USPS Priority Mail® 9405 5118 99562498 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 #15 Site (AP-78) T12S-R34E-Section 2, Unit Letter G, Lea County, New Mexico

Dear Mr. Griswold:

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

Groundwater Sampling Procedures

During each quarterly sampling event the on-site monitoring well (MW-1) was 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 the 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 the monitoring well were transferred into 500 milliliter (ml) plastic containers for laboratory analysis of chloride and sulfate using EPA Method E300 and TDS 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 plan showing the most recent groundwater elevation and the chloride/TDS concentrations in monitoring well MW-1 is shown in Figure 1. Figure 2 is a graph depicting chloride and TDS concentrations and groundwater elevation versus time at monitoring well MW-1.



Table 1
Summary of Groundwater Monitorling Results (MW-1)
South Four Lakes #15 Site (AP-78)

Sample Date	Depth to Groundwater (feet BTOC)	Groundwater Elevation (feet AMSL)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
1/23/2008	29.10	4122.05	3,930						
3/13/2008	26.25	4124.90	4,150		9,820	< 0.001	< 0.001	< 0.001	< 0.003
6/20/2008	26.46	4124.69	6,180		12,500				
9/9/2008	26.55	4124.60	4,850		9,700	< 0.001	< 0.001	< 0.001	< 0.003
12/8/2008	26.63	4124.52	5,300	632	10,400	< 0.001	< 0.001	< 0.001	< 0.003
3/18/2009	26.81	4124.34	5,400	611	11,000	< 0.001	< 0.001	< 0.001	< 0.003
6/17/2009	27.01	4124.14	5,700	568	10,500	< 0.001	< 0.001	< 0.001	< 0.003
9/21/2009	27.00	4124.15	5,700	568	10,000	< 0.001	< 0.001	< 0.001	< 0.003
12/9/2009	26.63	4124.52	5,400	499	11,000	< 0.001	< 0.001	< 0.001	< 0.003
3/24/2010	27.18	4123.97	5,300	844	10,200				
6/15/2010	27.26	4123.89	5,300	742	11,500				
9/13/2010	27.33	4123.82	5,400	528	9,750				
12/13/2010	27.44	4123.71	4,340	536	10,600				
3/17/2011	27.52	4123.63	5,280	790	10,100				
6/29/2011	27.68	4123.47	4,540	1,170	8,430				
9/27/2011	27.70	4123.45	5,090	688	8,400				
12/13/2011	27.79	4123.36	5,570	844	8,780				
3/29/2012	27.86	4123.29	4,950	878	10,900				
6/19/2012	27.95	4123.20	4,520	996	8,640				
9/26/2012	28.07	4123.08	4,590	1,010	8,920				
12/27/2012	28.14	4123.01	4,140	851	8,260				
3/18/2013	28.17	4122.98	4,020	968	7,010				
6/12/2013	28.25	4122.90	3,620	947	6,920				
9/23/2013	28.30	4122.85	2,770	870	6,850				
12/30/2013	28.38	4122.77	3,100	888	6,300				
3/24/2014	28.44	4122.71	2,920	769	5,690				
7/2/2014	27.84	4123.31	2,540	664	5,500				
9/26/2014	27.56	4123.59	2,030	664	7,200				
12/11/2014	27.99	4123.16	3,540	770	7,140				
	W	OCC Standards	250	600	1.000	0.01	0.75	0.75	0.62

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 state plane coordinates surveyed by Basin Surveys, Hobbs, NM.

--- Indicates parameter was not analyzed.

FIGURE 2

Chloride/TDS Concentrations and Groundwater Elevation Versus Time Graph (MW-1)



Groundwater Depth, Elevations, Hydraulic Gradient and Flow Direction

Depth to groundwater at the site is approximately 26 feet (ft) below ground surface. With the exception of two rapid increases of short duration in 2009 and 2014, the water table elevation has been steadily declining about 0.4 ft/year as displayed in Figure 2, which graphs the change in groundwater elevation since 2008 at monitoring well MW-1. Based on data from nearby sites, the prevailing groundwater gradient direction trends towards the southeast with a relatively flat hydraulic gradient of approximately 0.002 ft/ft (Figure 1). 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 remain 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 was discontinued.

