

3R - 207

REPORTS

DATE:

1999



Certified Mail: #Z 213 707 666 (Box 1 of 2)
#Z 213 707 664 (Box 2 of 2)

March 24, 2000

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

RECEIVED

MAR 20 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 1999 Pit Project Annual Groundwater Report

Dear Mr. Olson:

In accordance with reporting requirements, El Paso Field Services (EPFS) has enclosed annual updates for the 32 remaining groundwater impacted locations that were identified during our pit closure project of 1994 / 1995.

Of the 32 reports, EPFS hereby requests closure of 4 of these locations. The 4 sites EPFS is requesting closure on are presented in one separate binder entitled "San Juan Basin Pit Closures, El Paso Field Services, Pit Closure Reports".

The Jaquez Com. C #1 and Jaquez Com. E #1 site is included in a separate report which is entitled "Jaquez Com. C #1 and Jaquez Com. E #1 Annual Report for Soil and Groundwater Remediation".

EPFS has also included for your information five Navajo sites in a separate binder and a separate report for the Bisti Flare Pit #1.

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

Sincerely,

A handwritten signature in dark ink that reads 'Scott T. Pope' with a stylized flourish at the end.

Scott T. Pope P.G.
Senior Environmental Scientist

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Certified Mail # Z 213 707 667**
Mr. Bill Liesse, BLM - w / enclosures; **Certified Mail # Z 213 707 668**
Mr. John Jaquez, - w / Jaquez enclosures; **Certified Mail # Z 213 707 669**
Ms. Charmaine Tso, Navajo EPA - w / enclosures; **Certified Mail # Z 213 707 670**

bc: J. A. Lambdin w / enclosures

Philip Services Corp. – Cecil Irby, w / o enclosures

B. B. McDaniel / 24321 – NMOCD Regulatory w / o

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services Pit Project Groundwater Report
Annual Report

March 2000

RECEIVED

MAR 29 2000

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 62800158



EPFS GROUNDWATER PITS 1999 ANNUAL GROUNDWATER REPORT

KNIGHT #1
Meter/Line ID - 72556

SITE DETAILS

Legals - Twn: 30N Rng: 13 W Sec: 5 Unit: A
NMOCD Hazard Ranking: 30 Land Type: FEE
Operator: FULLER PETROLEUM INC.

PREVIOUS ACTIVITIES

Site Assessment: Jan-95 Excavation: Jan-95 (60 cy) Soil Boring: Oct-95
Monitor Well: Oct-95 Downgradient MW's: Dec-95 Nutrients: Nov-96
Quarterly Sampling Initiated: Apr-96

1999 ACTIVITIES

Groundwater Monitoring – Annual sampling was performed during April of 1999.

Provided Operator with Site Data - EPFS has provided operator with all pertinent site data generated to date. EPFS met with operator on two occasions to discuss problems at the site.

SUMMARY TABLES

Groundwater analytical data are presented in Table 1 and Figure 2. Copies of the laboratory data sheets and associated quality assurance/quality control data are presented as Attachment 1.

SITE MAP

A site map and groundwater elevation data is presented in Figures 1, 2, 3, and 4.

Site Map Revision- Please note that monitor wells MW-3 and MW-4 and associated data were reversed in the 1997 annual report. Site maps included in this groundwater report have been corrected to reflect the current labeling scheme.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

There were no drilling activities at this site in 1999.

DISPOSITION OF GENERATED WASTES

There were no wastes generated at this site in 1999.

ISOCONCENTRATION MAPS

Isoconcentration maps were generated for benzene, total xylenes, and total BTEX and are included as Figures 5, 6, and 7.

CONCLUSIONS

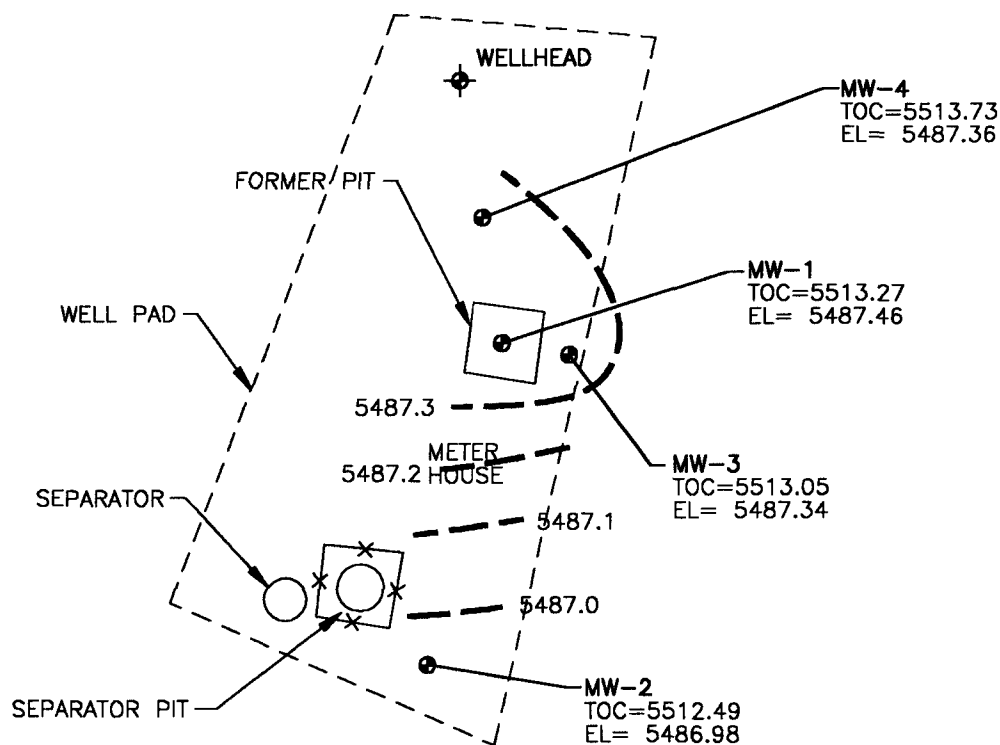
Based on groundwater levels collected from four groundwater monitor wells during the monitoring event of 1999, the groundwater flow varies. Off-site work will be required to obtain downgradient samples and determine the downgradient edge of hydrocarbon constituents in the groundwater. Isoconcentration maps show elevated levels of benzene and total xylenes located in the former pit area. The geometry of the monitor wells makes it difficult to determine the gradient with the monitor wells that are now in place. The January 9, 1999, gradient map shows that during periods

