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1RP#2049

New Mexico State No. 7 Lease
Final Closure Report
Lea County, New Mexico

Project No. 8-0171

July 23, 2009

Prepared for:
Bridwell Oil Company
810 8th Street
Wichita Falls, Texas 76301

Prepared by:
Mark J. Larson, CPG
Certified Professional Geologist No. 10490

Larson & Associates, Inc.
507 North Marienfeld, Suite 200
Midland, Texas 79701

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Executive Summary

This report presents the closure documentation for the New Mexico State 7 Lease Well number 001 and tank battery operated by Bridwell Oil Company (Bridwell) in Unit H (SE/NE), Section 7, Township 9 South, Range 33 East in Lea County, New Mexico. The Site was remediated between February 2 and 10, 2009, according to New Mexico Oil Conservation Division (OCD) guidelines ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"). On February 3 and 6, 2009, final soil samples were collected from the Site and analyzed by laboratory methods for total petroleum hydrocarbons (TPH) and chloride. The TPH concentrations in the final samples were below the OCD recommended remediation action level (RRAL) of 1,000 milligrams per kilogram (mg/Kg). The highest chloride concentration was 48 mg/Kg. Approximately 1,560 cubic yards of hydrocarbon contaminated soil was excavated and hauled to Gandy Marley Inc. (GMI) located west of Tatum, New Mexico. Approximately 1,960 cubic yards of clean top soil, approved by the New Mexico State Land Office (SLO), was acquired from GMI to fill the excavations. On May 5, 2009, the remediation areas were seeded according to SLO specifications. On July 1, 2009, the OCD released the plugging bond for the Site.

1.0 Introduction

This report was prepared by Larson & Associates, Inc. (LAI) to document the investigation and remediation of hydrocarbon contaminated soil at the New Mexico State 7 Lease Well No. 001 and tank battery located in Unit H (SE, NE), Section 7, Township 9 South , Range 33 East in Lea County New Mexico. The latitude and longitude is north 33° 32' 57.6" and west 103° 36' 02.0", respectively. On September 26, 2008, Bridwell submitted initial form C-103 to the OCD in Hobbs, New Mexico, for its intent to plug the well. On September 29, 2008, the SLO issued a letter to Charles D. Ray, as lessee of record, specifying requirements of Bridwell for abandoning the Site. On November 24 and 25, 2008, LAI collected soil samples from thirteen (13) air rotary drilled borings and analyzed the samples by laboratory methods for benzene, toluene, ethylbenzene, xylene (BTEX), TPH and chloride. On January 13, 2009, the OCD approved the initial form C-141 (Release Notification and Corrective Action) authorizing Bridwell to commence remediation. Soil remediation was performed between February 2 and 10, 2009. Final soil samples were collected on February 3 and 6, 2009, with no TPH concentrations exceeding the OCD recommended remediation action levels (RRAL). On May 5 and 6, 2009, the Site was seeded according to SLO requirements. Figure 1 presents a location map. Appendix A presents the regulatory correspondence.

2.0 Chronology

The following events have been documented in connection with the North (#2) Brine Pond closure.

September 26, 2008	Bridwell submits form C-103 to the OCD in Hobbs, New Mexico to provide notification of its intent to plug well No. 001;
September 29, 2008	SLO issues letter to Charles D. Ray, lessee of record, notifying Bridwell of its requirements to abandon the site and unacceptable damage, including obsolete equipment and surface staining;
November 5, 2008	Bridwell retains LAI to remediate the site;
November 24, 2008	SLO issues Right-of-Entry permit (ROE-1752) to LAI, whom supervises Scarborough Drilling, Inc. to collect soil samples from thirteen (13) air-rotary drilled borings for laboratory analysis;
January 13, 2009	LAI submits initial form C-141 (Release Notification and Corrective Action) to the OCD in Hobbs, New Mexico, and receives approval to remediate the hydrocarbon contaminated soil;
January 28, 2009	Bridwell submits subsequent form C-103 to the OCD in Hobbs, New Mexico, providing notification that Well No. 001 was plugged;
January 29, 2009	OCD inspects Site and issues a notice of violation to Bridwell for unacceptable conditions at tank battery and well location;
February 2, 2009	LAI and Watson Construction Company, Inc. (Watson) begin soil remediation by removing approximately 300 cubic yards of caliche from the well location for blending and placement on the adjoining lease road;
February 10, 2009	Soil remediation is completed after hauling approximately 1,560 cubic yards of hydrocarbon contaminated soil to the Gandy Marley, Inc. disposal facility, located west of Tatum, New Mexico. Approximately 1,960 cubic yards of clean soil, approved by the SLO, was hauled back from the Gandy Marley facility for filling excavations;
May 5, 2009	B & T Farms, from Clovis, New Mexico, prepares seed bed, drills seed mixture according to SLO requirements and crimp mulch over remediation areas;
July 1, 2009	Plugging bond for Well No. 001 is released by the OCD in Hobbs, New Mexico.

3.0 Investigative Activities

On November 24 and 25, 2008, LAI supervised Scarborough Drilling, Inc. to collect soil samples using an air rotary rig and jam tube sampler at three (3) locations (BH-1 through BH-3) in the vicinity of the well and ten (10) locations (BH-4 through BH-13) at the tank battery. LAI provided notification to the OCD prior to drilling the borings which were advanced between approximately 15 and 30 feet below ground surface (BGS). Soil samples were collected about every five (5) feet (i.e., 1, 5, 10, 15, 20, etc.) to the total depth of the borings and placed in clean glass sample jars. The containers were sealed, labeled, chilled in an ice filled chest and hand delivered under chain of custody control to Trace Analysis, Inc. (Trace) located in Midland, Texas. Samples were collected for field headspace analysis using a calibrated photoionization detector (PID). Only one sample, BH-7, 5 feet, reported a PID reading over 100 parts per million (ppm) and was analyzed by the laboratory for benzene, toluene, ethylbenzene and xylene (BTEX) by method SW846-8021B. The laboratory analyzed additional samples for total petroleum hydrocarbons (TPH) by method SW846-8015 for gasoline range organics (GRO) and diesel range organics (DRO) and chloride. Table 1 presents a summary of the soil boring sample analysis. Figure 2 presents a drawing for the well location and borings. Figure 3 presents a drawing for the tank battery and spill are north of the tank battery and borings. Appendix B presents the boring logs. Appendix C presents the laboratory report.

Groundwater occurs in the Ogallala formation (Tertiary) at approximately 60 feet BGS. The nearest well is located about 3,400 feet northwest of the Site in Unit O (SW/SE) in Section 6, Township 9 South, Range 33 East and is used for stock watering. The closest surface water feature is a stock tank located about 3,200 feet southeast of the Site. LAI calculated recommended remediation action levels (RRAL) using the following criteria published by OCD ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"):

Ranking Criteria	*Result*	*Ranking Score*
Depth-to-Groundwater	>50 feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Horizontal Feet	0
	Total Score:	**10**

The following RRAL are assigned to the leak based on the total ranking score (10):

Benzene	10 mg/Kg
Total BTEX	50 mg/Kg
TPH	1,000 mg/Kg

The laboratory reported no benzene in the sample from 5 feet BGS at boring BH-7, and BTEX was 0.197 mg/Kg. The laboratory reported TPH above 1,000 mg/Kg in the following samples:

Location	Depth	GRO	DRO	TPH
BH-1	1	560	519	1,079
BH-7	5	7.22	1300	1,307.22
BH-12	1	1,390	3,960	5,350

TPH was also reported at 2,021.02 mg/Kg in a composite sample from a soil pile at the tank battery. Chloride was reported in concentrations from 15.6 mg/Kg to 6,620 mg/Kg.

4.0 Closure Activities

On January 13, 2009, Bridwell received approval from the OCD in Hobbs, New Mexico, to commence remediation. On February 2, 2009, LAI initiated remediation at the well location by excavating soil near the well (BH-1 through BH-3) to approximately three (3) feet BGS. About 300 cubic yards of caliche was removed from the well location, blended and was placed on the adjacent lease road. Soil was excavated from the tank battery to about eight (8) feet BGS near the center and to about 3 feet BGS in the vicinity of boring BH-12 at the spill area located north of the tank battery. Approximately 1,560 cubic yards of contaminated soil was disposed at Gandy Marley, Inc. (GMI) disposal facility located west of Tatum, New Mexico. Approximately 1,960 cubic yards of clean top soil, approved by the SLO, was acquired from GMI to fill the excavations.

On February 3 and 6, 2009, LAI collected confirmation samples at seven (7) locations (SS-1 through SS-7). The samples were collected near the well (SS-1), spill area north of the tank battery (SS-2), and from the tank battery (SS-4 through SS-7). The samples were collected using a stainless steel hand auger, placed in clean glass sample jars that were sealed, labeled, chilled in an ice filled chest and hand delivered under chain of custody control to Cardinal Laboratories, Inc. (Cardinal) located in Hobbs, New Mexico. Cardinal analyzed the samples for TPH, including GRO and DRO, by method SW846-8015 and chloride. The highest TPH concentration (103 mg/Kg) was reported in sample SS-7 collected near the center of the tank battery. The highest chloride concentration (48 mg/Kg) was reported in sample SS-4 from the northeast corner of the tank battery. Table 2 presents a summary of the remediation soil samples. Figure 2 presents the remediation sample locations. Appendix C presents the laboratory report.

On May 5 and 6, 2009, B & T Farms, Inc. (B & T) located in Clovis, New Mexico, seeded the remediation areas according to SLO requirements. Appropriate notification was given to the SLO in Hobs and Santa Fe, New Mexico. B & T prepared the seed bed, drilled the seed and placed a layer of hay mulch over the seeded areas. The hay mulch was mechanically crimped to minimize erosion from wind. Curtis & Curtis, Inc., located in Clovis, New Mexico, prepared the seed blend according to SLO specifications. Appendix D presents the seed certification and bag tag. Appendix E presents photographs. Appendix F presents the initial and final form C-141.

5.0 Conclusions

The following observations are documented in this report:

- The laboratory results of samples SS-1 through SS-7 demonstrate that soil was remediated to achieve the RRAL of 1,000 mg/Kg for TPH;
- Chloride in remediation soil samples SS-1 through SS-7 was below the OCD action level of 250 mg/Kg;
- The well location, tank battery and spill area north of the tank battery were remediated to OCD requirements and the surface was restored to SLO requirements.

TABLES

Table 1
Bridwell Oil Company
Soil Boring Analytical Data Summary
NM State #7 Lease
Lea County, New Mexico
Project Number: 8-0171

Sample ID	Date	GRO C6-C12	DRO C12-C28	TPH C6-C28	Chlorides
New Mexico Regulatory Limit		---	---	1,000	250
BH-1, 1'	11/24/2008	**560**	**519**	**1,079**	**1,490**
BH-1, 5'	11/24/2008	**89.7**	**32.2**	**121.9**	**665**
BH-1, 10'	11/24/2008	**29.4**	<17.3	**29.4**	**3,360**
BH-1, 15'	11/24/2008	---	---	---	**1,160**
BH-1, 20'	11/24/2008	---	---	---	**1,480**
BH-2, 1'	11/24/2008	**10.9**	<16.6	**10.9**	**149**
BH-2, 5'	11/24/2008	**6.19**	**18.5**	**24.69**	**6,620**
BH-2, 10'	11/24/2008	---	---	---	**1,490**
BH-2, 15'	11/24/2008	---	---	---	**470**
BH-2, 20'	11/24/2008	---	---	---	**1,620**
BH-3, 1'	11/24/2008	**6.84**	<17.0	**6.84**	**176**
BH-3, 5'	11/24/2008	**1.13**	<17.5	**1.13**	**3,210**
BH-3, 10'	11/24/2008	---	---	---	**4,390**
BH-3, 15'	11/24/2008	---	---	---	**776**
BH-3, 20'	11/24/2008	---	---	---	**460**
BH-4, 1'	11/25/2008	**0.447**	<17.3	**0.447**	**46.6**
BH-4, 5'	11/25/2008	**0.270**	<17.0	**0.270**	**26.0**
BH-4, 10'	11/25/2008	---	---	---	**666**
BH-4, 15'	11/25/2008	---	---	---	**52.0**
BH-4, 20'	11/25/2008	---	---	---	**50.6**
BH-5, 1'	11/25/2008	<0.182	<16.8	<16.982	**120**
BH-5, 5'	11/25/2008	<0.186	<17.1	<17.286	**962**
BH-5, 10'	11/25/2008	---	---	---	**868**
BH-5, 15'	11/25/2008	---	---	---	**332**
BH-5, 20'	11/25/2008	---	---	---	**163**
BH-6, 1'	11/25/2008	<0.183	**27.8**	**27.8**	**37.5**
BH-6, 5'	11/25/2008	<0.180	<16.6	<16.780	**134**
BH-6, 10'	11/25/2008	---	---	---	**320**
BH-6, 15'	11/25/2008	---	---	---	**101**
BH-7, 1'	11/25/2008	<0.189	<17.4	<17.589	**1,170**
BH-7, 5'	11/25/2008	**7.22**	**1,300**	**1,307.22**	**1,390**
BH-7, 10'	11/25/2008	**6.52**	<17.1	**6.52**	**733**
BH-7, 15'	11/25/2008	**1.41**	<16.0	**1.41**	**211**
BH-7, 20'	11/25/2008	---	---	---	**317**
BH-7. 30'	11/25/2008	---	---	---	**295**
BH-8, 1'	11/25/2008	**0.922**	<16.9	**0.922**	**187**
BH-8, 5'	11/25/2008	**1.01**	<17.4	**1.01**	**1,220**
BH-8, 10'	11/25/2008	---	---	---	**746**
BH-8, 15'	11/25/2008	---	---	---	**2,090**
BH-8, 20'	11/25/2008	---	---	---	**1,750**

Table 1
Bridwell Oil Company
Soil Boring Analytical Data Summary
NM State #7 Lease
Lea County, New Mexico
Project Number: 8-0171

Sample ID	Date	GRO C6-C12	DRO C12-C28	TPH C6-C28	Chlorides
New Mexico Regulatory Limit		--	---	1,000	250
BH-9, 1'	11/25/2008	**0.949**	<16.6	**0.949**	**159**
BH-9, 5'	11/25/2008	**0.932**	<16.8	**0.932**	**805**
BH-9, 10'	11/25/2008	**0.950**	<17.8	**0.950**	**1,740**
BH-9, 15'	11/25/2008	**0.941**	<16.5	**0.941**	**810**
BH-9, 20'	11/25/2008	---	---	---	**345**
BH-10, 1'	11/25/2008	**0.937**	<17.3	**0.937**	**38.5**
BH-10, 5'	11/25/2008	**0.982**	<17.3	**0.982**	**127**
BH-10, 10'	11/25/2008	---	---	---	**134**
BH-10, 15'	11/25/2008	---	---	---	**57.3**
BH-10, 20'	11/25/2008	---	---	---	**40.9**
BH-11, 1'	11/25/2008	**0.934**	<16.8	**0.934**	**79.9**
BH-11, 5'	11/25/2008	**0.925**	<16.7	**0.925**	**40.2**
BH-11, 10'	11/25/2008	---	---	---	**724**
BH-11, 15'	11/25/2008	---	---	---	**543**
BH-11, 20'	11/25/2008	---	---	---	**173**
BH-12, 1'	11/25/2008	**1390**	**3960**	**5350**	**25.6**
BH-12, 5'	11/25/2008	**47.6**	<17.8	**47.6**	**22.1**
BH-12, 10'	11/25/2008	**16.3**	<16.6	**16.3**	**120**
BH-12, 15'	11/25/2008	---	---	---	**82.5**
BH-13, 0'	11/25/2008	**2.36**	<16.6	**2.36**	**15.6**
BH-13, 5'	11/25/2008	**1.31**	<16.9	**1.31**	**28.9**
BH-13, 10'	11/25/2008	---	---	---	**220**
BH-13, 15'	11/25/2008	---	---	---	**97.4**
BH-13, 20'	11/25/2008	---	---	---	**49.1**
SS-1	11/25/2008	**1.02**	**2020**	**2021.02**	**122**

Notes

Total Petroleum Hydrocarbons analyzed via EPA SW Method 8015 Mod.

All values reported in Milligrams per Kilogram - dry (mg/Kg, parts per million).

Bold indicates the analyte was detected.

Bold and blue indicates the value exceeds NMOCD requirements.

Table 1
Bridwell Oil Company
Soil Analytical Data Summary
NM State #7 Lease
Lea County, New Mexico
Project Number: 8-0171

Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX
New Mexico Regulatory Limit		10	---	---	---	50
BH-7, 5'	11/25/2008	<0.00905	<0.00905	**0.115**	**0.0819**	**0.197**

Notes

Benzene, Toluene, Ethylbenzene and Xylenes analyzed via EPA SW Method 8021B.

All values reported in Milligrams per Kilogram - dry (mg/Kg, parts per million).

Bold indicates the analyte was detected.

Bold and blue indicates the value exceeds NMOCD requirements.

Table 2
Bridwell Oil Company
Soil Remediation Analytical Data Summary
NM State #7 Lease
Lea County, New Mexico
Project Number: 8-0171

Sample ID	Date	GRO C6-C12	DRO C12-C28	TPH C6-C28	Chlorides
New Mexico Regulatory Limit		--	---	**1,000**	**250**
SS-1 (0-1)	2/3/2009	<10	<10	<10	<16
SS-2 (0-1)	2/3/2009	<10	<10	<10	<16
SS-3 (0-1)	2/6/2009	<10	<10	<10	32
SS-4 (0-1)	2/6/2009	<10	<10	<10	48
SS-5 (0-1)	2/6/2009	<10	<10	<10	<16
SS-6 (0-1)	2/6/2009	<10	82.8	82.8	<16
SS-7 (0-1)	2/6/2009	<10	103	103	<16

Notes

Total Petroleum Hydrocarbons analyzed via EPA SW Method 8015 Mod.

All values reported in Milligrams per Kilogram - dry (mg/Kg, parts per million).

Bold indicates the analyte was detected.

Bold and blue indicates the value exceeds NMOCD requirements.

FIGURES

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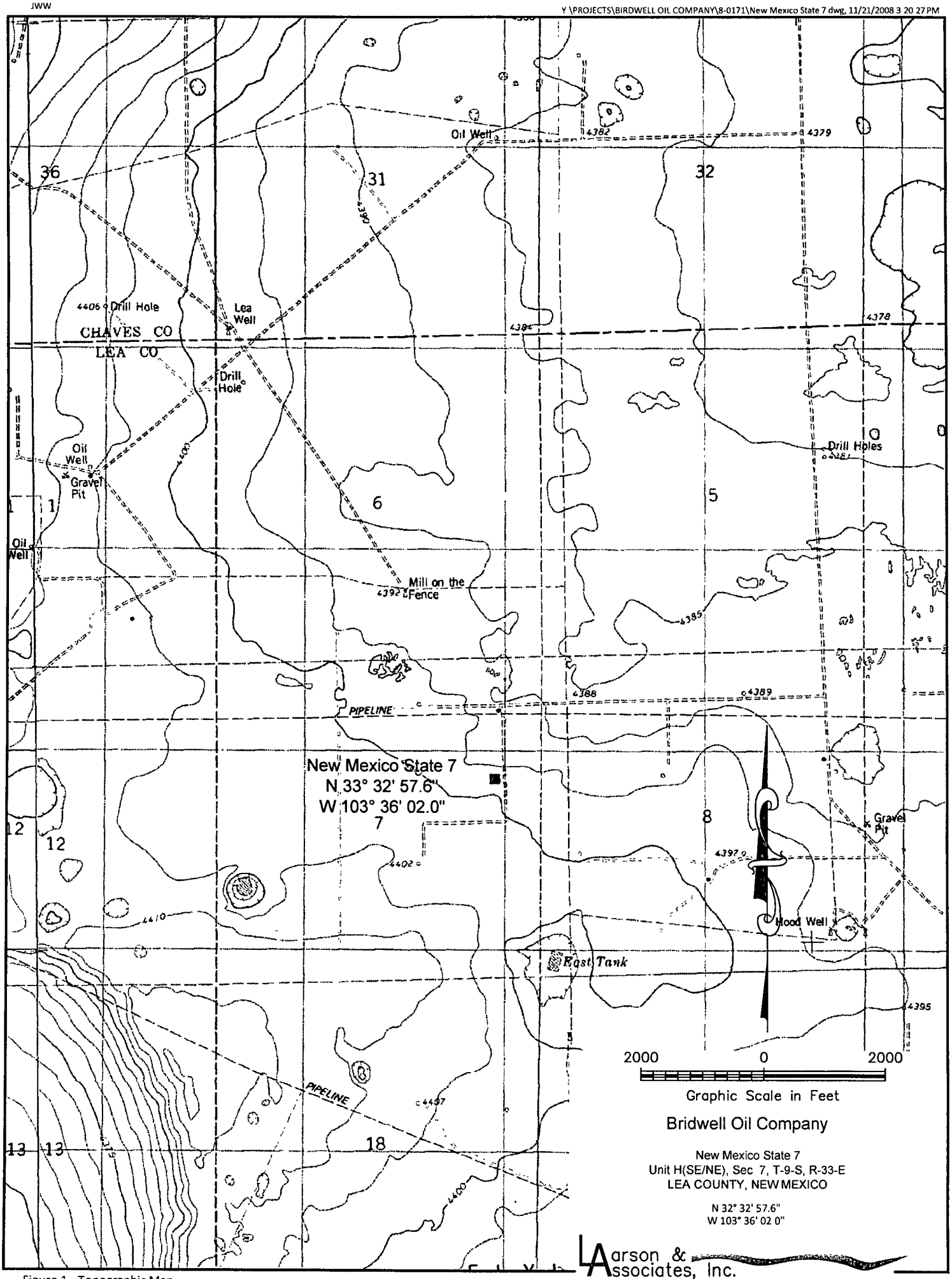
Y \PROJECTS\BIRDWELL OIL COMPANY\8-0171\New Mexico State 7 dwg, 11/21/2008 3 20 27 PM



