

3R - 239

REPORTS

DATE:

2002

Certified Mail: #7001 1940 0002 1371 7676

February 28, 2003

RECEIVED

MAR 05 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Mr. William C. Olson
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87504

RE: 2002 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual reports for the 30 remaining groundwater impacted sites that were identified during our pit closure project of 1994 / 1995.

EPFS has organized the 30 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 sites and Volume 3 contains sites on Navajo land. Of the 30 reports submitted, EPFS is requesting closure of three sites located on Navajo lands. Of the three Navajo sites submitted for closure OCD has closed the Charley Pah #4 and the John Charles #8. The Rementa et al #1 has not been closed by either agency and EPFS reiterates request for closure of this site. EPFS understands closure of groundwater sites on Navajo land falls under jurisdiction of the Navajo Nation Environmental Protection Agency and original documents have been submitted to them for review. Other Navajo sites are included in the report for your information.

Three additional sites were submitted for closure in 2002. EPFS recently has received closure on the W.D. Heath B-5. Closure approval is pending on the D Loop Line Drip and Hammond # 41A. All of these sites are included in the 2002 Annual Report.

If you have any questions concerning the enclosed reports, please call me at (505) 599-2124.

Sincerely,



Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # 7001 1940 0002 1371 7669**
Mr. Bill Liesse, BLM - w / enclosures (federal sites only), **Certified Mail # 7001 1940 0002 1371 7652**



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MAR 05 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

El Paso Field Services

**San Juan Basin Pit Program
Groundwater Sites Project**

**2002 Annual Report
Non-Federal Sites (Volume 2)**

March 2003



MWH

10619 South Jordan Gateway, Suite 100
Salt Lake City, Utah 84095

EL PASO FIELD SERVICES ANNUAL GROUNDWATER REPORT

NON-FEDERAL SITES VOLUME II

TABLE OF CONTENTS

Site Map

METER or LINE ID	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
71669	State Gas Com N #1	31N	12W	16	H
70194	Johnston Fed #4	31N	09W	33	H
93388	Horton #1E	31N	09W	28	H
72556	Knight #1	30N	13W	5	A
73551	Coldiron A #1	30N	11W	2	K
03906	GCU Com A #142E	29N	12W	25	G
70445	Standard Oil Com #1	29N	09W	36	N
LD146	Lat 3B-39 Line Drip	29N	09W	10	M
LD087	K-31 Line Drip	25N	06W	16	N
94967	Lindrith B #24	24N	03W	9	N



MWH

MONTGOMERY WATSON HARZA

This is a detailed topographic map of the Merrimack River region in New Hampshire. The map shows the river flowing from the north towards the south, with several towns and communities labeled, including Farmington, Keegan, and Keegan, NH. The terrain is depicted with green shading for forested areas and brown/tan shading for open land or urban areas. A scale bar at the bottom indicates a distance of 1 mile. A north arrow is located in the upper right corner. The map also shows various roads, including NH Route 103 and NH Route 104, and several bridges crossing the river.

3 mil Scale: 1 : 600,000 Detail: 8:4 Datum: WGS84

**EPFS GROUNDWATER SITES
2002 ANNUAL GROUNDWATER REPORT**

**State Gas Com N #1
Meter Code: 71669**

SITE DETAILS

LEGAL DESCRIPTION: **Twn:** 31N **Rng:** 12W **Sec:** 16 **Unit:** H
NMOCD Haz Ranking: 30 **Land Type:** State **Operator:** Amoco Production Company

PREVIOUS ACTIVITIES

Site Assessment: 3/94	Excavation: 5/94 (80 cy)	Soil Boring: 10/95
Monitor Well: 10/95	Geoprobe: NA	Additional MWs: 12/01
Downgradient MWs: 11/95	Replace MW: NA	Quarterly Initiated: NA
ORC Nutrient Injection: NA	Re-Excavation: NA	PSH Removal Initiated: NA
Annual Initiated: NA	Quarterly Resumed: NA	

SUMMARY OF 2002 ACTIVITIES

- MW-1:** Quarterly free-product recovery visits and water level monitoring were performed during 2002.
- MW-2:** Quarterly free-product recovery and water level monitoring were performed during 2002.
- MW-3:** Quarterly free-product recovery and water level monitoring were performed during 2002.
- MW-4:** Annual groundwater sampling (September) and quarterly water level monitoring were performed during 2002.
- MW-5:** Annual groundwater sampling (September) and quarterly water level monitoring were performed during 2002.
- MW-6:** Quarterly free-product recovery and water level monitoring were performed during 2002.
- Site-Wide Activities:** No other activities were performed at this site during 2002.

SUMMARY TABLES AND GRAPHS

- Analytical data are summarized in Table 1 and presented graphically in Figures 6 through 10.
- Free-product recovery data are summarized in Table 2 and presented graphically in Figures 11 through 13.
- Laboratory reports are presented in Attachment 1.
- Field documentation are presented in Attachment 2.

**EPFS GROUNDWATER SITES
2002 ANNUAL GROUNDWATER REPORT**

**State Gas Com N #1
Meter Code: 71669**

SITE MAP

Site maps are attached as Figures 1 through 5.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this site during 2002.

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 the potentiometric surface and analytical data collected during 2002.

CONCLUSIONS

- The groundwater flow direction at this site trends toward the southeast.
- Free-product was not detected in MW-1 during 2002.
- Free-product recovery efforts at MW-2 resulted in removal of approximately 0.01 gallons of free-phase hydrocarbons during 2002 bringing the cumulative total recovered to date to 133.16 gallons.
- Free-product recovery efforts at MW-3 resulted in removal of approximately 4.33 gallons of free-phase hydrocarbons during 2002 bringing the cumulative total volume removed to 61.43 gallons.
- Laboratory results from the annual groundwater sample collected at MW-4 indicate that BTEX concentrations remain elevated at this well. Benzene results for the sample collected in September indicated a concentration of 17,800 µg/l.
- Laboratory results from the annual groundwater sample collected at MW-5 indicate that BTEX concentrations remain elevated at this well. Benzene results for the sample collected in September indicate a concentration of 21,100 µg/l.
- Free-product recovery efforts at MW-6 were initiated this year and resulted in a removal of approximately 2.7 gallons of free-phase hydrocarbons.

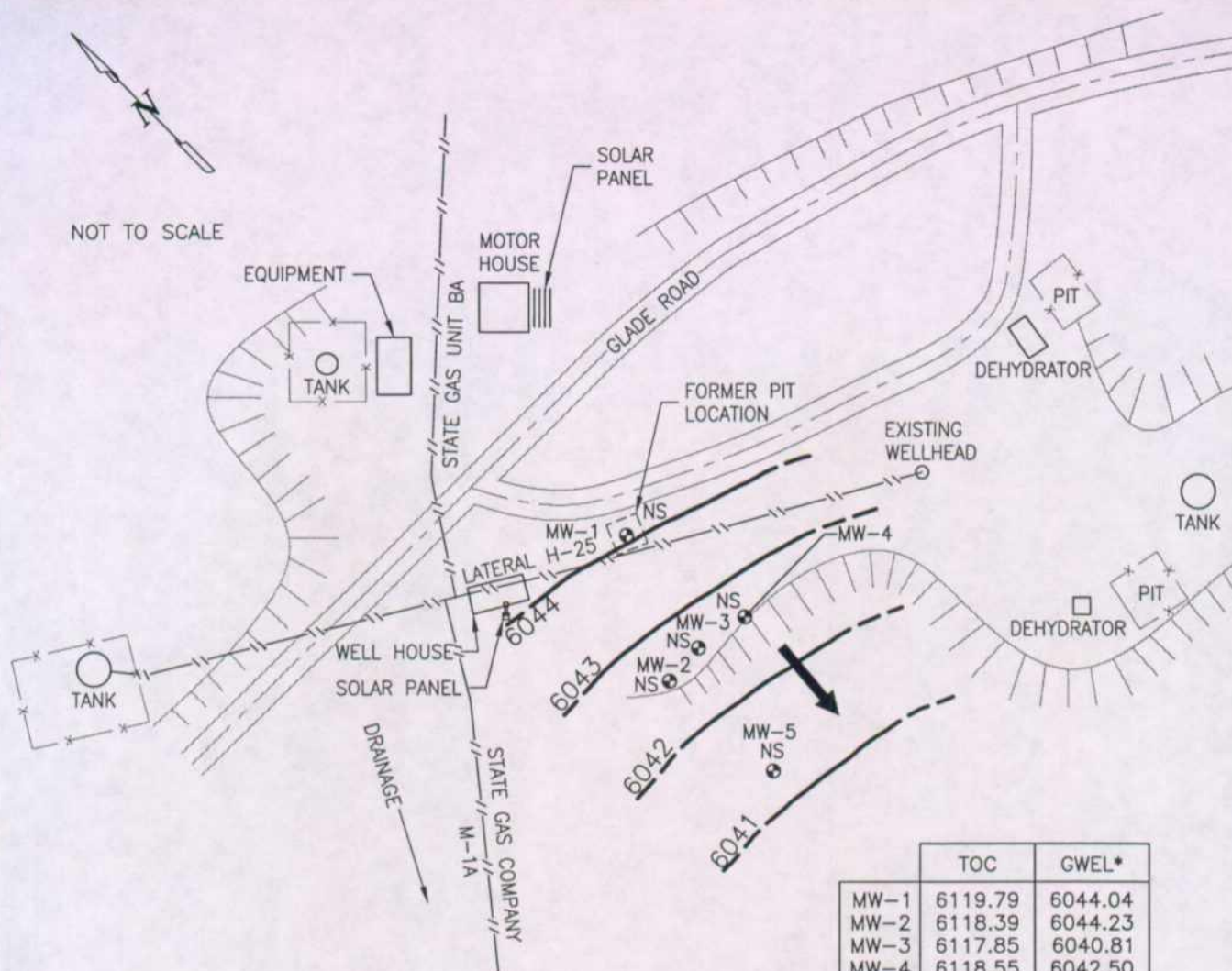
**EPFS GROUNDWATER SITES
2002 ANNUAL GROUNDWATER REPORT**

**State Gas Com N #1
Meter Code: 71669**

RECOMMENDATIONS

- EPFS recommends to continue free-product recovery efforts at MW-2, MW-3, and MW-6 on a quarterly basis.
- EPFS recommends redevelopment of monitoring wells MW-2, MW-3, and MW-6 in an attempt to increase free-product recovery.
- EPFS recommends annual groundwater sampling at MW-1, MW-4, and MW-5, and continued quarterly water level measurements.

