

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**NMOCD**  
**Artesia**

FORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

5. Lease Serial No. NMNM17056
6. If Indian, Allottee or Tribe Name
7. If Unit or CA/Agreement, Name and/or No.
8. Well Name and No. NASH UNIT 202H
9. API Well No. 30-015-45495
10. Field and Pool or Exploratory Area FORTY NINER RIDGE; BS
11. County or Parish, State EDDY COUNTY, NM

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well/ <input type="checkbox"/> Other	
2. Name of Operator XTO ENERGY INC Contact: KELLY KARDOS E-Mail: kelly_kardos@xtoenergy.com	
3a. Address 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707	3b. Phone No. (include area code) Ph: 432-620-4374
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 19 T23S R30E Mer NMP NENE 90FNL 630FEL	

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

XTO Energy Inc, requests permission to set intermediate casing at 7750' instead of 7100' as originally applied for. Updated drilling program attached....

DV tool on 9-5/8"  
2m after 18-5/8"  
3m multibowl after 13-3/8"

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

RECEIVED

APR 01 2019

14. I hereby certify that the foregoing is true and correct. Electronic Submission #456554 verified by the BLM Well Information System For XTO ENERGY INC, sent to the Carlsbad Committed to AFMSS for processing by PRISCILLA PEREZ on 03/05/2019 ( )		DISTRICT II-ARTESIA O.G.D.	
Name (Printed/Typed)	KELLY KARDOS	Title	REGULATORY COORDINATOR
Signature (Electronic Submission)		Date	03/04/2019
APPROVED			
THIS SPACE FOR FEDERAL OR STATE OFFICE USE			
Approved By		Title	MAR 19 2019
Conditions of approval, if any, are attached. Approval of this notice 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.		Office	BUREAU OF LAND MANAGEMENT ROSWELL FIELD MANAGEMENT
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)

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

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

XTO Energy Inc.  
Nash 202

Projected TD: 21100' MD / 9317' TVD  
SHL: 90' FNL & 630' FEL , Section 19, T23S, R30E  
BHL: 1276' FSL & 990' FEL , Section 6, T23S, R30E  
Eddy County, NM

**1. Geologic Name of Surface Formation**

A. Quaternary

**2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas**

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	26'	Water
Top of Salt	408'	Water
Base of Salt	3243'	Water
Delaware	3479'	Water
Bone Spring	7646'	Water
1st Bone Spring Ss	8184'	Water/Oil/Gas
2nd Bone Spring Ss	9027'	Water/Oil/Gas
Target/Land Curve	9317'	Water/Oil/Gas

\*\*\* Hydrocarbons @ Brushy Canyon

\*\*\* Groundwater depth 40' (per NM State Engineers Office).

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 18-5/8" inch casing @ 385' (23' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8" inch casing at 3343' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 9-5/8" inch casing at 7750' and a DV tool at 3393'. A 8-3/4" inch curve and lateral hole will be drilled to MD/TD and 5-1/2 inch casing will be set at TD and cemented back up to surface per Potash regulations.

**3. Casing Design**

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' - 385'	18-5/8"	87.5	STC	H-40	New	1.60	3.58	16.59
17-1/2"	0' - 3343'	13-3/8"	68	STC	J-55	New	1.62	1.89	2.97
12-1/4"	0' - 7750'	9-5/8"	40	LTC	J-55	New	2.34	1.93	2.35
8-3/4"	0' - 21100'	5-1/2"	17	BTC	P-110	New	1.12	1.66	2.35

- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 13-3/8" Collapse analyzed using 50% evacuation based on regional experience.
- 9-5/8" Collapse analyzed using 33% evacuation based on regional experience.
- 5-1/2" Tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35
- Test on 2M Annular & Casing will be limited to 70% burst of the casing or 1500 psi, whichever is less

**Wellhead:**

*Temporary Wellhead*

- 18-5/8" SOW bottom x 21-1/4" 2M top flange.

