USPS Priority Mail® 9405 5118 9956 2498 7768 70



February 27, 2015

Mr. Jim Griswold New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 South St. Francis Drive Santa Fe, New Mexico 87505

#### RE: 2014 Annual Groundwater Monitoring Report South Four Lakes #13 Site (AP-76) T12S-R34E-Section 1, Unit Letter L, Lea County, New Mexico

Dear Mr. Griswold:

As agent for Pride Energy Company, Trident Environmental submits this 2014 Annual Groundwater Monitoring Report for the above-referenced site.

#### Groundwater Sampling Procedures

During each quarterly sampling event the two monitoring wells (MW-1 and MW-2) were gauged for depth to groundwater using an electronic water level indicator immediately prior to purging operations. A minimum of three well volumes of groundwater was purged from each monitoring well using a 3-stage submersible pump which was decontaminated using an Alconox solution and a distilled water rinse between sampling points. Groundwater parameters (pH, temperature, and conductivity) were measured using a Hanna Model 98130 multimeter and recorded on a well sample data form. At the end of purging, water samples for each monitoring well were transferred into 500 milliliter (ml) plastic containers for laboratory analysis of chloride using EPA Method 160.1. For each set of samples, chain of custody forms documenting sample identification numbers, collection times, and delivery times to the laboratory were completed. All water samples were placed in an ice-filled cooler immediately after collection and transported to Permian Basin Environmental Lab (Midland, Texas) for analysis.

#### Groundwater Monitoring Results

Groundwater monitoring activities have been performed at the site on a quarterly basis since January 2008 as summarized in Table 1. A site map showing the most recent groundwater elevation and the chloride/TDS concentrations in monitoring wells MW-1 and MW-2 is presented as Figure 1.

#### Groundwater Depth, Elevations, Hydraulic Gradient and Flow Direction

Depth to groundwater at the site is approximately 27 feet (ft) below ground surface with a groundwater gradient direction trending towards the southeast and a hydraulic gradient of approximately 0.002 ft/ft (Figure 1). As displayed in Figure 2, which graphs the change in groundwater elevation since 2008 at monitoring wells MW-1 and MW-2, the water table elevation has been steadily declining about 0.4 ft/year up until the latter part of 2014 in which an approximate increase of 0.6 ft/yr is observed. A decline in water table is expected to resume as the more normally dry years characteristic of southeast New Mexico climate continue. Groundwater depths and gradient patterns are consistent with the prevailing water table conditions in the area.

#### Groundwater Quality Conditions

The constituents of concern in groundwater are chloride and TDS as they are above the New Mexico's Water Quality Control Commission (WQCC) standards, of 250 mg/L and 1,000 mg/L, respectively. Benzene, toluene, ethylbenzene, and xylenes (BTEX) are not a constituent of concern as concentrations remained below laboratory detection limits and WQCC standards for two years; therefore, analysis for these constituents has been discontinued. The site groundwater monitoring map (Figure 1) includes the most recent chloride and TDS concentrations. Graphs depicting chloride and TDS concentrations at monitoring wells MW-1 and MW-2 since 2008 are presented in Figures 3 and 4, respectively.

Pride Energy Company plans to continue quarterly ground water monitoring activities and submit an annual groundwater monitoring report next year.

We look forward to working with you on this project. If you have any questions or comments you may contact me at 432.638.8740 (gil@trident-environmental.com) or Matt Pride at 918.524.9200 (mattp@pride-energy.com).

Respectfully,

Gilbert Van Deventer, REM, PG Trident Environmental

#### cc: Matt Pride (Pride Energy Co., Tulsa, OK) Tomas Oberding (NMOCD -District 1, Hobbs, NM)

Attachments: Table, Figures, well sampling data form, and laboratory analytical reports

## TABLE 1 Summary of Groundwater Monitoring Results

FIGURE 1 Site Map with Groundwater Monitoring Results

FIGURE 2 Groundwater Elevations versus Time Graph

FIGURE 3 Chloride Concentrations Versus Time Graph

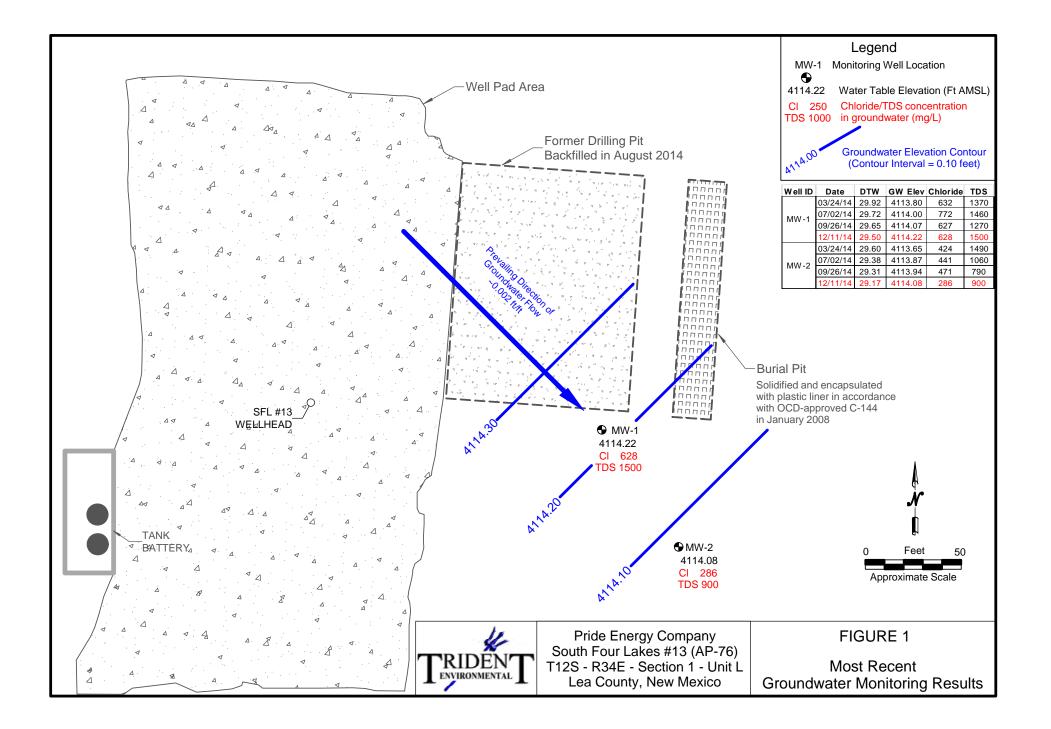
FIGURE 4 TDS Concentrations Versus Time Graph

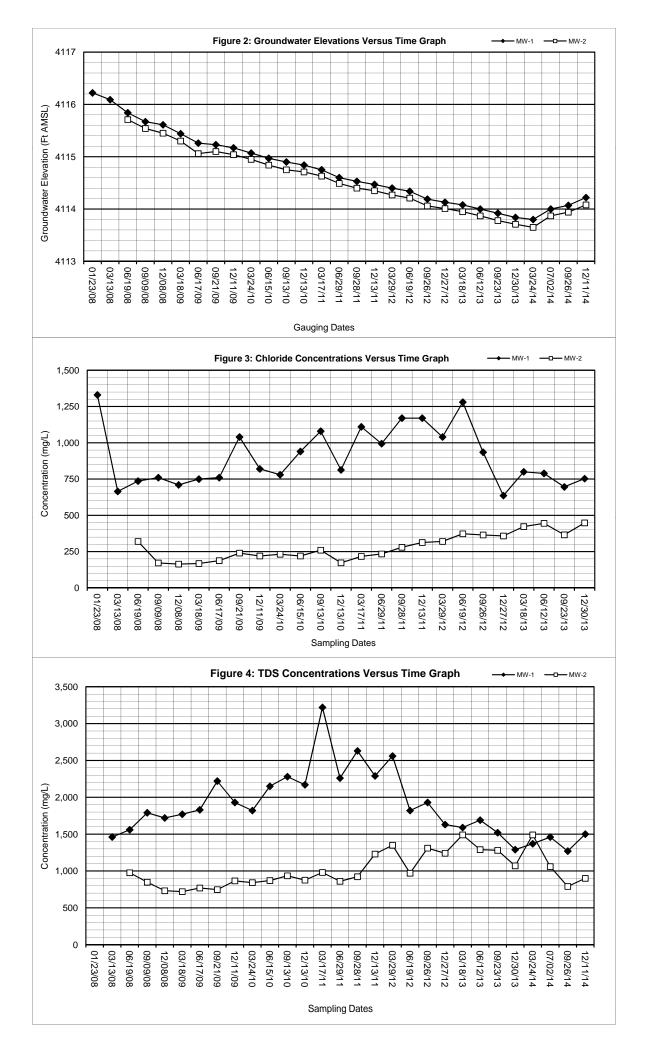
WELL SAMPLING DATA FORM

| Table 1                                   |
|---|
| Summary of Groundwater Monitoring Results |
| South Four Lakes #13 Site (AP-76)         |