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 please 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: Well sampling data form and laboratory analytical reports

WELL SAMPLING DATA FORM

AND

LABORATORY ANALYTICAL REPORTS

WELL SAMPLING DATA FORM (MW-1)

SITE NAME: South Four Lakes #15 (AP-78)

SITE LOCATION: T12S-R34E-Sec 2 Unit Letter G ~ Lea County, NM

SAMPLER: Gil Van Deventer



PURGING METHOD:

SAMPLING METHOD:

METHOD:

Hand Bailed☑Pump, Type: Whaler Model WP-9012 Mega Purger (12-volt submersible pump)Disposable Bailer☑Direct from Discharge Hose□Other:

DISPOSAL METHOD OF PURGE WATER:

- On-site Drum 🗌 Drums
- SWD Disposal Facility

Quarter	Date	Time	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	TDS	PHYSICAL APPEARANCE AND REMARKS
First	03/24/14	13:15	28.44	49.80	21.36	0.16	3.4	20	5.9	19.3	9.61		Cloudy but cleared quickly during purge

	Second	07/02/14	12:00	27.84	49.80	21.96	0.16	3.5	15	4.3	19.4	8.98		Clear
--	--------	----------	-------	-------	-------	-------	------	-----	----	-----	------	------	--	-------

Third 09/26/14 9:45 27.56 49.80 22.24 0.16 3.6 15 4.2 20.3 7.62 Clear

|--|

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 Permian Basin Environmental Laboratory (Midland TX) for chloride, sulfate, and TDS analysis.

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 #15 (AP78) Location: T12S-R34E-Sec 2 Unit Letter G ~ Lea County, NM

Lab Order Number: 4C26012



NELAP/TCEQ # T104704156-13-3

Report Date: 04/09/14

Project: Pride Energy Company Project Number: South Four Lakes #15 (AP78) Project Manager: Matt Pride

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4C26012-01	Water	03/24/14 13:15	03-26-2014 11:55

MW-1 4C26012-01 (Water)

				,					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permia	ın Basin Eı	nvironme	ental Lab, l	L .P.				
General Chemistry Parameters by	EPA / Standard Methods								
Chloride	2920	100	mg/L	200	P4C2703	03/27/14	03/28/14	EPA 300.0	
Total Dissolved Solids	5690	20.0	mg/L	1	P4D0203	03/28/14	04/02/14	EPA 160.1	
Sulfate	769	200	mg/L	200	P4C2703	03/27/14	03/28/14	EPA 300.0	

Project: Pride Energy Company Project Number: South Four Lakes #15 (AP78) Project Manager: Matt Pride

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

					_					
Analyte	Result	Reporting Limit	Unite	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Thatye	Result	Linit	Onits	Level	Result	JULLE	Linits	Ki D	Linin	Notes
Batch P4C2703 - *** DEFAULT PREP ***										
Blank (P4C2703-BLK1)				Prepared: (03/27/14 A	nalyzed: 03	/28/14			
Sulfate	ND	1.00	mg/L							
Chloride	ND	0.500	"							
LCS (P4C2703-BS1)				Prepared: (03/27/14 A	nalyzed: 03	/28/14			
Sulfate	10.6	1.00	mg/L	10.0		106	80-120			
Chloride	10.5	0.500	"	10.0		105	80-120			
LCS Dup (P4C2703-BSD1)				Prepared: (03/27/14 A	nalyzed: 03	/28/14			
Sulfate	10.8	1.00	mg/L	10.0		108	80-120	1.39	20	
Chloride	10.5	0.500	"	10.0		105	80-120	0.00952	20	
Duplicate (P4C2703-DUP1)	Sou	rce: 4C26012-	-01	Prepared: (03/27/14 A	nalyzed: 03	/28/14			
Sulfate	767	200	mg/L		769			0.339	20	
Chloride	2920	100	"		2920			0.164	20	
Matrix Spike (P4C2703-MS1)	Sou	rce: 4C26012-	-01	Prepared: (03/27/14 A	nalyzed: 03	/28/14			
Sulfate	3140	200	mg/L	2500	769	94.8	80-120			
Chloride	5360	100	"	2500	2920	97.8	80-120			
Batch P4D0203 - *** DEFAULT PREP ***										
Blank (P4D0203-BLK1)				Prepared: (03/28/14 A	nalyzed: 04	/02/14			
Total Dissolved Solids	ND	20.0	mg/L							
Duplicate (P4D0203-DUP1)	Sou	rce: 4C26014-	-04	Prepared: (03/28/14 A	nalyzed: 04	/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.

