

3R - 155

REPORTS

DATE:

2000



Certified Mail: #7000 1670 0012 7260 6739

February 26, 2001

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

RECEIVED

FEB 28 2001

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 2000 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 sites that were identified during our pit closure project of 1994 / 1995.

Of the 32 reports (Volumes 1-4), EPFS hereby requests closure of six sites. The six 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". Four of the six sites were submitted in last years report and a decision has not been made on closure. The remaining two sites have been submitted in previous years and denied closure.

The Jaquez Com. C #1 and Jaquez Com. E #1 site is not included in with this years report and will be submitted by the required deadline of April 1, 2001

EPFS has also included for your information six Navajo sites in a separate binder.

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, appearing to read '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 # 7000 1670 0012 7260 6722**
Mr. Bill Liesse, BLM - w / enclosures (federal sites only), **Certified Mail # 7000 1670 0012 7260 6715**

SAN JUAN BASIN PIT CLOSURES
San Juan Basin, New Mexico

El Paso Field Services
Pit Project Groundwater Report
Annual Report
Volume III

March 2001

Prepared For

El Paso Field Services
Farmington, New Mexico

Project 62800398



155

EPFS GROUNDWATER PITS

2000 ANNUAL GROUNDWATER REPORT

CANADA MESA #2
Meter/Line ID - 87640

SITE DETAILS

Legals - Twn: 24N Rng: 6W Sec: 24 Unit: I
NMOCD Hazard Ranking: 40 Land Type: FEDERAL
Operator: MERRION OIL AND GAS CORP.

PREVIOUS ACTIVITIES

Site Assessment: Jul-94 Excavation: Aug-94 (80 cy) Soil Boring: Aug-95
Monitor Well: Aug-95 PSH Removal Initiated: Aug-97
Additional Monitor Wells: Oct-00

2000 ACTIVITIES

Phase Separated Hydrocarbon (PSH) Removal - PSH removal from MW-1 was initiated in January 1997 and continued through 2000.

Monitor Well Installation - The groundwater gradient was estimated based on topography and monitor wells were installed according to recommendations in the 1999 Annual Groundwater Report.

SUMMARY TABLES

Groundwater level data and PSH recovery data are presented in Table 1. Groundwater analytical data from MW-2 and MW-3 are presented in Table 2. Copies of the laboratory data sheets and associated quality assurance/quality control data are presented as Attachment 1.

SITE MAP

A site map with groundwater elevations and gradient is presented as Figure 1.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Drilling activities were conducted on October 27 and November 1, 2000 and geologic logs and well completion diagrams are presented as Attachment 2.

DISPOSITION OF GENERATED WASTES

All PSH has been disposed of at the EPFS Kutz Separator located in Bloomfield, New Mexico.

ISOCONCENTRATION MAPS

Isoconcentration maps were not generated for this site.

CONCLUSIONS

A total of 26.73 gallons of PSH has been recovered from MW-1 to date, with only 1.0 gallon of PSH recovered in 2000. All PSH has been disposed of at the EPFS Kutz Separator in Bloomfield, New Mexico.

EPFS GROUNDWATER PITS 2000 ANNUAL GROUNDWATER REPORT

Additional downgradient monitor wells, MW-2 and MW-3, were installed to determine the extent of migration and isolate the source of contamination. Analyses of groundwater samples from MW-2 and MW-3 exhibit hydrocarbon levels exceeding the New Mexico groundwater standards. The direction of groundwater flow appears to be toward the east.

Pertinent data from past groundwater reports include the following:

A passive product removal system was installed in MW-1 on 8/28/97 and product removal was initiated at that time. Quarterly groundwater sampling was discontinued when product removal was initiated.

Temporary well point data show two downgradient and three crossgradient samples were all above standards for BTEX. One upgradient sample collected from PH-1 was below standards for BTEX. No product was measured in any of the temporary wells. The northeastern and eastern extent of contamination was not identified. There were two unlined pits at this site that had been used by the operator and may be potential sources of hydrocarbon constituents in groundwater and the operator was notified.

RECOMMENDATIONS

- Continue product removal at MW-1.
- Sample groundwater annually until BTEX levels are below New Mexico groundwater standards, then sample quarterly for closure.
- EPFS will continue to provide the operator with pertinent site data regarding EPFS activities at the site.

