

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

Form C-141  
Revised October 10, 2003

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

X Final Report

Name of Company	Fasken Oil & Ranch, Ltd.	Contact	Jimmy Carlile
Address	303 W. Wall Ave., Ste. 1800 Midland, TX 79701-5116	Telephone No.	(432)687-1777
Facility Name	Denton SWD Historical Site #6	Facility Type	Salt Water Disposal

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

**LOCATION OF RELEASE**

API # ~~30-025-23621-00-00~~ 30-025-05283

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	11	15S	37E					Eddy

Latitude 33.0361° North

Longitude 103.1712° West

**NATURE OF RELEASE**

Type of Release	Produced water	Volume of Release	Unknown	Volume Recovered	Unknown
Source of Release	SWD Trunk Line	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	Unknown
Was Immediate Notice Given?	Yes No X Not Required	If YES, To Whom?			
By Whom?		Date and Hour 7/31/2009, Time unknown			
Was a Watercourse Reached?	<input type="checkbox"/> Yes X No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken:

In July 2009, Fasken discovered a historical release along the Denton Salt Water Disposal (SWD) flowline. The release was attributed to failure of a section of an old steel flowline, which had been replaced with a fiberglass line several years prior to the discovery of the release. Failure of the steel flowline resulted in the release of an unknown volume of produced water. Following vertical delineation, the historical release was reported to the NMOCD Hobbs District Office on July 31, 2009, in a remediation plan entitled *Proposed Cleanup of Historical Salt Water Spill Sites*.

Describe Area Affected and Cleanup Action Taken.

The release affected an area of pastureland measuring approximately 183' in length by 10' to 68' in width. The release was remediated as per NMOCD approval. Please reference the attached *Remediation Summary & Risk-Based Site Closure Request* for remediation details.

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.

Signature:	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Ben J. Arguijo (Agent on behalf of Fasken O&R, Ltd)	Approved by District Supervisor: <i>Jeffrey Laking</i>		
Title: Project Manager, Basin Environmental	Approval Date: 4/17/12	Expiration Date: -	
E-mail Address: bjarguijo@basinenv.com	Conditions of Approval: -		
Date: 4/17/2012	Phone: (575)396-2378	IRP-4-12-2798	

# *Basin Environmental Service Technologies, LLC*

3100 Plains Highway  
P. O. Box 301  
Lovington, New Mexico 88260  
bjarguijo@basinenv.com  
Office: (575) 396-2378 Fax: (575) 396-1429



## **REMEDIATION SUMMARY & RISK-BASED SITE CLOSURE REQUEST**

**FASKEN OIL & RANCH, LTD.  
DENTON SWD HISTORICAL SITE #6  
Lea County, New Mexico  
Unit Letter "C" (NE/NW), Section 11, Township 15 South, Range 37 East  
Latitude 33.0361° North, Longitude 103.1712° West**

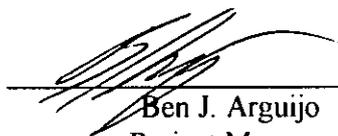
Prepared For:

Fasken Oil and Ranch, Ltd.  
303 W. Wall Ave., Suite 1800  
Midland, TX 79701-5116

Prepared By:

Basin Environmental Service Technologies, LLC  
3100 Plains Highway  
Lovington, New Mexico 88260

**April 2012**

  
\_\_\_\_\_  
Ben J. Arguijo  
Project Manager

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Appendix B – Laboratory Analytical Reports

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## 1.0 INTRODUCTION & BACKGROUND INFORMATION

Basin Environmental Service Technologies, LLC (Basin), on behalf of Fasken Oil & Ranch, Ltd. (Fasken), has prepared this *Remediation Summary & Risk-Based Site Closure Request* for the release site known as Denton SWD Historical Site #6. The legal description of the release site is Unit Letter "C" (NE/NW), Section 11, Township 15 South, Range 37 East, in Lea County, New Mexico. The geographic coordinates of the release site are 33.0361° North latitude and 103.1712° West longitude. The property affected by the release is owned by Mr. Darr Angell. A "Site Location Map" is provided as Figure 1.

In July 2009, Fasken discovered a historical release along the Denton Salt Water Disposal (SWD) flowline. The release was attributed to failure of a section of an old steel flowline, which had been replaced with a fiberglass line several years prior to the discovery of the release. Failure of the steel flowline resulted in the release of an unknown volume of produced water. The historical release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on July 31, 2009. General photographs of the release site are provided as Appendix A.

In July 2009, a previous consultant advanced three (3) soil borings at the release site to delineate the vertical extent of impacted soil.

