

MAY 13 1988

In Reply Refer To:
Docket: 50-382

Louisiana Power & Light Company
ATTN: J. G. Dewease, Senior Vice President
Nuclear Operations
317 Baronne Street
New Orleans, Louisiana 70160

Gentlemen:

Attached is a copy of a report dated February 17, 1988, from the Federal Emergency Agency (FEMA) evaluation of the Waterford 3 Steam Electric Station alert and notification system. The FEMA representatives conducted a system engineering design review and a telephone survey of persons living in the vicinity of the Waterford 3 site. The attached document titled "Waterford 3 Steam Electric Station Site Specific Offsite Radiological Emergency Preparedness Alert And Notification System Quality Assurance Verification " concluded that there was reasonable assurance that the system was adequate to promptly alert and notify the public in the event of a radiological emergency at the site. The Honorable Buddy Roemer, Governor of Louisiana, has been advised of the approval.

If you have any further questions, please contact this office.

Sincerely,

Original Signed By:

L. J. CALLAN

L. J. Callan, Director
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cc w/o report:
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CAHackney:cd
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C:NMEPB *WLF*
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Louisiana Power & Light Company

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Federal Emergency Management Agency

Washington, D.C. 20472

(Murley)
Letter only: Stello
Taylor
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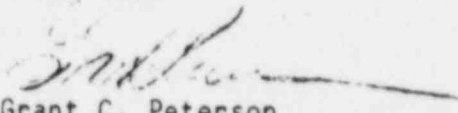
Mr. Victor Stello, Jr.
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Stello:

The Federal Emergency Management Agency (FEMA) has completed an analysis of the prompt alert and notification system for the Waterford III Steam Electric Station located in Taft, Louisiana. This review has been completed pursuant to Title 44 CFR, Part 350; selected evaluative criteria and Appendix 3 in NUREG-0654/FEMA-REP-1, Revision 1; and FEMA-REP-10, the "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants." The enclosed report, entitled "Waterford III Steam Electric Station Site-Specific Offsite Radiological Emergency Preparedness Alert and Notification System Quality Assurance Verification," summarizes the engineering design review; incorporates the results of the telephone survey of the public conducted immediately following full activation of the alert and notification system on April 15, 1987; and confirms the adequacy of the applicable evaluative criteria from NUREG-0654/FEMA-REP-1, Revision 1, and FEMA-REP-10.

Based on the engineering design review and the results of the public telephone survey, FEMA has determined that the alert and notification system installed around the Waterford III Steam Electric Station satisfies the requirements of NUREG-0654/FEMA-REP-1, Revision 1, and FEMA-REP-10. Therefore, there is now reasonable assurance that the system is adequate to promptly alert and notify the public in the event of a radiological emergency at the site. The caveat on the alert and notification system contained in the Title 44 CFR, Part 350, approval dated July 15, 1985, is now removed. The Honorable Duddy Roemer, Governor of Louisiana, has been advised of this approval.

Sincerely,


Grant C. Peterson
Associate Director
State and Local Programs
and Support

Enclosure

8804

WATERFORD 3 STEAM ELECTRIC STATION
SITE-SPECIFIC OFFSITE RADIOLOGICAL
EMERGENCY PREPAREDNESS ALERT
AND NOTIFICATION SYSTEM QUALITY
ASSURANCE VERIFICATION

Prepared for

Federal Emergency Management Agency
Washington, D.C. 20472
Under Contract No. EMW-83-C-1217

February 17, 1988

800-4270020
32488

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Waterford 3 Steam Electric Station
Site-Specific Offsite Radiological
Emergency Preparedness Alert And Notification
System Quality Assurance Verification

State Of Louisiana

St. Charles Parish
St. John the Baptist Parish

I. INTRODUCTION

A. Identification

1. Site Information

The Waterford 3 Steam Electric Station is located on the west bank of the Mississippi River approximately 50 miles east-southeast of Baton Rouge, Louisiana and 25 miles west-northwest of New Orleans, Louisiana. The station is situated in the northwest portion of St. Charles Parish, Louisiana, near the towns of Killona and Taft.¹

The Mississippi River is the most prominent natural feature of the region. Other important natural features include Lac des Allemands (located approximately 5.5 miles southwest of the site) and Lake Pontchartrain (located approximately 7 miles northwest of the site). The land surrounding the site slopes gently from its high points near the river to the extensive wetlands located 1.5 to 2.5 miles inland from the river. As a result, most of the man-made features are located on the narrow strip of dry land between the Mississippi River and the wetlands.¹

A number of large industries are located along the Mississippi River both north and south of the Waterford 3 Steam Electric Station as far as Baton Rouge and New Orleans. These industries include oil refineries, oil storage facilities, petrochemical manufacturers, grain elevators, a sugar producer, and a paper company.¹

There are no state parks within 10 miles of the Waterford 3 Steam Electric Station.¹

2. Governments Within The 10-Mile Emergency Planning Zone

The emergency planning zone (EPZ) for the Waterford 3 Steam Electric Station is irregularly-shaped, approximating a 10-mile-radius circle with the station as the center point. That portion of Lafourche Parish which lies within 10 miles of the plant (in the south-southwest portion of the 10-mile circle) has been excluded due to the fact that no permanent population resides in this area. The southeast and northwest boundaries of the 10-mile circle have been extended to include all of the communities of Mimosa Park and Garyville, respectively.⁹ With the exception of these three areas, the perimeter of the EPZ is a perfect circle. The Waterford 3 Steam Electric Station EPZ is located entirely within St. Charles and St. John the Baptist parishes and the State of Louisiana.

According to 1980 census data, the total estimated populations within the Waterford 3 Steam Electric Station EPZ was 50,970 persons. The larger towns within the Waterford 3 Steam Electric Station EPZ

include: Reserve (6 miles northwest of the station, 1980 census population 7,288 persons); Luling (7 miles southeast, 4,006 persons); Mimosa Park (9 miles southeast, 3,737 persons); Norco (2 miles east, 4,416 persons); Hahnville (4 miles east-southeast, 2,947 persons); and Garyville (9 miles northwest, 2,856 persons).^{1,2}

B. Scope Of Review

1. Emergency Plans For Offsite Response Organizations

All appropriate offsite radiological emergency plans and preparedness site-specific to the Waterford 3 Steam Electric Station have been reviewed by the Federal Emergency Management Agency (FEMA) Region VI and the Regional Assistance Committee.

2. Alert And Notification System Design Report

The physical means established for alerting the public within the Waterford 3 Steam Electric Station EP2 are documented in the following:

- . Louisiana Power and Light Company, "Final Report, Alert/Notification System For Waterford 3 Steam Electric Station," June 1985;³ supplemented by a
- . Letter to Gary Jones, Technological Hazards Branch, Federal Emergency Management Agency, Region VI, signed by David A. Zaloudek, Emergency Planning Supervisor, Office of Air Quality and Nuclear Energy, Louisiana Department of Environmental Quality, dated July 25, 1986 (with enclosures and attachments).⁹

These documents are hereinafter collectively referred to as the Design Report.

3. FEMA Evaluation Findings

The offsite radiological emergency plans and preparedness site-specific to the Waterford 3 Steam Electric Station received approval under Title 44 of the Code of Federal Regulations, Part 350 (44 CFR 350), conditioned upon verification of the adequacy of the public alert and notification system, as documented in the:

- . Letter to the Honorable Edwin W. Edwards, Governor of Louisiana, signed by Louis O. Giuffrida, Director, FEMA, dated July 15, 1985;⁴ and
- . Letter to William J. Dircks, Executive Director for Operations, U.S. Nuclear Regulatory Commission, signed by Samuel W. Speck, Associate Director, State and Local Programs and Support, FEMA, dated July 15, 1985.⁵

II. FINDINGS FOR EVALUATION CRITERION E.6

The Design Report describing the alert and notification system for the Waterford 3 Steam Electric Station was reviewed against evaluation criterion E.6 and Appendix 3 of NUREG-0654/FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (hereinafter referred to as NUREG-0654/FEMA-REP-1, Rev. 1). This evaluation criterion states:

Each organization shall establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume exposure pathway Emergency Planning Zone. (See Appendix 3.) It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement. It shall be the responsibility of the State and local governments to activate such a system.⁶

The bases for review against this evaluation criterion were the corresponding acceptance criteria of FEMA-REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants"⁷ (hereinafter referred to as FEMA-REP-10). This quality assurance verification review was performed to make a determination of alert and notification system adequacy prior to conducting a demonstration of this system for the Waterford 3 Steam Electric Station on April 15, 1987.

Based upon this quality assurance verification review and public survey results, International Energy Associates Limited concluded that the design and implementation of the alert and notification system for the Waterford 3 Steam Electric Station and its supporting procedures conform sufficiently to the acceptance criteria, as stated in FEMA-REP-10, for evaluation criterion E.6 of NUREG-0654/

FEMA-REP-1, Rev. 1, to support a FEMA finding that the alert and notification system is adequate.

This portion of the quality assurance verification review evaluates the Waterford 3 Steam Electric Station's alert and notification system against FEMA-REP-10 acceptance criteria in the following areas: the physical means of alerting and the special alerting methods.

A. Administrative Means Of Alerting (E.6.1, FEMA-REP-10)

The administrative means of alerting for the Waterford 3 Steam Electric Station were evaluated by FEMA and the Regional Assistance Committee in their determination of adequacy under 44 CFR 350.^{4,5}

B. Physical Means Of Alerting (E.6.2, FEMA-REP-10)

A description of the physical means of alerting for the Waterford 3 Steam Electric Station is contained in Section E.6 of the Design Report and additional data are contained in the attachments to the Design Report. The primary system is comprised of fixed sirens augmented by the St. John portable stationary siren. All other alerting mechanisms used as part of the primary alerting system are used in connections with special facilities or the transient population (helicopters fitted with mounted alerting devices, a telephone hot-line, a radio system, automatic telephone dialing devices, and other special means of alerting.)

1. Sirens (E.6.2.1, FEMA-REP-10)

The Waterford 3 Steam Electric Station siren warning system was evaluated in accordance with the design evaluation methodology detailed in "Analysis of Siren

System Pilot Test."⁸ The system consists of 57 WS-3000 fixed rotating sirens rated at 124 dBC at 100 ft, one WS-2000 fixed siren rated at 106 dBC, and one WS-2000 portable stationary siren rated at 110 dBC. All sirens are manufactured by Whelen Engineering Corporation. Relevant technical information about the fixed siren system is contained in Attachments 5 through 8 and Attachments 18 and 19 of the Design Report. The siren system, as originally submitted in the Design Report, consisted of 52 fixed sirens and one mobile siren. However, supplemental data provided by the licensee (Reference 9 of this report) reflects the addition of 6 fixed sirens to the siren system and the redesignation of the mobile siren as a portable stationary siren.

Although the WS-3000 siren was rated by the manufacturer at 124 dBC at 100 ft, an on-site field measurement program of 13 sirens conducted by the licensee reported overall maximums of 118 to 124 dBC, with an average of 121.3 dBC and a fundamental tone frequency ranging from 770 to 830 hertz (Hz). As reported (Section 4.3 of Attachment 18 of the Design Report) this output is lower than the siren design specification. Additionally, the operating siren frequency is higher and less effective for far-field sound propagation. Since actual field measurements supercede the manufacturer's claimed rating, the value of 121.3 dBC at 100 ft is adopted for this evaluation of the fixed siren system.

One of the two WS-2000 sirens incorporated in the Waterford 3 Steam Electric Station siren alerting system is, in fact, a portable stationary siren. This non-rotating siren is equipped with a collapsible

pole and is mounted on a trailer that will be towed by a Civil Defense vehicle. The siren will not be operated while it is being towed; instead, it will be transported to its predetermined activation point, set up, and sounded (see Reference 9 of this report). The Design Report (Section 3.1.3) states that based upon sound measurements conducted by the licensee, a rating of 110 dBC at 100 ft was chosen.

The Design Report states in section 4.3 that the other WS-2000 siren in the Waterford 3 siren alerting system is a fixed siren rated at 106 dBC at 100 ft by the licensee.

Routine siren testing procedures and operability for the Waterford 3 Steam Electric Station have been reviewed and determined to satisfy FEMA-REP-10 requirements.

The evaluation of the siren system design calculation procedure was conducted by:

- . Verifying the licensee's computer modeling results as presented in the Design Report against the 10 dB loss per distance doubled attenuation rate in the absence of special conditions; and
- . Ascertaining the adequacy of the licensee's computer-predictive coverage in the presence of site-specific topographical and meteorological conditions through comparisons of the licensee's results with Outdoor Sound Propagation Model (OSPM)⁸ results for specific sirens.

The Design Report states that the Waterford 3 Steam Electric Station siren warning system design takes into consideration meteorological and topographical factors and land surface conditions that affect the propagation of sound generated by each siren. The computer model utilized to design the system, as described, calculates sound attenuation with distance due to hemispherical wave divergence, atmospheric absorption, absorption due to vegetation and other types of ground cover, propagation of sound over water, propagation of sound through urban and suburban areas, upwind sound shadow, and topographical barriers. The Design Report does not, however, provide any discussion of the assumptions used, the methodologies employed, or how the final sound contours were generated; in particular, the 70 dBC and 60 dBC contours as shown on Maps 2 and 3 of the Design Report.

The Design Report presents in Figures 23 through 25 and in Appendix 5 of Attachment 18 some limited and unqualified results of field tests conducted to substantiate the validity of the computer predictions. Since the field measurements were made in A-weighted sound pressure levels (dBA) and not in dBC or in the one-third octave band containing the dominant tones of the sirens (as required by FEMA-REP-10), and since unspecified adjustments were made for dBC to dBA conversions and for wind, temperature, and relative humidity corrections, these results were not used in this evaluation. Therefore, this quality assurance verification review is based on an evaluation of the presented predictions of acoustical coverage (the

siren contour map [Map 2] and Appendix 6 of Attachment 18 of the Design Report) and seeks to ascertain whether the computer model used in the design adequately accounts for site-specific terrain and weather conditions and whether the siren warning system does indeed meet FEMA-REP-10 acceptance criteria.

Fifteen WS-3000 sirens, representative of the site-specific topographical conditions within the Waterford 3 Steam Electric Station EPZ, were selected for this quality assurance verification review. The locations of 13 of the selected sirens are depicted on the U.S. Geological Survey's Reserve quadrangle map (see Figure 1 of this report). These 15 sirens cover one of the relatively more populated areas within the Waterford 3 Steam Electric Station EPZ.

Surface weather parameters, representative of site prevailing summer daytime conditions, were used in the OSPM calculations. Appendix A of this report contains OSPM topographical profile charts, OSPM topographical input, OSPM siren sound pressure level input, OSPM meteorological input, and OSPM siren sound pressure level output for each of the 15 individual OSPM siren runs.

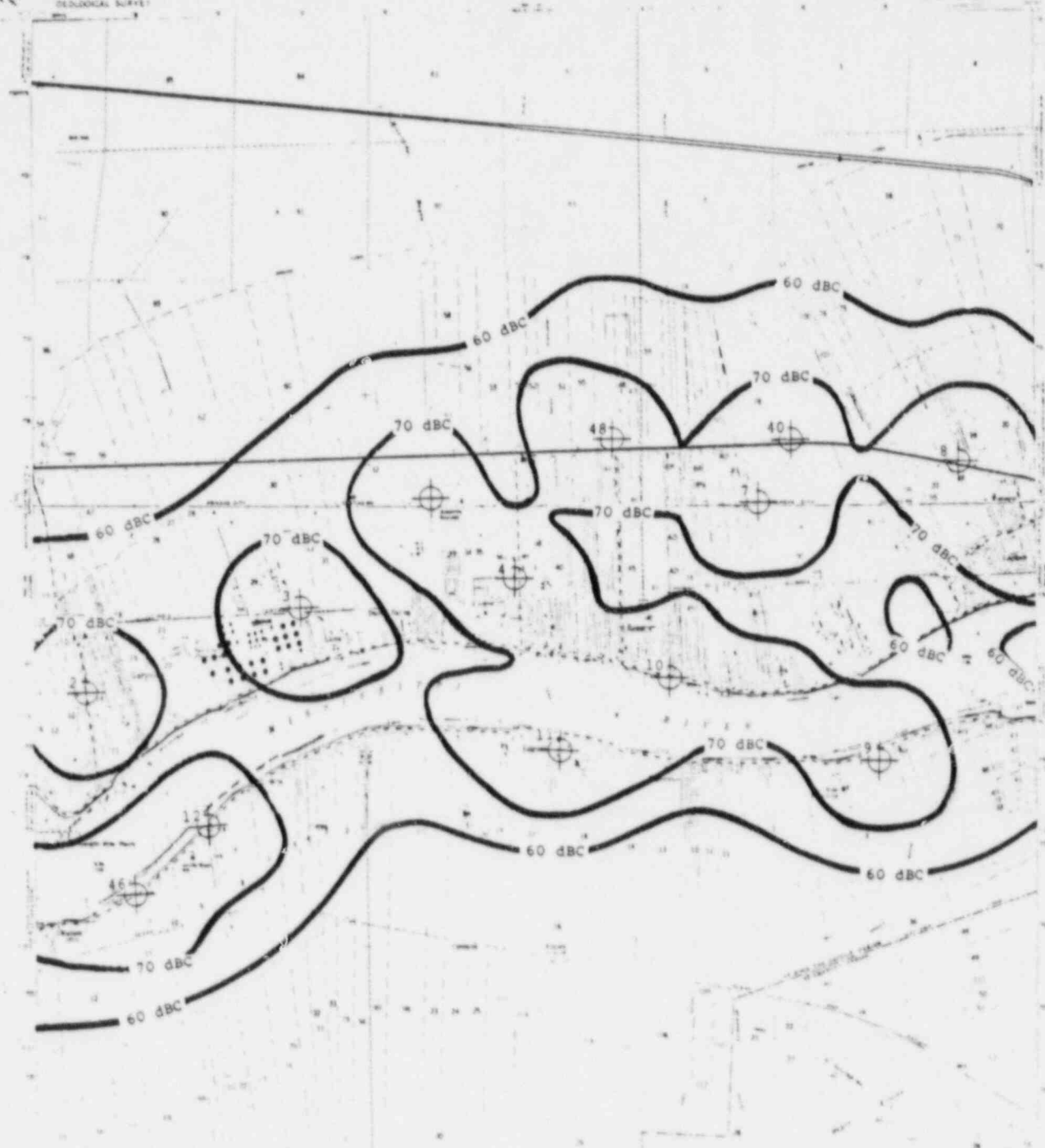
To compare the acoustical coverage estimates of OSPM with the data presented in the Design Report, each analyzed siren azimuth was classified into one of three categories according to terrain profiles: rolling (minor obstructions) and relatively flat (generally unobstructed line-of-sight) terrains, and a

750

FIGURE 1
WATERFORD SIREN CONTOUR PLOT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RESERVE QUADRANGLE
100,000
1:250,000
1:500,000



1. Contour lines are drawn at 10 dBC intervals.

2. Contour lines are drawn at 5 dBC intervals.

3. Contour lines are drawn at 1 dBC intervals.

4. Contour lines are drawn at 0.5 dBC intervals.

5. Contour lines are drawn at 0.2 dBC intervals.

6. Contour lines are drawn at 0.1 dBC intervals.

7. Contour lines are drawn at 0.05 dBC intervals.

8. Contour lines are drawn at 0.02 dBC intervals.

9. Contour lines are drawn at 0.01 dBC intervals.

10. Contour lines are drawn at 0.005 dBC intervals.

THE SURFACE SOUND LEVELS SHOWN ON THIS PLOT ARE BASED ON THE STATE OF CALIFORNIA REGULATIONS FOR SIREN SOUND LEVELS. THESE REGULATIONS REQUIRE THAT SIREN SOUND LEVELS BE MEASURED AT A POINT 100 FEET FROM THE SIREN AND AT A POINT 10 FEET FROM THE SIREN.

RESERVE, CA
100,000
1:250,000
1:500,000

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water category for those azimuths crossing expanses of the Mississippi River. In addition, a shadow zone category reflecting the influence of site weather conditions on siren sound propagation was used.

Regressions of dBC versus the logarithm of distance were performed for the WS-3000 siren data for each of the four categories. These regressions were computed utilizing both OSPM and Design Report data. The Design Report's data were taken from Appendix 6 for azimuths closely corresponding to each OSPM-analyzed azimuth. The results are depicted in Figures 2 through 6 of this report.

Figure 2 of this report shows the regression data of the Design Report's computer model prediction results for all categories characteristic of the site. The 10 dB loss per distance doubled attenuation rate is also included in Figure 2 for comparison. The Design Report's computer model predictions for these 15 sirens yield an apparent sloping rate of 15 dB loss per distance doubled within 1,000 to 10,000 ft from the siren (with 7 to 10 dB loss per distance doubled within 1,000 ft). The Design Report's results do not seem to consistently reflect the influence of site terrain conditions. As shown in Figure 2 of this report, the regression lines of the Design Report's predicted siren sound pressure levels in the upwind direction and those over water are virtually identical, and differ very slightly (within 2 dBC) with those over the two terrain categories. This is contrary to the expected behavior of a severe attenuation rate in upwind shadows, a moderate attenuation rate over rolling terrain, a decreasing rate over flat terrain, and the smallest attenuation rate over the reflecting surface of water.

FIGURE 2

COMPOSITE REGRESSION, DESIGN REPORT (WS3000 SIREN)

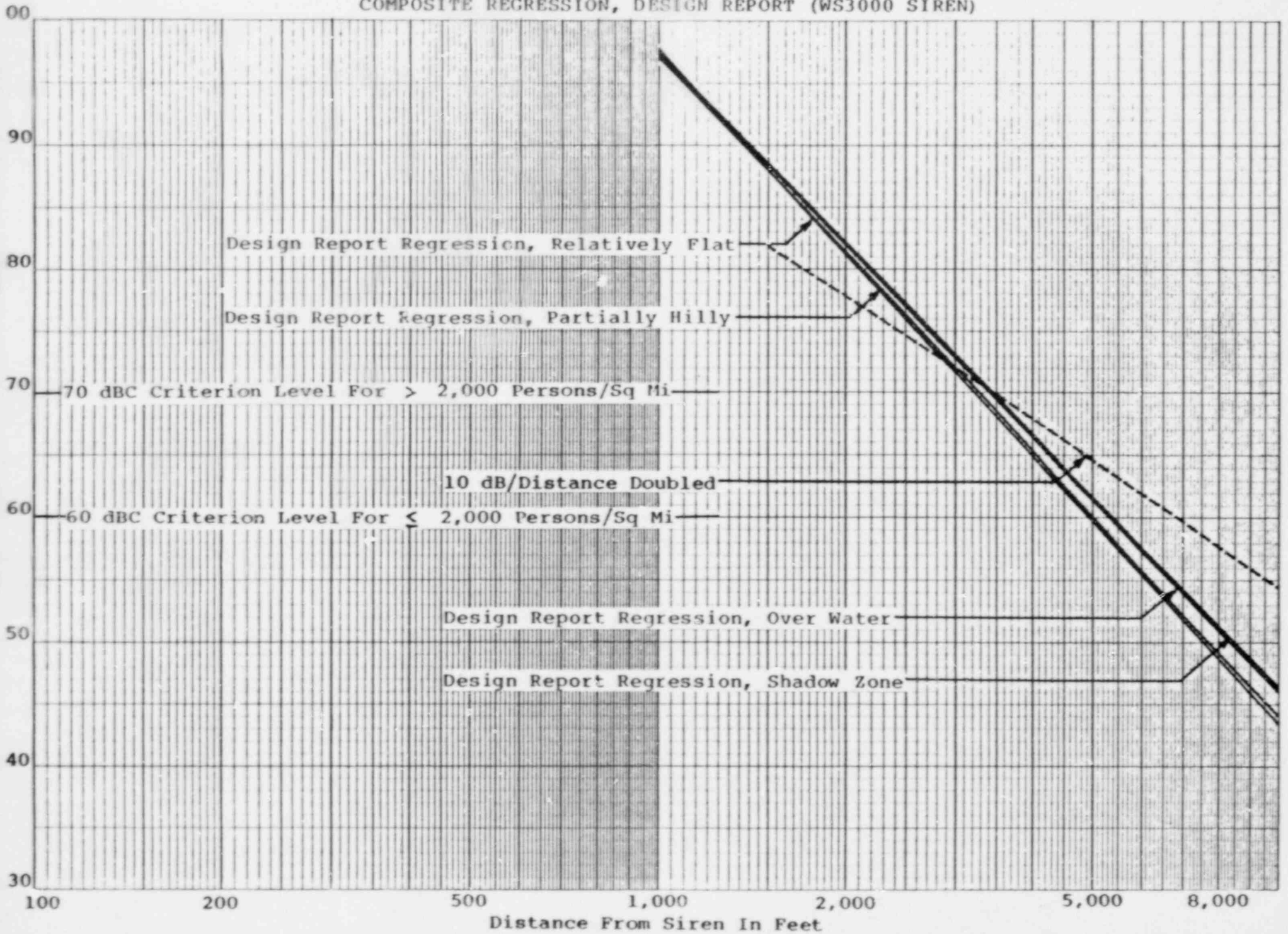


FIGURE 3

COMPARATIVE RESULTS, RELATIVELY FLAT TERRAIN (WS3000 SIREN)

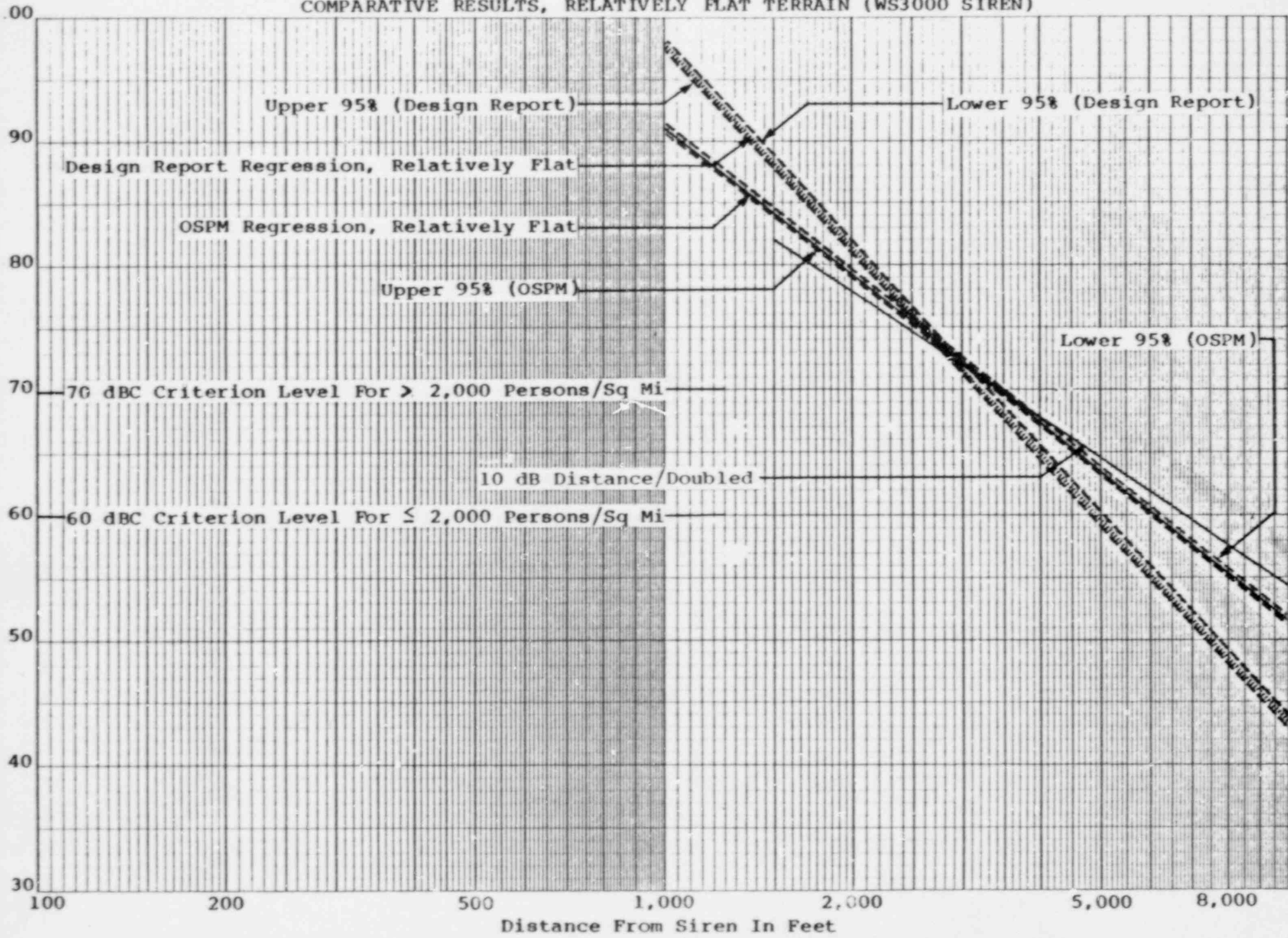


FIGURE 4

COMPARATIVE RESULTS, PARTIALLY HILLY TERRAIN (WS3000 SIREN)

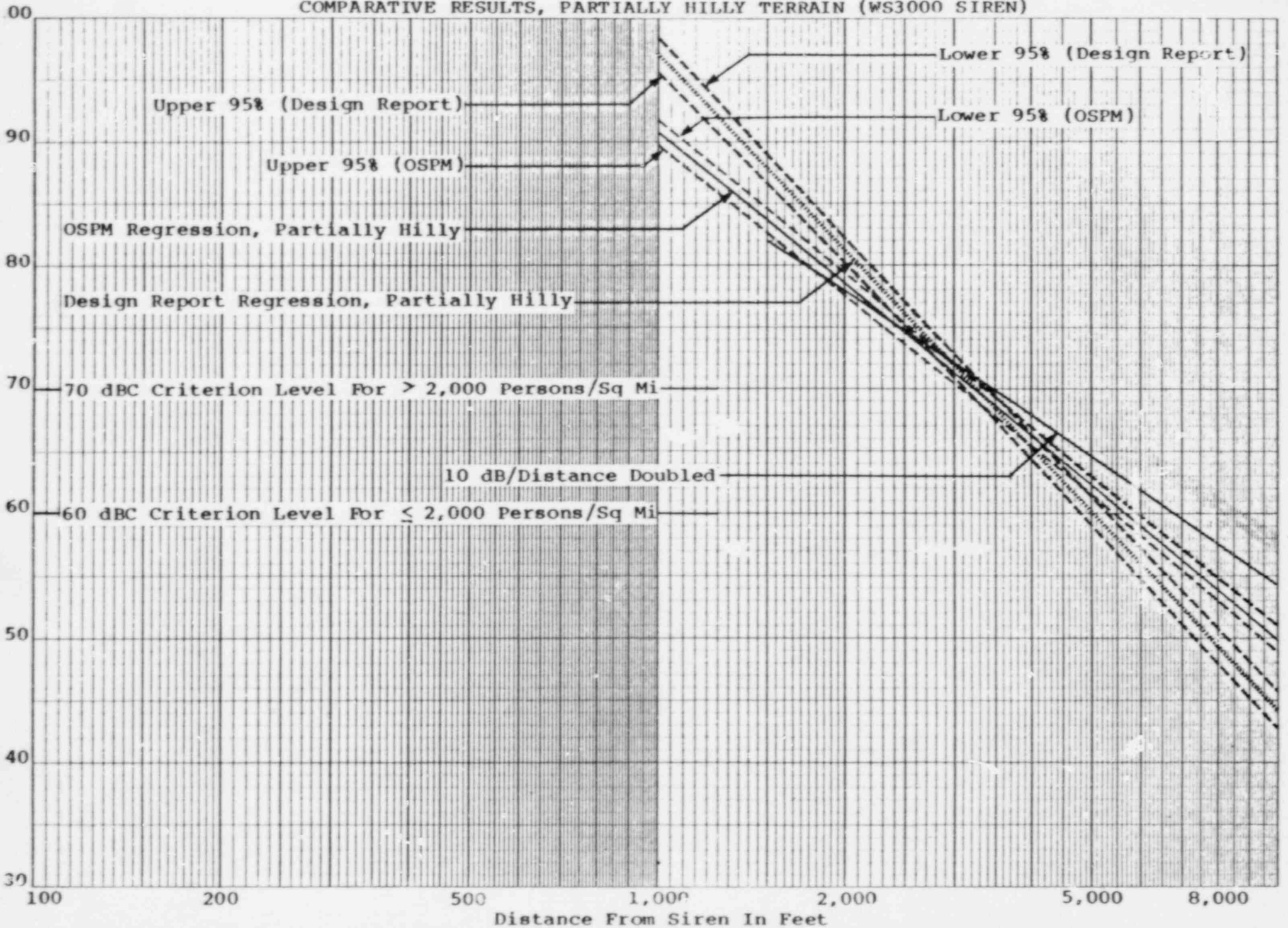


FIGURE 5

COMPARATIVE RESULTS, OVER WATER (WS3000 SIREN)

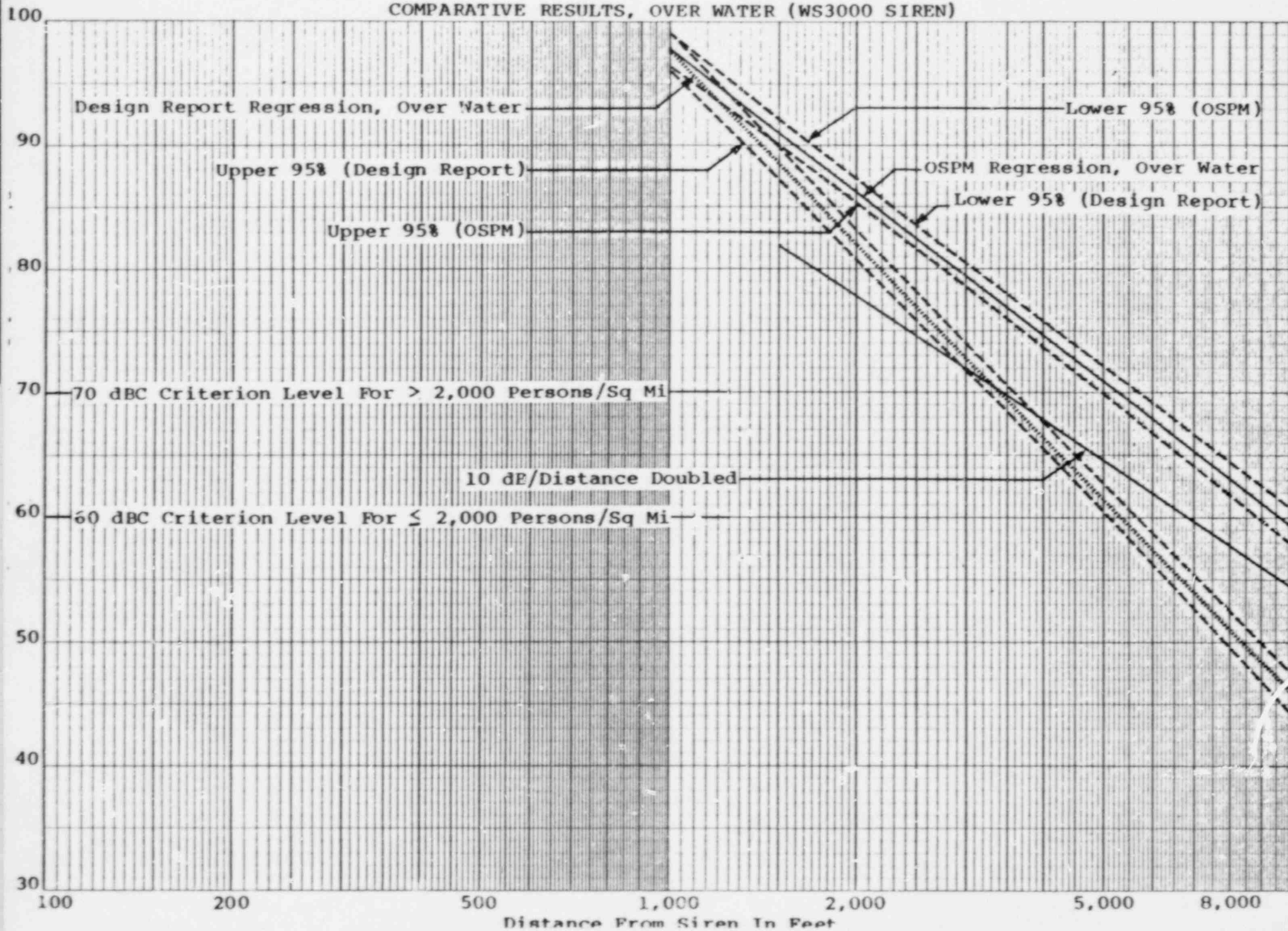
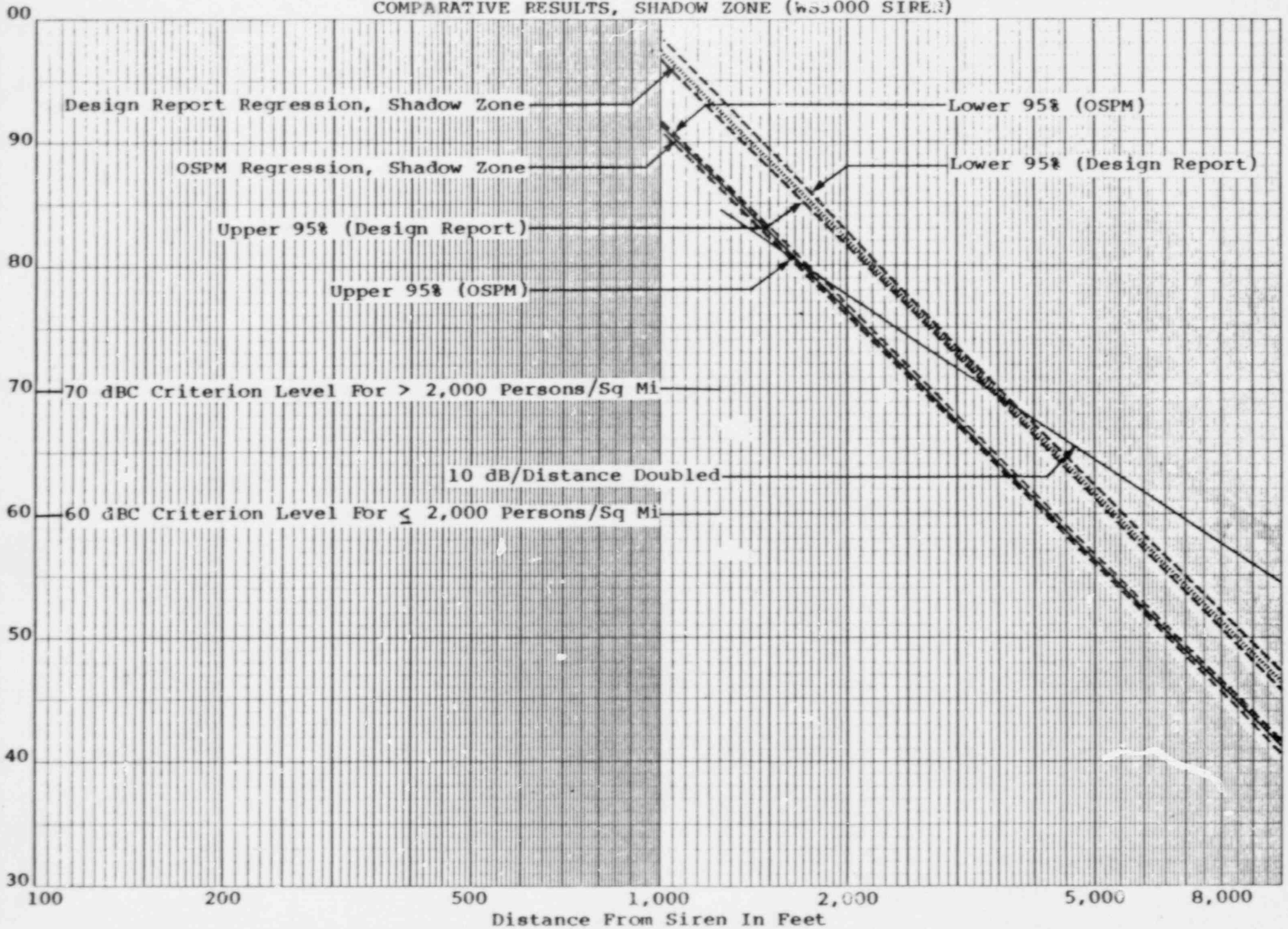


FIGURE 6

COMPARATIVE RESULTS, SHADOW ZONE (w/5000 SIREs)



The Design Report's regression data indicate 60 dBC ranges of from 4,950 to 5,350 ft and 70 dBC ranges of from 3,200 to 3,425 ft for the varying site conditions. The 10 dB loss per distance doubled attenuation rate yields a range of approximately 7,000 ft for 60 dBC and 3,500 ft for 70 dBC. Thus, the ranges predicted by the Design Report's model are conservative compared to the 10 dB loss per distance doubled attenuation rate on a linear regression basis.

Figures 3 through 6 of this report depict the regressions of OSPM predictions and the Design Report's predictions, along with the 10 dB loss per distance doubled attenuation rate, for each of the four categories. Some general comparative observations can be made. First, the regressed ranges for 70 and 60 dBC based on the Design Report's data are almost identical with those of OSPM predictions over the rolling and flat terrain categories, which are the predominant terrain types in the area. The linearized attenuation rate within the range of 1,000 to 10,000 ft is approximately 12 dB for OSPM results and 15 dB for Design Report results, both substantially higher than the 10 dB per distance doubling rate. This is largely due to the relatively high operating frequency (800 Hz) of the WS-3000 sirens which results in much higher air absorption losses than anticipated by the 10 dB rule (which is applicable to sirens operating at around 500 Hz in the absence of special conditions). Second, the OSPM results show much larger 70 and 60 dBC ranges for propagation paths over water, as expected. Last, the 60 and 70 dBC ranges estimated by the licensee are liberal over the shadow zone category.

The following table summarizes the estimated effective ranges to 70 and 60 dBC over the various categories for the WS-3C00 sirens:

<u>Procedure</u>	<u>Terrain</u>	<u>Range In Ft To</u>	
		<u>70 dBC</u>	<u>60 dBC</u>
10-dB Rule	All	3,500	7,000
Licensee	Shadow	3,425	5,350
	Rolling	3,250	5,000
	Flat	3,200	4,950
	Water	3,425	5,350
OSPM	Shadow	2,650	4,200
	Rolling	3,250	5,700
	Flat	3,425	6,150
	Water	5,250	9,500

To assess the overall adequacy of the design on an area basis, for each siren located on the U.S. Geological Survey's Reserve quadrangle map (Figure 1 of this report), the area coverages of 60 dBC and 70 dBC were numerically integrated and averaged. In addition, manual planimeter area computations were derived using the siren sound contours of Appendix 6B of the Design Report. The results are as follows:

AVERAGE AREA
(In Square Miles)

<u>Procedure</u>	<u>70 dBC</u>	<u>60 dBC</u>
Design Report [Map 3]	1.22	3.05
OSPM	1.03	4.02

Using these results, the following average effective radii are derived:

EFFECTIVE RADIUS
(In Ft)

<u>Procedure</u>	<u>70 dBC</u>	<u>60 dBC</u>
Design Report	3,300	5,200
OSPM	3,020	5,970

These area-wide results confirm that the Design Report siren ranges are adequate when site terrain and weather conditions are taken into account.

The results of the individual OSPM runs were combined to generate a comprehensive overview of the siren sound pressure levels over the Reserve area as depicted in Figure 1 of this report. A surface interpolation and contouring program utilizing the output results of the 15 sirens was used to generate the sound pressure level contour overlays. These contours account for site-specific topographical and meteorological effects on siren sound propagation.

Comparisons of the OSPM-predicted 60 dBC and 70 dBC contours with the contours in Map 3 of the Design Report indicate that the siren coverage is adequate.

In conclusion, the Waterford 3 Steam Electric Station siren alerting system is found to meet the specific design requirements of FEMA-REP-10.

2. Special Alerting (E.6.2.4, FEMA-REP-10)

In addition to the siren system, the primary alert system for the Waterford 3 Steam Electric Station is augmented with helicopters equipped with alerting devices, the St. Charles Parish Industrial Hot-Line,

the St. John the Baptist Parish Industrial Mutual Aid Radio System, automatic telephone dialing devices, and provisions for alerting institutions, hearing-impaired individuals, and traffic on the Mississippi River. These alerting methods are only used in connection with special facilities or transient population.¹¹

A helicopter airborne warning system provides the primary means of alert and notification to any transient population expected in wetlands and lake areas in the Waterford 3 10-mile EPZ. Four helicopters equipped with battery-operated electronic sirens with public address capability fly pre-determined routes (see Attachment 11 of the Design Report) and transmit an alert tone and message. The alert message is pre-recorded on an endless loop tape to ensure accuracy and consistency with the information transmitted to the public within populated areas of the EPZ.

St. Charles Parish maintains a private telephone Industrial Hot-Line which connects the St. Charles Parish Emergency Operations Center (EOC) with 22 major parish industries including the Waterford 3 Steam Electric Station (see Attachment 12 of the Design Report). The Industrial Hot-Line is used as the primary means of alert and notification for major St. Charles Parish industries. Notification of workers will take place in accordance with procedures established by individual industries.

St. John the Baptist Parish maintains an Industrial Mutual Aid Radio System with the Dupont Chemical Company, Marathon Oil Company, and Kaiser Chemicals.

This system allows the Parish EOC to directly alert and notify these three industries. As with the Industrial Hot-Line, this radio system allows for the confirmation of messages and the direct notification of industrial employees through the plants' management.

St. Charles Parish and St. John the Baptist Parish utilize automatic dialing devices to alert and notify smaller industries not on the Industrial Hot-Line or the Industrial Mutual Aid Radio System. These devices (described on pages 14 and 15 of the Design Report) are also used to notify facilities such as nursing homes and day care centers. St. Charles Parish utilizes this device to alert parochial schools located within the EPZ, and St. John the Baptist Parish alerts parochial schools not on the School Board radio system with this device. In addition, the two persons in St. John the Baptist Parish who have accepted the responsibility for notifying several hearing-impaired persons living in the vicinity are included on the automatic telephone dialer for direct notification from the Parish EOC. A listing of calls to be made by the automatic dialing devices for each parish is contained in Attachments 13 and 14 of the Design Report.

Notification of schools within the EPZ are made through radio and telephone communications connecting the Parish EOCs with the School Board administrative offices. Parochial schools in St. Charles Parish and parochial and private schools in St. John the Baptist Parish are included on the automatic dialing system. The St. John the Baptist Parish School Board also maintains a radio system which includes all public schools and one parochial school.

Both Parishes have jails located within the EPZ, and both of these jails are located in the same building as the EOCs. Alert and notification of these facilities is made by the Law Enforcement Officer who is part of the EOC staff for each parish. (A list of those facilities receiving notification directly from the parish EOCs is contained in Attachment 15 of the Design Report.)

The U.S. Coast Guard is responsible for alerting traffic on that portion of the Mississippi River within 10 miles of the Waterford 3 Steam Electric Station. The Coast Guard is accessed from each parish EOC by radio. Ships on the river are notified by radio using the Coast Guard frequency or by stopping ships prior to their entering the EPZ.

A public information booklet (see Attachment 2 of the Design Report) is distributed annually to the population within the Waterford 3 Steam Electric Station EPZ which describes how people are notified and actions to take in the event of an emergency. The transient population is informed by means of posters which are made available to locations in each parish including industrial plants, service stations, restaurants, convenience stores, food and other retail outlets, recreation centers, and banks. (See Attachment 3 of the Design Report for a list of locations to which this poster has been made available.)

A summary of the information provided in the public information booklet is also included in the telephone directories for St. Charles and St. John the Baptist parishes.

In addition to these alerting methods, there are back-up means that serve to alert the public should a part of the system fail. These back-up means include route alerting by emergency personnel in populated areas; route alerting by Louisiana Department of Wildlife and Fisheries personnel and additional portable stationary siren activations in wetland and lake areas; phone calls to industries within the EPZ by the Louisiana Department of Commerce and Industry; and tone alert radio notification for a limited number of hunting and fishing camps in wetland areas.

The special alerting aerial component of the Waterford 3 ANS was tested on November 13, 1987, evaluated by FEMA Region VI, and found to be in accordance with FEMA-REP-10 criteria.¹² The results of that aerial alert and notification activation are documented in Appendix B of this report.

III. FINDINGS FOR EVALUATION CRITERION N.1

On April 15, 1987, the physical means (sirens) used to alert the population within the Waterford 3 Steam Electric Station EPZ was demonstrated to satisfy the alert and notification aspects of 44 CFR 350.9 (a). This demonstration was conducted by using the methods specified in Section N.2.(a,b).2 of FEMA-REP-10. The results indicate that this portion of the alert and notification system evaluation conforms to FEMA-REP-10 and NUREG-0654/FEMA-REP-1, Rev.1.

The April 15, 1987 demonstration of the Waterford 3 Steam Electric Station public alerting system consisted of a single activation of all sirens and a subsequent telephone survey to estimate the proportion of EPZ households actually alerted. The siren activation was initiated at approximately 10:15 a.m. (Central Standard Time). All sirens were reported operating during the activation.

The telephone survey of EPZ residences began at approximately 10:18 a.m. (Central Standard Time) and was completed within one hour and 10 minutes. This survey was conducted by 37 telephone interviewers, each with a separate WATS line and computer terminal.

The universe of households to be surveyed was determined by establishing a 12-mile radius circle around the latitude and longitude of the plant. The sample incorporated a sorted master list of approximately 2,500 households (addresses and telephone numbers) within the established boundary.

A sufficient number of replicated subsamples were developed from the overall sample to ensure that the required number of telephone calls would be made, i.e., to establish the

proportion of households alerted to within a 5% precision at a 95% confidence level. Appendix B of this report describes the method used for sizing the sample to achieve this result.

The questionnaire used for the telephone survey is included as Figure 7 of this report.

As part of the telephone survey, a total of 287 households believed to be within the Waterford 3 Steam Electric Station EPZ were contacted, and the responses were collected in an automated data base. Of this group, 33 respondents stated that they were not alerted. However, before running the final tabulations, addresses of all households interviewed were checked on a street map to validate their locations. Of these original 287 addresses, 3 were found to lie outside of the EPZ. Therefore, data were tabulated on the 284 respondent households that were located within the EPZ. Respondents at 20 of these households had been away from home at the time of the alerting system demonstration and, therefore, were not included in the alerting analysis. Of the remaining 264 households, 91.7% (242) indicated that they had been alerted during the demonstration. Using the estimated number of households within the EPZ (15,306 from reference 1) in the confidence interval expression in Appendix B, an estimated 95% confidence interval that ranges from 87.7% to 94.4% is yielded for the proportion of the total EPZ population alerted. In other words, at the 95% confidence level between 87.7% and 94.4% of the households within the Waterford 3 Steam Electric Station EPZ would have stated that they were alerted by the siren system.

The sample of 284 households was also used to estimate the proportion of households within the EPZ that stated they received information about what to do in a real emergency.

#35080
 Chilton Research Services
 Radnor, Pennsylvania

Study #6810
 April, 1987

OMB #3067-0103 (FEMA 9/86)
FEMA NUCLEAR POWER PLANT ALERTING
AND NOTIFICATION SYSTEM: PUBLIC TELEPHONE
SURVEY

WATERFORD

Time Dialed _____ AM _____ PM

Interview # _____
 (1-3)

Time Began _____ AM _____ PM

Zip Code _____
 (6-10)

Time Ended _____ AM _____ PM

INTERVIEWER: Enter Sample Type _____
 (11)

RECORD BEFORE DIALING - Telephone # _____
 (Area Code) (Exchange) (Number) (12-21)

INTRODUCTION:

Hello, my name is _____. We're calling households long distance from Chilton Research Services as part of a survey. This survey is sponsored by The Federal Emergency Management Agency (FEMA) of the United States Government. Your answers are voluntary and will be kept strictly confidential.

1. First of all, is this (REPEAT # DIALED)?

	Yes	1
TERMINATE AND DIAL AGAIN	No	2

2. As you may or may not know, there was a test of the public alert notification system for the Waterford III Steam Electric Station. Did you, or any other member of this household, hear any type of emergency alerting signal from this test today?

22-

CONTINUE	Yes	1
SKIP TO Q. 4A	No	2
CONTINUE	Heard from another source	3
ASK IF ANY OTHER HOUSEHOLD MEMBER IS MORE KNOWLEDGEABLE	Don't Know	9

3. What did you or your household hear? (DO NOT READ. CIRCLE ALL THAT APPLY)

(23-25)

SKIP TO Q. 4	Siren (PROBE FOR TYPE)	
	Large pole-mounted siren (doesn't move)	1
	Movable siren (in tow)	2
	Siren - Don't know type	3
	Neighbor told me	4
	Other family member told me	5
	EBS on Radio	6
	EBS on TV	7
	Other: (SPECIFY) _____ _____ _____	9
CONTINUE	Don't Know	Y

3A. Did you hear . . . (READ LIST. CIRCLE ALL THAT APPLY)

(30-32)

	Large Pole-mounted siren (doesn't move)	1	
	Movable siren (in tow)	2	
	From a neighbor	4	
	From another family member	5	
	Or by means of something else (SPECIFY) _____ _____ _____	9	
	DO NOT READ	Siren - Don't know type	3
		Don't Know	Y

4. (IF "HEARD EMERGENCY SIGNAL" ASK Q. 4 BELOW; OTHERWISE SKIP TO Q. 4A)

Were you at home or away from home when you heard this emergency test signal?

37-

Home	1
Away from home	2

4A. (IF "DID NOT HEAR EMERGENCY SIGNAL")

Were you at home around 10:30 this morning?

38-

Yes	1
No	2
Don't Know	Y

5. Has your household ever received information which tells you what to do in the event of a "real" emergency at the Waterford III Steam Electric Station. This pamphlet titled "Safety Information" was mailed to you earlier this month by the parishes of Saint Charles and Saint John the Baptist in cooperation with LP&L.

41-

Yes	1
No	2
Don't Know	Y

6. Because we need to determine whether or not you live within the 10 mile Emergency Planning Zone of Waterford III Steam Electric Station, would you please give me this address? (PAUSE FOR ANSWER)

ADDRESS:

and the nearest intersection (or cross street) to this house.

Also, what town and/or parish is this?

On behalf of Chilton Research Services and the Federal Emergency Management Agency, I would like to thank you for your time and for giving us this valuable information.

at the Waterford 3 Steam Electric Station. Of these 284 households, 75.0% (213) responded that they had received the information, 19.4% (55) responded that they had not received the information, and 5.6% (16) did not know whether they had received the information. Using the approach discussed previously, the following estimates for the entire EPZ population resulted (at 95% confidence interval):

- . Between 69.7% and 79.6% of the households would have reported receiving the information;
- . Between 15.2% and 24.3% of the households would have responded that they had not received the information; and
- . Between 3.5% and 8.9% of the households would not have known whether they had received the information.

In conclusion, no areas of the Waterford 3 Steam Electric Station siren system were identified as needing enhancements.

IV. FINDINGS FOR EVALUATION CRITERIA E.5, F.1, N.2, N.3, AND N.5

Those aspects of the alert and notification system addressing evaluation criteria E.5, F.1, N.2, N.3, and N.5 of NUREG-0654/FEMA-REP-1, Rev. 1 have been reviewed by FEMA and found to be adequate to provide reasonable assurance that appropriate protective measures can be taken off site in the event of a radiological emergency. This conclusion is documented in letters to the Honorable Edwin W. Edwards, Governor of Louisiana, signed by Louis O. Giuffrida, Director, FEMA, dated July 15, 1985;⁴ and William J. Dircks, Executive Director for Operations, U.S. Nuclear Regulatory Commission, signed by Samuel W. Speck, Associate Director, State and Local Programs and Support, FEMA, dated July 15, 1985.⁵ In these letters, the Waterford 3 Steam Electric Station received FEMA approval under 44 CFR 350 conditioned on an ultimate approval and verification of the public alert and notification system as called for in NUREG-0654/FEMA-REP-1, Rev. 1.

REFERENCE LIST

1. Louisiana Power and Light Company. 1984. "Waterford Steam Electric Station final safety analysis report." May 1985.
2. U.S. Department of Commerce, Bureau of the Census. 1983. 1980 census of population. Volume 1, Chapter A, Part 1, "United States summary." PC 80-1-A1. April 1983.
3. Louisiana Power and Light Company. 1985. "Final report, alert/notification system for Waterford 3 Steam Electric Station." June 1985.
4. Federal Emergency Management Agency. 1985. Letter to the Honorable Edwin W. Edwards, Governor of Louisiana, signed by Louis O. Giuffrida, Director. July 15, 1985.
5. Federal Emergency Management Agency. 1985. Letter to William J. Dircks, Executive Director for Operations, U.S. Nuclear Regulatory Commission, signed by Samuel W. Speck, Associate Director, State and Local Programs and Support. July 15, 1985.
6. Nuclear Regulatory Commission and Federal Emergency Management Agency. 1980. "Criteria for preparation and evaluation of radiological emergency response plans and preparedness in support of nuclear power plants." NUREG-0654/FEMA-REP-1. Revision 1. November 1980.
7. Federal Emergency Management Agency. 1985. "Guide for the evaluation of alert and notification systems for nuclear power plants." FEMA-REP-10. November 1985.
8. International Energy Associates Limited. 1983. "Analysis of siren system pilot test." IEAL-333. November 2, 1983.
9. Louisiana Department of Environmental Quality. 1986. Letter to Gary Jones, Technological Hazards Branch, Federal Emergency Management Agency, Region VI, signed by David A. Zaloudek, Emergency Planning Supervisor, Office of Air Quality and Nuclear Energy. July 25, 1986.

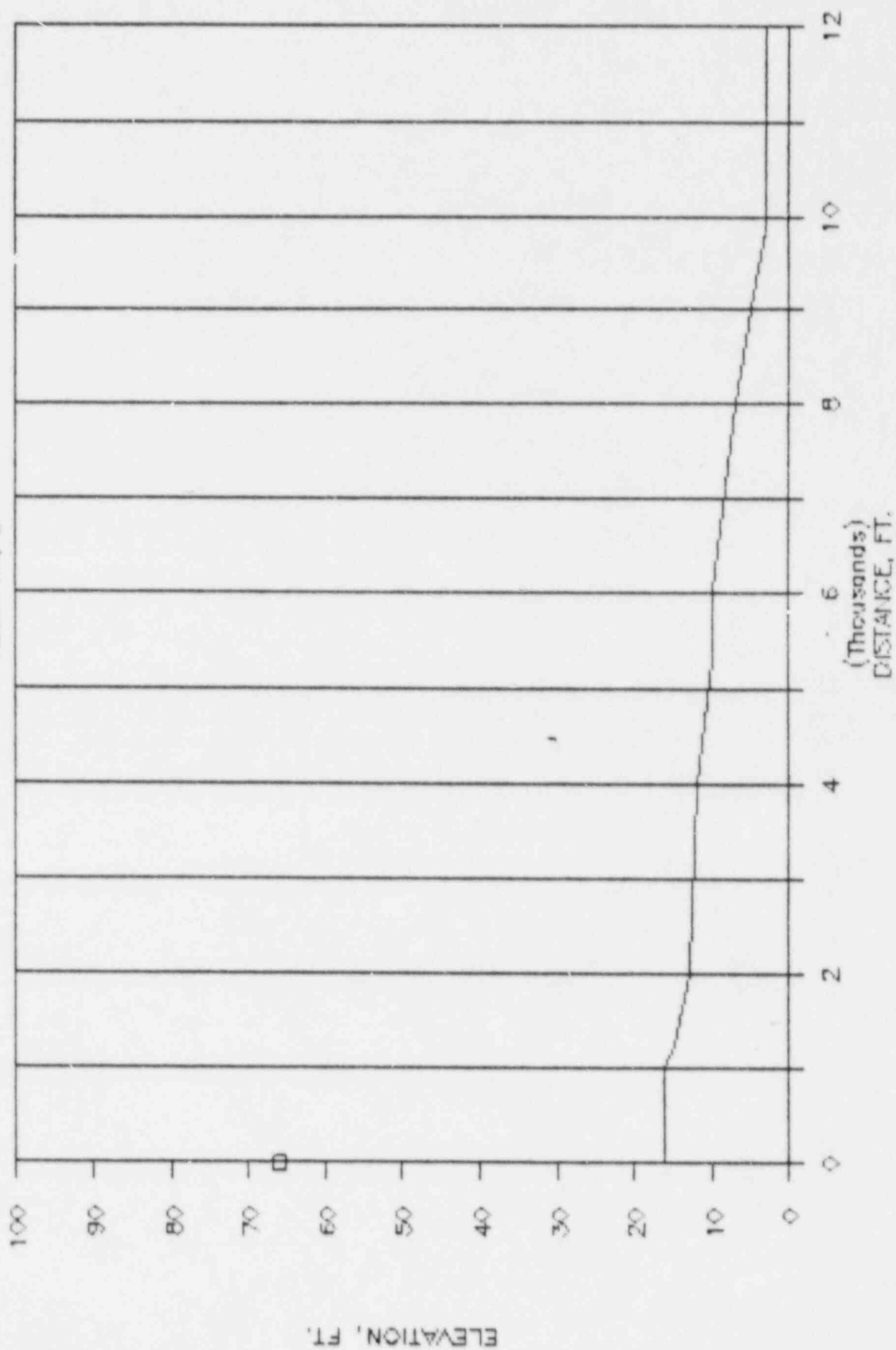
10. Federal Emergency Management Agency. 1986. Memorandum with attachments to Megs Hepler, Emergency Management Specialist, State and Local Programs and Support, Federal Emergency Management Agency, from Alton S. Ray, Acting Chief, Natural and Technological Hazards Division, Region VI. July 31, 1986.
11. Louisiana Department of Environmental Quality. Letter to Gary Jones, Acting RAC Chairman, Region VI, Federal Emergency Management Agency, from David A. Zaloudek, Program Manager, Emergency Planning and Response Section. December 4, 1986.
12. Federal Emergency Management Agency. 1988. Memorandum For: Richard Krimm, Assistance Associate Director, State and Local Programs and Support, NT-TH, From: Alton S. Ray, Chief, Natural and Technological Hazards Division, Subject: Waterford 3 Steam Electric Station Alert and Notification System (ANS). January 19, 1988.

APPENDIX A

OSPM Siren Topographical Profile Charts
OSPM Siren Topographical Input Data
OSPM Siren Sound Pressure Level Input Data
OSPM Siren Meteorological Input Data
OSPM Siren Sound Pressure Level Output Data

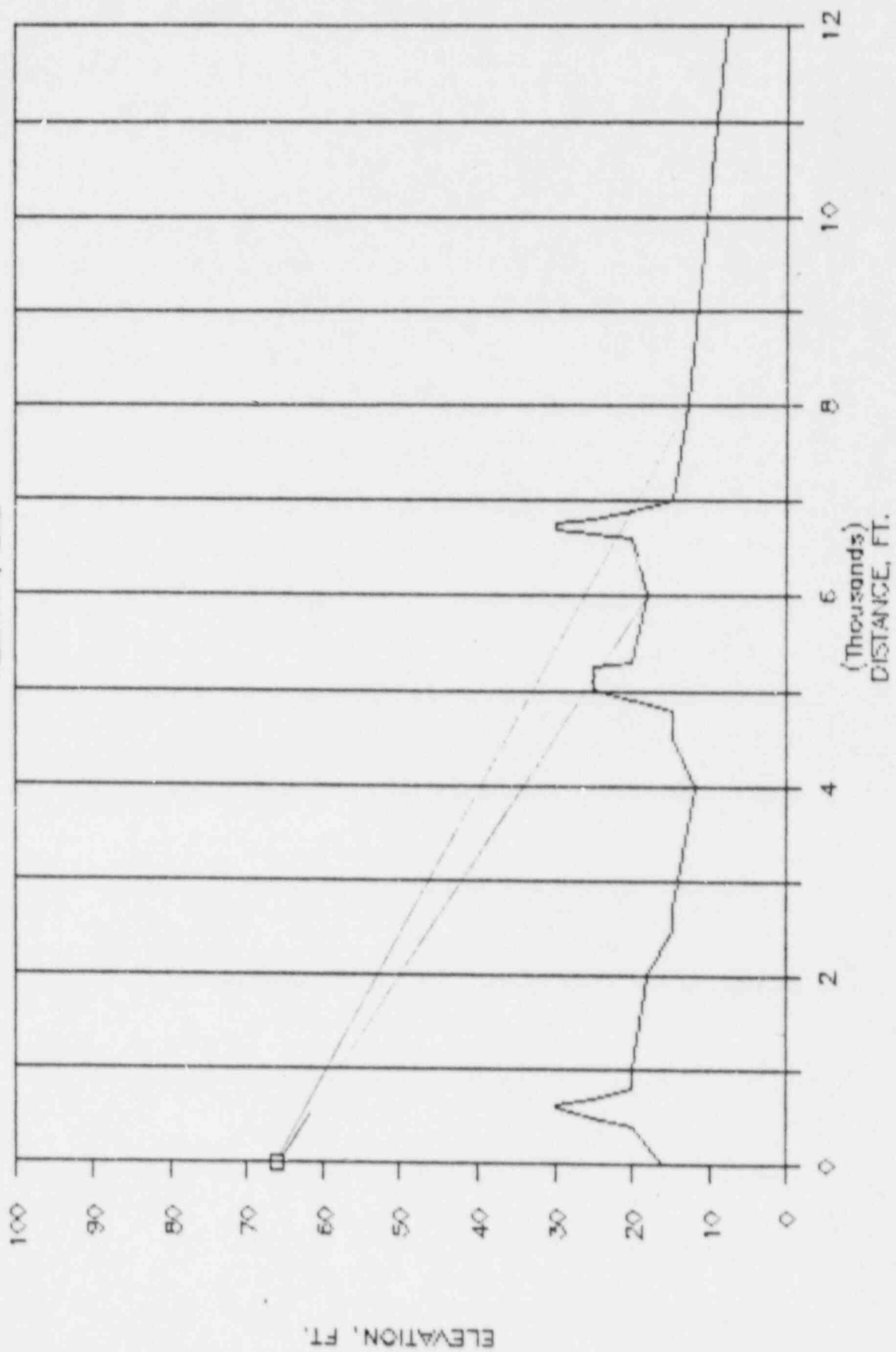
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AZIMUTH, E



WATERFORD 1

AZIMUTH, ENE

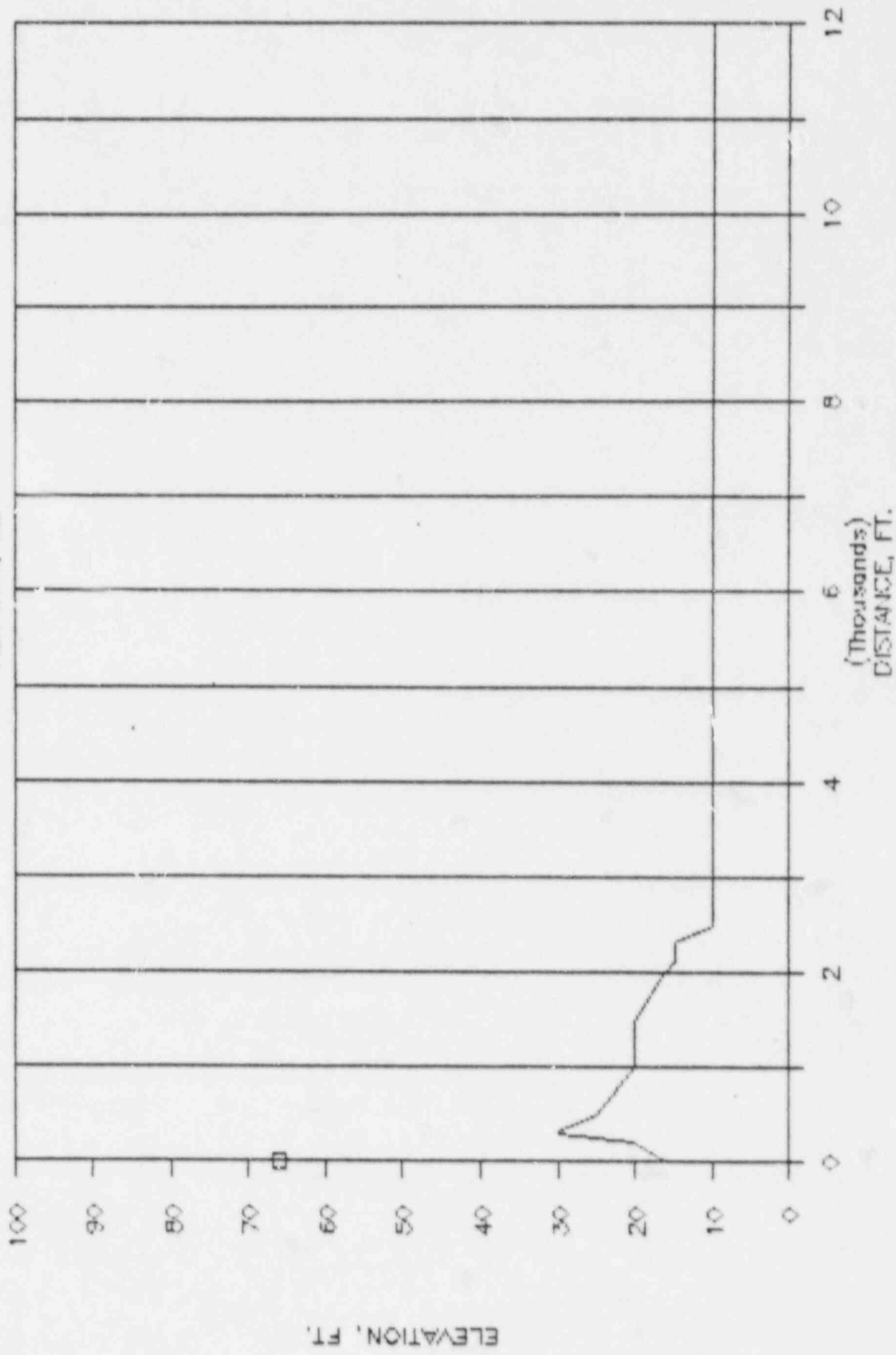


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(Thousands)
DISTANCE, FT.

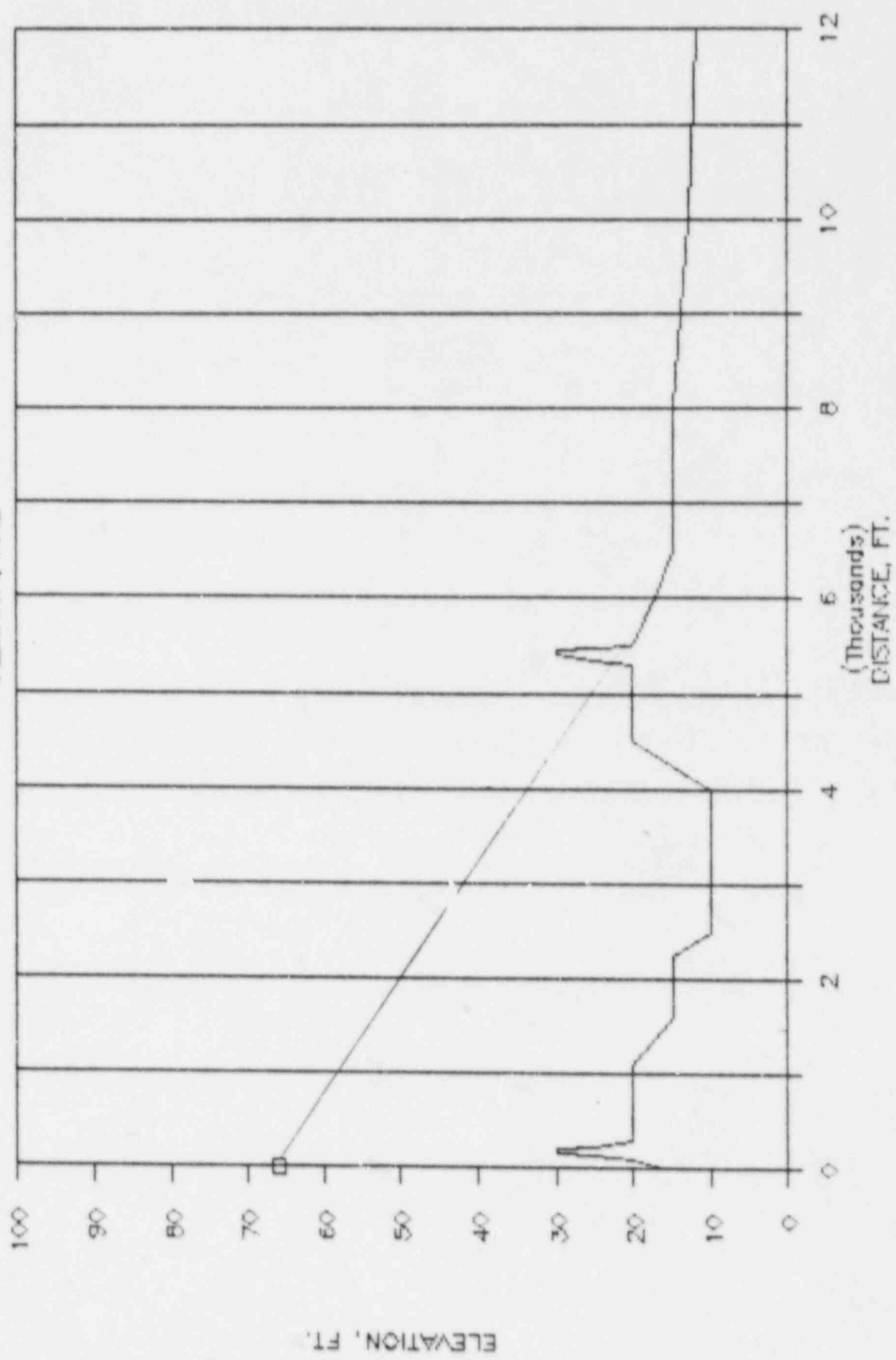
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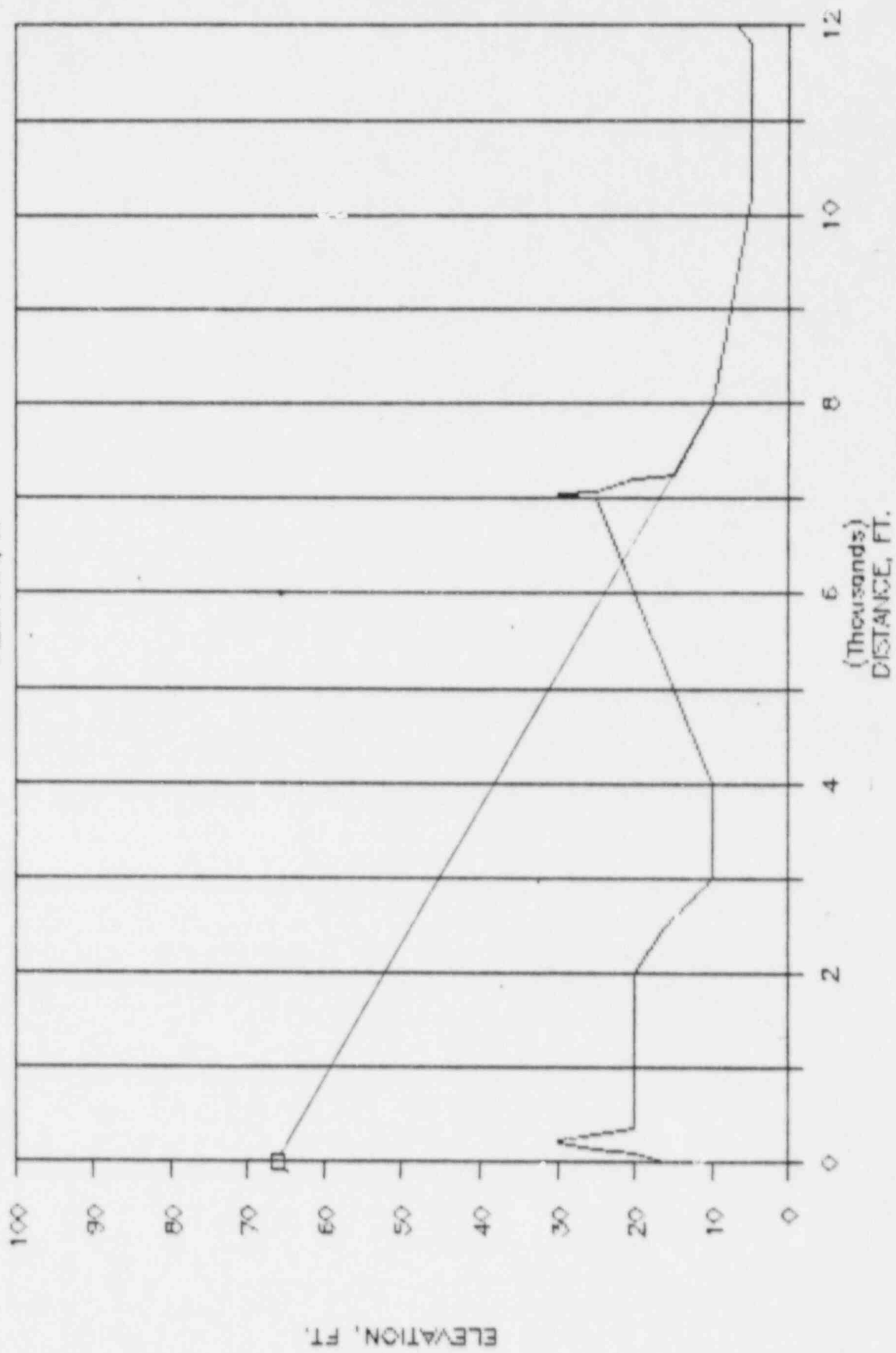
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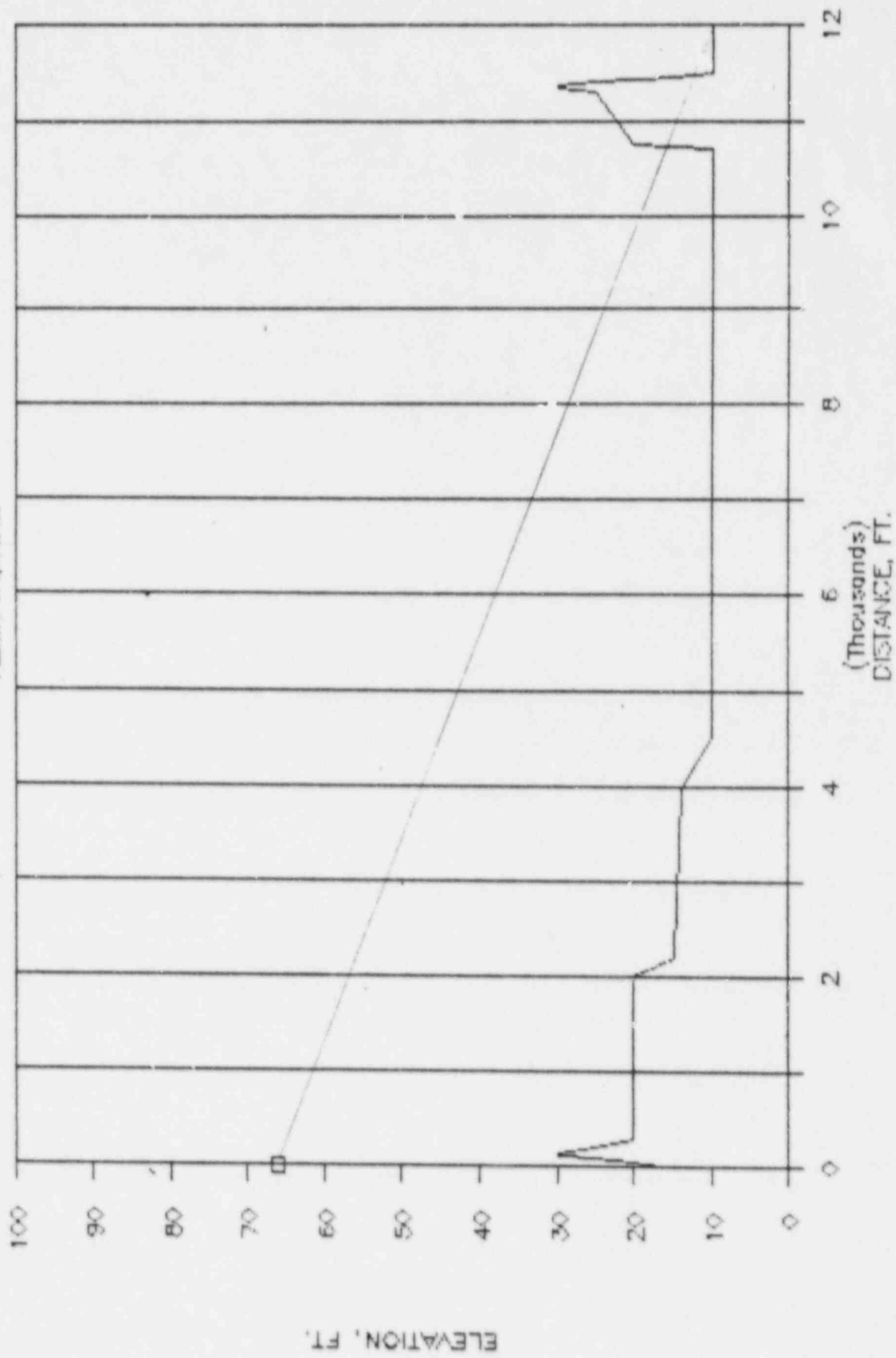
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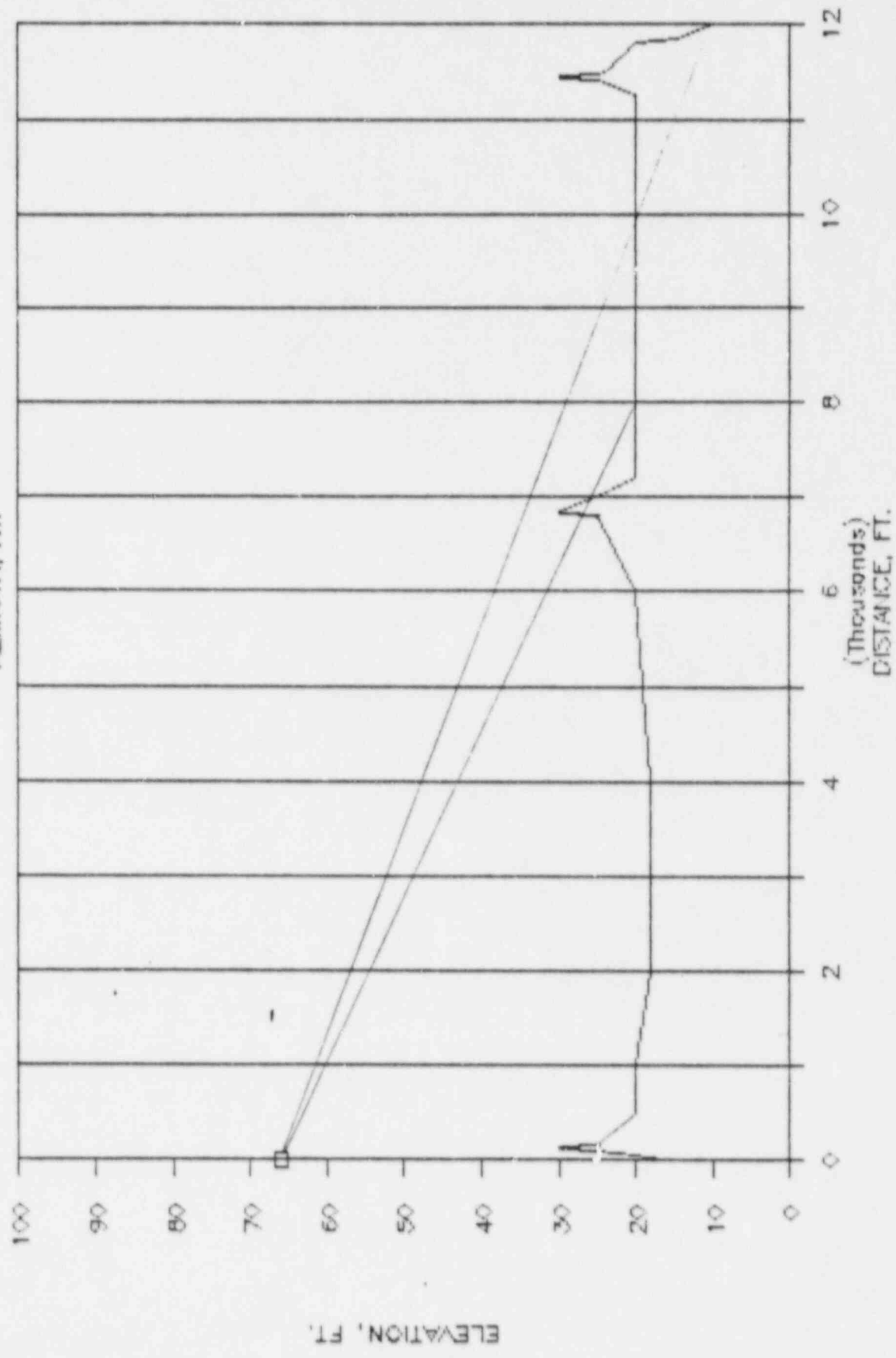
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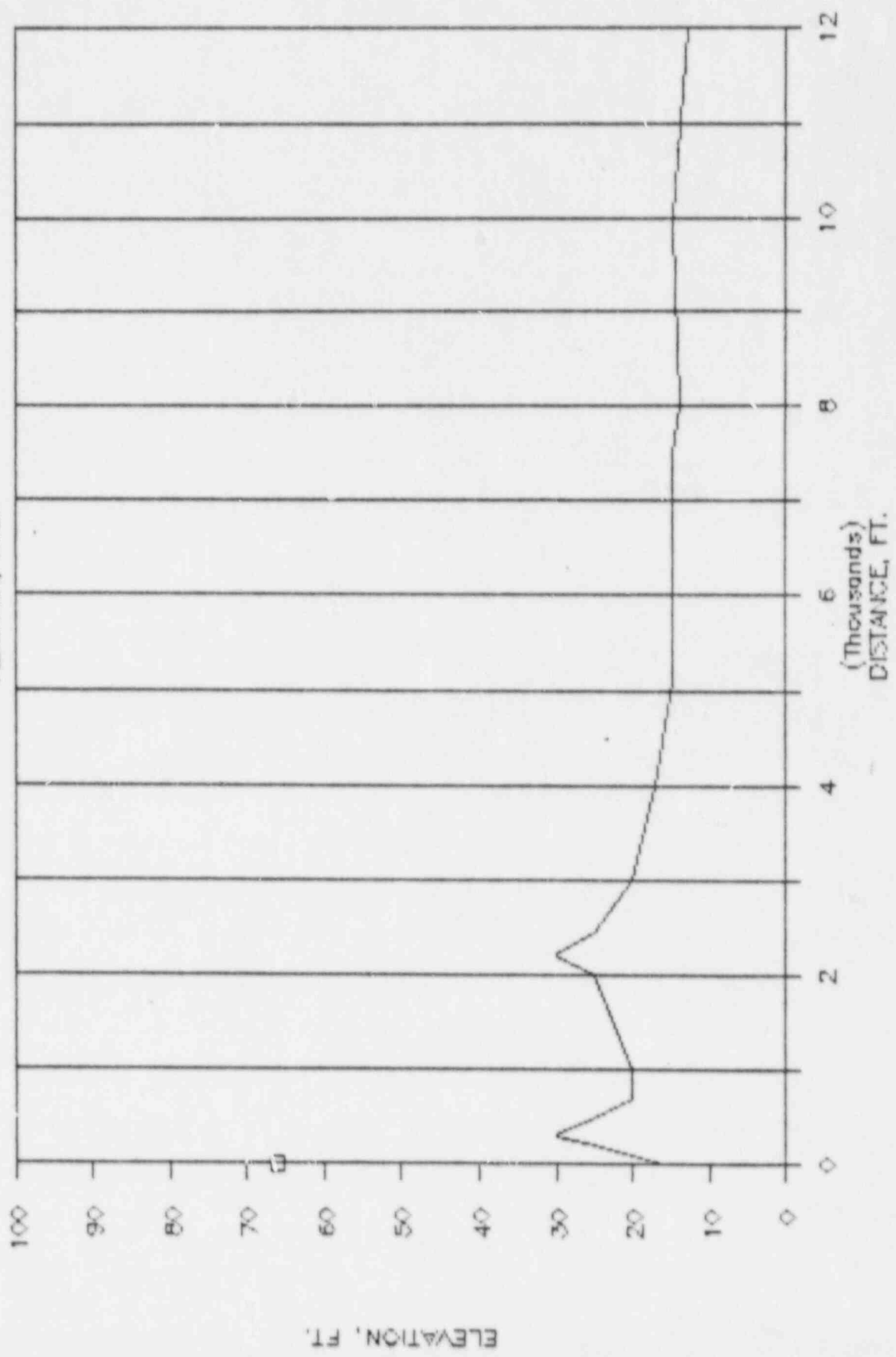
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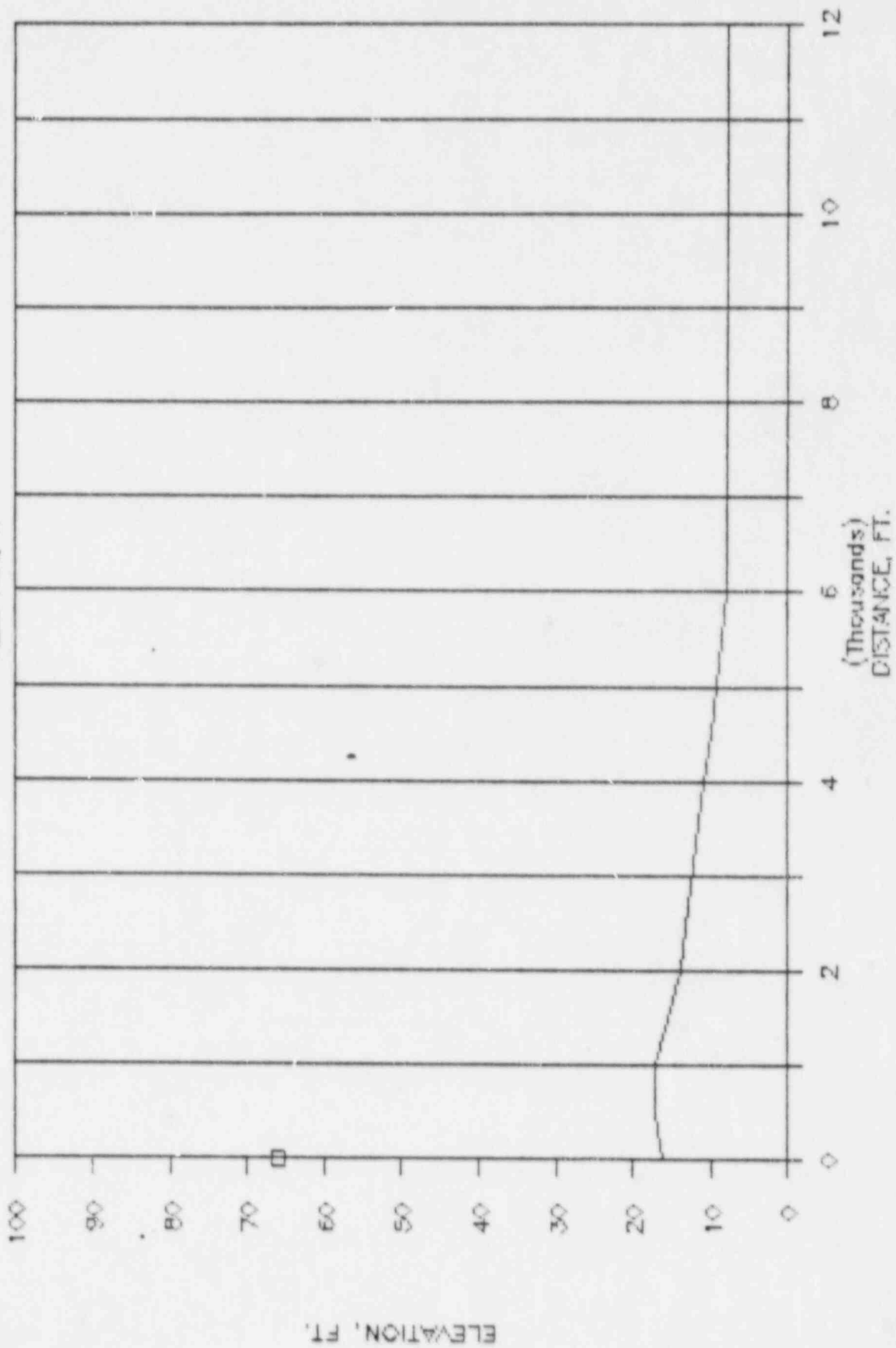
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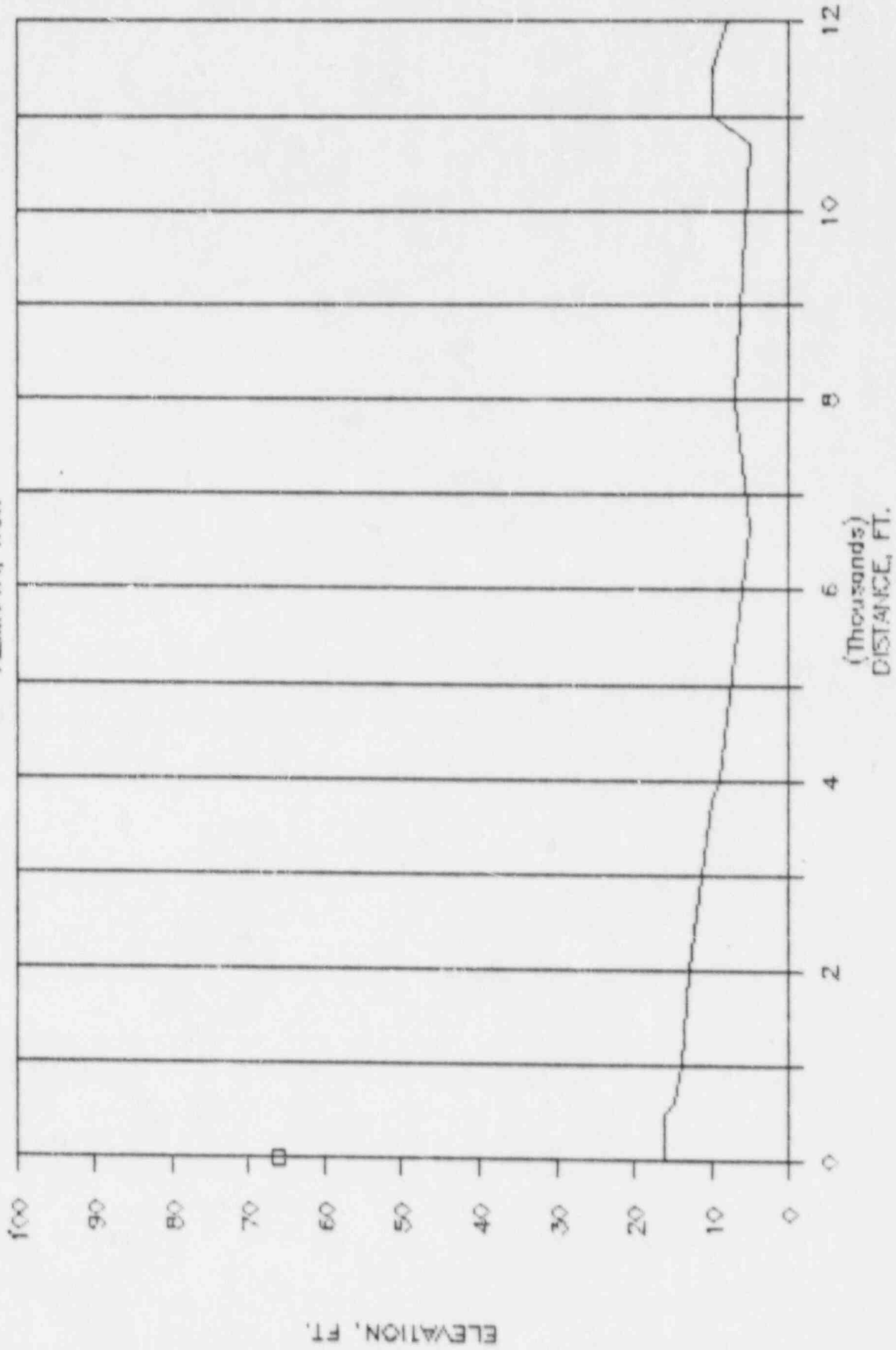
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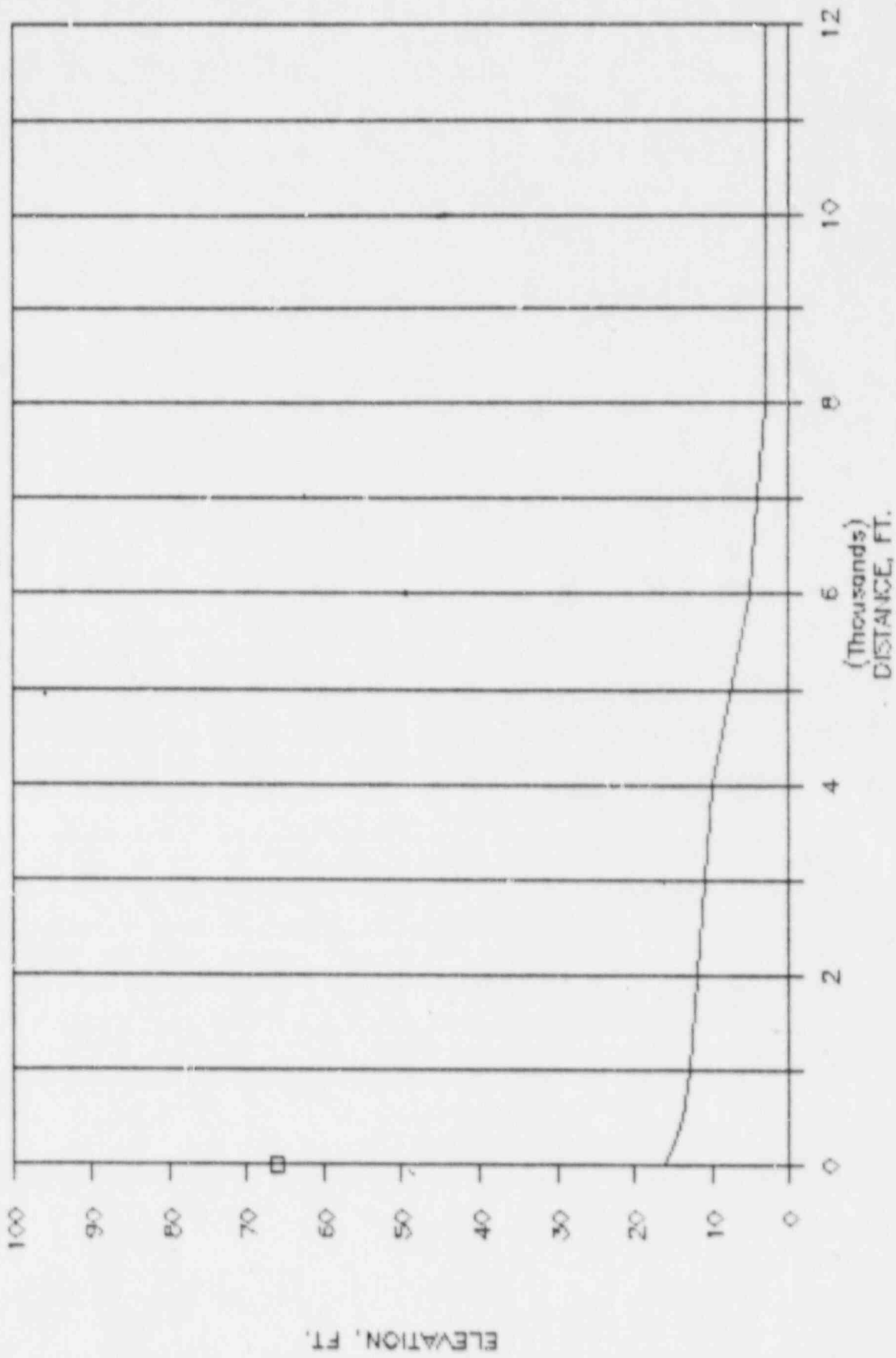
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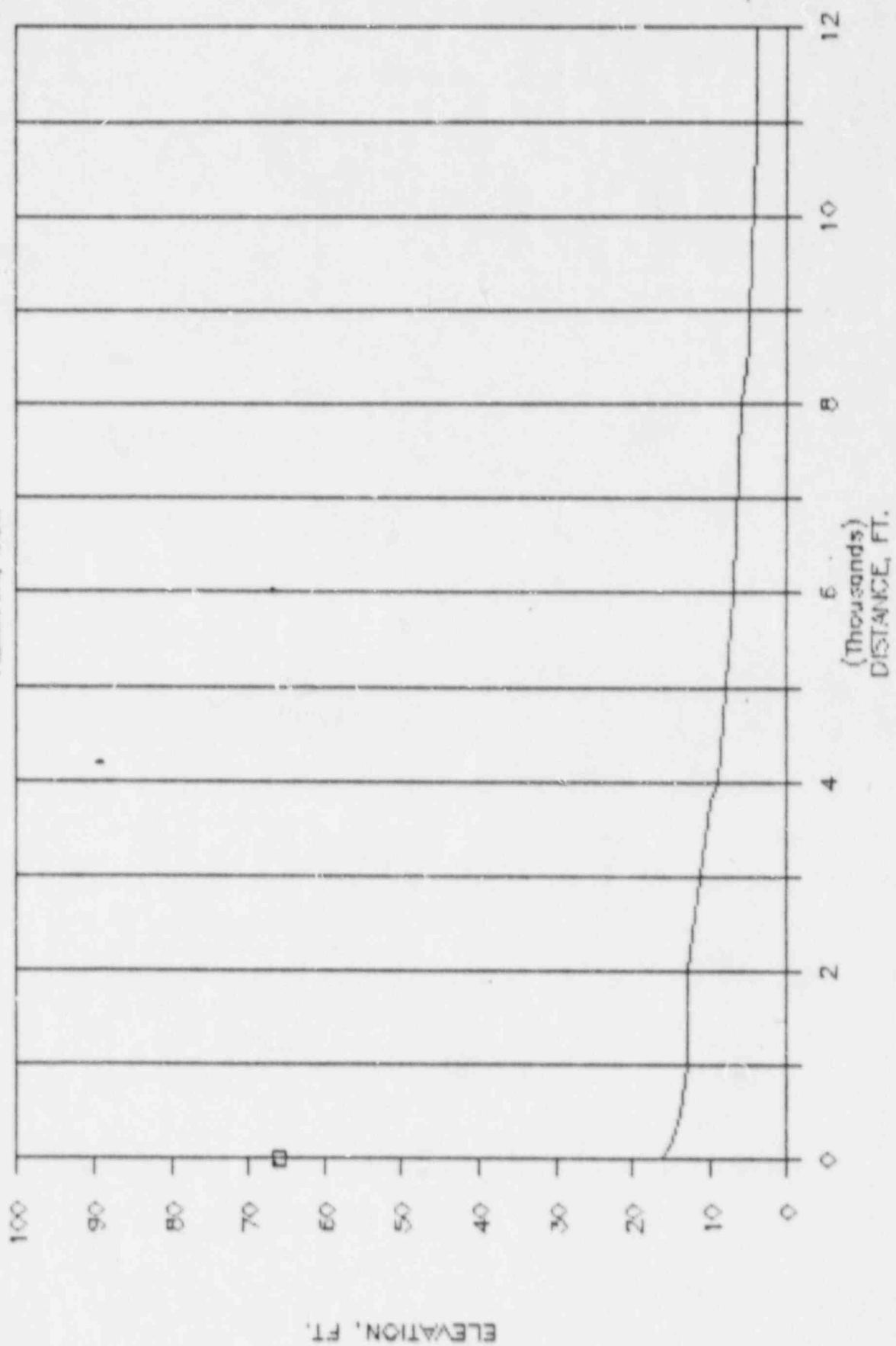
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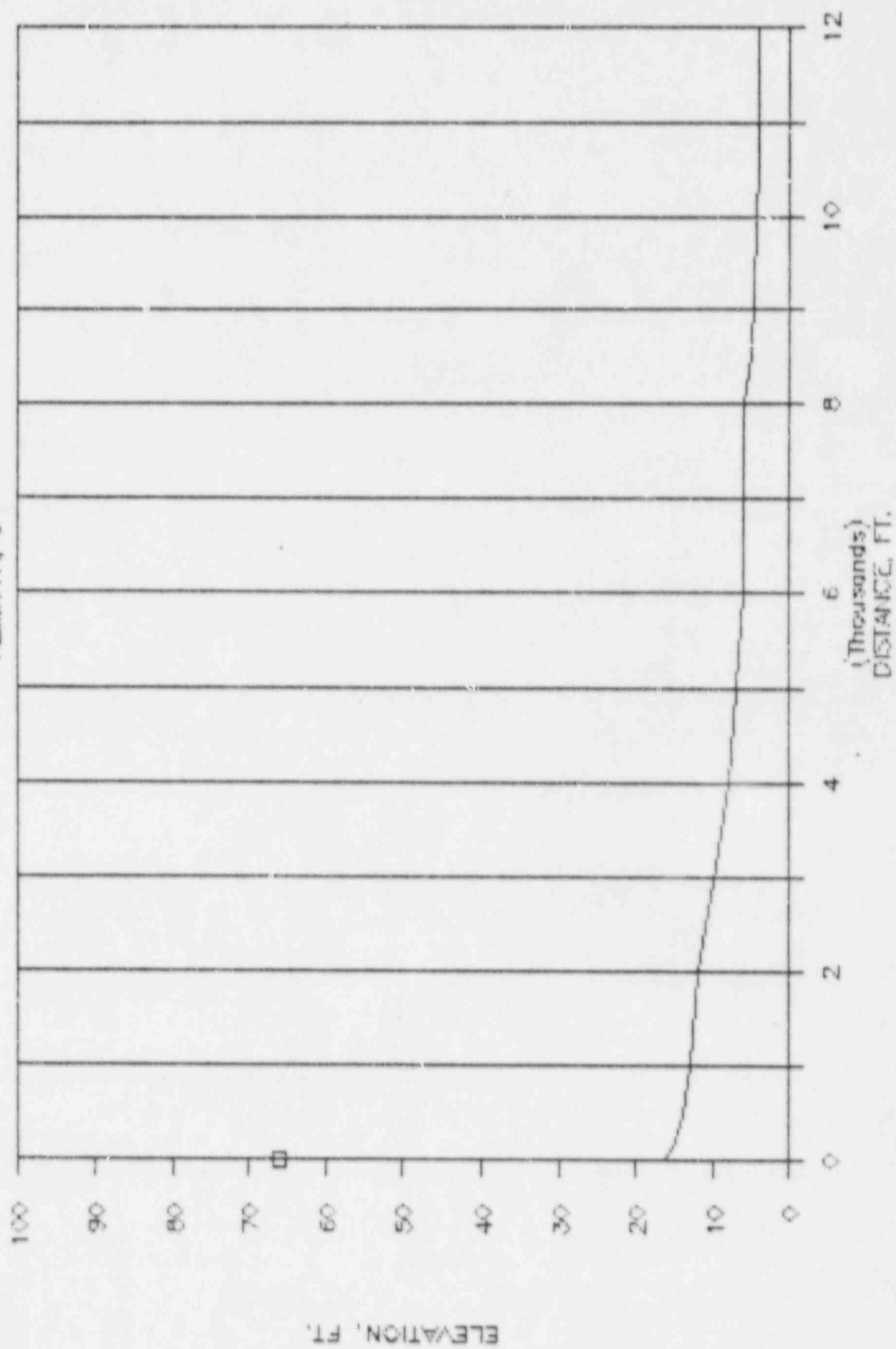
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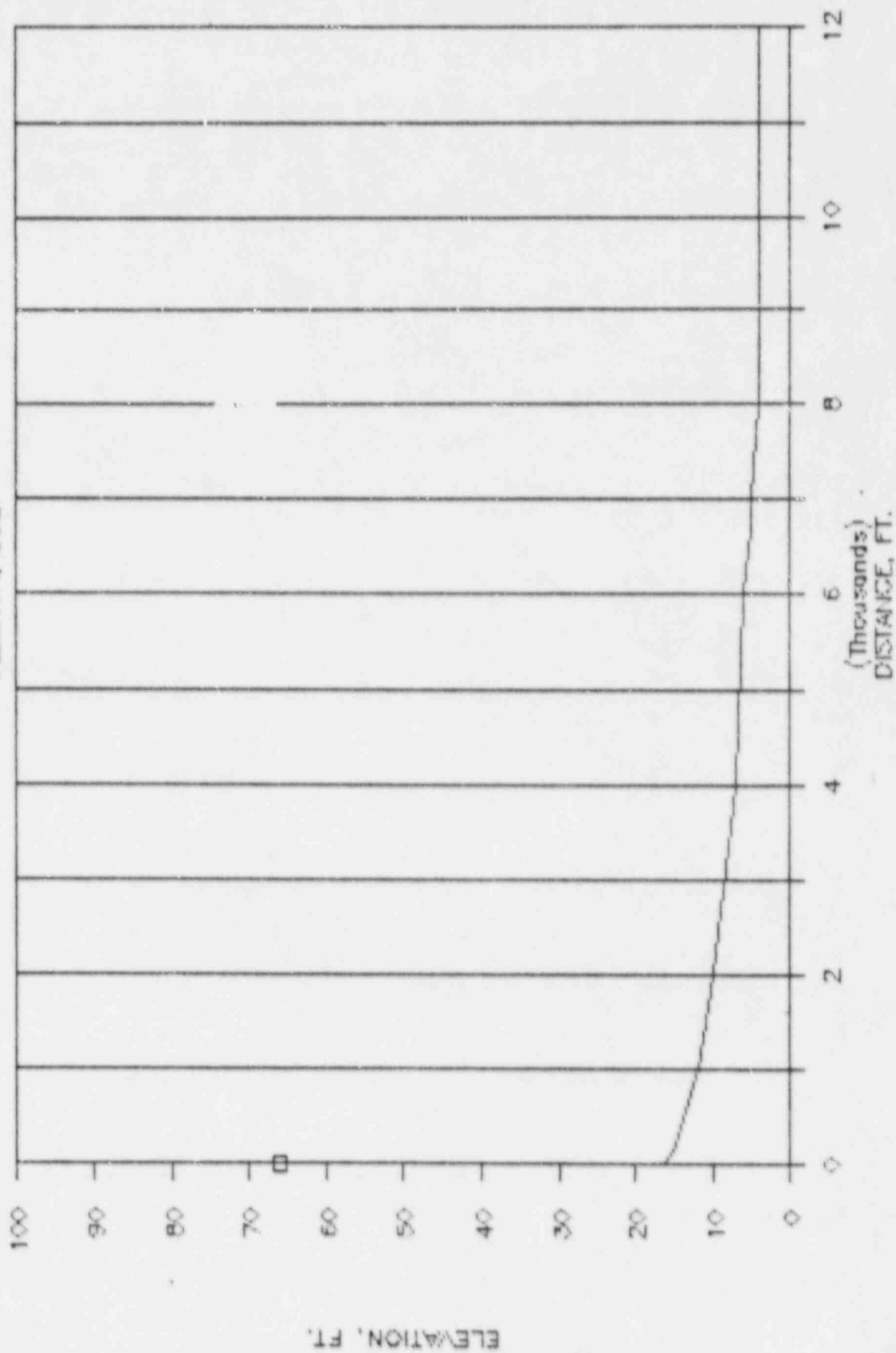
WATERFORD 1

AZIMUTH, 5



WATERFORD 1

AZIMUTH, SSE

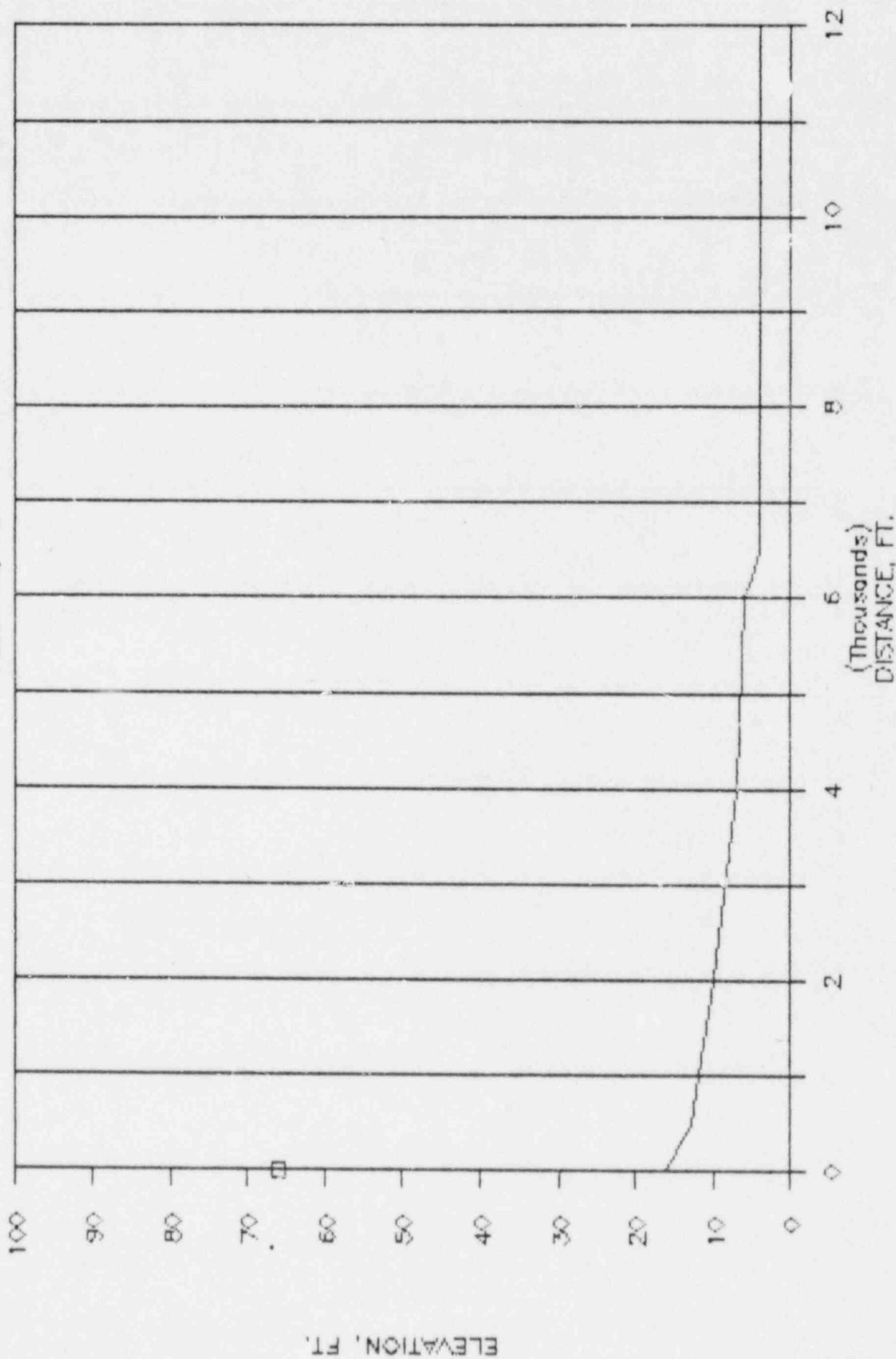


ELEVATION, FT.

(Thousands)
DISTANCE, FT.