|            |                |             | outh Four La            | kes #13 Sit       | te (AP-76 | )       |         |         | -                |
|------------|----------------|-------------|-------------------------|-------------------|-----------|---------|---------|---------|------------------|
| Monitoring | Sampla         | Depth to    | Groundwater             | Chloride          | TDS       | Banzone | Toluene | Ethyl-  | Yulong           |
| Well       | Sample<br>Date | Groundwater | Elevation               |                   |           | Benzene |         | benzene | Xylene<br>(mg/L) |
| well       | Date           | (feet BTOC) | (feet AMSL)             | (mg/L)            | (mg/L)    | (mg/L)  | (mg/L)  | (mg/L)  | (mg/L)           |
|            | 01/23/08       | 27.5        | 4116.22                 | 1,330             | NA        |         |         |         |                  |
|            | 03/13/08       | 27.63       | 4116.09                 | 665               | 1,461     | < 0.001 | < 0.002 | < 0.001 | < 0.003          |
|            | 06/19/08       | 27.88       | 4115.84                 | 736               | 1,560     |         |         |         |                  |
|            | 09/09/08       | 28.05       | 4115.67                 | 760               | 1,790     | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 12/08/08       | 28.11       | 4115.61                 | 710               | 1,720     | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 03/18/09       | 28.28       | 4115.44                 | 750               | 1,770     | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 06/17/09       | 28.46       | 4115.26                 | 760               | 1,830     | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 09/21/09       | 28.49       | 4115.23                 | 1,040             | 2,220     | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 12/11/09       | 28.55       | 4115.17                 | 820               | 1930      | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 03/24/10       | 28.65       | 4115.07                 | 780               | 1820      |         |         |         |                  |
|            | 06/15/10       | 28.75       | 4114.97                 | 940               | 2150      |         |         |         |                  |
|            | 09/13/10       | 28.82       | 4114.90                 | 1080              | 2280      |         |         |         |                  |
|            | 12/13/10       | 28.88       | 4114.84                 | 813               | 2170      |         |         |         |                  |
|            | 03/17/11       | 28.97       | 4114.75                 | 1110              | 3220      |         |         |         |                  |
| MW-1       | 06/29/11       | 29.12       | 4114.60                 | 994               | 2260      |         |         |         |                  |
|            | 09/28/11       | 29.19       | 4114.53                 | 1170              | 2630      |         |         |         |                  |
|            | 12/13/11       | 29.25       | 4114.47                 | 1170              | 2290      |         |         |         |                  |
|            | 03/29/12       | 29.32       | 4114.40                 | 1040              | 2560      |         |         |         |                  |
|            | 06/19/12       | 29.38       | 4114.34                 | 1280              | 1820      |         |         |         |                  |
|            | 09/26/12       | 29.53       | 4114.19                 | 935               | 1930      |         |         |         |                  |
|            | 12/27/12       | 29.59       | 4114.13                 | 636               | 1630      |         |         |         |                  |
|            | 03/18/13       | 29.64       | 4114.08                 | 800               | 1590      |         |         |         |                  |
|            | 06/12/13       | 29.72       | 4114.00                 | 789               | 1690      |         |         |         |                  |
|            | 09/23/13       | 29.80       | 4113.92                 | 696               | 1520      |         |         |         |                  |
|            | 12/30/13       | 29.88       | 4113.84                 | 753               | 1290      |         |         |         |                  |
|            | 03/24/14       | 29.92       | 4113.80                 | 632               | 1370      |         |         |         |                  |
|            | 07/02/14       | 29.72       | 4114.00                 | 772               | 1460      |         |         |         |                  |
|            | 09/26/14       | 29.65       | 4114.07                 | 627               | 1270      |         |         |         |                  |
|            | 12/11/14       | 29.50       | 4114.22                 | 628               | 1500      |         |         |         |                  |
|            | 06/19/08       | 27.54       | 4115.71                 | 320               | 976       |         |         |         |                  |
|            | 09/09/08       | 27.71       | 4115.54                 | 172               | 848       | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 12/08/08       | 27.80       | 4115.45                 | 164               | 732       | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 03/18/09       | 27.95       | 4115.30                 | 168               | 720       | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 06/17/09       | 28.19       | 4115.06                 | 188               | 769       | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 09/21/09       | 28.15       | 4115.10                 | 240               | 747       | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 12/11/09       | 28.21       | 4115.04                 | 220               | 866       | < 0.001 | < 0.001 | < 0.001 | < 0.003          |
|            | 03/24/10       | 28.30       | 4114.95                 | 232               | 842       |         |         |         |                  |
|            | 06/15/10       | 28.41       | 4114.84                 | 220               | 870       |         |         |         |                  |
|            | 09/13/10       | 28.50       | 4114.75                 | 260               | 935       |         |         |         |                  |
|            | 12/13/10       | 28.54       | 4114.71                 | 173               | 876       |         |         |         |                  |
|            | 03/17/11       | 28.62       | 4114.63                 | 217               | 980       |         |         |         |                  |
|            | 06/29/11       | 28.76       | 4114.49                 | 234               | 860       |         |         |         |                  |
| MW-2       | 09/28/11       | 28.85       | 4114.40                 | 280               | 922       |         |         |         |                  |
|            | 12/13/11       | 28.90       | 4114.35                 | 313               | 1,230     |         |         |         |                  |
|            | 03/29/12       | 28.98       | 4114.27                 | 320               | 1,350     |         |         |         |                  |
|            | 06/19/12       | 29.04       | 4114.21                 | 373               | 970       |         |         |         |                  |
|            | 09/26/12       | 29.19       | 4114.06                 | 365               | 1,310     |         |         |         |                  |
|            | 12/27/12       | 29.24       | 4114.01                 | 358               | 1,240     |         |         |         |                  |
|            | 03/18/13       | 29.30       | 4113.95                 | 423               | 1,490     |         |         |         |                  |
|            | 06/12/13       | 29.38       | 4113.87                 | 445               | 1,290     |         |         |         |                  |
|            | 09/23/13       | 29.47       | 4113.78                 | 366               | 1,280     |         |         |         |                  |
|            | 12/30/13       | 29.54       | 4113.71                 | 448               | 1,070     |         |         |         |                  |
|            | 03/24/14       | 29.60       | 4113.65                 | 424               | 1,490     |         |         |         |                  |
|            | 07/02/14       | 29.38       | 4113.87                 | 441               | 1,060     |         |         |         |                  |
|            | 09/26/14       | 29.31       | 4113.94                 | 471               | 790       |         |         |         |                  |
|            |                |             |                         |                   |           |         |         |         |                  |
|            | 12/11/14       | 29.17       | 4114.08<br>CC Standards | <b>286</b><br>250 | 900       |         |         |         |                  |

Total Dissolved Soilds (TDS), chloride, sulfate, and BTEX concentrations listed in milligrams per liter (mg/L) Values in boldface type indicate concentrations exceed New Mexico Water Quality Commission (WQCC) standards. BTOC - Below Top of Casing; Elevations and relative eastings/northings surveyed by Trident Environmental NA Indicates parameter was not analyzed for this constituent.





#### WELL SAMPLING DATA FORM

CLIENT: Pride Energy Company

SITE NAME: South Four Lakes #13

SITE LOCATION: T12S-R34E-Sec1 Unit Letter L ~ Lea County, NM

SAMPLER: Gil Van Deventer



PURGING METHOD:

SAMPLING METHOD:

Other:

□ Pump, Type: Whaler Model WP-9012 Mega Purger (12-volt submersible pump)

DISPOSAL METHOD OF PURGE WATER:

On-site Drum 🗌 Drums

Hand Bailed

rums 🔄 SWD Disposal Facility

| Quarter | Date     | Time  | Monitoring<br>Well No. | Depth<br>to<br>Water<br>(ft btoc) | Total<br>Depth<br>(ft) | Water<br>Column<br>Height<br>(ft) | Well<br>Factor<br>2"=.16<br>4"=.65 | Calc.<br>Well<br>Vol.<br>(gal) | Volume<br>Purged<br>(gal) | No. of<br>Well<br>Volumes<br>Purged | Temp.<br>° <b>F</b> | Cond.<br>mS/cm | рН   | PHYSICAL APPEARANCE AND<br>REMARKS |
|---------|----------|-------|------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|--------------------------------|---------------------------|-------------------------------------|---------------------|----------------|------|------------------------------------|
| First   | 03/24/14 | 13:55 | MW-1                   | 29.92                             | 43.26                  | 13.34                             | 0.16                               | 2.1                            | 15                        | 7.0                                 | 18.4                | 2.39           | 7.02 | Cloudy but cleared during purge    |
| Ë       | 03/24/14 | 13:26 | MW-2                   | 29.60                             | 42.10                  | 12.50                             | 0.16                               | 2.0                            | 15                        | 7.5                                 | 19.3                | 1.75           | 6.91 | Cloudy but cleared during purge    |
|         |          |       |                        |                                   |                        |                                   |                                    |                                |                           |                                     |                     |                |      |                                    |
| puq     | 07/02/14 | 13:40 | MW-1                   | 29.72                             | 43.26                  | 13.54                             | 0.16                               | 2.2                            | 10                        | 19.0                                | 2.2                 | 7.51           | 7.02 | Cloudy but cleared during purge    |
| Second  | 07/02/14 | 13:10 | MW-2                   | 29.38                             | 42.10                  | 12.72                             | 0.16                               | 2.0                            | 10                        | 19.8                                | 1.5                 | 7.54           | 6.91 | Cloudy but cleared during purge    |
|         |          |       | -                      |                                   |                        |                                   |                                    |                                |                           |                                     |                     | -              |      |                                    |
| Third   | 09/26/14 | 12:30 | MW-1                   | 29.65                             | 43.26                  | 13.61                             | 0.16                               | 2.2                            | 10                        | 19.0                                | 21.0                | 2.51           | 7.11 | Cloudy but cleared during purge    |
| Th      | 09/26/14 | 11:50 | MW-2                   | 29.31                             | 42.10                  | 12.79                             | 0.16                               | 2.0                            | 10                        | 19.8                                | 21.0                | 1.64           | 6.80 | Cloudy but cleared during purge    |
|         |          |       | -                      |                                   |                        |                                   |                                    |                                |                           |                                     |                     |                |      |                                    |
| Irth    | 12/11/14 | 11:45 | MW-1                   | 29.50                             | 43.26                  | 13.76                             | 0.16                               | 2.2                            | 10                        | 18.5                                | 2.5                 | 7.41           | 7.11 | Cloudy but cleared during purge    |
| Fourth  | 12/11/14 | 11:05 | MW-2                   | 29.17                             | 42.10                  | 12.93                             | 0.16                               | 2.1                            | 10                        | 18.7                                | 1.4                 | 7.45           | 6.80 | Cloudy but cleared during purge    |

COMMENTS: Equipment decontamination consists of gloves, Alconox, and Distilled Water Rinse.

Hanna Model 98130 instrument used to obtain pH, conductivity, and temperature measurements.

Delivered samples to the analytical laboratory for chloride and TDS analysis.

## LABORATORY ANALYTICAL REPORTS

## AND

## CHAINS OF CUSTODY

PERMIAN BASIN ENVIRONMENTAL LAB, LP 10014 SCR 1213 Midland, TX 79706



# Analytical Report

## **Prepared for:**

Matt Pride Pride Energy Company P.O. BOX 701950 Tulsa, OK 74170-1950

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Location: T12S-R34E-Sec1 Unit Letter L ~ Lea County, NM

Lab Order Number: 4C26013



NELAP/TCEQ # T104704156-13-3

Report Date: 04/09/14

#### Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Matt Pride

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|-----------|---------------|--------|----------------|------------------|
| MW-1      | 4C26013-01    | Water  | 03/24/14 14:10 | 03-26-2014 11:55 |
| MW-2      | 4C26013-02    | Water  | 03/24/14 13:50 | 03-26-2014 11:55 |

## MW-1

|                                 | 4C26013-01 (Water)       |                    |          |              |         |          |          |           |       |  |  |  |  |
|---------------------------------|--------------------------|--------------------|----------|--------------|---------|----------|----------|-----------|-------|--|--|--|--|
| Analyte                         | Result                   | Reporting<br>Limit | Units    | Dilution     | Batch   | Prepared | Analyzed | Method    | Notes |  |  |  |  |
|                                 | Permiar                  | n Basin Ei         | nvironme | ental Lab, I |         |          |          |           |       |  |  |  |  |
| General Chemistry Parameters by | v EPA / Standard Methods |                    |          |              |         |          |          |           |       |  |  |  |  |
| Chloride                        | 632                      | 25.0               | mg/L     | 50           | P4C2703 | 03/27/14 | 03/28/14 | EPA 300.0 |       |  |  |  |  |
| Total Dissolved Solids          | 1370                     | 20.0               | mg/L     | 1            | P4D0203 | 03/28/14 | 04/02/14 | EPA 160.1 |       |  |  |  |  |

**Total Dissolved Solids** 

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Matt Pride

|                                    |                             | I         | MW-2     |              |         |          |          |           |       |
|------------------------------------|-----------------------------|-----------|----------|--------------|---------|----------|----------|-----------|-------|
|                                    |                             | 4C2601    | 3-02 (Wa | ater)        |         |          |          |           |       |
|                                    |                             | Reporting |          |              |         |          |          |           |       |
| Analyte                            | Result                      | Limit     | Units    | Dilution     | Batch   | Prepared | Analyzed | Method    | Notes |
|                                    | Permia                      | n Basin E | nvironme | ental Lab, I | L.P.    |          |          |           |       |
| <b>General Chemistry Parameter</b> | s by EPA / Standard Methods |           |          |              |         |          |          |           |       |
| Chloride                           | 424                         | 12.5      | mg/L     | 25           | P4C2703 | 03/27/14 | 03/28/14 | EPA 300.0 |       |

mg/L

1

P4D0203

03/28/14

04/02/14

EPA 160.1

20.0

1490

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Matt Pride

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### Permian Basin Environmental Lab, L.P.

