

HOBBS

HOBBS OCD

ATS-11-716

FORM APPROVED
OMB No 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 27 2012

APPLICATION FOR PERMIT TO DRILL OR REENTER

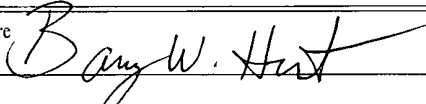
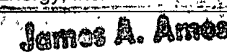
RECEIVED

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM #18848	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator XTO Energy, Inc.		7. If Unit or CA Agreement, Name and No.	
3a. Address 200 N. Loraine, Suite 800 Midland, Tx. 79701		8. Lease Name and Well No. SDE 31 Federal #18H 43007297	
3b. Phone No. (include area code) 432-620-6749		9. API Well No. 30-025-40460	
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 350 FSL & 680 FEL At proposed prod. zone 350 FNL & 350 FEL		10. Field and Pool, or Exploratory West Triste Draw Delaware 2599457	
14. Distance in miles and direction from nearest town or post office* Approximately 20 miles northeast of Loving, NM		11. Sec., T. R. M. or Blk. and Survey or Area Section 31, T. 23 S., R. 32 E.	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any) 350 ft.	16. No. of acres in lease 640	17. Spacing Unit dedicated to this well 160	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 1630 ft. east of the #15	19. Proposed Depth 8340 ft. TVD / 12590 ft. MD	20. BLM/BIA Bond No. on file UTB000138	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3606' GL	22. Approximate date work will start*	23. Estimated duration 35 Days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must 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 must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

25. Signature 	Name (Printed/Typed) BARRY W. HUNT	Date 6/20/11
Title Permit Agent for XTO Energy, Inc.		
Approved by (Signature) 	Name (Printed/Typed)	Date FEB 2 32012
Title FIELD MANAGER	Office CARLSBAD FIELD 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.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Ka 03/01/12

**Approval Subject to General Requirements
& Special Stipulations Attached**

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

MAR 05 2012

Drilling Plan

(Supplement to BLM 3160-3)

XTO Energy Inc., 200 North Loraine, Suite 800, Midland, TX

SDE 31 Federal 18H

350' FSL & 680' FEL

Unit P, Section 31, T-23-S, R-32-E

Lea County, NM

Triste Draw; Delaware, West: Pool Code: 59945

Projected TD: 8340' TVD/12590' MD

NMNM-18848

1. GEOLOGIC NAME OF SURFACE FORMATION: Quaternary

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

Formation	Well Depth (ft)	Water / Oil / Gas
	100-300	Fresh Water
Rustler	900	Water
Top of Salt	1030	
Base of Salt	3110	
Lamar	4652	
Bell Canyon	4707	Water/Oil/Gas
Cherry Canyon	5415	Water/Oil/Gas
Brushy Canyon *	6774	Water/Oil/Gas
Brushy Canyon E3 zone	8280	Water/Oil/Gas
Brushy Canyon E5 zone	8410	Water/Oil/Gas

(*) Primary hydrocarbon-bearing strata

3. CASING PROGRAM:

The surface fresh water sands will be protected by setting 13-3/8" casing at $\pm 900'$ and circulating cement back to surface. The hydrocarbon productive zones will be isolated by setting 7" casing and cementing above the 9-5/8" intermediate casing.

Hole Size	Depth	OD Csg.	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' - 900' 1045	13-3/8"	48	STC	H-40	New	2.24	1.29	4.56
12-1/4"	0' - 4400' 4650	9-5/8"	40#	LTC	HCL-80	New	1.56	1.48	8.39
8-3/4"	0' - 8700'	7"	26#	LTC	HCP-110	New	2.58	2.38	4.23
6-1/8"	8550' - 12590'	4-1/2"	11.6#	LTC	HCP-110	New	2.49	2.02	2.12

4-1/2" liner will have at least 150' overlap back into the 7" casing.

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. "B" Section: Casing Hanger 11" Bowl x 5-1/2" casing
- D. Tubing Spool: 11" 3000 psi bottom flange x 7-1/16" 5000 psi top flange

4. CEMENT PROGRAM: (Note yields and DV tool depths if multiple stages)

A. Surface Cement: 13-3/8"

Lead Slurry: 585 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.3% Fresh Water
(13.50 ppg, 1.75 cu ft/sk, 9.20 gal wtr/sk) 12 hr compr strength - 450 psi 24 hr compr strength – 900 psi

Tail Slurry: 200 sacks Class C Cement + 2% bwoc Calcium Chloride + 56.4% Fresh Water
(14.8 ppg, 1.34 cu ft/sk, 6.36 gal wtr/sk) 12 hr compr strength - 750 psi 24 hr compr strength – 1500 psi

100% excess. Cement to surface.

B. Intermediate Cement: 9-5/8"

Lead Slurry: 740 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 5 lbs/sack LCM-1 + 6% bwoc Bentonite + 0.2% bwoc Sodium Metasilicate + 0.25 lbs/sack Cello Flake + 103% Fresh Water
(12.5 ppg, 2.05 cu ft/sk, 10.75 gal wtr/sk) 12 hr compr strength - 350 psi 24 hr compr strength – 1100 psi

Tail Slurry: 365 sacks Class C Cement + 1% bwoc Calcium Chloride + 56.3% Fresh Water
(14.8 ppg, 1.34 cu ft/sk, 6.34 gal wtr/sk) 12 hr compr strength – 625 psi 24 hr compr strength – 2200 psi

50% excess. Cement to surface.

C. Production Cement: 7"

Lead Slurry: 210 sacks (50:50) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 5 lbs/sack LCM-1 + 0.3% bwoc FL-52 + 10% bwoc Bentonite + 129.3% Fresh Water
(11.9 ppg, 2.38 ft³/sk, 13.02 gal wtr/sk) 24 hr compr strength – 225 psi 72 hr compr strength – 1400 psi

Tail Slurry: 405 sacks (50:50) Poz (Fly Ash):Class H Cement + 2% bwow Sodium Chloride + 0.6% bwoc FL-52 + 2% bwoc Bentonite + 0.2% bwoc Sodium Metasilicate + 57.4% Fresh Water

(14.2 ppg, 1.28 ft³/sk, 5.78 gal/sx wtr) 24 hr compr strength – 575 psi 72 hr compr strength – 2200 psi

TOC - 4200'.

35% excess, all volumes to be adjusted per caliper log.

D. Production liner: 4-1/2"

Cement not required. A packer and port system will be used.

