3R - 205

ANNUAL MONITORING REPORTS

DATE:

2/2005

2004 ANNUAL GROUNDWATER REPORT
NON-FEDERAL SITES VOLUME II

EL PASO FIELD SERVICES

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* Coldiron A#1 Site was closed by NMOCD in October 2004.

** Lindrith B#24 Site has been submitted for closure, and is pending approval from NMOCD.

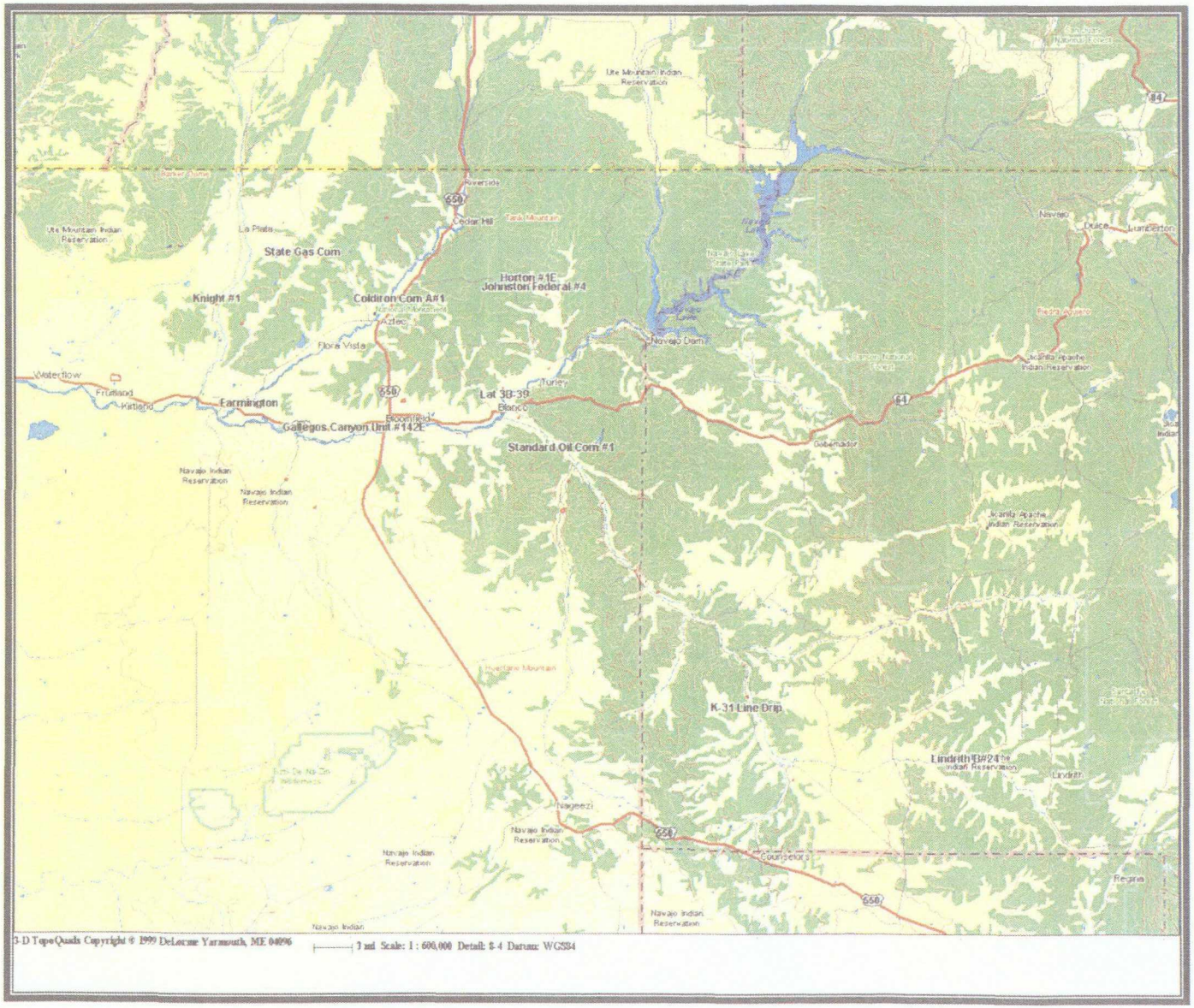
elpaso

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

Non - Federal Groundwater Site Map



EPFS GROUNDWATER SITES
2004 ANNUAL GROUNDWATER REPORT

3R205

K-31 Line Drip
Meter Code: LD087

SITE DETAILS

Legal Description: **Town:** 25N **Range:** 6W **Sec:** 16 **Unit:** N

NMOCD Haz Ranking: 40 **Land Type:** State **Operator:** EPFS

PREVIOUS ACTIVITIES

Site Assessment:	7/94	**Excavation:**	8/94 (90 cy)	**Soil Boring:**	9/95
Monitor Well:	3/97	**Geoprobe:**	7/97	**Additional MWs:**	7/00
Downgradient MWs:	7/00	**Replace MW:**	NA	**Quarterly Initiated:**	6/97
ORC Nutrient Injection:	11/02	**Re-Excavation:**	11/95 (1786 cy)	**PSH Removal Initiated:**	NA
Annual Initiated:	6/99	**Quarterly Resumed:**	NA		

SUMMARY OF 2004 ACTIVITIES

MW-1: Semi-annual water level monitoring was performed in March and September 2004.

MW-2: Semi-annual groundwater sampling and water level monitoring were performed during 2004.

MW-3: Semi-annual water level monitoring was performed during 2004.

Site-Wide Activities: No other activities were performed at this site during 2004.

SITE MAP

Site maps (March and September) are attached in Figures 1 and 2.

SUMMARY TABLES AND GRAPHS

- Analytical data from 2004 are summarized in Table 1, and historic data are presented graphically in Figures 3 through 5.
- Laboratory reports are presented in Attachment 1.
- Field documentation are presented in Attachment 2.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2004.

DISPOSITION OF GENERATED WASTES

No wastes were generated at this site during 2004.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this site, however, the attached site maps present both water level and analytical data collected during 2004.

CONCLUSIONS

- Based on water level data collected between 2001 and 2004, the hydraulic gradient at this site is extremely flat and the groundwater flow direction appears to vary between the north/northwest and the north/northeast. In September 2004, the gradient appeared to be to the southwest. Considering the extremely flat hydraulic gradient in the area, natural variability in the flow direction is possible. However, based on the most consistent patterns and the local topography, EPFS has concluded that the predominant flow direction is north/northeast towards MW-2.

