

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.*5. Lease Serial No.
NMLC064827A

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 27. If Unit or CA/Agreement, Name and/or No.
891000558X

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other8. Well Name and No.
JAMES RANCH UNIT DI 2 112H

2. Name of Operator

XTO PERMIAN OPERATING LLC

Contact: KELLY KARDOS

E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.

30-015-45467-00-X1

3a. Address

6401 HOLIDAY HILL ROAD BLDG 5
MIDLAND, TX 79707

3b. Phone No. (include area code)

Ph: 432-620-4374

10. Field and Pool or Exploratory Area
LOS MEDANOS

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 25 T22S R30E SENW 2550FSL 1960FWL
32.362850 N Lat, 103.836594 W Lon

11. County or Parish, State

EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ 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 recompleat 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 Permian Operating, LLC requests permission to make the following changes to the APD:

Casing & cement design per the attached drilling program.

Change Name from James Ranch Unit DI 2 WCY-4W 273H to James Ranch Unit DI 2 112H. ✓

Change SHL from 2550'FSL & 1960'FWL to 2600'FSL & 2050'FWL. No Surface Disturbance. ✓

Change BHL from 2310'FNL & 2440'FEL to 2310'FNL & 2640'FEL. ✓

XTO requests to utilize centralizers only in the curve after KOP and only a minimum of every other joint.

RECEIVED**JAN 30 2020****EMNRD-OCD ARTESIA**

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #496188 verified by the BLM Well Information System
For XTO PERMIAN OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 12/17/2019 (20PP0687SE)**

Name (Printed/Typed) KELLY KARDOS

Title REGULATORY COORDINATOR

Signature (Electronic Submission)

Date 12/17/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CODY LAYTON

Title ASSIST FIELD MANAGER LANDS MINERALS Date 01/16/2020

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 Carlsbad

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 REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Ruf 2-7-2020

Revisions to Operator-Submitted EC Data for Sundry Notice #496188

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM89052	NMLC064827A
Agreement:		891000558X (NMNM70965X)
Operator:	XTO PERMIAN OPERATING, LLC 6401 HOLIDAY HILL RD BLDG 5 MIDLAND, TX 79707 Ph: 432-620-4374	XTO PERMIAN OPERATING LLC 6401 HOLIDAY HILL ROAD BLDG 5 MIDLAND, TX 79707 Ph: 432.683 2277
Admin Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Tech Contact:	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374	KELLY KARDOS REGULATORY COORDINATOR E-Mail: kelly_kardos@xtoenergy.com Ph: 432-620-4374
Location:		
State:	NM	NM
County:	EDDY	EDDY
Field/Pool:	LOS MEDANOS WOLFCAMP GAS	LOS MEDANOS
Well/Facility:	JAMES RANCH UNIT DI2 WCY-4W 251H Sec 25 T22S R30E Mer NMP SENW 2550FSL 1960FWL	JAMES RANCH UNIT DI 2 112H Sec 25 T22S R30E SENW 2550FSL 1960FWL 32.362850 N Lat, 103.836594 W Lon

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

XTO Energy Inc.

James Ranch Unit DI 2 112H

Projected TD: 26358' MD / 11122' TVD

SHL: 2600' FSL & 2050' FWL , Section 25, T22S, R30E

BHL: 2310' FNL & 2640' FEL , Section 28, T22S, 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	366'	Water
Top of Salt	653'	Water
Base of Salt	3605'	Water
Delaware	3732'	Water
Bone Spring Lime	7718'	Water
Lw. Avalon Sh.	8323'	Water/Oil/Gas
1st Bone Spring Ss	8719'	Water/Oil/Gas
2nd Bone Spring	9564'	Water/Oil/Gas
3rd Bone Spring Carb	9854'	Water/Oil/Gas
3rd Bone Spring Shale	10059'	Water/Oil/Gas
3rd Bone Spring Ss	10549'	Water/Oil/Gas
Wolfcamp	10959'	Water/Oil/Gas
Target/Land Curve	11122'	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 @ 628' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8" inch casing at 3682' 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 9904' and cemented back into the 13-3/8 inch casing shoe. 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 2nd intermediate (estimated TOC 9404 feet) per Potash regulations.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 628'	18-5/8"	87.5	STC	H-40	New	1.45	2.22	10.17
17-1/2"	0' – 3682'	13-3/8"	68	STC	J-55	New	1.35	1.71	2.70
12-1/4"	0' – 9904'	9-5/8"	40	LTC	HCL-80	New	1.69	2.05	1.84
8-3/4"	0' – 26358'	5-1/2"	17	BTC	P-110	New	1.12	1.28	1.92

- XTO requests to not utilize centralizers in the curve and lateral
- 18-5/8" Collapse analyzed using 75% evacuation. Casing to be filled while running.
- 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 +/- 628'

Lead: 430 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Tail: 550 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/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 +/- 3682'

Lead: 2510 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 9-5/8", 40 New HCL-80, LTC casing to be set at +/- 9904'

ECP/DV Tool to be set at 3782'

1st Stage

Lead: 1870 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft³/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Stage

Lead: 1090 sxs Halcem-C + 2% CaCl (mixed at 12.9 ppg, 1.88 ft³/sx, 9.61 gal/sx water)

Tail: 230 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)

Compressives: 12-hr = 900 psi 24 hr = 1500 psi

Lead: 80 sxs NeoCem (mixed at 10.5 ppg, 2.69 ft³/sx, 12.26 gal/sx water) Top of Cement:

Tail: 3310 sxs VersaCem (mixed at 13.2 ppg, 1.61 ft³/sx, 8.38 gal/sx water) Top of Cement: 9404 feet

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 1124 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 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 3394 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

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", 5M bradenhead and flange, the BOP test will be limited to 5M psi. When nipping up on the 9-5/8", the BOP will be tested to a minimum of 5M psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M 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' - 628'	24"	FW/Native	8.4-8.8	35-40	NC
628' - 3682'	17-1/2"	Brine	9.8-10.2	30-32	NC
3682' to 9904'	12-1/4"	FW / Cut Brine	8.7-9.4	30-32	NC
9904' to 26358'	8-3/4"	Cut Brine / Polymer	9.8 - 10.1	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 9.8 ppg -10.2 ppg 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. 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 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

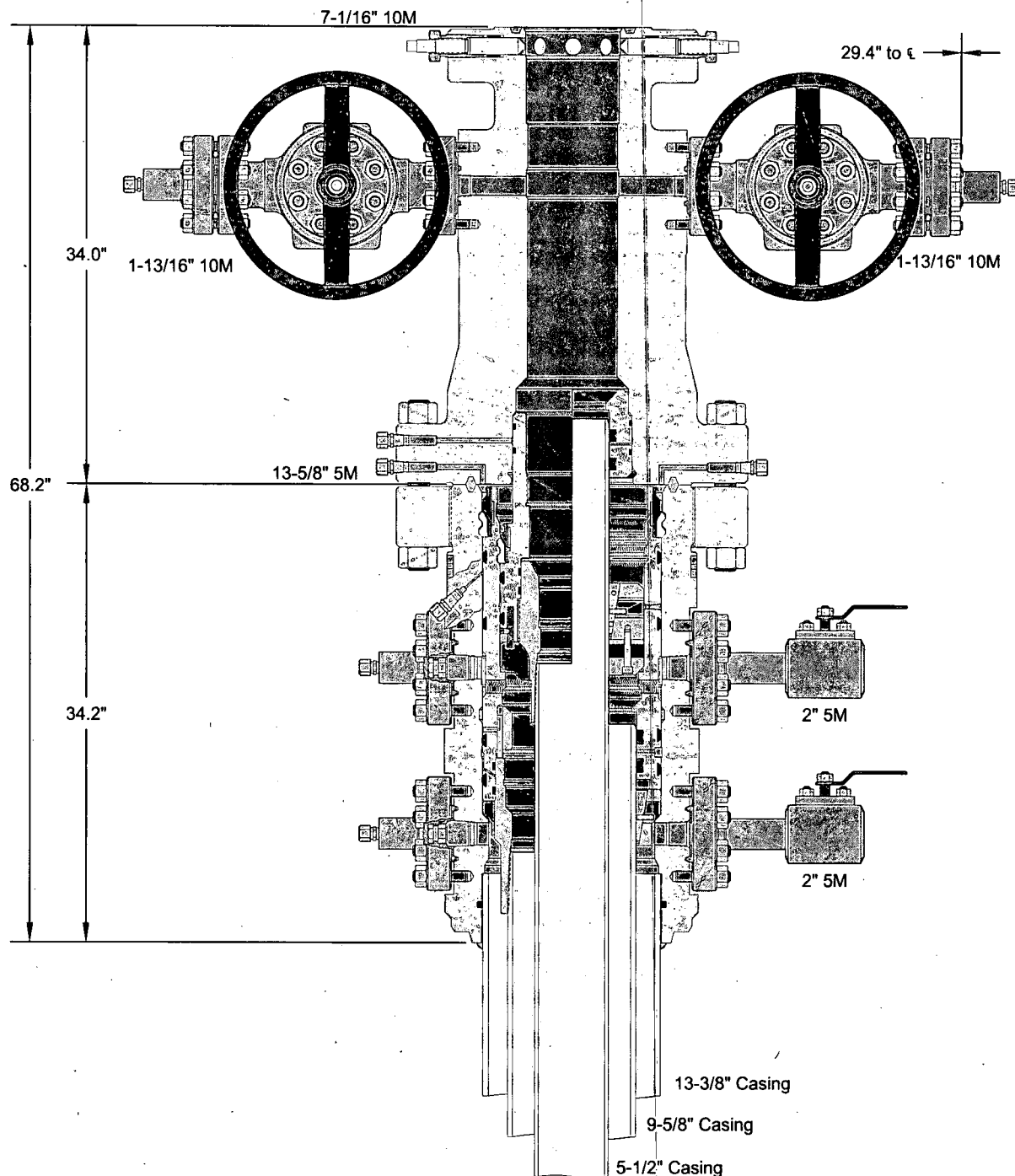
None Anticipated. BHT of 175 to 195 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S occurrences. Should these circumstances be encountered the operator and drilling contractor are prepared to take all necessary steps to ensure safety of all personnel and environment. 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 5841 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



