Operator

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

REC'D/MIDLAND
DEC 06 2019

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.
NMNM0554239

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
891000558X

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
JRU DI 11 WHITLASH 515H

2. Name of Operator
XTO PERMIAN OPERATING LLC
Contact: KELLY KARDOS
E-Mail: kelly_kardos@xtoenergy.com

9. API Well No.
30-015-46283-00-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
WCG07S223021G-BONE SPRING
WILDCAT - BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 17 T22S R30E NESW 1990FSL 1990FWL
32.390461 N Lat, 103.905846 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 to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

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 Permian Operation, LLC requests permission to make the following changes to the original APD:

Change the BHL from 330' FSL & 50' FWL to 1980' FSL & 50' FWL.

Change the casing/cement program per the attached procedure.

XTO requests to not utilize centralizers in the curve and lateral.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 11 2019

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

APPROVED
RECEIVED

Electronic Submission #493421 verified by the BLM Well Information System
For XTO PERMIAN OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by JENNIFER SANCHEZ on 11/22/2019 (20JAS0023SE)

Name *(Printed/Typed)* KELLY KARDOS — Title REGULATORY COORDINATOR

NOV 22 2019

Signature (Electronic Submission) — Date 11/20/2019

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By JENNIFER SANCHEZ — Title PETROLEUM ENGINEER — Date 11/22/2019

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 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 ****

1/27/20 KS

Revisions to Operator-Submitted EC Data for Sundry Notice #493421

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM0554239	NMNM0554239
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: County:	 NM EDDY	 NM EDDY
Field/Pool:	WC BONE SPRING	WCG07S223021G-BONE SPRING WILDCAT - BONE SPRING
Well/Facility:	JRU DI 11 WHITLASH 515H Sec 17 T22S R30E Mer NMP NESW 1990FSL 1990FWL	JRU DI 11 WHITLASH 515H Sec 17 T22S R30E NESW 1990FSL 1990FWL 32.390461 N Lat, 103.905846 W Lon

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011
Submit one copy to appropriate District Office

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-46283	97905	WC BONE SPRING - WC G-07 S223021G

[4] Property Code	[5] Property Name	[6] Well Number
	JRU DI 11 WHITLASH	515H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373075	XTO PERMIAN OPERATING, LLC.	3,101'

[10] Surface Location

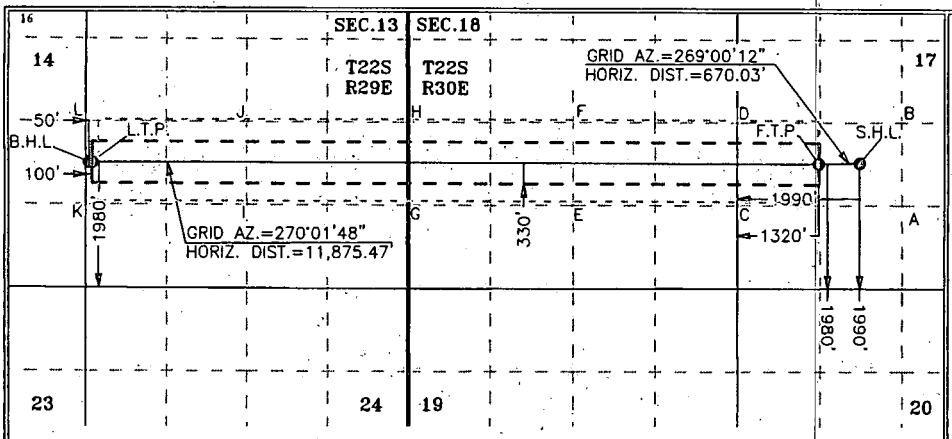
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	17	22S	30 E		1,990	SOUTH	1,990	WEST	EDDY

[11] 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
L	13	22 S	29 E		1,980	SOUTH	50	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
360			

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.



SHL (NAD83 NME)	LTP (NAD83 NME)	SHL (NAD27 NME)	LTP (NAD27 NME)
Y = 506,045.1	Y = 506,039.5	Y = 505,984.3	Y = 505,978.8
X = 673,288.4	X = 660,793.0	X = 632,107.0	X = 619,611.6
LAT. = 32.390462 °N	LAT. = 32.390577 °N	LAT. = 32.390339 °N	LAT. = 32.390455 °N
LONG. = 103.905849 °W	LONG. = 103.946330 °W	LONG. = 103.905353 °W	LONG. = 103.945833 °W
FTP (NAD83 NME)	**BHL (NAD83 NME)**	**FTP (NAD27 NME)**	**BHL (NAD27 NME)**
Y = 506,033.4	Y = 506,039.6	Y = 505,972.6	Y = 505,978.9
X = 672,618.5	X = 660,743.0	X = 631,437.0	X = 619,561.6
LAT. = 32.390437 °N	LAT. = 32.390578 °N	LAT. = 32.390314 °N	LAT. = 32.390455 °N
LONG. = 103.908020 °W	LONG. = 103.946492 °W	LONG. = 103.907524 °W	LONG. = 103.945995 °W

CORNER COORDINATES (NAD83 NME)		CORNER COORDINATES (NAD27 NME)	
A - Y = 505,375.8 N	X = 673,977.1 E	A - Y = 505,315.1 N	X = 632,795.7 E
B - Y = 506,694.9 N	X = 673,972.6 E	B - Y = 506,634.1 N	X = 632,791.2 E
C - Y = 505,369.1 N	X = 671,300.0 E	C - Y = 505,308.3 N	X = 630,118.5 E
D - Y = 506,688.0 N	X = 671,297.0 E	D - Y = 506,627.2 N	X = 630,115.6 E
E - Y = 505,365.5 N	X = 668,622.8 E	E - Y = 505,304.7 N	X = 627,441.3 E
F - Y = 506,684.4 N	X = 668,619.2 E	F - Y = 506,623.7 N	X = 627,437.8 E
G - Y = 505,361.9 N	X = 665,935.1 E	G - Y = 505,301.2 N	X = 624,753.7 E
H - Y = 506,680.9 N	X = 665,930.3 E	H - Y = 506,620.1 N	X = 624,749.0 E
I - Y = 505,370.0 N	X = 663,314.1 E	I - Y = 505,309.3 N	X = 622,132.7 E
J - Y = 506,688.6 N	X = 663,311.6 E	J - Y = 506,627.9 N	X = 622,130.2 E
K - Y = 505,378.1 N	X = 660,693.1 E	K - Y = 505,317.4 N	X = 619,511.7 E
L - Y = 506,696.4 N	X = 660,692.9 E	L - Y = 506,635.7 N	X = 619,511.5 E

[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.

Kelly Kardos 11/18/19
Signature Date

Kelly Kardos
Printed Name

kelly_kardos@xtoenergy.com
E-mail Address

[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 belief.

09-30-2019
Date of Survey

Signature and Seal of Professional Surveyor:

MARK DILLON HARP 23786
Certificate Number

GM 2019041013

MARK DILLON HARP
NEW MEXICO
23786
PROFESSIONAL SURVEYOR

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

XTO Energy Inc.
JRU DI 11 Whitlash #515H
Projected TD: 20548' MD / 8286' TVD
SHL: 1990' FSL & 1990' FWL , Section 17, T22S, R30E
BHL: 1980' FSL & 50' FWL , Section 13, T22S, R29E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Permian

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	48'	Water
Top of Salt	640'	Water
Base of Salt	3138'	Water
Delaware	3362'	Water
Bone Spring	7165'	Water/Oil/Gas
1st Bone Spring Ss	8123'	Water/Oil/Gas
Target/Land Curve	8286'	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 @ 600' (40' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13-3/8 inch casing at 3200' and circulating cement to surface. A 12-1/4 inch vertical hole will be drilled to 7500' and 9-5/8 inch casing ran and cemented 500' into the 13-3/8 inch casing. A 8-1/2 inch curve and lateral hole will be drilled to 20548' MD/TD and 5-1/2 casing will be set at TD and cemented back 300' into the 9-5/8 inch casing shoe.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
24"	0' – 600'	18-5/8"	87.5	BTC	J-55	New	2.34	2.32	26.18
17-1/2"	0' – 3200'	13-3/8"	68	BTC	HCL-80	New	1.80	2.99	13.51
12-1/4"	0' – 7500'	9-5/8"	40	BTC	HCL-80	New	3.72	1.78	4.21
8-1/2"	0' – 20548'	5-1/2"	20	BTC	P-110	New	1.20	5.84	2.51

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 50% 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

WELLHEAD:

Temporary Wellhead

- 18-5/8" SOW x 21-1/4" 3M top flange

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head (RSH System): 13-3/8" SOW bottom x 13-5/8" 5M top flange
B. Tubing Head: 13-5/8" 15M bottom flange x 7-1/16" 15M 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 Onshore Order 2.
- Wellhead manufacturer representative may not be present for BOP test plug installation

4. Cement Program

Surface Casing: 18-5/8", 87.5 New J-55, BTC casing to be set at +/- 600'

Tail: 690 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

Previous wells in the area did not see returns throuought surface cement job and multiple 1" top outs. Two additional 1" top out jobs will be attempted after the surface cement job. If the top of cement is not affected by the two top out jobs, ~10-20 ppb gravel will be added on the backside of the 1" to attempt to get cement to surface.

