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**ANNUAL
MONITORING
REPORTS**

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**2005 ANNUAL GROUNDWATER REPORT
FEDERAL SITES VOLUME I**

EL PASO TENNESSEE PIPELINE COMPANY MAR 17 2006

**Oil Conservation Division
Environmental Bureau**

TABLE OF CONTENTS

| 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 |
| 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 |
| LD174 | LAT L 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 |

3R170
3R202
3R196
3R235
3R213
3R068
3R190
3R212
3R186
3R223
3R204?
3R155



MWH
MONTGOMERY WATSON HARZA

LIST OF ACRONYMS

| | |
|--------|---|
| B | benzene |
| btoc | below top of casing |
| E | ethylbenzene |
| EPFS | El Paso Field Services |
| ft | foot/feet |
| GWEL | groundwater elevation |
| ID | identification |
| MW | monitoring well |
| PSH | phase-separated hydrocarbons |
| NMWQCC | New Mexico Water Quality Control Commission |
| T | toluene |
| TOC | top of casing |
| NA | not applicable |
| NE | not established |
| NM | not measured |
| NMOCD | New Mexico Oil Conservation Division |
| NS | not sampled |
| ORC | oxygen-releasing compound |
| ppb | parts per billion |
| µg/L | micrograms per liter |
| X | total xylenes |

**EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT**

**Canada Mesa #2
Meter Code: 87640**

- Laboratory Reports are presented in Attachment 1 (included on CD).
- Field documentation is presented in Attachment 2 (included on CD).

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2005.

DISPOSITION OF GENERATED WASTES

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station. Phase separated hydrocarbons are stored in a 55 gallon drum and are periodically picked up by Mesa Oil for recycling.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this site, however, the attached site maps present both water level and analytical data collected during 2005.

CONCLUSIONS

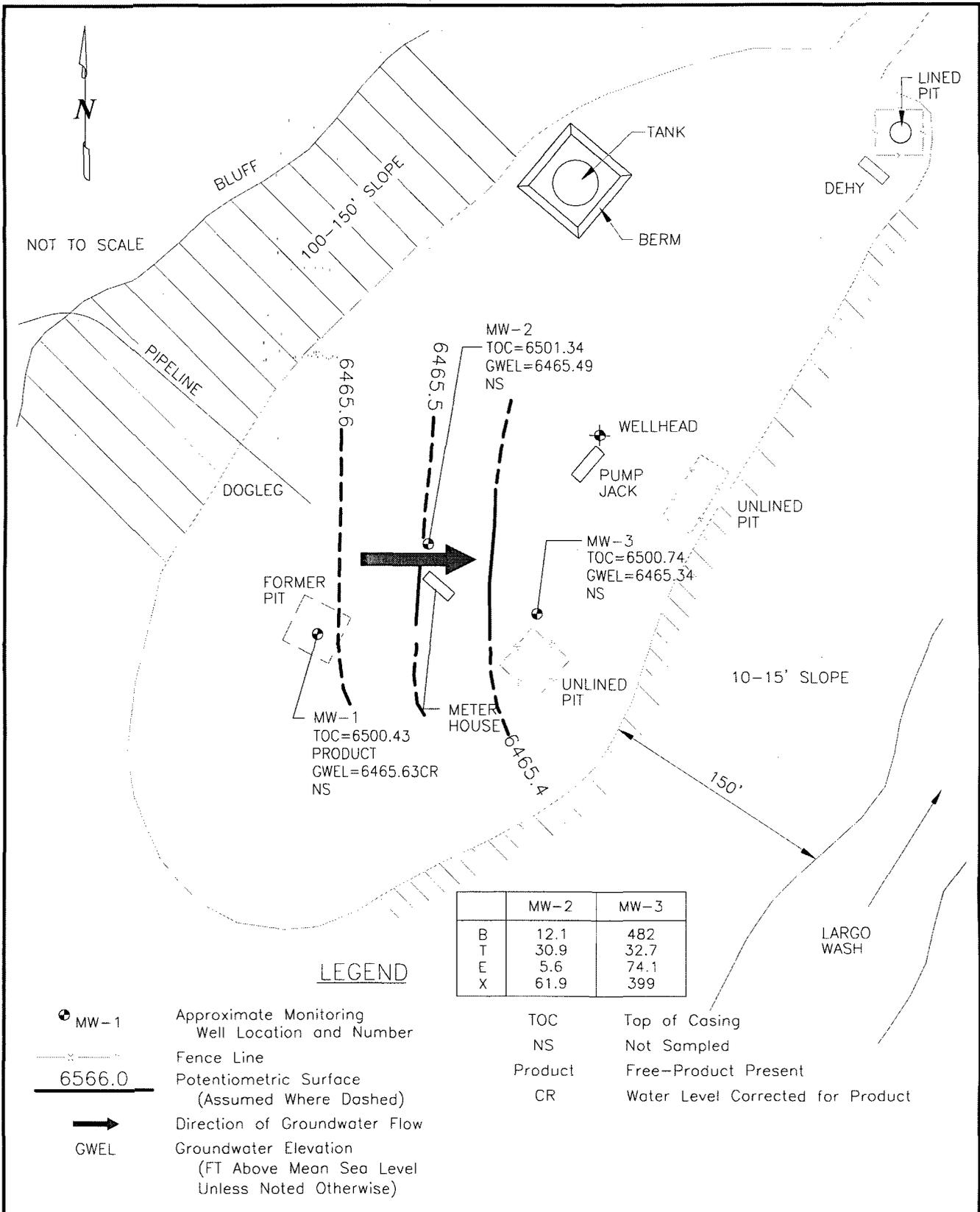
- The groundwater flow direction is generally to the east at this site.
- Free-product recovery from MW-1 removed 2.24 gallons of free-phase hydrocarbons in 2005, bringing the cumulative total recovered to date to approximately 42 gallons.
- A passive skimmer was installed at MW-1 in September 2005.
- Based on the technology review and free-product removal data for this site, it was concluded that the passive skimmer would be the most efficient and cost-effective product removal technique for MW-1 at this site.
- Benzene concentrations in MW-2 have been steadily decreasing from 3,200 µg/L in 2000 to 12.1 µg/L in December 2005.
- The benzene concentration in MW-3 continued to decrease from a high concentration of 1,430 µg/L in 2002, to 482 µg/L in December 2005. Toluene, ethylbenzene and total xylenes concentrations were below standards.

**EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT**

**Canada Mesa #2
Meter Code: 87640**

RECOMMENDATIONS

- EPTPC will continue quarterly free-product recovery efforts at MW-1; however, the frequency of monitoring will be adjusted based on the amount of product recovered during the monitoring visits.
- EPTPC will continue sampling MW-2 and MW-3 on an annual basis.
- 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. All wells will then be scheduled for quarterly sampling until closure criteria are met.
- EPTPC will investigate BTEX concentrations downgradient of EPTPCs former pit; this effort may include installation of a new monitoring well at this site.



CANADA MESA #2, METER 87640
DECEMBER 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 1

canadamesa_12_04.dwg

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN 2005 GROUNDWATER SAMPLES
CANADA MESA #2 (METER #87640)

| Site Name | Sample Date | Monitoring Well | Benzene (ug/L) | Toluene (ug/L) | Ethylbenzene (ug/L) | Total Xylenes (ug/L) | Depth to Water (feet) |
|----------------|-------------|-----------------|-------------------|-------------------|------------------------|-------------------------|--------------------------|
| Canada Mesa #2 | 12/15/2005 | MW-2 | 12.1 | 30.9 | 5.6 | 61.9 | 35.85 |
| Canada Mesa #2 | 12/15/2005 | MW-3 | 482 | 32.7 | 74.1 | 399 | 35.4 |

TABLE 2

SUMMARY OF FREE-PRODUCT REMOVAL DURING 2005
CANADA MESA #2 (METER #87640)

| 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) |
|----------------|-----------------|--------------|---------------------------------|-------------------------------|-----------------------------|--|---|
| Canada Mesa #2 | MW-1 | 3/22/05 | 34.36 | 35.01 | 0.65 | 0.64 | 40.68 |
| Canada Mesa #2 | MW-1 | 6/24/05 | 34.39 | 34.97 | 0.58 | 0.5 | 41.18 |
| Canada Mesa #2 | MW-1 | 9/14/05 | 34.6 | 35.65 | 1.05 | 0.3 | 41.48 |
| Canada Mesa #2 | MW-1 | 12/14/05 | 34.74 | 35.05 | 0.31 | 0.8 | 42.28 |