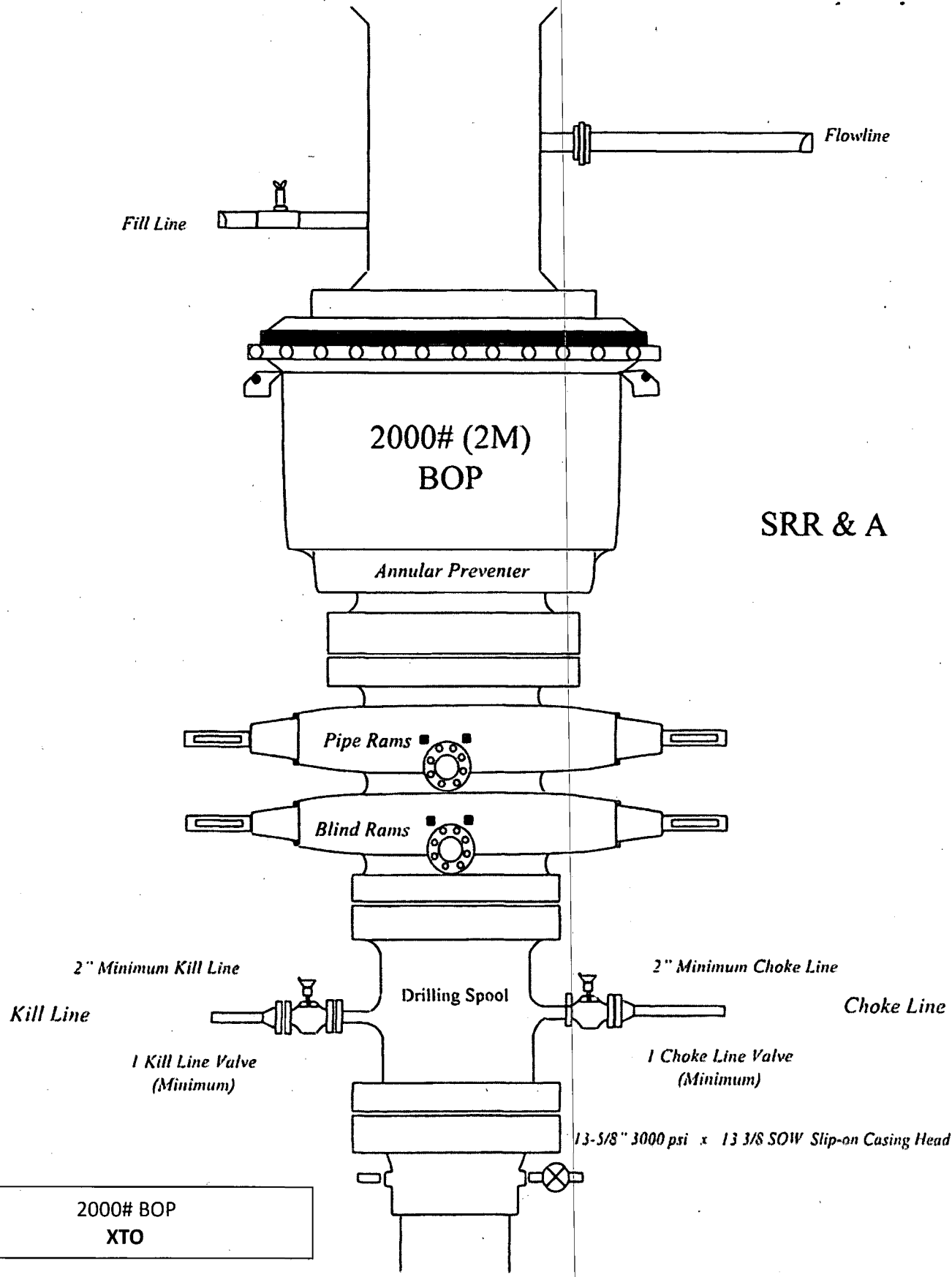
ALL DIMENSIONS ARE APPROXIMATE

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.

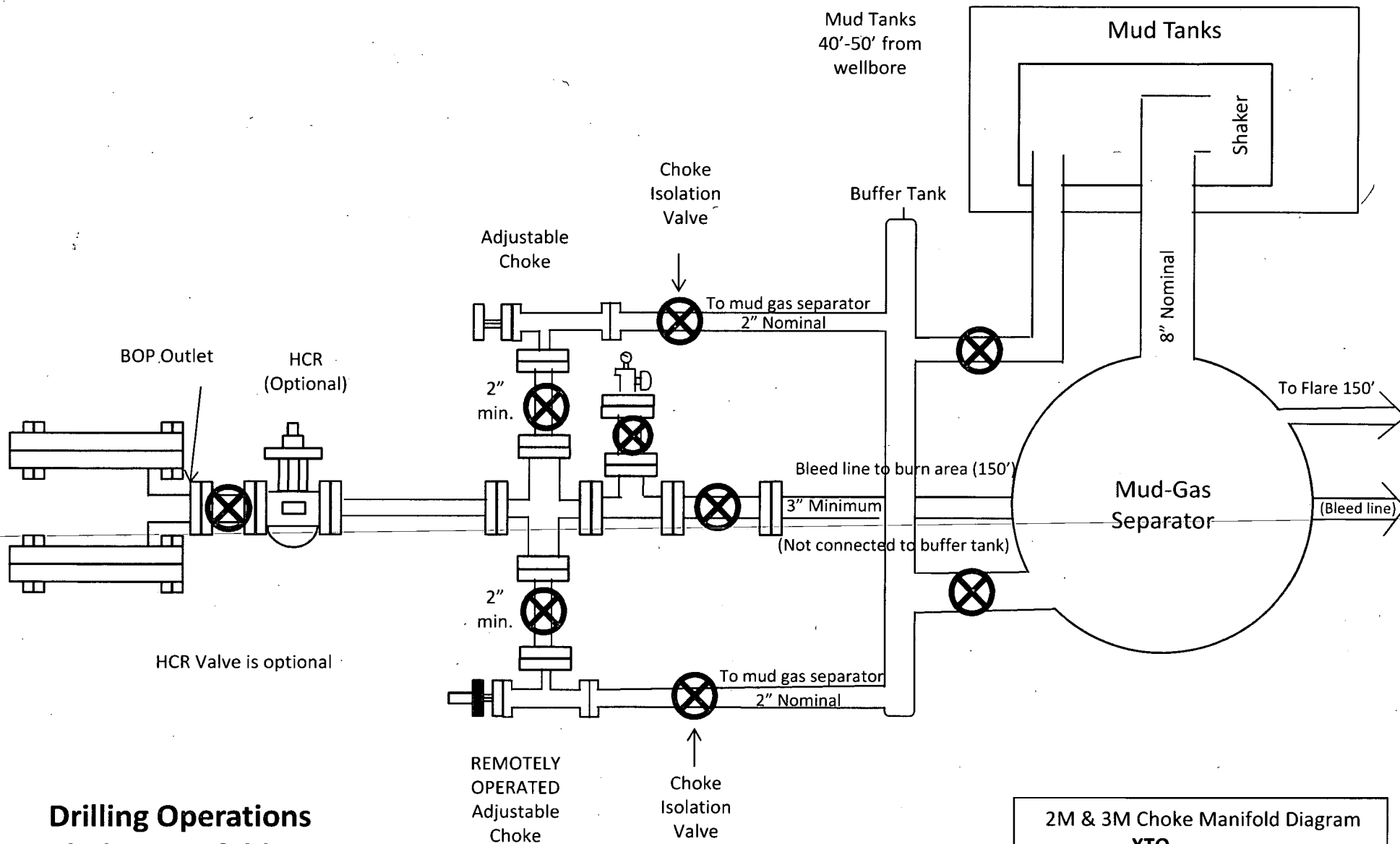
13-3/8" x 9-5/8" x 5-1/2" 10M RSH-2 Wellhead
Assembly, With T-EBS-F Tubing Head