1st Intermediate Casing: 13-3/8", 68 New HCL-80, BTC casing to be set at +/- 3200'

Lead: 3660 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.94 ft3/sx, 9.61 gal/sx water)

Tail: 810 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.37 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing (Stage 2): 9-5/8", 40 New HCL-80, BTC casing to be set at +/- 7500'
ECP/DV Tool to be set at 3250'
1st Stage

Lead: 880 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.87 ft3/sx, 9.61 gal/sx water)

Tail: 210 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.92 ft3/sx, 6.39 gal/sx water)
Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Stage

Lead: 720 sxs Halcem-C + 2% CaCl (mixed at 12.8 ppg, 1.94 ft3/sx, 9.61 gal/sx water)

Tail: 470 sxs Halcem-C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft3/sx, 6.39 gal/sx water)
Compressives:

Production Casing: 5-1/2", 20 New P-110, BTC casing to be set at +/- 20548'

Lead: 4740 sxs Halcem-C + 2% CaCl (mixed at 11.5 ppg, 1.29 ft3/sx, 9.61 gal/sx water)

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 960 psi.

Once the perminent wellhead is installed the blow out preventer equipment (BOP) for this well consists of a 13-5/8" minimum 3M Hydril and a 13-5/8" minimum 3M Double Ram BOP. MASP should not exceed 2055 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 nippling up on the 13-5/8" 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When the 13-3/8" and 9-5/8" casing is set, the packoff seals 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' to 600'	24"	FW/Native	8.4-8.8	35-40	NC
600' to 3200'	17-1/2"	Brine/Gel Sweeps	9.8-10.2	30-32	NC
3200' to 7500'	12-1/4"	FW / Cut Brine	9.1-9.5	29-32	NC - 20
7500' to 20548'	8-1/2"	FW / Cut Brine / Polymer/ OBM	8.7-9.3	32-50	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 18.625" surface casing with brine solution. A 9.8ppg-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. 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) from surface to TD.
Coring includes sidewall cores in the first and secind intermedaite hole sections.

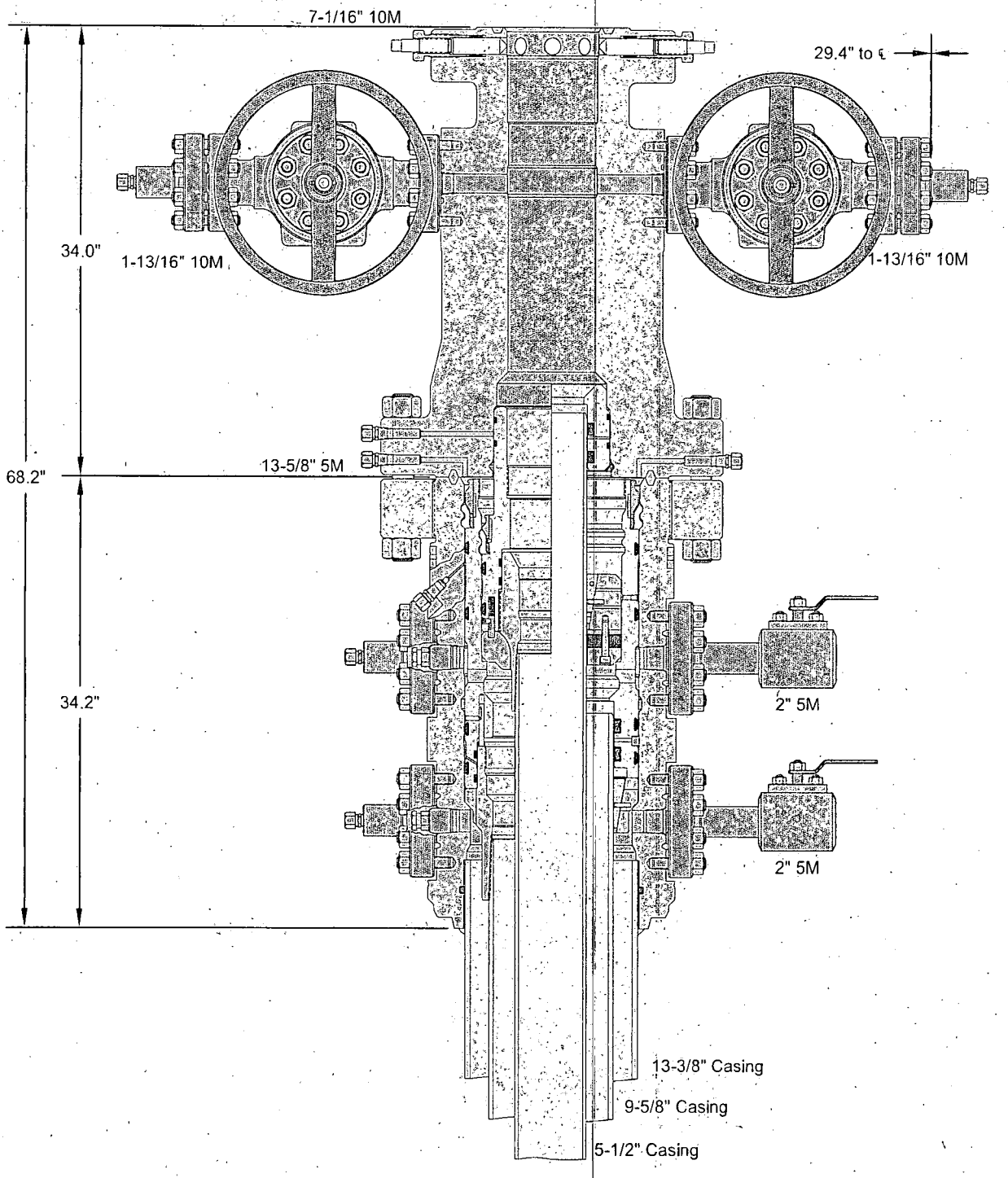
9. Abnormal Pressures and Temperatures / Potential Hazards

None Anticipated. BHT of 125 to 145 F is anticipated. No H2S is expected but monitors will be in place to detect any H2S

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

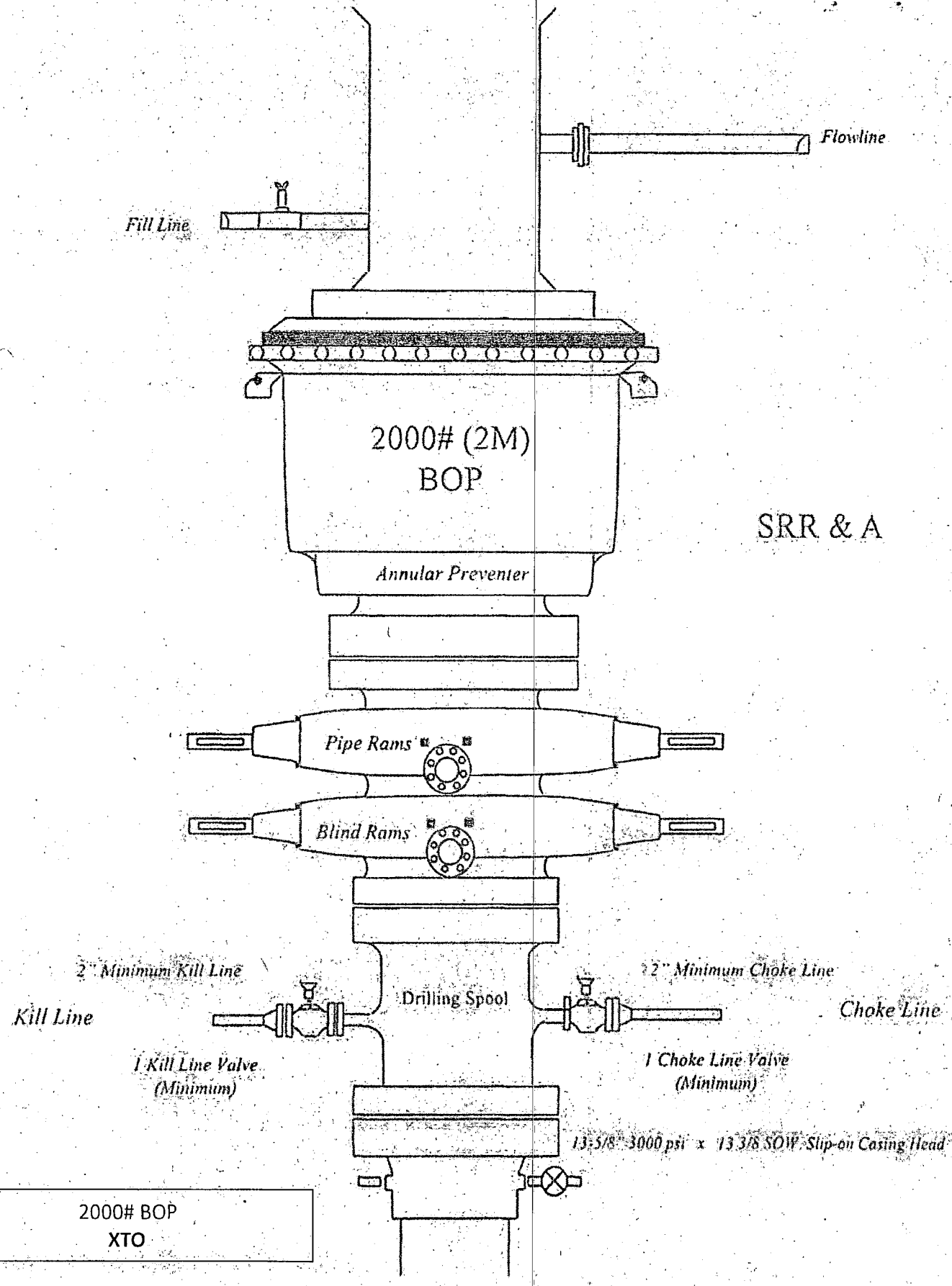
XTO ENERGY, INC.

