

# New Mexico Energy, Minerals and Natural Resources Department

**Bill Richardson**  
Governor

Joanna Prukop  
Cabinet Secretary  
Reese Fullerton  
Deputy Cabinet Secretary

Mark Fesmire  
Division Director  
Oil Conservation Division



January 13, 2009

BTA Oil Producers  
104 S Pecos  
Midland, TX 79701

**CERTIFIED MAIL—RETURN RECEIPT REQUESTED**  
7007 2560 0002 2222 8247

RE: Pardue 8808 SWD Facility 30 015 26341  
Eddy County, New Mexico N-11-23S-28E  
2RP-155

Operator:

Site assessment and soil analytical data forms the basis of any required remediation. OCD may accept an assessment of risk that demonstrates the **remaining** contaminants will not pose a threat to the present or foreseeable beneficial use of fresh waters and the environment. To approve an assessment of risk, OCD requires independent laboratory analyses that completely define the lateral and vertical extent of contamination including analytical data supporting at what level the contaminated soil cleans up. Based on the soil analytical reports submitted to OCD, BTA has not fully delineated the contamination. The remediation plan dated August 14, 2008 as presented is again denied based on the following:

- Hydrocarbons not delineated in Central Area per Table 1 and Analytical Report
- Chlorides not delineated in Central and North Areas per Table 1 and Analytical Report
- Elevated chloride impacted soils in East Area per Table 1 and Analytical Report not addressed

Results of a complete delineation **and** a remediation work plan must be submitted to NMOCD District II office **on or before February 13, 2009**. Beyond this date, if this matter is not satisfactorily resolved, further enforcement will occur. Please be advised that such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Division Examiner. Such a hearing may result in imposition of civil penalties of up to \$1,000 per day against BTA for each violation of OCD Rules, in accordance with NMSA 1978, Section 70-2-31(A).

Please provide written notification (e-mail) to the OCD **48 hours prior** to obtaining samples where analyses of samples are to be submitted to the OCD. Notification is to include the date and time of the sample event.

Remediation requirements and methods may be subject to change as conditions warrant.

In the event ground water is encountered at any time, all work is to cease and OCD is to be notified immediately.

Please be advised that NMOCD acceptance and/or approval of documents and/or reports 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 and/or approval of documents and/or reports do not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

Respectfully,

Sherry Bonham  
NMOCD District II





**BTA OIL PRODUCERS**

104 SOUTH PECOS STREET  
MIDLAND, TEXAS 79701  
OFFICE 432-682-3753 Fax 432-683-0325

OCT 17 2008  
OCD-ARTESIA

October 8, 2008

**NEW MEXICO OIL CONSERVATION DIVISION  
DISTRICT II**

Artesia Field Office  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

CERTIFIED MAIL 7006 0810 0000 3488 2827

Re: 8808 JV-P, Pardue SWD Injection Facility  
NE/4, NE/4, Section 11, T23S, R28E,  
Eddy County, New Mexico

Dear Ms. Bonham,

Enclosed is a copy of the Pardue SWD Injection Facility Monitor Well Report for the monitor well boring advanced on September 25, 2008. BTA Oil Producers, LLC has completed the monitor well, collected a water sample and has had it the water sample analyzed for TDS and Chlorides as requested by the Oil Conservation Division (OCD) in Artesia, New Mexico. BTA Oil Producers, LLC is please to present the report to the OCD for review and approval of the remediation plan dated August 14, 2008. Thank you for your time in this matter. Should you have any questions, feel free to contact me at 432.553.5352.

Regards,

A handwritten signature in cursive script, appearing to read 'Joseph A. (Skip) Baca'.

