

1R - 264

REPORTS

DATE:

3/23/2004



Tipperary CORPORATION

633 Seventeenth Street
Suite 1550
Denver, Colorado 80202-3622

March 23, 2004

VIA OVERNIGHT MAIL

Mr. Roger C. Anderson
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

**RE: Progress Report for Year 2003
Bagley Field
Pit Closure Project
Lea County, NM**

RECEIVED

MAR 24 2004

Oil Conservation Division
Environmental Bureau

Dear Mr. Anderson:

Please find enclosed the 2003 results from our monitor wells in the subject project area. This report summarizes the results from water samples taken on January 4, April 17, June 20, and October 30, 2003. These results represent 25 quarters of monitoring. In general, we are continuing to observe decreasing levels of BTEX in the monitor wells.

The Executive Summary section contains a general discussion and the following data:

- Map of pit reclamation locations.
- Survey coordinates of ten new monitor well locations.
- Cross reference listing of revised monitor well numbers.

A summary of investigation work and results to date for each pit closure site is included. The following data is presented for each site:

- Well site plat with monitor well locations.
- Ground water potentiometric map for each sampling event with the direction and magnitude of the hydraulic gradient.
- Table of ground water recovery volumes (where applicable).
- Well bailing log for each well.
- Summary table and chart of water quality results for each well.
- Geologic/lithologic log and well construction diagram for each well.

2003 Annual Report
Page 2.

A CD is enclosed and contains all of the laboratory analytical and quality assurance information for 2003. We will continue to sample the project quarterly and report the results to your office on an annual basis. If you have any questions, please call me at (303) 293-9379.

Very truly yours,

Tipperary Oil & Gas Corporation



Larry G. Sugano
Vice President - Engineering

Enclosures

cc: NMOCD Hobbs Office
Whole Earth Environmental

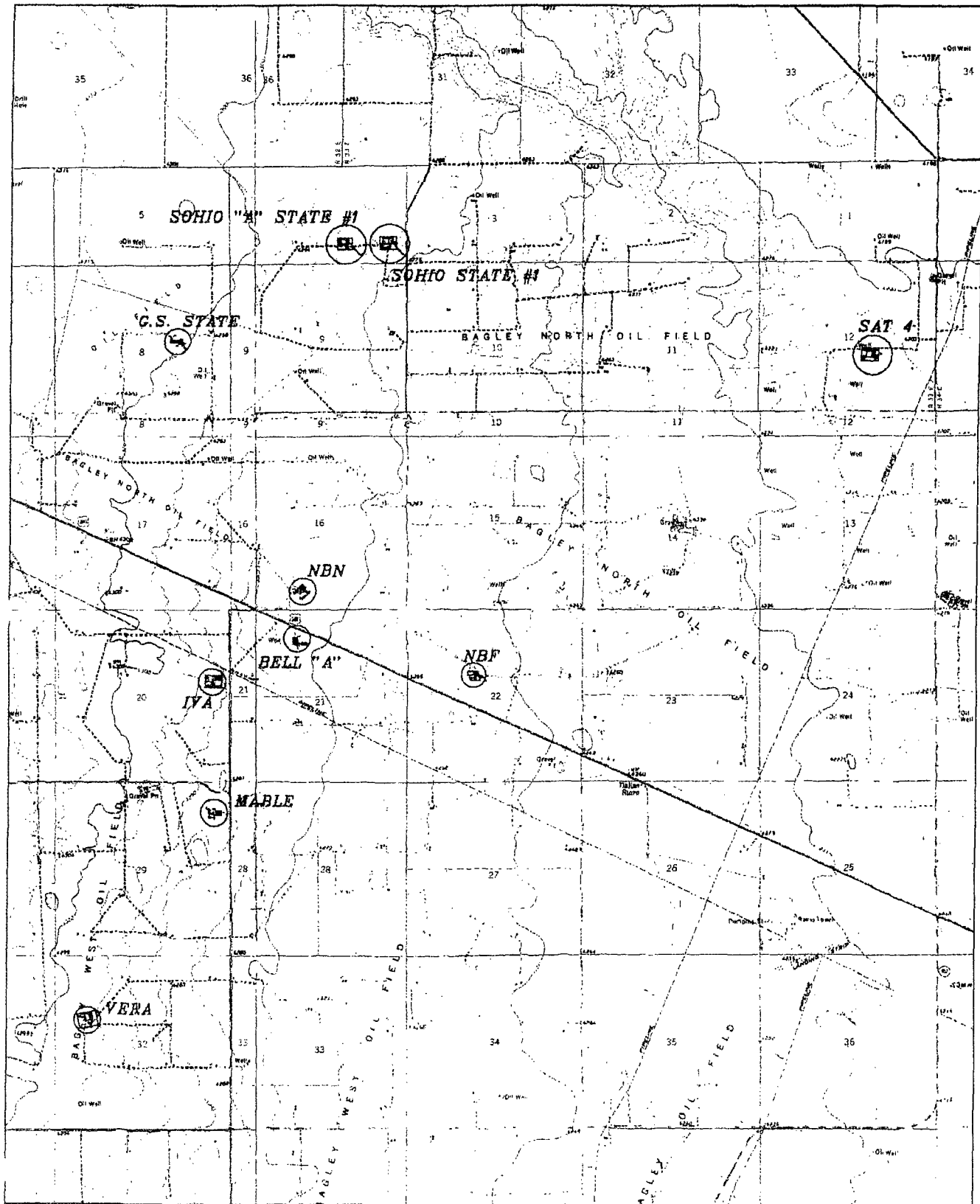
**Tipperary Oil & Gas Corporation
Bagley Field
2003 Annual Report**

Executive Summary

The 2003 Bagley Field monitor well survey project was especially busy. In addition to the installation of ten additional wells within the field, we made great strides in perfecting our bailing procedures to minimize any potential for cross contamination. Each well now has its own dedicated bailer used to obtain water samples after pumping an average of ten well volumes from each bore. New decontamination procedures and equipment blank analyses were instituted to insure the accuracy of the reported results.

We believe that all sites have been completely delineated. The outer ring of wells on each site have BTEX concentrations falling within NMOCD standards. A table of monitor well number revisions is attached for your reference. A table listing the surveyed locations of all recently installed monitor wells is attached. The following sections present the investigation work and results to date for each of the sites.

WHOLE EARTH ENVIROMENTAL, INC.



4000 0 4000 8000

EXHIBIT 9

BASIN SURVEYS P.O. BOX 1788-HOBBS, NEW MEXICO

W.O. Number: 9352

Drawn By: K. GOAD

Date: 10-21-99

Disk: KJG #122 - WE9352.DWG

WHOLEEARTH

SOHIO STATE 1

WELL		LATITUDE	LONGITUDE	ELEVATION
MW4	N 33 23'	22.56781"	W 103 36' 38.95930"	4282.71
MW8	N 33 23'	17.11074"	W 103 36' 42.59112"	4280.10

SOHIO A STATE 1

WELL		LATITUDE	LONGITUDE	ELEVATION
MW4	N 33 23'	22.80984"	W 103 36' 55.56751"	4285.06
MW6	N 33 23'	21.21826"	W 103 36' 54.49003"	4284.50
MW8	N 33 23'	16.75221"	W 103 36' 56.54969"	4283.84
MW10	N 33 23'	16.78983"	W 103 36' 49.48521"	4281.32
MW11	N 33 23'	14.05096"	W 103 36' 49.64146"	4280.55

COLLIER WELLS

WELL		LATITUDE	LONGITUDE	ELEVATION
MW1	N 33 22'	55.89915"	W 103 37' 14.87439"	4290.13
MW2	N 33 22'	56.31201"	W 103 37' 10.72284"	4286.90
MW5	N 33 22'	51.16167"	W 103 37' 15.53811"	4290.58

