

1R - 263

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

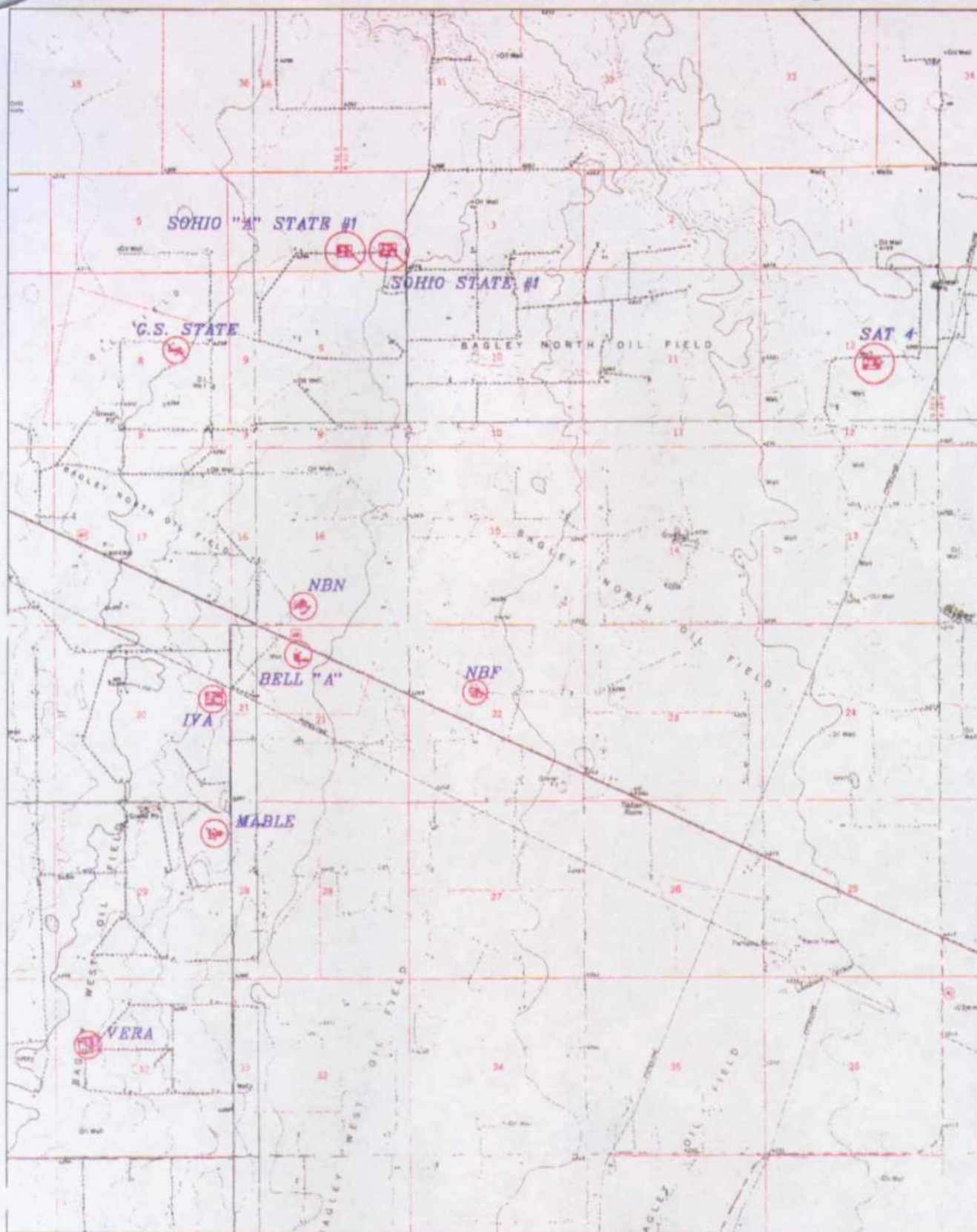
**Tipperary Oil & Gas Corporation
Bagley Field
2003 Annual Report**

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 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	Source	Source	East	28	4
	3	1		30	5
	4	2		40	6
	35	3			7
Bell			Sohio A		8
	6	1		11	1
	13	2		20	2
	14	3		19	3
	25	4		44	4
	36	5		27	5
NBF	41	6		45	6
				31	7
	8	1		46	8
	15	2		39	9
	16	3		47	10
	26	4			11
GS	37	5			
	42	6			
	Source	Source			
	12	1			
	22	2			
Collier	21	3			
	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**

