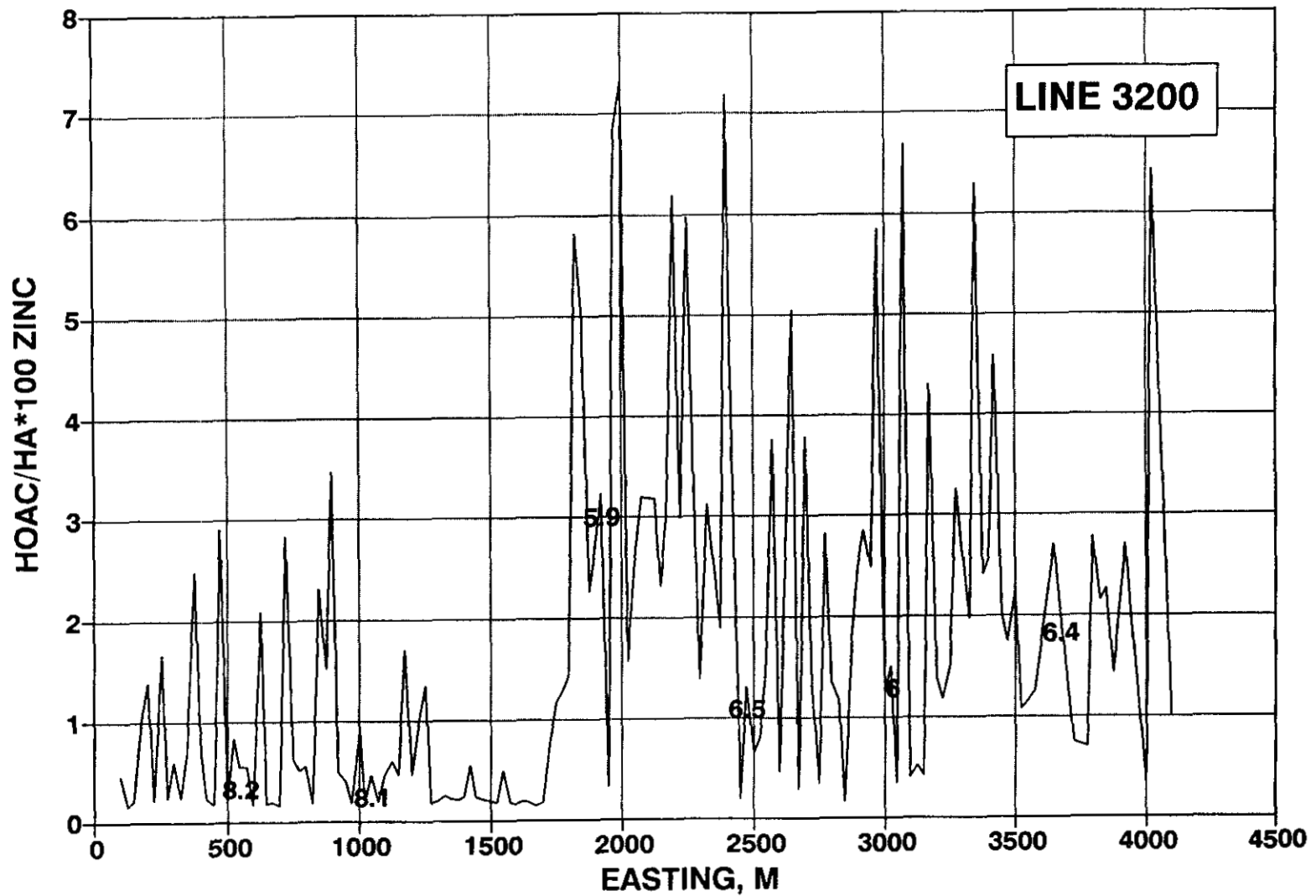
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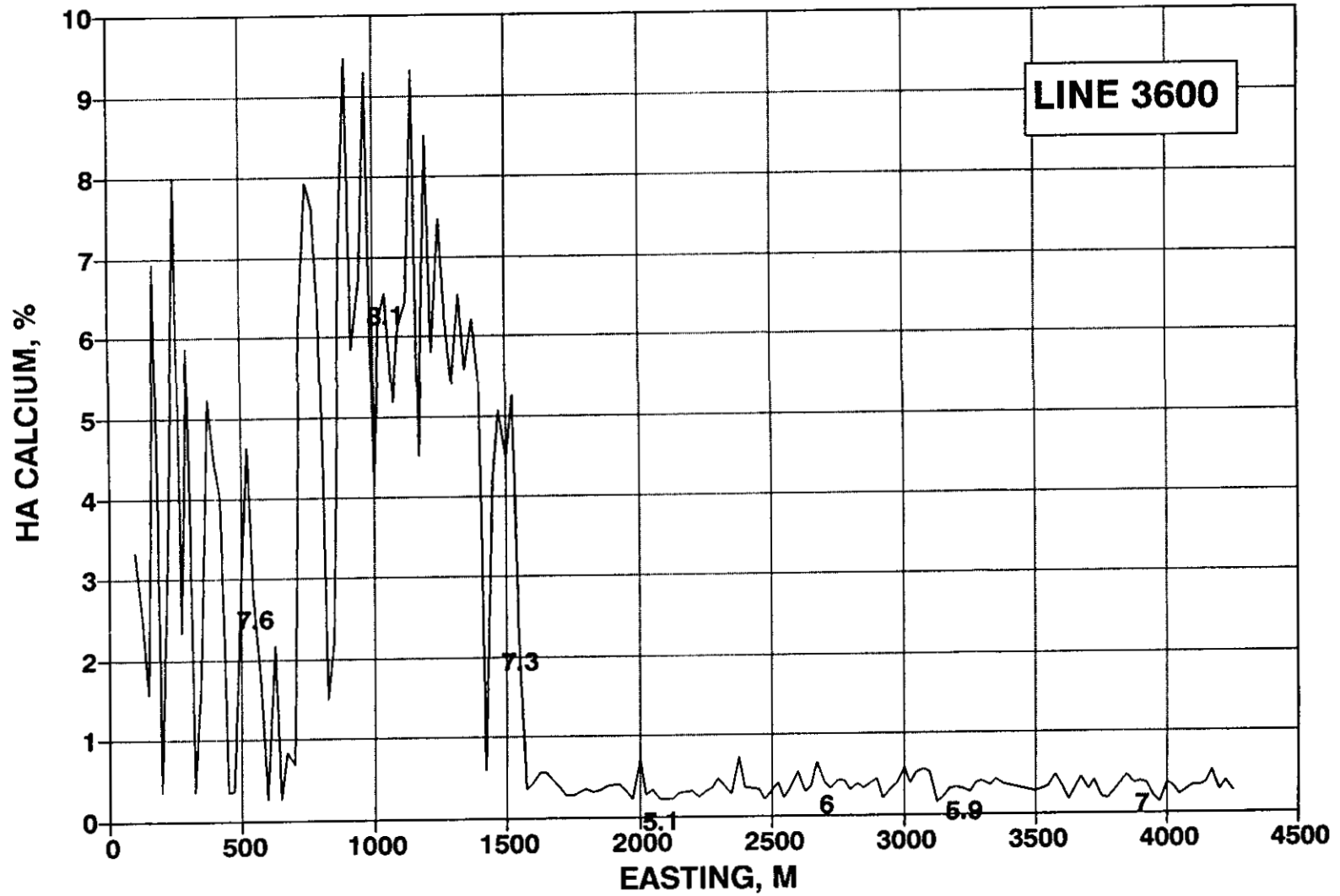
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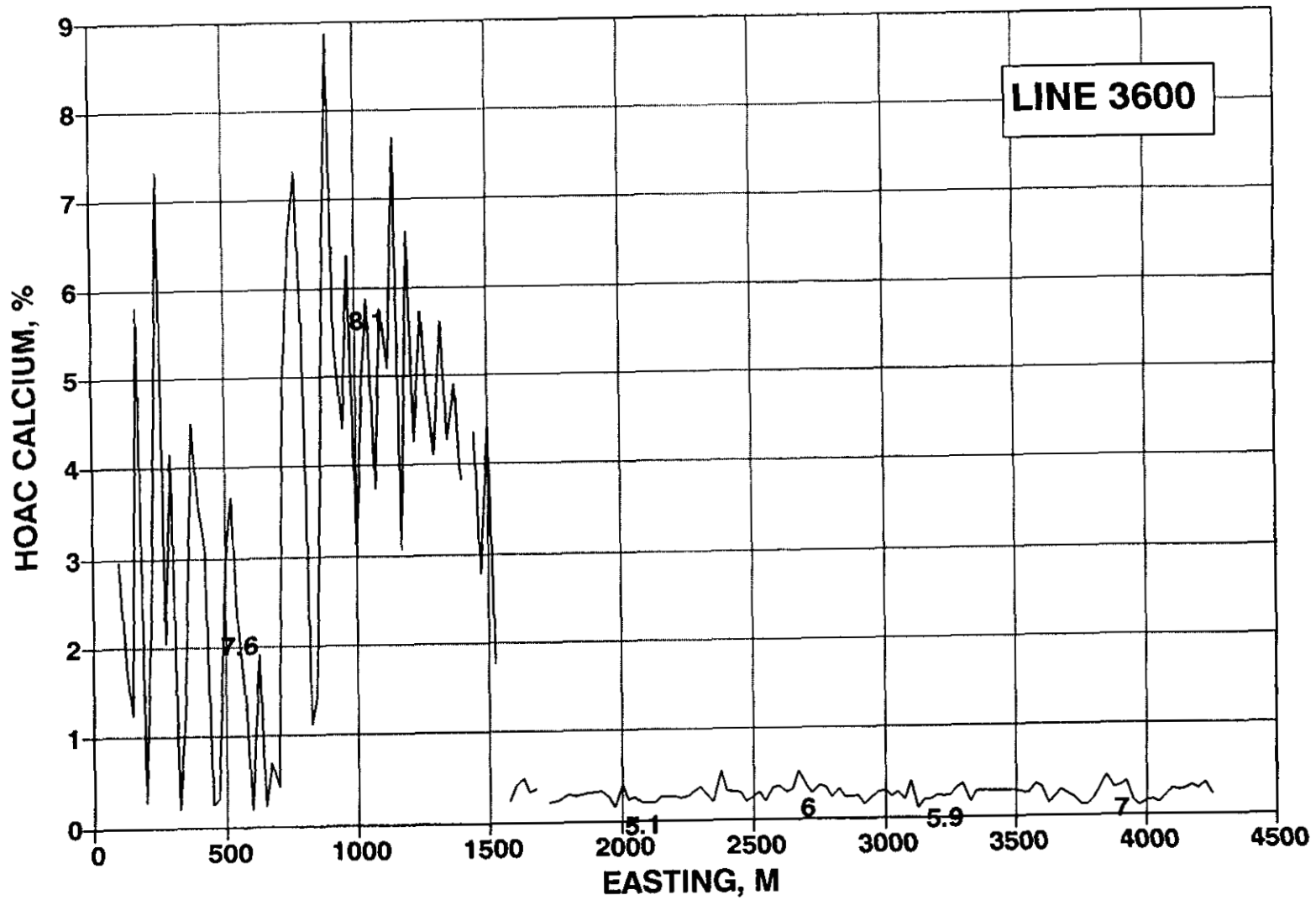
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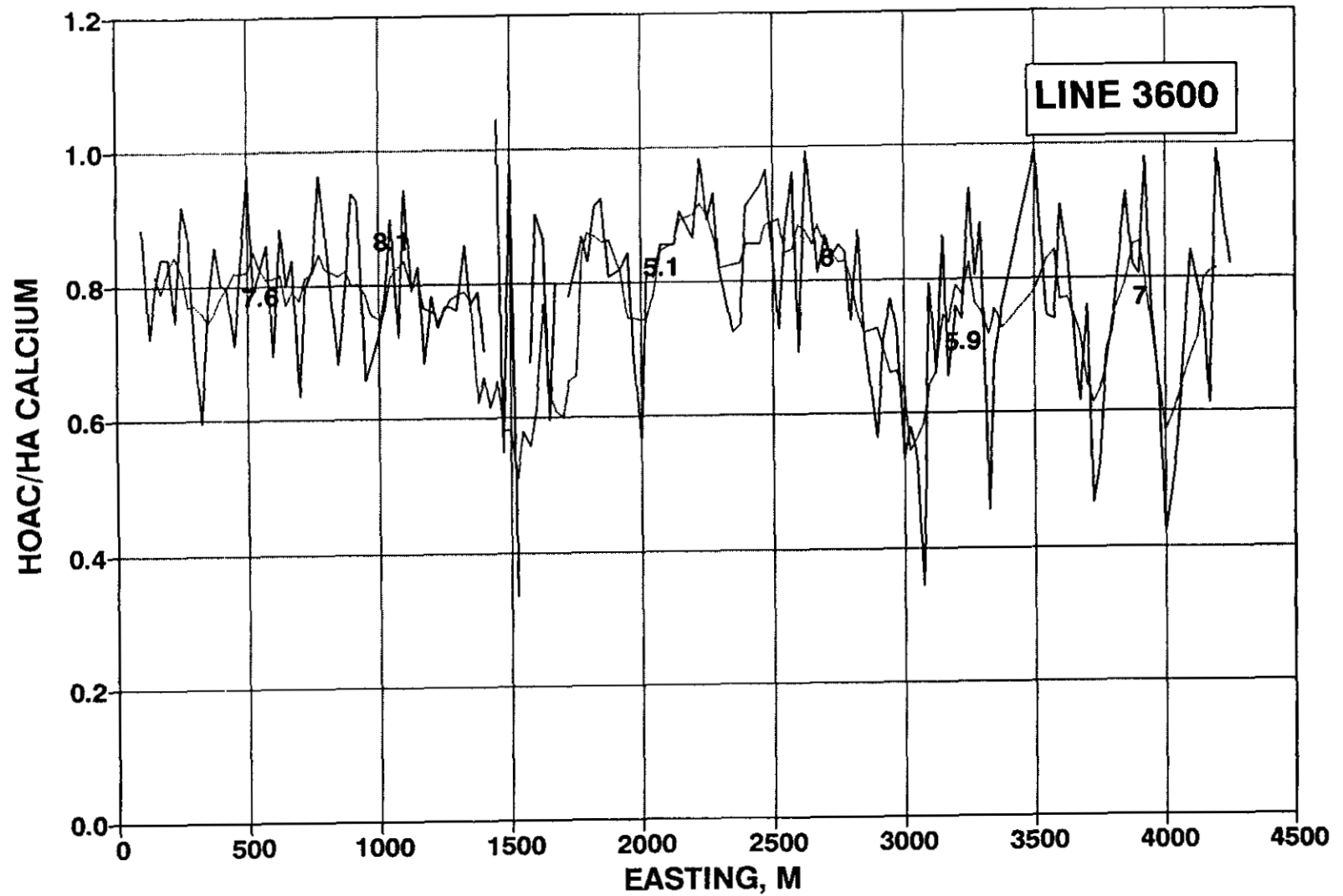
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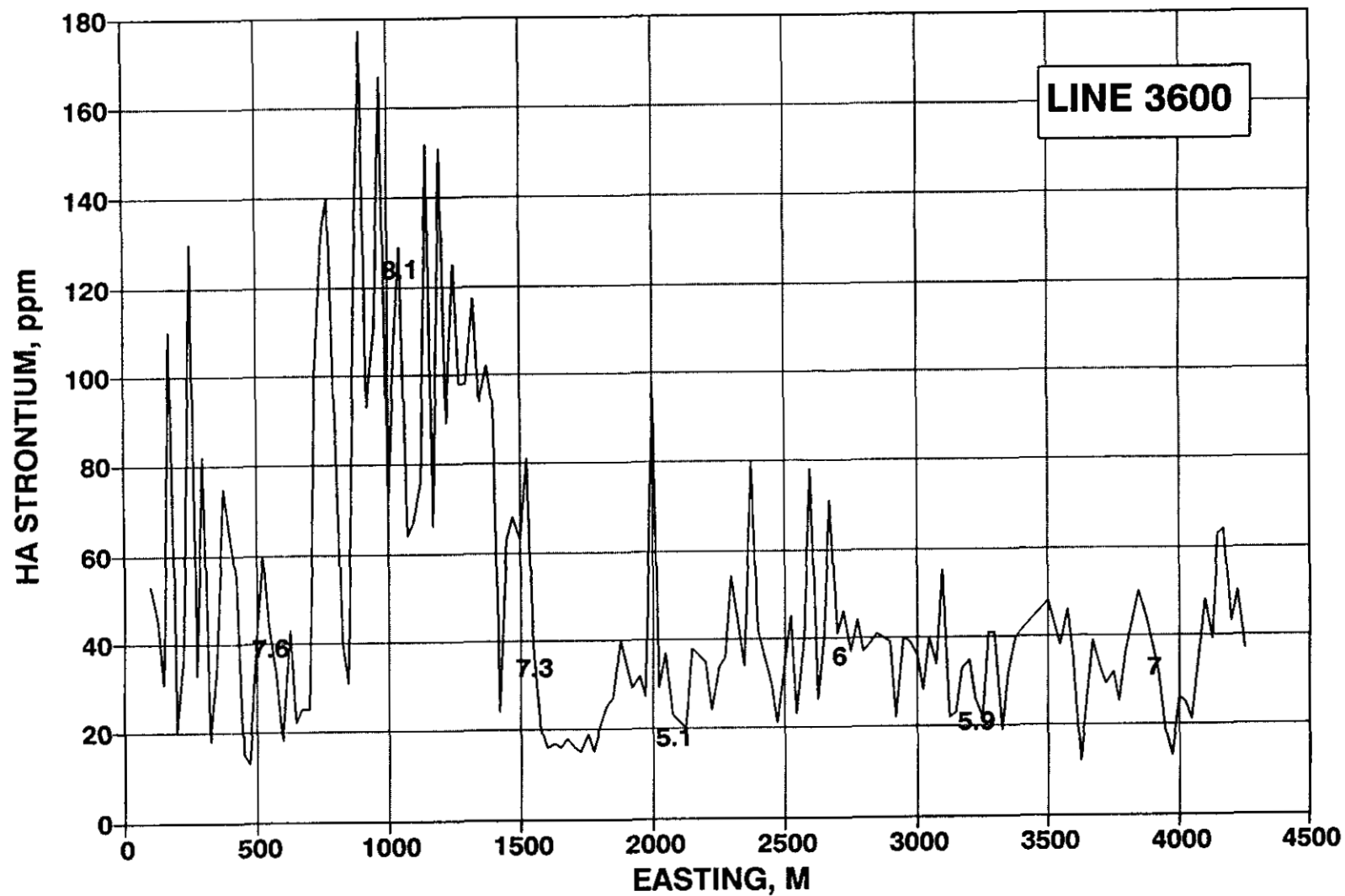
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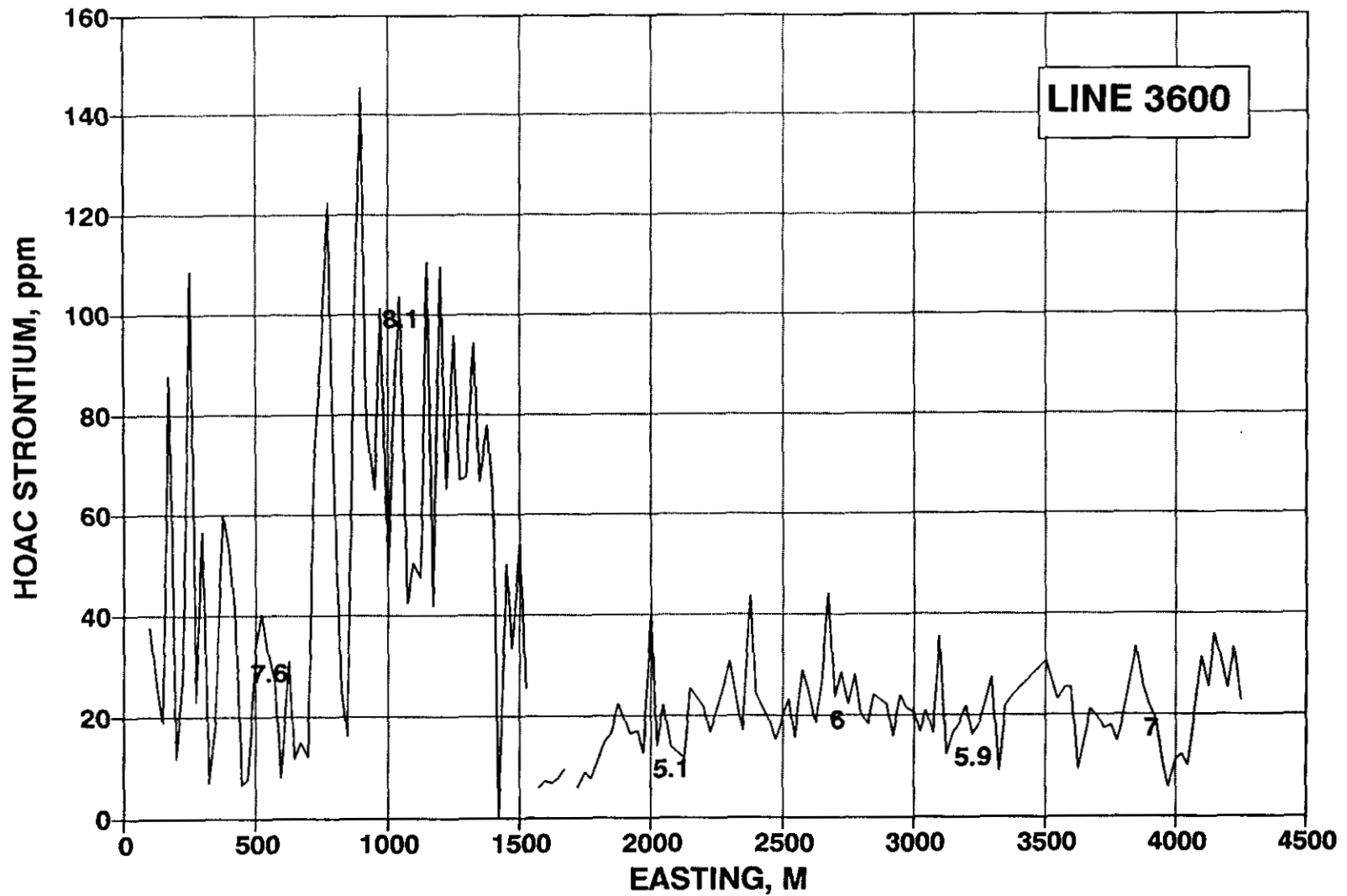
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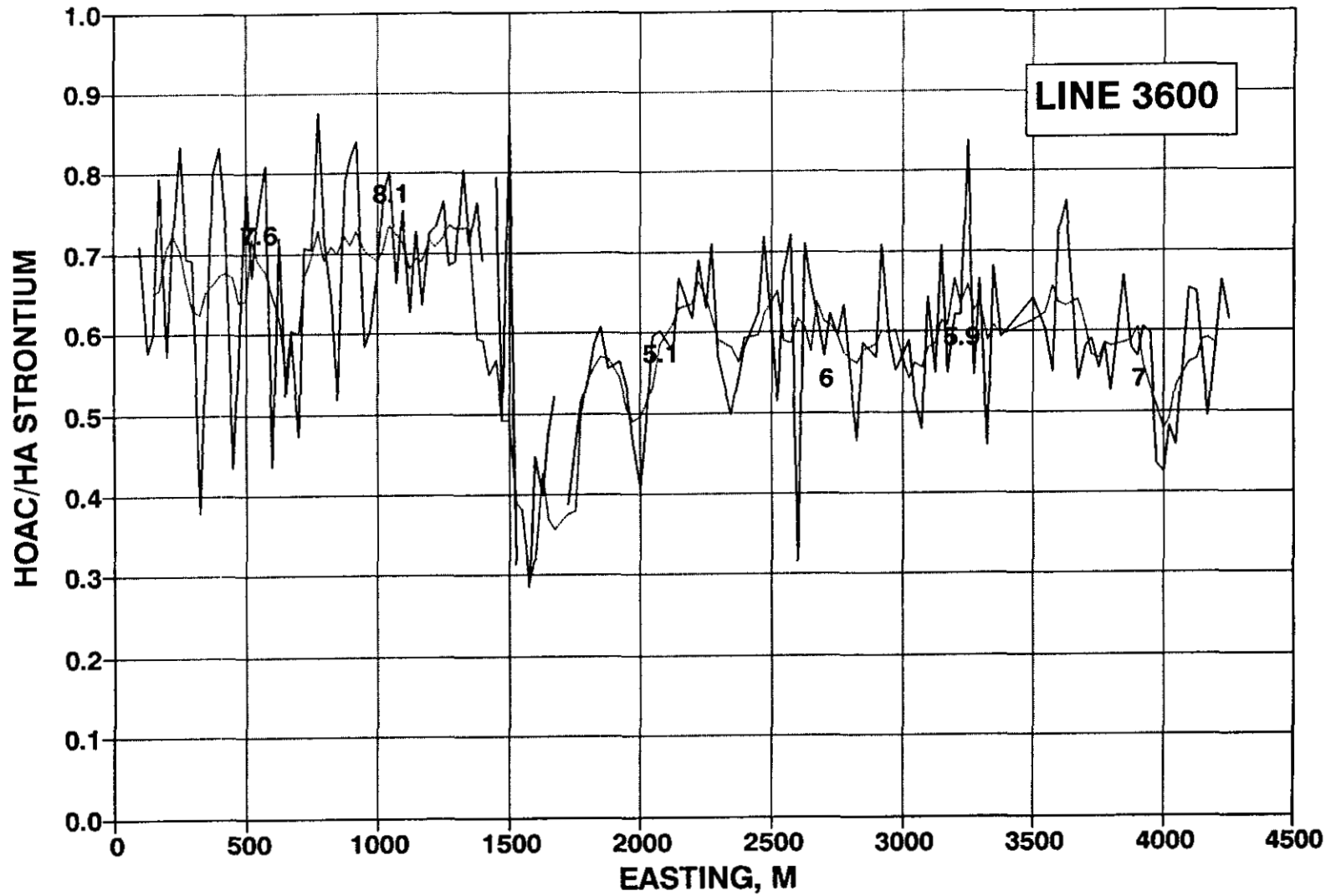


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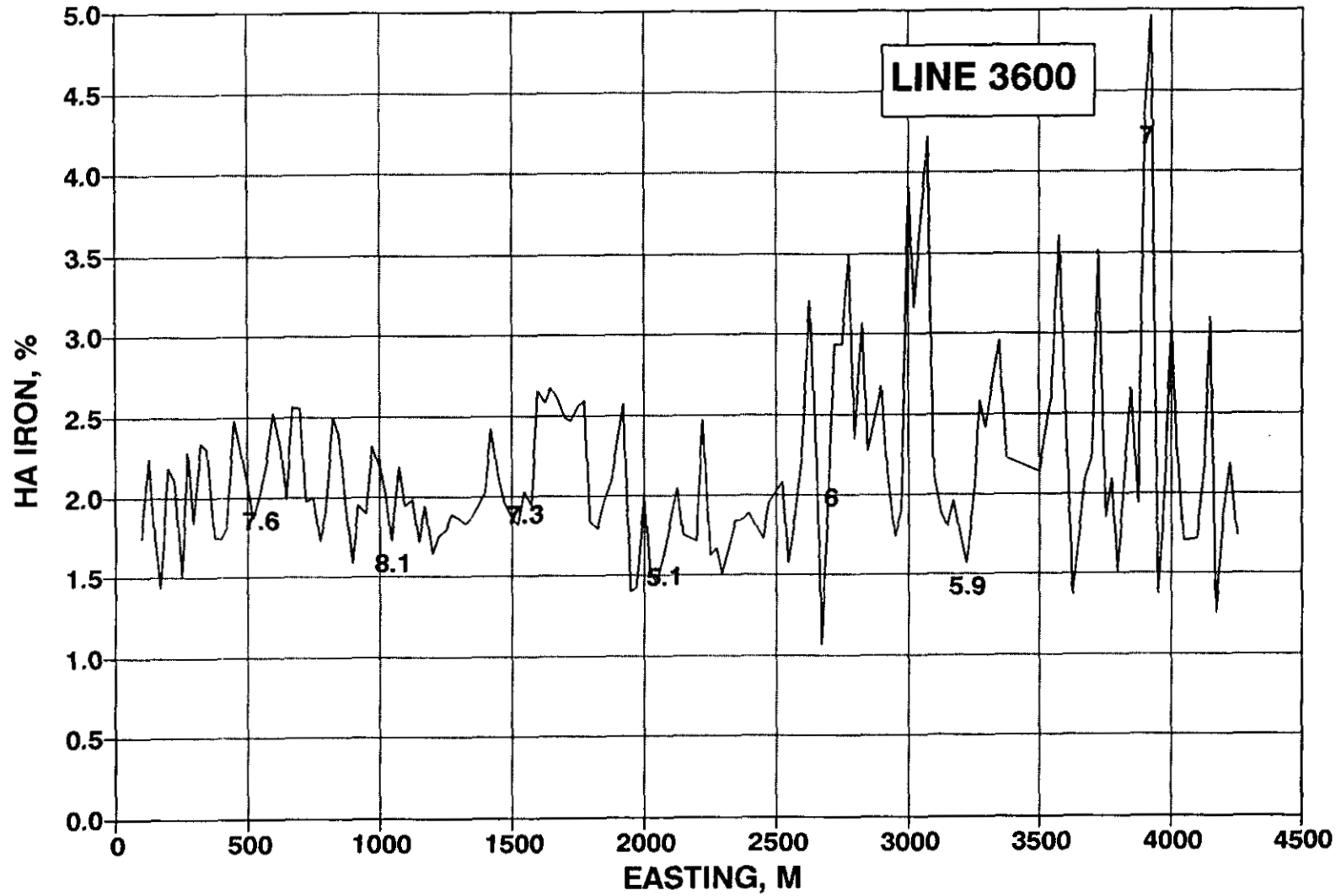