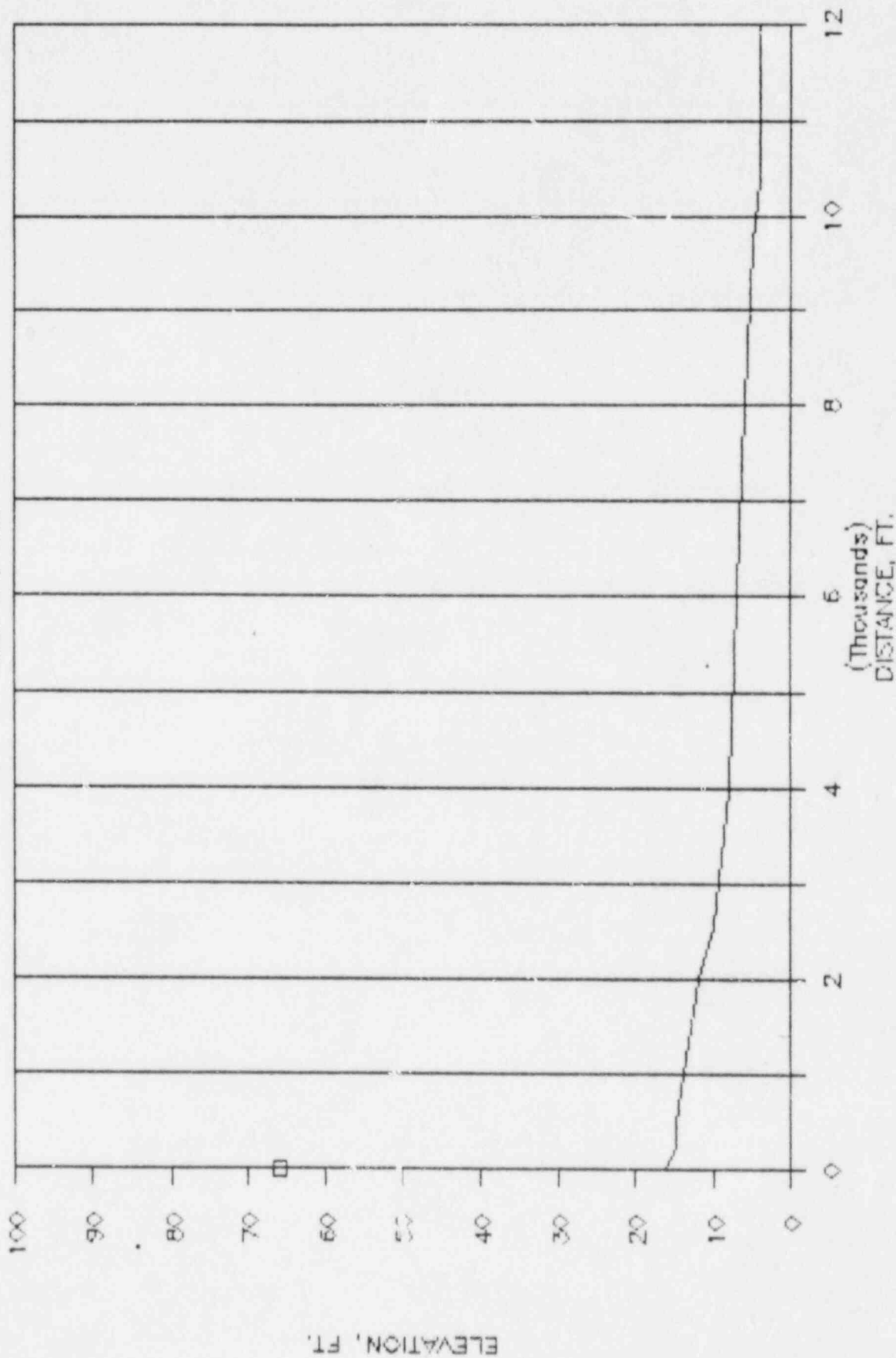
WATERFORD 1

AZIMUTH, SE



WATERFORD 1

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #1-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	16.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	16.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	13.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	12.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	10.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	7.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	3.00	SOFT	0.	NO	0.	0.
8	500.	67.50	25.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	20.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	18.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	12.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	18.00	SOFT	0.	YES	5250.	25.
13	8000.	67.50	13.00	SOFT	0.	YES	6750.	30.
14	12000.	67.50	8.00	SOFT	0.	NO	0.	0.
15	500.	45.00	25.00	HARD	0.	NO	0.	0.
16	1000.	45.00	20.00	HARD	0.	NO	0.	0.
17	2000.	45.00	16.00	HARD	0.	NO	0.	0.
18	4000.	45.00	10.00	HARD	0.	NO	0.	0.
19	6000.	45.00	10.00	HARD	0.	NO	0.	0.
20	8000.	45.00	10.00	HARD	0.	NO	0.	0.
21	12000.	45.00	10.00	HARD	0.	NO	0.	0.
22	500.	22.50	20.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	20.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	15.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	10.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	17.00	SOFT	0.	YES	5400.	30.
27	8000.	22.50	15.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	12.00	SOFT	0.	NO	0.	0.
29	500.	0.0	20.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	20.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	20.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	10.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	20.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	10.00	SOFT	0.	YES	7050.	30.
35	12000.	0.0	7.00	SOFT	0.	NO	0.	0.
36	500.	337.50	20.00	HARD	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	12.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	10.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	5.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	3.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	3.00	SOFT	0.	NO	0.	0.
78	500.	202.50	14.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	13.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	13.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	9.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	7.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	6.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	4.00	SOFT	0.	NO	0.	0.
85	500.	180.00	14.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	13.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	12.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	8.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	6.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	6.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	4.00	SOFT	0.	NO	0.	0.
92	500.	157.50	14.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	12.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	10.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	7.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	6.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	4.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	4.00	SOFT	0.	NO	0.	0.
99	500.	135.00	13.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	12.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	10.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	7.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	6.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	4.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	4.00	SOFT	0.	NO	0.	0.
106	500.	112.50	15.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	14.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	12.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	8.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	7.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	6.00	SOFT	0.	NO	0.	0.
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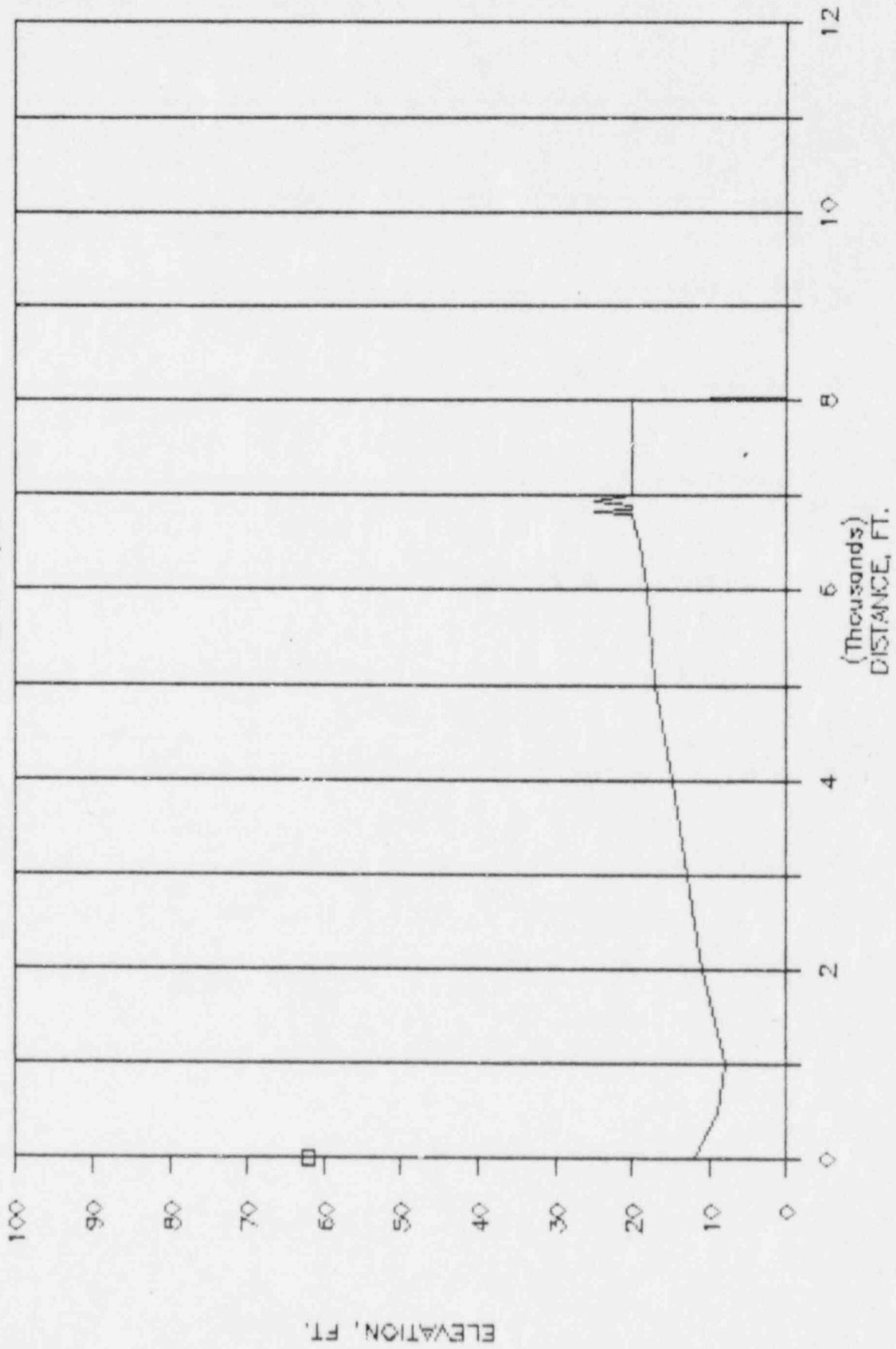
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 AHS SIREN #1-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.7	91.3	75.7	65.1	56.1	52.1	50.8
NE	105.8	98.4	89.7	78.9	71.2	65.0	55.2
NNE	105.7	91.3	75.7	65.1	55.3	57.4	50.8
N	105.7	91.3	75.7	65.1	60.9	51.3	50.8
NNW	105.8	98.4	89.7	78.9	71.2	65.0	47.8
NW	105.7	91.3	75.7	65.1	60.9	52.5	43.2
WNW	105.7	91.3	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	32.1
S	105.6	91.2	75.7	62.8	54.1	46.2	30.6
SSE	105.6	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

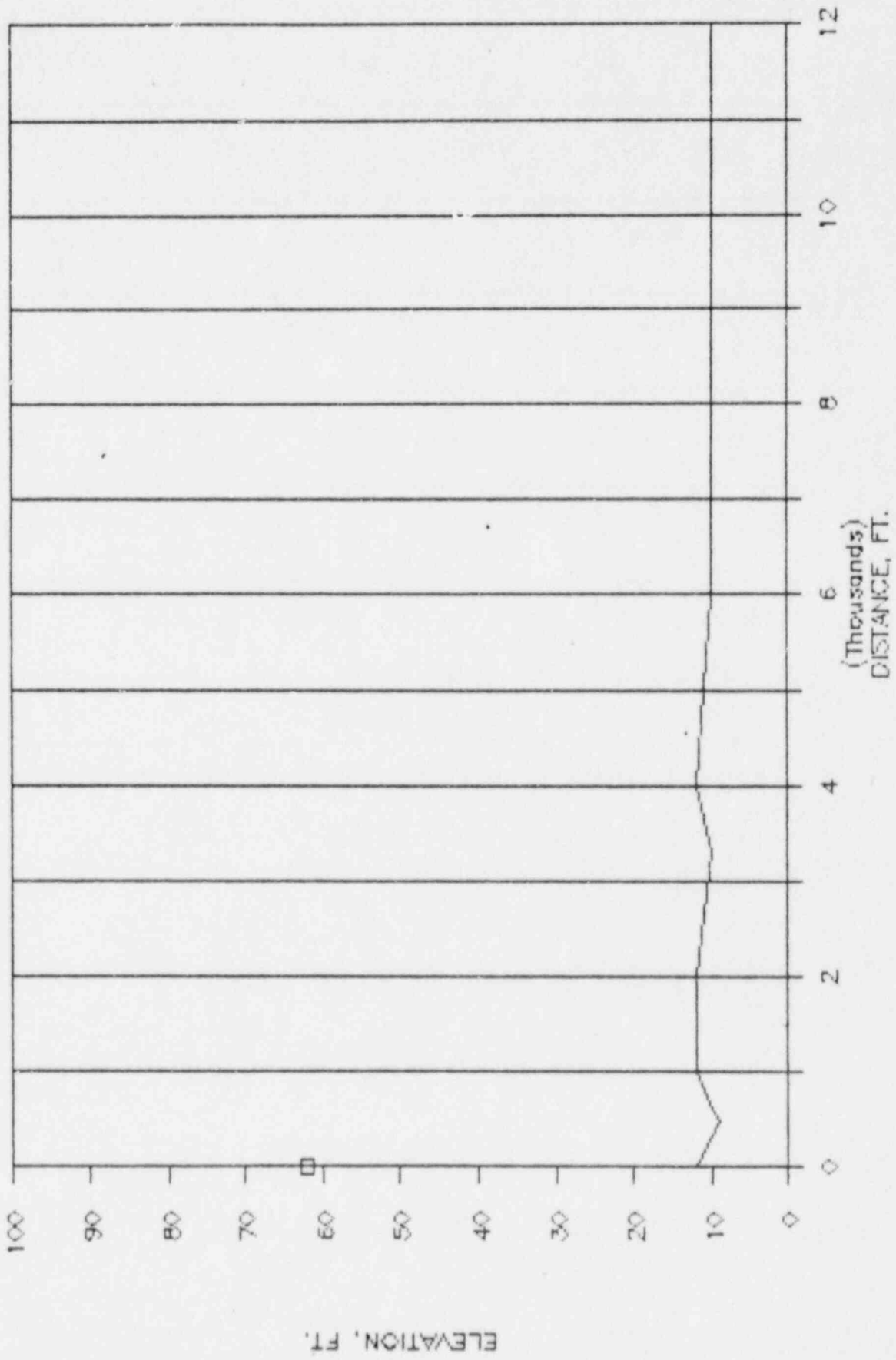
WATERFORD 2

AZIMUTH, E



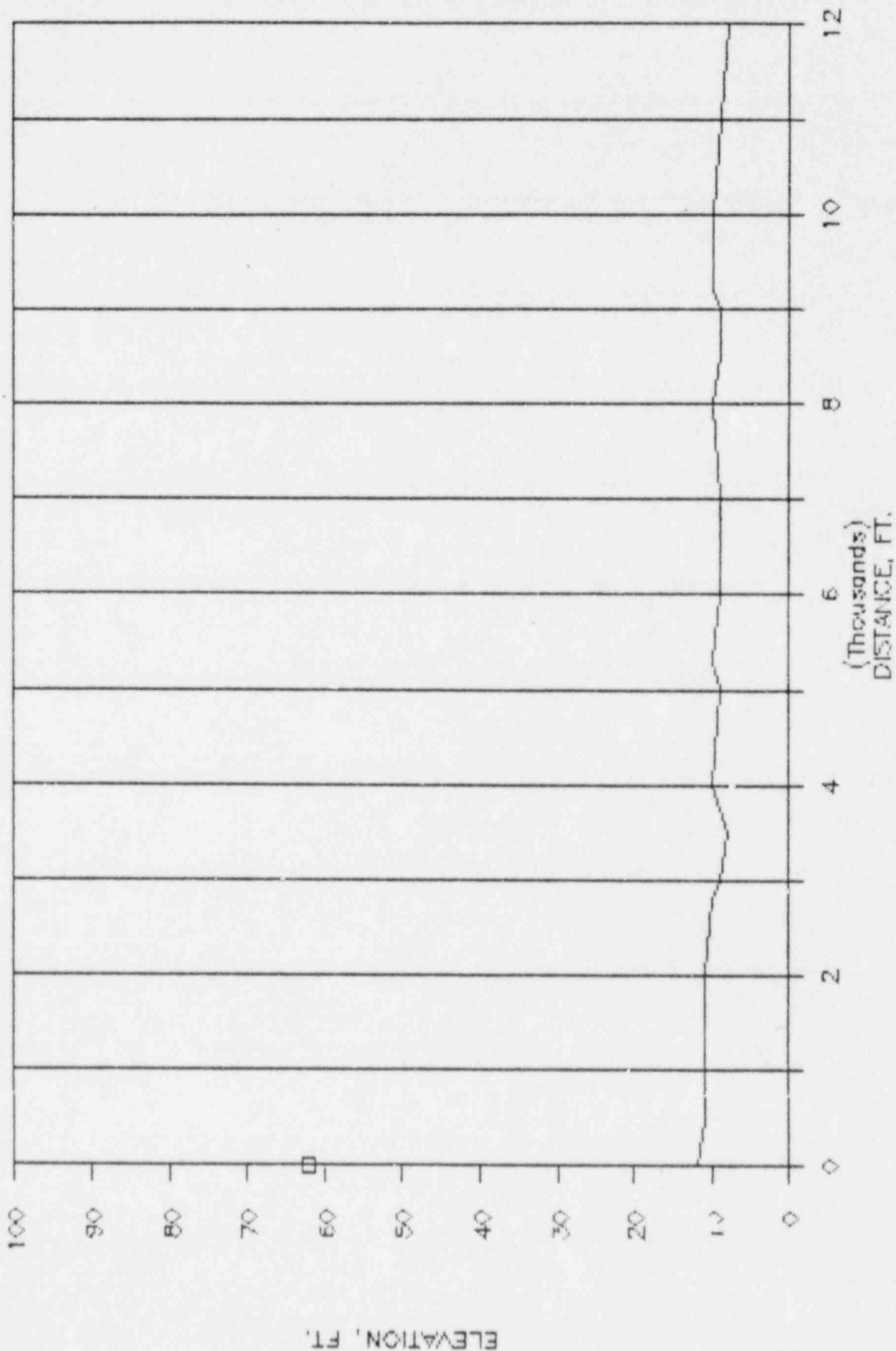
WATERFORD 2

AZIMUTH, ENE



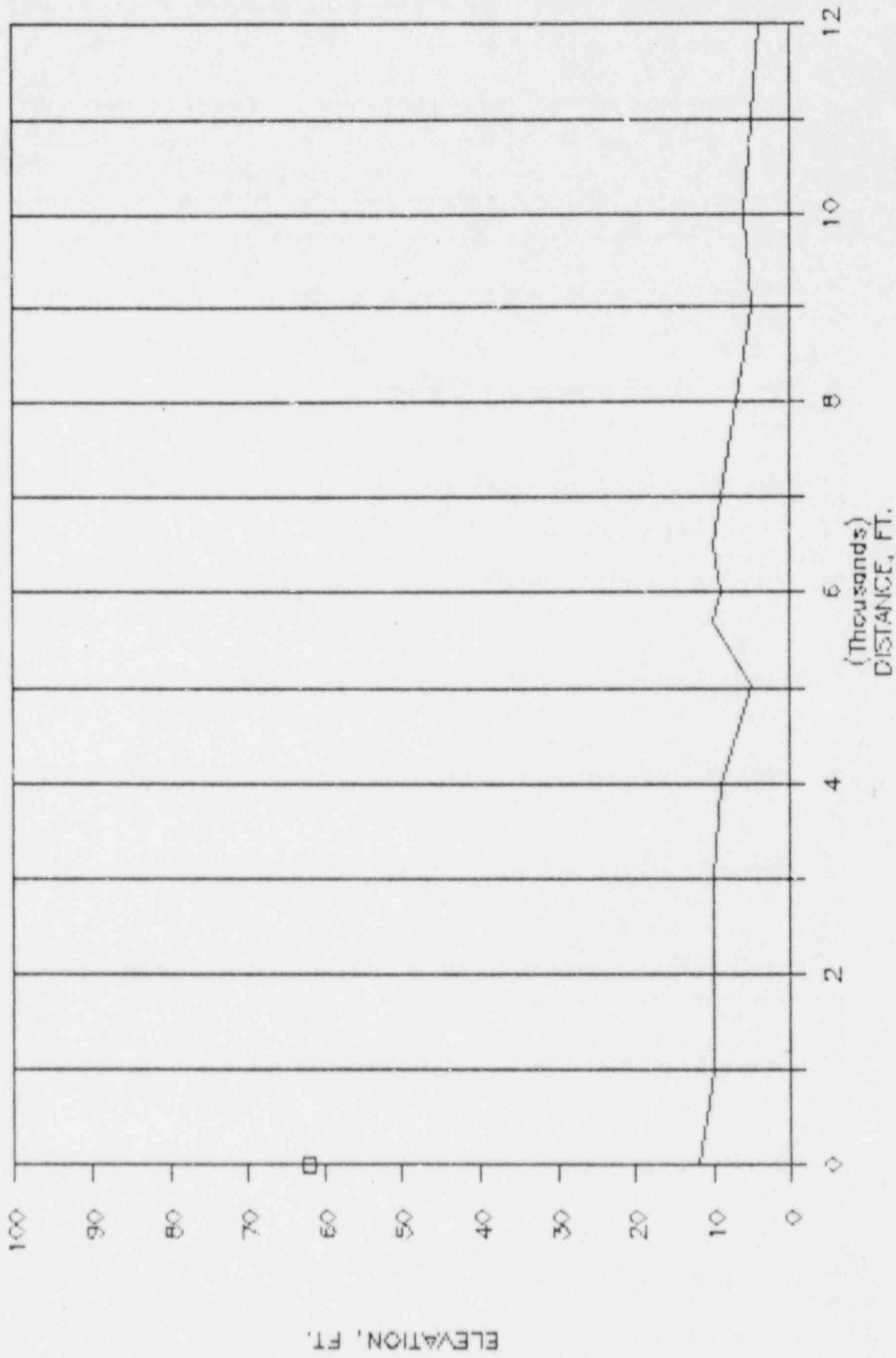
WATERFORD 2

AZIMUTH, NE



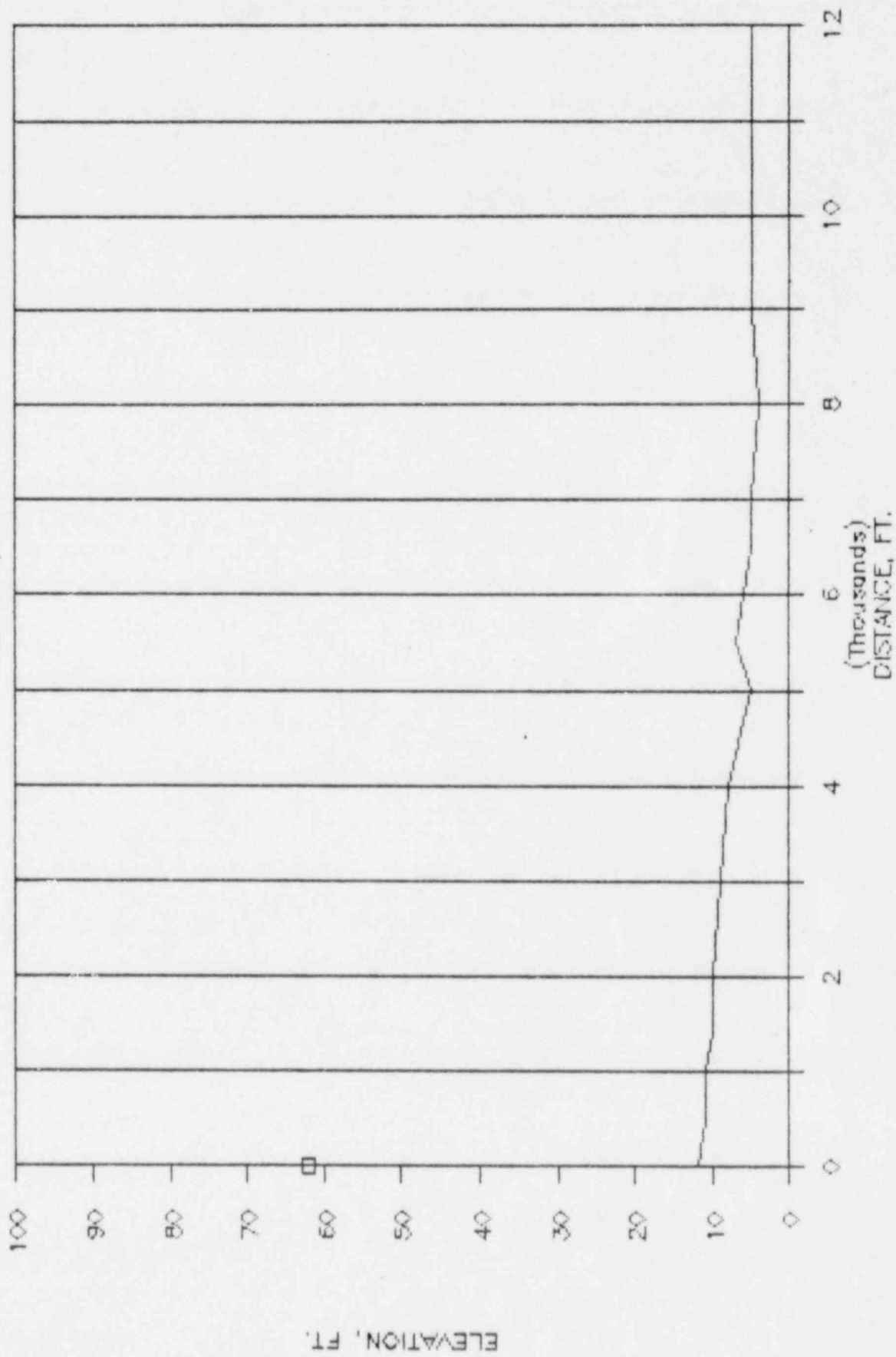
WATERFORD 2

AZIMUTH, NNE



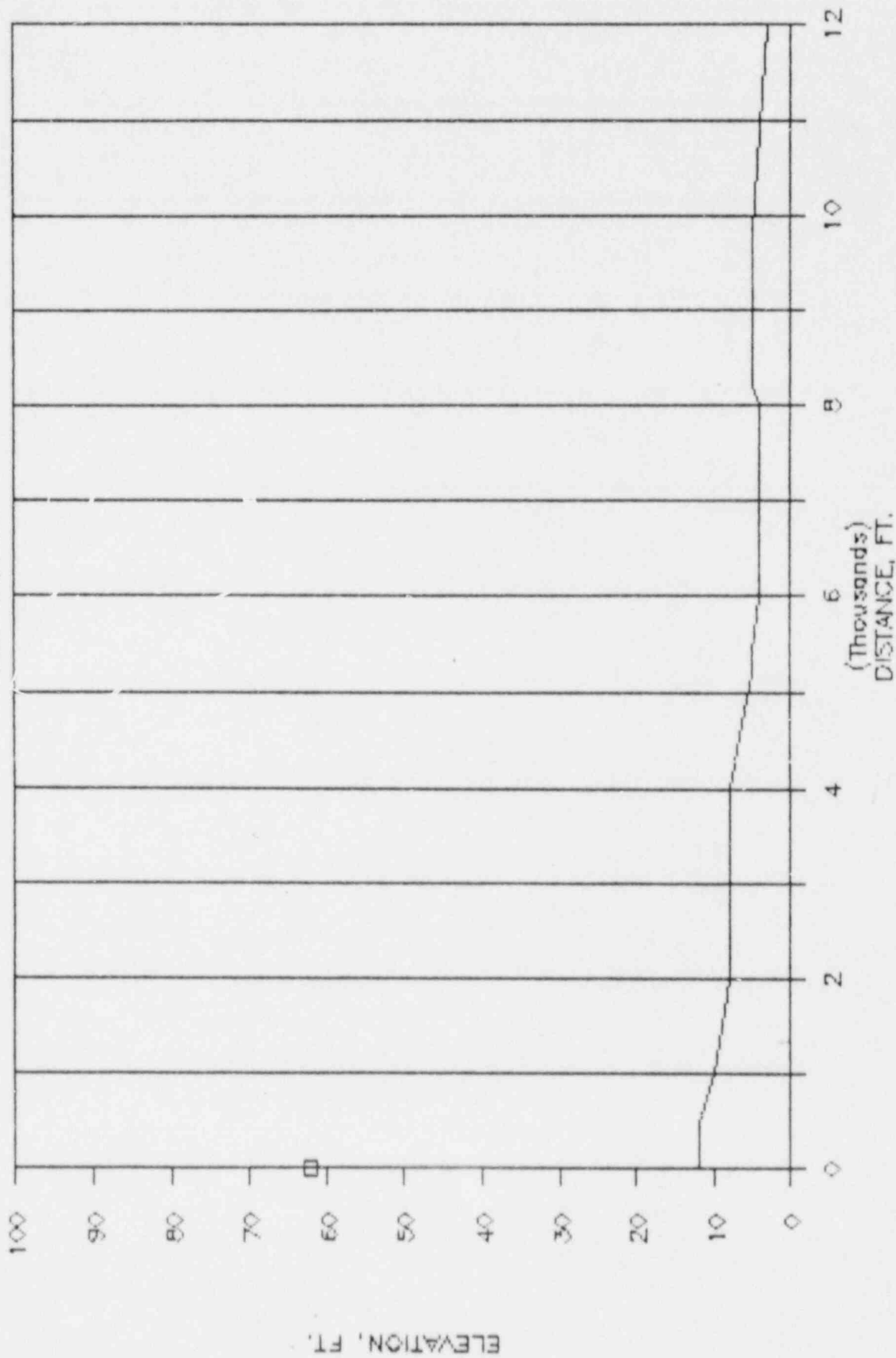
WATERFORD 2.

AZIMUTH, N



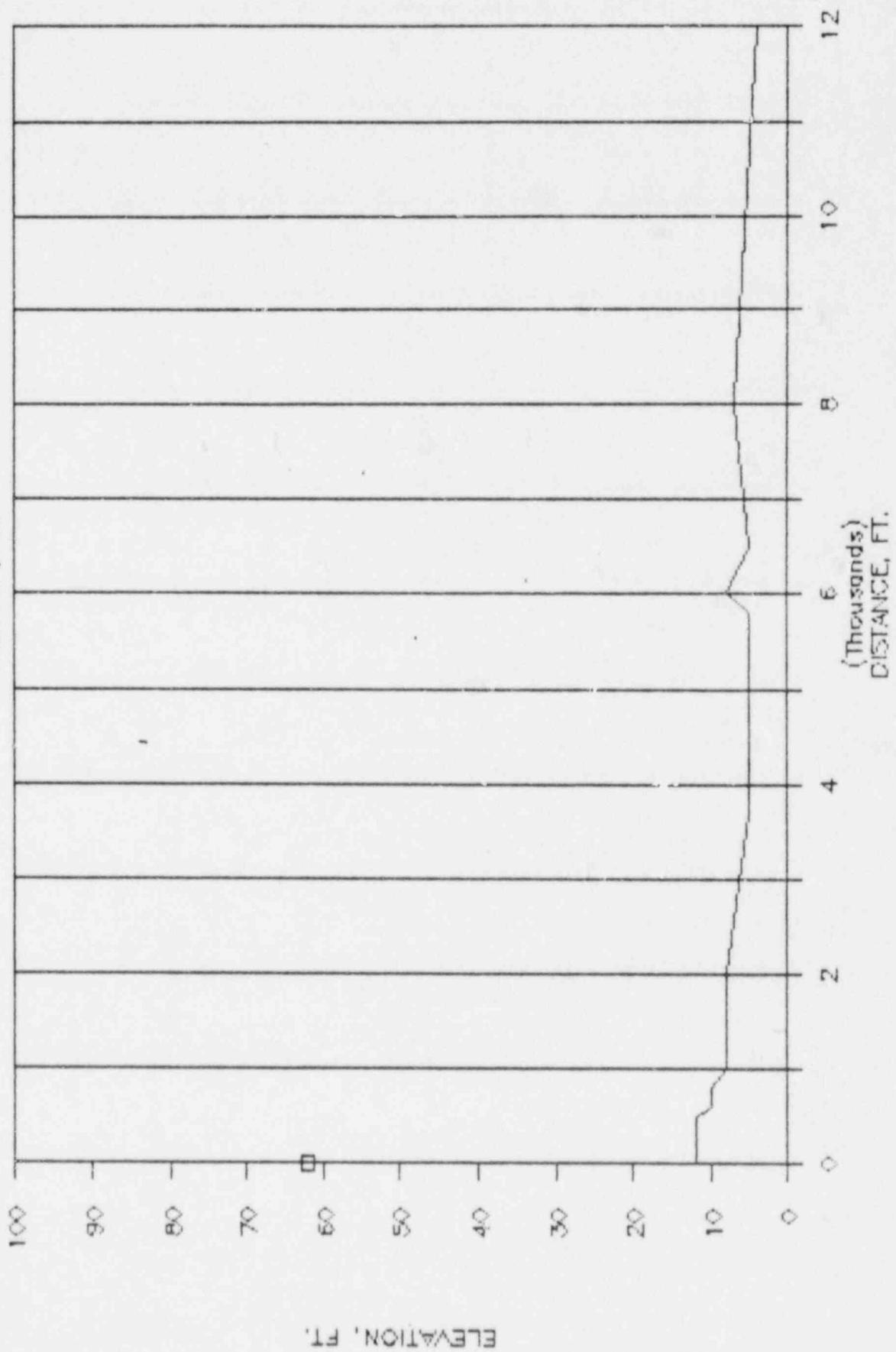
WATERFORD 2

AZIMUTH, NNW



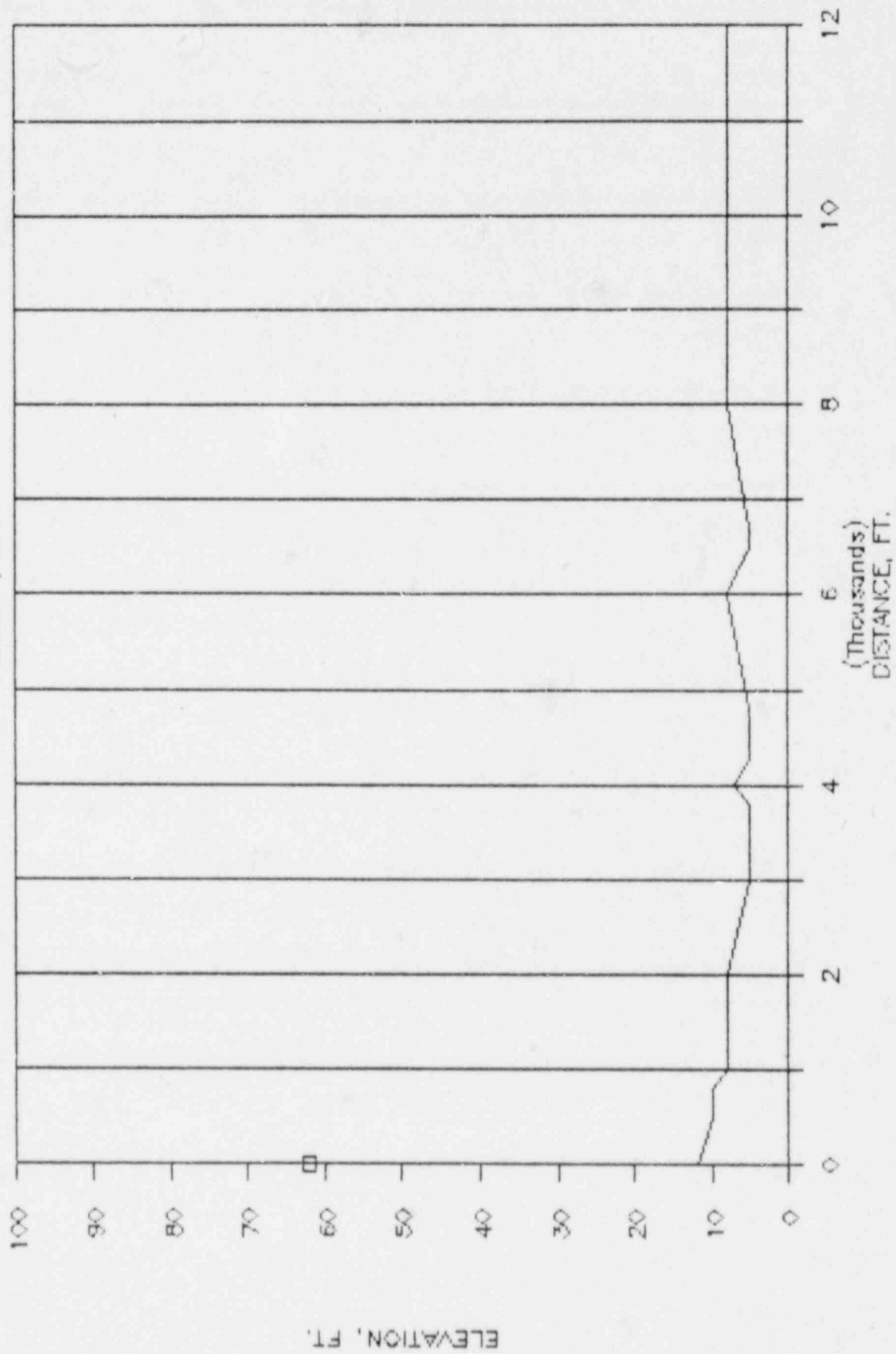
WATERFORD 2

AZIMUTH, NW



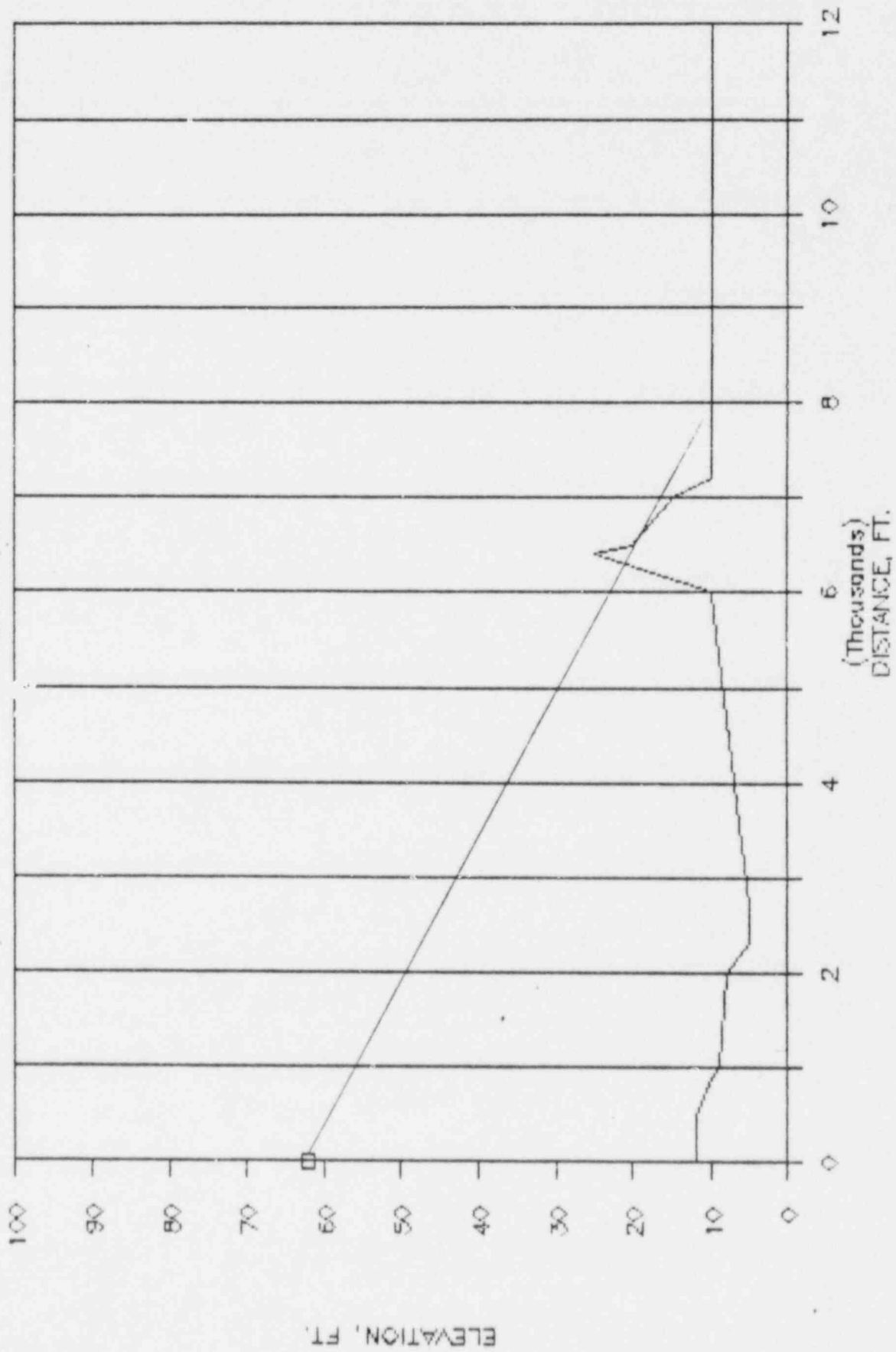
WATERFORD 2

AZIMUTH, WNW



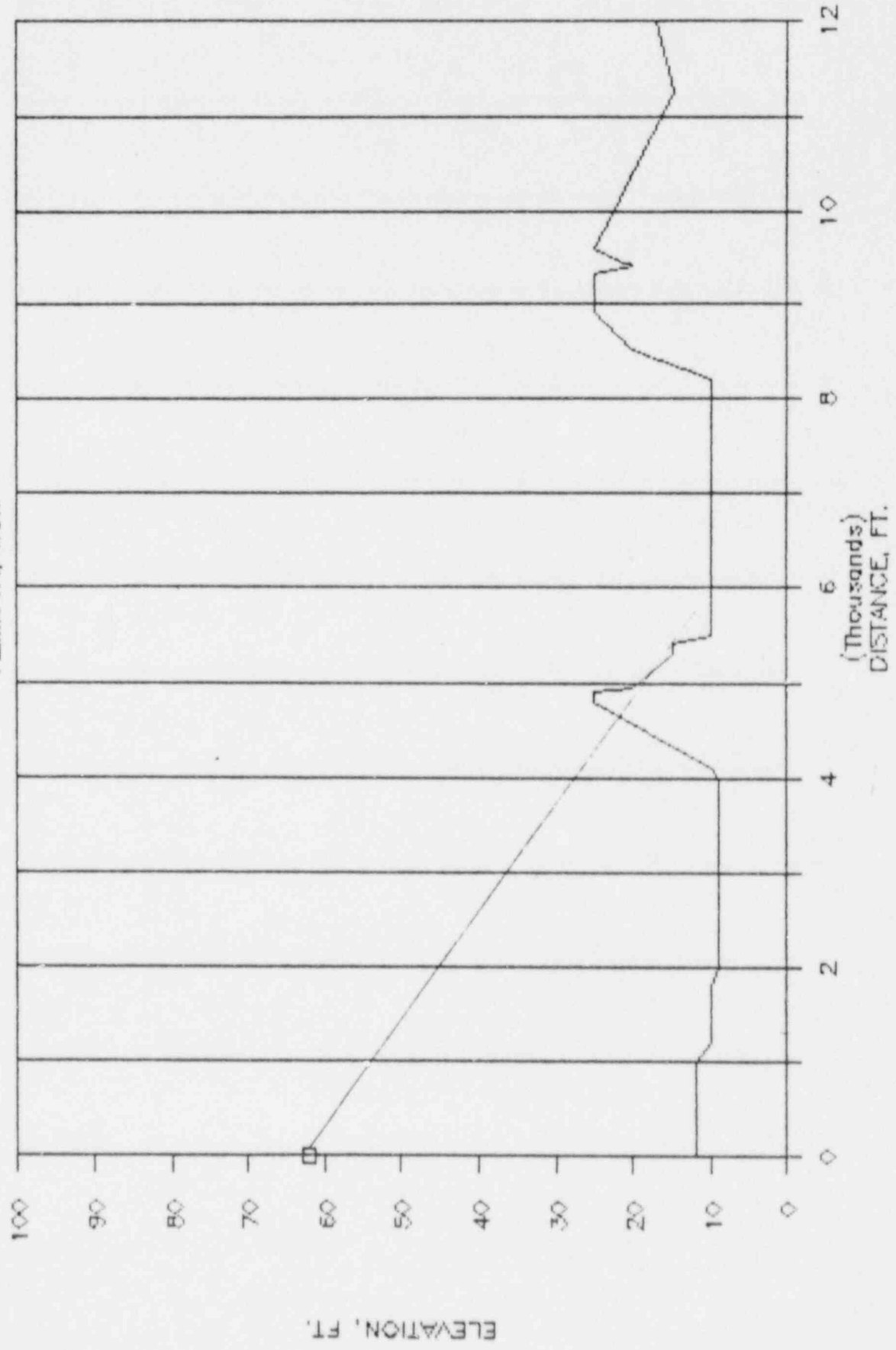
WATERFORD 2

AZIMUTH, W



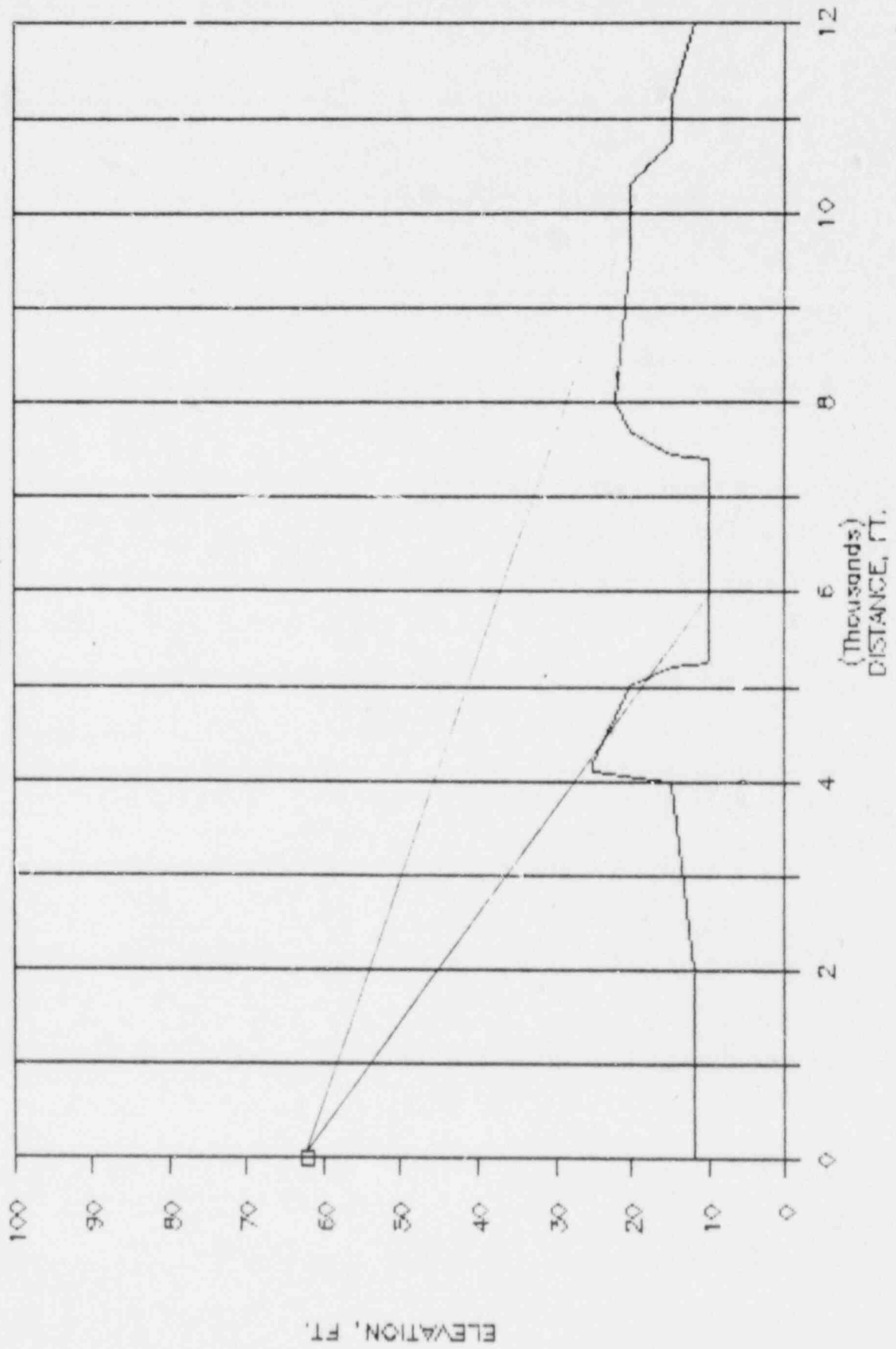
WATERFORD 2

AZIMUTH, WSW



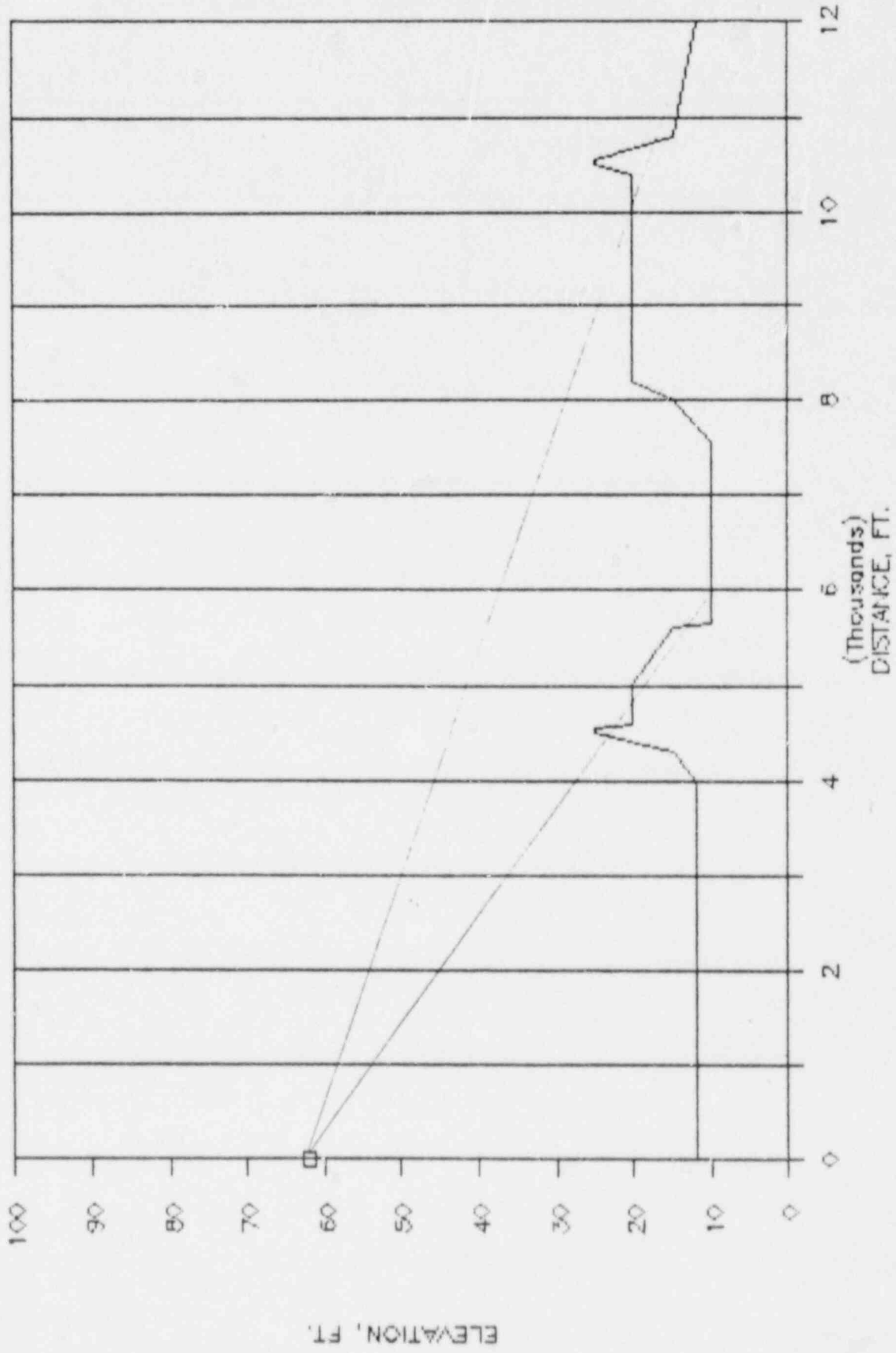
WATERFORD 2

AZIMUTH, SW



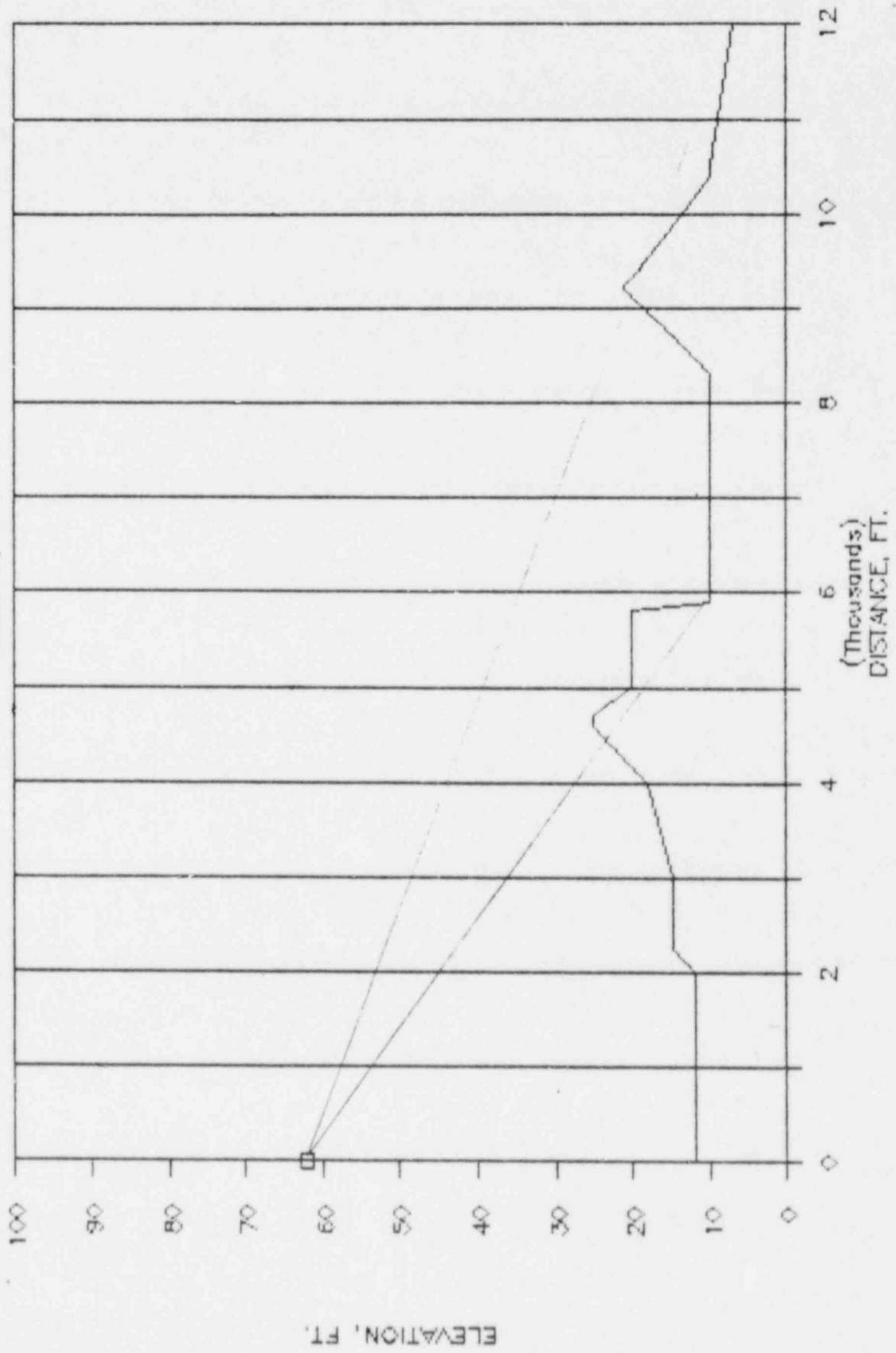
WATERFORD 2

AZIMUTH, SSW



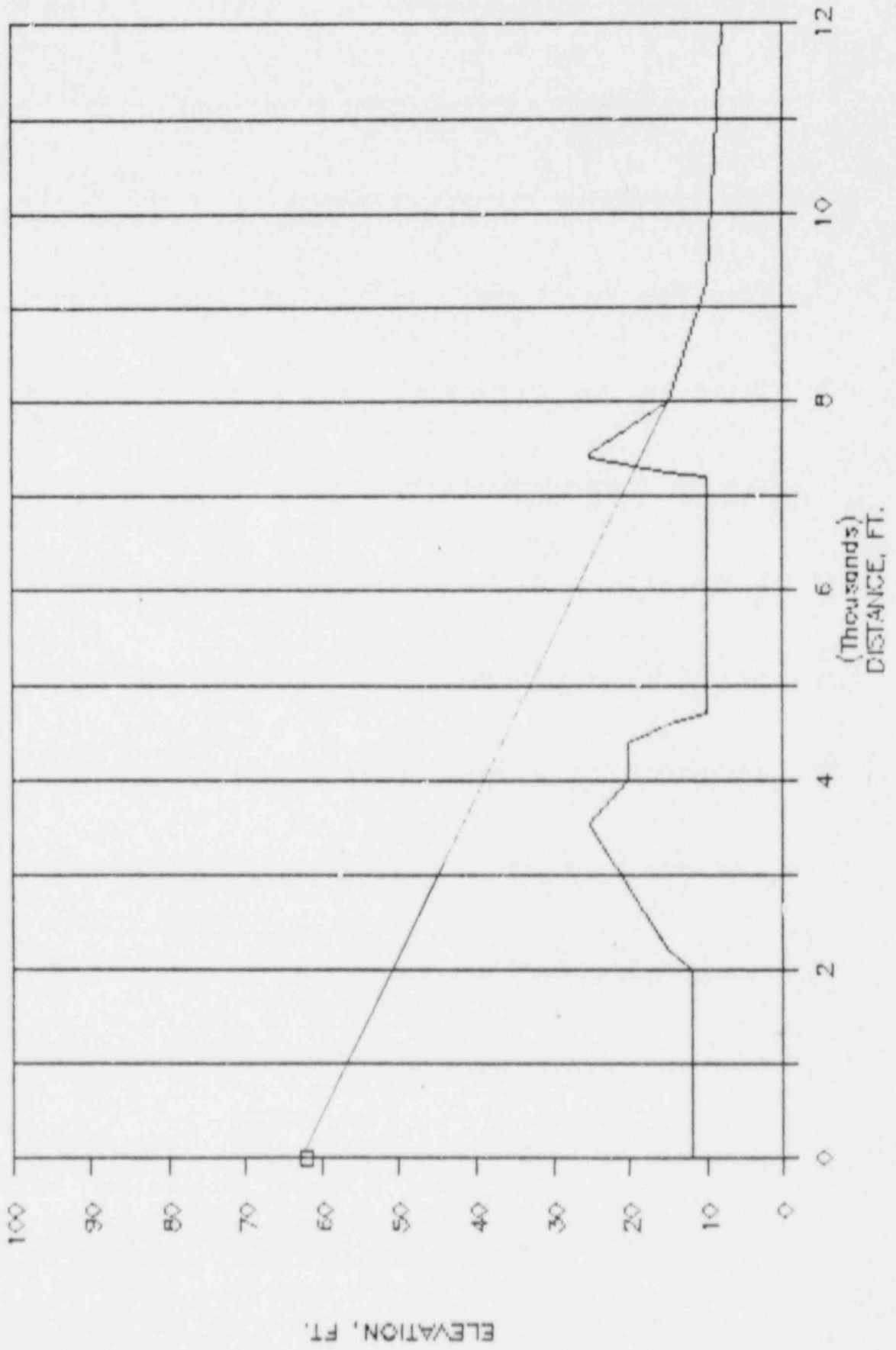
WATERFORD 2

AZIMUTH, S



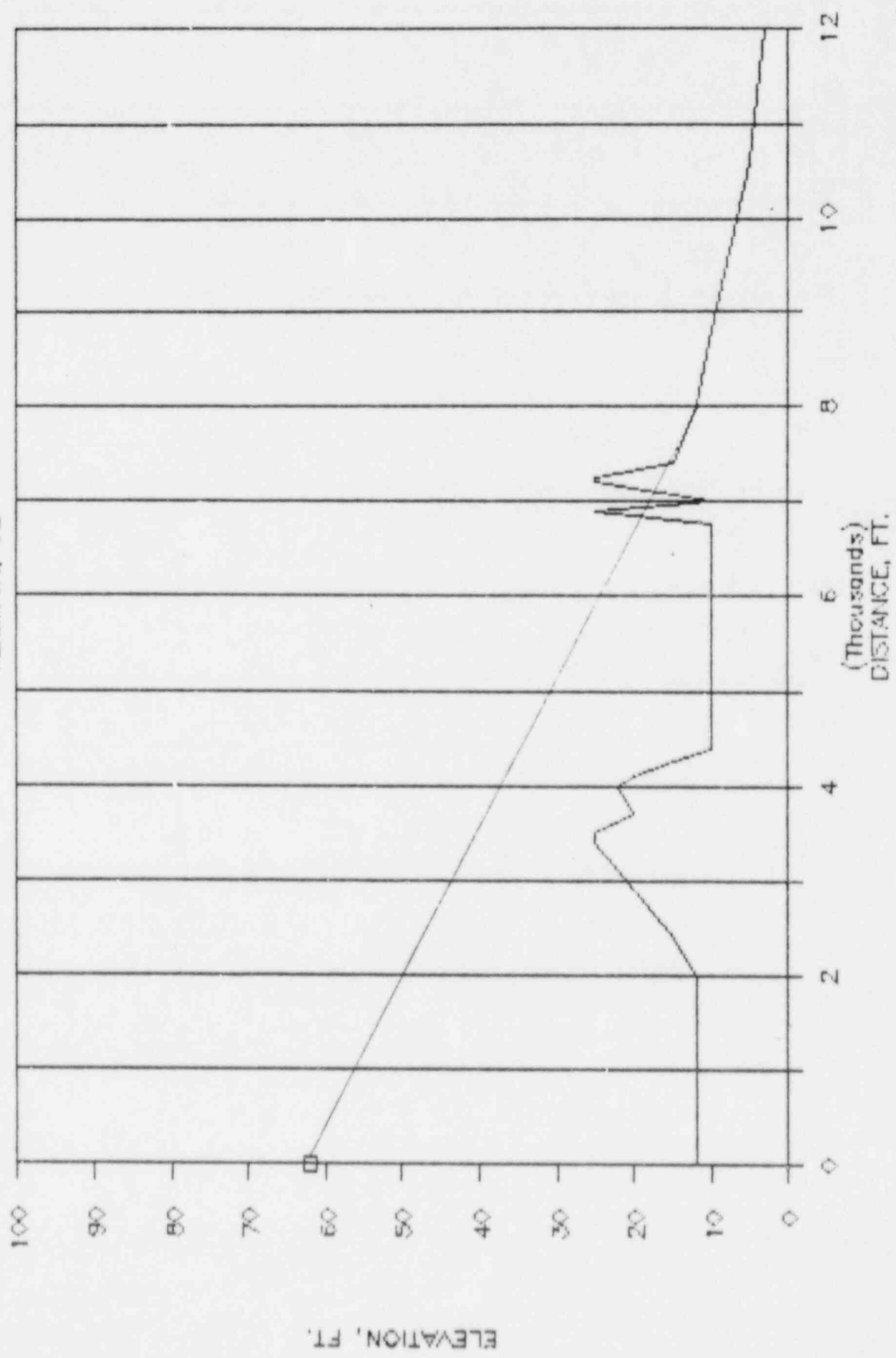
WATERFORD 2

AZIMUTH, SSE



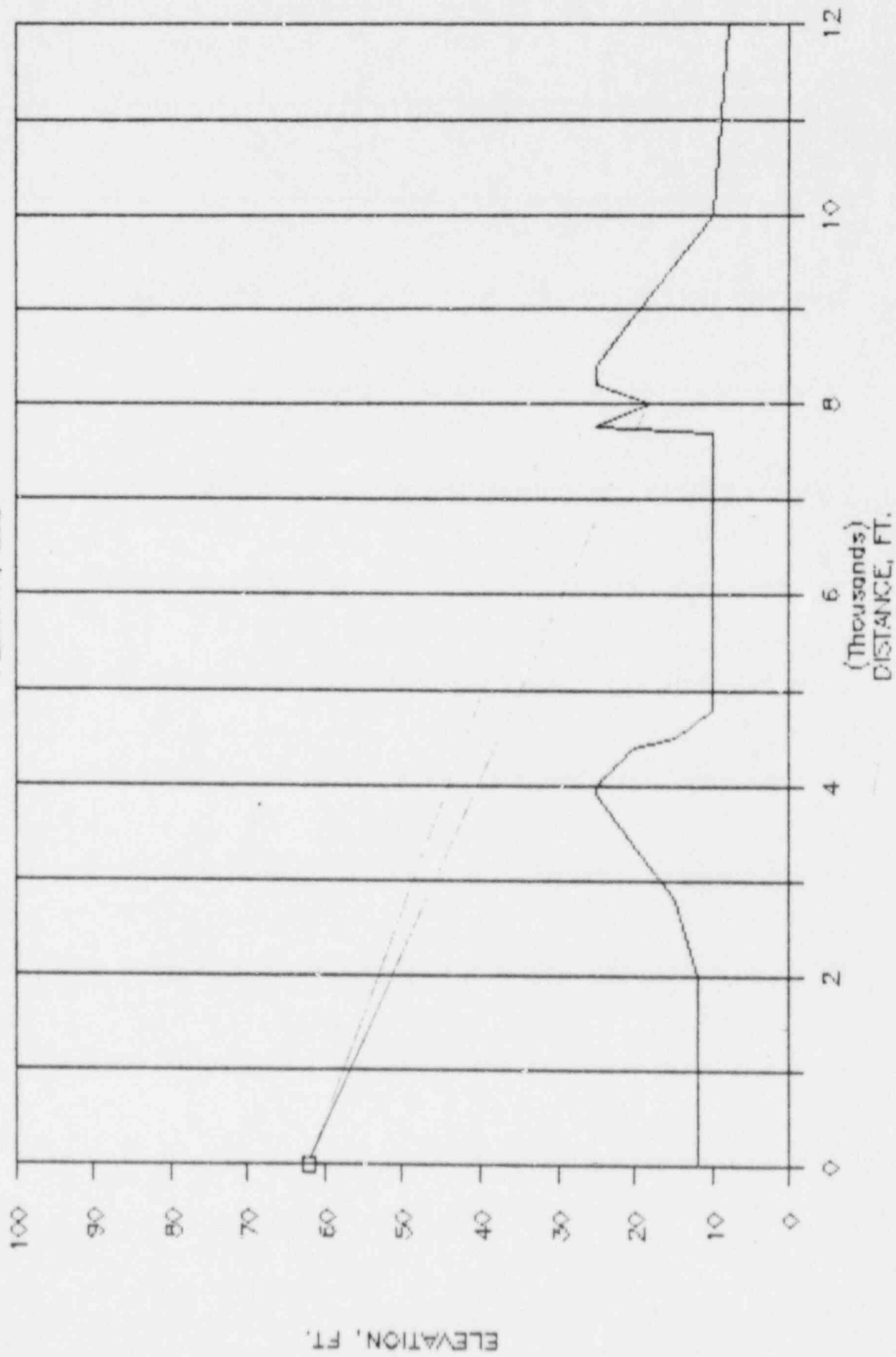
WATERFORD 2

AZIMUTH, SE



WATERFORD 2

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 AWS SIREN #2-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	9.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	8.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	11.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	15.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	18.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	20.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	0.0	SOFT	0.	NO	0.	0.
8	500.	67.50	9.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	12.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	12.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	12.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	10.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	10.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	10.00	SOFT	0.	NO	0.	0.
15	500.	45.00	11.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	11.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	11.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	10.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	9.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	10.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	0.00	SOFT	0.	NO	0.	0.
22	500.	22.50	11.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	10.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	10.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	9.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	9.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	7.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	4.00	SOFT	0.	NO	0.	0.
29	500.	0.0	11.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	11.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	10.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	8.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	6.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	4.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	5.00	SOFT	0.	NO	0.	0.
36	500.	337.50	12.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	10.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	8.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	8.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	4.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	4.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	3.00	SOFT	0.	NO	0.	0.
43	500.	315.00	12.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	8.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	8.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	5.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	8.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	7.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	4.00	SOFT	0.	NO	0.	0.
50	500.	292.50	10.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	8.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	8.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	7.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	8.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	8.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	8.00	SOFT	0.	NO	0.	0.
57	500.	270.00	12.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	9.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	8.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	7.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	10.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	10.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	10.00	SOFT	0.	NO	0.	0.
64	500.	247.50	12.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	12.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	9.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	9.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	10.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	10.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	17.00	SOFT	0.	NO	0.	0.
71	500.	225.00	12.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	12.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	12.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	15.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	10.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	22.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	12.00	SOFT	0.	NO	0.	0.
78	500.	202.50	12.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	12.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	12.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	12.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	10.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	15.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	12.00	SOFT	0.	NO	0.	0.
85	500.	180.00	12.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	12.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	12.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	13.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	10.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	10.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	7.00	SOFT	0.	NO	0.	0.
92	500.	157.50	12.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	12.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	12.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	20.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	10.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	15.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	8.00	SOFT	0.	NO	0.	0.
99	500.	135.00	12.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	12.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	12.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	22.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	10.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	12.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	3.00	SOFT	0.	NO	0.	0.
106	500.	112.50	12.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	12.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	12.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	25.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	10.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	18.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	8.00	SOFT	0.	NO	0.	0.

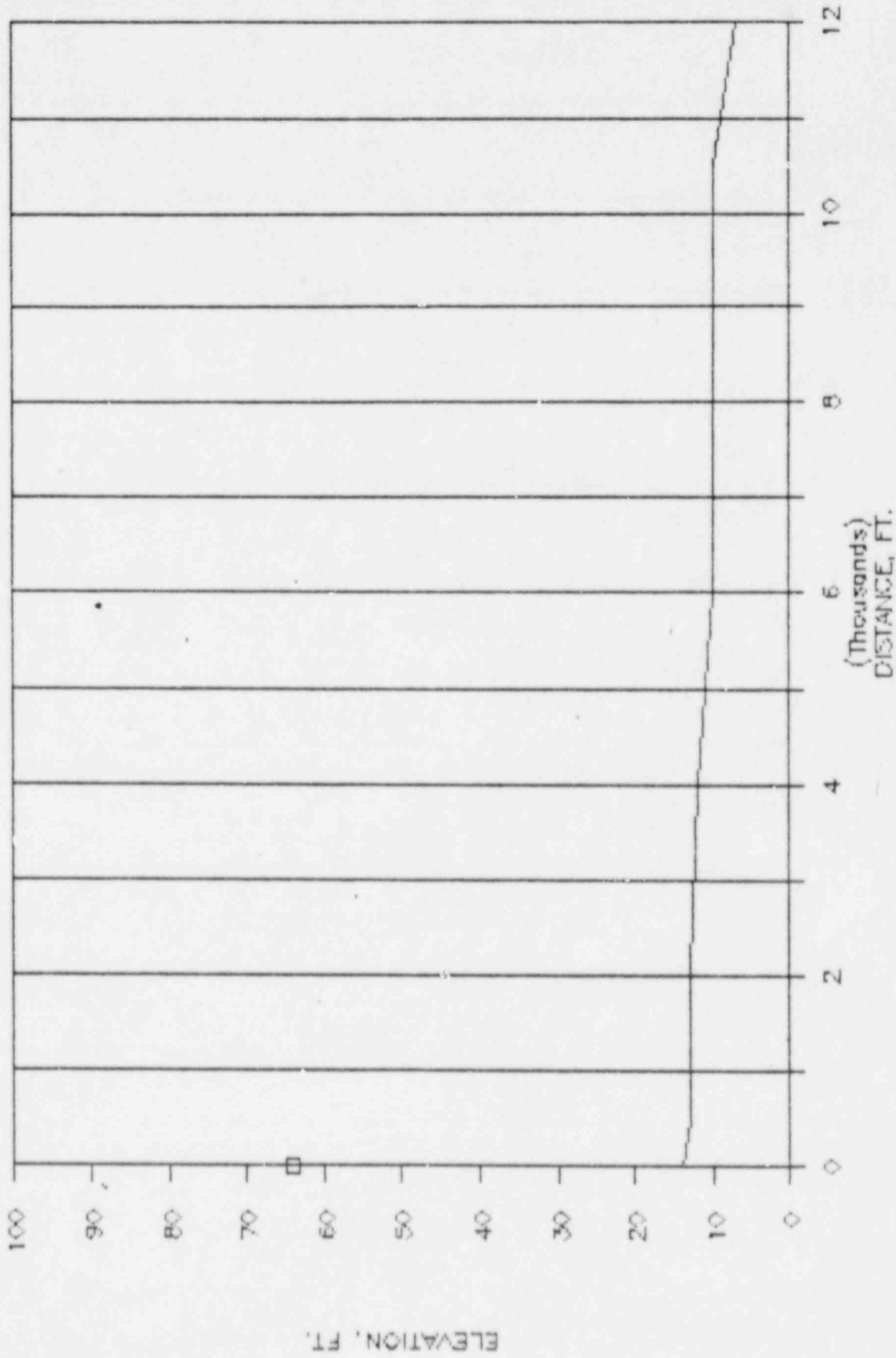
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #2-W03000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.5	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.5	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.5	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.5	91.2	75.7	65.1	60.9	57.4	50.8
N	105.5	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.5	91.2	75.6	65.1	60.9	57.4	50.8
NW	105.5	91.2	75.6	65.1	60.9	57.4	50.8
WNW	105.5	91.2	75.6	65.1	60.9	57.4	50.8
W	105.5	91.2	75.6	65.1	60.9	57.4	50.8
WSW	105.5	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.5	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.5	91.2	75.7	63.3	54.9	47.1	32.1
S	105.5	91.2	75.7	62.8	54.1	46.1	30.6
SSE	105.5	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.5	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.5	91.2	75.7	65.1	60.9	57.4	47.6

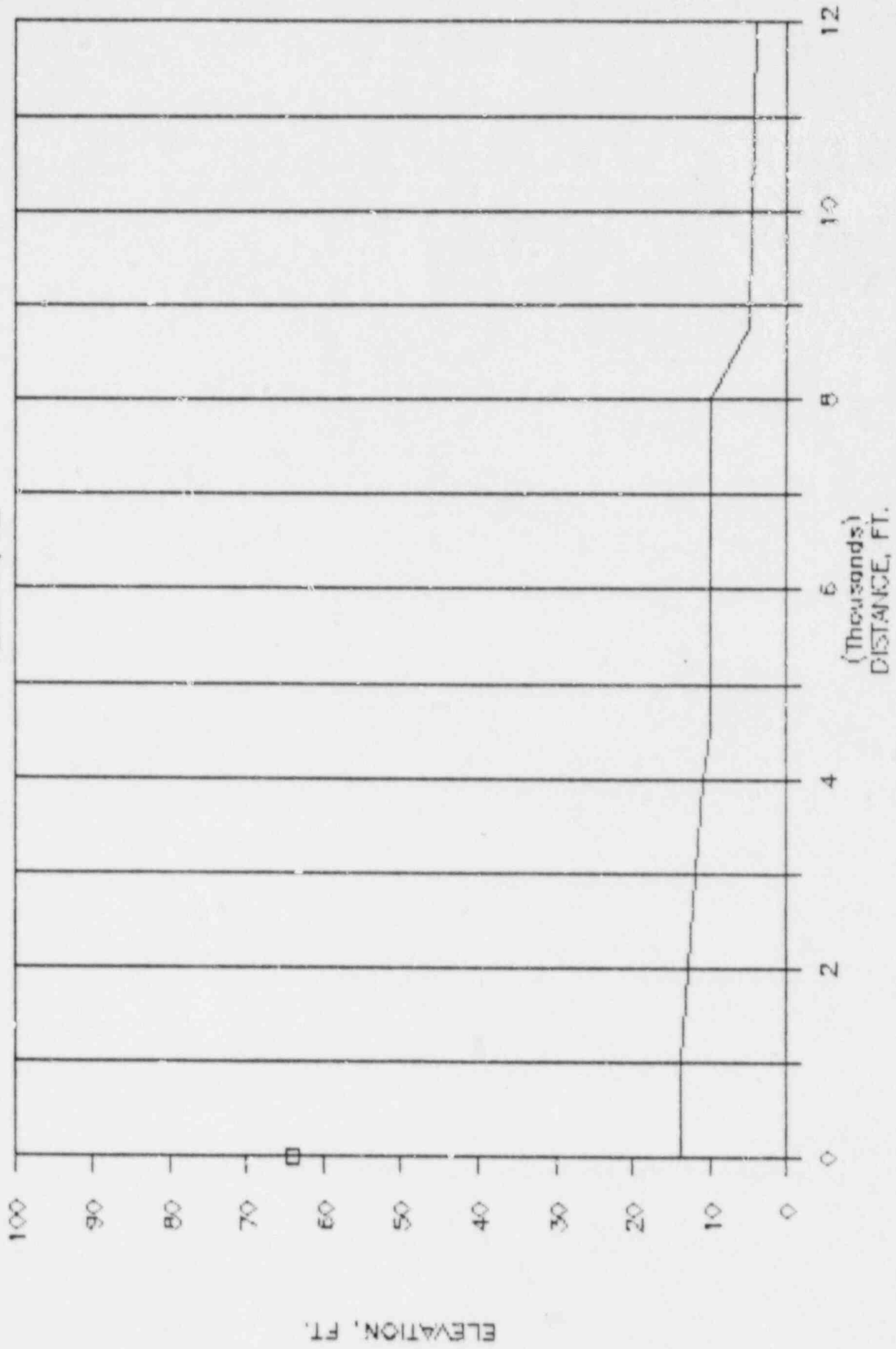
WATERFORD 3

AZIMUTH, BNE



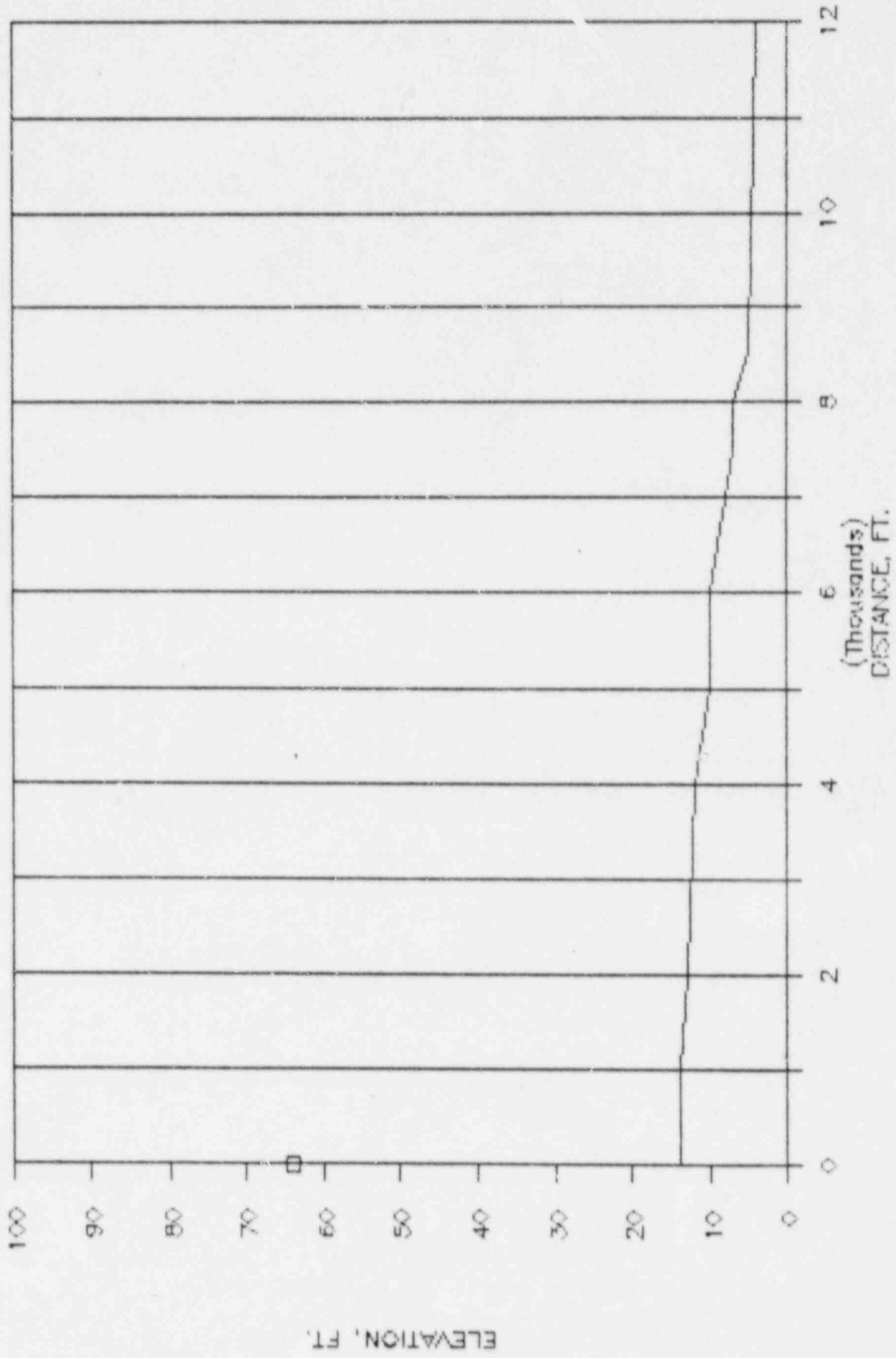
WATERFORD 3

AZIMUTH, NE



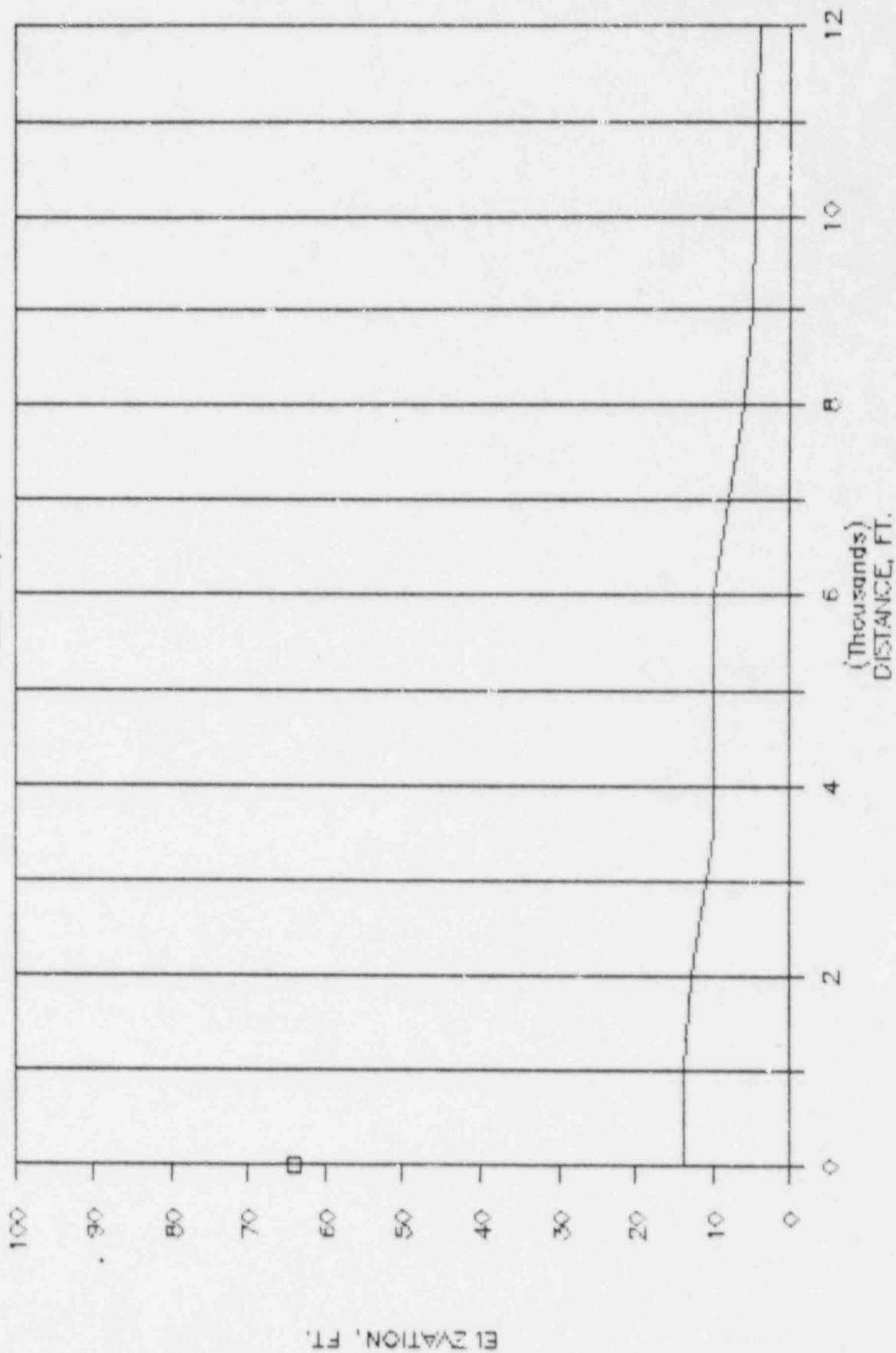
WATERFORD 3

AZIMUTH, NNE



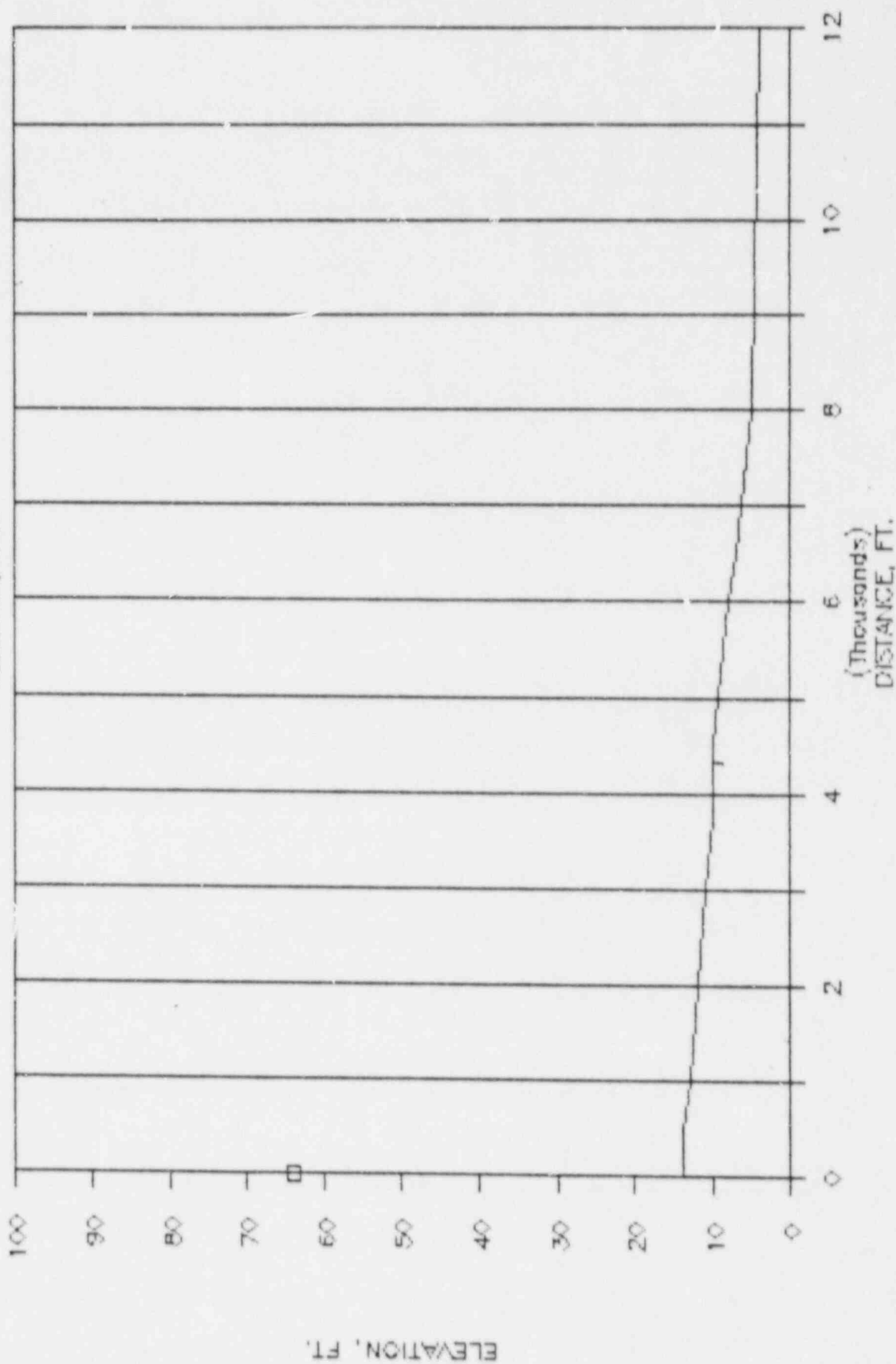
WATERFORD 3

AZIMUTH, N



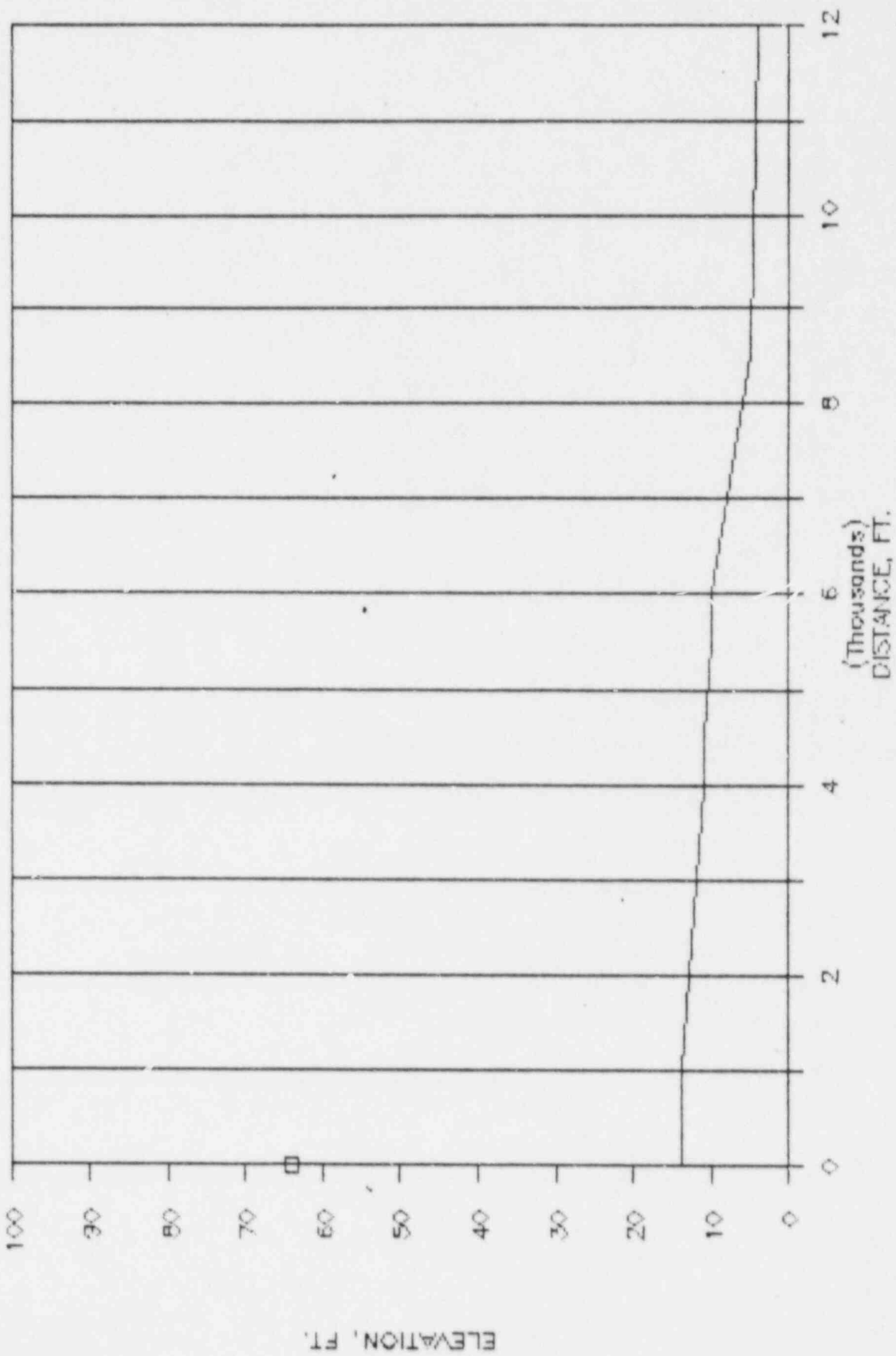
WATERFORD 3

AZIMUTH, NNW



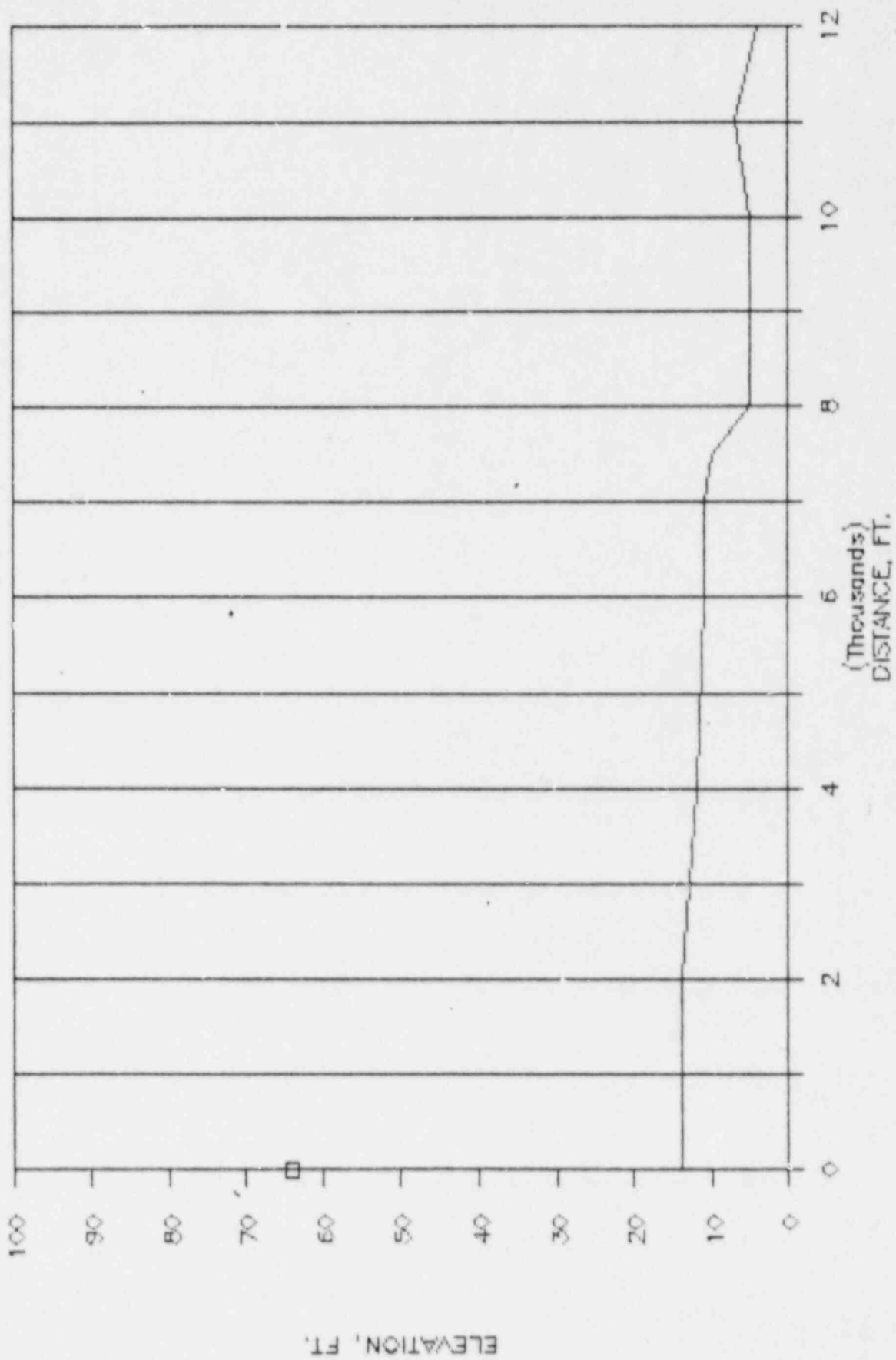
WATERFORD 3

AZIMUTH, NW



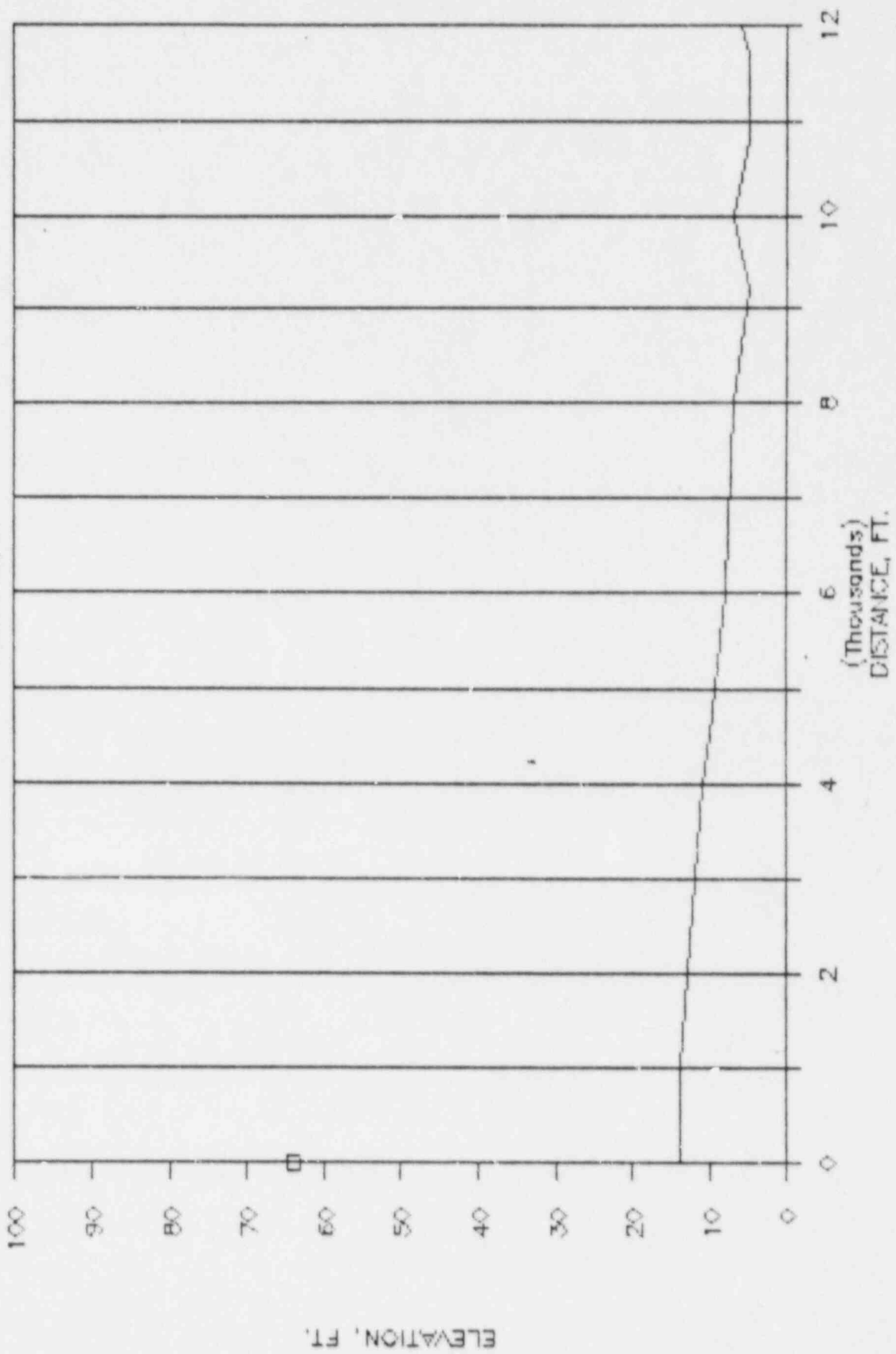
WATERFORD 3

AZIMUTH, WNW



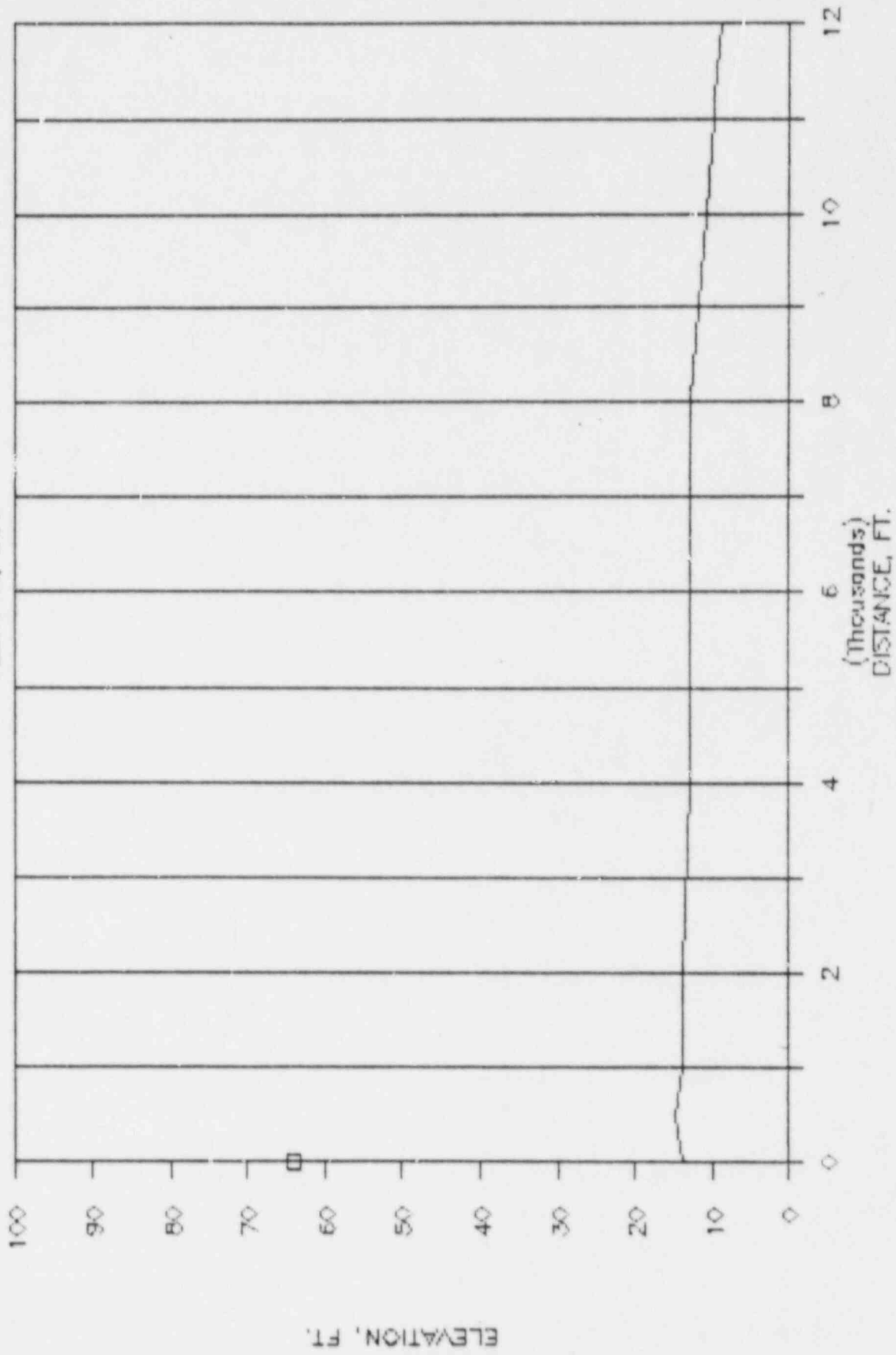
WATERFORD 3

AZIMUTH, W



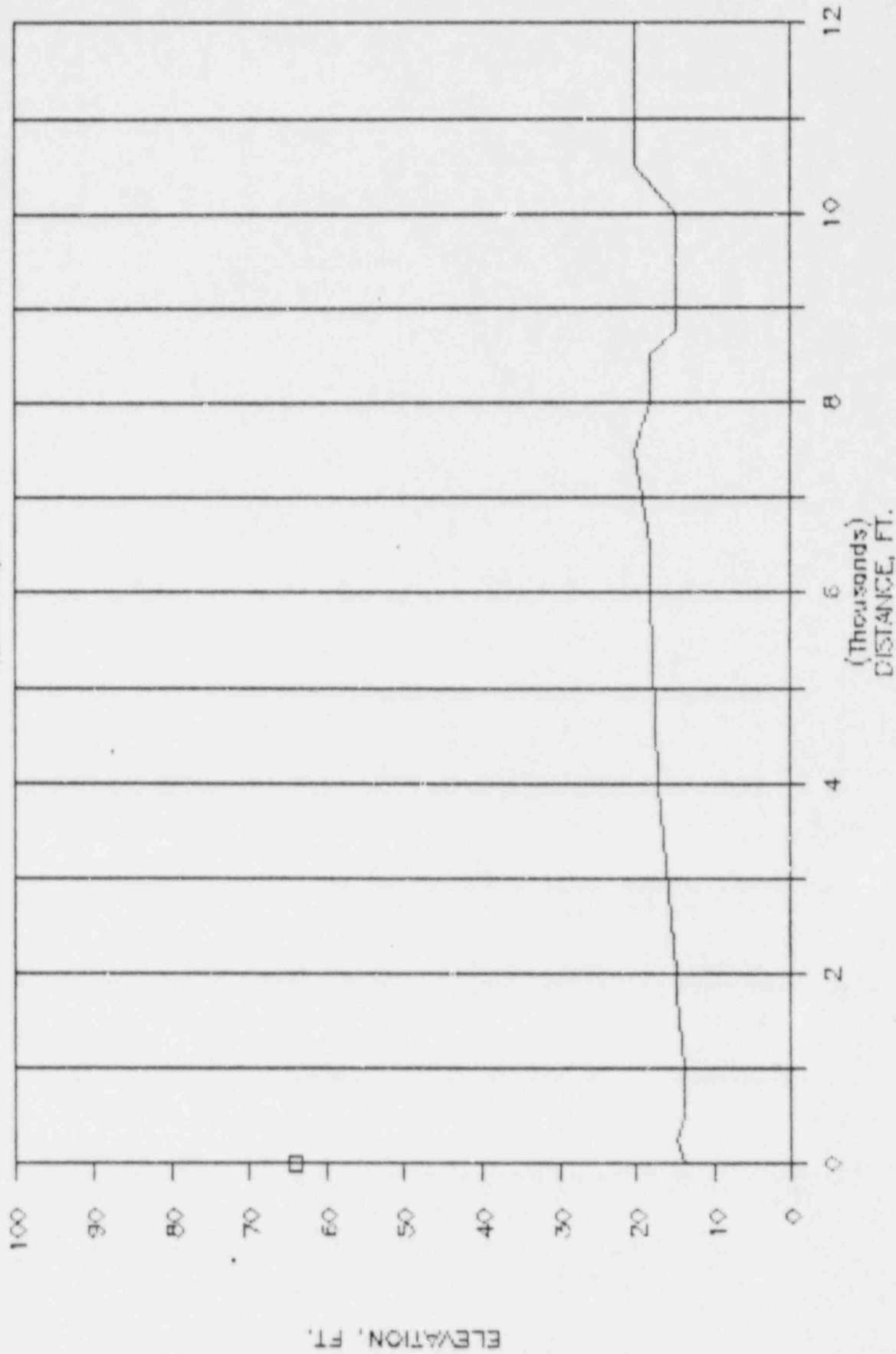
WATERFORD 3

AZIMUTH, WSW



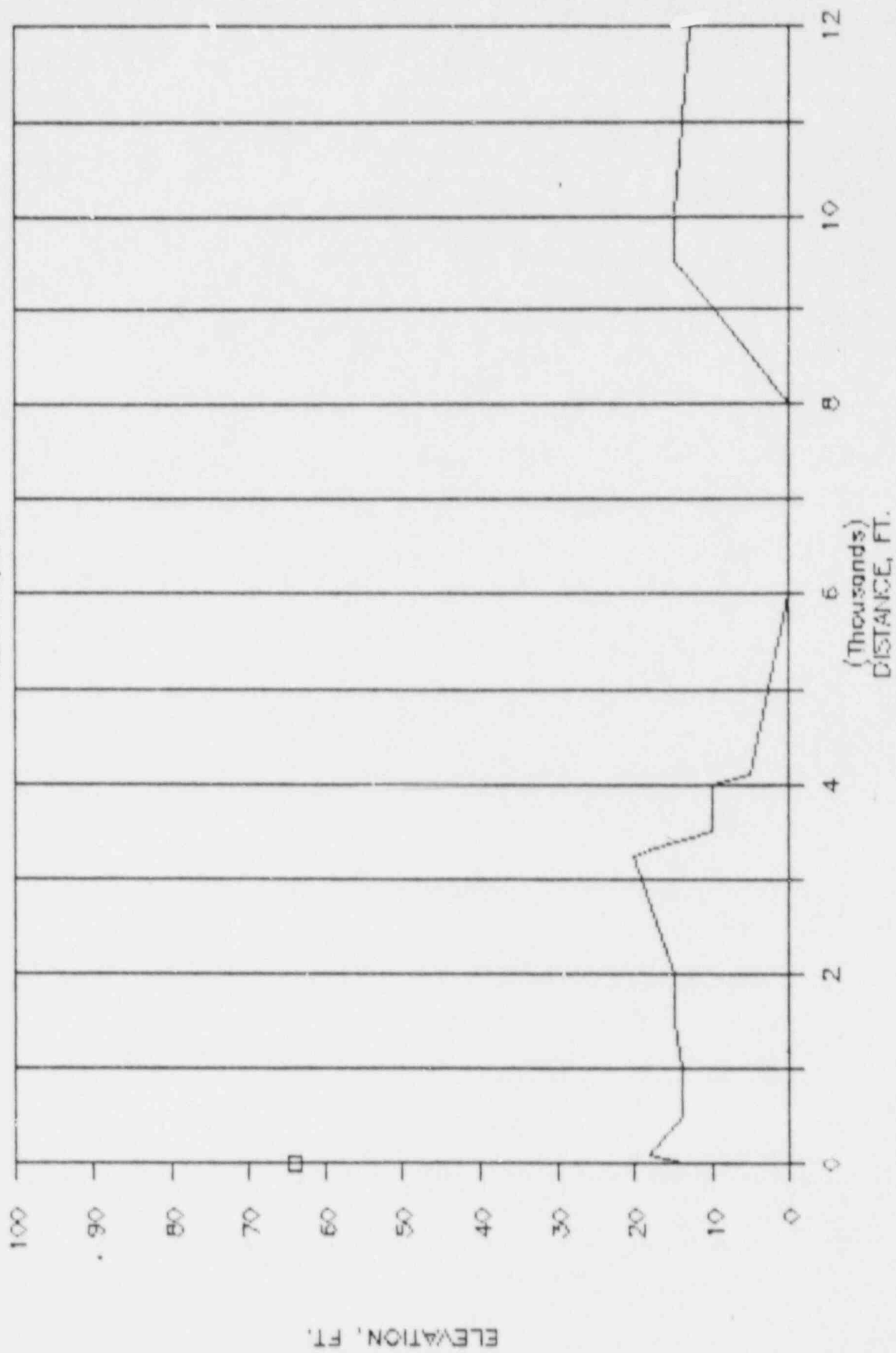
WATERFORD 3

AZIMUTH, SW



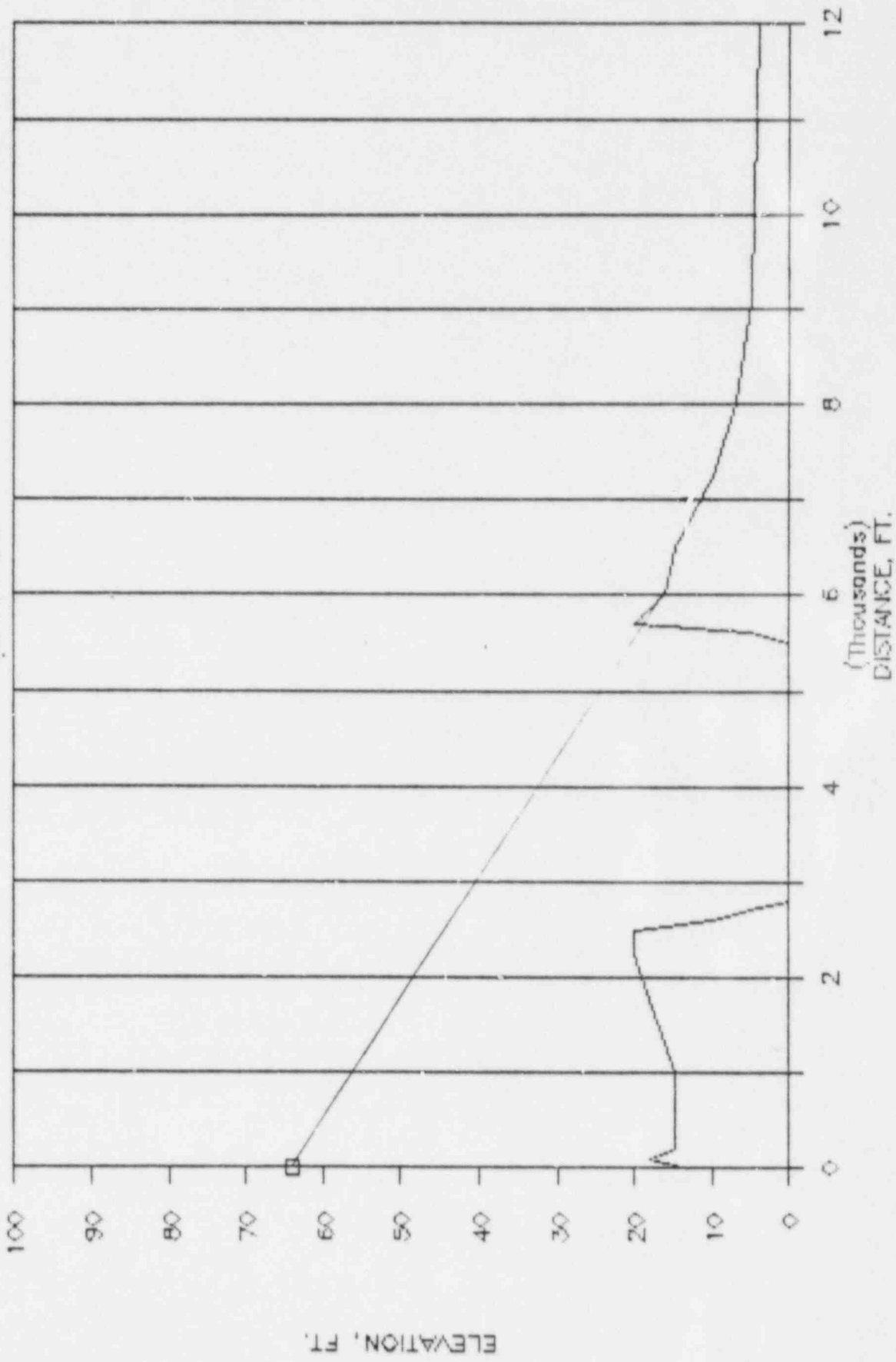
WATERFORD 3

AZIMUTH, SSW



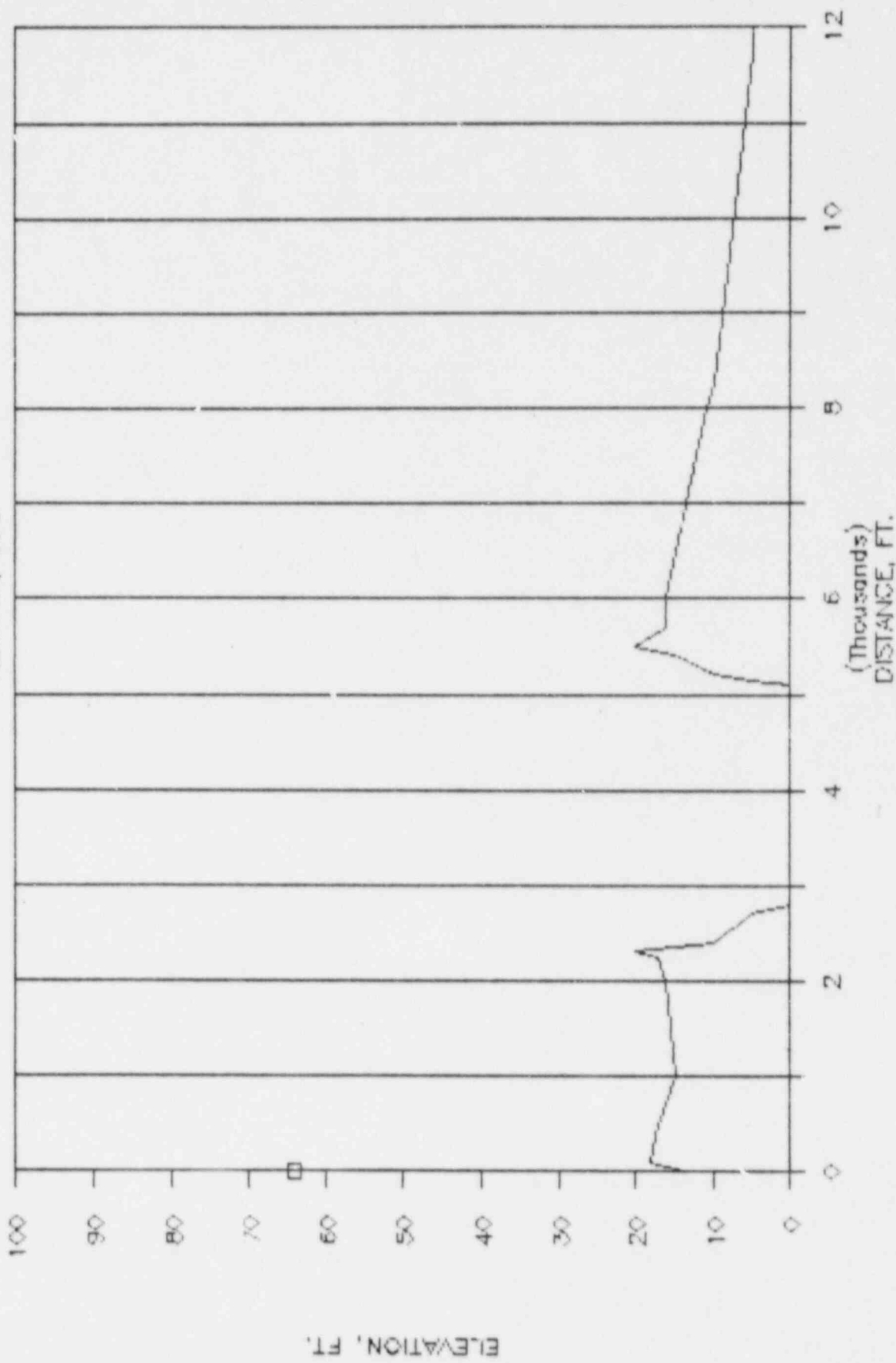
WATERFORD 3

AZIMUTH, S



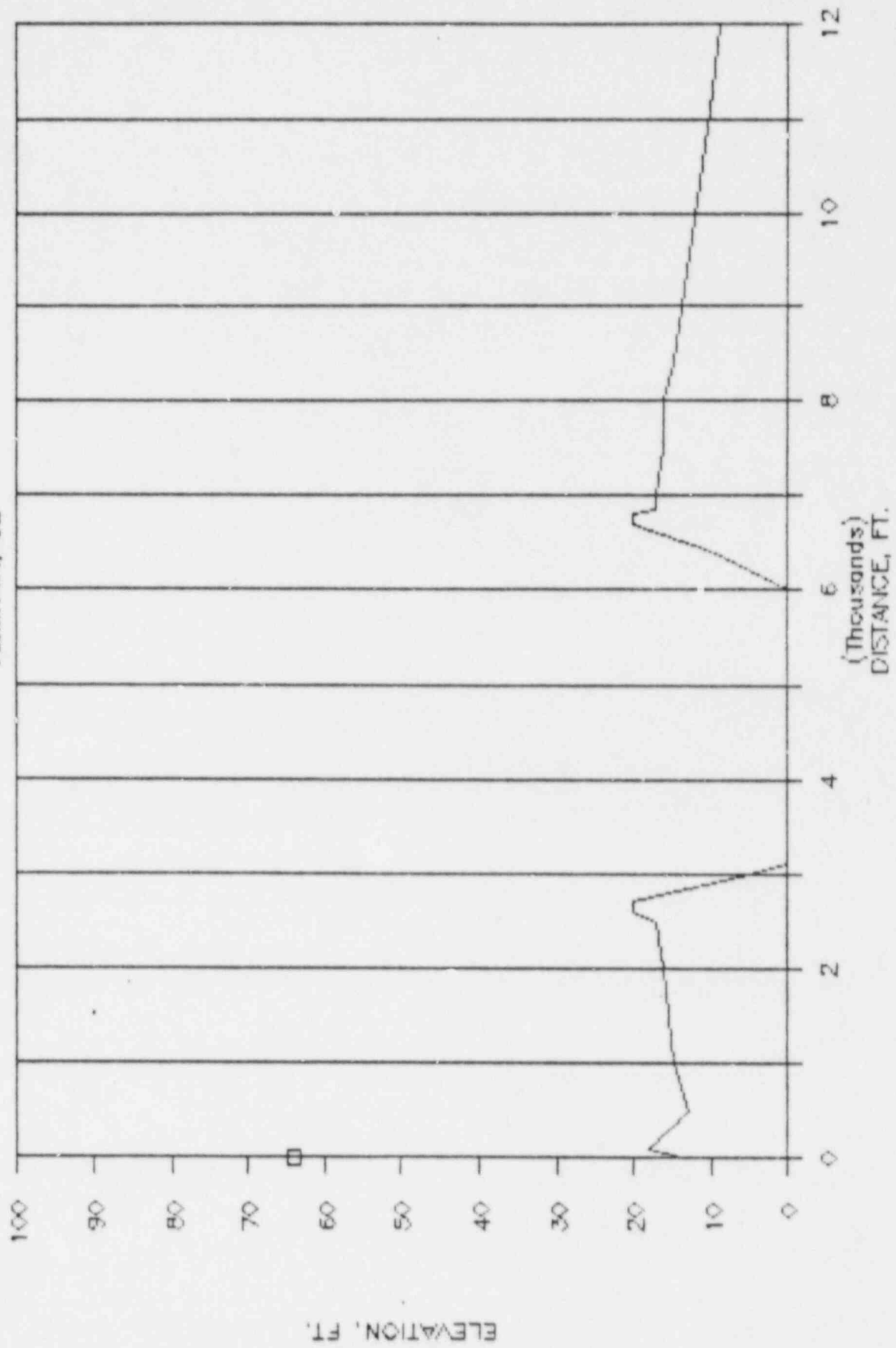
WATERFORD 3

AZIMUTH, SSE



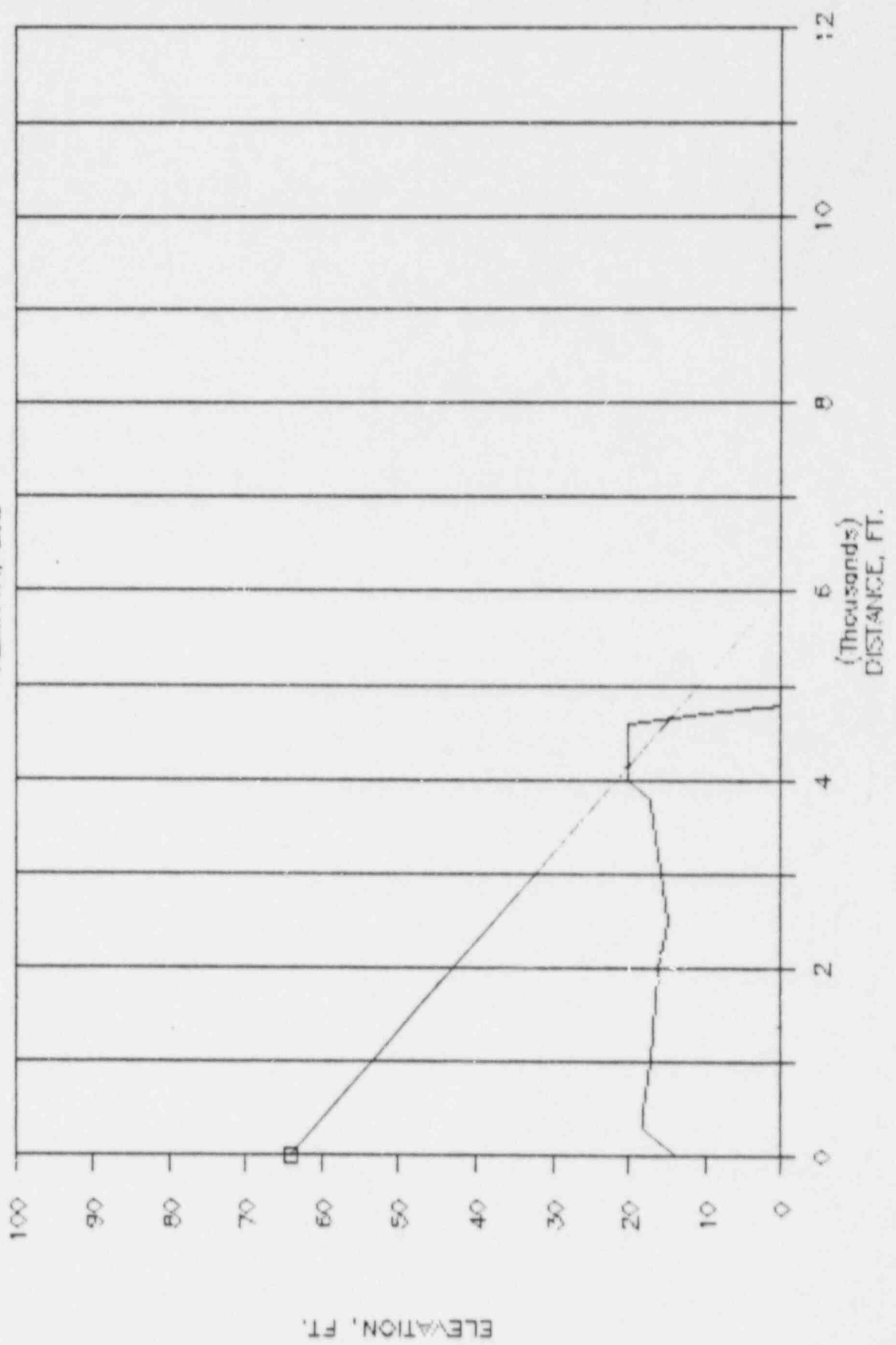
WATERFORD 3

AZIMUTH, SE



WATERFORD 3

AZIMUTH, ESE



100 90 80 70 60 50 40 30 20 10 0

0 2 4 6 8 10 12

(Thousands)
DISTANCE, FT.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #3-WG3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	15.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	15.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	15.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	15.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	15.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	15.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	15.00	SOFT	0.	NO	0.	0.
8	500.	67.50	13.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	13.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	13.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	12.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	10.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	10.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	7.00	SOFT	0.	NO	0.	0.
15	500.	45.00	14.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	14.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	13.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	11.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	10.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	10.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	4.00	SOFT	0.	NO	0.	0.
22	500.	22.50	14.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	14.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	13.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	12.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	10.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	7.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	4.00	SOFT	0.	NO	0.	0.
29	500.	0.0	14.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	14.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	13.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	10.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	10.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	6.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	4.00	SOFT	0.	NO	0.	0.
36	500.	337.50	14.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARINGS	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	20.00	HARD	0.	NO	0.	0.
38	2000.	337.50	20.00	HARD	0.	NO	0.	0.
39	4000.	337.50	14.00	HARD	0.	NO	0.	0.
40	6000.	337.50	10.00	HARD	0.	NO	0.	0.
41	8000.	337.50	10.00	HARD	0.	NO	0.	0.
42	12000.	337.50	10.00	HARD	0.	YES	11375.	30.
43	500.	315.00	20.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	20.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	18.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	18.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	20.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	20.00	SOFT	0.	YES	6850.	30.
49	12000.	315.00	10.00	SOFT	0.	YES	11450.	30.
50	500.	292.50	25.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	20.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	25.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	17.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	15.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	14.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	13.00	SOFT	0.	NO	0.	0.
57	0.	270.00	17.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	17.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	14.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	11.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	8.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	8.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	8.00	SOFT	0.	NO	0.	0.
64	500.	247.50	16.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	14.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	13.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	9.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	6.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	7.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	8.00	SOFT	0.	NO	0.	0.
71	500.	225.00	14.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	13.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	13.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	12.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	10.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	8.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	5.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	4.00	SOFT	0.	NO	0.	0.
43	500.	315.00	14.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	14.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	13.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	11.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	10.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	6.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	4.00	SOFT	0.	NO	0.	0.
50	500.	292.50	14.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	14.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	14.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	12.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	11.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	5.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	4.00	SOFT	0.	NO	0.	0.
57	500.	270.00	14.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	14.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	13.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	11.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	8.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	7.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	6.00	SOFT	0.	NO	0.	0.
64	500.	247.50	15.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	14.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	14.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	13.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	13.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	13.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	9.00	SOFT	0.	NO	0.	0.
71	500.	225.00	14.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	14.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	15.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	17.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	18.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	18.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	20.00	SOFT	0.	NO	0.	0.
78	500.	202.50	14.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	14.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	15.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	10.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	0.0	SOFT	0.	NO	0.	0.
83	8000.	202.50	0.0	SOFT	0.	NO	0.	0.
84	12000.	202.50	13.00	SOFT	0.	NO	0.	0.
85	500.	180.00	15.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	15.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	19.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	0.0	SOFT	0.	NO	0.	0.
89	6000.	180.00	16.00	SOFT	0.	YES	5700.	20.
90	8000.	180.00	7.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	4.00	SOFT	0.	NO	0.	0.
92	500.	157.50	17.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	15.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	16.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	0.0	SOFT	0.	NO	0.	0.
96	6000.	157.50	16.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	11.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	5.00	SOFT	0.	NO	0.	0.
99	500.	135.00	13.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	15.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	16.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	0.0	SOFT	0.	NO	0.	0.
103	6000.	135.00	0.0	SOFT	0.	NO	0.	0.
104	8000.	135.00	16.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	9.00	SOFT	0.	NO	0.	0.
106	500.	112.50	18.00	HARD	0.	NO	0.	0.
107	1000.	112.50	17.00	HARD	0.	NO	0.	0.
108	2000.	112.50	16.00	HARD	0.	NO	0.	0.
109	4000.	112.50	20.00	HARD	0.	NO	0.	0.
110	6000.	112.50	0.0	HARD	0.	YES	4700.	10.
111	8000.	112.50	0.0	HARD	0.	NO	0.	0.
112	12000.	112.50	0.0	HARD	0.	NO	0.	0.