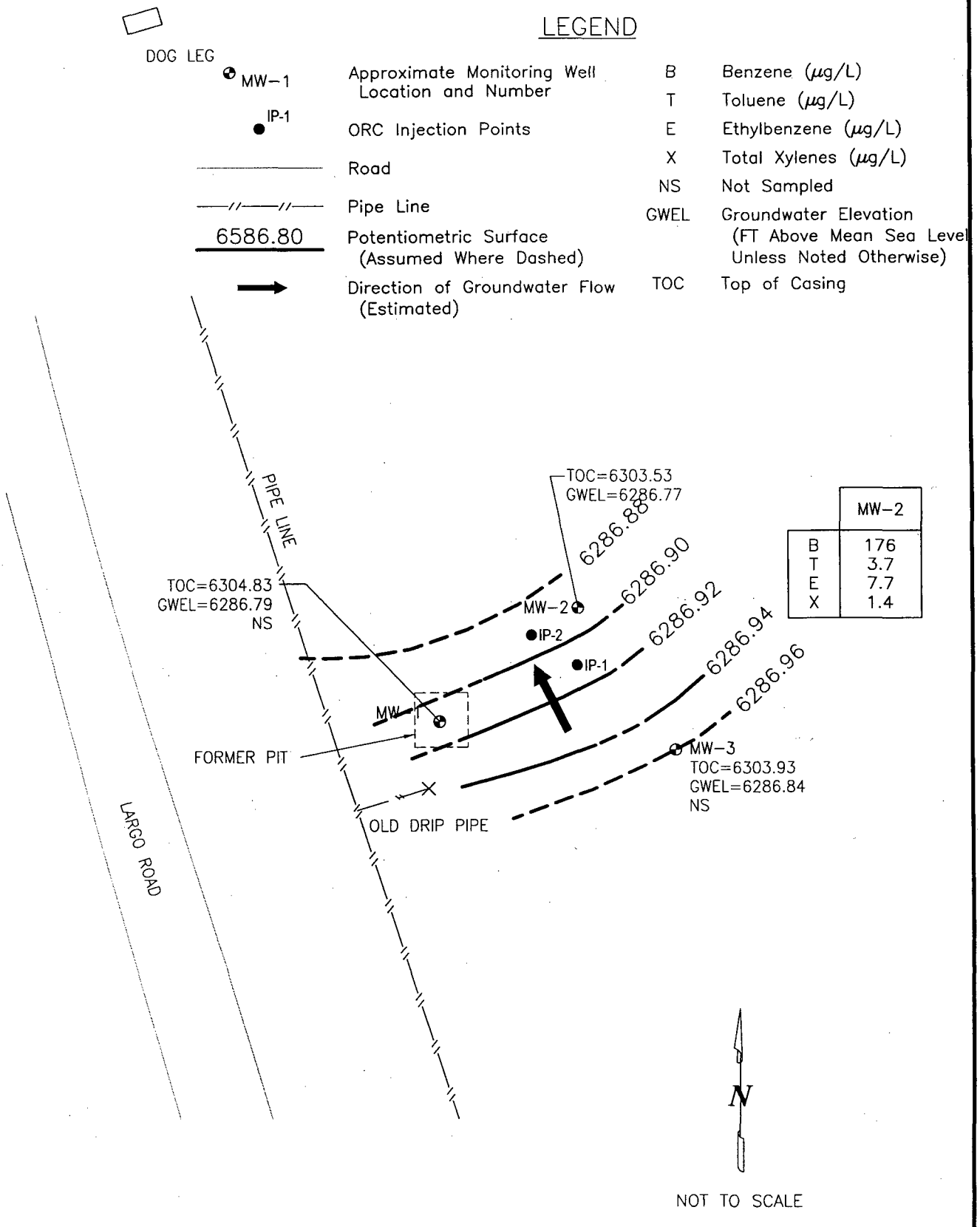
- In November 2002, oxygen releasing compound (ORC) slurry was injected into the subsurface near MW-2 (see maps for injection point locations). The pre-injection benzene concentrations in MW-2 were 230 and 104 µg/L in March and September 2002, respectively. In 2004, concentrations decreased to 176 µg/L and 32.2 µg/L during the semi-annual sampling events. These data suggest that the ORC injections may be enhancing natural biodegradation of hydrocarbons at this location.

RECOMMENDATIONS

- Because sampling at MW-1 has indicated BTEX concentrations below detection limits for four consecutive quarters, EPFS recommends that this well not be sampled until closure samples are scheduled for collection.

- EPFS will sample MW-2 in March 2005. If BTEX concentrations continue to approach NMWQCC standards, quarterly sampling will be initiated; if not, semi-annual sampling will continue.

- Because sampling at MW-3 has indicated BTEX concentrations below detection limits, EPFS recommends that this well not be sampled until closure samples are scheduled.