BELL A 1

WELL		LATITUDE	LONGITUDE	ELEVATION
MW6	N 33 21'	21.90236"	W 103 37' 14.63097"	4280.64

STATE NBF 1

WELL		LATITUDE	LONGITUDE	ELEVATION
MW6	N 33 21'	10.65698"	W 103 36' 08.88434"	4258.24

GS STATE 1

WELL		LATITUDE	LONGITUDE	ELEVATION
MW5	N 33 22'	50.08279"	W 103 37' 55.56043"	4302.52

HORIZONTAL DATUM NAD-83
VERTICAL DATUM NAVD-88

Tipperary - Bagley Field **Well Number Revisions**

	Original No.	New No.		Original No.	New No.
Iva COM	Source	Source	Sohio 1	10	1
	1	1		17	2
	2	2		18	3
Mable				East	4
	Source	Source		28	5
	3	1		30	6
	4	2		40	7
Bell	35	3			8
	6	1	Sohio A	11	1
	13	2		20	2
	14	3		19	3
	25	4		44	4
	36	5		27	5
NBF	41	6		45	6
	8	1		31	7
	15	2		46	8
	16	3		39	9
	26	4		47	10
	37	5			11
GS	42	6			
	Source	Source			
	12	1			
	22	2			
	21	3			
Collier	29	4			
	38	5			
	Source	Source			
	37	1			
	36	2			
	32	3			
	33	4			
	35	5			
	34	6			

**Tipperary Oil & Gas Corporation
Bagley Field
2003 Annual Report**

**Mable COM
Section 29A-T11S-R33E**

The Mable site consists of one recovery and three monitor wells. The recovery well continues to show reductions in BTEX over the four years of operations with the latest results being less than 10% of the initial concentrations.

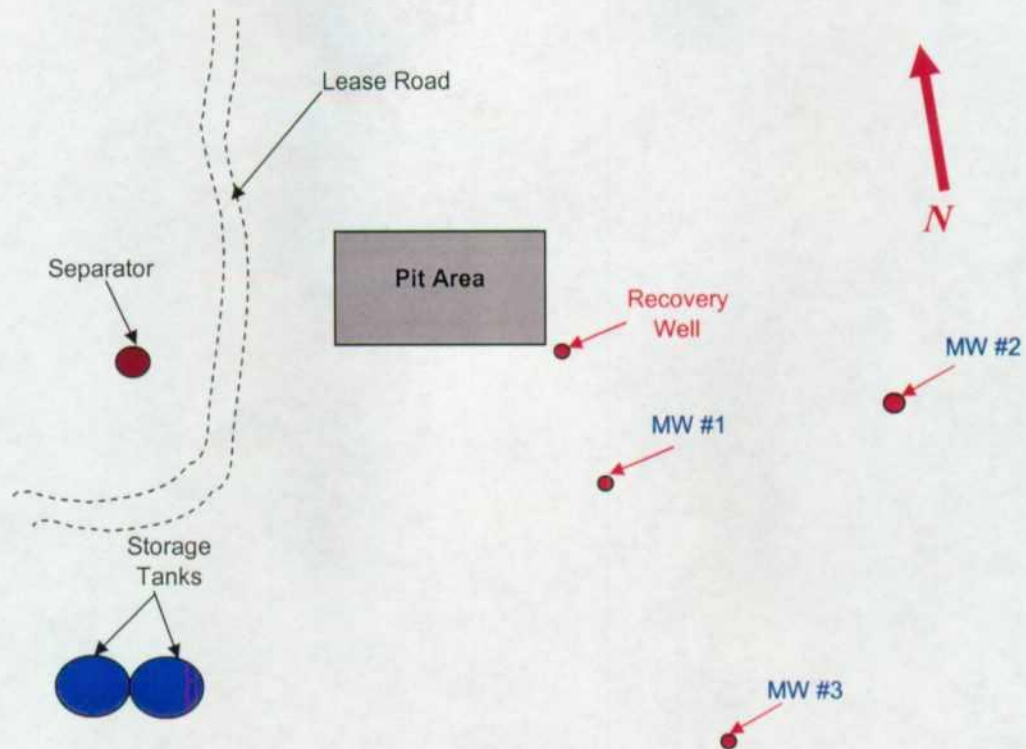
Monitor well #1 continues to contain free product (LPNL) within the well bore with BTEX concentrations trending upward over time. When bailing the well, we run the pump as long as necessary to remove the free product within the column sample, (as much as 35 gallons per event). This activity undoubtedly causes some distortion of the sampling results due to the differences in mobility between water and hydrocarbon fractions.

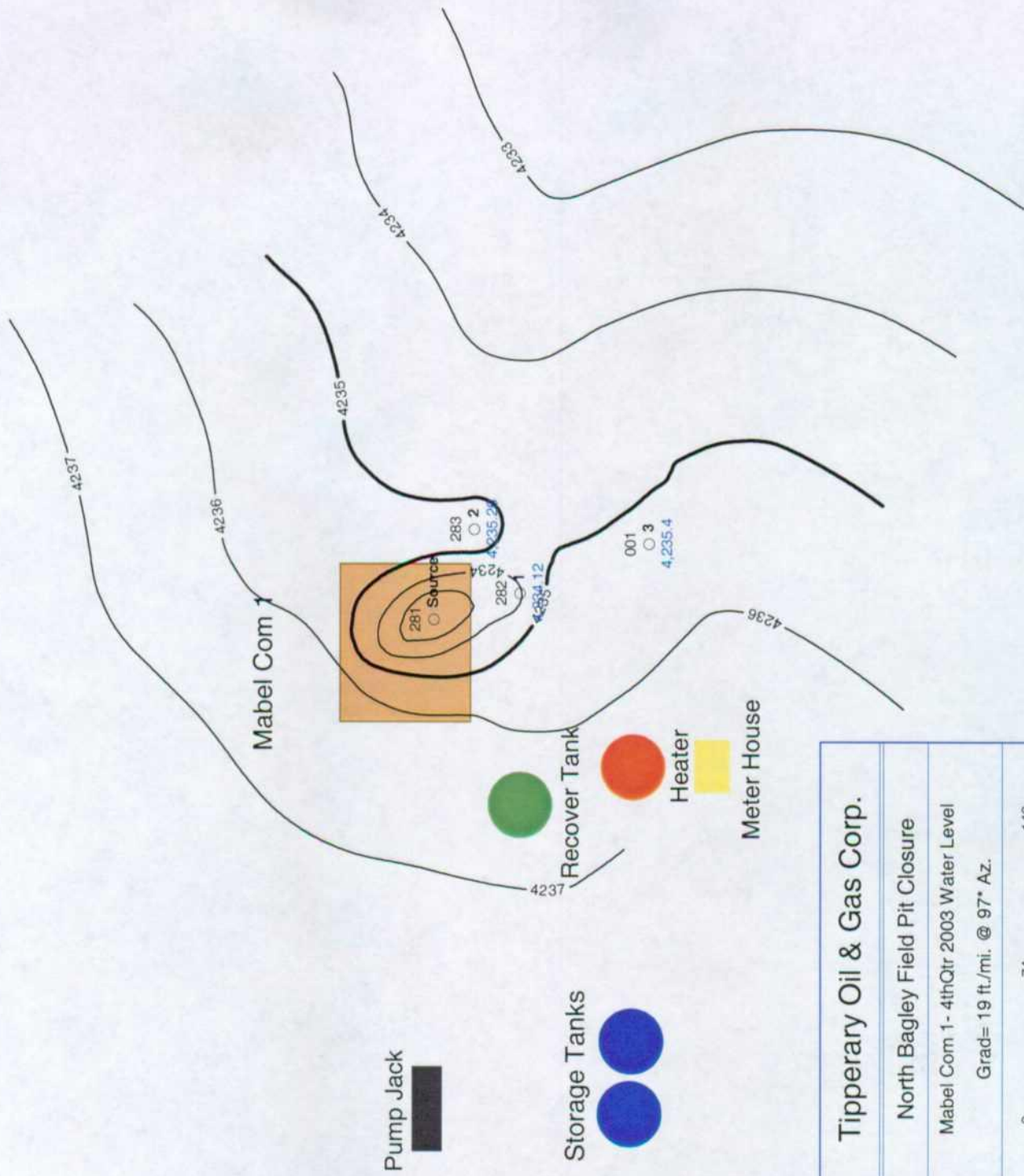
Monitor wells two and three continue to show acceptable BTEX results.

