

**AP-71**

**2013**

**Annual Report**

**DATE**

**March 31, 2014**

**From:** [Hall, Sharon](#)  
**To:** [Lowe, Leonard, EMNRD](#)  
**Cc:** [VonGonten, Glenn, EMNRD](#); [Hack Conder: Katie Jones](#)  
**Subject:** ROC BD H-35 Annual Report, NMOCD case # AP-71  
**Date:** Monday, March 31, 2014 2:57:01 PM  
**Attachments:** [BD H-35 2013 Annual Groundwater Report.pdf](#)

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Mr. Lowe,

On behalf of ROC, I am respectfully submitting the attached Annual Groundwater Report for the BD H-35 site. (NMOCD case # AP-71). If you have any questions please contact Hack.

Regards,  
Sharon

**Sharon Hall** | Associate Vice President | [Sharon.Hall@arcadis-us.com](mailto:Sharon.Hall@arcadis-us.com)  
**ARCADIS U.S., Inc.** | 1004 N. Big Spring St., Suite 300 | Midland, Texas 79701  
T. 432.687.5400 | F. 432.687.5401 [www.arcadis-us.com](http://www.arcadis-us.com)  
ARCADIS, Imagine the result  
*Please consider the environment before printing this email.*

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*Infrastructure, buildings, environment, communications*

Mr. Leonard Lowe  
New Mexico Oil Conservation Division  
1220 So. St. Francis Drive  
Santa Fe, New Mexico 87505

Subject: **2013 ANNUAL GROUNDWATER REPORT**  
**NMOCD Case # AP-71**  
**Blinebry Drinkard (BD) H-35 Emergency Overflow Pit**  
**T22S, R37E, Section. 35, Unit H, Lea County, New Mexico**

Mr. Lowe:

On behalf of Rice Operating Company (ROC), ARCADIS U.S., Inc. (ARCADIS) respectfully submits the 2013 Annual Groundwater Report for the BD H-35 Emergency Overflow Pit site located at the H-35 facility on the Blinebry-Drinkard Salt Water Disposal System.

One monitoring well was installed on December 21, 2005, following the approval of the Investigation and Characterization Work Plan on November 9, 2004.

The well was sampled quarterly in 2013 per NMOCD guidelines. The attached table summarizes the analytical results from groundwater samples collected from the monitor well at the site. ROC will continue to monitor through 2014.

ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The BD SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, do not hesitate to contact me or Hack Conder at (575) 393-9174.

Sincerely,

ARCADIS U.S., Inc.

A handwritten signature in blue ink that reads "Sharon E. Hall".

Sharon E. Hall  
Associate Vice President

Copies: Hack Conder- ROC

Attachments:

Site Location Map  
Monitor Well Location Figure  
Data Summary Table  
Most Recent Laboratory Results

ARCADIS U.S., Inc.  
1004 North Big Spring Street  
Suite 300  
Midland  
Texas 79701  
Tel 432 687 5400  
Fax 432 687 5401  
www.arcadis-us.com

