

Well Name: BIG EDDY UNIT DI BB JABBA	Well Location: T20S / R32E / SEC 22 / SWSW / 32.5522 / -103.76058	County or Parish/State: LEA / NM
Well Number: 104H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMLC065750A, NMNM33955	Unit or CA Name: BIG EDDY	Unit or CA Number: NMNM68294X
US Well Number: 3002547270	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Sundry ID: 2682661

Type of Submission: Notice of Intent **Type of Action:** Other

Date Sundry Submitted: 07/19/2022 **Time Sundry Submitted:** 05:16

Date proposed operation will begin: 08/10/2022

Procedure Description: **Surface Location Move, Casing/Cement, Drilling Variance Changes XTO Permian Operating, LLC requests permission to make the following changes to the original APD: No Additional Surface Disturbance Change SHL fr/270'FSL & 915'FWL to 290'FSL & 640'FWL. Well Stays in the Same Quarter-Quarter as Permitted Total SHL Move: 20'North & 275'East SHL change requested to optimize well pad layout, drilling efficiencies, and for safety purposes. Casing/Cement design per the attached drilling program. Attachments: C102 Drilling Program Directional Plan Multibowl Diagram

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Jabba_104H_Attachments_20220719051551.pdf

Received by OCD: 9/6/2022 11:49:22 AM

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Conditions of Approval

Additional

Sec_22_20S_32E_NMP_2682661_Big_Eddy_Unit_DI_BB_Jabba_104H_Lea_NMNM033955_XTO_COAs_20220831132034.pdf

Sec_22_20S_32E_NMP_2682661_Big_Eddy_Unit_DI_BB_Jabba_104H_Lea_NMNM033955_XTO_13_22_44804_Allison_Morency_20220831132034.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: STEPHANIE RABADUE	Signed on: JUL 19, 2022 05:15 AM
Name: XTO PERMIAN OPERATING LLC	
Title: Regulatory Coordinator	
Street Address: 500 W. Illinois St, Ste 100	
City: Midland	State: TX
Phone: (432) 620-6714	
Email address: STEPHANIE.RABADUE@EXXONMOBIL.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: cwalls@blm.gov
Disposition: Approved	Disposition Date: 09/02/2022
Signature: Chris Walls	

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 30-025-47270	² Pool Code 53560	³ Pool Name Salt Lake; Bone Spring
⁴ Property Code 328261	⁵ Property Name Big Eddy Unit DI BB Jabba	⁶ Well Number 104H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC.	⁹ Elevation 3,529'

