Form-3160-5 (August 2007) OCD-ARTESIA

**UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT FORM APPROVED OMB NO. 1004-0135 Expires: July 31, 2010

	NOTICES AND REPO				. Lease Serial No. NMNM040544	4A
abandoned we	is form for proposals to ll. Use form 3160-3 (AP	D) for such	proposals.	6	. If Indian, Allottee	or Tribe Name
SUBMIT IN TRI	PLICATE - Other instruc	ctions on re	verse side.	, , 7	. If Unit or CA/Agre	eement, Name and/or No.
Type of Well     ☐ Gas Well ☐ Ott	her	<del></del>		8	. Well Name and No TODD 22B FED	
Name of Operator     DEVON ENERGY PRODUCT	Contact:	JEANETTE	BARRON	9	. API Well No.	00.61
3a. Address	TON CO Enviair. Jeanette.ba		o. (include area code	-) 1	30-015-32203- 0. Field and Pool, or	
333 WEST SHERIDAN AVE OKLAHOMA CITY, OK 7310		Ph: 515-7			INGLE WELLS	-DĖLAWĀRE
4. Location of Well (Footage, Sec., T	, R., M., or Survey Description	1)		1	<ol> <li>County or Parish,</li> </ol>	and State
Sec 22 T23S R31E NWNE 51	OFNL 1980FEL				EDDY COUNT	Y, NM
12. CHECK APPI	ROPRIATE BOX(ES) TO	DINDICAT	E NATURE OF	NOTICE, REP	ORT, OR OTHE	R DATA
TYPE OF SUBMISSION			TYPEO	F ACTION		
Notice of Intent	☐ Acidize	☐ De	epen	□ Production	(Start/Resume)	☐ Water Shut-Off
_	☐ Alter Casing	☐ Fra	cture Treat	□ Reclamation	on .	■ Well Integrity
☐ Subsequent Report	□ Casing Repair	□ Ne	w Construction	■ Recomplete	e	☐ Other
☐ Final Abandonment Notice	☐ Change Plans	🗖 Plu	g and Abandon	Temporaril	y Abandon	
	Convert to Injection	🗖 Plu	g Bàck	🛛 Water Disp	osal .	
If the proposal is to deepen direction: Attach the Bond under which the worfollowing completion of the involved testing has been completed. Final Aldetermined that the site is ready for final Number 14-MB-W215 1 Producing from Delaware fo 2 Producing 12 BBL per day	rk will be performed or provide l operations. If the operation re- pandonment Notices shall be file inal inspection.)	the Bond No. c sults in a multip	n file with BLM/BL le completion or rec	<ul> <li>A. Required subsection in a new</li> </ul>	quent reports shall be interval, a Form 316	e filed within 30 days 50-4 shall be filed once
4 Water is stored in 2-500 BBI 5 Water being piped 6 Facility operator Devon Ene 7 a.) Well name Todd Fed 26 8 a.)S-26/T-23s/R-31E b.)S-1	rgy permit #493 b.)Barclay 11	1 Fed 1 perm	it #935	CON	SEE ATTACHED IDITIONS OF AF	FOR PPROVAL
•						oted for tellora NMOCD
			· · · · · · · · · · · · · · · · · · ·	~		
14. I hereby certify that the foregoing is	For DEVON ENERG Electronic Submission #2 For DEVON ENERG mitted to AFMSS for proce	Y PRODUCT	ON CO LP, sent	to the Carlsbad		•
	E BARRON	coming by Emi	l	ADMIN TECH		
					V 1	
Signature (Electronic S	Submission)		Date 07/17/2	014	APP	ROVED
	THIS SPACE FO	R FEDERA	AL OR STATE	OFFICE USE		
Agreemed Du			D TWI-		NOA MOA	1 9 2014
Approved By	d Approval of this resting t		Title		1 × M	Date
Conditions of approval; if any, are attached certify that the applicant holds legal or equ which would entitle the applicant to condu	itable title to those rights in the ct operations thereon.	subject lease	Office	<u> </u>	SUPE	ES A. AMOS RVISOR-E PS
Title 18 U.S.C. Section 1001 and Title 43	U.S.C. Section 1212, make it a	crime for any p	erson knowingly and	l willfully to make t	o any department or	agency of the United

