

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

FORM APPROVED  
Bureau of Land Management  
5. Lease Serial No.  
NMNM-03554

RCVD MAY 27 11  
OIL CONS. DIV.  
DIST. 3

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		2. If Unit or CA Agreement, Name and No. N/A
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		8. Lease Name and Well No. BREECH C #244G
2. Name of Operator NTO Energy, Inc.		9. API Well No. 30-04-039-30652
3a. Address 382 CR 3100 Aztec NM 87410	3b. Phone No. (include area code) 505-333-3100	10. Field and Pool, or Exploratory Basin DK/Blanco MV/S. Blanco TO
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 660' FNL x 945 FWL At proposed prod. zone same		11. Sec., T. R. M. or Blk. and Survey or Area (D) SEC 14, T26N, R6W
14. Distance in miles and direction from nearest town or post office* Approximately 33.5 miles Southeast of Bloomfield, NM post office		12. County or Parish San Juan
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'	16. No. of acres in lease 160	17. Spacing Unit dedicated to this well DK/MV: N/2 320, To: W/2 NW/4 80
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 333'	19. Proposed Depth 7680'	20. BLM/BIA Bond No. on file UTB-000138
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6612' Ground Elevation	22. Approximate date work will start* 03/01/2009	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 	Name (Printed/Typed) Edén Fine	Date 01/12/2009
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Title

Approved by (Signature) 	Name (Printed/Typed) AFM	Date 5/24/11
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Title

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. \* NSL required for South Blanco Torito Pm.

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)

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

JUN 10 2011

APD/ROW

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

NMOC

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

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plot 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 knowledge & belief.

Date of Survey: NOV 19 1938

Signature and Title of Professional Surveyor: NEW MEXICO

*(Circular Seal: NEW MEXICO PROFESSIONAL LAND SURVEYORS, 1934, 73-08)*

Certificate Number: \_\_\_\_\_

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

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

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

DISTRICT IV  
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005  
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 30-039-301052		<sup>2</sup> Pool Code 71599	<sup>3</sup> Pool Name Basin Dakota
<sup>4</sup> Property Code 304751	<sup>5</sup> Property Name BREECH C		<sup>6</sup> Well Number 244G
<sup>7</sup> OCRID No. 5380	<sup>8</sup> Operator Name XTO ENERGY INC.		<sup>9</sup> Elevation 6612'

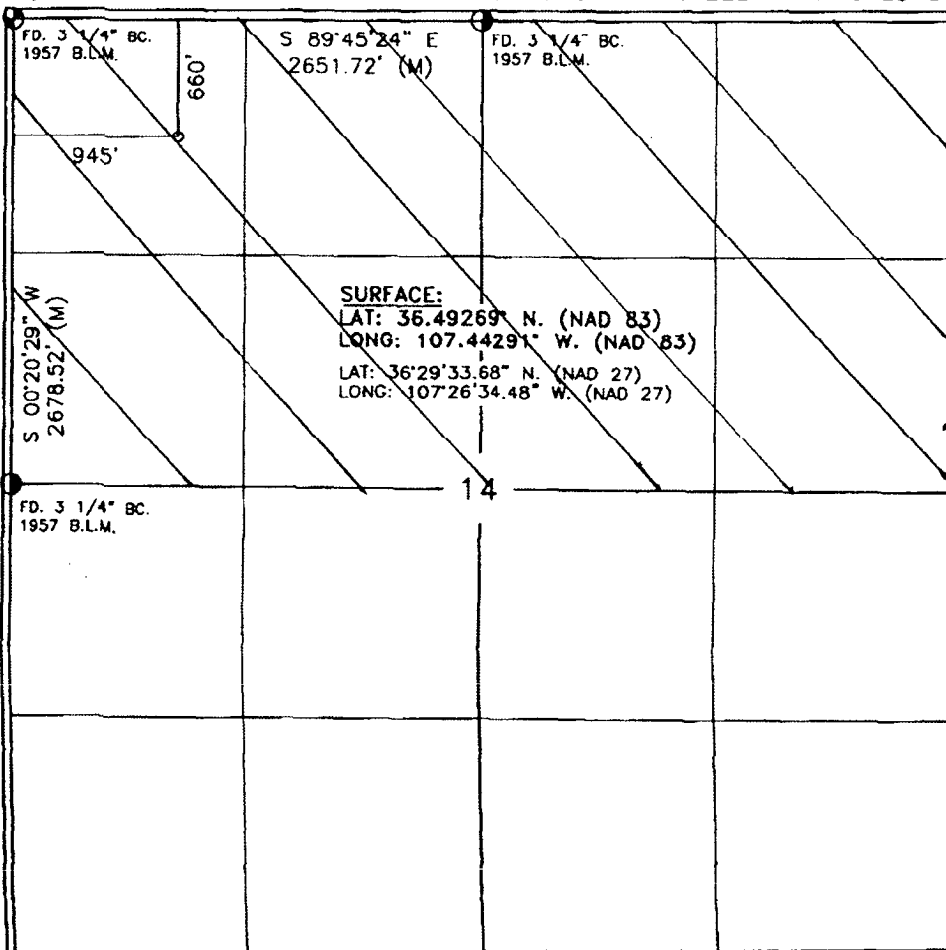
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	14	26-N	6-W		660	NORTH	945	WEST	RIO ARRIBA