¹⁰ Surface Location

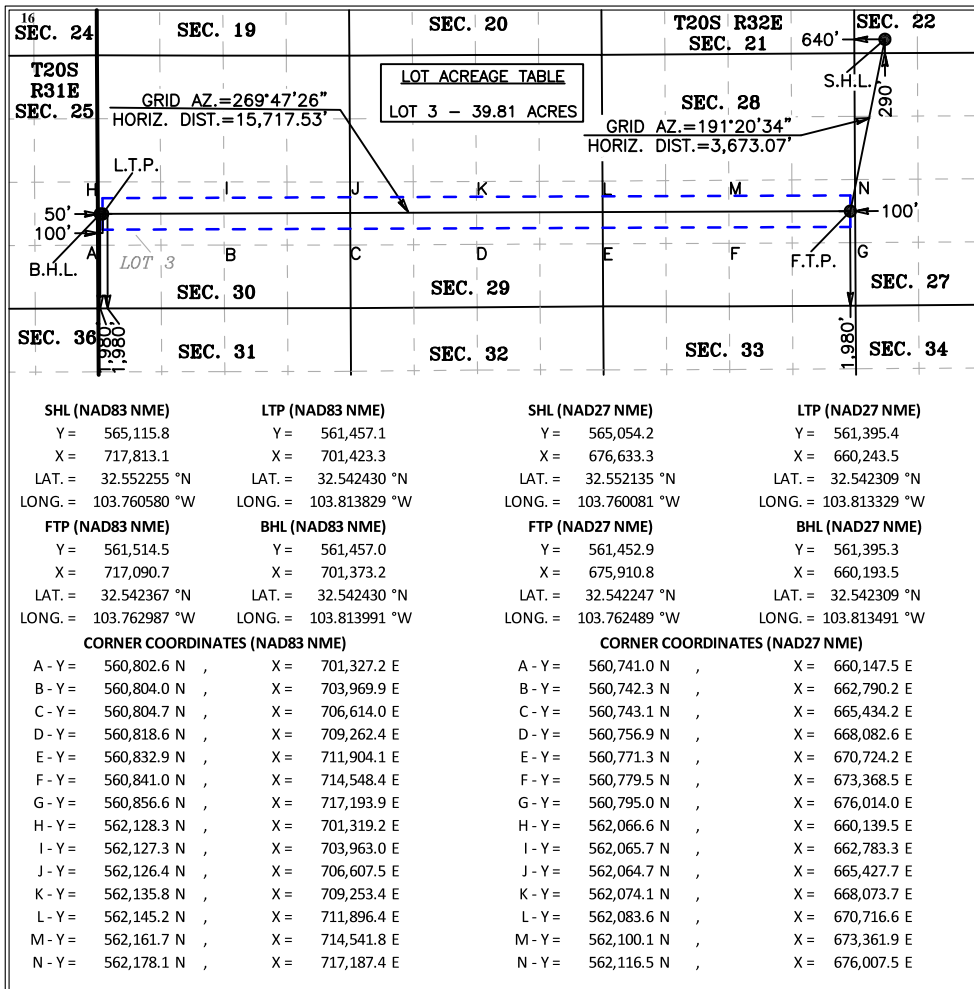
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	22	20 S	32 E		290	SOUTH	640	WEST	LEA

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
3	30	20 S	32 E		1,980	SOUTH	50	WEST	LEA

¹² Dedicated Acres 479.81	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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.

Stephanie Rabadue 05/15/2022

Signature Date

Stephanie Rabadue

Printed Name

stephanie.rabadue@exxonmobil.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.

3-9-2022

Date of Survey

Signature and Seal of Professional Surveyor:

[Signature]