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

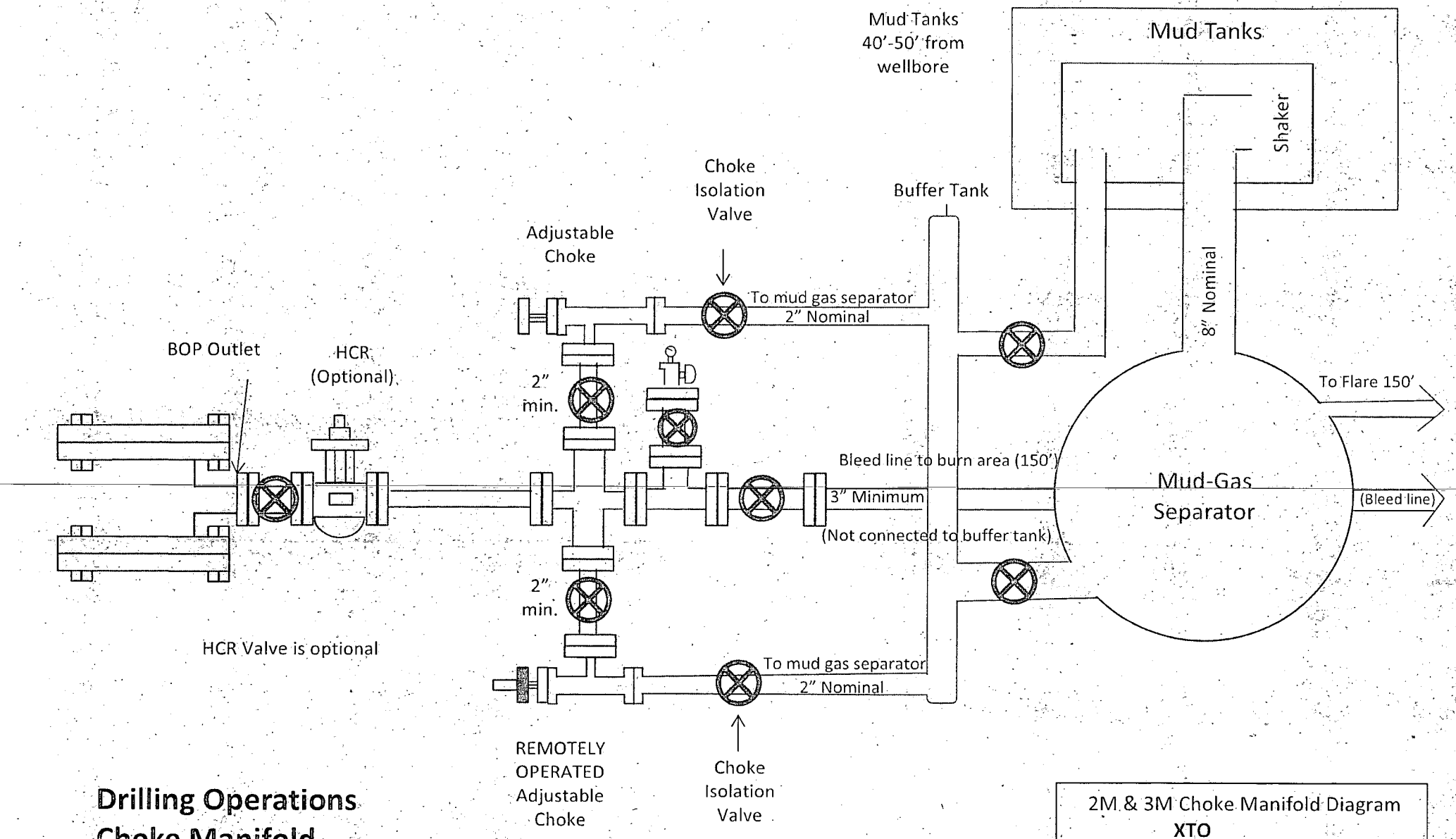
DRAWN	VJK	16FEB17
APPRV	KN	16FEB17

FOR REFERENCE ONLY

DRAWING NO. 10012842


Flowline
Fill Line
2000# (2M)
BOP
SRR & A
Annular Preventer
Pipe Rams
Blind Rams
2" Minimum Kill Line
Kill Line
Drilling Spool
2" Minimum Choke Line
Choke Line
1 Kill Line Valve
(Minimum)
1 Choke Line Valve
(Minimum)
13 5/8" 3000 psi x 13 3/8 SOW Slip-on Casing Head

2000# BOP
XTO



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:	NORMA

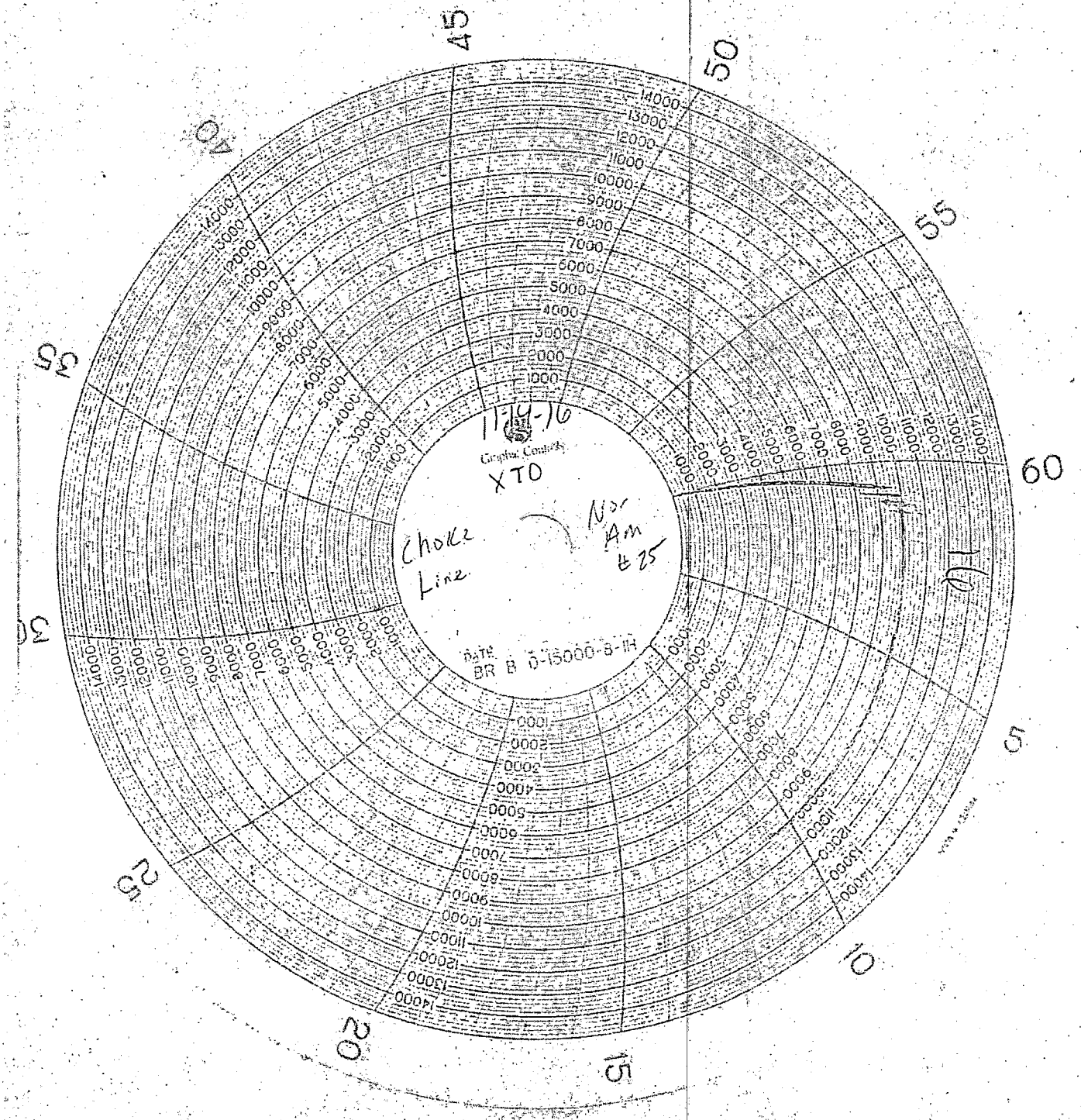
Product Description: FD3.0-12.0R4-1/16.5KFLGE/E LE

End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K 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:	

