3R - 205

ANNUAL MONITORING REPORTS DATE:

3/2006

2005 ANNUAL GROUNDWATER REPORT
NON-FEDERAL SITES VOLUME II

RECEIVED
MAR 17 2006
Oil Conservation Division
Environmental Bureau

EL PASO TENNESSEE PIPELINE COMPANY

TABLE OF CONTENTS

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT	
71669	State Gas Com N #1	31N	12W	16	H	3R239
70194	Johnston Fed #4	31N	09W	33	H	3R201
93388	Horton #1E	31N	09W	28	H	3R192
72556	Knight #1	30N	13W	5	A	3R207
03906	GCU Com A #142E	29N	12W	25	G	3R 197
70445	Standard Oil Com #1	29N	09W	36	N	3R238
LD087	K-31 Line Drip	25N	06W	16	N	3R205
94967	*Lindrith B #24	24N	03W	9	N	3R214

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

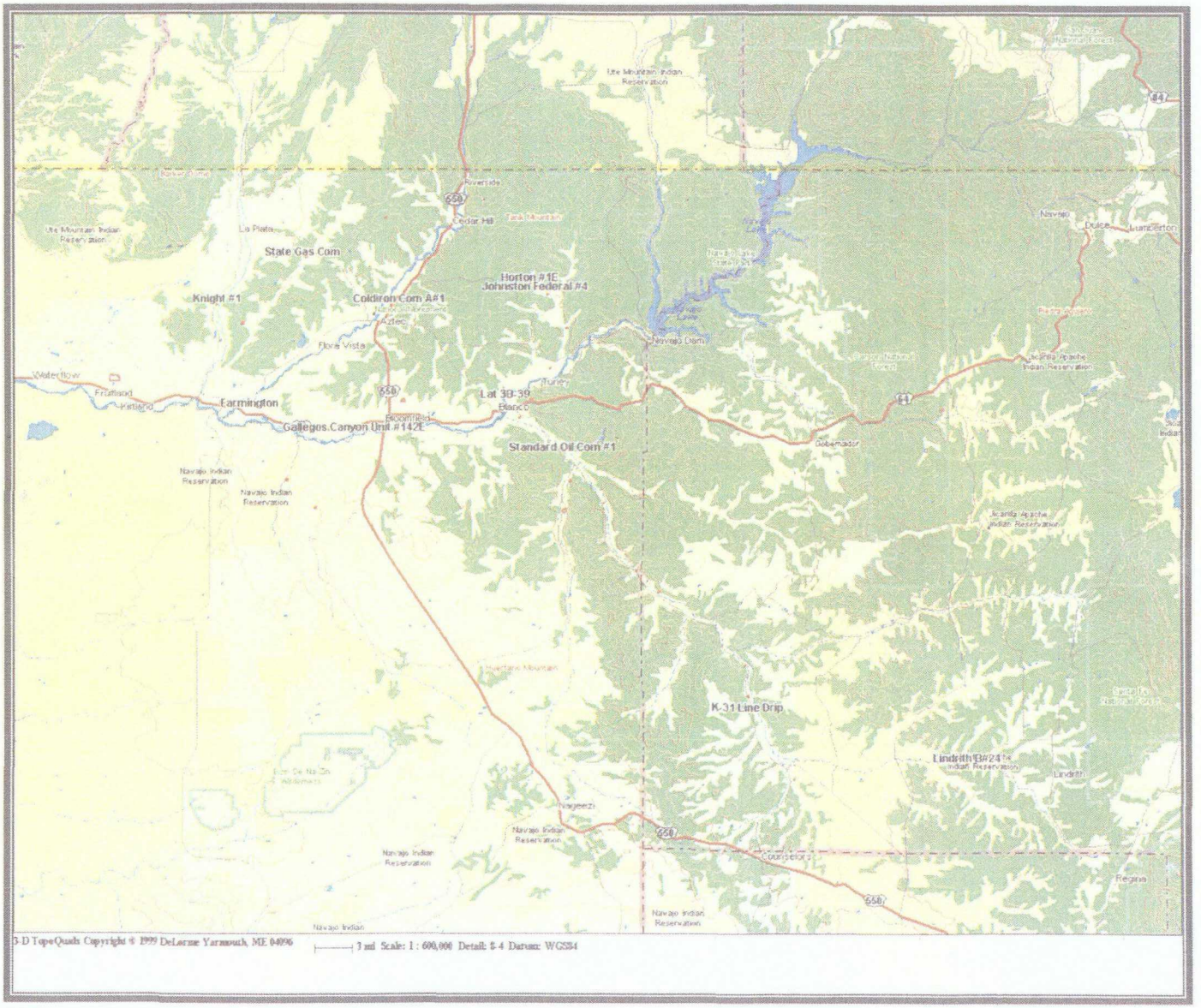
elpaso

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



EPTPC GROUNDWATER SITES
2005 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:** Enterprise

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 2005 ACTIVITIES

MW-1: Quarterly water level monitoring was performed in 2005.