EPFS GROUNDWATER PITS 1999 ANNUAL GROUNDWATER REPORT

of high groundwater elevations (precipitation), the groundwater gradient may be affected by localized surface recharge conditions.

RECOMMENDATIONS

- EPFS proposes to continue annual monitoring at the site.
- Installation of a groundwater monitoring well east of MW-3 would help to establish a more accurate groundwater gradient. Drilling off-site to the east of the location may be difficult due to thick tree cover and other natural barriers.
- EPFS will continue to work with the operator at this site.



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

TOC TOP OF CASING ELEVATION

EL GROUNDWATER ELEVATION

B BENZENE (ug\L)
T TOLUENE (ug\L)
E ETHYL BENZENE (ug\L)
X XYLENE (ug\L)

➔ APPROXIMATE GROUNDWATER GRADIENT

—5487.50— GROUNDWATER POTENTIOMETRIC SURFACE

FORMER PIT MAY BE LOCALLY AFFECTING GRADIENT DURING PERIODS OF RAIN.

0 40
FEET



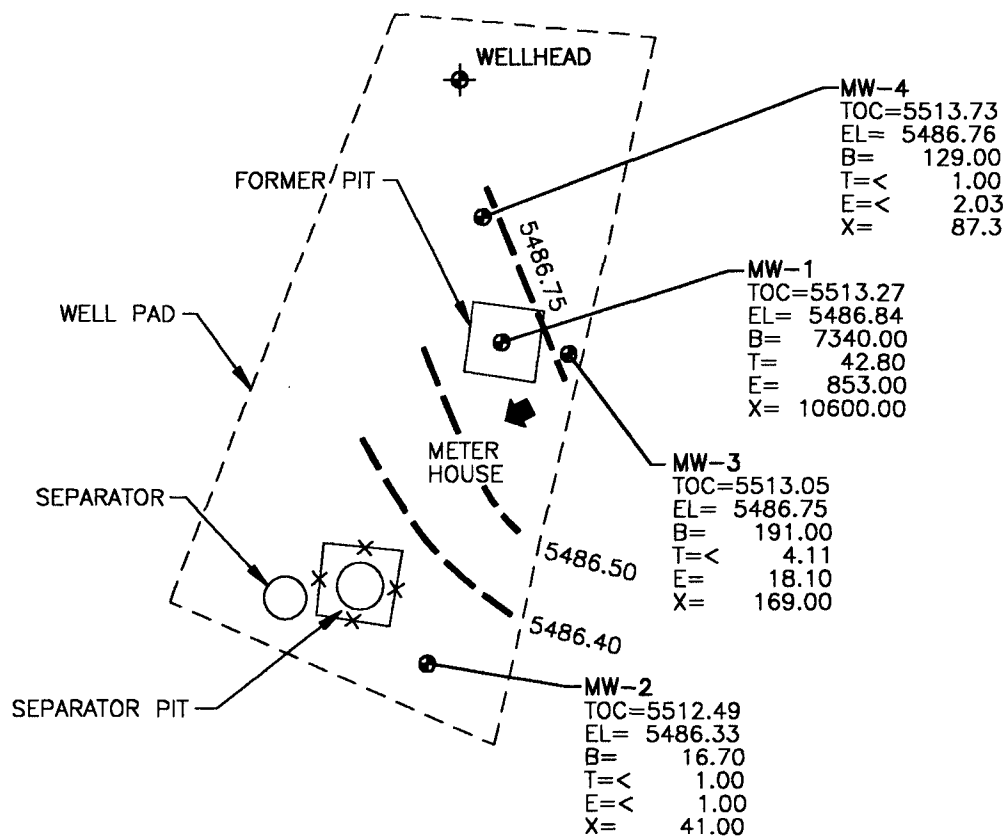
TITLE:
KNIGHT #1
METER 72556
JANUARY 9, 1999

DWN: CJK
CHKD: CI
DATE: 02/25/00

DES.: CI
APPD:
REV.: 1

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 1



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

TOC TOP OF CASING ELEVATION

EL GROUNDWATER ELEVATION

B BENZENE (ug\L)

T TOLUENE (ug\L)

E ETHYL BENZENE (ug\L)

X XYLENE (ug\L)

