

3R - 186

**ANNUAL
MONITORING
REPORTS**

DATE:

3/2006

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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

**EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT**

3R186

**Hammond #41A
Meter Code: 89894**

SITE DETAILS

Legal Description:	Town: 27N	Range: 8W	Sec: 25	Unit: O
NMOCD Haz Ranking: 40	Land Type:	Federal	Operator:	R&G Drilling Company

PREVIOUS ACTIVITIES

Site Assessment:	6/94	Excavation:	7/94	Soil Boring:	7/95
Monitor Well:	5/97	Geoprobe:	11/96	Additional MWs:	9/99
Downgradient MWs:	9/99	Replace MW:	NA	Quarterly Initiated:	6/97
ORC Nutrient Injection:	7/98	Re-Excavation:	5/97	PSH Removal Initiated:	NA
Annual Initiated:	9/99	Quarterly Resumed:	NA		

SUMMARY OF 2005 ACTIVITIES

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

MW-2: Quarterly water level water level monitoring was performed during 2005.

MW-3: Quarterly water level water level monitoring was performed during 2005.

TMW-1: Quarterly sampling of TMW-1 was performed in February, May, August, and November 2005.

SITE MAPS

Site maps (February, May, August and November) are attached as Figures 1 through 4.

SUMMARY TABLES AND GRAPHS

- Analytical data from TMW-1 are summarized in Table 1, and historic data for all wells are presented graphically in Figures 5 through 8.
- Laboratory reports are presented in Attachment 1 (included on CD).
- Field documentation is presented in Attachment 2 (included on CD).

**EPTPC GROUNDWATER SITES
2005 ANNUAL GROUNDWATER REPORT**

**Hammond #41A
Meter Code: 89894**

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

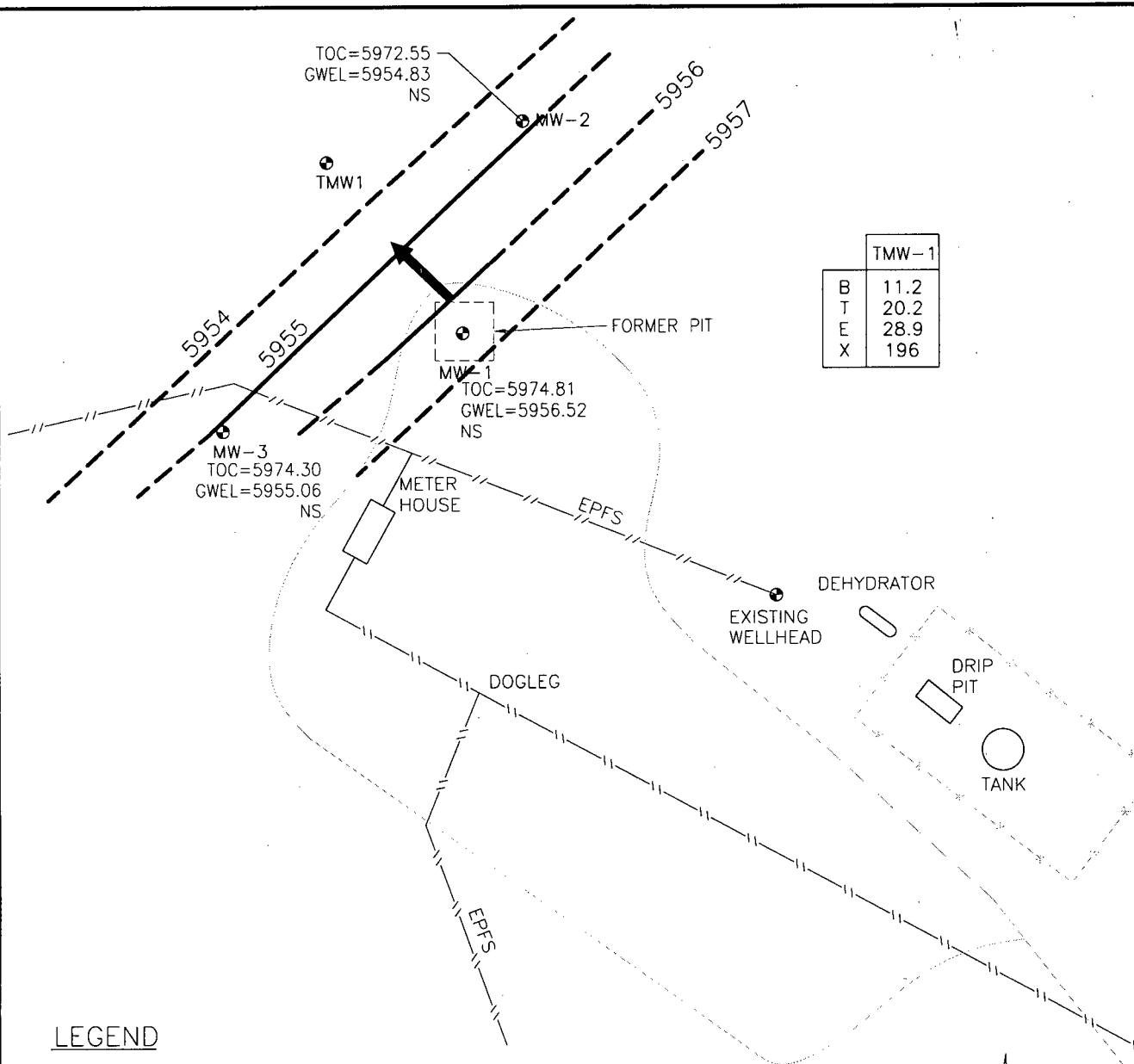
No isoconcentration maps were prepared for this site, however, the attached site maps present both the water level and analytical data collected during 2005.

