

R-111-POTASH

ATS-11-97

OCD-ARTESIA

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

EA 370

5. Lease Serial No.
SHL NM-0556859, NM-0554223 BHL

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
Nash Unit 56H

9. API Well No.

30-015-38992

10. Field and Pool, or Exploratory
Nash Draw, Brushy Canyon11. Sec, T, R, M. or Blk and Survey or Area
Sec 14, T23-S, R29-E, UL:H12. County or Parish
Eddy Co.13. State
NM1a. Type of work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator

XTO Energy Inc

3a. Address 200 N. Loraine, Ste. 800
Midland, Texas 797013b. Phone No. (include area code)
432-620-6749

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface 1940' FNL & 370' FEL, Sec. 14, T23S, R29-E, UL:H

At proposed prod. zone 1980' FNL & 340' FWL, Sec. 14, T23-S, R29-E, UL:E

14. Distance in miles and direction from nearest town or post office*
Approx 25 miles East Southeast of Carlsbad, NM15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)

340' (BHL)

16. No. of acres in lease

5123 Unit

17. Spacing Unit dedicated to this well

160

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.19. Proposed Depth
TVD: 6780' TMD: 11011'20. BLM/BIA Bond No. on file
UTB00013821. Elevations (Show whether DF, KDB, RT, GL, etc.)
2984'22. Approximate date work will start*
05/08/201123. Estimated duration
35 Days

24. Attachments

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

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

25. Signature

Chip Amrock

Name (Printed/Typed)

Chip Amrock

Date

12/9/2010

Title

Sr. Drilling Engineer

Approved by (Signature) /s/ Linda S.C. Rundell

Name (Printed/Typed)

Date

APR 6 2011

Title

STATE DIRECTOR

Office

NM STATE OFFICE

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.

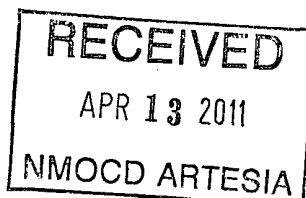
Conditions of approval, if any, are attached.

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 APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE
620 E. GREENE STREET
CARLSBAD, NM 88220

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

Operator Name: XTO ENERGY INC
Street or Box: 200 N. Loraine St., Ste. 800
City, State: Midland, TX
Zip Code: 79701

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No: SHL: NM-0556859 BHL: NM-0554223

Legal Description of Land: NASH #56H

UL: H Section: 14 Township: 23 South Range: 29 East

County: Eddy State: New Mexico

Bond Coverage: \$1,184,600.00

^{NATION}
Statewide Oil and Gas Surety Bond, XTO ENERGY INC.

BLM Bond File No.: UTB000138

Signature:  Printed Name: Don Eubank

Title: Drilling Manager

Date: 11/3/2010

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

XTO Energy Inc.

Nash Well #56H

Projected TD: 11011 MD / TVD: 6780'

SHL: 1940' FNL & 370' FEL , SECTION 14, T23S, R29E (H)

BHL: 1980' FNL & 340' FWL, SECTION 14, T23S, R29E (E)

Eddy County, NM

Lease #: SHL: NM-0556859, BHL: NM-0554223

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		262'	Water
Base of Castille		3128'	Water
Bell Canyon		3170'	Water/Oil/Gas
Cherry Canyon		4050'	Water/Oil/Gas
Top Brushy Canyon		5553'	Water/Oil/Gas
Base Brushy Canyon		6582'	Water/Oil/Gas
Brushy Canyon E5 Zone		6758'	Water/Oil/Gas
Target/Land Curve		6780'	Water/Oil/Gas
TD/MD		11011'	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 @ 265' and circulating cement back to surface. Potash/fresh water sands will be protected by setting 9-5/8" casing at 3250' 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' - 265' 225'	13-3/8"	48#	STC	H-40	New	2.24	.96	4.56
12-1/4"	3100 0' - 3250'	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 - 11011'	4-1/2"	11.6#	LTC	P-110	New	2.77	1.96	4.73

see
COA
SAP
COA

WELLHEAD:

- 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)

- see CoA*
- A. Surface Casing: 13-3/8", 48#, NEW H-40, STC casing to be set at $\pm 265'$.

500 sx HalCem-C + 2% CaCl (14.80 ppg, 1.35 cu ft/sx, 6.39 gal/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 $\pm 3250'$.

Stage 1:

Lead: 20 bbls FW, then 900 sx EconoCem-HLC + 5% salt (mixed at 12.8 ppg, 1.92 ft³/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 ft³/sk, 6.36 gal/sx wtr)

Compr Strengths: 12 hr - 900 psi 24 hr - 1500 psi

***All volumes 100% excess. Cement to surface.

- C. 2nd Interm. Casing: 7", 26#, NEW HCP-110, LTC casing to be set at $\pm 7400'$ w/DVT @ 5500'

Stage 1:

Lead: 650 sx CorossaCem-H + 0.5% LAP-1 + 0.1% HR-800 + 5 lb/sx Gilsonite (14.4 ppg, 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 3250'. 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 265' 225'	17-1/2"	FW/Native	8.5-8.8	35-40	NC
280' to 3250' +/- 3100'	12-1/4"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
3250' to 7400'	8-3/4"	Cut Brine/ Poly-Sweeps	9.2-9.6	29-32	NC-30
7400' to 11011'	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. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling the 12-1/4" hole.

8. LOGGING, CORING AND TESTING PROGRAM: *See COA*

- A. Mud Logger: Suttles Mud Logging Unit (2 man) on @ 6000'.
Catch 10' samples from 6000' to 11011' (TD/MD).
Send 1 set of dry samples to Midland Sample Library.

9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS:

None anticipated. Max bottom hole pressure should not exceed 2500psi. BHT of 175 F is anticipated. H₂S 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'.

- See COA* C. WOC a minimum of ²⁴~~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.