FIGURE 2
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
CANADA MESA #2
MW-1

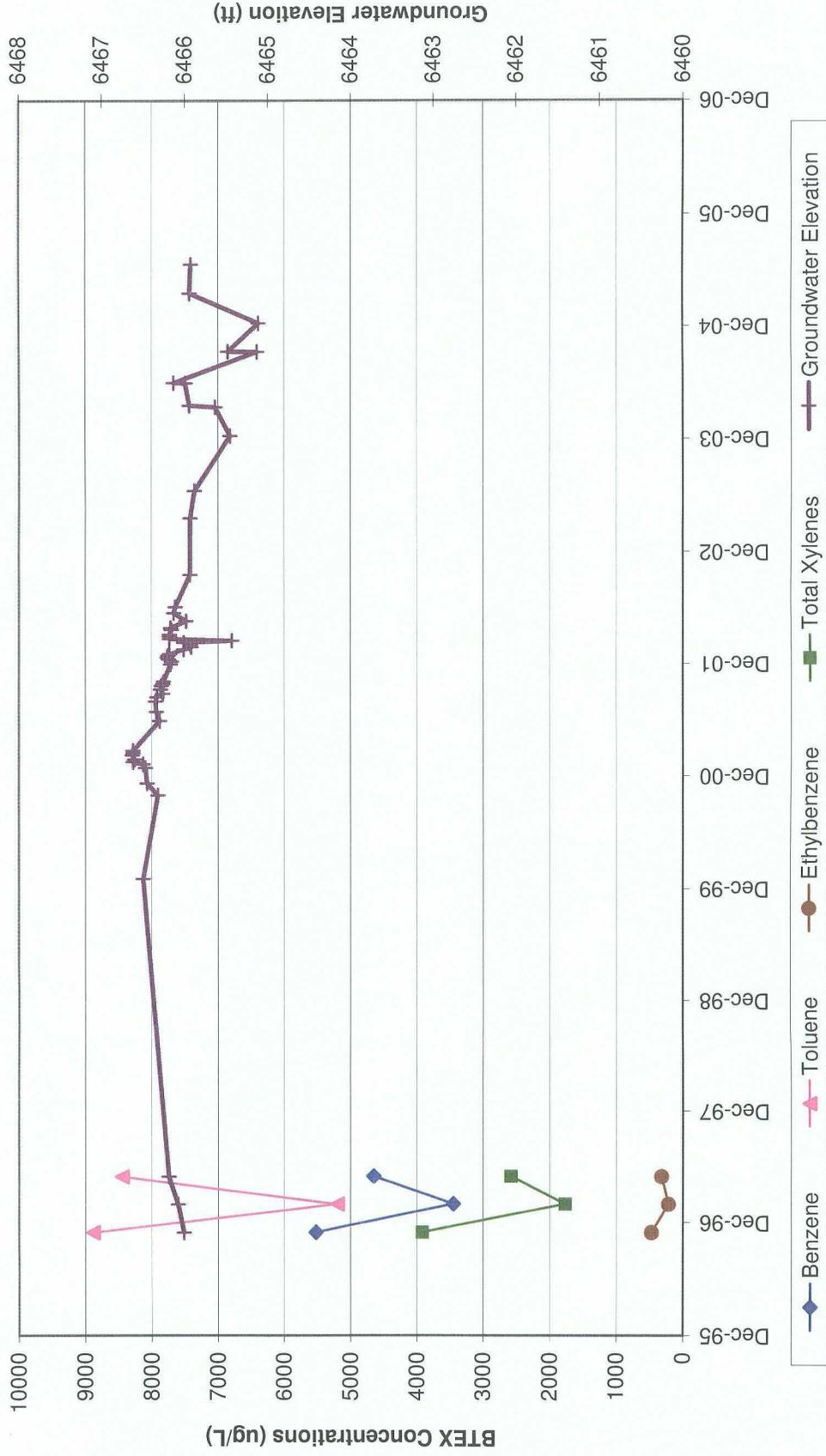


FIGURE 3
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
CANADA MESA #2
MW-2

