

1RP-1368

# Basin Environmental Service Technologies, LLC

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## PRELIMINARY SITE INVESTIGATION REPORT and REMEDIATION/CLOSURE PLAN

**Forest Oil Corporation  
Downes "D" Lease Well # 4  
Lea County, New Mexico  
UNIT M (SW/SW), Section 32, Township 21S, Range 37E  
Latitude 32°, 25', 48.9" North, Longitude 103°, 11', 28.1" West**

Prepared For:

Forest Oil Corporation  
3504 NW County Road  
Hobbs, New Mexico 88240-8826



Prepared By:

Basin Environmental Service Technologies, LLC

22 May 2007

Ken Dutton

Basin Environmental Service Technologies, LLC

incident - n PAC0714534272  
application - p PAC0714534363

RP# 1368

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## **INTRODUCTION**

Basin Environmental Service Technologies, LLC (Basin), at the request of Forest Oil Corporation (Forest), visually inspected and proposed remedial activities to be conducted at the Downes "D" Lease Well # 4 crude oil release site in May 2007. The Downes "D" Lease Well # 4 is located on land owned by Mr. Patrick Simms.

This site is located in Unit M (SW $\frac{1}{4}$ /SW $\frac{1}{4}$ ) Section 32, Township 21 South, Range 37 East, in Lea County, New Mexico (topographic Site Location Map is attached as Figure 1). The site latitude is 32°, 25', 48.9" North and site longitude is 103°, 11', 28.1" West. The site is characterized by an operational pump jack located in a pasture utilized for cattle grazing and numerous oil and natural gas producing facilities. The visible surface stained area included the release point covering an area approximately 150 feet long by 66 feet wide. Approximately 3 barrels of crude oil and 1 barrel of produced water were released from the Downes "D" Lease Well # 4 flow line and 0 barrels were recovered.

Mr. Gary Wink, New Mexico Oil Conservation Division (NMOCD), Hobbs, New Mexico District 1, was verbally notified of the release on 02 April 2007. A C-141 form, dated 23 April 2007 was completed by Forest and submitted to the NMOCD, Hobbs, New Mexico Office (see Appendix C, NMOCD C-141).

## **SUMMARY OF FIELD ACTIVITIES**

In May 2007, Basin responded to a request from Forest to evaluate and propose remedial activities to be conducted at the Downes "D" Lease Well # 4 crude oil release site. After evaluating the Downes "D" Lease Well # 4 release site, Basin proposed to manually install soil borings to delineate the vertical and horizontal extent of impacted soil, which was subsequently approved by Forest, collecting soil samples at the surface and the subsurface at 1-foot intervals. The release point and visually stained area is approximately 150 feet long by 66 feet wide. Forest personnel replaced the original 2-inch poly flow line which caused the crude oil release with a 3-inch poly flow line.

On 10 May 2007 Basin manually installed eight (8) delineation soil borings collecting soil samples at the surface and the subsurface at 1-foot intervals. Eighteen (18) delineation soil samples were collected from the visually stained area. The eighteen (18) delineation soil samples collected were field screened with a Photoionization Detector (PID), (see Figure 3, Excavation Site Map - Soil Sampling Locations) and were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons – gasoline range organics/diesel range organics (TPH-GRO/DRO) and chlorides. Laboratory results of the eighteen (18) delineation soil samples indicated that constituent concentrations of BTEX were either not detected above laboratory method detection limits or below NMOCD regulatory standards (see Table 1, Soil Chemistry Results). Laboratory results of the eighteen (18) delineation

soil samples indicated that TPH-GRO/DRO concentrations were not detected above laboratory method detection limits for five (5) soil samples; were below NMOCD regulatory standards for twelve (12) soil samples and exceeded NMOCD regulatory standards for the remaining soil sample (flow path surface). Laboratory results of the eighteen (18) delineation soil samples indicated chloride concentrations were not detected above laboratory method detection limits for eight (8) soil samples; were below NMOCD guidelines for seven (7) soil samples and were slightly elevated for the three (3) remaining soil samples.

## **NEW MEXICO OIL CONSERVATION DIVISION (NMOCD) SOIL CLASSIFICATION**

A search of the New Mexico State Engineers database revealed no records available for depth to groundwater for that section, township and range. On 23 April 2007, Forest representative, Mr. Rick Rickman, visited with Mr. Larry Johnson, NMOCD, District 1, and discussed the depth to groundwater issue and Mr. Johnson informed Mr. Rickman, the NMOCD maps indicated groundwater was greater than 200 feet for that section, township and range. There are no surface water bodies or water wells within 1000 feet of the release site. Based on this data, the site has an NMOCD Ranking Score of 0 – 9, which sets the remediation levels at:

Benzene:	10 ppm
BTEX:	50 ppm
TPH:	5000 ppm

## **DISTRIBUTION OF HYDROCARBONS IN THE UNSATURATED ZONE**

On 10 May 2007 Basin manually installed eight (8) delineation soil borings in the visually stained area collecting soil samples at the surface and the subsurface at 1-foot intervals. The eight (8) soil borings were installed at depths ranging from the surface to approximately 2 feet below ground surface (bgs). The selected soil samples collected were field screened with a Photoionization Detector (PID) and were analyzed for BTEX, TPH-GRO/DRO and chlorides. Laboratory data sheets and chain-of-custody forms are attached (Appendix B)

The pump jack (PJ) soil boring, as depicted on the Soil Sampling Locations (Figure 3), was installed at the release point (north of pump jack) position. Soil samples at the surface and 1-foot sample depths were submitted for analysis. Laboratory results indicated that BTEX constituent concentrations were below NMOCD regulatory standards for the surface soil sample and not detected above laboratory method detection limits for the 1-foot soil sample. Laboratory results indicated that TPH-GRO/DRO constituent concentrations for the surface and 1-foot soil samples were below NMOCD regulatory standards at 1928 mg/kg and 442 mg/kg, respectively. Laboratory results indicated chloride concentrations for the surface and 1-foot soil

samples slightly exceeded NMOCD guidelines at 304 mg/kg and 528 mg/kg, respectively.

