

**Fasken Oil and Ranch, LTD.  
Denton SWD Emergency Pit Overflow  
Delineation Report/Work Plan  
Lea County, New Mexico**

**March 1, 2010**

**RECEIVED**

MAR 24 2010

HOBBSOCD



IRP# 2388

**Prepared for:**

**Fasken Oil and Ranch, LTD.  
303 West Wall Suite 1800  
Midland, Texas 79701-5116**

*Johnson*  
ENVIRONMENTAL ENGINEER  
PLAN APPROVED  
4.28.10

**By:**

**Safety & Environmental Solutions, Inc.  
703 East Clinton  
Hobbs, New Mexico 88240  
(575) 397-0510**

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<b>Date</b>	<b>Sample ID</b>	<b>Cl<sup>-</sup> (mg/kg)</b>
2/22/10	BH #4-10'	1140
2/22/10	BH #4-15'	176
2/22/10	BH #4-20'	368
2/22/10	BH #4-25'	608
2/22/10	BH #4-30'	1040
2/22/10	BH #4-35'	768

All borings were backfilled from total depth to surface with bentonite and hydrated.

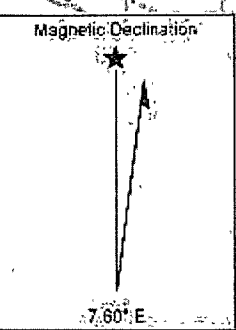
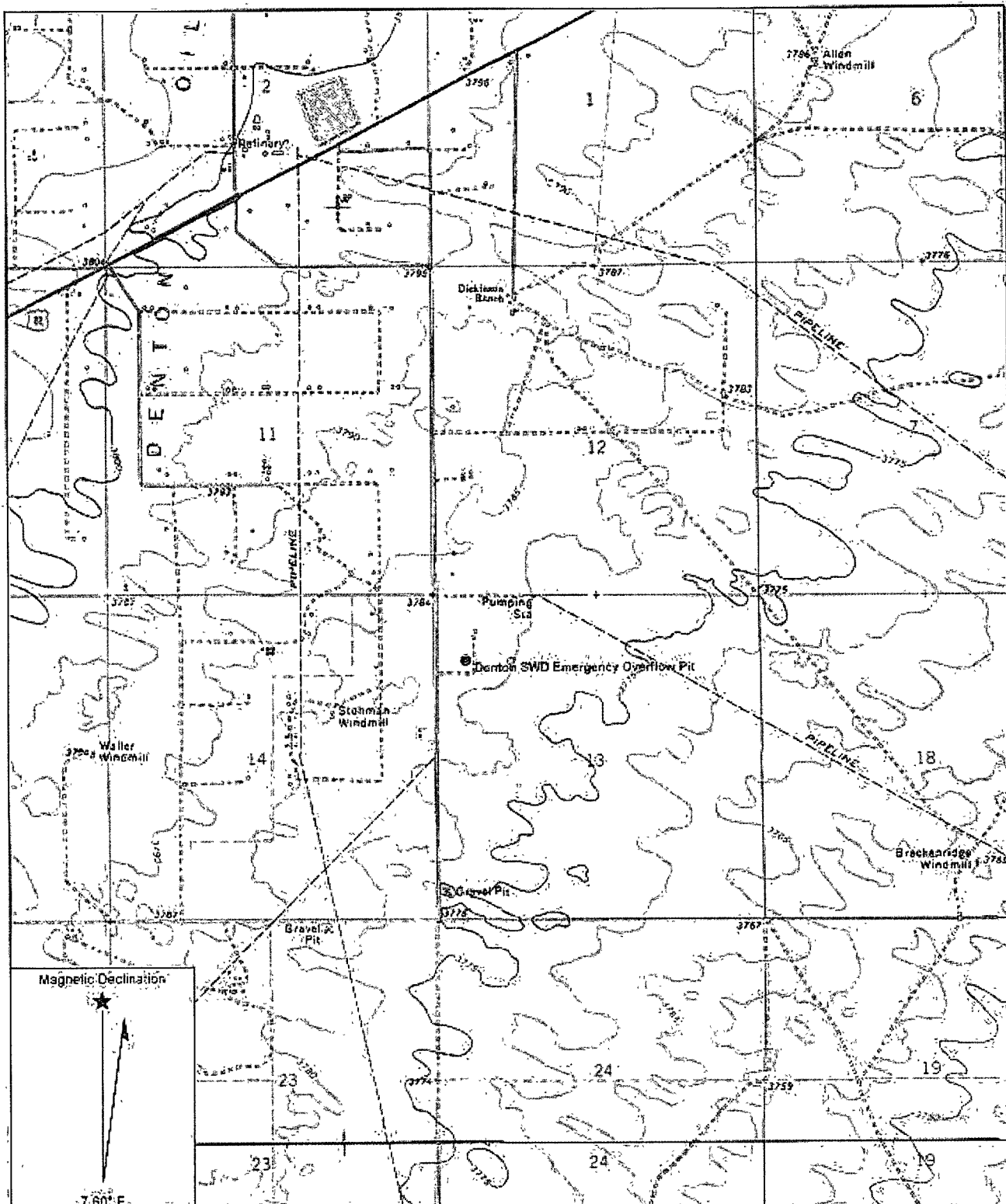
#### **VI. Action Plan**