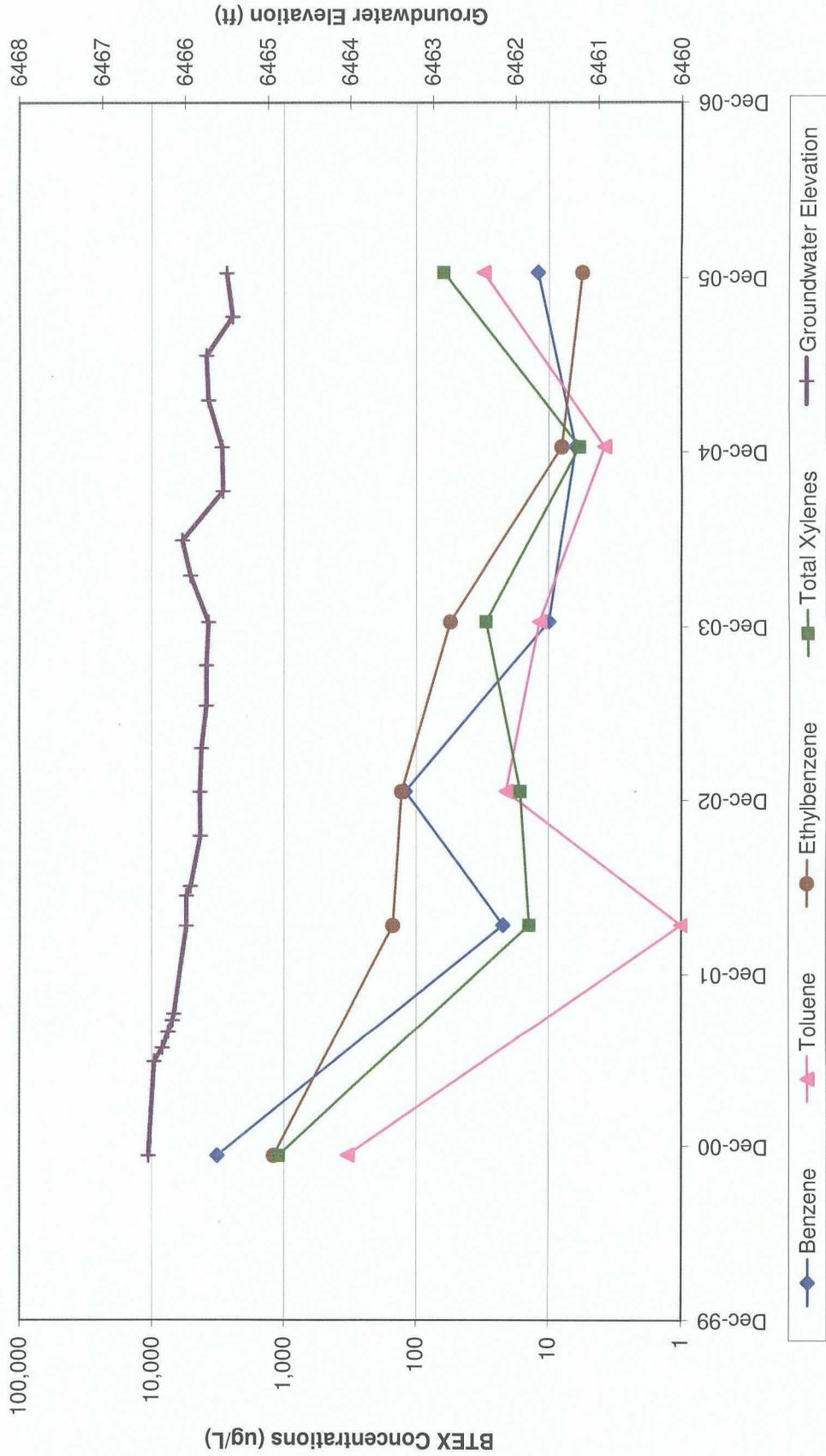


FIGURE 4
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
CANADA MESA #2
MW-3

