

Delivery Confirmation No.  
420 87505 9101 9690 0094 0865 9218 78



February 21, 2012

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

**RE: 2011 Annual Groundwater Monitoring Report  
State 36 #2 Site (NMOCD Case # 1R-501)  
T19S-R37E-Section 36, Unit Letter O, Lea County, New Mexico**

Dear Mr. von Gonten:

As agent for Pride Energy Company (Pride), Trident Environmental submits this *2011 Annual Groundwater Monitoring Report* for the above-referenced site.

**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 plan showing the most recent groundwater elevation and the chloride/TDS concentrations in the four on site monitoring wells (MW-1, MW-2, MW-3, and MW-4) is shown in Figure 1. Figure 2 depicts graphs of chloride and TDS concentrations and groundwater elevation versus time for each monitoring well. A well sampling data form, laboratory analytical reports, and chains of custody documentation for each 2011 sampling event are included in Attachment A.

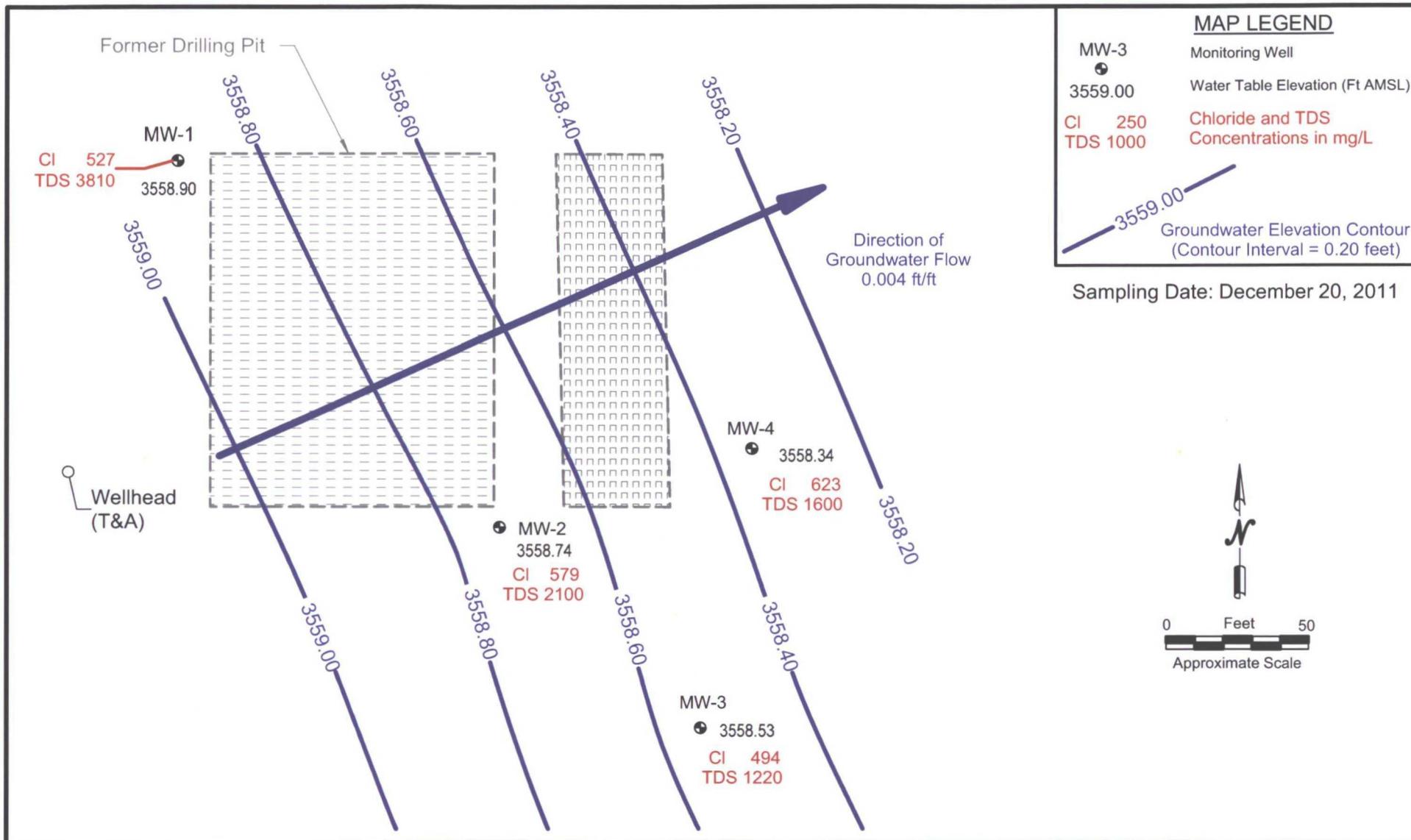
**Table 1: Summary of Groundwater Monitoring Results**

Monitoring Well	Sample Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)	Chloride (mg/L)	TDS (mg/L)	BTEX (mg/L)
MW-1	02/25/08	43.80	3559.41	489	---	---
	03/27/08	43.88	3559.33	557	1,770	<0.003
	06/17/08	43.89	3559.32	594	1,370	---
	09/10/08	43.97	3559.24	440	1,260	<0.003
	12/17/08	43.96	3559.25	440	1,290	<0.003
	03/19/09	44.02	3559.19	430	1,240	<0.003
	06/18/09	44.02	3559.19	428	1,330	<0.003
	09/17/09	44.08	3559.13	456	1,530	<0.003
	12/10/09	44.13	3559.08	450	1,360	<0.003
	03/31/10	44.14	3559.07	468	1,330	---
	06/16/10	44.20	3559.01	447	1,420	---
	09/22/10	44.09	3559.12	1,470	3,940	---
	12/13/10	44.12	3559.09	491	1,790	---
	03/17/11	44.14	3559.07	512	1,840	---
	06/30/11	44.24	3558.97	447	1,410	---
	09/29/11	44.23	3558.98	453	770	---
12/20/11	44.31	3558.90	527	3,810*	---	

State 36 #2 Site (NMOCD Case # 1R-501)  
2011 Annual Groundwater Monitoring Report

