

1R - 260

REPORTS

DATE:

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

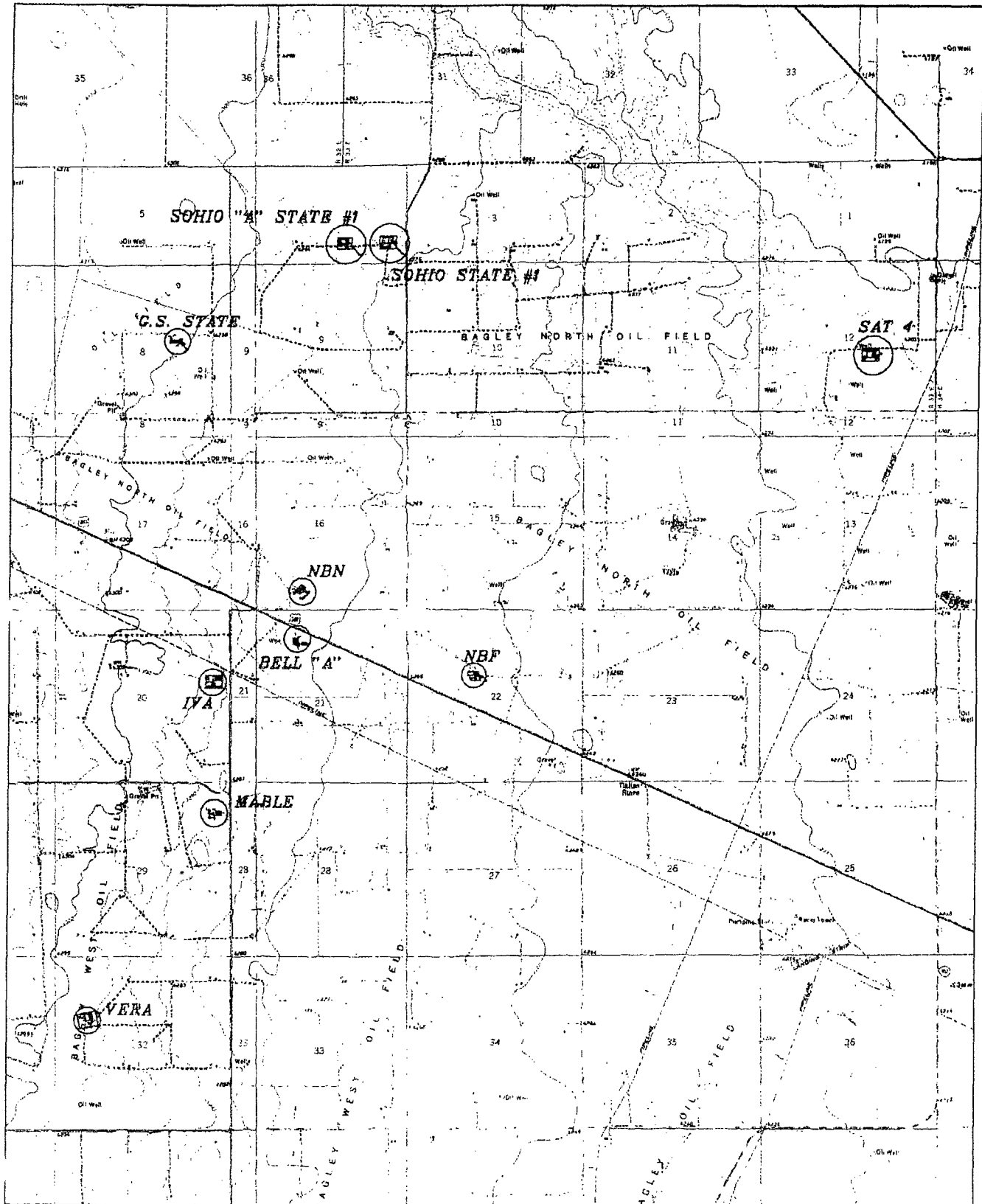
**Tipperary Oil & Gas Corporation
Bagley Field
2003 Annual Report**

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 1786—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**

