

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
geology, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

ALL API NO. 30-025-38789
5. Indicate Type of Lease X STATE FEE
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name PARKER ENERGY SWD
8. Well Number 5
9. OGRID Number 245739
10. Pool name or Wildcat 96121 / SWD; SAN ANDRES

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well Gas Well Other SWD

2. Name of Operator
PARKER ENERGY SUPPORT SERVICES, INC

3. Address of Operator
P.O. BOX 1957, EUNICE NEW MEXICO

4. Well Location

Unit Letter A : 1200 feet from the NORTH line and 990 feet from the EAST line

Section 24 Township 21S Range 36E NMPM County LEA COUNTY, NEW MEXICO

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3528'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK
TEMPORARILY ABANDON
PULL OR ALTER CASING
DOWNHOLE COMMINGLE
CLOSED-LOOP SYSTEM
OTHER: CONVERT WELL TO SWD

SUBSEQUENT REPORT OF:

REMEDIAL WORK
COMMENCE DRILLING OPNS.
CASING/CEMENT JOB

OTHER:

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

THIS WORK WAS COMPLETED TO BE IN COMPLIANCE WITH ADMINISTRATIVE ORDER # SWD - 1500

- OCT /21/2014 – OCT / 25 / 2014. DRLG CMT PLUG #1 F/ SURFACE TO 221'. PLUG #2 F/ 1156' – 1435'. PLUG #3 F/ 2319' – 2810'. PLUG #4 F/ 3405' – 3696'.
- OCT / 25 / 2014. DRLG UP CIBP AT 3701'.
- OCT / 27 / 2014 – OCT / 31 / 2014. ESTABLISH INJ RATE IN EXISTING PERFS F/ 3736' – 3852'. SQ PERFS W/ 270 SX CMT. THEN DRLG OUT CMT AND TEST TO 500#.
- OCT / 31 / 2014 - NOV / 1 / 2014. DRLG CMT RTR AT 3870' THEN DRLG CMT SQ ON PERFS F/ 3877' – 4037'.
- NOV / 1 / 2014. DRLG CMT IN SHOE JTS F/ 4208' - 4329' (END OF CSG).
- NOV / 3 / 2014 – NOV / 5 / 2014. DRLG NEW FORMATION F/ 4329' – 4375' (FINAL TD)
- NOV / 5 / 2014. NOTIFIED OCD ON (ANSWERING MACHINE ~~OF STEP RATE TEST~~).
- NOV / 6 / 2014. PERFORM STEP RATE TEST: USING FRESH WATER PMP INTO FORMATION AT 815# / 4375'. THEN INJ ¼ BPM AT 600#. (PLS SEE ATTACHED PRESSURE CHART AND WORK SHEET).
- NOV / 7 / 2014. ACIDIZE OPEN HOLE W/ 3800 GALS 15% HCL NEFE, USING ROCK SALT AS DIVERTER.
- NOV / 13 / 2014 AFTER FINDING SEEPAGE LEAK IN PERFS. SQ 46 SX CMT OVER PERF INTERVAL 4054' – 3655'.
- NOV / 15 / 2014. DRLG CMT F/ 3655' – 4054'. TEST CSG 400# (GOOD).

JAN 08 2015

12. NOV / 17 / 2014. NOTIFY OCT (AXEY BROWN) OF SWAB TEST ON W
13. NOV / 18 / 2014 – NOV / 19 / 2014. SWAB TEST WELL (2 DAYS) RECOVERED 457 BBLS OF IRON LADEN, H2S LADEN WATER. 8.7 PPG. TDS = 17,400.
14. NOV / 20 / 2014. NOTIFIED OCD OF CARDINAL LAB TEST ON WATER (BILL SONAMAKER)
15. NOV / 20 / 2014. MU RU WEATHERFORD WL AND LOG OPEN HOLE W/ ARRAY INDUCTION FOR RESISTIVITY, COMPENSATED PHOTO DENSITY, COMPENSATED NEUTRON, GR. PLS SEE ATTACHED LOGS. (LOGGERS TD = 4672')
16. NOV / 21 / 2014. NOTIFIED OCD (BILL SONAMAKER) OF (MIT) NOV 24TH.
17. NOV / 21 / 2014. RAN 2.875" (EUE 6.5# J-55 IPC INJECTION STRING) AS FOLLOWS: NICKEL COATED ARROW/SET PACKER + 131 EA. JTS OF TBG + 2 EA. 10' PUP JTS. (PACKER SET AT 4303') (END OF CSG AT 4329'). OPEN HOLE (INJECTION INTERVAL) F/ 4329' – 4675'. ANNULUS FULL OF PACKER FLUID.
18. NOV / 24 / 2014. PERFORM (MIT) W/ OCD REP (MARK WHITAKER) ON LOCATION. 350# LOST 10# TO 340# IN 30 MIN. RIG DOWN AND RELEASE ALL EQUIPMENT. W/ON STATE LAND OFFICE TO GIVE FINAL RELEASE TO START INJECTION OF DISPOSAL WATER.