**Table 1: Summary of Groundwater Monitoring Results (continued)**

Monitoring Well	Sample Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)	Chloride (mg/L)	TDS (mg/L)	BTEX (mg/L)
MW-2	05/08/08	43.25	3559.22	1,450	2,730	< 0.003
	06/17/08	43.31	3559.16	1,980	2,730	---
	09/10/08	43.37	3559.10	1,580	3,440	<0.003
	12/17/08	43.38	3559.09	1,300	2,900	<0.003
	03/19/09	43.41	3559.06	1,080	2,380	<0.003
	06/18/09	43.42	3559.05	920	2,300	<0.003
	09/17/09	43.47	3559.00	810	1,980	<0.003
	12/10/09	43.53	3558.94	860	1,870	<0.003
	03/31/10	43.55	3558.92	691	1,520	---
	06/16/10	43.66	3558.81	723	2,020	---
	09/22/10	43.54	3558.93	923	3,080	---
	12/13/10	43.55	3558.92	936	2,750	---
	03/17/11	43.55	3558.92	765	2,560	---
	06/30/11	43.67	3558.80	788	1,180	---
09/29/11	43.65	3558.82	616	1,380	---	
12/20/11	43.73	3558.74	579	2,100	---	
MW-3	06/17/08	43.83	3558.98	733	1,810	---
	09/10/08	43.85	3558.96	580	1,660	<0.003
	12/17/08	43.91	3558.90	570	1,580	<0.003
	03/19/09	43.91	3558.90	560	1,620	<0.003
	06/18/09	43.97	3558.84	520	1,530	<0.003
	09/17/09	44.03	3558.78	500	1,410	<0.003
	12/10/09	44.07	3558.74	500	1,360	<0.003
	03/31/10	44.07	3558.74	489	1,230	---
	06/16/10	44.14	3558.67	489	1,440	---
	09/22/10	44.07	3558.74	420	1,520	---
	12/13/10	44.10	3558.71	290	1,350	---
	03/17/11	44.07	3558.74	434	1,420	---
	06/30/11	44.19	3558.62	426	1,310	---
09/29/11	44.18	3558.63	439	890	---	
12/20/11	44.28	3558.53	494	1,220	---	
MW-4	06/17/08	43.54	3558.81	1,070	2,150	---
	09/10/08	43.61	3558.74	820	2,070	<0.003
	12/17/08	43.63	3558.72	830	1,970	<0.003
	03/19/09	43.67	3558.68	810	1,970	<0.003
	06/18/09	43.68	3558.67	740	1,860	<0.003
	09/17/09	43.78	3558.57	740	1,690	<0.003
	12/10/09	43.81	3558.54	660	1,570	<0.003
	03/31/10	43.83	3558.52	691	1,560	---
	06/16/10	43.88	3558.47	606	1,580	---
	09/22/10	43.78	3558.57	669	1,940	---
	12/13/10	43.81	3558.54	646	2,020	---
	03/17/11	43.83	3558.52	778	2,530	---
	06/30/11	43.94	3558.41	758	1,910	---
	09/29/11	43.93	3558.42	662	1,180	---
12/20/11	44.01	3558.34	623	1,600	---	



PRIDE ENERGY COMPANY  
STATE 36 #2  
T19S - R37E - Section 36 - Unit O  
Lea County, New Mexico

