Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
12/12/2017		SWD	pMAM1733465530

RECEIVED OCD

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

2017 DEC 12 P 2:32

NEW MEXICO OIL CONSERVATION DIVISION

Geological & Engineering Bureau –
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: XTO ENERGY INC. **OGRID Number:** 005380
Well Name: Corral Canyon 16 State SWD #1 **API:** 30-015-44387
Pool: SWD; DEVONIAN **Pool Code:**

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐NSL ☐NSP (PROJECT AREA) ☐NSP (PRORATION UNIT) ☐SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐DHC ☐CTB ☐PLC ☐PC ☐OLS ☐OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐WFX ☐PMX ☒SWD ☐IPI ☐EOR ☐PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☐ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ☐ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E. ☐ Notification and/or concurrent approval by BLM
F. ☐ Surface owner
G. ☒ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

DeeAnn Kemp ; Regulatory Manager
Print or Type Name

DeAnn Kemp
Signature

12/8/2017
Date

432-571-8220
Phone Number

Deeann_Kemp@xtoenergy.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance __x__Disposal _____Storage
Application qualifies for administrative approval? __x__Yes _____No

II. OPERATOR: XTO Energy Inc.
ADDRESS: 500 W. Illinois Suite 100 Midland, Texas 79701

CONTACT PARTY: Patricia Donald PHONE: 432-571-8220

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes __x__No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Patricia Donald TITLE: Regulatory Analyst

SIGNATURE: Patricia Donald DATE: 12/8/2017

E-MAIL ADDRESS: Patricia_Donald@xtoenergy.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: XTO ENERGY INC.

WELL NAME & NUMBER: Corral Canyon 16 State SWD #1

WELL LOCATION: 990FNL & 1280 FWL; D; 16; 25S; 29E
FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC
Please see attached for WBD.

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 24 Casing Size: 20

Cemented with: 950 sx. *or* _____ ft³

Top of Cement: SURFACE Method Determined: CIRC

Intermediate Casing

Hole Size: 17 1/2 Casing Size: 13 3/8

Cemented with: 1240 sx. *or* _____ ft³

Top of Cement: surface Method Determined: circ

Production Casing

Hole Size: 12 1/4 Casing Size: 9 5/8

Cemented with: 2635 sx. *or* _____ ft³

Top of Cement: surface Method Determined: circ

Total Depth: 16,660'

Not included

7" 32# P-110 BTC Liner

Injection Interval

15100 feet to 16660
(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 4" Lining Material: IPC

Type of Packer: 4" RATCH LATCH PERM PACKER

Packer Setting Depth: 15'000

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? X Yes _____ No

   If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: DEVONIAN

3. Name of Field or Pool (if applicable): SWD; DEVONIAN

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed Injection zone in this area: OVERLYING- ATOKA;
   UNDERLYING: NONE

Corral Canyon 16 State SWD #1

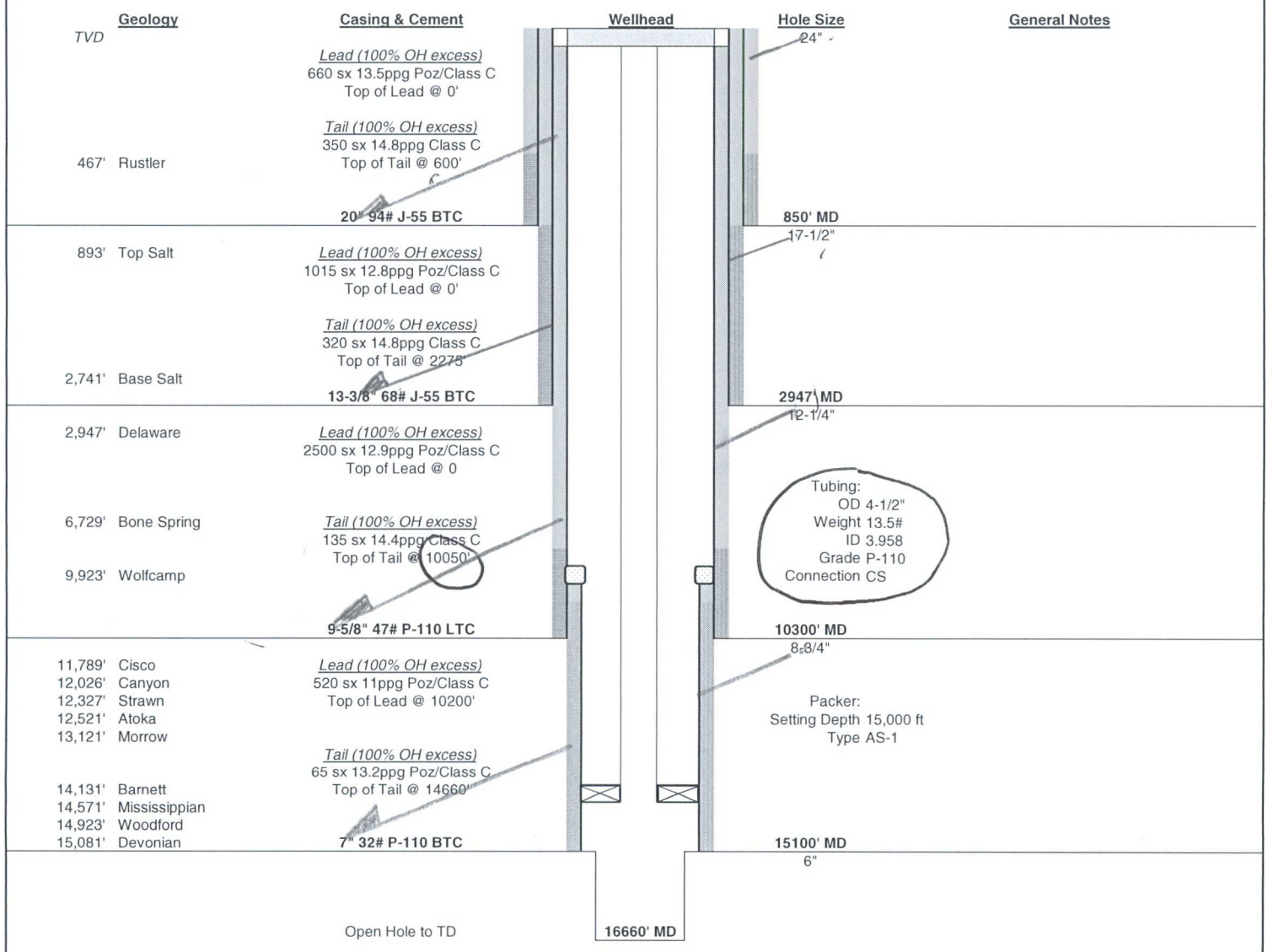
Proposed SWD Schematic (Nov 6, 2017)

County: Eddy
SHL: 990' FNL, 1280' FWL
Sec 16, T 25S, R 29E

BHL: 990' FNL, 1280' FWL
Sec 16, T 25S, R 29E

XTO ENERGY

AFE #	1702983
XTO ID #	720334
API #	TBD
Elevation	3006'
Rig:	TBD (RKB ~25')



Approvals (not required for planning schematics)

Prepared by: _____ Date

Reviewed by: _____ Date

Reviewed by: _____ Date

Approved by: _____ Date

Corral Canyon 16 State SWD #1

Proposed SWD Schematic (Nov 6, 2017)

County: Eddy
SHL: 990' FNL, 1280' FWL
Sec 16, T 25S, R 29E

BHL: 990' FNL, 1280' FWL
Sec 16, T 25S, R 29E

XTO ENERGY

AFE # 1702983
XTO ID # 720334

API # TBD
Elevation 3006'
Rig: TBD (RKB ~25')

TVD	Geology	Casing & Cement	Wellhead	Hole Size	General Notes
		Lead (100% OH excess) 660 sx 13.5ppg Poz/Class C Top of Lead @ 0'		24"	
467'	Rustler	*Tail (100% OH excess)* 350 sx 14.8ppg Class C Top of Tail @ 600'			
		20" 94# J-55 BTC		**850' MD**	
				17-1/2"	
893'	Top Salt	*Lead (100% OH excess)* 920 sx 12.8ppg Poz/Class C Top of Lead @ 0'			
2,741'	Base Salt	*Tail (100% OH excess)* 320 sx 14.8ppg Class C Top of Tail @ 2275'			
		13-3/8" 68# J-55 BTC		**2775' MD**	
				12-1/4"	
2,947'	Delaware	*Lead (100% OH excess)* 2500 sx 12.9ppg Poz/Class C Top of Lead @ 0			
6,729'	Bone Spring	*Tail (100% OH excess)* 135 sx 14.4ppg Class C Top of Tail @ 10050'			
9,923'	Wolfcamp				
		9-5/8" 47# P-110 LTC		**10300' MD**	
				8-3/4"	
11,789'	Cisco	*Lead (100% OH excess)* 520 sx 11ppg Poz/Class C Top of Lead @ 10200'			
12,026'	Canyon				
12,327'	Strawn				
12,521'	Atoka				
13,121'	Morrow				
		Tail (100% OH excess) 65 sx 13.2ppg Poz/Class C Top of Tail @ 14660'			
14,131'	Barnett				
14,571'	Mississippian				
14,923'	Woodford				
15,081'	Devonian	**7" 32# P-110 BTC**		**15100' MD**	
				6"	
		Open Hole to TD	**16660' MD**		

Approvals (not required for planning schematics)

Prepared by: _____ Date

Reviewed by: _____ Date

Reviewed by: _____ Date

Approved by: _____ Date

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

11/2/2017

Re: C-108 Application for Authorization to Inject

To Whom it May Concern:

XTO Energy, Inc has examined the geologic data in connection with Corral Canyon 16 State SWD #1 (a well to be located 990 FNL & 1280 FWL, Unit D, Section 16, T25S, R29E in Eddy County NM) and has determined that there are no open faults or other hydrologic connections between the disposal zone and any underground drinking water/potable aquifers.