MARK DILLON HARP 23786

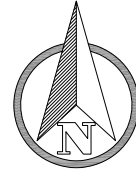
Certificate Number



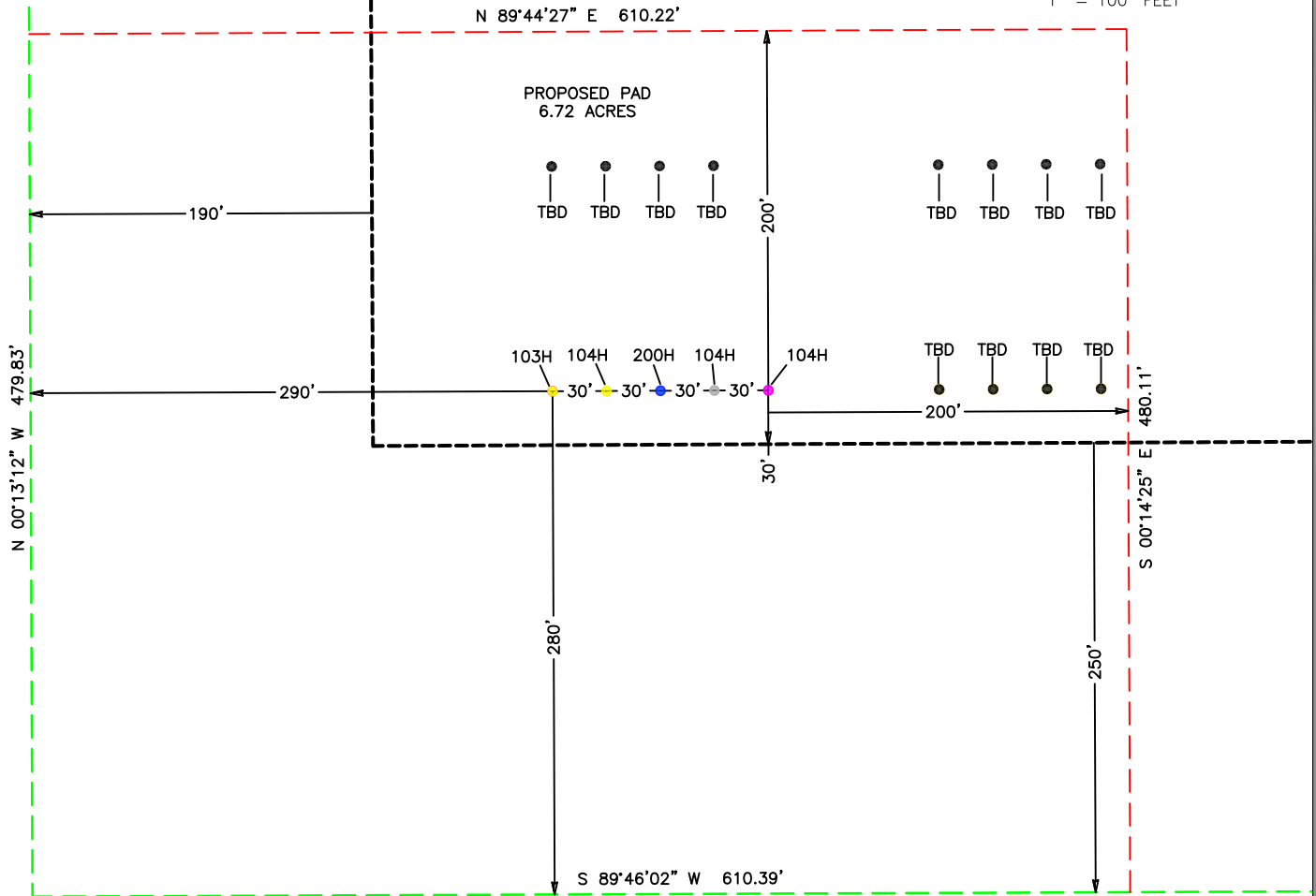
AW

2019061807

SECTION 22
TOWNSHIP 20 SOUTH, RANGE 32 EAST
NEW MEXICO PRIME MERIDIAN
OWNER: U.S.A.
SW/4 SW/4



0 50' 100'
1" = 100 FEET



NOTE:

- 1). SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR PROPOSED ROAD LOCATION

DIRECTIONS TO THIS LOCATION:

FROM THE INTERSECTION OF HOBBS HIGHWAY (U.S. HWY 62) AND N.M. 243 HEAD SOUTHWEST ON HOBBS HIGHWAY. GO APPROX. 1.5 MILES AND TURN RIGHT (NORTHWEST) ON A GRAVEL RD. GO APPROX. 0.9 MILES, THE LOCATION IS TO THE NORTH.

LEGEND

- PROPOSED PAD
--- PROPOSED DRILLING ISLAND
--- PROPOSED PAD FALL OFF
--- SECTION LINE

WELL NAMES

- JABBA
● EMPIRE
● GRIEVOUS
● HUX
● FUTURE WELL

I, MARK DILLON HARP, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23786, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

MARK DILLON HARP
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF NEW MEXICO NO. 23786



XTO PERMIAN OPERATING, LLC.

PAD LAYOUT

BIG EDDY UNIT BB PROPOSED PAD
LOCATED 625 FEET FROM THE WEST LINE
AND 250 FEET FROM THE SOUTH LINE OF
SECTION 22, TOWNSHIP 20 SOUTH, RANGE 32
EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO



FSC INC
SURVEYORS+ENGINEERS

550 Bailey Ave., 205 - Fort Worth, TX 76107
Ph: 817.349.9800 - Fax: 979.732.5271
TBPE Firm 17957 | TBPLS Firm 10193887
www.fscinc.net