|                                      |        | Reporting     |       | Spike       | Source     |             | %REC    |         | RPD   |       |
|--------------------------------------|--------|---------------|-------|-------------|------------|-------------|---------|---------|-------|-------|
| Analyte                              | Result | Limit         | Units | Level       | Result     | %REC        | Limits  | RPD     | Limit | Notes |
| Batch P4C2703 - *** DEFAULT PREP *** |        |               |       |             |            |             |         |         |       |       |
| Blank (P4C2703-BLK1)                 |        |               |       | Prepared &  | Analyzed   | : 03/27/14  |         |         |       |       |
| Chloride                             | ND     | 0.500         | mg/L  |             |            |             |         |         |       |       |
| LCS (P4C2703-BS1)                    |        |               |       | Prepared &  | Analyzed   | : 03/27/14  |         |         |       |       |
| Chloride                             | 10.5   | 0.500         | mg/L  | 10.0        |            | 105         | 80-120  |         |       |       |
| LCS Dup (P4C2703-BSD1)               |        |               |       | Prepared &  | Analyzed   | : 03/27/14  |         |         |       |       |
| Chloride                             | 10.5   | 0.500         | mg/L  | 10.0        |            | 105         | 80-120  | 0.00952 | 20    |       |
| Duplicate (P4C2703-DUP1)             | Sou    | rce: 4C26012- | 01    | Prepared: ( | )3/27/14 A | nalyzed: 03 | 3/28/14 |         |       |       |
| Chloride                             | 2920   | 100           | mg/L  |             | 2920       |             |         | 0.164   | 20    |       |
| Matrix Spike (P4C2703-MS1)           | Sou    | rce: 4C26012- | 01    | Prepared: ( | )3/27/14 A | nalyzed: 03 | 3/28/14 |         |       |       |
| Chloride                             | 5360   | 100           | mg/L  | 2500        | 2920       | 97.8        | 80-120  |         |       |       |
| Batch P4D0203 - *** DEFAULT PREP *** |        |               |       |             |            |             |         |         |       |       |
| Blank (P4D0203-BLK1)                 |        |               |       | Prepared: ( | )3/28/14 A | nalyzed: 04 | 4/02/14 |         |       |       |
| Total Dissolved Solids               | ND     | 20.0          | mg/L  |             |            |             |         |         |       |       |
| Duplicate (P4D0203-DUP1)             | Sou    | rce: 4C26014- | 04    | Prepared: ( | )3/28/14 A | nalyzed: 04 | 4/02/14 |         |       |       |
| Total Dissolved Solids               | 1580   | 20.0          | mg/L  |             | 1600       |             |         | 1.01    | 20    |       |
|                                      |        |               |       |             |            |             |         |         |       |       |

#### **Notes and Definitions**

| DET | Analyte DETECTED                                     |
|-----|--|
| ND  | Analyte NOT DETECTED at or above the reporting limit |
| NR  | Not Reported   |
| dry | Sample results reported on a dry weight basis        |
| RPD | Relative Percent Difference                          |
| LCS | Laboratory Control Spike                             |
| MS  | Matrix Spike   |
| Dup | Duplicate  |
|     |  |

Report Approved By:

un Barron

Date: 4/9/2014

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

|                         | 0   |                   | <u>ہ</u>           |                        | ন্দ             |    |    | _ |           |    |               |               |        |              | <b>.</b> |                       |            |          |              | Ţ   |                              | <b>?</b>       | Ų                             | Ş                   |  | <u>p</u> ç  | ?              |   |                           |                                     |
|-------------------------|---|-------------------|--------------------|------------------------|-----------------|----|----|---|-----------|----|---------------|---------------|--------|--------------|----------|-----------------------|------------|----------|--------------|---|------------------------------|----------------|-------------------------------|---------------------|--|---|----------------|---|---------------------------|-------------------------------------|
| Sampler                 | Delivered By:   |                   | Relinquished by:   | Ŕ                      | Relinquished by |    |    |   |           |    |               |               |        | 0            | 6        |                       | LAB #      |          |              | Project Location:<br>T12S-R34E-Sec1 Unit Letter L ~ | South Four Lakes #13 (AP-76) | (432) 638-8740 | PO Box 12177, Odessa TX 79768 | Address:            | Gil Van Deventer / Trident Environmental | Trident Environmental Project Manager:                                    |                |   | 5                         |                                     |
| Ŷ                       | d By:   |                   | shed               | Ì                      | affed           |    |    |   |           |    | •             |               |        | $\mathbf{r}$ | -        |                       | #          | •        |              | -R3   | Fo                           | 638            | × 1                           |                     | an D                                     | nt E  |                |   | $\square$                 |                                     |
|                         | 6   | Ĺ                 | by:                | <i>] U</i> z           | <u>ь</u> Х:/    |    |    |   |           |    | -             |               |        |              |          |                       |            |          |              |   |                              | -87            | 217                           | (Street, City, Zip) | leve                                     |   |                |   | IJ                        |                                     |
| UPS                     | Circle  |                   |                    | $\int \Delta$          |                 |    |    |   |           |    |               |               |        |              |          |                       | ~          | 1        | •            | Sec 1   | akeg                         | ð              | 1,7                           | t, City             | nter                                     | nu  |                |   | S                         |                                     |
| - Bus                   | (Circle One)  |                   |                    | p/                     |                 |    |    |   |           |    |               |               |        |              |          |                       | ŦΙΕ        | R        |              | C n   | #                            |                | des                           | ', Zip)             | /Tr                                      | enta  |                |   | Jung                      |                                     |
| 1.1                     | 5   |                   | Date:              |                        | vate:           |    |    |   |           |    |               |               |        | MW-2         | MW-1     |                       | FIELD CODE | 2        |              | it Le   | α<br>(À                      |                | sa                            |                     | iden                                     | =   |                |   | $\sim$                    |                                     |
| Other:                  |   |                   |                    | 14                     | ,<br>,<br>,     |    |    |   |           |    |               |               |        | N            |          |                       | ODE        | 626013   |              | tter  | P-76                         |                | X                             |                     | Ē  |   |                |   |                           |                                     |
| ler.                    |   |                   | Time:              | 11:5                   | Time:           |    |    |   |           |    |               |               |        |              |          | · ·                   |            | Ĕ        | 1            |   | Ĵ                            |                | 9768                          |                     | viror                                    |   |                |   | J                         |                                     |
|                         |   |                   |                    | 4                      |                 |    |    |   |           |    |               |               |        |              |          |                       |            |          |              | ea  |                              |                |                               |                     | nme                                      |   |                |   |                           |                                     |
| [ ·                     | Sample  |                   | Receiv             |                        | Receiv          |    |    |   |           |    |               |               |        | ଜ            | ଜ        | (G)rab o              | (C)om      | <b>D</b> |              | Coun  | <b> </b> -                   | (413)          | #<br>22                       |                     |  |   |                | Phone                                       | 10014                     | Permi                               |
| No Yes                  | Sample Condition  | R                 | Received By:       |                        | Received by:    |    |    |   |           |    |               |               |        | 1            | -        | # CONT                | AINER      | S        |              | Lea County, NM                                      | Pride Energy Company         | (413) 403-9968 | (918) 524-9200                |                     | PO Box 710950,                           | Pride Energy Company / Attention: Matt Pride Address: (Street, City, Zip) |                | Midland, Texas 79706<br>Phone: 432-661-4184 | 10014 S. County Road 1213 | Permian Basin Environmental Lab, LP |
|                         |   | $\langle \rangle$ | 5.                 |                        |                 |    |    |   |           |    |               |               |        | ×            | ×        | WATER                 |            |          |              |   | En                           | 9968           | 52                            |                     | x<br>X                                   | E C   |                | 9xas<br>1-661                               | ount                      | lsin                                |
| No Yes                  | J<br>Č  | 2                 | abora              |                        |                 |    |    |   |           |    |               |               |        |              |          | SOIL                  |            |          | MA           | Samp  | ergy                         | i w            | 4-92                          | Phone#              | 7100                                     | Address:  |                | - <b>4</b> 18                               | Y Ro                      | Env                                 |
|                         | Jan (Q)   | 2                 | (Laboratory Staff) |                        |                 |    | _  |   |           |    |               | -+            | _      |              | ┣—       | AIR<br>SLUDG          |            | _        | MATRIX       | Sampler Signature:                                  | S                            |                | 8                             | <b>.</b> #          |  | s S a   |                | 4 06  | ad 1                      | ron                                 |
| <u> </u>                |   | m                 | Staff)             |                        |                 |    |    |   |           | -  | -             | -             |        |              |          | SLODG                 | <b>L</b> . | -        |              | gnatur  | npa                          | ŀ              |                               |                     | Tulsa,                                   | npa   |                |   | 213                       | nen                                 |
| (Initials)              | CHE   | K                 | )                  |                        | •               |    |    |   |           |    |               |               |        |              |          | HCL (B                | EX only    | y)       | Ρ            |   | Ŋ                            |                |                               |                     | ă  | ny/   |                |   |                           |                                     |
| als)                    | CHECKED BY:   |                   | Date:              |                        | D               |    |    |   |           |    | _             |               |        |              |          |                       |            | ₃        | PRESERVATIVE |   |                              |                |                               |                     | OK 74170-1950                            | Atte  |                |   |                           | ab, I                               |
| K                       | , BY  | w.                | ē                  |                        | Date:           |    | _  | _ |           |    |               | -             | -      |              |          | NaHSO<br>H₂SO₄        | 4          |          |              |   |                              |                |                               |                     | 417                                      | ention: Matt<br>(Street, City, Zip)                                       |                |   |                           | שי                                  |
| $\mathbb{N}$            |   | 3-26-14           | _                  |                        |                 |    | -  |   |           |    | -+            | -f            |        | ×            | ×        | ICE                   |            | - ĕ      | ATIV         |   |                              | Í              | 6                             | Fax#:               | Q<br>Q                                   |   | 3              |   |                           |                                     |
|                         | N.  | 14                | Time:              |                        | Time:           |    |    |   |           |    |               |               |        |              |          | NONE                  |            |          | m            |   |                              |                | 18                            | .∰                  | 950                                      | Zip   |                |   |                           |                                     |
|                         |   |                   |                    |                        |                 |    |    |   |           |    |               |               |        | 3/24/14      | 3/24/14  | DATE                  |            |          | 7S           |   |                              |                | (918) 524-9292                |                     |  | Pride   |                | •   |                           |                                     |
|                         |   | 1155              |                    |                        |                 |    |    |   |           |    |               |               |        | 14           | 4        |                       |            |          | SAMPLING     |   |                              |                | 92                            |                     |  |   |                |   |                           |                                     |
|                         |   | Ŋ                 |                    |                        |                 |    |    |   |           |    |               |               |        | 1350         | 1410     | TIME                  |            |          | NG           |   |                              | · -            |                               |                     |  |   |                |   |                           |                                     |
| L                       |   |                   |                    |                        |                 |    |    |   |           |    |               |               | _      | 0            |          |                       |            |          |              |   |                              |                |                               |                     | L  |   |                |   |                           |                                     |
|                         |   | т                 | REMARKS            | Fax Results            | Phone           |    | -  | _ |           |    | -             | -+            |        |              | ┣        | MTBE 8<br>BTEX 8      |            | )2       |              |   |                              |                |                               |                     |  |   |                | ი   |                           |                                     |
|                         |   | Email Results to: | ARK                | lesul                  | e Re            |    |    |   |           |    | ╉             | +             | _      | i!           |          | TPH 41                |            | 005/1    | TX1          | 005 Ex  | tended                       | I (C35)        |                               |                     | _  |   |                | Η<br>A                                      |                           |                                     |
|                         |   | Res               | ŝ                  | S.                     | Results         |    |    |   |           |    |               |               |        |              |          | PAH 82                |            |          |              |   | <u> </u>                     |                |                               |                     |  |   | Σ              | z   |                           |                                     |
|                         |   | ults              |                    |                        |                 |    |    |   |           |    |               |               |        | _            |          | Total Me              |            |          |              |   |                              |                | 3/200                         | .7                  | $\square$                                | <u>ି</u> କ୍ 🎽   | ğ              | ň   |                           | · ]                                 |
|                         |   | <b>t</b> o:       |                    | Yes                    | Yes             |    | -  |   |           | -+ | -+            | -             | _      |              |          | TCLP Me<br>TCLP Vo    |            | As Ba    |              | Cr Pb   | Se Ho                        |                |                               |                     |  | ANALYSIS REQUEST<br>(Circle or Specify Method No.)                        | LAB Order ID # | SUS   |                           |                                     |
|                         | ji Qi   |                   |                    | Se                     | Se<br>Se        |    |    |   |           |    |               |               |        |              |          | TCLP Se               |            | tiles    |              |   |                              |                |                               |                     |  | r Sp  | #              | <u>d</u>                                    | 2                         |                                     |
|                         | ₿₿  |                   |                    | ×                      | ×               |    |    |   |           |    |               |               |        |              |          | TCLP Pe               | sticides   |          |              |   |                              |                |                               |                     |  |   |                | 2   | R                         |                                     |
|                         | nide  |                   |                    | No                     | No              |    |    |   |           |    |               |               | ŕ      |              |          | RCI                   |            |          |              |   |                              |                |                               |                     |  |   |                | A   | COC No.:                  |                                     |
|                         | ride  | •                 |                    | _                      |                 |    |    | , |           |    | _             | -             |        |              |          | GC/MS \               |            |          |              |   |                              |                |                               |                     |  |   |                | Þ   |                           |                                     |
|                         |   |                   |                    | Addi                   |                 |    |    | _ | $\square$ | -+ |               |               |        |              |          | GC/MS S               |            |          | 70C          | /625  |                              |                |                               |                     |  | N S   |                | Ž   | ₽7                        | P                                   |
|                         | ron   |                   |                    | tiona                  |                 |    |    |   |           |    | _             | $\rightarrow$ | -      |              |          | Moisture<br>Cations ( |            |          | <u>.</u>     |   |                              |                |                               |                     |  | <u> </u>  |                | Y   | 0-0                       | Page                                |
| incup@price_criptgy.com |   |                   |                    | al Fa                  |                 | -+ | -+ |   | -         |    | $\rightarrow$ | +             |        |              |          | Anions (              |            |          |              | :03)  |                              |                |                               |                     |  |   |                | SIS   | AP76-032414               |                                     |
|                         | ntal  |                   |                    | XN                     |                 |    | -+ |   |           |    | -+            | -†            | $\neg$ | ×            | ×        | Total Dis             |            |          |              |   | SM254                        | 0C)            |                               |                     |  |   |                | R   | <u>114</u>                | $\left[ \right]$                    |
| ₽ · ·                   | gil@trident-environmental.com<br>mattn@pride-energy.com |                   |                    | Additional Fax Number: |                 |    | -+ |   |           |    |               | -†            |        | ×            | ×        | Chloride              |            |          | -            |   |                              |                | ·                             |                     |  | 1   |                | ğ   |                           | <u>e</u>                            |
|                         | Н   |                   | ч I                | er:                    |                 | 1  | 1  |   |           |    | 1             |               |        | ,            |          |                       | <u></u>    |          |              |   |                              |                |                               |                     |  |   |                | CHAIN-OF-CUSTODY AND ANALYSIS REQUEST       |                           |                                     |
| 1                       |   |                   |                    |                        |                 | 1  | -† |   |           | -  |               | +             |        |              | •        | Turn Aro              | und Tim    | ie ~ 24  | 4 Ho         | urs   |                              | ······         |                               |                     |  |   |                | -1  |                           |                                     |
| L                       |   |                   |                    |                        | أجيرها          |    |    |   |           | يل | 1             | <u> </u>      |        |              |          | 1                     |            |          |              |   |                              |                |                               |                     |  |   |                |   | -                         |                                     |