Joseph A. (Skip) Baca, P.G.  
Environmental Coordinator  
BTA Oil Producers  
104 South Pecos  
Midland, Texas 79701



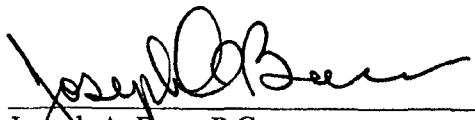
# Site Monitor Well Report

8808 JV-P Pardue SWD Facility  
20 Miles Southwest of Carlsbad, New Mexico  
BTA Project Number Env. 2007-025

Prepared for:  
**New Mexico Oil Conservation Division (NMOCD)**  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

Prepared By:  
**BTA Oil Producers, LLC**  
104 S. Pecos St.  
Midland, Texas 79701

October 2008

  
\_\_\_\_\_  
Joseph A. Baca, P.G.  
Environmental Coordinator

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## **ATTACHMENTS**

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Figure 1	Site Location Map
Figure 2	Site Detail Map with Drilling Locations
Figure 3	Drillers Log and Well Design

### **TABLES**

Table 1	Laboratory analysis of Water Sample
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### **APPENDICES**

Appendix A	Laboratory Analytical Results
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## **1.0 INTRODUCTION**

BTA Oil Producers, LLC (BTA) is pleased to submit the Pardue Site Monitor Well Report for the Pardue Monitor Well #1 drilled (Pardue MW #1) on September 25, 2008 to delineate the depth to ground water at the 8808 JV-P Pardue SWD Injection Facility (Site) in an effort to facilitate a Risk Based Closure of the impacted area within the site. The Pardue site is located approximately 20 miles southeast of the town of Carlsbad, in the NE/4, NE/4, of Section 11, Township 23 South, Range 28 East, and Eddy County, New Mexico. Ground Positioning Satellite (GPS) coordinates are N32°18.771' and W104°03.633' for the site and N32°18.735 and W104°03.703 for the MW #1. A site map is provided with this report as Figure 1.

It is BTA's intention to submit this report and data to the Oil Conservation Division (OCD), in Artesia, New Mexico in an effort to seek approval of a Risk Based Closure Plan, begin remediation activities and closure the site according to applicable New Mexico regulatory clean up regulations.

## **2.0 PURPOSE OF REPORT**

The purpose of this report is to document field activities that took place at the Pardue in order to delineate the depth of ground water and develop a remediation plan to close the impact site at the injection facility and present supporting analytical and technical data to meet that end. Based on the analytical results of the confirmation water sample collected and the depth to groundwater, BTA requests that the OCD review and approve the Risk Based Closure dated August 14, 2008 and remediation of the site may begin and the site closed.

## **3.0 SUMMARY OF FIELD ACTIVITIES**

After the New Mexico one call was cleared, BTA moved in a truck mounted drilling rig on September 25, 2008 and drilled one (1) boring to an approximate depth of 65-feet below ground surface (bgs). The drill site is approximately 240-feet southwest of the impacted area and outside the perimeter of the Pardue SWD Injection Facility (Figure 2). During drilling activities soil samples were collected at 5-foot intervals. The samples were classified and described (Figure 3). The bottom 10 to 20-feet of sand from 45-feet to 65-feet bgs had some moisture and as the bit penetrated the sand zone a small amount of water was blown out of the bore hole onto the surface. The soil samples descriptions were used to create a "Drillers Log" (Figure 3) as requested by the OCD.

## **4.0 MONITOR WELL INSTALLATION, DEVELOPMENT AND SAMPLING**

Sixty-five feet (65) of Sch 40 PVC was used to temporarily complete the well. The bottom 20-feet of casing string, from 65-feet to 45-feet bgs was slotted, 2-inch, coarse thread, Sch 40, PVC pipe, with 20-feet of cloth filter sock installed around outside of the slotted pipe (Figure 3). The upper portion of the casing string from 45-feet bgs to surface was 2-inch, coarse thread, Sch 40, PVC pipe. The casing was installed from surface to 65-feet. Due to the extremely low volume of water during drilling the bottom 20-feet and

the slow recovery of the well it was decided that the well would not be developed or sampled on September 25, 2008. The well was left open for approximately 72-hours and would be sampled on September 29, 2008. The well was not developed due to the wells extremely low volume of water and slow recovery period.

