3R - 196

REPORTS

DATE:

2002

elpaso Field Services

Certified Mail: #7001 1940 0002 1371 7676

February 28, 2003

Mr. William C. Olson
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

RE: 2002 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

EPFS has organized the 30 Annual Reports (Volumes 1, 2 and 3) by land type. Volume 1 contains Annual Reports for sites found on Federal land. Volume 2 contains Non Federal sites and Volume 3 contains sites on Navajo land. Of the 30 reports submitted, EPFS is requesting closure of three sites located on Navajo lands. Of the three Navajo sites submitted for closure OCD has closed the Charley Pah #4 and the John Charles #8. The Rementa et al #1 has not been closed by either agency and EPFS reiterates request for closure of this site. EPFS understands closure of groundwater sites on Navajo land falls under jurisdiction of the Navajo Nation Environmental Protection Agency and original documents have been submitted to them for review. Other Navajo sites are included in the report for your information.

Three additional sites were submitted for closure in 2002. EPFS recently has received closure on the W.D. Heath B-5. Closure approval is pending on the D Loop Line Drip and Hammond # 41A. All of these sites are included in the 2002 Annual Report.

If you have any questions concerning the enclosed reports, please call me at (505) 599-2124.

Sincerely,

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7001 1940 0002 1371 7669**
Mr. Bill Liesse, BLM – w / enclosures (federal sites only), **Certified Mail # 7001 1940 0002 1371 7652**

El Paso Field Services

San Juan Basin Pit Program Groundwater Sites Project

2002 Annual Report Federal Sites (Volume 1)

March 2003

MWH
10619 South Jordan Gateway, Suite 100
Salt Lake City, Utah 84095

EL PASO FIELD SERVICES ANNUAL GROUNDWATER REPORT

FEDERAL SITES VOLUME I

TABLE OF CONTENTS

Site Map

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
89961	Fields A#7A	32N	11W	34	E
89232	Johnston Fed #6A	31N	09W	35	F
94715	James F. Bell #1E	30N	13W	10	P
89620	Sandoval GC A #1A	30N	09W	35	C
87493	W D Heath B-5	30N	09W	31	M
LD151	Lat 0-21 Line Drip	30N	09W	12	O
73220	Fogelson 4-1 Com. #14	29N	11W	4	P
97213	Hamner #9	29N	09W	20	A
72890	Ohio C Government #3	28N	11W	26	P
LD169	D Loop Line Drip	28N	08W	33	I
LD174	LAT LD 40	28N	04W	13	H
89894	Hammond #41A	27N	08W	25	O
94810	Miles Fed 1A	26N	07W	5	F
LD072	K27 LD072	25N	06W	4	E
87640	Canada Mesa #2	24N	06W	24	I

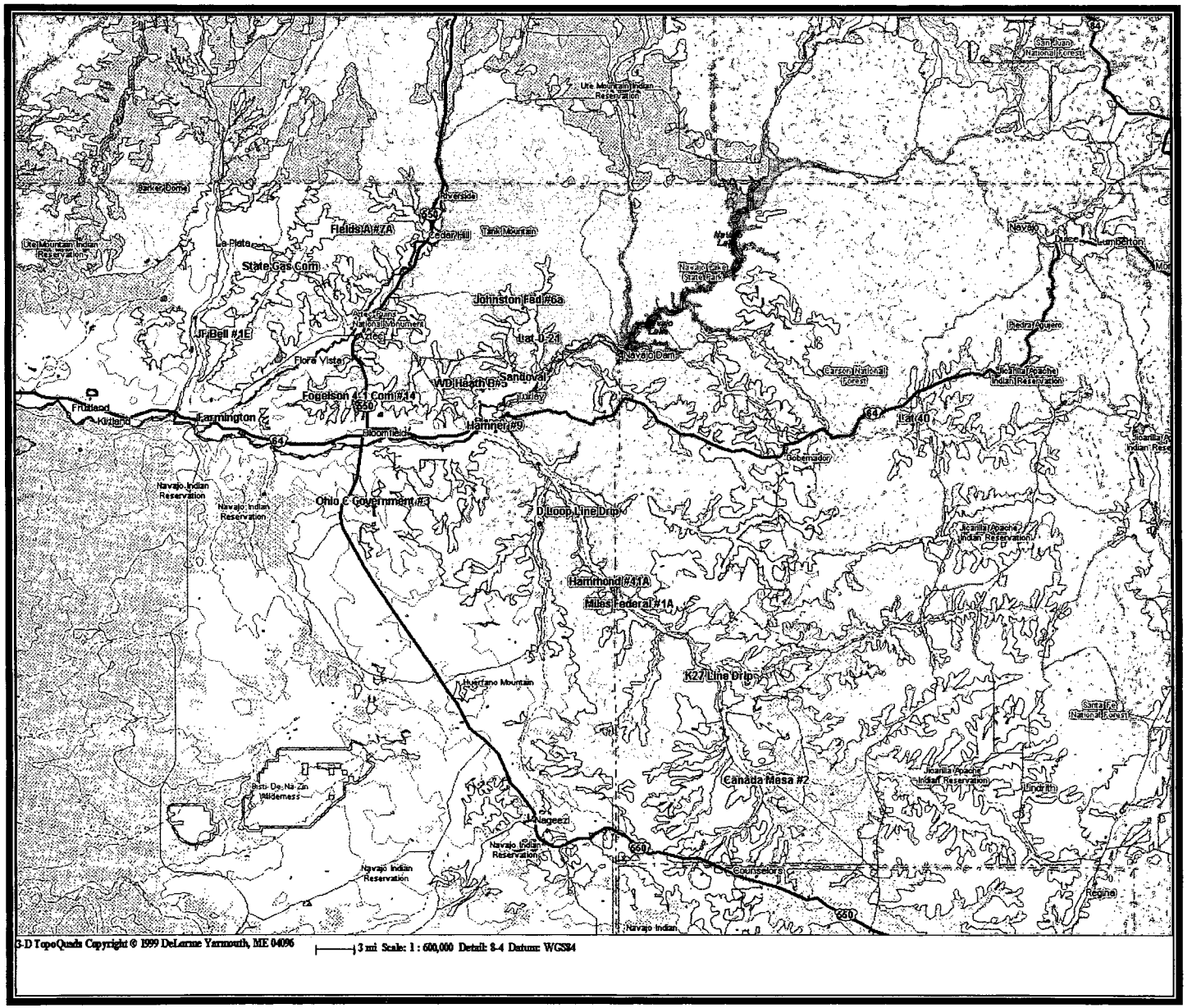
elpaso

MWH
MONTGOMERY WATSON HARZA

ACRONYMS

B	Benzene
E	Ethylbenzene
EPFS	El Paso Field Services
ft	foot/feet
GWEL	groundwater elevation
ID	identifier
MW	Monitoring Well
PSH	Phase Separated Hydrocarbons
NMWQCC	New Mexico Water Quality Control Commission
T	Toluene
TOC	Top Of Casing
NE	not established
NS	not sampled
ORC	oxygen release compound
OCD	Oil Conservation Division
ppb	parts per billion
µg/L	micrograms per liter
X	Total Xylenes

Federal Groundwater Site Map



EPFS GROUNDWATER SITES
2002 ANNUAL GROUNDWATER REPORT

James F. Bell #1E
Meter Code: 94715

SITE DETAILS

LEGAL DESCRIPTION: **Twn:** 30N **Rng:** 13W **Sec:** 10 **Unit:** P

NMOCD Haz Ranking: 40 **Land Type:** Federal **Operator:** Amoco Production Company

PREVIOUS ACTIVITIES

Site Assessment: 3/94	**Excavation:** 4/94	**Soil Boring:** 10/95
Monitor Well: 10/95	**Geoprobe:** NA	**Additional MWs:** 6/99
Downgradient MWs: 11/95	**Replace MW:** NA	**Quarterly Initiated:** NA
ORC Nutrient Injection: NA	**Re-Excavation:** NA	**PSH Removal Initiated:** 7/97
Annual Initiated: 10/00	**Quarterly Resumed:** NA	

SUMMARY OF 2002 ACTIVITIES

MW-1:

- Weekly free-product recovery activities were performed during 2002.
- Quarterly water level monitoring was performed during 2002.
- During November 2002, the control unit for the skimmer pump system at MW-1 was replaced with a new controller and associated components.

MW-2:

- Annual groundwater sampling (June 02) was performed during 2002.
- Quarterly water level monitoring was performed during 2002.

MW-3:

- Weekly free-product recovery activities were performed during 2002.
- Quarterly water level monitoring was performed during 2002.

MW-4:

- Annual groundwater sampling (June 02) was performed during 2002.
- Quarterly water level monitoring was performed during 2002.

Site-Wide Activities: No other activities were performed at this site during 2002.

SUMMARY TABLES AND GRAPHS

- Analytical data is summarized in Table 1 and presented graphically in Figures 5 through 8.
- Free-product recovery data is summarized in Table 2 and presented graphically in Figures 9 and 10.
- Laboratory reports are presented in Attachment 1.
- Field documentation is presented in Attachment 2.

SITE MAP

Site maps are attached as Figures 1 through 4.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2002.

DISPOSITION OF GENERATED WASTES

All phase-separated hydrocarbons were disposed of at the EPFS Kutz Separator located in Bloomfield, New Mexico.

ISOCONCENTRATION MAPS

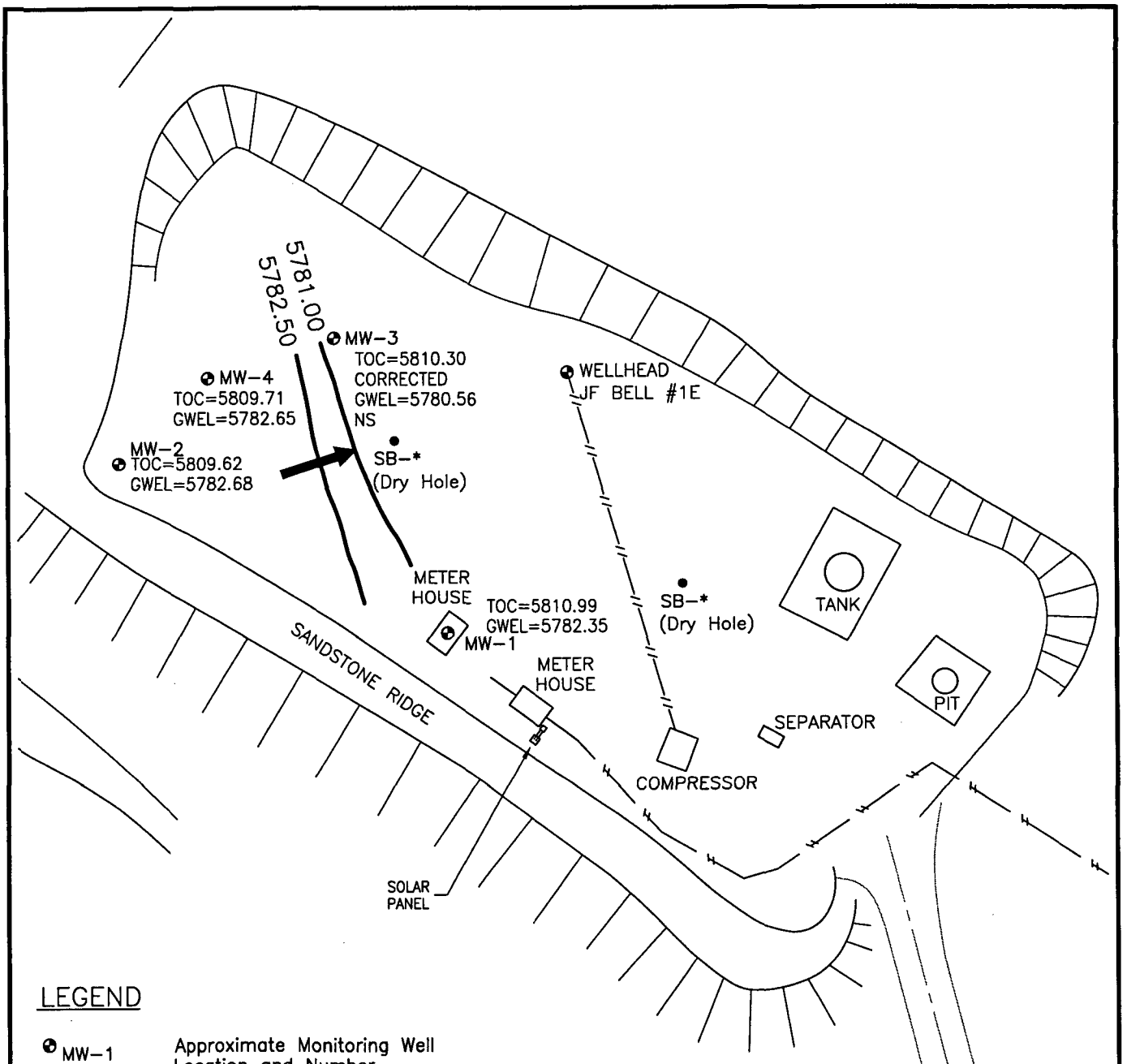
No isoconcentration maps were prepared for this site, however, the attached site maps present both the potentiometric surface and analytical data collected during 2002.