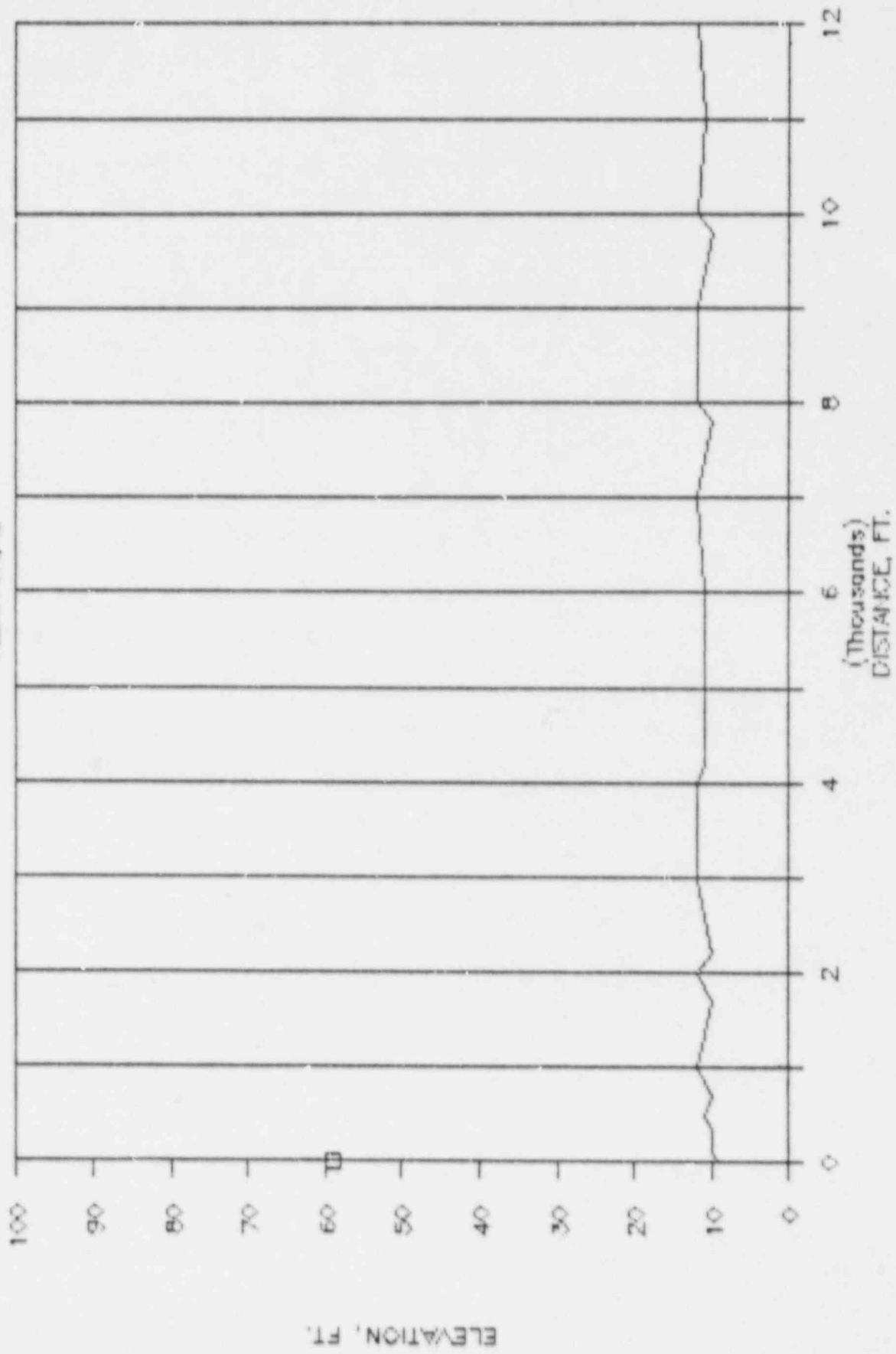
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #3-#53000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.7	91.3	75.7	65.1	60.9	57.4	50.8
ENE	105.7	91.3	75.7	65.1	60.9	57.4	50.8
NE	105.7	91.3	75.7	65.1	60.9	57.4	50.8
NNE	105.7	91.3	75.7	65.1	60.9	57.4	50.8
N	105.7	91.3	75.7	65.1	60.9	57.4	50.8
NNW	105.7	91.3	75.7	65.1	60.9	57.4	50.8
NW	105.7	91.3	75.7	65.1	60.9	57.4	50.8
WNW	105.7	91.3	75.7	65.1	60.9	57.4	50.8
W	105.7	91.3	75.7	65.1	60.9	57.4	50.8
WSW	105.7	91.3	75.7	65.1	60.9	57.4	47.6
SW	105.7	91.3	75.7	64.9	57.3	50.3	36.8
SSW	105.7	91.3	75.7	63.3	54.9	47.1	32.1
S	105.7	91.3	75.7	62.8	49.3	46.2	30.6
SSE	105.7	91.3	75.7	63.3	54.9	47.1	32.1
SE	105.7	91.3	75.7	64.9	57.3	50.3	36.8
ESE	105.8	98.4	89.7	78.9	66.3	65.0	52.0

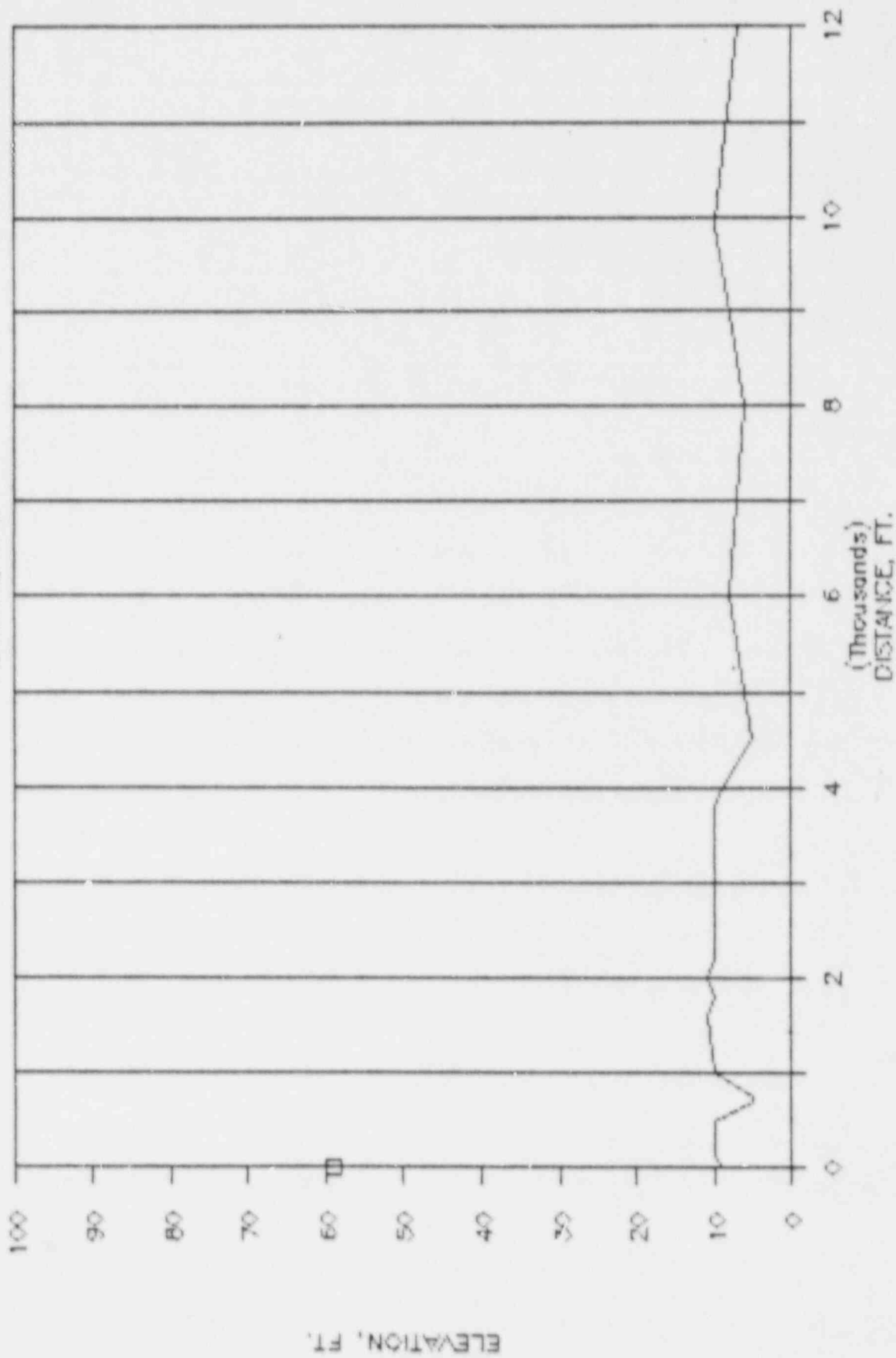
WATERFORD 4

AZIMUTH, E



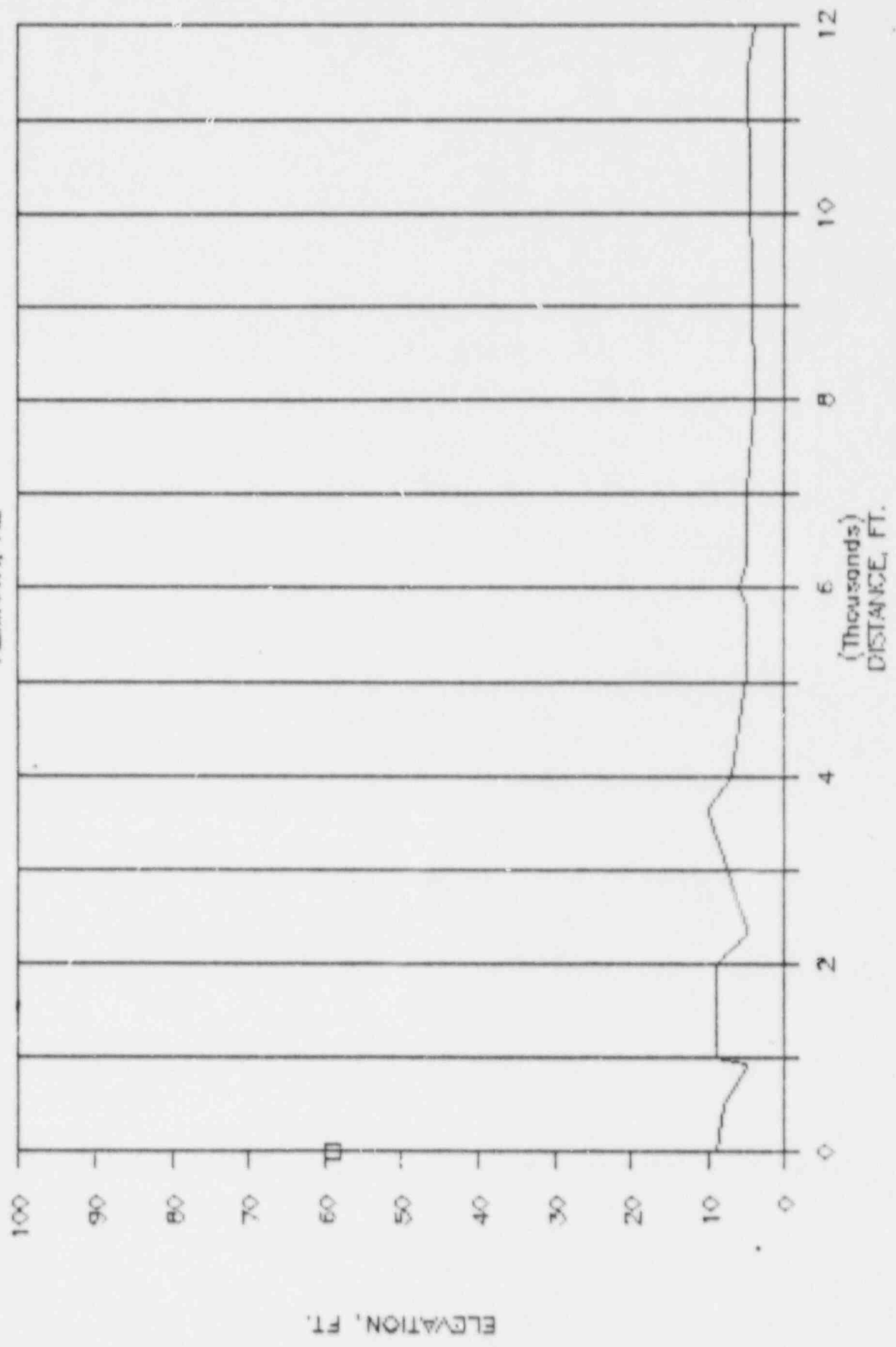
WATERFORD 4

AZIMUTH, ENE



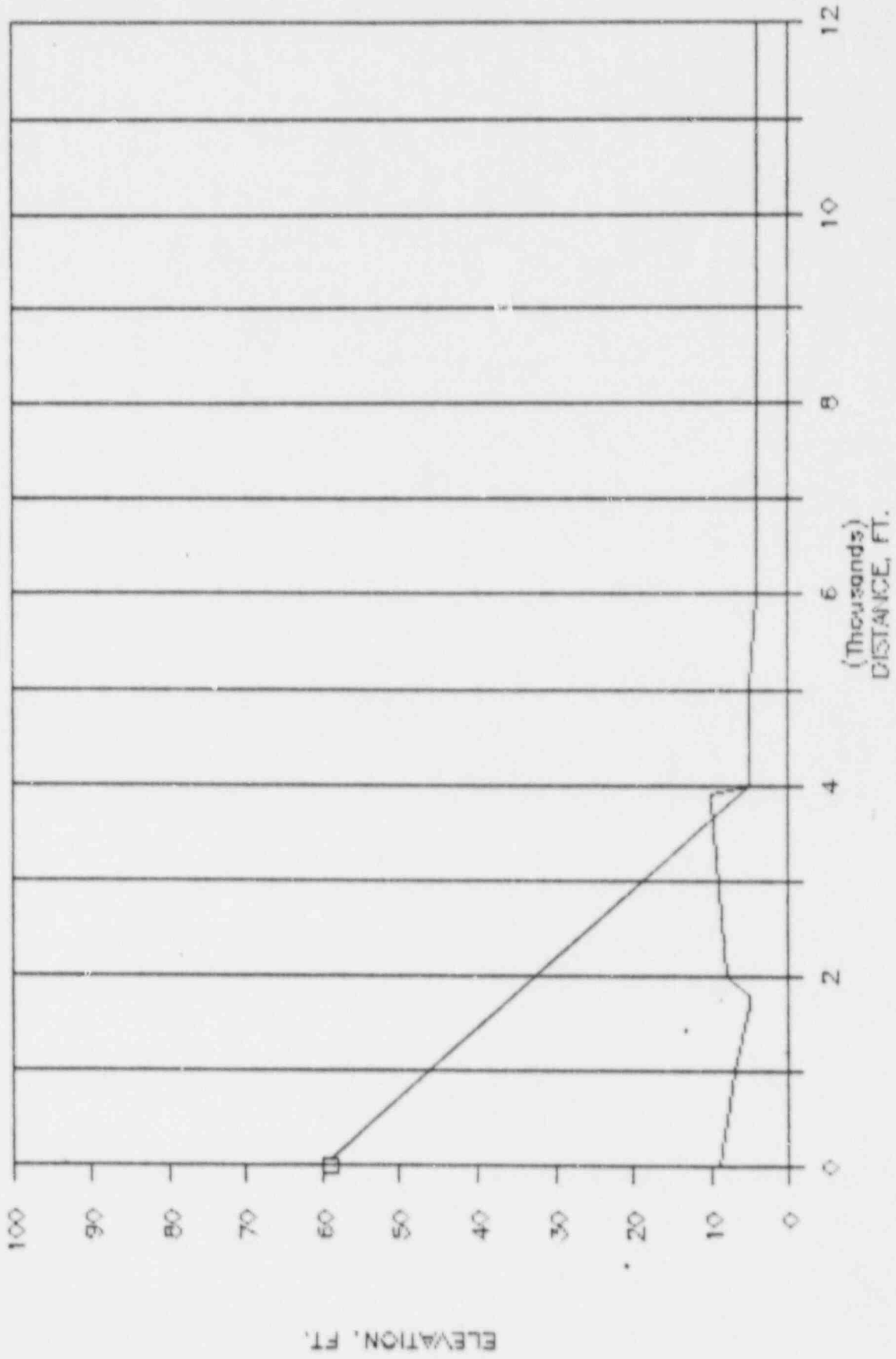
WATERFORD 4

AZIMUTH, NE



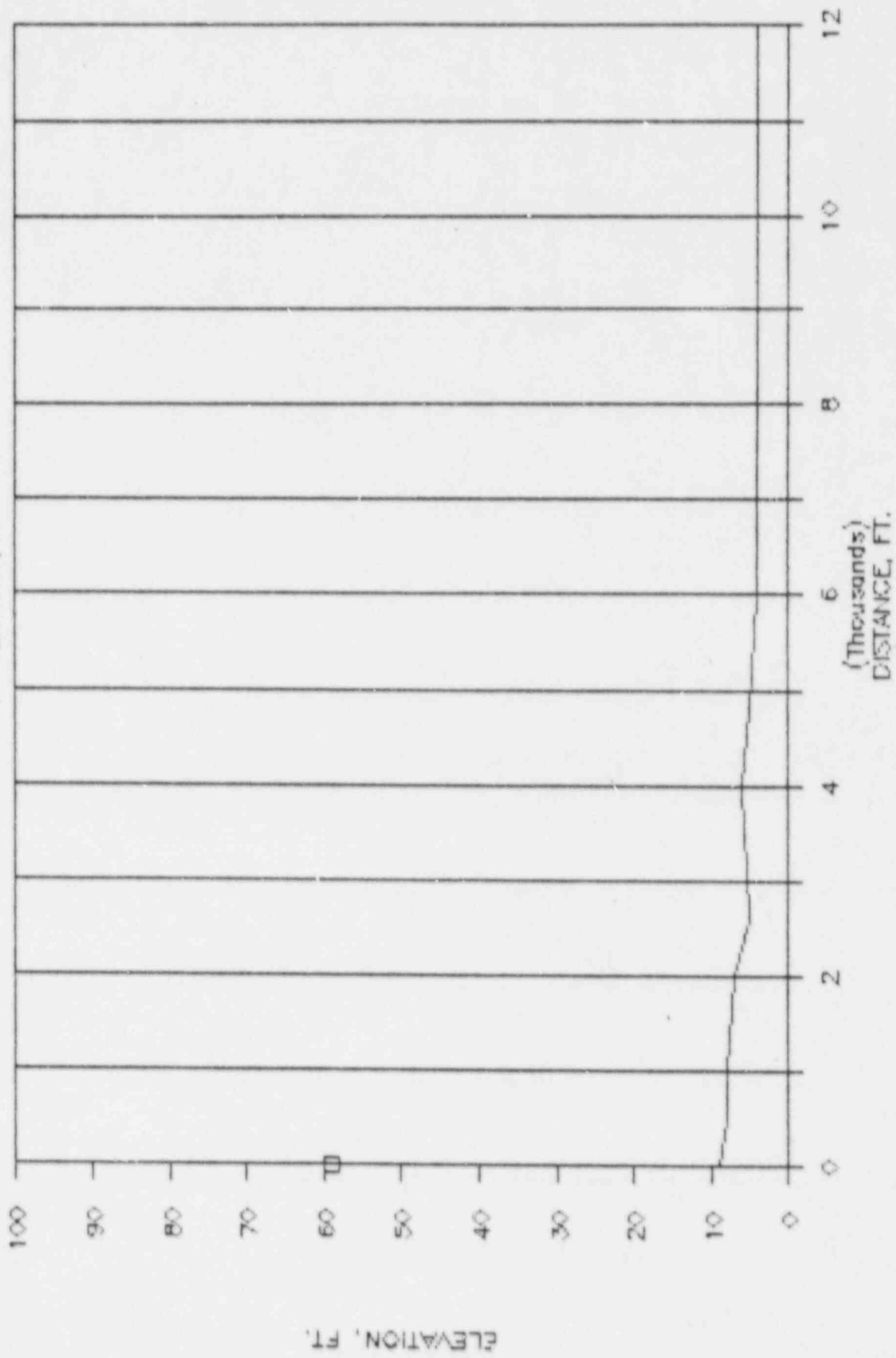
WATERFORD 4

AZIMUTH, NNE



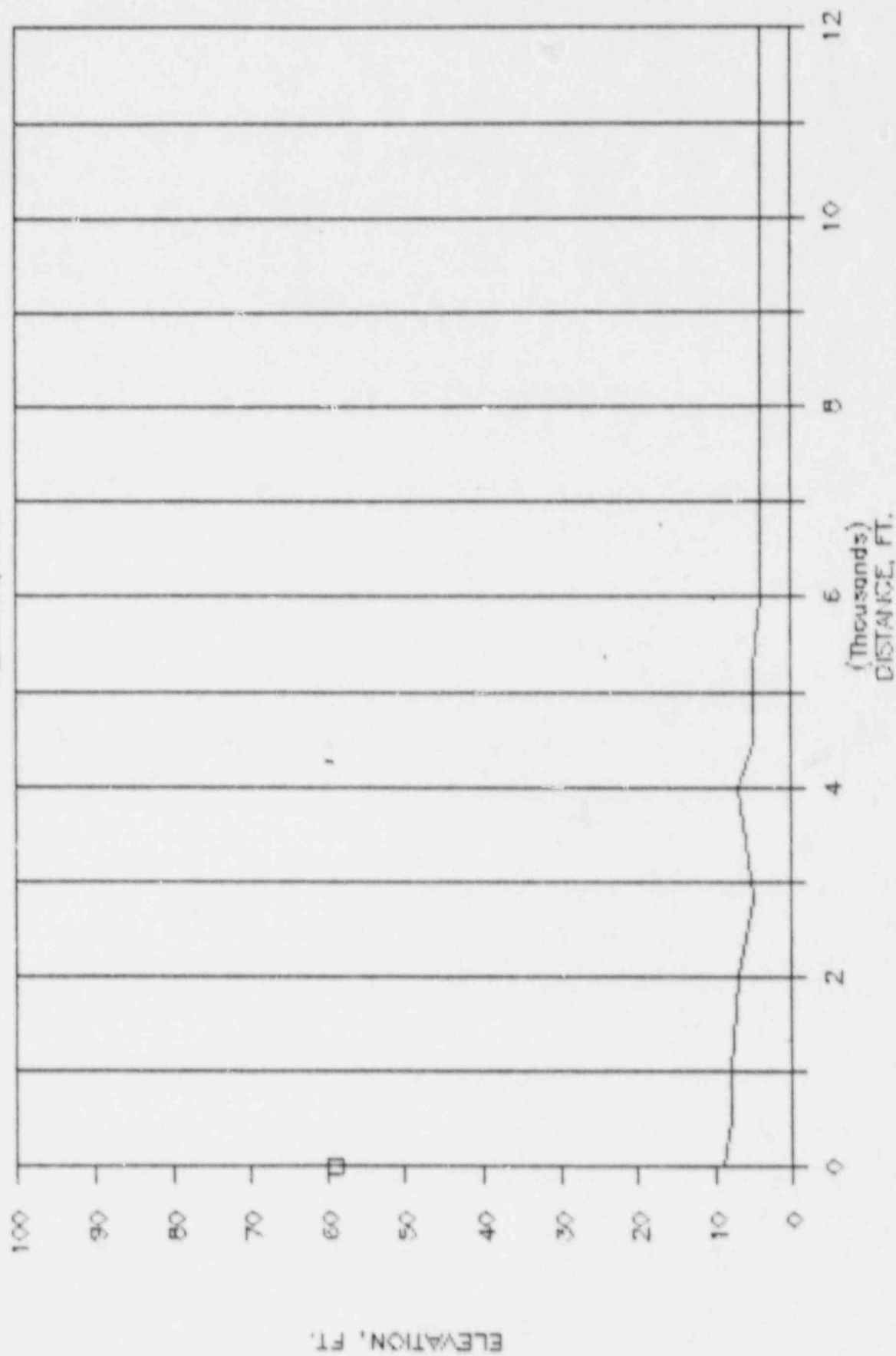
WATERFORD 4

AZIMUTH, N



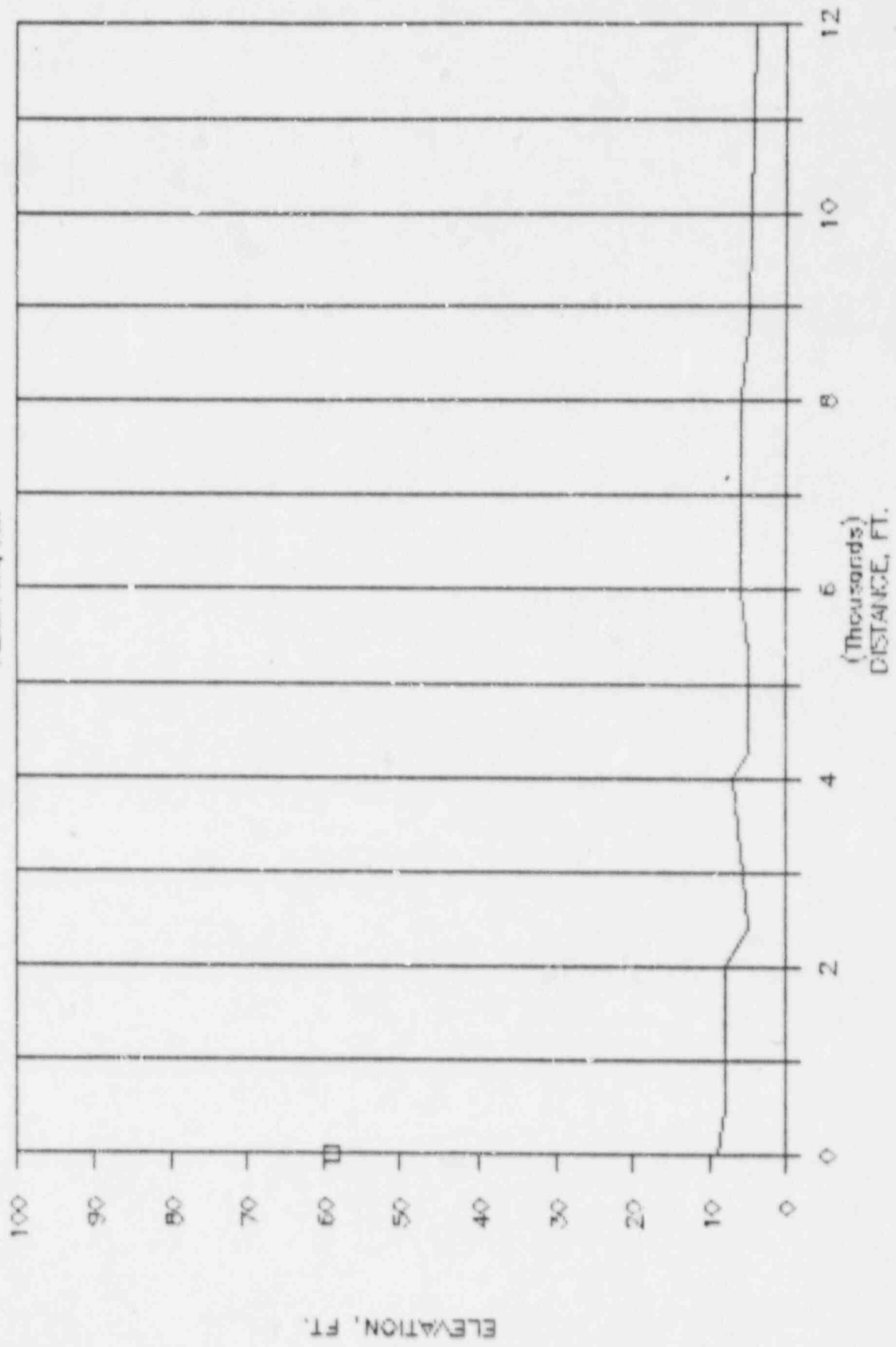
WATERFORD 4

AZIMUTH, NNW



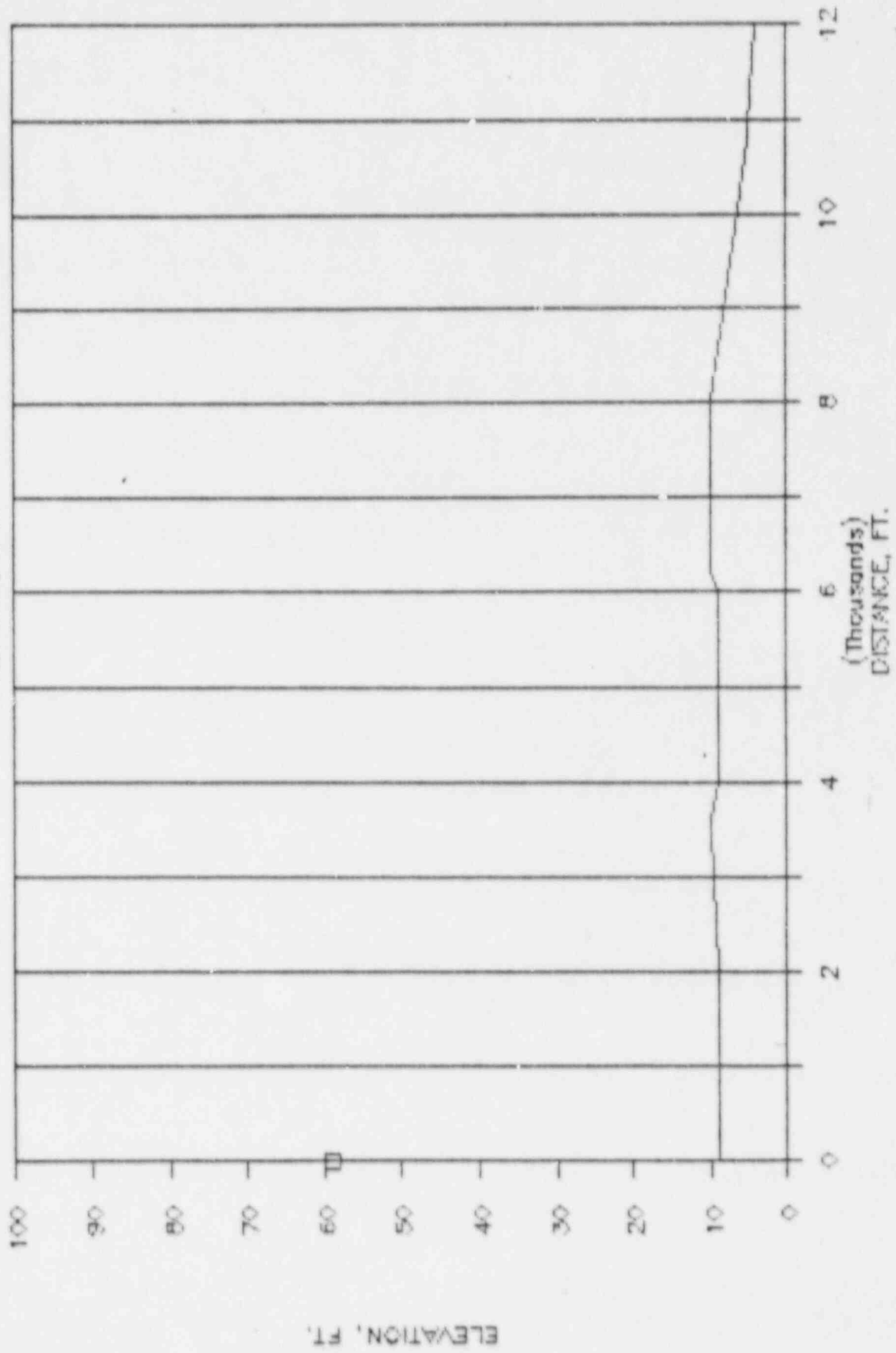
WATERFORD 4

AZIMUTH, NW



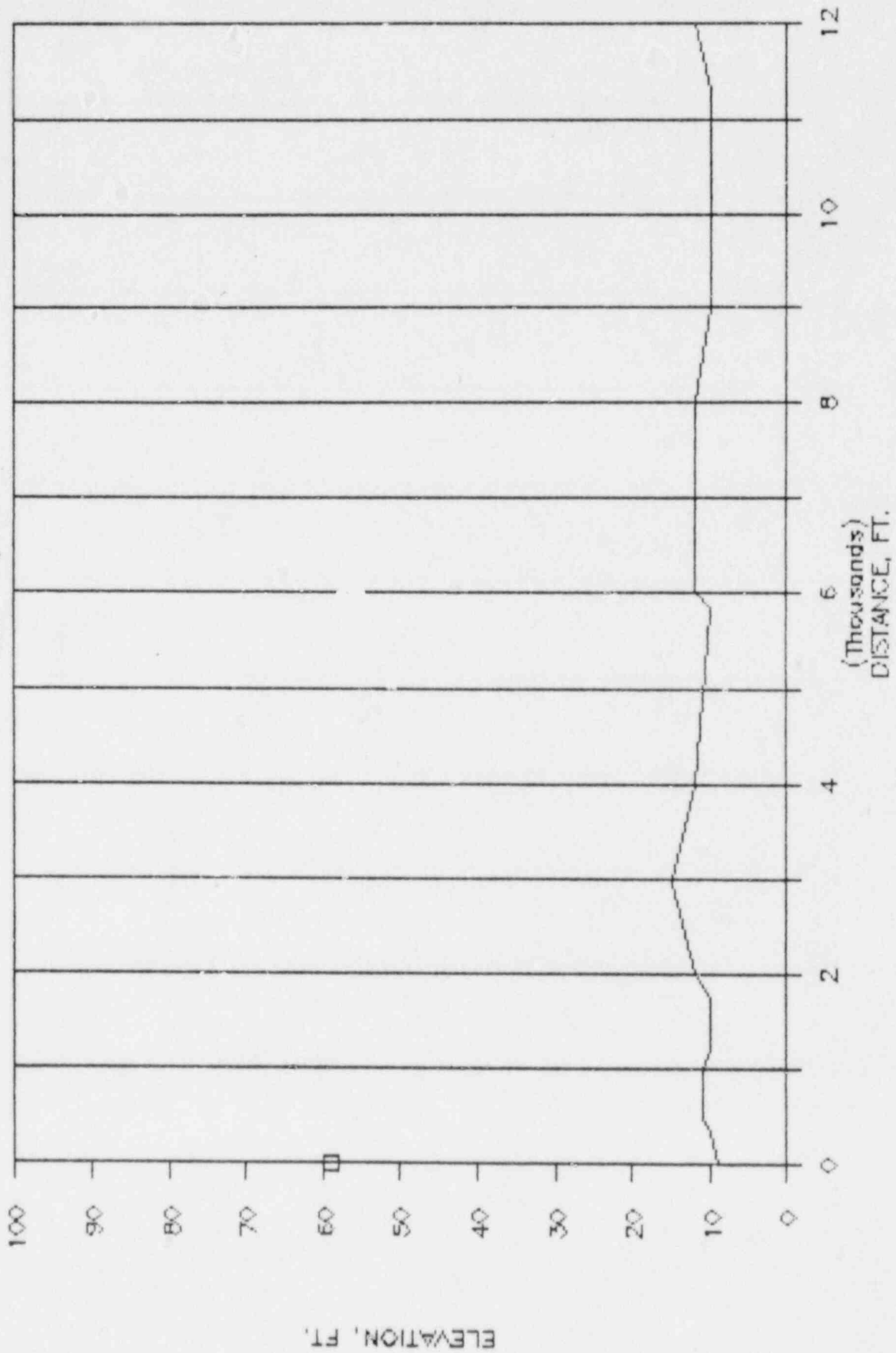
WATERFORD 4

AZIMUTH, WNW



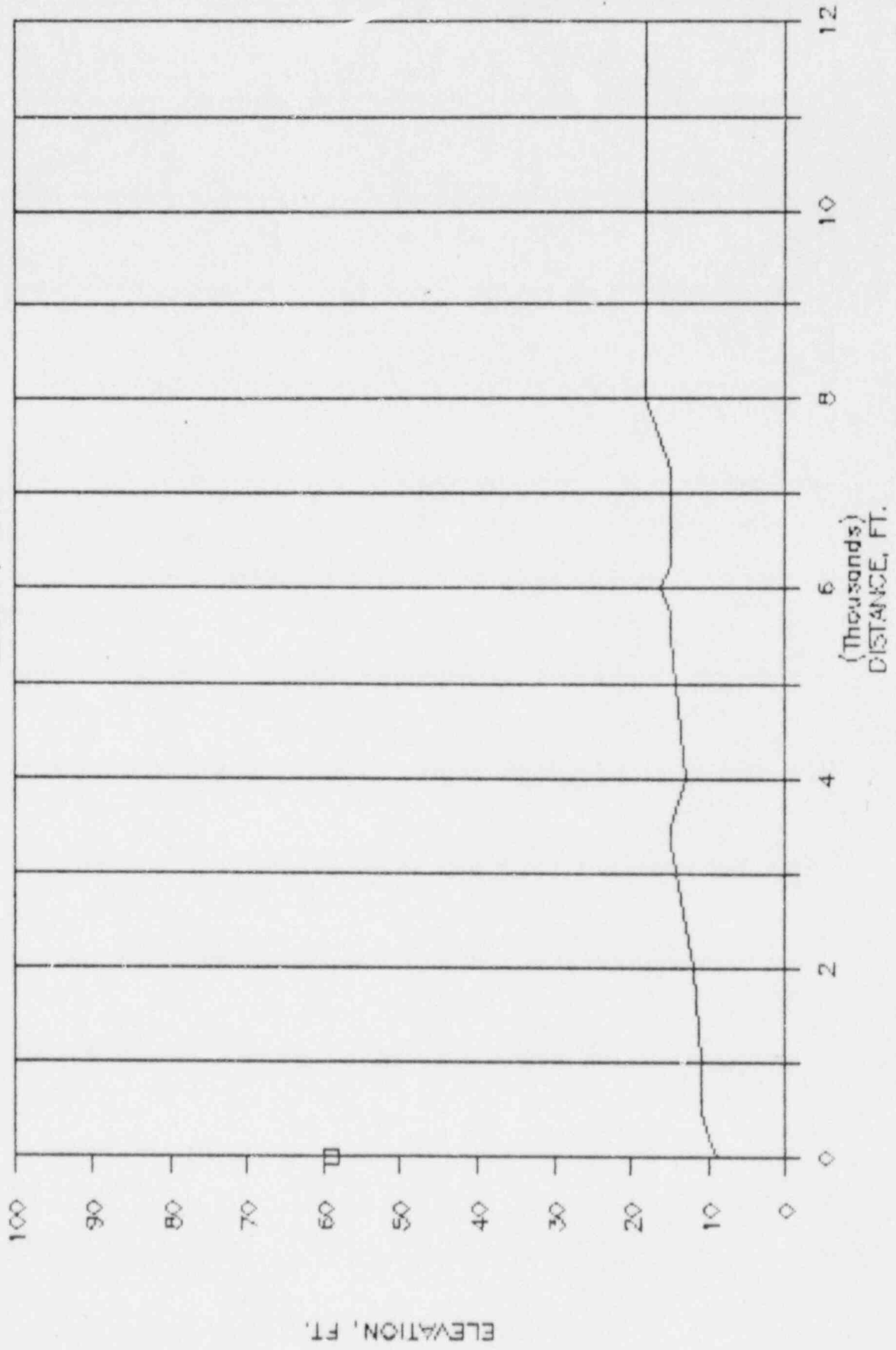
WATERFORD 4

AZIMUTH, W



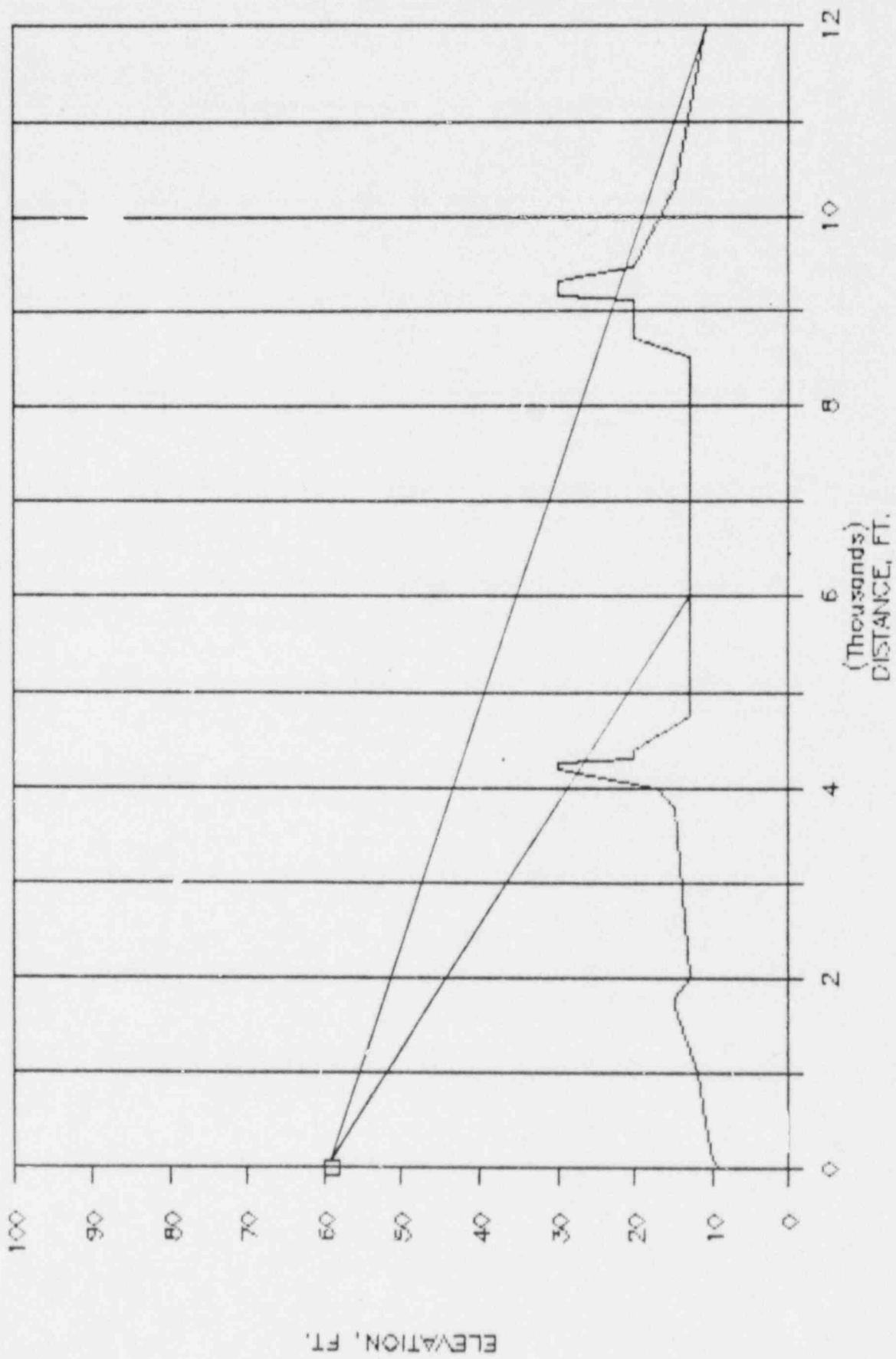
WATERFORD 4

AZIMUTH, WSW



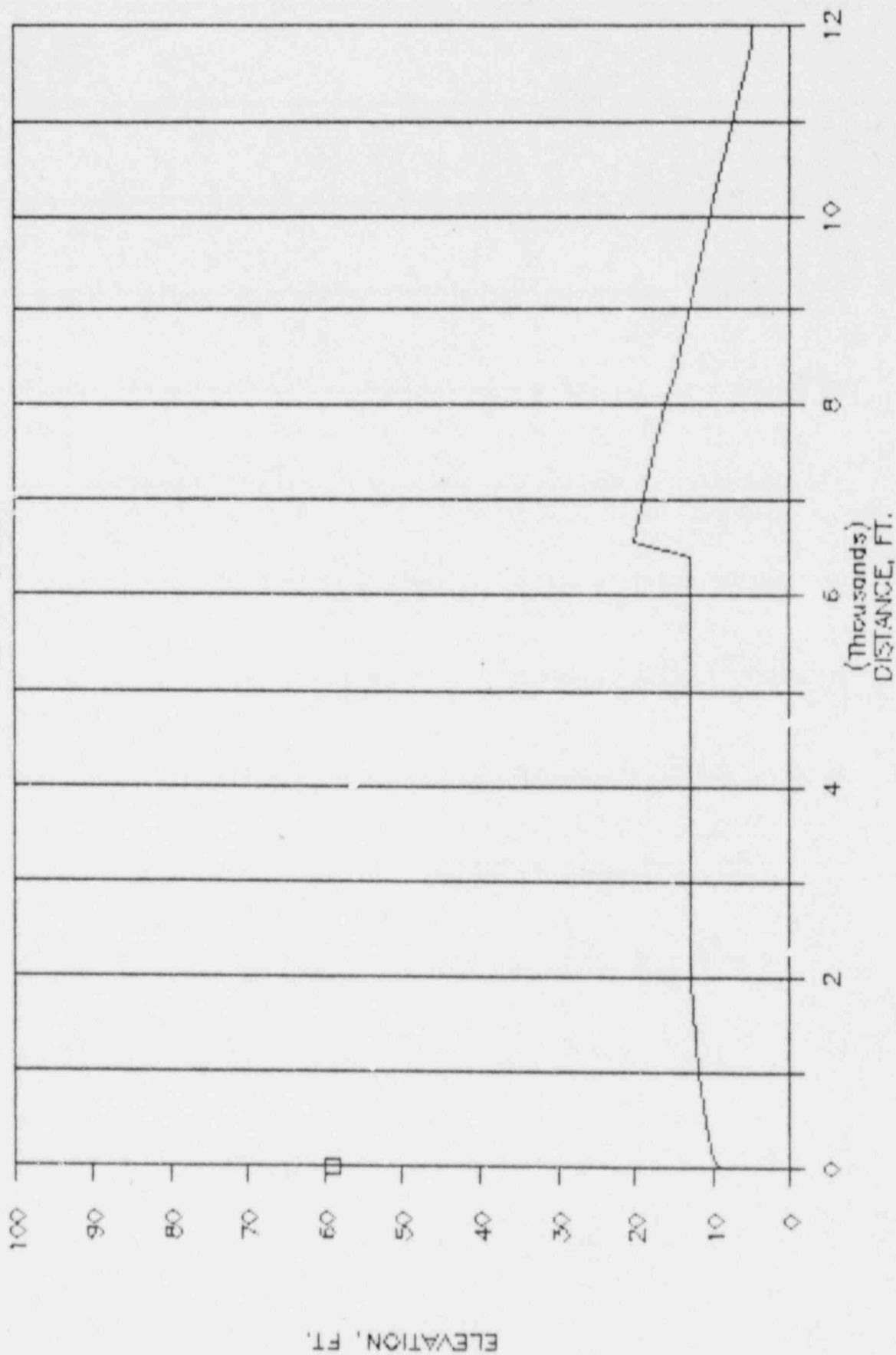
WATERFORD 4

AZIMUTH, SW



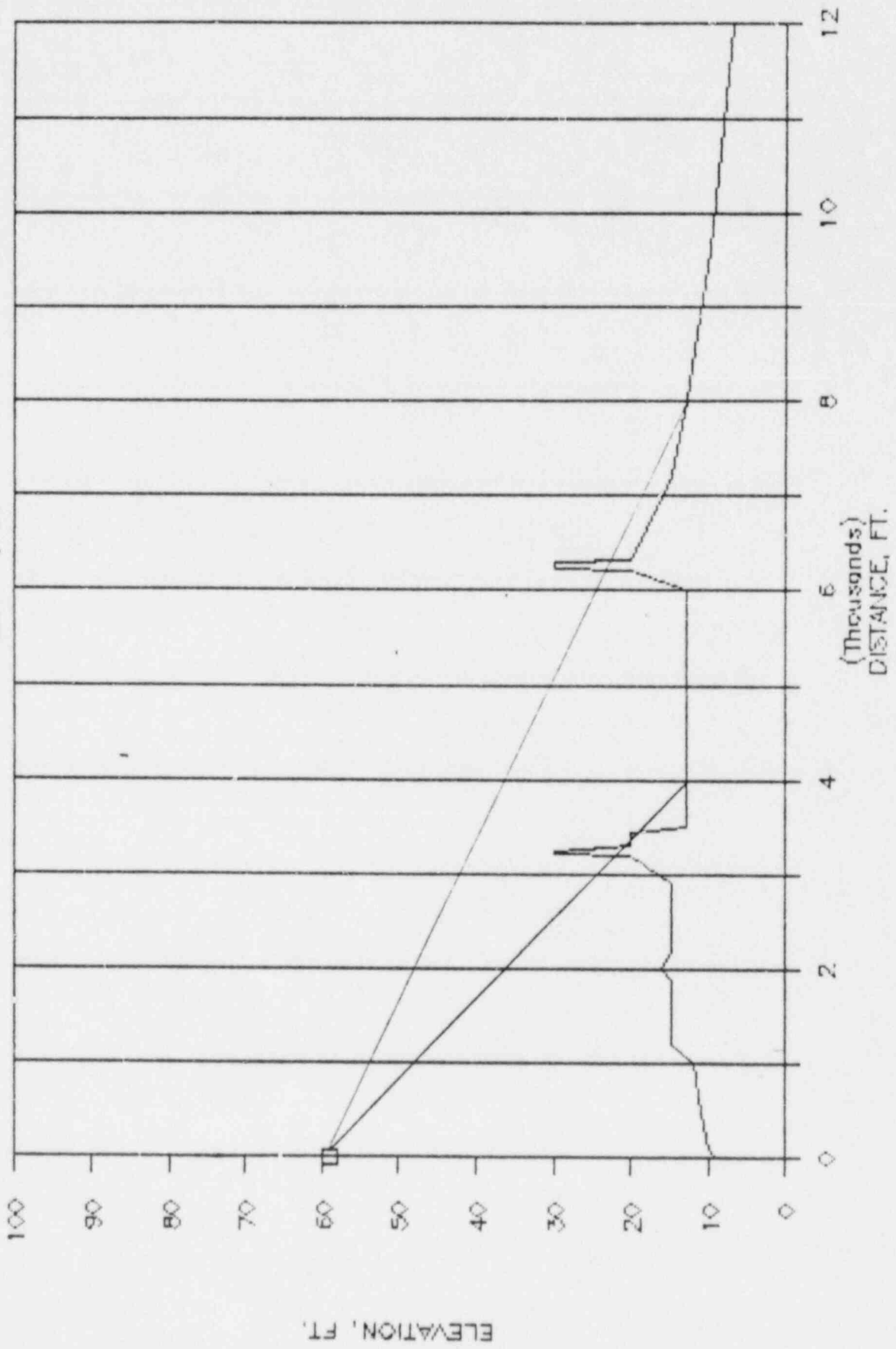
WATERFORD 4

AZIMUTH, SSW



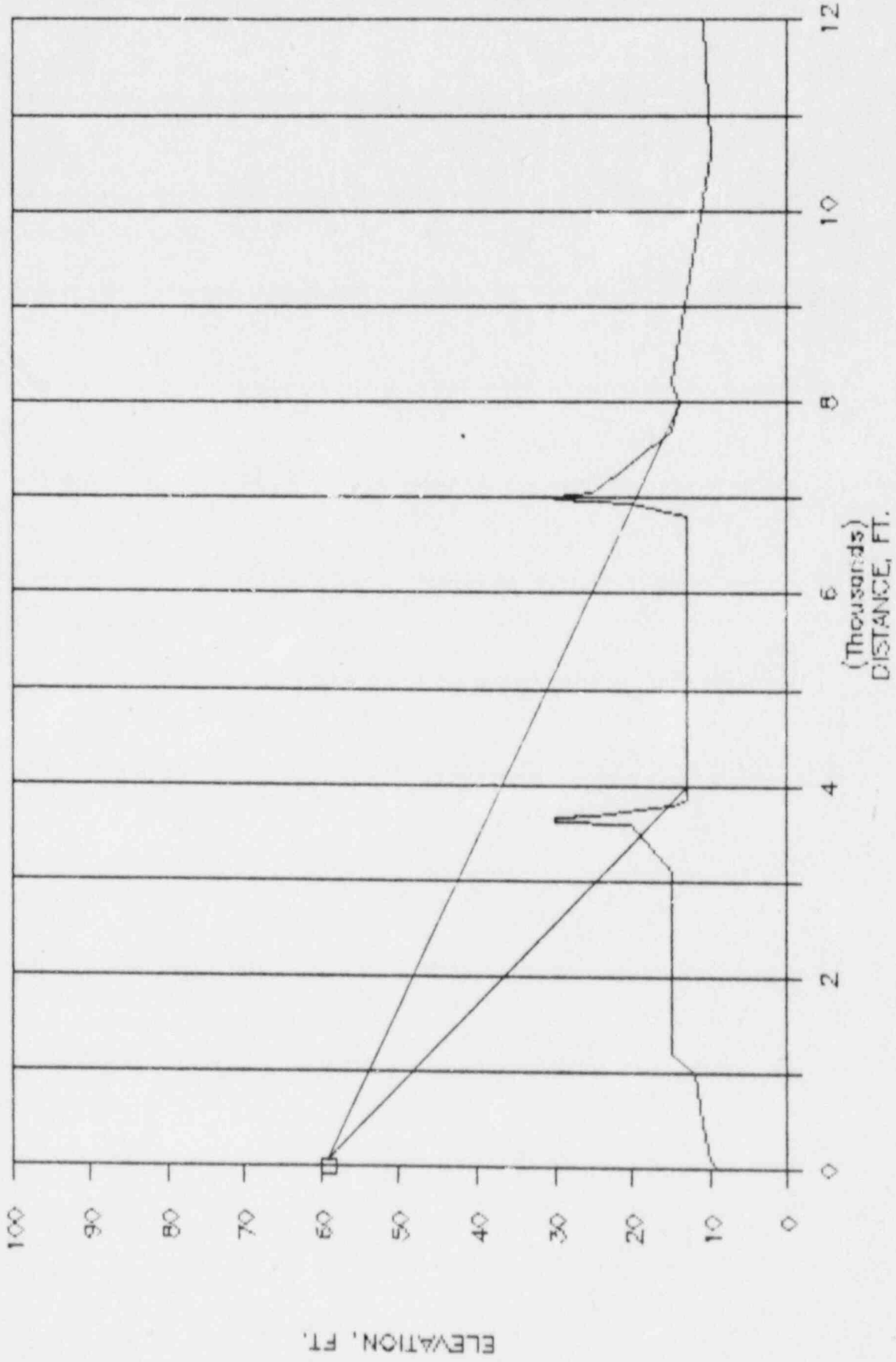
WATERFORD 4

AZIMUTH, S



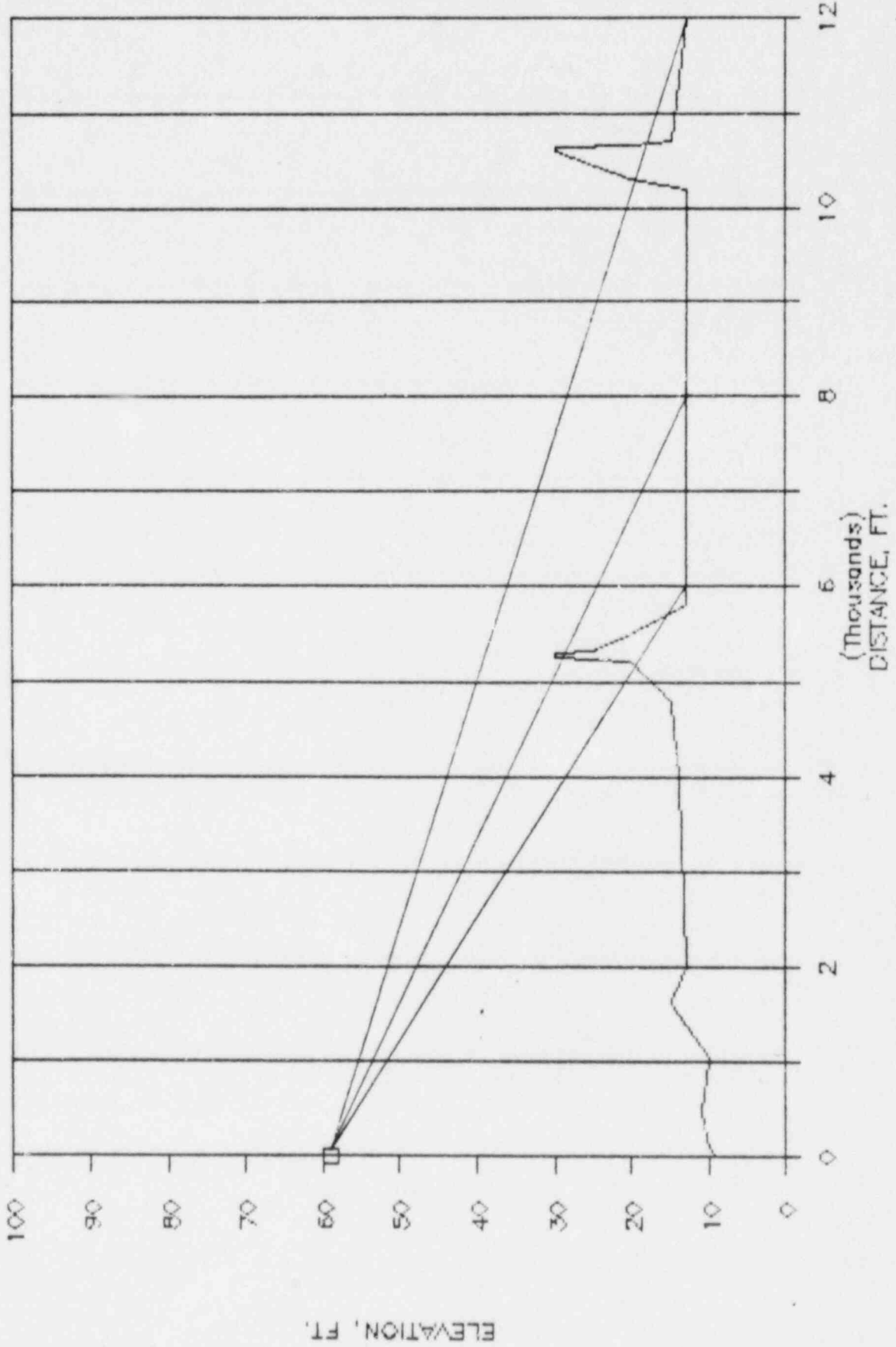
WATERFORD 4

AZIMUTH, SSE



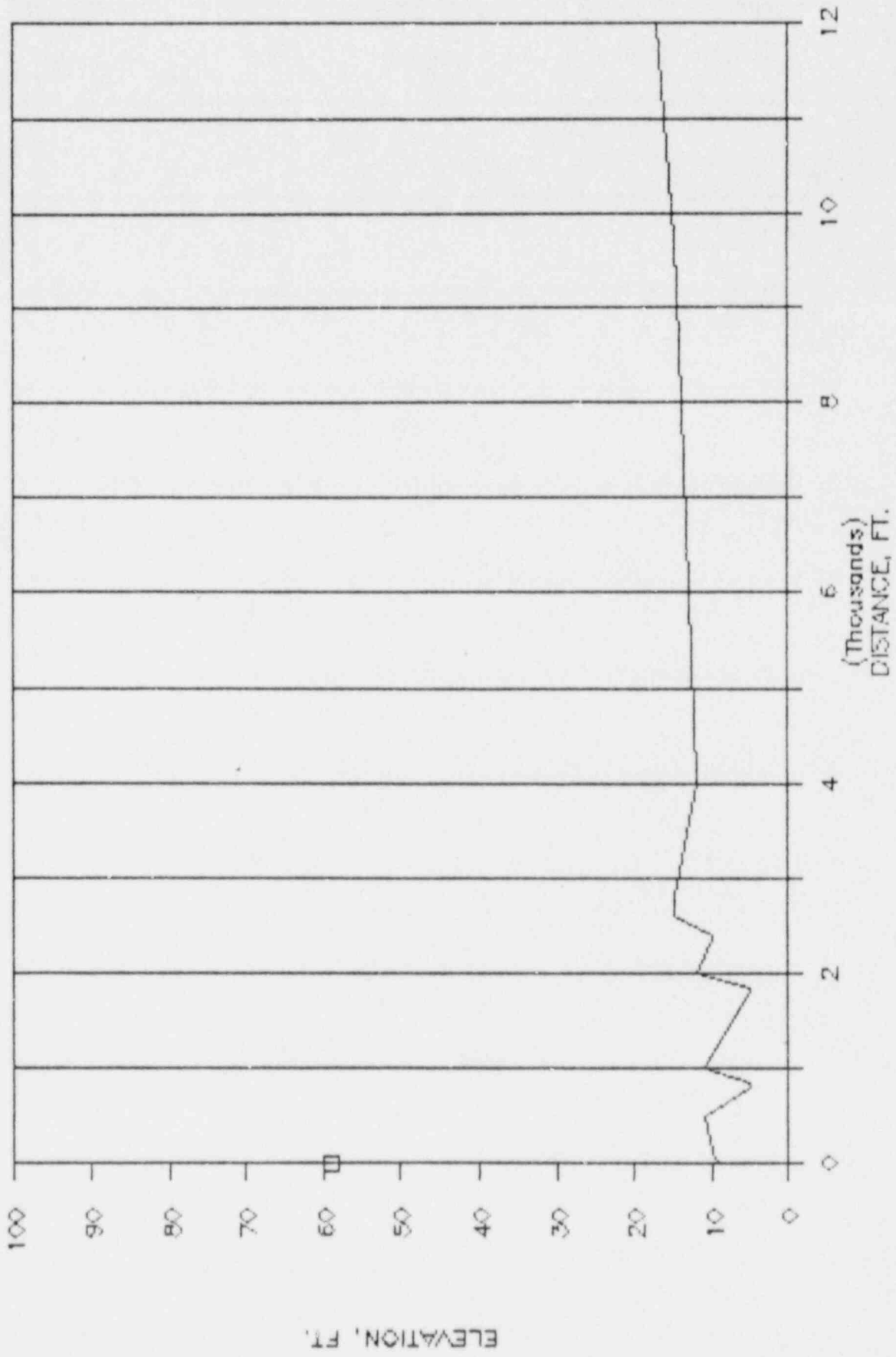
WATERFORD 4

AZIMUTH, SE



WATERFORD 4

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #4-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	11.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	12.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	12.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	12.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	11.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	12.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	12.00	SOFT	0.	NO	0.	0.
8	500.	67.50	10.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	10.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	11.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	9.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	8.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	6.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	7.00	SOFT	0.	NO	0.	0.
15	500.	45.00	8.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	9.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	9.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	7.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	6.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	4.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	4.00	SOFT	0.	NO	0.	0.
22	500.	22.50	8.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	7.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	8.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	5.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	4.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	4.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	4.00	SOFT	0.	NO	0.	0.
29	500.	0.0	8.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	8.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	7.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	6.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	4.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	4.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	4.00	SOFT	0.	NO	0.	0.
36	500.	337.50	8.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	8.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	7.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	7.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	4.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	4.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	4.00	SOFT	0.	NO	0.	0.
43	500.	315.00	8.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	8.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	8.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	7.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	6.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	6.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	7.00	SOFT	0.	NO	0.	0.
50	500.	292.50	9.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	9.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	9.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	9.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	9.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	10.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	4.00	SOFT	0.	NO	0.	0.
57	500.	270.00	11.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	11.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	12.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	12.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	12.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	12.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	12.00	SOFT	0.	NO	0.	0.
64	500.	247.50	11.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	11.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	12.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	13.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	16.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	18.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	18.00	SOFT	0.	NO	0.	0.
71	500.	225.00	11.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	12.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	13.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	17.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	13.00	SOFT	0.	YES	4250.	30.
76	8000.	225.00	13.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	11.00	SOFT	0.	YES	9300.	30.
78	500.	202.50	11.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	12.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	13.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	13.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	13.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	16.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	5.00	SOFT	0.	NO	0.	0.
85	500.	180.00	11.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	12.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	16.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	13.00	SOFT	0.	YES	3250.	30.
89	6000.	180.00	13.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	13.00	SOFT	0.	YES	6300.	30.
91	12000.	180.00	7.00	SOFT	0.	NO	0.	0.
92	500.	157.50	11.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	12.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	15.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	13.00	SOFT	0.	YES	3650.	30.
96	6000.	157.50	13.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	14.00	SOFT	0.	YES	7000.	30.
98	12000.	157.50	11.00	SOFT	0.	NO	0.	0.
99	500.	135.00	11.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	10.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	13.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	14.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	13.00	SOFT	0.	YES	5300.	30.
104	8000.	135.00	13.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	13.00	SOFT	0.	YES	10625.	30.
106	500.	112.50	11.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	11.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	12.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	12.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	13.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	14.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	17.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #4-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT004	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
	X0=	0.0	Y0=	0.0	Z0=	59.00	HEIGHT ABOVE GROUND=		50.00			

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #4-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE BAROMETRIC HUMIDITY PRESSURE (MM OF HG)	
						H1	H2	H1	H2		
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

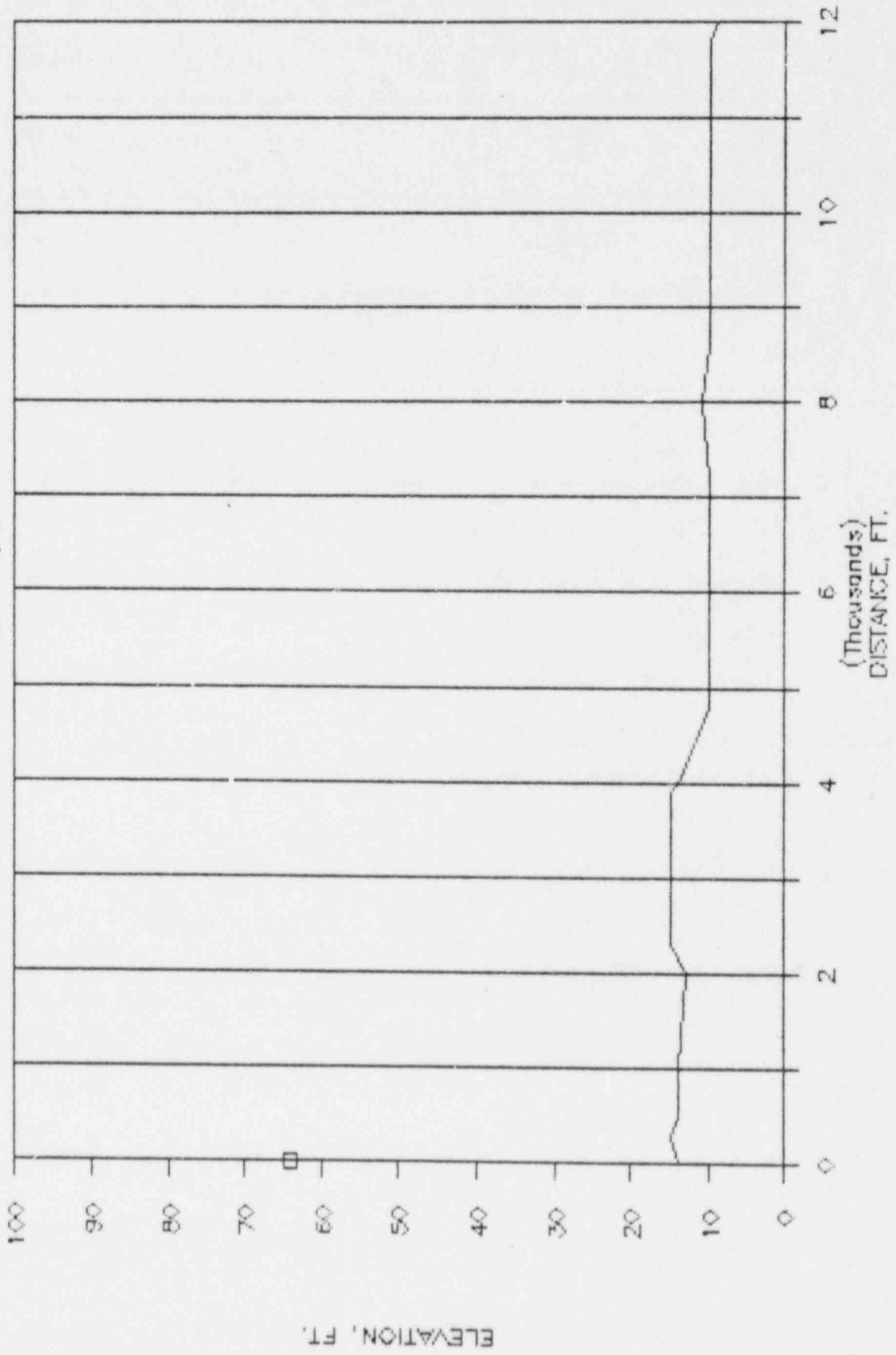
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #4-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
G	105.6	91.3	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.3	75.7	64.9	52.4	50.3	31.9
SSW	105.6	91.3	75.7	63.3	54.9	47.1	32.1
S	105.6	91.3	75.7	57.3	54.1	41.1	30.6
SSE	105.6	91.3	75.7	55.9	54.9	41.6	32.1
SE	105.6	91.2	75.7	64.9	51.2	50.3	31.3
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

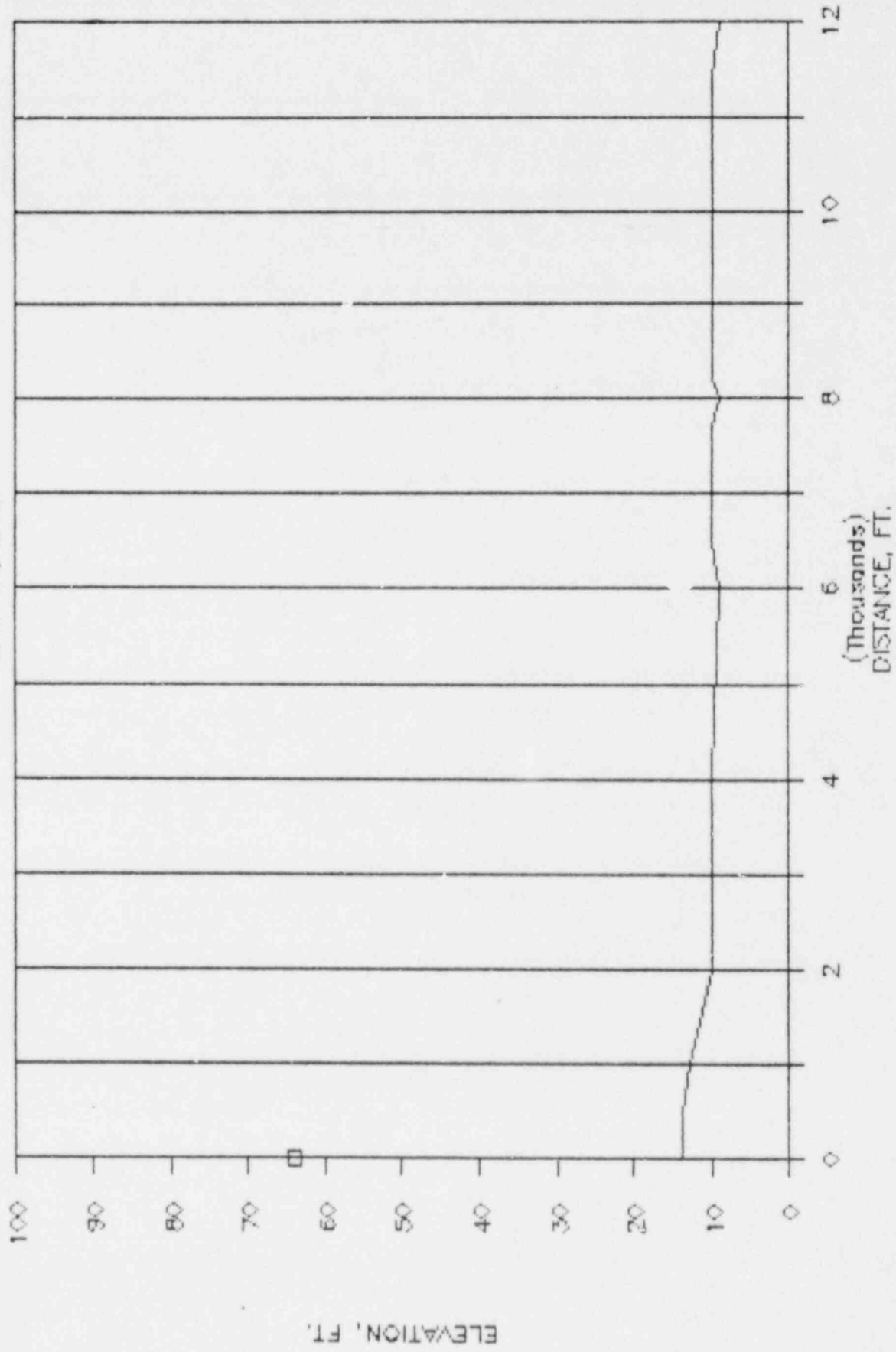
WATERFORD 6

AZIMUTH, E



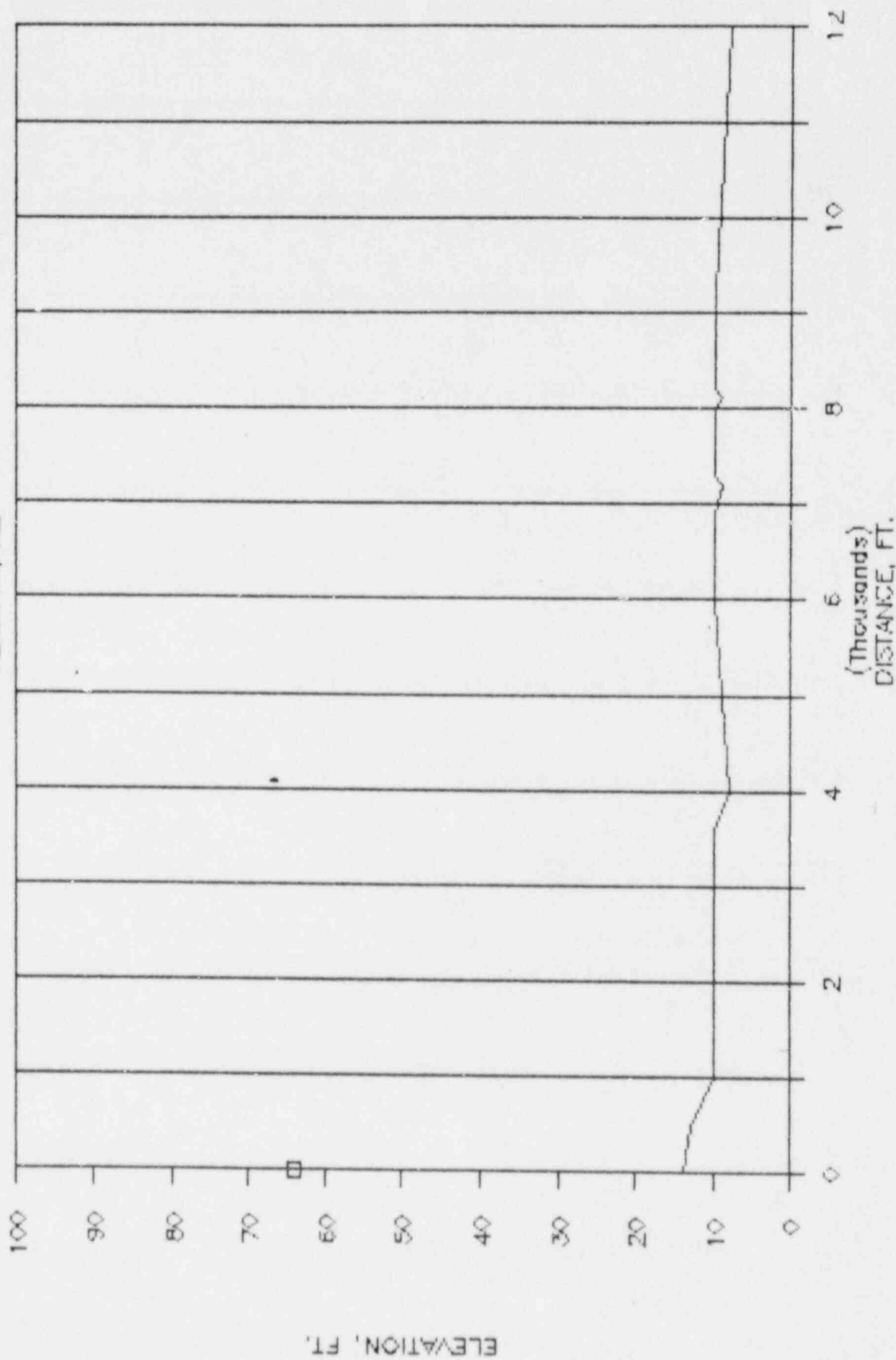
WATERFORD 6

AZIMUTH, ENE



WATERFORD 6

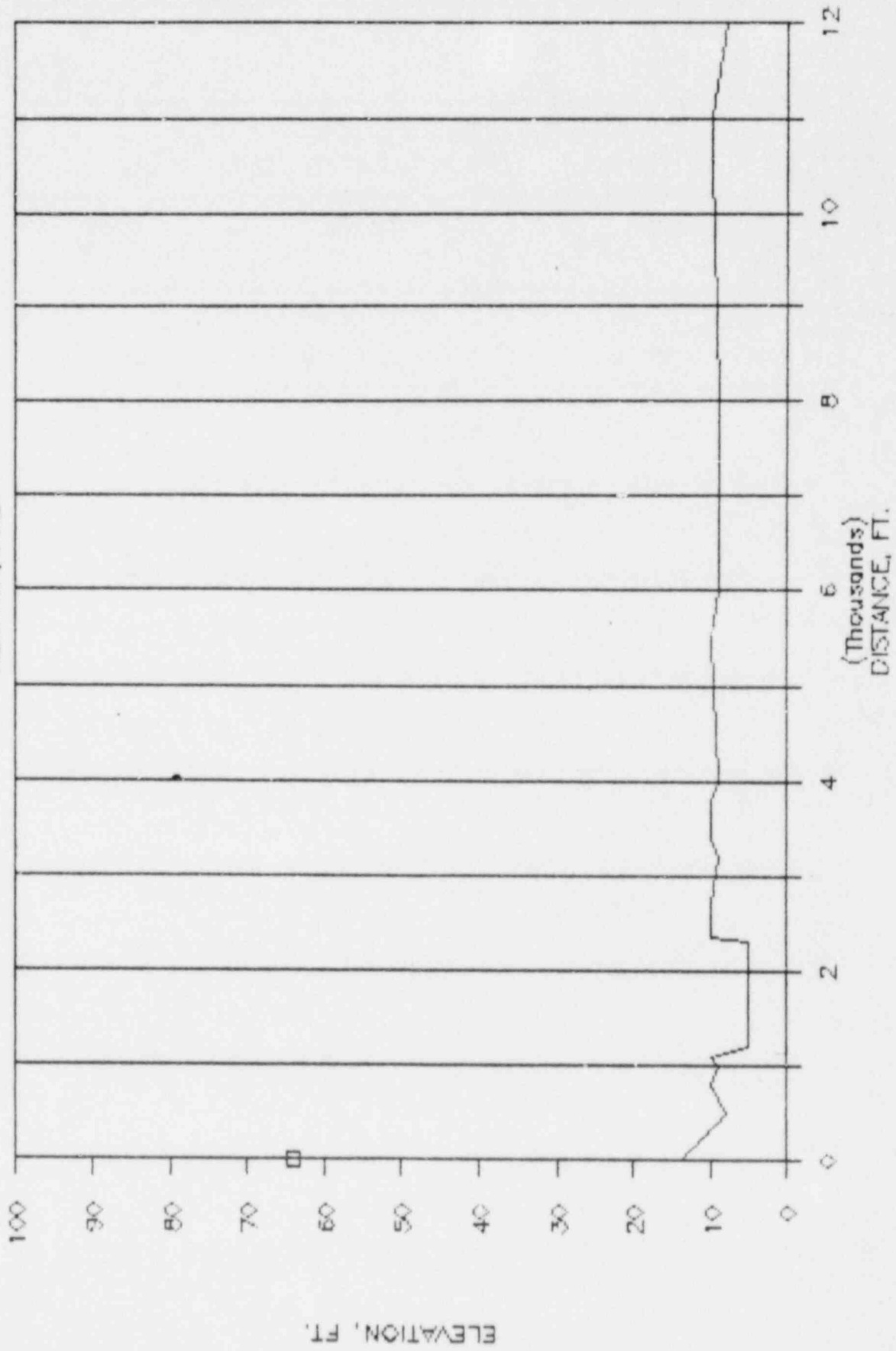
AZIMUTH, NE



0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900 10000

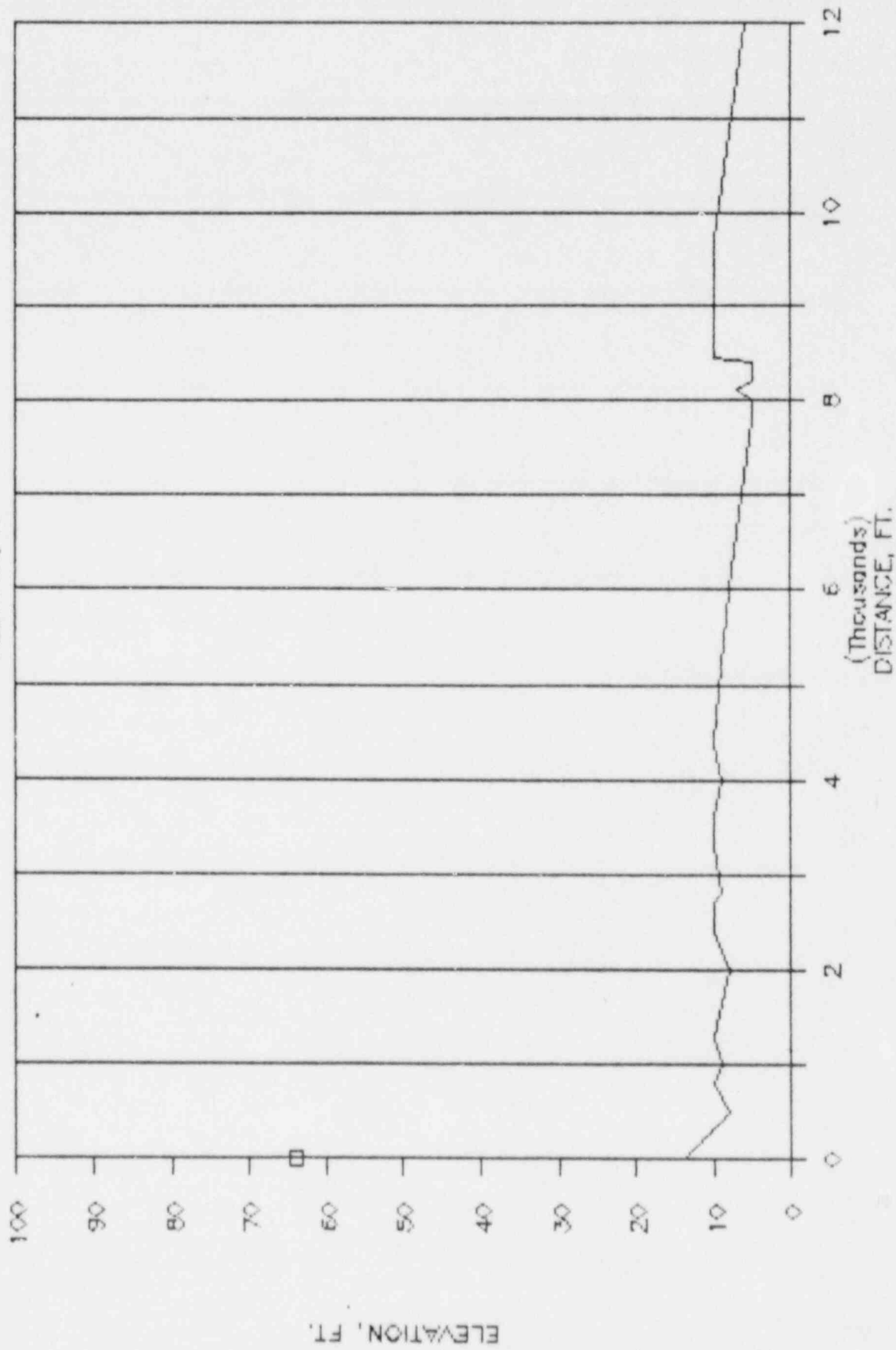
WATERFORD 6

AZIMUTH, NNE



WATERFORD 6

AZIMUTH, N

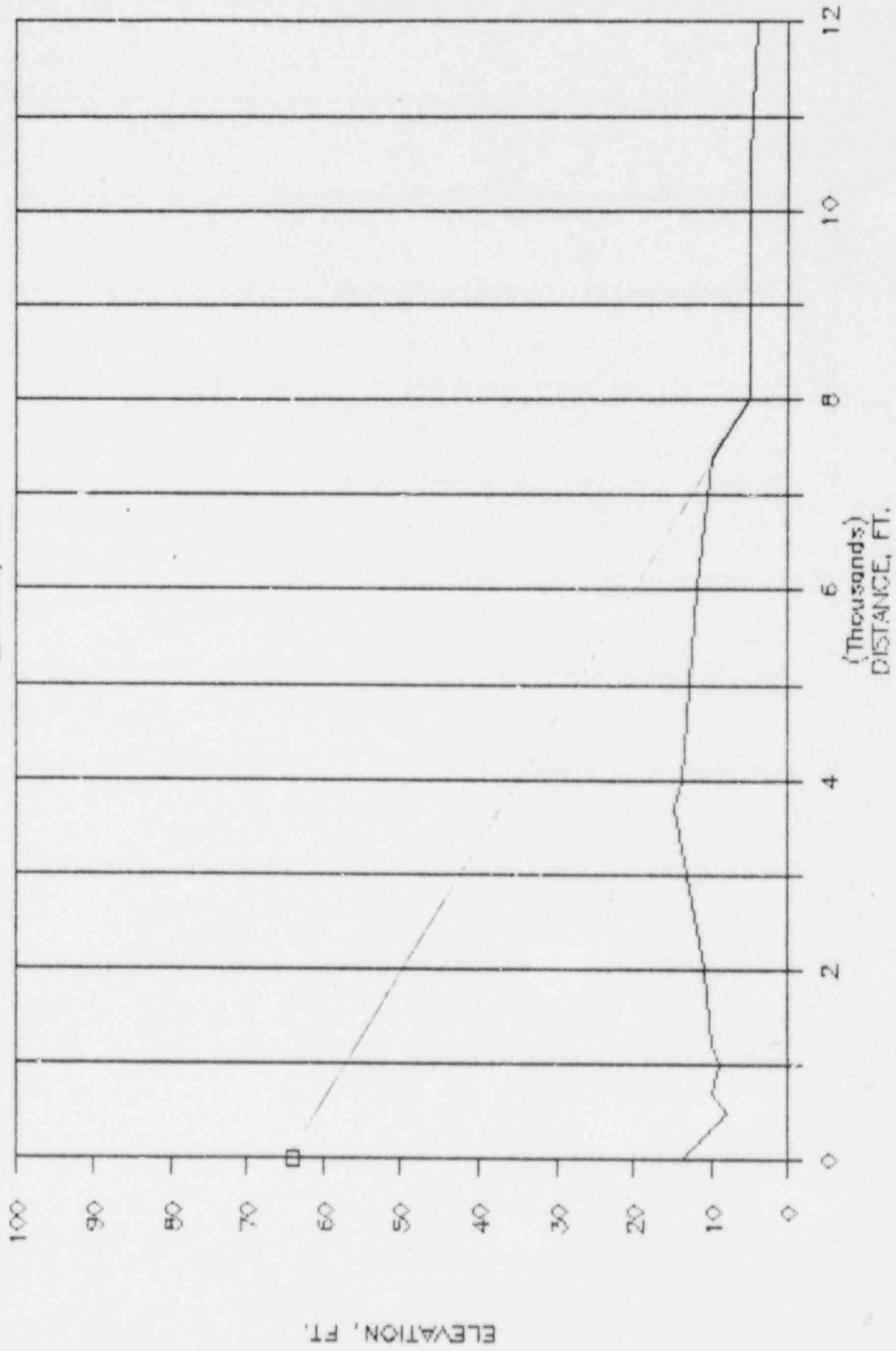


ELEVATION, FT.

(Thousands)
DISTANCE, FT.

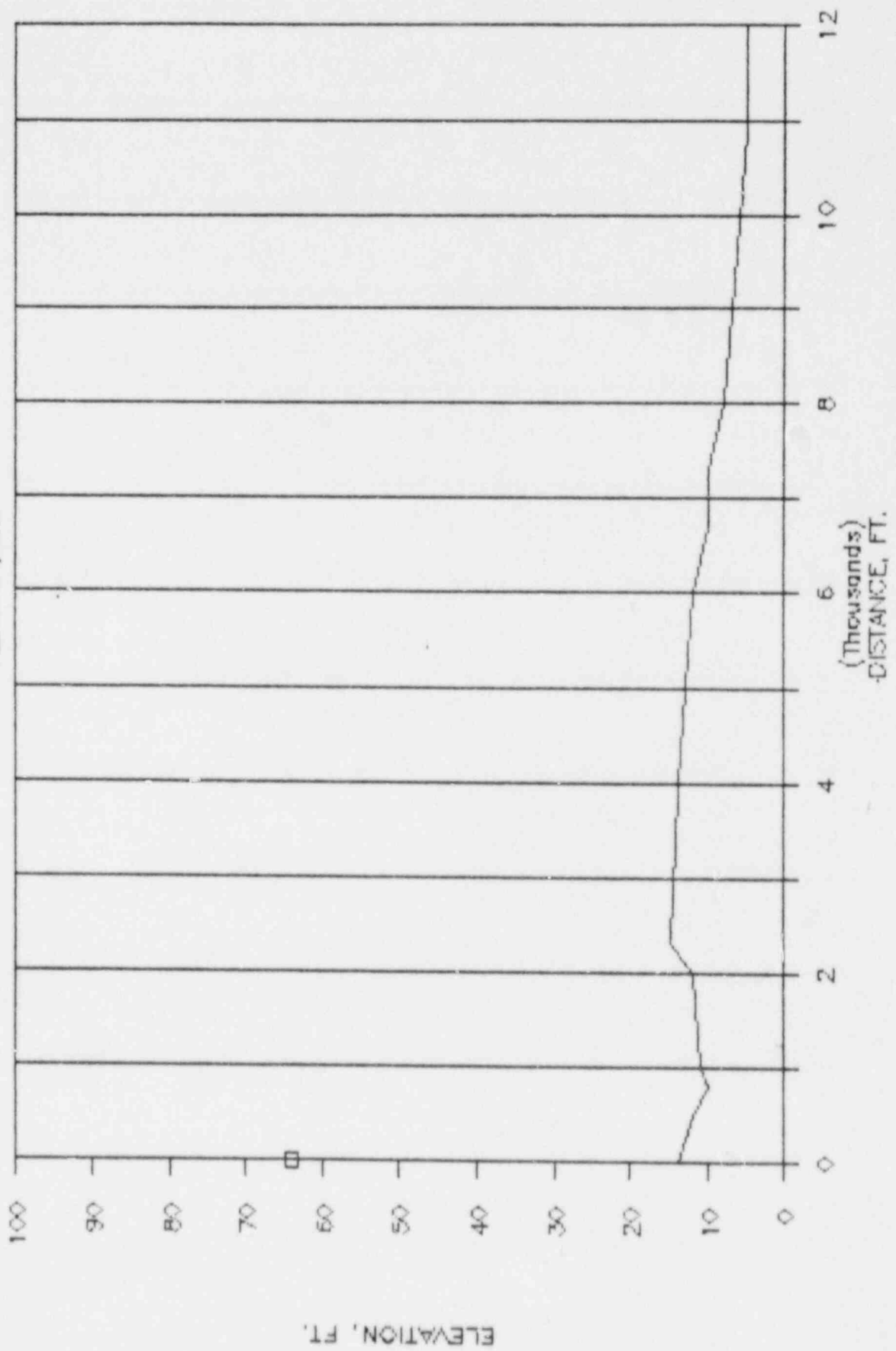
WATERFORD 6

AZIMUTH, NNW



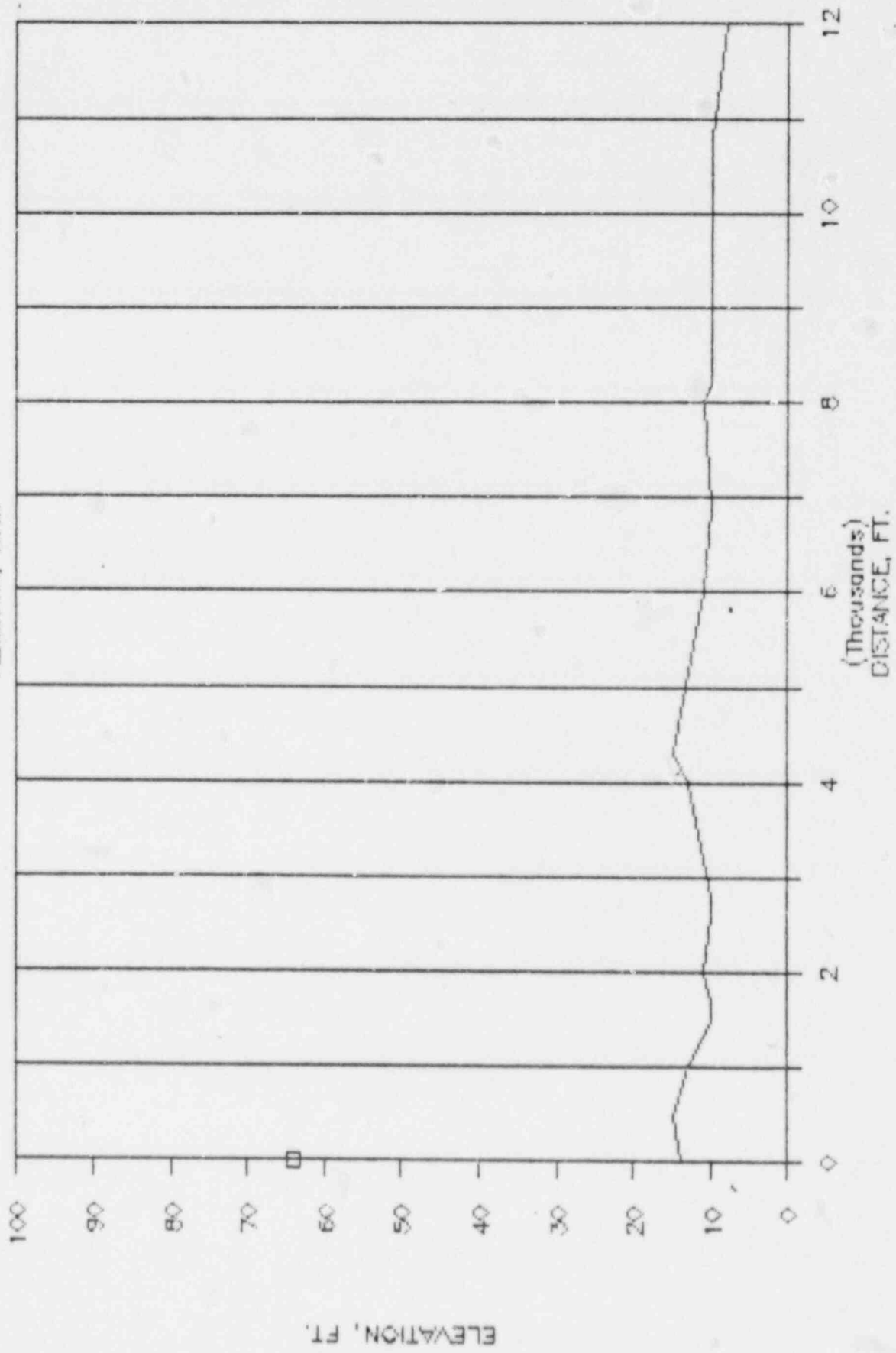
WATERFORD 6

AZIMUTH, NW



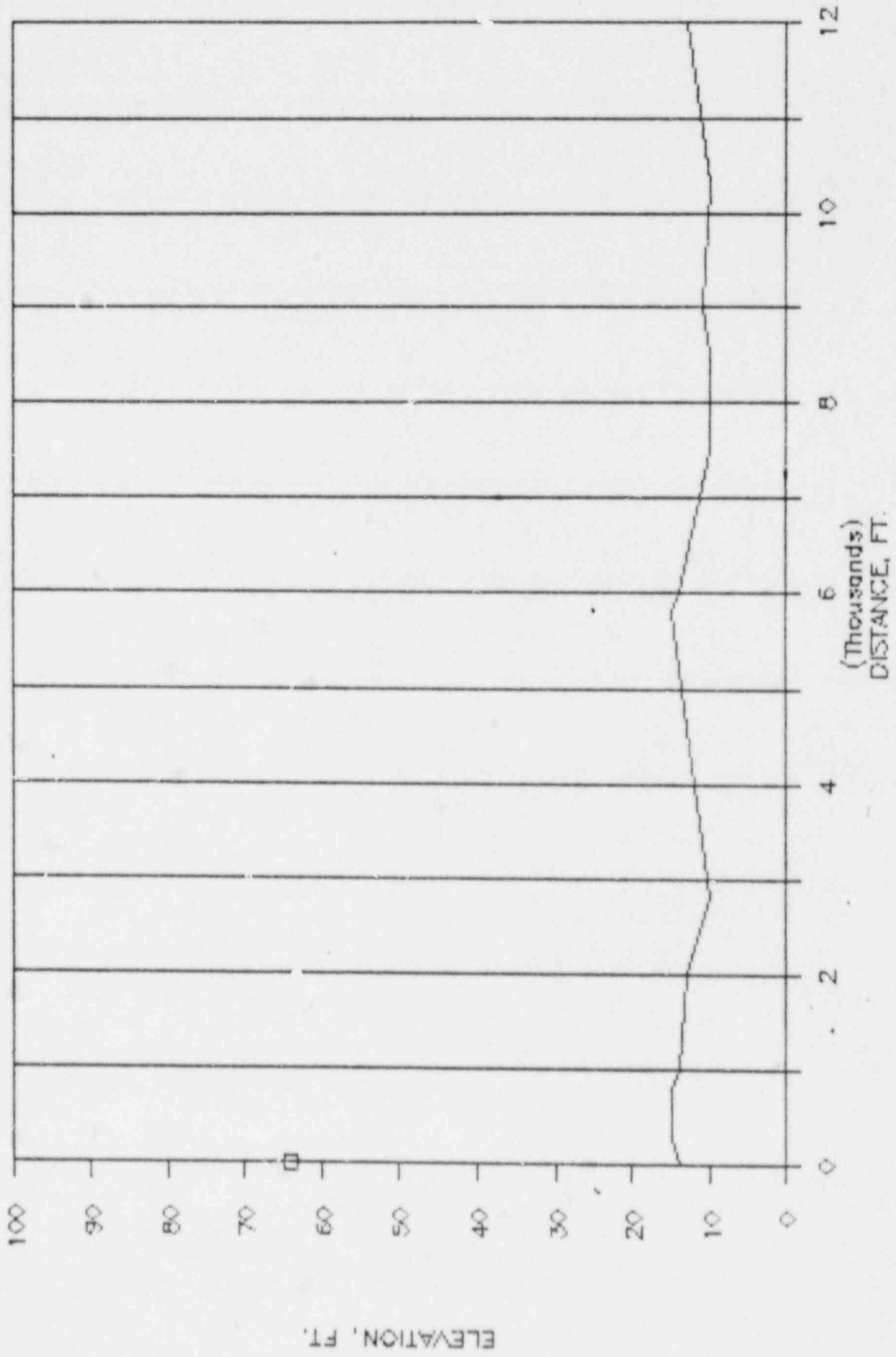
WATERFORD 6

AZIMUTH, WNW



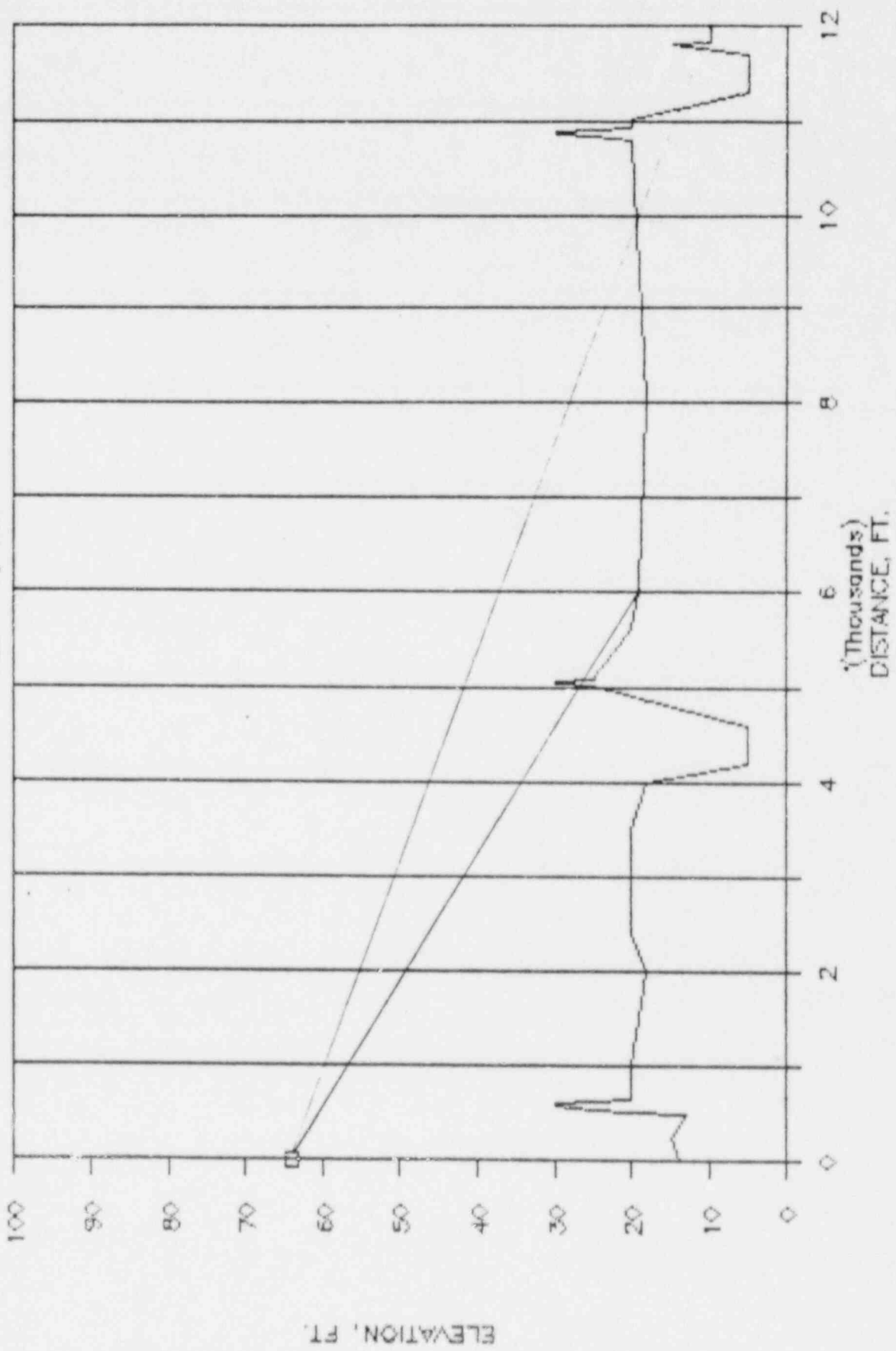
WATERFORD 6

AZIMUTH, W



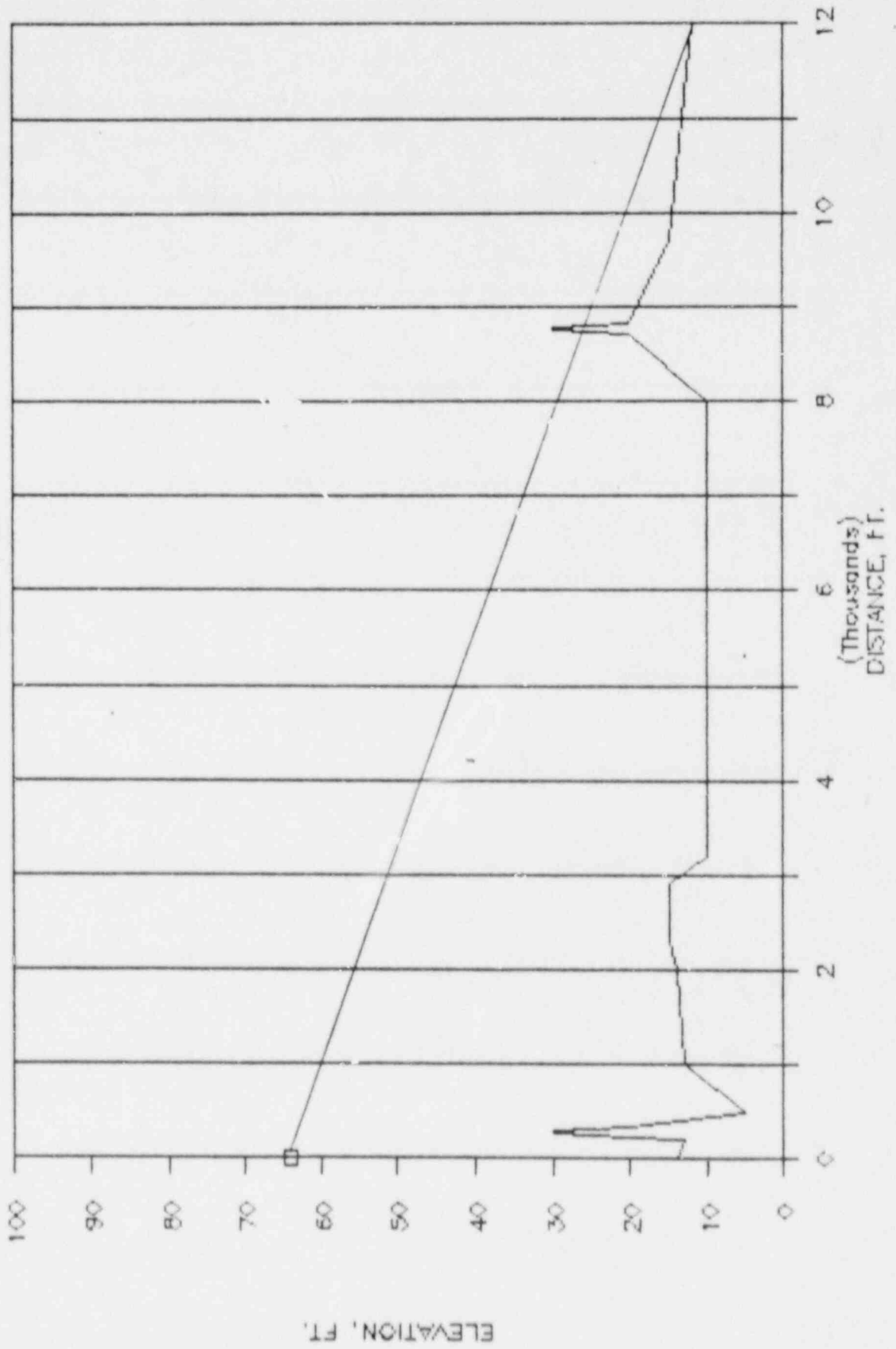
WATERFORD 6

AZIMUTH, WSW



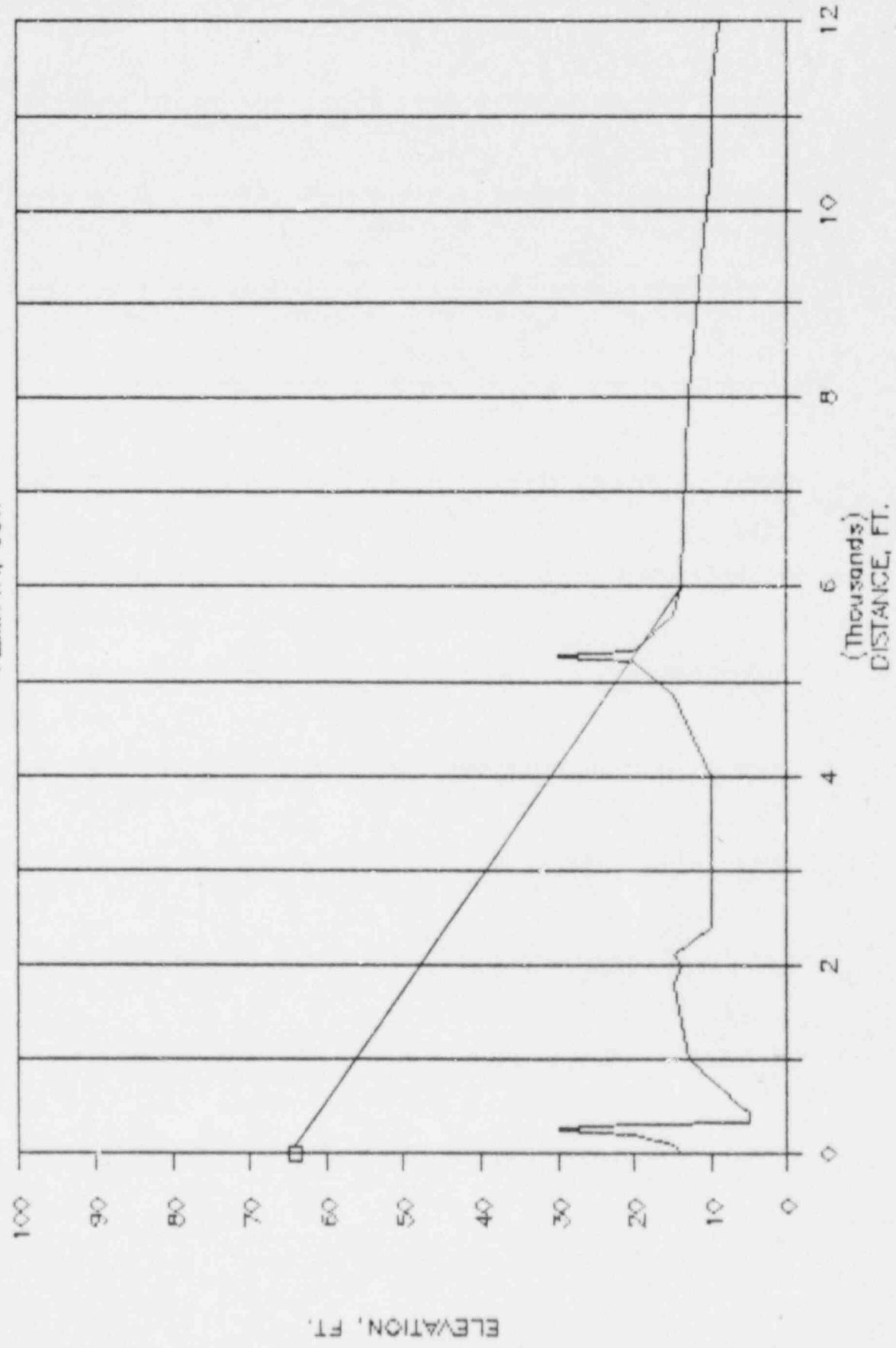
WATERFORD 6

AZIMUTH, SW



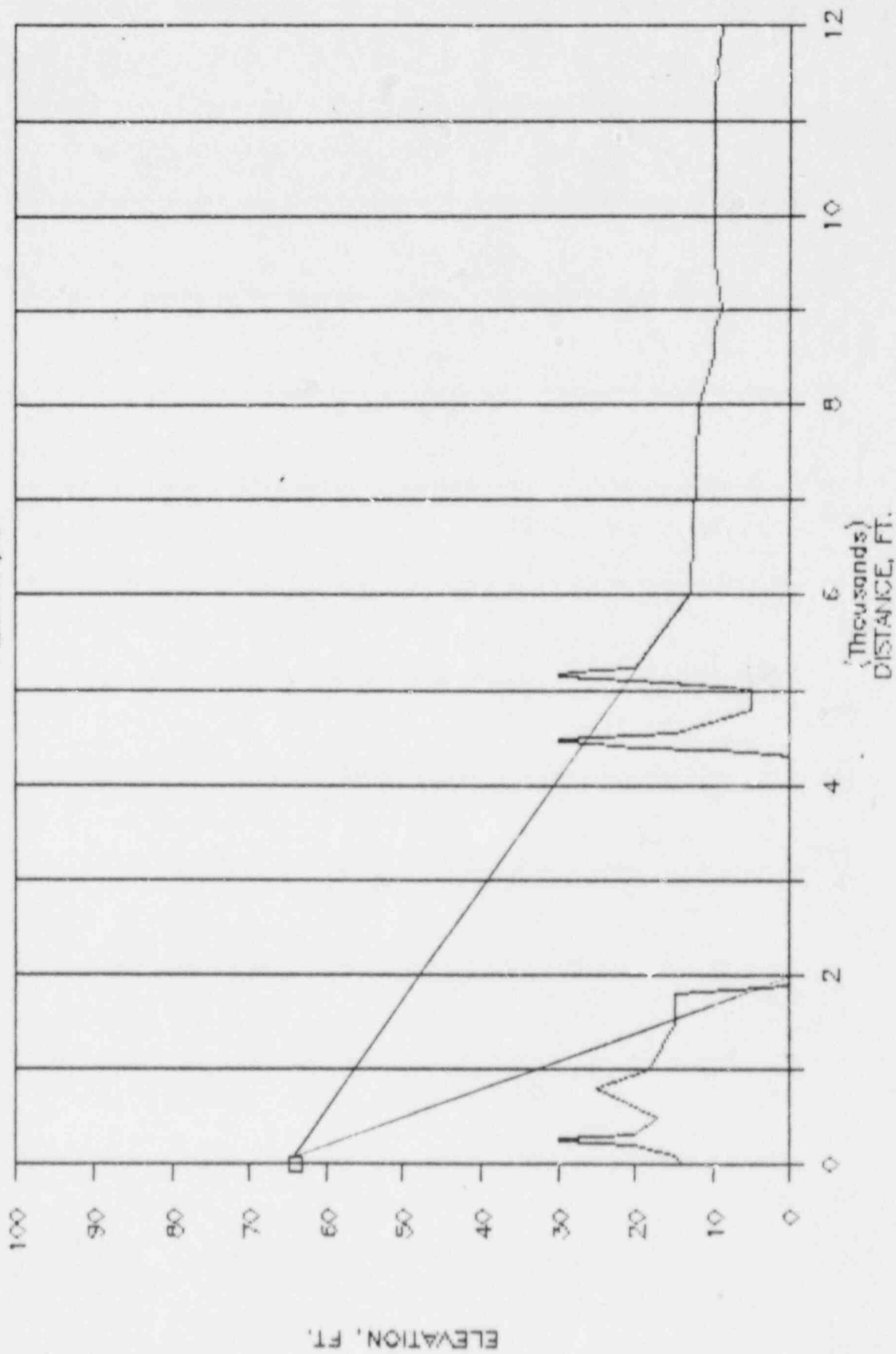
WATERFORD 6

AZIMUTH, SSW



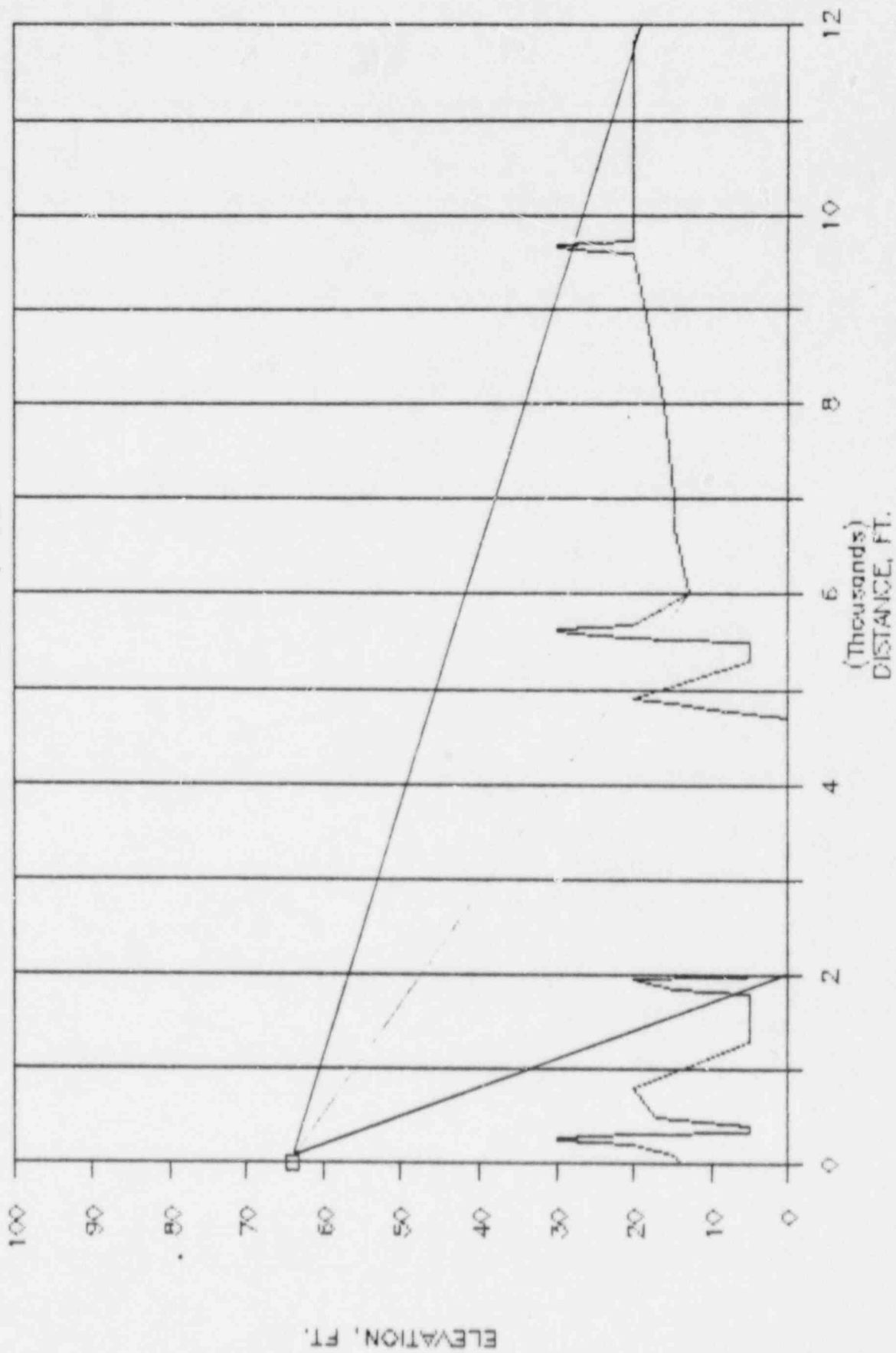
WATERFORD 6

AZIMUTH, S



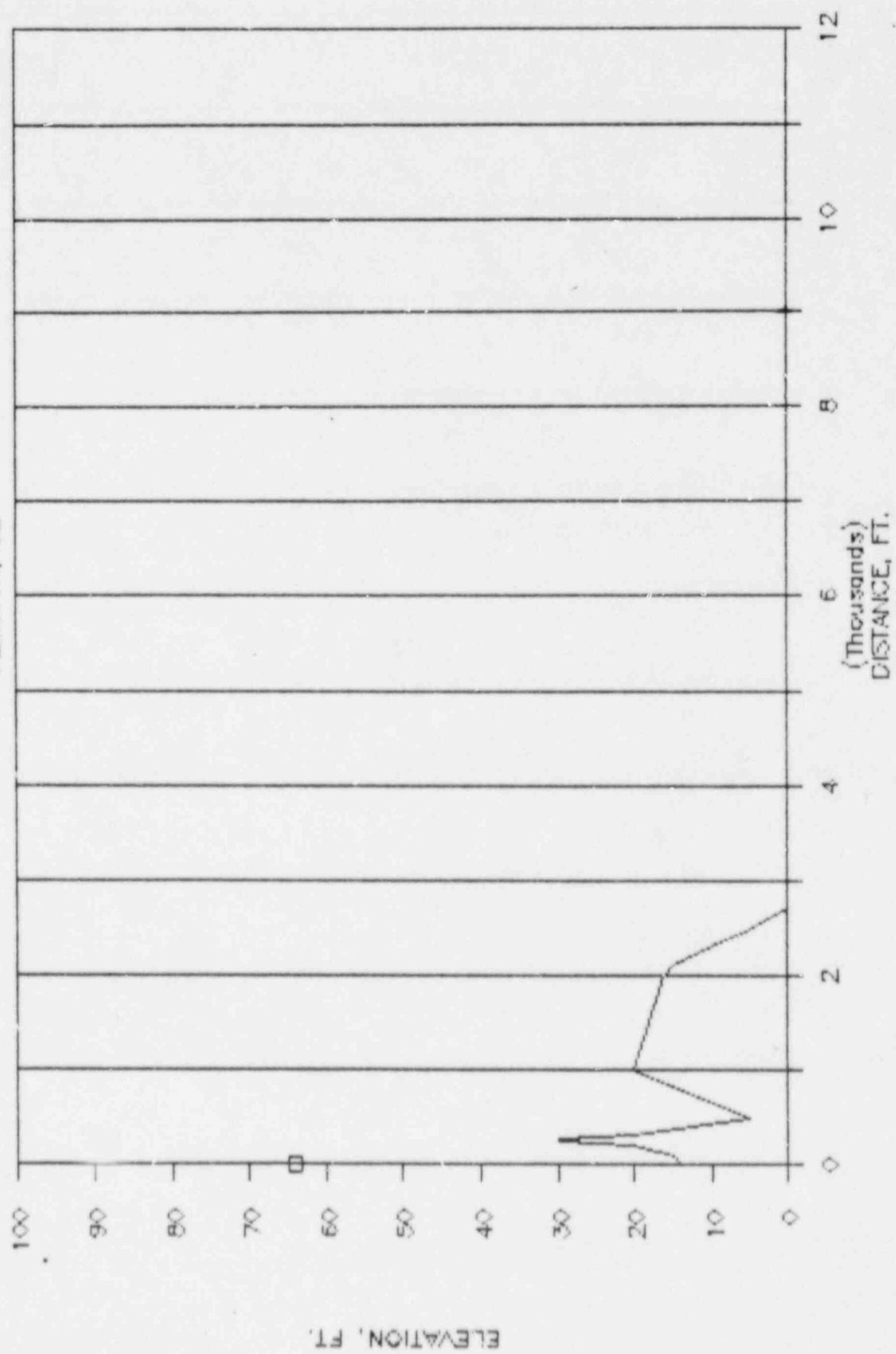
WATERFORD 6

AZIMUTH, SSE



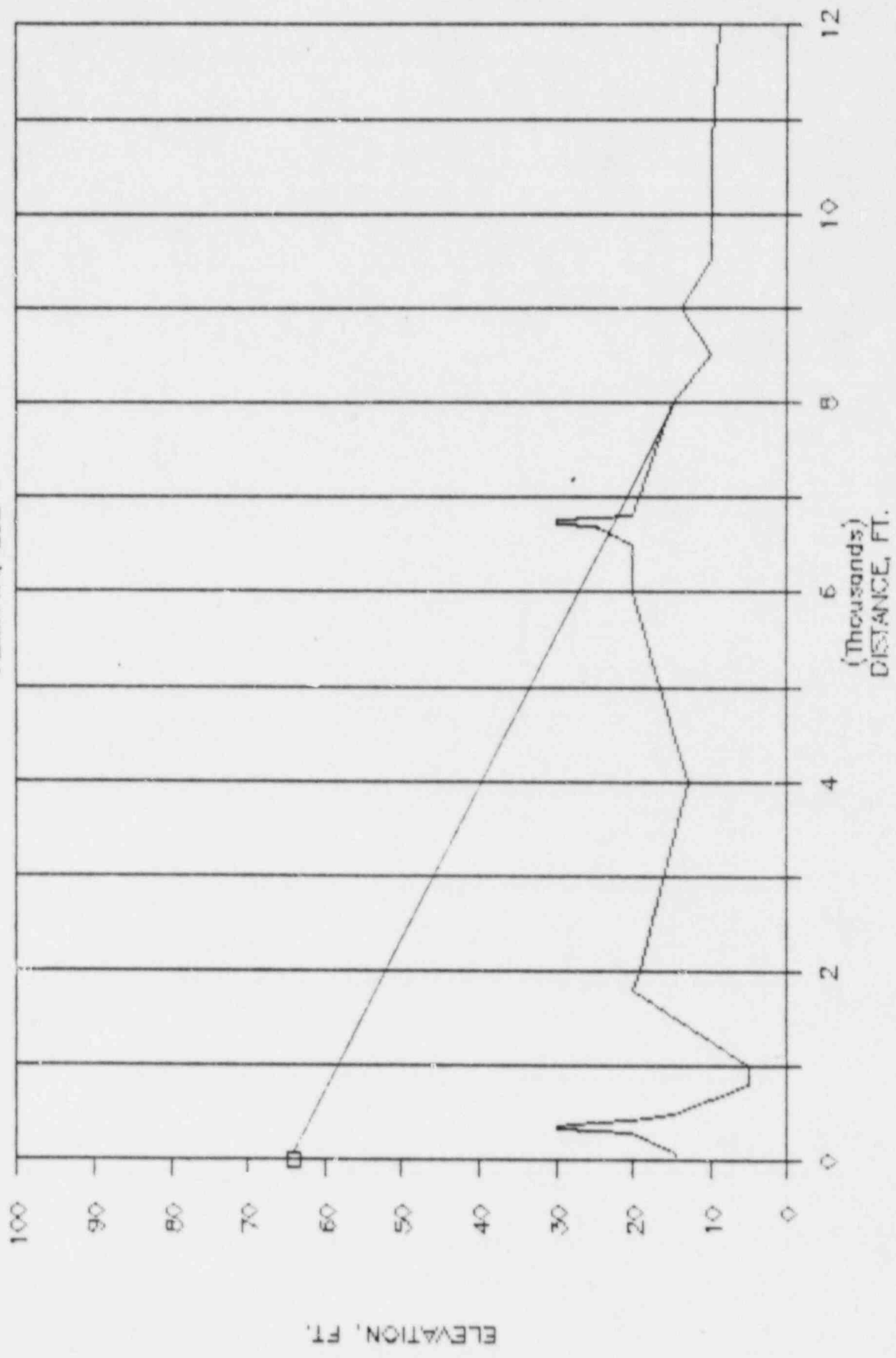
WATERFORD 6

AZIMUTH, SE



WATERFORD 6

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD AHS SIREN #6-MS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	14.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	14.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	13.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	14.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	10.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	11.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	9.00	SOFT	0.	NO	0.	0.
8	500.	67.50	14.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	13.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	10.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	10.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	9.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	9.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	9.00	SOFT	0.	NO	0.	0.
15	500.	45.00	13.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	10.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	10.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	8.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	10.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	10.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	8.00	SOFT	0.	NO	0.	0.
22	500.	22.50	8.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	9.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	5.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	9.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	9.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	9.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	8.00	SOFT	0.	NO	0.	0.
29	500.	0.0	8.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	9.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	8.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	9.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	8.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	5.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	6.00	SOFT	0.	NO	0.	0.
36	500.	337.50	8.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	9.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	11.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	14.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	12.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	5.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	4.00	SOFT	0.	NO	0.	0.
43	500.	315.00	12.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	11.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	12.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	14.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	12.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	8.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	5.00	SOFT	0.	NO	0.	0.
50	500.	292.50	15.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	13.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	11.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	13.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	11.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	11.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	8.00	SOFT	0.	NO	0.	0.
57	500.	270.00	15.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	14.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	13.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	12.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	14.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	10.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	13.00	SOFT	0.	NO	0.	0.
64	500.	247.50	13.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	20.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	18.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	18.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	19.00	SOFT	0.	YES	5050.	30.
69	8000.	247.50	18.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	10.00	SOFT	0.	YES	10875.	30.
71	500.	225.00	5.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	13.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	14.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	10.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	10.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	10.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	12.00	SOFT	0.	YES	8775.	30.
78	500.	207.50	6.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	13.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	14.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	10.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	14.00	SOFT	0.	YES	5275.	30.
83	8000.	202.50	13.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	9.00	SOFT	0.	NO	0.	0.
85	500.	180.00	17.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	18.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	0.0	SOFT	0.	YES	1800.	15.
88	4000.	180.00	0.0	SOFT	0.	NO	0.	0.
89	6000.	180.00	13.00	SOFT	0.	YES	5175.	30.
90	8000.	180.00	12.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	9.00	SOFT	0.	NO	0.	0.
92	500.	157.50	17.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	14.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	0.0	SOFT	0.	YES	1950.	20.
95	4000.	157.50	0.0	SOFT	0.	NO	0.	0.
96	6000.	157.50	13.00	SOFT	0.	YES	5625.	30.
97	8000.	157.50	16.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	19.00	SOFT	0.	YES	9675.	30.
99	500.	135.00	5.00	HARD	0.	NO	0.	0.
100	1000.	135.00	20.00	HARD	0.	NO	0.	0.
101	2000.	135.00	16.00	HARD	0.	NO	0.	0.
102	4000.	135.00	0.0	HARD	0.	NO	0.	0.
103	6000.	135.00	0.0	HARD	0.	NO	0.	0.
104	8000.	135.00	0.0	HARD	0.	NO	0.	0.
105	12000.	135.00	0.0	HARD	0.	NO	0.	0.
106	500.	112.50	15.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	5.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	19.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	13.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	20.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	15.00	SOFT	0.	YES	6750.	30.
112	12000.	112.50	9.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD AHS SIREN #6-WS3000
 NOISE SOURCE POWER LEVEL INPUT

DEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (H2)
1	SIREN WAT006	158.9	158.7	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
		10= 0.0	YD= 0.0	ZD= 0.0	Z0= 64.00	HEIGHT ABOVE GROUND=		50.00				

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD AHS SIREN #6-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

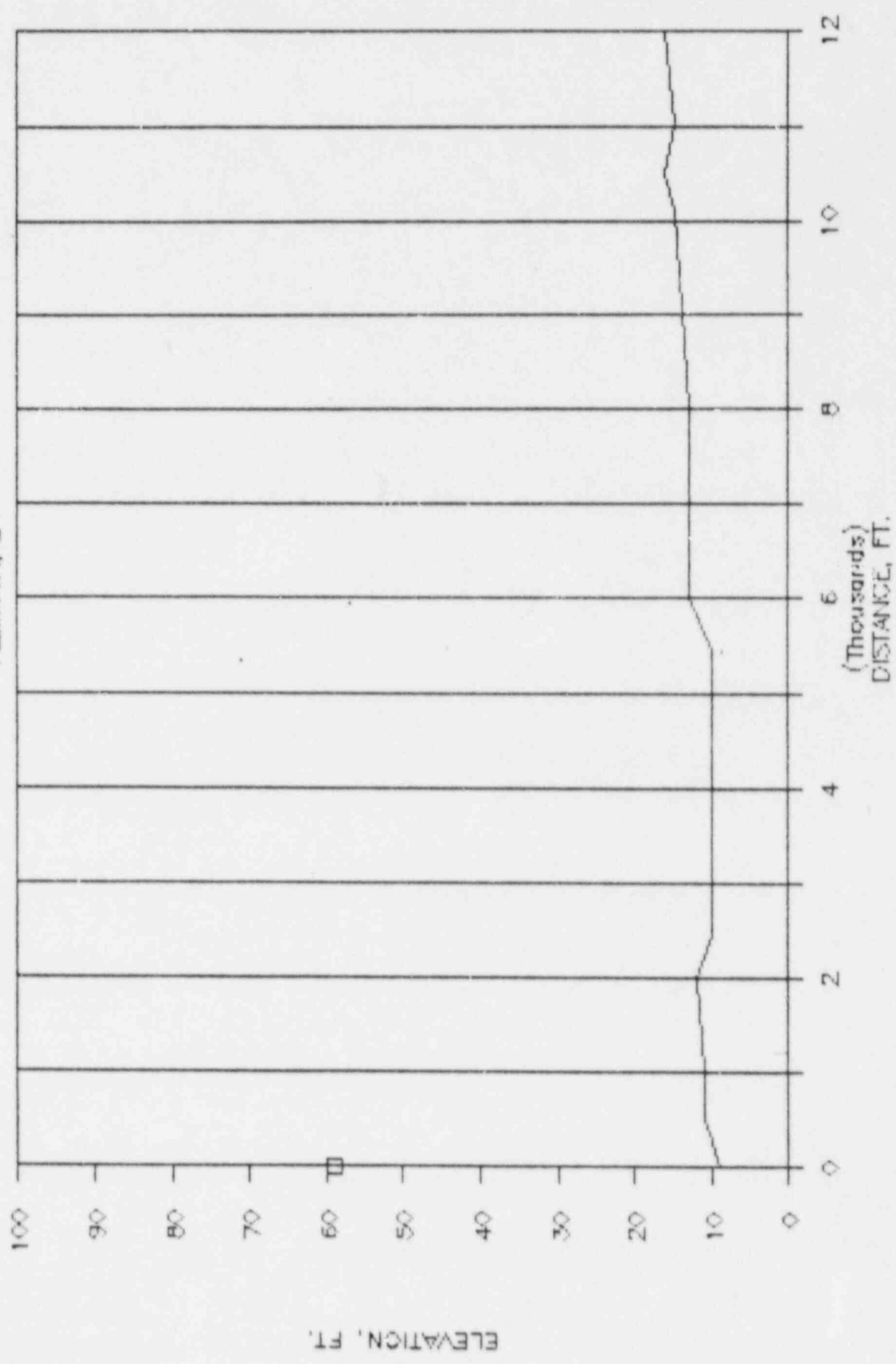
YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE HUMIDITY	BAROMETRIC PRESSURE (MM OF HG)
						H1	H2	H1	H2		
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

LOUISIANA POWER & LIGHT COMPANY
WATERFORD AHS SIREN #6-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

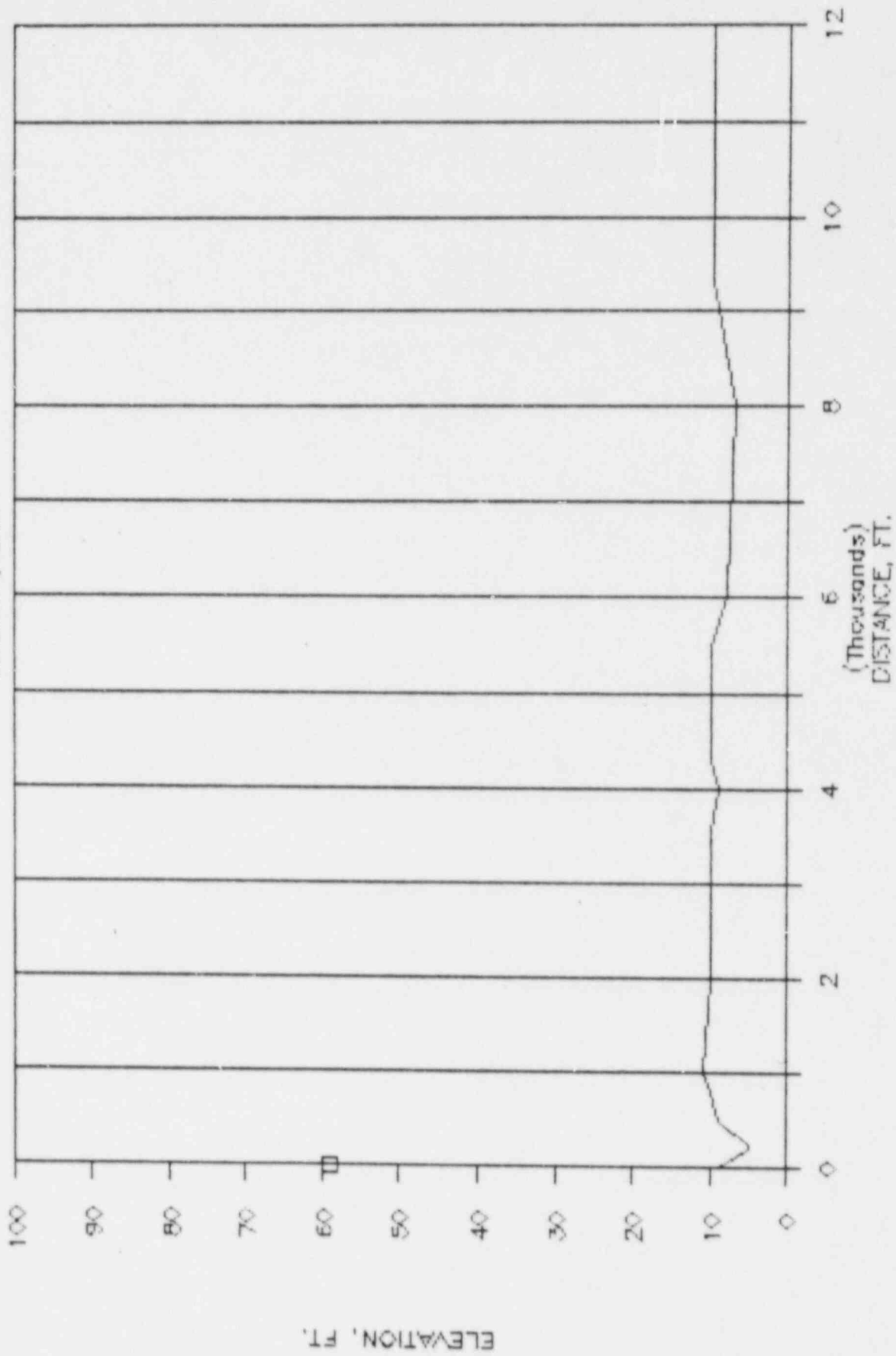
AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.3	75.7	65.1	56.0	57.4	41.5
SW	105.6	91.2	75.7	64.9	57.3	50.3	32.0
SSW	105.6	91.2	75.7	63.3	49.1	47.1	32.1
S	105.6	91.3	68.1	62.8	48.5	46.2	30.6
SSE	105.6	91.2	59.3	63.3	47.4	47.1	27.3
SE	105.7	98.4	89.7	78.7	67.5	57.9	41.3
ESE	105.6	91.2	75.7	65.1	60.9	52.3	47.6