PERMIAN BASIN ENVIRONMENTAL LAB, LP 10014 SCR 1213 Midland, TX 79706



# Analytical Report

## **Prepared for:**

Gilbert Vandeventer Trident Environmental P.O. Box 12177 Odessa, TX 79768

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Location: T12S-R34E-Sec1 Unit Letter L ~ Lea County, NM

Lab Order Number: 4G07003



NELAP/TCEQ # T104704156-13-3

Report Date: 07/21/14

#### Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Gilbert Vandeventer

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|-----------|---------------|--------|----------------|------------------|
| MW-1      | 4G07003-01    | Water  | 07/02/14 13:40 | 07-04-2014 13:30 |
| MW-2      | 4G07003-02    | Water  | 07/02/14 13:10 | 07-04-2014 13:30 |

## **MW-1**

|                                 | 4G07003-01 (Water) |                   |          |              |              |          |          |           |       |  |  |  |  |  |
|---------------------------------|--------------------|-------------------|----------|--------------|--------------|----------|----------|-----------|-------|--|--|--|--|--|
|                                 |                    | Reporting         |          |              |              |          |          |           |       |  |  |  |  |  |
| Analyte                         | Result             | Limit             | Units    | Dilution     | Batch        | Prepared | Analyzed | Method    | Notes |  |  |  |  |  |
| General Chemistry Parameters by |                    | ian Basin Ei<br>s | nvironme | ental Lab, I | L <b>.P.</b> |          |          |           |       |  |  |  |  |  |
| Chloride                        | 772                | 12.5              | mg/L     | 25           | P4G1703      | 07/14/14 | 07/17/14 | EPA 300.0 |       |  |  |  |  |  |
| Total Dissolved Solids          | 1460               | 20.0              | mg/L     | 1            | P4G1509      | 07/08/14 | 07/15/14 | EPA 160.1 |       |  |  |  |  |  |

**Total Dissolved Solids** 

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Gilbert Vandeventer

|                                   |                       |                    | MW-2<br>)3-02 (Wa | ater)        |              |          |          |           |       |
|-----------------------------------|-----------------------|--------------------|-------------------|--------------|--------------|----------|----------|-----------|-------|
| Analyte                           | Result                | Reporting<br>Limit | Units             | Dilution     | Batch        | Prepared | Analyzed | Method    | Notes |
|                                   | Permi                 | an Basin E         | nvironme          | ental Lab, 1 | L <b>.P.</b> |          |          |           |       |
| General Chemistry Parameters by E | PA / Standard Methods |                    |                   |              |              |          |          |           |       |
| Chloride                          | 441                   | 12.5               | mg/L              | 25           | P4G1703      | 07/14/14 | 07/17/14 | EPA 300.0 |       |

mg/L

1

P4G1509

07/08/14

07/15/14

EPA 160.1

20.0

1060

#### Permian Basin Environmental Lab, L.P.

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### Permian Basin Environmental Lab, L.P.

|        | Reporting   |   | Spike  | Source  |   | %REC  |  | RPD  |   |
|--------|---|---|--|---|---|---|--|--|---|
| Result | Limit   | Units   | Level  | Result  | %REC  | Limits  | RPD  | Limit  | Notes   |
|        |   |   |  |   |   |   |  |  |   |
|        |   |   | Prepared &   | Analyzed:   | 07/15/14  |   |  |  |   |
| ND     | 20.0  | mg/L  |  |   |   |   |  |  |   |
| Sour   | ce: 4G03014-  | 01  | Prepared &   | Analyzed:   | 07/15/14  |   |  |  |   |
| 815    | 20.0  | mg/L  |  | 815   |   |   | 0.00   | 20   |   |
| Sour   | ce: 4G07004-  | 04  | Prepared &   | Analyzed:   | 07/15/14  |   |  |  |   |
| 1660   | 20.0  | mg/L  |  | 1700  |   |   | 2.38   | 20   |   |
|        |   |   |  |   |   |   |  |  |   |
|        |   |   | Prepared: (  | 07/14/14 A  | nalyzed: 07   | 7/17/14   |  |  |   |
| ND     | 0.500   | mg/L  |  |   |   |   |  |  |   |
|        |   |   | Prepared: (  | 07/14/14 A  | nalyzed: 07   | 7/17/14   |  |  |   |
| 9.85   | 0.500   | mg/L  | 10.0   |   | 98.5  | 80-120  |  |  |   |
|        |   |   | Prepared: (  | )7/14/14 A  | nalyzed: 07   | 7/17/14   |  |  |   |
| 9.36   | 0.500   | mg/L  | 10.0   |   | 93.6  | 80-120  | 5.06   | 20   |   |
|        | ND<br><b>Sour</b><br>815<br><b>Sour</b><br>1660<br>ND<br>9.85 | Result         Limit           ND         20.0           Source:         4G03014-           815         20.0           Source:         4G07004-           1660         20.0           ND         0.500           9.85         0.500 | Result         Limit         Units           ND         20.0         mg/L           Source:         4G03014-01           815         20.0         mg/L           Source:         4G07004-04           1660         20.0         mg/L           ND         0.500         mg/L           9.85         0.500         mg/L | Result         Limit         Units         Level           Prepared &         Prepared &           ND         20.0         mg/L           Source: 4G03014-01         Prepared &           815         20.0         mg/L           Source: 4G07004-04         Prepared &           1660         20.0         mg/L           Prepared &         Prepared &           1660         20.0         mg/L           Prepared &         Prepared &           9.85         0.500         mg/L | Result         Limit         Units         Level         Result           ND         20.0         mg/L         Prepared & Analyzed:           Source:         4G03014-01         Prepared & Analyzed:           815         20.0         mg/L         815           Source:         4G07004-04         Prepared & Analyzed:           1660         20.0         mg/L         1700           MD         0.500         mg/L         Prepared: 07/14/14         Original Analyzed:           1660         20.0         mg/L         1700         10.0         10.0         10.0         10.0         10.0         Prepared: 07/14/14         0.0         10.0 <t< td=""><td>Result         Limit         Units         Level         Result         %REC           Prepared &amp; Analyzed: 07/15/14           ND         20.0         mg/L         Prepared &amp; Analyzed: 07/15/14           815         20.0         mg/L         815           Source: 4G03014-01         Prepared &amp; Analyzed: 07/15/14           815         20.0         mg/L         815           Source: 4G07004-04         Prepared &amp; Analyzed: 07/15/14           1660         20.0         mg/L         1700           Prepared: 07/14/14 Analyzed: 07           ND         0.500         mg/L         Prepared: 07/14/14 Analyzed: 07           9.85         0.500         mg/L         10.0         98.5           Prepared: 07/14/14 Analyzed: 07</td><td>Result         Limit         Units         Level         Result         %REC         Limits           Result         Limit         Units         Level         Result         %REC         Limits           ND         20.0         mg/L         Prepared &amp; Analyzed: 07/15/14             Source:         4G03014-01         Prepared &amp; Analyzed: 07/15/14              815         20.0         mg/L         815               Source:         4G07004-04         Prepared &amp; Analyzed: 07/15/14                1660         20.0         mg/L         1700</td><td>Result         Limit         Units         Level         Result         %REC         Limits         RPD           Result         Limit         Units         Level         Result         %REC         Limits         RPD           ND         20.0         mg/L         Prepared &amp; Analyzed: 07/15/14</td><td>ResultLimitUnitsLevelResult%RECLimitsRPDLimitResultLimitPrepared &amp; Analyzed: 07/15/14Prepared &amp; Analyzed: 07/15/14Image: Compare Compar</td></t<> | Result         Limit         Units         Level         Result         %REC           Prepared & Analyzed: 07/15/14           ND         20.0         mg/L         Prepared & Analyzed: 07/15/14           815         20.0         mg/L         815           Source: 4G03014-01         Prepared & Analyzed: 07/15/14           815         20.0         mg/L         815           Source: 4G07004-04         Prepared & Analyzed: 07/15/14           1660         20.0         mg/L         1700           Prepared: 07/14/14 Analyzed: 07           ND         0.500         mg/L         Prepared: 07/14/14 Analyzed: 07           9.85         0.500         mg/L         10.0         98.5           Prepared: 07/14/14 Analyzed: 07 | Result         Limit         Units         Level         Result         %REC         Limits           Result         Limit         Units         Level         Result         %REC         Limits           ND         20.0         mg/L         Prepared & Analyzed: 07/15/14             Source:         4G03014-01         Prepared & Analyzed: 07/15/14              815         20.0         mg/L         815               Source:         4G07004-04         Prepared & Analyzed: 07/15/14                1660         20.0         mg/L         1700 | Result         Limit         Units         Level         Result         %REC         Limits         RPD           Result         Limit         Units         Level         Result         %REC         Limits         RPD           ND         20.0         mg/L         Prepared & Analyzed: 07/15/14 | ResultLimitUnitsLevelResult%RECLimitsRPDLimitResultLimitPrepared & Analyzed: 07/15/14Prepared & Analyzed: 07/15/14Image: Compare Compar |