5. PRESSURE CONTROL EQUIPMENT:

The blow out preventer equipment (BOP) diagram is attached to this Drilling Plan. The blowout preventer stack for the intermediate and production hole will consist of a double ram blowout preventer and annular preventer rated to 3000 psi working pressure. All BOP's and accessory equipment will be tested according to Onshore Order #2 before drilling out. A hydraulic closing unit will be a part of this equipment and will be function tested daily.

6. PROPOSED MUD CIRCULATION SYSTEM:

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' to 900' / 1045	13-3/8"	FW/Native	8.5 – 8.8	35-40	NC
900' to 4400' 4650	12-1/4"	Brine/ Gel Sweeps	9.8 – 10.2	30-32	NC
4400' to 8700'	8-3/4"	FW/Polymer Sweeps	8.6-8.8	29-32	NC-20
8700' to 12590'	6-1/8"	FW/Polymer Sweeps	8.6-8.8	32-35	20

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 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. Hydrogen sulfide detection equipment and breathing equipment will be in operation from drilling out the 9-5/8" casing shoe until the 4-1/2" casing is in place.

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

- A. Potential drill stem tests will be based on geological sample shows.
- B. No coring is anticipated.
- C. Mudlogger unit will be on and working from 4400' to TD.
- D. Open hole logging to include Density/Neutron/PE/Dual Laterlog/Spectral Gamma from KOP to intermediate casing, with Neutron/Gamma continuing to surface.

9. ABNORMAL PRESSURES AND TEMPERATURES / POTENTIAL HAZARDS: *see not*

No abnormal pressures are anticipated. Max bottom hole pressure should not exceed ~~2000~~ *2000* psi. BHT of 145° F is anticipated. Hydrogen Sulfide Gas (H₂S) should be expected from about 4600' to TD. *mal 11/8/11*

Monitors will be in place to detect H₂S occurrences (as mentioned above). 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. Should any abnormal or hazardous circumstances be encountered personnel on location will take necessary steps to ensure safety of all personnel and environment.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

Road and location construction will begin after APD has been approved. Anticipated spud date will be as soon as location is complete and rig is available. Move in operations and drilling is expected to take 12 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 will 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'.
 - Production Hole: Maximum of 4° and not more than 1.5° change per 100'.
 - Note: Maximum distance between surveys is 500'.**
- C. WOC a minimum of 18 hours or before cement gains compressive strength of 500 psi, whichever is greater, before drilling out shoe joint on surface casing string. 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.

Reference: 7 Day Deficiency letter

#1. In the past, with reference to previous XTO Energy SDE wells drilled in 2006 and more recently drilled Nash Unit wells, 13-3/8" casing has been set as surface and 9-5/8" casing has been set as intermediate. The drilling rigs that we employ have an 11" 3M or 5M double ram BOP with Hydril with an auxiliary 13-5/8" 3M or 5M hydril that is utilized to be installed on the 13-3/8" starting head. This starting head and hydril are tested and in use while drilling the 12-1/4" intermediate hole, once the 9-5/8" casing is run and cemented, the 13-5/8" hydril and starting head are removed, and an 11" 3M or 5M x 9-5/8" bradenhead is installed permanently. The 11" 3M or 5M BOP stacked is then installed and tested and utilized for the remainder of the drilling program.

For this well, the SDE 31 Federal #18H and referring to our Drilling Plan, Wellhead Section, Item A & B, we plan on installing a 13-5/8" 3M starting head and utilize a 13-5/8" 3M hydril on the 13-3/8" surface casing. The Hydril will be tested to 1500 psi (normally 50% of rated pressure). Once the 12-1/4" hole is drilled and the 9-5/8" casing run & cemented, an 11" 3M x 9-5/8" bradenhead will be permanently installed and the 11" 3M BOP stack will be installed and tested per BLM requirements.

See closed loop plat schematic showing distances to steel tank.

#2. The attached page #4 of the drilling plan shows the changes to Bottom Hole Pressure not to exceed 2000. The BHT of 145 degree F is anticipated.

← Probably meant
max Surface
Pressure.

*This is not possible
at 8340', Mud weight
indicates slightly above
normal gradient - calculates
to a BHP of 3816 psi.*

*MM
11/8/11*



XTO Energy Co

Lea County
SDE 31 Fed
#18H
OH

Plan: Design #1

Pathfinder X&Y Report

15 June, 2011

PATHFINDER
A Schlumberger Company



Pathfinder
Pathfinder X&Y Report



Company	XTO Energy Co	Local Co-ordinate Reference:	Site SDE 31 Fed
Project	Lea County	TVD Reference	KB=14' @ 3620.00usft
Site	SDE 31 Fed	MD Reference	KB=14' @ 3620.00usft
Well	#18H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method	Minimum Curvature
Design:	Design #1	Database:	EDM 5000 1 Single User Db

Project	Lea 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	SDE 31 Fed		
Site Position:		Northing:	456,887 300 usft
From:	Map	Easting:	693,645 700 usft
Position Uncertainty:	0 00 usft	Slot Radius	13-3/16 "
		Latitude:	32° 15' 16 370 N
		Longitude:	103° 42' 24 940 W
		Grid Convergence:	0.33 °

Well	#18H					
Well Position	+N/-S	0.00 usft	Northing:	456,887 300 usft	Latitude:	32° 15' 16 370 N
	+E/-W	0.00 usft	Easting:	693,645.700 usft	Longitude:	103° 42' 24 940 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level	3,606.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/15/2011	7 64	60 21	48,655

Design	Design #1			
Audit Notes.				
Version	Phase.	PLAN	Tie On Depth	0 00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0 00	3.82

Survey Tool Program	Date:	6/15/2011		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
0 00	12,589 22	Design #1 (OH)	MWD	MWD - Standard



Pathfinder
Pathfinder X&Y Report



Company:	XTO Energy Co	Local Co-ordinate Reference:	Site SDE 31 Fed
Project:	Lea County	TVD Reference:	KB=14' @ 3620 00usft
Site:	SDE 31 Fed	MD Reference:	KB=14' @ 3620 00usft
Well:	#18H	North Reference:	Gnd
Wellbore:	OH	Survey Calculation Method	Minimum Curvature
Design:	Design #1	Database:	EDM 5000.1 Single User Db

