RADIAN

CORPORATION

SUMMARY REPORT

AIR MONITORING FOR

C-b SHALE OIL PROJECT

NOVEMBER, 1974 THROUGH OCTOBER, 1975

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RC #100-056

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AIR MONITORING FOR C-b SHALE OIL PROJECT NOVEMBER, 1974 THROUGH OCTOBER, 1975

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Presented to:
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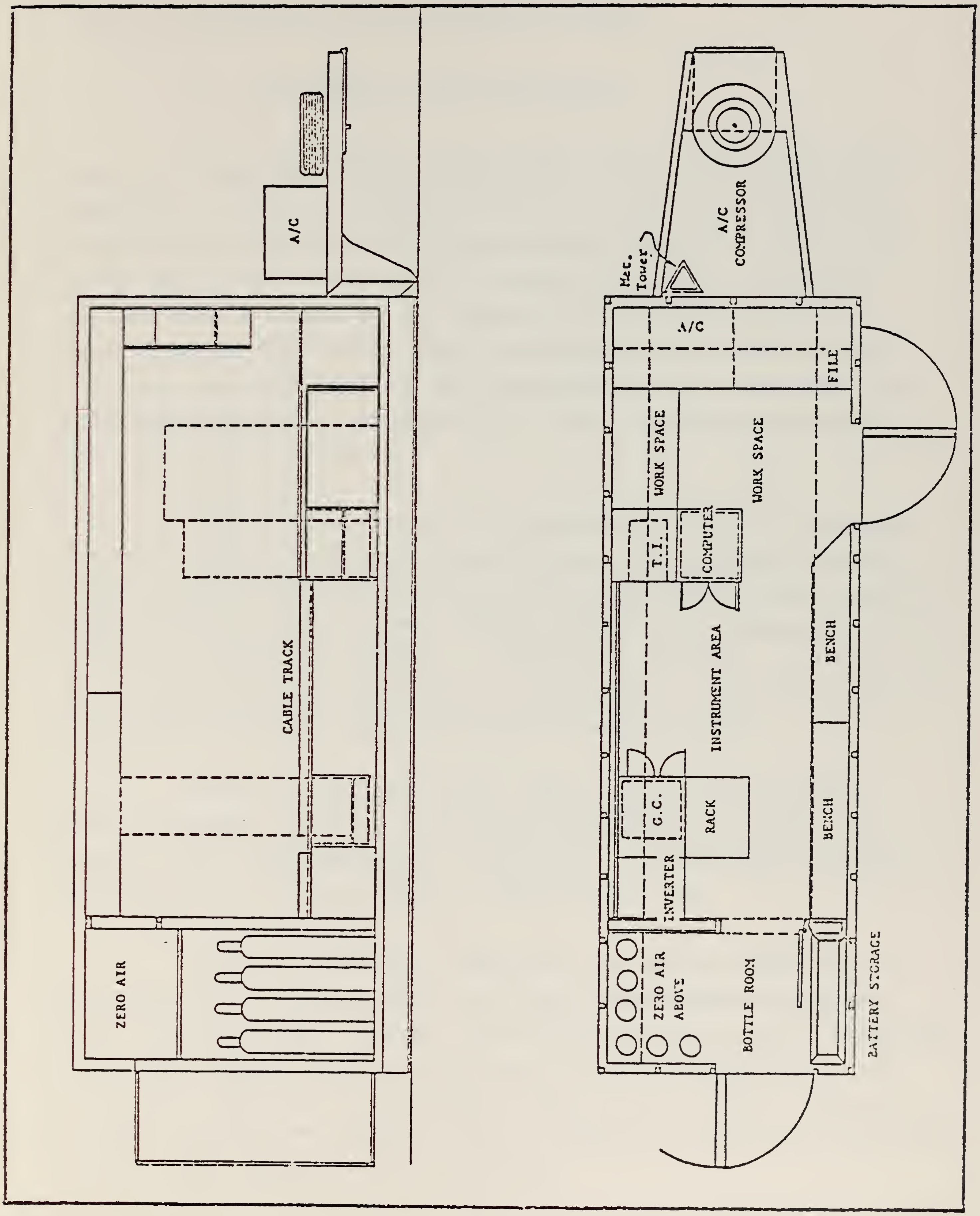
I. INTRODUCTION

Radian Corporation is under contract to C-b Shale Oil Project to provide ambient air quality monitoring. The monitoring is done at five sites in Northwest Colorado in the Piceance Creek Basin on or near the Federal Oil Shale Tract C-b. Each site measures and records the concentration of particulates, sulfur dioxide, and hydrogen sulfide. In addition, two of the sites record the amounts of nitrogen oxides, total hydrocarbon, methane, ozone, and carbon monoxide. Selected meteorological parameters such as wind speed, wind direction, temperature, relative humidity, and rainfall are monitored at each station. A 200-foot meteorological tower at one of the sites provides meteorological information at four different heights. Figure I shows a typical configuration of each monitoring station.

This report summarizes data collected from November 1974 through October 1975. The data presentations include averages, maximum recorded values, and graphical presentations correlating concentrations with meteorological conditions.



A/C
CABLE TRACK
ZERO AIR
Met. Tower
A/C COMPRESSOR
A/C
FILE
WORK SPACE
WORK SPACE
T.I.
COMPUTER
INSTRUMENT AREA
BENCH
G.C.
RACK
BENCH
INVERTER
ZERO AIR ABOVE
BOTTLE ROOM
BATTERY STORAGE

Figure 1

II. DESCRIPTION OF INSTRUMENT SYSTEMS

A. Air Quality Instrumentation

Nitrogen oxides are measured with a Meloy Model NA520 analyzer. This dual-channel analyzer is based on the chemiluminescent principle, and continuously monitors both NO_x and NO. A subtraction circuit in the instrument provides a continuous NO_2 output, but is not used in Radian's system. NO_2 is calculated once a second by the computer by subtracting the NO value from the NO_x value, thus avoiding any drift which might occur in the NO_2 output of the instrument. This instrument has a minimum detectable sensitivity of 5 ppb (parts per billion), and a linearity of ±1%.

Both sulfur dioxide and hydrogen sulfide are measured with Meloy Model SA185 sulfur analyzers. The hydrogen sulfide analyzer uses a Meloy Model SO_x-1 sulfur dioxide scrubber and the sulfur dioxide analyzer uses a Meloy Model H_2S-1 hydrogen sulfide scrubber. The Model SA185 is a continuous analyzer, and utilities the flame photometric principle of operation. The minimum detectable sensitivity is 5 ppb, and the linearity is ±1%.

Ozone is measured with a Meloy Model OA350 analyzer. This instrument provides continuous measurement of ozone, and is based on the chemiluminescent principle. The minimum detectable sensitivity is 0.5 ppb and the linearity is ±1%.

Total hydrocarbons, methane, and carbon monoxide are monitored with a Bendix Model 8200 gas chromatograph analyzer. This instrument uses a plume ionization detector and has a minimum detectable sensitivity of 5 ppb for all three components. The Model 8200 works on a five-minute cycle, i.e., one air sample is analyzed every five minutes, and the result is displayed for five minutes via a sample and hold circuit.

The air sample is drawn in through a glass cane and manifold supplied by the Ace Glass Company. The system has a 25mm diameter, and a constant air flow through the system is provided by an air pump rated at 60 cfm at 0" head pressure. The manifold has sampling ports to which 1/4" teflon lines to the instrument are connected. All joints in the sampling system are secured by O-ring compression fittings. The manifold is contained in a heated (100°F) chamber to prevent condensation of moisture. The teflon lines from the manifold to the instruments are insulated with 1/8" wall thickness rubber tubing.

The trailer has four heavy duty high volume particulate samplers (Hi-Vols). Fiberglass filter paper is used for collection of particulate samples, and each filter is brought to a controlled humidity before weighing. Each Hi-Vol has a flow recorder to permit correction for changes in air flow as the filter becomes loaded with particulates. Each Hi-Vol runs for a 24-hour period (midnight to midnight), and is turned on and off by the computer. The Hi-Vols were designed following guidelines recommended by the Environmental Protection Agency and were manufactured by Radian.

In addition to the normal Hi-Vol particulate samples, a duplicate Hi-Vol sample is collected every sixth day on special filter paper for trace element analysis. Once each quarter these samples are composited and analyzed for gross radioactivity and trace element content.

B. Calibration Procedures

Each trailer contains a Meloy Model RAD-1 calibration unit. This instrument provides a zero air supply, SO_2 span gas from an SO_2 permeation tube, and NO span gas obtained by

precisely diluting bottled NO span gas. The calibration of all instruments is automatically performed once a day, and is controlled by the computer. Each instrument is first switched to zero, and the computer monitors the output of each channel and takes a new zero reading after a stable zero signal has been reached. This zero reading is compared by the computer to the zero reading obtained 24 hours before, and if a drift in excess of 10 ppb has occurred, an excess zero drift light for the channel in question is turned on on the System Status Panel. Next, span gas is supplied to each channel and the computer decides when a stable span value has been reached. This value is recorded and compared to the previous day's value. An excess span drift light on the System Status Panel is turned on if a drift exceeding 10 ppb occurs. The instruments are then returned to the monitor mode, and after two minutes the computer resumes data taking.

The bottled NO gas used at each site was obtained from Precision Gas Products. Pre-purified grade hydrogen is used in the SO_2 analyzers.

The SO_2 permeation tubes were manufactured by Metronics Association, Inc. Their output has been verified by comparison to the output of National Bureau of Standards tube 10-42. Both SA185 analyzers in each trailer are calibrated with the SO_2 from the permeation tube. This instrument responds to the number of sulfur atoms per molecule, thus SO_2 can be used to calibrate both the H_2S and SO_2 monitors.

The Model OA350 ozone analyzer has its own calibration system which provides a zero check and a span check. The ozone calibration system is verified by comparison to a calibrated ozone generator maintained in Radian's laboratory in Rifle.

The Model 8200 total hydrocarbon, methane, and carbon monoxide analyzer is calibrated with undiluted span gas obtained from AirCo's Rare and Specialty Gas Division. This span gas contains methane and carbon monoxide in air, the methane being used to calibrate both the total hydrocarbon channel and the methane channel. The Model 8200 is zeroed with air from a Bendix Model 8834 zero air unit. In addition, the instrument is electronically re-zeroed at the start of every five-minute cycle.

The Hi-Vol particulate samplers were calibrated using a Calibration Kit from General Metal Works.

C. Data Acquisition System

The basis of the data acquisition system is a Data General NOVA 1200 minicomputer. The NOVA, which has a basic cycle time of 1.2 μsec, is equipped with automatic program load and power fail/automatic restart features. The computer utilizes 16K 16-bit words of core memory. Analog-to-digital conversion is accomplished via an ADC built by Radian Corporation. The input/output unit for the system is Texas Instrument's KSR 733 keyboard/printer. This model teletype provides keyboard entry and hard copy printed output. The data are also recorded on a cassette magnetic tape unit with three drives. The cassette unit is utilized for program storage and loading as well as recording. The power to the teletype and cassette units is turned on only when the unit(s) is to be used to reduce wear on mechanical parts. Several important functions in the instruments as well as in the computer and the trailer are monitored by means of lights on a System Status Panel. These data lights are written onto cassette tape to monitor the complete status of the system every five minutes. The Data Acquisition System also monitors

the presence of 100V power from the power lines. In its absence, the computer, which is powered by batteries, switches all trailer systems to battery-provided power. If the line voltage is restored before the batteries are discharged to a specified level, the trailer system is switched back to line power.

D. Meteorological Instrumentation

1. Ambient Air Monitoring Trailers

Four of the ambient air monitoring trailers are equipped with the following meteorological instrumentation: (1) dry bulb temperature (outside), (2) relative humidity, (3) wind direction, (4) wind speed, and (5) a tipping bucket, heated rain/snow gage. The temperature probe and relative humidity sensor are mounted inside a motor aspirated radiation shield, the Model 1S6 Aspirated Radiation Shield by Weather Measure, which gives an aspiration of approximately 100 cfm. The wind instrumentation and temperature and relative humidity apparatus (in the aspirated radiation shield) are all mounted atop a 33-foot crank-up meteorological tower (the WM-33, by Weather Measure) at each of the four trailer sites.

The wind instrumentation at the monitoring trailers consists of the Model W103/3L Lightweight Cup Anemometer by Weather Measure and the Model W104-2 Lightweight Vane by Weather Measure. The anemometer is a high response, low threshold wind system which offers the optimum in versatility and economy. For low threshold applications, a unique frictionless tachometer employing a high frequency oscillator and receiver is used to measure precisely wind speed. The oscillator, transmitter, and receiver are encapsulated in a small cube of epoxy for total protection against the environment. The high frequency

tachometer embodies several distinct advantages over the commonly used light chopper systems. There are no light bulbs or photocells to burn out; power consumption is low; and the system is insensitive to moisture condensation or dust deposition. The solid state tachometer is essentially free from maintenance with a life of well over five years when operated continuously. The specifications of the W103 Cup Anemometer are as follows:

- Accuracy: ± 1% or .15 mph, whichever is greater.
- Bearings: Sealed and shielded precision stainless steel.
- Threshold: 0.6 miles per hour.
- Distance Constant: 5 feet.

The wind vane, the W104-2, is equipped with a 1000 ohm low torque potentiometer and two wipers for 0° to 540° operations. The response characteristics of this vane are:

- Dead Band: 0 degrees.
- Damping Ratio: 0.4.
- Distance Constant: 3.5 feet.
- Threshold: 0.75 miles per hour.
- Potentiometer Linearity: 0.5%.

The thermistor probe used in the motor aspirated radiation shields is the Model T621-TP18X Air Temperature Premium

Thermistor Probe by Weather Measure. This probe has a range of -50°C to +50°C and an interchangeability of ±0.055°C. The output signal accuracy is ±0.3°F.

The relative humidity sensor is the Model 2013 Remote Reading Relative Humidity System by Texas Electronics. The sensor assembly contains a newly-developed hygroscopic inorganic sensing element. Its expansion and contraction positions the suspended core of a linear variable differential transformer (LVDT). The absence of friction inducing linkages and wiping contacts minimizes hysteresis and improves accuracy. The LVDT output signal, when processed, is directly proportional to relative humidity. The specifications of this instrument are as follows:

- Range of Indication: 0% to 100% RH.

- Response: The sensor response time to a step change of 10% in relative humidity is less than 2 minutes with the sensor exposed to moving air.

- Accuracy: 5% - 15% RH; ± 5% RH
  15% - 95% RH; ± 2% RH
  95% -100% RH; ± 3% RH

- Signal Output: Analog signal of -150 mv. to +150 mv. with electrical zero at 50% RH is standard.

Each of the four monitoring trailers is equipped with a Model P511-E Remote Recording Heated Snow Gage by Weather Measure. In the case of this gage, the durability and reliability of a tipping bucket gage are combined with heavy-duty electric heaters to make this an all-purpose precipitation sensor. This gage may be used to measure snowfall and rainfall. An insulating

cover of poly-vinyl chloride and a thermostatic control insure the proper gage temperature. The thermostatic control is adjustable from 0 to 35°C. Snow falling into the inlet funnel is melted. The resulting water (from rain or snow) drains into a precision tipping bucket mechanism which activates a mercury switch each time the bucket fills and tips. The gage is constructed of durable corrosion-resistant materials to provide many years of service. The specifications of this gage are as follows:

- Orifice: 8 inches.
- Calibration: 0.01 inch.
- Accuracy: 0.5% (Calibrated at 0.5 in/hr).
- Sensor: Chrome plated tipping buckets.
- Switch: Mercury, 0.1 second closure.
- Heat Control: Thermostat adjustment, 0 to 35°C.

2. <u>200-Foot Meteorological Tower</u>

The tower has instrumentation at four levels: 8 feet, 30 feet, 100 feet, and 200 feet. At all four levels, there are: wind speed, wind direction, and temperature and relative humidity sensors in a power aspirated radiation shield. Temperature difference thermistors (also in power aspirated radiation shields) and their associated circuitry take lapse rate measurements for the 30-foot to 100-foot layer and the 30-foot to 200-foot layer. In addition, this site has a Precision Spectral Pyranometer, a barometer, and a tipping bucket rain/snow gage.

The wind direction and speed apparatus used at each measurement level of the tower is the Model 1074-2 wind sensor by Meteorological Research, Inc. (MRI). This sensor has a 540° potentiometer for wind direction and a light chopper for wind speed. This sensor is rugged, with an all-weather coaxial cup and damped vane assembly. The prototype model has been in operation for years under the most demanding weather conditions, performing continuously with the utmost reliability. All of the wind sensors on the tower have been specially treated with a black paint which will promote warming of the exposed surfaces of the sensor and thereby reduce ice and snow accumulations on the moving parts of the apparatus. The specifications on the Model 1074-2 are as follows:

Wind Speed

. Starting Threshold: 0.75 mph.

. Response Distance: 18 feet (63% recovery).

. Flow Coefficient: 7.9 feet/Revolution.

. Accuracy: ± 0.4 mph or 1% (whichever is greater).

Wind Direction

. Starting Threshold: 0.75 mph.

. Delay Distance: 4 feet (50% recovery).

. Damping Ratio: 0.5 to 0.6.

. Accuracy (540° system): ± 1%.

. Range: 0° to 540°.

The relative humidity and temperature sensors are mounted within a power aspirated radiation shield at each tower level. All aspirators and sensors are of the Model 840 Series by MRI. The aspirated shielded housing is designed to provide maximum radiation protection to the sensor. Ambient air is drawn into the shield and across the sensors at approximately 15 feet per second. This intake air is essentially sampled from a hemispherical space which is approximately 3-inch radius from the tube opening. Speed of the incoming air at the periphery of this hemisphere is approximately 1 mph.

The temperature sensor is comprised of a dual thermistor and resistor network. This circuit provides a linear resistance change with an air temperature change. The relative humidity sensor is placed alongside the temperature elements inside the shield where it is exposed to a constant flow of air. Circulation to both sides of the sensing element produces accurate monitoring with a good response time. The specifications on the sensing elements are as follows:

Temperature

- Accuracy: ± 0.25°C
- Range: -50°C to +50°C

Humidity

- Accuracy: ± 3.0% RH
- Range: 0% to 100% Relative Humidity

Measurements of temperature difference are taken for two layers, the 30-foot to 100-foot and the 30-foot to 200-foot

layer. The thermistors and circuitry used for these measurements are separate from the thermistors measuring air temperature. The use of separate thermistors and circuitry to measure ΔT allows for much greater accuracy and resolution in the measurements, which is necessary for stability assessments. Two ΔT thermistors are at the 30-foot level, one is at the 100-foot level, and one is at the 200-foot level. All of these ΔT thermistors are mounted within power aspirated radiation shields. The specifications on the ΔT instrumentation are as follows:

- Accuracy: ±0.1°C
- Range of ΔT Circuit
  (Lower Level-Upper Level): +4°F to -8°F

All instrumentation, except at the ground level, is mounted at the end of 12-foot retractable booms. These booms are 3-inch box beams which are on rollers and can be retracted to the instrument platforms for instrument maintenance.

The meteorological tower itself is a 200-foot Rohn Model 80 Guyed Tower, designed for 40 pounds per square foot wind load with ½" of radial ice per EIA Standard RS-222-B, to support four levels of meteorological equipment. The material consists of tower sections with a tapered base, three retractable booms 12-feet long, three outside work platforms, an inside ladder for climbing, two base ground kits and one anchor ground kit. The cable-type Safety Climbing Device consists of a cable and attachment mechanisms with a locking sleeve and safety belt. The tower is lighted and painted according to FAA specifications.

The signals from the tower instrumentation are fed from multiple signal cables into transmitters mounted at the base of

the tower. After signals have been converted to analog signals, they are fed into a junction box, also at the tower base, where they are assimilated into one coaxial cable. The signals are then run underground within 3" PVC conduit to the A-to-D assembly, where they are processed. The transmitters are shielded and insulated from the elements. The signal cable is run underground in PVC conduit in order to minimize damage from the weather or various rodents in the region.

The auxiliary equipment at the tower site consists of a heated tipping bucket rain/snow gage, an analog barometer, and a Precision Spectral Pyranometer. The rain/snow gage is the Model P511-E unit by Weather Measure, with characteristics and specifications as described in Section 1. The barometer is the B242 Analog Output Barometer by Weather Measure. This barometer provides an output voltage that is linearly proportional to pressure. The specifications on this instrument, which is mounted inside the monitoring trailer at the site, are as follows:

- Range: Specially designed for the 100 millibar interval from 725 millibars to 825 millibars.
- Resolution: Infinite
- Linearity: ± 0.5 millibar, over the 100 millibar interval

The pyranometer at the site is the Eppley Precision Spectral Pyranometer. This instrument is used for the measurement of sun and sky radiation totally or in defined wavelength bands. The pyranometer is levelled and mounted atop a wooden stand 4½ feet from the ground surface. Care has been taken to

eliminate the effects from all outside influences, such as reflection or shadows, on the pyranometer. The instrument characteristics are as follows:

- Sensitivity: 5 mv. per cal/cm^2/min
- Independence: 300 ohms
- Temperature dependence: Sensitivity constant to within ± 1 percent over the ambient temperature range from -20 to +40°C
- Linearity: Response linear up to intensities of 4 cal/cm^2/min
- Response Time: 1 second (i/e signal)

All instrumentation is factory calibrated and is field-calibrated at various intervals. Sling psychrometers are used to calibrate the humidity sensors, known temperatures and/or resistances are used to calibrate the thermistors, and an rpm calibrating unit is used to calibrate the anemometers. The wind direction instrumentation is aligned to true north (reference direction) by means of a surveyor's transit.

III. METEOROLOGICAL SUMMARY

A. Summary of the Meteorological Conditions in West Central and Northwestern Colorado During the 12-Month Period From November 1974 to October 1975

West central and northwestern Colorado experienced relatively cool, wet conditions during the twelve-month period extending from November, 1974 to October, 1975. Temperatures were below normal, while precipitation totals were slightly above normal during the period. Snowfall totals were much above normal during the period, especially during the spring months of 1975. Grand Junction, Colorado, approximately sixty miles to the south-southwest of the Tract C-b, received a total of 47.5 inches of snow and/or ice pellets during the twelve-month period, a total which is 21.1 inches above normal. Temperatures during January, April, May, and June, 1975 were much below normal in the region. In fact, monthly average temperatures at Grand Junction did not exceed the monthly normals during the entire study period.

The generally cool, wet meteorological conditions that prevailed in the region resulted from persistent upper-level troughing in the southwestern United States. Basically, upper-level troughing conditions were dominant in west central Colorado from November, 1974 until the early portions of June, 1975. Upper-level ridging conditions became dominant during June and persisted throughout the remainder of the twelve-month period. These flow patterns are reflected in the statistics in Table M-1. Temperatures (monthly) were well below normal, precipitation totals (monthly) were near or above normal, and cloudiness (percent of sunshine, sky cover, and number of cloudy days) was above normal during the November to early June period. Especially cold, wet conditions prevailed during the spring of 1975 because of persistent cold-core cyclonic vortices

GRAND JUNCTION, COLORADO CLIMATOLOGICAL DATA

NOVEMBER 1974 THROUGH OCTOBER 1975

	TEMPERATURE (°F)								DEW POINT TEMP. (°F)	PRECIPITATION (INCHES)												CLOUDINESS					
	Average Maximum	Average Minimum	Average	Departure from Normal	Highest	Date of Highest	Lowest	Date of Lowest	Average	Total	Departure from Normal	Greatest in 24 Hours	Date	Total Snow/Ice Pellets	Departure from Normal	Greatest Snow/Ice Pellets in 24 Hours	Date	Max. Depth of Snow/Ice Pellets on Ground	Date	# of Days with Thunderstorms	# of Days with Measurable (≥.01) Precipitation	# of Clear Days	# of Partly Cloudy Days	# of Cloudy Days	Sky Cover Sunrise to Sunset (tenths)	Sky Cover Midnight to Midnight (tenths)	Percent of Possible Sunshine
Nov '74	49.9	29.2	39.6	-0.2	57	22	16	30	29	1.18	+0.57	0.82	2-3	0.1	-3.0	0.1	3	0	-	1	9	12	6	12	5.1	4.5	77
Dec '74	36.8	17.4	27.1	-2.4	46	6+*	1	25	14	0.32	-0.23	0.16	5	4.6	-1.1	2.9	29-30	3	30	0	5	12	5	14	5.6	5.4	56
Jan '75	31.4	8.6	20.0	-6.6	48	26	-8	12	12	0.53	-0.11	0.22	8-9	7.9	+0.1	3.2	8-9	4	17+	0	10	7	10	14	6.6	5.6	58
Feb '75	42.5	23.4	33.0	-0.6	55	28	9	6	20	0.49	-0.12	0.29	14	4.4	0	1.5	16-17	1	6+	0	6	6	8	14	6.3	5.7	60
Mar '75	51.6	30.3	41.0	-0.2	65	20	11	28	24	1.74	+0.99	0.52	9	8.8	+4.7	4.3	17	4	27	1	10	6	5	20	7.4	7.0	63
Apr '75	58.4	34.3	46.4	-5.3	77	25	11	2	23	1.38	+0.59	0.95	17-18	14.3	+13.6	8.9	17-18	7	18	1	6	8	11	11	5.9	5.5	73
May '75	69.8	44.3	57.1	-5.1	86	15	32	6	31	1.23	+0.60	0.40	28	1.3	+1.3	1.3	5-6	T	6	2	9	11	8	12	5.6	5.6	71
Jun '75	83.8	51.2	67.5	-3.8	98	30	42	19+	33	0.43	-0.12	0.20	7-8	0	0	0	-	0	-	5	7	14	11	5	4.2	4.1	81
Jul '75	92.7	63.9	78.3	-0.4	99	1	59	17+	47	1.39	+0.93	0.98	16	0	0	0	-	0	-	10	5	11	16	4	4.3	4.3	81
Aug '75	90.8	59.9	75.4	0.0	98	8+	48	25	36	0.09	-0.96	0.06	14	0	0	0	-	0	-	3	2	19	7	5	3.3	3.1	84
Sep '75	82.2	52.0	67.1	-0.1	93	1	42	20	32	0.16	-0.68	0.10	9-10	0	-0.1	0	-	0	-	6	4	18	9	3	2.7	2.6	84
Oct '75	68.5	38.4	53.5	-1.4	85	6	18	24	22	0.85	-0.08	0.75	23-24	6.1	+5.6	6.1	23-24	5	24	0	5	16	12	3	3.6	2.9	84
Average	63.2	37.7	50.5	-2.2	--	--	--	---	27	----	----	----	-----	---	----	---	-----	-	--	--	--	--	--	--	5.0	4.7	73
Total	----	----	----	----	--	--	--	---	--	9.79	+1.38	----	-----	47.5	+21.1	---	-----	-	--	29	78	140	108	117	--	---	--

*"+" after a date indicates that a certain event occurred on earlier days than the days shown.

which cutoff from the long-wave circulation and settled over the southwestern United States.

The sudden appearance of upper-level ridging conditions is also illustrated by Table M-1. During the period from June through October, 1975, mild, dry, sunny conditions generally prevailed in the region. Over 80 percent of the possible sunshine was received in all five of these months. However, two brief interruptions in this clear, sunny regime occurred. During July, warm, moist tropical air from the Gulf of Mexico (low-level) and the Pacific Ocean (mid- and high-levels) advected into the region due to an irregularity in the ridging pattern. This added moisture (monthly average dew point of 47°F) resulted in considerable shower and thundershower activity during the month. Moreover, during the last portion of October, an unusually intense upper-level vortex (intense for October) developed over the region, bringing very heavy snowfalls on the 23rd and 24th of October.

In Grand Junction (GJT), the average temperature for the twelve-month period was 50.5°F (2.2°F below normal). The average dew point at GJT was 27°F and the average relative humidity was 40 percent . Precipitation totaled 9.79 inches (1.38 inches above normal) at GJT, with thunderstorms reported on 29 days (10 in July). Measurable precipitation ($\geq$ .01 inch) occurred on 78 days. GJT experienced 140 clear days, 108 partly cloudy days, and 117 cloudy days. The average sky cover by cloudiness in tenths at GJT during the daylight hours was 5.0 (out of a possible 10), while the sky cover was 4.7 for the entire period. The GJT area received 73 percent of the possible sunshine during the twelve-month period. The highest temperature recorded at GJT during the period was 99°F on July 1st (98°F was recorded on June 30th, July 7th, July 24th, and August 5th, 7th, and 8th). The lowest temperature recorded at GJT was -8°F on January 12th. Temperatures below 0°F were also experienced on the 10th, 11th, 13th, 14th, and 15th of January.

B. Summary of the Meteorological Conditions in the Tract C-b Region During the Period from November 1974 to October 1975

The meteorological conditions that prevailed in the Tract C-b region during the November, 1974 to October, 1975 period were often quite diverse because of terrain influences. The meteorology of the three stations in the Piceance Creek Valley (Sites 020, 021, and 022) was dominated by the effects of the two local circulation cells, the katabatic (downslope) and anabatic (upslope) cells. On the plateau, the meteorological tower (Site 023) and Site 024 normally experienced conditions that were macroscale in nature (e.g., wind directions and speeds that were induced by synoptic-scale pressure gradients and thermal fields that reflected large-scale patterns). Precipitation totals, especially snowfall, were normally greater on the plateau than in the Valley because of the forced lifting that the plateau provided to the air.

The walls of the Piceance Creek Valley had a marked channeling effect on the wind flow within the Valley. The wind roses for the Valley stations exhibited primarily a northwest-southeast flow couplet during the twelve-month period. The southeasterly winds were caused by the nighttime and morning katabatic circulation, while the northwesterly winds, induced by the anabatic circulation cell, were primarily an afternoon phenomenon. Channeling effects from the terrain concentrated the winds associated with these localized circulations. The katabatic cell was more strongly developed during the winter months, while the anabatic cell was more strongly developed during the summer months. However, since the anabatic cell never attained the strength that the katabatic cell achieved,

and since winds were generally light and variable on a synoptic scale during much of the summer, the wind roses for the Piceance Creek Valley show more directional variability during the late spring and summer months. The effects of channeling and the local circulations are most marked at Trailer 022.

The wind roses for the meteorological tower, where channeling and localized effects are not significant, show that the winds had a westerly component during most of the period. This westerly influence is due to synoptic-scale effects, since the basic flow of the long-wave pattern is west-to-east. Southwesterly winds were most common at the meteorological tower site. Because of its elevation and exposure, the meteorological tower also experienced much stronger winds than did the other monitoring sites. The Ekman spiral effect was evident at the tower, since the winds generally veered in direction and increased in strength as a function of increasing height.

The katabatic and anabatic influences were both evident at Trailer 024, which is located in a transition zone between the meteorological conditions of the Piceance Creek Valley and those of the plateau. The anabatic (upslope) flow generally affected all five monitoring sites to varying degrees. However, the katabatic (downslope) flow generally affected only the lower elevations. On nights and mornings when this drainage or katabatic flow was well-developed, it affected the Valley trailers as well as Trailer 024 and the 8- and 30-foot levels of the meteorological tower. The katabatic effects seldom reached the 100- and 200-foot levels of the meteorological tower, however.

Because of the katabatic effects, temperatures were often considerably colder in the Piceance Creek Valley than on the plateau during relatively calm, clear nights. During these

nights which had radiational cooling, intense ground-based inversions formed. The top of the inversions normally reached elevations that were above the top of the meteorological tower. However, the most stable conditions normally occurred near the ground, especially in the Piceance Creek Valley. Because of the surrounding valley walls and the relatively low elevation of the site (cold air drainage), Trailer 021 usually had minimal nocturnal wind flow (i.e., little vertical mixing) and, therefore, normally had the lowest minimum temperatures. In fact, nighttime temperatures were often 30°F colder at Trailer 021 than atop the plateau. During the afternoons, when vertical mixing of the air was well established, temperatures were fairly uniform throughout the Tract C-b region. However, afternoon temperatures were slightly lower on the plateau than they were in the Piceance Creek Valley due to lapse rate considerations.

IV. QUALITY CONTROL PROGRAM

Radian has a detailed quality control program for air quality monitoring projects. This program is designed to ensure that a maximum amount of accurate data is obtained, and includes the following features:

(1) All stations are visited daily by a trained operator.

(2) A factory trained instrument engineer works with the system full-time.

(3) All calibration sources except ozone are NBS-traceable.

(4) All flows and dilutions in calibration units are measured and recalculated at least quarterly.

(5) Detailed logbooks are maintained in each station.

(6) A detailed checklist is completed daily at each station.

(7) Each station features a computer for real time data processing. The data is printed in the station on hardcopy, and is inspected daily by the operator. In addition, the computer also does certain checks on the data, and signifies problems (e.g., excessive zero drift between calibrations) by illuminating a light on the SYSTEM STATUS PANEL. The computer monitors interior shelter temperature, air flow thru the manifold, temperature of

the manifold, line voltage, zero drift, span drift, hydrogen pressure, ethylene pressure, and flame status.

(8) Shelter temperature is controlled to ±3°C.

(9) A back-up power supply system keeps the analyzers operating (and thus warmed to operating temperature) during power failures less than four hours.

(10) The instruments on the meteorological tower and the computers in all monitoring trailers are kept in the operating mode during power failures having a duration of less than four hours by back-up power supply systems.

(11) A battery powered digital clock assures that the correct time is associated with all data, even after line power failures.

(12) The computer controls many parts of the system, eliminating operator error. Included are automatic power shutoff if interior temperature exceeds 90°F, automatic calibration of all analyzers, control of High Volume particulate samplers, control of the printer and cassette tape unit, and illumination of an outside alarm light if a severe problem develops.

(13) All data are recorded on two separate cassette units and a hardcopy. The cassettes and hardcopy are sent separately to Radian's headquarters according to a detailed data handling procedure.

(14) All Hi-Vol filters are brought to a constant humidity before and after exposure. Particulates are measured daily at all five stations.

(15) All analyzers receive a multi-point calibration at least every 180 days.

(16) For the gas chromatograph type analyzers, a spectrum output is recorded every time the hydrogen bottle is changed.

(17) Special audit checks using a different span gas source and dilution system are run whenever another Radian Instrument Engineer visits the system.

(18) Instruments are occasionally run for 24 hours on zero and 24 hours on span to assess noise and drift characteristics.

(19) Since SO_2 and H_2S are monitored with flame photometric detectors at all stations, a test has begun in which SO_2 is measured on two analyzers at one station, and H_2S on two analyzers at one station. This will be continued for a month, and will further define noise and drift characteristics.

(20) All data are machine processed using digitized tape recorded data, thus eliminating manual processing errors.

(21) The entire data acquisition system is checked monthly with a reference voltage source for voltage offsets or other problems.

(22) Many quality control features are designed into the shelter itself. All air leaving the shelter goes through a charcoal scrubber to avoid contamination of the air near the shelter. The manifold is heated to prevent condensation, and the air flow is continually monitored.

Status bits such as "flame out", "low hydrogen pressure", "low ethylene pressure", "power off", "excess zero drift", etc. are recorded along with the air quality data, and also displayed via lights on the System Status Panel.

Catalytic oxidizers are used to remove ethylene from the vent on ozone analyzers and charcoal scrubbers are used to remove SO_2 from excess span gas vented by the calibrator. All manifolds are vented outside the shelters so no back pressure can build up.

(23) All monitoring data are reviewed by technical experts at Radian to ensure that questionable or erroneous data are eliminated from the permanent data base. Experts in air chemistry review all air quality data. Professional meteorologists review all meteorological data, using National Weather Service data from Grand Junction, Colorado as an aid in the editing process.

(24) Many of the meteorological instruments in the monitoring network are equipped with aspirating or heating apparatus to alleviate operating problems or failures during extreme winter conditions.

(25) The meteorological tower is equipped with both standard wind sensing instrumentation and anemometer bivanes at the three top measurement levels. This instrumentation scheme provides a data redundancy at these levels, such that data comparisons can be made to ensure data accuracy. In addition, in the case of a failure of any component of the standard wind sensing system, the bivane provides back-up data, both for the wind speed and the wind direction, which thereby increases the total data collection efficiency of the system.

(26) All analog channels are sampled once each second to obtain the five-minute averages that are retained in the permanent data storage. This sampling rate ensures statistical significance for all collected data.

Due to the instrument accuracies and the data processing techniques errors can be introduced into the reported samples. Table IV-1 shows the maximum possible errors that might be introduced in recording of one five-minute sample. It should be noted that this error will not occur frequently, and should be very near zero when considered on a statistical average.

TABLE IV-1

MAXIMUM ERRORS IN RECORDING IN SINGLE SAMPLE

CHANNEL	INSTRUMENT ACCURACY	DATA PROCESSING ERROR*
NO_x	± 5 ppb	± .62
NO	± 5 ppb	± .62
SO_2	± 10 ppb	± .74
H_2S	± 10 ppb	± .74
THC	± 50 ppb	± 1.72
CH_4	± 50 ppb	± 1.72
CO	± 50 ppb	± 1.72
O_3	± 5 ppb	± .62
Wind Speed (met. tower)	± 1.0 mph	± .52 mph
(reg. tower)	± .5 mpg	± .52 mph
Wind Direction (met. tower)	± 5.4 deg	± .63 deg
(reg. tower)	± 5.4 deg	± .63 deg
Temperature (met. tower)	± .45°F	± .54°F
(reg. tower)	± .3 °F	± .54°F
Relative Humidity (met. tower)	± 3.0%	± .52%
(reg. tower)	± 5.0%	± .52%
Change in Temperature	± .18°F	± .0064°F
Barometric Pressure	± .5 millibars	± .52 millibars

*Error due to rounded to integers for one five-minute average.

V. OPERATING TIME ANALYSIS

The amended Oil Shale Lease Environmental Stipulations require monitoring air quality for sulfur dioxide (SO_2), hydrogen sulfide (H_2S), and suspended particulates on a continuous basis (when applicable). In addition, hydrocarbons, oxides of nitrogen and otherpollutants will be continuously monitored as deemed necessary by the Area Oil Shale Supervisor. Requirements for meteorological monitoring include wind speed and direction at three levels near the proposed plant site, one monitor at a height of approximately 30 feet, one not less than 100 feet, and one at an intermediate level. Temperature is to be monitored at the 30-foot level and at a level at least 100 feet above the plant site. Humidity is to be monitored at one level, height not specified. All these meteorological parameters are to be monitored at least 95 percent of the time over each lease year.

The lease stipulations in force at the time the air monitoring network for Tract C-b was designed required monitoring at four sites for SO_2, H_2S and particulates; required monitoring for hydrocarbons, oxides of nitrogen and other pollutants as deemed necessary by the mining supervisor; and required monitoring over at least 90 percent of each lease year. In order to meet these requirements for 90 percent monitoring at four stations the network design included a complete spare station to be operated continuously so that even with a failure in one station, four stations would still be monitoring. The met tower was designed to monitor wind speed, wind direction, temperature, and relative humidity at four levels: 200 feet, 100 feet, 30 feet and 8 feet.

Since the lease stipulations have changed since the network was designed, the operating time analysis will be presented as follows.

(1) Air Quality Stations

Downtime will be reported as the number of channel-days in the quarter that each channel in each station was not taking data (Table I), and all five stations will be reported. Calibration time will not be counted as downtime. A particular channel will be marked as down on any day when it collects less than half the available data points for that day.

The three stations along Piceance Creek had electrical power prior to September 1 (020, 021, 022). Station 023 operated on power from a diesel generator from September 4, 1974 to October 4, 1974. Station 024 operated on power from a diesel generator from September 27, 1974 to October 4, 1974. Electrical lines were available at 023 and 024 after October 4, 1974.

Table V-1 lists air quality data collection percentages for each species for each month. For SO_2, H_2S, and particulates, the percentages were obtained with an effective four station network from the four stations plus one operating spare station (023). For the other species the percentages were obtained with an effective one station network from one station (020), plus one operating spare station (023).

(2) Meteorological Tower

The channels which will be reported in the operating time analysis include wind speed and wind direction at the 200, 100 and 30-foot levels; the temperature at the 200, 100 and 30-foot levels; and the relative humidity at the 200, 100 and 30-foot levels. A particular data channel will be marked as down on any day when it collects less than half of the available data points for that day. The percent monitoring achieved will be

calculated based on wind speed being taken at the 200, 100 and 30-foot levels; wind direction being taken at the 200, 100 and 30-foot level; temperature being taken at the 30-foot level and either the 100 or 200-foot level; and relative humidity being taken at the 200, 100, 30, or 8-foot level.

TABLE V-1
PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
11/ 1	100.	100.	50.	100.	100.	0.	0.	100.	100.	78.
11/ 2	100.	100.	0.	100.	100.	0.	0.	0.	100.	61.
11/ 3	100.	75.	0.	100.	100.	100.	100.	100.	100.	72.
11/ 4	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/ 5	100.	100.	0.	100.	100.	0.	0.	100.	0.	61.
11/ 6	100.	100.	0.	100.	100.	0.	0.	100.	100.	67.
11/ 7	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/ 8	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/ 9	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/10	75.	100.	0.	100.	100.	0.	0.	0.	100.	56.
11/11	100.	100.	0.	100.	100.	100.	100.	0.	100.	72.
11/12	100.	100.	0.	100.	100.	0.	0.	0.	100.	61.
11/13	100.	100.	0.	100.	100.	0.	0.	0.	100.	61.
11/14	100.	100.	0.	100.	100.	0.	0.	0.	100.	61.
11/15	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/16	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/17	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/18	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/19	100.	100.	0.	100.	100.	0.	0.	0.	0.	56.
11/20	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
11/21	100.	100.	25.	100.	100.	100.	100.	100.	100.	83.
11/22	100.	100.	25.	100.	100.	100.	100.	100.	100.	83.
11/23	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
11/24	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
11/25	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
11/26	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
11/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/28	100.	100.	25.	100.	100.	100.	100.	100.	100.	83.
11/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/30	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
TOTAL	99.	99.	18.	100.	100.	70.	70.	77.	93.	76.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
11/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
11/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
12/ 1	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
12/ 2	100.	100.	25.	100.	100.	100.	100.	100.	100.	83.
12/ 3	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
12/ 4	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
12/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 7	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
12/ 8	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
12/ 9	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
12/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/11	50.	75.	25.	100.	100.	100.	100.	100.	100.	67.
12/12	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
12/13	100.	100.	25.	100.	100.	100.	100.	100.	100.	83.
12/14	75.	75.	75.	100.	100.	100.	100.	100.	100.	83.
12/15	75.	75.	0.	100.	100.	100.	100.	100.	100.	67.
12/16	75.	75.	50.	100.	100.	100.	100.	100.	100.	78.
12/17	50.	50.	75.	100.	100.	100.	100.	100.	100.	72.
12/18	75.	75.	0.	100.	100.	100.	100.	100.	100.	67.
12/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/20	75.	75.	75.	100.	100.	100.	100.	100.	100.	83.
12/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/22	100.	100.	25.	100.	100.	100.	100.	100.	100.	83.
12/23	50.	75.	0.	0.	0.	0.	0.	0.	0.	28.
12/24	50.	50.	0.	0.	0.	0.	0.	0.	0.	22.
12/25	75.	75.	75.	100.	100.	0.	0.	0.	100.	67.
12/26	50.	50.	50.	100.	100.	0.	0.	0.	100.	50.
12/27	75.	100.	50.	100.	100.	0.	0.	0.	100.	67.
12/28	100.	100.	100.	100.	100.	0.	0.	0.	100.	83.
12/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/30	75.	100.	100.	100.	100.	100.	100.	100.	100.	94.
12/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	85.	89.	62.	94.	94.	81.	81.	81.	94.	82.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
12/ 1	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/15	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/17	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/23	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/24	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/25	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/26	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/27	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/28	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
12/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	65.	65.	65.	65.	65.	65.	65.	65.	65.	65.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
1/ 1	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
1/ 2	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
1/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 4	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
1/ 5	100.	100.	25.	100.	100.	0.	0.	0.	100.	67.
1/ 6	100.	100.	75.	100.	100.	0.	0.	0.	100.	78.
1/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 8	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
1/ 9	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
1/10	100.	100.	100.	100.	100.	0.	100.	100.	100.	94.
1/11	100.	100.	100.	100.	100.	0.	100.	100.	100.	94.
1/12	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
1/13	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
1/14	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
1/15	100.	100.	50.	0.	0.	0.	0.	0.	100.	61.
1/16	100.	100.	100.	100.	100.	0.	0.	0.	100.	83.
1/17	100.	100.	100.	100.	100.	0.	0.	0.	100.	83.
1/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/19	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
1/20	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
1/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/26	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
1/27	100.	100.	25.	100.	100.	100.	100.	100.	100.	83.
1/28	100.	100.	0.	100.	100.	100.	100.	100.	100.	78.
1/29	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
1/30	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
1/31	100.	100.	50.	100.	100.	0.	0.	100.	100.	78.
TOTAL	100.	100.	73.	84.	84.	74.	81.	84.	100.	89.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
1/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 5	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1/ 6	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
1/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	94.	94.	94.	94.	94.	94.	94.	94.	94.	94.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
2/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 5	100.	100.	75.	100.	100.	100.	0.	100.	100.	89.
2/ 6	100.	100.	100.	100.	100.	100.	0.	100.	100.	94.
2/ 7	100.	100.	100.	100.	100.	100.	0.	100.	100.	94.
2/ 8	100.	100.	100.	100.	100.	100.	0.	100.	100.	94.
2/ 9	100.	100.	100.	0.	0.	100.	0.	100.	100.	83.
2/10	100.	100.	75.	0.	0.	100.	0.	100.	0.	72.
2/11	100.	100.	75.	0.	0.	100.	0.	100.	100.	78.
2/12	100.	100.	75.	0.	0.	100.	0.	100.	100.	78.
2/13	100.	100.	75.	0.	0.	100.	0.	100.	100.	78.
2/14	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
2/15	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
2/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/17	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
2/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/23	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
2/24	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
2/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	91.	82.	82.	100.	68.	100.	96.	94.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
2/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
2/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
3/ 1	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
3/ 2	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
3/ 3	100.	100.	75.	0.	0.	100.	100.	100.	100.	83.
3/ 4	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
3/ 5	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
3/ 6	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
3/ 7	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
3/ 8	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
3/ 9	100.	100.	50.	0.	0.	0.	0.	0.	100.	61.
3/10	100.	75.	0.	0.	0.	0.	0.	100.	100.	50.
3/11	75.	100.	25.	0.	0.	100.	100.	100.	100.	67.
3/12	75.	100.	100.	0.	0.	100.	100.	100.	100.	83.
3/13	75.	100.	75.	0.	0.	100.	100.	100.	100.	78.
3/14	75.	100.	100.	0.	0.	100.	100.	100.	100.	83.
3/15	75.	100.	100.	0.	0.	100.	100.	100.	100.	83.
3/16	75.	100.	50.	100.	100.	100.	100.	100.	100.	83.
3/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/22	100.	100.	100.	100.	100.	0.	100.	100.	100.	94.
3/23	100.	100.	50.	100.	100.	100.	100.	100.	100.	89.
3/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/27	100.	100.	100.	100.	100.	100.	0.	100.	100.	94.
3/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/29	100.	100.	100.	100.	100.	100.	0.	100.	100.	94.
3/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	95.	99.	88.	52.	52.	90.	87.	97.	100.	89.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
3/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3/11	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3/12	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3/13	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3/14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3/15	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3/16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
3/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
3/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	77.	77.	77.	77.	77.	77.	77.	77.	77.	77.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
4/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
4/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(6-CHANNELS)
4/ 1	100.	100.	100.	100.	100.	100.	100.
4/ 2	100.	100.	100.	100.	100.	100.	100.
4/ 3	100.	100.	100.	100.	100.	100.	100.
4/ 4	100.	100.	100.	100.	100.	100.	100.
4/ 5	100.	100.	100.	100.	100.	100.	100.
4/ 6	100.	100.	100.	100.	100.	100.	100.
4/ 7	100.	100.	100.	100.	100.	100.	100.
4/ 8	100.	100.	100.	100.	100.	100.	100.
4/ 9	100.	100.	100.	100.	100.	100.	100.
4/10	100.	100.	100.	100.	100.	100.	100.
4/11	100.	100.	100.	100.	100.	100.	100.
4/12	100.	100.	100.	100.	100.	100.	100.
4/13	100.	100.	100.	100.	100.	100.	100.
4/14	100.	100.	100.	100.	100.	100.	100.
4/15	100.	100.	100.	100.	100.	100.	100.
4/16	100.	100.	100.	100.	100.	100.	100.
4/17	100.	100.	100.	100.	100.	100.	100.
4/18	100.	100.	100.	100.	100.	100.	100.
4/19	100.	100.	100.	100.	100.	100.	100.
4/20	100.	100.	100.	100.	100.	100.	100.
4/21	100.	100.	100.	100.	100.	100.	100.
4/22	100.	100.	100.	100.	100.	100.	100.
4/23	100.	100.	100.	100.	100.	100.	100.
4/24	100.	100.	100.	100.	100.	100.	100.
4/25	100.	100.	100.	100.	100.	100.	100.
4/26	100.	100.	100.	100.	100.	100.	100.
4/27	100.	100.	100.	100.	100.	100.	100.
4/28	100.	100.	100.	100.	100.	100.	100.
4/29	100.	100.	100.	100.	100.	100.	100.
4/30	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

CORPORATION

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
5/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 6	100.	75.	100.	100.	100.	100.	100.	100.	100.	94.
5/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 8	100.	75.	100.	100.	100.	100.	100.	100.	100.	94.
5/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/16	75.	100.	100.	100.	100.	100.	100.	100.	100.	94.
5/17	75.	100.	100.	100.	100.	100.	100.	100.	100.	94.
5/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	98.	98.	100.	100.	100.	100.	100.	100.	100.	99.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
5/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
5/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
6/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 3	100.	100.	100.	100.	100.	0.	0.	100.	100.	89.
6/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 8	50.	50.	75.	100.	100.	100.	100.	100.	100.	72.
6/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/12	100.	100.	75.	100.	100.	100.	100.	100.	100.	94.
6/13	75.	75.	75.	0.	0.	100.	100.	100.	100.	72.
6/14	75.	75.	75.	0.	0.	100.	100.	100.	100.	72.
6/15	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
6/16	100.	100.	100.	0.	0.	100.	100.	100.	100.	89.
6/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	97.	97.	97.	87.	87.	97.	97.	100.	100.	96.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
6/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/13	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
6/14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
6/15	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
6/16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
6/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
6/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	87.	87.	87.	87.	87.	87.	87.	87.	87.	87.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
7/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/14	100.	75.	100.	100.	100.	100.	100.	100.	100.	94.
7/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/22	100.	100.	100.	0.	100.	100.	100.	100.	100.	94.
7/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	99.	100.	97.	100.	100.	100.	100.	100.	100.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
7/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
7/31	100.	100.	100.	100.	100.	100.	0.	100.	100.	89.
TOTAL	100.	100.	100.	100.	100.	100.	97.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

RADIAN CORPORATION

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
8/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/11	100.	75.	100.	100.	100.	100.	100.	100.	100.	94.
8/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	99.	100.	100.	100.	100.	100.	100.	100.	100.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
8/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
8/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.-
WD2 - WIND DIRECTION-100FT.-
WD3 - WIND DIRECTION-200FT.-

PERCENTAGES OF DATA RECOVERY

	SO2(4)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITE(18-CHANNELS)
9/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/10	75.	50.	75.	100.	100.	100.	100.	100.	100.	78.
9/11	100.	100.	100.	100.	100.	100.	100.	100.	0.	94.
9/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/21	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
9/22	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
9/23	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
9/24	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
9/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	99.	98.	99.	100.	100.	100.	100.	87.	97.	98.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
9/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
9/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.
WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

PERCENTAGES OF DATA RECOVERY

	SO2(1)	H2S(4)	PART(4)	NOX(1)	NO(1)	THC(1)	CH4(1)	CO(1)	O3(1)	COMPOSITF(18-CHANNELS)
10/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 4	75.	100.	100.	100.	100.	100.	100.	100.	100.	94.
10/ 5	75.	100.	100.	100.	100.	100.	100.	100.	100.	94.
10/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/23	100.	100.	100.	100.	100.	0.	0.	0.	100.	83.
10/24	100.	100.	100.	100.	100.	0.	0.	0.	100.	83.
10/25	100.	100.	100.	100.	100.	0.	0.	0.	100.	83.
10/26	100.	100.	100.	100.	100.	100.	0.	0.	100.	89.
10/27	100.	100.	100.	100.	100.	0.	0.	0.	100.	83.
10/28	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
10/29	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
10/30	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
10/31	100.	100.	100.	100.	100.	100.	100.	0.	100.	94.
TOTAL	[illegible]	100.	100.	100.	100.	87.	84.	71.	100.	96.

PERCENTAGES OF DATA RECOVERY

	WS1(1)	WS2(1)	WS3(1)	WD1(1)	WD2(1)	WD3(1)	RH(1)	TMP1(1)	TMP2(1)	COMPOSITE(9-CHANNELS)
10/ 1	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 2	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 3	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 4	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 5	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 6	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 7	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 8	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/ 9	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/10	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/11	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/12	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/13	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/14	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/15	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/16	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/17	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/18	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/19	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/20	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/21	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/22	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/23	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/24	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/25	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/26	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/27	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/28	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/29	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/30	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
10/31	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.
TOTAL	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.

WS1 - WIND SPEED-30FT.
WS2 - WIND SPEED-100FT.
WS3 - WIND SPEED-200FT.
RH - RELATIVE HUMIDITY 8,30,100 OR 200 FT.
TMP1 - TEMPERATURE 30FT.
TMP2 - TEMPERATURE-100 OR 200 FT.

WD1 - WIND DIRECTION-30FT.
WD2 - WIND DIRECTION-100FT.
WD3 - WIND DIRECTION-200FT.

VI. DATA PRESENTATION AND SUMMARY

This section presents summaries for all recorded parameters for the twelve months of operation from November, 1974 through October, 1975. The data presentations show averages and maximum recorded values during the period of operation as well as seasonal variations and correlations of concentrations with recorded wind data. The presentations are derived from the data base that contains five-minute averages for all channels except suspended particulates which are recorded as 24-hour averages. All concentrations reported in these summaries are in units of micrograms per cubic meter. The data is recorded in parts per billion and converted to micrograms per cubic meter assuming standard temperature and pressure of 25°C and 760 mmHg (1013.2 millibars) respectively.

Table VI-1 displays the average concentrations over the entire twelve month period, and the two highest recorded samples encountered. The table also shows various averaging times corresponding to both State and Federal ambient air standards. Maxima are chosen so that time segments are independent. For averaging times less than or equal to three hours, the sliding average window is stepped one five-minute sample at a time. For longer averaging times the step size is twelve samples or one hour. Averages are not computed unless 100 percent of the samples are present for averaging times less than or equal to one hour, and at least 90 percent are required for longer averaging times. In addition, the ten highest one-hour SO_2 averages at each site are presented in Table VI-2, and ten highest 24-hour particulate averages are shown in Table VI-3.

Figures VI-1 through VI-31 demonstrate the variation of each of the recorded contaminants over the twelve month period.

These plots serve to demonstrate seasonal variation in the contaminant concentrations, as well as the variability between monitoring sites. Figures VI-32 through VI-57 present the relationship between contaminant concentration and wind speed and direction. These figures indicate the directionality of sources with respect to the site. In these figures, wind speeds above 19 miles per hour are included in the highest wind speed class. The concentrations are averaged over the twelve months of operation.

Frequency of occurrence of wind direction for each of the twelve months is shown in Figures VI-58 through VI-65. The figures indicate the predominant wind direction in each month at each of the monitoring sites. Figures VI-66 through VI-75 show the percentage of occurrence of various wind speeds and wind direction. For each of the locations, there are two figures which show different views of the same plot. Relative humidity and temperature are shown in Figures VI-76 through VI-91. These graphs indicate the mean temperature or relative humidity as well as maximum and minimum values occurring in each month. Table VI-4 presents a wind direction persistence table. The wind direction appearing in this table are arithmetic averages of the five minute samples accounting for the 0° - 360° crossover.

A final presentation presents the relationship between non-methane hydrocarbons, nitrogen dioxide, and ozone at two of the sampling locations. Each of the figures VI-92 through VI-99 show the diurnal variation of ratio of the nitrogen dioxide concentration to the non-methane hydrocarbon concentration averaged over three months of operation. For comparison purposes, the diurnal variation of the ozone concentration is also plotted.