*Permanent Wellhead - GE RSH Multibowl System*

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom

B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange

- Wellhead will be installed by manufacturer's representatives.
- Manufacturer will monitor welding process to ensure appropriate temperature of seal.
- Operator will test the 9-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

#### 4. Cement Program

*Surface Casing: 18-5/8", 87.5 New H-40, STC casing to be set at +/- 385'*

Tail: 710 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

*1st Intermediate Casing: 13-3/8", 68 New J-55, STC casing to be set at +/- 3343'*

Lead: 2260 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft<sup>3</sup>/sx, 10.13 gal/sx water)  
Tail: 300 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

*2nd Intermediate Casing: 9-5/8", 40 New J-55, LTC casing to be set at +/- 7750'*  
*ECP/DV Tool to be set at 3393'*

*1st Stage*

Lead: 1280 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft<sup>3</sup>/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

*2nd Stage*

Lead: 960 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft<sup>3</sup>/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft<sup>3</sup>/sx, 6.39 gal/sx water)  
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

*Production Casing: 5-1/2", 17 New P-110, BTC casing to be set at +/- 21100'*

Lead: 650 sxs NeoCem (mixed at 10.5 ppg, 2.69 ft<sup>3</sup>/sx, 12.26 gal/sx water)

Tail: 2620 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft<sup>3</sup>/sx, 8.38 gal/sx water)  
Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

#### 5. Pressure Control Equipment

The blow out preventer equipment (BOP) on surface casing temporary wellhead will consist of a 21-1/4" minimum 2M Hydril. MASP should not exceed 1020 psi.

Once the permanent WH is installed on the 13-3/8" casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP. MASP should not exceed 2456 psi.

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 13-3/8", 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When nipping up on the 9-5/8", the BOP will be tested to a minimum of 3000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

A variance is requested to allow use of a flex hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test chart will be kept on the rig. Attached is an example of a certification and pressure test chart. The manufacturer does not require anchors.

## 6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 385'	24"	FW/Native	8.4-8.8	35-40	NC
385' - 3343'	17-1/2"	Brine	9.8-10.2	30-32	NC
3343' to 7750'	12-1/4"	FW / Cut Brine	8.7-9.4	30-32	NC
7750' to 21100'	8-3/4"	Cut Brine / Polymer	9 - 9.3	29-32	NC - 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 18-5/8" surface casing with brine solution. A ppg-10.2ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. 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 Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- H2S monitors will be on location when drilling below the 13-3/8" casing.

## 8. Logging, Coring and Testing Program

Mud Logger: Mud Logging Unit (2 man) below intermediate casing.

Open hole logging will not be done on this well.