DRAWN	VJK	16FEB17
APPRV	KN	16FEB17
FOR REFERENCE ONLY		
DRAWING NO.		10012842



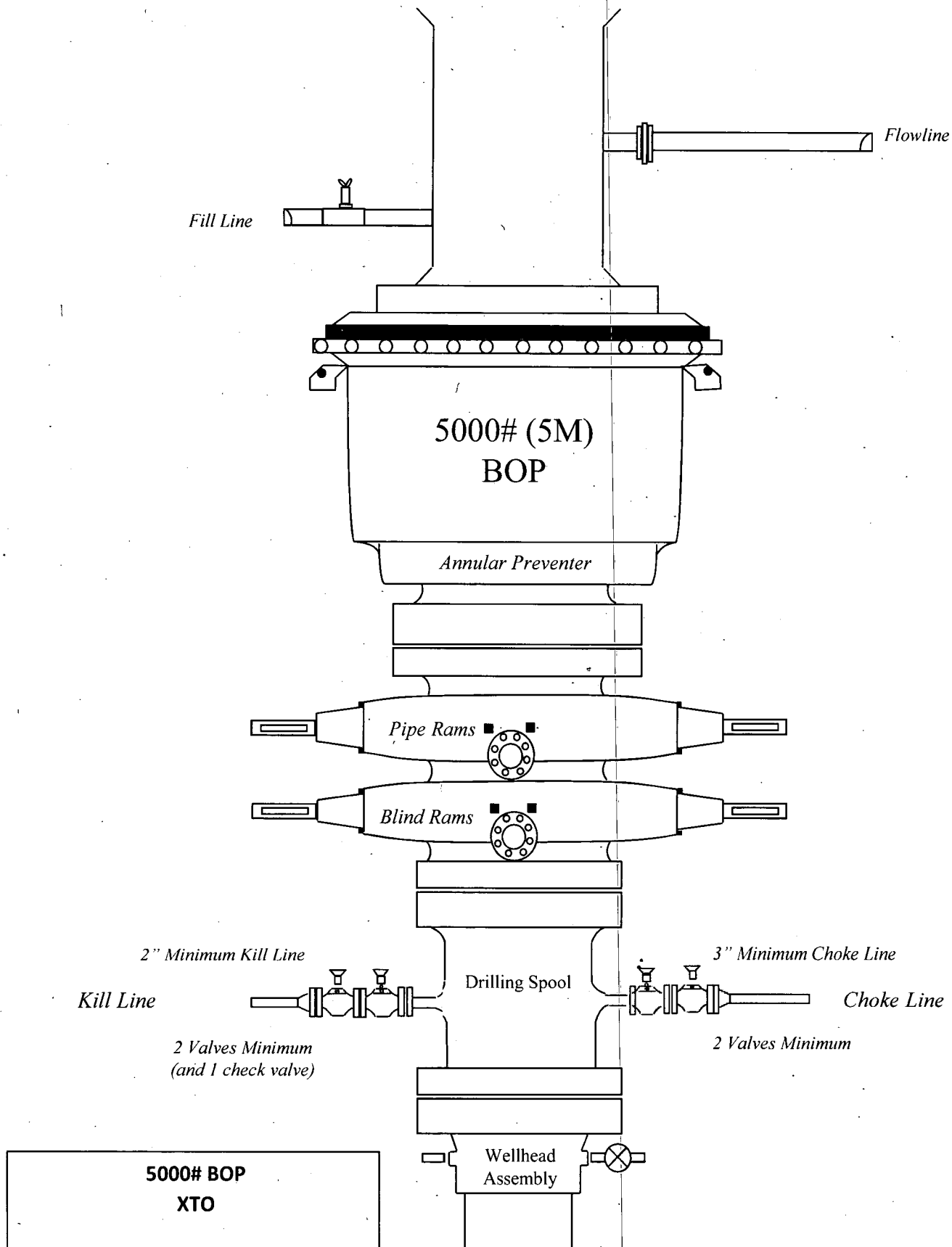
SRR & A

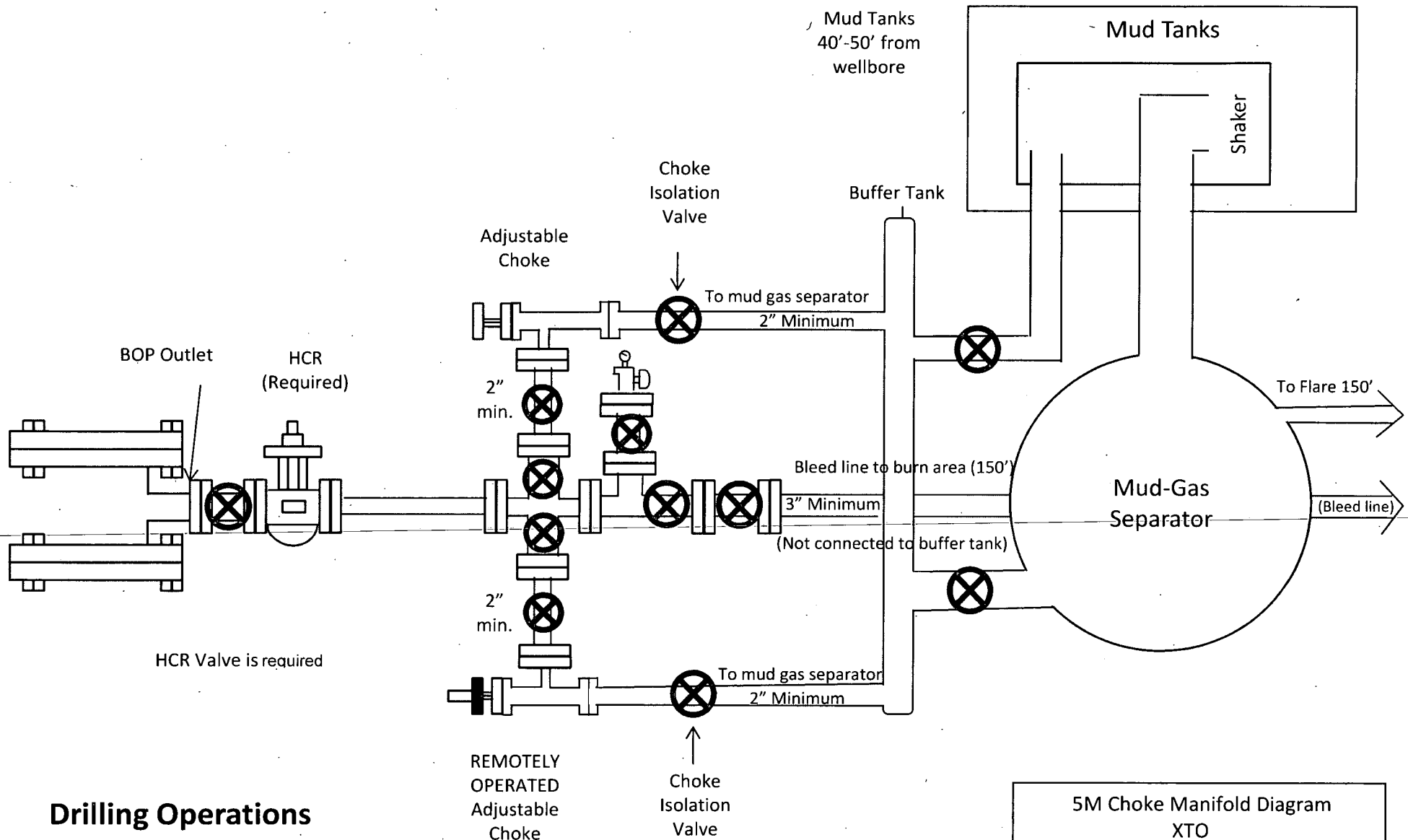
2000# BOP
XTO



Drilling Operations Choke Manifold 2M & 3M Service

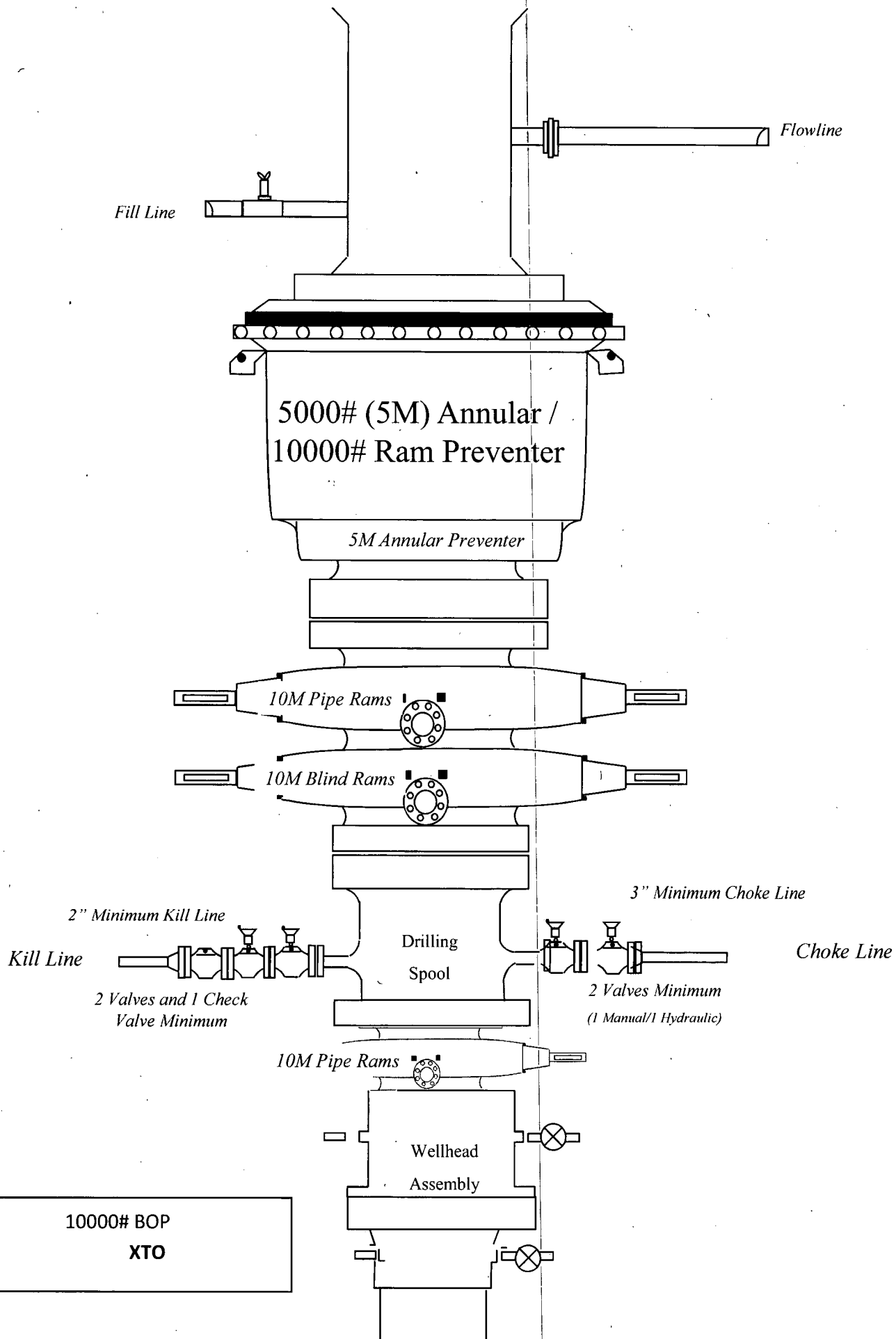
2M & 3M Choke Manifold Diagram
XTO

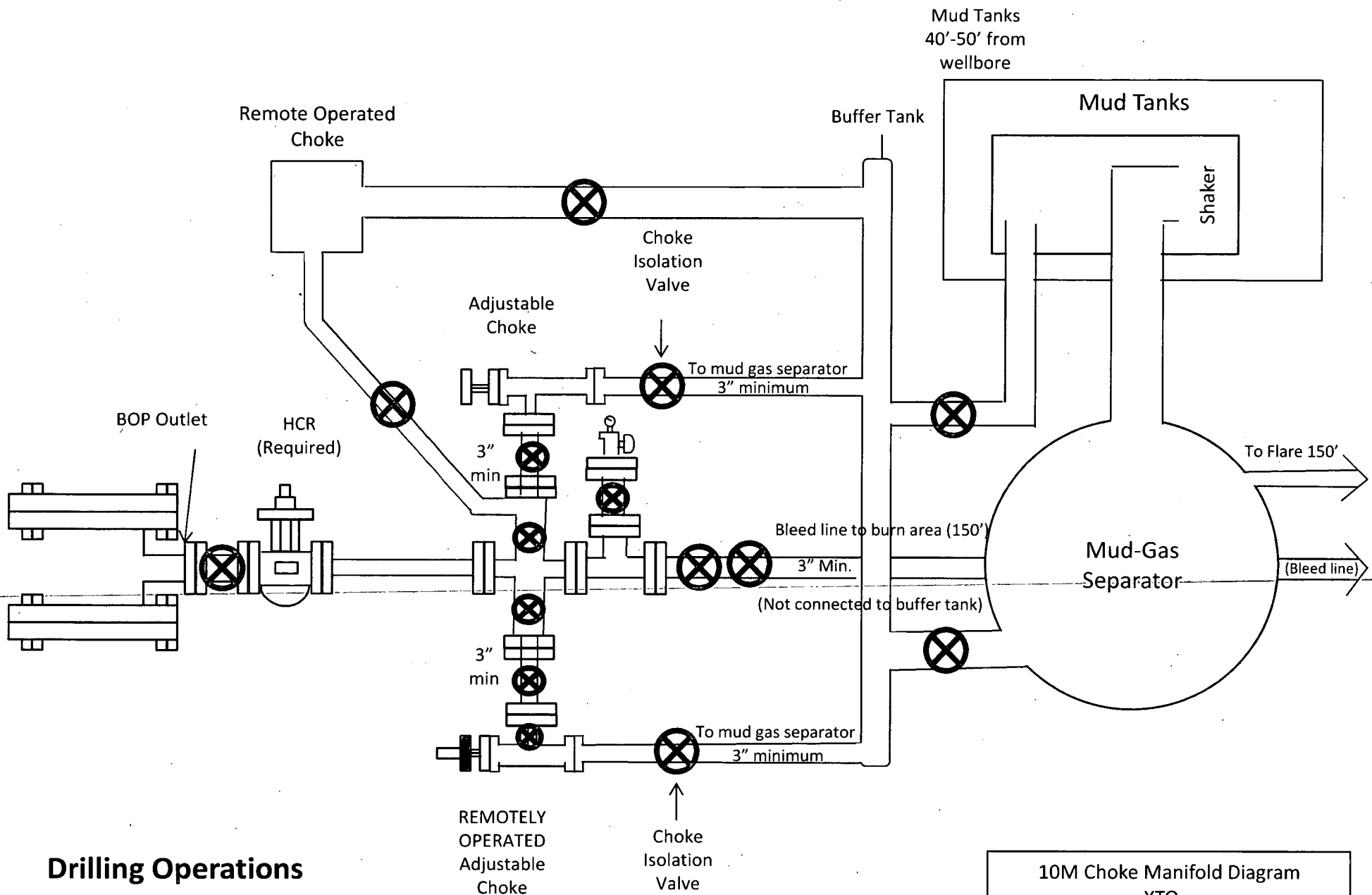




Drilling Operations Choke Manifold 5M Service

5M Choke Manifold Diagram
XTO





**Drilling Operations
Choke Manifold
10M Service**

10M Choke Manifold Diagram
XTO

10,000 PSI Annular BOP Variance Request

XTO Energy/XTO Permian Op. request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOPL).

1. Component and Preventer Compatibility Tables

The tables below outline the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

8-1/2" Production Hole Section 10M psi Requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5"-5.5" VBR Lower 3.5"-5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	-	-
DCs and MWD tools	6.500"-8.000"	Annular	5M	-	-
Mud Motor	6.750"-8.000"	Annular	5M	-	-
Production Casing	5-1/2"	Annular	5M	-	-
Open-Hole	-	Blind Rams	10M	-	-

2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the XTO Energy/Permian Operating drilling supervisor's office on location and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan

9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full-opening safety valve & close
3. Space out drill string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full-opening safety valve and close
3. Space out string
4. Shut-in well (uppermost applicable BOP, typically annular preventer, first. HCR & choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP & SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

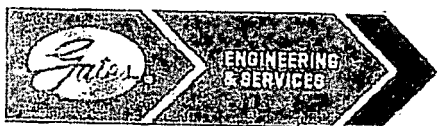