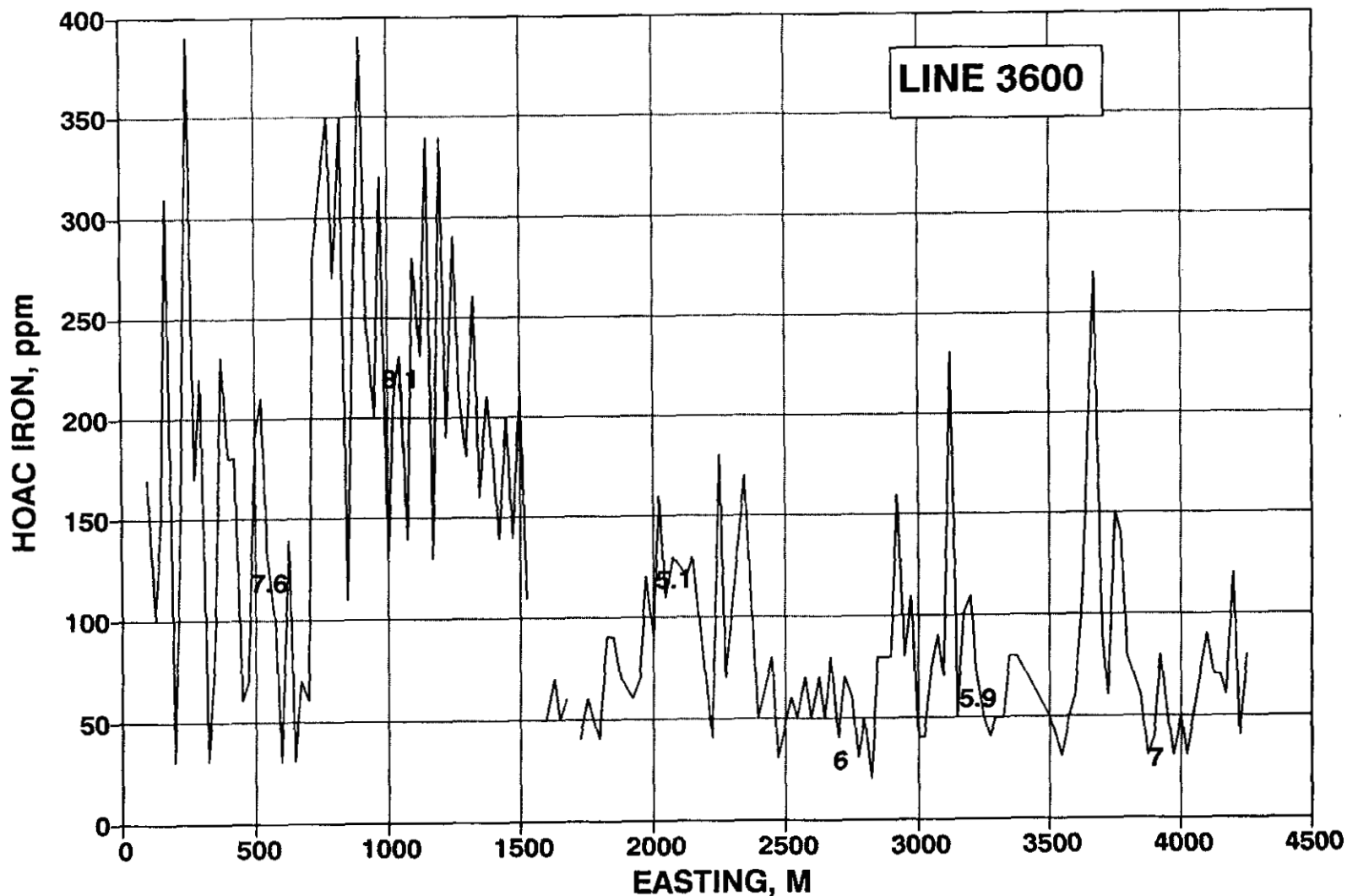
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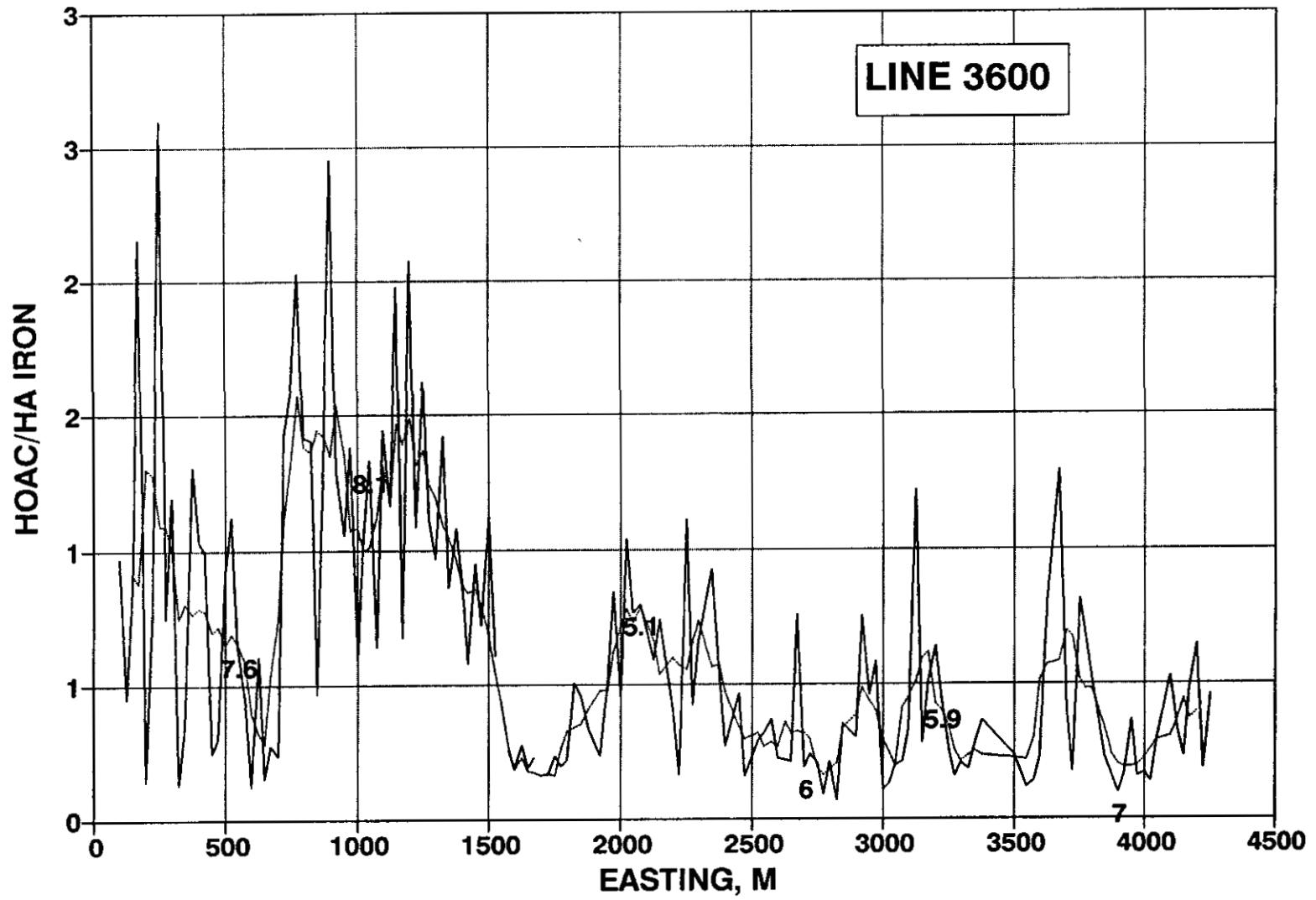
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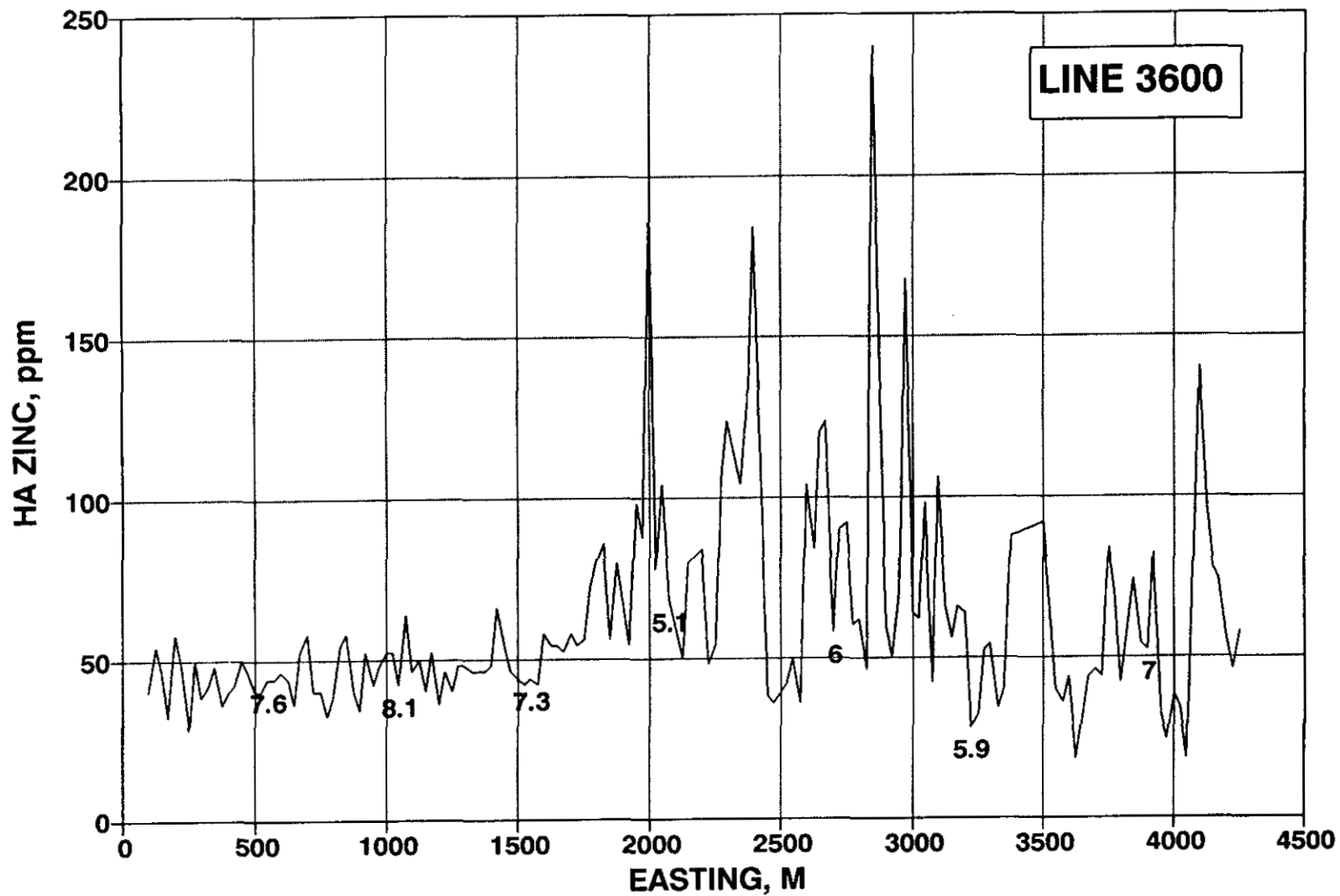
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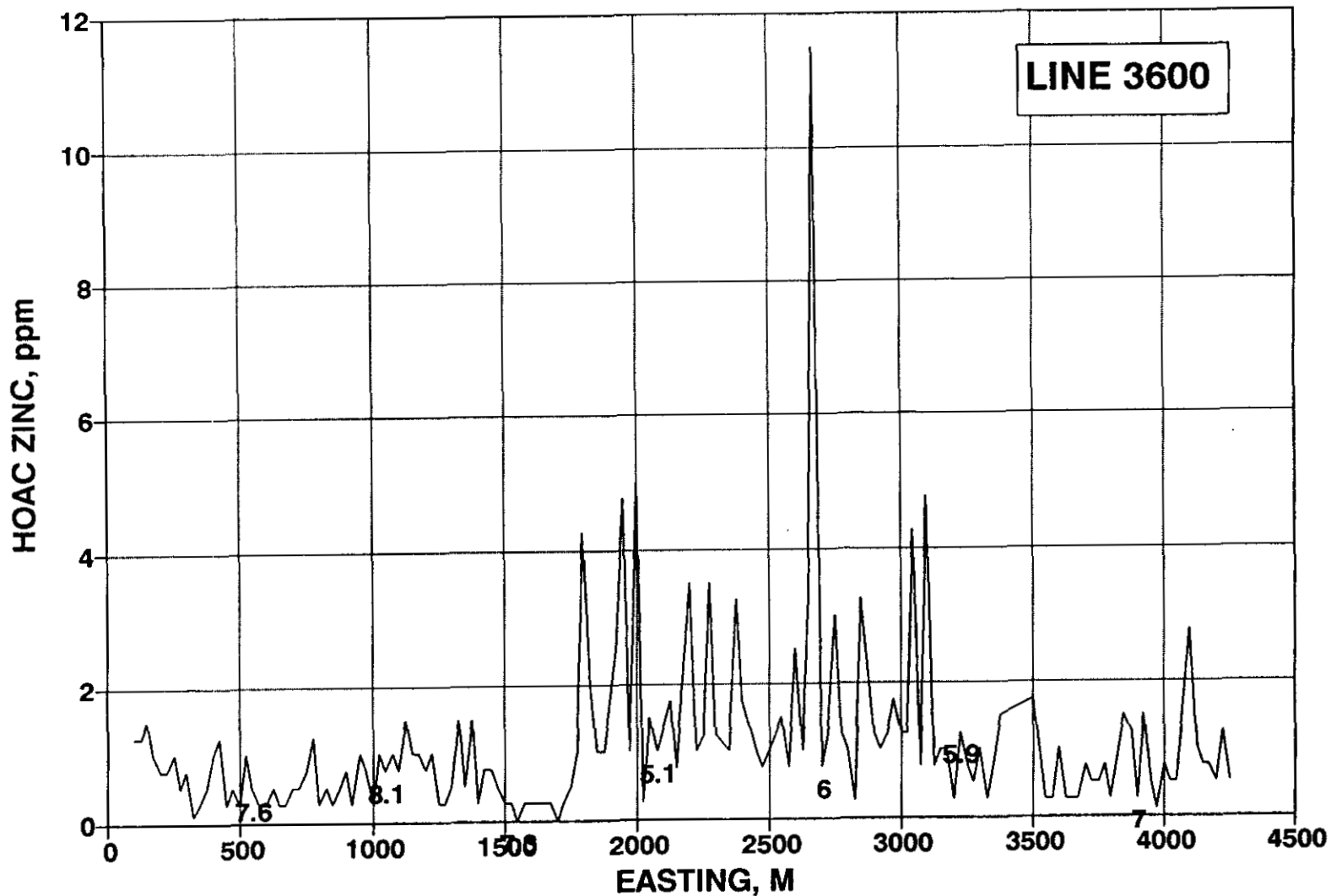
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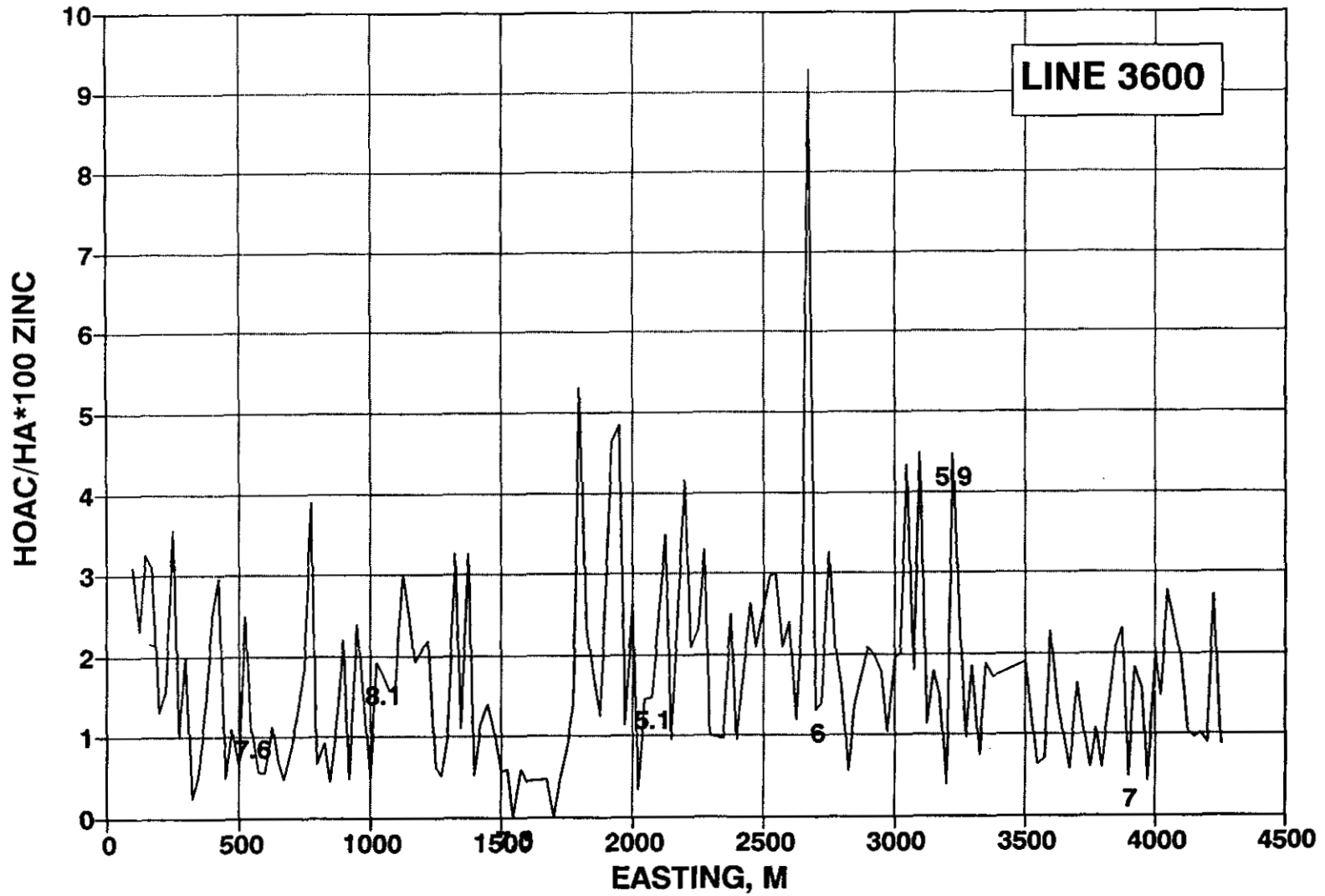
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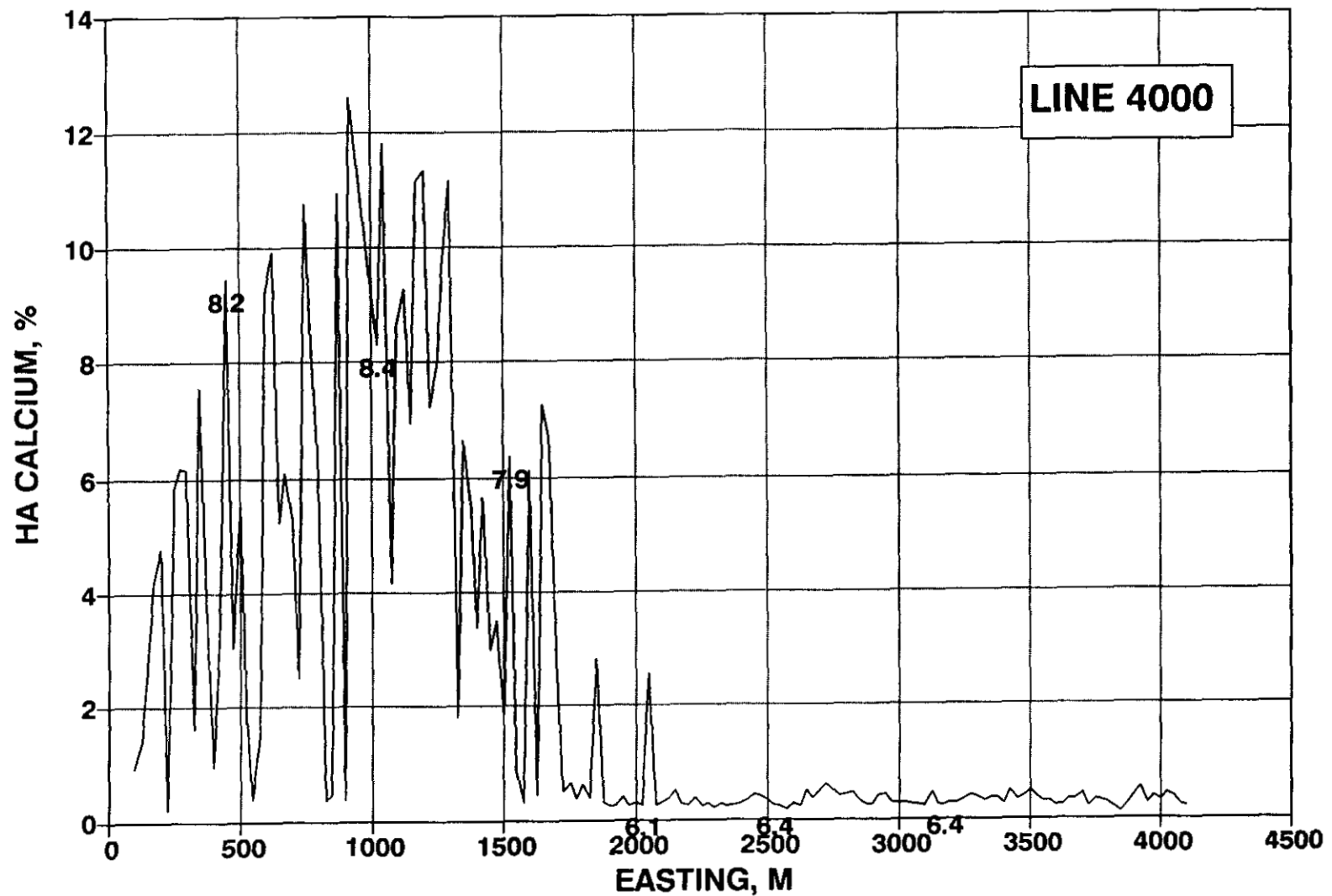
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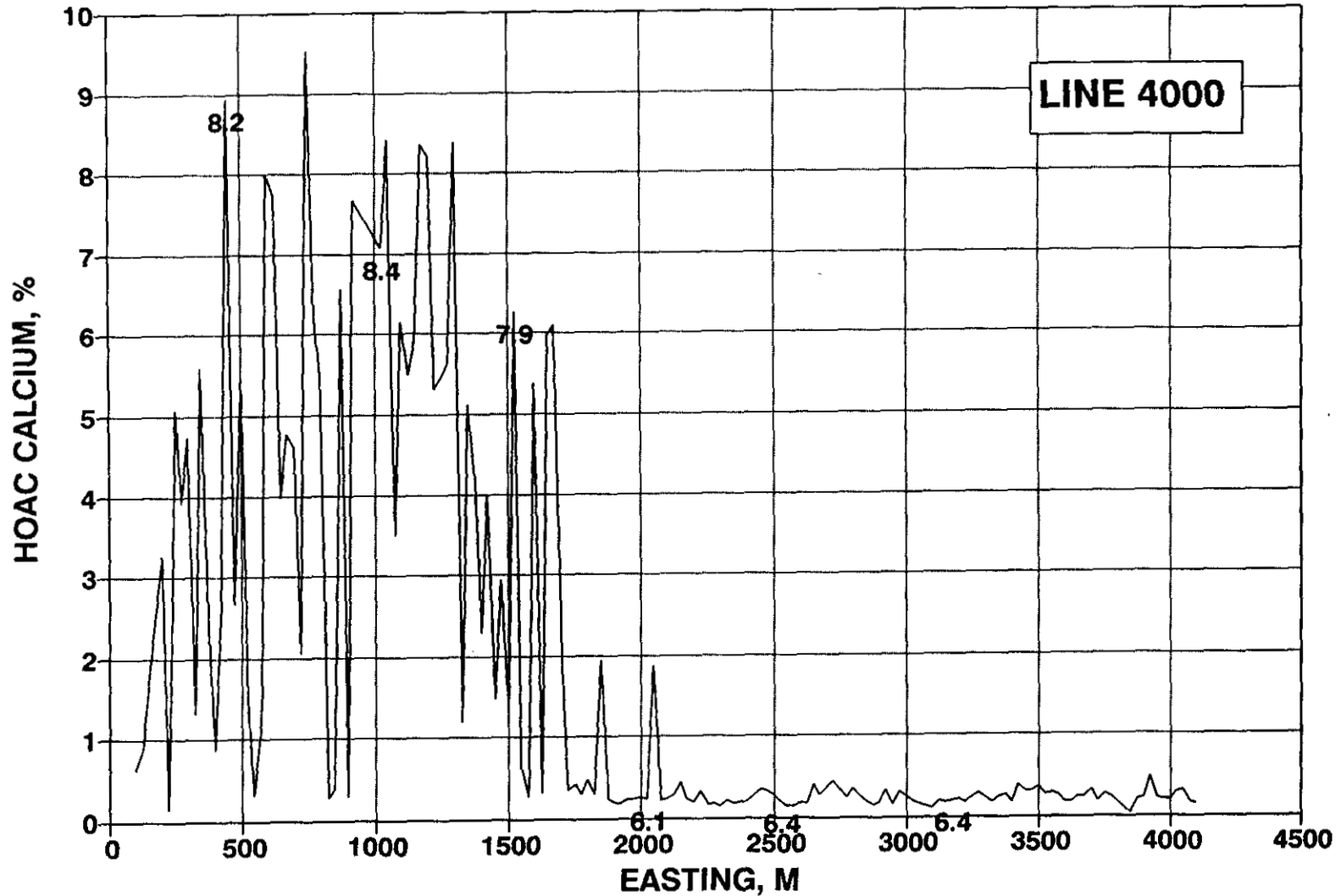


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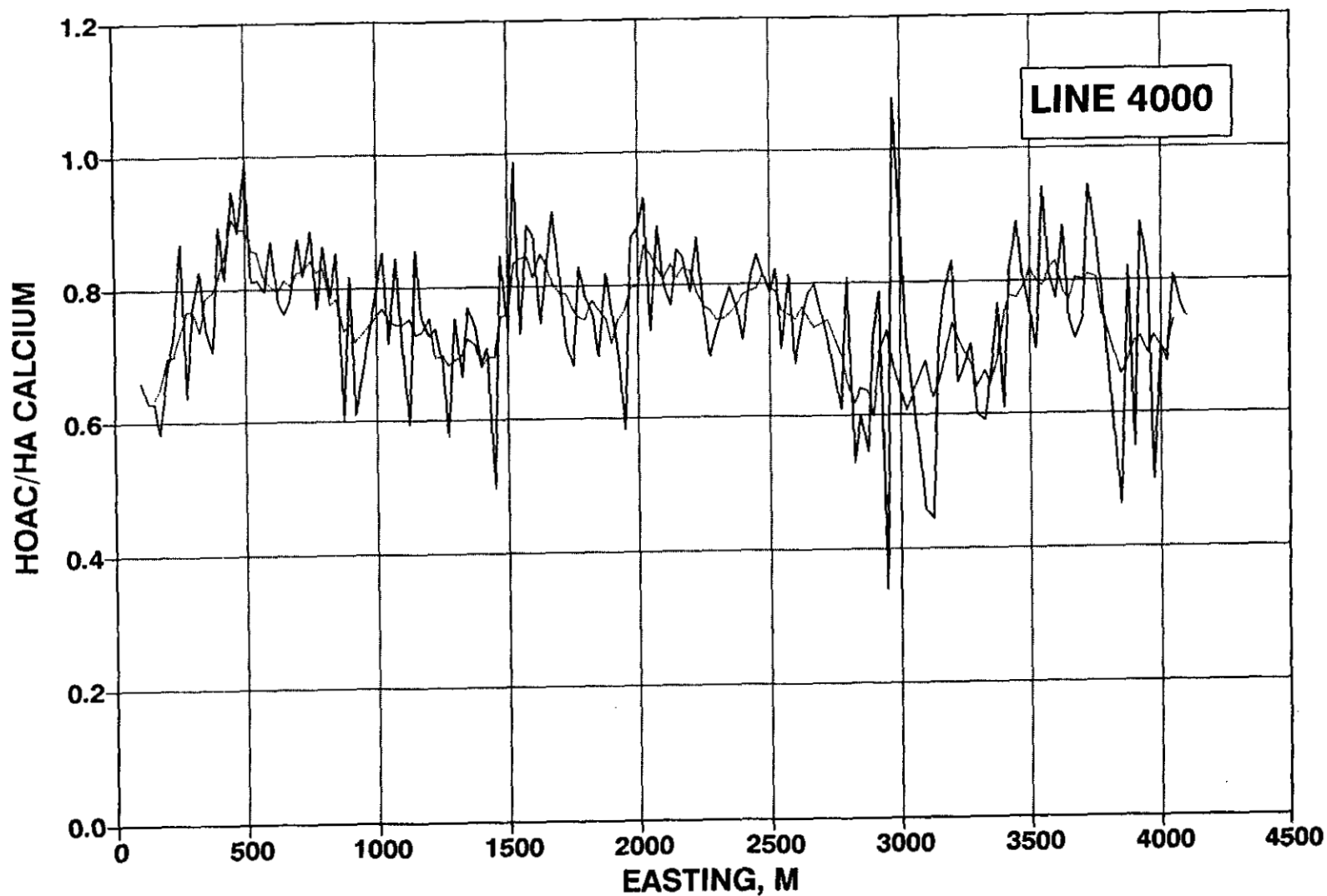