CONCLUSIONS

- Groundwater flow at the site is consistently to the northwest.
- Benzene and total xylenes concentrations were above standards in TMW-1 in samples collected in February and May of 2005. All BTEX concentrations were below standards August 2005. Benzene was above the standard in November 2005. This pattern was observed in 2004, indicating that the concentrations fluctuate with the seasons.
- Wells MW-1, MW-2 and MW-3 have met four consecutive quarters of BTEX concentrations below NMWQCC standards by 2002. TMW-1 was installed in 2003, as requested by NMOCD.

RECOMMENDATIONS

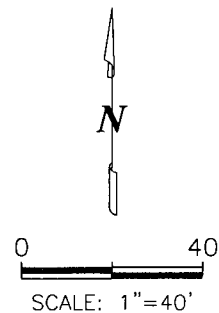
- EPTPC recommends continued quarterly sampling of TMW-1 until four consecutive quarters of BTEX concentrations below standards have been achieved, at which time the site will be submitted for closure.
- Because historic samples have indicated that these wells have achieved closure standards, MW-1, MW-2 and MW-3 will be sampled again only at final closure.
- Once closure has been granted, all monitoring wells will be plugged and abandoned in accordance with the approved well abandonment plan.



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 (Feet Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing

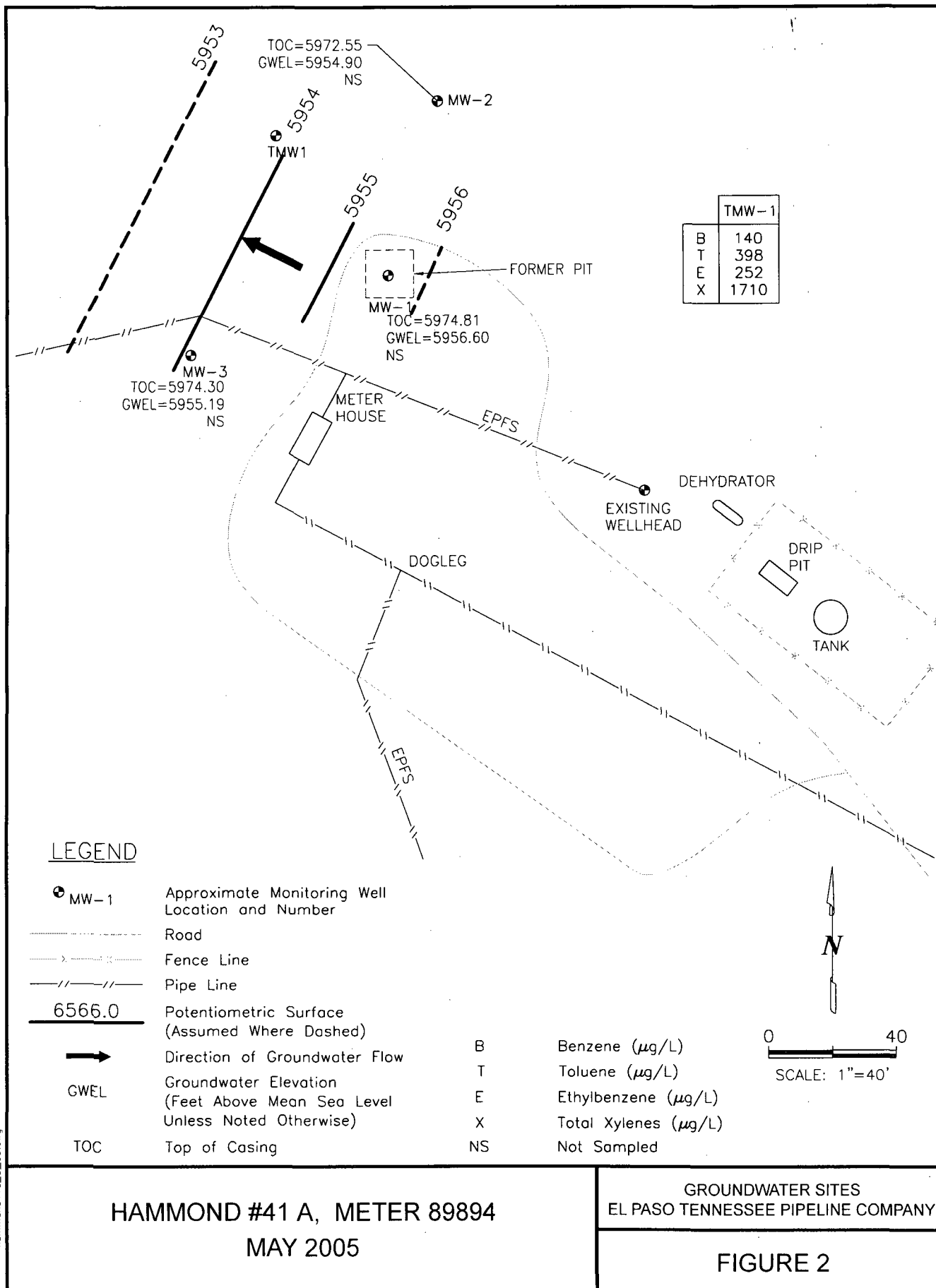
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- X Total Xylenes ($\mu\text{g/L}$)
- NS Not Sampled