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.

		JAN .								•																·
Delivered By: Sampler -		Relinquished b	Sella-	Relinquisted b									•	-0-	LAB #		T12S-R34	South Fo	(432) 638-	PO Box 1	Address: ()	Project Manager	Company Name: Trident Er			J
(Circle One) UPS - Bus -		ý: Date:	13-126/s	y/ A / Date:										MW	FIELD	Anz	E-Sec 2 Unit L	ur Lakes #15 (-8740	2177, Odessa	eventer / I rider Street, City, Zip)		vironmental		A COLOR K	
Other:		Time: R	11255	Time: R										-		6012	etter G ~ Lea	AP-78)	(TX 79768	nt Environmen					
ample o N ≺	\mathcal{K}_{0}	eceive		eceive										G	(G)rab or (C)omp) —	Coun		413) <i>^</i>	* 				hone	lidlan	ermia 0014 :
o es	Y a	d By:		d by:				-		·				<u> </u>	# CONTAINER	S	ţ, Z	ride	103-9	918)	С Ц		ride	432	d, Te	In Ba
	210	(Labo			-	_		_		_				×	WATER	_	N S	Ene	968	524-	₽ P	A	Ene o	-661	xas	unty
	$ \mathcal{K} $	prator								\neg					AIR			rgy		920	1095	idress	rgy C	418	7970	Roa
	S.	y Staf		•											SLUDGE	- [©]		ŝ		°	ļ,		om 3	4	o	onme d 12
२ ₽	Ľ)∍				_	_		:	_					HCL (BTEX only	<u></u>		Ipan			ulsa,	(pany			13 sntal
HECKI iitials)	ش	D		D			_		1						HNO ₃			Ż			Ŗ		/ At			Lab
ED BY	32-	ite:		ate:						_		_			NaHSO₄						741	(Stree	tenti			5
M	-15	Ţ							_			+	-	×	H ₂ SO ₄					6	70 <u>-</u> 1	ət, City	on: I			
		me:		ime:											NONE	ñ	Ì			18)	950 #	y, Zip))# Matt			
	1/55													3/24/14	DATE	SAMPL				524-9292			Pride			
		· .							1					1315	TIME	ING										
		REM	Fax	Phor	\square						-				MTBE 8021B/60	2						Ţ				
	mail	ARK	Resul	ie Re		-		· .	-+			-+	_		BTEX 8021 B	05 / T	(1005	Extend	ed (C3	35)		-		ΗĂ		. [
	Resu	ŝ	8	sults											PAH 8270C									LAB O	I	
	uits to	S							_	4	_		_		Total Metals Ag A	∖s Ba (As Ba	Cd Cr F	b Se H	lg 601 Ha	0B/20	0.7			Order	I	
	2	ample	Yes	Yes				-				コ			TCLP Volatiles				. <u>.</u>					ID #	ł	8
gil@ matt		es no	×	l‴ X		-				-	- 1	-	-		TCLP Semi Volat	iles							SDEC	B		
tp@		t field	No No	No No							_		-		RCI					. <u>.</u>				A A		<u>.</u>
ent-e		filter	_												GC/MS Vol. 826	0B/624	,									Ą
e-en		ed	Addit		\square			_		_		_			GC/MS Semi. Vo	l. 827()C/625						EST	Ň		Ра(78-0
ergy			ional			\neg			-	-					Cations (Ca, Mg,	Na, K)					-				Je)324
r cor			Fax												Anions (CI, SO4,	CO3, I	HCO3)		······································			1	. 1			14
n al.o			Num			-				_				×	Total Dissolved S	Solids (160.1 0	or SM2	540C)			-				of
E E			ber:		\vdash	+			-	\neg	-	\dashv	\neg	××	Sulfate / SO4 (37	14500 I (5.4)	5 or 30	0.1)				-		ŬĔ		
															Turn Around Tim	e ~ 24	Hours					1				
																								F	age	e 6 of 6

