

**3R - 204**

**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.

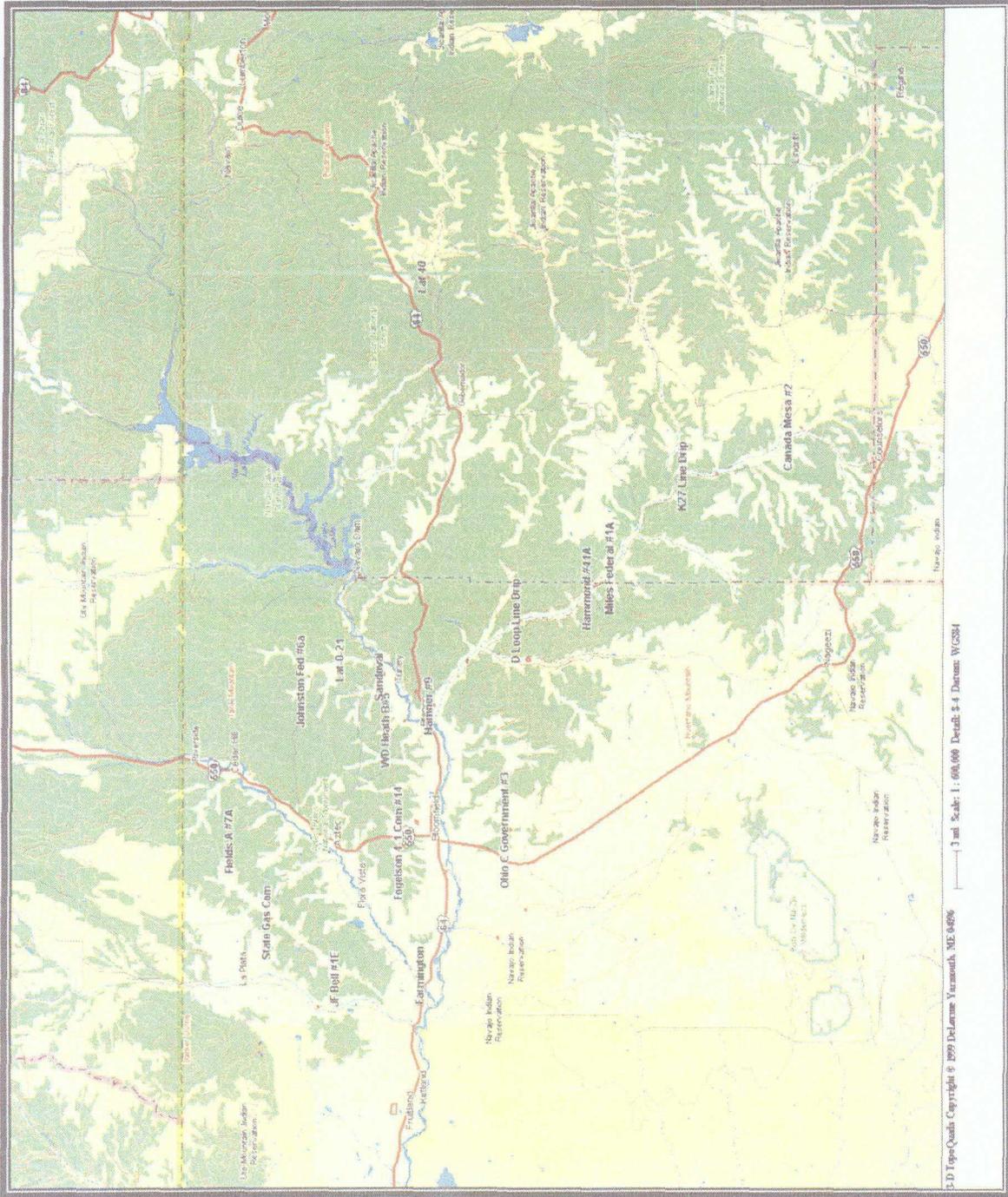
Sincerely,

A handwritten signature in black ink, appearing to read "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