Planned Survey												
MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (*/100usft)	Northing (usft)	Easting (usft)		
0 00	0.00	0.00	0 00	-3,620.00	0 00	0.00	0 00	0 00	456,887.30	693,645.70		
100.00	0 00	0.00	100.00	-3,520.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
200.00	0 00	0.00	200.00	-3,420.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
300.00	0 00	0 00	300.00	-3,320.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
400.00	0 00	0 00	400.00	-3,220.00	0 00	0.00	0 00	0 00	456,887.30	693,645.70		
500.00	0.00	0.00	500.00	-3,120.00	0 00	0 00	0.00	0 00	456,887.30	693,645.70		
600.00	0 00	0 00	600.00	-3,020.00	0.00	0 00	0 00	0 00	456,887.30	693,645.70		
700.00	0 00	0.00	700.00	-2,920.00	0.00	0.00	0 00	0.00	456,887.30	693,645.70		
800.00	0.00	0.00	800.00	-2,820.00	0 00	0 00	0 00	0.00	456,887.30	693,645.70		
900.00	0.00	0.00	900.00	-2,720.00	0.00	0 00	0 00	0.00	456,887.30	693,645.70		
1,000.00	0 00	0.00	1,000.00	-2,620.00	0.00	0.00	0 00	0 00	456,887.30	693,645.70		
1,100.00	0 00	0.00	1,100.00	-2,520.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
1,200.00	0.00	0.00	1,200.00	-2,420.00	0.00	0 00	0 00	0.00	456,887.30	693,645.70		
1,300.00	0 00	0.00	1,300.00	-2,320.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
1,400.00	0 00	0 00	1,400.00	-2,220.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
1,500.00	0 00	0.00	1,500.00	-2,120.00	0 00	0.00	0 00	0 00	456,887.30	693,645.70		
1,600.00	0 00	0 00	1,600.00	-2,020.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
1,700.00	0 00	0 00	1,700.00	-1,920.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
1,800.00	0 00	0.00	1,800.00	-1,820.00	0 00	0.00	0.00	0 00	456,887.30	693,645.70		
1,900.00	0 00	0 00	1,900.00	-1,720.00	0 00	0.00	0 00	0 00	456,887.30	693,645.70		
2,000.00	0.00	0 00	2,000.00	-1,620.00	0 00	0 00	0.00	0 00	456,887.30	693,645.70		
2,100.00	0.00	0.00	2,100.00	-1,520.00	0 00	0.00	0 00	0 00	456,887.30	693,645.70		
2,200.00	0.00	0 00	2,200.00	-1,420.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
2,300.00	0 00	0.00	2,300.00	-1,320.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
2,400.00	0 00	0 00	2,400.00	-1,220.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
2,500.00	0 00	0.00	2,500.00	-1,120.00	0 00	0 00	0 00	0 00	456,887.30	693,645.70		
2,600.00	0 00	0.00	2,600.00	-1,020.00	0 00	0.00	0 00	0 00	456,887.30	693,645.70		



Pathfinder
Pathfinder X&Y Report



Company:	XTO Energy Co	Local Co-ordinate Reference:	Site SDE 31 Fed
Project:	Lea County	TVD Reference	KB=14' @ 3620 00usft
Site:	SDE 31 Fed	MD Reference	KB=14' @ 3620 00usft
Well:	#18H	North Reference	Gnd
Wellbore:	IOH	Survey Calculation Method	Minimum Curvature
Design:	Design #1	Database:	EDM 5000.1 Single User Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northings (usft)	Easting (usft)		
2,700.00	0.00	0.00	2,700.00	-920.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
2,800.00	0.00	0.00	2,800.00	-820.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
2,900.00	0.00	0.00	2,900.00	-720.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,000.00	0.00	0.00	3,000.00	-620.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,100.00	0.00	0.00	3,100.00	-520.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,200.00	0.00	0.00	3,200.00	-420.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,300.00	0.00	0.00	3,300.00	-320.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,400.00	0.00	0.00	3,400.00	-220.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,500.00	0.00	0.00	3,500.00	-120.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,600.00	0.00	0.00	3,600.00	-20.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,700.00	0.00	0.00	3,700.00	80.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,800.00	0.00	0.00	3,800.00	180.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
3,900.00	0.00	0.00	3,900.00	280.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,000.00	0.00	0.00	4,000.00	380.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,100.00	0.00	0.00	4,100.00	480.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,200.00	0.00	0.00	4,200.00	580.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,300.00	0.00	0.00	4,300.00	680.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,400.00	0.00	0.00	4,400.00	780.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,500.00	0.00	0.00	4,500.00	880.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,600.00	0.00	0.00	4,600.00	980.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,700.00	0.00	0.00	4,700.00	1,080.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,800.00	0.00	0.00	4,800.00	1,180.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
4,900.00	0.00	0.00	4,900.00	1,280.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,000.00	0.00	0.00	5,000.00	1,380.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,100.00	0.00	0.00	5,100.00	1,480.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,200.00	0.00	0.00	5,200.00	1,580.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,300.00	0.00	0.00	5,300.00	1,680.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		



Pathfinder
Pathfinder X&Y Report



Company	XTO Energy Co	Local Co-ordinate Reference	Site SDE 31 Fed
Project	Lea County	TVD Reference	KB=14' @ 3620 00usft
Site	SDE 31 Fed	MD Reference	KB=14' @ 3620 00usft
Well	#18H	North Reference	Gnd
Wellbore	OH	Survey Calculation Method	Minimum Curvature
Design	Design #1	Database	EDM 5000.1 Single User Db

Planned Survey												
MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
5,400.00	0.00	0.00	5,400.00	1,780.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,500.00	0.00	0.00	5,500.00	1,880.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,600.00	0.00	0.00	5,600.00	1,980.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,700.00	0.00	0.00	5,700.00	2,080.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,800.00	0.00	0.00	5,800.00	2,180.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
5,900.00	0.00	0.00	5,900.00	2,280.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,000.00	0.00	0.00	6,000.00	2,380.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,100.00	0.00	0.00	6,100.00	2,480.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,200.00	0.00	0.00	6,200.00	2,580.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,300.00	0.00	0.00	6,300.00	2,680.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,400.00	0.00	0.00	6,400.00	2,780.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,500.00	0.00	0.00	6,500.00	2,880.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,600.00	0.00	0.00	6,600.00	2,980.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,700.00	0.00	0.00	6,700.00	3,080.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,800.00	0.00	0.00	6,800.00	3,180.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
6,900.00	0.00	0.00	6,900.00	3,280.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,000.00	0.00	0.00	7,000.00	3,380.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,100.00	0.00	0.00	7,100.00	3,480.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,200.00	0.00	0.00	7,200.00	3,580.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,300.00	0.00	0.00	7,300.00	3,680.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,400.00	0.00	0.00	7,400.00	3,780.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,500.00	0.00	0.00	7,500.00	3,880.00	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,533.02	0.00	0.00	7,533.02	3,913.02	0.00	0.00	0.00	0.00	456,887.30	693,645.70		
7,550.00	1.21	3.82	7,550.00	3,930.00	0.18	0.01	0.18	7.10	456,887.48	693,645.71		
7,600.00	4.76	3.82	7,599.92	3,979.92	2.77	0.19	2.78	7.10	456,890.07	693,645.89		
7,650.00	8.31	3.82	7,649.59	4,029.59	8.45	0.56	8.46	7.10	456,895.75	693,646.26		
7,700.00	11.86	3.82	7,698.81	4,078.81	17.18	1.15	17.21	7.10	456,904.48	693,646.85		