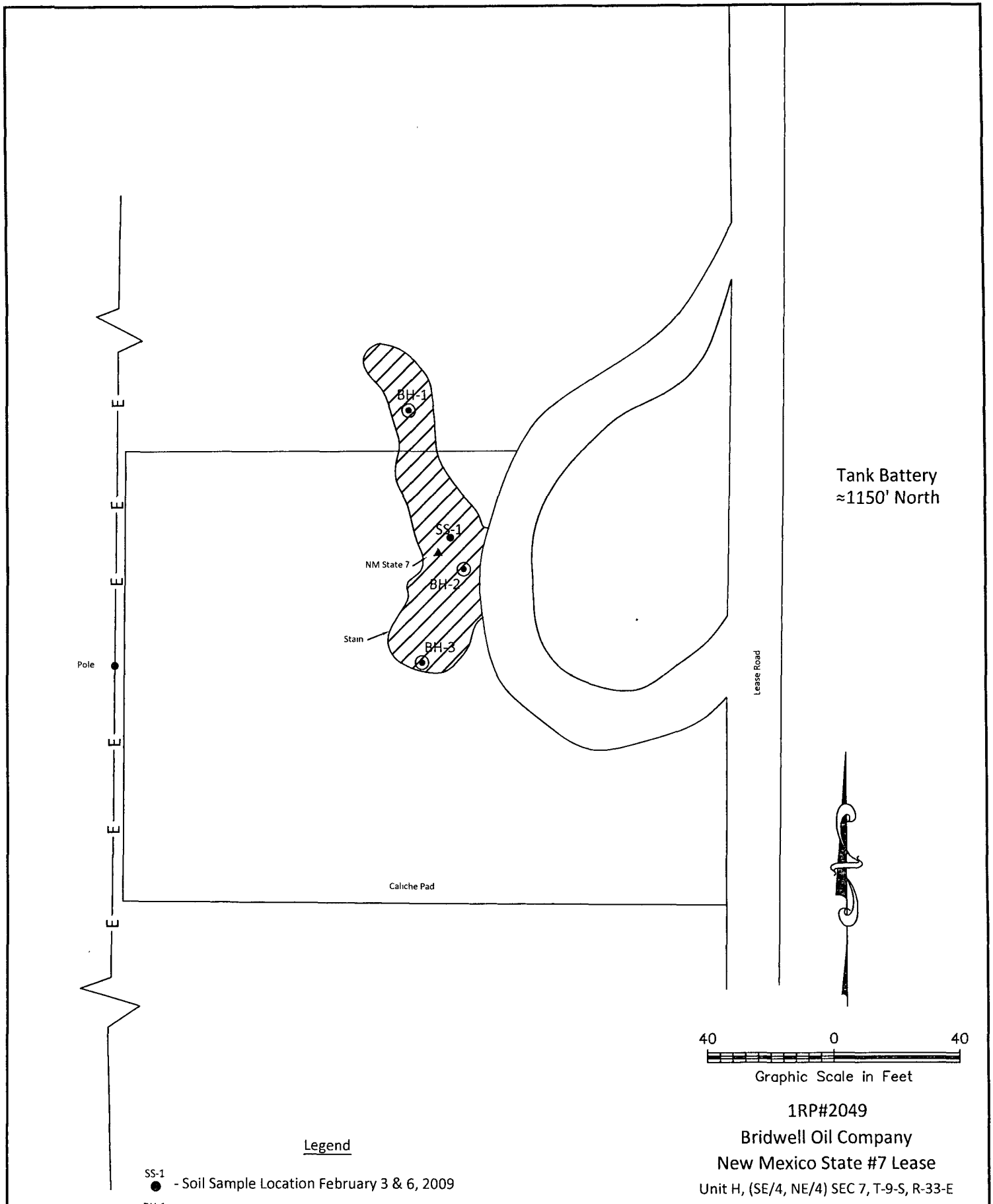
Bridwell Oil Company

New Mexico State 7
Unit H(SE/NE), Sec 7, T-9-S, R-33-E
LEA COUNTY, NEW MEXICO

N 32° 32' 57.6"
W 103° 36' 02 0"

Larson & Associates, Inc.
Environmental Consultants

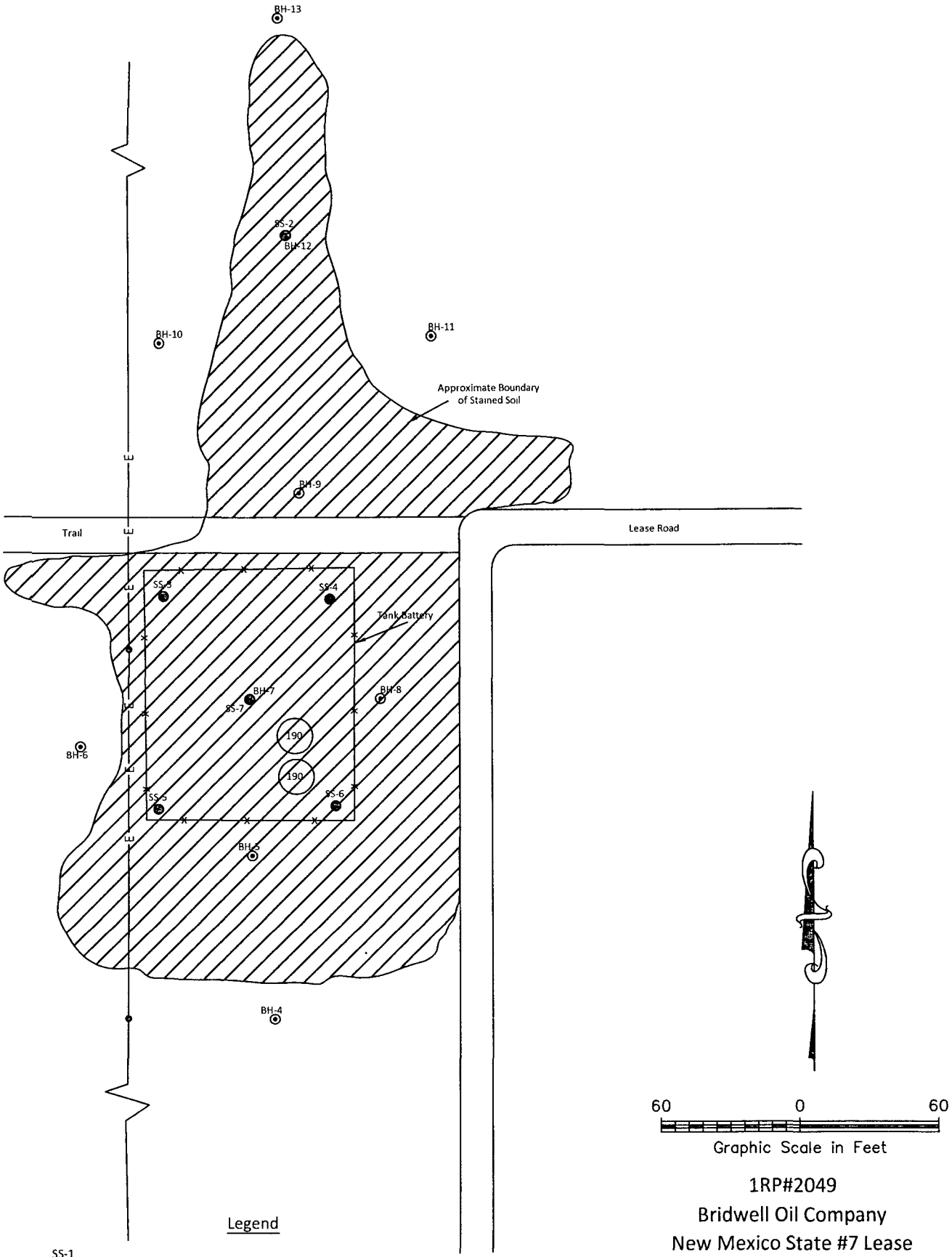
Figure 1 - Topographic Map



1RP#2049
Bridwell Oil Company
New Mexico State #7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
Lea County, NM
N 33° 32' 57.6"
W 103° 36' 02.0"

Larson & Associates, Inc.
Environmental Consultants

Figure 2- Well Location Drawing



Legend

SS-1 - Soil Sample Location February 3 & 6, 2009

BH-1 - Bore Hole Location November 24 & 25, 2009

- Soil Investigation Area

1RP#2049

Bridwell Oil Company

New Mexico State #7 Lease

Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E

Lea County, NM

N 33° 32' 57 6"

W 103° 36' 02 0"

Larson & Associates, Inc.

Environmental Consultants

Figure 3- Tank Battery Drawing

APPENDIX A

Regulatory Correspondence

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505

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HOBBS (OCD)

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
June 19, 2008

WELL API NO. 30-025-24388 ✓	
5. Indicate Type of Lease STATE ☒ FEE ☐ ✓	
6. State Oil & Gas Lease No. K-03354	
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	7. Lease Name or Unit Agreement Name New Mexico State -7- ✓
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ✓	8. Well Number 1 ✓
2. Name of Operator Bridwell Oil Company ✓	9. OGRID Number 2832 ✓
3. Address of Operator Post Office Box 1830, Wichita Falls, Texas 76307	10. Pool name or Wildcat Flying M; San Andres ✓
4. Well Location Unit Letter **H : 1980** feet from the **North** line and **660** feet from the **East** line ✓ Section **007** Township **9S** Range **33E** NMPM County **Lea**	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 4380 GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☒	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: ☐		OTHER. ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Plug & Abandon
1. MIRU Well Servicing Rig, pull rods, pump, and tubing out of well.
2. Set a CIBP at 4350', dump 35 sacks cement. Perforations are at 4396' to 4450'. Perf. @ 2440' Squeeze
3. Perforate the 4.5" casing at 422' with 4 shots. Surface casing shoe is at 372'. Perf. @ 1878' Squeeze
4. Establish circulation, pump 50 sacks cement, place inside and outside 4.5" casing from 322' to 422'. WOC-Tag; WOC + Tag
5. Set 5 sacks cement plug at ground surface-60' to surface
6. Cut casing off 3' below ground level, weld plat with well name and operator, cover.

Estimated Start Date: As Soon As Possible

The Oil Conservation Division **Must be notified 24 hours prior** to the beginning of plugging operations

Spud Date: _____ Rig Release Date: _____

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Steve Ginnings TITLE President DATE 9/26/2008

Type or print name Steve Ginnings E-mail address: sginnings@wf.net PHONE: 940/723-4351

For State Use Only

APPROVED BY: Gary W. Gill TITLE OC FIELD REPRESENTATIVE II/STAFF MANAGER DATE OCT 02 2008

Conditions of Approval (if any):

PATRICK H. LYONS
COMMISSIONER

State of New Mexico
Commissioner of Public Lands
310 OLD SANTA FE TRAIL
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE
Phone (505) 827-5760
Fax (505) 827-5766
www.nmstatelands.org

September 29, 2008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Charles D. Ray
PO Box 51608
Midland, TX 79710

Re: **P&A RECLAMATION / REVEGETATION REQUIREMENTS**
V07586-0000, BRIDWELL NM STATE #7, PRODUCTION WELL
API # 30-025-24388
UL H, Sec 7, TWP 9S, RNG 33E
Lea County, NM

Dear Mr. Ray:

The New Mexico State Land Office (Land Office) understands that the above-mentioned well bore is scheduled to be plugged and abandoned and that New Mexico Oil Conservation Division (NMOCD) approval is pending. Recent inspection revealed that unacceptable damages exist on the site, including obsolete equipment and surface staining. Under the terms of the State Land Office Rules NMAC §§ 19.2.100.67, it is the responsibility of Charles D. Ray as the lessee of record to ensure that the site is fully reclaimed and restored in accordance with a reclamation plan approved by the Land Office. The following are the required corrective actions to be implemented at the site, including the reclamation/reseeding requirements and standards; Charles D. Ray may provide an alternate reclamation plan for written approval by the Land Office.

- Charles D. Ray shall contact the New Mexico Oil Conservation Division to obtain requirements for the investigation, mitigation, and remediation of stained soils on the subject property.
- Removal of all caliche pads and roads utilized for the sole purpose of accessing and operating the easement.
- After remediation of all contaminated soils and removal of the caliche pads and roads, Charles D. Ray shall revegetate the site in accordance with the attached State Land Office requirements, which are summarized as follows:

SEED MIXTURE: Sandy with Tall Grass (ST)
Based on the following existing site conditions:
MLRA: HP-3
SOIL TYPE: Amarillo-Arvana loamy fine sands
ESD: Sandy Plains

REVEGETATION PROCEDURAL REQUIREMENTS (details attached):

1. Seedbed Preparation
2. Seeding

ADDITIONAL REQUIREMENTS:

1. At least 5 working days prior to initiating the seeding, you must notify the State Land Office District Resource Manager (DRM) at (575) 392-8736, of your scheduled dates for seeding.
2. The following documentation shall be submitted to the State Land Office:

   a. Original seedbag tags - or copies of tags & receipt (invoice), preferably provided during the witnessing of seeding.
   b. Photo documentation - of the site before, during and after each procedural requirement performed at the site.

Contingent upon meeting the reclamation/reseeding requirements, the reclaimed area will be eligible for release 2 years, or 3 growing seasons, following initial reseeding efforts. The State Land Office will conduct a field inspection following the second growing season. If the field inspection determines that reseeding efforts have failed, you will be required to reseed prior to the 2-year termination date and possibly make modifications to the seedbed.

Contact Thaddeus Kostrubala at (505) 827-5723 with any questions your company may have regarding closure requirements. Should reclamation / revegetation be required after the expiration of the lease a Right-of-Entry (ROE) Easement will be required; in such case, please contact Anna Villa at (505) 827-5789 for a ROE easement.

The State Land Office appreciates the opportunity to work with Charles D. Ray in performing successful remediation on trust lands.

Sincerely.
PATRICK H. LYONS
COMMISSIONER OF PUBLIC LANDS

Jim Norwick

By: Jim Norwick, Director
Field Operations Division
(505) 827-5745

Cc: File: V0-7586-000
Steve Ginnings, Bridwell Oil Co.
Thaddeus Kostrubala, P.E., NMSLO
Myra Meyers, NMSLO
Scott Dawson, NMSLO

2.4 RECLAMATION PRACTICES

Placement of Soils - Compaction, Ripping & Grading

All soils placed for purposes of reclaiming a site shall utilize the following procedures, or alternate procedures approved by the SLO.

All soils, excluding topsoil, shall be compacted to 90% of maximum proctor density. This may require the addition of water for dry soils. Compaction shall occur in a maximum of 18 inch lifts. Under correct soil-water content conditions, proper compaction can typically be achieved through the double-pass of heavy equipment, walk-behind vibratory compaction, or single press compaction with a heavy equipment bucket attachment.

Following compaction, the upper one (1) foot of soils shall be ripped or disced to key in the topsoil.

Topsoil shall be placed uncompacted on the ripped soils. Seedbed preparation procedures shall be followed to prepare the topsoil for seeding.

The final elevation of the topsoil shall meet the grade surrounding the site. The site shall be graded to mimic the surrounding landscape. For example, final grading should be approximately flat in flat landscapes; the final grading shall produce a hummocky landform in hummocky landscapes.

Flipping Soils

The practice of "flipping" soils places the upper soil layer beneath a lower layer via mechanical excavation and placement. Soil flipping is best suited for sites where unsuitable surface soils exist and subsurface soils are desirable below the topsoil level. Examples of sites where flipping soils may be a preferred option are: caliche pads and shallow saline/sodic soils that exist above suitable soils. Sites where subsurface soils are caliche or limestone are unsuitable for soil flipping.

The operator shall have SLO approval to flip soils as part of the Revegetation Plan. The following is a typical procedure for flipping soils.

1. Unsuitable soils are excavated and stockpiled;
2. Clean soils beneath excavated unsuitable soils are removed, creating a burial pit or trench;
3. Unsuitable soils are placed in the burial pit or trench; and,
4. Clean soils are placed on top of the unsuitable soils.

Reclamation of linear disturbance areas, such as roads or pipeline rights-of-way, can be well suited for reclamation through a process of trenching and flipping. Trenching and flipping of soils occurs via excavation of subsurface soils immediately adjacent to and parallel to a road. The excavated material is stockpiled, the road surface material is placed in the trench and the excavated subsurface material is placed as the upper-layer.

Soil Blending

Blending existing soil with hauled-in soils can be an effective method of handling unsuitable soils such as saline soils. Blending of soils should occur in a manner that creates a well mixed homogeneous soil. The SLO will require blended soils to be sampled to assure suitable soil conditions have been achieved.

Adding sandy soils to clay, or clay-loamy soils, and blending is not recommended. The mixture may result in a hardened soil. Sandy soils may be added on top of clay soils, but should be keyed-in by first ripping the clay soils and then placing the sandy soils on top.

SANDY with TALL GRASS (ST) SEED MIXTURE:

COMMON NAME	VARIETY	APPLICATION RATE (PLS/Acre)	DRILL BOX
Grasses:			
Sand bluestem	Elida, VNS, So.	2.0	F
Sideoats grama	Vaughn, El Reno	4.0	F
Little bluestem	Pastura, Cimmaron	6.0	F
Plains bristlegrass	VNS, Southern	1.0	D
Sand dropseed	VNS, Southern	2.0	S
Forbs:			
Indian blanketflower	VNS, Southern	1.0	D
Plains coreopsis	VNS, Southern	1.0	S
	Total PLS/acre	17.0	

S = Small seed drill box, D = Standard seed drill box, F = Fluffy seed drill box
VNS = Variety Not Stated

- Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).
- VNS, Southern – Seed should be from a southern latitude collection of this species.
- Double above seed application rate for broadcast or hydroseeding.
- If one species is not available, contact the SLO for an approved substitute, alternatively the SLO may require other species proportionately increased.
- Additional information on these seed species can be found on the USDA Plants Database website at http://plants.usda.gov.

4.3 SEEDBED PREPARATION

Proper seedbed preparation will provide the best environment for successful germination and plant development.

The topsoil (loosely defined as the upper 6 inches to 1 foot of soil) shall be in a "mellow" state, i.e. in a firm condition, between compacted and loose and fluffy. The topsoil should be loose enough to allow water penetration and percolation, yet firm enough to hold the seed at the desired elevation in the soil profile. This allows the seed to be in full contact with the soil, enable proper crimping and assist with appropriate root development and moisture percolation.

The top 2 inches of soil shall be reasonably free of clods, caliche chunks, rocks and clumps. All rocks, including caliche, greater than 2 inches in diameter shall be removed from the site. If soil is hauled to the site it should be of a similar texture as surrounding soils. Under no circumstances will caliche or pulverized caliche be accepted as the upper 6 inches of soil. All miscellaneous equipment, trash and debris shall be removed and properly disposed of.

The site should be graded smooth to allow a drill seeder to properly seed to the edge of disturbance. The site may be undulating but should contain no high or low spots that would prevent a portion of a drill seeder from contacting the soil.

Procedures

Utilize the following procedures to create a mellow seedbed for suitable soils to a depth of 1 foot. If 1 foot of suitable soils does not exist, soils shall be added to the site (see section Reclamation Practices). Caliche subsoils, or other rocky soils, that are shallower than 1 foot shall have a minimum of 6 inches of suitable soil placed on top of the subsoil.

1. **Scarify** (rip) on the contour for sloping areas and perpendicular to the prevailing wind on flat areas to a depth of 1 foot, or applicable depth based on subsoil conditions (i.e. caliche). See scarifying subsection below for more information.
2. **Disc** to a minimum depth of 6 inches, in the same direction as scarifying. Leaving definite furrows, continue discing until a mellow, loose soil is prepared. Roller packing may be used instead of discing, depending on soil conditions (i.e. sandy soils).

Caution: Shallow sites where caliche subsoil is less than 6 inches below ground surface should not be scarified. When scarifying above caliche or rocky subsoils deeper than 6 inches, caution should be exercised in order not to bring up rocks to the surface.

Discing only (no scarifying) may be all that is required for sites where soils have been hauled in and exist in a loose condition following grading. In this case, soil amendments (if required) can be spread prior to discing. If the soils are very soft, then roller packing to firm the soils may be required. Sandy soils are especially susceptible to erosional forces and roller harrowing is the preferred method of preparing a mellow seedbed. See Discing and Roller Packing subsections below for more information.

On small sites (less than ¼ of an acre), or when scarifying and discing is not possible or economical, then one or multiple of the following methods of seedbed preparation shall occur. Additional information can be found in the subsections below. The methods are listed in order of preference:

1. Dragging with a chain harrow, slope chain, log chain, spike tooth harrow, chain link fence or similar equipment.
2. Hand raking.

Scarifying:

Scarifying shall be done on the contour on sloping surfaces and perpendicular to prevailing winds on flat areas. Equipment capable of penetration to a minimum depth of 1 foot is required. Spaces between scarifier teeth should

be close enough to provide for complete fracturing of the soils between rip marks. Generally, scarifier teeth on 18 inch spacing or closer will accomplish this fracturing. Otherwise, perform multiple passes to obtain scarified rows spaced approximately 18 inches. In tight soils, additional passes might be needed to adequately loosen compacted soils. On soils existing above caliche or rocky subsoils, ***scarifying should be done carefully or not at all*** to prevent pulling rocks to the surface.

Discing:

Discing shall be done on the contour on sloping areas and perpendicular to prevailing winds on flat areas. Equipment shall be able to properly disc the soil to a depth of 6 inches. If discing to a depth of 6 inches is not possible due to site conditions, additional scarifying and discing may be required. Tandem discs with a minimum of 20 inch diameter disc blades are recommended to obtain adequate penetration on finer textured soils. Disc blades should have 9 inch, or closer, spacing between blades. A maximum 10 foot wide disc implement is recommended. Wider implements are difficult to use on small revegetation sites and are less likely to guarantee uniform soil preparation on rough sites. Some large construction discs have 12 inches or more between blades and will often not provide adequate discing results. When a large construction disc is utilized, roller packing on course textured soils or tandem discing on finer textured soils will be necessary following the heavy discing operation to properly prepare the seedbed.

Roller Packing:

Roller packing, like scarifying and discing, should be done on the contour or perpendicular to prevailing winds on flat areas. Use roller packers (cultipackers) on soils that exhibit soft, powdery conditions and are loose and fluffy.

A 10 or 12 foot wide roller packer is recommended. Wider implements are difficult to use on small revegetation sites and are less likely to assure uniform soil preparation on rough sites. Roller packers may have either 1 or 2 rollers the full width of the implement. Generally, a pull type roller packer has a front roller, chisel teeth in the center, and a back roller. Roller surface configurations vary and are long, round cylindrical sections with a diameter of 12 to 20 inches.

Chain Harrowing:

A four wheel drive tractor or ATV shall be used to pull the chain harrow by traveling up and down the slope. This same implement may be used to cover seed, spread fertilizer, and soil amendments after broadcast applications.

Slope Chaining, Chain Dragging, and Raking:

Slope chaining is an excellent soil manipulation procedure for steep slopes, but is seldom used because of the infrequent availability of this equipment.

Slope chains are typically comprised of a 30 foot long chain with a large metal disc at the end attached by a swivel to a heavy boat anchor. Welded to the links of the chain are round rods that churn and loosen the soil as the unit is rolled along a steep slope from above by a tractor or other power unit. The disc at the base of the hill moves with the tractor at the top of the slope and the soil is worked and loosened for seeding. The slope chain can be used following seeding to lightly cover the seed.

Chain drags are any assortment of chains either dragged along slopes by hand, or attached to some sort of power equipment (ATV, tractor). Chains are typically 5/16" or 3/8" diameter links and can be any length, depending on the capacity of the power equipment.

Hand raking should occur only as a last choice. Rake soils to loosen to the greatest depth feasible. Hand raking typically can produce a mellow soil to a maximum depth of two inches. First rake to create a mellow seedbed, then rake to cover seed and soil amendments to the appropriate depth.

4.4 SEEDING

Drill seeding is the SLO preferred method for applying and incorporating the seed into the soil surface. Other methods of seeding shall only be used when drill seeding is not possible or practical (see Table 3).

Table 3. Recommended seeding methods

Preference	Seeding Method	Situation Best Suited for Seeding Method
1st	Drill Seeding	All applications
2nd	Hydroseeding	Steep slopes – greater than 3 horizontal to 1 vertical*
3rd	Broadcast Seeding - *Mechanical*	Small areas – less than ¼ acres

*Hydroseeding may occur when more economical for smaller sites.

Seed Mixtures

The seed mixtures developed by the SLO are designed to address the soil types and post-reclamation land use, soil stabilization, erosion control issues, seed availability and seed costs. Expensive seed was only specified when absolutely required.

