3R - 245

REPORTS

DATE:

1997

EL PASO ENERGY

Certified Mail: #Z 295 387 297; #Z 295 387 296

RECEIVED
MAR 0 2 1998
Environmental Bureau
Oil Conservation Division

February 27, 1998

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87504

Re: 1997 Groundwater Annual Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for 57 groundwater impacted locations that were identified during our pit closure project of 1994/1995.

Of the 57 reports, EPFS hereby requests your approval for closure of 11 of these locations. The 11 reports for which EPFS requests closure, are in 2 separate binders entitled "Request for Closure".

After you have had an opportunity to review these updates, EPFS would like to schedule a meeting with you to discuss issues related to closure criteria for some of the more complex locations that are currently being addressed.

If you have any questions regarding this information, please call me at 505/599-2141. I will contact you within the next quarter to schedule a meeting.

Sincerely,

Sandra D. Miller
Environmental Manager

xc: Mr. Bill Liesse, BLM w/o enclosures
Mr. Denny Foust, NMOCD - Aztec w/enclosures; **Certified Mail #Z 295 387 298; #Z 295 387 299**
Ms. Charmaine Tso, Navajo EPA w/enclosures; **Certified Mail #Z 295 387 292**

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project
Pit Closure Report

March 1998

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 17520

PHILIP ENVIRONMENTAL

EPFS GROUNDWATER PITS
1997 ANNUAL GROUNDWATER REPORT

USSELMAN GAS COM #1
Meter/Line ID - 70753

SITE DETAILS

Legals - Twn: 31N **Rng:** 10W **Sec:** 4 **Unit:** B
NMOCD Hazard Ranking: 40 **Land Type:** FEE
Operator: AMOCO PRODUCTION COMPANY

PREVIOUS ACTIVITIES

Site Assessment: Sep-94 **Excavation:** Sep-94 (30 cy) **Soil Boring:** Aug-95
Monitor Well: Aug-95

The pit was excavated to 12 feet beneath ground surface (bgs), and one soil sample was collected. The headspace soil reading from the excavation bottom was 410 ppm. Soil analytical were as follows; benzene – 0.42 mg/kg, total BTEX – 60.1 mg/kg, TPH – 7,830 mg/kg.

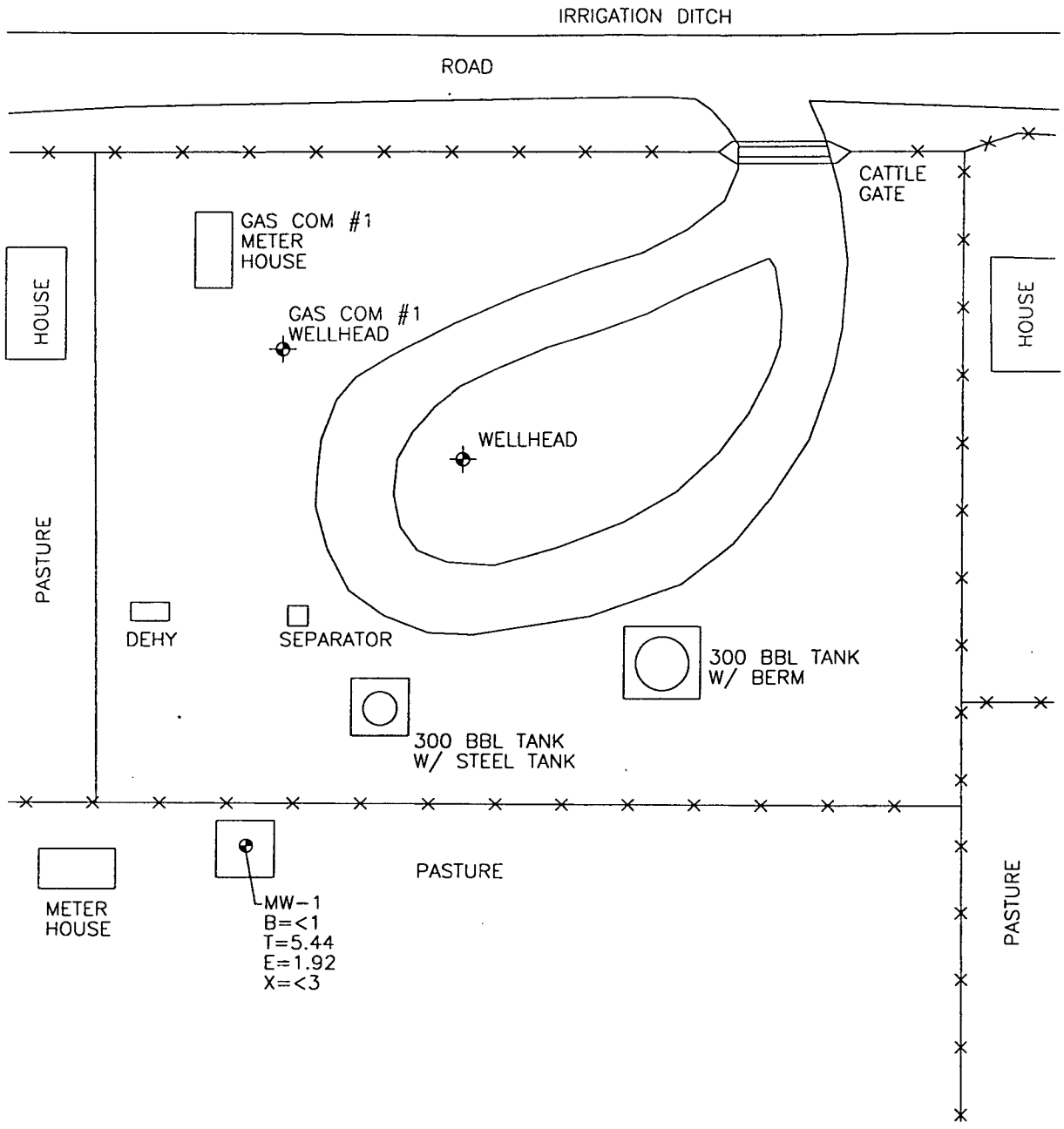
One soil boring was drilled in the center of the former pit and a monitoring well was installed. No soil sample was collected due to encountering shallow groundwater. Quarterly groundwater monitoring was initiated on 12/5/96. Groundwater analytical data are presented in Table 1. A site map is presented in Figure 1.