## 9. Abnormal Pressures and Temperatures / Potential Hazards

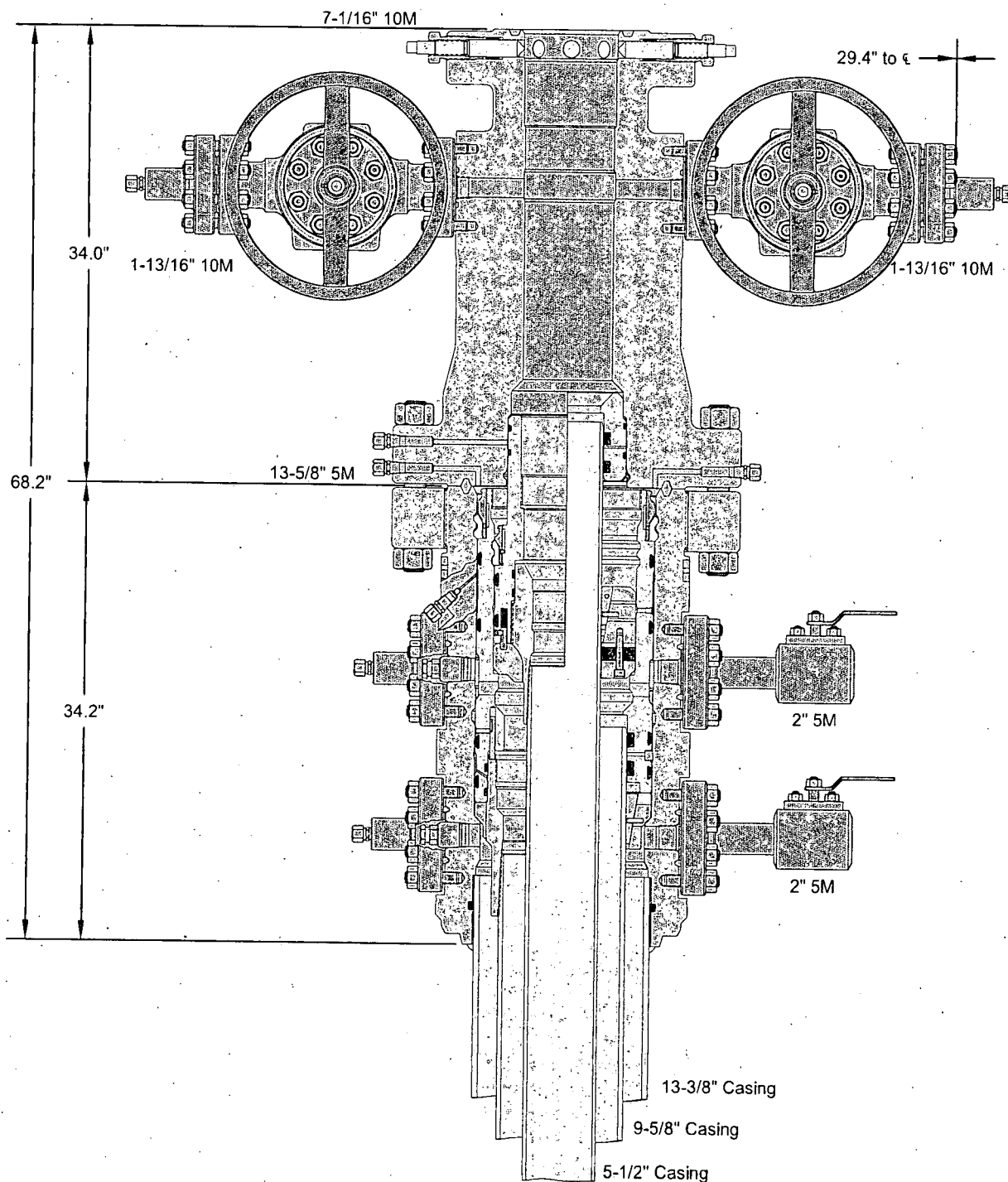
None Anticipated. BHT of 160 to 180 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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. The maximum anticipated bottom hole pressure for this well is 4506 psi.

## 10. Anticipated Starting Date and Duration of Operations

Road and location construction will begin after Santa Fe and BLM have approved the APD. Anticipated spud date will be as soon after Santa Fe and BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 40 days. If production casing is run, 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.



GE Oil & Gas



ALL DIMENSIONS ARE APPROXIMATE

This drawing is the property of GE Oil & Gas Pressure Control LP and is considered confidential. Unless otherwise approved in writing, neither it nor its contents may be used, copied, transmitted or reproduced except for the sole purpose of GE Oil & Gas Pressure Control LP.

XTO ENERGY, INC.