Seeding rates shall be doubled when hydroseeding or broadcast seeding.

The Operator should request the seed supplier to divide the specified seed mixtures into submixtures of: small seed (S), standard sized seed (D), and fluffy and thrashy seed (F).

No substitution of species, variety, or collection for non-varietal species will be allowed unless evidence is submitted in writing by the Operator to the SLO showing that the specified materials are not reasonably available during the seeding period. The substitution of a species, variety, or collection shall be made only with the written approval of the SLO, prior to making a substitution.

"Pure Live Seed" (PLS) is a means of expressing seed quality. Drills need to be calibrated on the basis of PLS/acre. The amount of PLS required for a planting is based on the quality of a given seed lot. Therefore, prior to calibrating a drill, seed lot quality must be known. PLS and bulk seed required are determined by using the seed analysis information on the seed tag in the following formula.

% PLS = [(% germination + % hard or dormant) x % purity)] / 100

Bulk Seed (lbs/ac) = PLS seeding rate recommendation (lbs/ac) / (% PLS / 100)

Recommended seeding rates provide an adequate amount of PLS seed per acre even though seed lots differ in seed size, shape, weight, viability, etc. The variation in individual seed lots causes the amount of bulk seed planted per acre to vary considerably while the actual PLS seeding rates remain constant.

Best Times to Seed

Seeding just prior to the summer monsoon season is recommended. The arrival of the summer monsoon season typically occurs somewhere between the middle of June through the end of August. If seeding immediately prior to the summer monsoons is not practical, the SLO recommends seeding during the monsoons, or after the monsoons and before the first frost. Seeding following the summer monsoons may be successful if rain initiates sufficient growth to allow the plants to go through cool, dry, windy, and hot weather prior to the next summer precipitation events.

Seeding during other times of the year is allowed, however, the risk of failure increases due to spring winds and early germination followed by a dry period. Seeding should not be done when the ground is frozen. Seeding may

proceed when there is evidence of frost, providing the seedbed can be kept in a workable condition so that the seed is planted at the correct depth.

Table 4. Recommended Seeding Times

Preference	Seeding Times
1st	Prior to summer monsoon *June - August*
2nd	During summer monsoon
3rd	After summer monsoon *Before first frost*

Seed Certification

All seed utilized must be purchased through a licensed dealer and meet standards established by the New Mexico Department of Agriculture (NMDA). All seed shall be furnished in sealed, undamaged containers and shall be plainly labeled on tags in accordance with NMDA standards. Following seeding operations, the Operator shall furnish to the SLO the seed tags and one copy of a materials certification signed by the vendor. One or more random samples may be taken by the SLO or his representative prior to, or during drill seeding operations for testing and analysis by an independent seed laboratory.

Drill Seeding

Drill seeding is the most effective seeding method for revegetation of disturbed sites.

Equipment:

Only rangeland drills are recommended. Drills shall be capable of applying the seed in uniform rows spaced at a maximum of 12 inches; 6 to 8 inch spacing between drill rows is most common. Rangeland drills including Truax Flex II drills, Laird rangeland drills, Great Plains rangeland drills, and equivalent are recommended for use.

Light duty drills (drills incapable of withstanding site and soil conditions on sites to be revegetated), standard farm drills, and drills in poor working condition are not acceptable. Use of these drills will result in less than satisfactory revegetation success due to poor seed application and placement. Turf grass type seeders can be utilized, but may have difficulty seeding in rough and rocky terrain and may be subject to considerable damage.

Rangeland drills capable of seeding a variety of seed types are best. Rangeland drills generally have three seed boxes, which can be used for the 3 seed submixtures.

1. Small seed box for small seed.
2. Standard box for average, non fluffy, non trashy seed
3. Fluffy box for fluffy, trashy, or similar seed

All three boxes shall have their own flow metering system. The drill manufacturer will provide operator's instructions for setting flow rates for the drill boxes. Seed mixes should be provided in bags separating seed types into the three categories: small (S), standard (D) and fluffy (F).

Application Rates:

The seed mixture shall be applied at the drill seed application rate indicated in the seed mixture tables of the Revegetation Plan with adjustments for hydroseeding or broadcast seeding if needed. Variations from the specified seed mixtures must be approved in writing by the SLO.

Application rates identified in the Revegetation Plan seed mixtures are designed to address more factors than the soil type and the standard recommended seeds per acre. The application rates also address practical issues such as

equipment efficiency, operator error, wind, wildlife impact, seed survivability, seed planting depth, and related factors that negatively impact seed placement and survival.

Seeding Depth:

The SLO recommends seed be drilled to a depth of ¼ to ½ inch regardless of the size or type.

Drill Calibration:

Calibrating the drill at the beginning of drill seeding operations is required for each seed mixture. Continual checking and adjusting the drill settings is necessary. Frequency of checking and adjustments depends on the uniformity of the mixed seed, humidity, dust and trash accumulation in the drill metering system, and variability in the roughness of the soil surface.

Drills can be calibrated by a number of different techniques. Utilize drill manufacturers calibration procedures if available; otherwise, the NMSLO recommends the following drill seeding calibration methods described by the NRCS (USDA, 1985. www.mt.nrcs.usda.gov/technical /ecs/plants/technotes/pmtechnotesMT30.html).

Hydraulic Seeding

Hydraulic seeding, or hydroseeding, is the process of broadcast seed using water and a small amount of wood fiber mulch to carry the seed via a hydroseeder. Hydroseeding is typically best suited for steep slope areas where drill seeding is not practical. While the SLO recommends drill seeding as the method of choice for all sites, economics of smaller sites may make hydroseeding more practical. Hydraulic mulching (hydromulching) shall follow hydroseeding on all sites (see section 4.5 Mulching).

Procedures

Following are the three steps for hydroseeding and hydromulching:

1. Preparing the area for seeding;
2. Hydraulic seeding; and,
3. Hydraulic mulching.

1. Preparing the Area for Seeding:

The Operator should first prepare the seedbed (seed section 4.3 Seedbed Preparation).

2. Hydraulic Seeding:

Mix seed, water, and hydraulic mulch fiber into a homogenous slurry and uniformly apply to the areas to be seeded. The slurry must be constantly agitated during application to assure even application and distribution of seed and hydromulch.

Seed should be applied at double the drill seed application rate. At least 1,000 gallons of water should be used per acre for applying the seed and hydraulic mulch. 400 pounds of hydraulic mulch fiber per acre should be included in the mixture to assist the hydroseeder applicator in visually determining the evenness of the seed application and the accuracy of the application rate.

Seed should not be left in the tank with water for more than 2 hours. If this occurs due to equipment failure, or for any other reason, then the mixed material may need to be disposed of either off-site, or applied to the slopes at the Operator's expense. If applied to the slopes, it should not be counted as applied seed and new seed will need to be applied.

3. Hydraulic Mulching (Hydromulching):

Hydromulching is a technique to provide short term soil stabilization and erosion protection while seedlings germinate and begin to establish. Hydromulching differs from hydroseeding in that only hydraulic mulch fiber and tackifier are applied during hydromulching operations. It serves the same purpose as hay mulching and crimping.

Combining seed with all the hydromulch woodfiber and applying everything in a one step operation is highly discouraged and success will be unlikely.

For best results, measure the area(s) to be seeded, divide the disturbed area into small components, depending on the capacity of the hydroseeder, and prepare a chart or plan for determining the number of seed loads and the location(s) for each load. The hydraulic mulch and tackifier should be mixed with water and uniformly applied after seeding, preferably during the same day or within 36 hours. See section 4.5 Mulching for more details on Hydromulching.

Application Rates

Seed mixtures should be applied at double the drill seed application rates in the Revegetation Plans.

Equipment

The hydroseeder shall be equipped with a mechanical power-driven agitator capable of keeping all solids in suspension in a homogeneous slurry until distributed. The pump pressure must maintain a continuous non-fluctuating spray capable of reaching the extremities of the seeding area.

Broadcast Seeding

Broadcast seeding is recommended only for areas inaccessible to a rangeland drill, or too small to warrant the use of a rangeland drill (less than ¼ acres), the SLO recommends drill seeding in all accessible locations. Because the seed is not carefully placed in the soil profile to a controlled depth when broadcast seeding, seed is lost to environmental impacts including wind, rain, wildlife (birds and rodents), sunlight (UV light, heat) and other factors.

Application Rates:

When broadcasting, seed mixtures shall be applied at double the drill seed application rates in the Revegetation Plan.

Procedures:

Areas to be broadcast seeded should receive the same topsoil placement and seedbed preparation as drill seeded areas. If equipment access limitations exist, then some type of soil surface loosening is still necessary such that the topsoil is in a mellow, loosened condition. If slopes are too steep to apply on the contour by drill seeding, broadcast up and down the slope or at a diagonal. Broadcast seeding should not be done during windy conditions.

Do not broadcast an area larger than can be quickly raked, dragged, or chained to cover the seed (within approximately 30 minutes after broadcasting). The seed should be covered approximately ¼ to ½ inches by raking, dragging, chaining, or chain harrowing, unless prevented by equipment access limitations. Care should be taken by the operators and laborers to minimize dragging seed down slope or dragging seed off high spots and concentrating that seed in the low spots. Failure to cover the seed soon after broadcasting, or at all, may result in revegetation failure.

Equipment:

Mechanical broadcast seeding is always recommended over hand broadcast seeding. Mechanical broadcast seeding can be accomplished with any equipment that will evenly spread the seed on the soil surface. A broad range of hand held, ATV mounted, 3-point, and pull type broadcast spreaders are available on the market.

Mechanical broadcasting units must be capable of distributing fluffy and thrashy seed. Most residential type units are not capable. One example of a mechanical broadcasting unit capable of handling fuffy/thrashy seed is distributed by Truax (http://www.truaxcomp.com/seed-slinger.html), other types are available.

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd , Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

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JAN 30 2009
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State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
June 19, 2008

WELL API NO. 30-025-24388	
5. Indicate Type of Lease STATE ☒ FEE ☐	
6. State Oil & Gas Lease No. K-03354	
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS)	7. Lease Name or Unit Agreement Name New Mexico State -7-
1. Type of Well: Oil Well ☒ Gas Well ☐ Other	8. Well Number 1
2. Name of Operator Bridwell Oil Company	9. OGRID Number 2832
3. Address of Operator Post Office Box 1830, Wichita Falls, Texas 76307	10. Pool name or Wildcat Flying M ; SA
4. Well Location Unit Letter **H** : **1980** feet from the **North** line and **660** feet from the **East** line Section **007** Township **9S** Range **33E** NMPM County **Lea**	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 4380 GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☒
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Plug & Abandon
1. MIRU J&B Well Service.
2. Set Plug 1 at 4,249' to 4,420'.
3. Circulate hole with 12.5 ppg mud. Shot squeeze perforations at 2,440', 1,878', 422', 60'.
4. Set Plug 2 at 2,223' to 2,497', 25 sacks, tagged.
5. Set Plug 3 at 1,768' to 1,928', 25 sacks, tagged.
6. Set Plug 4 at 264' to 422', 50 sacks.
7. Set Plug 5 to 60' below ground level, 15 sacks.
8. Cut casing 3' below surface, weld plate, cover.
9. Steel marker not set as per instructions by OCD field agent.

Approved for plugging of well bore only. Liability under bond is retained pending receipt of C-103 (Subsequent Report of Well Plugging) which may be found at OCD Web Page under Forms, www.emnrd.state.nm.us/ocd.

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Steve Ginnings TITLE President DATE 1/28/2009

Type or print name Steve Ginnings E-mail address: sginnings@wf.net PHONE: 940/723-4351

For State Use Only

APPROVED BY: Gary W. Gill TITLE DISTRICT 1 SUPERVISOR DATE FEB 03 2009

Conditions of Approval (if any):

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

Field Inspection Program
"Preserving the Integrity of Our Environment"

29-Jan-09

BRIDWELL OIL CO
PO DRAWER 1830
WICHITA FALLS TX 76307

LETTER OF VIOLATION - Inspection

Dear Operator:

The following inspection(s) indicate that the well, equipment, location or operational status of the well(s) failed to meet standards of the New Mexico Oil Conservation Division as described in the detail section below. To comply with standards imposed by Rules and Regulations of the Division, corrective action must be taken immediately and the situation brought into compliance. The detail section indicates preliminary findings and/or probable nature of the violation. This determination is based on an inspection of your well or facility by an inspector employed by the Oil Conservation Division on the date(s) indicated.

Please notify the proper district office of the Division, in writing, of the date corrective actions are scheduled to be made so that arrangements can be made to reinspect the well and/or facility.

INSPECTION DETAIL SECTION

NEW MEXICO 7 STATE No.001 H-7-9S-33E **30-025-24388-00-00**

Inspection Date	Type Inspection	Inspector	Violation?	*Significant Non-Compliance?	Corrective Action Due By:	Inspection No.
01/28/2009	Plugged Well Surface Restor	Maxey Brown	Yes	No	5/3/2009	iMGB0902860668

Comments on Inspection: DO NOT RELEASE. (RULE 202). NEED TO FINISH CLEARING T/B SITE OF PILES OF DIRT, REMOVE FLOWLINE, SEVERAL JTS OF TBG FROM LOCATION. FILL IN CELLAR (WELDED PLATE MARKER OK). ALSO SUBMIT C-103 SUBSEQUENT REPORT OF WELL PLUGGING THIS IS 1ST LETTER OF NON-COMPLIANCE.

P/A'D. OK TO RELEASE

DATE: 7/1/2009

COMPANY: BRIDWELL OIL COMPANY

LEASE NAME and #. NEW MEXICO STATE 7 #1

API# 30-025-24388

UL H SECTION 7 TOWNSHIP 9S RANGE 33E

SIGNED: Mary D Brown

GPS N 33° 32.956
W 103° 36.032

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

RECEIVED
JAN 13 2009
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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

[X] Initial Report [ ] Final Report

Name of Company: Bridwell Oil Company	Contact: Steve Ginnings, President
Address: 810 8th Street, Wichita Falls, TX 76301	Telephone No.: (940) 723-4351
Facility Name: NM State #7	Facility Type: Well and Tank Battery

Surface Owner: State Land	Mineral Owner	Lease No.

LOCATION OF RELEASE

API 30.025. [illegible] 24388

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A H	7	9S	33E					Lea

Latitude: N 33° 32' 57.6" Longitude: W 103° 36' 02.0"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Legacy Spill	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: Unknown
Was Immediate Notice Given? [ ] Yes [X] No [ ] Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? [ ] Yes [X] No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Legacy spills at plugged well and out-of-service tank battery.

Describe Area Affected and Cleanup Action Taken.* Affected area is approximately 20' X 100' at well and 200' X 300' at tank battery. Cleanup is proposed by scraping soil from affected areas to achieve NMOCD recommended remediation action levels, collect confirmation soil samples and restore surface to New Mexico State Land Office requirements. Contaminated soil will be transported to an NMOCD permitted surface waste management or disposal facility.

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: Steve Ginnings	OIL CONSERVATION DIVISION	
Printed Name: Steve Ginnings	Approved by District Supervisor: ENVIRO ENGR	
Title: President	Approval Date: 1.13.09	Expiration Date: 3.13.09
E-mail Address: sginnings@wf.net	Conditions of Approval:	Attached [ ] IRP # 2049
Date: January 9, 2009 Phone: (970) 723-4351		

* Attach Additional Sheets If Necessary

RECEIVED
JAN 13 2009
HOBBSOCD

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

RECEIVED
JAN 13 2009
HOBBSOCD

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

[X] Initial Report [ ] Final Report

Name of Company: Bridwell Oil Company	Contact: Steve Ginnings, President
Address: 810 8th Street, Wichita Falls, TX 76301	Telephone No.: (940) 723-4351
Facility Name: NM State #7	Facility Type: Well and Tank Battery

Surface Owner: State Land	Mineral Owner	Lease No.

LOCATION OF RELEASE

API 30-025-24388

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A H	7	9S	33E					Lea

Latitude: N 33° 32' 57.6" Longitude: W 103° 36' 02.0"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Legacy Spill	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: Unknown
Was Immediate Notice Given? [ ] Yes [X] No [ ] Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? [ ] Yes [X] No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Legacy spills at plugged well and out-of-service tank battery.

Describe Area Affected and Cleanup Action Taken.* Affected area is approximately 20' X 100' at well and 200' X 300' at tank battery. Cleanup is proposed by scraping soil from affected areas to achieve NMOCD recommended remediation action levels, collect confirmation soil samples and restore surface to New Mexico State Land Office requirements. Contaminated soil will be transported to an NMOCD permitted surface waste management or disposal facility.

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Signature: Steve Ginnings

Printed Name: Steve Ginnings

Title: President

E-mail Address: sginnings@wf.net

Date: January 9, 2009 Phone: (970) 723-4351

OIL CONSERVATION DIVISION

Approved by District Supervisor: ENVIRO ENGR

Approval Date: 1.13.09 Expiration Date: 3.13.09

Conditions of Approval:

Attached [ ]
IRP # 2049

* Attach Additional Sheets If Necessary

RECEIVED
JAN 13 2009
HOBBSOCD

District I
1625 N. French Dr., Hobbs, NM 88240
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1301 W. Grand Avenue, Artesia, NM 88210
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State of New Mexico
Energy Minerals and Natural Resources

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

RECEIVED
JAN 13 2009
HOBBSOCD

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

[X] Initial Report [ ] Final Report

Name of Company: Bridwell Oil Company	Contact: Steve Ginnings, President
Address: 810 8th Street, Wichita Falls, TX 76301	Telephone No.: (940) 723-4351
Facility Name: NM State #7	Facility Type: Well and Tank Battery

Surface Owner: State Land	Mineral Owner	Lease No.

LOCATION OF RELEASE

API 30.025. 24388

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A H	7	9S	33E					Lea

Latitude: N 33° 32' 57.6" Longitude: W 103° 36' 02.0"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Legacy Spill	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: Unknown
Was Immediate Notice Given? [ ] Yes [X] No [ ] Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? [ ] Yes [X] No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Legacy spills at plugged well and out-of-service tank battery.

Describe Area Affected and Cleanup Action Taken.* Affected area is approximately 20' X 100' at well and 200' X 300' at tank battery. Cleanup is proposed by scraping soil from affected areas to achieve NMOCD recommended remediation action levels, collect confirmation soil samples and restore surface to New Mexico State Land Office requirements. Contaminated soil will be transported to an NMOCD permitted surface waste management or disposal facility.

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Signature: Steve Ginnings	OIL CONSERVATION DIVISION	
Printed Name: Steve Ginnings	Approved by District Supervisor: ENVIRO ENGR	
Title: President	Approval Date: 1.13.09	Expiration Date: 3.13.09
E-mail Address: sginnings@wf.net	Conditions of Approval:	Attached [ ] IRP # 2049
Date: January 9, 2009 Phone: (970) 723-4351		

* Attach Additional Sheets If Necessary

RECEIVED
JAN 13 2009
HOBBSOCD

Submit 2 Copies To Appropriate District Office
District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Ave , Artesia, NM 88210
District III
1000 Rio Brazos Rd , 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-103
October 25, 2007

	WELL API NO.
	5. Indicate Type of Lease STATE ☐ FEE ☐
	6. State Oil & Gas Lease No.
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS)	7. Lease Name or Unit Agreement Name
1. Type of Well: ☐Oil Well ☐ Gas Well ☐ Other	8. Well Number
2. Name of Operator	9. OGRID Number
3. Address of Operator	10. Pool name or Wildcat
4. Well Location Unit Letter_____:_____feet from the _____ line and _____feet from the _____line Section _____ Township _____ Range _____ NMPM _____ County _____	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
OTHER: ☐		☒ **Location is ready for OCD inspection after P&A**	

☐ All pits have been remediated in compliance with OCD rules and the terms of the Operator's pit permit and closure plan.
☐ Rat hole and cellar have been filled and leveled. Cathodic protection holes have been properly abandoned.
☐ A steel marker at least 4" in diameter and at least 4' above ground level has been set in concrete. It shows the

OPERATOR NAME, LEASE NAME, WELL NUMBER, API NUMBER, QUARTER/QUARTER LOCATION OR UNIT LETTER, SECTION, TOWNSHIP, AND RANGE. All INFORMATION HAS BEEN WELDED OR PERMANENTLY STAMPED ON THE MARKER'S SURFACE.

☐ The location has been leveled as nearly as possible to original ground contour and has been cleared of all junk, trash, flow lines and other production equipment.
☐ Anchors, dead men, tie downs and risers have been cut off at least two feet below ground level.
☐ If this is a one-well lease or last remaining well on lease, the battery and pit location(s) have been remediated in compliance with OCD rules and the terms of the Operator's pit permit and closure plan. All flow lines, production equipment and junk have been removed from lease and well location.
☐ All metal bolts and other materials have been removed. Portable bases have been removed. (Poured onsite concrete bases do not have to be removed.)
☐ All other environmental concerns have been addressed as per OCD rules.
☐ Pipelines and flow lines have been abandoned in accordance with 19.15.9.714.B(4)(b) NMAC. All fluids have been removed from non-retrieved flow lines and pipelines.

When all work has been completed, return this form to the appropriate District office to schedule an inspection. If more than one inspection has to be made to a P&A location because it does not meet the criteria above, a penalty may be assessed.