Form PTC- 01 Rev.0.2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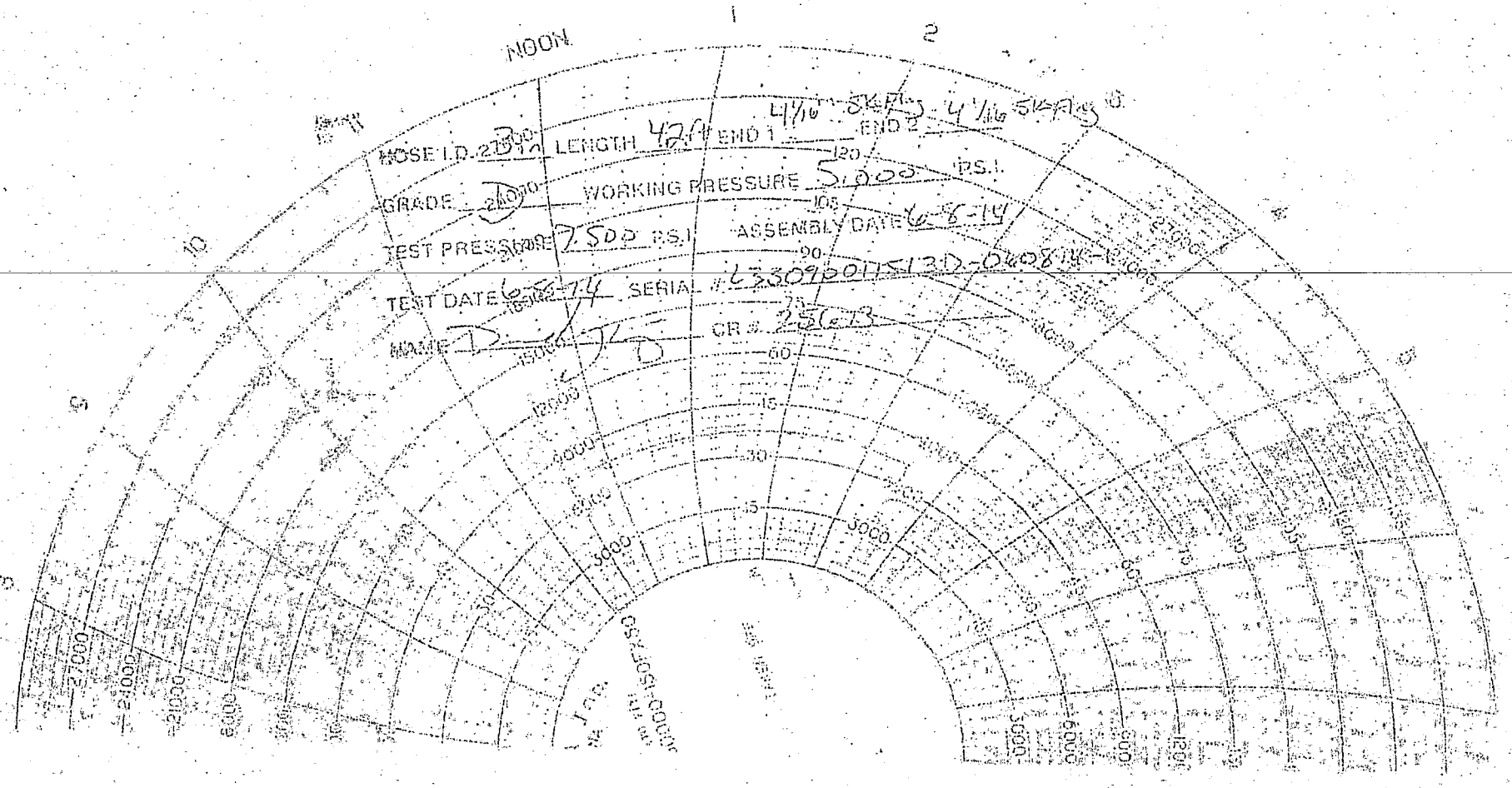
Graphic Controls
XTO
Choke Line
Nor Am #25
DATE
BR B 0-15000-B-III


NOON
HOSE I.D. 2 3/4
LENGTH 42.4
END 1 4 1/16 SKRD
END 2 4 1/16 SKRD
GRADE D
WORKING PRESSURE 5000 P.S.I.
TEST PRESSURE 7500 P.S.I.
ASSEMBLY DATE 6-5-14
TEST DATE 6-5-14
SERIAL # 23092017513D-040814-1
NAME D
CR # 25673

XTO Energy Inc.

Location: Eddy County, NM
Field: Wolfcamp (Eddy Co., NM)
Facility: JRU DI 11 Whitlash A

Slot: JRU DI 11 Whitlash 515H
Well: JRU DI 11 Whitlash 515H
Wellbore: JRU DI 11 Whitlash 515H PWB

Plot reference wellpath is JRU DI 11 Whitlash 515H Rev-A.0	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
True vertical depths are referenced to Precision 598 (KB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Precision 598 (KB)	North Reference: Grid north
Precision 598 (KB) to Mean Sea Level: 3126 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: JRU DI 11 Whitlash 515H): -3101 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: okimlucg on 2019-11-20
	Database: WA_HOU_Midland_Delh

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
20587.30	90.989	270.030	8081.00	-5.40	-12546.31	619561.60	505978.90	32°23'25.640"N	103°56'45.582"W

Location Information

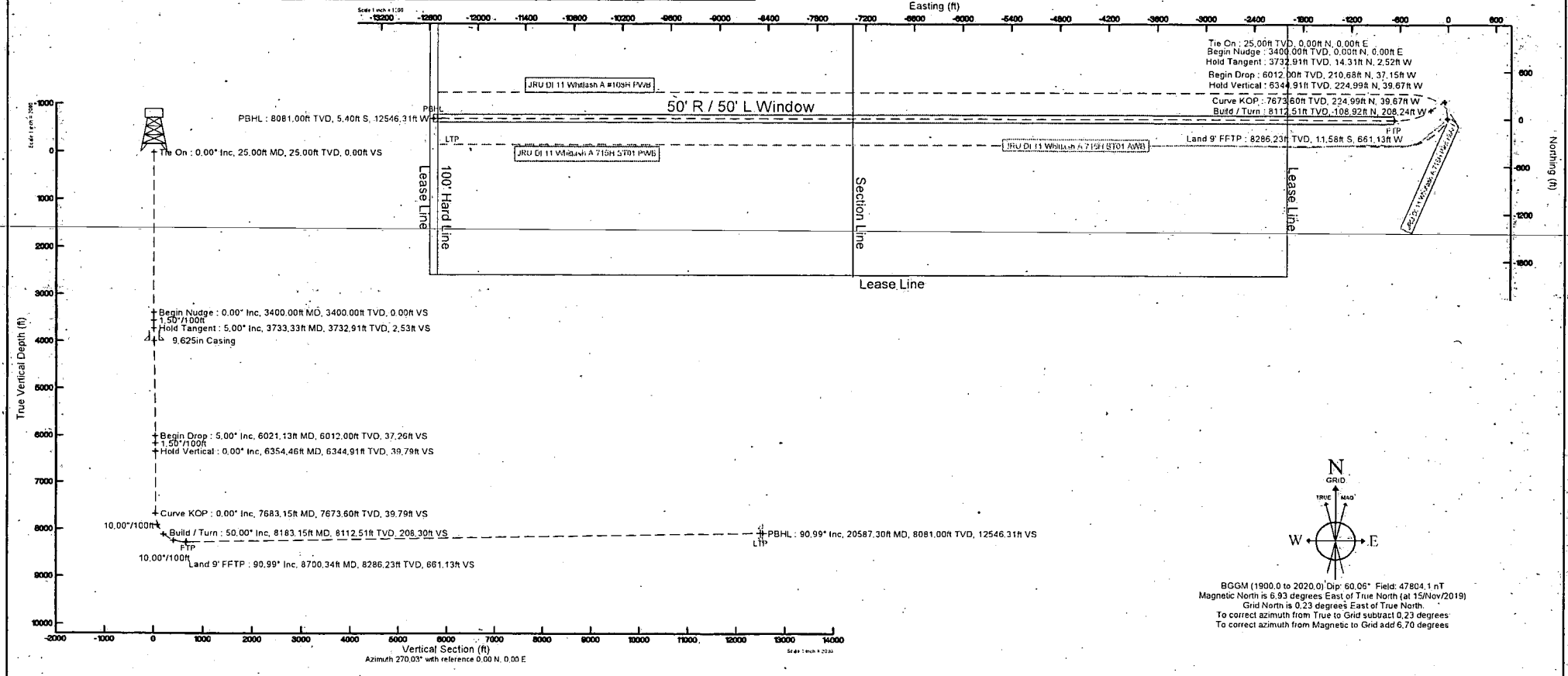
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
JRU DI 11 Whitlash A			632156.800	505984.800	32°23'25.223"N	103°54'18.690"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
JRU DI 11 Whitlash 515H	-0.50	-49.80	632107.000	505984.300	32°23'25.220"N	103°54'19.271"W
Precision 598 (KB) to Ground level (At Slot: JRU DI 11 Whitlash 515H)					25ft	
Mean Sea Level to Ground level (At Slot: JRU DI 11 Whitlash 515H)					-3101ft	
Precision 598 (KB) to Mean Sea Level					3126ft	

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
JRU DI 11 Whitlash 515H LTP		8081.00	-5.50	-12496.31	619611.60	505978.80	32°23'25.637"N	103°56'44.999"W
JRU DI 11 Whitlash 515H PBHL	20587.30	8081.00	-5.40	-12546.31	619561.60	505978.90	32°23'25.640"N	103°56'45.582"W
JRU DI 11 Whitlash 515H FTP		8286.00	-11.70	-670.05	631437.00	505972.60	32°23'25.131"N	103°54'27.086"W

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	25.00	0.000	350.000	25.00	0.00	0.00	0.00	0.00
Begin Nudge	3400.00	0.000	350.000	3400.00	0.00	0.00	0.00	0.00
Hold Tangent	3733.33	5.000	350.000	3732.91	14.31	-2.52	1.50	2.53
Begin Drop	6021.13	5.000	350.000	6012.00	210.68	-37.15	0.00	37.26
Hold Vertical	6354.46	0.000	235.450	6344.91	224.99	-39.67	1.50	39.79
Curve KOP	7683.15	0.000	235.450	7673.60	224.99	-39.67	0.00	39.79
Build / Turn	8183.15	50.000	235.450	8112.51	108.92	-208.24	10.00	208.30
Land 9" FFTP	8700.34	90.989	270.030	8286.23	-11.58	-661.13	10.00	661.13
PBHL	20587.30	90.989	270.030	8081.00	-5.40	-12546.31	0.00	12546.31



BGGM (1900.0 to 2020.0) Dip: 60.06° Field: 47804.1 nT
Magnetic North is 6.93 degrees East of True North (at 15/Nov/2019)
Grid North is 0.23 degrees East of True North.
To correct azimuth from True to Grid subtract 0.23 degrees
To correct azimuth from Magnetic to Grid add 6.70 degrees