CONCLUSIONS

Groundwater analytical data has been below standards for 4 consecutive quarters since quarterly sampling was initiated at MW-1. Minimal impact to groundwater has occurred at this site.

RECOMMENDATIONS

- EPFS requests closure at this site.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



LEGEND

MW-1	APPROXIMATE MONITORING WELL LOCATION AND NUMBER
B	BENZENE (ug\L)
T	TOLUENE (ug\L)
E	ETHYL BENZENE (ug\L)
X	XYLENE (ug\L)
ug\L	MICROGRAMS PER LITER

NOT TO SCALE

N

PHILIP SERVICES CORP

TITLE:

USSELMAN GAS COM #1
70753

DWN: TMM	DES.: CC	PROJECT NO.: 17520	
CHKD: CC	APPD:	EPFS GW PITS	
DATE: 1/12/98	REV.: 0	FIGURE 1	

COL. 17520BA-001

FIELD PIT SITE ASSESSMENT FORM

GENERAL

Meter: 70-753 Location: Usselman Gas Com No. 1
Operator #: 0203 Operator Name: Amoco P/L District: Aztec
Coordinates: Letter: B Section 4 Township: 31 Range: 10
Or Latitude _____ Longitude _____
Pit Type: Dehydrator ___ Location Drip: X Line Drip: ___ Other: _____
Site Assessment Date: 9/7/94 Area: 04 Run: 43

SITE ASSESSMENT

NMOCD Zone: (From NMOCD Maps) Inside ☒ (1) Outside ☐ (2)

Land Type: BLM ☐ (1) State ☐ (2) Fee ☒ (3) Indian _____

Depth to Groundwater
Less Than 50 Feet (20 points) ☒ (1)
50 Ft to 99 Ft (10 points) ☐ (2)
Greater Than 100 Ft (0 points) ☐ (3)

Wellhead Protection Area :
Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ (1) YES (20 points) ☒ (2) NO (0 points)

Horizontal Distance to Surface Water Body
Less Than 200 Ft (20 points) ☒ (1)
200 Ft to 1000 Ft (10 points) ☐ (2)
Greater Than 1000 Ft (0 points) ☐ (3)
Name of Surface Water Body Animas River
(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)
Distance to Nearest Ephemeral Stream ☐ (1) < 100' (Navajo Pits Only)
☐ (2) > 100'

TOTAL HAZARD RANKING SCORE: 40 POINTS

REMARKS

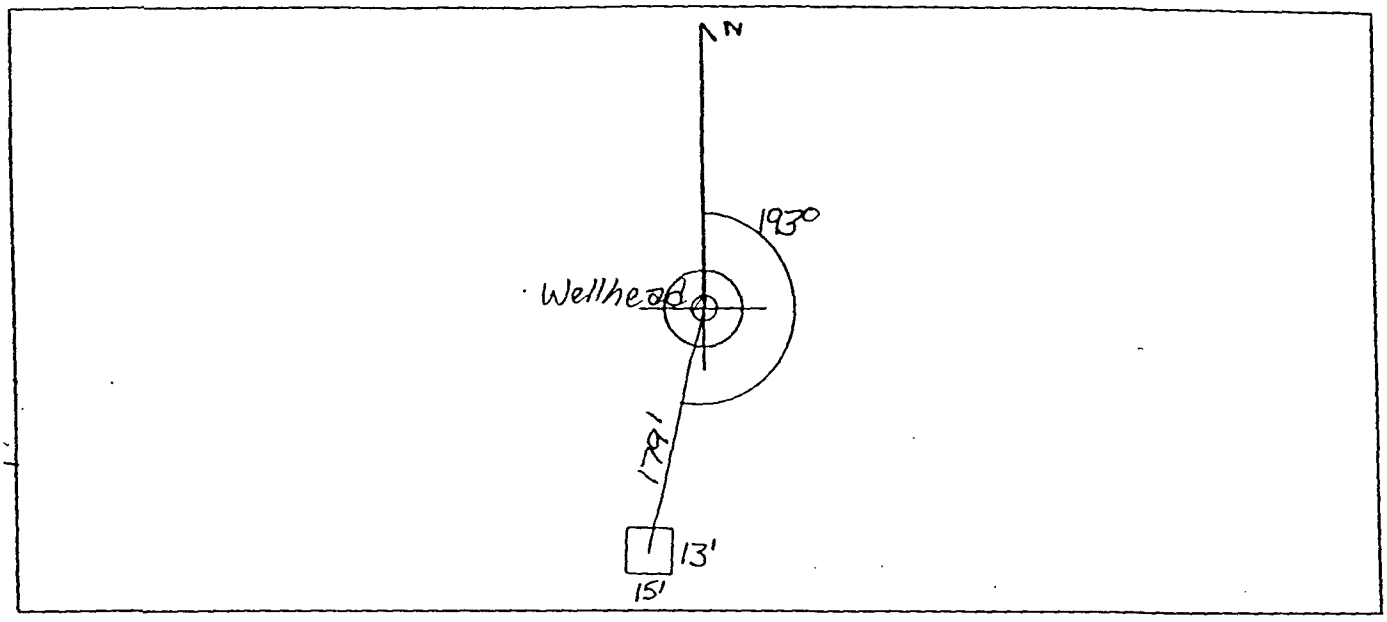
Remarks : Redline Book - Inside Vulnerable Zone Topo - Inside
Three pits, location drip pit has liquid in it. Will close one pit.