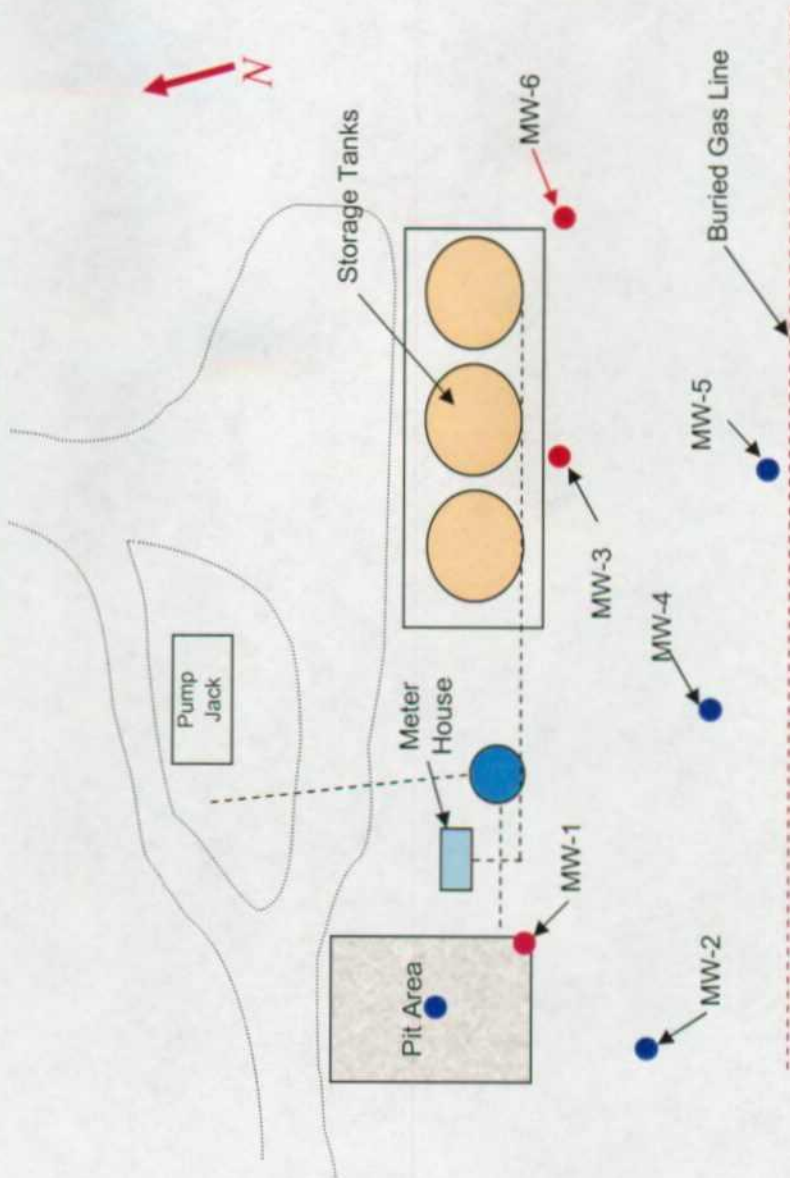
**Bell State A
Section 21C-T11S-R33E**

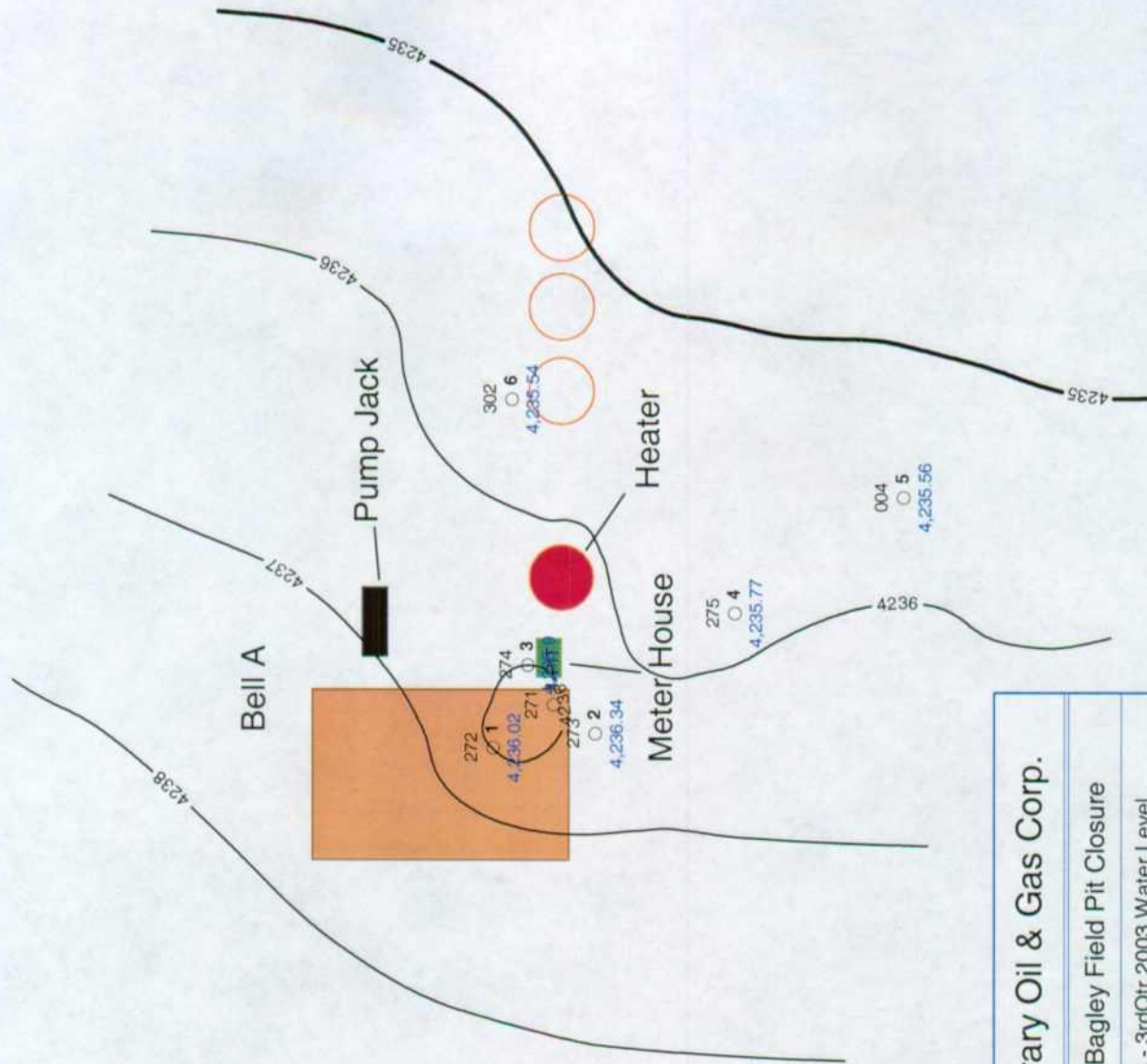
The Bell State A side consists of six monitor wells. The latest being constructed on June 16, 2003. The well nearest the pit, (MW #1) shows a decline in BTEX concentrations of 99.6% over the past six years. Monitor wells nos. 2,4 and 5 all show acceptable results. Monitor well no. 3 has seen a 98% reduction in BTEX values over the highest reading and should fall within acceptance standards this year.

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.
- 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
Bell State A
Monitor Well Locations**





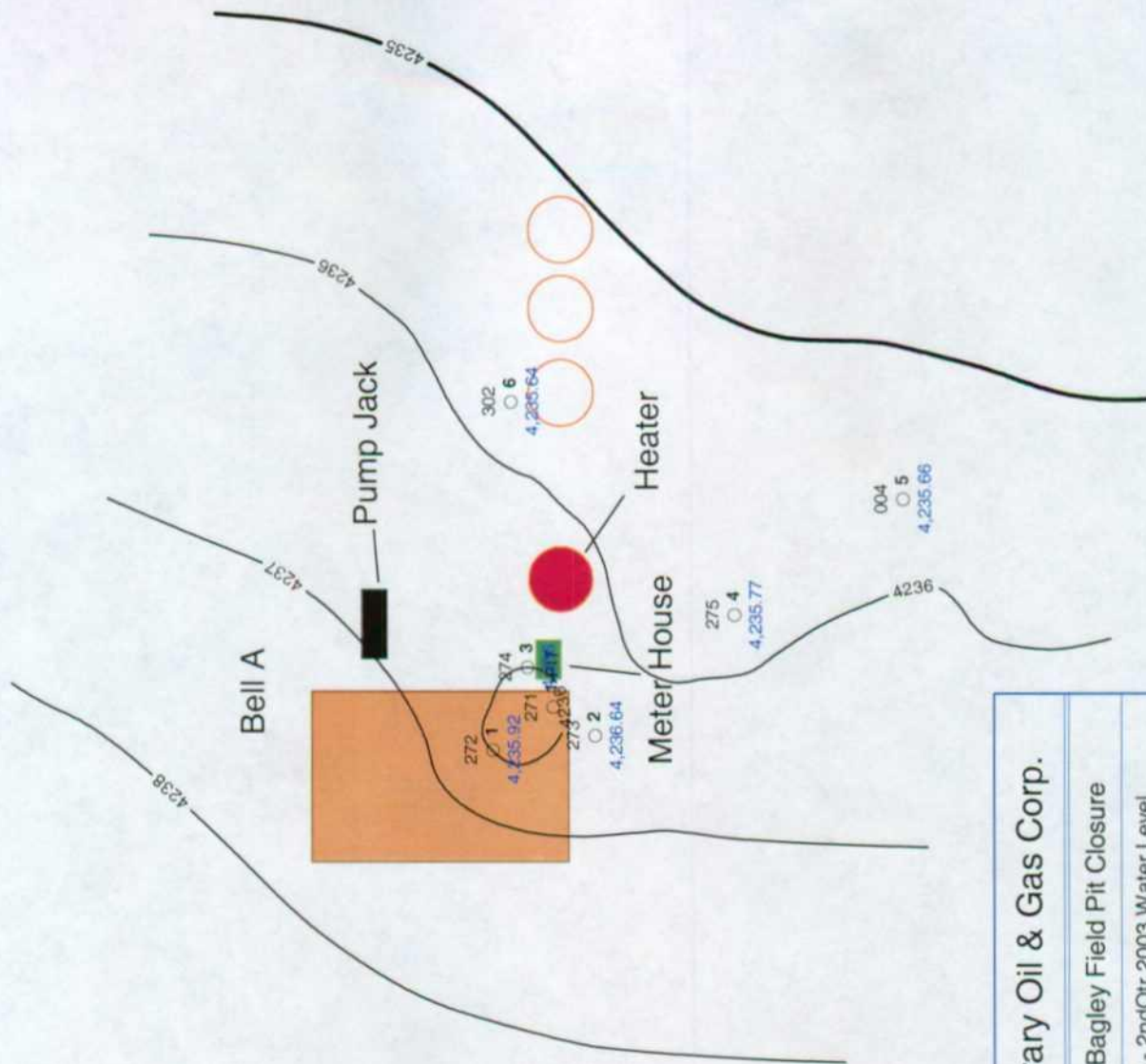
Tipperary Oil & Gas Corp.

North Bagley Field Pit Closure

Bell A - 3rdQtr 2003 Water Level

Grad= 21 ft./mi. @ 122° Az.





Tipperary Oil & Gas Corp.

North Bagley Field Pit Closure

Bell A - 2ndQtr 2003 Water Level

Grad= 21 ft./mi. @ 122° Az.

0 53 106

METERS





Bell

Monitor Well Bailing Log

Bell MW #1

Lat: N33° 21.3688495'
Long. W103° 37.31095483'
Surf. Elev. 4281.18 Ft.

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

Date: 8/28/1997
Top of Water 51 Ft.
Bottom of Bore 60 Ft.

Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	45.00	45.20	45.10	45.10	Ft.
Bottom of Bore	55.80	55.60	56.20	55.90	Ft.
Bore Volume	1.74	1.68	1.79	1.74	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.	5.23	5.03	5.37	5.23	Gal.
Actual Bailing Vol.	12.0	15.0	15.0	15.0	Gal.

Comments

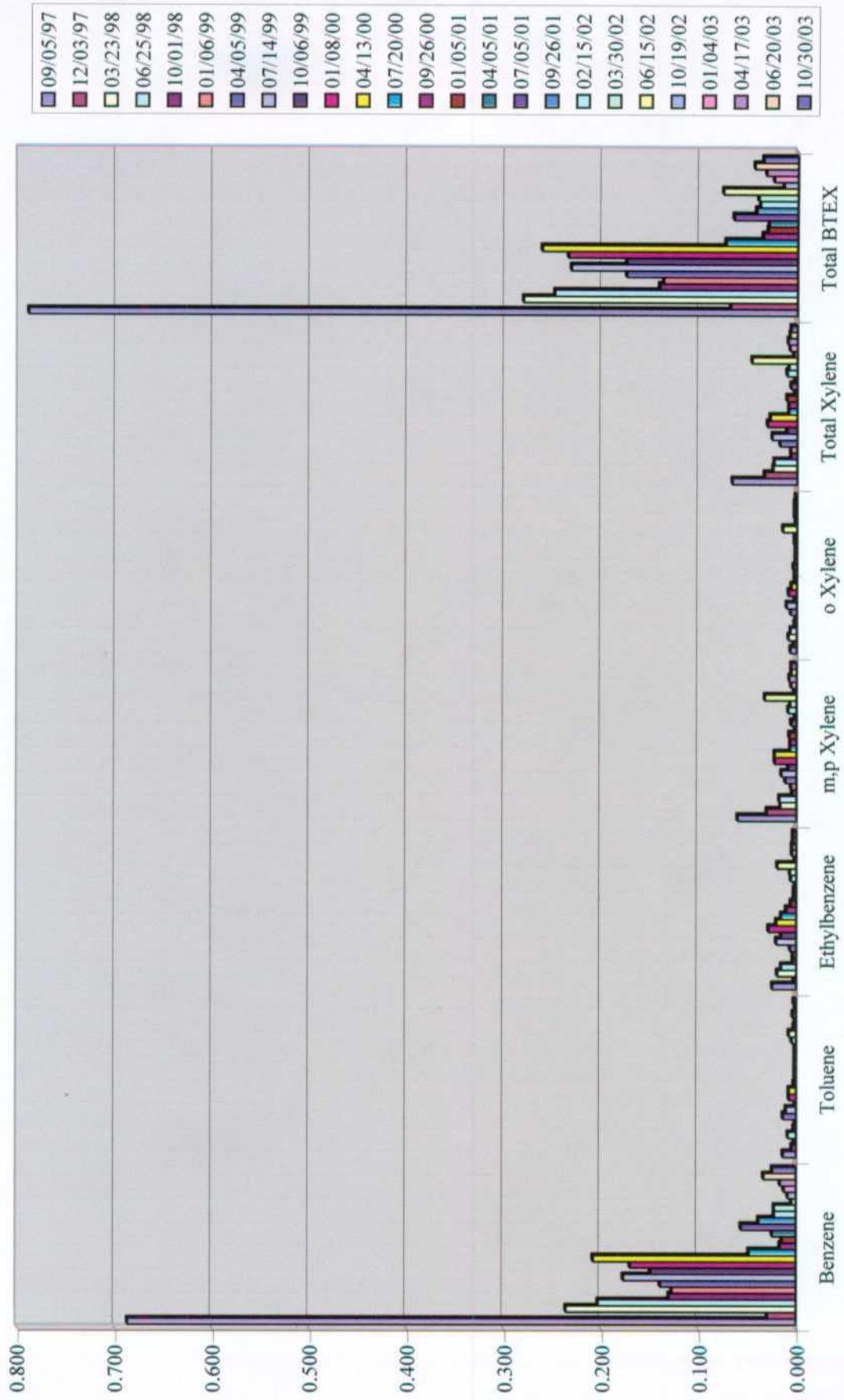
6-12 Installed Bailer

10-25 Re-numbered Lid

**Monitor Well # 1
Bell State "A"
Sampling Results**

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12481	09/05/97	0.687	0.013	0.024	0.060	0.006	0.066	0.790
13179	12/03/97	0.029	0.004	0.002	0.030	0.003	0.033	0.068
14062	03/23/98	0.236	0.002	0.019	0.016	0.008	0.024	0.281
14661	06/25/98	0.203	0.008	0.015	0.017	0.006	0.023	0.249
15593	10/01/98	0.130	0.002	0.003	0.004	0.002	0.006	0.141
16600	01/06/99	0.127	0.001	0.003	0.005	0.001	0.006	0.137
17431	04/05/99	0.139	0.013	0.006	0.011	0.006	0.017	0.175
18593	07/14/99	0.177	0.010	0.020	0.015	0.010	0.025	0.232
20599	10/06/99	0.149	0.001	0.015	0.008	0.002	0.010	0.175
22765	01/08/00	0.170	0.007	0.028	0.022	0.008	0.030	0.235
25167	04/13/00	0.208	0.007	0.020	0.022	0.005	0.027	0.262
28440	07/20/00	0.048	0.002	0.015	0.006	0.002	0.008	0.073
31507	09/26/00	0.016	0.001	0.010	0.006	0.002	0.008	0.035
36136	01/05/01	0.014	0.001	0.005	0.007	0.003	0.010	0.030
38923	04/05/01	0.024	0.001	0.002	0.001	0.001	0.002	0.029
0101098-07	07/05/01	0.056	0.001	0.002	0.005	0.001	0.006	0.065
0101642-07	09/26/01	0.038	0.001	0.001	0.001	0.001	0.002	0.042
0202619-07	02/15/02	0.022	0.001	0.005	0.008	0.002	0.010	0.038
0203001-07	03/30/02	0.022	0.004	0.006	0.006	0.002	0.008	0.040
0203602-05	06/15/02	0.004	0.007	0.019	0.032	0.014	0.046	0.076
0203602-05	10/19/02	0.008	0.002	0.001	0.002	0.001	0.003	0.014
0205349-07	01/04/03	0.012	0.001	0.004	0.005	0.002	0.007	0.024
0306249-08	04/17/03	0.016	0.003	0.004	0.007	0.002	0.009	0.032
0306733-24	06/20/03	0.033	0.001	0.003	0.005	0.002	0.007	0.044
0307790-01	10/30/03	0.024	0.002	0.003	0.005	0.001	0.006	0.035

Bell MW #1



Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3158			LOG OF BORING Bell MW-1 (Page 1 of 2)		
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : August 28, 1997 Drill Start : 1115 Drill End : 1500 Boring Location : Bell, Sec. 21, SE Corner, 30 ft. from Center of Plt		
			Site Location : 17 mi. W of Tatum, NM Auger Type : Solid Stem Logged By : Mark Bates		

Depth in Feet	GSA/HIC	USCS	DESCRIPTION	
0	CL		Caliche Rock w/Clay mix, hard, dry	
5				
10			Caliche Clay, tan, stiff, dry Caliche Rock, clayey, hard, dry	
15	CL		Caliche, Clay, sandy, tan, stiff, damp	
20				
25				
30				

09-10-1997 c:\myelec\17michigan\pwr\pwr1.bor



Bell

Monitor Well Bailing Log

Bell MW #2

Lat: N33° 21.3518603'
Long. W103° 37.3084305'
Surf. Elev. 4280.89 Ft.