3R204

**EPFS GROUNDWATER SITES  
2004 ANNUAL GROUNDWATER REPORT**

**K27  
Meter Code: LD072**

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**SITE DETAILS**

<b>Legal Description:</b>	<b>Town:</b> 25N	<b>Range:</b> 6W	<b>Sec:</b> 4	<b>Unit:</b> E
<b>NMOCD Haz Ranking:</b> 40	<b>Land Type:</b> Federal	<b>Operator:</b>	El Paso Field Services	

**PREVIOUS ACTIVITIES**

<b>Site Assessment:</b>	7/94	<b>Excavation:</b>	8/94	<b>Soil Boring:</b>	9/99
<b>Monitor Well:</b>	9/95	<b>Geoprobe:</b>	9/95	<b>Additional MWs:</b>	12/99
<b>Downgradient MWs:</b>	12/99	<b>Replace MW:</b>	7/00	<b>Quarterly Initiated:</b>	NA
<b>ORC Nutrient Injection:</b>	NA	<b>Re-Excavation:</b>	NA	<b>PSH Removal Initiated:</b>	2/98
<b>Annual Initiated:</b>	NA	<b>Quarterly Resumed:</b>	NA		

**SUMMARY OF 2004 ACTIVITIES**

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

**MW-2:** Quarterly free-product recovery activities and water level monitoring were performed in 2004. MW-2 was redeveloped in October 2004.

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

**Site-Wide Activities:** A technology review and data assessment were performed to evaluate free-product removal protocol and methodologies for sites with free-product.

**SITE MAPS**

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

**SUMMARY TABLES AND GRAPHS**

- Historic BTEX concentrations and groundwater elevations for MW-1, MW-2 and MW-3 are presented graphically in Figures 2 through 4.
- Free-product removal data for 2004 are summarized in Table 1, and historic data are presented graphically in Figures 5 and 6.
- 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 is approximately to the north (varies between northeast to northwest) at this site.
- Approximately 0.13 gallons of free-product was removed from MW-1 during 2004 bringing the cumulative total of recovered hydrocarbons at this well to 2.02 gallons since 2001. A similar amount of product was removed in 2003.
- Approximately 1.65 gallons of free-product was removed from MW-2 during 2004 bringing the cumulative total of recovered hydrocarbons at this well to 5.83 gallons since 2001. A similar amount of product was removed in 2003.
- Based on the technology review and free-product removal data for this site, it was concluded that free-product removal would be most efficient using oil-absorbent socks in MW-1 and MW-2 at this time.