XTO

Eddy County

Nash Unit

#56H

OH

Plan: Plan #1

Pathfinder X & Y Planning Report

27 October, 2010

PATHFINDER[®]

A Schlumberger Company



Pathfinder
Pathfinder X & Y Planning Report



Company: XTO
Project: Eddy County
Site: Nash Unit
Well: #56H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #56H
TVD Reference: WELL @ 3003.00ft (19' KB Correction)
MD Reference: WELL @ 3003.00ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project	Eddy County		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Nash Unit				
Site Position:		Northing:	474,205.800 ft	Latitude:	32° 18' 11.028 N
From:	Map	Easting:	624,676.800 ft	Longitude:	103° 55' 47.322 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.22 °

Well	#56H					
Well Position	+N/-S	0.00 ft	Northing:	475,617.400 ft	Latitude:	32° 18' 25.196 N
	+E/-W	0.00 ft	Easting:	619,198.300 ft	Longitude:	103° 56' 51.095 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	2,984.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	01/27/10	7.92	60.25	48.796

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	269.22

Survey Tool Program		Date	10/27/10		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,010.84	Plan #1 (OH)	MWD	MWD - Standard	



Pathfinder
Pathfinder X & Y Planning Report



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Wellbore: OH
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0.00	0.00	0.00	0.00	-3,003.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
100.00	0.00	0.00	100.00	-2,903.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
200.00	0.00	0.00	200.00	-2,803.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
300.00	0.00	0.00	300.00	-2,703.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
400.00	0.00	0.00	400.00	-2,603.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
500.00	0.00	0.00	500.00	-2,503.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
600.00	0.00	0.00	600.00	-2,403.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
700.00	0.00	0.00	700.00	-2,303.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
800.00	0.00	0.00	800.00	-2,203.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
900.00	0.00	0.00	900.00	-2,103.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,000.00	0.00	0.00	1,000.00	-2,003.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,100.00	0.00	0.00	1,100.00	-1,903.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,200.00	0.00	0.00	1,200.00	-1,803.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,300.00	0.00	0.00	1,300.00	-1,703.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,400.00	0.00	0.00	1,400.00	-1,603.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,500.00	0.00	0.00	1,500.00	-1,503.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,600.00	0.00	0.00	1,600.00	-1,403.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,700.00	0.00	0.00	1,700.00	-1,303.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,800.00	0.00	0.00	1,800.00	-1,203.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
1,900.00	0.00	0.00	1,900.00	-1,103.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,000.00	0.00	0.00	2,000.00	-1,003.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,100.00	0.00	0.00	2,100.00	-903.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,200.00	0.00	0.00	2,200.00	-803.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,300.00	0.00	0.00	2,300.00	-703.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,400.00	0.00	0.00	2,400.00	-603.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,500.00	0.00	0.00	2,500.00	-503.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,600.00	0.00	0.00	2,600.00	-403.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30



Pathfinder
Pathfinder X & Y Planning Report



Company: XTO
Project: Eddy County
Site: Nash Unit
Well: #56H
Wellbore: OH
Design: Plan #1

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2,700.00	0.00	0.00	2,700.00	-303.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,800.00	0.00	0.00	2,800.00	-203.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
2,900.00	0.00	0.00	2,900.00	-103.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,000.00	0.00	0.00	3,000.00	-3.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,100.00	0.00	0.00	3,100.00	97.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,200.00	0.00	0.00	3,200.00	197.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,300.00	0.00	0.00	3,300.00	297.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,400.00	0.00	0.00	3,400.00	397.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,500.00	0.00	0.00	3,500.00	497.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,600.00	0.00	0.00	3,600.00	597.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,700.00	0.00	0.00	3,700.00	697.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,800.00	0.00	0.00	3,800.00	797.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
3,900.00	0.00	0.00	3,900.00	897.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,000.00	0.00	0.00	4,000.00	997.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,100.00	0.00	0.00	4,100.00	1,097.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,200.00	0.00	0.00	4,200.00	1,197.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,300.00	0.00	0.00	4,300.00	1,297.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,400.00	0.00	0.00	4,400.00	1,397.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,500.00	0.00	0.00	4,500.00	1,497.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,600.00	0.00	0.00	4,600.00	1,597.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,700.00	0.00	0.00	4,700.00	1,697.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,800.00	0.00	0.00	4,800.00	1,797.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
4,900.00	0.00	0.00	4,900.00	1,897.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,000.00	0.00	0.00	5,000.00	1,997.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,100.00	0.00	0.00	5,100.00	2,097.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,200.00	0.00	0.00	5,200.00	2,197.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,300.00	0.00	0.00	5,300.00	2,297.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30



Pathfinder
Pathfinder X & Y Planning Report



Company: XTO
Project: Eddy County
Site: Nash Unit
Well: #56H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #56H
WELL @ 3003.00ft (19' KB Correction)
WELL @ 3003.00ft (19' KB Correction)
Grid
Minimum Curvature
Midland Database