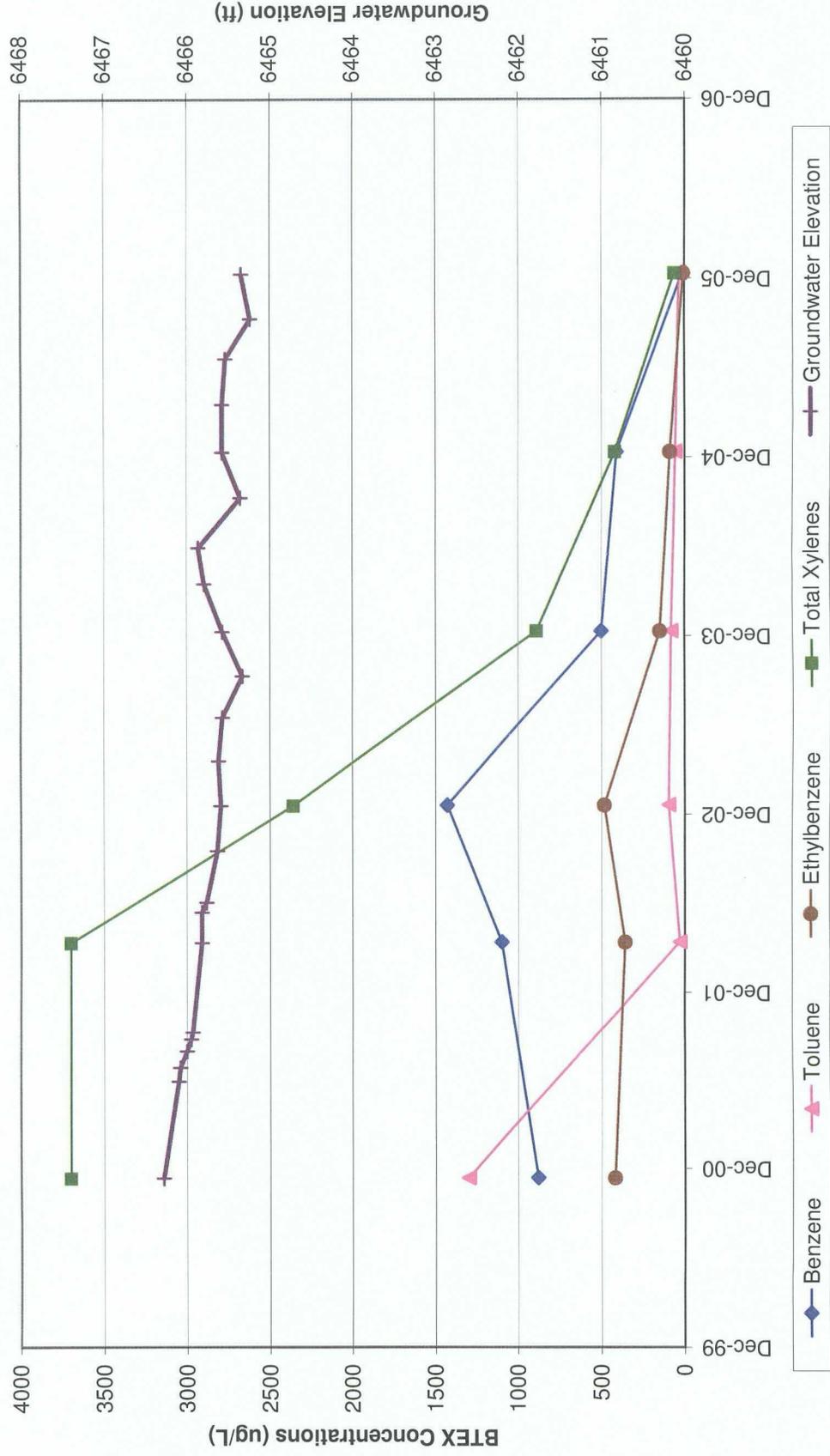


FIGURE 5
HISTORIC FREE-PRODUCT RECOVERY
CANADA MESA #2
MW-1