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	**XTO Energy Inc.**	Slot	**JRU DI 11 Whitlash 515H**
Area	**Eddy County, NM**	Well	**JRU DI 11 Whitlash 515H**
Field	**Wolfcamp (Eddy Co., NM)**	Wellbore	**JRU DI 11 Whitlash 515H PWB**
Facility	**JRU DI 11 Whitlash A**		

REPORT SETUP INFORMATION			
Projection System	**NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet**	Software System	**WellArchitect® 5.1**
North Reference	**Grid**	User	**Okimlucg**
Scale	**0.999929**	Report Generated	**20/Nov/2019 at 10:15**
Convergence at slot	**0.23° East**	Database	**WA_HOU_Midland_Defn**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	-0.50	-49.80	**632107.00**	**505984.30**	32°23'25.220"N	103°54'19.271"W
Facility Reference Pt			**632156.80**	**505984.80**	32°23'25.223"N	103°54'18.690"W
Field Reference Pt			**152400.30**	**0.00**	30°59'42.846"N	105°26'33.659"W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Precision 598 (KB) to Facility Vertical Datum	**3126.00ft**
Horizontal Reference Pt	**Slot**	Precision 598 (KB) to Mean Sea Level	**3126.00ft**
Vertical Reference Pt	**Precision 598 (KB)**	Precision 598 (KB) to Ground Level at Slot (JRU DI 11 Whitlash 515H)	**25.00ft**
MD Reference Pt	**Precision 598 (KB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**270.03°**

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
0.00†	0.000	350.000	0.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
25.00	0.000	350.000	25.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	Tie On
125.00†	0.000	350.000	125.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
225.00†	0.000	350.000	225.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
325.00†	0.000	350.000	325.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
425.00†	0.000	350.000	425.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
525.00†	0.000	350.000	525.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
625.00†	0.000	350.000	625.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
725.00†	0.000	350.000	725.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
825.00†	0.000	350.000	825.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
925.00†	0.000	350.000	925.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1025.00†	0.000	350.000	1025.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1125.00†	0.000	350.000	1125.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1225.00†	0.000	350.000	1225.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1325.00†	0.000	350.000	1325.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1425.00†	0.000	350.000	1425.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1525.00†	0.000	350.000	1525.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1625.00†	0.000	350.000	1625.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1725.00†	0.000	350.000	1725.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1825.00†	0.000	350.000	1825.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
1925.00†	0.000	350.000	1925.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2025.00†	0.000	350.000	2025.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2125.00†	0.000	350.000	2125.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2225.00†	0.000	350.000	2225.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2325.00†	0.000	350.000	2325.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2425.00†	0.000	350.000	2425.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2525.00†	0.000	350.000	2525.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2625.00†	0.000	350.000	2625.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2725.00†	0.000	350.000	2725.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
2825.00†	0.000	350.000	2825.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
2925.00†	0.000	350.000	2925.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
3025.00†	0.000	350.000	3025.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
3125.00†	0.000	350.000	3125.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
3225.00†	0.000	350.000	3225.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
3325.00†	0.000	350.000	3325.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	
3400.00	0.000	350.000	3400.00	0.00	0.00	0.00	632107.00	505984.30	32°23'25.220"N	103°54'19.271"W	0.00	0.00	0.00	Begin Nudge
3425.00†	0.375	350.000	3425.00	0.01	0.08	-0.01	632106.99	505984.38	32°23'25.221"N	103°54'19.271"W	1.50	1.50	-40.00	
3525.00†	1.875	350.000	3524.98	0.36	2.01	-0.36	632106.64	505986.31	32°23'25.240"N	103°54'19.275"W	1.50	1.50	0.00	
3625.00†	3.375	350.000	3624.87	1.15	6.52	-1.15	632105.85	505990.82	32°23'25.284"N	103°54'19.284"W	1.50	1.50	0.00	
3725.00†	4.875	350.000	3724.61	2.41	13.61	-2.40	632104.60	505997.91	32°23'25.355"N	103°54'19.299"W	1.50	1.50	0.00	
3733.33	5.000	350.000	3732.91	2.53	14.31	-2.52	632104.48	505998.61	32°23'25.362"N	103°54'19.300"W	1.50	1.50	0.00	Hold Tangent
3825.00†	5.000	350.000	3824.23	3.92	22.18	-3.91	632103.09	506006.48	32°23'25.440"N	103°54'19.316"W	0.00	0.00	0.00	
3925.00†	5.000	350.000	3923.85	5.44	30.77	-5.42	632101.58	506015.06	32°23'25.524"N	103°54'19.333"W	0.00	0.00	0.00	
4025.00†	5.000	350.000	4023.47	6.96	39.35	-6.94	632100.06	506023.65	32°23'25.609"N	103°54'19.350"W	0.00	0.00	0.00	
4125.00†	5.000	350.000	4123.09	8.48	47.93	-8.45	632098.55	506032.23	32°23'25.694"N	103°54'19.368"W	0.00	0.00	0.00	
4225.00†	5.000	350.000	4222.71	9.99	56.51	-9.97	632097.04	506040.81	32°23'25.779"N	103°54'19.385"W	0.00	0.00	0.00	
4325.00†	5.000	350.000	4322.33	11.51	65.10	-11.48	632095.52	506049.39	32°23'25.864"N	103°54'19.402"W	0.00	0.00	0.00	
4425.00†	5.000	350.000	4421.95	13.03	73.68	-12.99	632094.01	506057.98	32°23'25.949"N	103°54'19.419"W	0.00	0.00	0.00	
4525.00†	5.000	350.000	4521.56	14.55	82.26	-14.51	632092.50	506066.56	32°23'26.034"N	103°54'19.437"W	0.00	0.00	0.00	
4625.00†	5.000	350.000	4621.18	16.07	90.85	-16.02	632090.98	506075.14	32°23'26.119"N	103°54'19.454"W	0.00	0.00	0.00	
4725.00†	5.000	350.000	4720.80	17.58	99.43	-17.53	632089.47	506083.72	32°23'26.204"N	103°54'19.471"W	0.00	0.00	0.00	
4825.00†	5.000	350.000	4820.42	19.10	108.01	-19.05	632087.96	506092.31	32°23'26.289"N	103°54'19.488"W	0.00	0.00	0.00	
4925.00†	5.000	350.000	4920.04	20.62	116.60	-20.56	632086.44	506100.89	32°23'26.374"N	103°54'19.506"W	0.00	0.00	0.00	
5025.00†	5.000	350.000	5019.66	22.14	125.18	-22.07	632084.93	506109.47	32°23'26.459"N	103°54'19.523"W	0.00	0.00	0.00	
5125.00†	5.000	350.000	5119.28	23.66	133.76	-23.59	632083.42	506118.05	32°23'26.544"N	103°54'19.540"W	0.00	0.00	0.00	
5225.00†	5.000	350.000	5218.90	25.17	142.35	-25.10	632081.90	506126.64	32°23'26.629"N	103°54'19.557"W	0.00	0.00	0.00	
5325.00†	5.000	350.000	5318.52	26.69	150.93	-26.61	632080.39	506135.22	32°23'26.714"N	103°54'19.575"W	0.00	0.00	0.00	
5425.00†	5.000	350.000	5418.14	28.21	159.51	-28.13	632078.88	506143.80	32°23'26.799"N	103°54'19.592"W	0.00	0.00	0.00	
5525.00†	5.000	350.000	5517.76	29.73	168.10	-29.64	632077.36	506152.38	32°23'26.884"N	103°54'19.609"W	0.00	0.00	0.00	
5625.00†	5.000	350.000	5617.38	31.25	176.68	-31.15	632075.85	506160.97	32°23'26.969"N	103°54'19.626"W	0.00	0.00	0.00	

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
5725.00†	5.000	350.000	5717.00	32.76	185.26	-32.67	632074.34	506169.55	32°23'27.054"N	103°54'19.644"W	0.00	0.00	0.00	
5825.00†	5.000	350.000	5816.62	34.28	193.85	-34.18	632072.82	506178.13	32°23'27.139"N	103°54'19.661"W	0.00	0.00	0.00	
5925.00†	5.000	350.000	5916.24	35.80	202.43	-35.69	632071.31	506186.71	32°23'27.224"N	103°54'19.678"W	0.00	0.00	0.00	
6021.13	5.000	350.000	6012.00	37.26	210.68	-37.15	632069.85	506194.96	32°23'27.306"N	103°54'19.695"W	0.00	0.00	0.00	Begin Drop
6025.00†	4.942	350.000	6015.86	37.32	211.01	-37.21	632069.80	506195.29	32°23'27.309"N	103°54'19.695"W	1.50	-1.50	0.00	
6125.00†	3.442	350.000	6115.59	38.59	218.21	-38.48	632068.53	506202.49	32°23'27.381"N	103°54'19.710"W	1.50	-1.50	0.00	
6225.00†	1.942	350.000	6215.47	39.41	222.83	-39.29	632067.71	506207.12	32°23'27.426"N	103°54'19.719"W	1.50	-1.50	0.00	
6325.00†	0.442	350.000	6315.45	39.77	224.88	-39.65	632067.35	506209.17	32°23'27.447"N	103°54'19.723"W	1.50	-1.50	0.00	
6354.46	0.000	235.450	6344.91	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	1.50	-1.50	33.94	Hold Vertical
6425.00†	0.000	235.450	6415.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
6525.00†	0.000	235.450	6515.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
6625.00†	0.000	235.450	6615.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
6725.00†	0.000	235.450	6715.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
6825.00†	0.000	235.450	6815.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
6925.00†	0.000	235.450	6915.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7025.00†	0.000	235.450	7015.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7125.00†	0.000	235.450	7115.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7225.00†	0.000	235.450	7215.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7325.00†	0.000	235.450	7315.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7425.00†	0.000	235.450	7415.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7525.00†	0.000	235.450	7515.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7625.00†	0.000	235.450	7615.45	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	
7683.15	0.000	235.450	7673.60	39.79	224.99	-39.67	632067.33	506209.28	32°23'27.448"N	103°54'19.723"W	0.00	0.00	0.00	Curve KOP
7725.00†	4.185	235.450	7715.41	41.05	224.13	-40.93	632066.07	506208.41	32°23'27.439"N	103°54'19.738"W	10.00	10.00	-297.62	
7825.00†	14.185	235.450	7814.00	54.17	215.09	-54.06	632052.94	506199.37	32°23'27.350"N	103°54'19.892"W	10.00	10.00	0.00	
7925.00†	24.185	235.450	7908.33	81.20	196.47	-81.09	632025.91	506180.76	32°23'27.167"N	103°54'20.208"W	10.00	10.00	0.00	
8025.00†	34.185	235.450	7995.52	121.29	168.85	-121.20	631985.80	506153.14	32°23'26.895"N	103°54'20.677"W	10.00	10.00	0.00	
8125.00†	44.185	235.450	8072.94	173.25	133.07	-173.18	631933.84	506117.36	32°23'26.543"N	103°54'21.285"W	10.00	10.00	0.00	
8183.15	50.000	235.450	8112.51	208.30	108.92	-208.24	631898.77	506093.21	32°23'26.306"N	103°54'21.695"W	10.00	10.00	0.00	Build / Turn
8225.00†	52.955	239.240	8138.58	235.86	91.28	-235.81	631871.21	506075.58	32°23'26.132"N	103°54'22.017"W	10.00	7.06	9.06	