Pathfinder
Pathfinder X&Y Report



Company:	XTO Energy Co	Local Co-ordinate Reference:	Site SDE 31 Fed
Project:	Lea County	TVD Reference:	KB=14' @ 3620.00usft
Site:	SDE 31 Fed	MD Reference:	KB=14' @ 3620.00usft
Well:	#18H	North Reference:	Gnd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 5000 1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
7,750.00	15.41	3.82	7,747.39	4,127.39	28.93	1.93	29.00	7.10	456,916.23	693,647.63	
7,800.00	18.96	3.82	7,795.16	4,175.16	43.66	2.91	43.76	7.10	456,930.96	693,648.61	
7,850.00	22.51	3.82	7,841.91	4,221.91	61.32	4.09	61.46	7.10	456,948.62	693,649.79	
7,900.00	26.06	3.82	7,887.48	4,267.48	81.83	5.46	82.01	7.10	456,969.13	693,651.16	
7,950.00	29.61	3.82	7,931.69	4,311.69	105.12	7.02	105.35	7.10	456,992.42	693,652.72	
8,000.00	33.16	3.82	7,974.37	4,354.37	131.09	8.75	131.39	7.10	457,018.39	693,654.45	
8,050.00	36.71	3.82	8,015.36	4,395.36	159.66	10.66	160.01	7.10	457,046.96	693,656.36	
8,100.00	40.26	3.82	8,054.49	4,434.49	190.69	12.73	191.12	7.10	457,077.99	693,658.43	
8,150.00	43.81	3.82	8,091.62	4,471.62	224.09	14.96	224.59	7.10	457,111.39	693,660.66	
8,200.00	47.36	3.82	8,126.61	4,506.61	259.72	17.34	260.30	7.10	457,147.02	693,663.04	
8,250.00	50.91	3.82	8,159.33	4,539.33	297.44	19.85	298.10	7.10	457,184.74	693,665.55	
8,300.00	54.46	3.82	8,189.63	4,569.63	337.11	22.50	337.86	7.10	457,224.41	693,668.20	
8,350.00	58.01	3.82	8,217.42	4,597.42	378.57	25.27	379.41	7.10	457,265.87	693,670.97	
8,400.00	61.56	3.82	8,242.58	4,622.58	421.67	28.15	422.61	7.10	457,308.97	693,673.85	
8,450.00	65.11	3.82	8,265.02	4,645.02	466.25	31.12	467.29	7.10	457,353.55	693,676.82	
8,500.00	68.66	3.82	8,284.65	4,664.65	512.12	34.18	513.26	7.10	457,399.42	693,679.88	
8,550.00	72.21	3.82	8,301.40	4,681.40	559.12	37.32	560.37	7.10	457,446.42	693,683.02	
8,600.00	75.76	3.82	8,315.19	4,695.19	607.07	40.52	608.42	7.10	457,494.37	693,686.22	
8,650.00	79.31	3.82	8,325.99	4,705.99	655.77	43.77	657.23	7.10	457,543.07	693,689.47	
8,700.00	82.86	3.82	8,333.74	4,713.74	705.05	47.06	706.62	7.10	457,592.35	693,692.76	
8,750.00	86.41	3.82	8,338.42	4,718.42	754.71	50.38	756.39	7.10	457,642.01	693,696.08	
8,800.63	90.00	3.82	8,340.00	4,720.00	805.19	53.75	806.98	7.10	457,692.49	693,699.45	
8,900.00	90.00	3.82	8,340.00	4,720.00	904.34	60.37	906.36	0.00	457,791.64	693,706.07	
9,000.00	90.00	3.82	8,340.00	4,720.00	1,004.12	67.03	1,006.36	0.00	457,891.42	693,712.73	
9,100.00	90.00	3.82	8,340.00	4,720.00	1,103.90	73.69	1,106.36	0.00	457,991.20	693,719.39	
9,200.00	90.00	3.82	8,340.00	4,720.00	1,203.68	80.35	1,206.36	0.00	458,090.98	693,726.05	
9,300.00	90.00	3.82	8,340.00	4,720.00	1,303.46	87.01	1,306.36	0.00	458,190.76	693,732.71	



Pathfinder
Pathfinder X&Y Report



Company	XTO Energy Co	Local Co-ordinate Reference.	Site SDE 31 Fed
Project:	Lea County	TVD Reference	KB=14' @ 3620.00usft
Site	SDE 31 Fed	MD Reference:	KB=14' @ 3620.00usft
Well	#18H	North Reference.	Gnd
Wellbore	OH	Survey Calculation Method	Minimum Curvature
Design:	Design #1	Database:	EDM 5000 1 Single User Db