Planned Survey

MD (ft)	Inc (")	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,400.00	0.00	0.00	5,400.00	2,397.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,500.00	0.00	0.00	5,500.00	2,497.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,600.00	0.00	0.00	5,600.00	2,597.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,700.00	0.00	0.00	5,700.00	2,697.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,800.00	0.00	0.00	5,800.00	2,797.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
5,880.00	0.00	0.00	5,880.00	2,877.00	0.00	0.00	0.00	0.00	475,617.40	619,198.30
KOP-5880.00°MD,0.00°INC,0.00°AZI,5880.00°TVD										
5,900.00	1.27	269.22	5,900.00	2,897.00	0.00	-0.22	0.22	6.37	475,617.40	619,198.08
5,950.00	4.46	269.22	5,949.93	2,946.93	-0.04	-2.72	2.72	6.37	475,617.36	619,195.58
6,000.00	7.64	269.22	5,999.64	2,996.64	-0.11	-7.99	7.99	6.37	475,617.29	619,190.31
6,050.00	10.82	269.22	6,048.99	3,045.99	-0.22	-16.01	16.01	6.37	475,617.18	619,182.29
6,100.00	14.01	269.22	6,097.82	3,094.82	-0.36	-26.75	26.75	6.37	475,617.04	619,171.55
6,150.00	17.19	269.22	6,145.97	3,142.97	-0.55	-40.19	40.20	6.37	475,616.85	619,158.11
6,200.00	20.37	269.22	6,193.30	3,190.30	-0.77	-56.29	56.29	6.37	475,616.63	619,142.01
6,250.00	23.55	269.22	6,239.67	3,236.67	-1.02	-74.98	74.99	6.37	475,616.38	619,123.32
6,300.00	26.74	269.22	6,284.92	3,281.92	-1.31	-96.23	96.23	6.37	475,616.09	619,102.07
6,350.00	29.92	269.22	6,328.93	3,325.93	-1.63	-119.95	119.96	6.37	475,615.77	619,078.35
6,400.00	33.10	269.22	6,371.55	3,368.55	-1.99	-146.08	146.09	6.37	475,615.41	619,052.22
6,450.00	36.29	269.22	6,412.65	3,409.65	-2.38	-174.53	174.55	6.37	475,615.02	619,023.77
6,500.00	39.47	269.22	6,452.11	3,449.11	-2.79	-205.22	205.24	6.37	475,614.61	618,993.08
6,550.00	42.65	269.22	6,489.81	3,486.81	-3.24	-238.06	238.08	6.37	475,614.16	618,960.24
6,600.00	45.84	269.22	6,525.62	3,522.62	-3.72	-272.94	272.96	6.37	475,613.68	618,925.36
6,650.00	49.02	269.22	6,559.44	3,556.44	-4.22	-309.75	309.78	6.37	475,613.18	618,888.55
6,700.00	52.20	269.22	6,591.17	3,588.17	-4.74	-348.39	348.42	6.37	475,612.66	618,849.91
6,750.00	55.39	269.22	6,620.70	3,617.70	-5.29	-388.72	388.76	6.37	475,612.11	618,809.58
6,800.00	58.57	269.22	6,647.94	3,644.94	-5.86	-430.64	430.68	6.37	475,611.54	618,767.66
6,850.00	61.75	269.22	6,672.82	3,669.82	-6.45	-474.00	474.04	6.37	475,610.95	618,724.30



Pathfinder
Pathfinder X & Y Planning Report



Company: XTO
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Site: Nash Unit
Well: #56H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #56H
TVD Reference: WELL @ 3003.00ft (19' KB Correction)
MD Reference: WELL @ 3003.00ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
6,900.00	64.94	269.22	6,695.25	3,692.25	-7.06	-518.67	518.72	6.37	475,610.34	618,679.63
6,950.00	68.12	269.22	6,715.16	3,712.16	-7.69	-564.53	564.58	6.37	475,609.71	618,633.77
7,000.00	71.30	269.22	6,732.50	3,729.50	-8.32	-611.41	611.47	6.37	475,609.08	618,586.89
7,050.00	74.48	269.22	6,747.20	3,744.20	-8.97	-659.19	659.25	6.37	475,608.43	618,539.11
7,100.00	77.67	269.22	6,759.23	3,756.23	-9.64	-707.71	707.78	6.37	475,607.76	618,490.59
7,150.00	80.85	269.22	6,768.55	3,765.55	-10.30	-756.82	756.89	6.37	475,607.10	618,441.48
7,200.00	84.03	269.22	6,775.13	3,772.13	-10.98	-806.38	806.45	6.37	475,606.42	618,391.92
7,250.00	87.22	269.22	6,778.94	3,775.94	-11.66	-856.22	856.30	6.37	475,605.74	618,342.08
7,293.72	90.00	269.22	6,780.00	3,777.00	-12.25	-899.92	900.00	6.37	475,605.15	618,298.38
EOC-7293.72°MD,90.00°INC,269.22°AZI,6780.00°TVD,6.37°DLS, 900.00°VS, -12.25°N, -899.92°E										
7,300.00	90.00	269.22	6,780.00	3,777.00	-12.34	-906.20	906.28	0.00	475,605.06	618,292.10
7,400.00	90.00	269.22	6,780.00	3,777.00	-13.70	-1,006.19	1,006.28	0.00	475,603.70	618,192.11
7,500.00	90.00	269.22	6,780.00	3,777.00	-15.06	-1,106.18	1,106.28	0.00	475,602.34	618,092.12
7,600.00	90.00	269.22	6,780.00	3,777.00	-16.42	-1,206.17	1,206.28	0.00	475,600.98	617,992.13
7,700.00	90.00	269.22	6,780.00	3,777.00	-17.78	-1,306.16	1,306.28	0.00	475,599.62	617,892.14
7,800.00	90.00	269.22	6,780.00	3,777.00	-19.14	-1,406.15	1,406.28	0.00	475,598.26	617,792.15
7,900.00	90.00	269.22	6,780.00	3,777.00	-20.51	-1,506.14	1,506.28	0.00	475,596.89	617,692.16
8,000.00	90.00	269.22	6,780.00	3,777.00	-21.87	-1,606.13	1,606.28	0.00	475,595.53	617,592.17
8,100.00	90.00	269.22	6,780.00	3,777.00	-23.23	-1,706.13	1,706.28	0.00	475,594.17	617,492.17
8,200.00	90.00	269.22	6,780.00	3,777.00	-24.59	-1,806.12	1,806.28	0.00	475,592.81	617,392.18
8,300.00	90.00	269.22	6,780.00	3,777.00	-25.95	-1,906.11	1,906.28	0.00	475,591.45	617,292.19
8,400.00	90.00	269.22	6,780.00	3,777.00	-27.31	-2,006.10	2,006.28	0.00	475,590.09	617,192.20
8,500.00	90.00	269.22	6,780.00	3,777.00	-28.67	-2,106.09	2,106.28	0.00	475,588.73	617,092.21
8,600.00	90.00	269.22	6,780.00	3,777.00	-30.03	-2,206.08	2,206.28	0.00	475,587.37	616,992.22
8,700.00	90.00	269.22	6,780.00	3,777.00	-31.40	-2,306.07	2,306.28	0.00	475,586.00	616,892.23
8,800.00	90.00	269.22	6,780.00	3,777.00	-32.76	-2,406.06	2,406.28	0.00	475,584.64	616,792.24
8,900.00	90.00	269.22	6,780.00	3,777.00	-34.12	-2,506.05	2,506.28	0.00	475,583.28	616,692.25



