

OCD-ARTESIA

R-111-POTASH

Form 3160-3  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. <b>BHLN-MD55683</b> <b>K0-6600-0001</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator <b>XTO ENERGY INC</b> <b>&lt;5380&gt;</b>		7. If Unit or CA Agreement, Name and No. <b>NM 170992x</b>
3a. Address <b>200 N. LORAIN ST., STE. 800</b> <b>MIDLAND, TX 79701</b>		8. Lease Name and Well No. <b>NASH UNIT 49H</b> <b>&lt;303152&gt;</b>
3b. Phone No. (include area code) <b>432-682-8873</b>		9. API Well No. <b>30-015-38663</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <b>510' FNL &amp; 500' FEL, SEC 13, T23S R29E, UL: A</b> At proposed prod. zone <b>424' FNL &amp; 340' FEL, SEC 18, T23S, R30E, UL: A</b>		10. Field and Pool, or Exploratory <b>NASH DRAW-BRUSHY CANYON</b> <b>&lt;47545&gt;</b>
11. Sec., T. R. M. or Blk. and Survey or Area <b>SEC 13, T23S, R29E, UL: A</b>		
14. Distance in miles and direction from nearest town or post office* <b>APPROX 25 MILES EAST SOUTEAST OF CARLSBAD, NM</b>		12. County or Parish <b>EDDY</b>
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>340' (BHL)</b>		13. State <b>NM</b>
16. No. of acres in lease <b>5123 UNIT</b>		17. Spacing Unit dedicated to this well <b>320</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>TVD: 6880' 7030'</b> <b>MD: 12055'</b>		20. BLM/BIA Bond No. on file <b>UTB000138</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3001'</b>		22. Approximate date work will start* <b>10/01/2010</b>
23. Estimated duration <b>35 DAYS</b>		

24. Attachments

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

- |   |  |
|---|--|
| 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.   | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <b>Chip Amrock</b>	Name (Printed/Typed) <b>CHIP AMROCK</b>	Date <b>07/16/2010</b>
Title <b>SR. DRILLING ENGINEER</b>		

Approved by (Signature) <b>/s/ Jesse J. Juen</b>	Name (Printed/Typed) <b>/s/ Jesse J. Juen</b>	Date <b>MAR 07 2011</b>
Title <b>STATE DIRECTOR</b>	Office <b>NM STATE OFFICE</b>	

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.

**APPROVAL FOR TWO YEARS**

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.

\*(Instructions on page 2)

Carlsbad Controlled Water Basin



SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

K2 04/04/11

**DRILLING PLAN: BLM COMPLIANCE**  
(Supplement to BLM 3160-3)

XTO Energy Inc.  
Nash Well #49H

Projected TD: 12055 MD / TVD: 6880'  
SHL: 510' FNL & 500' FEL , SECTION 13, T23S, R29E (K)  
BHL: 424' FNL & 340' FEL, SECTION 18, T23S, R30E (F)  
Eddy County, NM  
Lease #: K0-6600-0001

**1. GEOLOGIC NAME OF SURFACE FORMATION:**

A. Salido

**2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:**

Formation	Subsea Depth	Well Depth	Water / Oil / Gas
Rustler		270'	Water
Base of Castille		3190'	Water
Bell Canyon		3230'	Water/Oil/Gas
Cherry Canyon		4081'	Water/Oil/Gas
Top Brushy Canyon		5658'	Water/Oil/Gas
Base Brushy Canyon		6680'	Water/Oil/Gas
Brushy Canyon E5 Zone		6852'	Water/Oil/Gas
Target/Land Curve		6880'	Water/Oil/Gas
TD/MD		12055'	Water/Oil/Gas

\*\*\* Hydrocarbons @ Brushy Canyon

No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13-3/8" casing @ 225' and circulating cement back to surface. Potash/fresh water sands will be protected by setting 9-5/8" casing at 3200' and circulating cement to surface. The Brushy Canyon intervals will be isolated by setting 7" casing to the end of the directional curve at 7400' +/- and cementing back to surface. A 6-1/8" lateral hole will be drilled to MD/TD and 4-1/2" casing with Halliburton swell packers will be run for completion.

**3. CASING PROGRAM:**

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' - 295' 225'	13-3/8"	48#	STC	H-40	New	2.24	.96	4.56
12-1/4"	0' - 3300' 3200'	9-5/8"	36#	LTC	J-55	New	2.12	1.38	3.35
8-3/4"	0' - 7400'	7"	26#	LTC	HCP-110	New	2.6	1.6	2.87
6-1/8"	7250 - 12055'	4-1/2"	11.6#	LTC	P-110	New	2.77	1.96	4.73

**WELLHEAD:**

See  
COA

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- A. Starting head: 13-5/8" 3000 psi top flange x 13-3/8" SOW bottom (to be removed upon setting intermediate casing)
- B. Lower casing head: 11" 3000 psi top flange x 9-5/8" SOW bottom
- C. Casing hanger 11" bowl x 7" casing
- D. 'B' Section / Tubing spool: 11" 3000 psi bottom flange x 7-1/16" 5000 psi top flange

4. **CEMENT PROGRAM: (Note yields and DV tool depts. If multiple stages)**

- A. **Surface Casing:** 13-3/8", 48#, NEW H-40, STC casing to be set at ~~±295'~~ 225' See COA  
 500 sx HalCem-C + 2% CaCl (14.80 ppg, 1.35 cu ft/sx, 6.39gal/sx wtr)  
 Compr Strengths: 12 hr -900 psi 24 hr - 1500 psi  
 \*\*\*All volumes 100% excess. Cement to surface.