The flow path (FP) soil boring was installed at the flow path (north and east of pump jack) position. Soil samples at the surface and 1-foot bgs sample depths were submitted for analysis. Laboratory results indicated that BTEX constituent concentrations were below NMOCD regulatory standards for the surface soil sample and not detected above laboratory method detection limits for the 1-foot bgs soil sample. Laboratory results indicated that TPH-GRO/DRO constituent concentrations for the surface soil sample exceeded NMOCD regulatory standards at 5153 mg/kg and was below NMOCD regulatory standards for the 1-foot bgs soil sample at 161 mg/kg. Laboratory results indicated chloride concentrations for the surface soil sample was below NMOCD guidelines at 112 mg/kg and the 1-foot soil bgs soil sample was not detected above laboratory method detection limits.

Soil Boring 1 was installed in the visually stained area (north and east of pump jack) position. Soil samples at the surface and 1-foot bgs sample depths were submitted for analysis. Laboratory results indicated that BTEX constituent concentrations were below NMOCD regulatory standards for the surface soil sample and not detected above laboratory method detection limits for the 1-foot bgs soil sample. Laboratory results indicated that TPH-GRO/DRO constituent concentrations for the surface and 1-foot bgs soil samples were below NMOCD regulatory standards at 1529 mg/kg and 58 mg/kg, respectively. Laboratory results indicated chloride concentrations for the surface soil sample was below NMOCD guidelines at 32 mg/kg and the 1-foot bgs soil sample was not detected above laboratory method detection limits.

Soil Boring 2 was installed in the visually stained area (north and east of pump jack) position. Soil samples at the surface, 1-foot bgs and 2 feet bgs sample depths were submitted for analysis. Laboratory results indicated that BTEX constituent concentrations were below NMOCD regulatory standards for the surface soil sample and not detected above laboratory method detection limits for the 1-foot bgs and 2-foot bgs soil samples. Laboratory results indicated that TPH-GRO/DRO constituent concentrations for the surface, 1-foot bgs and 2 feet bgs soil samples were below NMOCD regulatory standards at 4874 mg/kg, 45 mg/kg and 10 mg/kg, respectively. Laboratory results indicated chloride concentrations for the surface soil sample exceeded NMOCD guidelines at 1250 mg/kg and the 1-foot bgs and 2 feet bgs soil samples were below NMOCD guidelines at 32 mg/kg and 32 mg/kg, respectively.

Soil Boring 3 was installed in the visually stained area (north and east of pump jack) position. Soil samples at the surface and 1-foot bgs sample depths were submitted for analysis. Laboratory results indicated that BTEX constituent concentrations were not detected above laboratory method detection limits for the surface and 1-foot bgs soil samples. Laboratory results indicated that TPH-GRO/DRO constituent concentrations for the surface soil sample was below NMOCD regulatory standards at 23 mg/kg and not detected above laboratory detection limits for the 1-foot bgs soil

sample. Laboratory results indicated chloride concentrations for the surface and 1-foot soil samples were not detected above laboratory method detection limits.

Soil Boring 4 was installed in the visually stained area (north and east of pump jack) position. Soil samples at the surface, 1-foot bgs and 2 feet bgs sample depths were submitted for analysis. Laboratory results indicated that BTEX constituent concentrations were not detected above laboratory method detection limits for the surface, 1-foot bgs and 2 feet soil samples. Laboratory results indicated that TPH-GRO/DRO constituent concentrations for the surface and 1-foot bgs soil samples were below NMOCD regulatory standards at 832 mg/kg and 23 mg/kg, respectively, and not detected above laboratory detection limits for the 2 feet bgs soil sample. Laboratory results indicated chloride concentrations for the surface, 1-foot bgs and 2 feet soil samples were below NMOCD guidelines at 32 mg/kg, 16 mg/kg and 80 mg/kg, respectively.

Soil Boring 5 was installed in the visually stained area (north and east of pump jack) position. Soil samples at the surface and 1-foot bgs sample depths were submitted for analysis. Laboratory results indicated that BTEX, TPH-GRO/DRO and chloride constituent concentrations were not detected above laboratory method detection limits for the two (2) soil samples.

Soil Boring 6 was installed in the visually stained area (north and east of pump jack) position. Soil samples at the surface and 1-foot bgs sample depths were submitted for analysis. Laboratory results indicated that BTEX constituent concentrations were not detected above laboratory method detection limits for the surface and 1-foot bgs soil samples. Laboratory results indicated that TPH-GRO/DRO constituent concentrations for the surface soil sample was below NMOCD regulatory standards at 202 mg/kg and not detected above laboratory detection limits for the 1-foot bgs soil sample. Laboratory results indicated chloride concentrations for the surface and 1-foot bgs soil samples were not detected above laboratory method detection limits.