Pathfinder
Pathfinder X & Y Planning Report



Company: XTO
Project: Eddy County
Site: Nash Unit
Well: #56H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #56H
TVD Reference: WELL @ 3003.00ft (19' KB Correction)
MD Reference: WELL @ 3003.00ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,000.00	90.00	269.22	6,780.00	3,777.00	-35.48	-2,606.04	2,606.28	0.00	475,581.92	616,592.26
9,100.00	90.00	269.22	6,780.00	3,777.00	-36.84	-2,706.03	2,706.28	0.00	475,580.56	616,492.27
9,200.00	90.00	269.22	6,780.00	3,777.00	-38.20	-2,806.02	2,806.28	0.00	475,579.20	616,392.28
9,300.00	90.00	269.22	6,780.00	3,777.00	-39.56	-2,906.01	2,906.28	0.00	475,577.84	616,292.29
9,400.00	90.00	269.22	6,780.00	3,777.00	-40.92	-3,006.00	3,006.28	0.00	475,576.48	616,192.30
9,500.00	90.00	269.22	6,780.00	3,777.00	-42.29	-3,106.00	3,106.28	0.00	475,575.11	616,092.30
9,600.00	90.00	269.22	6,780.00	3,777.00	-43.65	-3,205.99	3,206.28	0.00	475,573.75	615,992.31
9,700.00	90.00	269.22	6,780.00	3,777.00	-45.01	-3,305.98	3,306.28	0.00	475,572.39	615,892.32
9,800.00	90.00	269.22	6,780.00	3,777.00	-46.37	-3,405.97	3,406.28	0.00	475,571.03	615,792.33
9,900.00	90.00	269.22	6,780.00	3,777.00	-47.73	-3,505.96	3,506.28	0.00	475,569.67	615,692.34
10,000.00	90.00	269.22	6,780.00	3,777.00	-49.09	-3,605.95	3,606.28	0.00	475,568.31	615,592.35
10,100.00	90.00	269.22	6,780.00	3,777.00	-50.45	-3,705.94	3,706.28	0.00	475,566.95	615,492.36
10,200.00	90.00	269.22	6,780.00	3,777.00	-51.82	-3,805.93	3,806.28	0.00	475,565.58	615,392.37
10,300.00	90.00	269.22	6,780.00	3,777.00	-53.18	-3,905.92	3,906.28	0.00	475,564.22	615,292.38
10,400.00	90.00	269.22	6,780.00	3,777.00	-54.54	-4,005.91	4,006.28	0.00	475,562.86	615,192.39
10,500.00	90.00	269.22	6,780.00	3,777.00	-55.90	-4,105.90	4,106.28	0.00	475,561.50	615,092.40
10,600.00	90.00	269.22	6,780.00	3,777.00	-57.26	-4,205.89	4,206.28	0.00	475,560.14	614,992.41
10,700.00	90.00	269.22	6,780.00	3,777.00	-58.62	-4,305.88	4,306.28	0.00	475,558.78	614,892.42
10,800.00	90.00	269.22	6,780.00	3,777.00	-59.98	-4,405.88	4,406.28	0.00	475,557.42	614,792.42
10,900.00	90.00	269.22	6,780.00	3,777.00	-61.34	-4,505.87	4,506.28	0.00	475,556.06	614,692.43
11,000.00	90.00	269.22	6,780.00	3,777.00	-62.71	-4,605.86	4,606.28	0.00	475,554.69	614,592.44
11,010.84	90.00	269.22	6,780.00	3,777.00	-62.85	-4,616.70	4,617.12	0.00	475,554.55	614,581.60

TD at 11010.84



Pathfinder
Pathfinder X & Y Planning Report



Company: XTO
Project: Eddy County
Site: Nash Unit
Well: #56H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well #56H
TVD Reference: WELL @ 3003.00ft (19' KB Correction)
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(N#56H)	0.00	0.00	6,780.00	-62.50	-4,616.70	475,554.900	614,581.600	32° 18' 24.739 N	103° 57' 44.891 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,880.00	5,880.00	0.00	0.00	KOP-5880.00°MD,0.00°INC,0.00°AZI,5880.00°TVD
7,293.72	6,780.00	-12.25	-899.92	EOC-7293.72°MD,90.00°INC,269.22°AZI,6780.00°TVD,6.37°DLS, 900.0
11,010.84	6,780.00	-62.85	-4,616.70	TD at 11010.84

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County
Site: Nash Unit
Well: #56H
Wellbore: OH
Plan: Plan #1 (#56H/OH)