➔ APPROXIMATE GROUNDWATER GRADIENT

5487.50 GROUNDWATER POTENTIOMETRIC SURFACE

0 40
FEET



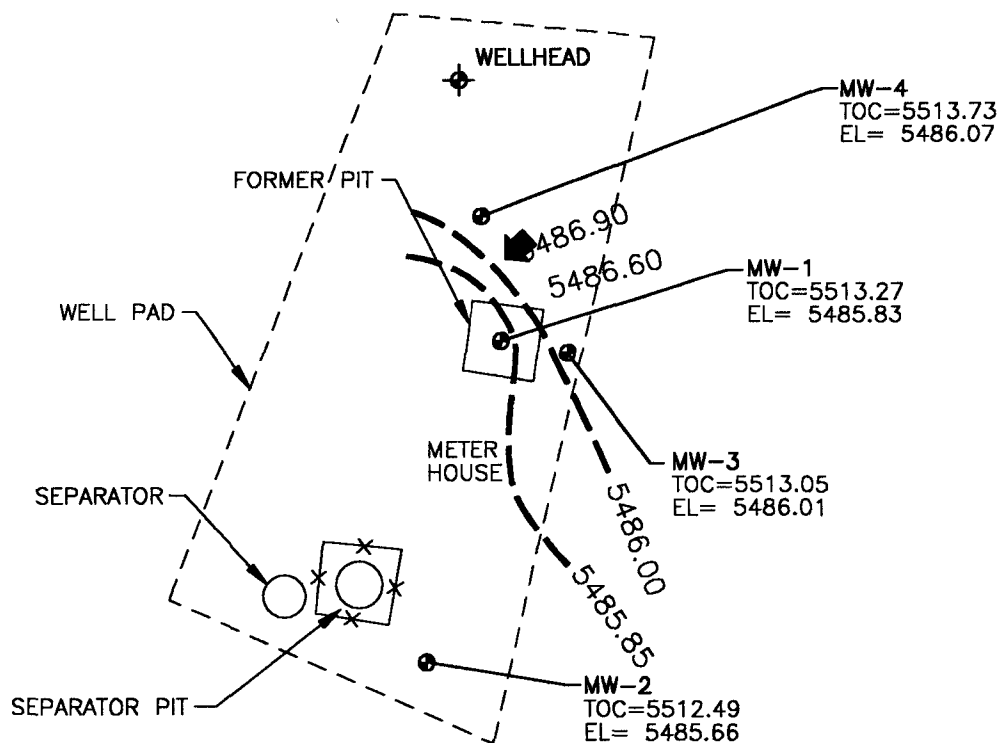
TITLE:
KNIGHT #1
METER 72556
APRIL 16, 1999

DWN: C/JG
CHKD: CI
DATE: 02/09/00

DES.: CI
APPD:
REV.: 1

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 2



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

TOC TOP OF CASING ELEVATION

EL GROUNDWATER ELEVATION

B BENZENE (ug\L)

T TOLUENE (ug\L)

E ETHYL BENZENE (ug\L)

X XYLENE (ug\L)



APPROXIMATE GROUNDWATER GRADIENT

5487.50 GROUNDWATER POTENTIOMETRIC SURFACE

0 40
FEET



TITLE:

KNIGHT #1
METER 72556
JULY 19, 1999

DWN:

CJG

DES.:

CI

PROJECT NO.:

17520

CHKD:

CI

APPD:

DATE:

03/14/00

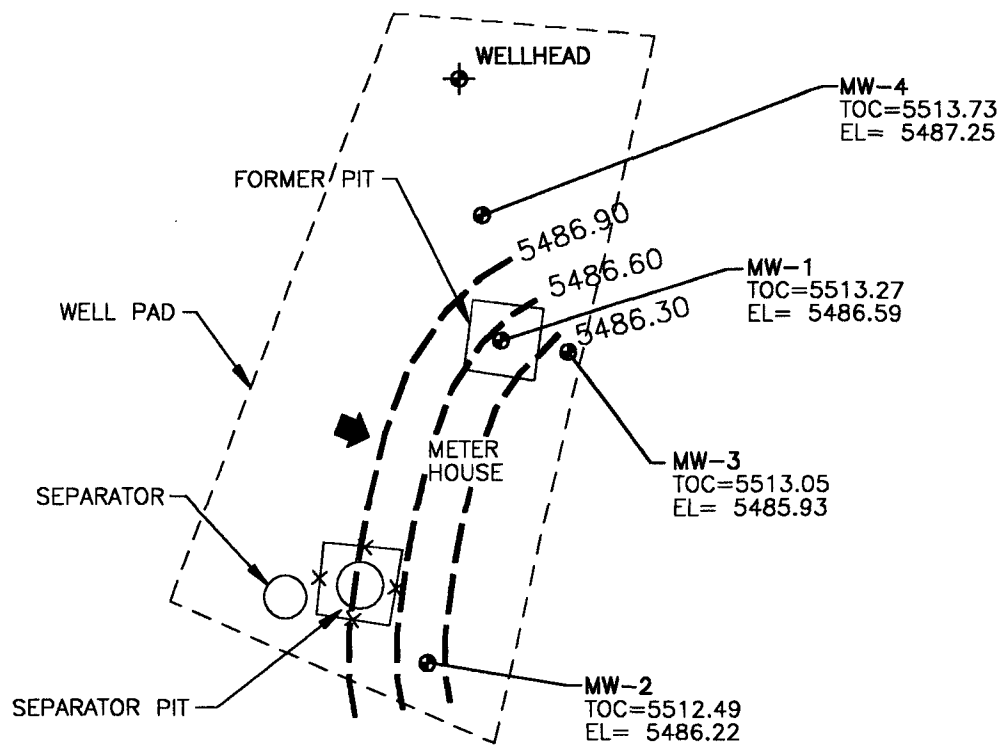
REV.:

1

EPFS GW PITS

FIGURE 3

COL 17520BJ-014



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

TOC TOP OF CASING ELEVATION

EL GROUNDWATER ELEVATION

B BENZENE (ug\L)

T TOLUENE (ug\L)

E ETHYL BENZENE (ug\L)

X XYLENE (ug\L)

➔ APPROXIMATE GROUNDWATER GRADIENT

5487.50 GROUNDWATER POTENTIOMETRIC SURFACE

0 40
FEET



TITLE:

KNIGHT #1
METER 72556
DECEMBER 8, 1999

DWN:

CJG

DES.:

CI

CHKD:

CI

APPD:

DATE:

02/09/00

REV.:

1

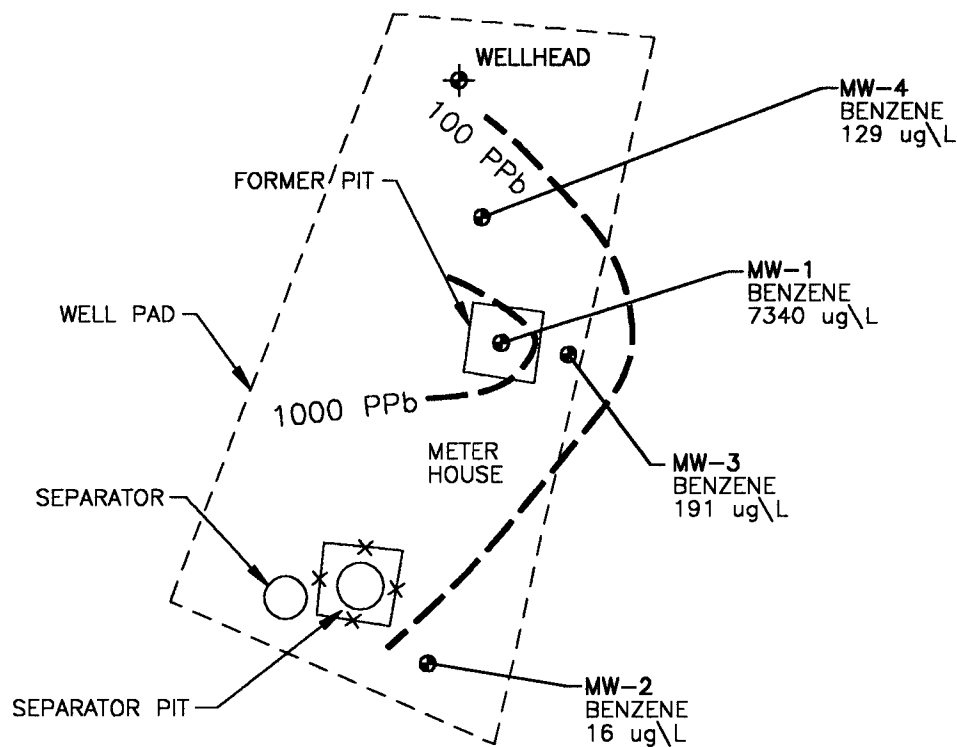
PROJECT NO.:

17520

EPFS GW PITS

FIGURE 4

COL 17520BJ-014



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

TOC TOP OF CASING ELEVATION

EL GROUNDWATER ELEVATION

B BENZENE (ug/L)

T TOLUENE (ug/L)

E ETHYL BENZENE (ug/L)

X XYLENE (ug/L)

➔ APPROXIMATE GROUNDWATER GRADIENT

5487.50 GROUNDWATER POTENTIOMETRIC SURFACE

0 40
FEET



TITLE:

KNIGHT #1 - METER 72556

APRIL 16, 1999

ISOCONCENTRATION MAP-BENZENE

DWN:

CJG

DES.:

CI

CHKD:

CI

APPD:

DATE:

03/14/00

REV.:

1

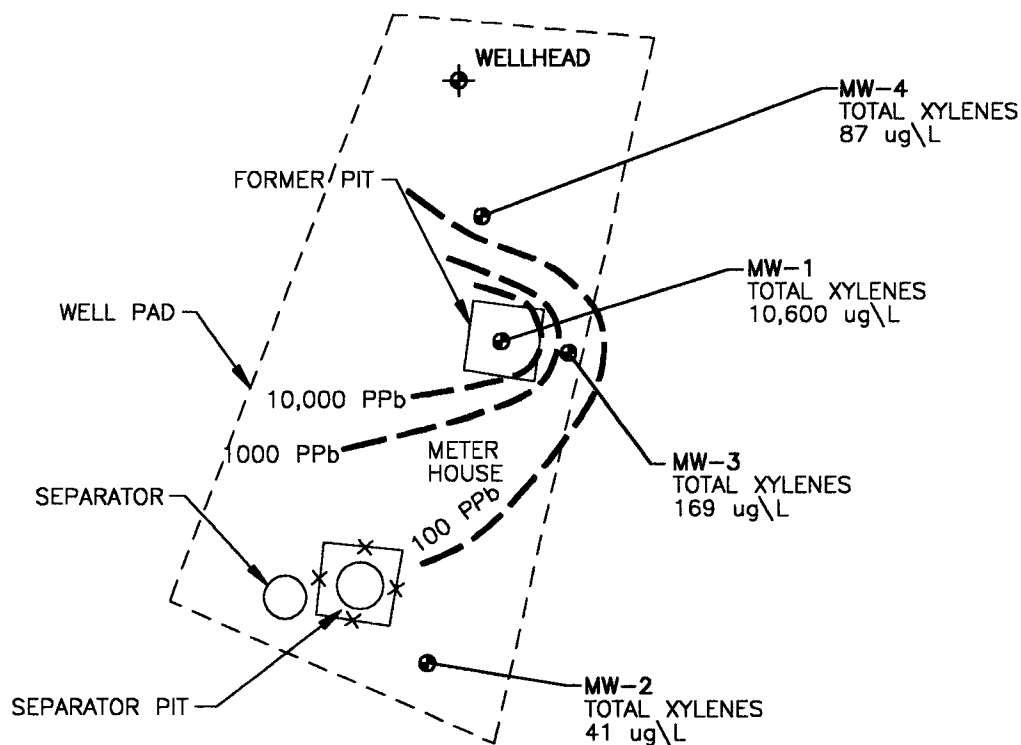
PROJECT NO.:

17520

EPFS GW PITS

FIGURE 5

COL 17520BJ-014



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

TOC TOP OF CASING ELEVATION

EL GROUNDWATER ELEVATION

B BENZENE (ug/L)
T TOLUENE (ug/L)
E ETHYL BENZENE (ug/L)
X XYLENE (ug/L)

➔ APPROXIMATE GROUNDWATER GRADIENT

5487.50 GROUNDWATER POTENTIOMETRIC SURFACE

FORMER PIT MAY BE LOCALLY AFFECTING GRADIENT DURING PERIODS OF RAIN.