TABLE VI-1

TWELVE-MONTH SUMMARY (NOVEMBER 1974-OCTOBER 1975)
(Concentrations in Micrograms Per Cubic Meter)

Trailer 020

Parameter	Average	Maximum 24 Hour Value	Maximum 24 Hour Time	Maximum 8 Hour Value	Maximum 8 Hour Time	Maximum 3 Hour Value	Maximum 3 Hour Time	Maximum 1 Hour Value	Maximum 1 Hour Time	Maximum 5 Minutes Value	Maximum 5 Minutes Time
SO_2	.8	1) 30.2	3/7 10:00			1) 31.5	3/7 9:50	1) 33.9	9/14 13:10	1) 143.3	7/14 12:05
		2) 19.2	6/22 13:00			2) 31.0	3/7 23:25	2) 32.8	3/7 10:05	2) 109.4	10/29 11:45
H_2S	.1							1) 30.2	3/7 10:00	1) 70.6	8/23 10:35
								2) 21.7	6/15 6:00	2) 55.4	6/30 21:35
Particulate	9.5	1) 133.	11/29								
		2) 70.	5/20								
THC	930.6					1)2294.6	5/13 6:00			1)3256.2	8/20 12:15
						2)2200.8	5/20 6:00			2)3256.0	1/25 10:00
CH_4	851.7					1)1298.0	2/3 6:00			1)3254.2	7/14 18:55
						2)1219.5	12/8 6:00			2)3232.1	12/24 2:00
NMHC	74.3					1)1485.8	2/11 6:00			1)2070.9	12/5 15:55
						2) 707.7	4/22 6:00			2)1820.2	12/4 1:00
O_3	68.8							1)160.4	6/26 14:00	1) 314.5	3/15 14:05
								2)147.2	6/26 15:05	2) 289.0	12/12 11:50
NO_x	10.1							1) 53.2	8/17 6:35	1) 146.0	4/27 16:05
								2) 51.3	9/3 6:25	2) 91.7	8/11 12:15
NO	5.8							1) 44.3	11/10 5:50	1) 146.0	4/27 16:05
								2) 43.7	1/22 7:30	2) 84.0	1/30 3:25
CO	1238.6			1)4052.5	10/3 0:55			1)4227.9	10/4 22:15	1)5698.0	1/11 19:40
				2)3982.4	10/6 1.55			2)4124.5	10/3 7:20	2)5698.0	1/25 10:00
NO_2	4.1							1) 36.0	12/3 17:10	1) 69.3	10/27 0:00
								2) 33.9	7/14 13:10	2) 58.0	9/3 4:25

TABLE VI-1

TWELVE-MONTH SUMMARY (NOVEMBER 1974-OCTOBER 1975)
(Concentrations in Micrograms Per Cubic Meter)

Trailer 021

Parameter	Average	Maximum 24 Hour Value	Maximum 24 Hour Time	Maximum 8 Hour Value	Maximum 8 Hour Time	Maximum 3 Hour Value	Maximum 3 Hour Time	Maximum 1 Hour Value	Maximum 1 Hour Time	Maximum 5 Minutes Value	Maximum 5 Minutes Time
SO_2	1.3	1) 43.1	6/16 9:00			1) 66.4	6/16 12:55	1) 67.9	6/16 13:45	1)640.0	1/26 15:05
		2) 18.6	11/25 22:00			2) 61.1	6/16 16:00	2) 65.8	6/16 15:15	2)117.2	6/16 13:00
H_2S	.6							1) 62.6	4/14 0.35	1)107.9	1/18 10:05
								2) 62.6	4/14 1:40	2) 87.2	1/20 22:05
Particulate	10.2	1) 125.0	4/25								
		2) 97.0	5/20								
THC											
CH_4											
NMHC											
O_3											
NO_x											
NO											
CO											
NO_2											

TABLE VI-1

TWELVE-MONTH SUMMARY (NOVEMBER 1974-OCTOBER 1975)
(Concentrations in Micrograms Per Cubic Meter)

Trailer 022

Parameter	Average	Maximum 24 Hour Value	Maximum 24 Hour Time	Maximum 8 Hour Value	Maximum 8 Hour Time	Maximum 3 Hour Value	Maximum 3 Hour Time	Maximum 1 Hour Value	Maximum 1 Hour Time	Maximum 5 Minutes Value	Maximum 5 Minutes Time
SO_2	.5	1) 14.1	6/11 3:00			1) 26.9	6/12 0:00	1) 27.4	6/12 0:00	1) 140.7	2/22 9:45
		2) 13.9	5/23 10:00			2) 25.6	6/12 22:30	2) 27.1	6/12 1:15	2) 135.5	3/23 9:35
H_2S	.3							1) 14.3	2/28 20:55	1) 84.4	3/3 9:30
								2) 14.1	3/1 0:00	2) 84.4	3/23 9:35
Particulate	8.2	1) 154.0	11/28								
		2) 116.0	12/1								
THC											
CH_4											
NMHC											
O_3											
NO_x											
CO											
NO_2											

TABLE VI-1

TWELVE-MONTH SUMMARY (NOVEMBER 1974-OCTOBER 1975)
(Concentrations in Micrograms Per Cubic Meter)

Trailer 023

Parameter	Average	Maximum 24 Hour Value	Time	Maximum 8 Hour Value	Time	Maximum 3 Hour Value	Time	Maximum 1 Hour Value	Time	Maximum 5 Minutes Value	Time
SO_2	1.0	1) 43.0	1/1 11:00			1) 87.7	12/21 0:10	1) 97.9	12/21 1:55	1) 200.6	12/22 14:45
		2) 31.8	12/12 16:00			2) 59.2	8/20 4:00	2) 59.9	8/20 4:15	2) 127.0	1/23 15:40
H_2S	1.7							1) 71.2	7/9 0:10	1) 113.5	3/9 10:15
								2) 70.1	7/9 1:20	2) 91.3	2/22 14:35
Particulate	11.2	1) 112.0	4/25								
		2) 107.0	5/20								
THC*	965.1					1) 3256.1	1/4 6:00			1) 3256.0	1/1 0:20
						2) 2505.4	1/13 6:00			2) 3256.0	1/2 0:15
CH_4*	849.0					1) 1137.7	1/1 6:00			1) 3117.0	1/23 17:45
						2) 1029.5	9/12 6:00			2) 2253.9	6/24 10:45
NMHC*	130.8					1) 2316.0	1/4 6:00			1) 2763.2	9/17 0:25
						2) 1426.4	2/6 6:00			2) 2473.0	1/25 11:05
O_3	68.0							1) 152.2	6/26 13:05	1) 781.5	2/23 22:20
								2) 145.9	3/8 11:40	2) 455.2	3/8 11:50
NO_x	3.9							1) 121.9	1/16 1:20	1) 256.0	1/1 2:20
								2) 121.9	1/17 9:55	2) 256.0	1/10 13:00
NO	2.4							1) 114.2	1/17 9:55	1) 228.0	1/10 13:00
								2) 101.9	1/17 7:00	2) 189.0	1/1 2:20
CO*	740.9			1) 4240.6	10/8 16:55			1) 4452.1	10/9 6:35	1) 5588.9	10/5 10:25
				2) 4033.9	10/9 8:55			2) 4257.5	10/8 22:50	2) 5382.6	6/24 10:45
NO_2	1.5							1) 68.2	1/16 9:15	1) 95.0	1/16 10:15
								2) 67.6	1/16 5:40	2) 89.0	1/5 9:35

*Averages over 9 months (2/1/75 - 10/31/75).

TABLE VI-1

TWELVE-MONTH SUMMARY (NOVEMBER 1974-OCTOBER 1975)
(Concentrations in Micrograms Per Cubic Meter)

Trailer 024

Parameter	Average	Maximum 24 Hour Value	Maximum 24 Hour Time	Maximum 8 Hour Value	Maximum 8 Hour Time	Maximum 3 Hour Value	Maximum 3 Hour Time	Maximum 1 Hour Value	Maximum 1 Hour Time	Maximum 5 Minutes Value	Maximum 5 Minutes Time
SO_2	1.3	1) 28.9	4/13 12:00			1) 77.9	12/10 6:05	1) 128.5	12/10 6:20	1) 218.8	10/11 20:00
		2) 25.8	3/3 12:00			2) 53.9	5/2 3:10	2) 56.4	5/2 3:20	2) 161.5	12/10 7:10
H_2S	.4							1) 70.9	6/22 19:05	1) 148.1	6/22 17:30
								2) 56.9	5/2 1:40	2) 143.9	6/23 8:15
Particulate	7.8	1) 178.0	11/27								
		2) 162.0	11/29								
THC											
CH_4											
NMHC											
O_3											
NO_x											
NO											
CO											
NO_2											

TABLE VI-2

TEN HIGHEST ONE (1)-HOUR SO_2 AVERAGES

	Site	1	2	3	4	5	6	7	8	9	10
020	Concentration (μg/m^3)	33.9	32.8	31.3	31.0	31.0	31.0	20.8	20.6	20.6	20.4
	Date/Time	7/14	3/7	3/8	3/7	3/7	3/8	6/23	6/23	6/23	6/23
		13:10	10:05	3:05	11:10	23:25	0:45	4:45	1:20	2:40	5:50
	Wind Speed (mph)	1	10	5	10	5	1	7	4	7	7
	Wind Direction	157	186	113	189	111	107	134	107	139	134
021	Concentration (μg/m^3)	67.9	65.8	63.2	60.3	56.0	53.4	34.3	32.8	32.8	31.7
	Date/Time	6/16	6/16	6/16	6/16	6/16	1/26	5/5	11/1	3/7	5/5
		13:45	15:15	16:20	17:25	18:30	14:05	10:50	1:35	10:05	11:55
	Wind Speed (mph)	15	19	16	7	1	10	6	5	9	7
	Wind Direction	304	309	320	320	339	177	148	133	192	158
022	Concentration (μg/m^3)	27.4	27.1	26.5	26.3	26.0	20.8	18.2	18.0	17.8	17.6
	Date/Time	6/12	6/12	6/11	6/11	6/11	12/20	5/23	5/24	5/24	5/23
		0:00	1:15	21:05	19:30	16:45	1:15	20:55	2:25	3:40	14:05
	Wind Speed (mph)	7	9	0	3	6	6	3	2	1	3
	Wind Direction	123	117	71	41	282	116	80	61	97	39
023	Concentration (μg/m^3)	97.9	59.9	59.3	58.0	54.9	50.6	49.9	49.1	48.8	44.7
	Date/Time	12/21	8/20	8/20	8/20	8/20	1/1	1/1	1/1	1/1	1/1
		1:55	4:15	5:20	6:25	7:30	14:30	11:35	17:75	15:50	20:50
	Wind Speed (mph)	6	2	1	2	2	5	6	6	4	8
	Wind Direction	158	171	186	178	94	17	340	261	292	178
024	Concentration (μg/m^3)	128.5	56.4	54.3	54.1	51.7	50.8	50.8	49.5	49.1	44.7
	Date/Time	12/10	5/2	1/5	5/2	12/10	3/3	3/4	5/2	4/13	3/3
		6:20	3:20	11:50	4:25	7:25	22:50	0:05	5:30	17:35	20:35
	Wind Speed (mph)	0	1	11	2	0	4	4	2	3	1
	Wind Direction	4	97	173	91	54	62	55	111	306	50

TABLE VI-3

TEN HIGHEST TWENTY-FOUR HOUR PARTICULATE AVERAGES

Site		1	2	3	4	5	6	7	8	9	10
020	Concentration ($\mu g/m^3$)	113.0	89.0	70.0	69.0	62.0	59.0	49.0	48.0	47.0	46.0
	Date	11/29	4/25	5/20	5/4	10/12	10/7	8/29	6/18	7/12	4/26
021	Concentration ($\mu g/m^3$)	125.0	97.0	87.0	81.0	77.0	75.0	71.0	64.0	62.0	51.0
	Date	4/25	5/20	10/7	9/1	5/4	6/19	11/21	4/26	10/12	6/25
022	Concentration ($\mu g/m^3$)	154.0	116.0	82.0	80.0	70.0	70.0	69.0	68.0	60.0	55.0
	Date	11/28	12/1	4/25	5/20	10/7	10/12	7/24	5/4	9/24	6/18
023	Concentration ($\mu g/m^3$)	171.0	112.0	107.0	81.0	67.0	65.0	62.0	61.0	57.0	56.0
	Date	3/22	4/25	5/20	10/7	5/16	6/17	6/18	10/12	4/6	6/19
024	Concentration ($\mu g/m^3$)	178.0	162.0	86.0	80.0	80.0	75.0	69.0	56.0	52.0	46.0
	Date	11/27	11/29	5/20	4/25	10/12	10/6	5/4	4/26	6/18	6/19

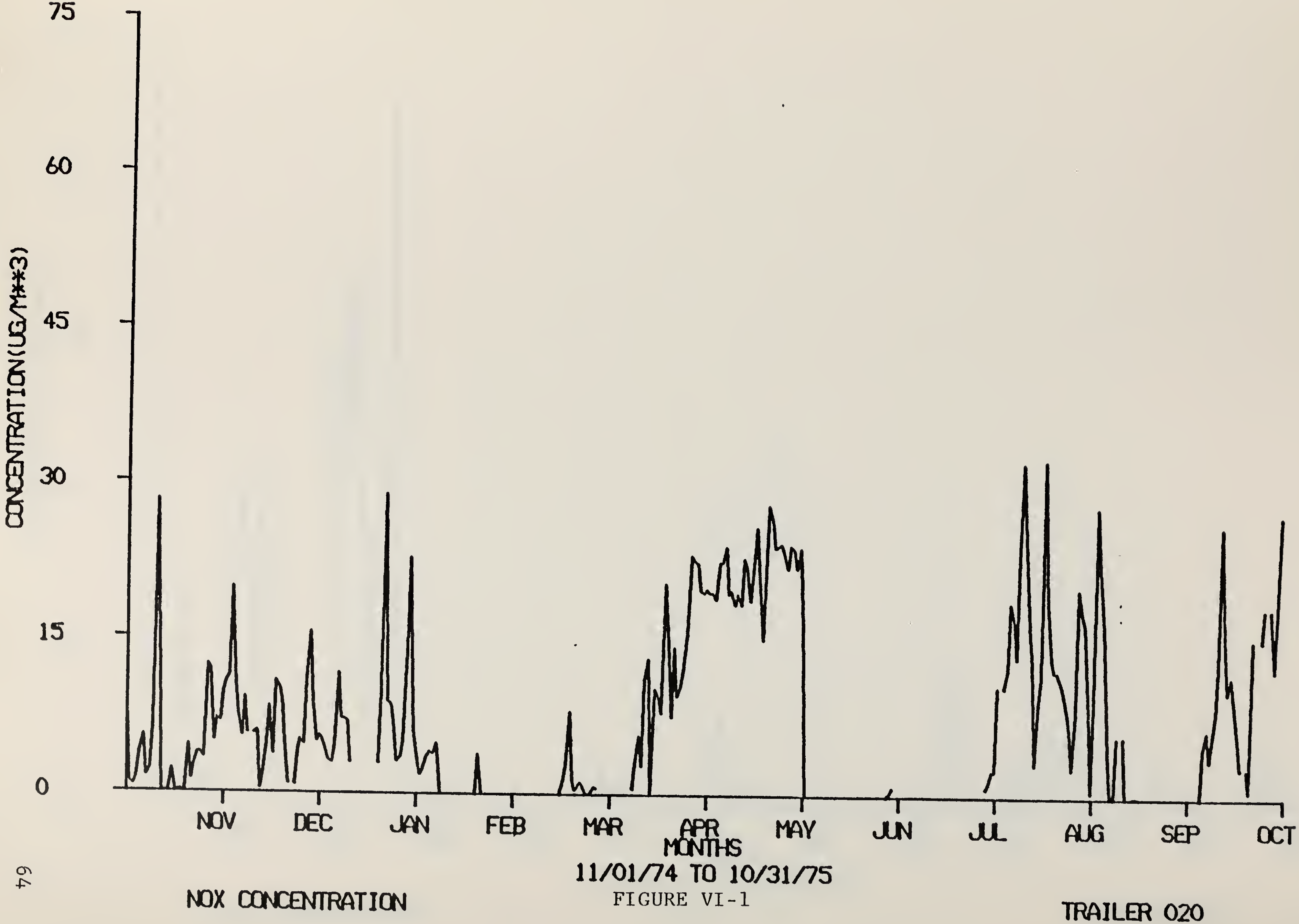

75
60
45
30
15
0
CONCENTRATION(UG/M**3)
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
NOX CONCENTRATION
TRAILER 020

FIGURE VI-1

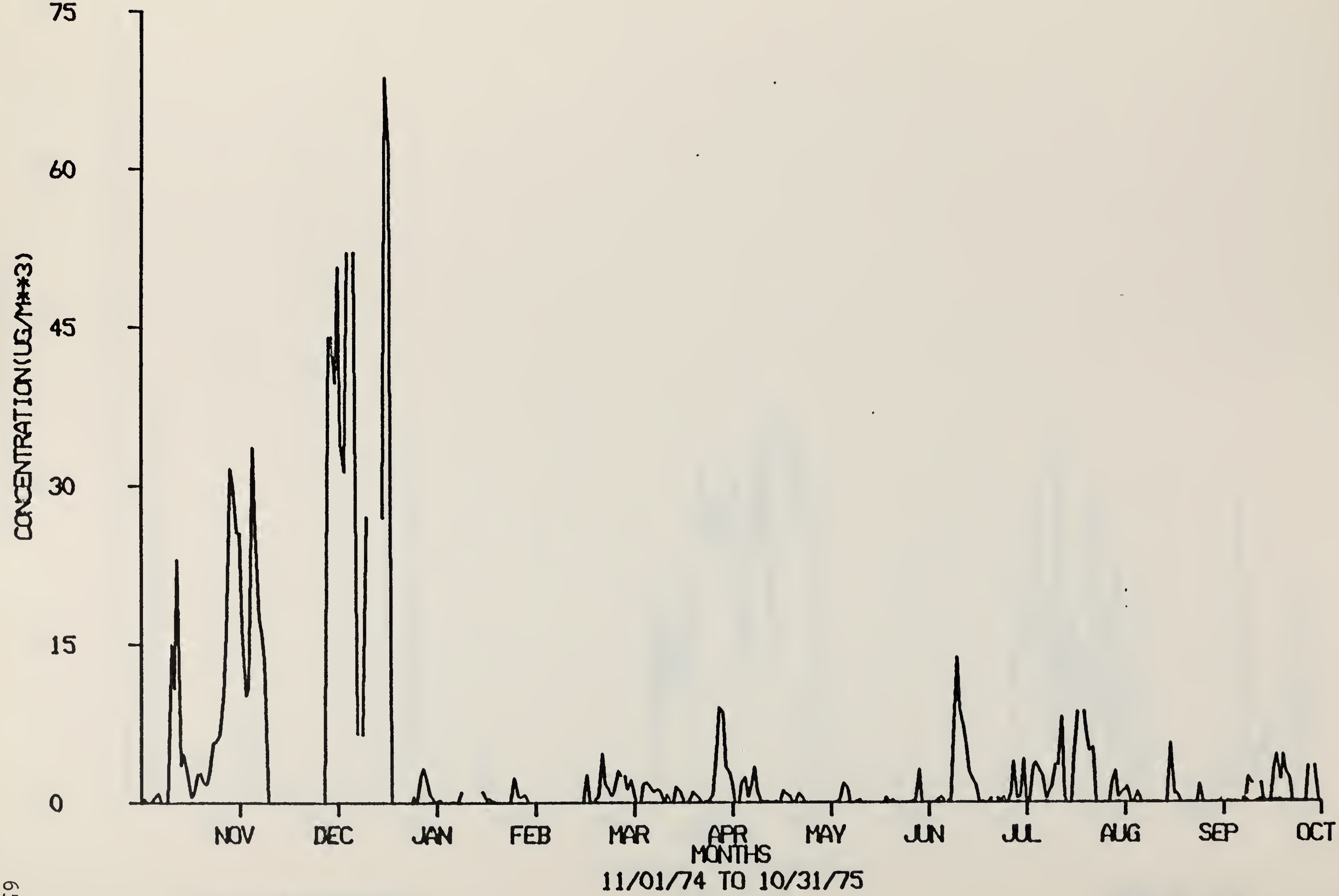
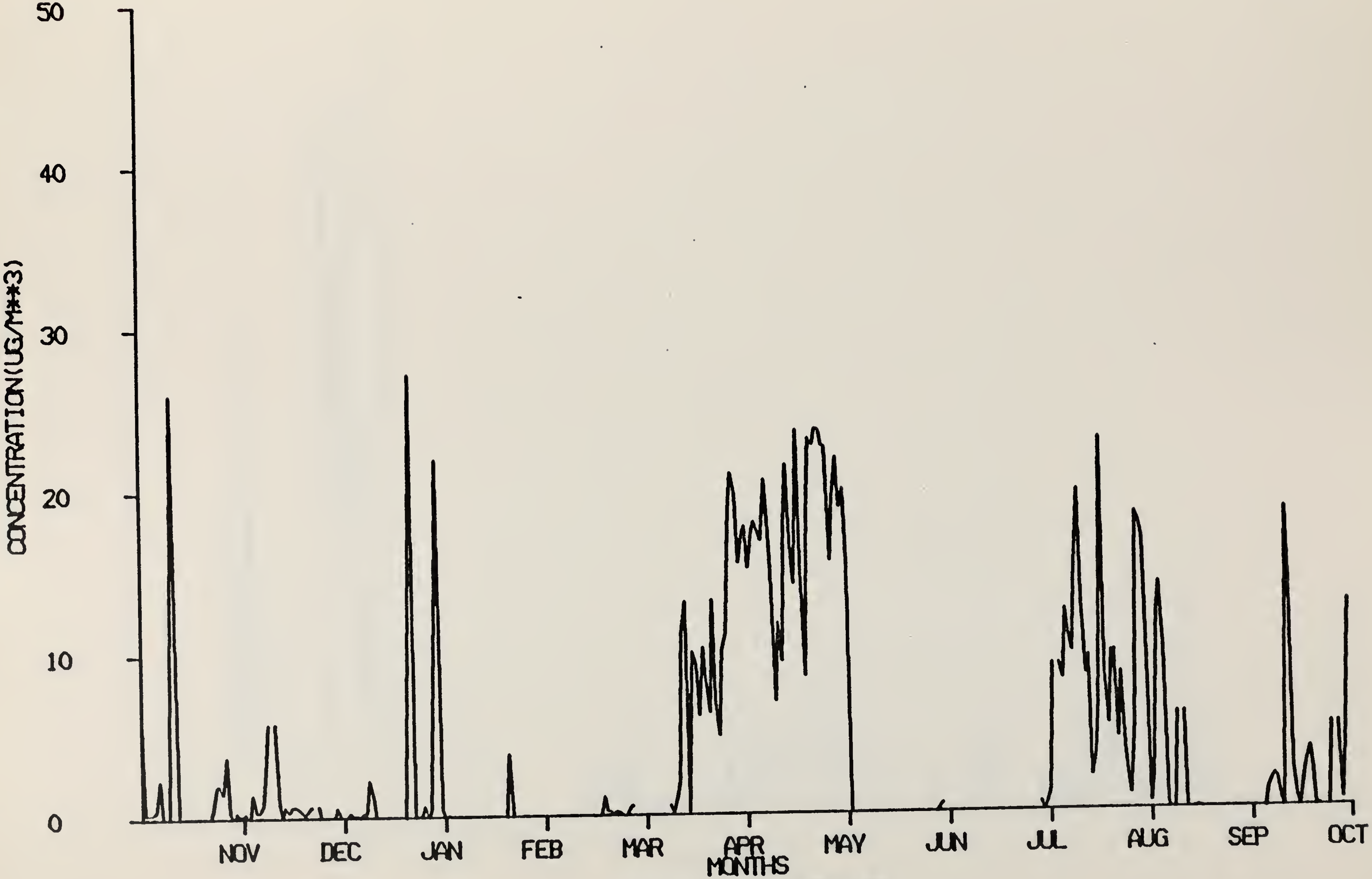

75
60
45
30
15
0
CONCENTRATION(UG/M**3)
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
NOX CONCENTRATION
TRAILER 023

FIGURE VI-2



11/01/74 TO 10/31/75

NO CONCENTRATION

TRAILER 020

FIGURE VI-3

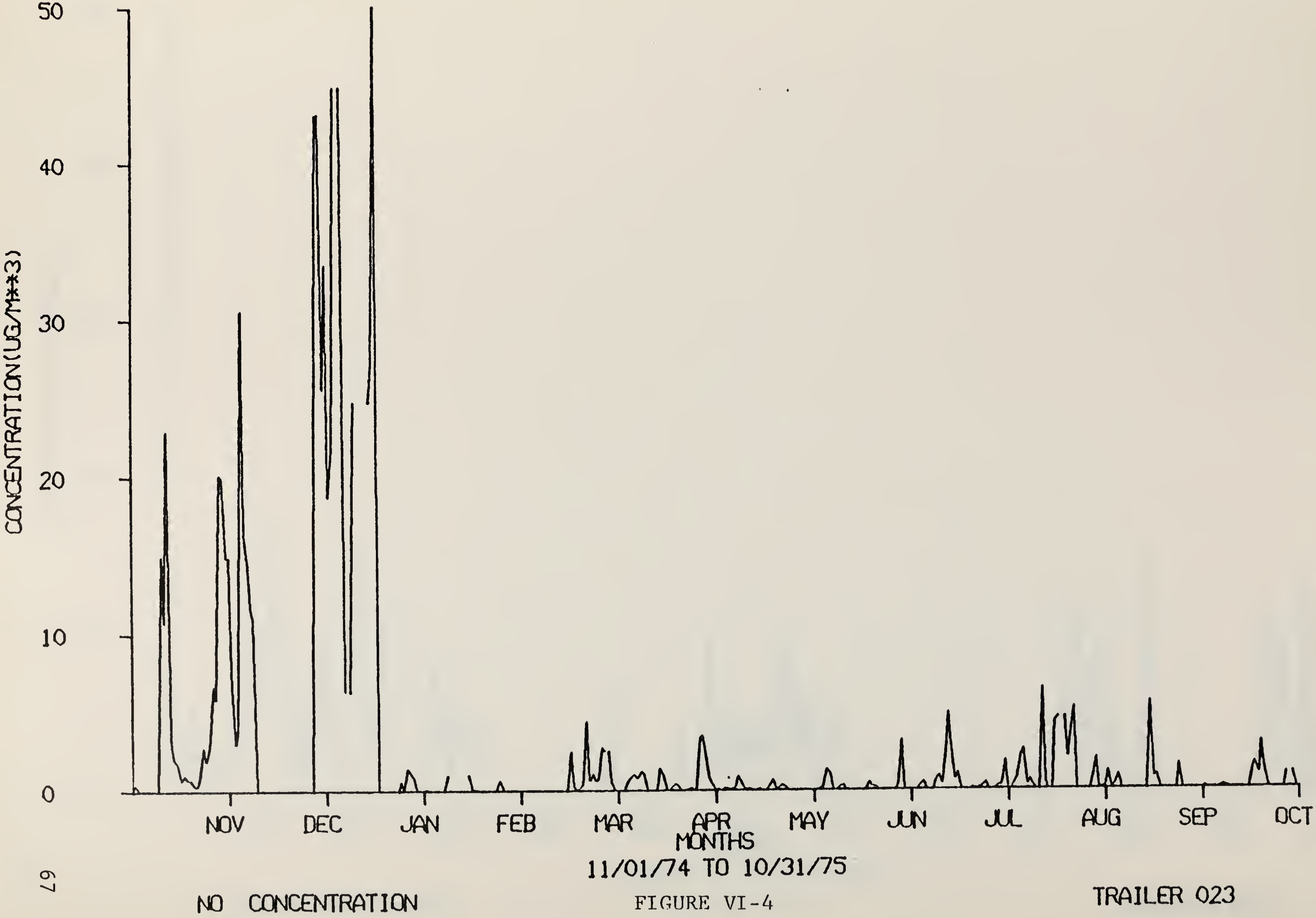
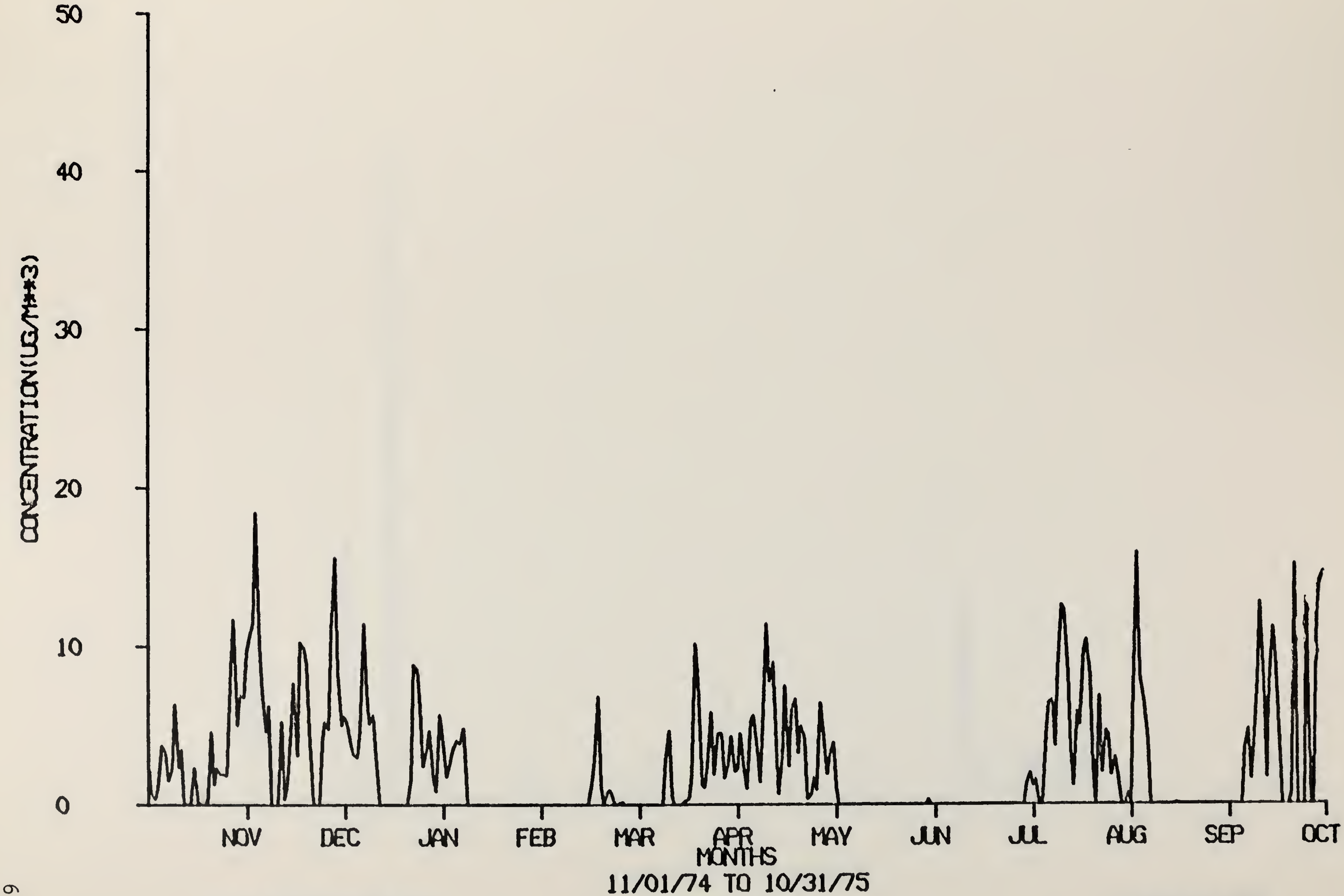

CONCENTRATION(UG/M**3)
50
40
30
20
10
0
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
NO CONCENTRATION
TRAILER 023

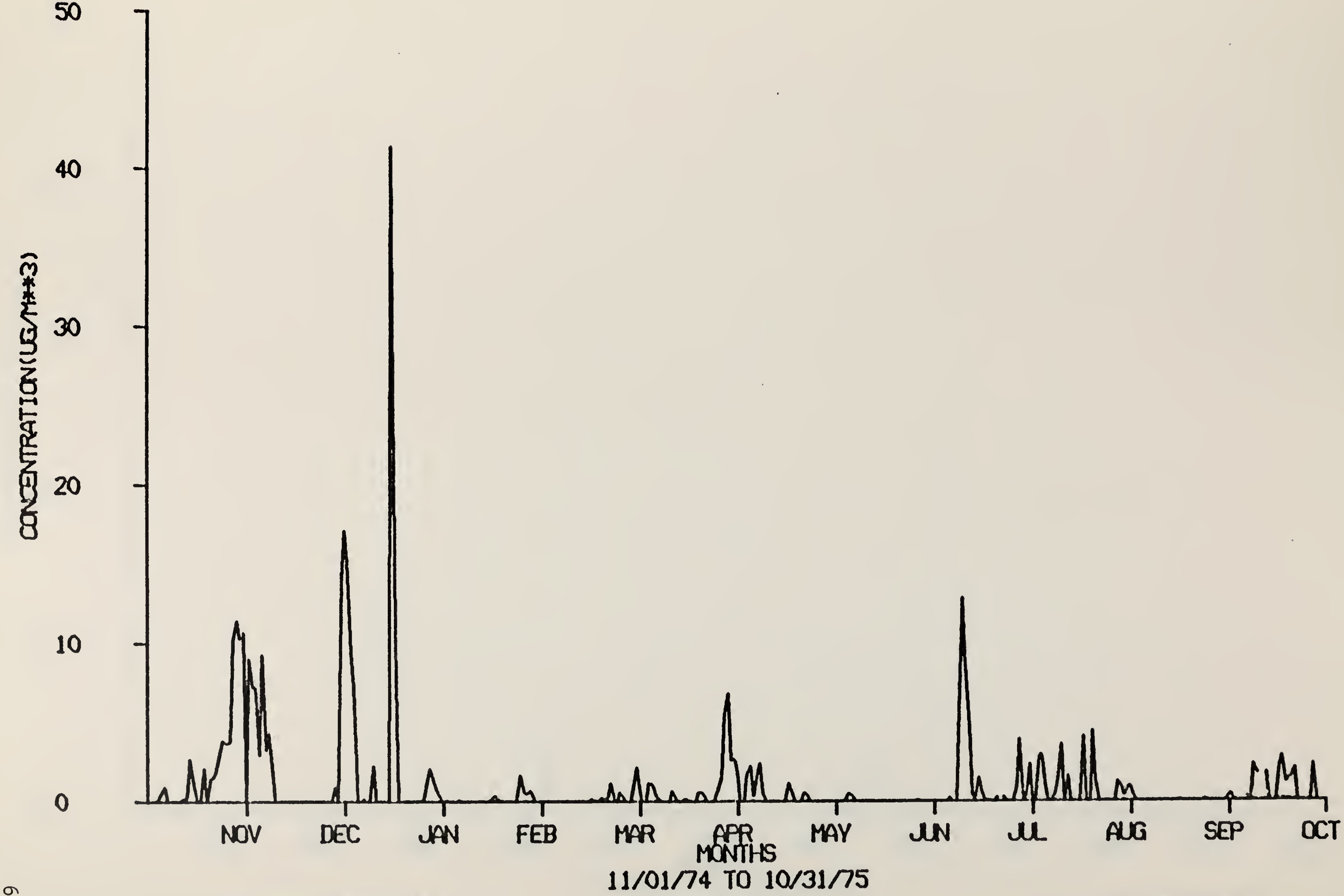
FIGURE VI-4



NO2 CONCENTRATION

FIGURE VI-5

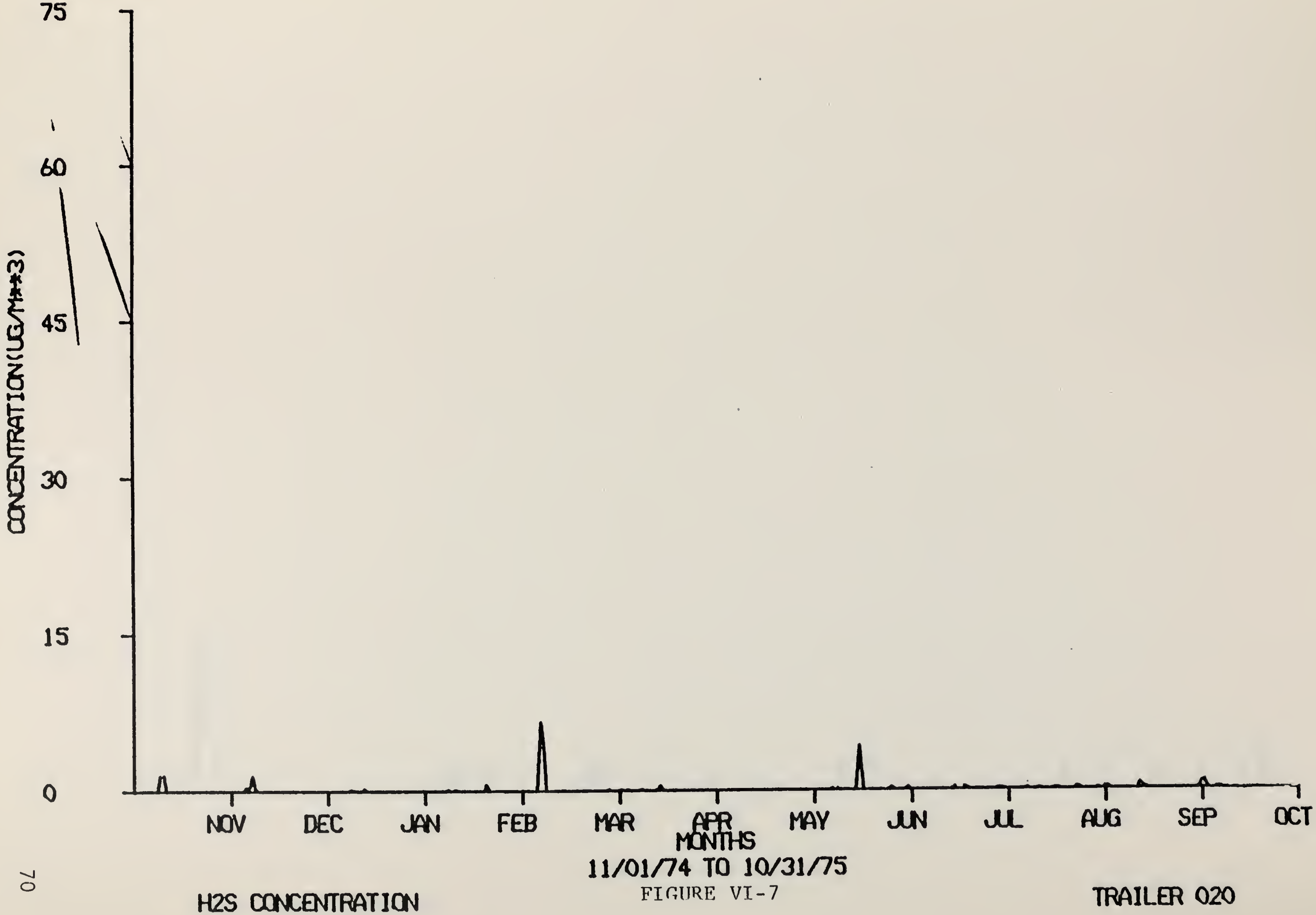
TRAILER 020



NO2 CONCENTRATION

FIGURE VI-6

TRAILER 023


75
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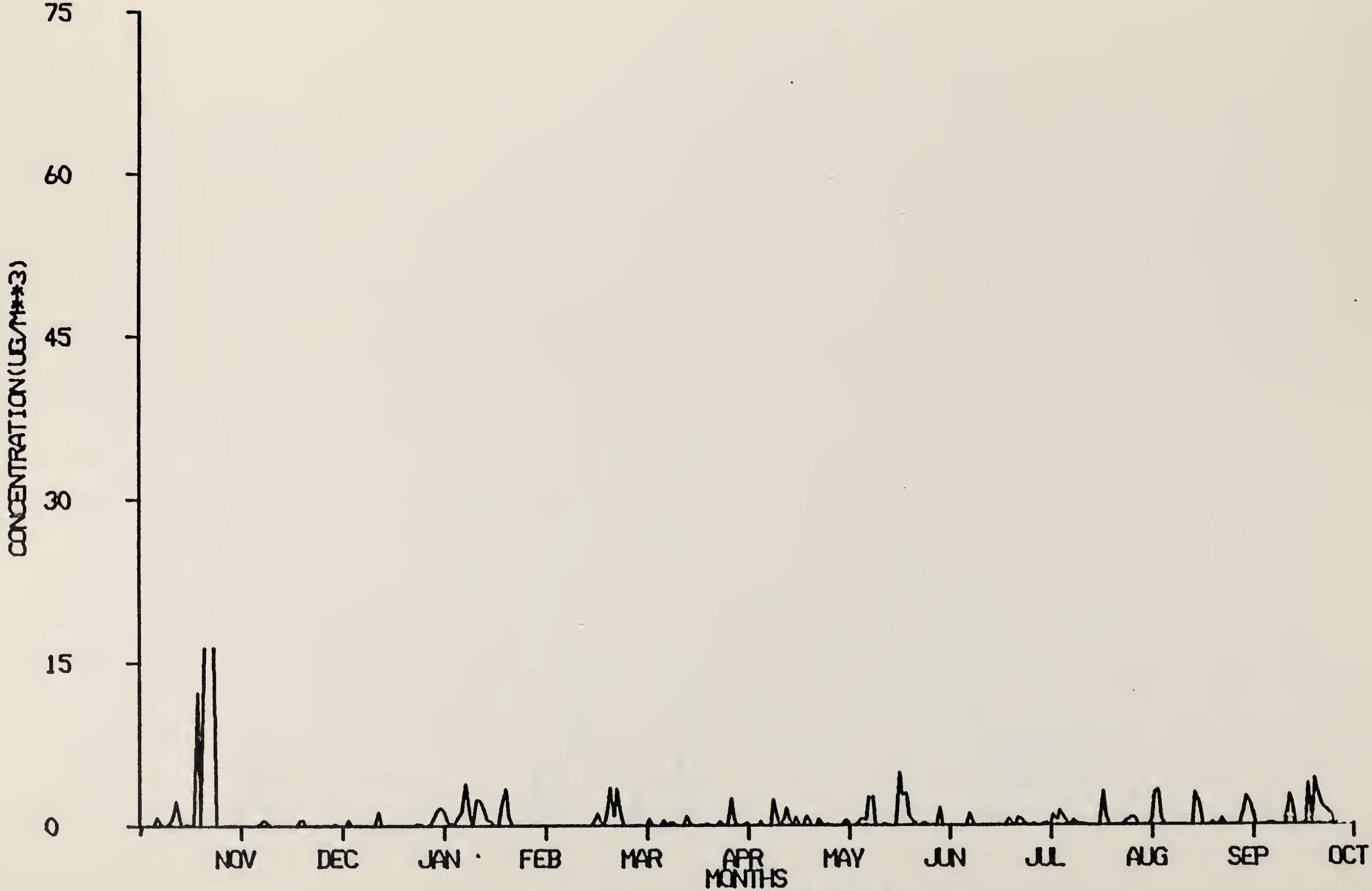
CONCENTRATION(UG/M**3)
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
H2S CONCENTRATION
TRAILER 020

FIGURE VI-7

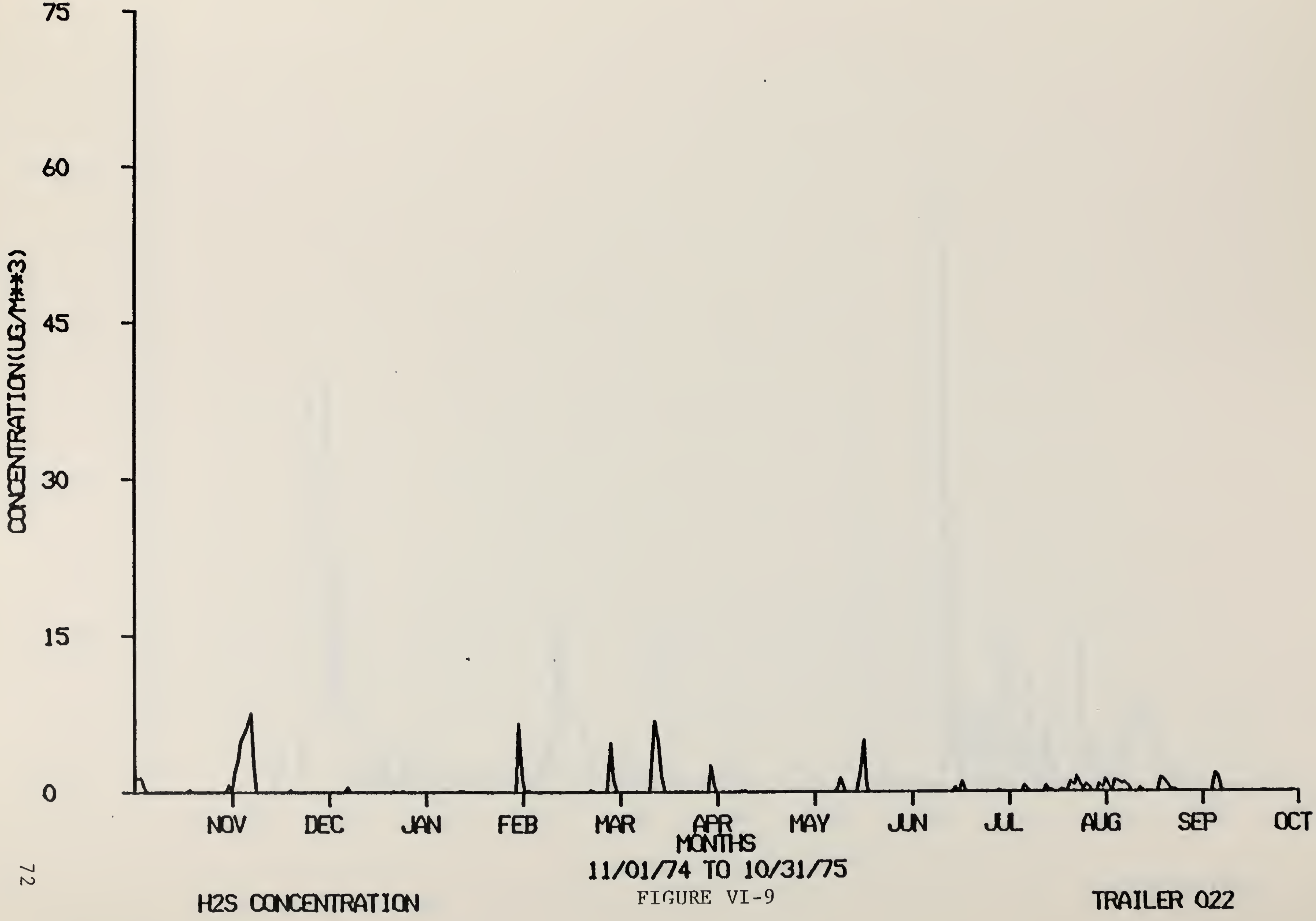


11/01/74 TO 10/31/75

H2S CONCENTRATION

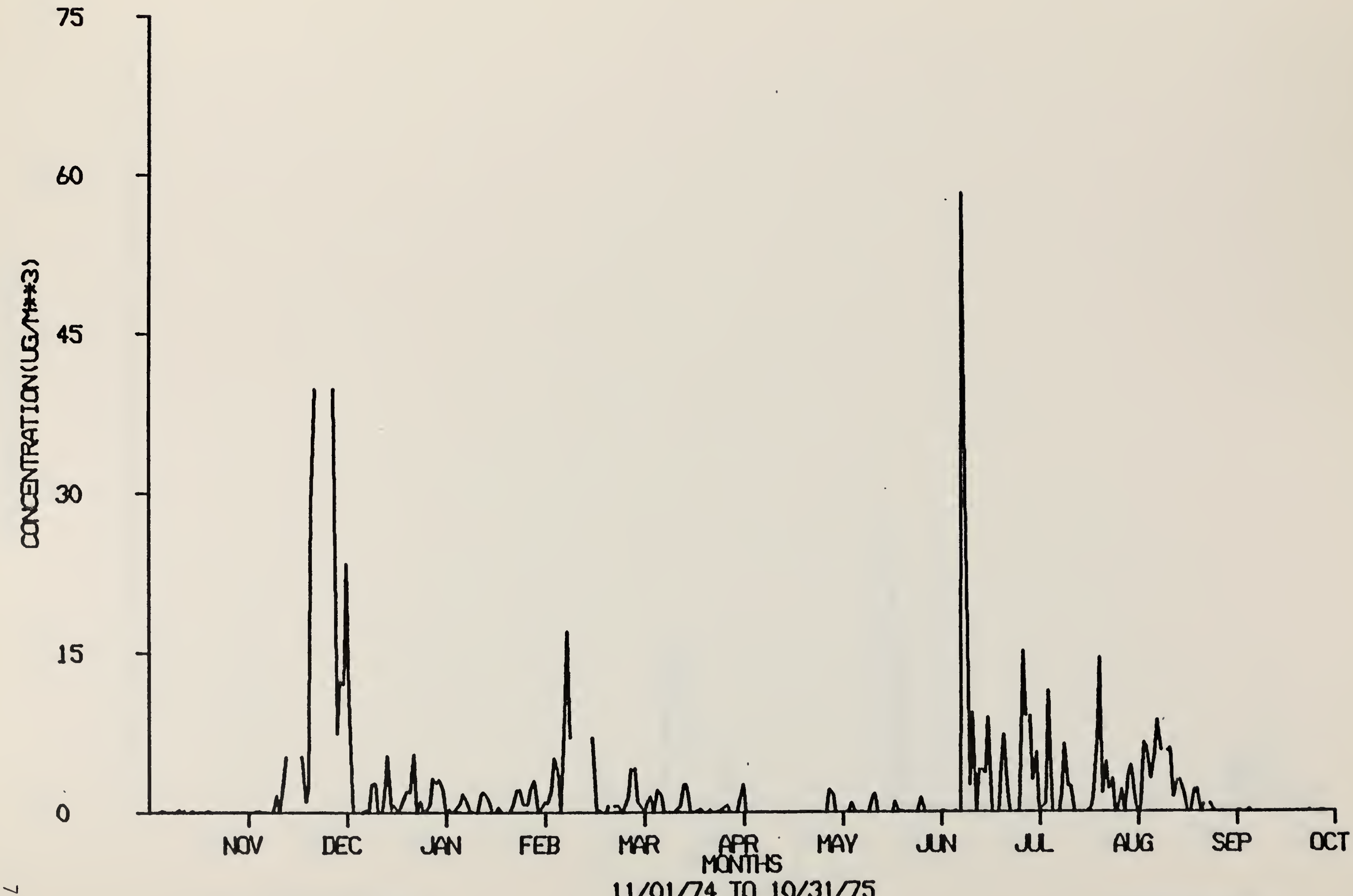
FIGURE VI-8

TRAILER 021



75
60
45
30
15
0
CONCENTRATION(UG/M**3)
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
H2S CONCENTRATION
TRAILER 022