NOT TO SCALE



LEGEND

⊕ MW-1 Approximate Monitoring Well Location and Number

--- Centerline of Road

-x-x- Fence Line

-//- Pipe Line

GWEL Groundwater Elevation
(FT Above Mean Sea Level Unless Noted Otherwise)

TOC Top of Casing

6566.0 Potentiometric Surface
(Approximate & Assumed Where Dashed)

➔ Direction of Groundwater Flow
(Estimated)

	TOC	GWEL*
MW-1	6119.79	6044.04
MW-2	6118.39	6044.23
MW-3	6117.85	6040.81
MW-4	6118.55	6042.50
MW-5	6115.34	6041.33
MW-6	6111.16	6039.72

*Recorded 3/28/02

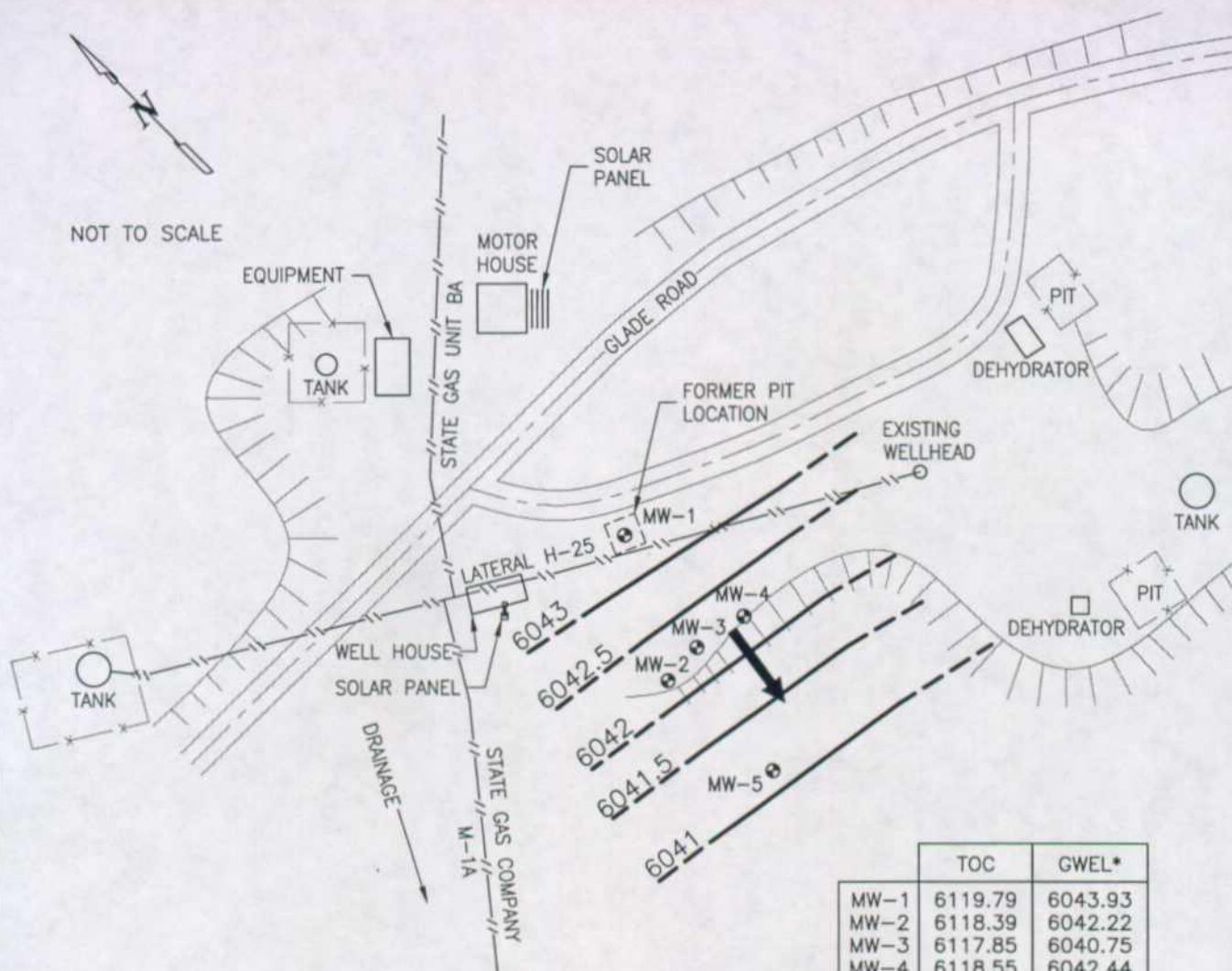
⊕ MW-6

STATE GAS COM N#1, METER 71669
MARCH, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 1

NOT TO SCALE



LEGEND

⊕ MW-1 Approximate Monitoring Well Location and Number

— — — — — Centerline of Road

— x — x — Fence Line

— // — // — Pipe Line

GWEL Groundwater Elevation
(FT Above Mean Sea Level Unless Noted Otherwise)

TOC Top of Casing

6566.0 Potentiometric Surface
(Approximate & Assumed Where Dashed)

→ Direction of Groundwater Flow
(Estimated)

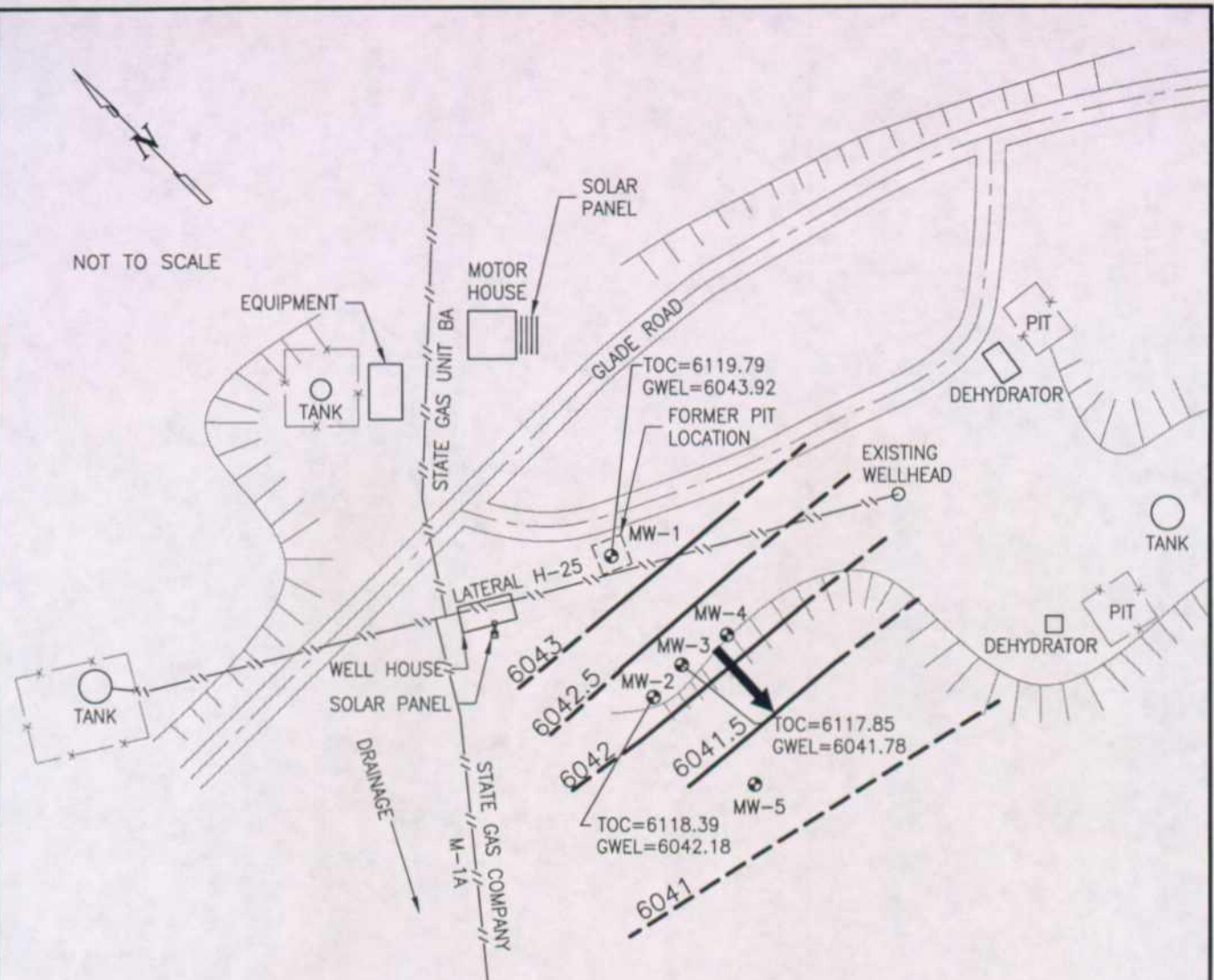
	TOC	GWEL*
MW-1	6119.79	6043.93
MW-2	6118.39	6042.22
MW-3	6117.85	6040.75
MW-4	6118.55	6042.44
MW-5	6115.34	6041.19
MW-6	6111.16	6040.12

*Recorded 5/17/02

SITE LOCATION MAP
STATE GAS COM N#1, METER 71669
MAY, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 2