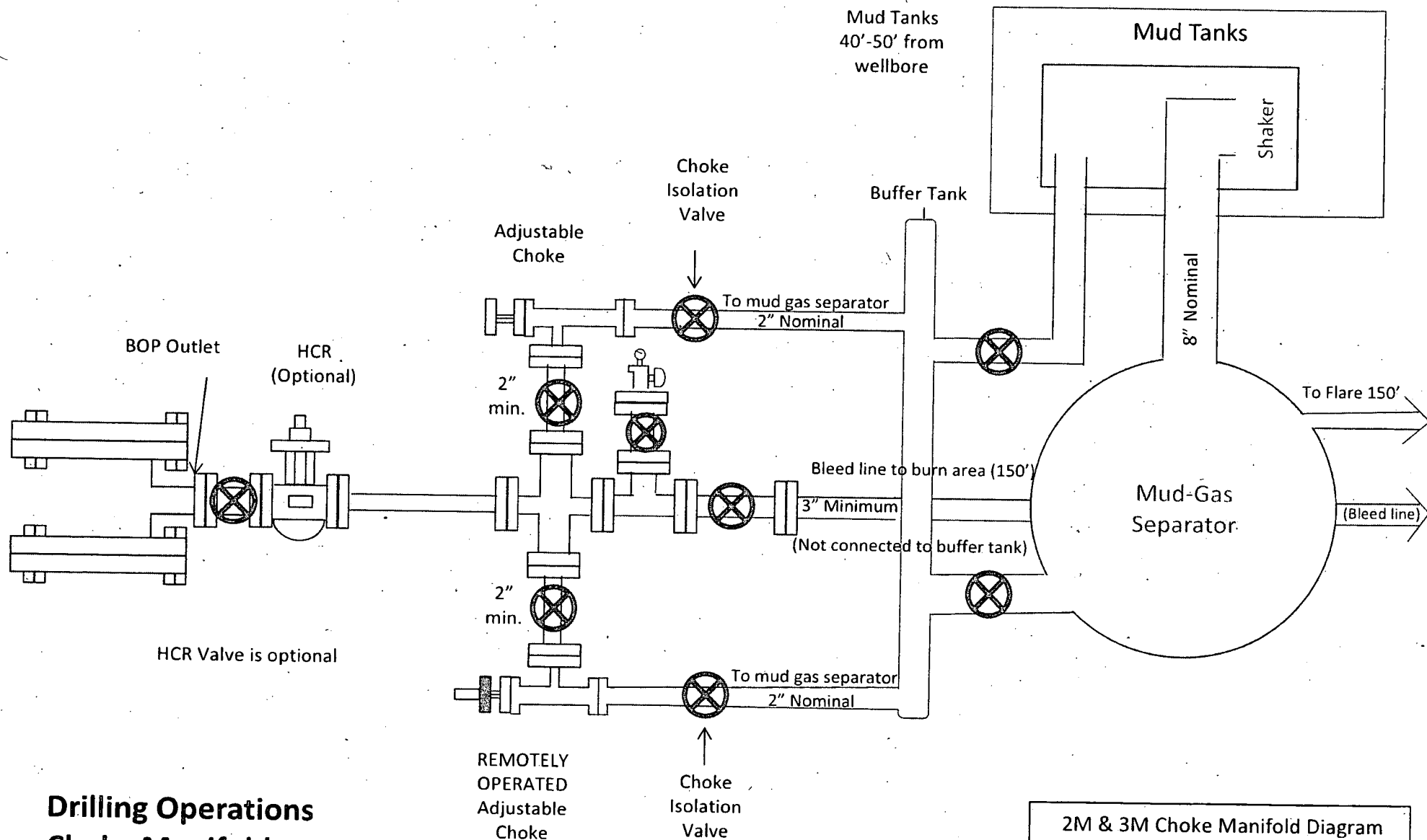
13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead  
Assembly, With T-EBS-F Tubing Head