On July 31, 2009, Fasken submitted a risk-based site closure proposal, *Proposed Cleanup of Historical Salt Water Spill Sites*, to the NMOCD Hobbs District Office, presenting laboratory analytical results from the drilling event and summarizing remedial activities to-date. Based on laboratory analytical results, Fasken requested and received NMOCD approval to remove heavily chloride-impacted soil from above the hard rock layer at the site [approximately one and three-quarters feet (1.75') below ground surface (bgs)], install an impermeable liner in the floor of the excavation, and backfill the excavation with non-impacted material.

## 2.0 NMOCD SITE CLASSIFICATION

A search of the New Mexico Water Rights Reporting System (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE) indicated the depth to water in Section 11, Township 15 South, Range 37 East ranges from approximately thirty-seven feet (37') to sixty-five feet (65') bgs. A depth-to-groundwater reference map utilized by the NMOCD indicates groundwater should be encountered at approximately fifty-five feet (55') bgs at the release site. Based on the NMOCD ranking system, ten (10) points will be assigned to the site as a result of this criterion.

A search of the NMWRRS database indicated there are water supply wells within 1,000 feet of the release. Based on the NMOCD ranking system, twenty (20) points will be assigned to the site as a result of this criterion.

There are no surface water bodies within 1,000 feet of the release. Based on the NMOCD ranking system, zero (0) points will be assigned to the site as a result of this criterion.

NMOCD guidelines indicate the Denton SWD Historical Site #6 release site has an initial ranking score of thirty (30) points. The soil remediation levels for a site with a ranking score of thirty (30) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 100 mg/Kg (ppm)

The New Mexico Administrative Code (NMAC) does not currently specify a remediation level for chloride concentrations in soil. Chloride remediation levels are set by the NMOCD on a site-specific basis.

### **3.0 SUMMARY OF SOIL REMEDIATION ACTIVITIES**

On January 30, 2012, excavation of impacted soil commenced at the site. Hach Quantab Chloride Low Range (30-600 mg/Kg) Titrators were used to field-screen the horizontal extent of impacted soil and to guide the excavation. Excavated soil was stockpiled on-site, pending final disposition.

From January 30 through February 1, 2012, approximately six hundred and sixty cubic yards (660 yd<sup>3</sup>) of impacted soil was excavated and transported to Gandy Marley, Inc. (NMOCD Permit # DP-1041), for disposal. A representative sample of soil disposal manifests is included as Appendix C.

On January 30, 2012, three (3) soil samples (East Wall #1, South Wall, and West Wall #2) were collected from the sidewalls of the excavation. The soil samples were submitted to Cardinal Laboratories in Hobbs, New Mexico, for analysis of chloride concentrations using EPA Method 4500 Cl-B. Table 1 summarizes the "Concentrations of Chloride in Soil". Soil sample locations are depicted in Figure 2, "Site & Sample Location Map". Laboratory analytical reports are provided as Appendix B.

Laboratory analytical results indicated chloride concentrations ranged from 160 mg/Kg in soil sample West Wall #2 to 848 mg/Kg in soil sample East Wall #1. Review of laboratory analytical results indicated the chloride concentrations in all submitted soil samples were less than the regulatory remediation action level (RRAL) established for the site by the NMOCD.

On January 31, 2012, four (4) soil samples (East Wall #2, West Wall #1, Northeast Wall, and Northwest Wall) were collected from the sidewalls of the excavation and submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 64 mg/Kg in soil sample East Wall #2 to 720 mg/Kg in soil sample Northeast Wall. Review of laboratory analytical results indicated the chloride concentrations in all submitted soil samples were less than the RRAL established for the site.

On February 8, 2012, Basin representatives met with a representative of the NMOCD Hobbs District Office to request permission to backfill the excavation. The request was approved by the NMOCD representative.

Based on laboratory analytical results, and with NMOCD approval, from March 23 through April 4, 2012, the excavation was backfilled with approximately three hundred and fifty cubic yards (350 yd<sup>3</sup>) of topsoil purchased from the landowner, compacted, and contoured to fit the surrounding topography. Prior to backfilling, an impermeable clay liner was placed in the floor of the excavation, compacted, and leveled. Final dimensions of the excavation were approximately one hundred and eighty-three feet (183') in length, ranging in width from approximately ten feet (10') to approximately sixty-eight feet (68'), and approximately one and three-quarters feet (1.75') in depth.

The Denton SWD Historical Site #6 release site will be seeded with an NMOCD-approved seed mixture during the 2012 calendar year.