0 40
FEET



TITLE:
KNIGHT #1 - METER 72556
APRIL 16, 1999
ISOCONCENTRATION MAP -
TOTAL XYLENES

DWN:
CJG

DES.:
CI

CHKD:
CI

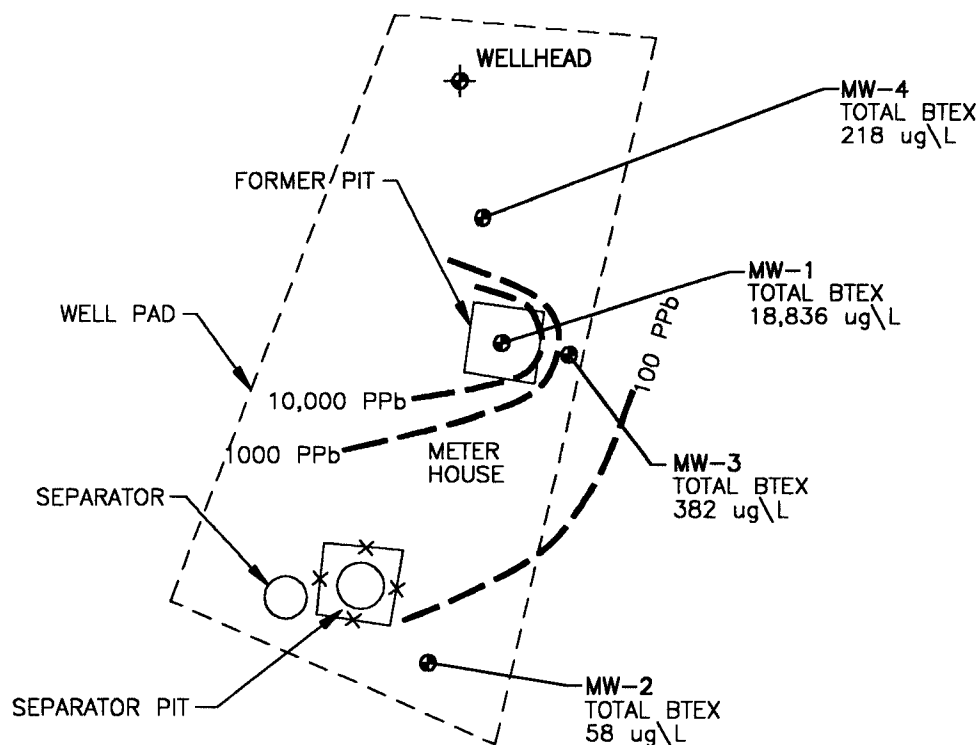
APPD:

DATE:
03/14/00

REV.:
1

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 6



LEGEND

● MW-1 MONITORING WELL NUMBER AND APPROXIMATE LOCATION

TOC TOP OF CASING ELEVATION

EL GROUNDWATER ELEVATION

B BENZENE (ug\L)
T TOLUENE (ug\L)
E ETHYL BENZENE (ug\L)
X XYLENE (ug\L)

➔ APPROXIMATE GROUNDWATER GRADIENT

5487.50 GROUNDWATER POTENTIOMETRIC SURFACE

FORMER PIT MAY BE LOCALLY AFFECTING GRADIENT DURING PERIODS OF RAIN.

0 40
FEET



COL 17520BJ-015



TITLE:
KNIGHT #1 - METER 72556
APRIL 16, 1999
ISOCONCENTRATION MAP -
TOTAL BTEX

DWN:
CJG
CHKD:
CI
DATE:
03/14/00

DES.:
CI
APPD:
REV.:
1

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 7

TABLE 1

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX
990176	72556	Knight #1	04/16/99	1	Sample 4 - 10th Quarter	= 7340.0	= 42.8	= 853.0	= 10600.0	= 18836
990177	72556	Knight #1	04/16/99	2	Sample 4 - 10th Quarter	= 16.7	< 1.0	< 1.0	= 41.0	= 58
990179	72556	Knight #1	04/16/99	3	Sample 4 - 10th Quarter	= 191.0	= 4.1	= 18.1	= 169.0	= 382
990180	72556	Knight #1	04/16/99	4	Sample 4 - 10th Quarter	= 129.0	< 1.0	= 2.03	= 87.3	= 218

ATTACHMENT 1
1999 GROUNDWATER ANALYTICAL



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990176
MTR CODE SITE NAME:	72556	Knight #1
SAMPLE DATE TIME (Hrs):	4/16/99	1150
PROJECT:	Sample 4 - 10th Quarter	
DATE OF BTEX EXT. ANAL.:	NA	4/22/99
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	7340	PPB	50	D		
TOLUENE	42.8	PPB				
ETHYL BENZENE	853	PPB	10	D		
TOTAL XYLENES	10600	PPB	50	D		
TOTAL BTEX	18836	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 84.8 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The "D" qualifier indicates that the analyte calculated is based on a secondary dilution factor.