EPFS Groundwater Report
2000 Annual Report

Table 1

March 2001

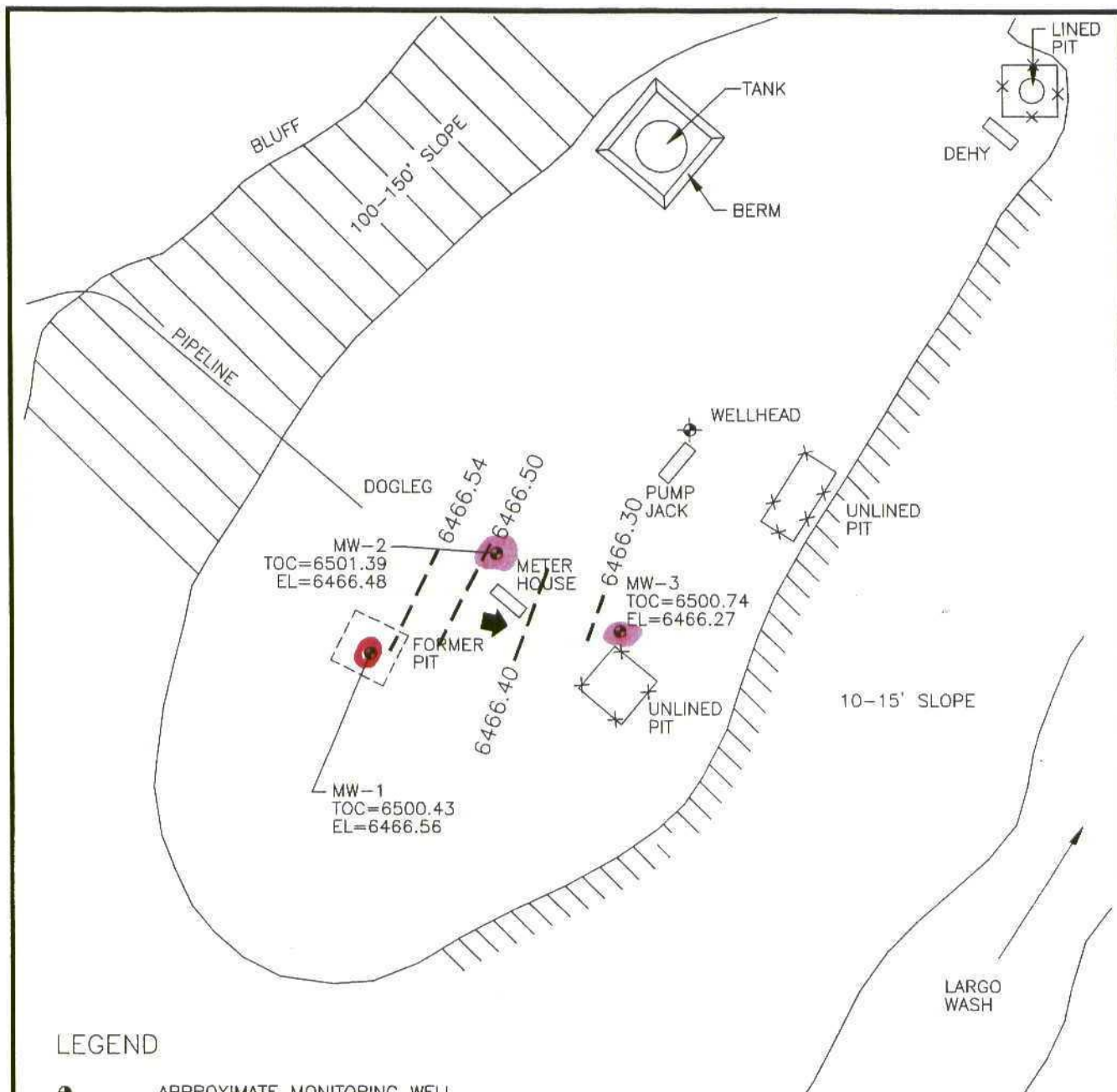
Meter/Line #	Location/Line Name	Date	MW	Depth to Product	Depth to Water	Product Thickness	Volume Removed Gallons	Cumulative Gallons
87640	CANADA MESA #2	1/26/00	1	35.03	35.22	0.19	0	25.73
87640	CANADA MESA #2	2/15/00	1	34.93	35.11	0.18	1	26.73
87640	CANADA MESA #2	1/3/01	1	33.83	33.96	0.13	0	26.73

