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## ANNUAL MONITORING REPORT

YEAR(S):

## ANNUAL MONITORING REPORT

EOTT ENERGY, LLC
DARR ANGELL #4

NW ¼, NE ¼ OF SECTION 11, TOWNSHIP 15 SOUTH, RANGE 37 EAST
SW ¼, SE ¼ OF SECTION 2, TOWNSHIP 15 SOUTH, RANGE 37 EAST
LEA COUNTY, NEW MEXICO

PREPARED FOR:

EOTT ENERGY, LLC 5805 EAST HIGHWAY 80 MIDLAND, TEXAS 79701

PREPARED BY:

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

April 2003

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### INTRODUCTION

Environmental Technology Group, Inc. (ETGI), on behalf of EOTT Energy, LLC (EOTT), prepared this Annual Monitoring Report in compliance with the New Mexico Oil Conservation Division (NMOCD) letter of May 1998, requiring submittal of an Annual Monitoring Report by April 1 of each year. This report is intended to be viewed as a complete document with text, figures, tables, and appendices. This report presents the results of the quarterly groundwater monitoring events only. For reference, the Site Location Map is provided as Figure 1.

Groundwater monitoring was conducted during four quarterly events in calendar year 2002 to assess the levels and extent of dissolved phase and phase-separated petroleum hydrocarbon (PSH) constituents. The groundwater monitoring events consisted of measuring static water levels in the monitor wells, checking for the presence of PSH and purging and sampling of each well exhibiting sufficient recharge. Monitor and recovery wells containing measurable levels of PSH were not sampled.

## FIELD ACTIVITIES

The site monitor wells were gauged and sampled on February 18, June 19, September 18, and December 18, 2002. Monitor and recovery wells MW-14, RW-7, RW-8, RW-9, RW-10, RW-11, RW-12, and RW-13 were installed during this reporting period and sampled according to established NMOCD sampling guidelines. During each sampling event the monitor and recovery wells designated to be sampled were purged of approximately three well volumes of water or until the wells were dry using a PVC bailer or electrical Grundfos Pump. Groundwater 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 or Vista Trucking, Eunice, New Mexico utilizing a licensed disposal facility (OCD AO SWD-730).

### **GROUNDWATER GRADIENT**

Locations of the monitor wells and the inferred groundwater gradient, as measured on December 18, 2002, is depicted on Figure 2, the Inferred Groundwater Gradient Map. The groundwater elevation data is provided in Table 1. Groundwater elevation contours generated from the final quarterly event of calendar year 2002 water level measurements indicate a general gradient of approximately 0.002 ft/ft to the southeast as measured between groundwater monitor wells MW-5 and MW-3. The depth to groundwater as measured from the top of the well casing ranged between 60.77 to 69.25 feet for the shallow alluvial aquifer.

A measurable thickness of PSH was detected in recovery wells RW-1, RW-2, RW-3, RW-4, RW-6, RW-8, RW-9, RW-10, RW-11, RW-12 and monitor wells MW-6 and MW-8 during the annual monitoring period. Recovery well RW-3 was inaccessible during the first, second, and third quarters due to excavation activities. Maximum thicknesses of 2.33 feet in recovery well RW-1, 6.26 feet in recovery well RW-2, 4.42 feet in recovery well RW-3, 6.67 feet in recovery

well RW-4, 1.12 feet in recovery well RW-6, 0.14 feet in recovery well RW-8, 0.95 feet in recovery well RW-9, 5.67 feet in recovery well RW-10, 4.02 feet in recovery well RW-11, 0.35 feet in recovery well RW-12, 0.53 feet in monitor well MW-6, and 0.02 feet in monitor well MW-8 was measured and is shown on Table 1.

### LABORATORY RESULTS

Groundwater samples collected during the sampling events were delivered to AnalySys, Inc. in Austin, Texas for determination of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) constituent concentrations via EPA Method SW846-8260b. The groundwater chemistry data is provided in Table 2 and copies of the Laboratory Reports are provided in Appendix A. Groundwater samples which exceeded regulatory standards for benzene and BTEX, are indicated on Figure 3, the NMOCD Site Map.

Laboratory results for groundwater samples collected during the calendar year 2002 monitoring period indicate BTEX concentrations were below NMOCD regulatory standards in monitor wells MW-1, MW-2, MW-4, MW-5, MW-7, MW-9, MW-11, MW-12 and recovery well RW-5. The benzene concentrations for monitor wells MW-3, MW-8, MW-10, MW-13, MW-14 and recovery wells RW-7 and RW-13 were above NMOCD regulatory standards while the other BTEX concentrations were below NMOCD regulatory standards.

### **SUMMARY**

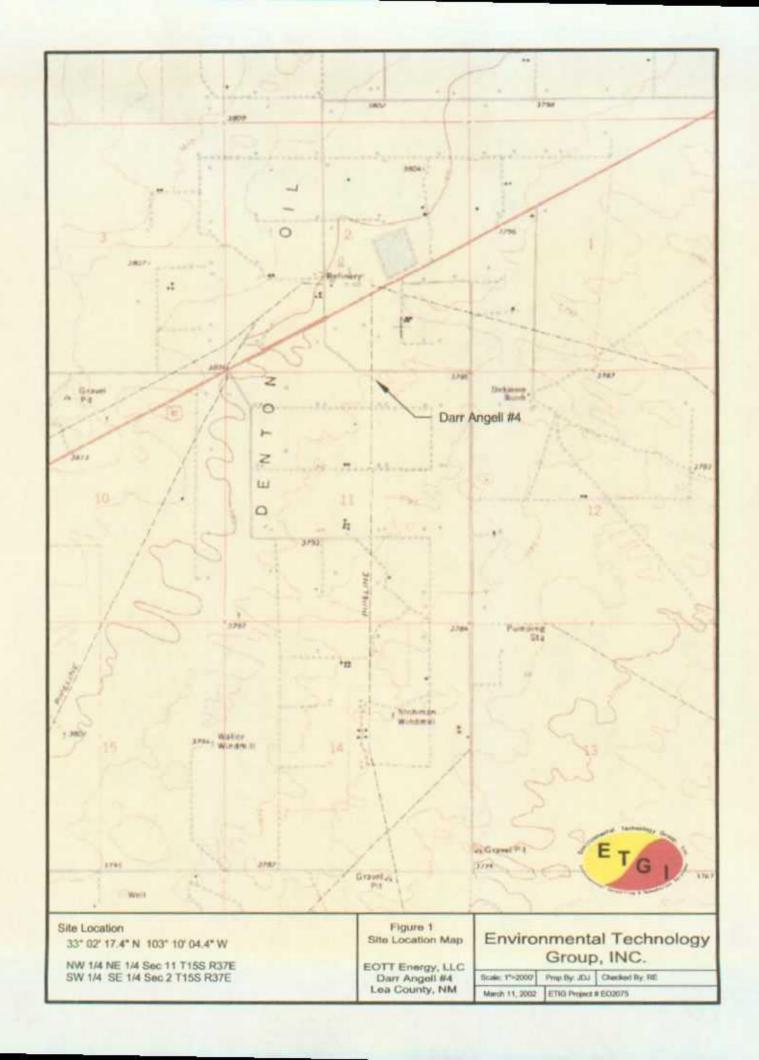
This report presents the results of monitoring activities for the annual monitoring period of calendar year 2002. A measurable thickness of PSH was detected in recovery wells RW-1, RW-2, RW-3, RW-4, RW-6, RW-8, RW-9, RW-10, RW-11, RW-12 and monitor wells MW-6 and MW-8 during the annual monitoring period. Recovery well RW-3 was inaccessible during the first, second and third quarters due to excavation activities. Maximum thicknesses of 2.33 feet in recovery well RW-1, 6.26 feet in recovery well RW-2, 4.42 feet in recovery well RW-3, 6.67 feet in recovery well RW-4, 1.12 feet in recovery well RW-6, 0.14 feet in recovery well RW-8, 0.95 feet in recovery well RW-9, 5.67 feet in recovery well RW-10, 4.02 feet in recovery well RW-11, 0.35 feet in recovery well RW-12, 0.53 feet in monitor well MW-6, and 0.02 feet in monitor well MW-8 was measured in the recovery and monitor wells. During this reporting period, approximately 2,291 gallons of PSH was recovered from the aforementioned recovery and monitor wells. Recovered PSH was reintroduced into the EOTT transportation system at the Lea Station Facility, Monument, New Mexico.

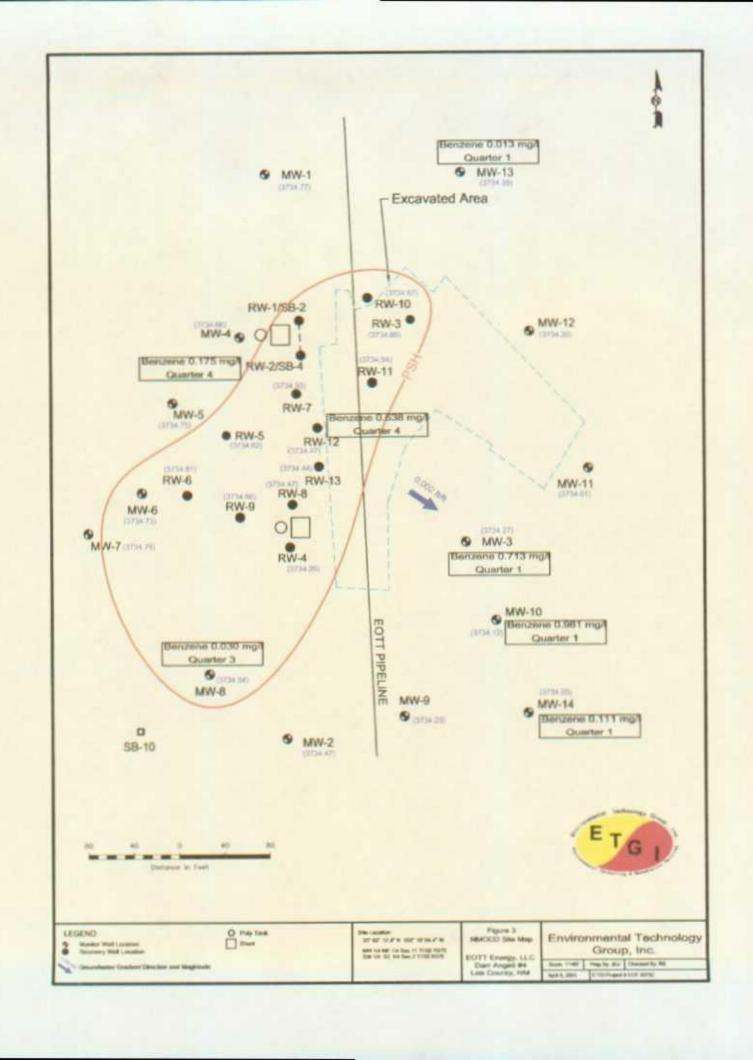
Groundwater elevation contours, generated from the final quarterly event of calendar year 2002 water level measurements, indicate a general gradient of approximately 0.002 ft/ft to the southeast as measured between groundwater monitoring wells MW-3 and MW-3.