FIGURE 1  
CHLORIDE, TDS, & BTEX CONCENTRATIONS  
AND GROUNDWATER ELEVATION MAP

Figure 2a: Chloride Concentrations vs Time

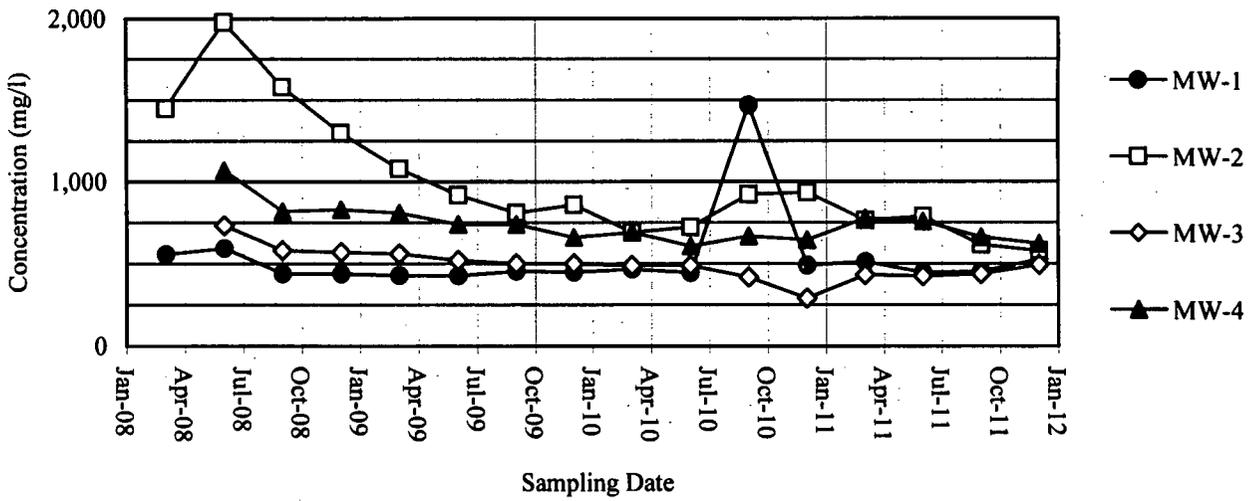


Figure 2b: TDS Concentrations vs Time

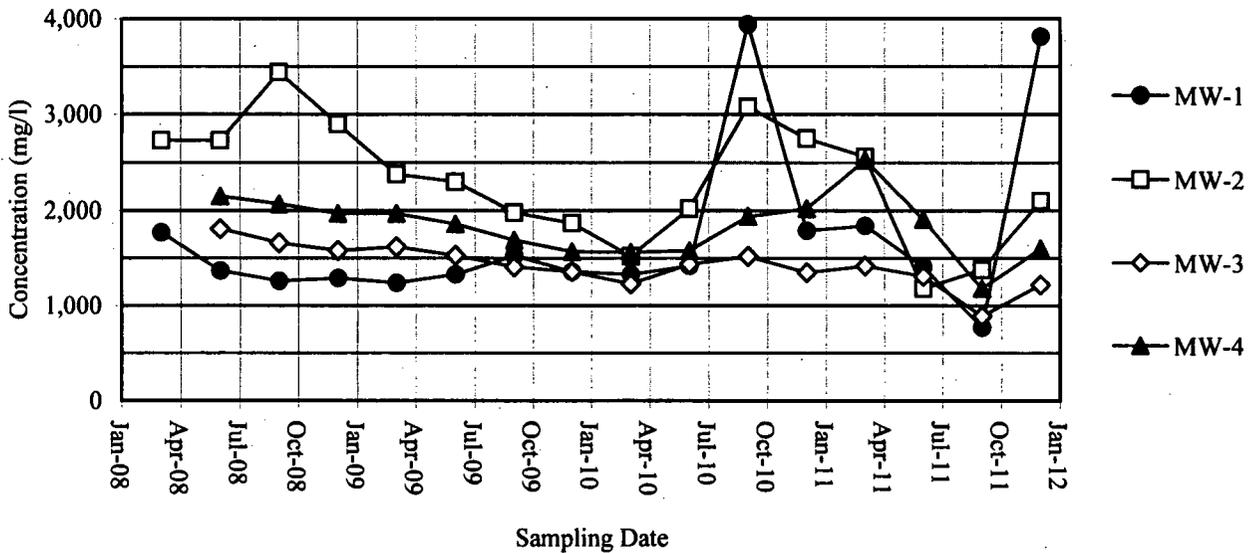
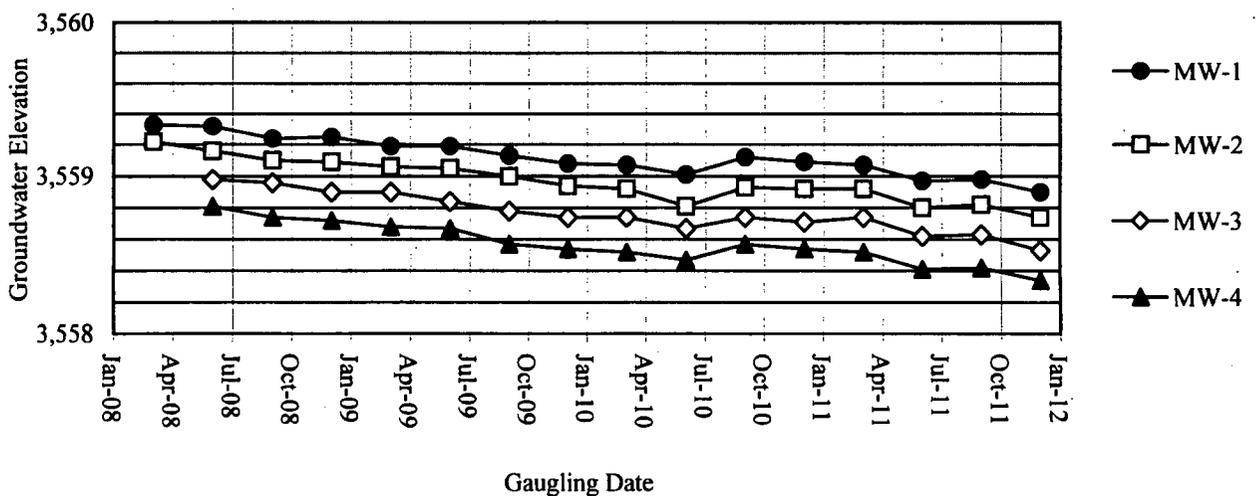


Figure 2c: Groundwater Elevations (Ft AMSL) vs Time



Conclusions regarding groundwater conditions are summarized as follows:

- The local water table is at a depth of approximately 41 feet bgs and slopes towards the northeast at a magnitude of approximately 0.004 ft/ft, which is anomalous to the prevailing southeast trending regional gradient.
- The base of the aquifer is at approximately 50 ft bgs, where red clay was encountered during well installations, therefore the saturated thickness is estimated at only 9 feet.
- The potential well yield for possible beneficial use of groundwater at the site is very low due to the limited thickness of the aquifer (less than 10 feet), observations of low yields during monitoring well development activities, and water table elevation declines of approximately 0.1 feet per year. In the unlikely event a water well is completed in the area, the expected yield would be less than 150 gallons per day which is considered inadequate for any beneficial domestic, irrigation, or municipal use.
- Chloride and TDS concentrations from groundwater samples collected at monitoring well MW-1, MW-2, MW-3, and MW-4 exceed WQCC standards. Due to its location immediately downgradient of the former drilling pit, monitoring well MW-2 usually exhibits the highest chloride and TDS values. However, during the most recent sampling event, the TDS concentration in monitoring well MW-1 (3,810 mg/L) exceeded that of MW-2 (2,100 mg/L) which is not consistent with previous sampling events nor does it correlate with the reported chloride values or gradient direction. Therefore, a lab error is suspected for the TDS concentration in MW-1 as reported in the December 20, 2011 sampling event. Possibly the sample was not filtered sufficiently allowing for suspended solids to be included in the result. The seven day holding time was exceeded prior to receiving the lab results so the lab could not re-analyze the TDS. Results from subsequent sampling events should confirm the suspicion of lab error.
- 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 suspended. Quarterly ground water sampling and monitoring will continue.

We look forward to working with you on this project. If you have any questions please call me at 432-638-8740 or Matt Pride at 918-524-9200.

Sincerely,



Gilbert Van Deventer, REM, PG (Trident Environmental, Odessa TX)

cc: Matt Pride (Pride Energy Co., Tulsa OK)  
Geoffrey Leking (NMOCD -District 1, Hobbs NM)

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

**ATTACHMENT A**

**WELL SAMPLING DATA FORM**

**and**

**LABORATORY ANALYTICAL REPORTS**

**WELL SAMPLING DATA FORM**



CLIENT: Pride Energy Company

SITE NAME: State 36 #2 (OCD Case # 1R501)

ITE LOCATION: T19S R37E Sec36 Unit O, Lea County, NM

SAMPLER: Gil Van Deventer

PURGING METHOD:  Hand Bailed  Pump, Type: Proactive SuperTwister (3-stage Submersible Pump)

SAMPLING METHOD:  Disposable Bailer  Direct from Discharge Hose  Other: \_\_\_\_\_