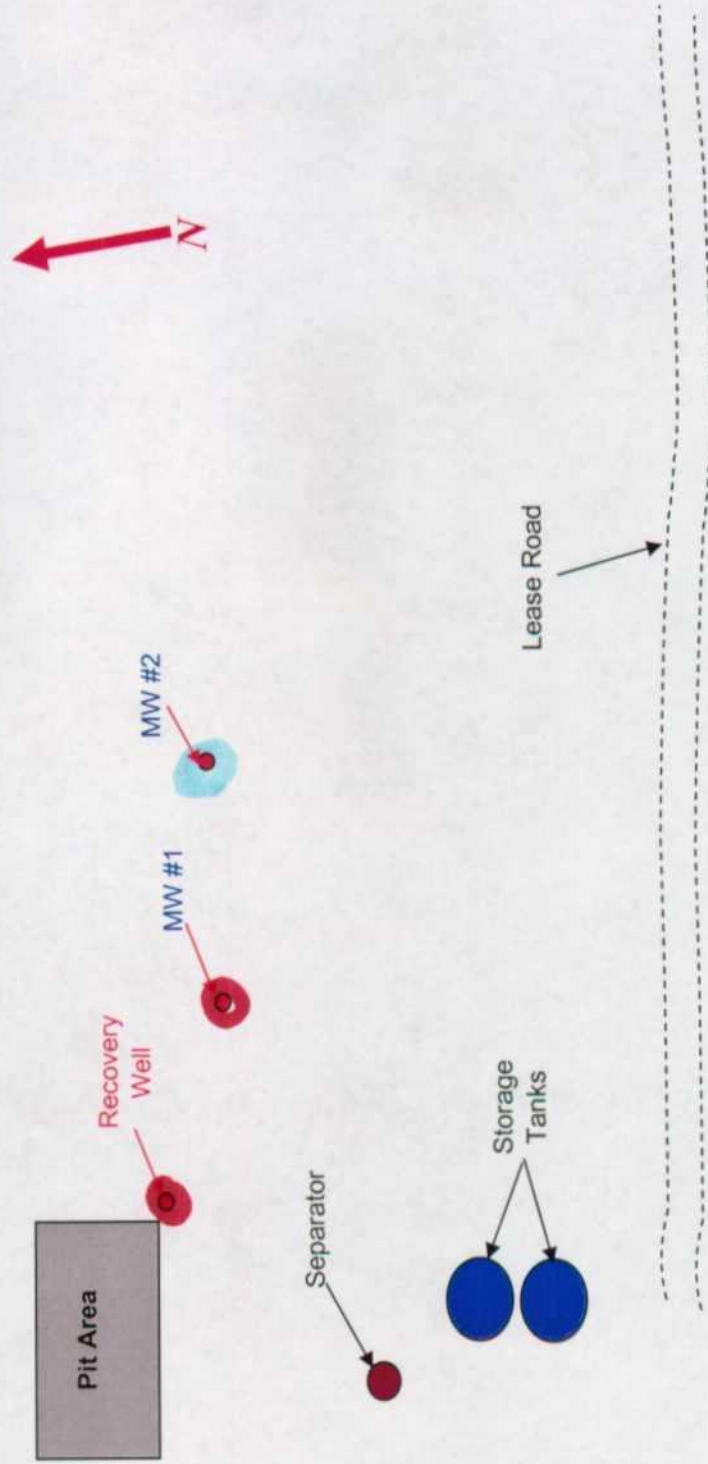
**Iva COM
Section 20H-T11S-R33E**

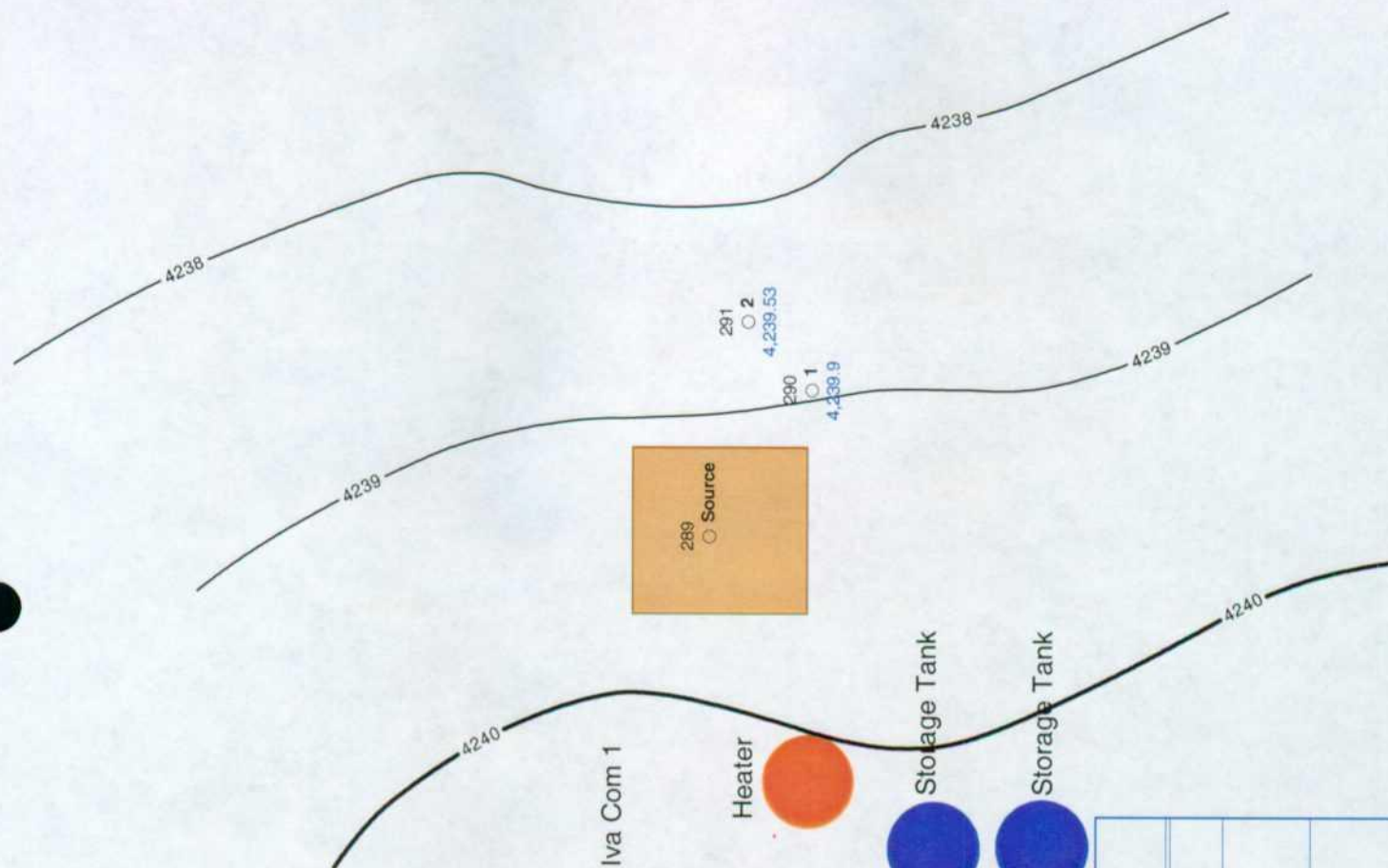
The Iva site consists of one recovery and two monitor wells. The recovery well continues to show reductions in BTEX over the four years of operations with the latest results being less than 4% of the initial concentrations.