Page	6 of	6

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 #15 (AP-78) Location: T12S-R34E-Sec 2 Unit Letter G ~ Lea County, NM

Lab Order Number: 4G07002



NELAP/TCEQ # T104704156-13-3

Report Date: 07/21/14

Project: Pride Energy Company Project Number: South Four Lakes #15 (AP-78) Project Manager: Gilbert Vandeventer

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4G07002-01	Water	07/02/14 12:00	07-04-2014 13:30

MW-1 4G07002-01 (Water)

			- 01 (
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permia	n Basin Ei	nvironme	ental Lab, I	L .P.				
General Chemistry Parameters by	EPA / Standard Methods								
Chloride	2540	100	mg/L	200	P4G1703	07/14/14	07/17/14	EPA 300.0	
Total Dissolved Solids	5500	20.0	mg/L	1	P4G1509	07/08/14	07/15/14	EPA 160.1	
Sulfate	664	200	mg/L	200	P4G1703	07/14/14	07/17/14	EPA 300.0	

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 P4G1509 - *** DEFAULT PREP ***										
Blank (P4G1509-BLK1)				Prepared &	Analyzed:	07/15/14				
Total Dissolved Solids	ND	20.0	mg/L							
Duplicate (P4G1509-DUP1)	Sou	rce: 4G03014-	-01	Prepared &	Analyzed:	07/15/14				
Total Dissolved Solids	815	20.0	mg/L		815			0.00	20	
Duplicate (P4G1509-DUP2)	Sou	rce: 4G07004-	-04	Prepared &	Analyzed:	07/15/14				
Total Dissolved Solids	1660	20.0	mg/L		1700			2.38	20	
Batch P4G1703 - *** DEFAULT PREP ***										
Blank (P4G1703-BLK1)				Prepared: (07/14/14 A	nalyzed: 07	7/17/14			
Sulfate	ND	1.00	mg/L							
Chloride	ND	0.500	"							
LCS (P4G1703-BS1)				Prepared: (07/14/14 A	nalyzed: 07	7/17/14			
Sulfate	9.65	1.00	mg/L	10.0		96.5	80-120			
Chloride	9.85	0.500	"	10.0		98.5	80-120			
LCS Dup (P4G1703-BSD1)				Prepared: (07/14/14 A	nalyzed: 07	7/17/14			
Sulfate	9.50	1.00	mg/L	10.0		95.0	80-120	1.65	20	
Chloride	9.36	0.500	"	10.0		93.6	80-120	5.06	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:

Bun Barron

Date: 7/21/2014

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.