LEGEND

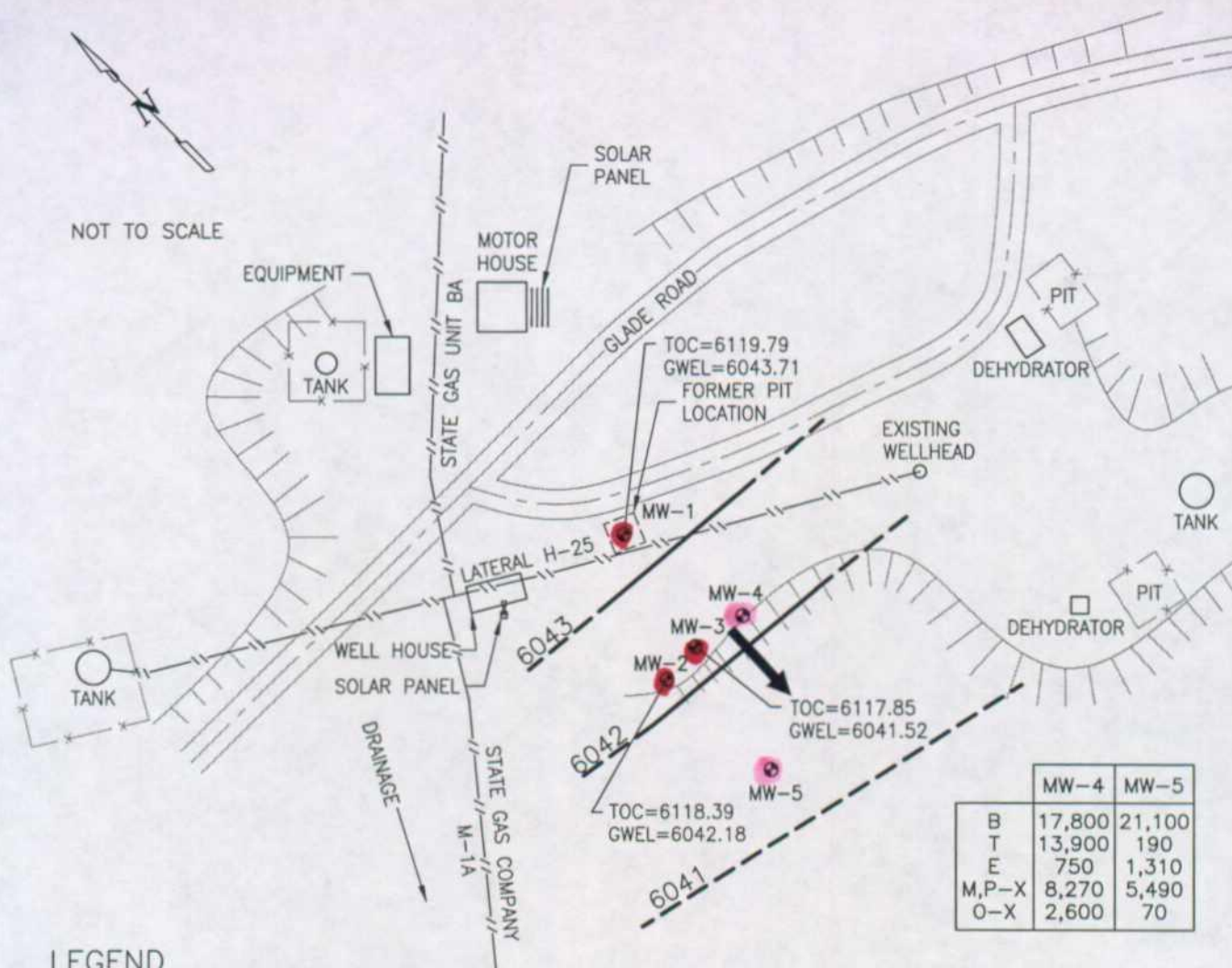
- MW-1
 Approximate Monitoring Well Location and Number
- Centerline of Road
- Fence Line
- Pipe Line
- GWEL
 Groundwater Elevation
(FT Above Mean Sea Level Unless Noted Otherwise)
- TOC
 Top of Casing
- Potentiometric Surface
(Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow
(Estimated)

SITE LOCATION MAP
STATE GAS COM N#1, METER 71669
JUNE, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 3

NOT TO SCALE



	MW-4	MW-5
B	17,800	21,100
T	13,900	190
E	750	1,310
M,P-X	8,270	5,490
O-X	2,600	70

LEGEND

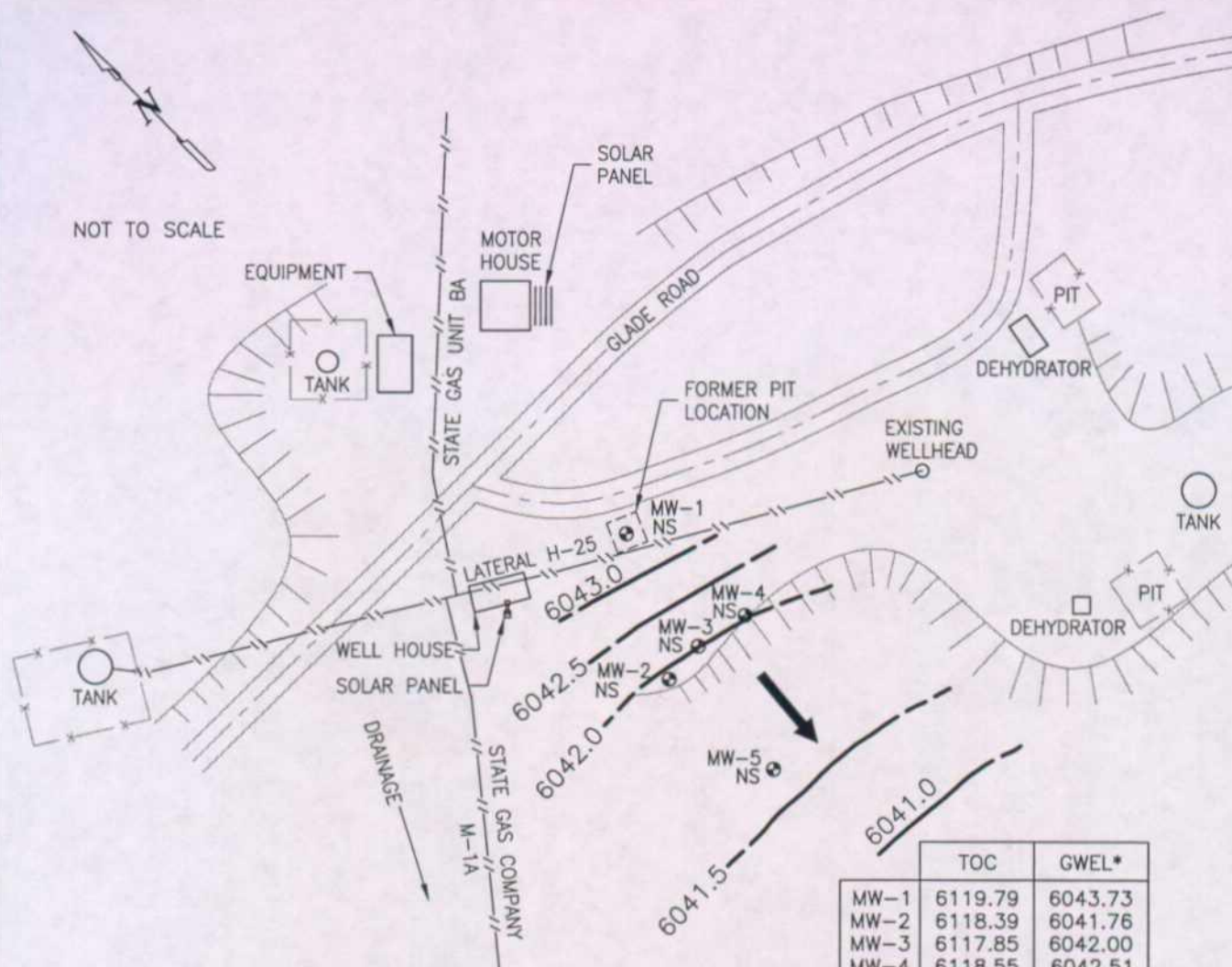
- ⊗ MW-1 Approximate Monitoring Well Location and Number
- Centerline of Road
- x-x- Fence Line
- // Pipe Line
- GWEL Groundwater Elevation (FT Above Mean Sea Level Unless Noted Otherwise)
- TOC Top of Casing
- 6566.0 Potentiometric Surface (Approximate & Assumed Where Dashed)
- Direction of Groundwater Flow (Estimated)
- B Benzene ($\mu\text{g/L}$)
- T Toluene ($\mu\text{g/L}$)
- E Ethylbenzene ($\mu\text{g/L}$)
- M,P,O-X Xylenes (Isomers)($\mu\text{g/L}$)

SITE LOCATION MAP
STATE GAS COM N#1, METER 71669
SEPTEMBER, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 4

NOT TO SCALE



LEGEND

⊙ MW-1 Approximate Monitoring Well Location and Number

--- Centerline of Road

-x-x- Fence Line

/// Pipe Line

GWEL Groundwater Elevation
(FT Above Mean Sea Level Unless Noted Otherwise)

TOC Top of Casing

6566.0 Potentiometric Surface
(Approximate & Assumed Where Dashed)

➔ Direction of Groundwater Flow
(Estimated)

	TOC	GWEL*
MW-1	6119.79	6043.73
MW-2	6118.39	6041.76
MW-3	6117.85	6042.00
MW-4	6118.55	6042.51
MW-5	6115.34	6041.56
MW-6	6111.16	6040.10

*Recorded 12/17/02

SITE LOCATION MAP
STATE GAS COM N#1, METER 71669
DECEMBER, 2002

GROUNDWATER SITES
EL PASO FIELD SERVICES

FIGURE 5

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER
STATE GAS COM N#1 (METER #71669)
(Page 1 of 1)

Sample Identification	Sample Date	MW Identification	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	m,p-Xylene (µg/l)	o-Xylene (µg/l)	Total Xylenes (µg/l)
02-4725-3	04-Sep-2002	4	17800	13900	750	8270	2600	10870
02-4725-5	04-Sep-2002	5	21100	190	1310	5490	70	5560

Figure 6
 Historical BTEX Concentration and Groundwater Elevation vs. Time
 State Gas Com N#1 (Meter #71669)
 MW-1

