

RECEIVED

SEP 29 2009

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NOG 050317310
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name NAVAJO ALLOTMENT
2. Name of Operator XTO Energy Inc.		7. If Unit or CA Agreement, Name and No PENDING
3a. Address 382 CR 3100 Aztec, NM 87410		8. Lease Name and Well No. VALENTINE #21 H
3b. Phone No. (include area code) 505/ 333-3100		9. API Well No. 30-045- 35028
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 1938' FSL x 410' FWL At proposed prod. zone 700' FSL x 700' FEL		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
14. Distance in miles and direction from nearest town or post office* 23 miles SE of Bloomfield P.O.		11. Sec., T. R. M. or Blk. and Survey or Area (L) Sec 21, T25N, R10W
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 410'	16. No. of acres in lease 160	17. Spacing Unit dedicated to this well FC: S/2 320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A	19. Proposed Depth 5622' MD/1685' TVD	20. BLM/BIA Bond No. on file BIA104312789
21. Elevations (Show whether DF, KDB, RT, GL, etc) 6682' Ground Elevation	22. Approximate date work will start* 01/01/2010	23. Estimated duration 2 Weeks

24. Attachments

RCVD FEB 1 '10

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form:

OIL CONS. DIV.

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2. A Drilling Plan | |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 5. Operator certification |
| | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

DIST. 3

25. Signature Malia Villers	Name (Printed/Typed) Malia Villers	Date 09/23/2009
Title Permitting Tech.		

Approved by (Signature) [Signature]	Name (Printed/Typed) AFM	Date 1/29/2010
Title AFM		Office FFO

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

BLM'S APPROVAL OR ACCEPTANCE OF THIS

*(Instructions on page 2)

Hold C104

for Direct or Indirect Survey
and "As Drilled" plat

ACTION DOES NOT RELIEVE THE LESSEE AND
OPERATOR FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS

NOTIFY AZTEC OCD 24-HRS.

to NMOCD

PRIOR TO CASING & CEMENT

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4

FEB 03 2010

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

SEP 29 2009

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30.045-35028	² Pool Code 71629	³ Pool Name Basin FRUITLAND COAL
⁴ Property Code 38006	⁵ Property Name VALENTINE	⁶ Well Number 21
⁷ GRID No. 5380	⁸ Operator Name XTO ENERGY, INC.	⁹ Elevation 6682

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	21	25 N	10 W		1938	SOUTH	410	WEST	SAN JUAN

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	21	25 N	10 W		700	SOUTH	700	EAST	SAN JUAN

¹² Dedicated Acres S/2, 320 AC ±	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16 N 89°49'00" E 2635.23'	N 89°53'54" E 2631.42'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <u>Maria Villers</u> Date: <u>9/23/09</u> Printed Name: <u>Maria Villers</u>
SECTION 21		18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: <u>3/12/08</u> Signature and Seal of Professional Surveyor: <u>Robert L. Pounds</u> Certificate Number: <u>6846</u>
2631.77' N 0°09'47" E	2641.93' S 0°04'29" E	
410' NAD 83 LAT: 36.3846253° N LONG: 107.9094893° W	700' NAD 83 LAT: 36.3812191° N LONG: 107.8953341° W	
2631.25' N 0°06'32" W	2636.71' S 0°00'55" W	
1938'	700'	
N 89°56'40" W	N 89°55'05" W	

XTO Energy, Inc.

Planning Report

Database: EDM 2003 21 Single User Db
Company: XTO Energy
Project: San Juan Basin (NAD 83)
Site: Valentine #21
Well: Valentine #21
Wellbore: Valentine #21
Design: Permitted Wellbore

Local Co-ordinate Reference: Well Valentine #21
TVD Reference: Rig KB @ 6694.0ft (Aztec 507)
MD Reference: Rig KB @ 6694.0ft (Aztec 507)
North Reference: True
Survey Calculation Method: Minimum Curvature

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
5,622.3	1,685.0	4 1/2"	4-1/2	6-1/8
225.0	225.0	9 5/8"	9-5/8	12-1/4
2,230.1	1,685.0	7"	7	8-3/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
767.0	767.0	Ojo Alamo SS		0.00	
921.3	920.0	Kirtland Shale		0.00	
1,263.3	1,236.0	Fruitland Formation		0.00	
2,049.6	1,668.0	Lower Fruitland Coal		0.00	