Table 2

March 2001

Sample #	Meter/ Line #	Site Name	Sample Date	MW #	Project	Benzene (PPB)	Toluene (PPB)	Ethyl Benzene (PPB)	Total Xylenes (PPB)	Total BTEX (PPB)
CAN-0011-MW2	87640	CANADA MESA #2	11/16/00	2	SAMPLE 1 - 1st Annual	= 3,200	= 330	= 1,200	= 1,100	5,830
CAN-0011-MW3	87640	CANADA MESA #2	11/16/00	3	SAMPLE 1 - 1st Annual	= 880	= 1,300	= 420	= 3,700	6,300

Sample 1 - Annual Sampling



LEGEND

- ⊕ MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER
- TOC TOP OF CASING ELEVATION
- EL GROUNDWATER ELEVATION
- 75.0- GROUNDWATER POTENTIOMETRIC SURFACE
- ➔ GROUNDWATER GRADIENT

NOT TO SCALE



COL 628\00219AW-003



TITLE:
CANADA MESA #2
METER 87640
JANUARY 3, 2001

DWN: TMM	DES.: LW
CHKD: LW	APPD: MN
DATE: 1/31/01	REV.: 0

PROJECT NO.: 62800219
EPFS GW PITS

FIGURE 1

ATTACHMENT 1

2000 GROUNDWATER ANALYTICAL

Project No. 62800219

Phase.Task No. 0301

Site Address Local San Juan Co.

Water Volume Calculation

Initial Depth of Yell (feet) 42.75

Initial Depth to Water (feet) -

Height of Water Column in Well (feet)

Water Volume in Well	Gallons to be

Item	Cubic Feet	Gallons	Removed

Well Casing	8.00	1.30 x 3	3.90
-------------	------	----------	------

Gravel Pack		
-------------	--	--

Drilling Fluids

10/51	3.90
-------	------

Water Disposal

6-72 September 18 AM

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

Comments Bailed Approximately 1.75 gallons well dry Let Recover collected

Brex sample 1500* Added 19 gallons Bailed Dry, Started water quality Reab.

Developer's Signature(s) Chin A M

Date // 16-00

Reviewer Julian Date 12/1/00

*Chris bailed approximately 1.75 gallons of water from the well, then used 19 gallons of potable water to remove

F:\NEWFORM\PE_A0101.DOT 1/31/96

samples were obtained after mud & potable water had been removed & well recovered. In each addition.

ALFA

4000 Monroe Road
Farmington, NM 87401

(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2785

Project Name		Project Number		Phase		Task		Type of Analysis and Bottle		Total Number of Bottles		Comments	
Laboratory		Name		Date		Time		Matrix		Sample Number (and depth)		Location	
EPCS Quarterly Sampling		62400107		Phase		Task 0301							
Samplers		C. M. S. E. Z.											
Laboratory		PENNACLA											
Sample Number (and depth)		Date		Time		Matrix							
CAN-0011-MW 02		11-16-00		1450		H ₂ O		2					
CAN-0011-MW 03		11-16-00		1500		H ₂ O		2					

Relinquished by:

Received By:

Signature	Date	Time	Signature	Date	Time
Chris A. M...	11-20-00	1630			

Samples Iced:

☒ Yes ☐ No

Samples Iced: ☐ Yes ☒ No

Preservatives (ONLY for Water Samples)

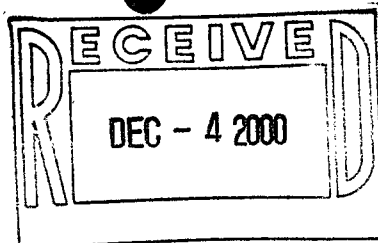
- ☐ Cyanide Sodium hydroxide (NaOH)
- ☐ Volatile Organic Analysis Hydrochloric acid (HCl)
- ☐ Metals Nitric acid (HNO₃)
- ☐ TPH (418.1) Sulfuric acid (H₂SO₄)
- ☒ Other (Specify) H₂Cl₂
- ☐ Other (Specify) _____