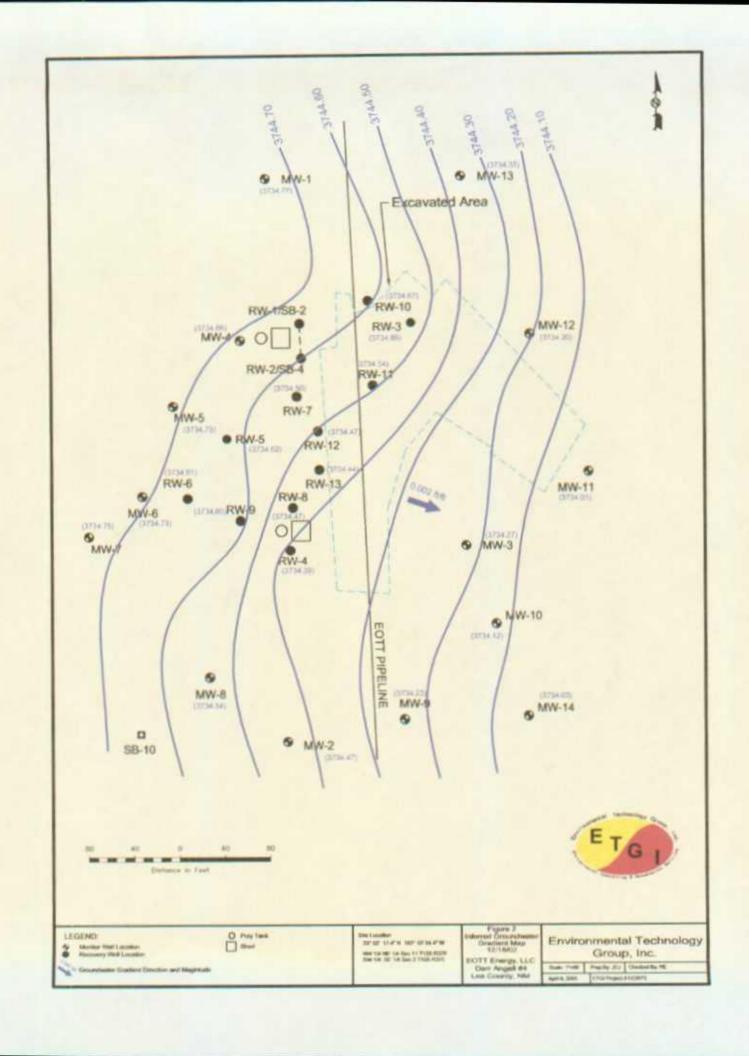
Laboratory results for groundwater samples collected during the calendar year 2002 monitor period indicate BTEX concentrations were below NMOCD regulatory standards in monitor wells MW-1, MW-2, MW-4, MW-5, MW-7, MW-9, MW-11, MW-12 and recovery well RW-5. The benzene concentrations for monitor wells MW-3, MW-8, MW-10, MW-13, MW-14 and recovery wells RW-7 and RW-13 were above NMOCD regulatory standards while the other BTEX concentrations were below NMOCD regulatory standards.

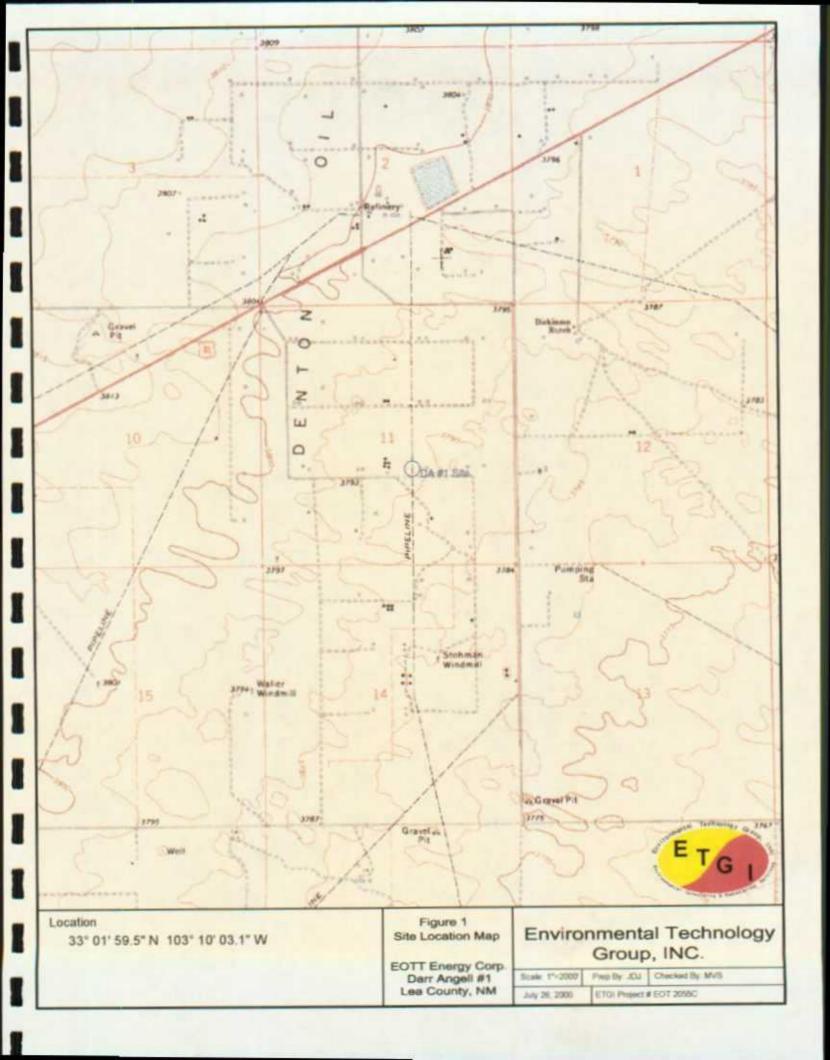
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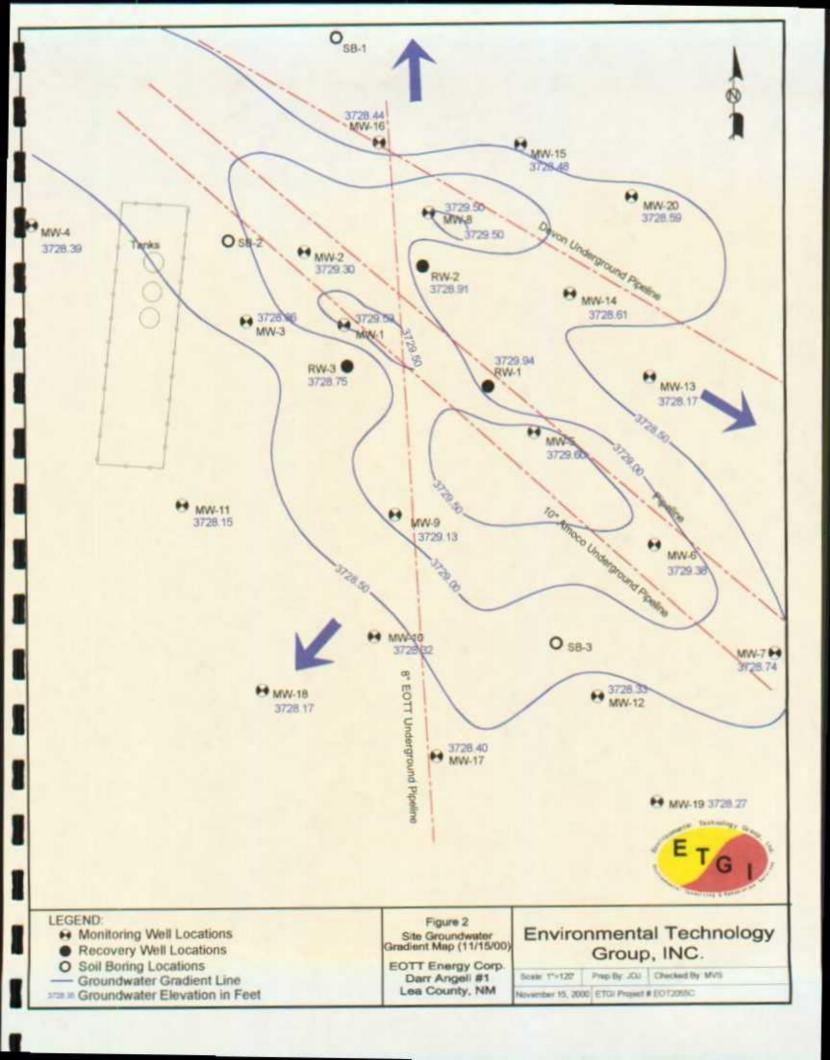


TABLE 1

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW:-1	07/31/00	3,800.66	4	64.55	0.00	3,736.11
	09/13/00	3,800.66		64.65	0.00	3,736,01
	11/15/00	3,800.66	-	64.76	0.00	3,735.90
	02/14/01	3,800.66	1 2	64.82	0.00	3,735.84
	04/24/01	3,800.66		64.92	0.00	3,735.74
	08/21/01	3,800.66	-	65.11	0.00	3,735.55
	10/30/01	3,800.66	-	65.22	0.00	3,735.44
	02/18/02	3,800.66	-	65.39	0.00	3,735.27
	06/19/02	3,800.66	-	65.59	0.00	3,735.07
	09/18/02	3,800.66	-	65.77	0.00	3,734.89
	12/18/02	3,800.66	-	65.89	0.00	3,734.77
MW - 2	07/31/00	3,796.33	-	60.55	0.00	3,735.78
	09/13/00	3,796.33		60.66	0.00	3,735.67
	11/15/00	3,796.33	-	60.76	0.00	3,735.57
	02/14/01	3,796.33	-	60.74	0.00	3,735.59
	04/24/01	3,796.33	3/	60.90	0.00	3,735.43
	08/21/01	3,796.33		61.10	0.00	3,735.23
	10/30/01	3,796.33	-40	61.20	0.00	3,735.13
	02/18/02	3,796.33	-	61.31	0.00	3,735.02
	06/19/02	3,796.33	-	61.57	0.00	3,734.76
	09/18/02	3,798.33	-	61.74	0.00	3,734.59
	12/18/02	3,796.33	-	61.86	0.00	3,734.47
MW-3	07/31/00	3,798.10	-	62.53	0.00	3,735,57
	09/13/00	3,798.10		62.63	0.00	3,735.47
	11/15/00	3,798.10		62.72	0.00	3,735.38
	02/14/01	3,798.10		62.72	0.00	3,735.38
	04/24/01	3,798.10	+	62.88	0.00	3,735.22
	08/21/01	3,798.10	-	63.10	0.00	3,735.00
	10/30/01	3,798.10	(+)	63.20	0.00	3,734.90
	02/18/02	3,798.10	-	63.31	0.00	3,734.79
	06/19/02	3,798.10		63.54	0.00	3,734.56
	09/18/02	3,798.10	P	62.72	0.00	3,735.38
	12/18/02	3,798.10	-	63.83	0.00	3,734.27