## **RECOMMENDATIONS FOR REMEDIATION**

Based on the results of the delineation activities conducted and laboratory results, Forest proposes to excavate the pump jack, flow path and Soil Boring 2 areas to approximately 1-foot bgs. The excavated impacted soils and stockpiled soil will be transported to a NMOCD certified land farm. Once the impacted areas are excavated, confirmation soil samples will be collected and analyzed for constituent concentrations of BTEX, TPH-GRO/DRO and chlorides to ensure NMOCD remedial thresholds are met. Backfill material will be obtained from the landowner. Upon receipt of the analytical results for the confirmation soil samples and NMOCD thresholds are met, backfilling activities will be initiated. Concluding the backfilling activities, the complete area (150 feet long by 66 feet wide) will be disked and reseeded with landowner approved grass seed.

## **LIMITATIONS**

Basin Environmental Service Technologies, LLC, has prepared this Preliminary Investigation Report and Remediation/Closure Plan to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Service Technologies, LLC, has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Service Technologies, LLC, has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Service Technologies, LLC, has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Service Technologies, LLC, also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Forest Oil Corporation. The information contained in this report including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Service Technologies, LLC, and Forest Oil Corporation.

## DISTRIBUTION

- Copy 1: Rick Rickman  
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3504 NW County Road  
Hobbs, New Mexico 88240-8826  
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- Copy 2: Mr. Larry Johnson  
New Mexico Oil Conservation Division  
1625 N. French Drive  
Hobbs, New Mexico 88240  
[Larry.Johnson@state.nm.us](mailto:Larry.Johnson@state.nm.us)
- Copy 3: Mr. Patrick Simms
- Copy 4: Basin Environmental Service Technologies LLC  
P. O. Box 301  
Lovington, New Mexico 88260  
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- Copy 2

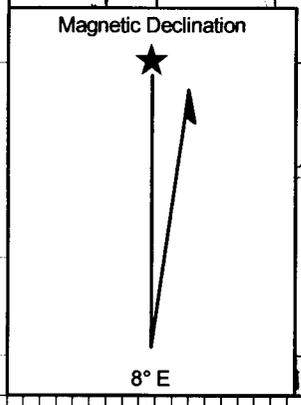
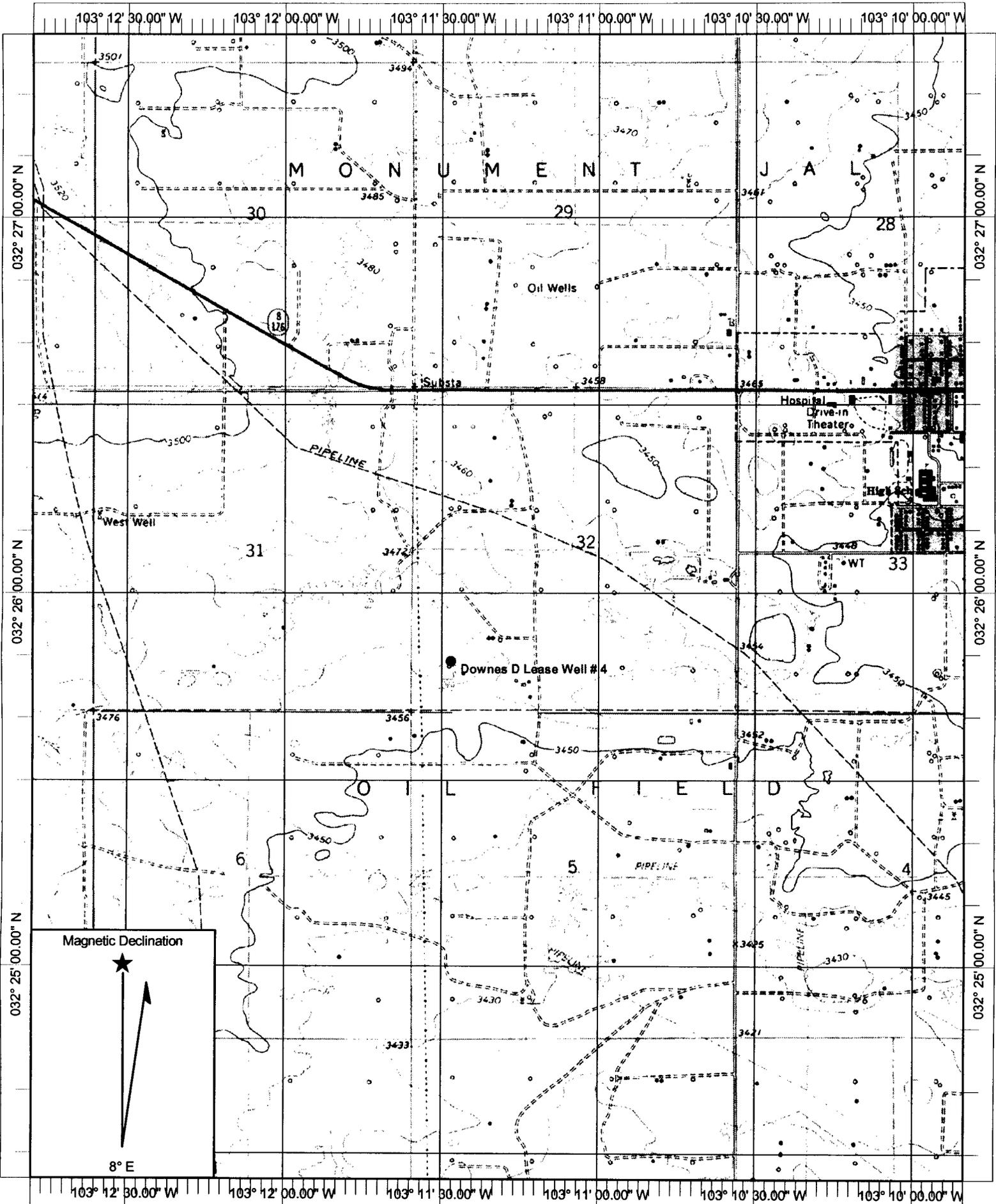
TABLE 1

SOIL CHEMISTRY RESULTS

FOREST OIL CORPORATION  
 DOWNES "D" LEASE WELL # 4  
 LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE		METHOD: EPA SW 846-8021B, 5030				METHOD: 8015M			TOTAL CHLORIDES (mg/kg)
	DEPTH (Below Normal Surface Grade)	DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)	
S/P	N/A	05/10/07	<0.010	0.017	0.188	0.285	22	3460	3482	672
PJ SURFACE	N/A	05/10/07	0.028	0.124	<0.010	1.11	168	1760	1928	304
PJ 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	442	442	528
FP SURFACE	N/A	05/10/07	<0.002	0.029	0.200	0.461	103	5050	5153	112
FP 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	161	161	<16
SB-1 SURFACE	N/A	05/10/07	<0.010	0.018	0.176	0.594	49	1480	1529	32
SB-1 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	58	58	<16
SB-2 SURFACE	N/A	05/10/07	0.012	0.162	0.755	1.06	174	4700	4874	1250
SB-2 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	45	45	32
SB-2 2' BGS	2' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	10	10	32
SB-3 SURFACE	N/A	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	23	23	<16
SB-3 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	<10	<10	<16
SB-4 SURFACE	N/A	05/10/07	<0.010	<0.010	<0.010	<0.030	<10	832	832	32
SB-4 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	23	23	16
SB-4 2' BGS	2' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	<10	<10	80
SB-5 SURFACE	N/A	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	<10	<10	<16
SB-5 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.006	<10	<10	<10	<16
SB-6 SURFACE	N/A	05/10/07	<0.010	<0.010	<0.010	<0.030	<10	202	202	<16
SB-6 1' BGS	1' BGS	05/10/07	<0.002	<0.002	<0.002	<0.002	<10	<10	<10	<16
<b>NMOC D CRITERIA</b>			<b>10</b>	<b>TOTAL BTEX 50</b>					<b>5000</b>	

LEGEND: S/P: Stockpile PJ: Pump Jack (west) FP: Flow Path BGS: Below Ground Surface

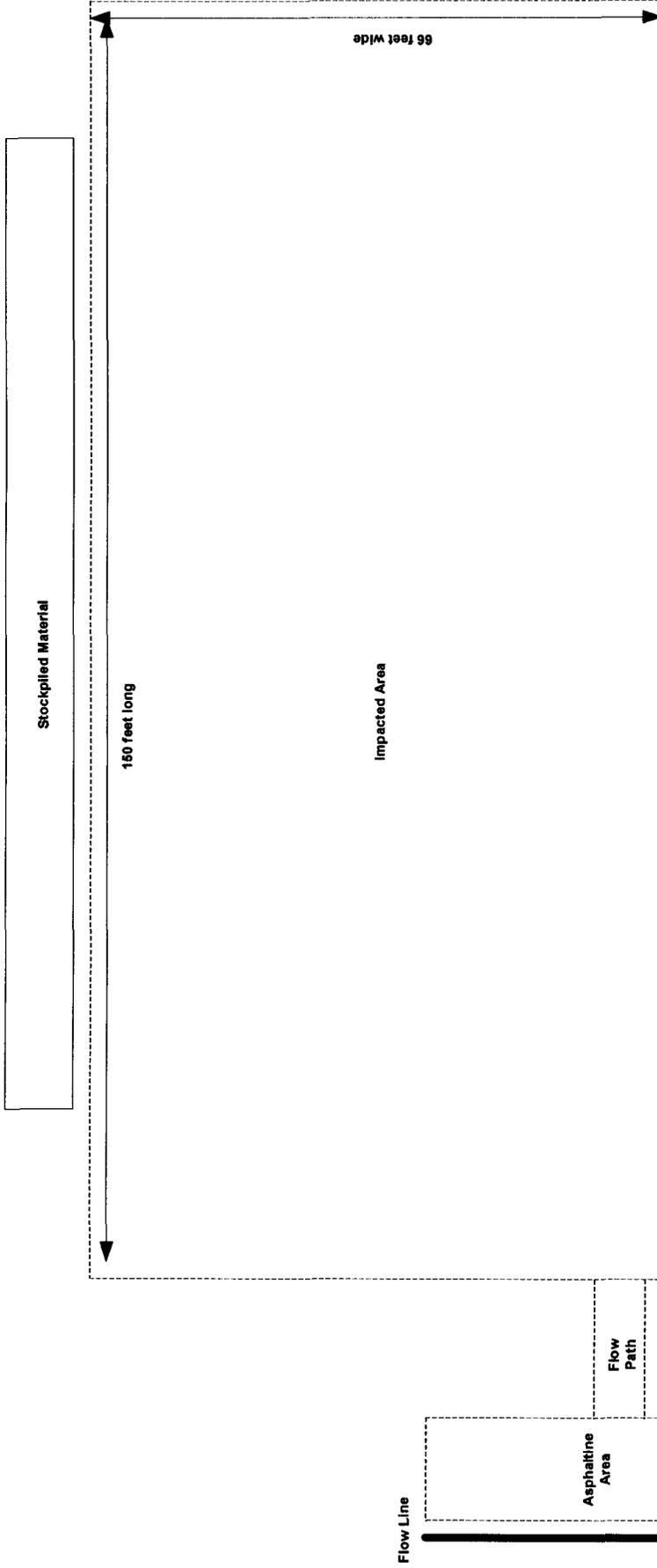


Name: EUNICE  
 Date: 5/24/2007  
 Scale: 1 inch equals 2000 feet

Location: 032° 25' 57.81" N 103° 11' 19.15" W NAD 27  
 Caption: Figure 1, Site Location Map  
 Forest Oil Corporation  
 Downes D Lease Well # 4