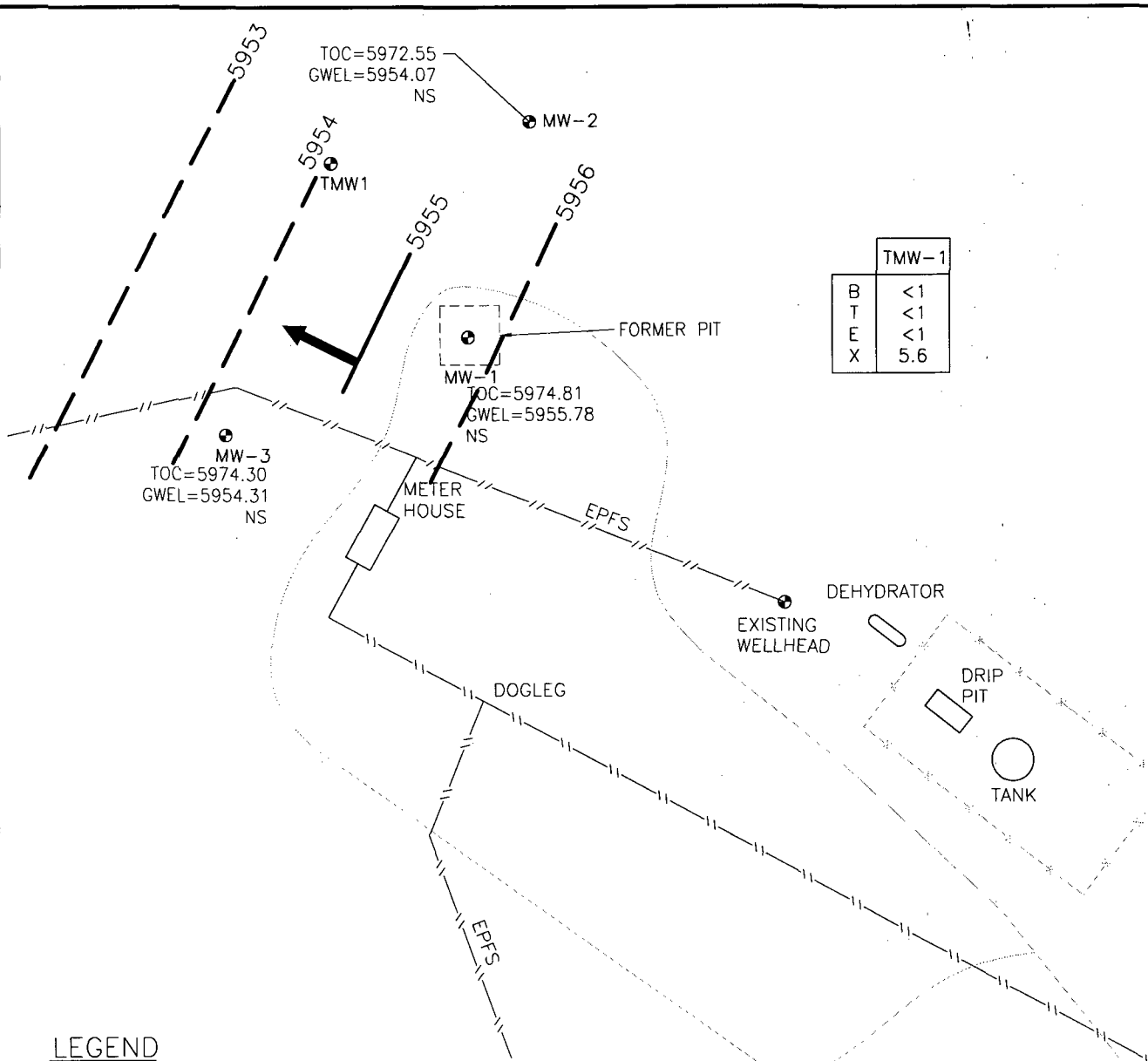


HAMMOND #41 A, METER 89894
FEBRUARY 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 1



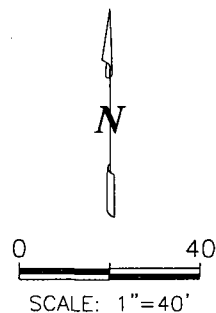


TMW-1	
B	<1
T	<1
E	<1
X	5.6

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 (Feet Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing

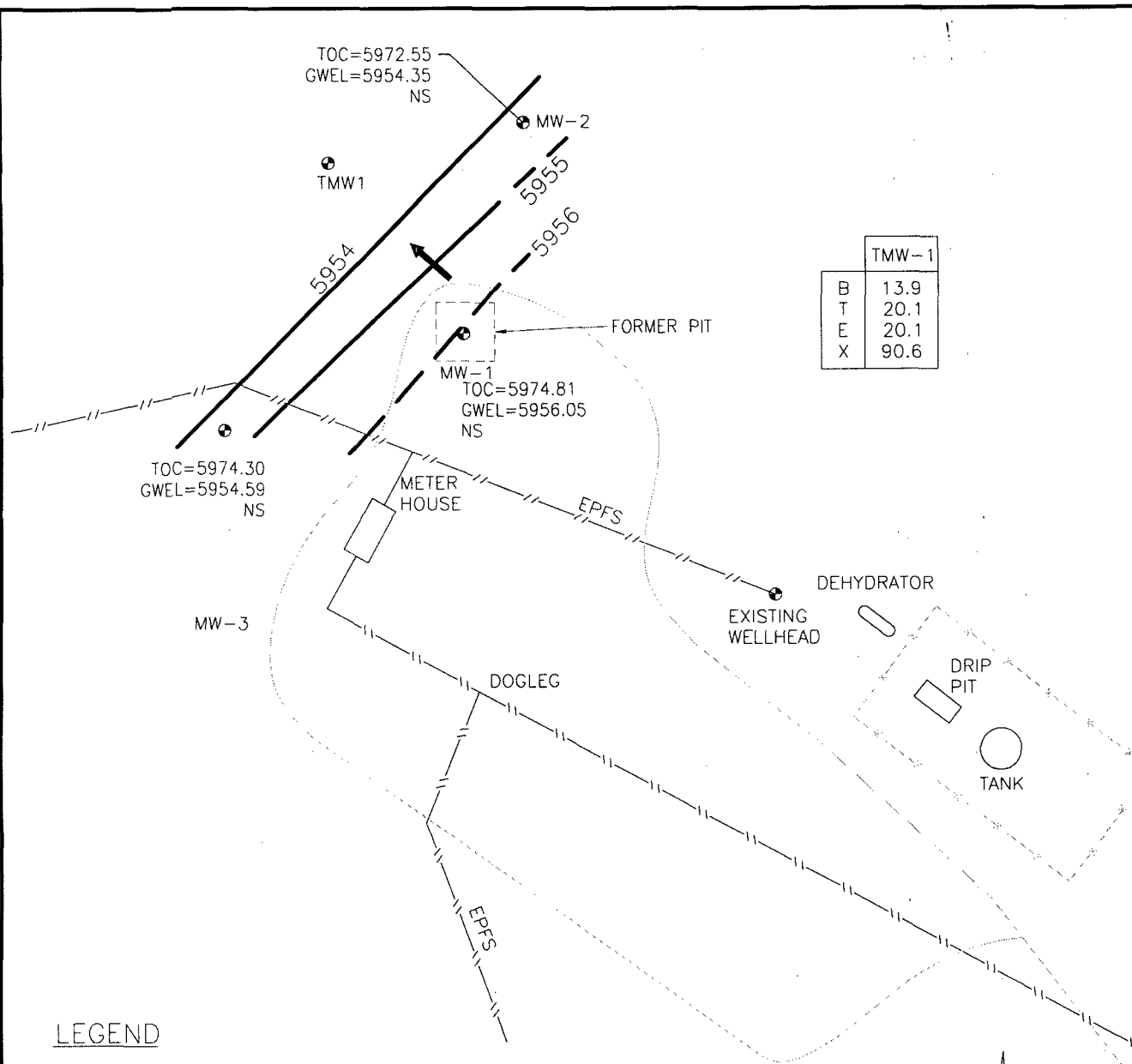
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- X Total Xylenes ($\mu\text{g/L}$)
- NS Not Sampled



HAMMOND #41 A, METER 89894
AUGUST 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 3



TMW-1	
B	13.9
T	20.1
E	20.1
X	90.6

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 (Feet Above Mean Sea Level Unless Noted Otherwise)
	TOC	Top of Casing

B	Benzene ($\mu\text{g/L}$)
T	Toluene ($\mu\text{g/L}$)
E	Ethylbenzene ($\mu\text{g/L}$)
X	Total Xylenes ($\mu\text{g/L}$)
NS	Not Sampled

0 40
SCALE: 1"=40'

HAMMOND #41 A, METER 89894
NOVEMBER 2005

GROUNDWATER SITES
EL PASO TENNESSEE PIPELINE COMPANY

FIGURE 4

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN 2005 GROUNDWATER SAMPLES
HAMMOND #41A (METER #89894)

Site Name	Sample Date	Monitoring Well	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	Depth to Water (feet)
Hammond #41A	2/21/05	TMW1	11.2	20.2	28.9	196	16.43
Hammond #41A	5/18/05	TMW1	140	398	252	1710	16.35
Hammond #41A	8/23/05	TMW1	1	1	1	5.6	17.18
Hammond #41A	11/8/05	TMW1	13.9	20.1	20.1	149	16.91