In the event that loss circulation is encountered while drilling the surface hole ( i.e. Nash #39H, #40H, #41H), an alternate cementing procedure will be to pump 150 sx Thixotropic + 10 pps CalSeal + 10 pps Gilsonite + 2% CaCl (14 ppg, 1.7 cu ft/sx) Compr Strengths 24 hr - 651 psi 48 hr - 847 psi followed by 200 sx HalCem C + 2% CaCl (properties above) Run temp survey to locate top of cement, top out with 1" to surface with the required amount of "Thixotropic" cement. These events and procedures to be coordinated and communicated with the designated BLM representative.

- B. **1st Interm. Casing:** 9-5/8", 36#, NEW J-55, LTC casing to be set at ~~± 3300'~~ 3200' See COA

**Stage 1:**

Lead: 20 bbls FW, then 900 sx EconoCem-HLC + 5% salt (mixed at 12.8 ppg, 1.92 ft<sup>3</sup>/sk, 10.44 gal/sx wtr) Compr Strengths 12 hr - 319 psi 24 hr - 653 psi

Tail: 250 sx HalCem-C + 1% CaCl (mixed at 14.8 ppg, 1.34 ft<sup>3</sup>/sk, 6.36 gal/sx wtr)  
 Compr Strengths: 12 hr - 900 psi 24 hr - 1500 psi  
 \*\*\*All volumes 100% excess. Cement to surface.

- C. **2<sup>nd</sup> Interm. Casing:** 7", 26#, NEW HCP-110, LTC casing to be set at ± 7400' w/DVT @ 5500'

**Stage 1:**

Lead: 650 sx CorossaCem-H + 0.5% LAP-1 + 0.1% HR-800 + 5 lb/sx Gilsonite (14.4ppg, 1.23 cuft/sx, 5.18 gal/sx wtr). Compr Strengths: 24 hr - 681 psi 48 hr - 1561 psi.

Tail (Csg Shoe Cmt): 150 sx HalCem-H + .5% LAP-1 + .25% CFR-3 + 5 pps Gilsonite + .25 lb/sx D-air 3000 (15.8 ppg, 1.17 cuft/sx, 4.58 gal/sx)  
 Compr Strengths - 24 hr - 2203 psi 48 hr - 2788 psi \*\*\* Cement to 5500'.

**Stage 2: (thru DV Tool @ 5500' up to base of water flow area around 4000')**

Lead: 100 sx EconoCem HLC + 5% Salt (mixed at 12.8 ppg, 1.92 cuft/sx, 10.44 gal/sx wtr)  
 Compr Strengths: 12 hr - 444 psi 24 hr - 755 psi

Tail: 150 sx HalCem C (mixed at 14.8 ppg, 1.33 cuft/sx, 6.34 gal/sx wtr)  
 Compr Strengths: 12 hr - 1404 psi 24 hr - 1909 psi

**Cement to be pumped down the 7" x 9-5/8" annulus to eliminate and isolate the water flow area - cement to fill from 4000' to surface.**

Lead: 500 sx EconoCem HLC + 5% Salt (mixed at 12.8 ppg, 1.92 cuft/sx, 10.44 gal/sx wtr)  
Compr Strengths: 12 hr – 444 psi 24 hr – 755 psi

Tail: 50 sx HalCem C (mixed at 14.8 ppg, 1.33 cuft/sx, 6.34 gal/sx wtr)  
Compr Strengths: 12 hr – 1404 psi 24 hr – 1909 psi \*\*\* Cement to Surface.

## 5. PRESSURE CONTROL EQUIPMENT:

The blow out preventer equipment (BOP) for this well consists of two groups of mechanical pressure equipment – 1) a 13-5/8" 3M Hydril and 2) an 11" 5M double ram BOP with Hydril and manifold.

The 13-5/8" 3M Hydril will be rigged up on the 13-3/8" surface casing and utilized while drilling the 12-1/4" hole to 3300'. This Hydril will be tested to 1500 psi. Once the 9-5/8" casing is cemented, the 13-5/8" 3M Hydril will be removed and a 11" 3M x 9-5/8" bradenhead flange will be installed. The 11" 5M BOP & equipment will then be nipped up and tested. With the 11" 3M bradenhead flange being the limiting factor, the 11" 5M BOP will be tested to 3000 psi. The 3000 psi test pressure is sufficient for this well with formation pressures of 2500 psi or less. The 11" 5M BOP diagram is attached.