**RECOMMENDATIONS**

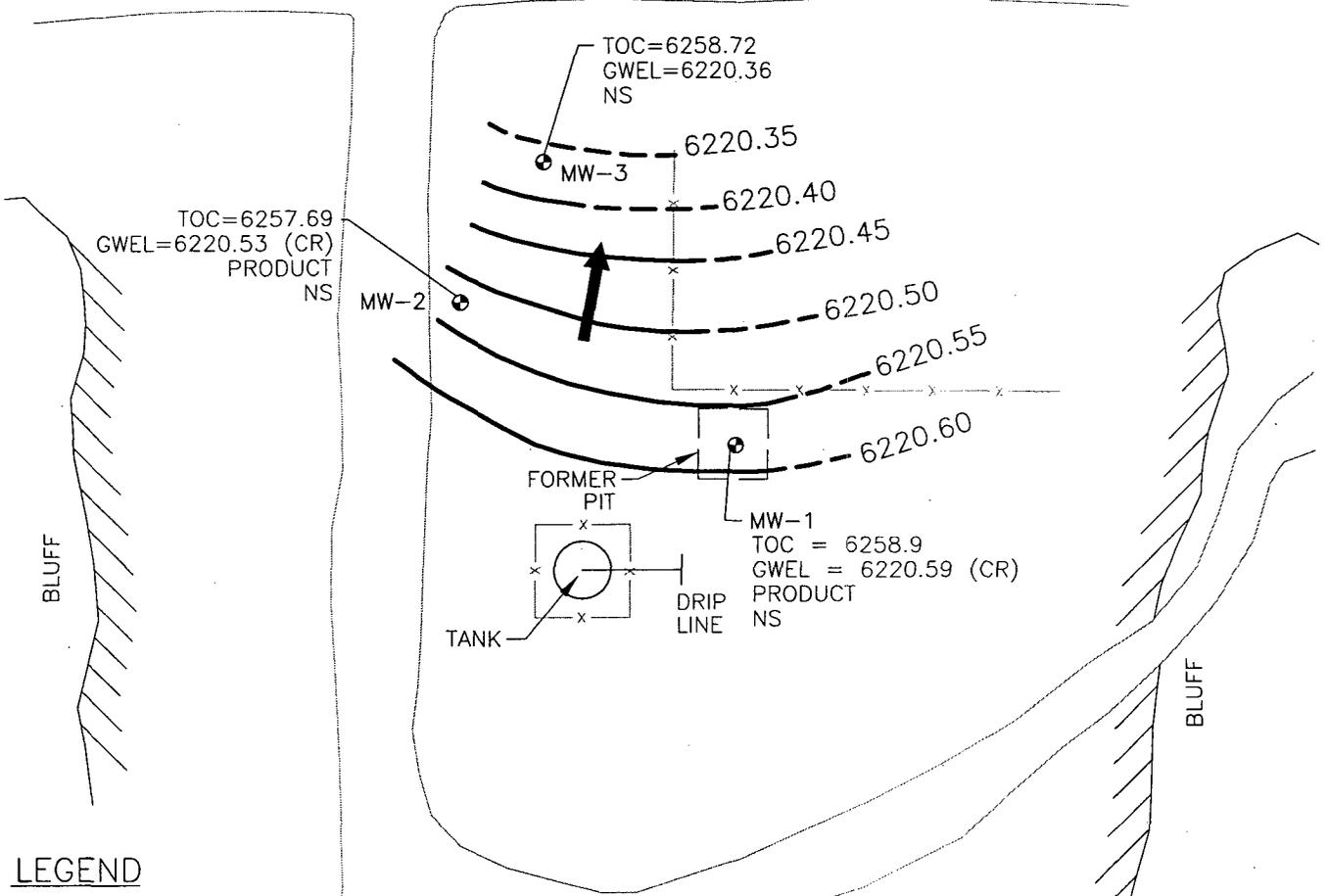
- EPFS recommends installation of oil-absorbent socks into MW-1 and MW-2 to facilitate free-product removal in 2005. EPFS will continue quarterly free-product recovery efforts at these wells; however, the frequency of monitoring will be adjusted based on the amount of product recovered during the monitoring visits.
- EPFS will continue to monitor groundwater levels on a quarterly basis at MW-3.
- Once free-product recovery efforts are completed at this site, each well 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.

LARGO WASH

WFS DOGIE STATION

MW-1	1/19/04	4/20/04	7/27/04	10/20/04
Product Removed (Gallons)	0.01	0.00	0.10	0.02

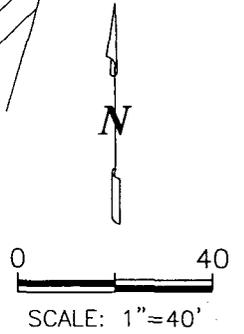
LARGO ROAD



LEGEND

- MW-1 Approximate Monitoring Well Location and Number
- Road
- Fence Line
- Pipe Line
- 6566.0 Potentiometric Surface (Assumed Where Dashed)
- Direction of Groundwater Flow
- GWEL Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing

- Product
- NS Not Sampled
- CR Water Level Has Been Corrected for Free-Product



K-27 LINE DRIP, METER LD072  
JULY 2004

GROUNDWATER SITES  
EL PASO FIELD SERVICES

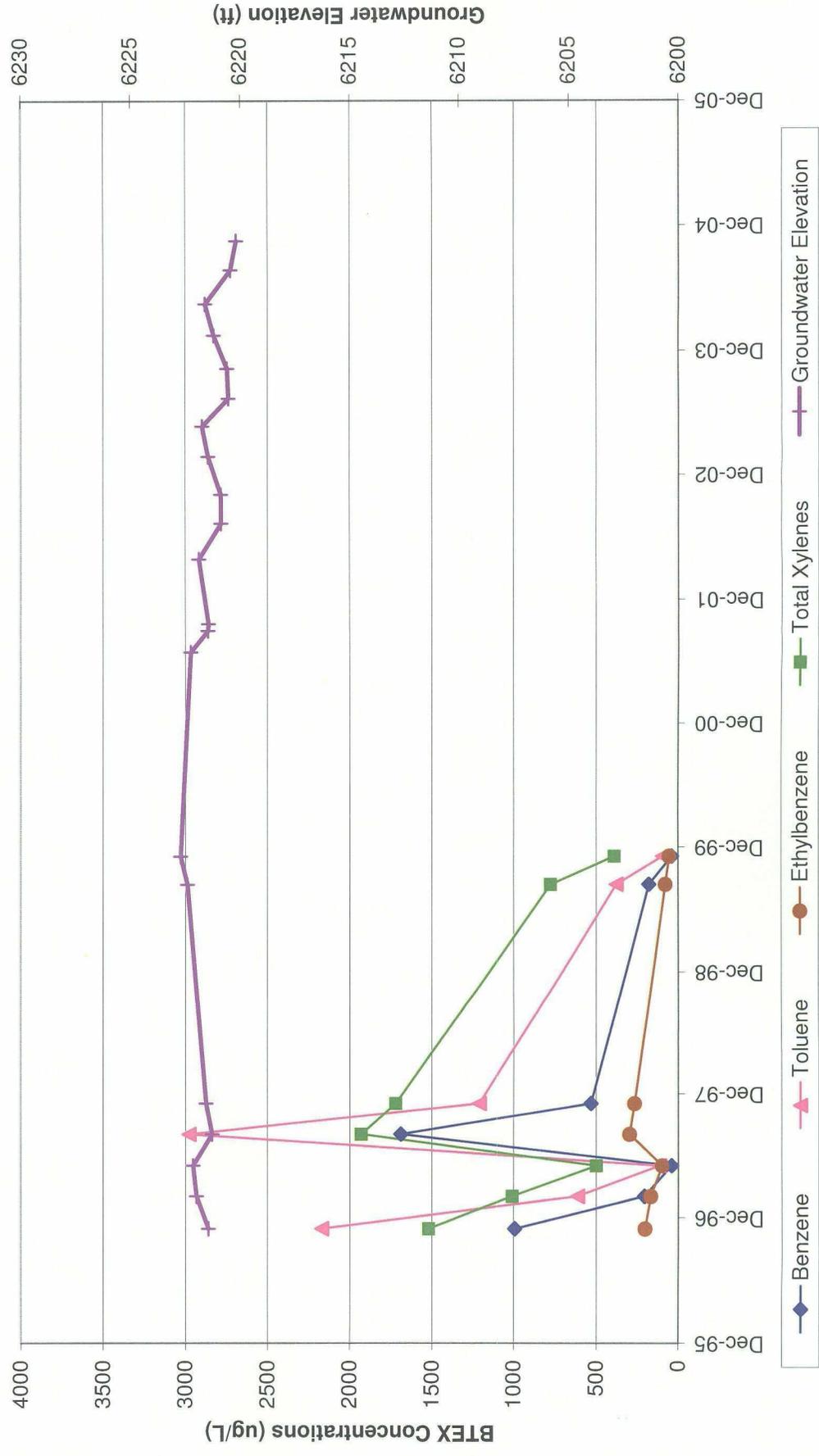
FIGURE 1

TABLE 1  
 SUMMARY OF FREE-PRODUCT REMOVAL DURING 2004  
 K27 LD072 (METER #LD072)

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)
K27 LD072	MW-1	1/19/04	37.68	37.69	0.01	0.01	1.89
K27 LD072	MW-1	4/20/04	NA	37.29	0.00	0.00	1.89
K27 LD072	MW-1	7/27/04	38.28	38.45	0.17	0.10	1.99
K27 LD072	MW-1	10/20/04	38.68	38.71	0.03	0.02	2.02
K27 LD072	MW-2	1/19/04	36.51	36.72	0.21	0.06	4.25
K27 LD072	MW-2	4/20/04	35.91	36.93	1.02	0.58	4.83
K27 LD072	MW-2	7/27/04	36.88	38.30	1.42	0.63	5.46
K27 LD072	MW-2	10/20/04	37.37	38.23	0.87	0.38	5.83