WATERFORD 7
AZIMUTH, E



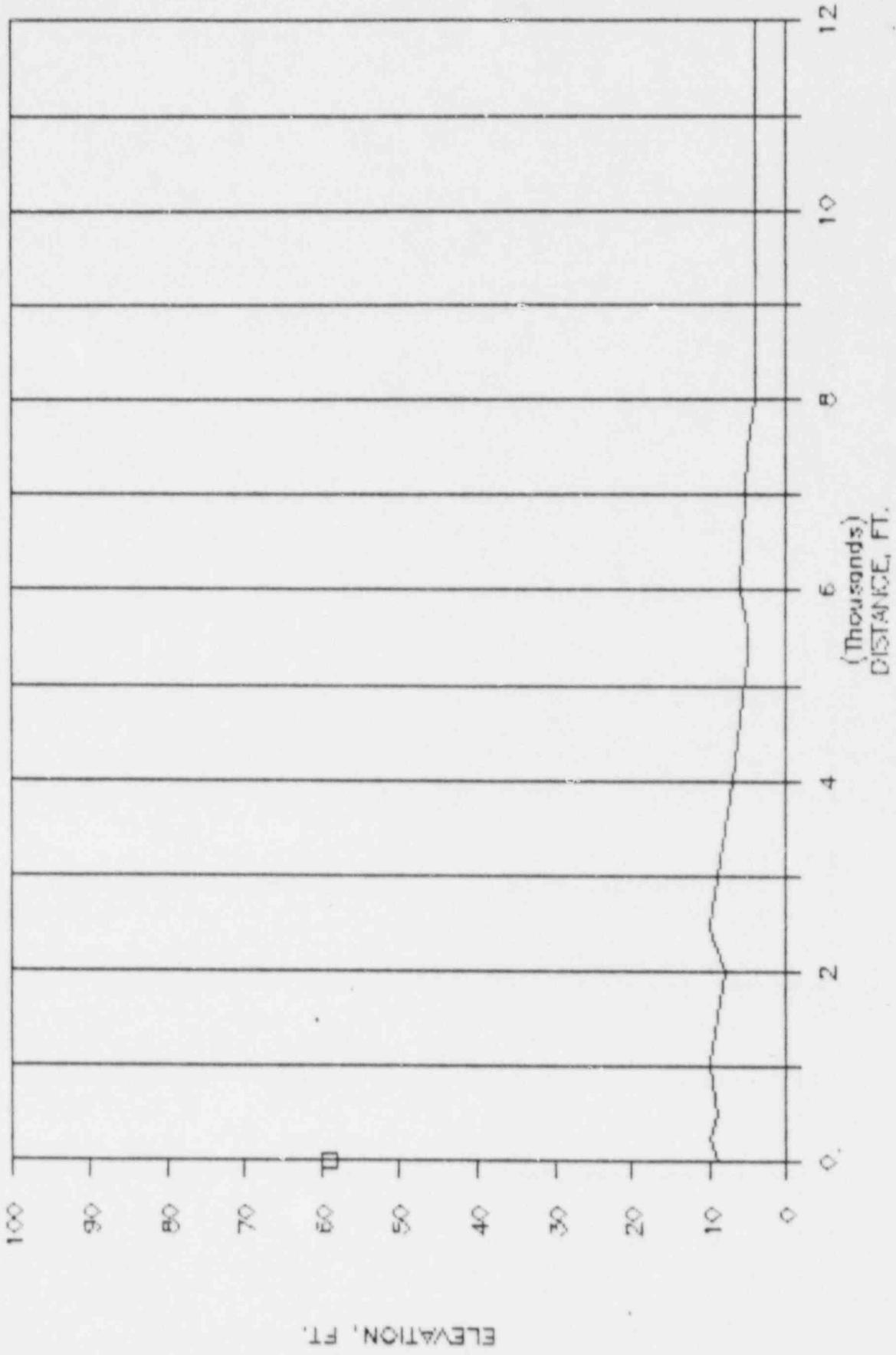
WATERFORD 7

AZIMUTH, ENE



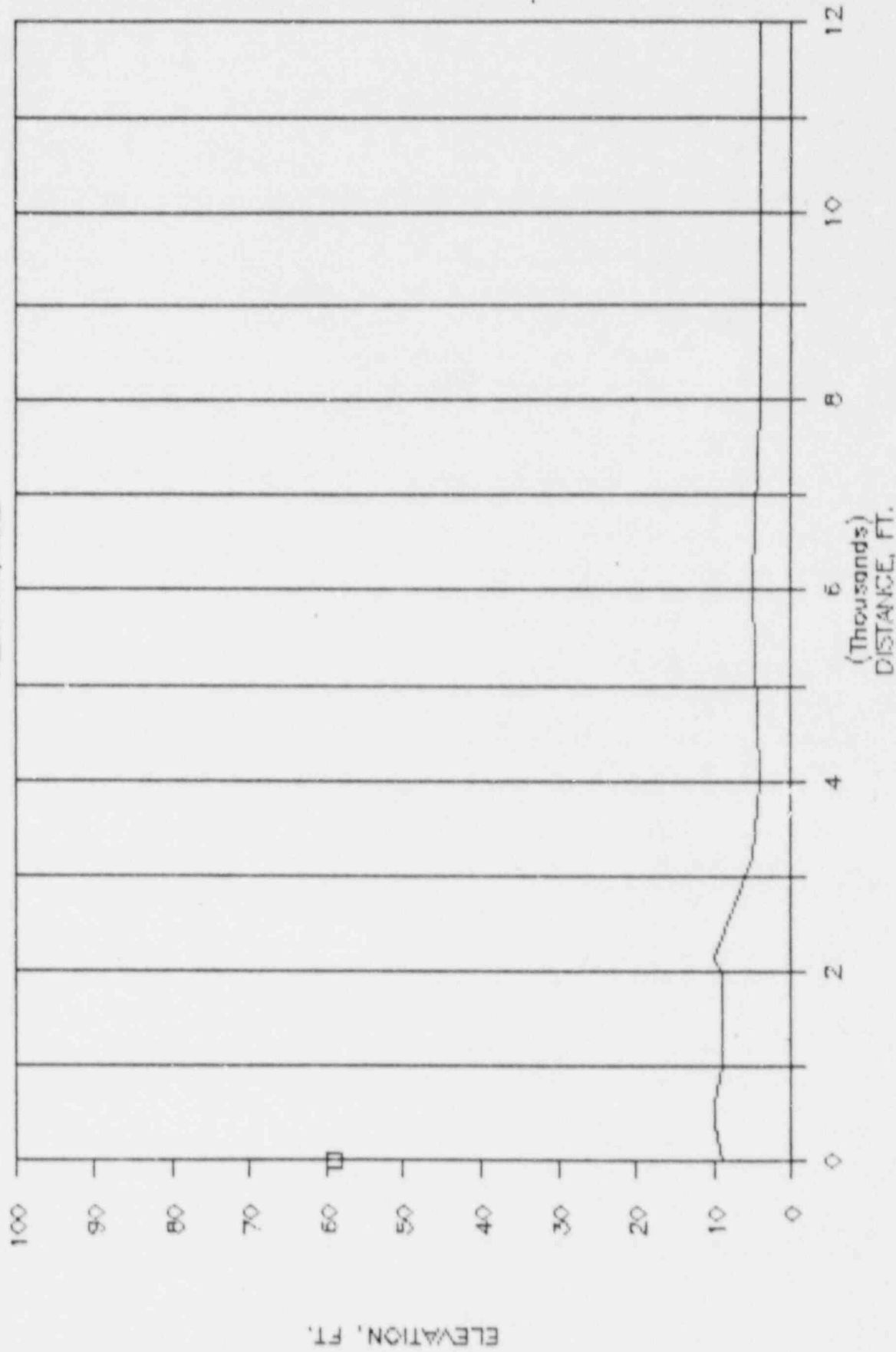
WATERFORD 7

AZIMUTH, NE



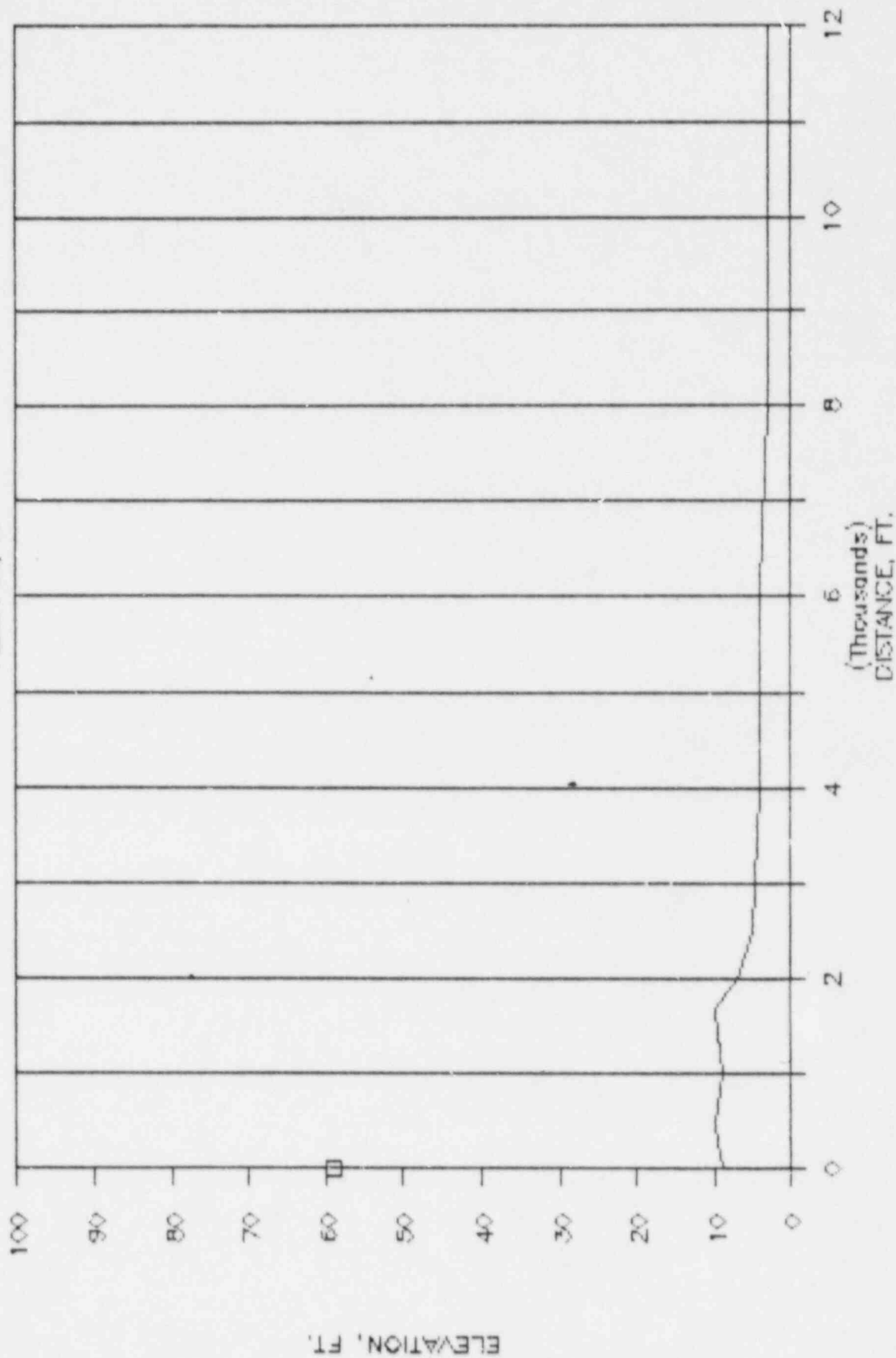
WATERFORD 7

AZIMUTH, NINE



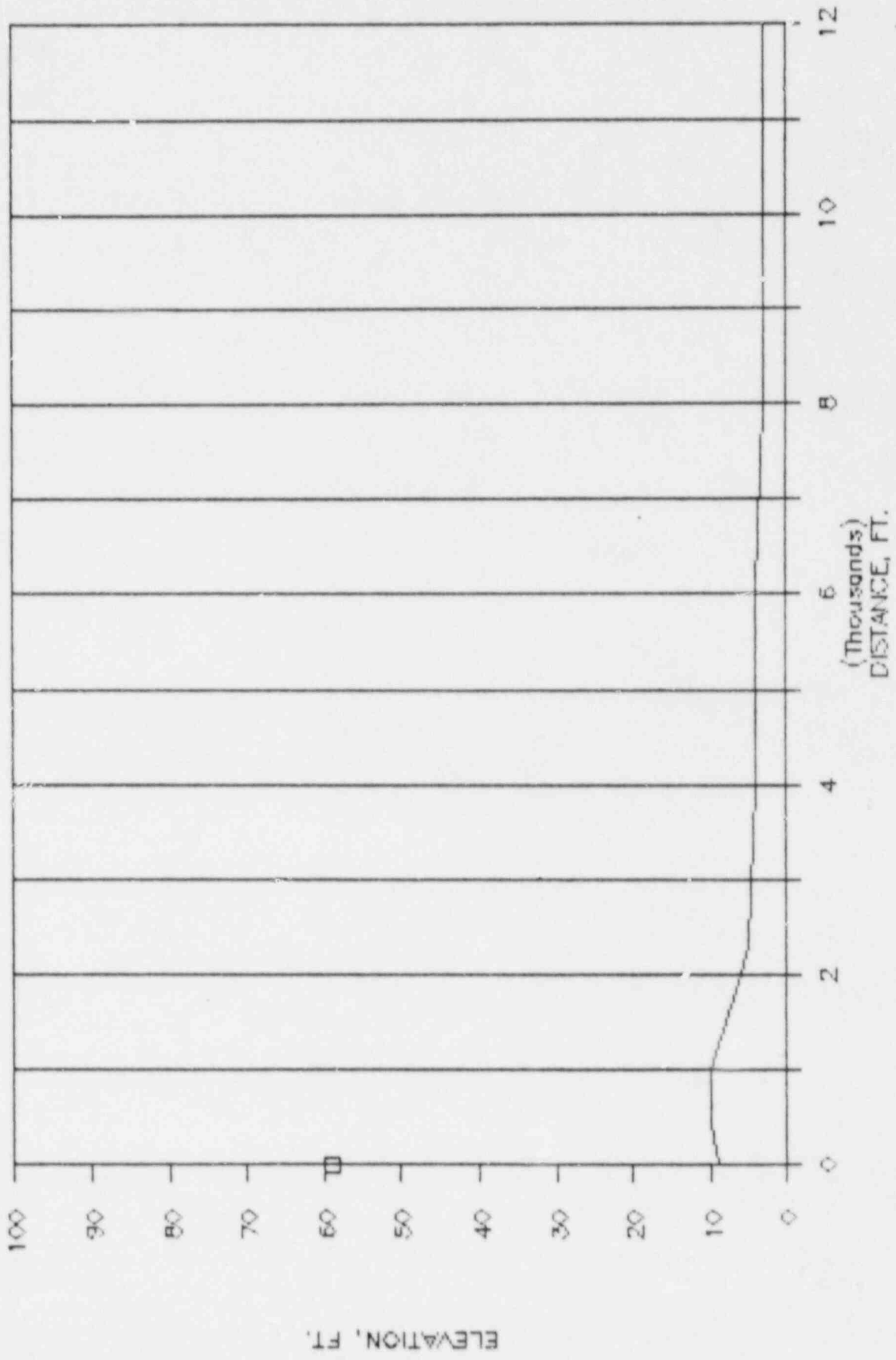
WATERFORD 7

AZIMUTH, N



WATERFORD 7

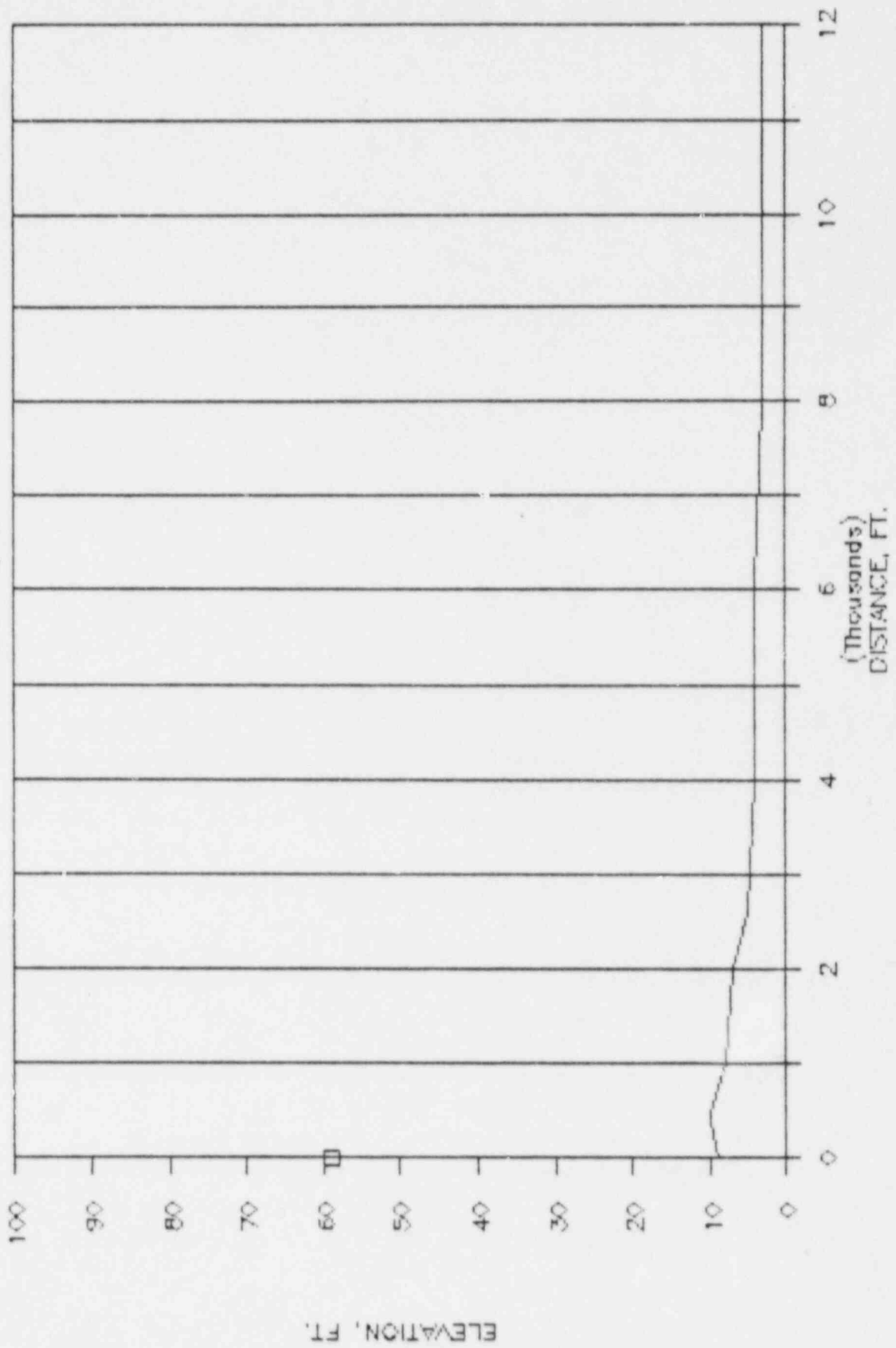
AZIMUTH, NNW



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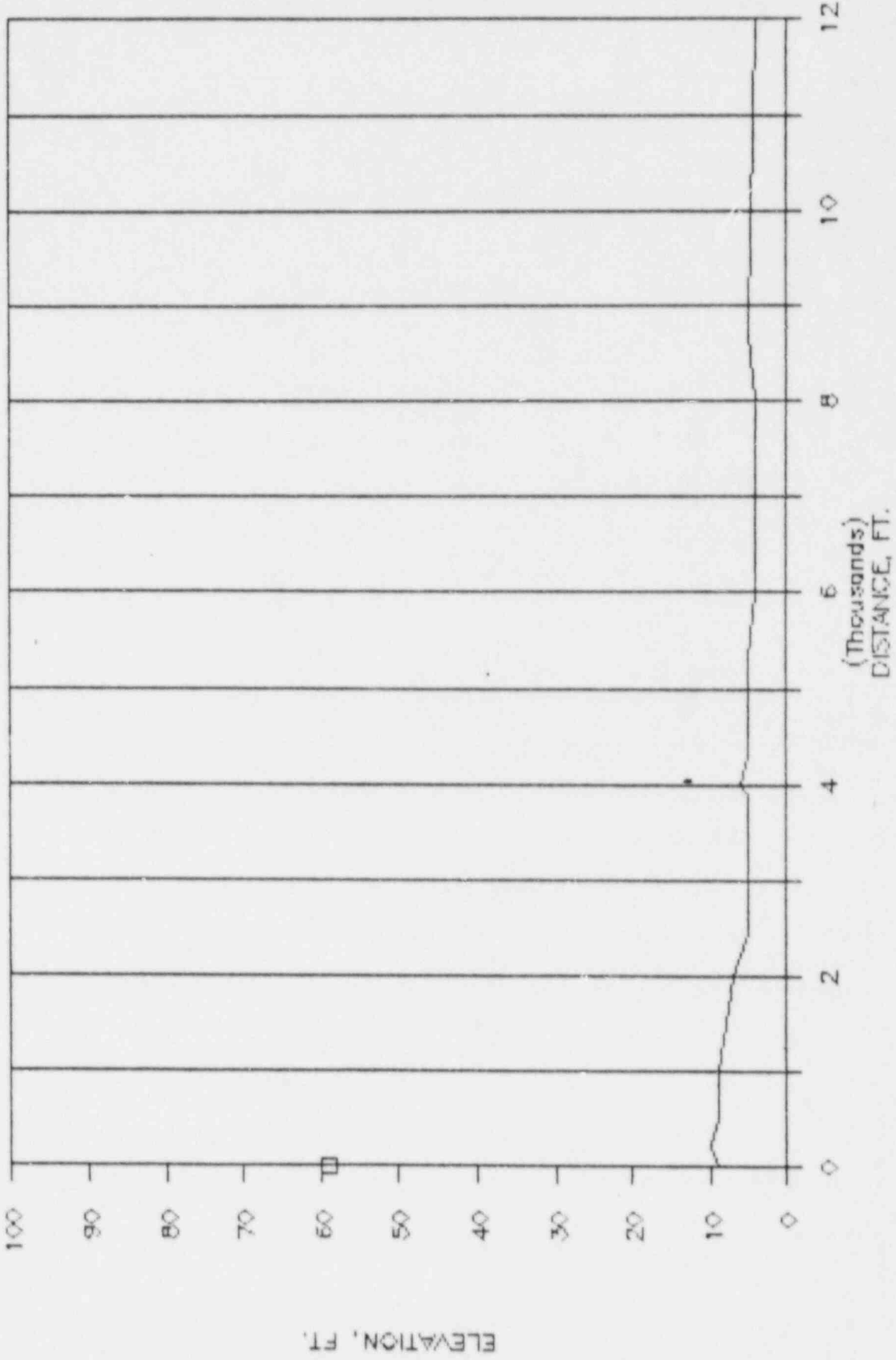
WATERFORD 7

AZIMUTH, NW



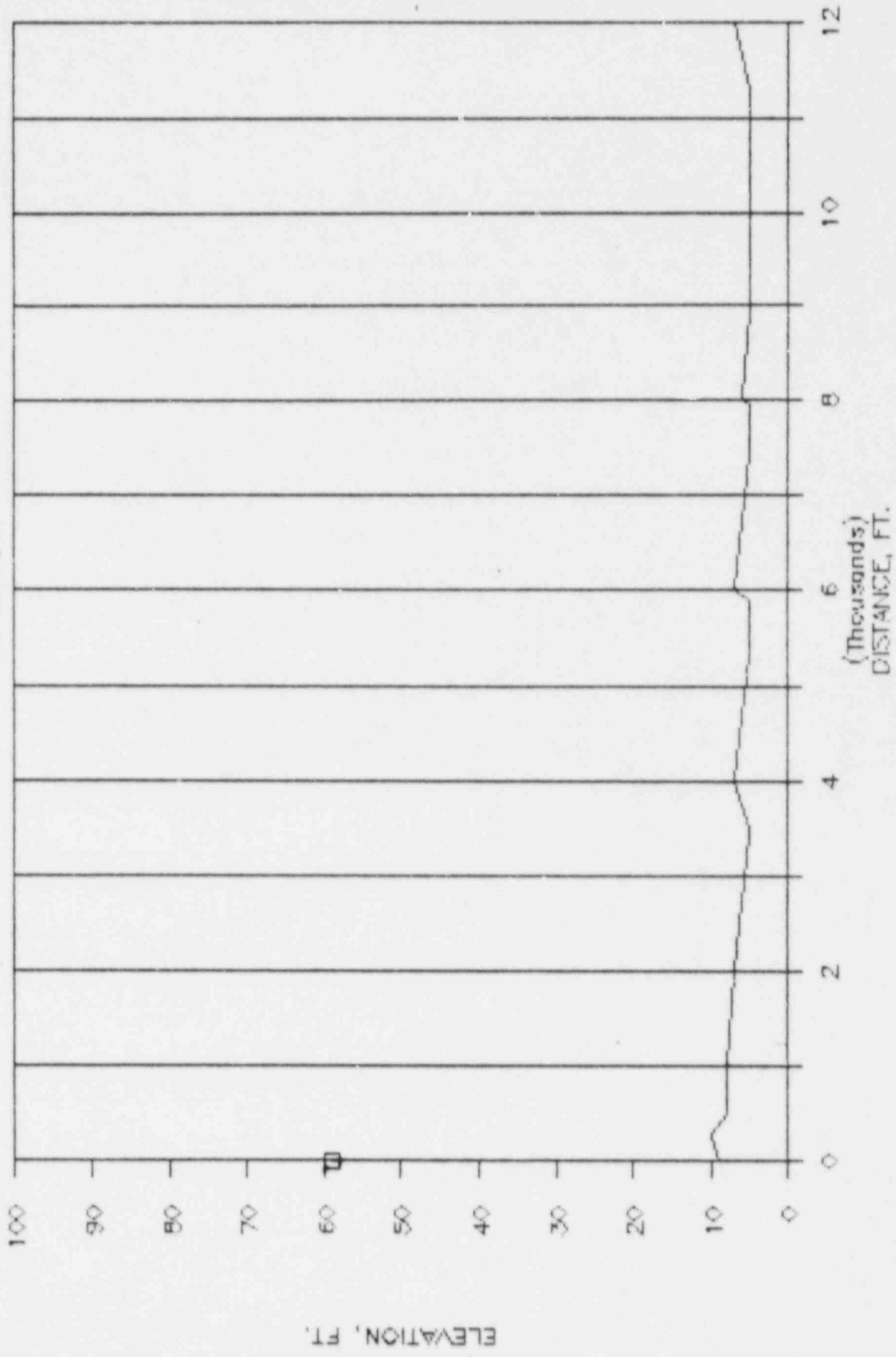
WATERFORD 7

AZIMUTH, WNW



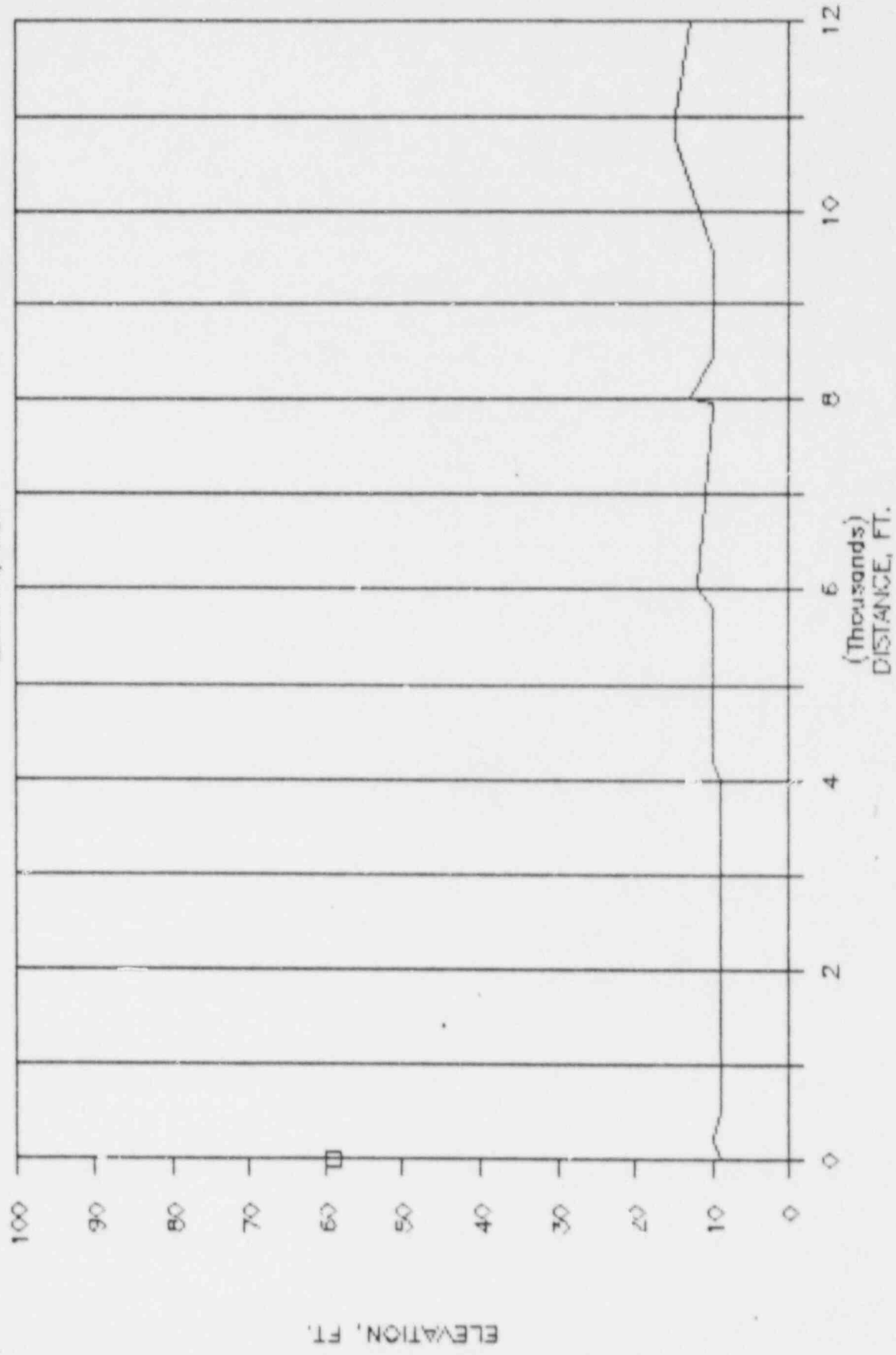
WATERFORD 7

AZIMUTH, W



WATERFORD 7

AZIMUTH, WSW



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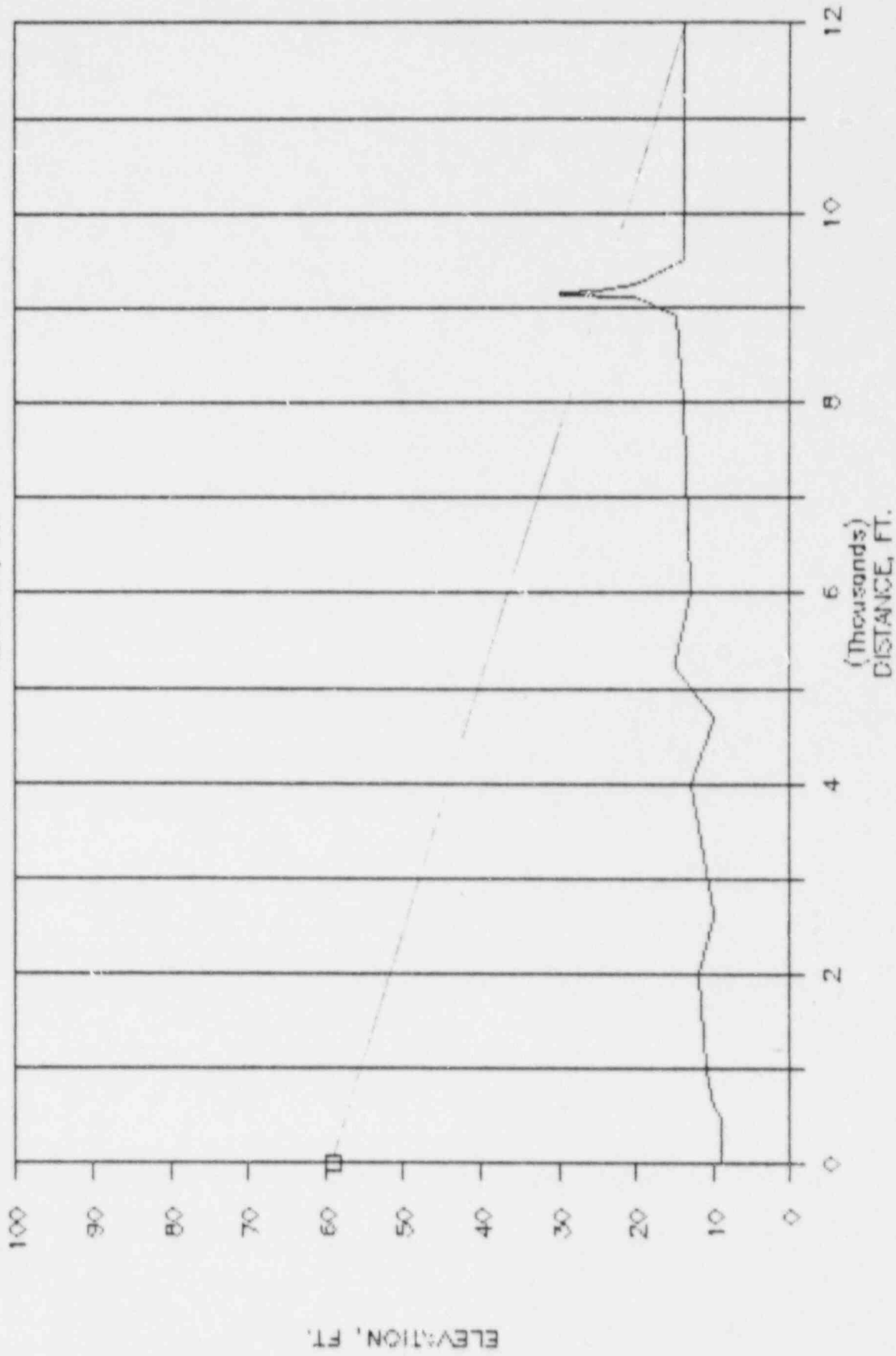
0 2 4 6 8 10 12

ELEVATION, FT.

(Thousands) DISTANCE, FT.

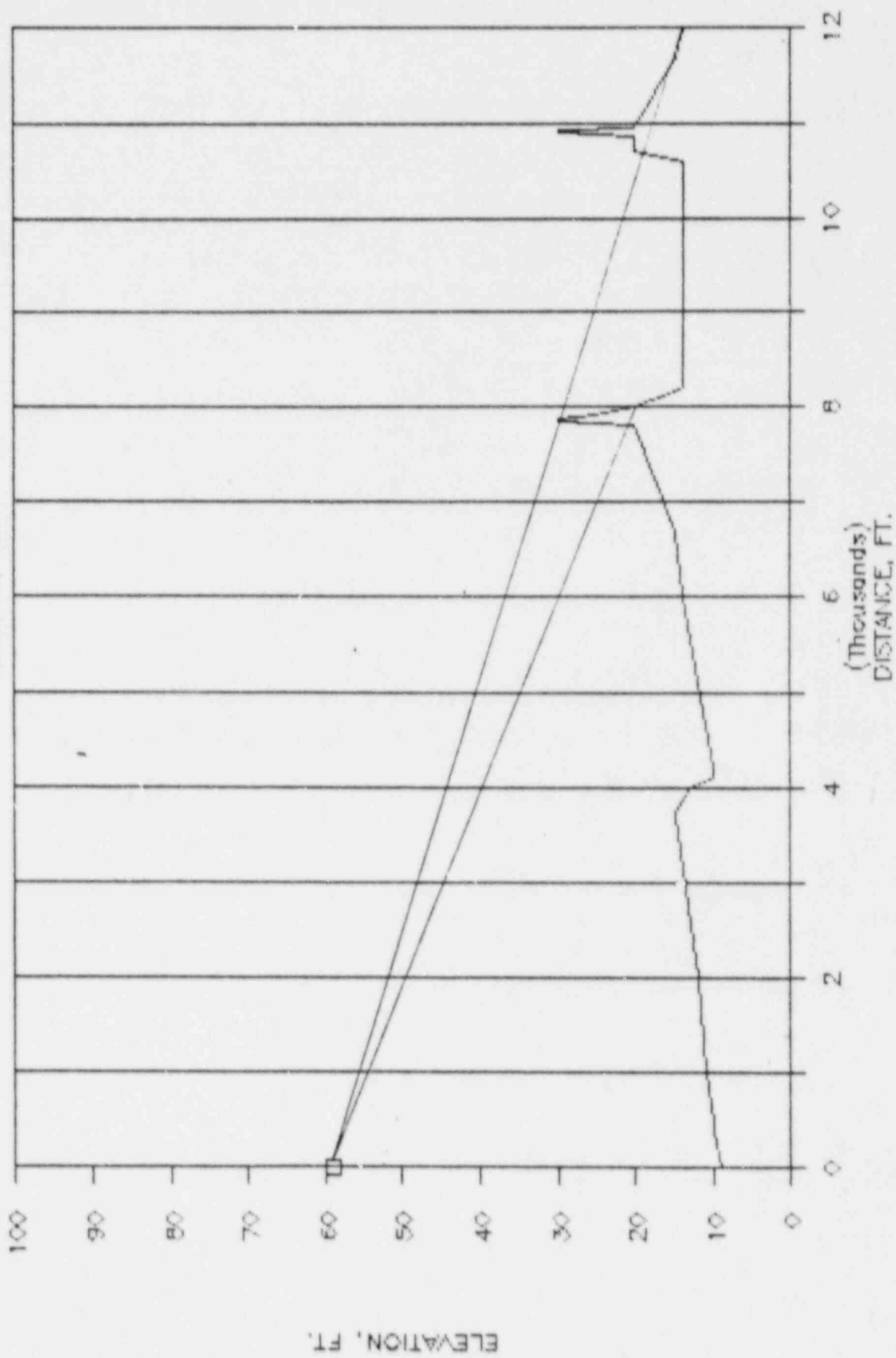
WATERFORD 7

AZIMUTH, SW



WATERFORD 7

AZIMUTH, SSW



100 90 80 70 60 50 40 30 20 10 0

0 2 4 6 8 10 12

(Thousands) DISTANCE, FT.

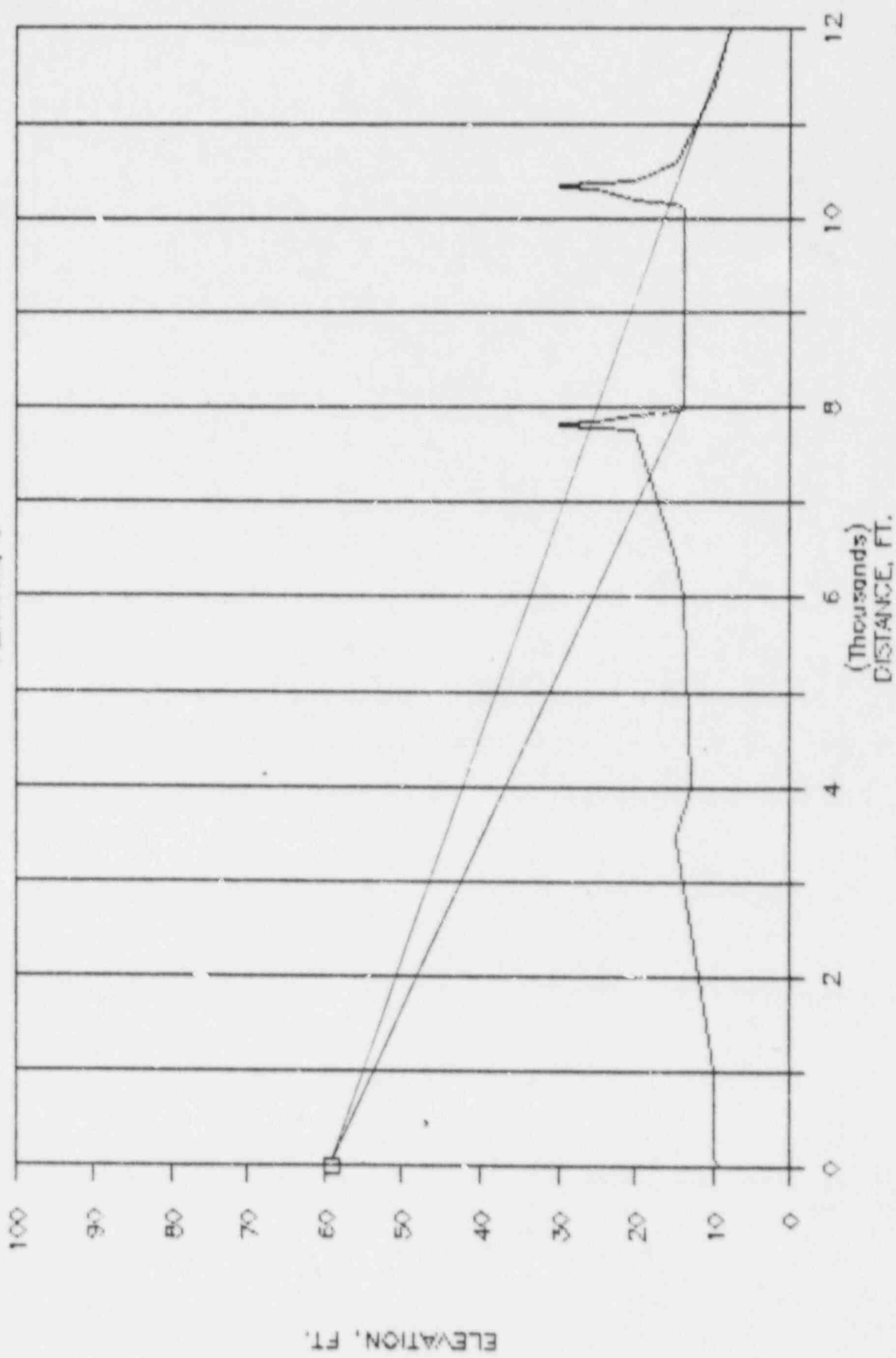
ELEVATION, FT.

WATERFORD 7

AZIMUTH, SSW

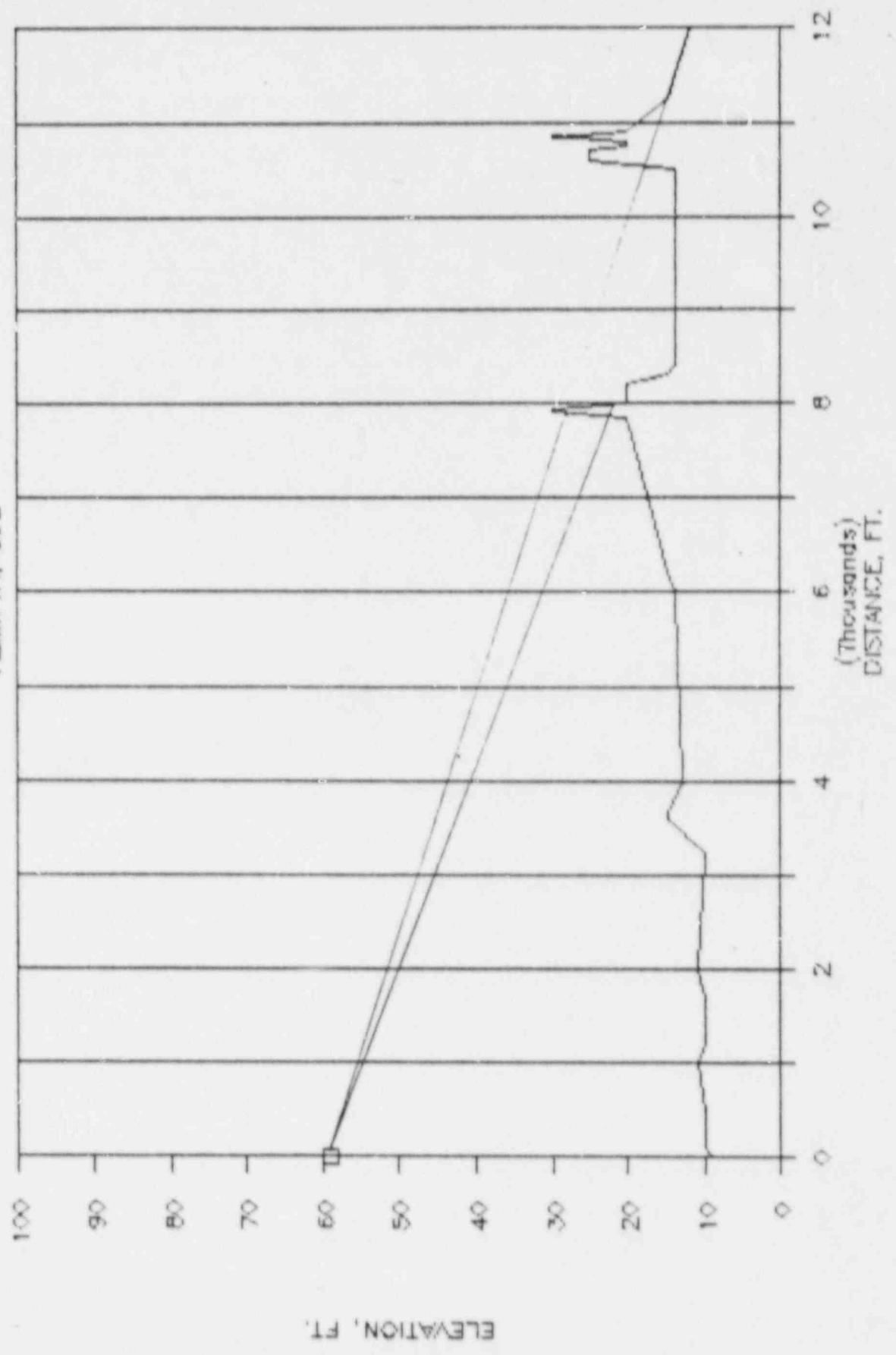
WATERFORD 7

AZIMUTH, S



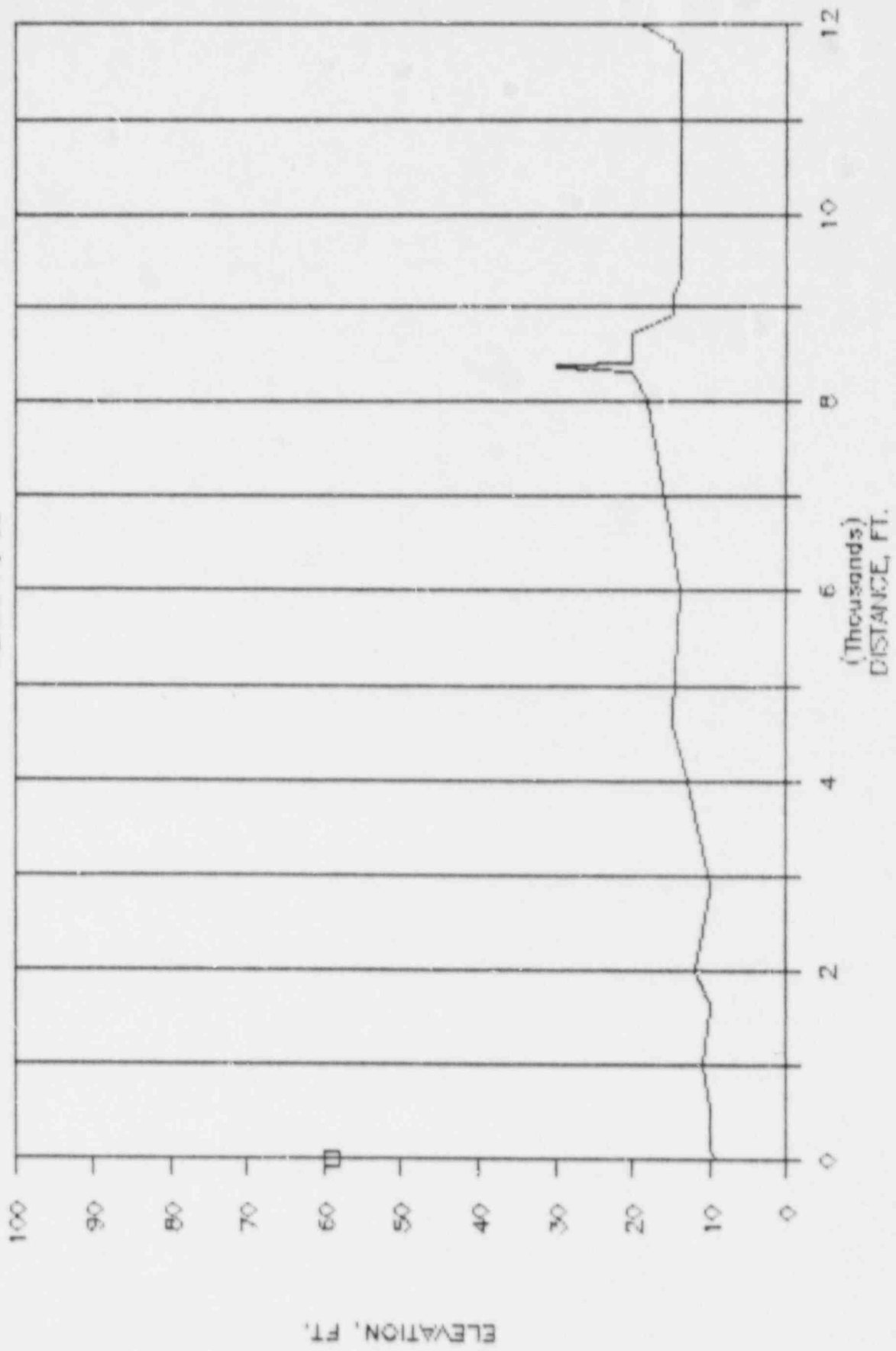
WATERFORD 7

AZIMUTH, SSE



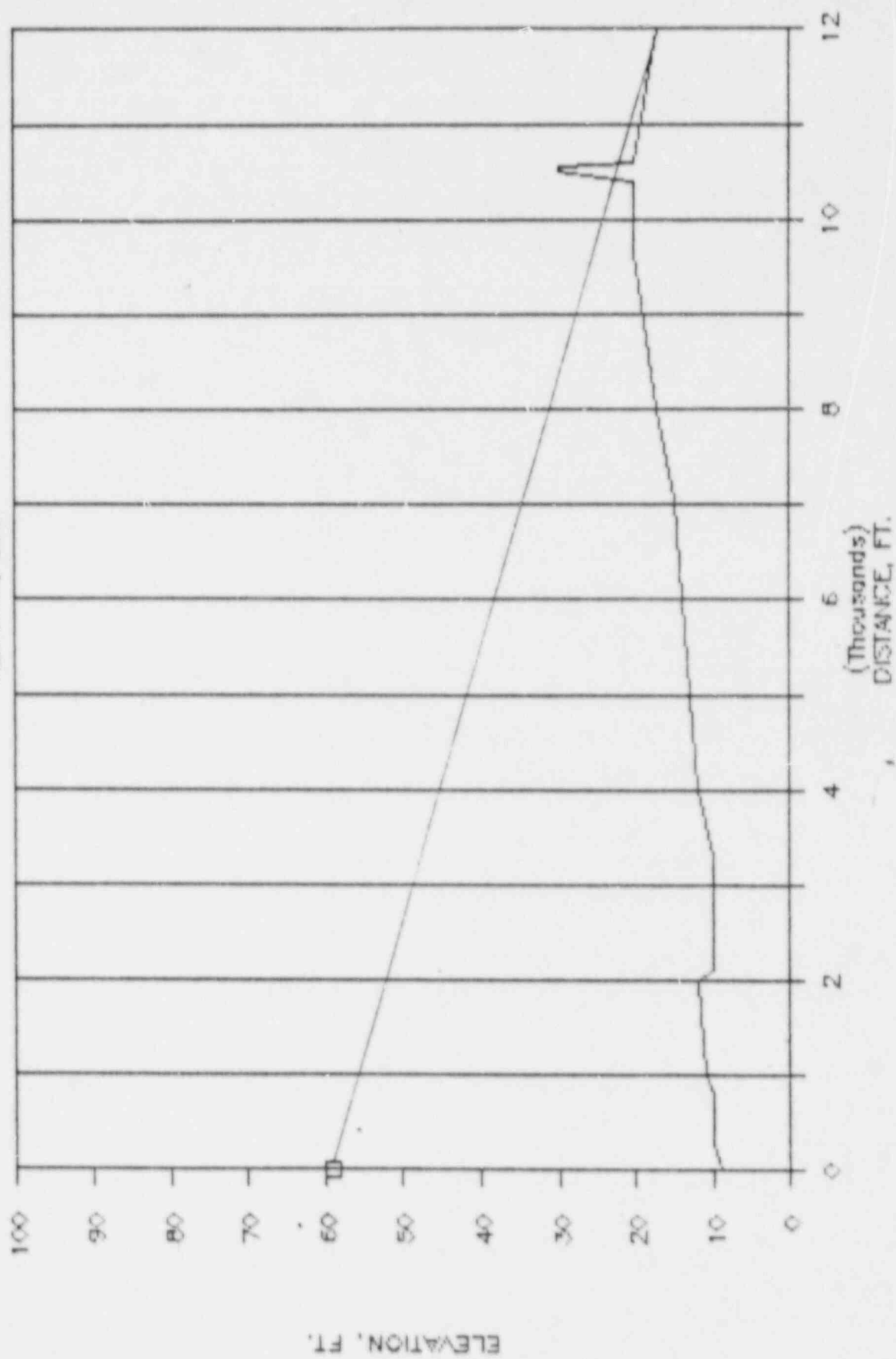
WATERFORD 7

AZIMUTH, SE



WATERFORD 7

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #7-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	11.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	11.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	12.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	10.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	13.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	13.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	16.00	SOFT	0.	NO	0.	0.
8	500.	67.50	9.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	11.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	9.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	9.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	8.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	10.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	5.00	SOFT	0.	NO	0.	0.
15	500.	45.00	9.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	10.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	8.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	7.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	6.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	4.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	4.00	SOFT	0.	NO	0.	0.
22	500.	22.50	10.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	9.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	9.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	4.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	5.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	4.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	4.00	SOFT	0.	NO	0.	0.
29	500.	0.0	10.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	9.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	9.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	4.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	4.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	3.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	3.00	SOFT	0.	NO	0.	0.
36	500.	337.50	10.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	10.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	8.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	4.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	4.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	3.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	3.00	SOFT	0.	NO	0.	0.
43	500.	315.00	10.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	8.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	7.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	4.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	4.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	3.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	3.00	SOFT	0.	NO	0.	0.
50	500.	292.50	9.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	9.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	7.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	6.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	4.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	4.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	4.00	SOFT	0.	NO	0.	0.
57	500.	270.00	9.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	9.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	7.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	7.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	6.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	6.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	7.00	SOFT	0.	NO	0.	0.
64	500.	247.50	8.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	8.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	9.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	9.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	12.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	13.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	13.00	SOFT	0.	NO	0.	0.
71	500.	225.00	9.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	11.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	12.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	13.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	13.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	13.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	15.00	SOFT	0.	YES	9150.	30.
78	500.	202.50	11.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	12.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	13.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	14.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	14.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	20.00	SOFT	0.	YES	7900.	25.
84	12000.	202.50	14.00	SOFT	0.	YES	10900.	30.
85	500.	180.00	10.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	10.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	12.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	13.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	13.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	15.00	SOFT	0.	YES	7950.	15.
91	12000.	180.00	8.00	SOFT	0.	YES	10350.	30.
92	500.	157.50	10.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	11.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	10.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	13.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	13.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	17.00	SOFT	0.	YES	7925.	30.
98	12000.	157.50	12.00	SOFT	0.	YES	10825.	30.
99	500.	135.00	10.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	11.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	12.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	13.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	12.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	18.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	25.00	SOFT	0.	NO	0.	0.
106	500.	112.50	10.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	11.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	11.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	12.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	14.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	15.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	17.00	SOFT	0.	YES	10550.	30.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #7-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (Hz)
1	SIREN WAT007	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
		10= 0.0	Y0= 0.0	Z0= 0.0	Z0= 59.00	HEIGHT ABOVE GROUND=		50.00				

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #7-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE HUMIDITY	BAROMETRIC PRESSURE (MM OF HG)
						H1	H2	H1	H2		
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

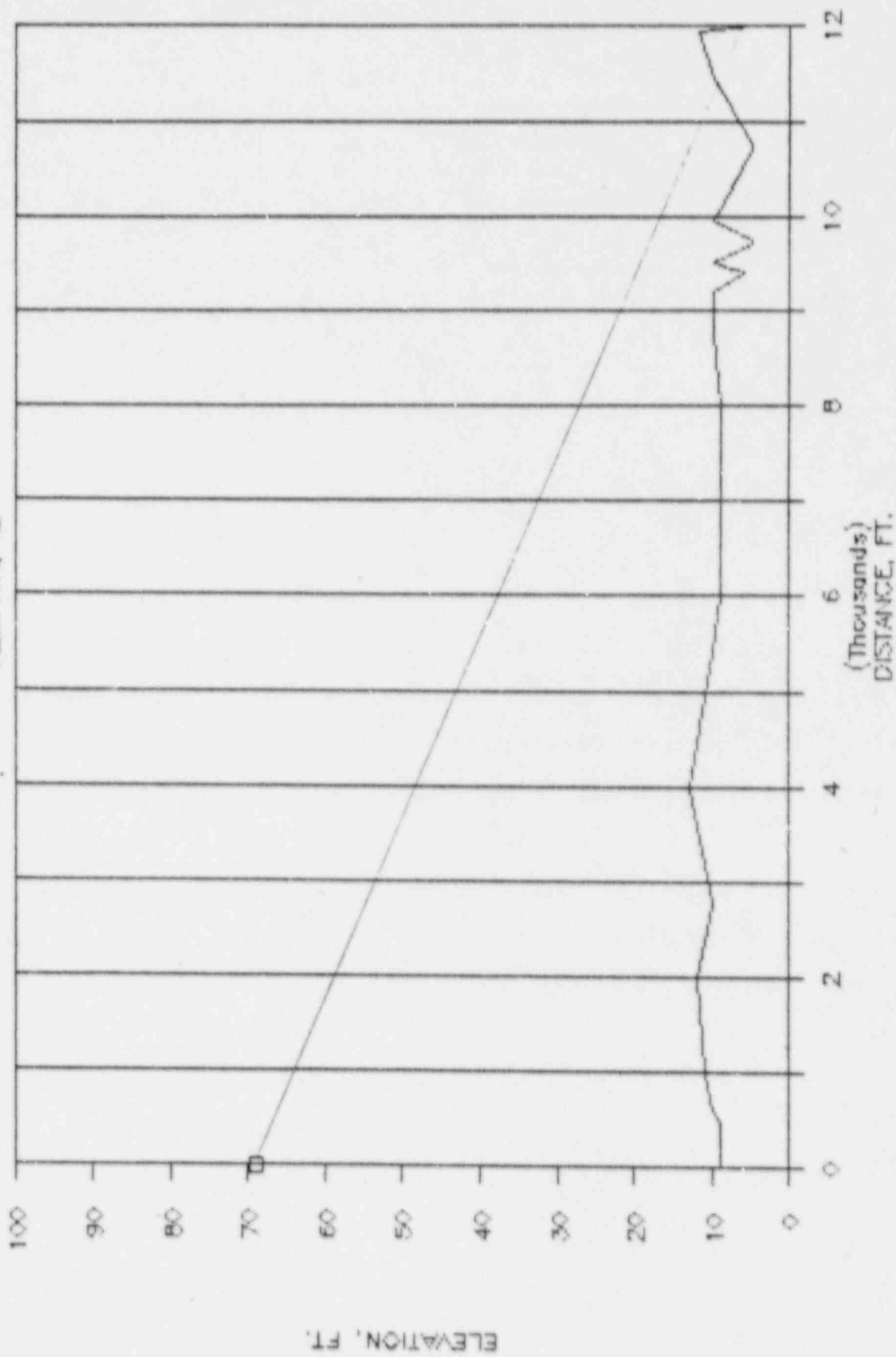
LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #7-WS3000

SOUND PRESSURE LEVELS IN DBC
 UNDER NET CONDITION 1

AZINUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	32.0
SSW	105.6	91.3	75.7	63.3	54.9	41.1	26.4
S	105.6	91.2	75.7	62.8	54.1	41.4	24.9
SSE	105.6	91.2	75.7	63.3	54.9	36.0	26.3
SE	105.6	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	42.5

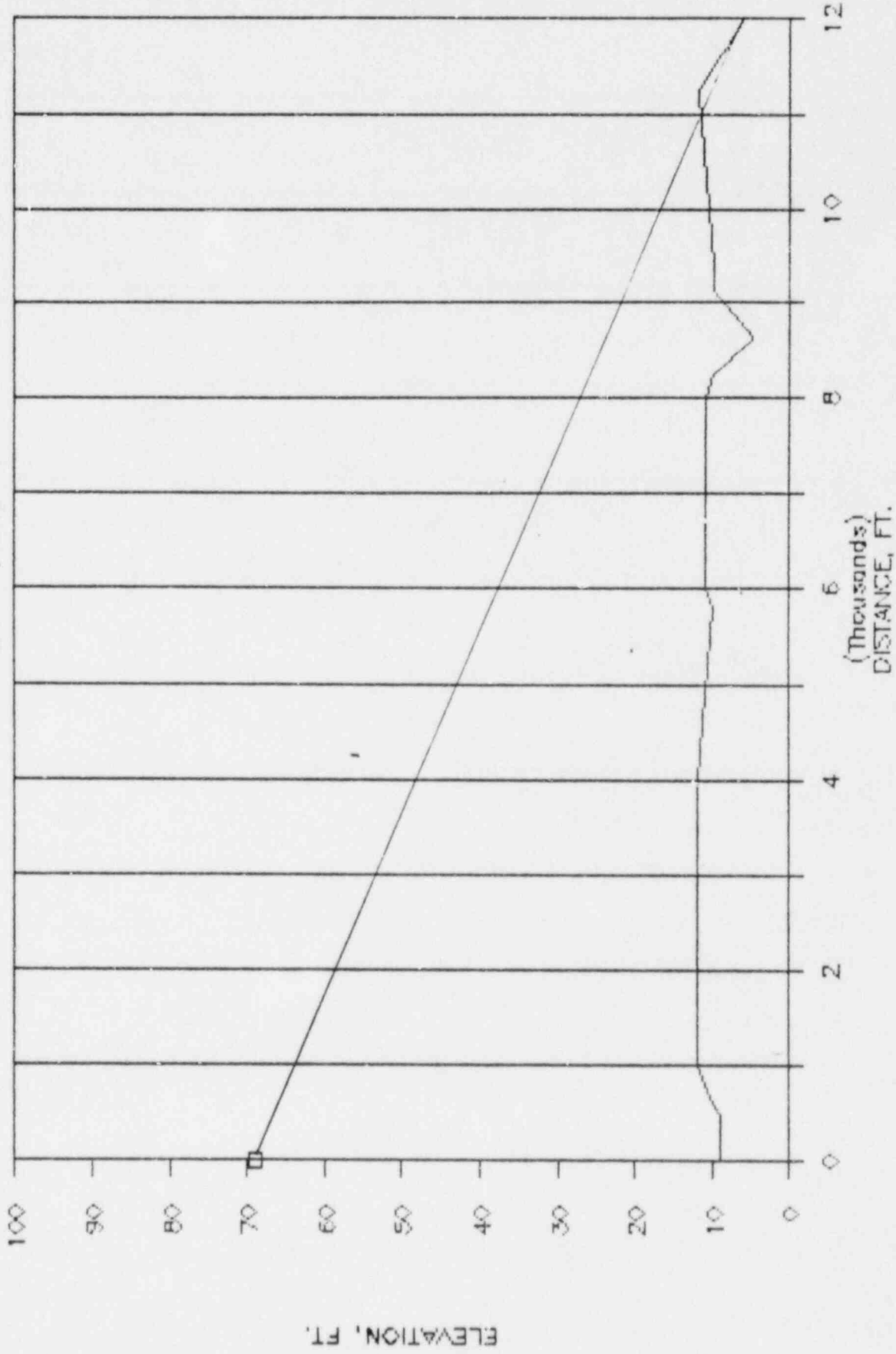
WATERFORD 8

AZIMUTH, E



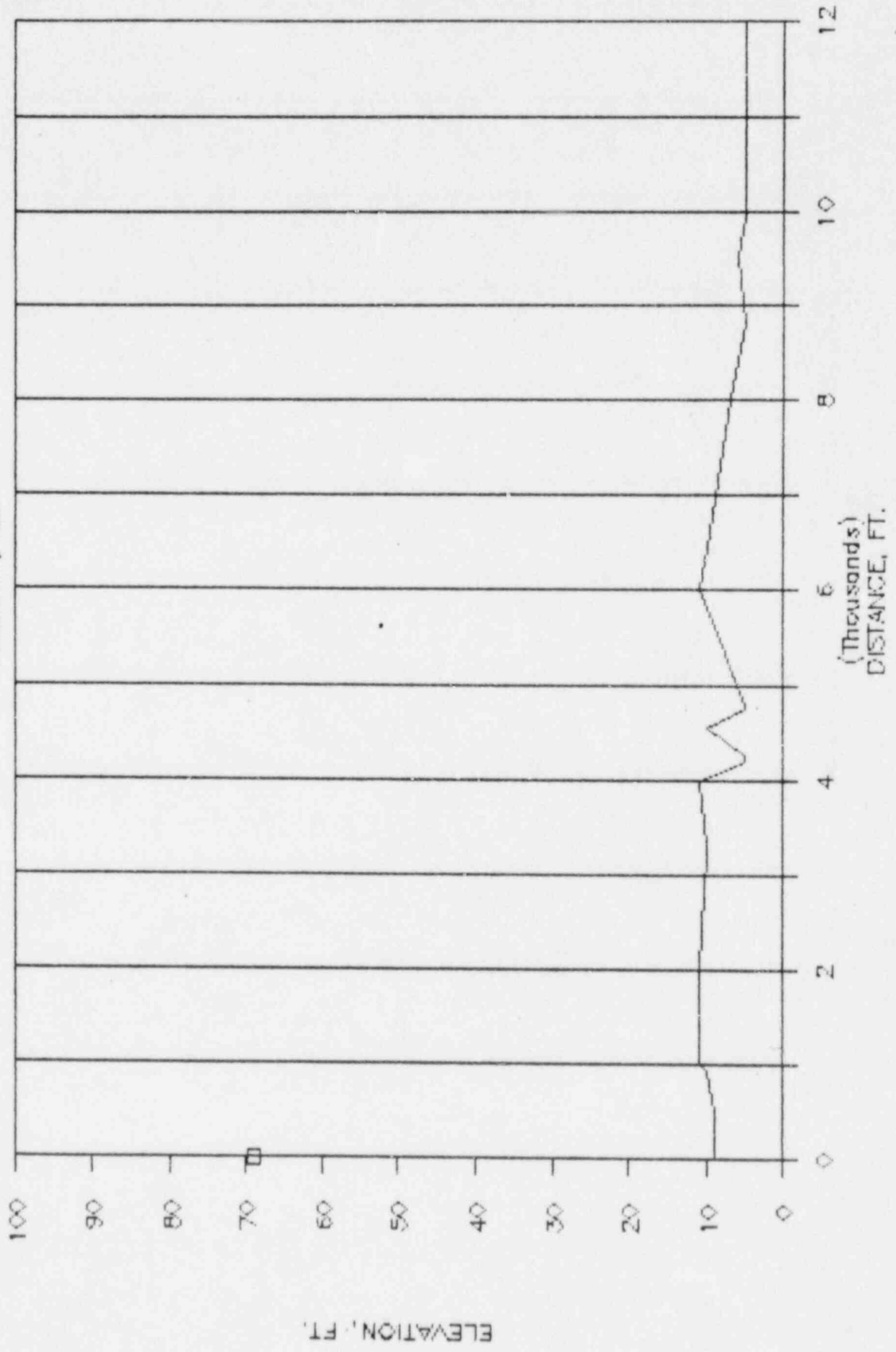
WATERFORD 8

AZIMUTH, ENE



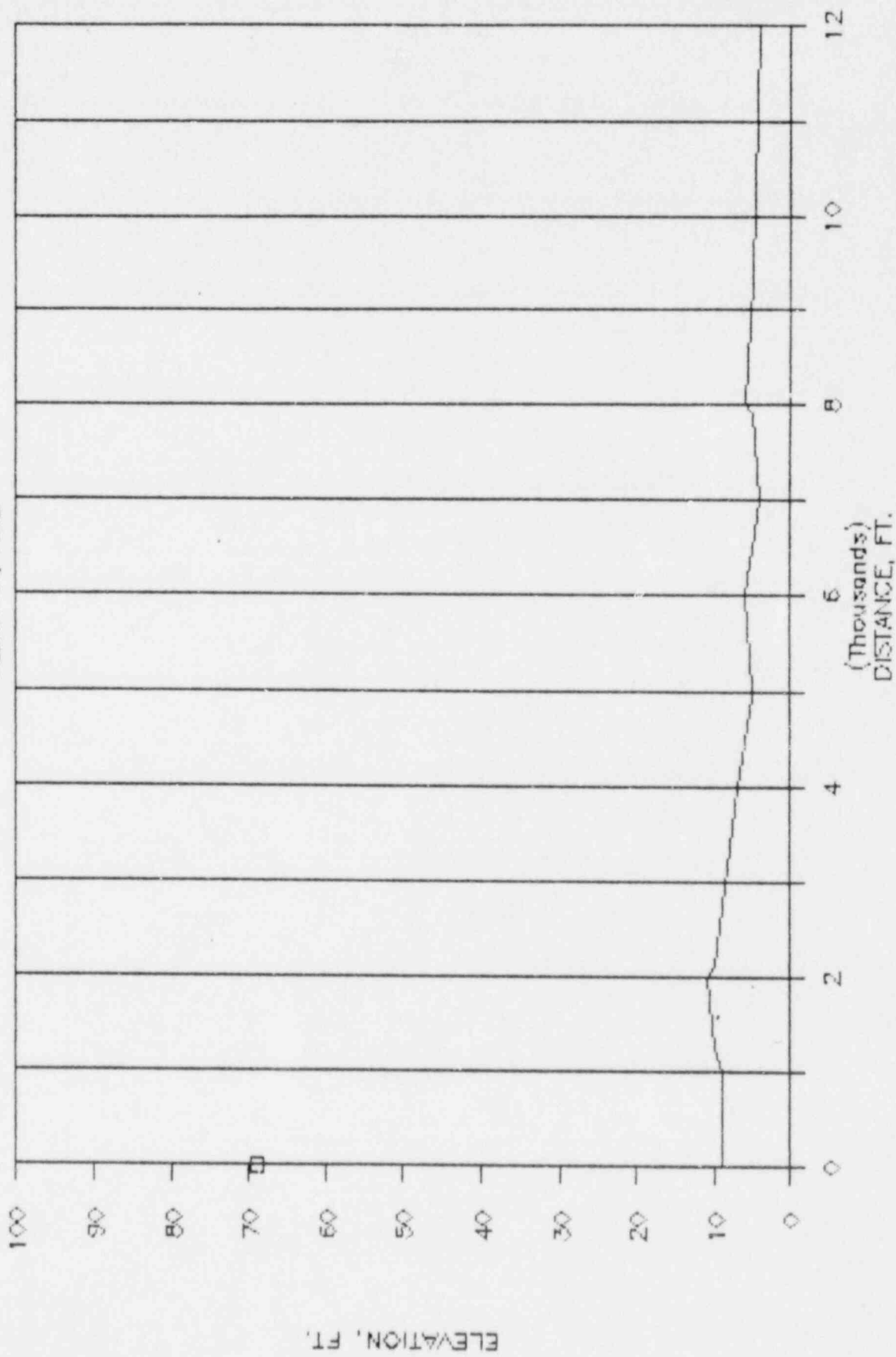
WATERFORD 8

AZIMUTH, NE



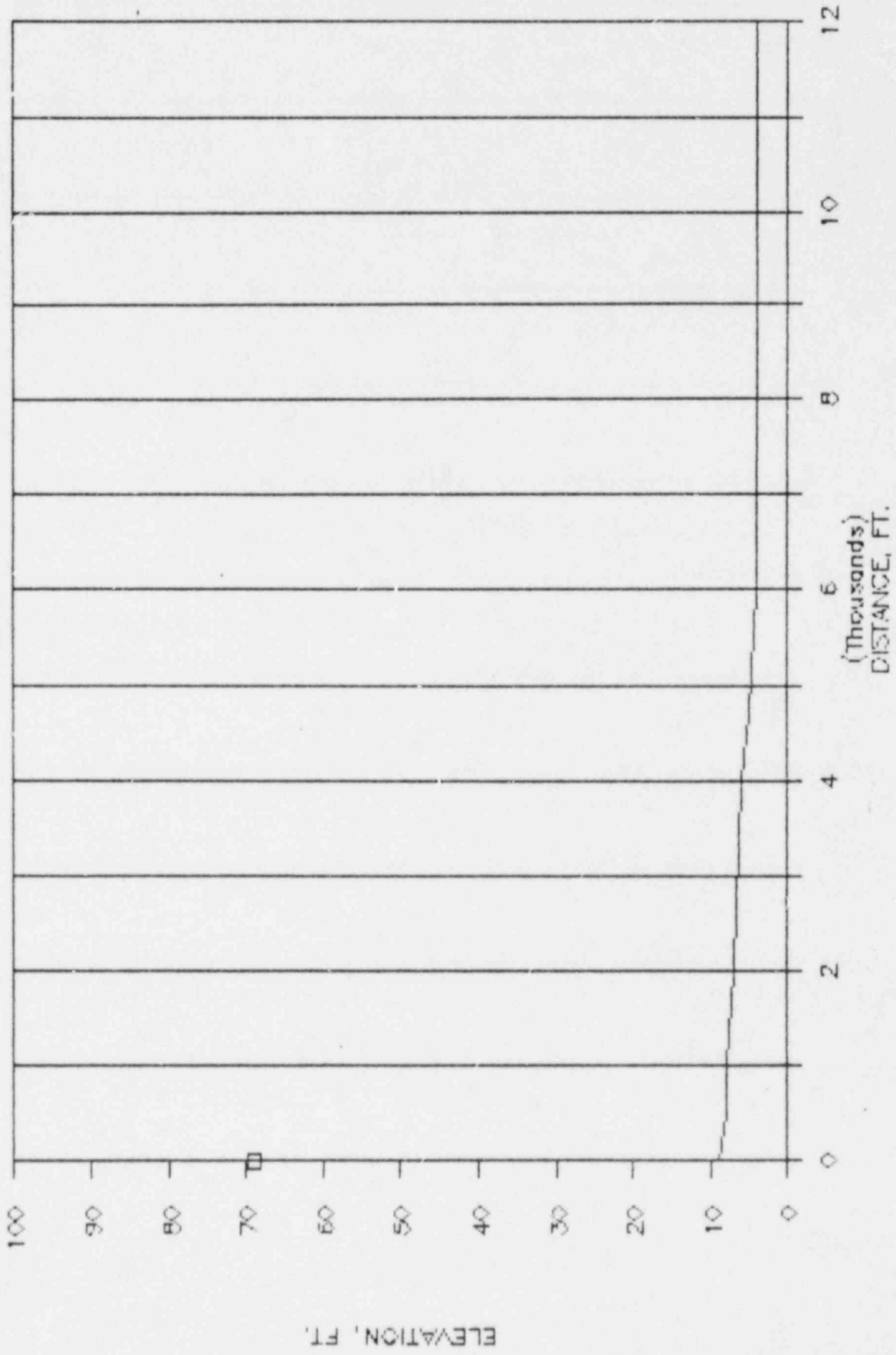
WATERFORD 8

AZIMUTH, NINE



WATERFORD 8

AZIMUTH, N

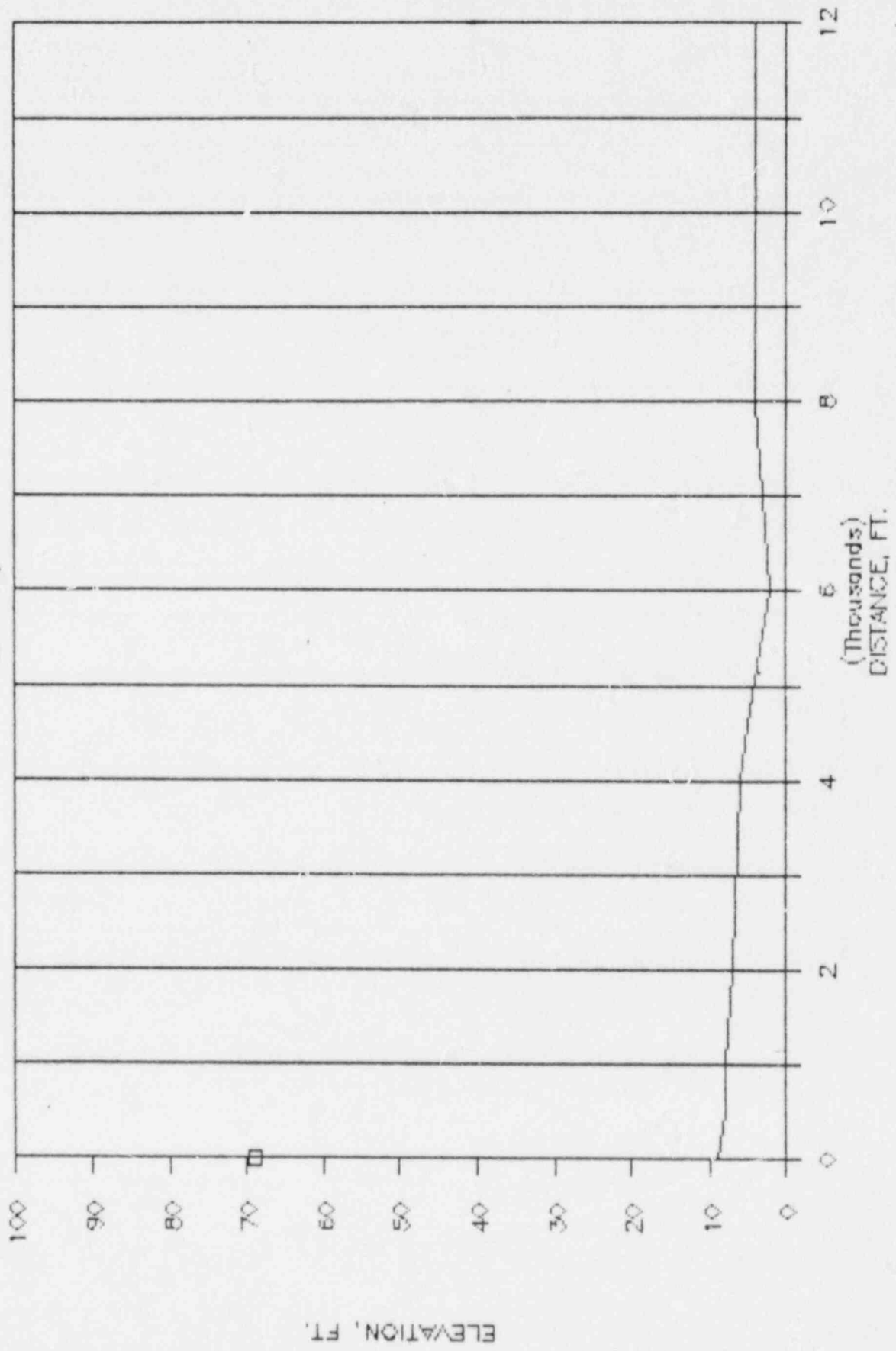


ELEVATION, FT.

(Thousands)
DISTANCE, FT.

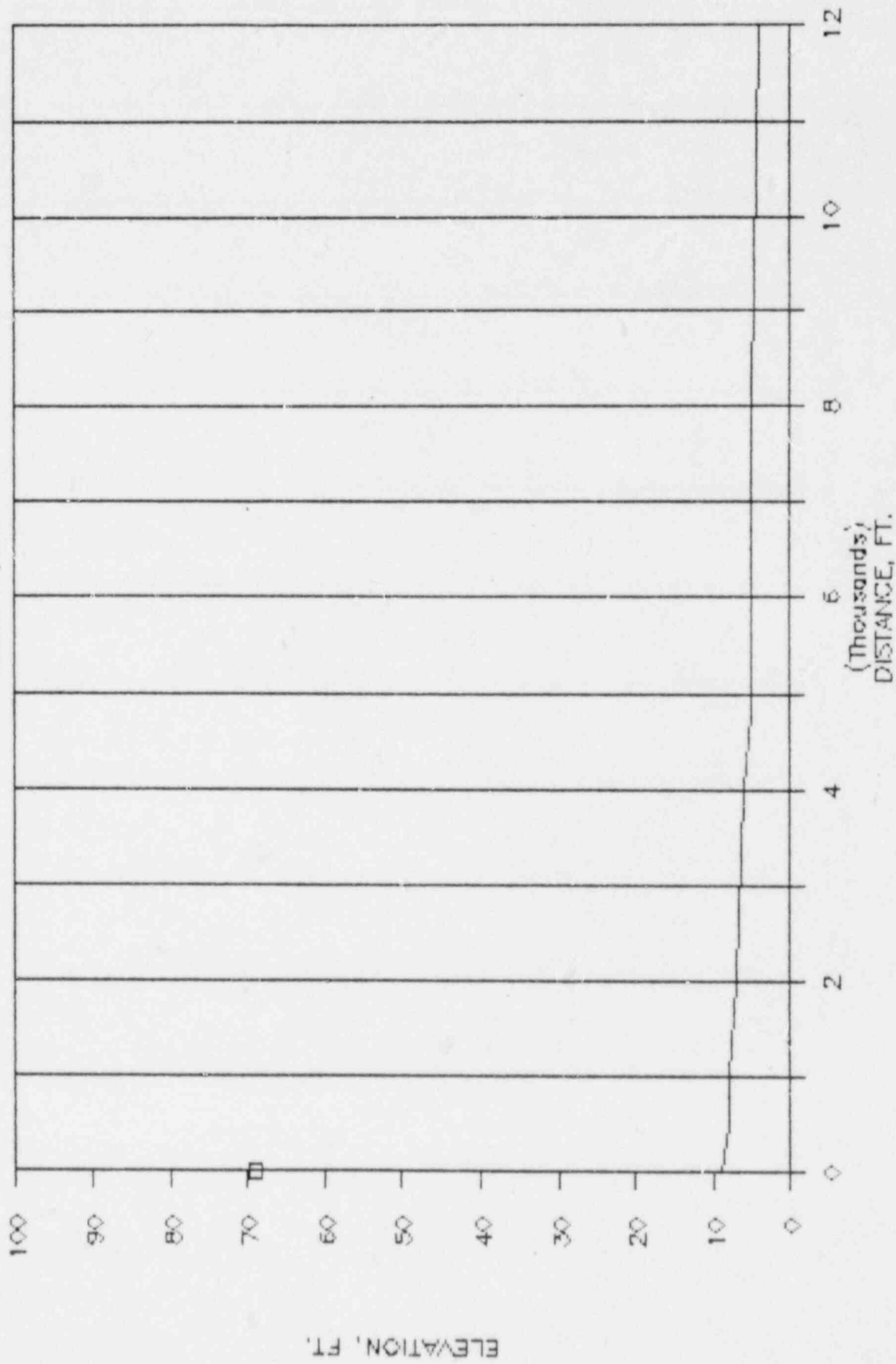
WATERFORD 8

AZIMUTH, NNW



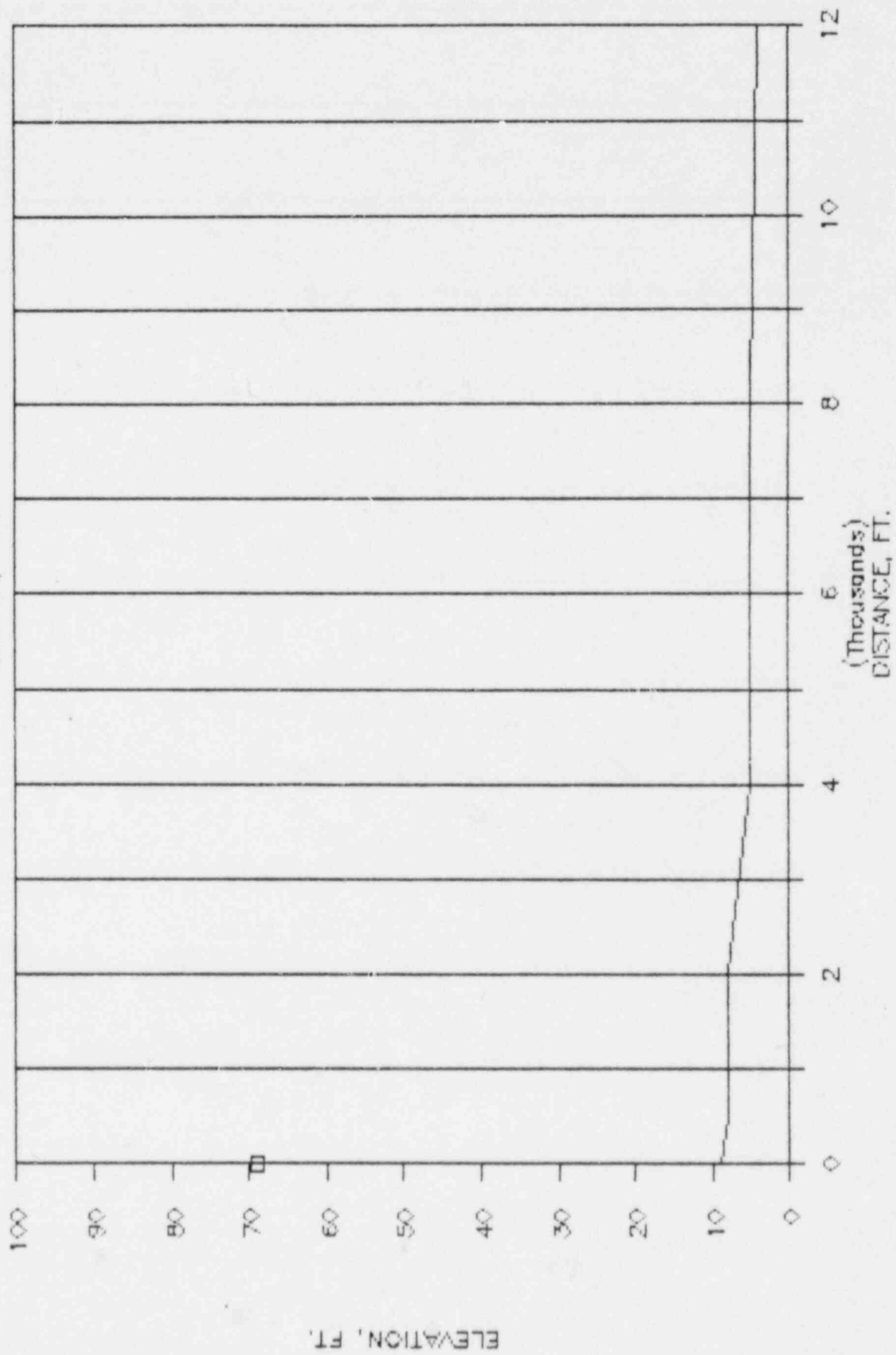
WATERFORD 8

AZIMUTH, NW



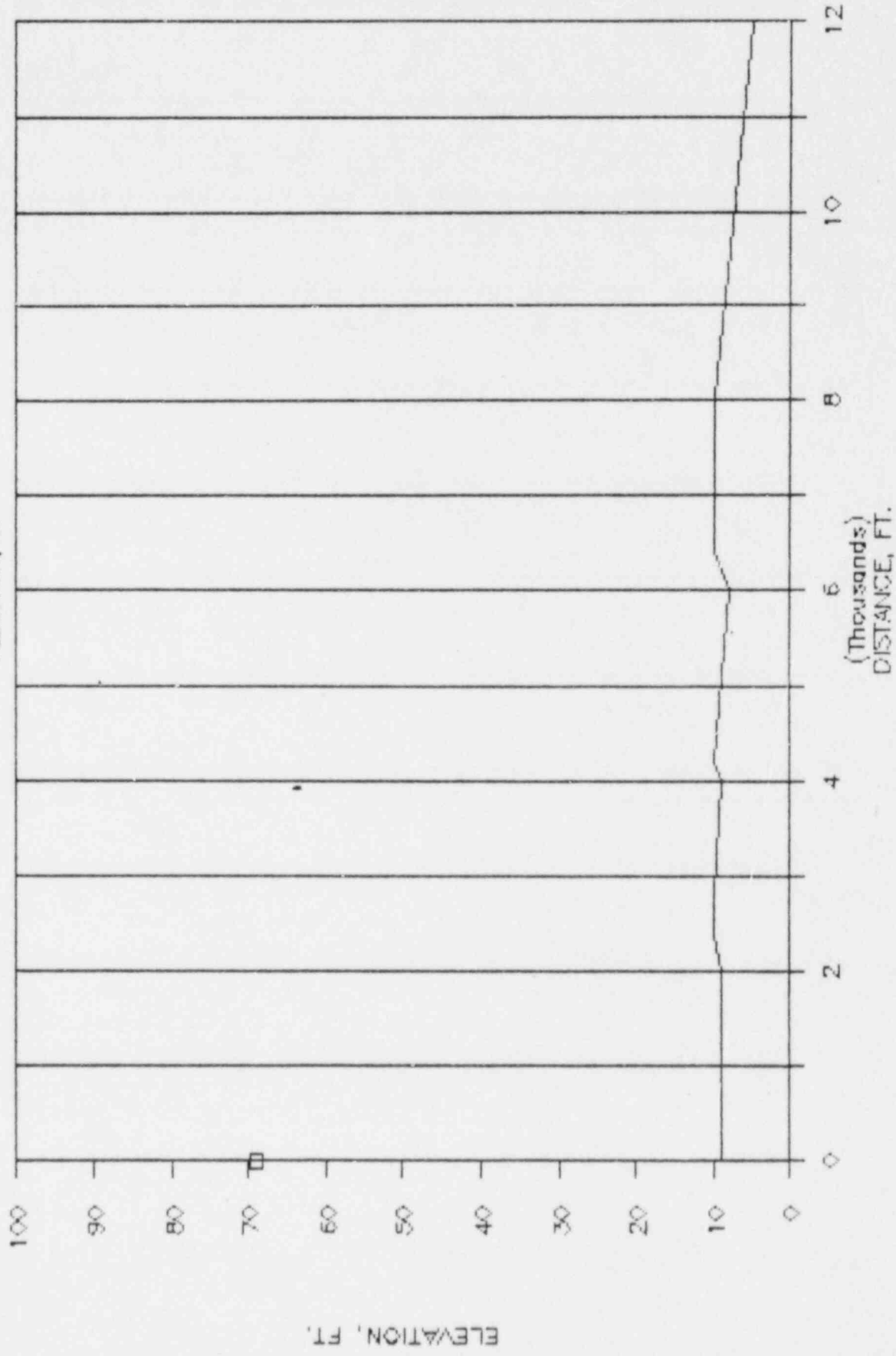
WATERFORD 8

AZIMUTH, WNW



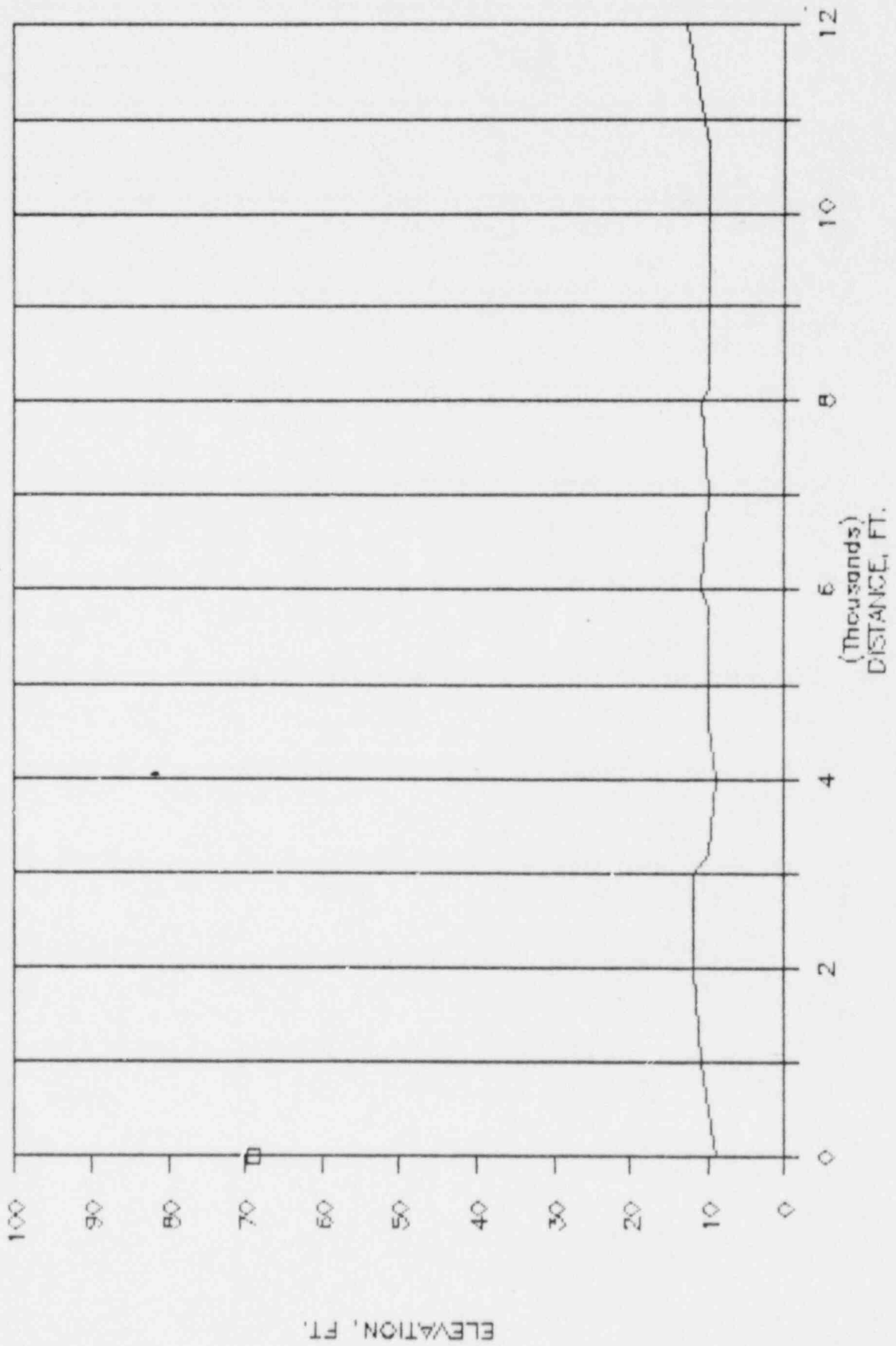
WATERFORD 8

AZIMUTH, W



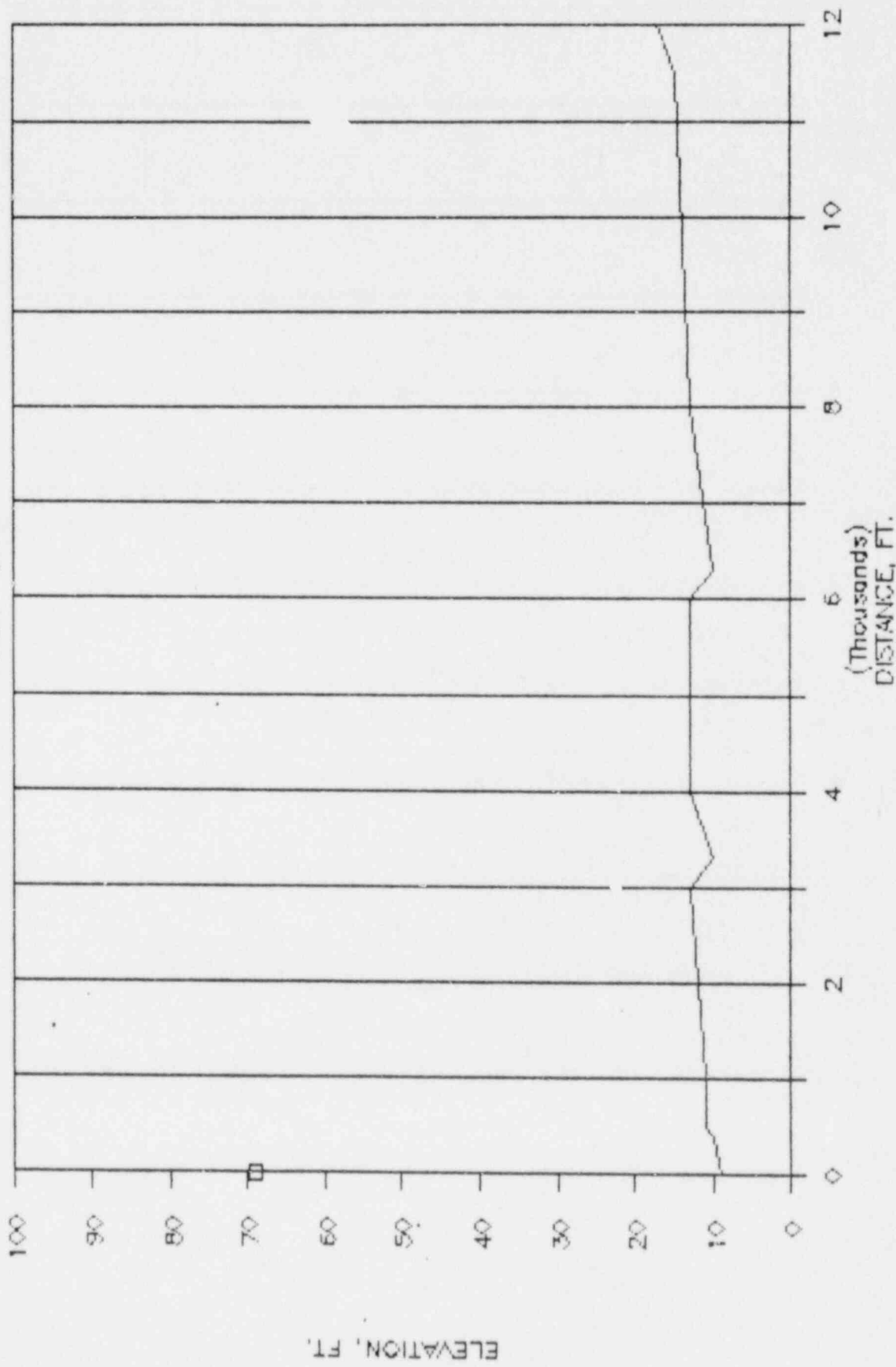
WATERFORD 8

AZIMUTH, WSW



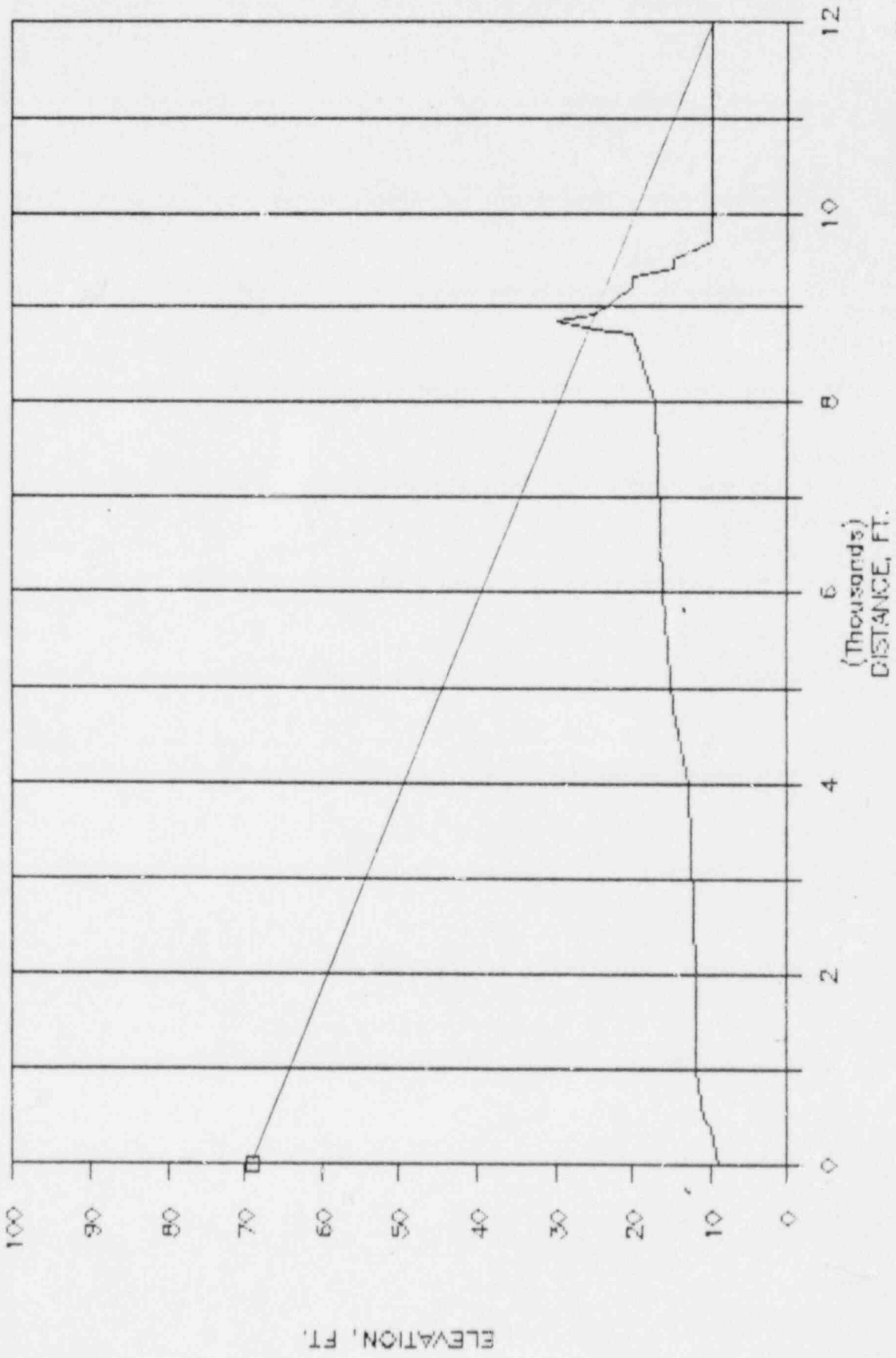
WATERFORD 8

AZIMUTH, SW



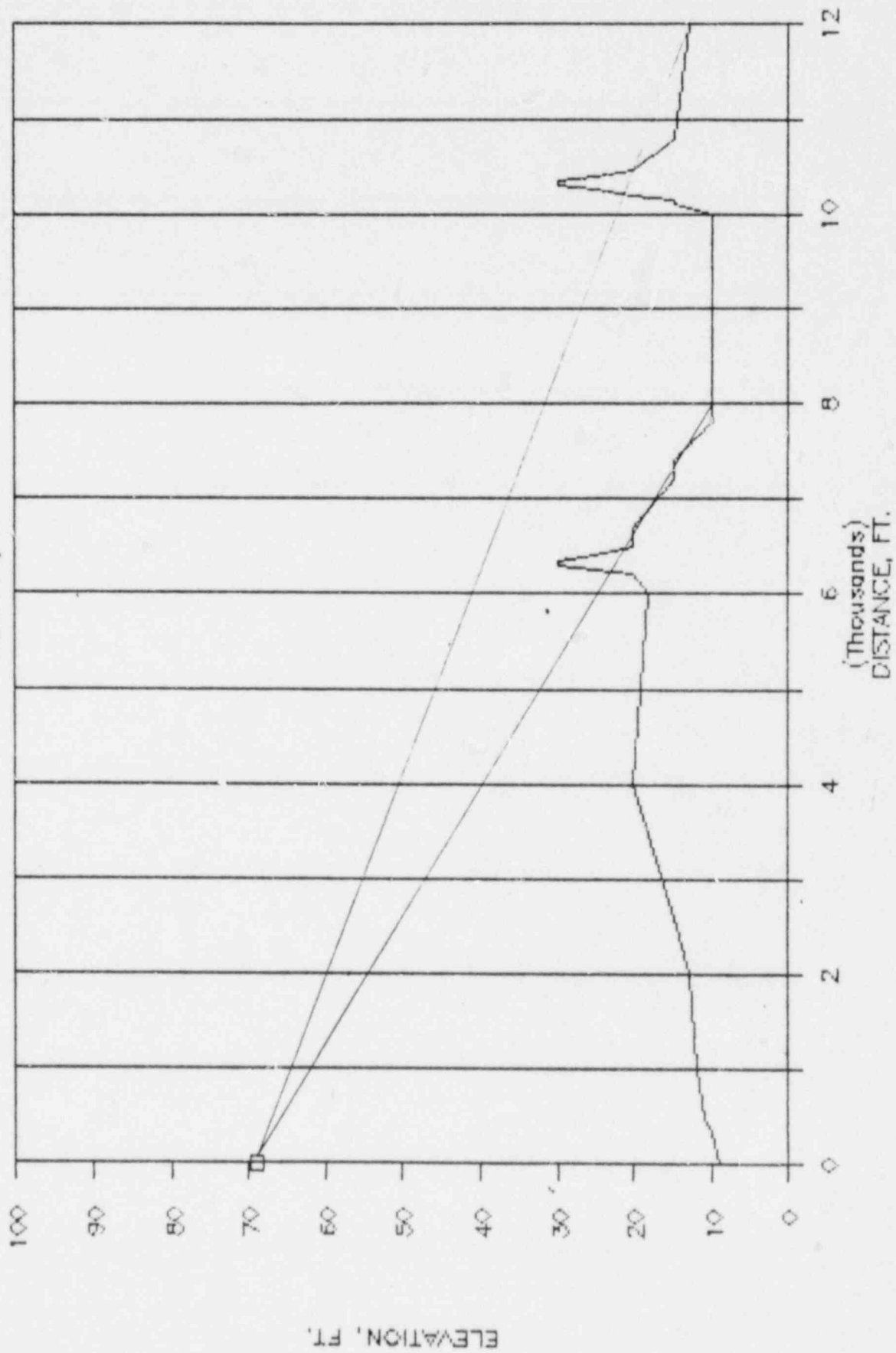
WATERFORD 8

AZIMUTH, SSW



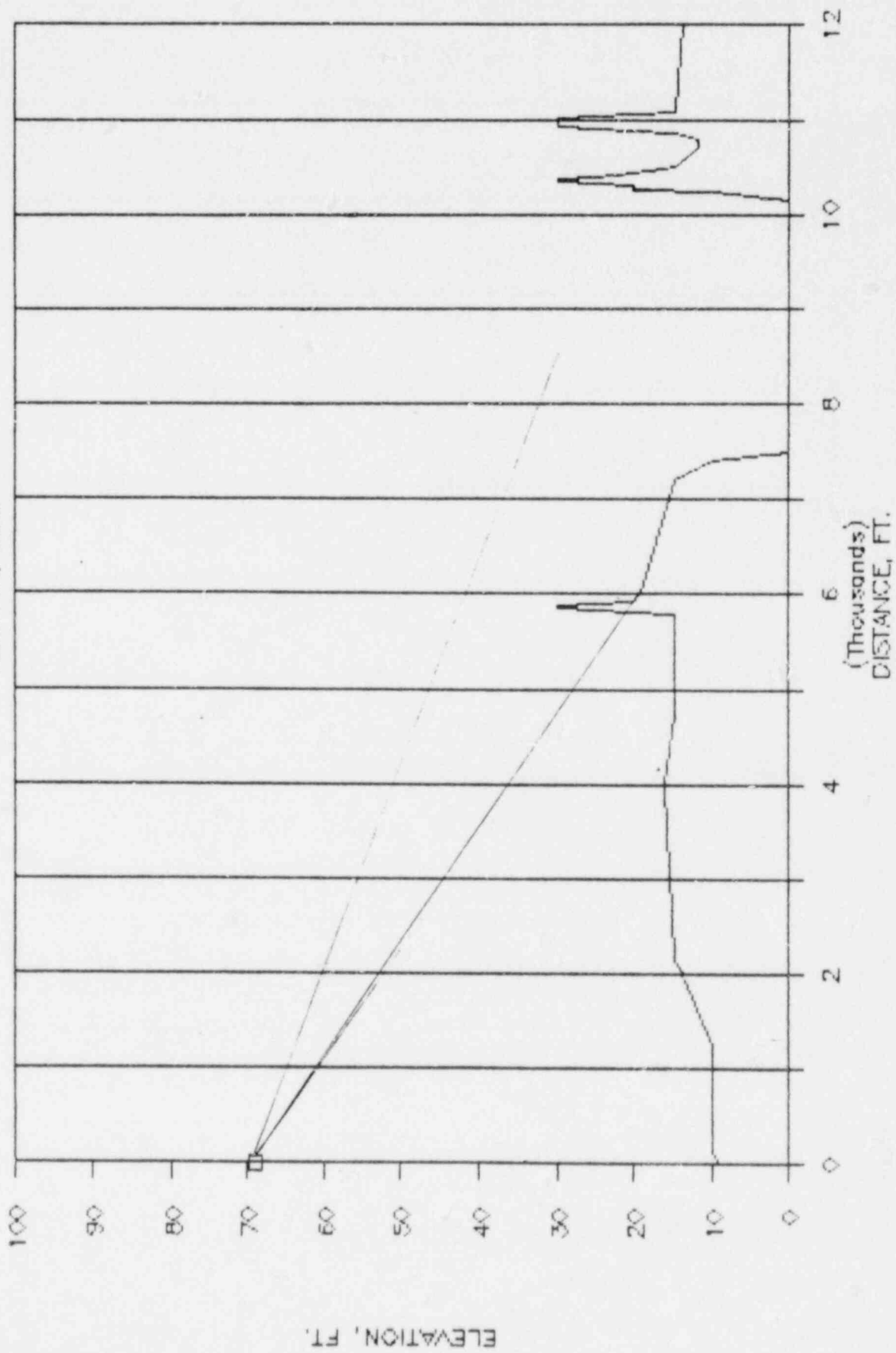
WATERFORD 8

AZIMUTH, S



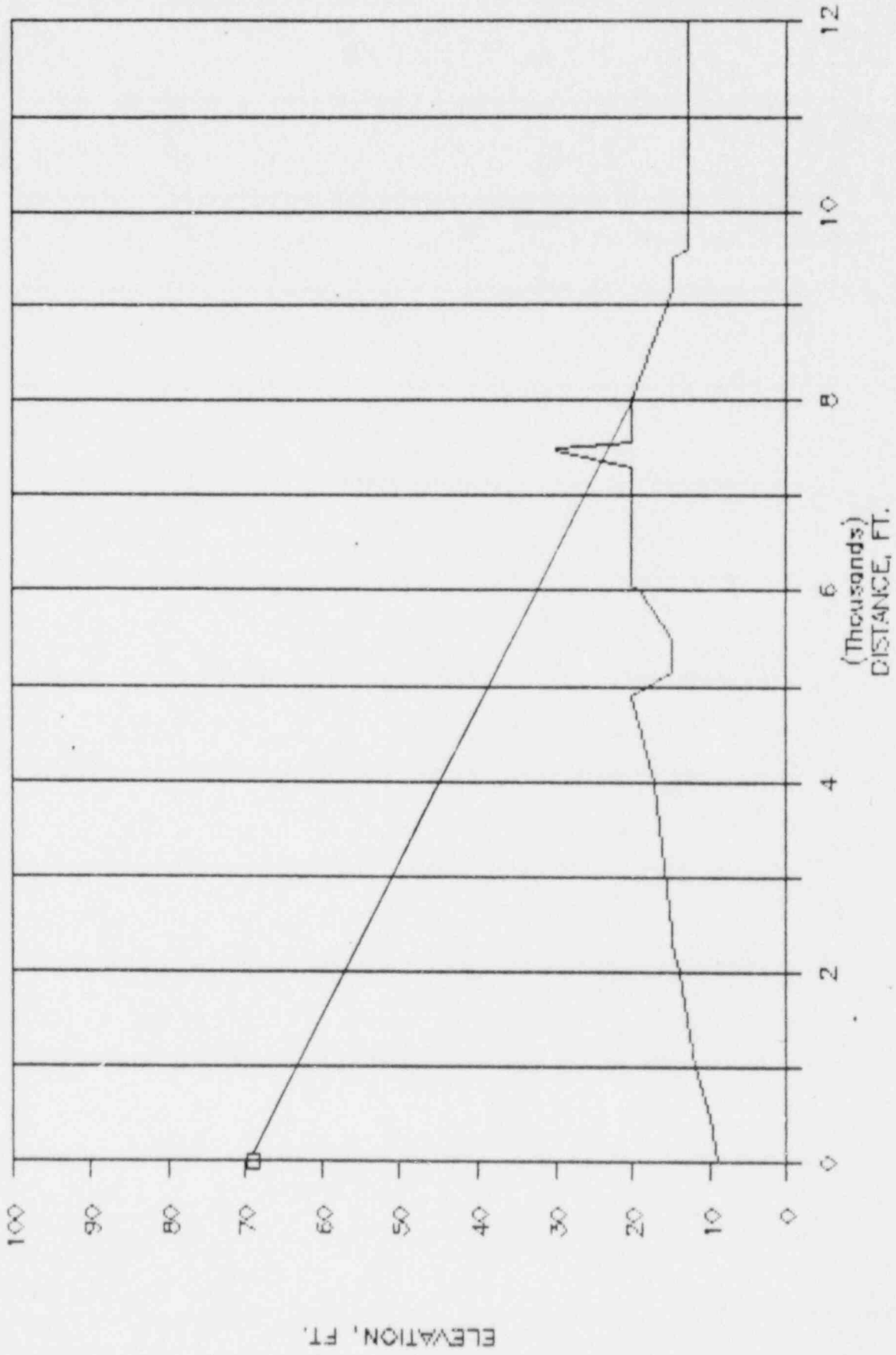
WATERFORD 8

AZIMUTH, SSE



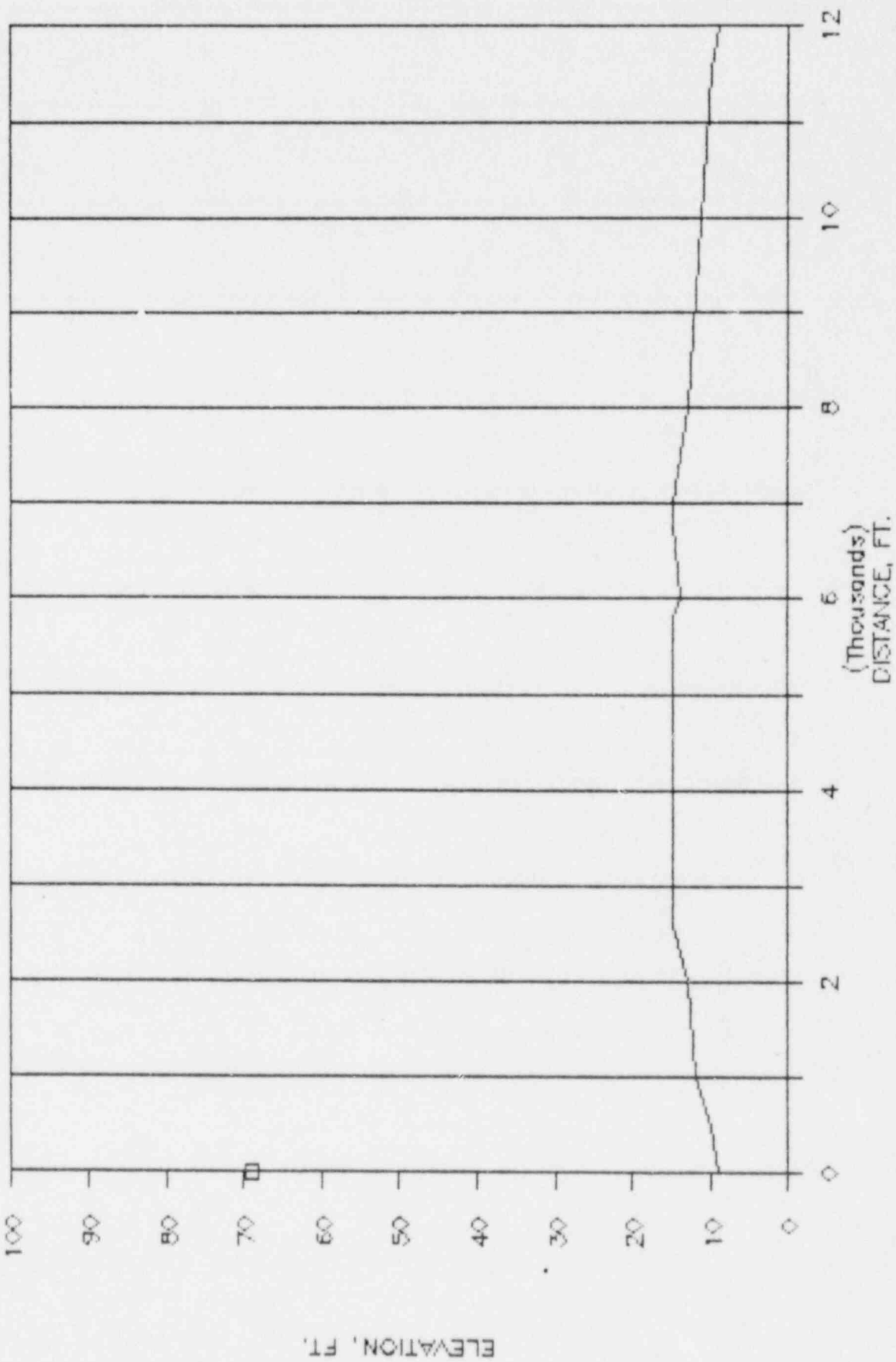
WATERFORD 8

AZIMUTH, SE



WATERFORD 8

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #8-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	9.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	11.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	12.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	13.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	9.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	9.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	5.00	SOFT	0.	YES	11950.	12.
8	500.	67.50	9.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	12.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	12.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	12.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	11.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	11.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	6.00	SOFT	0.	YES	11250.	12.
15	500.	45.00	9.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	11.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	11.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	11.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	11.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	7.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	5.00	SOFT	0.	NO	0.	0.
22	500.	22.50	9.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	9.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	11.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	7.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	6.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	6.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	4.00	SOFT	0.	NO	0.	0.
29	500.	0.0	8.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	8.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	7.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	6.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	4.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	4.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	4.00	SOFT	0.	NO	0.	0.
36	500.	337.50	8.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	8.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	7.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	6.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	2.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	4.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	4.00	SOFT	0.	NO	0.	0.
43	500.	315.00	8.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	8.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	7.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	6.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	5.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	5.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	4.00	SOFT	0.	NO	0.	0.
50	500.	292.50	8.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	8.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	8.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	5.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	5.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	5.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	4.00	SOFT	0.	NO	0.	0.
57	500.	270.00	9.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	9.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	9.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	9.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	8.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	10.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	5.00	SOFT	0.	NO	0.	0.
64	500.	247.50	10.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	11.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	12.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	9.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	11.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	11.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	13.00	SOFT	0.	NO	0.	0.
71	500.	225.00	11.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	11.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	12.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	13.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	13.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	13.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	17.00	SOFT	0.	NO	0.	0.
78	500.	202.50	11.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	12.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	12.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	13.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	16.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	17.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	10.00	SOFT	0.	YES	8850.	30.
85	500.	180.00	11.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	12.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	13.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	20.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	18.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	10.00	SOFT	0.	YES	6350.	30.
91	12000.	180.00	13.00	SOFT	0.	YES	10350.	30.
92	500.	157.50	10.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	10.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	14.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	16.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	19.00	SOFT	0.	YES	5875.	30.
97	8000.	157.50	10.00	SOFT	0.	YES	5875.	30.
98	12000.	157.50	14.00	SOFT	0.	YES	10375.	30.
99	500.	135.00	10.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	12.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	14.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	17.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	19.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	20.00	SOFT	0.	YES	7500.	30.
105	12000.	135.00	13.00	SOFT	0.	NO	0.	0.
106	500.	112.50	10.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	12.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	13.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	15.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	14.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	13.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	9.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #8-WS3000
 NOISE SOURCE POWER LEVEL INPUT

DEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT008	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
		10= 0.0	Y0= 0.0	Z0= 0.0	59.00	HEIGHT ABOVE GROUND=		50.00				

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #8-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE BAROMETRIC HUMIDITY PRESSURE (MM OF HG)	
						H1	H2	H1	H2		
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

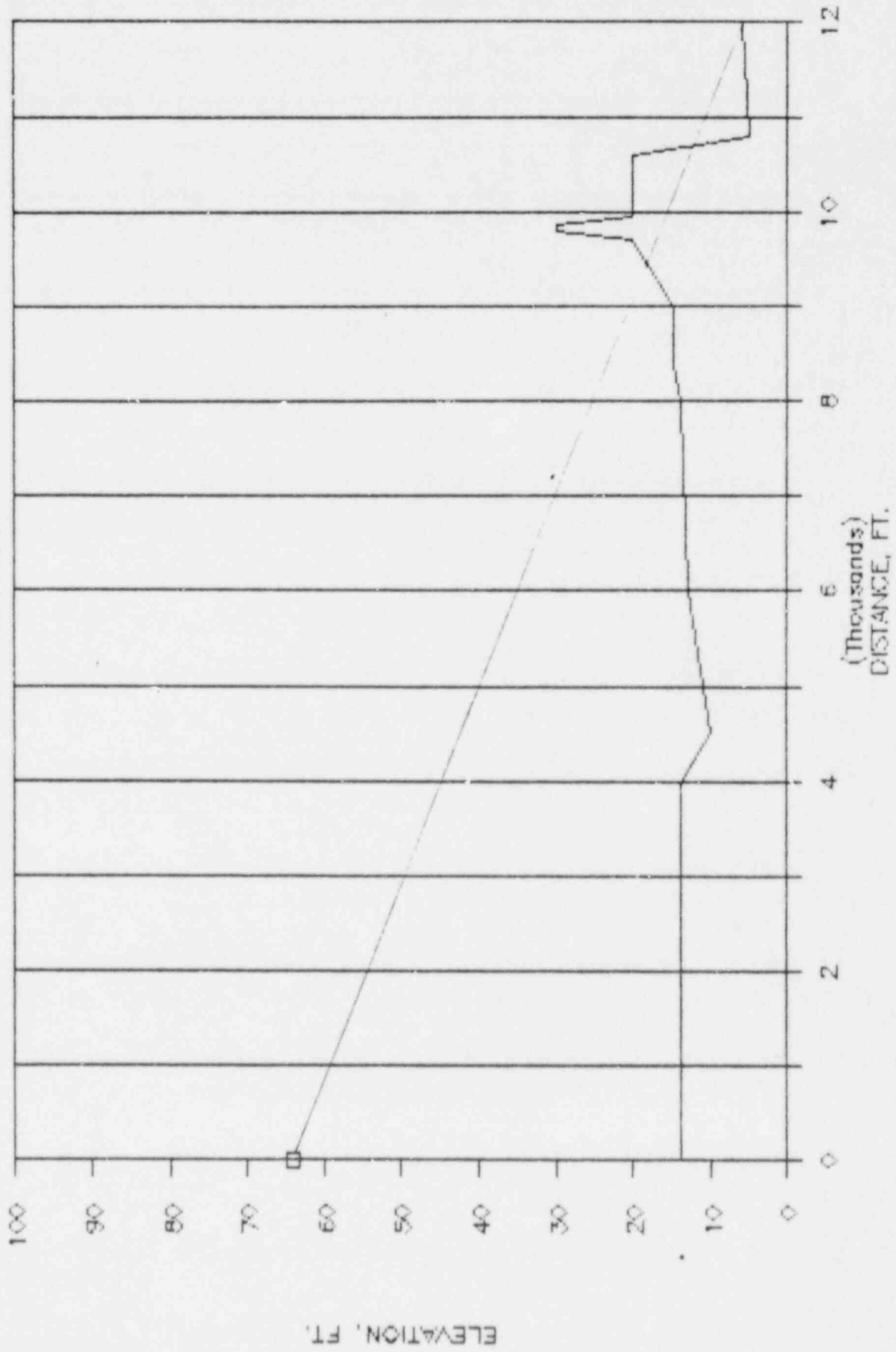
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #6-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	42.2
ENE	105.6	91.3	75.7	65.1	60.9	57.4	45.9
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.3	75.7	63.3	54.9	47.1	27.2
S	105.6	91.3	75.7	62.8	54.1	40.9	25.3
SSE	105.6	91.2	75.7	63.3	46.4	42.1	26.8
SE	105.6	91.3	75.7	64.9	57.3	44.8	36.8
ESE	105.6	91.3	75.7	65.1	60.9	57.4	47.6