SIGNATURE_____ TITLE_____ DATE _____

TYPE OR PRINT NAME _____ E-MAIL: _____ PHONE: _____

For State Use Only

APPROVED BY:_____ TITLE_____ DATE_____

Conditions of Approval (if any):

APPENDIX B

Boring Logs

Lithologic Boring Log

Drilling started 11/24/2008, completed 11/24/2008.
Drilled with Air Rotary by Scarborough Drilling

CL - Reddish Brown (5YR 4/3) silty clay, very fine grained quartz sand, moist

SM - Reddish Yellow (5YR 7/6 to 7/8) silty sand, very fine grained quartz sand, poorly sorted, round

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, hard below 10'

Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 500 700 | >1,000

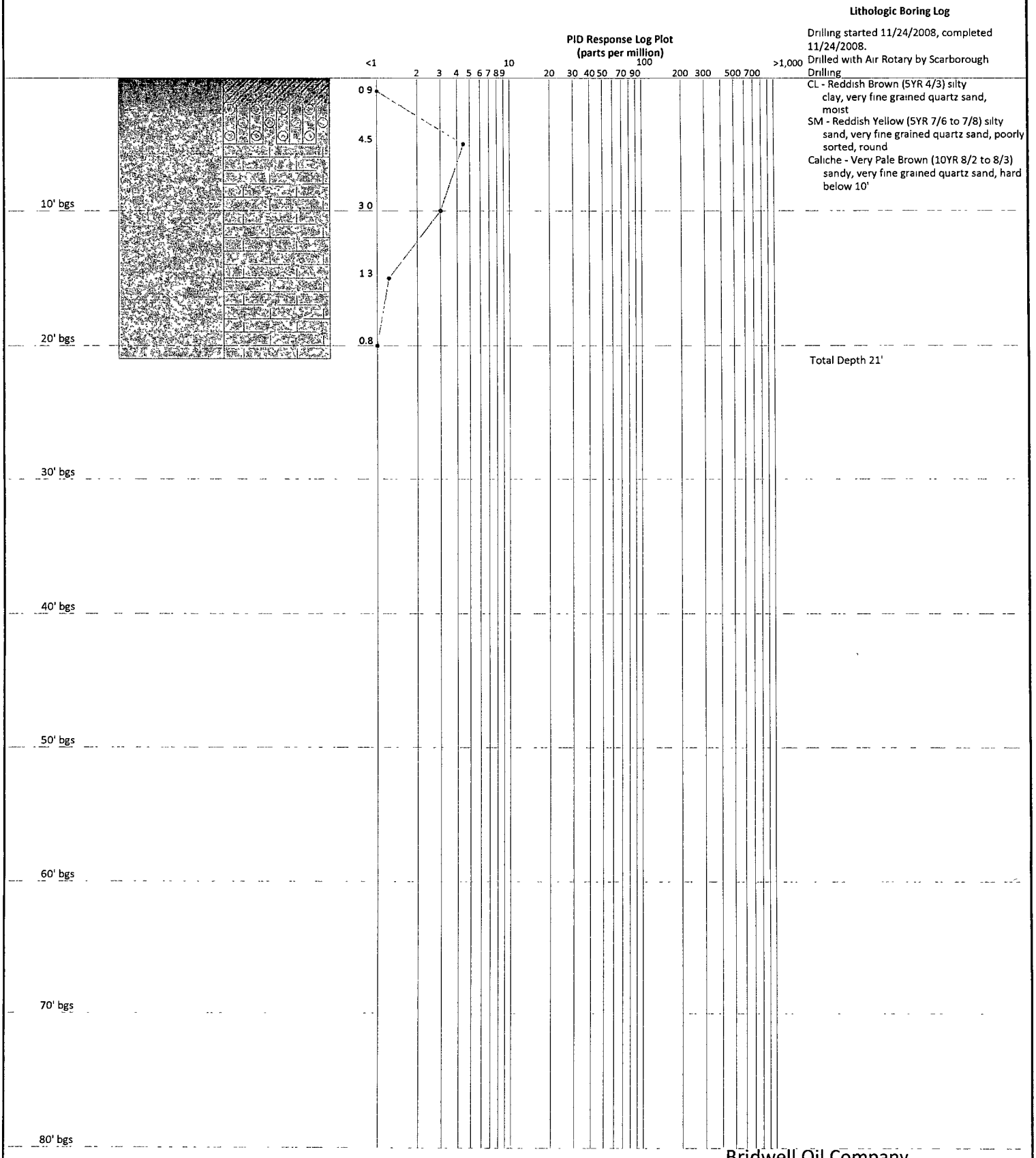
60.2
40.9
2.8
6.8
0.2

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 32' 57.6"
W 103° 36' 02.0"

Larson & Associates, Inc.
Environmental Consultants

BH-1 - Boring Log



Lithologic Boring Log

Drilling started 11/24/2008, completed 11/24/2008.
Drilled with Air Rotary by Scarborough Drilling

CL - Reddish Brown (5YR 4/3) silty clay, very fine grained quartz sand, moist

SM - Reddish Yellow (5YR 7/6 to 7/8) silty sand, very fine grained quartz sand, poorly sorted, round

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, hard below 10'

Total Depth 21'

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 32' 57.6"
W 103° 36' 02.0"

Larson & Associates, Inc.
Environmental Consultants

BH-2 - Boring Log

Lithologic Boring Log

Drilling started 11/24/2008, completed 11/24/2008.
Drilled with Air Rotary by Scarborough Drilling.

CL - Reddish Brown (5YR 4/3) silty clay, very fine grained quartz sand, moist

SM - Reddish Yellow (5YR 7/6 to 7/8) silty sand, very fine grained quartz sand, poorly sorted, poorly cemented, round

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, hard below 10'

Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 20 | 30 | 40 | 50 | 70 | 90 | 100 | 200 | 300 | 500 | 700 | >1,000

0.8
0.7
0.2
0.9
0.7

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 32' 57.6"
W 103° 36' 02.0"

Larson & Associates, Inc.
Environmental Consultants

BH-3 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling.

CL - Reddish Brown (5YR 4/3) silty clay, very fine grained quartz sand, moist

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, moderately hard below 10'

Total Depth 30'

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 | 500 700 | >1,000

0.0
0.0
0.0
0.0
0.0

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09 0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-4 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling

CL - Red (5YR 5/6 to 5/8) silty clay, very fine grained quartz sand, dry, compacted

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, moderately hard below 10' Light Reddish Brown (5YR 6/3) indurated

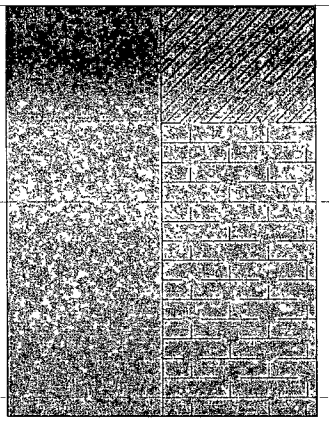
Total Depth 21'

PID Response Log Plot (parts per million)

<1 2 3 4 5 6 7 8 9 10 20 30 40 50 70 90 100 200 300 500 700 >1,000

0.4
0.2
0.0
0.0
0.0

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs



Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09 0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-5 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling

CL - Red (5YR 5/6 to 5/8) silty clay, very fine grained quartz sand, dry

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, moderately hard to soft

Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 20 | 30 | 40 | 50 | 70 | 90 | 100 | 200 | 300 | 500 | 700 | >1,000

0.0
0.2
0.0
0.2
0.0

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-6 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling.

CL - Red (2 5YR 5/6 to 5/8) silty clay, very fine grained quartz sand, moist

SM - Pink (7.5YR 8/4) silty clayey sand, very fine grained quartz sand, poorly sorted, soft, moist

Caliche - Pink (7.5YR 7/3 to 8/3) sandy, very fine grained quartz sand, moderately hard below 10'; Pale brown (10YR 8/3 to 8/4) to Pink (5YR 8/3) below 10'

Total Depth 31'

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 500 700 | >1,000

10' bgs	3.5
	123 7
	1.3
	15.9
20' bgs	5 1
30' bgs	4.1
40' bgs	
50' bgs	
60' bgs	
70' bgs	
80' bgs	

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09 0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-7 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008
Drilled with Air Rotary by Scarborough Drilling.

CL - Red (2.5YR 5/6 to 5/8) silty clay, very fine grained quartz sand, moist

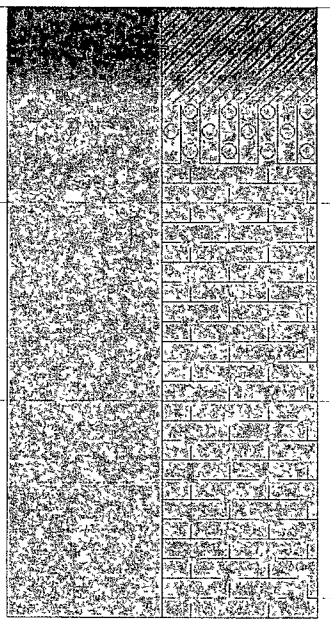
SM - Pink (7.5YR 8/4) silty clayey sand, very fine grained quartz sand, poorly sorted, soft, moist

Caliche - Pink (7.5YR 7/3 to 8/3) sandy, very fine grained quartz sand, moderately hard below 10'; Pale brown (10YR 8/3 to 8/4) to Pink (5YR 8/3) below 10'

Total Depth 31'

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 500 700 | >1,000

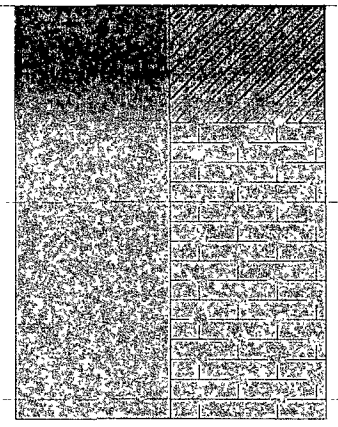


10' bgs	3.5
	123.7
	1.3
	15.9
20' bgs	5.1
30' bgs	4.1
40' bgs	
50' bgs	
60' bgs	
70' bgs	
80' bgs	

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-7 - Boring Log



Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling.

Caliche - Light Brown (10YR 8/3 to 8/4) fill material

CL - Red (2.5YR 5/6 to 5/8) very fine grained quartz sand, moist

SM- Pink (5YR 8/3) clayey sand, very fine grained quartz sand, poorly sorted, dry

Caliche - Very Pale Brown (10YR 8/3 to 8/4) sandy, very fine grained quartz sand, very hard below 10'

Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 20 | 30 | 40 | 50 | 70 | 90 | 100 | 200 | 300 | 500 | 700 | >1,000

0.0
0.0
0.4
0.0
0.0

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-8 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling.

CL - Yellowish Red (5YR 5/6 to 5/8) very fine grained quartz sand, moist

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, very hard light Reddish Brown (5YR 6/3) below 15'

Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 500 700 | >1,000

0.0
1 2
10.5
38 6
6.4

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01 1"

Larson & Associates, Inc.
Environmental Consultants

BH-9 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling

CL - Yellowish Red (5YR 5/6 to 5/8) very fine grained quartz sand

SM - Reddish Yellow (5YR 7/6 to 6/6) very fine grained quartz sand, mottled, dry

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, soft to very hard

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 500 700 | >1,000

0.0
0.0
0.0
0.0

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Total Depth 21'

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01 1"

Larson & Associates, Inc.
Environmental Consultants

BH-10 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008
Drilled with Air Rotary by Scarborough Drilling.

CL - Yellowish Red (5YR 5/6 to 5/8) very fine grained quartz sand, moist

SM - Reddish Yellow (5YR 7/6 to 6/6) very fine grained quartz sand, dry

Caliche - Very Pale Brown (10YR 8/2 to 8/3) sandy, very fine grained quartz sand, soft to hard, Light Reddish Brown (5YR 6/3) very hard below 15'

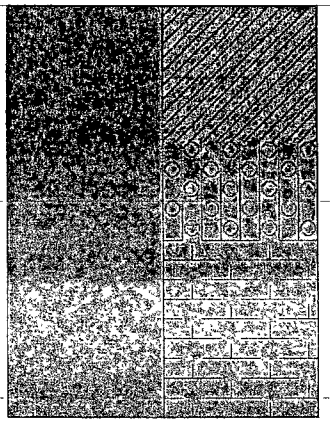
Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 20 | 30 | 40 | 50 | 70 | 90 | 100 | 200 | 300 | 500 | 700 | >1,000

0.0
0.0
0.0
0.0

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs



Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-11 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling

CL - Very Dark Gray to Reddish Brown (5YR 3/1 to 5/3) silty clay, very fine grained quartz sand, moist, very strong hydrocarbon smell and stain fron 0 0' to 0.5'

SM - Reddish Yellow (5YR 7/6) very fine grained quartz sand, poorly sorted

Caliche - Very Pale Brown (10YR 8/3 to 8/4) sandy, very fine grained quartz sand, soft to hard

Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 500 700 | >1,000

210 6
14.6
0 0
18.4
8 3

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-12 - Boring Log

Lithologic Boring Log

Drilling started 11/25/2008, completed 11/25/2008.
Drilled with Air Rotary by Scarborough Drilling.

CL - Yellowish Red (5YR 5/6 to 4/6) silty clay, very fine grained quartz sand, dry

Caliche - Very Pale Brown (10YR 8/3 to 8/4) sandy, very fine grained quartz sand, soft to very hard

Total Depth 21'

PID Response Log Plot (parts per million)

<1 | 2 3 4 5 6 7 8 9 | 10 | 20 30 40 50 70 90 | 100 | 200 300 500 700 | >1,000

0.0
0.0
0.0
0.2

10' bgs
20' bgs
30' bgs
40' bgs
50' bgs
60' bgs
70' bgs
80' bgs

Bridwell Oil Company
1RP#2049
New Mexico State 7 Lease
Unit H, (SE/4, NE/4) SEC 7, T-9-S, R-33-E
LEA COUNTY, NM
N 33° 33' 09.0"
W 103° 36' 01.1"

Larson & Associates, Inc.
Environmental Consultants

BH-13 - Boring Log

APPENDIX C

Laboratory Reports

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
5002 Basin Street, Suite A1 Midland Texas 79703 432•689•6301 FAX 432•689•6313
6015 Harris Parkway Suite 110 Ft. Worth, Texas 76132 817•201•5260
E-Mail lab@traceanalysis.com

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

Michelle Green
Larson and Associates, Inc.

P. O. Box 50685
Midland, Tx, 79710

Report Date: December 30, 2008

Work Order: 8112601

Project Location: NM
Project Name: NM State #7 Lease
Project Number: 8-0171

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
180641	BH-1, 1'	soil	2008-11-24	14:10	2008-11-26
180642	BH-1, 5'	soil	2008-11-24	14:15	2008-11-26
180643	BH-1, 10'	soil	2008-11-24	14:18	2008-11-26
180644	BH-1, 15'	soil	2008-11-24	14:33	2008-11-26
180645	BH-1, 20'	soil	2008-11-24	14:37	2008-11-26
180646	BH-2, 1'	soil	2008-11-24	14:50	2008-11-26
180647	BH-2, 5'	soil	2008-11-24	14:55	2008-11-26
180648	BH-2, 10'	soil	2008-11-24	14:59	2008-11-26
180649	BH-2, 15'	soil	2008-11-24	15:06	2008-11-26

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
180650	BH-2, 20'	soil	2008-11-24	15:12	2008-11-26
180651	BH-3, 1'	soil	2008-11-24	15:27	2008-11-26
180652	BH-3, 5'	soil	2008-11-24	15:31	2008-11-26
180653	BH-3, 10'	soil	2008-11-24	15:37	2008-11-26
180654	BH-3, 15'	soil	2008-11-24	15:43	2008-11-26
180655	BH-3, 20'	soil	2008-11-24	15:54	2008-11-26
180656	BH-4, 1'	soil	2008-11-25	07:39	2008-11-26
180657	BH-4, 5'	soil	2008-11-25	07:42	2008-11-26
180658	BH-4, 10'	soil	2008-11-25	07:49	2008-11-26
180659	BH-4, 15'	soil	2008-11-25	07:55	2008-11-26
180660	BH-4, 20'	soil	2008-11-25	08:01	2008-11-26
180661	BH-4, 30'	soil	2008-11-25	08:16	2008-11-26
180662	BH-5, 1'	soil	2008-11-25	08:24	2008-11-26
180663	BH-5, 5'	soil	2008-11-25	08:34	2008-11-26
180664	BH-5, 10'	soil	2008-11-25	08:42	2008-11-26
180665	BH-5, 15'	soil	2008-11-25	08:49	2008-11-26
180666	BH-5, 20'	soil	2008-11-25	09:02	2008-11-26
180667	SS-1	soil	2008-11-25	08:55	2008-11-26
180668	BH-6, 1'	soil	2008-11-25	09:15	2008-11-26
180669	BH-6, 5'	soil	2008-11-25	09:21	2008-11-26
180670	BH-6, 10'	soil	2008-11-25	09:26	2008-11-26
180671	BH-6, 15'	soil	2008-11-25	09:30	2008-11-26
180673	BH-7, 1'	soil	2008-11-25	09:52	2008-11-26
180674	BH-7, 5'	soil	2008-11-25	09:57	2008-11-26
180675	BH-7, 10'	soil	2008-11-25	10:04	2008-11-26
180676	BH-7, 15'	soil	2008-11-25	10:13	2008-11-26
180677	BH-7, 20'	soil	2008-11-25	10:19	2008-11-26
180678	BH-7, 30'	soil	2008-11-25	10:42	2008-11-26
180679	BH-8, 1'	soil	2008-11-25	10:55	2008-11-26
180680	BH-8, 5'	soil	2008-11-25	11:00	2008-11-26
180681	BH-8, 10'	soil	2008-11-25	11:03	2008-11-26
180682	BH-8, 15'	soil	2008-11-25	11:11	2008-11-26
180683	BH-8, 20'	soil	2008-11-25	11:29	2008-11-26
180684	BH-9, 1'	soil	2008-11-25	12:27	2008-11-26
180685	BH-9, 5'	soil	2008-11-25	12:31	2008-11-26
180686	BH-9, 10'	soil	2008-11-25	12:37	2008-11-26
180687	BH-9, 15'	soil	2008-11-25	12:47	2008-11-26
180688	BH-9, 20'	soil	2008-11-25	12:56	2008-11-26
180689	BH-10, 1'	soil	2008-11-25	13:06	2008-11-26
180690	BH-10, 5'	soil	2008-11-25	13:10	2008-11-26
180691	BH-10, 10'	soil	2008-11-25	13:15	2008-11-26
180692	BH-10, 15'	soil	2008-11-25	13:21	2008-11-26
180693	BH-10, 20'	soil	2008-11-25	13:27	2008-11-26
180694	BH-11, 1'	soil	2008-11-25	13:37	2008-11-26
180695	BH-11, 5'	soil	2008-11-25	13:40	2008-11-26
180696	BH-11, 10'	soil	2008-11-25	13:46	2008-11-26
180697	BH-11, 15'	soil	2008-11-25	13:50	2008-11-26
180698	BH-11, 20'	soil	2008-11-25	13:59	2008-11-26
180699	BH-12, 1'	soil	2008-11-25	14:11	2008-11-26

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
180700	BH-12, 5'	soil	2008-11-25	14:15	2008-11-26
180701	BH-12, 10'	soil	2008-11-25	14:20	2008-11-26
180702	BH-12, 15'	soil	2008-11-25	14:23	2008-11-26
180704	BH-13, 0'	soil	2008-11-25	14:40	2008-11-26
180705	BH-13, 5'	soil	2008-11-25	14:45	2008-11-26
180706	BH-13, 10'	soil	2008-11-25	14:49	2008-11-26
180707	BH-13, 15'	soil	2008-11-25	15:04	2008-11-26
180708	BH-13, 20'	soil	2008-11-25	15:06	2008-11-26

Comment(s)

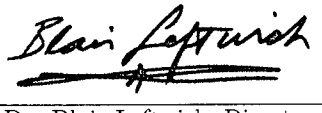
These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Notes:
All sample results are reported on a dry weight basis.

For inorganic analyses, the term MQL should actually read PQL.

Standard Flags

U - Not detected. The analyte is not detected above the SDL.
J - Estimated. The analyte is positively identified and the value is approximated between the SDL and MQL.
B - The sample contains less than ten times the concentration found in the method blank.
JB - The analyte is positively identified and the value is approximated between the SDL and MQL.
The sample contains less than ten times the concentration found in the method blank.
The result should be considered non-detect to the SDL.



Dr. Blair Leftwich, Director

Case Narrative

Samples for project NM State #7 Lease were received by TraceAnalysis, Inc. on 2008-11-26 and assigned to work order 8112601. Samples for work order 8112601 were received intact at a temperature of 3.3 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
BTEX	S 8021B
Chloride (IC)	E 300.0
Moisture Content	ASTM D 2974-87
TPH DRO	Mod. 8015B
TPH GRO	S 8015B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8112601 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Note: *All sample results are reported on a dry weight basis.*

Sample: 180641 - BH-1, 1'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55381	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47336	Sample Preparation:	2008-12-18	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**1490**	**1490**	<40.2	mg/Kg	100	40.2	1	0.3527

Sample: 180641 - BH-1, 1'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54759	Date Analyzed:	2008-12-02	Analyzed By:	AR
Prep Batch:	46783	Sample Preparation:	2008-12-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		12.2	%	1	0

Sample: 180641 - BH-1, 1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54826	Date Analyzed:	2008-12-03	Analyzed By:	LD
Prep Batch:	46719	Sample Preparation:	2008-11-26	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	B	**519**	**519**	96.8	mg/Kg	5	89.8	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[1]	533	mg/Kg	5	100	533	10 - 250.4

Sample: 180641 - BH-1, 1'

[1] High surrogate recovery due to peak interference.

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54735 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | Sample Preparation: 2008-12-01 | Prepared By: AG

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**560**	**560**	<0.390	mg/Kg	2	0.390	1	0.171

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.02	mg/Kg	2	2.00	101	75 - 117.2
4-Bromofluorobenzene (4-BFB)	[2]	4.15	mg/Kg	2	2.00	208	56 - 142.8

Sample: 180642 - BH-1, 5'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55381 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47336 | Sample Preparation: 2008-12-18 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**665**	**665**	<37.0	mg/Kg	100	37.0	1	0.3527

Sample: 180642 - BH-1, 5'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 54759 | Date Analyzed: 2008-12-02 | Analyzed By: AR
Prep Batch: 46783 | Sample Preparation: 2008-12-01 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		4.77	%	1	0

Sample: 180642 - BH-1, 5'

Laboratory: Midland
Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A
QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD
Prep Batch: 46719 | Sample Preparation: 2008-11-26 | Prepared By: LD

[2]High surrogate recovery due to peak interference.