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

### WATER PRODUCTION & DISPOSAL INFORMATION

\*In order to process your disposal request, the following information must be completed in full\*

Site Name: Todd 22-2
Name(s) of formation(s) producing water on the lease:     Delaware
<ul><li>2. Amount of water produced from all formations in barrels per day:</li><li>23 BBLS</li></ul>
3. Attach a current water analysis of produced water from all zones showing at least the total dissolved solids, ph, and the concentrations of chlorides and sulfates.  (One sample will suffice if water is commingled)
4. How water is stored on lease: 2-500 BBL TANKS
5. How water is moved to the disposal facility: Piped
6. Identify the Disposal Facility by:
A. Facility Operators Name: a.)Devon Energy  B. Facility or well name/number: a.) Todd Fed 26 Permit # 493 b.) Barclay 11 Fed 1 Permit # 935
C. Type of Facility or well (WDW) (WIW): a.) WDW b.) WDW
D.A. Location by SW4/NE4 Section 26 Township 23S Range 31E
D.B. Location by SE4/NE4 Section 11 Township 23S Range 31E
7. Attach a copy of the State issued permit for the Disposal Facility.  (Info on the NMOCD Website or on the Artesia LDrive)

Submit to this office, 620 EAST GREENE ST, CARLSBAD NM, 88220, the above required information on a Sundry Notice 3160-5. Submit 1 original and 5 copies, within abatement period. (This form may be used as an attachment to the Sundry Notice.)

# Natural Gas Analysis Report AKM Measurement Services



# Sample Information

	Sample Information	Ì
Sample Name	Todd 22 B Fed #2(13155052)	
Injection Date	2013-11-19 17:20:48	

## **Component Results**

Component Name	Nom%	GPM (Dry) (Gal. / 1000 cu.ft.)	
Nitrogen	4.6291	0.000	
Methane	70.1944	0.000	_
CO2	0.0641	0.000	·
Ethane	12.1731	3.268	
H2S ,	0.0000	0.000	•
Propane	7.7879	2.154	
iso-Butane	0.9547	0.314	
n-Butane	2.3657	0.749	
iso-Pentane	0.5979	· 0.220	
n-Pentane	0.5434	0.198	
Hexanes Plus	0.6897	0.300	
Water	0.0000	0.000	
Total:	100.0000	7.202	·

#### **Results Summary**

Result	Dry	Sat.					
Pressure Base (psia)	14.730		11 11 And 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	***************************************		<del></del>	
Flowing Temperature (Deg. F)	0.0						
Flowing Pressure (psia)	0.0						
Gross Heating Value (BTU / Real cu.ft.)	1318.1	1295.7					
Relative Density (G), Real	0.7997	0,7970	•		•		
Total GPM	7.202	7.180					
Total Molecular Weight	23.076	22.988					



Permian Basin Area Laboratory 2101 S Market St. / Building B Midland, TX. 79711

Report Date

6/25/201

# Complete Water Analysis Report SSP v.8

Customer:	DEVON ENERGY	Sample Point Name	TODD 22B FED 2
District: .	New Mexico	Sample ID:	201401010620
Sales Rep:	Gene Rogers	Sample Date:	6/17/2014
Lease:	TODD 22B FED	Log Out Date:	6/24/2014
Site Type:		Analyst:	Sandra Sanchez
Site Type: Sample Point Descriptio	n:	Analyst:	Sandra Sanchez