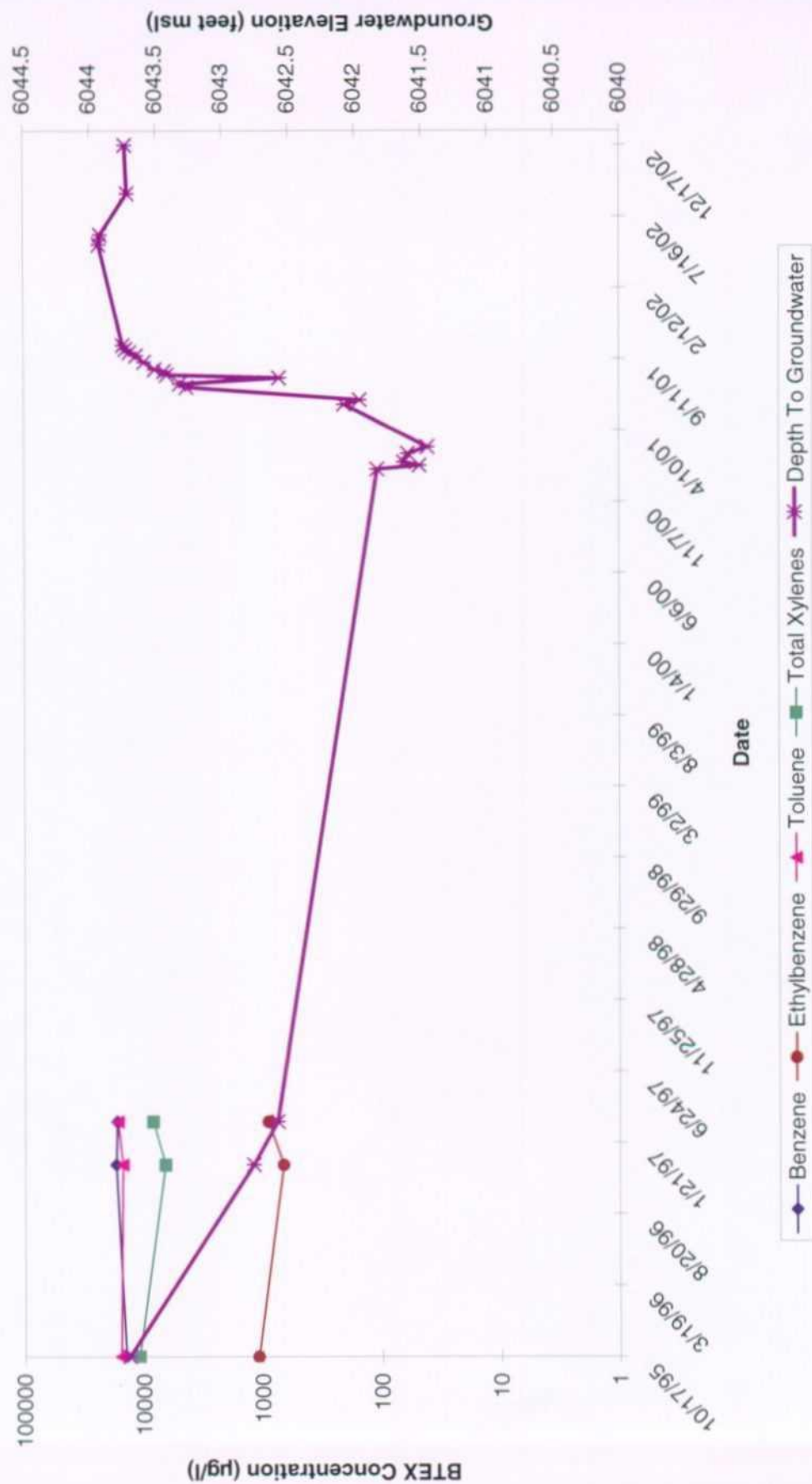


Figure 7
 Historical BTEX Concentration and Groundwater Elevation vs. Time
 State Gas Com N#1 (Meter #71699)
 MW-2



Figure 8
 Historical BTEX Concentration and Groundwater Elevation vs. Time
 State Gas Com N#1 (Meter #71699)
 MW-3

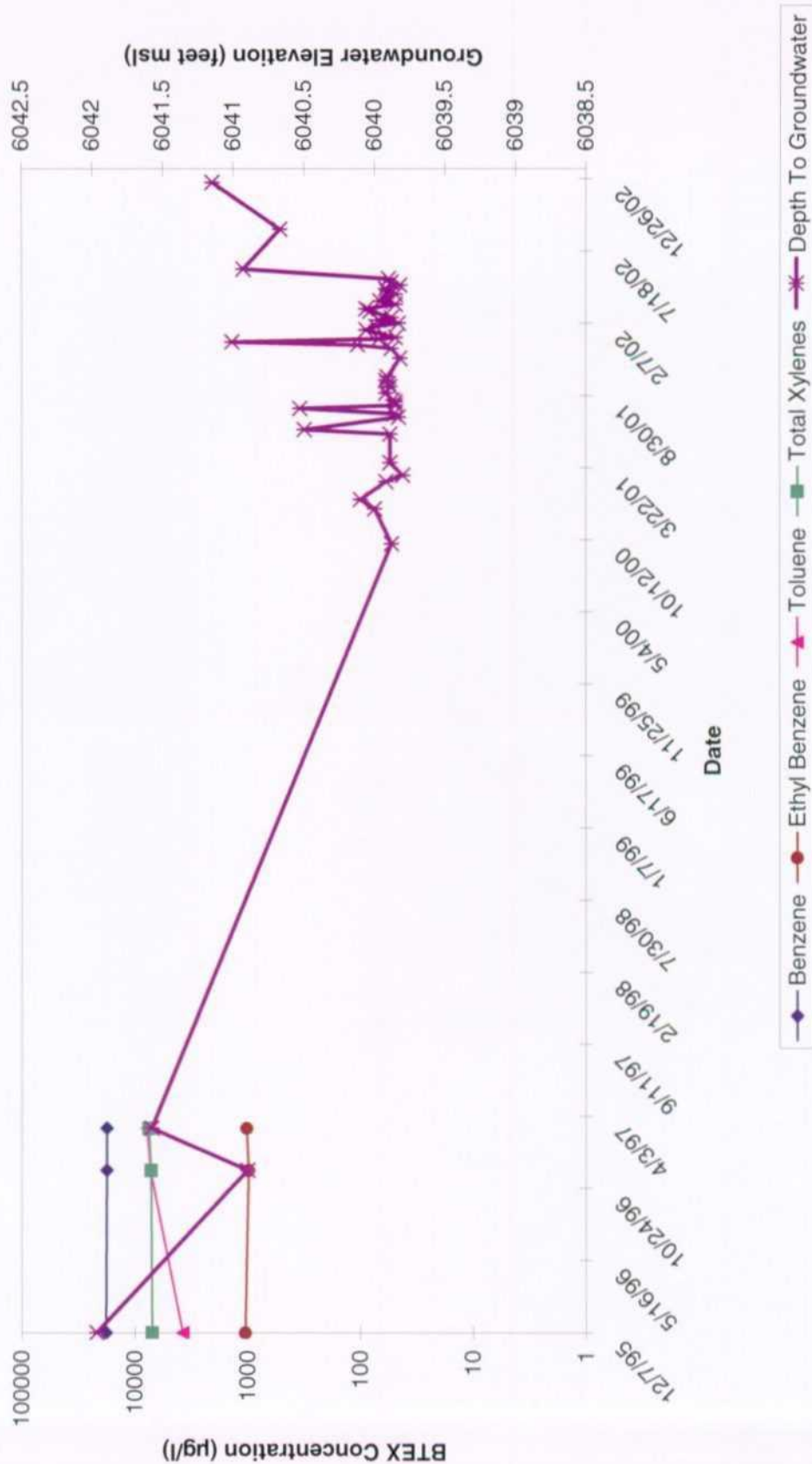


Figure 9
BTEX Concentration and Groundwater Elevation vs. Time
State Gas Com N#1
MW-4



Figure 10
 BTEX Concentration and Groundwater Elevation vs. Time
 State Gas Com N#1 (Meter 71669)
 MW-5

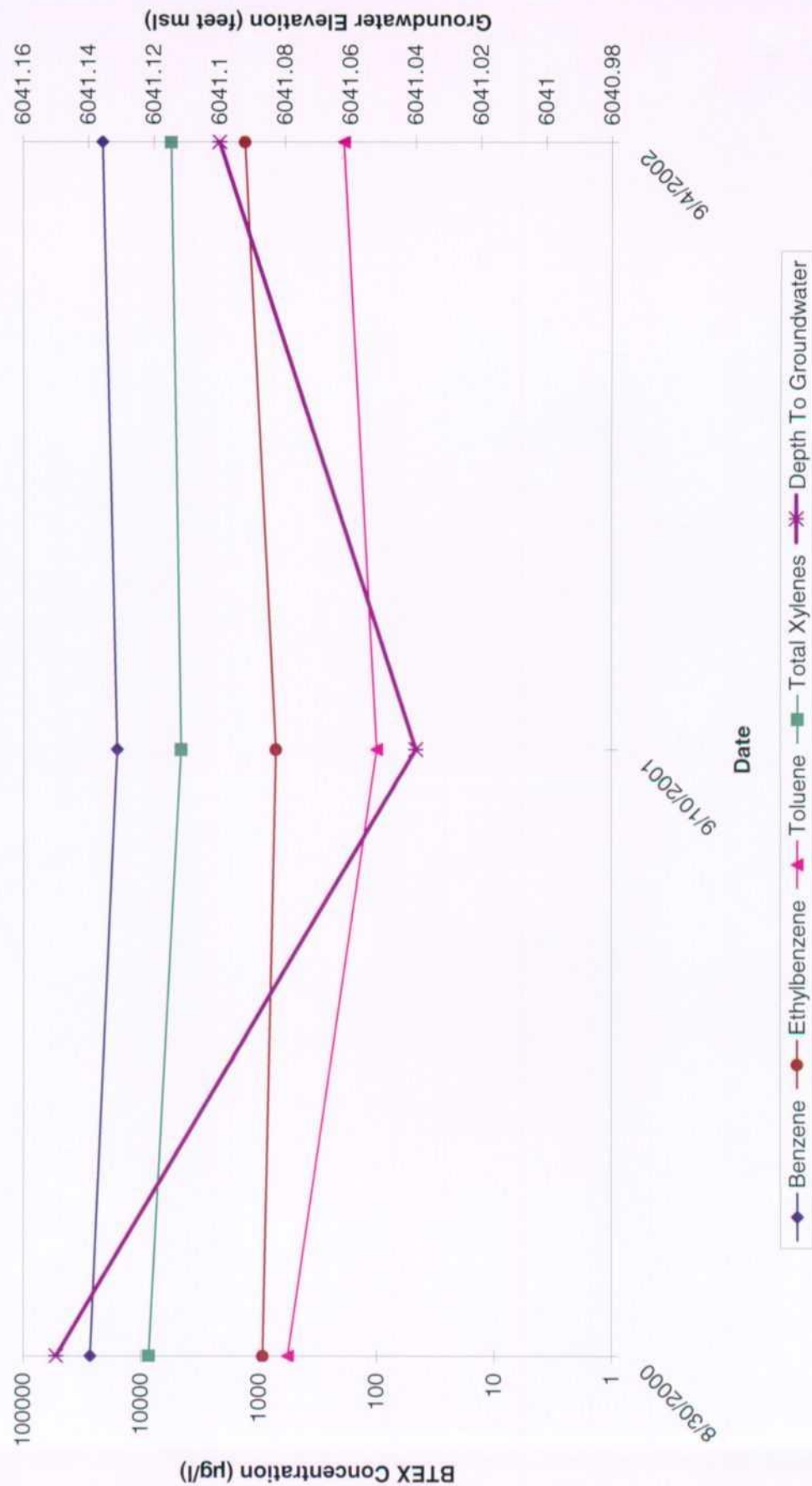


TABLE 2

SUMMARY OF FREE-PRODUCT RECOVERY
STATE GAS COM N#1 (METER #71669)
(Page 1 of 2)