Brian Henthorn
Regional Geologist
XTO Energy Inc.
810 Houston St.
Fort Worth, TX 76102

EXHIBIT C

XTO ENERGY INC.
Corral Canyon 16 State SWD#1
990FNL & 1280 FWL, SEC 16, T25S, R29E
Eddy County, New Mexico
RE: C: 108 (Application for Authorization to Inject)

VII. Data for Proposed Operation

1. Proposed average & maximum daily rate & volume: 40,000bwpd maximum, 20,000bwpdaverage.
2. System is closed.
3. Proposed injection Pressure: 2,000psi average, 5,000psi maximum
4. This is a permit for multi-lease SWD. The sources of disposal fluids will be reinjected produced water from the Bone Spring, and the Wolfcamp formation (water sample results attached).
5. Upon drilling the well, a chemical analysis of the disposal formation water will be provided.

VII. Geologic Data:

1. Proposed Zone: Devonian - Silurian added with additional notice and assessment
2. Geologic formation is Devonian. The lithologic detail is cherty fractures limestone and dolomite with a thickness of 1580' and depth of 14,950-16,500'. Corrected to 15,100 to 16,550
3. The Rustler is a known source of fresh water throughout this area. The average depth to the Rustler is 200-400'. There are no known sources of fresh water below the proposed disposal zone.

In second notice & third notice

IX. Proposed Stimulation Program

The OH will be stimulated with an Acid frac using acid and rock salt for diversion.

X. Well Test Information

No well test is available Log will be provided to Division once well is drilled.

XI. Chemical Analysis

Not aware of Fresh water well within one mile of subject well.

XII. Geological Statement

Please see signed geological statement enclosed.

XII. Proof of Notice

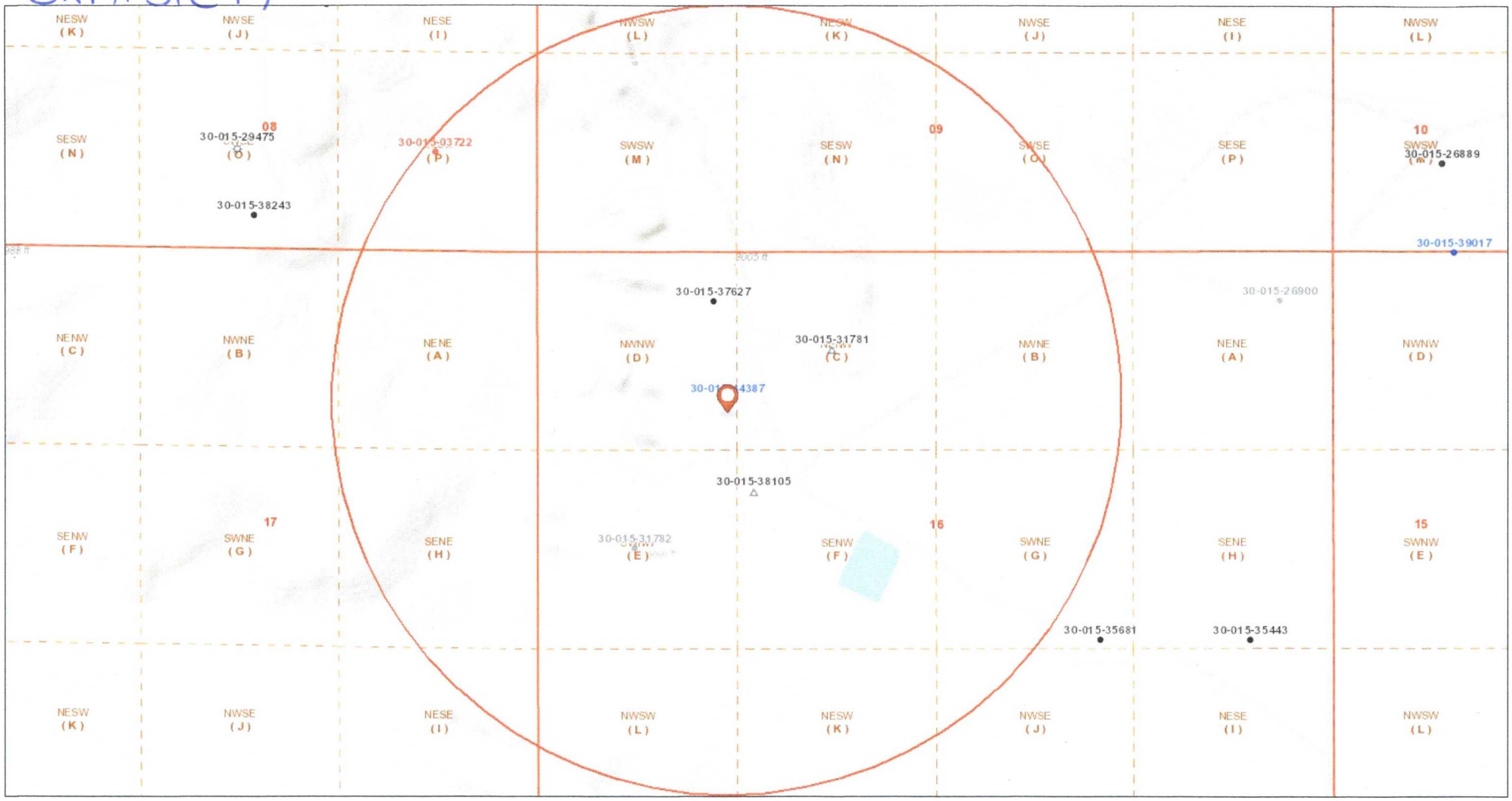
Proof of notice is enclosed.

XIV. Surface owners

Please see exhibit D & F

Exhibit A:

ArcGIS Web Map



November 8, 2017

1:9,028

Well Locations - Large Scale

- <all other values>
- Miscellaneous
- CO2 Active
- CO2 Cancelled
- CO2 New
- CO2, Plugged
- CO2, Temporarily Abandoned
- Gas Active
- Gas, Cancelled, Never Drilled
- Gas, New
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active
- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abondoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New
- Salt Water Injection, Plugged
- Salt Water InjectionTemporarily Abandoned
- Water, Active
- Water, Cancelled
- Water, New
- Water, Plugged
- Water, Temporarily Abandoned
- OCD District Offices
- PLSS Second Division
- PLSS First Division

0 0.075 0.15 0.3 mi

0 0.175 0.35 0.7 km

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS

Web AppBuilder for ArcGIS

Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | NM OSE | U.S. BLM | US Census Bureau, NMDOT | BLM | OCD |

Exhibit B

Well Name	Well #	API#	TD	Spud date	Completion Date	Pool	Status	Operator	N/S	E/W	UNIT	SEC	TOWNSHIP	RANGE
Pre Ongard Well	1	3.002E+09	2968	12/18/1959	N/A	NONE	PLUGGED- OIL	PRE-ONGARD WELL OPERATION	660S	660E	P	8	25S	29E
Cooter 16 State	3H	3.002E+09	11589	6/8/2010	9/2/2010	Willow Lake; Bone spring Southeast	ACTIVE	Devon Energy Production Copany LLC	330N	1190W	D	16	25S	29E
Chimayo 16 State	1	3.002E+09	9300	5/27/2001	7/20/2001	Willow Lake; Bone spring Southeast	ACTIVE	Devon Energy Production Copany LLC	660N	1980W	C	16	25S	29E
Chimayo 16 State	3	3.002E+09	4202	9/25/2010	1/10/2011	Willow Lake; Bone spring Southeast	ACTIVE	Devon Energy Production Copany LLC	1610N	1455W	F	16	25S	29E
Chimayo 16 State	2	3.002E+09	9300	5/27/2001	N/A	Willow Lake; Bone spring Southeast	APD CANCELED	Devon Energy Production Copany LLC	1980N	660W	E	16	25S	29E

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02371		C	ED	2	3	15	25S	29E		596741	3555106*	200	60	140
C 02518		C	ED	3	4	08	25S	29E		593895	3556300*	462		
C 02680		C	ED	2	3	15	25S	29E		596741	3555106*	200		