General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams (HCR & choke will already be in the closed position)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA Through Stack

1. PRIOR to pulling last joint of drillpipe through stack:
 - a. Perform flow check. If flowing, continue to (b).
 - b. Sound alarm (alert crew)
 - c. Stab full-opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams
 - e. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full-opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams
 - d. Shut-in using upper variable bore rams (HCR & choke will already be in the closed position)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP & SICP

- ii. Pit gain
 - iii. Time
- h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combination immediately available:
 - a. Sound alarm (alert crew)
 - b. If possible, pull string clear of the stack and follow "Open Hole" procedure.
 - c. If impossible to pull string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe and full-opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram
 - f. Shut-in using upper variable bore ram (HCR & choke will already be in the closed position)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP & SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan



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 :
Customer Ref. :
Invoice No. :

AUSTIN DISTRIBUTING
PENDING
201709

Test Date:
Hose Serial No.:
Created By:

6/8/2014
D-060814-1
NORMA

Product Description:

FD3.042.0R41/16.5KFLGE/E LE

End Fitting 1 :
Gates Part No. :
Working Pressure :

4 1/16 in. SK FLG
4774-6001
5,000 PSI

End Fitting 2 :
Assembly Code :
Test Pressure :

4 1/16 in. SK FLG
L33090011513D-060814-1
7,500 PSI

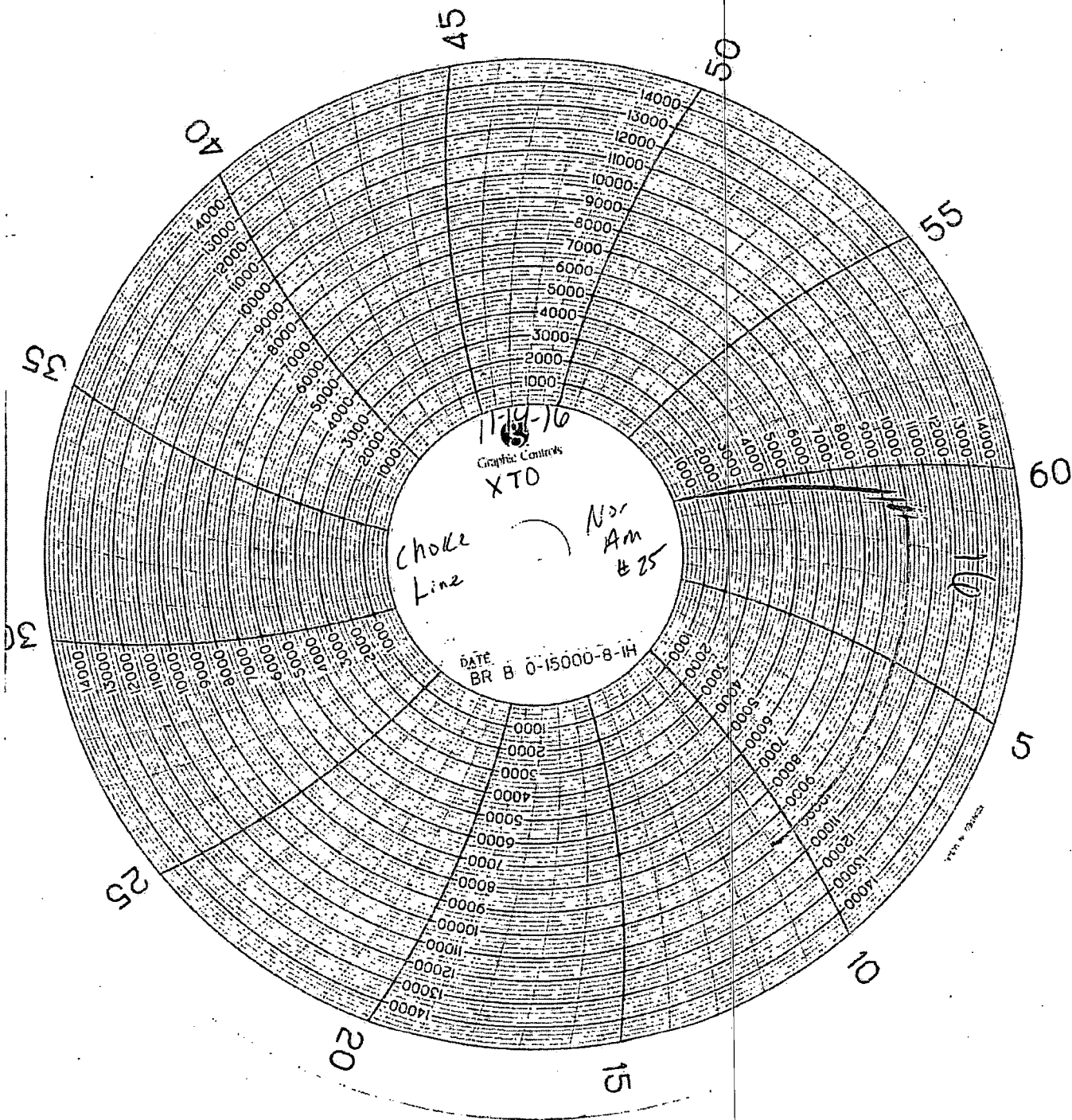
Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance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