MW-2: Quarterly groundwater sampling and water level monitoring were performed during 2005.

MW-3: Quarterly water level monitoring was performed during 2005. Natural attenuation parameter sampling was performed in December 2005.

Site-Wide Activities: The need for additional investigation was evaluated. A plan was developed to include natural attenuation potential evaluation, geoprobe investigation, and additional groundwater monitoring wells in 2005. Right of way permits and access grants for geoprobe investigation were also procured in 2005; right of way permit and access applications for monitoring well installation were prepared for submittal in 2006.

SITE MAP

Site maps are attached in Figures 1, 2, 3, 4 and 5.

SUMMARY TABLES AND GRAPHS

- Analytical data from 2005 are summarized in Table 1, and historic data are presented graphically in Figures 6 through 8.

- 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.

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

- Based on water level data collected between 2001 and 2005, 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. 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, EPTPC has concluded that the predominant flow direction is to the north/northwest.

- In November 2002, oxygen releasing compound (ORC) slurry was injected into the subsurface near MW-2. The pre-injection benzene concentrations in MW-2 were 230 and 104 µg/L in March and September 2002, respectively. In 2005, concentrations decreased to 93.7 µg/L and 7.6 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.

- The high concentration of sulfate in MW-3 during the December 2005 sampling event (7,020 mg/L) indicates conditions at this site are favorable for natural attenuation.

K-31 Line Drip
Meter Code: LD087

RECOMMENDATIONS

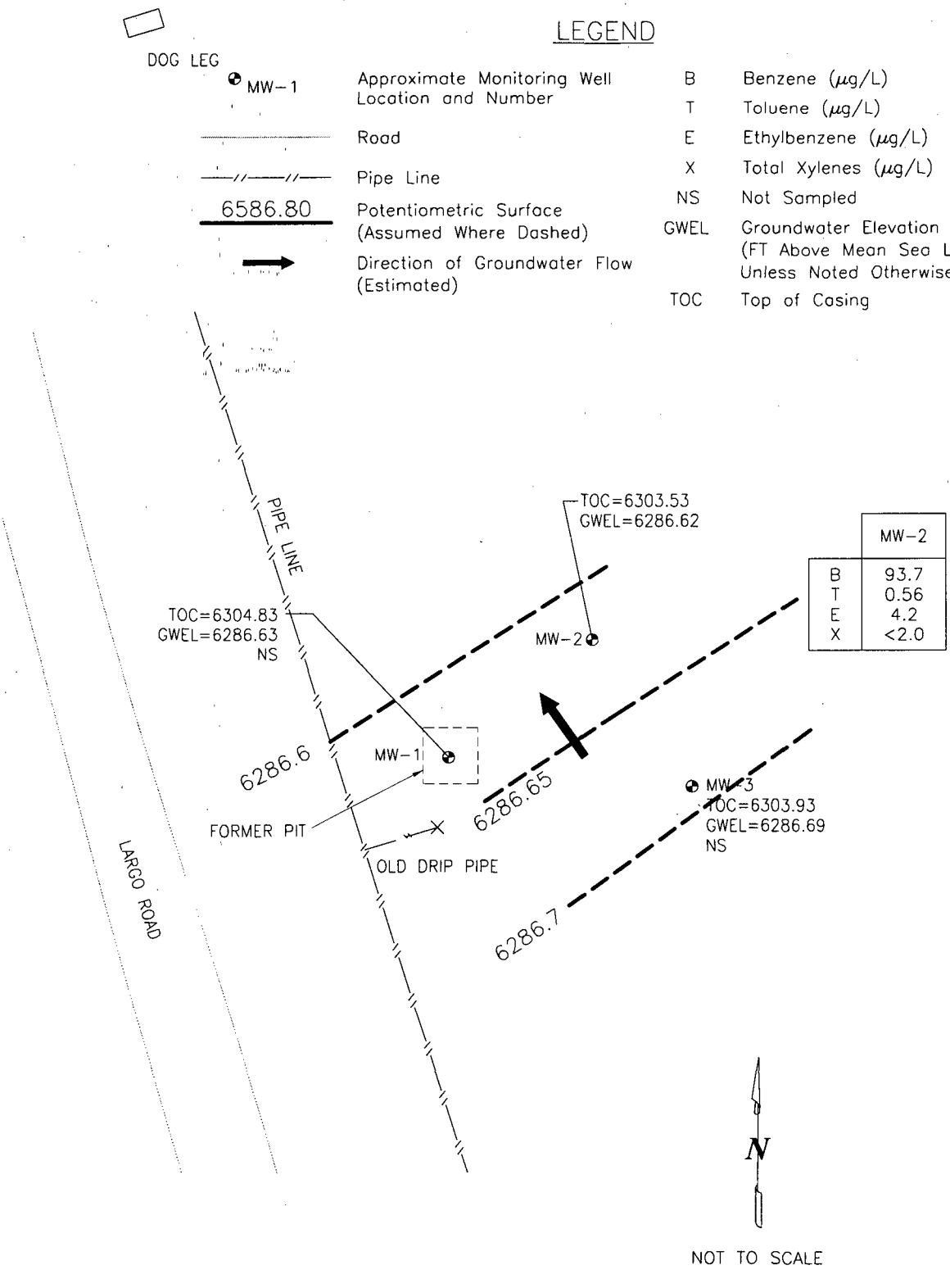
- Because sampling at MW-1 has indicated BTEX concentrations below detection limits for four consecutive quarters, EPTPC recommends that this well not be sampled until closure samples are scheduled for collection.