ORIGINAL PIT LOCATION

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 193° Footage from Wellhead 179'

b) Length : 15' Width : 13' Depth : 2'



REMARKS

Remarks :

Pictures @ 1356 (17-20, Roll2)
Dump Truck
There is a residence approximately 500' away from this site. There is a barbed wire fence that runs right along the north side of the pit.

Completed By:

Sarah Kelly
Signature

9/7/94
Date

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
961036	70753	Usselman Gas Com #1	12/05/96	1	Sample 4 - 1st Quarter	< 1	< 1	= 1.55	= 4.8	= 8
970190	70753	Usselman Gas Com #1	3/10/97	1	Sample 4 - 2nd Quarter	< 1	< 1	= 2.06	= 5.36	= 7
970517	70753	Usselman Gas Com #1	6/2/97	1	Sample 4 - 3rd Quarter	< 1	< 1	= 2.64	< 3	= 3
970959	70753	Usselman Gas Com #1	9/8/97	1	Sample 4 - 4th Qtr	< 1	= 5.44	= 1.92	< 3	= 7

PHASE I EXCAVATION

FIELD PIT REMEDIATION/CLOSURE FORM

GENERAL

Meter: 70753 Location: Usselman Gas Com No. 1

Coordinates: Letter: B Section 4 Township: 31 Range: 10

Or Latitude _____ Longitude _____

Date Started : 9-21-94 Run: 04 43

FIELD OBSERVATIONS

Sample Number(s): KP 246 _____ _____ _____

Sample Depth: 12' Feet

Final PID Reading 410 PID Reading Depth 12' Feet

	Yes	No
Groundwater Encountered	☐	☒

Approximate Depth _____ Feet

CLOSURE

Remediation Method :

Excavation ☒ Approx. Cubic Yards 30

Onsite Bioremediation ☐

Backfill Pit Without Excavation ☐

Soil Disposition:

Envirotech ☐ ☒ Tierra

Other Facility ☐ Name: _____

Pit Closure Date: 9-21-94 Pit Closed By: B.E.J

REMARKS

Remarks : Some Line markers. Had to solidify 1 Load to mix up Before we could Haul off. Had some water & oil. Had Two Lines on other side of Pit.

Signature of Specialist: Kelly Padilla

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page _____ of _____

CT NUMBER: 24324

PROJECT NAME: Pit Closure Project

ERS: (Signature): Kelly Padilla DATE: 9/22/94

LAB ID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	REQUESTED ANALYSIS: TPH EPA 418.1	BTEX EPA 8020	LAB PID			SEQUENCE #	REMARKS
6177	9-21-94	1230	Soil	KP 245	1	VC	X	X				221	
6178	9-21-94	1545	Soil	KP 246	1	VC	X	X				222	

CONTRACT LABORATORY P. O. NUMBER

RELINQUISHED BY: (Signature) Kelly Padilla — DATE/TIME 9-21-94 1700

RECEIVED BY: (Signature) Brenda Liess — DATE/TIME 340

RELINQUISHED BY: (Signature) Brenda Liess — DATE/TIME 9/22/94 1045

RECEIVED BY: (Signature) _____ — DATE/TIME 32°

RELINQUISHED BY: (Signature) _____ — DATE/TIME _____

RECEIVED OF LABORATORY BY: (Signature) Kim Kyle

UESTED TURNAROUND TIME:

OUTINE ☐ RUSH _____

IER CO.