Please find the following data:

- Well-site plat with monitor well locations.
- Ground water potentiometric map for each sampling event with direction and magnitude of the hydraulic gradient.
- Table of ground water recovery volumes.
- Well bailing log for each well.
- Summary table and chart of ground water quality results for each well.
- Well completion diagram for each well.

Tipperary Corporation
Mable COM
Monitor Well Locations





Tipperary Oil & Gas Corp.

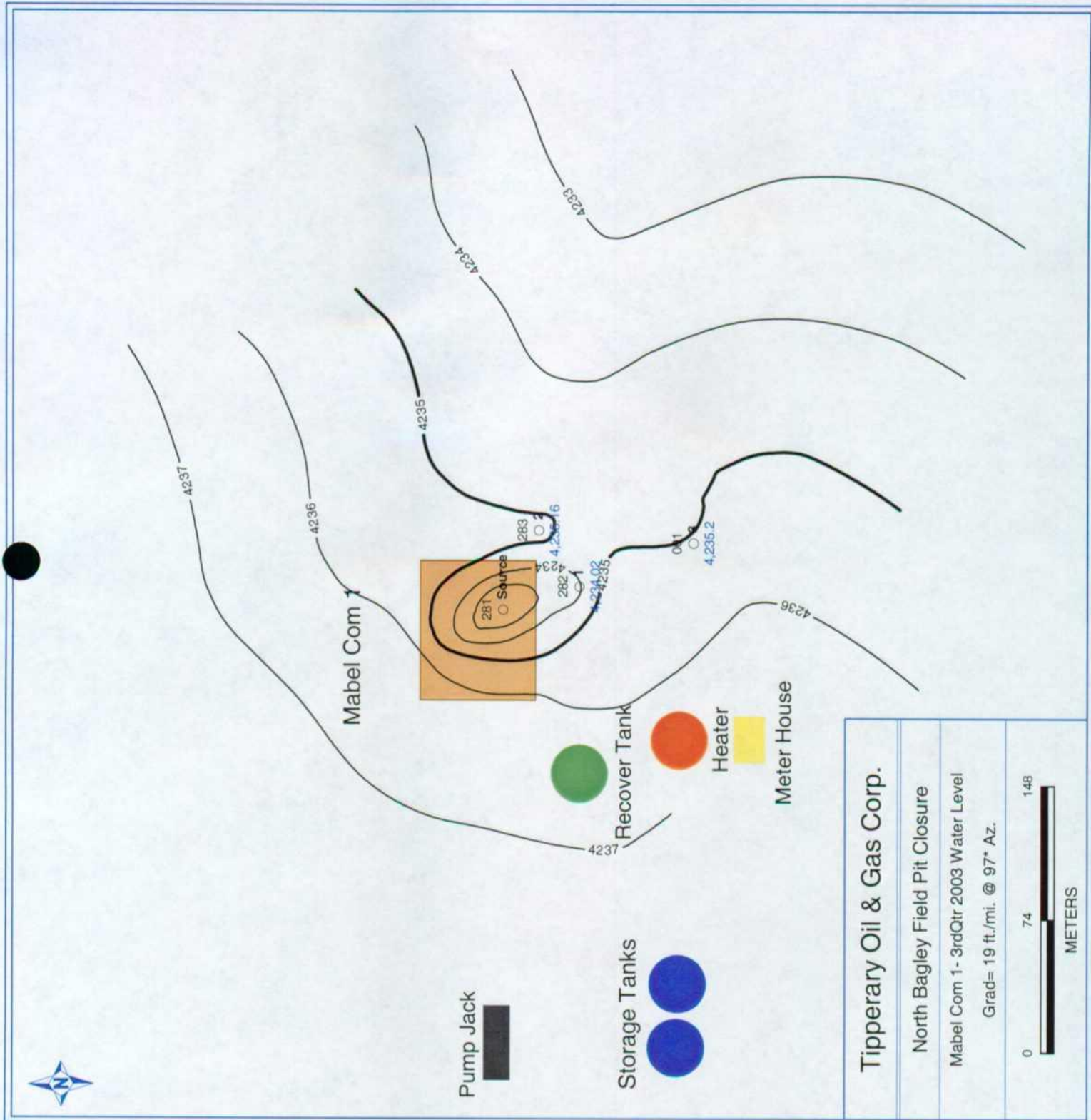
North Bagley Field Pit Closure

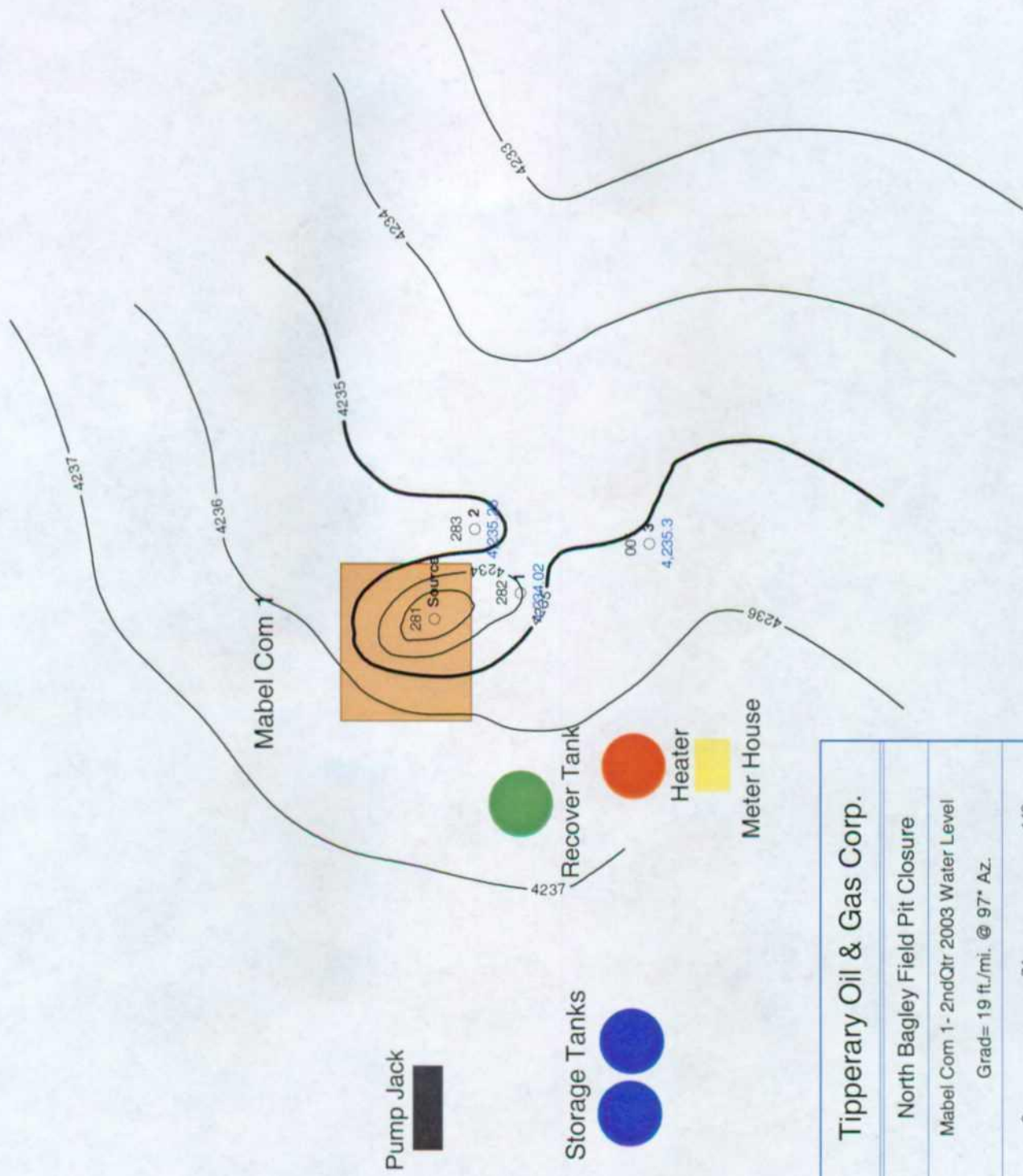
Mabel Com 1 - 4thQtr 2003 Water Level

Grad= 19 ft./mi. @ 97° Az.