- EPTPC will sample MW-2 in March 2006. 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, EPTPC recommends that this well not be sampled until closure samples are scheduled.

- In order to assess the extent of contamination downgradient of MW-1, EPTPC will perform a geoprobe investigation at this site in January 2006 (shown in Figure 4).

- Based on the results of the geoprobe investigation, EPTPC will attempt to install monitoring well MW-4 north of MW-1, and MW-5 northeast of MW-1 (shown in Figure 4) in March 2006.

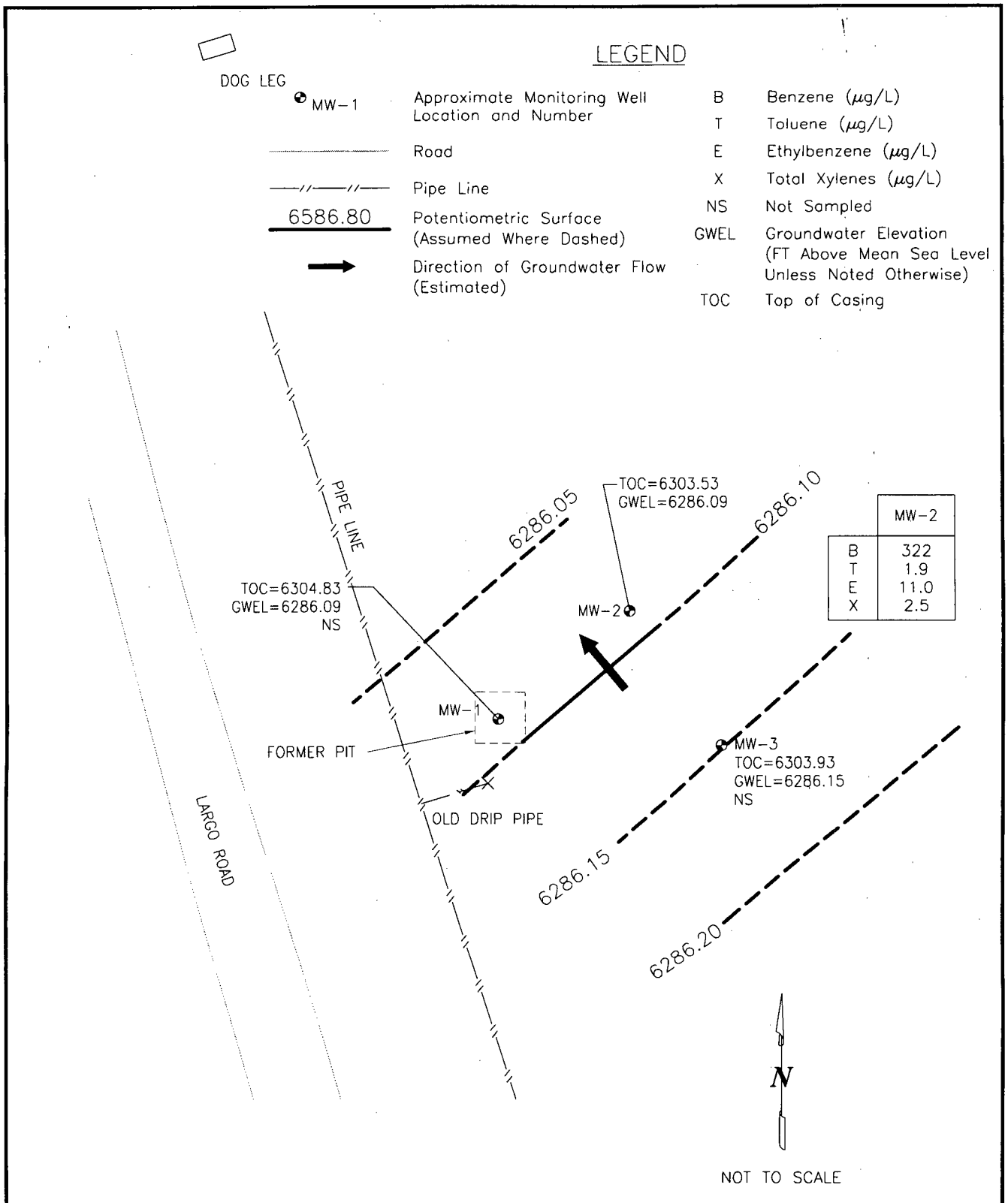


k31ld 3_05.dwg

K-31 LINE DRIP, LD087
MARCH 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 1



K-31 LINE DRIP, LD087
JUNE 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 2

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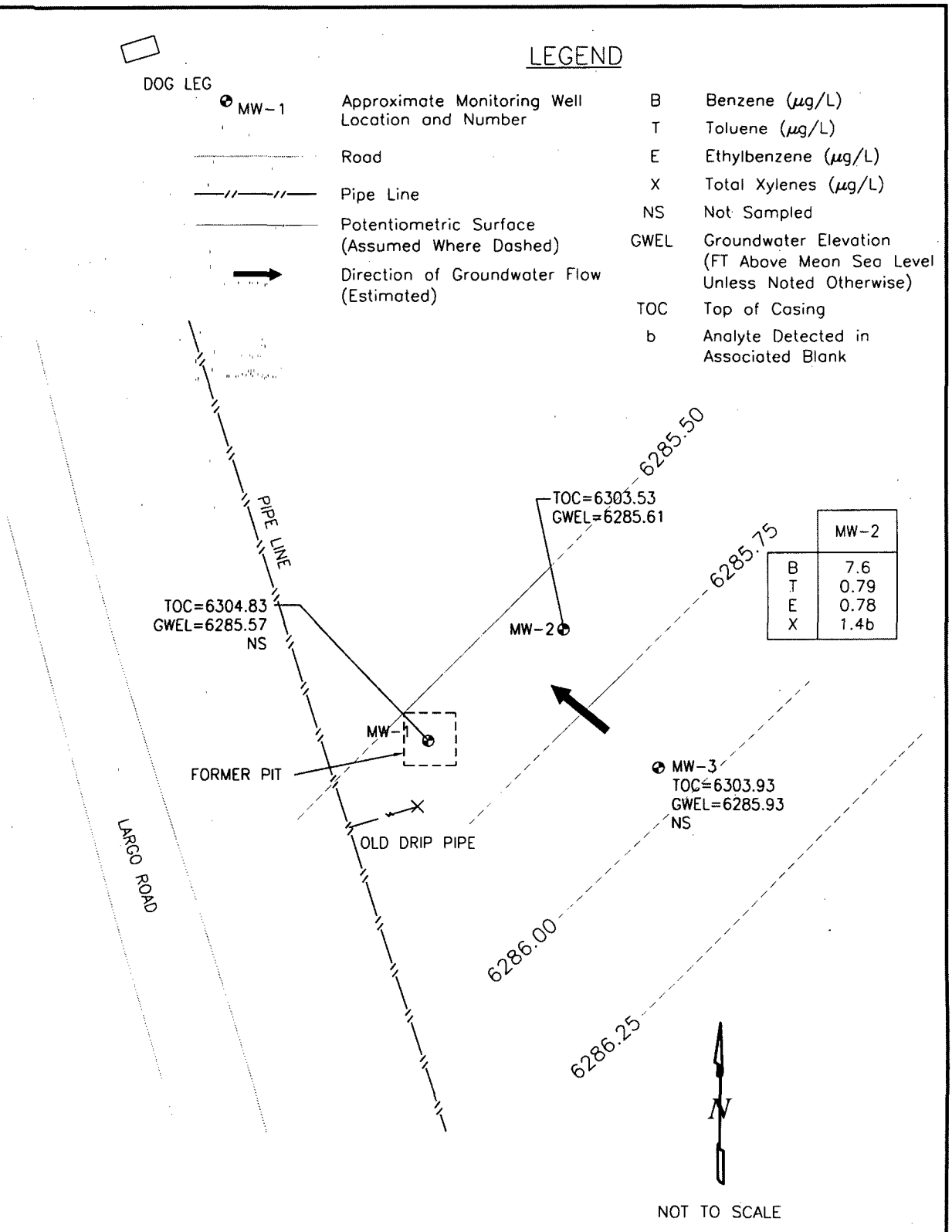

