

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

SEP 29 2009

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

RCVD FEB 11 10  
OIL CONS. DIV.  
DIST. 3

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NOG 050317275
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name NAVAJO ALLOTMENT
2. Name of Operator XTO Energy Inc.		7. If Unit or CA Agreement, Name and No. PENDING
3a. Address 382 CR 3100 Aztec, NM 87410		8. Lease Name and Well No. BOXER #21 H
3b. Phone No. (include area code) 505/ 333-3100		9. API Well No. 30-045-35625
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 200' FNL x 250' FWL At proposed prod. zone 1950' FNL x 700' FEL		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
14. Distance in miles and direction from nearest town or post office* 23.5 miles SE of Bloomfield P.O.		11. Sec., T. R. M. or Blk. and Survey or Area (D) Sec 27, T25N, R10W
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 200'	16. No. of acres in lease 160	17. Spacing Unit dedicated to this well FC: N/2 320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A	19. Proposed Depth 5863' MD/1673' TVD	20. BLM/BIA Bond No. on file BIA104312789
21. Elevations (Show whether DF, KDB, RT, GL, etc) 6666' Ground Elevation	22. Approximate date work will start* 01/01/2010	23. Estimated duration 2 Weeks

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 <i>Malia Villers</i>	Name (Printed/Typed) MALIA VILLERS	Date 09/25/2009
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Title  
PERMITTING TECH.

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

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

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

\*(Instructions on page 2)

Hold C104  
for Directional Survey  
and "As Drilled" plat

NOTIFY AZTEC OCD 24 HRS.  
PRIOR TO CASING & CEMENT

NMOCD

FEB 03 2010

*[Signature]*

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

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

BLM'S APPROVAL OR ACCEPTANCE OF THIS  
ACTION DOES NOT RELIEVE THE LESSEE AND  
OPERATOR FROM OBTAINING ANY OTHER  
AUTHORIZATION REQUIRED FOR OPERATIONS  
ON FEDERAL AND INDIAN LANDS

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

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

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

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

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102

Revised October 12, 2005

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

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30.045.35025	<sup>2</sup> Pool Code 71629	<sup>3</sup> Pool Name Basin FRUITLAND COAL
<sup>4</sup> Property Code 38004	<sup>5</sup> Property Name BOXER	<sup>6</sup> Well Number 21
<sup>7</sup> GRID No. 5380	<sup>8</sup> Operator Name XTO ENERGY, INC.	<sup>9</sup> Elevation 6666

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	27	25 N	10 W		200	NORTH	250	WEST	SAN JUAN

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	27	25 N	10 W		1950	NORTH	700	EAST	SAN JUAN

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

<sup>16</sup> N 89°56'55" E 200' NAD 83 LAT: 36.378747° N LONG: 107.892105° W 2640.01' 250' N 0°02'07" E 2638.59' N 0°01'49" E S 89°59'51" W 2639.29'	SECTION 27	N 89°54'20" E 2639.36' 1950' NAD 83 LAT: 36.373960° N LONG: 107.877411° W 700' S 0°02'40" W 2642.37' S 0°03'37" W 2643.53'	<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. mainville 9/25/09 Signature Date maria Villers Printed Name
<sup>18</sup> SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 6/24/08 Date of Survey Signature and Seal ROBERT L. POUNDS NEW MEXICO 6846 LICENSED PROFESSIONAL SURVEYOR Certificate Number 6846			

# XTO ENERGY INC.

Boxer #21

APD Data

September 28, 2009

Location: 200' FNL x 250' FWL Sec 27, T25N, R10W County: San Juan

State: New Mexico

Bottomhole Location: 1950' FNL x 700' FEL Sec 27, T25N, R10W

GREATEST PROJECTED TVD: 1673'

APPROX GR ELEV: 6666'

GREATEST PROJECTED MD: 5863'

Est KB ELEV: 6678' (12' AGL)

OBJECTIVE: Fruitland Coal

## 1. MUD PROGRAM:

INTERVAL	0' to 250'	250' to 2285'	2285' to TD
HOLE SIZE	12.25"	8.75"	6.125"
MUD TYPE	FW/Spud Mud	FW/Polymer	Air/Mist
WEIGHT	8.6-9.0	8.4-8.8	NA
VISCOSITY	28-32	28-32	NA
WATER LOSS	NC	NC	NC

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

## 2. CASING PROGRAM:

Surface Casing: 9.625" casing to be set at  $\pm 250'$  in a 12-1/4" hole filled with 9.20 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll <sup>1</sup>	SF Burst <sup>2</sup>	SF Ten <sup>3</sup>
0'-250'	250'	36.0#	J-55	ST&C	2020	3520	394	8.921	8.765	18.76	32.7	48.6

Intermediate Casing: 7" casing to be set at  $\pm 1925'$  MD, 1673' TVD in 8.75" hole filled with 9.20 ppg mud.