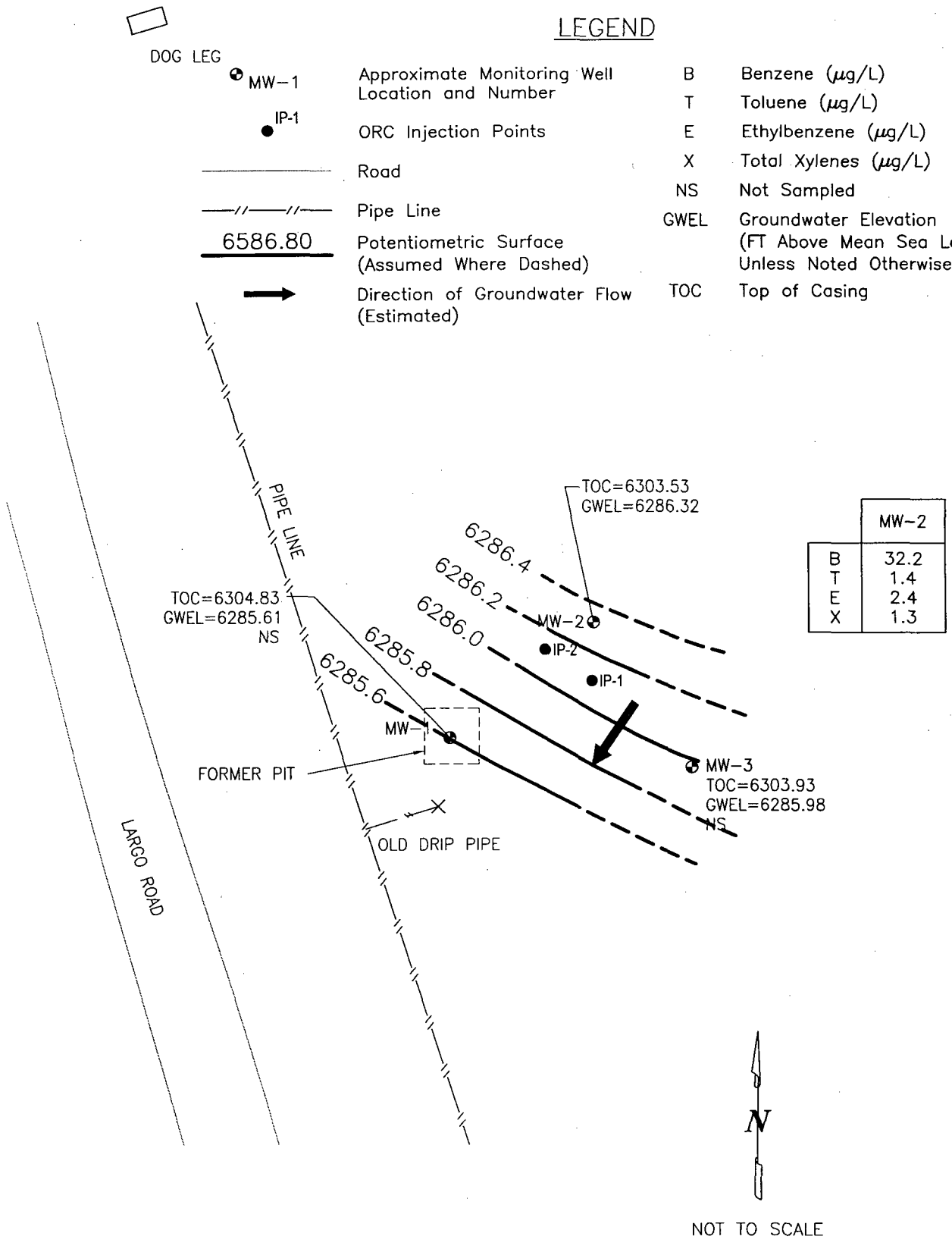


k31ldg.dwg

K-31 LINE DRIP, LD087
MARCH 2004

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1



K-31 LINE DRIP, LD087
SEPTEMBER 2004

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 2

k31ld_

TABLE 1

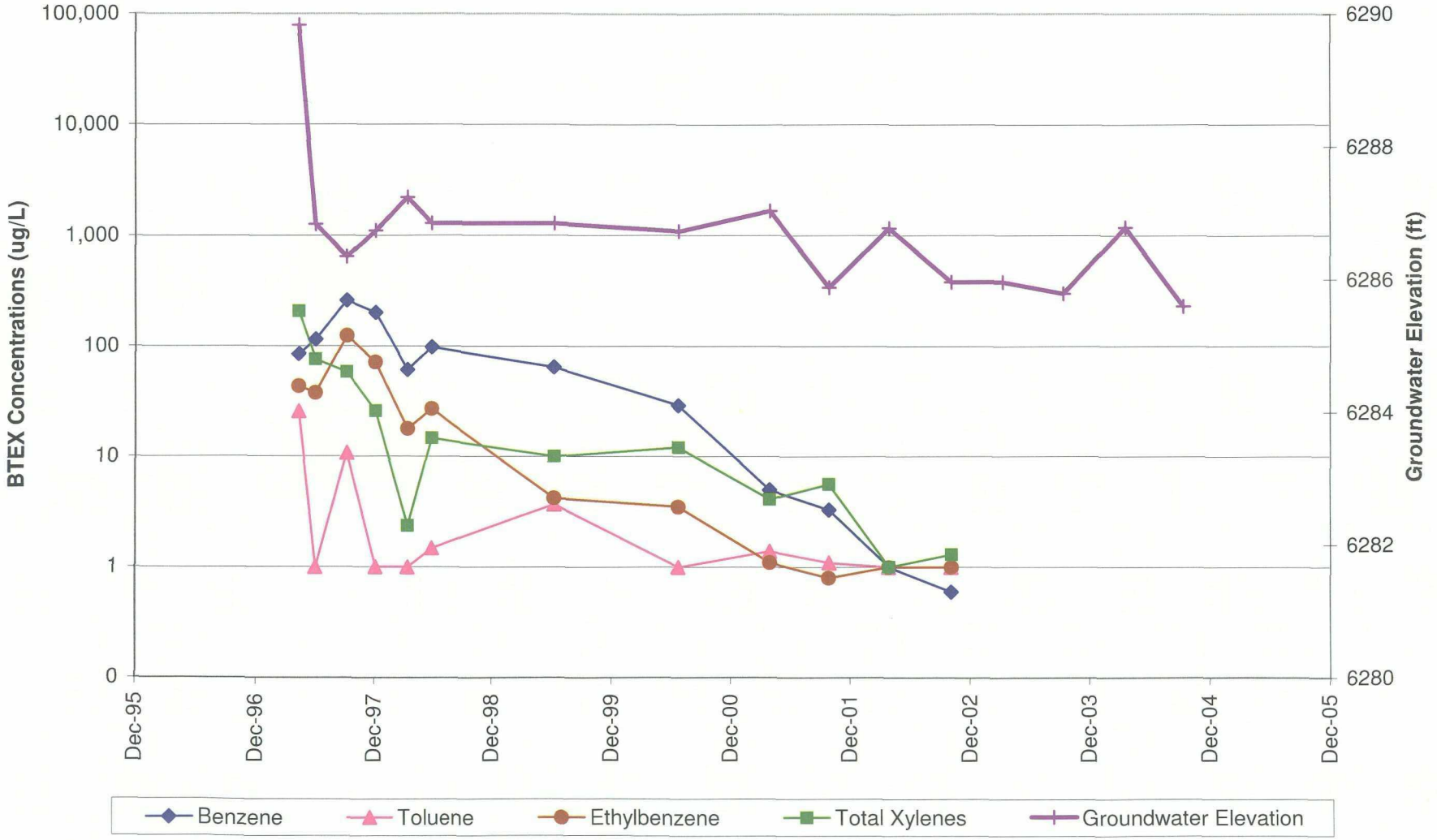
SUMMARY OF BTEX COMPOUNDS IN 2004 GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)

Site Name	Monitoring Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (ft btoc)
K-31 Line Drip	MW-2	3/22/2004	176	3.7	7.7	1.4	16.76
K-31 Line Drip	MW-2	9/14/2004	32.2	1.4	2.4	J 1.3	17.91

< = Analyte not detected at Method Detection Limit (MDL). Value shown is MDL.