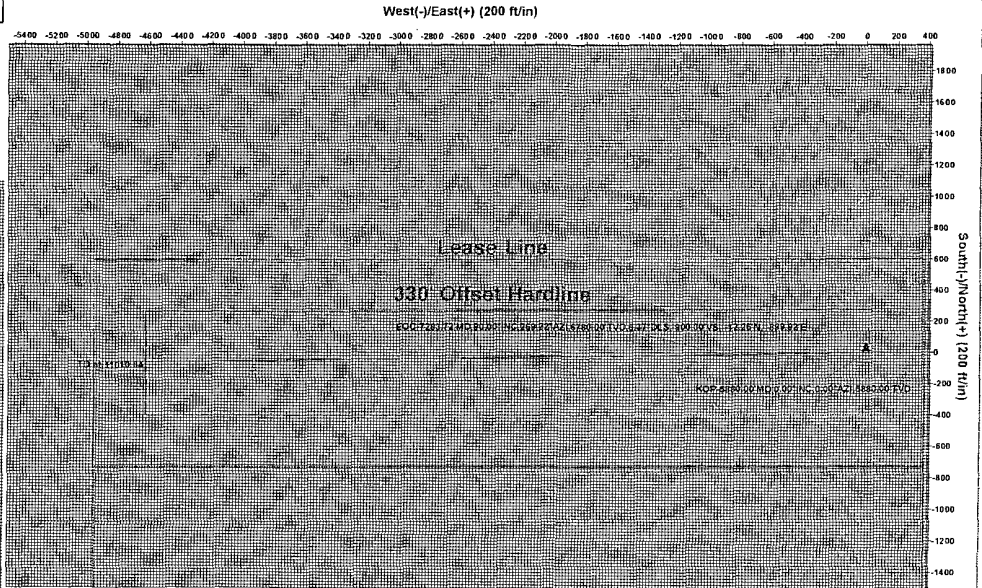
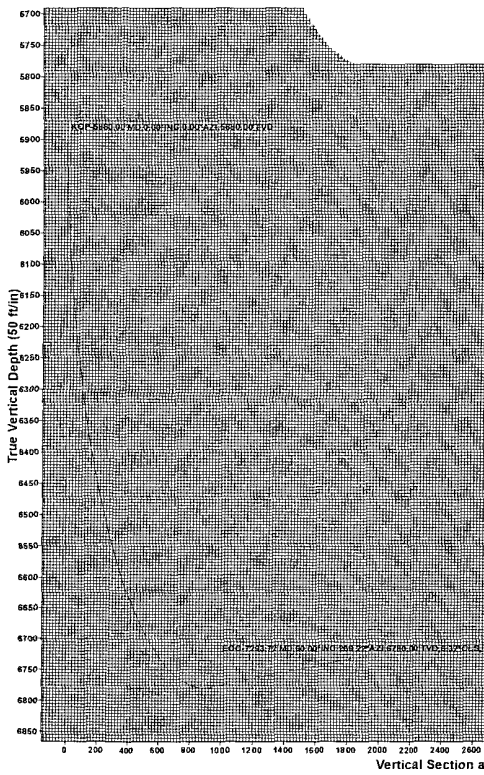


Azimuths to Grid North
True North: -0.21°
Magnetic North: 7.71°
Magnetic Field
Strength: 48795.8 nT
Dip Angle: 60.25°
Date: 01/27/2010
Model: IGRF200510

PATHFINDER
A Schlumberger Company

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dlog	TFace	VSec Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	5882.00	0.00	0.00	5880.00	0.00	0.00	0.00	0.00	0.00
3	7283.72	50.00	269.22	6780.00	-12.25	-899.92	6.37	260.22	900.00
4	11010.84	50.00	269.22	6780.00	-62.85	-4616.70	0.00	0.00	4617.12 PBR (#56H)

WELL DETAILS: #56H						
Ground Elevation: 2884.00						
RKB Elevation: WELL @ 3003.00R (19 KB Correction)						
Rig Name: 1P KB Correction						
+N-S	+E-W	Heading	Easting	Latitude	Longitude	Stat
0.00	0.00	475617.400	618188.300	32° 18' 25.196 N	103° 56' 51.090 W	



PROJECT DETAILS: Eddy County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

Plan: Plan #1 (#56H/OH)
Created By: Nate Bingham Date: 9/30, November 03 2010
Checked: _____ Date: _____

GEOLOGICAL WELL PLAN & AFE REQUEST

OPERATOR: XTO Energy Inc.

EXISTING WELLS:

WELL NAME: NASH UNIT 56H

LOCATION: SHL: X= 619229.0 Y= 475575.0

BHL: X= 614568.0 Y= 475550.0

Ralph Nelson

DATE: September 22, 2010

1940 370
1980' FNL 330' FEL 23S 29E Section 14 NE 1/4

1980' FNL 340' FWL 23S 29E Section 14 NW 1/4
EDDY COUNTY, NM

ENG. TBD

PROSPECT: BASAL BYCN E5 ZONE

EST T.D.: 11,500 MD

LND. STEVE COBB

Delaware Mtn Horizontal Drillwell

CLASS H

HBP

SURFACE OWNER: BLM??

drill lateral at 270 degree azimuth with an inclination of 90.8 degrees

Land well at 900' VS at -3763 or 6765' TVD (3002' KB)

DEVELOPMENT: XX NEW WELL: XX OIL with GAS: XX

MUD LOG:

DEPTH ON	DEPTH OFF	LOGGING COMPANY	TYPE UNIT
500' before KO	TD	TBD	2-man
SAMPLES:	Caught & Bagged	Depth Interval	1 Set of samples delivered to:
Email mudlogs 3 times daily to ralph_nelson@xtoenergy.com AM, 3:00 PM and 9:00 PM	Every 10' feet in vertical and deviated / every 30 feet in horizontal	surface casing - TD	International Midland Sample Library 707 S. Connell Midland, TX 79701 hand deliver or Fedex/UPS only

OPENHOLE LOGS: RUN 1

Logging Company

TYPE LOGS

Other: GR (MWD)

WELL DEPTH

none unless required by BLM

500' before kickoff to TD

Remarks:

Email GR and surveys including MD, TVD, and TVD up log on 5" scale to ralph_nelson@xtoenergy.com at 6:30 AM, 3:00 PM and 9:00 PM

Wellsite geological

Mud Logger

XX

Consultant

Company

SUPERVISION:

Geologist:

Ralph Nelson

If no answer, leave message, wait 15 minutes before calling engineer below

Office:

(817) 885-3440

Cell:

(432) 528-7777

Engineer:

TBD

Office:

Cell:

EXPECTED FORMATION TOPS:		K.B. Elevation (feet):	3002'	(Est. XX Actual:)
Formation	Subsea Depth (feet)	Well Depth (feet)*		
Rustler/Salado	2,740'	262'		TVD
Base Castile	-126'	3,128'		TVD
Bell Canyon	-168'	3,170'		TVD
Cherry Canyon	-1,048'	4,050'		TVD
Brushy Canyon	-2,551'	5,553'		TVD
Basal Brushy Canyon*	-3,580'	6,582'		TVD
Brushy Canyon E5 zone*	-3,756'	6,758'		TVD
Target Interval*	-3,778'	6,780'		TVD

* At 0 vertical section

USE SUBSEA ONLY FOR CALCULATIONS

Special Instructions:

Well has been planned to land approx. 900 feet from surface.