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	JB	**32.2**	<52.5	17.8	mg/Kg	1	16.6	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		84.1	mg/Kg	1	100	84	10 - 250.4

Sample: 180642 - BH-1, 5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54735	Date Analyzed:	2008-12-01	Analyzed By:	AG
Prep Batch:	46799	Sample Preparation:	2008-12-01	Prepared By:	AG

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**89.7**	**89.7**	<0.180	mg/Kg	1	0.180	1	0.171

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.02	mg/Kg	1	1.00	102	75 - 117.2
4-Bromofluorobenzene (4-BFB)		0.952	mg/Kg	1	1.00	95	56 - 142.8

Sample: 180643 - BH-1, 10'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55381	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47336	Sample Preparation:	2008-12-18	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**3360**	**3360**	<38.7	mg/Kg	100	38.7	1	0.3527

Sample: 180643 - BH-1, 10'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54759	Date Analyzed:	2008-12-02	Analyzed By:	AR
Prep Batch:	46783	Sample Preparation:	2008-12-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		8.91	%	1	0

Sample: 180643 - BH-1, 10'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54826	Date Analyzed:	2008-12-03	Analyzed By:	LD
Prep Batch:	46719	Sample Preparation:	2008-11-26	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<17.3	<54.9	18.7	mg/Kg	1	17.3	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		82.8	mg/Kg	1	100	83	10 - 250.4

Sample: 180643 - BH-1, 10'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54735	Date Analyzed:	2008-12-01	Analyzed By:	AG
Prep Batch:	46799	Sample Preparation:	2008-12-01	Prepared By:	AG

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**29.4**	**29.4**	<0.188	mg/Kg	1	0.188	1	0.171

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.10	mg/Kg	1	1.00	110	75 - 117.2
4-Bromofluorobenzene (4-BFB)		0.908	mg/Kg	1	1.00	91	56 - 142.8

Sample: 180644 - BH-1, 15'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55381	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47336	Sample Preparation:	2008-12-18	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**1160**	**1160**	<36.2	mg/Kg	100	36.2	1	0.3527

Sample: 180644 - BH-1, 15'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54759	Date Analyzed:	2008-12-02	Analyzed By:	AR
Prep Batch:	46783	Sample Preparation:	2008-12-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		2.50	%	1	0

Sample: 180645 - BH-1, 20'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55381	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47336	Sample Preparation:	2008-12-18	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**1480**	**1480**	<37.6	mg/Kg	100	37.6	1	0.3527

Sample: 180645 - BH-1, 20'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54759	Date Analyzed:	2008-12-02	Analyzed By:	AR
Prep Batch:	46783	Sample Preparation:	2008-12-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		6.10	%	1	0

Sample: 180646 - BH-2, 1'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55327	Date Analyzed:	2008-12-19	Analyzed By:	RD
Prep Batch:	47290	Sample Preparation:	2008-12-17	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**149**	**149**	<3.72	mg/Kg	10	3.72	1	0.3527

Sample: 180646 - BH-2, 1'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54759	Date Analyzed:	2008-12-02	Analyzed By:	AR
Prep Batch:	46783	Sample Preparation:	2008-12-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		5.26	%	1	0

Sample: 180646 - BH-2, 1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54826	Date Analyzed:	2008-12-03	Analyzed By:	LD
Prep Batch:	46719	Sample Preparation:	2008-11-26	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.6	<52.8	17.9	mg/Kg	1	16.6	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		105	mg/Kg	1	100	105	10 - 250.4

Sample: 180646 - BH-2, 1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54735	Date Analyzed:	2008-12-01	Analyzed By:	AG
Prep Batch:	46799	Sample Preparation:	2008-12-01	Prepared By:	AG

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**10.9**	**10.9**	<0.180	mg/Kg	1	0.180	1	0.171

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.12	mg/Kg	1	1.00	112	75 - 117.2
4-Bromofluorobenzene (4-BFB)		0.915	mg/Kg	1	1.00	92	56 - 142.8

Sample: 180647 - BH-2, 5'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55381	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47336	Sample Preparation:	2008-12-18	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**6620**	**6620**	<398	mg/Kg	1000	398	1	0.3527

Sample: 180647 - BH-2, 5'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54760	Date Analyzed:	2008-12-02	Analyzed By:	AR
Prep Batch:	46784	Sample Preparation:	2008-12-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		11.3	%	1	0

Sample: 180647 - BH-2, 5'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54826	Date Analyzed:	2008-12-03	Analyzed By:	LD
Prep Batch:	46719	Sample Preparation:	2008-11-26	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	*JB*	**18.5**	<56.4	19.2	mg/Kg	1	17.8	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		102	mg/Kg	1	100	102	10 - 250.4

Sample: 180647 - BH-2, 5'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55389 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47341 | Sample Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**295**	**295**	<3.66	mg/Kg	10	3.66	1	0.3527

Sample: 180678 - BH-7, 30'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 55170 | Date Analyzed: 2008-12-16 | Analyzed By: AR
Prep Batch: 47137 | Sample Preparation: 2008-12-15 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		3.70	%	1	0

Sample: 180679 - BH-8, 1'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55389 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47341 | Sample Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**187**	**187**	<3.79	mg/Kg	10	3.79	1	0.3527

Sample: 180679 - BH-8, 1'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 54762 | Date Analyzed: 2008-12-02 | Analyzed By: AR
Prep Batch: 46786 | Sample Preparation: 2008-12-01 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		6.93	%	1	0

Sample: 180679 - BH-8, 1'

Laboratory: Midland
Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A
QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD
Prep Batch: 46719 | Sample Preparation: 2008-11-26 | Prepared By: LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.9	<53.7	18.3	mg/Kg	1	16.9	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		70.2	mg/Kg	1	100	70	10 - 250.4

Sample: 180679 - BH-8, 1'

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54735 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | Sample Preparation: 2008-12-01 | Prepared By: AG

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.922**	<1.07	<0.184	mg/Kg	1	0.184	1	0.171

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.933	mg/Kg	1	1.00	93	75 - 117.2
4-Bromofluorobenzene (4-BFB)		1.12	mg/Kg	1	1.00	112	56 - 142.8

Sample: 180680 - BH-8, 5'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55498 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47431 | Sample Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**1220**	**1220**	<38.9	mg/Kg	100	38.9	1	0.3527

Sample: 180680 - BH-8, 5'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A

QC Batch: 54762 | Date Analyzed: 2008-12-02 | Analyzed By: AR
Prep Batch: 46786 | Sample Preparation: 2008-12-01 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		9.39	%	1	0

Sample: 180680 - BH-8, 5'

Laboratory: Midland
Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A
QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD
Prep Batch: 46719 | Sample Preparation: 2008-11-26 | Prepared By: LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<17.4	<55.2	18.8	mg/Kg	1	17.4	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		86.4	mg/Kg	1	100	86	10 - 250.4

Sample: 180680 - BH-8, 5'

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | Sample Preparation: 2008-12-02 | Prepared By: ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**1.01**	<1.10	<0.488	mg/Kg	1	0.488	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.947	mg/Kg	1	1.00	95	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.962	mg/Kg	1	1.00	96	63.8 - 141

Sample: 180681 - BH-8, 10'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method. N/A
QC Batch: 55498 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47431 | Sample Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**746**	**746**	<36.8	mg/Kg	100	36.8	1	0.3527

Sample: 180681 - BH-8, 10'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54762	Date Analyzed:	2008-12-02	Analyzed By:	AR
Prep Batch:	46786	Sample Preparation:	2008-12-01	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		4.05	%	1	0

Sample: 180682 - BH-8, 15'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55498	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47431	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**2090**	**2090**	<38.3	mg/Kg	100	38.3	1	0.3527

Sample: 180682 - BH-8, 15'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54775	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch.	46800	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		7.84	%	1	0

Sample: 180683 - BH-8, 20'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55498	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47431	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**1750**	**1750**	<35.9	mg/Kg	100	35.9	1	0.3527

Sample: 180683 - BH-8, 20'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	55170	Date Analyzed:	2008-12-16	Analyzed By:	AR
Prep Batch:	47137	Sample Preparation:	2008-12-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		1.84	%	1	0

Sample: 180684 - BH-9, 1'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55391	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47343	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**159**	**159**	<3.71	mg/Kg	10	3.71	1	0.3527

Sample: 180684 - BH-9, 1'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54775	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46800	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		4.97	%	1	0

Sample: 180684 - BH-9, 1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.6	<52.6	<16.6	mg/Kg	1	16.6	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		144	mg/Kg	1	100	144	10 - 250.4

Sample: 180684 - BH-9, 1'

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | Sample Preparation: 2008-12-02 | Prepared By: ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.949**	<1.05	<0.465	mg/Kg	1	0.465	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.936	mg/Kg	1	1.00	94	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.939	mg/Kg	1	1.00	94	63.8 - 141

Sample: 180685 - BH-9, 5'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55498 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47431 | Sample Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**805**	**805**	<37.5	mg/Kg	100	37.5	1	0.3527

Sample: 180685 - BH-9, 5'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 54775 | Date Analyzed: 2008-12-03 | Analyzed By: AR
Prep Batch: 46800 | Sample Preparation: 2008-12-02 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		6.07	%	1	0

Sample: 180685 - BH-9, 5'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.8	<53.2	<16.8	mg/Kg	1	16.8	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		94.0	mg/Kg	1	100	94	10 - 250.4

Sample: 180685 - BH-9, 5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.932**	<1.06	<0.470	mg/Kg	1	0.470	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.910	mg/Kg	1	1.00	91	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.908	mg/Kg	1	1.00	91	63.8 - 141

Sample: 180686 - BH-9, 10'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55498	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47431	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**1740**	**1740**	<39.8	mg/Kg	100	39.8	1	0.3527

Sample: 180686 - BH-9, 10'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54775	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46800	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		11.3	%	1	0

Sample: 180686 - BH-9, 10'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<17.8	<56.4	<17.8	mg/Kg	1	17.8	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		86.6	mg/Kg	1	100	87	10 - 250.4

Sample: 180686 - BH-9, 10'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.950**	<1.13	<0.498	mg/Kg	1	0.498	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.877	mg/Kg	1	1.00	88	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.874	mg/Kg	1	1.00	87	63.8 - 141

Sample: 180687 - BH-9, 15'

Laboratory:	Lubbock			Prep Method:	N/A
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Analyzed By:	RD
QC Batch:	55498	Date Analyzed:	2008-12-24	Prepared By:	RD
Prep Batch:	47431	Sample Preparation:	2008-12-22		

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**810**	**810**	<37.0	mg/Kg	100	37.0	1	0.3527

Sample: 180687 - BH-9, 15'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54775	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46800	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		4.55	%	1	0

Sample: 180687 - BH-9, 15'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.5	<52.4	<16.5	mg/Kg	1	16.5	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		87.5	mg/Kg	1	100	88	10 - 250.4

Sample: 180687 - BH-9, 15'

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | Sample Preparation: 2008-12-02 | Prepared By: ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.941**	<1.05	<0.463	mg/Kg	1	0.463	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.932	mg/Kg	1	1.00	93	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.932	mg/Kg	1	1.00	93	63.8 - 141

Sample: 180688 - BH-9, 20'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55391 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47343 | Sample Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**345**	**345**	<3.58	mg/Kg	10	3.58	1	0.3527

Sample: 180688 - BH-9, 20'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 54775 | Date Analyzed: 2008-12-03 | Analyzed By: AR
Prep Batch: 46800 | Sample Preparation: 2008-12-02 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		1.38	%	1	0

Sample: 180689 - BH-10, 1'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55391 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47343 | Sample Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**38.5**	**38.5**	<3.88	mg/Kg	10	3.88	1	0.3527

Sample: 180689 - BH-10, 1'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54775	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46800	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		9.05	%	1	0

Sample: 180689 - BH-10, 1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<17.3	<55.0	<17.3	mg/Kg	1	17.3	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		108	mg/Kg	1	100	108	10 - 250.4

Sample: 180689 - BH-10, 1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.937**	<1.10	<0.486	mg/Kg	1	0.486	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.884	mg/Kg	1	1.00	88	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.888	mg/Kg	1	1.00	89	63.8 - 141

Sample: 180690 - BH-10, 5'

Laboratory:	Lubbock			Prep Method:	N/A
Analysis:	Chloride (IC)	Analytical Method.	E 300.0	Analyzed By:	RD
QC Batch:	55391	Date Analyzed:	2008-12-22	Prepared By:	RD
Prep Batch:	47343	Sample Preparation:	2008-12-19		

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**127**	**127**	<3.87	mg/Kg	10	3.87	1	0.3527

Sample: 180690 - BH-10, 5'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54775	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46800	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		8.79	%	1	0

Sample: 180690 - BH-10, 5'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<17.3	<54.8	<17.3	mg/Kg	1	17.3	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		84.9	mg/Kg	1	100	85	10 - 250.4

Sample: 180690 - BH-10, 5'

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | Sample Preparation: 2008-12-02 | Prepared By: ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.982**	<1.10	<0.484	mg/Kg	1	0.484	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.930	mg/Kg	1	1.00	93	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.932	mg/Kg	1	1.00	93	63.8 - 141

Sample: 180691 - BH-10, 10'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55391 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47343 | Sample Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**134**	**134**	<3.85	mg/Kg	10	3.85	1	0.3527

Sample: 180691 - BH-10, 10'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 54775 | Date Analyzed: 2008-12-03 | Analyzed By: AR
Prep Batch: 46800 | Sample Preparation: 2008-12-02 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		8.39	%	1	0

Sample: 180692 - BH-10, 15'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55393 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47345 | Sample Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**57.3**	**57.3**	<3.58	mg/Kg	10	3.58	1	0.3527

Sample: 180692 - BH-10, 15'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	55170	Date Analyzed:	2008-12-16	Analyzed By:	AR
Prep Batch:	47137	Sample Preparation:	2008-12-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		1.51	%	1	0

Sample: 180693 - BH-10, 20'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55393	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47345	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**40.9**	**40.9**	<3.58	mg/Kg	10	3.58	1	0.3527

Sample: 180693 - BH-10, 20'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	55170	Date Analyzed:	2008-12-16	Analyzed By:	AR
Prep Batch:	47137	Sample Preparation:	2008-12-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		1.39	%	1	0

Sample: 180694 - BH-11, 1'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55393	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47345	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**79.9**	**79.9**	<3.76	mg/Kg	10	3.76	1	0.3527

Sample: 180694 - BH-11, 1'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54775	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46800	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		6.34	%	1	0

Sample: 180694 - BH-11, 1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.8	<53.4	<16.8	mg/Kg	1	16.8	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		95.2	mg/Kg	1	100	95	10 - 250.4

Sample: 180694 - BH-11, 1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.934**	<1.07	<0.472	mg/Kg	1	0.472	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.907	mg/Kg	1	1.00	91	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.914	mg/Kg	1	1.00	91	63.8 - 141

Sample: 180695 - BH-11, 5'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55393	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47345	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**40.2**	**40.2**	<3.73	mg/Kg	10	3.73	1	0.3527

Sample: 180695 - BH-11, 5'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54776	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46801	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		5.40	%	1	0

Sample: 180695 - BH-11, 5'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.7	<52.8	<16.7	mg/Kg	1	16.7	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		108	mg/Kg	1	100	108	10 - 250.4

Sample: 180695 - BH-11, 5'

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | Sample Preparation: 2008-12-02 | Prepared By: ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	J	**0.925**	<1.06	<0.467	mg/Kg	1	0.467	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.928	mg/Kg	1	1.00	93	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.924	mg/Kg	1	1.00	92	63.8 - 141

Sample: 180696 - BH-11, 10'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55499 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47432 | Sample Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**724**	**724**	<39.7	mg/Kg	100	39.7	1	0.3527

Sample: 180696 - BH-11, 10'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 54776 | Date Analyzed: 2008-12-03 | Analyzed By: AR
Prep Batch: 46801 | Sample Preparation: 2008-12-02 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		11.2	%	1	0

Sample: 180697 - BH-11, 15'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55499 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47432 | Sample Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**543**	**543**	<37.1	mg/Kg	100	37.1	1	0.3527

Sample: 180697 - BH-11, 15'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	55170	Date Analyzed:	2008-12-16	Analyzed By:	AR
Prep Batch:	47137	Sample Preparation:	2008-12-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		5.02	%	1	0

Sample: 180698 - BH-11, 20'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55393	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47345	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**173**	**173**	<3.60	mg/Kg	10	3.60	1	0.3527

Sample: 180698 - BH-11, 20'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	55170	Date Analyzed:	2008-12-16	Analyzed By.	AR
Prep Batch:	47137	Sample Preparation:	2008-12-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		1.96	%	1	0

Sample: 180699 - BH-12, 1'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55393	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47345	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**25.6**	**25.6**	<4.02	mg/Kg	10	4.02	1	0.3527

Sample: 180699 - BH-12, 1'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54776	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46801	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		12.2	%	1	0

Sample: 180699 - BH-12, 1'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO		**3960**	**3960**	<89.8	mg/Kg	5	89.8	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	[5]	1040	mg/Kg	5	100	1040	10 - 250.4

Sample: 180699 - BH-12, 1'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**1390**	**1390**	<2.52	mg/Kg	5	2.52	1	0.442

[5]High surrogate recovery due to peak interference.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.28	mg/Kg	5	5.00	106	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)	[6]	11.8	mg/Kg	5	5.00	236	63.8 - 141

Sample: 180700 - BH-12, 5'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55393	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47345	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**22.1**	**22.1**	<3.98	mg/Kg	10	3.98	1	0.3527

Sample: 180700 - BH-12, 5'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54776	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46801	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		11.5	%	1	0

Sample: 180700 - BH-12, 5'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<17.8	<56.5	<17.8	mg/Kg	1	17.8	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		91.1	mg/Kg	1	100	91	10 - 250.4

[6]High surrogate recovery due to peak interference.

Sample: 180700 - BH-12, 5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**47.6**	**47.6**	<0.499	mg/Kg	1	0.499	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.16	mg/Kg	1	1.00	116	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.12	mg/Kg	1	1.00	112	63.8 - 141

Sample: 180701 - BH-12, 10'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55393	Date Analyzed:	2008-12-22	Analyzed By:	RD
Prep Batch:	47345	Sample Preparation:	2008-12-19	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**120**	**120**	<3.73	mg/Kg	10	3.73	1	0.3527

Sample: 180701 - BH-12, 10'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54776	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46801	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		5.35	%	1	0

Sample: 180701 - BH-12, 10'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.6	<52.8	<16.6	mg/Kg	1	16.6	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		103	mg/Kg	1	100	103	10 - 250.4

Sample: 180701 - BH-12, 10'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**16.3**	**16.3**	<0.934	mg/Kg	2	0.934	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.63	mg/Kg	2	2.00	82	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.94	mg/Kg	2	2.00	97	63.8 - 141

Sample: 180702 - BH-12, 15'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55499	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47432	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**82.5**	**82.5**	<3.67	mg/Kg	10	3.67	1	0.3527

Sample: 180702 - BH-12, 15'

Laboratory.	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54776	Date Analyzed.	2008-12-03	Analyzed By:	AR
Prep Batch:	46801	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		3.90	%	1	0

Sample: 180704 - BH-13, 0'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55499	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47432	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**15.6**	**15.6**	<3.73	mg/Kg	10	3.73	1	0.3527

Sample: 180704 - BH-13, 0'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54776	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46801	Sample Preparation.	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		5.36	%	1	0

Sample: 180704 - BH-13, 0'

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	54883	Date Analyzed:	2008-12-04	Analyzed By:	LD
Prep Batch:	46895	Sample Preparation:	2008-12-04	Prepared By:	LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.6	<52.8	<16.6	mg/Kg	1	16.6	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		103	mg/Kg	1	100	103	10 - 250.4

Sample: 180704 - BH-13, 0'

Laboratory: Midland
Analysis: TPH GRO | Analytical Method: S 8015B | Prep Method: S 5035
QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | Sample Preparation: 2008-12-02 | Prepared By: ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**2.36**	**2.36**	<0.467	mg/Kg	1	0.467	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.899	mg/Kg	1	1.00	90	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.930	mg/Kg	1	1.00	93	63.8 - 141

Sample: 180705 - BH-13, 5'

Laboratory: Lubbock
Analysis: Chloride (IC) | Analytical Method: E 300.0 | Prep Method: N/A
QC Batch: 55499 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47432 | Sample Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**28.9**	**28.9**	<3.78	mg/Kg	10	3.78	1	0.3527

Sample: 180705 - BH-13, 5'

Laboratory: Midland
Analysis: Moisture Content | Analytical Method: ASTM D 2974-87 | Prep Method: N/A
QC Batch: 54776 | Date Analyzed: 2008-12-03 | Analyzed By: AR
Prep Batch: 46801 | Sample Preparation: 2008-12-02 | Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		6.69	%	1	0

Sample: 180705 - BH-13, 5'

Laboratory: Midland
Analysis: TPH DRO | Analytical Method: Mod. 8015B | Prep Method: N/A
QC Batch: 54883 | Date Analyzed: 2008-12-04 | Analyzed By: LD
Prep Batch: 46895 | Sample Preparation: 2008-12-04 | Prepared By: LD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<16.9	<53.6	<16.9	mg/Kg	1	16.9	50	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		83.7	mg/Kg	1	100	84	10 - 250.4

Sample: 180705 - BH-13, 5'

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5035
QC Batch:	54812	Date Analyzed:	2008-12-02	Analyzed By:	ME
Prep Batch:	46849	Sample Preparation:	2008-12-02	Prepared By:	ME

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO		**1.31**	**1.31**	<0.474	mg/Kg	1	0.474	1	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.884	mg/Kg	1	1.00	88	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		0.925	mg/Kg	1	1.00	92	63.8 - 141

Sample: 180706 - BH-13, 10'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55499	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47432	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**220**	**220**	<3.82	mg/Kg	10	3.82	1	0.3527

Sample: 180706 - BH-13, 10'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	54776	Date Analyzed:	2008-12-03	Analyzed By:	AR
Prep Batch:	46801	Sample Preparation:	2008-12-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		7.70	%	1	0

Sample: 180707 - BH-13, 15'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55499	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47432	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**97.4**	**97.4**	<3.62	mg/Kg	10	3.62	1	0.3527

Sample: 180707 - BH-13, 15'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	55170	Date Analyzed:	2008-12-16	Analyzed By:	AR
Prep Batch:	47137	Sample Preparation:	2008-12-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		2.52	%	1	0

Sample: 180708 - BH-13, 20'

Laboratory:	Lubbock				
Analysis:	Chloride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	55499	Date Analyzed:	2008-12-24	Analyzed By:	RD
Prep Batch:	47432	Sample Preparation:	2008-12-22	Prepared By:	RD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**49.1**	**49.1**	<3.56	mg/Kg	10	3.56	1	0.3527

Sample: 180708 - BH-13, 20'

Laboratory:	Midland				
Analysis:	Moisture Content	Analytical Method:	ASTM D 2974-87	Prep Method:	N/A
QC Batch:	55171	Date Analyzed:	2008-12-16	Analyzed By:	AR
Prep Batch:	47138	Sample Preparation:	2008-12-15	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Moisture		1.01	%	1	0

Method Blank (1)

QC Batch: 54734 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | QC Preparation: 2008-12-01 | Prepared By: ME

Parameter	Flag	Result	Units	Reporting Limits
Benzene		<0.00800	mg/Kg	0.008
Toluene		<0.00800	mg/Kg	0.008
Ethylbenzene		<0.00820	mg/Kg	0.0082
Xylene		<0.00960	mg/Kg	0.0096

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.786	mg/Kg	1	1.00	79	65.6 - 130.6
4-Bromofluorobenzene (4-BFB)		0.875	mg/Kg	1	1.00	88	51.9 - 128.1

Method Blank (1)

QC Batch: 54735 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | QC Preparation: 2008-12-01 | Prepared By: ME

Parameter	Flag	Result	Units	Reporting Limits
GRO		<0.171	mg/Kg	0.171

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.947	mg/Kg	1	1.00	95	58.3 - 129.3
4-Bromofluorobenzene (4-BFB)		0.930	mg/Kg	1	1.00	93	57 - 124.9

Method Blank (1)

QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | QC Preparation: 2008-12-02 | Prepared By: ME

Parameter	Flag	Result	Units	Reporting Limits
GRO		0.839	mg/Kg	0.442

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.876	mg/Kg	1	1.00	88	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		0.865	mg/Kg	1	1.00	86	16.8 - 138.1

Method Blank (1)

QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD
Prep Batch: 46719 | QC Preparation: 2008-11-26 | Prepared By: LD

Parameter	Flag	Result	Units	Reporting Limits
DRO		17.0	mg/Kg	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		103	mg/Kg	1	100	103	30.9 - 146.4

Method Blank (1)

QC Batch: 54859 | Date Analyzed: 2008-12-03 | Analyzed By: ME
Prep Batch: 46892 | QC Preparation: 2008-12-03 | Prepared By: ME

Parameter	Flag	Result	Units	Reporting Limits
GRO		0.766	mg/Kg	0.171

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.814	mg/Kg	1	1.00	81	58.3 - 129.3
4-Bromofluorobenzene (4-BFB)		0.804	mg/Kg	1	1.00	80	57 - 124.9

Method Blank (1)

QC Batch: 54883 | Date Analyzed: 2008-12-04 | Analyzed By: LD
Prep Batch: 46895 | QC Preparation: 2008-12-04 | Prepared By: LD

Parameter	Flag	Result	Units	Reporting Limits
DRO		<15.8	mg/Kg	15.765

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		118	mg/Kg	1	100	118	30.9 - 146.4

Method Blank (1)

QC Batch: 55327 | Date Analyzed: 2008-12-19 | Analyzed By: RD
Prep Batch: 47290 | QC Preparation: 2008-12-17 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55328 | Date Analyzed: 2008-12-19 | Analyzed By: RD
Prep Batch: 47291 | QC Preparation: 2008-12-17 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55381 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47336 | QC Preparation: 2008-12-18 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55382 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47337 | QC Preparation: 2008-12-18 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55389 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47341 | QC Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55391 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47343 | QC Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55393 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47345 | QC Preparation: 2008-12-19 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55498 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47431 | QC Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Method Blank (1)