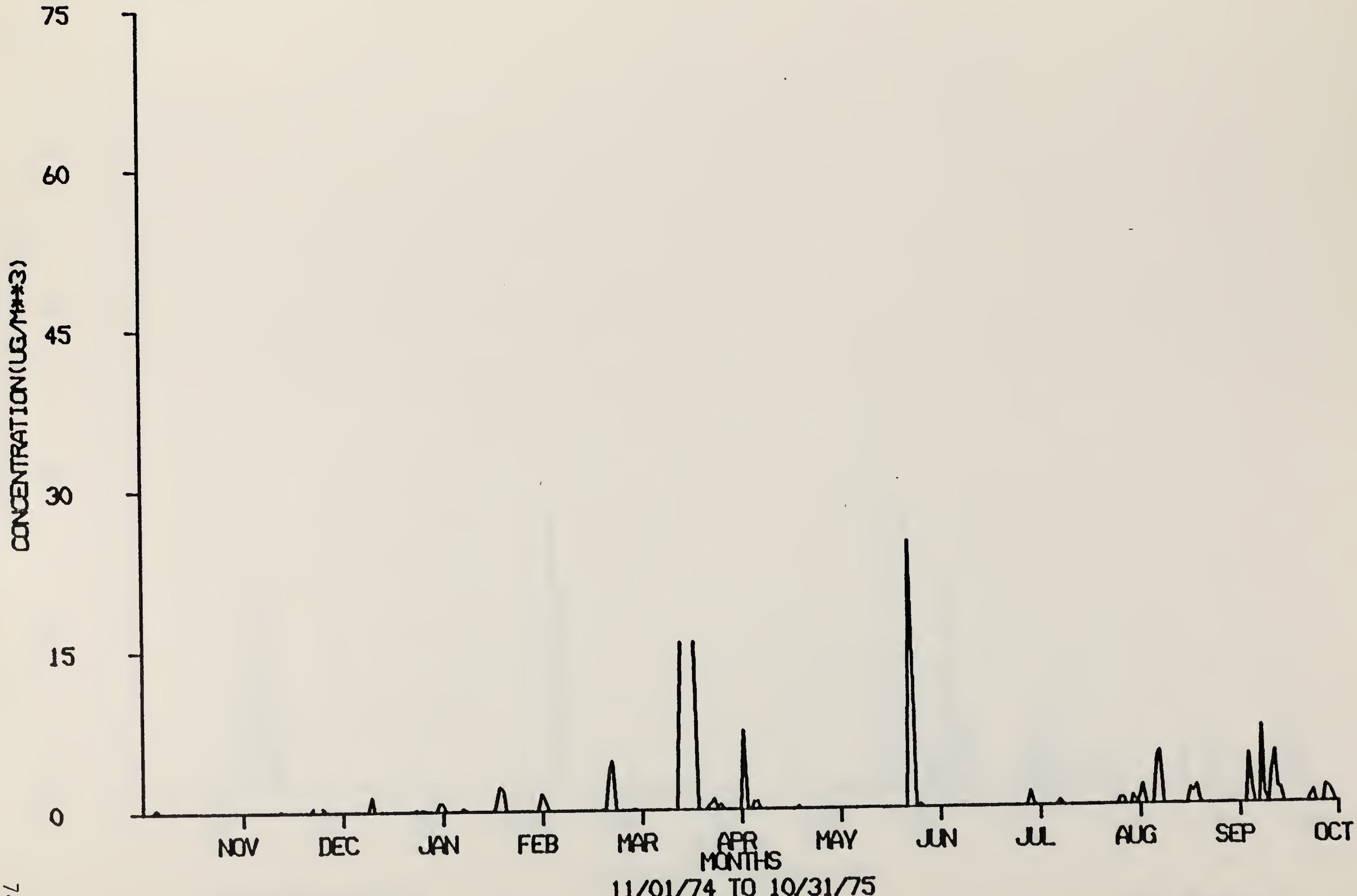
FIGURE VI-9



H2S CONCENTRATION

FIGURE VI-10

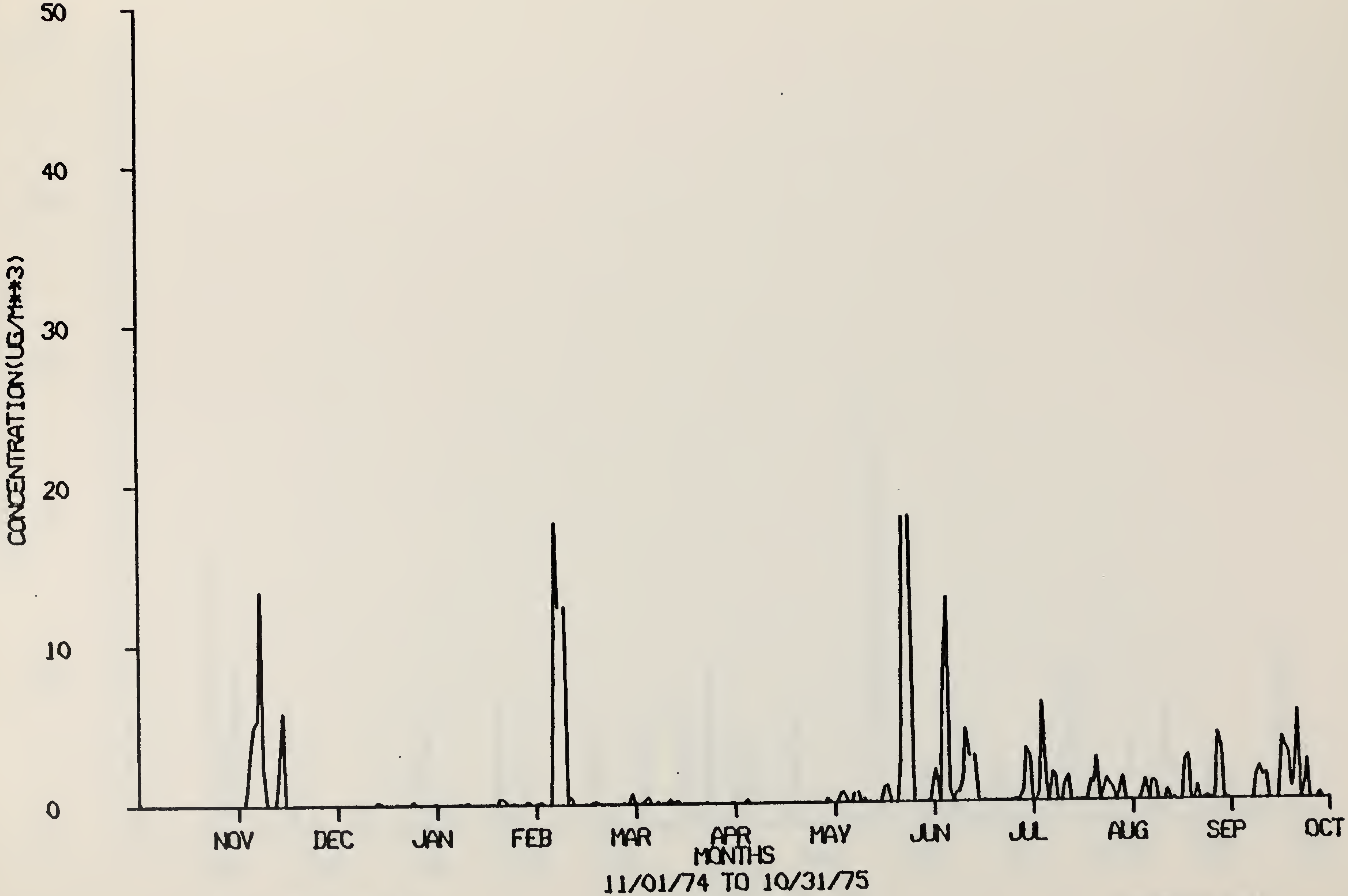
TRAILER 023



H2S CONCENTRATION

FIGURE VI-11

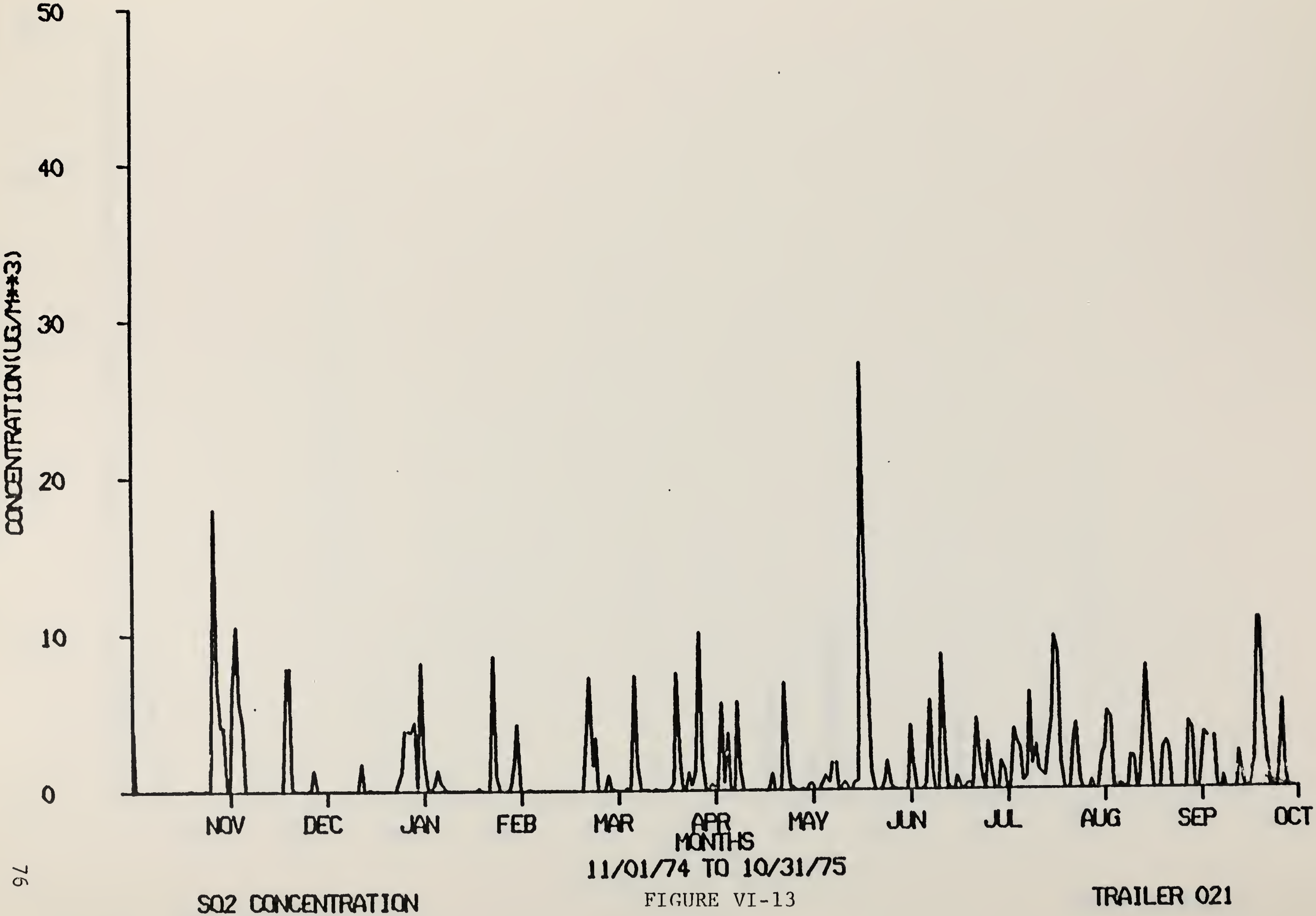
TRAILER 024



SO2 CONCENTRATION

FIGURE VI-12

TRAILER 020


50
40
30
20
10
0
CONCENTRATION(UG/M**3)
NOV
DEC
JAN
FEB
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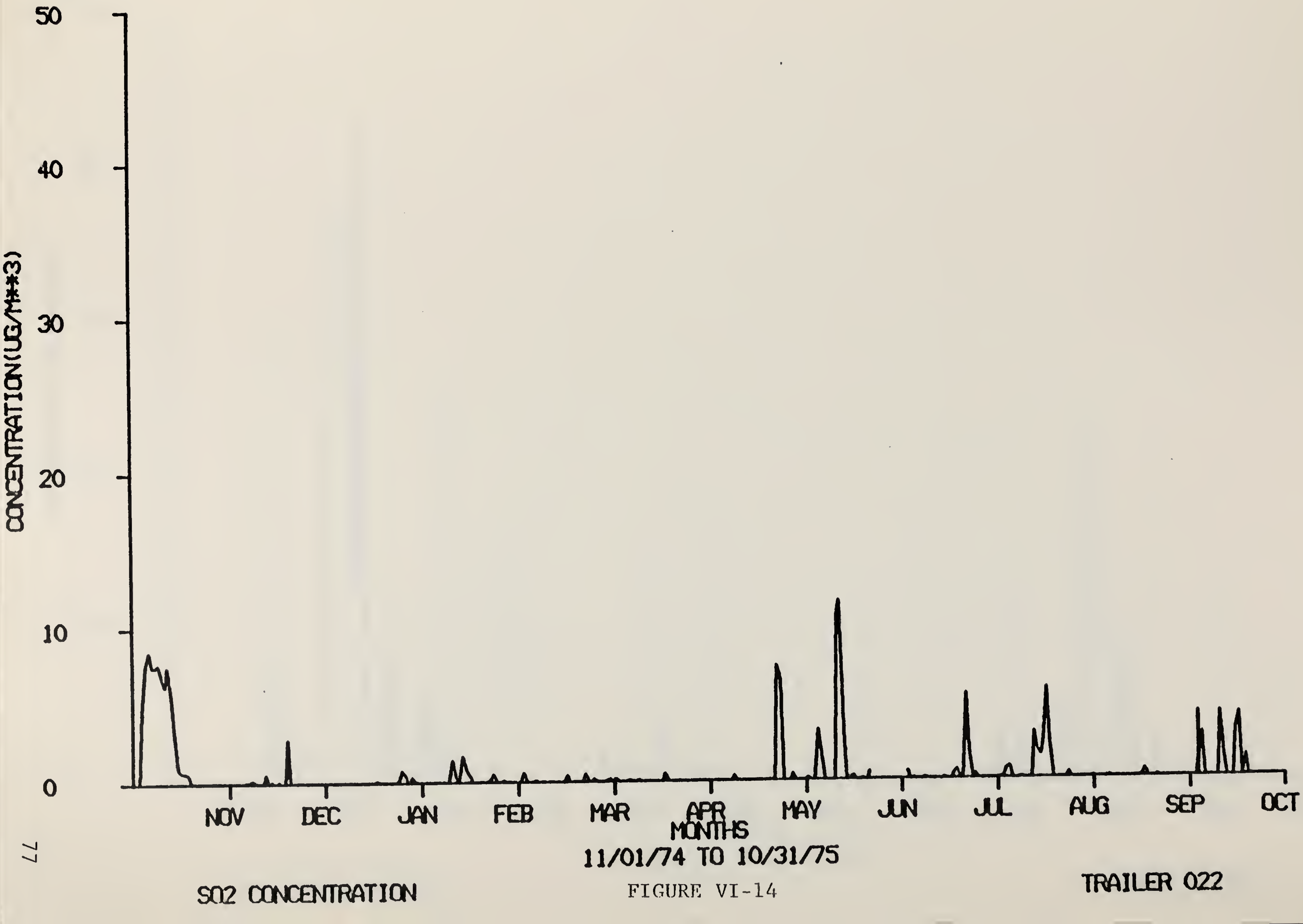
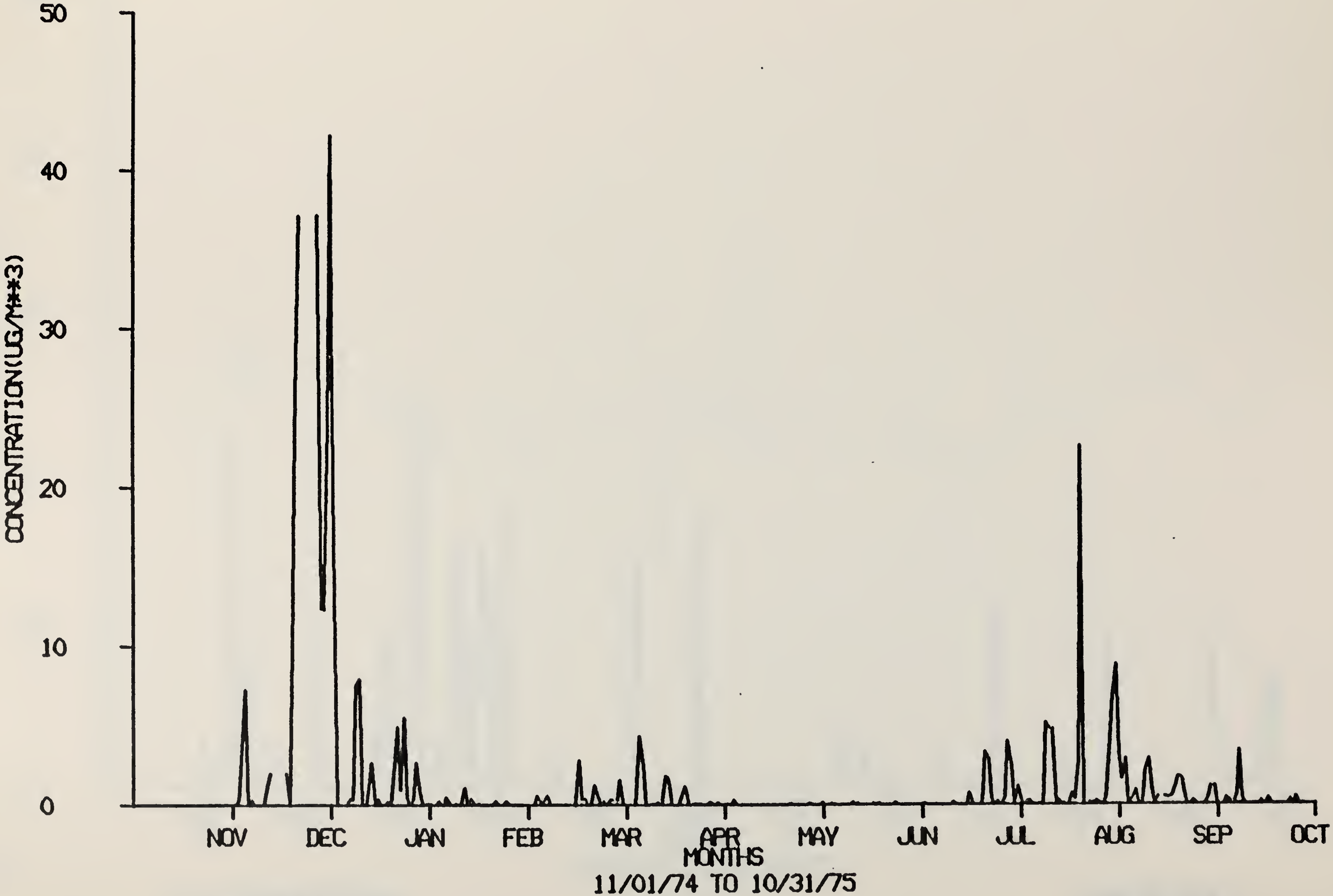
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
SO2 CONCENTRATION
TRAILER 021

FIGURE VI-13



CONCENTRATION(UG/M**3)
50
40
30
20
10
0
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
SO2 CONCENTRATION
TRAILER 022

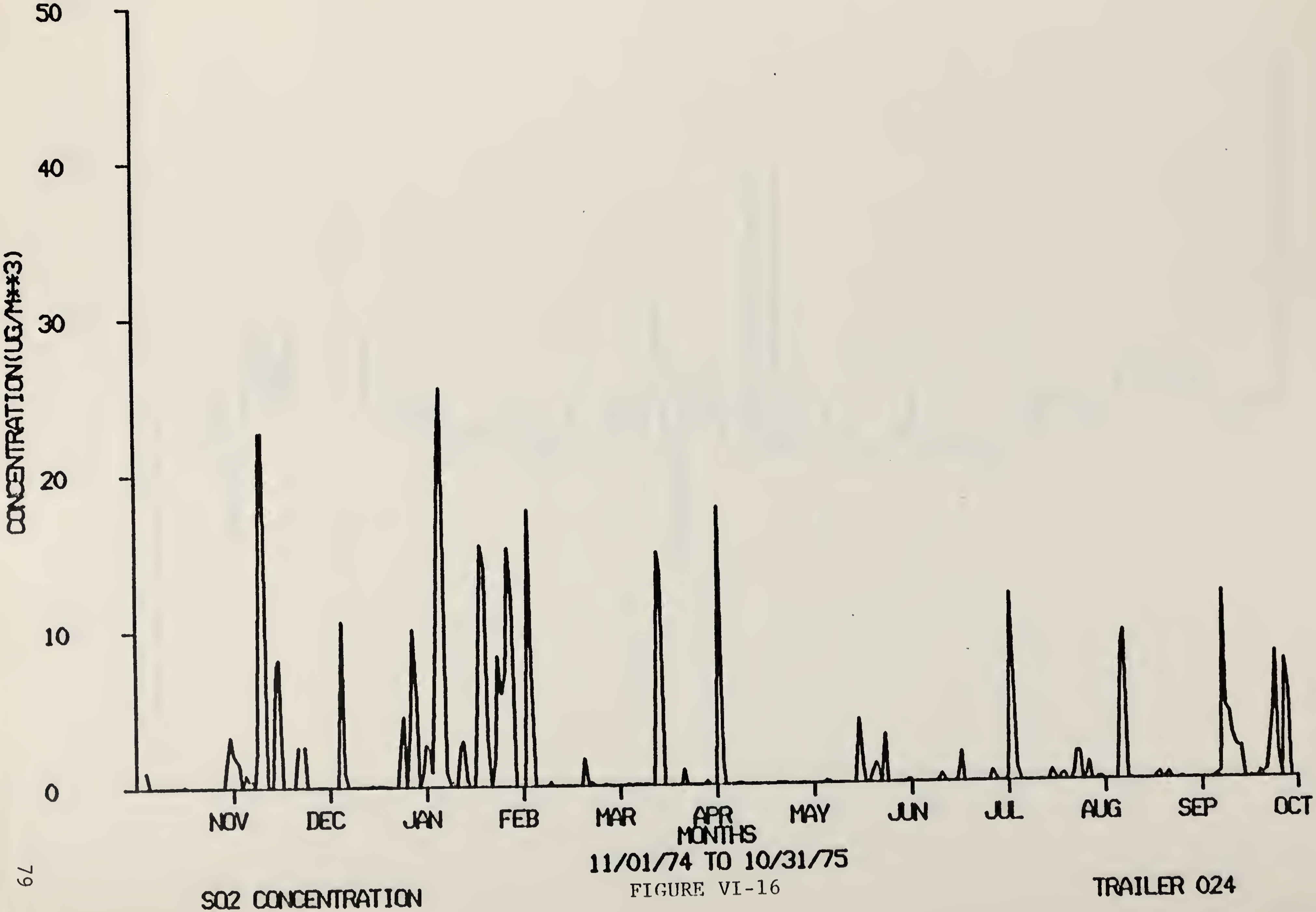
FIGURE VI-14



SO2 CONCENTRATION

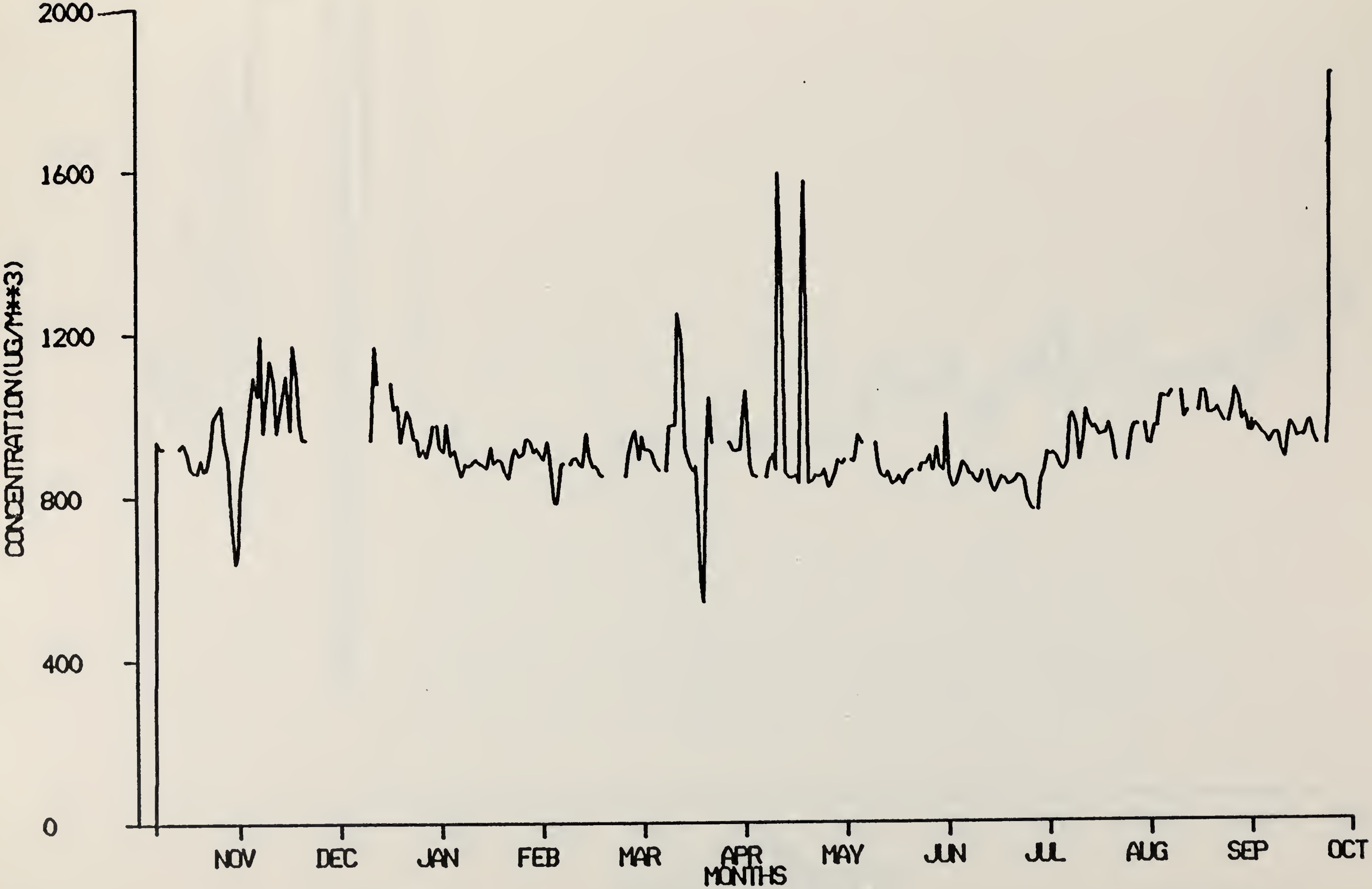
FIGURE VI-15

TRAILER 023



CONCENTRATION(UG/M**3)
50
40
30
20
10
0
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
SO2 CONCENTRATION
TRAILER 024

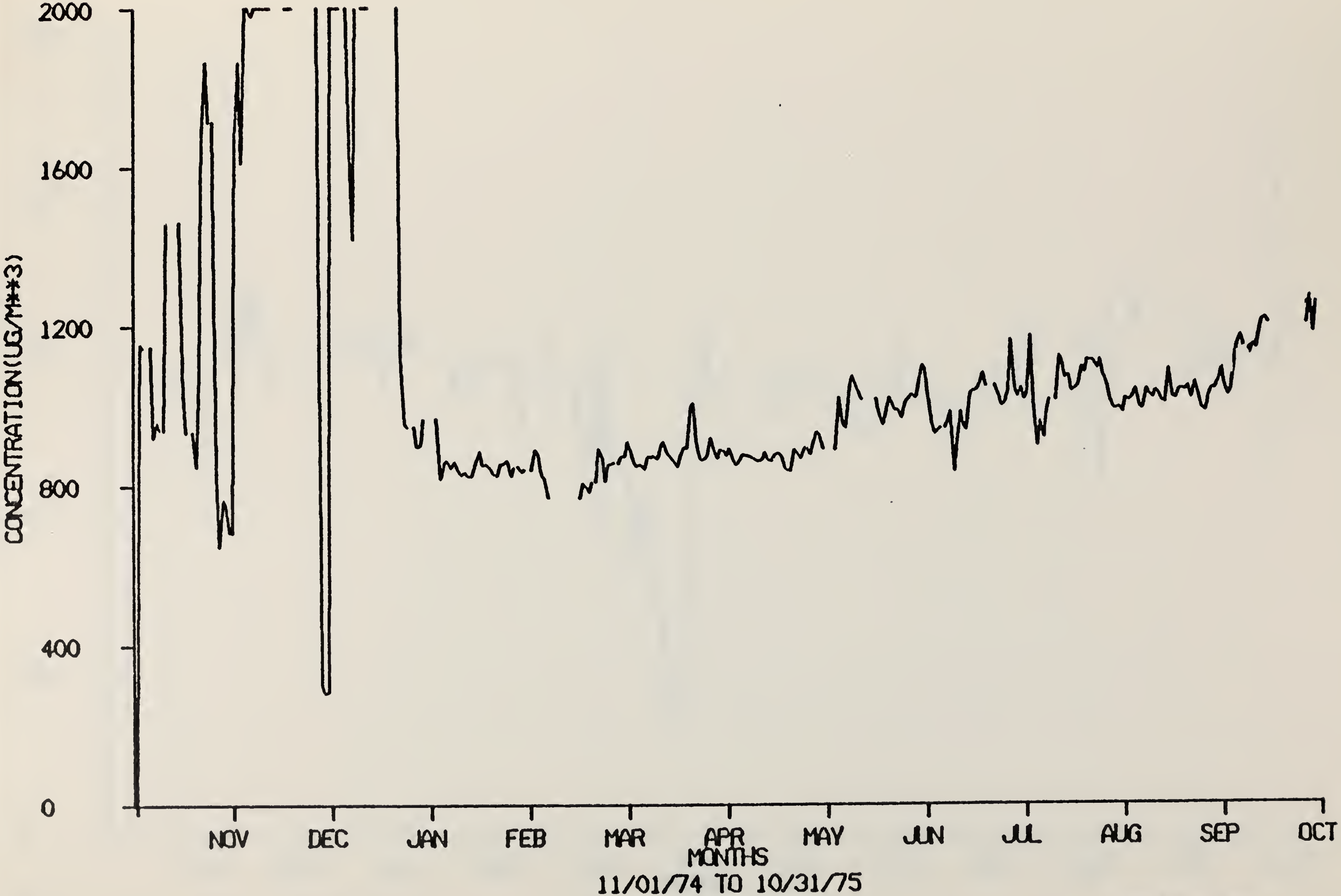
FIGURE VI-16



THC CONCENTRATION

FIGURE VI-17

TRAILER 020



THC CONCENTRATION

FIGURE VI-18

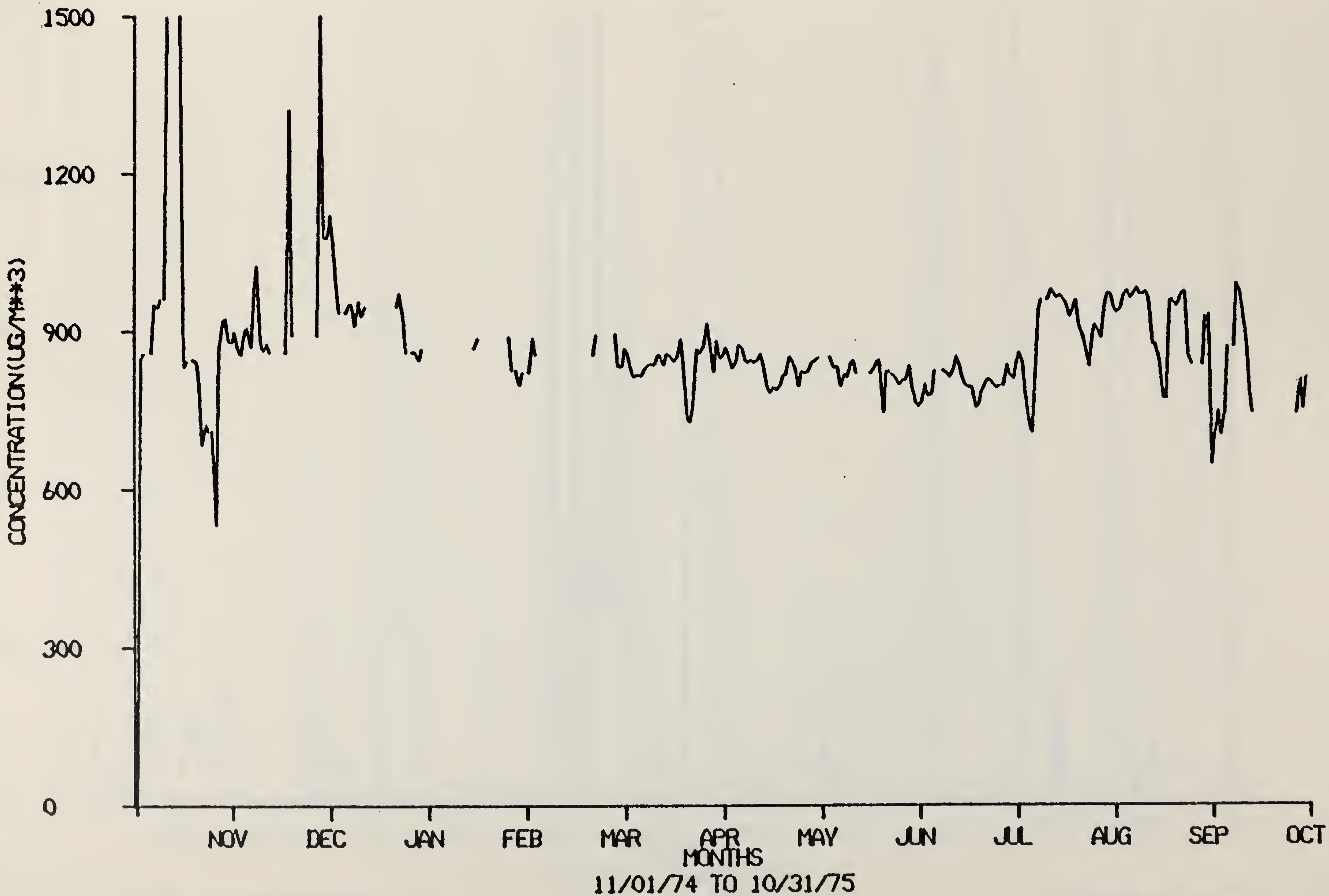
TRAILER 023

11/01/74 TO 10/31/75

CH4 CONCENTRATION

FIGURE VI-19

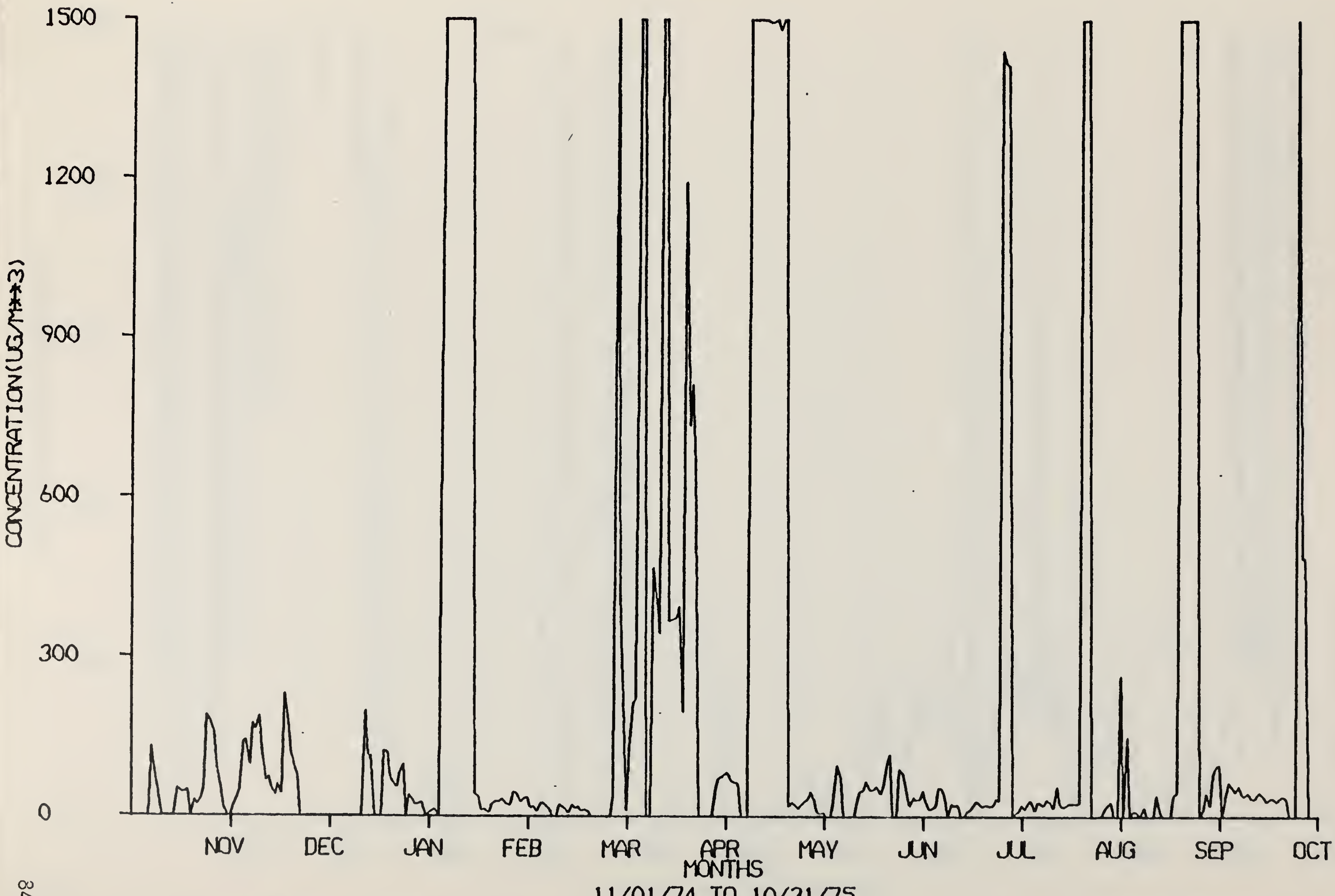
TRAILER 020



CH_4 CONCENTRATION

FIGURE VI-20

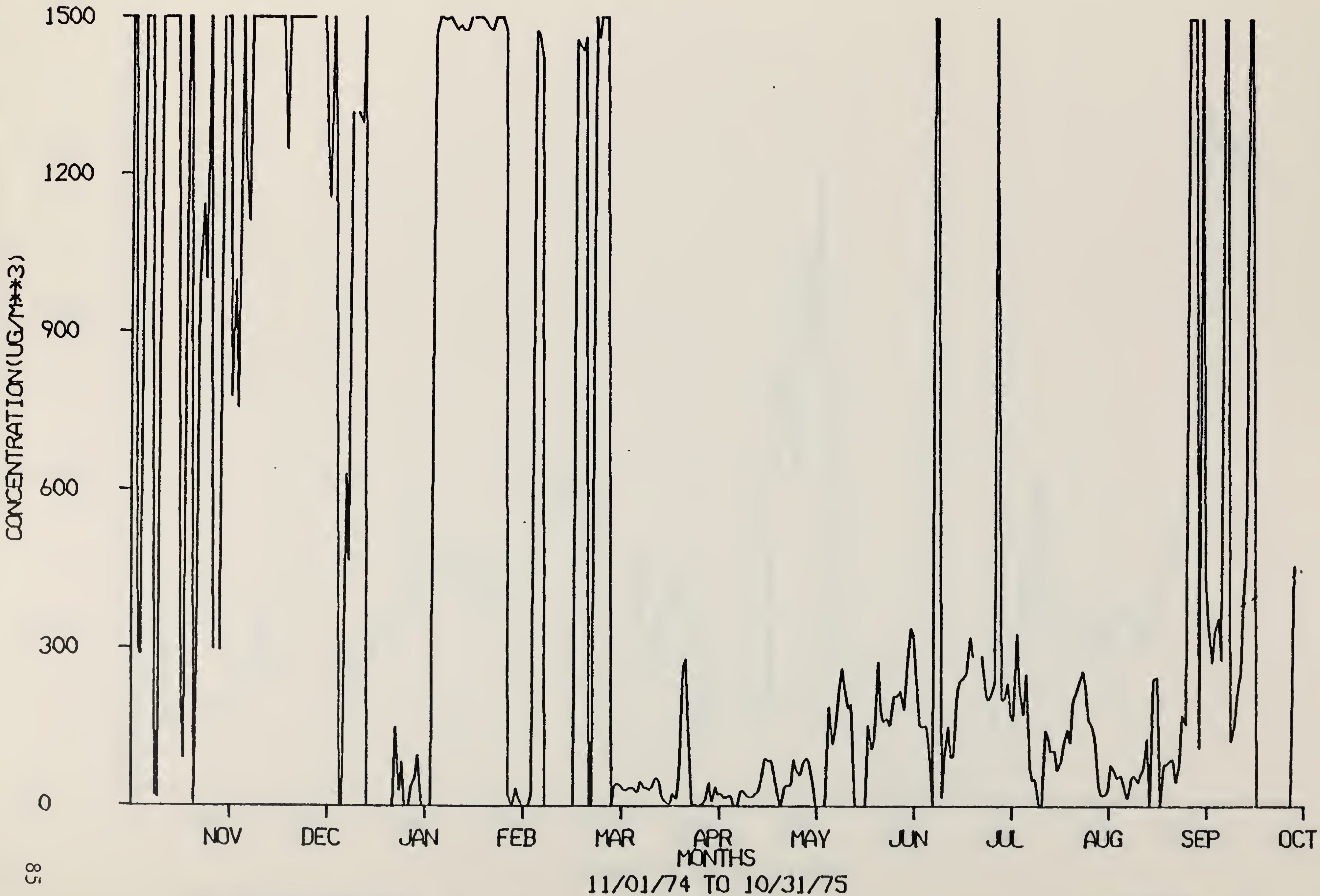
TRAILER 023



NMHC CONCENTRATION

FIGURE VI-21

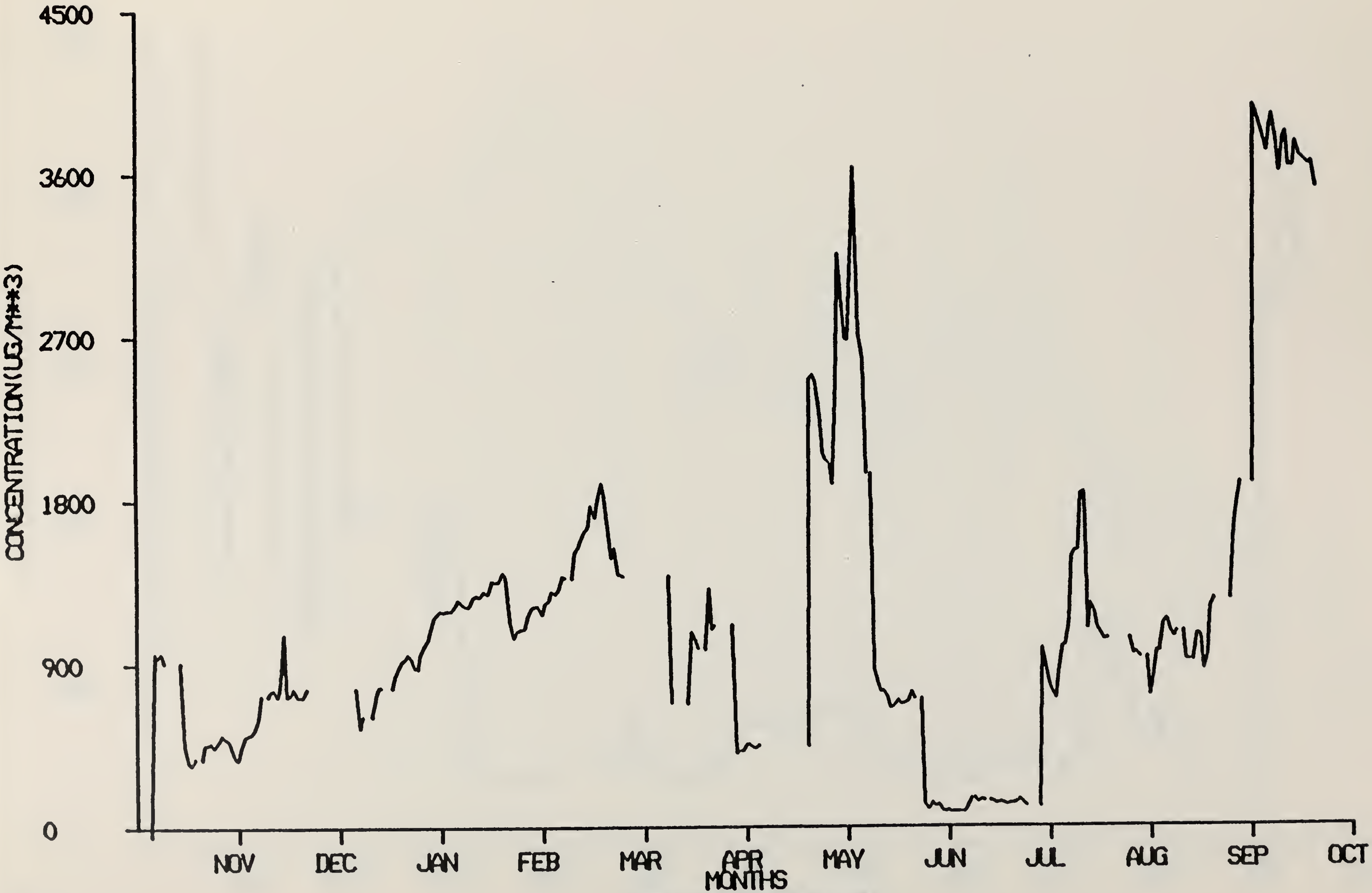
TRAILER 020



NMHC CONCENTRATION

FIGURE VI-22

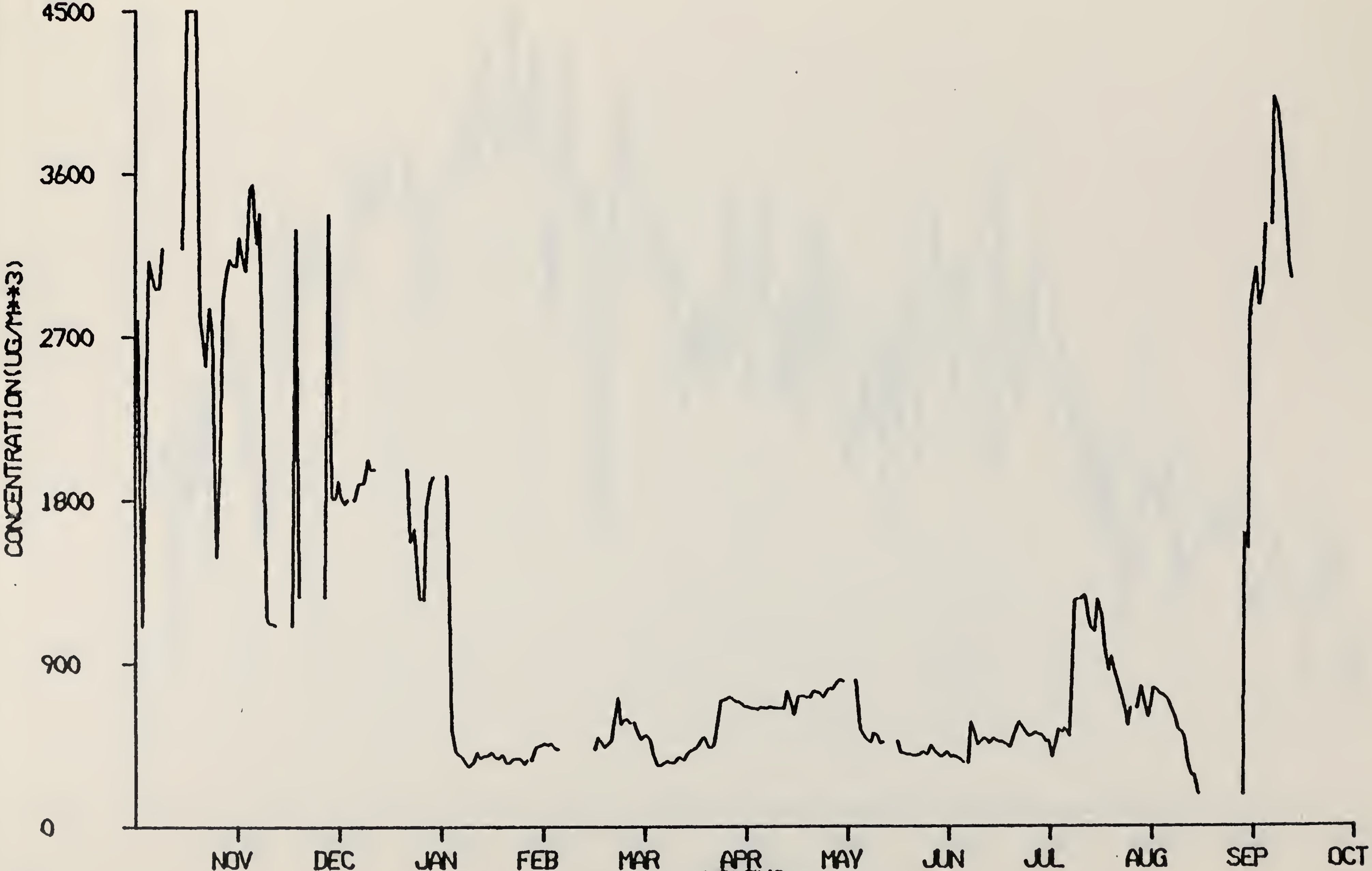
TRAILER 023



CO CONCENTRATION

FIGURE VI-23

TRAILER 020



11/01/74 TO 10/31/75

CO CONCENTRATION

FIGURE VI-24

TRAILER 023

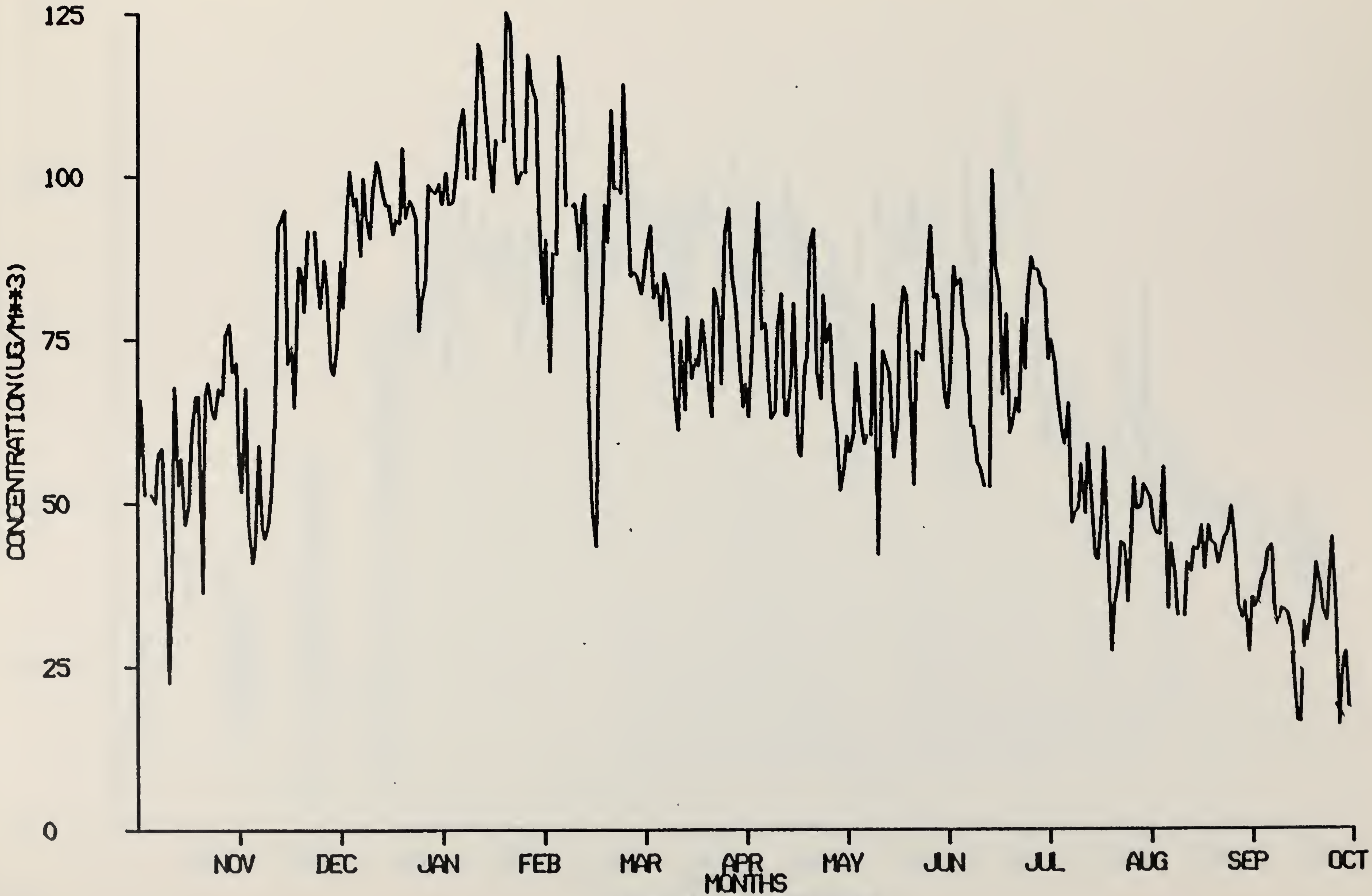

CONCENTRATION(UG/M**3)
125
100
75
50
25
0
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
03 CONCENTRATION
TRAILER 020

FIGURE VI-25

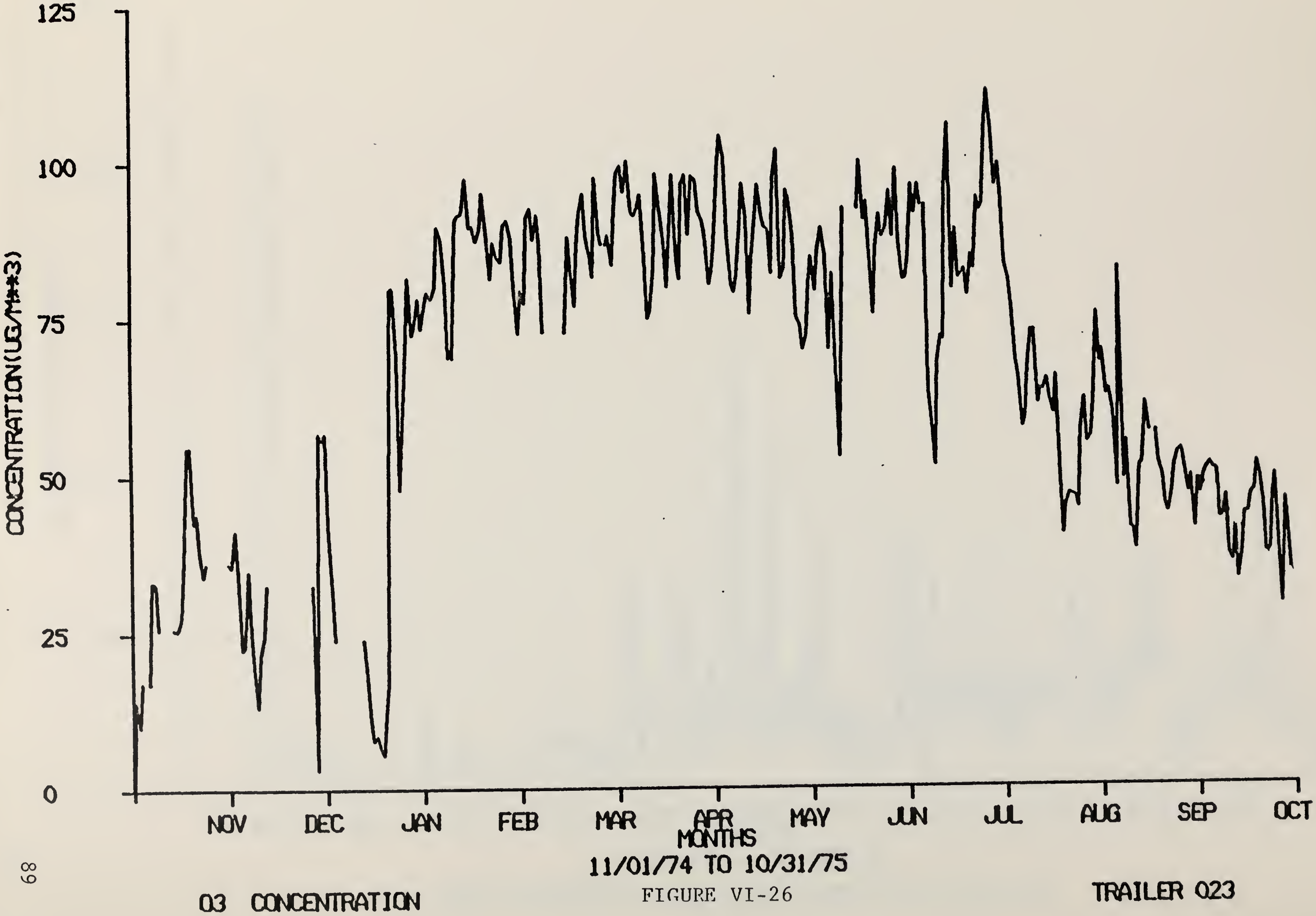
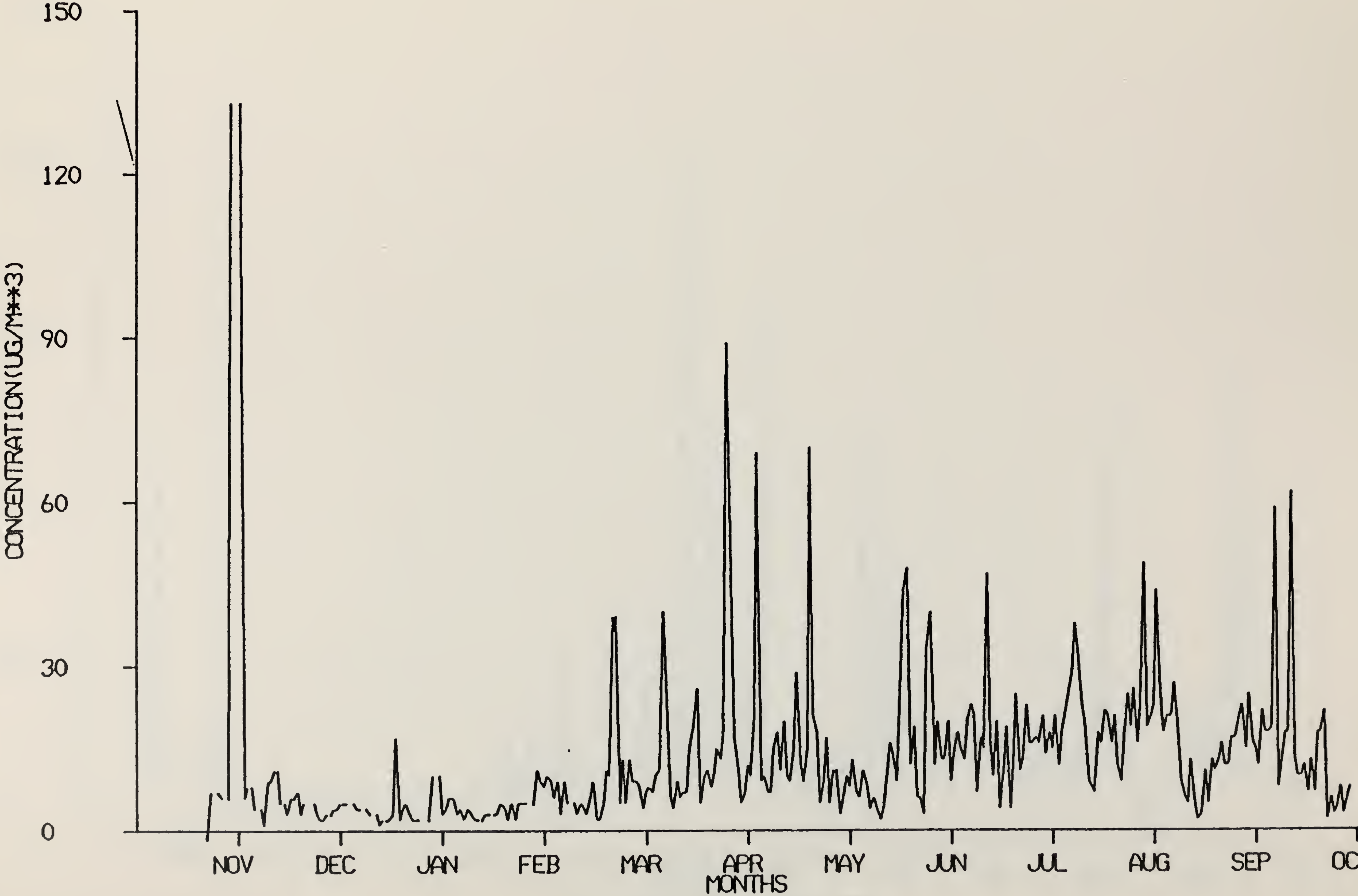

125
100
75
50
25
0
CONCENTRATION(UG/M**3)
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
11/01/74 TO 10/31/75
O3 CONCENTRATION
TRAILER O23

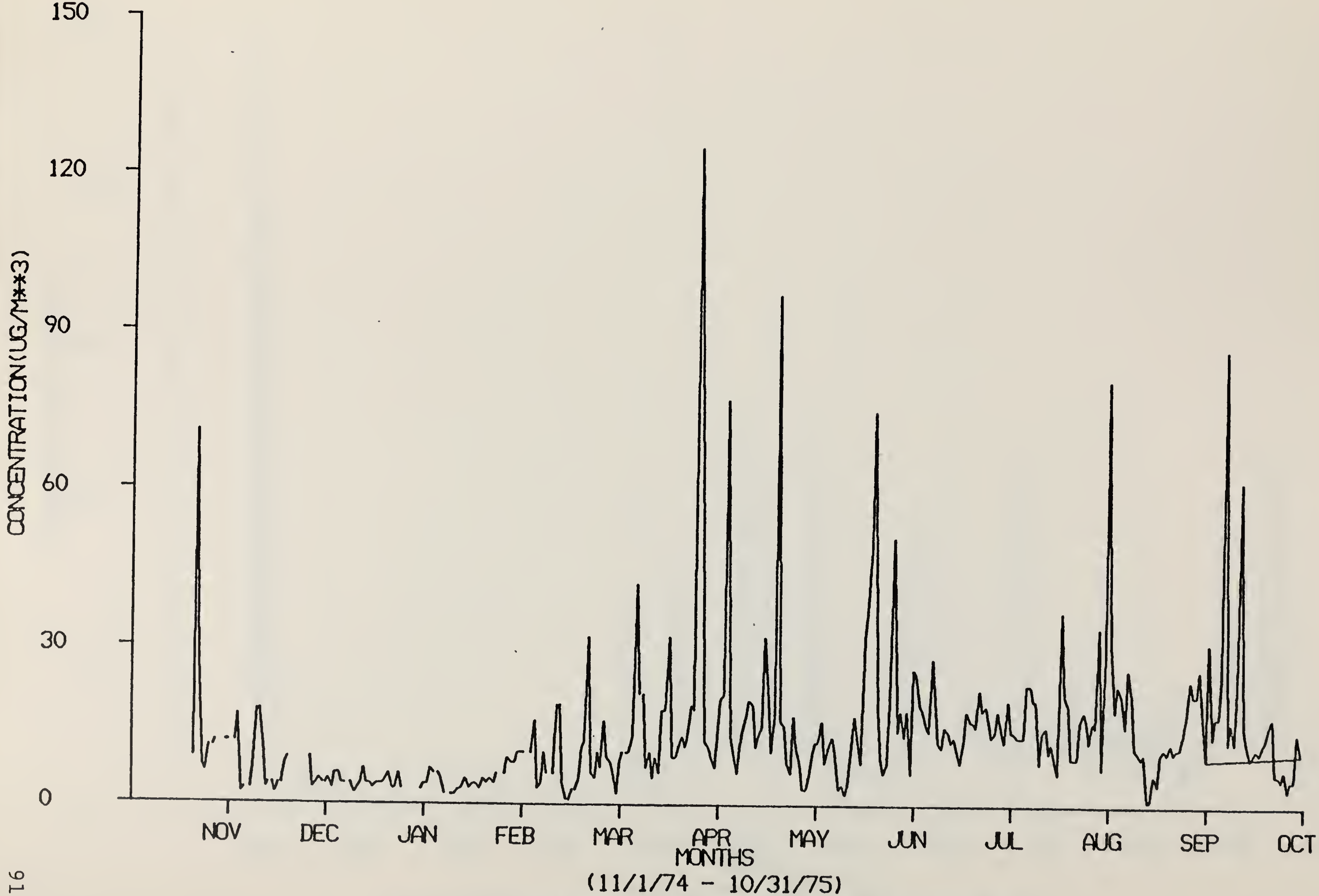
FIGURE VI-26



(11/1/74 - 10/31/75)