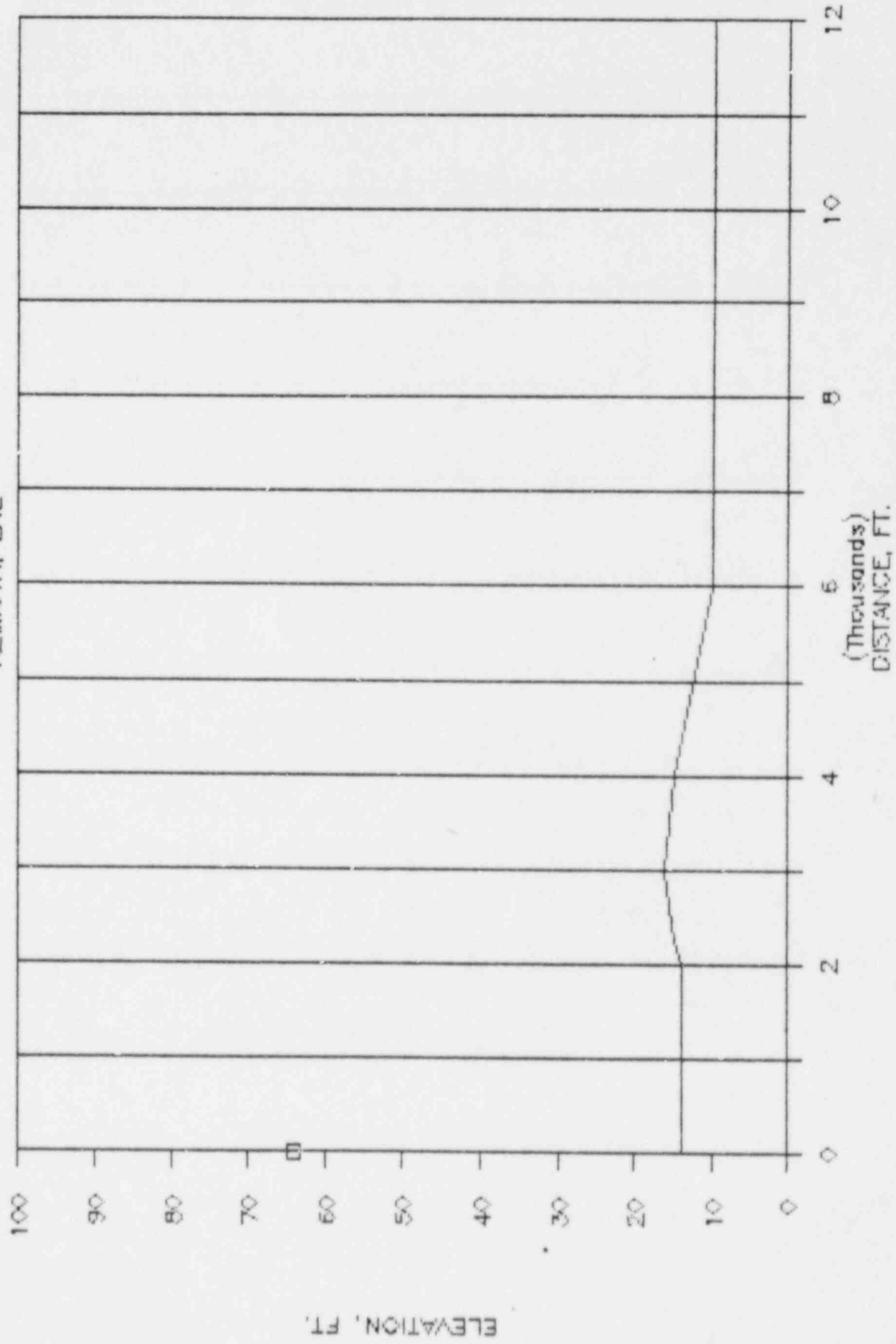
WATERFORD 9

AZIMUTH, E



WATERFORD 9

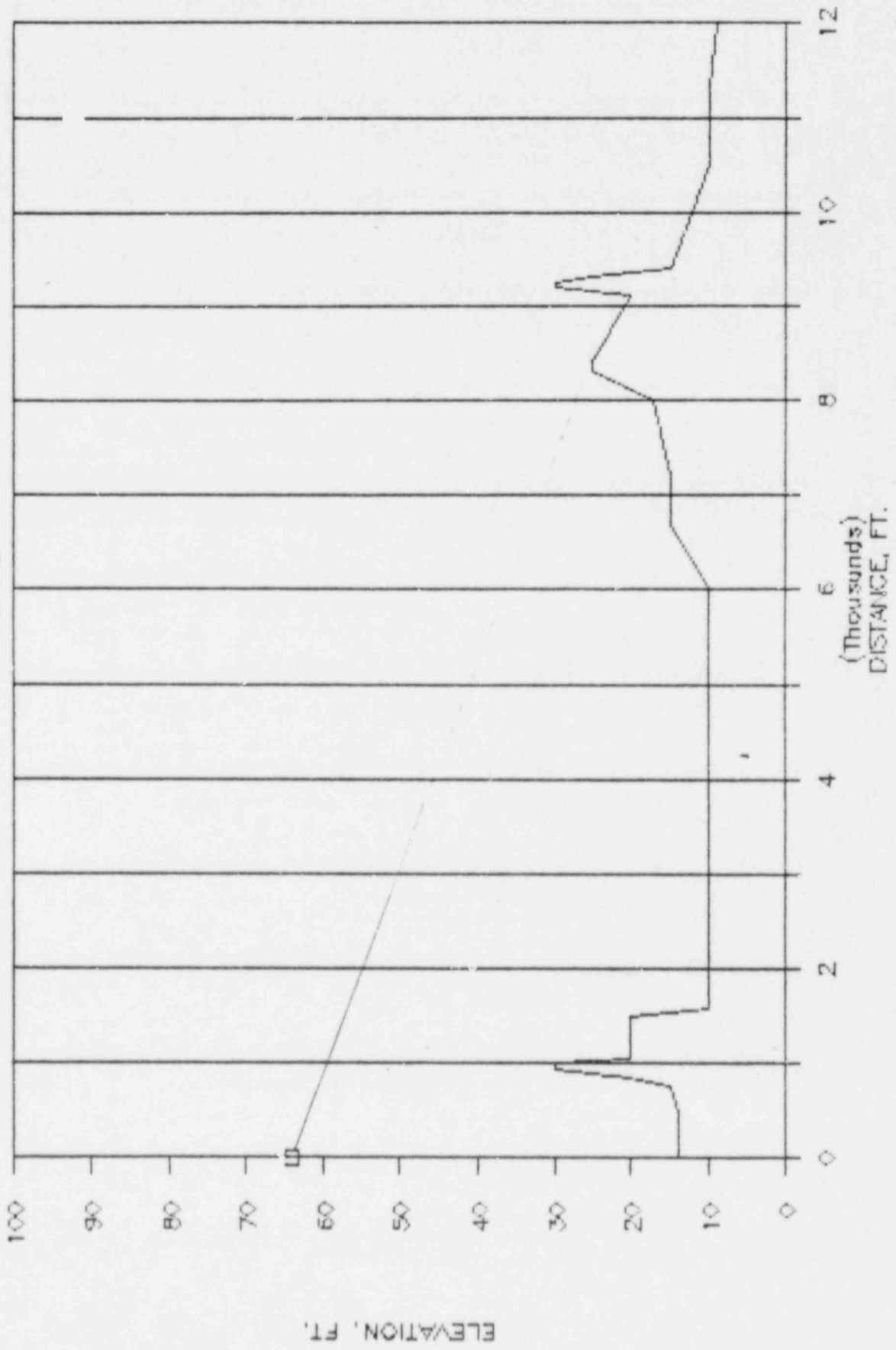
AZIMUTH, ENE



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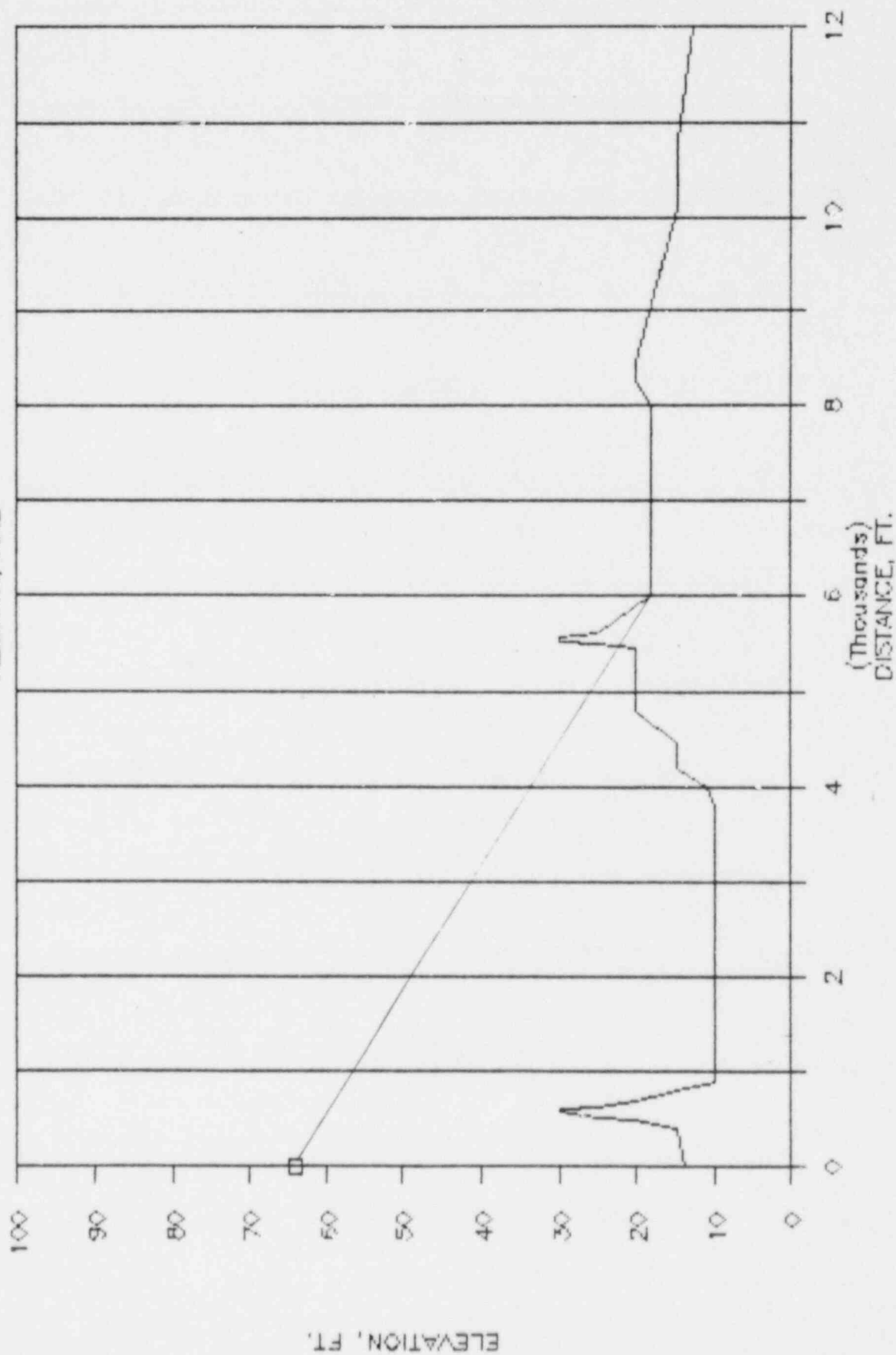
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WATERFORD 9 AZIMUTH, NE



WATERFORD 9

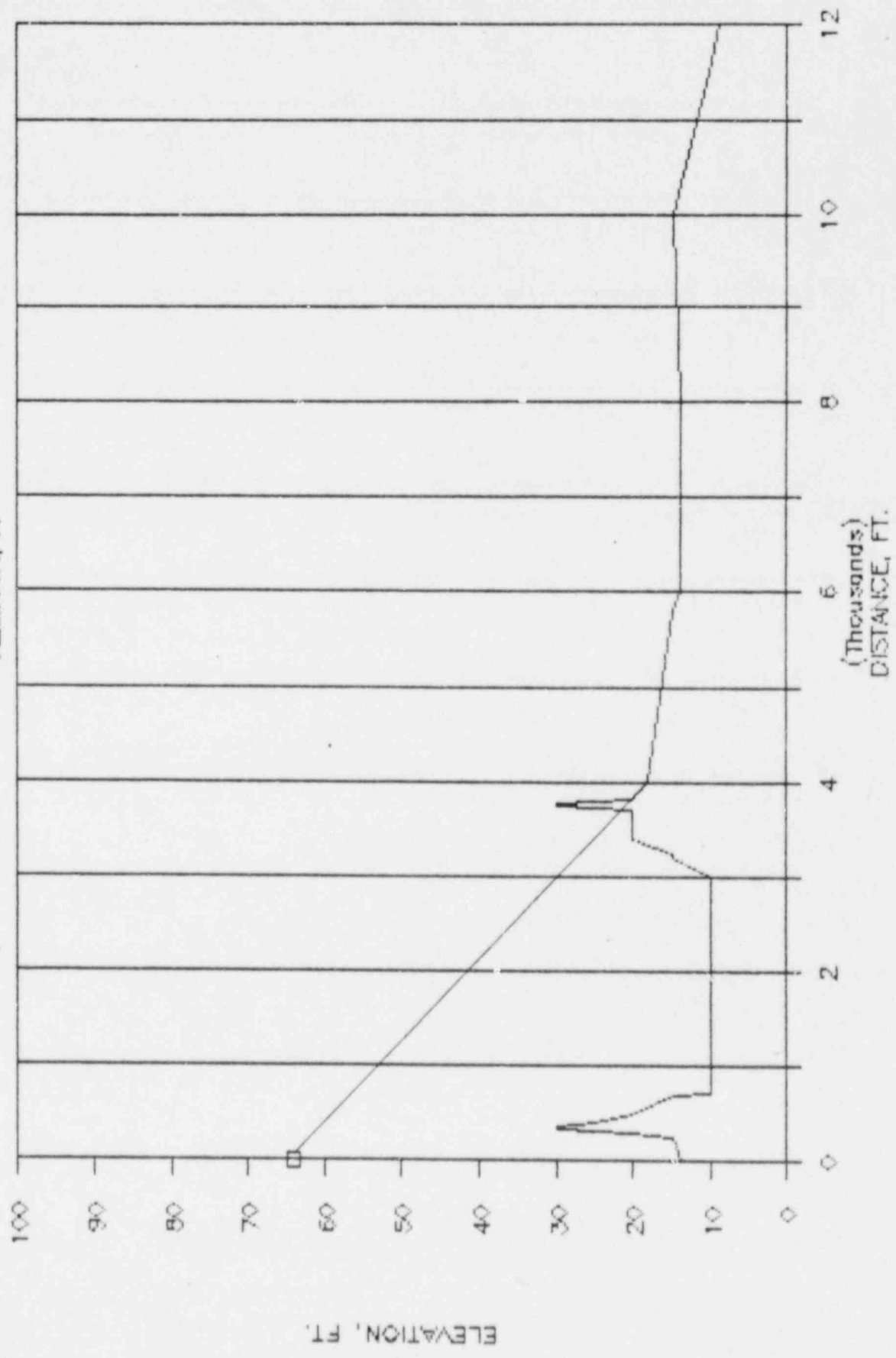
AZIMUTH, NINE



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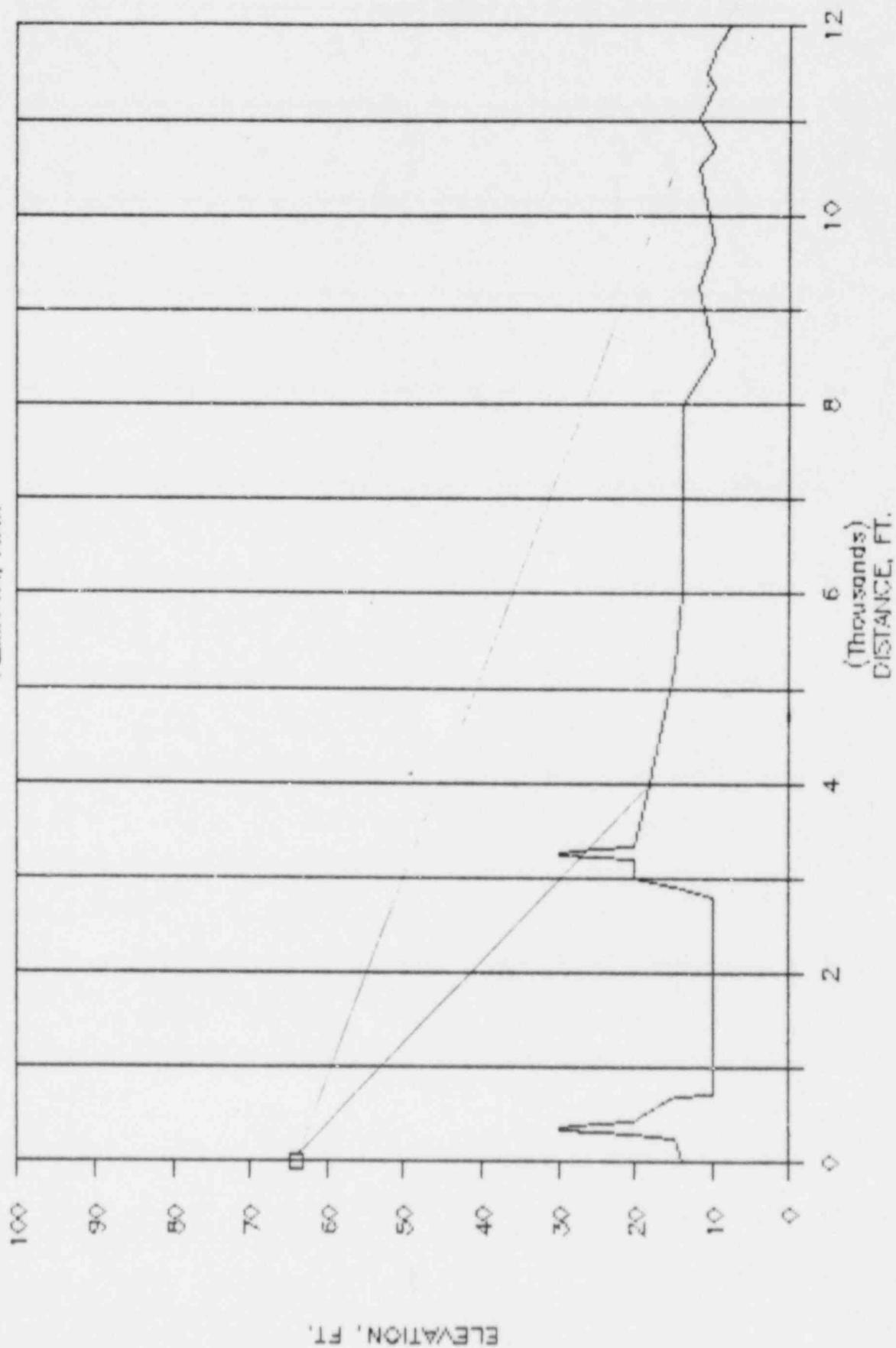
WATERFORD 9

AZIMUTH, N



WATERFORD 9

AZIMUTH, NNW



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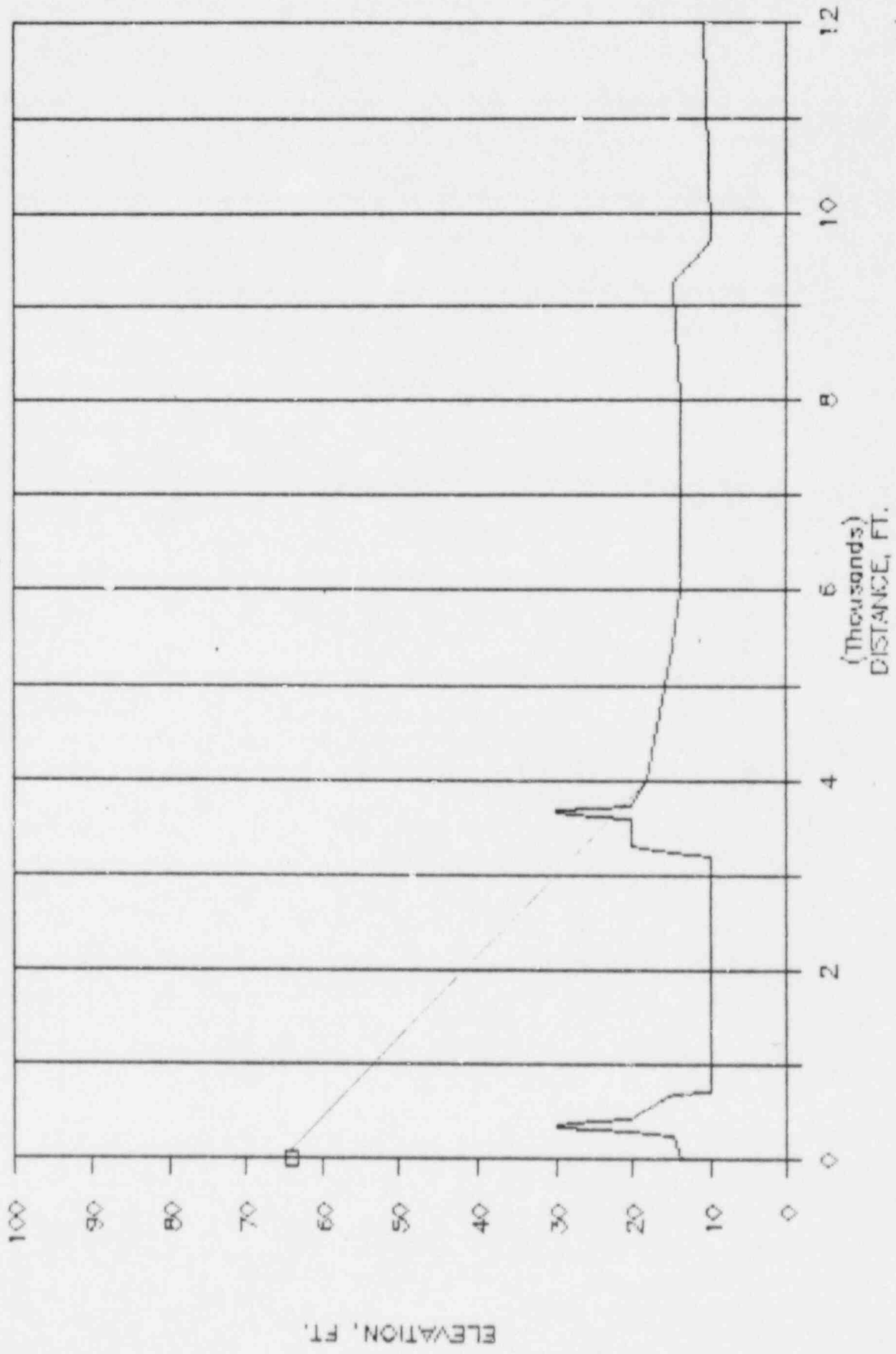
0 2 4 6 8 10 12

(Thousands)
DISTANCE, FT.

ELEVATION, FT.

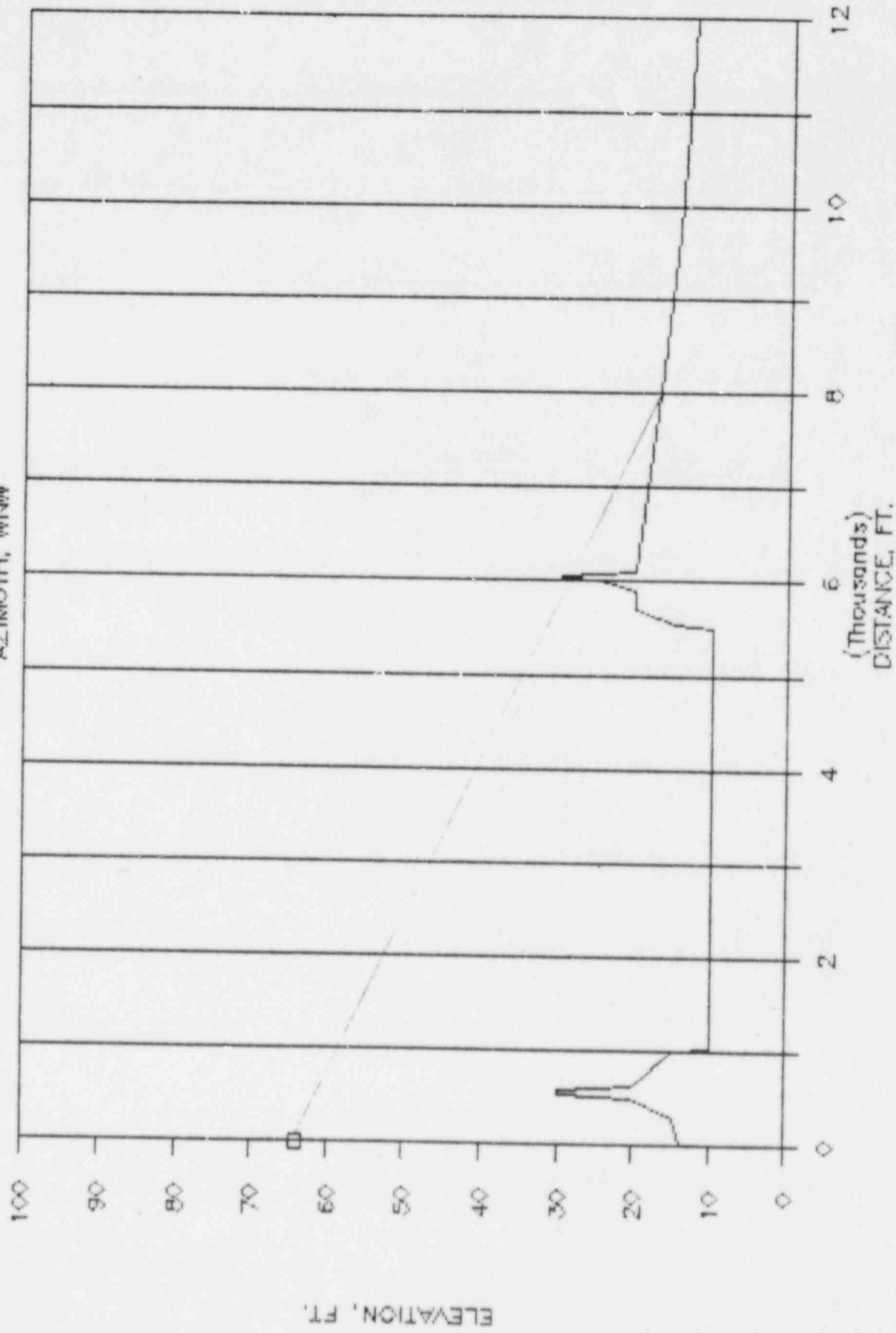
WATERFORD 9

AZIMUTH, NW



WATERFORD 9

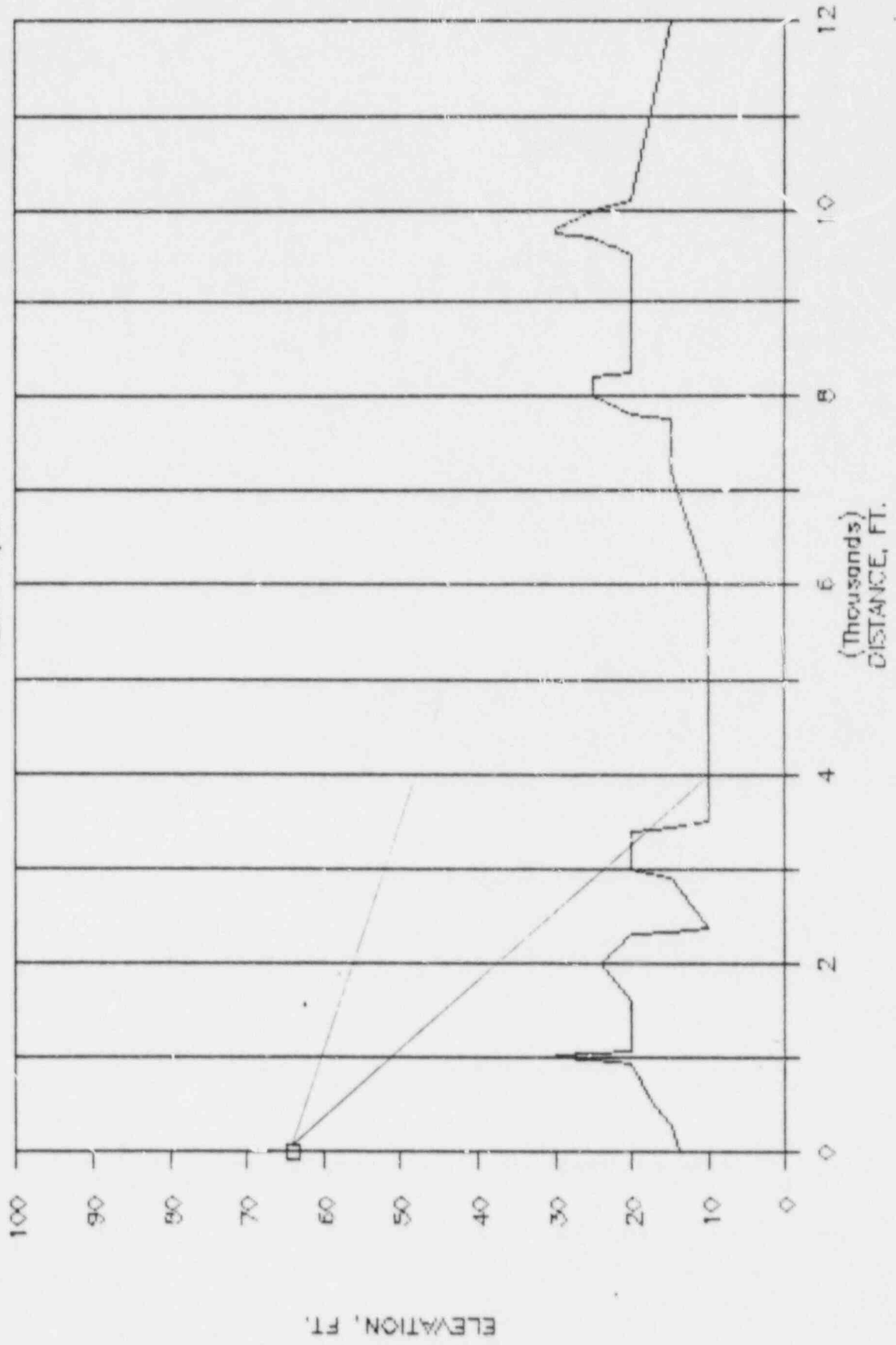
AZIMUTH, WNW



U.S. GEOLOGICAL SURVEY

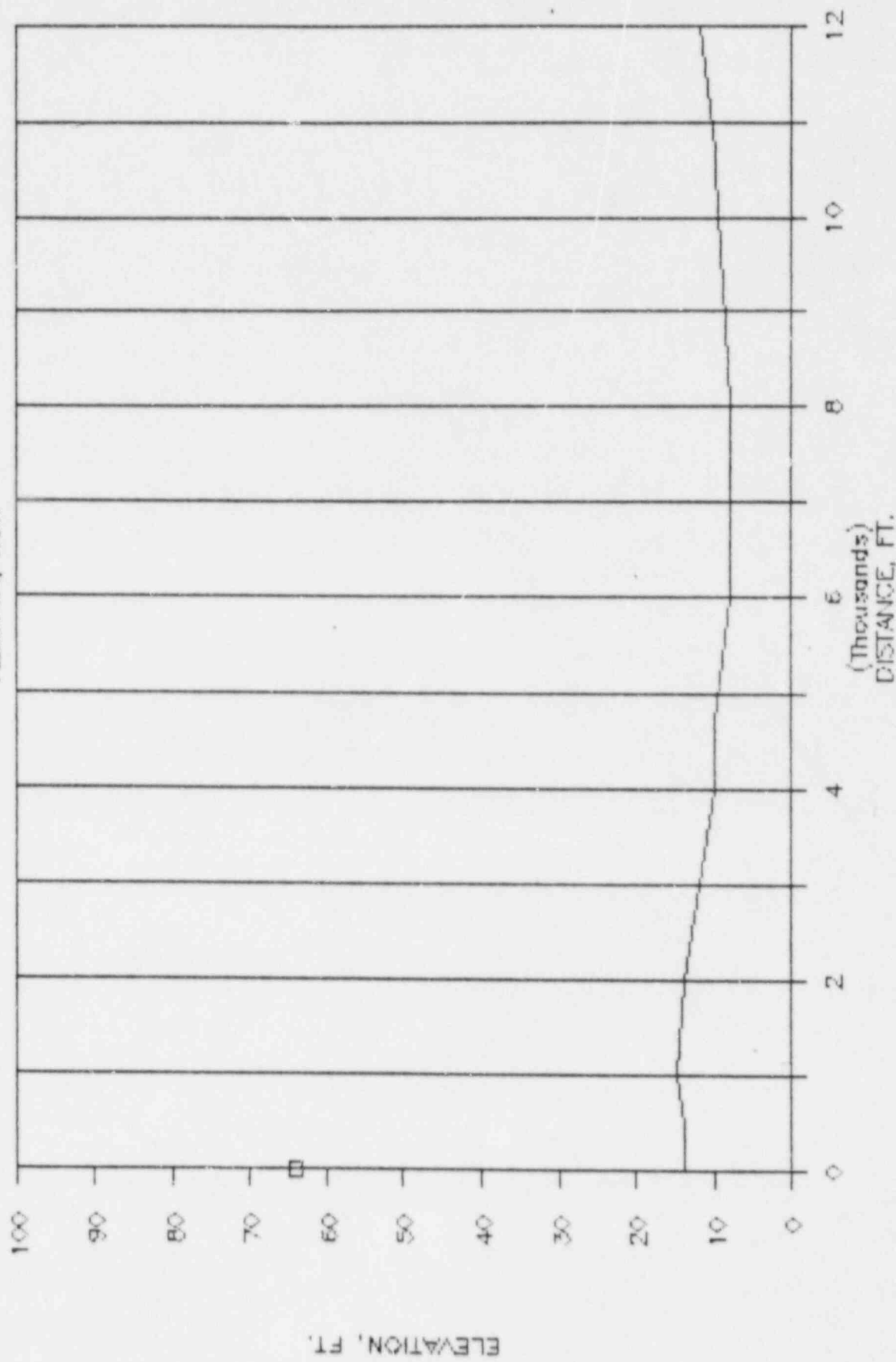
WATERFORD 9

AZIMUTH, W



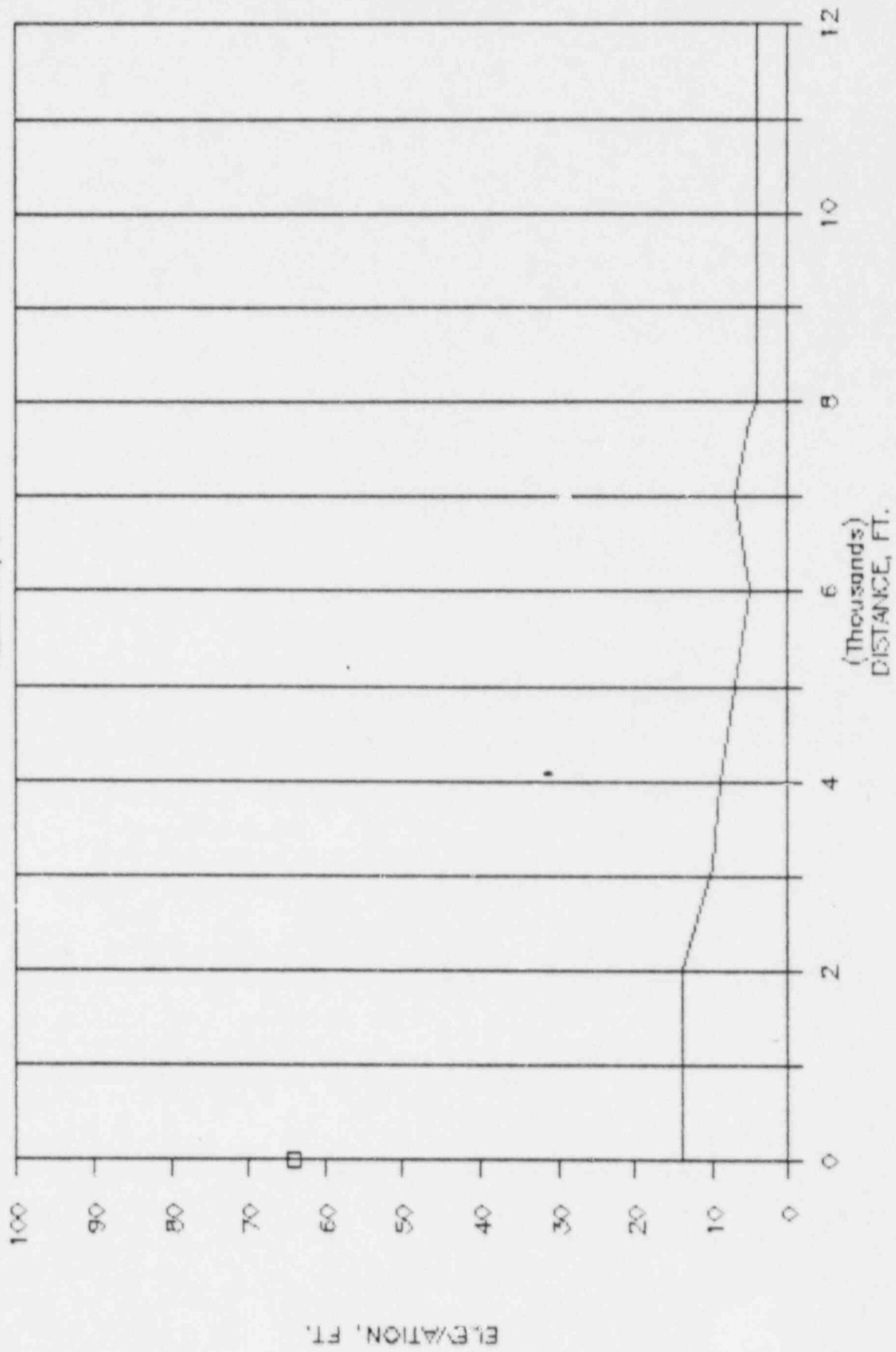
WATERFORD 9

AZIMUTH, WSW



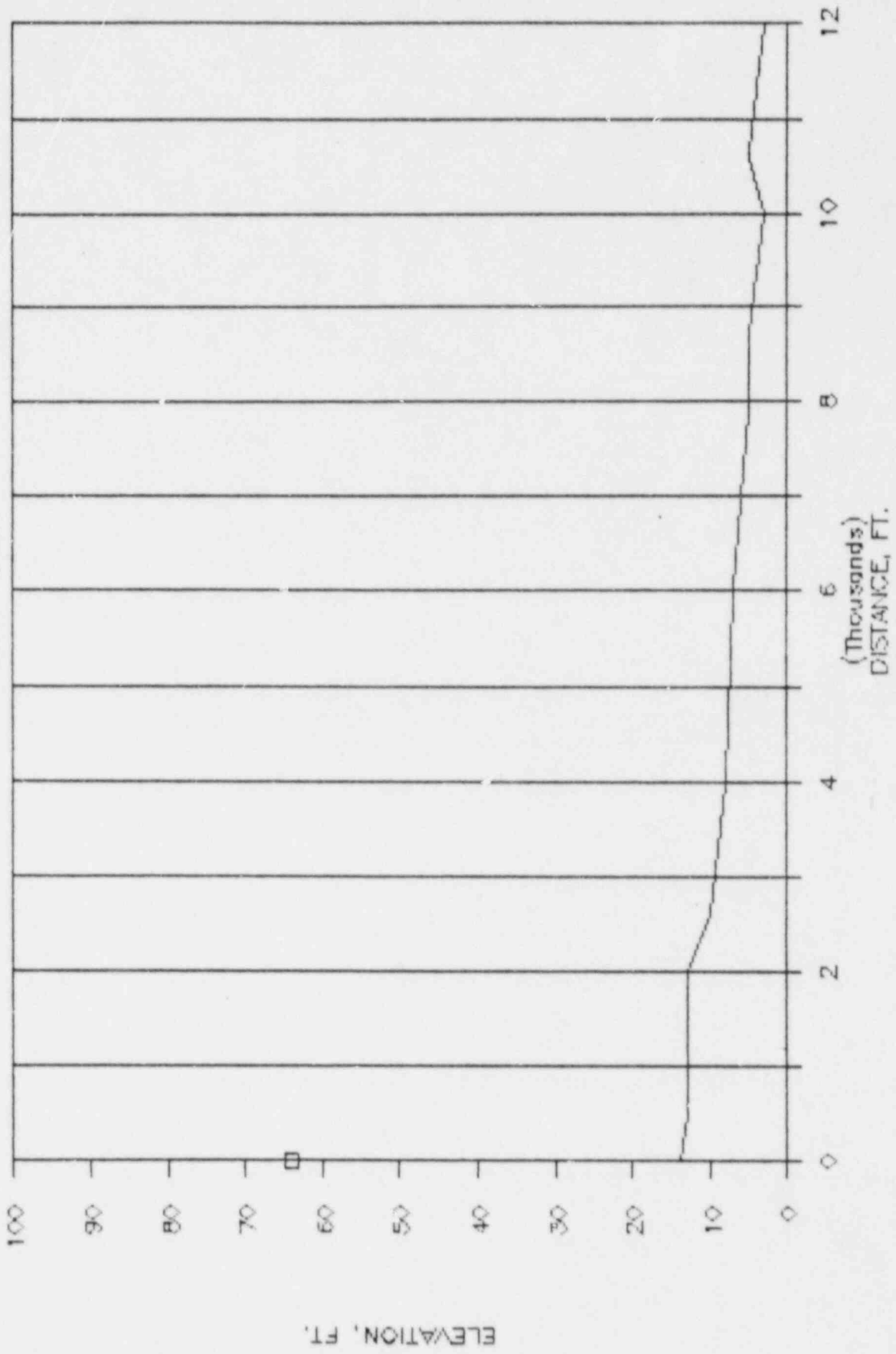
WATERFORD 9

AZIMUTH, SW



WATERFORD 9

AZIMUTH, SSW



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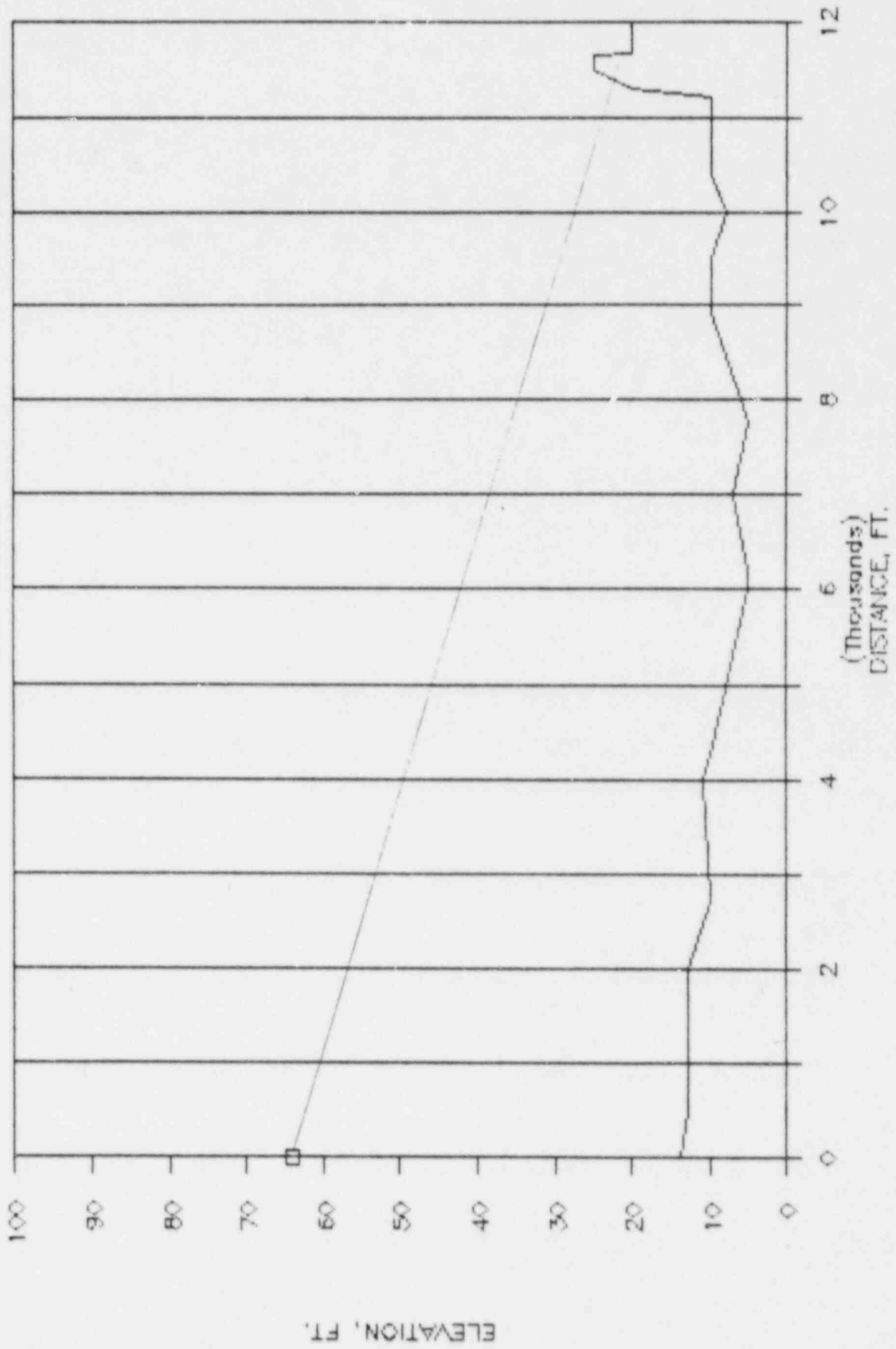
0 2 4 6 8 10 12

100 90 80 70 60 50 40 30 20 10 0

0 2 4 6 8 10 12

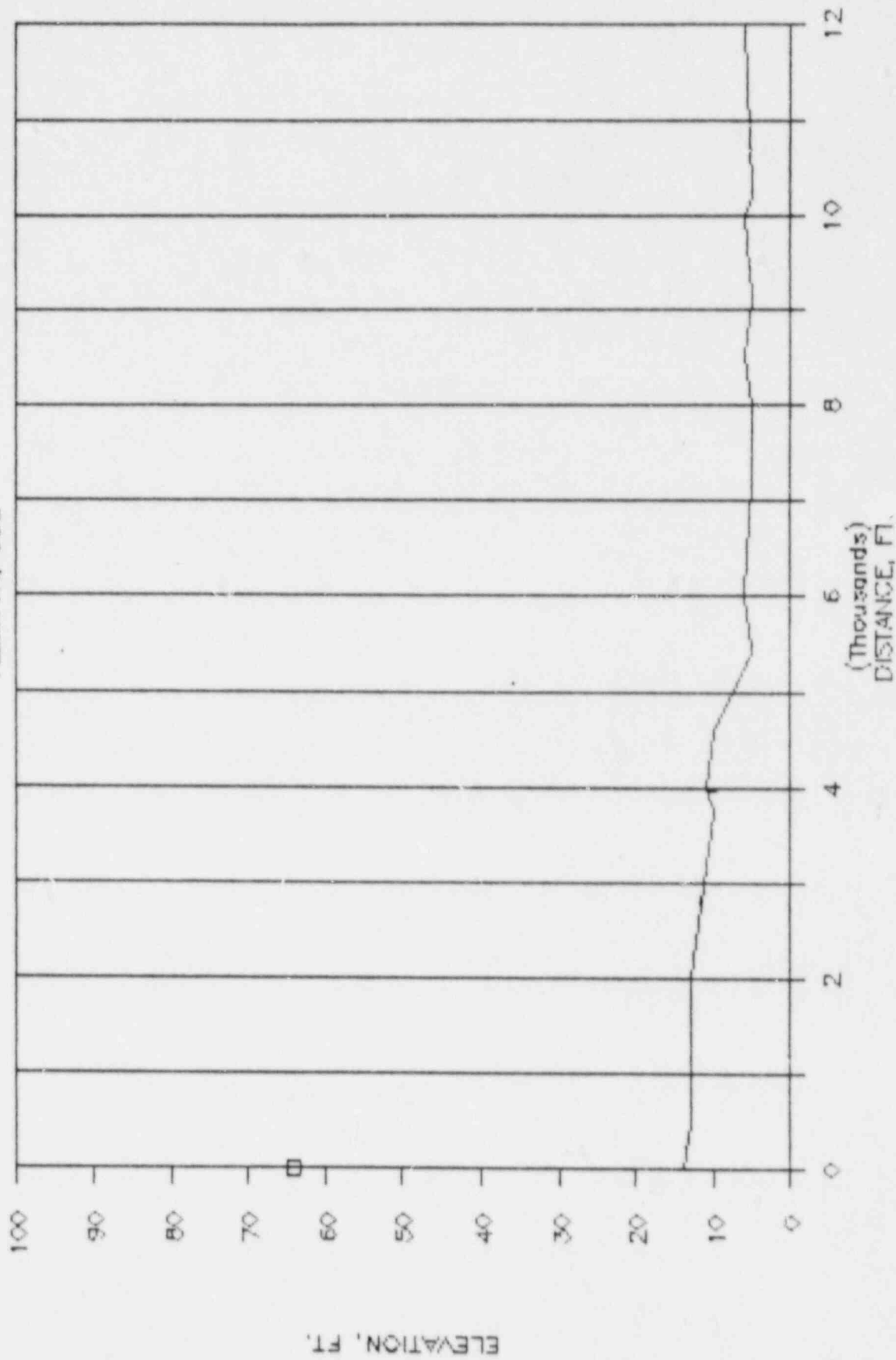
WATERFORD 9

AZIMUTH, SE



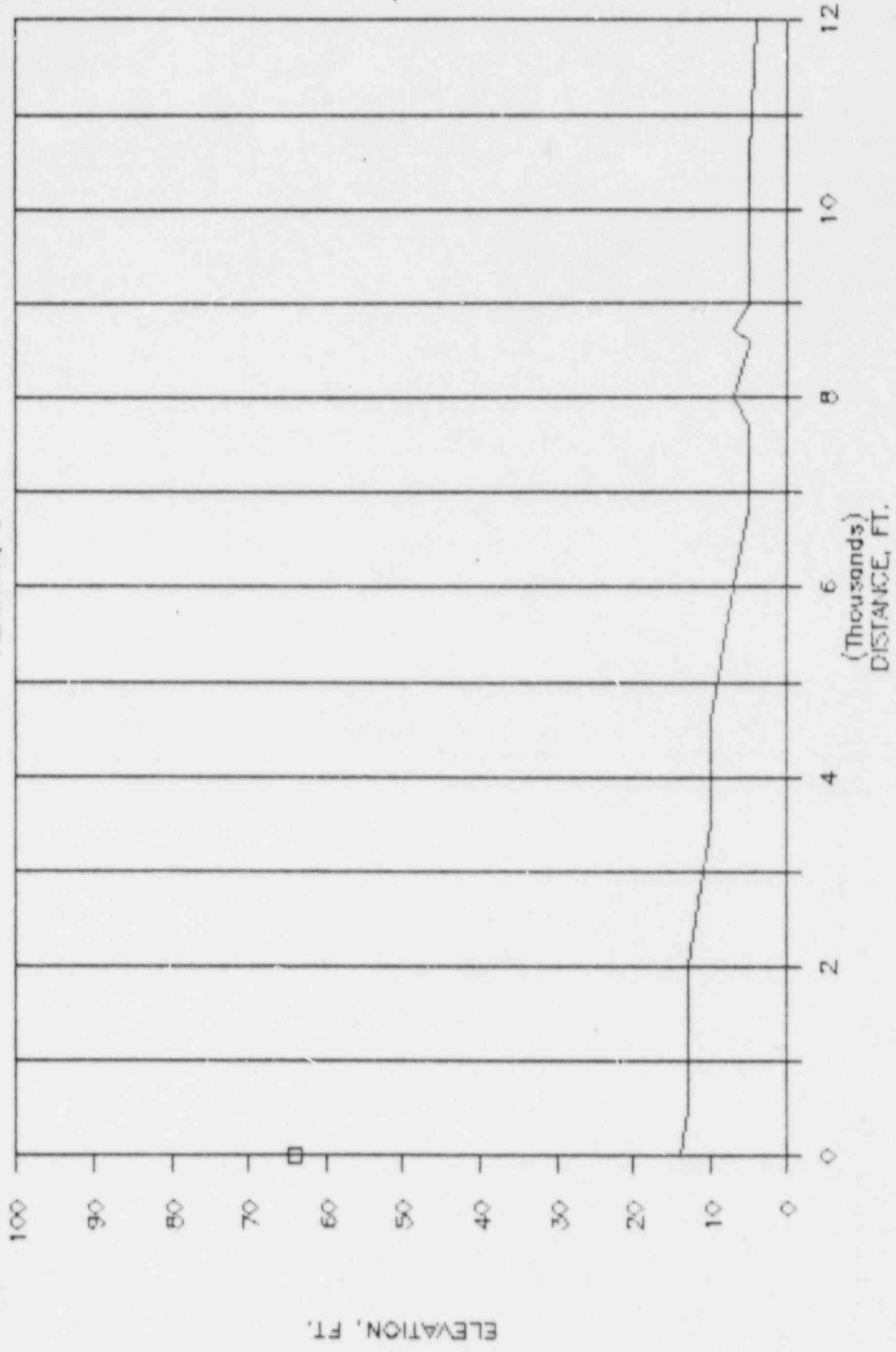
WATERFORD 9

AZIMUTH, SSE



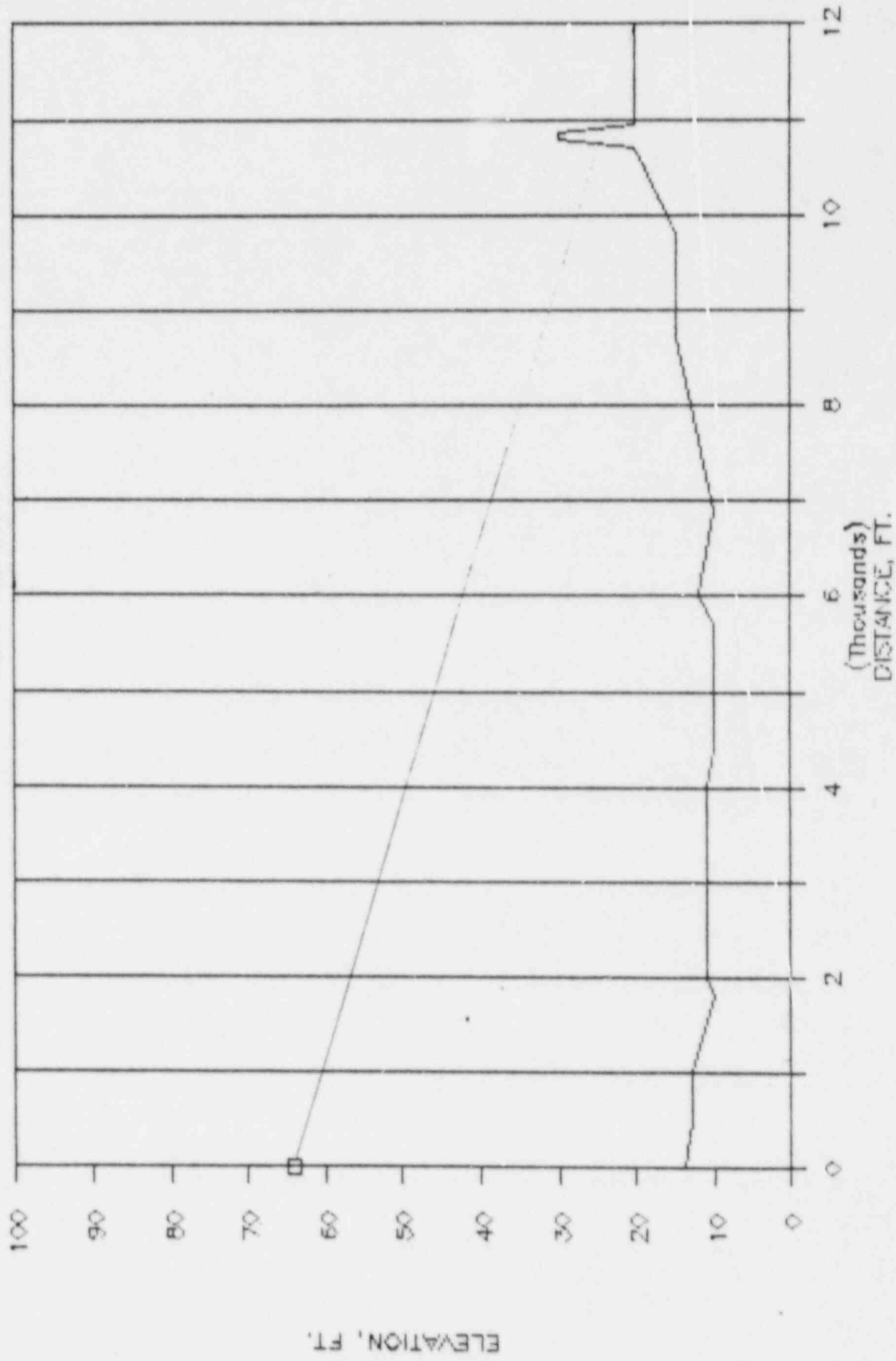
WATERFORD 9

AZIMUTH, S



WATERFORD 9

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #9-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	14.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	14.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	14.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	14.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	13.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	14.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	6.00	SOFT	0.	YES	9850.	30.
8	500.	67.50	14.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	14.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	14.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	15.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	10.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	10.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	10.00	SOFT	0.	NO	0.	0.
15	500.	45.00	14.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	30.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	10.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	10.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	10.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	17.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	9.00	SOFT	0.	YES	9250.	30.
22	500.	22.50	20.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	10.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	10.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	11.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	18.00	SOFT	0.	YES	5575.	30.
27	8000.	22.50	18.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	13.00	SOFT	0.	NO	0.	0.
29	500.	0.0	20.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	10.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	10.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	18.00	SOFT	0.	YES	3775.	30.
33	6000.	0.0	14.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	14.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	9.00	SOFT	0.	NO	0.	0.
36	500.	337.50	19.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	10.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	10.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	18.00	SOFT	0.	YES	3275.	30.
40	6000.	337.50	14.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	14.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	8.00	SOFT	0.	NO	0.	0.
43	500.	315.00	19.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	10.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	10.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	18.00	SOFT	0.	YES	3675.	30.
47	6000.	315.00	14.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	14.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	11.00	SOFT	0.	NO	0.	0.
50	500.	292.50	20.00	HARD	0.	NO	0.	0.
51	1000.	292.50	15.00	HARD	0.	NO	0.	0.
52	2000.	292.50	10.00	HARD	0.	NO	0.	0.
53	4000.	292.50	10.00	HARD	0.	NO	0.	0.
54	6000.	292.50	25.00	HARD	0.	YES	6025.	30.
55	8000.	292.50	17.00	HARD	0.	NO	0.	0.
56	12000.	292.50	13.00	HARD	0.	NO	0.	0.
57	500.	270.00	17.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	30.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	24.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	10.00	SOFT	0.	YES	3400.	20.
61	6000.	270.00	10.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	25.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	15.00	SOFT	0.	YES	9800.	30.
64	500.	247.50	14.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	15.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	14.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	10.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	8.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	8.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	12.00	SOFT	0.	NO	0.	0.
71	500.	225.00	14.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	14.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	14.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	9.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	5.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	4.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	4.00	SOFT	0.	NO	0.	0.
78	500.	202.50	13.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	13.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	13.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	8.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	7.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	5.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	3.00	SOFT	0.	NO	0.	0.
85	500.	180.00	13.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	13.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	13.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	10.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	7.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	7.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	4.00	SOFT	0.	NO	0.	0.
92	500.	157.50	13.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	13.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	13.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	11.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	6.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	5.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	6.00	SOFT	0.	NO	0.	0.
99	500.	135.00	13.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	13.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	13.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	11.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	5.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	6.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	20.00	SOFT	0.	YES	11650.	25.
106	500.	112.50	13.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	13.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	11.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	11.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	12.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	13.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	20.00	SOFT	0.	YES	10850.	30.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANJ SIREN #9-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT009	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
		IO= 0.0	YO= 0.0	ZO= 0.0	64.00	HEIGHT ABOVE GROUND=		50.00				

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #9-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE HUMIDITY	BAROMETRIC PRESSURE (MM OF HG)
						H1	H2	H1	H2		
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

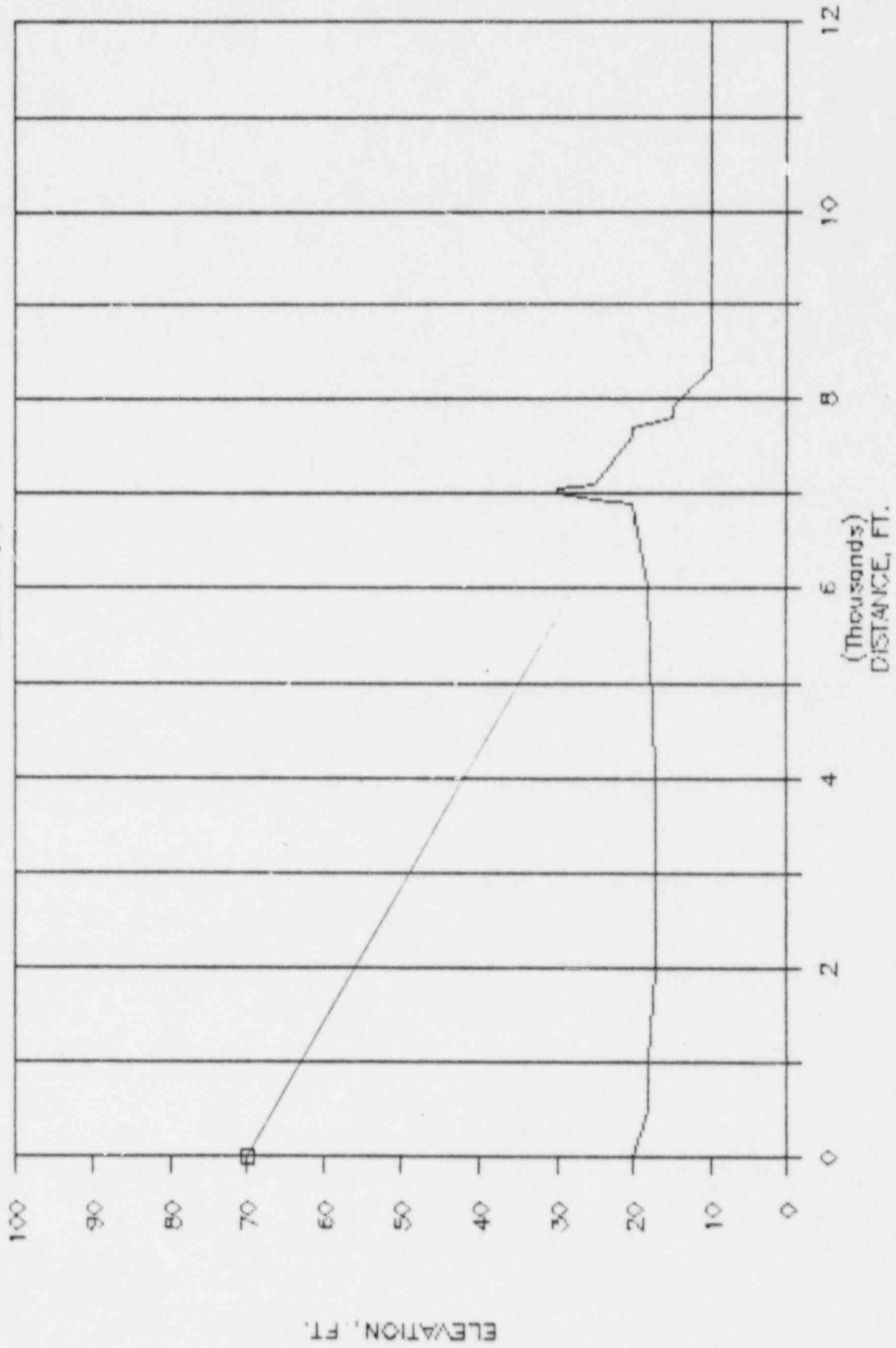
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #9-MS3000

SOUND PRESSURE LEVELS IN DBC
UNDER NET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	45.3
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.3	75.7	65.1	60.9	57.4	45.8
NNE	105.7	91.2	75.7	65.1	54.9	57.4	50.8
N	105.7	91.2	75.7	58.1	60.9	57.4	50.8
NNW	105.7	91.2	75.7	60.2	60.9	57.4	50.8
NW	105.7	91.2	75.7	59.0	60.9	57.4	50.8
WNW	105.8	98.4	89.7	78.9	46.2	65.0	55.2
W	105.6	91.3	75.7	60.3	60.9	57.4	45.9
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	32.1
S	105.6	91.2	75.7	62.8	54.1	46.2	30.6
SSE	105.6	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	57.3	50.3	31.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	42.6

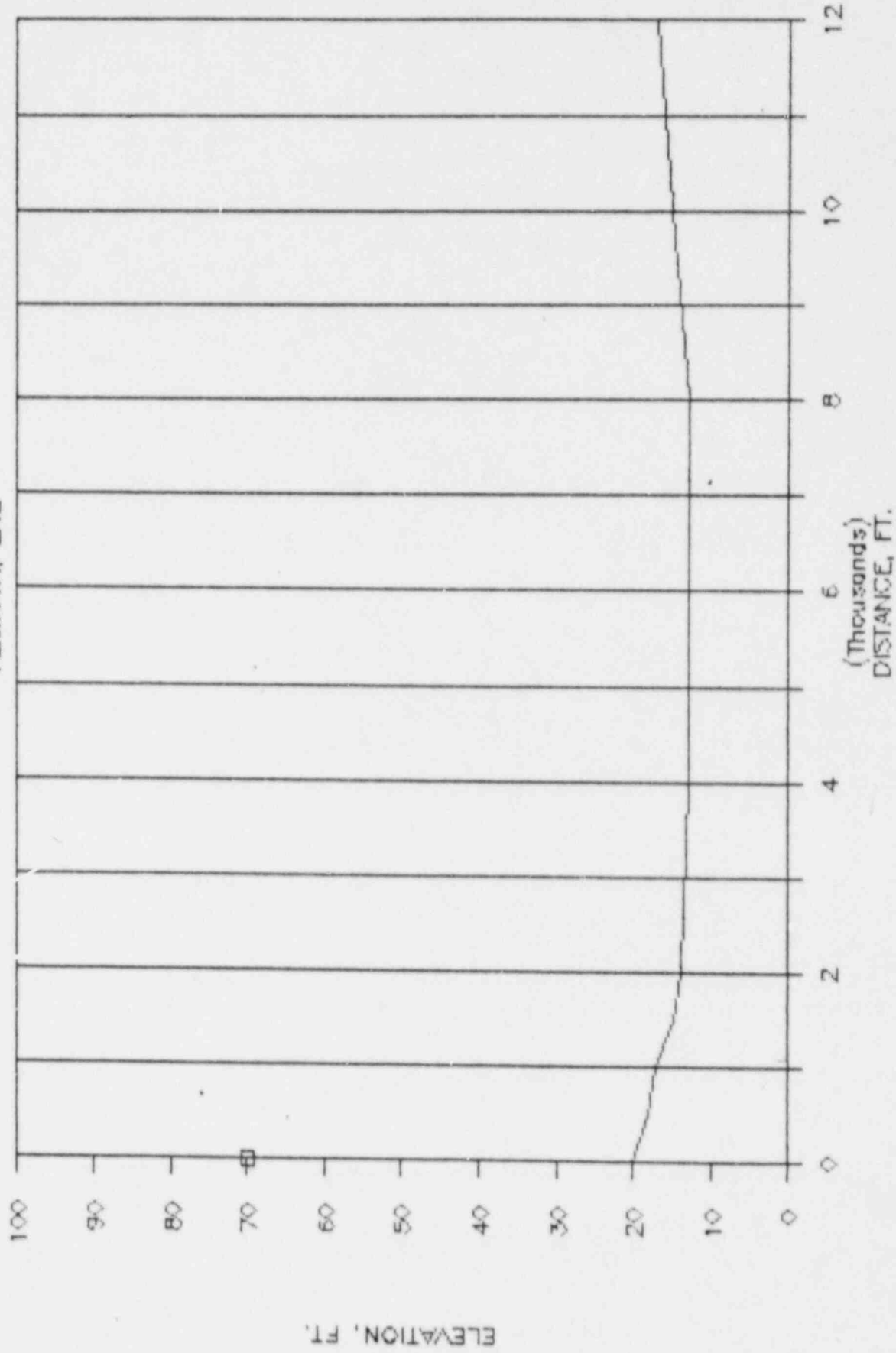
WATERFORD 10

AZIMUTH, E



WATERFORD 10

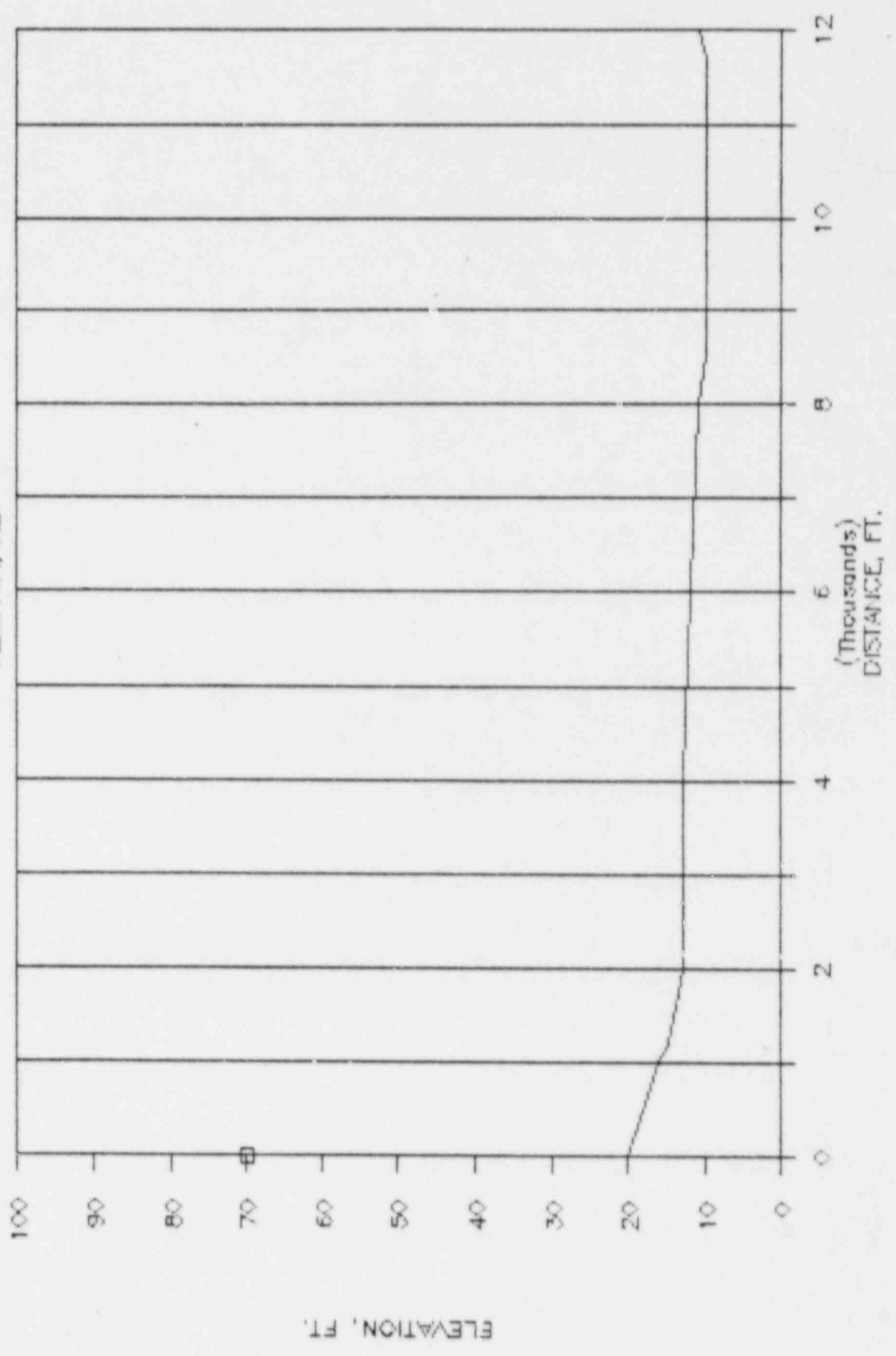
AZIMUTH, ENR



100 90 80 70 60 50 40 30 20 10 0

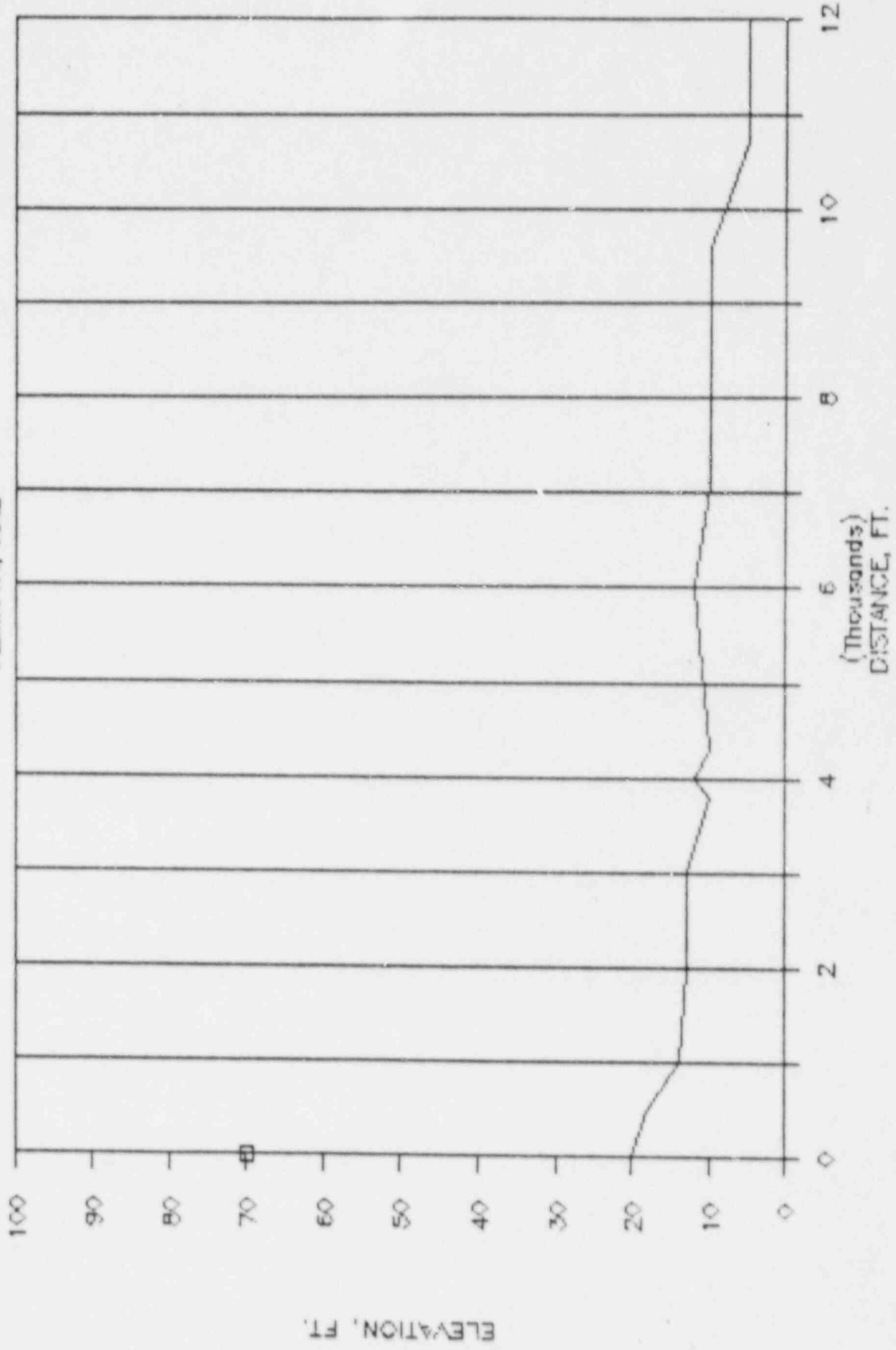
WATERFORD 10

AZIMUTH, NE



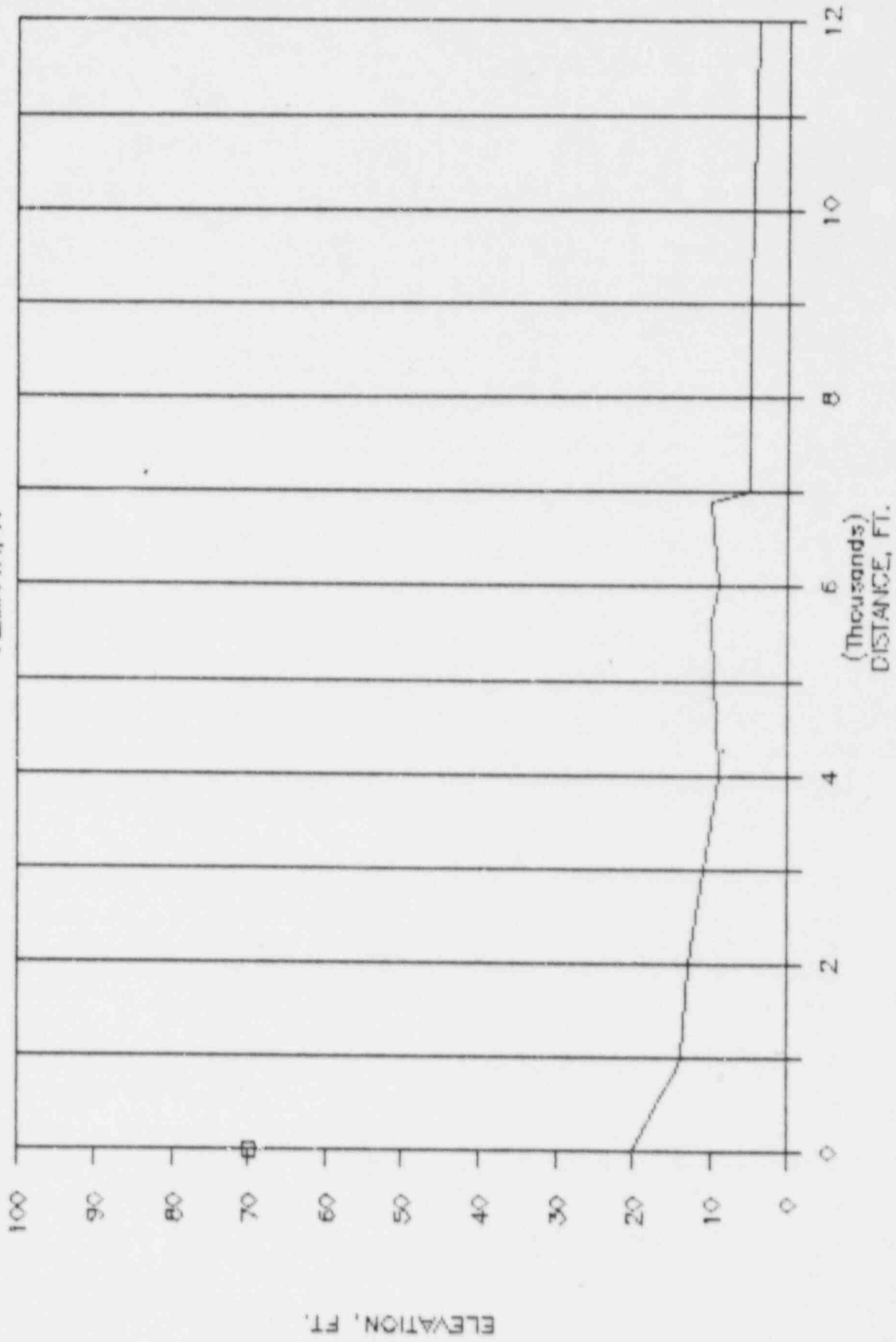
WATERFORD 10

AZIMUTH, NNE



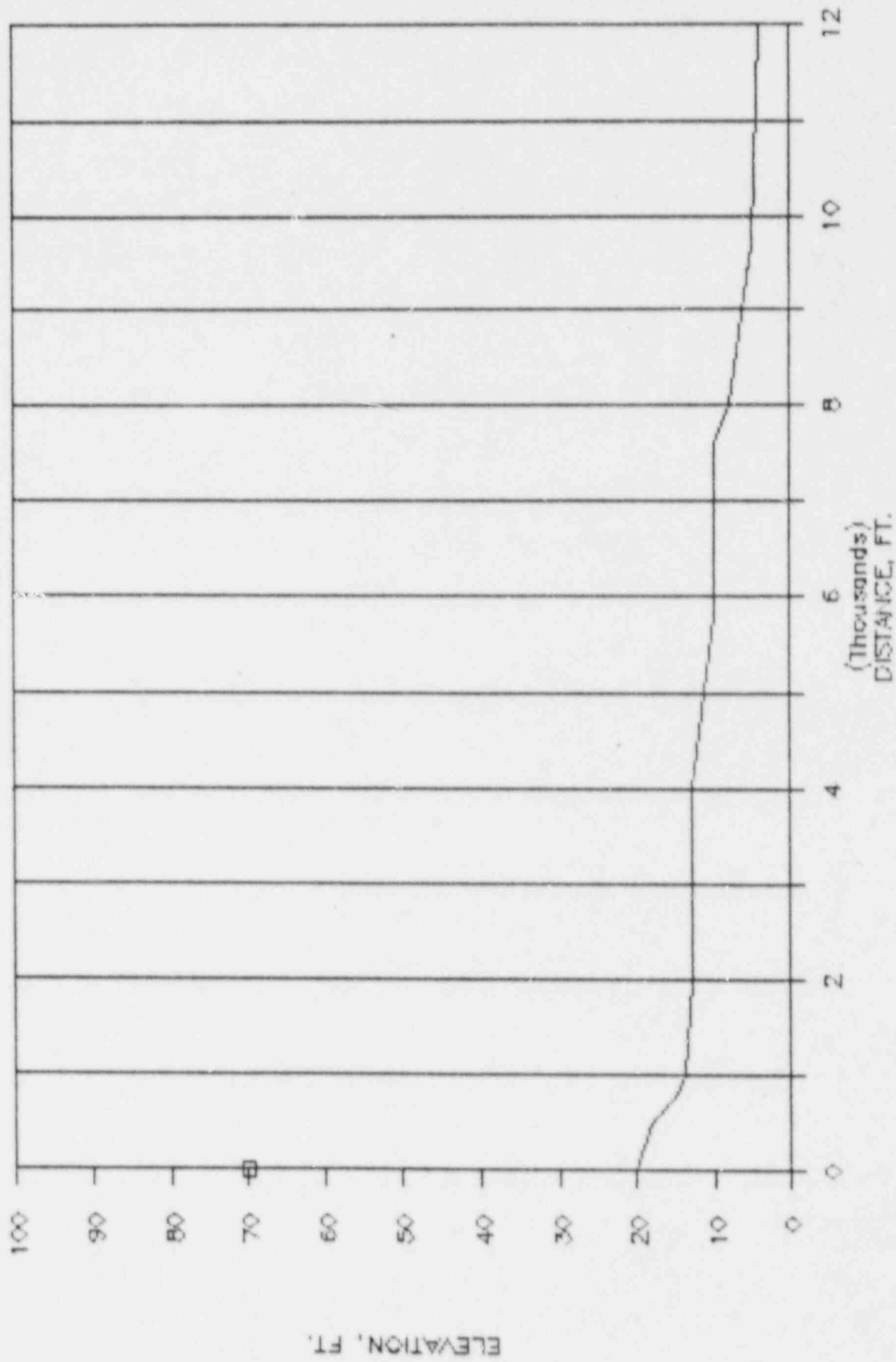
WATERFORD 10

AZIMUTH, N



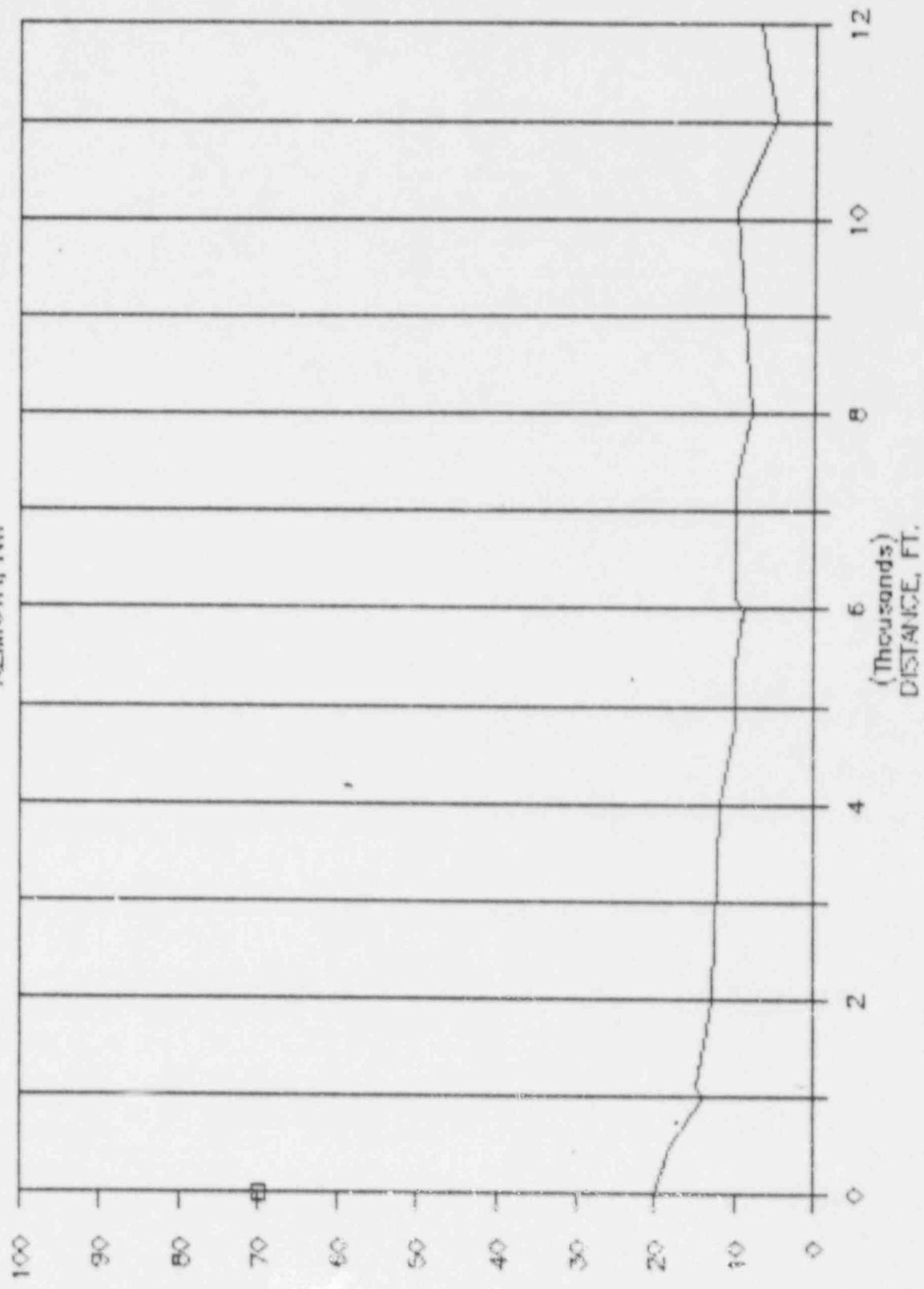
WATERFORD 10

AZIMUTH, NNW



WATERFORD 10

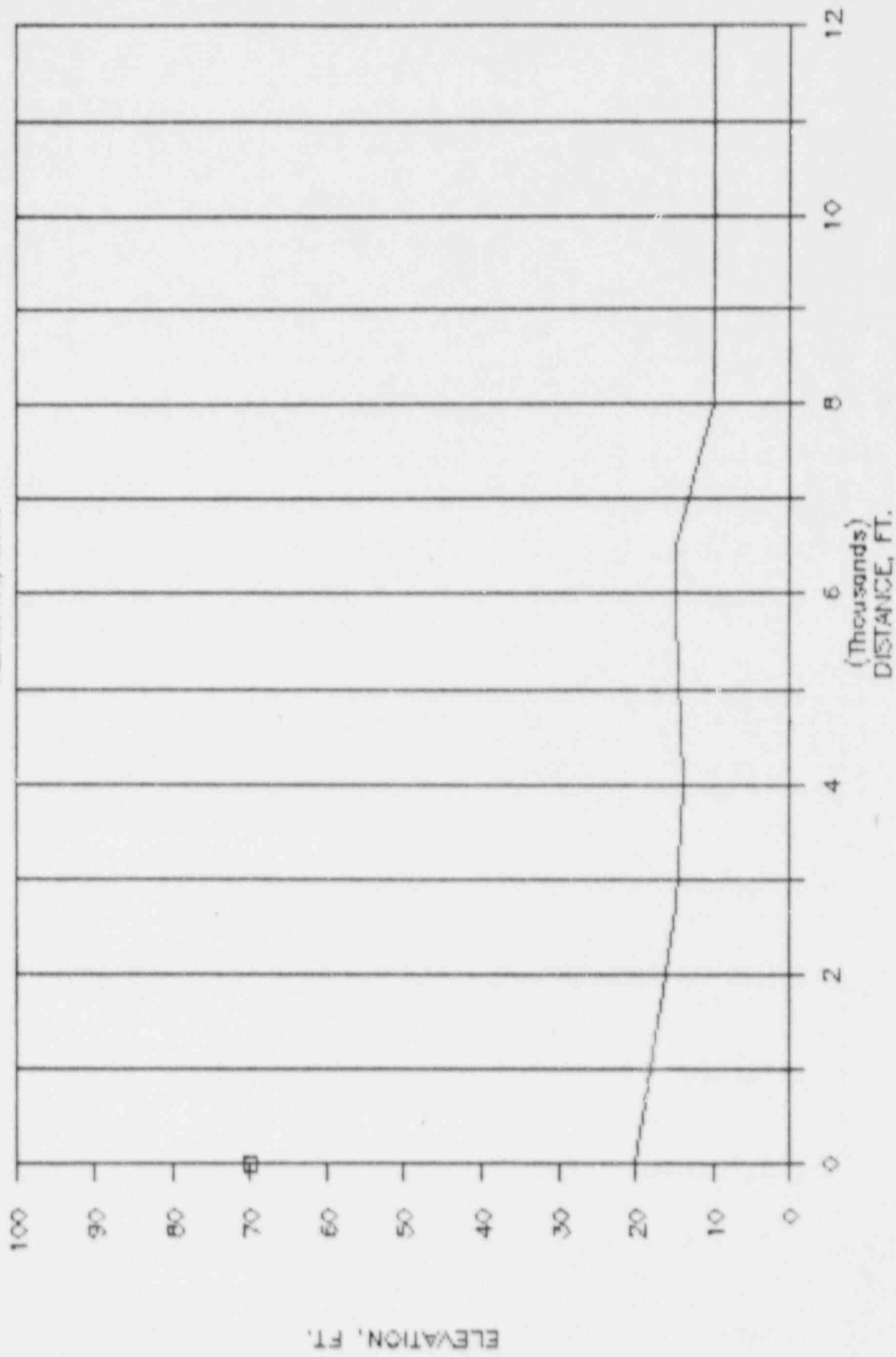
AZIMUTH, NW



ELEVATION

WATERFORD 10

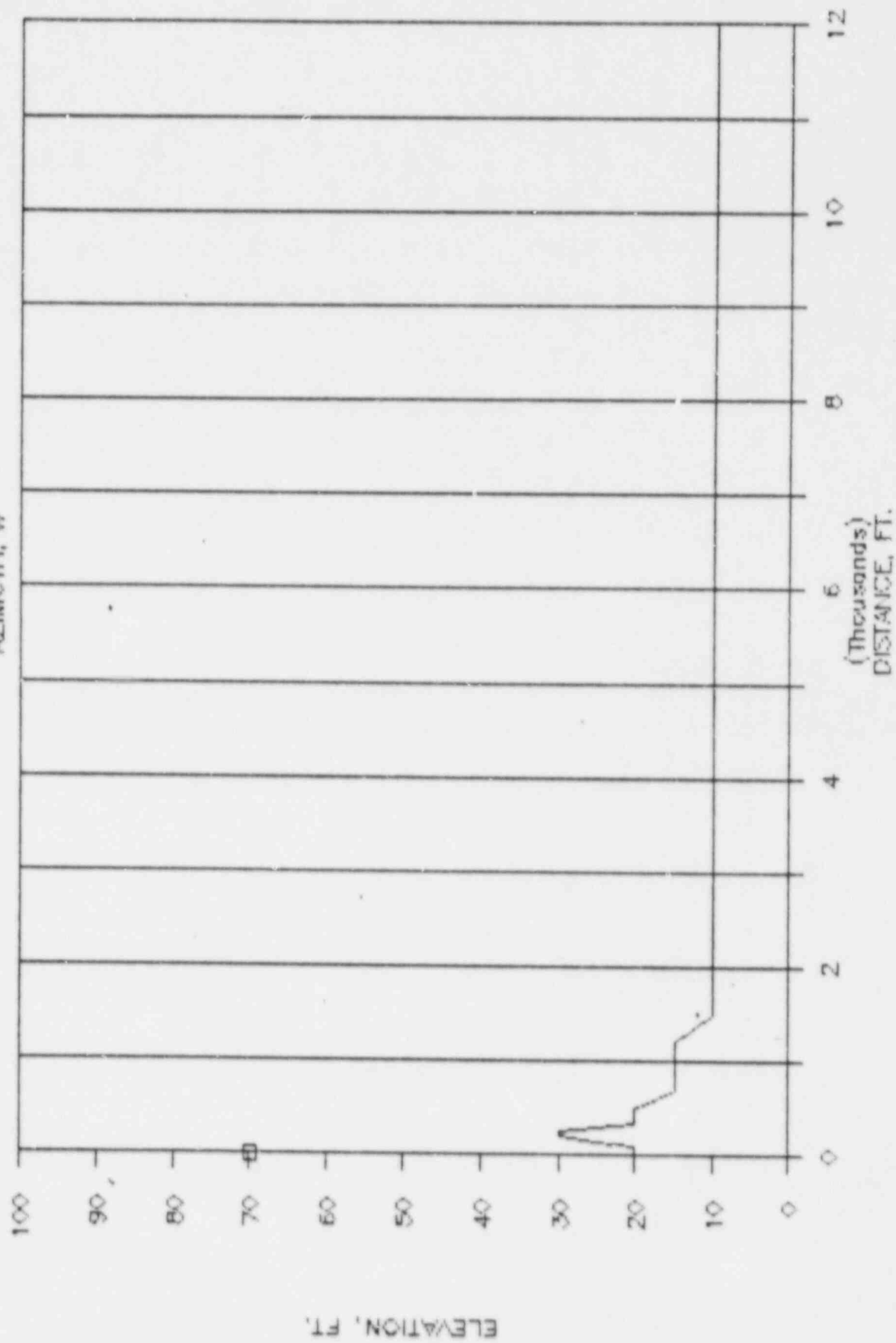
AZIMUTH, WNW



100 90 80 70 60 50 40 30 20 10 0

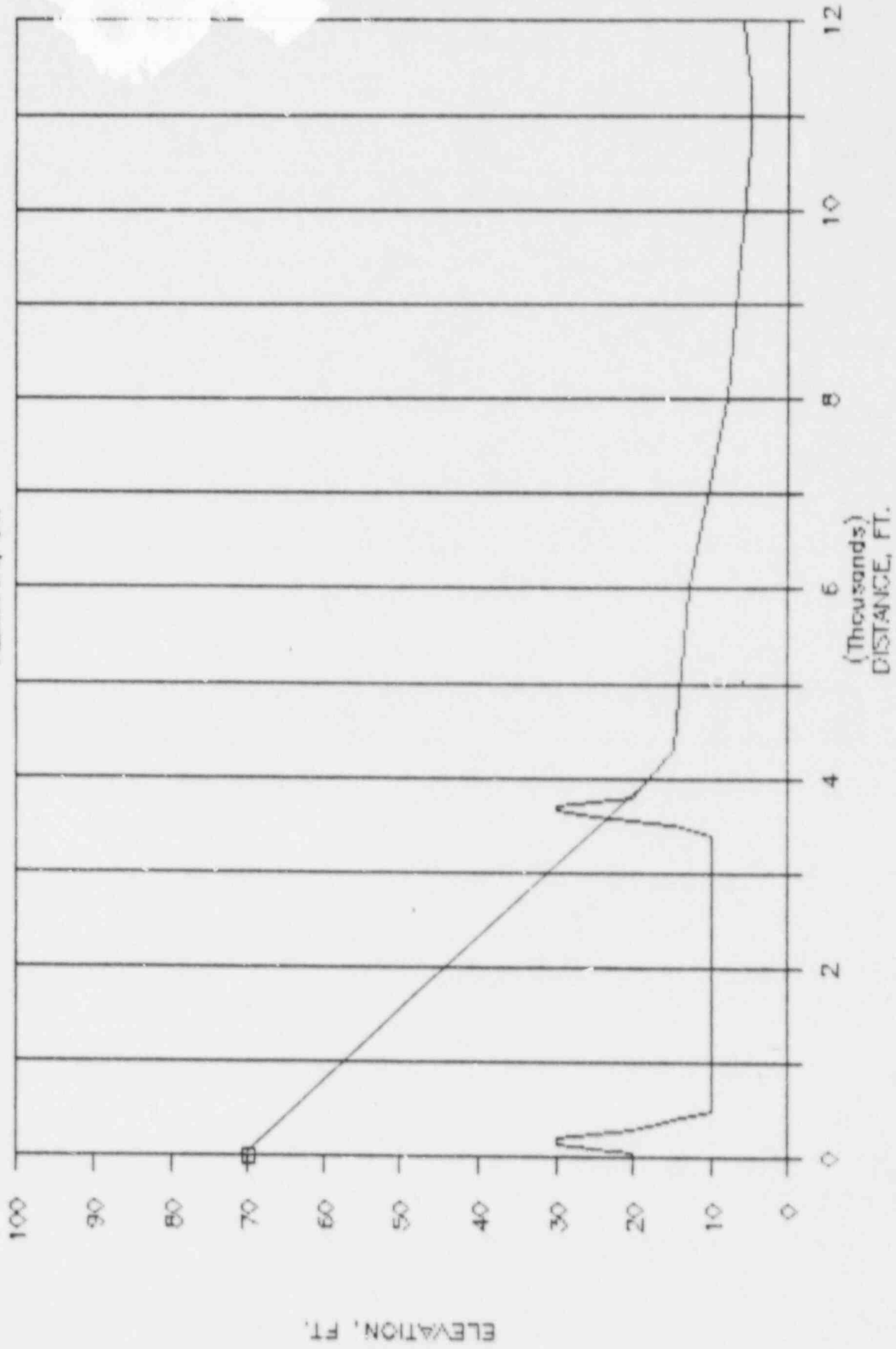
WATERFORD 10

AZIMUTH, W



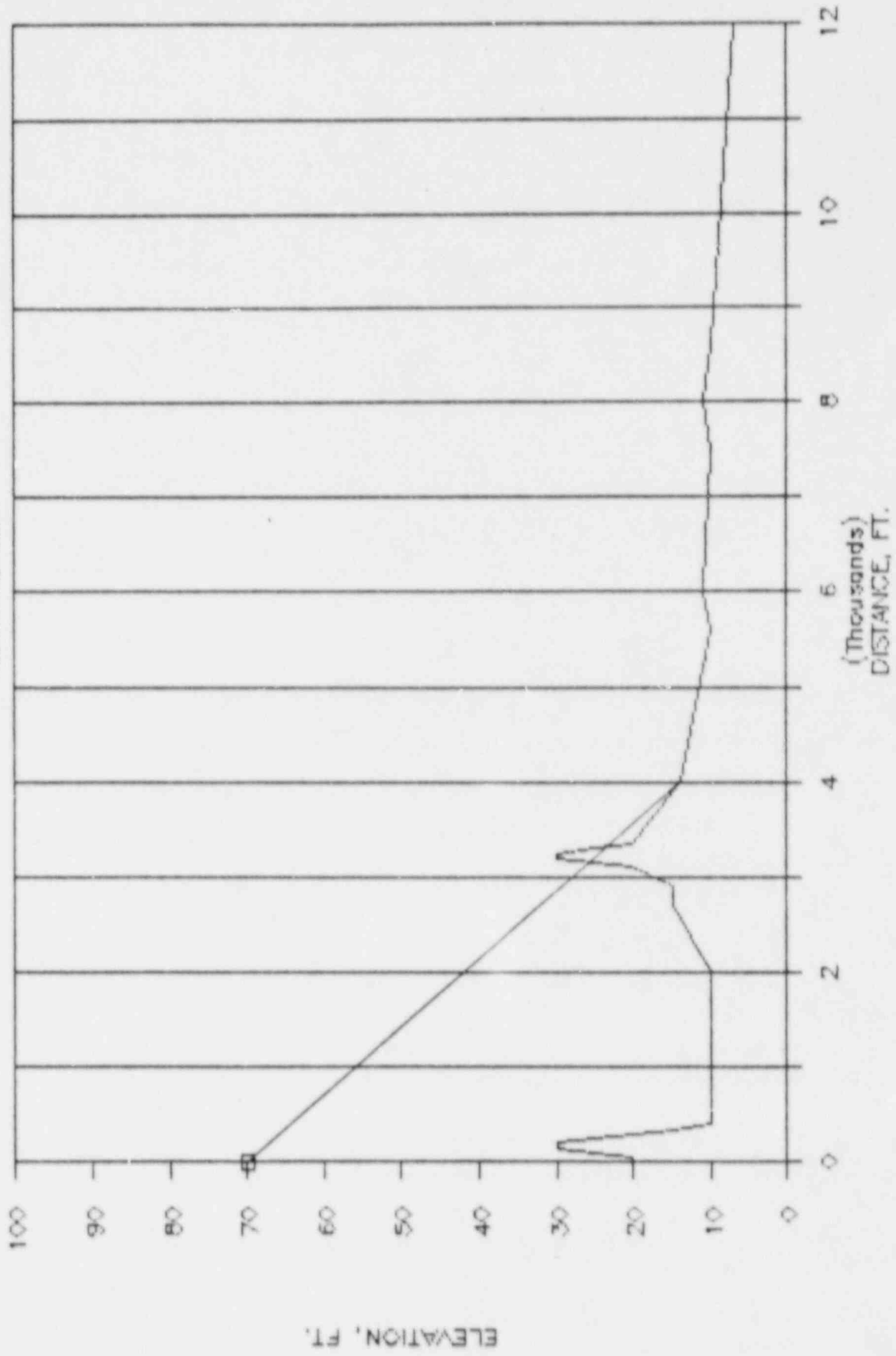
WATERFORD 10

AZIMUTH, SW



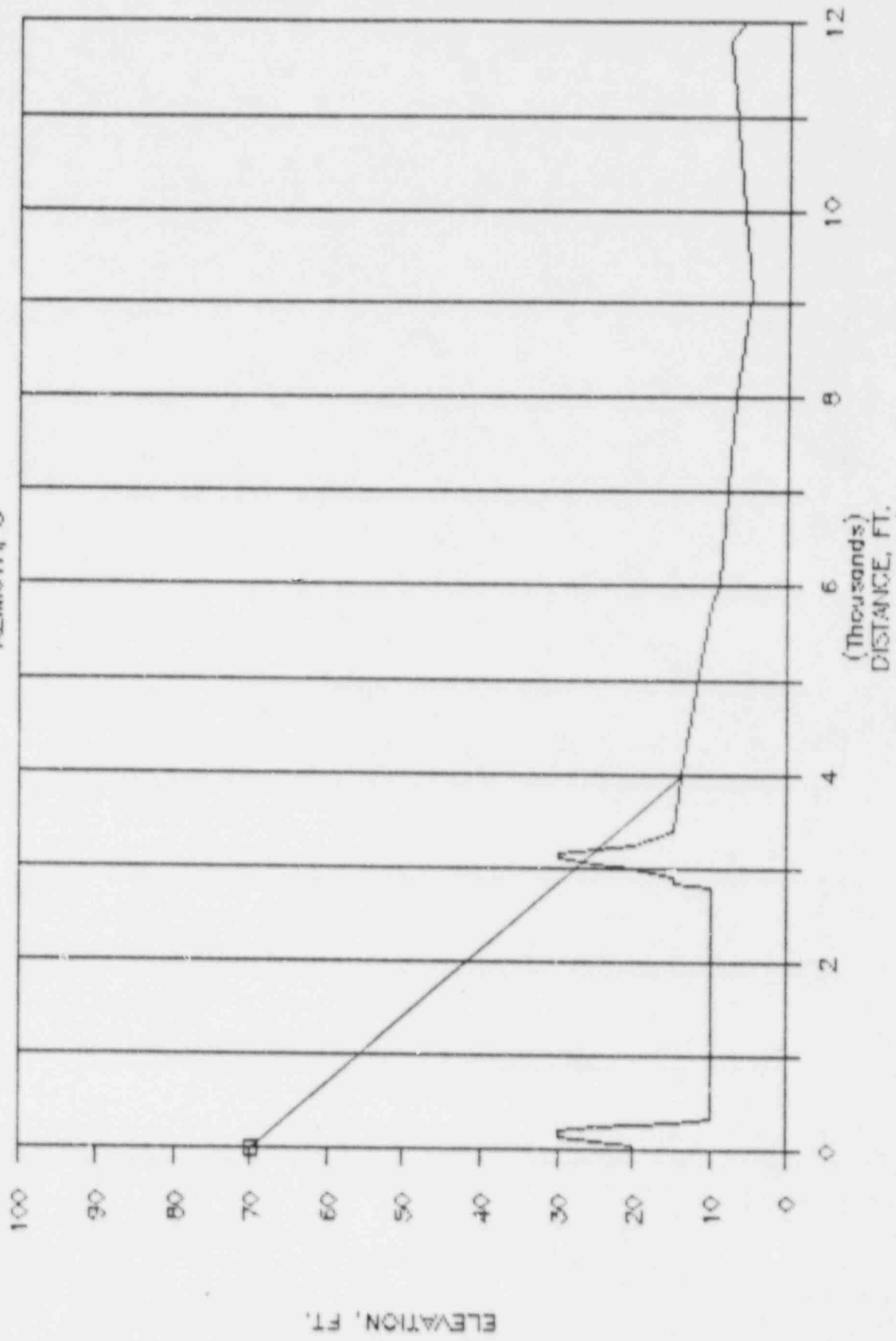
WATERFORD 10

AZIMUTH, SSW



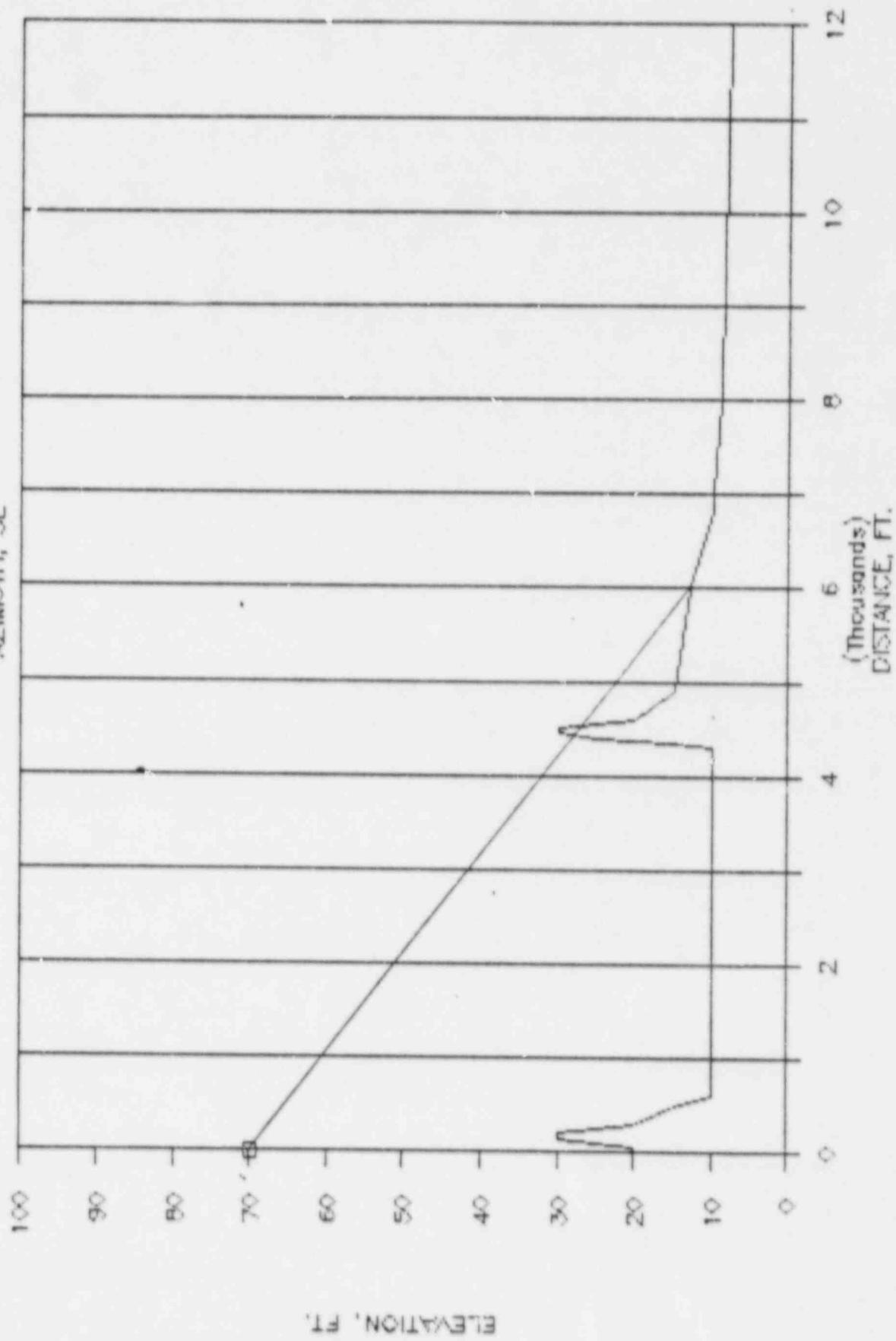
WATERFORD 10

AZIMUTH, S



WATERFORD 10

AZIMUTH, SE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #10-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	18.00	HARD	0.	NO	0.	0.
2	1000.	90.00	18.00	HARD	0.	NO	0.	0.
3	2000.	90.00	17.00	HARD	0.	NO	0.	0.
4	4000.	90.00	17.00	HARD	0.	NO	0.	0.
5	6000.	90.00	18.00	HARD	0.	NO	0.	0.
6	8000.	90.00	14.00	HARD	0.	YES	7050.	30.
7	12000.	90.00	10.00	HARD	0.	NO	0.	0.
8	500.	67.50	18.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	17.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	14.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	13.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	13.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	13.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	17.00	SOFT	0.	NO	0.	0.
15	500.	45.00	18.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	16.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	13.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	13.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	12.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	11.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	11.00	SOFT	0.	NO	0.	0.
22	500.	22.50	18.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	14.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	13.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	12.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	12.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	10.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	5.00	SOFT	0.	NO	0.	0.
29	500.	0.0	17.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	14.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	13.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	9.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	9.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	5.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	4.00	SOFT	0.	NO	0.	0.
36	500.	337.50	18.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BELRING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	14.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	13.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	13.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	10.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	8.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	4.00	SOFT	0.	NO	0.	0.
43	500.	315.00	18.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	14.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	13.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	12.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	9.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	8.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	7.00	SOFT	0.	NO	0.	0.
50	500.	292.50	19.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	18.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	16.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	14.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	15.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	10.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	10.00	SOFT	0.	NO	0.	0.
57	500.	270.00	20.00	HARD	0.	NO	0.	0.
58	1000.	270.00	15.00	HARD	0.	NO	0.	0.
59	2000.	270.00	10.00	HARD	0.	NO	0.	0.
60	4000.	270.00	10.00	HARD	0.	NO	0.	0.
61	6000.	270.00	10.00	HARD	0.	NO	0.	0.
62	8000.	270.00	10.00	HARD	0.	NO	0.	0.
63	12000.	270.00	10.00	HARD	0.	NO	0.	0.
64	500.	247.50	15.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	10.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	10.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	10.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	18.00	SOFT	0.	YES	5400.	30.
69	8000.	247.50	14.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	12.00	SOFT	0.	NO	0.	0.
71	500.	225.00	10.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	10.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	10.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	18.00	SOFT	0.	YES	3750.	25.
75	6000.	225.00	13.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	8.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	6.00	SOFT	0.	NO	0.	0.
78	500.	202.50	10.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	10.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	10.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	14.00	SOFT	0.	YES	3250.	30.
82	6000.	202.50	11.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	11.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	7.00	SOFT	0.	NO	0.	0.
85	500.	180.00	10.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	10.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	10.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	14.00	SOFT	0.	YES	3150.	30.
89	6000.	180.00	9.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	7.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	6.00	SOFT	0.	NO	0.	0.
92	500.	157.50	10.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	10.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	10.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	13.00	SOFT	0.	YES	3500.	30.
96	6000.	157.50	8.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	7.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	4.00	SOFT	0.	NO	0.	0.
99	500.	135.00	15.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	10.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	10.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	10.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	13.00	SOFT	0.	YES	4500.	30.
104	8000.	135.00	9.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	8.00	SOFT	0.	NO	0.	0.
106	500.	112.50	20.00	HARD	0.	NO	0.	0.
107	1000.	112.50	20.00	HARD	0.	NO	0.	0.
108	2000.	112.50	10.00	HARD	0.	NO	0.	0.
109	4000.	112.50	10.00	HARD	0.	NO	0.	0.
110	6000.	112.50	10.00	HARD	0.	NO	0.	0.
111	8000.	112.50	19.00	HARD	0.	YES	7750.	30.
112	12000.	112.50	9.00	HARD	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREM #10-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT010	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
	X0=	0.0	Y0=	0.0	Z0=	70.00	HEIGHT ABOVE GROUND=			50.00		

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREM #10-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED(MPS)		TEMPERATURE(C)		RELATIVE BAROMETRIC HUMIDITY PRESSURE(MM OF HG)	
						H1	H2	H1	H2		
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

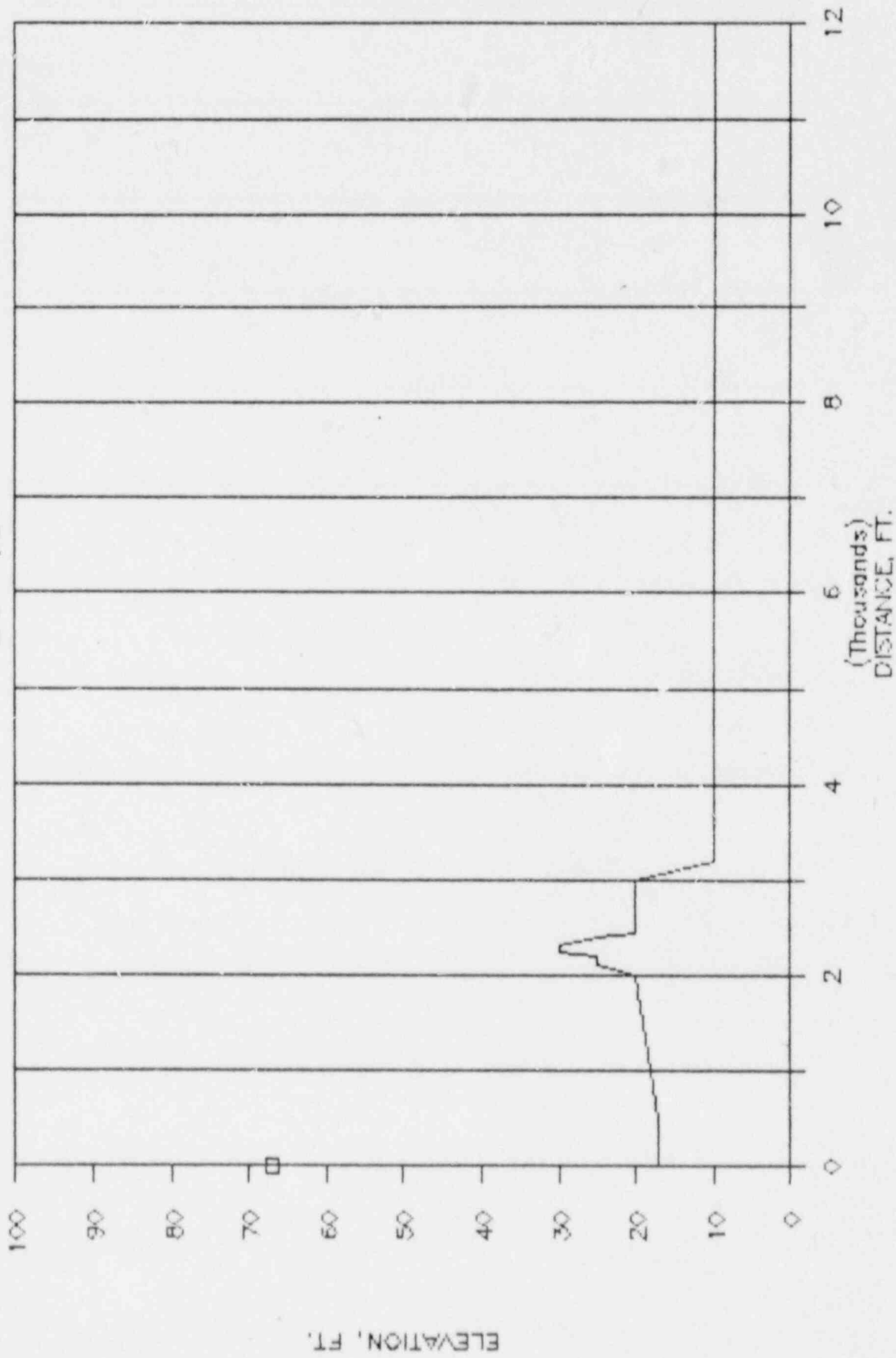
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #10-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITIO. 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.8	98.4	89.7	78.9	71.2	59.3	55.2
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.8	98.4	89.7	78.9	71.2	65.0	55.2
WSW	105.6	91.2	75.7	65.1	55.6	57.4	47.6
SW	105.6	91.2	75.7	59.7	57.3	50.3	36.8
SSW	105.6	91.2	75.7	58.2	54.9	47.1	32.1
S	105.6	91.2	75.7	57.9	54.1	46.1	30.6
SSE	105.6	91.2	75.7	57.2	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	52.4	50.3	36.8
ESE	105.8	98.4	89.7	78.9	71.2	57.8	52.0