Denied - need to provide proper stop rate information

Spud Date: Rig Release Date: RIG RELEASED NOV / 24 / 2014
 I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Fred M Ortiz TITLE Well Svr DATE 12-8-2014

Type or print name FRED M ORTIZ E-mail address: fredmortiz@valornet.com PHONE: 575-390-3243
For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
 Conditions of Approval (if any):

BS 1/7/2014

L

PRINTED IN U.S.A.

NOV 000

DEC 7 8 2014

RECEIVED

END
-340 PSI

11-24-2014

DATE
BR 2221

PKR 4303'

Bottom of csq. 4329'

PARKER Energy Support Services INC

Parker Energy SWD #5

30-025-38789

UL-A, SEC 24, T215, R36E

Initial MIT

Alach White

-OCD-

Fudmills

PARKER

BS 1/7/2015

NOON

MIDNIGHT

Parker Energy SWD #5

final INJ string run 11-21-2014

(MIT) witnessed by OGD (Mark Whitaker) 11-24-2014

HOBBS OGD

DEC 08 2014

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24#
8 5/8"
1304'

27 1/2' J-55 EUE BRN

1505' IPC TBC

2ea. 10' pup JIS

13lea. Reg. L9TH TBC

Sq Perfs

3736'

3852'

3877'

4037'

ARROW SET NICKEL COATED
INJ PACKER at 4303'

5 1/2"
15.5#
4309'

4 3/4"
OPEN HOLE

4675'

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

HOBBS OCD

DEC 08 2014

Jami Bailey, Division Director
Oil Conservation Division



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Administrative Order SWD-1500
September 26, 2014

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Pursuant to the provisions of Division Rule 19.15.26.8B, NMAC, Parker Energy Support Services, Incorporated (the "operator" or "Parker Energy") seeks an administrative order to re-enter and recompleat its Harry Leonard NCT J Well No. 5 with a location of 1200 feet from the North line and 990 feet from the East line, Unit letter A of Section 24, Township 21 South, Range 36 East, NMPM, Eddy County, New Mexico, for commercial disposal purposes of produced water.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of Division Rule 19.15.26.8B. NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified.

Three protests involving this application were received from notified affected persons within the prescribed waiting period. The applicant, Parker Energy, set an application for Division hearing and was assigned Case No. 15180. Prior to appearance before Division, Parker Energy entered into an agreement with the three protestants that addressed issues regarding the application for injection authority. Therefore, the provisions outlined in the settlement agreement (correspondence of Montgomery and Andrews Law Firm to Division Santa Fe office dated August 6, 2014) are incorporated into this administrative order.

The applicant has presented satisfactory evidence that all requirements prescribed in Rule 19.15.26.8 NMAC have been met and the operator is in compliance with Rule 19.15.5.9 NMAC.

IT IS THEREFORE ORDERED THAT:

Parker Energy Support Services, Incorporated (OGRID 245739), is hereby authorized to utilize its Harry Leonard NCT J Well No. 5 (API 30-025-38789) with a location of 1200 feet from the North line and 990 feet from the East line, Unit letter A of Section 24, Township 21 South, Range 36 East, NMPM, Eddy County, for commercial disposal of oil field produced water (UIC Class II only) in the San Andres formation through perforations from 4200 feet to 4320 feet and open hole from 4329 feet to 4675 feet (Provision 1 of settlement agreement). Injection will occur through internally-coated, 2 7/8-inch or smaller tubing and a packer set within 100 feet of the top perforation.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes the well construction proposed and described in the application as modified by the settlement agreement.