NO.:

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499

505-599-2144 FAX: 505-599-2261

) - Testing Laboratory Canary - EPNG Lab Pink - Field Sampler

FM-08-0565 A (Rev 05-94)

El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	KP 246	946178
MTR CODE | SITE NAME:	70753	Usselman Gas Com #1
SAMPLE DATE | TIME (Hrs):	9-21-94	1545
SAMPLED BY:	N/A Phase I	
DATE OF TPH EXT. | ANAL.:	9-22-94	9-22-94
DATE OF BTEX EXT. | ANAL.:	9-27-94	9-29-94
TYPE | DESCRIPTION:	VC	Brown Sand & Clay

REMARKS: ____________________

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS DF	Q	M(g)	V(ml)
BENZENE	0.42	MG/KG	10			
TOLUENE	< 0.25	MG/KG	10			
ETHYL BENZENE	4.4	MG/KG	10			
TOTAL XYLENES	55	MG/KG	10			
TOTAL BTEX	60.1	MG/KG				
TPH (418.1)	7830	MG/KG			.78	28
HEADSPACE PID	410	PPM				
PERCENT SOLIDS	80.0	%				

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

he Surrogate Recovery was at 125 % for this sample All QA/QC was acceptable.

a[illegible]ve: ATI Results Attached. Surrogate Recovery was outside ATI QC limits Due to Matrix interference. nok 10/14/94

F = Dilution Factor Used

pproved By: [signature] Date: 10/23/94

Analytical Technologies, Inc.

GAS CHROMATOGRAPHY RESULTS

TEST : BTEX (EPA 8020)

CLIENT : EL PASO NATURAL GAS ATI I.D.: 409408

PROJECT # : 24324

PROJECT NAME : PIT CLOSURE

SAMPLE ID. #	CLIENT I.D.	MATRIX	DATE SAMPLED	DATE EXTRACTED	DATE ANALYZED	DIL. FACTOR
04	946167	NON-AQ	09/20/94	09/27/94	09/29/94	20
05	946177	NON-AQ	09/21/94	09/27/94	09/29/94	10
06	946178	NON-AQ	09/21/94	09/27/94	09/29/94	10

PARAMETER	UNITS	04	05	06
BENZENE	MG/KG	0.86	0.82	0.42
TOLUENE	MG/KG	39	28	<0.25
ETHYLBENZENE	MG/KG	7.4	6.6	4.4
TOTAL XYLENES	MG/KG	110	83	55
SURROGATE:				
BROMOFLUOROBENZENE (%)		63*	74	125*

*OUTSIDE ATI QUALITY CONTROL LIMITS DUE TO MATRIX INTERFERENCE

PHASE II SOIL BORING

04-43 AZTEC

RECORD OF SUBSURFACE EXPLORATION

Borehole # BH #1
Well #
Page 1 of 1

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(606) 326-2262 FAX (606) 326-2388

Project Name EPNG Pits
Project Number 14509 Phase ~~601~~ 6200
Project Location Usselman Gas Com No. 1 30-753

Elevation
Borehole Location T31, R10, Sec 4, B
GWL Depth
Logged By ~~S. Kelly~~ J. Kindley
Drilled By M. Donahue
Date/Time Started 08/02/95 1224
Date/Time Completed 08/02/95 1450

Well Logged By ~~S. Kelly~~ J. Kindley
Personnel On-Site M. Donahue, 2 O'Keefe, D. Gotto
Contractors On-Site
Client Personnel On-Site

Drilling Method 4 1/4" HSA
Air Monitoring Method CGI, PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0				Back Fill material to 12'						
5										
10										• water on Rods at 10'
15				Sand with Cobbles (10%), gray brown color						
20				Boring terminated at 18'						
25										
30										
35										
40										

Comments: Hit cobble at 3' Depth. Moved over several feet and redrilled.

Geologist Signature Jeffrey Kindley

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(606) 326-2262 FAX (606) 326-2388

Borehole # BH-1
Well #
Page ____ of ____

Project Name EPNG Drip Pits
Project Number 74509 Phase 6001.1
Project Location Usselman Gas Com No. 1
70753

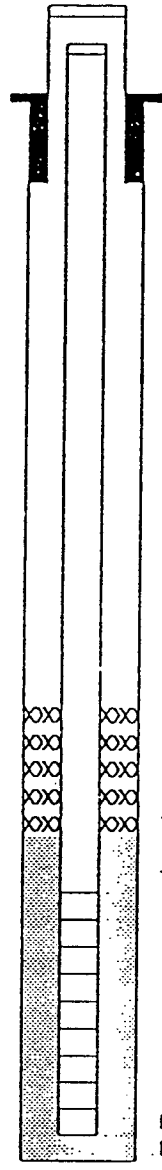
Elevation
Well Location T 31, R10, Sec 4, B
GWL Depth
Installed By J. Kindley

Date/Time Started 8/7/95, 1305
Date/Time Completed

On-Site Geologist JWK
Personnel On-Site Mr. Donahue, J O'Keefe, O. Gotti
Contractors On-Site
Client Personnel On-Site

Depths in Reference to Ground Surface

Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser		
Bottom of Well Riser		
Top of Well Screen	Sch. 40 - 4" .010 Slot PVC	3'
Bottom of Well Screen	↓	18'
Top of ~~Peltonite~~ Bentonite Seal	(2) 50 lb bags of Bentonite pellets	
Bottom of ~~Peltonite~~ Bentonite Seal		
Top of Gravel Pack	10-20, C55I Sand - (14) 50 lb sacks	
Bottom of Gravel Pack		
Top of Natural Cave-In		
Bottom of Natural Cave-In		
Top of Groundwater		
Total Depth of Borehole		18