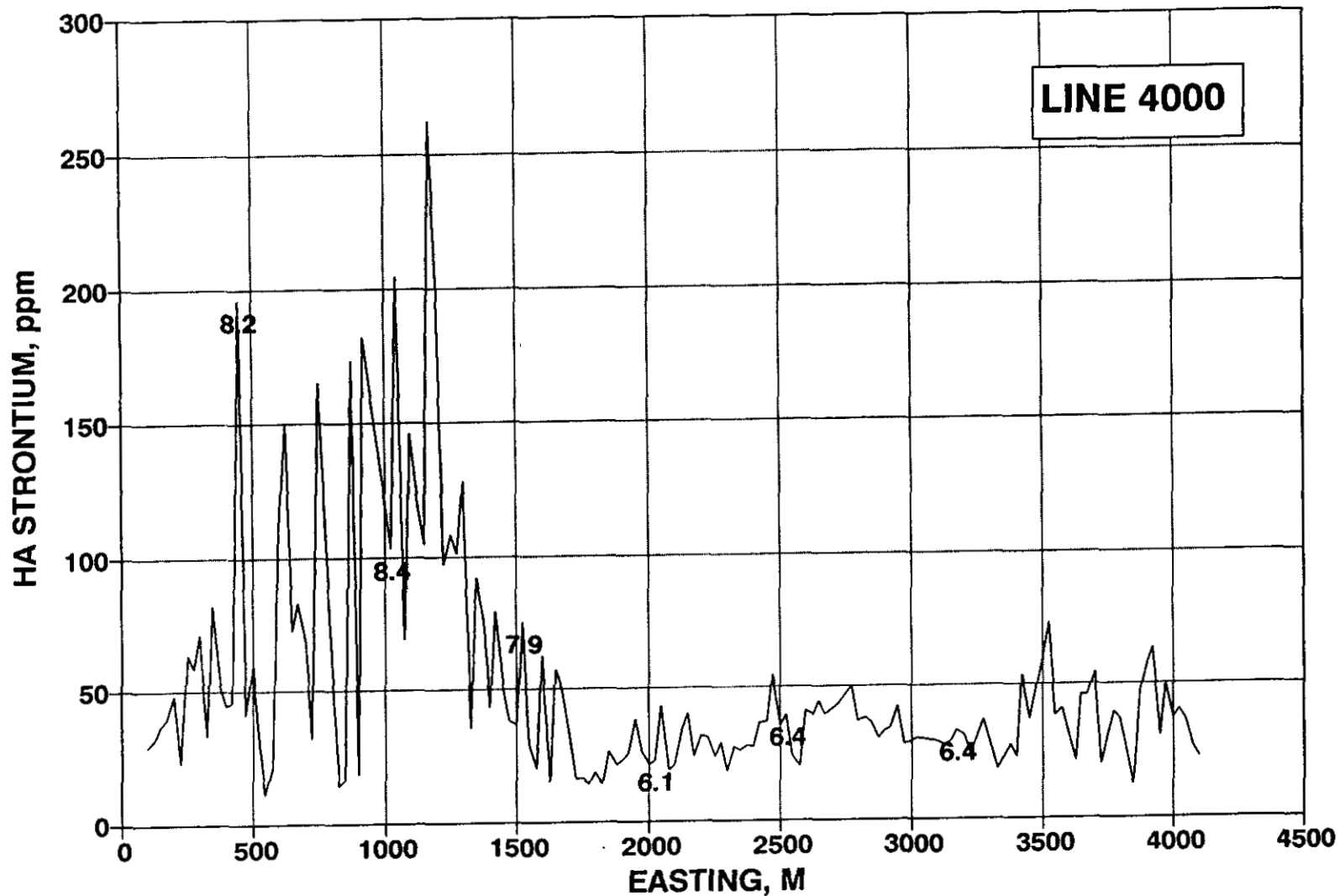
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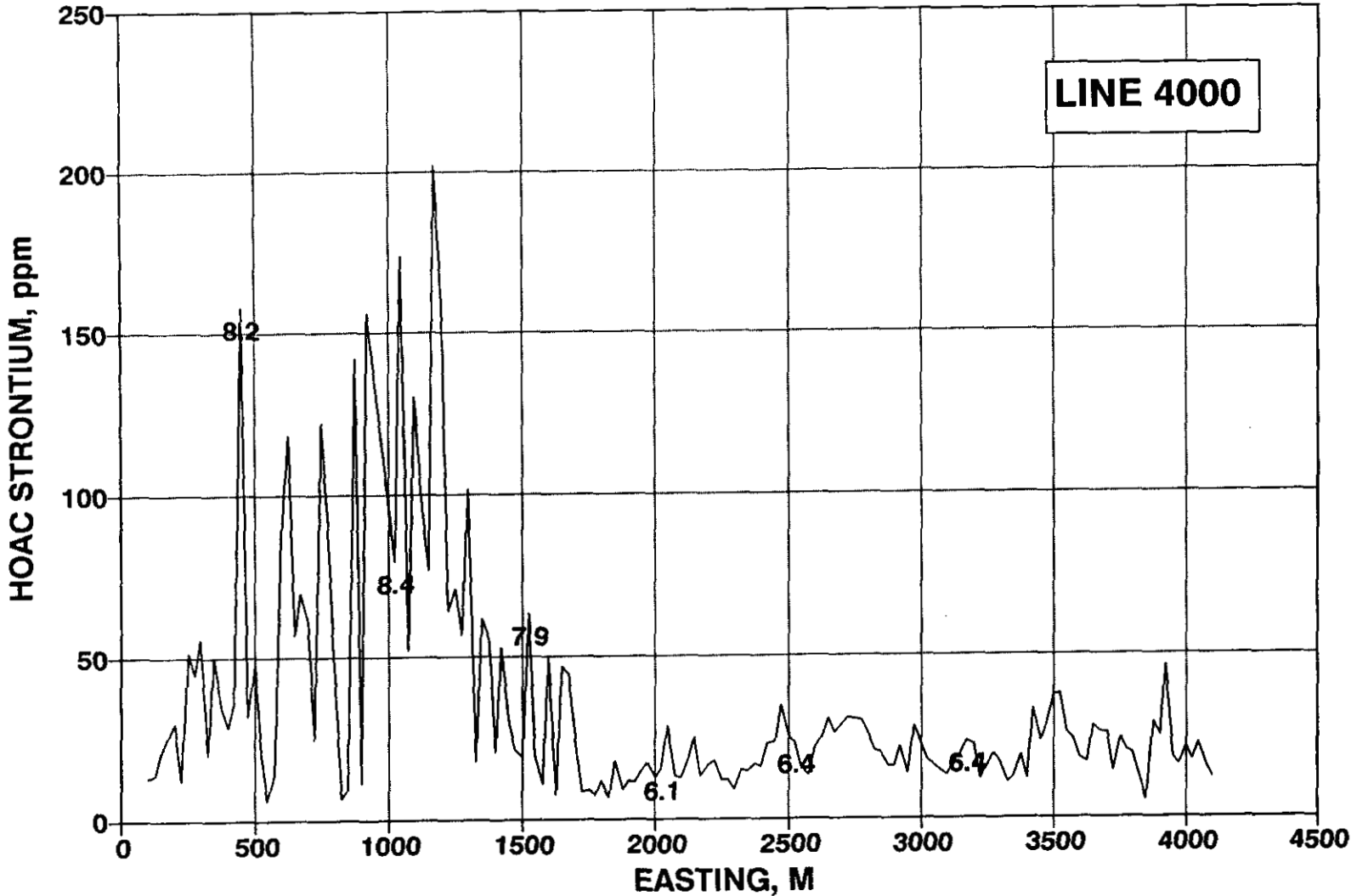
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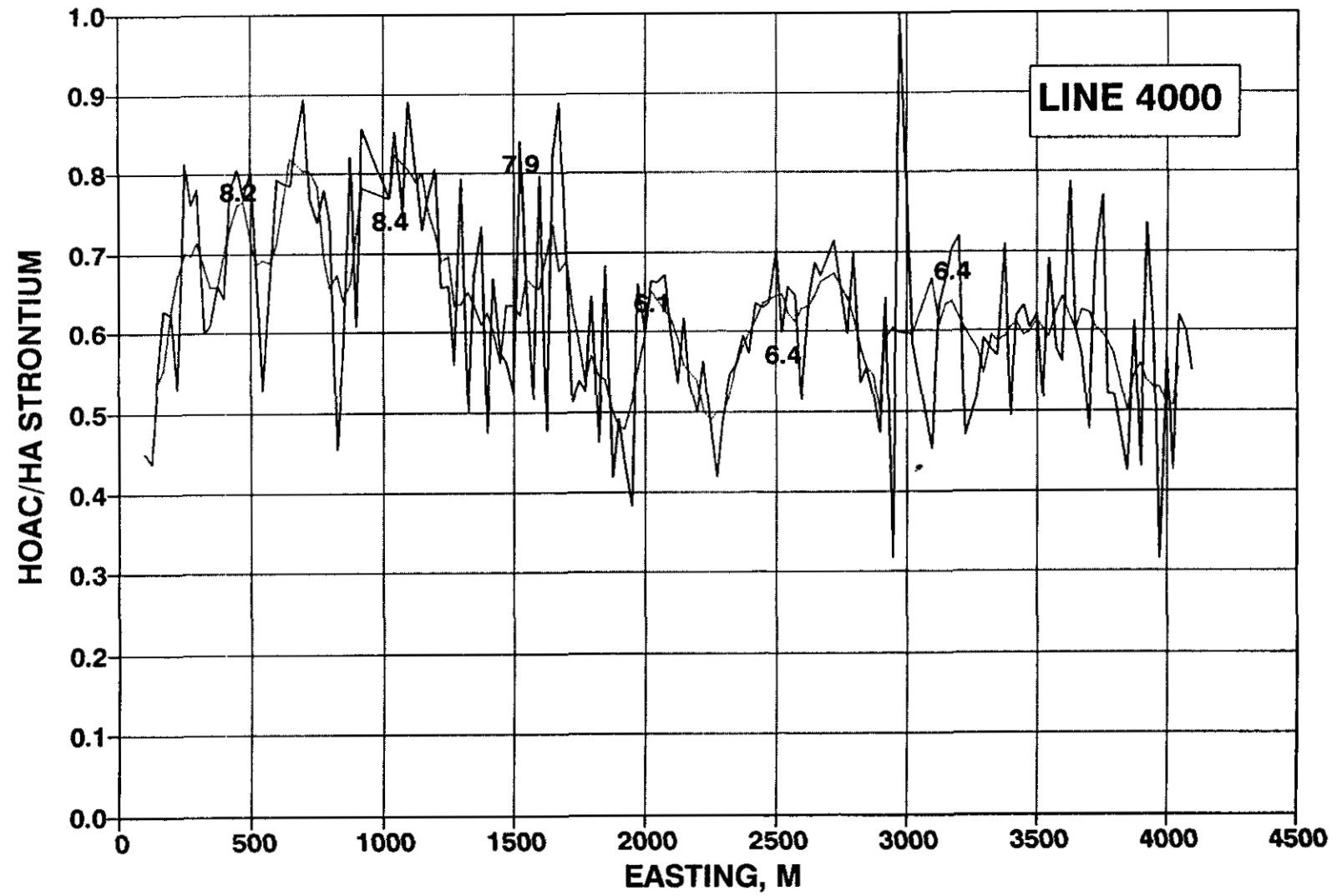
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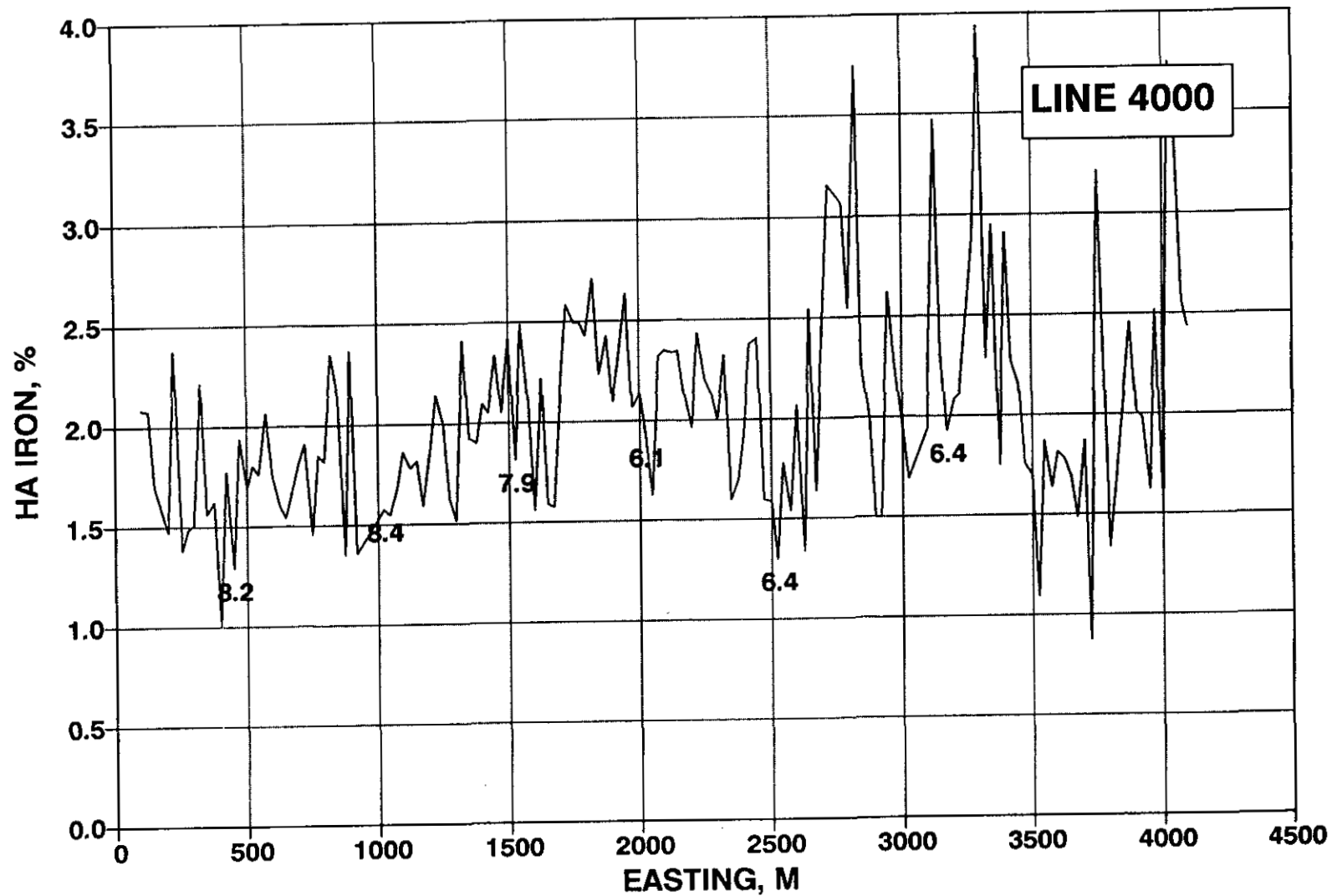
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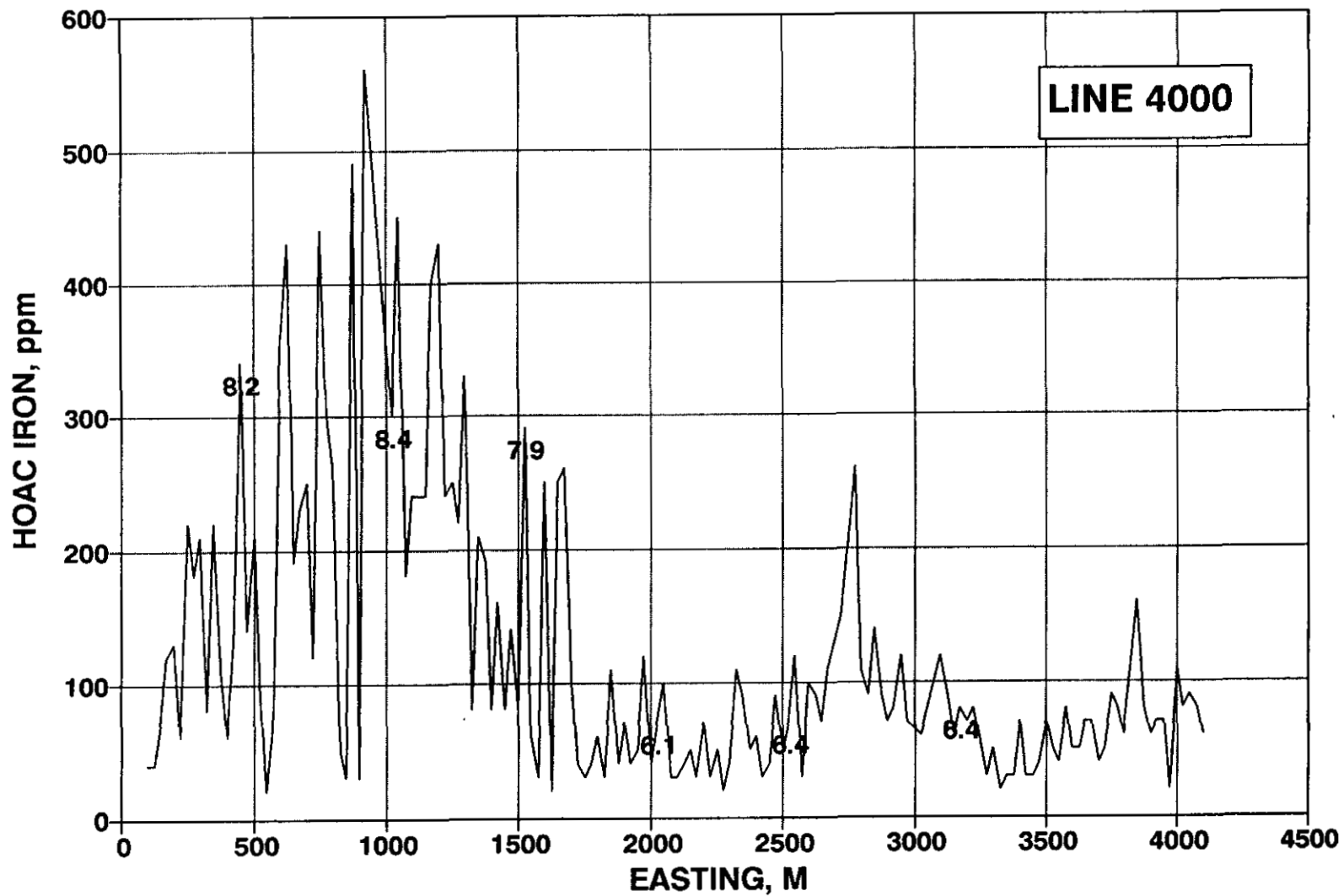
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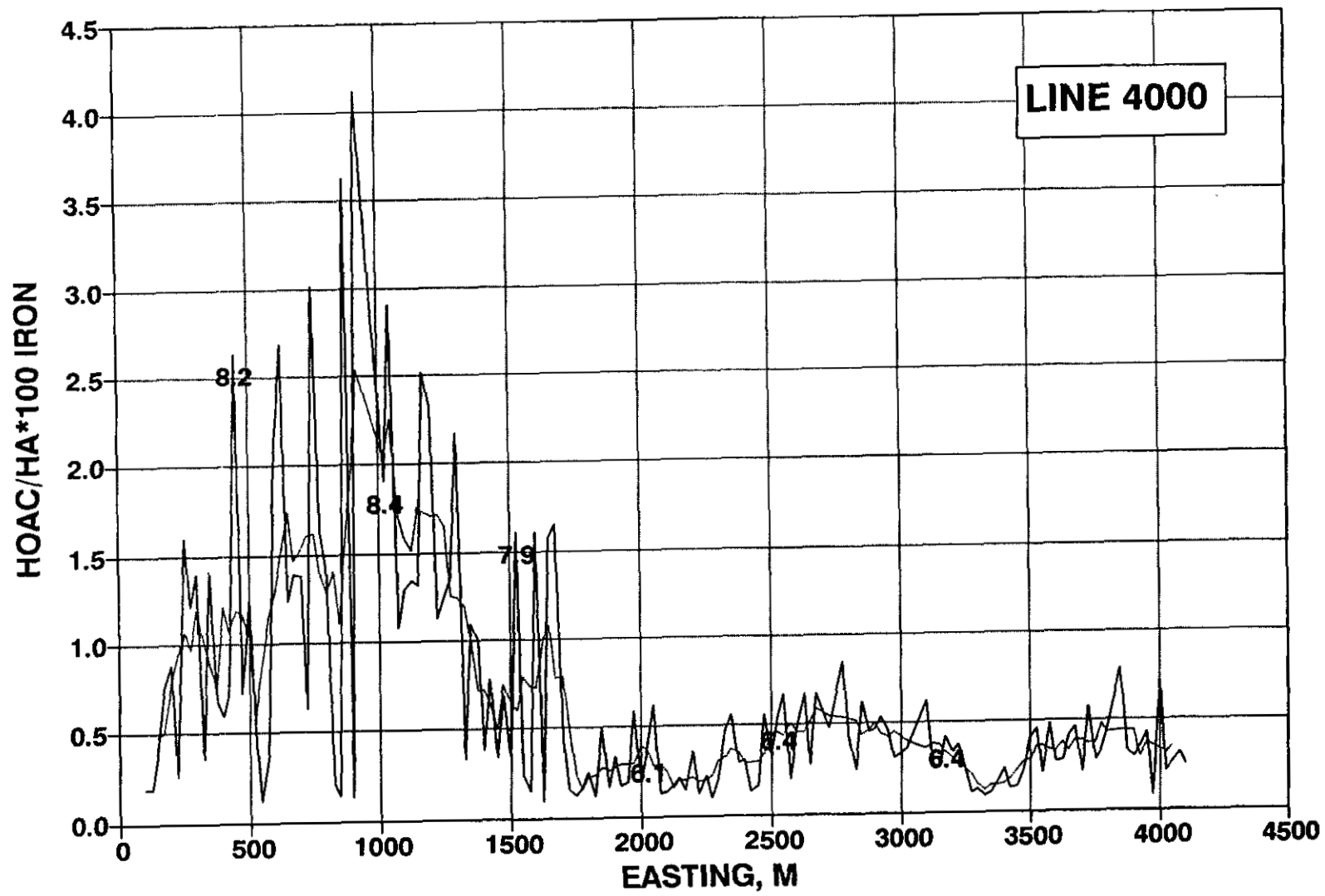
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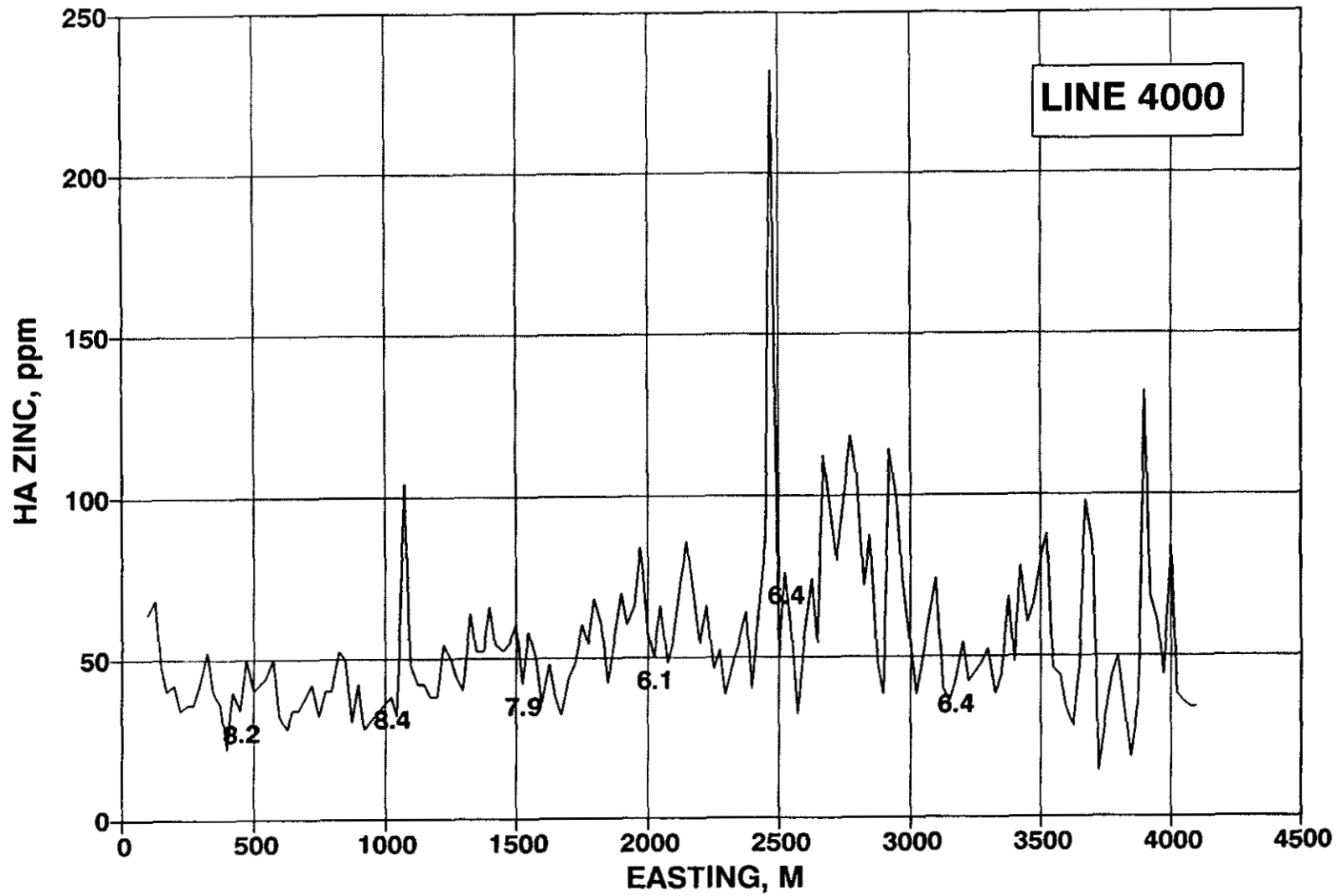


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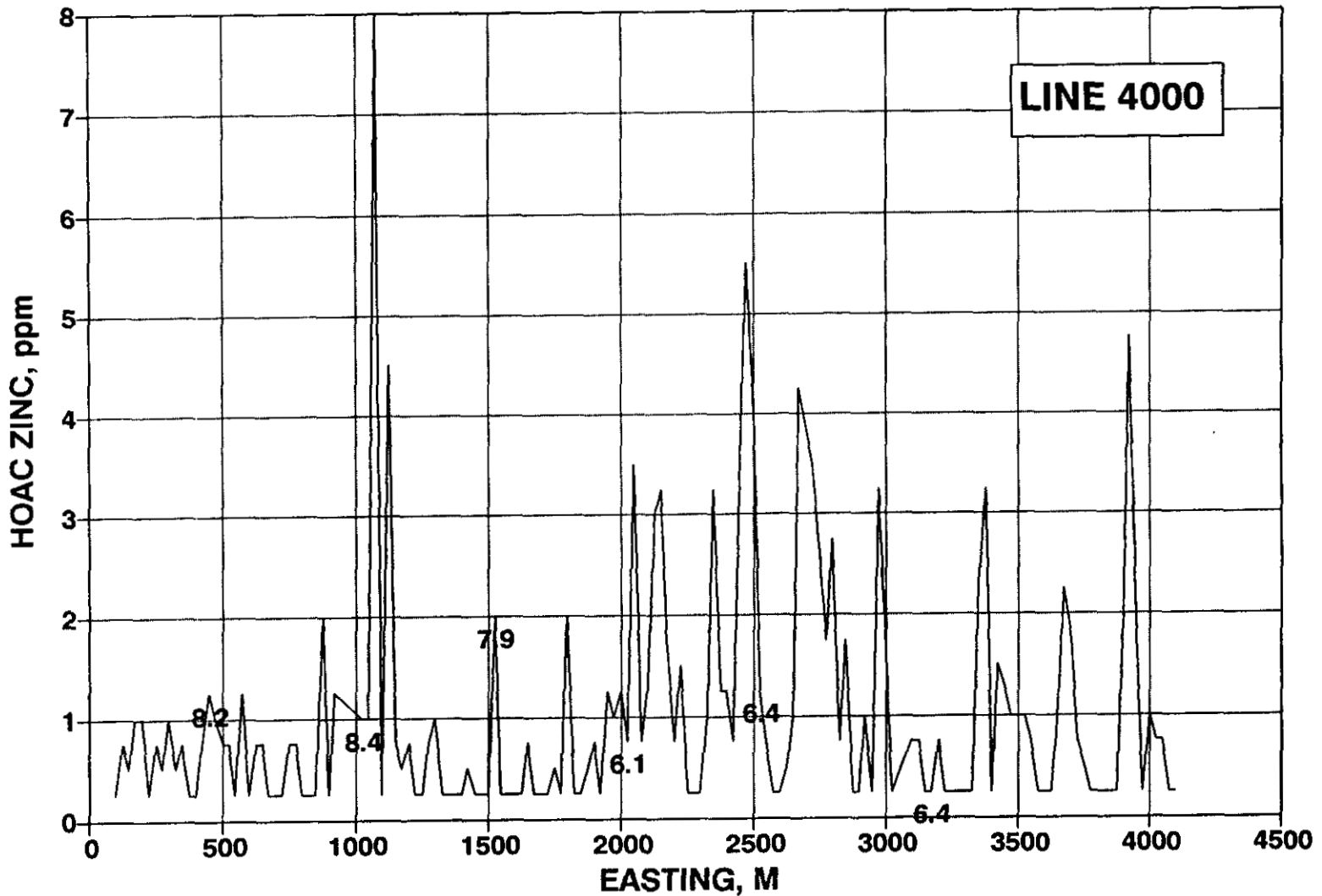




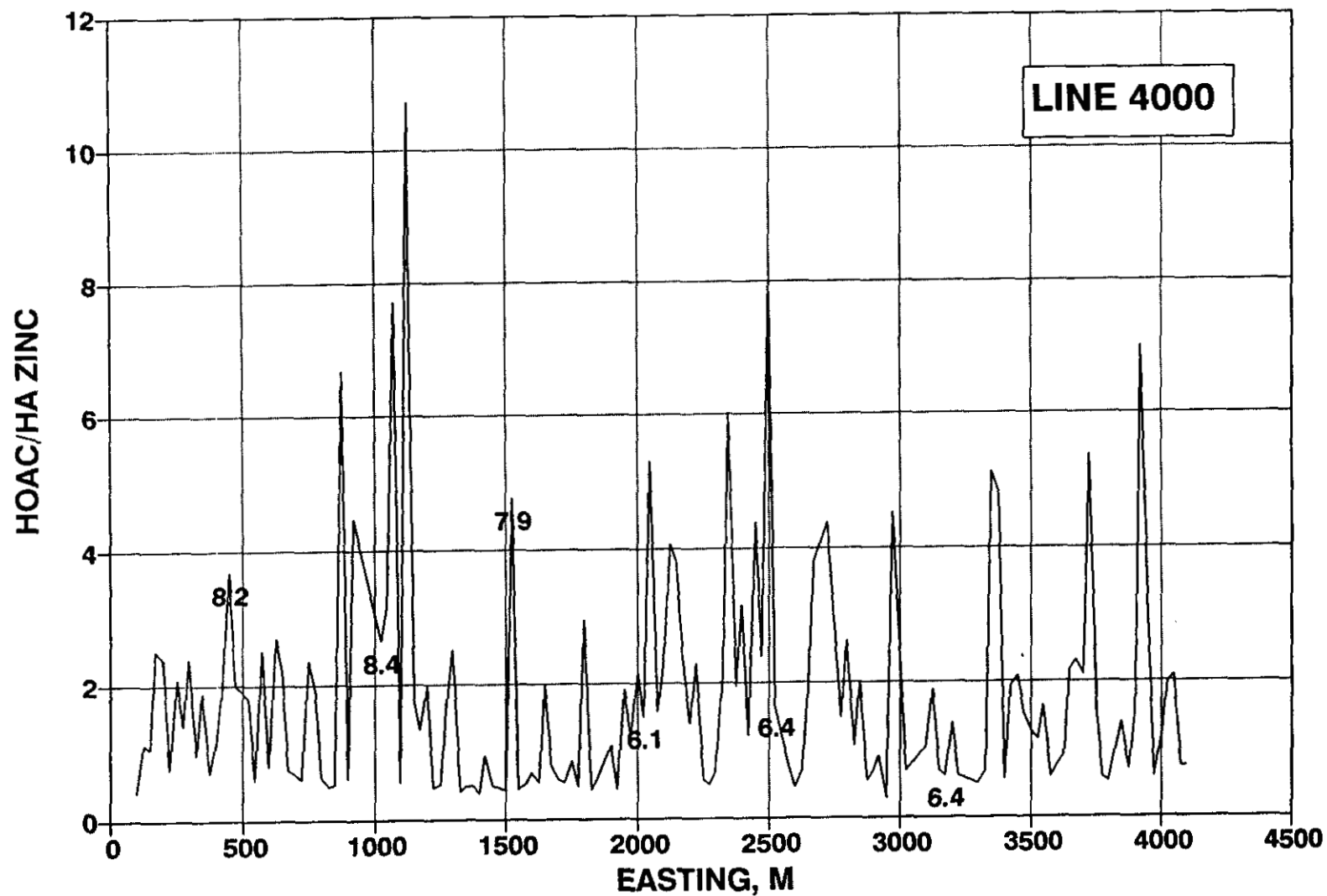
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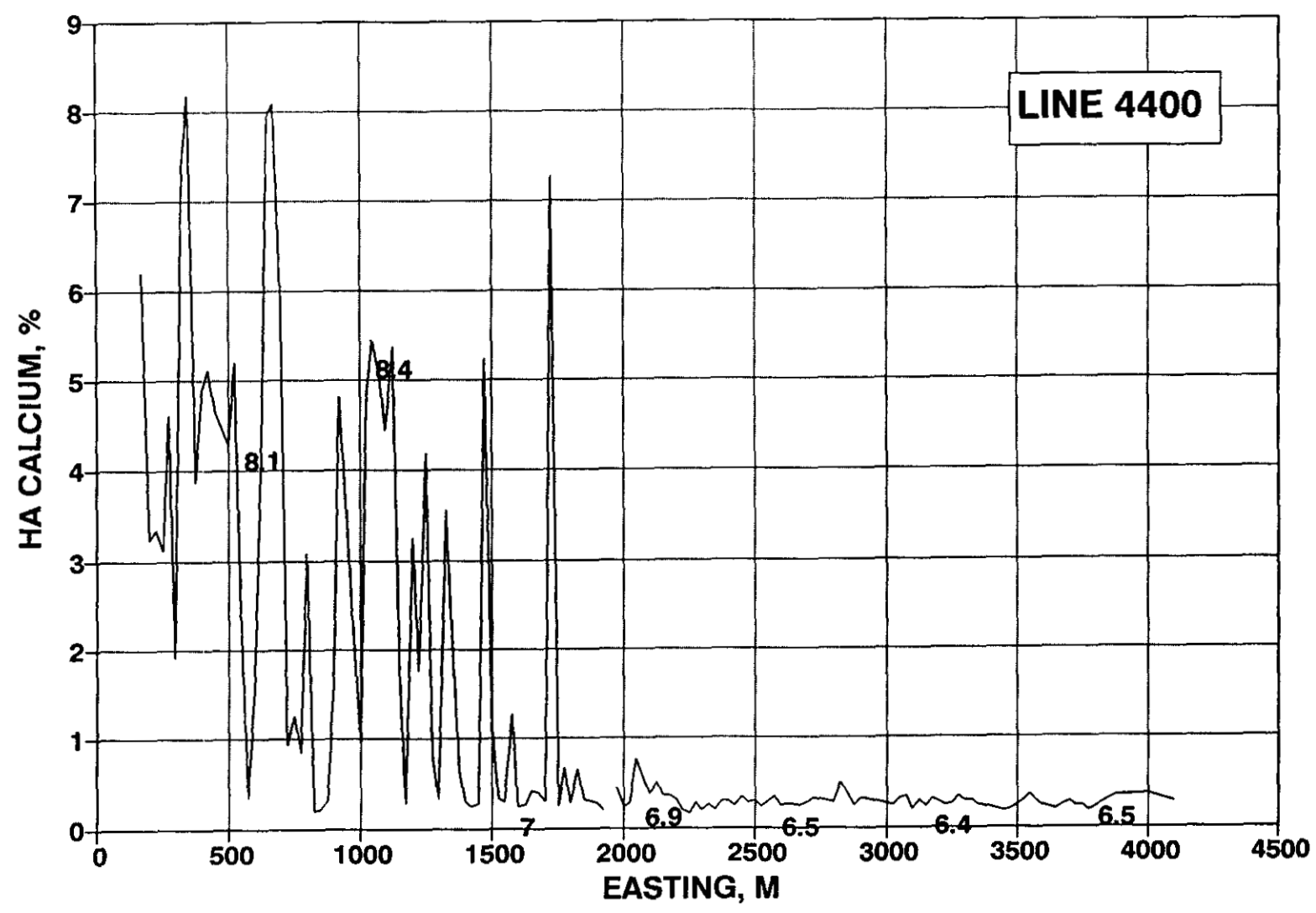
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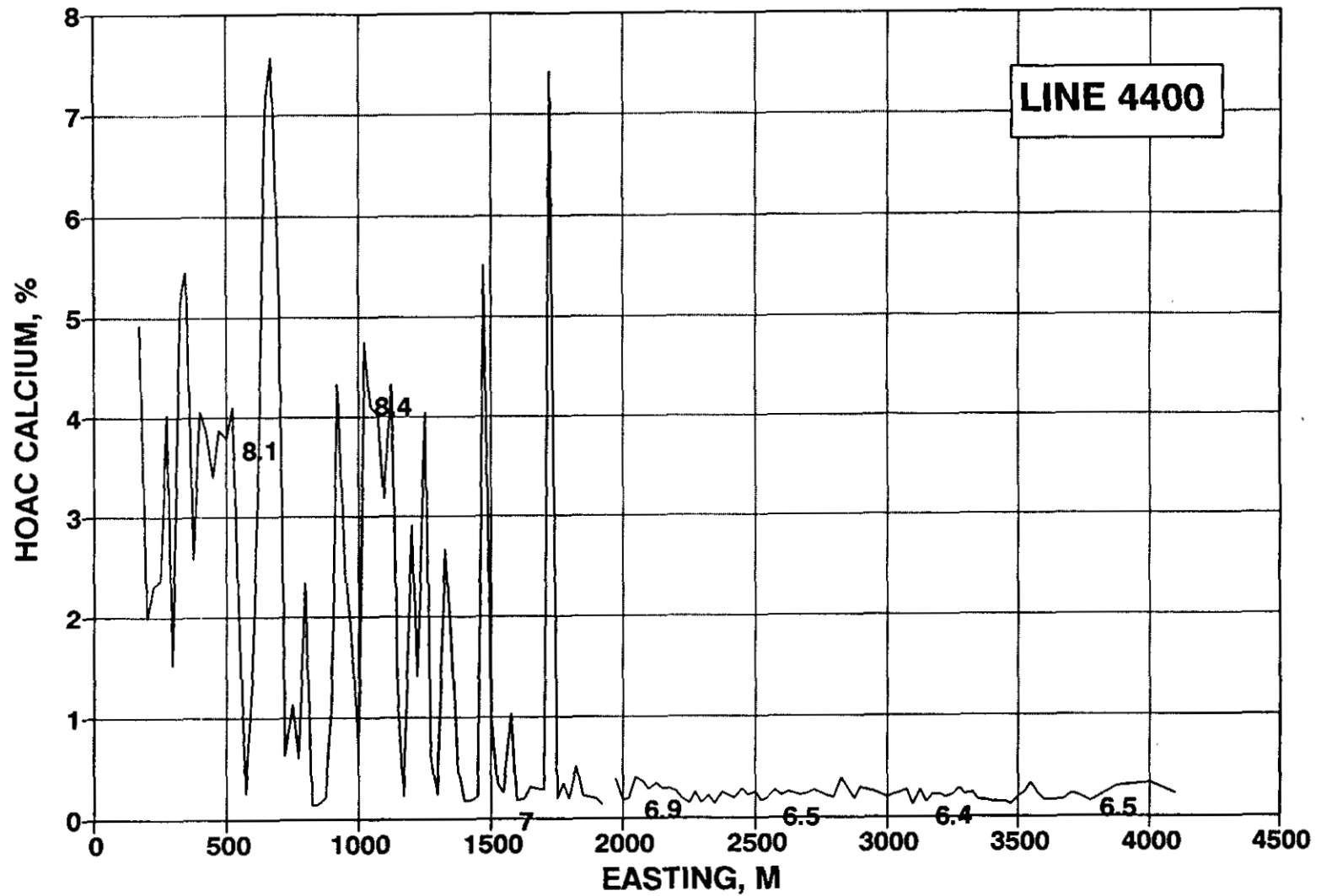
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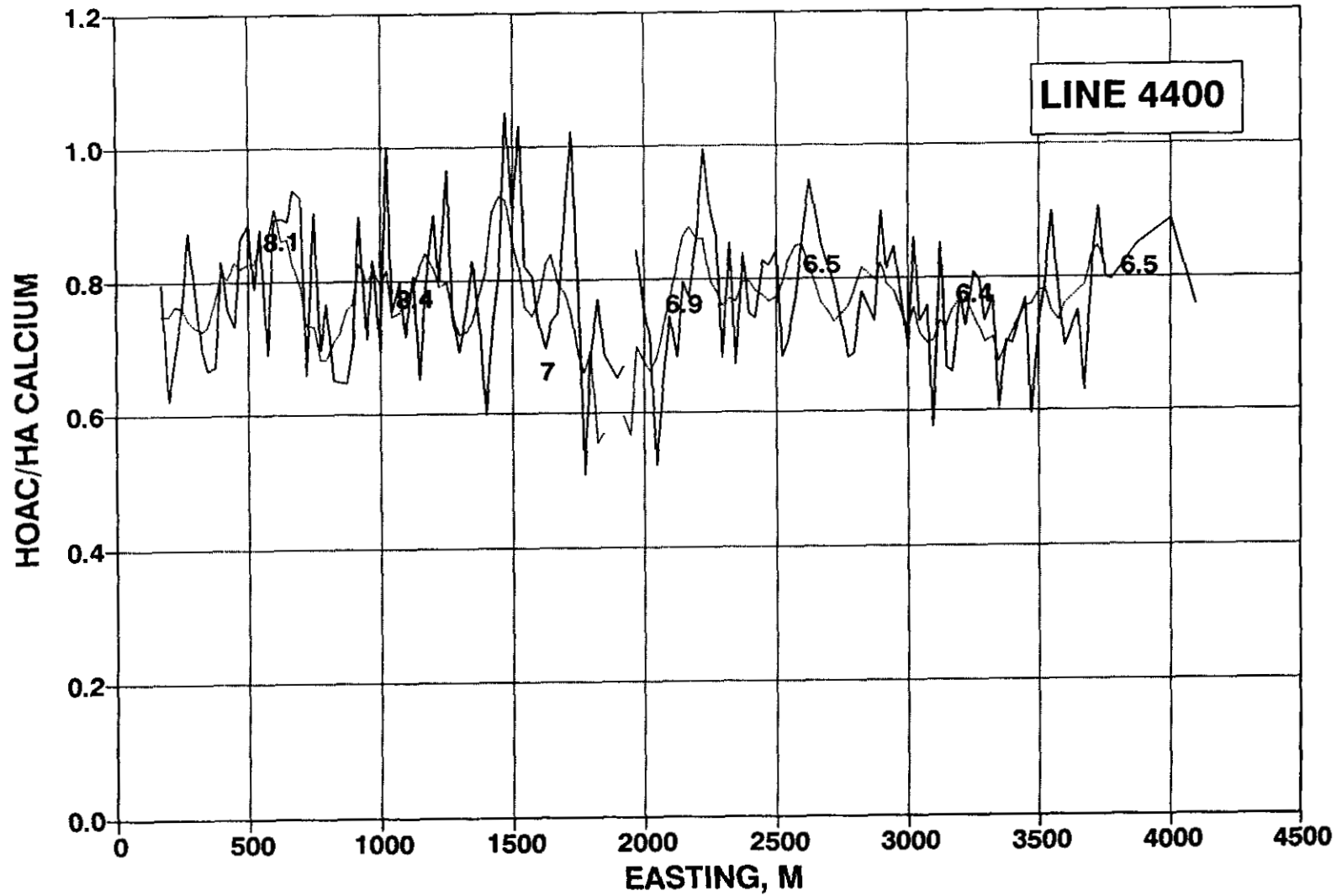
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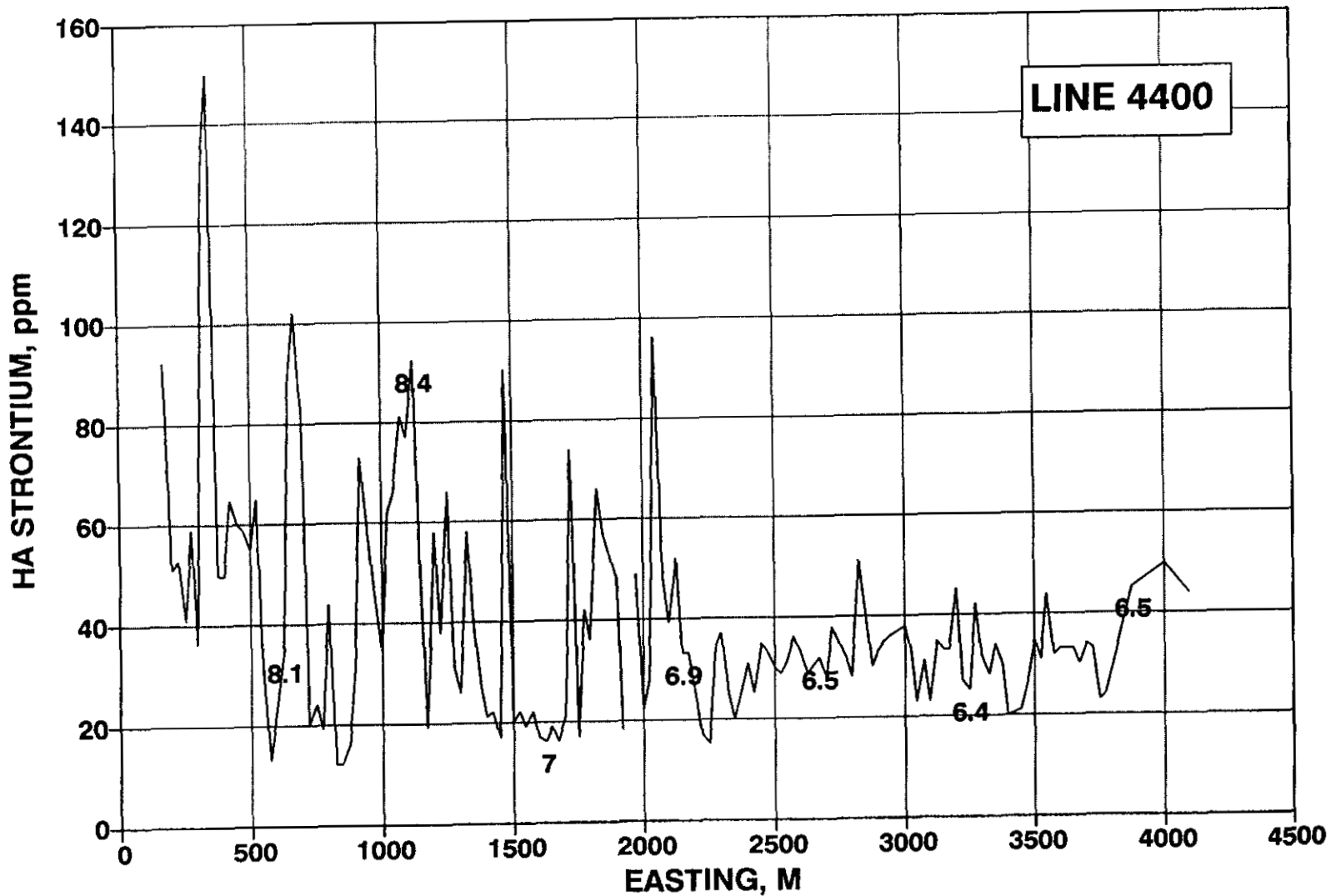
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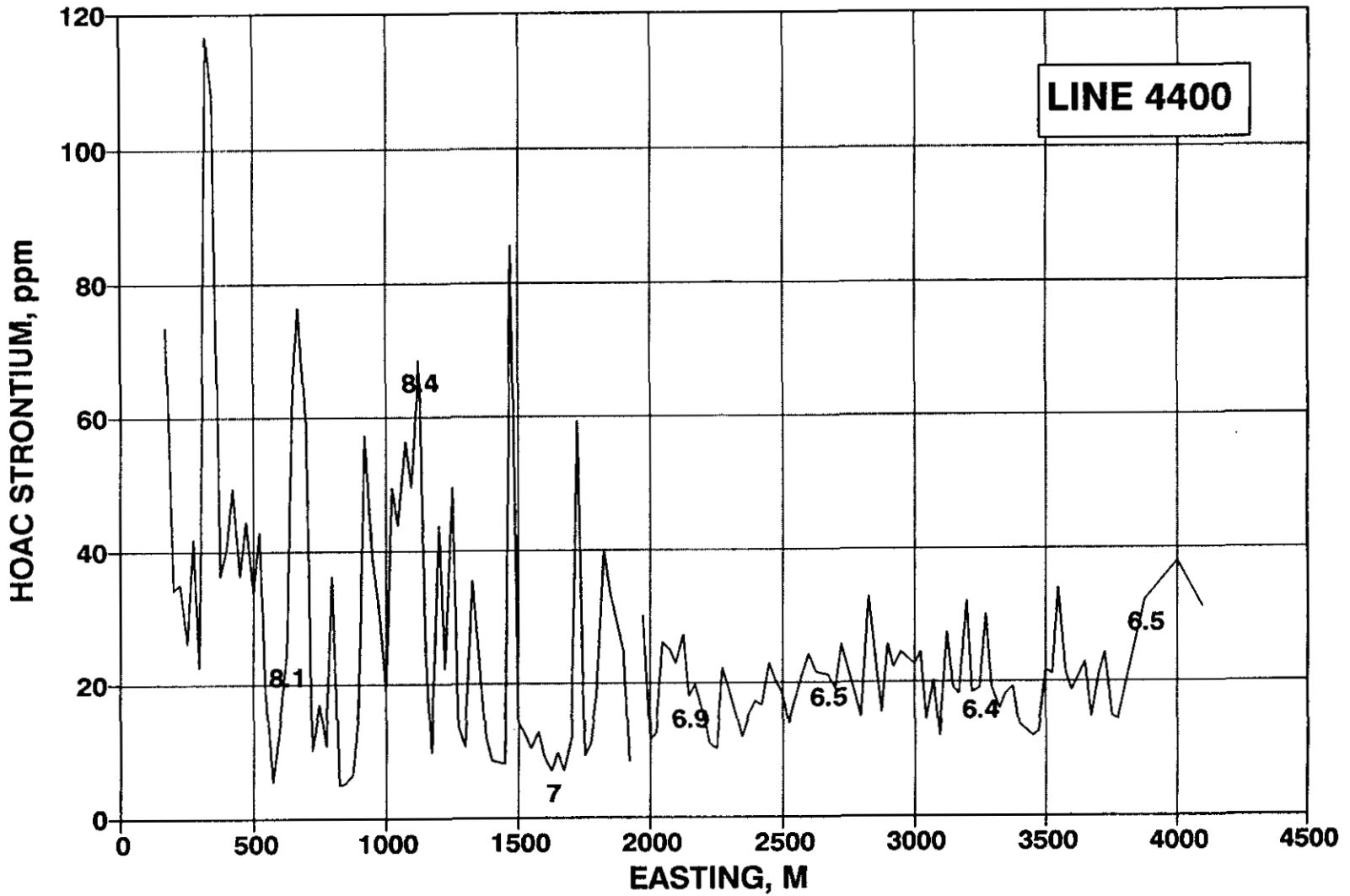
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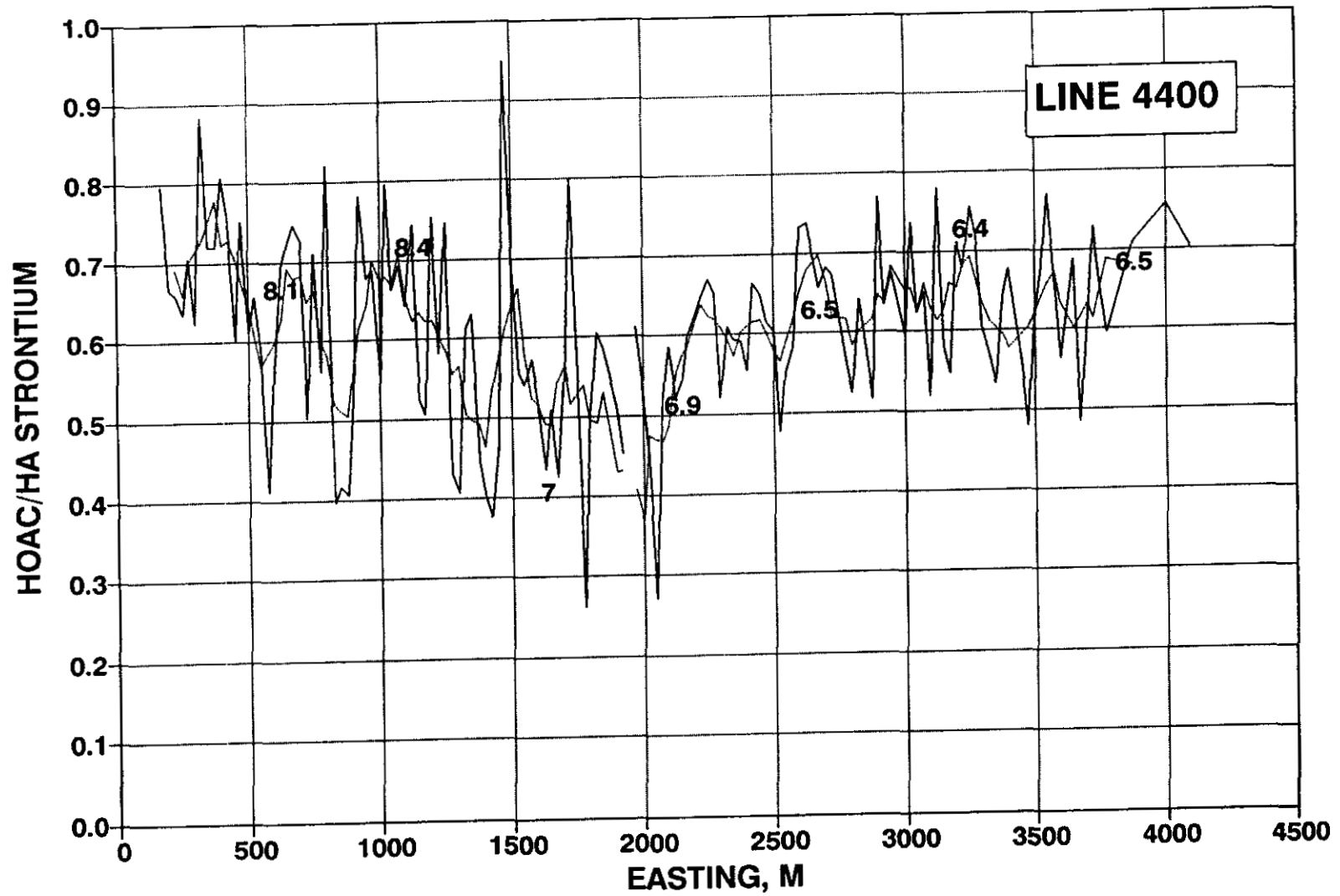