## 6. PROPOSED MUD CIRCULATION SYSTEM:

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 295' 225	17-1/2"	FW/Native	8.5-8.8	35-40	NC
280' to 3300' +/-	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
3300' to 7400' . 3200	8-3/4"	Cut Brine/ Poly-Sweeps	9.2-9.6	29-32	NC-30
7400' to 12055'	6-1/8"	Cut Brine/Poly- Starch	8.6-9	32-38	NC -30

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Spud with fresh water/native mud. Drill out from under 13-3/8" surface casing with brine solution. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Use available solids controls equipment to help keep mud weight down after mud up. Rig up Dynamic Energy Systems' solids control equipment to operate as a closed loop system.

## 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- H2S monitors will be on location when drilling the 12-1/4" hole.

## 8. LOGGING, CORING AND TESTING PROGRAM:

See  
COA

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- A. Mud Logger: Suttles Mud Logging Unit (2 man) on @ 6000'.  
Catch 10' samples from 6000' to 12055' (TD/MD).  
Send 1 set of dry samples to Midland Sample Library.

## 9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

See COA — None anticipated. Max bottom hole pressure should not exceed 2500psi. BHT of 175 F is anticipated. H<sub>2</sub>S can be present from 4600 – TD. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

## 10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

A. Road and location construction will begin after Santa Fe & BLM has approved APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as rig will be available. Move in operations and drilling is expected to take 40 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

## 11. SPECIAL INSTRUCTIONS:

- A. Reports should be filled out on the XTO Drilling Report form, and the Casing/Cementing Detail Forms provided.
- B. Deviation:  
Surface Hole: Maximum of 1° and not more than 1° change per 100'.  
Intermediate Hole: Maximum of 4° and not more than 1.5° change per 100'.  
Production hole: Maximum of 6° and not more than 1.5° change per 100'.  
**Note: Maximum distance between surveys is 500'.**
- C. WOC a minimum of 12 hours before drilling out shoe joint on surface and intermediate casing strings. Use minimal WOB and RPM until drill collars are below the shoe joints.
- D. Check BOP blind rams each trip and pipe rams each day. Strap out of hole for logging and/or casing jobs.
- E. A trash trailer will be provided on each location. Keep trash picked up and the location as clean as possible. All drilling line, oil filters, etc. should be hauled away at the Drilling Contractor's expense. At the conclusion of drilling operations, the contents of the trash trailer will be disposed of into a commercial sanitary landfill.
- F. The reserve pits should be lined with a plastic liner in order to contain the drill cuttings and drilling fluids. At the conclusion of the drilling operations, all re-usable drilling fluid should be moved to the next well in the drilling order.

## HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

### Hydrogen Sulfide Training:

All regularly assigned personnel, contracted or employed by XTO Energy, Inc. will receive training from qualified  
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instructor(s) in the following areas prior to commencing drilling possible hydrogen sulfide bearing formations in this well:

The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)

The proper use and maintenance of personal protective equipment and life support systems.

The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing area, evacuation procedures & prevailing winds.

The proper techniques for first aid and rescue procedures.

**Supervisory personnel will be trained in the following areas:**

The effects of H<sub>2</sub>S on metal components. If high tensile tubulars are to be utilized, personnel will be trained in their special maintenance requirements.

Corrective action & shut-in procedures when drilling or reworking a well & blowout prevention / well control procedures.

The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan

**H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS:**

**Well Control Equipment:**

Flare Line w/continuous pilot. Choke manifold with a minimum of one remote choke.

Blind rams and pipe rams to accommodate all pipe sizes w/properly sized closing unit.

Auxiliary equipment to include: annular preventer, ude-gas separator, rotating head & flare.

**Protective Equipment for Essential Personnel:**

Mark II Survive-air 30 minute units located in dog house & at briefing areas, as indicated on wellsite diagram.

**H<sub>2</sub>S Detection and Monitoring Equipment:**

Two portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S levels of 20 ppm are reached.

One portable H<sub>2</sub>S monitor positioned near flare line.

**H<sub>2</sub>S Visual Warning Systems:**

Wind direction indicators are shown on wellsite diagram.

Caution / Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

**Mud Program:**

The Mud Program has been designed to minimize the volume of H<sub>2</sub>S circulated to the surface. Proper mud weights, safe drilling practices and the use of H<sub>2</sub>S scavengers will minimize hazards when penetrating H<sub>2</sub>S bearing zones. A mud-gas separator will be utilized as needed.

**Metallurgy:**

All drill strings, casing, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and line and valves will be suitable for H<sub>2</sub>S service.

**Communication:**

Cellular telephone communications in company vehicles, rig floor and mud logging trailer.