#### **4.0 QA/QC PROCEDURES**

##### **4.1 Soil Sampling**

Soil Samples were delivered to Cardinal Laboratories in Hobbs, New Mexico, for analysis of chloride concentrations in accordance with EPA Method 4500 Cl-B. Soil samples were analyzed for chloride concentrations within fourteen (14) days following the collection date.

##### **4.2 Decontamination of Equipment**

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox® detergent and rinsed with distilled water.

##### **4.3 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form(s). These procedures were either transmitted with the laboratory analytical reports or are on file at the laboratory.

#### **5.0 SITE CLOSURE REQUEST**

Soil samples collected from the sidewalls of the Denton SWD Historical Site #6 excavation were analyzed by an NMOCD-approved laboratory, and chloride concentrations were below the regulatory remediation action levels established for the site. The activities conducted at the site met the objectives set forth in the *Proposed Cleanup of Historic Salt Water Spill Sites*, dated July 31, 2009. Basin recommends Fasken provide the NMOCD Hobbs District Office a copy of this *Remediation Summary & Risk-Based Site Closure Request* and request the NMOCD grant site closure to the Denton SWD Historical Site #6 release site.

## 6.0 LIMITATIONS

Basin Environmental Service Technologies, LLC, has prepared this *Remediation Summary & Risk-Based Site Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Basin has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Basin has not conducted an independent examination of the facts contained in referenced materials and statements. Basin has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Basin has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin 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 Fasken Oil & Ranch, Ltd. 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/or Fasken Oil & Ranch, Ltd.

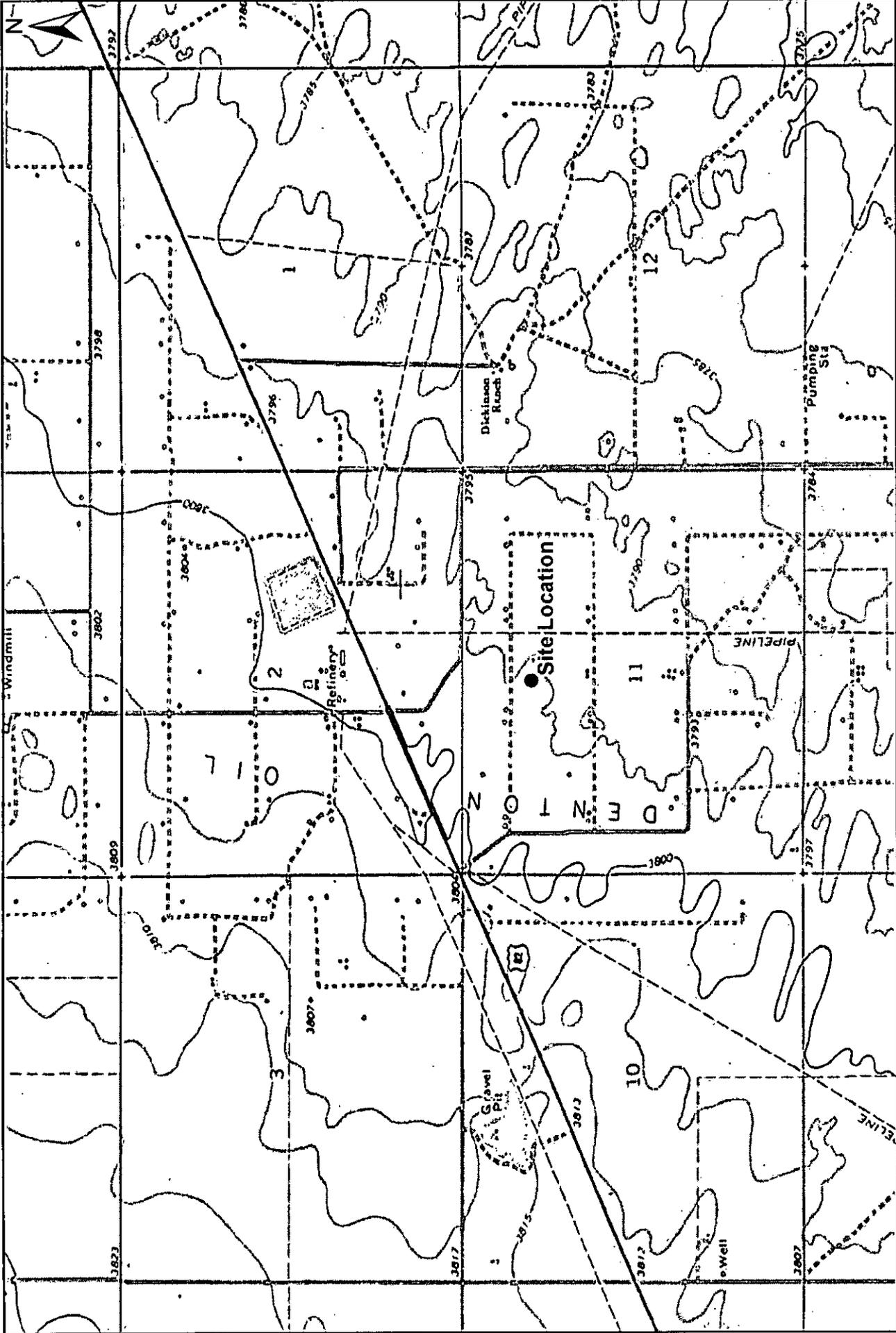
## 7.0 DISTRIBUTION:

Copy 1: Geoffrey Leking  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division (District 1)  
1625 French Drive  
Hobbs, NM 88240  
GeoffreyR.Leking@state.nm.us

Copy 2: Jimmy D. Carlile  
Fasken Oil and Ranch, Ltd.  
303 W. Wall Ave., Suite 1800  
Midland, TX 79701-5116  
jimmyc@forl.com

Copy 3: Basin Environmental Service Technologies, LLC  
P.O. Box 301  
Lovington, New Mexico 88260

# Figures

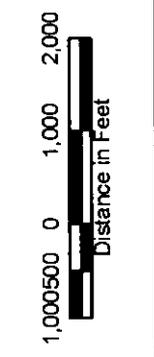


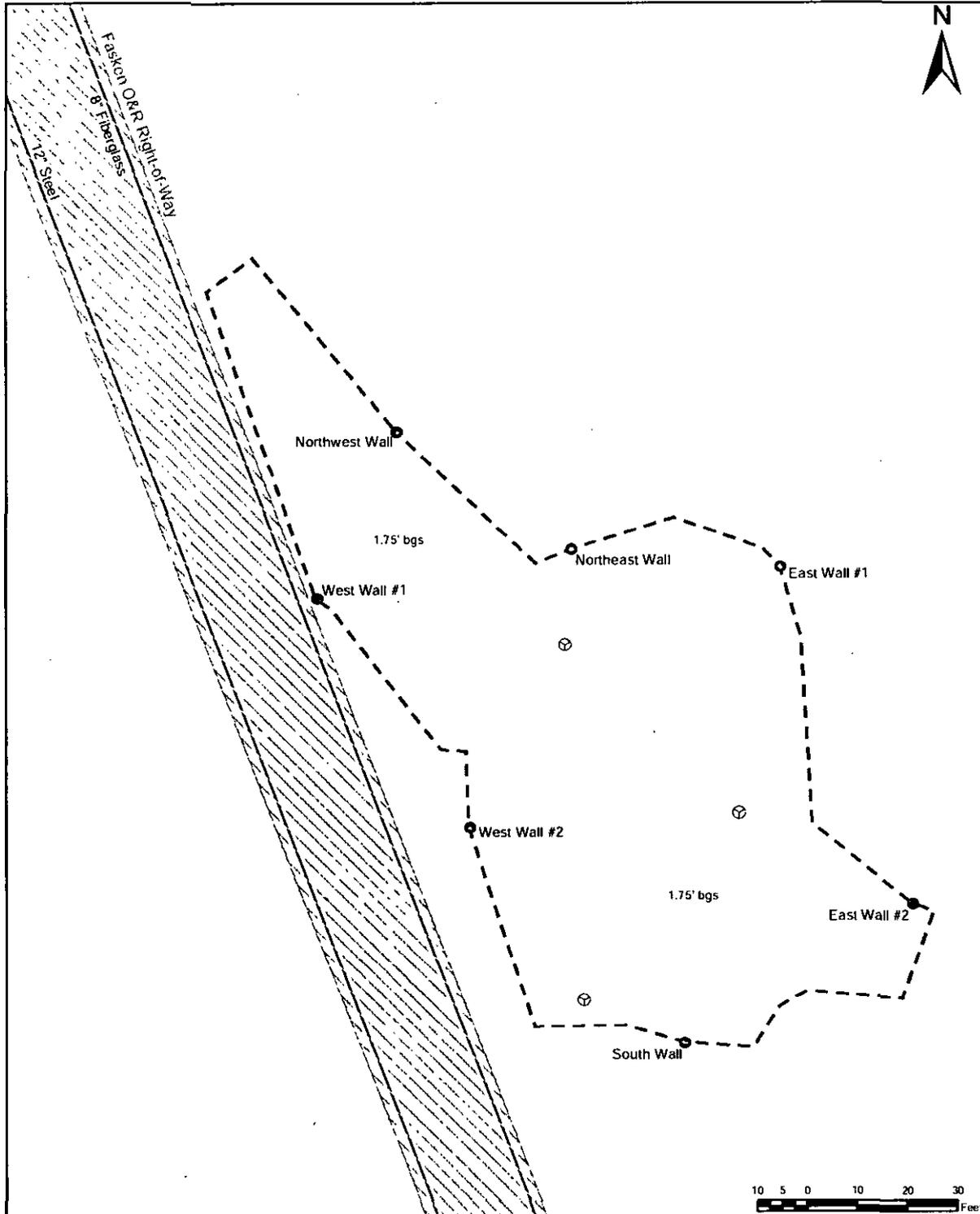
Basin Environmental Service Technologies, LLC  
 3100 Plains Hwy.  
 Lovington, NM 88260