Carrier: *Exhibit*

Shipping and Lab Notes:

Airbill No. F/I/KOL919996

PINNACLE
LABORATORIES



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

Pinnacle Lab ID number **011073**
November 28, 2000

PHILIP ENVIRONMENTAL
4000 MONROE ROAD
FARMINGTON, NM 87401

EL PASO FIELD SERVICES
614 RIELLY STREET
FARMINGTON, NM 87401

Project Name EPFS QUARTERLY SAMPLING
Project Number 62800107

Attention: ROBERT THOMPSON/SCOTT POPE

On 11/21/00 Pinnacle Laboratories, Inc., (ADHS License No. AZ0592 pending), received a request to analyze aqueous samples. The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

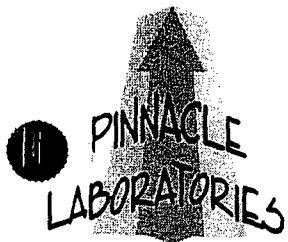
If you have any questions or comments, please do not hesitate to contact us at (505)344-3777.

A handwritten signature in black ink, appearing to read "H. Mitchell Rubenstein".

H. Mitchell Rubenstein, Ph. D.
General Manager

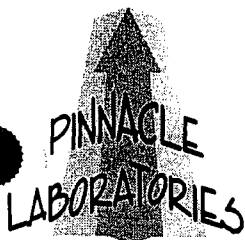
MR: ft

Enclosure



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

CLIENT	: PHILIP ENVIRONMENTAL	PINNACLE ID	: 011073
PROJECT #	: 62800107	DATE RECEIVED	: 11/21/00
PROJECT NAME	: EPFS QUARTERLY SAMPLING	REPORT DATE	: 11/28/00
IN			DATE
D. #	CLIENT DESCRIPTION	MATRIX	COLLECTED
01	CAN-0011-MW02	AQUEOUS	11/16/00
02	CAN-0011-MW03	AQUEOUS	11/16/00



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS

TEST : EPA 8021 MODIFIED
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D.: 011073

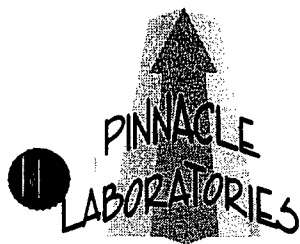
SAMPLE			DATE	DATE	DATE	DIL.
D. #	CLIENT I.D.	MATRIX	SAMPLED	EXTRACTED	ANALYZED	FACTOR
01	CAN-0011-MW02	AQUEOUS	11/16/00	NA	11/21/00	20
02	CAN-0011-MW03	AQUEOUS	11/16/00	NA	11/21/00	20

PARAMETER	DET. LIMIT	UNITS	CAN-0011-MW02	CAN-0011-MW03
BENZENE	0.5	UG/L	3200	880
TOLUENE	0.5	UG/L	330	1300
ETHYLBENZENE	0.5	UG/L	1200	420
TOTAL XYLENES	0.5	UG/L	1100	3700

DATE:
BROMOFLUOROBENZENE (%) 129* 122*
SURROGATE LIMITS (80 - 120)

CHEMIST NOTES:

= High surrogate due to matrix interference.



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY RESULTS
REAGENT BLANK

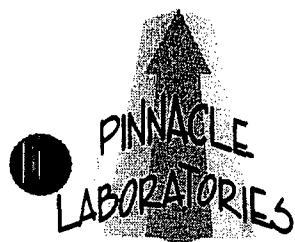
TEST	: EPA 8021 MODIFIED	PINNACLE I.D.	: 011073
BLANK I. D.	: 112100	DATE EXTRACTED	: NA
CLIENT	: PHILIP ENVIRONMENTAL	DATE ANALYZED	: 11/21/00
PROJECT #	: 62800107	SAMPLE MATRIX	: AQUEOUS
PROJECT NAME	: EPFS QUARTERLY SAMPLING		

PARAMETER	UNITS	
BENZENE	UG/L	<0.5
TOLUENE	UG/L	<0.5
ETHYLBENZENE	UG/L	<0.5
TOTAL XYLENES	UG/L	<0.5

SURROGATE:
BROMOFLUOROBENZENE (%) 112

SURROGATE LIMITS: (80 - 120)