DRAWN VJK 16FEB17

APPRV KN 16FEB17

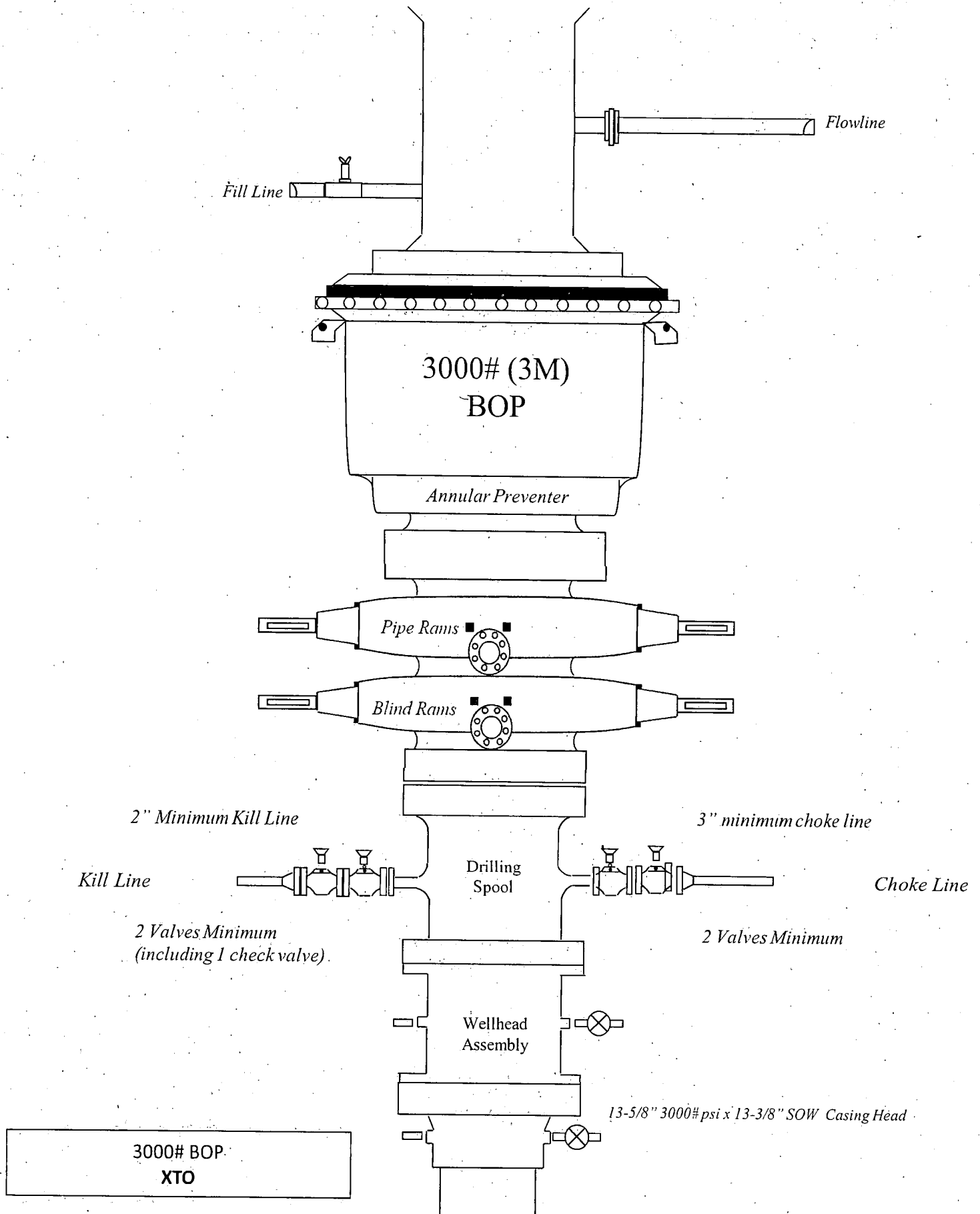
FOR REFERENCE ONLY

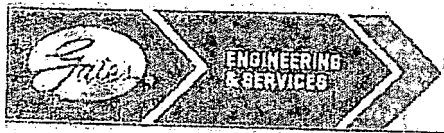
DRAWING NO. 10012842



**Drilling Operations  
Choke Manifold  
2M & 3M Service**

2M & 3M Choke Manifold Diagram  
XTO





GATES E & S NORTH AMERICA, INC  
DU-TEX  
134 44TH STREET  
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807  
FAX: 361-887-0812  
EMAIL: crpe@s@gates.com  
WEB: www.gates.com