MW Identification	Date	Depth to Product (feet bgs)	Depth to Water (feet bgs)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Removed (gallons)
2	23-Jan-2002	76.07	76.08	0.01	0.00	133.16
2	17-May-2002	NA	76.17	0.00	0.00	133.16
2	07-Jun-2002	NA	76.21	0.00	0.00	133.16
2	04-Sep-2002	76.20	76.21	0.01	0.01	133.16
2	17-Dec-2002	NA	76.63	0.00	0.00	133.16
3	04-Jan-2002	NA	77.03	0.00	0.00	57.10
3	07-Jan-2002	77.14	77.15	0.01	0.00	57.10
3	23-Jan-2002	76.93	76.94	0.01	0.00	57.10
3	31-Jan-2002	77.00	77.01	0.01	0.00	57.10
3	07-Feb-2002	77.16	77.17	0.01	0.00	57.10
3	14-Feb-2002	77.02	77.03	0.01	1.00	58.10
3	20-Feb-2002	77.11	77.12	0.01	0.00	58.10
3	06-Mar-2002	NA	76.97	0.00	0.13	58.23
3	11-Mar-2002	NA	76.94	0.00	0.50	58.73
3	21-Mar-2002	NA	77.15	0.00	0.19	58.92
3	28-Mar-2002	NA	77.04	0.00	0.00	58.92
3	03-Apr-2002	NA	NA	NA	0.01	58.93
3	12-Apr-2002	0.00	77.15	0.00	1.25	60.18
3	19-Apr-2002	NA	77.09	0.00	1.25	61.43
3	25-Apr-2002	NA	77.08	0.00	0.00	61.43
3	03-May-2002	NA	77.18	0.00	0.00	61.43
3	10-May-2002	NA	77.12	0.00	0.00	61.43
3	17-May-2002	NA	77.10	0.00	0.00	61.43
3	04-Sep-2002	NA	76.33	0.00	0.00	61.43
3	17-Dec-2002	75.81	75.85	0.04	0.03	61.43

TABLE 2

SUMMARY OF FREE-PRODUCT RECOVERY
STATE GAS COM N#1 (METER #71669)
(Page 2 of 2)

MW Identification	Date	Depth to Product (feet bgs)	Depth to Water (feet bgs)	Product Thickness (feet)	Volume Removed (gallons)	Cumulative Removed (gallons)
6	06-Mar-2002	70.64	72.09	1.45	1.50	1.50
6	11-Mar-2002	71.38	71.95	0.57	0.25	1.75
6	21-Mar-2002	71.17	71.44	0.27	0.75	2.50
6	03-Apr-2002	75.95	75.99	0.04	0.00	2.50
6	04-Sep-2002	71.05	71.28	0.23	0.20	2.70
6	17-Dec-2002	71.03	71.06	0.03	0.02	2.72

Figure 11
Free-Product Recovery vs. Time
State Gas Com N#1
MW-2

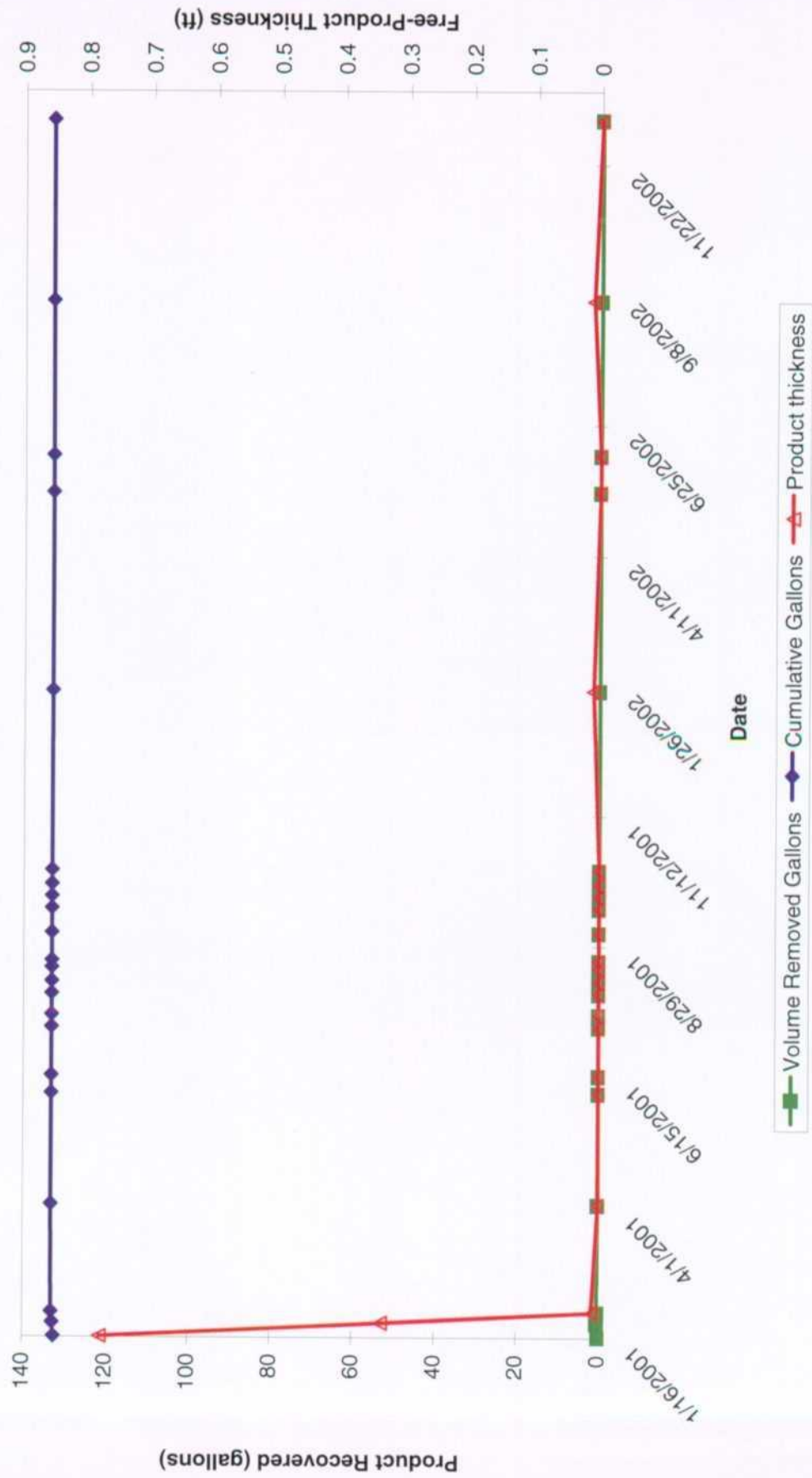


Figure 12
Free-Product Recovery vs. Time
State Gas Com N#1 (Meter #71669)
MW-3

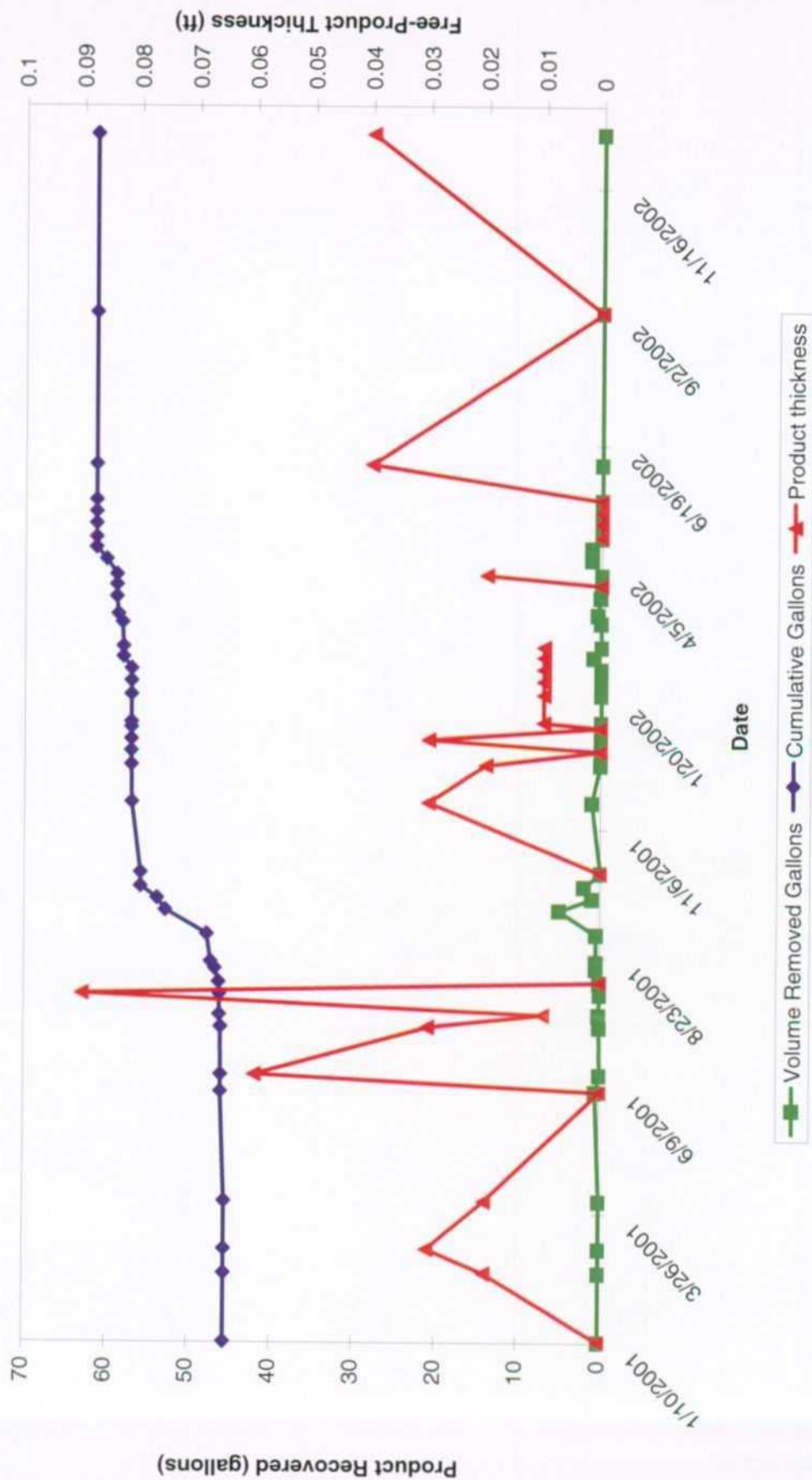
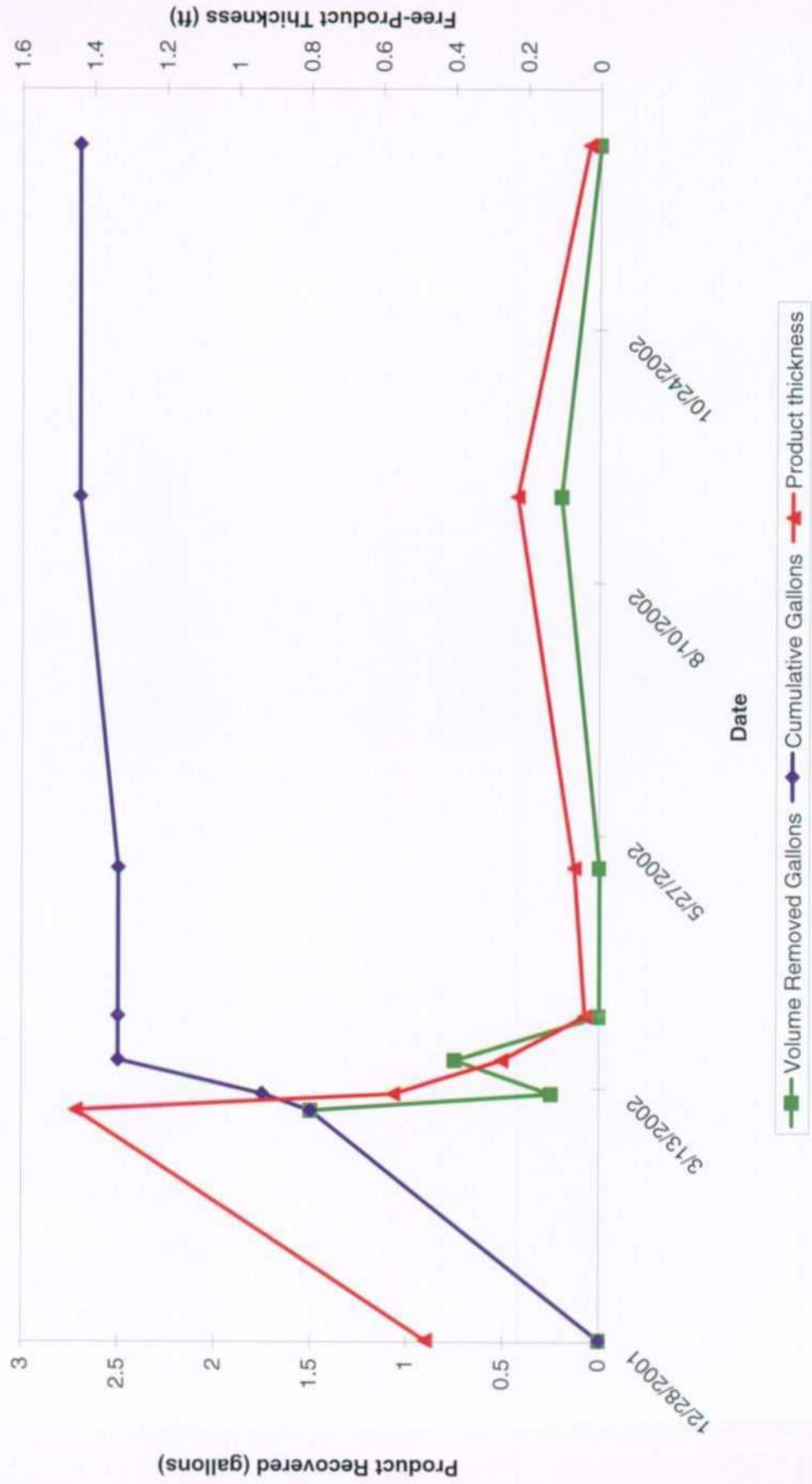