Drawn By: BJA	Checked By: BRB
February 7, 2012	Scale: 1" = 2000'



**Figure 1**  
**Site Location Map**  
 Fasken Oil & Ranch, Ltd.  
 Denton SWD Historical Site #6  
 Lea County, New Mexico





**Legend:**

- - -	Excavation Extent
—	Pipeline
●	Sample Location
⊕	Soil Bore
▨	Pipeline Right-of-Way

**Figure #2**  
**Site & Sample Location Map**  
**Fasken Oil & Ranch, Ltd.**  
**Denton SWD Historical Site #6**  
**Lea County, New Mexico**

	Basin Environmental Service Technologies 3100 Plains Hwy. Lovington, NM 88260	
	Drawn By: BJA April 11, 2011	Checked By: BRB Scale: 1" = 12'

# Tables

**TABLE 1**

**CONCENTRATIONS OF CHLORIDE IN SOIL**

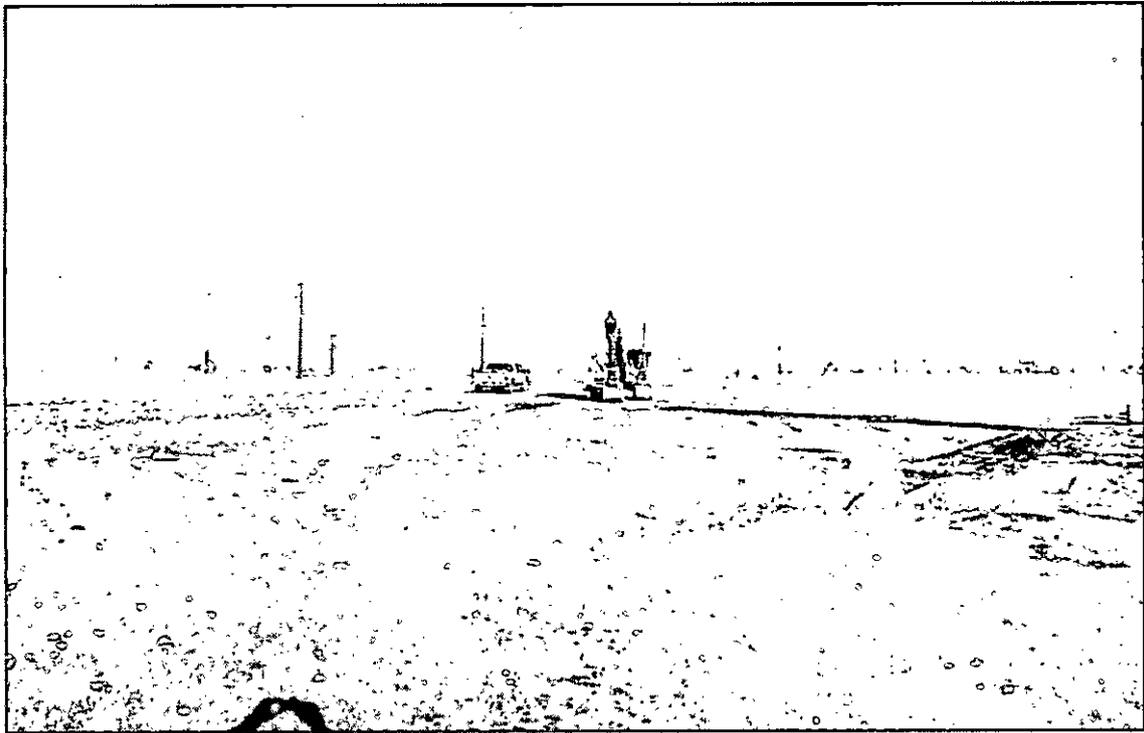
**FASKEN OIL & RANCH, LTD.  
DENTON SWD HISTORICAL SITE #6  
LEA COUNTY, NEW MEXICO**

