AP - 013

ANNUAL MONITORING REPORT

YEAR(S):

2001

PB 11/5

noRW 2.6 ft PSH
and rising (12/00)
plume not defined

PB305
DP-13

ANNUAL MONITORING REPORT

EOTT PIPELINE COMPANY
TNM 97-18
LEA COUNTY, NEW MEXICO

RECEIVED
MAY 09 2001
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

PREPARED FOR:

EOTT PIPELINE COMPANY
5805 EAST HIGHWAY 80
MIDLAND, TEXAS 79701

PREPARED BY:

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
2540 WEST MARLAND
HOBBS, NEW MEXICO 88240

April 2001

TABLE OF CONTENTS

INTRODUCTION

Environmental Technology Group, Inc. (ETGI), on behalf of EOTT Energy Corp. (EOTT), prepared this annual report in compliance with the New Mexico Oil Conservation Division (OCD) letter of May 1998, requiring submittal of an annual report by April 1 of each year. The report presents the results of the quarterly ground water monitoring events only. For reference, the Site Location Map is provided as Figure 1.

Ground water monitoring was conducted during four quarterly events in calendar year 2000 to assess the levels and extent of dissolved phase and phase-separated petroleum hydrocarbon (PSH) constituents. The ground water monitoring events consisted of measuring static water levels in the monitoring wells, checking for the presence of PSH, and purging and sampling of each well exhibiting sufficient recharge. Monitoring wells containing measurable levels of PSH were not sampled.

FIELD ACTIVITIES

The site monitoring wells were gauged and sampled on March 3, May 16, September 1, and November 21, 2000. During each sampling event, the monitoring wells, designated to be sampled, were purged of approximately 3 well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Ground water was allowed to recharge and samples were obtained using disposable Teflon samplers. Water samples were stored in clean, glass containers provided by the laboratory and placed on ice in the field. Purge water was collected in a polystyrene tank and disposed of by Pate Trucking, Hobbs, New Mexico, utilizing a licensed disposal facility (OCD AO SWD-730).

GROUND WATER GRADIENT

Locations of the monitoring wells and the inferred ground water gradient, as measured on November 21, 2000, are depicted on Figure 2, the Site Ground Water Gradient Map. The ground water elevation data are provided as Table 1. Ground water elevation contours, generated from the final quarterly event of calendar year 2000 water level measurements, indicated a general gradient of approximately 0.009 ft/ft to the southeast as measured between ground water monitoring wells MW-2 and MW-4. The depth to ground water, as measured from the top of the well casing, ranged between 28.38 to 31.56 feet for the shallow alluvial aquifer.

A measurable thickness of PSH was detected in monitoring wells MW-4 and MW-5 during the annual monitoring period, monitoring well MW-2 developed a sheen during the second quarter monitoring event, this has remained constant for the subsequent monitoring events. A maximum thickness of 1.35 feet in monitoring well MW-4 and 2.60 feet in monitoring MW-5 was measured and is shown on Table 1.

LABORATORY RESULTS

Ground water samples collected during the sampling events were hand delivered to Environmental Laboratory of Texas, Midland, Texas for determination of benzene, toluene, ethyl benzene and total xylenes (BTEX) concentrations by EPA Method SW846-8021B. The ground water chemistry data are provided as Table 2 and the Laboratory Reports are provided as Appendix A.

Laboratory results for all of the site ground water samples, obtained during the calendar year 2000 monitoring period, indicated that Benzene and BTEX concentrations were below method detection limits for monitoring well MW-1. The Benzene concentrations were above regulatory standards in the ground water samples collected from monitoring well MW-3, while BTEX concentrations were below regulatory standards.

SUMMARY

This report presents the results of monitoring activities for the annual monitoring period of calendar year 2000. A measurable thickness of PSH was detected in monitoring wells MW-4 and MW-5 during the annual monitoring period, monitoring well MW-2 developed a sheen during the second quarter monitoring event, this has remained constant for the subsequent monitoring events. A maximum thickness of 1.35 feet in monitoring well MW-4 and 2.60 feet in monitoring MW-5 was measured in the monitoring wells.