CONCLUSIONS

- Free-product recovery efforts at MW-1 resulted in removal of approximately 72.33 gallons of free-phase hydrocarbons during 2002 bringing the cumulative total volume recovered to date to 685.5 gallons.
- Free-product recovery efforts at MW-3 resulted in removal of approximately 53.5 gallons of free-phase hydrocarbons during 2002 bringing the cumulative total volume recovered to date to 83.5 gallons.
- The benzene concentration in MW-2 dropped to 53 µg/l during 2002.
- The BTEX concentrations in MW-4 were below analytical detection limits.

RECOMMENDATIONS

- EPFS intends to redevelop monitoring wells MW-1 and MW-3 in an attempt to enhance free-product recovery.
- EPFS will continue free-product recovery efforts as needed at MW-1 and MW-3.
- EPFS will continue annual groundwater sample collection and quarterly water level monitoring at MW-2.
- Because historical data collected at MW-4 indicate concentrations of BTEX constituents are below analytical detection limits, EPFS requests that this well not be sampled until the site closure samples are collected. Water level monitoring will continue on a quarterly basis.
- Once free-product recovery efforts are complete at MW-1 and MW-3, these wells will be sampled on an annual basis until sample results approach closure criteria. The wells will then be scheduled for quarterly sampling until closure criteria are met.



LEGEND

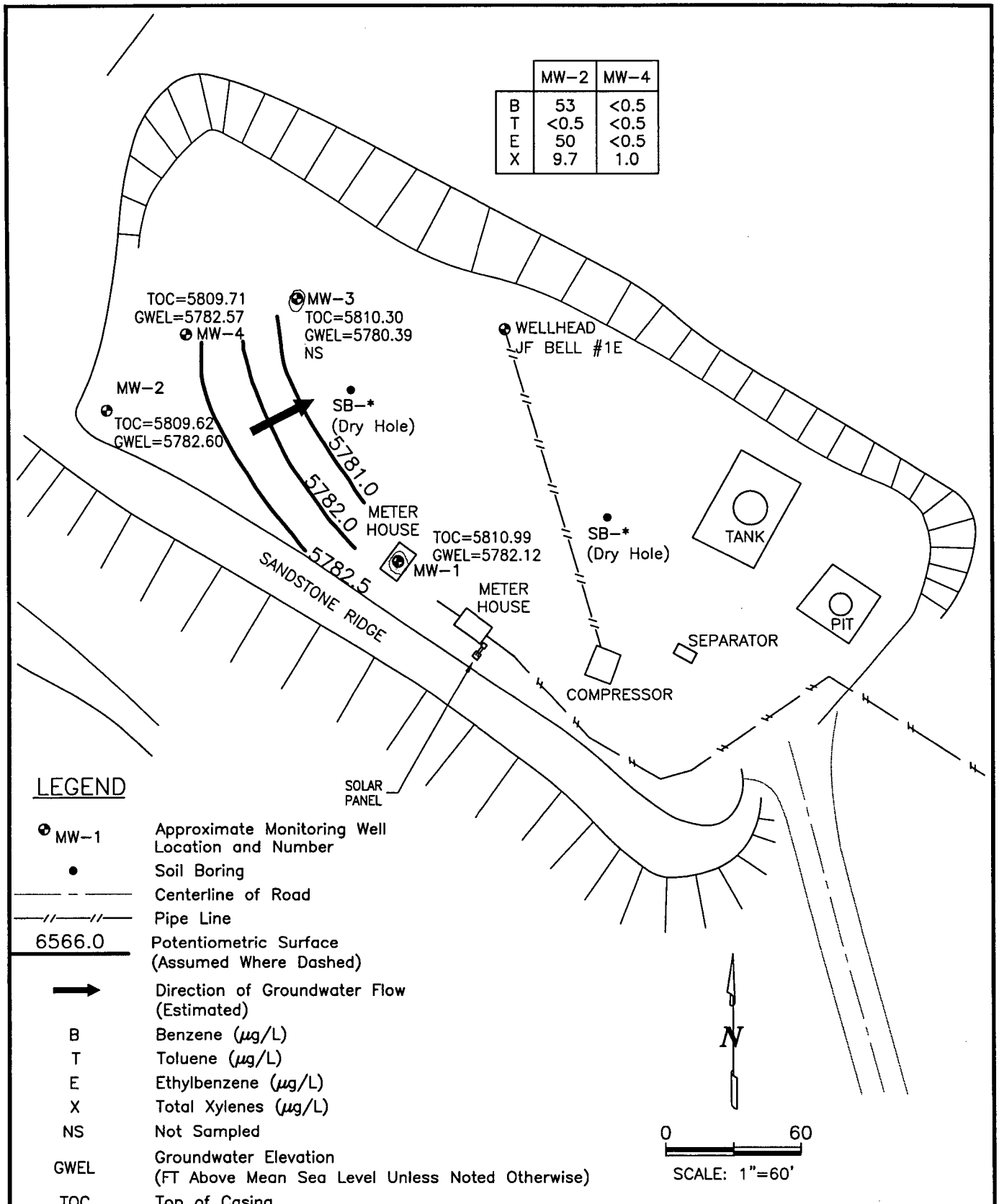
MW-1	Approximate Monitoring Well Location and Number
•	Soil Boring
——— - ———	Centerline of Road
——//——//——	Pipe Line
6566.0	Potentiometric Surface (Assumed Where Dashed)
→	Direction of Groundwater Flow (Estimated)
NS	Not Sampled
GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
TOC	Top of Casing

jfbell1e_02.dwg

J.F. BELL #1E, METER 94715
MARCH, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1



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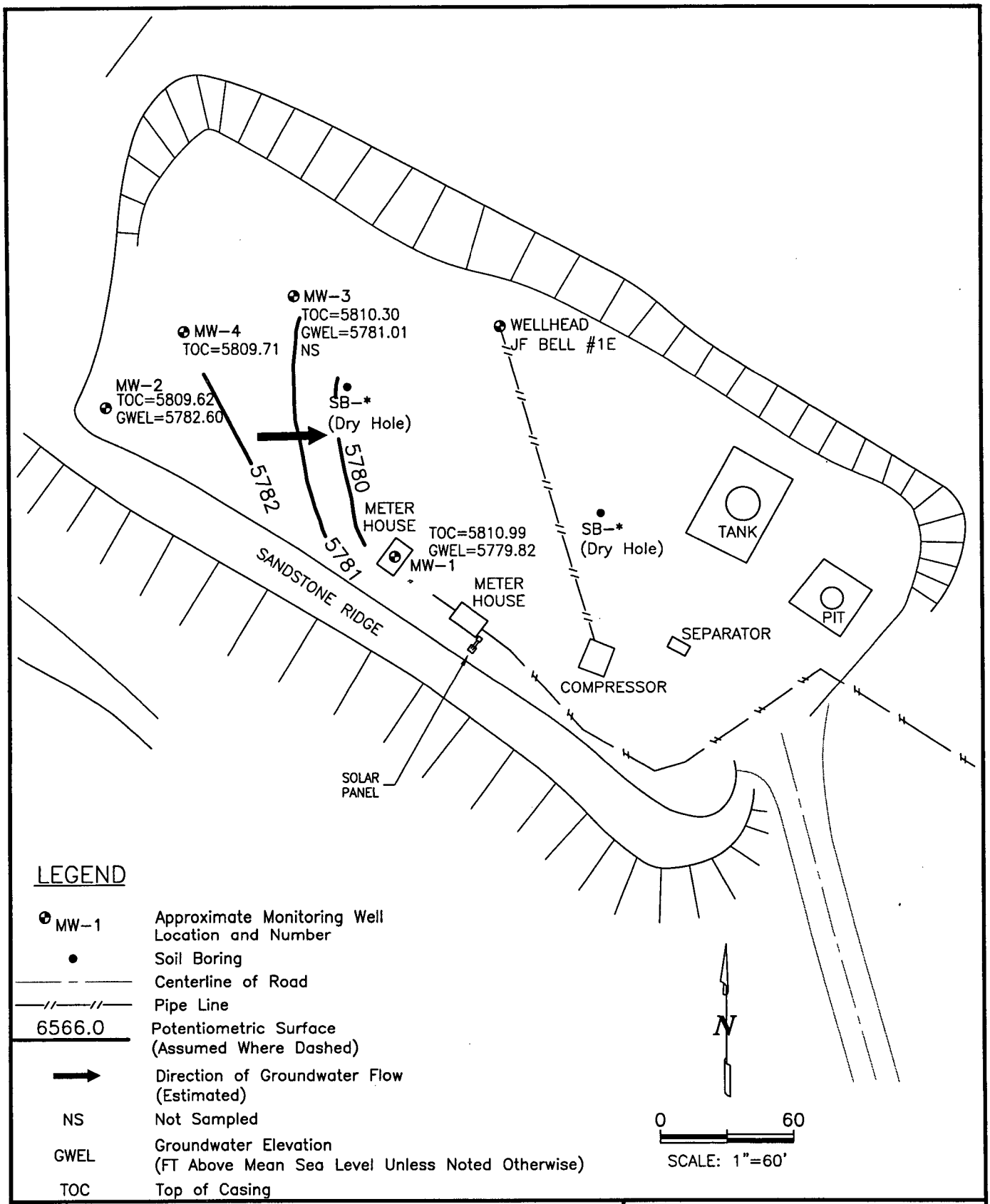
J.F. BELL #1E, METER 94715
MAY, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 2



LEGEND

MW-1	Approximate Monitoring Well Location and Number
•	Soil Boring
——— - ———	Centerline of Road
——//——//——	Pipe Line
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→	Direction of Groundwater Flow (Estimated)
NS	Not Sampled
GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
TOC	Top of Casing

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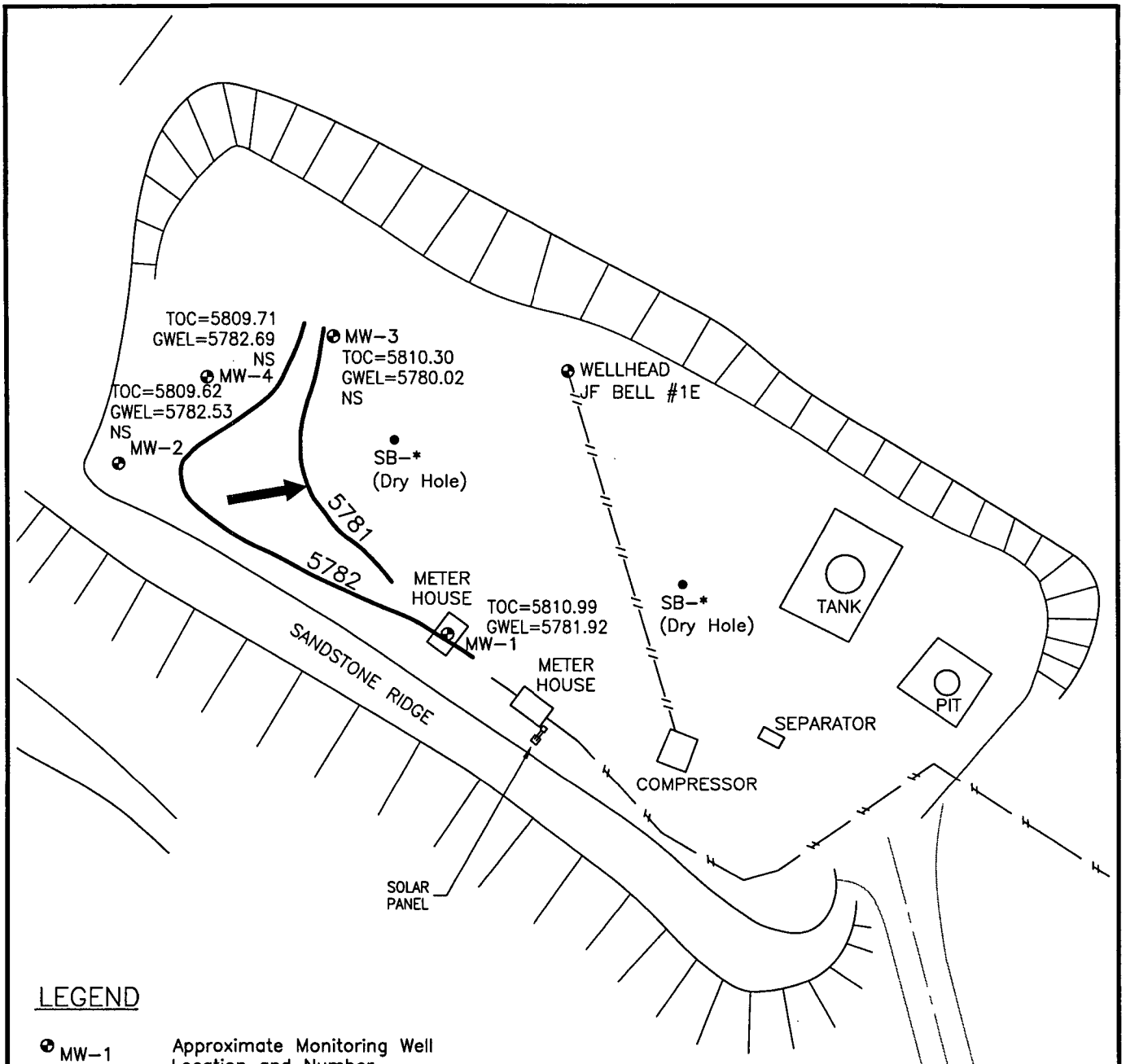
J.F. BELL #1E, METER 94715
SEPTEMBER, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 3