METERS





Tipperary Oil & Gas Corp.

North Bagley Field Pit Closure

Mabel Com 1 - 2ndQtr 2003 Water Level

Grad= 19 ft./mi. @ 97° Az.



Tipperary Corporation
Mable Com Recovery Well
Section 29A-T11S-R33E
Lea County, NM

YEAR	ESTIMATED	
	GROUND WATER RECOVERY (BBLs)	ESTIMATED PRODUCT RECOVERY (BBLs)
1997	200	1.0
1998	500	2.5
1999	500	2.5
2000	500	2.5
2001	500	2.5
2002	500	2.5
2003	500	2.5
TOTAL	3200	16

All fluids pumped into the Burro Disposal System.



Mable

Monitor Well Bailing Log

Mable Source

Lat: _____
Long. _____
Surf. Elev. 4290.55

As Drilled	As Measured
------------	-------------

Date: 8/27/1997
Top of Water 52 Ft.
Bottom of Bore 69 Ft.

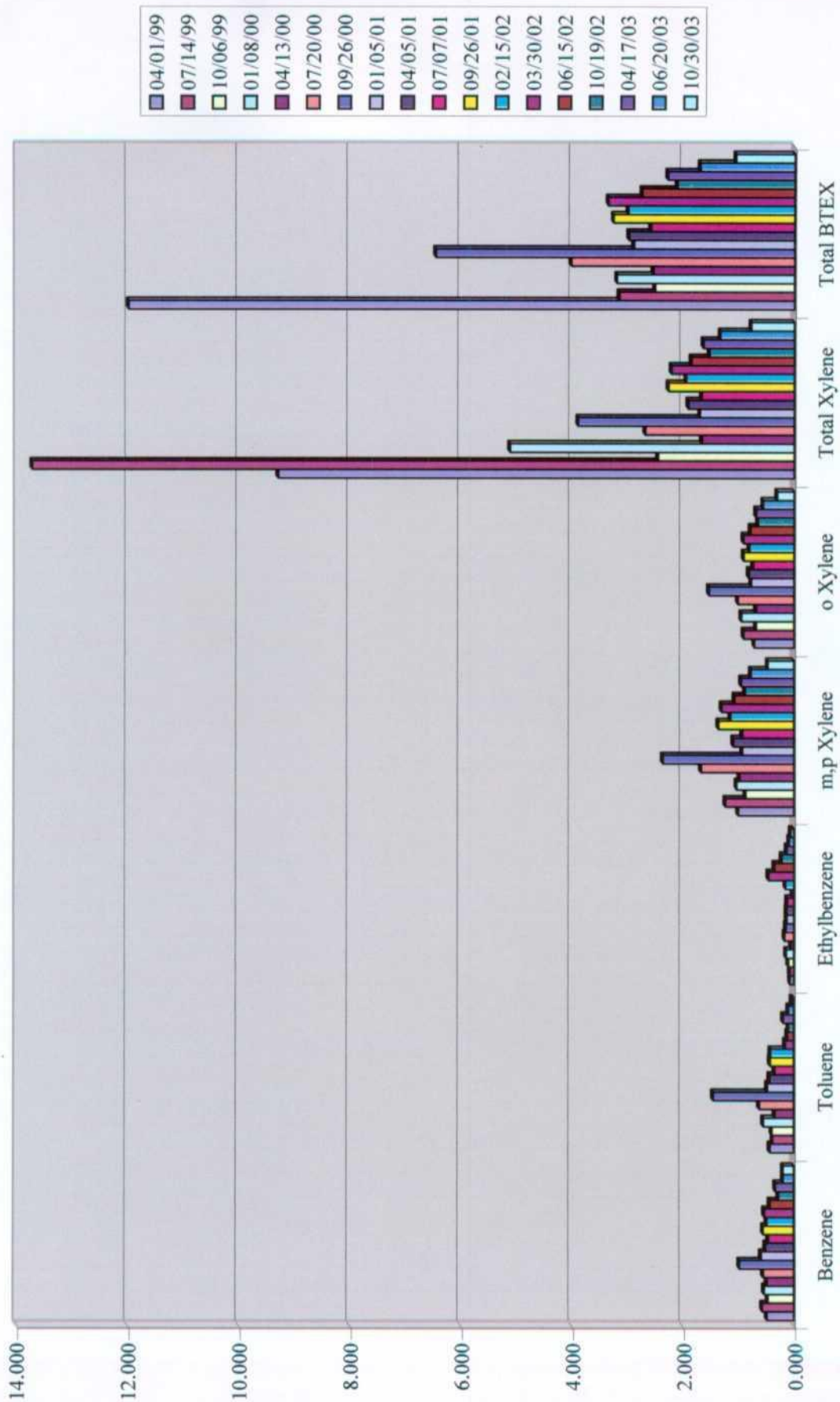
Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	NA	NA	NA	NA	Ft.
Bottom of Bore	NA	NA	NA	NA	Ft.
LPNL Top	NA	NA	NA	NA	Ft.
LPNL Bottom	NA	NA	NA	NA	Ft.
DPNL Top	NA	NA	NA	NA	Ft.
DPNL Bottom	NA	NA	NA	NA	Ft.
Min. Bailing Vol.	NA	NA	NA	NA	Gal.
Actual Bailing Vol.	NA	NA	NA	NA	Gal.

Comments

**Mable COM
Source Well**

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
17429	04/01/99	0.486	0.432	0.066	1.000	0.713	9.300	11.997
18591	07/14/99	0.568	0.378	0.068	1.230	0.908	13.730	3.152
20608	10/06/99	0.467	0.395	0.094	0.868	0.685	2.450	2.509
22775	01/08/00	0.534	0.548	0.136	1.030	0.946	5.120	3.194
25161	04/13/00	0.485	0.342	0.048	0.978	0.685	1.663	2.538
28465	07/20/00	0.552	0.622	0.166	1.670	1.010	2.680	4.020
31495	09/26/00	0.980	1.450	0.141	2.360	1.530	3.890	6.461
36137	01/05/01	0.590	0.475	0.127	0.927	0.768	1.695	2.887
38920	04/05/01	0.509	0.435	0.128	1.090	0.816	1.906	2.978
0101098-04	07/07/01	0.459	0.343	0.118	0.929	0.735	1.664	2.584
0101642-04	09/26/01	0.550	0.425	0.018	1.360	0.904	2.264	3.257
0202619-04	02/15/02	0.485	0.418	0.149	1.140	0.801	1.941	2.993
0001112-02	03/30/02	0.531	0.156	0.456	1.300	0.909	2.209	3.352
0203602-01	06/15/02	0.429	0.113	0.348	1.070	0.782	1.852	2.742
0204815-04	10/19/02	0.272	0.093	0.216	0.878	0.649	1.527	2.108
0306249-04	04/17/03	0.330	0.190	0.126	0.951	0.684	1.635	2.281
0306733-20	06/20/03	0.189	0.096	0.084	0.774	0.555	1.329	1.698
0307790-23	10/30/03	0.193	0.038	0.053	0.469	0.304	0.773	1.057

Mable Source



Atkins Engineering Associates, Inc. 2604 W. 2nd St., Roswell, NM 88202-3166		LOG OF BORING Mabel Com Source Well (Page 1 of 3)	
Tipperary Oil and Gas Corporation 833 17th St. Denver, CO 80202 c/o Whole Earth Environmental		Date : August 26-27, 1997 Drill Start : 1115 (8/26/97) Drill End : 1015 (8/27/97) Boring Location : Sec. 28, Mabel Com, Center of PR	Site Location : 17 miles W. of Tatum, NM Auger Type : Hollow Stem Logged By : Mort Bates

Depth in feet	GRAPHIC USCS	DESCRIPTION
0		Caliche Rock, clayey, tan, stiff, damp, backfill
5		
10		
15		
20		
25	CL	Clay, silty, sandy, loose, tan, dry
30		

Well R-1
Elev.:

5'x12" monitor well cover with 2'x2' concrete base
Cap
Concrete

4 in. schedule 40, pvc casing

Grout

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 86202-3158		LOG OF BORING <i>Mabel Com Source Well</i> (Page 2 of 3)																	
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental		<table style="width: 100%;"> <tr> <td style="width: 33%;">Date</td> <td style="width: 33%;">: August 26-27, 1997</td> <td style="width: 33%;">Site Location</td> <td style="width: 33%;">: 17 miles W. of Tatum, NM</td> </tr> <tr> <td>Drill Start</td> <td>: 1115 (8/26/97)</td> <td>Auger Type</td> <td>: Hollow Stem</td> </tr> <tr> <td>Drill End</td> <td>: 1015 (8/27/97)</td> <td>Logged By</td> <td>: Mort Sales</td> </tr> <tr> <td>Boring Location</td> <td colspan="3">: Sec. 28, Mabel Com, Center of Pit</td> </tr> </table>		Date	: August 26-27, 1997	Site Location	: 17 miles W. of Tatum, NM	Drill Start	: 1115 (8/26/97)	Auger Type	: Hollow Stem	Drill End	: 1015 (8/27/97)	Logged By	: Mort Sales	Boring Location	: Sec. 28, Mabel Com, Center of Pit		
Date	: August 26-27, 1997	Site Location	: 17 miles W. of Tatum, NM																
Drill Start	: 1115 (8/26/97)	Auger Type	: Hollow Stem																
Drill End	: 1015 (8/27/97)	Logged By	: Mort Sales																
Boring Location	: Sec. 28, Mabel Com, Center of Pit																		

Depth in ft.	GRAPHIC	USCS	DESCRIPTION
30			
35		CL	
40			Clay, sand, loose, tan, dry
45			
50		CL	finished 8/28/97 at 1700 began 8/27/97 at 0630
52			Water Level = 52 ft.
55			
60			

Well: R-1

Elev.:

The diagram shows a vertical well casing. From top to bottom, the components are: Grout (stippled pattern), 4 in. schedule 40, pvc casing (dotted pattern), Bentonite Seal (hatched pattern), Sand Pack (cross-hatched pattern), and .032 slot screen, 4 in. ID (vertical lines). The casing ends at a depth of approximately 58 feet.

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 86202-3156			LOG OF BORING Mabel Corn Source Well (Page 3 of 3)		
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : August 26-27, 1997 Site Location : 17 miles W. of Tatum, NM Drill Start : 1115 (8/26/97) Auger Type : Hollow Stem Drill End : 1015 (8/27/97) Logged By : Mark Bates Boring Location : Sec. 29, Mabel Corn, Center of PE		
Depth in feet	GRAPHIC	USCS	DESCRIPTION		
60	CL		Well R-1 Elev.: 		
65					
70			TD=69 ft. Pumped well for 2.5 hours. Maximum pumping rate = 10 gpm Steady pumping rate = 6 gpm for 1 hour Drawdown = 6.5 ft.		
75					
80					
85					
90					



Iva

Monitor Well Bailing Log

Iva MW #1

Lat: _____
Long. _____
Surf. Elev. 4292.1 Ft.

As Drilled	As Measured
------------	-------------

Date: 8/14/1997
Top of Water 54.9 Ft.
Bottom of Bore 60 Ft.

Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	52.20	52.30	52.20	52.20	Ft.
Bottom of Bore	63.20	63.30	63.50	63.40	Ft.
Bore Volumn	1.77	1.77	1.82	1.81	Gal.
LPNL Top	NA	NA	NA	NA	Ft.
LPNL Bottom	NA	NA	NA	NA	Ft.
DPNL Top	NA	NA	NA	NA	Ft.
DPNL Bottom	NA	NA	NA	NA	Ft.
Min. Bailing Vol.	5.32	5.32	5.47	5.42	Gal.
Actual Bailing Vol.	15.00	15.00	15.00	15.00	Gal.