SPOSAL METHOD OF PURGE WATER:  On-site Drum  Drums  SWD Disposal Facility

Quarter	Date	Time	Monitoring Well No.	Depth to Water (ft btoc)	Total Depth (ft)	Water Column Height (ft)	Well Factor 2"=.16 4"=.65	Calc. Well Vol. (gal)	Volume Purged (gal)	No. of Well Volumes Purged	Temp. °C	Cond. mS/cm	pH	Purge Method	PHYSICAL APPEARANCE AND REMARKS
First	03/17/11	10:30	MW-1	44.14	52.37	8.23	0.16	1.3	8	6.1	20.9	2.41	6.83	Pump	Tan; cleared during purge
		11:40	MW-2	43.55	57.61	14.06	0.16	2.2	12	5.3	19.9	3.42	6.92		Clear
		11:00	MW-3	44.07	53.83	9.76	0.16	1.6	8	5.1	20.6	2.17	6.87		Pinkish/tan; cleared during purge
		11:20	MW-4	43.83	50.30	6.47	0.16	1.0	8	7.7	20.4	3.27	6.80		Clear
Second	06/30/11	14:40	MW-1	44.24	52.37	8.13	0.16	1.3	12	9.2	21.8	2.47	6.89	Pump	Whitish/tan; cleared during purge
		15:20	MW-2	43.67	57.61	13.94	0.16	2.2	12	5.4	21.1	3.15	6.84		Clear
		10:30	MW-3	44.19	53.83	9.64	0.16	1.5	12	7.8	20.9	2.38	6.78		Whitish/tan; cleared during purge
		14:00	MW-4	43.94	50.30	6.36	0.16	1.0	12	11.8	22.0	3.34	6.89		Whitish/tan; cleared during purge
Third	09/29/11	14:00	MW-1	44.23	52.37	8.14	0.16	1.3	10	7.7	20.6	2.31	6.90	Pump	Clear
		14:30	MW-2	43.65	57.61	13.96	0.16	2.2	15	6.7	20.3	2.82	7.06		Clear
		15:20	MW-3	44.18	53.83	9.65	0.16	1.5	10	6.5	20.9	2.27	7.06		Pinkish/tan; cleared during purge
		16:00	MW-4	43.93	50.30	6.37	0.16	1.0	10	9.8	20.9	2.96	7.00		Whitish/tan; cleared during purge
Fourth	12/20/11	12:30	MW-1	44.31	52.37	8.06	0.16	1.3	8	6.3	16.9	2.31	6.90	Pump	Whitish/tan; cleared during purge
		15:30	MW-2	43.73	57.61	13.88	0.16	2.2	12	5.4	17.9	2.82	7.06		Clear
		13:30	MW-3	44.28	53.83	9.55	0.16	1.5	8	5.2	16.6	2.27	7.06		Pinkish/tan; cleared during purge
		14:30	MW-4	44.01	50.30	6.29	0.16	1.0	8	7.9	16.7	2.96	7.00		Whitish/tan; cleared during purge

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

Note: Gate may be locked for access.

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

One of the locks combo is 5010

Delivered samples to Xenco Laboratories for chloride (300.1) and TDS (160.1) analysis.

# Analytical Report 410342

for  
**Trident Environmental**

**Project Manager: Gil Van Deventer**

**Pride Energy Company**

**State 36 #2**

**22-MAR-11**



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**12600 West I-20 East Odessa, Texas 79765**

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Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

**Xenco-Atlanta (EPA Lab Code: GA00046):**

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

**Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)**

**Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)**

**Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)**

**Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)**

**Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)**

**Xenco-Boca Raton (EPA Lab Code: FL01273):**

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)  
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

**Xenco Phoenix (EPA Lab Code: AZ00901):**

Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)

**Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)**

**Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)**

22-MAR-11

Project Manager: **Gil Van Deventer**  
**Trident Environmental**  
P.O. Box 7624  
Midland, TX 79708

Reference: XENCO Report No: **410342**  
**Pride Energy Company**  
Project Address: T19S-R37E, Sec 36, Unit Letter O ~ Lea County, NM

**Gil Van Deventer:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 410342. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 410342 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,



**Brent Barron, II**  
Odessa Laboratory Manager

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**Sample Cross Reference 410342**



**Trident Environmental, Midland, TX**  
Pride Energy Company

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	Mar-17-11 09:30		410342-001
MW-2	W	Mar-17-11 10:40		410342-002
MW-3	W	Mar-17-11 10:00		410342-003
MW-4	W	Mar-17-11 10:20		410342-004



# CASE NARRATIVE

*Client Name: Trident Environmental*

*Project Name: Pride Energy Company*



*Project ID: State 36 #2*  
*Work Order Number: 410342*

*Report Date: 22-MAR-11*  
*Date Received: 03/18/2011*

**Sample receipt non conformances and Comments:**

*None*

**Sample receipt Non Conformances and Comments per Sample:**

*None*



# Certificate of Analysis Summary 410342

Trident Environmental, Midland, TX

Project Name: Pride Energy Company



Project Id: State 36 #2

Contact: Gil Van Deventer

Date Received in Lab: Fri Mar-18-11 01:17 pm

Report Date: 22-MAR-11

Project Manager: Brent Barron, II

Project Location: T19S-R37E, Sec 36, Unit Letter O ~ Lea C

Analysis Requested	Lab Id:	410342-001	410342-002	410342-003	410342-004
	Field Id:	MW-1	MW-2	MW-3	MW-4
	Depth:				
	Matrix:	WATER	WATER	WATER	WATER
	Sampled:	Mar-17-11 09:30	Mar-17-11 10:40	Mar-17-11 10:00	Mar-17-11 10:20
Anions by E300	Extracted:				
	Analyzed:	Mar-21-11 10:52	Mar-21-11 10:52	Mar-21-11 10:52	Mar-21-11 10:52
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Chloride		512 10.0	765 12.5	434 10.0	778 12.5
TDS by SM2540C	Extracted:				
	Analyzed:	Mar-21-11 15:00	Mar-21-11 15:00	Mar-21-11 15:00	Mar-21-11 15:00
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Total dissolved solids		1840 5.00	2560 5.00	1420 5.00	2530 5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II  
Odessa Laboratory Manager



# Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- \* Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



# BS / BSD Recoveries



Project Name: Pride Energy Company

Work Order #: 410342

Project ID: State 36 #2

Analyst: LATCOR

Date Prepared: 03/21/2011

Date Analyzed: 03/21/2011

Lab Batch ID: 848684

Sample: 848684-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

## BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	9.91	99	10.0	9.94	99	0	80-120	20	

Analyst: WRU

Date Prepared: 03/21/2011

Date Analyzed: 03/21/2011

Lab Batch ID: 848683

Sample: 848683-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

## BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Total dissolved solids	<5.00	1000	958	96	1000	914	91	5	80-120	30	

Relative Percent Difference RPD = 200\*((C-F)/(C+F))

Blank Spike Recovery [D] = 100\*(C)/[B]

Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Pride Energy Company

Work Order #: 410342

Lab Batch #: 848684

Date Analyzed: 03/21/2011

Date Prepared: 03/21/2011

Project ID: State 36 #2

Analyst: LATCOR

QC- Sample ID: 410286-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	531	200	749	109	80-120	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B

Relative Percent Difference [E] = 200\*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