Ground water elevation contours, generated from the final quarterly event of calendar year 2000 water level measurements, indicated a general gradient of approximately 0.009 ft/ft to the southeast as measured between ground water monitoring wells MW-2 and MW-4.

Laboratory results for all of the site ground water samples, obtained during the calendar year 2000 monitoring period, indicated that Benzene and BTEX concentrations were below method detection limits for monitoring well MW-1. The Benzene concentrations were above regulatory standards in the ground water samples collected from monitoring well MW-3, while BTEX concentrations were below regulatory standards.

FIGURES

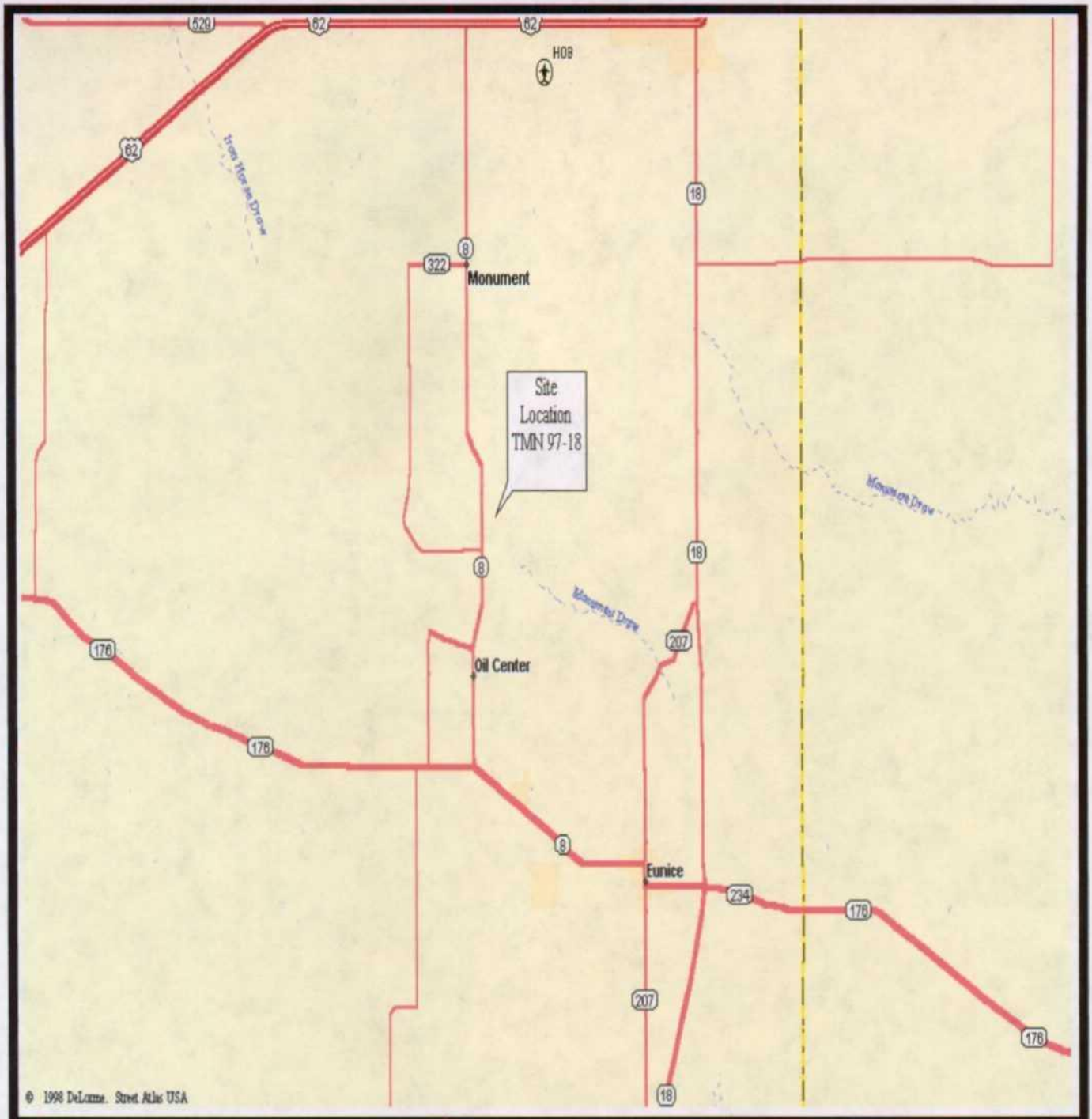
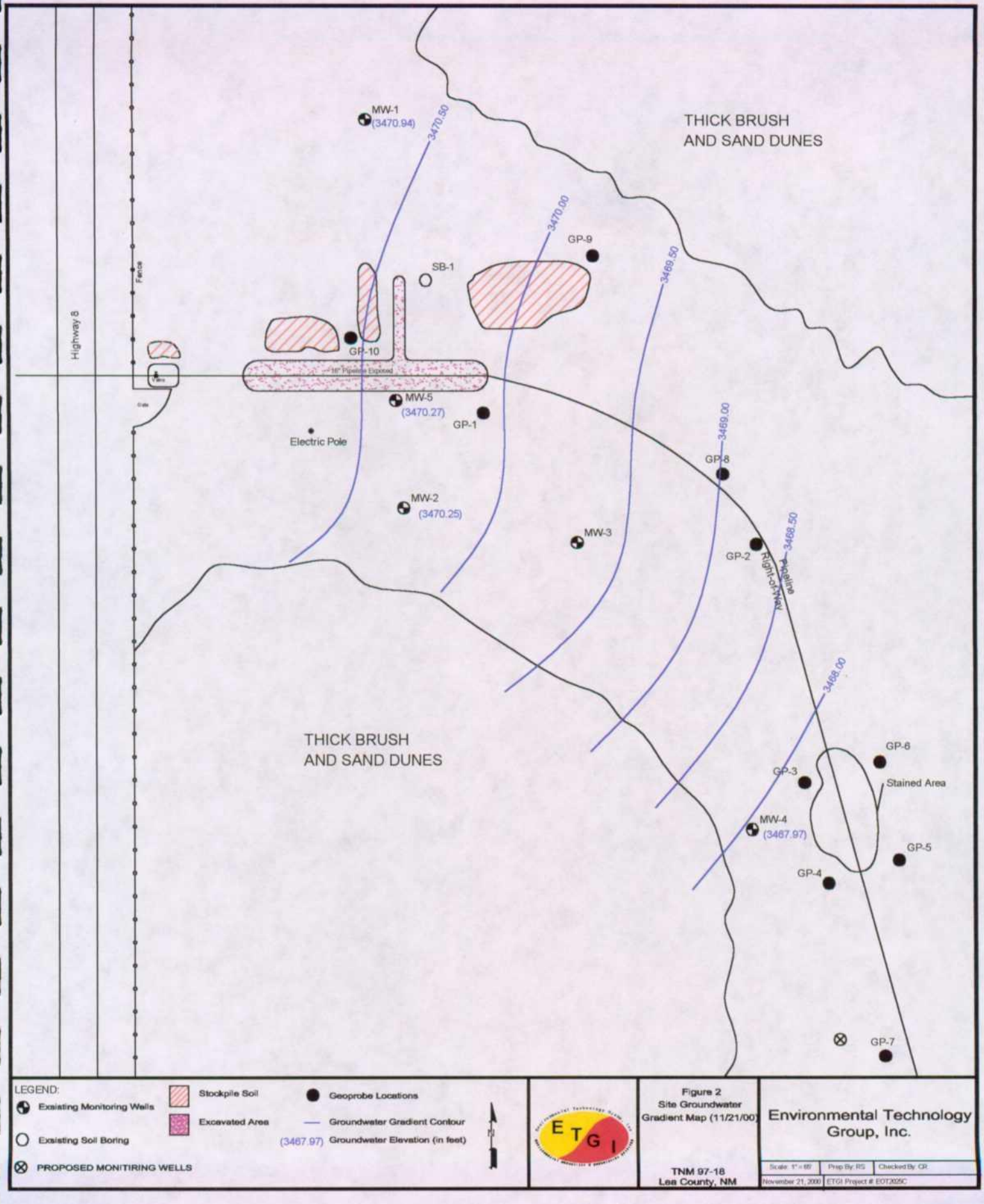
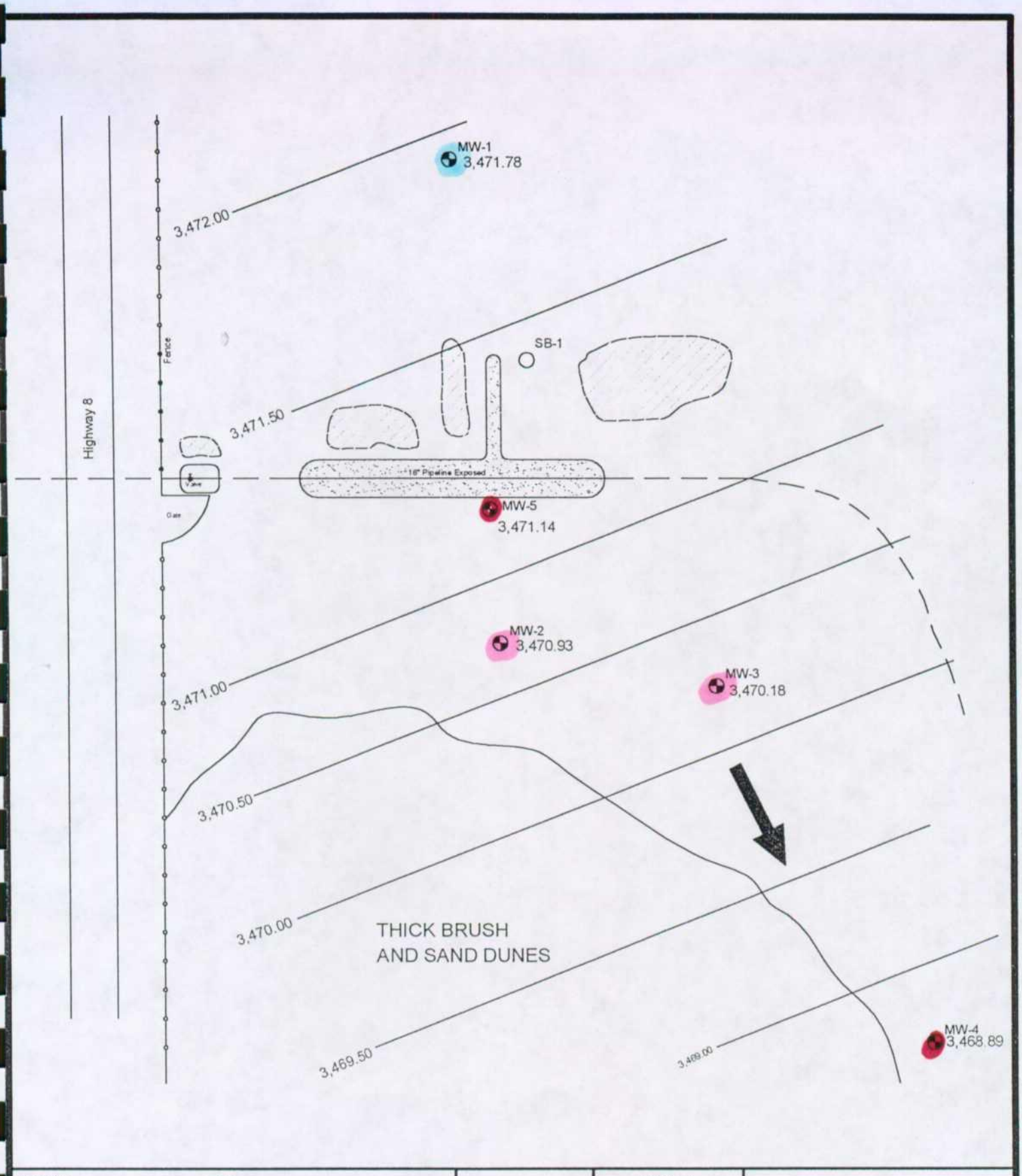