K-31 LINE DRIP, LD087
SEPTEMBER 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 3

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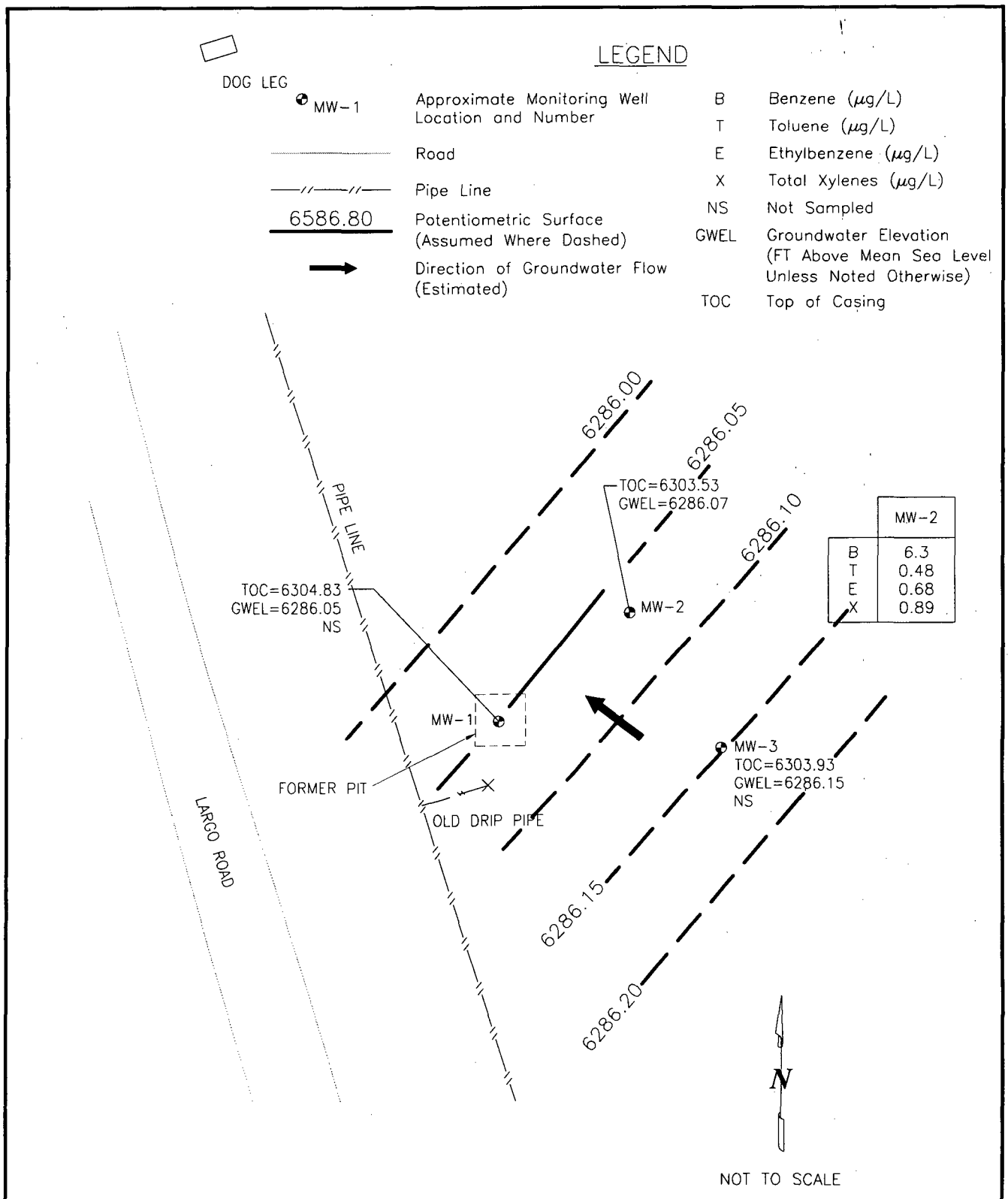