Average Depth to Water: **60 feet**

Minimum Depth: **60 feet**

Maximum Depth: **60 feet**

Record Count: 3

PLSS Search:

Section(s): 7-9, 15-17, 20-22 **Township:** 25S **Range:** 29E

***UTM location was derived from PLSS - see Help**

September 22, 2017

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: XTO Energy Inc.
500 W. Illinois, Suite 100
Midland, Texas 79701

Sample: Goldenchild Central Tank Battery (Goldenchild 1H)
Inlet Separator
Spot Gas Sample @ 157 psig & 87 °F

Date Sampled: 09/08/2017 Job Number: 73269.011

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	1.480	
Carbon Dioxide	0.129	
Methane	74.904	
Ethane	13.114	3.501
Propane	6.504	1.789
Isobutane	0.773	0.253
n-Butane	1.757	0.553
2-2 Dimethylpropane	0.019	0.007
Isopentane	0.351	0.128
n-Pentane	0.367	0.133
Hexanes	0.222	0.091
Heptanes Plus	0.380	0.147
Totals	100.000	6.602

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.268	(Air=1)
Molecular Weight	94.28	
Gross Heating Value	4781	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.757	(Air=1)
Compressibility (Z)	0.9961	
Molecular Weight	21.85	
Gross Heating Value		
Dry Basis	1294	BTU/CF
Saturated Basis	1272	BTU/CF

*Hydrogen Sulfide tested on location by: Stain Tube Method (GPA 2377)
<0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Sampled By: (14) R.Perez
Analyst: MR
Processor: NG
Cylinder ID: T-0403

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	1.480		1.897
Carbon Dioxide	0.129		0.260
Methane	74.904		54.994
Ethane	13.114	3.501	18.046
Propane	6.504	1.789	13.125
Isobutane	0.773	0.253	2.056
n-Butane	1.757	0.553	4.674
2,2 Dimethylpropane	0.019	0.007	0.063
Isopentane	0.351	0.128	1.159
n-Pentane	0.367	0.133	1.212
2,2 Dimethylbutane	0.003	0.001	0.012
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.027	0.011	0.106
2 Methylpentane	0.071	0.029	0.280
3 Methylpentane	0.037	0.015	0.146
n-Hexane	0.084	0.034	0.331
Methylcyclopentane	0.044	0.015	0.169
Benzene	0.041	0.011	0.147
Cyclohexane	0.081	0.028	0.312
2-Methylhexane	0.011	0.005	0.050
3-Methylhexane	0.012	0.005	0.055
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.032	0.014	0.145
n-Heptane	0.023	0.011	0.105
Methylcyclohexane	0.051	0.020	0.229
Toluene	0.022	0.007	0.093
Other C8's	0.030	0.014	0.151
n-Octane	0.009	0.005	0.047
Ethylbenzene	0.001	0.000	0.005
M & P Xylenes	0.005	0.002	0.024
O-Xylene	0.001	0.000	0.005
Other C9's	0.011	0.006	0.064
n-Nonane	0.002	0.001	0.012
Other C10's	0.003	0.002	0.019
n-Decane	0.001	0.001	0.007
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	6.602	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity	0.757	(Air=1)
Compressibility (Z)	0.9961	
Molecular Weight	21.85	
Gross Heating Value		
Dry Basis	1294	BTU/CF
Saturated Basis	1272	BTU/CF

October 23, 2017

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: XTO Energy Inc.
500 W. Illinois, Suite 100
Midland, Texas 79701

Sample: Goldenchild Central Tank Battery (Goldenchild 1H)
Inlet Separator Hydrocarbon Liquid
Sampled @ 157 psig & 87 °F

Date Sampled: 09/08/17 Job Number: 73269.002

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2186-M

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.031	0.006	0.006
Carbon Dioxide	0.023	0.007	0.007
Methane	3.590	1.066	0.410
Ethane	3.807	1.784	0.816
Propane	6.428	3.103	2.020
Isobutane	1.751	1.004	0.725
n-Butane	5.632	3.111	2.332
2,2 Dimethylpropane	0.147	0.099	0.076
Isopentane	2.720	1.743	1.398
n-Pentane	3.675	2.334	1.889
2,2 Dimethylbutane	0.038	0.028	0.024
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.430	0.309	0.264
2 Methylpentane	1.383	1.006	0.849
3 Methylpentane	0.824	0.590	0.506
n-Hexane	2.268	1.634	1.392
Heptanes Plus	67.250	82.176	87.284
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.8277	(Water=1)
°API Gravity	39.46	@ 60°F
Molecular Weight	182.2	
Vapor Volume	14.42	CF/Gal
Weight	6.90	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.7792	(Water=1)
°API Gravity	50.09	@ 60°F
Molecular Weight	140.3	
Vapor Volume	17.62	CF/Gal
Weight	6.49	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

Sampled By: (16) Garcia
Analyst: XG
Processor: XGdjv
Cylinder ID: W-2629

TANKS DATA INPUT REPORT - GPA 2186-M

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.023	0.007	0.007
Nitrogen	0.031	0.006	0.006
Methane	3.590	1.066	0.410
Ethane	3.807	1.784	0.816
Propane	6.428	3.103	2.020
Isobutane	1.751	1.004	0.725
n-Butane	5.780	3.210	2.408
Isopentane	2.720	1.743	1.398
n-Pentane	3.675	2.334	1.889
Other C-6's	2.676	1.933	1.643
Heptanes	10.038	6.974	6.554
Octanes	10.487	8.219	7.895
Nonanes	5.140	4.814	4.641
Decanes Plus	35.876	58.776	64.388
Benzene	1.403	0.688	0.781
Toluene	2.337	1.372	1.535
E-Benzene	0.165	0.112	0.125
Xylenes	1.805	1.221	1.365
n-Hexane	2.268	1.634	1.392
2,2,4 Trimethylpentane	0.000	0.000	0.000
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity	0.7792	(Water=1)
°API Gravity	50.09	@ 60°F
Molecular Weight	140.3	
Vapor Volume	17.62	CF/Gal
Weight	6.49	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity	0.8537	(Water=1)
Molecular Weight	251.9	

Characteristics of Atmospheric Sample:

°API Gravity	45.07	@ 60°F
Reid Vapor Pressure Equivalent (D-6377)	6.41	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-2629*	------
Pressure, PSIG	157	149	------
Temperature, °F	87	85	------

* Sample used for analysis

TOTAL EXTENDED REPORT - GPA 2186-M

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.031	0.006	0.006
Carbon Dioxide	0.023	0.007	0.007
Methane	3.590	1.066	0.410
Ethane	3.807	1.784	0.816
Propane	6.428	3.103	2.020
Isobutane	1.751	1.004	0.725
n-Butane	5.632	3.111	2.332
2,2 Dimethylpropane	0.147	0.099	0.076
Isopentane	2.720	1.743	1.398
n-Pentane	3.675	2.334	1.889
2,2 Dimethylbutane	0.038	0.028	0.024
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.430	0.309	0.264
2 Methylpentane	1.383	1.006	0.849
3 Methylpentane	0.824	0.590	0.506
n-Hexane	2.268	1.634	1.392
Methylcyclopentane	1.619	1.004	0.971
Benzene	1.403	0.688	0.781
Cyclohexane	3.650	2.177	2.189
2-Methylhexane	0.772	0.629	0.551
3-Methylhexane	0.703	0.566	0.502
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C-7's	1.476	1.130	1.043
n-Heptane	1.816	1.468	1.297
Methylcyclohexane	4.489	3.162	3.141
Toluene	2.337	1.372	1.535
Other C-8's	4.445	3.664	3.491
n-Octane	1.552	1.393	1.263
E-Benzene	0.165	0.112	0.125
M & P Xylenes	1.371	0.932	1.037
O-Xylene	0.433	0.289	0.328
Other C-9's	3.878	3.570	3.488
n-Nonane	1.262	1.244	1.153
Other C-10's	4.002	4.049	4.029
n-decane	0.998	1.073	1.011
Undecanes(11)	3.807	3.952	3.988
Dodecanes(12)	2.883	3.232	3.307
Tridecanes(13)	2.943	3.538	3.670
Tetradecanes(14)	2.652	3.415	3.591
Pentadecanes(15)	2.204	3.040	3.235
Hexadecanes(16)	1.810	2.668	2.863
Heptadecanes(17)	1.473	2.295	2.487
Octadecanes(18)	1.397	2.292	2.498
Nonadecanes(19)	1.258	2.151	2.357
Eicosanes(20)	1.069	1.899	2.094
Heneicosanes(21)	0.826	1.544	1.712
Docosanes(22)	0.811	1.579	1.761
Tricosanes(23)	0.733	1.480	1.660
Tetracosanes(24)	0.620	1.297	1.461
Pentacosanes(25)	0.578	1.255	1.420
Hexacosanes(26)	0.472	1.063	1.208
Heptacosanes(27)	0.525	1.225	1.399
Octacosanes(28)	0.421	1.017	1.165
Nonacosanes(29)	0.324	0.806	0.927
Triacontanes(30)	0.356	0.915	1.056
Hentriacontanes Plus(31+)	3.716	12.992	15.489
Total	100.000	100.000	100.000