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
Iva COM
Monitor Well Locations





Tipperary Oil & Gas Corp.

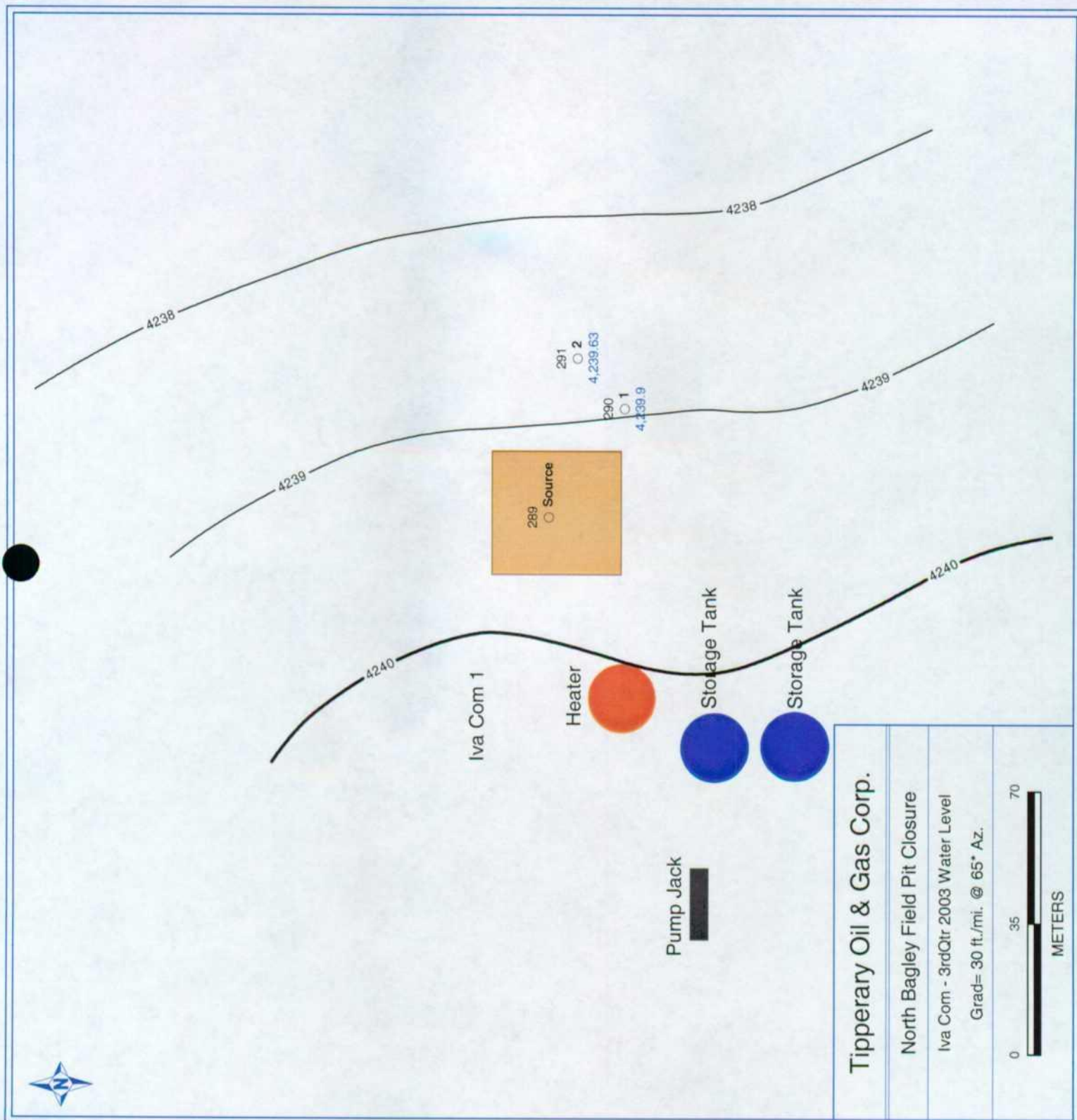