→ The operator shall complete a geophysical log suite for the open hole portion of the approved injection interval. The suite shall include, at a minimum, logs to determine resistivity and porosity. The operator shall supply Division's District II office, Santa Fe Bureau office and the New Mexico State Land office with a copy of the logs prior to commencing disposal into this well (Provision 2 of settlement agreement).

→ The operator shall conduct a Step-Rate Test or equivalent pressure test of the approved injection interval to determine the fracture parting pressure. This test shall be conducted in accordance with Division Rule 19.15.26.11C. The operator shall supply Division's District II office, Santa Fe Bureau office and the New Mexico State Land office with a copy of the test results prior to commencing disposal into this well (Provision 3 of settlement agreement). I

→ The operator shall conduct a swab or production test of the approved injection interval for hydrocarbon potential and obtain a water sample for analysis of hydrocarbon content as well as general water chemistry (including major cations, major anions, and Total Dissolved Solids (TDS)). The Division's District II office shall be noticed prior to this test and given the opportunity to witness the test. The operator shall supply the results of the water sample to Division's District II office, Santa Fe Bureau office and the New Mexico State Land office prior to commencing injection. If the analysis of the sample is found to contain a TDS concentration of 10000 milligrams per liter or less, the injection authority under this Order shall be suspended ipso facto (Provision 4 of settlement agreement).

The operator shall run an initial injection survey (tracer/temperature or equivalent) of the entire injection interval within one (1) year after commencing disposal into this well. A copy of the survey shall be submitted to both the Division's District II office and Santa Fe Bureau office.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 840 psi**. In

addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

The operator shall notify the supervisor of the Division's District II office of the date and time of the installation of disposal equipment and of any MIT so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's District II office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

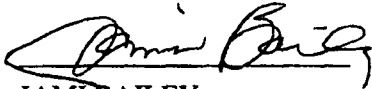
The Division may revoke this injection permit after notice and hearing if the operator is in violation of Rule 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two (2) years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

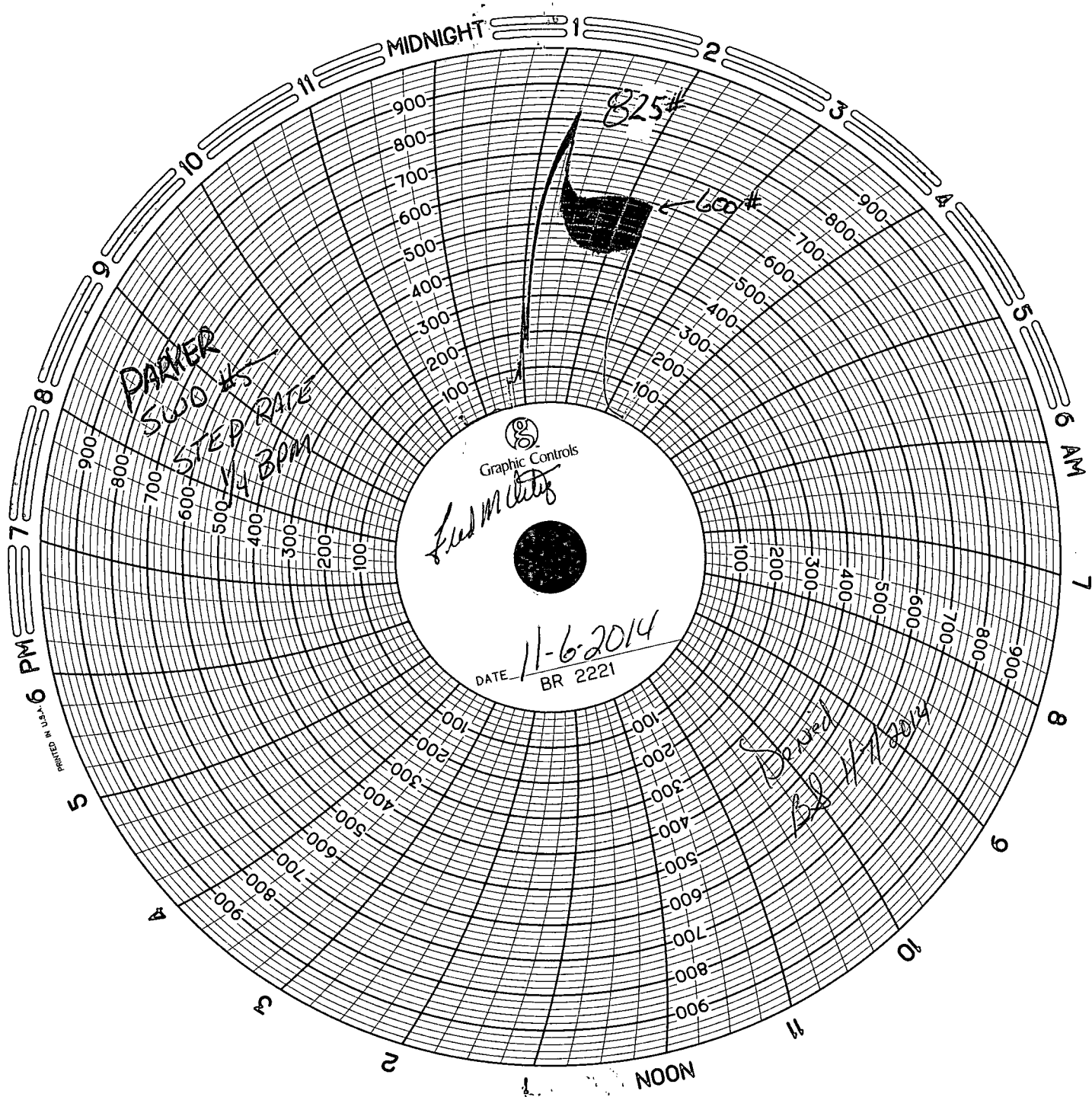
Administrative Order SWD-1500
Parker Energy Support Services, Inc.
September 26, 2014
Page 4 of 4