#### **5.0 Sample Collection and Analytical Results**

On September 29, 2008 approximately 1,250 milliliter water sample was collected from a depth of 65-feet bgs. The sample was collected at 11:00 AM (Central Time), and identified as Pardue MW #1. The sample was submitted for laboratory analysis. The analytical results indicated that the sample identified as Pardue MW #1 exhibited Chloride concentration of 757mg/L and a TDS concentration of 2,680 mg/L (Table 1).

The water sample was submitted to a laboratory in a tightly sealed in a new sterile poly-container, furnished by the laboratory. The samples were labeled, placed on ice, chilled to a temperature of approximately 4°C and transported to Trace Analysis, Inc in Midland, Texas for analysis of Chlorides (IC) (E300.0) and TDS (SM 2540C). Appropriate chain-of-custody documentation and shipping protocols were followed. The laboratory analytical reports are provided in Appendix B. Figure 2 displays the well site location and depth of water sample. Table 1 displays the analytical results of the laboratory analyzed water sample.

#### **6.0 LIMITATIONS**

BTA has prepared this Site Monitor Well Report to the best of its ability. No other warranty, expressed or implied, is made or intended. BTA has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. BTA has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements are true and accurate. BTA has prepared this report in a professional manner, using a degree of skill and care. BTA also notes that the facts and conditions referenced in this report may change over time, and the conclusions set forth herein are applicable only to the facts and conditions as described at the time of this report.

**7.0 DISTRIBUTION LIST**  
**Monitor Well Report**  
**BTA Oil Producers, LLC**  
**8808 JV-P Pardue SWD Facility**  
**BTA Project No. Env. 2007-025**