TABLE 1

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION		DEPTH TO WATER	PSH THICKNESS	GROUND WATER ELEVATION
MW - 4	08/21/01	3,797.72	-	62.34	0.00	3,735.38
	10/30/01	3,797.72		62.45	0.00	3,735.27
	02/18/02	3,797.72	-	62.63	0.00	3,735.09
	06/19/02	3,797.72	14	62.81	0.00	3,734.91
	09/18/02	3,797.72	-	62.99	0.00	3,734.73
	12/18/02	3,797.72	-	63.09	0.00	3,734.63
MW - 5	08/21/01	3,797.23		61.87	0.00	3,735.36
	10/30/01	3,797.23	-	61.86	0.00	3,735.37
	02/18/02	3,797.23	4	62.03	0.00	3,735.20
	06/19/02	3,797.23	-	62.21	0.00	3,735.02
	09/18/02	3,797.23	-	62.38	0.00	3,734.85
	12/18/00	3,797.23	-	62.50	0.00	3,734.73
MW - 6	08/21/01	3,796.51	-	60.96	0.00	3,735.55
11111	10/30/01	3,796.51		61,11	0.00	3,735,40
	02/18/02	3,796.51	61.28	61.47	0.19	3,735.20
	06/19/02	3,796.51	61.44	61.54	0.21	3,735.15
	09/18/02	3,796.51	61.53	62.01	0.48	3,734.91
	10/09/02	3,796.51	61.61	62.14	0.53	3,734.82
	10/10/02	3,796.51	61.69	61.78	0.09	3,734.81
	10/11/02	3,796.51	61.69	61.79	0.10	3,734.81
	12/18/02	3,796.51	61.77	61.85	0.08	3,734.73
MW-7	08/21/01	3,796.16	-	60.60	0.00	3,735.56
19164	10/30/01	3,796.16	-	60.73	0.00	3,735.43
	02/18/02	3,796.16		60.83	0.00	3,735.33
	06/19/02	3,796.16		61.08	0.00	3,735.08
	09/18/02	3,796.16	-	61.24	0.00	3,734.92
	12/18/02	3,796.16		61.66	0.00	3,734.50
MW - 8	08/21/01	3,795.89		60.58	0.00	3,735.31
7414.4 - 13	10/30/01	3,795.89		60.65	0.00	3,735.24
	02/18/02	3,795.89	107	60.77	0.00	3,735.12
	06/19/02			61.05	0.00	3,734.84
_	-	3,795.89		61.23	0.00	3,734.66
	09/18/02	3,795.89	61.35	61.37	0.02	3,734,54
MW - 9	12/18/02 08/21/01	3,795.66		60.68	0.02	3,734.98
MAX - 2	10/30/01	3,795.66	-	60.80	0.00	3,734.86
	02/18/02	3,795.66		60.92	0.00	3,734.74
	06/19/02	3,795.66	-	61.15	0.00	3,734.51
	09/18/02	3,795.66		61 32	0.00	3,734.34
	12/18/02	3,795.66	-	61.43	0.00	3,734.23

TABLE 1

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	GROUND WATER ELEVATION
MW - 10	08/21/01	3,796.23	-	61.35	0.00	3,734.88
	10/30/01	3,796.23		61.51	0.00	3,734.72
	02/18/02	3,796.23		61.61	0.00	3,734.62
	06/19/02	3,796.23		61.84	0.00	3,734.39
	09/18/02	3,796.23		62.01	0.00	3,734.22
	12/18/02	3,796.23		62.11	0.00	3,734.12
MW - 11	08/21/01	3,796.58	-	61.80	0.00	3,734.78
	10/30/01	3,796.58	-	61.92	0.00	3,734.66
	02/18/02	3,796.58	-	62.08	0.00	3,734.50
	06/19/02	3,796,58	-	62.28	0.00	3,734.30
	09/18/02	3,796.58	-	62.42	0.00	3,734.16
	12/18/02	3,796.58		62.57	0.00	3,734.01
MW - 12	08/21/01	3,798.03	-	63.04	0.00	3,734.99
	10/30/01	3,798.03	-	63.20	0.00	3,734.83
	02/18/02	3,798.03		63.28	0.00	3,734,75
	06/19/02	3,798.03		63.52	0.00	3,734.51
	09/18/02	3,798.03		63.68	0.00	3,734.35
	12/18/02	3,798.03	-	63.83	0.00	3,734.20
MW - 13	08/21/01	3,799.65	-	.64.51	0.00	3,735.14
	10/30/01	3,799.65	-	64.63	0.00	3,735.02
	02/18/02	3,799.65		64.73	0.00	3,734.92
	06/19/02	3,799.65		64.97	0.00	3,734.68
	09/18/02	3,799.65	-	65.13	0.00	3,734.52
	12/18/02	3,799.65	-	65.30	0.00	3,734.35
MW - 14	12/18/02	3,788.64	-	62.07	0.00	3,726.57
RW - 1	07/31/00	3,797.86		61.76	0.00	3,735.90
	09/13/00	3,797.66		61.86	0.00	3,735.80
	11/15/00	3,797.66	-	61.94	0.00	3,735.72
	02/14/01	3,797.66		61.95	0.00	3,735,71
	04/24/01	3,797.66	62.06	62.50	0.44	3,735,53
	08/21/01	3,797.66	62.31	63.18	0.87	3,735.22
	10/30/01	3,797.66	62.43	63.00	0.57	3,735.14
	02/18/02	3,797.66	62.20	64.53	2.33	3,735.11
	04/29/02	3,797.66	62.80	62.86	0.06	3,734.85
	06/19/02	3,797.66	62.87	62.94	0.07	3,734.78
	09/18/02	3,797.66	62.75	64.03	1.28	3,734.72
	12/18/02	** could not	THE RESERVE OF THE PARTY OF THE	A CONTRACTOR OF THE PARTY OF TH	Annual Control of the	

TABLE 1

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
RW - 2	07/31/00	3,797.60	61.53	62.45	0.92	3,735,93
	09/13/00	3,797.60	61.13	64.52	3.39	3,735,96
	11/15/00	3,797.60	61.01	65.91	4.90	3,735.86
	02/14/01	3,797.60	61.04	66.80	5.76	3,735.70
	04/24/01	3,797.60	60.26	66.21	5.95	3,736.45
	08/21/01	3,797.60	61.47	67.22	5.75	3,735.27
	10/30/01	3,797.60	61.58	66.25	4.67	3,735.32
	02/18/02	3,797.60	61.42	67.68	6.26	3,735.24
	04/29/02	3,797.60	62.72	63.15	0.43	3,734.82
	06/19/02	3,797.60	62.86	62.93	0.07	3,734.73
	09/18/02	3,797.60	61.89	67.84	5.95	3,734.82
	12/18/02	3,797.60	62.08	67.80	5.72	3,734.66
RW - 3	07/31/00	3,798.81	61.35	37.81	6.46	3,766.49
	09/13/00	3,798.81	61.77	67.82	6.35	3,736.39
	11/15/00	3,798.81	61.65	67.81	6.16	3,736.24
	02/14/01	3,798.81	61.88	67.80	5.92	3,736.04
	04/24/01	3,798.81	61.97	67.84	5.87	3,735.96
	08/21/01	3,798.81	62.20	67.87	5.47	3,735.59
	10/30/01	3,798.81	62.30	65:70	3,40	3,736.00
	02/18/02	3,798.81	*			
	06/19/02	3,798.81		*		
	09/18/02	3,798.81				
	12/18/02	3,798.81	63.30	67.72	4.42	3,734.85
RW - 4	07/31/00	3,798.34	61.95	64.92	2.97	3,735.94
	09/13/00	3,798.34	61.33	68.18	6.85	3,735.98
	11/15/00	3,798.34	81.44	68.41	6.97	3,735.85
	02/14/01	3,798.34	61.65	68.47	6.82	3,735.67
	04/24/01	3,798.34	61.75	68.51	6.76	3,735.58
	08/21/01	3,798.34	62.05	66.26	4.21	3,735.66
	10/30/01	3,798.34	62.14	64.00	1.85	3,735.91
	02/18/02	3,798.34	62.14	68.81	6.67	3,735.20
	04/29/02	3,798.34	63.40	64.56	1.16	3,734.77
	06/19/02	3,798.34	63.87	63.92	0.05	3,734.46
	09/18/02	3,798.34	62.70	68.81	6.11	3,734.72
	12/18/02	3,798.34	63.93	64.08	0.15	3,734.39
RW - 5	08/21/01	3,797.60	62.22	62.22	0.00	3,735.38
	10/30/01	3,797.60	62.35	62.35	0.00	3,735.25
	02/18/02	3,797.60	-	62.50	0.00	3,735.10
	06/19/02	3,797.60		62.69	0.00	3,734.91
	09/18/02	3,797.60		62.85	0.00	3,734.75
	12/18/02	3,797.60		62.98	0.00	3,734.62

TABLE 1

WELL	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	GROUND WATER ELEVATION
RW - 6	08/21/01	3,797.28	61.88	61.89	0.01	3,735.40
	10/30/01	3,797.28	62.01	62.04	0.03	3,735.27
	02/18/02	3,797.28	62.13	62.40	0.27	3,735.11
	06/19/02	3,797.28	62.26	62.81	0.55	3,734.94
	09/18/02	3,797.28	62.31	63.31	1.00	3,734.82
	10/09/02	3,797.28	62.35	63.47	1.12	3,734.76
	10/10/02	3,797.28	62.52	62.66	0.14	3,734.74
	10/11/02	3,797.28	62.52	62.66	0.14	3,734.74
	12/18/02	3,797.28	62.52	63.49	0.97	3,734.61
RW - 7	12/18/02	3,979.43		62.93	0.00	3,916.50
RW - 8	12/18/02	3,798.33	63.84	63.98	0.14	3,734.47
RW - 9	12/18/02	3,797.99	63.25	64.20	0.95	3,734.60
RW - 10	12/18/02	3,799.10	63.58	69.25	5.67	3,734.67
RW - 11	12/18/02	3,796.65	61.51	65.53	4.02	3,734.54
RW - 12	12/18/02	3,798.13	63.61	63.96	0.35	3,734.47
RW - 13	12/18/02	3,798.52	-	64.08	0.00	3,734.44

<sup>\*\*</sup> Could not gauge due to excavation

TABLE 2

## GROUNDWATER CHEMISTRY

## DARR ANGEL 4 LEA COUNTY, NEW MEXICO ETGI PROJECT # EO 2075

SAMPLE	SAMPLE		Method	#260b	
LOCATION	DATE	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL
MW - 1	09/14/00	< 0.001	< 0.001	< 0.001	< 0.001
	11/15/00	< 0.001	< 0.001	< 0.001	< 0.001
	02/14/01	< 0.001	< 0.001	< 0.001	< 0.001
	04/24/01	<0.005	< 0.005	< 0.005	<0.005
	08/21/01	0.002	< 0.001	< 0.001	< 0.001
	10/30/01	< 0.001	< 0.001	< 0.001	< 0.001
	02/18/02	0.002	< 0.001	< 0.001	< 0.001
	06/19/02	0.006	< 0.001	0.002	< 0.001
	09/18/02	< 0.001	< 0.001	< 0.001	< 0.001
	12/18/02	<0.001	< 0.001	< 0.001	< 0.001
MW-2	09/14/00	<0.001	< 0.001	< 0.001	< 0.001
	11/15/00	< 0.001	< 0.001	< 0.001	< 0.001
	02/14/01	< 0.001	< 0.001	< 0.001	< 0.001
	04/24/01	< 0.005	< 0.005	< 0.005	< 0.005
	08/21/01	< 0.001	< 0.001	< 0.001	< 0.001
	10/30/01	0.002	< 0.001	<0.001	< 0.001
	02/18/02	< 0.001	< 0.001	< 0.001	< 0.001
	06/19/02	< 0.001	< 0.001	< 0.001	< 0.001
	09/18/02	<0.001	< 0.001	0.002	<0.001
	12/18/02	0.002	< 0.001	< 0.001	< 0.001
MW-3	09/14/00	0.159	0.001	< 0.001	0.025
	11/15/00	0.431	< 0.001	< 0.001	0.074
	02/14/01	0.553	0.001	< 0.001	0.087
	04/24/01	0.683	< 0.005	< 0.005	0.915
	08/21/01	0.953	< 0.001	< 0.001	0.085
	10/30/01	0.071	< 0.001	<0.001	0.005
	02/18/02	0.713	< 0.001	< 0.001	0.057
	06/19/02	0,395	< 0.001	< 0.001	0.053
	09/18/02	0.705	<0.001	< 0.001	0.035
	12/18/02	0.250	< 0.001	0.001	0.025
MW - 4	08/21/01	0.001	<0.001	< 0.001	< 0.001
	10/30/01	<0.001	<0.001	< 0.001	< 0.001
	02/18/02	< 0.001	<0.001	<0.001	<0.001
	06/19/02	<0.001	< 0.001	<0.001	< 0.001
	09/18/02	< 0.001	< 0.001	< 0.001	< 0.001
	12/18/02	0.002	< 0.001	<0.001	< 0.001