October 2, 2017

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: XTO Energy Inc.
500 W. Illinois, Suite 100
Midland, Texas 79701

Date Sampled: 09/08/17

Date Analyzed: 09/20/17

Sample: Goldenchild Central Tank Battery (Goldenchild 1H)

Job Number: J73269

FLASH LIBERATION OF HYDROCARBON LIQUID		
	Inlet Separator HC Liquid	**Stock Tank**
Pressure, psig	157	0
Temperature, °F	87	70
Gas Oil Ratio (1)	------	111.3
Gas Specific Gravity (2)	------	1.368
Separator Volume Factor (3)	1.0629	1.000

STOCK TANK FLUID PROPERTIES	
Shrinkage Recovery Factor (4)	0.9408
Oil API Gravity at 60 °F	45.07
Reid Vapor Pressure Equivalent (D-6377), psi (5)	6.41

Quality Control Check			
	Sampling Conditions	**Test Samples**	
Cylinder No.	------	W-2629*	-----
Pressure, psig	157	149	------
Temperature, °F	87	85	------

(1) - Scf of flashed vapor per barrel of stock tank oil
(2) - Air = 1.000
(3) - Separator volume / Stock tank volume
(4) - Fraction of first stage separator liquid
(5) - Absolute pressure at 100 deg F

Analyst: E.J.

* Sample used for flash study

Base Conditions: 15.025 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus

David Dannhaus 361-661-7015

September 21, 2017

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: XTO Energy Inc.
500 W. Illinois, Suite 100
Midland, Texas 79701

Sample: Goldenchild Central Tank Battery (Goldenchild 1H)
Gas Evolved from Hydrocarbon Liquid Flashed
From 157 psig & 87 °F to 0 psig & 70 °F

Date Sampled: 09/08/2017 Job Number: 73269.001

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.179	
Carbon Dioxide	0.110	
Methane	25.334	
Ethane	23.212	6.263
Propane	26.664	7.412
Isobutane	4.515	1.491
n-Butane	11.112	3.535
2-2 Dimethylpropane	0.037	0.014
Isopentane	2.436	0.899
n-Pentane	2.460	0.900
Hexanes	1.644	0.685
Heptanes Plus	2.297	0.882
Totals	100.000	22.080

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.244	(Air=1)
Molecular Weight	92.61	
Gross Heating Value	4679	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.368	(Air=1)
Compressibility (Z)	0.9855	
Molecular Weight	39.05	
Gross Heating Value		
Dry Basis	2256	BTU/CF
Saturated Basis	2218	BTU/CF

*Hydrogen Sulfide tested in laboratory by: Stain Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Sampled By: (16) O.Almaguer
Analyst: MR
Processor: NG
Cylinder ID: FL-5S

Certified: FESCO, Ltd. - Alice, Texas
David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.179		0.128
Carbon Dioxide	0.110		0.124
Methane	25.334		10.410
Ethane	23.212	6.263	17.875
Propane	26.664	7.412	30.112
Isobutane	4.515	1.491	6.721
n-Butane	11.112	3.535	16.541
2,2 Dimethylpropane	0.037	0.014	0.068
Isopentane	2.436	0.899	4.501
n-Pentane	2.460	0.900	4.546
2,2 Dimethylbutane	0.022	0.009	0.049
Cyclopentane	0.245	0.103	0.440
2,3 Dimethylbutane	0.000	0.000	0.000
2 Methylpentane	0.521	0.218	1.150
3 Methylpentane	0.268	0.110	0.591
n-Hexane	0.588	0.244	1.298
Methylcyclopentane	0.311	0.108	0.670
Benzene	0.275	0.078	0.550
Cyclohexane	0.544	0.187	1.172
2-Methylhexane	0.064	0.030	0.164
3-Methylhexane	0.070	0.032	0.180
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.192	0.084	0.488
n-Heptane	0.132	0.061	0.339
Methylcyclohexane	0.302	0.122	0.759
Toluene	0.120	0.041	0.283
Other C8's	0.150	0.070	0.423
n-Octane	0.039	0.020	0.114
Ethylbenzene	0.006	0.002	0.016
M & P Xylenes	0.020	0.008	0.054
O-Xylene	0.004	0.002	0.011
Other C9's	0.053	0.027	0.171
n-Nonane	0.007	0.004	0.023
Other C10's	0.007	0.004	0.025
n-Decane	0.001	0.001	0.004
Undecanes (11)	0.000	0.000	0.000
Totals	100.000	22.080	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.368	(Air=1)
Compressibility (Z)	0.9855	
Molecular Weight	39.05	
Gross Heating Value		
Dry Basis	2256	BTU/CF
Saturated Basis	2218	BTU/CF

October 2, 2017

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

For: XTO Energy Inc.
500 W. Illinois, Suite 100
Midland, Texas 79701

Sample: Goldenchild CTB (Goldenchild 1H)
Breathing Vapor from Residual Flash Hydrocarbon Liquid
From 157 psig & 87 °F to 0 psig & 100 °F

Date Sampled: 09/08/2017 Job Number: 73269.021

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.000	
Carbon Dioxide	0.021	
Methane	2.453	
Ethane	14.820	4.044
Propane	36.371	10.225
Isobutane	8.044	2.686
n-Butane	21.502	6.917
2-2 Dimethylpropane	0.061	0.024
Isopentane	5.259	1.963
n-Pentane	5.510	2.038
Hexanes	2.778	1.168
Heptanes Plus	3.181	1.204
Totals	100.000	30.269

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity	3.200	(Air=1)
Molecular Weight	90.31	
Gross Heating Value	4546	BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.812	(Air=1)
Compressibility (Z)	0.9744	
Molecular Weight	51.15	
Gross Heating Value		
Dry Basis	2942	BTU/CF
Saturated Basis	2892	BTU/CF

*Hydrogen Sulfide tested in laboratory by: Stain Tube Method (GPA 2377)
Results: <0.013 Gr/100 CF, <0.2 PPMV or <0.001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Sampled By: (16) TG
Analyst: MR
Processor: NG
Cylinder ID: ST-2

Certified: FESCO, Ltd. - Alice, Texas

David Dannhaus 361-661-7015

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.000		0.000
Carbon Dioxide	0.021		0.018
Methane	2.453		0.768
Ethane	14.820	4.044	8.712
Propane	36.371	10.225	31.354
Isobutane	8.044	2.686	9.140
n-Butane	21.502	6.917	24.433
2,2 Dimethylpropane	0.061	0.024	0.086
Isopentane	5.259	1.963	7.418
n-Pentane	5.510	2.038	7.772
2,2 Dimethylbutane	0.037	0.016	0.062
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.340	0.142	0.573
2 Methylpentane	0.911	0.386	1.535
3 Methylpentane	0.467	0.195	0.787
n-Hexane	1.023	0.429	1.723
Methylcyclopentane	0.523	0.184	0.861
Benzene	0.434	0.124	0.663
Cyclohexane	0.873	0.303	1.436
2-Methylhexane	0.097	0.046	0.190
3-Methylhexane	0.104	0.048	0.204
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.285	0.127	0.553
n-Heptane	0.176	0.083	0.345
Methylcyclohexane	0.376	0.154	0.722
Toluene	0.121	0.041	0.218
Other C8's	0.130	0.062	0.280
n-Octane	0.022	0.012	0.049
Ethylbenzene	0.001	0.000	0.002
M & P Xylenes	0.007	0.003	0.015
O-Xylene	0.002	0.001	0.004
Other C9's	0.023	0.012	0.057
n-Nonane	0.002	0.001	0.005
Other C10's	0.002	0.001	0.006
n-Decane	0.001	0.001	0.003
Undecanes (11)	0.002	0.001	0.006
Totals	100.000	30.269	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity	1.812	(Air=1)
Compressibility (Z)	0.9744	
Molecular Weight	51.15	
Gross Heating Value		
Dry Basis	2942	BTU/CF
Saturated Basis	2892	BTU/CF