North Bagley Field Pit Closure

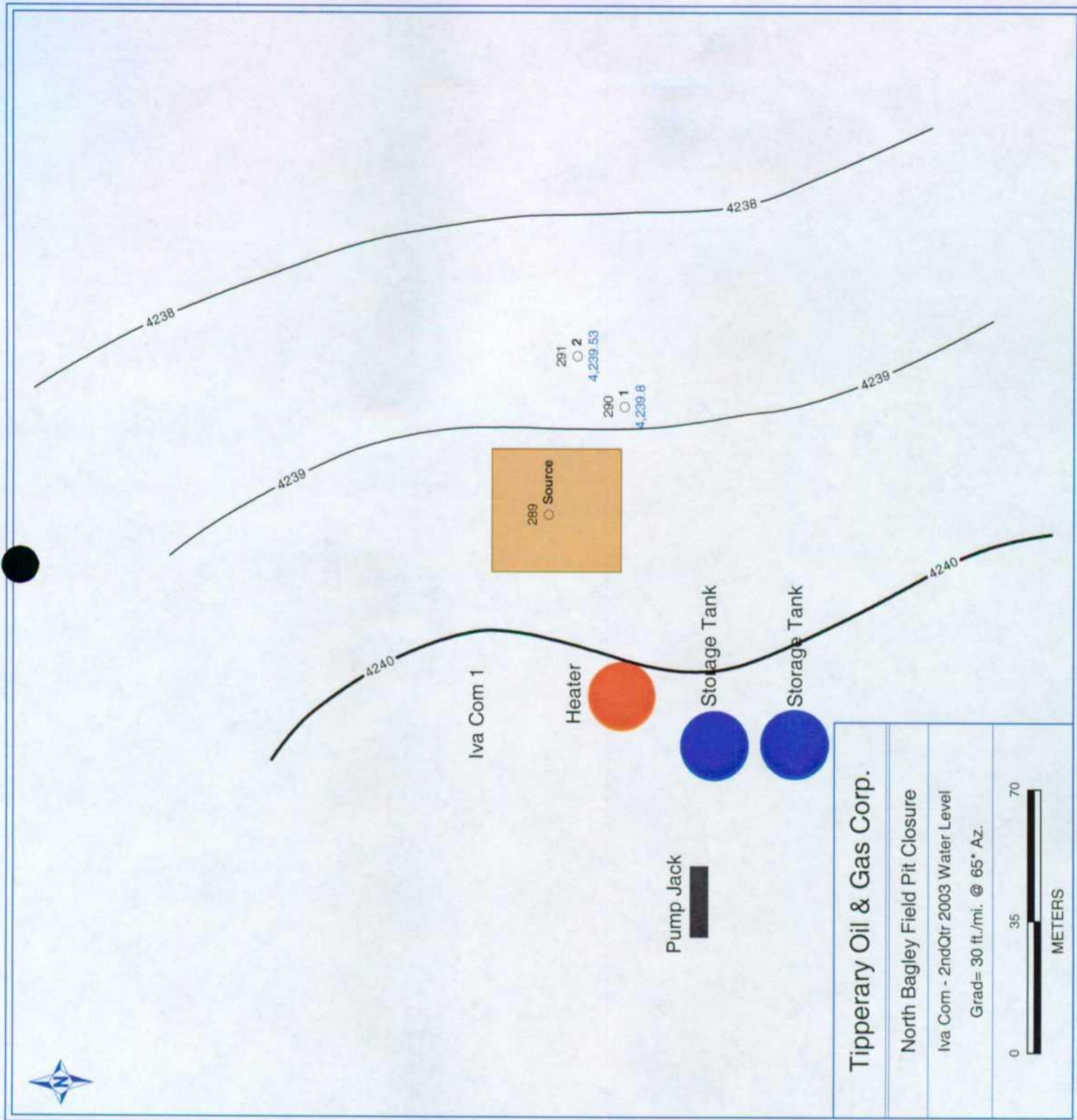
Iva Com - 4thQtr 2003 Water Level

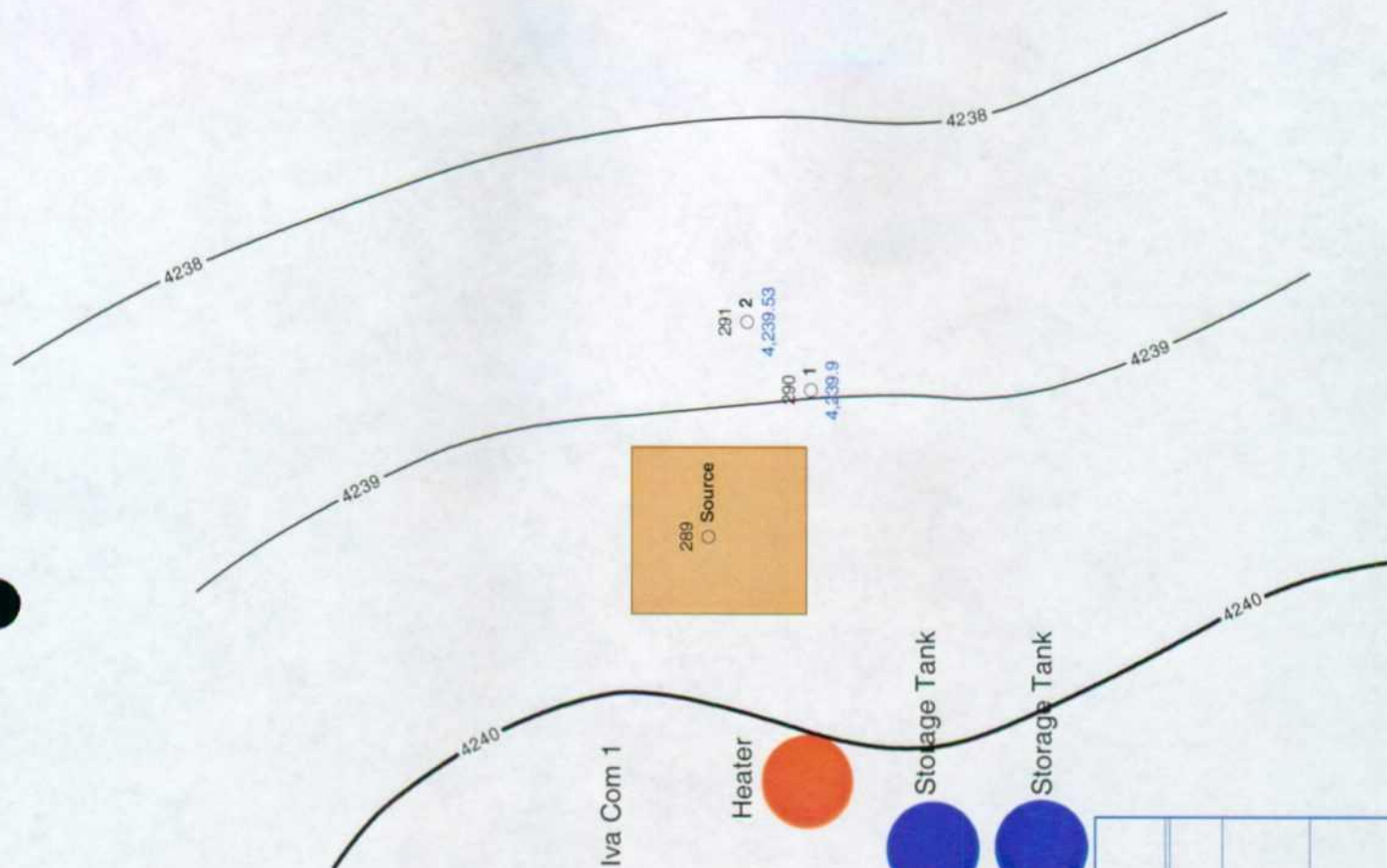
Grad= 30 ft./mi. @ 65° Az.