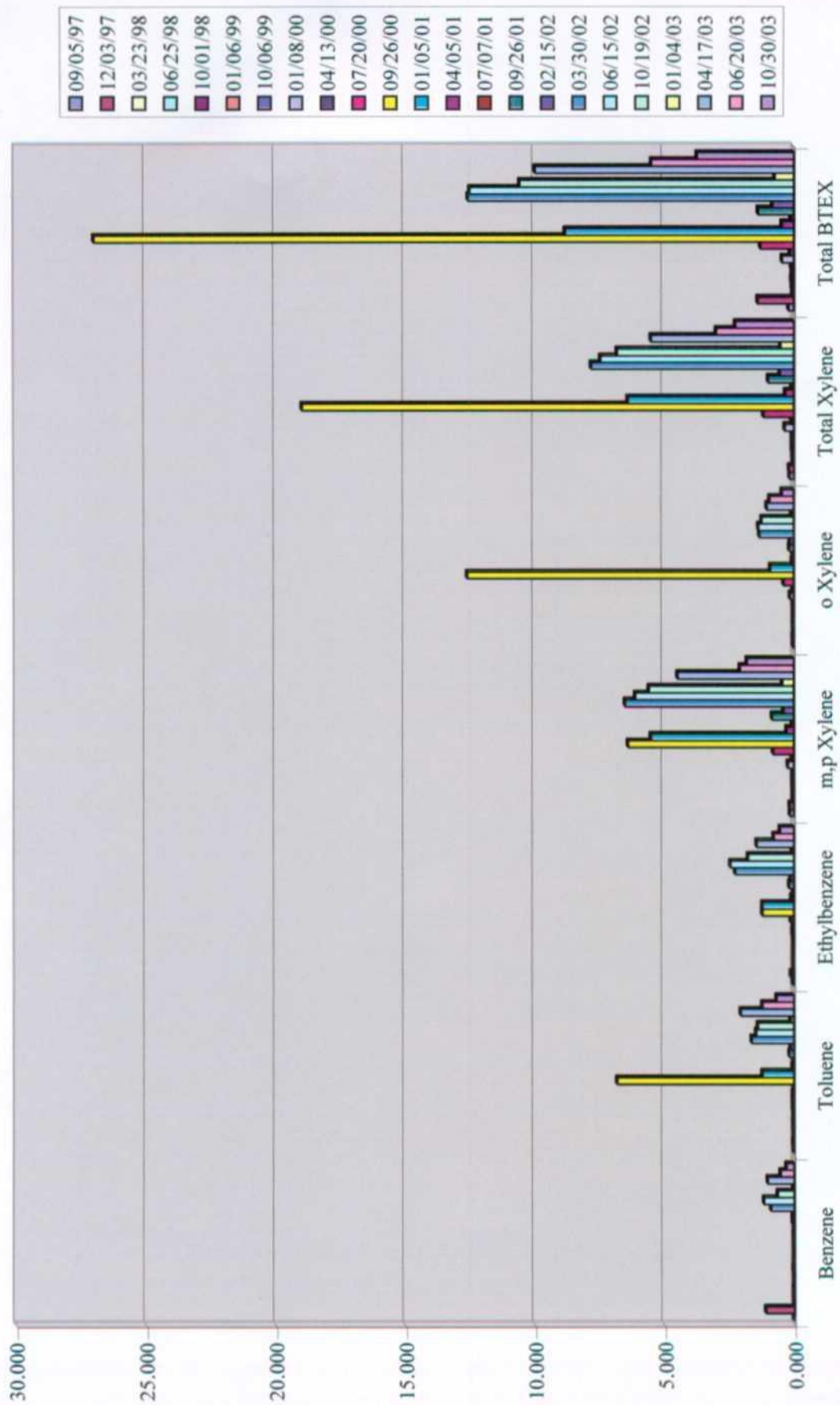
Comments

6-12 Installed bailer
10-25 Re-marked lid

**Monitor Well # 1
Mable COM
Sampling Results**

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12488	09/05/97	0.010	0.008	0.031	0.139	0.012	0.151	0.200
13177	12/03/97	1.093	0.024	0.097	0.153	0.020	0.173	1.387
14059	03/23/98	0.006	0.006	0.007	0.029	0.006	0.035	0.054
14658	06/25/98	0.009	0.011	0.009	0.033	0.009	0.042	0.071
15591	10/01/98	0.010	0.015	0.010	0.041	0.017	0.058	0.093
16597	01/06/99	0.001	0.002	0.012	0.042	0.016	0.058	0.073
20598	10/06/99	0.003	0.021	0.010	0.038	0.020	0.058	0.092
22766	01/08/00	0.022	0.032	0.046	0.215	0.131	0.346	0.446
25162	04/13/00	0.001	0.030	0.022	0.062	0.023	0.085	0.138
28438	07/20/00	0.001	0.001	0.107	0.790	0.380	1.170	1.279
31505	09/26/00	0.001	6.810	1.210	6.380	12.600	18.980	27.001
36132	01/05/01	0.001	1.210	1.210	5.500	0.894	6.394	8.815
38921	04/05/01	0.009	0.047	0.088	0.270	0.049	0.319	0.463
0101098-05	07/07/01	0.003	0.007	0.025	0.057	0.021	0.078	0.113
0101642-05	09/26/01	0.053	0.163	0.173	0.826	0.154	0.980	1.369
0202619-05	02/15/02	0.050	0.116	0.118	0.395	0.139	0.534	0.818
0001159-02	03/30/02	0.881	1.620	2.250	6.500	1.310	7.810	12.561
0203602-02	06/15/02	1.160	1.450	2.440	6.100	1.350	7.450	12.500
0204815-05	10/19/02	0.622	1.380	1.760	5.580	1.230	6.810	10.572
0205349-04	01/04/03	0.028	0.118	0.073	0.434	0.076	0.51	0.729
0306249-05	04/17/03	1.010	2.040	1.430	4.470	1.030	5.500	9.980
0306733-21	06/20/03	0.518	1.210	0.768	2.070	0.921	2.991	5.487
0307790-24	10/30/03	0.285	0.662	0.529	1.800	0.453	2.253	3.729

Mable MW #1





Mable

Monitor Well Bailing Log

Mable MW #2

Lat: _____
Long. _____
Surf. Elev. _____

As Drilled	As Measured
------------	-------------

Date: 8/27/1997
Top of Water 52 Ft.
Bottom of Bore 68 Ft.

Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	52.20	52.20	52.30	52.20	Ft.
Bottom of Bore	66.30	66.40	66.60	66.30	Ft.
Bore Volumn	2.27	2.29	2.31	2.27	Gal.
LPNL Top	NA	NA	NA	NA	Ft.
LPNL Bottom	NA	NA	NA	NA	Ft.
DPNL Top	NA	NA	NA	NA	Ft.
DPNL Bottom	NA	NA	NA	NA	Ft.
Min. Bailing Vol.	6.82	6.87	6.92	6.82	Gal.
Actual Bailing Vol.	15.00	15.00	15.00	15.00	Gal.

Comments

6-12 Installed Bailer
10-25 Re-marked cap

Atkins Engineering Associates, Inc. 2904 W. 2nd St. Roswell, NM 88202-3155			LOG OF BORING Mabel Com MW-1 (Page 1 of 3)		
Tipparary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : August 27, 1997 Drill Start : 1030 Drill End : 1300 Boring Location : Mabel Com, 160 ft. SSE of R-1		
			Site Location : 17 mi. W of Tatum, NM Auger Type : Solid Stem Logged By : Mark Bates		

Depth in feet	GRAPHIC	USCS	DESCRIPTION	Well: MW-1 Elev.:
0	/ / / /	CL	Clay with caliche rock, tan, stiff, dry	
5	/ / / /	CL	Clay with caliche, tan, stiff, damp	
10			Caliche Clay, tan, stiff, damp	
15			Caliche Clay, sandy, tan, stiff, damp	
20				
25				
30				

09-01-1997 atkins-11m-well-log

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156		LOG OF BORING Mabel Com MW-1 (Page 2 of 3)	
Tipperary Oil and Gas Corporation 833 17th St. Denver, CO 80202 c/o Whole Earth Environmental		Date : August 27, 1987 Drill Start : 1030 Drill End : 1300 Boring Location : Mabel Com, 150 ft. SSE of R-1	Site Location : 17 mi. W of Tatum, NM Augur Type : Solid Stem Logged By : Mark Bates

Depth in feet	GRAPHIC	USCS	DESCRIPTION
30			
35			
40			
45		CL	Silty, Sandy, Clay, tan, loose, damp
50		CL	Silty, Sandy, Clay, tan, loose, moist
55		SP	Silty Sand, tan, soft, saturated Water Level = 52 ft.
60			

West MW-1
Elev.: _____

Grout

2 in. schedule 40, pvc casing

Bentonite Seal

Sand Pack

.020 slot screen, 2 in. ID

00-35-1007 c:\m\edocu\Trans\c\bacon-1\well1 bor

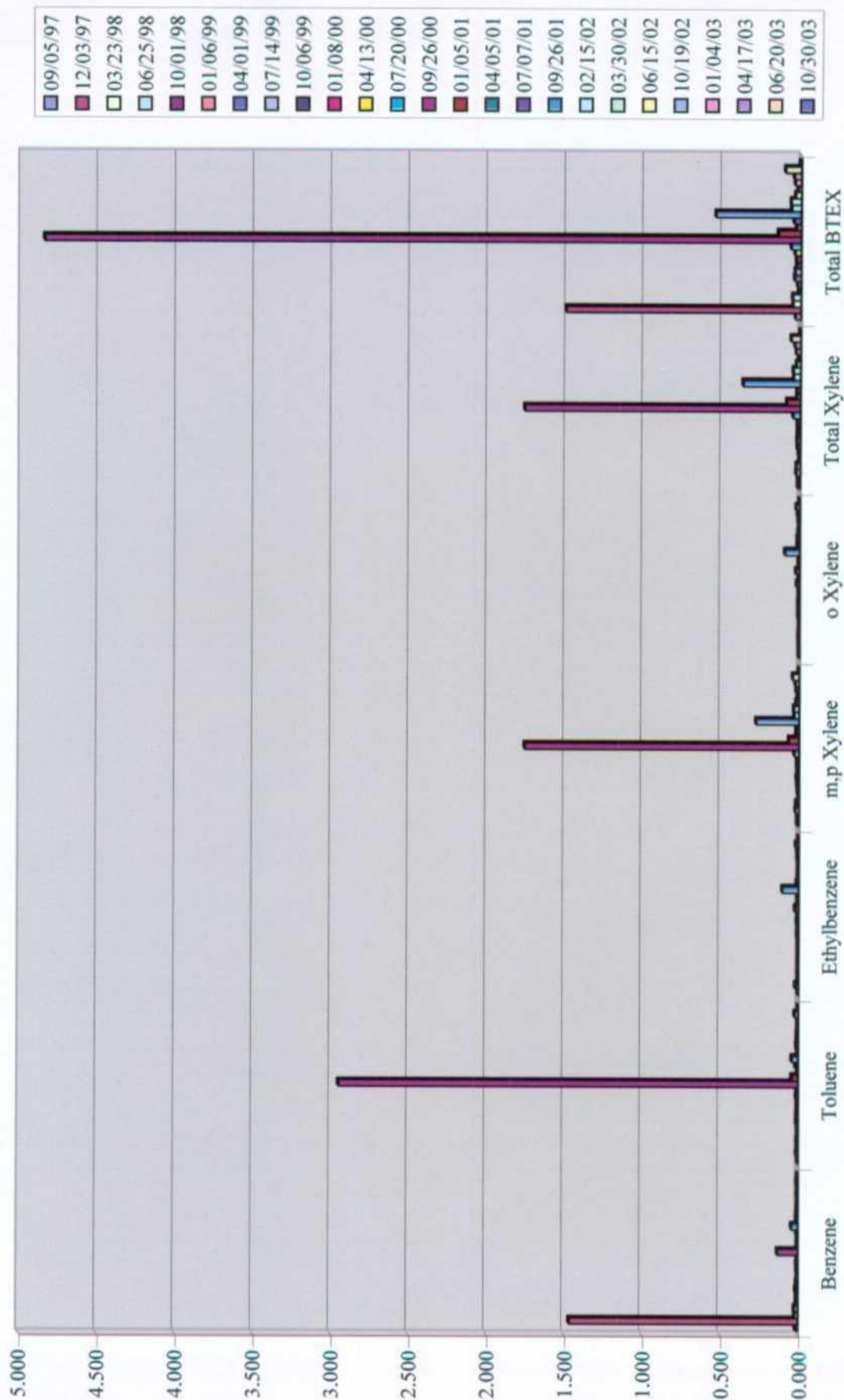
Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 86202-3156			LOG OF BORING Mabel Com MW-1 (Page 3 of 3)	
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202			Date : August 27, 1997 Site Location : 17 mi. W of Tatum, NM Drill Start : 1030 Auger Type : Solid Stem Drill End : 1300 Logged By : Mark Bates Boring Location : Mabel Com. 150 ft. SSE of R-1	
c/o Whole Earth Environmental				