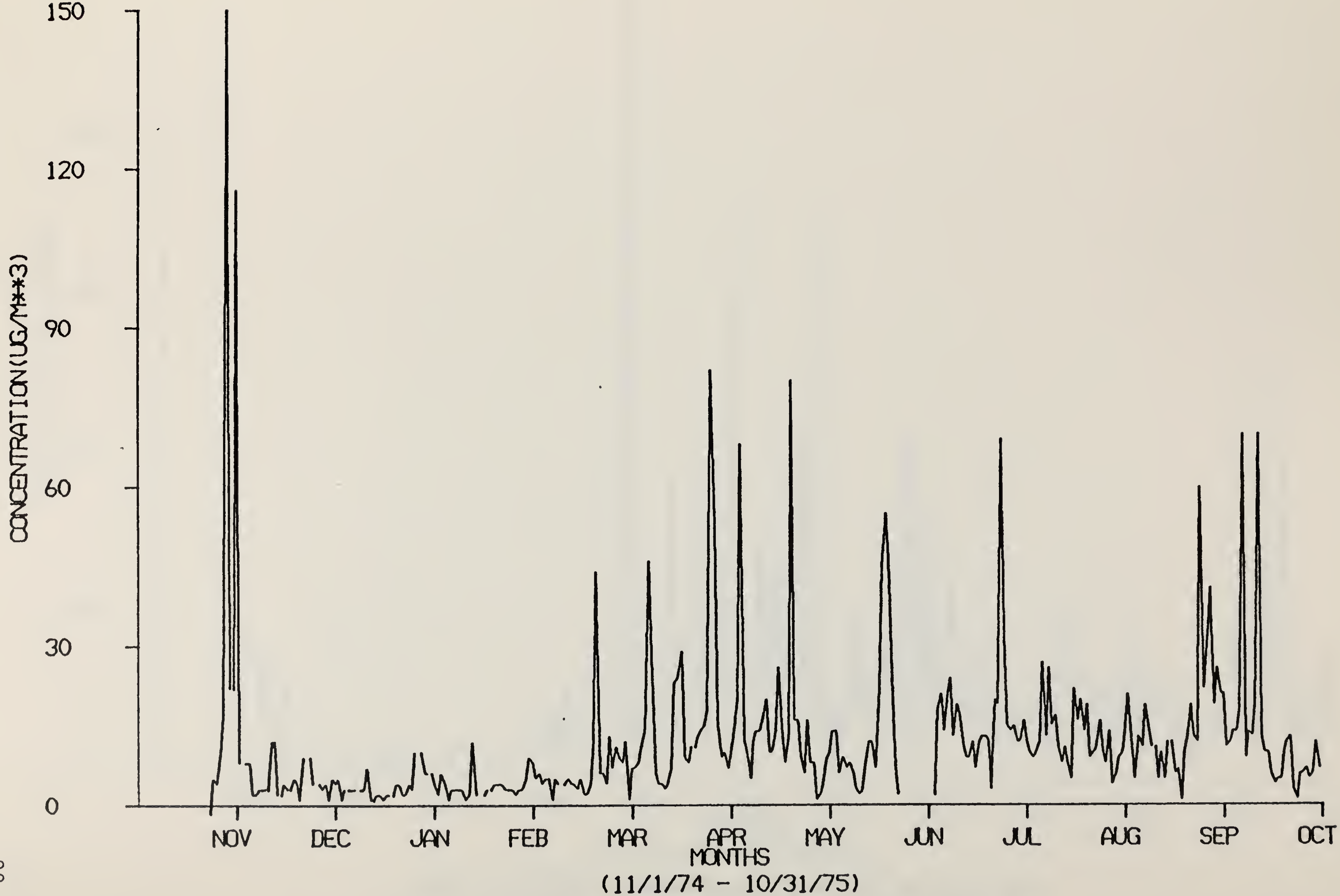
DAILY SUSPENDED PARTICULATE SAMPLES AT SITE 020

FIGURE VI-27



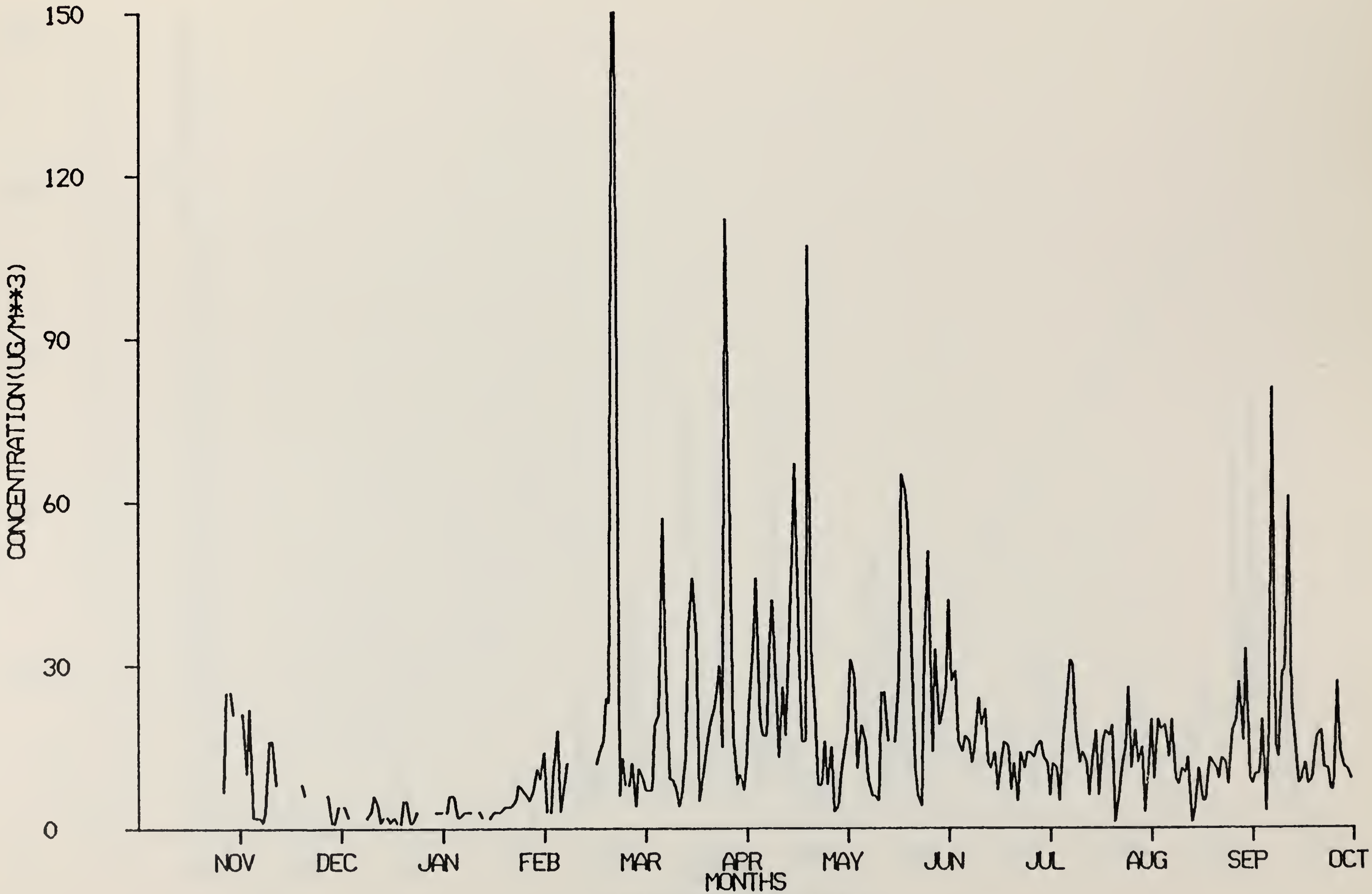
DAILY SUSPENDED PARTICULATE SAMPLES AT SITE 021

FIGURE VI-28



DAILY SUSPENDED PARTICULATE SAMPLES AT SITE 022

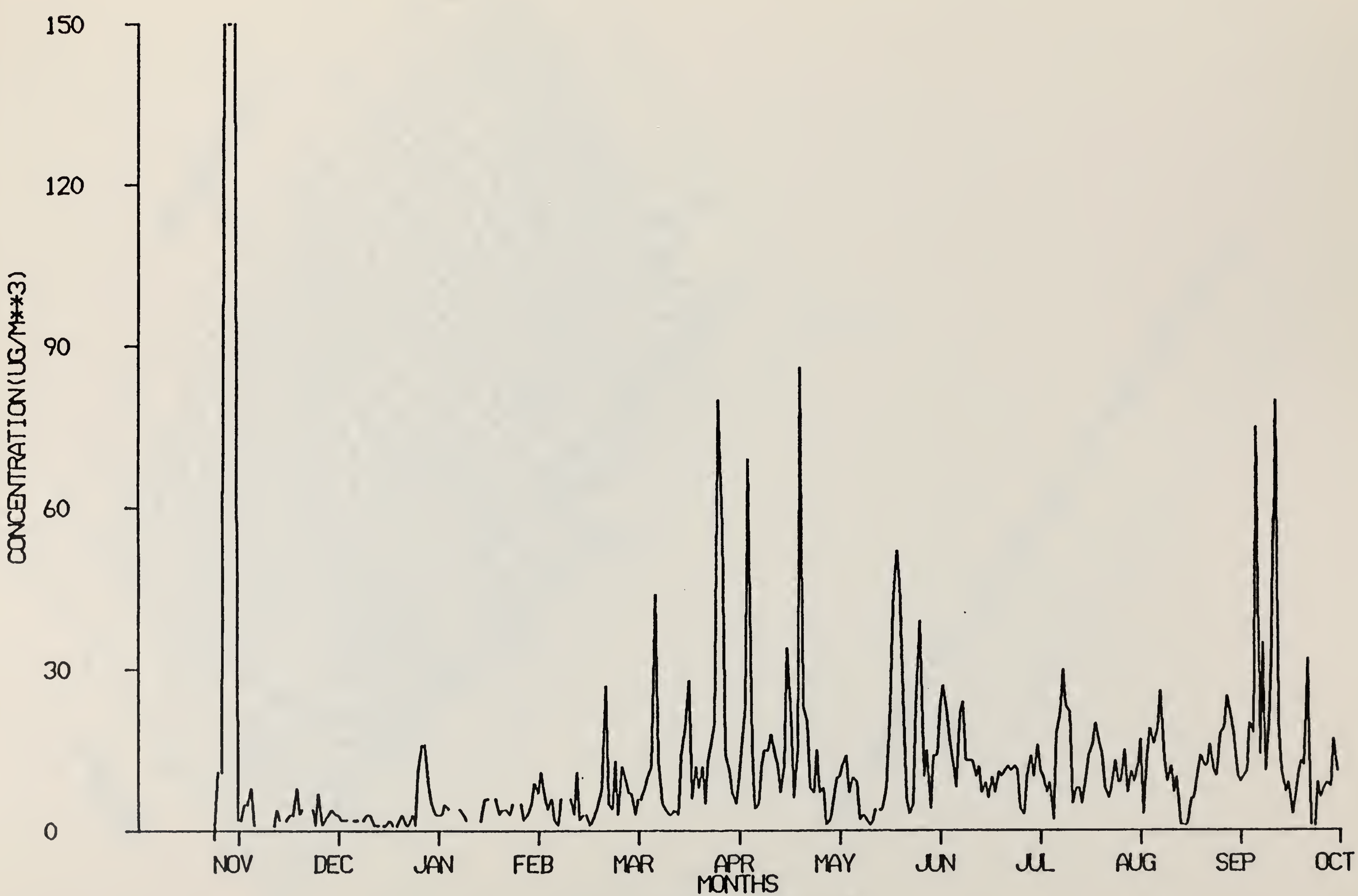
FIGURE VI-29



(11/1/74 - 10/31/75)

DAILY SUSPENDED PARTICULATE SAMPLES AT SITE 023

FIGURE VI-30



(11/1/74 - 10/31/75)

DAILY SUSPENDED PARTICULATE SAMPLES AT SITE 024

FIGURE VI-31

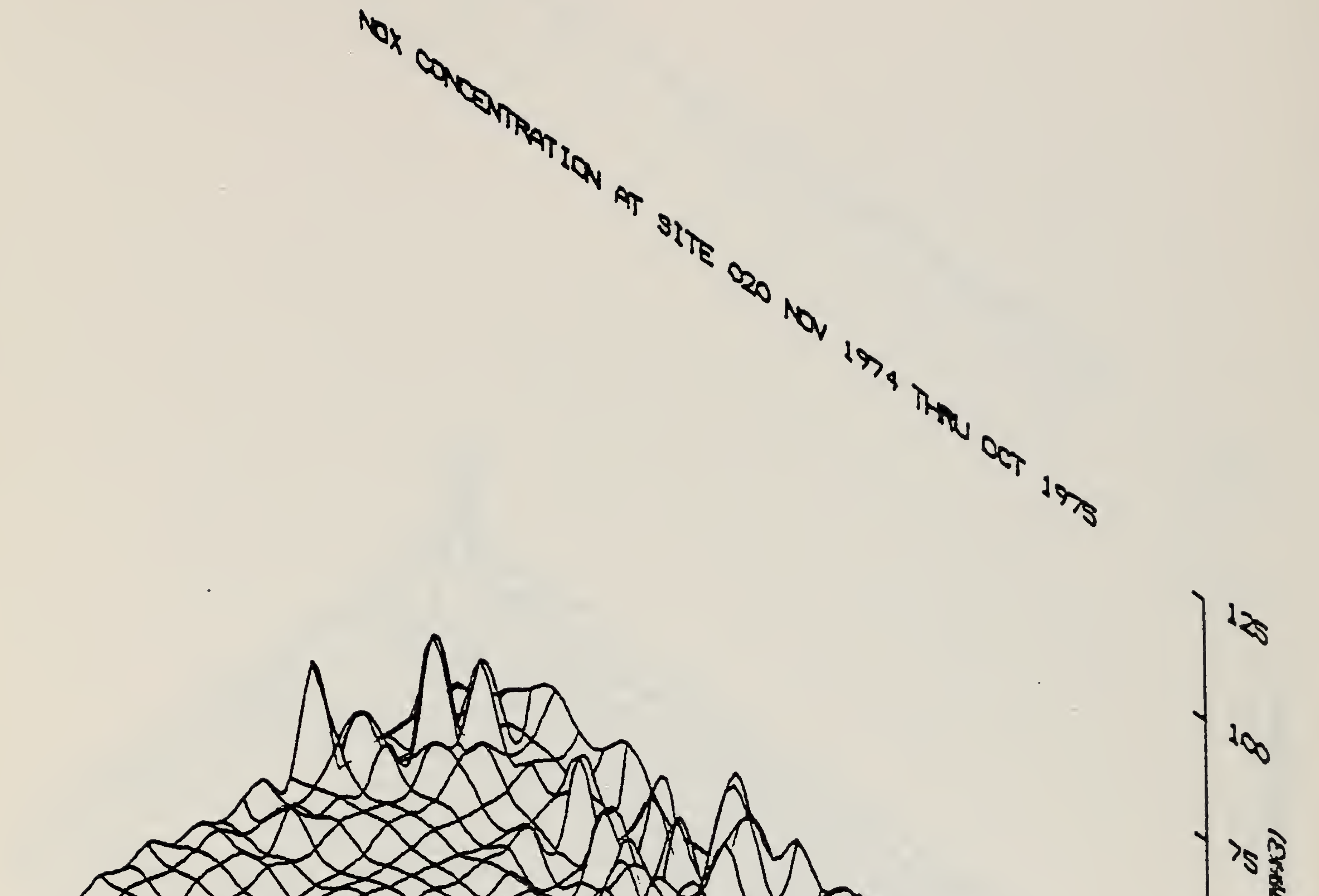

NOX CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
125
100
75
50
25
CONCENTRATION(UG/M**3)
W
S
WIND DIRECTION
E
N
0
5
10
15
WIND SPEED
(MPH)

FIGURE VI-32

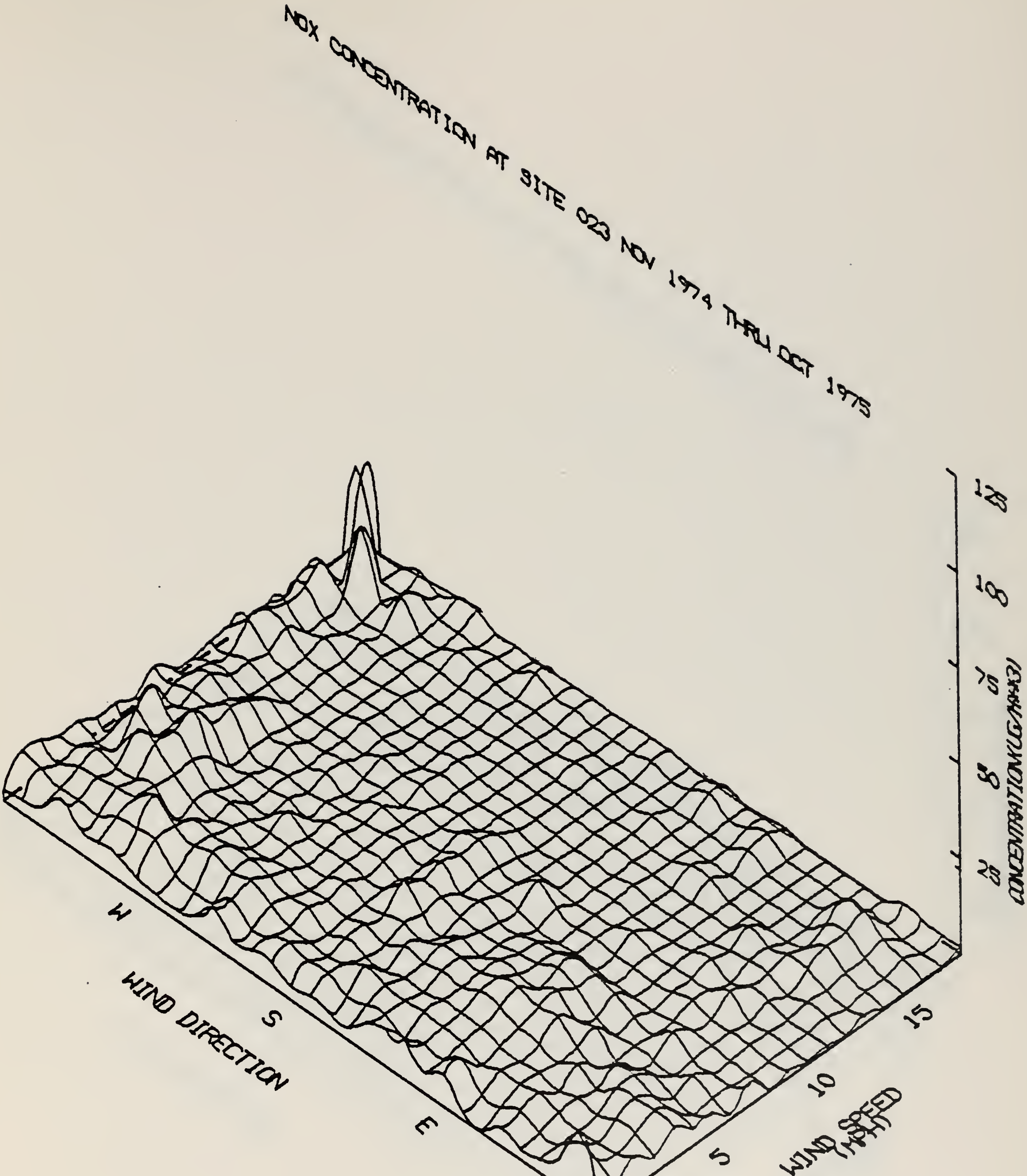

NOX CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
CONCENTRATION(UG/M**3)
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED (MPH)

FIGURE VI-33

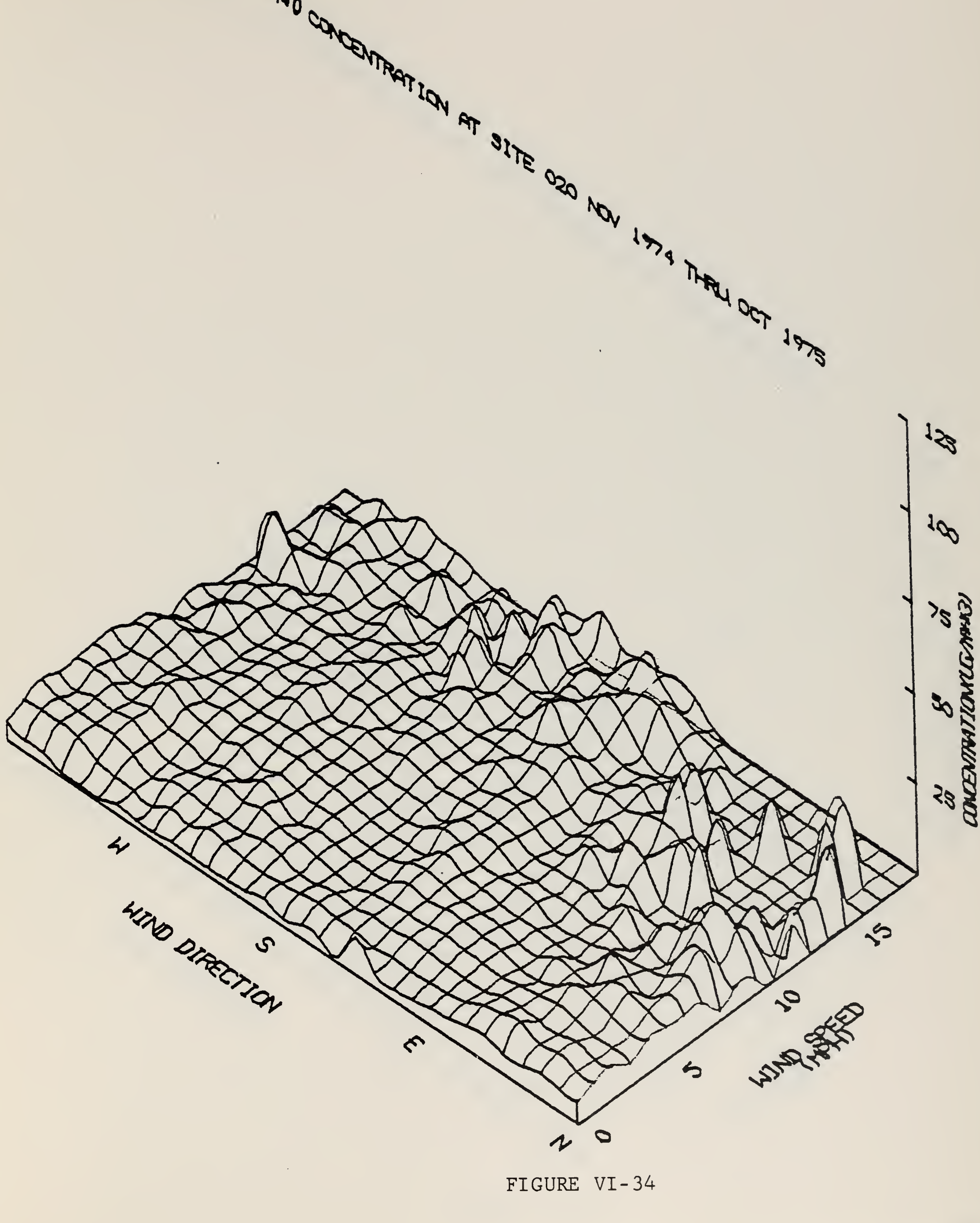

NO CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
125
100
75
50
25
CONCENTRATION
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED

FIGURE VI-34

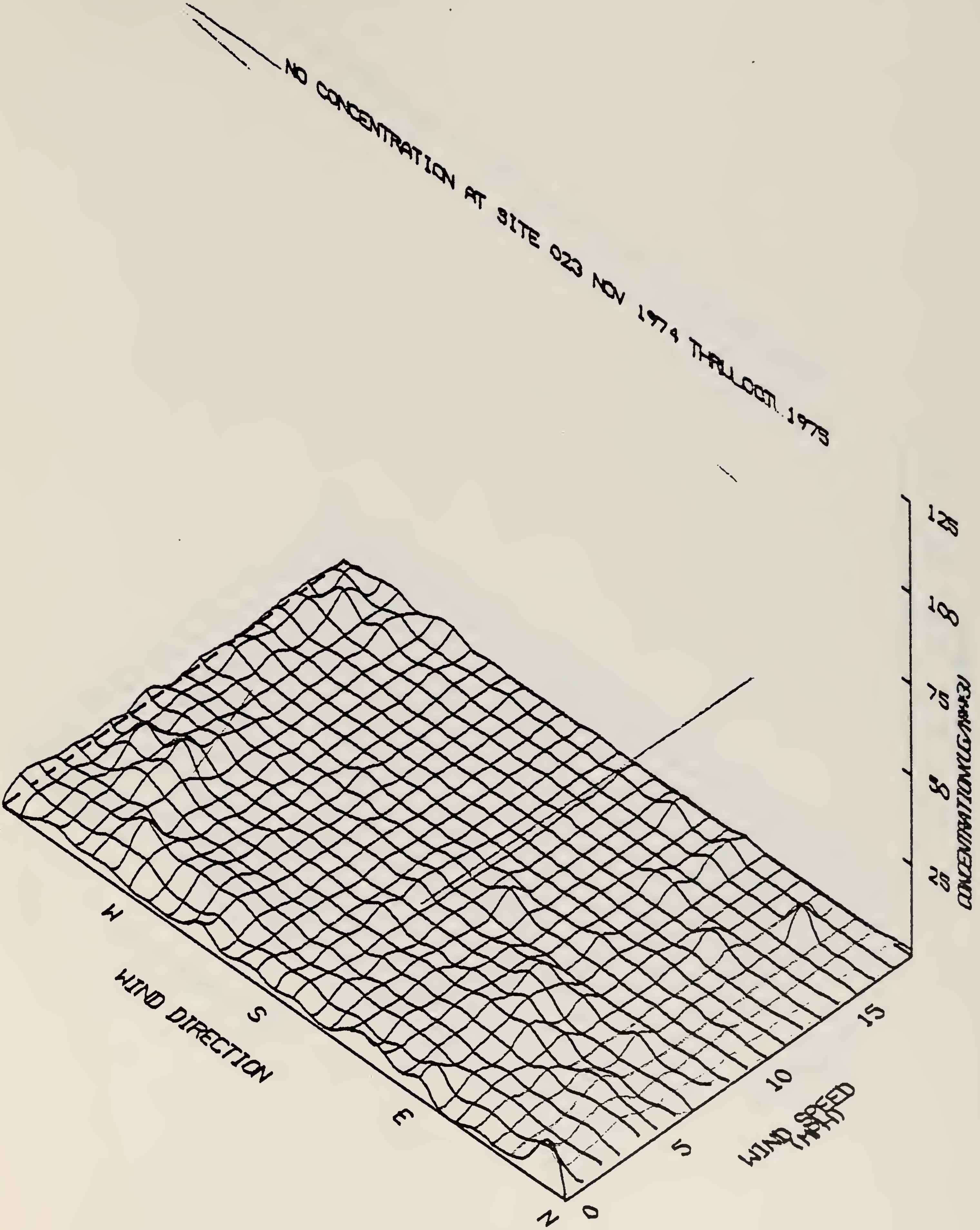

NO CONCENTRATION AT SITE 023 NOV 1974 THRU OCT. 1975
125
100
75
50
25
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED (MPH)

FIGURE VI-35

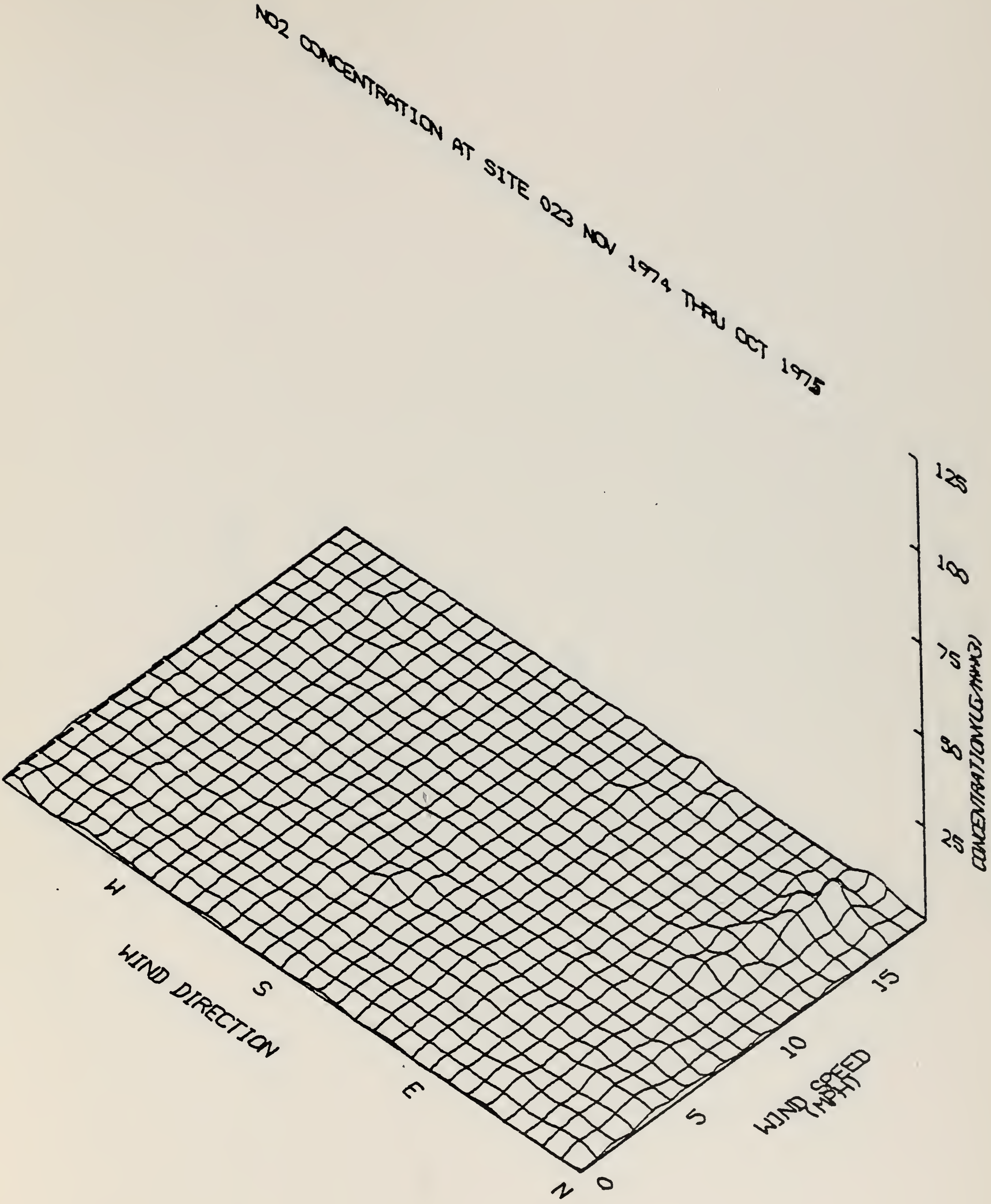

NO2 CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
125
100
75
50
25
CONCENTRATION(UG/M**3)
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED
(MPH)

FIGURE VI-36

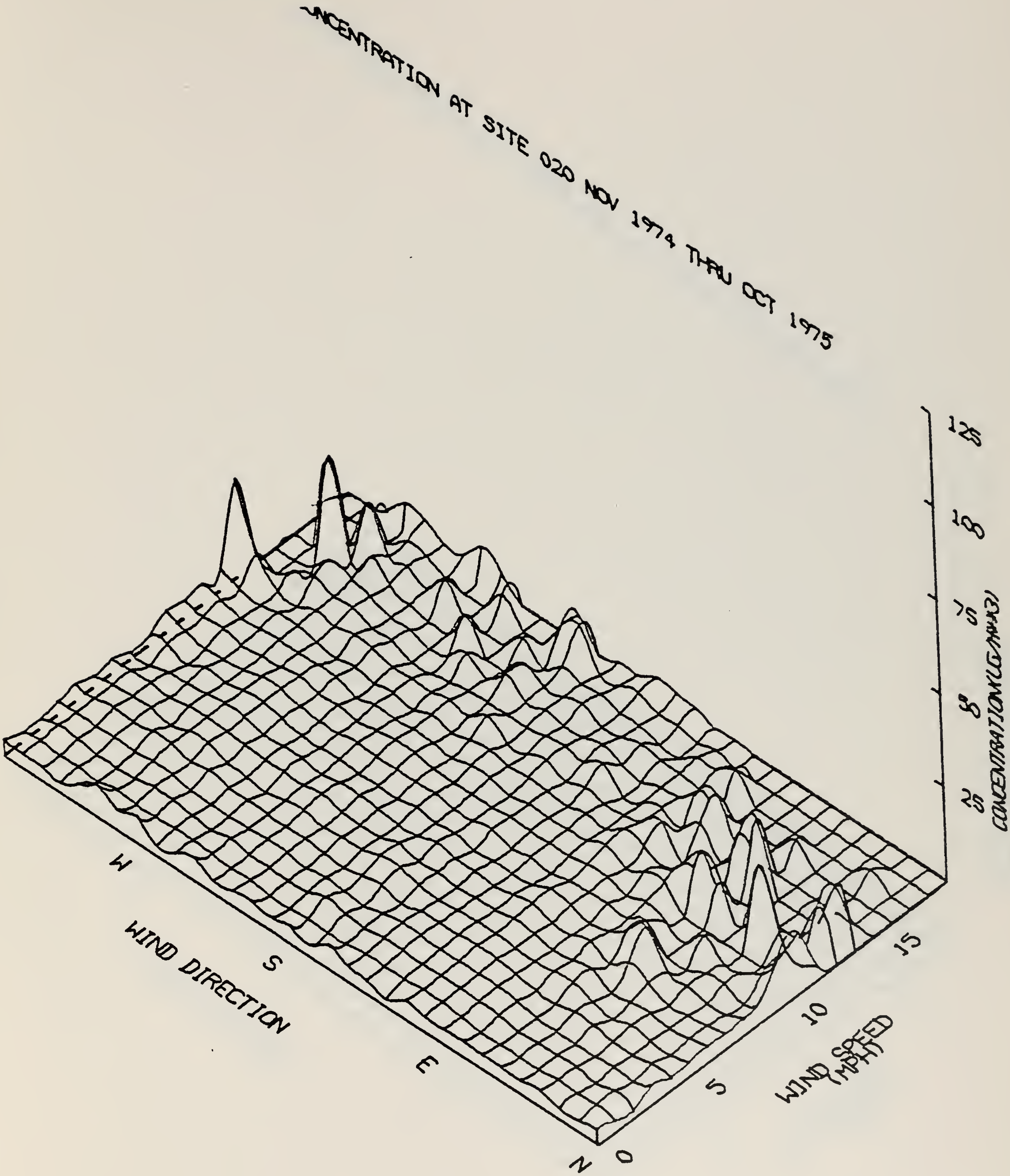

NCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
125
100
75
50
25
CONCENTRATION
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED
(MPH)

FIGURE VI-37

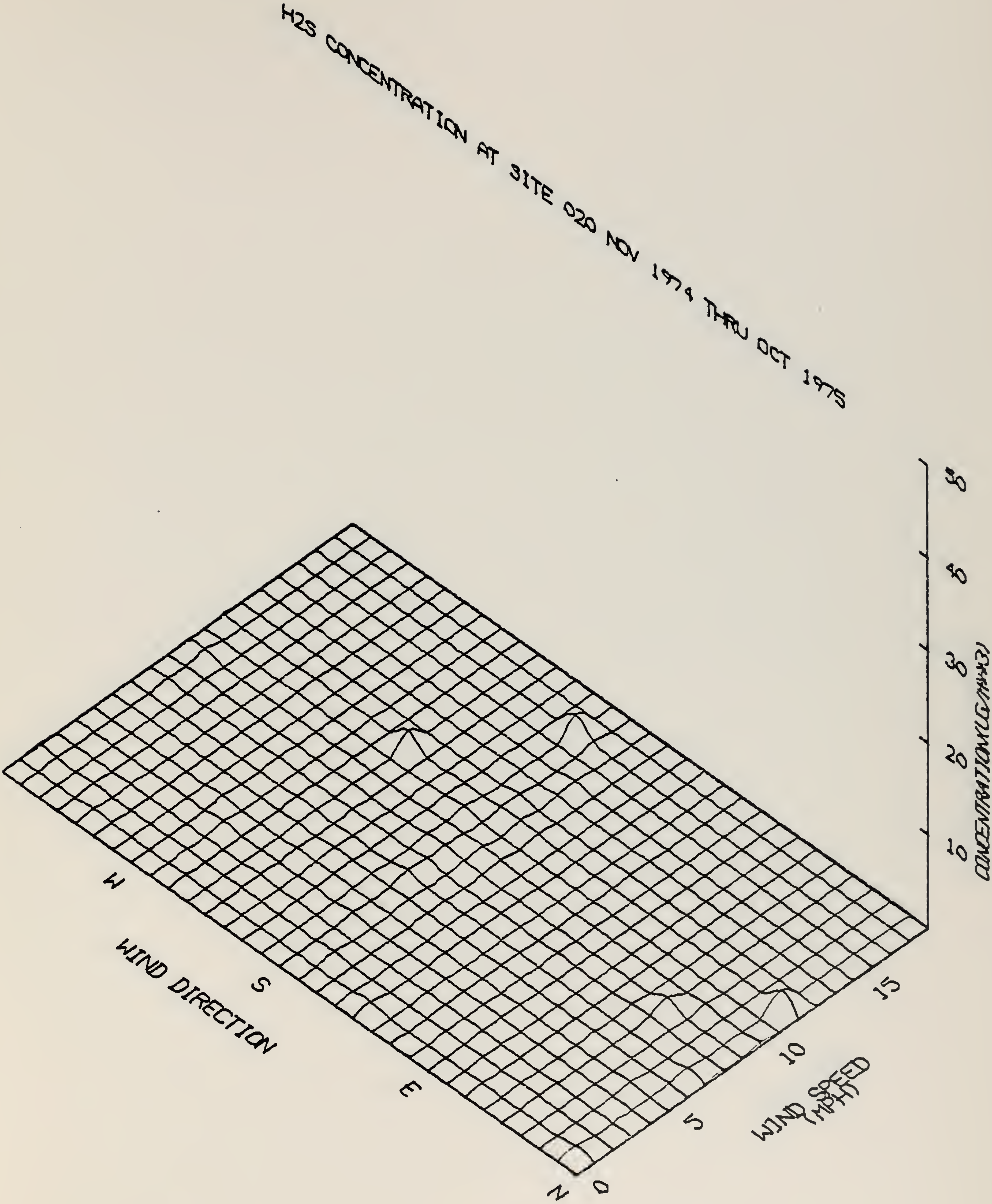

H2S CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
10
20
30
40
50
CONCENTRATION
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED
(MPH)

FIGURE VI-38

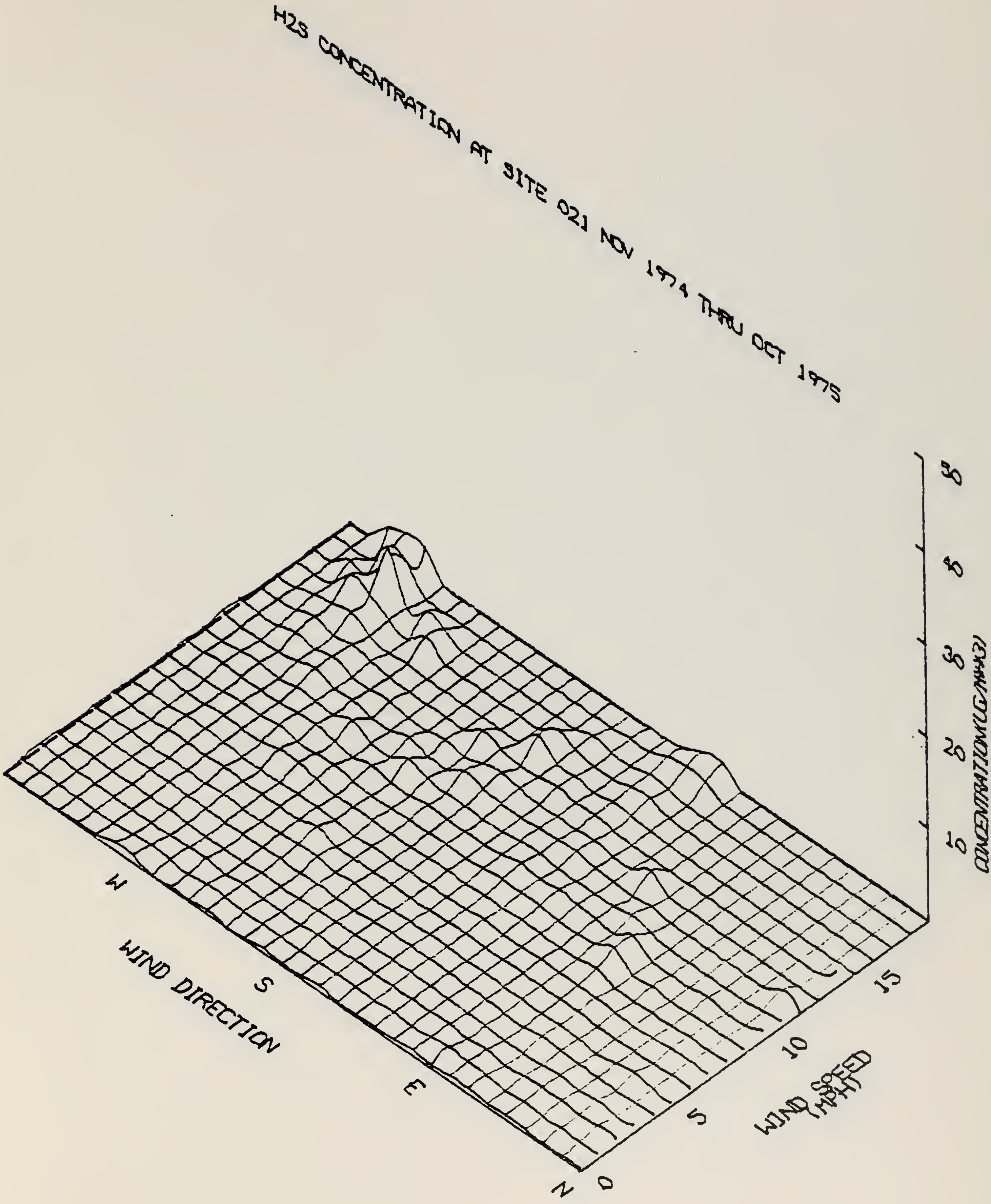

H2S CONCENTRATION AT SITE 021 NOV 1974 THRU OCT 1975
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED (MPH)
10
20
30
40
50
CONCENTRATION(UG/M**3)

FIGURE VI-39

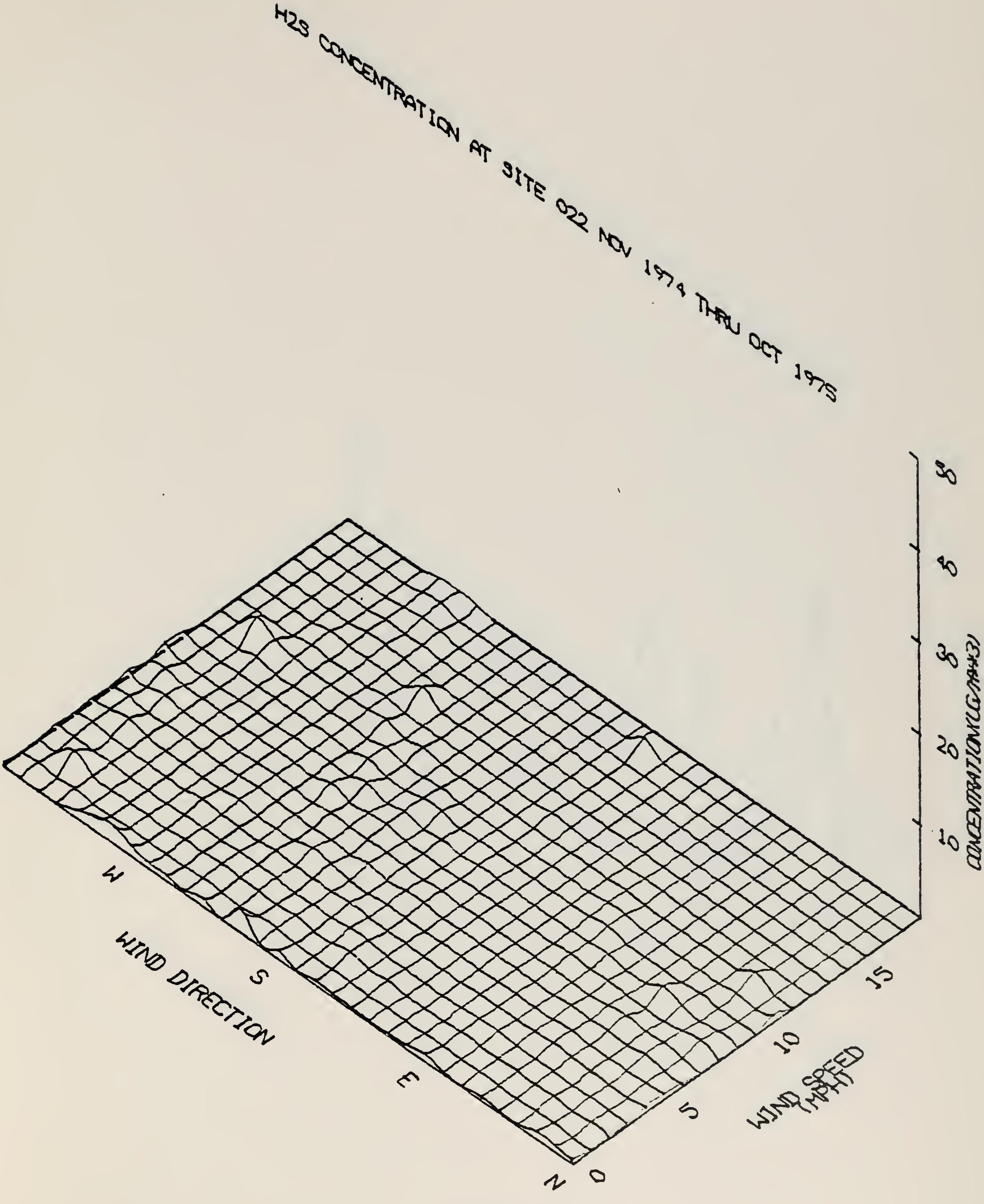

H2S CONCENTRATION AT SITE 022 NOV 1974 THRU OCT 1975
CONCENTRATION(UG/M**3)
WIND DIRECTION
W
S
E
N
WIND SPEED (MPH)
0
5
10
15

FIGURE VI-40

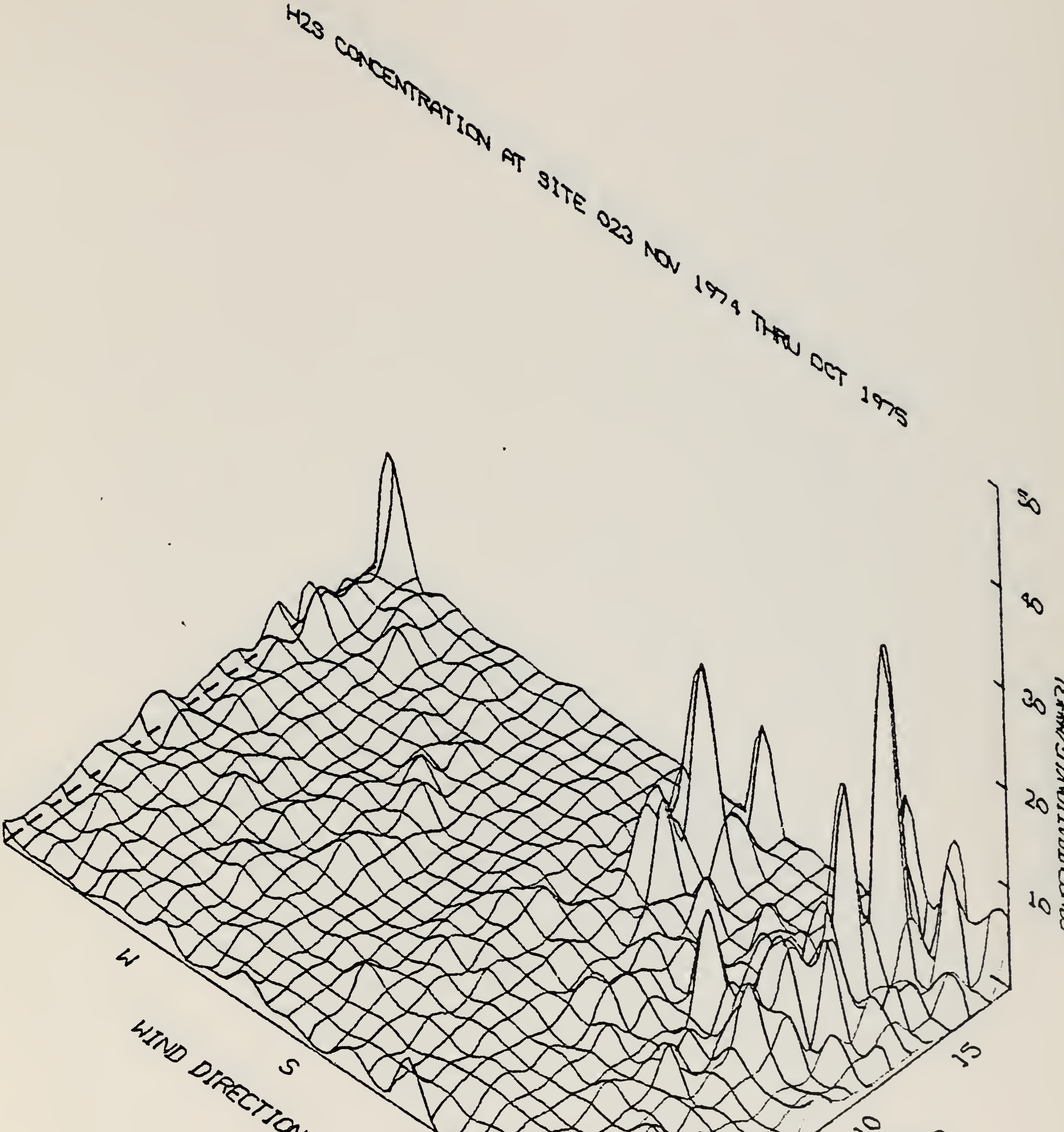

H2S CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
CONCENTRATION(UG/M**3)
10
20
30
W
WIND DIRECTION
S
E
N
0
5
10
15
WIND SPEED
(MPH)

FIGURE VI-41

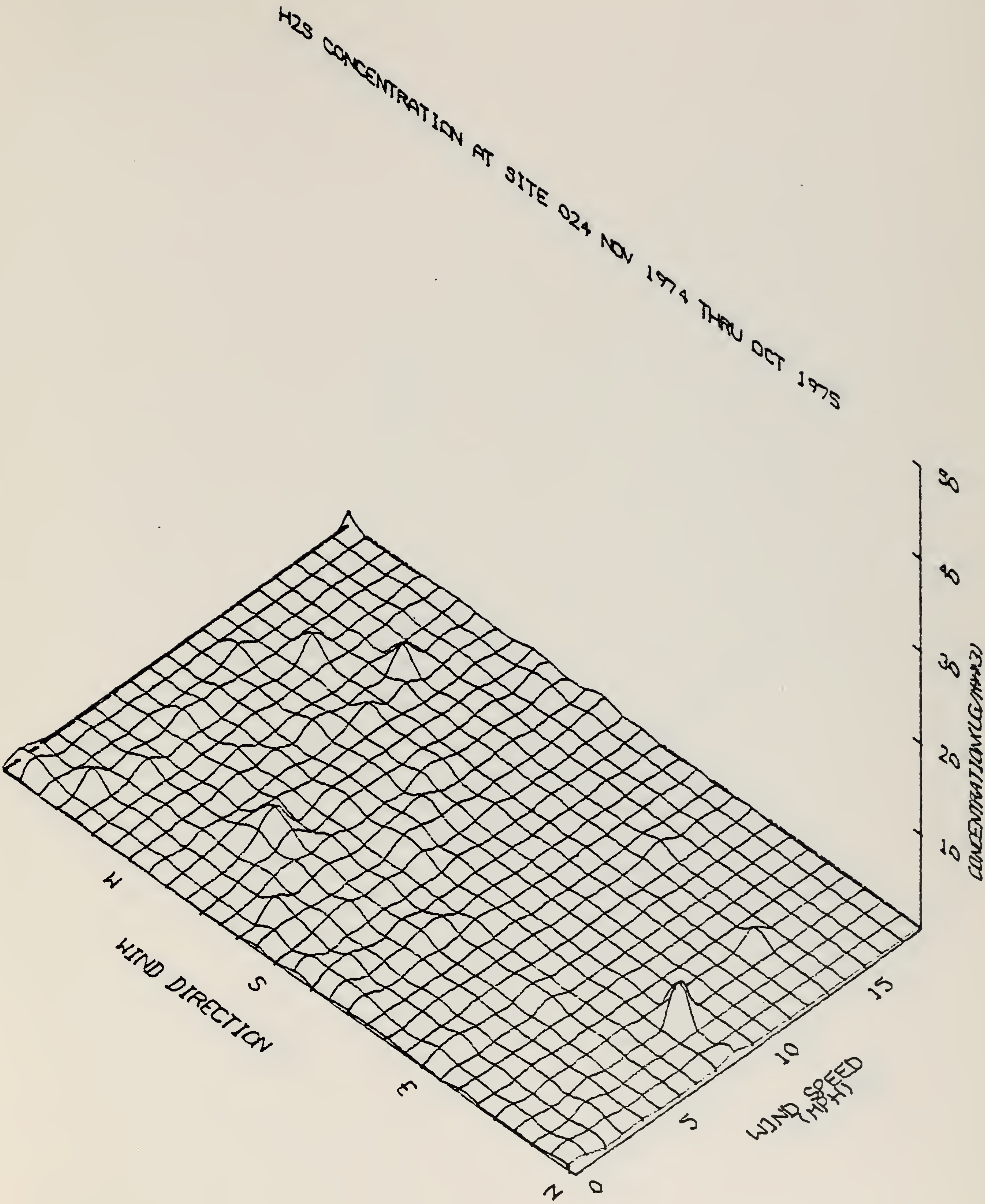

H2S CONCENTRATION AT SITE 024 NOV 1974 THRU OCT 1975
WIND DIRECTION
N
W
S
E
N
WIND SPEED (MPH)
0
5
10
15
CONCENTRATION(UG/M**3)
10
20
30
40
50

FIGURE VI-42

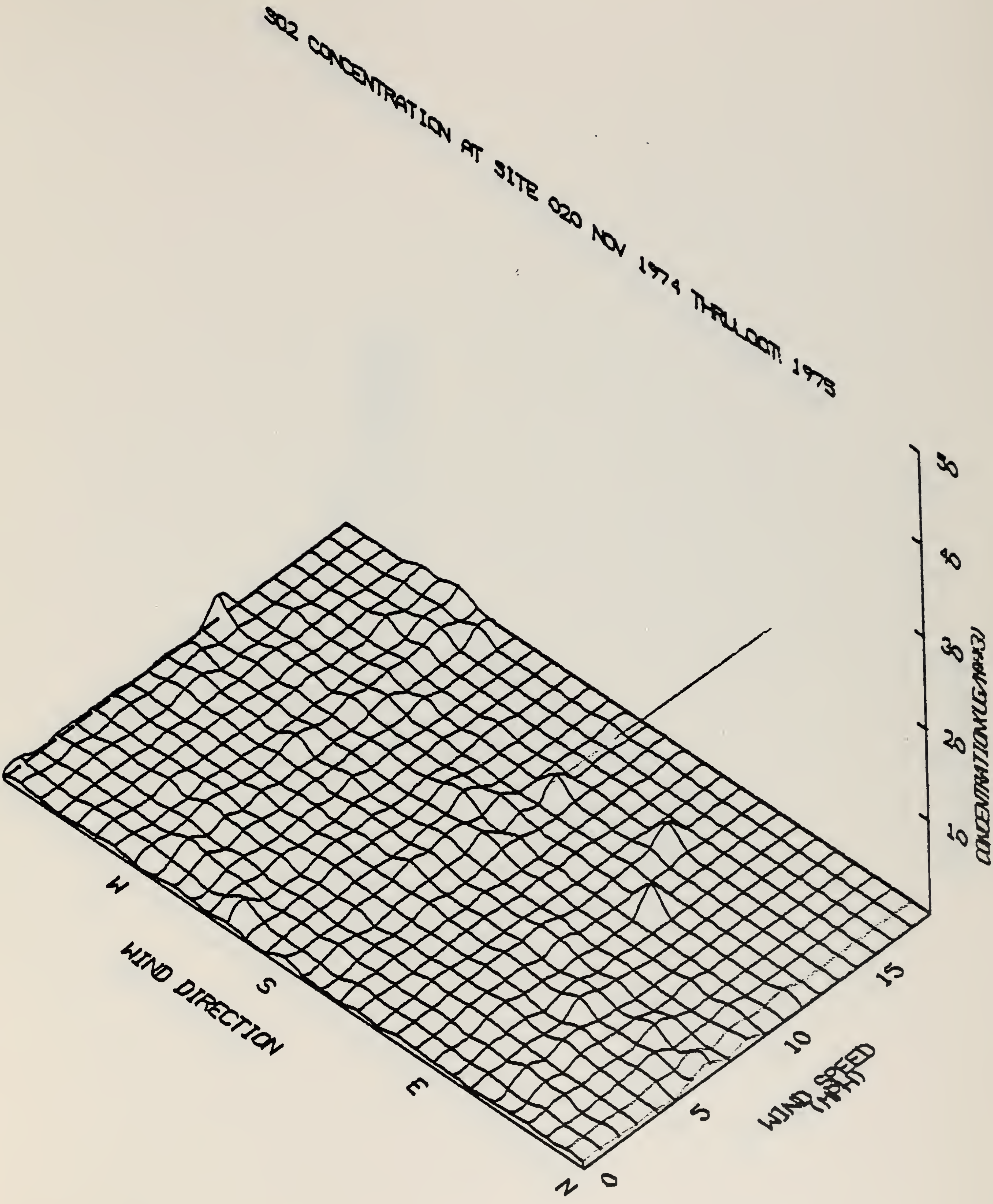

SO2 CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
WIND DIRECTION
W
S
E
N
WIND SPEED (MPH)
0
5
10
15
CONCENTRATION (UG/M**3)