# Planned Wellpath Report

Prelim\_1  
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Operator	XTO Energy Inc.	Slot	No. 49H SHL
Area	Eddy County, NM	Well	No. 49H
Field	(Nash) Sec 13, T23S, R29E	Wellbore	No. 49H PWB
Facility	Nash Unit No. 49H		

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999927	Report Generated	7/8/2010 at 4:28:25 PM
Convergence at slot	0.22° East	Database/Source file	WA_Midland/No. 49H_PWB.xml

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	624366.20	477026.30	32°18'38.951"N	103°55'50.818"W
Facility Reference Pt			624366.20	477026.30	32°18'38.951"N	103°55'50.818"W
Field Reference Pt			624366.20	477026.30	32°18'38.951"N	103°55'50.818"W

Calculation method	Minimum curvature	Rig on No. 49H SHL (KB) to GL	15.00ft
Horizontal Reference Pt	SL	Rig on No. 49H SHL (KB) to Mean Sea Level	3016.00ft
Vertical Reference Pt	Rig on No. 49H SHL (KB)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 49H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.07°



## Planned Wellpath Report

Prelim\_1  
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Operator	XTO Energy Inc.	Slot	No. 49H SHL
Area	Eddy County, NM	Well	No. 49H
Field	(Nash) Sec 13, T23S, R29E	Wellbore	No. 49H PWB
Facility	Nash Unit No. 49H		

### WELLPATH DATA (63 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	89.073	0.00	0.00	0.00	0.00	624366.20	477026.30	32°18'38.951"N	103°55'50.818"W	0.00	Tie On
6072.00	0.000	89.073	6072.00	0.00	0.00	0.00	624366.20	477026.30	32°18'38.951"N	103°55'50.818"W	0.00	EST. KOP
6172.00†	7.000	89.073	6171.75	6.10	0.10	6.10	624372.30	477026.40	32°18'38.952"N	103°55'50.747"W	7.00	
6272.00†	14.000	89.073	6270.02	24.31	0.39	24.31	624390.51	477026.69	32°18'38.954"N	103°55'50.535"W	7.00	
6372.00†	21.000	89.073	6365.33	54.37	0.88	54.36	624420.55	477027.18	32°18'38.958"N	103°55'50.184"W	7.00	
6472.00†	28.000	89.073	6456.27	95.81	1.55	95.80	624461.99	477027.85	32°18'38.963"N	103°55'49.702"W	7.00	
6572.00†	35.000	89.073	6541.48	148.03	2.39	148.01	624514.20	477028.69	32°18'38.969"N	103°55'49.093"W	7.00	
6672.00†	42.000	89.073	6619.69	210.24	3.40	210.21	624576.40	477029.70	32°18'38.977"N	103°55'48.368"W	7.00	
6772.00†	49.000	89.073	6689.74	281.52	4.55	281.48	624647.66	477030.85	32°18'38.985"N	103°55'47.538"W	7.00	
6872.00†	56.000	89.073	6750.58	360.81	5.84	360.76	624726.93	477032.14	32°18'38.995"N	103°55'46.614"W	7.00	
6972.00†	63.000	89.073	6801.30	446.91	7.23	446.86	624813.02	477033.53	32°18'39.006"N	103°55'45.611"W	7.00	
7072.00†	70.000	89.073	6841.15	538.56	8.71	538.49	624904.65	477035.01	32°18'39.017"N	103°55'44.543"W	7.00	
7172.00†	77.000	89.073	6869.53	634.39	10.26	634.30	625000.46	477036.56	32°18'39.029"N	103°55'43.427"W	7.00	
7272.00†	84.000	89.073	6886.03	732.95	11.86	732.86	625099.00	477038.16	32°18'39.041"N	103°55'42.279"W	7.00	
7333.47	88.303	89.073	6890.15	794.27	12.85	794.17	625160.31	477039.15	32°18'39.048"N	103°55'41.564"W	7.00	END OF CURVE
7372.00†	88.303	89.073	6891.29	832.78	13.47	832.67	625198.81	477039.77	32°18'39.053"N	103°55'41.115"W	0.00	
7472.00†	88.303	89.073	6894.25	932.74	15.09	932.62	625298.75	477041.39	32°18'39.065"N	103°55'39.951"W	0.00	
7572.00†	88.303	89.073	6897.22	1032.70	16.71	1032.56	625398.68	477043.00	32°18'39.078"N	103°55'38.786"W	0.00	
7672.00†	88.303	89.073	6900.18	1132.65	18.32	1132.50	625498.62	477044.62	32°18'39.090"N	103°55'37.622"W	0.00	
7772.00†	88.303	89.073	6903.14	1232.61	19.94	1232.45	625598.55	477046.24	32°18'39.102"N	103°55'36.457"W	0.00	
7872.00†	88.303	89.073	6906.10	1332.56	21.56	1332.39	625698.49	477047.85	32°18'39.114"N	103°55'35.293"W	0.00	
7972.00†	88.303	89.073	6909.06	1432.52	23.17	1432.33	625798.43	477049.47	32°18'39.127"N	103°55'34.128"W	0.00	
8072.00†	88.303	89.073	6912.02	1532.48	24.79	1532.28	625898.36	477051.09	32°18'39.139"N	103°55'32.964"W	0.00	
8172.00†	88.303	89.073	6914.98	1632.43	26.41	1632.22	625998.30	477052.71	32°18'39.151"N	103°55'31.799"W	0.00	
8272.00†	88.303	89.073	6917.95	1732.39	28.02	1732.16	626098.23	477054.32	32°18'39.163"N	103°55'30.635"W	0.00	
8372.00†	88.303	89.073	6920.91	1832.34	29.64	1832.11	626198.17	477055.94	32°18'39.176"N	103°55'29.470"W	0.00	
8472.00†	88.303	89.073	6923.87	1932.30	31.26	1932.05	626298.10	477057.56	32°18'39.188"N	103°55'28.305"W	0.00	
8572.00†	88.303	89.073	6926.83	2032.26	32.88	2031.99	626398.04	477059.17	32°18'39.200"N	103°55'27.141"W	0.00	
8672.00†	88.303	89.073	6929.79	2132.21	34.49	2131.93	626497.97	477060.79	32°18'39.212"N	103°55'25.976"W	0.00	
8772.00†	88.303	89.073	6932.75	2232.17	36.11	2231.88	626597.91	477062.41	32°18'39.224"N	103°55'24.812"W	0.00	