Depth in feet	GRAPHIC	USCS	DESCRIPTION	
60	SP			Well: MW-1 Elev.:  Sand Pack .020 slot screen, 2 in. ID
65				
			TD=68 ft.	
70			Well was baled for one hour after drilling	
75				
80				
85				
90				

08-25-1997 s:\mynote\c\mynote\mabel\mabel log

Monitor Well # 2
Mable COM
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12489	09/05/97	0.015	0.002	0.002	0.010	0.002	0.012	0.031
13178	12/03/97	1.465	0.007	0.017	0.010	0.002	0.012	1.501
14060	03/23/98	0.019	0.004	0.002	0.019	0.003	0.022	0.047
14659	06/25/98	0.020	0.006	0.003	0.015	0.005	0.020	0.049
15606	10/01/98	0.007	0.002	0.001	0.002	0.001	0.003	0.013
16598	01/06/99	0.007	0.002	0.002	0.006	0.002	0.008	0.019
17430	04/01/99	0.012	0.008	0.002	0.010	0.006	0.016	0.038
18592	07/14/99	0.008	0.006	0.002	0.012	0.006	0.018	0.034
20607	10/06/99	0.002	0.005	0.002	0.010	0.006	0.016	0.025
22768	01/08/00	0.004	0.004	0.004	0.011	0.004	0.015	0.027
25163	04/13/00	0.006	0.009	0.004	0.011	0.005	0.016	0.035
28435	07/20/00	0.002	0.006	0.008	0.028	0.016	0.044	0.060
31506	09/26/00	0.129	2.950	0.005	1.760	0.005	1.765	4.849
36135	01/05/01	0.001	0.038	0.020	0.063	0.021	0.084	0.143
38922	04/05/01	0.001	0.001	0.006	0.015	0.004	0.019	0.027
0101098-06	07/07/01	0.004	0.014	0.006	0.014	0.005	0.019	0.043
0101642-06	09/26/01	0.039	0.038	0.102	0.273	0.091	0.364	0.543
0202619-06	02/15/02	0.007	0.003	0.009	0.028	0.012	0.040	0.059
001159-02	03/30/02	0.006	0.009	0.003	0.030	0.013	0.043	0.061
0203602-03	06/15/02	0.004	0.006	0.001	0.016	0.007	0.023	0.034
0204815-06	10/19/02	0.002	0.004	0.001	0.007	0.004	0.011	0.018
0205349-05	01/04/03	0.004	0.002	0.006	0.016	0.008	0.024	0.036
0306249-06	04/17/03	0.001	0.002	0.008	0.021	0.011	0.032	0.043
0306733-22	06/20/03	0.006	0.02	0.016	0.038	0.019	0.057	0.099
0307790-25	10/30/03	0.001	0.001	0.001	0.002	0.001	0.003	0.006

[illegible]

Atkins Engineering Associates, Inc.

2904 W. 2nd St., Roswell, NM 86202-3156

LOG OF BORING Mabel Com MW-2

(Page 1 of 3)

Tipperary Oil and Gas Corporation
633 17th St.

Denver, CO 80202

c/o Whole Earth Environmental

Date : August 27, 1997

Drill Start : 1340

Drill End : 1530

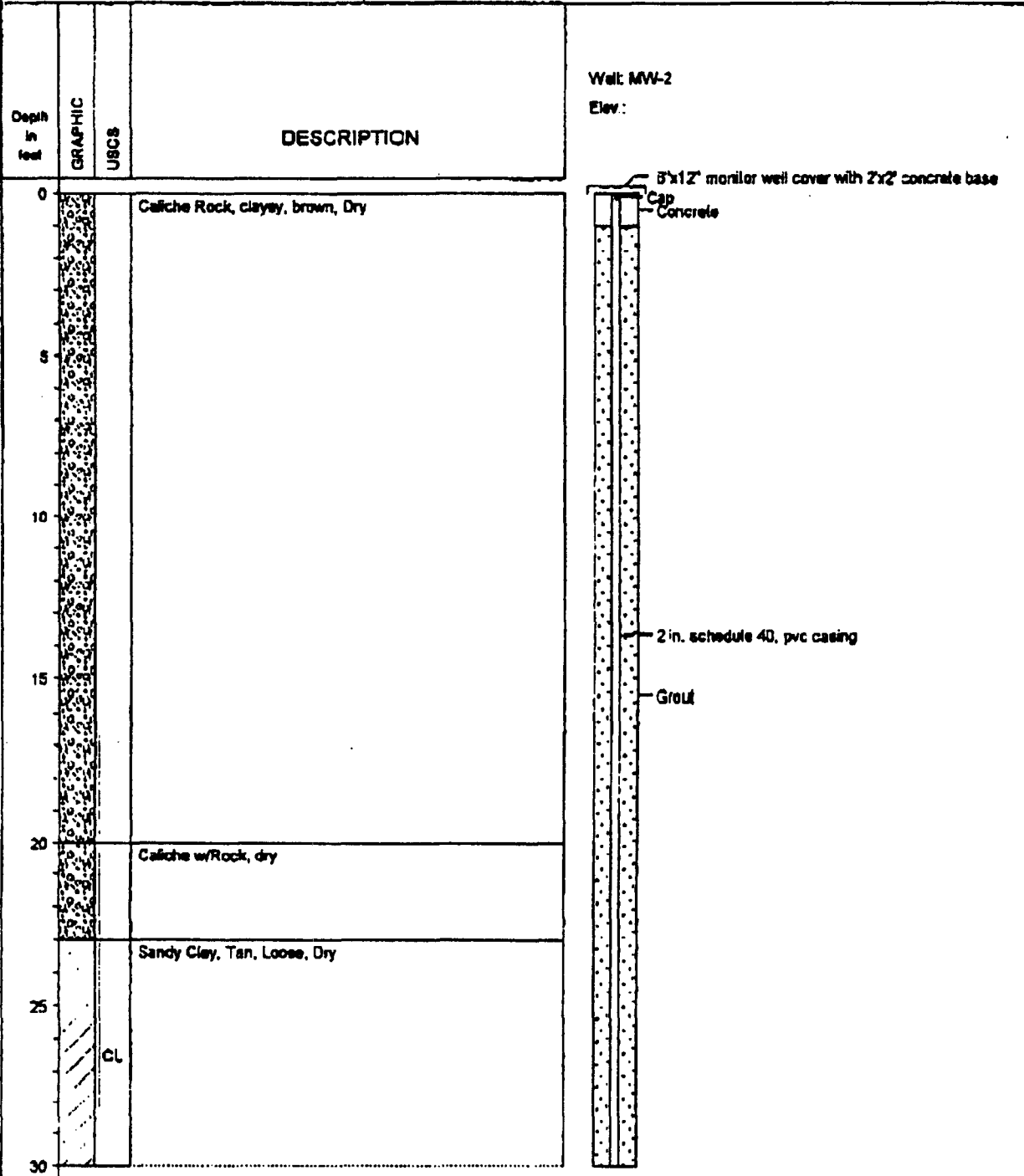
Boring Location

Site Location : 17 mi. W of Tatum, NM

Auger Type : Solid Stem

Logged By : Mori Bates

: Mabel Com, Sec. 29, 150 ft. E of R-1, 40 ft. NE of MW-1



Atkins Engineering Associates, Inc. 2804 W. 2nd St., Roswell, NM 86202-3156			LOG OF BORING Mabel Com MW-2 (Page 2 of 3)	
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : August 27, 1997 Drill Start : 1340 Drill End : 1630 Boring Location : Mabel Com, Sec. 29, 150 ft. E of R-1, 40 ft. NE of MW-1	
			Site Location : 17 mi. W of Tatum, NM Auger Type : Solid Stem Logged By : Mort Bates	