FIGURE VI-43

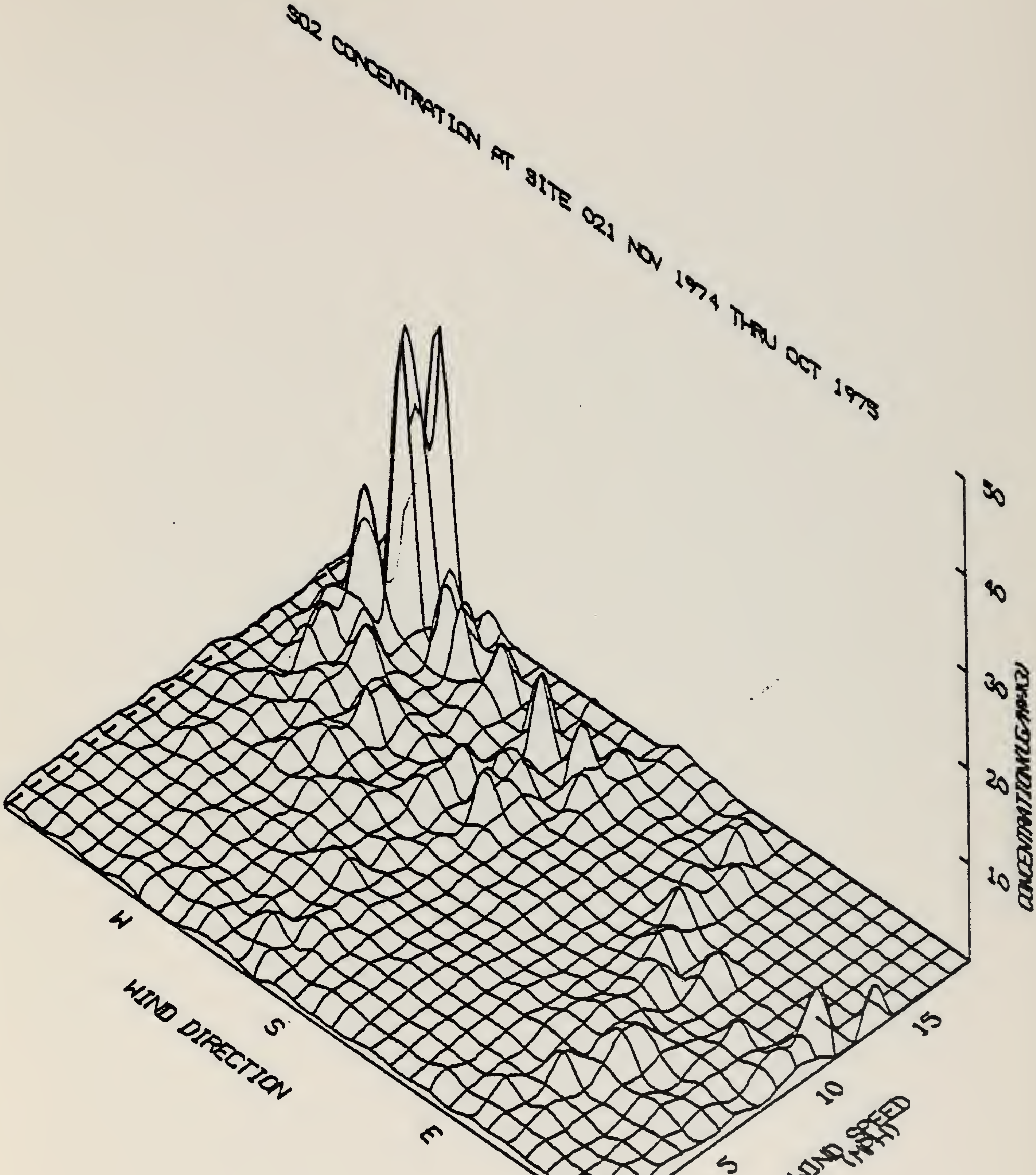

SO2 CONCENTRATION AT SITE 021 NOV 1974 THRU OCT 1975
CONCENTRATION(UG/M**3)
10
20
30
40
50
WIND DIRECTION
N
E
S
W
WIND SPEED (MPH)
0
5
10
15

FIGURE VI-44

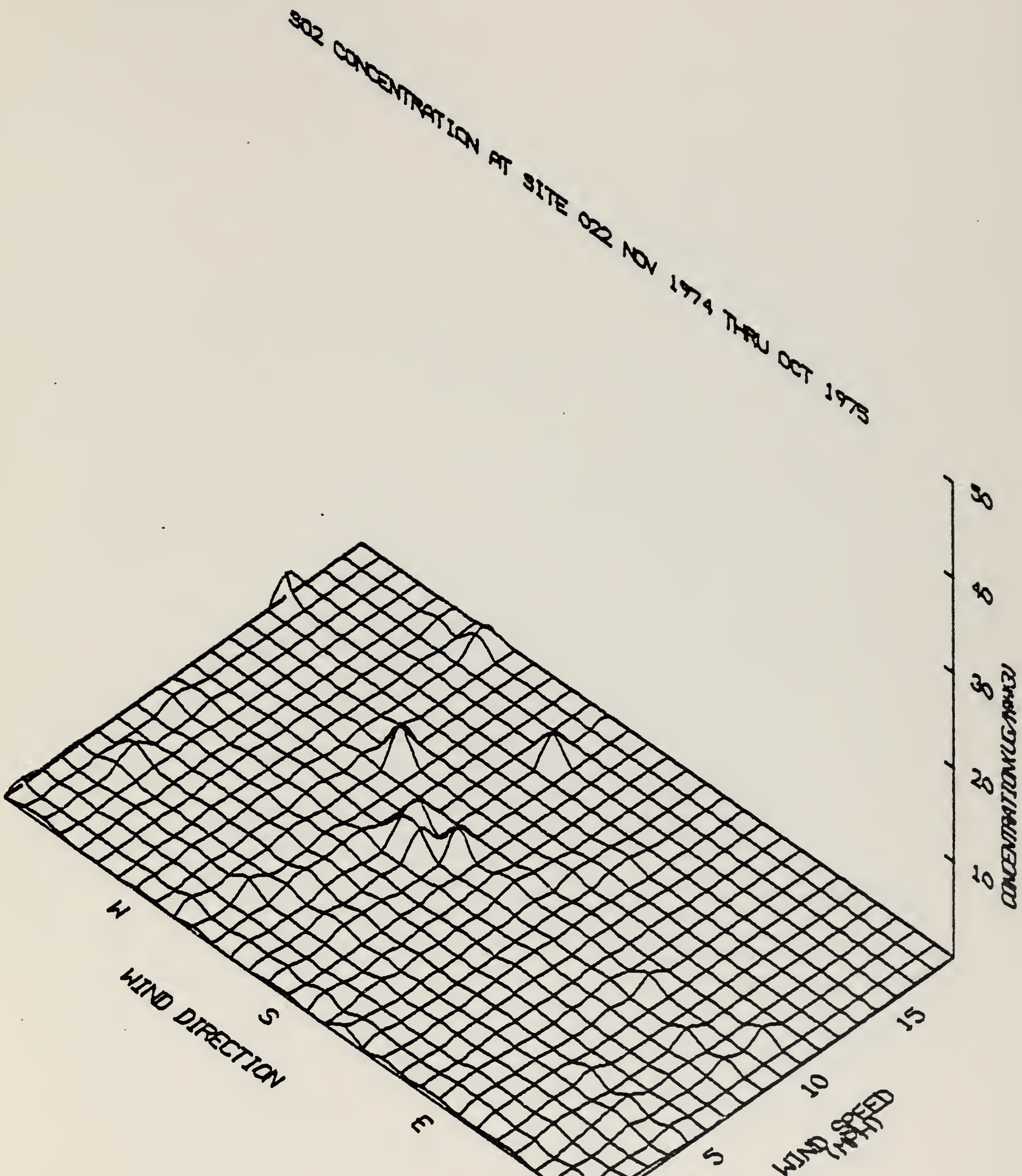
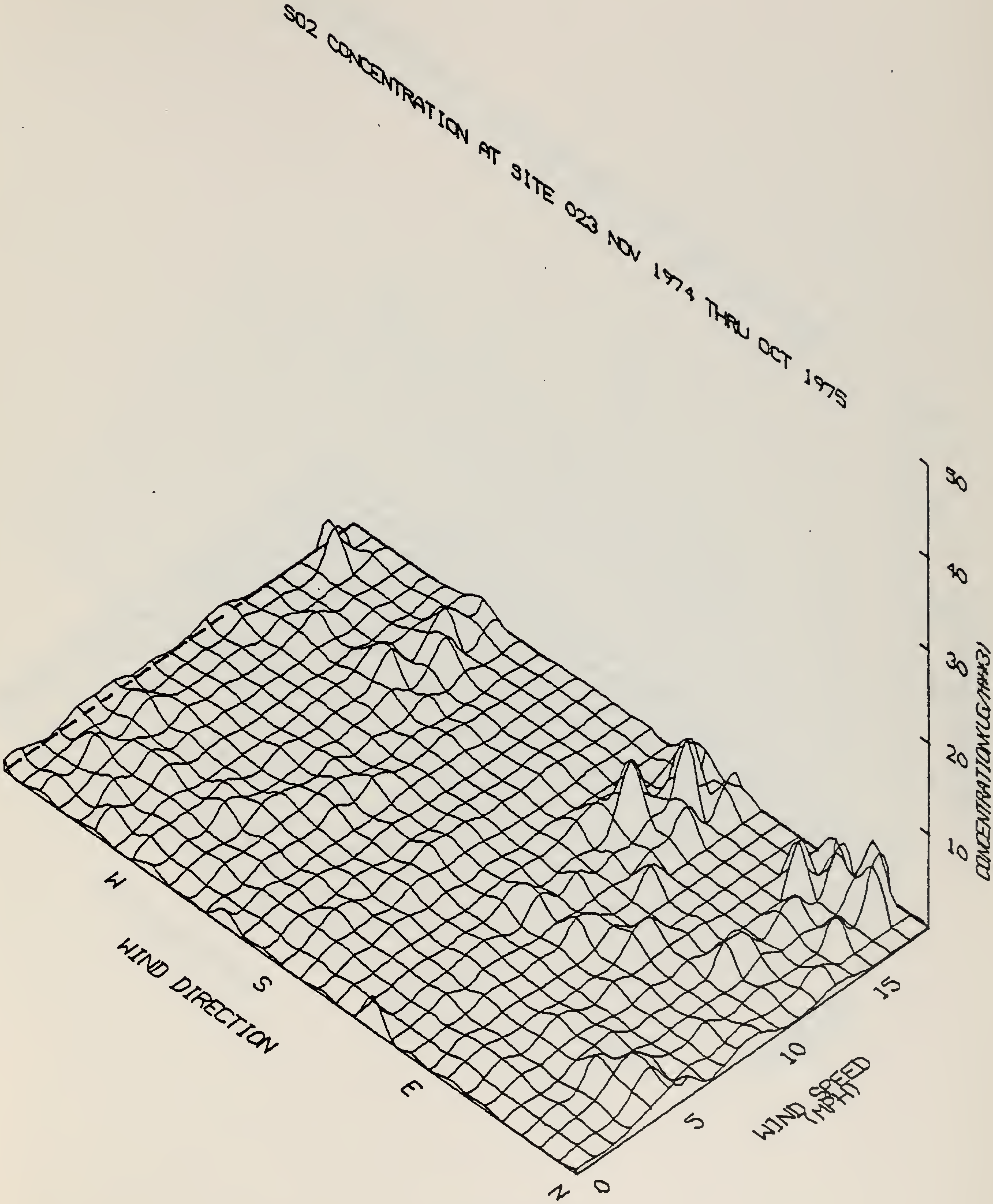
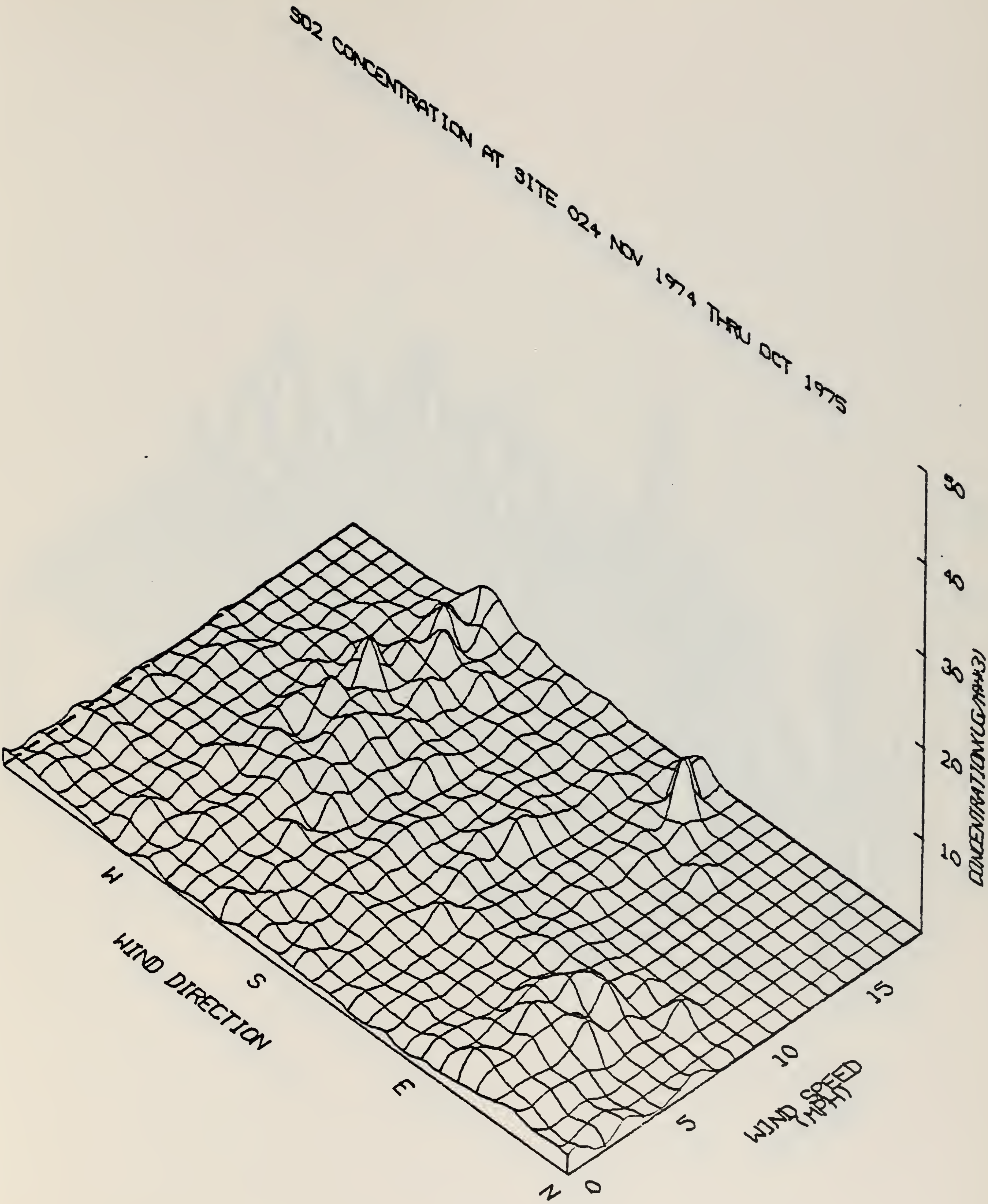

SO2 CONCENTRATION AT SITE 022 NOV 1974 THRU OCT 1975
50
40
30
20
10
CONCENTRATION(UG/M**3)
W
WIND DIRECTION
S
E
N
0
5
10
15
WIND SPEED
(MPH)

FIGURE VI-45



SO2 CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
CONCENTRATION(UG/M**3)
10
20
30
40
50
WIND DIRECTION
N
E
S
W
WIND SPEED (MPH)
0
5
10
15

FIGURE VI-46



SO2 CONCENTRATION AT SITE 024 NOV 1974 THRU OCT 1975
CONCENTRATION(UG/M**3)
10
20
30
40
50
WIND DIRECTION
N
E
S
W
WIND SPEED (MPH)
0
5
10
15

FIGURE VI-47

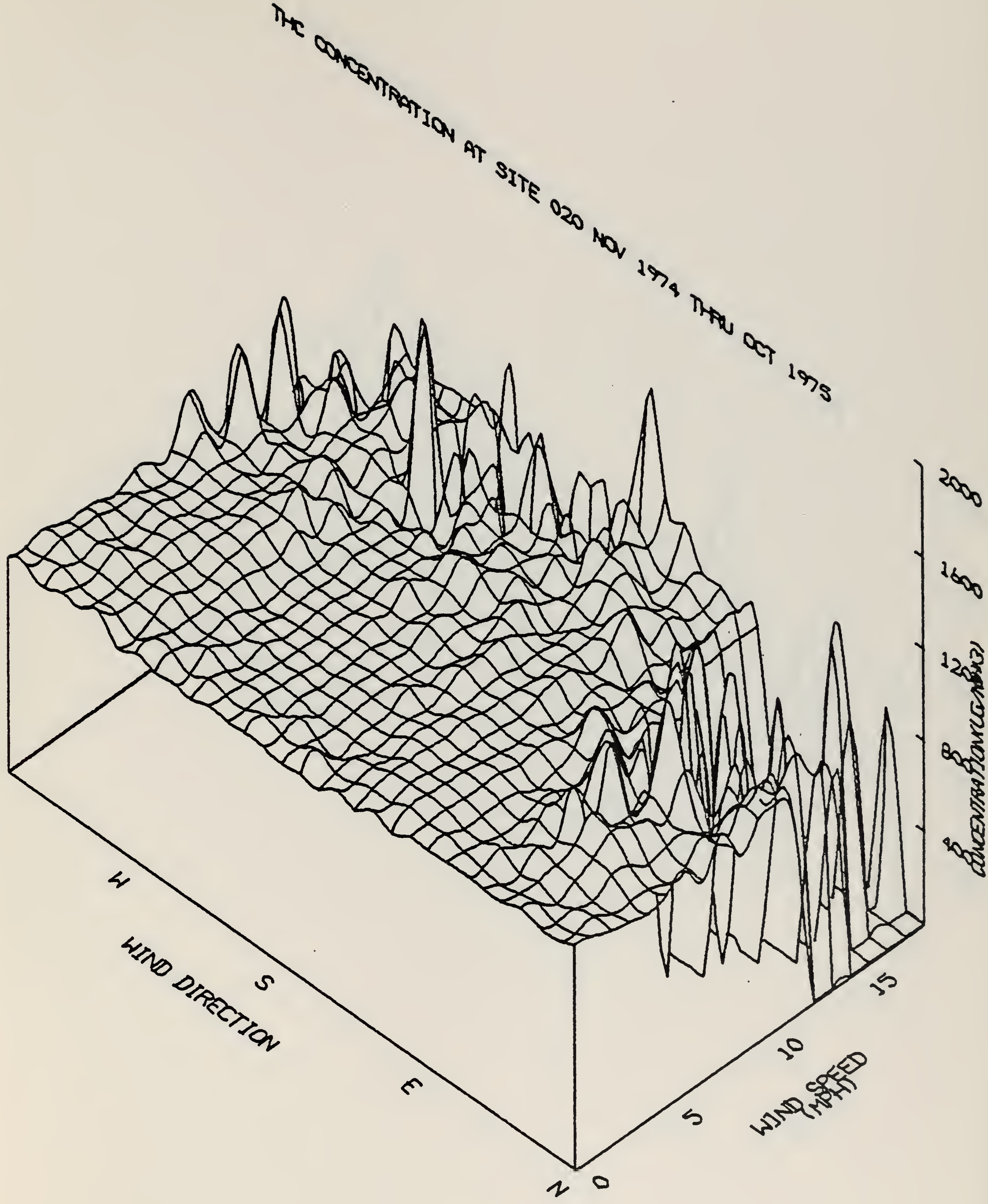

THC CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
2000
1600
CONCENTRATION(UG/M3)
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED (MPH)

FIGURE VI-48

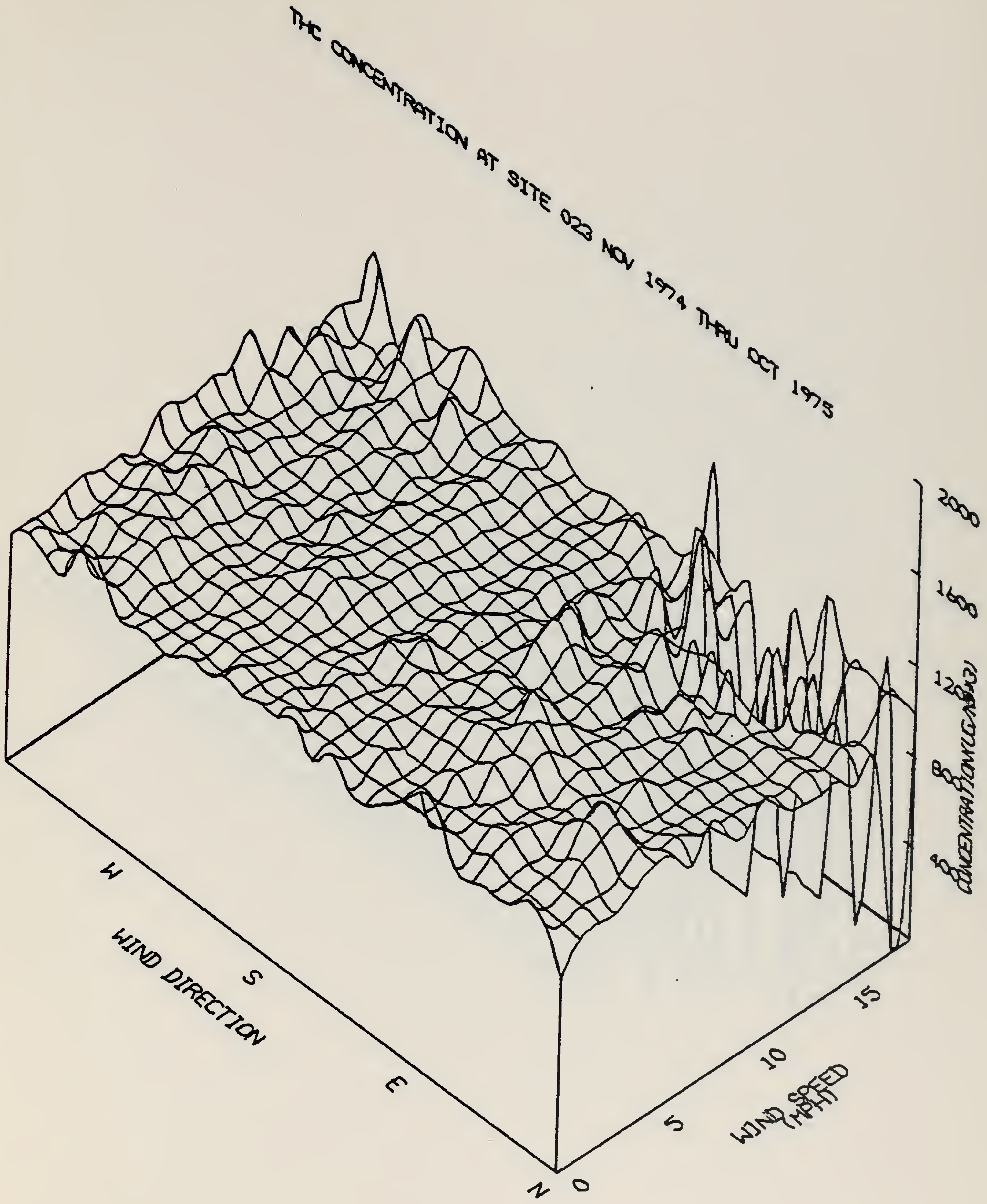

THC CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
2000
1600
WIND DIRECTION
W
S
E
N
WIND SPEED
(MPH)
0
5
10
15

FIGURE VI-49

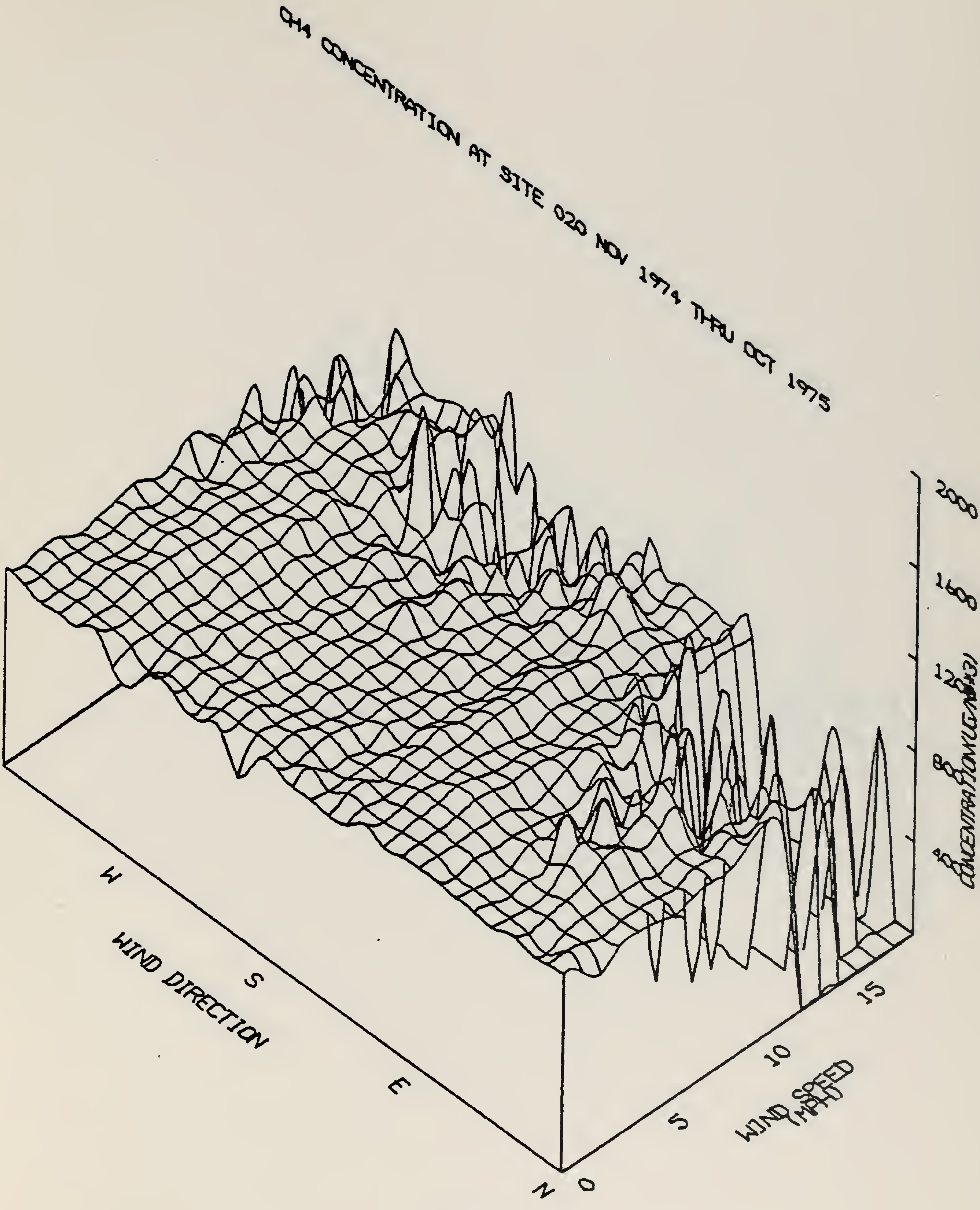

CH4 CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
WIND DIRECTION
W
S
E
N
WIND SPEED (MPH)
0
5
10
15
2000
1600
1200
800
0
CONCENTRATION(UG/M**3)

FIGURE VI-50

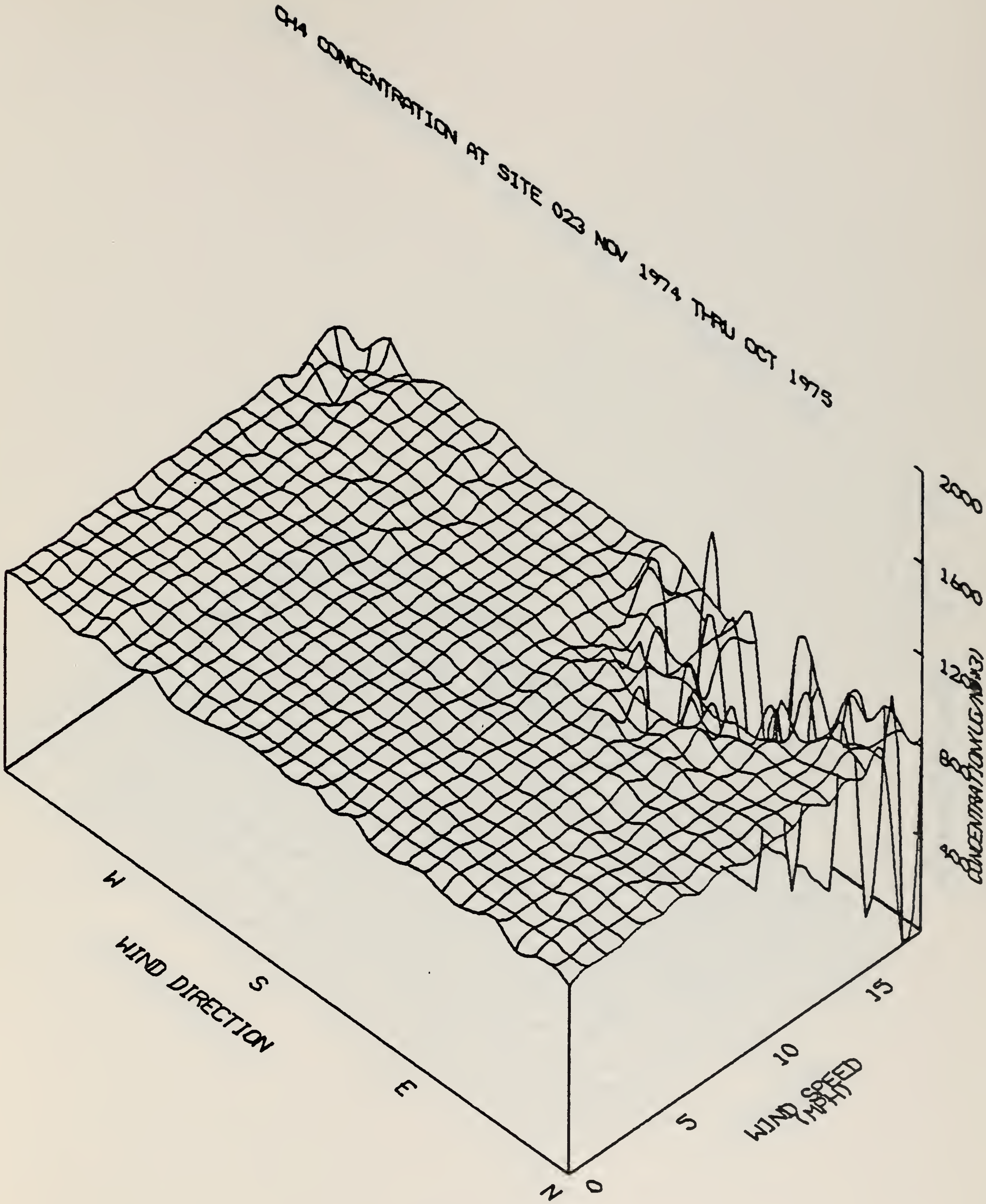

CH4 CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
WIND DIRECTION
N
E
S
W
WIND SPEED (MPH)
0
5
10
15
CONCENTRATION (UG/M**3)
2000
1600
1200
800
400

FIGURE VI-51

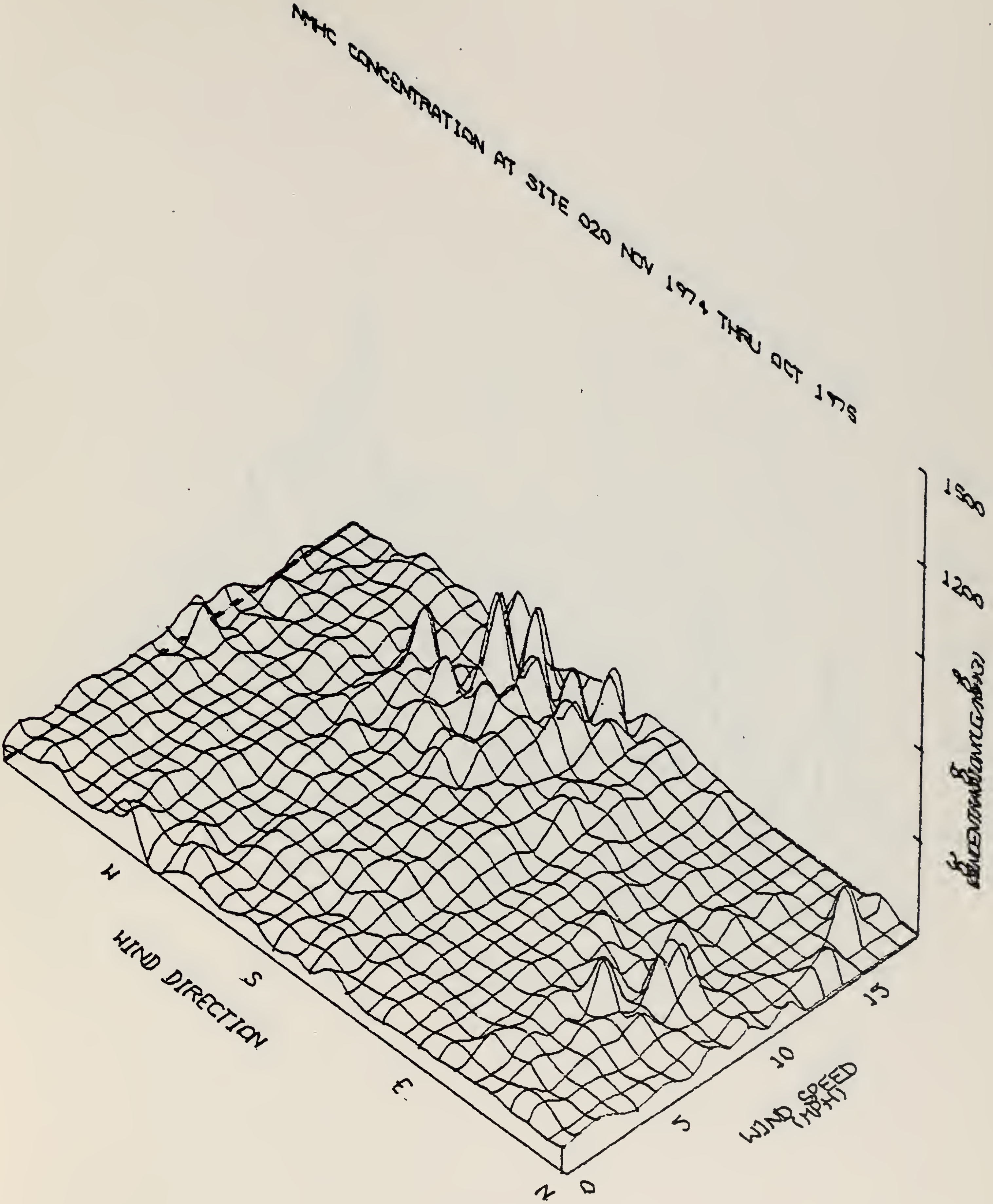

NMHC CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
1500
1200
W
WIND DIRECTION
S
E
N
0
5
10
15
WIND SPEED
(MPH)

FIGURE VI-52

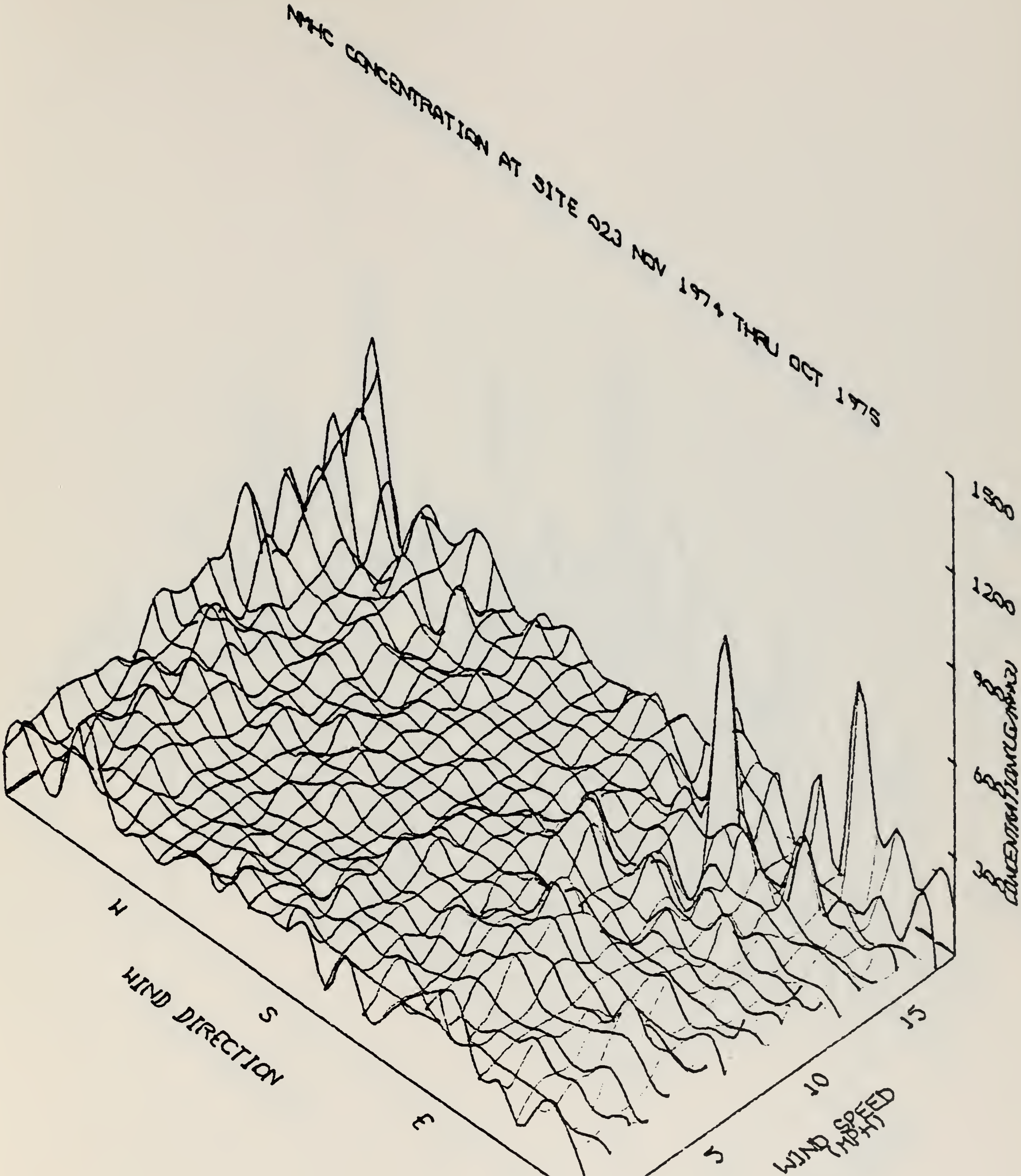

NMHC CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
1500
1200
W
S
E
N
WIND DIRECTION
0
5
10
15
WIND SPEED (MPH)

FIGURE VI-53

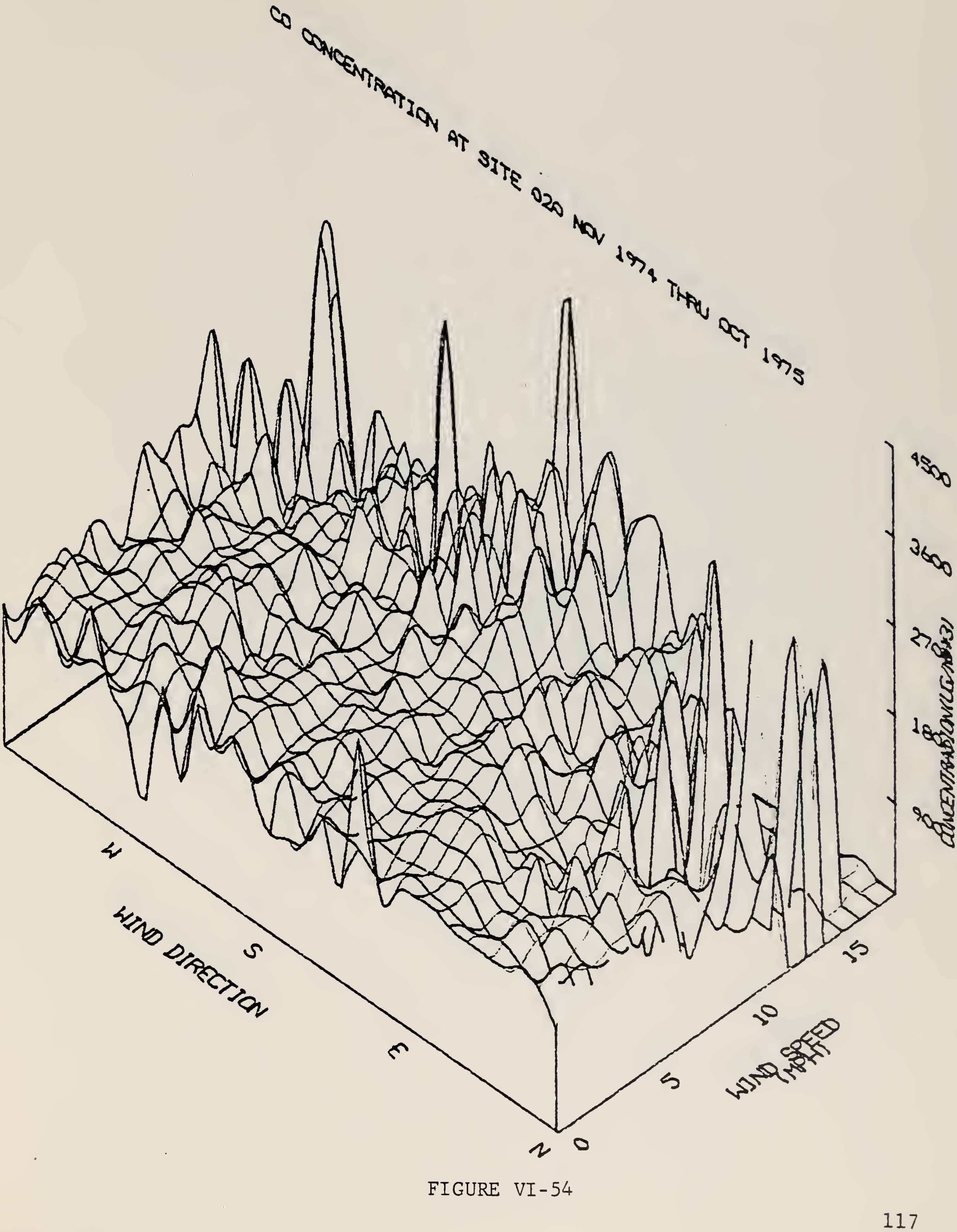

CO CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
4500
3600
0
WIND DIRECTION
N
E
S
W
0
5
10
15
WIND SPEED (MPH)

FIGURE VI-54

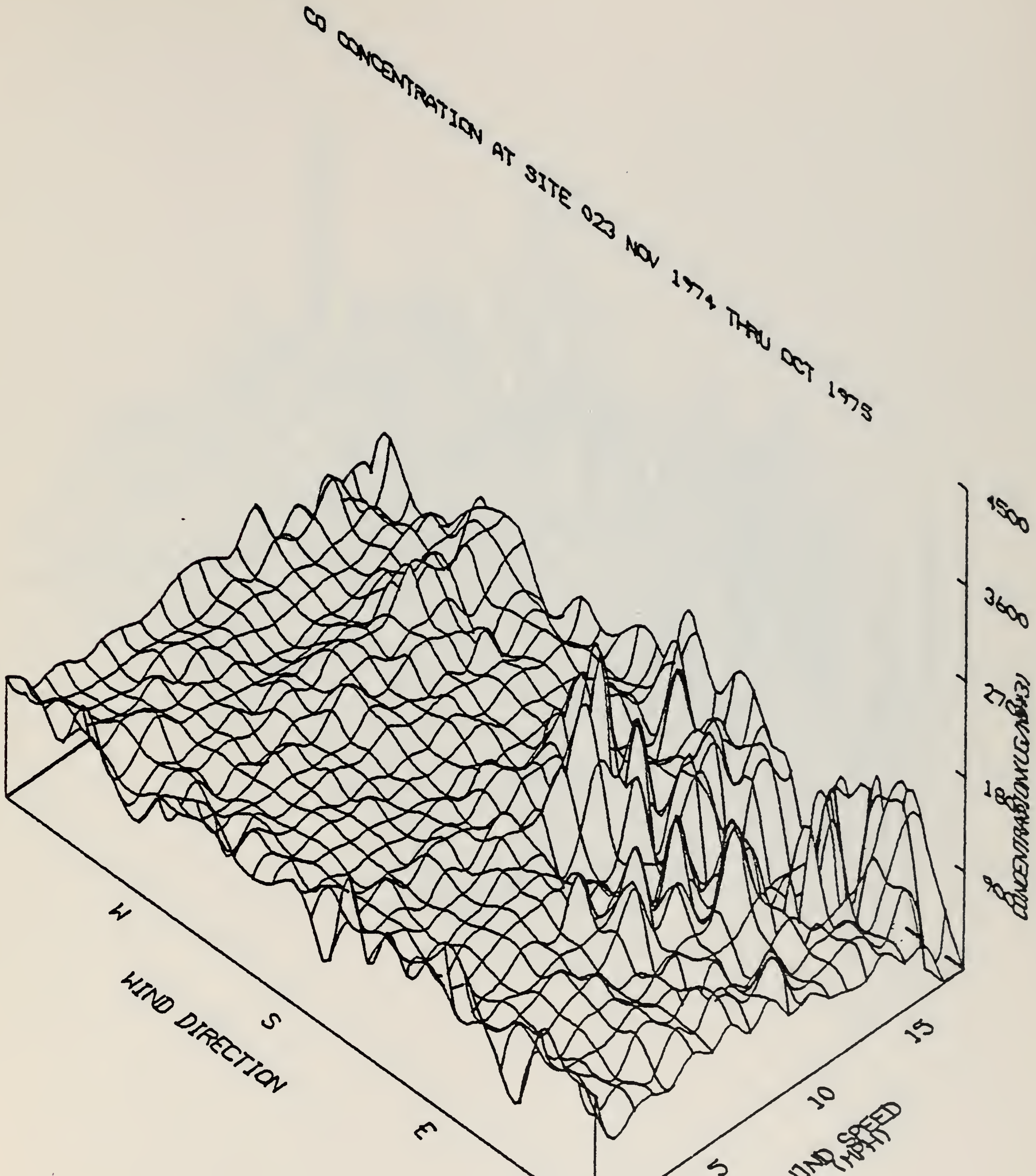

CO CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
WIND DIRECTION
N
E
S
W
WIND SPEED (MPH)
0
5
10
15
CONCENTRATION (UG/M**3)
3600
4500

FIGURE VI-55

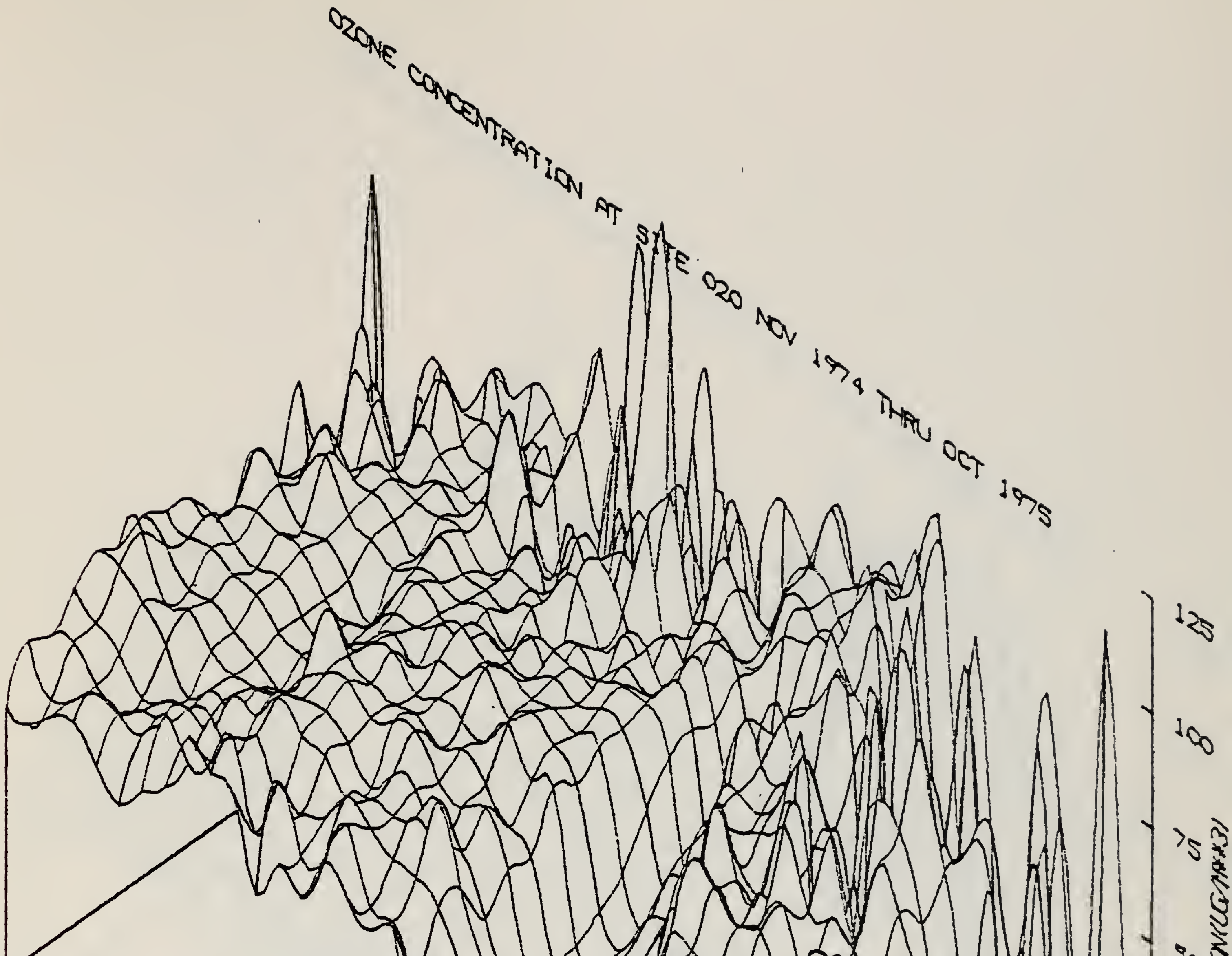
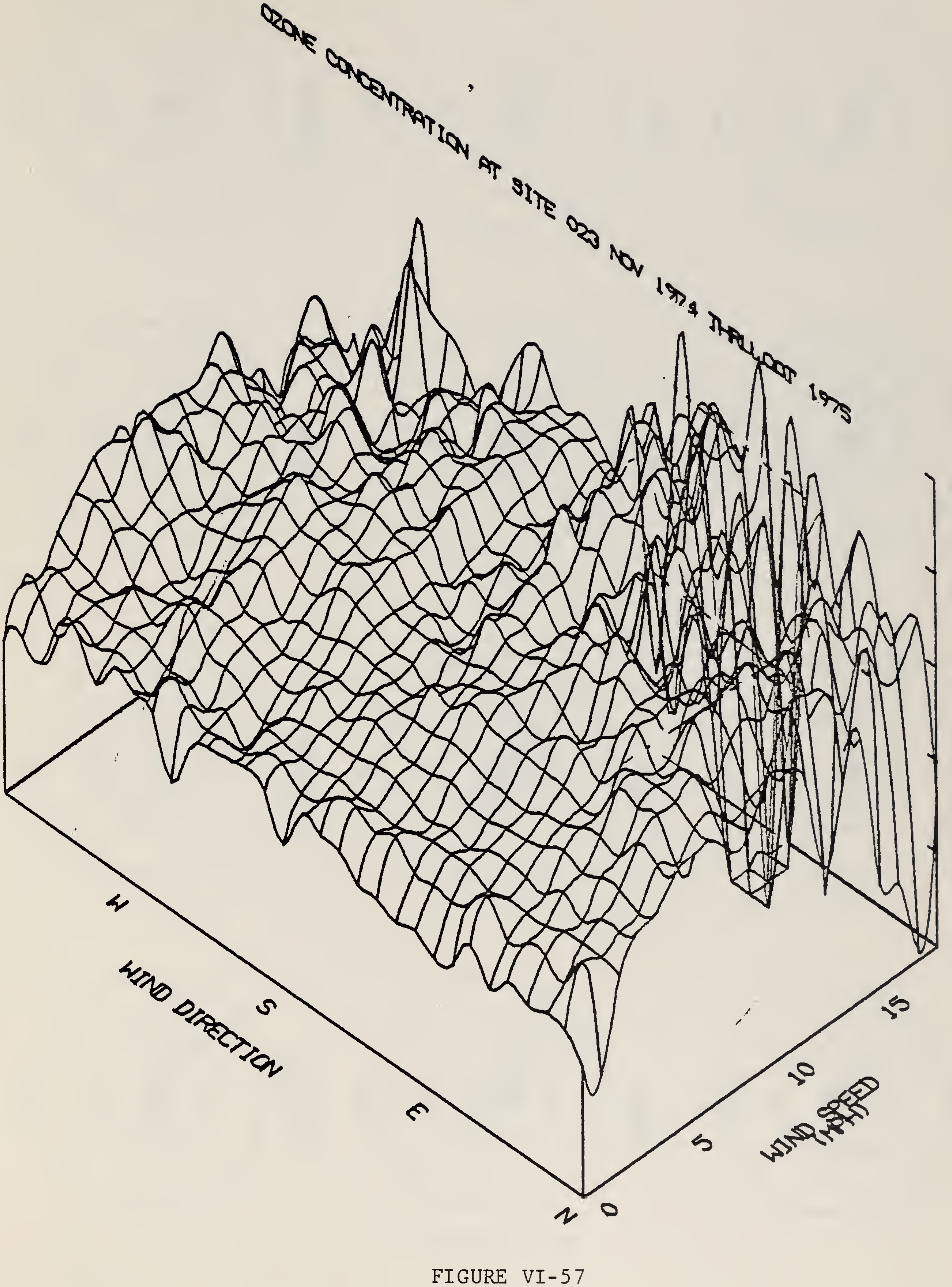

OZONE CONCENTRATION AT SITE 020 NOV 1974 THRU OCT 1975
WIND DIRECTION
W
S
E
N
WIND SPEED (MPH)
0
5
10
15
CONCENTRATION(UG/M**3)
25
125

FIGURE VI-56



OZONE CONCENTRATION AT SITE 023 NOV 1974 THRU OCT 1975
WIND DIRECTION
N
E
S
W
WIND SPEED (MPH)
0
5
10
15
CONCENTRATION (UG/M**3)

FIGURE VI-57

STATION 020 WIND ROSES (1974 - 1975)