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
8325.00†	60.430	247.202	8193.51	310.41	53.93	-310.38	631796.64	506038.22	32°23'25.766"N	103°54'22.888"W	10.00	7.48	7.96	
8425.00†	68.314	254.036	8236.78	395.37	24.22	-395.36	631711.67	506008.52	32°23'25.475"N	103°54'23.881"W	10.00	7.88	6.83	
8525.00†	76.447	260.146	8267.05	488.15	3.07	-488.15	631618.88	505987.37	32°23'25.270"N	103°54'24.964"W	10.00	8.13	6.11	
8625.00†	84.719	265.848	8283.41	585.94	-8.88	-585.95	631521.09	505975.42	32°23'25.155"N	103°54'26.105"W	10.00	8.27	5.70	
8700.34	90.989	270.030	8286.23	661.13	-11.58	-661.13	631445.91	505972.72	32°23'25.131"N	103°54'26.982"W	10.00	8.32	5.55	Land 9 FFTP
8725.00†	90.989	270.030	8285.80	685.78	-11.57	-685.79	631421.26	505972.73	32°23'25.132"N	103°54'27.269"W	0.00	0.00	0.00	
8825.00†	90.989	270.030	8284.07	785.77	-11.52	-785.77	631321.28	505972.78	32°23'25.137"N	103°54'28.435"W	0.00	0.00	0.00	
8925.00†	90.989	270.030	8282.35	885.75	-11.47	-885.76	631221.31	505972.83	32°23'25.141"N	103°54'29.601"W	0.00	0.00	0.00	
9025.00†	90.989	270.030	8280.62	985.74	-11.41	-985.74	631121.33	505972.89	32°23'25.146"N	103°54'30.767"W	0.00	0.00	0.00	
9125.00†	90.989	270.030	8278.89	1085.72	-11.36	-1085.73	631021.35	505972.94	32°23'25.150"N	103°54'31.933"W	0.00	0.00	0.00	
9225.00†	90.989	270.030	8277.17	1185.71	-11.31	-1185.71	630921.37	505972.99	32°23'25.155"N	103°54'33.099"W	0.00	0.00	0.00	
9325.00†	90.989	270.030	8275.44	1285.69	-11.26	-1285.70	630821.39	505973.04	32°23'25.159"N	103°54'34.265"W	0.00	0.00	0.00	
9425.00†	90.989	270.030	8273.72	1385.68	-11.21	-1385.68	630721.42	505973.09	32°23'25.164"N	103°54'35.431"W	0.00	0.00	0.00	
9525.00†	90.989	270.030	8271.99	1485.66	-11.15	-1485.67	630621.44	505973.15	32°23'25.168"N	103°54'36.597"W	0.00	0.00	0.00	
9625.00†	90.989	270.030	8270.26	1585.65	-11.10	-1585.66	630521.46	505973.20	32°23'25.172"N	103°54'37.763"W	0.00	0.00	0.00	
9725.00†	90.989	270.030	8268.54	1685.63	-11.05	-1685.64	630421.48	505973.25	32°23'25.177"N	103°54'38.929"W	0.00	0.00	0.00	
9825.00†	90.989	270.030	8266.81	1785.62	-11.00	-1785.63	630321.50	505973.30	32°23'25.181"N	103°54'40.095"W	0.00	0.00	0.00	
9925.00†	90.989	270.030	8265.08	1885.60	-10.95	-1885.61	630221.53	505973.35	32°23'25.186"N	103°54'41.261"W	0.00	0.00	0.00	
10025.00†	90.989	270.030	8263.36	1985.59	-10.89	-1985.60	630121.55	505973.41	32°23'25.190"N	103°54'42.427"W	0.00	0.00	0.00	
10125.00†	90.989	270.030	8261.63	2085.57	-10.84	-2085.58	630021.57	505973.46	32°23'25.194"N	103°54'43.593"W	0.00	0.00	0.00	
10225.00†	90.989	270.030	8259.90	2185.56	-10.79	-2185.57	629921.59	505973.51	32°23'25.199"N	103°54'44.759"W	0.00	0.00	0.00	
10325.00†	90.989	270.030	8258.18	2285.54	-10.74	-2285.55	629821.62	505973.56	32°23'25.203"N	103°54'45.925"W	0.00	0.00	0.00	
10425.00†	90.989	270.030	8256.45	2385.53	-10.69	-2385.54	629721.64	505973.61	32°23'25.208"N	103°54'47.091"W	0.00	0.00	0.00	
10525.00†	90.989	270.030	8254.72	2485.51	-10.63	-2485.52	629621.66	505973.67	32°23'25.212"N	103°54'48.257"W	0.00	0.00	0.00	
10625.00†	90.989	270.030	8253.00	2585.50	-10.58	-2585.51	629521.68	505973.72	32°23'25.217"N	103°54'49.423"W	0.00	0.00	0.00	
10725.00†	90.989	270.030	8251.27	2685.49	-10.53	-2685.49	629421.70	505973.77	32°23'25.221"N	103°54'50.589"W	0.00	0.00	0.00	
10825.00†	90.989	270.030	8249.54	2785.47	-10.48	-2785.48	629321.73	505973.82	32°23'25.225"N	103°54'51.755"W	0.00	0.00	0.00	
10925.00†	90.989	270.030	8247.82	2885.46	-10.43	-2885.46	629221.75	505973.87	32°23'25.230"N	103°54'52.921"W	0.00	0.00	0.00	
11025.00†	90.989	270.030	8246.09	2985.44	-10.37	-2985.45	629121.77	505973.93	32°23'25.234"N	103°54'54.087"W	0.00	0.00	0.00	
11125.00†	90.989	270.030	8244.37	3085.43	-10.32	-3085.43	629021.79	505973.98	32°23'25.238"N	103°54'55.253"W	0.00	0.00	0.00	