FIGURE 1	Site Location Map	Environmental Technology Group, Inc.
Not To Scale	EOTT Energy Corp. TNM 97-18 Lea County, NM	11 - 22 - 99 RS
		ETGI Project #: EOT2025C


MW-1
(3470.94)
3470.50
THICK BRUSH
AND SAND DUNES
3470.00
GP-9
SB-1
3469.50
Fence
Highway 8
GP-10
16" Pipeline Exposed
MW-5
(3470.27)
GP-1
Electric Pole
3469.00
GP-8
MW-2
(3470.25)
MW-3
3468.50
GP-2
Pipeline
Right-of-Way
3468.00
THICK BRUSH
AND SAND DUNES
GP-6
GP-3
Stained Area
MW-4
(3467.97)
GP-5
GP-4
GP-7
LEGEND:
Existing Monitoring Wells
Existing Soil Boring
PROPOSED MONITIRING WELLS
Stockpile Soil
Excavated Area
Geoprobe Locations
Groundwater Gradient Contour
(3467.97) Groundwater Elevation (in feet)
ETGI
Figure 2
Site Groundwater
Gradient Map (11/21/00)
TNM 97-18
Lea County, NM
Environmental Technology
Group, Inc.
Scale: 1" = 65'
Prep By: RS
Checked By: CR
November 21, 2000
ETGI Project # EOT2025C



LEGEND:

- Existing Monitoring Wells
- Existing Soil Boring
- 3,456.98 Ground Water Elevations
- Stockpile Soil
- Excavated Area
- Inferred Ground Water Gradient Contour
- Inferred Ground Water Gradient Contour

N

ETGI

Figure 2
Inferred Ground Water Contours 11/30/99

TNM 97-18
Lea County, NM

Environmental Technology Group, Inc.

Scale: 1" = 55'	Prep By: RS	Checked By: JN
August 19,1999	ETGI Project # EOT 1025C	

TABLES

TABLE 1

GROUND WATER ELEVATION
ANNUAL REPORT

EOTT ENERGY CORPORATION
TNM 97-18
LEA COUNTY, NEW MEXICO
ETGI PROJECT # EOT2025C

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 1	03/03/00	3,500.17	-	28.60	0.00	3,471.57
	05/16/00	3,500.17	-	28.68	0.00	3,471.49
	09/01/00	3,500.17	-	29.06	0.00	3,471.11
	11/21/00	3,500.17	-	29.23	0.00	3,470.94
MW - 2	03/03/00	3,499.19	-	28.38	0.00	3,470.81
	05/16/00	3,499.19	28.43	28.43	0.00	3,470.76
	09/01/00	3,499.19	29.00	29.00	0.00	3,470.19
	11/21/00	3,499.19	28.94	28.94	0.00	3,470.25
MW - 3	03/03/00	3,500.05	-	29.95	0.00	3,470.10
	05/16/00	3,500.05	-	30.03	0.00	3,470.02
	09/01/00	3,500.05	-	30.56	0.00	3,469.49
	11/21/00	3,500.09	-	30.21	0.00	3,469.88
MW - 4	03/03/00	3,498.38	29.55	30.28	0.73	3,468.72
	05/16/00	3,498.38	29.56	30.33	0.77	3,468.70
	09/01/00	3,498.38	30.11	31.24	0.13	3,467.25
	11/21/00	3,498.38	30.21	31.56	1.35	3,467.97
MW - 5	03/03/00	3,500.12	28.90	30.26	1.36	3,471.02
	05/16/00	3,500.12	28.94	30.31	1.37	3,470.97
	09/01/00	3,500.12	29.47	30.36	0.89	3,470.52
	11/21/00	3,500.12	29.46	32.06	2.60	3,470.27