# Sample Duplicate Recovery



**Project Name: Pride Energy Company**

**Work Order #: 410342**

**Lab Batch #: 848684**

**Project ID: State 36 #2**

**Date Analyzed: 03/21/2011 10:52**

**Date Prepared: 03/21/2011**

**Analyst: LATCOR**

**QC- Sample ID: 410286-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

### SAMPLE / SAMPLE DUPLICATE RECOVERY

<b>Anions by E300</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Chloride	531	517	3	20	

**Lab Batch #: 848683**

**Date Analyzed: 03/21/2011 15:00**

**Date Prepared: 03/21/2011**

**Analyst: WRU**

**QC- Sample ID: 410286-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

### SAMPLE / SAMPLE DUPLICATE RECOVERY

<b>TDS by SM2540C</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Total dissolved solids	1490	1520	2	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit





**XENCO Laboratories**  
 Atlanta, Boca Raton, Corpus Christi, Dallas  
 Houston, Miami, Odessa, Philadelphia  
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist  
 Document No.: SYS-SRC  
 Revision/Date: No. 01, 5/27/2010  
 Effective Date: 6/1/2010 Page 1 of 1

**Prelogin / Nonconformance Report - Sample Log-In**

Client: Trident Environmental  
 Date/Time: 3-18-11 1:17  
 Lab ID #: 410342  
 Initials: LM

**Sample Receipt Checklist**

1. Samples on ice?	Esu	<input checked="" type="radio"/> Water	No	
2. Shipping container in good condition?	<input checked="" type="radio"/> Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	<input checked="" type="radio"/> Yes	No	N/A	
4. Chain of Custody present?	<input checked="" type="radio"/> Yes	No		
5. Sample instructions complete on chain of custody?	<input checked="" type="radio"/> Yes	No		
6. Any missing / extra samples?	Yes	<input checked="" type="radio"/> No		
7. Chain of custody signed when relinquished / received?	<input checked="" type="radio"/> Yes	No		
8. Chain of custody agrees with sample labels?	<input checked="" type="radio"/> Yes	No		
9. Container labels legible and intact?	<input checked="" type="radio"/> Yes	No		
10. Sample matrix / properties agree with chain of custody?	<input checked="" type="radio"/> Yes	No		
11. Samples in proper container / bottle?	<input checked="" type="radio"/> Yes	No		
12. Samples properly preserved?	<input checked="" type="radio"/> Yes	No	N/A	
13. Sample container intact?	<input checked="" type="radio"/> Yes	No		
14. Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	No		
15. All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	No		
16. Subcontract of sample(s)?	Yes	<input checked="" type="radio"/> No	N/A	
17. VOC sample have zero head space?	Yes	No	<input checked="" type="radio"/> N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 3.6 °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Regarding: \_\_\_\_\_  
 Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.2.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis

# Analytical Report 421885

for  
**Trident Environmental**

**Project Manager: Gil Van Deventer**

**Pride Energy Company**

**State 36 # 2**

**06-JUL-11**

Collected By: Client



**Celebrating 20 Years of commitment to excellence in Environmental Testing Services**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)  
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

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Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



06-JUL-11

Project Manager: **Gil Van Deventer**  
**Trident Environmental**  
P.O. Box 7624  
Midland, TX 79708

Reference: XENCO Report No: **421885**  
**Pride Energy Company**  
Project Address: T19S-R37E, Sec 36, Unit Letter O-Lea County, NM

**Gil Van Deventer:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 421885. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 421885 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron, II**  
Odessa Laboratory Manager

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*Certified and approved by numerous States and Agencies.*

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**Sample Cross Reference 421885**

**Trident Environmental, Midland, TX**  
**Pride Energy Company**

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	Jun-30-11 14:40		421885-001
MW-2	W	Jun-30-11 15:20		421885-002
MW-3	W	Jun-30-11 10:30		421885-003
MW-4	W	Jun-30-11 14:00		421885-004



## CASE NARRATIVE

*Client Name: Trident Environmental*

*Project Name: Pride Energy Company*



*Project ID: State 36 # 2*  
*Work Order Number: 421885*

*Report Date: 06-JUL-11*  
*Date Received: 07/01/2011*

**Sample receipt non conformances and comments:**

*None*

**Sample receipt non conformances and comments per sample:**

*None*



# Certificate of Analysis Summary 421885

Trident Environmental, Midland, TX

Project Name: Pride Energy Company



Project Id: State 36 # 2

Contact: Gil Van Deventer

Project Location: T19S-R37E, Sec 36, Unit Letter O-Lea Co

Date Received in Lab: Fri Jul-01-11 05:05 pm

Report Date: 06-JUL-11

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	421885-001	421885-002	421885-003	421885-004
	<i>Field Id:</i>	MW-1	MW-2	MW-3	MW-4
	<i>Depth:</i>				
	<i>Matrix:</i>	WATER	WATER	WATER	WATER
	<i>Sampled:</i>	Jun-30-11 14:40	Jun-30-11 15:20	Jun-30-11 10:30	Jun-30-11 14:00
<b>Anions by E300</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-05-11 19:10	Jul-05-11 19:10	Jul-05-11 19:10	Jul-05-11 19:10
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Chloride		447 100	788 250	426 100	758 250
<b>TDS by SM2540C</b>	<i>Extracted:</i>				
	<i>Analyzed:</i>	Jul-05-11 15:30	Jul-05-11 15:30	Jul-05-11 15:30	Jul-05-11 15:30
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Total dissolved solids		1410 5.00	1180 5.00	1310 5.00	1910 5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II  
Odessa Laboratory Manager

## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
  - B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
  - D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
  - E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
  - F** RPD exceeded lab control limits.
  - J** The target analyte was positively identified below the MQL and above the SQL.
  - U** Analyte was not detected.
  - L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
  - H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
  - K** Sample analyzed outside of recommended hold time.
  - JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- LOD** Limit of Detection
- LOQ** Limit of Quantitation
- DL** Method Detection Limit
- NC** Non-Calculable
- + Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
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842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116
3725 E. Atlanta Ave, Phoenix, AZ 85040	(602) 437-0330	



# BS / BSD Recoveries



**Project Name: Pride Energy Company**

**Work Order #: 421885**

**Analyst: BRB**

**Lab Batch ID: 862643**

**Units: mg/L**

**Sample: 862643-1-BKS**

**Date Prepared: 07/05/2011**

**Batch #: 1**

**Project ID: State 36 # 2**

**Date Analyzed: 07/05/2011**

**Matrix: Water**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
Chloride	<0.500	10.0	9.33	93	10.0	9.09	91	3	80-120	20	