FIGURE 5
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
HAMMOND #41A
TMW-1

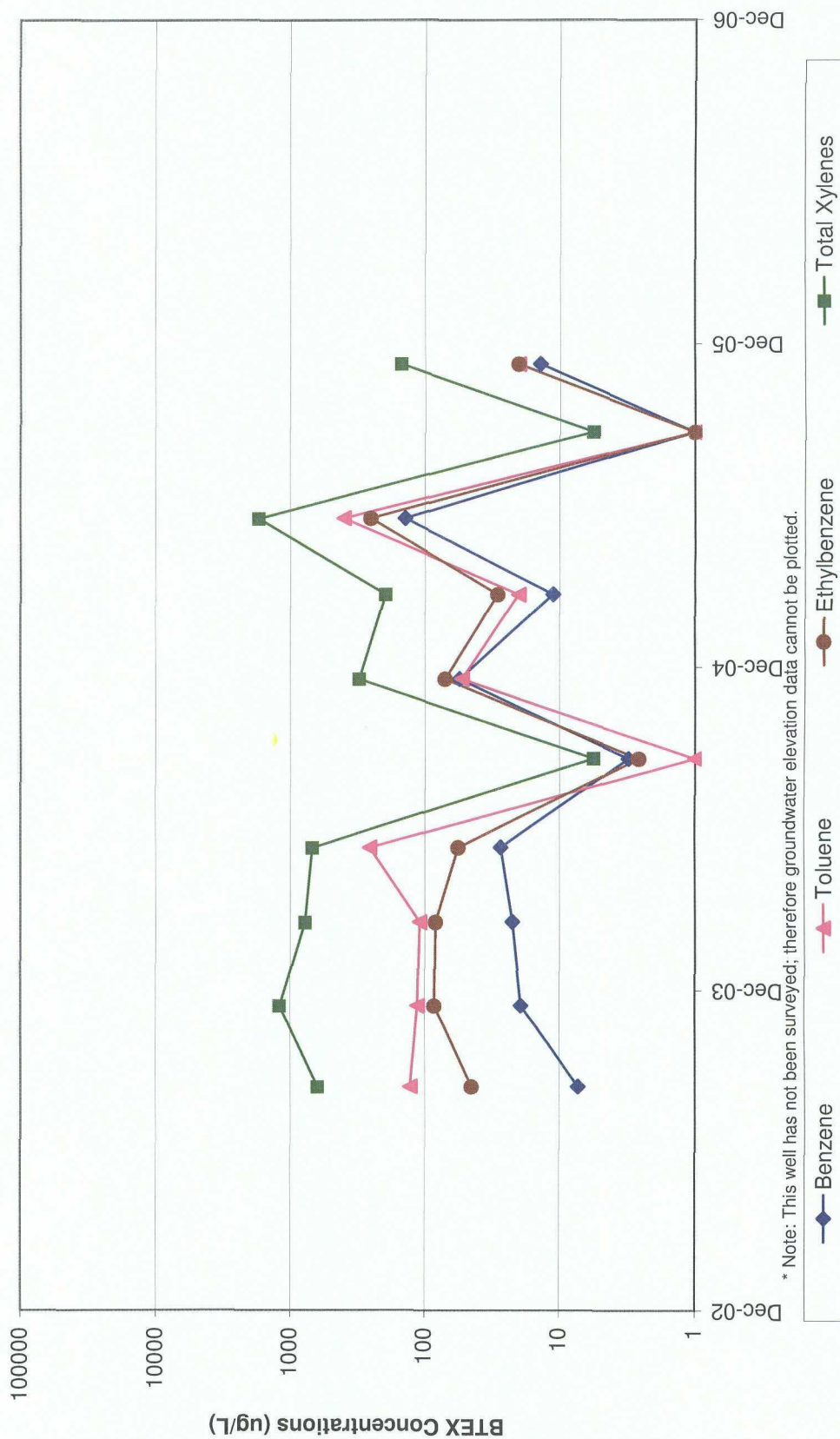


FIGURE 6
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