TABLE 2

## GROUNDWATER CHEMISTRY

## DARR ANGEL 4 LEA COUNTY, NEW MEXICO ETGI PROJECT # EO 2075

SAMPLE	SAMPLE	Method: 8260b						
LOCATION	DATE	BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL			
MW - 5	08/21/01	< 0.001	< 0.001	<0.001	<0.001			
	10/30/01	< 0.001	<0.001	< 0.001	<0.001			
	02/18/02	< 0.001	< 0.001	< 0.001	< 0.001			
	06/19/02	< 0.001	< 0.001	< 0.001	< 0.001			
	09/18/02	< 0.001	< 0.001	< 0.001	< 0.001			
	12/18/02	0.002	< 0.001	< 0.001	< 0.001			
MW - 6	08/21/01	< 0.001	0.038	0.060	0.295			
MW - 7	08/21/01	< 0.001	< 0.001	<0.001	< 0.001			
	10/30/01	< 0.001	< 0.001	< 0.001	< 0.001			
	02/18/02	< 0.001	< 0.001	< 0.001	< 0.001			
	06/19/02	< 0.001	< 0.001	< 0.001	< 0.001			
	09/18/02	< 0.001	<0.001	< 0.001	< 0.001			
	12/18/02	0.001	< 0.001	< 0.001	< 0.001			
MW - 8	08/21/01	0.009	0.004	0.032	0.087			
	10/30/01	0.008	< 0.001	0.044	0.035			
	02/18/02	0.009	< 0.001	0.063	0.014			
	06/19/02	0.016	< 0.001	0.205	0.036			
	09/18/02	0.030	0.002	0.145	0.041			
MW - 9	08/21/01	< 0.001	< 0.001	< 0.001	<0.001			
	10/30/01	< 0.001	< 0.001	< 0.001	< 0.001			
	02/18/02	0.001	< 0.001	< 0.001	< 0.001			
	06/19/02	< 0.001	< 0.001	< 0.001	< 0.001			
	09/18/02	< 0.001	< 0.001	< 0.001	< 0.001			
	12/18/02	< 0.001	<0.001	< 0.001	<0.001			
MW - 10	08/21/01	0.360	< 0.001	0.002	0.022			
	10/30/01	0.596	< 0.001	0.002	0.071			
	02/18/02	0.981	< 0.001	0.002	0.050			
	06/19/02	0.629	< 0.001	0.004	0.067			
	09/18/02	0.949	< 0.001	0.005	0.050			
	12/18/02	0.437	< 0.001	0.003	0.036			
MW - 11	08/21/01	0.003	< 0.001	< 0.001	< 0.001			
	10/30/01	0.004	< 0.001	< 0.001	< 0.001			
	02/18/02	< 0.001	<0.001	<0.001	< 0.001			
	06/19/02	0.002	< 0.001	< 0.001	< 0.001			
	09/18/02	0.005	< 0.001	< 0.001	< 0.001			
	12/18/02	0.002	< 0.001	<0.001	< 0.001			
MW - 12	08/21/01	0.001	< 0.001	< 0.001	<0.001			
	10/30/01	0.002	< 0.001	< 0.001	< 0.001			
	02/18/02	< 0.001	< 0.001	< 0.001	< 0.001			
	06/19/02	< 0.001	< 0.001	< 0.001	< 0.001			
	09/18/02	0.002	< 0.001	< 0.001	<0.001			
	12/18/02	0.002	< 0.001	<0.001	< 0.001			

TABLE 2

## GROUNDWATER CHEMISTRY

## DARR ANGEL 4 LEA COUNTY, NEW MEXICO ETGI PROJECT # EO 2075

All Concentrations are in mg/L.

SAMPLE	SAMPLE	Il Concentration	Method	: 8260b	
LOCATION	DATE	BENZENE	TOLUENE	ETHYL- BENZENE	14 (14 (14 (14 (14 (14 (14 (14 (14 (14 (
MW - 13	08/21/01	0.002	< 0.001	<0.001	< 0.001
	10/30/01	0.003	< 0.001	< 0.001	<0.001
	02/18/02	0.013	< 0.001	< 0.001	< 0.001
	06/19/02	800.0	< 0.001	< 0.001	< 0.001
	09/18/02	0.009	< 0.001	< 0.001	<0.001
	12/18/02	0.004	< 0.001	< 0.001	< 0.001
MW - 14	12/18/02	0.111	< 0.001	< 0.001	0.012
RW -1	09/14/00	0.007	0.004	< 0.001	0.011
	11/15/00	0.022	0.021	0.005	0.010
	02/14/01	0.016	0.014	0.005	0.010
RW - 5	08/21/01	0.007	0.027	0.014	0.060
	02/18/02	0.007	0.017	0.019	0.027
	06/19/02	0.006	0.015	0.012	0.024
	09/18/02	0.003	0.013	0.042	0.033
	12/18/02	0.002	0.005	0.004	0.025
RW - 7	12/18/02	0.175	0.152	0.060	0.195
RW - 13	12/18/02	0.638	0.476	0.225	0.550
EB - 1	02/14/01	<0.001	< 0.001	< 0.001	< 0.001
	04/24/01	<0.001	< 0.001	< 0.001	<0.001
	10/30/01	<0.001	< 0.001	< 0.001	<0.001
	02/18/02	< 0.001	< 0.001	< 0.001	<0.001
	06/19/02	< 0.001	< 0.001	< 0.001	<0.001
	09/18/02	< 0.001	< 0.001	< 0.001	< 0.001
	12/18/02	<0.001	<0.001	<0.001	<0.001

## DARR ANGELL #4 ETGI Project # 2075

- Leak occurred11-9-99 and a second release occurred on 2-2-01;
- On 11-9-99 a reported 10 barrels of crude oil were released with none recovered and on 2-2-01 a reported 150 barrels of crude oil were released with 95 barrels recovered;
- Approximately 6,650 cubic yards of soil has been excavated, shredded, nutrients
  added and stockpiled on-site, baseline soil samples of the stockpiles indicated soil
  above NMOCD regulatory standards. Soil shredding with addition of nutrients in
  progress, samples collected of shredded soil every 250 cubic yards;
- · Shredded soil above NMOCD regulatory standards will be land farmed on-site;
- Excavation was backfilled with caliche rock as per Request to Backfill letter dated March 12, 2002;
- 13 recovery wells with PSH on-site; 4 automated recovery wells (recovery wells RW-1, RW-2, RW-3, and RW-4), 7 newly installed wells (RW-7, RW-8, RW-9, RW-10, RW-11, RW-12, and RW-13) with PSH, 3 to be automated (RW-9, RW-10, and RW-11), 4 recovery well with absorbent boom (MW-6, RW-6, RW-8, and RW-12);
- 3,384 gallons of PSH has been recovered to date;
- Monitor well MW-14 installed on 11/25/02 to further delineate site to southeast,
- One additional proposed monitor well to delineate north side of site, awaiting State Land Office approval;
- Stage I Abatement Plan dated February 2001, Stage II Abatement Plan dated July 2002, Annual Groundwater Monitoring Report dated April 2002, and Request to Backfill Excavation Letter dated March 12, 2002.

## PROPOSED WORK

- Continue shredding and addition of nutrients to stockpiled excavated soil.
   Confirmation samples collected of every 250 cubic yards of soil treated, stockpiles registering above NMOCD regulatory standards will be retreated and sampled until NMOCD standards are achieved.
- Analytical results indicate additional excavation will be required of the north and northwest sidewalls. Approximately 500 cubic yards of soil will need to be removed, shredded, and nutrients added. Confirmation soil samples will be collected and analyzed.

ONE CALL	11/19/2002	
DARR ANGELL #4	CO. ID: 739	
EFFECTIVE: Nove	mber 21 - December 7, 2002	
		CONTACTED
DA-4	NW4-NE4, S11,T15S,R37E	
	250 yds. to South Only	
	Confirmation #2002471104	
	VALOR TELECOMMUNICATIONS	
	AMOCO	
	EOTT	
	S 82, proceed 11.2 east, turn @ first cattle	
Gas Plant on the S.	side of road, turn immediately east, procee	d .2 mi tum
	, turn west, proceed .2 mi. Site is excavati	
side of road.		



AP - 007

# ANNUAL MONITORING REPORT

YEAR(S):

## ANNUAL MONITORING REPORT

DARR ANGELL I LEA COUNTY, NEW MEXICO

RECEIVED

MAY 0 9 2001

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

PREPARED FOR:

5805 EAST HIGHWAY 80 MIDLAND, TEXAS 79701

PREPARED BY:

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

APRIL 2001

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## 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 three quarterly events in calendar year 2000 to assess the levels and extent of dissolved phase and phase-separated 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 May 5, June 27, September 13, and November 16, 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 15, 2000, are depicted on Figure 2, the Site Ground Water Gradient Map. The ground water elevation data are provided as Table 1. The ground water gradient is modified by a mounding effect and slopes to the north, northeast, southwest and southeast. The variations in gradient, as depicted on Figure 2, are most likely a function of variations in lithology at the water table, and the presence of PSH within portions of the mapped area. The depth to ground water, as measured from the top of the well casing, ranged between 56.08 to 65.41 feet for the shallow alluvial aquifer.

A measurable thickness of PSH was detected in recovery and monitoring wells RW-1, RW-2, RW-3, MW-1, MW-2, MW-3, MW-5, MW-6, MW-8, MW-9, MW-10, MW-13 and MW-14 during the annual monitoring period. A maximum thickness of 9.89 feet in recovery well RW-1, 9.09 feet in recovery well RW-2, 9.52 feet in recovery well RW-3, 10.02 feet in monitoring well MW-1, 6.36 feet in monitoring well MW-2, 5.19 feet in monitoring well MW-3, 9.37 feet in monitoring well MW-5, 5.40 feet in monitoring well MW-6, 7.19 feet in monitoring well MW-8, 9.85 feet in monitoring well MW-9, a sheen in monitoring well MW-10, 0.65 foot in monitoring well MW-13, and 6.77 feet in monitoring well MW-14, was measured and is shown on Table 1.

## LABORATORY RESULTS

Ground water samples obtained 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 wells MW-4, MW-7 and MW-20. Benzene and BTEX concentrations contained in monitoring wells MW-11, MW-16, MW-17, MW-18, and MW-19 were below regulatory standards. Benzene concentrations were above regulatory standards in monitoring wells MW-12 and MW-15, 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 recovery and monitoring wells RW-1, RW-2, RW-3, MW-1, MW-2, MW-3, MW-5, MW-6, MW-8, MW-9, MW-10, MW-13 and MW-14 during the annual monitoring period. A maximum thickness of 9.89 feet in recovery well RW-1, 9.09 feet in recovery well RW-2, 9.52 feet in recovery well RW-3, 10.02 feet in monitoring well MW-1, 6.36 feet in monitoring well MW-2, 5.19 feet in monitoring well MW-3, 9.37 feet in monitoring well MW-5, 5.40 feet in monitoring well MW-6, 7.19 feet in monitoring well MW-8, 9.85 feet in monitoring well MW-9, a sheen in monitoring well MW-10, 0.65 foot in monitoring well MW-13, and 6.77 feet in monitoring well MW-14, was measured in the recovery and monitoring wells.

The ground water gradient is modified by a mounding effect and slopes to the north, northeast, southwest and southeast. The variations in gradient, as depicted on Figure 2, are most likely a function of variations in lithology at the water table, and the presence of PSH within portions of the mapped area.

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 wells MW-4, MW-7 and MW-20. Benzene and BTEX concentrations contained in monitoring wells MW-11, MW-16, MW-17, MW-18, and MW-19 were below regulatory standards. Benzene concentrations were above regulatory standards in monitoring wells MW-12 and MW-15, while BTEX concentrations were below regulatory standards.