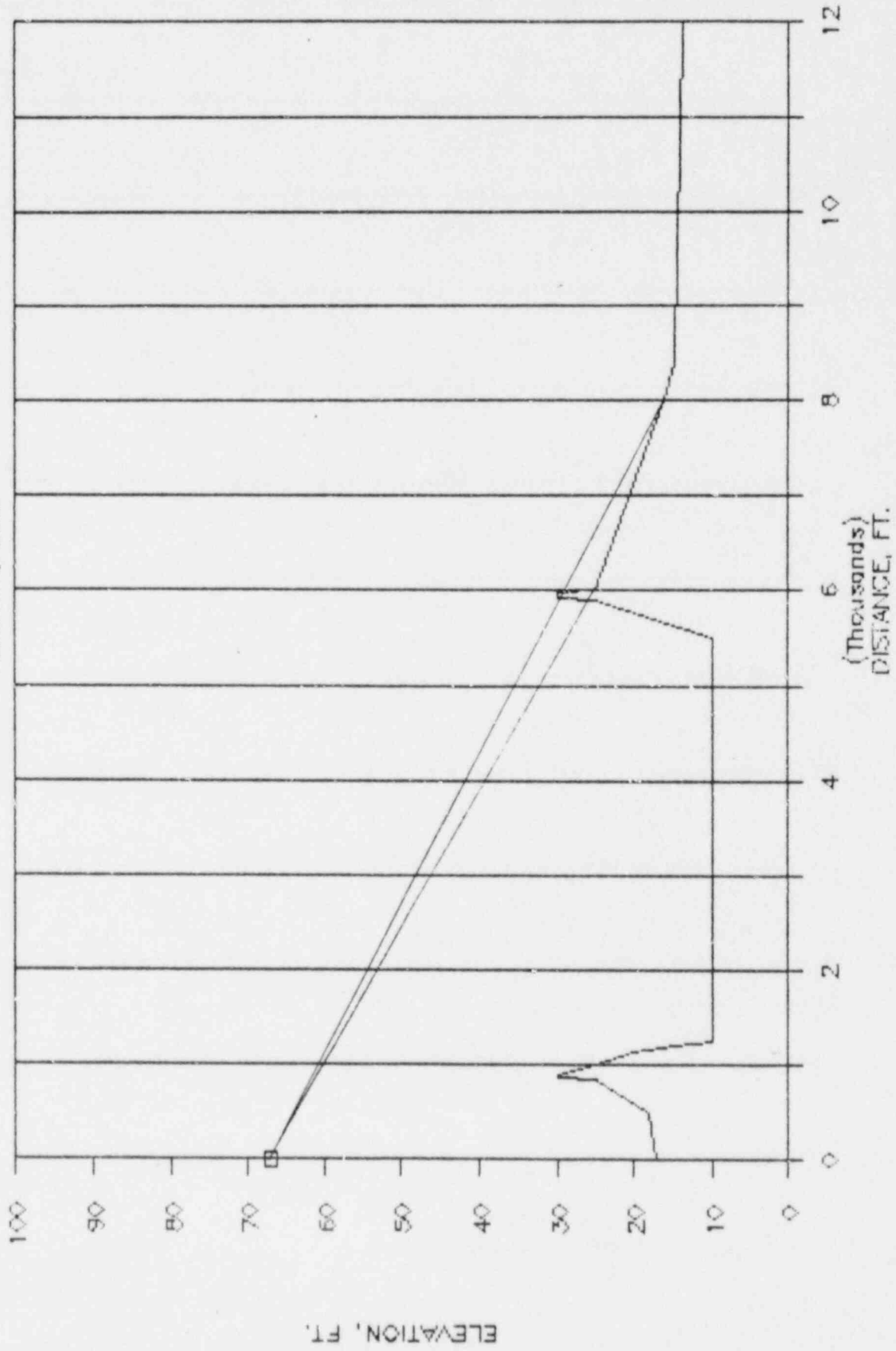
WATERFORD 11

AZIMUTH, E



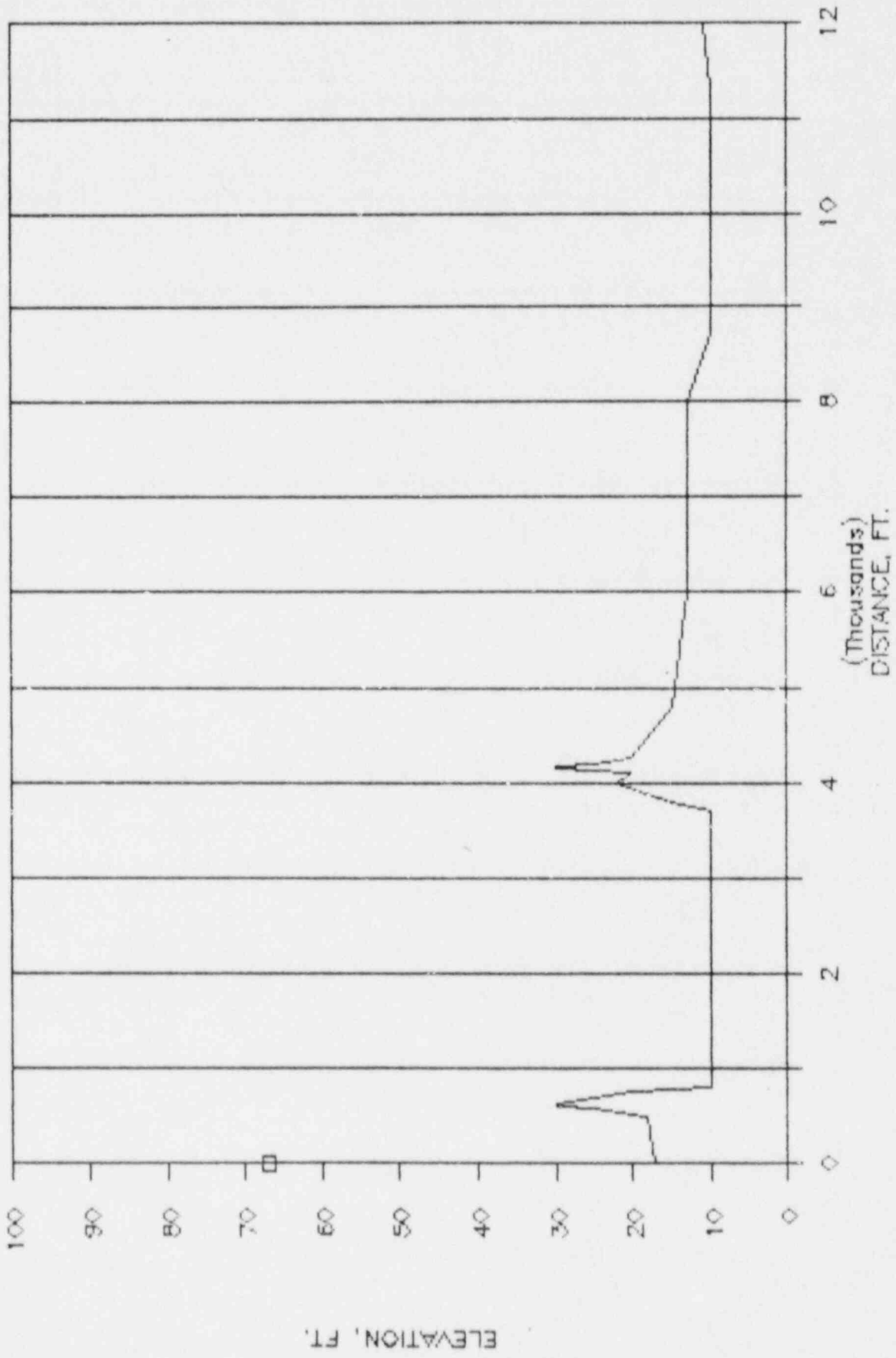
WATERFORD 11

AZIMUTH, ONE



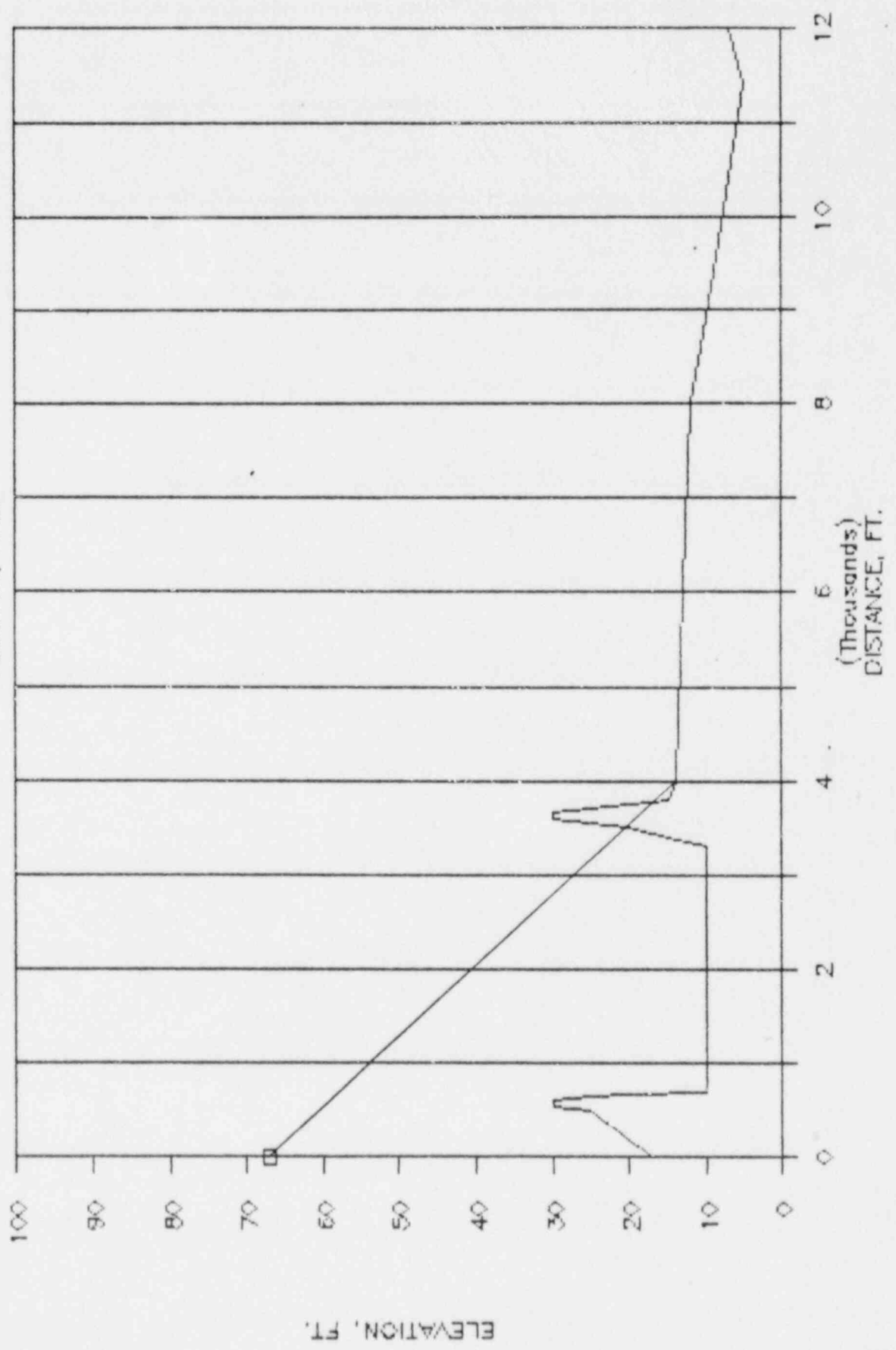
WATERFORD 11

AZIMUTH, NE



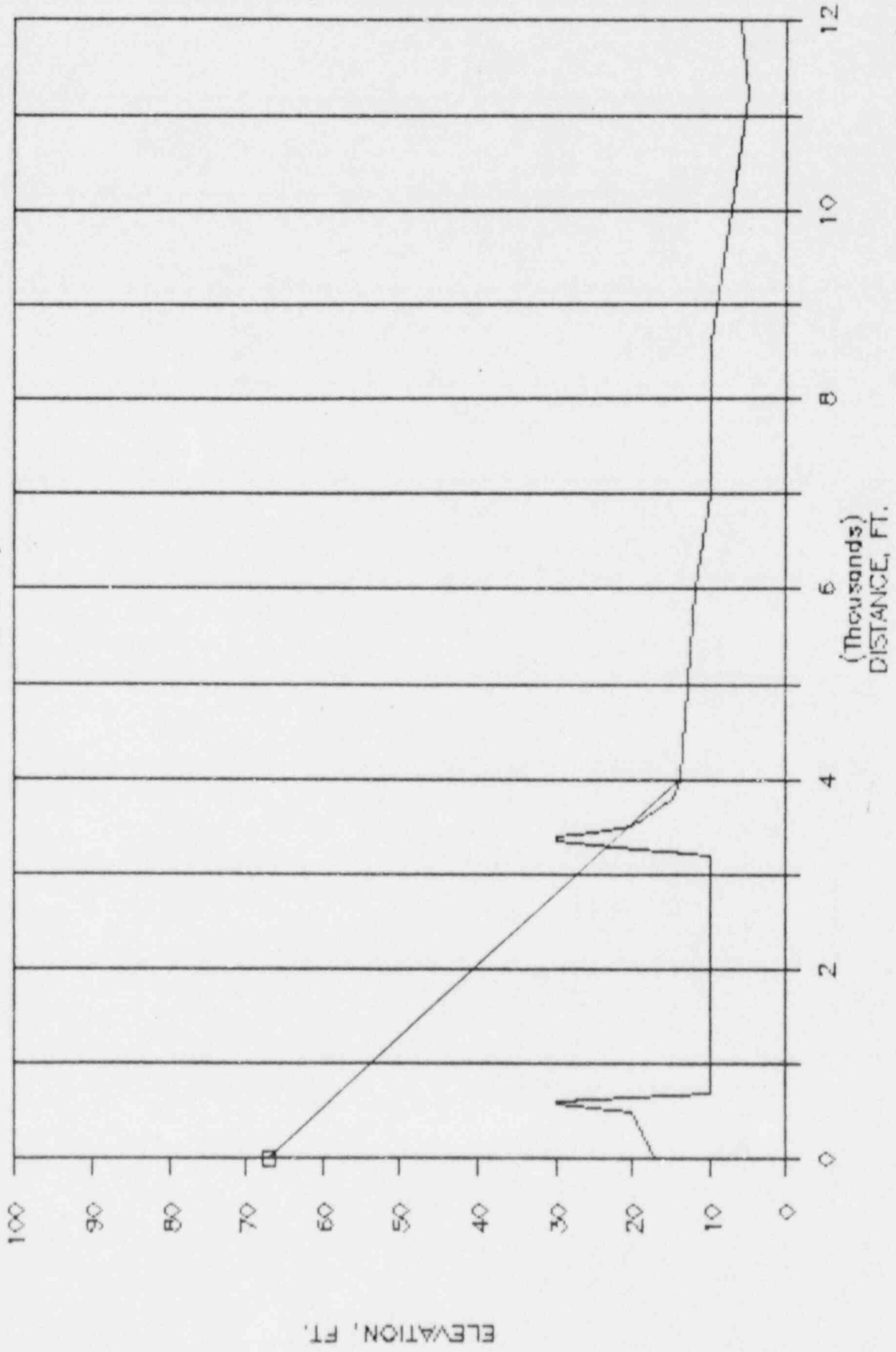
WATERFORD 11

AZIMUTH, NINE



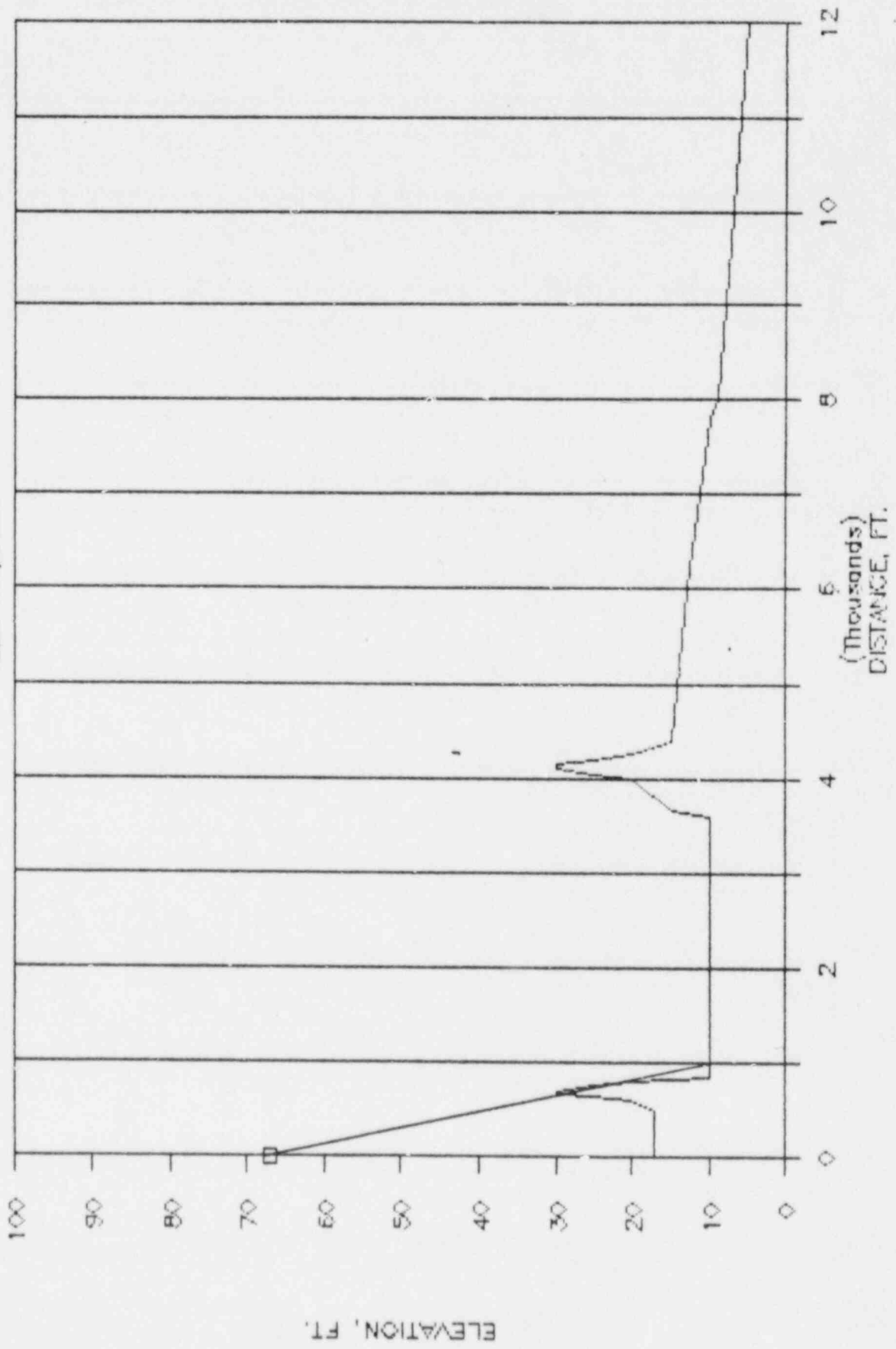
WATERFORD 11

AZIMUTH, N



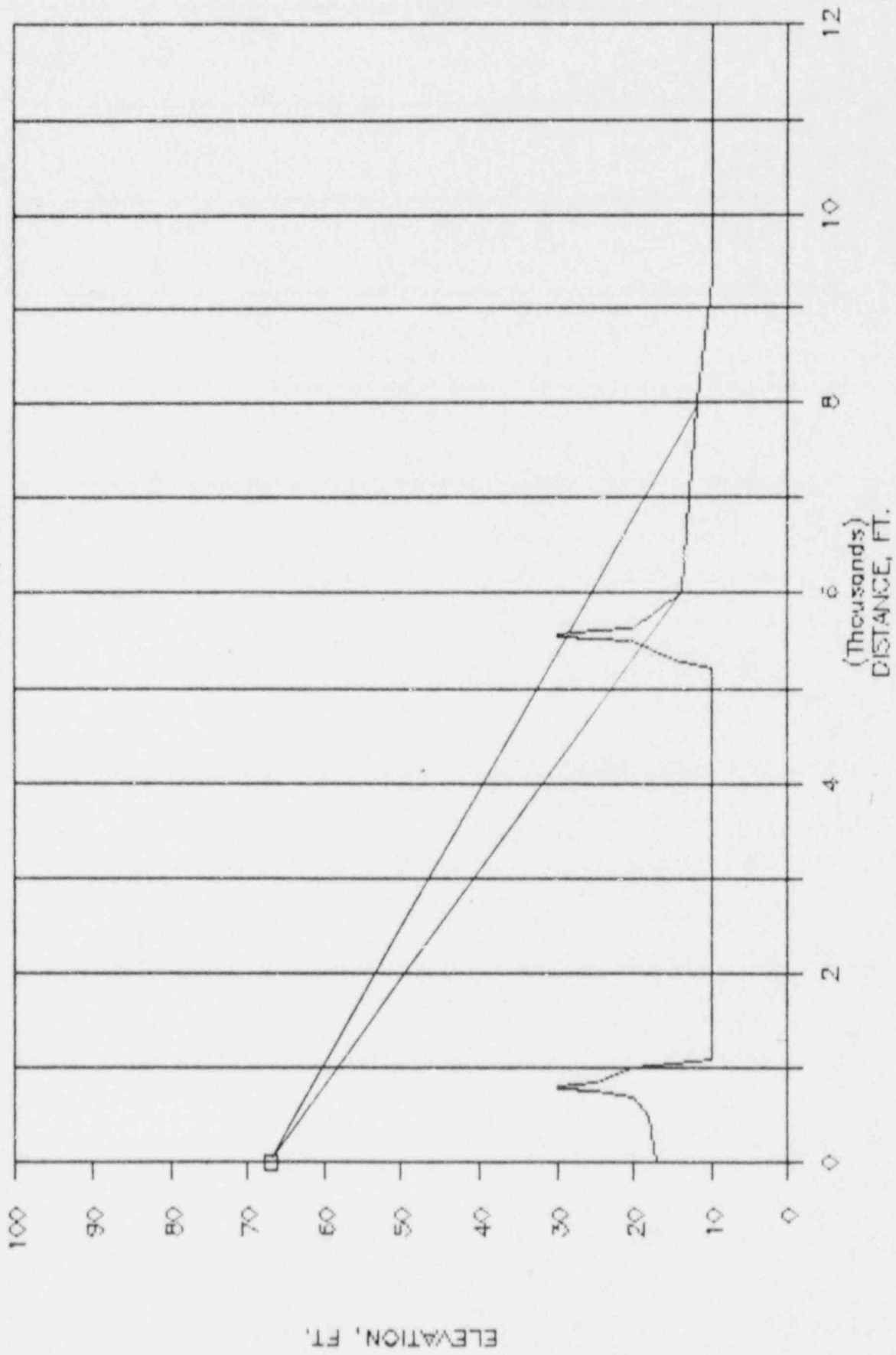
WATERFORD 11

AZIMUTH, NNW



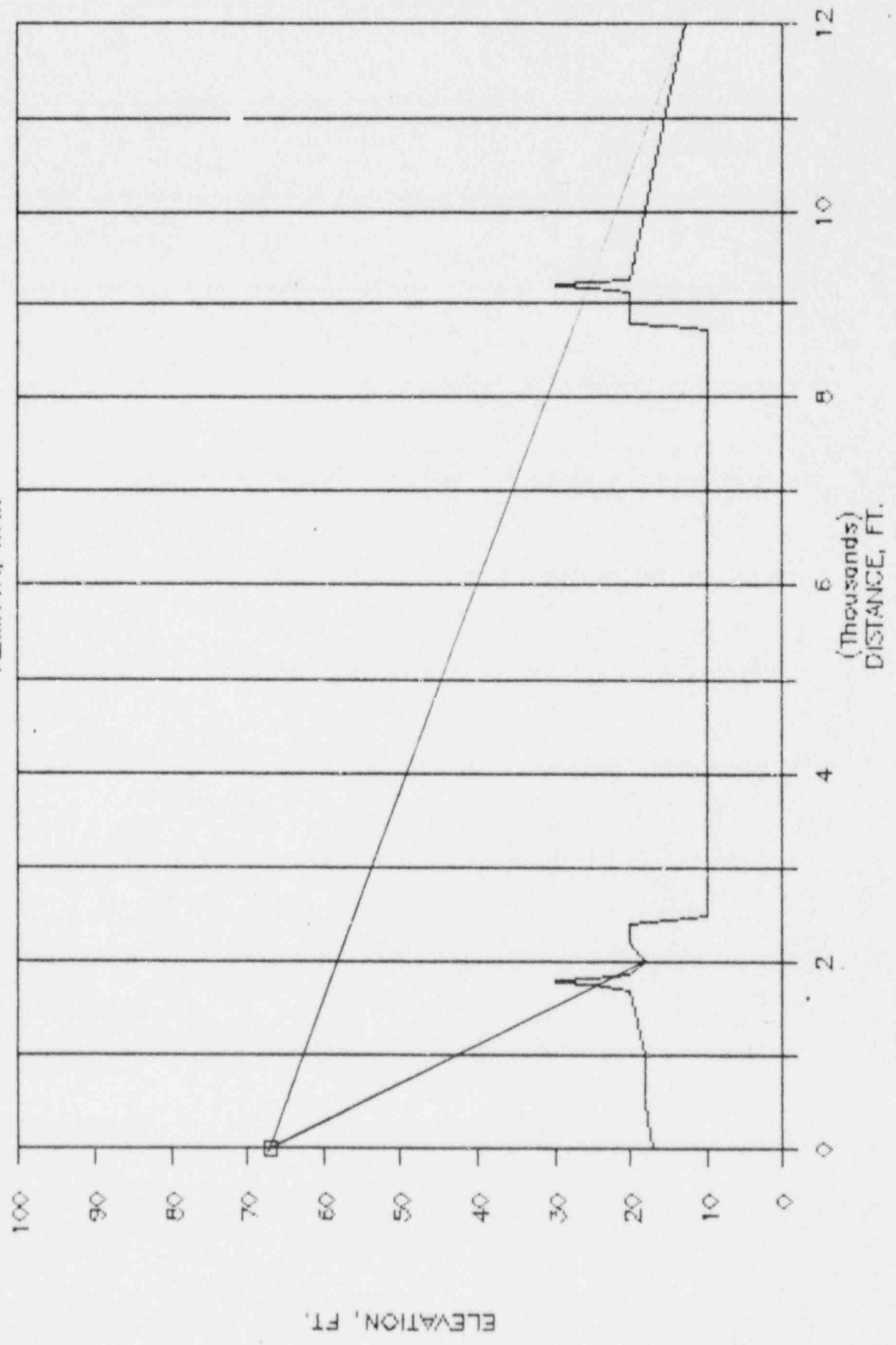
WATERFORD 11

AZIMUTH, NW



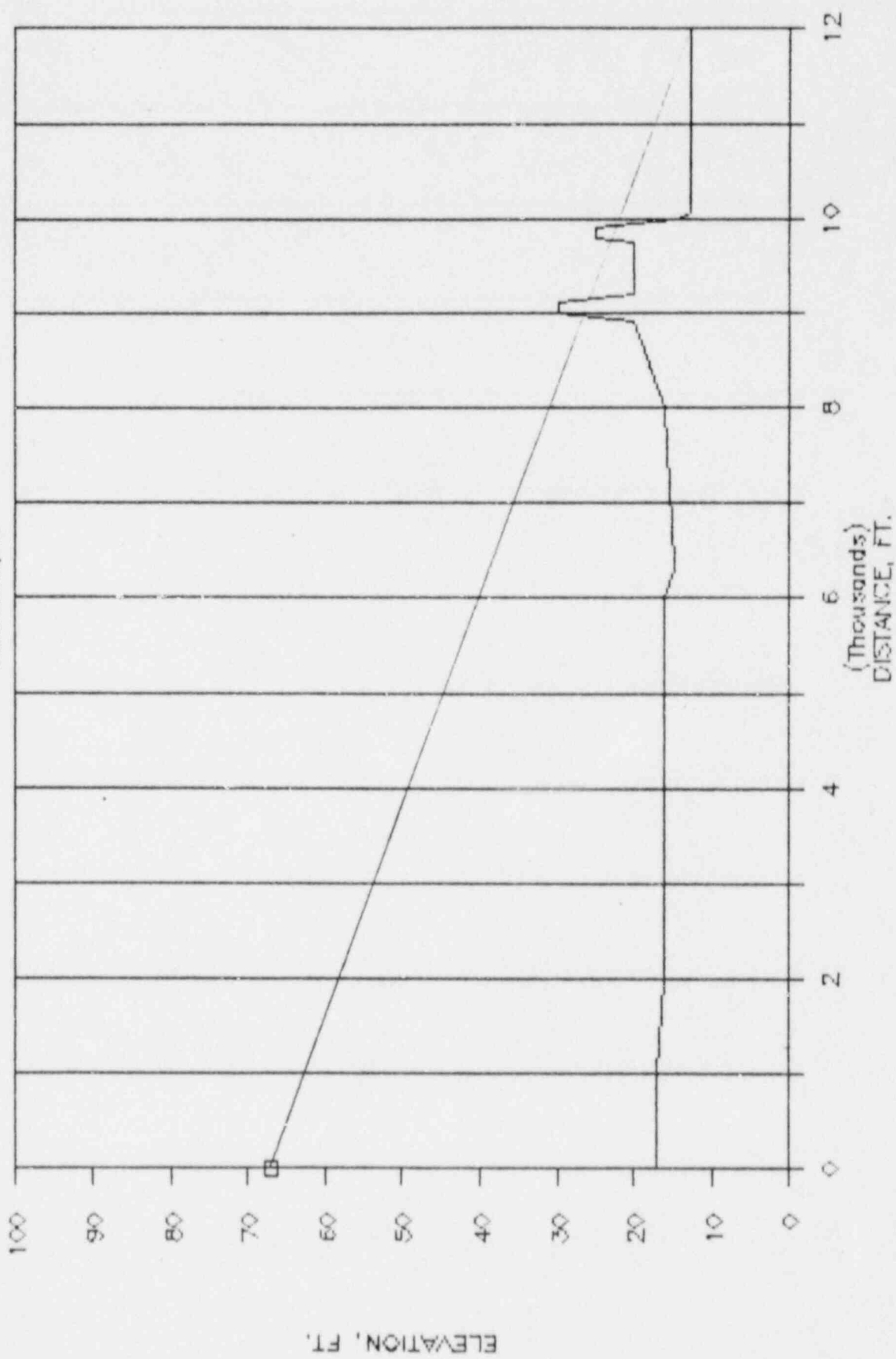
WATERFORD 11

AZIMUTH, WNW



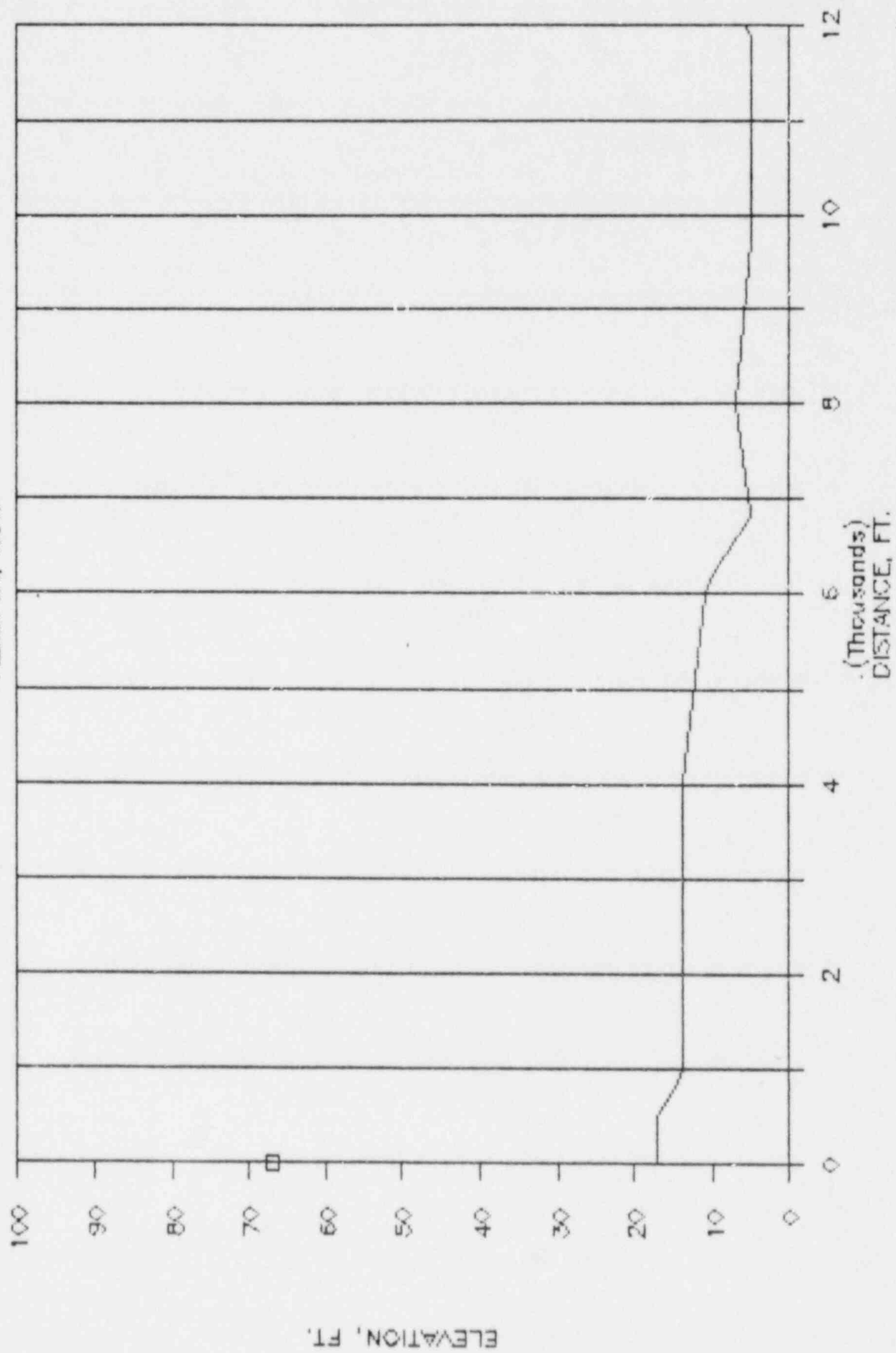
WATERFORD 11

AZIMUTH, W



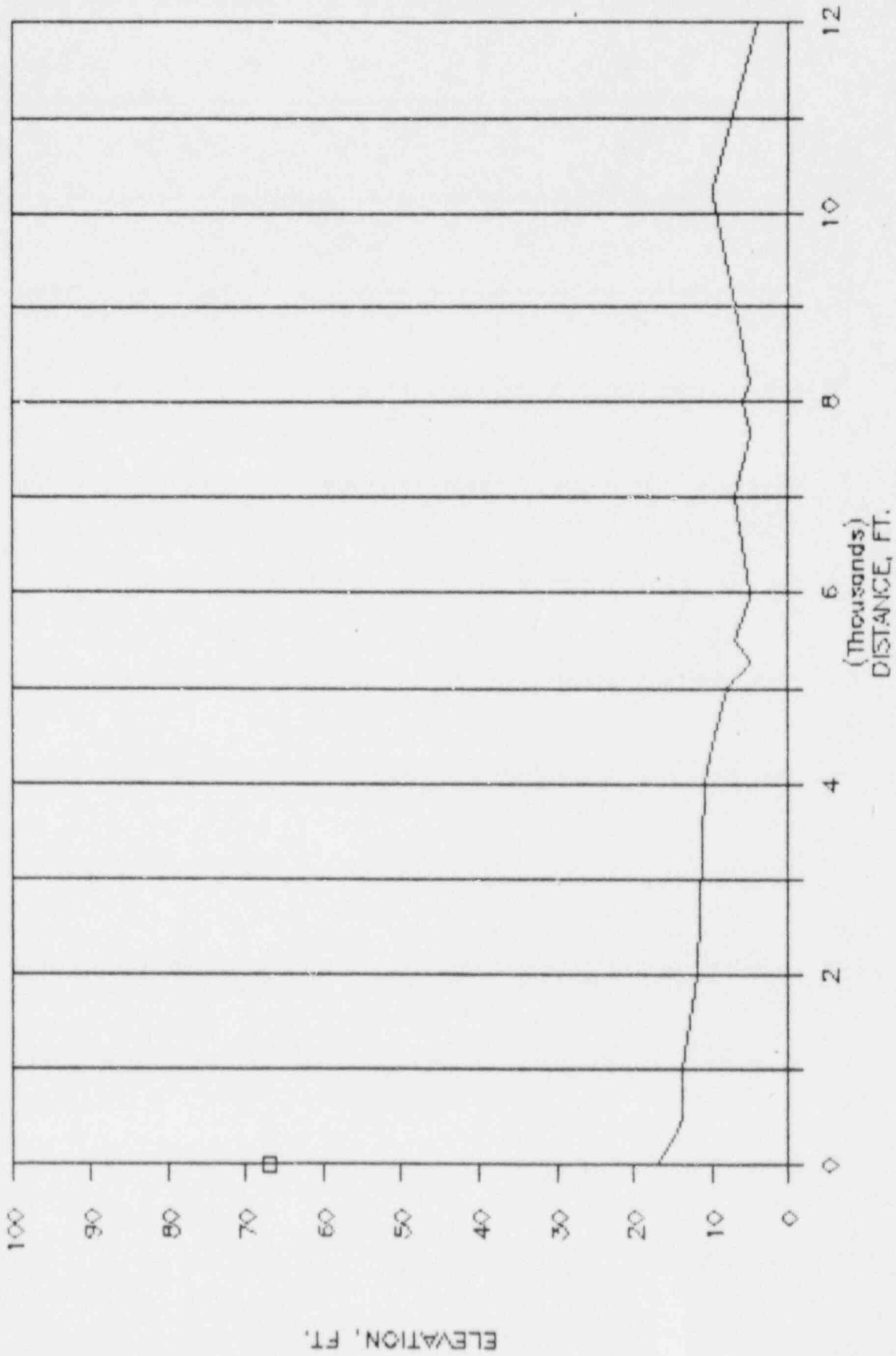
WATERFORD 11

AZIMUTH, WSW



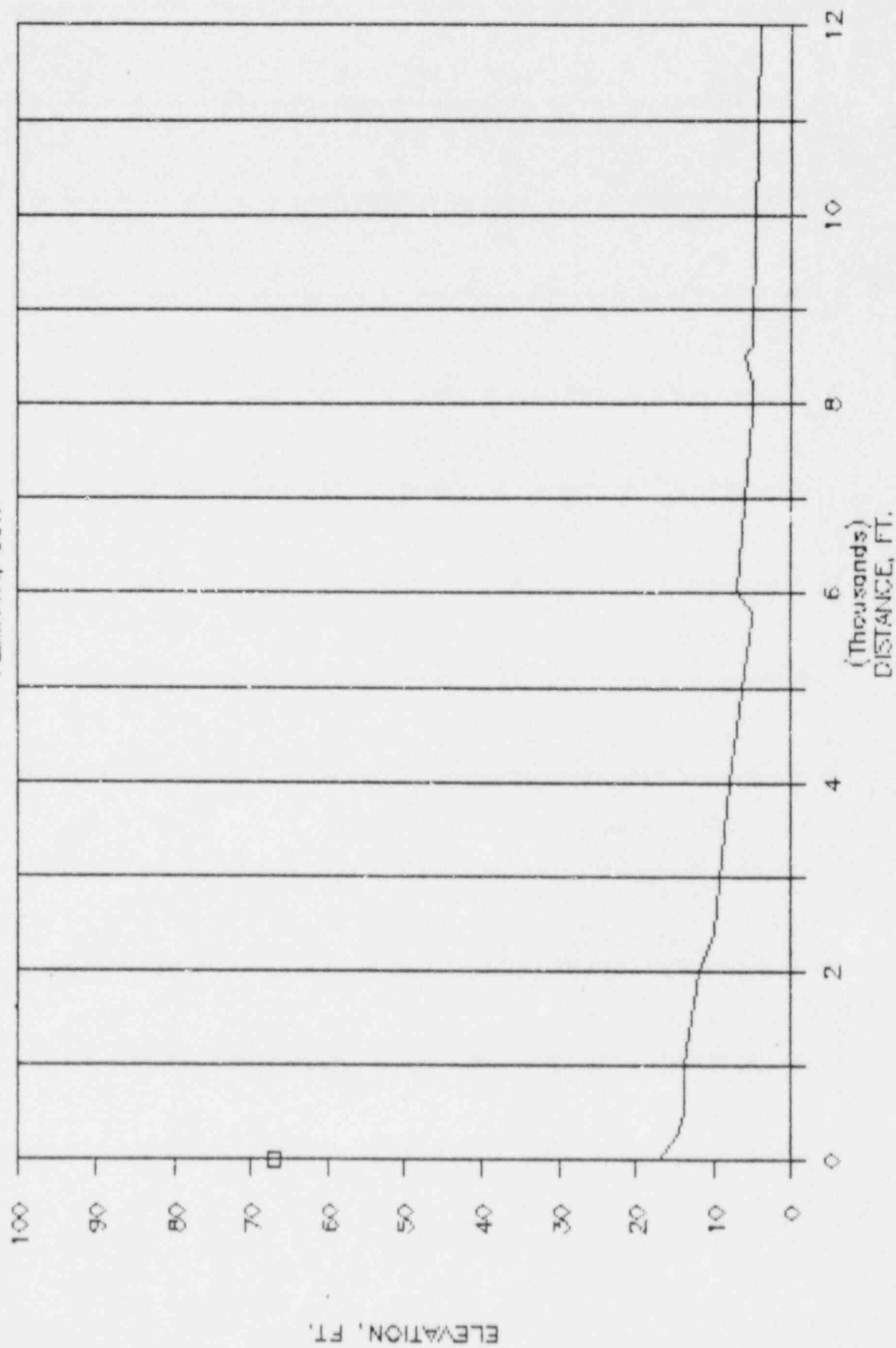
WATERFORD 11

AZIMUTH, SW



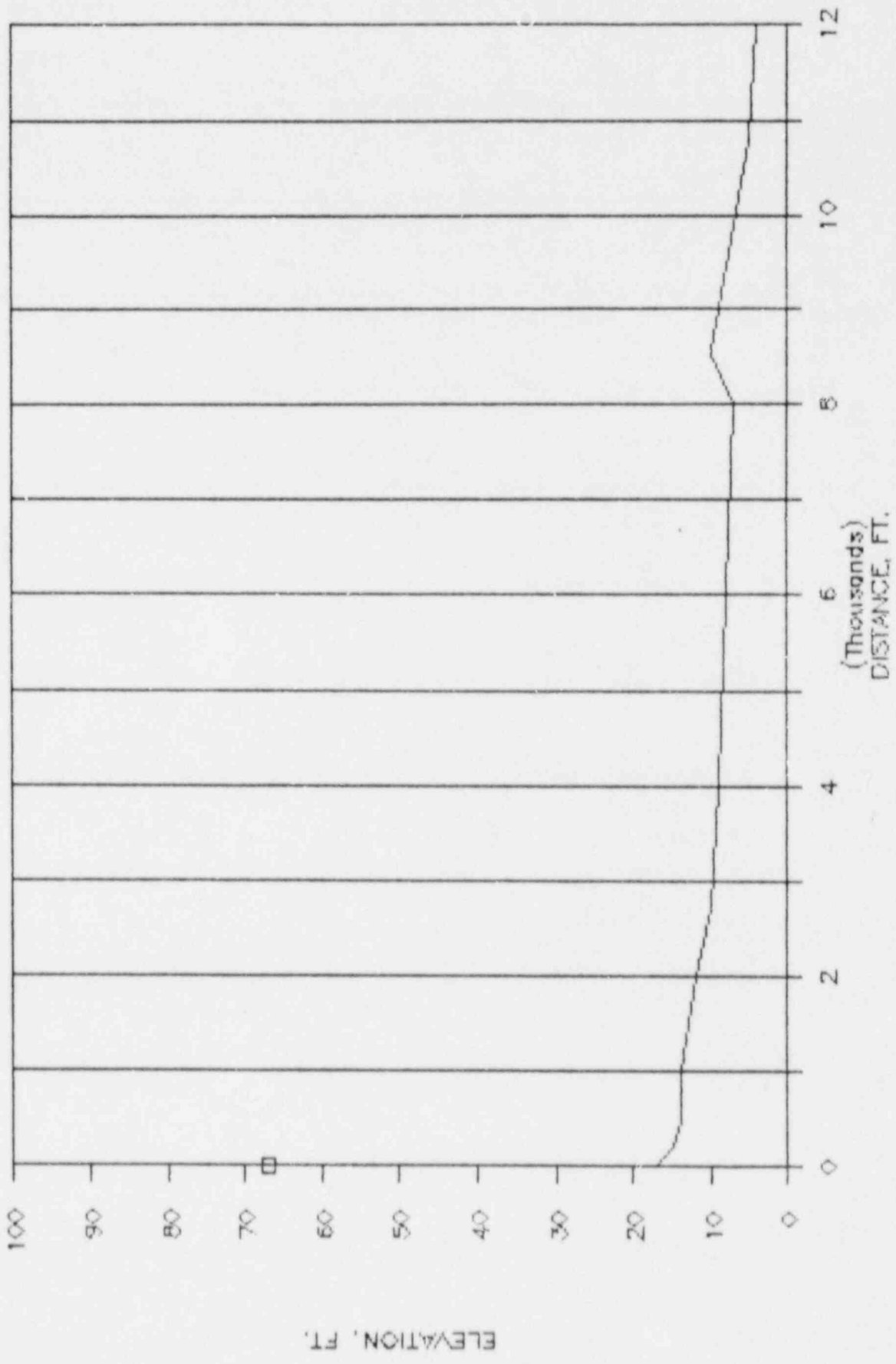
WATERFORD 11

AZIMUTH, SSW



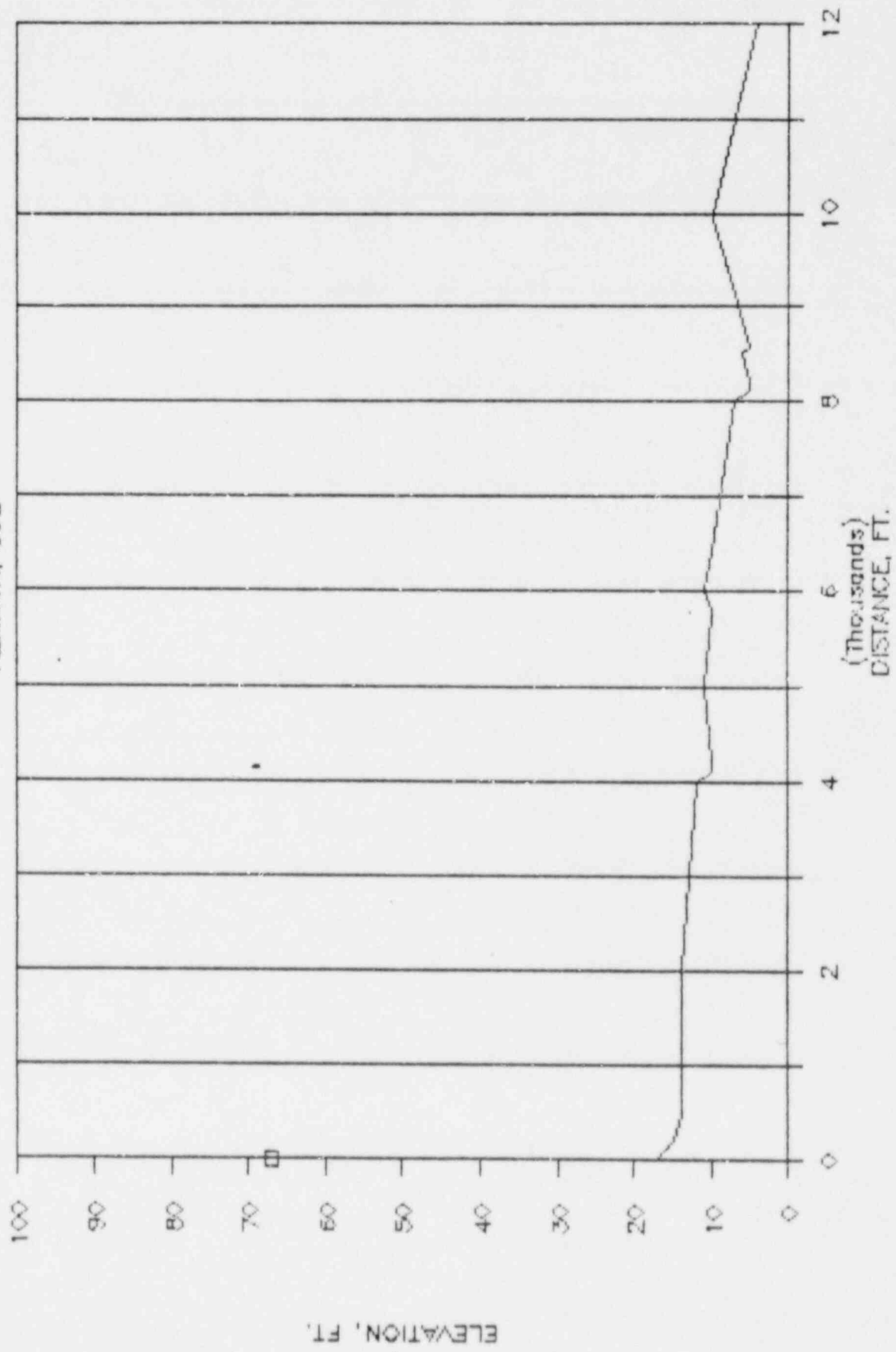
WATERFORD 11

AZIMUTH, 5



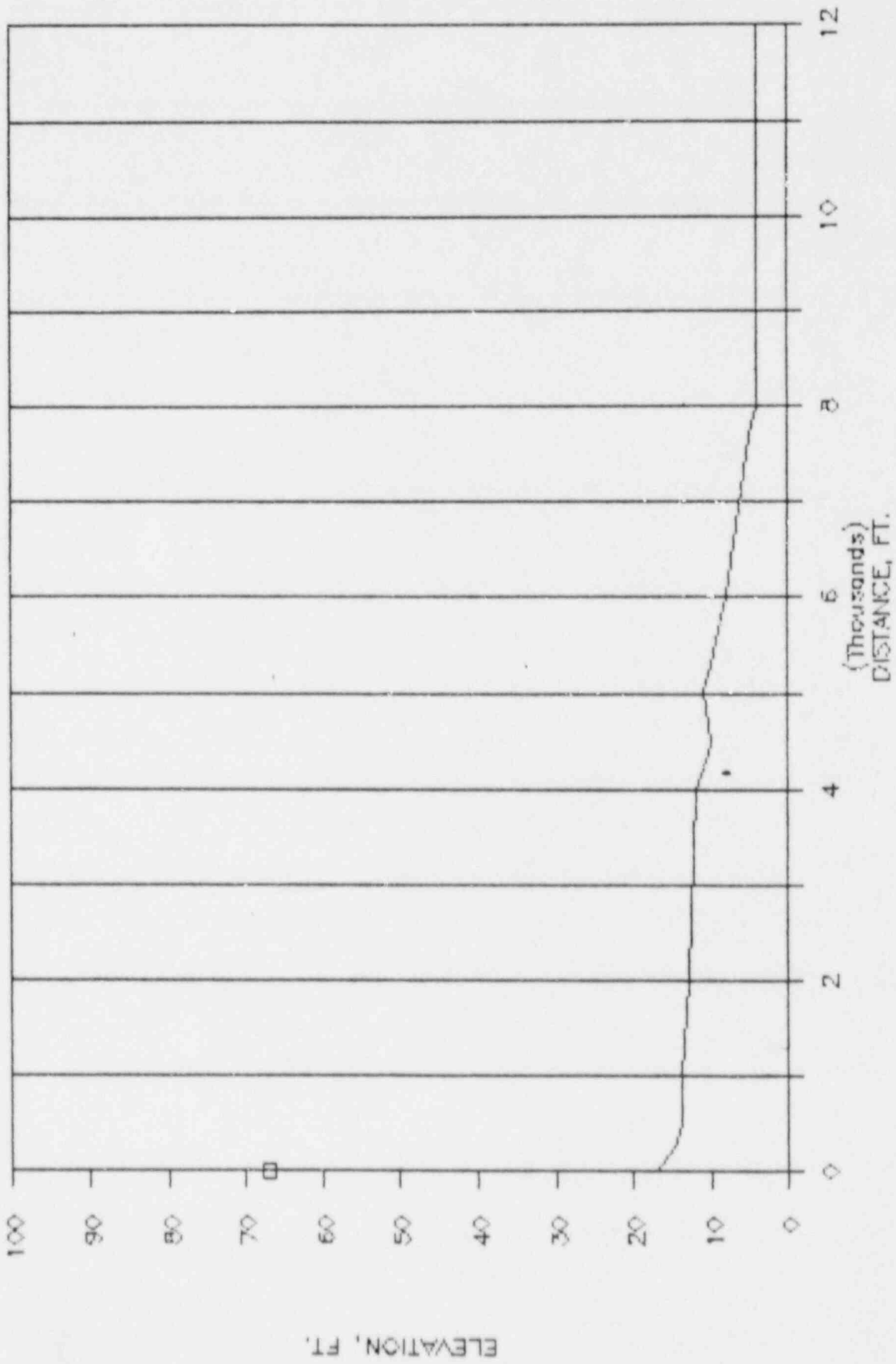
WATERFORD 11

AZIMUTH, SSE



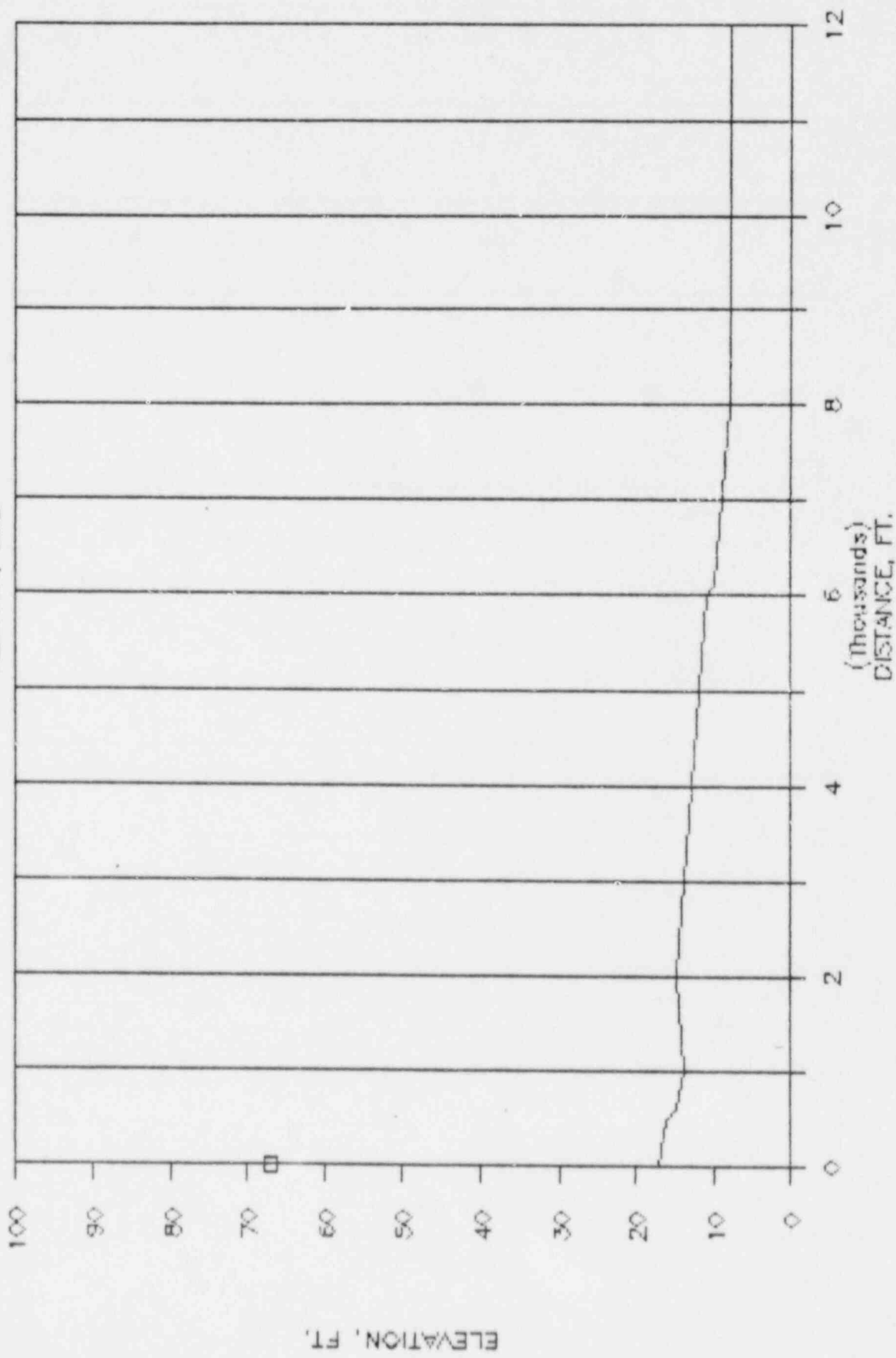
WATERFORD 11

AZIMUTH, SE



WATERFORD 11

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #11-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	17.00	HARD	0.	NO	0.	0.
2	1000.	90.00	18.00	HARD	0.	NO	0.	0.
3	2000.	90.00	20.00	HARD	0.	NO	0.	0.
4	4000.	90.00	10.00	HARD	0.	NO	0.	0.
5	6000.	90.00	10.00	HARD	0.	NO	0.	0.
6	8000.	90.00	10.00	HARD	0.	NO	0.	0.
7	12000.	90.00	10.00	HARD	0.	NO	0.	0.
8	500.	67.50	18.00	HARD	0.	NO	0.	0.
9	1000.	67.50	25.00	HARD	0.	NO	0.	0.
10	2000.	67.50	10.00	HARD	0.	NO	0.	0.
11	4000.	67.50	10.00	HARD	0.	NO	0.	0.
12	6000.	67.50	25.00	HARD	0.	YES	5925.	30.
13	8000.	67.50	16.00	HARD	0.	YES	5925.	30.
14	12000.	67.50	14.00	HARD	0.	NO	0.	0.
15	500.	45.00	18.00	HARD	0.	NO	0.	0.
16	1000.	45.00	10.00	HARD	0.	NO	0.	0.
17	2000.	45.00	10.00	HARD	0.	NO	0.	0.
18	4000.	45.00	22.00	HARD	0.	NO	0.	0.
19	6000.	45.00	13.00	HARD	0.	NO	0.	0.
20	8000.	45.00	13.00	HARD	0.	NO	0.	0.
21	12000.	45.00	11.00	HARD	0.	NO	0.	0.
22	500.	22.50	25.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	10.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	10.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	14.00	SOFT	0.	YES	3650.	30.
26	6000.	22.50	13.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	12.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	7.00	SOFT	0.	NO	0.	0.
29	500.	0.0	20.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	10.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	10.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	14.00	SOFT	0.	YES	3400.	30.
33	6000.	0.0	12.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	10.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	6.00	SOFT	0.	NO	0.	0.
36	500.	337.50	17.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	10.00	SOFT	0.	YES	700.	30.
38	2000.	337.50	10.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	20.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	13.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	9.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	5.00	SOFT	0.	NO	0.	0.
43	500.	315.00	18.00	SOFT	0.	NO	0.	0.
44	1900.	315.00	20.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	10.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	10.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	14.00	SOFT	0.	YES	5575.	30.
48	8000.	315.00	12.00	SOFT	0.	YES	5575.	30.
49	12000.	315.00	10.00	SOFT	0.	NO	0.	0.
50	500.	292.50	18.00	HARD	0.	NO	0.	0.
51	1000.	292.50	18.00	HARD	0.	NO	0.	0.
52	2000.	292.50	18.00	RARA	0.	YES	1800.	30.
53	4000.	292.50	10.00	HARD	0.	NO	0.	0.
54	6000.	292.50	10.00	HARD	0.	NO	0.	0.
55	8000.	292.50	10.00	HARD	0.	NO	0.	0.
56	12000.	292.50	13.00	HARD	0.	YES	9200.	30.
57	500.	270.00	17.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	17.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	16.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	16.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	16.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	16.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	13.00	SOFT	0.	YES	9100.	30.
64	500.	247.50	17.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	14.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	14.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	14.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	11.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	7.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	6.00	SOFT	0.	NO	0.	0.
71	500.	225.00	14.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	14.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	12.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	11.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	5.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	6.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	4.00	SOFT	0.	NO	0.	0.
78	500.	202.50	14.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	14.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	12.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	8.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	7.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	5.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	4.00	SOFT	0.	NO	0.	0.
85	500.	180.00	14.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	14.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	12.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	9.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	8.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	7.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	4.00	SOFT	0.	NO	0.	0.
92	500.	157.50	14.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	14.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	14.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	12.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	11.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	7.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	4.00	SOFT	0.	NO	0.	0.
99	500.	135.00	14.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	14.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	13.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	12.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	8.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	4.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	4.00	SOFT	0.	NO	0.	0.
106	500.	112.50	16.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	14.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	15.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	13.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	11.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	8.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	8.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 AHS SIREN #11-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT011	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
	X0=	0.0	Y0=	0.0	Z0=	67.00	HEIGHT ABOVE GROUND=		50.00			

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 AHS SIREN #11-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND	WIND SPEED(MPS)		TEMPERATURE(C)		RELATIVE BAROMETRIC	
					DIRECTION	H1	H2	H1	H2	HUMIDITY	PRESSURE(MM OF HG)
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

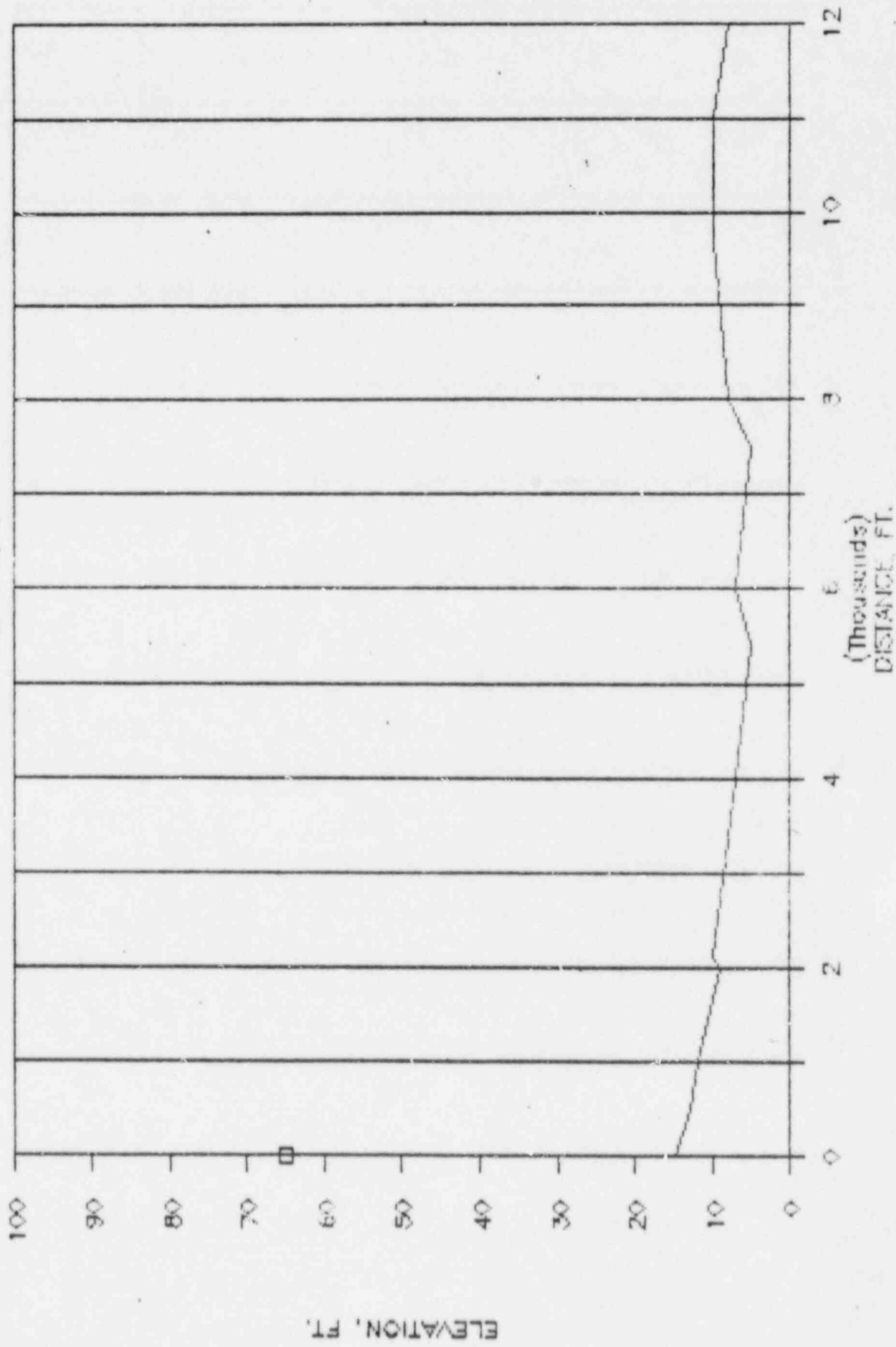
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 AHS SIREN #11-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER NET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.8	98.4	89.7	78.9	71.2	65.0	55.2
ENE	105.8	98.4	89.7	78.9	64.3	60.2	55.2
NE	105.8	98.4	89.7	78.9	71.2	65.0	55.2
NNE	105.7	91.2	75.7	58.2	60.9	57.4	50.8
N	105.6	91.2	75.7	59.5	60.9	57.4	50.8
NNW	105.6	86.0	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.3	75.7	65.1	54.1	57.4	50.8
WNW	105.8	98.4	82.5	78.9	71.2	65.0	50.3
W	105.6	91.2	75.7	65.1	60.9	57.4	45.9
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	32.1
S	105.6	91.2	75.7	62.8	54.1	46.2	30.6
SSE	105.6	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

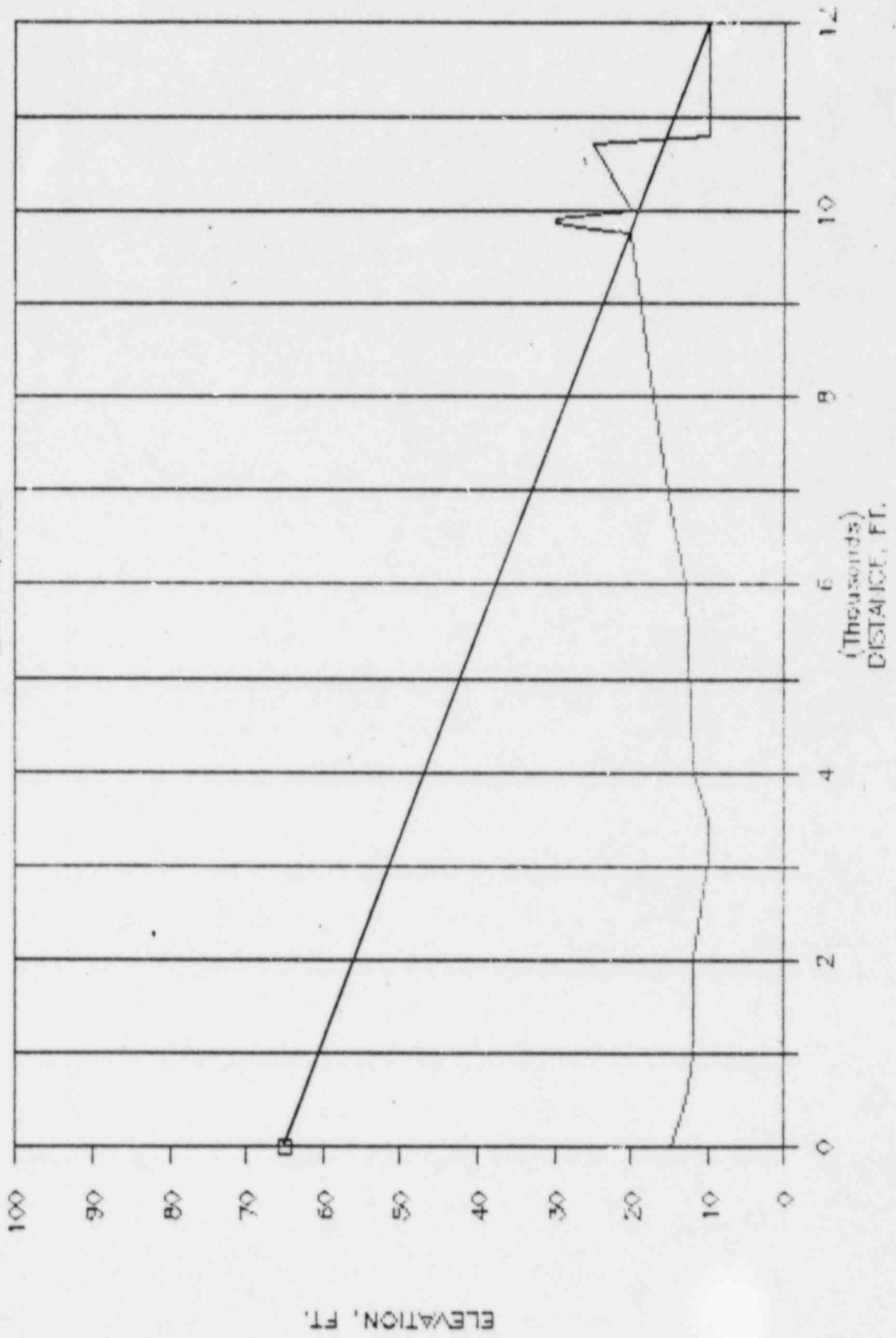
WATERFORD 12

AZIMUTH, E



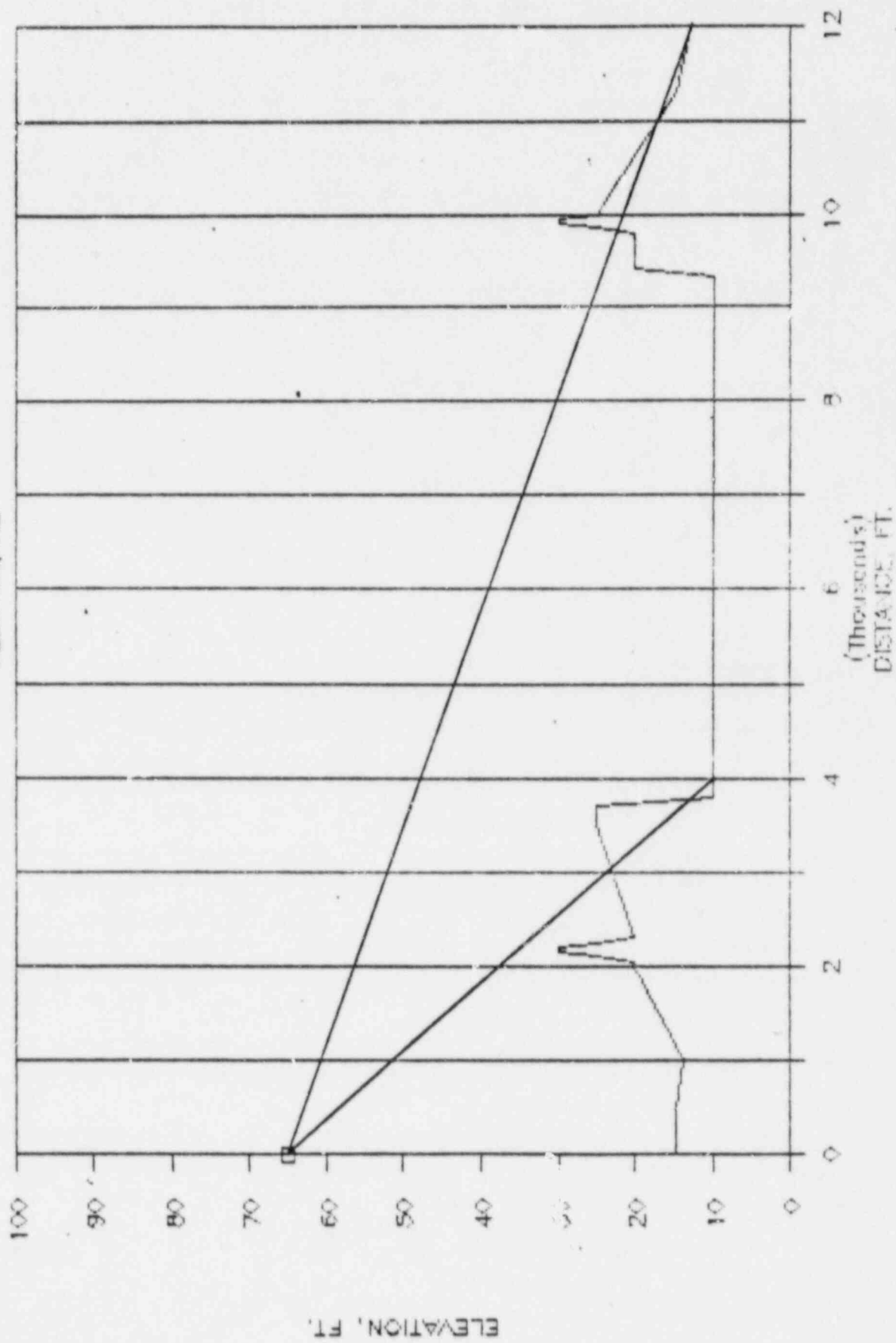
WATERFORD 12

AZIMUTH, BNE



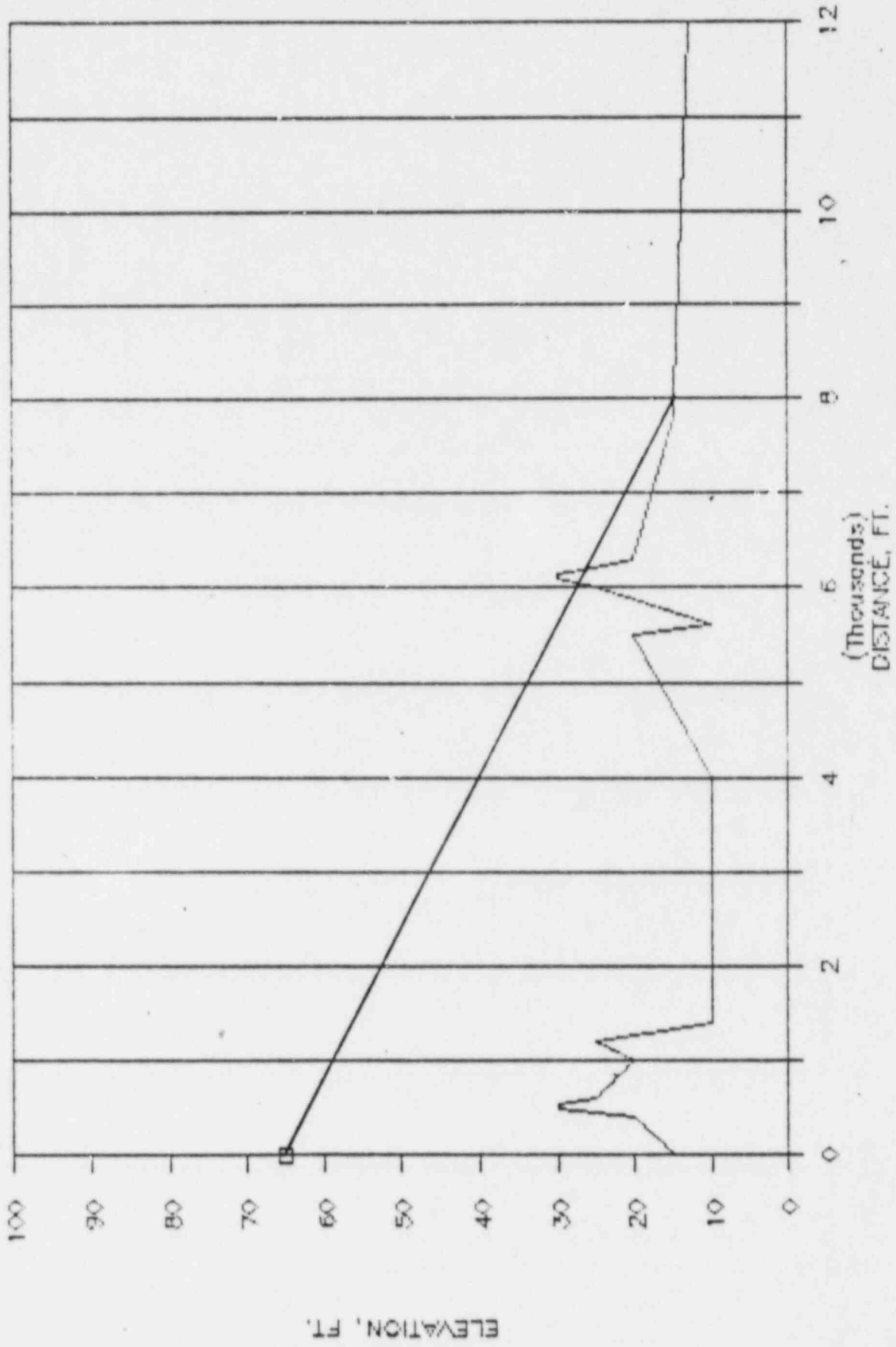
WATERFORD 12

AZIMUTH, NE



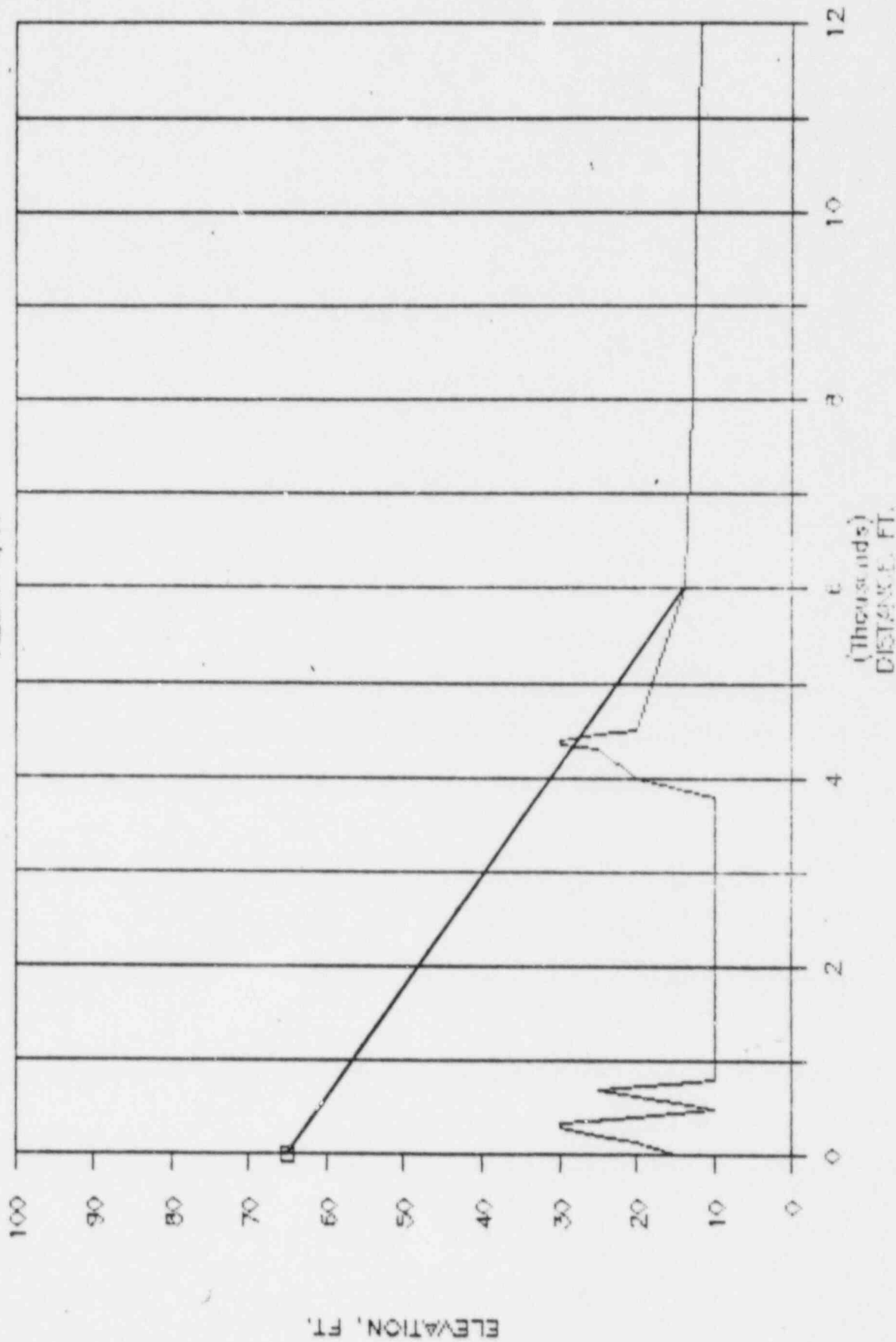
WATERFORD 12

AZIMUTH, NHE



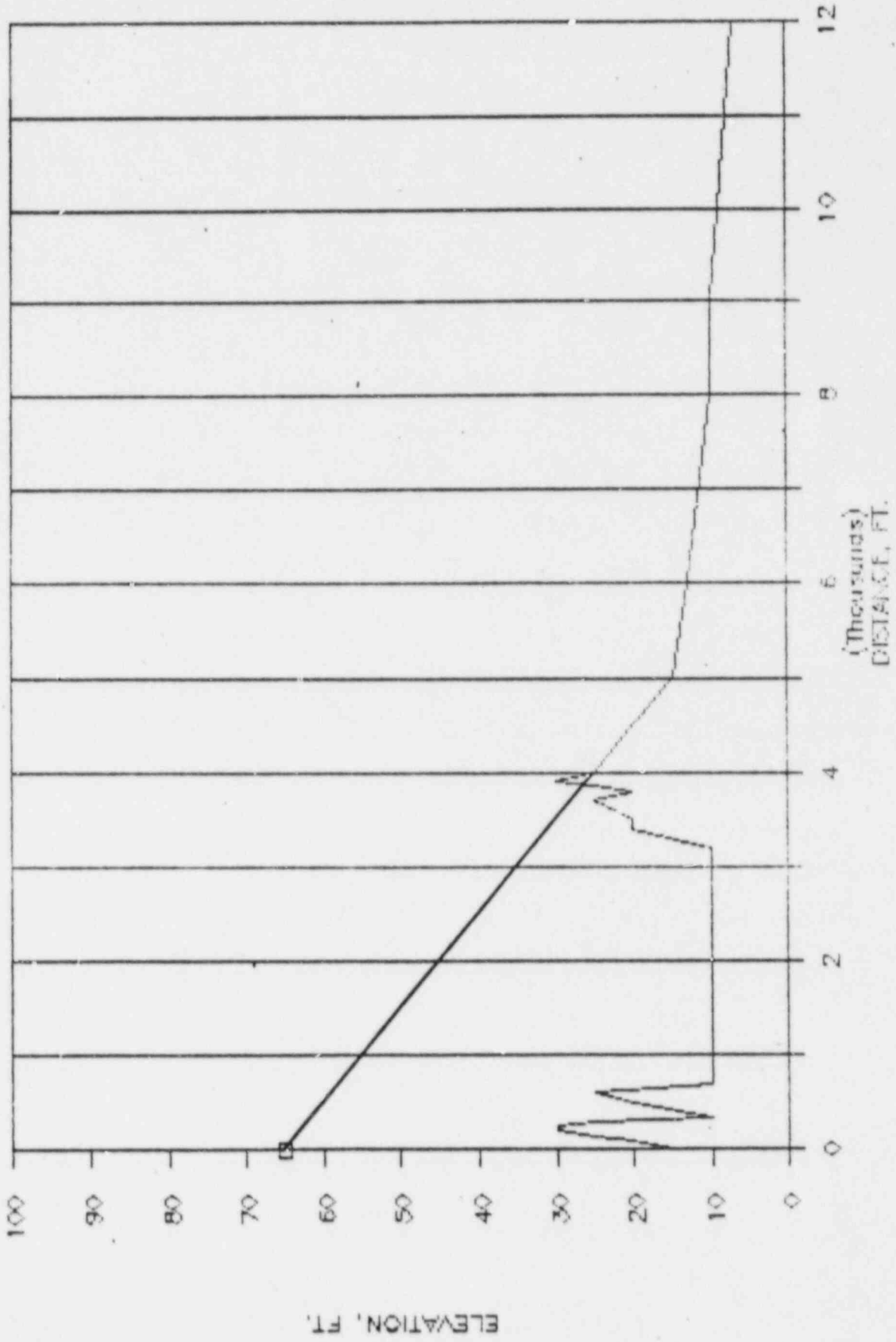
WATERFORD 12

AZIMUTH, N



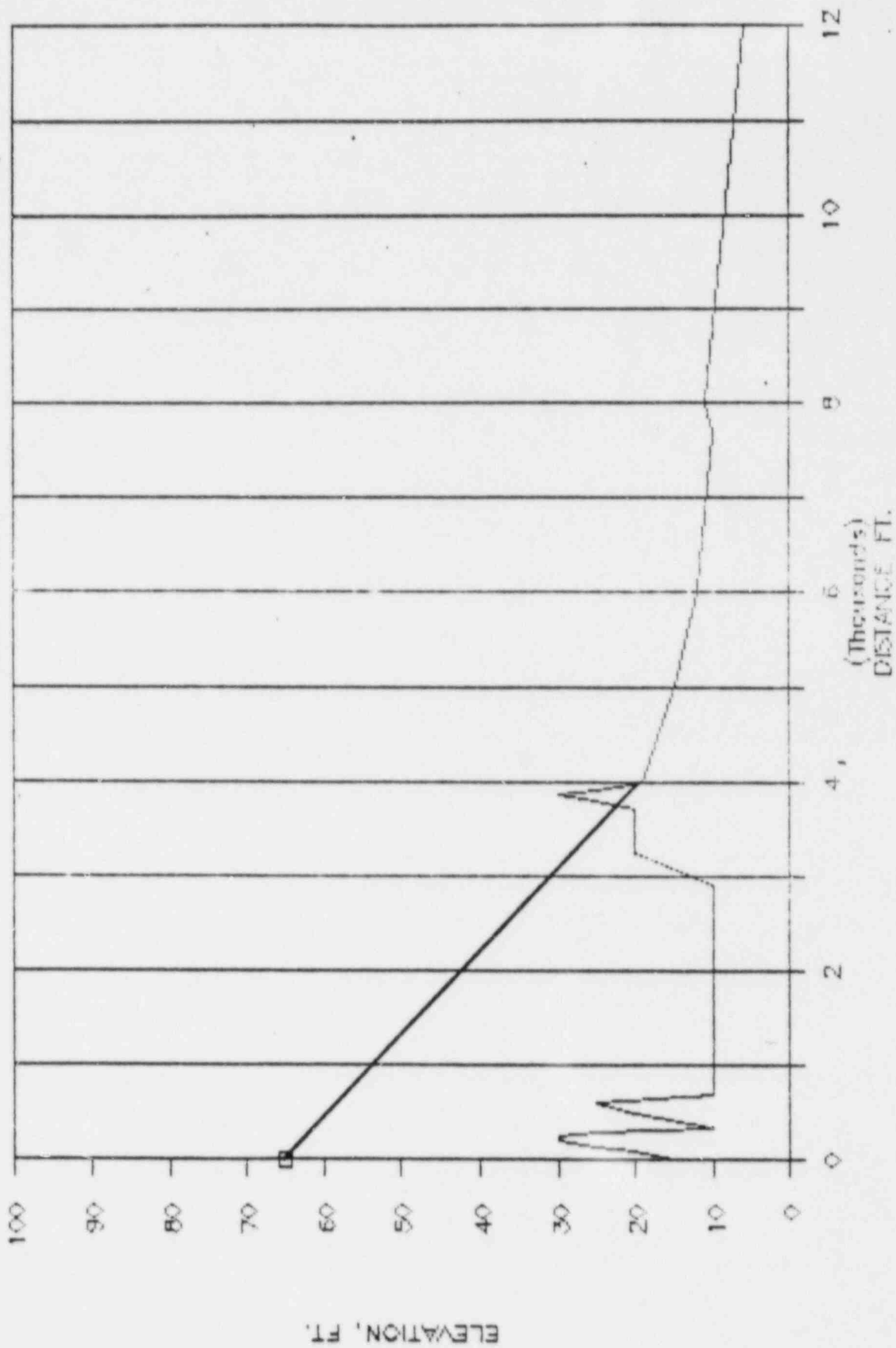
WATERFORD 12

AZIMUTH, NNW



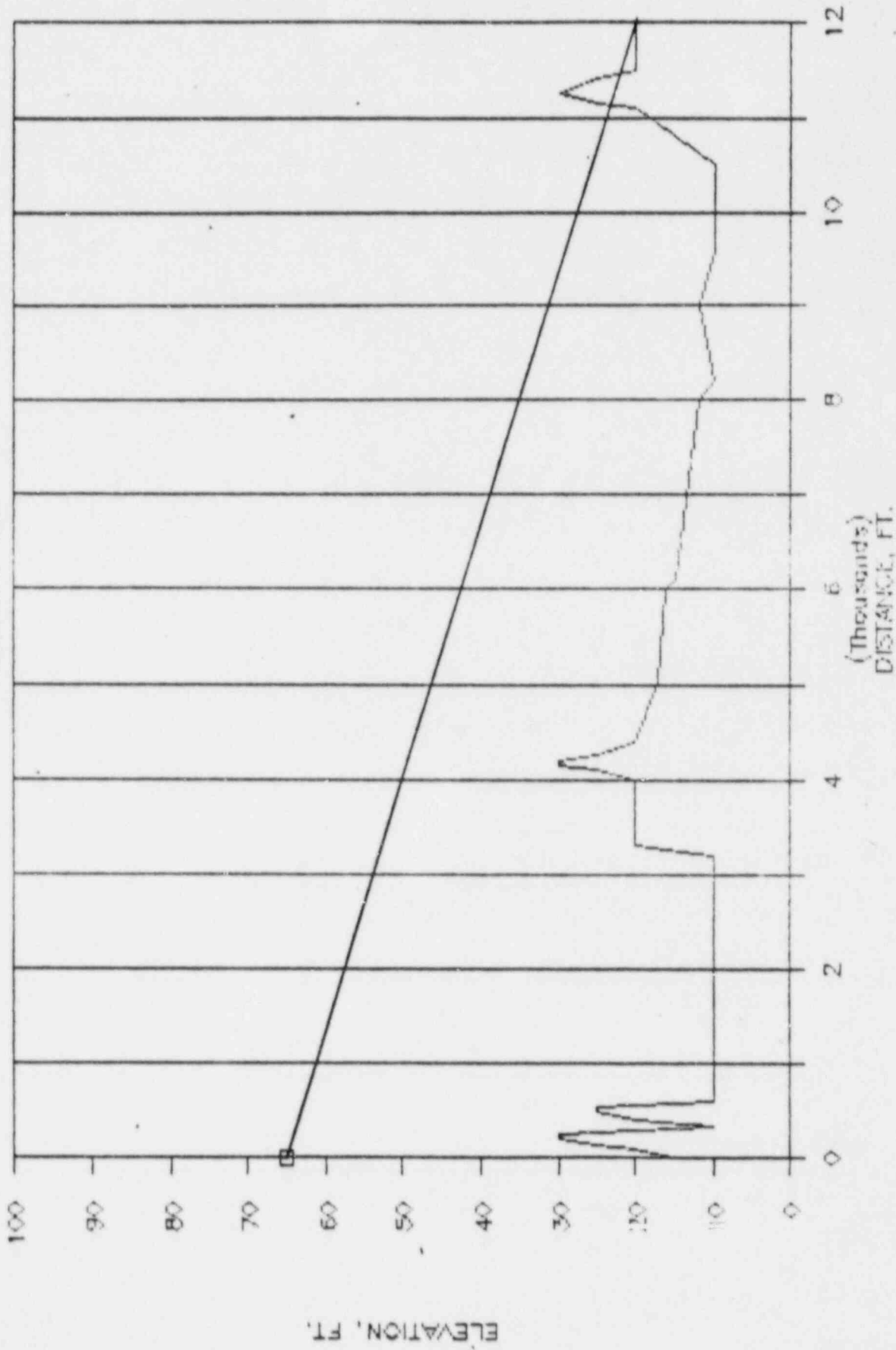
WATERFORD 12

AZIMUTH, NW



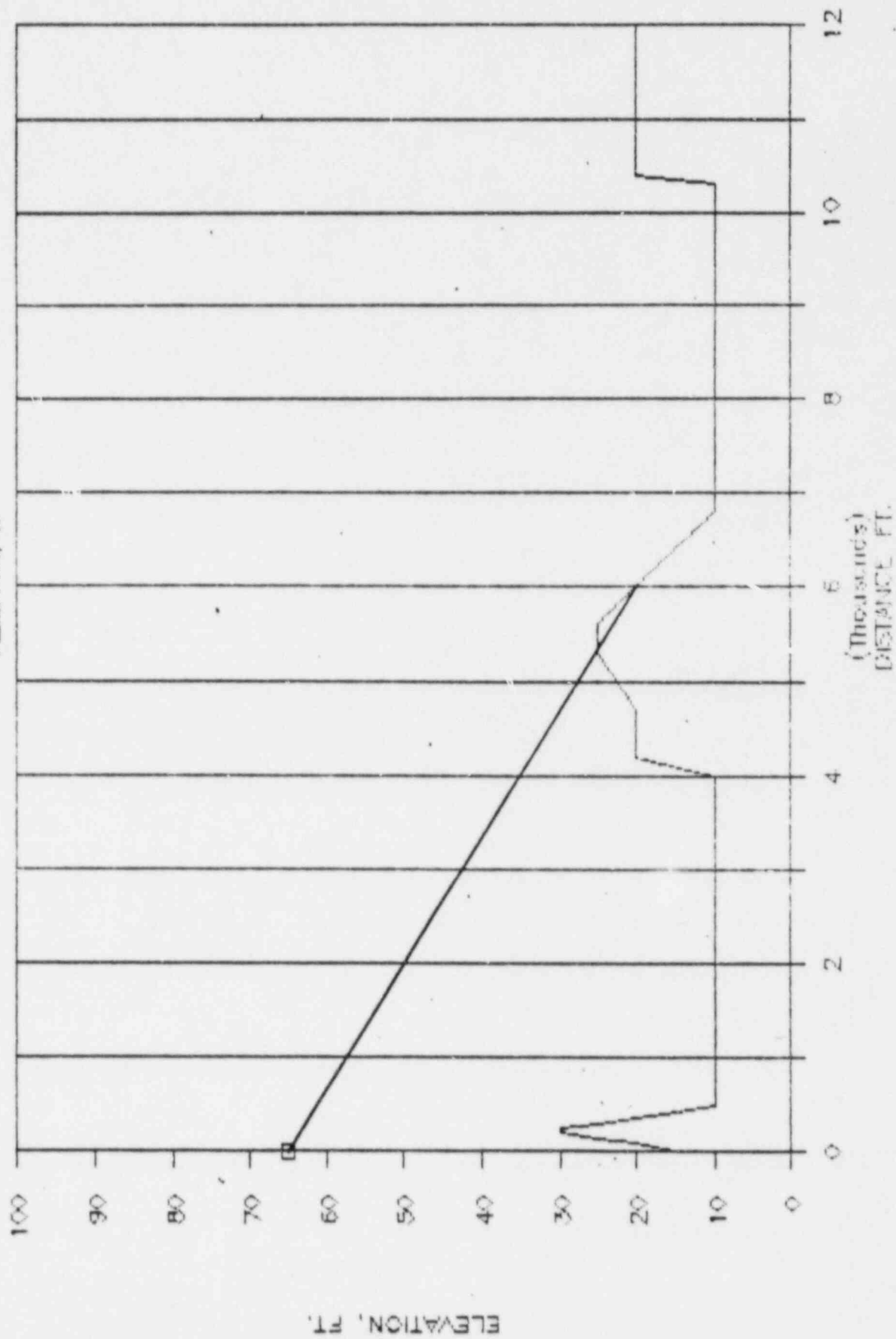
WATERFORD 12

AZIMUTH, WINW



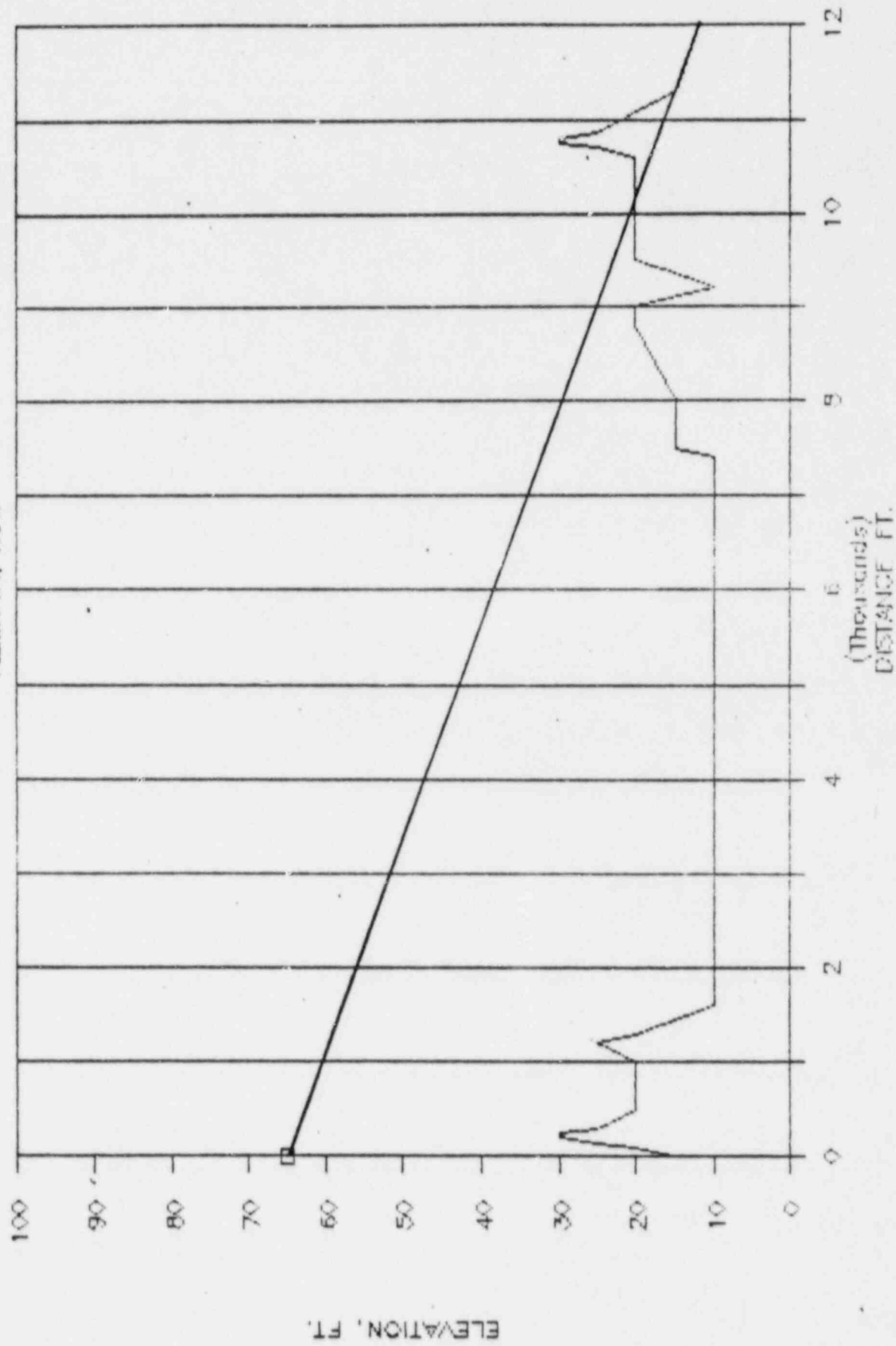
WATERFORD 12

AZIMUTH, W



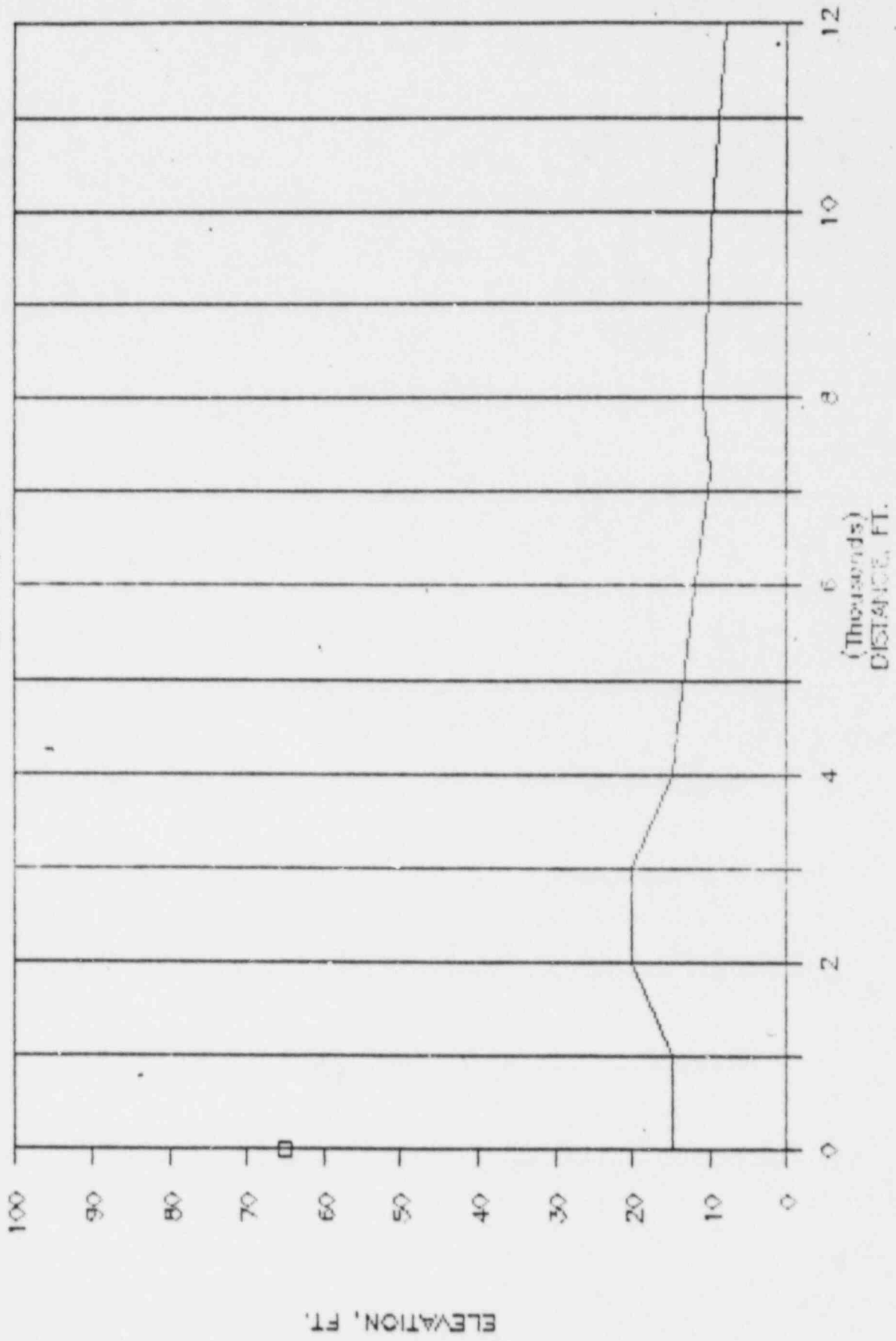
WATERFORD 12

AZIMUTH, WSW



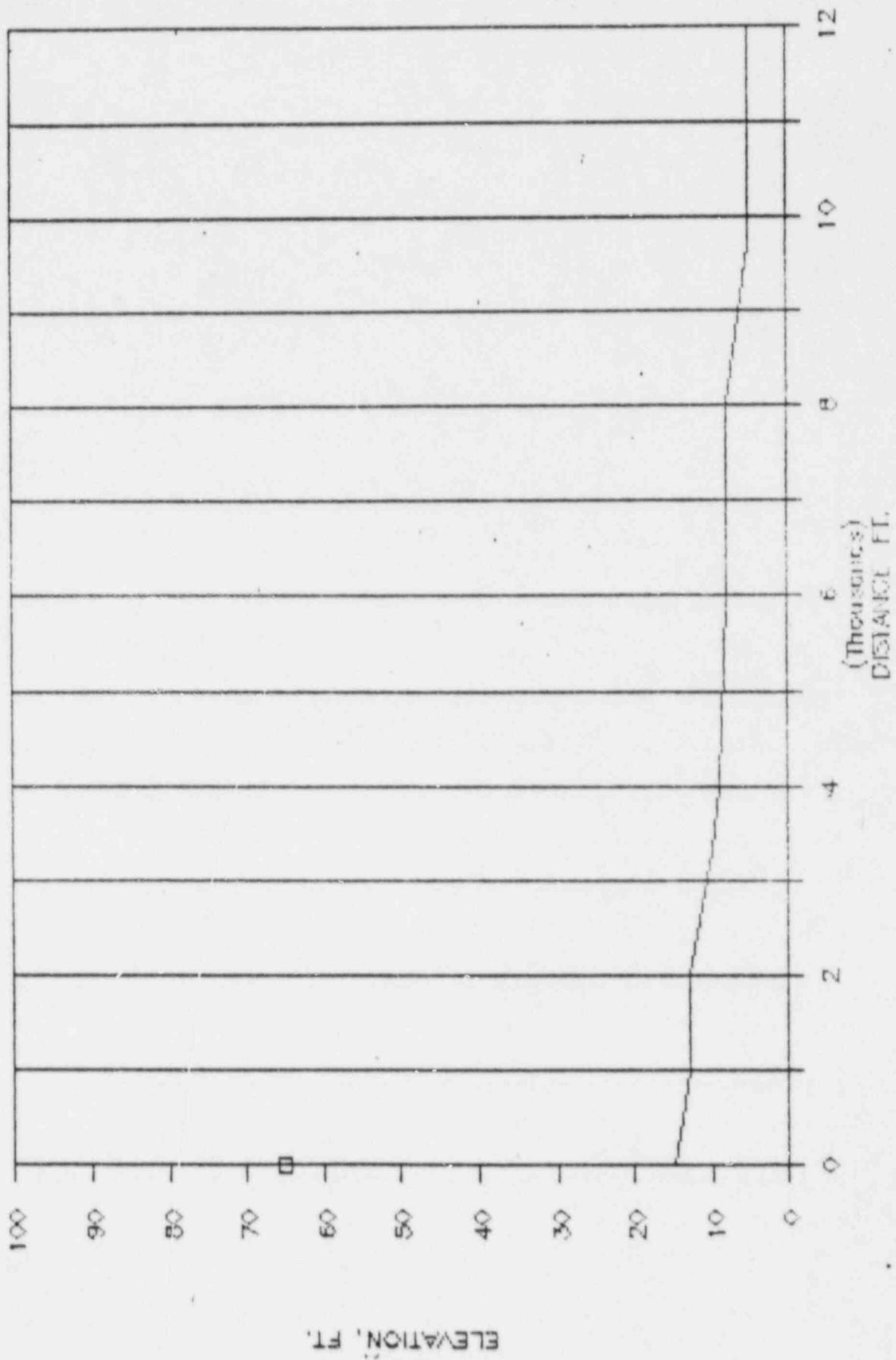
WATERFORD 12

AZIMUTH, SW



WATERFORD 12

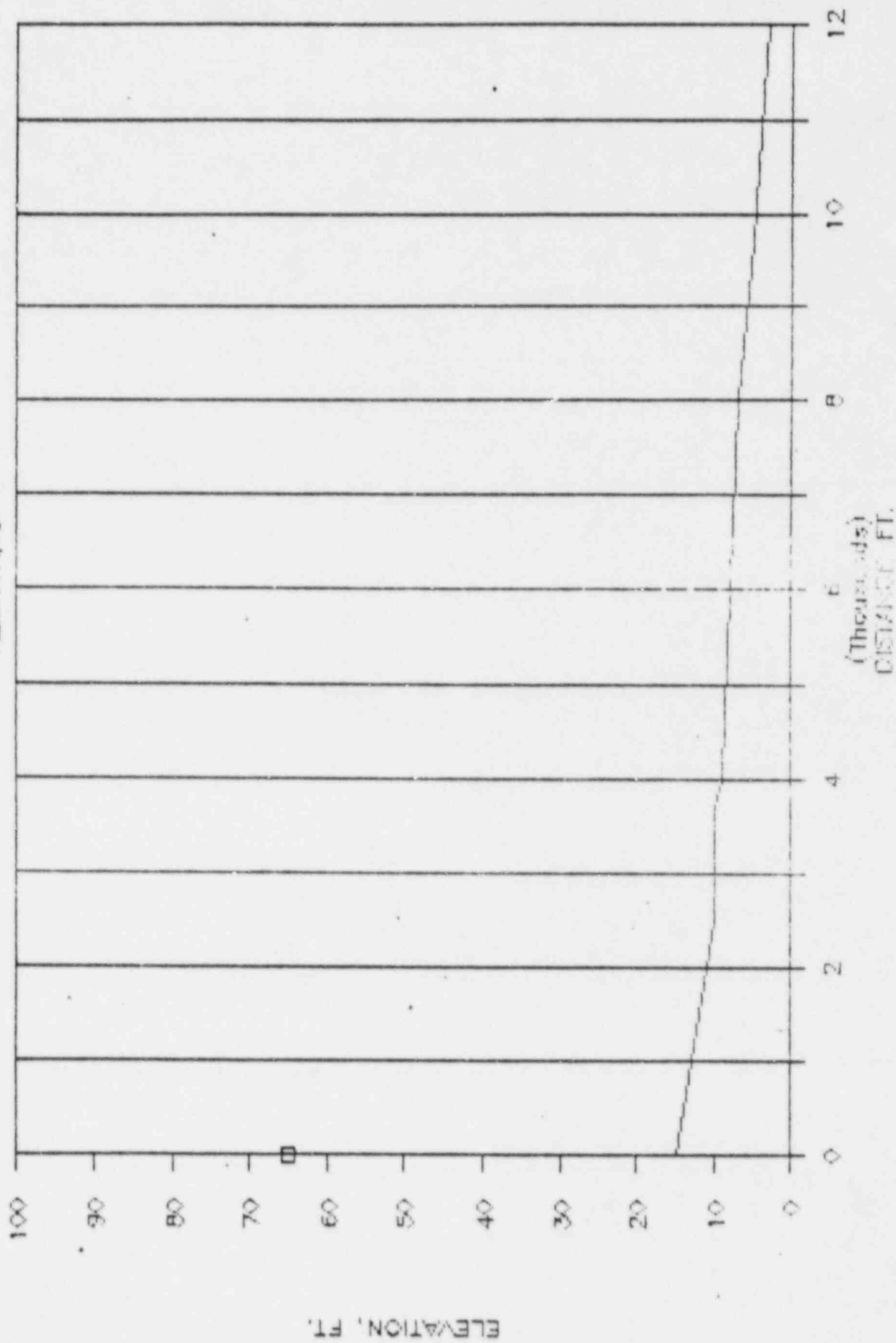
AZIMUTH, SSW



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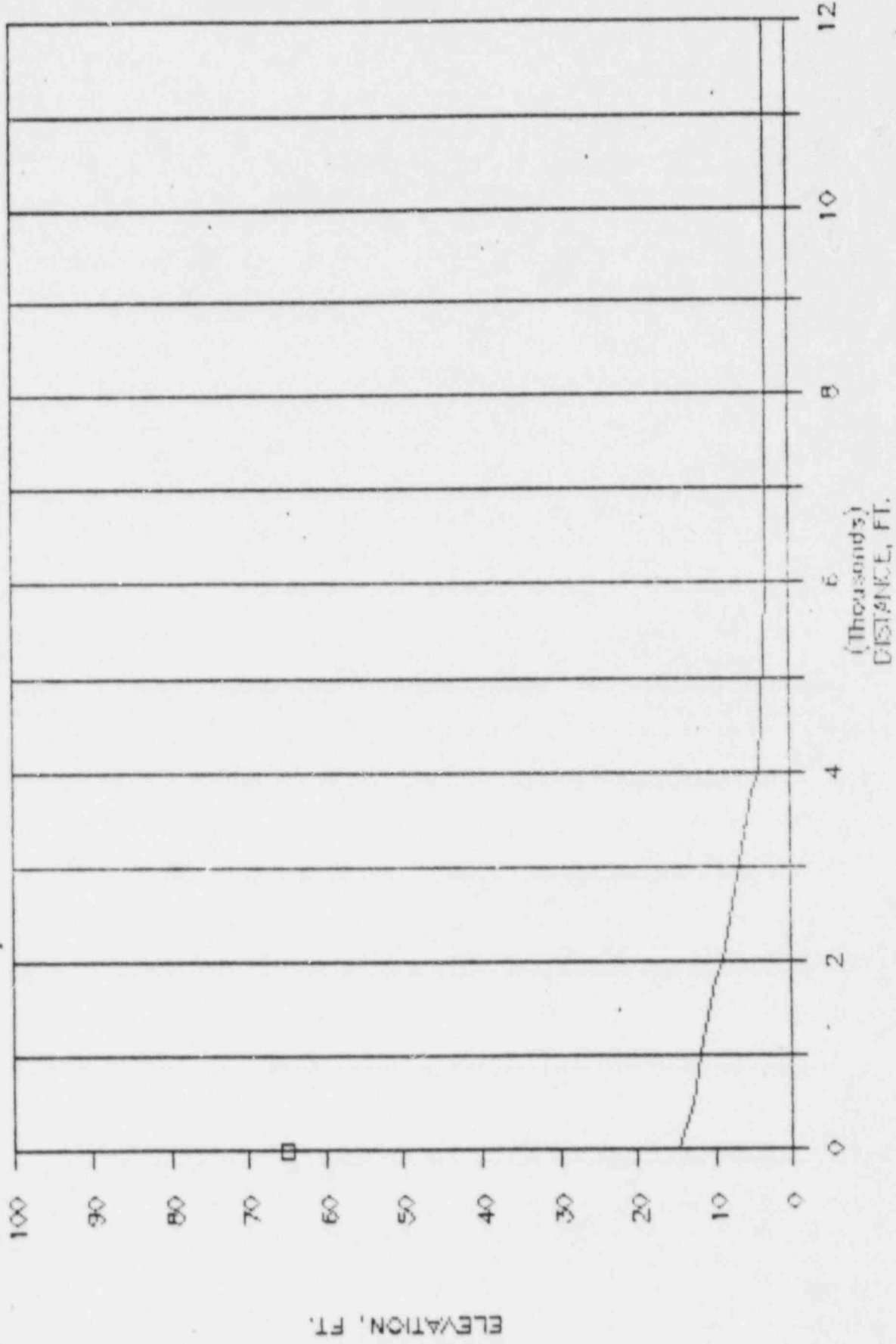
WATERFORD 12

AZIMUTH, S



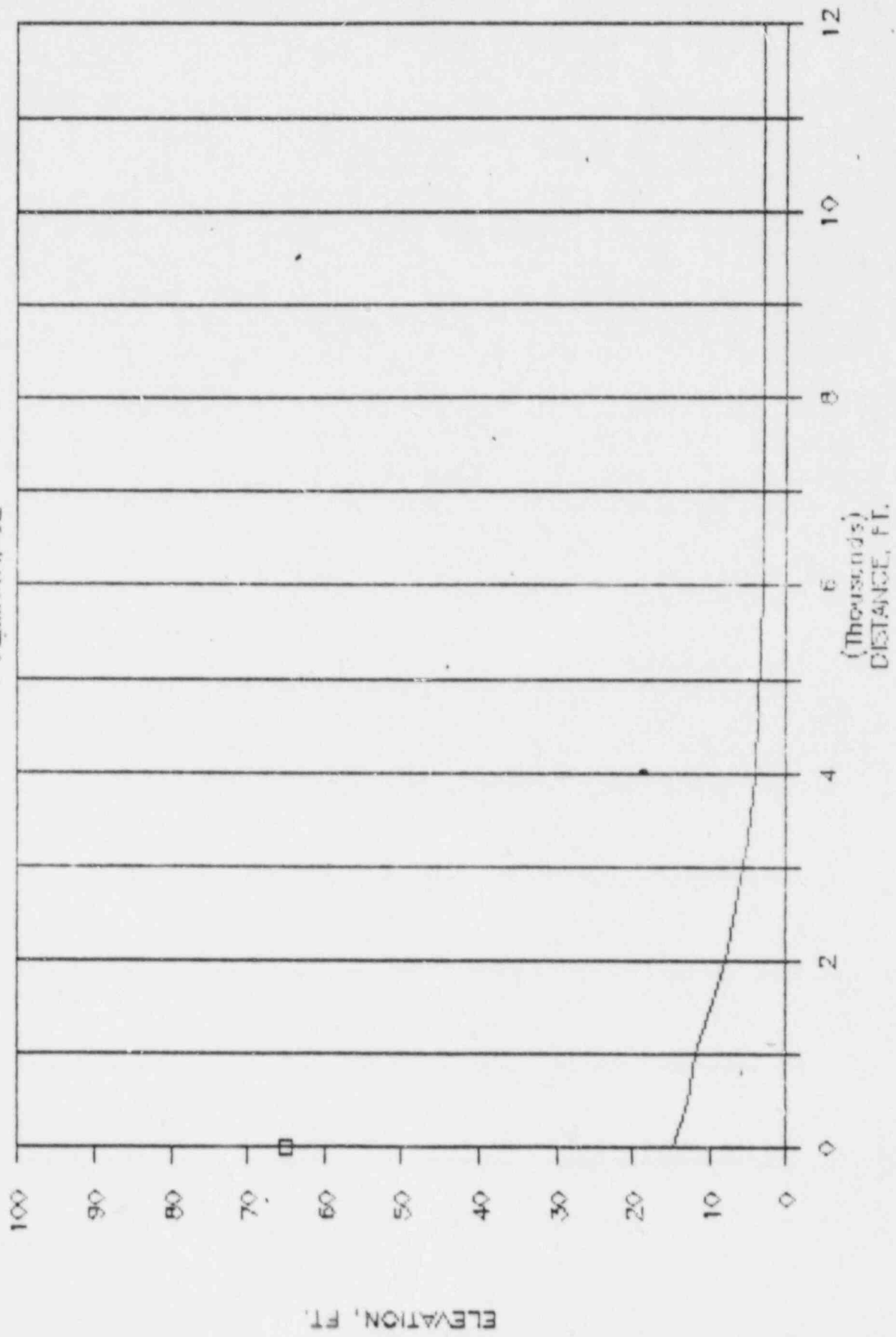
WATERFORD 12

AZIMUTH, SSE



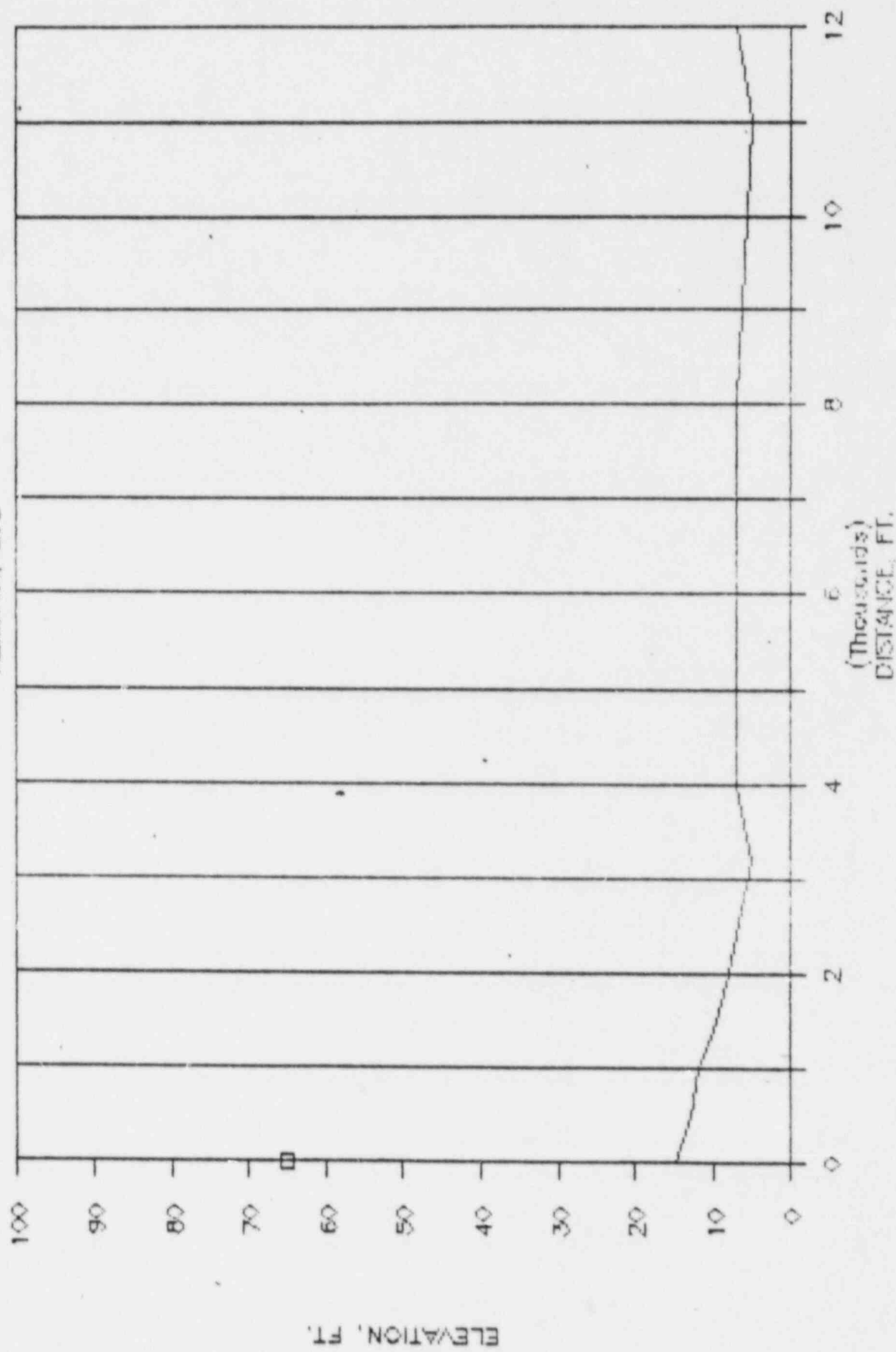
WATERFORD 12

AZIMUTH, SE



WATERFORD 12

AZIMUTH, ESE



100 90 80 70 60 50 40 30 20 10 0

0 2 4 6 8 10 12

100 90 80 70 60 50 40 30 20 10 0

0 2 4 6 8 10 12

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #12-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	13.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	12.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	9.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	7.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	7.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	8.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	8.00	SOFT	0.	NO	0.	0.
8	500.	67.50	13.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	12.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	12.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	12.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	13.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	17.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	10.00	SOFT	0.	YES	9900.	30.
15	500.	45.00	15.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	14.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	20.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	10.00	SOFT	0.	YES	3700.	25.
19	6000.	45.00	10.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	10.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	13.00	SOFT	0.	YES	9900.	30.
22	500.	22.50	30.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	20.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	10.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	10.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	25.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	15.00	SOFT	0.	YES	6100.	30.
28	12000.	22.50	13.00	SOFT	0.	NO	0.	0.
29	500.	0.0	10.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	10.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	10.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	20.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	14.00	SOFT	0.	YES	4400.	30.
34	8000.	0.0	13.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	12.00	SOFT	0.	NO	0.	0.
36	500.	337.50	20.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	10.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	10.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	25.00	SOFT	0.	YES	3900.	20.
40	6000.	337.50	13.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	10.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	7.00	SOFT	0.	NO	0.	0.
43	500.	315.00	20.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	10.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	10.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	19.00	SOFT	0.	YES	3850.	20.
47	6000.	315.00	12.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	11.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	6.00	SOFT	0.	NO	0.	0.
50	500.	292.50	25.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	10.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	10.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	20.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	16.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	12.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	20.00	SOFT	0.	YES	11250.	20.
57	500.	270.00	10.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	10.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	10.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	10.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	20.00	SOFT	0.	YES	5600.	25.
62	8000.	270.00	10.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	20.00	SOFT	0.	NO	0.	0.
64	500.	247.50	20.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	20.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	10.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	10.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	10.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	15.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	12.00	SOFT	0.	YES	10800.	20.
71	500.	225.00	15.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	15.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	20.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	15.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	12.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	11.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	8.00	SOFT	0.	NO	0.	0.
78	500.	202.50	14.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	13.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	13.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	9.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	8.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	8.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	5.00	SOFT	0.	NO	0.	0.
85	500.	180.00	14.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	13.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	11.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	9.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	8.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	7.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	3.00	SOFT	0.	NO	0.	0.
92	500.	157.50	13.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	12.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	9.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	4.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	3.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	3.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	3.00	SOFT	0.	NO	0.	0.
99	500.	135.00	13.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	12.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	8.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	4.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	3.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	3.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	3.00	SOFT	0.	NO	0.	0.
106	500.	112.50	13.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	12.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	8.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	7.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	7.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	7.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	7.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #12-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT012	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
		X0= 0.0	Y0= 0.0	Z0= 0.0		65.00		HEIGHT ABOVE GROUND=		50.00		

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #12-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE HUMIDITY	BAROMETRIC PRESSURE (MM OF HG)
						H1	H2	H1	H2		
1987	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #12-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER NET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	45.6
NE	105.6	91.2	75.7	58.1	60.9	57.4	45.8
NNE	105.7	91.3	75.7	65.1	60.9	52.6	50.8
N	105.6	91.2	75.7	65.1	56.1	57.4	50.8
NNW	105.7	91.2	75.7	59.3	60.9	57.4	50.8
NW	105.7	91.2	75.7	57.5	60.9	57.4	50.8
WNW	105.7	91.2	75.7	65.1	60.9	57.4	45.5
W	105.6	91.2	75.7	65.1	56.1	57.4	50.8
WSW	105.7	91.3	75.7	65.1	60.9	57.4	41.9
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	32.1
S	105.6	91.2	75.7	62.8	54.1	46.2	30.6
SSE	105.6	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 AXIS SIREN #12-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	13.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	12.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	9.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	7.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	7.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	8.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	8.00	SOFT	0.	NO	0.	0.
8	500.	67.50	13.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	12.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	12.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	12.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	13.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	17.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	10.00	SOFT	0.	YES	9900.	30.
15	500.	45.00	15.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	14.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	20.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	10.00	SOFT	0.	YES	3700.	25.
19	6000.	45.00	10.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	10.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	13.00	SOFT	0.	YES	9900.	30.
22	500.	22.50	30.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	20.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	10.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	10.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	25.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	15.00	SOFT	0.	YES	6100.	30.
28	12000.	22.50	13.00	SOFT	0.	NO	0.	0.
29	500.	0.0	10.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	10.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	10.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	20.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	14.00	SOFT	0.	YES	4400.	30.
34	8000.	0.0	13.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	12.00	SOFT	0.	NO	0.	0.
36	500.	337.50	20.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	10.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	10.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	25.00	SOFT	0.	YES	3900.	30.
40	6000.	337.50	13.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	10.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	7.00	SOFT	0.	NO	0.	0.
43	500.	315.00	20.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	10.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	10.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	19.00	SOFT	0.	YES	3850.	30.
47	6000.	315.00	12.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	11.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	6.00	SOFT	0.	NO	0.	0.
50	500.	292.50	25.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	10.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	10.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	20.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	16.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	12.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	20.00	SOFT	0.	YES	11250.	30.
57	500.	270.00	10.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	10.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	10.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	10.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	20.00	SOFT	0.	YES	5600.	25.
62	8000.	270.00	10.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	20.00	SOFT	0.	NO	0.	0.
64	500.	247.50	20.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	20.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	10.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	10.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	10.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	15.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	12.00	SOFT	0.	YES	10800.	30.
71	500.	225.00	15.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	15.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	20.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	15.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	12.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	11.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	8.00	SOFT	0.	NO	0.	0.
78	500.	202.50	14.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	13.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	13.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	9.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	8.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	8.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	5.00	SOFT	0.	NO	0.	0.
85	500.	180.00	14.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	13.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	11.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	9.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	8.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	7.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	3.00	SOFT	0.	NO	0.	0.
92	500.	157.50	13.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	12.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	9.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	4.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	3.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	3.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	3.00	SOFT	0.	NO	0.	0.
99	500.	135.00	13.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	12.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	8.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	4.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	3.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	3.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	3.00	SOFT	0.	NO	0.	0.
106	500.	112.50	13.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	12.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	8.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	7.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	7.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	7.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	7.00	SOFT	0.	NO	0.	0.