It is proposed that the affected area is excavated to a depth of four (4) feet bgs removing the most highly contaminated soils. The excavated area will be slightly dome and a 20 mil geo-membrane liner will be installed to prevent migration of the contamination. The area will then be backfilled to grade with like soils and contoured to match the surrounding area. The excavated soils will be transported to Sundance Services, a New Mexico Oil Conservation Division (NMOCD) approved facility for disposal.

#### **VII. Figures & Appendices**

Figure 1 – Vicinity Map  
Figure 2 – Site Plan  
Appendix A – Analytical Results  
Appendix B – C-141

**Figure 1**  
**Vicinity Map**



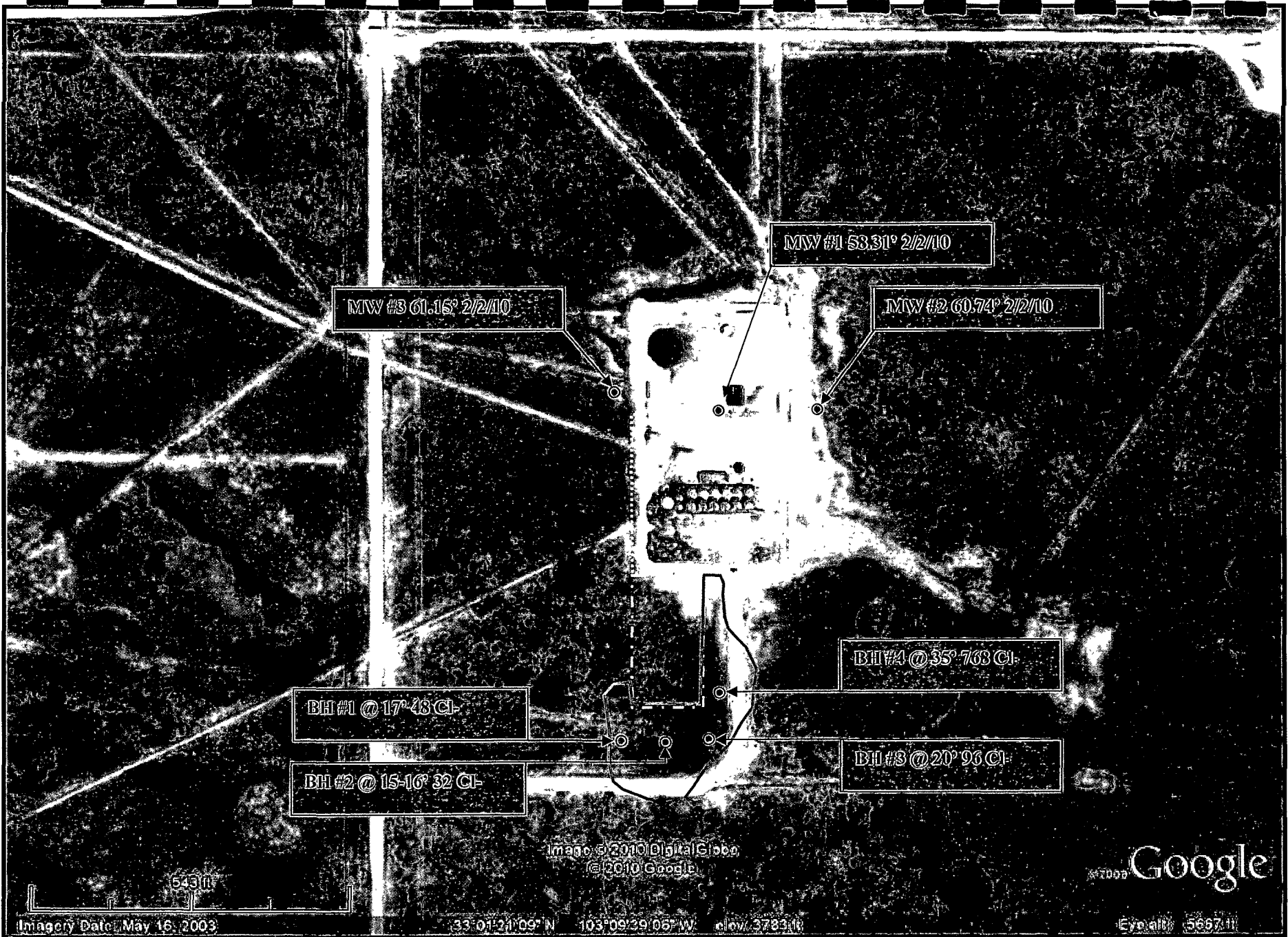
Name: PRAIRIEVIEW

Date: 3/1/2010

Scale: 1 inch equals 2000 feet

Location: 033° 01' 25.47" N 103° 09' 28.34" W NAD27

**Figure 2**  
**Site Plan**



## **Appendix A**

### **Analytical Results**





# ARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

February 25, 2010

Bob Allen  
Safety & Environmental Solutions, Inc.  
703 East Clinton, #102  
Hobbs, NM 88240

Re: SWD Pit (FAS-10-001)

Enclosed are the results of analyses for sample number H19324, received by the laboratory on 02/23/10 at 8:47 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 4 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director