Top of Protective Casing
Top of Riser 2+
Ground Surface
Top of Seal 1 (Bent)
Top of Gravel Pack 3
Top of Screen 3
Bottom of Screen 18
Bottom of Borehole 18

Comments:

Geologist Signature Jeffrey Kindley

GROUNDWATER ANALYSIS

PHILIP ENVIRONMENTAL Well Development and Purging Data

☒ Development ☐ Purging Well Number MW-1

Serial No. WDPD- Page ____ of ____

Project Name EPNG Pits Project Manager Cory Chance Project No. 14509

Client Company EPNG Phase.Task No. Gen3.77

Site Name Usselman Gas Com No. 1 (70753) Site Address ____

Development Criteria

- ☒ 3 to 5 Casing Volumes of Water Removal
- ☒ Stabilization of Indicator Parameters
- ☐ Other ____

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other ____

Water Volume Calculation

Initial Depth of Well (feet) 19.12

Initial Depth to Water (feet) 8.57

Height of Water Column in Well (feet) 10.55

Diameter (inches): Well 4 Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		6.88	6.88x5
Gravel Pack			
Drilling Fluids			
Total			34.4

Instruments

	Serial No. (If applicable)
☒ pH Meter	Hydac
☐ DO Monitor	
☒ Conductivity Meter	
☒ Temperature Meter	
☐ Other ____	

Water Disposal

Drummed and Transport to Kutz Separator in Bloomfield

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gallons): Increment	Water Volume Removed (gallons): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature (°C)	pH	Conductivity (umhos/cm)	Dissolved Oxygen (mg/L)	Comments
8/7/95	1020		X				5	5			NR	NR	NR		Grey Silty
8/7/95	1040						5	10							Grey Silty
8/7/95	1055						5	15							↓
	1100						5	20							still slightly
	1107						5	25							Grey Silty
	1115						5	30							↓
	1122						5	35							
	1144						5	40							clearing
8/7/95	1153		X				5	45							Slightly Silty

Circle the date and time that the development criteria are met.

Comments Noted approx 1/4" free phase oily product float on water. No Readings taken of Groundwater due to free Phase Hydrocarbon product in well.

Developer's Signature(s) Scott T. Pope Date 8/7/95 Reviewer ____ Date ____

Form A0101 Rev. 03/21/94

PHILIP ENVIRONMENTAL Water Sampling Data

Location No. MW-1

Serial No. WSD-

Group List Number

Sample Type: ☑ Groundwater ☐ Surface Water ☐ Other Date 8/7/95

Project Name EPNG Pit Drilling Project No. ~~25/4509~~

Project Manager Cory Chance Phase.Task No. 6003-77

Site Name Usselman Gas Com No 1 (70753)

Sampling Specifications

Requested Sampling Depth Interval (feet) TOP 3'

Requested Wait Following Development/Purging (hours) NA

Initial Measurements

Time Elapsed From Final Development/Purging ~~(hours)~~ (min) 12

Initial Water Depth (feet) 8.57

Nonaqueous Liquids Present (Describe) floating hydrocarbons

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings: Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/cm)	Water Collection Data: Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (feet)	Bail	Final Water Depth (feet)	Notes (Explain in Comments Below)
See Well Development and Purging Data Sheet												

Sample Containers

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)

Preservatives: H = HCl; N = HNO_3; S = H_2SO_4; A = NaOH; O = Other (Specify); — = None

Analytical Parameter List	Container: Number	Type	Volume (mL)	Field Filtered: Yes	No	Preserved	Cooled During Collection: Yes	No	Comments
BTEX	2	A	40		X	H	X		1205 STP-16
TDS	1	P	250		X	—	X		1205 STP-16

Filter Type Chain-of-Custody Form Number

Comments

Signature Scott T. Dyer Date 8/7/95 Reviewer Date

Form A0202 Rev. 02/24/94

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Page _____ of _____

NUMBER 324 | PROJECT NAME: Pit Closure Project

(Signature): Scott T. Pope | DATE: 8/7/95

BID	DATE	TIME	MATRIX	FIELD ID	TOTAL NUMBER OF CONTAINERS	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020	LAB PID	TDS		SEQUENCE #	REMARKS
1164	8/7/95	1130	Water	STP-15	1	WB		X					TRIP Blank
1165	8/7/95	1205	Water	STP-16	3	W		X		X		4	Usselman Gas Com No 1 (70753) MW-1
1166	8/7/95	1815	Water	STP-17	3	W		X		X		5	Horton LE (93388) MW-1
1167	8/7/95	1845	WATER	STP-18	3	W		X		X		6	Sheets well # 2 (70246) MW-1

CONTRACT LABORATORY P. O. NUMBER

REQUESTED ANALYSIS

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Scott T. Pope	8/7/95 1918	Kelly Stovall

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Kelly Stovall	8/8/95 11:50 32°	

RECEIVED BY: (Signature)	DATE/TIME	RECEIVED OF LABORATORY BY: (Signature)

REQUESTED TURNAROUND TIME:
NE ☐ RUSH
CO.