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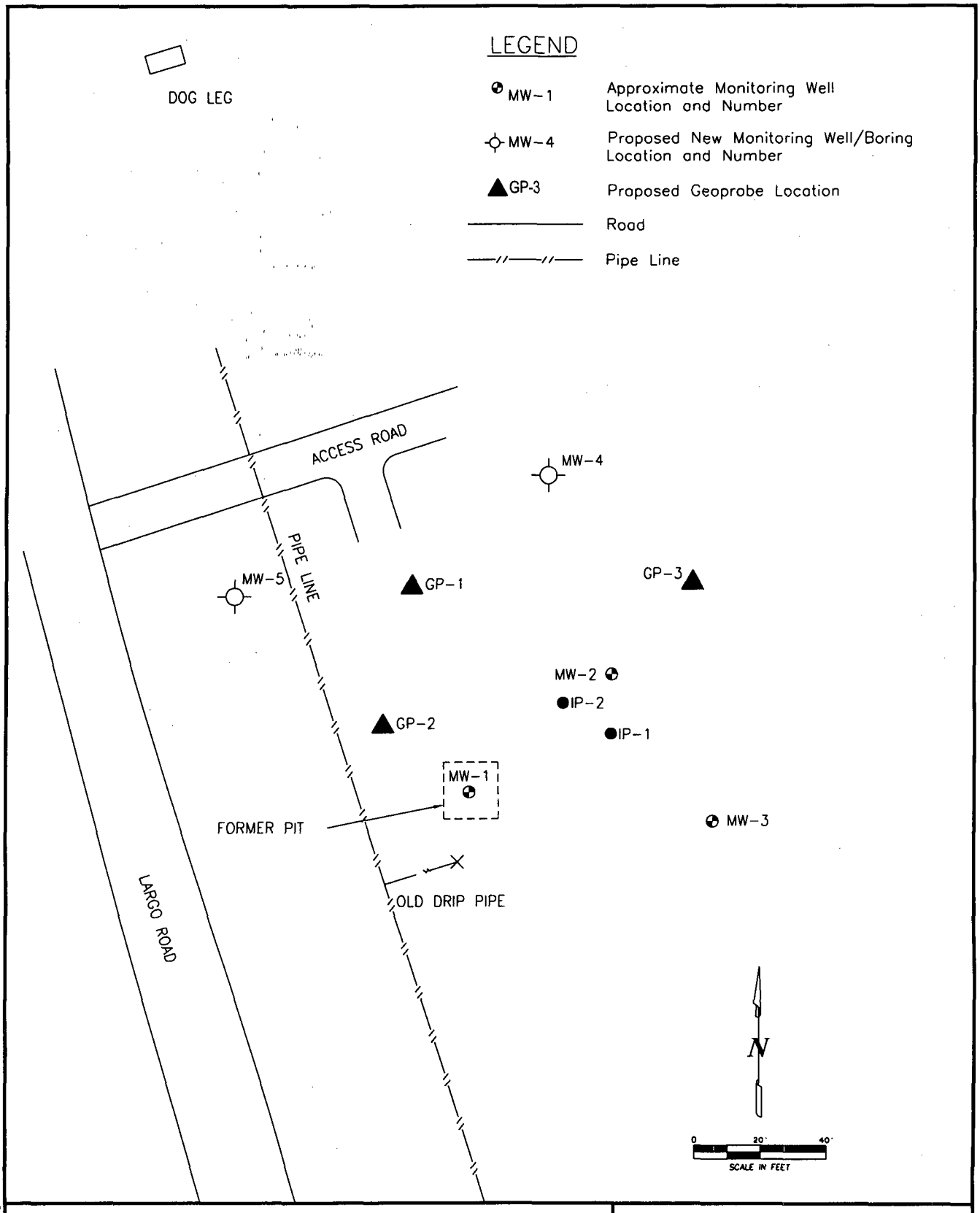
K-31 LINE DRIP, LD087
DECEMBER 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 4