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DATE:	07-05-2022	PROJECT NO:	2017111944
DRAWN BY:	LM	SCALE:	1" = 100'
CHECKED BY:	DH	SHEET:	1 OF 1
FIELD CREW:	RE	REVISION:	0

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

XTO Energy Inc.
Big Eddy Unit Blue Bird Jabba 104H
Projected TD: 26873' MD / 9805' TVD
SHL: 290' FSL & 640' FWL , Section 22, T20S, R32E
BHL: 1980' FSL & 50' FWL , Section 30, T20S, R32E
Lea 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	966'	Water
Top of Salt	1338'	Water
Base of Salt	2669'	Water
Capitan Reef	3003'	Water
Delaware	4985'	Water
Brushy Canyon	6126'	Water/Oil/Gas
Bone Spring	7732'	Water
1st Bone Spring Ss	8812'	Water/Oil/Gas
2nd Bone Spring Ss	9451'	Water/Oil/Gas
Target/Land Curve	9805'	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 18.625 inch casing @ 1066' (272' above the salt) and circulating cement back to surface. The salt will be isolated by setting 13.375 inch casing at 2769' and circulating cement to surface. The second intermediate will isolate the Capitan Reef from the salt down to the next casing seat by setting 9.625 inch casing at 5035' and cemented to surface. A 8.5 inch curve and 8.5 inch lateral hole will be drilled to 26873 MD/TD and 5.5 inch production casing will be set at TD and cemented back up to 2nd intermediate (estimated TOC 2928 feet; >50' above the Capitan Reef) per Potash regulations.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
24	0' – 1066'	18.625	87.5	J-55	BTC	New	2.71	1.31	14.25
17.5	0' – 2769'	13.375	54.5	J-55	BTC	New	2.19	1.34	5.65
12.25	0' – 2869'	9.625	40	HC P-110	BTC	New	2.94	3.15	6.26
12.25	2869' – 5035'	9.625	40	HC L-80	BTC	New	2.14	3.05	10.57
8.5	0' – 4935'	5.5	20	RY P-110	Semi-Premium	New	1.05	4.55	1.92
8.5	4935' - 26873'	5.5	20	RY P-110	Semi-Flush	New	1.05	2.29	2.13

- XTO requests the option to utilize a spudder rig (Atlas Copco RD20 or Equivalent) to set and cement surface and intermediate 1 casing per this Sundry
- XTO requests to not utilize centralizers in the curve and lateral
- 13.375 Collapse analyzed using 50% evacuation based on regional experience.
- 9.625 Collapse analyzed using 50% evacuation based on regional experience.
- 5.5 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
- XTO requests the option to use 5" BTC Float equipment for the the production casing

Wellhead:

Permanent Wellhead – Multibowl System

A. Starting Head: 13-5/8" 10M top flange x 18-5/8" bottom

B. Tubing Head: 13-5/8" 10M 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 BLM Onshore Order 2

- Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 18.625, 87.5 New BTC, J-55 casing to be set at +/- 1066'

Lead: 1340 sxs Class C (mixed at 12.8 ppg, 1.95 ft³/sx, 10.93 gal/sx water)
 Tail: 550 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)
 Top of Cement: Surface
 Compressives: 12-hr = 250 psi 24 hr = 500 psi

Due to the high probability of not getting cement to surface during conventional top-out jobs in the area, ~10-20 ppb gravel will be added on the backside of the 1" to get cement to surface, if required.

1st Intermediate Casing: 13.375, 54.5 New BTC, J-55 casing to be set at +/- 2769'

Lead: 1750 sxs Class C (mixed at 12.9 ppg, 1.95 ft³/sx, 10.93 gal/sx water)
 Tail: 310 sxs Class C + 2% CaCl (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
 Top of Cement: Surface
 Compressives: 12-hr = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 9.625, 40 New casing to be set at +/- 5035'

1st Stage

Optional Lead: 1250 sxs Class C (mixed at 10.5 ppg, 2.37 ft³/sx, 12.78 gal/sx water)
 TOC: 0
 Tail: 140 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
 TOC: 4735
 Compressives: 12-hr = 900 psi 24 hr = 1150 psi

2nd Stage Bradenhead (if needed)

Optional Tail: 1220 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
 Top of Cement: 0
 Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests the option to pump a two stage cement job on the 9-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Capitan Reef (3003') and the second stage performed as a bradenhead squeeze with planned cement from the Capitan Reef to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

XTO will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

XTO will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

XTO requests to pump an Optional Lead if well conditions dictate in an attempt to bring cement to surface. If cement reaches surface, the BLM will be notified and the second stage bradenhead squeeze and subsequent TOC verification will be negated.