---

This report conforms with NELAP requirements.



# CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
SAFETY & ENVIRONMENTAL SOLUTIONS  
ATTN: SERGIO CONTRERAS  
703 E. CLINTON, STE. 101  
HOBBS, NM 88240  
FAX TO: (575) 393-4388

Receiving Date: 02/23/10  
Reporting Date: 02/25/10  
Project Number: FAS-10-001 (FASKEN)  
Project Name: SWD PIT  
Project Location: LOVINGTON, NM

Analysis Date: 02/24/10  
Sampling Date: 02/23/10  
Sample Type: SOIL  
Sample Condition: INTACT @ 14°C  
Sample Received By: JH  
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H19324-1	BH #1 5'	2,640
H19324-2	BH #1 10'	624
H19324-3	BH #1 15'	16
H19324-4	BH #1 17'	48
H19324-5	BH #2 5'	624
H19324-6	BH #2 10'	32
H19324-7	BH #2 15'-16'	32
H19324-8	BH #3 5'	1,360
H19324-9	BH #3 10'	832
H19324-10	BH #3 15'	304
H19324-11	BH #3 20'	96
H19324-12	BH #4 5'	2,760
H19324-13	BH #4 10'	1,140
H19324-14	BH #4 15'	176
H19324-15	BH #4 20'	368
H19324-16	BH #4 25'	608
H19324-17	BH #4 30'	1,040
H19324-18	BH #4 35'	768
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods 4500-Cl<sup>-</sup>B

Note: Analyses performed on 1:4 w:v aqueous extracts.