JAMI BAILEY
Director

JB/prg

cc: Oil Conservation Division – Artesia District Office
State Land Office – Oil, Gas and Minerals Division



STEP RATE TEST NOV 6TH 2014.

INTERVAL CONSISTS OF 4.75" OPEN HOLE F/ 4329' – 4675'.

FLD USED = FRESH WATER 8.34 PPG.

DATA ON PRESSURE RECORDING CHART ATTACHED.

SURFACE PRESSURE TO INJECT FLD = 825#

$8.34 \text{ PPG} \times .052 \times 4675 \text{ FEET} = 2027\#$ HYDROSTATIC PRESSURE.

$2027\# \text{ HYDROSTATIC PRESSURE} + 825 \text{ PMP PSI} = 2852 \text{ PSI}$ FRAC PRESSURE.



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

December 04, 2014

FRED M ORTIZ

PARKER ENERGY

P. O. BOX 1957

EUNICE, NM 88231

HOBBS OCD

DEC 08 2014

RECEIVED

RE: PARKER SWD 5

Enclosed are the results of analyses for samples received by the laboratory on 11/20/14 10:08.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

PARKER ENERGY
P. O. BOX 1957
EUNICE NM, 88231

Project: PARKER SWD 5
Project Number: NONE GIVEN
Project Manager: FRED M ORTIZ
Fax To: (575) 394-0443

Reported:
04-Dec-14 17:11

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PARKER ENERGY SWD #5	H403565-01	Wastewater	19-Nov-14 17:00	20-Nov-14 10:08

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PARKER ENERGY
P. O. BOX 1957
EUNICE NM, 88231

Project: PARKER SWD 5
Project Number: NONE GIVEN
Project Manager: FRED M ORTIZ
Fax To: (575) 394-0443

Reported:
04-Dec-14 17:11

PARKER ENERGY SWD #5 H403565-01 (Wastewater)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories

Inorganic Compounds

Alkalinity, Bicarbonate	1510		5.00	mg/L	1	4090813	AP	20-Nov-14	310.1	
Alkalinity, Carbonate	ND		0.00	mg/L	1	4090813	AP	20-Nov-14	310.1	
Chloride*	10900		4.00	mg/L	1	4111707	AP	20-Nov-14	4500-Cl-B	
Conductivity*	23700		1.00	uS/cm	1	4112407	AP	24-Nov-14	120.1	
pH*	6.55		0.100	pH Units	1	4112408	AP	24-Nov-14	150.1	
Sulfate*	465		83.3	mg/L	8.33	4111708	AP	20-Nov-14	375.4	
TDS*	17400		5.00	mg/L	1	4111806	AP	21-Nov-14	160.1	
Alkalinity, Total*	1240		4.00	mg/L	1	4090813	AP	20-Nov-14	310.1	