#### DEVON ENERGY, TODD 22B FED, TODD 22B FED 2

Field Data		ALLESS MARKET		Analysis	of Sample 1477	MANUAL SE	
		Anions:	mg/Ling	meq/L	Cations:	mg/L	meq/L
Initial Temperature (°F):	250	Chloride (Cl'):	168500.0	4753.2	Sodium (Na*):	79454.4	3457.9
Final Temperature (°F):	81	Sulfate (SO <sub>4</sub> 2.):	340.0	7.1	Potassium (K <sup>+</sup> ):	1741.2	44.5
Initial Pressure (psi):	100	Borate (H <sub>3</sub> BO <sub>3</sub> ):	164.1	2.7	Magnesium (Mg <sup>2+</sup> ):	3665.1	301.7
Final Pressure (psi):	15	Fluoride (F'):	. ND		Calcium (Ca <sup>2+</sup> ):	22633.0	1129.4
	·	Bromide (Br'):	. ND		Strontium (Sr <sup>2+</sup> ):	1258.7	28.7
MENT OF THE PROPERTY OF THE PARTY OF THE PAR	大い海 みをから	Nitrite (NO <sub>2</sub> '):	ND		Barium (Ba <sup>2+</sup> ):	3.5	0.1
pH at time of sampling:	5.4	Nitrate (NO; ):	ND		iron (Fe <sup>2+</sup> ):	46.0	1.6
		Phosphate (PO43-):	ND '		Manganese (Mn2+):	. 5.0	0.2
· .		Sílica (SiO₂):	ND		Lead (Pb <sup>2+</sup> ):	ND	
					Zinc (Zn²*):	0.0	0.0
*Alkalinity by Titration: "mg/	L meg/L	1					•
Bicarbonate (HCO <sub>3</sub> '):	49.0 0.8	i			Afuminum (Af³+):	ND	
Carbonate (CO <sub>3</sub> <sup>2</sup> ):	ND .				Chromium (Cr³+):	ND	
Hydroxide (OH'):	ND				Cobalt (Co <sup>2+</sup> ):	ND	
•		Organic Acids:	mg/L	meq/L	Copper (Cu <sup>2+</sup> ):	ND	
aqueous CO <sub>2</sub> (ppm):	26.0	Formate:	ND		Molybdenum (Mo <sup>2+</sup> ):	. ND	
aqueous H₂S (ppm):	1.7	Acetate:	ND		Nickel (Ni <sup>2+</sup> ):	· ND	
aqueous O₂ (ppb):	ND	Propionate:	ND		Tin (Sn²+):	ND	
		Butyrate:	ND		Titanium (Ti <sup>2+</sup> ):	, ND	
Calculated TDS (mg/L):	277860	Valerate:	ND	٠.	Vanadium (V <sup>2+</sup> ):	, ND	
Density/Specific Gravity (g/cm³):	1.1802				Zirconium (Zr <sup>2+</sup> ):	ND	
Measured Density/Specific Gravity	y 1.1950						
Conductivity (mmhos):	ND				Total Hardness:	73120	N/A
		•					
MCF/D:	No Data						
BOPD:	No Data						
BWPD:	No Data	Anion/Cation Ratio:	•	0.96	ND = I	Not Determined	

Conc	titions	Barite (BaSO₄)		Calcite (CaCO <sub>3</sub> )		Gypsum (CaSO <sub>4</sub> ·2H <sub>2</sub> O)		Anhydrite (CaSO <sub>4</sub>	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
81°F	15 psi	0.55	1.498	0.37	4.899	-0.11	0.000	-0.14	0.000
100°F	,24 psi	0.43	1.318	0.40	5.204	-0.10	0.000	-0.06	0.000
119°F	34 psi	0.32	1.085	0.45	5.672	-0.10	0.000	0.02	8.315
137°F	43 psi	0.21	0.793	0.50	6.127	0.11	0.000	0.10	35.041
156°F	. 53 psi	0.10	0.435	0.54	6.530	-0.12	0.000	. 0.18	57.800
175°F	62 psi	0.00	0.006	0.58	6.878	-0.13	0.000	0.27	77.145
194°F	72 psi	-0.09	0.000	0.62	7.176	-0.14	0.000	0.35	93.391
212°F	81 psi	-0.18	0.000	0.66	7.519	-0.15	0.000	0.44	106.820
231°F	91 psi	-0.27	. 0.000	0.70	7.817	-0.17	0.000	0.52	117.737
250°F	100 psi	-0.35	0.000	0.74	8.082	-0.19	0.000	0.60	126.465