# Planned Wellpath Report

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Operator	XTO Energy Inc.	Slot	No. 49H SHL
Area	Eddy County, NM	Well	No. 49H
Field	(Nash) Sec 13, T23S, R29E	Wellbore	No. 49H PWB
Facility	Nash Unit No. 49H		

WELLPATH DATA (63 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8872.00†	88.303	89.073	6935.71	2332.13	37.73	2331.82	626697.85	477064.02	32°18'39.237"N	103°55'23.647"W	0.00	
8972.00†	88.303	89.073	6938.68	2432.08	39.34	2431.76	626797.78	477065.64	32°18'39.249"N	103°55'22.483"W	0.00	
9072.00†	88.303	89.073	6941.64	2532.04	40.96	2531.71	626897.72	477067.26	32°18'39.261"N	103°55'21.318"W	0.00	
9172.00†	88.303	89.073	6944.60	2631.99	42.58	2631.65	626997.65	477068.87	32°18'39.273"N	103°55'20.154"W	0.00	
9272.00†	88.303	89.073	6947.56	2731.95	44.19	2731.59	627097.59	477070.49	32°18'39.286"N	103°55'18.989"W	0.00	
9372.00†	88.303	89.073	6950.52	2831.91	45.81	2831.54	627197.52	477072.11	32°18'39.298"N	103°55'17.824"W	0.00	
9472.00†	88.303	89.073	6953.48	2931.86	47.43	2931.48	627297.46	477073.72	32°18'39.310"N	103°55'16.660"W	0.00	
9572.00†	88.303	89.073	6956.44	3031.82	49.04	3031.42	627397.39	477075.34	32°18'39.322"N	103°55'15.495"W	0.00	
9672.00†	88.303	89.073	6959.41	3131.77	50.66	3131.36	627497.33	477076.96	32°18'39.334"N	103°55'14.331"W	0.00	
9772.00†	88.303	89.073	6962.37	3231.73	52.28	3231.31	627597.27	477078.57	32°18'39.347"N	103°55'13.166"W	0.00	
9872.00†	88.303	89.073	6965.33	3331.69	53.90	3331.25	627697.20	477080.19	32°18'39.359"N	103°55'12.002"W	0.00	
9972.00†	88.303	89.073	6968.29	3431.64	55.51	3431.19	627797.14	477081.81	32°18'39.371"N	103°55'10.837"W	0.00	
10072.00†	88.303	89.073	6971.25	3531.60	57.13	3531.14	627897.07	477083.43	32°18'39.383"N	103°55'09.673"W	0.00	
10172.00†	88.303	89.073	6974.21	3631.56	58.75	3631.08	627997.01	477085.04	32°18'39.395"N	103°55'08.508"W	0.00	
10272.00†	88.303	89.073	6977.17	3731.51	60.36	3731.02	628096.94	477086.66	32°18'39.407"N	103°55'07.344"W	0.00	
10372.00†	88.303	89.073	6980.14	3831.47	61.98	3830.97	628196.88	477088.28	32°18'39.420"N	103°55'06.179"W	0.00	
10472.00†	88.303	89.073	6983.10	3931.42	63.60	3930.91	628296.81	477089.89	32°18'39.432"N	103°55'05.014"W	0.00	
10572.00†	88.303	89.073	6986.06	4031.38	65.21	4030.85	628396.75	477091.51	32°18'39.444"N	103°55'03.850"W	0.00	
10672.00†	88.303	89.073	6989.02	4131.34	66.83	4130.80	628496.68	477093.13	32°18'39.456"N	103°55'02.685"W	0.00	
10772.00†	88.303	89.073	6991.98	4231.29	68.45	4230.74	628596.62	477094.74	32°18'39.468"N	103°55'01.521"W	0.00	
10872.00†	88.303	89.073	6994.94	4331.25	70.07	4330.68	628696.56	477096.36	32°18'39.480"N	103°55'00.356"W	0.00	
10972.00†	88.303	89.073	6997.90	4431.20	71.68	4430.62	628796.49	477097.98	32°18'39.493"N	103°54'59.192"W	0.00	
11072.00†	88.303	89.073	7000.87	4531.16	73.30	4530.57	628896.43	477099.59	32°18'39.505"N	103°54'58.027"W	0.00	
11172.00†	88.303	89.073	7003.83	4631.12	74.92	4630.51	628996.36	477101.21	32°18'39.517"N	103°54'56.863"W	0.00	
11272.00†	88.303	89.073	7006.79	4731.07	76.53	4730.45	629096.30	477102.83	32°18'39.529"N	103°54'55.698"W	0.00	
11372.00†	88.303	89.073	7009.75	4831.03	78.15	4830.40	629196.23	477104.44	32°18'39.541"N	103°54'54.533"W	0.00	
11472.00†	88.303	89.073	7012.71	4930.99	79.77	4930.34	629296.17	477106.06	32°18'39.553"N	103°54'53.369"W	0.00	
11572.00†	88.303	89.073	7015.67	5030.94	81.38	5030.28	629396.10	477107.68	32°18'39.565"N	103°54'52.204"W	0.00	
11672.00†	88.303	89.073	7018.63	5130.90	83.00	5130.23	629496.04	477109.29	32°18'39.578"N	103°54'51.040"W	0.00	
11772.00†	88.303	89.073	7021.60	5230.85	84.62	5230.17	629595.98	477110.91	32°18'39.590"N	103°54'49.875"W	0.00	