SAMPLE RECEIPT REMARKS

CHARGE CODE

RESULTS & INVOICES TO:

FIELD SERVICES LABORATORY
EL PASO NATURAL GAS COMPANY
P. O. BOX 4990
FARMINGTON, NEW MEXICO 87499
505-599-2144
FAX: 505-599-2261

Testing Laboratory Canary - EPNG Lab Pink - Field Sampler

FM-08-0565 A (Rev. 05-94)

El Paso Natural Gas Company

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT - Water

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	947165
FIELD ID:	STP 16
MTR CODE:	70753
SAMPLE DATE:	8/7/95
SAMPLE TYPE:	Monitor Well
SITE NAME:	Usselman Gas Com #1
PROJECT:	Phase II Drilling
DATE OF BTEX ANALYSIS:	8/10/95

FIELD COMMENTS: 3 containers

EPA Method 8020 (BTEX) RESULTS

PARAMETER	RESULT	QUALIFIER	WQCC LIMIT PPB
TDS - TOTAL DISSOLVED SOLIDS (PPM)	516		None
BENZENE (PPB)	39.4		10
TOLUENE (PPB)	13.0		740
ETHYL BENZENE (PPB)	9.28		750
TOTAL XYLENES (PPB)	72.5		620
SURROGATE % RECOVERY	95.8	Allowed Range 80 to 120 %	

NOTES:
No Air bubbles.

Approved By: [signature] 8/10/95

A 1961

El Paso Natural Gas Company

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Samplers: (Signature)	Date
	ARTEC PIPELINE	Dennis Bird	12-5-96

Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis: BTXE	Requested Analysis: General Chemistry	Requested Analysis: RCRA Metals		Remarks
12-5-96	1127		X	961036	P2 G2	4°C	X	X	X		USSELMAN GAS COM #1 MW1 MC70753
12-5-96	—		X	—	G-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	12-5-96 1442				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Madonna Hopper	12/5/96 1515		

Carrier Co: | Carrier Phone No. | Date Results Reported / by: (Signature)

Air Bill No.:

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	961036
MTR CODE | SITE NAME:	70753	Usselman Gas Com #1 MW-1
SAMPLE DATE | TIME (Hrs):	12/5/96	1127
PROJECT:	Sample 4 - 1st Quarter	
DATE OF BTEX EXT. | ANAL.:	12/9/96	12/9/96
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	1.55	PPB				
TOTAL XYLENES	4.80	PPB				
TOTAL BTEX	6.35	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 97.6 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

Narrative:

Approved By: John Laeh Date: 12/13/96

EL PASO FIELD SERVICES

Field Services Laboratory
Analytical Report

SAMPLE IDENTIFICATION

EPFS LAB ID:	961036
DATE SAMPLED:	12/05/96
TIME SAMPLED (Hrs):	1127
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	70753
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Usselman Gas Com #1 MW-1

FIELD REMARKS: _____

GENERAL CHEMISTRY WATER ANALYSIS RESULTS

PARAMETER	RESULT	UNITS	DATE ANALYZED
Laboratory pH	7.3	Units	12/05/96
Alkalinity as $C0_3$	0	PPM	12/05/96
Alkalinity as $HC0_3$	497	PPM	12/05/96
Calcium as Ca	115	PPM	12/19/96
Magnesium as Mg	20.9	PPM	12/19/96
Total Hardness as $CaC0_3$	373	PPM	12/19/96
Chloride as Cl	34	PPM	12/05/96
Sulfate as $S0_4$	32	PPM	12/05/96
Fluoride as F	0.2	PPM	12/05/96
Nitrate as $N0_3$-N	<0.1	PPM	12/05/96
Nitrite as $N0_2$-N	<0.1	PPM	12/05/96
Ammonium as NH_4^+	1	PPM	12/19/96
Phosphate as PO_4	<0.1	PPM	12/05/96
Potassium as K	4	PPM	12/19/96
Sodium as Na	37	PPM	12/19/96
Total Dissolved Solids	536	PPM	12/05/96
Conductivity	732	umhos/cm	12/19/96
Anion/Cation %	3.1%	%, <5.0 Accepted	12/23/96

Lab Remarks:

Reported By: _____ Approved By: _____ Date: 1-2-97

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER:	961036
SAMPLE DATE:	12/05/96
SAMPLE TIME (Hrs):	1127
SAMPLED BY:	D. Bird
MATRIX:	Water
METER CODE:	70753
SAMPLE SITE NAME:	Aztec Pipeline
SAMPLE POINT:	Usselman Gas Com #1 MW-1

REMARKS: _____

RESULTS

PARAMETER	TOTAL RESULT (mg/L)	N. M. WQCC LIMIT (mg/L)
ARSENIC	<.010	0.100
BARIUM	1.42	1.00
CADMIUM	<.0002	0.010
CHROMIUM	0.003	0.050
LEAD	0.005	0.050
MERCURY	<.00024	0.002
SELENIUM	<.003	0.050
SILVER	<.001	0.050

NOTE: The sample results have been corrected for volume adjustment associated with Method 3015.

References:

Method 3015, Microwave Assisted Acid Digestion of Aqueous Samples and Extracts, Test Methods for Evaluating Solid Waste, SW-846, Sept., 1994.