Cond	itions	Celestite (SrSO <sub>4</sub> )		Halit	e (NaCi)	Iron Su	lfide (FeS)	Iron Carbonate (FeC	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
81°F	15 psi	0.48	139.013	-0.27	0.000	0.49	2.706	-0.75	0.000
100°F	24 psi	0.49	140.916	-0.29	0.000	0.43	2.406	-0.66	0.000
119°F	34 psi *	0.49	141.581	-0.31	0.000	0.41	2.362	-0.56	0.000
137°F	43 psi	0.50	141.752	-0.32	0.000	0.42	2.408	-0.47	0.000
156°F	53 psi	0.50	141.910	-0.34	0.000	0.43	2.483	-0.40	0.000
175°F	62 psi	. 0.50	142.345	-0.36	0.000	0.44	2.562	-0.35	0.000
194°F	72 psi	0.50	143.193	-0.37	0.000	0.45	2.635	-0.31	0.000
212°F	81 psi	0.51	144.460	-0.39	0.000	0.48	2.780	-0.28	0.000
231°F	91 psi	0.52	146.044	-0.40	0.000	0.50	2.906	-0.26	0.000
250°F	100 psi	0.53	147.765	-0.42	0.000	0.52	3.016	-0.26	0.000

Note 1: When assessing the severny of the scale problem, both the saturation index (s) and amount of scale must be considered.

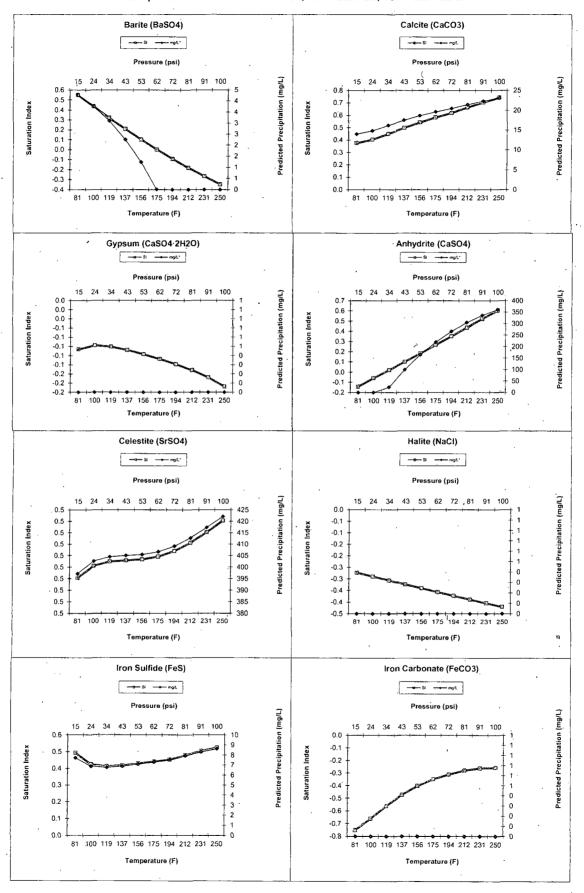
Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales.

Note 3: Saturation index precipitations on this sheet use of and alkalahility. %CO at its relicituded in the calculations.



\* EESI & ScaleSoftPitzer <sup>IM</sup> SSP2010

Comments



#### BUREAU OF LAND MANAGEMENT

Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220 575-234-5972

# Disposal of Produced Water From Federal Wells Conditions of Approval

Approval of the produced water disposal methodology is subject to the following conditions of approval:

- 1. This agency shall be notified of any change in your method or location of disposal.
- 2. Compliance with all provisions of Onshore Order No. 7.
- 3. This agency shall be notified of any spill or discharge as required by NTL-3A.
- 4. This agency reserves the right to modify or rescind approval whenever it determines continued use of the approved method may adversely affect the surface or subsurface environments.
- 5. Any on-lease open top storage tanks shall be covered with a protective cover to prevent entry by birds and other wildlife.
- 6. This approval should not constitute the granting of any right-of-way or construction rights not granted by the lease instrument.
- 7. If water is transported via a pipeline that extends beyond the lease boundary, then you need to submit within 30 days an application for right-of-way approval to the Realty Section in this office if you have not already done so.
- 8. Disposal at any other site will require prior approval.
- 9. Subject to like approval by NMOCD.

7/10/14