TABLE 2

GROUND WATER CHEMISTRY
ANNUAL REPORT

EOTT ENERGY CORPORATION
TNM 97 - 18
LEA COUNTY, NEW MEXICO
ETGI PROJECT # EOT 2025C

All concentrations are in mg/L

SAMPLE LOCATION	SAMPLE DATE	SW 846-8021B, 5030				
		BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES
MW - 1	03/03/00	<0.001	<0.001	<0.001	<0.001	<0.001
	05/16/00	<0.001	<0.001	<0.001	<0.001	<0.001
	09/01/00	<0.001	<0.001	<0.001	<0.001	<0.001
	11/21/00	<0.001	<0.001	<0.001	<0.001	<0.001
MW - 2	03/03/00	0.694	0.260	0.407	0.197	0.038
MW - 3	03/03/00	0.309	0.003	0.201	0.035	<0.001
	05/16/00	0.410	0.006	0.238	0.041	<0.001
	09/01/00	0.402	0.003	0.248	0.040	<0.001
	11/21/00	0.574	0.002	0.352	0.069	<0.001

APPENDIX

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: MR. JESSE TAYLOR
P.O. BOX 4845
MIDLAND, TEXAS 79704
FAX: 505-392-3760
FAX: 915-520-4310

SampleType: Water
Sample Condition: Intact/ Iced/HCl
Project #: EOT 1015C
Project Name: TNM 97-18
Project Location: Lea County, N.M.

Sampling Date: 03/03/00
Receiving Date: 03/03/00
Analysis Date: 03/07/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
23989	MW-1	<0.001	<0.001	<0.001	<0.001	<0.001
23990	MW-2	0.694	0.260	0.407	0.197	0.038
23991	MW-3	0.309	0.003	0.201	0.035	<0.001
	% IA	97	94	92	93	91
	% EA	100	96	94	96	94
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8021B,5030

Raland K. Tuttle

3-8-00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COC 99

Project Manager: Jesse Tatum
Phone #: (915) 664-9456
FAX #: (505) 392-3760

Company Name & Address: ETGI
P.O Box 4645 Midland TX 79704

Project #: EOT 1015C
Project Name: TNM 97-18

Project Location: Lea County
Sampler Signature: Simon Casas

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B/5030	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
	MW 1	2	V	X					X		X			3-3	1050	X							
	MW 2														1112								
	MW 3														1016								

Relinquished by:	Date:	Time:	Received by:
Simon Casas	3-300	1545	J McMurray
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS: Mail Results: K. Dutton

Invoice: Lennah Frost 1015C

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: MR. JESSE TAYLOR
P.O. BOX 4845
MIDLAND, TEXAS 79704
FAX: 915-520-4310
FAX: 505-392-3760

SampleType: Water
Sample Condition: Intact/ Iced/HCl/ 32 deg. F
Project #: EOT 2015C
Project Name: TNM 97-18
Project Location: Lea County, N.M.

Sampling Date: 05/16/00
Receiving Date: 05/17/00
Analysis Date: 05/24/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
25837	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001
25838	MW 3	0.410	0.006	0.238	0.041	<0.001
% IA		99	97	96	104	96
% EA		95	92	93	100	91
BLANK		<0.001	<0.001	<0.001	<0.001	<0 001

METHODS: SW 846-8021B,5030

Umesh Rao

Umesh Rao, Ph. D.