#### **Notes and Definitions**

| DET | Analyte DETECTED                                     |
|-----|--|
| ND  | Analyte NOT DETECTED at or above the reporting limit |
| NR  | Not Reported   |
| dry | Sample results reported on a dry weight basis        |
| RPD | Relative Percent Difference                          |
| LCS | Laboratory Control Spike                             |
| MS  | Matrix Spike   |
| Dup | Duplicate  |
|     |  |

Report Approved By:

un Barron

Date: 7/21/2014

Brent Barron, Laboratory Director/Technical Director

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Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

|                        |                               |                    |                        |               |                   |   |          | <u> </u>           |   |   |   |          |          |            | · .  |                   |                                   |                      |                                      |         |                            |                   |  |  |                |                                       |                |                           |                                     |
|------------------------|-------------------------------|--------------------|------------------------|---------------|-------------------|---|----------|--------------------|---|---|---|----------|----------|------------|--|-------------------|-----------------------------------|----------------------|--------------------------------------|---------|----------------------------|-------------------|--|--|----------------|---------------------------------------|----------------|---------------------------|-------------------------------------|
| Sampler UPS            | Delivered By: (Circ           | rceninquisited by. | PHUL L                 |               | Dolinguit had hur |   |          |                    |   |   |   |          | da<br>da | 4607003-01 | LAB #  |                   | T12S-R34E-S                       | South Four Lakes     | (432) 638-8740<br>Project <i>#</i> : | Phone # | <b>•</b>                   | Address: (Stree   | Gil Van Dever                            | Trident Environmental                              | Company Name:  |                                       |                |                           |                                     |
| - Bus - Other:         | (Circle One)                  |                    | ľ,                     |               |                   |   |          |                    |   |   |   |          | MW-2     | MW-1       | FIELD CODE   |                   | T12S-R34E-Sec1 Unit Letter L ~ Le | kes #13 (AP-76)      |                                      |         | Box 12177, Odessa TX 79768 | (Street City Zip) | Gil Van Deventer / Trident Environmental | nmental  |                |                                       | CONTRACTOR OF  |                           |                                     |
|                        | Samp                          | Nece               |                        | Rece          |                   |   |          |                    |   |   |   |          | G        | G          | (G)rab or (C)omp                                     |                   | Lea Co                            |                      | (41)                                 | Fax #:  |                            |                   | nenta                                    |  |                | Pho                                   | Mid            | 1001                      | Pern                                |
| Yes<br>No              | Sample Condition              |                    |                        | Received by.  |                   |   |          |                    | - |   |   |          | -        | -          | # CONTAINERS   |                   | County, NM                        | Pride Energy Company | (413) 403-9968<br>Project Name:      |         | (918                       |                   | PO Box 710950                            | Prid   |                | Phone: 432-661-4184                   | Midland, Texas | 10014 S. County Road 1213 | Permian Basin Environmental Lab, LP |
| ્ દ                    | tion                          | 14/ 1              |                        |               | •                 | - |          |                    |   |   |   |          | ×        | ×          | WATER  |                   | ΪŠ                                | Б                    |                                      | }       | 3)<br>5                    | , c               | Во                                       | е<br>Ш   | 3              | 2-6                                   | exa            | òu                        | 3asii                               |
| N Yes                  | 3                             |                    | $\Lambda$              |               |                   | + | +        |                    |   |   |   |          |          |            | SOIL   |                   | <br>a                             | ner                  | me:                                  | }       | 24-0                       | P                 |  | ner  | <u> </u>       | 51<br>4                               | :<br> S<br> 7  | nty I                     | ц                                   |
| Intact                 | 2                             |                    | $\mathcal{N}$          |               | -                 | - |          |                    |   |   |   |          |          |            | AIR  | MATRIX            | mplei                             | gy                   |                                      |         | (918) 524-9200             | Phone#            | 095                                      | ergy C   | Company        | 184                                   | 79706          | Roa                       | nvire                               |
| <u>2</u>               | ONCE                          |                    | 2                      |               |                   |   |          |                    |   |   |   |          |          |            | SLUDGE   | <sup>ஜ</sup>      |                                   | ğ                    |                                      |         | 0                          |                   |  | òm   | <              |                                       | Ø              | d 12                      | nm                                  |
|                        |                               |                    | 5                      |               | L                 |   |          |                    |   |   |   |          |          |            |  |                   |                                   | par                  |                                      |         |                            | 2                 | Tulsa                                    | Ipar   |                |                                       |                | 33                        | ent                                 |
| (Initials)             | CHECKED BY:                   |                    |                        |               |                   |   | -        | 1                  |   |   | • |          |          |            | HCL (BTEX only)                                      |                   | AIL                               | 2                    |                                      |         |                            |                   |  | ly /   |                |                                       |                |                           | alL                                 |
| <b>N</b> <sup>∰</sup>  | CKE                           |                    | 7                      | Date          |                   |   |          |                    |   |   |   | <u> </u> |          |            | HNO₃<br>NaUSO  | ĭ                 |                                   |                      |                                      |         |                            |                   | ž  | Att  |                |                                       |                |                           | ab,                                 |
|                        | N BY                          | <b>1</b>           |                        | lie:          | -                 | _ | _        |                    |   |   |   |          |          |            | NaHSO <sub>4</sub><br>H <sub>2</sub> SO <sub>4</sub> | METHOD            |                                   |                      |                                      |         |                            |                   | 41                                       | Intic  |                |                                       |                |                           | 5                                   |
|                        |                               |                    |                        |               | -                 |   |          |                    |   |   |   |          | ×        | ×          | ICE  | METHOD            |                                   |                      |                                      |         | ()                         | Ţ                 | 7<br>2<br>2                              |  | <b>.</b>       |                                       |                |                           |                                     |
|                        | Ň                             | i ime:             | 1                      | lime:         | !-                |   | +        |                    |   |   |   |          |          | <u>^</u>   | NONE   | Ē                 |                                   |                      |                                      |         | 918)                       |                   | OK 74170-1950                            | Mat  |                |                                       |                |                           |                                     |
|                        | N                             | -7/4/14 1330       |                        |               |                   |   |          |                    |   |   |   |          | 7/2/14   | 7/2/14     | DATE   | SAMPLING          |                                   |                      |                                      |         | 918) 524-9292              |                   |  | Pride Energy Company / Attention: Matt Pride       |                |                                       |                |                           |                                     |
|                        |                               | 1330               |                        |               |                   |   |          |                    |   |   |   |          | 1310     | 1340       | TIME   | LING              |                                   |                      |                                      |         |                            |                   |  |  |                |                                       |                |                           | -                                   |
|                        |                               |                    | Fax                    |               | 2                 |   |          |                    |   |   |   | -        |          |            | MTBE 8021B/602                                       |                   |                                   |                      |                                      |         |                            |                   |  |  | 1              |                                       |                |                           |                                     |
| 1                      |                               | Email Results to:  | Fax Results            | Phone Results |                   |   |          |                    |   |   |   |          |          |            | BTEX 8021 B  |                   |                                   |                      |                                      |         |                            |                   |  |  |                | CH.                                   |                |                           |                                     |
|                        |                               | ii R               | Uits                   | fesu          | Ĺ                 |   |          |                    |   |   |   |          |          |            | TPH 418.1/TX1005                                     | / TX <sup>.</sup> | 1005 Ex                           | tende                | d (C3                                | 35)     |                            |                   |  |  |                | AN                                    |                |                           |                                     |
|                        |                               | esul               |                        | lts           | -                 |   | _        |                    |   |   |   |          |          |            | PAH 8270C<br>Total Metals Ag As                      | Po Co             |                                   | Co Lla               | 601                                  |         | 200.7                      |                   |  |  | LAB Order ID # | Ģ                                     | )              |                           |                                     |
|                        |                               | ts to              |                        | -             | ╋                 |   | +        |                    |   |   |   |          |          |            | TCLP Metals Ag As                                    |                   |                                   |                      |                                      |         | 200.7                      |                   | -  |  | Orde           | <u>b</u>                              |                |                           |                                     |
|                        |                               | X                  | Yes                    | Yes           |                   |   |          |                    |   |   |   |          |          |            | TCLP Volatiles                                       |                   |                                   |                      | <u> </u>                             |         | •                          |                   |  |  | Ť              | LS.                                   |                |                           |                                     |
| ma                     | gil                           |                    | Ĺ                      | _             | 4_                | · |          |                    |   |   |   | _        |          |            | TCLP Semi Volatile                                   | S                 |                                   |                      |                                      |         |                            |                   |  | Spe<br>Spe   | #              | Q                                     |                | 8                         |                                     |
| ttp                    | 9<br>1                        |                    | Ľ,                     | Ľ             |                   |   |          |                    |   |   |   |          |          |            | TCLP Pesticides                                      |                   |                                   |                      |                                      |         |                            |                   |  | čify<br>F  |                | K                                     |                | č                         |                                     |
| (8)<br>19              | der                           |                    | No                     | No            | -                 | _ | _        |                    |   |   |   |          | _        |            | RCI  |                   |                                   |                      |                                      |         |                            |                   |  | Met  |                | PN N                                  |                | COC No.:                  |                                     |
| ide                    | i te                          |                    |                        |               | _                 |   |          | _                  |   |   |   |          |          |            | GC/MS Vol. 8260B                                     |                   |                                   |                      |                                      |         |                            |                   | _  |  |                | Þ                                     |                |                           |                                     |
| mattp@pride-energy.com | nvir                          |                    | ddit                   |               |                   | _ |          |                    |   |   |   |          | _        |            | GC/MS Semi. Vol. 3<br>Moisture Content               | 52700             | /625                              |                      |                                      |         |                            |                   |  | ANALYSIS REQUEST<br>(Circle or Specify Method No.) |                | A                                     |                | AP76-0714                 | Ţ                                   |
| erg                    | onr                           |                    | iona                   |               |                   |   |          | $\left  - \right $ |   | _ |   |          |          |            | Cations (Ca, Mg, Na                                  | <u>к)</u>         |                                   |                      |                                      |         |                            |                   | -  | -  |                | X                                     |                | 0-0                       | Page_                               |
| y.o                    | ner                           |                    | l Fa                   |               | -                 |   |          | $\left  - \right $ |   |   |   | ~        | ·        |            | Anions (CI, SO4, CO                                  |                   | 203)                              |                      |                                      |         |                            |                   | -  |  |                | SIS                                   |                | 714                       |                                     |
| Щ<br>Ш                 | ıtal.                         |                    | X                      |               |                   | + | <u> </u> |                    |   |   |   |          | ×        |            | Total Dissolved Soli                                 |                   |                                   | SM254                | 40C)                                 |         |                            | ſ                 | $\neg$                                   |  |                | RE                                    |                | حب                        |                                     |
| 1                      | gil@trident-environmental.com |                    | Additional Fax Number: |               | E                 |   |          |                    |   |   |   |          |          |            | Chloride / Cl (SM45                                  |                   |                                   |                      |                                      |         |                            |                   |  |  | ĺ              | ğ                                     |                |                           | 으.                                  |
|                        | Ц                             |                    | Ľ.                     | ĺ             | Γ                 |   |          |                    |   |   |   |          |          |            |  |                   |                                   |                      |                                      |         |                            |                   |  |  |                | CHAIN-OF-CUSTODY AND ANALYSIS REQUEST |                |                           |                                     |
|                        |                               |                    |                        |               | F                 |   | 1        | [ ]                |   |   |   |          |          |            | Turn Around Time ~                                   | 24 H              | ours                              |                      |                                      |         |                            |                   |  |  |                | -                                     |                |                           | 1                                   |
| 1                      |                               |                    |                        | _             |                   |   | - I      |                    |   |   |   |          |          |            |  |                   |                                   |                      |                                      |         |                            |                   |  |  |                |                                       |                |                           |                                     |

PERMIAN BASIN ENVIRONMENTAL LAB, LP 10014 SCR 1213 Midland, TX 79706



# Analytical Report

## **Prepared for:**

Gilbert Vandeventer Trident Environmental P.O. Box 12177 Odessa, TX 79768

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Location: T12S-R34E-Sec1 Unit Letter L ~ Lea County, NM

Lab Order Number: 4J02016



NELAP/TCEQ # T104704156-13-3

Report Date: 10/15/14

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Gilbert Vandeventer

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|-----------|---------------|--------|----------------|------------------|
| MW-1      | 4J02016-01    | Water  | 09/26/14 12:30 | 10-02-2014 14:19 |
| MW-2      | 4J02016-02    | Water  | 09/26/14 11:50 | 10-02-2014 14:19 |

Revised report. TDS on sample -01 was initially entered incorrectly.