As Drilled	As Measured
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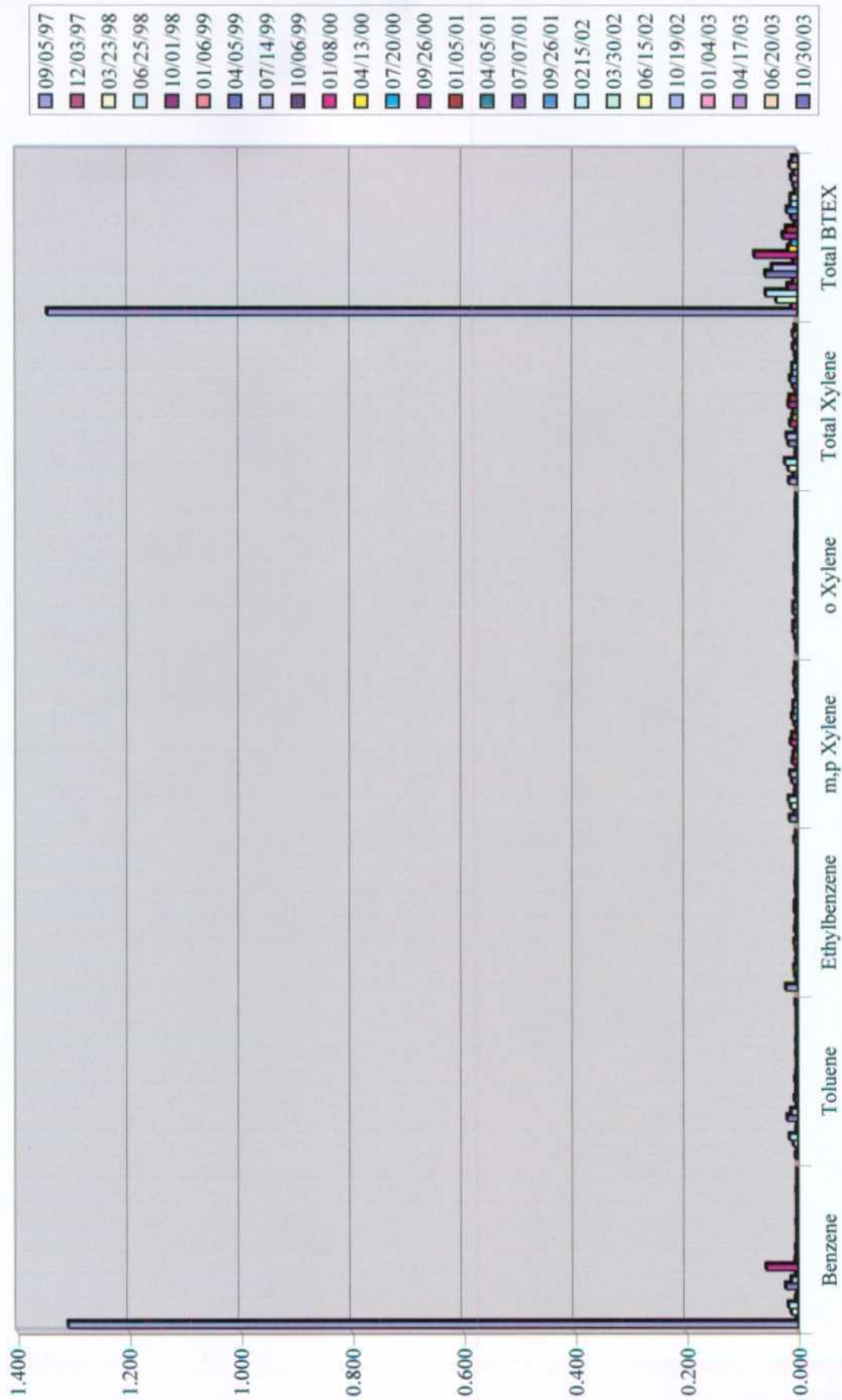
Date: 10/2/1997
Top of Water 47.75 Ft.
Bottom of Bore 60 Ft.

Date:	12/28/02	04/12/03	06/12/13	10/25/03	
Top of Water	44.40	44.20	44.50	44.10	Ft.
Bottom of Bore	55.90	55.60	55.90	56.40	Ft.
Bore Volume	1.85	1.84	1.84	1.98	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.	5.56	5.52	5.52	5.95	Gal.
Actual Bailing Vol.	12.0	15.0	15.0	15.0	Gal.

Comments

Monitor Well # 2
Bell State "A"
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12731	09/05/97	1.309	0.003	0.02	0.013	0.001	0.014	1.346
13180	12/03/97	0.002	0.001	0.001	0.005	0.001	0.006	0.010
13180	03/23/98	0.011	0.007	0.004	0.011	0.004	0.015	0.037
14667	06/25/98	0.016	0.014	0.005	0.015	0.006	0.021	0.056
15599	10/01/98	0.003	0.002	0.002	0.004	0.006	0.002	0.017
16606	01/06/99	0.001	0.001	0.001	0.003	0.001	0.002	0.007
17432	04/05/99	0.021	0.018	0.003	0.009	0.006	0.015	0.057
18599	07/14/99	0.011	0.011	0.005	0.012	0.006	0.018	0.045
20609	10/06/99	0.003	0.001	0.001	0.001	0.001	0.002	0.007
22779	01/08/00	0.056	0.005	0.004	0.008	0.004	0.012	0.077
25168	04/13/00	0.004	0.002	0.002	0.006	0.002	0.008	0.016
28443	07/20/00	0.002	0.002	0.001	0.004	0.002	0.006	0.011
31487	09/26/00	0.003	0.004	0.004	0.011	0.004	0.015	0.026
36140	01/05/01	0.001	0.002	0.004	0.009	0.004	0.013	0.020
38924	04/05/01	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0101098-08	07/07/01	0.001	0.001	0.002	0.005	0.002	0.007	0.011
0101642-08	09/26/01	0.002	0.002	0.003	0.009	0.003	0.012	0.019
0202619-08	0215/02	0.001	0.001	0.002	0.006	0.002	0.008	0.012
0203001-08	03/30/02	0.001	0.002	0.001	0.006	0.002	0.008	0.012
0203602-06	06/15/02	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0204815-09	10/19/02	0.001	0.001	0.001	0.003	0.001	0.004	0.007
0205349-08	01/04/03	0.002	0.001	0.001	0.005	0.002	0.007	0.011
0306249-09	04/17/03	0.001	0.001	0.001	0.002	0.002	0.004	0.007
0306733-25	06/20/03	0.001	0.001	0.005	0.005	0.002	0.007	0.014
0307790-02	10/30/03	0.001	0.003	0.002	0.003	0.001	0.004	0.010

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Atkins Engineering Associates, Inc. P.O. Box 3156 Roswell, New Mexico 88202			LOG OF BORING Bell State A, MW #2 (Page 1 of 1)		
Tipperary Corp. (Whole Earth Environmental) 633 17th Street Denver, CO 80202			Date Completed : 10-2-97 Site Location : 14 miles W. of Tatum Drill Start : 11:45 a.m. Auger Type : Hollow Stem Drill End : 2:00 p.m. Logged By : Mort Bates Boring Location : Bell State A, Sec. 21; 150 ft. S. SE. of Center of Plt		
Job #97260					

Depth in feet	GRAPHIC	USCS	DESCRIPTION	
0		CL	Clay w/Caliche, Brown, Stiff, Dry	
5			Caliche w/Clay, Tan, Stiff, Dry	
10				
15			Caliche Rock, Tan, Hard, Dry	
20			Clay w/Caliche, Tan, Stiff, Dry	
25		CL		
30				
35			Clayey Sand, Tan, Loose, Damp	
40		SC		
45			Sandy Clay, Tan, Loose, Moist	
50		CL		
55			WL = 47.75 ft.	
60			Sandy Clay, Tan, Loose, Saturated	
65		CL		
			TD = 60 ft.	
			Bailed and Developed well	



Bell MW #3

Lat:	<u>N33° 21.3628858'</u>
Long.	<u>W103° 37.29505033'</u>
Surf. Elev.	4280.8 Ft.

Date:	10/2/1997	
Top of Water	<u>48.32</u>	Ft.
Bottom of Bore	60	Ft.