QC Batch: 55499 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47432 | QC Preparation: 2008-12-22 | Prepared By: RD

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.353	mg/Kg	0.3527

Duplicate (1) Duplicated Sample: 180614

QC Batch: 54759 | Date Analyzed: 2008-12-02 | Analyzed By: AR
Prep Batch: 46783 | QC Preparation: 2008-12-01 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	2.57	3.02	%	1	16	20

Duplicate (1) Duplicated Sample: 180658

QC Batch: 54760 | Date Analyzed: 2008-12-02 | Analyzed By: AR
Prep Batch: 46784 | QC Preparation: 2008-12-01 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	2.11	2.23	%	1	6	20

Duplicate (1) Duplicated Sample: 180669

QC Batch: 54761 | Date Analyzed: 2008-12-02 | Analyzed By: AR
Prep Batch: 46785 | QC Preparation: 2008-12-01 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	5.01	5.00	%	1	0	20

Duplicate (1) Duplicated Sample: 180681

QC Batch: 54762 | Date Analyzed: 2008-12-02 | Analyzed By: AR
Prep Batch: 46786 | QC Preparation: 2008-12-01 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	3.98	4.05	%	1	2	20

Duplicate (1) Duplicated Sample: 180694

QC Batch: 54775 | Date Analyzed: 2008-12-03 | Analyzed By: AR
Prep Batch: 46800 | QC Preparation: 2008-12-02 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	6.30	6.34	%	1	1	20

Duplicate (1) Duplicated Sample: 180706

QC Batch: 54776 | Date Analyzed: 2008-12-03 | Analyzed By: AR
Prep Batch: 46801 | QC Preparation: 2008-12-02 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	7.70	7.70	%	1	0	20

Duplicate (1) Duplicated Sample: 180707

QC Batch: 55170 | Date Analyzed: 2008-12-16 | Analyzed By: AR
Prep Batch: 47137 | QC Preparation: 2008-12-15 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	2.55	2.52	%	1	1	20

Duplicate (1) Duplicated Sample: 180708

QC Batch: 55171 | Date Analyzed: 2008-12-16 | Analyzed By: AR
Prep Batch: 47138 | QC Preparation: 2008-12-15 | Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Moisture	1.06	1.01	%	1	5	20

Laboratory Control Spike (LCS-1)

QC Batch: 54734 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | QC Preparation: 2008-12-01 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.819	mg/Kg	1	1.00	<0.00800	82	72.7 - 129.8
Toluene	0.820	mg/Kg	1	1.00	<0.00800	82	71.6 - 129.6
Ethylbenzene	0.826	mg/Kg	1	1.00	<0.00820	83	70.8 - 129.7
Xylene	2.50	mg/Kg	1	3.00	<0.00960	83	70.9 - 129.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.836	mg/Kg	1	1.00	<0.00800	84	72.7 - 129.8	2	20
Toluene	0.841	mg/Kg	1	1.00	<0.00800	84	71.6 - 129.6	2	20
Ethylbenzene	0.846	mg/Kg	1	1.00	<0.00820	85	70.8 - 129.7	2	20
Xylene	2.56	mg/Kg	1	3.00	<0.00960	85	70.9 - 129.4	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.796	0.793	mg/Kg	1	1.00	80	79	65.9 - 132
4-Bromofluorobenzene (4-BFB)	0.914	0.911	mg/Kg	1	1.00	91	91	55.2 - 128.9

Laboratory Control Spike (LCS-1)

QC Batch: 54735 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | QC Preparation: 2008-12-01 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.69	mg/Kg	1	10.0	<0.171	87	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	8.63	mg/Kg	1	10.0	<0.171	86	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.993	0.988	mg/Kg	1	1.00	99	99	70 - 130
4-Bromofluorobenzene (4-BFB)	0.986	0.987	mg/Kg	1	1.00	99	99	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | QC Preparation: 2008-12-02 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.09	mg/Kg	1	10.0	<0.442	81	57.5 - 106.4

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	7.68	mg/Kg	1	10.0	<0.442	77	57.5 - 106.4	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.886	0.854	mg/Kg	1	1.00	89	85	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	0.895	0.884	mg/Kg	1	1.00	90	88	53.3 - 123.6

Laboratory Control Spike (LCS-1)

QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD
Prep Batch: 46719 | QC Preparation: 2008-11-26 | Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	252	mg/Kg	1	250	17	94	27.8 - 152.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	222	mg/Kg	1	250	17	82	27.8 - 152.1	13	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	128	127	mg/Kg	1	100	128	127	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 54859 | Date Analyzed: 2008-12-03 | Analyzed By: ME
Prep Batch: 46892 | QC Preparation: 2008-12-03 | Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.01	mg/Kg	1	10.0	<0.171	70	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	7.37	mg/Kg	1	10.0	<0.171	74	70 - 130	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.840	0.888	mg/Kg	1	1.00	84	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.817	0.825	mg/Kg	1	1.00	82	82	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 54883 | Date Analyzed: 2008-12-04 | Analyzed By: LD
Prep Batch: 46895 | QC Preparation: 2008-12-04 | Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	187	mg/Kg	1	250	<15.8	75	27.8 - 152.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	184	mg/Kg	1	250	<15.8	74	27.8 - 152.1	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	79.1	78.5	mg/Kg	1	100	79	78	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 55327 | Date Analyzed: 2008-12-19 | Analyzed By: RD
Prep Batch: 47290 | QC Preparation: 2008-12-17 | Prepared By: RD

Param		LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	[7]	12.0	mg/Kg	1	12.5	<0.353	96	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	[8]	11.8	mg/Kg	1	12.5	<0.353	94	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55328 | Date Analyzed: 2008-12-19 | Analyzed By: RD
Prep Batch: 47291 | QC Preparation: 2008-12-17 | Prepared By: RD

Param		LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	[9]	12.1	mg/Kg	1	12.5	<0.353	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	[10]	11.9	mg/Kg	1	12.5	<0.353	95	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55381 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47336 | QC Preparation: 2008-12-18 | Prepared By: RD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12.0	mg/Kg	1	12.5	<0.353	96	90 - 110

[7]Matrix spikes run with batch, but spiked sample reran in another batch. Use LCS/LCSD to show analysis is in control. •
[8]Matrix spikes run with batch, but spiked sample reran in another batch. Use LCS/LCSD to show analysis is in control. •
[9]Matrix spikes run with batch, but spiked sample reran in another batch. Use LCS/LCSD to show analysis is in control. •
[10]Matrix spikes run with batch, but spiked sample reran in another batch. Use LCS/LCSD to show analysis is in control. •

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11.8	mg/Kg	1	12.5	<0.353	94	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55382 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47337 | QC Preparation: 2008-12-18 | Prepared By: RD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.8	mg/Kg	1	12.5	<0.353	94	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11.9	mg/Kg	1	12.5	<0.353	95	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55389 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47341 | QC Preparation: 2008-12-19 | Prepared By: RD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride [11]	12.8	mg/Kg	1	12.5	<0.353	102	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride [12]	12.6	mg/Kg	1	12.5	<0.353	101	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55391 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47343 | QC Preparation: 2008-12-19 | Prepared By: RD

[11] Matrix spikes run with batch, but spiked sample reran in another batch. Use LCS/LCSD to show analysis is in control. •
[12] Matrix spikes run with batch, but spiked sample reran in another batch. Use LCS/LCSD to show analysis is in control. •

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12.4	mg/Kg	1	12.5	<0.353	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	12.1	mg/Kg	1	12.5	<0.353	97	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55393 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47345 | QC Preparation: 2008-12-19 | Prepared By: RD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12.4	mg/Kg	1	12.5	<0.353	99	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	12.4	mg/Kg	1	12.5	<0.353	99	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55498 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47431 | QC Preparation: 2008-12-22 | Prepared By: RD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.6	mg/Kg	1	12.5	<0.353	93	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11.6	mg/Kg	1	12.5	<0.353	93	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 55499 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47432 | QC Preparation: 2008-12-22 | Prepared By: RD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.6	mg/Kg	1	12.5	<0.353	93	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11.6	mg/Kg	1	12.5	<0.353	93	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 180674

QC Batch: 54734 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | QC Preparation: 2008-12-01 | Prepared By: ME

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	[13]	0.443	mg/Kg	1	1.00	<0.00800	44	58.6 - 165.2
Toluene	[14]	0.491	mg/Kg	1	1.00	<0.00800	49	64.2 - 153.8
Ethylbenzene	[15]	0.694	mg/Kg	1	1.00	0.1019	59	61.6 - 159.4
Xylene	[16]	1.71	mg/Kg	1	3.00	0.0724	54	64.4 - 155.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	[17]	0.622	mg/Kg	1	1.00	<0.00800	62	58.6 - 165.2	34	20
Toluene	[18]	0.678	mg/Kg	1	1.00	<0.00800	68	64.2 - 153.8	32	20
Ethylbenzene	[19]	0.953	mg/Kg	1	1.00	0.1019	85	61.6 - 159.4	31	20
Xylene	[20]	2.31	mg/Kg	1	3.00	0.0724	74	64.4 - 155.3	30	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	[21]	0.798	0.746	mg/Kg	1	1	80	75	76 - 127.9
4-Bromofluorobenzene (4-BFB)		1.13	1.20	mg/Kg	1	1	113	120	72 - 127.8

Matrix Spike (MS-1) Spiked Sample: 180651

QC Batch: 54735 | Date Analyzed: 2008-12-01 | Analyzed By: AG
Prep Batch: 46799 | QC Preparation: 2008-12-01 | Prepared By: ME

[13]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[14]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[15]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[16]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[17]MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[18]MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[19]MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[20]MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[21]Surrogate out due to peak interference.

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	16.6	mg/Kg	1	10.0	6.35	102	22.3 - 134.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	14.7	mg/Kg	1	10.0	6.35	84	22.3 - 134.6	12	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT) [22]	1.12	1.14	mg/Kg	1	1	112	114	68.4 - 113.1
4-Bromofluorobenzene (4-BFB)	0.995	1.02	mg/Kg	1	1	100	102	66.7 - 134.3

Matrix Spike (MS-1) Spiked Sample: 180690

QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME
Prep Batch: 46849 | QC Preparation: 2008-12-02 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	5.80	mg/Kg	1	10.0	<0.442	58	10 - 139.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	5.97	mg/Kg	1	10.0	<0.442	60	10 - 139.3	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.861	0.969	mg/Kg	1	1	86	97	21.3 - 119
4-Bromofluorobenzene (4-BFB)	0.914	0.971	mg/Kg	1	1	91	97	52.5 - 154

Matrix Spike (MS-1) Spiked Sample: 180642

QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD
Prep Batch: 46719 | QC Preparation: 2008-11-26 | Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	86.1	mg/Kg	1	250	30.72	22	18 - 179.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

[22] High surrogate recovery due to peak interference.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	105	mg/Kg	1	250	30.72	30	18 - 179.5	20	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	67.6	61.4	mg/Kg	1	100	68	61	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 180923

QC Batch: 54859 | Date Analyzed: 2008-12-03 | Analyzed By: ME
Prep Batch: 46892 | QC Preparation: 2008-12-03 | Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.73	mg/Kg	1	10.0	4.46	53	22.3 - 134.6

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO [23]	4.23	mg/Kg	1	10.0	4.46	0	22.3 - 134.6	79	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.878	0.782	mg/Kg	1	1	88	78	68.4 - 113.1
4-Bromofluorobenzene (4-BFB)	0.857	0.831	mg/Kg	1	1	86	83	66.7 - 134.3

Matrix Spike (MS-1) Spiked Sample: 180690

QC Batch: 54883 | Date Analyzed: 2008-12-04 | Analyzed By: LD
Prep Batch: 46895 | QC Preparation: 2008-12-04 | Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	201	mg/Kg	1	250	<15.8	80	18 - 179.5

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	212	mg/Kg	1	250	<15.8	85	18 - 179.5	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

[23] Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	86.0	83.1	mg/Kg	1	100	86	83	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 180647

QC Batch: 55381 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47336 | QC Preparation: 2008-12-18 | Prepared By: RD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec	Rec. Limit
Chloride	17000	mg/Kg	1000	12500	5870	89	68.7 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	17100	mg/Kg	1000	12500	5870	90	68.7 - 119	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 180664

QC Batch: 55382 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47337 | QC Preparation: 2008-12-18 | Prepared By: RD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride [24]	1550	mg/Kg	100	1250	812	59	68.7 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride [25]	970	mg/Kg	100	1250	812	13	68.7 - 119	46	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 180691

QC Batch: 55391 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47343 | QC Preparation: 2008-12-19 | Prepared By: RD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	253	mg/Kg	10	125	123	104	68.7 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

[24]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[25]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	250	mg/Kg	10	125	123	102	68.7 - 119	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 180701

QC Batch: 55393 | Date Analyzed: 2008-12-22 | Analyzed By: RD
Prep Batch: 47345 | QC Preparation: 2008-12-19 | Prepared By: RD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	230	mg/Kg	10	125	114	93	68.7 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	240	mg/Kg	10	125	114	101	68.7 - 119	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 180687

QC Batch: 55498 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47431 | QC Preparation: 2008-12-22 | Prepared By: RD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	1930	mg/Kg	100	1250	773	92	68.7 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	1980	mg/Kg	100	1250	773	96	68.7 - 119	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 180697

QC Batch: 55499 | Date Analyzed: 2008-12-24 | Analyzed By: RD
Prep Batch: 47432 | QC Preparation: 2008-12-22 | Prepared By: RD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	1630	mg/Kg	100	1250	516	89	68.7 - 119

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	1710	mg/Kg	100	1250	516	96	68.7 - 119	5	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 54734 Date Analyzed: 2008-12-01 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0868	87	85 - 115	2008-12-01
Toluene		mg/Kg	0.100	0.0882	88	85 - 115	2008-12-01
Ethylbenzene		mg/Kg	0.100	0.0860	86	85 - 115	2008-12-01
Xylene		mg/Kg	0.300	0.257	86	85 - 115	2008-12-01

Standard (CCV-1)

QC Batch: 54734 Date Analyzed: 2008-12-01 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0903	90	85 - 115	2008-12-01
Toluene		mg/Kg	0.100	0.0908	91	85 - 115	2008-12-01
Ethylbenzene		mg/Kg	0.100	0.0908	91	85 - 115	2008-12-01
Xylene		mg/Kg	0.300	0.278	93	85 - 115	2008-12-01

Standard (ICV-1)

QC Batch: 54735 Date Analyzed: 2008-12-01 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.01	101	85 - 115	2008-12-01

Standard (CCV-1)

QC Batch: 54735 Date Analyzed: 2008-12-01 Analyzed By: AG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.02	102	85 - 115	2008-12-01

Standard (ICV-1)

QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.966	97	85 - 115	2008-12-02

Standard (CCV-1)

QC Batch: 54812 | Date Analyzed: 2008-12-02 | Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.926	93	85 - 115	2008-12-02

Standard (ICV-1)

QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	234	94	85 - 115	2008-12-03

Standard (CCV-1)

QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	216	86	85 - 115	2008-12-03

Standard (CCV-2)

QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	220	88	85 - 115	2008-12-03

Standard (CCV-3)

QC Batch: 54826 | Date Analyzed: 2008-12-03 | Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	243	97	85 - 115	2008-12-03

Standard (ICV-1)

QC Batch: 54859 Date Analyzed: 2008-12-03 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.878	88	85 - 115	2008-12-03

Standard (CCV-1)

QC Batch: 54859 Date Analyzed: 2008-12-03 Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.910	91	85 - 115	2008-12-03

Standard (ICV-1)

QC Batch: 54883 Date Analyzed: 2008-12-04 Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	223	89	85 - 115	2008-12-04

Standard (CCV-1)

QC Batch: 54883 Date Analyzed: 2008-12-04 Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	221	88	85 - 115	2008-12-04

Standard (CCV-2)

QC Batch: 54883 Date Analyzed: 2008-12-04 Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	229	92	85 - 115	2008-12-04

Standard (ICV-1)

QC Batch: 55327 Date Analyzed: 2008-12-19 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.8	94	90 - 110	2008-12-19

Standard (CCV-1)

QC Batch: 55327 Date Analyzed: 2008-12-19 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.9	95	90 - 110	2008-12-19

Standard (ICV-1)

QC Batch: 55328 Date Analyzed: 2008-12-19 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.9	95	90 - 110	2008-12-19

Standard (CCV-1)

QC Batch: 55328 Date Analyzed: 2008-12-19 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.9	95	90 - 110	2008-12-19

Standard (ICV-1)

QC Batch: 55381 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.8	94	90 - 110	2008-12-22

Standard (CCV-1)

QC Batch: 55381 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.7	94	90 - 110	2008-12-22

Standard (ICV-1)

QC Batch: 55382 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.7	94	90 - 110	2008-12-22

Standard (CCV-1)

QC Batch: 55382 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.9	95	90 - 110	2008-12-22

Standard (ICV-1)

QC Batch: 55389 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.5	92	90 - 110	2008-12-22

Standard (CCV-1)

QC Batch: 55389 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.5	100	90 - 110	2008-12-22

Standard (ICV-1)

QC Batch: 55391 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.5	100	90 - 110	2008-12-22

Standard (CCV-1)

QC Batch: 55391 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.4	99	90 - 110	2008-12-22

Standard (ICV-1)

QC Batch: 55393 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.4	99	90 - 110	2008-12-22

Standard (CCV-1)

QC Batch: 55393 Date Analyzed: 2008-12-22 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	12.3	98	90 - 110	2008-12-22

Standard (ICV-1)

QC Batch: 55498 Date Analyzed: 2008-12-24 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.6	93	90 - 110	2008-12-24

Standard (CCV-1)

QC Batch: 55498 Date Analyzed: 2008-12-24 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.6	93	90 - 110	2008-12-24

Standard (ICV-1)

QC Batch: 55499 Date Analyzed: 2008-12-24 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.6	93	90 - 110	2008-12-24

Standard (CCV-1)

QC Batch: 55499 Date Analyzed: 2008-12-24 Analyzed By: RD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.7	94	90 - 110	2008-12-24

Lab Order ID# 8112601

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc. Environmental Consultants
Fax: 432-687-0456
432-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

CLIENT NAME:	SITE MANAGER:
Bridwell Oil Co	M. Larson
PROJECT NO.:	PROJECT NAME:
8-0171	NM State #7 Lease

PAGE 1 OF 4 — LAB. PO #

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PARAMETERS/METHOD NUMBER: BTEX (8021B)	TPH (8015M)	Chlorides	Hold	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I E, FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
11/24/08	1410		✓		BH-1, 1'	1		✓	✓		180641	
	1415		✓		BH-1, 5'	1		✓	✓		642	
	1418		✓		BH-1, 10'	1		✓	✓		643	
	1433		✓		BH-1, 15'	1			✓		644	
	1437		✓		BH-1, 20'	1			✓		645	
	14:50		✓		BH-2, 1'	1		✓	✓		646	
	14:55		✓		BH-2, 5'	1		✓	✓		647	
	1459		✓		BH-2, 10'	1			✓		648	
	15:06		✓		BH-2, 15'	1			✓		649	
	1512		✓		BH-2, 20'	1				✓	650	
	1527		✓		BH-3, 1'	1		✓	✓		651	
	1531		✓		BH-3, 5'	1		✓	✓		652	
	1537		✓		BH-3, 10'	1			✓		653	
	1543		✓		BH-3, 15'	1			✓		654	
	1554		✓		BH-3, 20'	1				✓	655	
11/25/08	0739		✓		BH-4, 1'	1		✓	✓		656	
	0742		✓		BH-4, 5'	1		✓	✓		657	
	0749		✓		BH-4, 10'	1			✓		658	

SAMPLED BY: (Signature)	DATE: 11/25/08 TIME: 12:15	RELINQUISHED BY: (Signature)	DATE: 11/26/08 TIME: 0810
RECEIVED BY: (Signature)	DATE: TIME:		
RELINQUISHED BY: (Signature)	DATE: TIME:	RECEIVED BY: (Signature)	DATE: 11/26/08 TIME: 8:10

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #:
HAND DELIVERED UPS OTHER:

COMMENTS: Case w/verbal results to Ben
Hold Samples

TURNAROUND TIME NEEDED: Std.

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS: 5002 Basin St, Ste. A1
CITY: Midland STATE: Tx ZIP: 79703
CONTACT: Armando Garay PHONE: (432) 689-6301

RECEIVED BY: (Signature)
DATE: TIME:

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

SAMPLE CONDITION WHEN RECEIVED:
All tests Midland

LA CONTACT PERSON: Michelle Green

SAMPLE TYPE: Soil

Lab Order ID # 8112601

CLIENT NAME: Bridwell Oil Co. | SITE MANAGER: M. Larson

PROJECT NO.: 8-0171 | PROJECT NAME: NM State #7 lease

PAGE 2 OF 4 | LAB. PO #

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc. Environmental Consultants
Fax: 432-687-0456
432-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	BTEX (8021B)	TPH (8015M)	Chlorides						HOLD	LAB I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
11/25/08	0755		✓		BH-4, 15'	1			✓							180659	
	0801		✓		BH-4, 20'	1			✓							660	
	0816		✓		BH-4, 30'	1			✓							661	
	0824		✓		BH-5, 1'	1		✓	✓							662	
	0834		✓		BH-5, 5'	1		✓	✓							663	
	0842		✓		BH-5, 10'	1			✓							664	
	0849		✓		BH-5, 15'	1			✓							665	
	0902		✓		BH-5, 20'	1									✓	666	
	0855		✓		SS-1	1		✓	✓							667	
	0915		✓		BH-6, 1'	1		✓	✓							668	
	0921		✓		BH-6, 5'	1		✓	✓							669	
	0926		✓		BH-6, 10'	1			✓							670	
	0930		✓		BH-6, 15'	1			✓							671	
	0936		✓		BH-6, 20'	1			X						✓	672	
	0952		✓		BH-7, 1'	1		✓	✓							673	
	0957		✓		BH-7, 5'	1	✓	✓	✓							674	
	1004		✓		BH-7, 10'	1		✓	✓							675	
↓	1013		✓		BH-7, 15'	1		✓	✓							676	

SAMPLED BY: (Signature) DATE: 11/25/08 TIME: 16:15

RELINQUISHED BY: (Signature) DATE: 11/26/08 TIME: 09:10

RECEIVED BY: (Signature) DATE: TIME:

RELINQUISHED BY: (Signature) DATE: TIME:

RECEIVED BY: (Signature) DATE: 11/26/08 TIME: 8:40

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #:
HAND DELIVERED UPS OTHER:

COMMENTS: Call w/verbal results to run head Samples

TURNAROUND TIME NEEDED: Std.