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K-31 LINE DRIP, LD087
PROPOSED NEW MONITORING WELL LOCATIONS

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

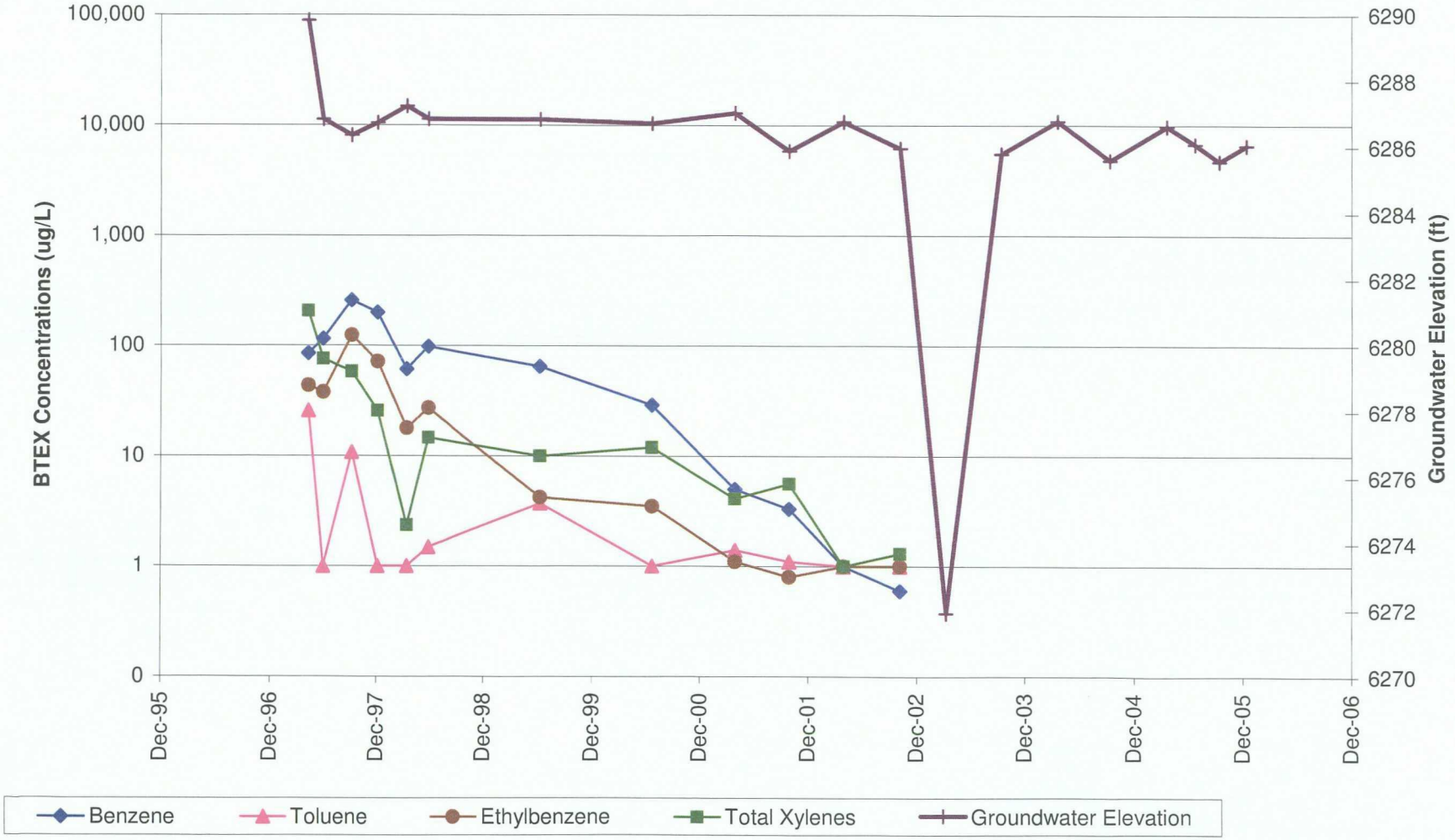
FIGURE 5

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN 2005 GROUNDWATER SAMPLES
K-31 LINE DRIP (METER #LD087)

Site Name	Sample Date	Monitoring Well	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (feet)
K-31 Line Drip	3/22/2005	MW-2	93.7	0.56	4.2	2	16.91
K-31 Line Drip	6/24/2005	MW-2	322	1.9	11	2.5	17.44
K-31 Line Drip	9/14/2005	MW-2	7.6	0.79	0.78	1.4	17.92
K-31 Line Drip	12/14/2005	MW-2	6.3	0.48	0.68	0.89	17.46