**Analyst: WRU**

**Date Prepared: 07/05/2011**

**Date Analyzed: 07/05/2011**

**Lab Batch ID: 862675**

**Sample: 862675-1-BKS**

**Batch #: 1**

**Matrix: Water**

**Units: mg/L**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
<b>Analytes</b>											
Total dissolved solids	<5.00	1000	930	93	1000	944	94	1	80-120	30	

Relative Percent Difference RPD = 200\*(C-F)/(C+F)

Blank Spike Recovery [D] = 100\*(C)/[B]

Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries

Project Name: Pride Energy Company

Work Order #: 421885

Lab Batch #: 862643

Date Analyzed: 07/05/2011

Date Prepared: 07/05/2011

Project ID: State 36 # 2

Analyst: BRB

QC- Sample ID: 421830-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	46.9	500	507	92	80-120	

Matrix Spike Percent Recovery [D] = 100\*(C-A)/B

Relative Percent Difference [E] = 200\*(C-A)/(C+B)

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



# Sample Duplicate Recovery



**Project Name: Pride Energy Company**

**Work Order #: 421885**

**Lab Batch #: 862643**

**Project ID: State 36 # 2**

**Date Analyzed: 07/05/2011 19:10**

**Date Prepared: 07/05/2011**

**Analyst: BRB**

**QC- Sample ID: 421830-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

## SAMPLE / SAMPLE DUPLICATE RECOVERY

<b>Anions by E300</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Chloride	46.9	42.1	11	20	

**Lab Batch #: 862675**

**Date Analyzed: 07/05/2011 15:30**

**Date Prepared: 07/05/2011**

**Analyst: WRU**

**QC- Sample ID: 421830-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

## SAMPLE / SAMPLE DUPLICATE RECOVERY

<b>TDS by SM2540C</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Total dissolved solids	2260	2200	3	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
 All Results are based on MDL and validated for QC purposes.  
 BRL - Below Reporting Limit





**XENCO Laboratories**  
 Atlanta, Boca Raton, Corpus Christi, Dallas  
 Houston, Miami, Odessa, Philadelphia  
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist  
 Document No.: SYS-SRC  
 Revision/Date: No. 01, 5/27/2010  
 Effective Date: 6/1/2010 Page 1 of 1

**Prelogin / Nonconformance Report - Sample Log-In**

Client: Pride Energy  
 Date/Time: 7-1-11 5:09  
 Lab ID #: 421885  
 Initials: DM

**Sample Receipt Checklist**

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	<u>No</u>	N/A	
17. VOC sample have zero head space?	Yes	No	<u>N/A</u>	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs .4 °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.6.8.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis

# Analytical Report 428777

for  
**Trident Environmental**

**Project Manager: Gil Van Deventer**

**Pride Energy Company**

**State 36 # 2**

**10-OCT-11**

Collected By: Client



**Celebrating 20 Years of commitment to excellence in Environmental Testing Services**



**12600 West I-20 East Odessa, Texas 79765**

**Xenco-Houston (EPA Lab code: TX00122):**

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

**Xenco-Atlanta (EPA Lab Code: GA00046):**

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AAL11), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

**Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)**

**Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)**

**Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)**

**Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)**

**Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)**

**Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)**

**Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)**



10-OCT-11

Project Manager: **Gil Van Deventer**  
**Trident Environmental**  
P.O. Box 7624  
Midland, TX 79708

Reference: XENCO Report No: **428777**  
**Pride Energy Company**  
Project Address: T19S-R37E, Sec. 36, Unit Letter O ~ Lea County, NM

**Gil Van Deventer:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 428777. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 428777 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron II**  
Odessa Laboratory Manager

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**Sample Cross Reference 428777**



**Trident Environmental, Midland, TX**  
**Pride Energy Company**

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	09-29-11 14:00		428777-001
MW-2	W	09-29-11 14:30		428777-002
MW-3	W	09-29-11 15:20		428777-003
MW-4	W	09-29-11 16:00		428777-004



## CASE NARRATIVE

*Client Name: Trident Environmental*

*Project Name: Pride Energy Company*



*Project ID: State 36 # 2*  
*Work Order Number: 428777*

*Report Date: 10-OCT-11*  
*Date Received: 09/30/2011*

**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non nonformances and comments:**

*Batch: LBA-871721 Anions by E300*  
*E300MI*

*Batch 871721, Chloride recovered below QC limits in the Matrix Spike.*

*Samples affected are: 428777-003, -004, -001, -002.*

*The Laboratory Control Sample for Chloride is within laboratory Control Limits*

*Batch: LBA-871899 TDS by SM2540C*

*The RPD between the Sample and Sample Duplicate for this batch was above the QC limits.*

*This is most likely due to sample non-homogeneity (excess particles.)*



# Certificate of Analysis Summary 428777

## Trident Environmental, Midland, TX

### Project Name: Pride Energy Company



Project Id: State 36 # 2

Contact: Gil Van Deventer

Project Location: T19S-R37E, Sec. 36, Unit Letter O ~ Lea (

Date Received in Lab: Fri Sep-30-11 03:01 pm

Report Date: 10-OCT-11

Project Manager: Brent Barron II

<i>Analysis Requested</i>	<i>Lab Id:</i>	428777-001	428777-002	428777-003	428777-004		
	<i>Field Id:</i>	MW-1	MW-2	MW-3	MW-4		
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER		
	<i>Sampled:</i>	Sep-29-11 14:00	Sep-29-11 14:30	Sep-29-11 15:20	Sep-29-11 16:00		
<b>Anions by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Oct-05-11 23:20	Oct-05-11 23:20	Oct-05-11 23:20	Oct-05-11 23:20		
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Chloride		453 25.0	616 25.0	439 25.0	662 25.0		
<b>TDS by SM2540C</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Oct-05-11 13:30	Oct-05-11 13:30	Oct-05-11 13:30	Oct-05-11 13:30		
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL		
Total dissolved solids		770 5.00	1380 5.00	890 5.00	1180 5.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron II  
Odessa Laboratory Manager



# Flagging Criteria

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

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 2505 North Falkenburg Rd, Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 12600 West I-20 East, Odessa, TX 79765  
 6017 Financial Drive, Norcross, GA 30071  
 3725 E. Atlanta Ave, Phoenix, AZ 85040

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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



# BS / BSD Recoveries



**Project Name: Pride Energy Company**

**Work Order #: 428777**

**Project ID: State 36 # 2**

**Analyst: BRB**

**Date Prepared: 10/05/2011**

**Date Analyzed: 10/05/2011**

**Lab Batch ID: 871721**

**Sample: 871721-1-BKS**

**Batch #: 1**

**Matrix: Water**

**Units: mg/L**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>Anions by E300</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Chloride	<0.500	10.0	10.3	103	10.0	10.4	104	1	80-120	20	

