District I
P.O. Box 1980, Hobbs, NM 88241

District II
P.O. Drawer DD, Artesia, NM 88211

District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

(Revised 3/9/94)

Approved Johnny G. Foust DEPUTY OIL & GAS INSPECTOR JUN 23 1998

PIT REMEDIATION AND CLOSURE REPORT

Operator: Conoco, Inc Telephone: 915-686-5453

Address: 10 Destra Drive, Suite 100W, Midland, TX 79705-4500

Facility Or: Fogelson 27-1 Pit #1
Well Name

Location: Unit or Qtr/Qtr Unit P Sec 27 T30N R11W County San Juan

Pit Type: Separator ____ Dehydrator X Other ____

Land Type: BLM X, State ____, Fee ____, Other ____

Pit Location: (Attach diagram)
Pit dimensions: length 12', width 12' depth 3'

Reference: wellhead X, other ____

Footage from reference: 50'

Direction from reference: 0 Degrees X East North ____ of West South ____

RECEIVED
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OIL CON. DIV.
DIST. 3

Depth To Ground Water (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet	(20 points)
	50 feet to 99 feet	(10 points)
	Greater than 100 feet	(0 points)
	0 .	
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes	(20 points)
	No	(0 points)
	0 .	
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	(20 points)
	200 feet to 1000 feet	(10 points)
	Greater than 1000 feet	(0 points)
	0 .	

RANKING SCORE (TOTAL POINTS):
0

Date Remediation Started: _____ **Date Completed:** _____

Remediation Method: (Check all appropriate sections) Excavation _____ Approx. cubic yards _____

Landfarmed _____ Insitu Bioremediation _____

Other _____

_____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite _____ Offsite _____

_____

General Description Of Remedial Action: Pit Assessed on 3/14/1997. Samples were taken from north, east and west of center of pit. PID reading was 2295.0ppm. Sample were composited and transported to laboratory
Pit was re-sampled to determine vertical extent of contamination on 6/25/97 bedrock (Shale) was encountered at 8 feet. Samples were taken at 7 feet and 8 feet below bottom of the pit. Bedrock (shale) was encountered at 8 feet
PID reading for both samples were greater then 2500 ppm.
A grab sample was taken at 8' transported to.laboratory for BTEX and TPH.
Laboratory results for TPH were 2896.0 ppm and BTEX 187.1 ppm.
Site re-hab was completed on 9/15/97. Closed per Risk-Based Closure.

Ground Water Encountered: No X Yes ____ Depth _____

Final Pit:
Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location: North, east and west of centerof pit
Re-sample location: Center of Pit

Sample depth: 3' below bottom of pit
Re-Sample depth: 8 feet below bottom of the pit
Sample date: 3/14/97 **Sample time:** 0830
Re-sample date: 6/25/97 **Re-sample time:** 1221
Sample Results

Benzene (ppm)		1.31
Total BTEX (ppm)		187.1
Field headspace (ppm)	2295	>2500
TPH (ppm)	12654	2896

Ground Water Sample: Yes ____ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE
SIGNATURE Shirley L. Ebert

PRINTED NAME AND TITLE Shirley L. EBERT Steam Specialist

Operator: Conoco
Location Name:Fogelson 27-1
Pit: #1
Location: Unit P, Sec. 27, T30N, R11W
Risk Ranking: 0

RATIONAL FOR RISK-BASED CLOSURE OF PRODUCTION PITS LOCATED OUTSIDE OF THE VULNERABLE ZONE IN SAN JUAN BASIN

This production pit location was ranked according to the criteria in the New Mexico Oil Conservation Division's Unlined Surface Impoundment Closure Guidelines and received a ranking score of zero. The estimated depth to groundwater is greater than 100-feet beneath ground surface (bgs), the pit is not in a well head protection area, and there is no surface water bodies within 1,000 horizontal feet of the pit location.

The primary source, discharge to pit has been removed. There has been no discharge to the pit for at least four (4) years and the pit has been closed for at least one year.

Each pit was back filled with clean soil and graded in a manner to divert precipitation away from excavated area. Minimal infiltration of rainfall is expected. Any rainfall that does infiltrate the ground surface must migrate through clean backfill before reaching the residual hydrocarbons.

There is no source material at the ground surface, so direct contact with livestock and populous is not likely.