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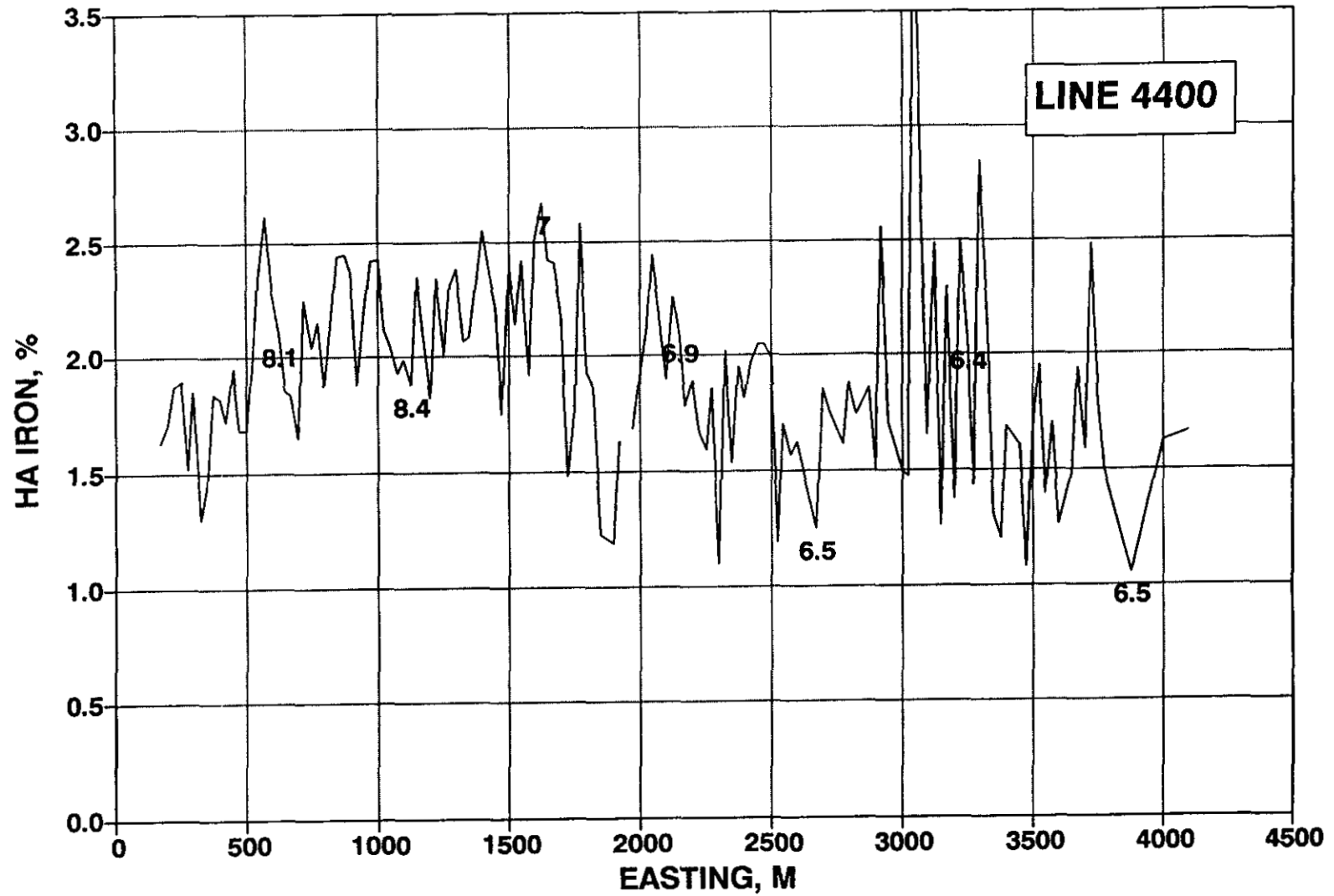




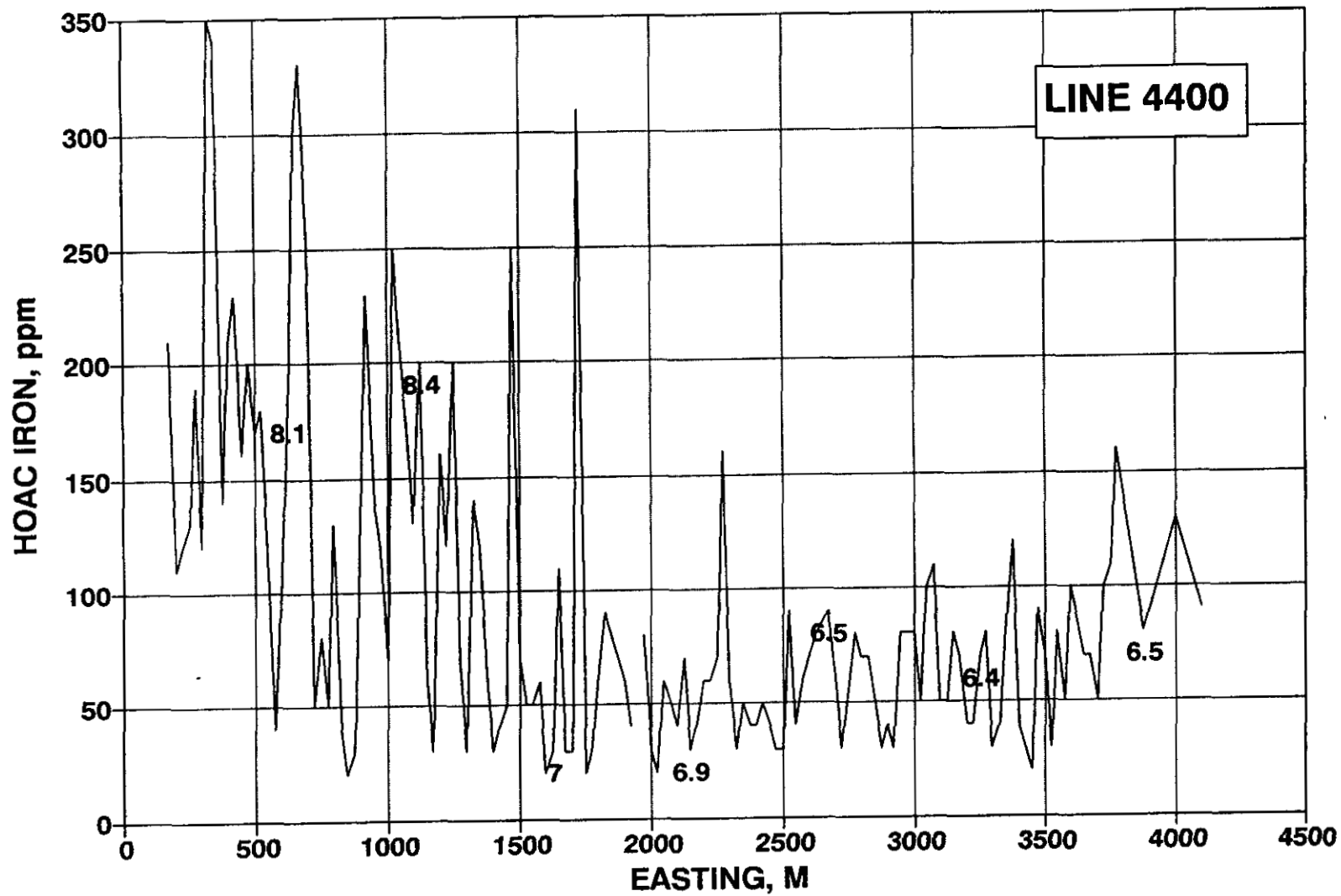
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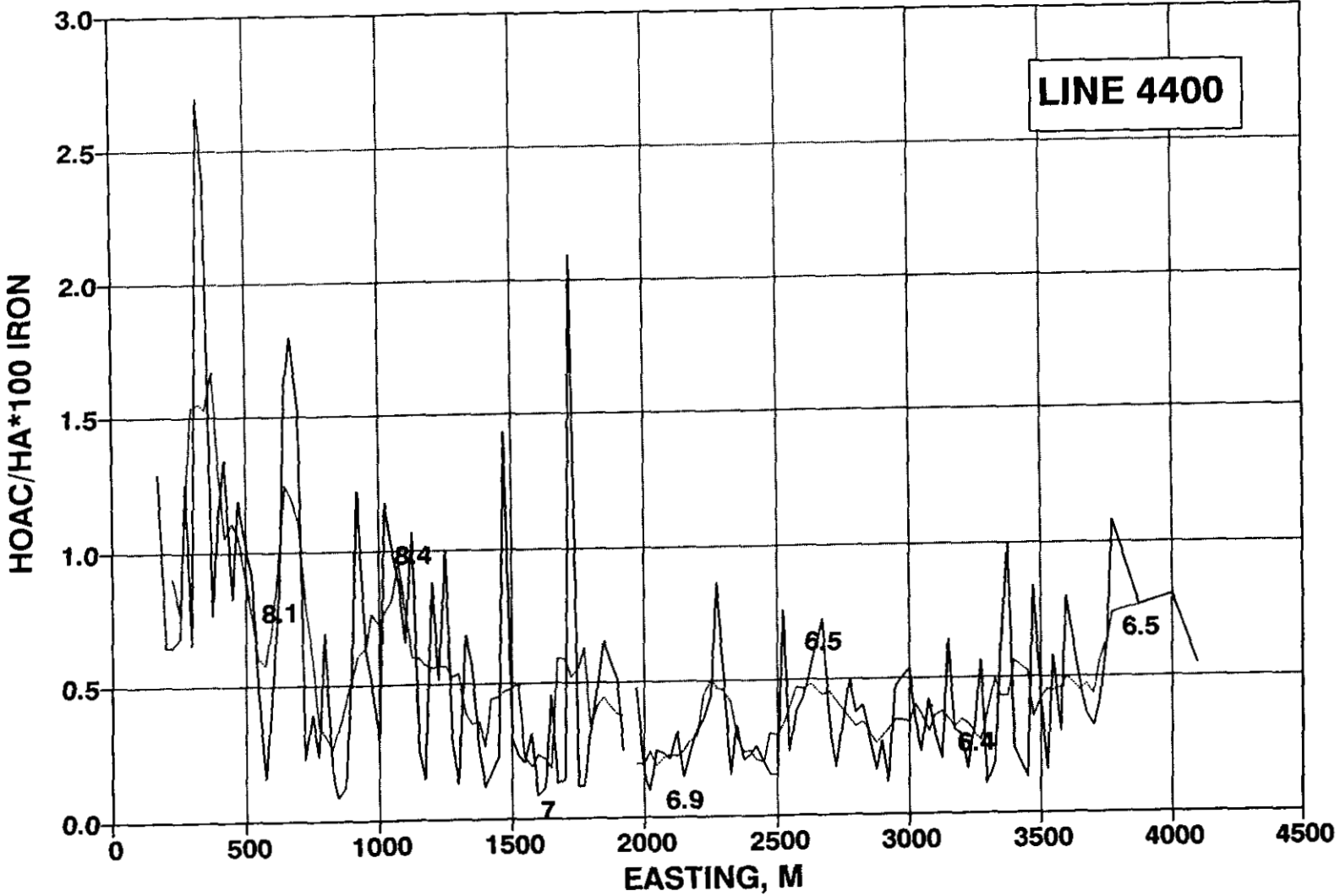
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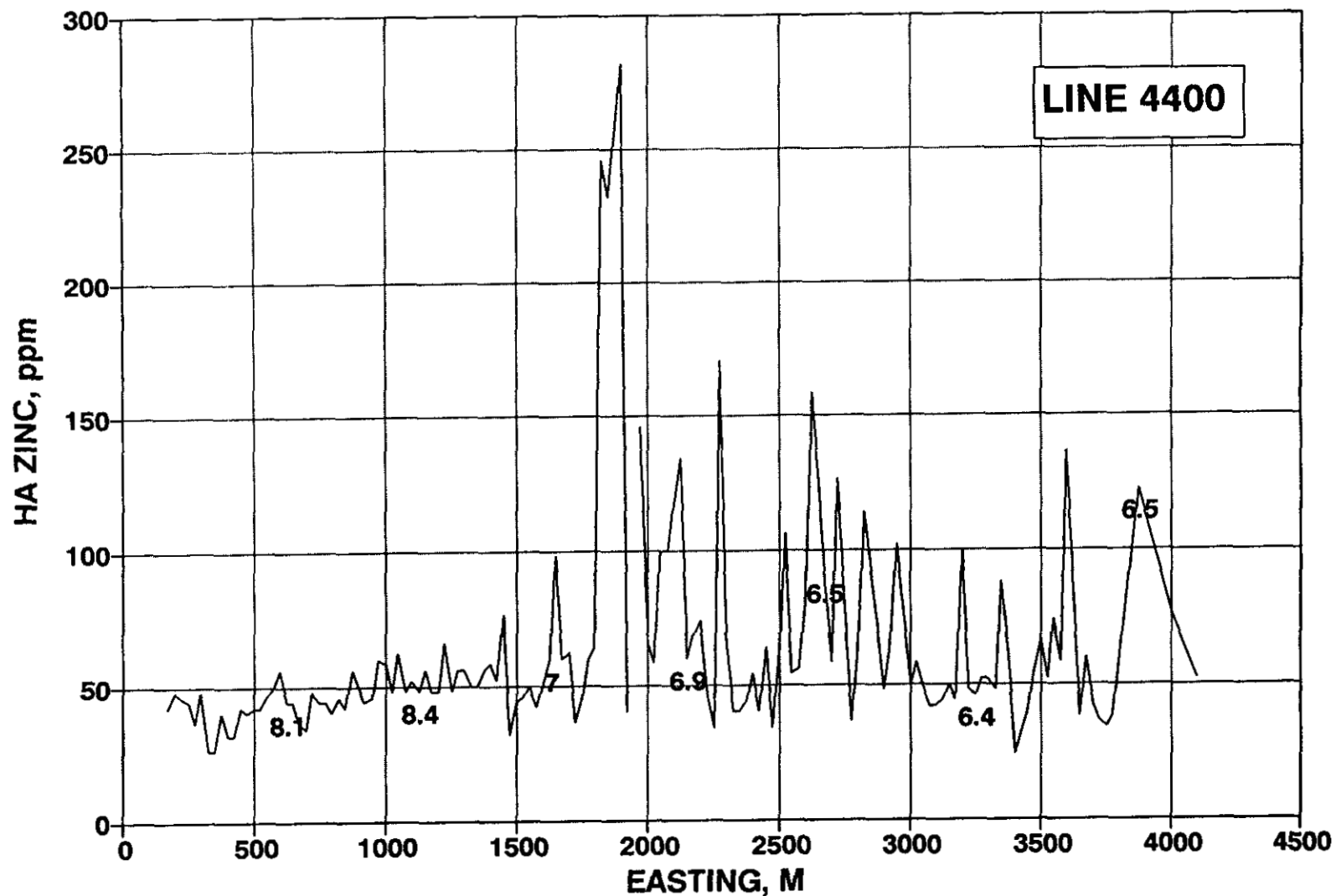
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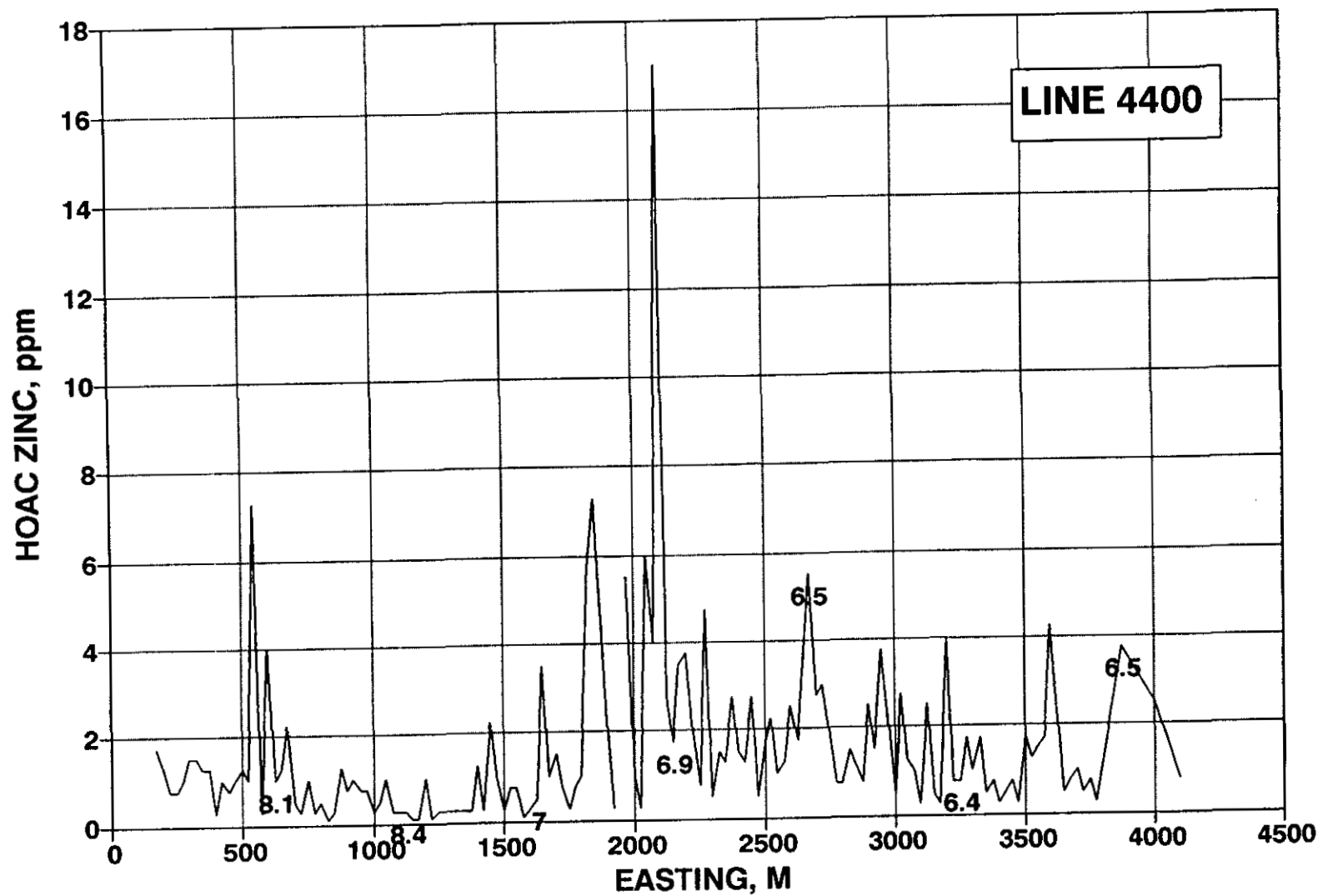
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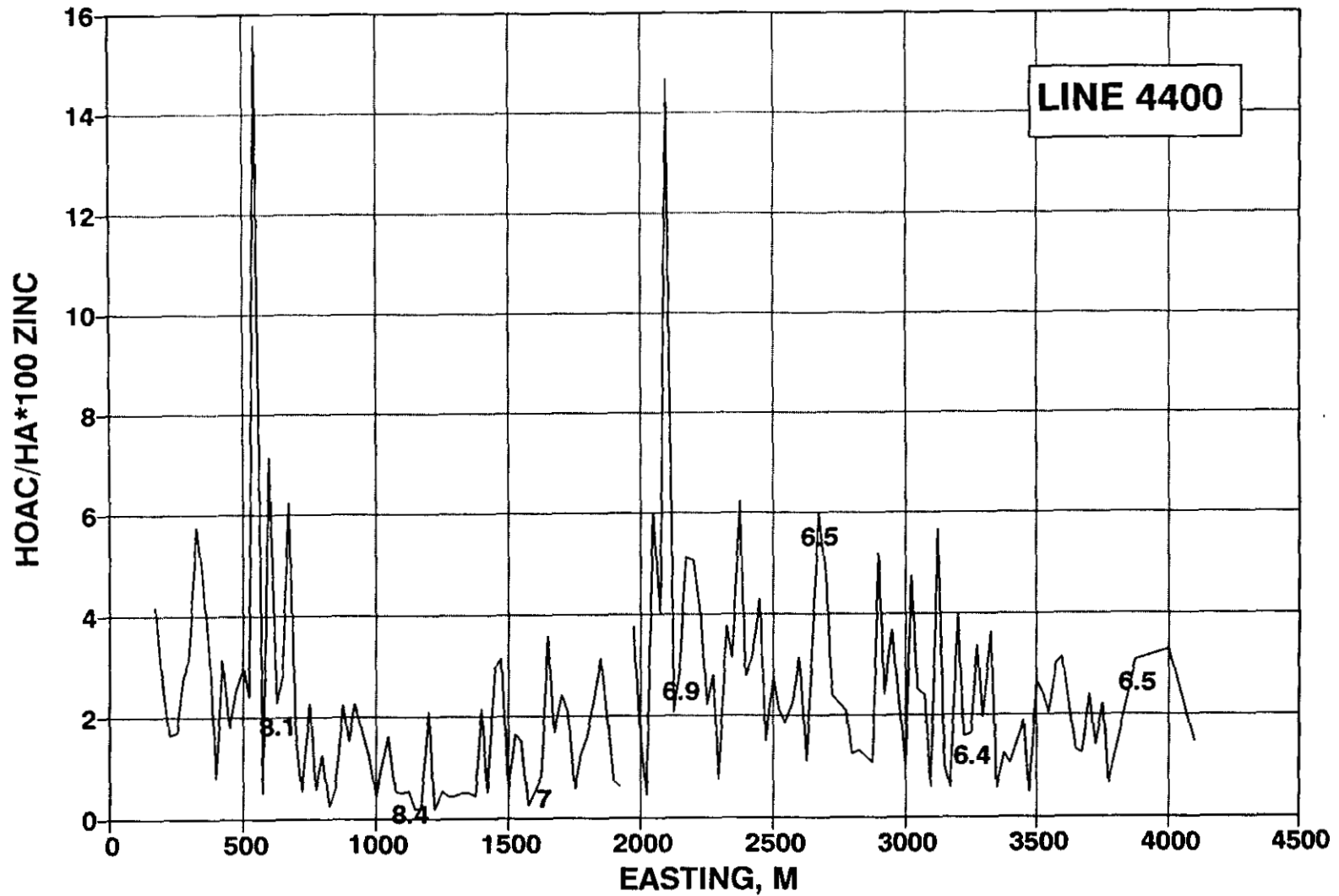
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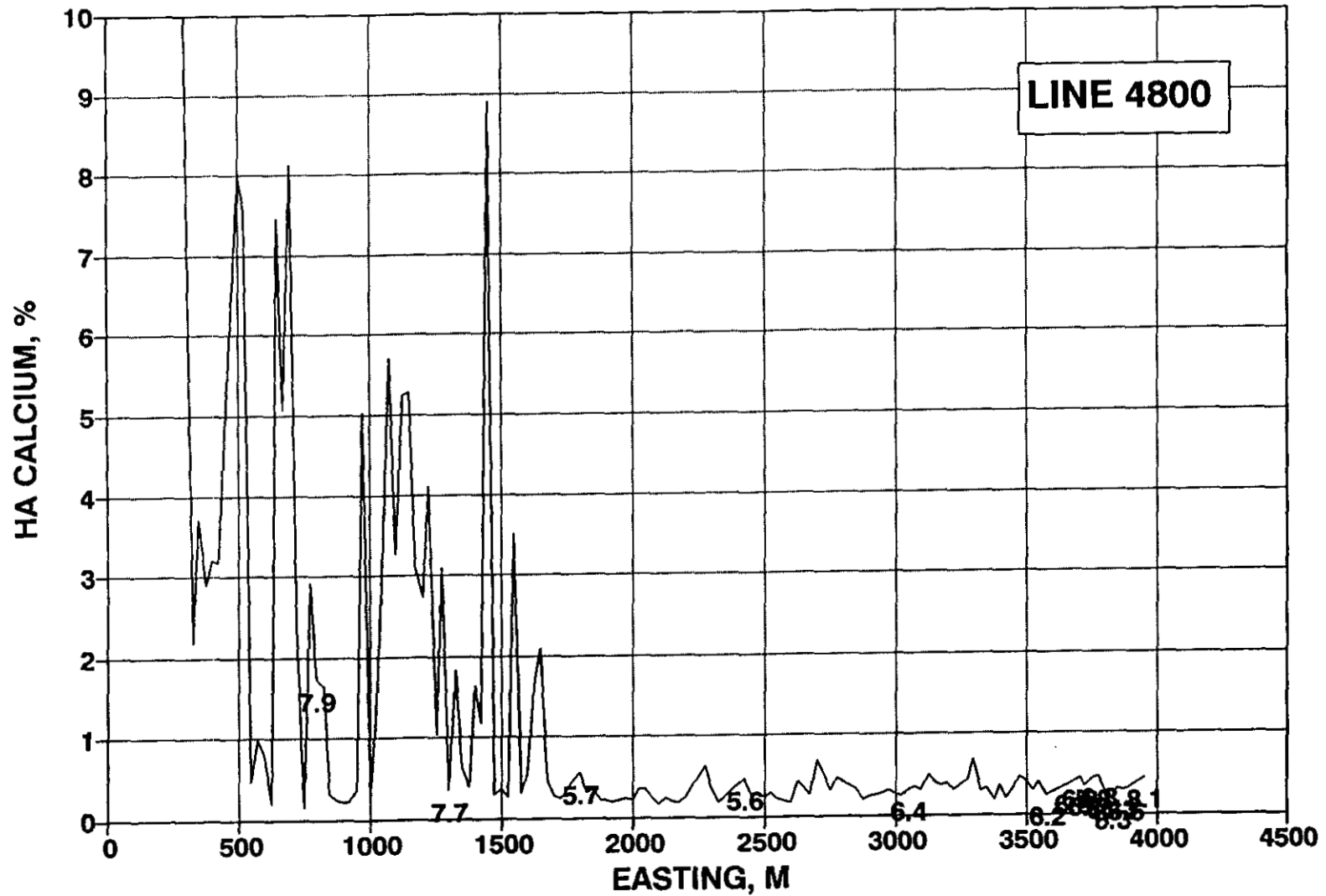
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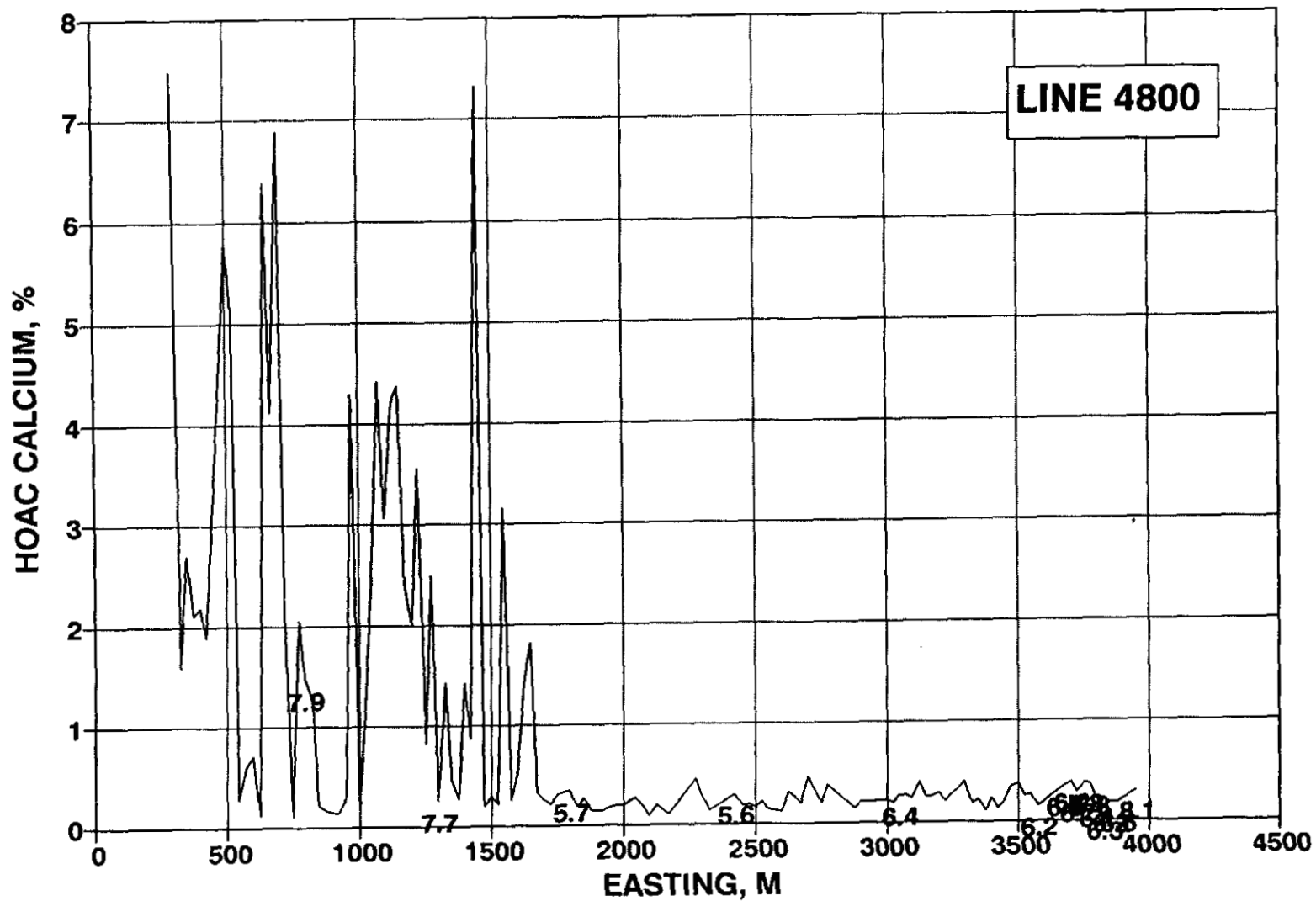