CLIENT NOTES:



2709-D Pan American Freeway NE
Albuquerque, New Mexico 87107
Phone (505) 344-3777
Fax (505) 344-4413

GAS CHROMATOGRAPHY QUALITY CONTROL
MSMSD

TEST : EPA 8021 MODIFIED
MSMSD # : 011057-26
CLIENT : PHILIP ENVIRONMENTAL
PROJECT # : 62800107
PROJECT NAME : EPFS QUARTERLY SAMPLING

PINNACLE I.D. : 011073
DATE EXTRACTED : NA
DATE ANALYZED : 11/21/00
SAMPLE MATRIX : AQUEOUS
UNITS : UG/L

PARAMETER	SAMPLE RESULT	CONC SPIKE	SPIKED SAMPLE	% REC	DUP SPIKE	DUP % REC	RPD	REC LIMITS	RPD LIMITS
BENZENE	<0.5	20.0	20.3	102	19.2	96	6	(80 - 120)	20
TOLUENE	<0.5	20.0	21.0	105	19.9	100	5	(80 - 120)	20
ETHYLBENZENE	<0.5	20.0	22.0	110	21.2	106	4	(80 - 120)	20
TOTAL XYLENES	<0.5	60.0	63.9	107	61.6	103	4	(80 - 120)	20

NOTES:
N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

PHILIP

4000 Monroe Road
Farmington, NM 87401
(505) 326-2262 Phone
(505) 326-2388 FAX

COC Serial No. C 2785

Project Name EFS Quarterly Sampling
Project Number 62400107 Phase Task 030

Samplers C-Mc 02

Name DINACLA

Location	ALBQ NM.
----------	----------

Sample Number (and depth)	Date	Time	Matrix
---------------------------	------	------	--------

CAN-0011-MW 02	11-16-00	1450	H ₂ O	2	01	"	CANADIAN MESH #2 (82640)
CAN-0011-MW 03	11-16-00	1500	H ₂ O	2	02	"	"

CAN-0611-MW 03 // -16-00 / 500 H₂O 2

Relinquished by:

Signature

Date _____

Time

Received By:

Signature

Date _____

Time

Samples Iced: ☒ Yes ☐ No

Carrier: Greyhound

Airbill No. GLI/806919996

Preservatives (ONLY for Water Samples)

☐ Cyanide Sodium hydroxide (NaOH)

☐ Volatile Organic Analysis Hydrochloric acid (HCl)

☐ **Metals** Nitric acid (HNO₃)

☐ **monomers** **monomer acid (mva3)**
☐ **TM11 / 440 41**
☐ **TM11 / 440 41** **TM11 / 440 41**

☐ 1PH (418.1) SULFURIC ACID (H₂SO₄)☒ Other (Specify) ASL☐ Other (Specify) _____

Rec'd @ 3.50

ATTACHMENT 2

**2000 MONITOR WELL
INSTALLATION RECORDS**

MONITORING WELL INSTALLATION RECORD

Philip Services Corporation

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole #

Well # MW-2

Page 1 of 1

Project Name EPFS

Project Number 62800219 Cost Code

Project Location Canada Mesa #2

Elevation

Well Location L: S: T: R:

GWL Depth ~ 35.2' BGS

Installed By Danny Padilla

On-Site Geologist Don Fernald

Personnel On-Site Danny Padilla, Allen Warito

Contractors On-Site NONE

Client Personnel On-Site NONE

Date/Time Started 10:15 A.M. 10/27/00

Date/Time Completed 11/1/00

Depths in Reference to Ground Surface			
Item	Material	Depth (feet)	
Top of Protective Casing			Top of Protective Casing
Bottom of Protective Casing			Top of Riser <u>~1'</u>
Top of Permanent Borehole Casing		0'	Ground Surface <u>0.0</u>
Bottom of Permanent Borehole Casing		40'	
Top of Concrete			
Bottom of Concrete			
Top of Grout		0'	
Bottom of Grout		11'	
Top of Well Riser		0	
Bottom of Well Riser		25'	
Top of Well Screen		25'	Top of Seal <u>15'</u>
Bottom of Well Screen		40'	
Top of Peltonite Seal		15'	
Bottom of Peltonite Seal		23'	Top of Gravel Pack <u>23'</u>
Top of Gravel Pack		23'	Top of Screen <u>25'</u>
Bottom of Gravel Pack		40'	
Top of Natural Cave-In			
Bottom of Natural Cave-In			
Top of Groundwater		35.2'	Bottom of Screen <u>40'</u>
Total Depth of Borehole		40'	Bottom of Borehole <u>40'</u>