Method 7061A, Arsenic (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7081, Barium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

Method 7131, Cadmium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7191, Chromium (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 7421, Lead (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1986.

Method 245.5, Mercury (Automated Cold Vapor Technique), Methods for the Determination of Metals in Environmental Samples, EPA 600/4-91/010, USEPA, June, 1991.

Method 7741A, Selenium (Atomic Absorption, Gaseous Hydride), Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept., 1994.

Method 7761, Silver (Atomic Absorption, Furnace Technique), Test Methods for Evaluating Solid Waste, SW-846, USEPA, July, 1992.

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

Sample ID: 961036
Date Sampled: 12/05/96

Date Reported: 01/02/97

STANDARD REFERENCE MATERIAL

Analyte	Found Result (µg/L)	Known Value (µg/L)	% Recovery
Arsenic	36.0	32.4	111%
Barium	69.4	64.9	107%
Cadmium	2.74	2.38	115%
Chromium	5.16	4.76	108%
Lead	33.9	29.7	114%
Mercury	4.86	4.59	106%
Selenium	36.3	40.5	90%
Silver	4.35	4.32	101%

DUPLICATE ANALYSIS (mg/L)

Analyte	Original Sample Result	Duplicate Sample Result	% RPD
Arsenic	ND	ND	NA
Barium	88.3	87.6	0.8%
Cadmium	ND	ND	NA
Chromium	0.002	0.003	NA*
Lead	ND	ND	NA
Mercury	ND	ND	NA
Selenium	ND	ND	NA
Silver	ND	ND	NA

* Results <5X DL.

SPIKE ANALYSIS (µg/L)

Analyte	Original Sample Result	Spike Sample Result	Spike Added	Recovery Percent
Arsenic	ND	108	100	103%
Barium	88.3	1060	1000	97%
Cadmium	ND	11.2	10.0	112%
Chromium	2.0	53.8	50.0	104%
Lead	ND	44.6	50.0	86%
Mercury	ND	1.81	2.00	91%
Selenium	ND	52.5	50.0	105%
Silver	ND	50.1	50.0	99%

METHOD BLANK

Analyte	Found Result (µg/L)	Detection Level (µg/L)
Arsenic	ND	10
Barium	ND	10
Cadmium	ND	0.2
Chromium	ND	2
Lead	ND	4
Mercury	ND	0.24
Selenium	ND	3
Silver	ND	0.5

ND: Not Detected at stated detection level.

NA: Not Applicable.

Reported By: [signature]

Approved By: [signature]

Date: 1-3-97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name USSELMAN GAS COM #1

Meter Code 70753

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removed
☐ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 19.12
Initial Depth to Water (feet) 17.23
Height of Water Column in Well (feet) 1.89

Diameter (inches): Well ____ Gravel Pack ____

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		1.2	3.7
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Water Disposal

KUTZ SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
12-5-96	1030										10.9	7.02	1905		
12-5-96	1036						2.0	2.0			11.5	6.74	1122		
12-5-96	1043						3.0	5.0			11.2	6.72	917		
12-5-96	1049						3.0	8.0			11.4	6.75	928		
12-5-96	1058						2.0	10.0			12.0	6.80	951	1.5	

Comments

Developer's Signature Dennis Bird Date 12-5-96 Reviewer John Tate Date 1-2-97

El Paso Natural Gas Company

A 2249

CHAIN OF CUSTODY RECORD

Project No.:

Project Name: AZTEC PIPELINE

Samplers: (Signature) [illegible] Date: 3-10-97

Matrix	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	BTXE				Remarks
[illegible]	[illegible]	1203		X	970190	[illegible]	[illegible]	X				[illegible]
[illegible]	[illegible]	—		X	—	[illegible]	[illegible]	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[illegible]	[illegible] 1617				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		[illegible]	3/11/97 0730		

Carrier Co:

Air Bill No.:

Carrier Phone No.:

Date Results Reported / by: (Signature)

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970190
MTR CODE | SITE NAME:	70753	Usselman Gas Com #1
SAMPLE DATE | TIME (Hrs):	3/10/97	1203
PROJECT:	Sample 4 - 2nd Quarter	
DATE OF BTEX EXT. | ANAL.:	3/11/97	3/11/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	2.06	PPB				
TOTAL XYLENES	5.36	PPB				
TOTAL BTEX	7.42	PPB				

–BTEX is by EPA Method 8020 –

The Surrogate Recovery was at 101 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Laubon Date: 3/18/97

970190.XLS,3/17/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name VSSELMAN GAS COM #1

Meter Code 70753

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removel
☐ Stabilization of Indicator Parameters
☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 20.03
Initial Depth to Water (feet) 18.58
Height of Water Column in Well (feet) 1.45
Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		.96	2.9
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Methods of Development

Pump		Bailer	
☐	Centrifugal	☒	Bottom Valve
☐	Submersible	☐	Double Check Valve
☐	Peristaltic	☐	Stainless-steel Kemmerer

☐ Other

Water Disposal

KVTC SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
3-10-97	1109										14.4	6.51	792		
3-10-97	1116						1.0	1.0			14.0	6.75	797		
3-10-97	1122						1.0	2.0			14.1	6.71	789		
3-10-97	1128						1.0	3.0			14.5	6.80	802	1.5	

Comments DURING PURGING WELL HAD BLACK SEDIMENT IN BOTTOM OF WELL.