FIGURES

TABLES

TABLE 1

## GROUND WATER ELEVATION ANNUAL REPORT

## DARR ANGELL#1 LEA COUNTY, NEW MEXICO PROJECT # EOT 2055C

Well Number	DATE MEASURED	Casing Well Elevation	Depth to Product	Depth to Water	PSH Thickness	Corrected Groundwater Elevation
MVV - 1	05/05/00	3,785.74	54.88	61.57	6.69	3,729.86
	09/13/00	3,785.74	54.58	63.92	9.34	3,729.76
	11/15/00	3,785.74	54.71	64.73	10.02	3,729.53
MW-2	05/05/00	3,785.88	55.85	58.84	2.99	3,729.58
	09/13/00	3,785.88	55.43	61.79	6.36	3,729.50
	11/15/00	3,785.88	55.80	60.97	5.17	3,729.30
MVV - 3	05/05/00	3,786.05	56.28	59.84	3.56	3,729.24
	09/13/00	3,786.05	56.17	61.36	5.19	3,729.10
	11/15/00	3,786.05	56.97	58.42	1.45	3,728.86
MW -4	05/05/00	3,786.47	(4)	57.74	0.00	3,728.73
	09/13/00	3,786.47	-	57.93	0.00	3,728.54
	11/15/00	3,786.47	191	58.08	0.00	3,728.39
MW - 5	05/05/00	3,785,55	54.25	63.46	9.21	3,729.92
	09/13/00	3,785.55	54.44	63.43	8.99	3,729.76
	11/15/00	3,785.55	54.54	63.91	9.37	3,729.60
MW-6	05/05/00	3,785.47	56.02	56.08	0.06	3,729.44
	09/13/00	3,785.47	55.23	60.63	5.40	3,729.43
	11/15/00	3,785.47	55.38	60.65	5.27	3,729.30
MW-7	05/05/00	3,785.48	-	56.42	0.00	3,729.06
	09/13/00	3,785.48	-	56.57	0.00	3,728.91
	11/15/00	3,785.48		56.74	0.00	3,728.74
MVV - 8	05/05/00	3,785.76	55.40	59.51	4.11	3,729.74
	09/13/00	3,785.76	- 55.05	62.09	7.04	3,729.65
	11/15/00	3,785.76	55.18	62.37	7.19	3,729.50
MW - 9	05/05/00	3,785.79	56.34	57.84	1.50	3,729.23
	09/13/00	3,785.79	55.05	64.47	9.42	3,729.33
	11/15/00	3,785.79	55.18	65.03	9.85	3,729.13
MW - 10	06/27/00	3,785.99	-	57.46	0.00	3,728.53
	09/13/00	3,785.99		57.52	0.00	3,728.47
	11/15/00	3,785.99	57.67	57.67	0.00	3,728.32
MW - 11	06/27/00	3,786.32	-	58.05	0.00	3,728.27
	09/13/00	3,786.32		58.12	0.00	3,728.20
	11/15/00	3,786.32	-	58.17	0.00	3,728.15
MW - 12	6/27/00	3,785.79	-	57.24	0.00	3,728.55
	09/13/00	3,785.79		57.31	0.00	3,728.48
	11/15/00	3,785.79	-	57.46	0.00	3,728.33

TABLE 1

WELL NUMBER	DATE MEASURED	Casing Well Elevation	Depth to Product	Depth to Water	PSH Thickness	Corrected Groundwater Elevation
MW - 13	06/27/00	3,786.01		57.60	0.00	3,728.41
	09/13/00	3,786.01	57.63	57.82	0.19	3,728.35
	11/15/00	3,786.01	57.74	58.39	0.65	3,728.17
MW - 14	06/27/00	3,786.06		57.62	0.00	3,728.44
	09/13/00	3,786.06	56.76	61.34	4.58	3,728.61
	11/15/00	3,786.06	56.43	63.20	6.77	3,728.61
MW - 15	06/27/00	3,786.13	-	57.42	0.00	3,728.71
	09/13/00	3,786.13	*	57.50	0.00	3,728.63
	11/15/00	3,786.13	2	57.65	0.00	3,728.48
MW - 16	06/27/00	3,786.33	-	57.83	0.00	3,728.50
	09/13/00	3,786.33	-	57.91	0.00	3,728.42
	11/15/00	3,786.33	-	58.06	0.00	3,728.27
MW - 17	09/13/00	3,785.83		57.27	0.00	3,728.56
	11/15/00	3,785.83	-	57.43	0.00	3,728.40
MW - 18	09/13/00	3,786.10	*	57.74	0.00	3,728.36
	11/15/00	3,786.10		57.93	0.00	3,728.17
MW - 19	09/13/00	3,785.71	-	57.29	0.00	3,728.42
	11/15/00	3,785.71	-	57.44	0.00	3,728.27
MW - 20	09/13/00	3,786.00	-	57.36	0.00	3,728.64
	11/15/00	3,786.00	- E	57.41	0.00	3,728.59
RW - 1	09/13/00	3,785.94	56.00	62.41	6.41	3,728.98
	11/15/00	3,785.94	55.52	65.41	9.89	3,728.94
RW - 2	09/13/00	3,786.14	56.34	62.78	6.44	3,728.83
	11/15/00	3,786.14	56.05	65.14	9.09	3,728.73
RW - 3	09/13/00	3,786.14	56.53	62.02	5.49	3,728.79
	11/15/00	3,786.14	55.96	65.48	9.52	3,728.75

## TABLE 2

## GROUND WATER CHEMISTRY ANNUAL REPORT

## DARR ANGELL #1 MONUMENT, NEW MEXICO PROJECT # EOT2055C

All concentrations are in mg/L

			SW	846-8021B,	5030	
SAMPLE LOCATION	SAMPLE	BENZENE	TOLUENE	ETHYL- BENZENE	M,P- XYLENES	O- XYLENES
MW - 4	05/05/00	< 0.001	<0.001	< 0.001	< 0.001	<0.001
	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/16/00	< 0.001	<00,001	< 0.001	< 0.001	< 0.001
MW - 7	05/05/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/16/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 10	06/27/00	1.520	0.787	0.303	0.711	0.262
MW - 11	06/27/00	0.007	0.006	0.003	0.007	0.003
	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/16/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 12	06/27/00	1.360	< 0.050	< 0.050	0.151	< 0.050
	09/13/00	1.250	< 0.010	< 0.010	< 0.085	< 0.010
	11/16/00	0.942	0.002	0.002	0.103	< 0.001
MW - 13	06/27/00	2.730	0.186	0.115	0.338	0.076
MW - 15	06/27/00	0.011	0.003	0.001	0.004	0.001
	09/13/00	0.002	< 0.001	< 0.001	< 0.001	< 0.001
	11/16/00	0.002	< 0.001	< 0.001	0.002	< 0.001
MW - 16	06/27/00	0.008	0.004	0.001	0.003	0.001
	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/16/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 17	09/13/00	0.003	< 0.001	< 0.001	0.002	< 0.001
	11/16/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 18	09/13/00	0.002	< 0.001	< 0.001	< 0.001	< 0.001
	11/16/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 19	09/13/00	0.004	< 0.001	0.001	< 0.001	0.005
	11/16/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 20	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/16/00	< 0.001	< 0.001	< 0.001	0.001	< 0.001

APPENDIX

## ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: BETH ALDRICH 2540 WEST MARLAND HOBBS, N.M. 58240 FAX: 915-520-4310 FAX: 505-397-4701

Sample Type: Water

Sample Condition: Intact/ Iced/ HC/ -1 deg. C

Project #: EGT 2055C Project Name: Darr Angel I Project Location: Lovington, N.M. Sampling Date: 11/16/00 Receiving Date: 11/16/00 Analysis Date: 11/19/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L			
34058 34059 34060 34061 34062 34063 34064 34065 34066 34067 34068	MW-4 MW-7 MW-11 MW-12 MW-15 MW-16 MW-17 MW-17 MW-19 MW-19 HW-20 EB-1	<0.001 <0.001 <0.001 0.942 0.902 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.002 <0.002 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	mg/L <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	#9/L <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	

NEA NEA BLANK	91 85 <0.001	91 =0.001	107 95	112 99	105 93
	<0.001	<0.001	<0.001	<0.001	< 0.001

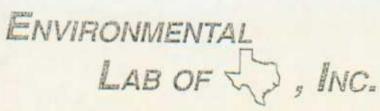
METHODS: EPA SW 846-80218 ,5030

Red - ck Julio

11-21-00

Propert Harry Deal Callegel I Project LOW I ROAD IN IN CHAIN OF CUSTODY RECORD AND ANALYSIS REDUEST Project # EUT 2055C Temperature Upon Recept. Stangle Containers Intact? Analyze For STEX BOTTBREGGS SHITTERN Metals As Ag Ba Co Ci Pa Hg Sk TCLF NO W SIT HEL 南 38787575750L 10S atons interio. Fax 110 (505) 397-47-44 (Aysadg ) Jako Environmental Technology Group Inc BUDDL CSH HOWN DH DNH 63 >4 N No. of Containers S Saylo 1055 1355 1340 1446 1146 1415 1300 baldmas amiT company address 2540 West Marland CHYSTAIRETE HODDS, NE W MEXICO Environmental Lab of Texas, Inc. Deldmis stell Beth aldrich Fax: 915-563-4713 Telephone 110 (505) 347 - 48 52 FIELD CODE mun-ap mw-11 TI-MW MW - 18 mw-15 mlw-lb P1-WM MW-4 Company Name Sampler Signature. Project Manager Colessa, Texas 79763 12600 West I.20 East Special Instructions LAB # Neb can only

teluberos-erfil TeT HZUR



"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

Sample Type: Water

Sample Condition: Intact/ loed/ HCI/ 47 deg. F

Project #: EOT 1020R Project Name: Darr Angel

Project Location: Lea County, N.M.

Sampling Date: 05/05/00 Receiving Date: 05/05/00 Analysis Date: 05/05/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m.p-XYLENE mg/L	o-XYLENE mg/L	_
25565	MW 4	<0.001	<0.001	<0.001	<0.001	<0.001	
25556	MW 7	<0.001	<0.001	<0.001	<0.001	<0.001	

% IA	106	100	103	113	102
% EA	101	96	98	105	97
BLANK	<0,001	< 0.001	<0.001	<0.001	<0.001

METHODS: SW 846-80218,5030

Unesh Rao, Ph. D.

5 17 00 Date

Env. Jumental Lab of Texas, Inc. 12600  Freject Manger: JESSE TAYLOR  Freject Lowelte:  LAB USE  LAB USE  AM 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
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"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: 505-397-4701

SampleType: Water

Sample Condition: Intact/ loed/ HCV 27 deg. F

Project # EOT 2055C

Project Name: DARR ANGELL #1
Project Location: Lea Co., N.M.