Well Name: Valentine #21

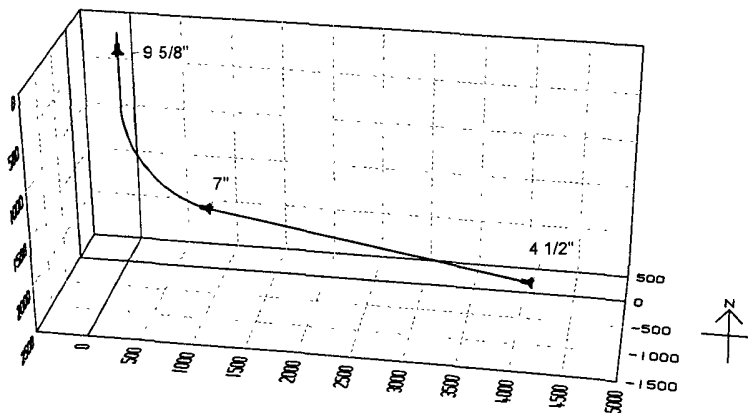
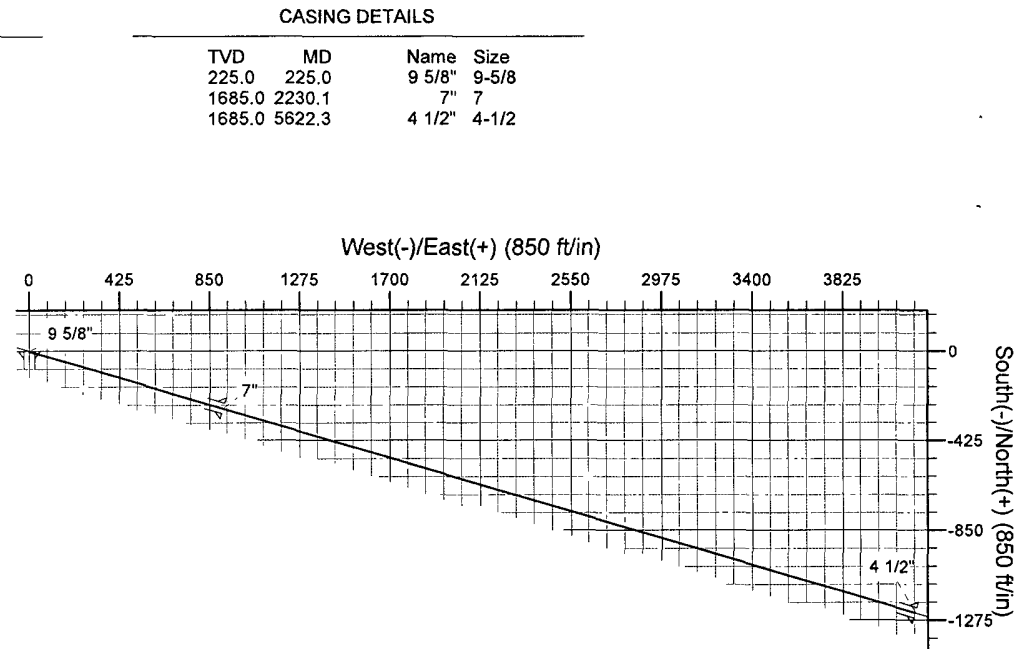
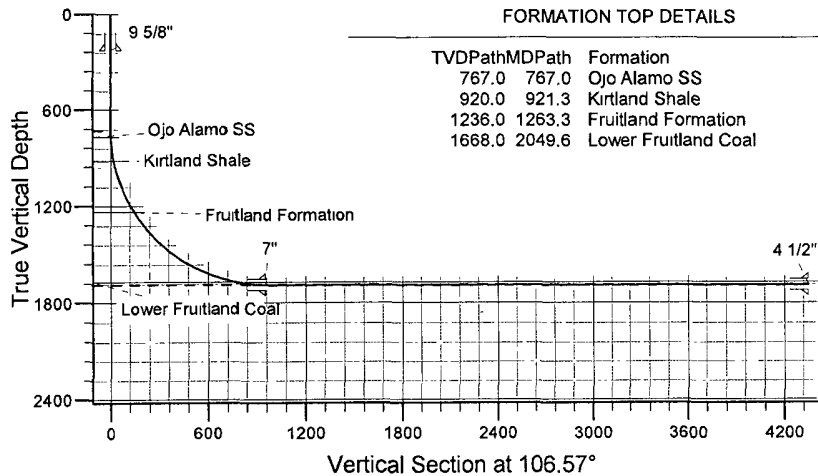
San Juan Division
Drilling Department

Calculation Method: Minimum Curvature
Geodetic Datum: North American Datum 1983
Lat. 36° 23' 4.651 N
Long: 107° 54' 34.161 W



Azimuths to True North
Magnetic North: 10.12°

Magnetic Field
Strength: 50722.8snT
Dip Angle: 63.18°
Date: 7/29/2009
Model: IGRF200510



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	730.1	0.00	0.00	730.1	0.0	0.0	0.00	0.00	0.0	
3	2230.1	90.00	106.57	1685.0	-272.3	915.3	6.00	106.57	954.9	
4	5622.3	90.00	106.57	1685.0	-1239.7	4166.7	0.00	0.00	4347.2	Proposed BHL--Valentine #21

XTO ENERGY INC.