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll <sup>1</sup>	SF Burst <sup>2</sup>	SF Ten <sup>3</sup>
0'-2285'	2285'	23.0#	J-55	ST&C	3270	4360	284	6.276	6.151	4.09	5.45	5.40

Production Casing: 4.5" casing to be set at  $\pm 5760'$  MD, 1673' TVD in 6.125" hole filled with 8.4 ppg mud.

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll <sup>1</sup>	SF Burst <sup>2</sup>	SF Ten <sup>3</sup>
2225'-5863'	3638'	10.5	J-55	ST&C	4010	4790	132	4.052	3.927	5.49	6.55	3.46

<sup>1</sup>Collapse SF is based on evacuated annulus and hydrostatic at TVD.

<sup>2</sup>Burst SF is based on evacuated casing and hydrostatic at TVD.

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

### 3. WELLHEAD:

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

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

- A. Surface: 9.625", 36.0#, J-55, ST&C casing to be set at  $\pm 250'$  in 12-1/4" hole.

140 sx of Type III cement (or equivalent) typically containing accelerator and LCM, mixed at 14.5 ppg, 1.39 ft<sup>3</sup>/sk, & 6.70 gal wtr/sk.

*Total slurry volume is 177 ft<sup>3</sup>, 100% excess of calculated annular volume to 250'.*

- B. Production Casing: 7", 23#/ft, J-55, ST&C casing to be set at  $\pm 2285'$  MD, 1673' TVD in 8.75" hole.

#### LEAD:

$\pm 150$  sx of Premium Lite FM or CBM Lite typically containing accelerator, LCM, dispersant, and fluid loss additives at 12.1 ppg, 2.22 ft<sup>3</sup>/sk, & 12.04 gal wtr/sk.

#### TAIL:

$\pm 100$  sx of Type III or V cement typically containing accelerator, LCM, dispersant, and fluid loss additives at 14.2 ppg, 1.48 ft<sup>3</sup>/sk, & 7.34 gal wtr/sk.

*Total estimated slurry volume for the 7" production casing is 481 ft<sup>3</sup>.*

- C. Production Liner: 4.5", 10.5#/ft, J-55, ST&C casing is to be set at 5863' MD, 1673' TVD in 6.125" hole.

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

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

### 5. LOGGING PROGRAM:

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

6. **FORMATION TOPS:**

See attached Directional Program.

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

7. **COMPANY PERSONNEL:**

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

JDN  
9/28/09



# Weatherford International, Inc.

## Proposal Plan Report

**Weatherford**

Company: XTO	Date: 9/25/2009	Time: 11:44:16	Page: 3
Field: San Juan, NM (NAD 83)	Co-ordinate(NE) Reference:	Well: #21, True North	
Site: Boxer #21	Vertical (TVD) Reference:	SITE 6678.0	
Well: #21	Section (VS) Reference:	Well (0.00N,0.00E,111.97Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

### Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec	<--- Longitude ---> Deg Min Sec
LP3		1668.00	-489.61	975.00	1956684.93	2706771.20	36 22 38.648 N	107 53 19.656 W
PBHL		1673.00	-1744.67	4324.98	1955427.83	2710120.42	36 22 26.233 N	107 52 38.690 W

### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
780.64	779.00	Ojo Alamo SS		0.00	0.00
941.83	934.00	Kirtland Shale		0.00	0.00
1323.25	1265.00	Fruitland Formation		0.00	0.00
2182.87	1663.00	Lower Fruitland Coal		0.00	0.00

### Annotation

MD ft	TVD ft	
545.95	545.95	KOP
1345.95	1282.53	BUILD/TURN
2285.11	1668.00	LP/TURN
2359.22	1668.10	HOLD
5862.50	1673.00	PBHL

### Casing Points

MD	TVD	Diameter	Hole Size	Name



BOXER #21  
SAN JUAN CO., NEW MEXICO



Weatherford®

#### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
2	545 95	0 00	0 00	545 95	0 00	0 00	0 00	0 00	0 00	
3	1345 95	40 00	120 00	1282 53	-134 05	232 18	5 00	120 00	265 46	
4	2285 11	89 92	112 74	1668 00	-489 61	975 00	5 36	-9 45	1087 37	LP3
5	2359 22	89 92	110 52	1668 10	-516 92	1043 89	3 00	-89 97	1161 47	
6	5862 50	89 92	110 52	1673 00	-1744 67	4324 98	0 00	0 00	4663 62	PBHL

#### FORMATION TOP DETAILS

No	TVDPath	MDPath	Formation
1	779 00	780 64	Ojo Alamo SS
2	934 00	941 83	Kirtland Shale
3	1265 00	1323 25	Fruitland Formation
4	1663 00	2182 87	Lower Fruitland Coal