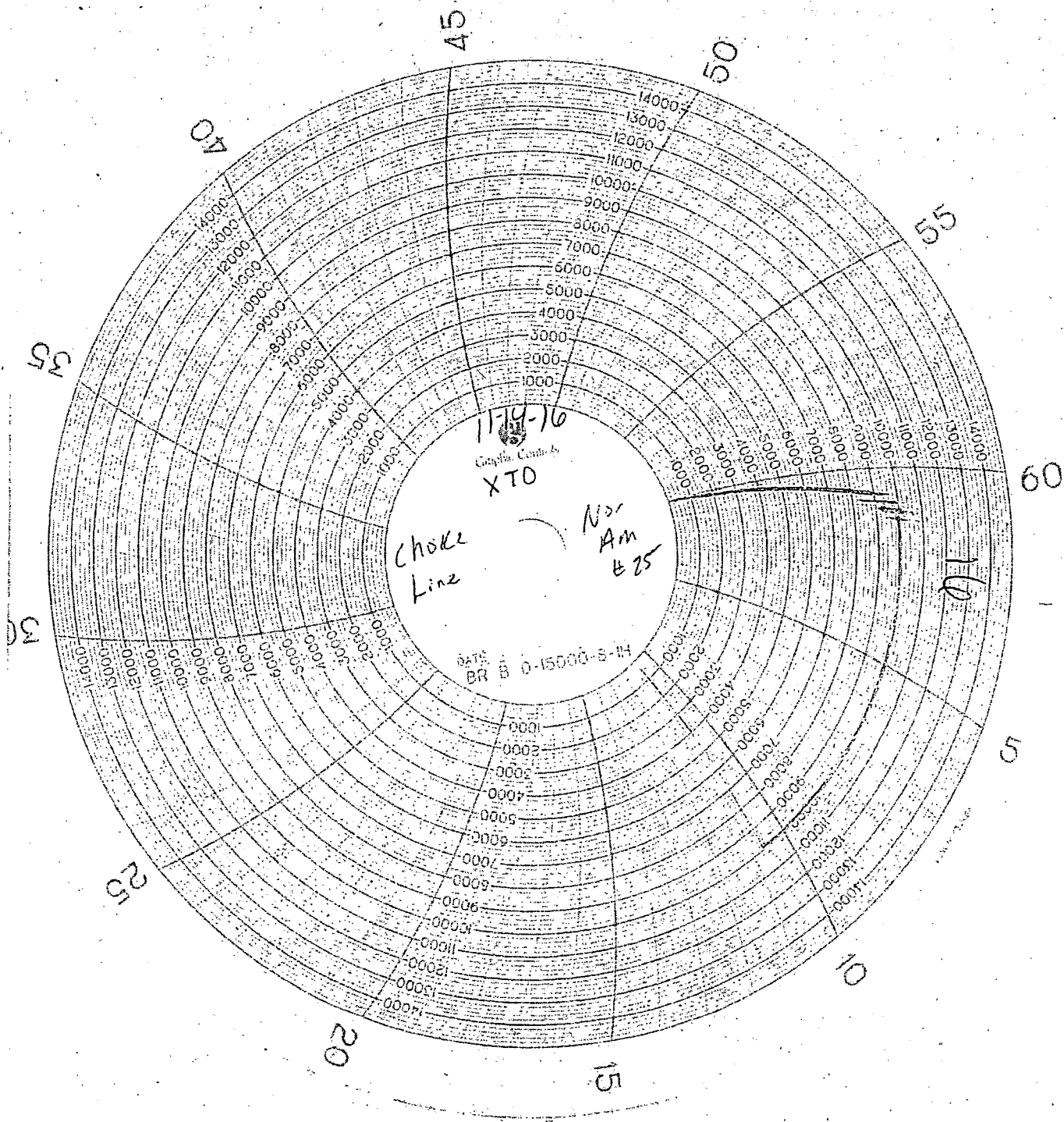
### GRADE D PRESSURE TEST CERTIFICATE

Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	MORIHA
Product Description:	FD3.0-12.0R41/16.5KFLGE/E LE		
End Fitting 1 :	4 1/16 in. SK FLG	End Fitting 2 :	4 1/16 in. SK FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