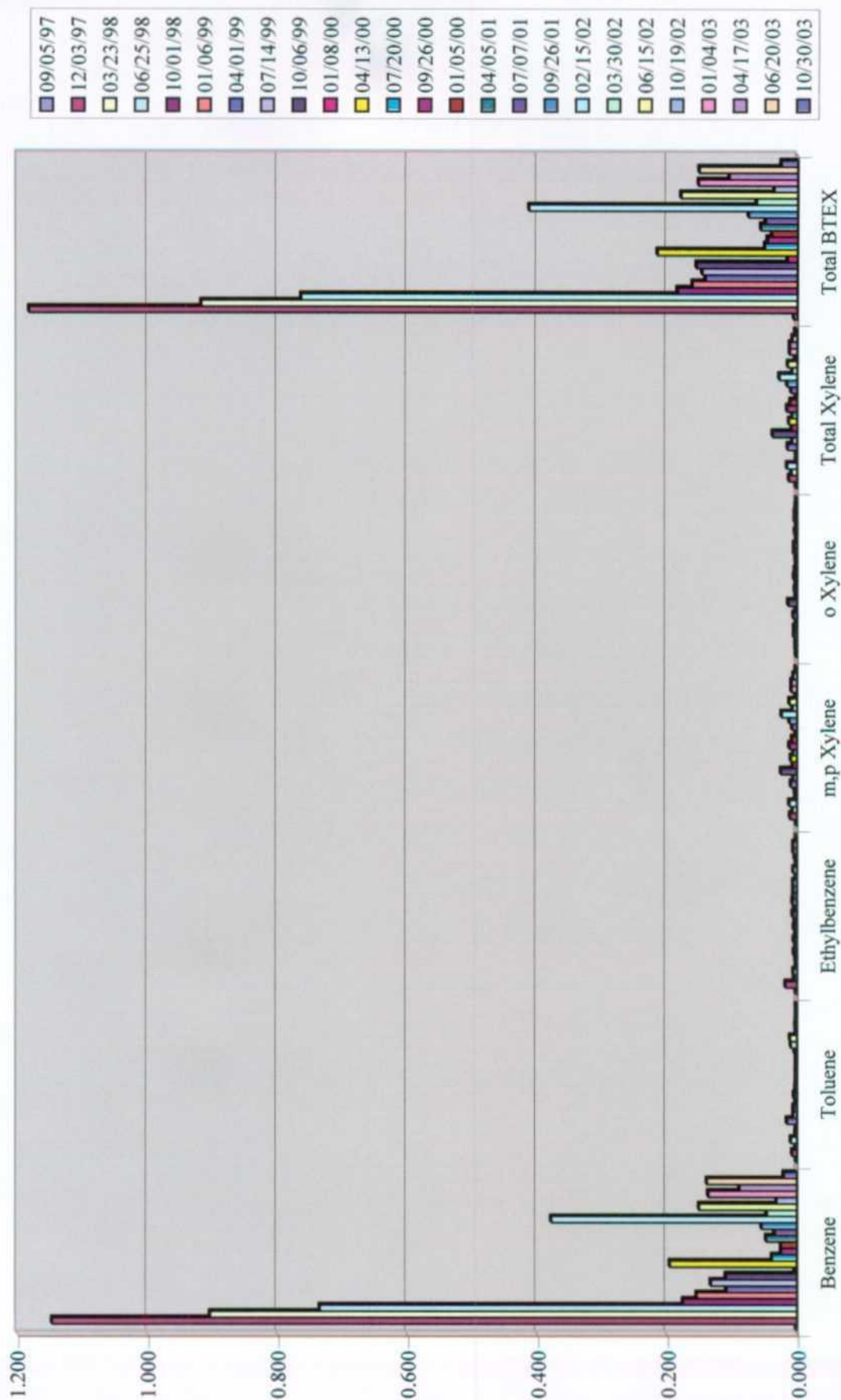
Comments

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**Monitor Well # 3
Bell State "A"
Sampling Results**

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12732	09/05/97	0.001	0.001	0.001	0.001	0.001	0.002	0.005
13181	12/03/97	1.147	0.007	0.017	0.010	0.002	0.012	1.183
14048	03/23/98	0.904	0.002	0.004	0.006	0.002	0.008	0.918
14668	06/25/98	0.735	0.009	0.005	0.011	0.004	0.015	0.764
15607	10/01/98	0.175	0.002	0.001	0.002	0.004	0.001	0.184
16607	01/06/99	0.154	0.001	0.002	0.003	0.001	0.001	0.161
17433	04/01/99	0.108	0.015	0.004	0.009	0.005	0.014	0.141
18600	07/14/99	0.132	0.005	0.002	0.005	0.002	0.007	0.146
20610	10/06/99	0.109	0.005	0.004	0.024	0.013	0.037	0.155
22770	01/08/00	0.003	0.002	0.002	0.006	0.002	0.008	0.015
25169	04/13/00	0.195	0.004	0.004	0.009	0.003	0.012	0.215
28444	07/20/00	0.038	0.002	0.003	0.005	0.002	0.007	0.050
31488	09/26/00	0.024	0.001	0.006	0.011	0.004	0.015	0.046
36141	01/05/00	0.024	0.001	0.004	0.007	0.003	0.010	0.039
38925	04/05/01	0.047	0.001	0.006	0.001	0.001	0.002	0.056
01010098-09	07/07/01	0.034	0.001	0.005	0.007	0.002	0.009	0.049
0101642-09	09/26/01	0.054	0.001	0.005	0.011	0.004	0.015	0.075
0202619-09	02/15/02	0.378	0.003	0.005	0.023	0.004	0.027	0.413
0203001-09	03/30/02	0.046	0.009	0.001	0.006	0.001	0.007	0.063
0203602-08	06/15/02	0.150	0.010	0.005	0.011	0.003	0.014	0.179
0204815-10	10/19/02	0.031	0.001	0.001	0.002	0.001	0.003	0.036
0205349-09	01/04/03	0.136	0.002	0.003	0.008	0.003	0.011	0.152
0306249-10	04/17/03	0.088	0.001	0.005	0.008	0.003	0.011	0.105
0306733-26	06/20/03	0.138	0.001	0.005	0.005	0.002	0.007	0.151
0307790-03	10/30/03	0.020	0.001	0.001	0.002	0.001	0.003	0.025

Bar chart showing the concentration of various aromatic compounds (Benzene, Toluene, Ethylbenzene, m,p Xylene, o Xylene, Total Xylene, Total BTEX) in mg/L over time (Date). The Y-axis represents concentration in mg/L, ranging from 0.000 to 1.200. The X-axis represents the Date, ranging from 09/05/97 to 10/30/03. The chart displays multiple data series for each compound, corresponding to different sampling dates. Benzene and Total BTEX show the highest concentrations, peaking around 0.45 mg/L and 1.1 mg/L respectively. Toluene, Ethylbenzene, m,p Xylene, and o Xylene show very low concentrations throughout the period.