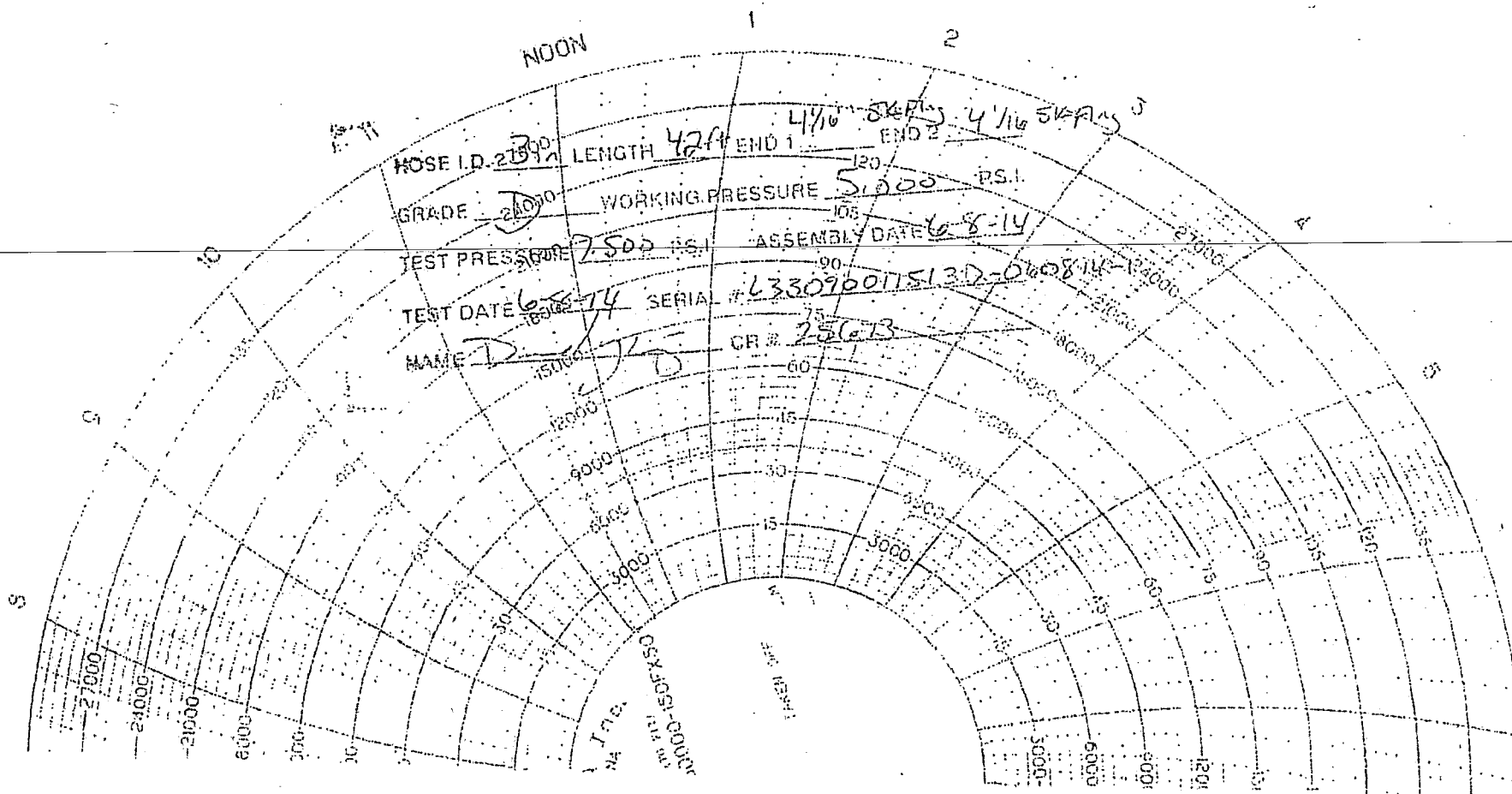
Quality:
Date :
Signature :

QUALITY
6/8/2014
<i>[Signature]</i>

Technical Supervisor :
Date :
Signature :

PRODUCTION
6/8/2014
<i>[Signature]</i>





NOON

1

2

HOSE I.D. 2 1/2

LENGTH 42 ft

END 1

4 1/16 SKANS

END 2

4 1/16 SKANS

GRADE D

WORKING PRESSURE

5000

PSI

TEST PRESSURE

7500

ASSEMBLY DATE

6-8-14

TEST DATE

6-8-14

SERIAL #

633096011513D-060814-14000

NAME

D. J. B.

CR #

25613

**5D Plan Report****XTO Energy**

Field Name: *XTO NAD 27 NME*
Site Name: *James Ranch Unit DI 2 Pad*
Well Name: *JRU DI 2 112H*
Plan: *P1:V2 (Current plan)*

11 December 2019





JRU DI 2 112H

Field Name: XTO NAD 27 NME	Map Units: US ft		Company Name: XTO Energy	
	Vertical Reference Datum (VRD): Mean Sea Level			
	Projected Coordinate System: NAD27 / New Mexico East			
	Comment:			
Site: James Ranch Unit DI 2 Pad	Units: US ft	North Reference: Grid	Convergence Angle: 0.27	
	Position:	Northing: 496082.70 US ft	Latitude: 32° 21' 46.32"	
		Easting: 653559.30 US ft	Longitude: -103° 50' 9.62"	
	Elevation above MSL: 3344.00 US ft			
Comment: Eddy Co, NM				
Slot: JRU DI 2 112H	Position (Relative to Site Centre)			
	+N/-S: 0.10 US ft	Northing: 496082.80 US ft	Latitude: 32° 21' 46.32"	
	+E/-W: 60.00 US ft	Easting: 653619.30 US ft	Longitude: -103° 50' 8.92"	
	Elevation above MSL: 3344.00 US ft			
Comment:				
Well: JRU DI 2 112H	Type: Main well		UWI:	Plan: P1:V2 (Current plan)
	File Number:	Comment:		
	Closure Distance: 15400.9 US ft		Closure Azimuth: 271.25°	
	Vertical Section: Position of Origin (Relative to Slot centre)			
	+N/-S: -0.00 US ft	+E/-W: -0.00 US ft	Az: 269.89°	
	Magnetic Parameters:			
	Model: Need IFR	Field Strength: 47833.5 nT	Declination: 6.93°	Dip: 60.06° Date: 25/Jun/2019

Drill floor: Plan: P1:V2 (Current plan)

Rig Height (Well TVD Reference): Elevation above MSL: 3369.00 US ft **Inclination:** 0.00° **Azimuth:** 0.00°
25.00 US ft

Target set: JRU DI 2 112H Comment:

Target Name:	C.Pt.MD (USft)	TVD (US ft)	TVD (MSL) (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (USft)	Easting (USft)	C.Pt.Distance (US ft)	Comment
FTP	13113.48	11179.00	7810.00	361.40	-2153.30	496444.20	651466.00	3.76	
9000'VS	19960.78	11169.00	7800.00	348.16	-9000.69	496430.96	644618.61	0.00	
LTP 2590' FWL	26307.53	11114.43	7745.43	336.30	-15347.20	496419.10	638272.10	0.01	
PBHL 112H	26357.54	11114.00	7745.00	336.20	-15397.20	496419.00	638222.10	0.00	

Tie Point:

MD: 0.00 USft **Inclination:** 0.00° **Azimuth:** 0.00° **TVD:** 0.00 USft **North Offset:** - 0.00 USft **East Offset:** - 0.00 USft

Survey Tool Ranges: (Using Anticipated Survey Programme)

Name	Start MD (USft)	End MD (USft)	Source Survey
MWD + IFR	0.00	10606.00	ASP
MWD + IFR + MS	10606.00	26400.00	ASP

5D Plan Report

Wellpath created using minimum curvature.

Salient Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)												
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	B.Rate (°/100US ft)	T.Rate (°/100US ft)	T.Face (°)	DLS (°/100US ft)	Comment
0.00	0.00	0.00	0.00	-3369.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.00	
1400.00	0.00	0.00	1400.00	-1969.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.00	Nudge
1600.00	3.00	0.00	1599.91	-1769.09	-0.01	5.23	-0.00	1.50	0.00	0.00	1.50	Hold
1900.00	3.00	0.00	1899.50	-1469.50	-0.04	20.94	-0.00	0.00	0.00	0.00	0.00	Drop
2100.00	0.00	0.00	2099.41	-1269.59	-0.05	26.17	-0.00	-1.50	0.00	180.00	1.50	Hold
10606.91	0.00	0.00	10606.32	7237.32	-0.05	26.17	-0.00	0.00	0.00	0.00	0.00	KOP
11507.61	90.07	279.26	11179.27	7810.27	565.95	118.48	-566.18	10.00	0.00	279.26	10.00	LP/Hold
12783.61	90.07	279.26	11177.71	7808.71	1824.93	323.81	-1825.55	0.00	0.00	0.00	0.00	Turn
13252.15	90.07	269.89	11177.14	7808.14	2291.38	361.14	-2292.08	-0.00	-2.00	270.00	2.00	Hold
19960.78	90.07	269.89	11169.00	7800.00	9000.00	348.16	-9000.69	0.00	0.00	0.00	0.00	9000°VS
19981.97	90.49	269.89	11168.90	7799.90	9021.20	348.12	-9021.88	2.00	0.02	0.50	2.00	Hold
26307.54	90.49	269.89	11114.43	7745.43	15346.53	336.29	-15347.20	0.00	0.00	0.00	0.00	LTP 2590' FWL
26357.54	90.49	269.89	11114.00	7745.00	15396.53	336.20	-15397.20	0.00	0.00	0.00	0.00	PBHL 112H

Interpolated Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
0.00	0.00	0.00	0.00	-3369.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
100.00	0.00	0.00	100.00	-3269.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
200.00	0.00	0.00	200.00	-3169.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
300.00	0.00	0.00	300.00	-3069.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
400.00	0.00	0.00	400.00	-2969.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
500.00	0.00	0.00	500.00	-2869.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
600.00	0.00	0.00	600.00	-2769.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
700.00	0.00	0.00	700.00	-2669.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
800.00	0.00	0.00	800.00	-2569.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
900.00	0.00	0.00	900.00	-2469.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
1000.00	0.00	0.00	1000.00	-2369.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
1100.00	0.00	0.00	1100.00	-2269.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
1200.00	0.00	0.00	1200.00	-2169.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
1300.00	0.00	0.00	1300.00	-2069.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	
1400.00	0.00	0.00	1400.00	-1969.00	-0.00	-0.00	-0.00	496082.80	653619.30	0.00	Nudge
1500.00	1.50	0.00	1499.99	-1869.01	-0.00	1.31	-0.00	496084.11	653619.30	1.50	
1600.00	3.00	0.00	1599.91	-1769.09	-0.01	5.23	-0.00	496088.03	653619.30	1.50	Hold
1700.00	3.00	0.00	1699.77	-1669.23	-0.02	10.47	-0.00	496093.27	653619.30	0.00	
1800.00	3.00	0.00	1799.63	-1569.37	-0.03	15.70	-0.00	496098.50	653619.30	0.00	
1900.00	3.00	0.00	1899.50	-1469.50	-0.04	20.94	-0.00	496103.74	653619.30	0.00	Drop
2000.00	1.50	0.00	1999.42	-1369.58	-0.05	24.86	-0.00	496107.66	653619.30	1.50	
2100.00	0.00	0.00	2099.41	-1269.59	-0.05	26.17	-0.00	496108.97	653619.30	1.50	Hold
2200.00	0.00	0.00	2199.41	-1169.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
2300.00	0.00	0.00	2299.41	-1069.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
2400.00	0.00	0.00	2399.41	-969.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
2500.00	0.00	0.00	2499.41	-869.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
2600.00	0.00	0.00	2599.41	-769.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
2700.00	0.00	0.00	2699.41	-669.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
2800.00	0.00	0.00	2799.41	-569.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
2900.00	0.00	0.00	2899.41	-469.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3000.00	0.00	0.00	2999.41	-369.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3100.00	0.00	0.00	3099.41	-269.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3200.00	0.00	0.00	3199.41	-169.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3300.00	0.00	0.00	3299.41	-69.59	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3400.00	0.00	0.00	3399.41	30.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3500.00	0.00	0.00	3499.41	130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3600.00	0.00	0.00	3599.41	230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3700.00	0.00	0.00	3699.41	330.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
3800.00	0.00	0.00	3799.41	430.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	