LEGEND

MW-1	Approximate Monitoring Well Location and Number
•	Soil Boring
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——//——//——	Pipe Line
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→	Direction of Groundwater Flow (Estimated)
NS	Not Sampled
GWEL	Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
TOC	Top of Casing

jfbell1e_02.dwg

J.F. BELL #1E, METER 94715
DECEMBER, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 4

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER
J.F. BELL #1E (METER #94715)
(Page 1 of 1)

Sample Identification	Sample Date	MW Identification	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)
JFB0206-MW2	05-Jun-2002	2	53	<0.5	50	9.7
JFB0206-MW-4	05-Jun-2002	4	<0.5	<0.5	<0.5	<1.0

Figure 5
Historical BTEX Concentration and Groundwater Elevation vs. Time
J.F.Bell #1E (Meter #94715)
MW-1

Figure 6
Historical BTEX Concentration and Groundwater Elevation vs. Time
JF Bell #1E (Meter #94715)
MW-2

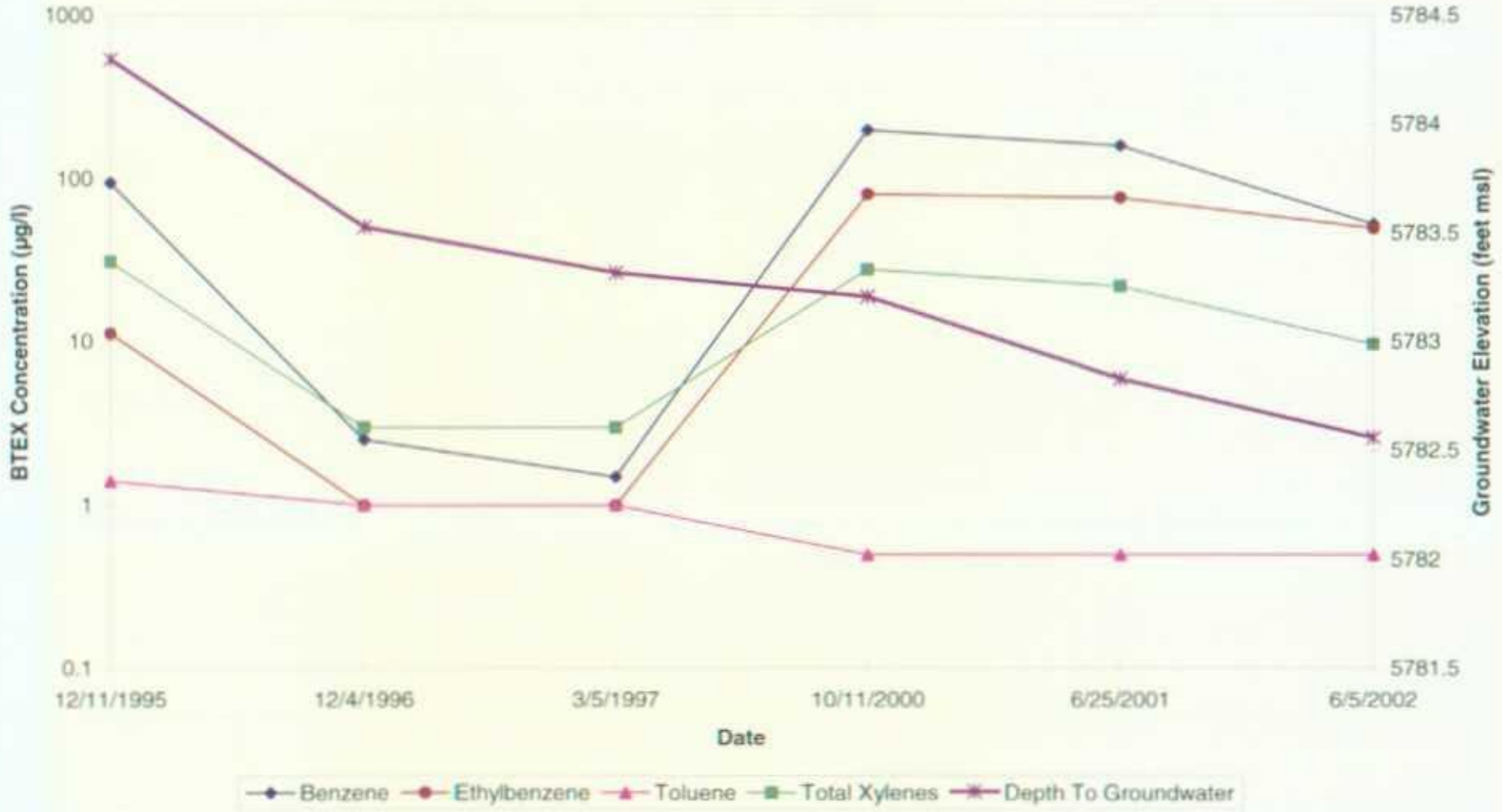


Figure 7
Historical BTEX Concentration and Groundwater Elevation vs. Time
J.F.Bell #1E (Meter #94715)
MW-3

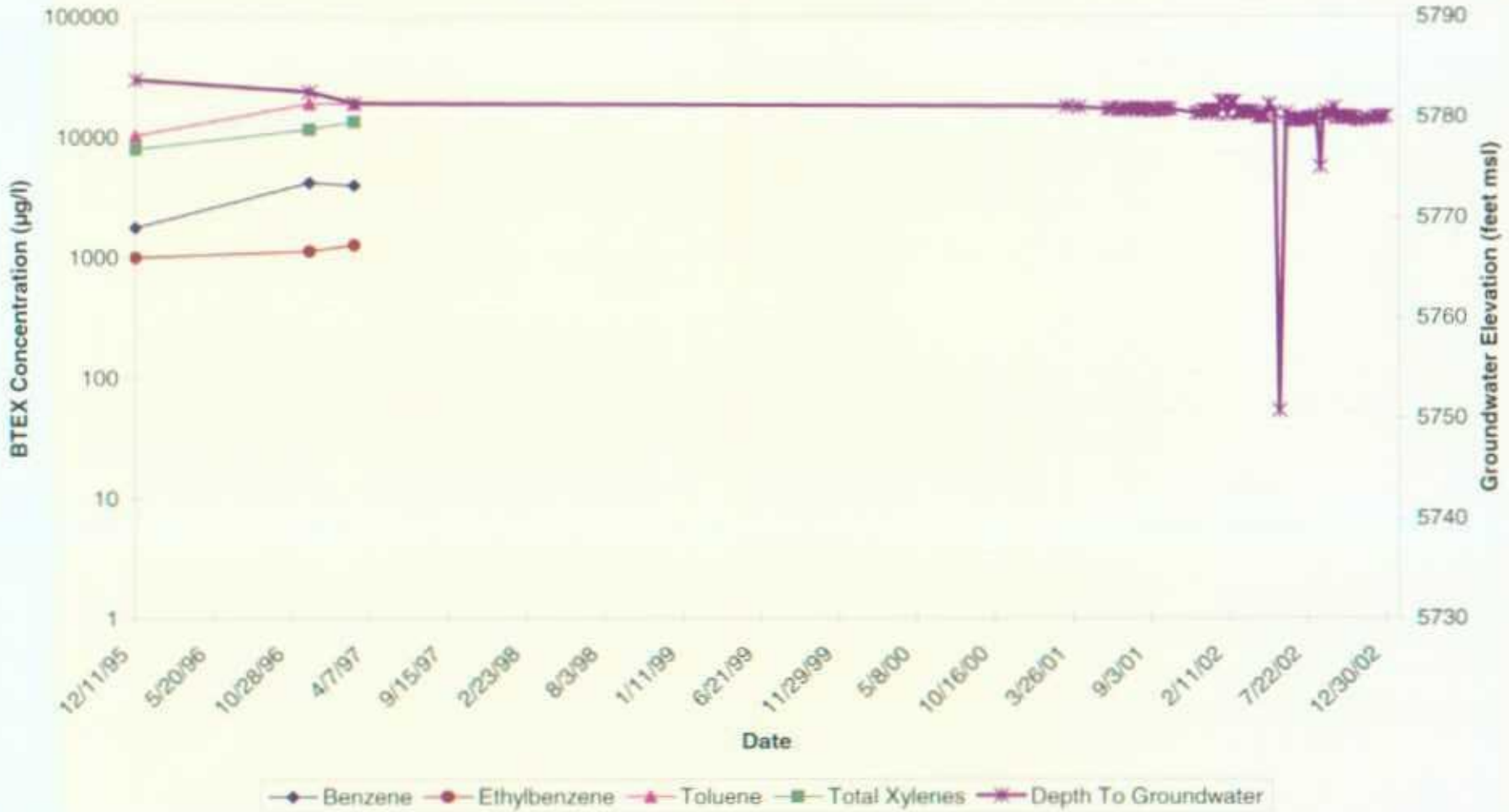


Figure 8
BTEX Concentration and Groundwater Elevation vs. Time
JF Bell #1E (Meter #94715)
MW-4

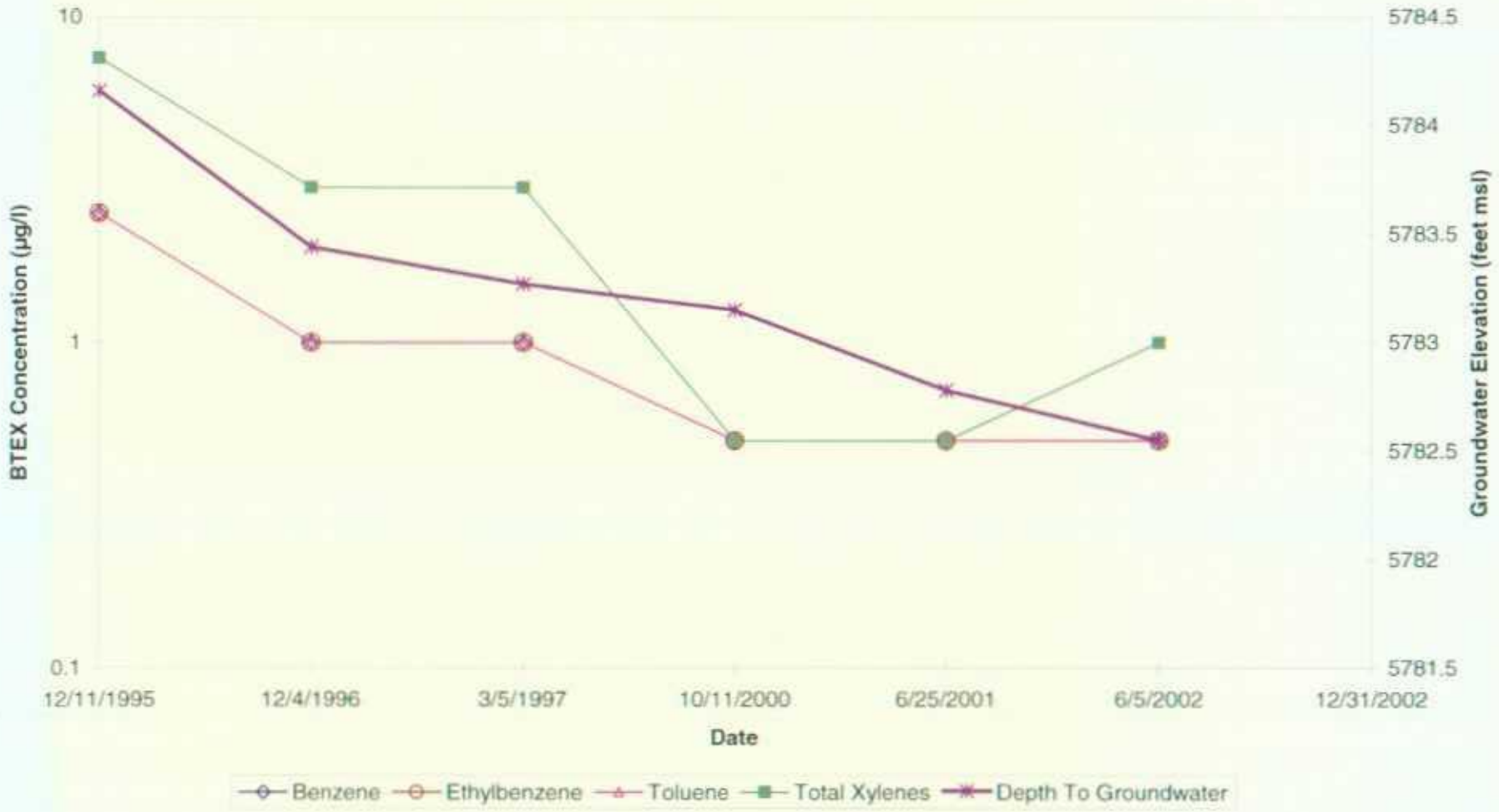


TABLE 2

SUMMARY OF FREE-PRODUCT RECOVERY
JF BELL #1E (METER #94715)