  
Chemist

  
Date

H19324 SESI

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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



# CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(575) 393-2326 Fax (575) 393-2476

Page 1 of 2

Company Name: <u>SEST</u>			<b>BILL TO</b>			<b>ANALYSIS REQUEST</b>											
Project Manager: <u>Sergio Contreras</u>			P.O. #: <u>SAME</u>			<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: 2em; font-weight: bold;">CHLORIDES</div>											
Address: <u>703 East Clinton Ste 101</u>			Company:														
City: <u>HOBBS</u> State: <u>NM</u> Zip: <u>88240</u>			Attn:														
Phone #: <u>575-3920510</u> Fax #: <u>575-3934388</u>			Address:														
Project #: <u>FAS 10.001</u> Project Owner: <u>Fasken</u>			City:														
Project Name: <u>SWD PIT</u>			State: Zip:														
Project Location: <u>Louington, NM</u>			Phone #:														
Salesperson Name: <u>Sergio Contreras</u>			Fax #:														

FOR LAB USE ONLY		MATRIX	PRESERV	SAMPLING			
Lab I.D.	Sample I.D.			DATE	TIME		
		GROUNDWATER					
		WASTEWATER					
		SOIL					
		OIL					
		SLUDGE					
		OTHER					
		ACID/BASE					
		ICE / COOL					
		OTHER					

# CONTAINERS	DATE	TIME
1	23 FEB 10	0905
1		0920
1		0935
1		1005
1		1045
1		1105
1		1200
1		1235
1		1245
1		1310

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 the client for the 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 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.

Sampler Relinquished: <u>[Signature]</u> Date: <u>0820</u> Time: <u>24 FEB 10</u>		Received By: <u>[Signature]</u> Date: <u>0847</u> Time: <u>2/23/10</u>		Phone Result: <input type="checkbox"/> No Add'l Phone #: Fax Result: <input type="checkbox"/> No Add'l Fax #: REMARKS:	
Relinquished By: <u>[Signature]</u> Delivered By: (Circle One) Sampler - UPS - Bus - Other: <u>Other</u>		Temp. <u>14°C</u> Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		CHECKED BY: <u>[Signature]</u> (initials)	

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#26



# ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240  
(915) 873-7001 Fax (915) 873-7020 (505) 393-2326 Fax (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 2 of 2

Company Name: <u>SEST</u>										Project Manager: <u>Sergio Contreras</u>										BILL TO PO #:									
Address: 703 E. CLINTON, #103										City: HOBBS State: NM Zip: 88240										Phone #: (505) 397-0510									
Fax #: (505) 393-4388										Project #: <u>Fas 10001</u> Project Owner: <u>Fasken</u>										Project Name: <u>SWD PIT</u>									
Project Location: <u>Logan NM</u>										Company: <u>SAME</u>										Attn:									
										Address:										City:									
										State: Zip:										Phone #:									
										Fax #:										ANALYSIS REQUEST									

FOR LAB USE ONLY		MATRIX										PRES.		SAMPLING		Chlorides
LAB I.D.	Sample I.D.	(G)PAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID:	ICE / COOL	OTHER:	DATE	TIME		
HR324-11	BH #3 20'	G	1			✓					✓		23 FEB 10	1325	✓	
-12	BH #4 5'	G	1			✓					✓			1415	✓	
-13	BH #4 10'	G	1			✓					✓			1435	✓	
-14	BH #4 15'	G	1			✓					✓			1500	✓	
-15	BH #4 20'	G	1			✓					✓			1520	✓	
-16	BH #4 25'	G	1			✓					✓			1545	✓	
-17	BH #4 30'	G	1			✓					✓			1615	✓	
-18	BH #4 35'	G	1			✓					✓			1720	✓	