Narrative:

Approved By:

John L. Linder

Date:

4/23/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990177
MTR CODE SITE NAME:	72556	Knight #1
SAMPLE DATE TIME (Hrs):	4/16/99	1203
PROJECT:	Sample 4 - 10th Quarter	
DATE OF BTEX EXT. ANAL.:	NA	4/22/99
TYPE DESCRIPTION:	MW-2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	16.7	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	<1.0	PPB				
TOTAL XYLENES	41.0	PPB				
TOTAL BTEX	58	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 96.7 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: John Ladd

Date: 4/23/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990178
MTR CODE SITE NAME:	72556	Knight #1
SAMPLE DATE TIME (Hrs):	4/16/99	1203
PROJECT:	Sample 4 - 10th Quarter	
DATE OF BTEX EXT. ANAL.:	NA	4/22/99
TYPE DESCRIPTION:	MW-2 Field Duplicate	Water

Field Remarks: Field Duplicate

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	14.6	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	<1.0	PPB				
TOTAL XYLENES	35.2	PPB				
TOTAL BTEX	50	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 99.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By: John L. Ladd

Date: 4/23/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990179
MTR CODE SITE NAME:	72556	Knight #1
SAMPLE DATE TIME (Hrs):	4/16/99	1358
PROJECT:	Sample 4 - 10th Quarter	
DATE OF BTEX EXT. ANAL.:	NA	4/22/99
TYPE DESCRIPTION:	MW-3	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	191	PPB				
TOLUENE	4.11	PPB				
ETHYL BENZENE	18.1	PPB				
TOTAL XYLENES	169	PPB				
TOTAL BTEX	382	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 100.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John L. Linder

Date:

4/23/99



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	990180
MTR CODE SITE NAME:	72556	Knight #1
SAMPLE DATE TIME (Hrs):	4/16/99	1455
PROJECT:	Sample 4 - 10th Quarter	
DATE OF BTEX EXT. ANAL:	NA	4/22/99
TYPE DESCRIPTION:	MW-4	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	129	PPB				
TOLUENE	<1.0	PPB				
ETHYL BENZENE	2.03	PPB				
TOTAL XYLENES	87.3	PPB				
TOTAL BTEX	218	PPB				

—BTEX is by EPA Method 8020 —

The Surrogate Recovery was at 99.0 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John L. Larch

Date:

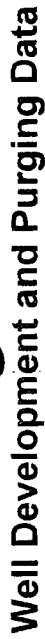
4/23/99



A 2447

CHAIN OF CUSTODY RECORD

Project No.		Project Name		Requested Analysis		Remarks	
Samplers: (Signature)		Date: 4-16-99		Preservation Technique			
Date	Time	Comp.	GRAB	Sample Number	Type and No. of Sample Containers		
4/16/99	11:50		X	990175	52	X	WASH = 1 MW-1
4/16/99	12:03		X	990177	52	X	WASH = 1 MW-2
4/16/99	12:03		X	990178	52	X	WASH = 1 MW-3 FRODOVA
4/16/99	13:58		X	990179	52	X	WASH = 1 MW-3
4/16/99	14:51		X	990180	52	X	WASH = 1 MW-3
4/16/99	—		X	—	51	X	TRAP FRODOVA
[A large diagonal line is drawn across the remaining rows of the table.]							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
[Signature]		4/16/99 15:58		[Signature]			
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
				[Signature]			
Relinquished by: (Signature)		Date/Time		Received for Laboratory by: (Signature)		Date/Time	
				[Signature]		4/22/99 14:55	
Carrier Co:		Carrier Phone No.		Remarks: Rod + In Det			
Air Bill No.:		Date Results Reported / by: (Signature)					



Well Number MW-1
Meter Code 72556

☐	Development
☒	Purging

Site Name AVIGH7 #1

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

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

Initial Depth of Well (feet) 33.94
Initial Depth to Water (feet) 26.52
Height of Water Column in Well (feet) 7.42

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		46.9	147
Gravel Pack			
Drilling Fluids			
Total			

☒	pH Meter
☐	DO Monitor
☒	Conductivity Meter
☒	Temperature Meter
☒	Other <u>DO-C</u>

Water Disposal

KNIGHT #/ SEPARATOR TANK

[illegible]

THE WELL HAD 0.12' OF FREE FLOATING HYDROCARBON. THE WELL BAVED 0.76.0 GALS.

Date: 4-16-99 Reviewer:

Date 4/23/99



Well Development and Purging Data

Well Number MW-2
Meter Code 72556

Site Name KWIGHT #1

☐ Development
☒ Purging

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 36.93
Initial Depth to Water (feet) 26.16
Height of Water Column in Well (feet) 10.77

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.1</u>	<u>21.4</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

KWIGHT #1 SEPARATOR TANK

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal)		Product Volume Removed (gallons)		pH	Conductivity $\mu\text{mho/cm}$	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative				
4-16-99	1048													
4-16-99	1055						5.0	5.0			6.48	2670		
4-16-99	1104						5.0	10.0			6.44	2650		
4-16-99	1116						5.0	15.0			6.57	2590		
4-16-99	1126						5.0	20.0			6.71	2680		
4-16-99	1143						5.0	25.0			6.77	2710		
											6.88	2730	2.5	

Comments

Developer's Signature Bernie Bird

Date 4-16-99 Reviewer John Fiedler

Date 4/23/99



Well Development and Purging Data

Well Number NW-3
Meter Code 22556

☐ Development
☒ Purging

Site Name KNIGHT #1

Development Criteria

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

Methods of Development

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

Water Volume Calculation

Initial Depth of Well (feet) 3220
Initial Depth to Water (feet) 2830
Height of Water Column in Well (feet) 10.90
Diameter (inches): Well 4 Gravel Pack _____

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		<u>7.3</u>	<u>21.6</u>
Gravel Pack			
Drilling Fluids			
Total			