Delivered By: (Circle One) Sampler - UPS - Bus -		Relinquished by: Date:	11 PM 111	Relinguished by: // / Date:)				4607002-01 MW	LAB USE ONLY	LAB # FIELD C		Project Location: T12S-R34E-Sec 2 Unit L	South Four Lakes #15 ((432) 638-8740	Address: (Street, City, Zip) PO Box 12177, Odessa 1	Gil Van Deventer / Trider	Trident Environmental Project Manager:	Company Name:			the second second
- Other: No	(I)	: Time! Received	14/300	, Time: Received					 1 G	(G)rab or (C	c)omp		etter G ~ Lea Count	(AP-78) Pi	(413) 4(TX 79768 (9	nt Environmental P(Pr	BIL		Phone:	
S No No	e f l	By: (Laboratory Staff)		by:					1 X	# CONTAI WATER SOIL AIR SLUDGE		MATRIX	/, NM	ide Energy Compa)3-9968	18) 524-9200	D Box 710950, Tulsa	ide Energy Compan Address:	L TO Company:		432-00 -4 104	IEXAS / JIUU
CHECKED BY: (Initials)	1 H/L	Date: Time:		Date: Time:					X	HCL (BTE) HNO ₃ NaHSO ₄ H ₂ SO ₄ ICE NONE	K only)	PRESERVATIVE METHOD	GUL LS	ny		(918) 5;	a, OK 74170-1950	y / Attention: Matt P (Street, City, Zip)	PO#			
	14 1330		~	-					 7/2/14 1200	DATE TIME		SAMPLING				24-9292		ride				
0 5	Email Results to:	REMARKS: Sample:	ax Results Yes	hone Results Yes						TPH 418.1 PAH 82700 Total Metals TCLP Metal TCLP Volat	TE/002 T B /TX1009 C s Ag As Is Ag As iles Volatile	5 / TX Ba C s Ba C	1005 E d Cr P Cd Cr F	Extend b Se I Pb Se	ded (C3 Hg 60 ² Hg	35) 10B/200	0.7	(Circle or S	ANAI YS	LAB Order ID #		CHAIN-OF-CIISTC
ill@trident-environm nattp@pride-energy		s not field filtered	X No Additional I	X No						TCLP Pesti RCI GC/MS Vol GC/MS Ser Moisture Co Cations (Ca	cides . 8260E ni. Vol. ontent a, Mg, N	3/624 8270 la, K)	C/625				······································	pecify Method No.)	SIS REQUEST	ан 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		INV AND ANAI YS
.com			Fax Number:						x x x	Anions (Cl, Total Dissol Chloride / C Sulfate / SC Turn Aroun	SO4, C lved So I ⁻ (SM4 D4 (375. d Time	:O3, ⊢ lids (1 500 B .4) ~ 24 I	60.1 o or 300	r SM2 0.1)	2540C)			-				SREDHEST

.

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 #15 (AP-78) Location: T12S-R34E-Sec 2 Unit Letter G ~ Lea County, NM

Lab Order Number: 4J02015



NELAP/TCEQ # T104704156-13-3

Report Date: 10/10/14

Project: Pride Energy Company Project Number: South Four Lakes #15 (AP-78) Project Manager: Gilbert Vandeventer

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4J02015-01	Water	09/26/14 09:45	10-02-2014 14:17

MW-1 4J02015-01 (Water)

			(,					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permia	n Basin Ei	nvironme	ental Lab, I	P .				
General Chemistry Parameters by	EPA / Standard Methods								
Chloride	2030	50.0	mg/L	100	P4J1002	10/10/14	10/10/14	EPA 300.0	
Total Dissolved Solids	7200	20.0	mg/L	1	P4J0702	10/03/14	10/03/14	EPA 160.1	
Sulfate	664	100	mg/L	100	P4J1002	10/10/14	10/10/14	EPA 300.0	

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 P4J0702 - *** DEFAULT PREP ***										
Blank (P4J0702-BLK1)				Prepared &	Analyzed:	10/03/14				
Total Dissolved Solids	ND	20.0	mg/L							
Duplicate (P4J0702-DUP1)	Sou	rce: 4H28001-	-01	Prepared &	Analyzed:	10/03/14				
Total Dissolved Solids	400	20.0	mg/L		372			7.25	20	
Duplicate (P4J0702-DUP2)	Sou	rce: 4H28002-	·01	Prepared &	Analyzed:	10/03/14				
Total Dissolved Solids	164	20.0	mg/L		160			2.47	20	
Batch P4J1002 - *** DEFAULT PREP ***										
Blank (P4J1002-BLK1)				Prepared &	Analyzed:	10/10/14				
Sulfate	ND	1.00	mg/L							
Chloride	ND	0.500	"							
LCS (P4J1002-BS1)				Prepared &	Analyzed:	10/10/14				
Sulfate	10.4	1.00	mg/L	10.0		104	80-120			
Chloride	9.93	0.500	"	10.0		99.3	80-120			
LCS Dup (P4J1002-BSD1)				Prepared &	Analyzed:	10/10/14				
Sulfate	10.3	1.00	mg/L	10.0		103	80-120	0.986	20	
Chloride	9.89	0.500	"	10.0		98.9	80-120	0.383	20	
Duplicate (P4J1002-DUP1)	Sou	rce: 4J02015-0	01	Prepared &	Analyzed:	10/10/14				
Sulfate	662	100	mg/L		664			0.256	20	
Chloride	2040	50.0	"		2030			0.373	20	
Matrix Spike (P4J1002-MS1)	Sou	rce: 4J02015-0	01	Prepared &	Analyzed:	10/10/14				
Sulfate	1740	100	mg/L	1000	664	108	80-120			
Chloride	3110	50.0	"	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:

Bun Barron

Date: 10/10/2014

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.

Delivered By: Sampler		Relinquished by	YUNG 6	Relinguished by									10-	LAB USE ONLY	LAB #		Project Location: T12S-R34E	South Fou	(432) 638-8	Address: (St PO Box 12	Gil Van De	Trident Env Project Manager:				
(Circle One) UPS - Bus - Other:		Date: Time:	St 19414 12:50	1 Date: Time:									I-WM		FIELD CODE	4502015	-Sec 2 Unit Letter G ~ Le	r Lakes #15 (AP-78)	;740	^{reet, City, Zip)} 177, Odessa TX 79768	venter / Trident Environm	ironmental			AL NUMBER	
Sample		Receiv		Receiv									G	(G)rab or ((C)omp		à Cou		(413)	n ŧ	ental			Phon	10014	Perm
Conditio Yes No	١.J.	ed BY		ed by:									ł	# CONTA	AINERS	; 	nty, N	Pride	403-9	(918)	РОВ	Pride		no, le e:430	L S. Co	ian Ba
	\mathcal{A}	Hab				_	-						Х	WATER			۳ ۳		8966	524	ox 7	П П П	ן וויי	-AAS	ounty	sin E
	4	orato				-	+	+-	┝		$\left - \right $					MAT	ample	ergy		hone#	1095	ompar ddress		1-415	Roa	nvir
		N Sta												SLUDGE		RX	r Signa	Con		Ŏ.	, , , –			Å å	d 12	onmo
÷Ω	Ŋ	Æ			\square		_									[ature:	npar		[ulsa	pany	1		13	ental
HECK nitials)	\mathcal{N}	D	N	0	$\left \right $	-	+	╈	┼╌		$\left\{ -\right\}$							<u>ک</u> ر			Ŗ	I A	ĺ			Lab
ED B	`~	ate:)ate:										NaHSO₄		MET					741	ttent ^{(Stre}				, LP
	0/2	_				_		+-					5			ġ ₹					70-					
<i>.</i>	14	ime:		fime:									$\hat{}$	NONE		m				∍x# 918)	1950	v. zi⊳	2			1
	:21												9/26/14	DATE		SAMPL				524-9292		Pride				
	16												0945	TIME		NG										
		REN	Fax	Pho										MTBE 80	21B/602			<u> </u>						-		
	Emai	IARK	Resu	ne Re		_		_						BTEX 802	21 B		1005 5	Vtond	ad (C2	<u> </u>				СНА		
	Res	ŝ	lts	sults	\vdash	-	+	+			┝─┦	-+		PAH 8270			1000 £	.xuend		J)			LAB -	Z		
	ults							1						Total Meta	lls Ag As	BaC	d Cr P	b Se F	lg 601	0B/200	.7	<u>ି</u> ବ୍	Orde	ž		
	<u>6</u>	Samp	Ύ	¥	┝┼	\rightarrow		+-	+		┝─┥		_	TCLP Met	als Ag A atiles	s Ba C	d Cr F	'b Se I	⊣g	•··· •_		cle o	т D	SUS	ဂ	
gil(oles r	š	, Х				1					·	TCLP Sen	ni Volatil	es						- Spe	#	Į Į	ဝင္ပ	
@tri		lot fie	×	×		_								TCLP Pes	ticides							bcify I		× ×	No.	
dent Dpri		eld fil	6	ō	\vdash		┽	-			$\left - \right $			RCI GC/MS Vo	8260	B/624					{	Meth	6	ŽD	 ⊳	
de-e		fered	Ad	{	┝╼╉			+	+		┝─┦	-		GC/MS Se	emi. Vol.	8270	C/625					DES N No	Ľ	AN	P78	P
viror			dition					T						Moisture C	Content							ë H	12	ALY	-091	age
nme gy.c		1	าal Fa		\square		-				⊢∣			Cations (C	a, Mg, N	la, K)	<u></u>				$ \rightarrow $		5	SIS	4	
intal Xom			3X N		┝╌┤	-+		+			┝─┤		×	Total Diss	olved Sc	lids (1	60.1 o	r SM2	540C)							
.cor			Imbe					1					×	Chloride /	CI ⁻ (SM4	500 B	or 300).1)	-,					Ö		뚝
а на			ň		P		-	F			\square	-	×	Sulfate / S	04 (375 ad Time	.4) ~ 24 L	loure				\neg			EST		
i				<u>ا</u>	يلبي				<u>. </u>		<u> </u>				iu iiiie	6-7 F	10013	_					I			