Planned Survey												
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S. (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)		
9,400.00	90.00	3.82	8,340.00	4,720.00	1,403.23	93.67	1,406.36	0.00	458,290.53	693,739.37		
9,500.00	90.00	3.82	8,340.00	4,720.00	1,503.01	100.33	1,506.36	0.00	458,390.31	693,746.03		
9,600.00	90.00	3.82	8,340.00	4,720.00	1,602.79	106.99	1,606.36	0.00	458,490.09	693,752.69		
9,700.00	90.00	3.82	8,340.00	4,720.00	1,702.57	113.65	1,706.36	0.00	458,589.87	693,759.35		
9,800.00	90.00	3.82	8,340.00	4,720.00	1,802.35	120.31	1,806.36	0.00	458,689.65	693,766.01		
9,900.00	90.00	3.82	8,340.00	4,720.00	1,902.12	126.97	1,906.36	0.00	458,789.42	693,772.67		
10,000.00	90.00	3.82	8,340.00	4,720.00	2,001.90	133.63	2,006.36	0.00	458,889.20	693,779.33		
10,100.00	90.00	3.82	8,340.00	4,720.00	2,101.68	140.29	2,106.36	0.00	458,988.98	693,785.99		
10,200.00	90.00	3.82	8,340.00	4,720.00	2,201.46	146.95	2,206.36	0.00	459,088.76	693,792.65		
10,300.00	90.00	3.82	8,340.00	4,720.00	2,301.24	153.61	2,306.36	0.00	459,188.54	693,799.31		
10,400.00	90.00	3.82	8,340.00	4,720.00	2,401.01	160.27	2,406.36	0.00	459,288.31	693,805.97		
10,500.00	90.00	3.82	8,340.00	4,720.00	2,500.79	166.93	2,506.36	0.00	459,388.09	693,812.63		
10,600.00	90.00	3.82	8,340.00	4,720.00	2,600.57	173.59	2,606.36	0.00	459,487.87	693,819.29		
10,700.00	90.00	3.82	8,340.00	4,720.00	2,700.35	180.25	2,706.36	0.00	459,587.65	693,825.95		
10,800.00	90.00	3.82	8,340.00	4,720.00	2,800.13	186.91	2,806.36	0.00	459,687.43	693,832.61		
10,900.00	90.00	3.82	8,340.00	4,720.00	2,899.90	193.57	2,906.36	0.00	459,787.20	693,839.27		
11,000.00	90.00	3.82	8,340.00	4,720.00	2,999.68	200.23	3,006.36	0.00	459,886.98	693,845.93		
11,100.00	90.00	3.82	8,340.00	4,720.00	3,099.46	206.89	3,106.36	0.00	459,986.76	693,852.59		
11,200.00	90.00	3.82	8,340.00	4,720.00	3,199.24	213.55	3,206.36	0.00	460,086.54	693,859.25		
11,300.00	90.00	3.82	8,340.00	4,720.00	3,299.02	220.21	3,306.36	0.00	460,186.32	693,865.91		
11,400.00	90.00	3.82	8,340.00	4,720.00	3,398.79	226.87	3,406.36	0.00	460,286.09	693,872.57		
11,500.00	90.00	3.82	8,340.00	4,720.00	3,498.57	233.53	3,506.36	0.00	460,385.87	693,879.23		
11,600.00	90.00	3.82	8,340.00	4,720.00	3,598.35	240.19	3,606.36	0.00	460,485.65	693,885.89		
11,700.00	90.00	3.82	8,340.00	4,720.00	3,698.13	246.85	3,706.36	0.00	460,585.43	693,892.55		
11,800.00	90.00	3.82	8,340.00	4,720.00	3,797.91	253.51	3,806.36	0.00	460,685.21	693,899.21		
11,900.00	90.00	3.82	8,340.00	4,720.00	3,897.68	260.17	3,906.36	0.00	460,784.98	693,905.87		
12,000.00	90.00	3.82	8,340.00	4,720.00	3,997.46	266.83	4,006.36	0.00	460,884.76	693,912.53		



Pathfinder
Pathfinder X&Y Report



Company	XTO Energy Co	Local Co-ordinate Reference:	Site SDE 31 Fed
Project:	Lea County	TVD Reference:	KB=14' @ 3620 00usft
Site	SDE 31 Fed	MD Reference:	KB=14' @ 3620 00usft
Well	#18H	North Reference:	Grid
Wellbore	OH	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 5000 1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
12,100.00	90 00	3.82	8,340.00	4,720 00	4,097.24	273 49	4,106.36	0 00	460,984 54	693,919 19	
12,200 00	90 00	3.82	8,340 00	4,720 00	4,197 02	280 16	4,206.36	0 00	461,084 32	693,925 86	
12,300.00	90 00	3.82	8,340 00	4,720 00	4,296 80	286 82	4,306.36	0 00	461,184 10	693,932 52	
12,400 00	90 00	3.82	8,340 00	4,720 00	4,396.57	293 48	4,406.36	0 00	461,283 87	693,939 18	
12,500 00	90 00	3.82	8,340.00	4,720 00	4,496.35	300 14	4,506.36	0.00	461,383.65	693,945.84	
12,589 55	90 00	3.82	8,340 00	4,720 00	4,585 70	306 10	4,595.90	0 00	461,473 00	693,951 80	
BHL (SDE #18)											

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



Project: Lea County
Site: SDE 31 Fed
Well: #18H
Wellbore: OH
Plan: Design #1 (#18H/OH)

PATHFINDER
A Schlumberger Company

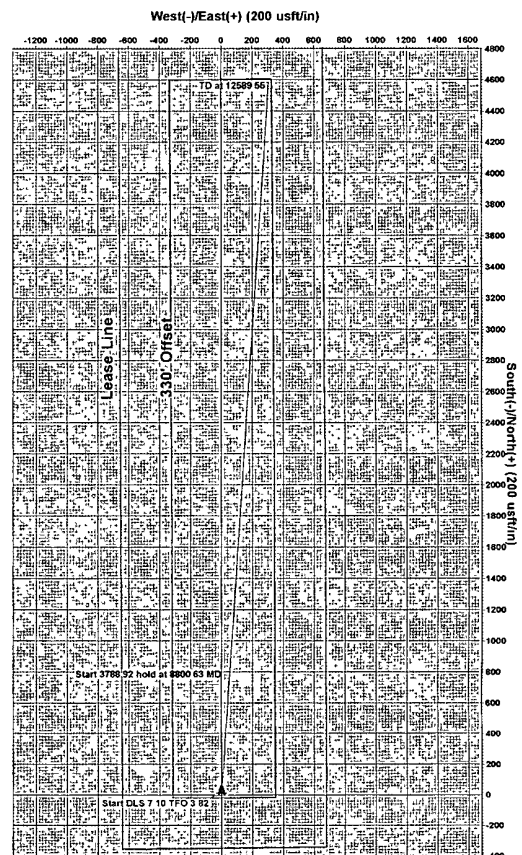
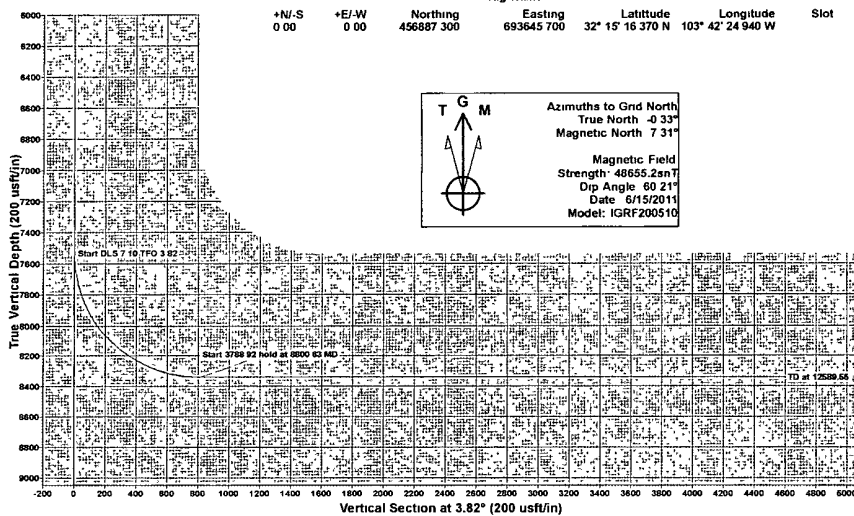
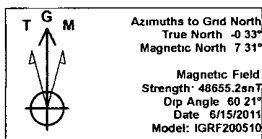
PROJECT DETAILS: Lea County
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7533.02	0.00	0.00	7533.02	0.00	0.00	0.00	0.00	0.00
3	8800.63	90.00	3.82	8340.00	805.19	53.75	7.10	3.82	806.98
4	12589.55	90.00	3.82	8340.00	4585.70	306.10	0.00	0.00	4595.90
									BHL (SDE #18)