Environmental

Date:  
March 31, 2014

Contact:  
Sharon E. Hall

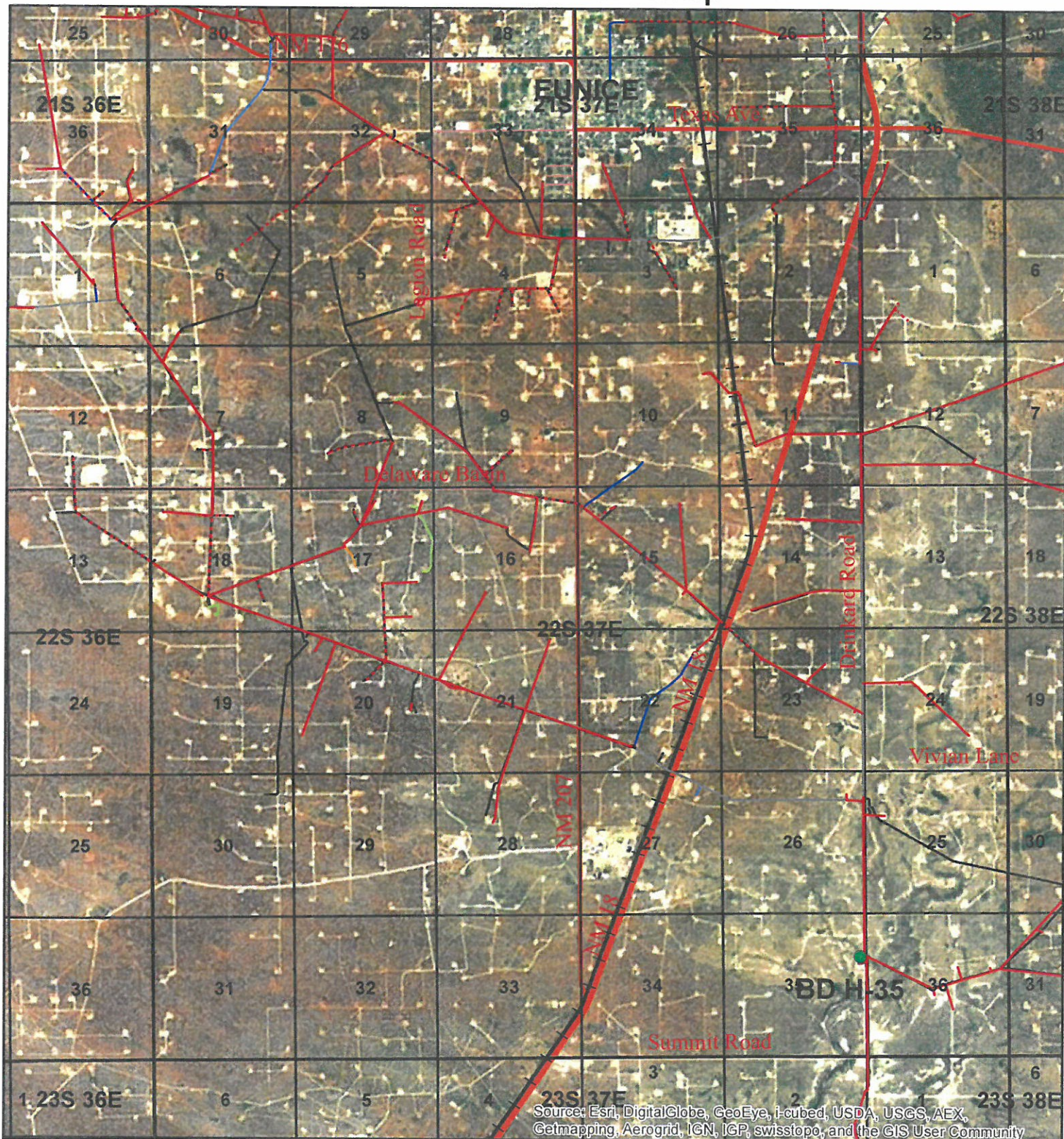
Phone:  
432 687-5400

Email:  
shall@arcadis-us.com

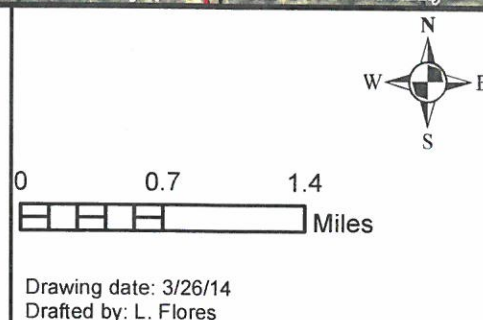
Our ref:  
MT000846.0001



# Site Location Map

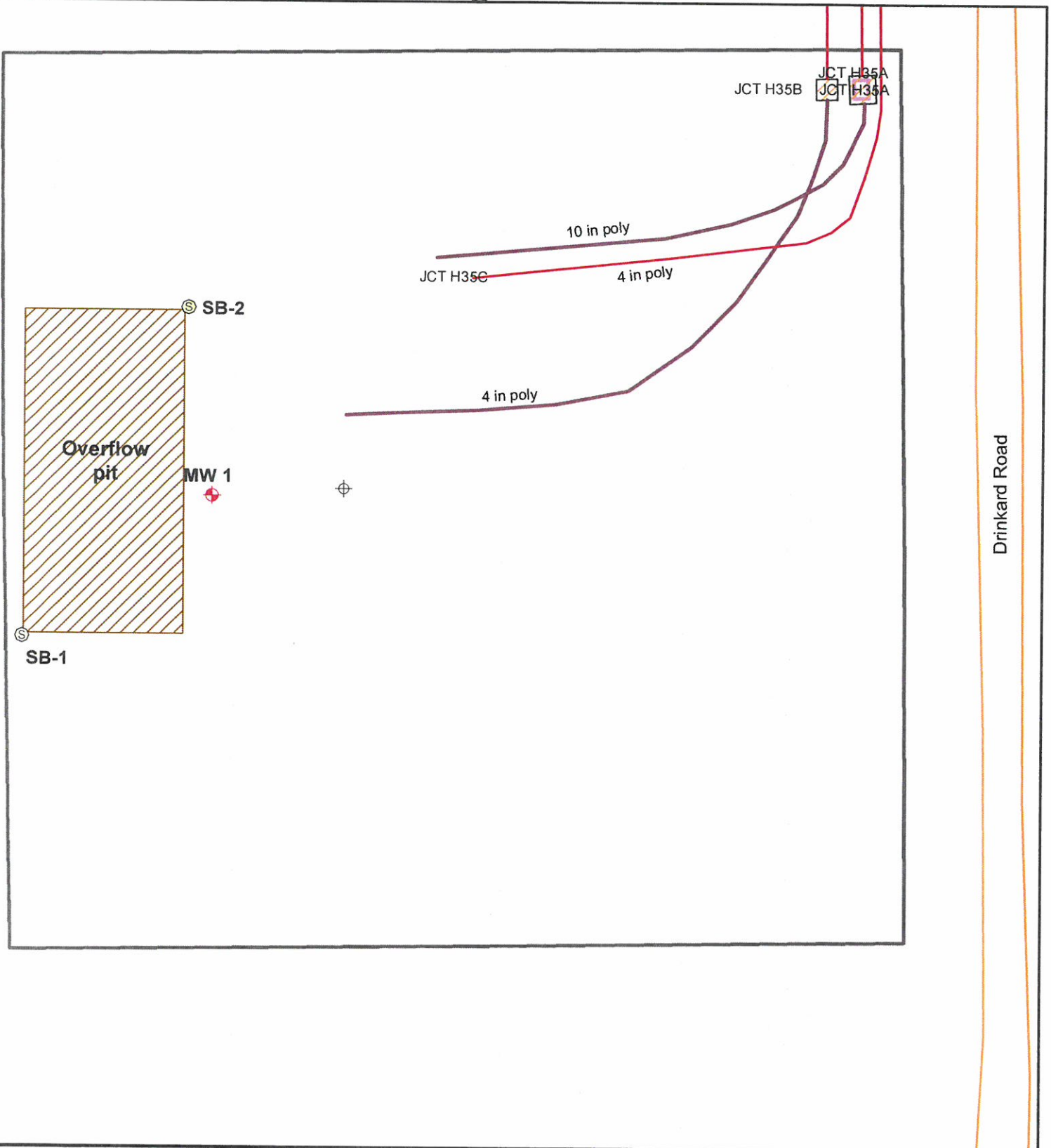


**BD H-35**  
**Emergency**  
**Overflow Pit**  
Legals: UL/H sec. 35  
T-22-S R-37-E  
NMOCD Case #: AP-71

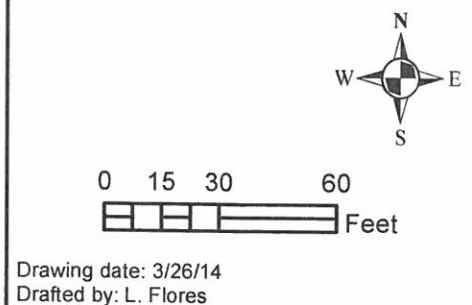




# Monitoring Well Location



***BD H-35  
Emergency  
Overflow Pit***  
Legals: UL/H sec. 35  
T-22-S R-37-E  
NMOCD Case #: AP-71



ROC - BD H-35 (AP-71)