METERS







Tipperary Oil & Gas Corp.

North Bagley Field Pit Closure

Iva Com - 1st Qtr 2003 Water Level

Grad= 30 ft./mi. @ 65° Az.



**Tipperary Corporation
Iva Com Recovery Well
Section 20H-T11S-R33E
Lea County, NM**

YEAR	ESTIMATED GROUND WATER RECOVERY	ESTIMATED PRODUCT RECOVERY
	(BBLS)	(BBLS)
1997	250	1.3
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	3250	16.3

All fluids pumped into the Burro Disposal System.



Iva

Monitor Well Bailing Log

Iva Source

Lat: _____
Long. _____
Surf. Elev. 4298.4' Ft. _____

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

Date:	8/25/1997	Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	<u>60</u> Ft.	Top of Water	NA	NA	NA	NA	Ft.
Bottom of Bore	<u>68</u> 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.

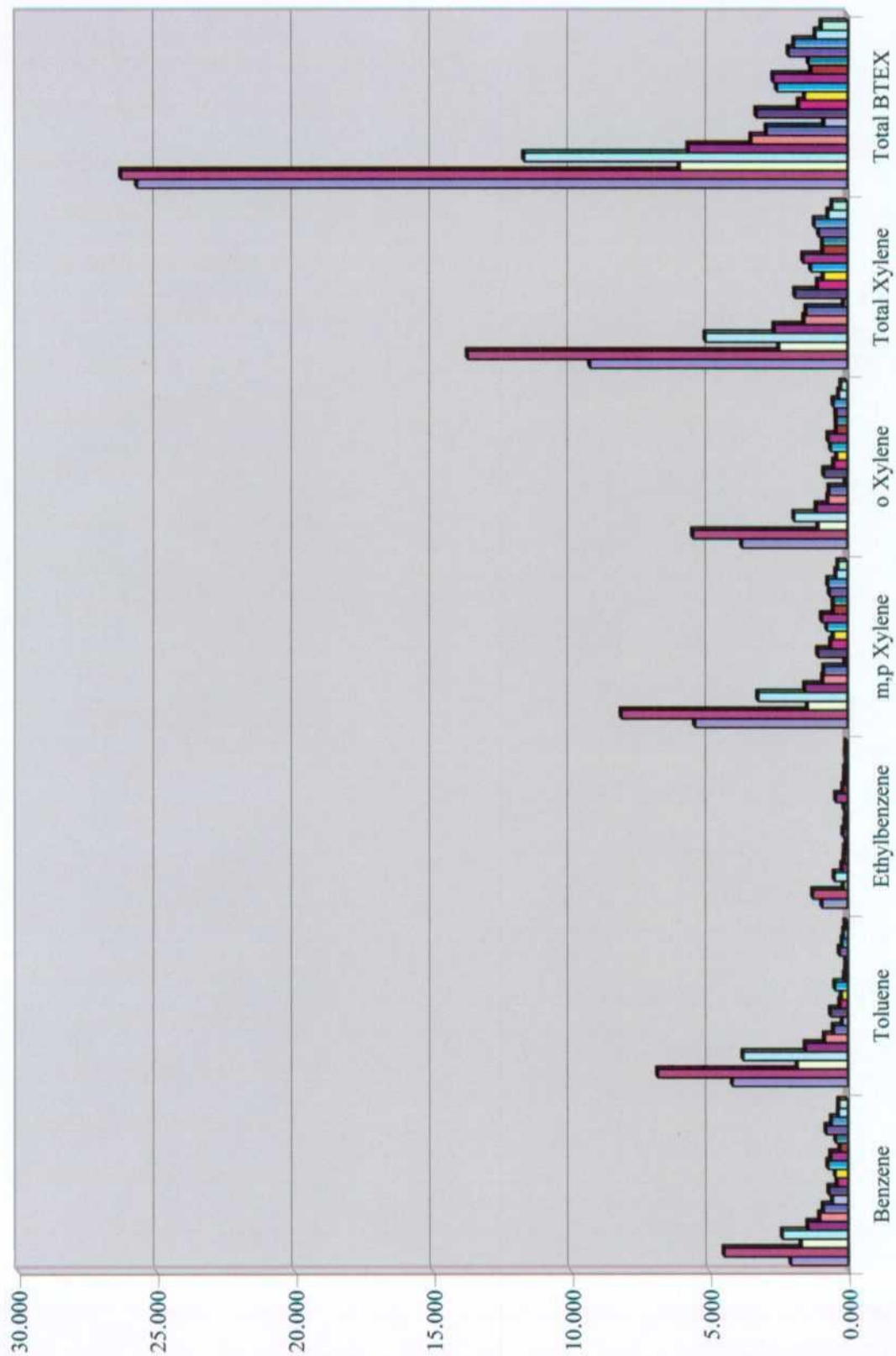
Comments

6-12 Cannot get to produce water - third visit turned off windmill- three hrs. later got very little.
Could not flow well for more than 1/2 gallon