Comments: Casing, sand & bentonite plug placed on 10/27/00
Grout & surface completed on 11/1/00

Geologist Signature

Don Fernald

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

505-2282 FAX (505) 326-2388

Drill Hole #

Well #

Page

of

MW-2

Project Name

Project Number

Project Location

Phase

Well Logged By

Personnel On-Site

Contractors On-Site

Client Personnel On-Site

Drilling Method

Air Monitoring Method

EPFS

62800219

Canada Mesa #2

Don Fernald

Danny Padilla, Allen Warrick

NONE

NONE

Hollow Stem - Rotary

PID

Elevation

Borehole Location

GWL Depth

Logged By

Drilled By

Date/Time Started

Date/Time Completed

Don Fernald

Danny Padilla

10/27/00 8:50 AM

10/27/00 10:15 AM

Depth (Feet)	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	PID Air Monitoring Units: MBU	Drilling Conditions & Blow Counts
0			Sampling initiated @ 10' bgs				
10	X 16"		Light brown to dark yellow-orange fine silty sand. ~ 40% sand		2.7		
15	X 20"		Light brown silty sand grading to more silt and to a reddish brown (dark) that is slightly coarser ~ w/ ~ 50% sand		2.6		
20	X 10"		Light brown silty sand > 70% w/ intermittent layer of dark reddish-brown sand sand is fine to med, mostly fine		8.8		
25	1.5 X 14"		Light brown silty sand sand ~ 60% fine grained.		2.2		
30	X 20"		Light brown - pinkish orange fine to medium grained silty sand. > 60% sand. Grades to dark grey to black		43.8		HC Odors
35	10"		Medium to light brown silty medium grained sand. Grading to more silt and clay.		18.7		No HC Odors ground water ~ 35.2
40			Boring completed @ 10:15 AM				

Comments:

Ground water @ ~ 35.2 bgs. converted to MW-2 @ 40' bgs.

Geologist Signature

Project Name

EPFS Drilling

Project Number

62800219

Phase

Project Location

Canada Mesa #2

Well Logged By

Don Fernald

Personnel On-Site

Danny Padilla, Jonathan

Contractors On-Site

None

Client Personnel On-Site

None

Drilling Method

Hollow-stem/Rotary

Air Monitoring Method

PID

Depth (Feet)	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	PID Air Monitoring Units: MOU SZ SH S	Drilling Conditions 2-Blow Counts
0			Initiated Sampling at 15' bgs				
5							
10							
15							
18"	V	18"	Light brown silty sand ~50% fine sand. HC Odors present			77.5	
20							
22"	X	12"	Light brown silty sand grading to a dark reddish brown silty sand w/ ~40% sand. HC Odors			27.5	
25							
28"	N	18"	Light reddish-orange silty medium to fine grained sand ~60% Grades to a medium brown silty sand ~20 sand HC Odors			43.3	Anger cuttings dark grey @ ~28-29' bgs
30							
32"	X	7"	Very hard. Black-grey silty sand. ~30% sand HC Odors			13.4	Poor sample recovery
35							
40			Boring terminated - Moved 3' North to Complete MW-3				

Comments:

At 35' a connecting rod was lost downhole. Pulled augers and attempted retrieval unsuccessfully. Backfilled borehole & move 3' North to continue new borehole.

Geologist Signature

Don Fernald

Philip Environmental Services Corp.