WELL DETAILS #18H

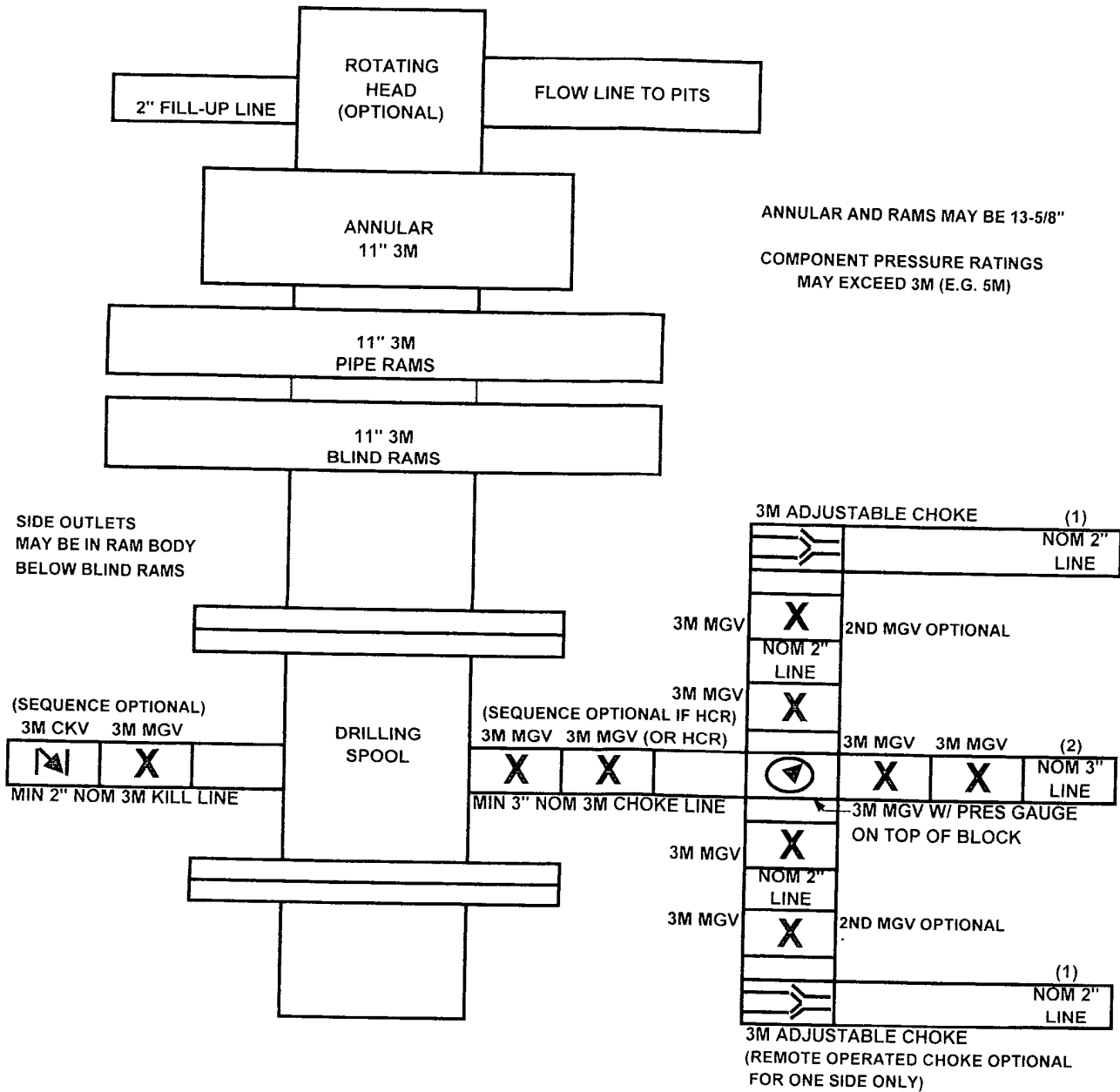
Ground Elevation: 3506.00
KB Elevation: 3620.00
Rig Name: RB-14 @ 3620.00usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	456867.308	693645.700	32° 15' 16.370 N	103° 42' 24.940 W	