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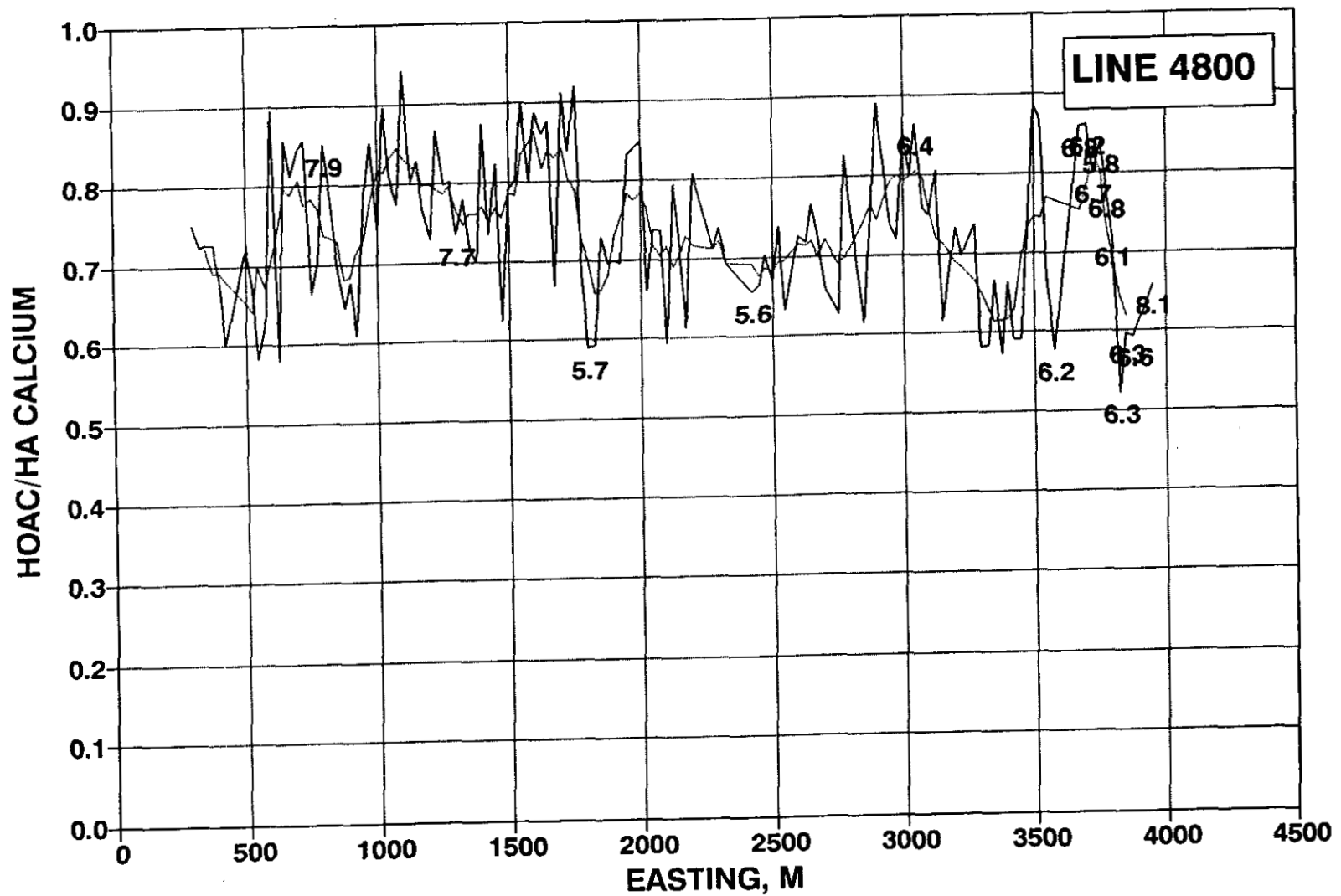




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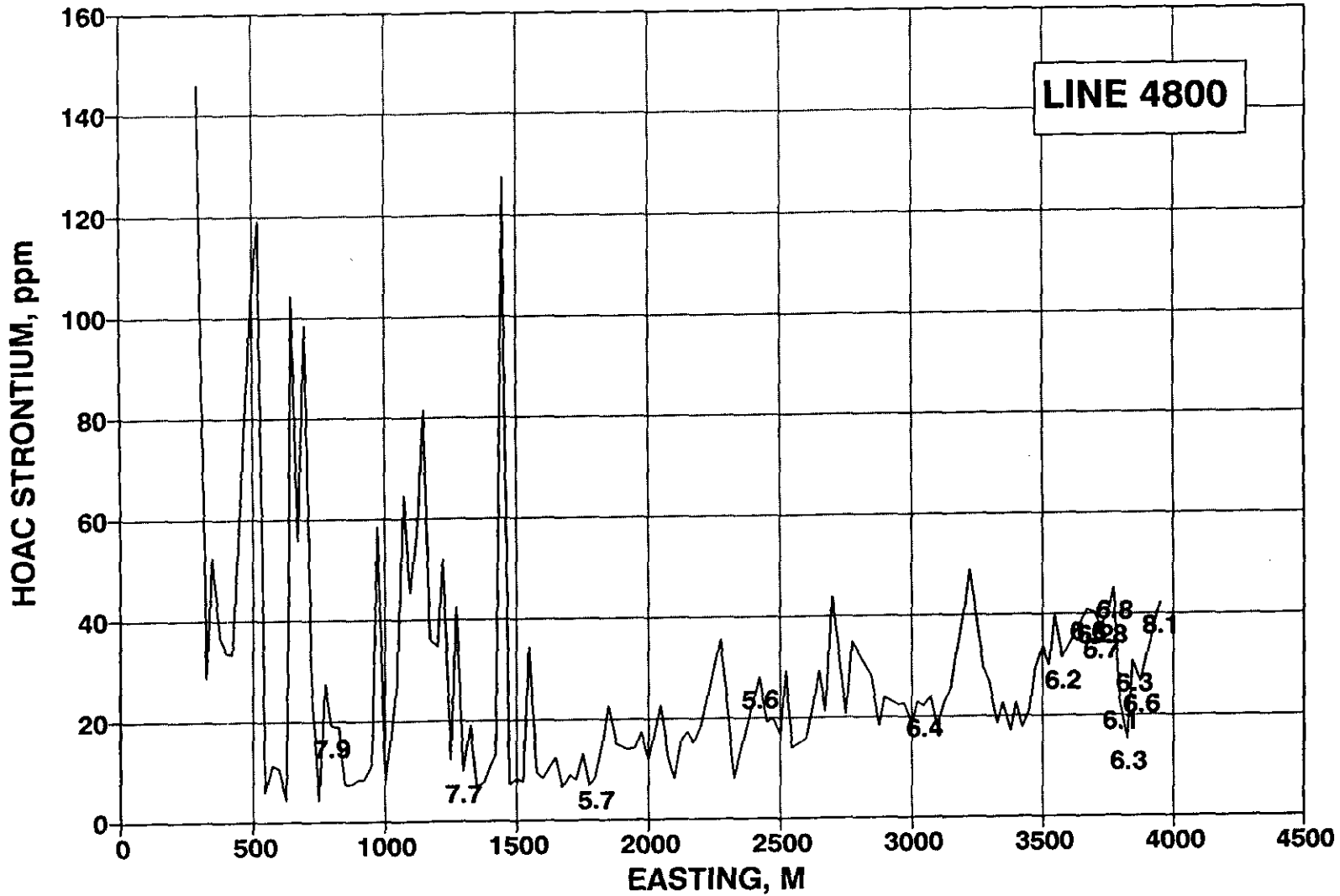


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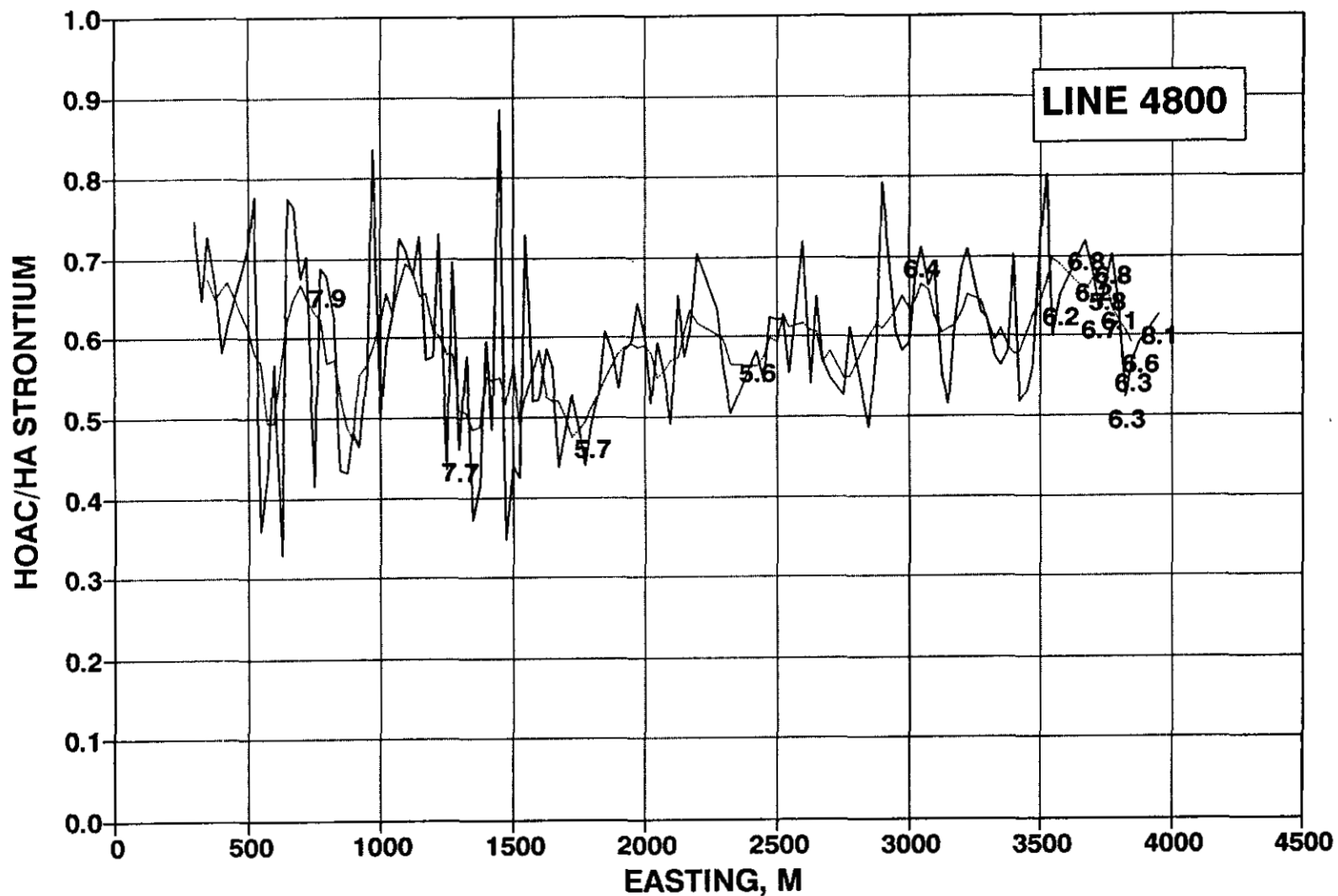




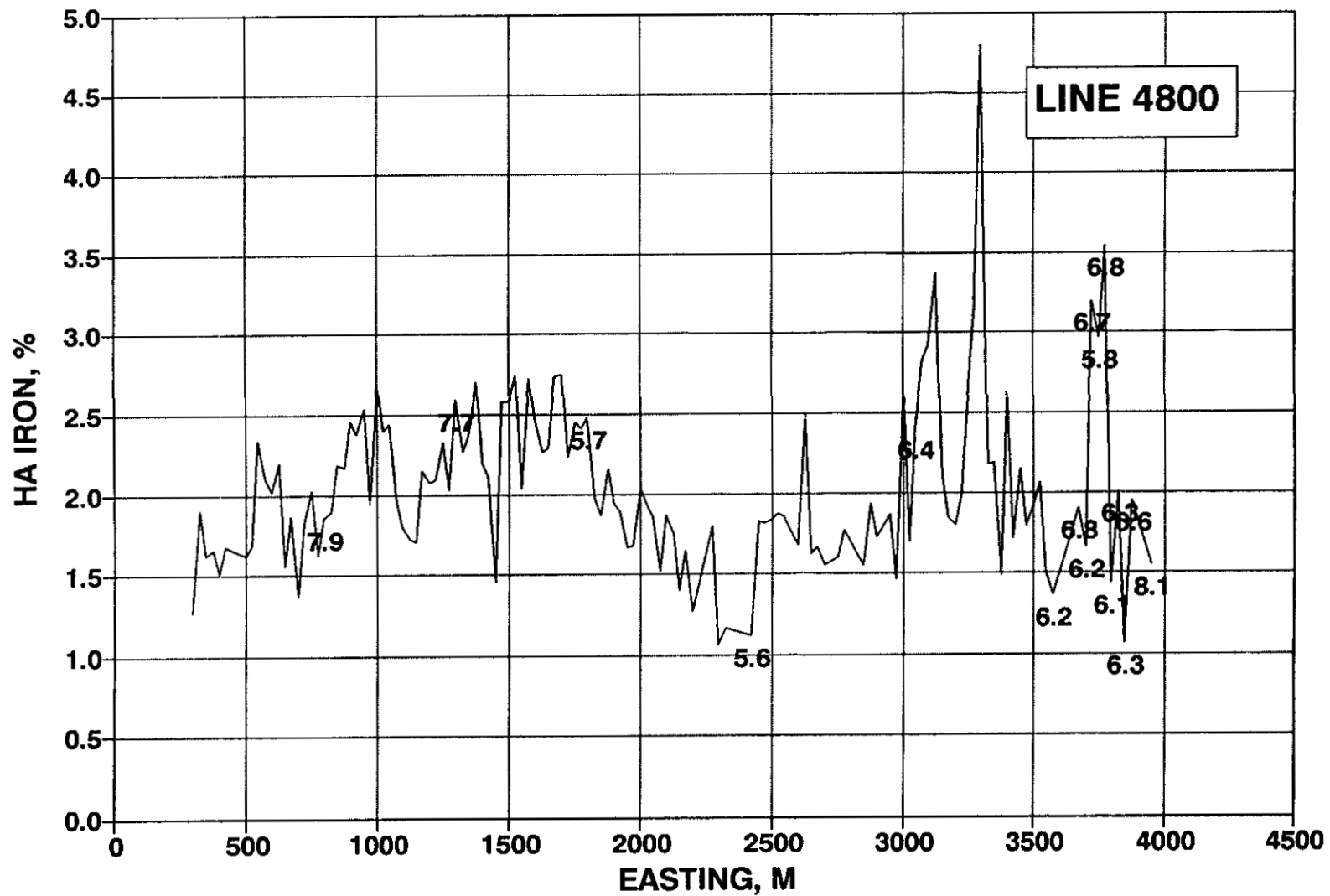
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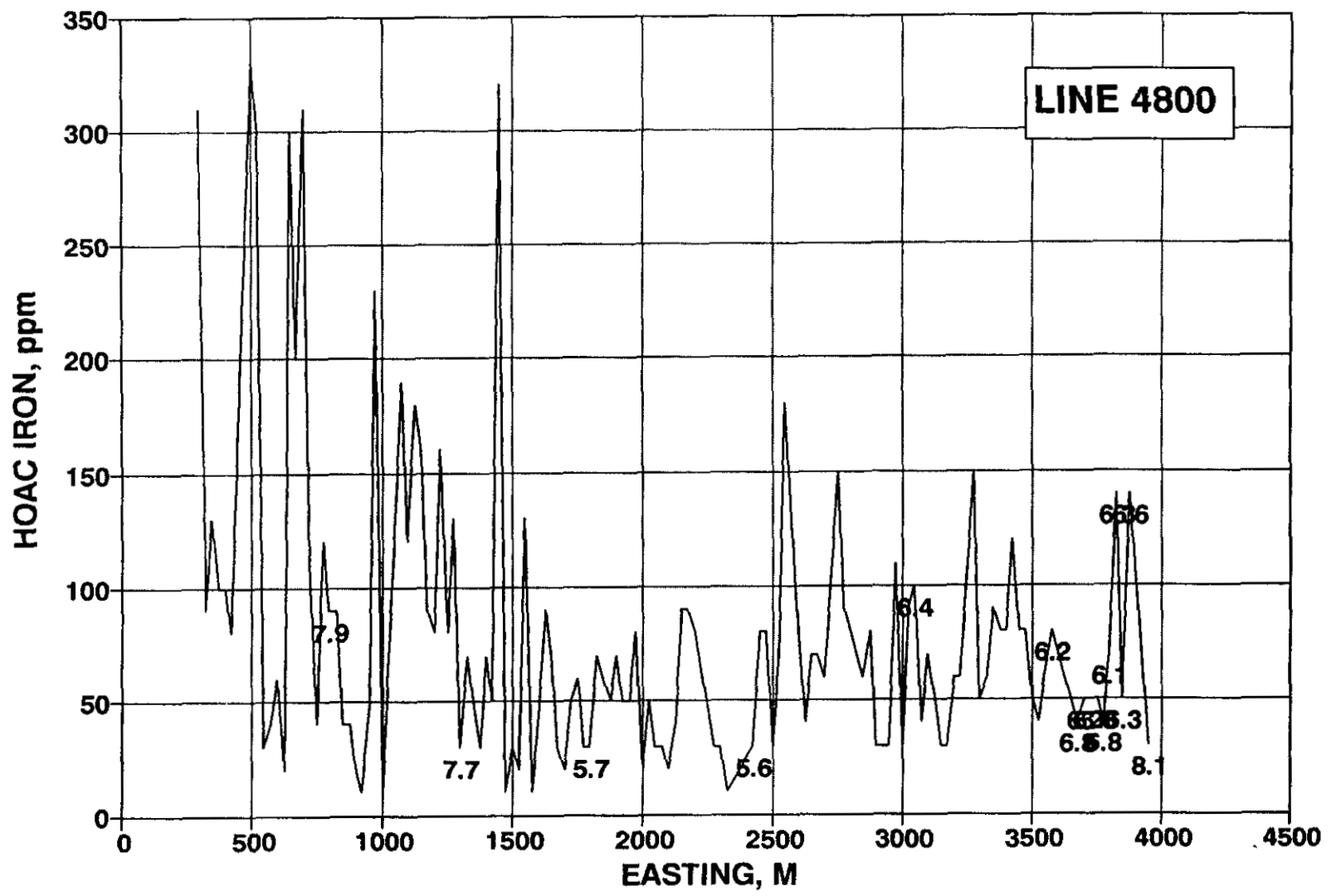
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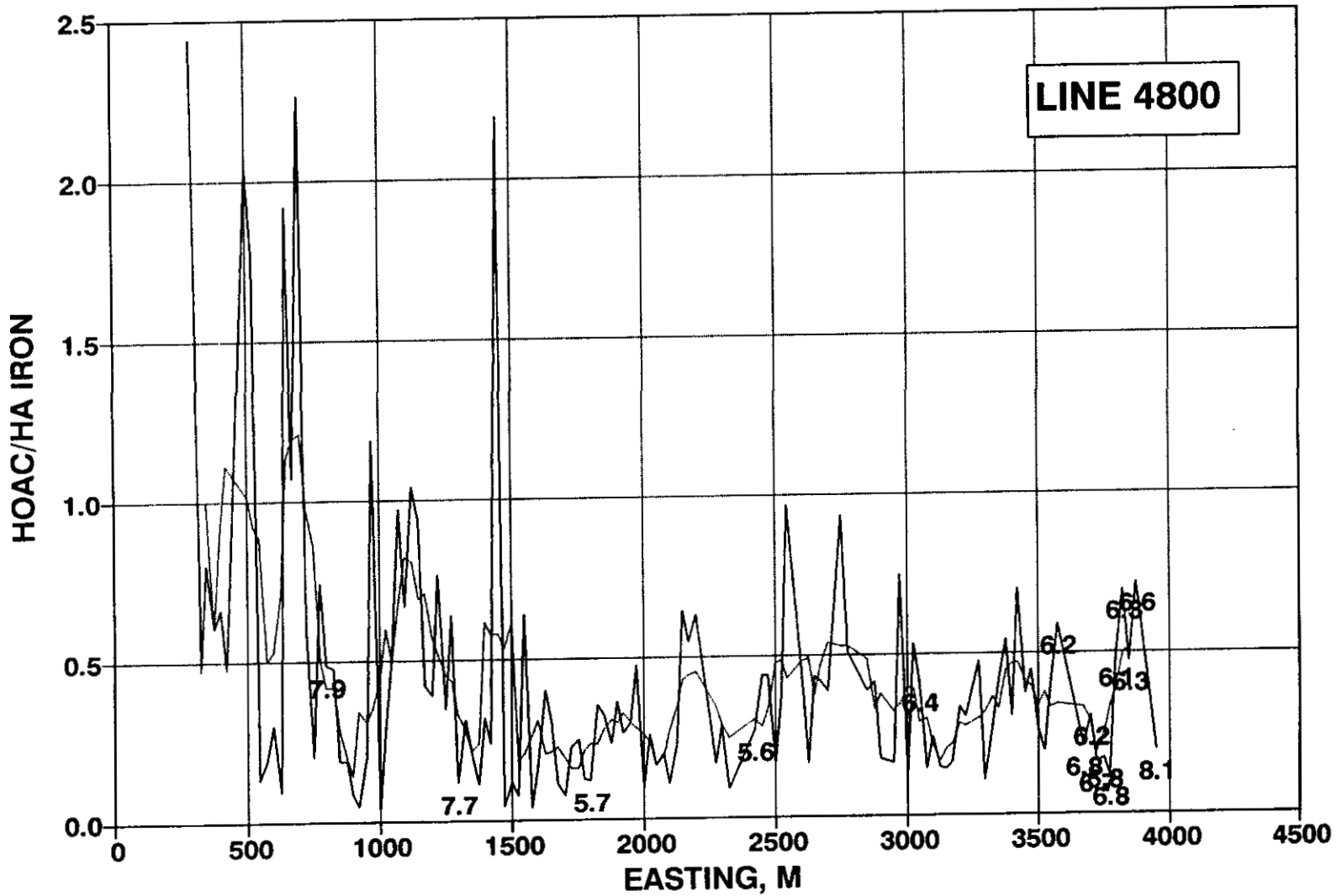
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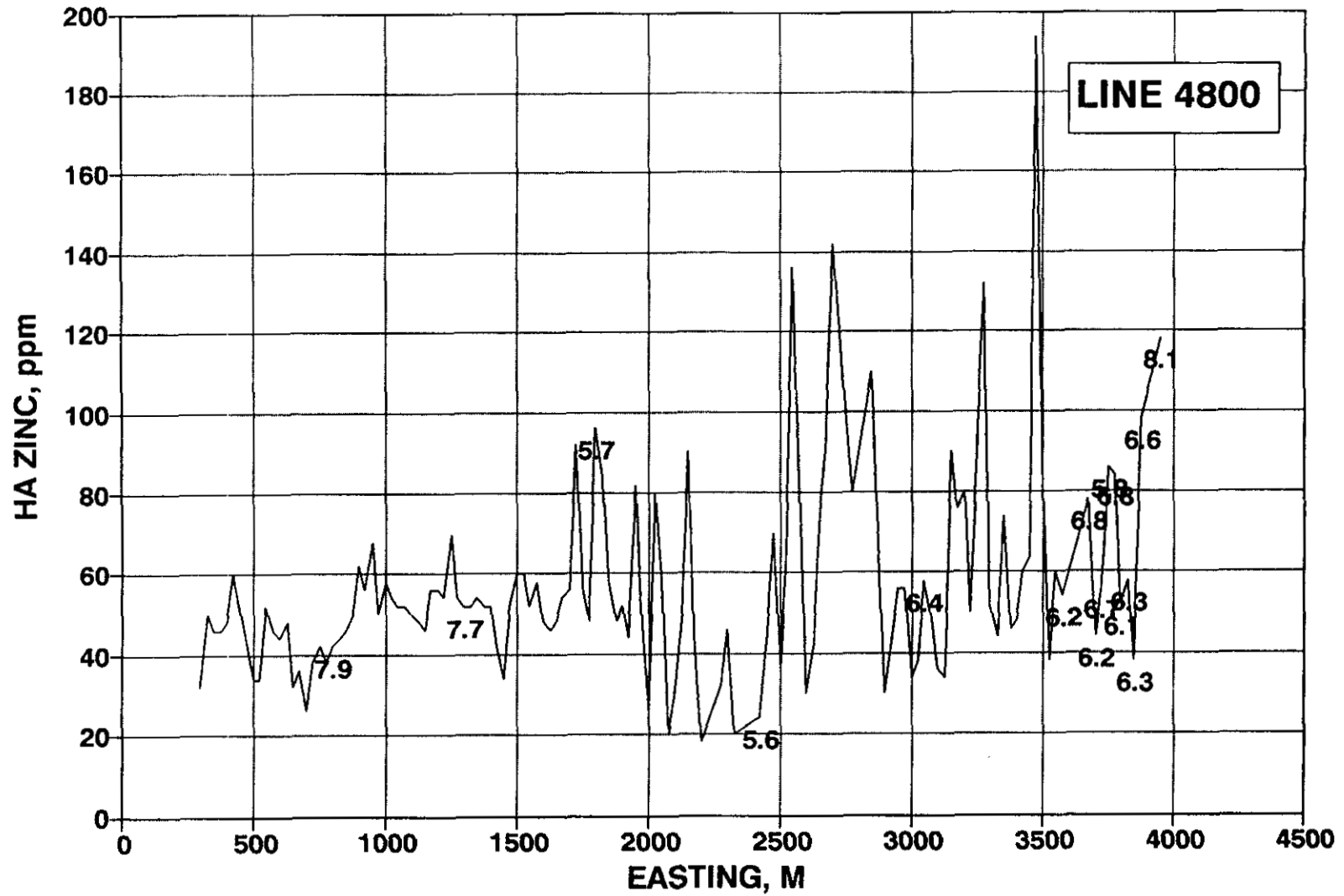


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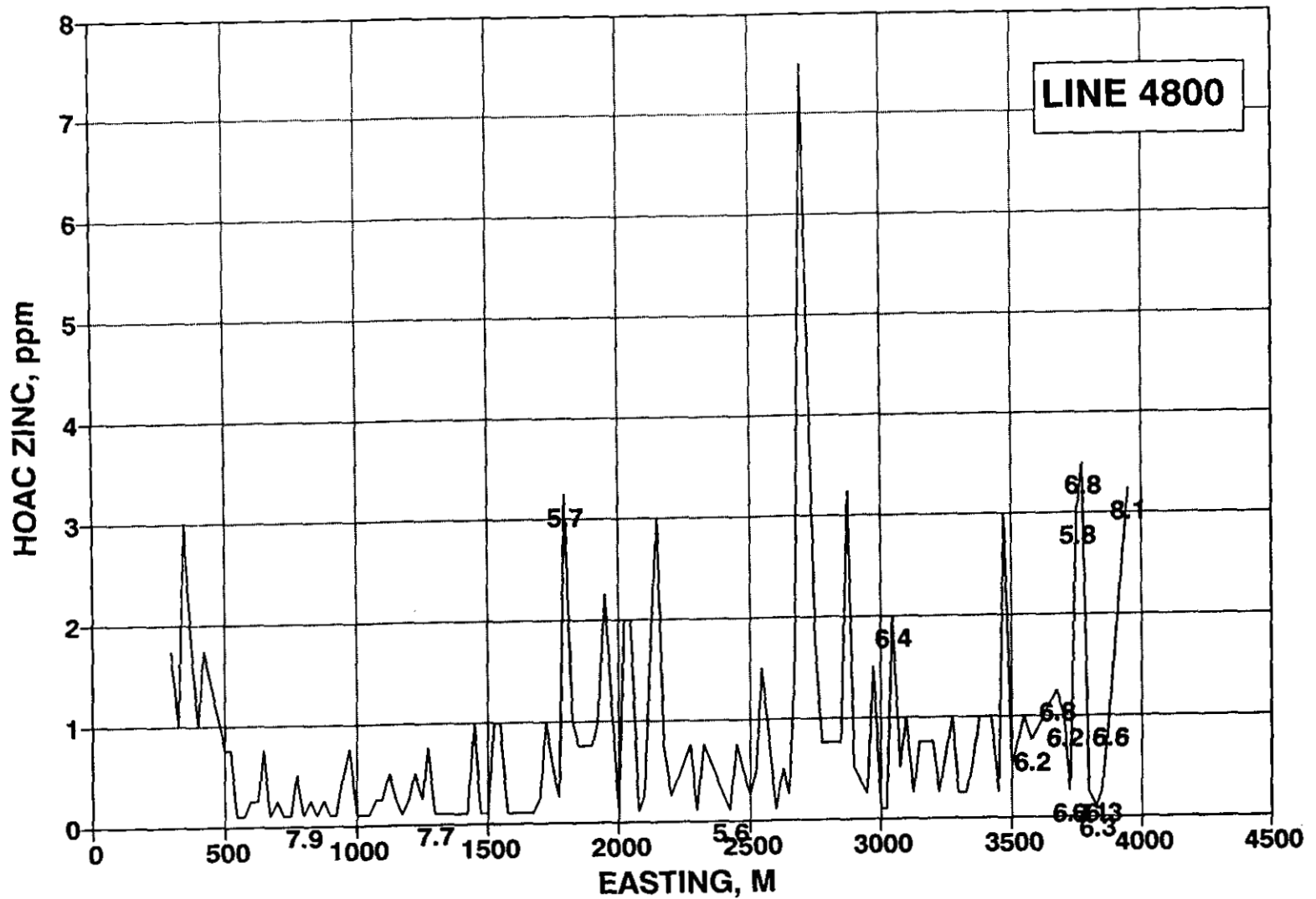