SD Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
3900.00	0.00	0.00	3899.41	530.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4000.00	0.00	0.00	3999.41	630.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4100.00	0.00	0.00	4099.41	730.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4200.00	0.00	0.00	4199.41	830.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4300.00	0.00	0.00	4299.41	930.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4400.00	0.00	0.00	4399.41	1030.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4500.00	0.00	0.00	4499.41	1130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4600.00	0.00	0.00	4599.41	1230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4700.00	0.00	0.00	4699.41	1330.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4800.00	0.00	0.00	4799.41	1430.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
4900.00	0.00	0.00	4899.41	1530.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5000.00	0.00	0.00	4999.41	1630.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5100.00	0.00	0.00	5099.41	1730.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5200.00	0.00	0.00	5199.41	1830.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5300.00	0.00	0.00	5299.41	1930.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5400.00	0.00	0.00	5399.41	2030.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5500.00	0.00	0.00	5499.41	2130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5600.00	0.00	0.00	5599.41	2230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5700.00	0.00	0.00	5699.41	2330.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5800.00	0.00	0.00	5799.41	2430.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
5900.00	0.00	0.00	5899.41	2530.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6000.00	0.00	0.00	5999.41	2630.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6100.00	0.00	0.00	6099.41	2730.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6200.00	0.00	0.00	6199.41	2830.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6300.00	0.00	0.00	6299.41	2930.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6400.00	0.00	0.00	6399.41	3030.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6500.00	0.00	0.00	6499.41	3130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6600.00	0.00	0.00	6599.41	3230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6700.00	0.00	0.00	6699.41	3330.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6800.00	0.00	0.00	6799.41	3430.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
6900.00	0.00	0.00	6899.41	3530.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7000.00	0.00	0.00	6999.41	3630.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7100.00	0.00	0.00	7099.41	3730.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7200.00	0.00	0.00	7199.41	3830.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7300.00	0.00	0.00	7299.41	3930.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7400.00	0.00	0.00	7399.41	4030.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7500.00	0.00	0.00	7499.41	4130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7600.00	0.00	0.00	7599.41	4230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7700.00	0.00	0.00	7699.41	4330.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7800.00	0.00	0.00	7799.41	4430.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
7900.00	0.00	0.00	7899.41	4530.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8000.00	0.00	0.00	7999.41	4630.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8100.00	0.00	0.00	8099.41	4730.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8200.00	0.00	0.00	8199.41	4830.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8300.00	0.00	0.00	8299.41	4930.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8400.00	0.00	0.00	8399.41	5030.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8500.00	0.00	0.00	8499.41	5130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8600.00	0.00	0.00	8599.41	5230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8700.00	0.00	0.00	8699.41	5330.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8800.00	0.00	0.00	8799.41	5430.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
8900.00	0.00	0.00	8899.41	5530.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9000.00	0.00	0.00	8999.41	5630.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9100.00	0.00	0.00	9099.41	5730.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9200.00	0.00	0.00	9199.41	5830.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9300.00	0.00	0.00	9299.41	5930.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9400.00	0.00	0.00	9399.41	6030.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9500.00	0.00	0.00	9499.41	6130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9600.00	0.00	0.00	9599.41	6230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Well TVD-Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
9700.00	0.00	0.00	9699.41	6330.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9800.00	0.00	0.00	9799.41	6430.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
9900.00	0.00	0.00	9899.41	6530.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10000.00	0.00	0.00	9999.41	6630.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10100.00	0.00	0.00	10099.41	6730.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10200.00	0.00	0.00	10199.41	6830.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10300.00	0.00	0.00	10299.41	6930.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10400.00	0.00	0.00	10399.41	7030.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10500.00	0.00	0.00	10499.41	7130.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10600.00	0.00	0.00	10599.41	7230.41	-0.05	26.17	-0.00	496108.97	653619.30	0.00	
10606.91	0.00	0.00	10606.32	7237.32	-0.05	26.17	-0.00	496108.97	653619.30	0.00	KOP
10700.00	9.31	279.26	10699.00	7330.00	7.39	27.38	-7.45	496110.18	653611.85	10.00	
10800.00	19.31	279.26	10795.77	7426.77	31.75	31.36	-31.81	496114.16	653587.49	10.00	
10900.00	29.31	279.26	10886.79	7517.79	72.31	37.97	-72.39	496120.77	653546.91	10.00	
11000.00	39.31	279.26	10969.29	7600.29	127.86	47.03	-127.95	496129.83	653491.35	10.00	
11100.00	49.31	279.26	11040.75	7671.75	196.69	58.26	-196.80	496141.06	653422.50	10.00	
11200.00	59.31	279.26	11099.02	7730.02	276.72	71.31	-276.86	496154.11	653342.44	10.00	
11300.00	69.31	279.26	11142.32	7773.32	365.52	85.79	-365.69	496168.59	653253.61	10.00	
11400.00	79.31	279.26	11169.33	7800.33	460.39	101.26	-460.59	496184.06	653158.71	10.00	
11500.00	89.31	279.26	11179.23	7810.23	558.45	117.26	-558.67	496200.06	653060.63	10.00	
11507.61	90.07	279.26	11179.27	7810.27	565.95	118.48	-566.18	496201.28	653053.12	10.00	LP/Hold
11600.00	90.07	279.26	11179.16	7810.16	657.11	133.35	-657.37	496216.15	652961.93	0.00	
11700.00	90.07	279.26	11179.04	7810.04	755.78	149.44	-756.06	496232.24	652863.24	0.00	
11800.00	90.07	279.26	11178.92	7809.92	854.44	165.53	-854.76	496248.33	652764.54	0.00	
11900.00	90.07	279.26	11178.79	7809.79	953.11	181.62	-953.46	496264.42	652665.84	0.00	
12000.00	90.07	279.26	11178.67	7809.67	1051.77	197.71	-1052.16	496280.51	652567.14	0.00	
12100.00	90.07	279.26	11178.55	7809.55	1150.44	213.80	-1150.85	496296.60	652468.45	0.00	
12200.00	90.07	279.26	11178.43	7809.43	1249.10	229.90	-1249.55	496312.70	652369.75	0.00	
12300.00	90.07	279.26	11178.31	7809.31	1347.77	245.99	-1348.25	496328.79	652271.05	0.00	
12400.00	90.07	279.26	11178.18	7809.18	1446.44	262.08	-1446.94	496344.88	652172.36	0.00	
12500.00	90.07	279.26	11178.06	7809.06	1545.10	278.17	-1545.64	496360.97	652073.66	0.00	
12600.00	90.07	279.26	11177.94	7808.94	1643.77	294.26	-1644.34	496377.06	651974.96	0.00	
12700.00	90.07	279.26	11177.82	7808.82	1742.43	310.35	-1743.03	496393.15	651876.27	0.00	
12783.61	90.07	279.26	11177.71	7808.71	1824.93	323.81	-1825.55	496406.61	651793.75	0.00	Turn
12800.00	90.07	278.93	11177.69	7808.69	1841.11	326.40	-1841.74	496409.20	651777.56	2.00	
12900.00	90.07	276.93	11177.57	7808.57	1940.12	340.20	-1940.77	496423.00	651678.53	2.00	
13000.00	90.07	274.93	11177.45	7808.45	2039.56	350.53	-2040.23	496433.33	651579.07	2.00	
13100.00	90.07	272.93	11177.33	7808.33	2139.30	357.39	-2139.99	496440.19	651479.31	2.00	
13200.00	90.07	270.93	11177.21	7808.21	2239.23	360.76	-2239.93	496443.56	651379.37	2.00	
13252.15	90.07	269.89	11177.14	7808.14	2291.38	361.14	-2292.08	496443.94	651327.22	2.00	Hold
13300.00	90.07	269.89	11177.08	7808.08	2339.23	361.04	-2339.93	496443.84	651279.37	0.00	
13400.00	90.07	269.89	11176.96	7807.96	2439.23	360.85	-2439.93	496443.65	651179.37	0.00	
13500.00	90.07	269.89	11176.84	7807.84	2539.23	360.66	-2539.93	496443.46	651079.37	0.00	
13600.00	90.07	269.89	11176.72	7807.72	2639.23	360.46	-2639.93	496443.26	650979.37	0.00	
13700.00	90.07	269.89	11176.60	7807.60	2739.23	360.27	-2739.93	496443.07	650879.37	0.00	
13800.00	90.07	269.89	11176.48	7807.48	2839.23	360.08	-2839.93	496442.88	650779.37	0.00	
13900.00	90.07	269.89	11176.36	7807.36	2939.23	359.88	-2939.93	496442.68	650679.37	0.00	
14000.00	90.07	269.89	11176.23	7807.23	3039.23	359.69	-3039.93	496442.49	650579.37	0.00	
14100.00	90.07	269.89	11176.11	7807.11	3139.23	359.50	-3139.93	496442.30	650479.37	0.00	
14200.00	90.07	269.89	11175.99	7806.99	3239.23	359.30	-3239.93	496442.10	650379.37	0.00	
14300.00	90.07	269.89	11175.87	7806.87	3339.23	359.11	-3339.93	496441.91	650279.37	0.00	
14400.00	90.07	269.89	11175.75	7806.75	3439.23	358.92	-3439.93	496441.72	650179.37	0.00	
14500.00	90.07	269.89	11175.63	7806.63	3539.23	358.72	-3539.93	496441.52	650079.37	0.00	
14600.00	90.07	269.89	11175.51	7806.51	3639.23	358.53	-3639.93	496441.33	649979.37	0.00	
14700.00	90.07	269.89	11175.39	7806.39	3739.23	358.33	-3739.93	496441.13	649879.37	0.00	
14800.00	90.07	269.89	11175.26	7806.26	3839.23	358.14	-3839.93	496440.94	649779.37	0.00	
14900.00	90.07	269.89	11175.14	7806.14	3939.23	357.95	-3939.93	496440.75	649679.37	0.00	
15000.00	90.07	269.89	11175.02	7806.02	4039.23	357.75	-4039.92	496440.55	649579.38	0.00	