#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
LP3	1668 00	-489 61	975 00	36°22'38 648N	107°53'19 656W	Point
PBHL	1673 00	-1744 67	4324 98	36°22'26 233N	107°52'38 690W	Point

#### FIELD DETAILS

San Juan, NM (NAD 83)

Geodetic System US State Plane Coordinate System 1983  
Ellipsoid GRS 1980  
Zone New Mexico, Western Zone  
Magnetic Model mgrf200510

System Datum Mean Sea Level  
Local North True North

#### WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
#21	0 00	0 00	1957175 13	2705796 50	36°22'43 490N	107°53'31 580W	N/A

#### SITE DETAILS

Boxer #21  
200' FNL 250' FWL of SEC 27 T25N R10W

Site Centre Latitude 36°22'43 490N  
Longitude 107°53'31 580W

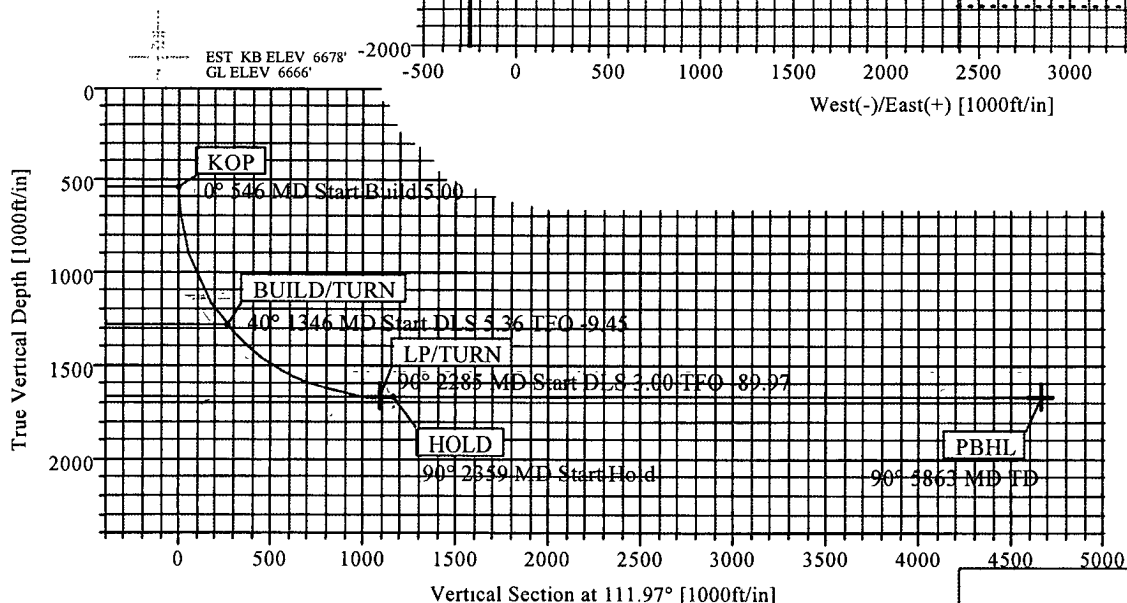
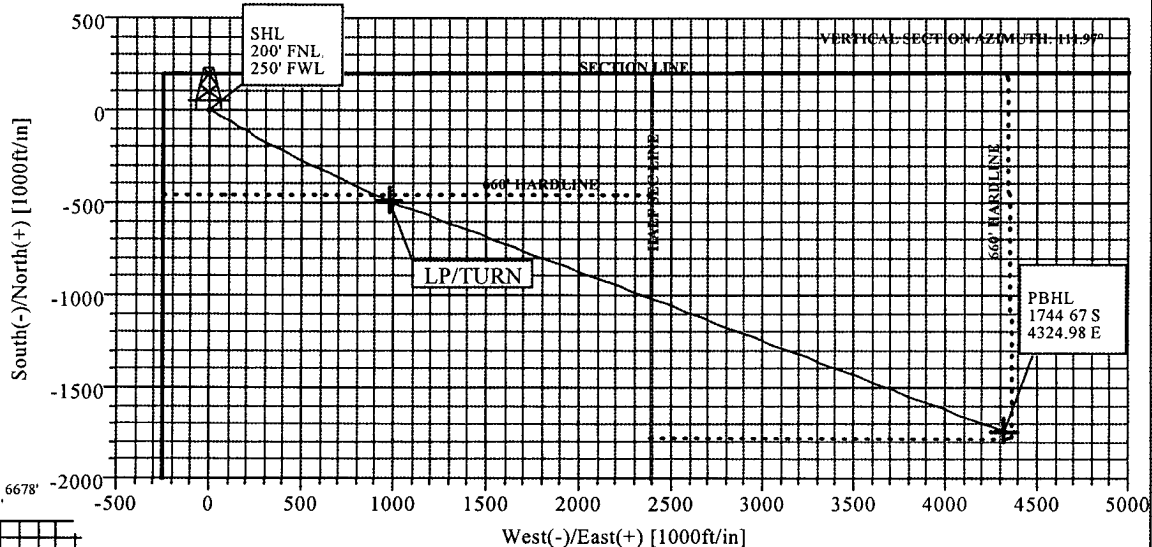
Ground Level 6666 00  
Positional Uncertainty 0 00  
Convergence -0 03