XTO requests the option to conduct the bradenhead squeeze and TOC verification offline as per standard approval from BLM when unplanned remediation is needed and batch drilling is approved. In the event the bradenhead is conducted, we will ensure the first stage cement job is cemented properly and the well is static with floats holding and no pressure on the csg annulus as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

Production Casing: 5.5, 20 New Semi-Flush, RY P-110 casing to be set at +/- 26873'1st Stage

Lead: 390 sxs 50/50 POZ/Class C (mixed at 11.5 ppg, 2.6 ft³/sx, 14.84 gal/sx water) Top of Cement: 6126 feet
 Tail: 2930 sxs 50/50 POZ/Class H (mixed at 13.2 ppg, 1.51 ft³/sx, 7.21 gal/sx water) Top of Cement: 10032 feet
 Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

2nd Stage Bradenhead (if needed)

Optional Tail: 1100 sxs Class C (mixed at 14.8 ppg, 1.33 ft³/sx, 6.39 gal/sx water)
 Top of Cement: 2928
 Compressives: 12-hr = 900 psi 24 hr = 1150 psi

XTO requests the option to pump a two stage cement job on the 5-1/2" production casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (4985') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to a depth dictated by the COA or current regulations.

A freshwater spacer will be pumped behind the cement to displace to the desired depth. A bradenhead squeeze will reduce channeling and allow for a more accurate placement of cement, while leaving an un-cemented portion of the annulus for pressure monitoring during completions operations.

XTO requests the ability to conduct the bradenhead squeeze offline.

XTO requests to pump an Optional Lead & Tail, if well conditions dictate, in an attempt to bring top of cement as dictated by the COA or current regulations. If cement reaches this depth, the BLM will be notified and the second stage bradenhead squeeze will be negated.

Lead: 1490 sxs 50/50 POZ/Class C (mixed at 11.5 ppg, 2.6 ft³/sx, 14.84 gal/sx water) Top of Cement: 2928 feet
 Tail: 2930 sxs 50/50 POZ/Class H (mixed at 13.2 ppg, 1.51 ft³/sx, 7.21 gal/sx water) Top of Cement: 10032 feet
 Compressives: 12-hr = 1375 psi 24 hr = 2285 psi

XTO requests the option to offline cement and remediate (if needed) surface and intermediate casing strings where batch drilling is approved and if unplanned remediation is needed. XTO will ensure well is static with no pressure on the csg annulus, as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed when applicable per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops. Offline cement operations will then be conducted after the rig is moved off the current well to the next well in the batch sequence.

5. Pressure Control Equipment

Once the permanent WH is installed on the 18.625 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 3M HydriL and a 13-5/8" minimum 3M Double Ram BOP. MASP should not exceed 0 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 18.625, 3M bradenhead and flange, the BOP test will be limited to 3000 psi. When nipping up on the 13.375, the BOP will be tested to a minimum of 3000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 3M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

XTO requests a variance to be able to batch drill this well if necessary. In doing so, XTO will set casing and ensure that the well is cemented properly (unless approval is given for offline cementing) and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per Cactus recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and both intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells.

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. Based on discussions with the BLM on February 27th 2020, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met: 1. After a full BOP test is conducted on the first well on the pad 2. When skidding to drill an intermediate section that does not penetrate into the Wolfcamp.