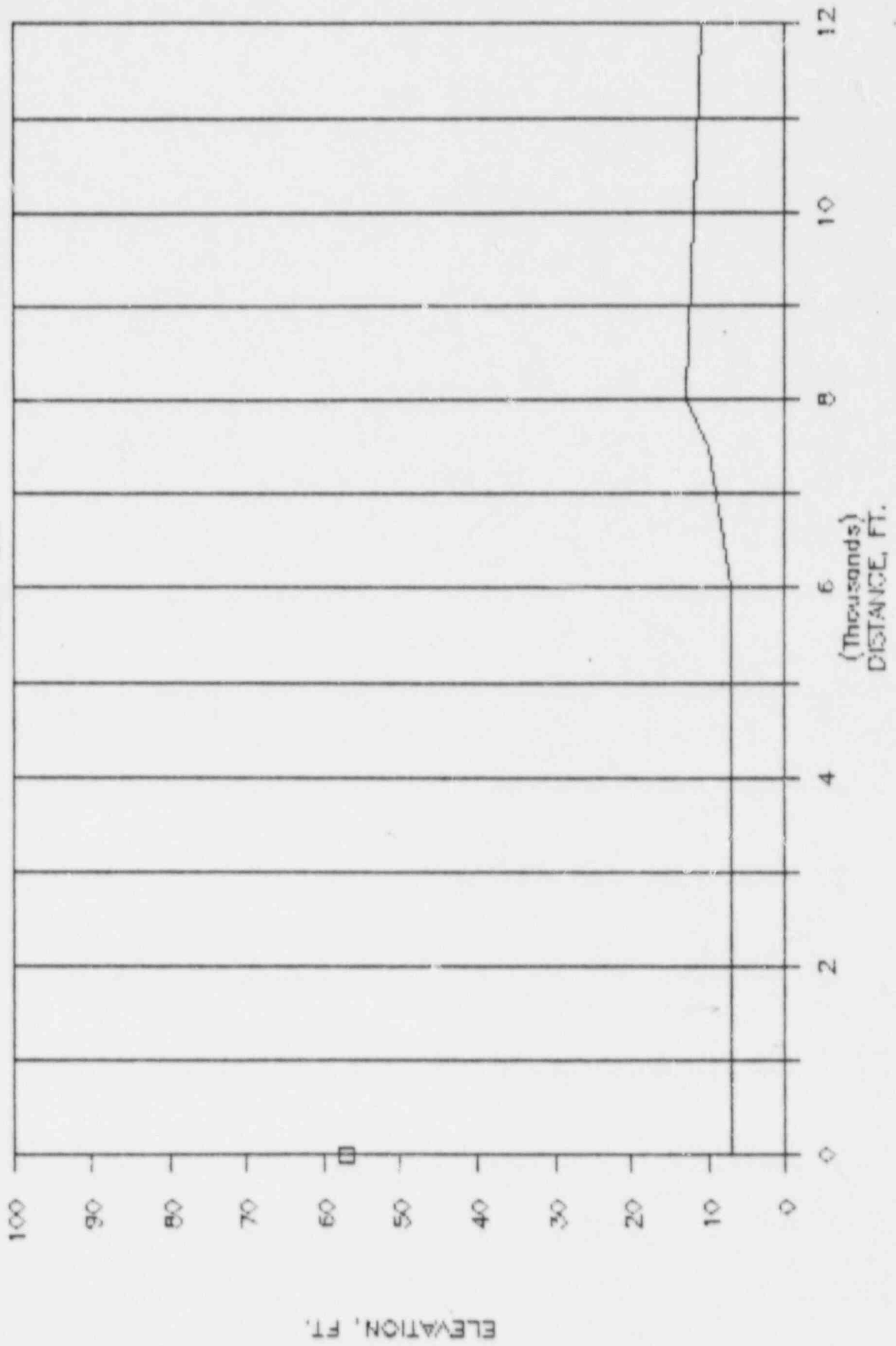
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #12-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	45.6
NE	105.6	91.2	75.7	58.1	60.9	57.4	45.8
NNE	105.7	91.3	75.7	65.1	60.9	52.6	50.8
N	105.6	91.2	75.7	65.1	56.1	57.4	50.8
NNW	105.7	91.2	75.7	59.3	60.9	57.4	50.8
NW	105.7	91.2	75.7	57.5	60.9	57.4	50.8
WNW	105.7	91.2	75.7	65.1	60.9	57.4	45.5
W	105.6	91.2	75.7	65.1	56.1	57.4	50.8
WSW	105.7	91.3	75.7	65.1	60.9	57.4	41.9
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	32.1
S	105.6	91.2	75.7	62.8	54.1	46.2	30.6
SSE	105.6	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

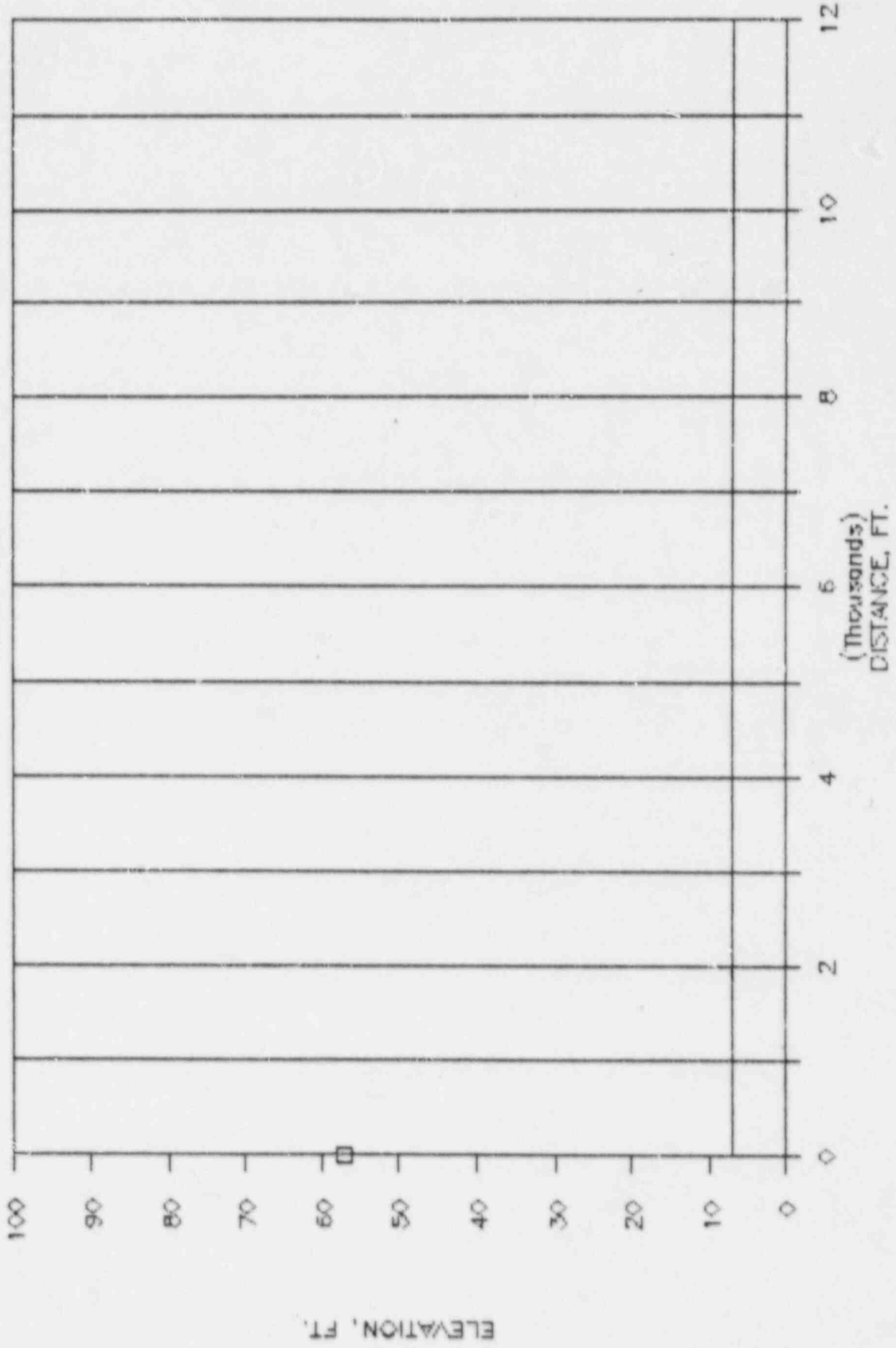
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AZIMUTH, E



WATERFORD 40

AZIMUTH, BNE

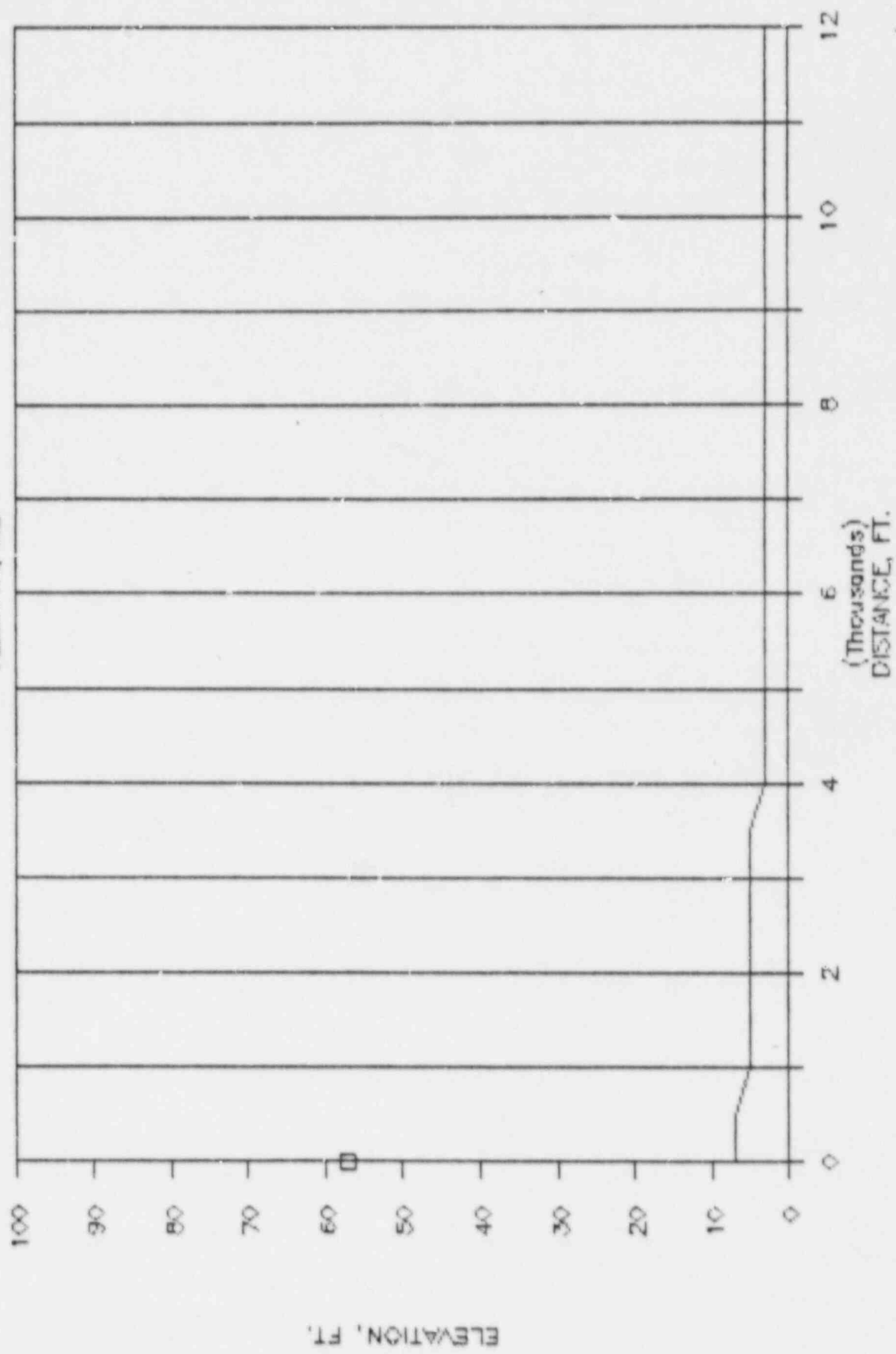


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0 2 4 6 8 10 12

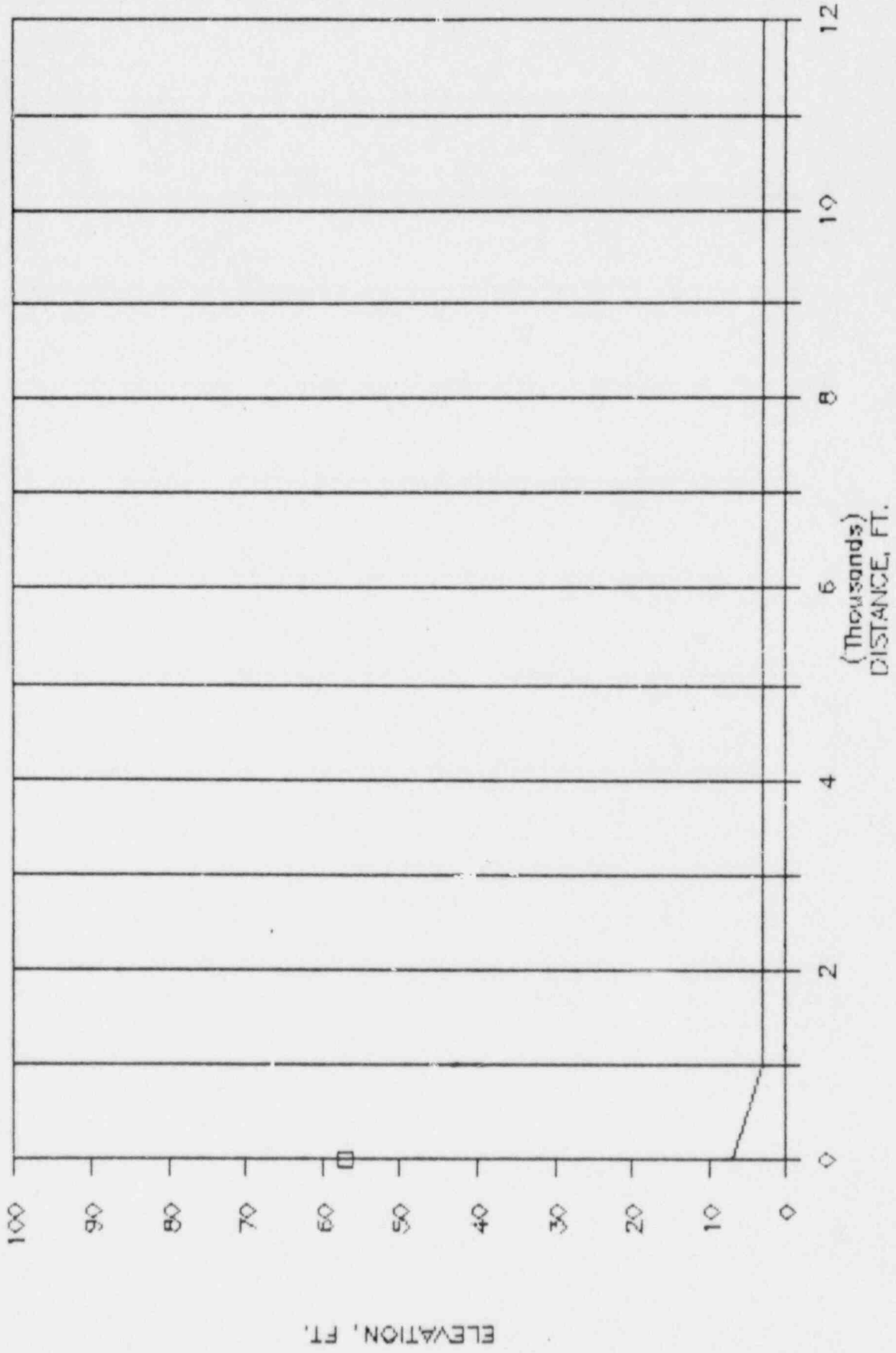
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AZIMUTH, NE



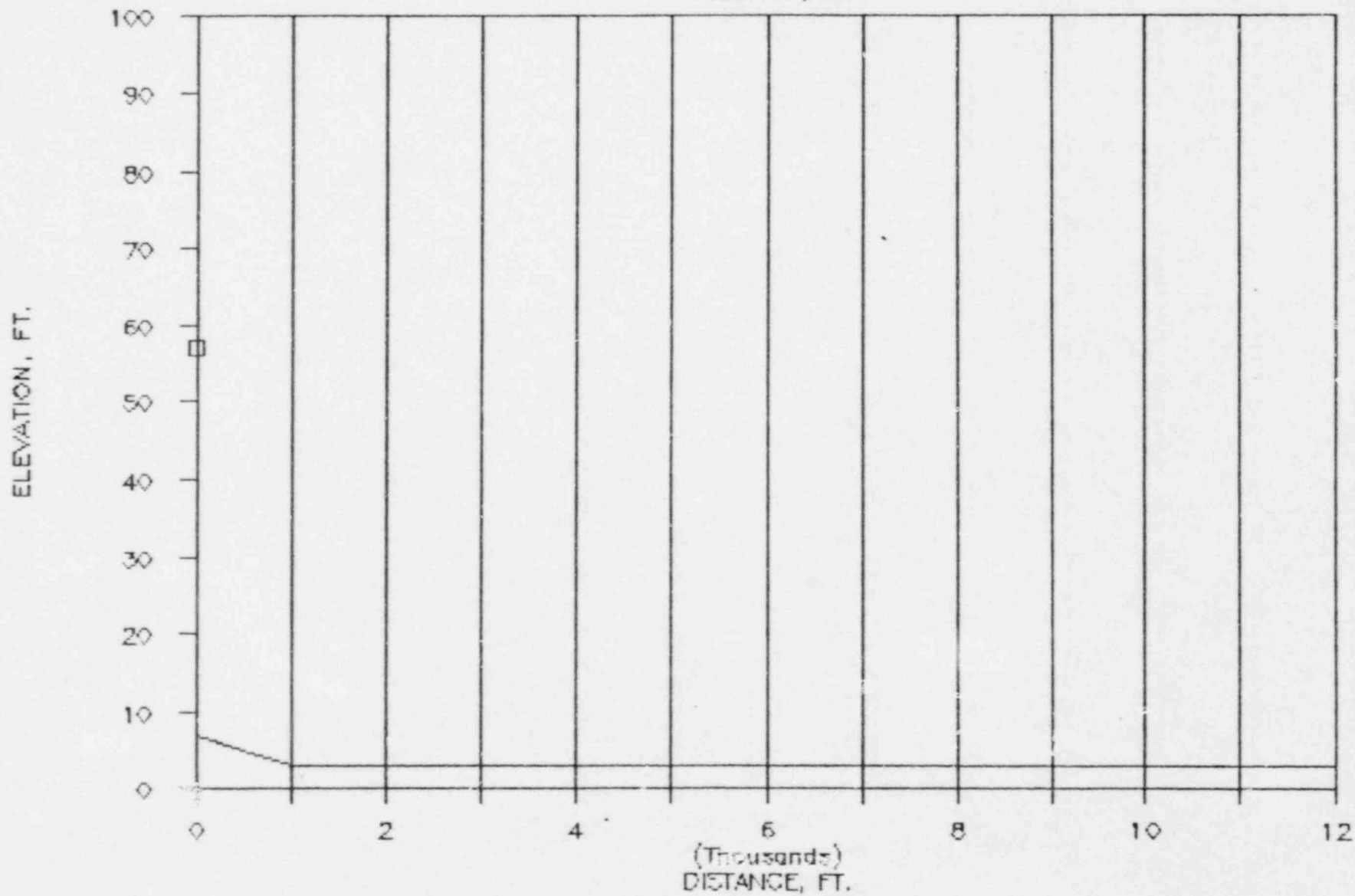
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AZIMUTH, NNE



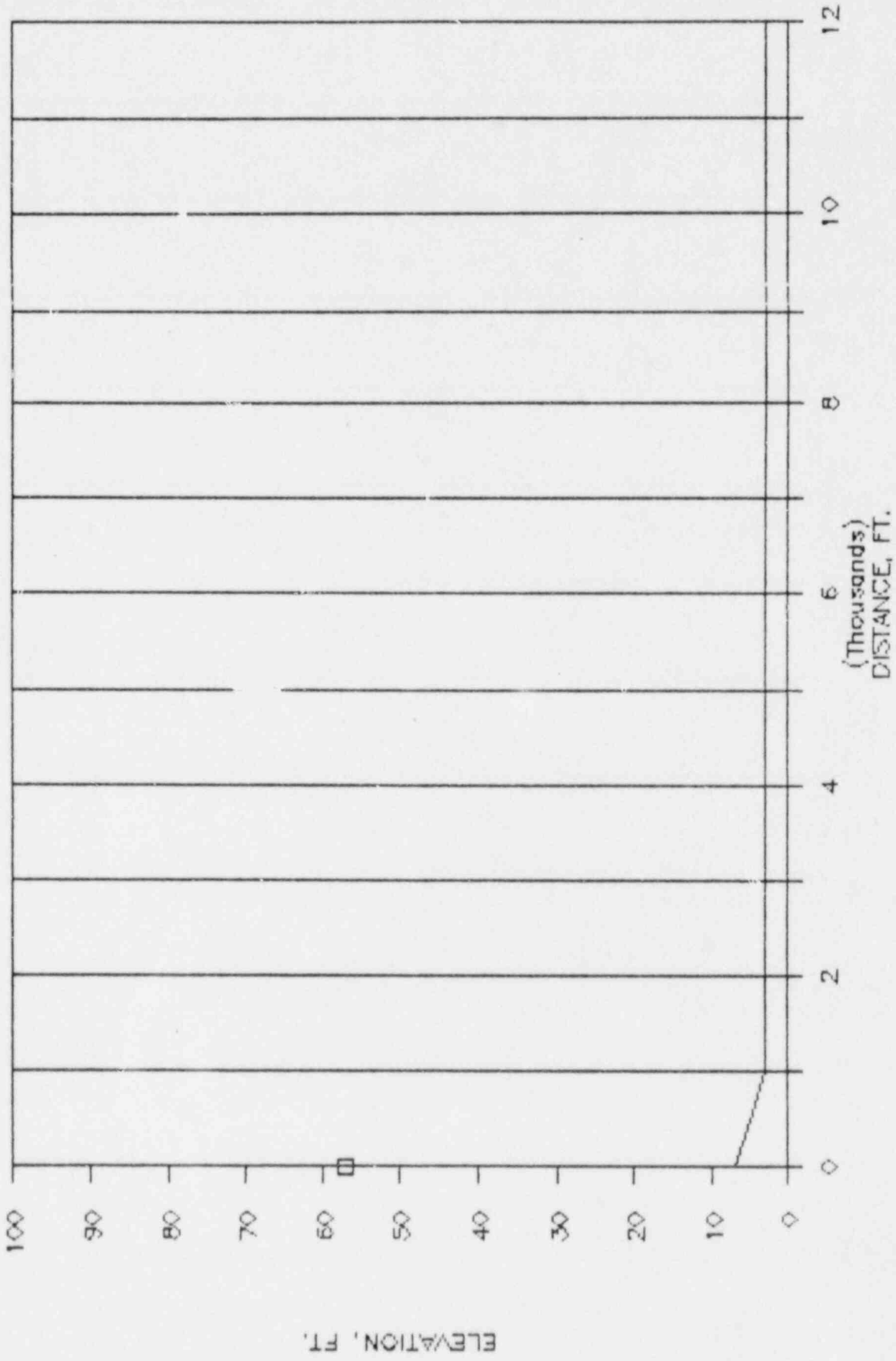
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AZIMUTH, N



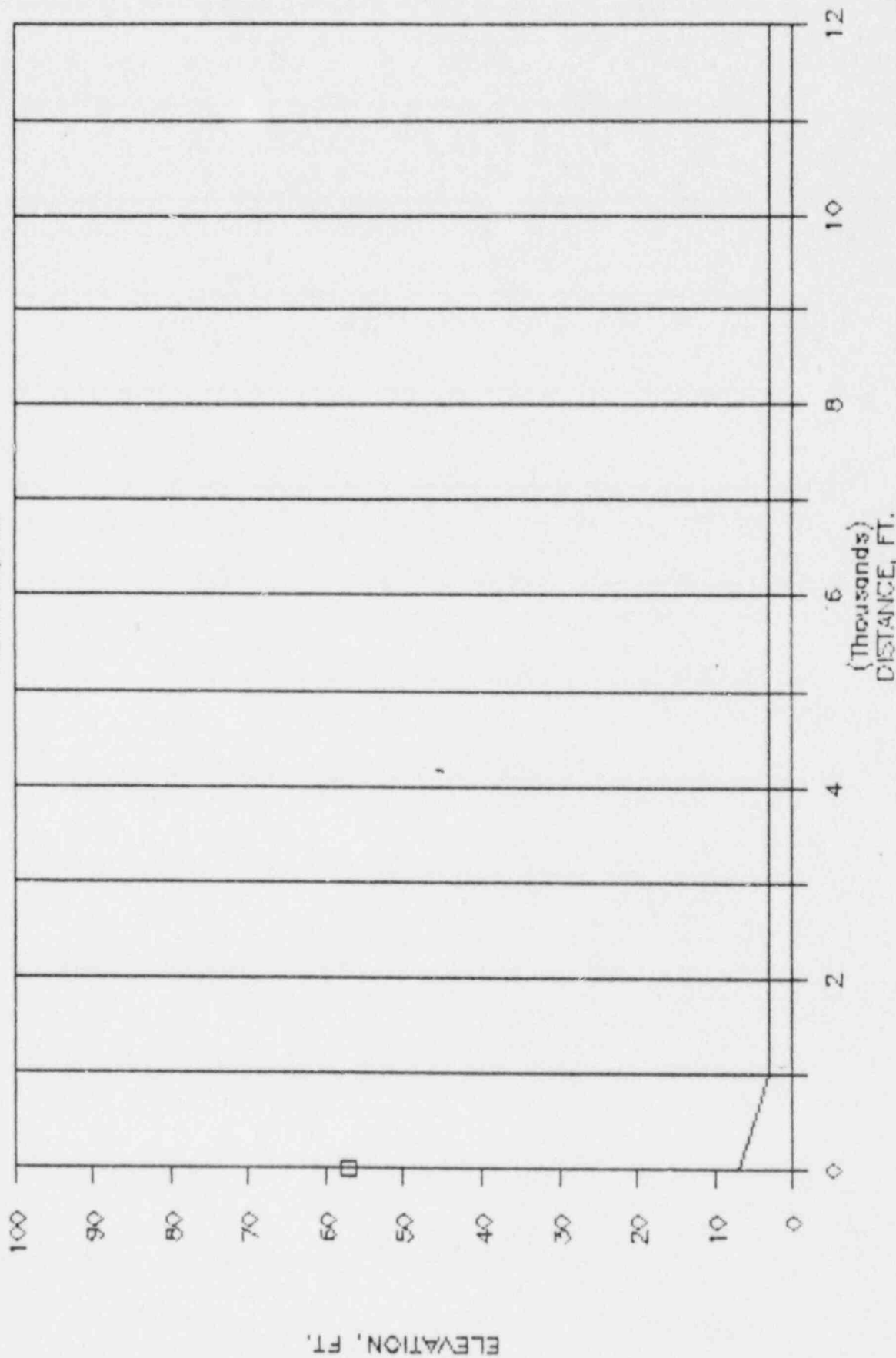
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AZIMUTH, NNW



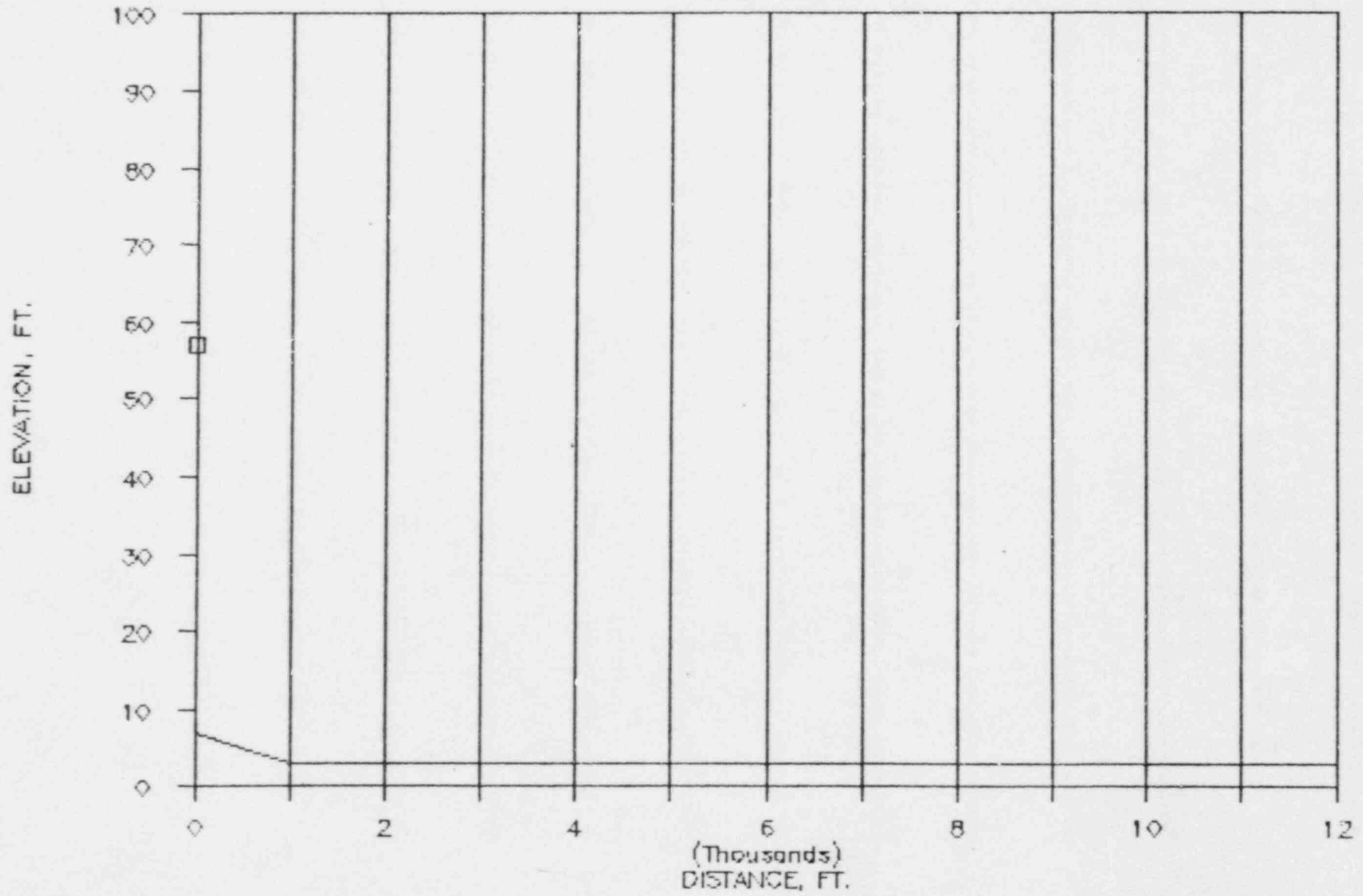
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AZIMUTH, NW



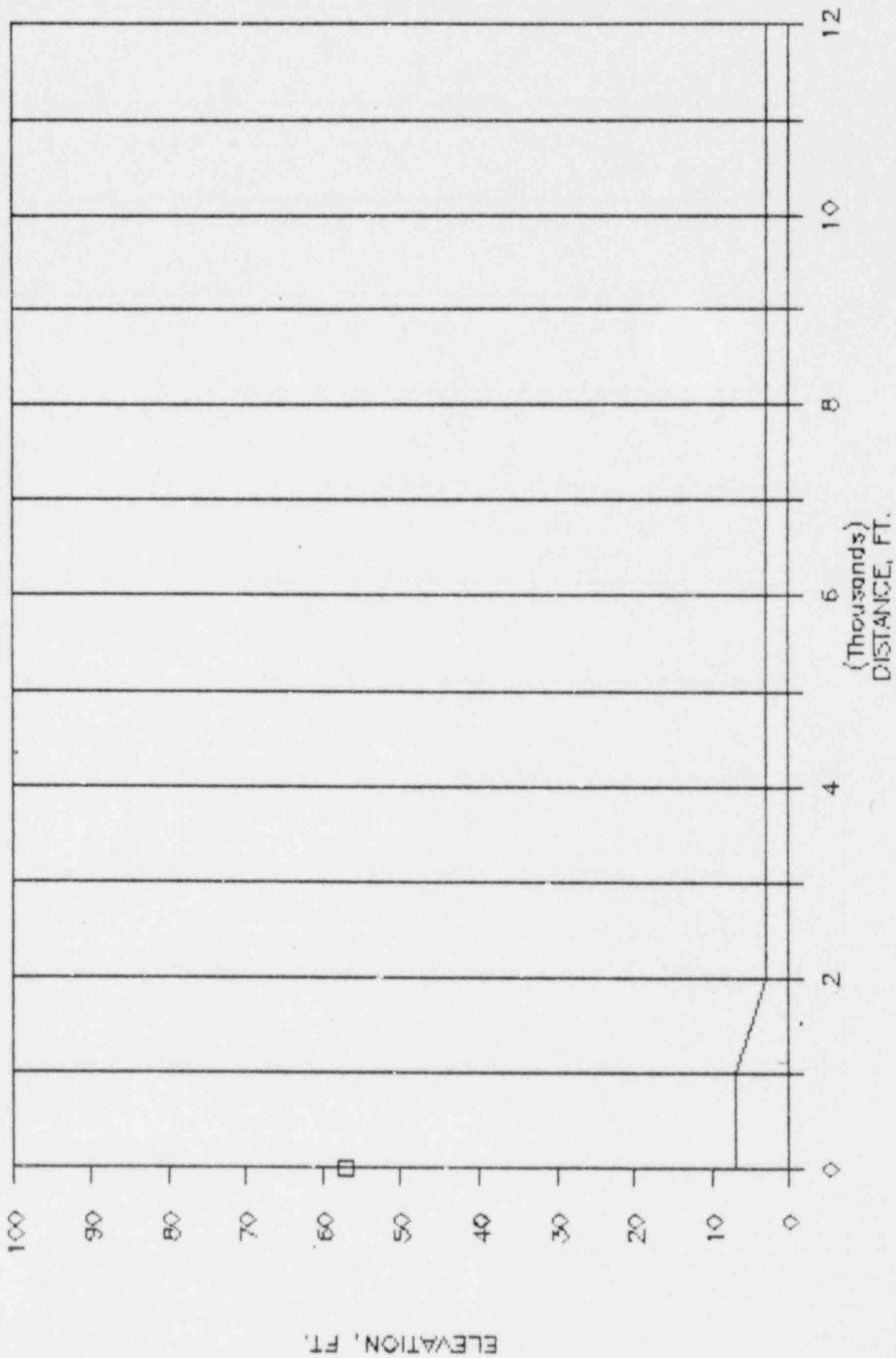
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AZIMUTH, WNW



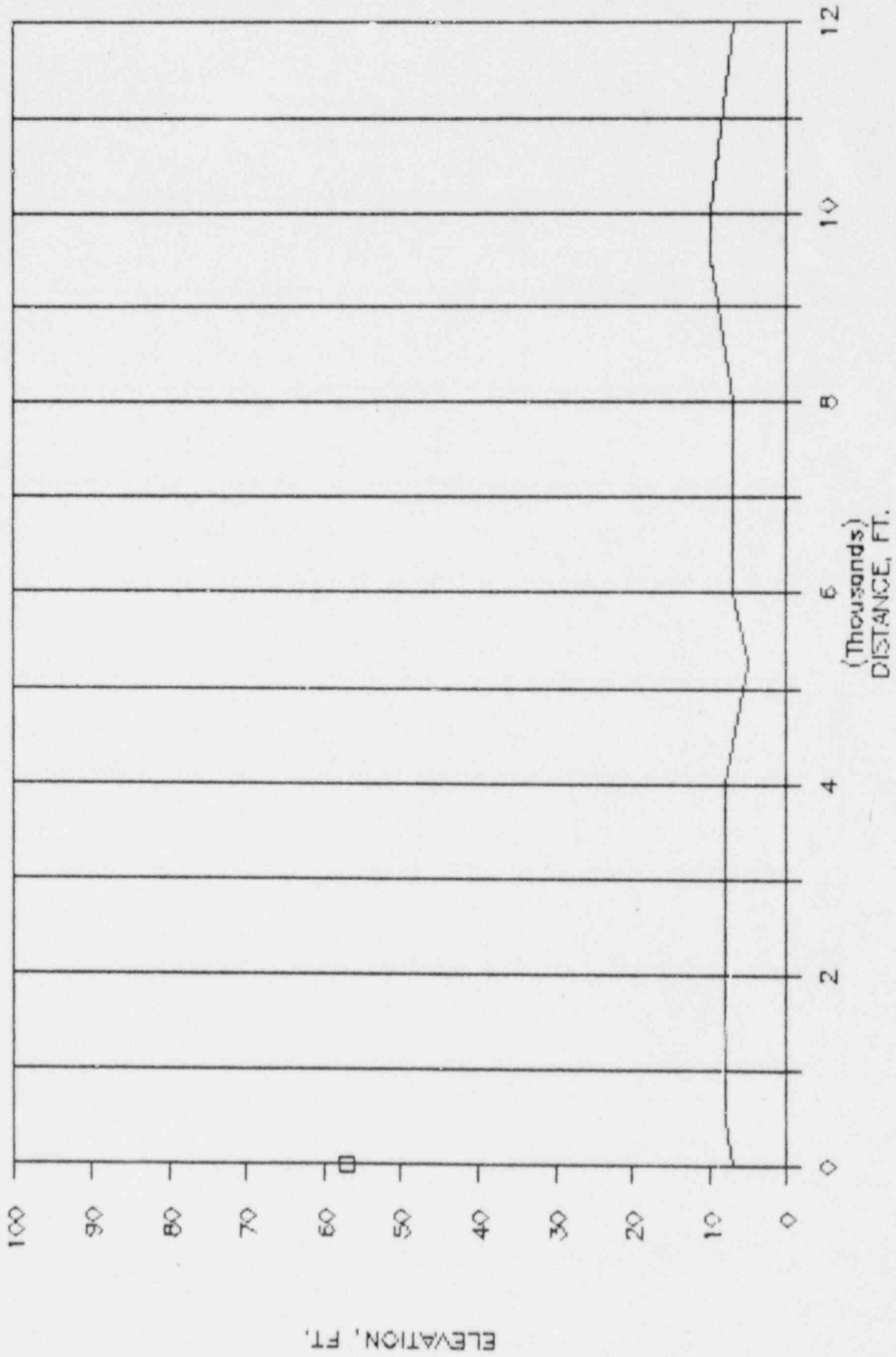
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AZIMUTH, W



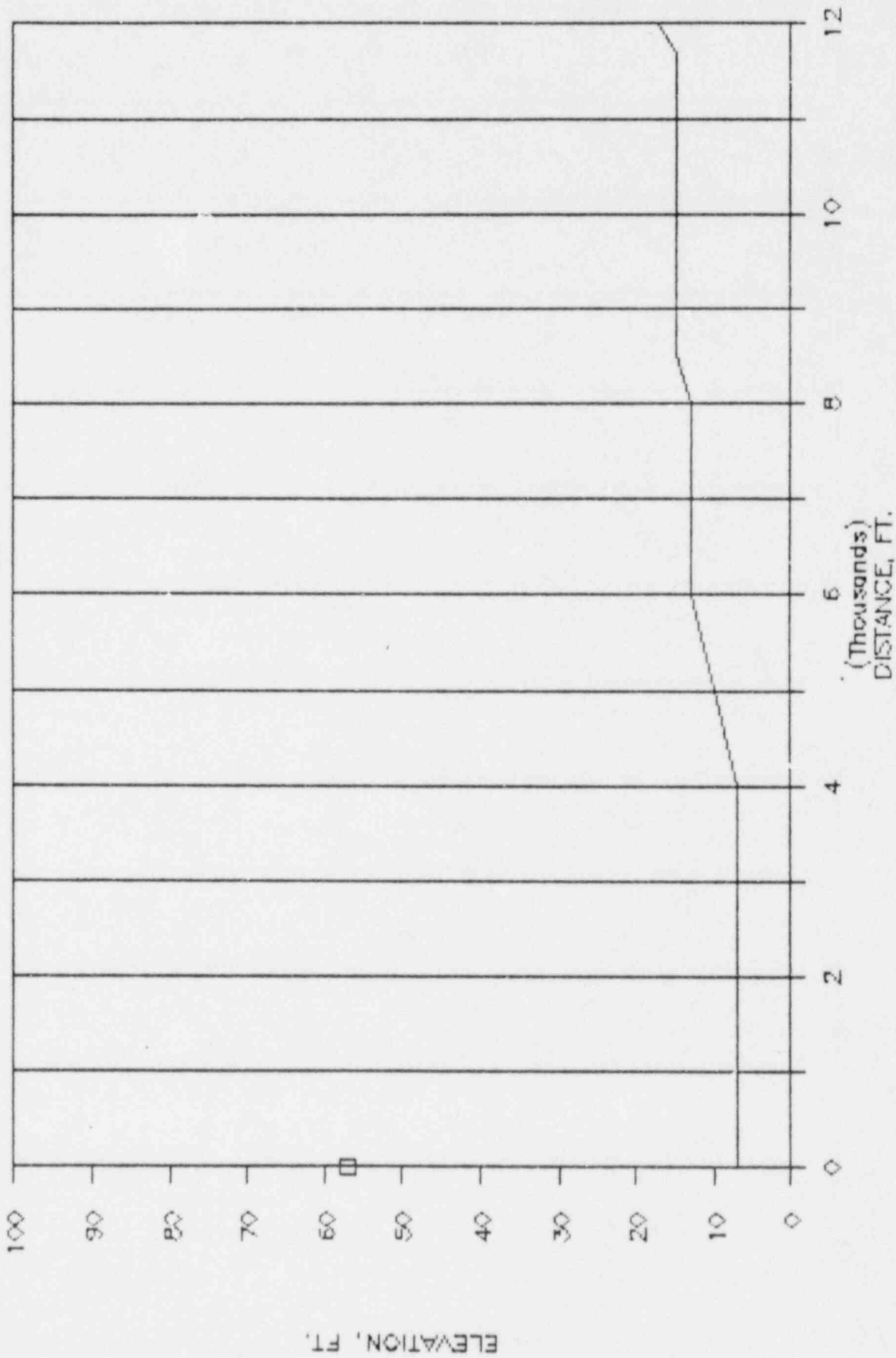
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AZIMUTH, WSW



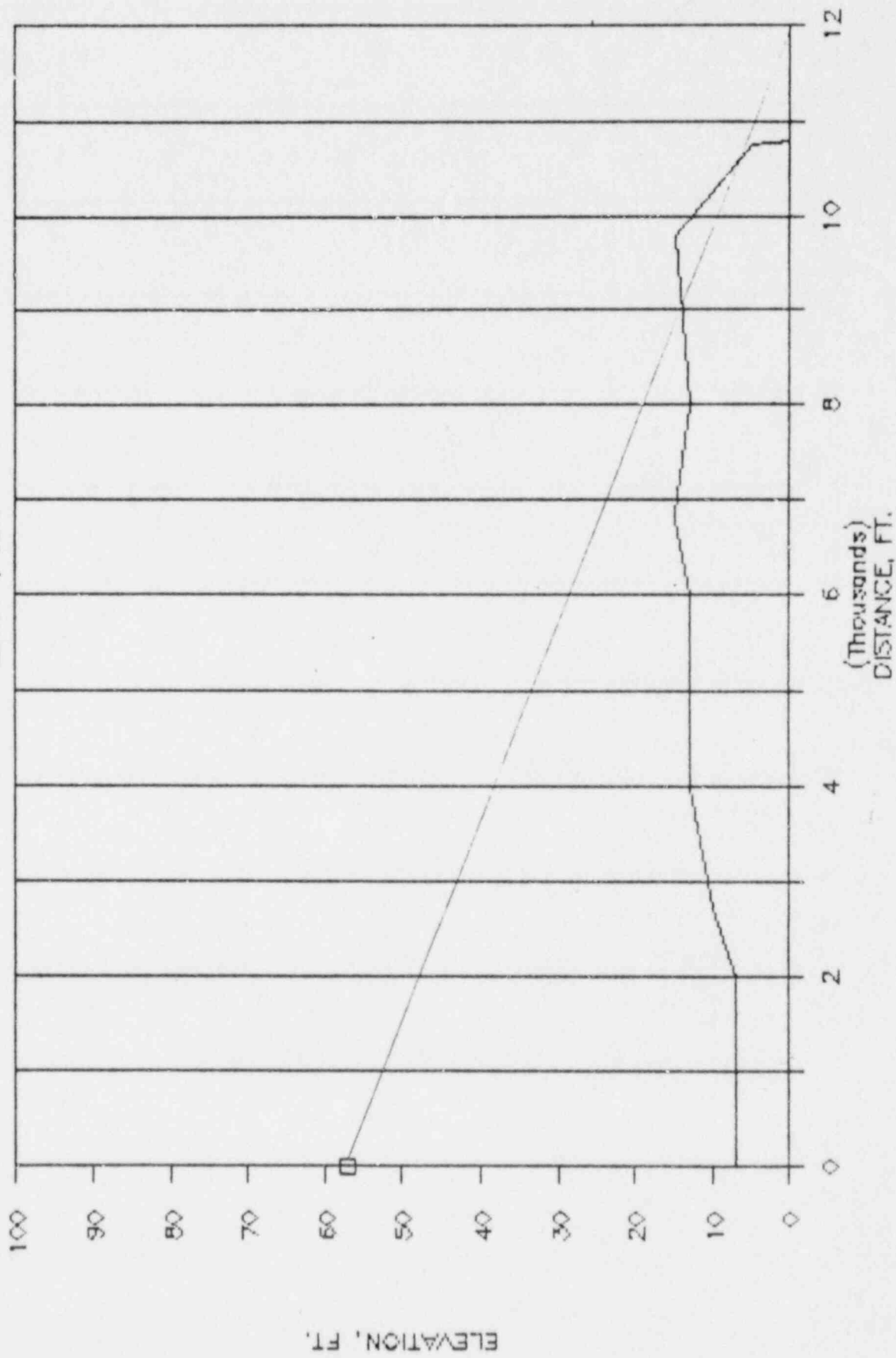
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AZIMUTH, SW



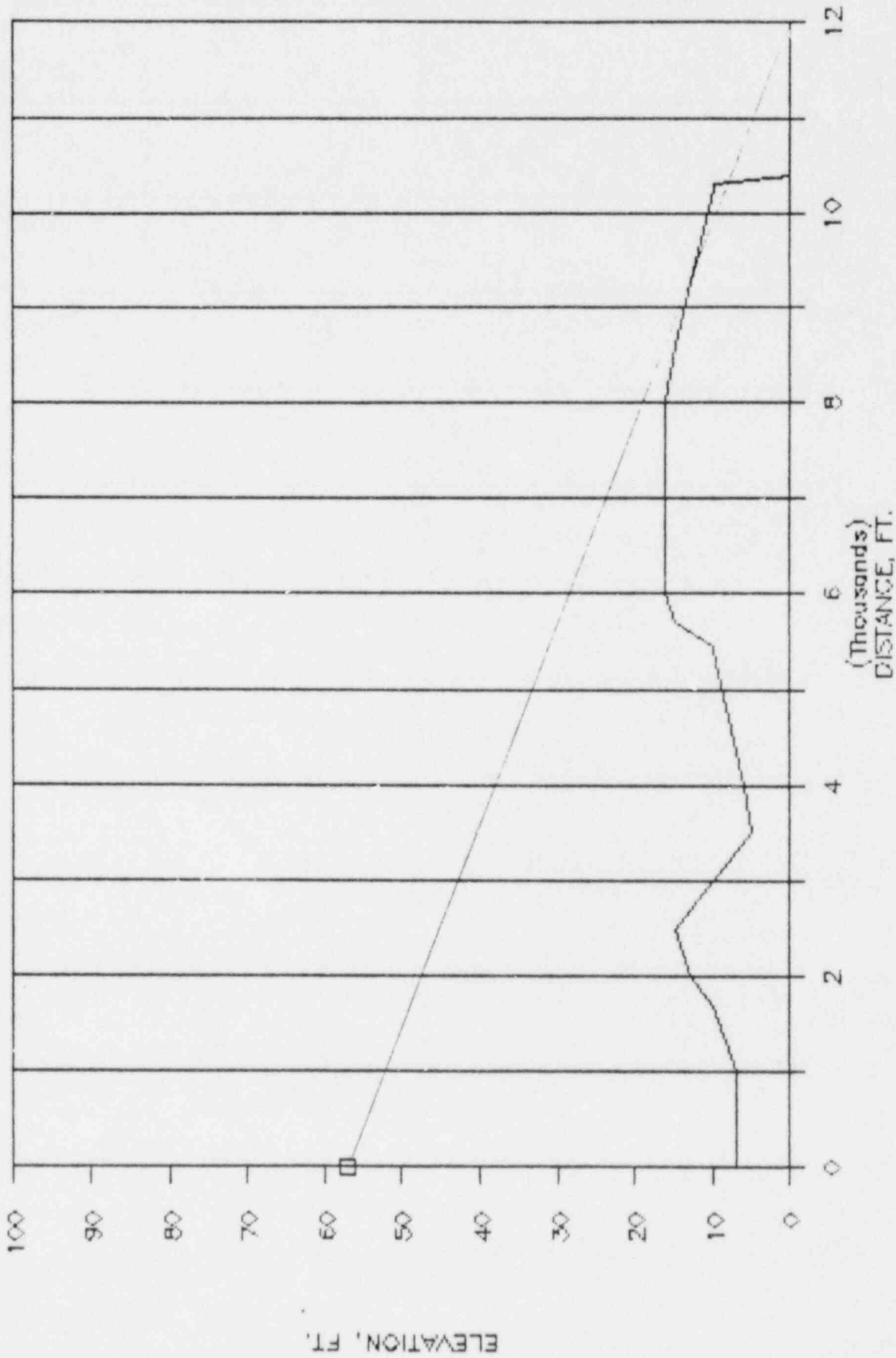
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AZIMUTH, SSW



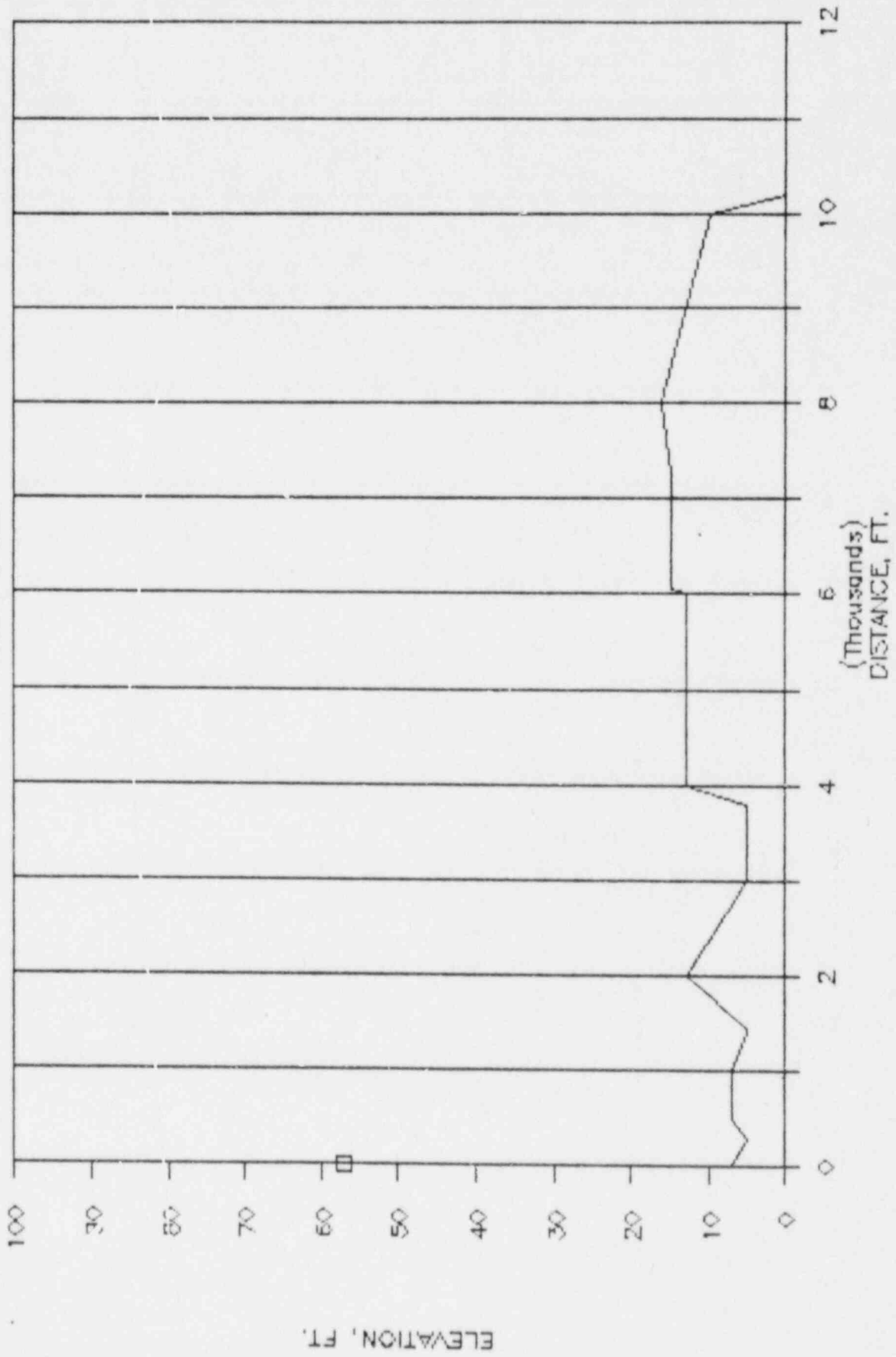
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AZIMUTH, S



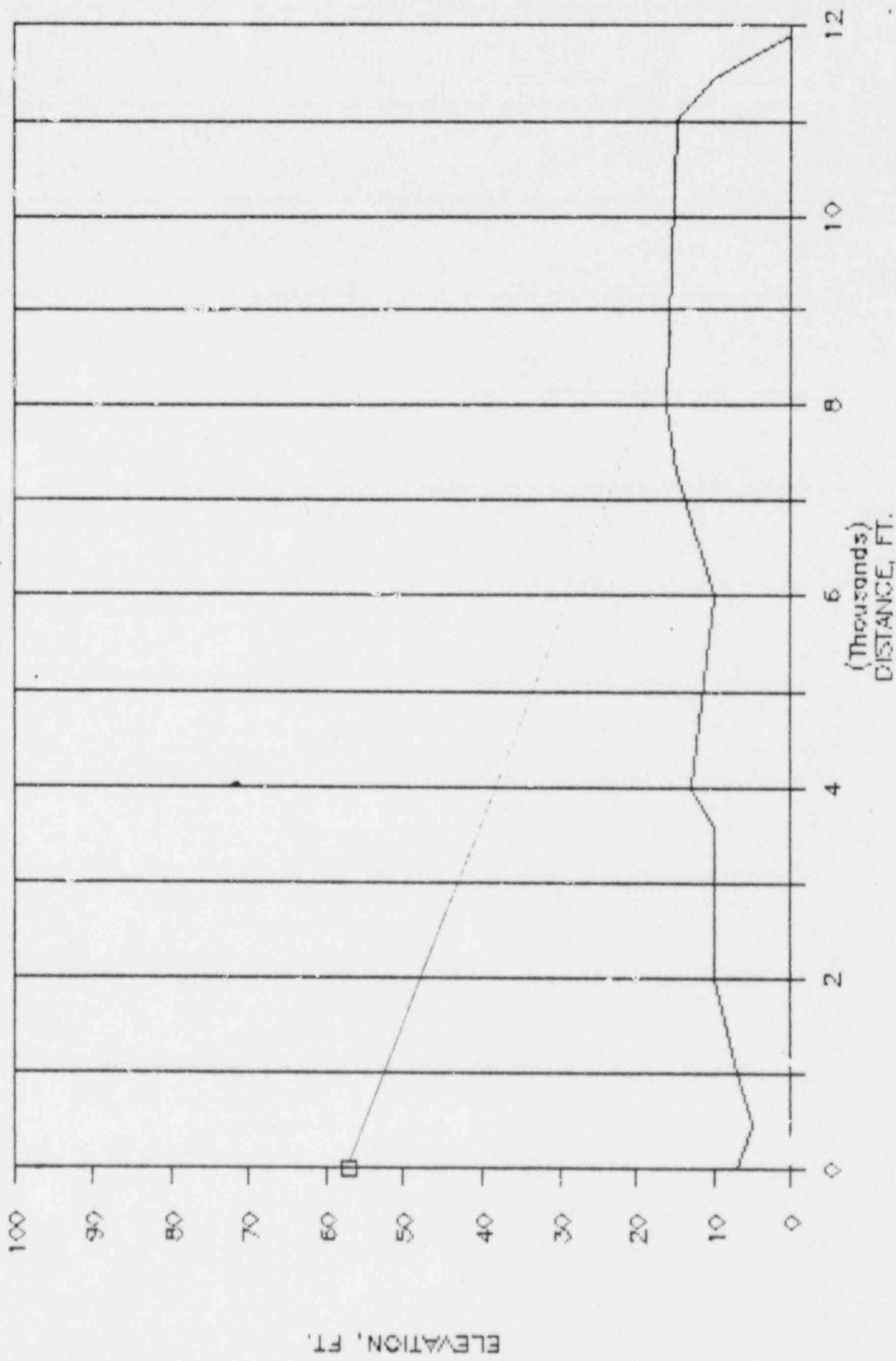
WATERFORD 40

AZIMUTH, SSE



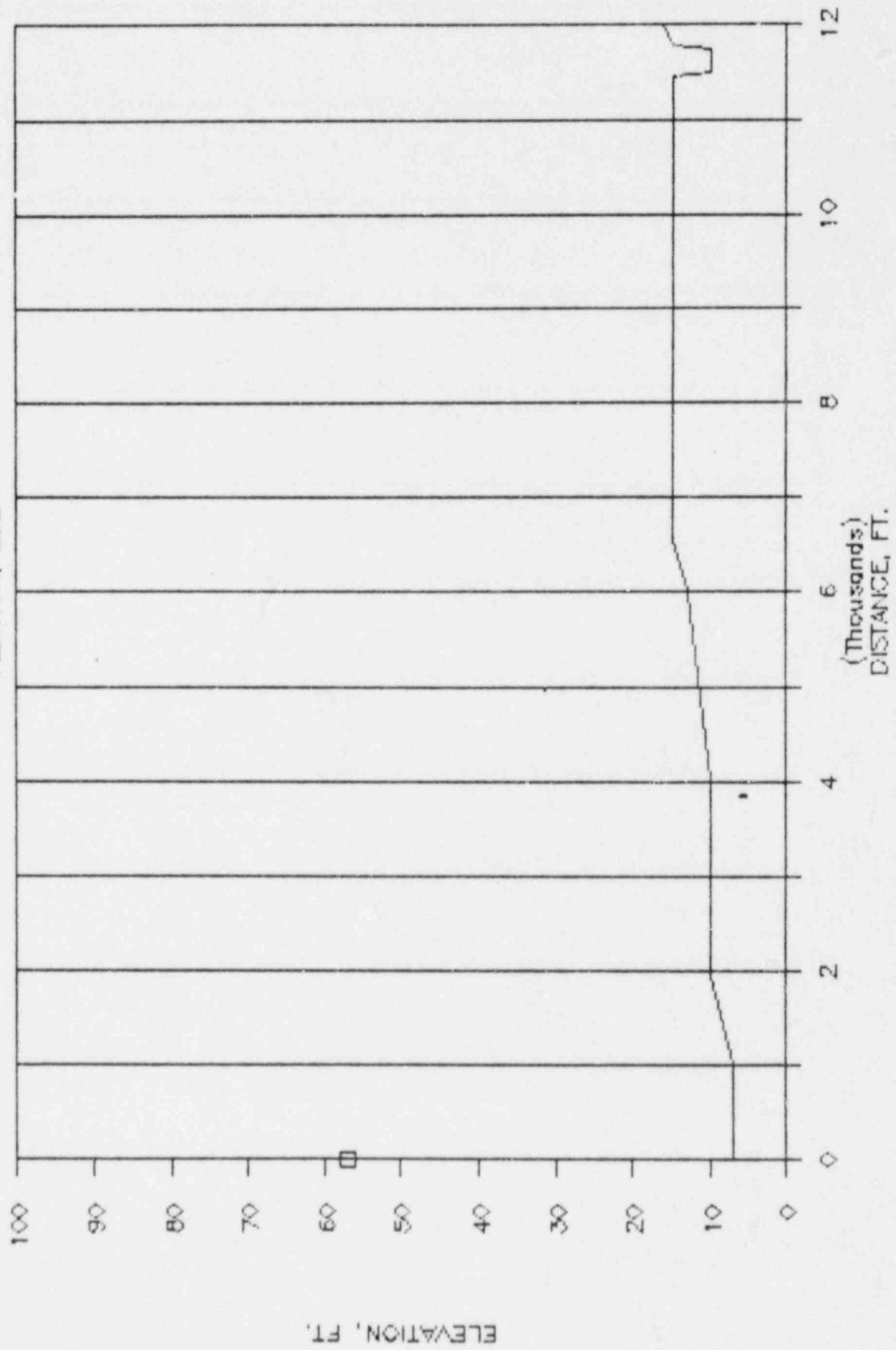
WATERFORD 40

AZIMUTH, SE



WATERFORD 40

AZIMUTH, ESE



ELEVATION, FT.

(Thousands)
DISTANCE, FT.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #40-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	7.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	7.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	7.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	7.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	7.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	13.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	11.00	SOFT	0.	NO	0.	0.
8	500.	67.50	7.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	7.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	7.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	7.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	7.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	7.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	7.00	SOFT	0.	NO	0.	0.
15	500.	45.00	7.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	5.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	5.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	3.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	3.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	3.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	3.00	SOFT	0.	NO	0.	0.
22	500.	22.50	5.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	3.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	3.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	3.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	3.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	3.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	3.00	SOFT	0.	NO	0.	0.
29	500.	0.0	5.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	3.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	3.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	3.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	3.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	3.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	3.00	SOFT	0.	NO	0.	0.
36	500.	337.50	5.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	3.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	3.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	3.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	3.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	3.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	3.00	SOFT	0.	NO	0.	0.
43	500.	315.00	5.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	3.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	3.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	3.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	3.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	3.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	3.00	SOFT	0.	NO	0.	0.
50	500.	292.50	5.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	3.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	3.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	3.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	3.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	3.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	3.00	SOFT	0.	NO	0.	0.
57	500.	270.00	7.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	7.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	3.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	3.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	3.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	3.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	3.00	SOFT	0.	NO	0.	0.
64	500.	247.50	8.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	8.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	8.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	8.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	7.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	7.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	7.00	SOFT	0.	NO	0.	0.
71	500.	225.00	7.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	7.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	7.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	7.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	13.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	13.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	17.00	SOFT	0.	NO	0.	0.
78	500.	202.50	7.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	7.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	7.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	13.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	13.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	13.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	0.0	SOFT	0.	YES	9800.	15.
85	500.	180.00	7.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	7.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	13.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	6.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	16.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	16.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	0.0	SOFT	0.	YES	10300.	10.
92	500.	157.50	7.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	7.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	13.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	13.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	13.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	16.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	0.0	SOFT	0.	NO	0.	0.
99	500.	135.00	5.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	7.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	10.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	13.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	10.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	16.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	0.0	SOFT	0.	YES	11000.	15.
106	500.	112.50	7.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	7.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	10.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	10.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	13.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	15.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	16.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #40-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT040	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
	X0=	0.0	Y0=	0.0	Z0=	57.00	HEIGHT ABOVE GROUND=		50.00			

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #40-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE BAROMETRIC HUMIDITY PRESSURE (MM OF HG)	
						H1	H2	H1	H2	HUMIDITY	PRESSURE (MM OF HG)
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

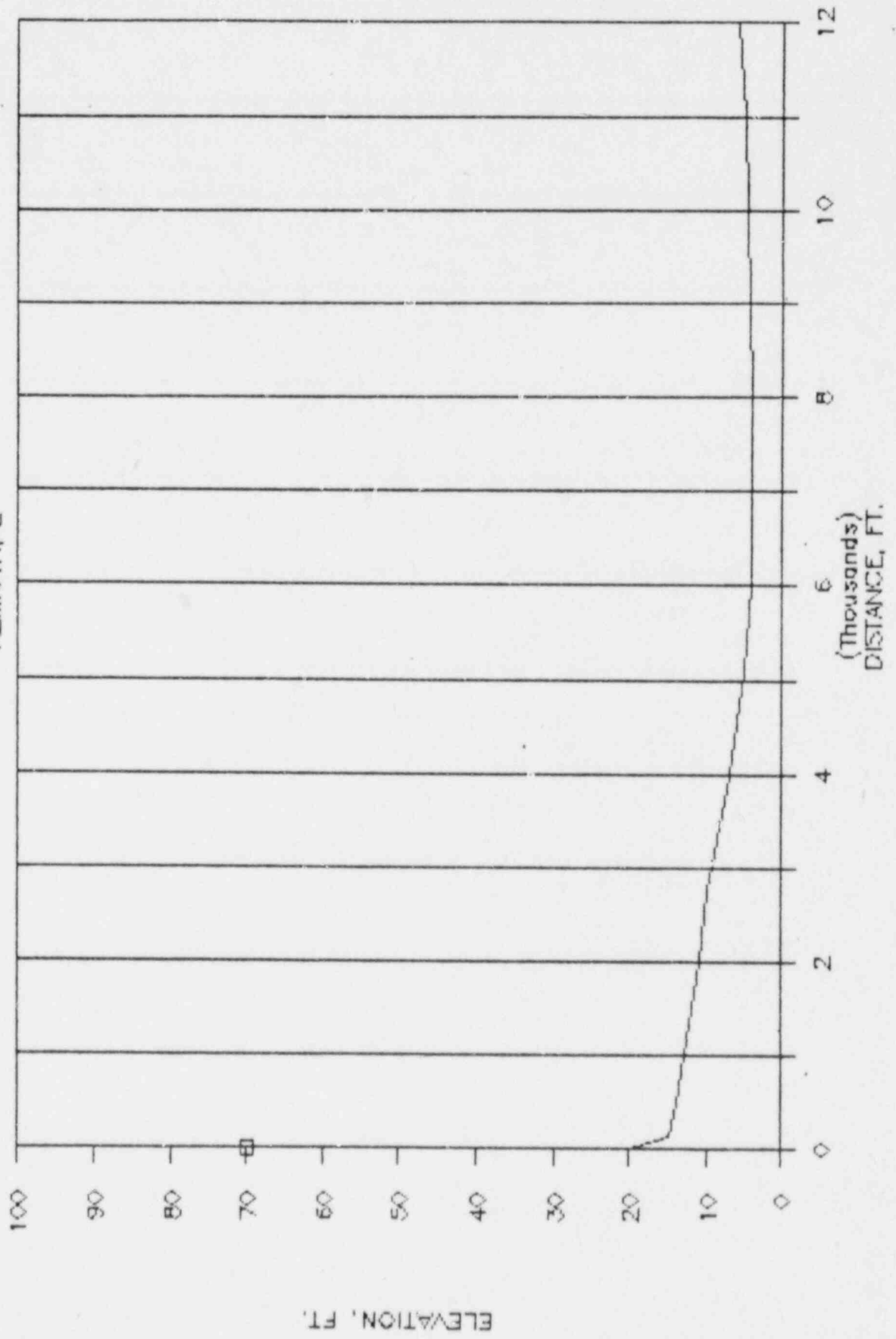
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #40-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	27.2
S	105.6	91.2	75.7	62.8	54.1	46.2	25.8
SSE	105.6	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	57.3	50.3	31.3
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

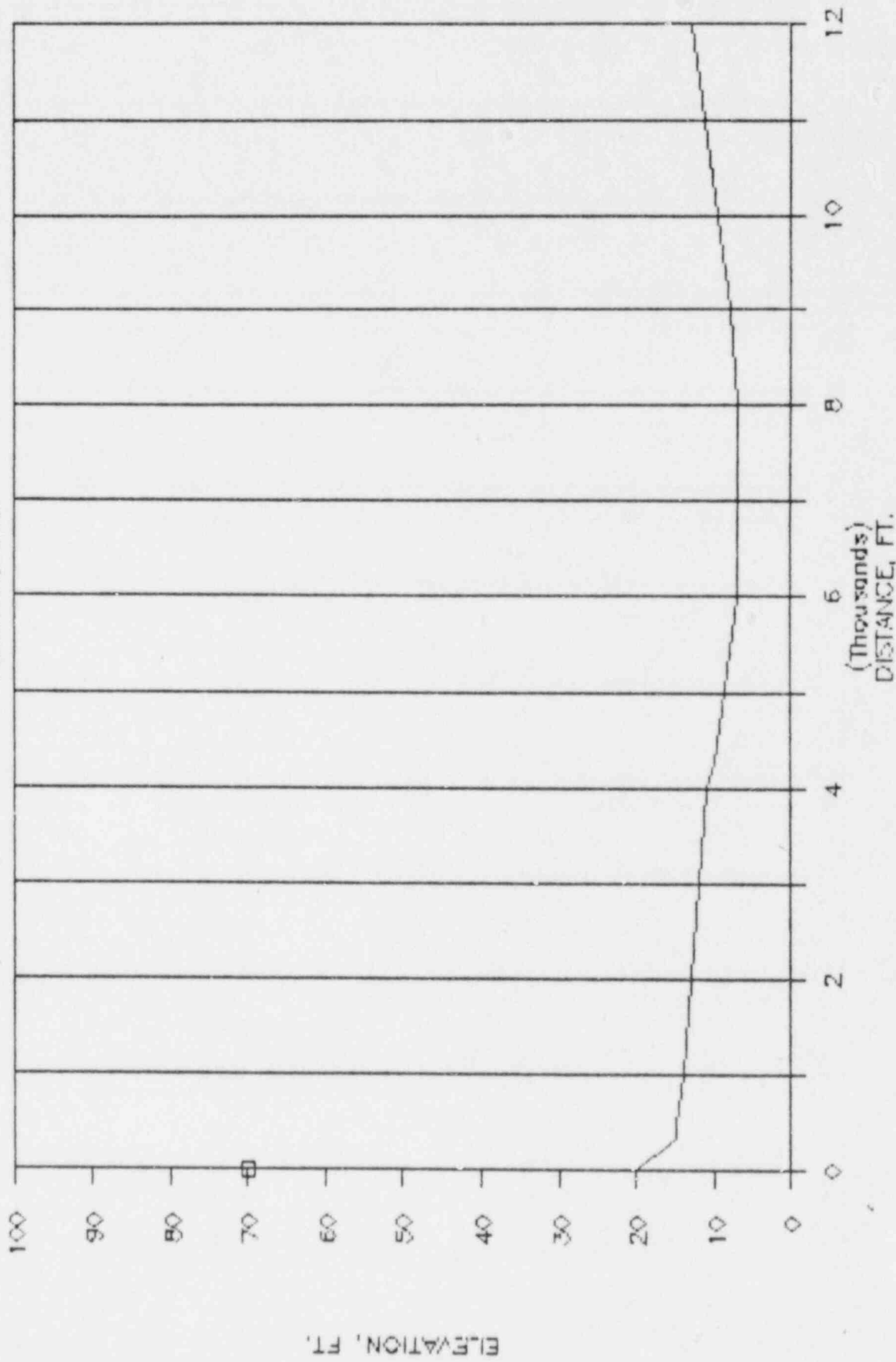
WATERFORD 46

AZIMUTH, E



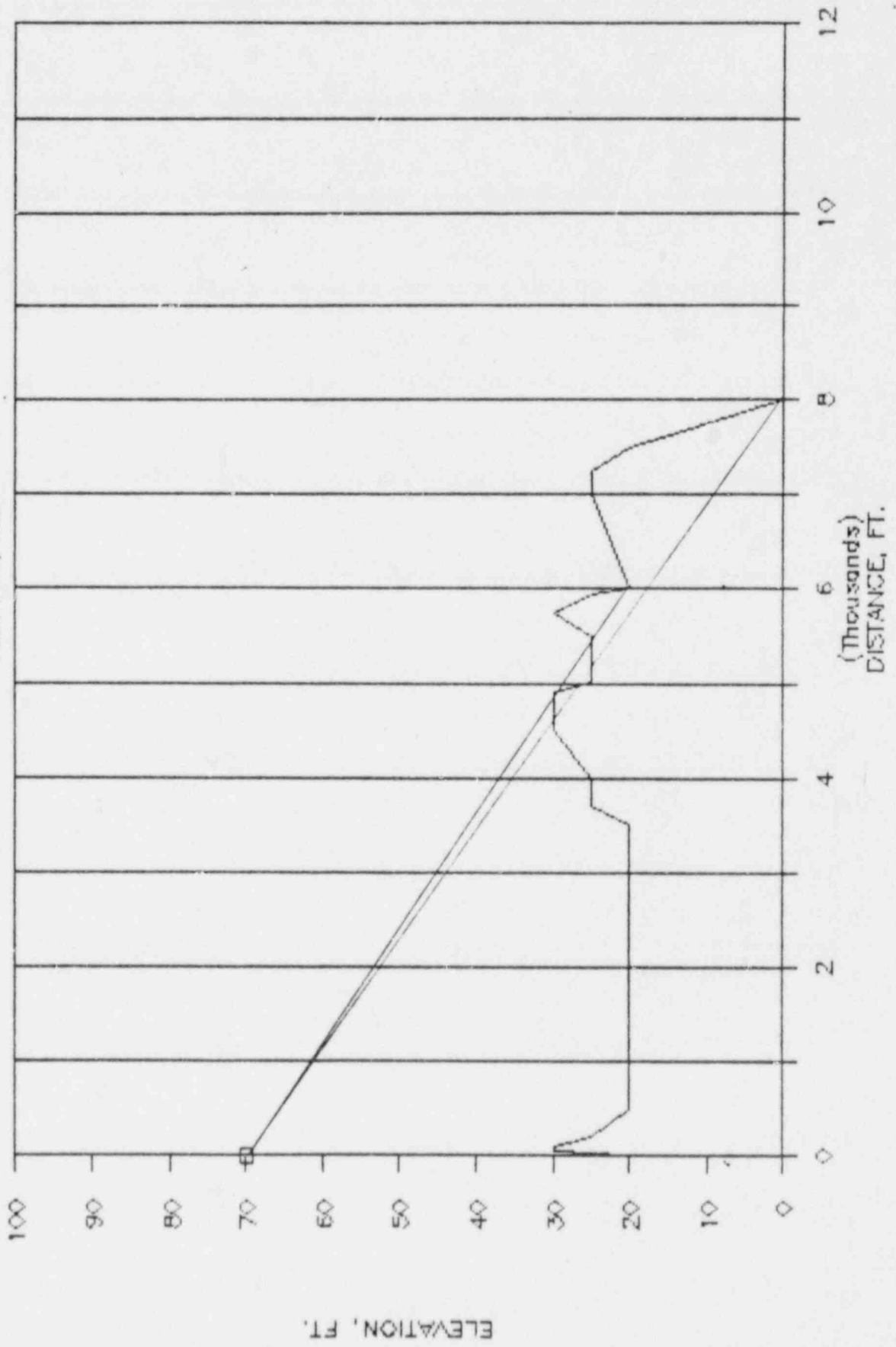
WATERFORD 46

AZIMUTH, BNE



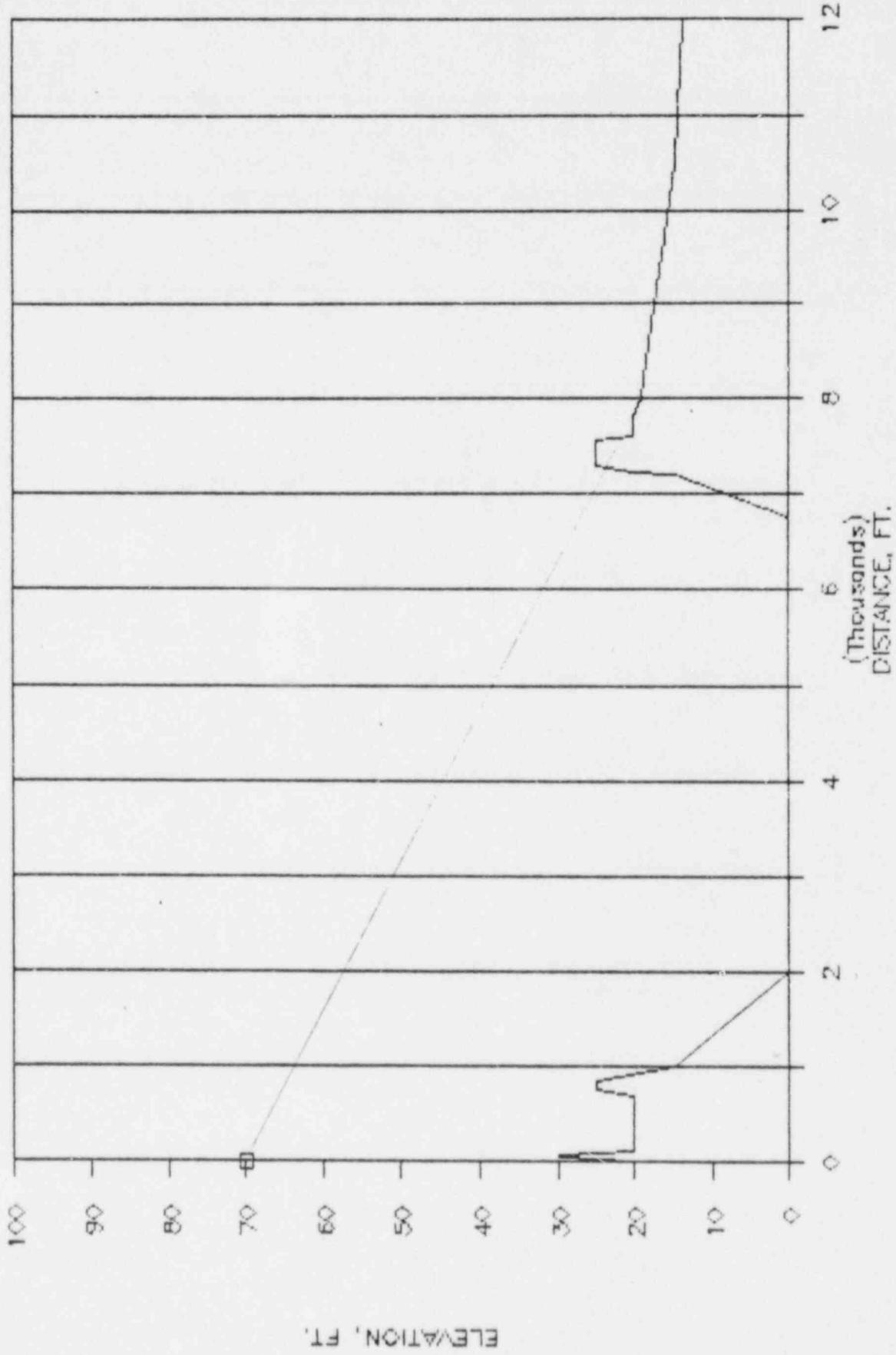
WATERFORD 46

AZIMUTH, NE



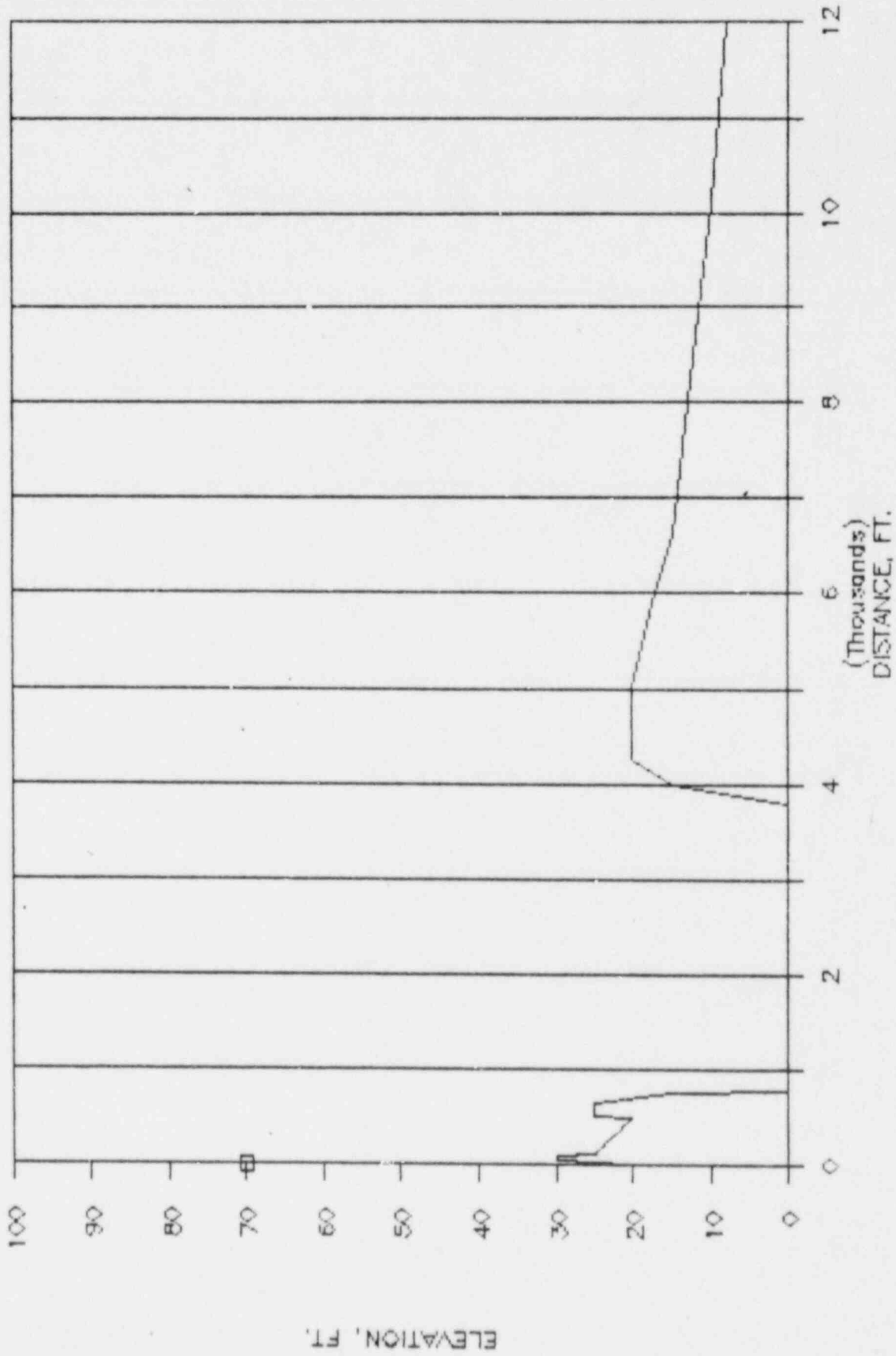
WATERFORD 46

AZIMUTH, NINE



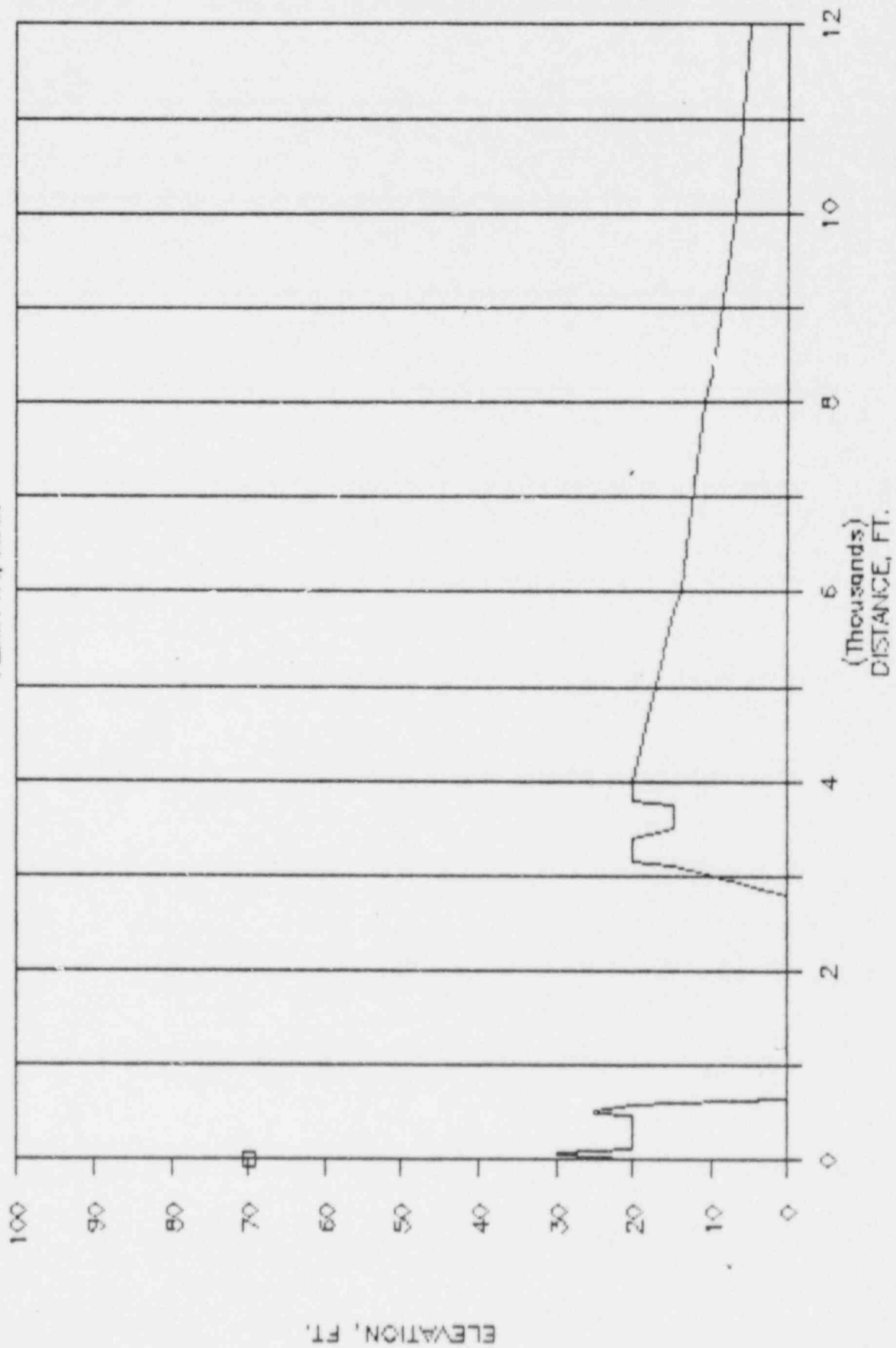
WATERFORD 46

AZIMUTH, N



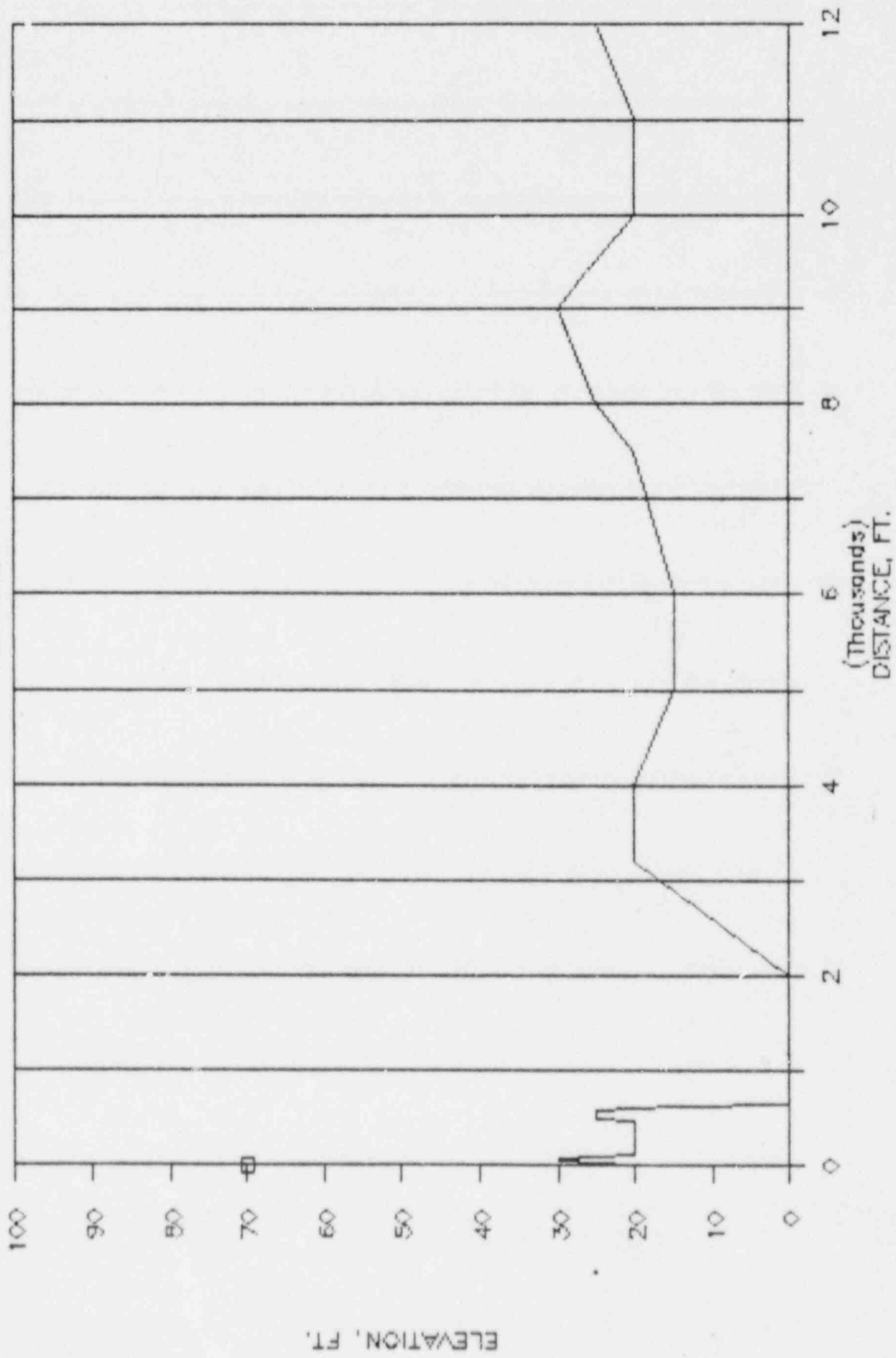
WATERFORD 46

AZIMUTH, NNW



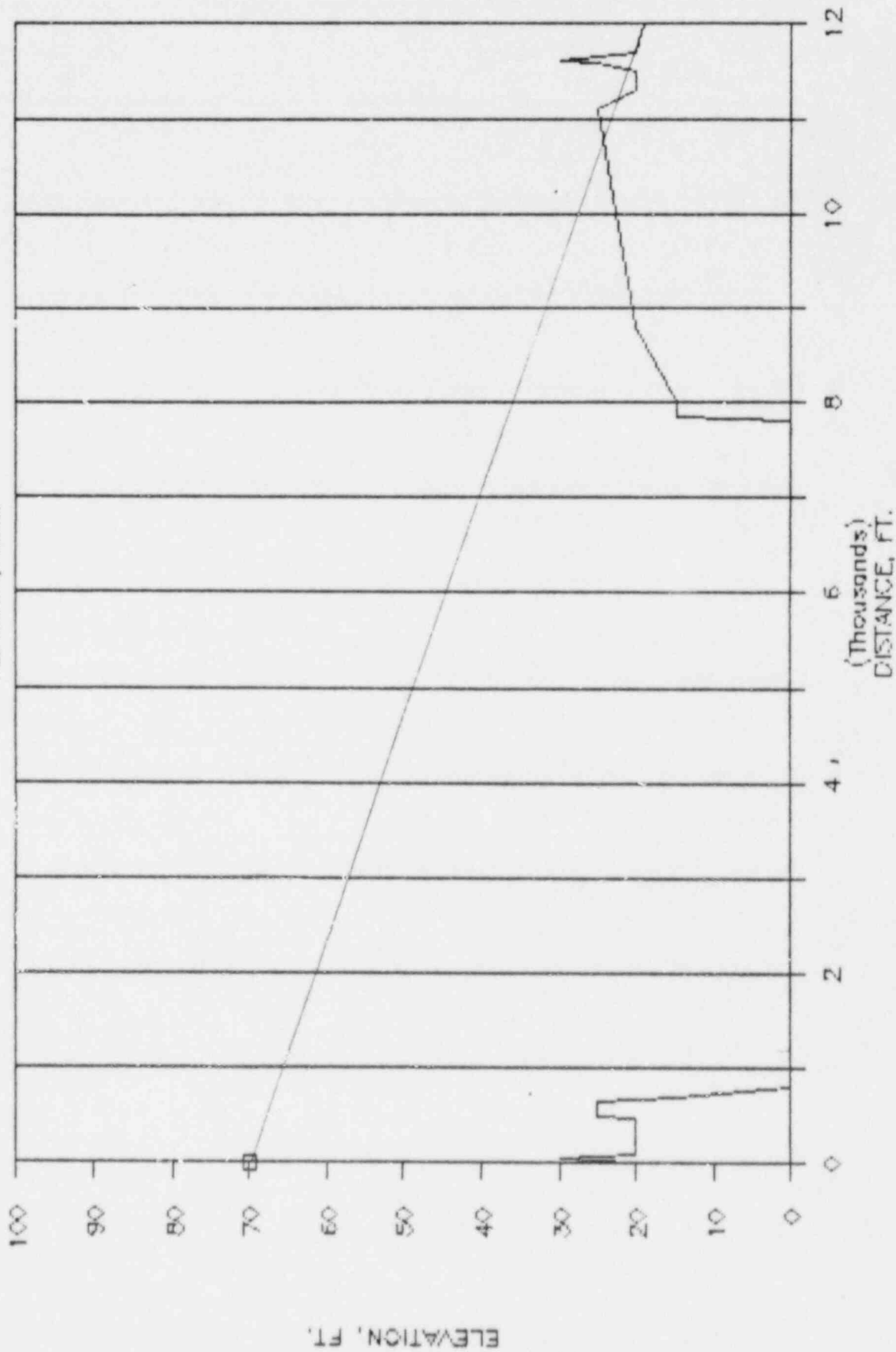
WATERFORD 46

AZIMUTH, NW



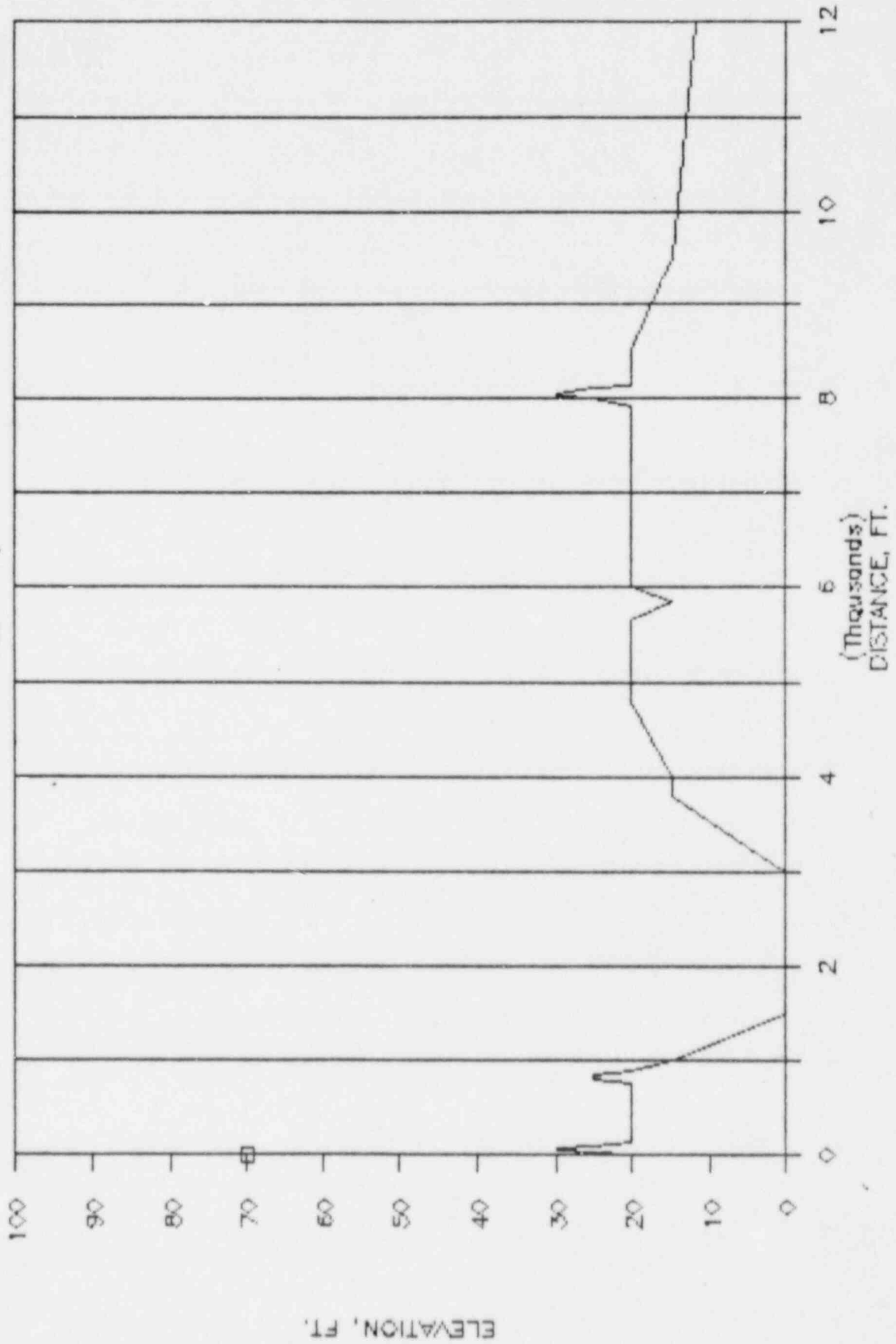
WATERFORD 46

AZIMUTH, WNW



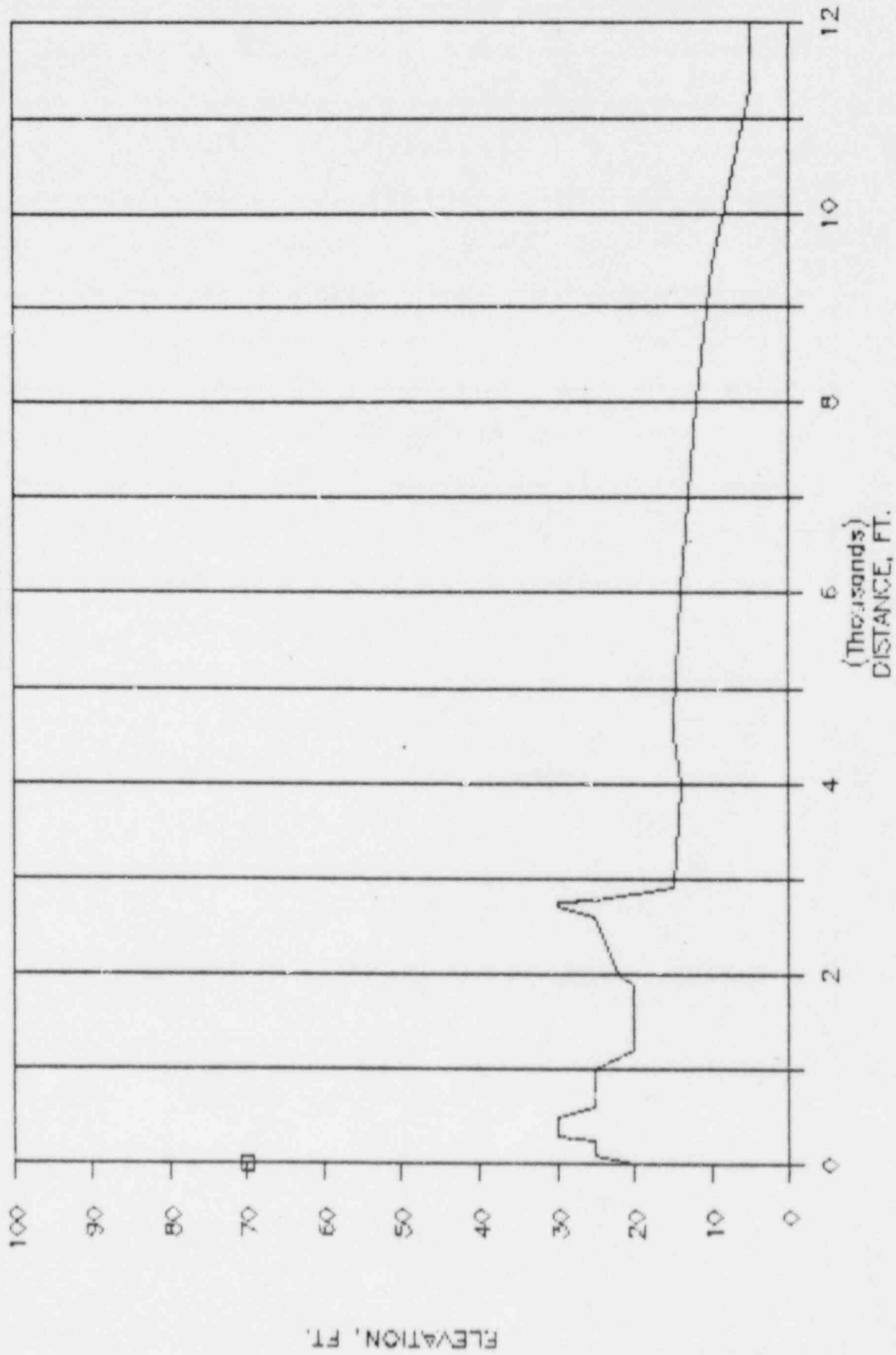
WATERFORD 46

AZIMUTH, W



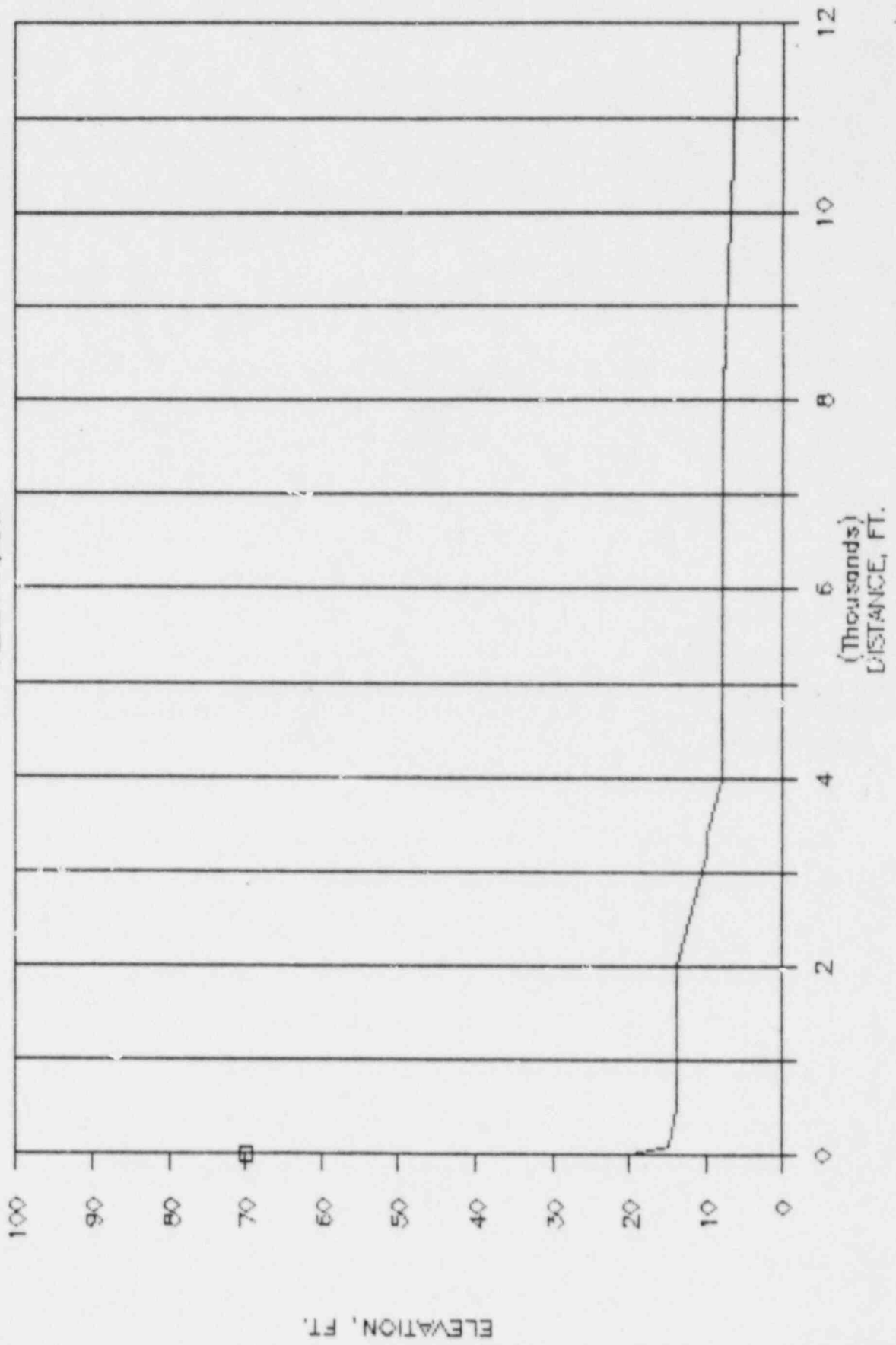
WATERFORD 46

AZIMUTH, WSW



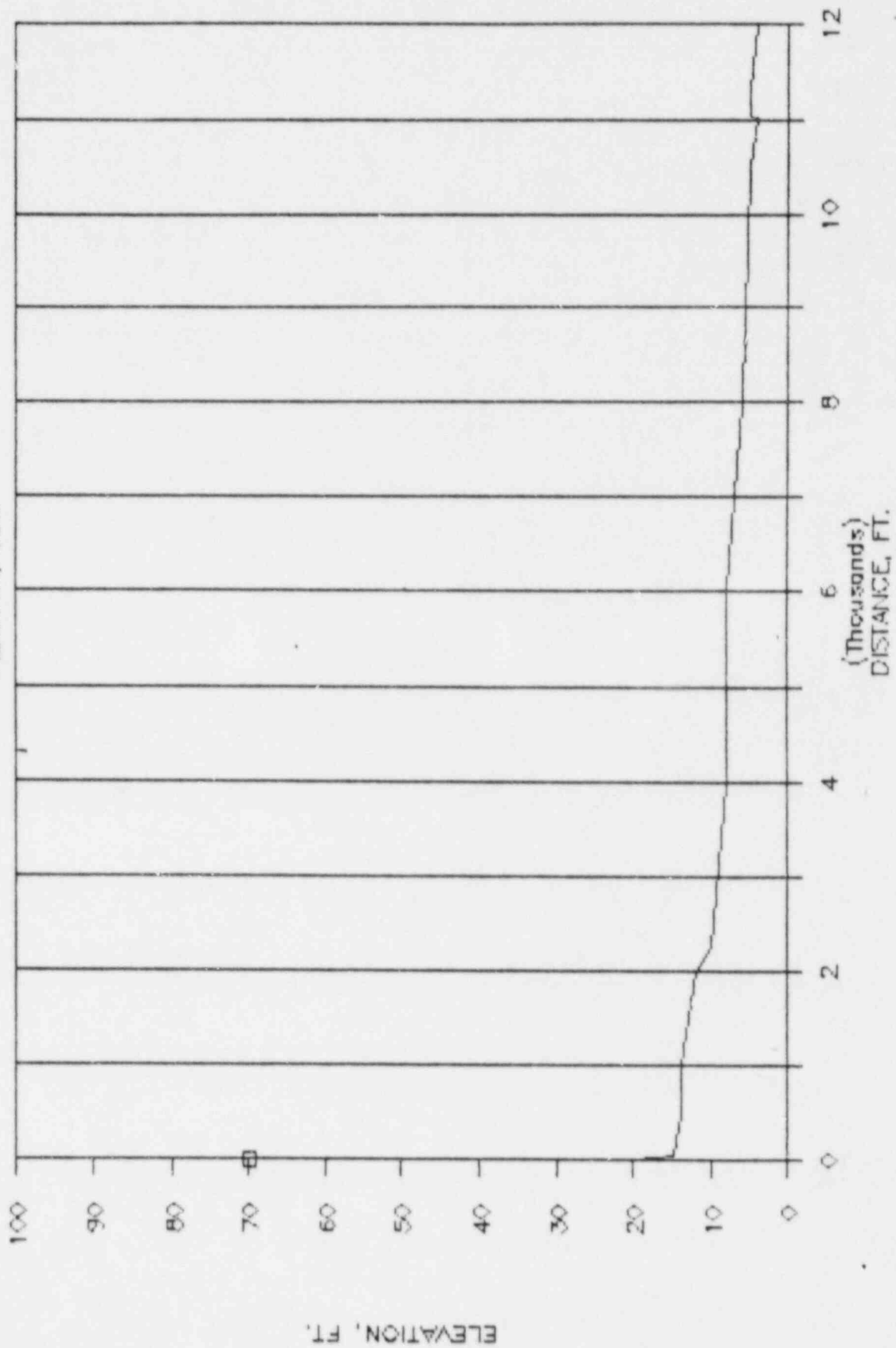
WATERFORD 46

AZIMUTH, SW



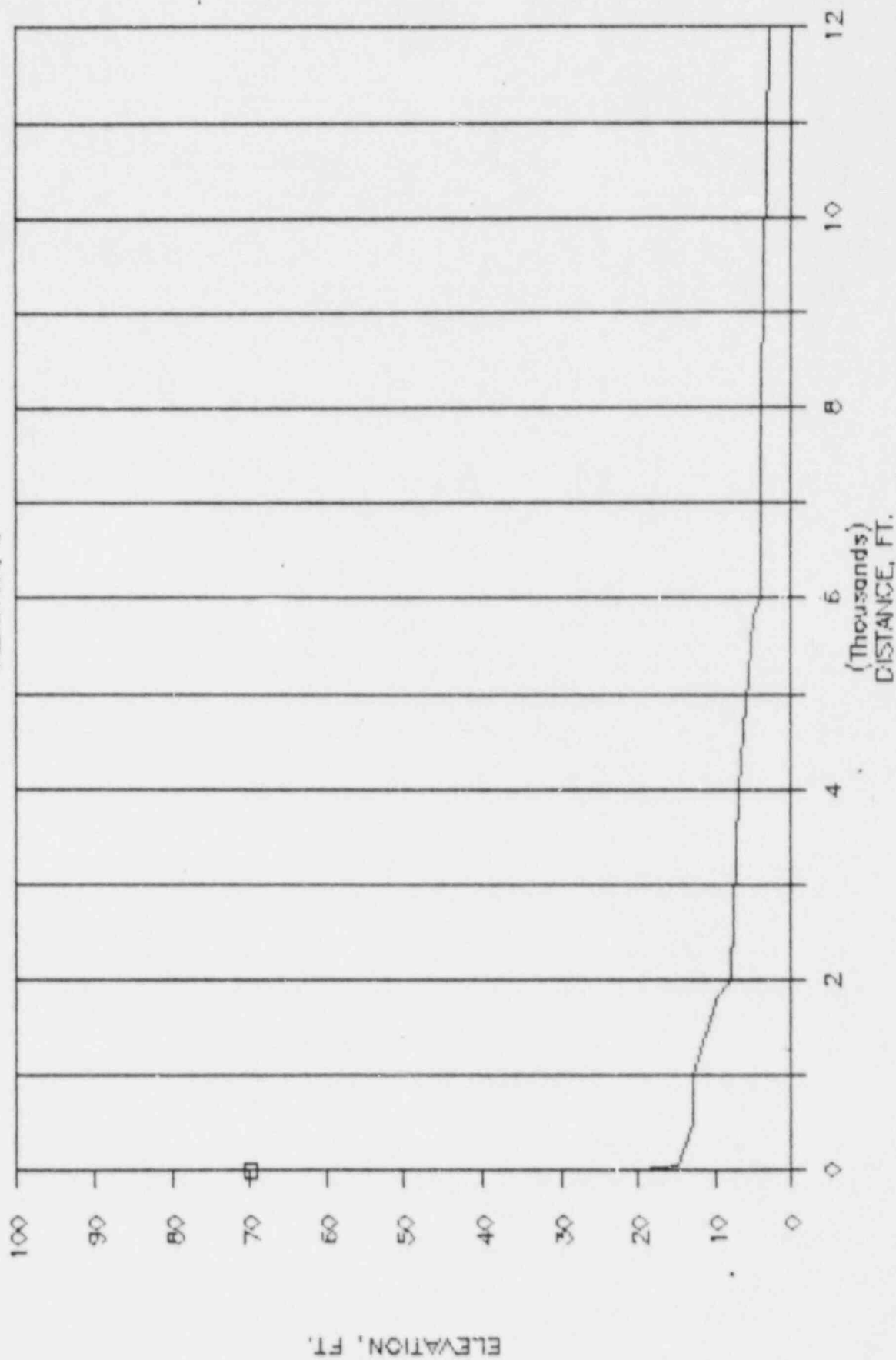
WATERFORD 46

AZIMUTH, SSW



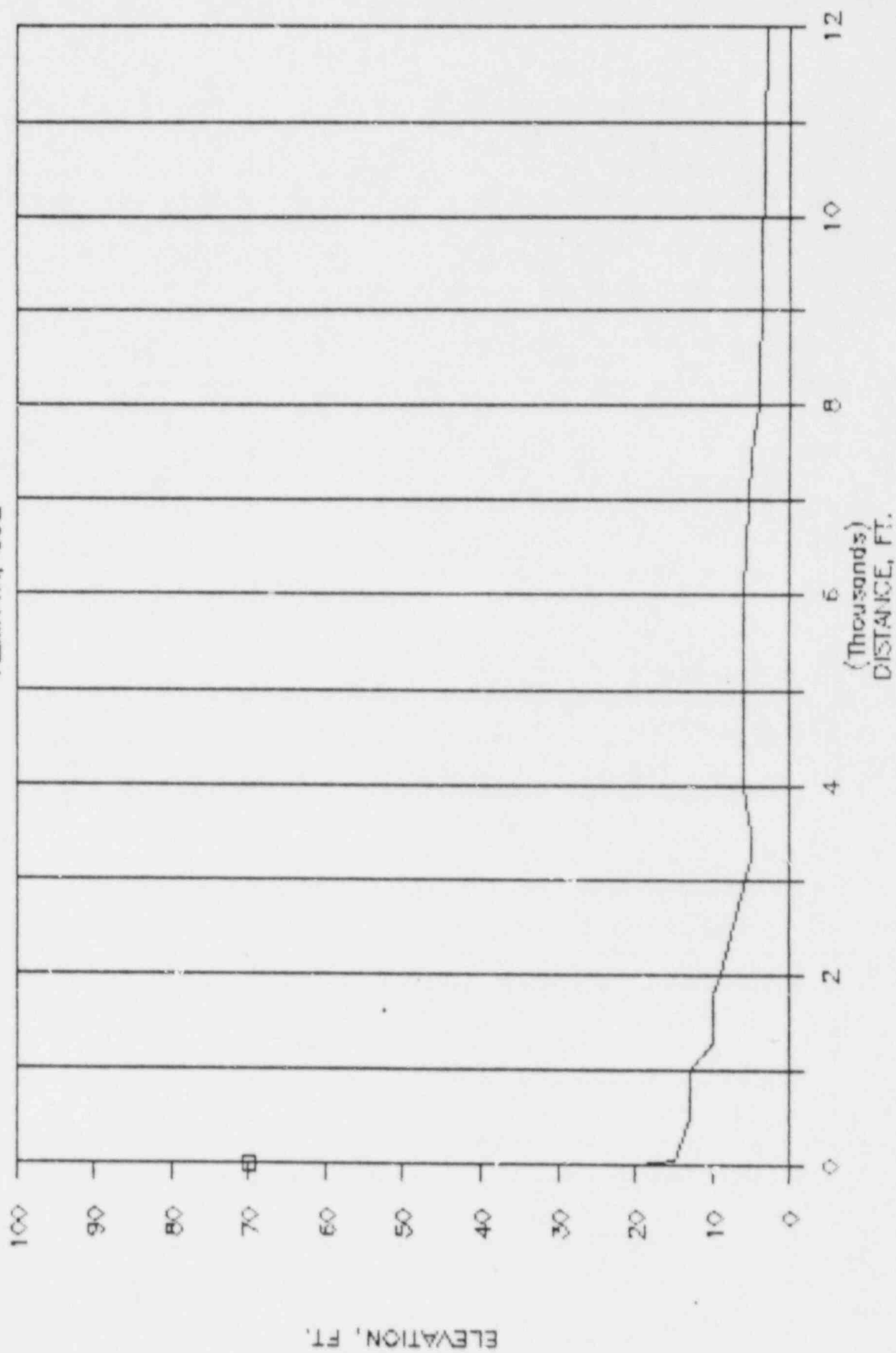
WATERFORD 46

AZIMUTH, S



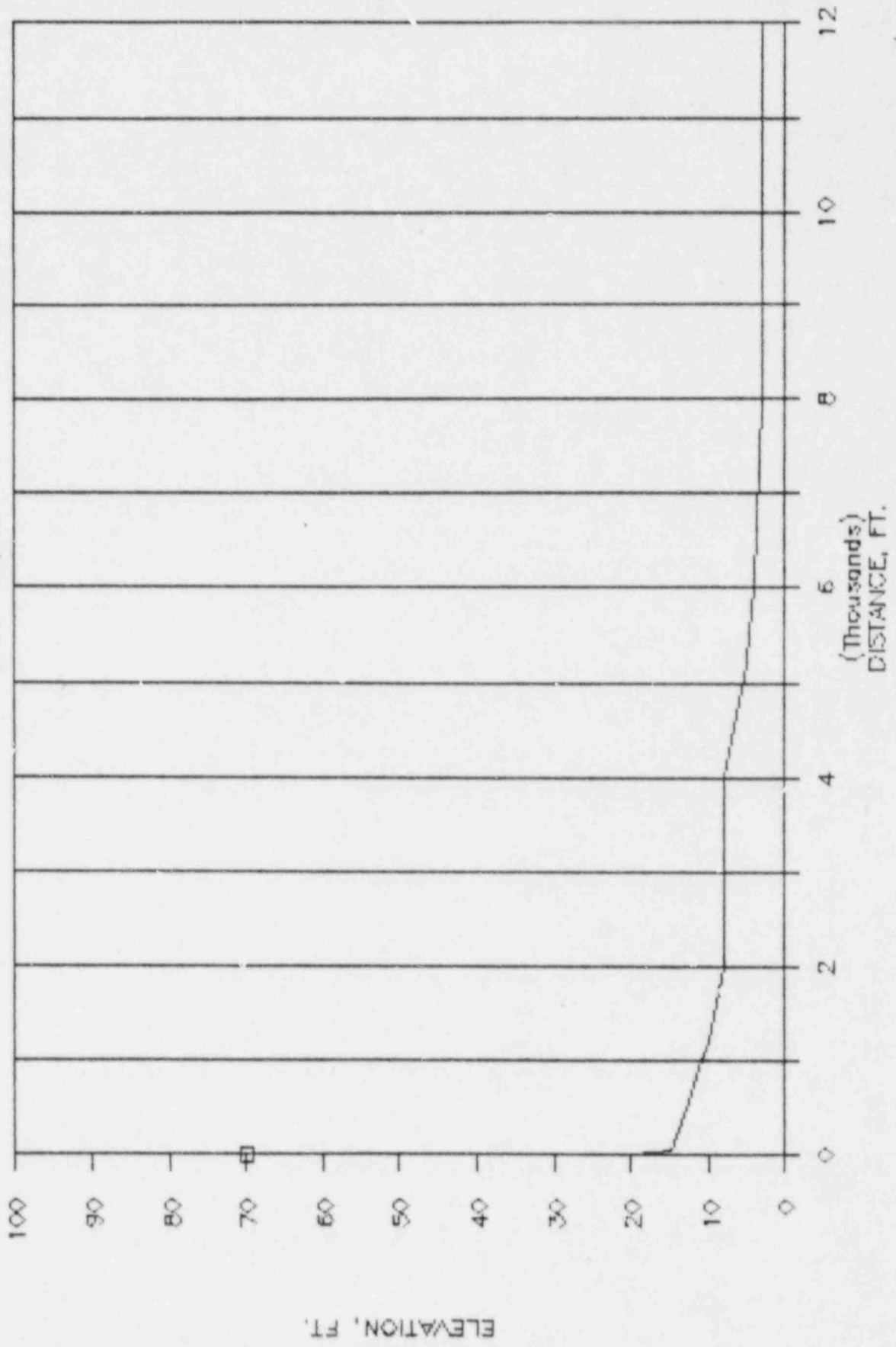
WATERFORD 46

AZIMUTH, SSE



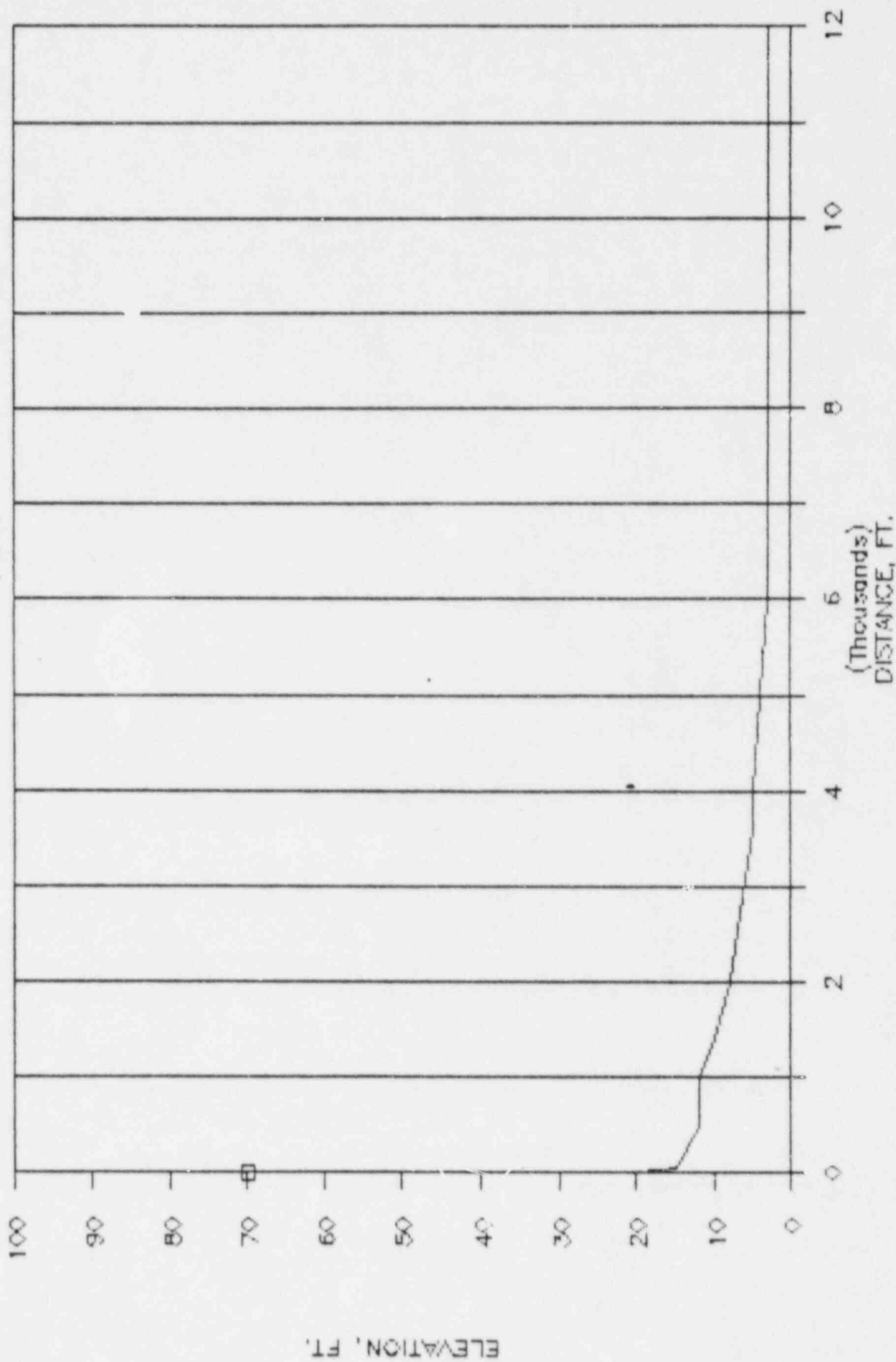
WATERFORD 46

AZIMUTH, SE



WATERFORD 46

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #46-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	14.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	13.00	SOFT	0.	N		0.
3	2000.	90.00	11.00	SOFT	0.			0.
4	4000.	90.00	7.00	SOFT	0.			0.
5	6000.	90.00	4.00	SOFT	0.	NO		0.
6	8000.	90.00	4.00	SOFT	0.	NO		0.
7	12000.	90.00	6.00	SOFT	0.	NO		0.
8	500.	67.50	15.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	14.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	13.00	SOFT	0.	NO		0.
11	4000.	67.50	11.00	SOFT	0.	NO		0.
12	6000.	67.50	7.00	SOFT	0.		0.	0.
13	8000.	67.50	7.00	SOFT	0.		0.	0.
14	12000.	67.50	13.00	SOFT	0.	NO	0.	0.
15	500.	45.00	20.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	20.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	20.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	25.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	20.00	SOFT	0.	YES	5750.	30.
20	8000.	45.00	0.0	SOFT	0.	YES	7250.	25.
21	12000.	45.00	0.0	SOFT	0.	NO	0.	0.
22	500.	22.50	20.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	15.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	0.0	SOFT	0.	NO	0.	0.
25	4000.	22.50	0.0	SOFT	0.	NO	0.	0.
26	6000.	22.50	0.0	SOFT	0.	NO	0.	0.
27	8000.	22.50	19.00	SOFT	0.	YES	7550.	25.
28	12000.	22.50	14.00	SOFT	0.	NO	0.	0.
29	500.	0.0	20.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	0.0	SOFT	0.	NO	0.	0.
31	2000.	0.0	0.0	SOFT	0.	NO	0.	0.
32	4000.	0.0	15.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	17.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	13.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	8.00	SOFT	0.	NO	0.	0.
36	500.	337.50	25.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	0.0	SOFT	0.	NO	0.	0.
38	2000.	337.50	0.0	SOFT	0.	NO	0.	0.
39	4000.	337.30	20.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	14.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	11.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	5.00	SOFT	0.	NO	0.	0.
43	500.	315.00	25.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	0.0	SOFT	0.	NO	0.	0.
45	2000.	315.00	0.0	SOFT	0.	NO	0.	0.
46	4000.	315.00	20.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	15.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	25.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	25.00	SOFT	0.	NO	0.	0.
50	500.	292.50	25.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	0.0	SOFT	0.	NO	0.	0.
52	2000.	292.50	0.0	SOFT	0.	NO	0.	0.
53	4000.	292.50	0.0	SOFT	0.	NO	0.	0.
54	6000.	292.50	0.0	SOFT	0.	NO	0.	0.
55	8000.	292.50	15.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	19.00	SOFT	0.	YES	11600.	30.
57	500.	270.00	20.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	15.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	0.0	SOFT	0.	NO	0.	0.
60	4000.	270.00	15.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	20.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	25.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	12.00	SOFT	0.	NO	0.	0.
64	500.	247.50	30.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	25.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	22.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	14.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	14.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	12.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	5.00	SOFT	0.	NO	0.	0.
71	500.	225.00	14.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	14.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	14.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	8.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	8.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	8.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	6.00	SOFT	0.	NO	0.	0.
78	500.	202.50	14.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	14.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	12.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	8.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	8.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	6.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	4.00	SOFT	0.	NO	0.	0.
85	500.	180.00	13.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	13.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	8.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	7.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	4.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	4.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	3.00	SOFT	0.	NO	0.	0.
92	500.	157.50	13.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	13.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	9.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	6.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	6.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	4.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	3.00	SOFT	0.	NO	0.	0.
99	500.	135.00	13.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	11.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	8.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	8.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	4.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	3.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	3.00	SOFT	0.	NO	0.	0.
106	500.	112.50	12.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	12.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	8.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	5.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	3.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	3.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	3.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #46-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT046	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
		X0= 0.0	Y0= 0.0	Z0= 0.0	70.00	HEIGHT ABOVE GROUND=		50.00				

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #46-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE	BAROMETRIC
					DIRECTION	H1	H2	H1	H2	HUMIDITY	PRESSURE (MM OF HG)
1983	S	B	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

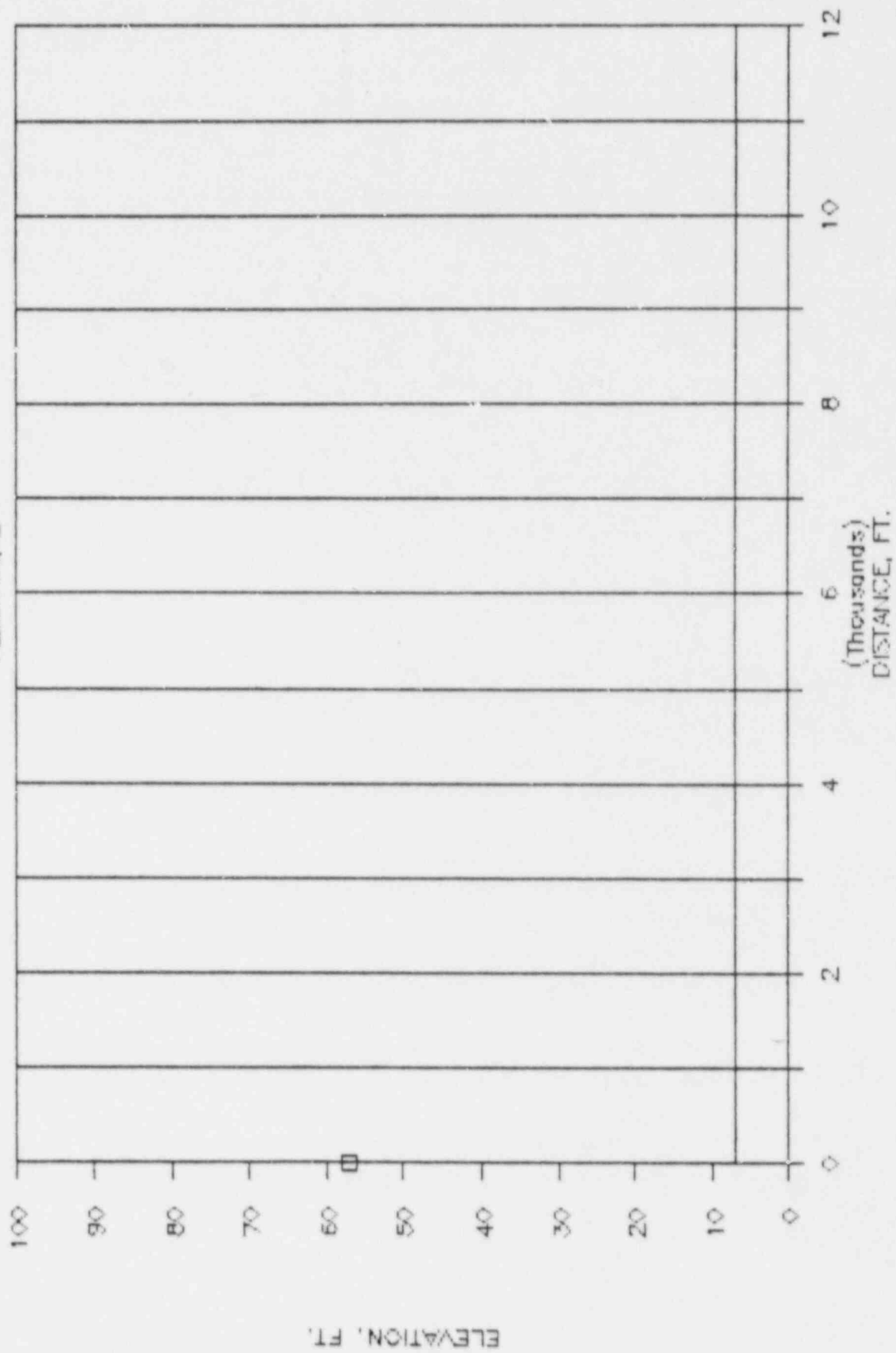
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #46-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	54.6	50.1	50.8
NNE	105.6	91.2	75.7	65.1	60.9	52.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.7	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.7	91.2	75.7	65.1	60.9	57.4	0.0
WNW	105.7	91.2	75.7	65.1	60.9	57.4	44.7
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.7	91.3	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	32.1
S	105.6	91.2	75.7	62.8	54.1	46.1	30.6
SSE	105.6	91.2	75.7	63.3	54.9	47.1	32.1
SE	105.6	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