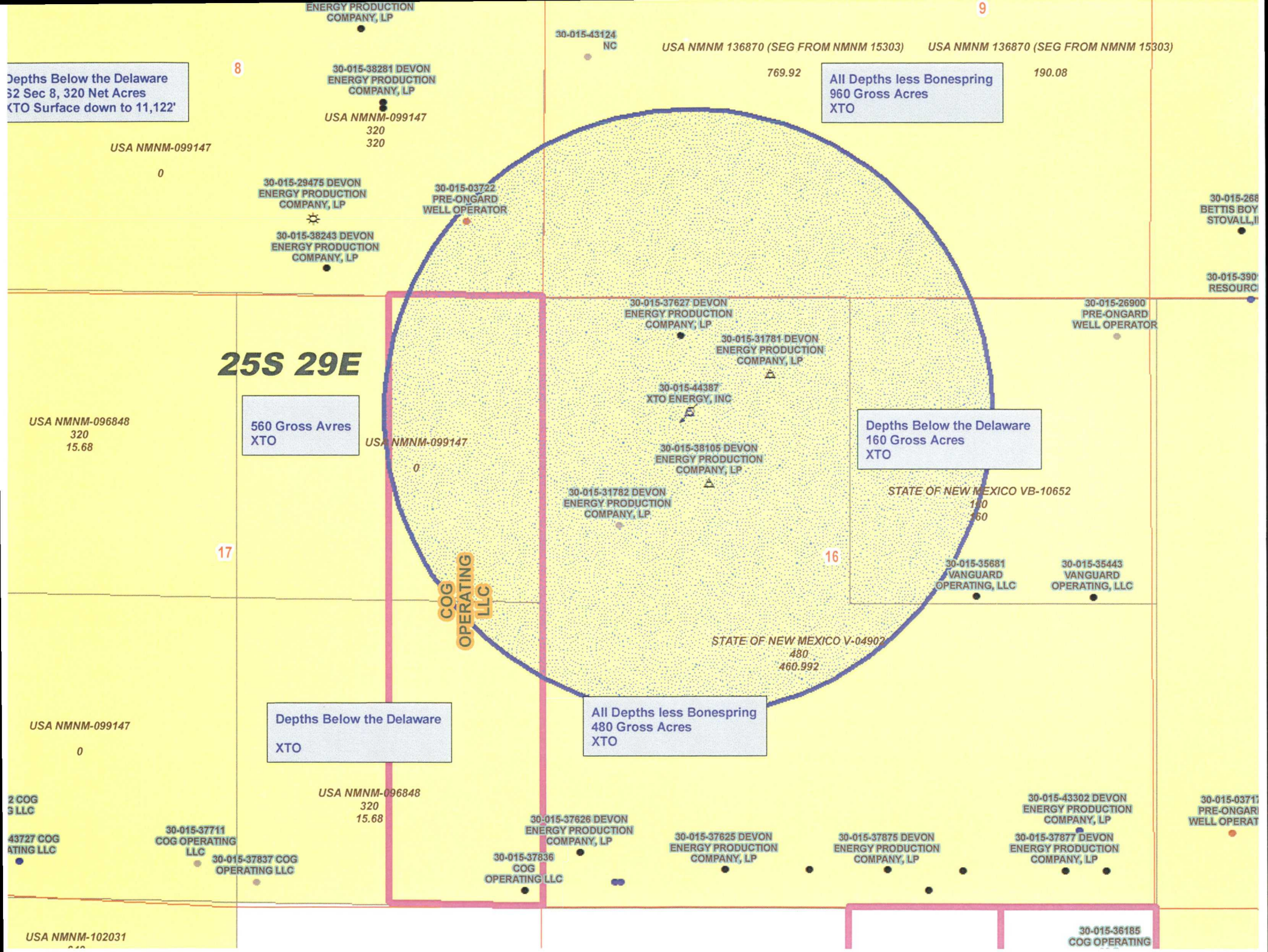

ENERGY PRODUCTION COMPANY, LP
30-015-43124 NC
USA NMNM 136870 (SEG FROM NMNM 15303)
USA NMNM 136870 (SEG FROM NMNM 15303)
769.92
190.08
9
8
Depths Below the Delaware
32 Sec 8, 320 Net Acres
XTO Surface down to 11,122'
30-015-38281 DEVON ENERGY PRODUCTION COMPANY, LP
USA NMNM-099147
320
320
All Depths less Bonespring
960 Gross Acres
XTO
USA NMNM-099147
0
30-015-29475 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-03722 PRE-ONGARD WELL OPERATOR
30-015-38243 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-268 BETTIS BOY STOVALL,
30-015-390 RESOURC
30-015-37627 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-26900 PRE-ONGARD WELL OPERATOR
30-015-31781 DEVON ENERGY PRODUCTION COMPANY, LP
25S 29E
30-015-44387 XTO ENERGY, INC
560 Gross Avres
XTO
USA NMNM-096848
320
15.68
USA NMNM-099147
0
30-015-38105 DEVON ENERGY PRODUCTION COMPANY, LP
Depths Below the Delaware
160 Gross Acres
XTO
30-015-31782 DEVON ENERGY PRODUCTION COMPANY, LP
STATE OF NEW MEXICO VB-10652
160
160
17
16
30-015-35681 VANGUARD OPERATING, LLC
30-015-35443 VANGUARD OPERATING, LLC
COG OPERATING LLC
STATE OF NEW MEXICO V-04902
480
460.992
All Depths less Bonespring
480 Gross Acres
XTO
Depths Below the Delaware
XTO
USA NMNM-099147
0
USA NMNM-096848
320
15.68
2 COG
G LLC
43727 COG
ATING LLC
30-015-37711 COG OPERATING LLC
30-015-37837 COG OPERATING LLC
30-015-37626 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-37836 COG OPERATING LLC
30-015-37625 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-37875 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-43302 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-37877 DEVON ENERGY PRODUCTION COMPANY, LP
30-015-0371 PRE-ONGAR WELL OPERAT
USA NMNM-102031
30-015-36185 COG OPERATING

Exhibit D 1/3

XTO ENERGY

PATRICIA DONALD
Regulatory Analyst
XTO Energy Inc.
500 W. Illinois Suite 100
Midland, TX 79707
432-571-8220

November 8, 2017

Re: Notice of Application to Inject Fluid

Corral Canyon 16 State SWD #1

Eddy County, New Mexico

Carlsbad Current Argus

P. O. Box 1629

Carlsbad, New Mexico 88220

To whom this may concern:

Enclosed for publication is one legal advertisement, please contact me for payment. XTO Energy Inc. requests that this be published for one day. XTO Energy Inc. is required by the New Mexico Oil Conservation Division to furnish them with a copy of this advertisement, from your newspaper, giving the date of publication.

Please send the ad, the affidavit of publication and the invoice to Patricia Donald at the above letterhead address.

Sincerely,

Patricia Donald
Regulatory Analyst

Enclosure

Exhibit D 2/3

NOTICE OF APPLICATION FOR FLUID DISPOSAL WELL PERMIT

XTO Energy Inc. OGRID#005380, 500 W. Illinois suite 100, Midland, Texas 79701 is applying to the New Mexico Oil Conservation Division to permit a salt water disposal well into a formation that is not productive of oil and gas.

The applicant proposes to permit a salt water disposal well into a non-productive zone (Devonian) in the Corral Canyon 16 State SWD #1. The proposed well is located 990 FNL & 1280 FWL, Unit Letter D, Section 16, Township 25S, Range 29E, Eddy County, New Mexico. Fluid will be disposed into strata in the subsurface depth interval from 15,100'-16,660' MD with a maximum injection rate of 40,000BWPD and a maximum injection pressure of 5,000psi. All interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South t. Francis Dr., Santa Fe, NM 87505, within 15 days.

Exhibit D 3/3

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Danny Fletcher, being first duly sworn, on oath says:

That he is the Publisher of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

November 14 2017

That the cost of publication is **$68.09** and that payment thereof has been made and will be assessed as court costs.

Subscribed and sworn to before me this 20 day of November 2017

Cynthia Arredondo

My commission Expires 2/13/21

Notary Public

OFFICIAL SEAL
CYNTHIA ARREDONDO
Notary Public
State of New Mexico
My Comm. Expires 2/13/21

November 14, 2017

NOTICE OF APPLICATION FOR FLUID DISPOSAL WELL PERMIT

XTO Energy Inc. OGRID#005380, 500 W. Illinois suite 100, Midland, Texas 79701 is applying to the New Mexico Oil Conservation Division to permit a salt water disposal well into formation that is not productive of oil and gas.

The applicant proposes to permit a salt water disposal well into a non-productive zone (Devonian) in the Corral Canyon 16 State SWD #1. The proposed well is located 990 FNL & 1280 FWL, Unit Letter D, Section 16, Township 25S, Range 29E, Eddy County, New Mexico. Fluid will be disposed into strata in the subsurface depth interval from 15,100'-16,660' MD with a maximum injection rate of 40,000WPD and a maximum injection pressure of 5,000psi. All interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505, within 15 days.