Figure 13
Free-Product Recovery vs. Time
State Gas Com N#1 (Meter #71699)
MW-6



ATTACHMENT 1
LABORATORY REPORTS

DATA VALIDATION WORKSHEET

Analytical Method/Analytes: SW-846 8021B (BTEX) Sample Collection Date(s): 09/04/02

Laboratory: APCL

MWH Job Number: EPC-SJRB
(Ground Water)

Batch Identification: 02-04725

Matrix: Water

QC Identification^(a):

Page: 1 of 2

Validation Complete:

1313
(Date/Signature) 9-27-02

[illegible]

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL QA/QC Report

Submitted to:

Montgomery Watson Harza

Attention: Brian Buttars

10619 South Jordan Gateway

Salt Lake City, UT 84095

Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-024813

Collected by: Ashley Lowe

Collected on: 09/09/02

Sample description:

Water

Project: San Juan River Basin /4270032-020105

Received: 09/11/02

Tested: 09/13/02

Reported: 09/17/02

Analysis of Water

801-024813QC

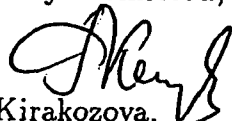
Component Name	Analysis Batch #	CCV (µg/L)	CCV %Rec	M-Blank	Conc. Unit	SP Level	LCS %Rec	MS %Rec	MSD %Rec	MS/MSD %RPD	Control Limit %Rec	%Diff
BTXE												
Benzene	02G3843	100	99	N.D.	µg/L	18.0	85	85*	86*	2	65-129	31
Toluene	02G3843	100	100	N.D.	µg/L	7000	89	90	90	0	66-133	33
Ethylbenzene	02G3843	100	101	N.D.	µg/L	1800	97	96	94	2	65-134	35
m/p-Xylene	02G3843	200	94	N.D.	µg/L	7000	92	88	88	0	65-134	35
o-Xylene	02G3843	100	96	N.D.	µg/L	2500	91	97	94	4	65-134	35

*: LCS/LCSD is used.

Notation: ICV - Initial Calibration Verification
CCV - Continuation Calibration Verification
LCS - Lab Control Spike
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ICS - Interference Check Standard
MD - Matrix Duplicate
N.D. - Not detected or less than PQL

CCB - Continuation Calibration Blank
M-blank - Method Blank
SP Level - Spike Level
%Rec - Recovery Percent
%RPD - Relative Percent Differences
%Diff - Control Limit for %RPD
ICP-SD - ICP Serial Dilution
N.A. - Not Applicable

Respectfully submitted,


Regina Kirakozova,
Associate QA/QC Director
Applied P & Ch Laboratory

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 8021B

Client Name: Montgomery Watson Harza

Contract No:

Lab Code:

APCL

Case No:

SAS No:

SDG Number:

024813

Project ID: San Juan River Basin

Project No: 4270032-020105

Sample Matrix:

Water

Batch No: 02G3843

#	Client Sample No	Lab Sample ID	S1 % #	TOT OUT
1		02G3843-LCS-01	77	0
2		02G3843-LSD-01	84	0
3		02G3843-MB-02	87	0
4	TB02090901	02-4813-3	90	0
5	MW-5 GW STATE GAS	02-4725-5MS	88	0
6	MW-5 GW STATE GAS	02-4725-5MSD	85	0
7	MW-1 GW HORTON 1E	02-4813-1	87	0
8	MW-5 GW OHIO GOV	02-4813-2	92	0
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

QC Control Limit

S1 = 4-BROMO-FLUOROBENZENE (PID)

65-134

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
Montgomery Watson Harza
Attention: Brian Buttars
10619 South Jordan Gateway
Salt Lake City UT 84095
Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-024725
Collected by: Ashley Lowe
Collected on: 09/04/02
Sample Description: Water
Project Description: 4270032-020105 San Juan River Basin

Received: 09/06/02
Extracted: N/A
Tested: 09/08-13/02
Reported: 09/16/02

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-2 GW Knight #1	MW-4 GW Knight #1	MW-4 GW State Gas
				02-04725-1	02-04725-2	02-04725-3
BTXE						
Dilution Factor				1	1	100
BENZENE	8021B	µg/L	0.5	269	261	17,800
ETHYLBENZENE	8021B	µg/L	0.5	48.9	20.1	750
TOLUENE	8021B	µg/L	0.5	7.4	3.1	13,900
O-XYLENE	8021B	µg/L	0.5	7.4	0.5J	2,600
M,P-XYLENE	8021B	µg/L	1	475	246	8,270

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-5 GW Knight #1	MW-5 GW State Gas	TB02090401
				02-04725-4	02-04725-5	02-04725-6
BTXE						
Dilution Factor				1	100	1
BENZENE	8021B	µg/L	0.5	<0.5	21,100	<0.5
ETHYLBENZENE	8021B	µg/L	0.5	0.9	1,310	1.0
TOLUENE	8021B	µg/L	0.5	0.3J	190	<0.5
O-XYLENE	8021B	µg/L	0.5	<0.5	70	<0.5
M,P-XYLENE	8021B	µg/L	1	0.9J	5,490	1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

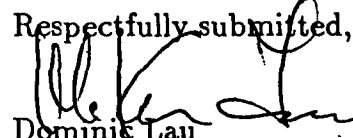
N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,


Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL QA/QC Report

Submitted to:

Montgomery Watson Harza
Attention: Brian Butters
10619 South Jordan Gateway
Salt Lake City, UT 84095
Tel: (801)617-3200 Fax: (801)617-4200

Service ID #: 801-024725

Collected by: Ashley Lowe

Collected on: 09/04/02

Sample description:

Water

Project: San Juan River Basin /4270032-020105

Received: 09/06/02

Tested: 09/08-13/02

Reported: 09/04/02

Received on

SEP 30 2002

at Montgomery Watson
801-024725QC

Analysis of Water

Component Name	Analysis Batch #	CCV (µg/L)	CCV %Rec	M-Blank	Conc. Unit	SP Level	LCS %Rec	MS %Rec	MSD %Rec	MS/MSD %RPD	Control Limit %Rec	%Diff
BTXE												
Benzene	02G3787	100	96	N.D.	µg/L	18.0	91	91*	92*	1	65-129	31
Toluene	02G3787	100	96	N.D.	µg/L	350	93	77	78	1	66-133	33
Ethylbenzene	02G3787	100	98	N.D.	µg/L	18.0	100	100*	100*	0	82-134	35
m/p-Xylene	02G3787	200	91	N.D.	µg/L	70.0	96	96*	96*	0	73-134	35
o-Xylene	02G3787	100	94	N.D.	µg/L	125	96	67	71	6	65-134	35

Component Name	Analysis Batch #	CCV (µg/L)	CCV %Rec	M-Blank	Conc. Unit	SP Level	LCS %Rec	MS %Rec	MSD %Rec	MS/MSD %RPD	Control Limit %Rec	%Diff
BTXE												
Benzene	02G3806	100	93	N.D.	µg/L	18.0	92	89	89	0	68-130	31
Toluene	02G3806	100	93	N.D.	µg/L	70.0	92	93	94	1	66-133	33
Ethylbenzene	02G3806	100	95	N.D.	µg/L	18.0	97	95	95	0	65-134	35
m/p-Xylene	02G3806	200	88	N.D.	µg/L	70.0	92	94	95	1	65-134	35
o-Xylene	02G3806	100	89	N.D.	µg/L	25.0	91	97	97	0	65-134	35

Component Name	Analysis Batch #	CCV (µg/L)	CCV %Rec	M-Blank	Conc. Unit	SP Level	LCS %Rec	MS %Rec	MSD %Rec	MS/MSD %RPD	Control Limit %Rec	%Diff
BTXE												
Benzene	02G3843	100	99	N.D.	µg/L	18.0	85	85*	86*	2	65-129	31
Toluene	02G3843	100	100	N.D.	µg/L	7000	89	90	90	0	66-133	33
Ethylbenzene	02G3843	100	101	N.D.	µg/L	1800	97	96	94	2	65-134	35
m/p-Xylene	02G3843	200	94	N.D.	µg/L	7000	92	88	88	0	65-134	35
o-Xylene	02G3843	100	96	N.D.	µg/L	2500	91	97	94	4	65-134	35

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

APCL QA/QC Report

*: LCS/LCSD is used.