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
11225.00†	90.989	270.030	8242.64	3185.41	-10.27	-3185.42	628921.82	505974.03	32°23'25.243"N	103°54'56.419"W	0.00	0.00	0.00	
11325.00†	90.989	270.030	8240.91	3285.40	-10.22	-3285.40	628821.84	505974.08	32°23'25.247"N	103°54'57.585"W	0.00	0.00	0.00	
11425.00†	90.989	270.030	8239.19	3385.38	-10.17	-3385.39	628721.86	505974.13	32°23'25.252"N	103°54'58.751"W	0.00	0.00	0.00	
11525.00†	90.989	270.030	8237.46	3485.37	-10.11	-3485.37	628621.88	505974.19	32°23'25.256"N	103°54'59.917"W	0.00	0.00	0.00	
11625.00†	90.989	270.030	8235.73	3585.35	-10.06	-3585.36	628521.90	505974.24	32°23'25.260"N	103°55'01.083"W	0.00	0.00	0.00	
11725.00†	90.989	270.030	8234.01	3685.34	-10.01	-3685.34	628421.93	505974.29	32°23'25.265"N	103°55'02.249"W	0.00	0.00	0.00	
11825.00†	90.989	270.030	8232.28	3785.32	-9.96	-3785.33	628321.95	505974.34	32°23'25.269"N	103°55'03.415"W	0.00	0.00	0.00	
11925.00†	90.989	270.030	8230.55	3885.31	-9.91	-3885.31	628221.97	505974.39	32°23'25.273"N	103°55'04.581"W	0.00	0.00	0.00	
12025.00†	90.989	270.030	8228.83	3985.29	-9.85	-3985.30	628121.99	505974.45	32°23'25.278"N	103°55'05.747"W	0.00	0.00	0.00	
12125.00†	90.989	270.030	8227.10	4085.28	-9.80	-4085.28	628022.02	505974.50	32°23'25.282"N	103°55'06.913"W	0.00	0.00	0.00	
12225.00†	90.989	270.030	8225.37	4185.26	-9.75	-4185.27	627922.04	505974.55	32°23'25.286"N	103°55'08.079"W	0.00	0.00	0.00	
12325.00†	90.989	270.030	8223.65	4285.25	-9.70	-4285.25	627822.06	505974.60	32°23'25.291"N	103°55'09.245"W	0.00	0.00	0.00	
12425.00†	90.989	270.030	8221.92	4385.23	-9.65	-4385.24	627722.08	505974.65	32°23'25.295"N	103°55'10.411"W	0.00	0.00	0.00	
12525.00†	90.989	270.030	8220.19	4485.22	-9.59	-4485.22	627622.10	505974.71	32°23'25.299"N	103°55'11.577"W	0.00	0.00	0.00	
12625.00†	90.989	270.030	8218.47	4585.20	-9.54	-4585.21	627522.13	505974.76	32°23'25.304"N	103°55'12.743"W	0.00	0.00	0.00	
12725.00†	90.989	270.030	8216.74	4685.19	-9.49	-4685.19	627422.15	505974.81	32°23'25.308"N	103°55'13.909"W	0.00	0.00	0.00	
12825.00†	90.989	270.030	8215.01	4785.17	-9.44	-4785.18	627322.17	505974.86	32°23'25.312"N	103°55'15.075"W	0.00	0.00	0.00	
12925.00†	90.989	270.030	8213.29	4885.16	-9.39	-4885.16	627222.19	505974.91	32°23'25.317"N	103°55'16.241"W	0.00	0.00	0.00	
13025.00†	90.989	270.030	8211.56	4985.14	-9.33	-4985.15	627122.22	505974.97	32°23'25.321"N	103°55'17.407"W	0.00	0.00	0.00	
13125.00†	90.989	270.030	8209.84	5085.13	-9.28	-5085.13	627022.24	505975.02	32°23'25.325"N	103°55'18.573"W	0.00	0.00	0.00	
13225.00†	90.989	270.030	8208.11	5185.11	-9.23	-5185.12	626922.26	505975.07	32°23'25.330"N	103°55'19.739"W	0.00	0.00	0.00	
13325.00†	90.989	270.030	8206.38	5285.10	-9.18	-5285.10	626822.28	505975.12	32°23'25.334"N	103°55'20.905"W	0.00	0.00	0.00	
13425.00†	90.989	270.030	8204.66	5385.08	-9.13	-5385.09	626722.30	505975.17	32°23'25.338"N	103°55'22.071"W	0.00	0.00	0.00	
13525.00†	90.989	270.030	8202.93	5485.07	-9.07	-5485.07	626622.33	505975.23	32°23'25.343"N	103°55'23.237"W	0.00	0.00	0.00	
13625.00†	90.989	270.030	8201.20	5585.05	-9.02	-5585.06	626522.35	505975.28	32°23'25.347"N	103°55'24.403"W	0.00	0.00	0.00	
13725.00†	90.989	270.030	8199.48	5685.04	-8.97	-5685.04	626422.37	505975.33	32°23'25.351"N	103°55'25.569"W	0.00	0.00	0.00	
13825.00†	90.989	270.030	8197.75	5785.02	-8.92	-5785.03	626322.39	505975.38	32°23'25.356"N	103°55'26.734"W	0.00	0.00	0.00	
13925.00†	90.989	270.030	8196.02	5885.01	-8.87	-5885.01	626222.42	505975.43	32°23'25.360"N	103°55'27.900"W	0.00	0.00	0.00	
14025.00†	90.989	270.030	8194.30	5984.99	-8.81	-5985.00	626122.44	505975.49	32°23'25.364"N	103°55'29.066"W	0.00	0.00	0.00	
14125.00†	90.989	270.030	8192.57	6084.98	-8.76	-6084.98	626022.46	505975.54	32°23'25.369"N	103°55'30.232"W	0.00	0.00	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
14225.00†	90.989	270.030	8190.84	6184.96	-8.71	-6184.97	625922.48	505975.59	32°23'25.373"N	103°55'31.398"W	0.00	0.00	0.00	
14325.00†	90.989	270.030	8189.12	6284.95	-8.66	-6284.95	625822.50	505975.64	32°23'25.377"N	103°55'32.564"W	0.00	0.00	0.00	
14425.00†	90.989	270.030	8187.39	6384.93	-8.61	-6384.94	625722.53	505975.69	32°23'25.381"N	103°55'33.730"W	0.00	0.00	0.00	
14525.00†	90.989	270.030	8185.66	6484.92	-8.55	-6484.92	625622.55	505975.75	32°23'25.386"N	103°55'34.896"W	0.00	0.00	0.00	
14625.00†	90.989	270.030	8183.94	6584.90	-8.50	-6584.91	625522.57	505975.80	32°23'25.390"N	103°55'36.062"W	0.00	0.00	0.00	
14725.00†	90.989	270.030	8182.21	6684.89	-8.45	-6684.89	625422.59	505975.85	32°23'25.394"N	103°55'37.228"W	0.00	0.00	0.00	
14825.00†	90.989	270.030	8180.49	6784.87	-8.40	-6784.88	625322.62	505975.90	32°23'25.399"N	103°55'38.394"W	0.00	0.00	0.00	
14925.00†	90.989	270.030	8178.76	6884.86	-8.35	-6884.86	625222.64	505975.95	32°23'25.403"N	103°55'39.560"W	0.00	0.00	0.00	
15025.00†	90.989	270.030	8177.03	6984.84	-8.29	-6984.85	625122.66	505976.01	32°23'25.407"N	103°55'40.726"W	0.00	0.00	0.00	
15125.00†	90.989	270.030	8175.31	7084.83	-8.24	-7084.83	625022.68	505976.06	32°23'25.411"N	103°55'41.892"W	0.00	0.00	0.00	
15225.00†	90.989	270.030	8173.58	7184.81	-8.19	-7184.82	624922.70	505976.11	32°23'25.416"N	103°55'43.058"W	0.00	0.00	0.00	
15325.00†	90.989	270.030	8171.85	7284.80	-8.14	-7284.80	624822.73	505976.16	32°23'25.420"N	103°55'44.224"W	0.00	0.00	0.00	
15425.00†	90.989	270.030	8170.13	7384.78	-8.09	-7384.79	624722.75	505976.21	32°23'25.424"N	103°55'45.390"W	0.00	0.00	0.00	
15525.00†	90.989	270.030	8168.40	7484.77	-8.03	-7484.77	624622.77	505976.27	32°23'25.428"N	103°55'46.556"W	0.00	0.00	0.00	
15625.00†	90.989	270.030	8166.67	7584.75	-7.98	-7584.76	624522.79	505976.32	32°23'25.433"N	103°55'47.722"W	0.00	0.00	0.00	
15725.00†	90.989	270.030	8164.95	7684.74	-7.93	-7684.75	624422.82	505976.37	32°23'25.437"N	103°55'48.888"W	0.00	0.00	0.00	
15825.00†	90.989	270.030	8163.22	7784.72	-7.88	-7784.73	624322.84	505976.42	32°23'25.441"N	103°55'50.054"W	0.00	0.00	0.00	
15925.00†	90.989	270.030	8161.49	7884.71	-7.83	-7884.72	624222.86	505976.47	32°23'25.445"N	103°55'51.220"W	0.00	0.00	0.00	
16025.00†	90.989	270.030	8159.77	7984.70	-7.77	-7984.70	624122.88	505976.53	32°23'25.450"N	103°55'52.386"W	0.00	0.00	0.00	
16125.00†	90.989	270.030	8158.04	8084.68	-7.72	-8084.69	624022.90	505976.58	32°23'25.454"N	103°55'53.552"W	0.00	0.00	0.00	
16225.00†	90.989	270.030	8156.31	8184.67	-7.67	-8184.67	623922.93	505976.63	32°23'25.458"N	103°55'54.718"W	0.00	0.00	0.00	
16325.00†	90.989	270.030	8154.59	8284.65	-7.62	-8284.66	623822.95	505976.68	32°23'25.462"N	103°55'55.884"W	0.00	0.00	0.00	
16425.00†	90.989	270.030	8152.86	8384.64	-7.57	-8384.64	623722.97	505976.73	32°23'25.466"N	103°55'57.050"W	0.00	0.00	0.00	
16525.00†	90.989	270.030	8151.13	8484.62	-7.51	-8484.63	623622.99	505976.79	32°23'25.471"N	103°55'58.216"W	0.00	0.00	0.00	
16625.00†	90.989	270.030	8149.41	8584.61	-7.46	-8584.61	623523.02	505976.84	32°23'25.475"N	103°55'59.382"W	0.00	0.00	0.00	
16725.00†	90.989	270.030	8147.68	8684.59	-7.41	-8684.60	623423.04	505976.89	32°23'25.479"N	103°56'00.548"W	0.00	0.00	0.00	
16825.00†	90.989	270.030	8145.96	8784.58	-7.36	-8784.58	623323.06	505976.94	32°23'25.483"N	103°56'01.714"W	0.00	0.00	0.00	
16925.00†	90.989	270.030	8144.23	8884.56	-7.31	-8884.57	623223.08	505977.00	32°23'25.488"N	103°56'02.880"W	0.00	0.00	0.00	
17025.00†	90.989	270.030	8142.50	8984.55	-7.25	-8984.55	623123.10	505977.05	32°23'25.492"N	103°56'04.046"W	0.00	0.00	0.00	
17125.00†	90.989	270.030	8140.78	9084.53	-7.20	-9084.54	623023.13	505977.10	32°23'25.496"N	103°56'05.212"W	0.00	0.00	0.00	