MW Identification	Date	Depth to Product (feet bgs)	Depth to Water (feet bgs)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Removed (gallons)
1	04-Jan-2002	NM	NM	NM	2.49	613.21
1	08-Jan-2002	28.25	28.54	0.29	1.00	614.21
1	17-Jan-2002	NM	NM	NM	2.50	616.71
1	23-Jan-2002	NM	NM	NM	2.50	619.21
1	31-Jan-2002	NM	NM	NM	3.00	622.21
1	07-Feb-2002	NM	NM	NM	2.50	624.71
1	14-Feb-2002	NM	NM	NM	2.50	627.21
1	20-Feb-2002	NM	NM	NM	2.50	629.71
1	28-Feb-2002	28.31	28.62	0.31	3.50	633.21
1	06-Mar-2002	NM	NM	NM	3.00	636.21
1	11-Mar-2002	NM	NM	NM	2.00	638.21
1	21-Mar-2002	28.61	29.82	0.19	5.00	643.21
1	28-Mar-2002	28.51	28.64	0.13	3.00	646.21
1	04-Apr-2002	NM	NM	NM	2.50	648.71
1	12-Apr-2002	NM	NM	NM	3.44	652.15
1	19-Apr-2002	NM	NM	NM	4.00	656.15
1	25-Apr-2002	NM	NM	NM	4.37	660.52
1	03-May-2002	NM	NM	NM	4.23	664.75
1	15-May-2002	28.48	28.87	0.39	3.95	668.70
1	31-May-2002	NM	NM	NM	5.00	673.70
1	07-Jun-2002	NM	NM	NM	2.50	676.20
1	14-Jun-2002	NM	NM	NM	2.00	678.20
1	21-Jun-2002	NM	NM	NM	2.10	680.30
1	27-Jun-2002	SM	SM	SM	SM	680.30
1	02-Jul-2002	NM	NM	NM	0.00	680.30
1	11-Jul-2002	SM	SM	SM	SM	680.30

TABLE 2

SUMMARY OF FREE-PRODUCT RECOVERY
JF BELL #1E (METER #94715)

MW Identification	Date	Depth to Product (feet bgs)	Depth to Water (feet bgs)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Removed (gallons)
1	22-Jul-2002	NM	NM	NM	8.15	688.45
1	25-Jul-2002	NM	NM	NM	1.00	689.45
1	31-Jul-2002	NM	NM	NM	11.97	701.42
1	08-Aug-2002	NM	NM	NM	0.75	702.17
1	16-Aug-2002	NM	NM	NM	0.20	702.37
1	22-Aug-2002	NM	NM	NM	4.49	706.86
1	28-Aug-2002	SM	SM	SM	SM	706.86
1	06-Sep-2002	NM	NM	NM	0.00	706.86
1	10-Sep-2002	NM	NM	NM	0.33	707.19
1	13-Sep-2002	29.20	31.17	1.97	0.00	707.19
1	19-Sep-2002	28.45	30.82	2.37	3.00	710.19
1	04-Oct-2002	NM	NM	NM	0.33	710.52
1	10-Oct-2002	NM	NM	NM	0.33	710.85
1	15-Oct-2002	NM	NM	NM	0.25	711.10
1	23-Oct-2002	NM	NM	NM	0.25	711.35
1	30-Oct-2002	NM	NM	NM	0.25	711.60
1	08-Nov-2002	NM	NM	NM	0.2	711.80
1	16-Nov-2002	SM	SM	SM	SM	711.80
1	21-Nov-2002	SM	SM	SM	SM	711.80
1	04-Dec-2002	28.37	29.07	0.7	0.5	712.30
1	10-Dec-2002	SM	SM	SM	SM	712.30
1	18-Dec-2002	SM	SM	SM	SM	712.30
1	27-Dec-2002	NM	NM	NM	27.5	739.80
1	04-Dec-2002	28.37	29.07	0.70	0.50	740.30

TABLE 2

SUMMARY OF FREE-PRODUCT RECOVERY
JF BELL #1E (METER #94715)

MW Identification	Date	Depth to Product (feet bgs)	Depth to Water (feet bgs)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Removed (gallons)
3	04-Jan-2002	28.39	29.63	1.36	1.25	30.25
3	08-Jan-2002	28.41	29.59	1.18	1.25	31.50
3	17-Jan-2002	28.70	30.00	1.30	1.25	32.75
3	23-Jan-2002	28.70	28.71	0.01	1.25	34.00
3	31-Jan-2002	28.68	28.70	0.02	2.50	36.50
3	07-Feb-2002	28.70	30.00	0.30	1.25	37.75
3	14-Feb-2002	27.80	28.80	1.00	1.25	39.00
3	20-Feb-2002	28.74	28.76	0.02	1.25	40.25
3	28-Feb-2002	28.64	29.82	1.19	1.25	41.50
3	06-Mar-2002	28.55	29.72	1.17	1.25	42.75
3	11-Mar-2002	28.72	29.90	0.18	1.25	44.00
3	21-Mar-2002	28.61	29.82	0.19	1.25	45.25
3	28-Mar-2002	28.57	29.74	1.17	1.25	46.50
3	04-Apr-2002	28.66	29.84	1.18	1.25	47.75
3	12-Apr-2002	28.93	30.28	1.35	1.00	48.75
3	19-Apr-2002	28.93	30.25	1.32	1.00	49.75
3	25-Apr-2002	28.93	30.24	1.31	1.00	50.75
3	03-May-2002	NA	28.96	0.00	1.00	51.75
3	15-May-2002	28.69	29.86	1.17	1.25	53.00
3	24-May-2002	28.53	59.53	1.00	0.00	53.00
3	31-May-2002	28.72	29.96	1.24	1.25	54.25
3	07-Jun-2002	28.72	29.91	1.19	1.25	55.50
3	14-Jun-2002	28.97	30.31	1.34	0.25	55.75
3	21-Jun-2002	29.32	30.54	1.32	1.25	57.00
3	27-Jun-2002	29.30	30.65	1.35	1.25	58.25
3	02-Jul-2002	29.25	30.56	1.31	1.25	59.50

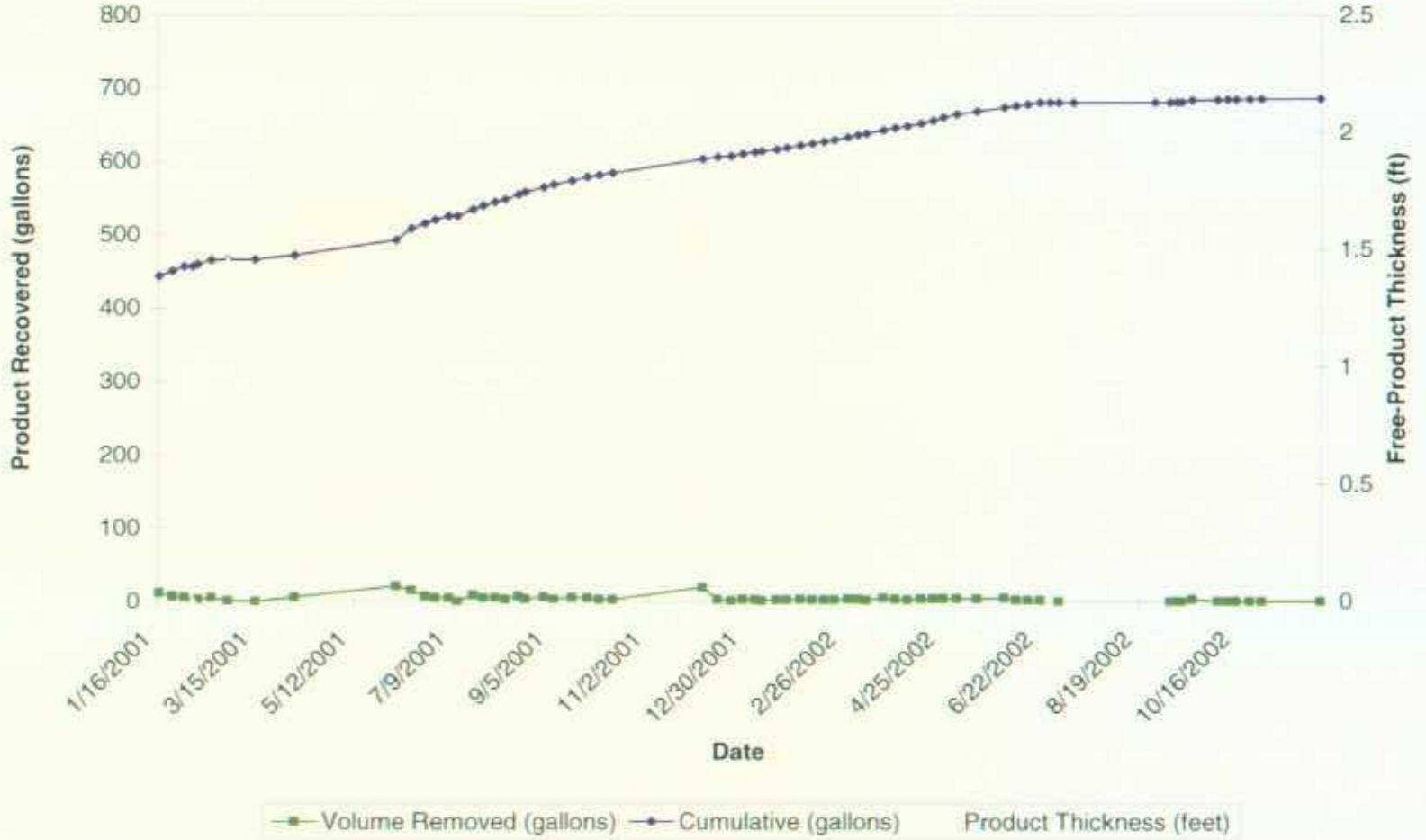
TABLE 2

SUMMARY OF FREE-PRODUCT RECOVERY
JF BELL #1E (METER #94715)

MW Identification	Date	Depth to Product (feet bgs)	Depth to Water (feet bgs)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Removed (gallons)
3	11-Jul-2002	29.31	30.66	1.35	1.25	60.75
3	22-Jul-2002	29.17	30.54	1.37	1.50	62.25
3	25-Jul-2002	29.25	30.40	1.15	1.25	63.50
3	31-Jul-2002	29.04	30.38	1.36	1.50	65.00
3	08-Aug-2002	29.13	30.15	1.03	0.50	65.50
3	16-Aug-2002	29.30	35.25	5.95	2.00	67.50
3	22-Aug-2002	28.74	30.07	1.33	1.00	68.50
3	06-Sep-2002	28.98	30.03	1.06	0.00	68.50
3	10-Sep-2002	SM	SM	SM	2.00	70.50
3	13-Sep-2002	28.63	29.29	0.66	0.00	70.50
3	19-Sep-2002	29.42	30.43	1.02	1.00	71.50
3	25-Sep-2002	29.40	30.28	0.88	0.25	71.75
3	04-Oct-2002	29.35	30.19	0.85	1.50	73.25
3	10-Oct-2002	29.46	30.32	0.86	1.50	74.75
3	15-Oct-2002	29.50	30.29	0.79	1.50	76.25
3	23-Oct-2002	29.66	30.32	0.66	1.50	77.75
3	30-Oct-2002	29.32	30.58	1.26	1.25	79.00
3	08-Nov-2002	29.36	30.58	1.22	1.50	80.50
3	21-Nov-2002	29.45	30.45	1.00	1.50	82.00
3	04-Dec-2002	29.48	30.47	0.99	1.75	83.75
3	10-Dec-2002	29.48	30.23	0.75	0.75	84.50
3	18-Dec-2002	29.38	30.28	0.90	1.00	85.50
3	27-Dec-2002	29.45	30.21	0.75	0.50	86.00

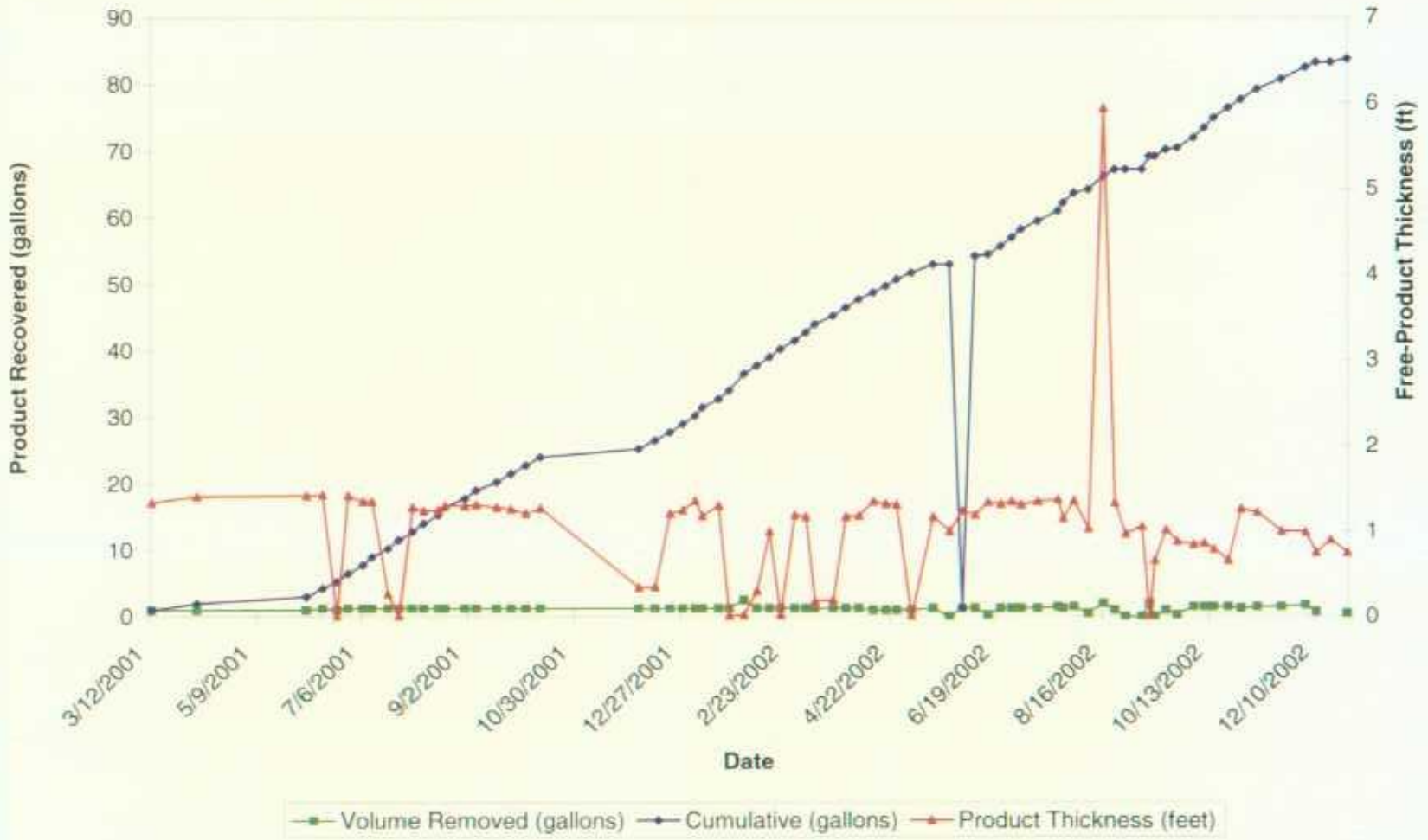
NM - Not measured due to skimmer pump obstruction.
SM - Not measured due to system maintenance issue.

Figure 9
Free-Product Recovery vs. Time
JF Bell #1E (Meter #94715)
MW-1



MW-1 has a product recovery pump installed. As a result product thickness is not measured for each site visit.

Figure 10
Free-Product Recovery vs. Time
JF Bell #1E (Meter #94715)
MW-3



ATTACHMENT 1

LABORATORY REPORTS

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **206036**
June 17, 2002

AMEC EARTH & ENVIRONMENTAL
2060 AFTON PLACE
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name J.F. BELL #1E
Project Number 1517000121

Attention: LISA WINN/SCOTT POPE

On 06/07/02 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze **aqueous** samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

H. Mitchell Rubenstein, Ph. D.
General Manager

MR: jt

Enclosure

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

LIENT	: AMEC EARTH & ENVIRONMENTAL	PINNACLE ID	: 206036
ROJECT #	: 1517000121	DATE RECEIVED	: 06/07/02
ROJECT NAME	: J.F. BELL #1E	REPORT DATE	: 06/17/02

INNACLE ID #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
06036 - 01	JFB-0206-MW2	AQUEOUS	06/05/02
06036 - 02	JFB-0206-MW4	AQUEOUS	06/05/02
06036 - 03	TRIP BLANK	AQUEOUS	06/04/02

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

:ST : EPA 8021 MODIFIED
.IENT : AMEC EARTH & ENVIRONMENTAL PINNACLE I.D.: 206036
ROJECT # : 1517000121
ROJECT NAME : J.F. BELL #1E

AMPLE . #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
	JFB-0206-MW2	AQUEOUS	06/05/02	NA	06/09/02	1
2	JFB-0206-MW4	AQUEOUS	06/05/02	NA	06/09/02	1
3	TRIP BLANK	AQUEOUS	06/04/02	NA	06/09/02	1

ARAMETER	DET. LIMIT	UNITS	JFB-0206-MW2	JFB-0206-MW4	TRIP BLANK
ENZENE	0.5	**UG/L**	**53**	< 0.5	< 0.5
OLUENE	0.5	UG/L	< 0.5	< 0.5	< 0.5
THYLBENZENE	0.5	**UG/L**	**50**	< 0.5	< 0.5
OTAL XYLENES	1.0	**UG/L**	**9.7**	< 1.0	< 1.0

SURROGATE:
ROMOFLUOROBENZENE (%) 112 98 94
JRROGATE LIMITS (80 - 120)

HEMIST NOTES:
/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

EST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206036
LANK I. D.	: 060902	DATE EXTRACTED	: N/A
LIENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/09/02
ROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: J.F. BELL #1E		

ARAMETER	UNITS	
ENZENE	UG/L	<0.5
OLUENE	UG/L	<0.5
THYLBENZENE	UG/L	<0.5
OTAL XYLENES	UG/L	<1.0

URROGATE:		
ROMOFLUOROBENZENE (%)		99
URROGATE LIMITS:	(80 - 120)	

HEMIST NOTES:
/A

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
LCS/LCSD

:ST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206036
\TCH #	: 060902	DATE EXTRACTED	: N/A
.IENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/09/02
ROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: J.F. BELL #1E	UNITS	: UG/L

\RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
:NZENE	<0.5	20.0	19.1	96	19.4	97	2	(80 - 120)	20
)LUENE	<0.5	20.0	20.0	100	20.8	104	4	(80 - 120)	20
THYLBENZENE	<0.5	20.0	20.3	102	20.9	105	3	(80 - 120)	20
)TAL XYLENES	<1.0	60.0	62.9	105	64.6	108	3	(80 - 120)	20

HEMIST NOTES:
'A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PINNACLE LABORATORIES

2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MS/MSD

ST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 206036
SMSD #	: 206037-01	DATE EXTRACTED	: N/A
IENT	: AMEC EARTH & ENVIRONMENTAL	DATE ANALYZED	: 06/09/02
ROJECT #	: 1517000121	SAMPLE MATRIX	: AQUEOUS
ROJECT NAME	: J.F. BELL #1E	UNITS	: UG/L

RAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
NZENE	<0.5	20.0	19.4	97	19.2	96	1	(80 - 120)	20
LUENE	<0.5	20.0	20.4	102	20.4	102	0	(80 - 120)	20
HYLBENZENE	<0.5	20.0	20.8	104	20.6	103	1	(80 - 120)	20
TAL XYLENES	<1.0	60.0	64.3	107	64.2	107	0	(80 - 120)	20

EMIST NOTES:
A

$$\text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 6-5-02 PAGE: 1 OF 1

PLI Accession #: 206036

SHADED AREAS ARE FOR LAB USE ONLY.

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER: LISA Winn

COMPANY: AMEC
ADDRESS: 2060 AFTON Place
FarmingTON N.M. 87401
PHONE: (505) 327-7928
FAX: (505) 326-5721

BILL TO: SCOTT Pope
COMPANY: EL paso Field Services
ADDRESS: 614 Reilly AVE
FarmingTON N.M. 87401

ANALYSIS REQUEST

SAMPLE ID	DATE	TIME	MATRIX	LAB I.D.
JFB-0206-MW2	6-5-02	1435	H_2O	01
JFB-0206-MW4	6-5-02	1520	H_2O	02
Trip Blank	6-4-02	1035	H_2O	03

	Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/~~8015 (Gasoline) MTBE~~	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐		8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Meta
01				X																						
02				X																						
03				X																						

PROJECT INFORMATION

PROJ. NO.: 15170002121
PROJ. NAME: EpFS GW. proj
P.O. NO.:
SHIPPED VIA: Gray Hound

SAMPLE RECEIPT

NO. CONTAINERS: 5
CUSTODY SEALS: Y (N/A)
RECEIVED INTACT: Y
APPROPRIATE: Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☑
CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
METHANOL PRESERVATION ☐
COMMENTS: FIXED FEE ☐

J.F. Bell #1E
Meter # (94715)

RELINQUISHED BY: 1.

Signature: Chris Mtz Time: 1430
Printed Name: Chris Mtez Date: 6-6-02
Company: AMEC
See reverse side (Force Majeure)

RECEIVED BY: 1.

Signature: Time:
Printed Name: Date:
Company:

RELINQUISHED BY:

Signature: Time:
Printed Name: Date:
Company:

RECEIVED BY: (LAB)

Signature: Time: 1050
Printed Name: Date: 6/7/02
Pinnacle Laboratories Inc.

ATTACHMENT 2

FIELD DOCUMENTATION

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: D. Belcis
Client Company: MWH
Site Name: JF BELL

Project No: 220013
Date: 12/27/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	0900	30.21	29.95		0.76	.6gal	
MW-1							see below.

COMMENTS:
MW-3: 1½ gal of water removed from skimmer, oily film on top of water. ≈ 1 tsp rem.
Bailed 4.5 gallons from well + .5 gal of product. copper/reddish in color, odor, & slightly thick.

MW-1, green light on system o.k. Clock timer at 210:31. reset to zero @ 944am and shut off & restart, system ran for 10 mins & shut down itself. Tank is approximately ½ full of product.

Signature: Delbert Belcis
Date: 12/27/02

Product Recovery and Well Observation Data

Project Name: SAN JUAN BASIN
Project Manager: D. BEKIS
Client Company: MWH
Site Name: J.F. BELL

Project No: 220013
Date: 12/18/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	1350	30.28	29.38		0.90		
MW-4	1430	27.02					NO product indicated by probe.
MW-2	1435	27.09					NO product indicated by probe, and by bailing 1 gl.
MW-1	1500						

COMMENTS:
MW-3 = 5 gallon of water removed and 1 gallon of which was product - reddish in color + strong odor. Water had silt at bottom and was grey in color. Skimmer had 1 1/2 gallon of water + NO product.

MW-1 = NOT ABLE to determine exact amount of product in 55 gal. barrel
Control box has 192 hrs + 07 minutes on counter.
Clock running continously? green light on.
Reset clock timer to zero at 1530.
PSI = 50 —— psi = 2250
Control set at 10 mins. and once a day cycle.

Signature: Dellwood Bekis
Date: 12/18/02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Delbert Belcis
Client Company: MWH
Site Name: J F BELL

Project No: 220013
Date: 10 Dec 02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
mw-1	1430						not measured
mw-3	1355	30.23	29.48	35.925	.75	.75 gal.	
	1420	32.07	31.78	35.925			

COMMENTS: mw-1, installed new counter; Xitech Instrument, model # 2500 ES, Serial # 002181. Set timer at 10 mins / 1 day cycle. Turned on at 1500 hrs and unit was up and running. Air tank at 50 psi & 2100 psi.

mw-3, Removed 5 gallon of liquid and .75 gallon was product. Greyish black in color.

Signature: Delbert Belcis
Date: 12-11-02.

Product Recovery and Well Observation Data

Project Name: San Juan Basin
Project Manager: M N
Client Company: MWH
Site Name: J F Bell

Project No: 220013
Date: 12-4-02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	1400	29.07	28.37		0.7ft	½ gal.	see below
MW3	1450	30.47	29.48		0.99ft	1¾ gal.	See below

COMMENTS: MW-1: Red light is on @ control box. Pulled pump & bailed well by hand. There is 19.41 gal product in drum. Bailed ½ gallon product & 2.25 gal water. Timer indicated pump had run for 5 minutes. DTW/P Taken after pulling the pump (Not static conditions)
MW-3: pulled skimmer ½ product ½ water DTW 30.47 DTP 29.48 bailed well by hand. Recovered 1.75 gallons product & 2.5 gal water. DTW/P taken after pulling skimmer (Not static conditions)

Signature: [signature]
Date: 12-4-02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Delbert Belris
Client Company: MWH
Site Name: JF BELL

Project No: 220013
Date: 11/27/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	10:15	30.38	29.38	35.925	1.00	1 gal	
MW-1	0945						No activity.

COMMENTS: MW-3 product removed was copper in color with a slight grey-black coming out within first 1/2 gal.

MW-1 - No mmutes on dwel - pump not working or control box is out, or battery is low. Did not have volt meter to check battery. Product at same level from last week.

Signature: Delbert Belris
Date: NOV 27, 02.

Product Recovery and Well Observation Data

Project Name: SAN JUAN RIVER BASIN
Project Manager: DELBERT BEKIS
Client Company: MONTGOMERY WATSON HARZA
Site Name: JF BELL

Project No: 220013
Date: 21 NOV 02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	10:35						
MW-3	10:40	30.45	29.45	35.925	1.00	1.50 gal.	

COMMENTS: MW-1: red light on, pump at 16 mins. since last product recovery. reset pumping time.
pressure in tank at 55 p.s.i. and 2400 16 in tank.
measured product thickness = 1.86' dia. of drum 1.8'
$V = \pi r^2 h$
$= 3.14 \times 0.9^2 \times 1.86$
$= 4.73 ft^3$
MW-3

Signature: Delbert Bekis
Date: 21 NOV 02

Product Recovery and Well Observation Data

Project Name: San Juan Basin
Project Manager: Beks
Client Company: MWH
Site Name: J F Bell

Project No: 22003
Date: 11/16/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MWH	0930	NA	NA	NA	NA	0	17.85 gal in drum
MW-3	1016	30.32	29.36			7 1/2 gal	1

COMMENTS: ~~BA~~ MW-1: Product is 1-85 inches in drum 27 minutes passed on timer. Green light is on Pressure is set @ 55 the tank has 2400psi in it.

Signature: _____ Date: _____

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 11-8-02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	7:35	30.578	29.36	35.925	1.22	1 ½ gal	
MW-1	7:48					½ gal	

COMMENTS:
Air tank valves = 55 psi & 2550 psi
Counter in control box = 11:20

Signature: Ashley Lowe
Date: 11-8-02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 10/30/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	13:38	30.575	29.32	35.925	1.26	1.25 gal	
MW-1	13:48					1/4 gal	

COMMENTS:
Green light still on at MW-1 control box
Air tank valves = 55 psi & 2600 psi (tank was replaced w/full tank on 10/24/02). Counter in control box = 5:20

Signature: Ashley L Lowe
Date: 10/30/02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 10/23/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	13:56	30.32	29.66	35.925	0.66	1.5 gal	also removed ½ gal H_2O
MW-1	14:16					¼ gal	

COMMENTS: MW-1: green light was on again; counter red 8-20; pump has worked since last visit. Pressure in canister reads 0psi & pressure from tank is 80 psi. No more air - need new air tank.

Signature: Ashley L Lowe Date: 10/23/02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 10/15/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	9:32	30.285	29.495	35.925	0.79	1.5 gal	also collected 1 gal H_2O
MW-1	9:45					¼ gal	

COMMENTS: MW-1: red light was on at control box again. The drum is not full & power to the battery is 12-15 V. Counter = 15-51; Air canister reads 700 psi. Pressure from tank = 60 psi

Checked all wires & connections. Cleaned off shut-off sensor (it was not dirty). Checked voltages on battery & solar panel. Everything looks fine. Called Xitech & spoke with Dave. who was not much help. System may need a new sensor.

Lynn Bonally said to manually bail until we can get system running again.

Signature: Ashley L Lowe Date: 10/15/02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 10/10/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	8:20	30.315	29.455	35.925	0.86	1.5 gal	also recovered ½ gal water
MW-1	8:45					⅓ gal	

COMMENTS: MW-1: Counter = 12-15
Pressure in air tank 60 psi & 950 psi
still running well

Signature: Ashley L Lowe
Date: 10/10/02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 10/4/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	8:30	30.190	29.345	35.925	0.845	1.5 gal	No water in skimmer, only product
MW-1	8:15					1/3 gal	

COMMENTS:
MW-1 Counter says 7-39 ∴ has worked all week
green light on
air tank = 60 psi

Signature: Ashley L Lowe
Date: 10/4/02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 09/25/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	9:30						see below
MW-3	9:50	30.279	29.400	35.925'	0.879	32 oz	see below

COMMENTS: MW-1: reconnected wires in small, lower box under control panel. This was recommended by Dwight at Xytech. Reset pump in well & turned on the system. Taped up loose connector at well (Gas intake hose). Set control box to 30 mins / time per day. Pump ran correctly for 1 cycle, but no product was recovered.

MW-3: skimmer contained ~32 oz of product & 2 gal of water. Reset in a little higher (~6 inches) in well.

Signature: Ashley L Lowe Date: 09/25/02

Product Recovery and Well Observation Data

Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 09/19/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	13:30	30.82	28.45	—	2.37	~3gal	manually bailed 5 gal H_2O + product
MW-3	14:41	30.43	29.415	35.925	1.015	~1gal	Only 5oz in skimmer, manually bailed rest

COMMENTS: MW-1: cleaned float sensor in drum, replaced fuse in control box. Pump seemed to work briefly, 1 cycle was counted, green light came on, but no product was collected. Increased pressure to 60 psi for counter to work. Pumped 1 cycle, then red light came on again. charged battery w/jumper cables, but did not affect the system. Martin called Xytech, but they will have to call us back w/suggestions. manually bailed product after removing skimmer.

MW-3: measured out rope again to attempt to set skimmer accurately. screen interval = 29.35 - 28.4 - once reset, product level should rise to these levels.

Signature: Ashley L Lowe Date: 09/19/02

Product Recovery and Well Observation Data

Project Name: San Juan River Plant
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 09/13/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1		31.17	29.20		1.97	0	
MW-2		27.07	—	~~34.00~~	—	—	
MW-3		29.29	28.63	35.925	0.66	0	
MW-4		27.18	—	34.120	—	—	

MW-1
COMMENTS: Talked to Xitech & learned that counter does not operate at pressures < 40 psi. Solar panel should put out ~15 V & float wire can be spliced. Probe on float must be in complete darkness, no water on it & clean. It will not operate at voltage less than 14. Use jumper cables to test system if red light doesn't go off

At site, set battery, spliced float wires, set pump, checked voltage Battery = 12V, Solar Panel = 20V Discovered blown fuse

~~Measured~~ Both skimmers were removed 9/10/02 to allow water & product levels to recover prior to measuring

MW-3: measured out enough rope for skimmer screen to rest in product. When set skimmer, it rested on bottom of well.

Signature: [signature] Date: 9-13-02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 22003
Date: 09/10/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-3	14:06					2gal	
MW-1	14:40					1/3 gal	

COMMENTS: L. Benally requested that AESE remove the skimmer systems at MW-1 & MW-3, hand bail product & clean out the wells by plunging. The skimmer & pump system will be left out of the wells to allow product & water levels to recover. AESE will then measure water & product levels (probably Friday 9/13/02).

MW-3: bailed 2 gal of product - bright orange in color
also bailed 5 gal of product-water-silt mixture until it bailed dry. No clear water was recovered

MW-1: bailed 1/3 gal of light yellow-orange product & 3 gal of gray water-product-silt until the well bailed dry. Some clearer water was observed. The meter house was blown over & the air tank was almost resting on the ground. The collection tank was overturned & erosion occurred beneath it. It was uprighted, but does not sit level. The shut-off pump cord was cut. AESE uprighted the house & re-staked it to the ground. AESE found the battery on its side & one of the wires off. AESE brought the battery in to have it checked. More cleanup is recommended.

Signature: Ashley L Lowe Date: 09/10/02

Product Recovery and Well Observation Data

ect Name: San Juan River Basin
Project Manager: Ashley Lowe
Client Company: MWH
Site Name: JF Bell

Project No: 220013
Date: 09/06/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-4	12:38	27.185	—	34.120	—	—	
MW-2	12:42	27.088	—	34.00	—	—	
MW-3	12:55	30.032	28.975	33.925	1.057	0	skimmer contained no product
MW-1	13:10					0	see below

COMMENTS:
MW-3: pulled skimmer from well before measuring water & product levels. These may not have had time to recover. The top of the skimmer was dry - lowered it in the water column.

MW-1: red light was still on indicating low battery. Tank valves = 40psi & 2100 psi. No new product in tank. Could not remove pump apparatus from top of well. Would have to remove entire pump apparatus from well & then reset. Ashley Lowe will contact Lynn Benally to see if he really wants this done.

Signature: Ashley L Lowe
Date: 09/06/02

AESE

PRODUCT RECOVERY

906 San Juan Blvd.Ste.D
Farmington, NM 87401
505.566.9116(9120fax)

Project Name San Juan Basin Project Project No. 220013

Project Manager Ashley Lowe Date 8-28-02

Client Company Montgomery Watson Harza

Site Name JF Bell

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1		NA	NA	NA	
MW-3		2878	2975		0

Comments Product thickness in MW-3 taken after removal of passive skimmer well may not have fully recovered. Passive Skimmer did not recover any product Skimmer should be pulled and the well allowed to recover. Then the skimmer should be re installed to be sure the inlet is in the product.

The red indicator light is on at MW-1 This indicates the battery is low.

Signature [signature] Date 8/28/02

AESE

PRODUCT RECOVERY

906 San Juan Blvd.Ste.D
Farmington, NM 87401
505.566.9116(9120fax)

Project Name San Juan River Basin Project No. 220013

Project Manager Ashley Lowe Date 08/22/02

Client Company Montgomery Watson Harza

Site Name JF Bell

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1	10:25	—	—	—	~0.6ft³
MW-3	10:07	28.74	30.07	1.33	~1gal (water + product)

Comments MW-1: Amt removed from well =
Emptied drum into canister on truck & hauled to Kutz Plant
Set cycles to 2 times/day on pump
Product level in drum = 1.67 'BTO Drum bottom of drum = 2.96'
Drum diameter = 1.8'
Prod Thickness = 1.29'

V = 1.3 × 0.9² × 3.14 = 3.31 total in drum
V = 3.31 − 2.7 (total V last wk) = 0.61 ft³ this wk

MW-3: skimmer contained a lot of water - rope may be stretching will change next week. Tied off cord at top of well instead of at post to prevent wear where well casing closes.

Signature Ashley L Lowe Date 08/22/02

AESE
906 San Juan Blvd.Ste.D
Farmington, NM 87401
505.566.9116(9120fax)

PRODUCT RECOVERY

Project Name San Juan River Basin Project No. 220013

Project Manager Ashley Lowe Date 08/16/02

Client Company Montgomery Watson Harza

Site Name JF Bell

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-3	11:20	29.3	35.25	5.95'	~2 gals
MW-1	11:40	—	—	—	~1/5 gal

Comments

MW-3 - last week skimmer was not low enough in water column - large amt purged this week may be b/c only a small amt was collected last week

MW-1 - drum will need to be emptied next week - almost full counter not showing any cycles, but additional product was measured since last week

Signature Ashley L Lowe Date 08/16/02

AESE
906 San Juan Blvd.Ste.D
Farmington, NM 87401
505.566.9116(9120fax)

PRODUCT RECOVERY

Project Name San Juan River Basin Project No. 220013

Project Manager Ashley Lowe Date 08/08/02

Client Company Montgomery Watson Harza

Site Name JF Bell

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-3	14:51	29.125	30.150	1.03	~ ½ gal
MW-1	15:13				~ 0.1 ft³

Comments

MW-3 - little product recovered compared to past - skimmer may have not been set low enough - top was dry. Lowered after cleaning stop cock

MW-1: product level in drum = 2.29'
bottom of drum = 2.96'
Prod Thick = 0.67

V = 1.7 ft³ - 1.6 ft³ from last week = 0.1 ft³ collected

~~[illegible]~~ counter still does not work

Signature Ashley L Lowe Date 08/08/02

AESE

PRODUCT RECOVERY

906 San Juan Blvd.Ste.D
Farmington, NM 87401
505.566.9116(9120fax)

Project Name San Juan River Basin Project No. 220013

Project Manager Ashley Lowe Date ~~07/31/02~~ 07/31/02

Client Company Montgomery Watson Harza

Site Name JF Bell

Well	Meter/Line No.	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-3		12:02	29.042	30.38	1.36	1.5 gal
MW-1		13:16				1.6 ft^3

Comments

MW-3: rope holding skimmer had snapped in two. Fished out rope & skimmer w/cord and toilet brush. Skimmer had been resting on bottom and was covered (bottom ¼) with black, very wet fine sand. Emptied skimmer, cleaned off outside of skimmer and replaced old rope with new rope. We will watch for any decay in rope closely.

MW-1: product level in drum = 2.33', bottom of drum = 2.96', Thickness = 0.63'
V = 1.6 ft^3 - 1.09 ft^3 from last week = 0.51 ft^3 collected

Signature Ashley L Lowe Date 07/31/02

Meter House at MW-1 is displaced. It looks as if someone backed into it with a truck. The back side is not grounded, but propped up on the concrete well pad.

AESE
906 San Juan Blvd.Ste.D
Farmington, NM 87401
505.566.9116(9120fax)

PRODUCT RECOVERY

Project Name San Juan River Basin Project No. 220013

Project Manager Ashley Lowe Date 07/25/02

Client Company Montgomery Watson Harza

Site Name JF Bell

Well	Meter/Line No.	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-3		15:43	29.246	30.398	1.15	1.25gal
MW-1		15:59	—	—	—	~1gal

Comments MW-3: bright orange product

MW-1: Drum contained same amount of product as measured 07/22/02 (0.43') It appeared that pump has not been running. Settings: Pumping Time = 7X/day; Cycles/Day = 1; 2 pressure gages on canister = 20psi & 1900 psi Martin Nee adjusted pressure to 30 psi & raised pumping time to 5mins, 1X/day Pump works, but counter on control panel appears not to work- never changed from 0-00. After pump ran for 5 mins, we estimated ~1gal pumped out. Sprayed inside of meter house down w/chlorine-water solution, shoveled & set mouse traps.

Signature Ashley L Lowe Date 07/25/02

AESE
906 San Juan Blvd.Ste.D
Farmington, NM 87401
505.566.9116(9120fax)

PRODUCT RECOVERY

Project Name San Juan River Basin Project No. 220013

Project Manager Ashley Lowe Date 07/22/02

Client Company Montgomery Watson Harza

Site Name JF Bell

Well	Meter/Line No.	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Volume Removed
MW-1		8:35				1.09 ft^3
MW-3		8:56	29.17'	30.54	1.37	~1.5 gal

Comments

MW-1: measured thickness of product in recovery drum = ~~2.5~~ 0.43'
Diameter of drum = 1.8'
$V = \pi r^2 h$
$= 3.14 \times 0.9^2 \times 0.43$
$= 1.094\ ft^3$
Did not disassemble pump to measure water & product levels in MW-1
Mouse is living in meter house = Hanta Virus - needs to be cleaned out
MW3: bright orange product below light yellow product

Signature Ashley Lowe Date 07/22/02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 7-11-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-3	1543		29.31	30.66		1.35	RECOVERED 1.25 GAL. OF PRODUCT
MW-1		N					SYSTEM IS DOWN AND BEING REPAIRED BY XITECH.

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: WATER AND PRODUCT LEVELS NOT MEASURED IN MW-1 DUE TO PUMP IN WELL.

Signature: Robert Thompson

Date: 7-11-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 7-2-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-1	1548	N					CONTROLLER [redacted] INOPERABLE. REMOVED AND SENT IN TO XITECH FOR REPAIR.
MW-3	1625		29.25	30.56		1.31	RECOVERED 1.25 GAL. OF PRODUCT

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: DID NOT RECORD WATER AND PRODUCT LEVELS IN MW-1 DUE TO PUMP IN WELL.

Signature: Robert Thompson

Date: 7-2-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 6-27-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-1	1555	N	—	—		—	PUMP NOT OPERABLE. HIGH LEVEL SENSOR MAY BE MALFUNCTIONING.
MW-3	1601		29.30	30.65		1.35	RECOVERED 1.25 GAL OF PRODUCT.

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: WATER AND PRODUCT LEVELS IN MW-1 NOT RECORDED DUE TO PUMP IN WELL.

Signature: Robert Thompson

Date: 6-27-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 6-21-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-1	1526	N	—	—		—	MEASURED 2.68' TO PRODUCT IN DRUM DRUM TD IS 2.79' 0.11' OF PRODUCT IN DRUM. 2.1 GAL. OF PRODUCT IN DRUM
MW-3	1538		29.22	30.54		1.32	RECOVERED 1.25 OF PRODUCT

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: WATER AND PRODUCT LEVELS NOT MEASURED IN MW-1 DUE TO PUMP IN WELL. 20 MIN. ON TIMER. PUMP IS NOT OPERATIONAL. PRODUCT TANK FULL LIGHT IS ON. HIGH LEVEL SENSOR IS MALFUNCTIONING.

Signature: Robert Thompson

Date: 6-21-02

WELL OBSERVATION DATA

amec

Project Name: EpFS G.W. project Project No.: 1517000121

Project Mngr: Lisa Winn Task: 3

Client Co.: El paso Field Services Date: 6-14-02

Site Name: J.F. Bell #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Comments
MW 1		Equip in well							2 gal
MW 3	0907		28.97	30.31					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 Run Time 0-10 Replaced Battery Recovered Approximately 2 gal MW3 Recovered Approximately .25 gal product 1 gal water Readjusted Stinger Dph.

Signature: Chris A. Mann Date: 6-14-02

☐ Development
☑ Purging

WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW2

Page 1 of 1

Project Name EPFS G.W. project Project Manager LISA KINN Project No. 15170001.21

Client Company EL PASO Field Services

Site Name J.F. Bell #1E (94715) Site Address Rural SAN JUAN CO.

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☐ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 34.04
Initial Depth to Water (feet) 27.06
Height of Water Column in Well (feet) 6.98
Diameter (inches): Well 4" Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	6.98	4.55x3	13.65
Gravel Pack			
Drilling Fluids			
Total			13.65

Instruments

	Serial No. (If applicable)
☑ pH Meter	YSI 63
☑ DO Monitor	YSI 95
☑ Conductivity Meter	YSI 63
☑ Temperature Meter	YSI 63
☐ Other _____	

Water Disposal

KUTZ Seperator Bloomfield NM.

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6-5-02	1411		X				2.75	2.75			15.6	6.89	462		Cloudy, light grey no odor
	1415		X				2.75	5.5			14.0	6.93	448.1		" "
	1419		X				2.75	8.25			13.6	6.89	446.7		" "
	1424		X				2.75	11			13.5	6.87	442.9		" "
	1429		X			32.02	2.75	13.75			13.6	6.92	446.7	2.90	no Change

Comments: Sampled for BTEX 1435

Developer's Signature(s) [signature] 6-5-02 Reviewer [signature] Date 6/10/02

L:\forms\MW Dvlpmnt 2.dot 11/2/01

☐ Development
☑ Purging

WELL DEVELOPMENT AND PURGING DATA FORM

Well Number MW 4 Page 1 of 1

Project Name EPFS GW. project Project Manager LISA Winn Project No. 151700121

Client Company El Paso Field Services

Site Name J.F. Bell #1E (94715) Site Address Rural SAN JUAN CO.

Development Criteria

☑ 3 to 5 Casing Volumes of Water Removal
☐ Stabilization of Indicator Parameters
☐ Other _____

Methods of Development

Pump	Bailer
☐ Centrifugal	☑ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other _____

Water Volume Calculation

Initial Depth of Well (feet) 34.12
Initial Depth to Water (feet) 27.16
Height of Water Column in Well (feet) 7.01
Diameter (inches): Well 4" Gravel Pack ____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing	7.01	4.57X3	13.71
Gravel Pack			
Drilling Fluids			
Total			13.71

Instruments

	Serial No. (If applicable)
☑ pH Meter	YSI 63
☑ DO Monitor	YSI 95
☑ Conductivity Meter	YSI 63
☑ Temperature Meter	YSI 63
☐ Other _____	

Water Disposal

KnTZ Seperator Bloomfield N.M

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (mmhos/cm)	Dissolved Oxygen (mg/L)	Comments
6-5-02	1458		X				2.75	2.75			15.1	7.09	560		Clear, no odor
	1501		X				2.75	5.5			14.3	7.37	551		" "
	1505		X				2.75	8.25			14.2	7.28	550		Cloudy, no odor
	1511		X				2.75	11			14.2	7.23	560		" "
	1514		X			33.31	2.75	13.75			14.4	7.30	556	3.28	No Change

Comments SAMPLED for BTEX 1520

Developer Signature(s) [signature] 6-5-02 Reviewer [signature] Date 6/10/02

L:\forms\MW Dvlpmnt 2.dot 11/29/01

Pinnacle Laboratories Inc.

CHAIN OF CUSTODY

DATE: 6-5-02 PAGE: 1 OF 1

PLI Accession #:

SHADED AREAS ARE FOR LAB USE ONLY

PLEASE FILL THIS FORM IN COMPLETELY.

PROJECT MANAGER:	Lisa Linn
COMPANY:	AMEC
ADDRESS:	2060 AFTON Place Farmington NM 87401
PHONE:	(505) 327-9292
FAX:	(505) 326-5721
BILL TO:	Scott Pope
COMPANY:	El Paso Field Services
ADDRESS:	614 Reilly AVE Farmington NM 87401

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
JFB-026-MW2	6-5-02	1435	H_2O	
JFB-026-MW4	6-5-02	1520	H_2O	
Trip Blank	6-4-02	1035	H_2O	

ANALYSIS REQUEST

Petroleum Hydrocarbons (418.1) TRPH	(MOD.8015) Diesel/Direct Inject	(M8015) Gas/Purge & Trap	8021 (BTEX)/8015 (Gasoline) MTBE	8021 (BTEX) ☐MTBE ☐TMB ☐PCE	8021 (TCL)	8021 (EDX)	8021 (HALO)	8021 (CUST)	504.1 EDB ☐ / DBCP ☐	8260 (TCL) Volatile Organics	8260 (Full) Volatile Organics	8260 (CUST) Volatile Organics	8260 (Landfill) Volatile Organics	Pesticides/PCB (608/8081/8082)	Herbicides (615/8151)	Base/Neutral/Acid Compounds GC/MS (625/8270)	Polynuclear Aromatics (610/8310/8270-SIMS)	General Chemistry:		Priority Pollutant Metals (13)	Target Analyte List Metals (23)	RCRA Metals (8)	RCRA Metals by TCLP (Method 1311)	Metals:		NUMBER OF CONTAINERS
			X																							3
			X																							3
			X																							1

PROJECT INFORMATION	PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS
PROJ. NO.: 15100012.1	(RUSH) ☐24hr ☐48hr ☐72hr ☐1 WEEK (NORMAL) ☑
PROJ. NAME: FJFSGW proj	CERTIFICATION REQUIRED ☐NM ☐SDWA ☐OTHER
P.O. NO.:	METHANOL PRESERVATION ☐
SHIPPED VIA: Ground	COMMENTS: FIXED FEE ☐

J. F. Bell #1E
meter # (94715)

SAMPLE RECEIPT		
NO. CONTAINERS		
CUSTODY SEALS	Y/N/NA	
RECEIVED INTACT	Y/N/NA	
BLUE ICE	Y/N/NA	

RELINQUISHED BY: 1	RELINQUISHED BY: 2
Signature: Time: 1430	Signature: Time:
Printed Name: Date: Chris Mayer 6-6-02	Printed Name: Date:
Company: AMEC	Company:
See reverse side (Force Majeure)	

RECEIVED BY: 1	RECEIVED BY (LAB): 2
Signature: Time:	Signature: Time:
Printed Name: Date:	Printed Name: Date:
Company:	Pinnacle Lab

WELL OBSERVATION DATA

amec

Project Name: EPFS GW project

Project No.: 1517000121

Project Mngr: Lisa Minn

Task: 3

Client Co.: El Paso Field Services

Date: 6-7-02

Site Name: J.F. Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Product Thickness	Product Thickness	Approximate Product Recovery Comments
MW 1									2.5 gal
MW 3			28.72	29.91					1.25 gal

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments:

Signature: Chris A Mac

Date: 6-7-02

WELL OBSERVATION DATA

amec

Project Name: EpFS GW Project

Project No.: 1512000121

Project Mngr: Lisa Winn

Task: 3

Client Co.: El Paso Field Services

Date: 5-31-02

Site Name: J.F. Bell

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Approximate product recovery	Comments
MW 1		equip. in well							5 gal	
MW 3			28.72	29.96			1.24		1.25 gal	

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 Run Time 0.33 upon arrival System NOT Running, BOOSTED with Truck Battery for 30 min System Running Cycled for 10 min. Green light.