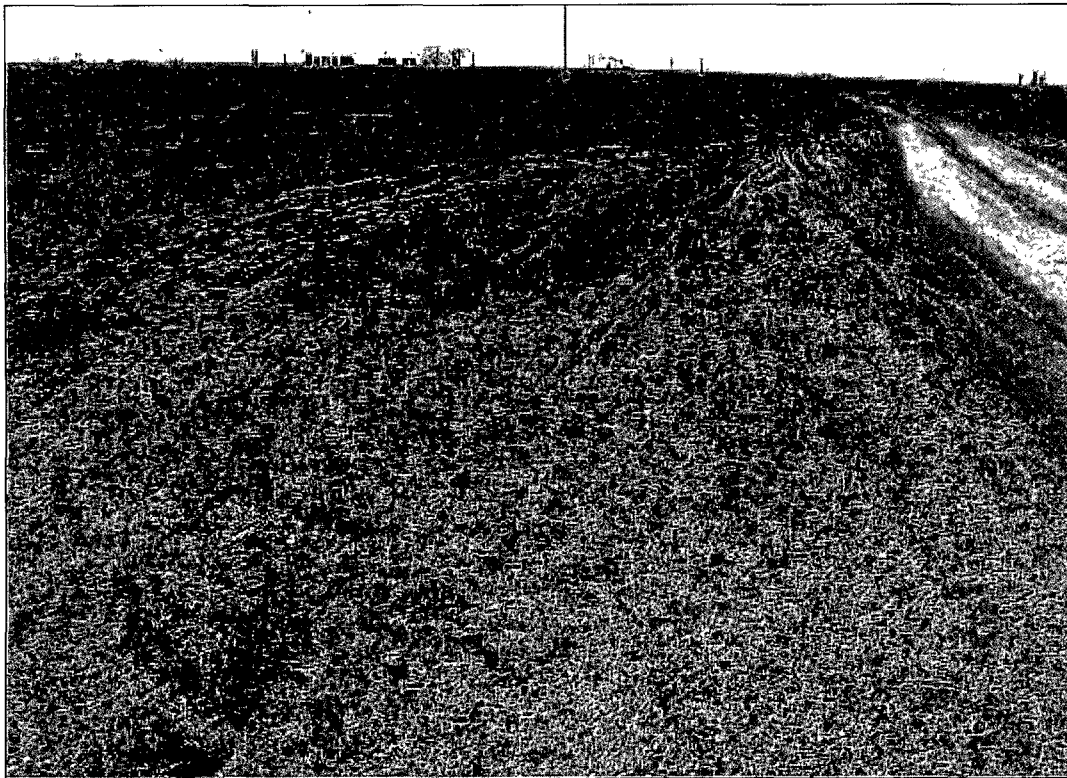
PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and at costs of collections, including attorney's fees.

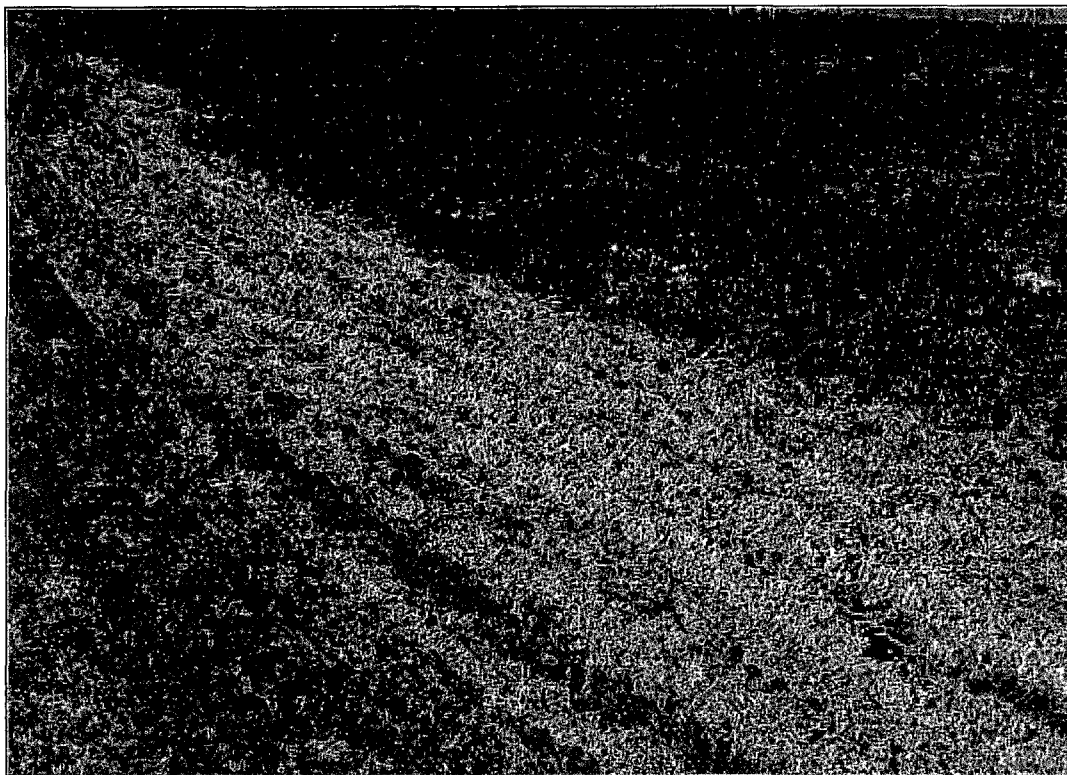
Sampler Relinquished: <u>[Signature]</u>		Date: <u>0820</u>		Received By:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Additional Fax #: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished By:		Time: <u>24 FEB 10</u>		Received By: (Lab Staff)		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		REMARKS:	
Date: <u>2/23/10</u>		Time: <u>0847</u>		<u>[Signature]</u>					
Delivered By: (Circle One)		Sample Condition		CHECKED BY:					
Sampler - UPS - Bus <u>(Other)</u>		Cool Intact		[Signature]					
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							