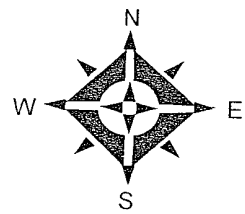
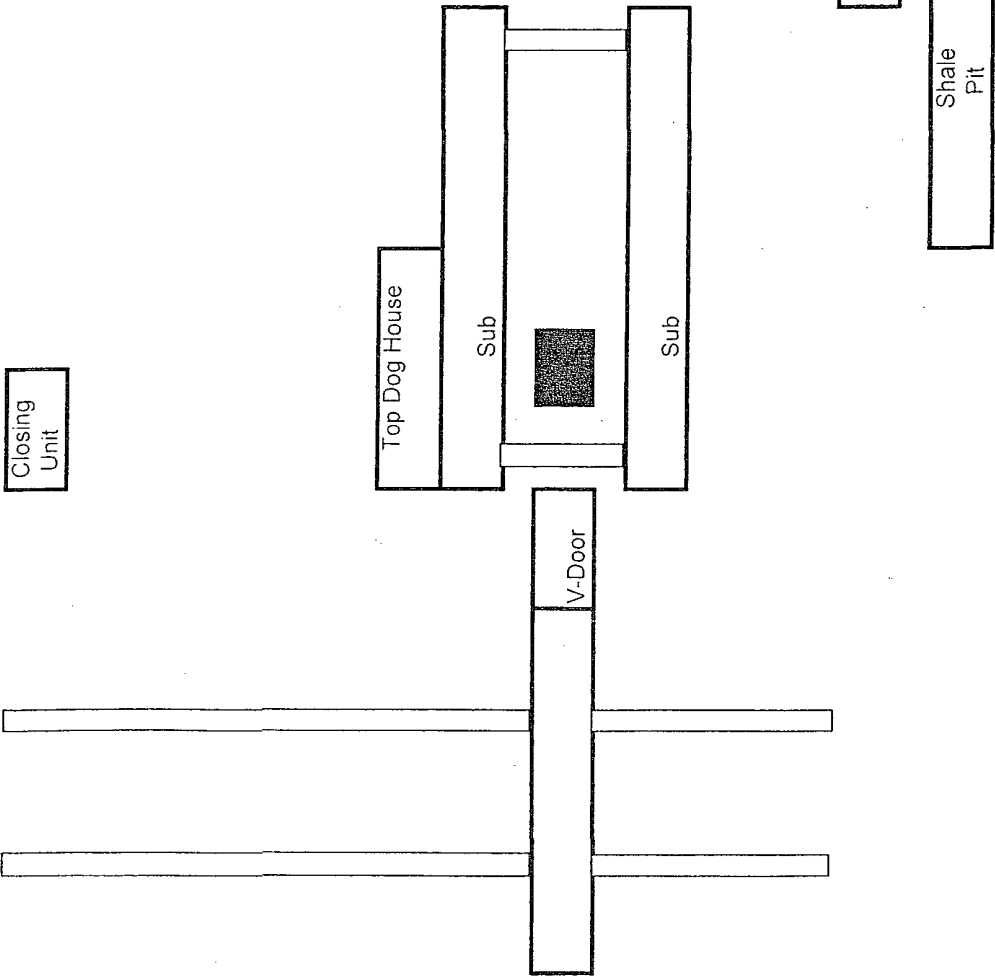
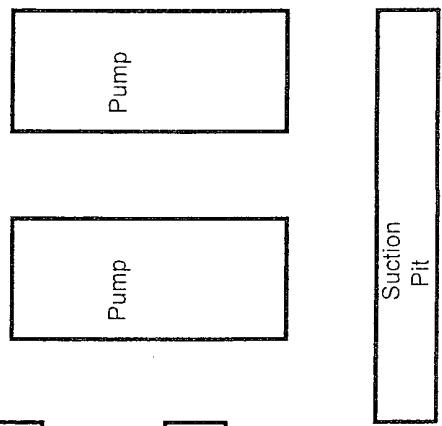
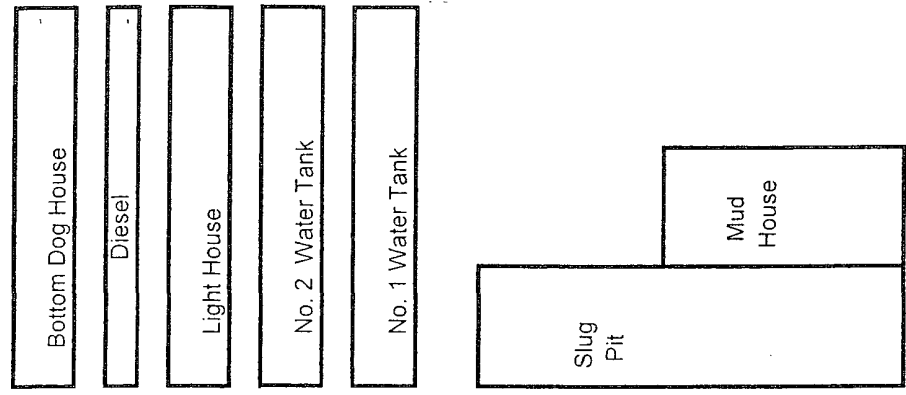
Location must be drilled on Nash drill island