## MW-1

|                                 |                        | 4J0201     | 6-01 (Wa | ter)         |            |          |          |           |       |
|---------------------------------|------------------------|------------|----------|--------------|------------|----------|----------|-----------|-------|
|                                 |                        | Reporting  |          |              |            |          |          |           |       |
| Analyte                         | Result                 | Limit      | Units    | Dilution     | Batch      | Prepared | Analyzed | Method    | Notes |
|                                 |                        | an Basin E | nvironme | ental Lab, I | <b>P</b> . |          |          |           |       |
| General Chemistry Parameters by | EPA / Standard Methods |            |          |              |            |          |          |           |       |
| Chloride                        | 627                    | 12.5       | mg/L     | 25           | P4J1002    | 10/10/14 | 10/10/14 | EPA 300.0 |       |
| Total Dissolved Solids          | 1270                   | 20.0       | mg/L     | 1            | P4J0702    | 10/03/14 | 10/03/14 | EPA 160.1 |       |

**Total Dissolved Solids** 

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Gilbert Vandeventer

|                                   |                               | l         | MW-2     |              |            |          |          |           |       |
|-----------------------------------|-------------------------------|-----------|----------|--------------|------------|----------|----------|-----------|-------|
|                                   |                               | 4J0201    | 6-02 (Wa | iter)        |            |          |          |           |       |
|                                   |                               | Reporting |          |              |            |          |          |           |       |
| Analyte                           | Result                        | Limit     | Units    | Dilution     | Batch      | Prepared | Analyzed | Method    | Notes |
|                                   | Permia                        | n Basin E | nvironme | ental Lab, I | <b>P</b> . |          |          |           |       |
| <b>General Chemistry Paramete</b> | ers by EPA / Standard Methods |           |          |              |            |          |          |           |       |
| Chloride                          | 471                           | 5.00      | mg/L     | 10           | P4J1002    | 10/10/14 | 10/10/14 | EPA 300.0 |       |

mg/L

1

P4J0702

10/03/14

10/03/14

EPA 160.1

20.0

790

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### Permian Basin Environmental Lab, L.P.

|                                      |          |                    |       |                | -                |          | WEEG           |       |              |        |
|--------------------------------------|----------|--------------------|-------|----------------|------------------|----------|----------------|-------|--------------|--------|
| Analyte                              | Result   | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC     | %REC<br>Limits | RPD   | RPD<br>Limit | Notes  |
|                                      | ittosuit | Linit              | omu   | Lever          | rtebuit          | , under  | Linito         | iu b  | 2            | 110105 |
| Batch P4J0702 - *** DEFAULT PREP *** |          |                    |       |                |                  |          |                |       |              |        |
| Blank (P4J0702-BLK1)                 |          |                    |       | Prepared &     | k Analyzed       | 10/03/14 |                |       |              |        |
| Total Dissolved Solids               | ND       | 20.0               | mg/L  |                |                  |          |                |       |              |        |
| Duplicate (P4J0702-DUP1)             | Sou      | -ce: 4H28001-      | -01   | Prepared &     | 2 Analyzed       | 10/03/14 |                |       |              |        |
| Total Dissolved Solids               | 400      | 20.0               | mg/L  |                | 372              |          |                | 7.25  | 20           |        |
| Duplicate (P4J0702-DUP2)             | Sou      | ce: 4H28002-       | -01   | Prepared &     | 2 Analyzed       | 10/03/14 |                |       |              |        |
| Total Dissolved Solids               | 164      | 20.0               | mg/L  |                | 160              |          |                | 2.47  | 20           |        |
| Batch P4J1002 - *** DEFAULT PREP *** |          |                    |       |                |                  |          |                |       |              |        |
| Blank (P4J1002-BLK1)                 |          |                    |       | Prepared &     | k Analyzed       | 10/10/14 |                |       |              |        |
| Chloride                             | ND       | 0.500              | mg/L  |                |                  |          |                |       |              |        |
| LCS (P4J1002-BS1)                    |          |                    |       | Prepared 8     | k Analyzed       | 10/10/14 |                |       |              |        |
| Chloride                             | 9.93     | 0.500              | mg/L  | 10.0           |                  | 99.3     | 80-120         |       |              |        |
| LCS Dup (P4J1002-BSD1)               |          |                    |       | Prepared &     | 2 Analyzed       | 10/10/14 |                |       |              |        |
| Chloride                             | 9.89     | 0.500              | mg/L  | 10.0           |                  | 98.9     | 80-120         | 0.383 | 20           |        |
| Duplicate (P4J1002-DUP1)             | Sou      |                    | 01    | Prepared &     | k Analyzed       | 10/10/14 |                |       |              |        |
| Chloride                             | 2040     | 50.0               | mg/L  | *              | 2030             |          |                | 0.373 | 20           |        |
| Matrix Spike (P4J1002-MS1)           | Sou      | rce: 4J02015-      | 01    | Prepared &     | 2 Analyzed       | 10/10/14 |                |       |              |        |
| Chloride                             | 3110     | 50.0               | mg/L  | 1000           | 2030             | 108      | 80-120         |       |              |        |

#### **Notes and Definitions**

| DET | Analyte DETECTED                                     |
|-----|--|
| ND  | Analyte NOT DETECTED at or above the reporting limit |
| NR  | Not Reported   |
| dry | Sample results reported on a dry weight basis        |
| RPD | Relative Percent Difference                          |
| LCS | Laboratory Control Spike                             |
| MS  | Matrix Spike   |
| Dup | Duplicate  |

Report Approved By:

un Barron

Date: 10/15/2014

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

| Difference         Formula Bath Environmental Lab, LP         Coc No.:         APPG01         APPG01         APPG01   | Delivered By: ()<br>Sampler - U | Relinquished by:    | 2 Mr. Gr | Relinquished by: |   |           | 4         | ι. |     |    |          | -07       | 101      | LAB #  |          | T12S-R34E-   | South Four I                 | (432) 638-8740 | PO Box 121          | Address: (Stre      | Gil Van Dev              | Project Manager: | Company Name: |            |          |              |
|---|---------------------------------|---------------------|----------|------------------|---|-----------|-----------|----|-----|----|----------|-----------|----------|--|----------|--|------------------------------|----------------|---------------------|---------------------|--------------------------|------------------|---------------|------------|----------|--------------|
| 14.9. Company<br>Price Energy Company<br>Mages<br>Market<br>Status       Company<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile<br>Faile | One)<br>Bus -                   |                     |          |                  |   |           | -         |    |     |    |          | MW-2      | MW-1     | FIELD CODE   | 41/02016 | opect Location:<br>T12S-R34E-Sec1 Unit Letter L ~ Le | South Four Lakes #13 (AP-76) | 740            | 77, Odessa TX 79768 | (Street, City, Zip) | enter / Trident Environn |                  | ronmental     |            | 19112405 |              |
| Page 1213         Company Attention: Mait Pride           Company Attention: Mait Pride         Company Attention: Mait Pride           Company Attention: Mait Pride         Company Attention: Mait Pride           Company Attention: Mait Pride         Company Company Attention: Mait Pride           Company Attention: Mait Pride           Company Attention: Mait Pride           Company C   | Samp                            | Recei               |          | Recei            |   |           |           |    |     |    |          | G         | G        | (G)rab or (C)omp   |          | a Cou  |                              | (413           | Пох #               |                     | lental                   |                  |               | Pho        | Midli    | 1001         |
| Page 1         Page 1         Company Attention: Mait Pride           Company Attention: Mait Pride         Company Attention: Mait Pride           Integy Company Attention: Mait Pride         Company Attention: Mait Pride           Company Attention: Mait Pride         Company Attention: Mait Pride           Integy Company Attention: Mait Pride           Company Attention: Mait Pride           Company Attention: Mait Pride           Company Attention: Mait Pride           Main and Solution of South Note Colspan="2">Control of South Note Colspan= 2"           Control of S  | Yes Cond                        | A Page              |          | ved by           |   |           |           |    |     |    | ľ        | <u> </u>  | _        | # CONTAINERS   |          | nty,   | Pric                         | ) 40           | (91                 |                     | ΡO                       |                  | BILL          | 1e: 43     | ind,     |              |
| Introversion         Introversion<  |                                 | 12                  | 0        |                  |   |           | $\neg$    |    | +   | ┢  | +        | ×         | ×        | WATER  |          | ₹  | е<br>П                       | 996-1          | 8) 52               |                     | Box                      | ā                |               | 12-66      | Fexa:    | Sasır        |
| International and the second   |                                 | abor                |          |                  |   |           |           |    |     |    | ┢        |           |          | SOIL   | s        | San  | nerc                         | õ              | 24-9                | Pho                 | 710                      | Add              | Con           | 1-4        | s 7:     |              |
| Internation         Point         CHAINOF CUSTODY AND ANALYSIS RECOURST           Internation:         Math Pride         CHAINOF CUSTODY AND ANALYSIS RECOURST           Internation:         Math Pride         Gene 10#         Gene 10#           Internation:         Math Pride         Gene 10#         Gene 10#           Internation:         Internation:         Gene 10#         Gene 10#           Internation:         Internat   |                                 | atory               |          |                  |   |           |           |    |     | T  |          |           |          |  | ATR      | ipler (  | V C                          |                | 200                 | ne#:                | )95(                     | Tess:            | npany         | 184        | 9706     | VIro         |
| International control         Internatenal contrefere         International contene   | `                               | Staf                | 12       |                  |   |           | $\square$ | _  |     |    | -        |           |          | SLUDGE   | Ī        | signa  | omp                          |                |                     |                     |                          |                  |               |            | i        | nme<br>191   |
| Correction         Correct   | 도 우                             | $\bigvee_{\exists}$ |          |                  | - |           | $\neg$    | -  | +-  | +  | +        |           |          | HCL (BTEX only)  | ┝──      |  | any                          |                |                     |                     | ılsa                     | a iy             |               |            |          | 3 intal      |
| Coc         No.:         AP76.091           Imate Pride   | HECK                            |                     |          | _                |   | $\neg$    |           | -+ |     | +  | +        |           |          | and the second s |          | ł  |                              |                | 1                   |                     | è                        | 5                |               |            |          | Lab          |
| Coc         No.:         AP76.091           Imate Pride   |                                 | j€                  |          | Date             |   |           |           |    |     |    |          |           |          |  | MET      |  |                              |                | l                   |                     | 74                       | (Stre            | Ŧ<br>Ŋ        |            |          | Ę            |
| Image: Second state in the second state in  | A 13                            | 2/2                 |          |                  | _ |           | _         | _  |     |    |          | <u> </u>  |          |  | I₽ ₹     |  |                              |                |                     | -                   | 170                      | ět C             | ion F         |            |          |              |
| Imate         Imate <th< td=""><td></td><td>Time<br/>(1 q</td><td></td><td>Ţ,</td><td></td><td></td><td><math>\neg</math></td><td>-+</td><td>+-</td><td>╋</td><td>╈</td><td><u>⊢</u></td><td>×</td><td></td><td></td><td>í</td><td></td><td></td><td>918</td><td>ax#:</td><td>-195</td><td>ity, Zij</td><td>°,</td><td></td><td></td><td></td></th<>  |                                 | Time<br>(1 q        |          | Ţ,               |   |           | $\neg$    | -+ | +-  | ╋  | ╈        | <u>⊢</u>  | ×        |  |          | í  |                              |                | 918                 | ax#:                | -195                     | ity, Zij         | °,            |            |          |              |
| Image: Sign of the second s   |                                 |                     |          |                  |   |           |           |    |     |    |          | 9/26/14   | 9/26/14  | DATE   | SAMPLI   |  |                              |                | 524-9292            |                     | 0                        |                  | + Drido       |            | •        |              |
| Image: state of the sector  |                                 |                     |          |                  |   |           |           | 3  |     |    |          | 1150      | 1230     | TIME   | ING      |  | ĺ                            |                |                     |                     |                          |                  |               |            |          |              |
| uits to:       Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7       Circle or Specify Method No.1         Uits to:       TCLP Metals Ag As Ba Cd Cr Pb Se Hg       COC No.:         gli@trident-environmental.com       TCLP Semi Volatiles       COC Mo.1         Mo       GC/MS Semi. Vol. 8260B/624       COC Mo.1         Additional Fax Number       GC/MS Semi. Vol. 8270C/625       COC Mo.1         Mo       GC/MS Semi. Vol. 8270C/625       COC Mo.1         Moisture Content       GC/SOC MO.1       Coations (Ca, Mg, Na, K)         Mo       Sector Mo.1       Sector Mo.1       COC MO.1         Mo       Sector Mo.1       Sector Mo.1       COC Mo.1         Mo       Sector Mo.1       Sector Mo.1       COC Mo.1         Mo       Sector Mo.1       Sector Mo.1       Sector Mo.1  |                                 | RE                  | Fax      | Pho              |   |           |           |    |     |    |          |           |          | MTBE 8021B/602   | L        | <u> </u>   | <b></b>                      | I              |                     |                     |                          | - <b>-</b>       |               |            |          |              |
| uits o:       Ves       Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7       Circle or Specify Method No.1         ves       TCLP Metals Ag As Ba Cd Cr Pb Se Hg       TCLP Volatiles       Provide of Specify Method No.1         gill@trident-environmental.com       RCI       RCI       Provide of Specify Method No.1         Mo       GC/MS Semi. Vol. 8260B/624       Provide of Specify Method No.1       Provide of Specify Method No.1         Mo       GC/MS Semi. Vol. 8260B/624       GC/MS Semi. Vol. 8270C/625       Provide of Specify Method No.1         Mo       GC/MS Semi. Vol. 8270C/625       Moisture Content       Provide of Specify Method No.1         Mo       GC/MS Semi. Vol. 8270C/625       Moisture Content       Provide of Specify Method No.1         Mo       GC/MS Semi. Vol. 8270C/625       Provide of Specify Method No.1       Provide of Specify Method No.1         Mo       GC/MS Semi. Vol. 8270C/625       Moisture Content       Provide of Specify Method No.1       Provide of Specify Method No.1         Mo       GC/MS Semi. Vol. 8260B/624       GC/MS Semi. Vol. 8270C/625       Provide of Specify Method No.1       Provide of Specify Method No.1         Mo       GC/MS Vol. 8260B/624       GC/MS Semi. Vol. 8270C/625       Provide of Specify Method No.1       Provide of Specify Method No.1         Mo       Specify Method No.1       Specify Method No.1       <  |                                 | MAR<br>Ema          | Res      | ne F             |   |           |           |    |     |    |          |           |          |  |          |  |                              |                |                     |                     |                          |                  |               | CH<br>CH   |          |              |
| uits to:       Ves       Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7       Circle or Specify Method No.1         Uits to:       TCLP Metals Ag As Ba Cd Cr Pb Se Hg       TCLP Volatiles       COC No.:         gill@trident-environmental.com       TCLP Pesticides       RCI       Cottons (Ca, Mg, Na, K)         Mo       GC/MS Semi. Vol. 8260B/624       Moisture Content       Cottons (Ca, Mg, Na, K)         Mo       GC/MS Semi. Vol. 8270C/625       Moisture Content       Cottons (Ca, Mg, Na, K)         Mo       X       X       Total Dissolved Solids (160.1 or SM2540C)       Cottons (Ca, Mdston B or 300.1)  |                                 | il Re               | ults     | (esul            | _ |           |           | -+ | _   |    |          | ļ         | ┡        |  | 5 / TX1  | 005 Ex   | tended                       | (C35)          |                     |                     |                          |                  |               |            |          |              |
|   |                                 | sult                |          | 8                |   |           |           |    | _   | ┼╴ | ╋        | <u> </u>  |          |  | Ba Co    | I Cr Pb  | Se Hg                        | 6010E          | /200                | .7                  |                          | ô                |               | AB C       |          |              |
|   |                                 | s to:               |          | Ľ                |   |           |           | _  |     | -  | 1        | <b></b>   |          | TCLP Metals Ag As  |          |  |                              |                |                     |                     |                          | ircle            | ŇÀ            | rder CC    |          |              |
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|   | iattp                           |                     |          |                  |   |           |           |    |     |    | T        |           |          |  |          |  |                              |                |                     |                     |                          | pecify           | I SI          | Ň          | ĉ        | 2            |
|   | @p                              |                     | No       | ß                |   |           |           |    |     |    | $\Box$   | $\square$ |          |  |          |  |                              |                |                     |                     |                          | y Me             | REC           | , <u>∧</u> |          |              |
|   | ride                            |                     | 7        |                  |   | $\square$ |           |    |     | +- | <u> </u> | _         | <u> </u> |  |          |  |                              |                |                     |                     |                          | thod             | Ĕ             |            |          |              |
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|   | ergy                            |                     | onal     |                  |   | $\vdash$  |           | -+ | -[- | ╀╴ | ┼─       | †         |          |  | a, K)    |  |                              |                |                     |                     |                          |                  |               | Ns         |          | n<br>Ge<br>L |
|   | lent.                           |                     | Fax      |                  |   |           |           |    |     |    |          |           |          |  |          |  |                              |                |                     |                     |                          |                  |               | 0 IS F     | ļ        | ž  -         |
|   | n<br>n                          |                     | Num      |                  | _ |           |           | _  |     | ╋  | +        |           |          |  |          |  |                              | 0C)            |                     |                     |                          |                  |               | <b>F</b>   |          | 0            |
|   | - m                             |                     | ber:     |                  |   |           |           | -+ | +   | ╋  | ┼─       | ŕ         | f        |  | 00 B     | 01 300.1   | ·/                           |                |                     |                     |                          |                  |               | UĔ         |          |              |
|   |                                 |                     |          |                  |   |           |           | +  |     | ╉  |          | ┢──       | ┝        | Turn Around Time ~   | 24 H     | ours   | <u>.</u>                     |                |                     |                     |                          |                  |               | F I        |          |              |

PERMIAN BASIN ENVIRONMENTAL LAB, LP 10014 SCR 1213 Midland, TX 79706



# Analytical Report

## **Prepared for:**

Gilbert Vandeventer Trident Environmental P.O. Box 12177 Odessa, TX 79768

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Location: T12S-R34E-Sec1 Unit Letter L ~ Lea County, NM

Lab Order Number: 4L15009



NELAP/TCEQ # T104704156-13-3

Report Date: 12/24/14

#### Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Gilbert Vandeventer

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|-----------|---------------|--------|----------------|------------------|
| MW-1      | 4L15009-01    | Water  | 12/11/14 11:45 | 12-15-2014 15:40 |
| MW-2      | 4L15009-02    | Water  | 12/12/14 11:05 | 12-15-2014 15:40 |

#### MW-1 4L15009-01 (Water)

|                                 |                        | 411500             | <b>9-01 (</b> <i>W</i> |              |            |          |          |           |       |
|---------------------------------|------------------------|--------------------|------------------------|--------------|------------|----------|----------|-----------|-------|
| Analyte                         | Result                 | Reporting<br>Limit | Units                  | Dilution     | Batch      | Prepared | Analyzed | Method    | Notes |
|                                 | Permia                 | an Basin Ei        | nvironme               | ental Lab, I | <b>P</b> . |          |          |           |       |
| General Chemistry Parameters by | EPA / Standard Methods |                    |                        |              |            |          |          |           |       |
| Chloride                        | 628                    | 25.0               | mg/L                   | 50           | P4L1807    | 12/16/14 | 12/18/14 | EPA 300.0 |       |
| Total Dissolved Solids          | 1500                   | 20.0               | mg/L                   | 1            | P4L1902    | 12/19/14 | 12/19/14 | EPA 160.1 |       |

**Total Dissolved Solids** 

Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Gilbert Vandeventer

|                                   |                               | I                  | MW-2     |              |            |          |          |           |       |
|-----------------------------------|-------------------------------|--------------------|----------|--------------|------------|----------|----------|-----------|-------|
|                                   |                               | 4L1500             | 9-02 (Wa | nter)        |            |          |          |           |       |
| Analyte                           | Result                        | Reporting<br>Limit | Units    | Dilution     | Batch      | Prepared | Analyzed | Method    | Notes |
|                                   | Permia                        | ın Basin E         | nvironme | ental Lab, I | <b>P</b> . |          |          |           |       |
| <b>General Chemistry Paramete</b> | ers by EPA / Standard Methods |                    |          |              |            |          |          |           |       |
| Chloride                          | 286                           | 12.5               | mg/L     | 25           | P4L1807    | 12/16/14 | 12/18/14 | EPA 300.0 |       |

mg/L

1

P4L1902

12/19/14

12/19/14

EPA 160.1

20.0

900

#### Project: Pride Energy Company Project Number: South Four Lakes #13 (AP-76) Project Manager: Gilbert Vandeventer

#### General Chemistry Parameters by EPA / Standard Methods - Quality Control

#### Permian Basin Environmental Lab, L.P.

|                                      |        |                               |       |                | -                |             |                |       |              |       |
|--------------------------------------|--------|-------------------------------|-------|----------------|------------------|-------------|----------------|-------|--------------|-------|
| Analyte                              | Result | Reporting<br>Limit            | Units | Spike<br>Level | Source<br>Result | %REC        | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
| Batch P4L1807 - *** DEFAULT PREP *** |        |                               |       |                |                  |             |                |       |              |       |
| Blank (P4L1807-BLK1)                 |        |                               |       | Prepared:      | 2/16/14 A        | nalyzed: 12 | 2/18/14        |       |              |       |
| Chloride                             | ND     | 0.500                         | mg/L  |                |                  |             |                |       |              |       |
| LCS (P4L1807-BS1)                    |        |                               |       | Prepared:      | 2/16/14 A        | nalyzed: 12 | 2/18/14        |       |              |       |
| Chloride                             | 20.5   | 0.500                         | mg/L  | 20.0           |                  | 102         | 80-120         |       |              |       |
| LCS Dup (P4L1807-BSD1)               |        |                               |       | Prepared:      | 2/16/14 A        | nalyzed: 12 | 2/18/14        |       |              |       |
| Chloride                             | 20.4   | 0.500                         | mg/L  | 20.0           |                  | 102         | 80-120         | 0.597 | 20           |       |
| Duplicate (P4L1807-DUP1)             | Sou    | rce: 4L15007-                 | 01    | Prepared:      | 2/16/14 A        |             |                |       |              |       |
| Chloride                             | 2650   | 100                           | mg/L  |                | 2640             |             |                | 0.514 | 20           |       |
| Matrix Spike (P4L1807-MS1)           | Sou    | rce: 4L15007-                 | 01    | Prepared: 1    | 2/16/14 A        | nalyzed: 12 | 2/18/14        |       |              |       |
| Chloride                             | 4380   | 100                           | mg/L  | 2000           | 2640             | 87.2        | 80-120         |       |              |       |
| Batch P4L1902 - *** DEFAULT PREP *** |        |                               |       |                |                  |             |                |       |              |       |
| Blank (P4L1902-BLK1)                 |        | Prepared & Analyzed: 12/19/14 |       |                |                  |             |                |       |              |       |
| Total Dissolved Solids               | ND     | 20.0                          | mg/L  |                |                  |             |                |       |              |       |
| Duplicate (P4L1902-DUP1)             | Sou    | rce: 4L15010-                 | 04    | Prepared &     | Analyzed:        | : 12/19/14  |                |       |              |       |
| Total Dissolved Solids               | 1500   | 20.0                          | mg/L  |                | 1530             |             |                | 1.98  | 20           |       |
|                                      |        |                               |       |                |                  |             |                |       |              |       |