In general, outside of the vulnerable area and alluvial valleys, bedrock material is generally encountered within twenty (20) feet of the ground surface. Bedrock material in the San Juan Basin consists of interbedded sandstones, shales and clays. According to Freeze and Cherry, 1979, the hydraulic conductivity of the bedrock material are as follows:

Sandstone	10^{-9} to 10^{-13} cm/sec
Shale	10^{-12} to 10^{-16} cm/sec
Clay	10^{-12} to 10^{-15} cm/sec

Based on this information, the residual hydrocarbons should not migrate to groundwater.

Natural process (bioremediation) are degrading the residual hydrocarbon to carbon dioxide and water and will continue until source is gone, therefore minimizing any impact to the environment.

Based on the above information, it is highly unlikely that any source material will impact groundwater or ever find an exposure pathway to effect human health,therefore

Conoco Inc. requests approval for closure of this pit location.

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Michael Lane*	Date:	25-Mar-97
Company:	*On Site Technologies, Ltd. c/o Conoco*	COC No.:	*5050*
Address:	*612 E. Murray Drive*	Sample No.:	*13898*
City, State:	*Farmington, NM 87401*	Job No.:	*4-1369*

Project Name:	***Conoco - Fogelson 27 #1***				
Project Location:	***Pit #1 Composite***				
Sampled by:	MKL	Date:	14-Mar-97	Time:	8:30
Analyzed by:	DC/HR	Date:	24-Mar-97		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	Result	Unit of Measure	Method Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	6554	mg/kg	1.0	mg/kg
Diesel Range Organics (C10 - C28)	6100	mg/kg	5.0	mg/kg

Quality Assurance Report

GRO QC No.: *0535-STD*

DRO QC No.: *0512-STD*

Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
Gasoline Range (C5 - C9)	<50	ppb	1,351	1,361	0.7	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	112	11.4	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
Gasoline Range (C5-C9)	81	83	(70-130)	2	20%
Diesel Range (C10-C28)	101	101	(70-130)	0	20%

Method *- SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by:

Date: 3/25/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Larry Trujillo*	Date:	1-Jul-97
Company:	*On Site Technologies, Ltd. c/o Conoco*	COC No.:	*6444*
Address:	*612 E. Murray Drive*	Sample No.:	*15074*
City, State	*Farmington, NM 87401*	Job No.:	*4-1369*

Project Name:	***Conoco, Inc. - Fogelson 27-1***				
Project Location:	***Pit #1 @ 8'***				
Sampled by:	LT	Date:	25-Jun-97	Time:	12:21
Analyzed by:	DC/HR	GRO Date:	27-Jun-97		
Sample Matrix:	*Soil*	DRO Date:	27-Jun-97		

Laboratory Analysis

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Gasoline Range Organics (C5 - C9)	2079	mg/kg	250	mg/kg
Diesel Range Organics (C10 - C28)	817	mg/kg	5	mg/kg

ND - Not Detected at Limit of Quantitation

Quality Assurance Report

GRO QC No.: 0537-STD

DRO QC No.: 0548-STD

Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
Gasoline Range (C5 - C9)	ND	ppb	1,351	1,241	8.5	15%
Diesel Range (C10 - C28)	ND	ppm	200	204	1.8	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
Gasoline Range (C5-C9)	98	97	(80-120)	2	20%
Diesel Range (C10-C28)	93	89	(84-118)	5	20%

Method: *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by:

Date: 7/1/97

CHAIN OF CUSTODY RECORD

6444

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 6/25/97

Page 1 of 1

Purchase Order No.:		Job No. 7-1167	
SEND INVOICE TO	Name Larry Trujillo		
	Company Conoco	Dept.	
	Address		
	City, State, Zip		
REPORT RESULTS TO	Name Larry Trujillo	Title	
	Company Conoco		
	Mailing Address		
	City, State, Zip		
	Telephone No.	Telefax No.	