Exhibit D

Surface Owner:

State of New Mexico
C/O Faith Crosby
310 Old Santa Fe Trail
Santa Fe, New Mexico 87504
505-827-5849
Certified Mail Receipt #7013 1710 0001 7901 9469

Mineral Owner:

State of New Mexico
C/O Faith Crosby
310 Old Santa Fe Trail
Santa Fe, New Mexico 87504
505-827-5849
Certified Mail Receipt #7013 1710 0001 7901 9469

Surface Tenant:

HENRY MCDONALD OR DRAPER BRANTLEY, JR.
P.O. BOX 597
LOVING, NM 88256
Certified Mail Receipt ## 7009 0820 0001 1970 8022

Offset Owners:

BUREAU OF LAND MANAGEMENT
620 E Greene St,
Carlsbad, NM 88220 ·
(575) 234-5972
Certified Mail Receipt #7015 3430 0000 0931 8143

Offset Operators with ½ Mille:

OCCIDENTAL PERMIAN LTD
P.O Box 4294
Houston, TX 77210
Certified Mail Receipt # 7015 3430 0000 0931 8051

COG OPERATING LLC
One Concho Center
600 W. Illinois Ave
Midland, Texas 79701
Certified Mail Receipt # 7015 3430 0000 0931 8044

DEVON ENERGY PRODUCTION COMPANY L.P.
620 E Greene St,
Carlsbad, NM 88220 ·
(575) 234-5972
Certified Mail Receipt # 7015 3430 0000 0931 8105

Exhibit D

EOG RESOURCES, INC.
P.O. Box 2267
Midland, Texas 79702
Certified Mail Receipt # 7015 3430 0000 0931 8099

BURLINGTON RESOURCES OIL & GAS COMPANY LP
3401 E. 30th Street
Farmington, NM 87402
Certified Mail Receipt # 7015 3430 0000 0931 8082

VANGUARD OPERATING, LLC
5847 San Felipe Suite 300
Houston, TX 77057
Certified Mail Receipt # 7015 3430 0000 0931 8112

BETTIS BOYLE & STOVALL, INC
P.O. Box 1240
Graham, TX 76450
Certified Mail Receipt # 7015 3430 0000 0931 8129

SOUTHWESTERN ENERGY PRODUCTION COMPANY
2350 N Sam Houston Pkwy East Suite 300
Houston, TX 77032
Certified Mail Receipt # 7015 3430 0000 0931 8150

PRE-ONGARD WELL OPERATOR
No longer a valid operator.
No address on file.
Certified Mail Receipt # NONE

I, Patricia Donald, do hereby certify that on December 7, 2018 the above and attached listed parties were given copies of the application to dispose water in the Corral Canyon16 State SWD#1 via certified mail.

Patricia Donald
Regulatory Analyst

PATRICIA DONALD
Regulatory Analyst
Patricia_Donald@xtoenergy.com
XTO Energy Inc.
500 W. Illinois Suite 100
Midland, TX 79707
432-571-8220

XTO ENERGY

December 5, 2017

Re: Notice of Application to Inject Fluid
Corral Canyon 16 State SWD #1
Eddy County, New Mexico

SOUTHWESTERN ENERGY PRODUCTION COMPANY
2350 N Sam Houston Pkwy East Suite 300
Houston, TX 77032

To whom this may concern:

This letter is to notify you XTO Energy Inc. has submitted to the Oil Conservation Division an application to drill a salt water disposal well. Our records indicate that you are the offset operator. Attached please find a copy of the application sent to the Oil Conservation Division for your review.

If you have any questions please feel free to contact me.

Sincerely,

Patricia Donald
Regulatory Analyst

Enclosure

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Thursday, January 11, 2018 12:46 PM
To: 'Donald, Patricia'
Subject: RE: Corral Canyon SWD

The problem is that Penwell Energy will have to be notified, since they are the lessor of record in the Devonian within the ½ mile AOR.
I thought they went out of business approximately 25 years ago.
As a result, your application will be suspended until the lessor in the Devonian in the SE/4 of Section 8 is properly notified.

Mike

From: Donald, Patricia [mailto:Patricia_Donald@xtoenergy.com]
Sent: Thursday, January 11, 2018 12:41 PM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Subject: RE: Corral Canyon SWD

Devon is on the surface of that section, and I am told by my land department that According to their title opinion, it appears that Penwell Energy, Inc. owns the Devonian in the S/2 of Section 8. They did not focus on this depth as it was not our target formation.

-Patricia

From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]
Sent: Wednesday, January 10, 2018 2:21 PM
To: Donald, Patricia <Patricia_Donald@xtoenergy.com>
Subject: RE: Corral Canyon SWD

So Devon has the Devonian rights?
Mike

From: Donald, Patricia [mailto:Patricia_Donald@xtoenergy.com]
Sent: Wednesday, January 10, 2018 1:20 PM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Subject: RE: Corral Canyon SWD

Mike, affected parties on SE/4 section 8 looks to be only Devon as being the operator of the existing well bores and XTO now from the Surface to 11,122.

Hope this answers all your questions.

Thanks again
Patricia

wellname	api	section	township	range	unit	formation	ph	tds_mgL	sodium_mg	calcium_mg	iron_mgL	magnesium	chloride_mgL	bicarbonat	sulfate_mg	co2_mgL
CHIMAYO 16 STATE #001	3001531781	16	25S	29E	C	Per OCD forms(willowlake, SE bonespring)	6.28	176868.4	56488.4	9205	46	1202	107748	85	599	110
COOTER 16 STATE #002H	3001537626	16	25S	29E	M	AVALON UPPER	7.5	129595	49316.2	618	10	129	76682	366	1747	450
SLIDER 8 FEDERAL #003H	3001538272	8	25S	29E	J	AVALON UPPER	7	65465.9	24094.3	833	33	153	38189	183	1589	250

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Danny Fletcher, being first duly sworn, on oath says:

That he is the Publisher of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

February 3 2018

That the cost of publication is **$70.87** and that payment thereof has been made and will be assessed as court costs.

Subscribed and sworn to before me this 6 day of February, 2018

Cynthia Arredondo

My commission Expires 2/13/21

Notary Public

OFFICIAL SEAL
CYNTHIA ARREDONDO
Notary Public
State of New Mexico
My Comm. Expires 2/13/21

February 3, 2018

NOTICE OF APPLICATION FOR FLUID DISPOSAL WELL PERMIT

XTO Energy, Inc. OGRID#005380, 500 W. Illinois suite 100, Midland, Texas 79701 is applying to the New Mexico Oil Conservation Division to permit a salt water disposal well into a formation that is not productive of oil and gas.

The applicant proposes to permit a salt water disposal well into a non-productive zone (Devonian) in the Corral Canyon 16 State SWD #1. The proposed well is located 990 FNL & 1280 FWL, Unit Letter D, Section 16, Township 25S, Range 29E, Eddy County, New Mexico. Fluid will be disposed into strata in the subsurface depth interval from 15,100'-16,660' MD with a maximum injection rate of 40,000BWPD and a maximum injection pressure of 5,000psi.

Affected parties were notified via certified letter. Addresses for parties listed below could not be located: Penwell Energy Inc.

All interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505, within 15 days.

Potential of Induced-Seismic Events Associated with Disposal Activities

Statements Regarding Seismicity

XTO has assessed the possibility of seismicity associated with the proposed Corral Canyon 16 State SWD Well by investigating historic seismicity, the presence of deep faulting, orientation of faults to the current stress regime and potential for pore pressure build up that might cause a fault to slip. In addition, as a precautionary measure, XTO has developed a monitoring plan to address risk elements that are not currently discernable. A summary follows:

Historic Seismicity

The USGS website reflects a single seismic event (M3.1, 3/18/2012) within 15 miles of the proposed Corral Canyon 16 State SWD. The New Mexico Tech Seismological Observatory determined the event was linked to the collapse of a potash mine.

Deep Faulting

Utilizing licensed 3D seismic data in the area of the proposed SWD well, XTO has not found any significant interpretable faulting in the Devonian-Basement section. Although, there are small steeply dipping seismic discontinuities associated with karsting in the Devonian section, these do not appear to have any lateral continuity. Additionally, there are a few minor structural flexures that may be reflective of small, laterally limited faults. The strike of these features in the proximity of the proposed well are ~40 degrees NE and ~15 degrees NE.

Stress Regime

Stanford's Fault Slip Potential Tool was used in conjunction with Snee and Zoback, 'State of Stress in the Permian Basin, Texas and New Mexico: Implications for Induced Seismicity' (Feb 2018, The Leading Edge) as well as nearby well information. As used, the FSP tool utilized the Aphi option and the conservative assumption that the current stress state in the Devonian and adjacent Basement would result in critically stressed faults. The fault orientation most likely to slip with the Snee input is one with a strike of 75 degree NE and a dip of 60 degrees. The features identified in XTO's mapping would require ~900+ psi to slip using the Snee study.

Pore Pressure Modeling

Three SWD wells were used in the "Hydrology" module in the FSP tool, the subject well and two preexisting SWD wells, both within ~3 miles of the proposed location. Resultant modeled pore pressure increases were limited to ~250 psi assuming injection volumes of 25,000 bbls a day in all three wells from 2019 to 2045.

Uncertainty

There are two primary sources of uncertainty in the FSP analysis. First, the characterization of the stress state. This uncertainty was investigated by varying four geomechanical factors: Aphi, Hmax orientation, fault strike and fault dip. Second, the characterization of Devonian reservoir properties. Currently, these properties are not well understood; accordingly, XTO investigated a wide range of reservoir thickness, porosity and permeability.

Monitoring Plan

To manage the inherent uncertainty, XTO has contracted with a third party to provide seismicity monitoring using public seismometers augmented by a private array in the area of the proposed well. This will allow for a better determination of baseline seismicity as well as early detection should there be anomalous events. Additionally, XTO will monitor disposal zone reservoir pressure for a minimum period of five years to better understand reservoir properties, including pore pressures. Upon request, XTO will share the results of this work with the EMNRD's UIC staff.