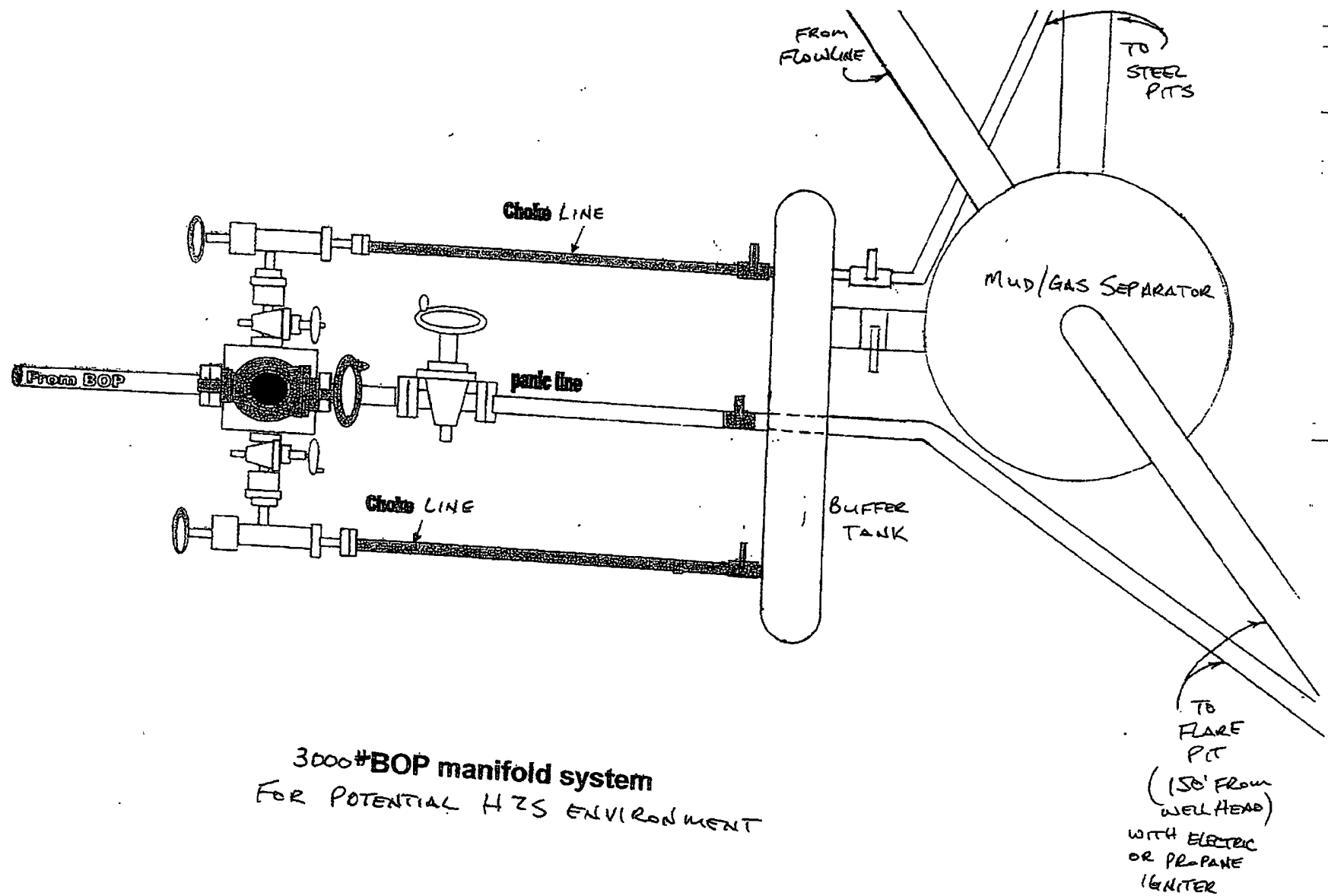
Plan: Design #1 (#18H/OH)
Created By: Nate Stingham Date: 10-06-June-15-2011