Sampling Date: 06/27/00 Receiving Date: 06/28/00 Analysis Date: 07/12/00

ELT#	PIELD CODE	BENZENE mg/l	TOLUENE mg/l	ETHYLBENZENE mg/l	m.p-XYLENE mg/l	o-XYLENE mg/l
27474	MW-10	1.52	0.787	0.303	0.711	0.262
27475	MW-11	0.007	0.006	0.003	0.007	0.003
27476	MW-12	1.36	< 0.050	< 0.050	0.151	<0.050
27477	MW-13	2.73	0.166	0.115	0.338	0.076
27478	MW-15	0.011	0.003	0.001	0.004	0.001
27479	MW-16	0.008	0.004	0.001	0.003	0.001

% IA	88	92	87	108	94
% EA	89	- 88	88	96	89
BLANK	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100

METHODS: SW 846-80218,5030

Roland K Tuttle

7-21-00 Date

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ruject Manager:	J 6556	1 dyear			Phone #:		n ~	397-	4 1	1885	01			4	NALY	ANALYSIS REQUEST	QUES				
expeny Ne.	Company Name & Address: ETG 2	ETGI	DWG	1	2885	6	3/4	4													,
Freject #:	205				Project Name: DARR ANGELL	Name:	and	El	A					e flu na				010			_
Project Location	LEA COUNTY	Nm			Sampler Signature:	Spratu	1	638	9			-		2 02 00			0.70	0,00			
				MA	MATRIX	-	RESE	PRESERVATIVE		SAMPLING	72		_	_	-	7.0	201	7E			
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	mw 13										8/11										
	mary &																				
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"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 FAX: 505 397 4701

SampleType: Water

Sample Condition: Intact/ Iced/ HCI/ -1 deg. C

Project #: EOT 2055C
Project Name: Darr Angell 1
Project Location: Lea County, N.M.

Sampling Date: 09/13/00 Receiving Date: 09/16/00 Analysis Date: 09/21/00

ELI#	FIFT D CODE	BENZENE MES.	TOLUENE mg/L	ETHILBENZENE Mg/L	martene me/L	S-XYLENE mg/L	TOTAL BITEX mg/L
31007	MW 4	<0.001	<0.001	<0.001	<0.001	< 0.001	< 0.001
31008	MW 7	<0.001	<0.001	<0.001	<0.001	+0.001	<0.001
31009	MW 11	<0.001	<0.001	< 0.001	< 0.001	<0.001	×0.001
31010	MW 12	1.25	<0.010	< 0.010	0.085	<0.010	1.34
31011	MW 15	0.002	K0.001	< 0.001	<0.001	< 0.001	0.002
31012	MW 16	<0.001	<0.001	< 0.001	< 0.001	<0.001	<0.001
31013	MW 17	0.003	<0.001	< 0.001	0.002	< 0.001	0.005
31014	MW 18	0.002	<0.001	< 0.001	<0.001	< 0.001	0.002
31015	MW 19	0.004	< 0.001	0.001	< 0.001	<0.001	0.005
31016	MW 20	<0.001	< 0.001	<0.001	< 0.001	<0.001	<0.001
31017	EB 1	×0.001	< 0.001	< 0.001	< 0.001	<0.001	< 0.001

% IA 98 96 95 96 90 % EA 92 90 91 92 86 HLANK <0.001 <0.001 <0.001 <0.001 <0.001

METHODS: SW 846-80218.5030

Kalanck Julie

9-25-00

E ironmental Lab of Texas, Inc. 12600 Westl. 2st Odesta, Texas 79763	CHAIN-OF-CUSTODY RECORD AND ANALY. REQUEST  COLAIN-OF-CUSTODY RECORD AND ANALY. REQUEST
Project Alasser 505 397- 488 2	APALYSIS REQUEST
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"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC. ATTN: BETH ALDRICH 2540 WEST MARLAND

HOBBS, N.M. 88240 FAX: 915-520-4310 FAX: 505-397-4701

Sample Type: Water

Sample Condition: Intact/ Iced/ HCl/ -1 deg. C

Project #, 507 2055C Project Name: Darr Angel 1 Project Lecation: Levington, N.M. Sampling Date: 11/16/00 Receiving Date: 11/16/00 Analysis Date: 12/19/00

EL7#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m.p-XYLENE mg/L		
34058 34059 34060 34061 34062 34063 34084 34065 34066 34066 34067	MW-4 MW-7 MW-11 MW-12 MW-15 MW-16 MW-17 MW-18 MW-19 MW-20 EB-1	<0.001 <0.001 <0.001 0.002 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 0.002 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 0.002 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	<0.001 <0.001 <0.001 <0.001 0.003 <0.001 <0.001 <0.001 0.001 <0.001	<0.001 <0.001 <0.001 <0.001 0.003 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001	

NEA	91	100	107	112	105
NEA	65	91	95	99	
SLANK	<0.001	<0.001	<0.001	40.001	
				714/1004	*U.001

METHODS EPA SW 846-80218 ,5030

Rail- dk Julio

11-21-00

# Environmental Lab of Texas, Inc.

Odessa, Texas 79763 12600 West 1.20 East

Phone: 915-563-1800 Fax: 915-563-1713

Project Manager Beth aldrich

Project Name: | ZUCF GATCHELT Project Low Loving LON, D. P.O. Project # EUT 2055C Environmental Technology Group Inc

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

# 02

FAX 110 (505) 397-47-4

940

2540 West Marland

Hobbs, he wy Mexico

City/State/Zip:

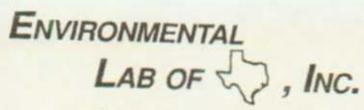
Company Address.

505)347-485

Sampler Signature

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Set 1-1



"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC. ATTN: BETN ALDRICH 2540 WEST MARLAND HOBBS, N.M. 88240

FAX: 915-520-4310 FAX: 505-397-4701

Sample Type: Water

Sample Condition: Intact/ Iced/ HCI/ 1 deg C

Project # EOT 2055C
Project Name: Darr Ange: 1
Project Location: Lovengton, N.M.

Sampling Data 11/16/00 Receiving Data 13/16/00 Analysis Data 11/19/00

FIELD CODE	Ta
MW-4 MW-7 MW-11 MW-12 MW-15 MW-16 MW-17 MW-16 MW-19 MW-20 FB-1	1058 1059 1060 1061 1052 1063 1064 1065 1066 1067

SIA. 91 100 107 112 105 SEA. 85 91 95 99 93 BLANK <0.001 < 0.001 < 0.001 <0.001 < 0.001

METHODS EPA SW 846-80218 ,5030

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Physical Manager

12100 West 1.20 East Odessa, Texas 79763

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Environmental Lab of Texas, Inc. 12600 West 1.20 East

Phone, 915-563-1800 Fax: 915-563-1713

Odessa, Texas 79763

Environmented Technology Group Inc 88340 company Address 2540 West Marland CHYSTANDIA LABOS, NEW MEXICO Freger Manager Beth aldrich Telephone 14 505) 397-4552

19th-FPE (202) mm

Sampler Signature

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# ANNUAL MONITORING REPORT

YEAR(S):

### ANNUAL MONITORING REPORT

DARR ANGELL #2
LEA COUNTY, NEW MEXICO

DP07

RECEIVED

MAY 0 9 2001

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

PREPARED FOR:

5805 EAST HIGHWAY 80 MIDLAND, TEXAS 79701

PREPARED BY:

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

APRIL 2001

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FIELD ACTIVITIES

GROUND WATER GRADIENT

LABORATORY RESULTS

SUMMARY

### **FIGURES**

Figure 1 - Site Location Map

Figure 2 - Site Ground Water Gradient Map

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Table 1 - Ground Water Elevation

Table 2 - Ground Water Chemistry

### APPENDICES

Appendix A - Laboratory Reports

#### 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 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 June 16, July 14, September 13, and November 15, 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 15, 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 0.002 ft/ft to the southeast as measured between ground water monitoring wells MW-1 and MW-4. The depth to ground water, as measured from the top of the well casing, ranged between 57.35 to 65.92 feet for the shallow alluvial aquifer.

A measurable thickness of PSH was detected in monitoring and recovery wells MW-2, RW-1 and RW-2 during the annual monitoring period. A maximum thickness of 1.20 feet in monitoring well MW-2, 10.40 feet in recovery well RW-1, and 9.51 feet in recovery well RW-2 was measured and is shown on Table 1.

### LABORATORY RESULTS

Ground water samples obtained 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 wells MW-1 and MW-4. Benzene and BTEX concentrations were below regulatory standards for monitoring well MW-3 during the annual monitoring period.

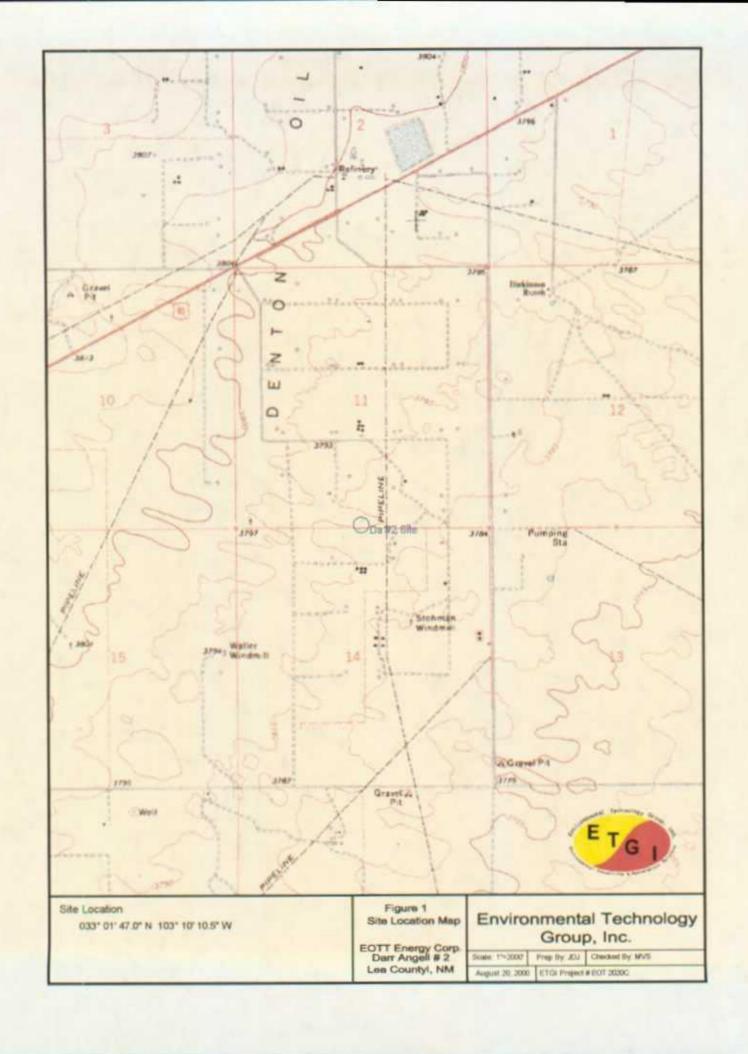
#### SUMMARY

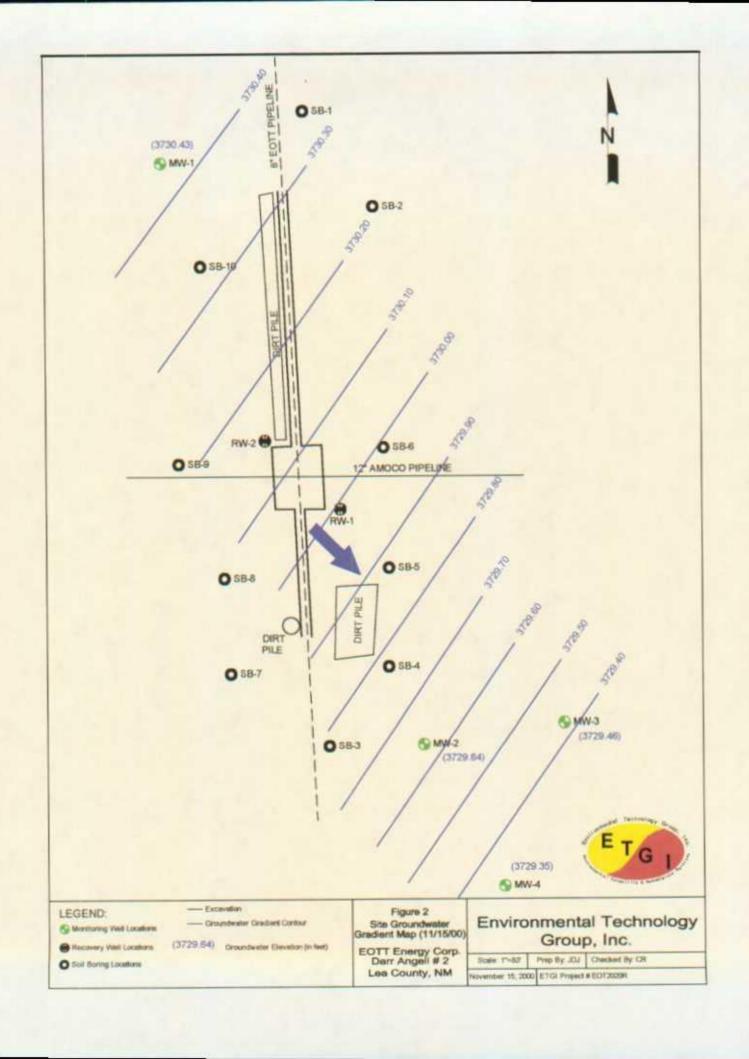
This report presents the results of monitoring activities for the annual monitoring period of calendar year 2000. A measurable thickness of PSH was detected in monitoring and recovery wells MW-2, RW-1 and RW-2 during the annual monitoring period. A maximum thickness of 1.20 feet in monitoring well MW-2, 10.40 feet in recovery well RW-1, and 9.51 feet in recovery well RW-2 was measured in the recovery and monitoring well.