HAMMOND #41A
MW-1

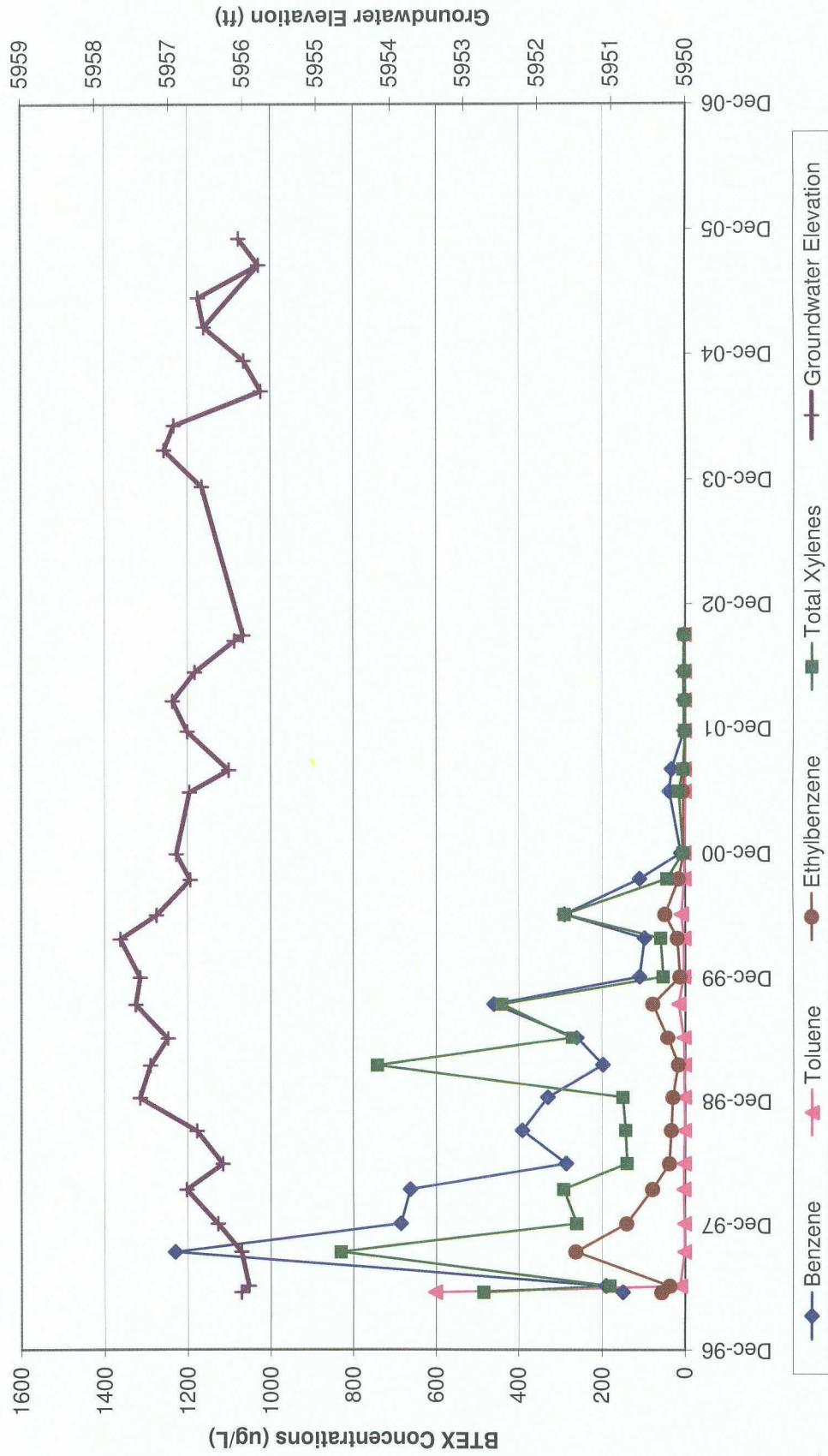


FIGURE 7
HISTORIC BTX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
HAMMOND #41A
MW-2