Unit Letter H, Section 35, T22S, R37E

| MW | Depth to Water | Total Depth | Well Volume | Volume Purged | Sample Date | Cl   | TDS   | Benzene | Toluene | Ethyl Benzene | Total Xylenes | Sulfate | Comments      |
|----|----------------|-------------|-------------|---------------|-------------|------|-------|---------|---------|---------------|---------------|---------|---------------|
| 1  | 43.64          | 57.2        | 8.8         | 30            | 1/4/2006    | 1880 | 4290  | <0.001  | <0.001  | <0.001        | <0.001        | 383     | clear no odor |
| 1  | 43.79          | 57.2        | 8.7         | 30            | 4/24/2006   | 2360 | 5380  | <0.001  | <0.001  | <0.001        | <0.001        | 405     | XXX           |
| 1  | 43.92          | 57.2        | 8.6         | 35            | 7/19/2006   | XXX  | XXX   | XXX     | XXX     | XXX           | XXX           | XXX     | XXX           |
| 1  | 43.83          | 57.2        | 8.7         | 30            | 10/11/2006  | 2880 | 7460  | <0.001  | <0.001  | <0.001        | <0.001        | 561     | clear         |
| 1  | 44.1           | 57.16       | 8.5         | 30            | 1/25/2007   | 3240 | 5300  | <0.001  | <0.001  | <0.001        | <0.001        | 556     | XXX           |
| 1  | 44.2           | 57.16       | 8.4         | 30            | 4/4/2007    | 3220 | 8680  | <0.001  | <0.001  | <0.001        | <0.001        | 381     | XXX           |
| 1  | 43.99          | 57.16       | 8.6         | 30            | 8/24/2007   | 4749 | 12345 | 0.003   | 0.003   | 0.003         | 0.008         | 565     | clear no odor |
| 1  | 44.13          | 57.16       | 8.5         | 30            | 10/31/2007  | 3400 | 7028  | <0.002  | <0.002  | <0.002        | <0.006        | 499     | clear no odor |
| 1  | 44.22          | 57.2        | 8.4         | 30            | 1/15/2008   | 4800 | 9194  | <0.001  | <0.001  | <0.001        | <0.003        | 665     | clear no odor |
| 1  | 44.26          | 57.2        | 8.4         | 30            | 4/7/2008    | 4600 | 9350  | <0.001  | <0.001  | <0.001        | <0.003        | 888     | clear no odor |
| 1  | 44.56          | 57.23       | 8.2         | 30            | 7/13/2009   | 2380 | 4800  | <0.001  | <0.001  | <0.001        | <0.003        | 522     | clear no odor |
| 1  | 44.34          | 57.2        | 8.4         | 30            | 7/22/2008   | 4400 | 9580  | <0.002  | <0.002  | <0.002        | <0.006        | 714     | clear no odor |
| 1  | 44.4           | 57.2        | 8.3         | 30            | 10/2/2008   | 3950 | 9350  | <0.001  | <0.001  | <0.001        | <0.003        | 675     | clear no odor |
| 1  | 44.47          | 57.2        | 8.3         | 30            | 1/14/2009   | 3650 | 7600  | <0.001  | <0.001  | <0.001        | <0.003        | 657     | clear no odor |
| 1  | 44.52          | 57.2        | 8.2         | 30            | 4/14/2009   | 3400 | 6550  | <0.001  | <0.001  | <0.001        | <0.003        | 629     | clear no odor |
| 1  | 44.62          | 57.23       | 8.2         | 30            | 10/7/2009   | 3050 | 6900  | <0.001  | <0.001  | <0.001        | <0.003        | 519     | clear no odor |
| 1  | 44.66          | 57.23       | 8.2         | 30            | 1/13/2010   | 3050 | 6300  | <0.001  | <0.001  | <0.001        | <0.003        | 490     | clear no odor |
| 1  | 44.68          | 57.23       | 8.2         | 30            | 4/9/2010    | 2850 | 5480  | <0.001  | <0.001  | <0.001        | <0.003        | 618     | clear no odor |
| 1  | 44.6           | 57.23       | 8.2         | 30            | 7/9/2010    | 2650 | 4970  | <0.001  | <0.001  | <0.001        | <0.003        | 526     | clear no odor |
| 1  | 44.55          | 57.23       | 8.2         | 30            | 10/7/2010   | 2750 | 6430  | <0.001  | <0.001  | <0.001        | <0.003        | 512     | clear no odor |
| 1  | 44.76          | 57.24       | 8.1         | 30            | 1/13/2011   | 2650 | 5160  | <0.001  | <0.001  | <0.001        | <0.003        | 598     | clear no odor |
| 1  | 44.77          | 57.24       | 8.1         | 30            | 4/11/2011   | 3050 | 5480  | <0.001  | <0.001  | <0.001        | <0.003        | 567     | clear no odor |
| 1  | 44.86          | 57.24       | 8           | 30            | 7/13/2011   | 4050 | 6590  | <0.001  | <0.001  | <0.001        | <0.003        | 597     | clear no odor |
| 1  | 44.94          | 57.24       | 8           | 30            | 10/12/2011  | 3400 | 5890  | <0.001  | <0.001  | <0.001        | <0.003        | 607     | clear no odor |
| 1  | 44.99          | 57.24       | 8           | 30            | 1/17/2012   | 2470 | 5070  | <0.001  | <0.001  | <0.001        | <0.003        | 558     | clear no odor |
| 1  | 45.08          | 57.24       | 7.9         | 30            | 4/16/2012   | 2570 | 5100  | <0.001  | <0.001  | <0.001        | <0.003        | 437     | clear no odor |
| 1  | 45.1           | 57.24       | 7.9         | 30            | 7/12/2012   | 2430 | 4940  | <0.001  | <0.001  | <0.001        | <0.003        | 504     | clear no odor |
| 1  | 45.12          | 57.24       | 7.9         | 30            | 10/4/2012   | 2700 | 5380  | <0.001  | <0.001  | <0.001        | <0.003        | 615     | clear no odor |
| 1  | 45.18          | 57.24       | 7.8         | 30            | 1/7/2013    | 2200 | 4290  | <0.001  | <0.001  | <0.001        | <0.003        | 501     | clear no odor |
| 1  | 45.25          | 57.24       | 7.8         | 30            | 4/18/2013   | 2080 | 4100  | <0.001  | <0.001  | <0.001        | <0.003        | 504     | clear no odor |
| 1  | 45.24          | 57.24       | 7.8         | 30            | 7/15/2013   | 1980 | 4240  | XXX     | XXX     | XXX           | XXX           | 456     | clear no odor |
| 1  | 45.32          | 57.24       | 7.7         | 30            | 10/16/2013  | 1800 | 4080  | XXX     | XXX     | XXX           | XXX           | 418     | clear no odor |