Ground water elevation contours, generated from the final quarterly event of calendar year 2000 water level measurements, indicated a general gradient of approximately 0.002 ft/ft to the southeast as measured between ground water monitoring wells MW-1 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 wells MW-1 and MW-4. Benzene and BTEX concentrations were below regulatory standards for monitoring well MW-3 during the annual monitoring period.

FIGURES





TABLES

TABLE 1

### GROUND WATER ELEVATION ANNUAL REPORT

### DARR ANGELL 2 LEA COUNTY, NEW MEXICO ETGI PROJECT # EOT2020R

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	GROUND WATER ELEVATION
MW - 1	6/16/00	3,788.04		57.35	0.00	3,730.69
	9/13/00	3,788.04		57.46	0.00	3,730.58
	11/15/00	3,788.04	-	57.61	0.00	3,730.43
MW - 2	6/16/00	3,788.41	- 1	58.62	0.00	3,729.79
	9/13/00	3,788.41	58.44	60.13	1.20	3,729.30
	11/15/00	3,788.41	58.15	62.26	4.11	3,729.64
MW - 3	6/16/00	3,787.94		58.27	0.00	3,729.67
	9/13/00	3,787.94	*:	58.38	0.00	3,729.56
	11/15/00	3,787.94	14	58.48	0.00	3,729.46
MW - 4	9/13/00	3,787.76	-	58.32	0.00	3,729.44
	11/15/00	3,787.76		58.41	0.00	3,729.35
RW - 1	6/16/00	3,789.45	55.49	65.63	10.14	3,732.44
	9/13/00	3,789.45	55.53	65.92	10.39	3,732.36
	11/15/00	3,789.45	55.68	66.08	10.4	3,732.21
RW - 2	6/16/00	3,787.83	55.98	64.71	8.73	3,730.54
	9/13/00	3,787.83	55.93	65.42	9.49	3,730.48
	11/15/00	3,787.83	56.06	65.57	9.51	3,730.34

#### TABLE 2

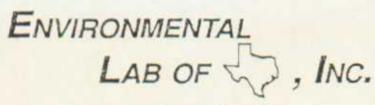
### GROUND WATER CHEMISTRY ANNUAL REPORT

### DARR ANGELL 2 LEA COUNTY, NEW MEXICO ETGI PROJECT # EOT 2020R

All concentrations are in mg/L

			SW 8	846-8021B, 5	5030	
LOCATION	DATE	BENZENE	TOLUENE	ETHYL- BENZENE	M,P- XYLENES	O- XYLENES
MW - 1	06/16/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/15/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 2	06/16/00	0.711	0.475	0.143	0.441	0.100
MW - 3	06/16/00	0.001	< 0.001	< 0.001	< 0.001	< 0.001
	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/15/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 4	07/14/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	09/13/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/15/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

APPENDIX



"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: MR. JESSE TAYLOR 2540 MARLAND HOBBS, N.M. 88240

FAX: 505-397-4701 FAX: 915-520-4310

Sample Type: Water

Sample Condition: Intact/ Iced/ HCI/ 29 deg. F

Project #: EOT 2020R
Project Name: Darr Angel #2
Project Location: Lea County, N.M.

Sampling Date: 06/16/00 Receiving Date: 06/17/00 Analysis Date: 06/21/00

ELTW	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m.p-XYLENE mg/l-	o-XYLENE mg/L	
27013	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001	
27014	MW 2	0.711	0.475	0.143	0.441	0.100	
27015	MW 3	0.001	<0.001	<0.001	<0,001	<0.001	

					4.00
% IA	88	86	86	94	87
% EA	96	91	93	102	94
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8021B,5030

Reland & Junt

7-3-00 Date

Environmental Lab of Texas, Inc. 12600 West 120 East Odera, Texas 1705.  Fraction Name & Address.  Fraction Name & Address	West 1-20 East Odesta, Texas 79763 CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST (915) 563-1800 FAX (915) 563-1713 CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST	NALLYSIS REQUEST  ANALYSIS REQUEST  ANALYSIS REQUEST  ANALYSIS REQUEST	100 My Cl. 20	Be Cq Ct	PRESERVATIVE SAMPLING CONTROL	SCI DOS DATE OTHER DATE OF THE DATE		X   X   X   X   X	(100	777		LL HOBS OFFICE	Unvest Ray
Onmental Lab of Texas,  Address See Taxe a Mar son  Sor 2020R  OT 2020R  MUS RUN   S  MUS RUN	Inc. 12600 West 1-7		10 1966	Sampler Sign	Z MATRIX	arndae viu aoir wyteu	K       X	74		_		16,08	There: / 40 pm
	onmental Lab of Texas,	Jesse )	STORT Mari	EN COUNTY			1 /W/	2/ 5	1	~ )		1120	4 C Jours 6-17-00

"Dan't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN BETH ALDRICH P.O. BOX 4845

MIDLAND, TEXAS 79704 FAX: 915 520 4310 FAX: 505 397 4701

SampleType: Water

Sample Condition: Intact/ Iced/ HCI/ +1 deg. C

Project #: EOT 2020R Project Name: Darr Angell 2

Project Location: Lea County, N.M.

Sampling Date: 09/13/00 Receiving Date: 09/16/00 Analysis Date: 09/21/00 pro 1

CUTH	FIELD CODE	BENZENE Ing/L	TOLUENE mg/L	ETHYLBENZENE mg/l	m.p.XYLENE mg/L	b-XYLENE mg/L	TOTAL SITEX mg/L
31018	MW 1 -	<0.001	<0.001	<0.001	<0.001	< 0.001	<0.001
31019	MW 3	<0.001	<0.001	< 0.001	< 0.001	< 0.001	<0.001
31020	MW 4	< 0.001	< 0.001	< 0.001	<0.001	< 0.001	< 0.001
31021	EB 1	<0.001	<0.001	< 0.001	<0.001	<0.001	<0.001

% IA % EA BLANK 98 92 <0.001 96 90 <0.001 95 91 <0.001 96 92 <0.001 90 86 <0.001

METHODS: SW 846-80218,5030

Ratured M. Tuttle

9-25-00

Date

E ironmental Lab of Texas, Inc. 12600 West P. (215) 563-	12600 West J. 2st Odests, Texas 79763 (915) 563-1800 FAX (915) 563-1713	CHAIN-OF-CUSTODY RECORD AND ANALY AEQUEST  COC # 229
Troject Manager	Bone 11 505 397-4882	AMALYSIS DEGUEST
BETH ALDRICH	FACE (30) 397-4761	
Company Trans & Address ET CG I MAR LAND	HOUBS NM	*5
	Project Same: DARR ANGGER 2	pH dq v
	Supplet Signature	D PO *8
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Relinquished by: Timest	Received by:	1
Relinquished Mr. Thurst	4:55 Clerkent	Man Kesucrs: EOTT

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC. ATTN: BETH ALDRICH 2540 WEST MARLAND HOBBS, N.M. 88240

FAX: 915-520-4310 FAX: 505-397-4701

Sample Type. Water

Sample Condition: Intact/ Iced/ HCl/ -1 deg C Project #: EOT 2020R

Project #: EOT 2010R
Project Name: Darr Angel II
Project Location: Lovington, N.M.

Sampling Date: 11/15/00 Receiving Date: 11/18/00 Analysis Date: 11/19/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE	o-XYLENE mg/L
34069	MW-1	<0.001	<0.001	<0.001	<0.001	<0.001
34070	MW-3	<0.001	<0.001	<0.001	<0.001	<0.001
34071	MW-4	<0.001	<0.001	<0.001	<0.001	<0.001
34072	EB-1	<0.003	<0.001	<0.001	<0.001	<0.001

%IA %EA	91 85	100	107	112	105
BLANK	×0.001	<0.001	95 <0.001		93

METHODS: EPA SW 846-80218 .5030

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//-22-00 Date

Otlessa, Texas 79763 12000 West L20 East

Phone: 915-563-1800 Fax: 915-563-1713

Company Hame Environmental Technology Group Inc COMPANY & LOTEST MUCKENS Proper Manyor Beth Aldrich

10+4-470) CHYSTANGER HODDS, MELLS MEXICO SSAND 10/10/2019 10/ (200) 397-4 \$62

Projection Lovington, n.M. Project Name Date Galgel II Propert EUT 2020 R # Od

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annielle Kungnolds 11/12/12/13



### AP - 007

# ANNUAL MONITORING REPORT

YEAR(S):

### ANNUAL MONITORING REPORT

DARR ANGELL #3
LEA COUNTY, NEW MEXICO

DP-07

RECEIVED

MAY 0 9 2001

ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION

PREPARED FOR:

5805 EAST HIGHWAY 80 MIDLAND, TEXAS 79701

PREPARED BY:

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

APRIL 2001

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FIELD ACTIVITIES

GROUND WATER GRADIENT

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Table 1 - Ground Water Elevation

Table 2 - Ground Water Chemistry

### APPENDICES

Appendix A - Laboratory Reports

#### 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 two quarterly events in calendar year 2000 to assess the levels and extent of dissolved phase and phase-separated 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 and Recovery wells containing measurable levels of PSH were not sampled.

#### FIELD ACTIVITIES

The site monitoring and recovery wells were gauged and sampled on September 14, and November 15, 2000. During each sampling event, the monitoring and recovery 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 15, 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 0.001 ft/ft to the southeast as measured between ground water monitoring wells MW-1 and MW-3. The depth to ground water, as measured from the top of the well casing, ranged between 60.66 to 68.41 feet for the shallow alluvial aquifer.

A measurable thickness of PSH was detected in recovery wells RW-2, RW-3 and RW-4 during the annual monitoring period. A maximum thickness of 4.90 feet in recovery well RW-2, 6.35 feet in recovery well RW-3 and 6.97 feet in recovery well RW-3 was measured and is shown on Table 1.

#### LABORATORY RESULTS

Ground water samples obtained 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 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 wells MW-1 and MW-2. Benzene concentrations for monitoring and recovery wells MW-3 and RW-1 were above regulatory standards while BTEX concentrations were below regulatory standards.