Volatile Organic Compounds by EPA Method 8021

Benzene*	ND		0.500	mg/L	500	4112601	CK	01-Dec-14	8021B	
Toluene*	3.40		0.500	mg/L	500	4112601	CK	01-Dec-14	8021B	
Ethylbenzene*	ND		0.500	mg/L	500	4112601	CK	01-Dec-14	8021B	
Total Xylenes*	ND		1.50	mg/L	500	4112601	CK	01-Dec-14	8021B	
Total BTEX	4.71		3.00	mg/L	500	4112601	CK	01-Dec-14	8021B	

Surrogate: 4-Bromofluorobenzene (PID) 92.3 % 66.2-142 4112601 CK 01-Dec-14 8021B

Petroleum Hydrocarbons by GC FID

GRO C6-C10	8.38		1.00	mg/L	0.1	4112504	ms	26-Nov-14	8015B	
DRO >C10-C28	1.36		1.00	mg/L	0.1	4112504	ms	26-Nov-14	8015B	
EXT DRO >C28-C35	ND		1.00	mg/L	0.1	4112504	ms	26-Nov-14	8015B	

Surrogate: 1-Chlorooctane 64.8 % 36.1-161 4112504 ms 26-Nov-14 8015B

Surrogate: 1-Chlorooctadecane 81.3 % 36-171 4112504 ms 26-Nov-14 8015B

Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Calcium*	1890		0.200	mg/L	10	B411225	JGS	02-Dec-14	EPA200.7	
Magnesium*	574		1.00	mg/L	10	B411225	JGS	02-Dec-14	EPA200.7	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARKER ENERGY
P. O. BOX 1957
EUNICE NM, 88231

Project: PARKER SWD 5
Project Number: NONE GIVEN
Project Manager: FRED M ORTIZ
Fax To: (575) 394-0443

Reported:
04-Dec-14 17:11

**PARKER ENERGY SWD #5
H403565-01 (Wastewater)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Green Analytical Laboratories

Total Recoverable Metals by ICP (E200.7)

Potassium*	232	10.0	mg/L	10	B411225	JGS	02-Dec-14	EPA200.7
Sodium*	4350	2.50	mg/L	10	B411225	JGS	02-Dec-14	EPA200.7

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 PARKER ENERGY
 P. O. BOX 1957
 EUNICE NM, 88231

 Project: PARKER SWD 5
 Project Number: NONE GIVEN
 Project Manager: FRED M ORTIZ
 Fax To: (575) 394-0443

 Reported:
 04-Dec-14 17:11

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4090813 - General Prep - Wet Chem
Blank (4090813-BLK1)

Prepared & Analyzed: 08-Sep-14

Alkalinity, Carbonate	ND	0.00	mg/L							
Alkalinity, Bicarbonate	ND	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							

LCS (4090813-BS1)

Prepared & Analyzed: 08-Sep-14

Alkalinity, Carbonate	ND	0.00	mg/L				80-120			
Alkalinity, Bicarbonate	126	5.00	mg/L				80-120			
Alkalinity, Total	104	4.00	mg/L	100		104	80-120			

LCS Dup (4090813-BSD1)

Prepared & Analyzed: 08-Sep-14

Alkalinity, Carbonate	ND	0.00	mg/L				80-120		20	
Alkalinity, Bicarbonate	126	5.00	mg/L				80-120	0.00	20	
Alkalinity, Total	104	4.00	mg/L	100		104	80-120	0.00	20	

Batch 4111707 - General Prep - Wet Chem
Blank (4111707-BLK1)

Prepared & Analyzed: 17-Nov-14

Chloride	ND	4.00	mg/L							
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LCS (4111707-BS1)

Prepared & Analyzed: 17-Nov-14

Chloride	108	4.00	mg/L	100		108	80-120			
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LCS Dup (4111707-BSD1)