Instruments

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

Water Disposal

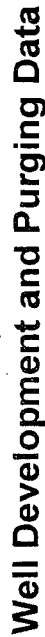
KNIGHT #1 SEPARATOR TANK

Water Removal Data

Date	Time	Development Method		Removal Rate (gal/min)	Intake Depth (feet)	Ending Water Depth (feet)	Water Volume Removed (gal)		Product Volume Removed (gallons)		Temperature °C	pH	Conductivity µmho/cm	Dissolved Oxygen mg/L	Comments
		Pump	Bailer				Increment	Cumulative	Increment	Cumulative					
<u>4-16-99</u>	<u>1255</u>										<u>13.8</u>	<u>6.04</u>	<u>2200</u>		
<u>4-16-99</u>	<u>1305</u>						<u>5.0</u>	<u>5.0</u>			<u>13.9</u>	<u>5.93</u>	<u>2530</u>		
<u>4-16-99</u>	<u>1314</u>						<u>5.0</u>	<u>10.0</u>			<u>13.8</u>	<u>6.57</u>	<u>2640</u>		
<u>4-16-99</u>	<u>1323</u>						<u>5.0</u>	<u>15.0</u>			<u>13.7</u>	<u>6.42</u>	<u>2660</u>		
<u>4-16-99</u>	<u>1332</u>						<u>5.0</u>	<u>20.0</u>			<u>13.8</u>	<u>6.74</u>	<u>2680</u>		
<u>4-16-99</u>	<u>1350</u>						<u>5.0</u>	<u>25.0</u>			<u>13.5</u>	<u>6.76</u>	<u>2640</u>	<u>2.5</u>	

Comments THE WATER HAD A LIGHT HYDROCARBON SMELL.

Developer's Signature Kevin Bied Date 4-16-99 Reviewer John Fader Date 4/23/99



Well Number NW-4
Meter Code 72538

☐	Development
☒	Purging

Site Name KNIGHT #1

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) 36.80
Initial Depth to Water (feet) 26.97
Height of Water Column in Well (feet) 9.83

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
☒ Other DOE

Water Disposal,

KNIGHT #1 SEP99RPTOR-TANK

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		6.5	19.5
Gravel Pack			
Drilling Fluids			
Total			

Water Removal Data

[illegible]

Comments

Developer's Signature Kennia Bird

Date 4/8/99 Reviewer

John T. Butler Date 4/23/99



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT

EPA METHOD 8020 - BTEX

Samples: 990173 to 990181

QA/QC for 04/22/99 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	47.1	94.2	75 - 125 %	X
Toluene	Standard	50.0	46.9	93.7	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.6	95.1	75 - 125 %	X
m & p - Xylene	Standard	100	95.8	95.8	75 - 125 %	X
o - Xylene	Standard	50.0	47.2	94.4	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	22.7	91	39 - 150	X
Toluene	Standard	25.0	22.7	91	46 - 148	X
Ethylbenzene	Standard	25.0	23.0	92	32 - 160	X
m & p - Xylene	Standard	50.0	46.1	92	Not Given	X
o - Xylene	Standard	25.0	22.9	92	Not Given	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
990173					RANGE	
Benzene	Matrix Duplicate	10.5	10.7	1.61	+/- 20 %	X
Toluene	Matrix Duplicate	1.52	1.54	0.86	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	9.36	9.63	2.79	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	3.50	3.57	2.05	+/- 20 %	X
o - Xylene	Matrix Duplicate	1.16	1.19	2.51	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 990173					RANGE	
Benzene	25	10.5	31.6	84	75 - 125 %	X
Toluene	25	1.52	21.9	81	75 - 125 %	X
Ethylbenzene	25	9.36	30.4	84	75 - 125 %	X
m & p - Xylene	50	3.50	45.9	85	75 - 125 %	X
o - Xylene	25	1.16	22.0	83	75 - 125 %	X

Narrative: Acceptable.

AUTO BLANK	SOURCE	PPB (1 analyzed with set)	STATUS
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (one analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (one analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

TRIP BLK 04/15,16,19/99	SOURCE	PPB (three analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: J.L.

Approved By: John Larkin

Date: 4-23-99

SURVEY
NOTES
OF

MONITOR WELLS

FROM

AT E.S.

E.S. TO E.S.

CO. NAME FULLER PETROLEUM INC

FARM NAME & NO. KNIGHT #1

LOCATION NE 1/4 SEC. 5 T. 30 N. R. 13 W. NMPM

FROM LINE FROM LINE

SAN JUAN COUNTY, NM

R/W No. DATE 2-26-99

W/O No. KTIMOWES WEATHER CLEAR + COOL

CREW

BASIS OF BEARING J. JOHN

GPS (RRR) FARMINGTON CHERNASY

NORTH QUAD.

(DWG. HEAD) SITE MAP

DWG. # 6A2-TM-L2

CHECKED BY

PLOTTED BY

Re Survey
La Plata Highway

1

KNIGHT #1 MONTANA WELL

ENG STA.	+	H.I.	GR OR ROD.	PIPE	T PELEV
	STA	PI A	REMARKS		

SEE DIAGRAM DRAWING.

SURVEY FIELD NOTES - AS BUILT - ELEVATIONS

ENGINEERING DEPT.