Valentine #21

APD Data

January 27, 2010

Location: 1938' FSL x 410' FWL Sec 21, T25N, R10W County: San Juan State: New Mexico
Bottomhole Location: 700' FSL x 700' FEL Sec 21, T25N, R10W

GREATEST PROJECTED TVD: 1685'

APPROX GR ELEV: 6682'

GREATEST PROJECTED MD: 5622'

Est KB ELEV: 6694' (12' AGL)

OBJECTIVE: Fruitland Coal

1. MUD PROGRAM:

INTERVAL	0' to 225'	225' to 2230'	2230' to TD
HOLE SIZE	12.25"	8.75"	6.125"
MUD TYPE	FW/Spud Mud	FW/Polymer	Air/Mist
WEIGHT	8.6-9.0	8.4-8.8	NA
VISCOSITY	28-32	28-32	NA
WATER LOSS	NC	NC	NC

Remarks: Use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. Raise viscosity at TD for logging. Reduce viscosity after logging for cementing purposes. Use Fruitland Coal produced water as make-up water for mist fluid. Pump enough fluid to dampen vibration at directional BHA. If directional control is not maintainable in air/mist environment convert to polymer mud.

2. CASING PROGRAM:

Surface Casing: 9.625" casing to be set at $\pm 225'$ in a 12-1/4" hole filled with 9.20 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll ¹	SF Burst ²	SF Ten ³
0'-225'	225'	36.0#	J-55	ST&C	2020	3520	394	8.921	8.765	18.76	32.7	48.6

Intermediate Casing: 7" casing to be set at $\pm 2230'$ MD, 1685' TVD in 8.75" hole filled with 9.20 ppg mud.

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll ¹	SF Burst ²	SF Ten ³
0'-2230	2230'	23.0#	J-55	ST&C	3270	4360	284	6.276	6.151	4.06	5.41	5.54

Production Casing: 4.5" casing to be set at $\pm 5622'$ MD, 1685' TVD in 6.125" hole filled with 8.4 ppg mud.

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll ¹	SF Burst ²	SF Ten ³
2170'-5622'	3846'	10.5	J-55	ST&C	4010	4790	132	4.052	3.927	5.45	6.51	3.27

¹Collapse SF is based on evacuated annulus and hydrostatic at TVD.

²Burst SF is based on evacuated casing and hydrostatic at TVD.

³Tensile SF is based on hanging air weight of casing in a vertical hole at measured depth.

3. WELLHEAD:

- A. Casing Head: WHI QDF System (or equivalent), 9-5/8" x 7", 3,000 psig WP (4,000 psig test) with 9-5/8" 8rnd thread ST&C pin end on bottom and 4-1/2" slips on top.
- B. Tubing Head: WHI W2F (or equivalent), 7.063" nominal, 5,000 psig WP (5,000 psig test), 5-1/2" slip-on or weld-on.

4. CEMENT PROGRAM (Slurry design may change slightly, but the plan is to circulate cement to surface on both casing strings):

- A. Surface: 9.625", 36.0#, J-55, ST&C casing to be set at $\pm 225'$ in 12-1/4" hole.

140 sx of Type III cement (or equivalent) typically containing accelerator and LCM, mixed at 14.5 ppg, 1.39 ft³/sk, & 6.70 gal wtr/sk.

Total slurry volume is 177 ft³, 100% excess of calculated annular volume to 250'.

- B. Production Casing: 7", 23#/ft, J-55, ST&C casing to be set at $\pm 2230'$ MD, 1685' TVD in 8.75" hole.

LEAD:

± 145 sx of Premium Lite FM or CBM Lite typically containing accelerator, LCM, dispersant, and fluid loss additives at 12.1 ppg, 2.22 ft³/sk, & 12.04 gal wtr/sk.

TAIL:

± 100 sx of Type III or V cement typically containing accelerator, LCM, dispersant, and fluid loss additives at 14.2 ppg, 1.48 ft³/sk, & 7.34 gal wtr/sk.

Total estimated slurry volume for the 7" production casing is 470 ft³.

- C. Production Liner: 4.5", 10.5#/ft, J-55, ST&C casing is to be set at 5622' MD, 1685' TVD in 6.125" hole.

The production liner will be set using an uncemented liner hanger. The liner may be tied back to surface during the completion of the well.

Note: The slurry design may change slightly based upon actual conditions. Final cement volumes will be determined from the caliper logs (if available) plus 40%. It will be attempted to circulate cement to the surface.

5. LOGGING PROGRAM:

- A. Mud Logger: A geologic consultant or unmanned mud logging unit will begin logging the well once the surface shoe is drilled out and remain on the well to TD.
- B. Open Hole Logs as follows: Gamma Ray from Surface shoe to TD.

6. **FORMATION TOPS:**

See attached Directional Program.

**** Maximum anticipated BHP should be <2,000 psig (<0.30 psi/ft) ****

7. **COMPANY PERSONNEL:**

Name	Title	Office Phone	Home Phone
Justin Niederhofer	Drilling Engineer	505-333-3199	505-320-0158
Bobby Jackson	Drilling Superintendent	505-333-3224	505-486-4706
John Klutsch	Project Geologist	817-885-2800	--

JDN

1/27/10

CHOKE MANIFOLD SCHEMATIC FOR DRILLING OPERATIONS CLASS 1 (2M) NORMAL PRESSURE

1. Stake all lines from choke manifold to pit.
2. Pressure test choke manifold after installation.
3. Pressure test manifold at the same time with the BOP Stack. Test manifold to the same test pressures.

TESTING PROCEDURE