6. Proposed Mud Circulation System

INTERVAL	Hole Size	Mud Type	MW (ppg)	Viscosity (sec/qt)	Fluid Loss (cc)
0' - 1066'	24	FW/Native	8.7-9.2	35-40	NC
1066' - 2769'	17.5	Brine	10-10.5	30-32	NC
2769' to 5035'	12.25	FW / Cut Brine	9-9.5	30-32	NC
5035' to 26873'	8.5	OBM	9.5-10	50-60	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 10 ppg -10.5 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 18.625 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 165 to 185 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 4844 psi.

10. Anticipated Starting Date and Duration of Operations

Anticipated spud date will be after Remuda 25 State drilling is completed and BLM approval. Move in operations and drilling is expected to take 40 days.

Well Plan Report - BEU BB JABBA 104H

Measured Depth: 26873.21 ft

TVD RKB: 9805.00 ft

Location

Cartographic Reference System: New Mexico East - NAD 27

Northing: 565055.30 ft

Easting: 676615.82 ft

RKB: 3543.00 ft

Ground Level: 3513.00 ft

North Reference: Grid

Convergence Angle: 0.31 Deg

Site: BlueBird

Slot: BEU BB JABBA 104H

Plan Sections		BEU BB JABBA 104H							
Measured		TVD		Build		Turn		Dogleg	
Depth	Inclination	Azimuth	RKB	Y Offset	X Offset	Rate	Rate	Rate	Target
(ft)	(Deg)	(Deg)	(ft)	(ft)	(ft)	(Deg/100ft)	(Deg/100ft)	(Deg/100ft)	

0	0	0	0	0	-0.01	0	0	0
2850	0	0	2850	0	-0.01	0	0	0
4364.53	30.29	180.12	4294.96	-391.1	-0.84	2	0	2
10031.69	30.29	180.12	9188.42	-3249.54	-6.92	0	0	0
11154.55	90	269.78	9805	-3612.41	-721.75	5.32	7.99	8 FTP 6
26873.21	90	269.78	9805	-3671.73	-16440.3	0	0	0 BHL 6

Position		BEU BB												
Uncertainty		JABBA 104H												
Measured		TVD		Highside		Lateral		Vertical		Magnitude		Semi-major	Semi-minor	Semi-minor Tool
Depth	Inclination	RKB	Error	Bias	Error	Bias	Error	Bias	Error	Bias	of Bias	Error	Error	Azimuth Used
(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)
0	0	0	0	0	0	0	0	2.297	0	0	0	0	0	XOM_R2OW SG 0 MWD+IFR1+ MS
100	0	100	0.358	0	0.358	0	0.358	2.299	0	0	0.358	0.358	0	XOM_R2OW SG 0 MWD+IFR1+ MS
200	0	200	0.717	0	0.717	0	0.717	2.307	0	0	0.717	0.717	0	XOM_R2OW SG 0 MWD+IFR1+ MS
300	0	300	1.075	0	1.075	0	1.075	2.321	0	0	1.075	1.075	0	XOM_R2OW SG 0 MWD+IFR1+ MS
400	0	400	1.434	0	1.434	0	1.434	2.34	0	0	1.434	1.434	0	XOM_R2OW SG 0 MWD+IFR1+ MS
500	0	500	1.792	0	1.792	0	1.792	2.364	0	0	1.792	1.792	0	XOM_R2OW SG 0 MWD+IFR1+ MS
600	0	600	2.151	0	2.151	0	2.151	2.394	0	0	2.151	2.151	0	XOM_R2OW SG 0 MWD+IFR1+ MS

700	0	0	700	2.509	0	2.509	0	2.428	0	0	2.509	2.509	0	XOM_R2OW SG MWD+IFR1+ MS XOM_R2OW
800	0	0	800	2.868	0	2.868	0	2.467	0	0	2.868	2.868	0	SG MWD+IFR1+ MS XOM_R2OW
900	0	0	900	3.226	0	3.226	0	2.511	0	0	3.226	3.226	0	SG MWD+IFR1+ MS XOM_R2OW
1000	0	0	1000	3.585	0	3.585	0	2.56	0	0	3.585	3.585	0	SG MWD+IFR1+ MS XOM_R2OW
1100	0	0	1100	3.943	0	3.943	0	2.613	0	0	3.943	3.943	0	SG MWD+IFR1+ MS XOM_R2OW
1200	0	0	1200	4.302	0	4.302	0	2.67	0	0	4.302	4.302	0	SG MWD+IFR1+ MS XOM_R2OW
1300	0	0	1300	4.66	0	4.66	0	2.731	0	0	4.66	4.66	0	SG MWD+IFR1+ MS XOM_R2OW
1400	0	0	1400	5.019	0	5.019	0	2.797	0	0	5.019	5.019	0	SG MWD+IFR1+ MS XOM_R2OW
1500	0	0	1500	5.377	0	5.377	0	2.866	0	0	5.377	5.377	0	SG MWD+IFR1+ MS XOM_R2OW
1600	0	0	1600	5.736	0	5.736	0	2.939	0	0	5.736	5.736	0	SG MWD+IFR1+ MS XOM_R2OW
1700	0	0	1700	6.094	0	6.094	0	3.016	0	0	6.094	6.094	0	SG MWD+IFR1+ MS XOM_R2OW
1800	0	0	1800	6.452	0	6.452	0	3.096	0	0	6.452	6.452	0	SG MWD+IFR1+ MS

1900	0	0	1900	6.811	0	6.811	0	3.179	0	0	6.811	6.811	0	XOM_R2OW SG MWD+IFR1+ MS
2000	0	0	2000	7.169	0	7.169	0	3.266	0	0	7.169	7.169	0	XOM_R2OW SG MWD+IFR1+ MS
2100	0	0	2100	7.528	0	7.528	0	3.355	0	0	7.528	7.528	0	XOM_R2OW SG MWD+IFR1+ MS
2200	0	0	2200	7.886	0	7.886	0	3.448	0	0	7.886	7.886	0	XOM_R2OW SG MWD+IFR1+ MS
2300	0	0	2300	8.245	0	8.245	0	3.544	0	0	8.245	8.245	0	XOM_R2OW SG MWD+IFR1+ MS
2400	0	0	2400	8.603	0	8.603	0	3.643	0	0	8.603	8.603	0	XOM_R2OW SG MWD+IFR1+ MS
2500	0	0	2500	8.962	0	8.962	0	3.745	0	0	8.962	8.962	0	XOM_R2OW SG MWD+IFR1+ MS
2600	0	0	2600	9.32	0	9.32	0	3.849	0	0	9.32	9.32	0	XOM_R2OW SG MWD+IFR1+ MS
2700	0	0	2700	9.679	0	9.679	0	3.956	0	0	9.679	9.679	0	XOM_R2OW SG MWD+IFR1+ MS
2800	0	0	2800	10.037	0	10.037	0	4.066	0	0	10.037	10.037	0	XOM_R2OW SG MWD+IFR1+ MS
2850	0	0	2850	10.216	0	10.216	0	4.123	0	0	10.216	10.216	0	XOM_R2OW SG MWD+IFR1+ MS
2900	1	180.122	2899.997	10.385	0	10.387	0	4.179	0	0	10.386	10.386	135	XOM_R2OW SG MWD+IFR1+ MS