Iva Source Well

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
17428	04/01/99	2.050	4.150	0.902	5.500	3.800	9.300	25.702
18590	07/14/99	4.460	6.850	1.240	8.160	5.570	13.730	26.280
20605	10/06/99	1.670	1.800	0.126	1.420	1.030	2.450	6.046
22774	01/08/00	2.350	3.760	0.458	3.210	1.910	5.120	11.688
25164	04/13/00	1.430	1.510	0.176	1.520	1.100	2.620	5.736
28464	07/20/00	1.000	0.815	0.104	0.866	0.676	1.542	3.461
31494	09/26/00	0.865	0.495	0.080	0.833	0.636	1.469	2.909
36195	01/10/01	0.533	0.168	0.015	0.067	0.044	0.111	0.827
38917	04/05/01	0.666	0.599	0.141	1.050	0.824	1.874	3.280
0101098-01	07/07/01	0.371	0.252	0.075	0.577	0.474	1.051	1.749
0101642-01	09/26/01	0.430	0.204	0.048	0.486	0.359	0.845	1.527
0202619-01	02/15/02	0.701	0.437	0.102	0.723	0.579	1.302	2.542
0001112-02	03/30/02	0.593	0.096	0.403	0.913	0.670	1.583	2.675
0203577-01	06/06/02	0.257	0.048	0.142	0.488	0.376	0.864	1.311
0204815-01	10/19/02	0.411	0.043	0.080	0.487	0.380	0.867	1.401
0205349-01	01/04/03	0.770	0.272	0.073	0.627	0.390	1.017	2.132
0306249-01	04/17/03	0.566	0.174	0.017	0.681	0.486	1.167	1.924
0306733-17	06/20/03	0.314	0.125	0.042	0.390	0.288	0.678	1.159
0307790-20	10/30/03	0.301	0.076	0.037	0.317	0.210	0.527	0.941

The chart displays the concentration of various VOCs in mg/m³ over time. The Y-axis ranges from 0.000 to 30.000 mg/m³. The X-axis lists the compounds: Benzene, Toluene, Ethylbenzene, m,p Xylene, o Xylene, Total Xylene, and Total BTEX. The legend shows dates from 04/01/99 to 10/30/03. The chart shows significant peaks for Benzene, Toluene, and Total BTEX, with concentrations generally decreasing over time.





Mable

Monitor Well Bailing Log

Mable MW #1

Lat: _____
Long. _____
Surf. Elev. 4287.22 Ft.

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

Date:	8/27/1997	Date:	12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	52 Ft.	Top of Water	53.10	53.20	53.20	53.10	Ft.
Bottom of Bore	68 Ft.	Bottom of Bore	62.90	63.00	62.80	63.10	Ft.
		Bore Volumn	1.58	1.58	1.55	1.61	Gal.
		LPNL Top	53.10	53.20	53.20	53.10	Ft.
		LPNL Bottom	?	?	?	56.00	Ft.
		DPNL Top	NA	NA	NA	NA	Ft.
		DPNL Bottom	NA	NA	NA	NA	Ft.
		Min. Bailing Vol.	4.74	4.74	4.65	4.84	Gal.
		Actual Bailing Vol.	25.0	35.0	25.0	30.0	Gal.

Comments

1-28 Free Product in Bore
4-12 Same
6-12 Free product longer than bailer
10-25 Water in bottom 2" of bailer

Monitor Well # 1

Iva COM

Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12475	09/05/97	0.001	0.001	0.001	0.002	0.007	0.009	0.012
13182	12/03/97	0.004	0.003	0.001	0.009	0.008	0.017	0.025
14057	03/23/98	0.003	0.003	0.001	0.007	0.008	0.015	0.022
14657	06/25/98	0.006	0.005	0.002	0.008	0.009	0.017	0.030
15590	10/01/98	0.004	0.004	0.002	0.006	0.007	0.013	0.023
16595	01/06/99	0.003	0.001	0.001	0.002	0.004	0.006	0.011
20597	10/06/99	0.001	0.001	0.001	0.001	0.001	0.002	0.005
22767	01/08/00	0.002	0.002	0.001	0.003	0.002	0.005	0.010
25165	04/13/00	0.001	0.006	0.005	0.015	0.007	0.022	0.034
28439	07/20/00	0.001	0.001	0.004	0.018	0.008	0.026	0.032
31503	09/26/00	0.001	0.003	0.006	0.020	0.008	0.028	0.038
36133	01/05/01	0.001	0.004	0.006	0.014	0.007	0.021	0.032
38918	04/05/05	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0101098-02	07/07/01	0.001	0.001	0.003	0.008	0.002	0.010	0.015
0101642-02	09/26/01	0.001	0.001	0.001	0.003	0.001	0.004	0.007
0202619-02	02/15/02	0.001	0.001	0.004	0.012	0.004	0.016	0.022
0203001-02	03/30/02	0.003	0.001	0.012	0.004	0.004	0.008	0.024
0203577-02	06/06/02	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0204815-02	10/19/02	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0205349-02	01/04/03	0.001	0.001	0.002	0.007	0.005	0.012	0.016
0306249-02	04/17/03	0.001	0.001	0.001	0.004	0.002	0.006	0.009
0306733-18	06/20/03	0.001	0.001	0.001	0.003	0.001	0.004	0.007
0307790-21	10/30/03	0.001	0.001	0.002	0.006	0.003	0.009	0.013