Page 6 of 6

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 #15 (AP-78) Location: T12S-R34E-Sec 2 Unit Letter G ~ Lea County, NM

Lab Order Number: 4L15008



NELAP/TCEQ # T104704156-13-3

Report Date: 12/24/14

Project: Pride Energy Company Project Number: South Four Lakes #15 (AP-78) Project Manager: Gilbert Vandeventer

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4L15008-01	Water	12/11/14 12:15	12-15-2014 15:40

MW-1 4L15008-01 (Water)

)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Permia	n Basin Ei	nvironme	ental Lab, I	L.P.				
General Chemistry Parameters b	y EPA / Standard Methods								
Chloride	3540	100	mg/L	200	P4L1807	12/16/14	12/18/14	EPA 300.0	
Total Dissolved Solids	7140	20.0	mg/L	1	P4L1902	12/19/14	12/19/14	EPA 160.1	
Sulfate	770	200	mg/L	200	P4L1807	12/16/14	12/18/14	EPA 300.0	

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 P4L1807 - *** DEFAULT PREP ***										
Blank (P4L1807-BLK1)				Prepared:	12/16/14 A	nalyzed: 12	2/18/14			
Sulfate	ND	1.00	mg/L							
Chloride	ND	0.500	"							
LCS (P4L1807-BS1)				Prepared:	12/16/14 A	nalyzed: 12	2/18/14			
Sulfate	20.2	1.00	mg/L	20.0		101	80-120			
Chloride	20.5	0.500	"	20.0		102	80-120			
LCS Dup (P4L1807-BSD1)				Prepared:	12/16/14 A	nalyzed: 12	2/18/14			
Sulfate	20.2	1.00	mg/L	20.0		101	80-120	0.0742	20	
Chloride	20.4	0.500	"	20.0		102	80-120	0.597	20	
Duplicate (P4L1807-DUP1)	Sou	rce: 4L15007-	01	Prepared:						
Sulfate	1730	200	mg/L		1730			0.0348	20	
Chloride	2650	100	"		2640			0.514	20	
Matrix Spike (P4L1807-MS1)	Source: 4L15007-01 Prepared: 12/16/14 Analyzed: 12/1									
Sulfate	3470	200	mg/L	2000	1730	87.4	80-120			
Chloride	4380	100	"	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 &	د 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

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.