Forest Oil Corporation  
 Downes "D" Lease Well # 4  
 SW/4SW S32, T21S, R37E  
 Lea County, NM



TITLE

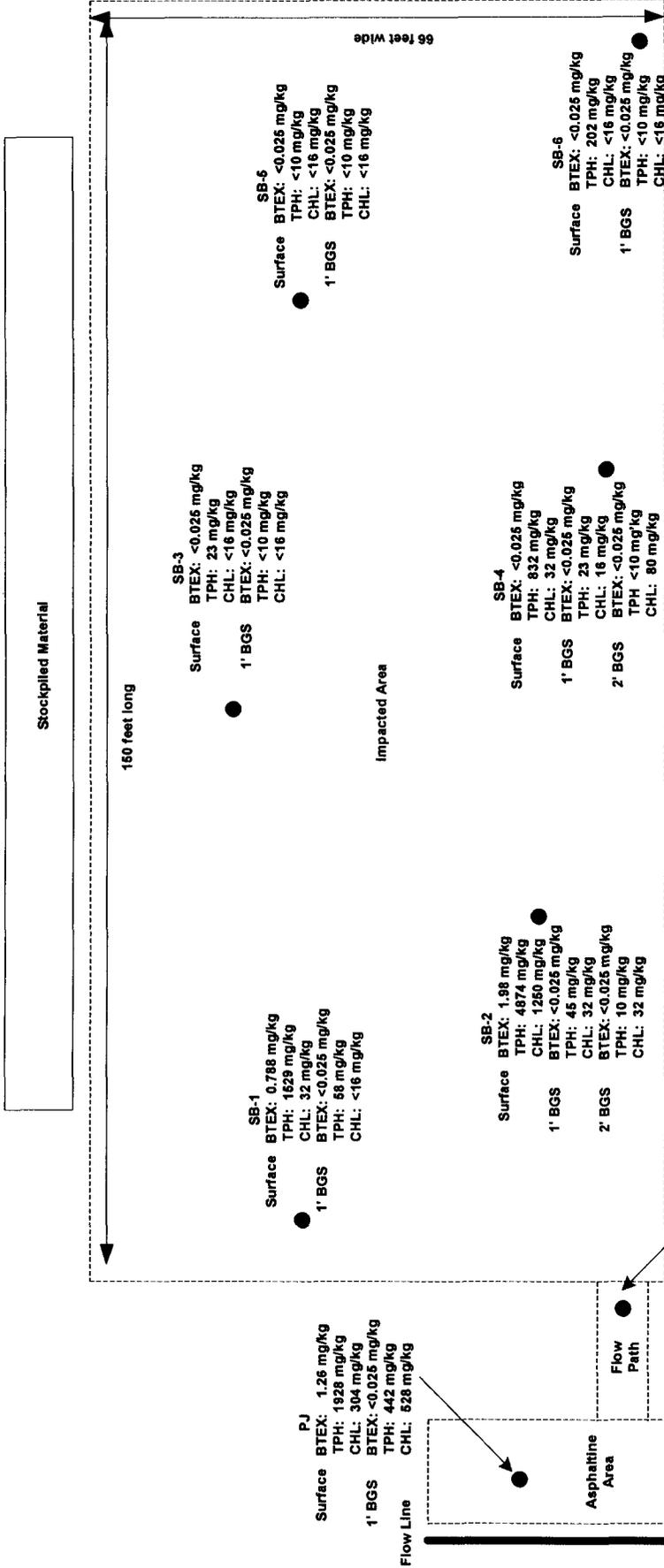
Figure 2  
 Site Map

DRAWN BY

Basin Environmental Svc.  
 kad



Forest Oil Corporation  
Downes "D" Lease Well # 4  
SW/SW S32, T21S, R37E  
Lea County, NM