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
17225.00†	90.989	270.030	8139.05	9184.52	-7.15	-9184.52	622923.15	505977.15	32°23'25.500"N	103°56'06.378"W	0.00	0.00	0.00	
17325.00†	90.989	270.030	8137.32	9284.50	-7.10	-9284.51	622823.17	505977.20	32°23'25.504"N	103°56'07.544"W	0.00	0.00	0.00	
17425.00†	90.989	270.030	8135.60	9384.49	-7.05	-9384.49	622723.19	505977.26	32°23'25.509"N	103°56'08.710"W	0.00	0.00	0.00	
17525.00†	90.989	270.030	8133.87	9484.47	-6.99	-9484.48	622623.21	505977.31	32°23'25.513"N	103°56'09.876"W	0.00	0.00	0.00	
17625.00†	90.989	270.030	8132.14	9584.46	-6.94	-9584.46	622523.24	505977.36	32°23'25.517"N	103°56'11.042"W	0.00	0.00	0.00	
17725.00†	90.989	270.030	8130.42	9684.44	-6.89	-9684.45	622423.26	505977.41	32°23'25.521"N	103°56'12.208"W	0.00	0.00	0.00	
17825.00†	90.989	270.030	8128.69	9784.43	-6.84	-9784.43	622323.28	505977.46	32°23'25.525"N	103°56'13.374"W	0.00	0.00	0.00	
17925.00†	90.989	270.030	8126.96	9884.41	-6.79	-9884.42	622223.30	505977.52	32°23'25.529"N	103°56'14.540"W	0.00	0.00	0.00	
18025.00†	90.989	270.030	8125.24	9984.40	-6.73	-9984.40	622123.33	505977.57	32°23'25.534"N	103°56'15.706"W	0.00	0.00	0.00	
18125.00†	90.989	270.030	8123.51	10084.38	-6.68	-10084.39	622023.35	505977.62	32°23'25.538"N	103°56'16.872"W	0.00	0.00	0.00	
18225.00†	90.989	270.030	8121.78	10184.37	-6.63	-10184.37	621923.37	505977.67	32°23'25.542"N	103°56'18.038"W	0.00	0.00	0.00	
18325.00†	90.989	270.030	8120.06	10284.35	-6.58	-10284.36	621823.39	505977.72	32°23'25.546"N	103°56'19.204"W	0.00	0.00	0.00	
18425.00†	90.989	270.030	8118.33	10384.34	-6.53	-10384.34	621723.41	505977.78	32°23'25.550"N	103°56'20.370"W	0.00	0.00	0.00	
18525.00†	90.989	270.030	8116.61	10484.32	-6.47	-10484.33	621623.44	505977.83	32°23'25.554"N	103°56'21.536"W	0.00	0.00	0.00	
18625.00†	90.989	270.030	8114.88	10584.31	-6.42	-10584.31	621523.46	505977.88	32°23'25.559"N	103°56'22.702"W	0.00	0.00	0.00	
18725.00†	90.989	270.030	8113.15	10684.29	-6.37	-10684.30	621423.48	505977.93	32°23'25.563"N	103°56'23.868"W	0.00	0.00	0.00	
18825.00†	90.989	270.030	8111.43	10784.28	-6.32	-10784.28	621323.50	505977.98	32°23'25.567"N	103°56'25.034"W	0.00	0.00	0.00	
18925.00†	90.989	270.030	8109.70	10884.26	-6.27	-10884.27	621223.53	505978.04	32°23'25.571"N	103°56'26.200"W	0.00	0.00	0.00	
19025.00†	90.989	270.030	8107.97	10984.25	-6.21	-10984.25	621123.55	505978.09	32°23'25.575"N	103°56'27.366"W	0.00	0.00	0.00	
19125.00†	90.989	270.030	8106.25	11084.23	-6.16	-11084.24	621023.57	505978.14	32°23'25.579"N	103°56'28.532"W	0.00	0.00	0.00	
19225.00†	90.989	270.030	8104.52	11184.22	-6.11	-11184.22	620923.59	505978.19	32°23'25.584"N	103°56'29.698"W	0.00	0.00	0.00	
19325.00†	90.989	270.030	8102.79	11284.20	-6.06	-11284.21	620823.61	505978.24	32°23'25.588"N	103°56'30.864"W	0.00	0.00	0.00	
19425.00†	90.989	270.030	8101.07	11384.19	-6.01	-11384.19	620723.64	505978.30	32°23'25.592"N	103°56'32.030"W	0.00	0.00	0.00	
19525.00†	90.989	270.030	8099.34	11484.17	-5.95	-11484.18	620623.66	505978.35	32°23'25.596"N	103°56'33.196"W	0.00	0.00	0.00	
19625.00†	90.989	270.030	8097.61	11584.16	-5.90	-11584.16	620523.68	505978.40	32°23'25.600"N	103°56'34.362"W	0.00	0.00	0.00	
19725.00†	90.989	270.030	8095.89	11684.14	-5.85	-11684.15	620423.70	505978.45	32°23'25.604"N	103°56'35.528"W	0.00	0.00	0.00	
19825.00†	90.989	270.030	8094.16	11784.13	-5.80	-11784.13	620323.73	505978.50	32°23'25.608"N	103°56'36.694"W	0.00	0.00	0.00	
19925.00†	90.989	270.030	8092.43	11884.11	-5.74	-11884.12	620223.75	505978.56	32°23'25.612"N	103°56'37.860"W	0.00	0.00	0.00	
20025.00†	90.989	270.030	8090.71	11984.10	-5.69	-11984.10	620123.77	505978.61	32°23'25.617"N	103°56'39.026"W	0.00	0.00	0.00	
20125.00†	90.989	270.030	8088.98	12084.08	-5.64	-12084.09	620023.79	505978.66	32°23'25.621"N	103°56'40.192"W	0.00	0.00	0.00	

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

WELLPATH DATA (215 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
20225.00†	90.989	270.030	8087.25	12184.07	-5.59	-12184.07	619923.81	505978.71	32°23'25.625"N	103°56'41.358"W	0.00	0.00	0.00	
20325.00†	90.989	270.030	8085.53	12284.05	-5.54	-12284.06	619823.84	505978.76	32°23'25.629"N	103°56'42.524"W	0.00	0.00	0.00	
20425.00†	90.989	270.030	8083.80	12384.04	-5.48	-12384.04	619723.86	505978.82	32°23'25.633"N	103°56'43.690"W	0.00	0.00	0.00	
20525.00†	90.989	270.030	8082.08	12484.02	-5.43	-12484.03	619623.88	505978.87	32°23'25.637"N	103°56'44.856"W	0.00	0.00	0.00	
20587.30	90.989	270.030	8081.00	12546.31	-5.40	-12546.31	619561.60	505978.90	32°23'25.640"N	103°56'45.582"W	0.00	0.00	0.00	PBHL

HOLE & CASING SECTIONS - Ref Wellbore: JRU DI 11 Whitlash 515H PWB Ref Wellpath: JRU DI 11 Whitlash 515H Rev-A.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing	25.00	4001.44	3976.44	25.00	4000.00	0.00	0.00	37.33	-6.58
5.5in Casing	25.00	20587.30	20562.30	25.00	8081.00	0.00	0.00	-5.40	-12546.31

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
JRU DI 11 Whitlash 515H LTP		8081.00	-5.50	-12496.31	**619611.60**	**505978.80**	32°23'25.637"N	103°56'44.999"W	point
1) JRU DI 11 Whitlash 515H PBHL	20587.30	8081.00	-5.40	-12546.31	**619561.60**	**505978.90**	32°23'25.640"N	103°56'45.582"W	rectangle
JRU DI 11 Whitlash 515H FTP		8286.00	-11.70	-670.05	**631437.00**	**505972.60**	32°23'25.131"N	103°54'27.086"W	point

Planned Wellpath Report

JRU DI 11 Whitlash 515H Rev-A.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO Energy Inc.	Slot	JRU DI 11 Whitlash 515H
Area	Eddy County, NM	Well	JRU DI 11 Whitlash 515H
Field	Wolfcamp (Eddy Co., NM)	Wellbore	JRU DI 11 Whitlash 515H PWB
Facility	JRU DI 11 Whitlash A		

SURVEY PROGRAM - Ref Wellbore: JRU DI 11 Whitlash 515H PWB Ref Wellpath: JRU DI 11 Whitlash 515H Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	7700.00	ISCWSA MWD, Rev. 4 (Standard)		JRU DI 11 Whitlash 515H PWB
7700.00	21405.53	OWSG MWD rev2 + IFR1 + Multi-Station Correction		JRU DI 11 Whitlash 515H PWB

PECOS DISTRICT DRILLING
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**XTO Permian Operating, LLC**
LEASE NO.:	**NMNM-0554239**
WELL NAME & NO.:	**JRU DI 11 Whitlash 515H**
SURFACE HOLE FOOTAGE:	**1990' FSL & 1990' FWL**
BOTTOM HOLE FOOTAGE	**1980' FSL & 0050' FWL Sec. 13, T. 22 S., R 29 E.**
LOCATION:	**Section 17, T. 22 S., R 30 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

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 (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S 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.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Potash Areas:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

R-111-P-Potash
High Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Red Beds, Rustler, and Delaware.
Abnormal pressure may be encountered within the 3rd Bone Spring Sand and all subsequent formations.

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 **600** 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. Excess calculates to 3% - Additional cement may be required.**

    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.

2. The minimum required fill of cement behind the **13-3/8** inch 1st 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.**

3. The minimum required fill of cement behind the **9-5/8** inch 2nd intermediate casing is:

Operator has proposed DV tool at depth of 3250', 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 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 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 should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

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).

   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

3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8'' 1st intermeidate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8'' 1st intermeidate 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 8-5/8" casing integrity tests 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.**

4. 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.

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