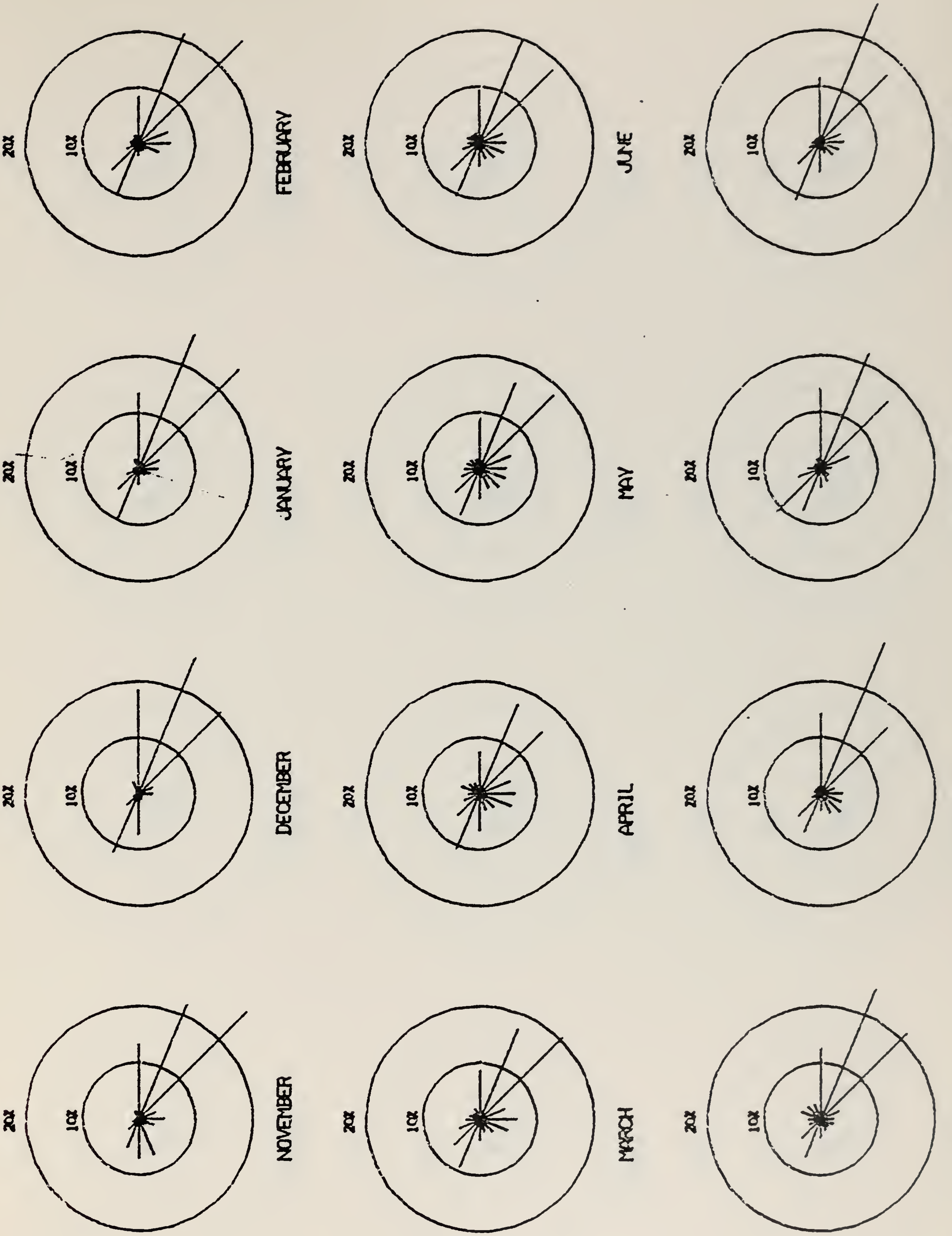


FIGURE VI-58

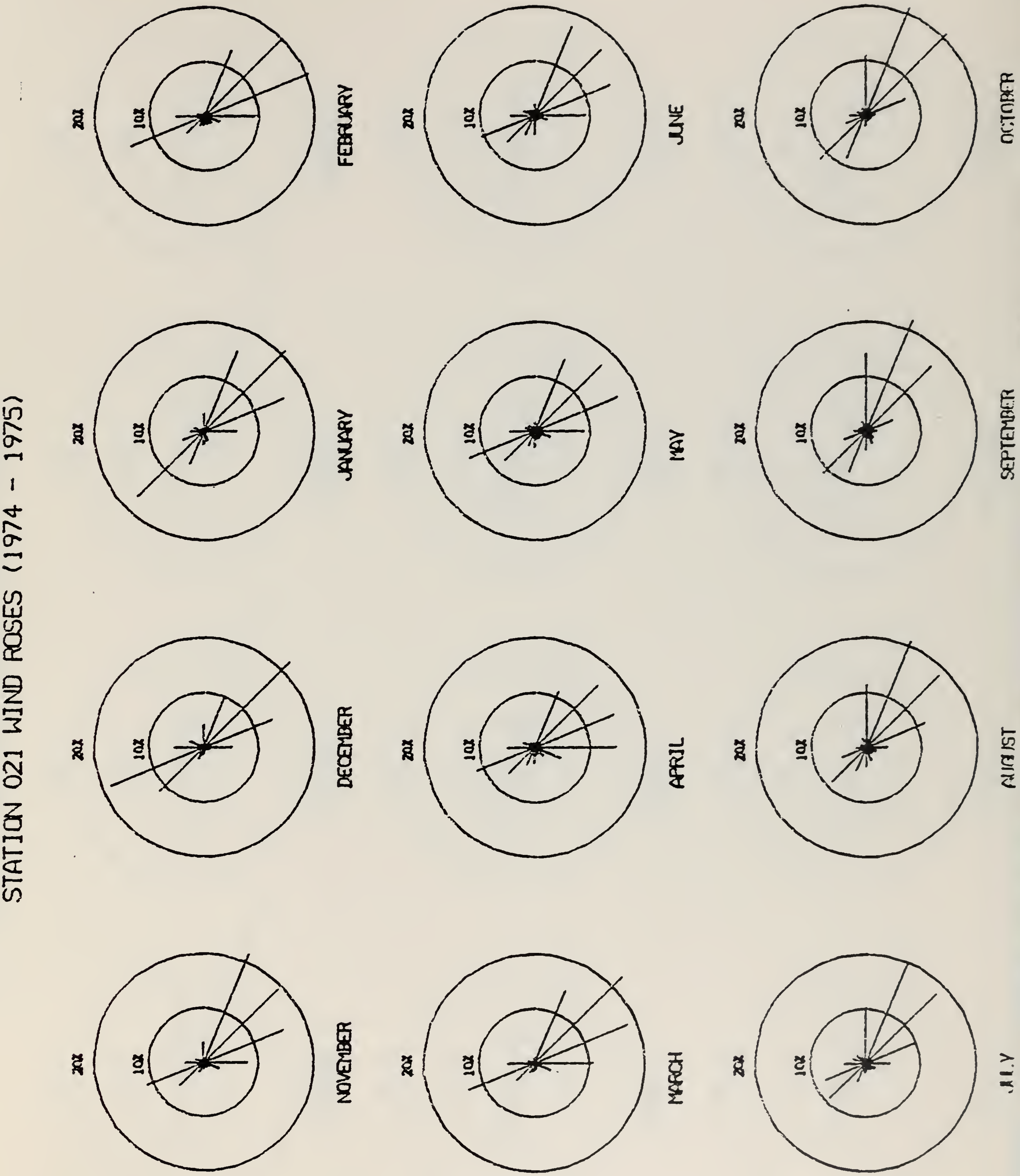

STATION 021 WIND ROSES (1974 - 1975)
20%
10%
FEBRUARY
JUNE
OCTOBER
JANUARY
MAY
SEPTEMBER
DECEMBER
APRIL
AUGUST
NOVEMBER
MARCH
JULY

FIGURE VI-59

STATION 022 WIND ROSES (1974 - 1975)

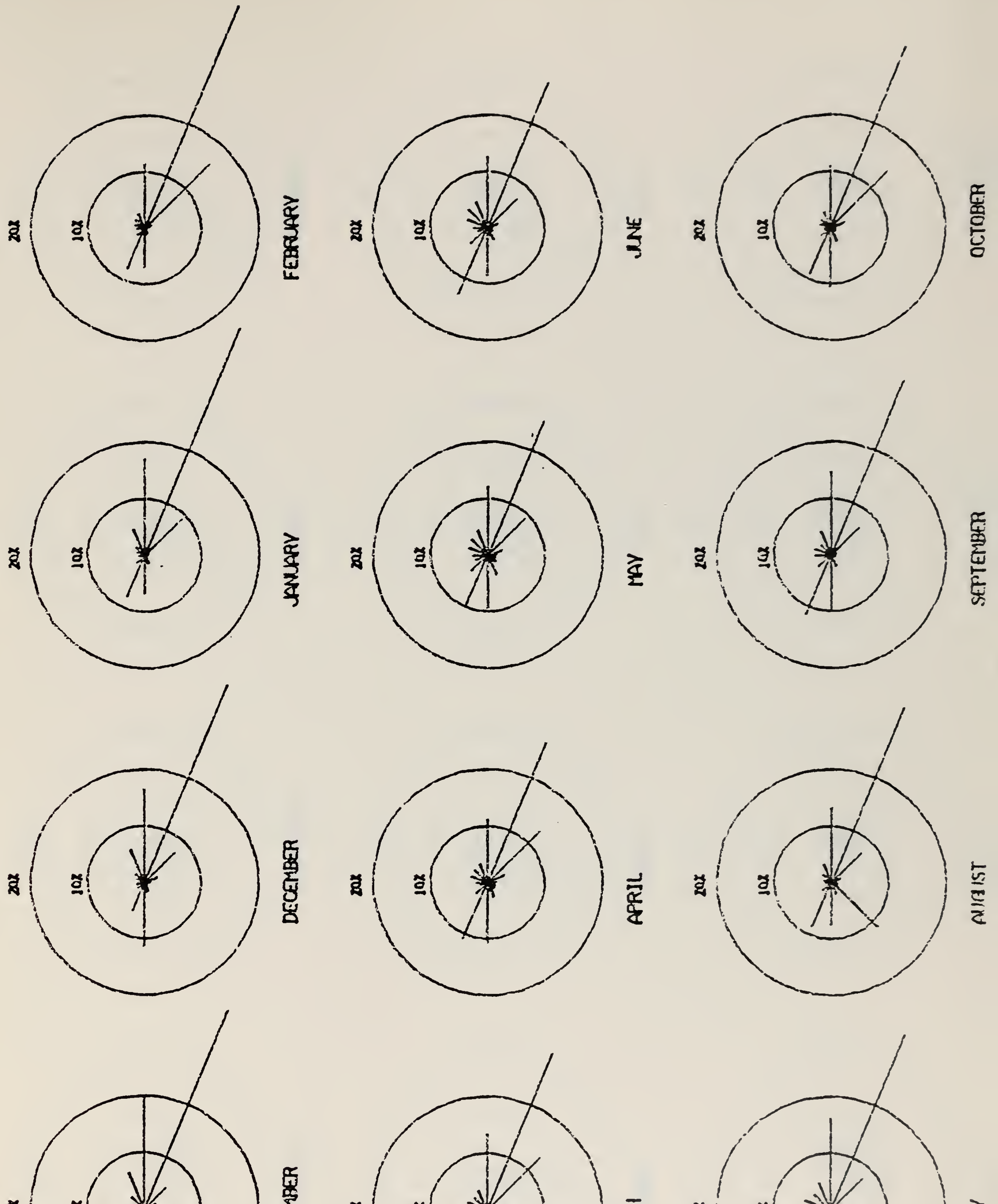


FIGURE VI-60

STATION 023 ELEVATION 8 FEET WIND ROSES (1974 - 1975)

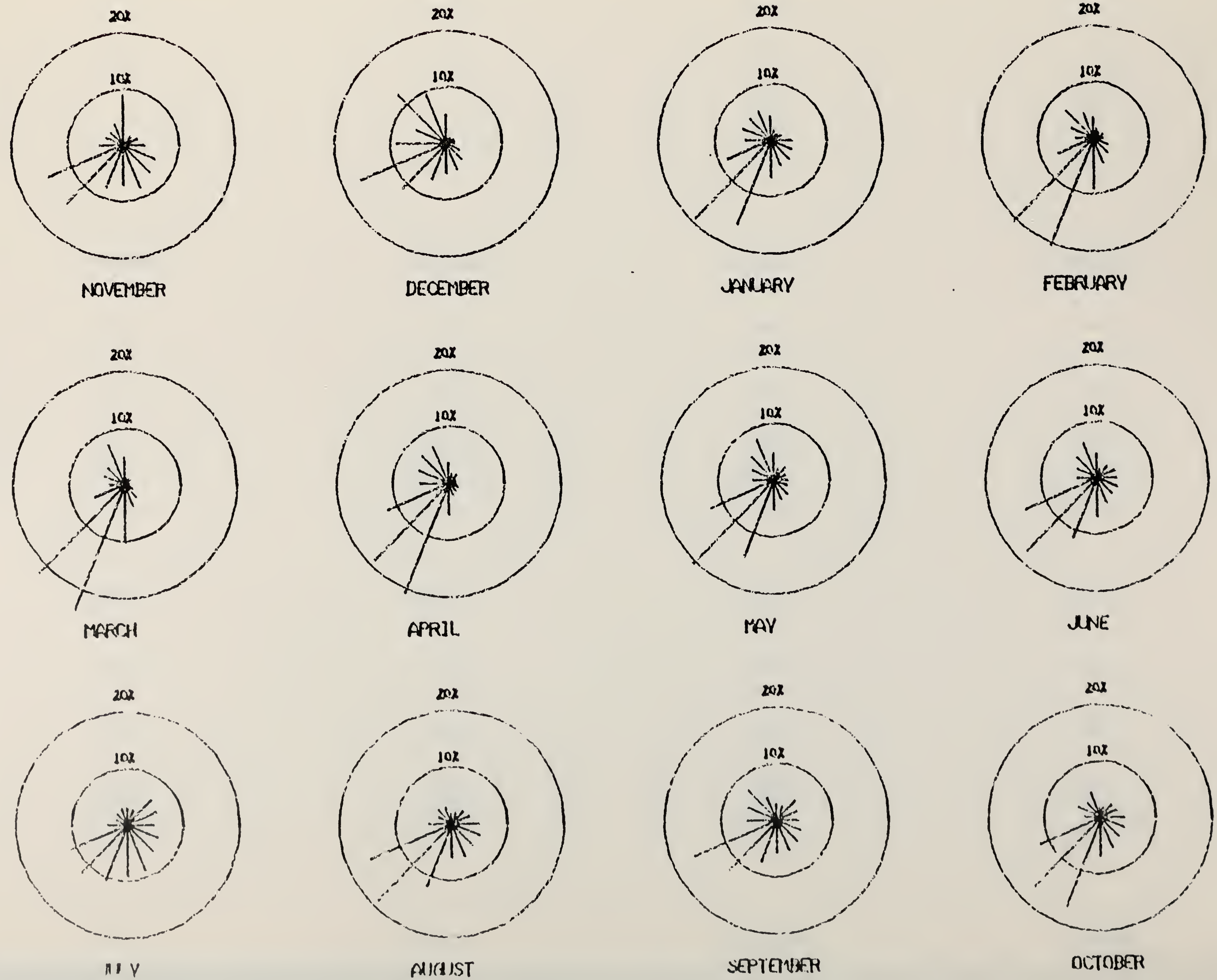


FIGURE VI-61

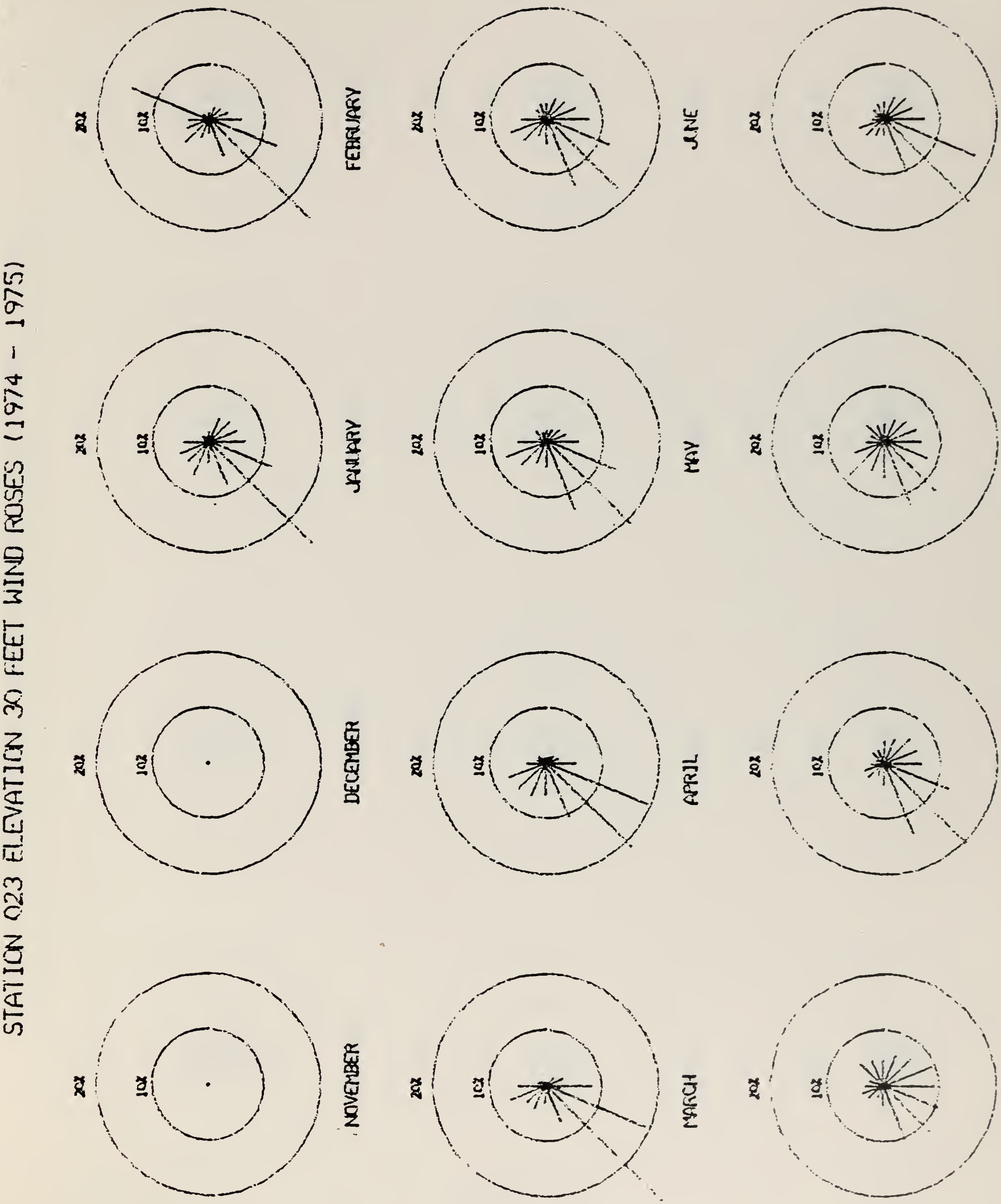

STATION 023 ELEVATION 30 FEET WIND ROSES (1974 - 1975)
FEBRUARY
JANUARY
DECEMBER
NOVEMBER
JUNE
MAY
APRIL
MARCH
SEPTEMBER
AUGUST

FIGURE VI-62

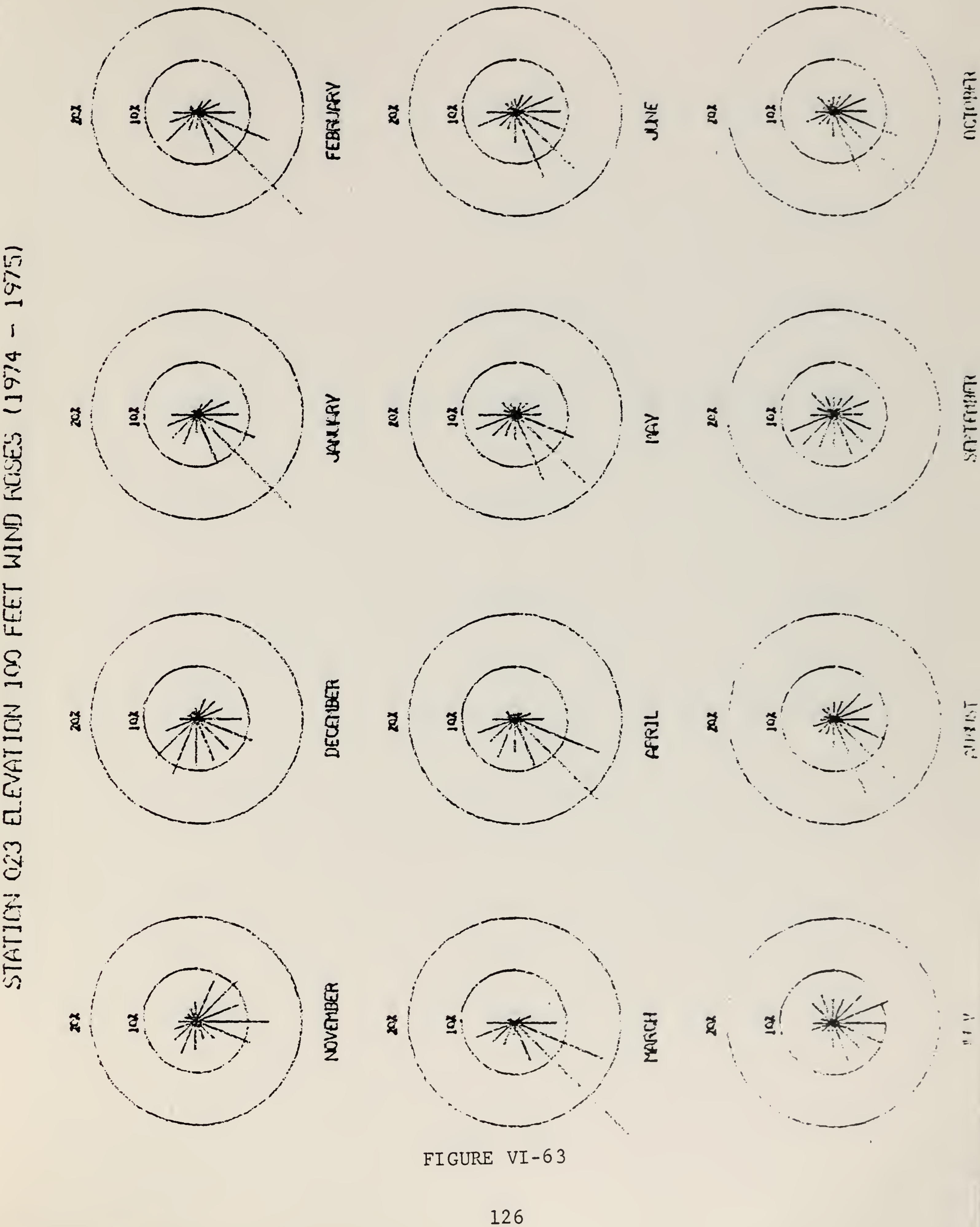

STATION 023 ELEVATION 100 FEET WIND ROSES (1974 - 1975)
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
OCTOBER
20%
10%

FIGURE VI-63

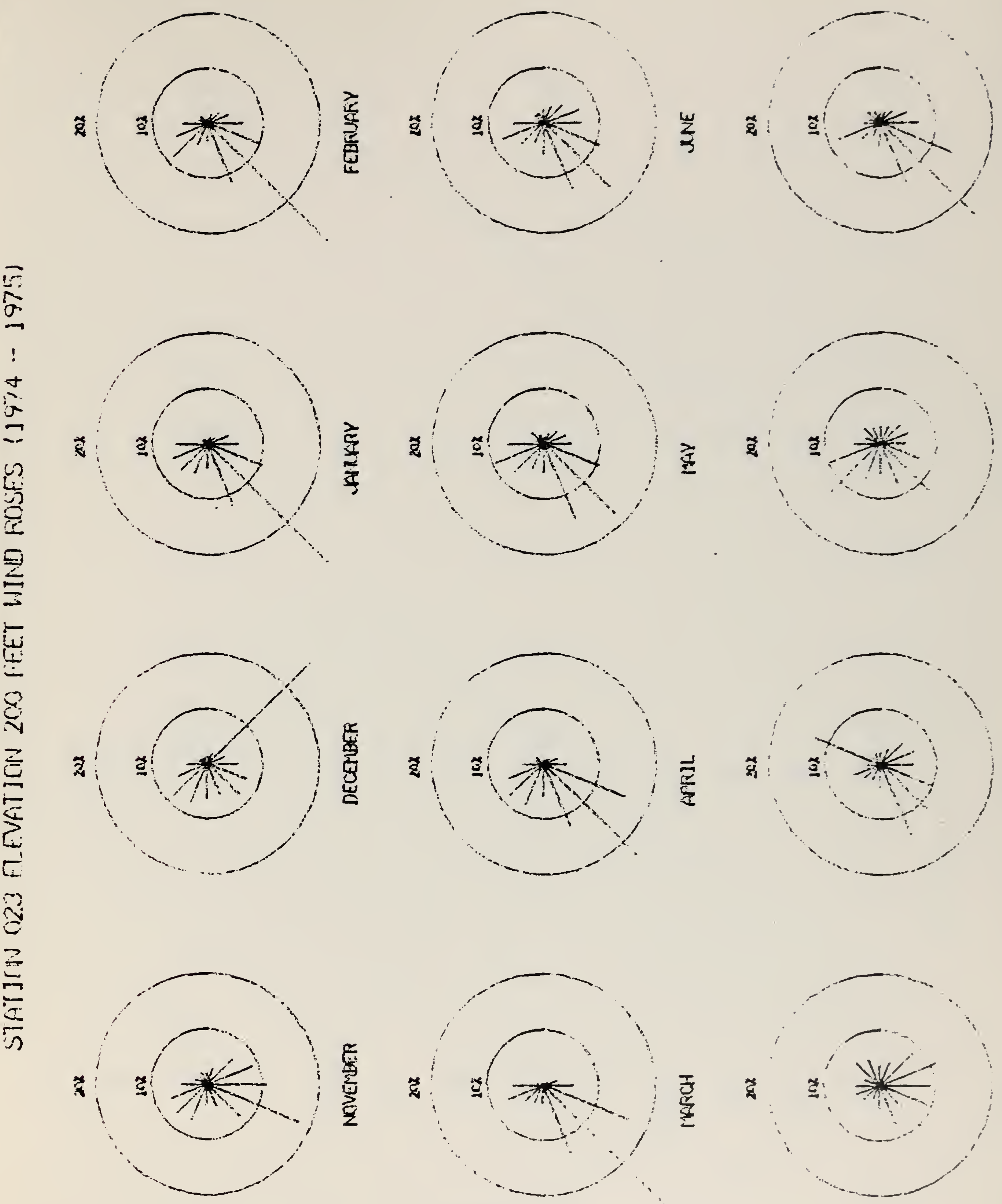

STATION 023 ELEVATION 200 FEET WIND ROSES (1974 - 1975)
20%
10%
FEBRUARY
JANUARY
DECEMBER
NOVEMBER
JUNE
MAY
APRIL
MARCH
OCTOBER
SEPTEMBER
AUGUST
JULY

FIGURE VI-64

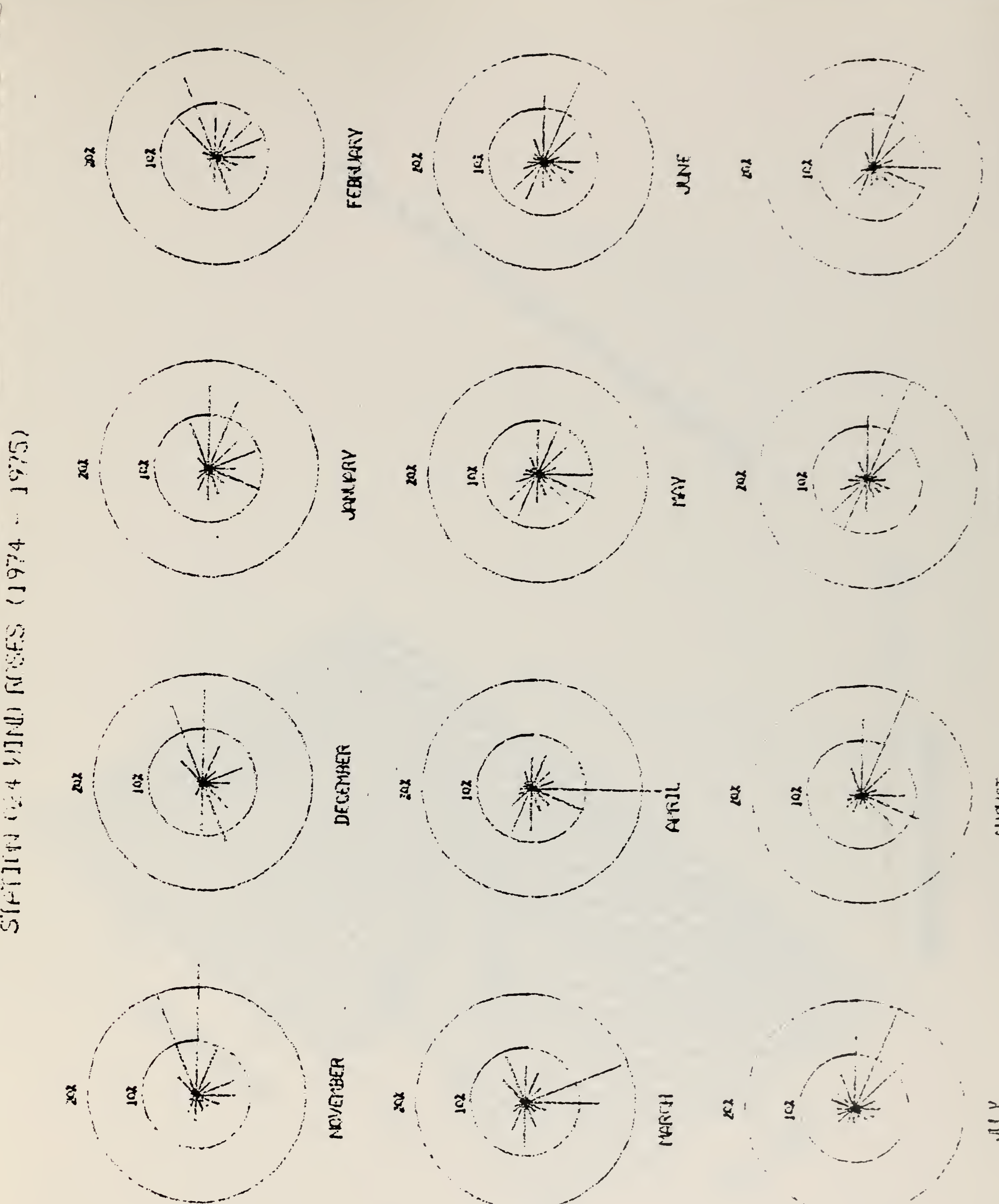
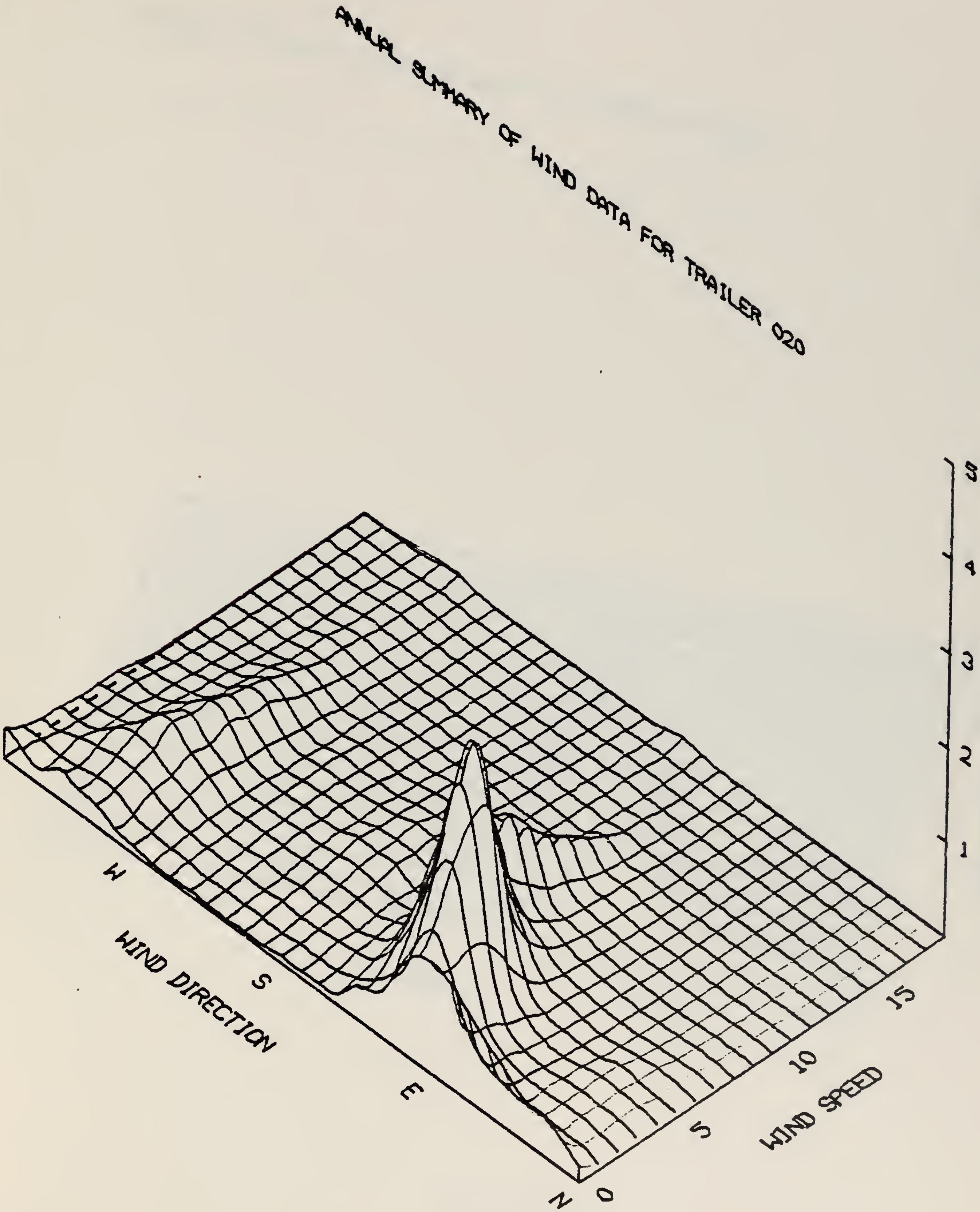

WIND ROSES (1974 - 1975)
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
10%
20%

FIGURE VI-65



ANNUAL SUMMARY OF WIND DATA FOR TRAILER 020
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND DIRECTION
N
E
S
W
WIND SPEED
0
5
10
15

FIGURE VI-66

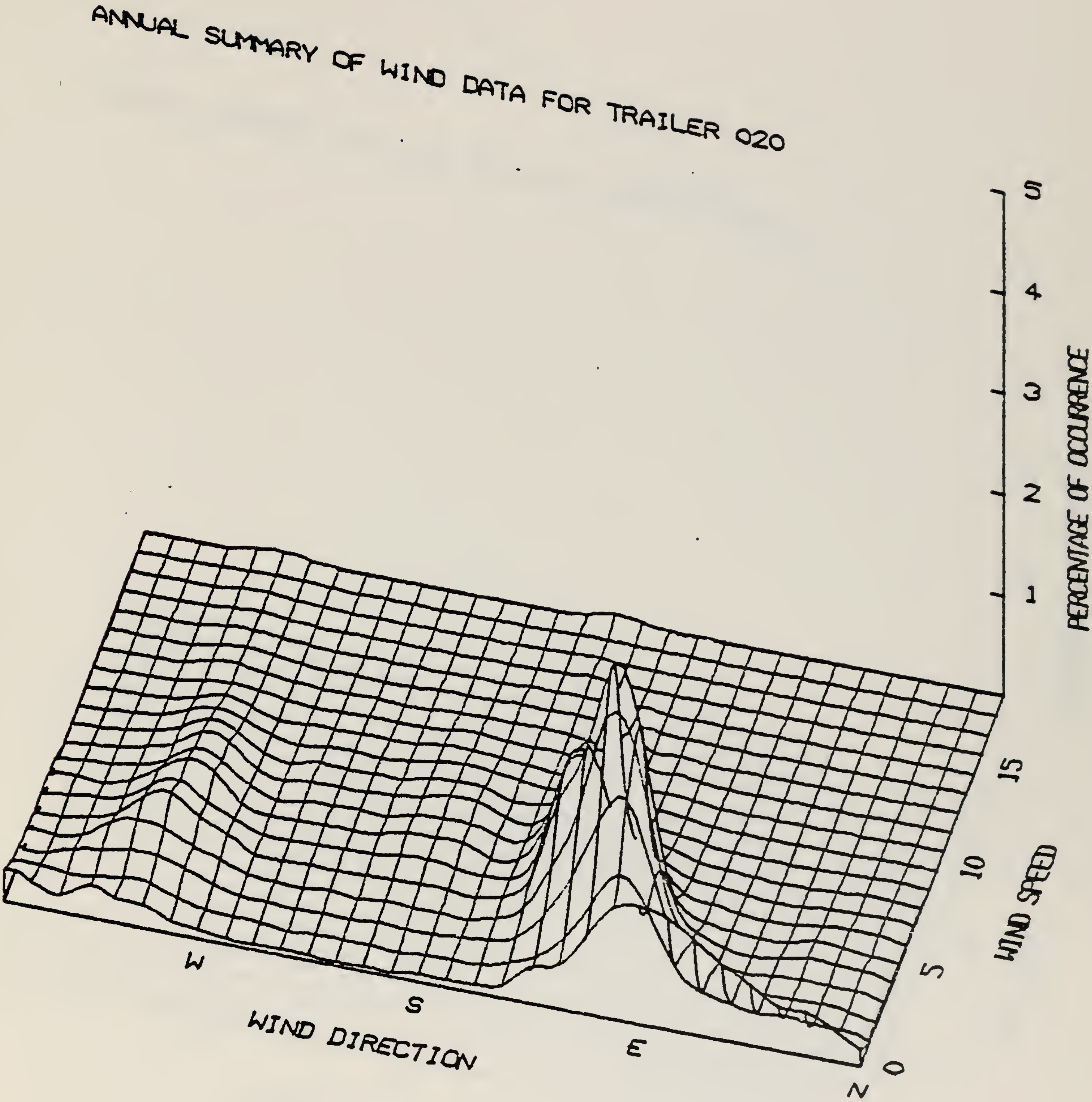
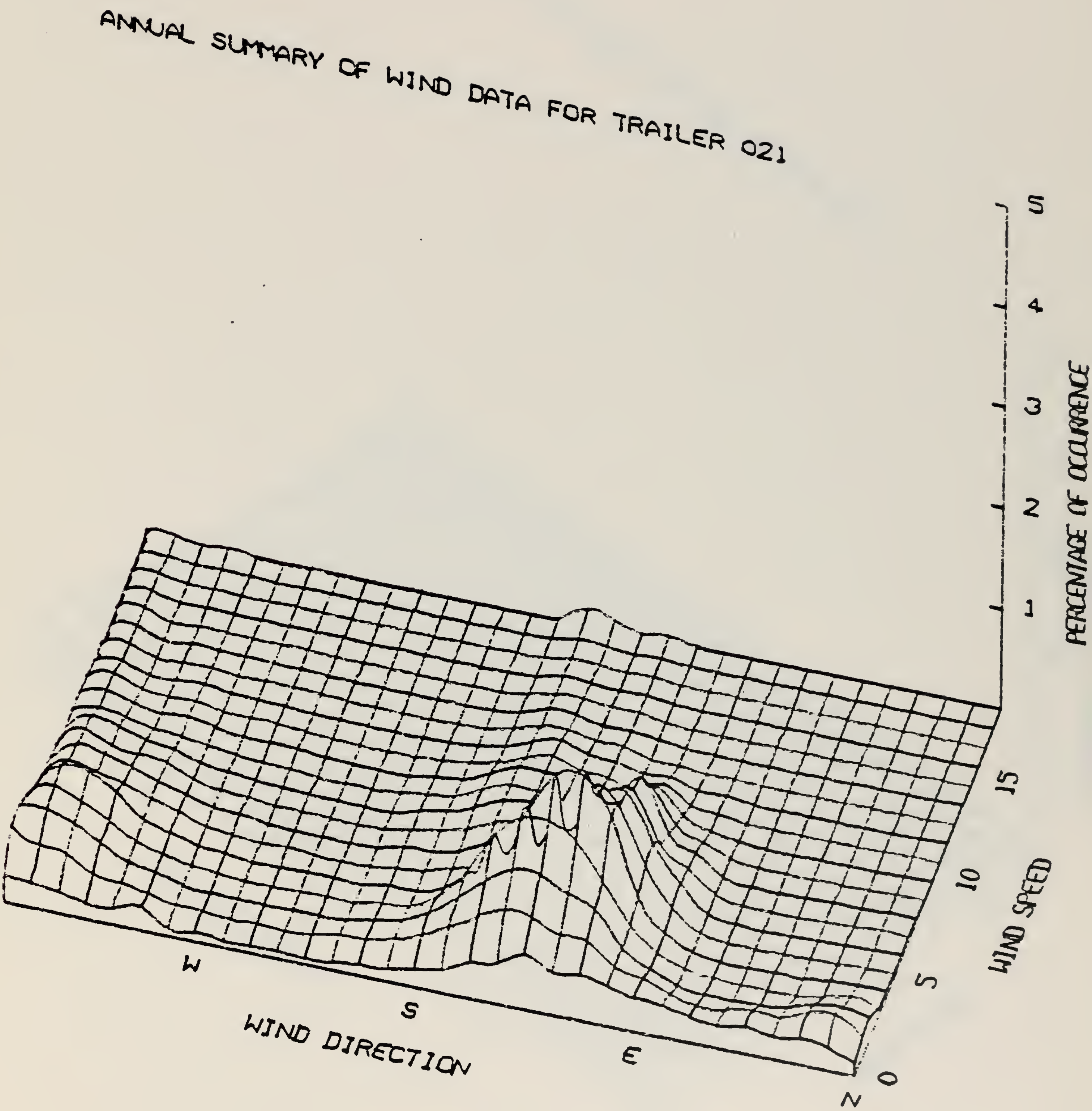

ANNUAL SUMMARY OF WIND DATA FOR TRAILER 020
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND SPEED
0
5
10
15
WIND DIRECTION
W
S
E
N

FIGURE VI-67



ANNUAL SUMMARY OF WIND DATA FOR TRAILER 021
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND SPEED
0
5
10
15
WIND DIRECTION
W
S
E
N

FIGURE VI-68

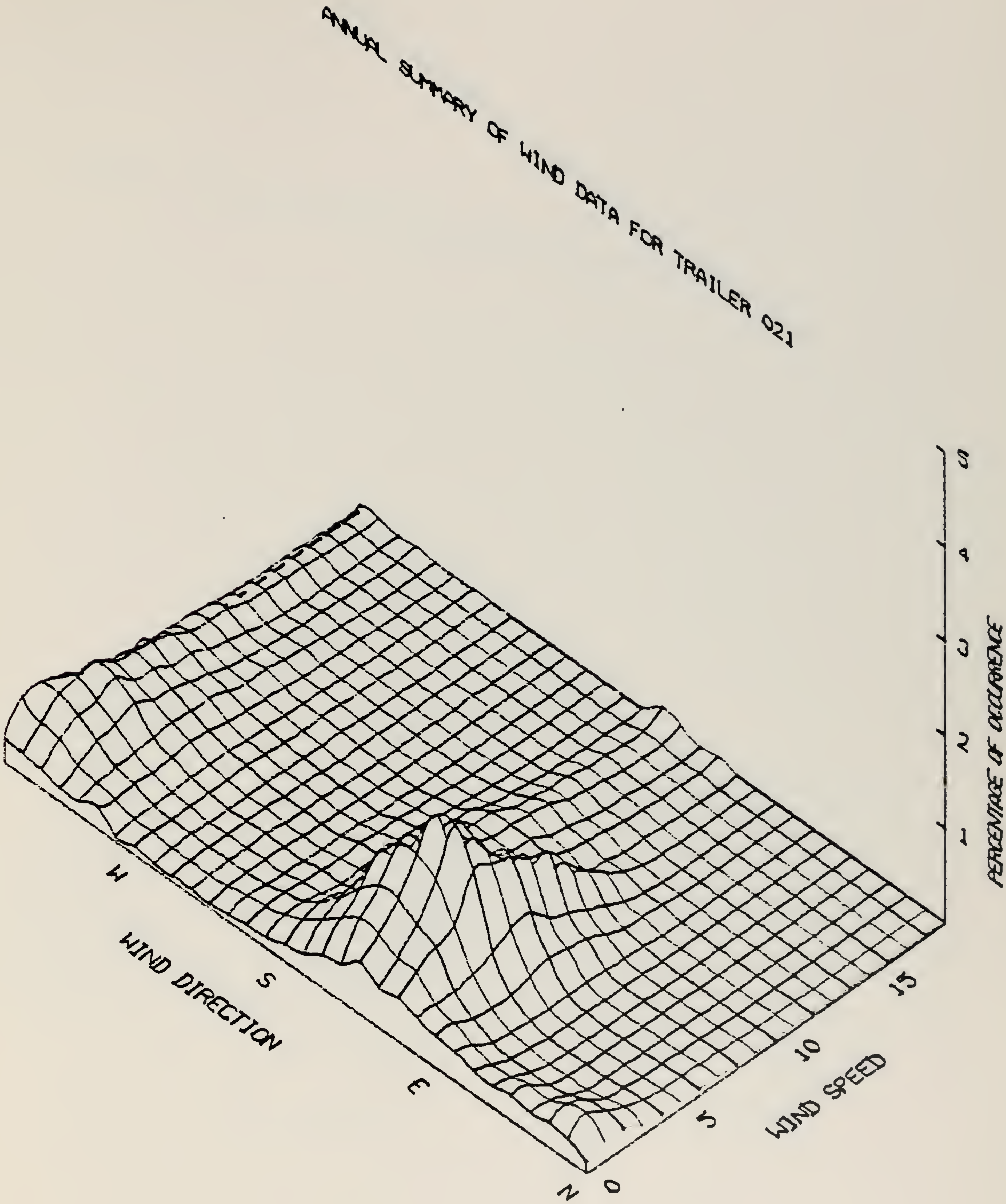

ANNUAL SUMMARY OF WIND DATA FOR TRAILER 021
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND DIRECTION
N
E
S
W
WIND SPEED
0
5
10
15

FIGURE VI-69

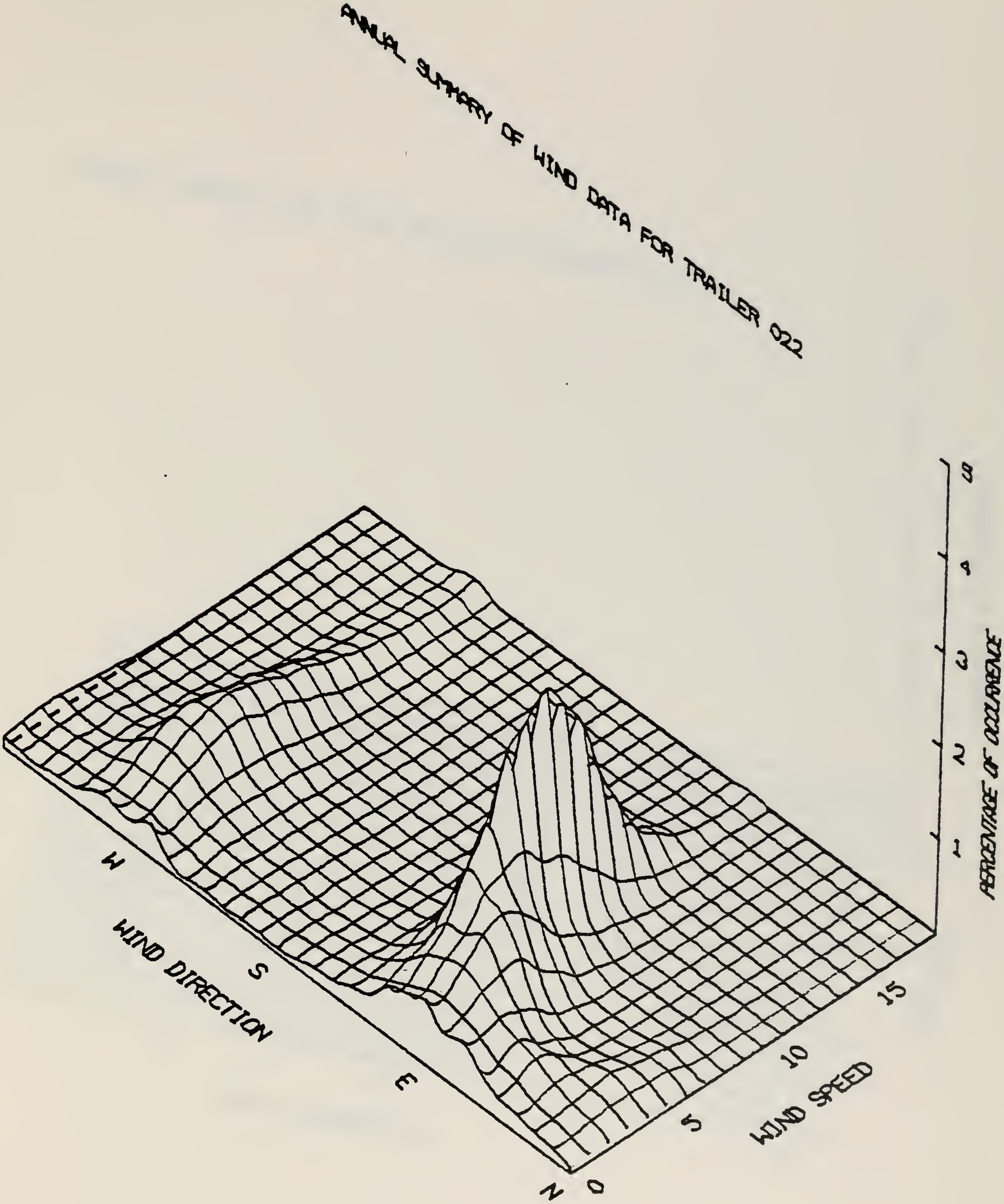

ANNUAL SUMMARY OF WIND DATA FOR TRAILER 022
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND DIRECTION
N
E
S
W
WIND SPEED
0
5
10
15

FIGURE VI-70

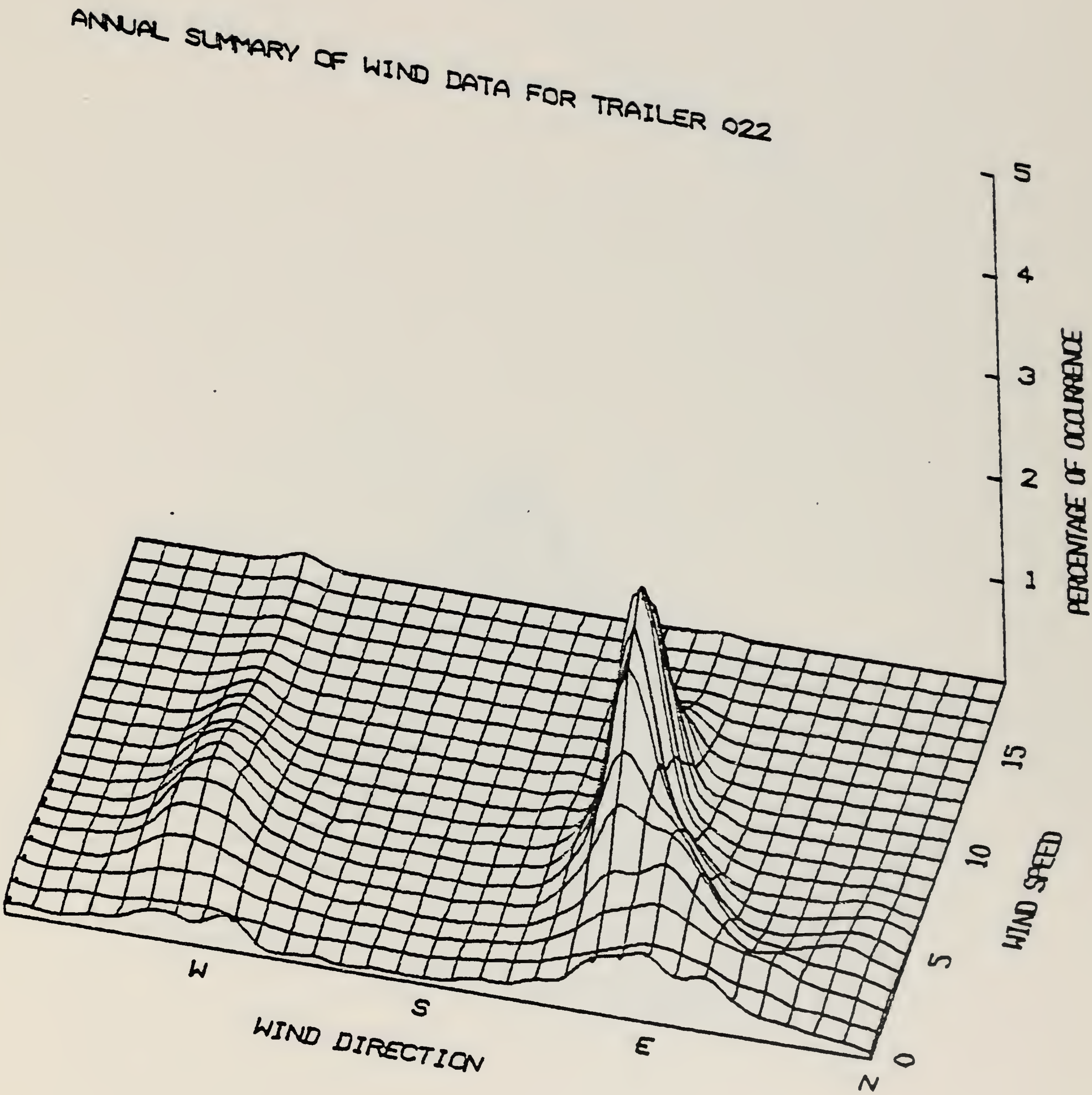
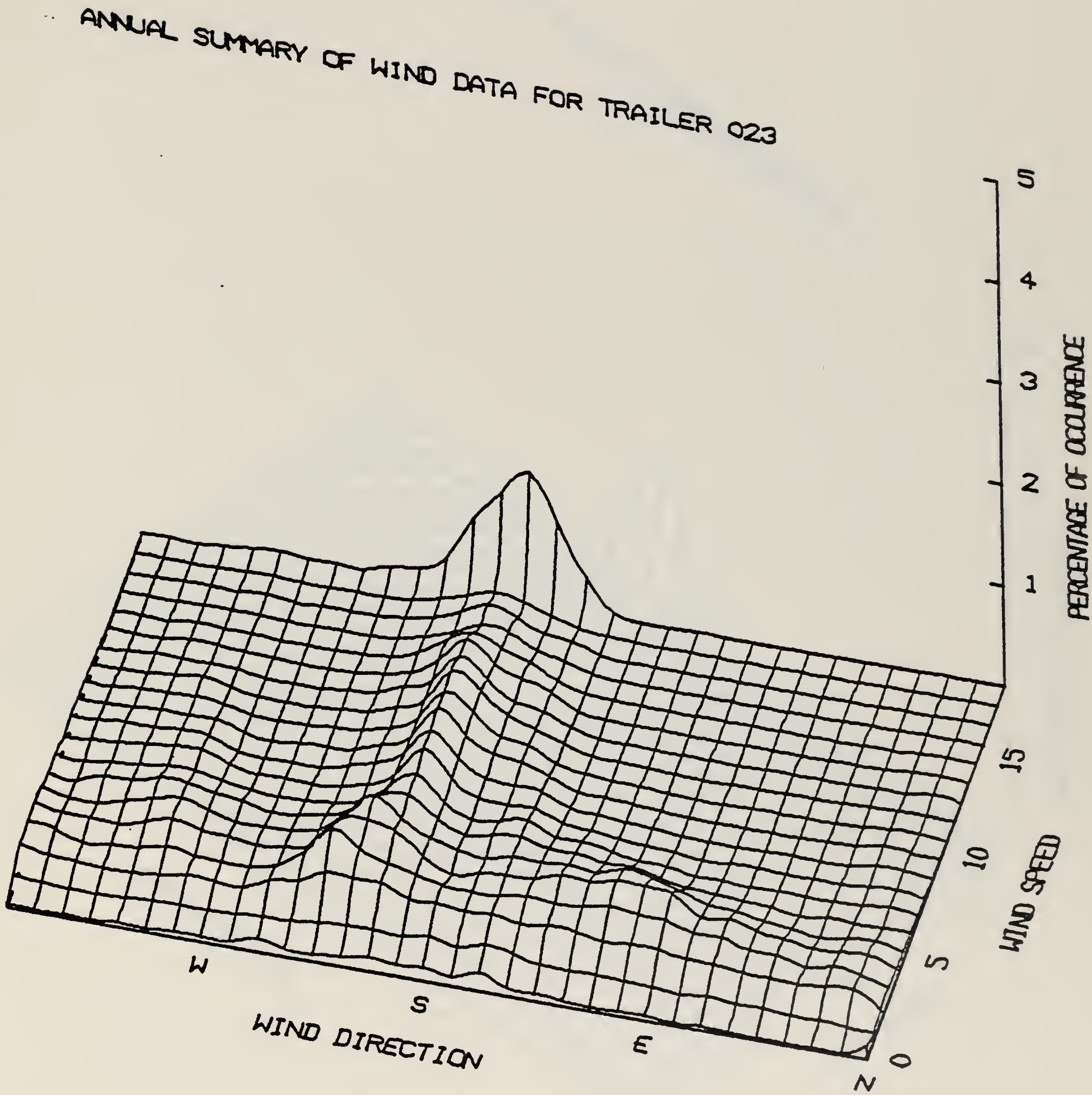
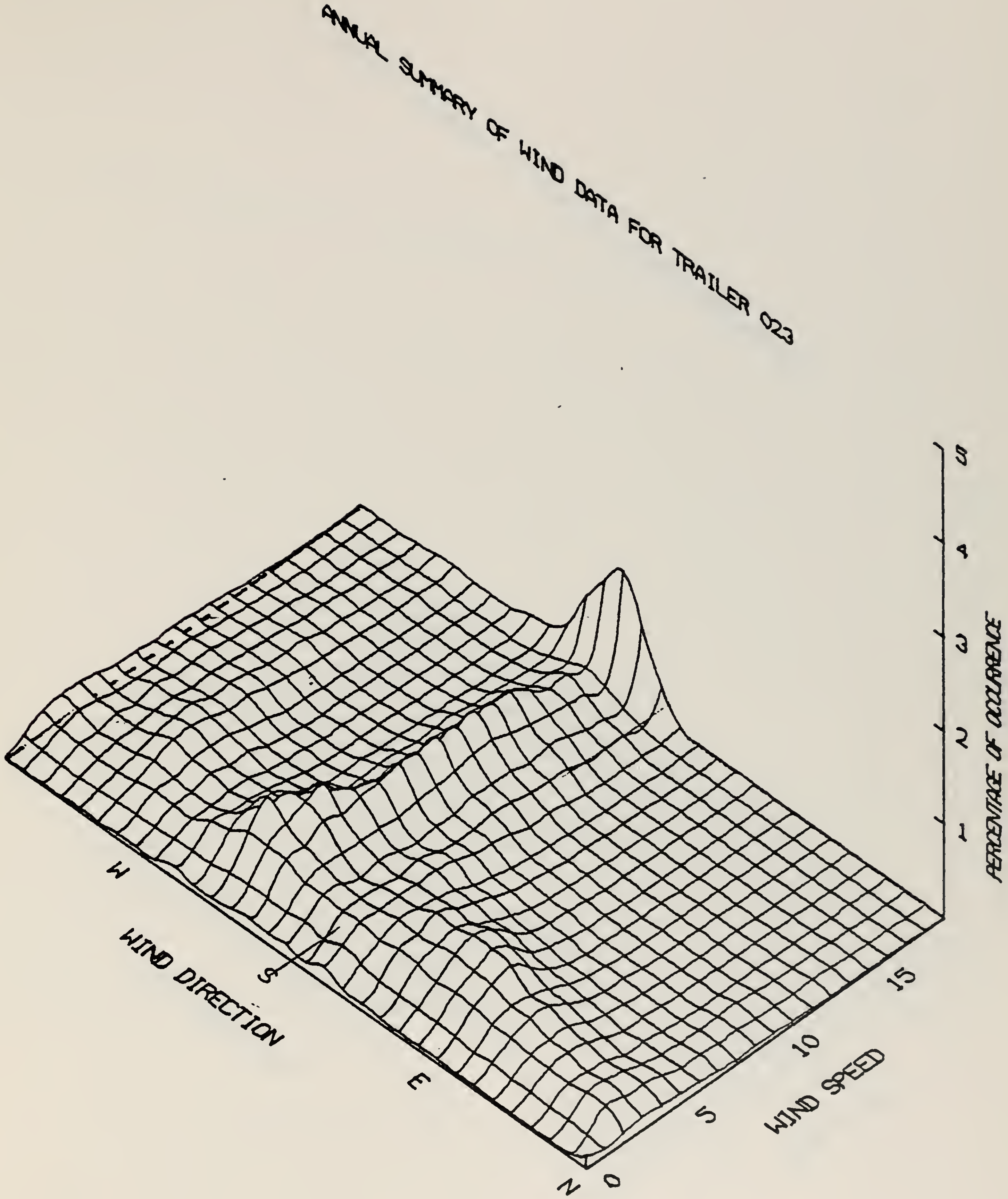