**LEGEND**

- Soil Sampling Locations
- SB Soil Boring
- PJ Pump Jack
- FP Flow Path

TITLE

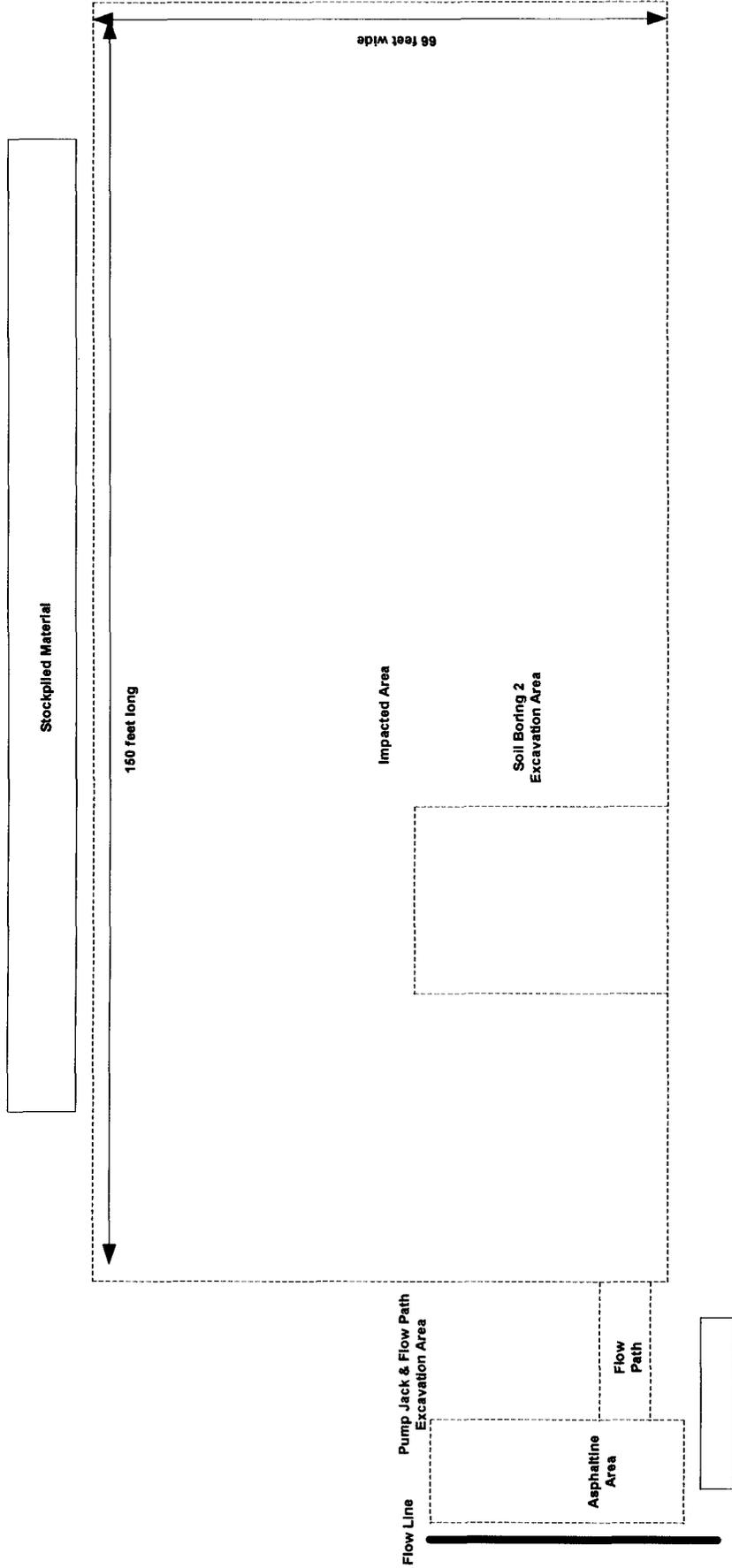
Figure 3  
Soil Sampling Locations

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kad



Forest Oil Corporation  
 Downes "D" Lease Well # 4  
 SW/4SW S32, T21S, R37E  
 Lea County, NM



TITLE

Figure 4  
Excavation Areas

DRAWN BY

Basin Environmental Svc.  
kad

**FOREST OIL CORPORATION**

**Downes "D" Lease Well # 4**

**Unit Letter M Sec. 32-21-37  
Lea Co. New Mexico**

**30/04/2007**

**Forest Oil Corporation  
Downes "D" Lease Well # 4  
SW/SW S32, T21S, R37E  
Lea County, NM**

30/04/2007

Forest Oil Corporation  
Downes "D" Lease Well # 4  
SW/SW S32, T21S, R37E  
Lea County, NM