**Copy 1**  
Oil Conservation Division (OCD)  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

**Copy 2**

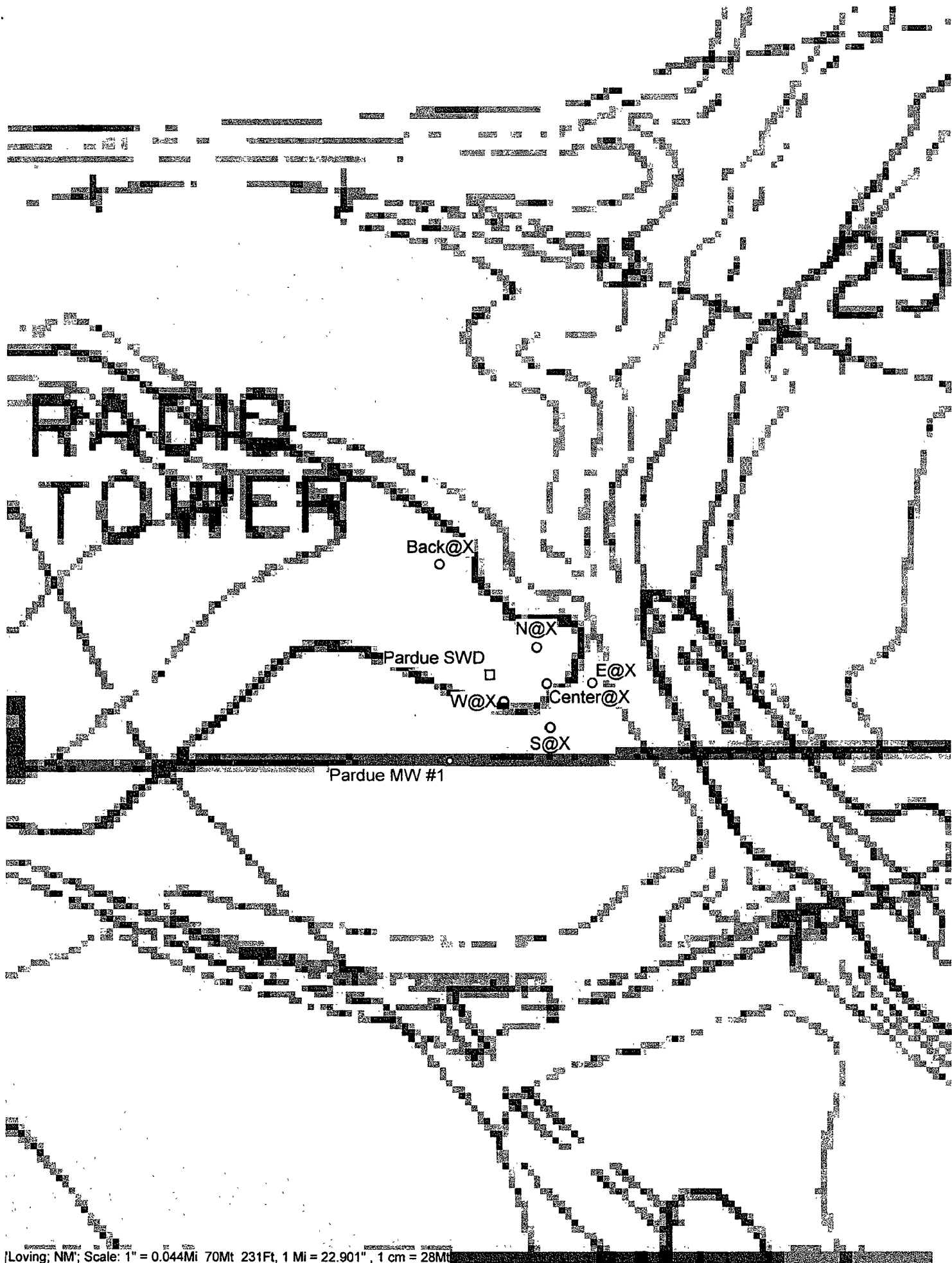
BTA Central File

# **ATTACHMENTS**

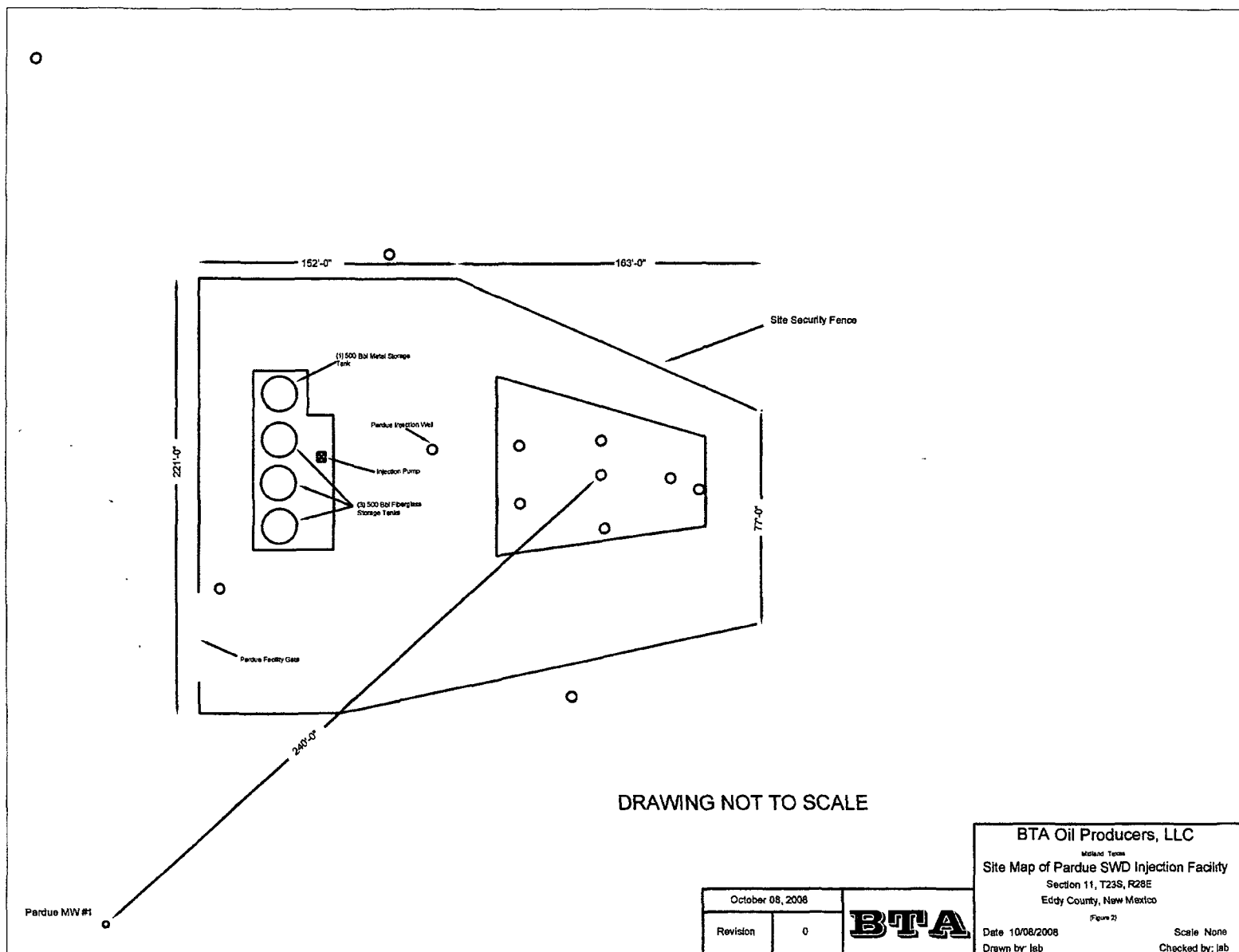


# FIGURES

## Figure 1



## **Figure 2**



Pardue MW #1

October 08, 2008	
Revision	0

**BTA**

BTA Oil Producers, LLC	
Midland Texas	