RECEIVING LABORATORY: Xenco Odessa, TX
ADDRESS: 5002 Basin St, Ste A1
CITY: Midland STATE: TX ZIP: 79703
CONTACT: Armanda Gomez PHONE: (432) 689-6301

RECEIVED BY: (Signature)
DATE: TIME:

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

SAMPLE CONDITION WHEN RECEIVED: All tests Midland

LA CONTACT PERSON: Michelle Green

SAMPLE TYPE: Soil

Lab Order ID# 8112601

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc. Environmental Consultants
Fax: 432-687-0456
432-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

CLIENT NAME: Bridwell Oil Co.
SITE MANAGER: M. Larson
PROJECT NO.: 8-0171
PROJECT NAME: NM State T Lease
PAGE 3 OF 4
LAB. PO #

PARAMETERS/METHOD NUMBER: BTEX (8021B) | TPH (8015C) | Chloride | Hold

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	BTEX	TPH	Chloride	Hold	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
11/25/08	1019		✓		BH-7, 20'	1			✓		180677	
	1042		✓		BH-7, 30'	1			✓	✓	678	
	1055		✓		BH-8, 1'	1		✓	✓		679	
	1100		✓		BH-8, 5'	1		✓	✓		680	
	1103		✓		BH-8, 10'	1			✓		681	
	1111		✓		BH-8, 15'	1			✓		687	
	1129		✓		BH-8, 20'	1		-		✓	683	
	1227		✓		BH-9, 1'	1		✓	✓		684	
	1231		✓		BH-9, 5'	1		✓	✓		685	
	1237		✓		BH-9, 10'	1		✓	✓		686	
	1247		✓		BH-9, 15'	1		✓	✓	✓	687	
	1256		✓		BH-9, 20'	1			✓	✓	688	
	1306		✓		BH-10, 1'	1		✓	✓		689	
	1310		✓		BH-10, 5'	1		✓	✓		690	
	1315		✓		BH-10, 10'	1			✓		691	
	1321		✓		BH-10, 15'	1				✓	692	
	1327		✓		BH-10, 20'	1				✓	693	
↓	1337		✓		BH-11, 1'	1		✓	✓		694	

SAMPLED BY: (Signature) DATE: 11/25/08 TIME: 16:15
RELINQUISHED BY: (Signature) DATE: 11/26/08 TIME: 0310
RECEIVED BY: (Signature) DATE: TIME:

RELINQUISHED BY: (Signature) DATE: TIME:
RECEIVED BY: (Signature) DATE: 11/26/08 TIME: 8:10
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED UPS OTHER:

COMMENTS: Case w/verbal results to Jim hold samples
TURNAROUND TIME NEEDED: Std

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS: 5002 Basin St. Ste 81
CITY: Midland STATE: TX ZIP: 79703
CONTACT: Amanda Gomez PHONE: (432) 689-6301
RECEIVED BY: (Signature)
DATE: TIME:

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

SAMPLE CONDITION WHEN RECEIVED: All tests Midland
LA CONTACT PERSON: Michelle Green
SAMPLE TYPE: Soil

Lab Order ID # 8112601

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc. Environmental Consultants
Fax: 432-687-0456
432-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

CLIENT NAME:	SITE MANAGER:
Bridwell Oil Co.	M. Larson
PROJECT NO.:	PROJECT NAME
8-0171	NM State 7 Lease
PAGE 4 OF 4	LAB. PO #

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	BTEX (8021B)	TPH (8015M)	Chloride						Hold	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
11/26/08	1340		✓		BH-11, 5'	1		✓	✓							180695	
	1346		✓		BH-11, 10'	1			✓							696	
	1350		✓		BH-11, 15'	1									✓	697	
	1359		✓		BH-11, 20'	1									✓	698	
	1411		✓		BH-12, 1'	1		✓	✓							699	
	1415		✓		BH-12, 5'	1		✓	✓							700	
	1420		✓		BH-12, 10'	1		✓	✓							701	
	1423		✓		BH-12, 15'	1			✓							702	
	1430		✓		BH-12, 20'	1									✓	703	
	1440		✓		BH-13, 0'	1		✓	✓							704	
	1445		✓		BH-13, 5'	1		✓	✓							705	
	1449		✓		BH-13, 10'	1			✓							706	
	1504		✓		BH-13, 15'	1									✓	707	
	1506		✓		BH-13, 20'	1									✓	708	

PARAMETERS/METHOD NUMBER

SAMPLED BY: (Signature)	DATE: 11/25/08 TIME: 16:15	RELINQUISHED BY: (Signature)	DATE: 11/26/08 TIME: 0810	RECEIVED BY: (Signature)	DATE: TIME:
RELINQUISHED BY: (Signature)	DATE: TIME:	RECEIVED BY: (Signature)	DATE: 11/26/08 TIME: 8:10	SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS AIRBILL #: OTHER:	

COMMENTS: Call w/verbal results to them
Hold samples

TURNAROUND TIME NEEDED: Std.

RECEIVING LABORATORY: Trace Analysis, Inc
ADDRESS: 5002 Basin St, Ste A1
CITY: Midland STATE: TX ZIP: 79703
CONTACT: Armonda Gomez PHONE: (432) 689-6301

RECEIVED BY: (Signature)
DATE: TIME:

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

SAMPLE CONDITION WHEN RECEIVED: All tests Midland

LA CONTACT PERSON: Michelle Green

SAMPLE TYPE: Soil

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
LARSON & ASSOCIATES
ATTN: MICHELLE GREEN
507 N. MARIENFELD, STE. 202
MIDLAND, TX 79701
FAX TO: (432) 687-0456

Receiving Date: 02/05/09
Reporting Date: 02/06/09
Project Number: 8-0171
Project Name: 8-0171
Project Location: NOT GIVEN

Sampling Date: 02/05/09
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: ML
Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	*Cl^- (mg/kg)
ANALYSIS DATE		02/06/09	02/06/09	02/06/09
H16832-1	SS#3 (0-1')	<10.0	<10.0	32
H16832-2	SS#4 (0-1')	<10.0	<10.0	48
H16832-3	SS#5 (0-1')	<10.0	<10.0	< 16
H16832-4	SS#6 (0-1')	<10.0	82.8	< 16
H16832-5	SS#7 (0-1')	<10.0	103	< 16
Quality Control		493	500	500
True Value QC		500	500	500
% Recovery		98.6	100	100
Relative Percent Difference		2.9	3.8	<0.1

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

02/06/09
Date

H16832TCL LARSON

CHAIN—OF—CUSTODY RECORD

Larson & Associates, Inc.
Environmental Consultants
Fax: 432-687-0456
432-687-0901
507 N. Marienfeld, Ste. 202 • Midland, TX 79701

CLIENT NAME: LARSON & ASSOCIATES
SITE MANAGER:
PROJECT NO.: 8-0171
PROJECT NAME:
PAGE 1 OF 1
LAB. PO #

DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	TPH	DRO MOD 8015	GRO MOD 8015	CHLORIDES	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS (I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE)
2009 02-05	MST		X		SS# 3 (0-1')	1	X	X	X	X	H16832-1	GRAB
					SS# 4 (0-1')	1					-2	
					SS#5 (0-1')	1					-3	
					SS#6 (0-1')	1					-4	
					SS#7 (0-1')	1					-5	

SAMPLED BY: (Signature) K.W. Booth
DATE: 02/05/09 TIME: 14:15

RELINQUISHED BY: (Signature) K.W. Booth
DATE: 02/05/09 TIME: 3:52

RELINQUISHED BY: (Signature)
DATE: TIME:

RECEIVED BY: (Signature) Misty LeBert
DATE: 2/5/09 TIME: 3:52

RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #:
HAND DELIVERED UPS OTHER:

COMMENTS: EMAIL RESULTS

TURNAROUND TIME NEEDED: 48 HR.

WHITE – RECEIVING LAB
YELLOW – RECEIVING LAB (TO BE RETURNED TO LA AFTER RECEIPT)
PINK – PROJECT MANAGER
GOLD – QA/QC COORDINATOR

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature)
DATE: TIME:

SAMPLE CONDITION WHEN RECEIVED: Cool + Intact 7.0°C

LA CONTACT PERSON: MICHELLE GREEN

SAMPLE TYPE:

APPENDIX D

Seed Certification and Tags

CURTIS & CURTIS, *Inc.*

4500 N. PRINCE
PHONE (505) 762-4759 / FAX (505) 763-4213
CLOVIS, NEW MEXICO 88101

IRRIGATED PASTURE GRASSES
MOUNTAIN PASTURE GRASSES
NATIVE PASTURE GRASSES
SORGHUMS

GRASS SEED SPECIALISTS

YARD AND PLAYGROUND GRASSES
GOLF COURSE GRASSES
ALFALFA / CLOVERS
FORAGES

CERTIFICATION

May 4, 2009

Larson and Associates
507 n. Marienfield
Suite 202
Job: State Land Seeding
Millensand, NM

TO WHOM IT MAY CONCERN:

CURTIS & CURTIS, INC. CERTIFIES THAT EACH CONTAINER OF SEED IS MIXED AND LABELED IN ACCORDANCE WITH THE FEDERAL SEED ACT AND IS AT LEAST EQUAL TO THE REQUIREMENTS INDICATED BELOW:

KIND	ORIGIN	LOT#	PURITY OF MIX	GERM PURITY	X DORMANT	= PLS%
Sand Bluestem Woodward	Kansas	16196	06.53%	89.07%	93.00%	82.84%
Sideoats Grama Vaughn	Texas	16304	18.98%	69.79%	64.00%	44.67%
Little Bluestem Redondo	Texas	16519	21.69%	50.96%	84.00%(TZ)	42.81%
Plains Brisgrass Not Stated	Texas	16212	04.90%	69.29%	62.00%(TZ)	42.96%
Sand Dropseed Not Stated	New Mexico	16385	06.53%	84.24%	93.00%	78.34%
Gaillardia Aristata Not Stated	India	16101	03.75%	97.07%	81.00%	78.63%
Plains Coreopsis Not Stated	Oregon	16427	03.87%	91.46%	78.50%	71.80%

Sincerely

Tye Curtis

Curtis & Curtis Seed
4500 N. Prince
Clovis, NM 88101
Phone: 575-762-4759

Larson and Associates
State Land Seeding Millensand, NM
2 Acres Custom mix
2 - 1 Acre Bags @ 32.93 Bulk Pounds Each

Lot#: M-8832

Item	Origin	Purity	Germ	Dormant	Germ & Dormant	Test Date	Total PLS Pounds
Sand Bluestem Woodward	Kansas	06.53%	47.00%	43.00%	93.00%	02/09	04.00
Sideoats Grama Vaughn	Texas	18.98%	56.00%	08.00%	64.00%	02/09	08.00
Little Bluestem Pastura	Texas	21.69%	84.00%	00.00%	84.00%(TZ)	04/09	12.00
Plains Bristlegrass Not Stated	Texas	04.90%	62.00%	00.00%	62.00%(TZ)	01/09	02.00
Sand Dropseed Not Stated	New Mexico	06.53%	02.00%	91.00%	93.00%	03/09	04.00
Gaillardia Aristata Not Stated	India	03.75%	81.00%	00.00%	81.00%	02/09	02.00
Coreopsis Plains	Oregon	03.87%	64.50%	14.00%	78.50%	04/09	02.00

Other Crop: 01.50%
Weed Seed: 00.51%
Inert Matter: 31.75%

There Are 2 Bags For This Mix
This Bag Weighs 32.93 Bulk Pounds
Use This Bag For 1 Acre

Total Bulk Pounds: 65.865

Curtis & Curtis Seed
4500 N. Prince
Clovis, NM 88101
Phone: 575-762-4759

Larson and Associates
State Land Seeding Millensand, NM
2 Acres Custom mix
2 - 1 Acre Bags @ 32.93 Bulk Pounds Each

Lot#: M-8832

Item	Origin	Purity	Germ	Dormant	Germ & Dormant	Test Date	Total PLS Pounds
Sand Bluestem Woodward	Kansas	06.53%	47.00%	43.00%	93.00%	02/09	04.00
Sideoats Grama Vaughn	Texas	18.98%	56.00%	08.00%	64.00%	02/09	08.00
Little Bluestem Pastura	Texas	21.69%	84.00%	00.00%	84.00%(TZ)	04/09	12.00
Plains Bristlegrass Not Stated	Texas	04.90%	62.00%	00.00%	62.00%(TZ)	01/09	02.00
Sand Dropseed Not Stated	New Mexico	06.53%	02.00%	91.00%	93.00%	03/09	04.00
Gaillardia Aristata Not Stated	India	03.75%	81.00%	00.00%	81.00%	02/09	02.00
Coreopsis Plains	Oregon	03.87%	64.50%	14.00%	78.50%	04/09	02.00

Other Crop: 01.50%
Weed Seed: 00.51%
Inert Matter: 31.75%

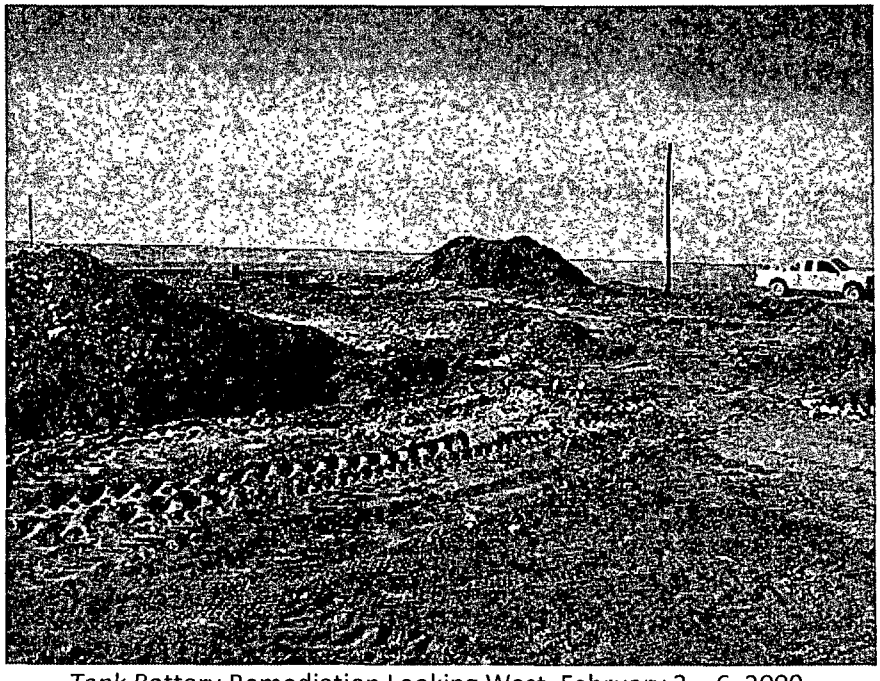
There Are 2 Bags For This Mix
This Bag Weighs 32.93 Bulk Pounds
Use This Bag For 1 Acre

Total Bulk Pounds: 65.865

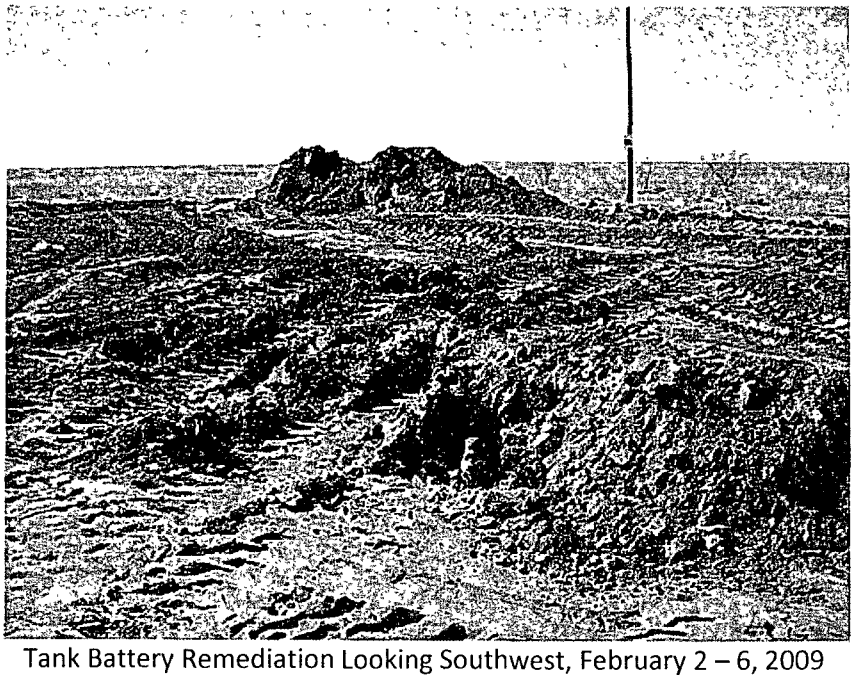
APPENDIX E

Photographs

Photographic Documentation



Tank Battery Remediation Looking West, February 2 – 6, 2009



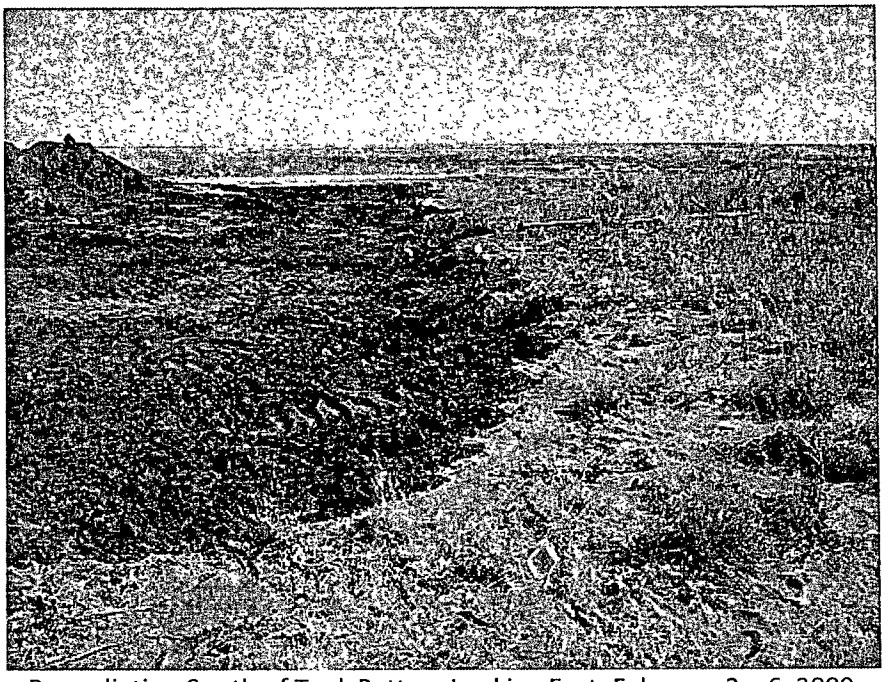
Tank Battery Remediation Looking Southwest, February 2 – 6, 2009

Photographic Documentation

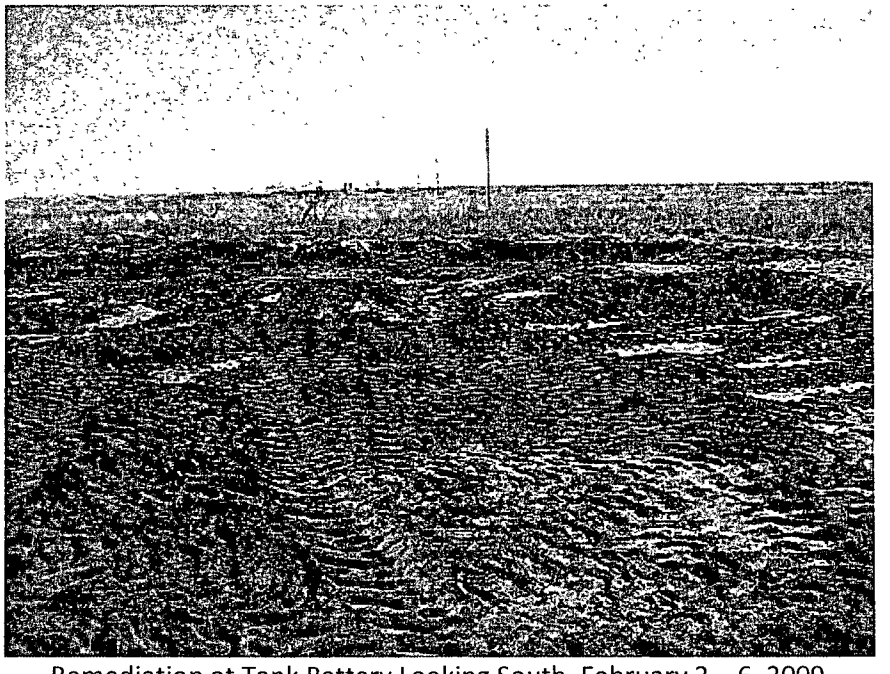
Remediation near Center of Tank Battery, February 2 – 6, 2009