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

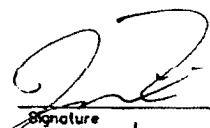
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres N/2 320		<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.			

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



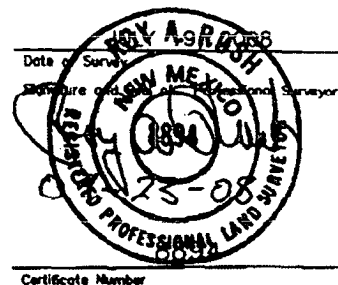
17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.

  
Signature  
1/9/2006  
Date  
Eden Fine  
Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge & belief.

Date of Survey  
Signature of Registered Professional Surveyor  
  
Certificate Number

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

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

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

DISTRICT IV  
1220 South St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005  
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 30-039-302052	<sup>2</sup> Pool Code 06460	<sup>3</sup> Pool Name South Blanco Tocito
<sup>4</sup> Property Code 304751	<sup>5</sup> Property Name BREECH C	<sup>6</sup> Well Number 244G
<sup>7</sup> GRID No. 5380	<sup>8</sup> Operator Name XTO ENERGY INC.	<sup>9</sup> Elevation 6612'

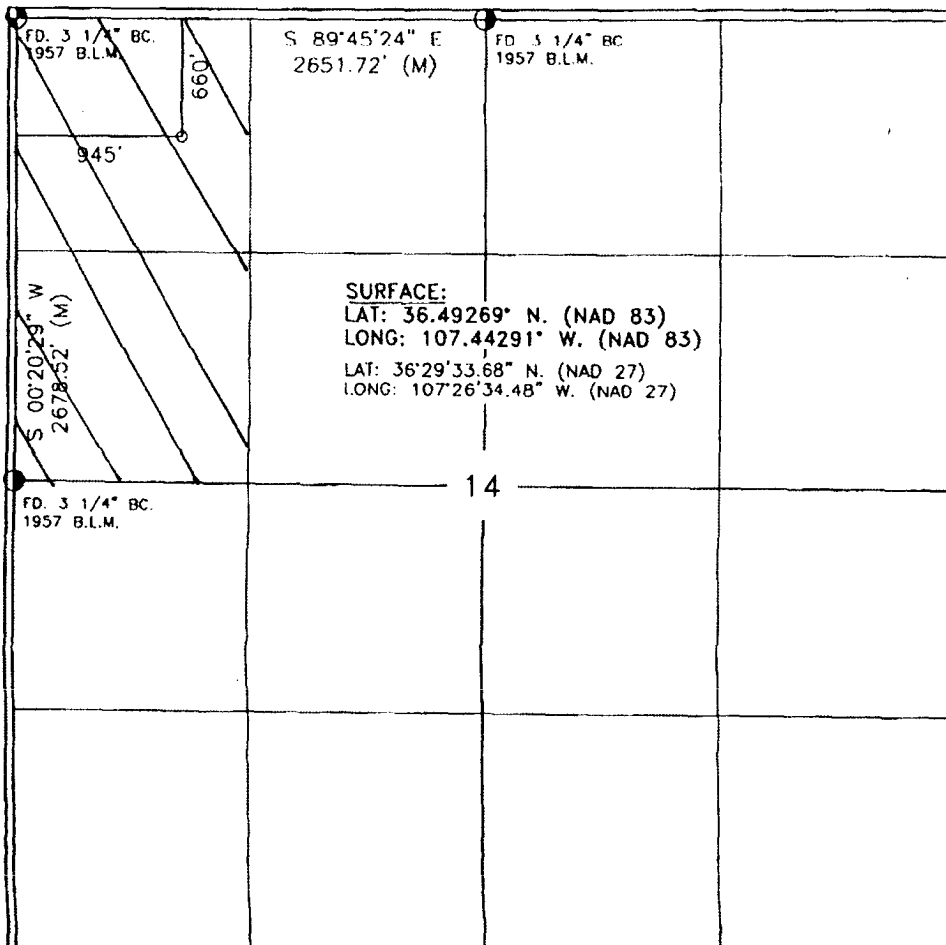
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	14	26-N	6-W		660	NORTH	945	WEST	RIO ARRIBA

<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
<sup>12</sup> Dedicated Acres E/2 NW/4 80					<sup>13</sup> Joint or Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> Order No.

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



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*[Signature]* 1/9/2009  