## **Appendix B**

### **Site Photographs**



South of lease road facing west



North of lease road facing west

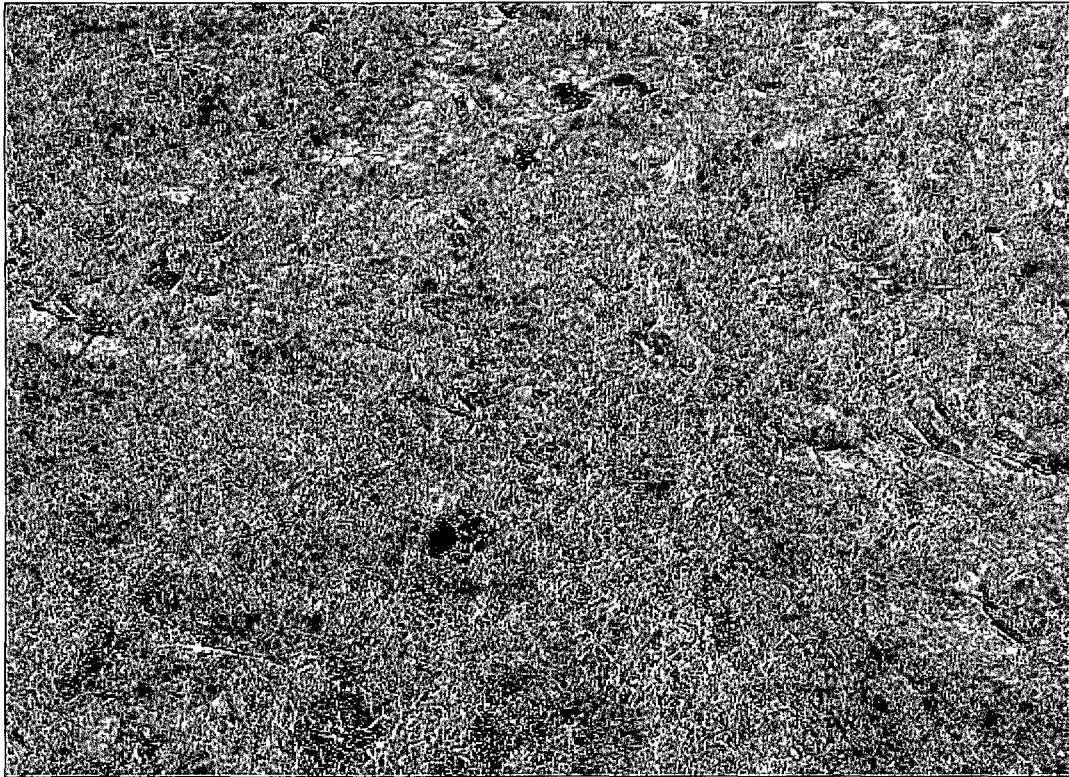


East of overflow pit facing south



East of lease road facing south





Surface of spill area, southwest of overflow pit



Southeast of overflow pit facing southwest





South of overflow pit facing west



Southeast of overflow pit facing northeast



Southwest of overflow pit facing northeast



Southwest of overflow pit

**Appendix C**  
**C-141**

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

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MAR 24 2010

HOBBSD

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	Fasken Oil and Ranch, Ltd.	Contact	Jimmy Carlile
Address	303 W. Wall, Ste. 1800, Midland, TX	Telephone No.	432-687-1777
Facility Name	Denton SWD Main Battery	Facility Type	SWD Emergency Pit
Surface Owner	Darr Angell	Mineral Owner	Fee
		Lease No.	

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	13	15S	37E					Lea

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

#### NATURE OF RELEASE

Type of Release	Salt Water	Volume of Release	680	Volume Recovered	640
Source of Release	Emergency Pit Overflow	Date and Hour of Occurrence		Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	1-2-10 5:30 pm		1-3-10 10:00 am
By Whom?	Jimmy Carlile	Date and Hour	1-4-10 8:47 am	Geoff Leking, voicemail	
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A			

If a Watercourse was Impacted, Describe Fully.\*

N/A

Describe Cause of Problem and Remedial Action Taken.\*

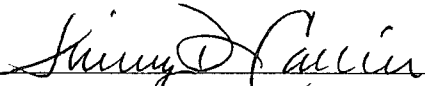
Injection pump went down on low suction pressure. Alarms failed due to blown fuse in Alltel callout board and Leaco cellular phone weak signal. Re-set pump. Replaced phone board and cellular phone.

Describe Area Affected and Cleanup Action Taken.\*

115' X 200' south of pit and 70' X 100' east of pit.

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: 	Approved by District Supervisor:		