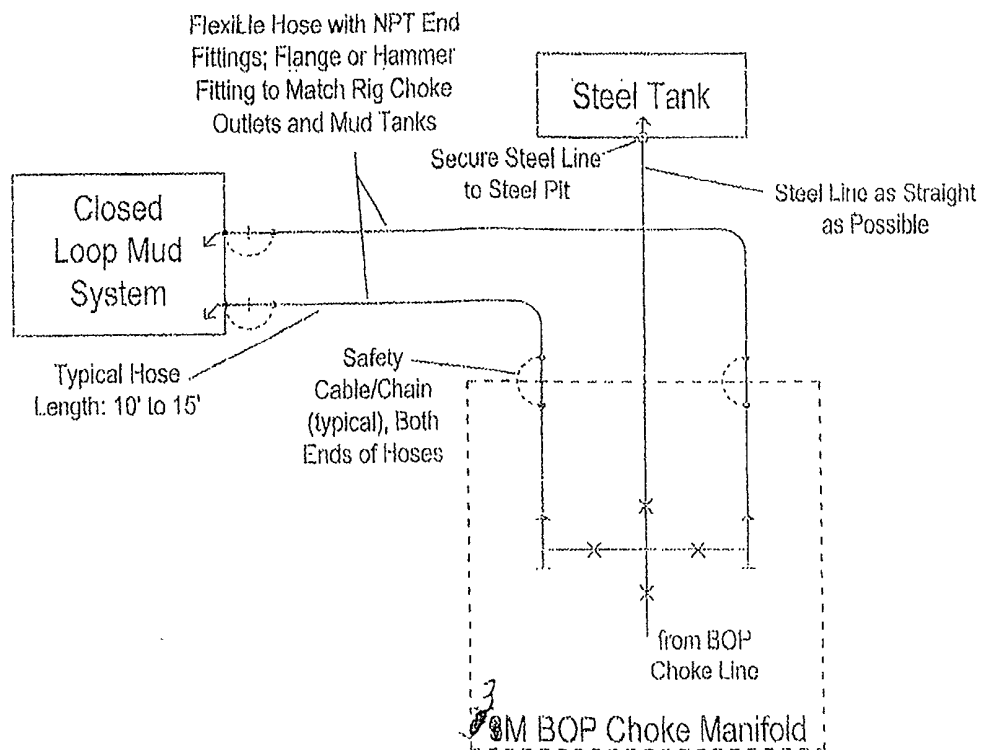
3M BOP SCHEMATIC



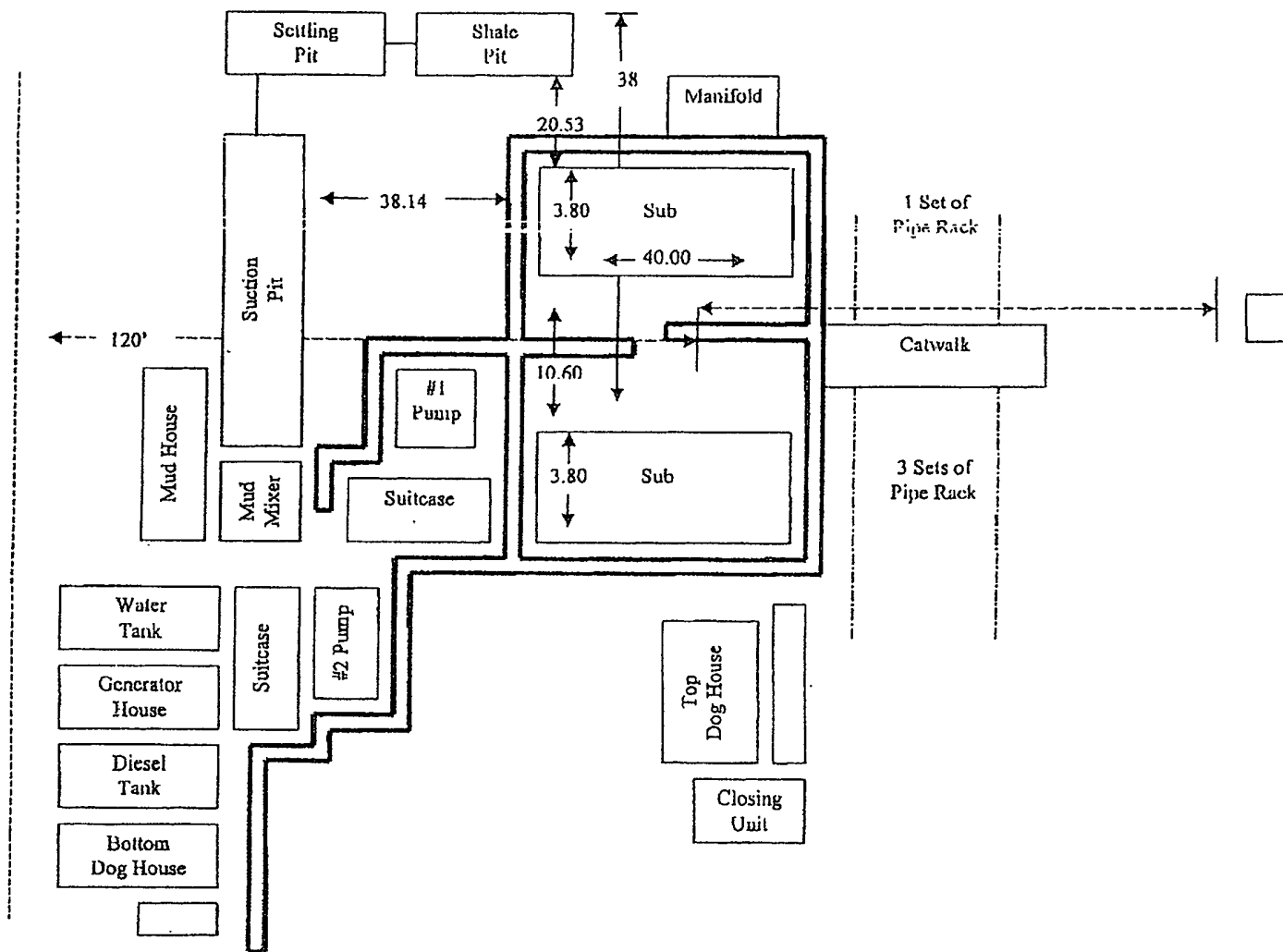
- (1) Line to mud gas separator and/or pit
(2) Bleed line to pit

MGV - Manual Gate Valve
CKV - Check Valve
HCR - Hydraulically Controlled Remote Valve



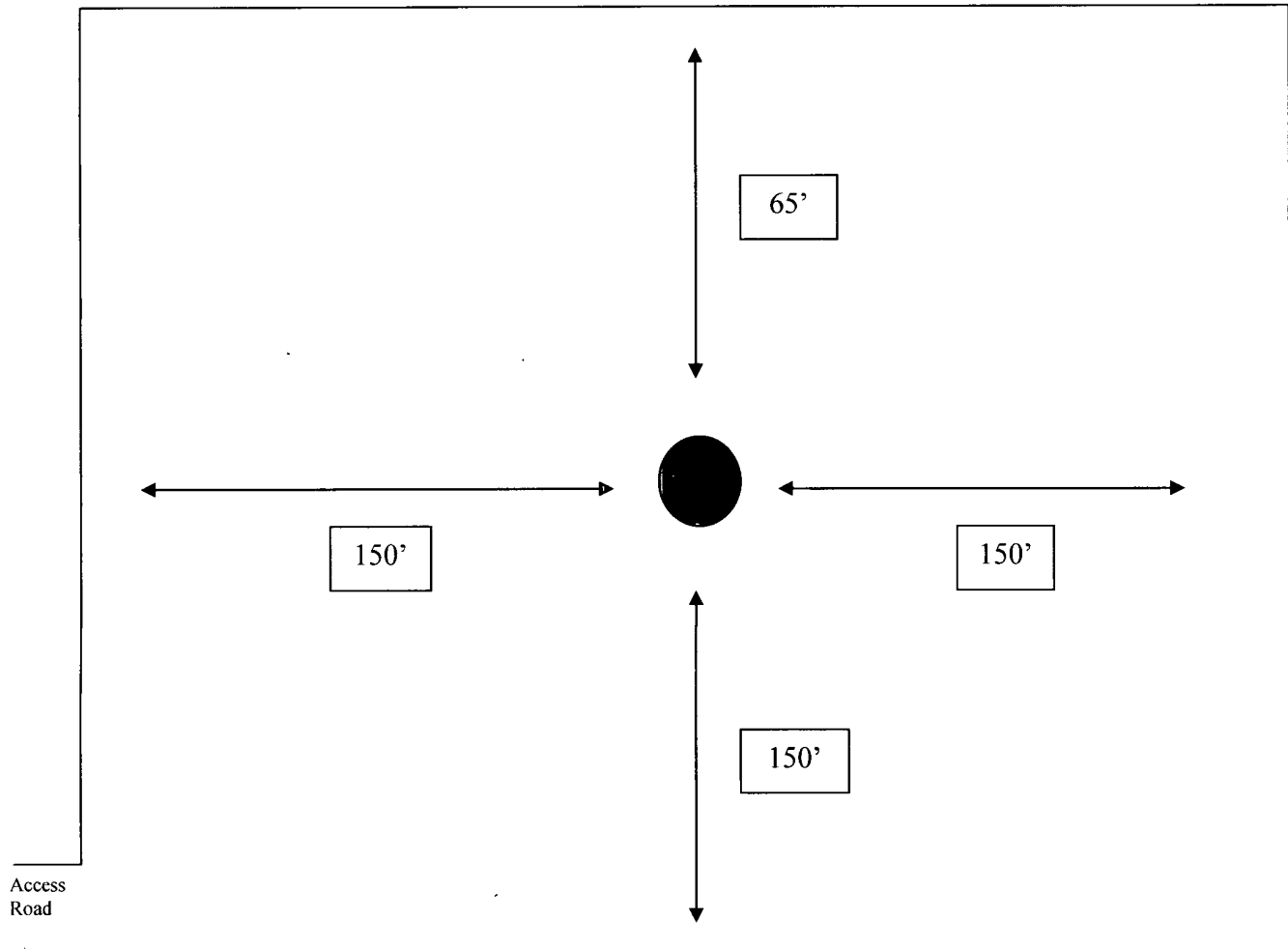


Plat for Closed Loop System



**EXHIBIT
'A'**

**Rig Plat Only
V-DOOR EAST
SDE 31 Fed #18H**



NORTH