Azimuths to True North  
Magnetic North: 10 11°

Magnetic Field  
Strength: 50768nT  
Dip Angle: 63.18°  
Date: 8/20/2009  
Model mgrf200510

TOTAL CORRECTION TO TRUE NORTH 10.11°



Plan Plan #3 (#21/1)

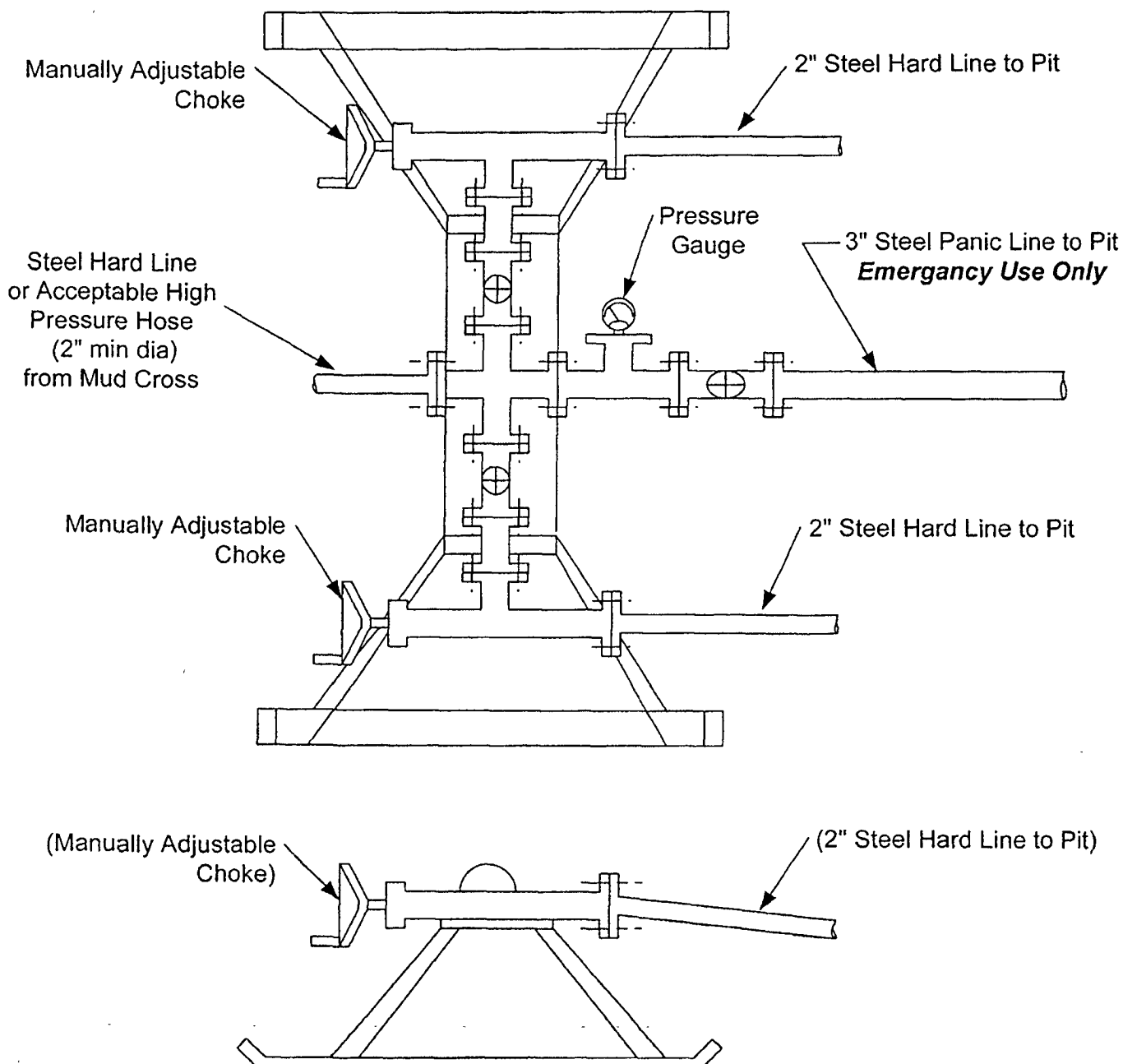
Created By Lindsey Maddux

Date 9/25/2009

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

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

## **TESTING PROCEDURE**





# AWS 507