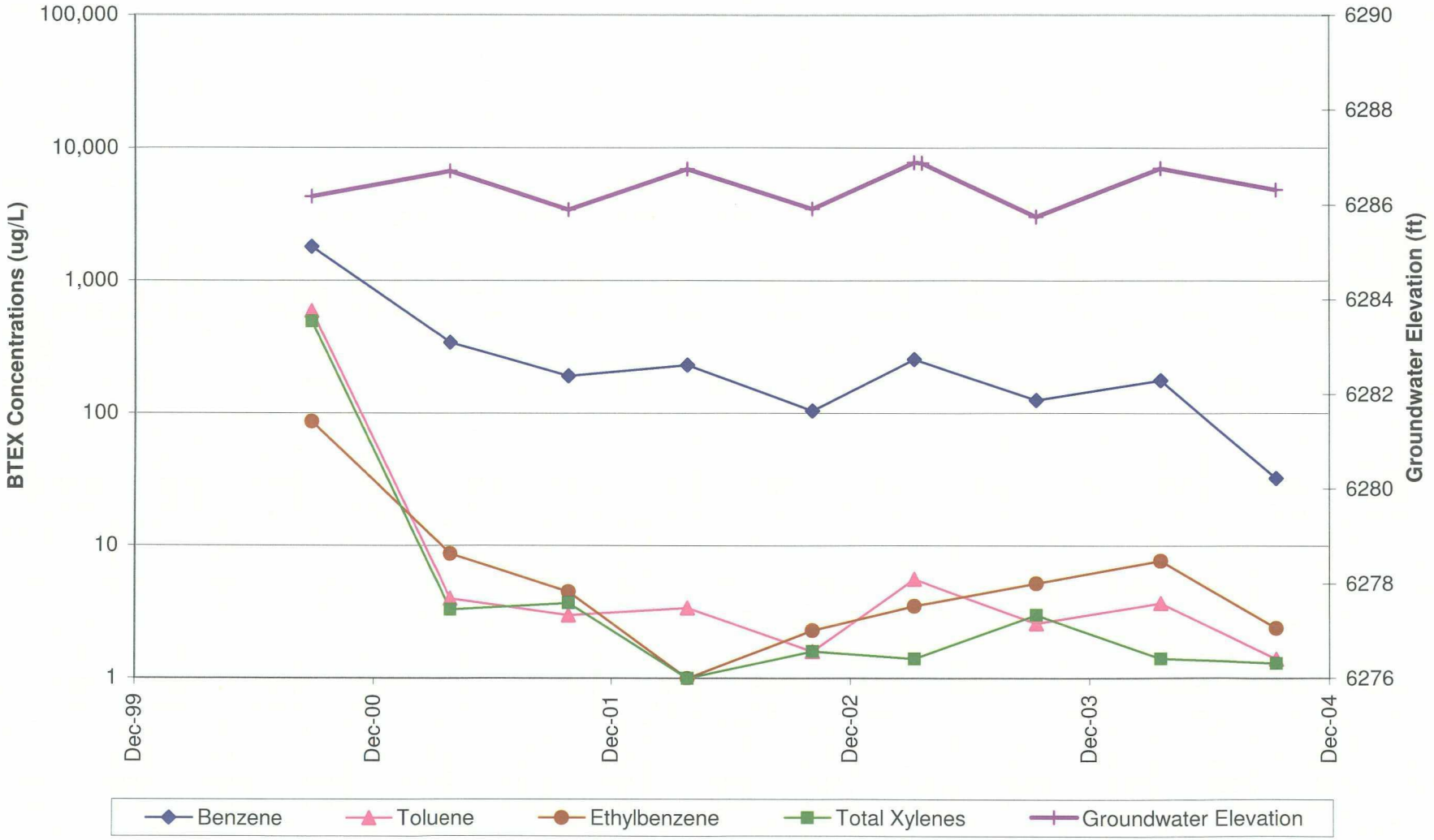
J = Value estimated

FIGURE 3
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
K-31 LINE DRIP
MW-1