Remediation North of Tank Battery Looking North, February 2 – 6, 2009

Photographic Documentation

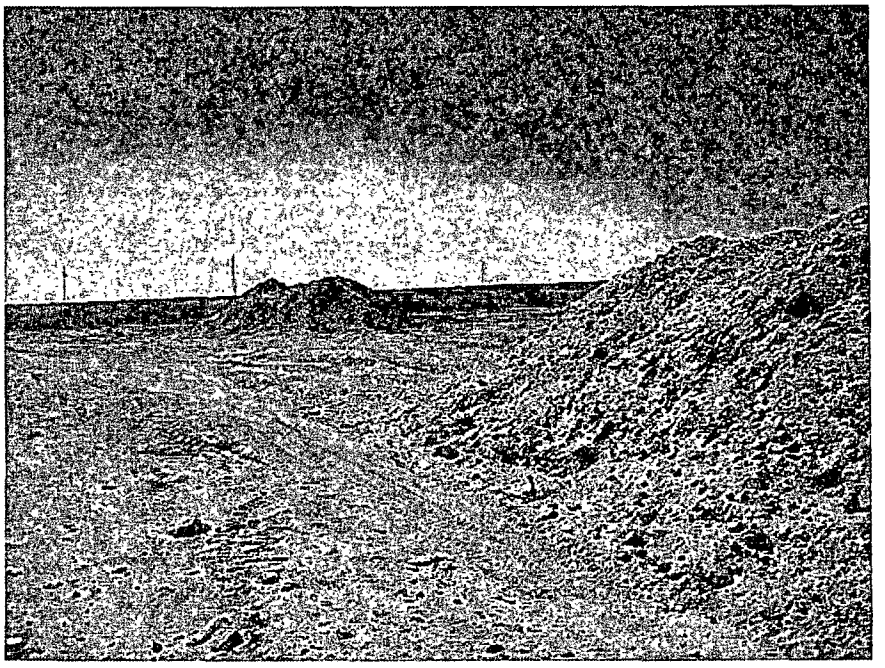


Remediation South of Tank Battery Looking East, February 2 – 6, 2009

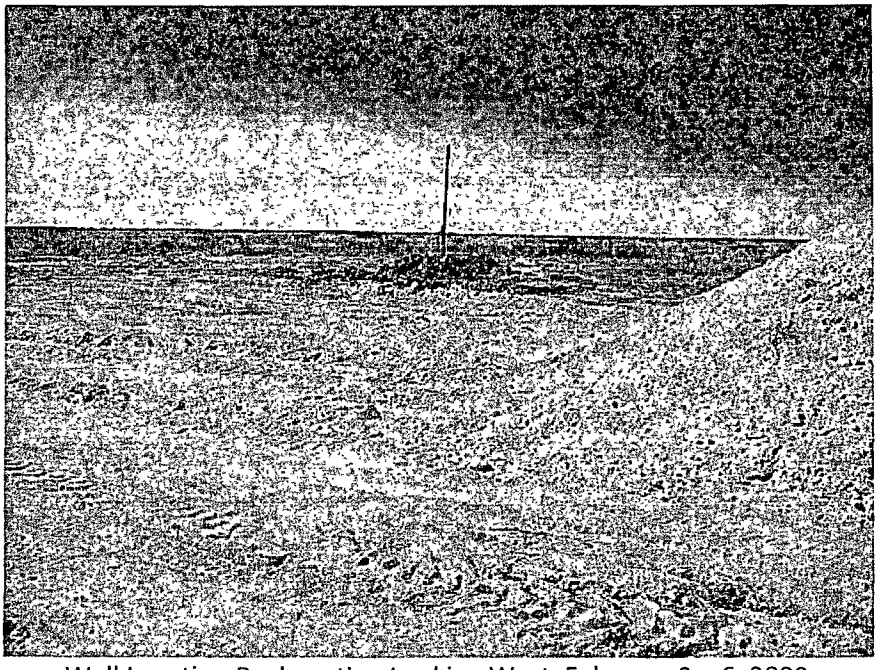


Remediation at Tank Battery Looking South, February 2 – 6, 2009

Photographic Documentation



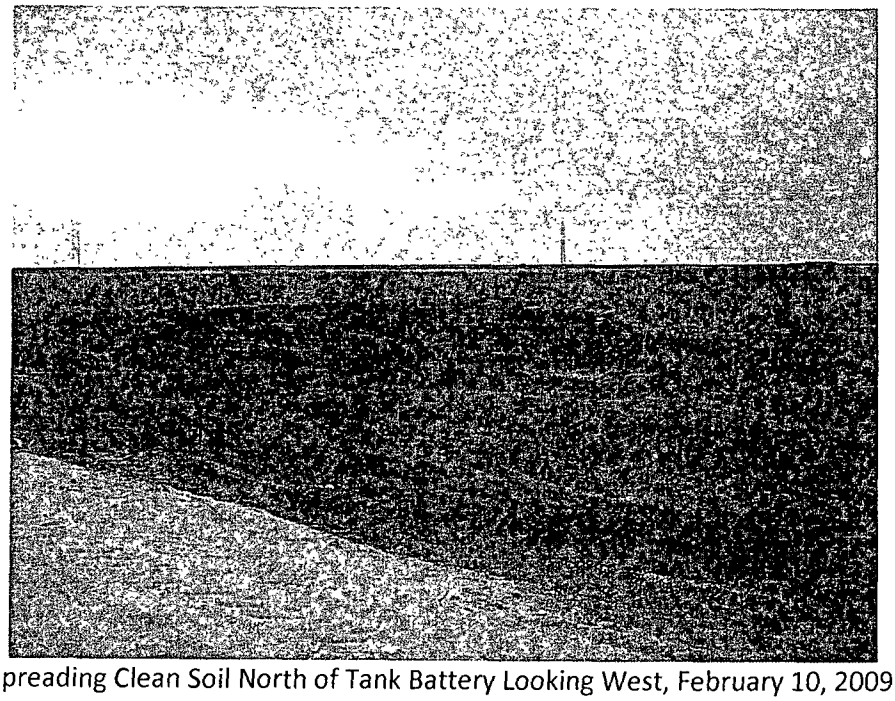
Well Location Reclamation Looking Southwest, February 2 – 6, 2009



Well Location Reclamation Looking West, February 2 – 6, 2009

Photographic Documentation

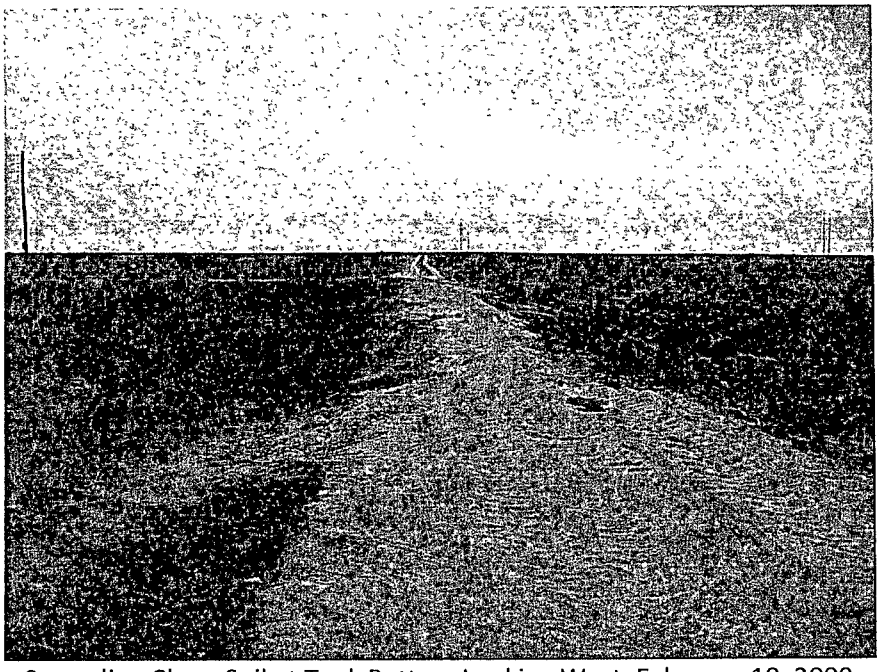
Spreading Clean Soil at Well Location Looking West, February 10, 2009



Spreading Clean Soil North of Tank Battery Looking West, February 10, 2009

Photographic Documentation

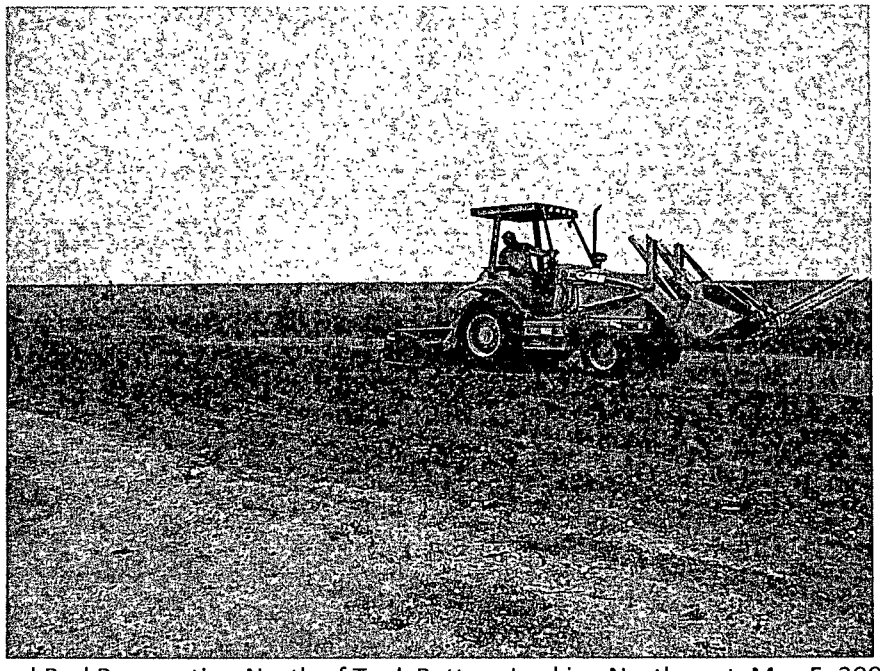
Spreading Clean Soil at Tank Battery Looking Southwest, February 10, 2009



Spreading Clean Soil at Tank Battery Looking West, February 10, 2009

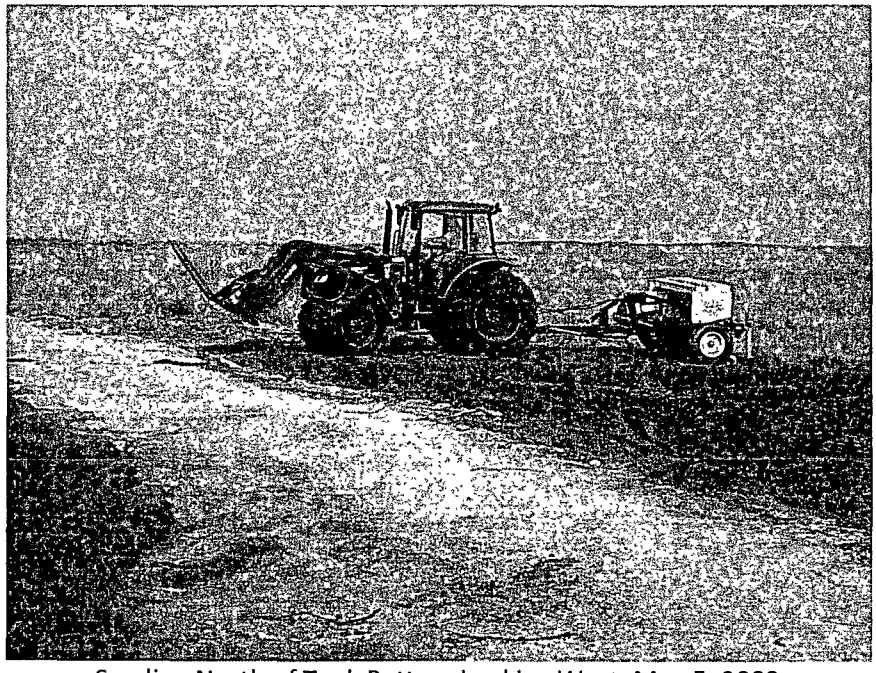
Photographic Documentation

Seed Bed Preparation North of Tank Battery Looking Northwest, May 5, 2009

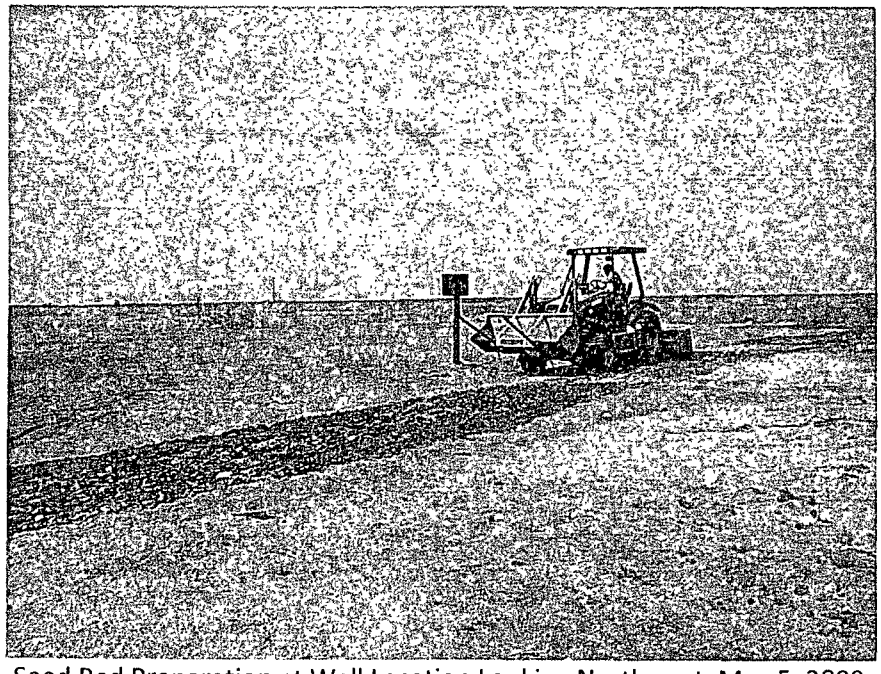


Seed Bed Preparation North of Tank Battery Looking Northwest, May 5, 2009

Photographic Documentation

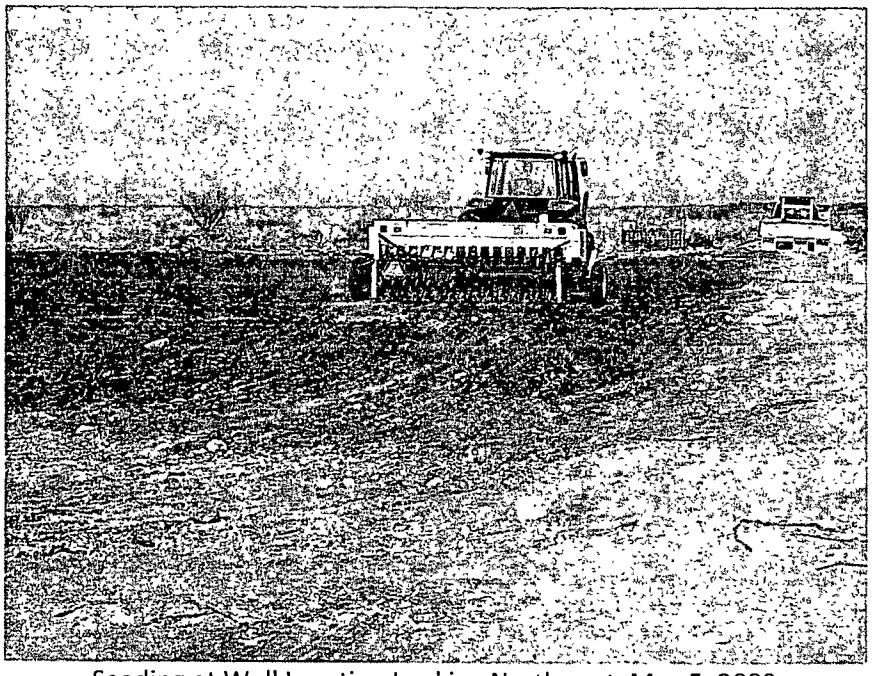


Seeding North of Tank Battery Looking West, May 5, 2009

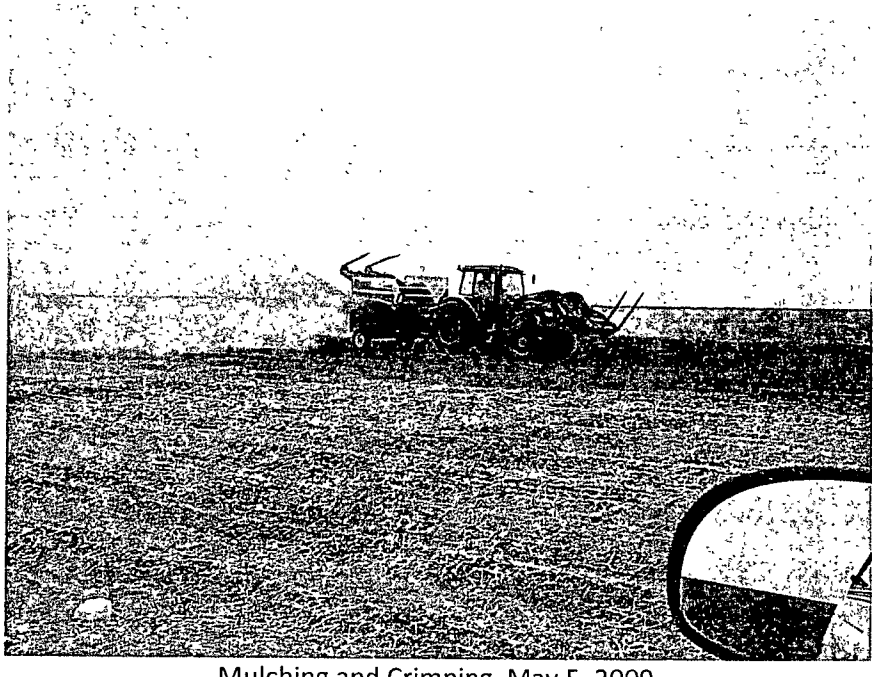


Seed Bed Preparation at Well Location Looking Northwest, May 5, 2009

Photographic Documentation

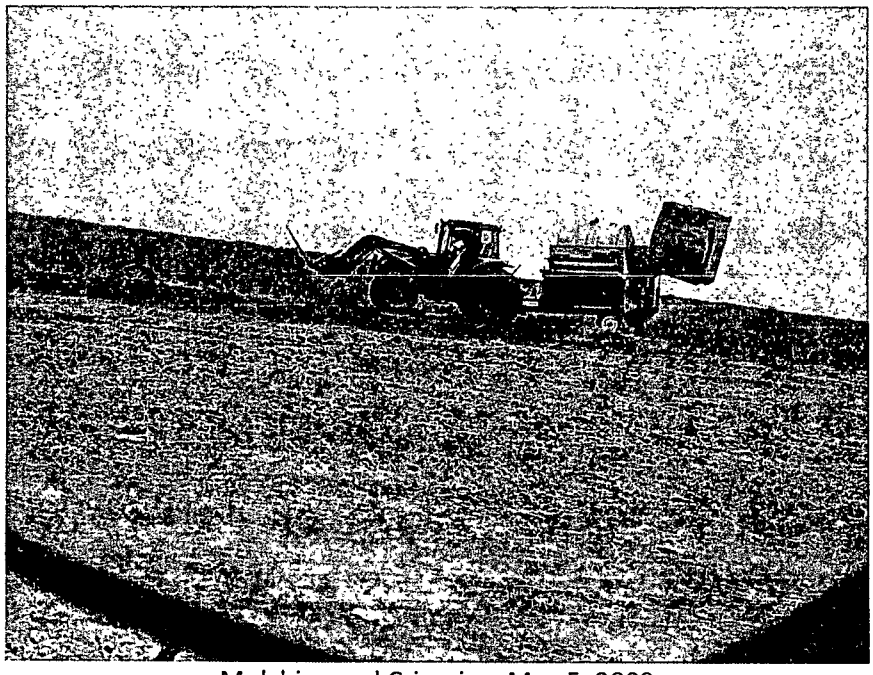


Seeding at Well Location Looking Northwest, May 5, 2009

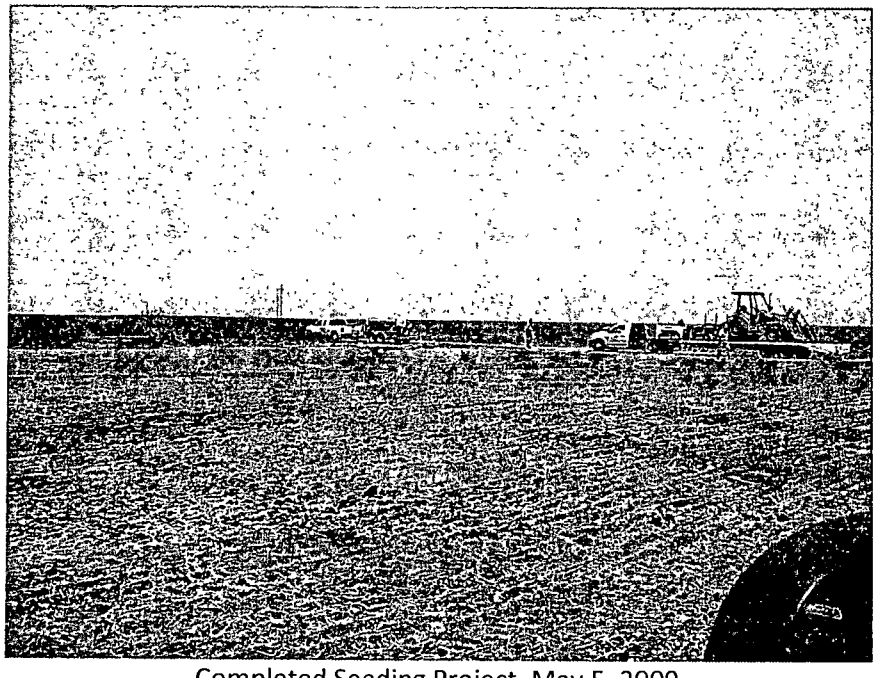


Mulching and Crimping, May 5, 2009

Photographic Documentation



Mulching and Crimping, May 5, 2009



Completed Seeding Project, May 5, 2009

APPENDIX F

Initial and Final 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

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HOBBSOCD

State of New Mexico
Energy Minerals and Natural Resources

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

RECEIVED
JAN 13 2009
HOBBSOCD

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

[X] Initial Report [ ] Final Report

Name of Company: Bridwell Oil Company	Contact: Steve Ginnings, President
Address: 810 8th Street, Wichita Falls, TX 76301	Telephone No.: (940) 723-4351
Facility Name: NM State #7	Facility Type: Well and Tank Battery

Surface Owner: State Land	Mineral Owner	Lease No.

LOCATION OF RELEASE

API 30-025-24388

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A H	7	9S	33E					Lea

Latitude: N 33° 32' 57.6" Longitude: W 103° 36' 02.0"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Legacy Spill	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: Unknown
Was Immediate Notice Given? [ ] Yes [X] No [ ] Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? [ ] Yes [X] No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Legacy spills at plugged well and out-of-service tank battery.

Describe Area Affected and Cleanup Action Taken.* Affected area is approximately 20' X 100' at well and 200' X 300' at tank battery. Cleanup is proposed by scraping soil from affected areas to achieve NMOCD recommended remediation action levels, collect confirmation soil samples and restore surface to New Mexico State Land Office requirements. Contaminated soil will be transported to an NMOCD permitted surface waste management or disposal facility.

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: Steve Ginnings	OIL CONSERVATION DIVISION	
Printed Name: Steve Ginnings	Approved by District Supervisor: ENVIRO ENGR	
Title: President	Approval Date: 1.13.09	Expiration Date: 3.13.09
E-mail Address: sginnings@wf.net	Conditions of Approval:	Attached [ ] IRP # 2049
Date: January 9, 2009 Phone: (970) 723-4351		

* Attach Additional Sheets If Necessary

RECEIVED
JAN 13 2009
HOBBSOCD

District I
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RECEIVED
JUL 27 2009
HOBBSOCD

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: Bridwell Oil Company	Contact: Dudley McMinn, Safety Coordinator
Address: 810 8th Street, Wichita Falls, Texas 76301	Telephone No.: (940) 723-4351
Facility Name: New Mexico State 7 Well #001	Facility Type: Oil Well and Tank Battery (API No. 30-025-24388)

Surface Owner: State Land Office	Mineral Owner: State Land Office	Lease No.: K-03354

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	7	9S	33E	1980	North	660	East	Lea

Latitude: N 33° 32' 57.6" Longitude: W 103° 36' 02.0"

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: Unknown	Volume Recovered: None
Source of Release: Legacy Spill	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: Unknown
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Legacy spills at plugged well and out-of-service tank battery.

Describe Area Affected and Cleanup Action Taken.* Affected area is approximately 20' x 100' at well ad 200' x 30' at tank battery and includes area north of tank battery. Cleanup was accomplished by excavating near well to approximately 3 feet, at tank battery to about 8 feet and to about 3 feet in spill area north of tank battery. Approximately 1,560 cubic yards of hydrocarbon contaminated soil was hauled to Gandy Marley, Inc. The maximum TPH and chloride concentrations in final soil samples were 103 mg/Kg and 48 mg/Kg, respectively. Remediation area was filled with clean top soil and seeded to landowner (SLO) specifications. Plugging bond was released on July 12, 2009.

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:

Printed Name: Mark J. Larson (Consultant to Bridwell Oil Company)

Title: Sr. Project Manager / President, Larson and Associates, Inc.

E-mail Address: mark@laenvironmental.com

Date: 07/23/2009 Phone: (432) 687-0901

OIL CONSERVATION DIVISION

Approved by District Supervisor: ENVIRONMENTAL ENGINEER

Approval Date: 7.27.09 Expiration Date: —

Conditions of Approval:

Attached ☐

IRP# 2049

* Attach Additional Sheets If Necessary