1000 Monroe Road

Farmington, New Mexico 87401

(505) 325-2282 FAX (505) 325-2388

Well #

17W-3

Page

2 of 2

Project Name

EPFS Drilling

Project Number

62800219

Phase

Project Location

Canada Mesa #2

Well Logged By

Don Fernald

Personnel On-Site

Danny Padilla, Jonathan

Contractors On-Site

NONE

Client Personnel On-Site

NONE

Drilling Method

Hollow-Stem / Rotary

Air Monitoring Method

PID

Borehole Location
 GWL Depth ~ 35' bgs
 Logged By Don Fernald
 Drilled By Danny Padilla
 Date/Time Started 10/31/00 1:00 P.M.
 Date/Time Completed 11/31/00

Depth (Feet)	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	PID Air Monitoring Value: 10W			Drilling Conditions Slow Steady
						BZ	BH	S	
0			Boring initiated 3'						
5			north of boring due						
10			to loss of connector rod.						
15			At this boring sampling						
20			was initiated @						
25			35' bgs.						
30									
35									
36	X	12"	Water encountered						
37			Black silty sand (~30% sand)						
38			grading to > 60% sand						
39			NO ODORS						
40									

Comments:

BH-2* - Continuation of BH-2 - moved ~ 3' to the north.

Geologist Signature

Don Fernald

Philip Services Corporation
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Well # MW-3
Page 1 of 1

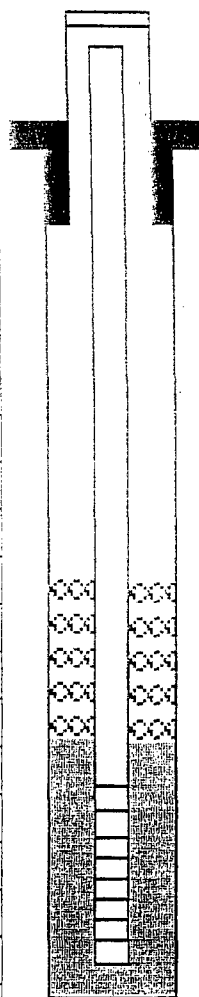
Project Name EPFS
Project Number 62800219 Cost Code
Project Location Canada Mesa #2

Elevation
Well Location L: S: T: R:
GWL Depth -35'
Installed By Danny Padilla

On-Site Geologist Don Fernald
Personnel On-Site Danny Padilla, Jonathan
Contractors On-Site NONE
Client Personnel On-Site NONE

Date/Time Started 10/31/00 3:15 P.M.
Date/Time Completed 11/1/00

Depths in Reference to Ground Surface			
Item	Material	Depth (feet)	
Top of Protective Casing	<u>Steel</u>	<u>~2.5'</u>	Top of Protective Casing <u>~2.5'</u>
Bottom of Protective Casing	<u>"</u>	<u>-6"</u>	Top of Riser <u>~2'</u>
Top of Permanent Borehole Casing			Ground Surface <u>0</u>
Bottom of Permanent Borehole Casing			
Top of Concrete	<u>slurry concrete</u>	<u>~4"</u>	
Bottom of Concrete		<u>0</u>	
Top of Grout	<u>Grout Gel</u>	<u>0</u>	
Bottom of Grout	<u>"</u>	<u>15.9'</u>	
Top of Well Riser	<u>2" sch 40 PVC</u>	<u>0'</u>	
Bottom of Well Riser	<u>"</u>	<u>25'</u>	
Top of Well Screen	<u>10 screen</u>	<u>25'</u>	Top of Seal <u>15.9'</u>
Bottom of Well Screen	<u>"</u>	<u>40'</u>	
Top of Peltonite Seal	<u>3/4" Bentonite</u>	<u>15.9'</u>	
Bottom of Peltonite Seal	<u>"</u>	<u>23'</u>	Top of Gravel Pack <u>23'</u>
Top of Gravel Pack	<u>10-20 screen</u>	<u>23'</u>	Top of Screen <u>25'</u>
Bottom of Gravel Pack	<u>"</u>	<u>32'</u>	
Top of Natural Cave-In	<u>—</u>	<u>—</u>	
Bottom of Natural Cave-In	<u>—</u>	<u>—</u>	
Top of Groundwater	<u>—</u>	<u>~35'</u>	Bottom of Screen <u>40'</u>
Total Depth of Borehole	<u>—</u>	<u>40'</u>	Bottom of Borehole <u>40'</u>



Comments: Sand kept pushing up borehole to approx. 32' bgs.

Geologist Signature Don Fernald