Atkins Engineering Associates, Inc.
P.O. Box 3156
Roswell, New Mexico 88202

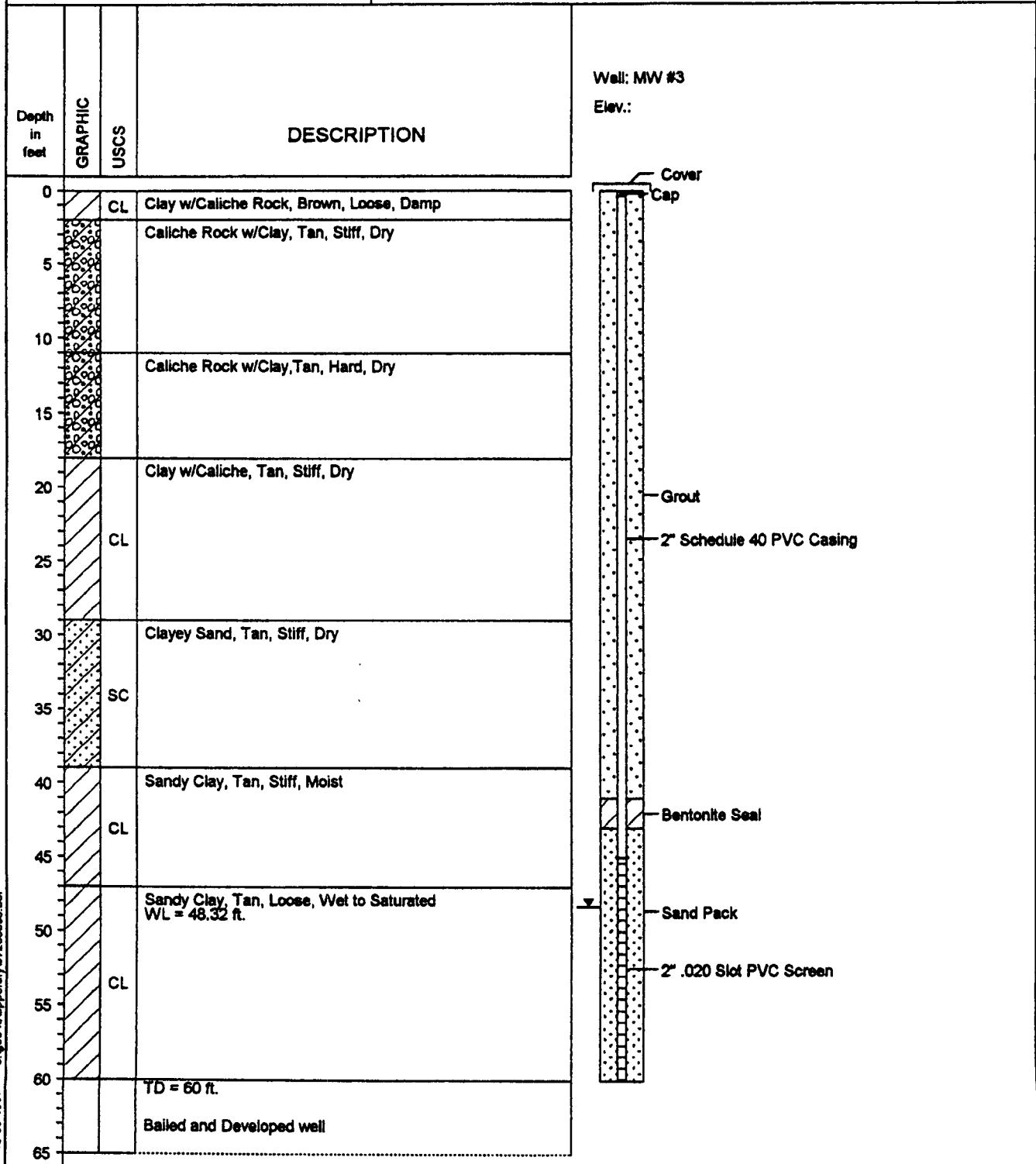
LOG OF BORING Bell State A, MW #3

(Page 1 of 1)

Tipperary Corp. (Whole Earth Environmental)
633 17th Street
Denver, CO 80202

Date Completed : 10-2-97 Site Location : 14 miles W. of Tatum
Drill Start : 10:15 a.m. Auger Type : Hollow Stem
Drill End : 11:30 a.m. Logged By : Mort Bates
Boring Location : Bell State A, Sec. 21; 150 ft. E. SE. of Center of Pit

Job #97260





Bell

Monitor Well Bailing Log

Bell MW #4

Lat: N33° 21.3285547'
Long. W103° 37.28553883'
Surf. Elev. 4280.54 Ft.

As Drilled	As Measured
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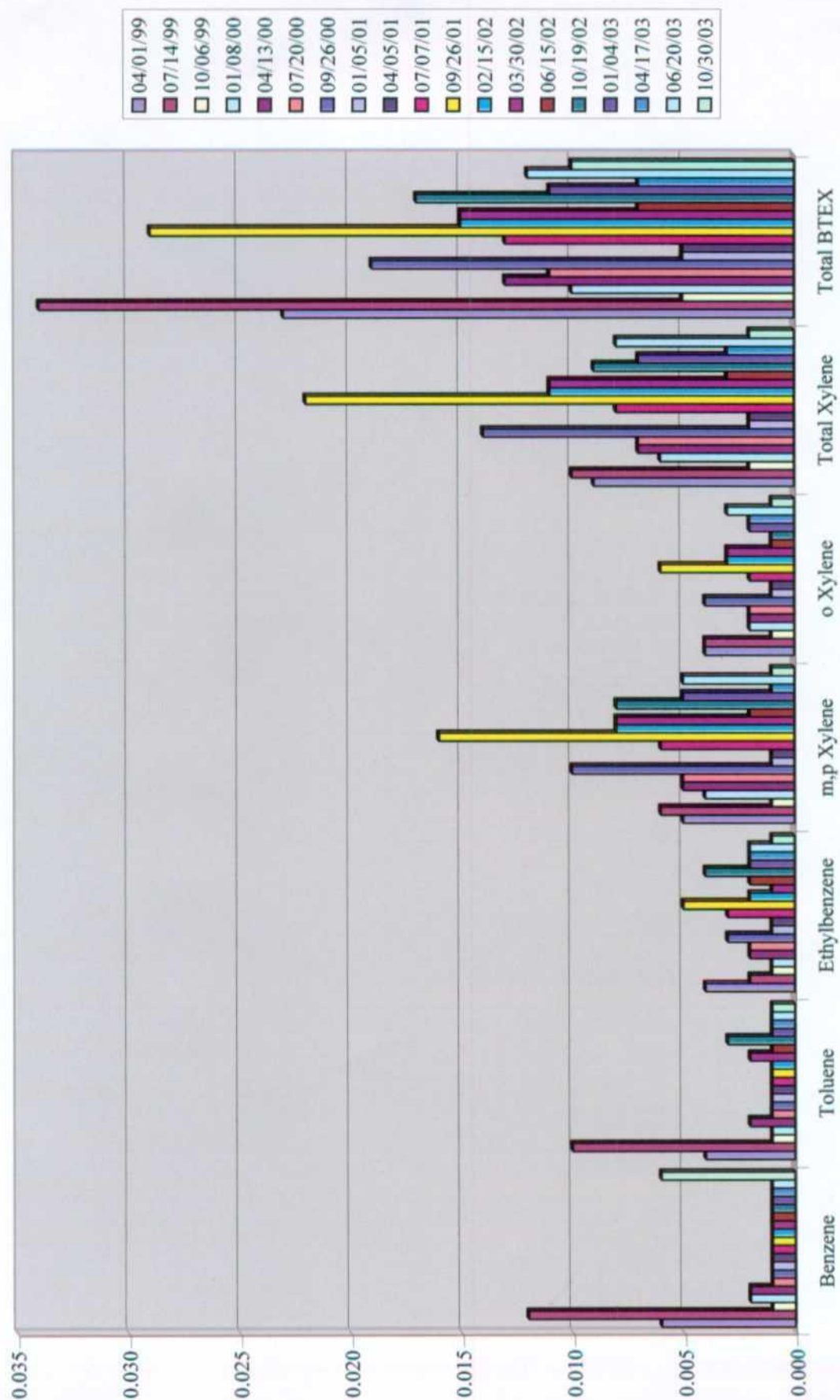
Date: 3/15/1999
Top of Water 47.44 Ft.
Bottom of Bore 60 Ft.

Date:	12/28/02	4/12/03	6/12/03	10/25/03	
Top of Water	44.50	44.60	44.60	44.40	Ft.
Bottom of Bore	58.30	58.20	58.20	59.20	Ft.
Bore Volume	2.23	2.19	2.19	2.39	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.	6.68	6.58	6.58	7.16	Gal.
Actual Bailing Vol.	15	20	15	10	Gal.