Sampling Location: Fogelson 27-1 Pit #1

Sampler: Larry Trujillo

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers: TPH	BTEX	LAB ID
Pit #1 @ 8'	6/25/97	1221	Soil		✓	✓	

ANALYSIS REQUESTED

Relinquished by: Larry Trujillo	Date/Time 6/25/97 1335	Received by:	Date/Time 6/25/97 1333
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

Denny E. Foust
DEPUTY OIL & GAS INSPECTOR
JUN 23 1998

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

(Revised 3/9/94)

Approved

PIT REMEDIATION AND CLOSURE REPORT

Operator Conoco, Inc **Telephone:** 915-686-5453

Address: 10 Destra Drive, Suite 100W, Midland, TX 79705-4500

Facility Or: Fogelson 27-1 Pit #2
Well Name

Location: Unit or Qtr/Qtr Unit P Sec 27 T30N R11W County San Juan

Pit Type: Separator____ Dehydrator X Other_____

Land Type: BLM X, State____, Fee____, Other_____

Pit Location: (Attach diagram)
Pit dimensions: length 8', width 8' depth 3'
Reference: wellhead X, other_____
Footage from reference: 110'
Direction from reference: 35 Degrees X North ____ West East X of South ____

Depth To Ground Water: (Vertical distance from contaminants to seasonal high water elevation of ground water)	Less than 50 feet 50 feet to 99 feet Greater than 100 feet 0	(20 points) (10 points) (0 points)
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources)	Yes No 0	(20 points) (0 points)
Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet 200 feet to 1000 feet Greater than 1000 feet 0	(20 points) (10 points) (0 points)

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: _____ **Date Completed:** _____

Remediation Method: (Check all appropriate sections) Excavation _____ Approx. cubic yards _____

Landfarmed _____ Insitu Bioremediation ___X___

Other _____

_____

Remediation Location: (ie. landfarmed onsite, name and location of offsite facility) Onsite _____ Offsite _____

_____

General Description Of Remedial Action: Former pit assessed on 3/14/97 Three samples were taken from bottom of pit north, east and west of. center. Samples were composited. PID reading on composite was 110.0 ppm. Composite sample was split and placed in clean jar with Teflon® closure and transported to laboratory for TPH analysis. Lab results for TPH. 2066.8 ppm. Pit covered during pit rehab on 9/15/97.

Ground Water Encountered: No __X__ Yes ____ Depth _____

Final Pit:
Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location: North east and west of center of pit.

Sample depth: 3 feet below bottom of pit

Sample date: 3/14/97 Sample time: 0830

Sample Results

Benzene (ppm)

Total BTEX (ppm)

Field headspace (ppm) 110.0

TPH (ppm) 2066.80

Ground Water Sample: Yes ____ No__X__ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE

SIGNATURE Shirley L. Ebert PRINTED NAME AND TITLE Shirley L. EBERT Sitemm Specialist

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Michael Lane*	Date:	25-Mar-97
Company:	*On Site Technologies, Ltd. c/o Conoco*	COC No.:	*5050*
Address:	*612 E. Murray Drive*	Sample No.:	*13899*
City, State:	*Farmington, NM 87401*	Job No.:	*4-1369*

Project Name:	***Conoco - Fogelson 27 #1***				
Project Location:	***Pit #2 Composite***				
Sampled by:	MKL	Date:	14-Mar-97	Time:	8:40
Analyzed by:	DC/HR	Date:	21-Mar-97		
Sample Matrix:	*Soil*				

Laboratory Analysis

Parameter	Result	Unit of Measure	Method Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	12.8	mg/kg	1.0	mg/kg
Diesel Range Organics (C10 - C28)	2054	mg/kg	5.0	mg/kg

Quality Assurance Report

GRO QC No.: *0535-STD*

DRO QC No.: *0512-STD*

Continuing Calibration Verification

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
Gasoline Range (C5 - C9)	<50	ppb	1,351	1,361	0.7	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	112	11.1	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
Gasoline Range (C5-C9)	81	83	(70-130)	2	20%
Diesel Range (C10-C28)	101	101	(70-130)	0	20%

Method - *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

Approved by:

Date: 3/25/97

CHAIN OF CUSTODY RECORD

5050

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 7-11-17

Page 1 of

Purchase Order No.:	Job No. 7-1		
SEND INVOICE TO: Name		REPORT RESULTS TO: Name	Title
Company	Dept.	Company	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	Telefax No.
Sampling Location:			
Sampler:			

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	ANALYSIS REQUESTED	LAB ID
	7-1			N	1	✓	
	7-1			N	1	✓	

Relinquished by:	Date/Time 7-11	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: Date 7-11-17

(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client