Site Map of Pardue SWD Injection Facility	
Section 11, T23S, R28E	
Eddy County, New Mexico	
(Figure 2)	
Date 10/08/2008	Scale None
Drawn by: jab	Checked by: jab

## **Figure 3**

0

5

10

15

20

25

30

35

40

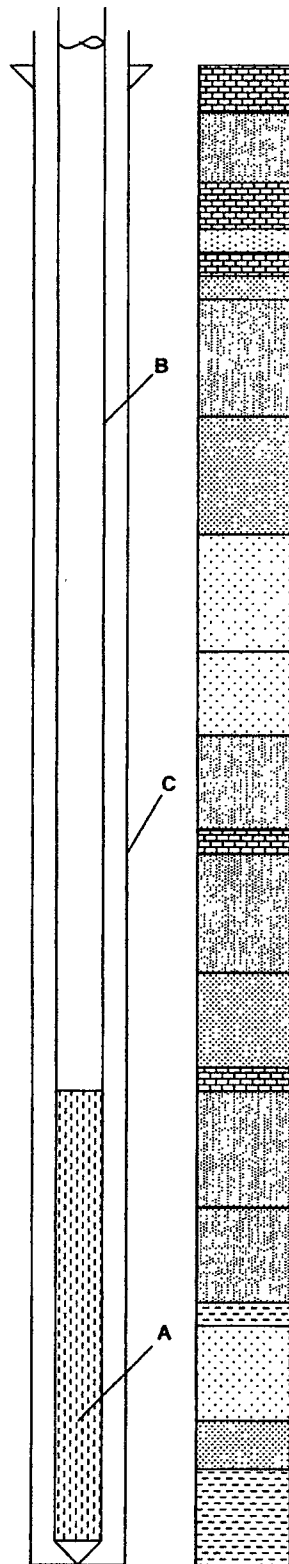
45

50

55

60

65



VFG Ls, White to Pink, with some small sand grains, MG  
Sd, Brn to Tan, with some pcs of Ls (NW)