Prepared & Analyzed: 17-Nov-14

Chloride	104	4.00	mg/L	100		104	80-120	3.77	20	
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Batch 4111708 - General Prep - Wet Chem
Blank (4111708-BLK1)

Prepared & Analyzed: 20-Nov-14

Sulfate	ND	10.0	mg/L							
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:PARKER ENERGY
P. O. BOX 1957
EUNICE NM, 88231Project: PARKER SWD 5
Project Number: NONE GIVEN
Project Manager: FRED M ORTIZ
Fax To: (575) 394-0443Reported:
04-Dec-14 17:11**Inorganic Compounds - Quality Control****Cardinal Laboratories**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111708 - General Prep - Wet Chem										
LCS (4111708-BS1)				Prepared & Analyzed: 20-Nov-14						
Sulfate	16.0	10.0	mg/L	20.0		80.1	80-120			
LCS Dup (4111708-BSD1)				Prepared & Analyzed: 20-Nov-14						
Sulfate	18.5	10.0	mg/L	20.0		92.4	80-120	14.2	20	
Batch 4111806 - Filtration										
Blank (4111806-BLK1)				Prepared: 17-Nov-14 Analyzed: 19-Nov-14						
TDS	ND	5.00	mg/L							
LCS (4111806-BS1)				Prepared: 17-Nov-14 Analyzed: 19-Nov-14						
TDS	470	5.00	mg/L	527		89.2	80-120			
Duplicate (4111806-DUP1)				Source: H403512-01 Prepared: 17-Nov-14 Analyzed: 19-Nov-14						
TDS	2730	5.00	mg/L		2760			1.17	20	
Batch 4112407 - General Prep - Wet Chem										
LCS (4112407-BS1)				Prepared & Analyzed: 24-Nov-14						
Conductivity	514		uS/cm	500		103	80-120			
Duplicate (4112407-DUP1)				Source: H403565-01 Prepared & Analyzed: 24-Nov-14						
Conductivity	23500	1.00	uS/cm		23700			1.06	20	
Batch 4112408 - NO PREP										
LCS (4112408-BS1)				Prepared & Analyzed: 24-Nov-14						
pH	7.09		pH Units	7.00		101	90-110			

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

PARKER ENERGY
P. O. BOX 1957
EUNICE NM, 88231

Project: PARKER SWD 5
Project Number: NONE GIVEN
Project Manager: FRED M ORTIZ
Fax To: (575) 394-0443

Reported:
04-Dec-14 17:11

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4112408 - NO PREP

Duplicate (4112408-DUP1)

Source: H403565-01

Prepared & Analyzed: 24-Nov-14

pH	6.57	0.100	pH Units	6.55	0.305	20
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 PARKER ENERGY
 P. O. BOX 1957
 EUNICE NM, 88231

 Project: PARKER SWD 5
 Project Number: NONE GIVEN
 Project Manager: FRED M ORTIZ
 Fax To: (575) 394-0443

 Reported:
 04-Dec-14 17:11

Volatile Organic Compounds by EPA Method 8021 - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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Batch 4112601 - Volatiles
Blank (4112601-BLK1)

Prepared & Analyzed: 26-Nov-14

Benzene	ND	0.001	mg/L						
Toluene	ND	0.001	mg/L						
Ethylbenzene	ND	0.001	mg/L						
Total Xylenes	ND	0.003	mg/L						
Total BTEX	ND	0.006	mg/L						
Surrogate: 4-Bromofluorobenzene (PID)	0.0456		mg/L	0.0500		91.2	66.2-142		

LCS (4112601-BS1)

Prepared & Analyzed: 26-Nov-14

Benzene	0.019	0.001	mg/L	0.0200		95.5	82.6-128		
Toluene	0.019	0.001	mg/L	0.0200		96.3	84.2-128		
Ethylbenzene	0.019	0.001	mg/L	0.0200		93.6	80.2-131		
Total Xylenes	0.057	0.003	mg/L	0.0600		95.8	81.8-128		
Surrogate: 4-Bromofluorobenzene (PID)	0.0459		mg/L	0.0500		91.8	66.2-142		

LCS Dup (4112601-BSD1)