October 25, 2013

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD H-35 SWD

Enclosed are the results of analyses for samples received by the laboratory on 10/22/13 12:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

Rice Operating Company  
Hack Conder  
112 W. Taylor  
Hobbs NM, 88240  
Fax To: (575) 397-1471

Received: 10/22/2013  
Reported: 10/25/2013  
Project Name: BD H-35 SWD  
Project Number: NONE GIVEN  
Project Location: T22S R37E SEC35 H-LEA CTY., NM

Sampling Date: 10/16/2013  
Sampling Type: Water  
Sampling Condition: Cool & Intact  
Sample Received By: Celey D. Keene

**Sample ID: MONITOR WELL #1 (H302546-01)**

| Chloride, SM4500Cl-B |        | mg/L            |            | Analyzed By: AP |      |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride*            | 1800   | 4.00            | 10/22/2013 | ND              | 100  | 100        | 100           | 3.92 |           |
| Sulfate 375.4        |        | mg/L            |            | Analyzed By: AP |      |            |               |      |           |
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Sulfate*             | 418    | 83.3            | 10/23/2013 | ND              | 21.2 | 106        | 20.0          | 2.24 |           |
| TDS 160.1            |        | mg/L            |            | Analyzed By: AP |      |            |               |      |           |
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| TDS*                 | 4080   | 5.00            | 10/23/2013 | ND              | 214  | 89.2       | 240           | 1.67 |           |

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

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

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

101 East Mariend - Hobbs, New Mexico  
88240 Tel  
(575) 393-2326 Fax  
(575) 393-2476

## Cardinal Laboratories, Inc.

|  |  |                                |
|--|--|--------------------------------|
| Company Name:<br><b>RICE Operating Company</b>                   | BILL TO Company:<br><b>RICE Operating Company</b>                | PO#                            |
| Project Manager:<br><b>Hack Conder</b>                           | Address:<br><b>122 W Taylor Street ~ Hobbs, New Mexico 88240</b> | (Street, City, Zip)            |
| Address:<br><b>122 W Taylor Street ~ Hobbs, New Mexico 88240</b> | Phone#:<br><b>(575) 393-9174</b>                                 | Fax#:<br><b>(575) 397-1471</b> |
| Phone #:<br><b>(575) 393-9174</b>                                | Fax #:<br><b>(575) 397-1471</b>                                  |                                |