Developer's Signature Dennis Bird Date 3-10-97 Reviewer John Ford Date 4/8/97

El Paso Natural Gas Company

A 2468

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Samplers: (Signature)	Date:
	AZTEC PIPELINE	Dennis Bird	6-2-97

MATRIX	Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers	Preservation Technique	Requested Analysis: BTXE			Remarks
WATER	6-2-97	1104		X	970517	G-2	4°C	X			VOSELMAN GAS COM #1 MC 70753
WATER	6-2-97	—		X	—	G-1	4°C	X			TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	6-2-97 1517				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon Hoppe	6/3/97 0730		

Carrier Co:

Carrier Phone No.

Air Bill No.:

Date Results Reported / by: (Signature)

EL PASO FIELD SERVICES

7-21-97

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT PROJECT CLOSURE

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970517
MTR CODE | SITE NAME:	70753	Usselman Gas Com #1 MW-1
SAMPLE DATE | TIME (Hrs):	6/2/97	1104
PROJECT:	Sample 4 - 3rd Quarter	
DATE OF BTEX EXT. | ANAL.:	6/3/97	6/3/97
TYPE | DESCRIPTION:	Monitor Well	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	2.64	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	2.64	PPB				

The Surrogate Recovery was at 98.0 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: _____ Date: 6/16/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name USSELMAN GAS COM #1

Meter Code 70753

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removed
☐ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 20.03
Initial Depth to Water (feet) 8.35
Height of Water Column in Well (feet) 11.68
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		7.7	23.2
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Water Disposal

KVT2 SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulativ	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
6-2-97	1016										17.9	6.23	1039		
6-2-97	1023						5.0	5.0			16.0	6.53	1073		
6-2-97	1030						5.0	10.0			15.5	6.57	953		
6-2-97	1038						5.0	15.0			15.8	6.76	928		
6-2-97	1044						5.0	20.0			15.5	6.78	918		
6-2-97	1052						5.0	25.0			15.5	6.85	929	0.5	

Comments

Developer's Signature Dennis Bird Date 6-2-97 Reviewer John Dalch Date 6/14/97

SAMPLE 4 4TH QTR

El Paso Natural Gas Company

A 2068

CHAIN OF CUSTODY RECORD

Project No.	Project Name	Type and No. of Sample Containers	Preservation Technique	Requested Analysis			Remarks
	MC # 70753			BTXE			

Samplers: (Signature) Dennis Bird Date: 9-8-97

MATRIX	Date	Time	Comp.	GRAB	Sample Number							
WATER	9-8-97	1130		X	970959	G-1	4°C	X				VESSELMAN GAS COM #1 MW-1
WATER	9-8-97	—		X	———	G-1	4°C	X				TRIP BLANK

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Dennis Bird	9-8-97 1556				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
		Marlon Hoppe	9/8/97 1630		

Carrier Co: Carrier Phone No. Date Results Reported / by: (Signature)

Air Bill No.:

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	970959
MTR CODE | SITE NAME:	70753	Usselman Gas Com. #1
SAMPLE DATE | TIME (Hrs):	9/8/97	1130
PROJECT:	Sample 4 4th Quarter	
DATE OF BTEX EXT. | ANAL.:	9/9/97	9/9/97
TYPE | DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	5.44	PPB				
ETHYL BENZENE	1.92	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	7	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 113.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John Stabler Date: 9-16-97

970959BTEX,9/15/97

EPFS
EL PASO FIELD SERVICES

Well Development and Purging Data

☐ Development
☒ Purging

Well Number MW-1

Site Name VESELMAN GAS COM #1

Meter Code 70753

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removel
☐ Stabilization of Indicator Parameters
☐ Other

Methods of Development

Pump	Bailer
☐ Centrifugal	☒ Bottom Valve
☐ Submersible	☐ Double Check Valve
☐ Peristaltic	☐ Stainless-steel Kemmerer

☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 20.03
Initial Depth to Water (feet) 10.73
Height of Water Column in Well (feet) 9.30
Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well: Cubic Feet	Water Volume in Well: Gallons	Gallons to be Removed
Well Casing		6.1	18.4
Gravel Pack			
Drilling Fluids			
Total			

Instruments

☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other D.O. CHEMETS KIT

Water Disposal

KUT2 SEPARATOR

Water Removal Data

Date	Time	Development Method: Pump	Development Method: Bailer	Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal): Increment	Water Volume Removed (gal): Cumulative	Product Volume Removed (gallons): Increment	Product Volume Removed (gallons): Cumulative	Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
9-8-97	1053										21.0	6.27	1510		
9-8-97	1100						5.0	5.0			18.7	6.57	1445		
9-8-97	1106						5.0	10.0			18.6	6.83	880		
9-8-97	1114						5.0	15.0			18.5	6.89	835		
9-8-97	1120						5.0	20.0			18.3	6.90	770	1.5	

Comments

Developer's Signature Dennis Bird Date 9-8-97 Reviewer John Saltz Date 9-16-97