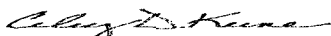
Prepared & Analyzed: 26-Nov-14

Benzene	0.019	0.001	mg/L	0.0200		93.3	82.6-128	2.38	18.6
Toluene	0.019	0.001	mg/L	0.0200		93.5	84.2-128	2.93	12.3
Ethylbenzene	0.018	0.001	mg/L	0.0200		90.7	80.2-131	3.14	12.6
Total Xylenes	0.056	0.003	mg/L	0.0600		93.1	81.8-128	2.78	12.8
Surrogate: 4-Bromofluorobenzene (PID)	0.0456		mg/L	0.0500		91.1	66.2-142		

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PARKER ENERGY P. O. BOX 1957 EUNICE NM, 88231	Project: PARKER SWD 5 Project Number: NONE GIVEN Project Manager: FRED M ORTIZ Fax To: (575) 394-0443	Reported: 04-Dec-14 17:11
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Petroleum Hydrocarbons by GC FID - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4112504 - General Prep - Organics
Blank (4112504-BLK1)

Prepared: 25-Nov-14 Analyzed: 26-Nov-14

GRO C6-C10	ND	1.00	mg/L							
DRO >C10-C28	ND	1.00	mg/L							
EXT DRO >C28-C35	ND	1.00	mg/L							
Surrogate: 1-Chlorooctane	3.33		mg/L	5.00		66.7	36.1-161			
Surrogate: 1-Chlorooctadecane	4.13		mg/L	5.00		82.6	36-171			

LCS (4112504-BS1)

Prepared: 25-Nov-14 Analyzed: 26-Nov-14

GRO C6-C10	40.7	1.00	mg/L	50.0		81.4	75.5-112			
DRO >C10-C28	50.7	1.00	mg/L	50.0		101	74.9-129			
EXT DRO >C28-C35	ND	1.00	mg/L	0.00			0-0			
Surrogate: 1-Chlorooctane	4.54		mg/L	5.00		90.8	36.1-161			
Surrogate: 1-Chlorooctadecane	4.42		mg/L	5.00		88.3	36-171			

LCS Dup (4112504-BSD1)

Prepared: 25-Nov-14 Analyzed: 26-Nov-14

GRO C6-C10	39.6	1.00	mg/L	50.0		79.3	75.5-112	2.68	17.3	
DRO >C10-C28	49.8	1.00	mg/L	50.0		99.6	74.9-129	1.93	22.6	
EXT DRO >C28-C35	ND	1.00	mg/L	0.00			0-0		0	
Surrogate: 1-Chlorooctane	4.18		mg/L	5.00		83.6	36.1-161			
Surrogate: 1-Chlorooctadecane	4.29		mg/L	5.00		85.9	36-171			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 PARKER ENERGY
 P. O. BOX 1957
 EUNICE NM, 88231

 Project: PARKER SWD 5
 Project Number: NONE GIVEN
 Project Manager: FRED M ORTIZ
 Fax To: (575) 394-0443

 Reported:
 04-Dec-14 17:11

Total Recoverable Metals by ICP (E200.7) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B411225 - EPA 200.2
Blank (B411225-BLK1)

Prepared: 26-Nov-14 Analyzed: 02-Dec-14

Potassium	ND	1.00	mg/L							
Calcium	ND	0.020	mg/L							
Magnesium	ND	0.100	mg/L							
Sodium	ND	0.250	mg/L							

LCS (B411225-BS1)

Prepared: 26-Nov-14 Analyzed: 02-Dec-14

Magnesium	20.5	0.100	mg/L	20.0		103	85-115			
Potassium	7.92	1.00	mg/L	8.00		99.0	85-115			
Sodium	6.49	0.250	mg/L	6.48		100	85-115			
Calcium	3.90	0.020	mg/L	4.00		97.5	85-115			

LCS Dup (B411225-BSD1)

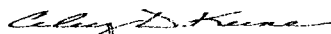
Prepared: 26-Nov-14 Analyzed: 02-Dec-14

Sodium	6.72	0.250	mg/L	6.48		104	85-115	3.47	20	
Potassium	8.48	1.00	mg/L	8.00		106	85-115	6.90	20	
Calcium	4.02	0.020	mg/L	4.00		101	85-115	3.10	20	
Magnesium	21.3	0.100	mg/L	20.0		106	85-115	3.57	20	

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Celey D. Keene, Lab Director/Quality Manager


Notes and Definitions

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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

changes
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