Comments

Monitor Well # 4
Bell State "A"
Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
17265	04/01/99	0.006	0.004	0.004	0.005	0.004	0.009	0.023
18601	07/14/99	0.012	0.010	0.002	0.006	0.004	0.010	0.034
20611	10/06/99	0.001	0.001	0.001	0.001	0.001	0.002	0.005
22784	01/08/00	0.002	0.001	0.001	0.004	0.002	0.006	0.010
25170	04/13/00	0.002	0.002	0.002	0.005	0.002	0.007	0.013
28454	07/20/00	0.001	0.001	0.002	0.005	0.002	0.007	0.011
31489	09/26/00	0.001	0.001	0.003	0.010	0.004	0.014	0.019
36152	01/05/01	0.001	0.001	0.001	0.001	0.001	0.002	0.005
38926	04/05/01	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0101098-10	07/07/01	0.001	0.001	0.003	0.006	0.002	0.008	0.013
0101642-10	09/26/01	0.001	0.001	0.005	0.016	0.006	0.022	0.029
0202619-10	02/15/02	0.001	0.001	0.002	0.008	0.003	0.011	0.015
0203001-10	03/30/02	0.001	0.002	0.001	0.008	0.003	0.011	0.015
0203602-08	06/15/02	0.001	0.001	0.002	0.002	0.001	0.003	0.007
0204815-11	10/19/02	0.001	0.003	0.004	0.008	0.001	0.009	0.017
0205349-10	01/04/03	0.001	0.001	0.002	0.005	0.002	0.007	0.011
0306249-11	04/17/03	0.001	0.001	0.002	0.001	0.002	0.003	0.007
0306733-27	06/20/03	0.001	0.001	0.002	0.005	0.003	0.008	0.012
0307790-04	10/30/03	0.006	0.001	0.001	0.001	0.001	0.002	0.010



Atkins Engineering Associates, Inc. P.O. Box 3156 Roswell, New Mexico 86202			LOG OF BORING Bell-A MW. 4 <i>Formerly MW 25</i> (Page 1 of 2)		
Tipperary Corporation 633 17th Street, Suite 1650 Denver, CO 80202			Date : 3-15-99 Site Location : Lee County, NM Drill Start : 8:00 A.M. Auger Type : Hollow Stem Drill End : 1:00 P.M. Logged By : Mori Bates Boring Location : 200 ft. SE of MW #6		
Contact: Mike Griffin Job #09174.00					

Depth in feet	GRAPHIC	USCS	Samples	DESCRIPTION	
0				Silty Clay, Brown, Soft, Dry	
5				Silty Clay w/Caliche, Tan, Firm, Dry	
10					
15					
20					
25				Silty Clay w/Caliche, Chalky, Firm, Dry	
30					
35				Clayey Sand, Tan, Firm, Dry	

03-17-1999 C:\mch\atkins\p09174\mw 25.log

Atkins Engineering Associates, Inc. P.O. Box 3156 Roswell, New Mexico 88202				LOG OF BORING Bell-A MW- 4 <i>Formerly MW 25</i> (Page 2 of 2)	
Tipperary Corporation 633 17th Street, Suite 1550 Denver, CO 80202 Contact: Mike Griffin Job #99174.00				Date : 3-18-99 Drill Start : 8:00 A.M. Drill End : 1:00 P.M. Boring Location : 200 ft. SE of MW #6	
				Site Location : Lee County, NM Auger Type : Hollow Stem Logged By : Mark Bates	

Depth In feet	GRAPHIC	USCS	Samples	DESCRIPTION	
35	SC				Well: MW- 4 Elev.:
				Silty Clayey Sand w/Gravel, Tan, Firm, Damp	
40	SC			Sand, Tan, Firm, Damp	
	SP				
45				Sand, Tan, Firm to Loose, Moist WL @ 47.44 ft.	
50	SP				
55				Sand, Tan, Loose, Saturated	
60	SP				
65				TD = 60 ft.	
70					

03-17-1000 C:\mtech\03\log\bell-a-mw-25.log

Backfilled hole w/drill cutting
 2 ft. Bentonite Plug
 2" PVC Casing
 8/16" Sand Pack
 2" PVC .020 Slot Screen



Bell MW #5

Lat:	<u>N33⁰ 21.3006243'</u>
Long.	<u>W103⁰ 37.26371767'</u>
Surf. Elev.	4280.54 Ft.

Date:	6/3/2002	
Top of Water	<u>41</u>	Ft.
Bottom of Bore	62	Ft.

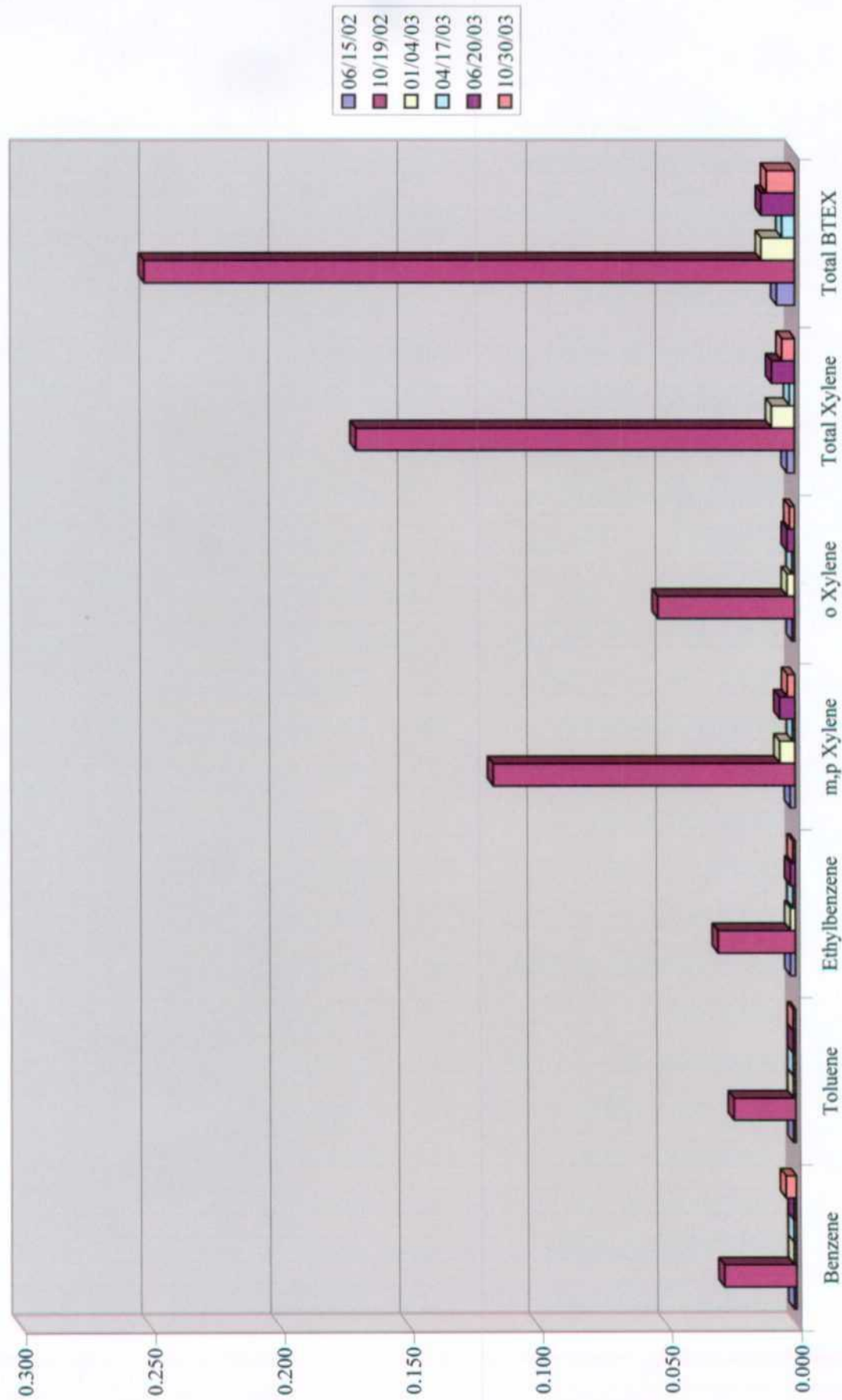
Comments

[illegible]

Bell State
MW-5

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
0203602-09	06/15/02	0.001	0.001	0.002	0.002	0.001	0.003	0.007
0204815-12	10/19/02	0.028	0.024	0.03	0.117	0.053	0.170	0.252
0205349-11	01/04/03	0.001	0.001	0.002	0.006	0.003	0.009	0.013
0306246-11	04/17/03	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0306733-28	06/20/03	0.001	0.001	0.002	0.006	0.003	0.009	0.013
0307790-05	10/30/03	0.004	0.001	0.001	0.003	0.002	0.005	0.011

Bell MW #5



Atkins Engineering
Associates, Inc.