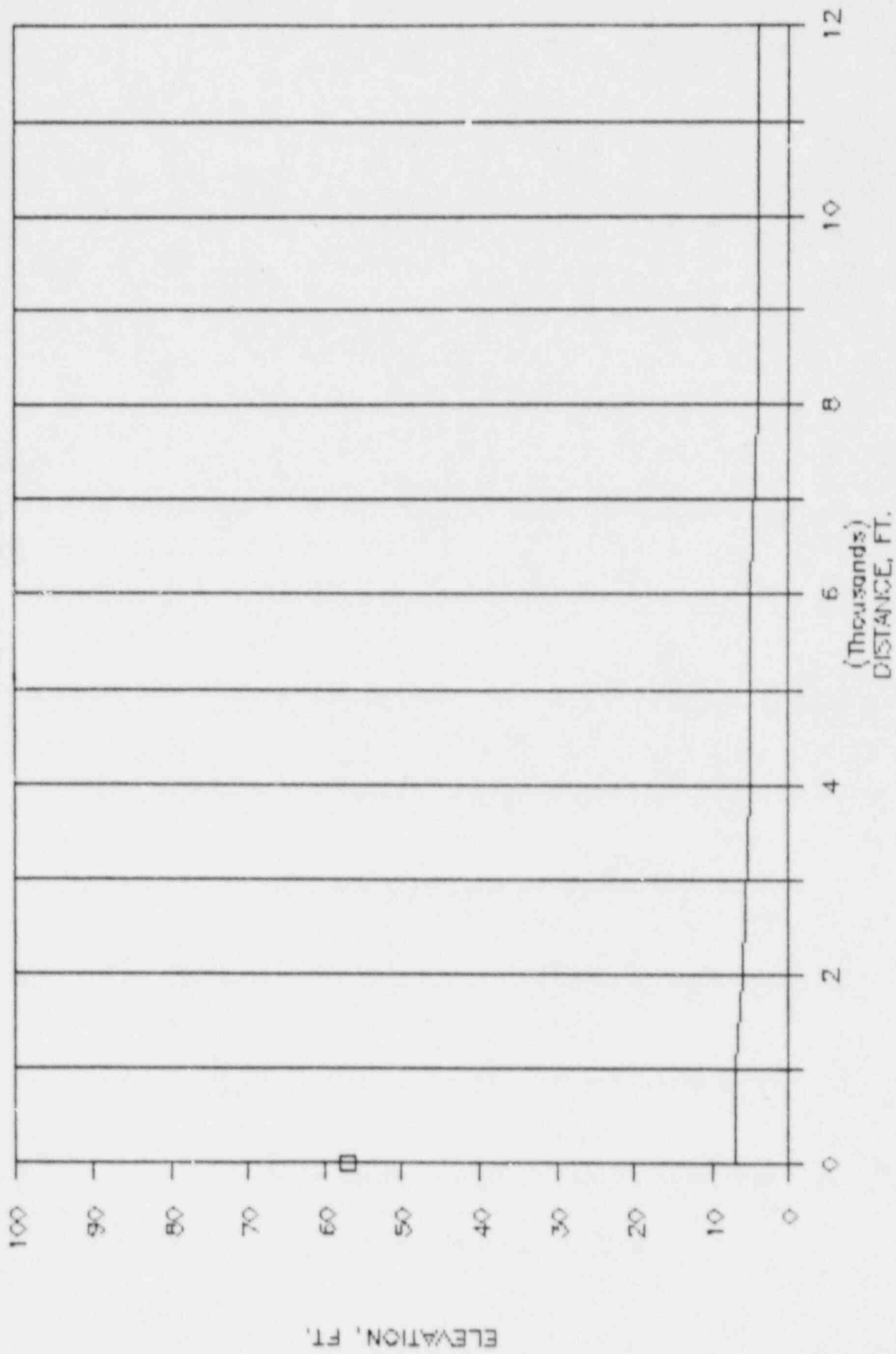
WATERFORD 47

AZIMUTH, E



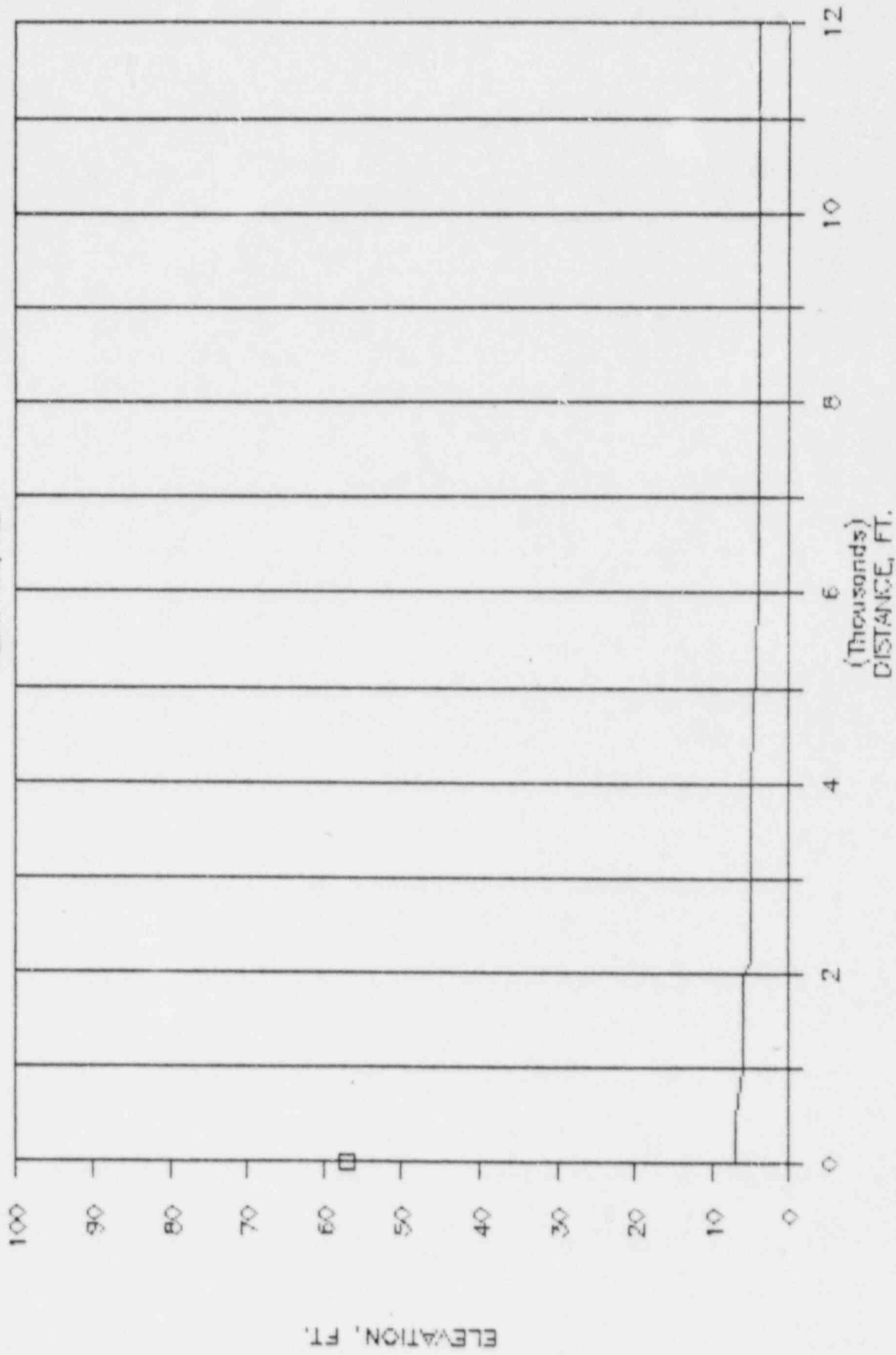
WATERFORD 47

AZIMUTH, ENE



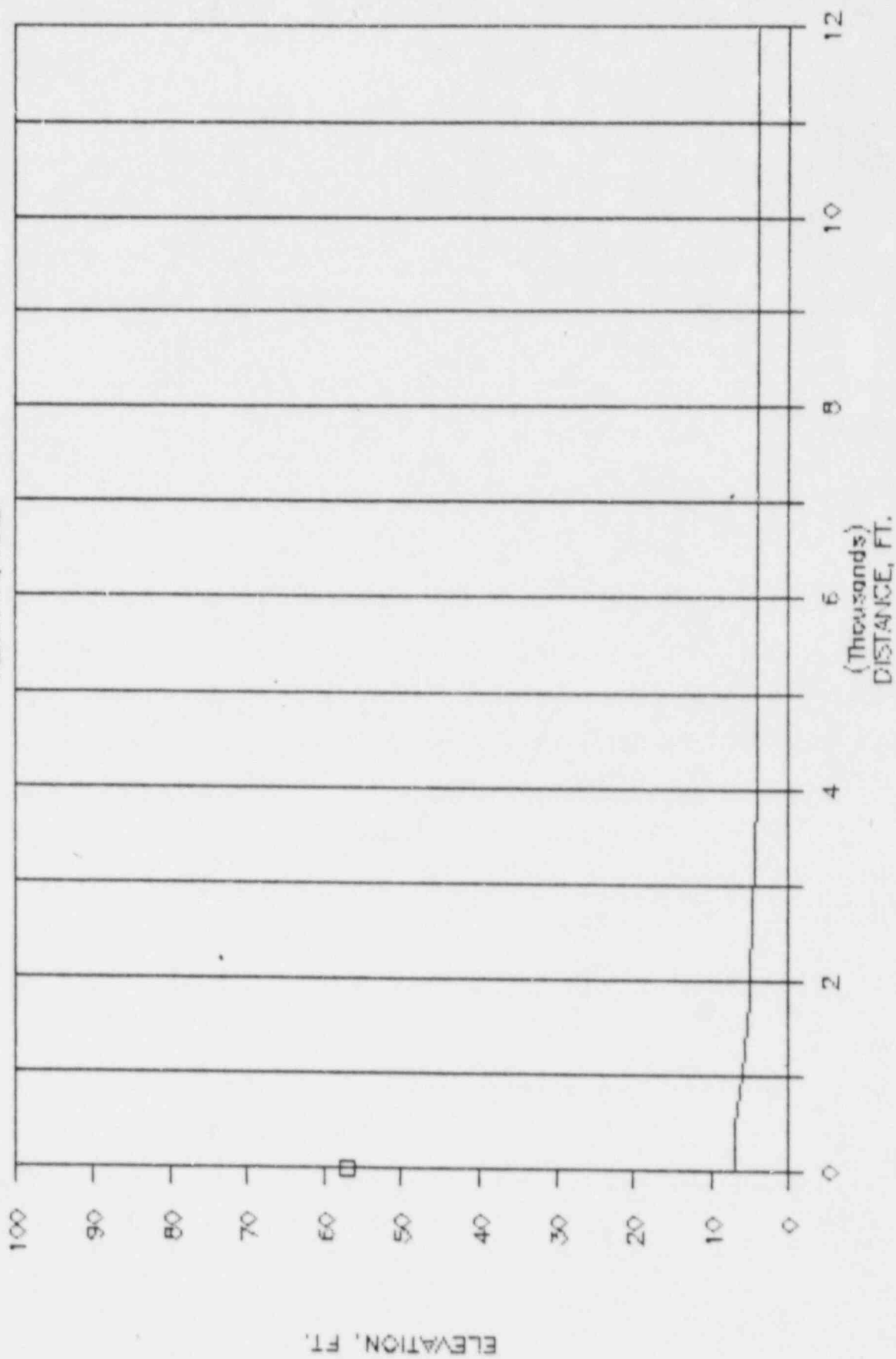
WATERFORD 47

AZIMUTH, NE



WATERFORD 47

AZIMUTH, NINE



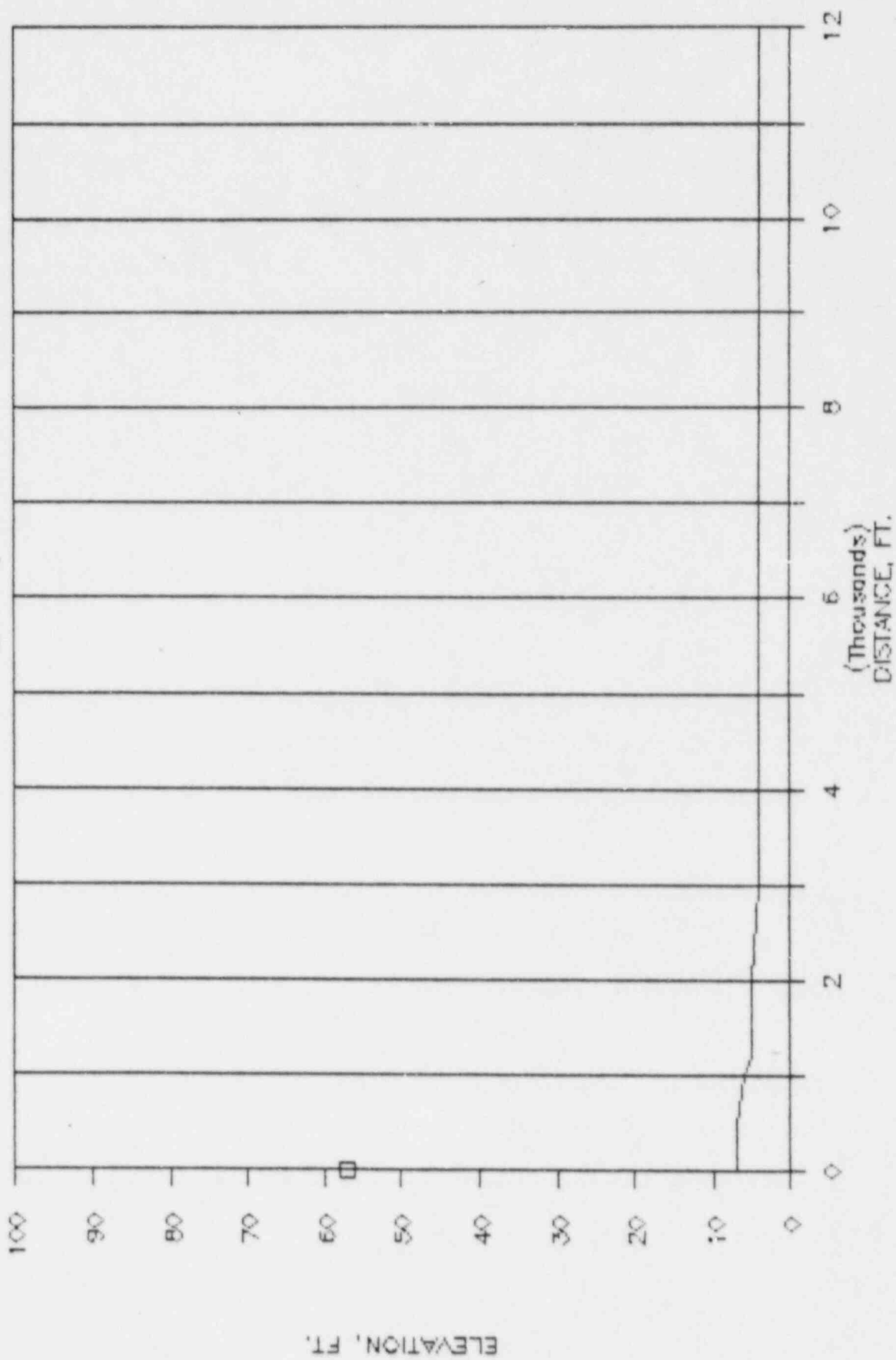
100 90 80 70 60 50 40 30 20 10 0

0 2 4 6 8 10 12

0 100 200 300 400 500 600 700 800 900 1000

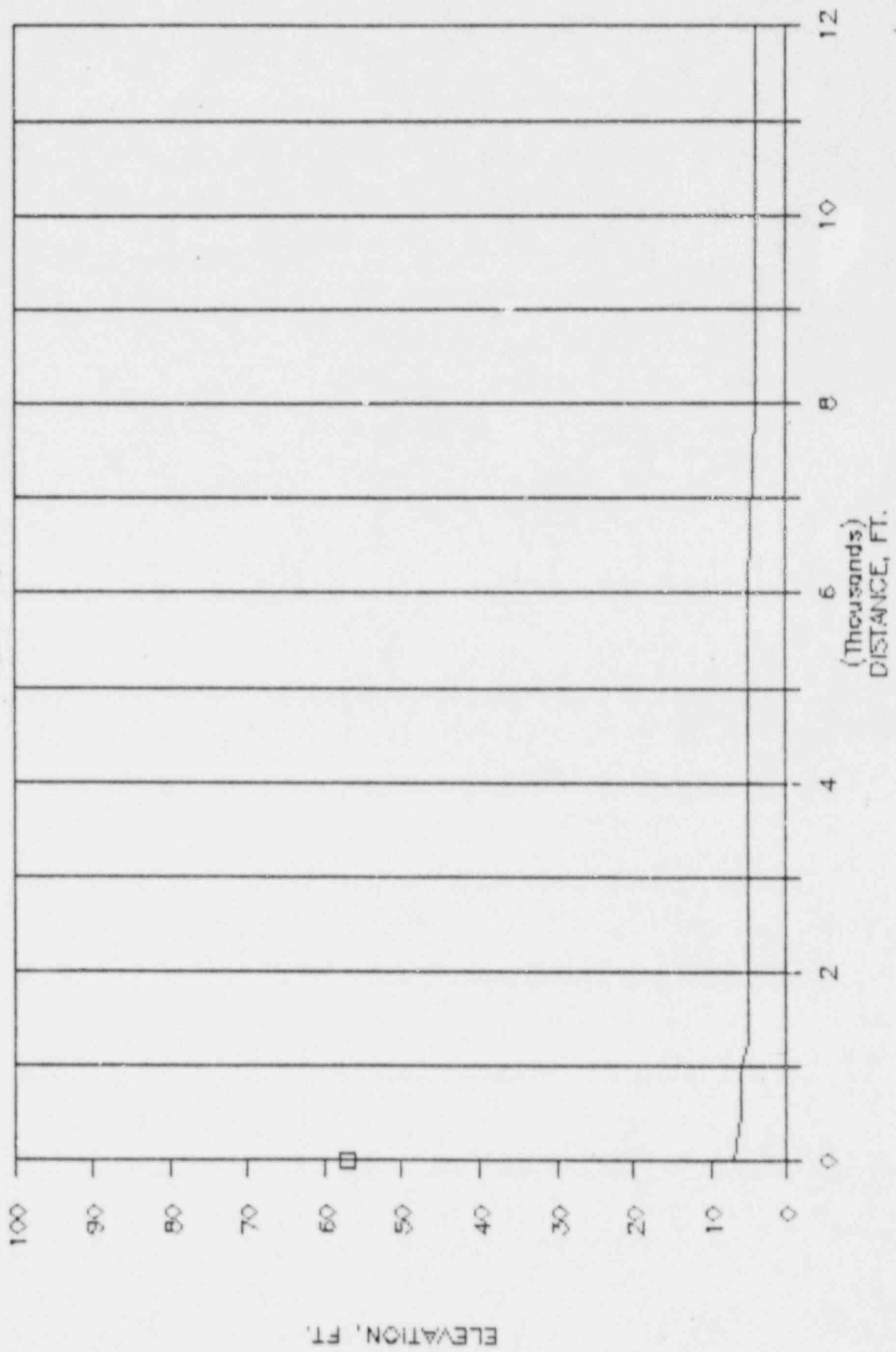
WATERFORD 47

AZIMUTH, N



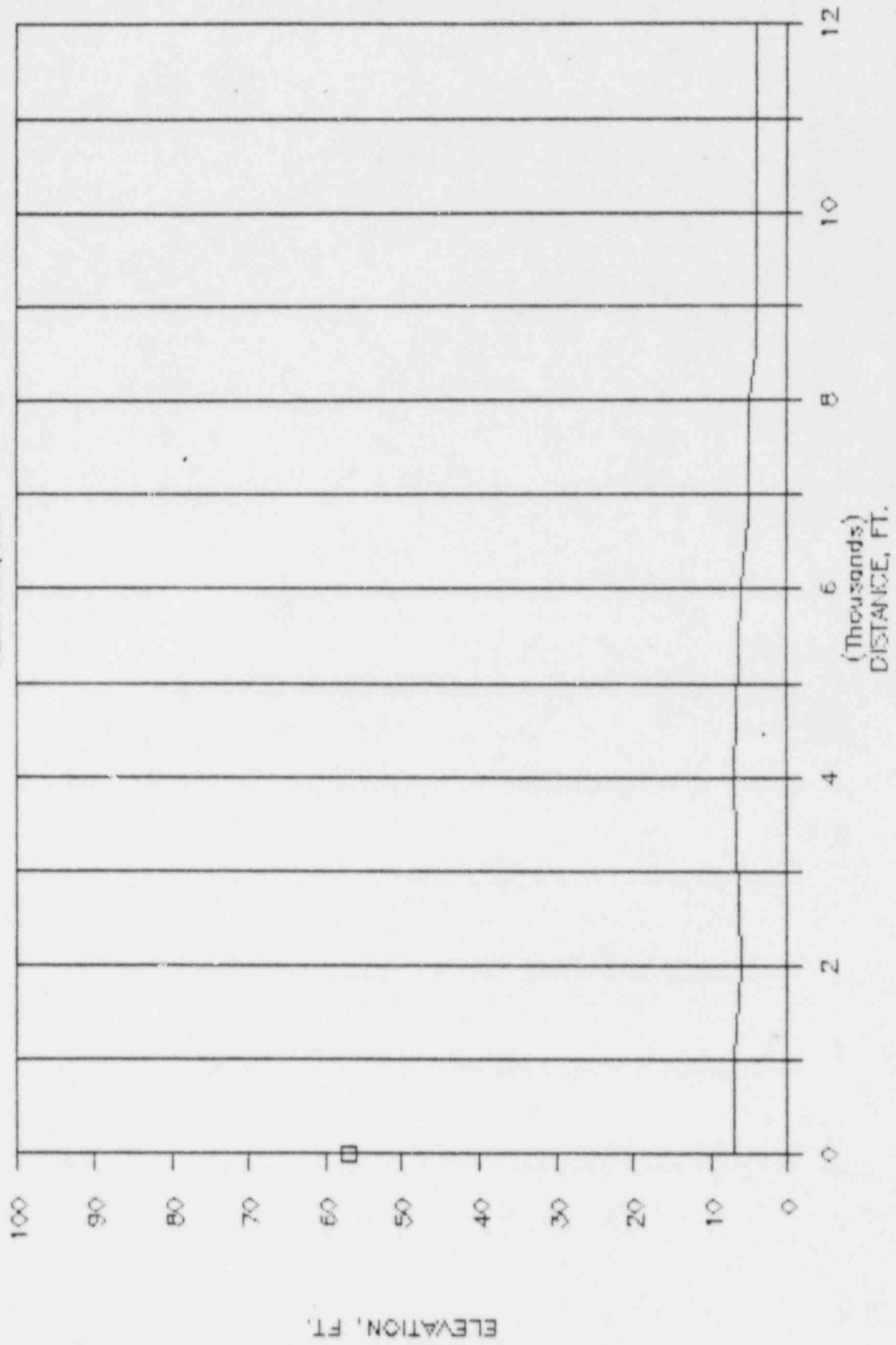
WATERFORD 47

AZIMUTH, NNW



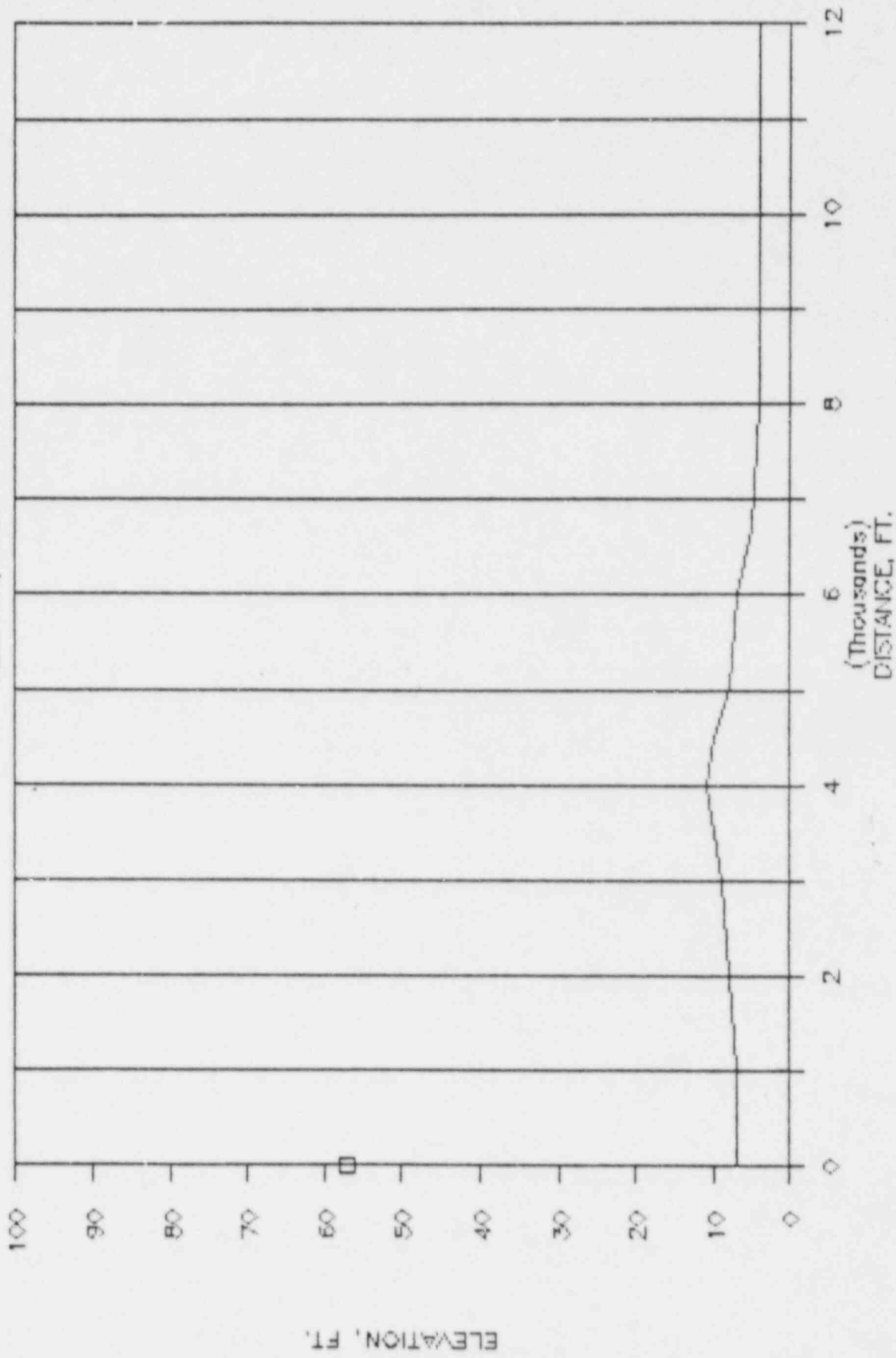
WATERFORD 47

AZIMUTH, NW



WATERFORD 47

AZIMUTH, WNW



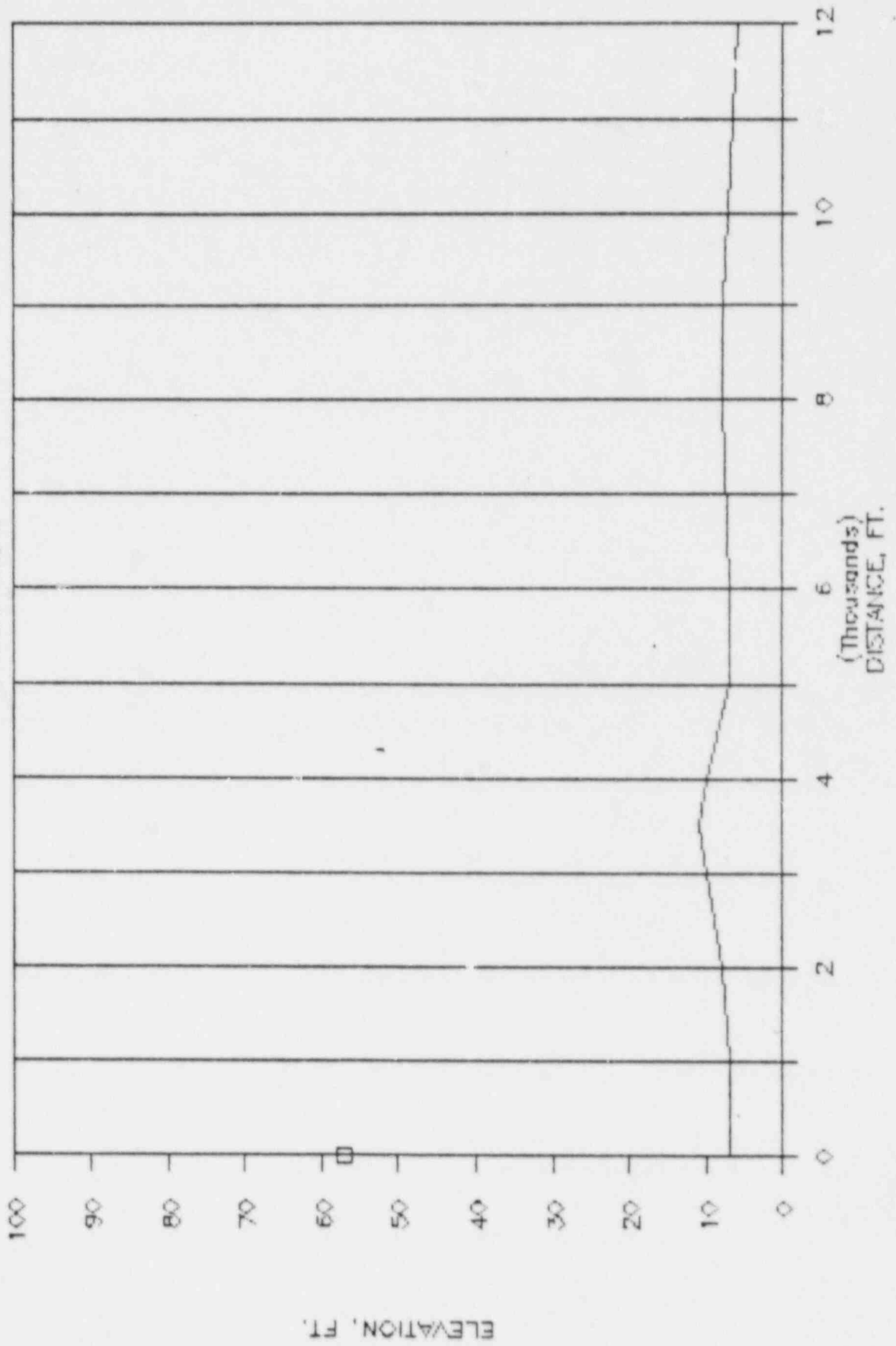
ELEVATION, FT.

(Thousands)
DISTANCE, FT.

100 90 80 70 60 50 40 30 20 10 0

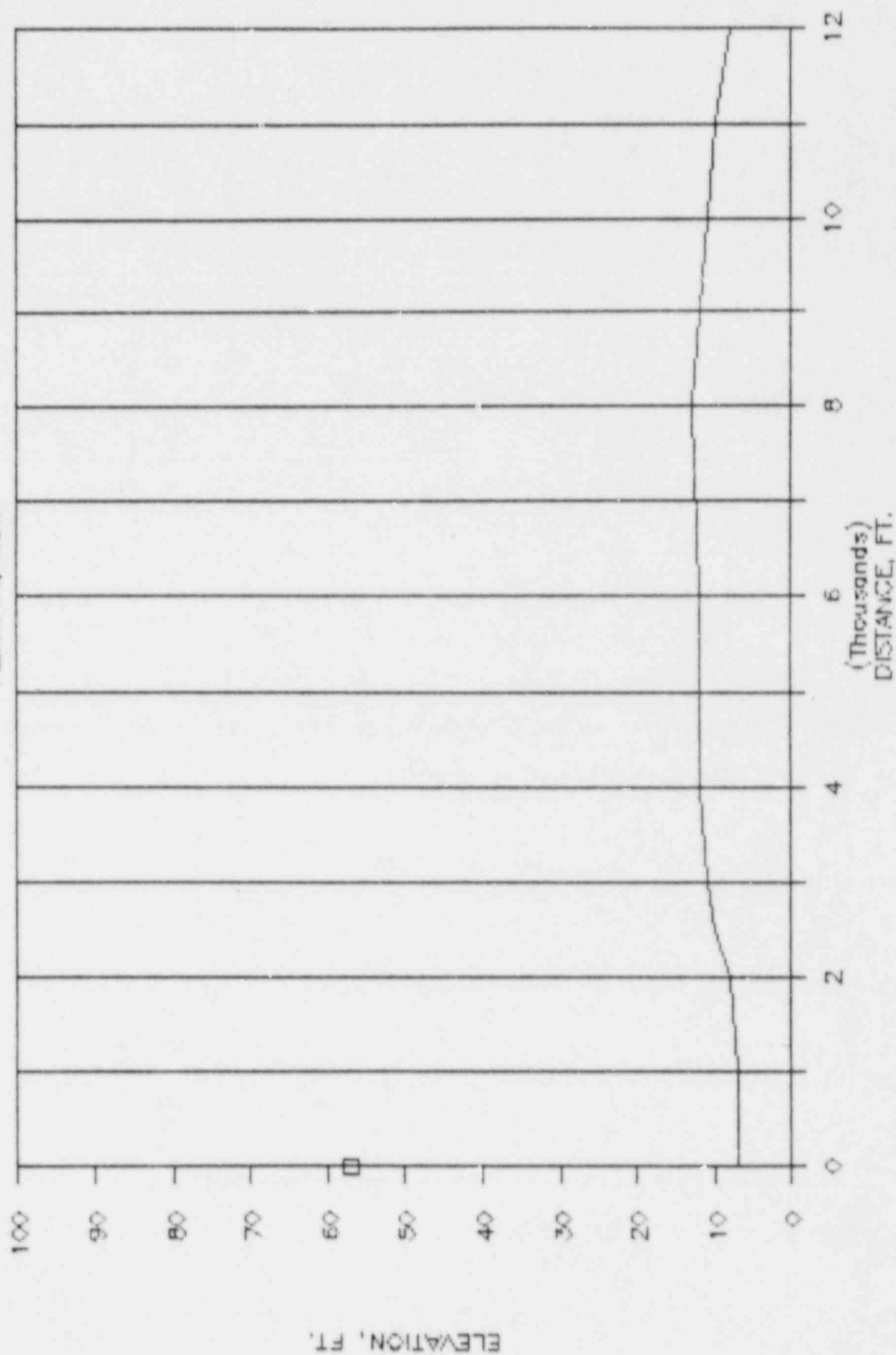
WATERFORD 47

AZIMUTH, W



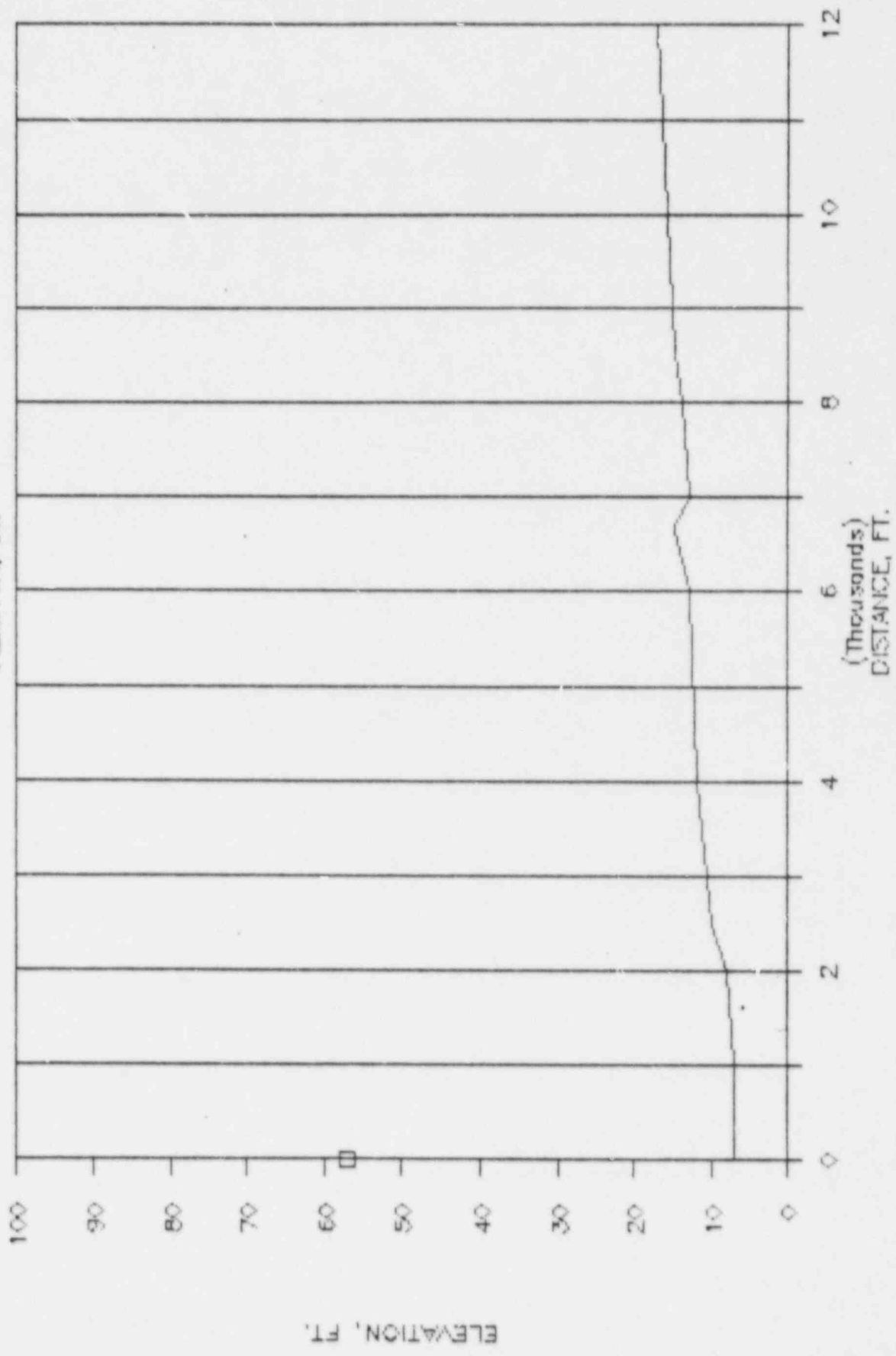
WATERFORD 47

AZIMUTH, WSW



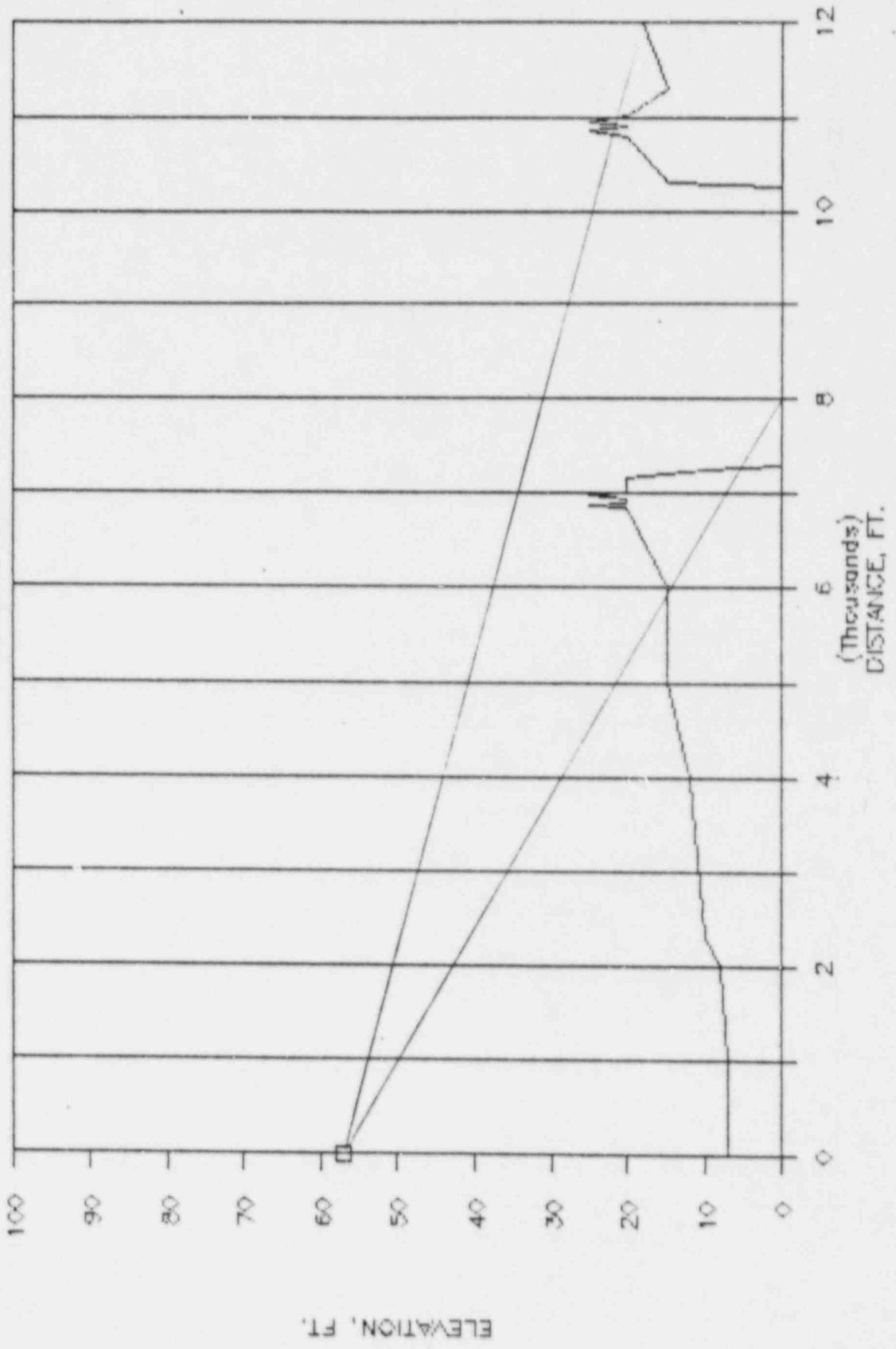
WATERFORD 47

AZIMUTH, SW



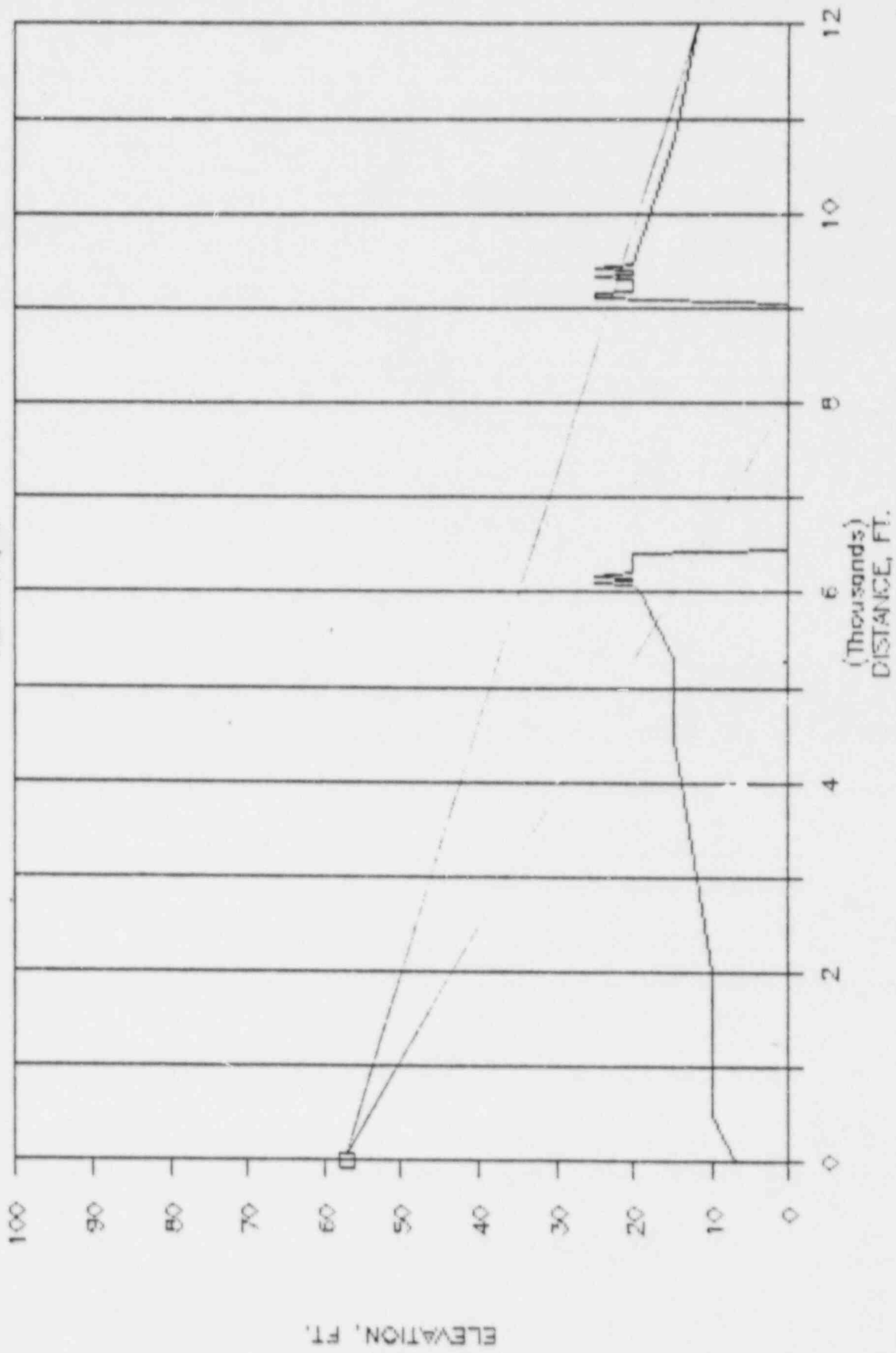
WATERFORD 47

AZIMUTH, SSW



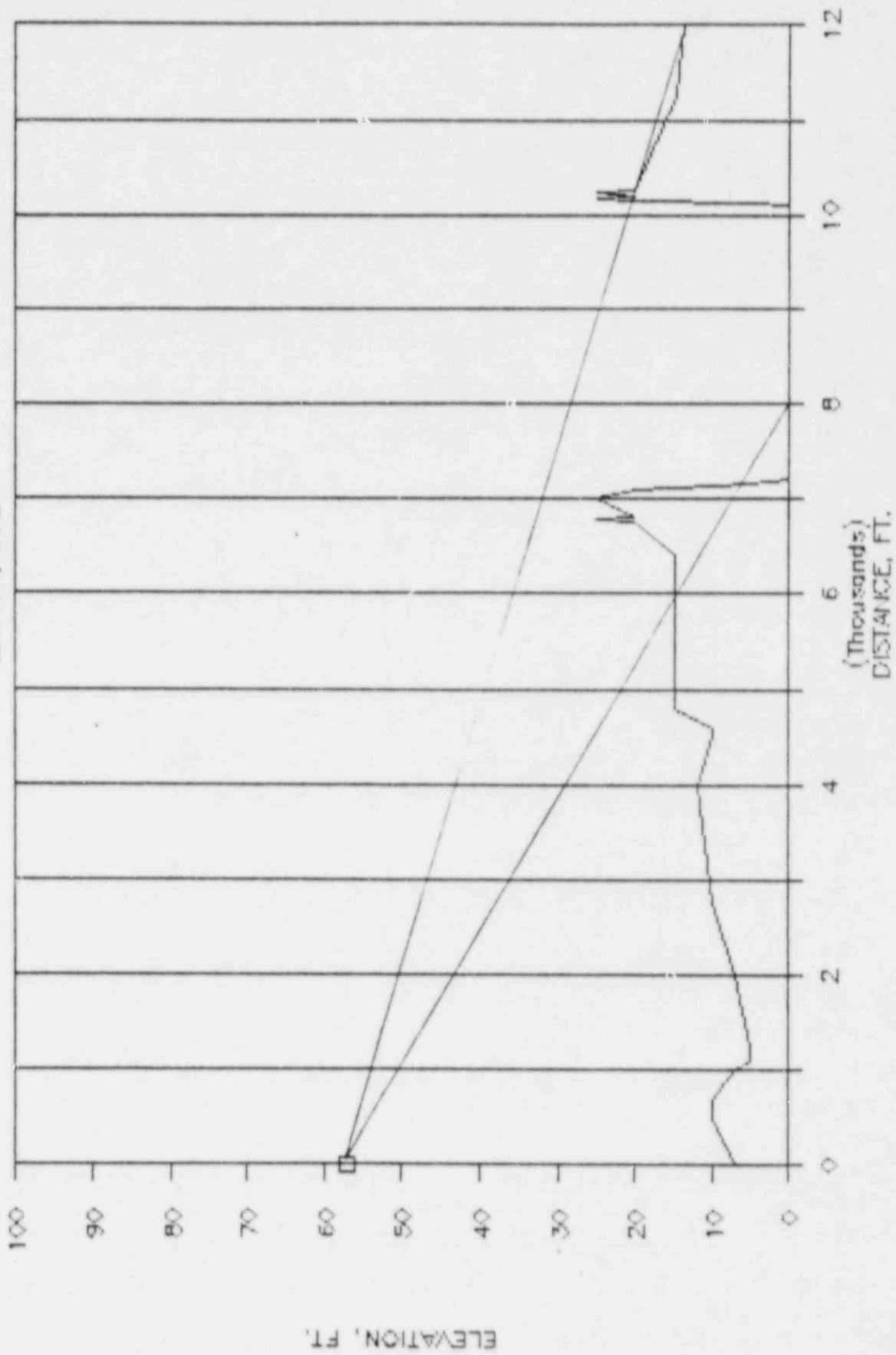
WATERFORD 47

AZIMUTH, S



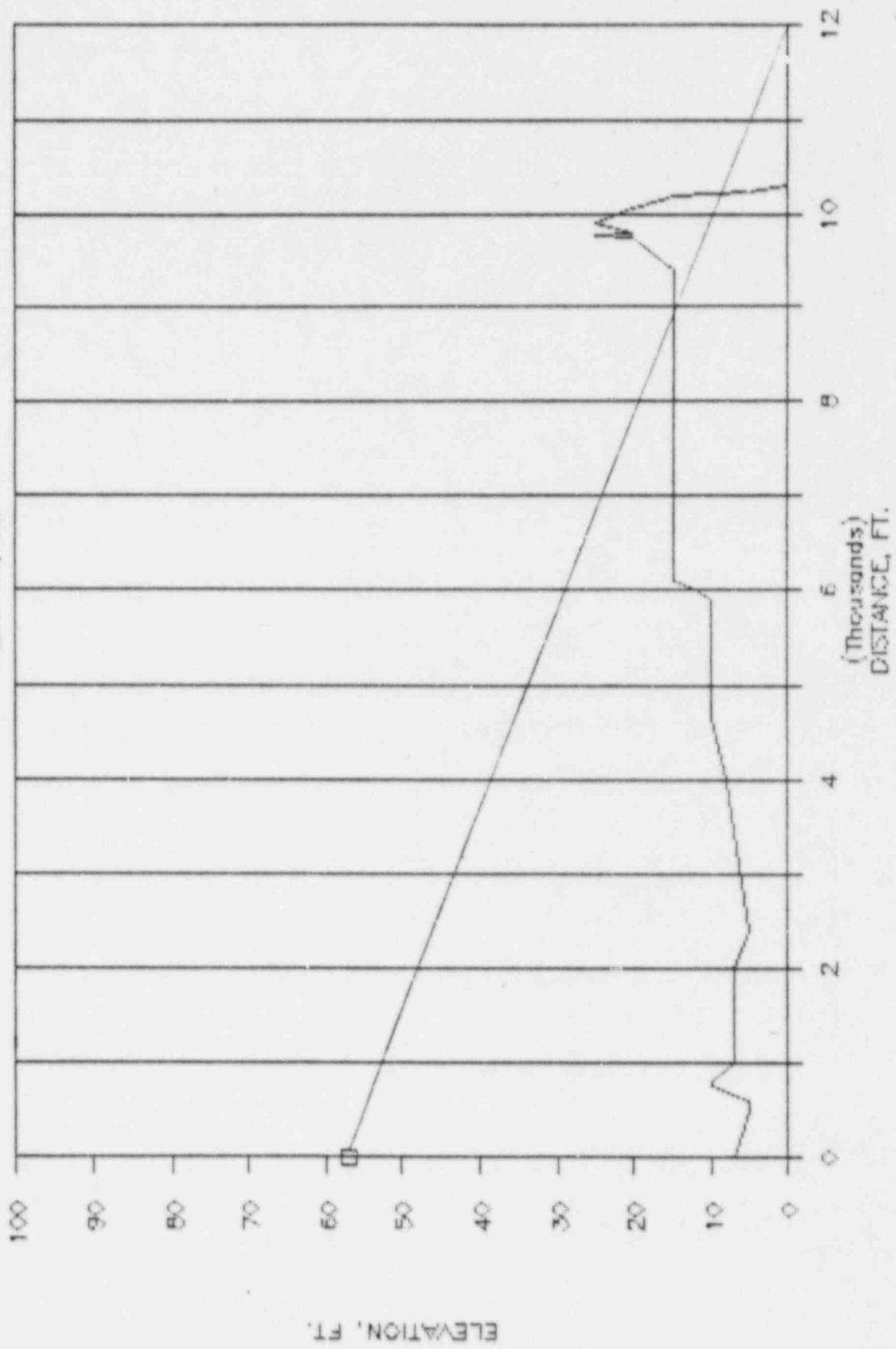
WATERFORD 47

AZIMUTH, SSE



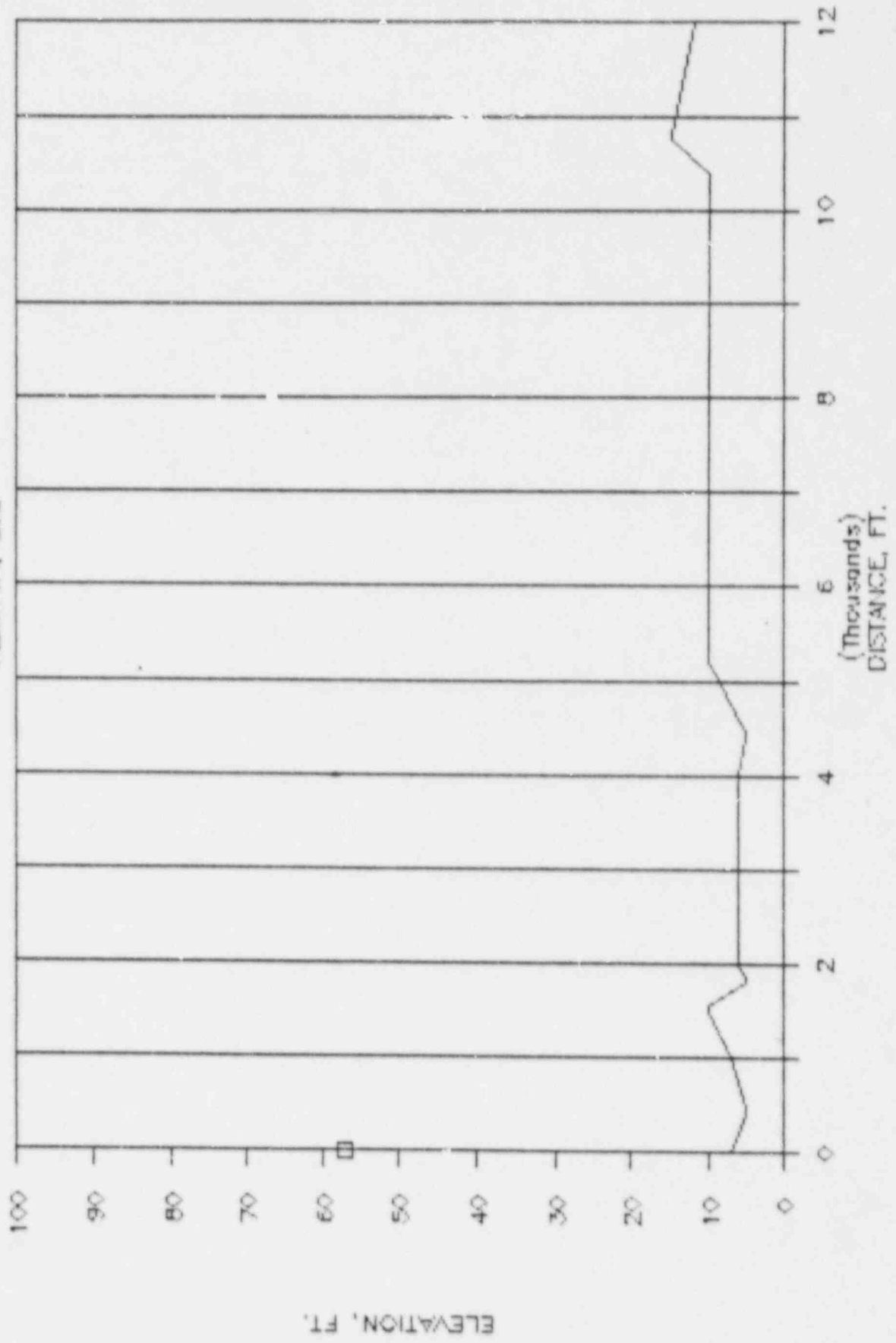
WATERFORD 47

AZIMUTH, SE



WATERFORD 47

AZIMUTH, ESE



100 90 80 70 60 50 40 30 20 10 0

0 2 4 6 8 10 12

(Thousands)
DISTANCE, FT.

ELEVATION, FT.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #47-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	7.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	7.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	7.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	7.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	7.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	7.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	7.00	SOFT	0.	NO	0.	0.
8	500.	67.50	7.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	7.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	6.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	5.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	5.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	4.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	4.00	SOFT	0.	NO	0.	0.
15	500.	45.00	7.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	6.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	6.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	5.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	4.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	4.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	4.00	SOFT	0.	NO	0.	0.
22	500.	22.50	7.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	6.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	5.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	4.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	4.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	4.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	4.00	SOFT	0.	NO	0.	0.
29	500.	0.0	7.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	6.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	5.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	4.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	4.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	4.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	4.00	SOFT	0.	NO	0.	0.
36	500.	337.50	6.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	6.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	5.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	5.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	5.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	4.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	4.00	SOFT	0.	NO	0.	0.
43	500.	315.00	7.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	7.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	6.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	7.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	6.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	5.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	4.00	SOFT	0.	NO	0.	0.
50	500.	292.50	7.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	7.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	8.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	11.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	7.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	4.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	4.00	SOFT	0.	NO	0.	0.
57	500.	270.00	7.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	7.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	8.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	10.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	7.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	8.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	6.00	SOFT	0.	NO	0.	0.
64	500.	247.50	7.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	7.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	8.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	12.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	12.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	13.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	8.00	SOFT	0.	NO	0.	0.
71	500.	225.00	7.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	7.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	8.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	12.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	13.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	14.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	17.00	SOFT	0.	NO	0.	0.
78	500.	202.50	7.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	7.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	8.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	12.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	15.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	0.0	SOFT	0.	YES	7160.	20.
84	12000.	202.50	18.00	SOFT	0.	YES	7160.	20.
85	500.	180.00	10.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	10.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	10.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	14.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	19.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	0.0	SOFT	0.	YES	6175.	25.
91	12000.	180.00	12.00	SOFT	0.	YES	9425.	25.
92	500.	157.50	10.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	7.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	7.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	12.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	15.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	0.0	SOFT	0.	YES	7000.	25.
98	12000.	157.50	14.00	SOFT	0.	YES	10225.	25.
99	500.	135.00	5.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	7.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	7.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	8.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	12.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	15.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	0.0	SOFT	0.	YES	9900.	25.
106	500.	112.50	5.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	7.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	6.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	6.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	10.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	10.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	12.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #47-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT047	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
		IO= 0.0	YO= 0.0	ZO= 0.0	57.00	HEIGHT ABOVE GROUND=		50.00				

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #47-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE HUMIDITY	BAROMETRIC PRESSURE (MM OF HG)
						H1	H2	H1	H2		
'993	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

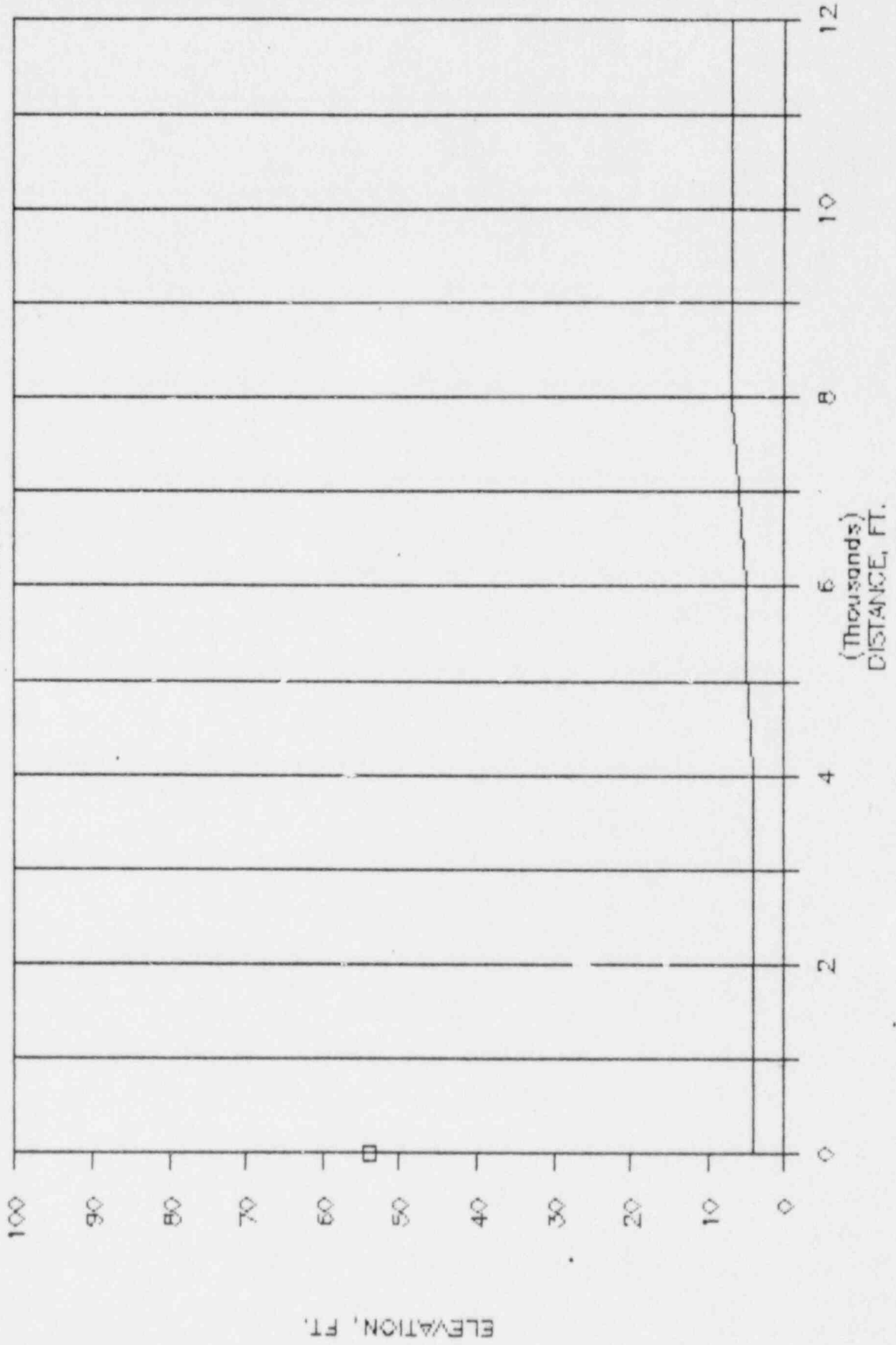
LOUISIANA POWER & LIGHT COMPANY
WATERFORD 3 ANS SIREN #A7-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	60.0	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	38.8
SSW	105.6	91.2	75.7	63.3	54.9	40.8	26.9
S	105.6	91.3	75.7	62.8	54.1	40.7	25.8
SSE	105.6	91.2	75.7	63.3	54.9	40.4	27.2
SE	105.6	91.2	75.7	64.9	57.3	50.3	31.2
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

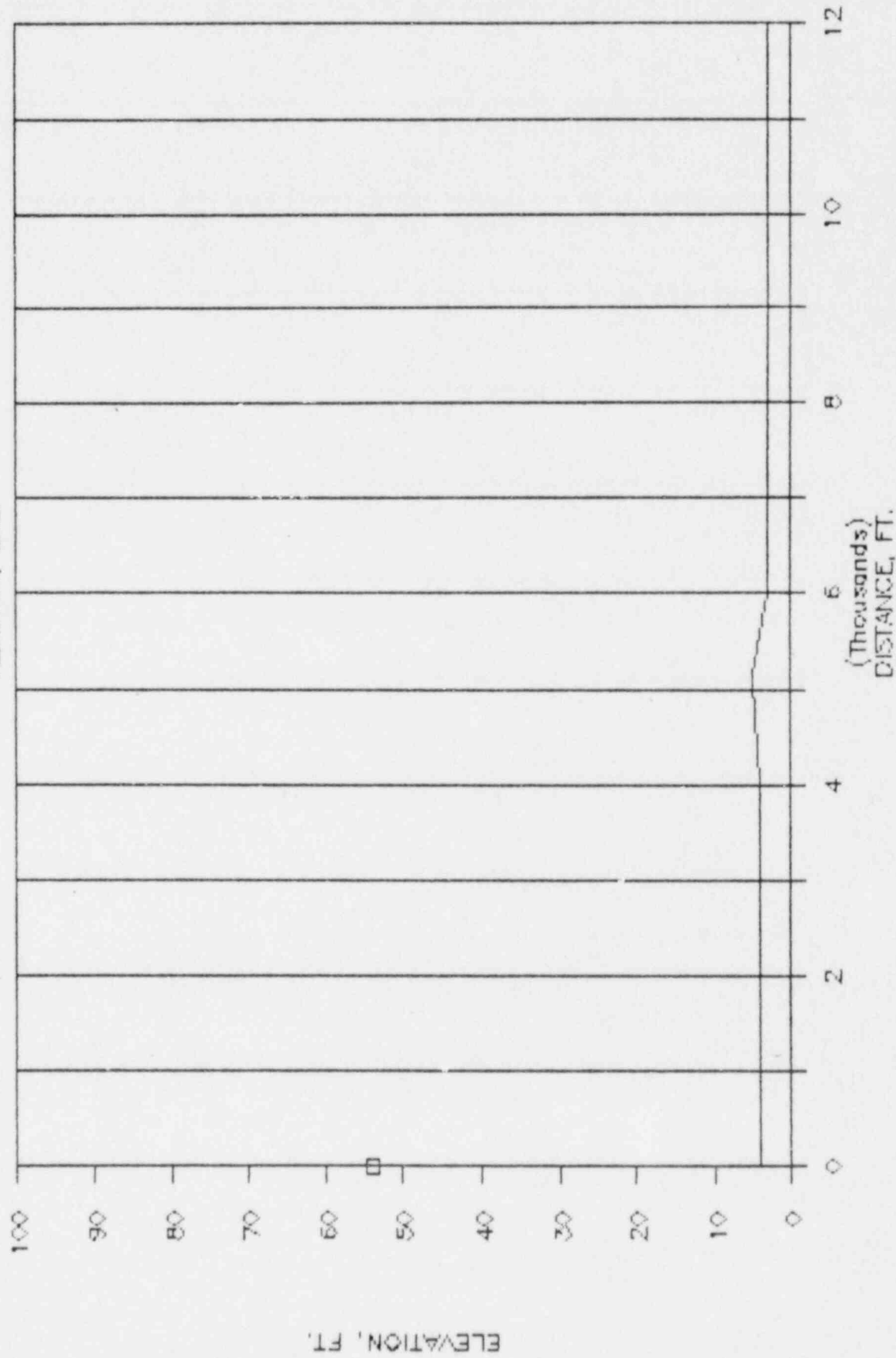
WATERFORD 48

AZIMUTH, E



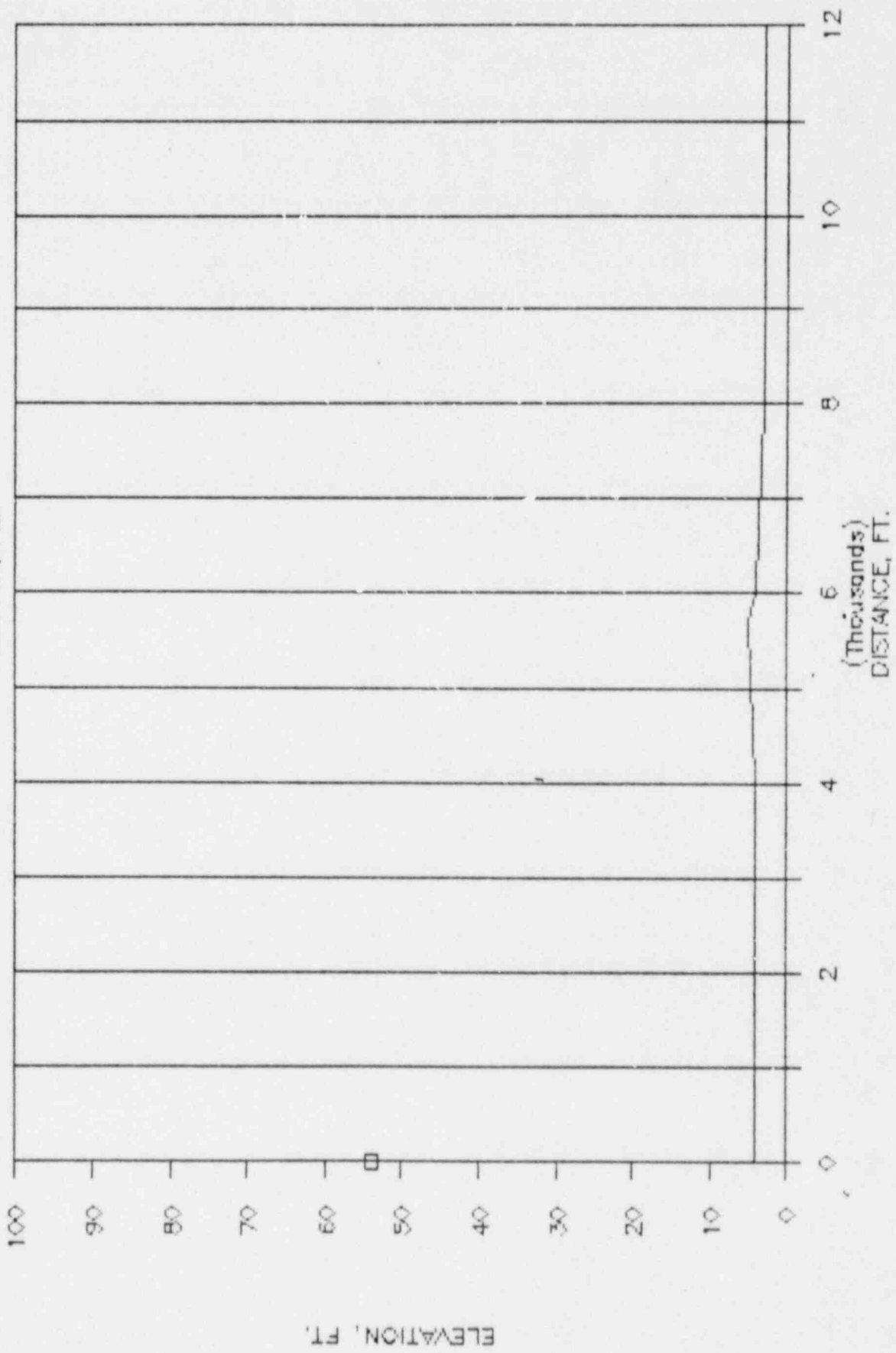
WATERFORD 48

AZIMUTH, ENE



WATERFORD 48

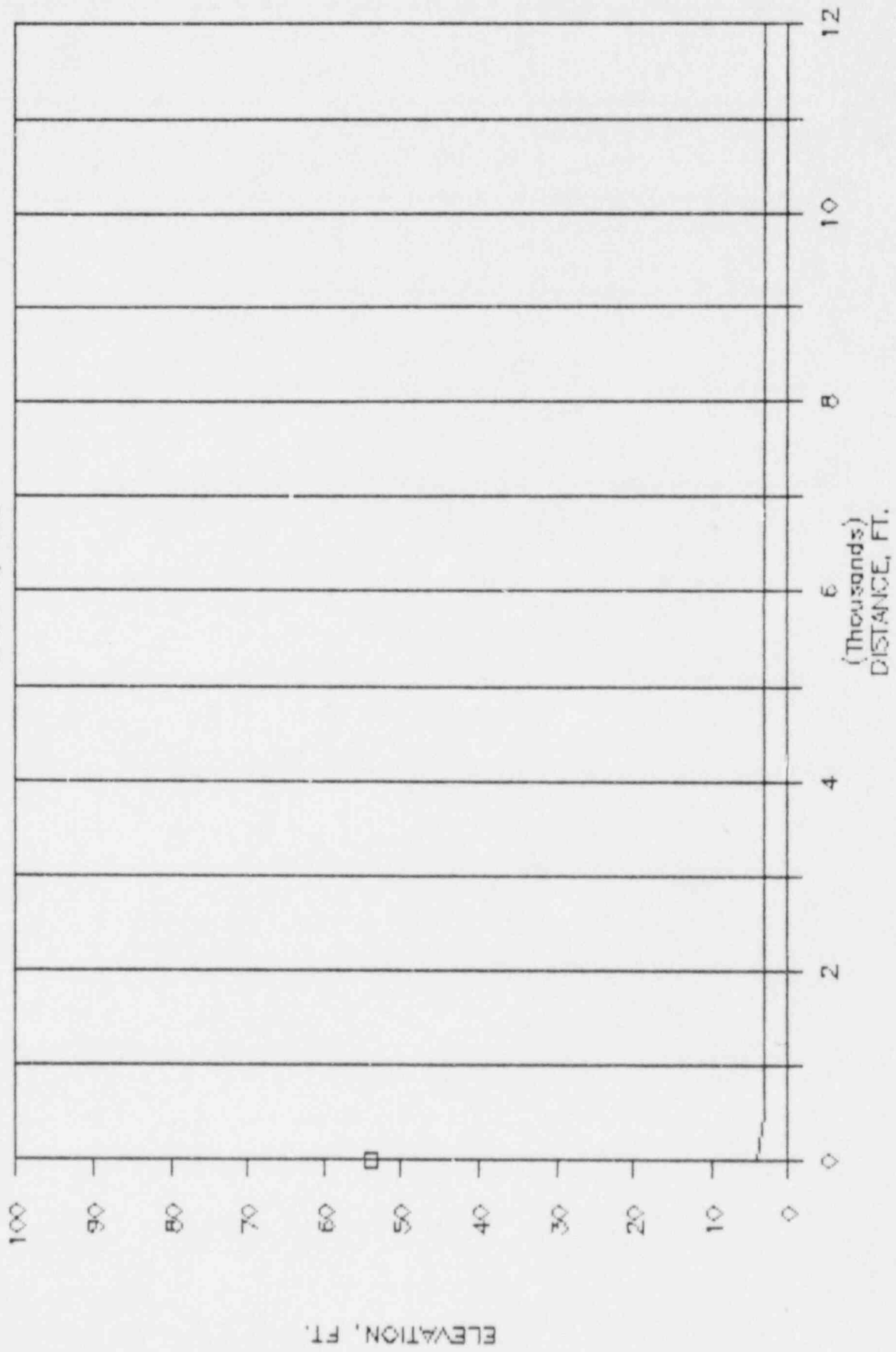
AZIMUTH, NE



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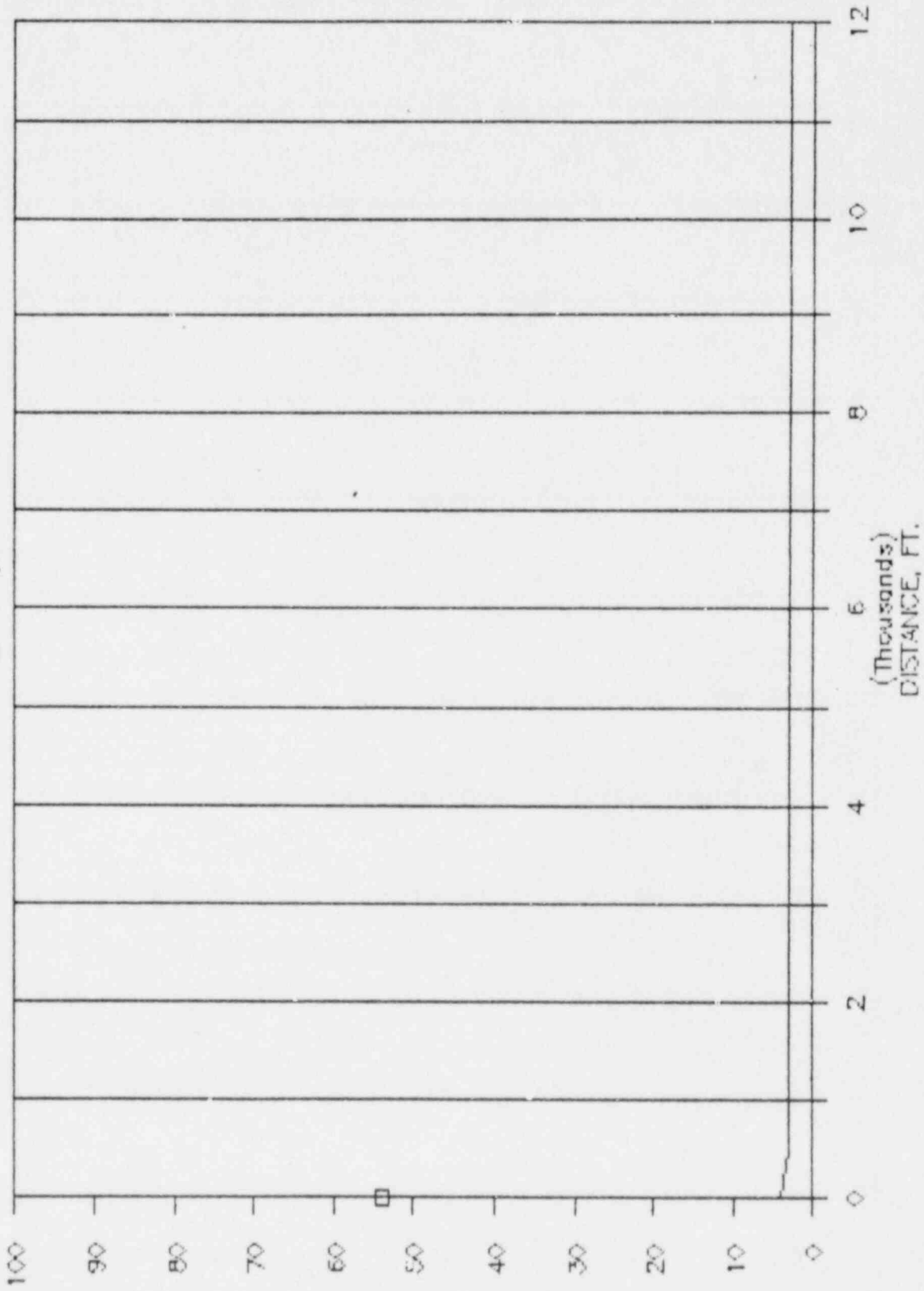
WATERFORD 48

AZIMUTH, NNE



WATERFORD 48

AZIMUTH, N

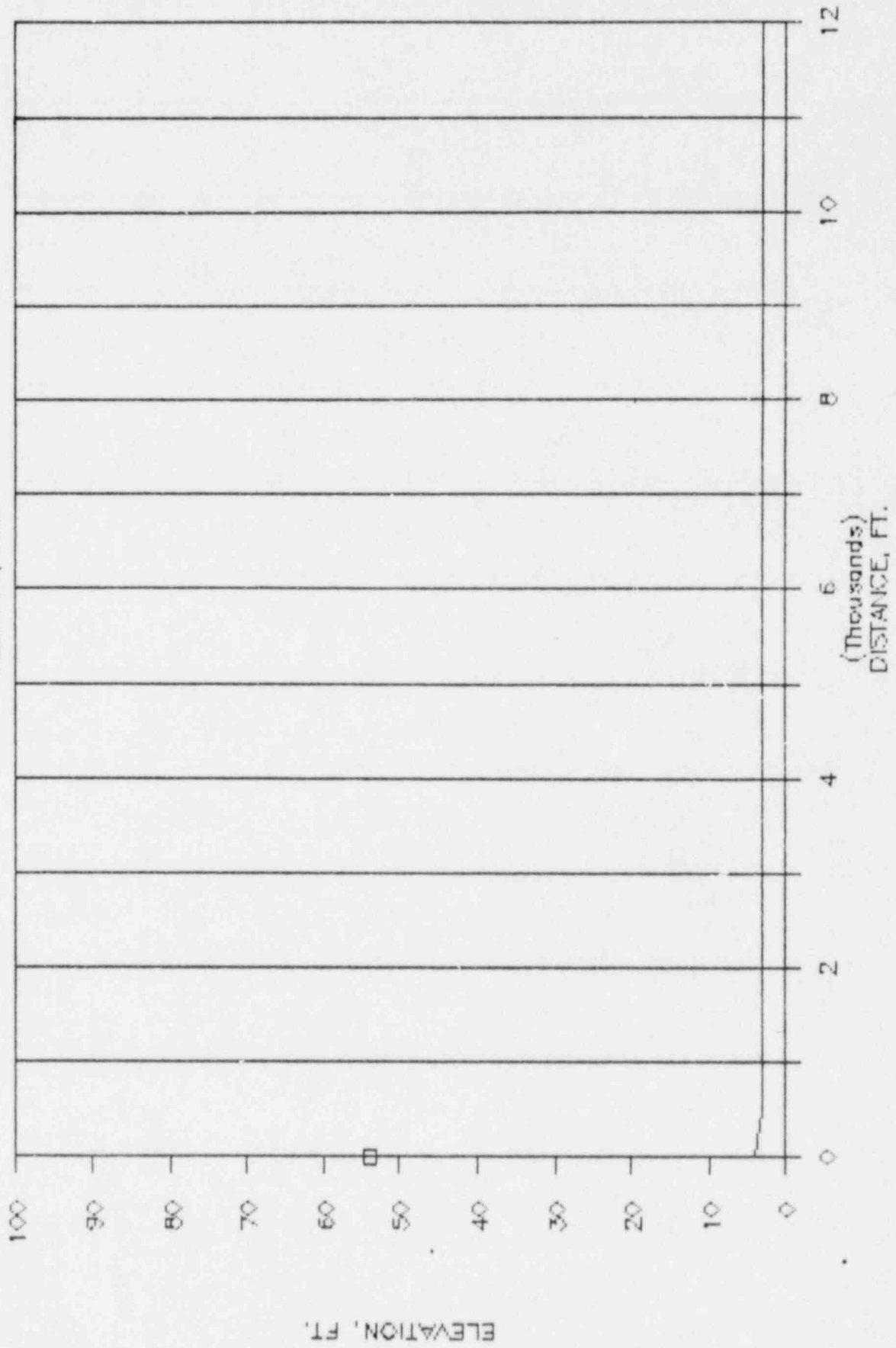


ELEVATION, FT.

1 2 3 4 5 6 7 8 9 10 11 12

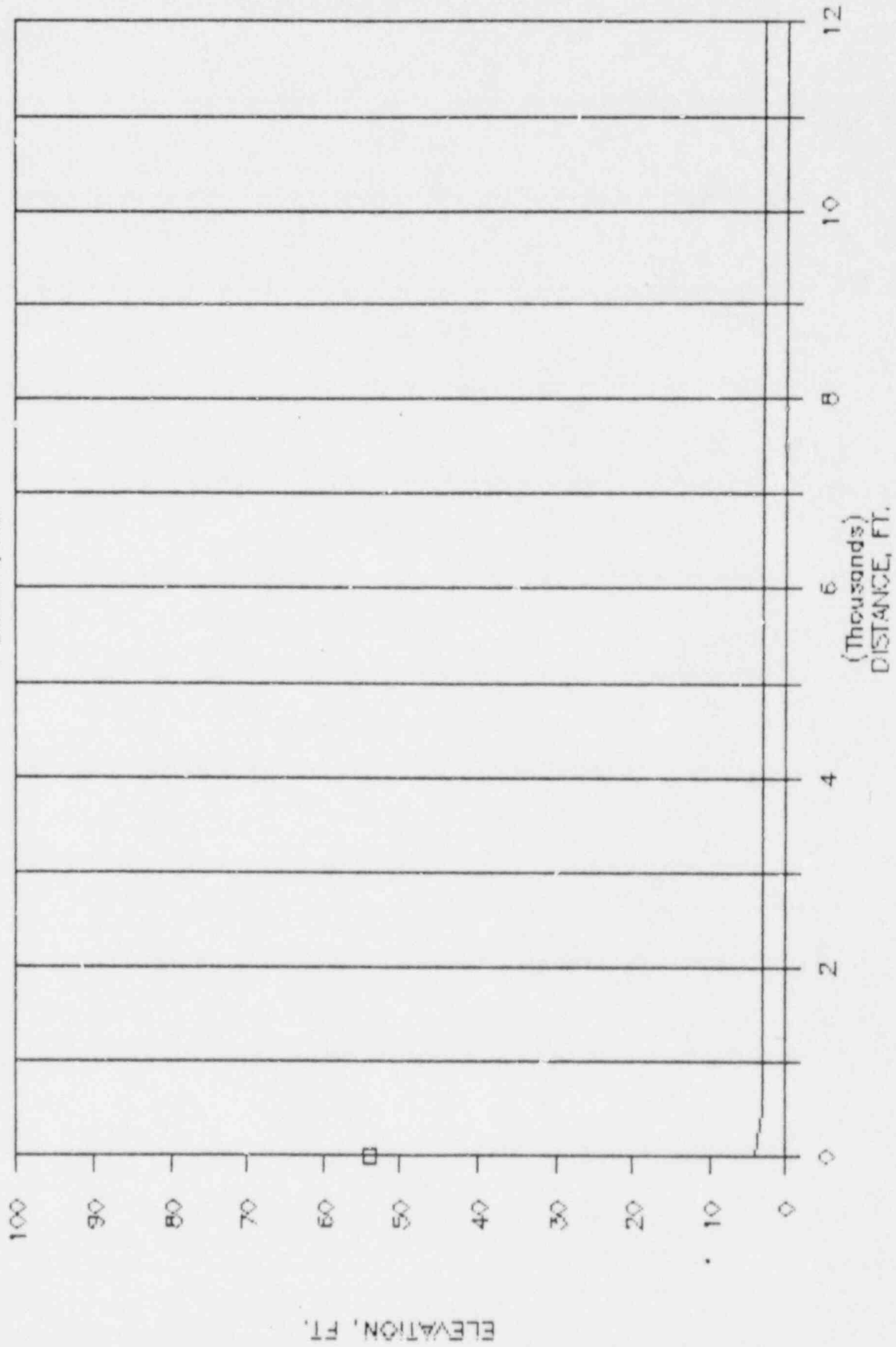
WATERFORD 48

AZIMUTH, NNW



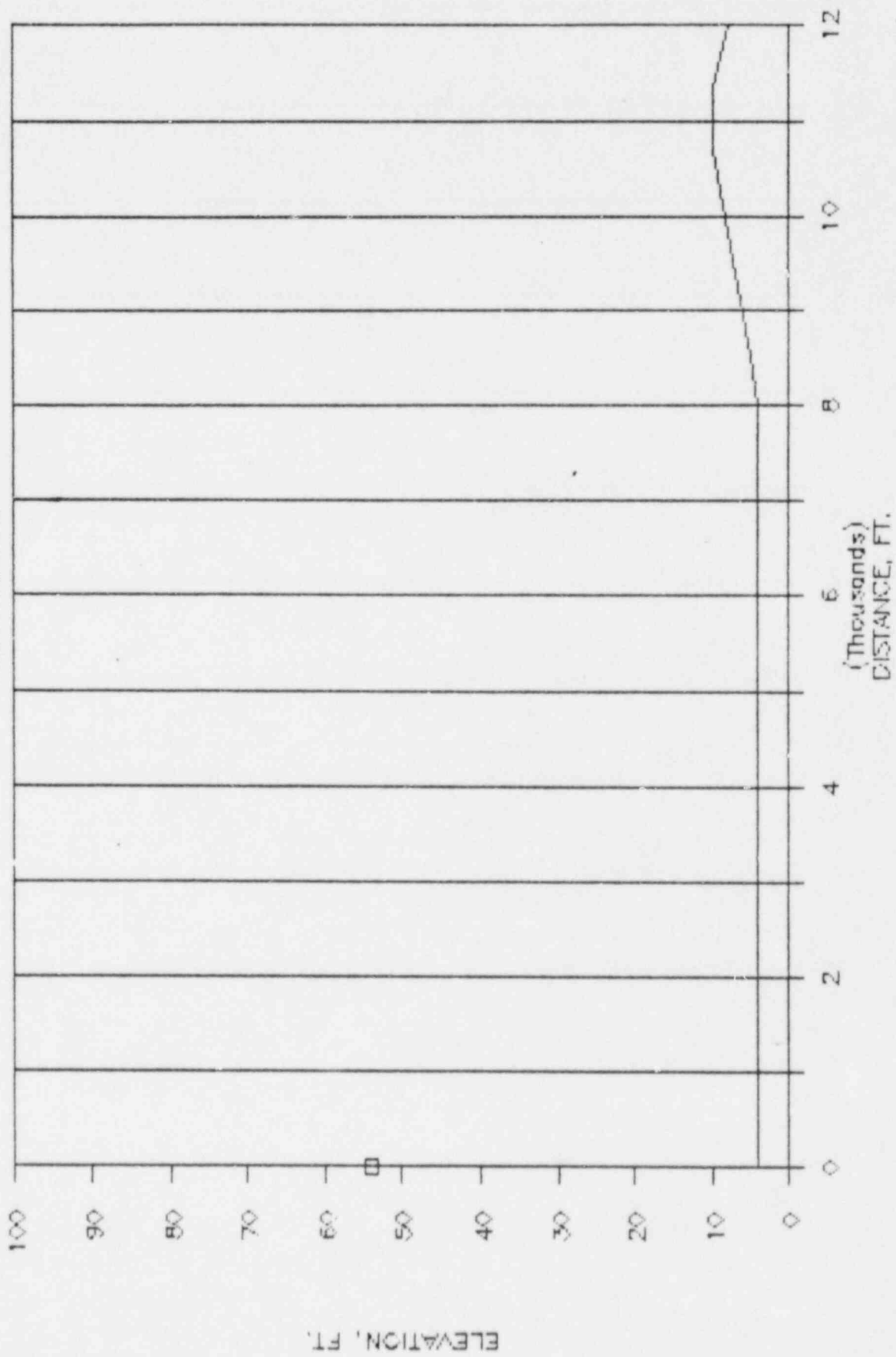
WATERFORD 48

AZIMUTH, NW



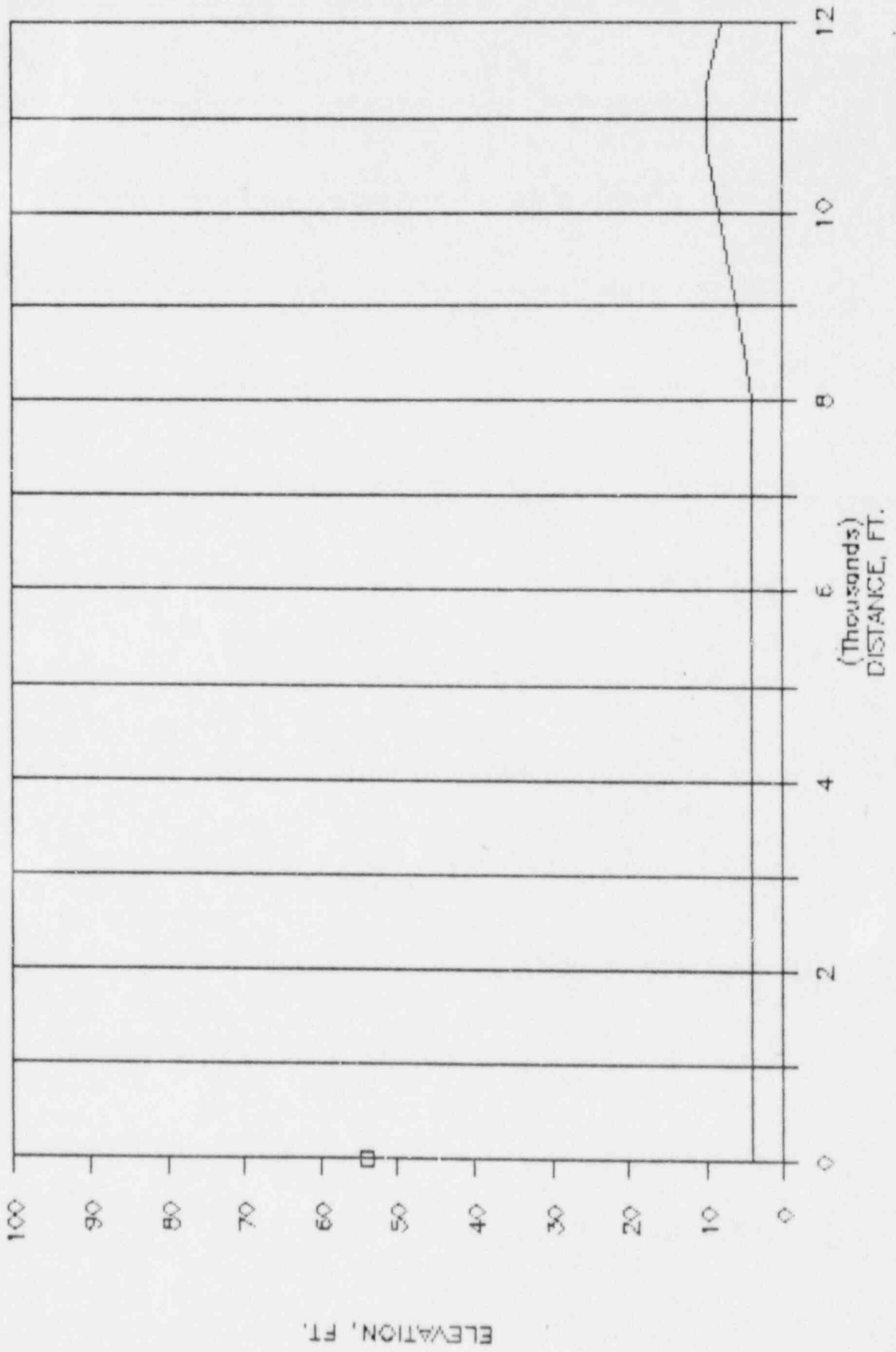
WATERFORD 48

AZIMUTH, WNW



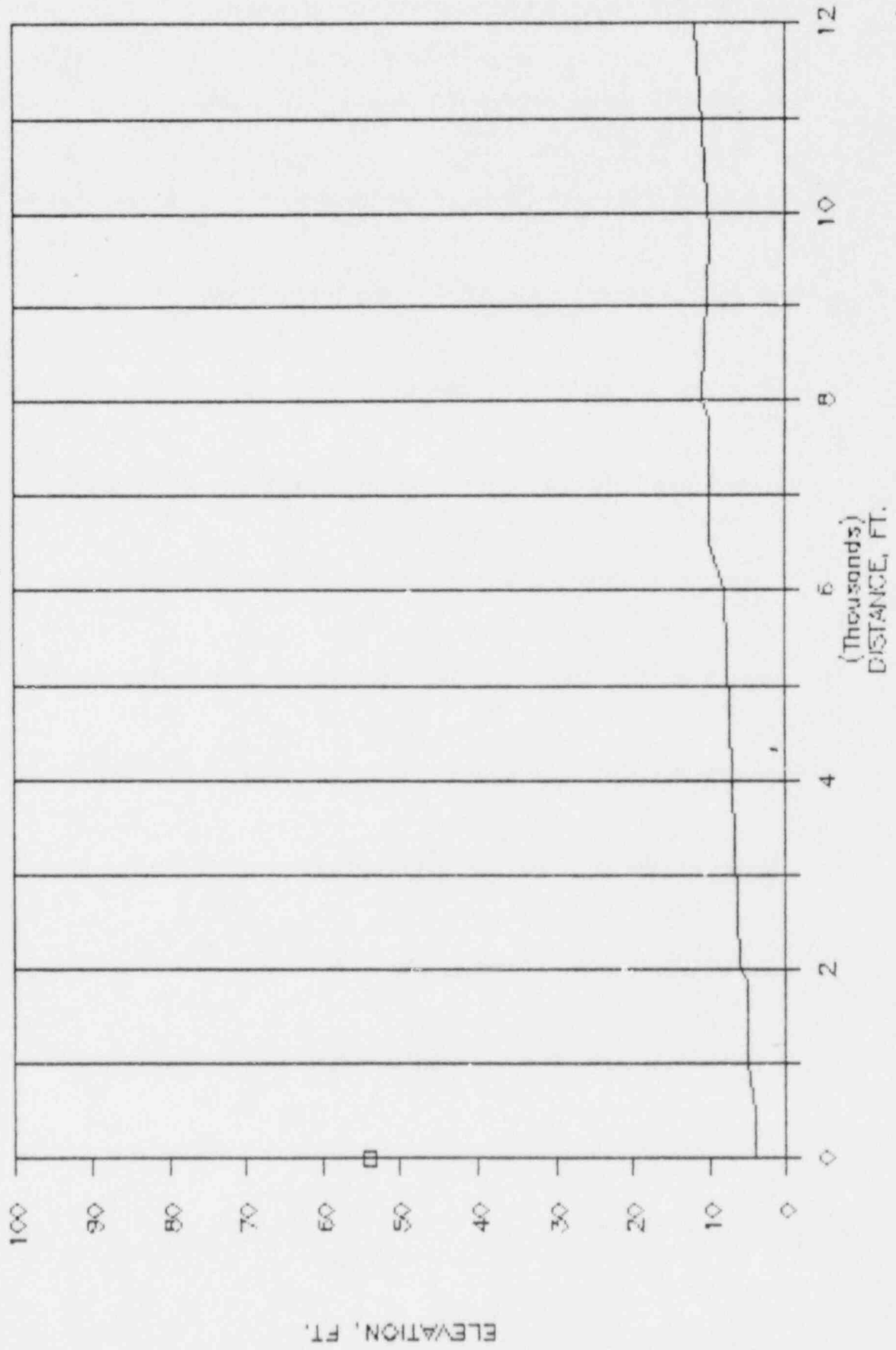
WATERFORD 48

AZIMUTH, W



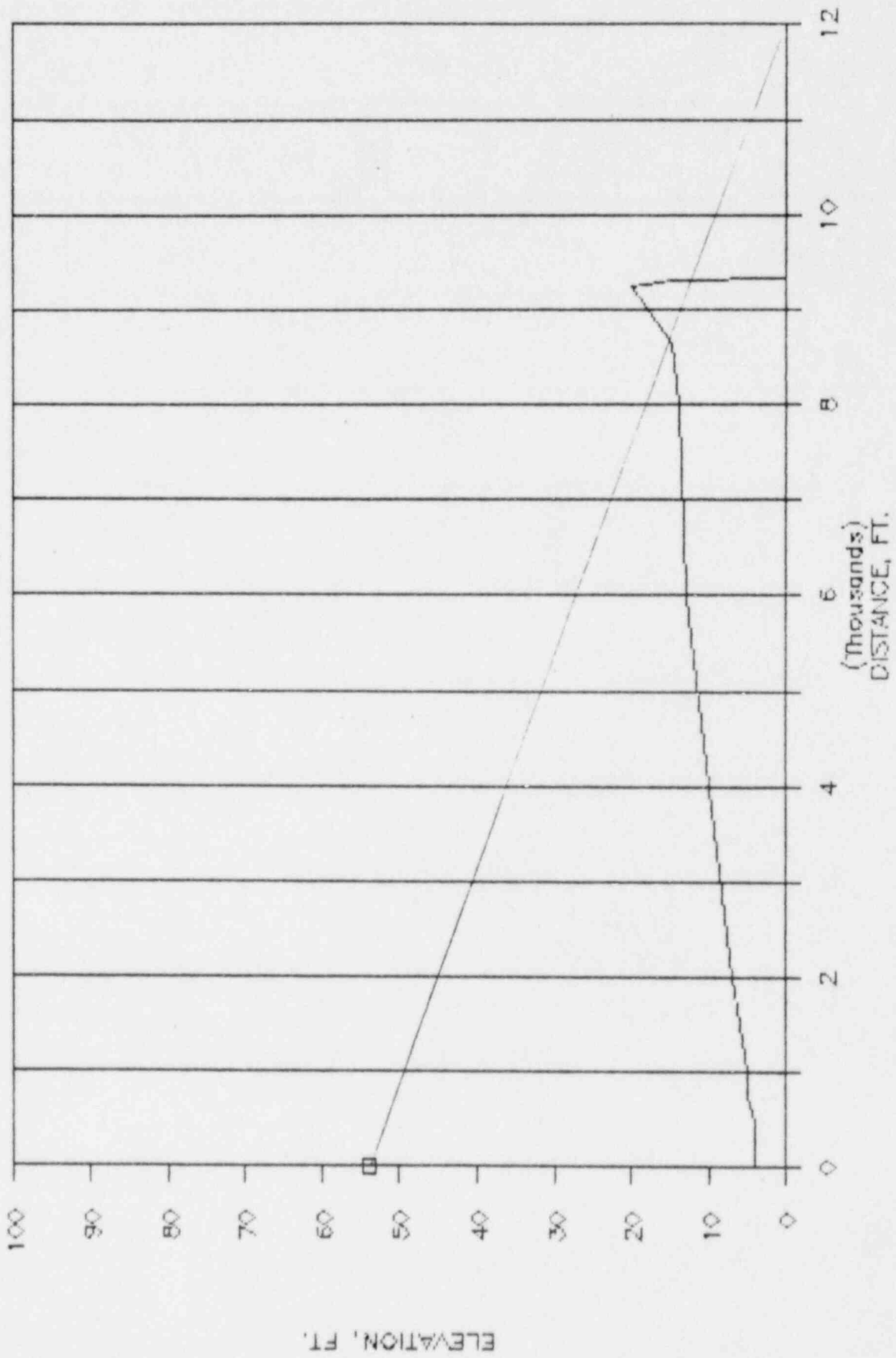
WATERFORD 48

AZIMUTH, WSW



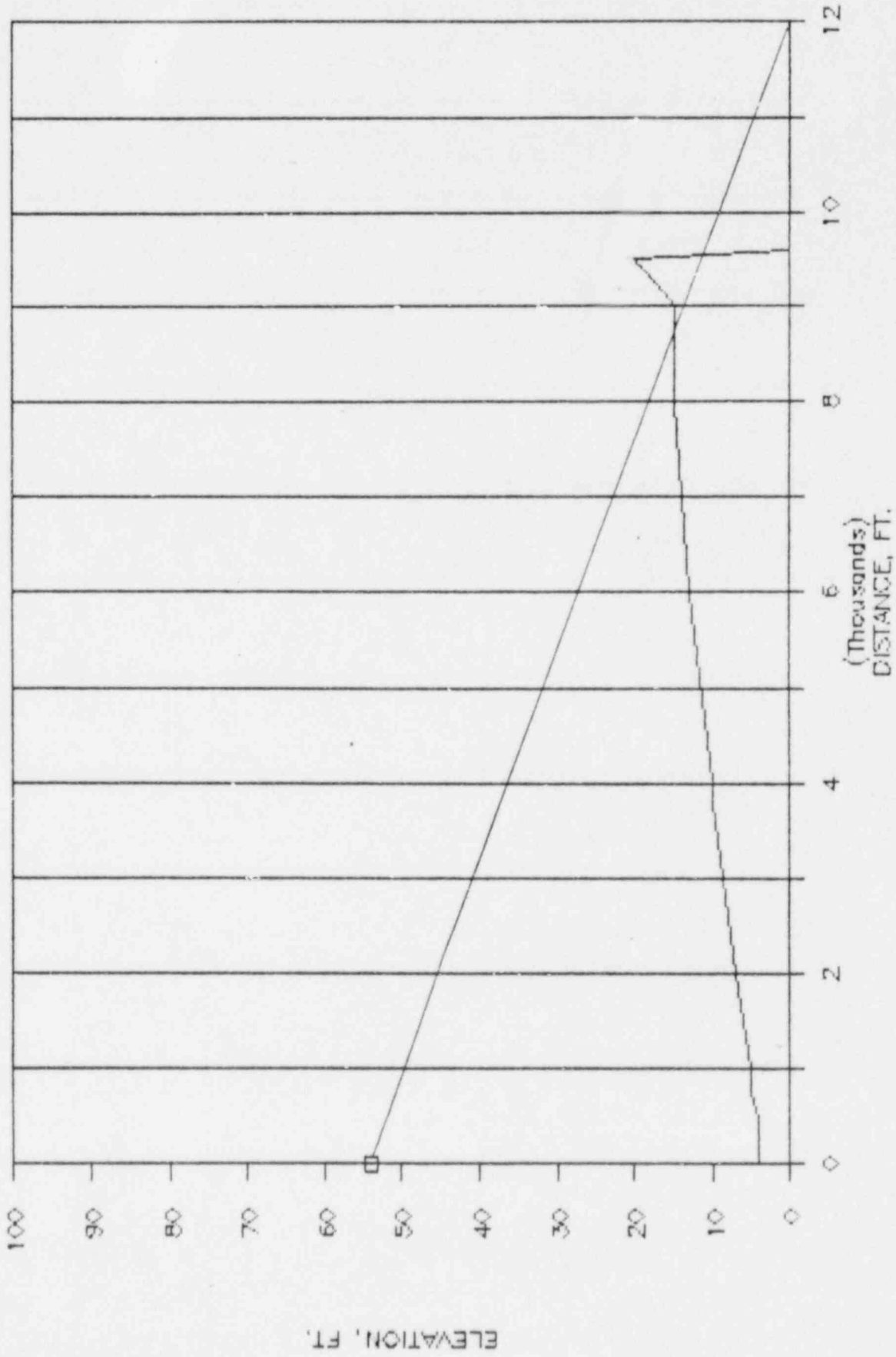
WATERFORD 48

AZIMUTH, S



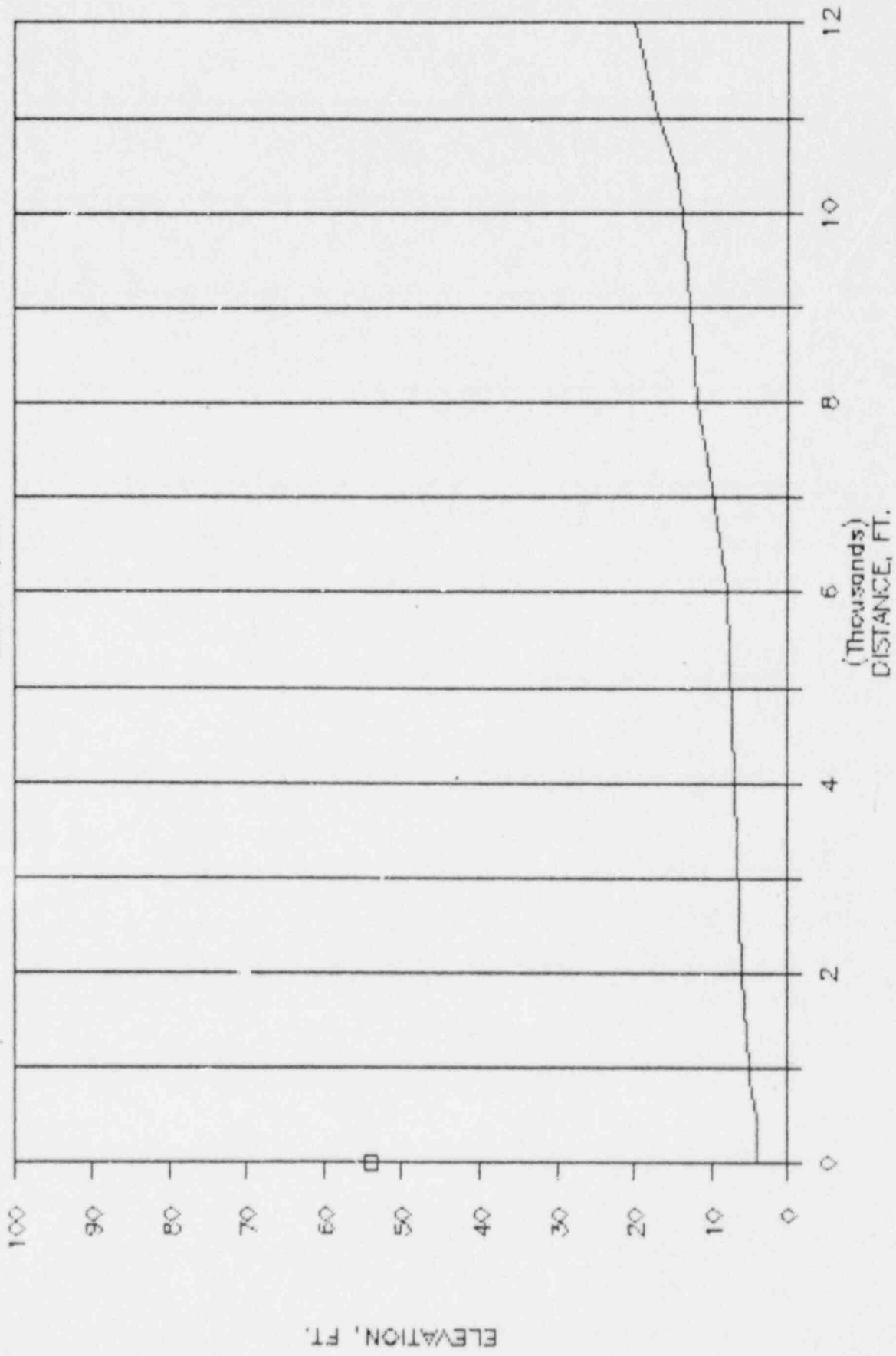
WATERFORD 48

AZIMUTH, SSW



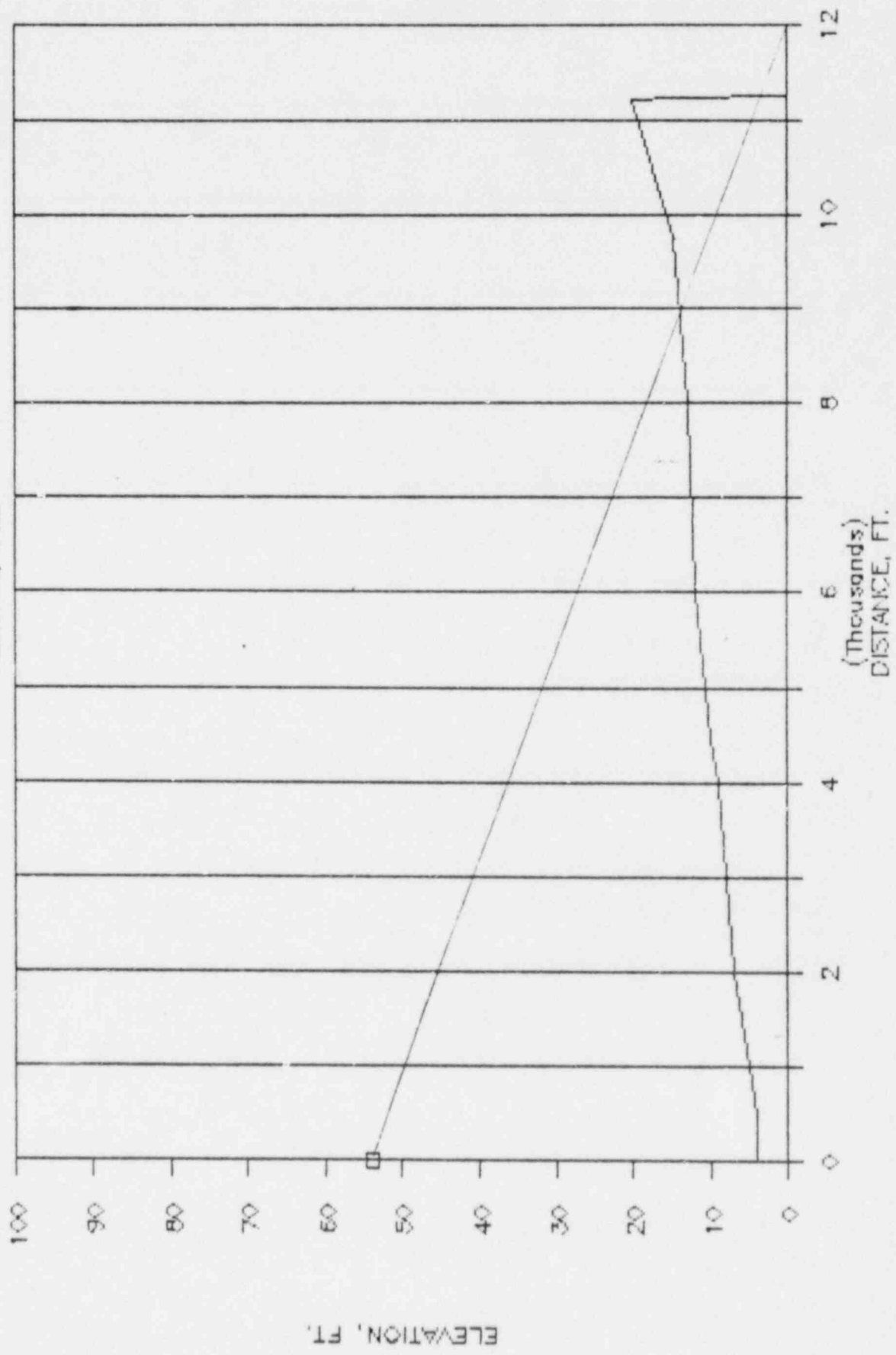
WATERFORD 48

AZIMUTH, SW



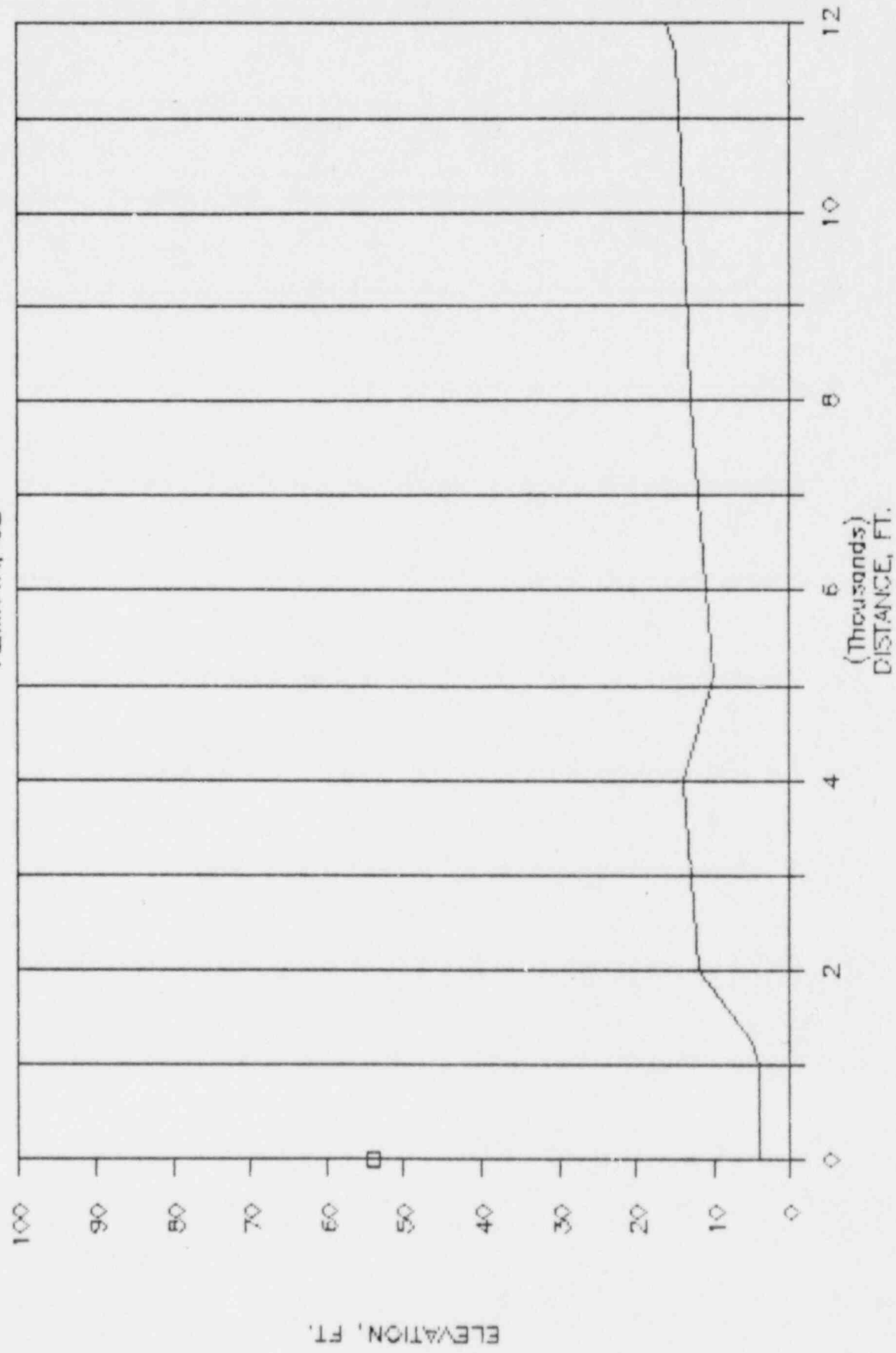
WATERFORD 48

AZIMUTH, SSE



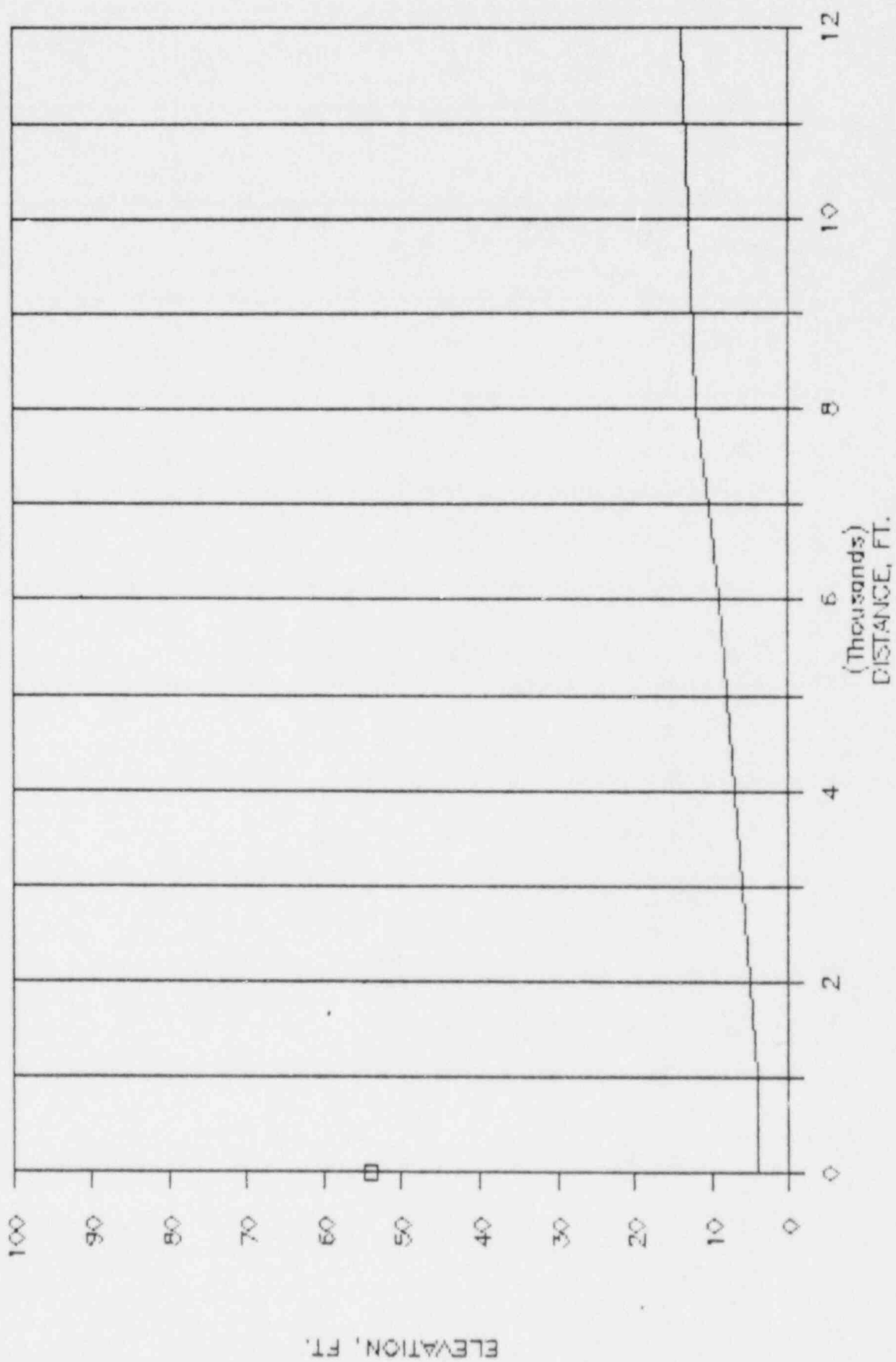
WATERFORD 48

AZIMUTH, SE



WATERFORD 48

AZIMUTH, ESE



LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #48-WS3000
 SOURCE-RECEIVER TOPOGRAPHICAL INPUTS

ALL BEARINGS ARE WITH RESPECT TO THE NORTH MEASURING CLOCKWISE

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
1	500.	90.00	4.00	SOFT	0.	NO	0.	0.
2	1000.	90.00	4.00	SOFT	0.	NO	0.	0.
3	2000.	90.00	4.00	SOFT	0.	NO	0.	0.
4	4000.	90.00	4.00	SOFT	0.	NO	0.	0.
5	6000.	90.00	5.00	SOFT	0.	NO	0.	0.
6	8000.	90.00	7.00	SOFT	0.	NO	0.	0.
7	12000.	90.00	7.00	SOFT	0.	NO	0.	0.
8	500.	67.50	4.00	SOFT	0.	NO	0.	0.
9	1000.	67.50	4.00	SOFT	0.	NO	0.	0.
10	2000.	67.50	4.00	SOFT	0.	NO	0.	0.
11	4000.	67.50	4.00	SOFT	0.	NO	0.	0.
12	6000.	67.50	3.00	SOFT	0.	NO	0.	0.
13	8000.	67.50	3.00	SOFT	0.	NO	0.	0.
14	12000.	67.50	3.00	SOFT	0.	NO	0.	0.
15	500.	45.00	4.00	SOFT	0.	NO	0.	0.
16	1000.	45.00	4.00	SOFT	0.	NO	0.	0.
17	2000.	45.00	4.00	SOFT	0.	NO	0.	0.
18	4000.	45.00	4.00	SOFT	0.	NO	0.	0.
19	6000.	45.00	4.00	SOFT	0.	NO	0.	0.
20	8000.	45.00	3.00	SOFT	0.	NO	0.	0.
21	12000.	45.00	3.00	SOFT	0.	NO	0.	0.
22	500.	22.50	3.00	SOFT	0.	NO	0.	0.
23	1000.	22.50	3.00	SOFT	0.	NO	0.	0.
24	2000.	22.50	3.00	SOFT	0.	NO	0.	0.
25	4000.	22.50	3.00	SOFT	0.	NO	0.	0.
26	6000.	22.50	3.00	SOFT	0.	NO	0.	0.
27	8000.	22.50	3.00	SOFT	0.	NO	0.	0.
28	12000.	22.50	3.00	SOFT	0.	NO	0.	0.
29	500.	0.0	3.00	SOFT	0.	NO	0.	0.
30	1000.	0.0	3.00	SOFT	0.	NO	0.	0.
31	2000.	0.0	3.00	SOFT	0.	NO	0.	0.
32	4000.	0.0	3.00	SOFT	0.	NO	0.	0.
33	6000.	0.0	3.00	SOFT	0.	NO	0.	0.
34	8000.	0.0	3.00	SOFT	0.	NO	0.	0.
35	12000.	0.0	3.00	SOFT	0.	NO	0.	0.
36	500.	337.50	3.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
37	1000.	337.50	3.00	SOFT	0.	NO	0.	0.
38	2000.	337.50	3.00	SOFT	0.	NO	0.	0.
39	4000.	337.50	3.00	SOFT	0.	NO	0.	0.
40	6000.	337.50	3.00	SOFT	0.	NO	0.	0.
41	8000.	337.50	3.00	SOFT	0.	NO	0.	0.
42	12000.	337.50	3.00	SOFT	0.	NO	0.	0.
43	500.	315.00	4.00	SOFT	0.	NO	0.	0.
44	1000.	315.00	3.00	SOFT	0.	NO	0.	0.
45	2000.	315.00	3.00	SOFT	0.	NO	0.	0.
46	4000.	315.00	3.00	SOFT	0.	NO	0.	0.
47	6000.	315.00	3.00	SOFT	0.	NO	0.	0.
48	8000.	315.00	3.00	SOFT	0.	NO	0.	0.
49	12000.	315.00	3.00	SOFT	0.	NO	0.	0.
50	500.	292.50	4.00	SOFT	0.	NO	0.	0.
51	1000.	292.50	4.00	SOFT	0.	NO	0.	0.
52	2000.	292.50	4.00	SOFT	0.	NO	0.	0.
53	4000.	292.50	4.00	SOFT	0.	NO	0.	0.
54	6000.	292.50	4.00	SOFT	0.	NO	0.	0.
55	8000.	292.50	4.00	SOFT	0.	NO	0.	0.
56	12000.	292.50	8.00	SOFT	0.	NO	0.	0.
57	500.	270.00	4.00	SOFT	0.	NO	0.	0.
58	1000.	270.00	4.00	SOFT	0.	NO	0.	0.
59	2000.	270.00	4.00	SOFT	0.	NO	0.	0.
60	4000.	270.00	4.00	SOFT	0.	NO	0.	0.
61	6000.	270.00	4.00	SOFT	0.	NO	0.	0.
62	8000.	270.00	4.00	SOFT	0.	NO	0.	0.
63	12000.	270.00	8.00	SOFT	0.	NO	0.	0.
64	500.	247.50	4.00	SOFT	0.	NO	0.	0.
65	1000.	247.50	5.00	SOFT	0.	NO	0.	0.
66	2000.	247.50	6.00	SOFT	0.	NO	0.	0.
67	4000.	247.50	7.00	SOFT	0.	NO	0.	0.
68	6000.	247.50	5.00	SOFT	0.	NO	0.	0.
69	8000.	247.50	11.00	SOFT	0.	NO	0.	0.
70	12000.	247.50	12.00	SOFT	0.	NO	0.	0.
71	500.	225.00	4.00	SOFT	0.	NO	0.	0.
72	1000.	225.00	5.00	SOFT	0.	NO	0.	0.

GRID POINT	DISTANCE	BEARING	HEIGHT	GROUND TYPE	FOLIAGE PENETRATION	INTERVENING OBSTRUCTIONS	DISTANCE TO HIGHEST OBSTRUCTION FROM SOURCE	HEIGHT OF OBSTRUCTION
73	2000.	225.00	6.00	SOFT	0.	NO	0.	0.
74	4000.	225.00	7.00	SOFT	0.	NO	0.	0.
75	6000.	225.00	8.00	SOFT	0.	NO	0.	0.
76	8000.	225.00	12.00	SOFT	0.	NO	0.	0.
77	12000.	225.00	20.00	SOFT	0.	NO	0.	0.
78	500.	202.50	4.00	SOFT	0.	NO	0.	0.
79	1000.	202.50	5.00	SOFT	0.	NO	0.	0.
80	2000.	202.50	7.00	SOFT	0.	NO	0.	0.
81	4000.	202.50	10.00	SOFT	0.	NO	0.	0.
82	6000.	202.50	13.00	SOFT	0.	NO	0.	0.
83	8000.	202.50	15.00	SOFT	0.	NO	0.	0.
84	12000.	202.50	0.0	SOFT	0.	YES	*****	*****
85	500.	180.00	4.00	SOFT	0.	NO	0.	0.
86	1000.	180.00	5.00	SOFT	0.	NO	0.	0.
87	2000.	180.00	7.00	SOFT	0.	NO	0.	0.
88	4000.	180.00	10.00	SOFT	0.	NO	0.	0.
89	6000.	180.00	13.00	SOFT	0.	NO	0.	0.
90	8000.	180.00	14.00	SOFT	0.	NO	0.	0.
91	12000.	180.00	0.0	SOFT	0.	YES	*****	*****
92	500.	157.50	4.00	SOFT	0.	NO	0.	0.
93	1000.	157.50	5.00	SOFT	0.	NO	0.	0.
94	2000.	157.50	7.00	SOFT	0.	NO	0.	0.
95	4000.	157.50	9.00	SOFT	0.	NO	0.	0.
96	6000.	157.50	12.00	SOFT	0.	NO	0.	0.
97	8000.	157.50	13.00	SOFT	0.	NO	0.	0.
98	12000.	157.50	0.0	SOFT	0.	YES	*****	*****
99	500.	135.00	4.00	SOFT	0.	NO	0.	0.
100	1000.	135.00	4.00	SOFT	0.	NO	0.	0.
101	2000.	135.00	12.00	SOFT	0.	NO	0.	0.
102	4000.	135.00	14.00	SOFT	0.	NO	0.	0.
103	6000.	135.00	11.00	SOFT	0.	NO	0.	0.
104	8000.	135.00	13.00	SOFT	0.	NO	0.	0.
105	12000.	135.00	16.00	SOFT	0.	NO	0.	0.
106	500.	112.50	4.00	SOFT	0.	NO	0.	0.
107	1000.	112.50	4.00	SOFT	0.	NO	0.	0.
108	2000.	112.50	5.00	SOFT	0.	NO	0.	0.
109	4000.	112.50	7.00	SOFT	0.	NO	0.	0.
110	6000.	112.50	9.00	SOFT	0.	NO	0.	0.
111	8000.	112.50	12.00	SOFT	0.	NO	0.	0.
112	12000.	112.50	14.00	SOFT	0.	NO	0.	0.

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #48-WS3000
 NOISE SOURCE POWER LEVEL INPUT

INDEX	SOURCE	DBA	DBC	31.5	63	125	250	500	1000	2000	4000	8000 (HZ)
1	SIREN WAT048	158.9	158.9	0.0	0.0	0.0	0.0	147.0	158.0	149.0	141.0	134.0
	X0=	0.0	Y0=	0.0	Z0=	54.00	HEIGHT ABOVE GROUND=		50.00			

LOUISIANA POWER & LIGHT COMPANY
 WATERFORD 3 ANS SIREN #48-WS3000
 METEOROLOGICAL INPUT CONDITIONS

H1= 9.14 METERS

H2= 39.62 METERS

YEAR	SEASON	MONTH	DATE	HOUR	WIND DIRECTION	WIND SPEED (MPS)		TEMPERATURE (C)		RELATIVE BAROMETRIC HUMIDITY PRESSURE (MM OF HG)	
						H1	H2	H1	H2		
1983	S	8	1	12	180.0	3.1	4.5	29.4	28.8	66.0	761.0

LOUISIANA POWER & LIGHT COMPANY
WATERFORD J ANS SIREN #48-WS3000

SOUND PRESSURE LEVELS IN DBC
UNDER MET CONDITION 1

AZIMUTH	DISTANCE IN FEET						
	500.	1000.	2000.	4000.	6000.	8000.	12000.
E	105.6	91.2	75.7	65.1	60.9	57.4	50.8
ENE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNE	105.6	91.2	75.7	65.1	60.9	57.4	50.8
N	105.6	91.2	75.7	65.1	60.9	57.4	50.8
NNW	105.6	0.0	75.7	65.1	60.9	57.4	50.8
NW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WNW	105.6	91.2	75.7	65.1	60.9	57.4	50.8
W	105.6	91.2	75.7	65.1	60.9	57.4	50.8
WSW	105.6	91.2	75.7	65.1	60.9	57.4	47.6
SW	105.6	91.2	75.7	64.9	57.3	50.3	36.8
SSW	105.6	91.2	75.7	63.3	54.9	47.1	6.6
S	105.6	91.2	75.7	62.8	54.1	46.2	5.1
SSE	105.6	91.2	75.7	63.3	54.9	47.1	6.6
SE	105.6	91.2	75.7	64.9	57.3	50.3	36.8
ESE	105.6	91.2	75.7	65.1	60.9	57.4	47.6

APPENDIX B

Evaluation of Helicopter Airborne Warning System

Once the confirmation of the message audibility was complete, the helicopter was then timed as it travelled the four quadrants. The helicopter began each quadrant run at the local EOC's at which time the clock started in an attempt to complete the aerial alerting for each quadrant in the 45 minutes allowed. (It should be noted that for the purpose of this test and due to the expense involved, only one helicopter was used. Whereas in reality there would be four helicopters used - one for each quadrant.)

The flight times for the helicopter emergency alerting runs were as follows:

- Quadrant A - 29 min
- Quadrant B - 43 min/15 sec
- Quadrant C - 45 min (Since this route utilizes the entire allotted time, the Quadrant A helicopter will be used to run a 15 minute portion of this quadrant.)
- Quadrant D - 35 min/21 sec

The aerial test clearly demonstrated that the four routes can be covered within the 45 minute time requirement. Also the message from the helicopter is clear and understandable from ground level.



Federal Emergency Management Agency

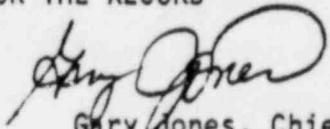
Region VI, Federal Center, 800 North Loop 288
Denton, Texas 76201-3698

NTH

November 18, 1987

MEMORANDUM FOR THE RECORD

FROM:


Gary Jones, Chief
Technological Hazards Branch

SUBJECT:

Waterford III Aerial Alerting Test Observation and Timing

On November 13, 1987, Waterford 3 representatives conducted a test of the Aerial Alert and Notification Warning System which was evaluated and timed by Region VI personnel to ensure that the 45 minute requirement could be met.

All participants met at the Holiday Inn in LaPlace, Louisiana, at 700 a.m. for a briefing on the test, routes, equipment and time elements. Mr. Reda Bassioni, consultant, Acoustic Technology, Inc., Boston, Mass., was also invited by the utility to perform an audio evaluation of a test message before we actually timed the four routes to ensure compliance with the 45 minute requirement. He discussed the test tape and equipment which was to be used to evaluate the audio portion of the message. He also, remarked on the positioning of the Parish-owned PA speakers that are attached to the underside of the helicopter.

Mr. Ron Perry, Emergency Planner, Louisiana Power and Light, provided maps outlining quadrants the helicopter would travel during the actual testing. He also briefly discussed the testing runs the helicopter would make initially to determine the audibility of the alert message.

The entire party then departed the motel in a motorcade enroute to departure point from which all the helicopter audibility test runs would originate. After participants were positioned on a deserted levy road, several flights were made back and forth at 75-80 mph and at an altitude of 500' while both auricular and electronic readings were taken to ensure the alerting message was audible to anyone on the ground. The FEMA evaluators could clearly understand the test message being given.

Following the completion of this phase of the test, a fisherman who had been inspecting his trot line approximately three miles away from the test site, appeared at the temporary helicopter pad and volunteered information that he had heard and fully understood the alerting message emitted from the helicopter.