SAMPLE LOCATION	SAMPLE DEPTH (BGS)	SAMPLE DATE	SOIL STATUS	E 300
				CHLORIDE (mg/Kg)
East Wall #1	1.5'	1/30/2012	In-situ	848
South Wall	1.5'	1/30/2012	In-situ	400
West Wall #2	1.5'	1/30/2012	In-situ	160
East Wall #2	1.5'	1/31/2012	In-situ	64
West Wall #1	1.5'	1/31/2012	In-situ	448
Northeast Wall	1.5'	1/31/2012	In-situ	720
Northwest Wall	1.5'	1/31/2012	In-situ	640
<b>NMOCD Criteria</b>				<b>1,000</b>

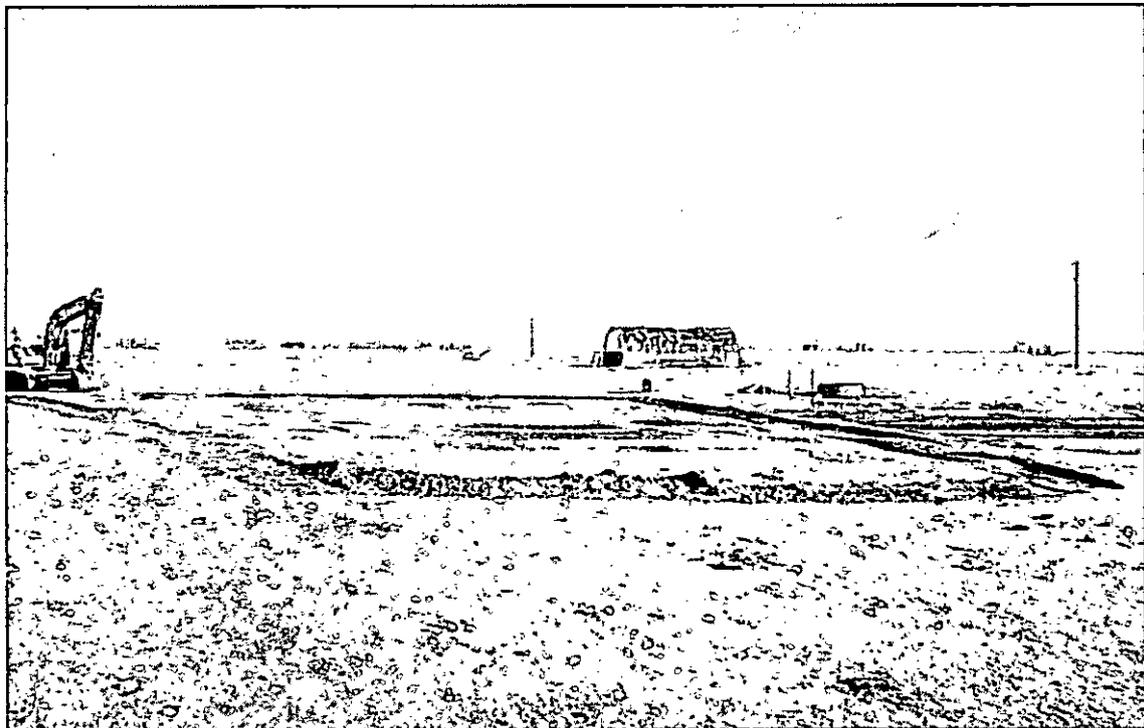
# **Appendices**

# **Appendix A**

# **Photographs**



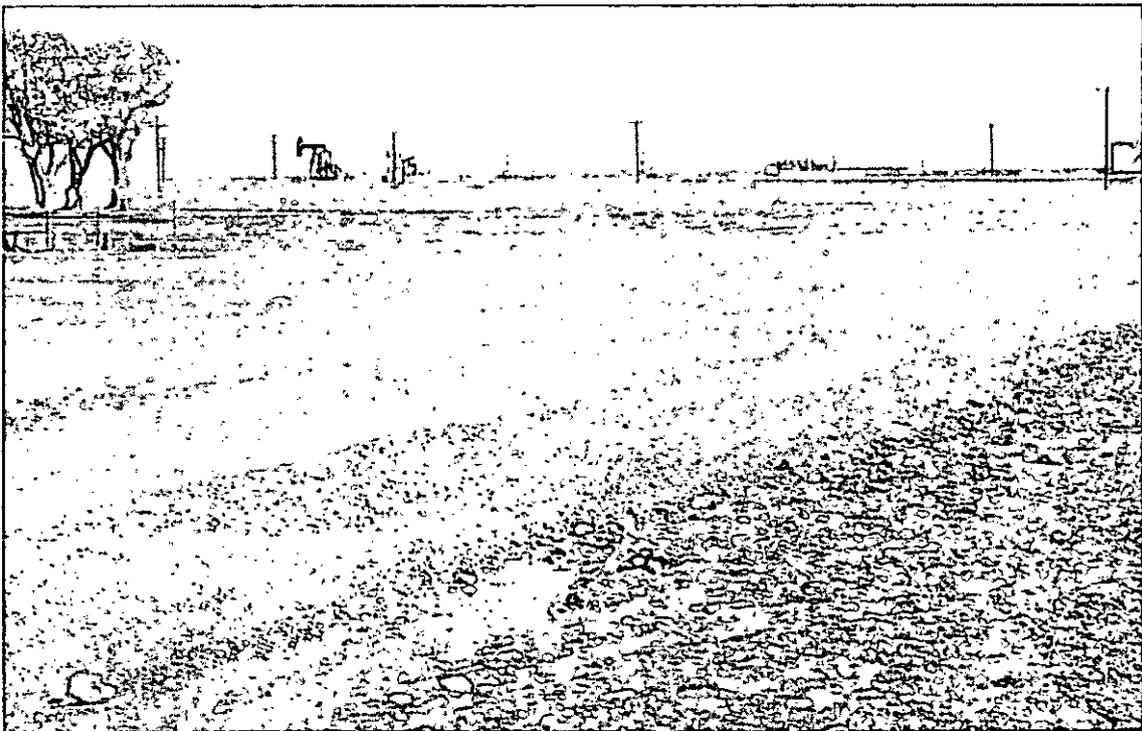
Denton SWD Historical Site #6 - Release Site



Denton SWD Historical Site #6 - Release Site (Delineation)



Denton SWD Historical Site #6 - Excavation



Denton SWD Historical Site #6 - Excavation (following backfill)

**Appendix B**  
**Laboratory Analytical Reports**

February 01, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: DENTON SWD HISTORICAL SITE #6

Enclosed are the results of analyses for samples received by the laboratory on 01/31/12 8:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

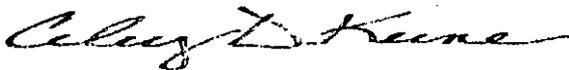
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 BEN J. ARGUIJO  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	01/31/2012	Sampling Date:	01/30/2012
Reported:	02/01/2012	Sampling Type:	Soil
Project Name:	DENTON SWD HISTORICAL SITE #6	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	LEA COUNTY, NM		

**Sample ID: EAST WALL #1 (H200222-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	848	16.0	02/01/2012	ND	416	104	400	3.77		

**Sample ID: SOUTH WALL (H200222-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	400	16.0	02/01/2012	ND	416	104	400	3.77		

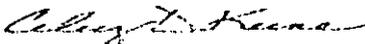
**Sample ID: WEST WALL #2 (H200222-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	02/01/2012	ND	416	104	400	3.77		

Cardinal Laboratories

\* = Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