Project #:                      Project Name: BD H-35 SWD  
Project Location: T22S R37E Sec35 H ~ Lea County New Mexico  
Sampler Signature: Rozanne Johnson (575) 531-9310  
rozanne@valernet.com

[illegible]

|                  |          |       |                                 |          |       |
|------------------|----------|-------|---------------------------------|----------|-------|
| Relinquished by: | Date:    | Time: | Received by:                    | Date:    | Time: |
| Bearne Johnson   | 10/22/13 | 12:54 | [Signature]                     | 10/22/13 | 12:55 |
| Relinquished by: | Date:    | Time: | Received by: (Laboratory Staff) | Date:    | Time: |

|                                     |   |                                     |      |        |     |                                     |                                     |    |                          |                          |                       |
|-------------------------------------|---|-------------------------------------|------|--------|-----|-------------------------------------|-------------------------------------|----|--------------------------|--------------------------|-----------------------|
| Delivered By: (Circle One)          | Sample Condition  | CHECKED BY:                         |      |        |     |                                     |                                     |    |                          |                          |                       |
| <u>Sampler</u> - UPS - Bus - Other: | <table border="0"> <tr> <td></td> <td>Cool</td> <td>Intact</td> </tr> <tr> <td>Yes</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>No</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table> |                                     | Cool | Intact | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | <input type="checkbox"/> | (Initials) <i>cdh</i> |
|                                     | Cool  | Intact                              |      |        |     |                                     |                                     |    |                          |                          |                       |
| Yes                                 | <input checked="" type="checkbox"/>   | <input checked="" type="checkbox"/> |      |        |     |                                     |                                     |    |                          |                          |                       |
| No                                  | <input type="checkbox"/>  | <input type="checkbox"/>            |      |        |     |                                     |                                     |    |                          |                          |                       |

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID #

### ANALYSIS REQUEST

(Circle or Specify Method No.)

|  |  |                                      |             |
|--|--|--------------------------------------|-------------|
|  | MTBE   | 8021B/602                            |             |
|  | BTEX   | 8021B/602                            |             |
|  | TPH  | 418.1/TK1005 / TX1005 Extended (C35) |             |
|  | PAH  | 8270C                                |             |
|  | Total Metals   | Ag As Ba Cd Cr Pb Se Hg              | 8010B/200.7 |
|  | TCLP Metals  | Ag As Ba Cd Cr Pb Se Hg              |             |
|  | TCLP Volatiles   |                                      |             |
|  | TCLP Semi Volatiles  |                                      |             |
|  | TCLP Pesticides  |                                      |             |
|  | RCI  |                                      |             |
|  | GC/MS Vol.   | 8260B/624                            |             |
|  | GC/MS Semi. Vol.   | 8270C/625                            |             |
|  | PCB's  | 8082/608                             |             |
|  | Pesticides   | 8081A/608                            |             |
|  | BOD, TSS, pH   |                                      |             |
|  | Moisture Content   |                                      |             |
|  | Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> ) |                                      |             |
|  | Cations (Ca, Mg, Na, K)  |                                      |             |
|  | Sulfates (SO <sub>4</sub> )  |                                      | X           |
|  | Total Dissolved Solids   |                                      | X           |
|  | Chlorides  |                                      | X           |
|  | Turn Around Time   | ~ 24 Hours                           |             |

|               |     |                           |
|---------------|-----|---------------------------|
| Phone Results | Yes | No                        |
| Fax Results   | Yes | No Additional Fax Number: |

Email Results to: [hconder@riceswd.com](mailto:hconder@riceswd.com)  
[lweinheimer@rice-ecs.com](mailto:lweinheimer@rice-ecs.com)  
[kjones@riceswd.com](mailto:kjones@riceswd.com)  
[rozanne11@windstream.net](mailto:rozanne11@windstream.net)

#54