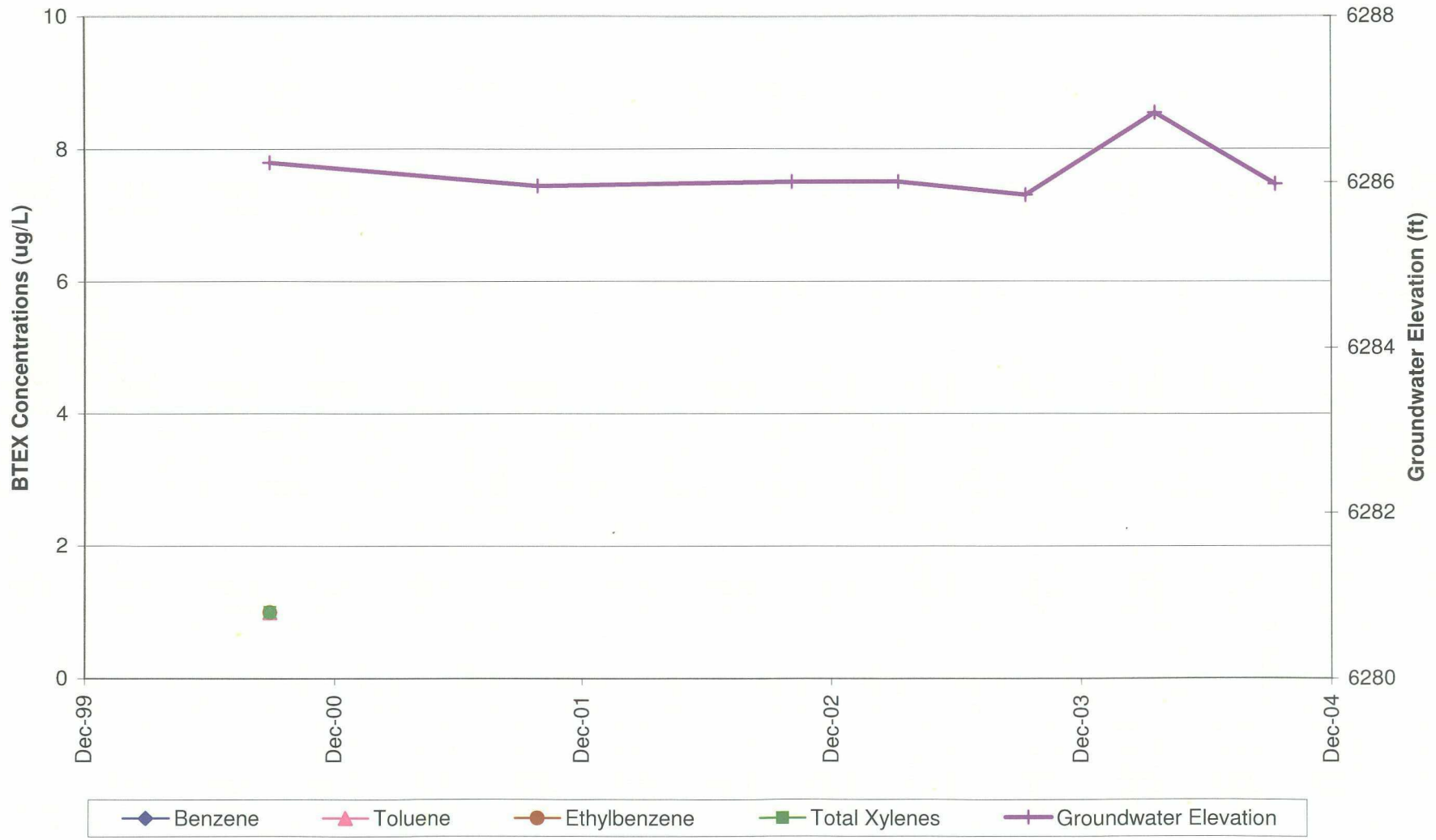
2004 K31 Line Drip.xls,K31 MW1

FIGURE 4
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
K-31 LINE DRIP
MW-2



2004 K31 Line Drip.xls,K31 MW2

FIGURE 5
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
K-31 LINE DRIP
MW-3



2004 K31 Line Drip.xls,K31 MW3