Signature: Lisa L Winn

Date: 5-31-02

WELL OBSERVATION DATA

amec

Project Name: EpFS G.W. project

Project No.: 151700012.1

Project Mngr: Lisa Winn

Task: 3

Client Co.: El Paso Field Services

Date: 5-24-02

Site Name: J. F. Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Approximate product Recovery Comments
MW3	1010		28.53	29.53					0

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: INSTALLED Controll panel MW1 MW3. NO product Recovered Screen NOT AT Right Level, ADJUSTED Screen Depth.

Signature: Chris A. Mag

Date: 5-24-02

WELL OBSERVATION DATA

amec

Project Name: EPFS G.W. project

Project No.: 1517000121

Project Mngr: Lisa Winn

Task: 3

Client Co.: El paso Field Services

Date: 5-15-02

Site Name: J.F. Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)			Approximate Product Recovery Comments
MW 1	1045		28.48	28.97					
MW 2	11 10			27.02					
MW 3	10 22		28.69	29.86					1.25 gal
MW 4	1055			27.14					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW 1 Runtime 1-20 Drum level .79 Removed Control Box and Drum Level Sensor To Be Repaired No water Recovered in MW 3

Signature: Chris A. Mc

Date: 5-15-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 5-10-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-3	1628		28.90	30.21		1.31'	RECOVERED 1 GAL. OF PRODUCT, NO WATER.

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: PUMP IS DOWN ON MW-1. NO CHANGE SINCE LAST WEEK. PUMP NEEDS NEW HIGH LEVEL SHUTOFF SWITCH.

Signature: Robert Thompson

Date: 5-10-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT Project No.: 151700012

Project Mngr: LISA WINN Task: 3

Client Co.: EL PASO FIELD SERVICE Date: 5-3-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-1	1350	N	—	—		—	30 MIN. ON TIMER. MEASURED 2.36' TO PRODUCT IN DRUM. DRUM TO 2.79'
MW-3	1405		—	28.96		0.00	RECOVERED 1 GAL. OF PRODUCT

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: PUMP AT BELL IS INOPERABLE. DID NOT HAVE ENOUGH TIME TO TROUBLE-SHOOT. WILL ~~RETURN~~ NEXT WEEK TO ATTEMPT TO REPAIR. 4.23 gal MW-1

Signature: Robert Thompson Date: 5-3-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 4-25-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to *Floating* Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-1	1618	N	—	—			45 MIN. ON TIMER. RECORDED 2.42' TD PRODUCT IN DRUM. DRUM T.D. 2.79
MW-3	1623		28.93	30.24		1.31	RECOVERED 1 GAL. OF PRODUCT.

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW-1 NOT MEASURED DUE TO PUMP IN WELL MW-1 4.37gal

Signature: Robert Thompson

Date: 4-25-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 4-19-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Comments
MW-1	0940	N					TIMER AT 52 MINUTES. PRODUCT IN DRUM - 2.55' DRUM TD - 2.7'
MW-3	0950		28.93	30.25		1.32	RECOVERED 1 GAL. OF PRODUCT. NO WATER RECOVERED.

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments:

Signature: Robert Thompson

Date: 4-19-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 151700121-*

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICE

Date: 4-12-02

Site Name: J.F. BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Comments
MW-1	1555	PUMP IN WELL		—			—		TIMER 1#20s DRUM- 2.67'
MW-2	1605			26.98			0.00		
MW-4	1607			27.10			0.00		
MW-3	1610		28.93	30.28			1.35		1 GAL OF PRODUCT RECOVERED

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MEASURED 2.67' TO PRODUCT IN DRUM. TOTAL DRUM DEPTH IS 2.79'

3.44 GAL. OF PRODUCT IN DRUM.

Signature: Robert Thompson

Date: 4-12-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW project

Project No.: 15120001.21

Project Mngr: Lisa Winn

Task: 3

Client Co.: El paso Field Services

Date: 4-4-02

Site Name: J.F Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Approximate Product Recovery Comments
MW 1	1308	eq in well							2.5 gal
MW 3	1320		28.66	29.84					1.25 gal

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 Run Time 1-00, NO water Recovered in either well

Signature: Chris A. Mary

Date: 4-4-02

WELL OBSERVATION DATA

amec

Project Name: EpFS GW project

Project No.: 15/7000121

Project Mngr: Lisa Winn

Task: 3

Client Co.: El paso Field Services

Date: 3-28-02

Site Name: J.F. Bell # 1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)			Approximate Product Recovery Comments
MW 1	1524		28.51	28.64					5 gal.
MW 2	1506			26.94					
MW 3	1513		28.57	29.24					1.25 gal.
MW 4	1509			27.06					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW 1 RunTime 0-57 NO water Recovered in either well

Signature: Chris A Pm

Date: 3-28-02

WELL OBSERVATION DATA

amec

Project Name: EpFS G.W. project

Project No.: 15/7000121

Project Mngr: Lisa Winn

Task: 3

Client Co.: El paso Field Services

Date: 3-21-02

Site Name: J.F. Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)			Comments
MW 1		Equip in well	28.61	29.82					5 gal
MW 3									1.25 gal

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 Run Time 1-51 NO water Recovered in either well

Signature: Chris J. Macey

Date: 3-21-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 15170000121

Project Mngr: Lisa Winn

Task: 3

Client Co.: El Paso Field Services

Date: 3-11-02

Site Name: J.F Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	[redacted]	[redacted]	Approximate Product Recovery Comments
MW 1	0845	equip. in well							2 gal.
MW 3	0437		28.72	29.90					1.25 gal

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: NO water Recovered in either well

Signature: Chad Mc[illegible]

Date: 3-11-02

amec

Project Name: EpFS GW project

Project No.: 15700012

Project Mngr: Lisa Winn

Task: 3

Client Co.: El paso Field Services

Date: 3-6-02

Site Name: J.F. Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	[redacted]	[redacted]	Approximate Product Recovery Comments
MW 1	1106	equip in well							3 gal.
MW 3			24.55	29.72					1.25 gal.

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 Run Time 1-00 NO water Recovered

MW3 NO water Recovered in skimmer

Signature: [signature]

Date: 3-6-02

amec

Project Name: EPFS GW project Project No.: 1517 00121

Project Mngr: LISA Winn Task: 3

Client Co.: El paso Field Services Date: 2-28-02

Site Name: J. F. Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Approximate Product Recovery Gallons Comments
MW 1	0850		24.31	24.62			.31		3.5 gal
MW 2	0825			26.92					
MW 3	0940		28.64	29.82			1.18		1.25 gal
MW 4	0830			27.05					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 Run Time 8.25 Recovered Approx. 3.5 gal MW3 Recovered Approx 1.25 gal. NO water Recovered in either well

Signature: Chris A. Mackey Date: 2-28-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 02-20-02

Site Name: JF BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Comments
MW1	1445	EQUIP. IN WELL							2.50 gal.
MW2	1438			26.91					
MW3	1430		28.74	28.76			.02		1.25 gal
MW4	1439			27.05					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments:

Signature: Jacey McClintan

Date: 02-20-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 02-14-02

Site Name: JF BELL #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	PROD. RECOVERY Comments
MW1	1432	EQUIP IN WELL							2.50 gal.
MW2	1424			26.90					
MW3	1412		~~28.~~ 27.80	28.80			1.00		1.25 gal.
MW4	1420			27.05					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments:

Signature: Jacey McCurtain

Date: 02-14-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 02-07-02

Site Name: JF BELL #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	APPROX. PROD RECOVERY Comments
MW1 *		EQUIP IN WELL							2.50 GAL
MW2				26.90					
MW3 *			28.70	30.00					1.25 GAL
MW4				27.02					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 RUN TIME 0.30

MW3 NO WATER RECOVERED

Signature: Jacey McCuntain

Date: 02-07-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT Project No.: 1517000121

Project Mngr: LISA WINN Task: 3

Client Co.: EL PASO FIELD SERVICES Date: 01-31-02

Site Name: JF BELL #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	APPROX. PROD RECOVERY
MW1	1040	EQUIP. IN WELL							3 GAL.
MW2	1020			26.92					
MW3	1000		28.68	28.70					2.5 GAL
MW4	1022			27.60					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW 1 RUN TIME 0.30 DRUM LEVEL @ 3 GAL. RECOVERY NO WATER RECOVERED IN MW1 OR MW3

Signature: Jacey McCurtain Date: 01-31-02

WELL OBSERVATION DATA

amec

Project Name: EPFS

Project No.: 1517000121

Project Mngr: LISA WINN

Task: 3

Client Co.: EL PASO FIELD SERVICES

Date: 01-23-02

Site Name: J.F. BELL #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Comments APPROX. PRODUCT RECOVERY
✓ MW1	1545	EQUIP. IN WELL							2.50 gal
MW2	1510			26.88					
✓ MW3	1520		28.70	28.71			0.01		1.25 gal.
MW4	1512			27.00					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW 1 RUN TIME 1-10

NO WATER RECOVERED MW1 OR MW3

Signature: Jacey McCanton

Date: 01-23-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW PROJECT Project No.: 1517000121

Project Mngr: LISA WINN Task: 3

Client Co.: EL PASO FIELD SERVICES Date: 01-17-02

Site Name: JF BELL #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	APPROX. PRODUCT RECOVERY IN GALLONS Comments
MW1	9:55	EQUIP. IN WELL							2.50 GAL.
MW3	9:26		28.70	30.00			1.3		1.25 GAL

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: RUN TIME 1-10 16.5 CUPS RECOVERED

Signature: Jacey McCurtain Date: 01-17-02

WELL OBSERVATION DATA

amec

Project Name: EPFS G.W. Project

Project No.: 1517000121

Project Mngr: Lisa Winn

Task: 3

Client Co.: El Paso Field Services

Date: 1-8-02

Site Name: J.F. Bell #1E

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Approximate Product Recovery Comments Gallons
MW1	0910		28.25	28.54			.29		1 gal.
MW2	0840			26.98					
MW3	0949		29.41	29.59			.18		1.25 gal.
MW4	0944			27.00					

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 RunTime 0-30 Drum Level 2.73 Recovery .05 = 0.1956 gal. MW3 No water Recovered

Signature: Chris A. Mary

Date: 1-8-02

WELL OBSERVATION DATA

amec

Project Name: EPFS GW project

Project No.: 1512000121

Project Mngr: Lisa Hinn

Task: 3

Client Co.: El paso Field Services

Date: 1-4-02

Site Name: J.F. Bell #1E (94715)

Well or Piezometer	Time	Reason Not Measured	Depth to Floating Product (Feet)	Depth to Water (Feet)	Depth to Sinking Product (Feet)	Total Well Depth (Feet)	Floating Product Thickness	Sinking Product Thickness	Approximate Product Recovery Gallons Comments
MW1	1335	Equip in well							2.49 gal
MW3	1339		28.39	29.63			1.24		1.25 gal.

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: MW1 Run Time 1-10 2.65 Recovery .13 Converted to gal. = 2.487

NO water Recovered in either MW 1 or MW 3

Signature: Christ May

Date: 1 4 02