Two other laterals are planned to be drilled from the Nash 56H pad

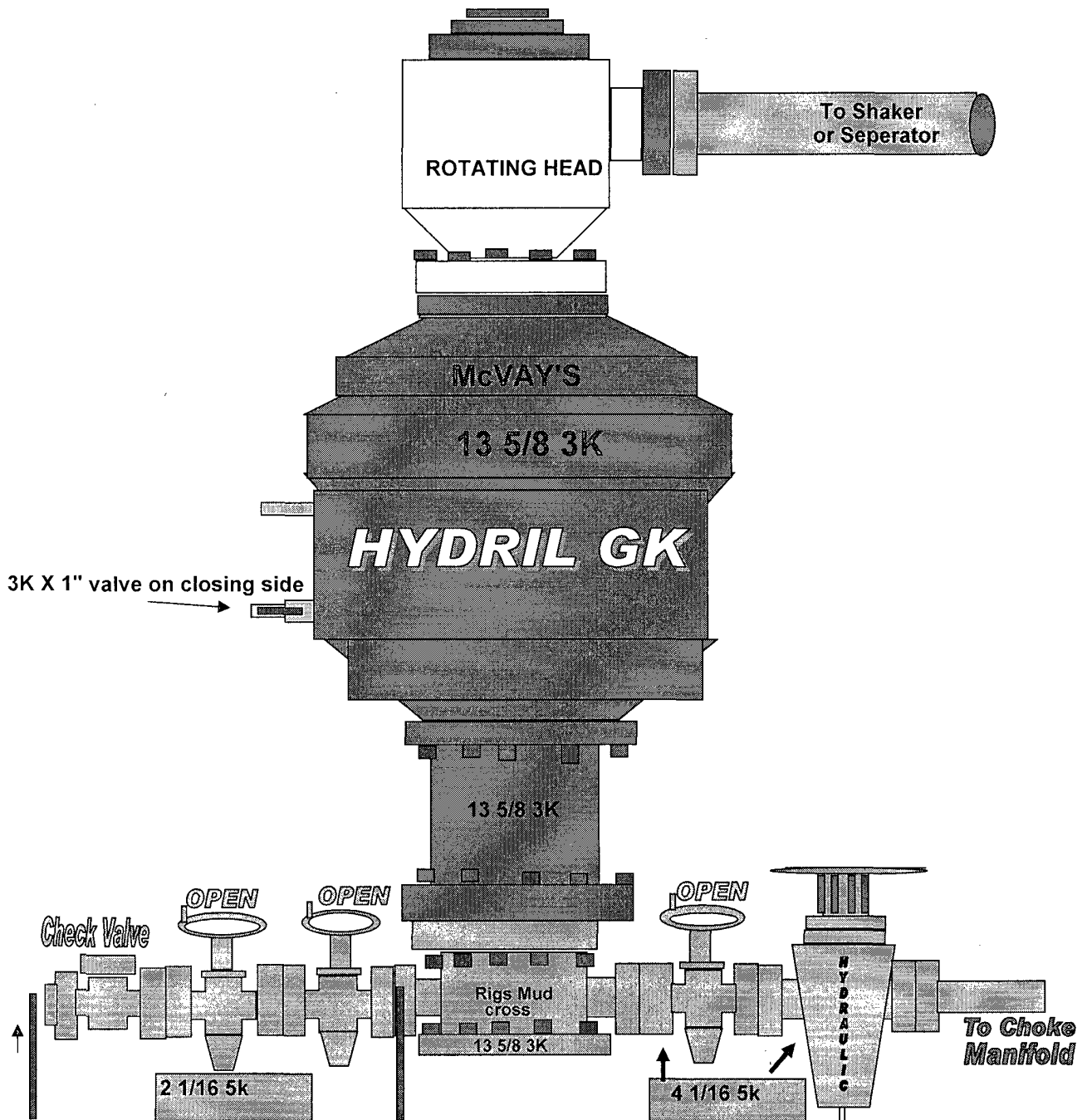
AFE 1006077

ID 115812

McVay Drilling Rig No. 5
Nash Unit # 56H



McVay Rig #7,5



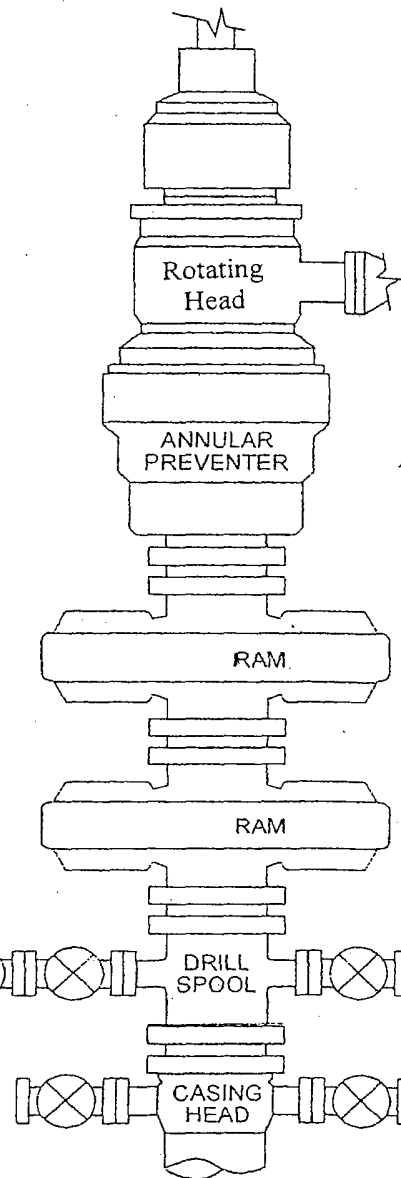
XTO ENERGY INC

Nash Unit #50H

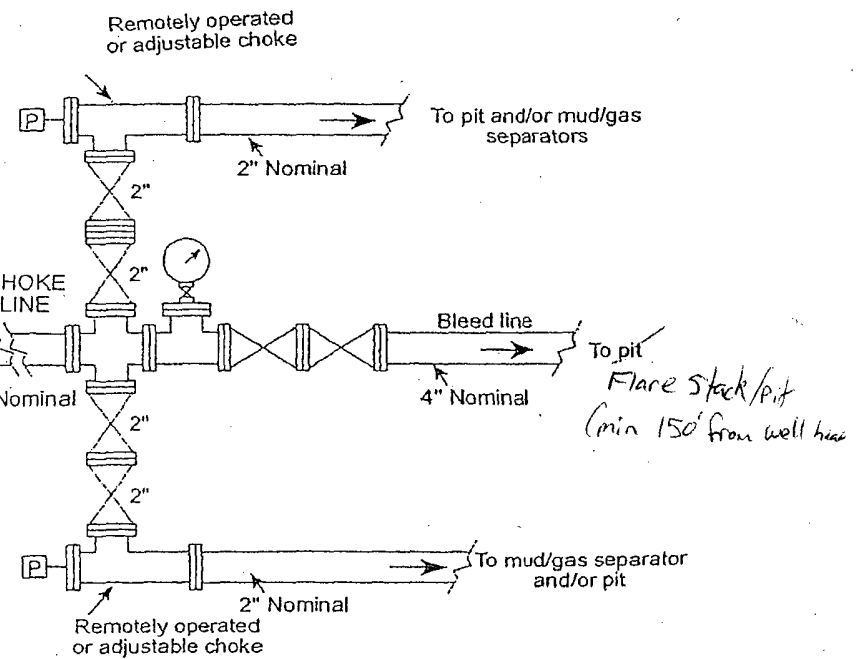