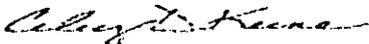
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- \*\* Samples not received at proper temperature of 6°C or below.
- \*\*\* Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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 the 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.



---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL Laboratories

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2478

**BILL TO**

**ANALYSIS REQUEST**

Company Name: Basin Environmental Service Technologies, LLC

Project Manager: Ben J. Arguijo

Address: P.O. Box 301

City: Lovington

Phone #: (575) 396-2378

Project #:

Project Name: Denton SMD Historical site #6

Project Location: Lea Co., NM

Sampler Name: Bobby Blackwood

FOR LAB USE ONLY

P.O. #: *Basin*

Company: ~~Faiken Oil & Ranch, Ltd~~

Attn: Jimmy D. Carlile

Address: 303 W. Wall, Ste. 1800

City: Midland

State: TX Zip: 79701-5116

Phone #: (432) 687-1777

Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	Chloride
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:			
HPDD0972												
1	East Wall #1	G	1						1/30/12	545	X	
2	South Wall #2									1550		
3	West Wall #3									1555		

**Lab Note:** Under and adjacent Cardinal's study and client's records verify for any claim arising out of or based on 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 interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or based on the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: *Bobby Blackwood*  
 Date: 1/30/12  
 Received By: *[Signature]*  
 Date: 1/31/12

Relinquished By: *[Signature]*  
 Date: 1/31/12  
 Received By: *[Signature]*  
 Date: 0700

Delivered By: (Circle One) *UPS*  
 Sampler - UPS - Bus - Other: *41°C*

Sample Condition:  Intact  Cool  Yes  No  
 CHECKED BY: *CDL*

REMARKS: *DAIC05041 W/A / 0815*

Please email results to [bjarguijo@basinenv.com](mailto:bjarguijo@basinenv.com)