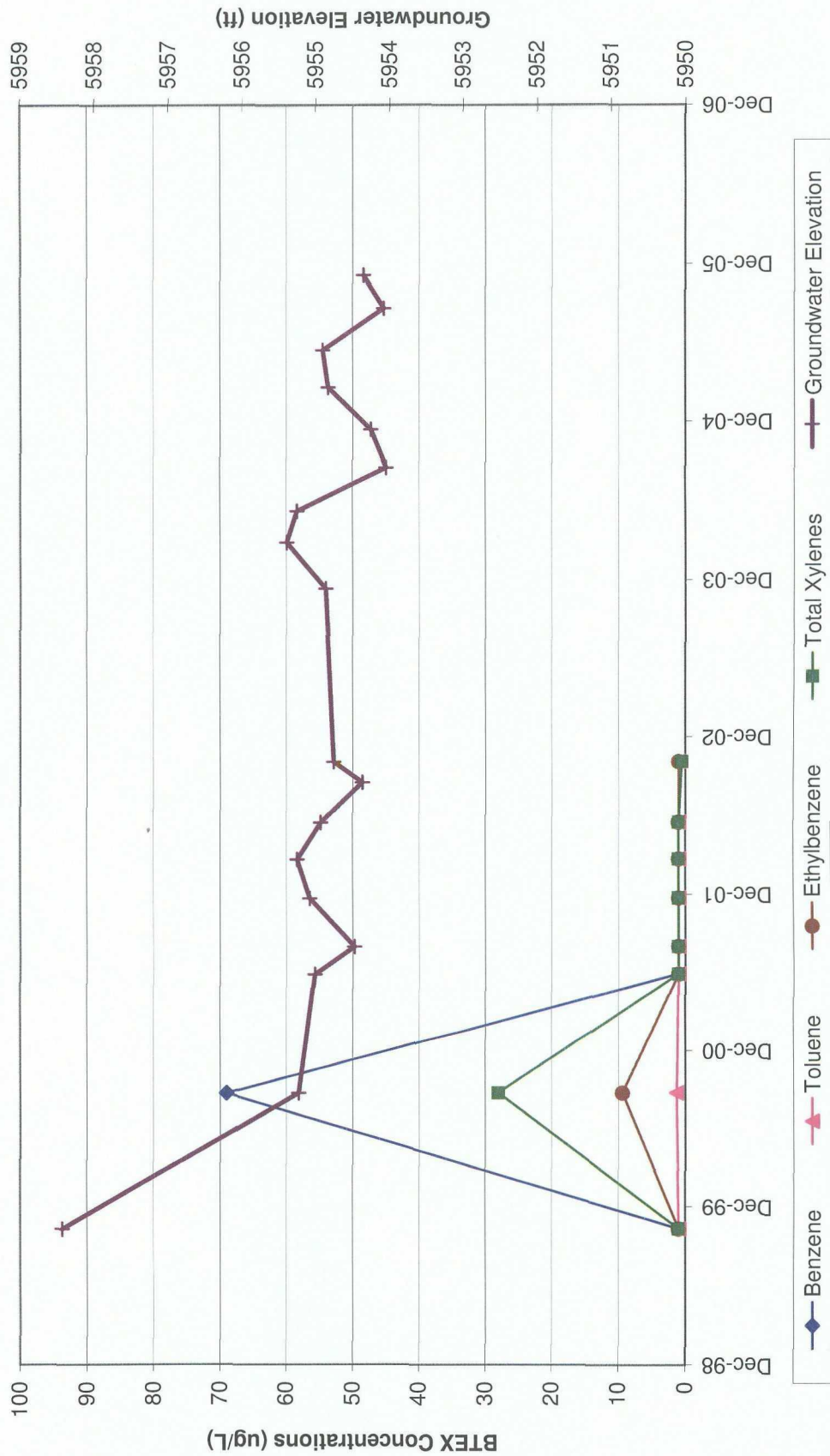


FIGURE 8
HISTORIC BTEX CONCENTRATIONS AND GROUNDWATER ELEVATIONS
HAMMOND #41A
MW-3