11" Hydraulic
Double Ram BOP
Blinds X Pipe Rams

11" 5000 psi
Hydraulic
Annular BOP

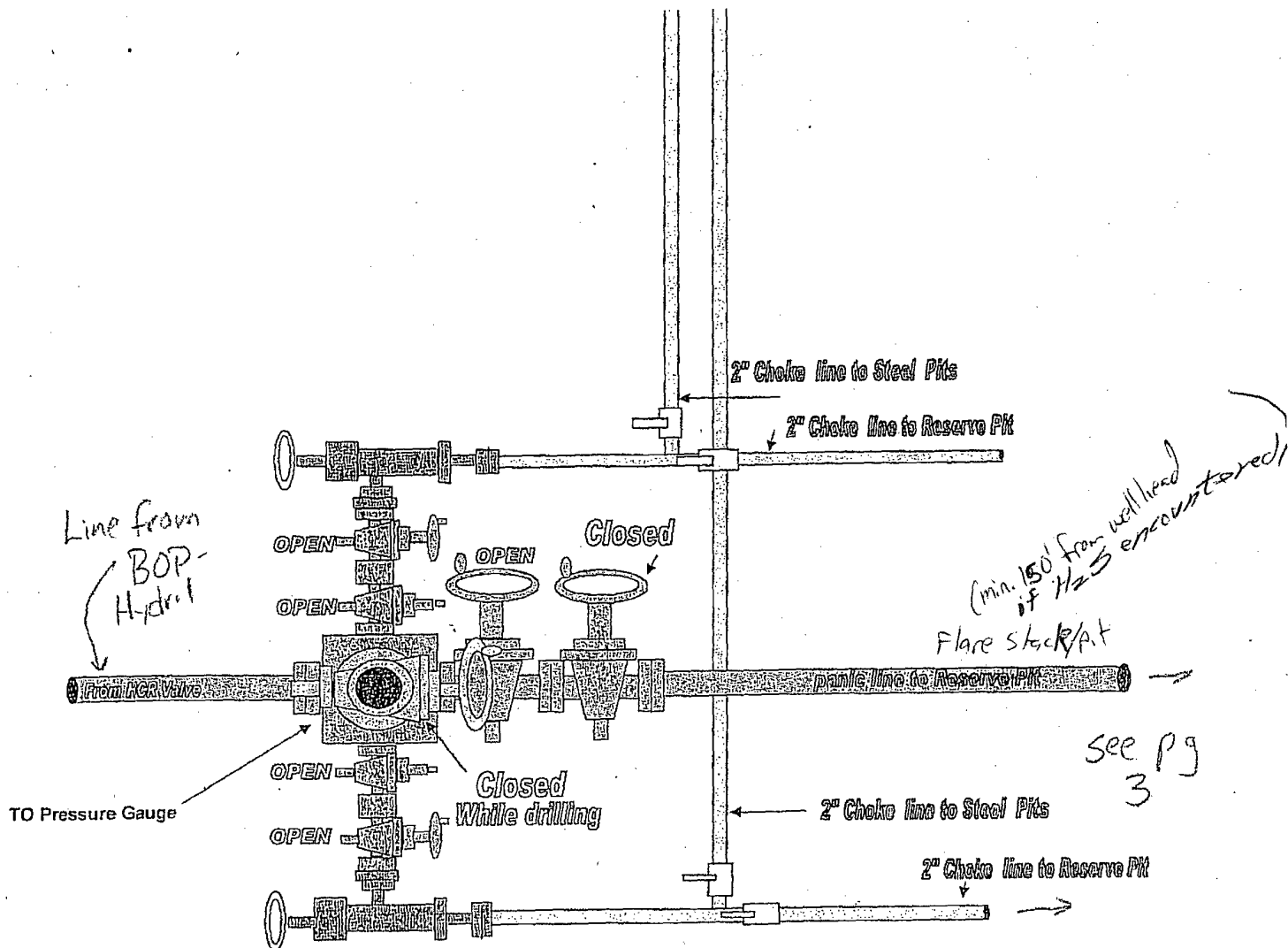
Check Valve



9-5/8" 3000 psi
SOW Wellhead



5000 psi Working Pressure
BOPE Configuration and Choke Manifold



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