Sli coarse G Ls, with some fine to med  
Grain sand (NW)

VFG Sand, Tan to Lt. Brn, with some sml pcs of  
Ls (NW)

FG Sand, Tan to Lt. Brn, with some Sml pcs of  
Ls (NW)

MG Sand, Pink to Lt. Tan, (NW)

MG Sand, Pink to Lt. Tan, (NW)

VFG Sand Tan to Lt. Brn (NW)

VFG Sand Tan to Lt. Brn (NW)

VFG Sand, Lt Brn to Tan, with  
some pcs of Ls, Lt Brn (NW)

VFG Sand, Lt Brn to Tan,  
with some pcs of Ls, Lt Brn  
(sli M)

Fine to Medium Grain Sand,  
Lt Tan to Lt Brn, (sli M), with  
some clay in part

Fine to Medium  
Grain Sand, Lt Tan  
to Lt Brn, (sli M), with  
some clay in part

Fine to Medium  
Grain Sand, Lt Tan  
to Lt Brn, (sli M), with  
Red clay balls in part

### **Temporary Well Design**

A - 20-feet, Coarse Thread, Sch 40,  
Slotted PVC pipe with 20-feet of  
cloth filter sock attached to outside  
of pipe

B - 45-feet, Coarse Thread Sch 40  
PVC Pipe

C - 6-inch bore hole drilled with air  
rotary, truck mounted, TD 65-feet

**NOT DRAWN TO SCALE**



## **BTA Oil Producers, LLC**

Midland, Texas

### ***Drillers Log of Pardue Monitor Well #1 and Temporary Well Casing Design***

NE/4, NE/4, Section 11, T23S, R28E  
Eddy County, New Mexico  
(Figure 3)

Date: 10/01/2008  
Drawn by: JAB

Scale: None  
Checked by: JAB

# **TABLES**



**BTA - Pardue SWD Injection Facility - Lea County, New Mexico**  
**New Mexico NMOC Inspection # iREI0724042324**  
**BTA Project Number Env. 2008-025**

**Table I**

GLE 3,001'			
<b>ANALYTICAL METHOD</b>		<b>SM 2540C</b>	<b>(IC) (E 300.0)</b>
<b>SAMPLE DATE</b>	<b>SAMPLE IDENTIFIC ATION</b>	<b>TDS mg/L</b>	<b>CHLORIDES (mg/L)</b>
<b>Monitor Well</b>			
9/29/2008	Pardue MW #1	2,680.00	757

Note: Values in bold are outside regulatory limits

# **APPENDICES**

# **Appendix A**

## Summary Report

Skip Baca  
BTA Oil Producers  
104 S. Pecos  
Midland, TX, 79701

Report Date: October 2, 2008

Work Order: 8093001



Project Location: 20.0 miles SW of Carlsbad  
Project Name: Pardue MW #1

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
174992	MW 1 (W)	water	2008-09-29	11:00	2008-09-29

**Sample: 174992 - MW 1 (W)**

Param	Flag	Result	Units	RL
Chloride		757	mg/L	0.500
Total Dissolved Solids		2680	mg/L	10.0



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1296  
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  
NCTRCA WFWB38444Y0909

DBE: VN 20657

## 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

Skip Baca  
BTA Oil Producers  
104 S. Pecos  
Midland, TX, 79701

Report Date: October 2, 2008

Work Order: 8093001



Project Location: 20.0 miles SW of Carlsbad  
Project Name: Pardue MW #1  
Project Number: Pardue MW #1

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
174992	MW 1 (W)	water	2008-09-29	11:00	2008-09-29

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.