San Juan repro Form 71-84

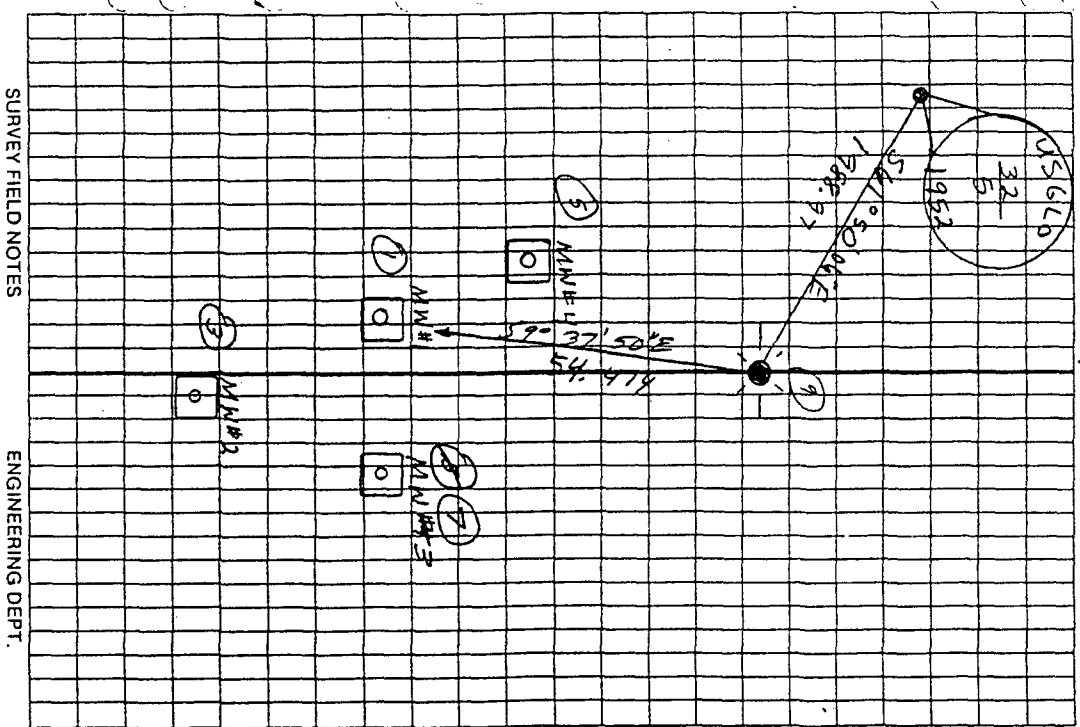
WEATHER CLEAR & COOL

CO. & STATE SAN JUAN Co., NH

DATE 2-26-91

PC JOHN

1



SURVEY FIELD NOTES

ENGINEERING DEPT.

TITLE PAGE

PROFILE

NOTES
OF

MONITOR WELL

FROM

AT E.S.

E.S. TO E.S.

CO. NAME FULLER PETROLEUM INC

FARM NAME & NO. KNIGHT #1

LOCATION NE 1/4 SEC. 5 T. 30 N.R. 13 W. N41PM

FROM LINE FROM LINE

SAN JUAN COUNTY, NM

R/W No. DATE 2-26-99

W/O No. WEATHER CLEAR / COOL

CREW

J. JOHN

M. DELEDON

CHECKED BY

PLOTTED BY

Knights Maurice Hill

ENG STA.	+	H.I.	GR OR ROD	PIPE	TPELEV
	STA	PI A	REMARKS		
TBM#2	3.64	5516.24			
MW #1					
TOP OF CASING					
MW #2					
MW #3					
MW #4					
Perc					
TBM #3					

san juan reoro Form 71-84

WEATHER CLEAR & COOL DATE 3-26-97
CO. & STATE SAN JUAN Co, NM P.C. JOHN W 1

DATE 2-26-99
P.C. JOHN



CO. & STATE San Juan Co., NM

P.C. John



TRM #2 @ MTK.ONT BOP OF BOYD FLOWLINE
E.L. 5513.60. IN JPM#2

7014

Top of Cassing

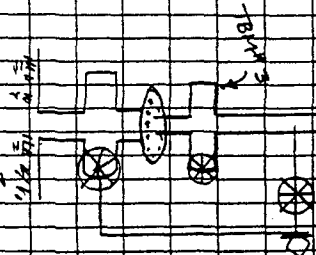
Top of casing

Top of Casing

Top of casing

valve on well head

TEAM #3 ON TOP OF
2" VALVE WITH SIDE
OF WELD HEND.



SURVEY FIELD NOTES

ENGINEERING DEPT

500,9222.398,10537.341,5539.593,BASE
501,10000.000,10000.000,5560.000,N1/4 5 30 13
1,9007.476,11762.570,5512.953,MW 1
2,9008.721,11761.289,5510.635,MW 1 TOP CONC
3,8941.899,11746.774,5512.524,MW 2
4,8941.914,11746.336,5510.062,MW 2 TOP CONC
5,9033.578,11758.655,5513.499,MW 4
6,9033.095,11759.069,5511.387,MW 4 TOP CONC
7,9005.104,11776.176,5512.775,MW 3
8,9006.250,11777.664,5510.661,MW 3 TOP CONC
9,9061.183,11753.457,5510.726,CL WH
10,8948.995,11759.272,5512.057,TBM 2
11,8853.915,11704.853,5509.261,TBM 1



FEB 22 2000

NEW MEXICO OIL CONSERVATION DIVISION

Certified Mail: #Z 213 707 662

February 17, 2000

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

RE: Corrected Request for Extension for 2000 Pit Project Annual Groundwater Report

Dear Mr. Olson:

Please except this request for extension with the dates corrected to reflect the current year.

The pit project annual groundwater report is due to you on March 1, 2000. Pursuant to our February 8, 2000 telephone conversation, El Paso Field Services (EPFS) hereby requests a one-month extension to the submittal date. EPFS will submit the pit project annual report to your office by April 3, 2000.

If you have any questions or require any additional information, please contact me at (505) 599-2124.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Scott T. Pope'.

Scott T. Pope P.G.
Environmental Scientist

xc: Mr. Denny Foust, NMOCD - Aztec

FEB 10 2000

Certified Mail: #Z 387 666 326

February 8, 1999

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

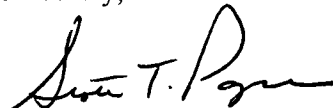
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Scott T. Pope P.G.
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