30/04/2007



**Forest Oil Corporation**

**Downies "D" Lease Well # 4**

**SW/SW S32, T21S, R37E**

**Lea County, NM**

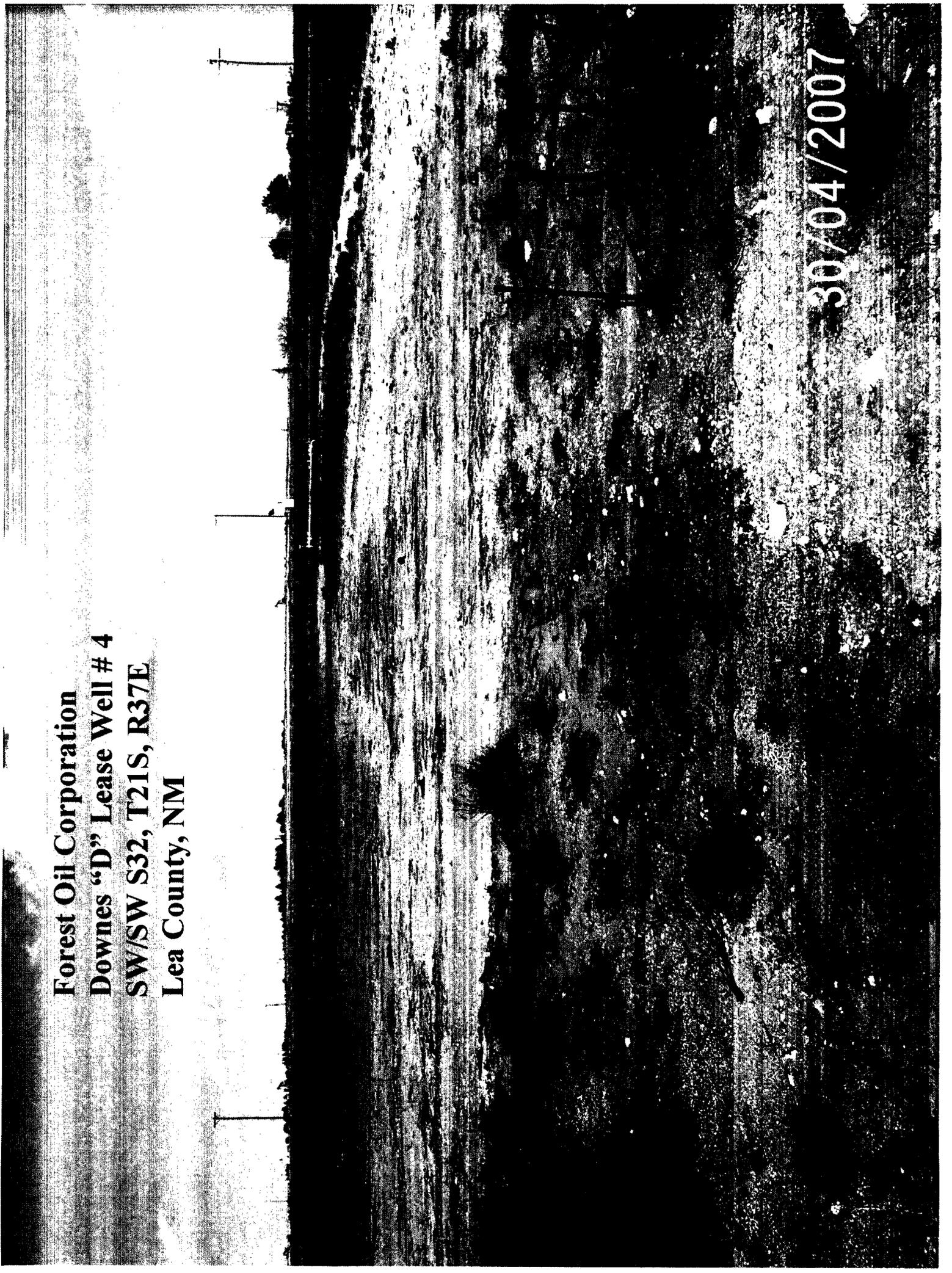
30/04/2007

**Forest Oil Corporation  
Downes "D" Lease Well # 4  
SW/SW S32, T21S, R37E  
Lea County, NM**



**Forest Oil Corporation  
Downes "D" Lease Well # 4  
SW/SW S32, T21S, R37E  
Lea County, NM**

30/04/2007



**Forest Oil Corporation  
Downes "D" Lease Well # 4  
SW/SW S32, T21S, R37E  
Lea County, NM**

**30/04/2007**



**New Mexico Office of the State Engineer  
POD Reports and Downloads**

Township: 21S Range: 37E Sections: 32

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) \_\_\_\_\_ (Last) \_\_\_\_\_  Non-Domestic  Domestic  
 All

POD / SURFACE DATA REPORT 05/17/2007

DB File Nbr	(acre ft per annum) Use	Diversion	Owner	POD Number	(que
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No Records found, try again



# ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
BASIN ENVIRONMENTAL SERVICE TECHNOLOGIES  
ATTN: KEN DUTTON  
P.O. BOX 301  
LOVINGTON, NM 88260

Receiving Date: 05/14/07

Reporting Date: 05/16/07

Project Owner: NOT GIVEN

Project Name: FOREST OIL CORPORATION

Project Location: LEA COUNTY, NM

FAX TO: (505) 396-1429

Sampling Date: 05/10/07

Sample Type: SOIL

Sample Condition: COOL & INTACT

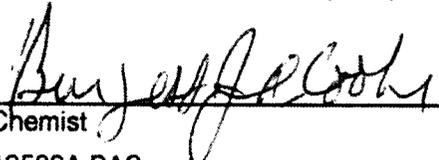
Sample Received By: LB

Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	CI* (mg/Kg)
ANALYSIS DATE		05/15/07	05/15/07	05/15/07
H12588-1	S/P	22.0	3460	672
H12588-2	PJ SURFACE	168	1760	304
H12588-3	PJ 1' BGS	<10.0	442	528
H12588-4	FP SURFACE	103	5050	112
H12588-5	FP 1' BGS	<10.0	161	<16
H12588-6	SB-1 SURFACE	49	1480	32
H12588-7	SB-1 1' BGS	<10.0	58.1	<16
H12588-8	SB-2 SURFACE	174	4700	1250
H12588-9	SB-2 1' BGS	<10.0	44.9	32
H12588-10	SB-2 2' BGS	<10.0	10.3	32
H12588-11	SB-3 SURFACE	<10.0	23.4	<16
H12588-12	SB-3 1' BGS	<10.0	<10.0	<16
H12588-13	SB-4 SURFACE	<10.0	832	32
H12588-14	SB-4 1' BGS	<10.0	23.1	16
H12588-15	SB-4 2' BGS	<10.0	<10.0	80
H12588-16	SB-5 SURFACE	<10.0	<10.0	<16
H12588-17	SB-5 1' BGS	<10.0	<10.0	<16
H12588-18	SB-6 SURFACE	<10.0	202	<16
H12588-19	SB-6 1' BGS	<10.0	<10.0	<16
Quality Control		770	801	490
True Value QC		800	800	500
% Recovery		96.2	100	98.0
Relative Percent Difference		1.1	2.4	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; CI: Std. Methods 4500-CI/B

\*Analyses performed on 1:4 w:v aqueous extracts.