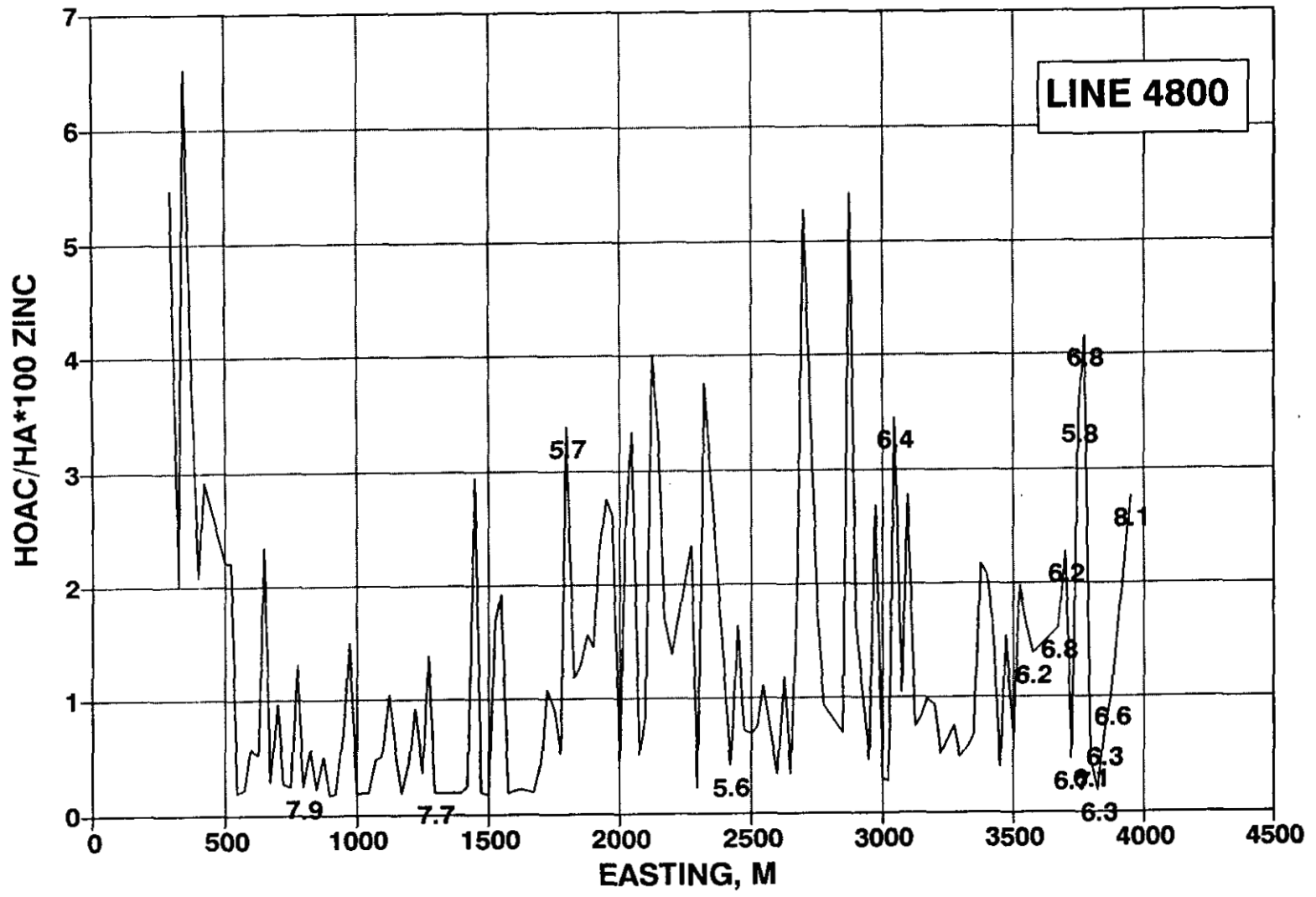
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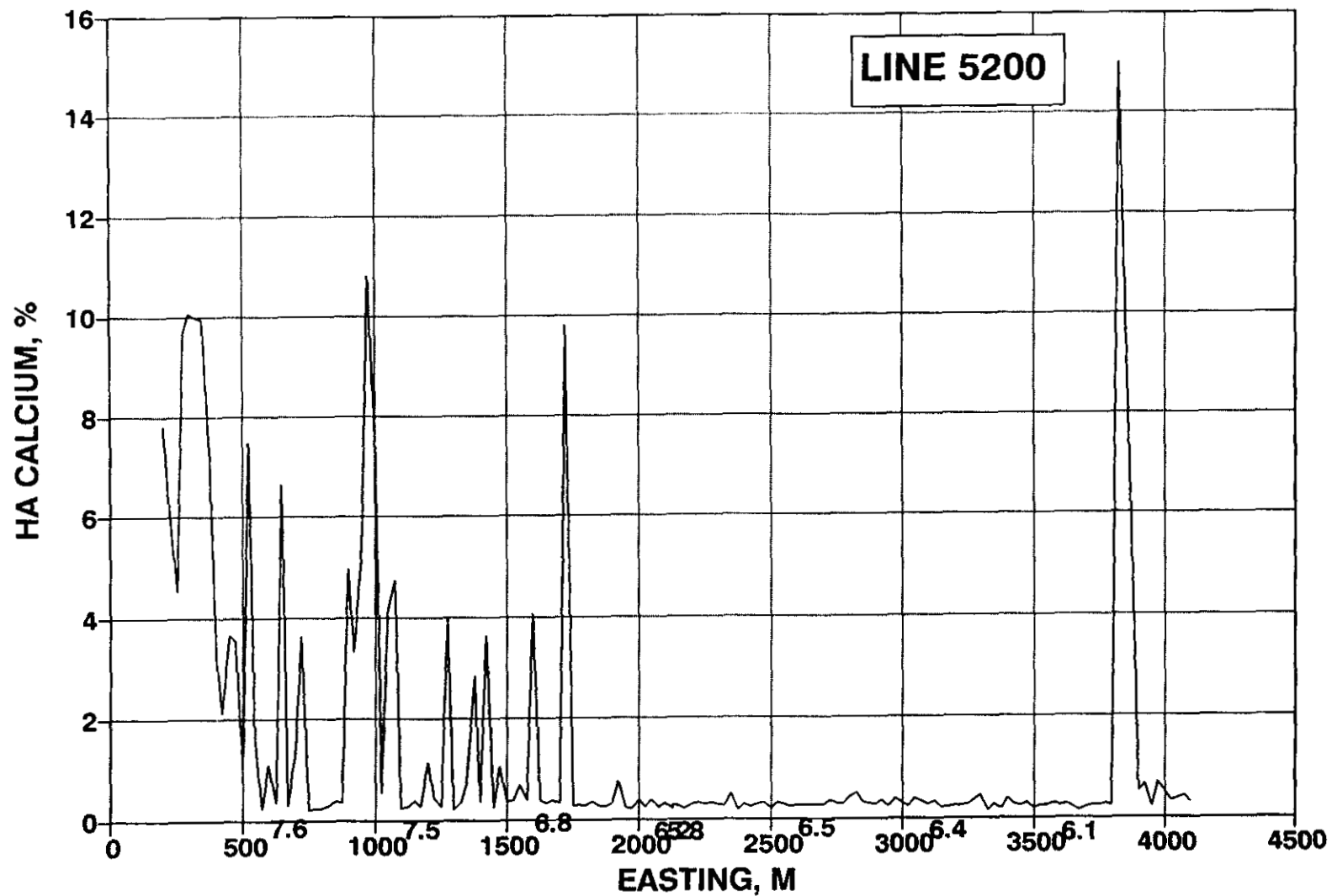
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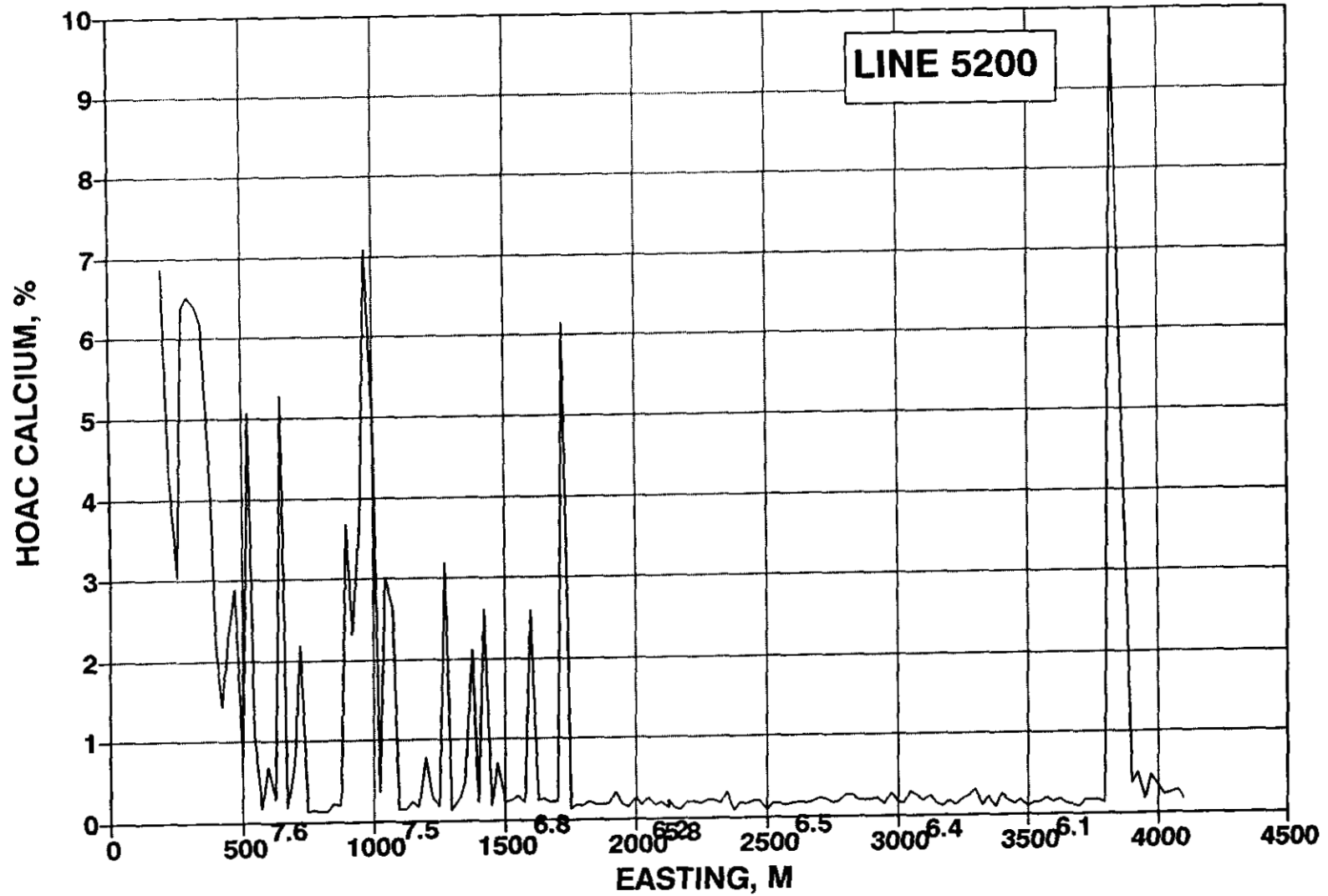
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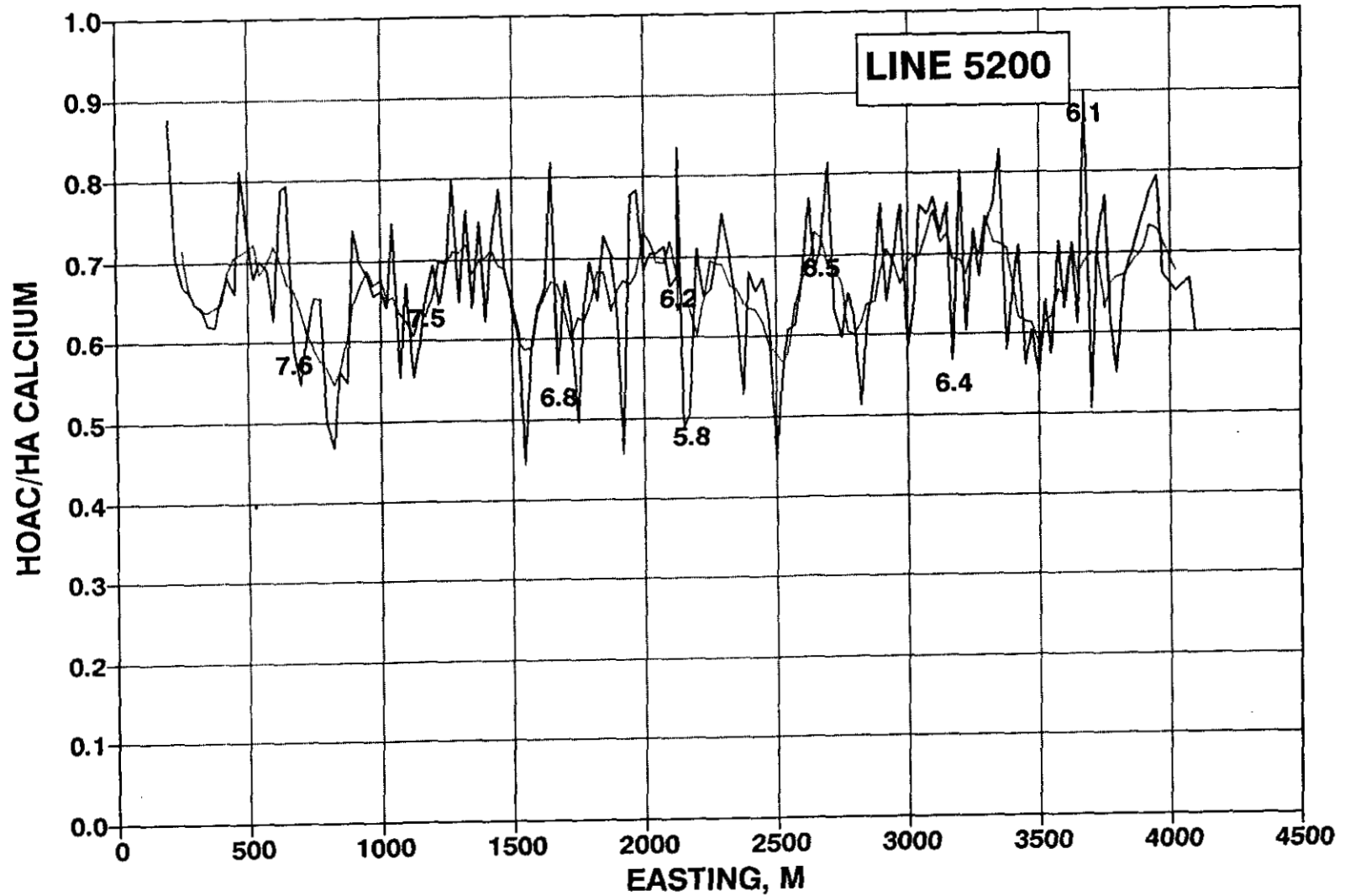
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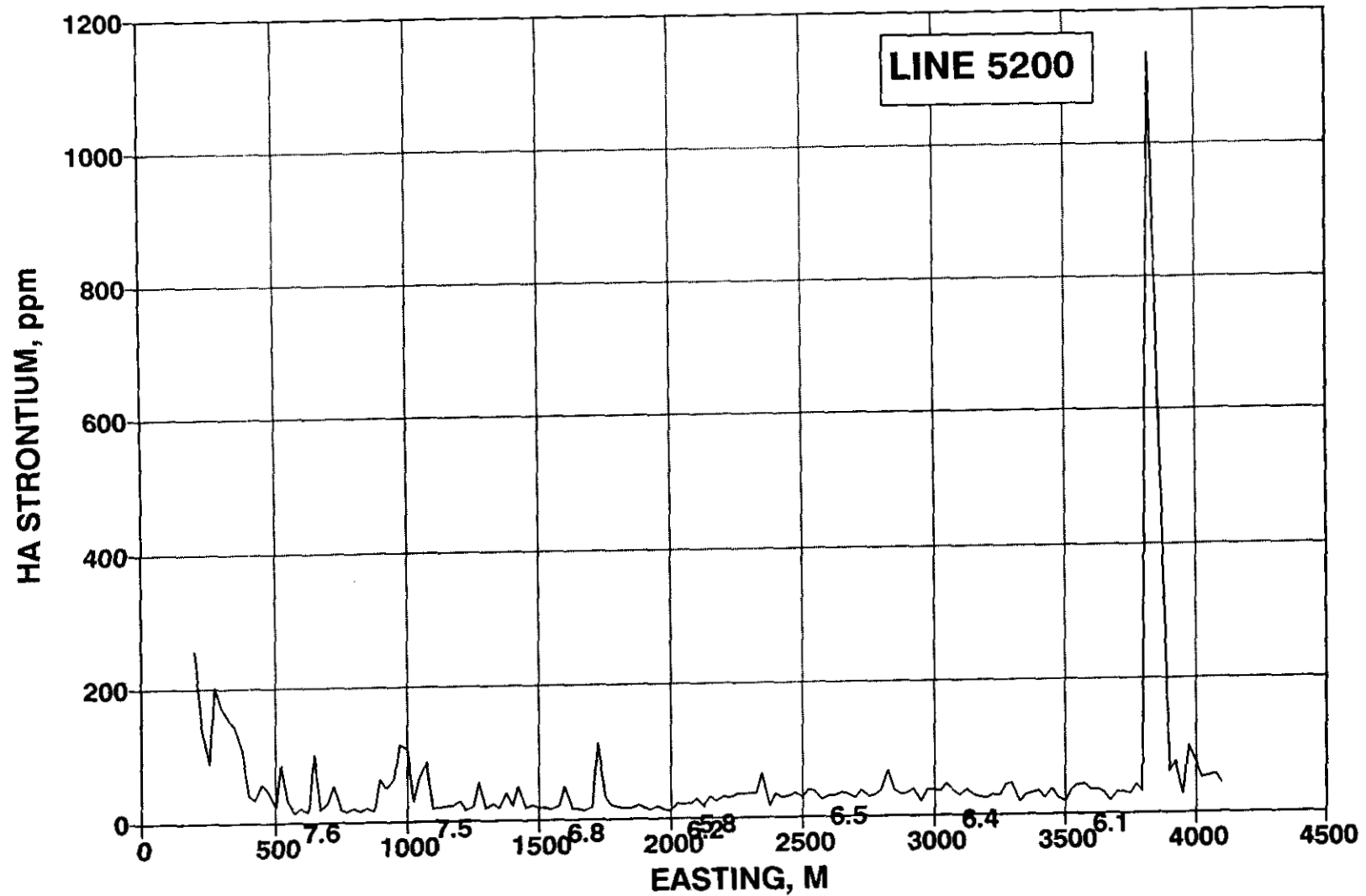
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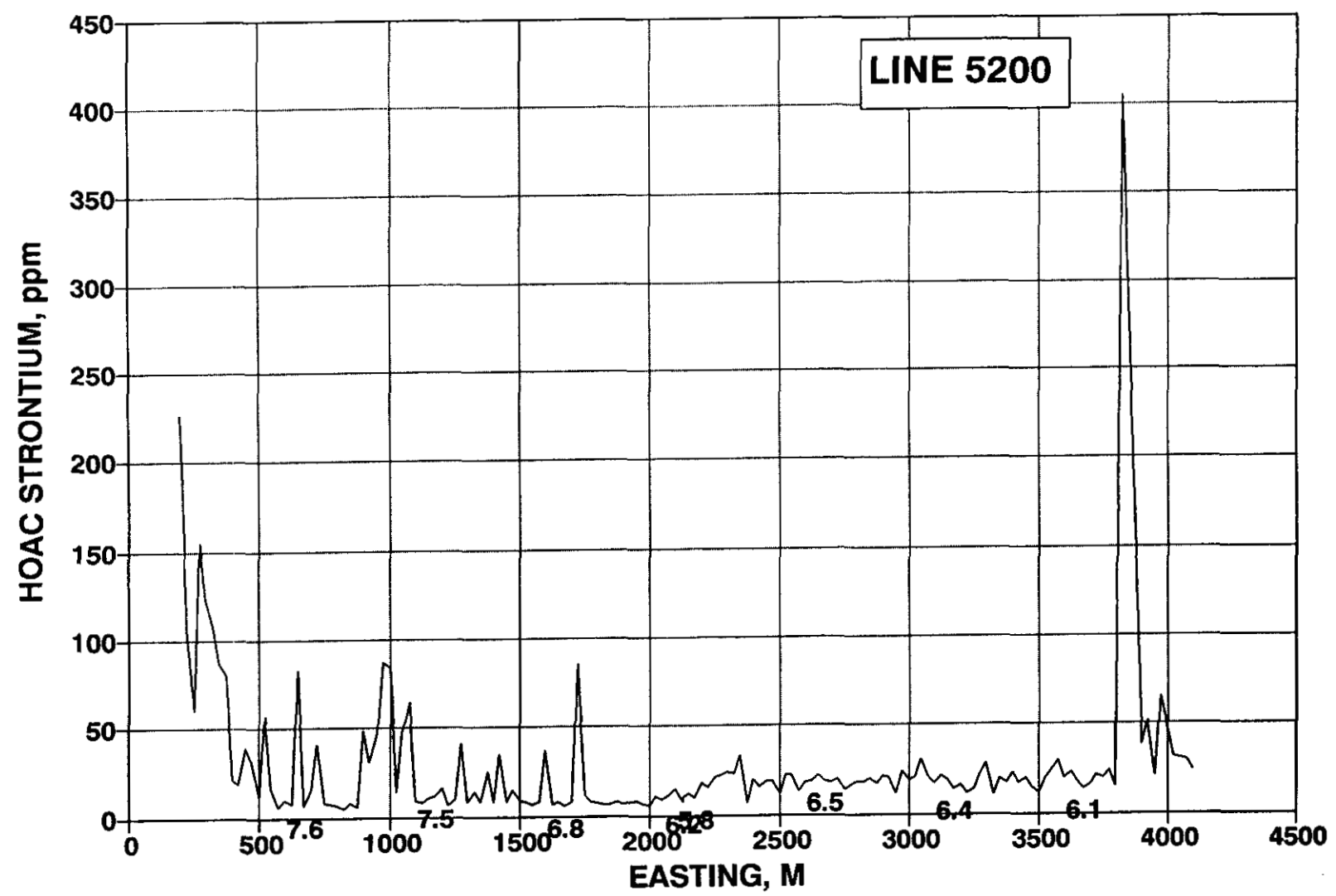
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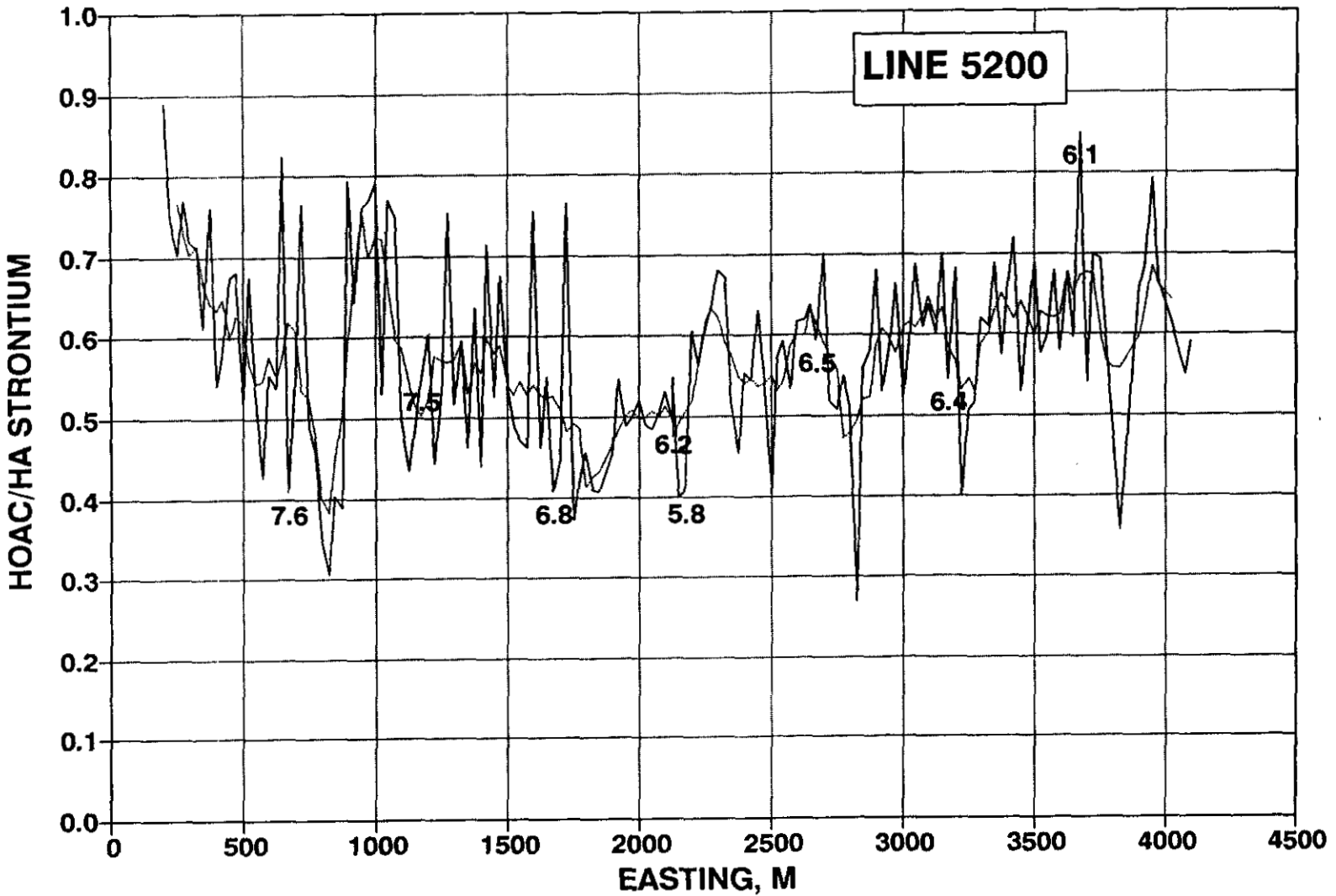


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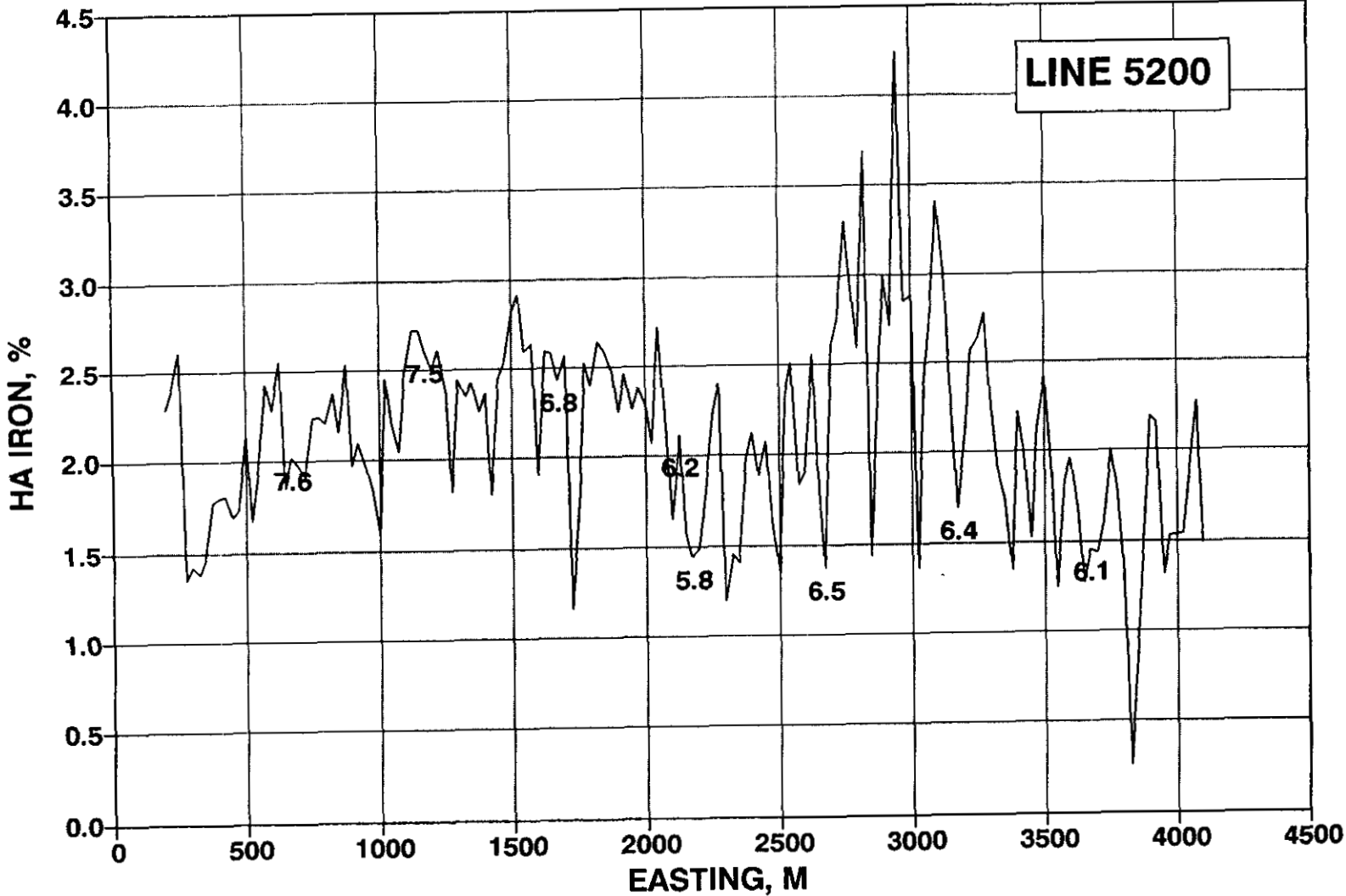




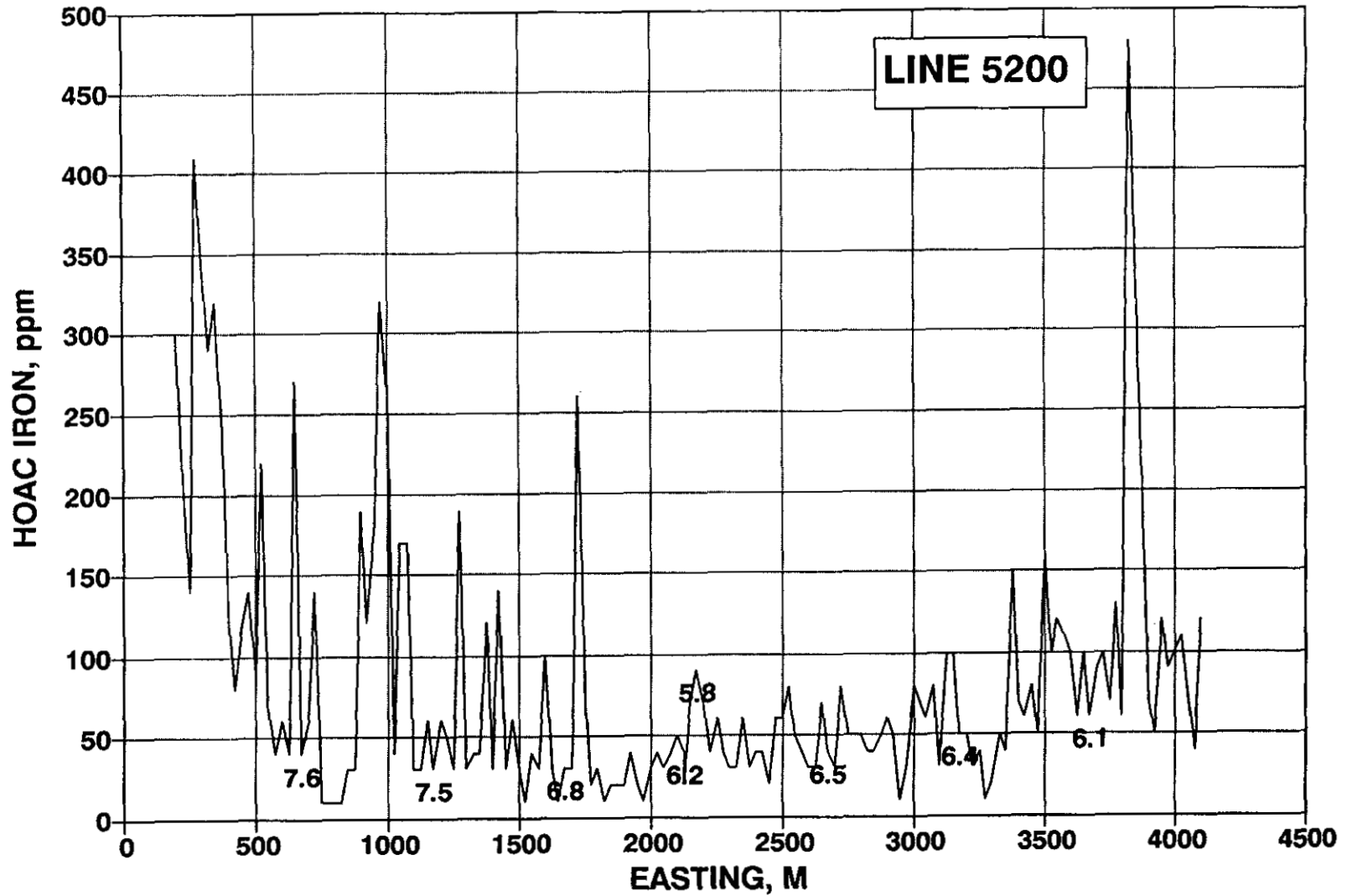
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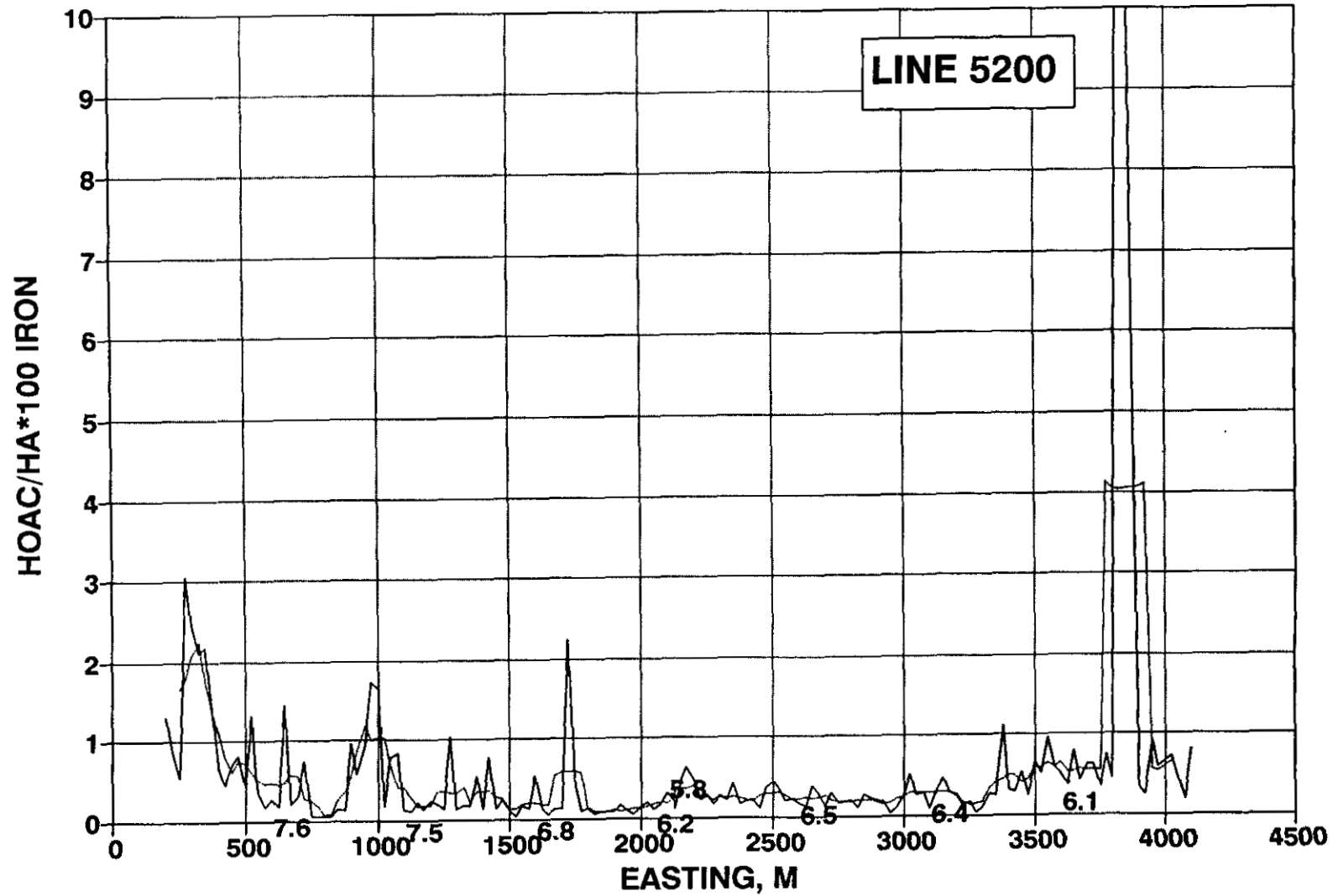
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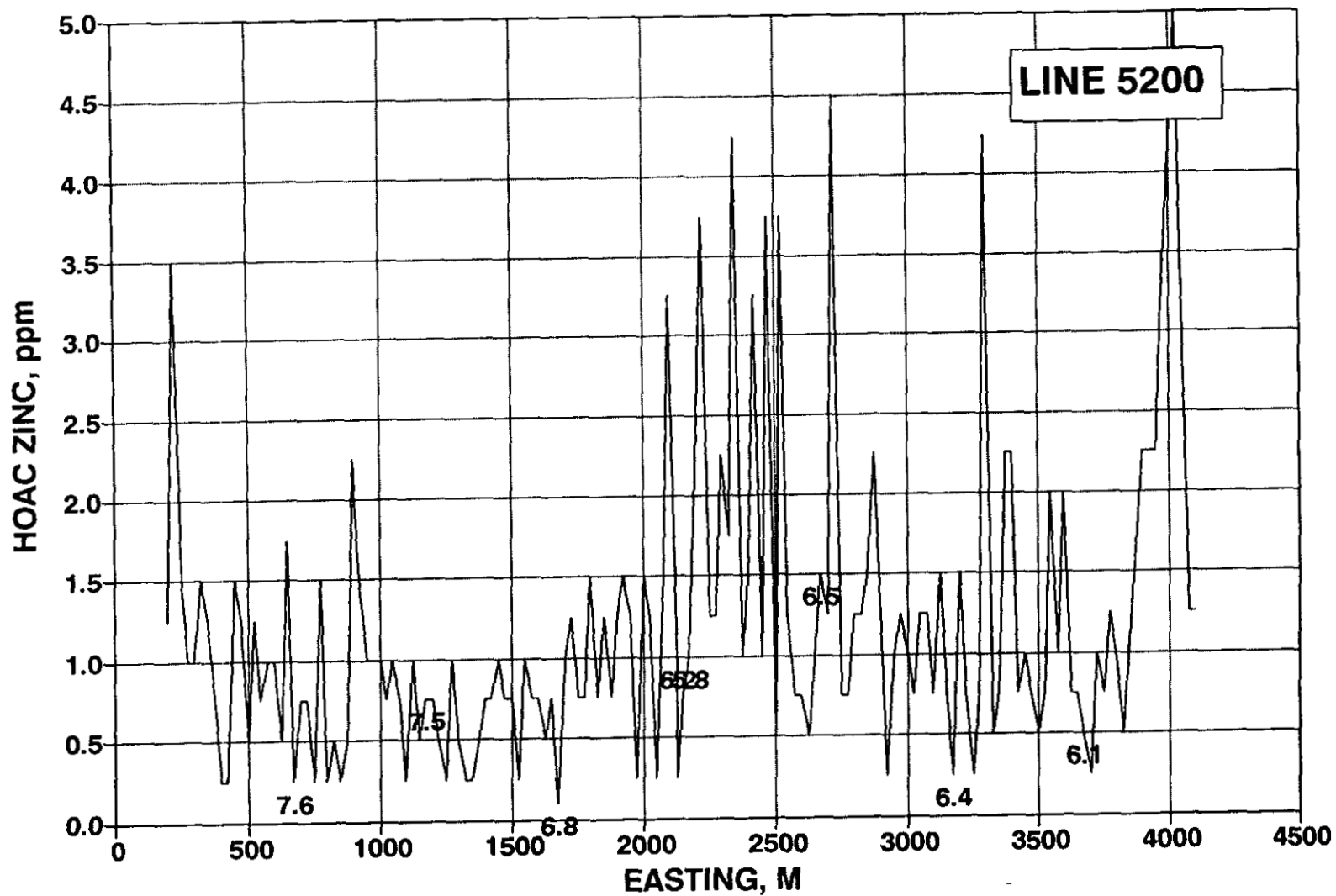
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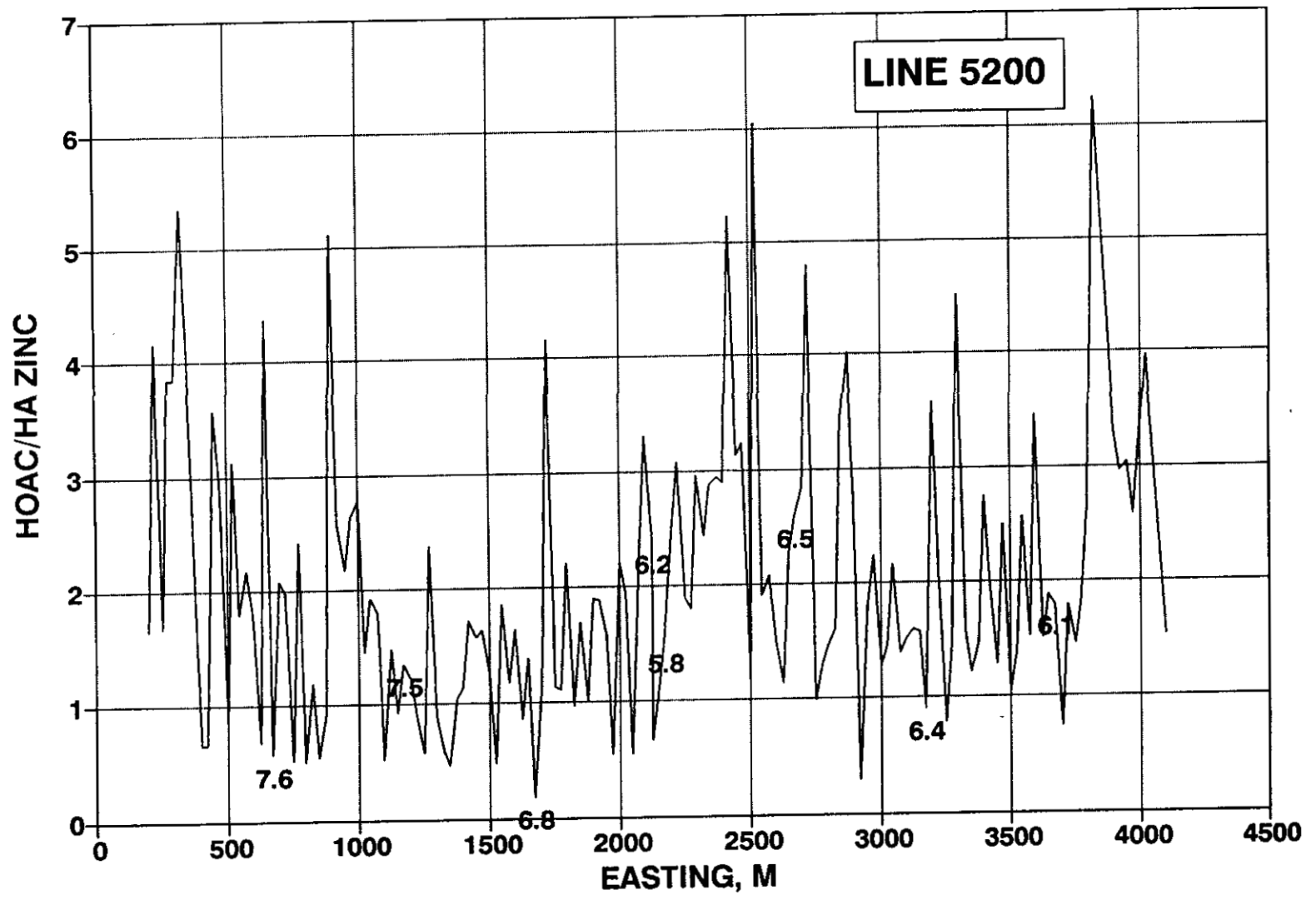
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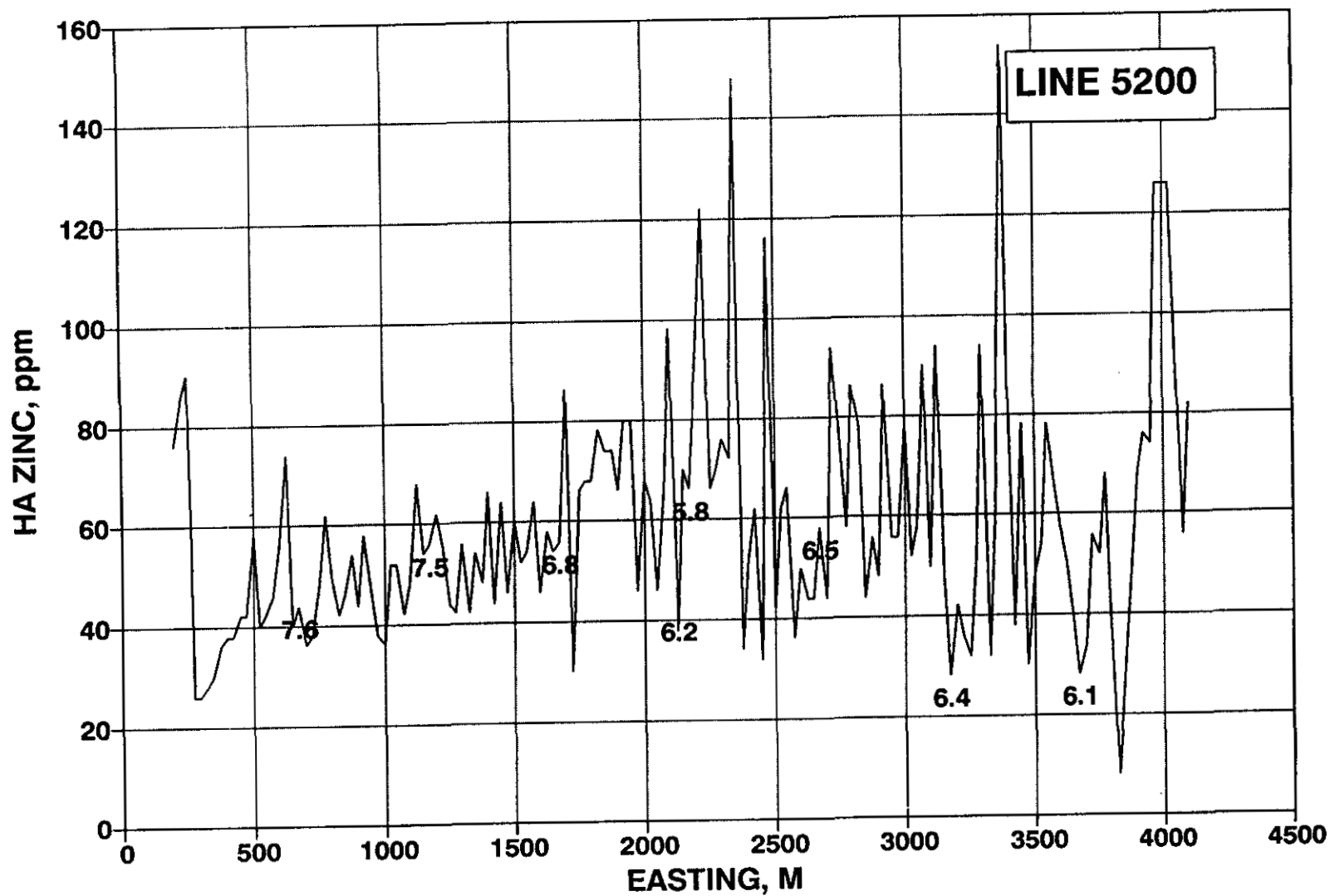
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# DIAMET MINERALS INC. PAUL-MIKE SOIL GEOCHEMISTRY