Depth in feet	GRAPHIC	USCS	DESCRIPTION	Well MW-2 Elev.:
30	CL			Grout 2 in. schedule 40, pvc casing Bentonite Seal
35				
40				
45			Sand w/ Silt, Fine, Damp	Sand Pack .020 Slot Screen, 2" ID
50	SP			
55			Silty Sand, Tan, Soft, Saturated Water Level = 52 ft.	
60	SM			

08.26.1997 c:\mylecu\lunach\mabel - mabel log

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156			LOG OF BORING Mabel Corn MW-2 (Page 3 of 3)	
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : August 27, 1997 Site Location : 17 mi. W of Tatum, NM Drill Start : 1340 Auger Type : Solid Stem Drill End : 1530 Logged By : Mort Bates Boring Location : Mabel Corn, Sec. 29, 160 ft. E of R-1, 40 ft. NE of MW-1	

Depth s feet	GRAPHIC	USCS	DESCRIPTION	Well: MW-2 Elev.:
80		SM	TD=68 ft.	 Sand Pack .020 Sieve Screen, 2" ID
65				
70			Well was baled for one hour after drilling	
75				
80				
85				
90				

09-25-1997 4:10 PM - 11/24/97 - 11/24/97



Mable

Monitor Well Bailing Log

Mable MW #3

Lat: _____
Long. _____
Surf. Elev. 4287.46 Ft.

As Drilled	As Measured
------------	-------------

Date:	6/3/2002	Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	53 Ft.	Top of Water	52.20	52.30	52.40	52.20	Ft.
Bottom of Bore	65 Ft.	Bottom of Bore	60.80	60.20	59.50	61.40	Ft.
		Bore Volumn	1.39	1.27	1.15	1.48	Gal.
		LPNL Top	NA	NA	NA	NA	Ft.
		LPNL Bottom	NA	NA	NA	NA	Ft.
		DPNL Top	NA	NA	NA	NA	Ft.
		DPNL Bottom	NA	NA	NA	NA	Ft.
		Min. Bailing Vol.	4.16	3.82	3.44	4.45	Gal.
		Actual Bailing Vol.	12.0	15.0	20.0	10.0	Gal.

Comments

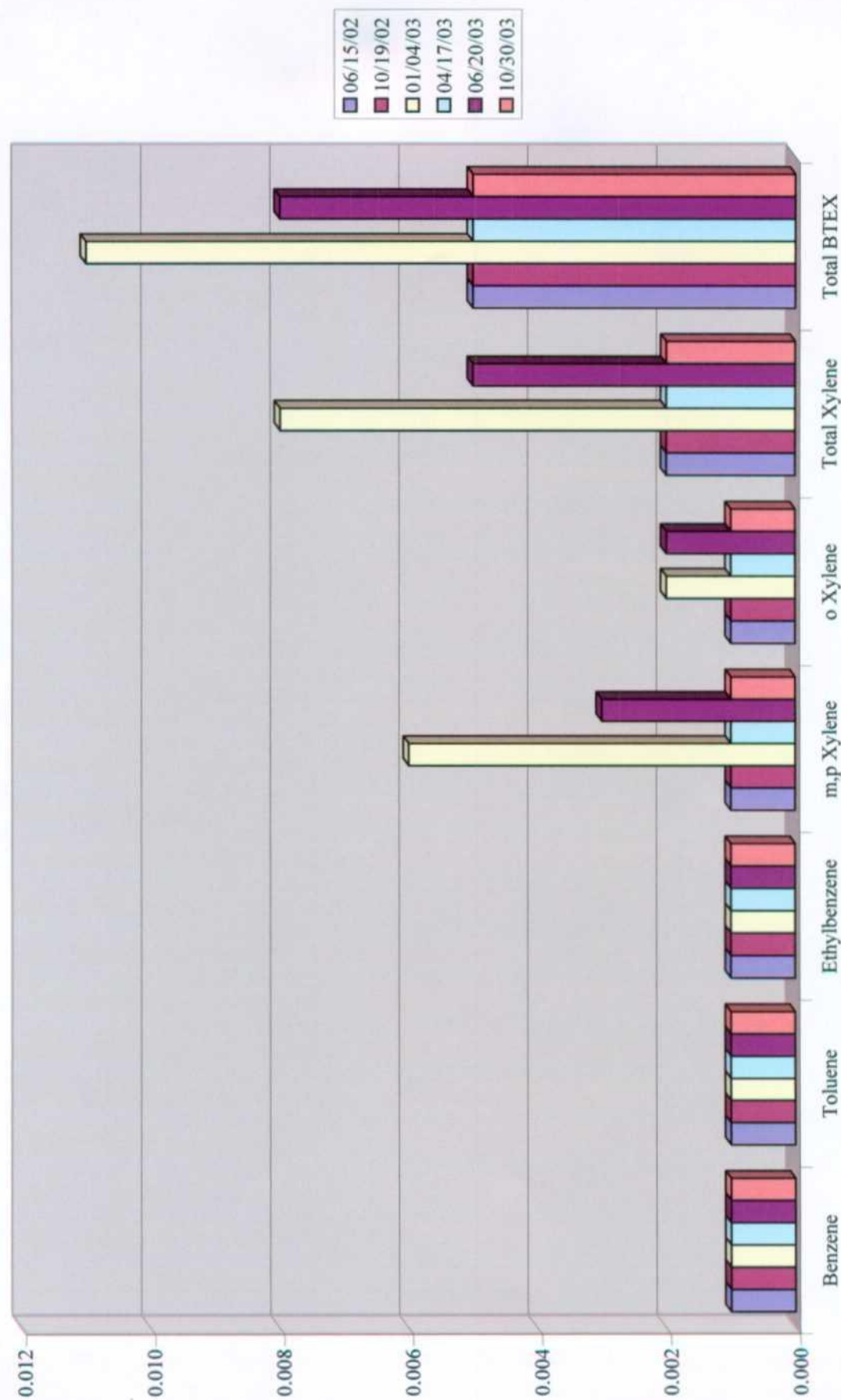
6-12 Installed Bailer

10-25 Re-marked Cap

MW-3

[illegible]

Mable MW #3



**Atkins Engineering
Associates, Inc.**

2904 W. 2nd St., Roswell, NM 88202-3156

LOG OF BORING Mabel Com MW3:

Formerly MW 35

(Page 1 of 1)

Whole Earth Environmental
19606 San Gabriel
Houston, Texas 77084

Contact Mike Griffin

Project # CALLIER.MWD.02

Date : 6/03/02
Drill Start : 0730
Drill End : 1530
Boring Location : SE of Location

Site Location : Caprock, NM
Auger Type : Hollow Stem
Logged By : Mort Bates

Depth in feet	GRAPHIC	USCS	Samples	DESCRIPTION	Lab mg/kg	
0		CL		Clay w/caliche rock, brown, loose, dry		
2.5				Caliche, tan, firm, dry		
5				Poorly graded sand w/caliche, firm, dry		
10		SP				
15						
20		SP		Poorly graded sand w/caliche, tan, loose, dry		
25						
30				Poorly graded sand, tan, loose, dry		
35						
40		SP				
45						
50						
52.5		SP		Poorly graded sand w/broken sandstone, tan, firm, dry		
55		SS		Poorly graded sand, tan, loose, damp		
57.5				Cemented sandstone, tan, firm, dry		
60		SP		Poorly graded sand, tan, soft, wet		
65						
70						

TD = 65 feet
WL = 53 feet

Well: MW35

8"x12" monitor well cover

Cement grout

2" PVC Casing

Bentonite Seal

8/16 Silica Sand pack

2" .020" slot screen