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

LOG OF BORING Bell A MW: 5

Formerly MW 36

(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 : 1200
Drill End : 1800
Boring Location : SE of Location

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

Well: MW 5

Depth
in
feet

GRAPHIC

USCS

Samples

DESCRIPTION

Lab mg/kg

0

CL

Clay, brown, loose, dry

5

CL

Clay w/caliche, tan, firm, dry

10

SP

Poorly graded sand w/caliche, tan, loose, dry

15

20

SP

Poorly graded sand, tan, loose, dry

25

Poorly graded sand w/broken sandstone, tan, firm, dry

30

SP

35

40

SS

Sandstone, tan, hard, dry

45

SP

Poorly graded sand, tan, soft, wet

Poorly graded sand, tan, loose, damp

50

SP

55

60

65

70

TD = 62 feet
WL = 41 feet

8"x12" monitor well cover

Cement grout

2" PVC Casing

Bentonite Seal

8/16 Silica Sand pack

2" .020" slot screen

Backfill w/drill cuttings



Bell

Monitor Well Bailing Log

Bell MW #6

Lat: N33° 21.3650'
Long. W103° 37.24385'
Surf. Elev. 4280.64 Ft.

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

Date: 6/16/2003
Top of Water 44 Ft.
Bottom of Bore 55 Ft.

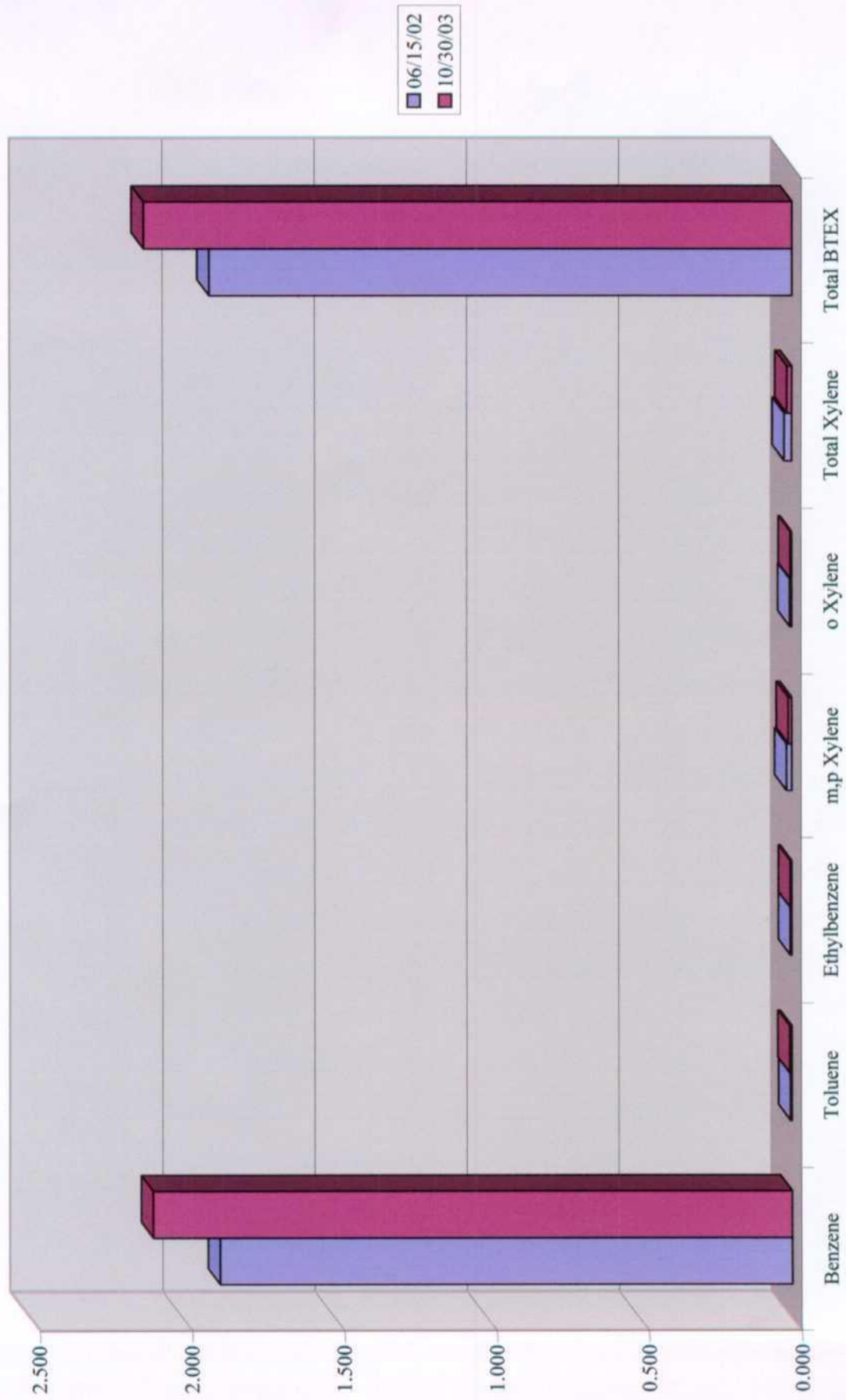
Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	44.90	45.00	45.10	44.80	Ft.
Bottom of Bore	51.10	51.10	51.60	52.50	Ft.
Bore Volumn	1.00	0.98	1.05	1.24	Gal.
LPNL Top	NA	NA	NA	NA	Ft.
LPNL Bottom	NA	NA	NA	NA	Ft.
DPNL Top	NA	NA	NA	NA	Ft.
DPNL Bottom	NA	NA	NA	NA	Ft.
Min. Bailing Vol.	3.00	2.95	3.15	3.73	Gal.
Actual Bailing Vol.	10	15	20	10	Gal.

Comments

Bell State
MW-6

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
0203602-09	06/15/02	1.880	0.005	0.005	0.018	0.007	0.025	1.915
0307790-06	10/30/03	2.100	0.008	0.005	0.012	0.005	0.017	2.130

Bell MW #6



Atkins Engineering
Associates, Inc.

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

LOG OF BORING MW- 6
Formerly MW 41

(Page 1 of 1)

Whole Earth Environmental
19606 San Gabriel
Houston, TX 77084

Contact: Mike Griffin

Job#: WHOLENV.DRL.03

Date : 6/16/03

Drill Start/Drill End :

Boring Location :

Site Location : State Bell A #1

: Sec. 21, T11S., R33E.

Auger Type : Hollow stem

Logged By : Mort Bates

Depth in Feet	GRAPHIC	USCS	Samples	DESCRIPTION	Lab mg/kg	PID ppm-v	
0				Clay w/caliche, Firm, Dry, White 7.5 YR 8/1			Well: MW- 6
5		CL		Clay w/caliche, Firm, Dry, Light Gray 7.5 YR 7/1			8"x12" monitor well cover
10							
15		CL					
20							Cement Grout with bentonite additive
25				Sandy Clay, Loose, Dry, Light Brown 7.5 YR 6/4			2" PVC Casing
30							
35		CL					Bentonite seal
40							
45				Sand, Soft, Wet, Light Gray 7.5 YR 7/1			8-16 Silica Sand pack
50		SP					2" .020 Slot PVC screen
55							
60							

Total depth = 55 ft.
Water level = 44.00 ft.