# Planned Wellpath Report

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Operator	XTO Energy Inc.	Slot	No. 49H SHL
Area	Eddy County, NM	Well	No. 49H
Field	(Nash) Sec 13, T23S, R29E	Wellbore	No. 49H PWB
Facility	Nash Unit No. 49H		

WELLPATH DATA (63 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
11872.00†	88.303	89.073	7024.56	5330.81	86.23	5330.11	629695.91	477112.53	32°18'39.602"N	103°54'48.711"W	0.00
11972.00†	88.303	89.073	7027.52	5430.77	87.85	5430.06	629795.85	477114.14	32°18'39.614"N	103°54'47.546"W	0.00
12055.81	88.303	89.073	7030.00†	5514.54	89.21	5513.81	629879.60	477115.50	32°18'39.624"N	103°54'46.570"W	0.00 No. 49H PBHL

HOLE & CASING SECTIONS Ref Wellbore: No. 49H PWB Ref Wellpath: Prelim_1									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	6072.00	7333.00	1261.00	6072.00	6890.14	0.00	0.00	12.84	793.70
7in Casing	0.00	7333.00	7333.00	0.00	6890.14	0.00	0.00	12.84	793.70
6.125in Open Hole	7333.00	12055.81	4722.81	6890.14	NA	12.84	793.70	NA	NA

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 49H PBHL	12055.81	7030.00	89.21	5513.81	629879.60	477115.50	32°18'39.624"N	103°54'46.570"W	point

SURVEY PROGRAM Ref Wellbore: No. 49H PWB Ref Wellpath: Prelim_1									
Start MD [ft]	End MD [ft]	Positional Uncertainty Model				Log Name/Comment		Wellbore	
15.00	12055.81	NaviTrak (Standard)						No. 49H PWB	



# Declination & Convergence Report

Slot: No. 49H SHL



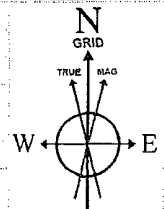
Field: (Nash) Sec 13, T23S, R29E	Operator: XTO Energy Inc.	Area: Eddy County, NM
Field Grid System: NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	North Reference: Grid North	Scale: True Distance
Field Reference	Horizontal Ref Pt: Field Center	Vertical Ref Pt: Mean Sea Level
	Easting: 624366.20USft Northing: 477026.30USft	Lat: 32°18'38.951"N Long: 103°55'50.818"W

Facility: Nash Unit No. 49H	Horizontal Ref Pt: SL	Vertical Ref Pt: GL
	Easting: 624366.20USft Northing: 477026.30USft	Lat: 32°18'38.951"N Long: 103°55'50.818"W
Horiz Offset from Field Ref 0.00ft North 0.00ft East	Facility Vert Ref Pt GL	Field Vert Ref Pt to Mean Sea Level
	Distance 3001.00ft	GL to Mud Line: 0.00ft
Facility Location Uncertainty	Horizontal Error Radius: 0.000ft	Vertical Error Radius: 0.000ft

## SLOT INFORMATION

Slot Name	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Elev above Fac [ft]	Elev above Mudline [ft]	Active Decl [°]	Grid Conv [°]	Scale Factor	Horiz Err Radius [ft]	Vert Err Radius [ft]
No. 49H SHL	0.00	0.00	624366.20	477026.30	32°18'38.951"N	103°55'50.818"W	15.00	15.00	7.91E	0.22E	0.999927	3.00	1.00

Data Source: BGGM (1945.0 to 2011.0)	Calculation Date: 7/6/2010
Magnetic Flux Dip Angle: 60.24°	Magnetic Field Strength: 48789.3 nT
Declination: 7.91° East	Convergence: 0.22° East
Magnetic North is 7.91 degrees East of True North	
Grid North is 0.22 degrees East of True North	
To correct azimuth from True to Grid subtract 0.22 degrees	
To correct azimuth from Magnetic to Grid add 7.69 degrees	
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.69 = 97.69	