Well MW-2 was redeveloped in October 2004

**FIGURE 2**  
**HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS**  
**K27 LD072**  
**MW-1**



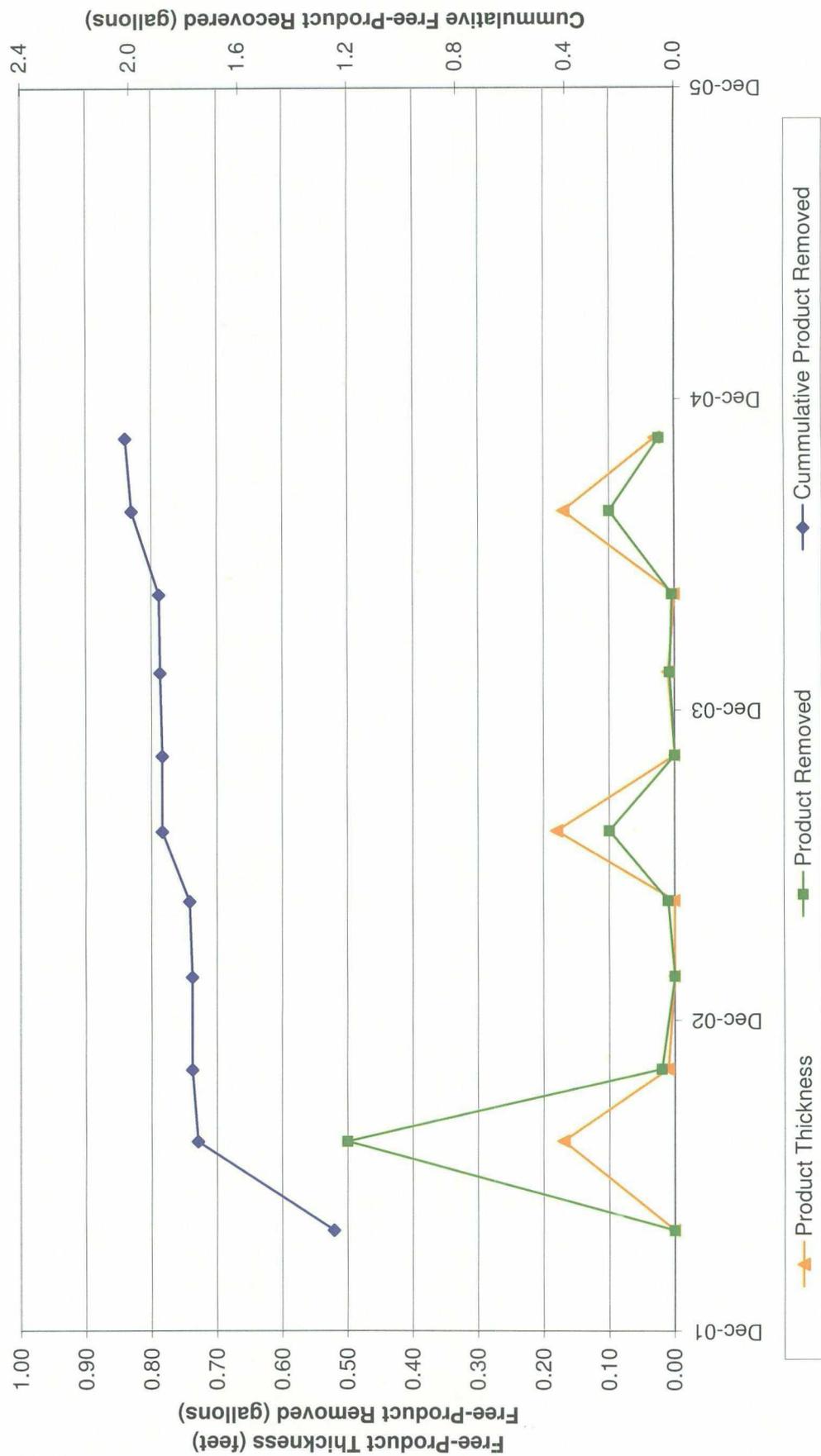
**FIGURE 3**  
**HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS**  
**K27 LD072**  
**MW-2**



**FIGURE 4**  
**HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS**  
**K27 LD072**  
**MW-3**



**FIGURE 5**  
**HISTORIC FREE-PRODUCT RECOVERY**  
**K27 LD072**  
**MW-1**



**FIGURE 6**  
**HISTORIC FREE-PRODUCT RECOVERY**  
**K27 LD072**  
**MW-2**