  
Chemist

  
Date

H12588A BAS

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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ANALYTICAL RESULTS FOR  
 BASIN ENVIRONMENTAL SERVICE TECHNOLOGIES  
 ATTN: KEN DUTTON  
 P.O. BOX 301  
 LOVINGTON, NM 88260  
 FAX TO: (505) 396-1429

Receiving Date: 05/14/07  
 Reporting Date: 05/16/07  
 Project Owner: NOT GIVEN  
 Project Name: FOREST OIL CORPORATION  
 Project Location: LEA COUNTY, NM

Sampling Date: 05/10/07  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: LB  
 Analyzed By: LB

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
	ANALYSIS DATE	05/14/07	05/14/07	05/14/07	05/14/07
H12588-1	S/P	<0.010 *	0.017	0.188	0.285
H12588-2	PJ SURFACE	0.028	0.124	<0.010 *	1.11
H12588-3	PJ 1' BGS	<0.002	<0.002	<0.002	<0.006
H12588-4	FP SURFACE	<0.002	0.029	0.200	0.461
H12588-5	FP 1' BGS	<0.002	<0.002	<0.002	<0.006
H12588-6	SB-1 SURFACE	<0.010 *	0.018	0.176	0.594
H12588-7	SB-1 1' BGS	<0.002	<0.002	<0.002	<0.006
H12588-8	SB-2 SURFACE	0.012	0.162	0.755	1.06
H12588-9	SB-2 1' BGS	<0.002	<0.002	<0.002	<0.006
H12588-10	SB-2 2' BGS	<0.002	<0.002	<0.002	<0.006
Quality Control		0.088	0.097	0.099	0.299
True Value QC		0.100	0.100	0.100	0.300
% Recovery		88.3	97.1	99	99.8
Relative Percent Difference		7.2	8.7	7.2	6.8

\*Increased reporting limits due to sample dilution.

METHOD: EPA SW-846 8021B

  
 Chemist

5/16/07  
 Date

PLEASE NOTE: **Liability and Damages** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
 BASIN ENVIRONMENTAL SERVICE TECHNOLOGIES  
 ATTN: KEN DUTTON  
 P.O. BOX 301  
 LOVINGTON, NM 88260  
 FAX TO: (505) 396-1429

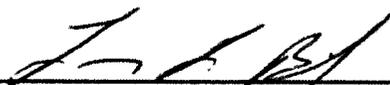
Receiving Date: 05/14/07  
 Reporting Date: 05/16/07  
 Project Owner: NOT GIVEN  
 Project Name: FOREST OIL CORPORATION  
 Project Location: LEA COUNTY, NM

Sampling Date: 05/10/07  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: LB  
 Analyzed By: LB

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		05/14/07	05/14/07	05/14/07	05/14/07
H12588-11	SB-3 SURFACE	<0.002	<0.002	<0.002	<0.006
H12588-12	SB-3 1' BGS	<0.002	<0.002	<0.002	<0.006
H12588-13	SB-4 SURFACE	<0.010 *	<0.010 *	<0.010 *	<0.030 *
H12588-14	SB-4 1' BGS	<0.002	<0.002	<0.002	<0.006
H12588-15	SB-4 2' BGS	<0.002	<0.002	<0.002	<0.006
H12588-16	SB-5 SURFACE	<0.002	<0.002	<0.002	<0.006
H12588-17	SB-5 1' BGS	<0.002	<0.002	<0.002	<0.006
H12588-18	SB-6 SURFACE	<0.010 *	<0.010 *	<0.010 *	<0.030 *
H12588-19	SB-6 1' BGS	<0.002	<0.002	<0.002	<0.006
Quality Control		0.088	0.097	0.099	0.299
True Value QC		0.100	0.100	0.100	0.300
% Recovery		88.3	97.1	99	99.8
Relative Percent Difference		7.2	8.7	7.2	6.8

\*Increased reporting limits due to sample dilution.

METHOD: EPA SW-846 8021B

  
 Chemist

5/16/07  
 Date





District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company <i>Forest Oil Co.</i>	Contact <i>Roy R. Munoz</i>
Address <i>Box 3504 Hobbs, N.M. 88240</i>	Telephone No. <i>505-631-5850</i>
Facility Name <i>Downes "D" Lease # 4</i>	Facility Type <i>oil &amp; NAT. Leaks</i>
Surface Owner <i>PATTICK SIMONS</i>	Mineral Owner _____ Lease No. <i>90-025-24568</i>

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<i>71</i>	<i>32</i>	<i>21</i>	<i>37</i>	<i>660'</i>	<i>South</i>	<i>810</i>	<i>West</i>	<i>Lea</i>

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

**NATURE OF RELEASE**

Type of Release <i>oil &amp; NAT.</i>	Volume of Release <i>3 oil - 1 NAT</i>	Volume Recovered <i>0</i>
Source of Release <i>oil &amp; NAT.</i>	Date and Hour of Occurrence _____	Date and Hour of Discovery _____
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	IF YES, To Whom? <i>Roy R. Munoz / GARY W. WINK</i>	
By Whom? <i>WILE DEAN</i>	Date and Hour <i>4-10-07 - 9:10 A.M.</i>	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* *2" polyec Line Leak - Replace with 3" polyec line back Hoe rake top of soil.*

Describe Area Affected and Cleanup Action Taken.\* *40' X 80' Area - spray-wind blowing 20 MPH. From The West. -*  
*\* SOME PREVIOUS CONTAMINATION WILL BE REMOVED*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

**OIL CONSERVATION DIVISION**

Signature: <i>Roy R. Munoz</i>	Approved by District Supervisor: <i>[Signature]</i>	
Printed Name: <i>Roy R. Munoz</i>	Approval Date: <i>5-25-07</i>	Expiration Date: <i>7-25-07</i>
Title: <i>FATE MAN</i>	Conditions of Approval: <i>SOBANT FINAL C-141</i>	
E-mail Address: <i>RMUNOZ@forestoil.com</i>	Attached <input type="checkbox"/>	
Date: <i>4-23-07</i> Phone: <i>505-631-5850</i>		

\* Attach Additional Sheets If Necessary