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156		LOG OF BORING Ivacom Source Well (Page 1 of 3)	
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental		Date : 8/25-26/97 Drill Start : 1:16 pm (8/25/97) Drill End : 10:45 am (8/26/97) Boring Location : Sec. 20, Ivacom, Center of Pl	
		Site Location : 18 miles W. of Tekon, NM Auger Type : Hollow Stem Logged By : Mori Bates	

Depth in feet	GRAPHIC	USCS	DESCRIPTION
0			Caliche Rock, clayey, stiff, tan and brown, damp, backfill
8			
10			
15			
20			
25			
30			
32		CL	Clay, sandy, silty, tan, loose to stiff, damp

Well: R-1A
 Elev.:

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

4 in. schedule 40, pvc casing
 Grout

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 86202-3156		LOG OF BORING Ivacom Source Well (Page 2 of 3)	
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 <i>c/o Whole Earth Environmental</i>		Date : 8/26-28/97 Drill Start : 1:15 pm (8/26/97) Drill End : 10:45 am (8/28/97) Boring Location : Sns. 20, Ivacom, Center of PH	Site Location : 18 miles W. of Tatum, NM Auger Type : Hollow Stem Logged By : Matt Bates

Depth in feet	GRAPHIC	USCS	DESCRIPTION
30			
35			
40			
45			
50			Water Level = 52 ft.
55			Clay, sandy, silty, tan, loose, damp
60			Finished 5:00pm, 8-25-97 Began 6:45 am, 8-26-97

Well: R-1A
Elev.: _____

- Groud
- 4 in. schedule 40, pvc casing
- Bentonite Seal
- Sand Pack
- 4 in. .032 slot screen

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3158			LOG OF BORING Ivacom Source Well (Page 3 of 3)		
Tipperary Oil and Gas Corporation 833 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : 8/25-26/97 Site Location : 18 miles W. of Tatum, NM DWH Start : 1:15 pm (8/25/97) Auger Type : Hollow Stem Drill End : 10:45 am (8/26/97) Logged By : Mark Baltes Boring Location : Sns. 20, N400m, Center of PH		

Depth in feet	GRAPHIC	USCS	DESCRIPTION	Well: R-1A Elev.:
60	CL		TD=68 ft.	 Sand Pack 4 in. .032 slot screen
65				
70			Pumped well for 2.25 hours with highest pump rate of 10 gpm. Lowered rate to 4.5 gpm then steadied to 6.0 gpm. Pumped at 6.0 gpm for 1 hour with pumped placed 2 ft from total depth. Drawdown = 6.0 ft.	
75				
80				
85				
90				

09-25-1997 8:00 AM - Ivacom Source Well

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3156			LOG OF BORING Ivacom MW-1 (Page 2 of 3)		
Tipperary Oil and Gas Corporation 833 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : August 14, 1987 Drill Start : 1110 Drill End : 1335 Boring Location : Sec. 20, N44E		
			Site Location : 17 miles W. of Tatum, NM Auger Type : Hollow Stem Logged By : Mark Bates		

Depth in feet	GRAPHIC	USCS	DESCRIPTION	Well: MW-1 Elev.:
30				
40				
45		CL		
50			Clay, sandy, red, loose, moist	
55		CL	Clay, sandy, tan, loose, wet	
58			Water Level = 54.92 ft.	
60		SP	Sand, tan, loose, saturated	