Notation: ICV - Initial Calibration Verification
CCV - Continuation Calibration Verification
LCS - Lab Control Spike
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ICS - Interference Check Standard
MD - Matrix Duplicate
N.D. - Not detected or less than PQL

CCB - Continuation Calibration Blank
M-blank - Method Blank
SP Level - Spike Level
%Rec - Recovery Percent
%RPD - Relative Percent Differences
%Diff - Control Limit for %RPD
ICP-SD - ICP Serial Dilution
N.A. - Not Applicable

Respectfully submitted,


Regina Kirakozova,
Associate QA/QC Director
Applied P & Ch Laboratory

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 8021B

Client Name: Montgomery Watson Harza

Contract No:

Lab Code:

APCL

Case No:

SAS No:

SDG Number:

024725

Project ID: San Juan River Basin

Project No: 4270032-020105

Sample Matrix:

Water

Batch No: 02G3787

#	Client Sample No	Lab Sample ID	S1 % #	TOT OUT
1		02G3787-LCS-01	86	0
2		02G3787-LSD-01	86	0
3		02G3787-MB-02	87	0
4	TB02090401	02-4725-6	89	0
5	MW-2 GW KNIGHT #1	02-4725-1	93	0
6	MW-4 GW KNIGHT #1	02-4725-2	94	0
7	MW-5 GW STATE GAS	02-4725-5MS	84	0
8	MW-5 GW STATE GAS	02-4725-5MSD	87	0
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

S1 = 4-BROMO-FLUOROBENZENE (PID)

QC Control Limit

65-134

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 8021B

Client Name: Montgomery Watson Harza

Contract No:

Lab Code:

APCL

Case No:

SAS No:

Service ID:

024725

Project ID: San Juan River Basin

Project No: 4270032-020105

Sample Matrix:

Water

Batch No: 02G3806

#	Client Sample No	Lab Sample ID	S1 % #	TOT OUT
1		02G3806-LCS-01	78	0
2		02G3806-LSD-01	80	0
3		02G3806-MB-02	82	0
4	MW-4 GW STATE GAS	02-4725-3	91	0
5	821816-0748	02-4758-13MS	86	0
6	821816-0748	02-4758-13MSD	86	0
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

S1 = 4-BROMO-FLUOROBENZENE (PID)

QC Control Limit

65-134

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 8021B

Client Name: Montgomery Watson Harza

Contract No:

Lab Code:

APCL

Case No:

SAS No:

Service ID:

024725

Project ID: San Juan River Basin

Project No: 4270032-020105

Sample Matrix:

Water

Batch No: 02G3843

#	Client Sample No	Lab Sample ID	S1 % #	TOT OUT
1		02G3843-LCS-01	77	0
2		02G3843-LSD-01	84	0
3		02G3843-MB-02	87	0
4	MW-5 GW KNIGHT #1	02-4725-4	88	0
5	MW-5 GW STATE GAS	02-4725-5	87	0
6	MW-5 GW STATE GAS	02-4725-5MS	88	0
7	MW-5 GW STATE GAS	02-4725-5MSD	85	0
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

QC Control Limit

S1 = 4-BROMO-FLUOROBENZENE (PID)

65-134

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

Sample Receiving Checklist

APCL ServiceID: 4725 Client Name/Project: Montgomery Watson

1. Sample Arrival

Date/Time Received 9/6/02 0930 Date/Time Opened 9/6/02 0930 By (name): Paul KouCustody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☒ FedEx ☐ APCL Empl: _____

2. Chain-of-Custody (CoC)

☒ With Samples? ☐ Fixed? ☒ Client has Copy? ☒ Signed, dated? By: Ashley Lane
☒ Project ID? ☐ Analyses Clear? ☐ Hold Samples? # on Hold _____ # Received _____
☒ CoC/Docs Zip-Locked under lid? ☐ Compos. #: _____ ☒ #Samples OK? _____
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☐ Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
 Temp °C 3.8°C

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☒ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12
 If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VJ} 24hr ☐ NO₃ 48hr ☐ BOD 48hr
☐ Cl₂ ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☒ Intact? ☐ Broken? ☐ Documented? Number: _____
 Type: ☐ plastic ☒ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☒ Quantity OK? ☐ Leaking? ☐ Anomaly?
☒ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
 Labels: ☐ Unique ID? ☐ Date/Time ☐ Preserved?

7. Turn Around Time

☒ RUSH TAT: 5 days ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H₂O ☒ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☐ Ground H₂O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☐ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: _____) Date/Time: _____

Received/Checked by: Paul Kou Date: 6 Sep 2002 Time: 8:53 a.m.

* HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

Document File: (local, remote) sample.doc

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

02-04725 (0984_ 960) (2721900_ 960)

09/06/02

Part 1: General Information

☒	Company Information	Name:	Montgomery Watson Harza
		Address:	10619 South Jordan Gateway, Salt Lake City, UT 84095
☒	Project Information	Project Description:	San Juan River Basin
			Hill AFB
		Project #:	4270032-020105
☐	Billing Information	P.O. #:	
		Bill Address:	10619 South Jordan Gateway, Salt Lake City, UT 84095
		Lab Project ID:	1999-0746
		Client Database #:	04
☒	Receiving Information	Who Received Sample?	Paul Kou
		Receiving Date/Time:	09/06/02 0930
		COC No.	
☐	Shipping Information	Shipping Company	Espress
		Packing Information:	Cooler/Ice Chests
		Cooler Temperature:	3.8 °C
☐	Container Information	Container Provider:	Client
☐	Sampling Information	Sampling Person:	
		Sampling Company:	Client
☐	Turn-Around-Time Option:		Rush 5 working day(s)
☐	QC Option:		Army Corps. E.
☐	Disposal Option:		Not specify

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample APCL Sub-ID Sample ID Matrix	Cont. talner	Preser- vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days
1	MW-1 GW Knight #1	BTEX 02-04725-2 W	V	C	40	2	G	090402	N	0	7
2	MW-2 GW Knight #1	BTEX 02-04725-1 W	V	C	40	2	G	090402	N	0	7
3	MW-5 GW Knight #1	BTEX 02-04725-4 W	V	C	40	2	G	090402	N	0	7
4	MW-4 GW State Gas	BTEX 02-04725-3 W	V	C	40	2	G	090402	N	0	7
5	MW-3 GW State Gas	BTEX 02-04725-5 W	V	C	40	2	G	090402	N	0	7
6	TBU2090401	BTEX 02-04725-6 W	V	C	40	2	G	090402	N	0	7

Part 3: Analysis Information

Test Items:

- ☒ 8021B BTXE
- ☐ 6010B TTLC 17 Metals
- ☐ 6010B Aluminum, Al by ICP
- ☐ 200.7/6010B Manganese, Mn, by ICP
- ☐ 200.7/6010B Calcium, Ca, by ICP
- ☐ 200.7/6010B Magnesium, Mg, by ICP
- ☐ 200.7/6010B Sodium, Na, by ICP
- ☐ 200.7/6010B Potassium, K, by ICP
- ☐ 200.7/6010B Iron, Fe, by ICP
- ☐ 300.0 Chloride Cl^- by IC
- ☐ 300.0 Sulfate (SO_4^{--}), by IC
- ☐ 300.0/SM4500NO3 Nitrate (NO_3^-) as N by IC
- ☐ 300.0 Nitrite (NO_2^-) as N by IC
- ☐ 310.1 Alkalinity
- ☐ 160.1 Solids, Total Dissolved (TDS)
- ☐ 350.3 Ammonia (NH_4^+)
- ☐ 351.3 Nitrogen, Total Kjeldahl (TKN)
- ☐ 365.2/365.3 Phosphorus, Total

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	BTXE	METALS	AL	MN	CA	MG	NA	K
1	MW-1 GW Knight #1	BTEX	02-04725-2	W	X							
2	MW-2 GW Knight #1	BTEX	02-04725-1	W	X							
3	MW-5 GW Knight #1	BTEX	02-04725-4	W	X							
4	MW-4 GW State Gas	BTEX	02-04725-3	W	X							
5	MW-3 GW State Gas	BTEX	02-04725-5	W	X							

6 TB02090401 BTEX 02-04725-6 W X ☐

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	PE	CL	SO4	NO3	NO2	ALKALIN	TDS	AMMON
1	MW-1 GW Knight #1	HTEX	02-04725-2	W								☐
2	MW-2 GW Knight #1	BTEX	02-04725-1	W								☐
3	MW-5 GW Knight #1	HTEX	02-04725-4	W								☐
4	MW-4 GW State Gas	HTEX	02-04725-3	W								☐
5	MW-6 GW State Gas	BTEX	02-04725-5	W								☐
6	TB02090401	BTEX	02-04725-6	W								☐

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	TKN	P
1	MW-1 GW Knight #1	HTEX	02-04725-2	W		☐
2	MW-2 GW Knight #1	BTEX	02-04725-1	W		☐
3	MW-5 GW Knight #1	BTEX	02-04725-4	W		☐
4	MW-4 GW State Gas	HTEX	02-04725-3	W		☐
5	MW-6 GW State Gas	BTEX	02-04725-5	W		☐
6	TB02090401	BTEX	02-04725-6	W		☐

☐ Client's Requirement: VOA UNPRESERVED ON SAMPLE # 3,5 ^{exc} 9/6/02

Login By En-Yu Paul Kou

Check By Wu

LABORATORY APCL
Contract El Paso Corp., San Juan River Basin

Chain of Custody ID 020904AL 01
Page 1 of 1
Air Bill No. 834715209726

Phone (801) 617-3200 FAX (801) 617-4200

Project 427b032 - 020105

Project Number San Juan River Basin

Date Due 21 Days

Sampler's Name Ashley Love
(print clearly)

475

Notes:

ATTACHMENT 2
FIELD DOCUMENTATION

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
 Project Manager: Delbert Beck
 Client Company: MWH
 Site Name: State Gas Com

Project No: 220013
 Date: 12/17/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	1345	76.06	—	83.80	—	—	NO product indicated
MW-2	1410	76.63	—	82.995	—	—	
MW-3	1430	75.85	75.81	83.57	.04	≈ 402	
MW-6	1530	71.68	71.03		.03	≈ 202	
MW-4	1445	76.04	—		—	—	
MW-5	1505	73.78					

COMMENTS:

MW-1, no product indicated by probe or by bailing 1 gal.
 MW-2, no indication of product or by bailing. Bailing resulted in water that was clear and started to get grey & silty. Bailed approximately 2 gallons of water.
 MW-3, yellow product, bailed 2.5 gallons until clear.
 MW-6 - bailed 2 gallon of water w/ ≈ 2oz of product that was light in color.

Signature: Delbert Beck

Date: 12/17/02

Product Recovery and Well Observation Data

Project Name: San Juan River Basin
 Project Manager: Ashley Lowe
 Client Company: MWH
 Site Name: State Gas Corn

Project No: 220013
 Date: 09/04/02

Well	Time	Depth to Water (ft)	Depth to Product (ft)	Total Well Depth (ft)	Product Thickness (ft)	Volume Removed	Comments
MW-1	12:46	76.075	—	83.80	—	—	No product indicated by interface probe
MW-3	14:00	76.33	—	83.57	—	—	No product indicated but very strong odor
MW-2	14:09	76.210	76.198	82.995	0.012	~2 lbsph	bailed ~72oz water
MW-6	15:12	71.280	71.052	82.745	0.228	~1/8 gal	bailed until thickness in bailer did not noticeably change

COMMENTS:

MW-1: bailed 32 oz of water - appeared to have thin sheen on top

MW-3: bailed 32 oz of clear water. Well did not have a solid bottom

MW-2: hard to get product in bailer - mainly recovered water
 product was pale yellow in color, very strong odor. Well does not have a solid bottom

MW-6: pale yellow product

Signature: _____

Ashley L Lowe

Date: _____

09/04/02

WELL DEVELOPMENT AND SAMPLING LOG

Project No: 220013 Project Name: San Juan River Basin Client: MWH
 Location: State Gascom Well No: MW4 Development ☐ Sampling ☒
 Project Manager Ashley Lowe Date 09/04/02 Start Time 12:46 Weather 80° sunny
 Depth to Water 76.275 Depth to Product NA Product Thickness NA Measuring Point TOC
 Water Column Height 6.41 Well Dia. 4" TD 82.676

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
 Bottom Valve Bailer ☒ Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐
 Criteria: 3 to 5 Casing Volumes of Water Removal ☒ Stabilization of Indicator Parameters ☒ Other or bail dry

Gal/ft x ft of water	Water Volume In Well		Gal/oz to be removed
	Gallons	Ounces	
<u>0.65 x 6.41</u>	<u>4.2 x 3</u>		<u>12.5 gal</u>

Time (military)	pH	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/ Flow rate
<u>12:53</u>	<u>7.10</u>	<u>6260</u>	<u>23.4</u>				<u>1/2 gal</u>	<u>light yellow, very strong odor</u>
	<u>7.09</u>	<u>6360</u>	<u>23.0</u>				<u>3</u>	<u>slimy film on top</u>
	<u>6.96</u>	<u>6240</u>	<u>21.7</u>				<u>5</u>	
	<u>7.11</u>	<u>6370</u>	<u>21.8</u>				<u>7</u>	<u>dark gray color</u>
	<u>7.09</u>	<u>6320</u>	<u>20.9</u>				<u>7.5</u>	<u>bailing down</u>
	<u>7.10</u>	<u>6330</u>	<u>20.8</u>				<u>7.7</u>	
	<u>7.08</u>	<u>6330</u>	<u>20.8</u>				<u>7.9</u>	<u>almost dry - will sample</u>

Final:

Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow rate
<u>13:45</u>	<u>7.08</u>	<u>6330</u>	<u>20.8</u>					<u>7.9</u>	

COMMENTS: HCl preservative reacted w/CO₂ in water - rinsed w/ clean of preservative, then filled

INSTRUMENTATION: pH Meter ☒ DO Monitor ☐ Conductivity Meter ☒ Temperature Meter ☒ Other ☐

Water Disposal Kutz Plant

Sample ID State Gas Com MW4 Sample Time 13:45 BTEX ☒ VOCs ☐ Alkalinity ☐

DS ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Ammonia ☐ TKN ☐ NM WQCC Metals ☐

Total Phosphorus ☐

MS/MSD BD BD Name/Time TB B02090401

WELL DEVELOPMENT AND SAMPLING LOG

Project No: 220013 Project Name: San Juan River Basin Client: MWH
 Location: State Gas Com Well No: MW-5 Development ☐ Sampling ☒
 Project Manager Ashley Lowe Date 09/04/02 Start Time 14:32 Weather 80° Sunny
 Depth to Water 74.240 Depth to Product 82.88 Product Thickness NA Measuring Point TDC
 Water Column Height 7.81 Well Dia. 2" TD 82.050

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
 Bottom Valve Bailer ☒ Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐
 Criteria: 3 to 5 Casing Volumes of Water Removal ☒ Stabilization of Indicator Parameters ☐ Other or bail dry

Gal/ft x ft of water	Water Volume In Well		Gal/oz to be removed
	Gallons	Ounces	
<u>7.81 x 0.116</u>	<u>1.25 x 3</u>		<u>3.75</u>

Time (military)	pH	SC (umhos/cm)	Temp (°C)	Eh-ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gal.)	Comments/Flow rate
<u>14:39</u>	<u>6.90</u>	<u>9320</u>	<u>22.1</u>				<u>2402</u>	<u>clear shen on top</u>
	<u>6.71</u>	<u>9700</u>	<u>20.8</u>				<u>56</u>	
	<u>6.75</u>	<u>9640</u>	<u>19.4</u>				<u>112</u>	
	<u>6.66</u>	<u>9340</u>	<u>18.4</u>				<u>164</u>	
	<u>6.74</u>	<u>9410</u>	<u>18.1</u>				<u>220</u>	<u>grayish brown, strong color</u>
	<u>6.68</u>	<u>9320</u>	<u>18.0</u>				<u>240</u>	
	<u>6.69</u>	<u>9330</u>	<u>18.1</u>				<u>260</u>	
	<u>6.67</u>	<u>9340</u>	<u>17.9</u>				<u>280</u>	
	<u>6.67</u>	<u>9340</u>	<u>17.9</u>				<u>300</u>	

Final:
 Time 15:02 pH 6.67 SC 9340 Temp 17.9 Eh-ORP D.O. Turbidity Ferrous Iron Vol Evac. 300oz Comments/Flow rate

COMMENTS: HCl preservative reacted w/CO₃ in water. Rinsed vials free of preservative before filling

INSTRUMENTATION: pH Meter ☒ DO Monitor ☐ Conductivity Meter ☒ Temperature Meter ☒ Other ☐

Water Disposal Kutz Plant
 Sample ID State Gas Com MW-5 Sample Time 15:02 BTEX ☒ VOCs ☐ Alkalinity ☐
 S ☐ Cations ☐ Anions ☐ Nitrate ☐ Nitrite ☐ Ammonia ☐ TKN ☐ NM WQCC Metals ☐
 Total Phosphorus ☐
 MS/MSD BD BD Name/Time TB JB02090401

Chain of Custody ID 020704AL01
 Page 1 of 1
 Air Bill No. 834715209726

MWH
Phone (801) 617-3200 FAX (801) 617-4200
MWH Contact Brian Butters
Project 4276032-020105
Project Number San Juan River Basin
Date Due 21 Days
Sampler's Name Ashley Lowe
(print clearly)

Sampler's Name Ashley Lowe
(print clearly)

[illegible]

amec

Project No.: 1517000121

Task: 3

Date: 6-7-02

Date: 6-7-02

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Signature: Chia A. M. Y. Date: 6-7-02

Date: 6-7-62

ameco

Project No.: 1517000121

Task: 3

Date: 5-17-02

Date: 5-17-02

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Out of hell

Signature: Chris A. May Date: 5-17-02

amec

Project No.: 1517000121

Task: 3

Date: 5-10-02

Site Name: STATE GAS COM N#1

[illegible]

Comments: _____

Bob Chapman

Date: 5-10-02

amec

Project No.: 1517000121

Task: 3

Date: 5-3-02

[illegible]

Comments:

Date: 5-3-02

amec

Project No.: 1517000121

Task: 3

Date: 4-25-02

[illegible]

Comments: _____

Date: 4-25-02

amec

Project No.: 1517000121

Task: 3

Date: 4-19-02

[illegible]

Comments: _____

Pet Thompson

4-19-02

amec

Project No.: 151700121*

Task: 3

Date: 4-12-02

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Signature: Robert Channing Date: 4-12-02

Date: 4-12-02

amec

Project No.: LS/2000/2-1

Task: 3

Date: 4-3-02

Site Name: STATE GAS COM N#1 (71669)

Comments: MW³ No product recovered in skimmer faulty valve (3/4 in)

Signature: Chen A. Meng Date: 4-3-02

Signature: Chris A. May Date: 4-3-02

amec

Project No.: 1512000121

Task:

Date: 7-28-02

[illegible]

Comments:

Chris A. May

Date: 3. 28. 02

ameco

Project No.: 1517 000121

Task:

Date: 3-21-02

[illegible]

Comments: MW 3 VALVE NEEDS TO BE REPLACED HAND BAILED MW 6 2 in. well

Signature:

Date: 3-21-02

amec

Project No.: 1517 000121

Task: 3

Date: 3-11-02

[illegible]

Comments: HAND Bailed MW 6 2" well NO water recovered
MW3 NO product detected using water oil probe.

Signature: Chris A. M... Date: 3-11-02

amec

Project No.: 15/7000121

Task: 3

Date: 3 - 6 - 02

Site Name: STATE GAS COM. N#1 (11669)

[illegible]

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: Bailed product from MW 6, MW 3. Skimmer recovered water because of faulty valve

Signature: Robert M. May Date: 3-6-02

Date: 3-6-02

1020 - 1080
amec

Project No.: 1517000/21

Task: 3

Date: 2-28-08

Date: 2-28-08

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Comments: NO product Recovered NO product Detected on probe
3/4 in Valve on the bottom of Skimmer defective, needs to be replaced

Signature: Chris M. Date: 12/1/20

1000-1000
amec

Project No.: 1517000121

Task: 3

Date: 02-20-02

Reason Not Measured: D = Dry; O = Obstructed; N = Not Accessible

Signature:

Date: 02-20-02

amec

Project No.: 1517 000121

Task: 3

Date: 02-14-02

[illegible]

Comments: _____

Signature: Daren McCutcheon Date: 02-19-02

Date: 02-19-02

amec

Project Name: EPFS GW PROJECT

Project Mngr: LISA WINN

Client Co.: EL PASO FIELD SERVICES

Site Name: STATE GAS COM. N#1

Project No.: 1517000121

Task: 3

Date: 02-07-02

[illegible]

Comments: SKIMMER IS COLLECTING WATER - RELEASED ABOUT
112 GALLON.

Signature:

Jacq M'Cartan

Date: 02-07-02

amec

Project No.: 1517000121

Task: 3

Date: 01-31-02

城

Comments: _____

Date: 01-31-02

amec

Project No.: 1517000121
Task: 3
Date: 01-23-02

Signature: Jacy McCurtain Date: 01-23-02

amec

Project No.: 1513 000121

Task: 3

Date: 1 - 7 - 02

Signature: Chris L. May Date: 1-7-02