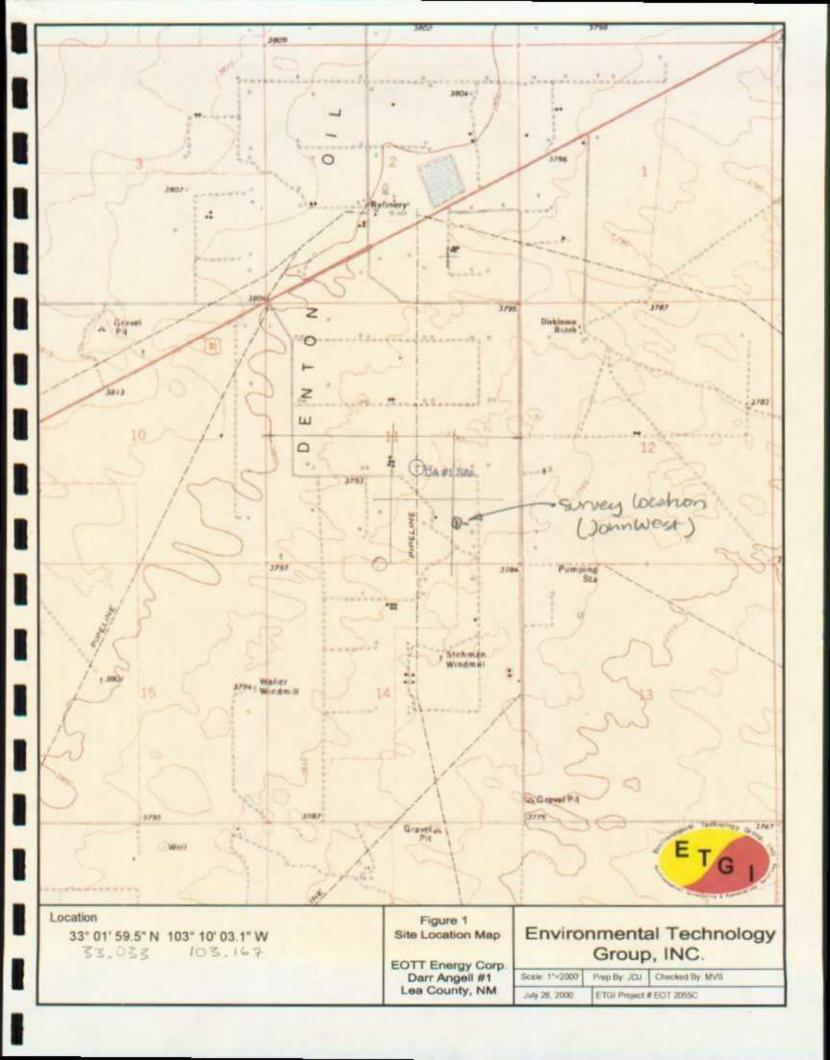
#### SUMMARY

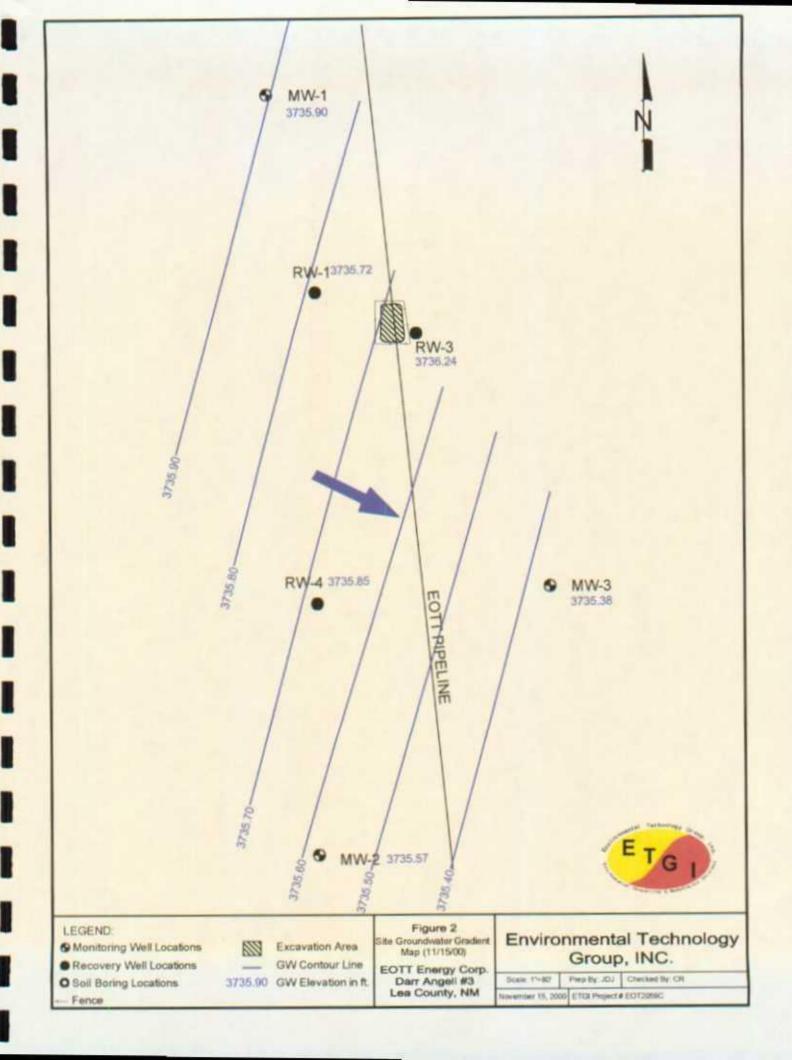
This report presents the results of monitoring activities for the annual monitoring period of calendar year 2000. A measurable thickness of PSH was detected in recovery wells RW-2, RW-3 and RW-4 during the annual monitoring period. A maximum thickness of 4.90 feet in recovery well RW-2, 6.35 feet in recovery well RW-3 and 6.97 feet in recovery well RW-3 was measured in the recovery wells.

Ground water elevation contours, generated from the final quarterly event of calendar year 2000 water level measurements, indicated a general gradient of approximately 0.001 fl/ft to the southeast as measured between ground water monitoring wells MW-1 and MW-3.

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 wells MW-1 and MW-2. Benzene concentrations for monitoring and recovery wells MW-3 and RW-1 were above regulatory standards while BTEX concentrations were below regulatory standards.

FIGURES





TABLES

TABLE 1

### GROUND WATER ELEVATION ANNUAL REPORT

### DARR ANGELL 3 LEA COUNTY, NEW MEXICO ETGI PROJECT # EOT 2059C

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	GROUND WATER ELEVATION
MW - 1	09/13/00	3,800.66	-	64.65	0.00	3,736.01
	11/15/00	3,800.66	-	64.76	0.00	3,735.90
MW - 2	09/13/00	3,796.33	-	60.66	0.00	3,735.67
	11/15/00	3,796.33	4.	60.76	0.00	3,735.57
MW - 3	09/13/00	3,798.10	-	62.63	0.00	3,735.47
	11/15/00	3,798.10	-	62.72	0.00	3,735.38
RW - 1	09/13/00	3,797.66	-	61.86	0.00	3,735.80
	11/15/00	3,797.66	-	61.94	0.00	3,735,72
RW - 2	09/13/00	3,797.60	61.13	64.52	3.39	3,735.96
	11/15/00	3,797.60	61.01	65.91	4.90	3,735.86
RW - 3	09/13/00	3,798.81	61.77	67.82	6.35	3,736.39
	11/15/00	3,798.81	61.65	67.81	6.16	3,736.24
RW - 4	09/13/00	3,798.34	61.33	68.18	6.85	3,735.98
	11/15/00	3,798.34	61.44	68.41	6.97	3,735.85

#### TABLE 2

### GROUND WATER CHEMISTRY ANNUAL REPORT

### DARR ANGELL 3 LEA COUNTY, NEW MEXICO ETGI PROJECT # EOT 2059C

All concentrations are in mg/L

SUCHERA	72.000mm/20		SW 8	346-8021B, 5	5030	
LOCATION	DATE	BENZENE	TOLUENE	ETHYL- BENZENE	M,P- XYLENES	O- XYLENES
MW - 1	09/14/00	< 0.001	< 0.001	< 0.001	< 0.001	<0.001
	11/15/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
MW - 2	09/14/00	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	11/15/00	< 0.001	< 0.001	<0.001	< 0.001	< 0.001
MW - 3	09/14/00	0.159	0.001	< 0.001	0.025	< 0.001
	11/15/00	0.431	< 0.001	< 0.001	0.074	< 0.001
RW - 1	09/14/00	0.007	0.004	< 0.001	< 0.001	<0.001
	11/15/00	0.022	0.021	0.005	0.008	0.002

APPENDIX

TOTAL

### ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC. ATTN: BETH ALDRICH PO BOX 4845 MIDLAND, TEXAS 79704

FAX. 915 520-4310 FAX: 505-397-4701

SampleType: Water

Sample Condition. Intact/ iced/ HCI/ 1 ong. C.

Project W. EQT 20590

Project Name: Darr Angeli 3 Project Location: Lea County, N M. Sampling Date: 09/14/00 Receiving Date: 09/16/00 Analysis Date: 09/21/00

	PELD COOK	BENZENE.	TOLULANI.	ETHY BENZEMB Mg/L	mpxn,me mg/l	SEXPLENE org/L	MEX Mars.
31022	MW 1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
31023	MW 2	<0.001	<0.001	<0.001	=0.001	<0.001	<0.001
31024	MW 3	0.159	0.001	<0.001	0.025	<0.001	9.185
31025	RW 1	0.007	0.004	<0.001	<0.001	<0.001	0.011
31026	EB 1	=0.001	<0.001	<0.001	<0.001	<0.001	<0.001

90 96 95 96 98 先换 86 92 90 91 92 % EA < 0.001 \*D.001 <0.001 e0.001 BLANK

METHODS: SW 846-80218-5030 :

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"Don't Treat Your Soil Like Dirti"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN BETH ALDRICH 2540 WEST MARLAND HOBBS, N.M. 88240 FAX: 915-520-4310 FAX: 505-397-4701

Sample Type: Water

Sample Condition: Intact/ Iced/ HCV +1 deg. C

Project #: EOT 2059C Project Name: Darr Angel III Project Location: Lovington, N.M. Sampling Date: 11/15/00 Receiving Date: 11/18/00 Analysis Date: 11/19/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/l	m,p-XYLENE mg/L		
34073	HW-1	<0.001	<0.001	<0.001	< 0.001	< 0.001	
34074	MW-2	< 0.001	< 0.001	< 0.001	<0.001	<0.001	
34075	MW-3	0.421	<0.001	< 0.001	0.074	< 0.001	
34076	HW-1	0.022	0.021	0.005	0.008	0.002	
34077	En-1	< 0.001	×0.001	< 0.001	< 0.001	< 0.001	

36IA	91	100	107	112	105
NEA	85	91	95	99	93
BLANK	< 0.001	<0.001	<0.001	< 0.001	<0.001

METHODS: EPA SW 846-80218 ,5030

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11-20-00 Date

Projection Lovington, n.M. Project Name. Darr Gaggill III-CHAIN OF CUSTODY RECORD AND ANALYSTS REDIEST Project # EUT 2059 C. Temperature Upon Rocept. Sample Containers Intact? Laboratory Community BIEN BOIL PO.E. 13/cm 13/5 108 ( C/) 898 ( EC appnis HIRIA THIS FIGH Farm (505) 397-4701 нояч Company Hame Environmentel Technology Group CHAI 81) No. of Containers CHYSTONECON HOLDDS, FELLI MexICO SSA4D \$63£ 440 020 baldma2 amiT 2540 West Marland Data Sampled Environmental Lab of Texas, Inc. Major Maryon Beth aldrich Fax: 915-563-1713 Phone: 915.563-1806 500) 347-4862 RW1-3 1-83 Odeksa, Texas 79763 12600 West I 20 East Special Instructions CAB II tob use only

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