Printed Name: Jimmy Carlile			
Title: Regulatory Affairs Coordinator	Approval Date:	Expiration Date:	
E-mail Address: jimmyc@for1.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 1-4-10	Phone: 432-687-1777		

\* Attach Additional Sheets If Necessary

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

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

Form C-141  
Revised October 10, 2003

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with Rule 116 on back  
side of form

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Facility Name	Denton SWD Main Battery	Facility Type	SWD Emergency Pit

Surface Owner	Darr Angell	Mineral Owner	Fee	Lease No.
---------------	-------------	---------------	-----	-----------

LOCATION OF RELEASE AP# 30.025.05309.00.00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	13	15S	37E					Lea

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

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By Whom?	Jimmy Carlile	Date and Hour	1-4-10 8:47 am	Geoff Leking, voicemail	
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.\*

N/A

WATER@ 52'

Describe Cause of Problem and Remedial Action Taken.\*

Injection pump went down on low suction pressure. Alarms failed due to blown fuse in Alltel callout board and Leaco cellular phone weak signal. Re-set pump. Replaced phone board and cellular phone.

Describe Area Affected and Cleanup Action Taken.\*

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Signature: <i>Jimmy Carlile</i>	OIL CONSERVATION DIVISION	
Printed Name: Jimmy Carlile	Approved by ENV. ENGINEER: <i>Geoffrey Leking</i>	District Supervisor:
Title: Regulatory Affairs Coordinator	Approval Date: 01/08/10	Expiration Date: 03/08/10
E-mail Address: jimmyc@for1.com	Conditions of Approval: DEMONSTRATE TO CLEAN + 1. SUBMIT FINAL C-141 BY	Attached <input type="checkbox"/>
Date: 1-4-10 Phone: 432-687-1777		IRP-10.1.2388

\* Attach Additional Sheets If Necessary

F GRL 1000851349