February 02, 2012

BEN J. ARGUIJO

Basin Environmental Service

P.O. Box 301

Lovington, NM 88260

RE: DENTON SWD HISTORICAL SITE #6

Enclosed are the results of analyses for samples received by the laboratory on 02/01/12 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

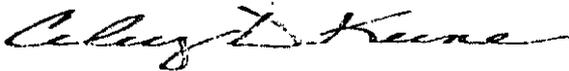
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 Basin Environmental Service  
 BEN J. ARGUIJO  
 P.O. Box 301  
 Lovington NM, 88260  
 Fax To: (575) 396-1429

Received:	02/01/2012	Sampling Date:	01/31/2012
Reported:	02/02/2012	Sampling Type:	Soil
Project Name:	DENTON SWD HISTORICAL SITE #6	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	LEA COUNTY, NM		

**Sample ID: EAST WALL #2 (H200244-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	02/02/2012	ND	432	108	400	3.77		

**Sample ID: WEST WALL #1 (H200244-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	448	16.0	02/02/2012	ND	432	108	400	3.77		

**Sample ID: NORTHEAST WALL (H200244-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	720	16.0	02/02/2012	ND	432	108	400	3.77		

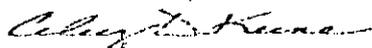
**Sample ID: NORTHWEST WALL (H200244-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	02/02/2012	ND	432	108	400	3.77		

Cardinal Laboratories

\* = Accredited Analyte

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 the 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.



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

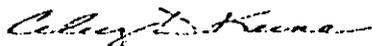
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C  
Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Appendix C**  
**Soil Disposal Manifests**

# GANDY•MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 12442

LEASE OPERATOR/SHIPPER/COMPANY: ENVIRONMENTAL - F. T. S. & OIL - Knick

LEASE NAME: DENTON SUD 11-20-12 Site # 6

TRANSPORTER COMPANY: ANGELS TIME: 9:00 (AM/PM)

DATE: 01-31-12 VEHICLE NO.: 01 DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

Other Material:  Contaminated soil  C-117 No.:

BS&W content:

Description: CL

VOLUME OF MATERIAL []: YARDS 20 CELL# LF : []

AS A CONDITION TO GANDY•MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF. CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY•MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY•MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER:

FACILITY REPRESENTATIVE: T. T.

White - GMI

Canary - Shipper

Pink - GMI

Gold - Transporter

# GANDY·MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 09627

LEASE OPERATOR/SHIPPER/COMPANY: FASKEN OIL & RANCH

LEASE NAME: DENTON SWD HISTORICAL SITE #6

TRANSPORTER COMPANY: TRIPLE M TIME: 9:40 AM/PM

DATE: 02-01-12 VEHICLE NO.: 0A DRIVER NO.:

CHARGE TO:

## TYPE OF MATERIAL

OCD

Other Material:  Contaminated soil:  C-117 No.:

BS&W content:

Description: CL

VOLUME OF MATERIAL [ ]: YARDS 20 : CELL# LF : [ ]

AS A CONDITION TO GANDY·MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAFETY CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY·MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY·MARLEY, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: [Signature]

FACILITY REPRESENTATIVE: [Signature]

White - GMI    Canary - Shipper    Pink - GMI    Gold - Transporter

# GANDY•MARLEY, INC.

P.O. Box 1658  
Roswell, NM 88202  
(575) 347-0434  
Fax (575) 347-0435

No. 12451

LEASE OPERATOR/SHIPPER/COMPANY: FOSKEN OIL & RANCH

LEASE NAME: DEBTON SWD HISTORICAL SITE # 6

TRANSPORTER COMPANY: ANGEL'S TIME: 9:15 AM/PM

DATE: 02-01-12 VEHICLE NO.: 01 DRIVER NO.:

CHARGE TO:

### TYPE OF MATERIAL

**OCD**

Other Material:  Contaminated soil  C-117-No. \_\_\_\_\_  
 BS&W content: \_\_\_\_\_

Description: CL

VOLUME OF MATERIAL [ ] YARDS 20 : CELL# LF : [ ]

AS A CONDITION TO GANDY•MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. §6901, et seq., THE NM HEALTH AND SAF CODE, §361.001, et seq. AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED CONTAMINATED SOILS AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO GANDY•MARLEY, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO GANDY•MARLEY, INC.'S FACILITY FOR DISPOSAL.

*THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.*

DRIVER: A.P.

FACILITY REPRESENTATIVE: T. E.

White - GMI      Canary - Shipper      Pink - GMI      Gold - Transporter