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
15100.00	90.07	269.89	11174.90	7805.90	4139.23	357.56	-4139.92	496440.36	649479.38	0.00	
15200.00	90.07	269.89	11174.78	7805.78	4239.23	357.37	-4239.92	496440.17	649379.38	0.00	
15300.00	90.07	269.89	11174.66	7805.66	4339.23	357.17	-4339.92	496439.97	649279.38	0.00	
15400.00	90.07	269.89	11174.54	7805.54	4439.23	356.98	-4439.92	496439.78	649179.38	0.00	
15500.00	90.07	269.89	11174.41	7805.41	4539.23	356.79	-4539.92	496439.59	649079.38	0.00	
15600.00	90.07	269.89	11174.29	7805.29	4639.23	356.59	-4639.92	496439.39	648979.38	0.00	
15700.00	90.07	269.89	11174.17	7805.17	4739.23	356.40	-4739.92	496439.20	648879.38	0.00	
15800.00	90.07	269.89	11174.05	7805.05	4839.23	356.21	-4839.92	496439.01	648779.38	0.00	
15900.00	90.07	269.89	11173.93	7804.93	4939.23	356.01	-4939.92	496438.81	648679.38	0.00	
16000.00	90.07	269.89	11173.81	7804.81	5039.23	355.82	-5039.92	496438.62	648579.38	0.00	
16100.00	90.07	269.89	11173.69	7804.69	5139.23	355.63	-5139.92	496438.43	648479.38	0.00	
16200.00	90.07	269.89	11173.56	7804.56	5239.23	355.43	-5239.92	496438.23	648379.38	0.00	
16300.00	90.07	269.89	11173.44	7804.44	5339.23	355.24	-5339.92	496438.04	648279.38	0.00	
16400.00	90.07	269.89	11173.32	7804.32	5439.23	355.05	-5439.92	496437.85	648179.38	0.00	
16500.00	90.07	269.89	11173.20	7804.20	5539.23	354.85	-5539.92	496437.65	648079.38	0.00	
16600.00	90.07	269.89	11173.08	7804.08	5639.23	354.66	-5639.92	496437.46	647979.38	0.00	
16700.00	90.07	269.89	11172.96	7803.96	5739.23	354.47	-5739.92	496437.27	647879.38	0.00	
16800.00	90.07	269.89	11172.84	7803.84	5839.23	354.27	-5839.92	496437.07	647779.38	0.00	
16900.00	90.07	269.89	11172.72	7803.72	5939.23	354.08	-5939.92	496436.88	647679.38	0.00	
17000.00	90.07	269.89	11172.59	7803.59	6039.23	353.89	-6039.92	496436.69	647579.38	0.00	
17100.00	90.07	269.89	11172.47	7803.47	6139.23	353.69	-6139.92	496436.49	647479.38	0.00	
17200.00	90.07	269.89	11172.35	7803.35	6239.23	353.50	-6239.92	496436.30	647379.38	0.00	
17300.00	90.07	269.89	11172.23	7803.23	6339.23	353.31	-6339.92	496436.11	647279.38	0.00	
17400.00	90.07	269.89	11172.11	7803.11	6439.23	353.11	-6439.92	496435.91	647179.38	0.00	
17500.00	90.07	269.89	11171.99	7802.99	6539.23	352.92	-6539.92	496435.72	647079.38	0.00	
17600.00	90.07	269.89	11171.87	7802.87	6639.23	352.73	-6639.92	496435.53	646979.38	0.00	
17700.00	90.07	269.89	11171.74	7802.74	6739.23	352.53	-6739.92	496435.33	646879.38	0.00	
17800.00	90.07	269.89	11171.62	7802.62	6839.23	352.34	-6839.92	496435.14	646779.38	0.00	
17900.00	90.07	269.89	11171.50	7802.50	6939.23	352.15	-6939.92	496434.95	646679.38	0.00	
18000.00	90.07	269.89	11171.38	7802.38	7039.23	351.95	-7039.92	496434.75	646579.38	0.00	
18100.00	90.07	269.89	11171.26	7802.26	7139.23	351.76	-7139.92	496434.56	646479.38	0.00	
18200.00	90.07	269.89	11171.14	7802.14	7239.23	351.57	-7239.92	496434.37	646379.38	0.00	
18300.00	90.07	269.89	11171.02	7802.02	7339.23	351.37	-7339.92	496434.17	646279.38	0.00	
18400.00	90.07	269.89	11170.89	7801.89	7439.23	351.18	-7439.92	496433.98	646179.38	0.00	
18500.00	90.07	269.89	11170.77	7801.77	7539.23	350.99	-7539.92	496433.79	646079.38	0.00	
18600.00	90.07	269.89	11170.65	7801.65	7639.23	350.79	-7639.92	496433.59	645979.38	0.00	
18700.00	90.07	269.89	11170.53	7801.53	7739.23	350.60	-7739.92	496433.40	645879.38	0.00	
18800.00	90.07	269.89	11170.41	7801.41	7839.23	350.41	-7839.91	496433.21	645779.39	0.00	
18900.00	90.07	269.89	11170.29	7801.29	7939.23	350.21	-7939.91	496433.01	645679.39	0.00	
19000.00	90.07	269.89	11170.17	7801.17	8039.23	350.02	-8039.91	496432.82	645579.39	0.00	
19100.00	90.07	269.89	11170.04	7801.04	8139.23	349.82	-8139.91	496432.62	645479.39	0.00	
19200.00	90.07	269.89	11169.92	7800.92	8239.23	349.63	-8239.91	496432.43	645379.39	0.00	
19300.00	90.07	269.89	11169.80	7800.80	8339.23	349.44	-8339.91	496432.24	645279.39	0.00	
19400.00	90.07	269.89	11169.68	7800.68	8439.23	349.24	-8439.91	496432.04	645179.39	0.00	
19500.00	90.07	269.89	11169.56	7800.56	8539.23	349.05	-8539.91	496431.85	645079.39	0.00	
19600.00	90.07	269.89	11169.44	7800.44	8639.23	348.86	-8639.91	496431.66	644979.39	0.00	
19700.00	90.07	269.89	11169.32	7800.32	8739.23	348.66	-8739.91	496431.46	644879.39	0.00	
19800.00	90.07	269.89	11169.20	7800.20	8839.23	348.47	-8839.91	496431.27	644779.39	0.00	
19900.00	90.07	269.89	11169.07	7800.07	8939.23	348.28	-8939.91	496431.08	644679.39	0.00	
19960.78	90.07	269.89	11169.00	7800.00	9000.00	348.16	-9000.69	496430.96	644618.61	0.00	9000'VS
19981.97	90.49	269.89	11168.90	7799.90	9021.20	348.12	-9021.88	496430.92	644597.42	2.00	Hold
20000.00	90.49	269.89	11168.74	7799.74	9039.23	348.09	-9039.91	496430.89	644579.39	0.00	
20100.00	90.49	269.89	11167.88	7798.88	9139.22	347.90	-9139.91	496430.70	644479.39	0.00	
20200.00	90.49	269.89	11167.02	7798.02	9239.22	347.71	-9239.90	496430.51	644379.40	0.00	
20300.00	90.49	269.89	11166.16	7797.16	9339.21	347.53	-9339.90	496430.33	644279.40	0.00	
20400.00	90.49	269.89	11165.30	7796.30	9439.21	347.34	-9439.90	496430.14	644179.40	0.00	
20500.00	90.49	269.89	11164.44	7795.44	9539.21	347.15	-9539.89	496429.95	644079.41	0.00	
20600.00	90.49	269.89	11163.57	7794.57	9639.20	346.96	-9639.89	496429.76	643979.41	0.00	