GEOPHYSICAL REPORT  
FORT STEELE PROJECT, S.E. BRITISH COLUMBIA  
PAUL-MIKE CLAIMS, NTS SHEET 82G 12/13  
FOR  
DIA MET MINERALS LTD  
BY  
DELTA GEOSCIENCE LTD

DEC. 12, 1997. G.A. HENDRICKSON, P.GEO.

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

25,631



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## INTRODUCTION

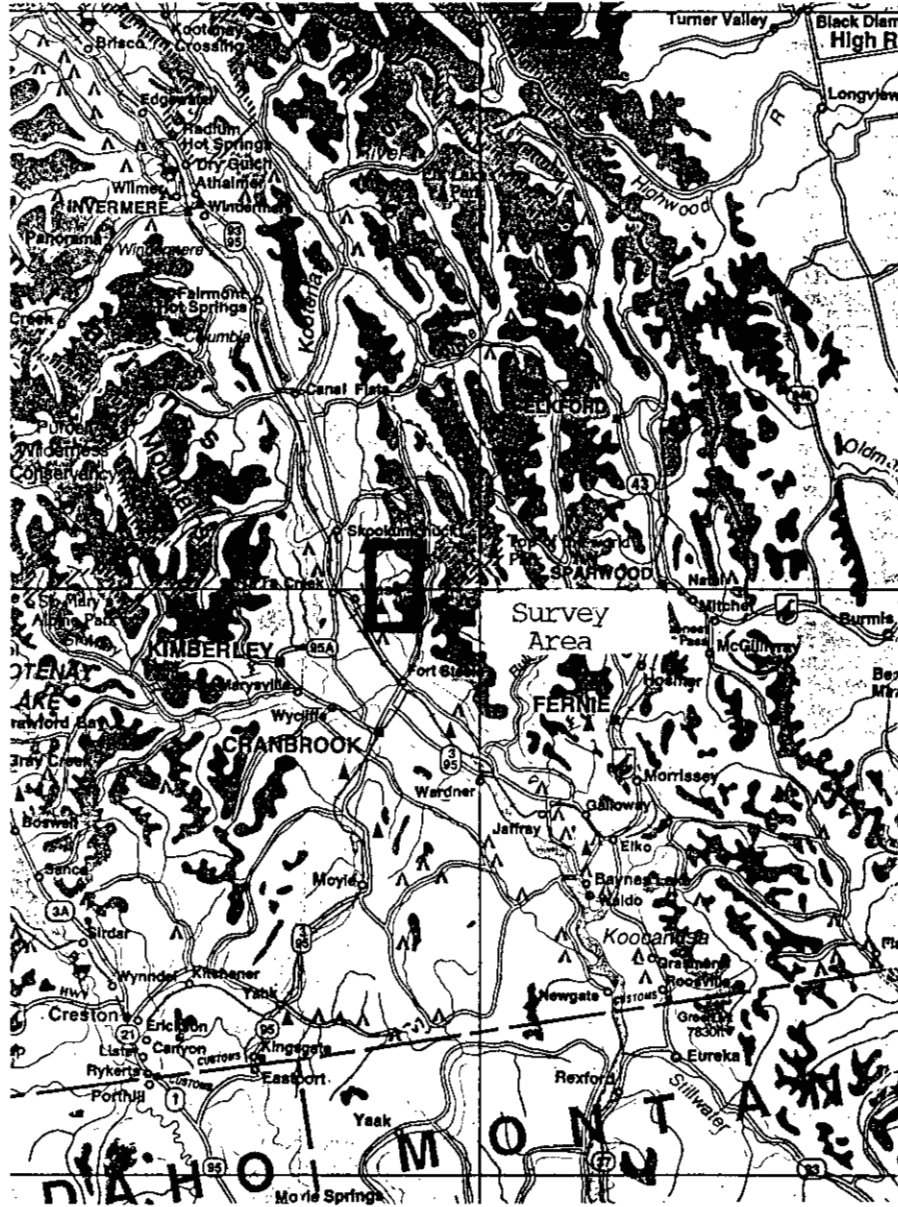
During the period June 21 to August 21, 1997, Delta Geoscience Ltd conducted a ground geophysical program on the Paul-Mike Claim Group located in the Fort Steele area of British Columbia, NTS Sheet 82G 12/13. This work was conducted on behalf of Dia Met Minerals, the owners of the claim group.

The geophysical work consisted of Induced Polarization, Resistivity, Self Potential and limited Borehole EM surveys over an east-west oriented grid of fourteen lines totalling approx. 43 line kilometers. Lines were generally spaced 400 meters apart.

The purpose of the abovementioned geophysical surveys was to search for a deeply buried (>400m) "Sullivan type" mineral deposit. The depth to the target horizon is a major exploration challenge.

The famous Sullivan Mine located several kilometers to the southwest of the survey area, is a world class lead, zinc, silver, massive sulphide deposit hosted in the lower to middle part of the Aldridge Formation. This section of the Aldridge Formation is composed mainly of siltstone, quartzite and argillite. Large intrusive dikes and sills of diorite and gabbro composition occur within the above stratigraphy, particularly the lower Aldridge. Thick overburden has tended to hamper the effective exploration of the Aldridge Formation.

This report has been written to provide a technical discussion of the survey design parameters and to discuss the exploration significance of the results.



LOCATION MAP - FORT STEELE PROJECT

Scale 1:500,000.

PERSONNEL

Grant Hendrickson - Senior Geophysicist.  
Jan Dobrescu - Geophysicist.  
Kristian von Fersen - Senior Technician.  
Max Oudendag - Technician.

In addition, from time to time Dia Met provided two experienced helpers to assist the Delta Geoscience crew:

Robert Schultz.  
Todd Mayer.

EQUIPMENT

1 - IRIS Instruments IP-6 Receiver.  
1 - IRIS Instruments VIP 4000 Transmitter.  
1 - Toshiba Field Computer.  
1 - Hewlett Packard Plotter (HP 250C).  
1 - 4x4 Truck.  
5 - Motorola VHF Radios.  
1 - Melis-Remi Frequency Domain Borehole EM System.

DATA PRESENTATION

Reduced scale (1:30,000) page-size maps of the geophysical data accompany this report.

This data is presented as colour contour plans. The colour spread is such that the blue colour has been assigned to low values and the red to the highest numerical values.

- Fig. #4 - Induced Polarization Plan.
- Fig. #5 - Resistivity Plan.
- Fig. #6 - Corrected Self Potential Plan.
- Fig. #7 - Uncorrected Self Potential Plan.

Larger scale plots of the above data (1:10,000) including stacked profile plans were provided to Dia Met at the completion of field work.

The borehole EM data is presented as separate page plots of the inphase, quadrature, amplitude and phase for each frequency.

- Figs. #8, 9, 10 & 11 - Borehole EM Data, DDH 88-1.

## SURVEY DESIGN AND PROCEDURE

Previous years exploration work (geochemistry, geophysics and drilling) in the survey area had outlined some interesting areas of anomalous overburden geochemistry, in particular the presence of diagenetic lead nodules within the thick overburden cover.

Dia Met's consulting geochemist, Dr. Barry Smee, felt that the reducing electric field (self potential anomaly) often created around a large, deeply buried oxidizing massive sulphide deposit could in part be responsible for the apparent diagenetic lead nodules observed in the overburden drill cuttings, thus recommended a large scale self potential survey be conducted.

Further discussions between Dia Met's geophysical staff and Delta Geoscience Ltd., lead to the decision to also conduct induced polarization and resistivity measurements, in conjunction with the remote reference self potential survey. The additional geophysics could be done simultaneous with the SP and would provide important backup information to the self potential work. Field work commenced in June, 1997.

The gradient array technique was chosen for the I.P. work, since the survey required a deep depth of investigation (focus at 500 meters), combined with an electrode array that was relatively easy to implement over the large survey area, yet maintain the best possible signal to noise ratios.

The expected I.P. response from the very broad pyritic alteration zone that surrounds most major mineral deposits, plus the response of the sulphides in the deposit itself, suggests that the I.P. technique would be the best physical property to exploit when trying to search deeply into the earth. There is good evidence that I.P. effects persist, albeit seriously attenuated, even at great depth.

Modelling tests indicated that a modest, (2-3 mV/V) I.P. anomaly could be detected over a large deeply buried (400m) deposit. The resistivity response would be almost negligible. The background response and noise from the overburden and host rocks was expected to be very low, however we did expect cultural noise problems in some localized areas.

After some initial field tests, the I.P/Resistivity array parameters were set as follows:

AB (current electrode separation) - 2800 meters.  
MN (potential electrode separation) - 150 meters.

Note: The current line was moved to each survey line, i.e. no offset lines were measured. This step helped keep the signal level as high as possible. All lines were read from west to east.

The long lines (4 kms) required the current AB to be shifted to the north to read all of the line. To the west, measurements began 250 meters from the current electrode, whereas to the east measurements terminated 300 meters from the current electrode. A broad overlap area (200 meters) was read in the middle and the results from the overlap were averaged. The I.P. responses in the overlap areas were generally very close, with some minor variations noticed in the resistivity.

Signal to noise concerns were paramount, since the response of a deeply buried major sulphide deposit would be weak. The low signal level would result in noisy I.P. data, which would result in noisy-looking contour patterns. Statistically however a clear signal (higher background) should emerge over a large area from a deeply buried large, almost flat lying deposit like the Sullivan.

The large MN employed, while not good for horizontal resolution, did provide more signal. The deep target depth precluded the need for high horizontal resolution in any event.

Measurements of the I.P, Resistivity and self potential, were taken every 25 meters and subsequently averaged over 100 meters, i.e. each 100 meter reading is a composite of four readings. This averaging procedure was done to improve the statistical significance of each plotted data point. There is no doubt that this procedure would severely smear the response of near surface anomalies, however as our exploration target was expected to lie at the 450 meter depth, the degradation of any near surface overburden and cultural responses was beneficial.

Recent work (referenced at the back of this report) has shown that, in general, the focus depth and depth of investigation of gradient/Schlumberger style electrode arrays can be characterized as follows:

Z50 depth = (.18)(AB) (in our case 504 meters).

Z90 depth = (.46)(AB) (in our case 1288 meters).

In the above, Z50 depth refers to the depth where 60% of the observed signal occurs above. The Z90 depth refers to the depth where 90% of the observed signal occurs above. The focus depth of gradient arrays is generally considered to be the Z50 depth.

For the self potential work, an isolated remote reference electrode was established at approximately 5500S, 500E. The choice of a quiet site for this electrode was hampered somewhat by the numerous roads and cultural interferences in the area.

For lines 5200S and 4800S, the reference was maintained at the same site, however as the survey progressed to the north it became necessary to move the reference. This move was done to minimize the amount of wire spread over the claims. We kept the reference electrode one line to the south of the survey line and always near station 500E. Movement of the reference necessitated a minor correction factor be applied to the S.P. data, to normalize each line with the original reference.

The S.P. corrections for each line follows:

L.5200S.	No correction.
L.4800S.	No correction.
L.4400S.	+20mV.
L.4000S.	-15mV.
L.3600S.	+9mV.
L.3200S.	-5mV.
L.2800S.	+20mV.
L.2400S.	-108mV.
L.2000S.	-54mV.
L.1600S.	-67mV.
L.1200S.	-80mV.
L.800S.	-6mV.
L.400S.	-20mV.
L.100S.	-46mV.

The S.P. data is presented both with and without the correction factor applied. Figs. #6 and 7.

Cultural interference to both the S.P. and I.P. signal was a frequent problem, particularly along the Lazy Lake Road and Lewis Creek. Another major cultural problem area was the land immediately around the Dionne house (located at approx. 4000S, 1100E).



The numerous cattle grazing within the survey area were a major nuisance to the long electrical lines necessary to do this work. The majority of the land owners co-operated with the survey crew, however there were some notable exceptions, particularly along Lewis Creek.

Only a minor amount of borehole EM work was completed due to the fact that all the holes, with the exception of DDH 88-1, were blocked near surface.

Hole DDH 88-1 was open to 597 meters, however steel casings were present in the hole from the surface to 568 meters, therefore only the last 27 meters of the hole could be logged.

As shown in the diagram, Fig. #2, the Melis-Remi EM system is a surface to hole EM system that operates in the frequency domain. An approximate 300m by 300m loop was laid out surrounding the hole. Measurements of the inphase, quadrature, amplitude and phase were made at 2 meter intervals at the following frequencies: 28Hz, 70Hz, 450Hz and 900Hz. The alternating current flowing in the surface loop will generate a secondary electromagnetic field in any conductive bodies adjacent to the hole, which will be detected in conjunction with the primary field by the borehole probe. In the absence of any secondary field, the probe only measures the slowly attenuating with depth primary field generated by the surface loop. Some simple models of the expected secondary field phase response are included (primary field removed). Fig. #3.

The Melis-Remi Borehole system can operate in the 1 to 8000Hz range, however the known overburden thickness in the survey area precluded frequencies higher than 900Hz, due to the skin effect (i.e. high frequency EM signals attenuate rapidly with depth in relatively conductive environments. Even the 900Hz data was strongly affected by thick weakly conductive overburden.

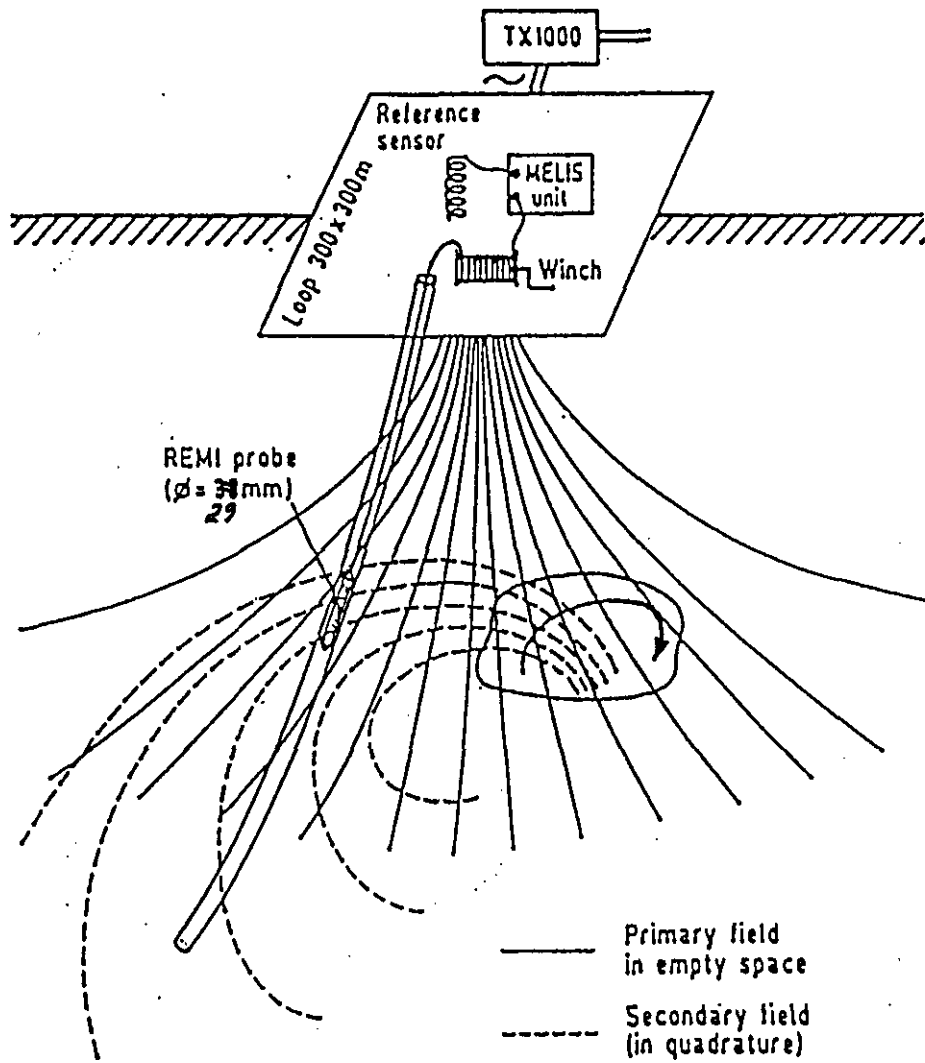
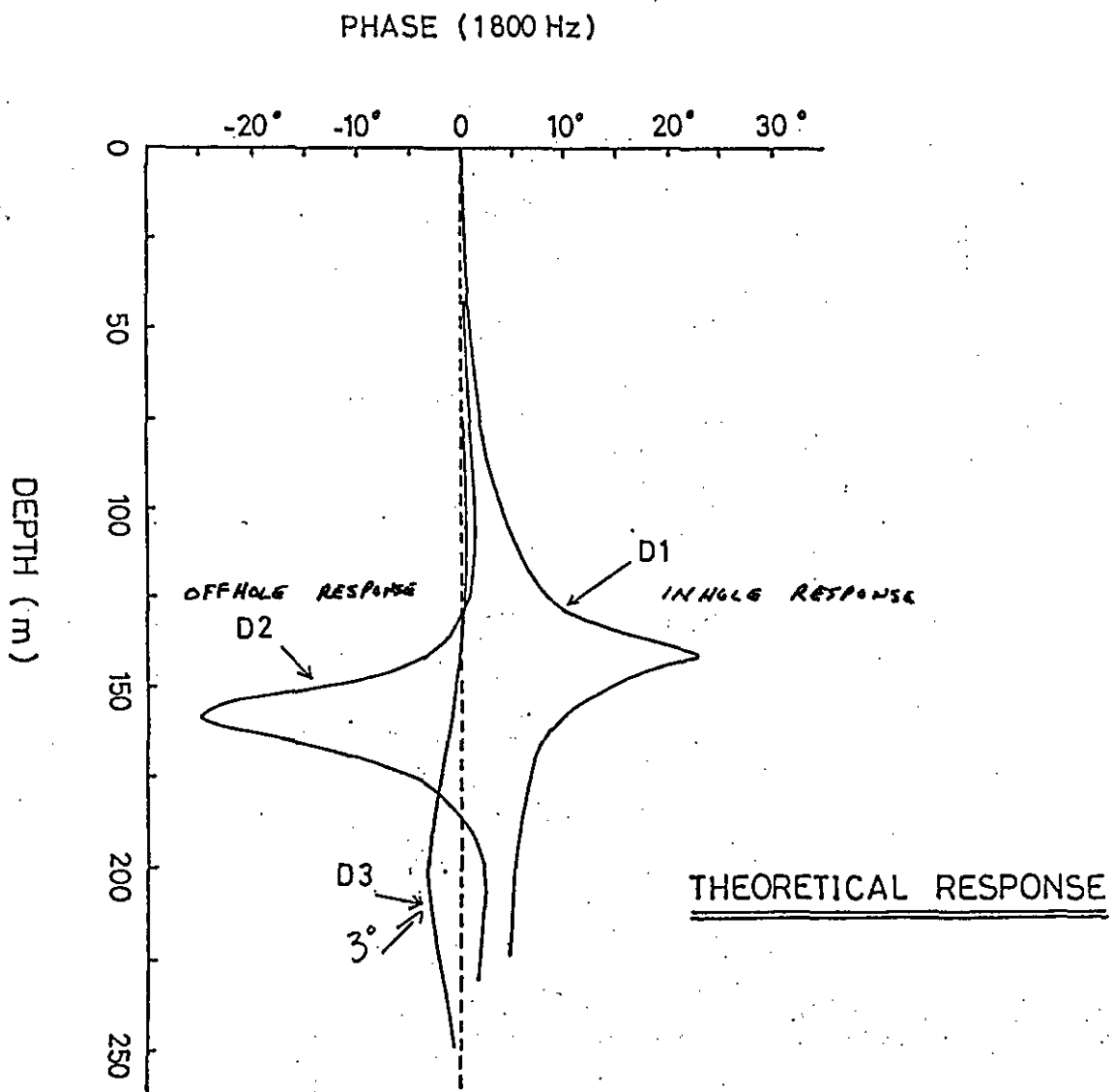
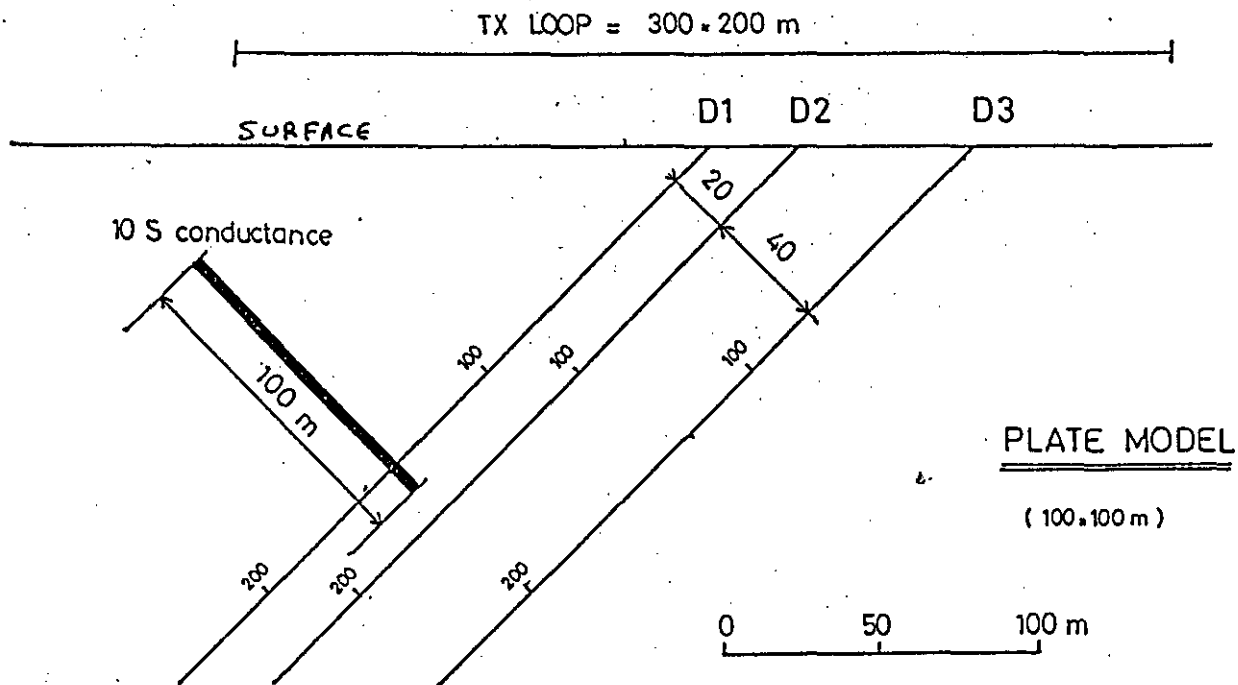


Figure 2: Sketch of the REMI system, a surface-to-borehole one-axis frequency EM system.



## DISCUSSION OF THE DATA

The Paul-Mike claim group is in most part overlain by a thick sequence of unconsolidated sand, silt and gravel, which totally obscures the local geology. The low resistivity over the western two thirds of the property is ample evidence of this overburden.

The Fort Steele formation, which is thought to be the stratigraphic equivalent to the lower and middle Aldridge formation, is known to outcrop in the rugged topography found on the extreme east side of the present grid. This formation has a moderate west dip, therefore should underlie much of the survey area.

The very high resistivities, Fig. #4, (several thousand ohm-meters) encountered along the extreme east margin of the survey grid, are probably related to the outcropping northwest striking Fort Steele formation, predominantly large massive quartzite units, although some coarse grained dioritic intrusive rocks were also observed in the field. The large high resistivity zone does attenuate to the northeast, which may indicate an increase in the siltstone component of the Fort Steele formation in that direction. The very high resistivities to the southeast may in part be due to intrusive rocks dipping beneath the grid and underlying the southwest corner of the grid at great depth.

A minor 2mV/V (Fig. #4) increase in the I.P. response along the east flank of the grid does correspond with the abovementioned high resistivity zone. This increase however is typical of the normal background response over these outcropping rock types.

The moderate west dip proposed for the Fort Steele formation can be observed in the resistivity contour patterns along the west flank of the north-south striking high resistivity zone, i.e. in the north central part of the grid at approx. 2500E, where the contour lines are much more open than further to the south. The contour gradient gives us some idea of the local dip, which may be approx. 45 degrees to west at the north end and steepening again to the west at the south end of the grid.

There is some weak evidence of a deeply buried east-west striking bedrock ridge, occurring in the centre of the grid at approx. 2500S.

The large line separation hampers the resolution of any relatively small features.

The small area of higher resistivity observed (500E, 100S) in the extreme northwest corner of the grid suggests that the bedrock is not as deep there and may actually outcrop further to the northwest of the present grid.

The self potential survey (Fig. #6) suggests a possible oxidation reduction boundary (probably related to a major fault), striking north northeast across the grid from approx. 1350E, 5200S, to 2800E, 100S.

From approx. 2400S to 1100S, there is a very prominent east-west oriented self potential low that probably represents the Lewis Creek fault zone. Note that the course of Lewis Creek follows this proposed fault (located at 2250S) only on the west side of the grid. It is also probable that a second fault parallel to the Lewis Creek fault, occurs 800 meters to the north. Further to the northeast, Lewis Creek appears to closely follow the proposed NNE trending oxidation reduction boundary.

The proposed location of the Lewis Creek fault, when considered in conjunction with the apparent oxidation reduction boundary mentioned above, points to major fault intersections in the vicinity of 2250E and 2250S. This is also the area of the largest negative self potential response and also interestingly coincides with an area of broad circular shaped low I.P. response. This coincidence could result from extensive alteration of the bedrock due to localized increases in porosity and permeability. The exploration significance of this is the possible identification of an alteration centre along an exhalative horizon. Diamond drill hole 88-1 lies just to the north of this area.

The induced polarization response over the grid shows a weak discontinuous I.P. response across the grid at approx. 1200E. The discontinuous nature of this response could be due to extensive faulting of a relatively narrow exhalative horizon that manifests itself best in the southwest quadrant of the grid.

The very broad area of increased I.P. response (approx. 2.5 mv/V above background) that occurs in the southwest quadrant of the grid, Fig. #4, is a very interesting statistical feature, since (a) all of the available data suggests that this should be an area of very thick overburden cover, which would attenuate a strong I.P. response originating from the bedrock; (b) the postulated oxidation reduction boundary and exhalative zone pass through the centre of this anomalous I.P. area, and (c) there is absolutely no cultural interference in this area. The available evidence at this time suggests a deeply buried large polarizable target occurs in the southwest quadrant of the grid, probably centered at 1250E, 4800S.

The borehole EM (DDH 88-1) data, while interesting, is not sufficient (only 27 meters) to make any significant interpretation, other than to say the hole bottoms in a relatively resistive bedrock. If the hole had managed to penetrate 100 meters of the bedrock, then much more could be said of the exploration significance of the area immediately surrounding the hole. The limited amount of data makes any attempt at interpretation a tenuous exercise.

## CONCLUSIONS AND RECOMMENDATIONS

The surveys described in this report have attempted to push back the depth limitations of conventional mineral exploration techniques. A large weak I.P. anomaly of an amplitude predicted by modelling (of a deep, flat lying sulphide horizon), has been outlined in the southwest corner of the grid. The possible identification of an oxidation reduction boundary along a proposed exhalative fault system, presents an interesting exploration scenario.

The I.P. anomaly mentioned above will require more geophysical exploration work to further define its depth, thickness and areal extent.


A series of Induced Polarization and Resistivity depth soundings, interpreted through simultaneous computer inversion of the I.P. and Resistivity data, could spatially define the limits of this anomaly prior to drilling, i.e. a layered earth solution could be obtained for the area.

C.S.A.M.T. surveying could also help in identifying a deep conductive layer, but should be done in conjunction with further I.P./Resistivity work.

Alternatively, one could drill test this anomaly without any further geophysics. However drilling should be done to a vertical depth of 700 meters, to ensure the holes pass through the area investigated by the surface geophysics. Borehole electromagnetic surveying may ultimately be required.


This report has been written largely from a geophysical point of view. Clearly much remains to be done to incorporate more of the latest geological and geochemical evaluations into the decision to conduct further drill tests of the Paul-Mike claim group.

The geophysical exploration approach to this very difficult exploration problem, was sound and serves as an example of the type of survey necessary to explore deep within the very important Aldridge Formation.

  
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Grant A. Hendrickson, P.Geo.

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Grant A. Hendrickson, P.Geo.




STATEMENT OF QUALIFICATIONS

Grant A. Hendrickson.

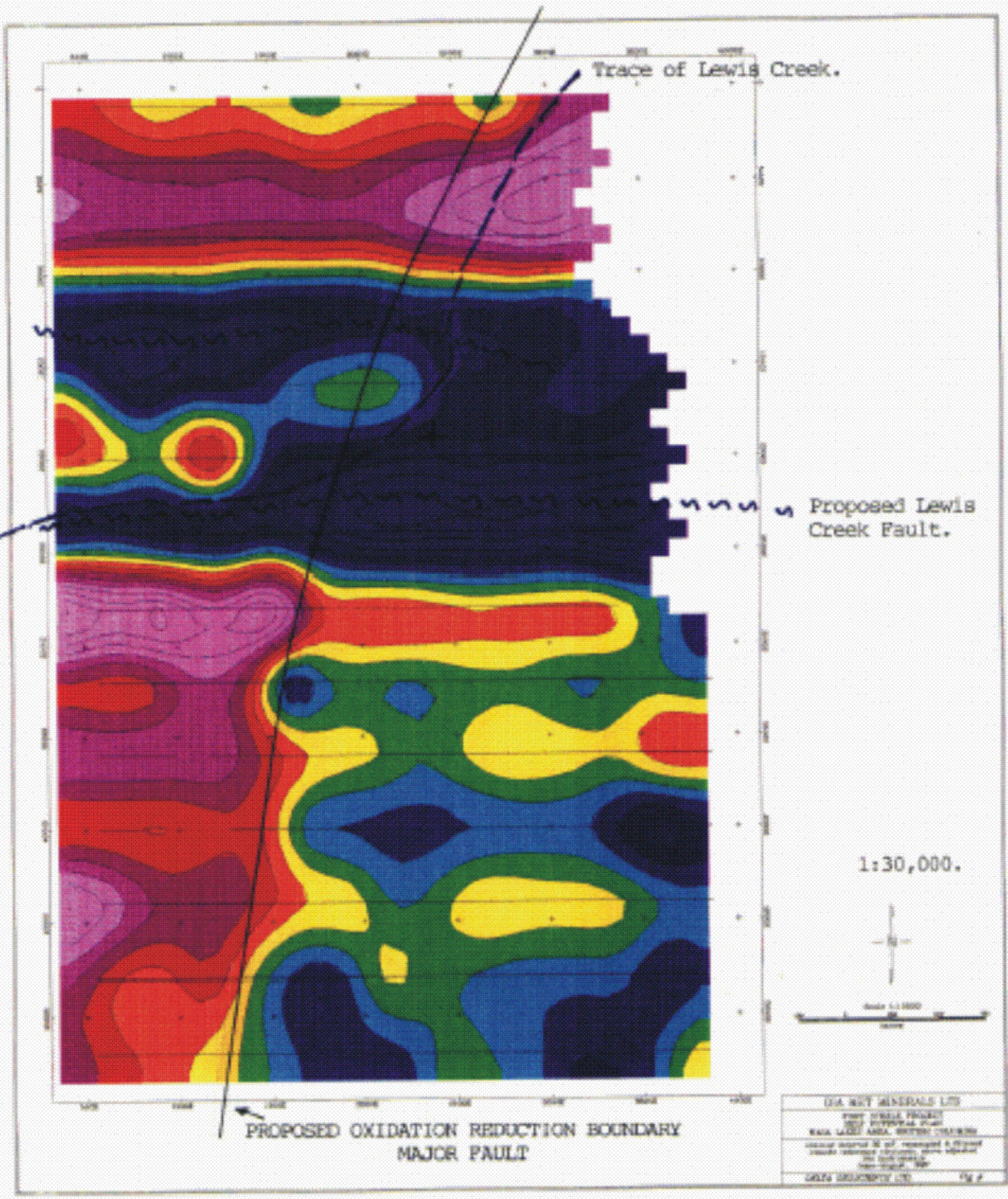
- B.Science, University of British Columbia, Canada, 1971. Geophysics option.
- For the past 26 years, I have been actively involved in mineral exploration projects throughout Canada, the United States, Europe and Central and South America.
- Registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Canada.
- Registered as a Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, Canada.
- Active member of the Society of Exploration Geophysicists, European Association of Geoscientists and Engineers, and the British Columbia Geophysical Society.

Dated at Delta, British Columbia, Canada, this 12 day of  
DEC, 1997.

  
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Grant A. Hendrickson, P.Geo.

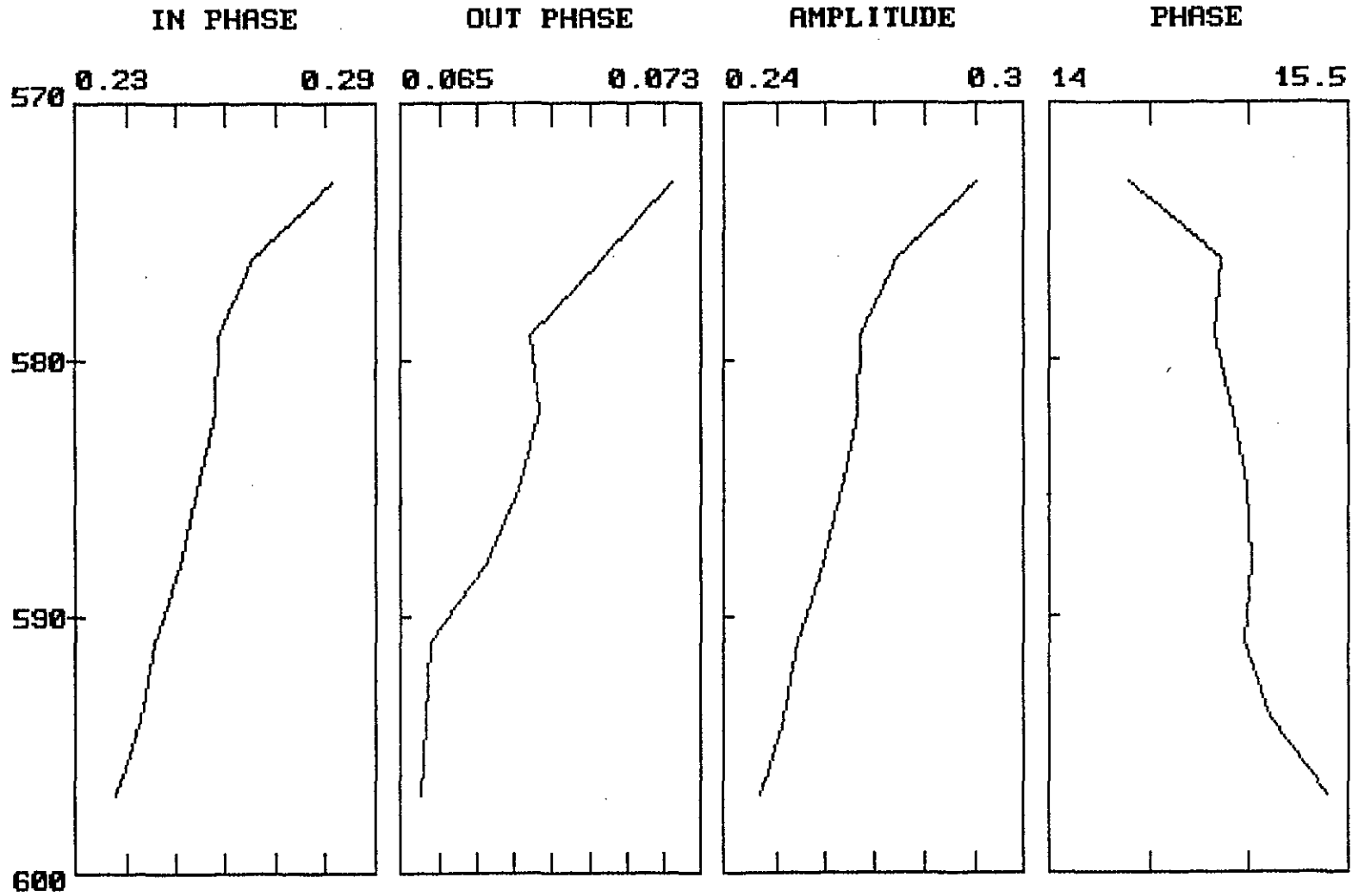






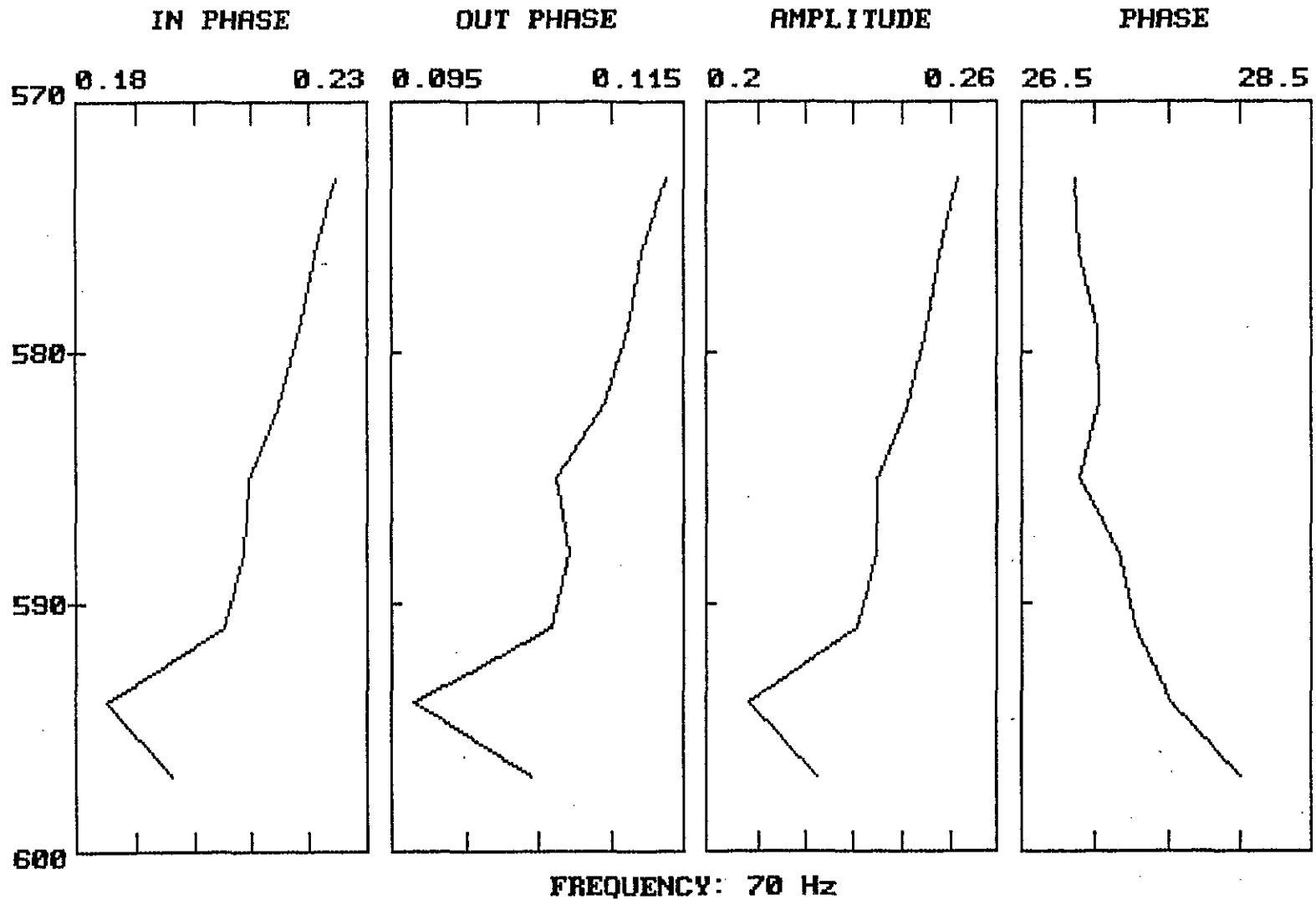


DIA MET DDH 88-1



FREQUENCY: 27.49 Hz

DIA MET DDH 88-1



FREQUENCY: 70 Hz

FIG. #9.

DIA MET DDH 88-1

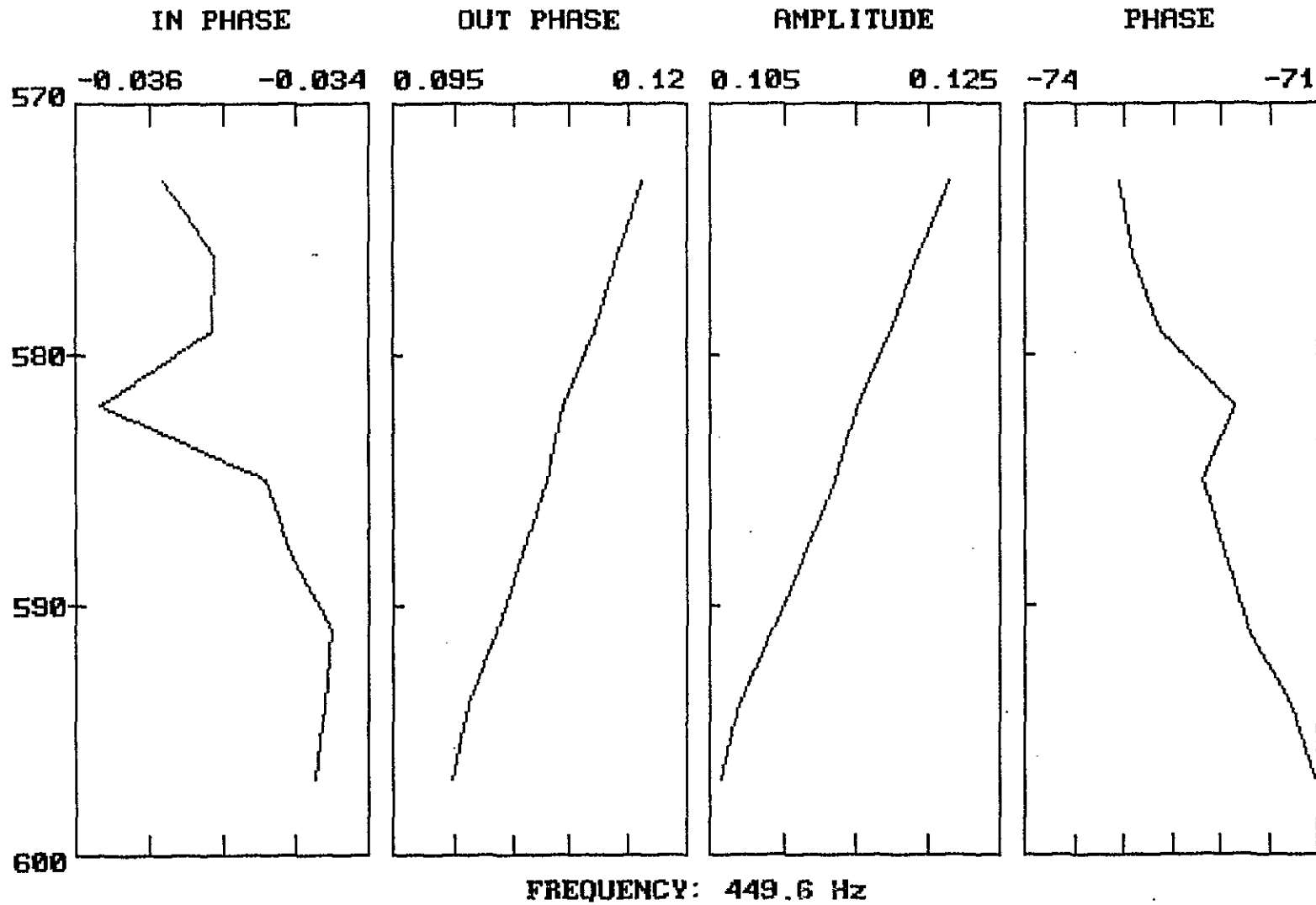


FIG. #10.



DIA MET DDH 88-1

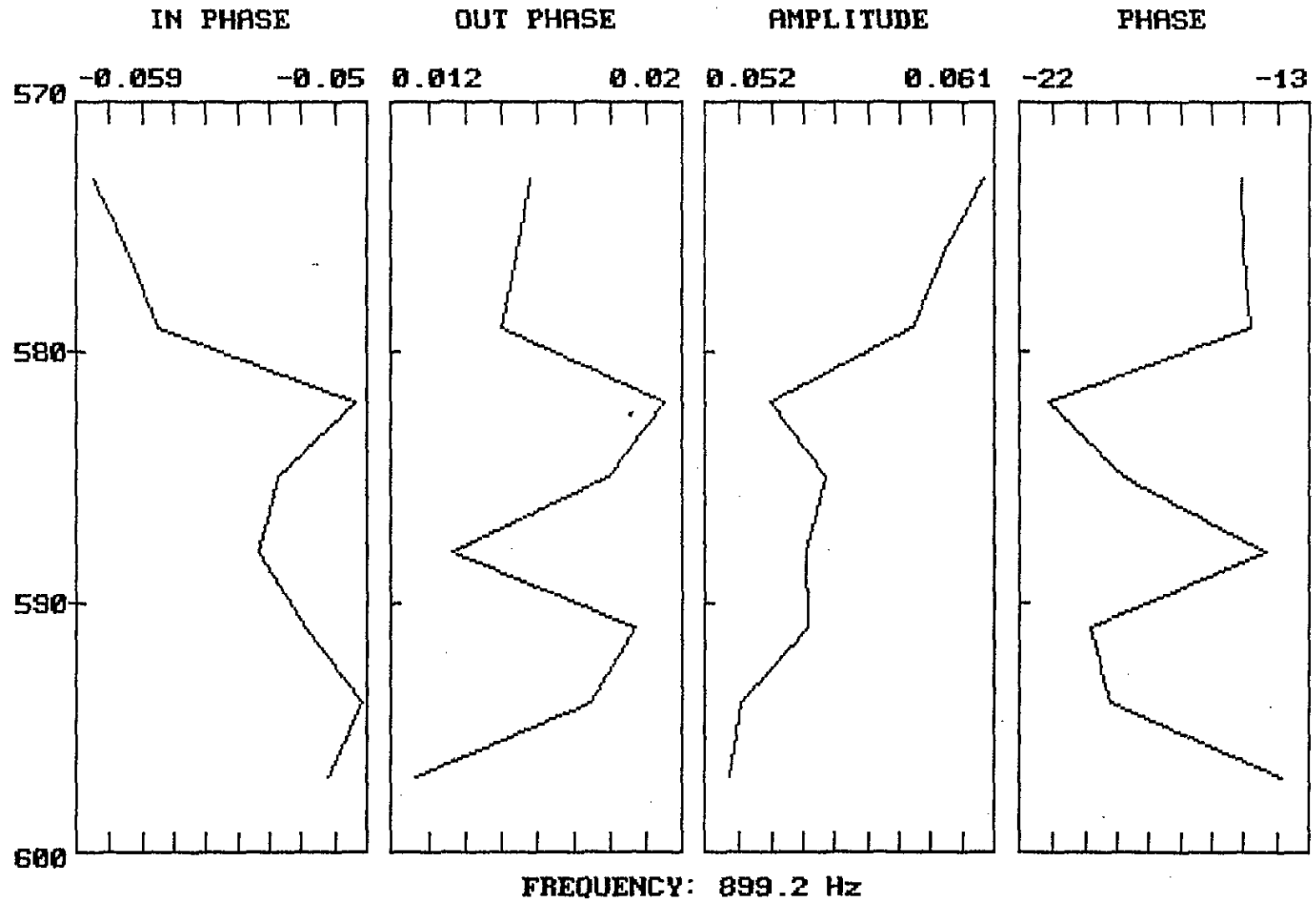


FIG. #11.

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Mineral Exploration Geophysics  
Consulting and Contracting

852 Tsawwassen Beach Rd.  
Delta, B.C., Canada V4M 2J3  
Tel: (604) 943-0983  
Fax: (604) 943-3907



June 30, 1997.

Inv. M.012.  
GST.#101333748.

Dia Met Minerals Ltd.,  
1695 Powick Road,  
Kelowna, B.C.,  
V1X 4L1.

Attn: Mr. Ray Ashley,  
Mr. Wayne Mitchell.

Geophysical Work at Paul-Mike Claims, Fort Steele, B.C.  
Period June 21 - June 30, 1997.

-----

June 21 - 29: 4 Man Crew.  
9 Survey days @ \$1,700.00/day.... \$15,300.00.

June 30: 2 man Crew.  
1 Survey day @ \$1,350.00/day..... \$ 1,350.00.

-----  
\$16,650.00.  
G.S.T... \$ 1,165.00.  
-----  
\$17,815.00.  
-----

Note: Room and Board will be charged at completion of survey.

POSTED  
28-14

O.K.  
*W Mitchell*

Goods Received	<i>BA</i>
Clerical Checked	<i>BA</i>
Payment Approved	<i>BA</i>
Charge to	Claims exploration
G/L Code	355 1,165.00 235-10 16,650.00

RECEIVED 11 1 1997

**DELTA GEOSCIENCE LTD.**

Mineral Exploration Geophysics  
Consulting and Contracting

852 Tsawwassen Beach Rd.  
Delta, B.C., Canada V4M 2J3  
Tel: (604) 943-0983  
Fax: (604) 943-3907



July 15, 1997.

Inv. M.015.  
GST.#101333748.

INVOICE

Dia Met Minerals Ltd.,  
1695 Powick Road,  
Kelowna, B.C.,  
V1X 4L1.

Attn: Mr. Ray Ashley,  
Mr. Wayne Mitchell.

Geophysical Work at Paul-Mike Claims, Fort Steele, B.C.  
Period July 1 - July 15, 1997.

-----

July 1 - 15: 2 Man Crew.  
15 Survey day @ \$1,350.00/day..... \$20,250.00.

Room and Board up to June 30 (4 men)..... \$ 2,717.53.

-----  
\$22,967.53.  
G.S.T... \$ 1,607.73.  
-----  
\$24,575.26.  
-----

**POSTED**  
28-18

Goods Received	<i>[Signature]</i>
Clerical Checked	<i>PJA</i>
Payment Approved	<i>[Signature]</i>
Charge to	Claims & expln. (Paul/Mike)
G/L Code	355 235-10

1,607.73  
22,967.53

**DELTA GEOSCIENCE LTD.**

Mineral Exploration Geophysics  
Consulting and Contracting

852 Tsawwassen Beach Rd.  
Delta, B.C., Canada V4M 2J3  
Tel: (604) 943-0983  
Fax: (604) 943-3907



August 15, 1997.

Inv. M.018.  
GST.#101333748.

INVOICE

Dia Met Minerals Ltd.,  
1695 Powick Road,  
Kelowna, B.C.,  
V1X 4L1.

Attn: Mr. Ray Ashley,  
Mr. Wayne Mitchell.

Geophysical Work at Paul-Mike Claims, Fort Steele, B.C.  
Period July 16, August 6-15, 1997

-----

8 Survey days I.P/Resistivity/S.P: 4 man crew @ \$1,700.00/day.....	\$ 13,600.00.
1 Survey day I.P/Resistivity/S.P: 3 man crew @ \$1,525.00/day.....	\$ 1,525.00.
1 Survey day Borehole E.M. @ \$1,200.00/day.....	\$ 1,200.00.
Room & Board July 1-16: 2 men.....	\$ 2,210.19.
Room & Board August 6-15: 5 men.....	\$ 2,755.11.
	-----
	\$ 21,290.30 ✓
G.S.T.....	\$ 1,490.32 ✓
	-----
	\$ 22,780.62 ✓
	-----

Goods Received	<i>[Signature]</i>
Clerical Checked	<i>[Signature]</i>
Payment Approved	<i>[Signature]</i>
Charge to	Claims & Exp Paul Mike
G/L Code	235-10 @ 21,290.30 355 @ 1,490.32

**POSTED**  
2-1

**PAID**  
08/15/97 #320

RECEIVED AUG 29 1997

DELTA GEOSCIENCE LTD.

Mineral Exploration Geophysics  
Consulting and Contracting

852 Tsawwassen Beach Rd.  
Delta, B.C., Canada V4M 2J3  
Tel: (604) 943-0983  
Fax: (604) 943-3907



August 25, 1997.

Inv. M.019.  
GST.#101333748.

INVOICE

Dia Met Minerals Ltd.,  
1695 Powick Road,  
Kelowna, B.C.,  
V1X 4L1.

Attn: Mr. Ray Ashley,  
Mr. Wayne Mitchell.

Geophysical Work at Paul-Mike Claims, Fort Steele, B.C.  
Period August 16-21, 1997 - Project Completed

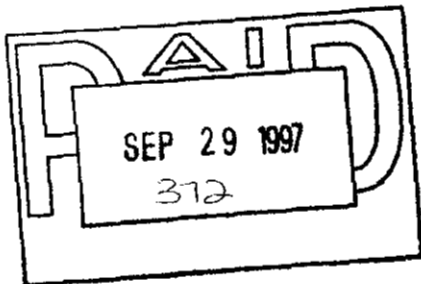
-----

3 Survey days I.P/Resistivity/S.P:  
3 man crew Aug. 16, 17, 18 @ \$1,525.00/day... \$ 4,575.00.✓

3 Survey days I.P/Resistivity/S.P:  
2 man crew Aug. 19, 20, 21 @ \$1,350.00/day... \$ 4,050.00.✓

Room & Board ..... \$ 2,044.66.

-----  
\$10,669.66.✓  
G.S.T.... \$ 746.88.✓  
-----  
\$11,416.54.✓  
-----



Goods Received	<i>SM</i>
Clerical Checked	<i>PC</i>
Payment Approved	<i>SM</i>
Charge to	<i>Paul/Mike</i>
No Code	<i>235 - 10,669.66</i>
	<i>355 - 746.88</i>



P1600-134 8625.00  
-127 2044.66

**DELTA GEOSCIENCE LTD.**

Mineral Exploration Geophysics  
Consulting and Contracting

852 Tsawwassen Beach Rd.  
Delta, B.C., Canada V4M 2J3  
Tel: (604) 943-0983  
Fax: (604) 943-3907



**RECEIVED** OCT 22 1997

October 17, 1997.

Inv. M.028.  
GST.#101333748.

INVOICE

Dia Met Minerals Ltd.,  
1695 Powick Road,  
Kelowna, B.C.,  
V1X 4L1.

Attn: Mr. Ray Ashley.

Fort Steele Project  
-----

Preparation of Profile Map..... \$ 50.00.

Air Express Courier Charges..... \$ 39.05.

G.S.T..... \$ 89.05 ✓  
\$ 6.23 ✓

-----  
\$ 95.28. ✓  
-----

**ENTERED**  
11/4/97

**POSTED**  
95-9

**PAID**  
NOV 18 1997  
524

Goods Received	<i>RM</i>
Clerical Checked	<i>RE</i>
Payment Approved	<i>RM</i>
Charge to	<i>Paul/Mike</i>
G/L Code	<i>235-10 355</i>

89.05  
6.23

GEOCHEM SURVEY

STATEMENT OF COSTS

Gridding & Collection	
90 man days @ \$175.00/day	\$15,750.00
crew: Dennis Wager	
Wayne Mitchell	
Robert Schultz	
Tod Mayer	
Field Supplies	\$1324.40
Travel, Truck rental, Fuel	\$4133.98
Accomodation & Food	\$10,344.16
Communications	\$1992.90
Shipping	\$325.43
Equipment Rental	\$690.02
 Smee and Associates	
Data compilation and reporting	
12 days @\$500.00/day	\$8,000.00
 TOTAL FIELD	\$42,560.89
 ASSAY & LAB	\$43,658.60
 TOTAL GEOCHEM SURVEY	\$86,219.49

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

25.63

FMC# 106717  
FOR:  
DIAMET LTD.  
1695 POWICK RD  
KELOWNA BC V1Y 4L1

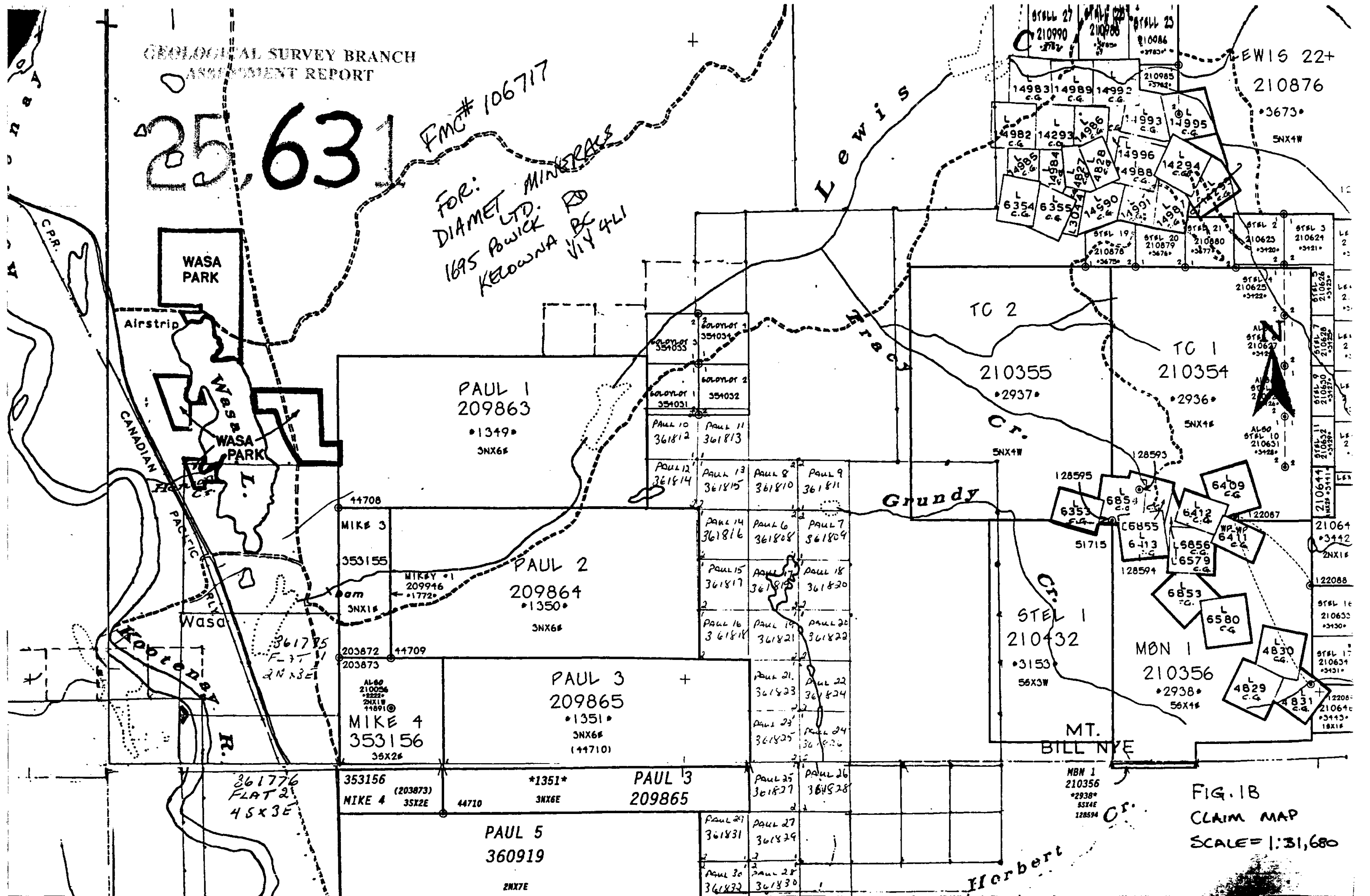
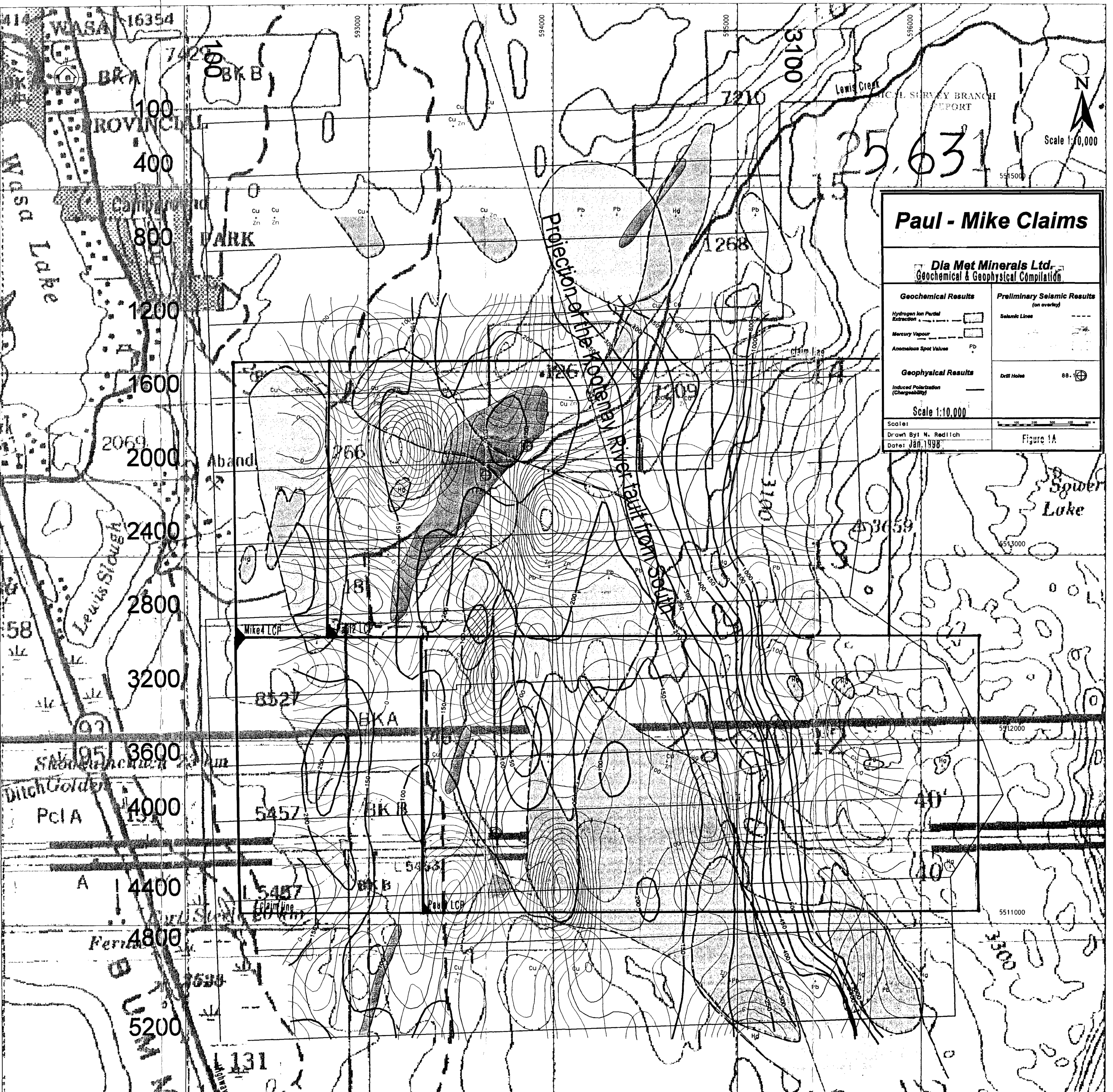


FIG. 1B  
CLAIM MAP  
SCALE = 1:31,680





MINERAL SURVEY BRANCH  
REPORT



25.631

### Paul - Mike Claims

**Dia Met Minerals Ltd.**  
Geochemical & Geophysical Compilation

**Geochemical Results**

- Hydrogen Ion Partial Extraction
- Mercury Vapour
- Anomalous Spot Values Pb

**Geophysical Results**

- Induced Polarization (Chargeability)

**Preliminary Seismic Results**  
(on overlay)

- Seismic Lines
- Drill Holes 88.

Scale 1:10,000

Scale:  
Drawn By: N. Redlich  
Date: Jan. 1998

Figure 1A