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

A handwritten signature in black ink, appearing to read "Michael Abel".

---

Dr. Blair Leftwich, Director

**Standard Flags**

**B** - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project Pardue MW #1 were received by TraceAnalysis, Inc. on 2008-09-29 and assigned to work order 8093001. Samples for work order 8093001 were received intact at a temperature of 2.5 deg. C.

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

Test	Method
Chloride (IC)	E 300.0
TDS	SM 2540C

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 8093001 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.

Report Date: October 2, 2008  
Pardue MW #1

Work Order: 8093001  
Pardue MW #1

Page Number: 4 of 6  
20.0 miles SW of Carlsbad

## Analytical Report

### Sample: 174992 - MW 1 (W)

Laboratory:	Midland	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Chloride (IC)	Date Analyzed:	2008-10-01	Analyzed By:	AR
QC Batch:	52892	Sample Preparation:	2008-09-30	Prepared By:	AR
Prep Batch:	45295				

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		757	mg/L	100	0.500

### Sample: 174992 - MW 1 (W)

Laboratory:	Midland	Analytical Method:	SM 2540C	Prep Method:	N/A
Analysis:	TDS	Date Analyzed:	2008-10-02	Analyzed By:	AR
QC Batch:	52924	Sample Preparation:	2008-09-30	Prepared By:	AR
Prep Batch:	45296				

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2680	mg/L	5	10.0

### Method Blank (1) QC Batch: 52892

QC Batch:	52892	Date Analyzed:	2008-10-01	Analyzed By:	AR
Prep Batch:	45295	QC Preparation:	2008-09-30	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.172	mg/L	0.5

### Method Blank (1) QC Batch: 52924

QC Batch:	52924	Date Analyzed:	2008-10-02	Analyzed By:	AR
Prep Batch:	45296	QC Preparation:	2008-09-30	Prepared By:	AR

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.00	mg/L	10



Report Date: October 2, 2008  
Pardue MW #1

Work Order: 8093001  
Pardue MW #1

Page Number: 5 of 6  
20.0 miles SW of Carlsbad

**Duplicates (1)** Duplicated Sample: 174859

QC Batch: 52924  
Prep Batch: 45296

Date Analyzed: 2008-10-02  
QC Preparation: 2008-09-30

Analyzed By: AR  
Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1280	1190	mg/L	2	8	20

**Laboratory Control Spike (LCS-1)**

QC Batch: 52892  
Prep Batch: 45295

Date Analyzed: 2008-10-01  
QC Preparation: 2008-09-30

Analyzed By: AR  
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.9	mg/L	1	12.5	<0.172	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	12.0	mg/L	1	12.5	<0.172	96	90 - 110	0	

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

**Matrix Spike (MS-1)** Spiked Sample: 174992

QC Batch: 52892  
Prep Batch: 45295

Date Analyzed: 2008-10-01  
QC Preparation: 2008-09-30

Analyzed By: AR  
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	<sup>1</sup> 796	mg/L	5	62.5	757	62	90 - 110

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	<sup>2</sup> 804	mg/L	5	62.5	757	75	90 - 110	1	

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

<sup>1</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>2</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: October 2, 2008  
Pardue MW #1

Work Order: 8093001  
Pardue MW #1

Page Number: 6 of 6  
20.0 miles SW of Carlsbad

**Standard (ICV-1)**

QC Batch: 52892

Date Analyzed: 2008-10-01

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.0	96	90 - 110	2008-10-01

**Standard (CCV-1)**

QC Batch: 52892

Date Analyzed: 2008-10-01

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.2	98	90 - 110	2008-10-01

**Standard (ICV-1)**

QC Batch: 52924

Date Analyzed: 2008-10-02

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	984	98	90 - 110	2008-10-02

**Standard (CCV-1)**

QC Batch: 52924

Date Analyzed: 2008-10-02

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	995	100	90 - 110	2008-10-02