																· ·										
Sampler -	Delivered By:		Relinquished by	12 Ma	Relinguished by							A 0 /	1 th 02	101	101	LAB #		T12S-R34	South For	(432) 638-1	PO Box 12	Gil Van De	Project Manager:	Company Name: Trident En		ונש
UPS - Bus - Other:	(Circle One)		Date: Time:	US 1415/14 1540	: MI "Date: Time:								2		MW-1	FIELD CODE		E-Sec 2 Unit Letter G ∼ L	ır Lakes #15 (AP-78)	8740	التحد, تابع, حام) 177, Odessa TX 79768	venter / Trident Environr		vironmental		REF AR
	Sample	X	Recei		Recei										G	(G)rab or (C)omp		ea Co		гах <i>#</i> . (413		nental			Pho	Pern 1001
No Yes	e Con	Ŋ			ved b						-	1			_	# CONTAINERS		unty) 40	(9	PO		Pri	ne: 4	nian 4 S.
	dition		Ň		ý:			_									, T	Ţ	ide I	3-99	8]	Bo		L TO	+32-	Bas Cou
Z ₹	1	M.	Labo					\neg	-	- 3 - 1		-			<u>⊢</u>	SOIL				896	524 I	× Z	A	iner Q	661	in E
	1	Ń	rator			-	-	-								AIR	AT	linipie	rgy		920	1095	dress	ndur bubba	-418	nvir Roa
	<u> </u>		v Sta													SLUDGE	∉	- U	ŝ		° .	, , ,		Com	4 ³ 4	onm d 12
-	_		(ff)		۰.														npa		1	uls:		ipan		enta 13
Initial	CHEO	-						-							-	HCL (BTEX only)	Ţ		Ŋ			,, 0		1 / y		
N N	ΧED	2	Date		Date	\neg		\neg				1.1				NaHSO₄		į					S)	Atte	7	Ţ, F
NYN -	BY:	5					-†	\neg								H ₂ SO ₄	IZŠ					17	treet,	ntio	L	Ū
		À	,Tim		Ħ										×	ICE					(91 ax	-19	City,	n: M	-	
· · · · ·			le:		le:			_								NONE	Ľ	-			8) 7	ីទី	Zip)	att I	0j	
		1540		4 											2-11-14	DATE	SAMPL				24-9292			Pride	800	
					-						-				12:15	TIME	ING							2	1.1	
			REN	Fax	Pho											MTBE 8021B/602	2								-	
		Ema	IARI	Res	ne R			\dashv							_	BTEX 8021 B									E E	
		il Re	(S:	ults	esult		\neg	-	-						┣	ТРН 418.1/ТХ100 РАН 82700	J5 / Τ)	x1005	Extend	ed (C3	15)		4		Ă,	
		sults			S			\neg				-			┢──	Total Metals Ag As	s Ba C	Cd Cr F	b Se H	lg 601	0B/20	0.7		() h	or P	
		ġ	San		N -				-					<u> </u>		TCLP Metals Ag A	\s Ba	Cd Cr	Pb Se	Hg						
4	g		ples	ſes	(es		-		-				_			TCLP Volatiles	les								STC	Ö
hattp	<u>@</u>		not	×	×											TCLP Pesticides				<u> </u>				SIS	DY DY	ž
<u> </u>	ride		field	No	No											RCI									A	
ride	nt-e		filten				_							·	L	GC/MS Vol. 8260	B/624	<u> </u>					- 2			AP7
en P	îvu;		å	Addit			_						<u> </u>		_	GC/MS Semi. Vol.	. 827(0C/625							NA	Ρa(
erg	uuo.			ional		\vdash	-								┢	Cations (Ca. Mo. N	Na. K))				<u></u>	┥	-		Je 214
y .co	nen			Fax		\vdash					\vdash	-	-		+	Anions (Cl, SO4, C	CO3, 1	HCO3)					-		Sis	·
Ĕ	tal.			Nur								-			×	Total Dissolved So	olids (160.1	or SM2	540C)]			0
1	moc	N		nber		\square					Ē				×	Chloride / Cl (SM4	4500	B or 30	0.1)							⁻
	-			. '		\vdash	-				-		⊢	<u> </u>	l×	Sultate / SO4 (375 Turn Around Time	5.4) e ~ 24	Hours					-		EST	
<u>.</u>											<u> </u>	i	I			L. street is owned in the						_				

15. 1 N C