**Analyst: BRB**

**Date Prepared: 10/05/2011**

**Date Analyzed: 10/05/2011**

**Lab Batch ID: 871899**

**Sample: 871899-1-BKS**

**Batch #: 1**

**Matrix: Water**

**Units: mg/L**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>TDS by SM2540C</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Total dissolved solids	<5.00	1000	886	89	1000	854	85	4	80-120	30	

Relative Percent Difference RPD =  $200 * (C-F) / (C+F)$   
Blank Spike Recovery [D] =  $100 * (C) / [B]$   
Blank Spike Duplicate Recovery [G] =  $100 * (F) / [E]$   
All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries

Project Name: Pride Energy Company

Work Order #: 428777

Lab Batch #: 871721

Date Analyzed: 10/05/2011

Date Prepared: 10/05/2011

Project ID: State 36 # 2

Analyst: BRB

QC- Sample ID: 428960-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

### MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
<b>Analytes</b>						
Chloride	40.8	100	120	79	80-120	X

Lab Batch #: 871721

Date Analyzed: 10/05/2011

Date Prepared: 10/05/2011

Analyst: BRB

QC- Sample ID: 428986-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

### MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
<b>Analytes</b>						
Chloride	206	100	407	201	80-120	X

Matrix Spike Percent Recovery [D] =  $100 \cdot (C-A) / B$   
 Relative Percent Difference [E] =  $200 \cdot (C-A) / (C+B)$   
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



# Sample Duplicate Recovery



**Project Name: Pride Energy Company**

**Work Order #: 428777**

**Lab Batch #: 871721**

**Project ID: State 36 # 2**

**Date Analyzed: 10/05/2011 23:20**

**Date Prepared: 10/05/2011**

**Analyst: BRB**

**QC- Sample ID: 428986-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

### SAMPLE / SAMPLE DUPLICATE RECOVERY

Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	206	206	0	20	

**Lab Batch #: 871899**

**Date Analyzed: 10/05/2011 13:30**

**Date Prepared: 10/05/2011**

**Analyst: BRB**

**QC- Sample ID: 428777-001 D**

**Batch #: 1**

**Matrix: Water**

**Reporting Units: mg/L**

### SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	770	1240	47	30	F

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
 All Results are based on MDL and validated for QC purposes.  
 BRL - Below Reporting Limit

12600 West I-20 East - Odessa TX 797658 Tel (432) 563-1800 Fax (432) 563-1713

# Xenco Laboratories

Company Name: Trident Environmental  
 Project Manager: Gil Van Deventer / Trident Environmental  
 Address: PO Box 12177, Odessa TX 79768  
 Phone #: (432) 638-8740  
 Project #: State 36 #2  
 Project Location: T19S-R37E, Sec 36, Unit Letter O ~ Lea County, NM

BILL TO Company: PO#  
 Pride Energy Company / Matt Pride  
 Address: PO Box 710950, Tulsa, OK 74170-1950  
 Phone#: (918) 524-9200 Fax#: (918) 524-9292  
 Project Name: Pride Energy Company  
 Sampler Signature:

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**  
 LAB Order ID # 428777

**ANALYSIS REQUEST**  
 (Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021 B	
TPH 418.1/TX1005 / TX1005 Extended (C35)	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
Moisture Content	
Cations (Ca, Mg, Na, K)	
Anions (Cl, SO <sub>4</sub> , CO <sub>3</sub> , HCO <sub>3</sub> )	
Total Dissolved Solids (160.1 or SM2540C)	
Chloride / Cl <sup>-</sup> (SM4500 B or 300.1)	
Turn Around Time ~ 24 Hours	

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX				PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCL (BTEX only)	HNO <sub>3</sub>	NaHSO <sub>4</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE	NONE
01	MW-1	G	1	X							X	9/29/11	1400
02	MW-2	G	1	X							X	9/29/11	1430
03	MW-3	G	1	X							X	9/29/11	1520
04	MW-4	G	1	X							X	9/29/11	1600

Relinquished by: Gil Van Deventer Date: 9/29/11 Time: 3:41 PM  
 Received by: Andrea Elam Date: 9/30/11 Time: 15:01

Delivered By: (Circle One) UPS Sample Condition: 7.0 Cool  Intact   
 No  Yes

CHECKED BY: (Initials)

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

REMARKS:  
 Email Results to: gil@trident-environmental.com mattp@pride-energy.com  
 Scan! poly



**XENCO Laboratories**  
 Atlanta, Boca Raton, Corpus Christi, Dallas  
 Houston, Miami, Odessa, Philadelphia  
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist  
 Document No.: SYS-SRC  
 Revision/Date: No. 01, 5/27/2010  
 Effective Date: 6/1/2010 Page 1 of 1

**Prelogin / Nonconformance Report - Sample Log-In**

Client: Trident Env.  
 Date/Time: 9:30 11 15:01  
 Lab ID #: 428777  
 Initials: AZ

**Sample Receipt Checklist**

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	<u>N/A</u>	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	Yes	No	<u>N/A</u>	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs 7.0 °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis

# Analytical Report 433881

for

## Trident Environmental

Project Manager: Gil Van Deventer

Pride Energy Company

State 36 # 2

29-DEC-11

Collected By: Client



**Celebrating 20 Years of commitment to excellence in Environmental Testing Services**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code: AZ000989): Arizona (AZ0758)



29-DEC-11

Project Manager: **Gil Van Deventer**  
**Trident Environmental**  
P.O. Box 7624  
Midland, TX 79708

Reference: XENCO Report No: **433881**  
**Pride Energy Company**  
Project Address: T19S-R37E, Sec 36, Unit Letter O ~ Lea County, NM

**Gil Van Deventer:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 433881. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 433881 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron II**

Odessa Laboratory Manager

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**Sample Cross Reference 433881**

**Trident Environmental, Midland, TX**  
Pride Energy Company

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW-1	W	12-20-11 12:30		433881-001
MW-2	W	12-20-11 15:30		433881-002
MW-3	W	12-20-11 13:30		433881-003
MW-4	W	12-20-11 14:30		433881-004



## CASE NARRATIVE

*Client Name: Trident Environmental*

*Project Name: Pride Energy Company*



*Project ID: State 36 # 2*  
*Work Order Number: 433881*

*Report Date: 29-DEC-11*  
*Date Received: 12/21/2011*

**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-877749 Anions by E300  
E300MI

Batch 877749, Chloride recovered above QC limits in the Matrix Spike.