#### **Notes and Definitions**

| DET | Analyte DETECTED                                     |
|-----|--|
| ND  | Analyte NOT DETECTED at or above the reporting limit |
| NR  | Not Reported   |
| dry | Sample results reported on a dry weight basis        |
| RPD | Relative Percent Difference                          |
| LCS | Laboratory Control Spike                             |
| MS  | Matrix Spike   |
| Dup | Duplicate  |

Report Approved By:

un Barron

Date: 12/24/2014

Brent Barron, Laboratory Director/Technical Director

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If you have received this material in error, please notify us immediately at 432-686-7235.

Permian Basin Environmental Lab, L.P.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

|   | Delivered By:      |                   | Relinguished he        |             | Relinguished by: |               |    |   |        |                    |  |           | ~07            | 101                              | LAB #  |                           | T12S-R34E                          | South Four                             | (432) 638-8740 | PO Box 12                                   | Gil Van De<br>Address: (St  | Project Manager:  | Company Name:<br>Trident Env         |  |                            |
|---|--------------------|-------------------|------------------------|-------------|------------------|---------------|----|---|--------|--------------------|--|-----------|----------------|----------------------------------|--|---------------------------|------------------------------------|--|----------------|---|---|---|--------------------------------------|--|----------------------------|
|   | (Circle One)       |                   |                        | 1 million + | ,<br>            |               |    |   |        |                    |  |           | MW-2           | MW-1                             | FIELD CODE   |                           | T12S-R34E-Sec1 Unit Letter L ~ Lea | Jeci #<br>South Four Lakes #13 (AP-76) | 8740           | PO Box 12177, Odessa TX 79768               | Gil Van Deventer / Trident Environmental<br>dress: (Street, City, Zip)                  |   | mpany Name:<br>Trident Environmental | AN ERCAD   |                            |
| Sample  | Sample Condition 🖌 | Kecew             | Reneived Rv.           |             | Received by:     |               |    |   | ଜ<br>ଜ | G                  | (G)rab or (C)omp                       |           | Lea County, NM |                                  | 5  | Fav#                      |                                    |  |                | Midland, Texas 79706<br>Phone: 432-661-4184 | Permian Basin Environmental Lab, LP<br>10014 S. County Road 1213<br>Midland Texas 79706 |   |                                      |  |                            |
| Yes   | Conditi            |                   |                        | •           | ăb⊻              |               |    |   |        |                    |  |           | -              | 4                                | # CONTAINER  | S                         | y<br>z                             | Pride Energy Company                   | 403            | (918) 524-9200                              | PO Box 710950,<br>Phone#:   |   | BILL TO<br>Pride E                   | : 432  | S. C                       |
| Ll §  | ŝ                  |                   |                        | •           | ľ                |               |    |   |        |                    |  |           | ×              | ×                                | WATER  |                           |                                    | E S                                    | 996            | ) 52  | Ň   |   | Що                                   | exas   | asin<br>ount               |
| Tes a   |                    | 1X                | /l ahoratory.Staff)    |             |                  |               |    |   |        | 1                  |  | $\square$ |                |                                  | SOIL   | ₹                         |                                    | ergy Compan                            | 00             | 4-92  | 71095<br>Phone#:  | Address:  | Company:<br>inergy Co                | 418  | Envi<br>y Ro               |
|   |                    | V                 | S S S                  |             | ┢                | _             |    |   |        | -                  |  | _         |                |                                  | AIR<br>SLUDGE  |                           |                                    | P C                                    | 1              | 8   | #)50,   | SS:   | C or                                 | 4 06   | ronr<br>ad 1               |
|   |                    | 2                 |                        |             | ł                |               |    |   | +      |                    |  |           |                |                                  |  |                           |                                    | npa                                    |                |   | Tulsa,  |   | npa                                  |  | nent<br>213                |
| CHECKED BY:<br>(Initials)                               | 도<br>문             | 3                 |                        |             | ſ                |               |    |   |        |                    |  |           |                |                                  | HCL (BTEX only   |                           |                                    | <sup>,</sup> N                         |                |   | jă  |   | ny /                                 |  | 2 <u>2</u>                 |
|   | CKED               | 44                | Date.                  |             | Date:            | -+            | +  |   | ┿      | ┼─                 | HNO <sub>3</sub><br>NaHSO <sub>4</sub> |           |                |                                  |  |                           | ×                                  | (9                                     | Atte           |   | ab, L   |   |                                      |  |                            |
|   | BY:                | 15                | 0                      |             | ē                | +             |    | +   | +      | ╞                  |  |           | _              | H <sub>2</sub> SO <sub>4</sub>   |  |                           | 1                                  |  | 1.             | 417   | treet,  | ntio  | 11                                   | ס  |                            |
|   | $\mathbb{N}$       | 1/14              |                        |             | _I               |               |    |   |        |                    |  |           | ××             | X                                | ICE  | METHOD                    |                                    |  |                | (91)<br>(91)                                | OK 74170-1950<br>Fax#:  | (Street, City, Zip)   | PO#                                  | -  |                            |
| V   | N.                 | -                 | Time.                  |             | Time:            | -             | ┿  |   | +-     | -                  |  | _         |                |                                  | NONE   | _                         | 4                                  |  |                | 8)<br>5                                     |   | (di   | att F                                | 5  |                            |
|   | <b>\</b>           | 540               |                        |             |                  |               |    | _   |        |                    |  | 12-11-14  | 12-11-14       | DATE                             | SAMPLING   |                           |                                    |  | (918) 524-9292 |   |   | BILL TO Company: PO# Pride Energy Company / Attention: Matt Pride | 1215000                              |  |                            |
|   |                    |                   |                        |             |                  |               |    |   |        |                    |  |           | 201            | 1145                             | TIME   | ING                       |                                    |  |                |   |   |   |                                      |  |                            |
|   |                    |                   | R                      | Fax         | Pho              |               |    |   |        |                    |  |           |                |                                  | MTBE 8021B/60  | 2                         |                                    |  |                |   |   |   |                                      |  |                            |
|   |                    | Emai              | REMARKS:               | Fax Results | ne<br>Re         | $\dashv$      | _  | +   | _      | -                  |  | _         |                |                                  | BTEX 8021 B  | 05 / TV                   | 1005 E                             | tondar                                 | 1/025          |   |   | -   |                                      | H  |                            |
|   |                    | Email Results to: | S                      | ŧ           | Phone Results    | -+            |    | -   | ╉      | +                  | $\left  - \right $                     |           |                |                                  | TPH 418.1/TX10<br>PAH 8270C  |                           | 1000 E                             | ~                                      | i (U30)        |   |   | 4   |                                      | N N  |                            |
|   |                    | iults             |                        |             | <u> </u>         |               |    | 1   |        | 1                  |  |           |                |                                  | Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7                         |                           |                                    |  |                |   |   |   | C<br>LAB Order ID #                  |  |                            |
|   |                    | ţ;                |                        |             | ऱ                | -+            |    |   |        |                    |  |           |                | TCLP Metals Ag<br>TCLP Volatiles | Ag As Ba Cd Cr Pb Se Hg<br>s   |                           |                                    |  |                |   |   |   | der II                               |  |                            |
| , IIC   | g<br>g             |                   | 162                    |             | Yes              | 二             |    | 1   | 士      | 1                  | $\square$                              |           |                |                                  | TCLP Semi Volat  | iles                      |                                    |  |                |   |   |   | ANALYSIS                             | <b>10</b>  | 8                          |
| anbr  | ŧ @                |                   |                        |             | ×                | -             |    | $\square$   |        |                    |  |           |                | <u> </u>                         | TCLP Pesticides  |                           |                                    |  |                | _   | #   |   | ecify R                              | Page 1 of 1<br>COC No.: AP76-1214<br>CHAIN-OF-CUSTODY AND ANALYSIS REQUEST |                            |
|   | iden               |                   | No                     | 5           | Š                | $\rightarrow$ | +  | +   |        | +                  | $\left  - \right $                     | -         |                |                                  | RCI<br>GC/MS Vol. 826  | CI<br>C/MS Vol. 8260B/624 |                                    |  |                |   |   | -   | ANALYSIS REQUEST                     | N N  | 0                          |
| gil@trident-environmental.com<br>mattp@pride-energy.com |                    | Į                 |                        |             | -+               | +             | +  | ╉   | ╋      | $\left  - \right $ |  |           |                | GC/MS Semi. Vo                   |  | C/625                     |                                    |  |                |   | 1   |   | Â                                    | AF   |                            |
|   | viro               |                   | 10110                  | 1dillion    |                  |               |    |   |        |                    |  |           |                |                                  | Moisture Content   |                           |                                    |  |                |   |   | 1   | °, <del>''</del>                     | A A  | Page <u>1</u><br>AP76-1214 |
|   | nm€                |                   | i ai r                 |             |                  | $\neg$        |    | Cations (Ca, Mg, Na, K)                               |        |                    |  |           |                |                                  |  | 4                         |                                    |  | -121           |   |   |   |                                      |  |                            |
|   | ntal               |                   | aX IV                  | 2           |                  |               | -+ | +   | +      | +                  | $\left  \right $                       |           | ×              | ×                                | Anions (Cl, SO4, CO3, HCO3)<br>Total Dissolved Solids (160.1 or SM2540C) |                           |                                    |  |                |   |   | +   |                                      | R  | 4                          |
| n <u>al</u><br>o  |                    |                   | Additional Lax Munner. |             |                  |               |    | ×         ×         Chloride / CF (SM4500 B or 300.1) |        |                    |  |           |                | -,                               |  |                           | 1                                  |  | l g            | ද   |   |   |                                      |  |                            |
|   | ц                  |                   |                        | i           |                  |               | -  |   |        | Γ                  |  |           |                |                                  |  |                           |                                    |  |                |   |   |   |                                      | ES I   | <u> </u>                   |
|   |                    |                   |                        |             |                  |               |    |   |        |                    |  |           |                |                                  | Turn Around Tim  | e ~ 24                    | lours                              |  |                |   |   |   |                                      |  | l                          |