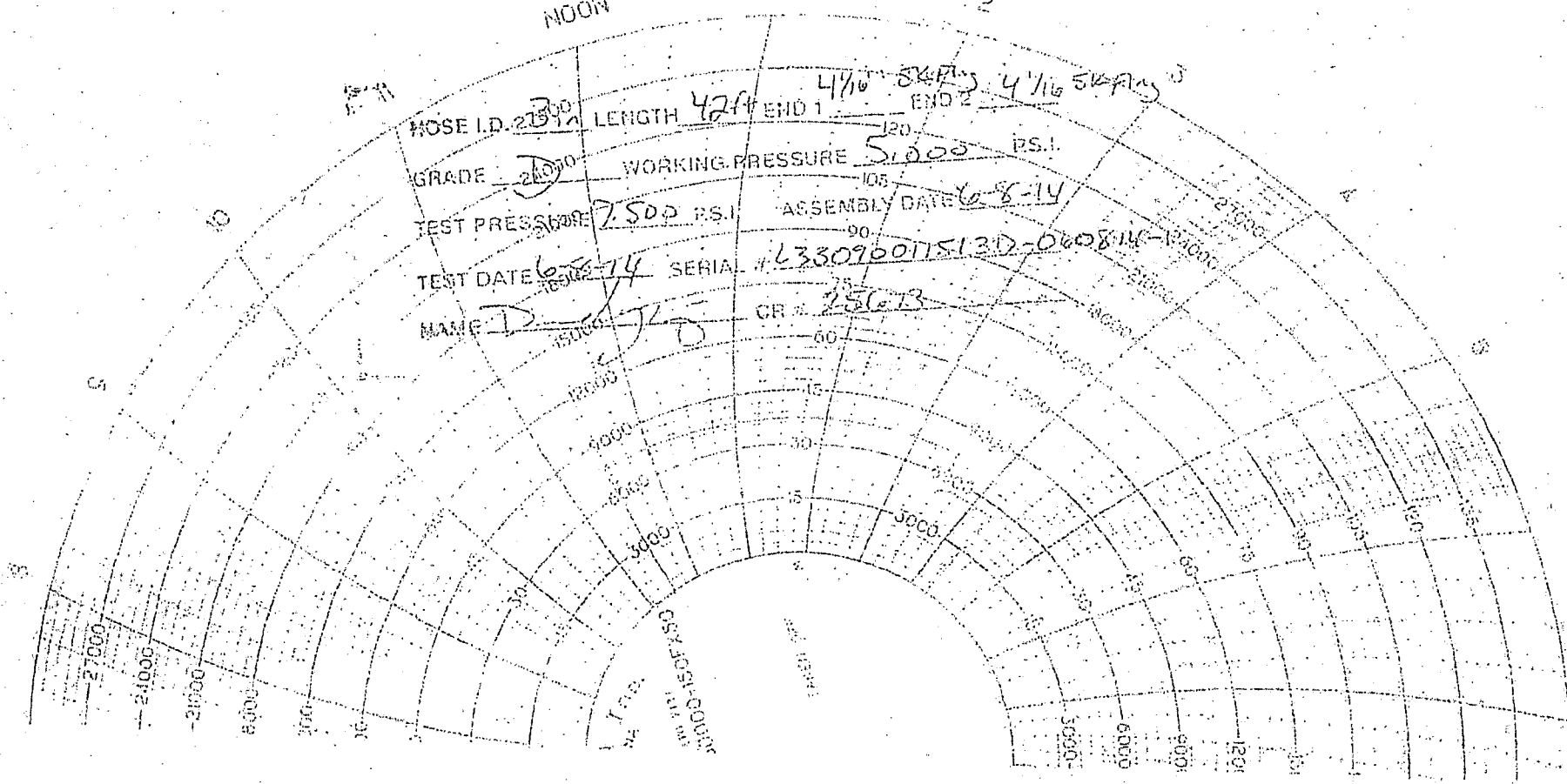
Quality :	QUALITY	Technical Supervisor :	PRODUCTION
Date :	6/8/2014	Date :	6/8/2014
Signature :		Signature :	





NOON

HOSE I.D. 2 1/2 LENGTH 42ft END 1 4 1/2 SKF END 2 4 1/2 SKF  
GRADE D WORKING PRESSURE 5,000 P.S.I.  
TEST PRESSURE 7,500 P.S.I. ASSEMBLY DATE 6-8-14  
TEST DATE 6-8-14 SERIAL # L330900175130-060814-14000  
NAME D. J. L. CR # 2563



## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>XTO Energy Incorporated</b>
<b>LEASE NO.:</b>	<b>NMNM-017056</b>
<b>WELL NAME &amp; NO.:</b>	<b>Nash Unit 202H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0090' FNL &amp; 0630' FEL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>1120' FNL &amp; 0990' FEL Sect. 06, T. 23 S., R 30 E.</b>
<b>LOCATION:</b>	<b>Section 19, T. 23 S., R 30 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

**The original COAs still stand with the following drilling modifications:**

### **Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months.

### **Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

## **A. DRILLING OPERATIONS REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. **Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**

**A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.**

1. The 18-5/8 inch surface casing shall be set at approximately 385 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**13-3/8" Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.**

2. The minimum required fill of cement behind the 13-3/8 inch intermediate casing is:
  - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash.**

**9-5/8" Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.**

3. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

**Operator has proposed DV tool at depth of 3393', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.**

a. First stage to DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

4. The minimum required fill of cement behind the 5-1/2 inch production casing is:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 11% - Additional cement may be required.**

5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi.**
4. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 inch casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8 inch casing shoe shall be 3000 (3M) psi.**
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Operator shall perform the 9-5/8 inch intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer.**

- c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- d. The results of the test shall be reported to the appropriate BLM office.
- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

**JAM 031919**