5/25/00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COC # 138

Project Manager: JESSE TAYLOR
Phone #: (505) 392-8731
FAX #: (505) 392-3760

Company Name & Address: ETGI
P.O. BOX 4545 MIDLAND TX 79704

Project #: EOT 2015C
Project Name: TNM97-16

Project Location: LEA COUNTY NM
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8112(5030)	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
25837	MW 1	2	V	X					X		X			5-16	1305	X							
25838	MW 3	2	V	X					X		X			5-16	1233	X							

Relinquished by:	Date:	Time:	Received by:
	5-17-00	1530	
	5/17/00	1:45	mcmurrey

Received by Laboratory:

REMARKS: MAIL RESULTS: K. DUTTON

Rec 32°F

INVOICE: EOT 105 M

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: BETH ALDRICH
2540 W. MARLAND
HOBBS, NM 88240
FAX: 505-397-4701

SampleType: Water
Sample Condition: Intact/ Iced/ HCL/30 deg. F
Project #: EOT 2025C
Project Name: TNM97-18
Project Location: Monument, NM

Sampling Date: 09/01/00
Receiving Date: 09/01/00
Analysis Date: 09/06/00&09/07/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L	TOTAL BTEX mg/L
30336	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
30337	MW 3	0.402	0.003	0.248	0.040	<0.001	0.693
30338	EB 1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
% IA		88	87	86	84	82	
% EA		88	86	87	86	84	
BLANK		<0.001	<0.001	<0.001	<0.001	<0.001	

METHODS: SW 846-8021B,5030

Raland K. Tuttle

9-8-00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COC 201

Project Manager: BETH ALDRICH
Phone #: (505) 397-4882
FAX #: (505) 397-4701

Company Name & Address: ETGI
2540 W MARLAND HOBBS NM 88240

Project #: EOT 2025C
Project Name: TNM 97-18

Project Location: MONUMENT NM
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021/~~8260~~	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
	MW 1	2	V	X					X		X			9-1	1040	X							
	MW 3	↓	↓	↓					↓		↓			↓	1020	↓							
	EB 1	↓	↓	↓					↓		↓			↓	1058	↓							

Relinquished by:	Date:	Times:	Received by:
[signature]	9-1-00	1400	
Relinquished by:	Date:	Times:	Received by:
[signature]	9-1-00	1705	
Relinquished by:	Date:	Times:	Received by Laboratory:
	9-1-00	1705	[signature]

REMARKS
FAX Results: HOBBS OFF.
MAIL Results: EOTT
INVOICE: EOTT

30°C

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: BETH ALDRICH
P.O. BOX 4845
MIDLAND, TEXAS 79704
FAX: 915-520-4310

Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ -3 deg. C
Project #: EOT 2025c
Project Name: TNM 97-18
Project Location: Lea Co., N.M.

Sampling Date: 11/21/00
Receiving Date: 11/22/00
Analysis Date: 11/26/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L
34229	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001
34230	MW 3	0.574	0.002	0.352	0.069	<0.001
34231	EB 1	<0.001	0.003	<0.001	<0.001	<0.001
	%IA	90	96	98	102	95
	%EA	87	90	91	92	85
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

11-27-00
Date

Environmental Lab of Texas, Inc.

12600 West I-20 E · Odessa, Texas 79763
(915) 563-180. FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COC 279

Project Manager: BETH ALDRICH
Phone #: (505) 397-4882
FAX #: (505) 397-4701

Company Name & Address: ETGI
2540 W MARLAND HOBBS NM

Project #: EOT 2025C
Project Name: TNM 97-18

Project Location: LEA COUNTY, NM
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 8021/5030	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
	MW 1	2	V	X					X		X			11-21	1445	X							
	MW 3														1510								
	EB 1														1520								

Relinquished by:	Date:	Time:	Received by:
Steven Cases	11-22-00	0800	Steven Baez
Steven Baez	11-22-00	11:25	
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS

INVOICE: EOTT
FAX RESULTS: HOBBS OFFICE
MAIL RESULTS: EOTT

-3C