FIGURE 6
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
K-31 LINE DRIP
MW-1

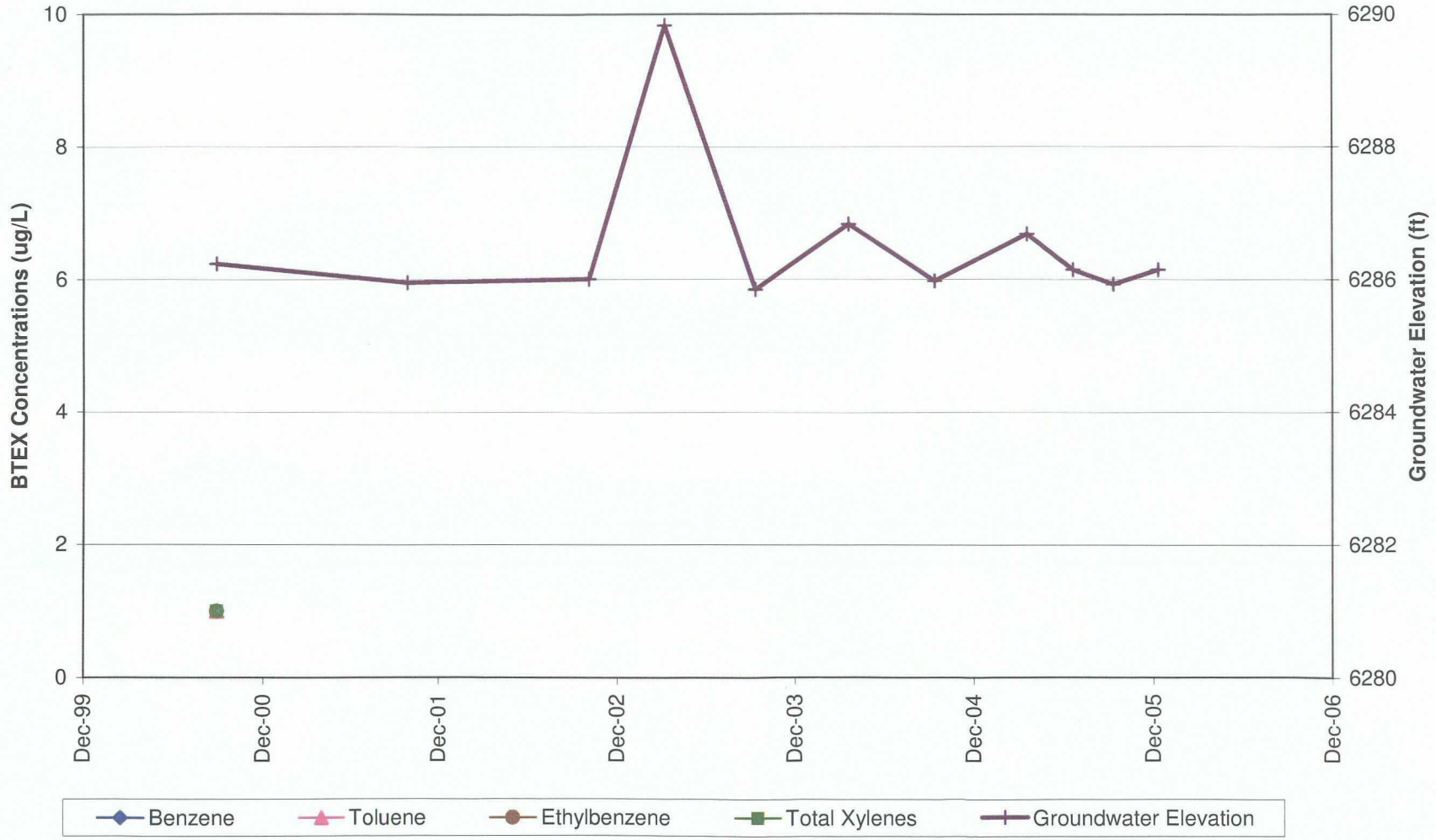


2005 K31 Line Drip.xls,K31 MW1

FIGURE 7
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
K-31 LINE DRIP
MW-2

2005 K31 Line Drip.xls,K31 MW2

FIGURE 8
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
K-31 LINE DRIP
MW-3



2005 K31 Line Drip.xls,K31 MW3