Signature Date  
Eden Fine  
Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge & belief.

Date of Survey: 1/9/2009  
Signature and Seal of Professional Surveyor:  
*[Signature]*  
Professional Land Surveyor  
Certificate Number: 75-08

# XTO ENERGY INC.

Breach C #244G

APD Data

January 9, 2009

Location: 660' FNL x 945' FWL Sec 14, T26N, R6W

County: Rio Arriba

State: New Mexico

GREATEST PROJECTED TD: 7680'

OBJECTIVE: Basin Dakota / Tocito / Mesaverde

APPROX GR ELEV. 6612'

Est KB ELEV: 6624' (12' AGL)

## 1. MUD PROGRAM:

INTERVAL	0' to 360'	360' to 2500'	2500' to 7680'
HOLE SIZE	12.25"	7.875"	7.875"
MUD TYPE	FW/Spud Mud	LSND	LSND
WEIGHT	8.6-9.0	8.4-8.8	8.6- 9.8
VISCOSITY	28-32	28-32	45-70
WATER LOSS	NC	NC	8-10

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.

## 2. CASING PROGRAM:

Surface Casing: 8.625" casing to be set at  $\pm 360'$  in a 12.25" 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	SF Burst	SF Ten
0'-360'	360'	24.0#	J-55	ST&C	1370	2950	244	8.097	7.972	7.950	17.13	28.24

Production Casing: 5.5" casing to be set at TD ( $\pm 7680'$ ) in 7.875" 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	SF Burst	SF Ten
0'-7800'	7800'	15.5#	J-55	ST&C	4040	4810	202	4.950	4.825	1.10	1.31	1.70

## 3. WELLHEAD:

- Casing Head: Larkin Fig 92 (or equivalent), 9" nominal, 2,000 psig WP (4,000 psig test) with 8-5/8" 8rnd thread on bottom and 11-3/4" 8rnd thread on top.
- Tubing Head: Larkin Fig 612 (or equivalent), 6.456" nominal, 2,000 psig WP (4,000 psig test), 5-1/2" 8rnd female thread on bottom (or slip-on, weld-on), 8-5/8" 8rnd thread on top.