Tim Tyrrell
XTO Geoscience Technical Manager

NOTICE OF APPLICATION FOR FLUID DISPOSAL WELL PERMIT

XTO Energy Inc. OGRID#005380, 500 W. Illinois suite 100, Midland, Texas 79701 is applying to the New Mexico Oil Conservation Division to permit a salt water disposal well into a formation that is not productive of oil and gas.

The applicant proposes to permit a salt water disposal well into a non-productive zone (Devonian, Silurian, and Fusselman) in the Corral Canyon 16 State SWD #1. The proposed well is located 990 FNL & 1280 FWL, Unit Letter D, Section 16, Township 25S, Range 29E, Eddy County, New Mexico. Fluid will be disposed into strata in the subsurface depth interval from 15,100'-16,660' MD with a maximum injection rate of 40,000BWPD and a maximum injection pressure of 5,000psi. All interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South t. Francis Dr., Santa Fe, NM 87505, within 15 days.

CARLSBAD
CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001254216

XTO ENERGY, INC.

6401 HOLIDAY HILL RD, BLDG #5
MIDLAND TX 79701

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

07/12/18

Kevin Kemp
Legal Clerk

Subscribed and sworn before me this
26th of July 2018.

Vicky Felty
State of WI, County of Brown
NOTARY PUBLIC

9-19-21
My Commission Expires

VICKY FELTY
NOTARY
PUBLIC
STATE OF WISCONSIN

Ad#:0001254216
P O:
# of Affidavits :0.00

CARLSBAD
CURRENT-ARGUS

AFFIDAVIT OF PUBLICATION

Ad No.
0001253367

XTO ENERGY, INC.
6401 HOLIDAY HILL RD, BLDG #5

MIDLAND TX 79701

I, a legal clerk of the **Carlsbad Current-Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

07/05/18

Kaira Garcia
Legal Clerk

Subscribed and sworn before me this
26th of July 2018.

Vicky Felty
State of WI, County of Brown
NOTARY PUBLIC

9-19-21
My Commission Expires

Ad#:0001253367
P O : Remuda Basin SWD
# of Affidavits :0.00

NOTICE OF APPLICATION FOR FLUID DISPOSAL WELL PERMIT

XTO Energy Inc. OGRID#005380, 500 W. Illinois suite 100, Midland, Texas 79701 is applying to the New Mexico Oil Conservation Division to permit a salt water disposal well into a formation that is not productive of oil and gas.

The applicant proposes to permit a salt water disposal well into a non-productive zones (Devonian, Silurian, Fusselman,) in the Remuda Basin SWD #1. The proposed well is located 1320 FSL & 1980 FEL, Unit Letter O, Section 25, Township 25S, Range 29E, Eddy County, New Mexico. Fluid will be disposed into strata in the subsurface depth interval from 15,150'-16,650' MD with a maximum injection rate of 40,000BWPD and a maximum injection pressure of 5,000psi. All interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South t. Francis Dr., Santa Fe, NM 87505, within 15 days.
July 5, 2018

VICKY FELTY
NOTARY
PUBLIC
STATE OF WISCONSIN

Goetze, Phillip, EMNRD

From: Donald, Patricia <Patricia_Donald@xtoenergy.com>
Sent: Monday, July 30, 2018 7:56 AM
To: Goetze, Phillip, EMNRD
Subject: FW: SWD Seismicity Letters
Attachments: Statements Regarding Seismicity Corral Canyon SWD Final.docx; Statements Regarding Seismicity BEU 14 Fed 1 SWD Well v1 Final.docx

Good Morning Phil,
Please see seismicity letters attached as requested.
On a separate email sent last week I sent you the new affidavit for the legal ads. Please let me know if you need anything else.
Thank you,

Patricia Donald
Regulatory Analyst
XTO ENERGY
An **ExxonMobil** Subsidiary
6401 Holiday Hill Road, Building #5
Midland, TX 79707
Phone: 432.571.8220
Fax: 817-900-7311
Patricia_Donald@xtoenergy.com

Goetze, Phillip, EMNRD

From: Donald, Patricia <Patricia_Donald@xtoenergy.com>
Sent: Monday, August 27, 2018 2:21 PM
To: Goetze, Phillip, EMNRD
Cc: McMillan, Michael, EMNRD
Subject: RE: Remuda Basin SWD#1 & Corral Canyon 16 State SWD #1
Attachments: 1254216.pdf; 1253367.pdf

Good Afternoon,

I just wanted to get updates on the following applications:
Corral canyon 16 state SWD #1 30-015-44387 (this one states suspended on the website, I am confused as to why?)
Remuda Basin SWD #1 30-015-44388

The last request was for a new affidavit. It was sent to you on 07/26/2018. I have re-attached it here for your convenience.

Please let me know if there is anything else needed from me to continue the approval process of these orders.

Thanks,
Patricia Donald

From: Donald, Patricia
Sent: Monday, August 20, 2018 9:46 AM
To: 'Goetze, Phillip, EMNRD' <Phillip.Goetze@state.nm.us>
Subject: RE: Remuda Basin SWD#1 & Corral Canyon 16 State SWD #1

Good Morning Phil,
I am sorry to pester you. Just want to see where we are on these orders.

Thanks,
Patricia

From: Donald, Patricia
Sent: Monday, August 13, 2018 9:16 AM
To: 'Goetze, Phillip, EMNRD' <Phillip.Goetze@state.nm.us>
Subject: Remuda Basin SWD#1 & Corral Canyon 16 State SWD #1

Good Morning Phil,
Any update on these orders?

Thank,
Patricia Donald
432-571-8220

From: Donald, Patricia
Sent: Thursday, July 26, 2018 3:06 PM
To: 'Goetze, Phillip, EMNRD' <Phillip.Goetze@state.nm.us>
Subject:

Hello Phil, per our phone conversation a few weeks ago, please see affidavit attached for the SWD permit of Remuda Basin SWD #1 and Corral Canyon 16 State SWD 1. These legal ads state all the formations and not just the Devonian.

Thanks,

Patricia Donald
Regulatory Analyst
XTO ENERGY
An **ExxonMobil** Subsidiary
6401 Holiday Hill Road, Building #5
Midland, TX 79707
Phone: 432.571.8220
Fax: 817-900-7311
Patricia_Donald@xtoenergy.com

FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

DATE RECORD: First Rec: 12/12/17 **Admin Complete:** 07/05/18 **or Suspended:** 12/15/17* Add. Request/Reply (add)

ORDER TYPE: WFX / PMX (SWD) Number: 1748 Order Date: 09/04/18 Legacy Permits/Orders: _____

*Appl - no director; Applicant expanded notice & provided ID assessment

Well No. 1 Well Name(s): Corral Canyon 16 State SWD

API : 30-0 15-44387 Spud Date: TBD New or Old (EPA): New (*UIC Class II Primacy 03/07/1982*)

Footages 990' FNL / 1280' FWL Lot — or Unit D Sec 16 Tsp 25S Rge 29E County Eddy

General Location: ~7.5mi SE of Malaga; 4.7 mi east of US285 Pool: SWD; Devonian-Silurian Pool No.: 97869

BLM 100K Map: Carlsbad Operator: XTO OGRID: 5380 Contact: Patricia Donald

COMPLIANCE RULE 5.9: Total Wells: 1276 Inactive: 10 **Fincl Assur:** Yes Compl. Order? No **IS 5.9 OK?** Yes **Date:** 09/04/18 (PRS)

WELL FILE REVIEWED (✓) Current Status: APD approved

WELL DIAGRAMS: NEW: Proposed (✓) or **RE-ENTER:** Before Conv. ( ) After Conv. ( ) Logs in Imaging: _____

Planned Rehab Work to Well: [Additional notice and risk assessment provided following second newspaper notice]

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)		Cement Sx or Cf	Cement Top and Determination Method
Planned ✓ or Existing — **Surface**	24 / 20	0 to 850	Stage Tool	1010	Circ. to surface
Planned ✓ or Existing — **Interm/Prod**	17 1/2 / 13 3/8	0 to 2947	—	1335	Circ to surface
Planned ✓ or Existing — **Interm/Prod**	12 1/4 / 9 5/8	0 to 10300	Possible DV	2635	Circ. to surface
Planned ✓ or Existing — **Prod/Liner**	8 3/4 / 7	10200 to 15100	—	585	Calc. TOL
Planned — or Existing — **Liner**	—	—	—	—	—
Planned ✓ or Existing — **OH / PERF**	6	15100 to 16600	Inj Length		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		Mississippian	14571
Confining Unit: Litho Struc. Por	±50	Woodford	14923
Proposed Inj Interval TOP:	15100	Devonian	15081
Proposed Inj Interval BOTTOM:	16660	Silurian	NR
Confining Unit: Litho. Struc. Por.	≤ 16660	Montoya	NR
Adjacent Unit: Litho. Struc. Por.		Simpson	NR

Completion/Operation Details:

Drilled TD — PBTD —

NEW TD 16660 NEW PBTD —

NEW Open Hole (✓) or NEW Perfs ( )