5D Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N. Offset (US ft)	E. Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (%/100US ft)	Comment
20700.00	90.49	269.89	11162.71	7793.71	9739.20	346.78	-9739.88	496429.58	643879.42	0.00	
20800.00	90.49	269.89	11161.85	7792.85	9839.20	346.59	-9839.88	496429.39	643779.42	0.00	
20900.00	90.49	269.89	11160.99	7791.99	9939.19	346.40	-9939.88	496429.20	643679.42	0.00	
21000.00	90.49	269.89	11160.13	7791.13	10039.19	346.22	-10039.87	496429.02	643579.43	0.00	
21100.00	90.49	269.89	11159.27	7790.27	10139.19	346.03	-10139.87	496428.83	643479.43	0.00	
21200.00	90.49	269.89	11158.41	7789.41	10239.18	345.84	-10239.86	496428.64	643379.44	0.00	
21300.00	90.49	269.89	11157.55	7788.55	10339.18	345.66	-10339.86	496428.46	643279.44	0.00	
21400.00	90.49	269.89	11156.69	7787.69	10439.17	345.47	-10439.86	496428.27	643179.44	0.00	
21500.00	90.49	269.89	11155.83	7786.83	10539.17	345.28	-10539.85	496428.08	643079.45	0.00	
21600.00	90.49	269.89	11154.96	7785.96	10639.17	345.09	-10639.85	496427.89	642979.45	0.00	
21700.00	90.49	269.89	11154.10	7785.10	10739.16	344.91	-10739.84	496427.71	642879.46	0.00	
21800.00	90.49	269.89	11153.24	7784.24	10839.16	344.72	-10839.84	496427.52	642779.46	0.00	
21900.00	90.49	269.89	11152.38	7783.38	10939.16	344.53	-10939.84	496427.33	642679.46	0.00	
22000.00	90.49	269.89	11151.52	7782.52	11039.15	344.35	-11039.83	496427.15	642579.47	0.00	
22100.00	90.49	269.89	11150.66	7781.66	11139.15	344.16	-11139.83	496426.96	642479.47	0.00	
22200.00	90.49	269.89	11149.80	7780.80	11239.14	343.97	-11239.83	496426.77	642379.47	0.00	
22300.00	90.49	269.89	11148.94	7779.94	11339.14	343.79	-11339.82	496426.59	642279.48	0.00	
22400.00	90.49	269.89	11148.08	7779.08	11439.14	343.60	-11439.82	496426.40	642179.48	0.00	
22500.00	90.49	269.89	11147.21	7778.21	11539.13	343.41	-11539.81	496426.21	642079.49	0.00	
22600.00	90.49	269.89	11146.35	7777.35	11639.13	343.23	-11639.81	496426.03	641979.49	0.00	
22700.00	90.49	269.89	11145.49	7776.49	11739.13	343.04	-11739.81	496425.84	641879.49	0.00	
22800.00	90.49	269.89	11144.63	7775.63	11839.12	342.85	-11839.80	496425.65	641779.50	0.00	
22900.00	90.49	269.89	11143.77	7774.77	11939.12	342.66	-11939.80	496425.46	641679.50	0.00	
23000.00	90.49	269.89	11142.91	7773.91	12039.11	342.48	-12039.79	496425.28	641579.51	0.00	
23100.00	90.49	269.89	11142.05	7773.05	12139.11	342.29	-12139.79	496425.09	641479.51	0.00	
23200.00	90.49	269.89	11141.19	7772.19	12239.11	342.10	-12239.79	496424.90	641379.51	0.00	
23300.00	90.49	269.89	11140.33	7771.33	12339.10	341.92	-12339.78	496424.72	641279.52	0.00	
23400.00	90.49	269.89	11139.47	7770.47	12439.10	341.73	-12439.78	496424.53	641179.52	0.00	
23500.00	90.49	269.89	11138.60	7769.60	12539.10	341.54	-12539.77	496424.34	641079.53	0.00	
23600.00	90.49	269.89	11137.74	7768.74	12639.09	341.36	-12639.77	496424.16	640979.53	0.00	
23700.00	90.49	269.89	11136.88	7767.88	12739.09	341.17	-12739.77	496423.97	640879.53	0.00	
23800.00	90.49	269.89	11136.02	7767.02	12839.08	340.98	-12839.76	496423.78	640779.54	0.00	
23900.00	90.49	269.89	11135.16	7766.16	12939.08	340.79	-12939.76	496423.59	640679.54	0.00	
24000.00	90.49	269.89	11134.30	7765.30	13039.08	340.61	-13039.76	496423.41	640579.54	0.00	
24100.00	90.49	269.89	11133.44	7764.44	13139.07	340.42	-13139.75	496423.22	640479.55	0.00	
24200.00	90.49	269.89	11132.58	7763.58	13239.07	340.23	-13239.75	496423.03	640379.55	0.00	
24300.00	90.49	269.89	11131.72	7762.72	13339.07	340.05	-13339.74	496422.85	640279.56	0.00	
24400.00	90.49	269.89	11130.86	7761.86	13439.06	339.86	-13439.74	496422.66	640179.56	0.00	
24500.00	90.49	269.89	11129.99	7760.99	13539.06	339.67	-13539.74	496422.47	640079.56	0.00	
24600.00	90.49	269.89	11129.13	7760.13	13639.06	339.49	-13639.73	496422.29	639979.57	0.00	
24700.00	90.49	269.89	11128.27	7759.27	13739.05	339.30	-13739.73	496422.10	639879.57	0.00	
24800.00	90.49	269.89	11127.41	7758.41	13839.05	339.11	-13839.72	496421.91	639779.58	0.00	
24900.00	90.49	269.89	11126.55	7757.55	13939.04	338.92	-13939.72	496421.72	639679.58	0.00	
25000.00	90.49	269.89	11125.69	7756.69	14039.04	338.74	-14039.72	496421.54	639579.58	0.00	
25100.00	90.49	269.89	11124.83	7755.83	14139.04	338.55	-14139.71	496421.35	639479.59	0.00	
25200.00	90.49	269.89	11123.97	7754.97	14239.03	338.36	-14239.71	496421.16	639379.59	0.00	
25300.00	90.49	269.89	11123.11	7754.11	14339.03	338.18	-14339.71	496420.98	639279.59	0.00	
25400.00	90.49	269.89	11122.24	7753.24	14439.03	337.99	-14439.70	496420.79	639179.60	0.00	
25500.00	90.49	269.89	11121.38	7752.38	14539.02	337.80	-14539.70	496420.60	639079.60	0.00	
25600.00	90.49	269.89	11120.52	7751.52	14639.02	337.62	-14639.69	496420.42	638979.61	0.00	
25700.00	90.49	269.89	11119.66	7750.66	14739.01	337.43	-14739.69	496420.23	638879.61	0.00	
25800.00	90.49	269.89	11118.80	7749.80	14839.01	337.24	-14839.69	496420.04	638779.61	0.00	
25900.00	90.49	269.89	11117.94	7748.94	14939.01	337.06	-14939.68	496419.86	638679.62	0.00	
26000.00	90.49	269.89	11117.08	7748.08	15039.00	336.87	-15039.68	496419.67	638579.62	0.00	
26100.00	90.49	269.89	11116.22	7747.22	15139.00	336.68	-15139.67	496419.48	638479.63	0.00	
26200.00	90.49	269.89	11115.36	7746.36	15239.00	336.49	-15239.67	496419.29	638379.63	0.00	
26300.00	90.49	269.89	11114.50	7745.50	15338.99	336.31	-15339.67	496419.11	638279.63	0.00	

SD Plan Report

Interpolated Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	VS (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	DLS (°/100US ft)	Comment
26307.54	90.49	269.89	11114.43	7745.43	15346.53	336.29	-15347.20	496419.09	638272.10	0.00	LTP 2590' FWL
26357.54	90.49	269.89	11114.00	7745.00	15396.53	336.20	-15397.20	496419.00	638222.10	0.00	PBHL 112H

Formation Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)											
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)		Comment
Rustler	366.00	0.00	0.00	366.00	-3003.00	-0.00	-0.00	496082.80	653619.30		
Magenta Dolomite	426.00	0.00	0.00	426.00	-2943.00	-0.00	-0.00	496082.80	653619.30		
Salado/Top of Salt	653.00	0.00	0.00	653.00	-2716.00	-0.00	-0.00	496082.80	653619.30		
Castile Anhydrite 1 Top	2525.59	0.00	0.00	2525.00	-844.00	26.17	-0.00	496108.97	653619.30		
Castile Anhydrite 1 Base	2942.59	0.00	0.00	2942.00	-427.00	26.17	-0.00	496108.97	653619.30		
Castile Anhydrite 2 Top	3160.59	0.00	0.00	3160.00	-209.00	26.17	-0.00	496108.97	653619.30		
Castile Anhydrite 2 Base	3259.59	0.00	0.00	3259.00	-110.00	26.17	-0.00	496108.97	653619.30		
Base Salt	3605.59	0.00	0.00	3605.00	236.00	26.17	-0.00	496108.97	653619.30		
Bell Canyon	3858.59	0.00	0.00	3858.00	489.00	26.17	-0.00	496108.97	653619.30		
Cherry Canyon	4789.59	0.00	0.00	4789.00	1420.00	26.17	-0.00	496108.97	653619.30		
Manzanita Marker	4949.59	0.00	0.00	4949.00	1580.00	26.17	-0.00	496108.97	653619.30		
Brushy Canyon Ss.	6046.59	0.00	0.00	6046.00	2677.00	26.17	-0.00	496108.97	653619.30		
Basal Brushy Canyon Ss.	7439.59	0.00	0.00	7439.00	4070.00	26.17	-0.00	496108.97	653619.30		
Bone Spring Lm.	7718.59	0.00	0.00	7718.00	4349.00	26.17	-0.00	496108.97	653619.30		
Avalon Ss.	7899.59	0.00	0.00	7899.00	4530.00	26.17	-0.00	496108.97	653619.30		
Upper Avalon Carb.	8009.59	0.00	0.00	8009.00	4640.00	26.17	-0.00	496108.97	653619.30		
Upper Avalon Sh.	8077.59	0.00	0.00	8077.00	4708.00	26.17	-0.00	496108.97	653619.30		
Lw. Avalon Carb.	8129.59	0.00	0.00	8129.00	4760.00	26.17	-0.00	496108.97	653619.30		
Lw. Avalon Sh.	8323.59	0.00	0.00	8323.00	4954.00	26.17	-0.00	496108.97	653619.30		
BS Carb.	8529.59	0.00	0.00	8529.00	5160.00	26.17	-0.00	496108.97	653619.30		
First BS Ss.	8719.59	0.00	0.00	8719.00	5350.00	26.17	-0.00	496108.97	653619.30		
Second BS Carb.	9219.59	0.00	0.00	9219.00	5850.00	26.17	-0.00	496108.97	653619.30		
Top Second BS	9564.59	0.00	0.00	9564.00	6195.00	26.17	-0.00	496108.97	653619.30		
Second BS A Ss.	9604.59	0.00	0.00	9604.00	6235.00	26.17	-0.00	496108.97	653619.30		
Second BS A/B Carb.	9703.59	0.00	0.00	9703.00	6334.00	26.17	-0.00	496108.97	653619.30		
Second BS B Ss.	9769.59	0.00	0.00	9769.00	6400.00	26.17	-0.00	496108.97	653619.30		
Third BS Carb.	9854.59	0.00	0.00	9854.00	6485.00	26.17	-0.00	496108.97	653619.30		
Third BS Shale	10059.59	0.00	0.00	10059.00	6690.00	26.17	-0.00	496108.97	653619.30		
Third BS Ss.	10549.59	0.00	0.00	10549.00	7180.00	26.17	-0.00	496108.97	653619.30		
Third BS Red Hills Ss.	10887.70	28.08	279.26	10876.00	7507.00	37.02	-66.56	496119.82	653552.74		
Wolfcamp Shale	10986.83	37.99	279.26	10959.00	7590.00	45.71	-119.83	496128.51	653499.47		
Wolfcamp X Ss.	11003.51	39.66	279.26	10972.00	7603.00	47.39	-130.15	496130.19	653489.15		

5D Plan Report

Formation Points: (Relative to Slot centre)(TVD relative to Well TVD Reference)										
Name	MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	TVD (MSL) (US ft)	N.Offset (US ft)	E.Offset (US ft)	Northing (US ft)	Easting (US ft)	Comment
Wolfcamp Y Ss.	11074.93	46.80	279.26	11024.00	7655.00	55.26	-178.40	496138.06	653440.90	
Wolfcamp A	11248.54	64.16	279.26	11122.00	7753.00	78.19	-319.04	496160.99	653300.26	