Location: Eddy County, NM  
Field: (Nash) Sec 13, T23S, R28E  
Facility: Nash Unit No. 49H

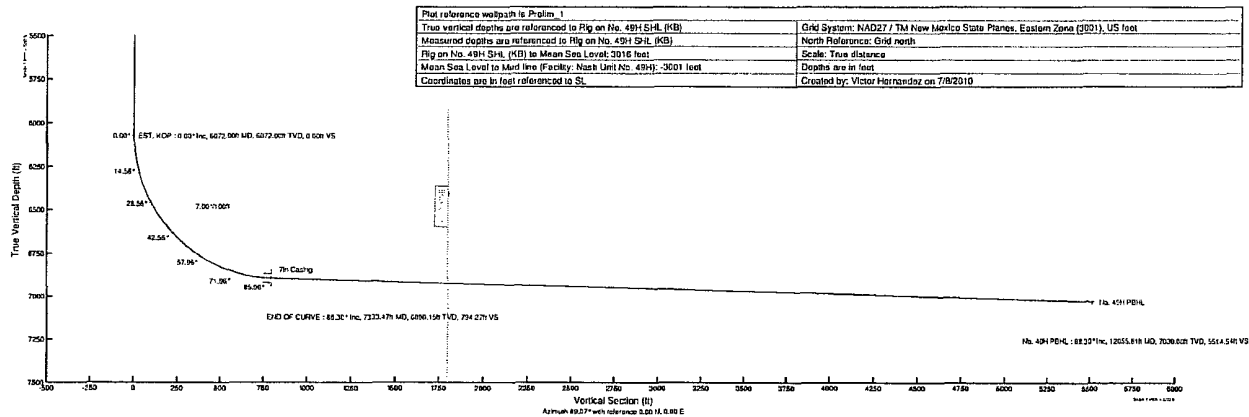
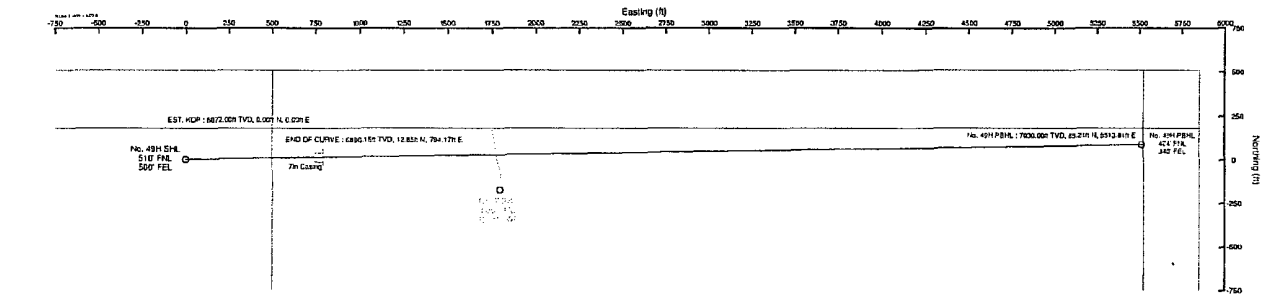
## XTO Energy Inc.

Stat: No. 49H SHL  
Well: No. 49H  
Wellbore: No. 49H PWB



### Well Profile Data

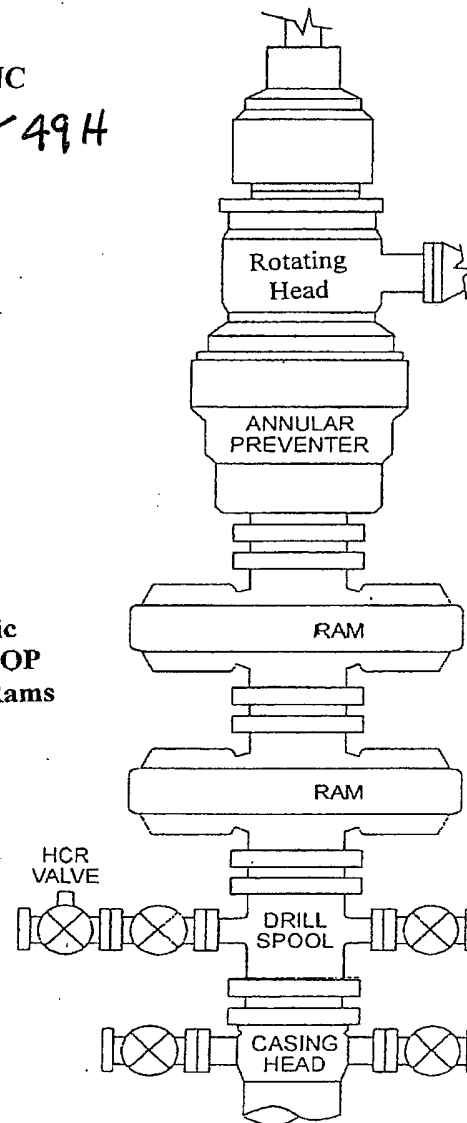
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°100ft)	VS (ft)
Tie On	0.00	0.000	89.073	0.00	0.00	0.00	0.00	0.00
EST. KOP	6072.00	0.000	89.073	6072.00	0.00	0.00	0.00	0.00
END OF CURVE	7333.47	88.303	89.073	6890.15	12.85	794.17	7.00	794.27
No. 49H PBHL	12055.81	88.303	89.073	7030.00	89.21	5513.61	0.00	5514.54