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

A. Surface: 8.625", 24.0#, J-55, ST&C casing to be set at  $\pm 360'$  in 12-1/4" hole.

214 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 297 ft<sup>3</sup>, 100% excess of calculated annular volume to 360'.*

B. Production: 5.5", 15.5#, J-55 (or K-55), ST&C casing to be set at  $\pm 7680'$  in 7.875" hole. DV Tools set @  $\pm 6325'$  and @  $\pm 3150'$ .

1<sup>st</sup> Stage

LEAD:

$\pm 90$  sx of Premium Lite HS (Type III/Poz/Gel) or equivalent, with dispersant, fluid loss, accelerator, & LCM mixed at 12.5 ppg, 2.01 ft<sup>3</sup>/sk, 10.55 gal wtr/sx.

TAIL:

100 sx Type III or equivalent cement with bonding additive, LCM, dispersant, & fluid loss mixed at 14.2 ppg, 1.54 cuft/sx, 8.00 gal/sx.

2<sup>nd</sup> Stage

LEAD:

$\pm 250$  sx of Type III or equivalent cement with 8% gel & LCM mixed at 11.9 ppg, 2.54 ft<sup>3</sup>/sk, 15.00 gal wtr/sx.

TAIL:

100 sx Type III neat mixed at 14.5 ppg, 1.39 cuft/sx, 6.3 gal/sx.

3<sup>rd</sup> Stage:

LEAD:

$\pm 240$  sx of Type III or equivalent cement with 8% gel & LCM mixed at 11.9 ppg, 2.54 ft<sup>3</sup>/sk, 15.00 gal wtr/sx.

TAIL:

100 sx Type III neat mixed at 14.5 ppg, 1.39 cuft/sx, 6.3 gal/sx

*Total estimated slurry volume for the 5-1/2" production casing is 1858 ft<sup>3</sup>.*

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

**5. LOGGING PROGRAM:**

A. Mud Logger: None.

B. Open Hole Logs as follows: Run Array Induction/SFL/GR/SP fr/TD (7680') to the bottom of the surface csg. Run Neutron/Lithodensity/Pe/GR/Cal from TD (7680') to 3,000'.

6. **FORMATION TOPS:**

Est. KB Elevation: 6624'

FORMATION	Sub-Sea	MD	FORMATION	TV Sub-Sea	MD
Ojo Alamo SS	4263	2361	Gallup	247	6377
Kirtland Shale	4079	2545	Greenhorn	-567	7191
Farmington SS			Graneros	-617	7241
Fruitland Formation	3972	2652	Dakota 1*	-648	7272
Lower Fruitland Coal	3615	3009	Dakota 2*	-689	7313
Pictured Cliffs SS	3592	3032	Dakota 3*	-747	7371
Lewis Shale	3423	3201	Dakota 4*	-783	7407
Chacra SS	2693	3931	Dakota 5*	-824	7448
Cliffhouse SS*	1891	4733	Dakota 6*	-881	7505
Menefee**	1863	4761	Burro Canyon	-924	7548
Point Lookout SS**	1371	5253	Morrison*	-958	7582
Mancos Shale	991	5633	TD	-1056	7680