ANNUAL SUMMARY OF WIND DATA FOR TRAILER 022
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND SPEED
0
5
10
15
WIND DIRECTION
W
S
E
N

FIGURE VI-71



ANNUAL SUMMARY OF WIND DATA FOR TRAILER 023
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND SPEED
0
5
10
15
WIND DIRECTION
W
S
E
N

FIGURE VI-72



ANNUAL SUMMARY OF WIND DATA FOR TRAILER 023
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND DIRECTION
N
E
S
W
WIND SPEED
0
5
10
15

FIGURE VI-73

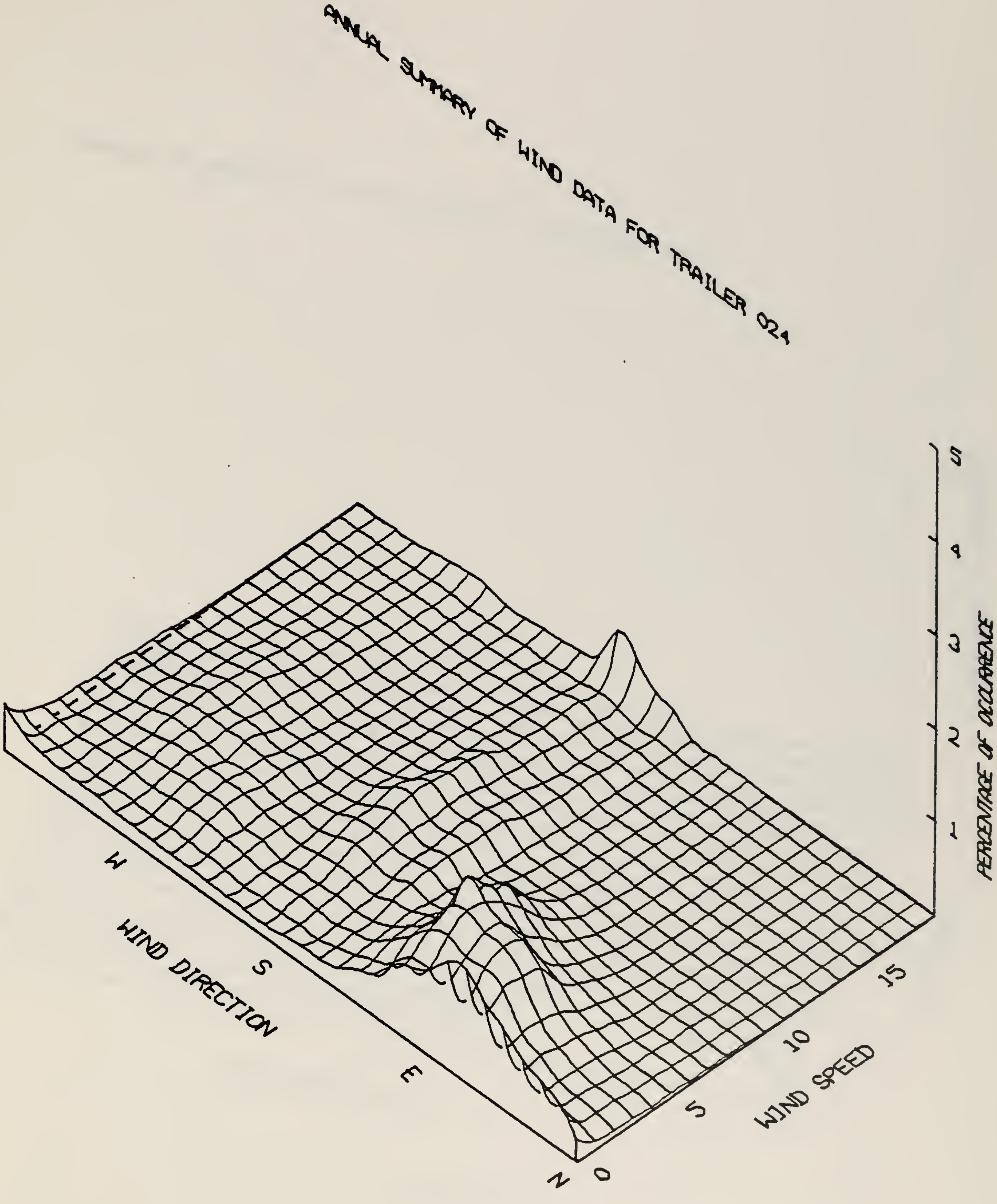

ANNUAL SUMMARY OF WIND DATA FOR TRAILER 024
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND DIRECTION
N
E
S
W
WIND SPEED
0
5
10
15

FIGURE VI-74

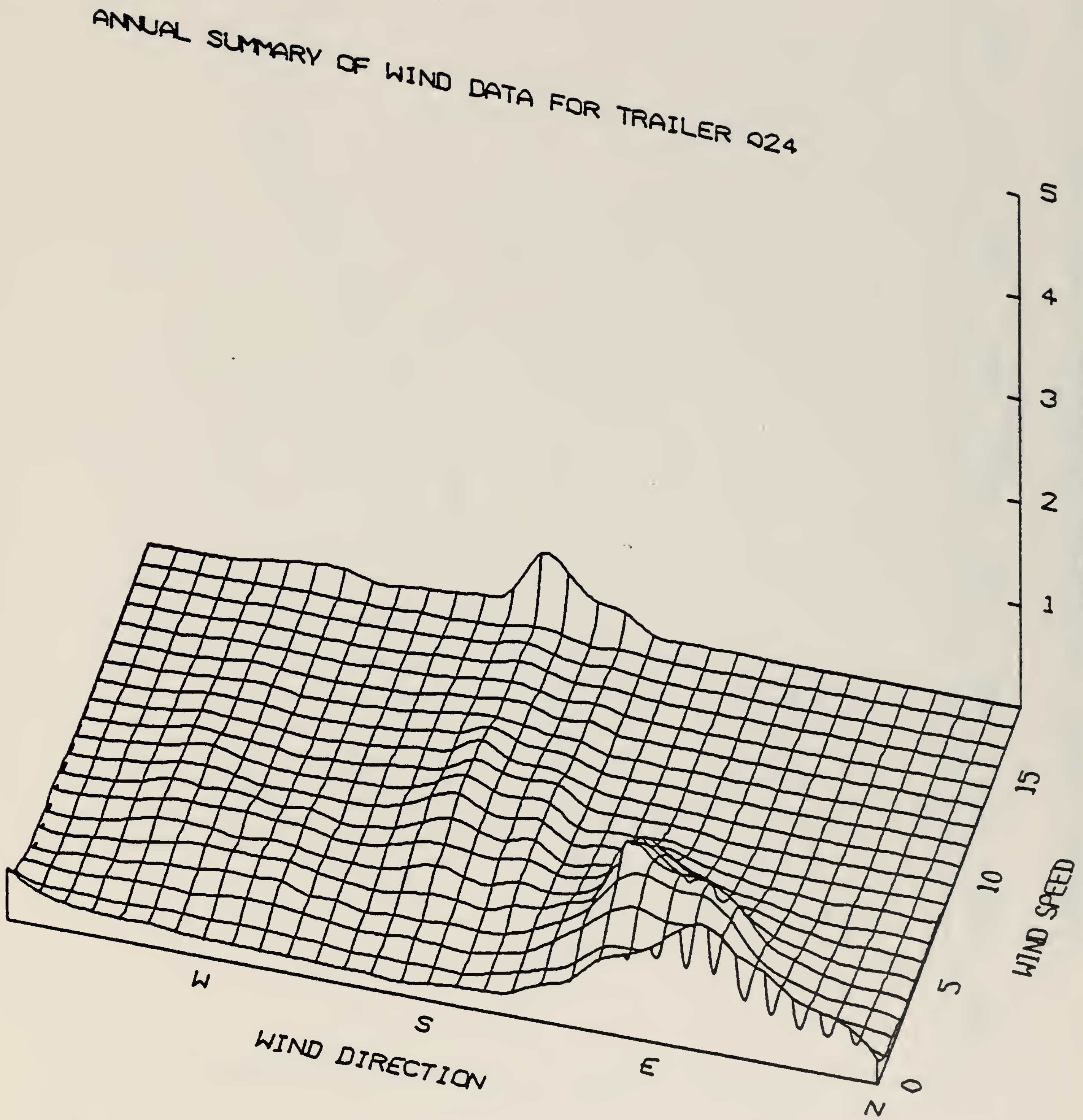
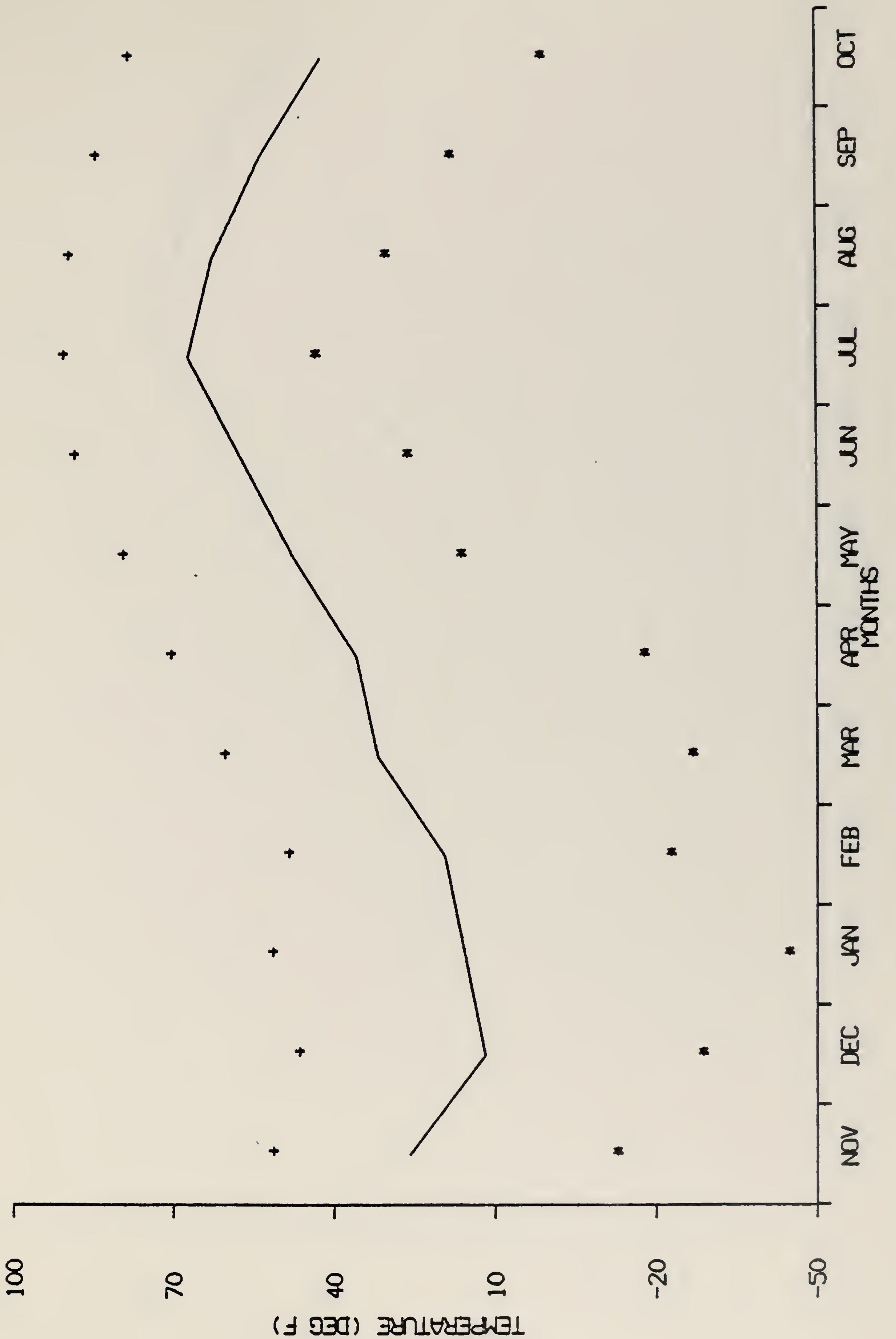

ANNUAL SUMMARY OF WIND DATA FOR TRAILER 024
PERCENTAGE OF OCCURRENCE
1
2
3
4
5
WIND SPEED
0
5
10
15
WIND DIRECTION
N
E
S
W

FIGURE VI-75



AVERAGE, MAXIMUM, AND MINIMUM TEMPERATURES AT SITE 020(1974 - 1975)

FIGURE VI- 76

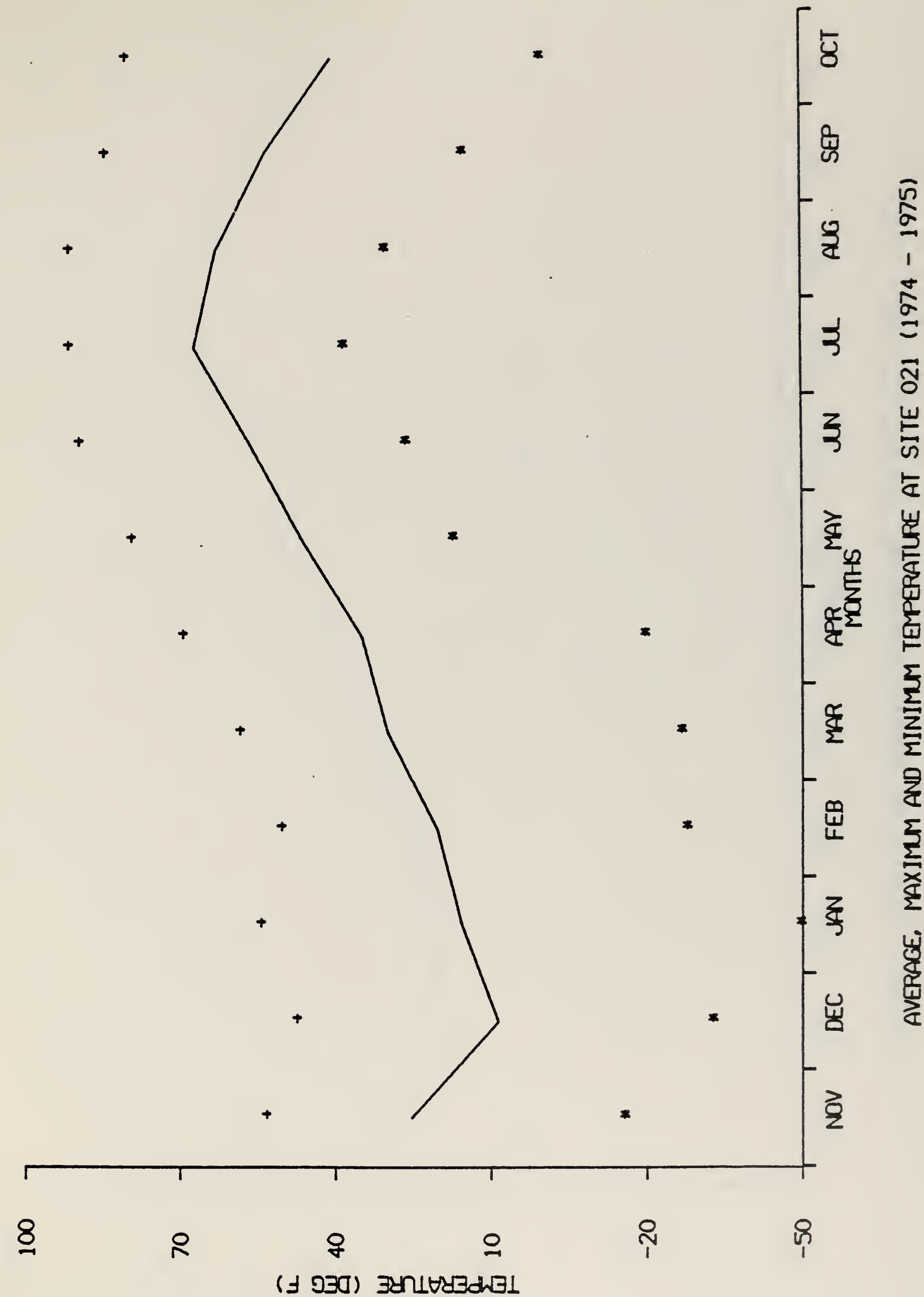
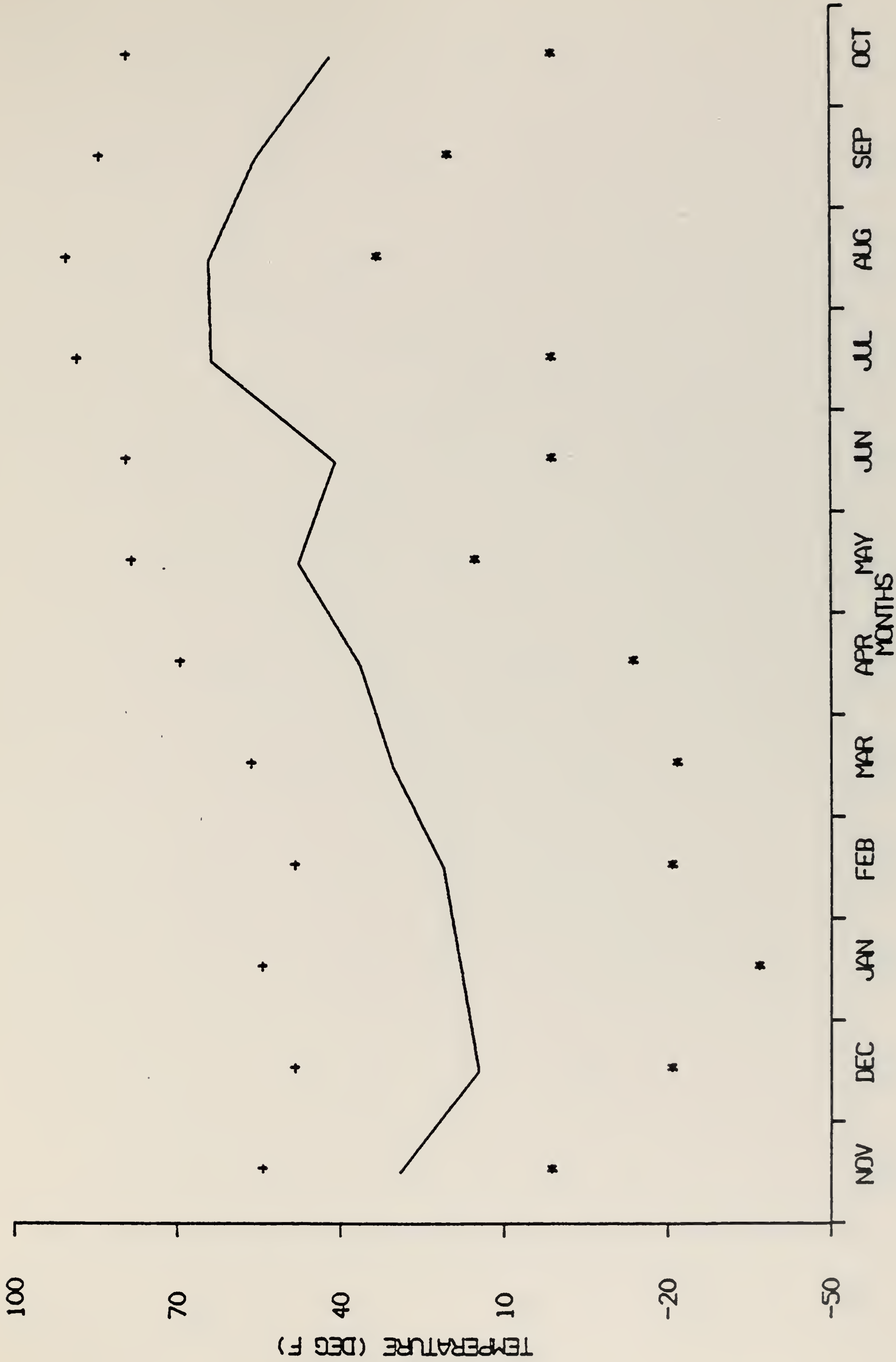
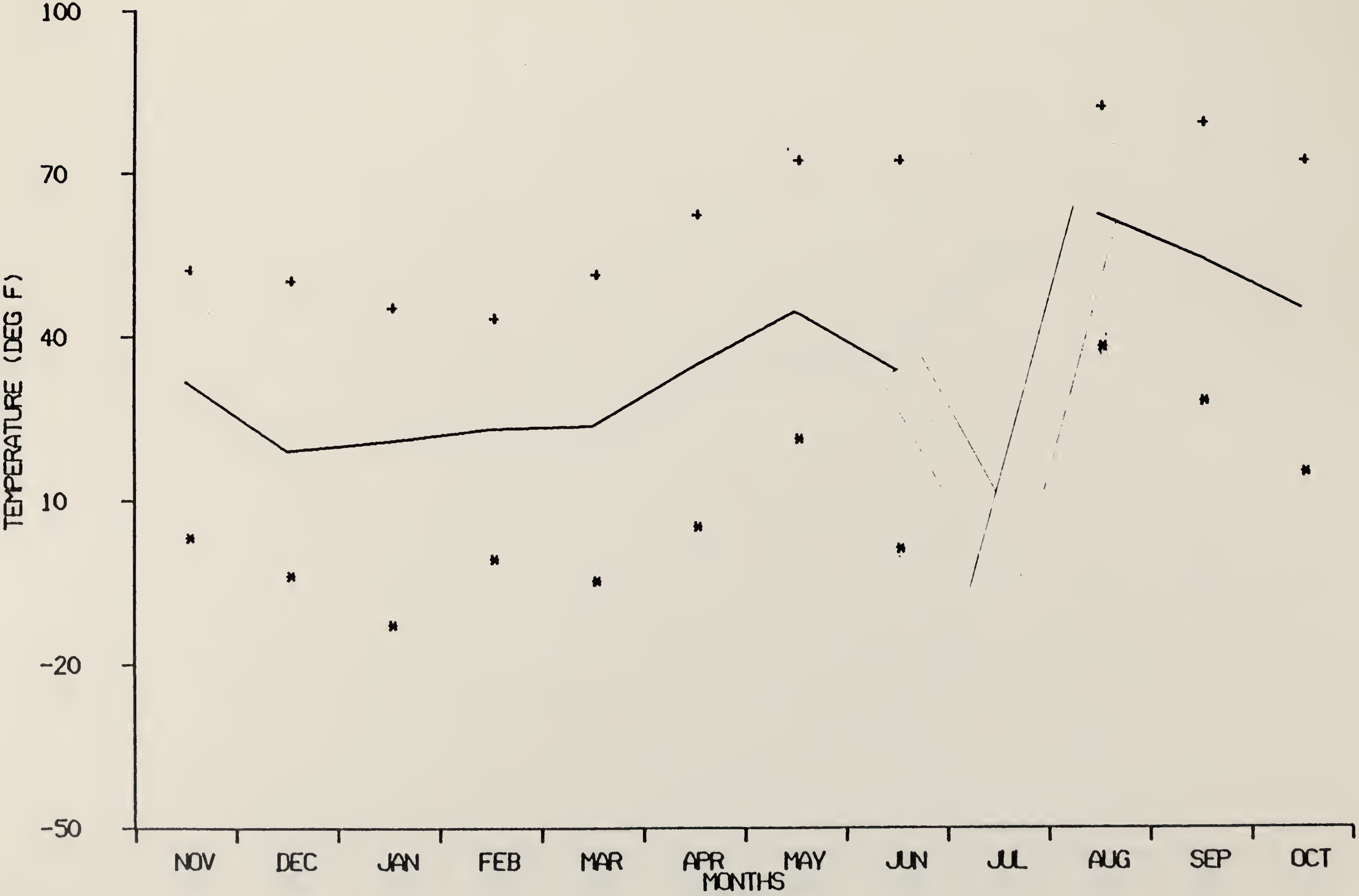

100
70
40
10
-20
-50
TEMPERATURE (DEG F)
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
AVERAGE, MAXIMUM AND MINIMUM TEMPERATURE AT SITE 021 (1974 - 1975)

FIGURE VI-77



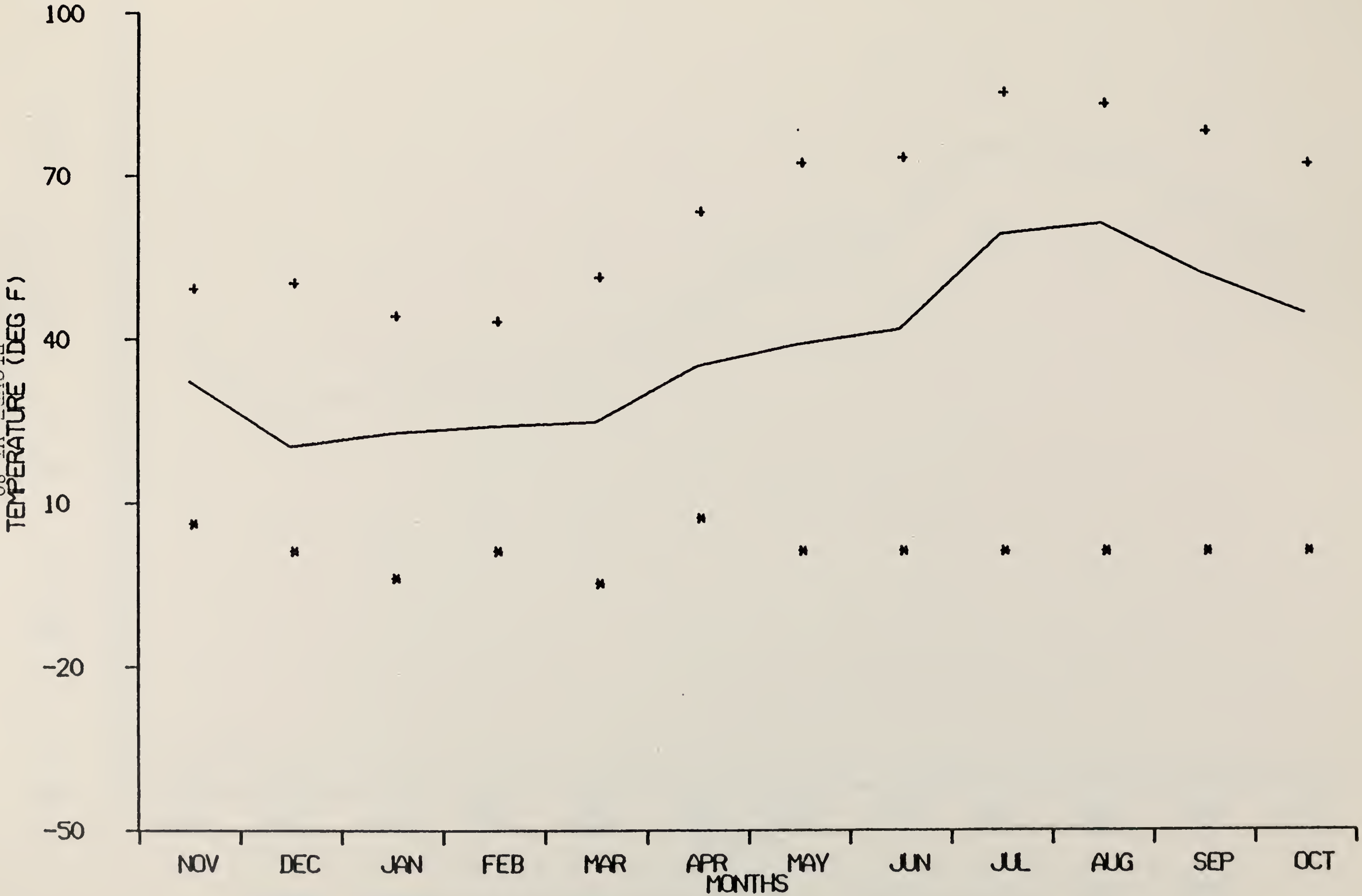
AVERAGE, MAXIMUM AND MINIMUM TEMPERATURE AT SITE 022 (1974 - 1975)

FIGURE VI- 78



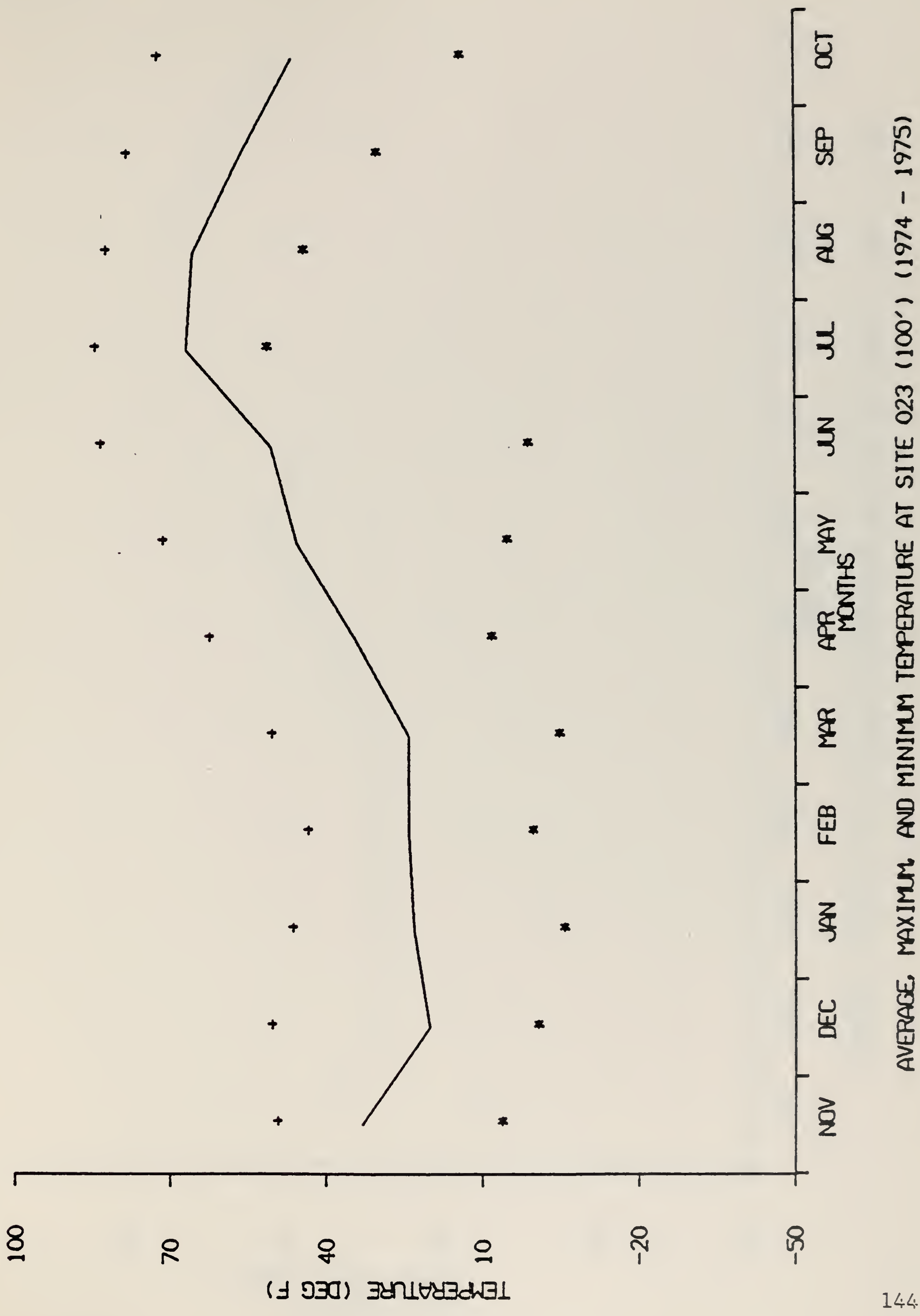
AVERAGE, MAXIMUM, AND MINIMUM TEMPERATURE AT SITE 023 (8') (1974 - 1975)

FIGURE VI-79



AVERAGE, MAXIMUM, AND MINIMUM TEMPERATURE AT SITE 023 (30′) (1974 - 1975)

FIGURE VI-80



AVERAGE, MAXIMUM, AND MINIMUM TEMPERATURE AT SITE 023 (100') (1974 - 1975)
TEMPERATURE (DEG F)
100
70
40
10
-20
-50
MONTHS
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT

FIGURE VI-81

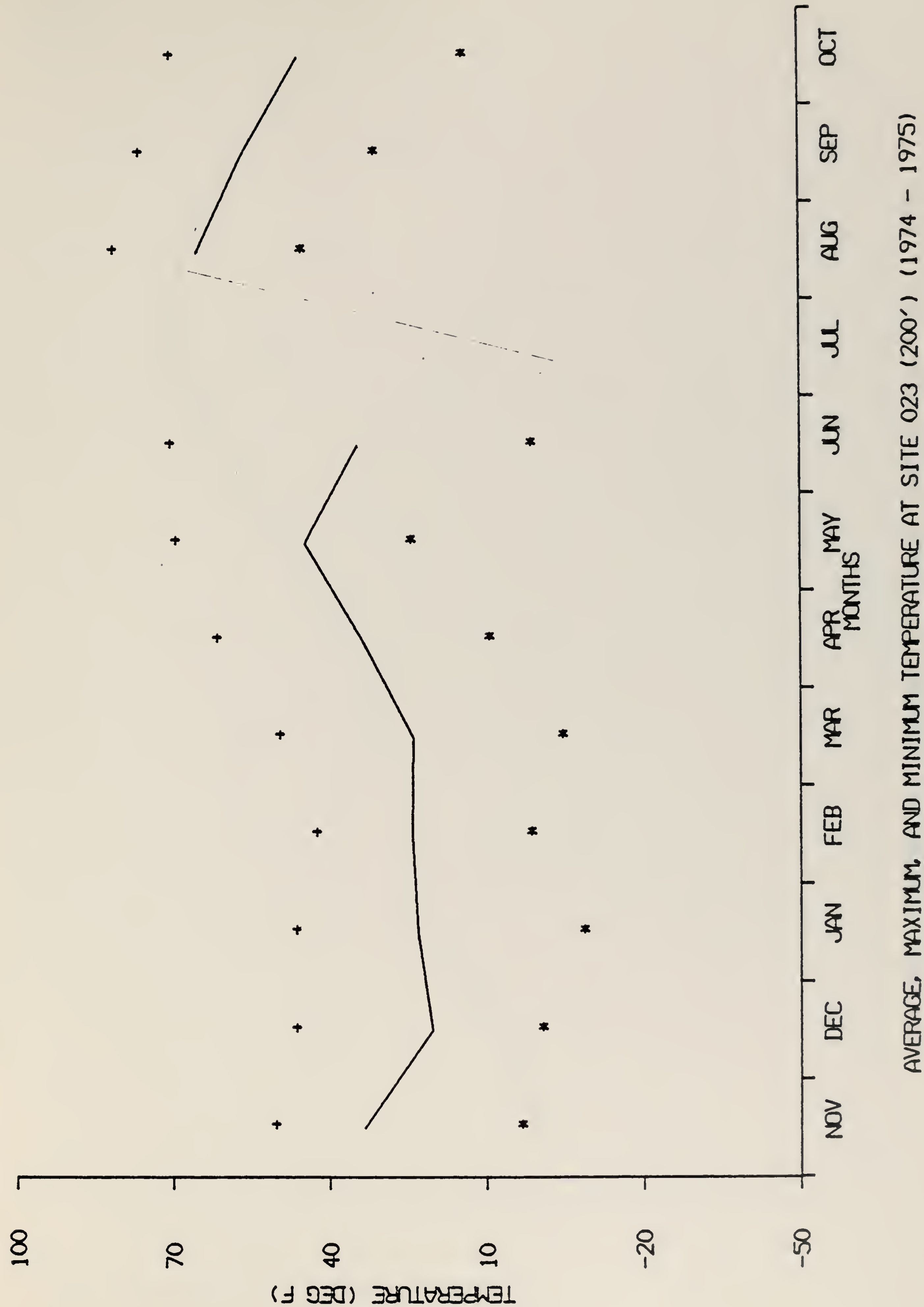

100
70
40
10
-20
-50
TEMPERATURE (DEG F)
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
MONTHS
AVERAGE, MAXIMUM, AND MINIMUM TEMPERATURE AT SITE 023 (200') (1974 - 1975)

FIGURE VI- 82

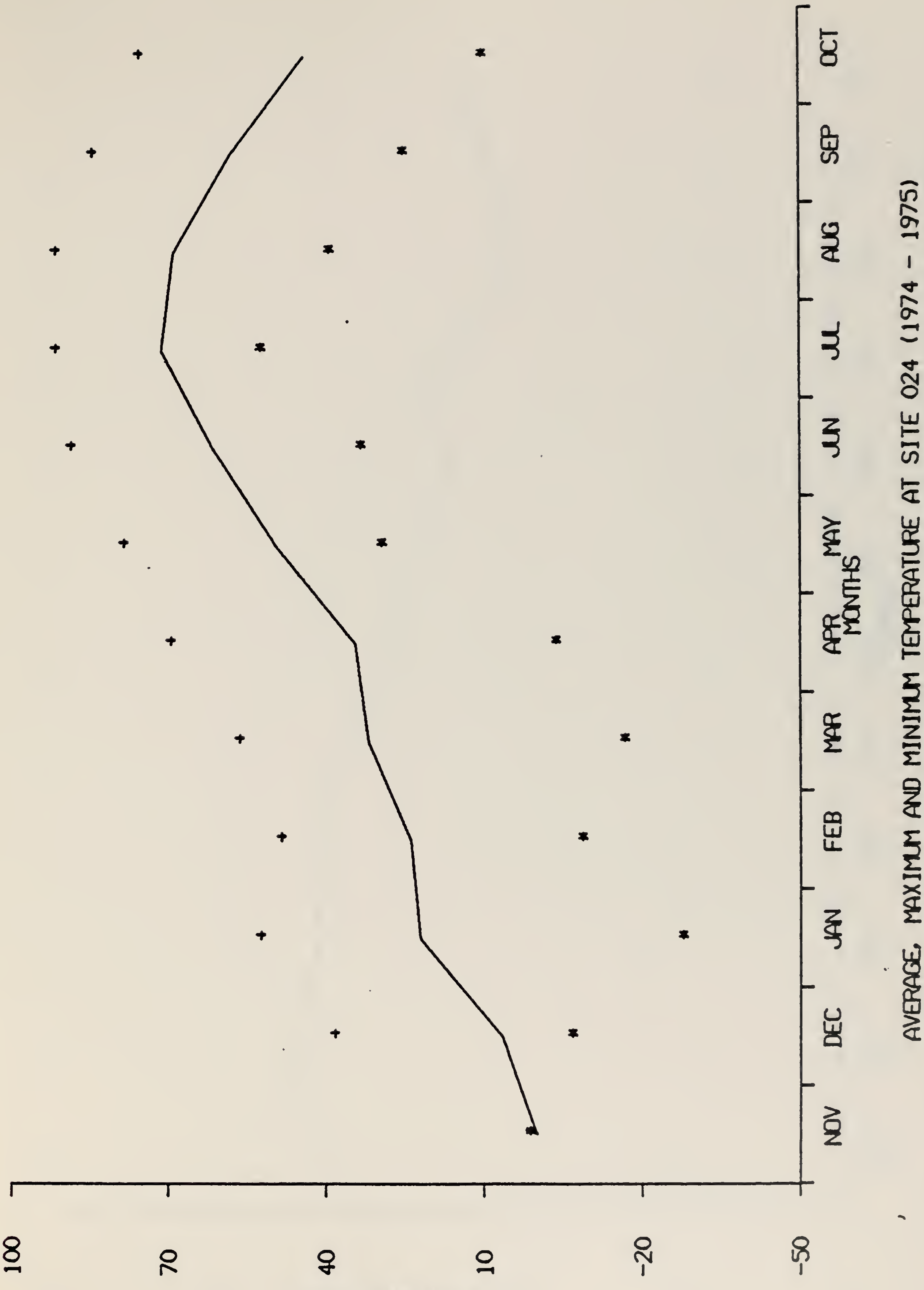
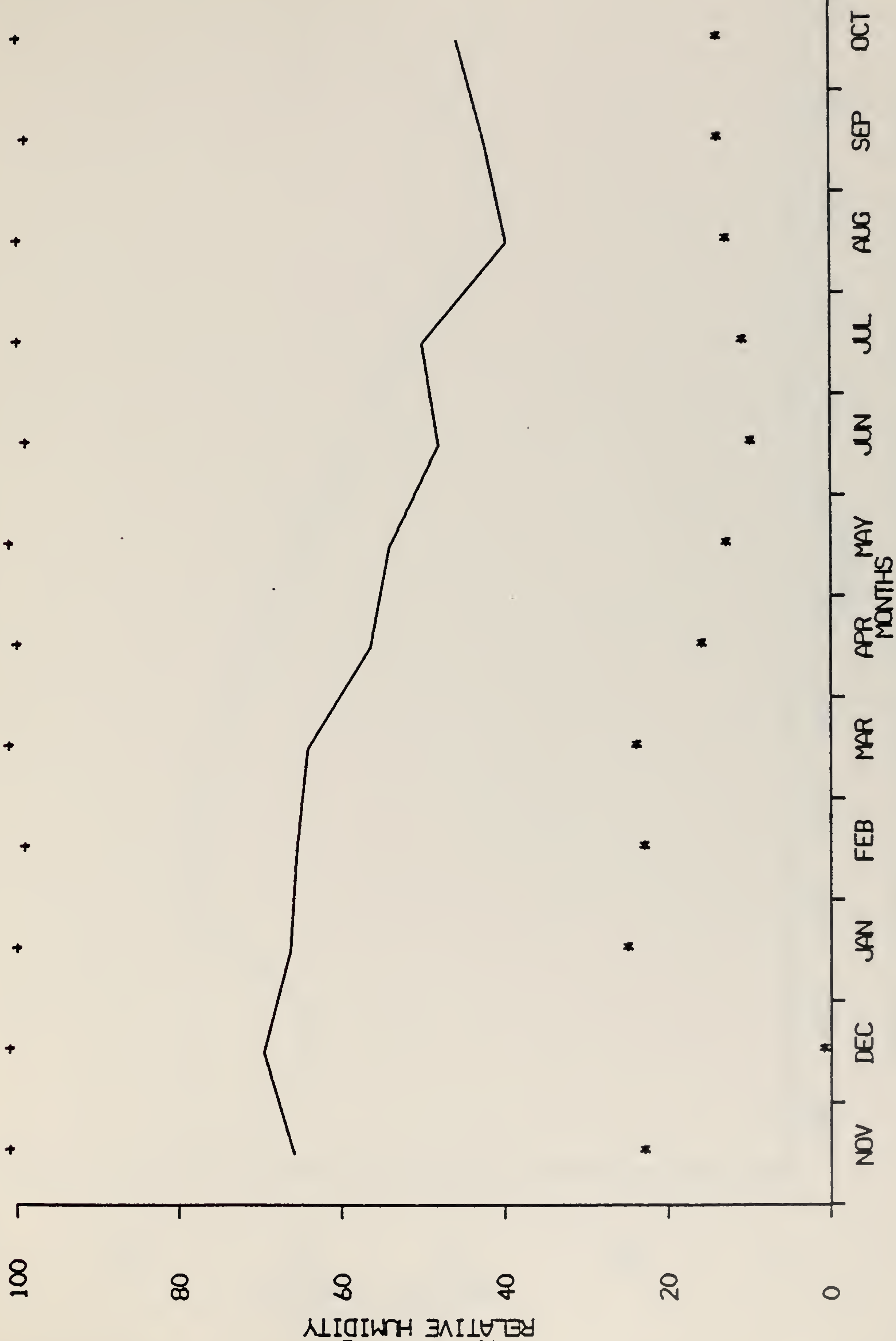
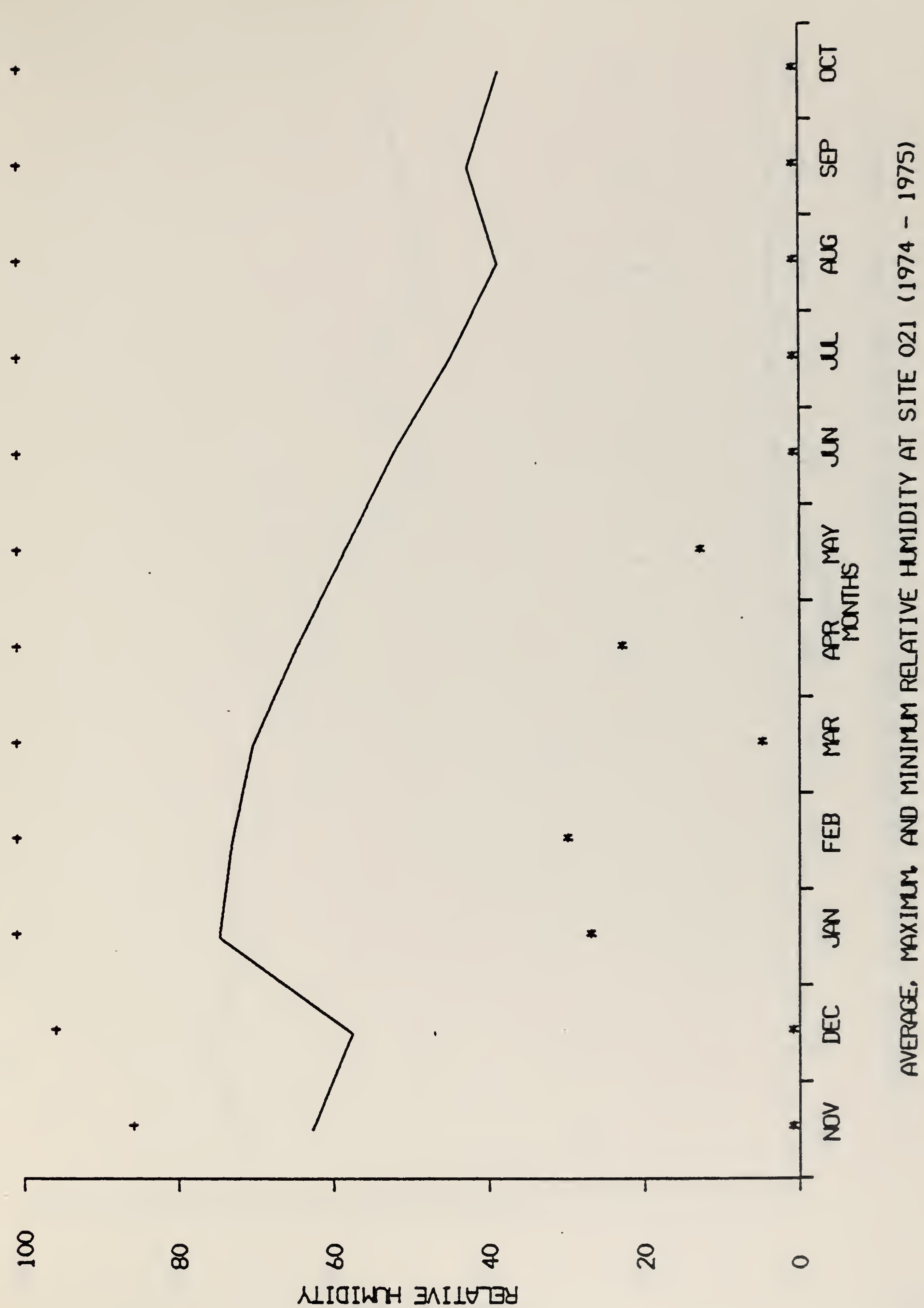

AVERAGE, MAXIMUM AND MINIMUM TEMPERATURE AT SITE 024 (1974 - 1975)
TEMPERATURE (DEG F)
100
70
40
10
-20
-50
MONTHS
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT

FIGURE VI- 83



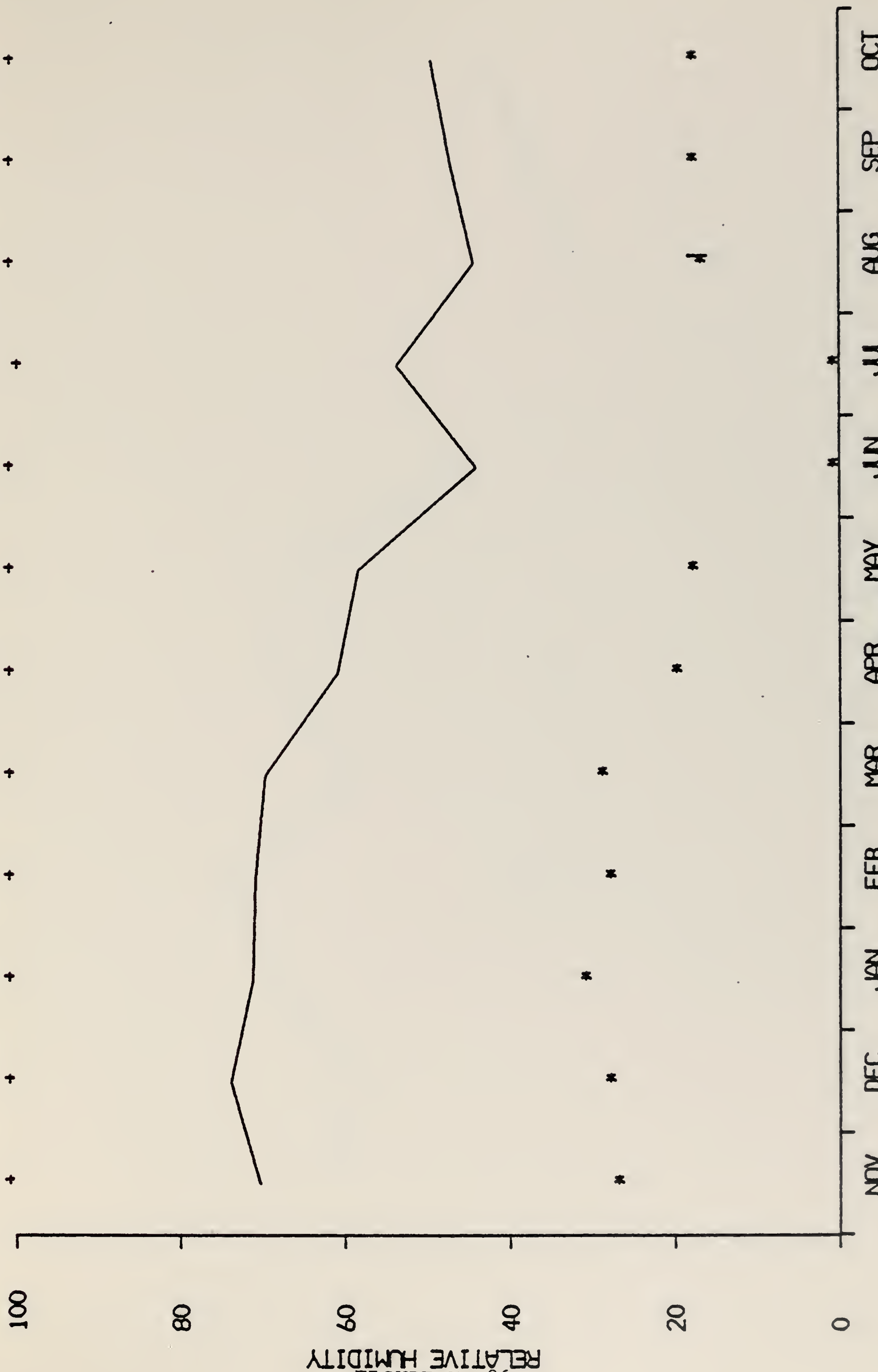
AVERAGE, MAXIMUM AND MINIMUM RELATIVE HUMIDITY AT SITE 020 (1974 - 1975)

FIGURE VI-84



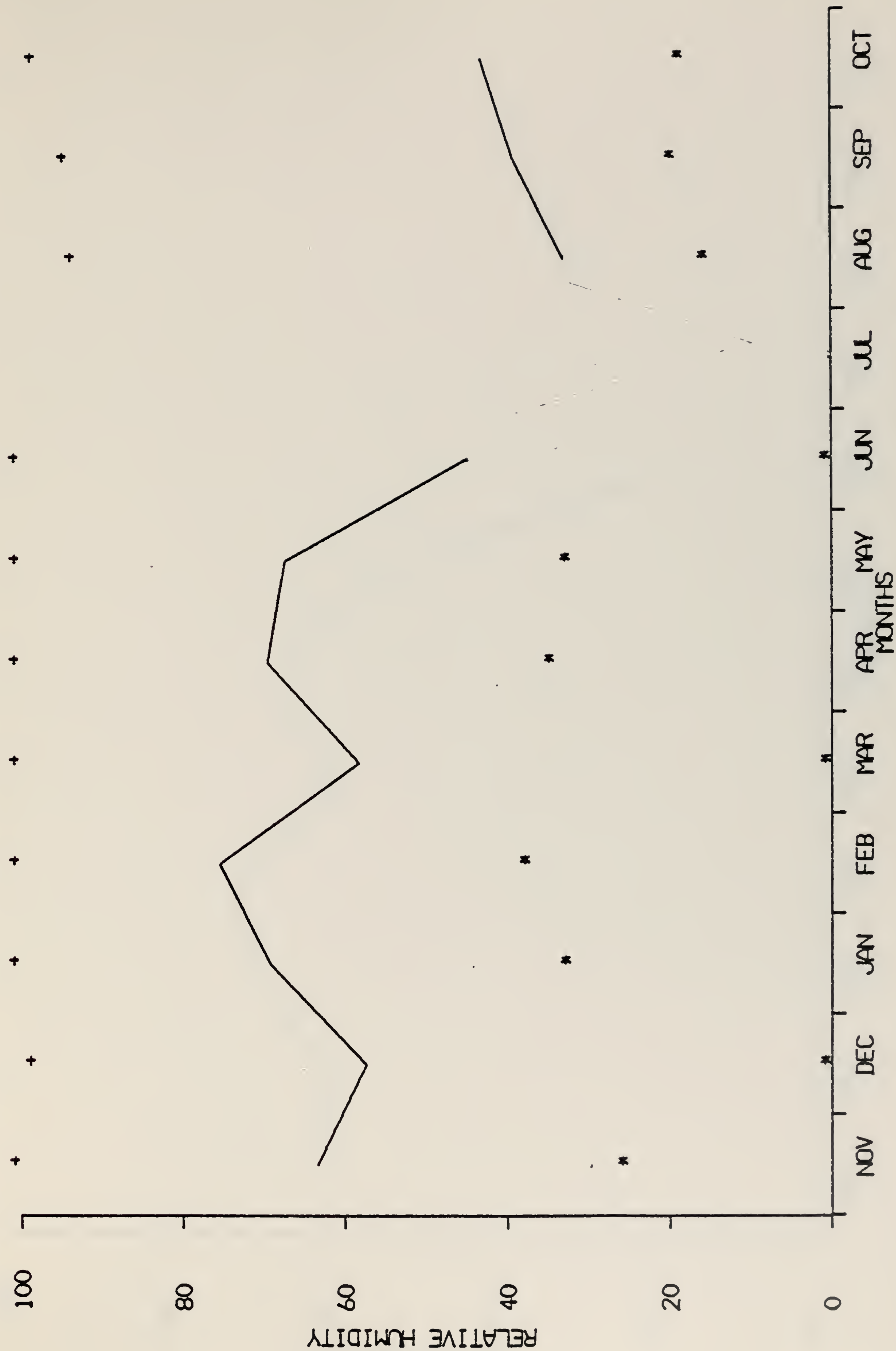
AVERAGE, MAXIMUM AND MINIMUM RELATIVE HUMIDITY AT SITE 021 (1974 - 1975)
RELATIVE HUMIDITY
0
20
40
60
80
100
MONTHS
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT

FIGURE VI-85



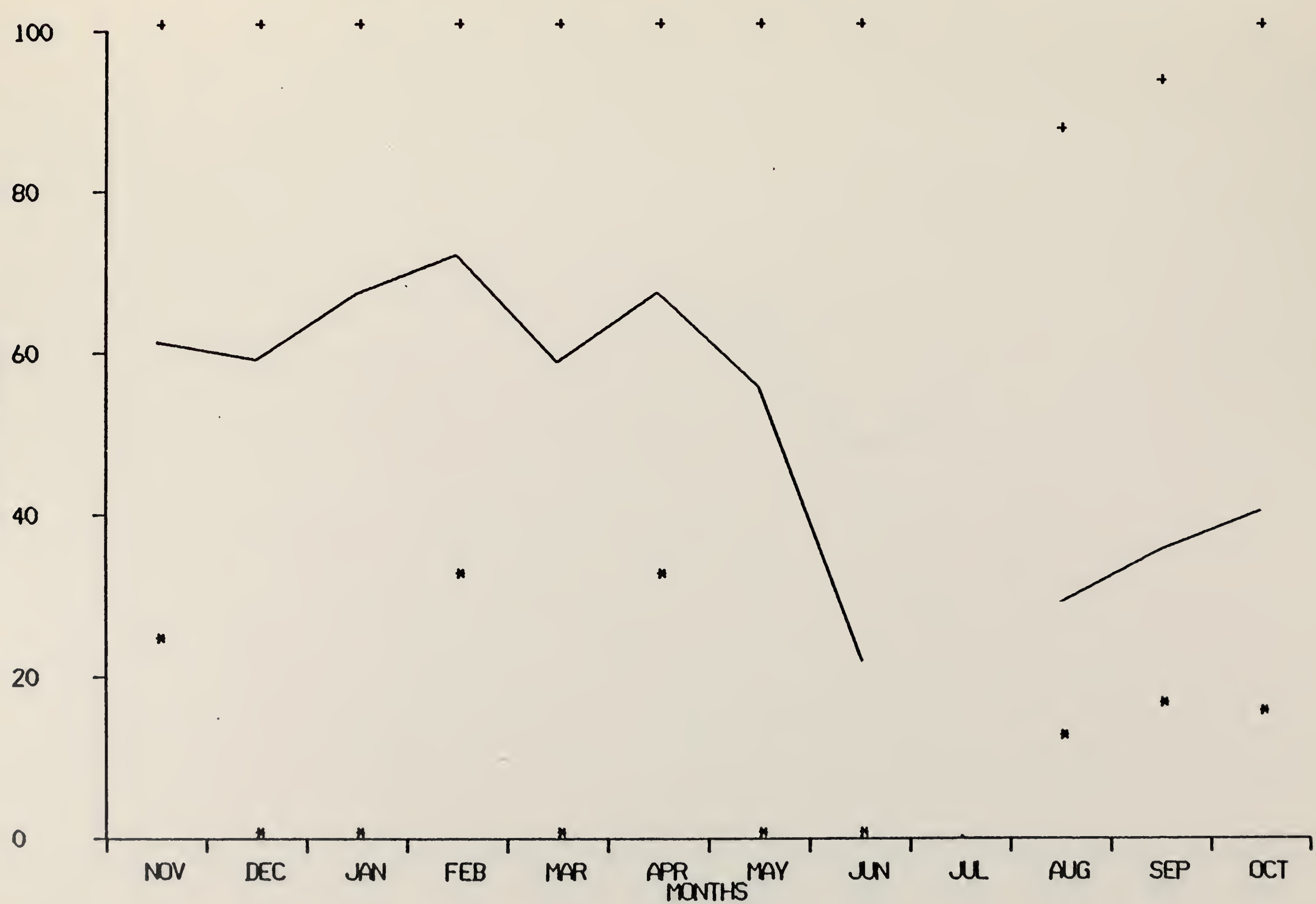
AVERAGE, MAXIMUM, AND MINIMUM RELATIVE HUMIDITY AT SITE 022 (1974 - 1975)

FIGURE VI-86



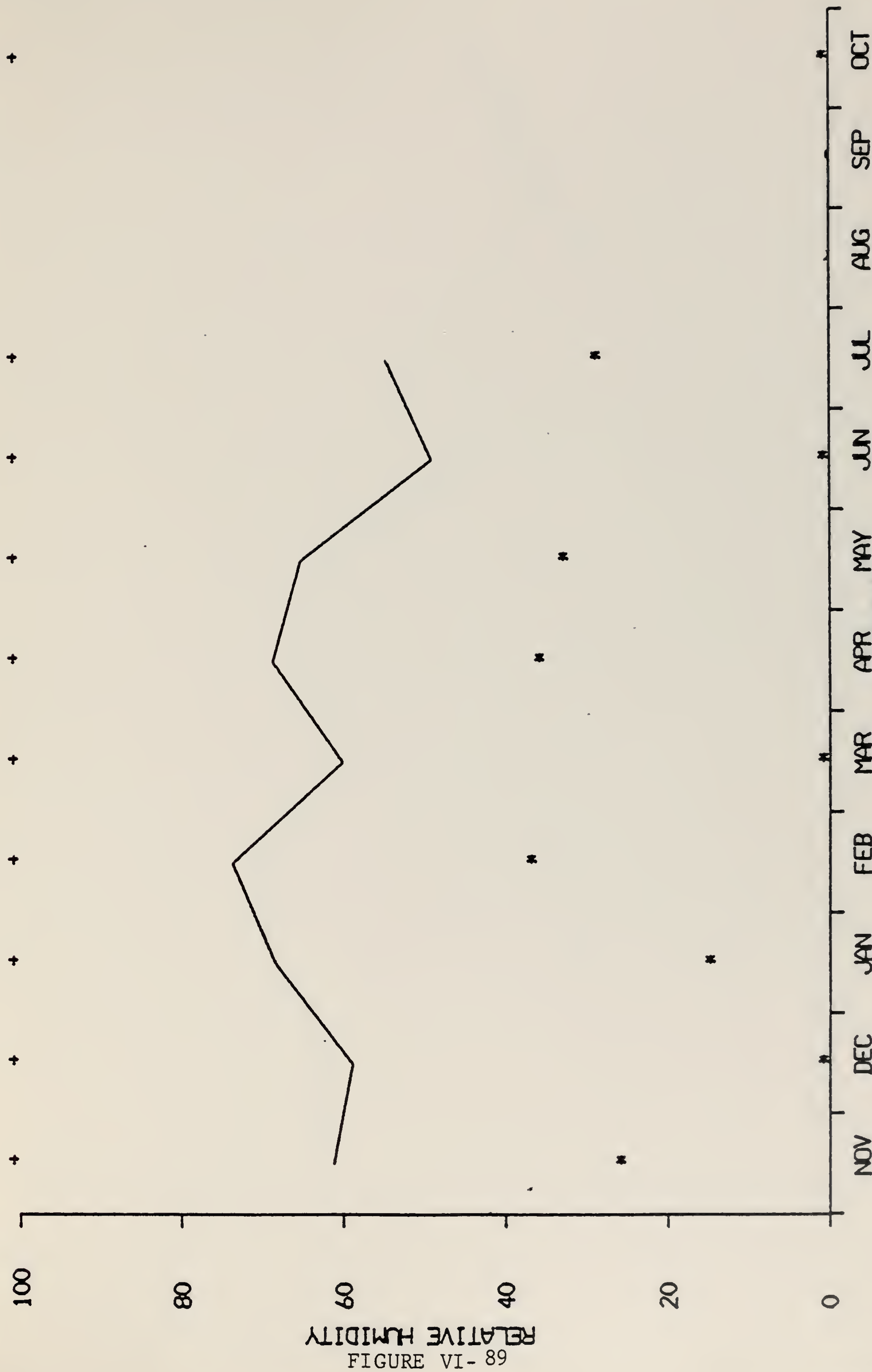
AVERAGE, MAXIMUM, AND MINIMUM RELATIVE HUMIDITY AT SITE 023(8') (1974 - 1975)

FIGURE VI-87



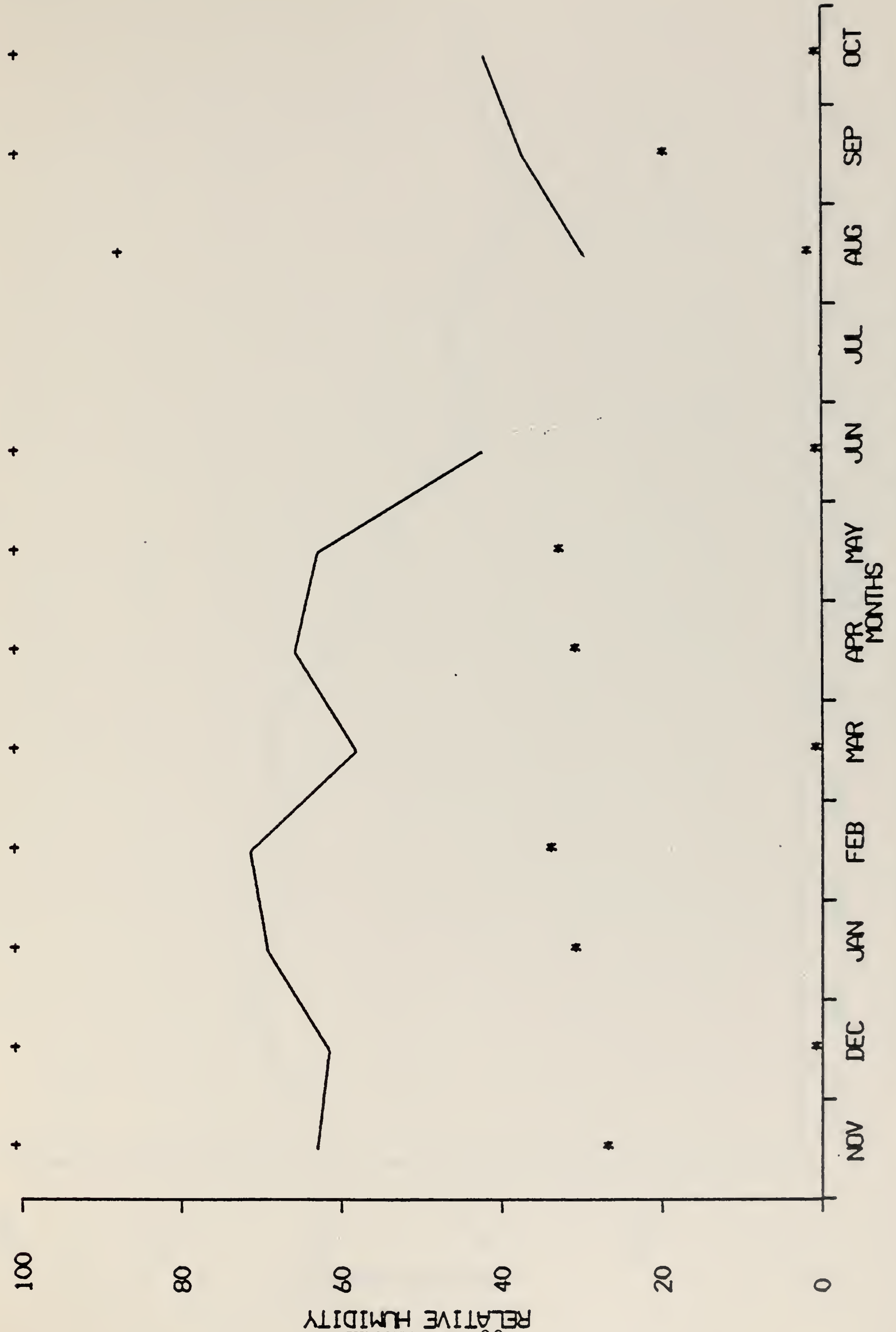
AVERAGE, MAXIMUM, AND MINIMUM RELATIVE HUMIDITY AT SITE 023(30′) (1974 - 1975)

FIGURE VI-88



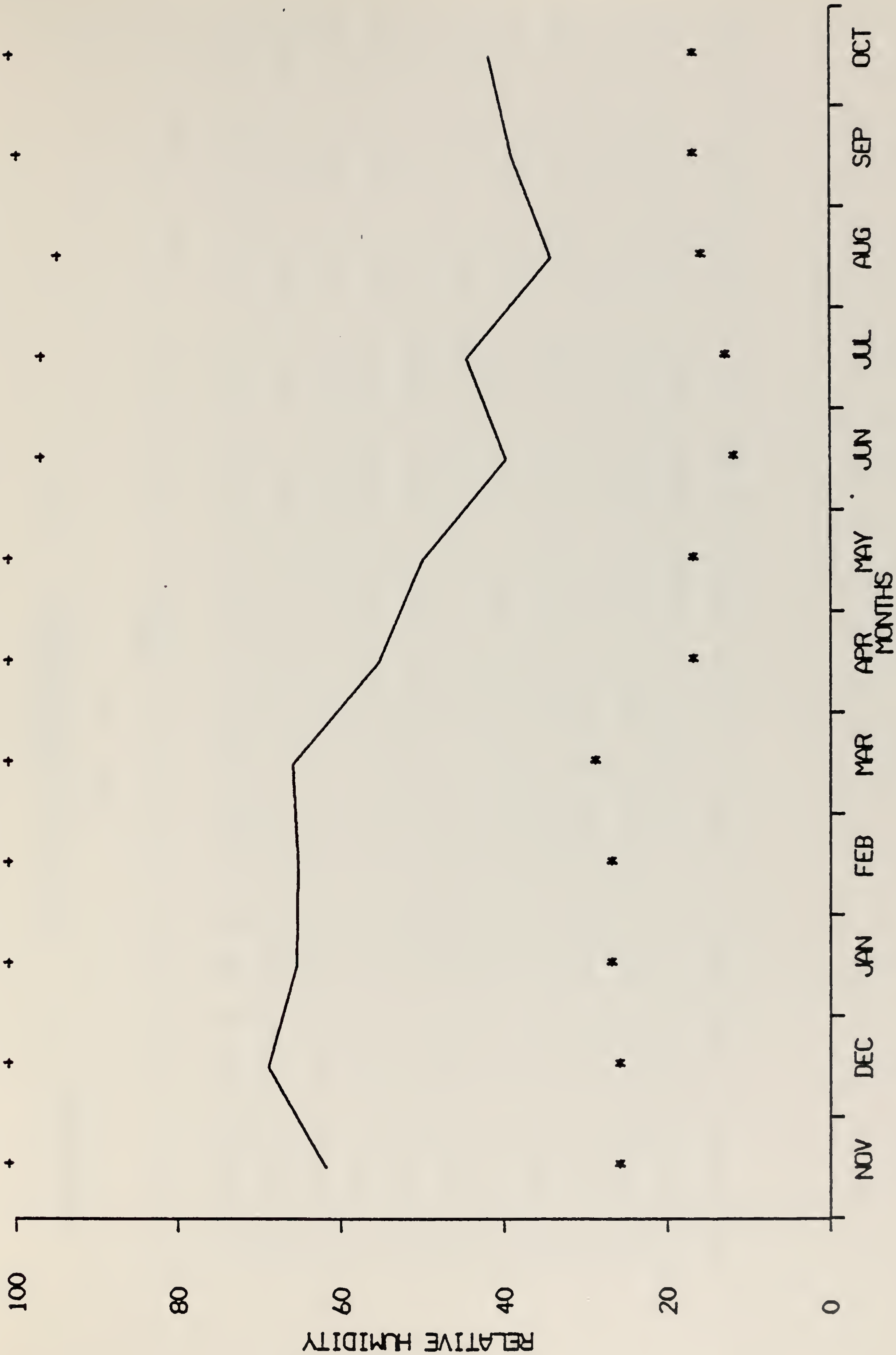
AVERAGE, MAXIMUM, AND MINIMUM RELATIVE HUMIDITY AT SITE 023(100') (1974 - 1975)

FIGURE VI-89



AVERAGE, MAXIMUM, AND MINIMUM RELATIVE HUMIDITY AT SITE 023(200') (1974 - 1975)

FIGURE VI-90



AVERAGE, MAXIMUM, AND MINIMUM RELATIVE HUMIDITY AT SITE 024 (1974 - 1975)

FIGURE VI- 91

CORPORATION

TABLE VI-4

WIND PERSISTENCE TABLE(1974 - 1975)

SITE - 020

	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	99	100	102	93	88	86	85	87	120	130	164	185	186	192	188	219	168	121	112	118	118	113	114	115
DEC	107	108	130	143	137	120	116	118	132	161	176	227	216	219	222	210	159	133	124	137	140	138	132	125
JAN	133	122	131	119	133	137	139	134	134	157	165	187	213	224	204	214	188	127	131	134	145	134	144	136
FEB	119	120	136	139	138	146	143	147	159	175	187	210	206	204	220	236	212	164	142	146	143	145	142	149
MAR	142	153	156	155	154	159	153	147	170	192	199	204	218	217	223	213	225	205	154	147	138	141	135	140
APR	161	152	160	150	146	146	156	165	190	211	212	207	211	209	218	203	203	206	182	126	131	127	132	134
MAY	144	153	141	143	155	148	144	160	201	209	216	220	220	214	219	219	218	219	199	131	122	123	132	141
JUN	119	126	121	117	113	117	117	140	175	213	238	255	229	203	227	244	235	227	217	160	125	134	114	120
JUL	110	113	117	116	119	116	123	128	160	200	221	214	206	194	167	173	174	164	134	99	120	113	112	111
AUG	110	112	115	111	112	118	111	130	154	211	223	212	220	223	228	213	226	216	193	120	124	117	112	111
SEP	112	109	113	113	112	114	114	130	142	195	241	242	244	255	245	228	236	219	138	118	115	114	114	116
OCT	135	142	139	139	135	130	131	130	158	182	214	231	239	243	240	221	220	174	128	126	128	130	133	129

CORPORATION

WIND PERSISTENCE TABLE(1974 - 1975)

SITE - 021

	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	144	146	144	140	143	148	153	143	147	192	204	198	189	210	192	219	209	170	151	163	167	161	158	147
DEC	138	152	168	184	159	158	143	164	187	196	248	276	264	273	277	271	255	189	165	169	164	162	149	148
JAN	163	170	168	165	165	171	160	156	169	206	225	244	249	239	228	221	209	194	175	155	166	156	177	166
FEB	152	150	154	163	172	169	173	177	176	211	232	230	234	236	240	231	237	206	178	173	169	172	166	164
MAR	156	162	171	171	163	172	165	167	177	198	219	220	214	213	220	220	226	220	182	175	169	169	164	158
APR	177	189	194	183	180	184	196	181	211	207	213	212	202	208	210	211	198	219	206	172	173	170	169	169
MAY	172	163	162	170	172	163	151	189	221	230	190	207	232	221	217	225	221	225	209	174	163	149	155	155
JUN	139	151	139	143	142	143	142	190	224	220	227	230	212	210	225	221	217	216	219	192	169	155	137	145
JUL	131	139	135	143	142	134	122	149	207	238	231	231	237	217	208	200	206	189	176	133	139	136	132	127
AUG	130	128	130	139	135	145	142	162	221	232	220	204	207	209	203	205	211	200	184	138	127	130	123	134
SEP	127	124	120	119	127	118	130	129	175	240	243	245	234	236	236	238	247	241	203	134	121	111	120	130
OCT	150	158	150	151	156	147	146	154	193	232	215	214	210	214	217	217	210	194	131	125	134	128	139	147

WIND PERSISTENCE TABLE(1974 - 1975)

SITE - 022

	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	110	113	115	113	113	122	124	122	121	124	155	184	202	219	208	200	162	107	106	115	119	109	110	117
DEC	121	121	132	132	122	121	120	116	129	135	149	186	191	196	190	190	155	133	130	126	125	124	120	120
JAN	125	129	124	125	124	126	135	124	120	137	145	155	174	173	180	186	170	138	116	123	141	135	141	133
FEB	118	114	115	130	134	135	131	131	129	138	159	168	184	181	173	185	172	165	122	125	123	130	136	129
MAR	132	127	139	138	131	130	132	142	144	148	169	188	188	190	182	185	188	171	137	138	144	139	134	138
APR	142	143	143	151	145	150	151	157	177	195	192	192	190	190	190	197	199	190	166	130	140	127	104	116
MAY	132	136	129	140	139	130	133	141	165	205	211	202	209	203	212	223	211	212	200	131	107	109	122	132
JUN	129	124	111	107	112	112	107	133	188	233	246	240	239	208	222	239	228	219	200	134	125	123	112	118
JUL	109	105	110	114	108	110	106	114	162	195	214	211	195	195	163	175	173	143	121	110	119	112	126	111
AUG	111	108	108	109	114	108	106	109	134	183	217	227	224	231	244	223	223	216	171	102	105	116	113	111
SEP	106	110	106	106	106	107	109	109	126	206	236	241	244	253	251	226	228	216	125	105	101	105	108	116
OCT	127	127	135	132	133	135	128	121	133	157	208	212	220	218	226	226	211	164	128	129	132	124	124	124

WIND PERSISTENCE TABLE(1974 - 1975)

SITE - 024

	HOUR 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	177	186	192	175	185	194	172	180	163	150	168	209	224	211	220	218	217	210	205	197	181	179	156	179
DEC	191	181	194	200	210	202	199	198	184	189	236	271	261	270	242	236	220	204	190	190	199	210	191	195
JAN	182	179	178	188	192	185	188	194	182	183	204	223	214	214	220	217	234	218	188	187	197	183	182	182
FEB	177	191	185	179	179	177	191	185	165	191	220	210	199	205	213	230	231	219	194	206	196	188	201	178
MAR	186	178	193	185	187	181	185	182	197	220	225	208	228	223	225	234	228	219	207	194	201	204	193	193
APR	216	211	206	210	202	196	195	208	214	217	216	222	225	221	224	218	215	213	203	179	198	195	197	199
MAY	188	209	198	198	197	206	185	188	206	209	211	220	204	212	233	230	214	216	215	197	176	178	188	187
JUN	164	170	174	177	168	174	131	165	189	217	221	225	227	222	228	233	234	214	213	196	208	201	163	158
JUL	144	156	162	169	162	159	157	162	180	198	201	204	188	187	181	172	170	149	144	148	152	157	162	161
AUG	155	166	160	167	159	164	143	132	158	183	195	201	197	214	208	206	211	215	213	206	193	170	171	162
SEP	182	186	183	175	184	167	177	131	160	197	203	224	216	220	210	206	211	227	206	189	169	188	189	180
OCT	177	183	176	173	166	154	174	148	138	178	197	200	208	209	207	204	217	215	205	195	182	169	181	176

WIND PERSISTENCE TABLE(1974 - 1975)

SITE - 023(8)

HOUR

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	37	50	93	101	136	126	129	142	159	166	191	169	141	141	149	170	141	126	119	138	93	59	83	77
DEC	129	73	94	117	109	200	171	94	81	75	141	118	73	88	51	52	62	87	83	94	112	106	105	124
JAN	172	172	170	181	188	180	179	183	173	183	205	225	226	217	214	218	229	207	179	173	186	179	180	179
FEB	176	180	174	168	171	178	183	175	155	191	220	207	202	203	214	225	227	213	188	202	188	184	194	176
MAR	178	171	182	176	178	175	178	170	195	223	219	224	226	222	223	233	218	215	203	193	202	199	186	185
APR	214	206	206	209	199	192	199	209	216	211	209	219	221	218	222	213	211	211	199	178	195	190	196	193
MAY	188	205	194	199	193	201	180	179	198	207	210	216	205	206	230	227	211	213	213	194	181	182	186	182
JUN	163	166	170	173	166	169	129	168	190	206	217	221	220	214	225	231	231	212	214	195	204	206	169	161
JUL	144	158	162	162	162	158	139	146	170	195	192	199	176	184	176	165	160	147	137	148	155	162	160	159
AUG	152	166	155	168	160	160	137	126	151	181	187	196	193	209	199	201	207	206	204	202	195	170	169	160
SEP	177	181	184	178	178	163	169	126	148	181	196	213	215	213	199	198	209	217	197	189	175	186	182	176
OCT	174	181	174	169	161	152	172	140	132	172	189	199	201	200	205	200	206	211	205	190	182	170	171	168

CORPORATION

WIND PERSISTENCE TABLE(1974 - 1975)

SITE - 023(30)

	HOUR 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	252	228	207	225	233	266	257	252	245	252	279	243	229	212	200	202	169	150	165	187	192	193	199	231
DEC	159	129	96	121	141	108	100	144	101	99	129	171	153	73	100	102	106	87	94	131	114	111	126	128
JAN	182	179	178	188	192	185	188	194	182	187	212	232	223	221	221	220	234	218	190	187	197	183	182	185
FEB	177	191	185	179	179	177	191	187	165	191	220	210	200	205	213	230	231	219	194	206	196	188	201	179
MAR	186	178	193	186	187	181	185	182	197	220	225	219	228	223	225	234	228	219	207	194	202	204	192	193
APR	216	211	206	210	202	196	195	208	214	217	216	223	225	221	224	218	215	213	203	179	198	195	197	199
MAY	189	209	198	198	197	206	185	188	206	210	212	220	206	212	233	230	214	216	219	200	178	179	188	187
JUN	164	170	174	177	168	174	131	165	189	217	221	225	227	222	228	233	234	214	213	196	208	201	163	158
JUL	144	156	162	169	162	159	157	162	180	198	201	204	188	187	181	172	170	149	144	148	152	157	162	161
AUG	155	166	160	167	159	164	143	132	158	183	195	201	197	214	208	206	211	215	213	206	193	170	171	162
SEP	182	186	183	175	184	167	177	131	160	197	203	224	216	220	210	206	211	227	206	189	169	188	189	180
OCT	177	183	176	173	166	154	174	148	138	178	197	200	208	209	207	204	217	215	205	195	182	169	181	176

WIND PERSISTENCE TABLE(1974 - 1975)

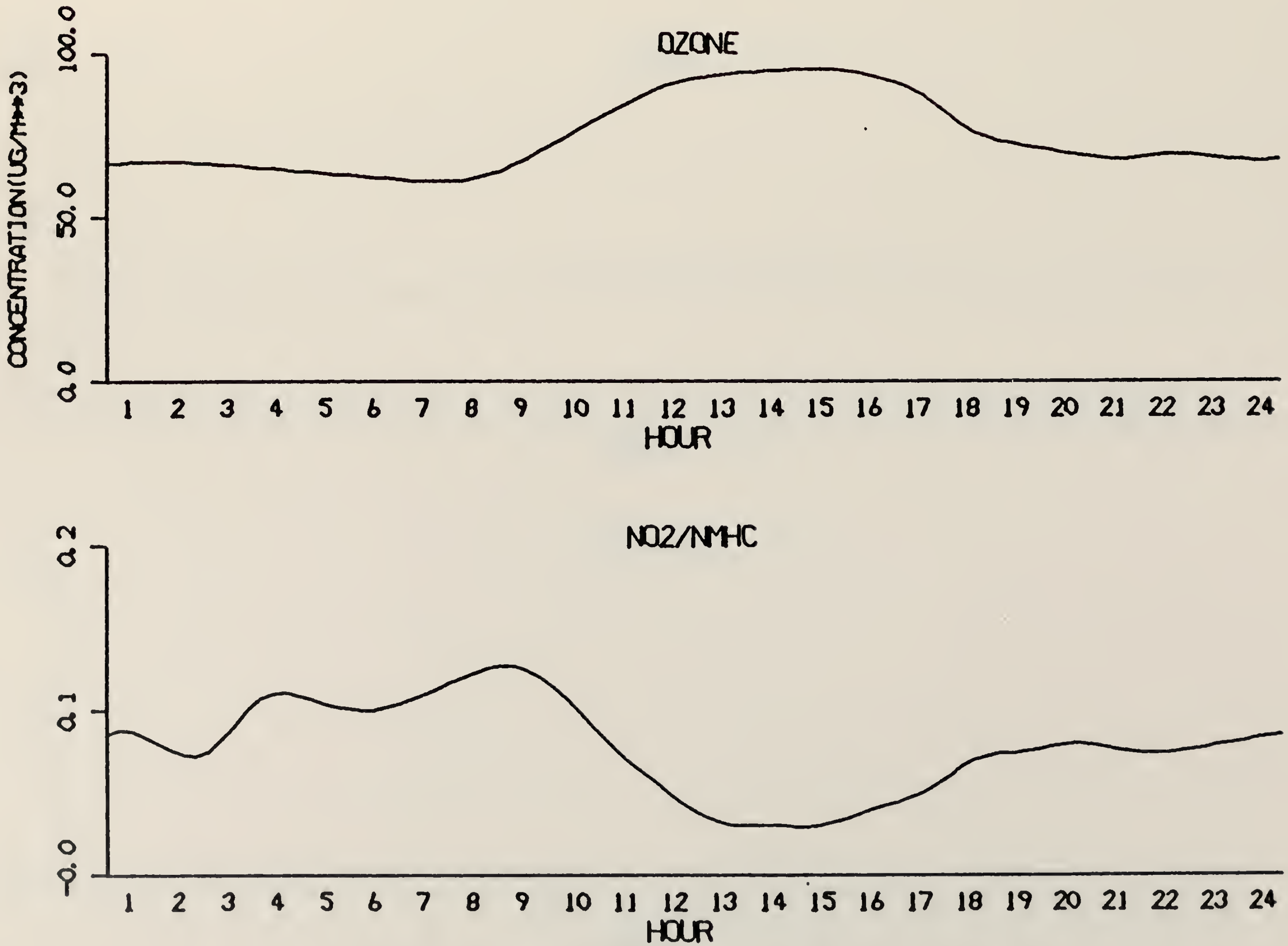
SITE - 023(100)

	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	342	346	357	355	316	327	339	9	42	26	16	12	23	359	353	19	347	347	327	340	350	340	8	355
DEC	78	140	168	186	151	158	133	119	113	150	173	102	81	94	27	43	357	55	94	93	127	97	78	65
JAN	185	187	190	191	205	194	199	197	193	199	211	221	221	215	211	227	240	223	203	209	201	192	195	198
FEB	177	190	180	177	178	173	190	184	174	182	219	201	203	205	214	233	235	220	193	201	198	192	205	190
MAR	196	191	206	201	195	188	196	196	212	226	225	223	227	227	227	231	232	224	212	194	206	208	196	198
APR	216	219	211	220	216	206	193	203	215	217	214	223	226	224	228	225	216	214	203	182	188	200	203	205
MAY	196	221	202	204	208	204	196	179	200	202	213	211	212	212	234	234	220	221	204	204	179	184	191	192
JUN	180	177	182	194	185	183	150	170	186	210	219	224	227	217	228	232	240	218	213	190	195	195	162	174
JUL	146	147	161	176	168	157	167	168	176	188	194	202	186	182	176	170	163	151	142	152	152	152	154	168
AUG	165	165	172	163	166	157	158	146	149	180	196	194	203	215	208	209	208	211	212	206	192	169	172	181
SEP	189	188	209	185	198	189	189	151	156	185	199	223	218	214	208	201	210	217	188	163	178	186	181	176
OCT	173	180	189	180	180	169	180	162	149	172	192	201	213	206	203	209	208	221	199	194	187	177	190	174

WIND PERSISTENCE TABLE(1974 - 1975)

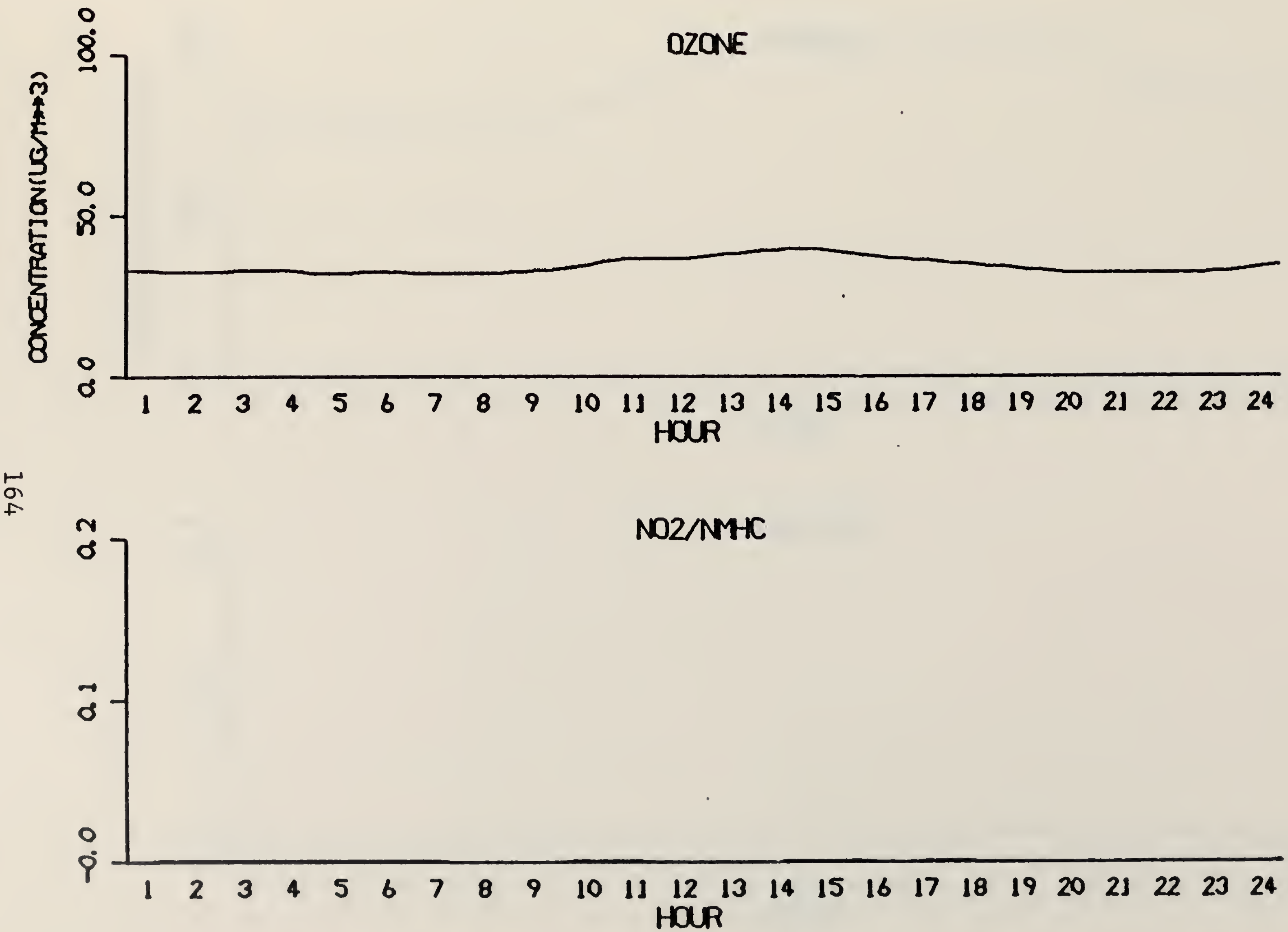
SITE - 023(200)

	HOUR																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
NOV	26	17	14	6	31	57	113	145	217	172	209	190	220	176	166	162	161	141	189	198	133	106	50	30
DEC	292	307	250	220	221	199	250	187	275	38	45	86	60	278	0	280	234	170	117	185	199	203	189	207
JAN	191	197	197	192	210	205	205	209	206	209	218	219	225	216	222	232	240	236	214	223	218	201	201	206
FEB	186	194	189	191	187	186	191	193	184	185	214	194	207	209	219	238	237	225	202	210	208	194	208	200
MAR	204	203	219	219	211	206	215	212	224	234	235	227	234	234	238	239	238	237	224	185	209	208	210	201
APR	224	225	213	232	222	219	212	214	224	217	219	225	229	226	228	226	216	215	210	186	193	210	210	209
MAY	205	211	204	198	199	200	201	196	202	210	222	226	214	208	234	239	221	220	218	206	168	184	192	208
JUN	168	189	182	193	199	180	160	175	195	223	231	231	234	217	236	239	240	221	220	201	196	190	158	173
JUL	153	148	158	173	170	157	171	172	179	197	201	212	194	191	178	177	171	157	145	146	141	140	153	168
AUG	166	162	164	162	171	161	154	158	156	182	206	206	210	220	219	211	221	219	219	211	192	185	189	184
SEP	186	185	214	199	194	197	181	160	168	197	206	230	239	231	222	212	221	231	207	176	163	185	176	188
OCT	170	177	191	182	189	186	186	186	170	180	210	211	218	224	210	220	221	222	204	191	187	176	193	177



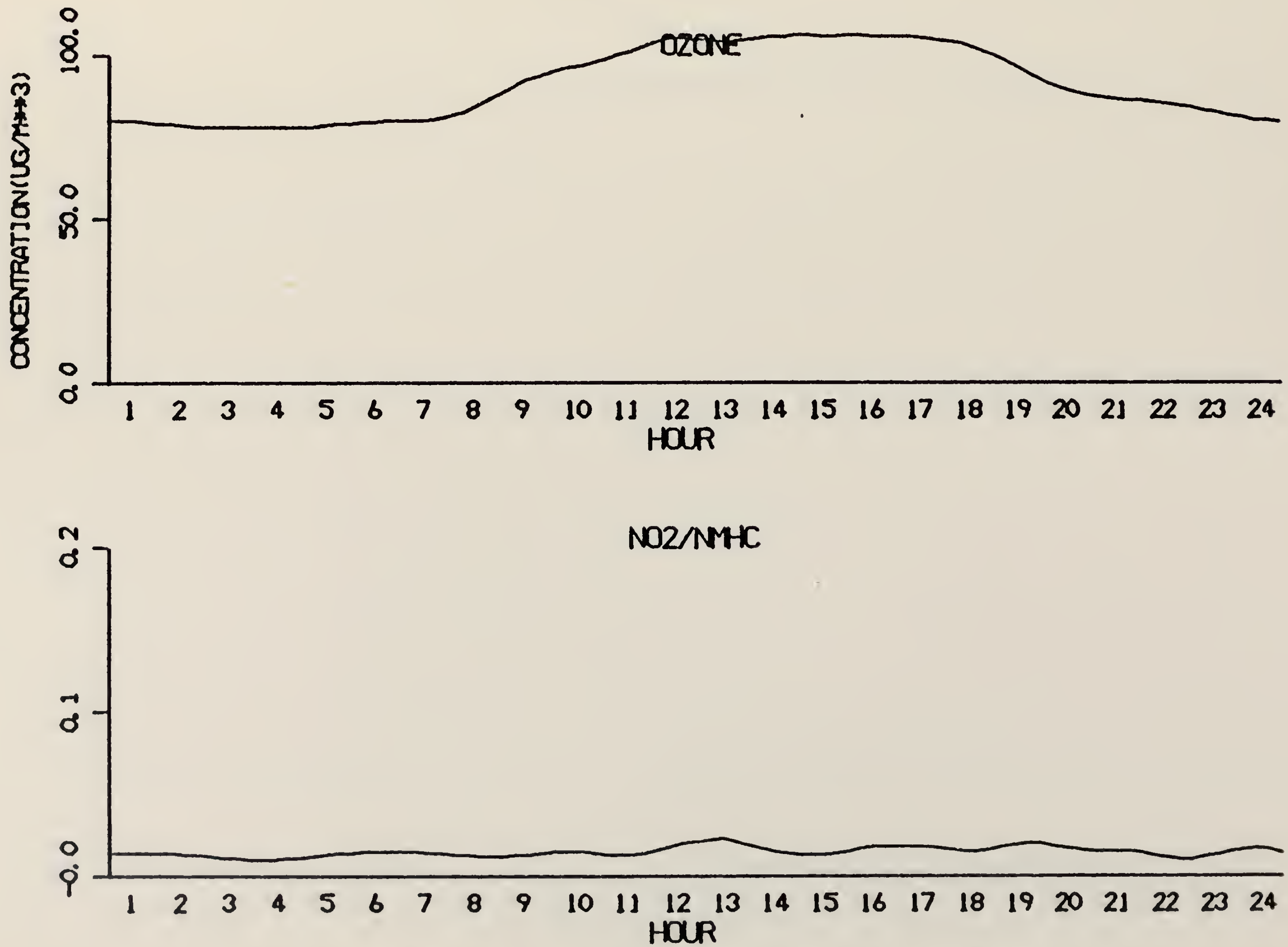
QUARTERLY AVERAGE (NOV 74 - JAN 75) SITE 020

FIGURE VI-92



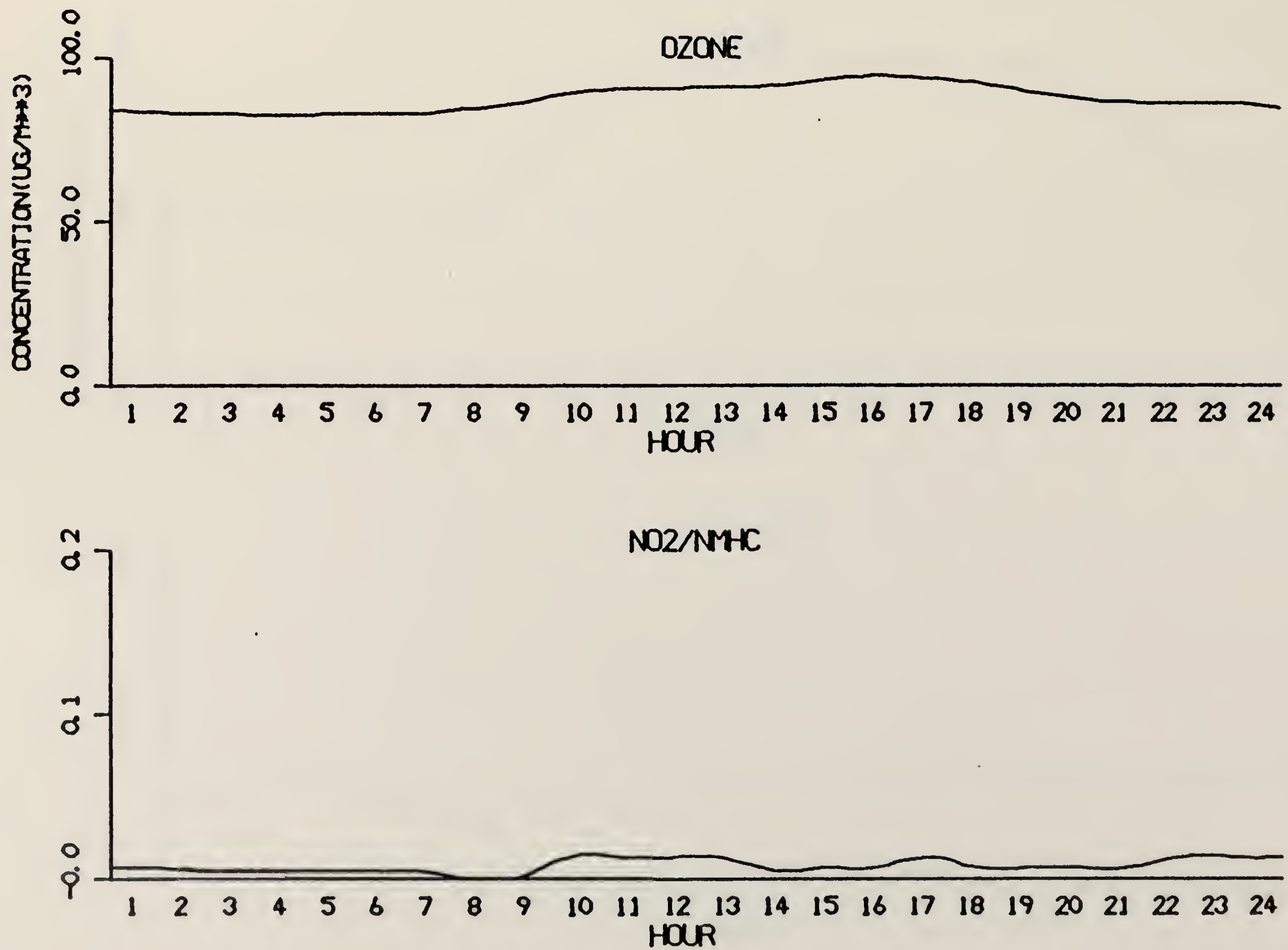
QUARTERLY AVERAGE (NOV 74 - JAN 75) SITE 023

FIGURE VI-93



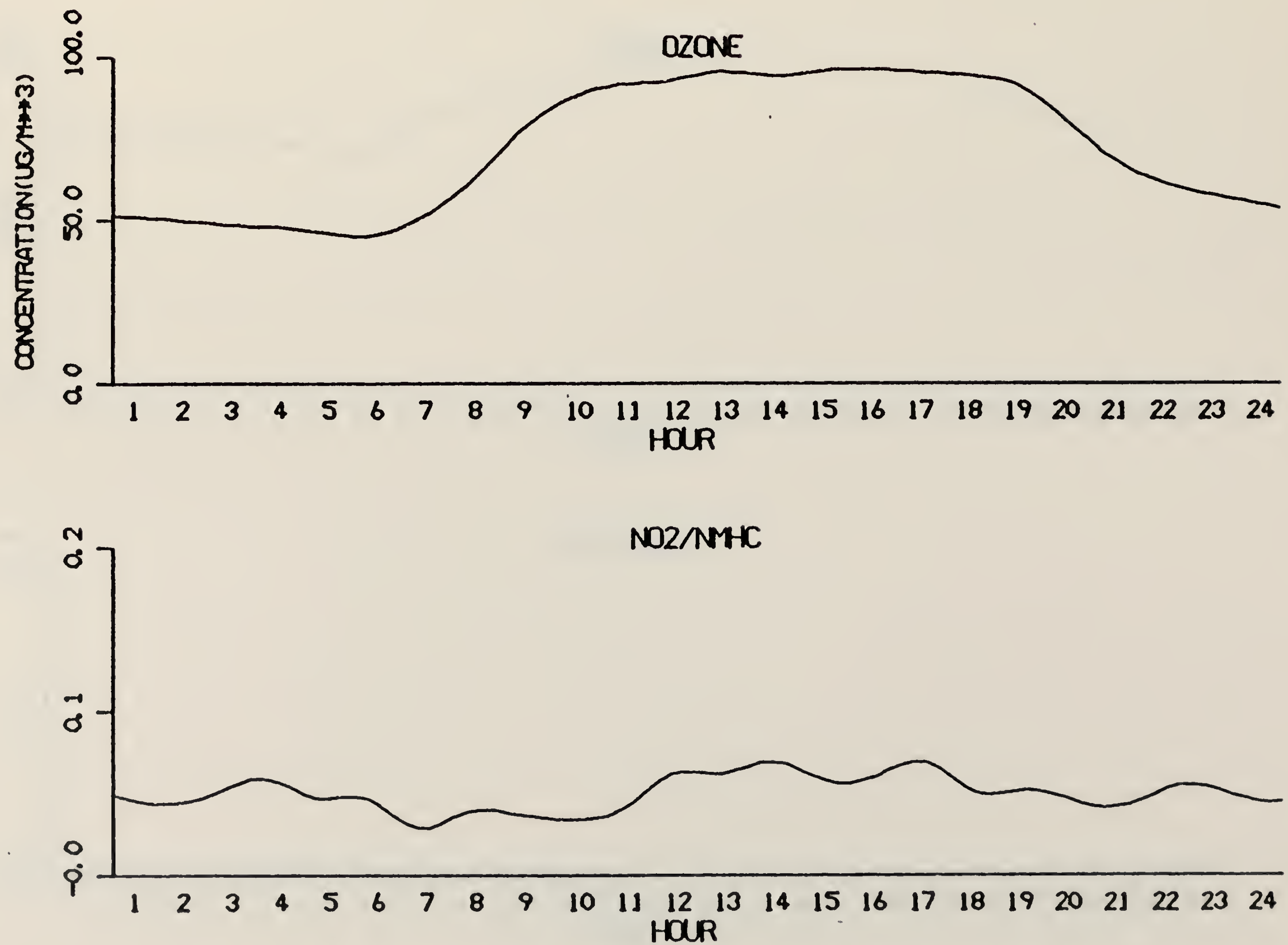
QUARTERLY AVERAGE (FEB 75 - APR 75) SITE 020

FIGURE VI-94



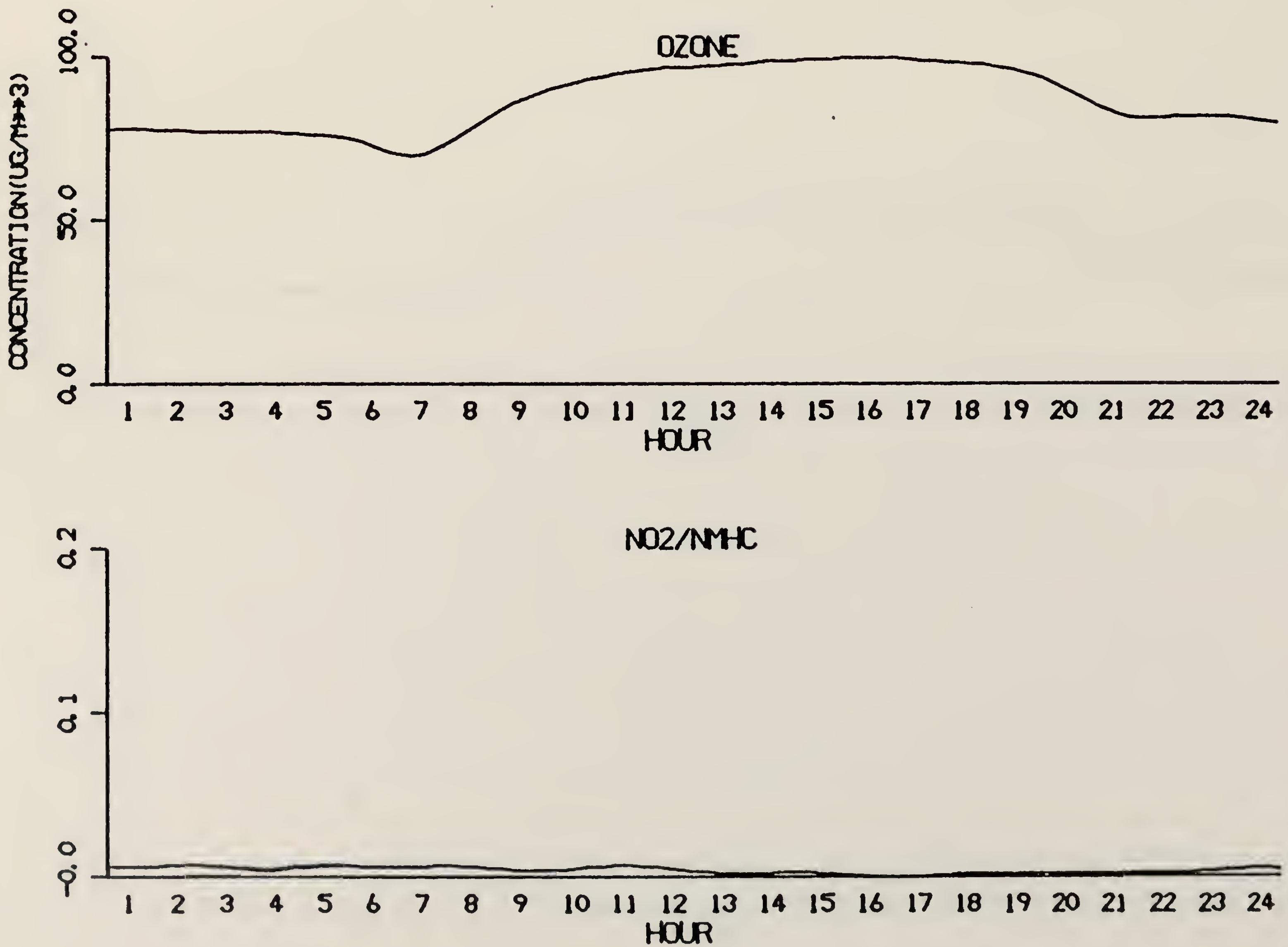
QUARTERLY AVERAGE (FEB 75 - APR 75) SITE 023

FIGURE VI-95



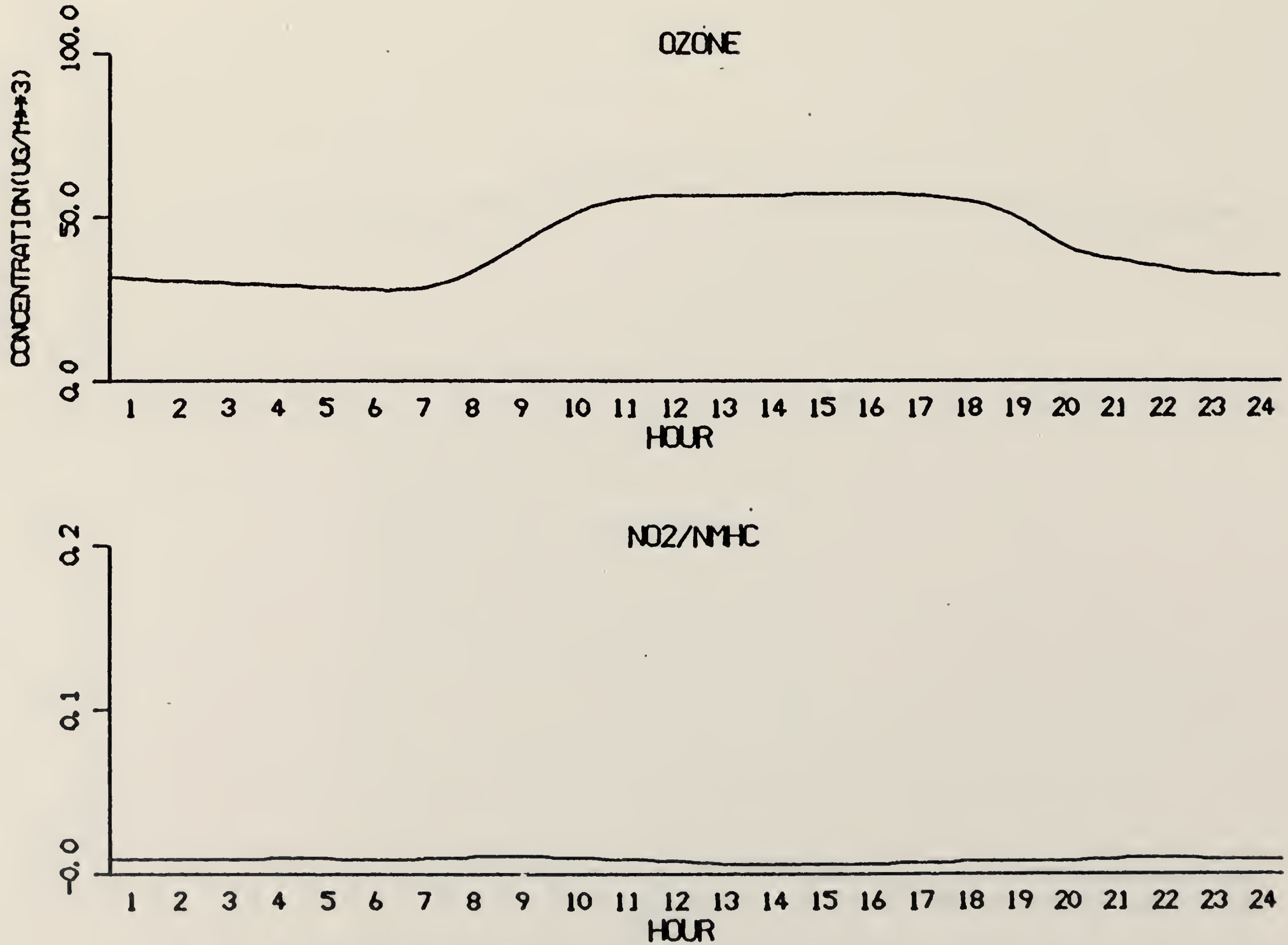
QUARTERLY AVERAGE (MAY 75 - JUL 75) SITE 020

FIGURE VI-96



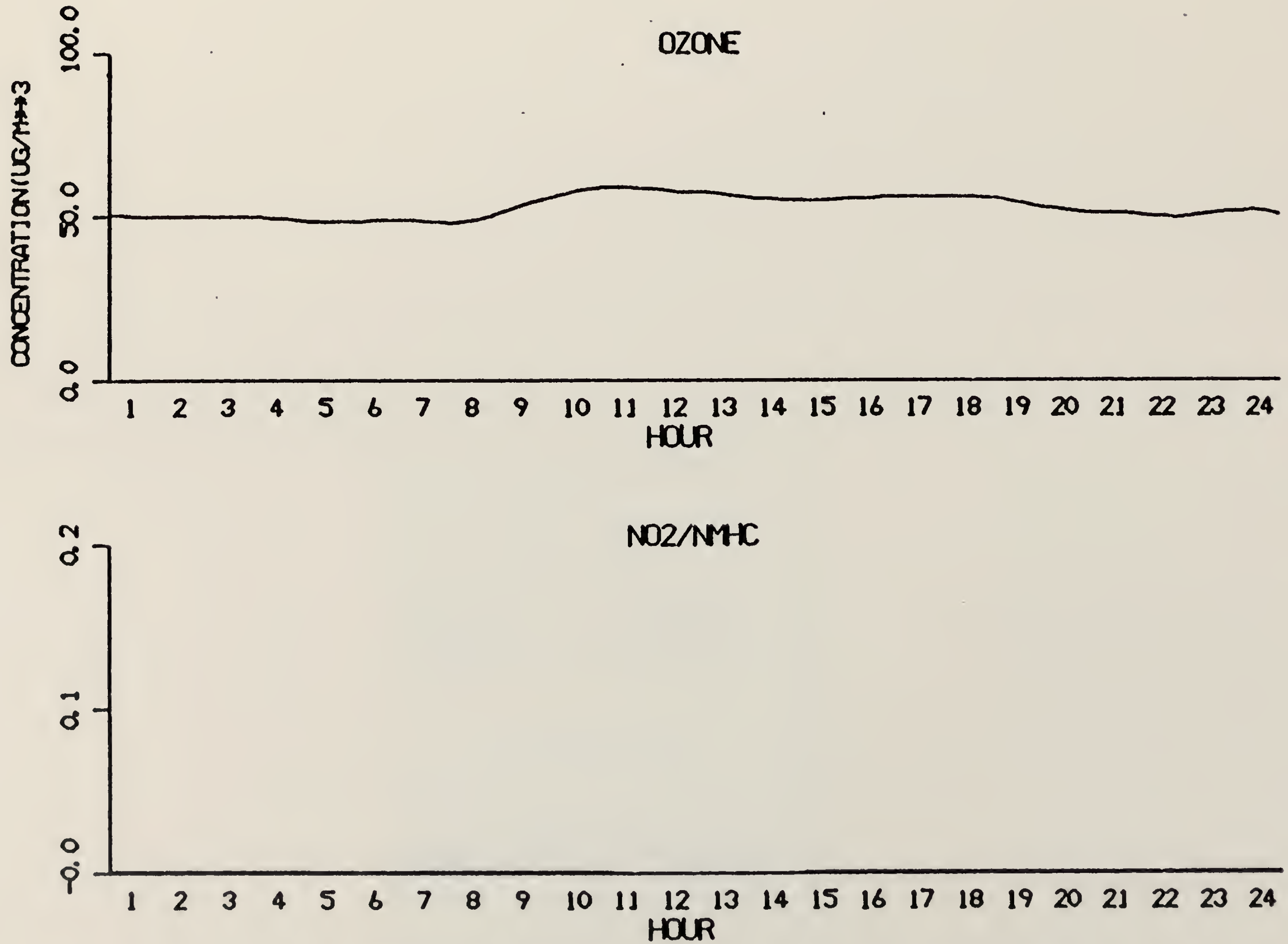
QUARTERLY AVERAGE (MAY 75 - JUL 75) SITE 023

FIGURE VI-97.



QUARTERLY AVERAGE (AUG 75 - OCT 75) SITE 020

FIGURE VI- 98



QUARTERLY AVERAGE (AUG 75 - OCT 75) SITE 023

FIGURE VI-99