XTO ENERGY INC

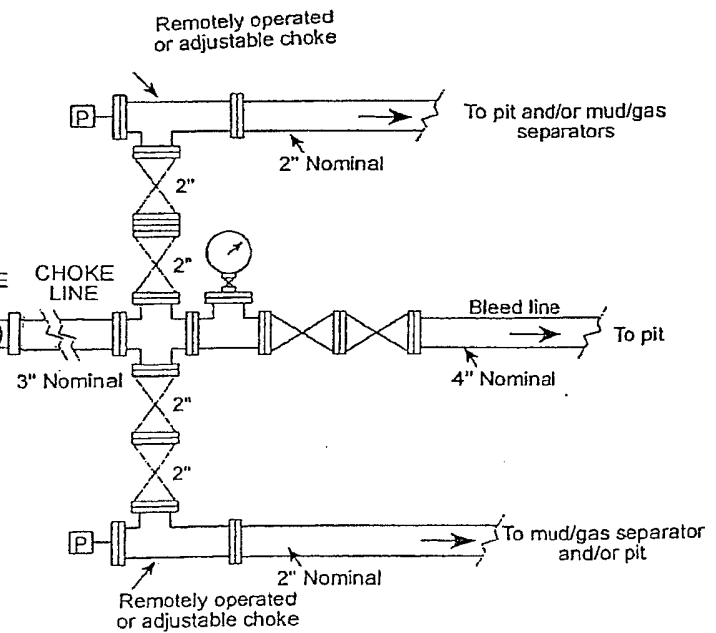
Nash Unit #51H ~~494~~

11" Hydraulic  
Double Ram BOP  
Blinds X Pipe Rams



11" 5000 psi  
Hydraulic  
Annular BOP

9-5/8" 3000 psi  
SOW Wellhead



5000 psi Working Pressure  
BOPE Configuration and Choke Manifold

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator X TO ENERGY INC OGRID # 5382  
 Well Name & # 303152 NASH UNIT # 4914 Surface Type (F) (S) (P)  
 Location: UL A, Sect 13, Township 23 s, RNG 29 e, Sub-surface Type (F) (S) (P)  
A 18 23 30

A. Date C101 rec'd      /      /      C101 reviewed      /      /     

B. 1. Check mark, Information is OK on Forms:

OGRID X, BONDING FED PROP CODE     , WELL # 3170, SIGNATURE     

2. Inactive Well list as of: 4/4/11 # wells 3170, # Inactive wells 9

a. District Grant APD but see number of inactive wells:

No Letter required X; Sent Letter to Operator     , to Santa Fe     

3. Additional Bonding as of: 4/4/11

a. District Denial because operator needs addition bonding:

No Letter required X; Sent Letter to Operator     , To Santa Fe     

b. District Denial because of Inactive well list and Financial Assurance:

No Letter required X; Sent Letter to Operator     , To Santa Fe     

C. C102 YES X NO     , Signature X

1. Pool NASH DRAW; DEL-PSAUSD, Code 47545

a. Dedicated acreage 320, What Units 17: ABCD; 18: ABCD

b. SUR. Location Standard X; Non-Standard Location     

c. Well shares acres: Yes X No     , # of wells      plus this well #     

2. 2<sup>nd</sup>. Operator in same acreage, Yes     , No     

Agreement Letter     , Disagreement letter     

3. Intent to Directional Drill Yes X No     

a. Dedicated acreage 320, What Units 13: ABCD; 18: ABCD

b. Bottomhole Location Standard     , Non-Standard Bottomhole     

4. Downhole Commingle: Yes     , No X

a. Pool #2     , Code     , Acres     

Pool #3     , Code     , Acres     

Pool #4     , Code     , Acres     

5. POTASH Area Yes     , No FED

D. Blowout Preventer Yes X No     

E. H2S Yes     , No     , PART FED ADD

F. C144 Pit Registration Yes     , No X, need

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes     , No X, NSL #     

2. Non-Standard Proration: Yes     , No X, NSP #     

3. Simultaneous Dedication: Yes     , No X, SD #     

Number of wells      Plus #     

4. Injection order Yes     , No X; PMX #      or WFX #     

5. SWD order Yes     , NO X; SWD #     

6. DHC from SF     ; DHC-HOB     ; Holding     

7. OCD Approval Date      /      /     

API #30-0 K -- 38663

8. Reviewers     

*Overlap  
w/ A sec 18  
w/ D sec 15*