08-05-1987 c:\myfiles\ivacom\mw-1\logfile.txt

GROUT

2 in. pvc casing

Bentonite Seal

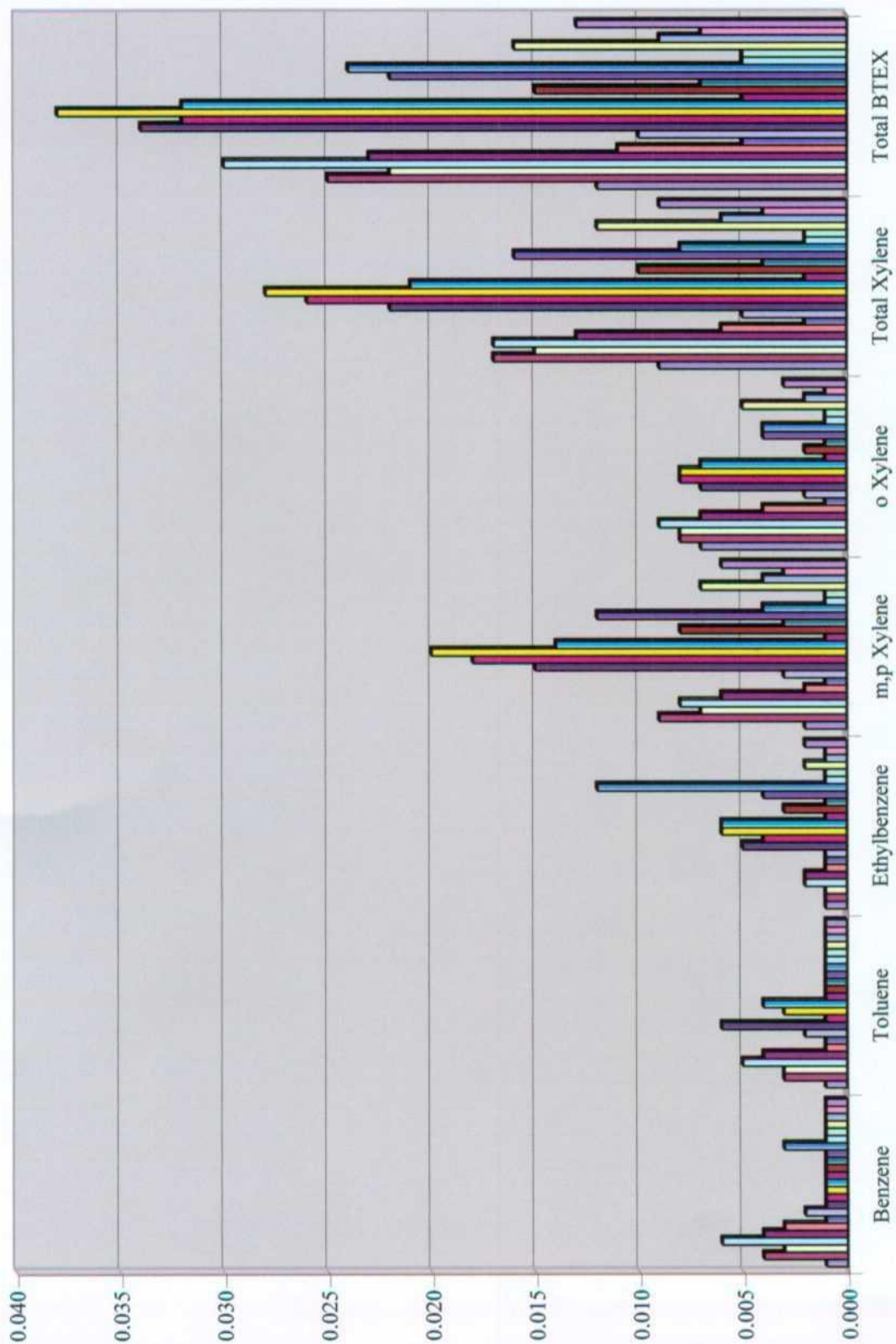
8/16 Sand Pack

.020 slot screen, 2 in. dia.

Atkins Engineering Associates, Inc. 2904 W. 2nd St., Roswell, NM 88202-3158			LOG OF BORING Ivacom MW-1 (Page 3 of 3)	
Tipperary Oil and Gas Corporation 633 17th St. Denver, CO 80202 c/o Whole Earth Environmental			Date : August 14, 1997 Drill Start : 1110 Drill End : 1335 Boring Location : Soc. 20, Ivacom	
			Site Location : 17 miles W. of Tatum, NM Auger Type : Hollow Stem Logged By : Mark Bates	

Depth in feet	GRAPHIC	USCS	DESCRIPTION	Well: MW-1 Elev.:
60		SP		 8/16 Sand Pack .020 slot screen, 2 in. dia.
65				
70				
75			TD=70 ft. Well was bailed after drilling	
80				
85				
90				

08-05-1997 c:\mpe\docu-rm\atkins-1\log4.bor





Iva

Monitor Well Bailing Log

Iva MW #2

Lat: _____
Long. _____
Surf. Elev. 4291.9 Ft

As Drilled	As Measured
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Date:		12/28/02	04/12/03	06/12/03	10/25/03	
Top of Water	Ft.	52.40	52.40	52.30	52.40	Ft.
Bottom of Bore	Ft.	63.80	63.80	63.70	63.90	Ft.
Bore Volumn		1.84	1.84	1.84	1.85	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.		5.52	5.52	5.52	5.56	Gal.
Actual Bailing Vol.		12.0	15.0	15.0	15.0	Gal.

Comments

6-12 Installed Bailer

10-25 Re-marked lid

Monitor Well # 2

Iva COM

Sampling Results

Lab. #	Sample Date	Benzene	Toluene	Ethylbenzene	m,p Xylene	o Xylene	Total Xylene	Total BTEX
12476	09/05/97	0.001	0.001	0.001	0.001	0.001	0.002	0.005
13183	12/03/97	0.002	0.002	0.001	0.006	0.002	0.008	0.013
14058	03/23/98	0.002	0.001	0.001	0.005	0.002	0.007	0.011
15605	10/01/98	0.003	0.002	0.001	0.003	0.001	0.004	0.010
16596	01/06/99	0.004	0.001	0.001	0.003	0.001	0.004	0.010
20606	10/06/99	0.001	0.001	0.001	0.001	0.001	0.002	0.005
22789	01/08/00	0.002	0.002	0.001	0.004	0.002	0.006	0.011
25166	04/13/00	0.001	0.006	0.005	0.015	0.007	0.022	0.034
28436	07/20/00	0.001	0.003	0.002	0.006	0.003	0.009	0.015
31504	09/26/00	0.001	0.880	0.001	0.072	0.019	0.091	0.973
36134	01/05/01	0.001	0.003	0.005	0.011	0.005	0.016	0.025
38919	04/05/01	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0101098-03	07/07/01	0.001	0.001	0.002	0.006	0.001	0.007	0.011
0101642-03	09/26/01	0.004	0.003	0.001	0.006	0.004	0.010	0.018
0202619-03	02/15/02	0.001	0.001	0.002	0.008	0.002	0.010	0.014
0204815-03	10/19/02	0.001	0.001	0.001	0.001	0.001	0.002	0.005
0205349-03	01/04/03	0.001	0.001	0.002	0.006	0.004	0.010	0.014
0306249-03	04/17/03	0.001	0.001	0.001	0.002	0.001	0.003	0.006
0306733-19	06/20/03	0.001	0.001	0.001	0.003	0.002	0.005	0.008
0307790-22	10/30/03	0.001	0.001	0.001	0.003	0.002	0.005	0.008

The chart displays the concentration of aromatic compounds in water over time. The y-axis represents concentration from 0.000 to 1.000. The x-axis lists compounds: Benzene, Toluene, Ethylbenzene, m,p Xylene, o Xylene, Total Xylene, and Total BTEX. The legend indicates dates from 09/05/97 to 10/30/03. Significant peaks are observed for Toluene in 1997 and for Total BTEX in 2000.