Tubing Size 4.5 in. Inter Coated? Yes

Proposed Packer Depth 15000 ft

Min. Packer Depth 15000 (100-ft limit)

Proposed Max. Surface Press. 5000 psi

Admin. Inj. Press. 3020 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P No Noticed? No **BLM Sec Ord** (NA) **WIPP** (NA) Noticed? NA **Salt/Salado** T: 893 B: 2741 **NW: Cliff House fm** —

FRESH WATER: Aquifer Alluvial / Rustler Max Depth ~250 **HYDRO AFFIRM STATEMENT By Qualified Person** (✓)

NMOSE Basin: Carlsbad **CAPITAN REEF:** thru ___ adj ___ NA (✓) **No. GW Wells in 1-Mile Radius?** 0 FW Analysis? NA

Disposal Fluid: Formation Source(s) Bone Spring / Wolfcamp Analysis? Yes On Lease ( ) Operator Only (✓) or Commercial ( )

Disposal Interval: Inject Rate (Avg/Max BWPD): 20000 / 40000 Protectable Waters? No Source: Historical System: Closed or Open

HC Potential: Producing Interval? No Formerly Producing? No Method: Logs/DST/P&A/Other Require mudlog 2-Mi Radius Pool Map (✓)

AOR Wells: 1/2-M Radius Map and Well List? NA **No. Penetrating Wells:** 0 [AOR Horizontals: — AOR SWDs: —]

Penetrating Wells: No. Active Wells 0 Num Repairs? — on which well(s)? — Diagrams? ___

Penetrating Wells: No. P&A Wells 0 Num Repairs? — on which well(s)? — Diagrams? ___

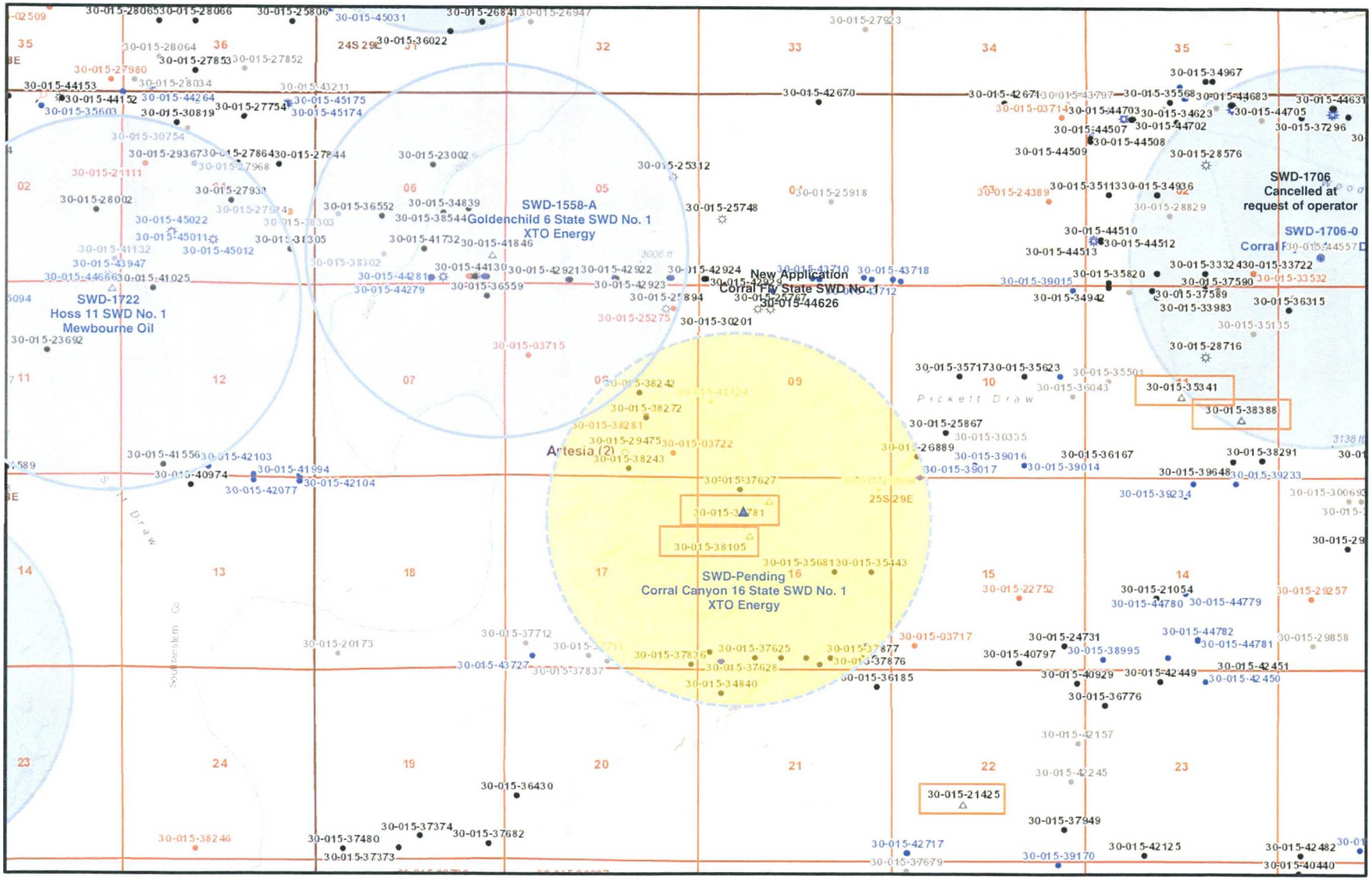
NOTICE: Newspaper Date Second 07/05/18 Mineral Owner SLO Surface Owner SLO N. Date 12/7/17

RULE 26.7(A): Identified Tracts? Yes Affected Persons: BLM / SW Energy / Occidental / COG / Devon / EOG / Burlington / Vanguard / Bayer Stroud N. Date 12/7/17

Order Conditions: **Issues:** CBL on Liner / 200' tie-in / HC potential / formation picks / Standard and Cit issue

Additonal COAs: CBL on liner / notice - remedial action to District / BH pressure record

Pending Application for High-Volume Devonian Disposal Well
C-108 Application for Corral Canyon 16 State SWD No. 1 – XTO Energy, Inc.



Corral Canyon 16 State SWD No. 1; XTO Energy, Inc.

API 30-015-44387; Application No. pMAM1733465530;
Proposed interval: 15,100' to 16,660'; proposed 4-inch tubing, but has large-capacity potential

Closest Devonian Wells with Large-Volume Potential: Hoss 11 SWD No. 1 (30-015-44666) and Goldenchild 6 State SWD No. 1 (30-015-41846); Goldenchild currently injecting <6500 BWPD; remaining SWD locations are for shallower disposal intervals (mostly Delaware Mountain Group).

Inactive Well List

Total Well Count: 1276 Inactive Well Count: 10
Printed On: Tuesday, September 04 2018

District	API	Well	ULSTR	OCD Unit	Ogrid	Operator	Lease Type	Well Type	Last Production	Formation/Notes	Status	TA Exp Date
1	30-025-34665	ARROWHEAD GRAYBURG UNIT #344	E-01-22S-36E	E	5380	XTO ENERGY, INC	F	O	08/2016	GRAYBURG		
2	30-015-24623	AVALON DELAWARE UNIT #246	J-30-20S-28E	J	5380	XTO ENERGY, INC	S	O	01/2008	INT TO P&A APVD 10-9-13 / LRD	T	1/1/2018
2	30-015-24048	AVALON DELAWARE UNIT #546	J-31-20S-28E	J	5380	XTO ENERGY, INC	F	S	04/2017			
2	30-015-25748	BAR 4 FEDERAL #001	L-04-25S-29E	L	5380	XTO ENERGY, INC	F	G	05/2017			
1	30-025-04631	EUNICE MONUMENT SOUTH UNIT #389	E-14-21S-36E	E	5380	XTO ENERGY, INC	F	O	01/2017	G-SA/TA RETURN TO PROD 12/27/08		
1	30-025-06811	F F HARDISON B #008	I-27-21S-37E	I	5380	XTO ENERGY, INC	P	G	02/2017	BLINEBRY RET TO PROD 02/06/10		
3	30-045-31275	NV NAVAJO 20 #003	K-20-29N-14W	K	5380	XTO ENERGY, INC	N	G	05/2017	FC/ RTP 2-22-11		
3	30-045-31041	NV NAVAJO 21 #004	I-21-29N-14W	I	5380	XTO ENERGY, INC	N	G	05/2017	W KUTZ PC/FC/ RTP 3-8-11		
2	30-015-36776	PATRON 23 FEDERAL #001H	D-23-25S-29E	D	5380	XTO ENERGY, INC	F	O	12/2015	CORRAL DRAW BONE SPRING		
3	30-045-29395	UTE #022	U00-17-32N-14	G	5380	XTO ENERGY, INC	U	G	08/2016	BARKER DOME DESERT CREEK/INT TO DEEPEN		

WHERE Operator:5380, County:All, District:All, Township:All, Range:All, Section:All, Production(months):15, Excludes Wells Under ACOI, Excludes Wells in Approved TA Period