\* Primary Objective

\*\* Secondary Objective

\*\*\*\* 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	--

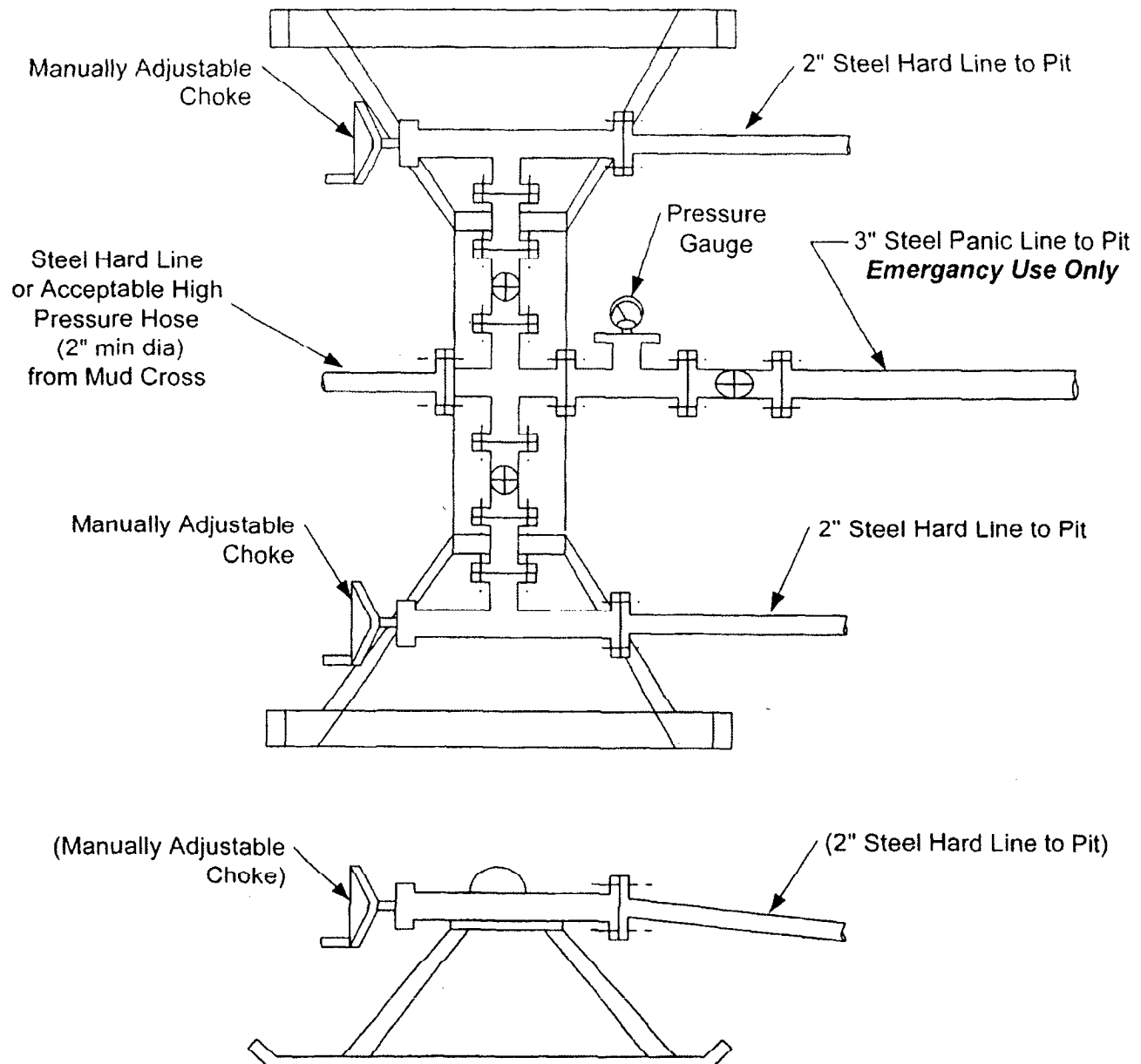
JN

1/9/09

# **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**





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

## **TESTING PROCEDURE**

1. Test BOP after installation:

Pressure test BOP to 200-300  
psig (low pressure) for 10 min.

Test BOP to Working Press or  
to 70% internal yield of surf csg  
(10 min) or which ever is less.

2. Test operation of (both) rams  
on every trip.

3. Check and record Accumulator  
pressure on every tour.

4. Re-pressure test BOP stack after  
changing out rams.

5. Have kelly cock valve with handle available.

6. Have safety valve and subs to fit all sizes of  
drill string on the rig floor and ready to go.