Samples affected are: 433881-002, -001, -003, -004.

The Laboratory Control Sample for Chloride is within laboratory Control Limits



# Certificate of Analy: ummary 433881

## Trident Environmental, Midland, TX

### Project Name: Pride Energy Company



Project Id: State 36 # 2

Contact: Gil Van Deventer

Project Location: T19S-R37E, Sec 36, Unit Letter O ~ Lea C

Date Received in Lab: Wed Dec-21-11 04:20 pm

Report Date: 29-DEC-11

Project Manager: Brent Barron II

<i>Analysis Requested</i>	<i>Lab Id:</i>	433881-001	433881-002	433881-003	433881-004	
	<i>Field Id:</i>	MW-1	MW-2	MW-3	MW-4	
	<i>Depth:</i>					
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	
	<i>Sampled:</i>	Dec-20-11 12:30	Dec-20-11 15:30	Dec-20-11 13:30	Dec-20-11 14:30	
<b>Anions by E300</b>	<i>Extracted:</i>					
	<i>Analyzed:</i>	Dec-22-11 14:29	Dec-22-11 14:29	Dec-22-11 14:29	Dec-22-11 14:29	
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Chloride		527 25.0	579 25.0	494 25.0	623 25.0	
<b>TDS by SM2540C SUB: E871002</b>	<i>Extracted:</i>					
	<i>Analyzed:</i>	Dec-27-11 07:45	Dec-27-11 07:45	Dec-27-11 07:45	Dec-27-11 07:45	
	<i>Units/RL:</i>	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Total dissolved solids		3810 5.00	2100 5.00	1220 5.00	1600 5.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron II  
Odessa Laboratory Manager

**Flagging Criteria**

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample..

\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.      ^ NELAC or State program does not offer Accreditation at this time.

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 2505 North Falkenburg Rd, Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 12600 West I-20 East, Odessa, TX 79765  
 6017 Financial Drive, Norcross, GA 30071  
 3725 E. Atlanta Ave, Phoenix, AZ 85040

Phone	Fax
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(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



# BS / BSD Recoveries



**Project Name: Pride Energy Company**

**Work Order #: 433881**

**Project ID: State 36 # 2**

**Analyst: BRB**

**Date Prepared: 12/22/2011**

**Date Analyzed: 12/22/2011**

**Lab Batch ID: 877749**

**Sample: 877749-1-BKS**

**Batch #: 1**

**Matrix: Water**

**Units: mg/L**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Chloride		<0.500	10.0	10.8	108	10.0	10.8	108	0	80-120	20	

**Analyst: JSO**

**Date Prepared: 12/27/2011**

**Date Analyzed: 12/27/2011**

**Lab Batch ID: 877942**

**Sample: 877942-1-BKS**

**Batch #: 1**

**Matrix: Water**

**Units: mg/L**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C		Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes												
Total dissolved solids		<5.00	1000	958	96	1000	995	100	4	80-120	30	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries

Project Name: Pride Energy Company

Work Order #: 433881

Lab Batch #: 877749

Date Analyzed: 12/22/2011

Date Prepared: 12/22/2011

Project ID: State 36 # 2

Analyst: BRB

QC- Sample ID: 433820-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	217	100	343	126	80-120	X

Lab Batch #: 877749

Date Analyzed: 12/22/2011

Date Prepared: 12/22/2011

Analyst: BRB

QC- Sample ID: 433881-002 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	579	500	1100	104	80-120	

Matrix Spike Percent Recovery [D] =  $100 \cdot (C-A)/B$   
 Relative Percent Difference [E] =  $200 \cdot (C-A)/(C+B)$   
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

**Sample Duplicate Recovery**



**Project Name: Pride Energy Company**

Work Order #: 433881

Lab Batch #: 877749  
 Date Analyzed: 12/22/2011 14:29  
 QC- Sample ID: 433820-001 D  
 Reporting Units: mg/L

Date Prepared: 12/22/2011  
 Batch #: 1

Project ID: State 36 # 2  
 Analyst: BRB  
 Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	217	217	0	20	

Lab Batch #: 877942  
 Date Analyzed: 12/27/2011 07:45  
 QC- Sample ID: 433710-033 D  
 Reporting Units: mg/L

Date Prepared: 12/27/2011  
 Batch #: 1

Analyst: JSO  
 Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	117000	111000	5	30	

Lab Batch #: 877942  
 Date Analyzed: 12/27/2011 07:45  
 QC- Sample ID: 433923-001 D  
 Reporting Units: mg/L

Date Prepared: 12/27/2011  
 Batch #: 1

Analyst: JSO  
 Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	3520	4750	30	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
 All Results are based on MDL and validated for QC purposes.  
 BRL - Below Reporting Limit





**XENCO Laboratories**  
 Atlanta, Boca Raton, Corpus Christi, Dallas  
 Houston, Miami, Odessa, Philadelphia  
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist  
 Document No.: SYS-SRC  
 Revision/Date: No. 01, 5/27/2010  
 Effective Date: 6/1/2010 Page 1 of 1

**Prelogin / Nonconformance Report - Sample Log-In**

Client: Trident Env.  
 Date/Time: 12.21.11 16:20  
 Lab ID #: 433881  
 Initials: RE

**Sample Receipt Checklist**

1. Samples on ice?	Blue	Water	No	
2. Shipping container in good condition?	<input checked="" type="radio"/> Yes	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	<input checked="" type="radio"/> Yes	No	N/A	
4. Chain of Custody present?	<input checked="" type="radio"/> Yes	No		
5. Sample instructions complete on chain of custody?	<input checked="" type="radio"/> Yes	No		
6. Any missing / extra samples?	Yes	<input checked="" type="radio"/> No		
7. Chain of custody signed when relinquished / received?	<input checked="" type="radio"/> Yes	No		
8. Chain of custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	No		
9. Container labels legible and intact?	<input checked="" type="radio"/> Yes	No		
10. Sample matrix / properties agree with chain of custody?	<input checked="" type="radio"/> Yes	No		
11. Samples in proper container / bottle?	<input checked="" type="radio"/> Yes	No		
12. Samples properly preserved?	<input checked="" type="radio"/> Yes	No	N/A	
13. Sample container intact?	<input checked="" type="radio"/> Yes	No		
14. Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	No		
15. All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	No		
16. Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	No	N/A	
17. VOC sample have zero head space?	Yes	No	<input checked="" type="radio"/> N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <input type="radio"/> °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis