

**3R - 223**

**ANNUAL  
MONITORING  
REPORT**

**02/21/2005**



**Via Federal Express**

February 21, 2005

Mr. Ed Martin  
New Mexico Oil Conservation Division  
1220 St. Francis Dr.  
Santa Fe, NM 87504

**RE: 2004 Pit Project Annual Groundwater Report**

Dear Mr. Martin:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 20 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

EPFS has organized the 20 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 land sites and Volume 3 contains one site on Navajo land. EPFS understands closure of groundwater sites on Navajo lands falls under jurisdiction of the Navajo Nation Environmental Protection Agency; however, the Navajo site report is included for your information.

If you have any questions concerning the enclosed reports, please call me at (719) 520-4433.

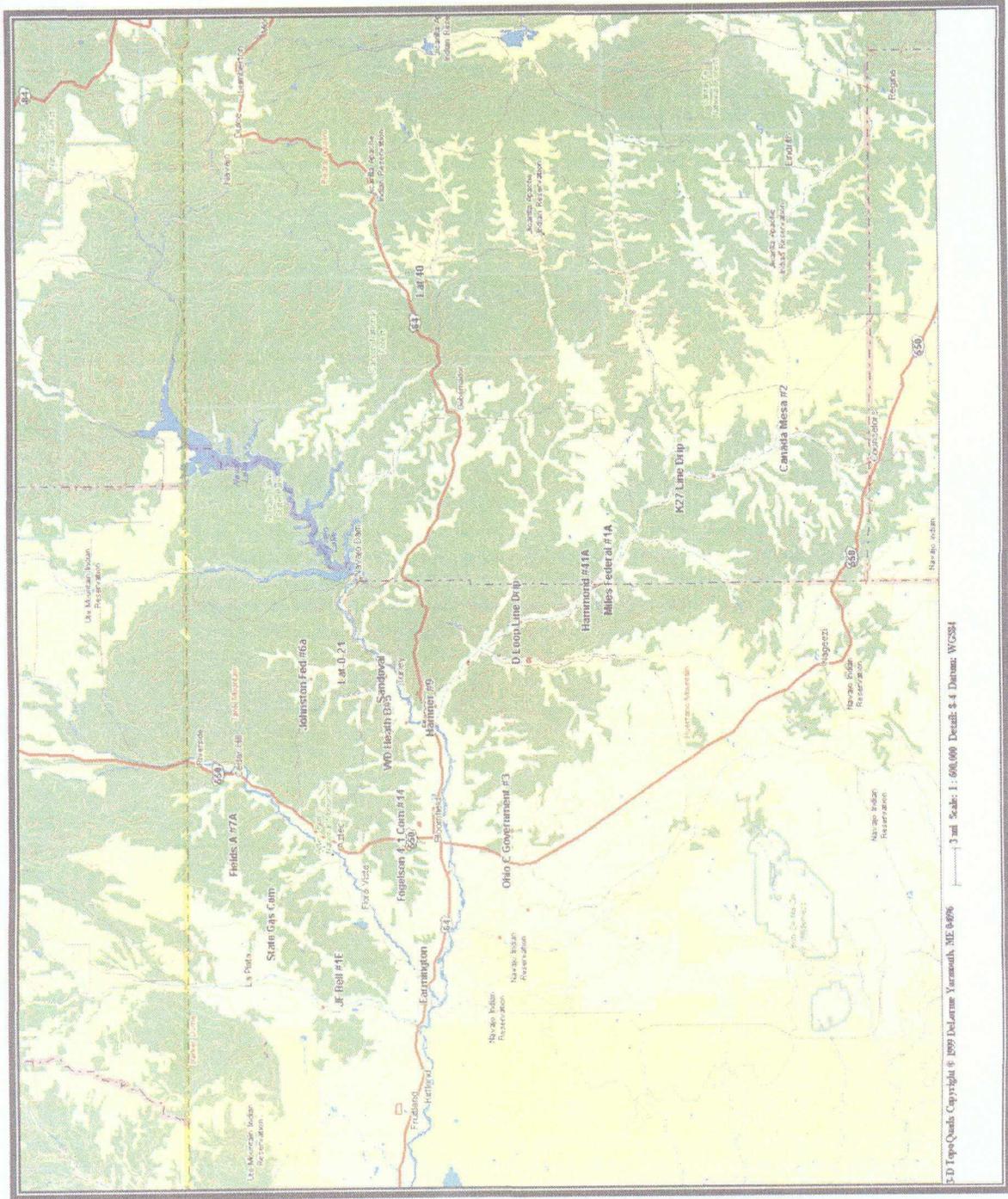
Sincerely,

A handwritten signature in black ink that reads "Scott T. Pope".

Scott T. Pope P.G.  
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Federal Express**  
Mr. Bill Liesse, BLM - w / enclosures (federal sites only), **Federal Express**  
Dr. Ted Helfgott, Enterprise - w / enclosures (Enterprise sites only), **Federal Express**  
Groundwater Pit File w / o enclosures  
Pam Anderson - MWH, w / o enclosures  
Inside Pocket of Each Volume of Report

# Federal Groundwater Site Map



3R223

**EPFS GROUNDWATER SITES  
2004 ANNUAL GROUNDWATER REPORT**

**Miles Fed 1A  
Meter Code: 94810**

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**SITE DETAILS**

<b>Legal Description:</b>	<b>Town:</b> 26N	<b>Range:</b> 7W	<b>Sec:</b> 5	<b>Unit:</b> F
<b>NMOCD Haz Ranking:</b>	40	<b>Land Type:</b>	Federal	<b>Operator:</b> Louis Dreyfus Natural Gas

**PREVIOUS ACTIVITIES**

<b>Site Assessment:</b>	5/94	<b>Excavation:</b>	6/94	<b>Soil Boring:</b>	9/95
<b>Monitor Well:</b>	9/95	<b>Geoprobe:</b>	2/97	<b>Additional MWs:</b>	10/99
<b>Downgradient MWs:</b>	10/99	<b>Replace MW:</b>	NA	<b>Quarterly Initiated:</b>	NA
<b>ORC Nutrient Injection:</b>	NA	<b>Re-Excavation:</b>	NA	<b>PSH Removal Initiated:</b>	2/99
<b>Annual Initiated:</b>	10/99	<b>Quarterly Resumed:</b>	NA		

**SUMMARY OF 2004 ACTIVITIES**

**MW-1:** Quarterly free-product recovery activities and water level monitoring were performed. MW-1 was redeveloped in October 2004.

**MW-2:** Quarterly water level monitoring was performed.

**MW-3:** Quarterly water level monitoring was performed.

**Site-Wide Activities:** The site was inspected quarterly for hydrocarbon seeps. No seeps were detected. A technology review and data assessment were performed to evaluate free-product removal protocol and methodologies for sites with free-product.

**SITE MAP**

A site map (2004) is attached in Figure 1.

**SUMMARY TABLES AND GRAPHS**

- Historic analytical data are presented graphically in Figures 2 through 4.
- Free-product recovery data from 2004 are summarized in Table 1, and historic data are presented graphically in Figure 5.
- Field documentation is presented in Attachment 1.

**EPFS GROUNDWATER SITES  
2004 ANNUAL GROUNDWATER REPORT**

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**GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS**

No subsurface activities were performed at this site during 2004.

**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 water level data collected during 2004.

**CONCLUSIONS**

- The groundwater flow direction at this site is toward the northeast.
- Free-product recovery efforts at MW-1 resulted in removal of approximately 0.9 gallons of free-phase hydrocarbons during 2004 bringing the cumulative total recovered to date to approximately 11.1 gallons. Free-product removal in 2003 totaled 1.7 gallons, compared to 0.9 gallons in 2004, demonstrating that product accumulation is decreasing.
- Based on the technology review and free-product removal data for this site, it was concluded that oil-absorbent socks would be the most efficient and cost-effective product removal technique for MW-1 at this time.
- There was no apparent change in product recovery following redevelopment of MW-1 in October 2004.
- No seeps along the well pad slopes were noted during 2004.

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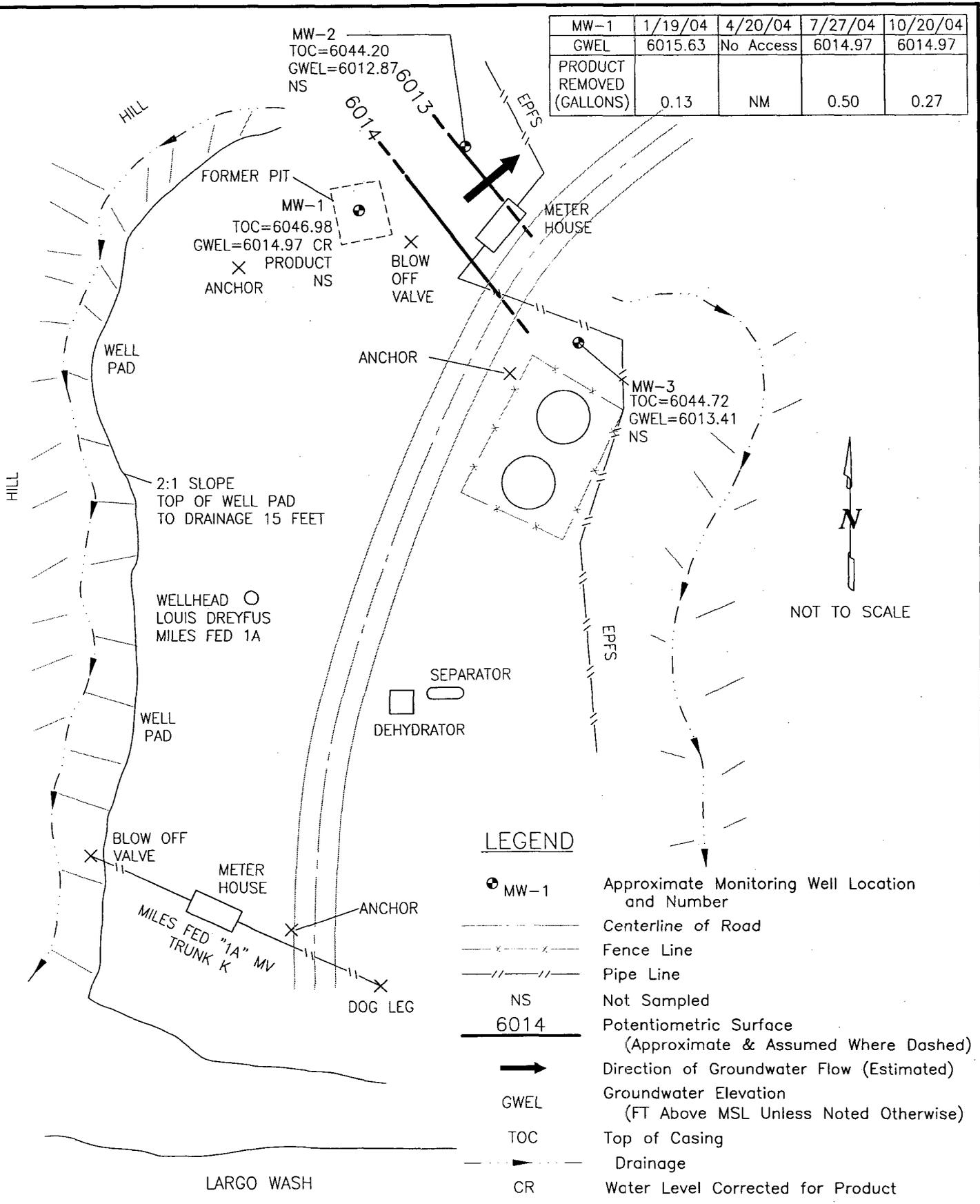
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**RECOMMENDATIONS**

- EPFS will continue to inspect the well pad slopes for evidence of seeps. If a seep is found, photographic documentation will be made and the seep will be sampled.
- EPFS recommends installation of oil absorbent socks to facilitate free-product removal in 2005. EPFS will continue quarterly free-product recovery efforts at these wells; however, the frequency of monitoring will be adjusted based on the amount of product recovered during the monitoring visits.
- Once free-product recovery efforts are completed at MW-1, this well will be sampled on an annual basis until sample results approach closure criteria. The well will then be scheduled for quarterly sampling until closure criteria are met.
- EPFS will continue water level monitoring at MW-2 and MW-3, in conjunction with product removal activities. Because historical analyses indicate minimal contamination in MW-2 and MW-3, these wells will not be sampled until free-product recovery efforts at MW-1 are complete. These wells will then be sampled on an annual basis until closure samples are collected.

MW-1	1/19/04	4/20/04	7/27/04	10/20/04
GWEL	6015.63	No Access	6014.97	6014.97
PRODUCT REMOVED (GALLONS)	0.13	NM	0.50	0.27



MILES FED 1A, METER 94497  
2004

GROUNDWATER SITES  
EL PASO FIELD SERVICES

FIGURE 1

milesfed1a.dwg

**TABLE 1**  
**SUMMARY OF FREE-PRODUCT REMOVAL DURING 2004**  
**MILES FED 1A (METER #94810)**

Site Name	Monitoring Well	Removal Date	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Product Thickness (feet)	Volume of Product Removed (gallons)	Cummulative Volume of Product Removed (gallons)
Miles Fed 1A	MW-1	1/19/04	31.32	31.49	0.17	0.13	10.33
Miles Fed 1A	MW-1	4/20/04	NM	NM	NM	NM	10.33
Miles Fed 1A	MW-1	7/27/04	31.89	32.47	0.58	0.50	10.83
Miles Fed 1A	MW-1	10/20/04	31.95	32.24	0.29	0.27	11.09

No access to site in April 2004 due to inclement weather/road conditions.

No evidence of seeps observed in drainage during October inspection

Well MW-1 redeveloped in October 2004.

**FIGURE 2**  
**HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS**  
**MILES FED 1A**  
**MW-1**



**FIGURE 3**  
**HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS**  
**MILES FED 1A**  
**MW-2**

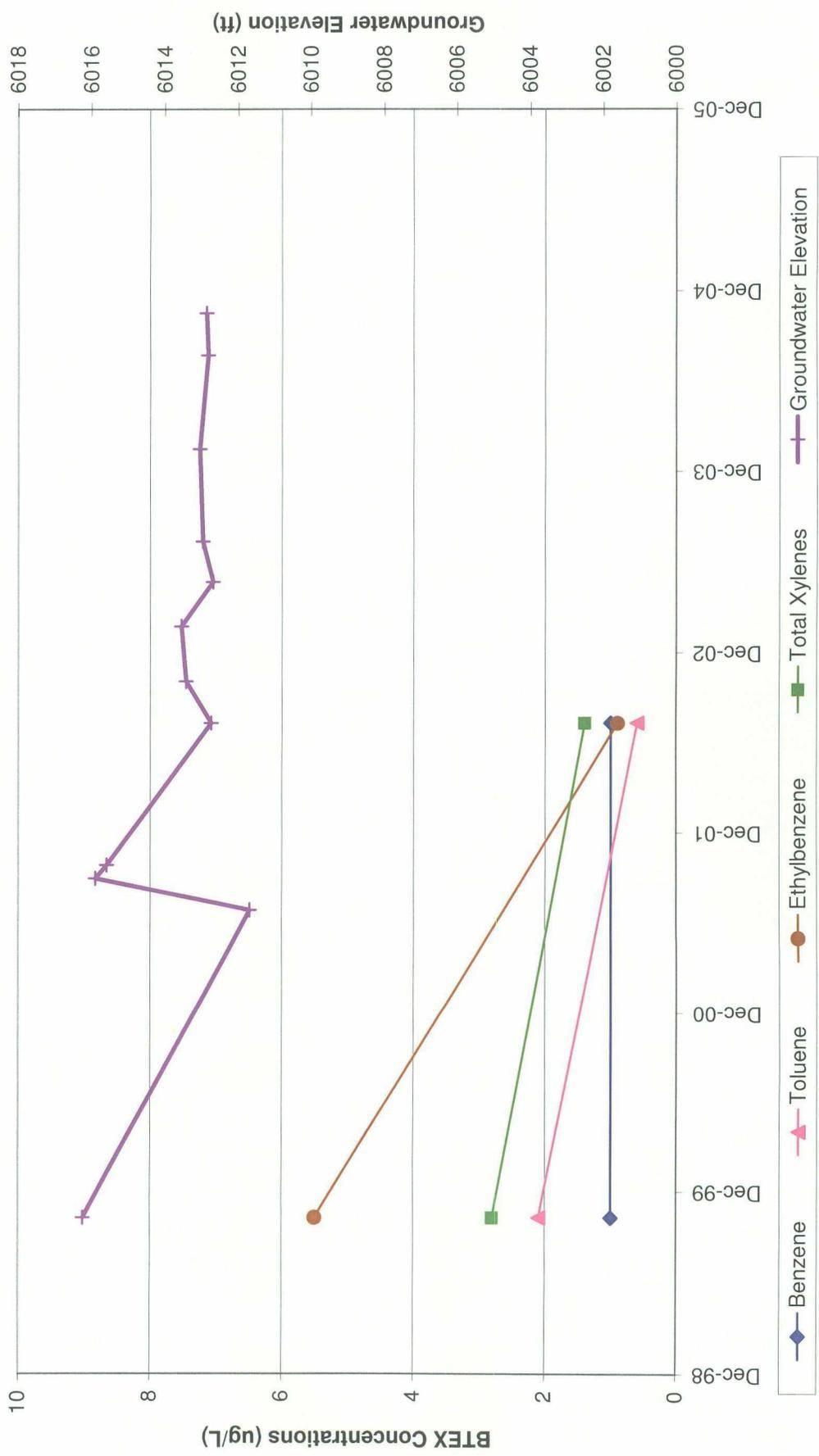
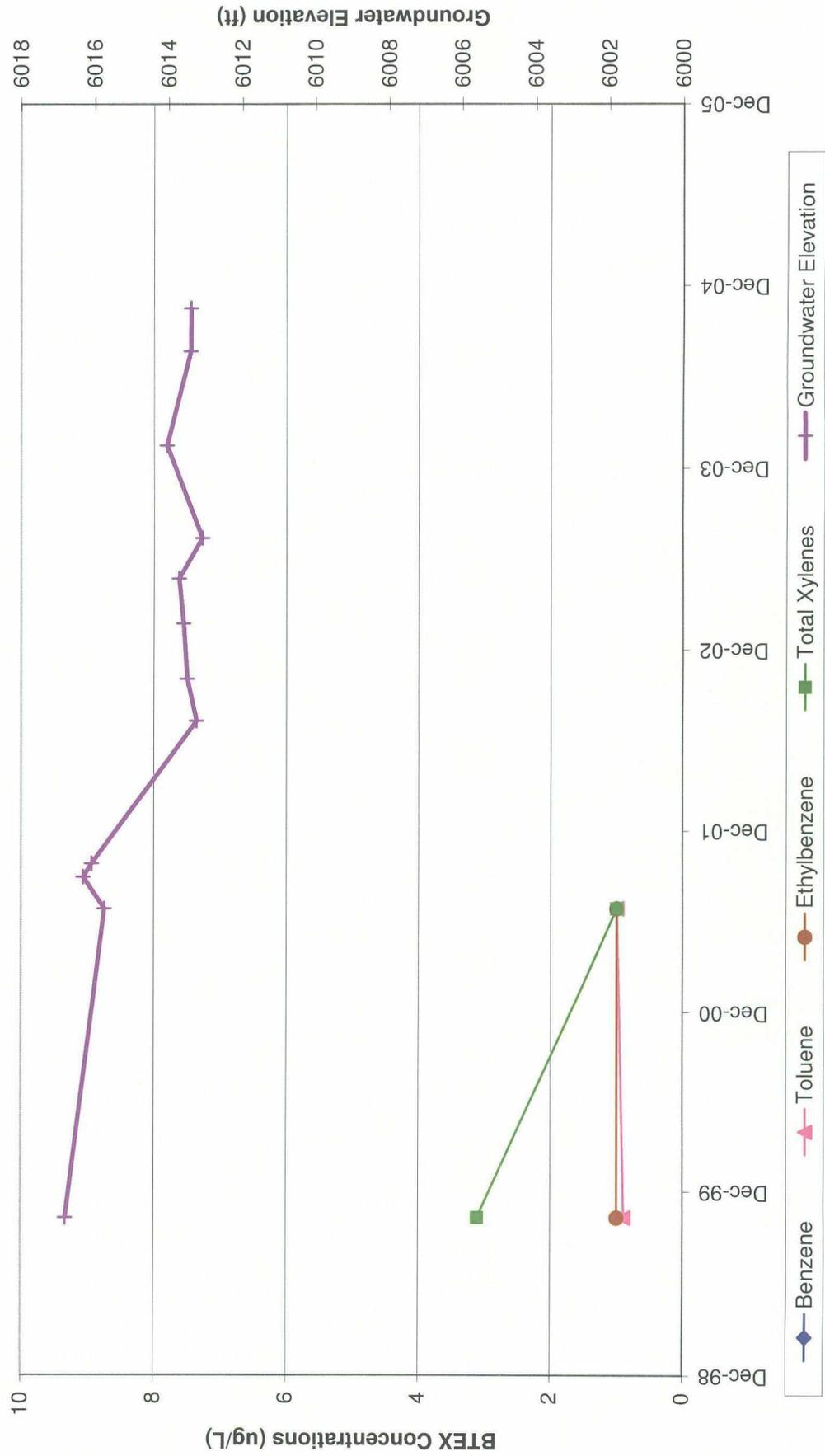


FIGURE 4  
 HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS  
 MILES FED 1A  
 MW-3



**FIGURE 5**  
**HISTORIC FREE-PRODUCT RECOVERY**  
**MILES FED 1A**  
**MW-1**