3000	3	180.122	2999.931	10.697	0	10.71	0	4.294	0	0	10.71	10.71	-0.146	XOM_R2OW SG MWD+IFR1+ MS
3100	5	180.122	3099.683	10.999	0	11.035	0	4.41	0	0	11.035	11.035	-0.142	XOM_R2OW SG MWD+IFR1+ MS
3200	7	180.122	3199.13	11.291	0	11.362	0	4.527	0	0	11.362	11.361	-0.054	XOM_R2OW SG MWD+IFR1+ MS
3300	9	180.122	3298.152	11.572	0	11.691	0	4.645	0	0	11.691	11.688	-0.001	XOM_R2OW SG MWD+IFR1+ MS
3400	11	180.122	3396.628	11.843	0	12.021	0	4.765	0	0	12.021	12.015	0.03	XOM_R2OW SG MWD+IFR1+ MS
3500	13	180.122	3494.437	12.103	0	12.352	0	4.888	0	0	12.352	12.342	0.05	XOM_R2OW SG MWD+IFR1+ MS
3600	15	180.122	3591.462	12.352	0	12.685	0	5.013	0	0	12.685	12.669	0.064	XOM_R2OW SG MWD+IFR1+ MS
3700	17	180.122	3687.583	12.591	0	13.018	0	5.141	0	0	13.018	12.996	0.074	XOM_R2OW SG MWD+IFR1+ MS
3800	19	180.122	3782.684	12.82	0	13.354	0	5.273	0	0	13.354	13.322	0.082	XOM_R2OW SG MWD+IFR1+ MS
3900	21	180.122	3876.649	13.04	0	13.691	0	5.41	0	0	13.691	13.648	0.088	XOM_R2OW SG MWD+IFR1+ MS
4000	23	180.122	3969.362	13.251	0	14.03	0	5.553	0	0	14.03	13.974	0.093	XOM_R2OW SG MWD+IFR1+ MS
4100	25	180.122	4060.712	13.453	0	14.372	0	5.702	0	0	14.372	14.3	0.097	XOM_R2OW SG MWD+IFR1+ MS

4200	27	180.122	4150.587	13.649	0	14.716	0	5.86	0	0	14.716	14.625	0.101	XOM_R2OW SG MWD+IFR1+ MS
4300	29	180.122	4238.877	13.837	0	15.062	0	6.026	0	0	15.062	14.949	0.104	XOM_R2OW SG MWD+IFR1+ MS
4364.535	30.291	180.122	4294.964	13.956	0	15.287	0	6.137	0	0	15.287	15.159	0.106	XOM_R2OW SG MWD+IFR1+ MS
4400	30.291	180.122	4325.587	14.088	0	15.412	0	6.202	0	0	15.412	15.273	0.107	XOM_R2OW SG MWD+IFR1+ MS
4500	30.291	180.122	4411.935	14.467	0	15.766	0	6.401	0	0	15.766	15.597	0.109	XOM_R2OW SG MWD+IFR1+ MS
4600	30.291	180.122	4498.282	14.853	0	16.126	0	6.609	0	0	16.126	15.926	0.111	XOM_R2OW SG MWD+IFR1+ MS
4700	30.291	180.122	4584.63	15.246	0	16.49	0	6.824	0	0	16.49	16.261	0.112	XOM_R2OW SG MWD+IFR1+ MS
4800	30.291	180.122	4670.978	15.645	0	16.858	0	7.046	0	0	16.858	16.601	0.113	XOM_R2OW SG MWD+IFR1+ MS
4900	30.291	180.122	4757.326	16.051	0	17.231	0	7.274	0	0	17.231	16.946	0.114	XOM_R2OW SG MWD+IFR1+ MS
5000	30.291	180.122	4843.673	16.462	0	17.607	0	7.508	0	0	17.607	17.295	0.115	XOM_R2OW SG MWD+IFR1+ MS
5100	30.291	180.122	4930.021	16.878	0	17.987	0	7.747	0	0	17.987	17.649	0.115	XOM_R2OW SG MWD+IFR1+ MS
5200	30.291	180.122	5016.369	17.299	0	18.37	0	7.992	0	0	18.37	18.007	0.116	XOM_R2OW SG MWD+IFR1+ MS

5300	30.291	180.122	5102.717	17.725	0	18.756	0	8.241	0	0	18.756	18.369	0.117	XOM_R2OW SG MWD+IFR1+ MS XOM_R2OW
5400	30.291	180.122	5189.064	18.154	0	19.146	0	8.494	0	0	19.146	18.735	0.117	SG MWD+IFR1+ MS XOM_R2OW
5500	30.291	180.122	5275.412	18.588	0	19.538	0	8.752	0	0	19.538	19.105	0.118	SG MWD+IFR1+ MS XOM_R2OW
5600	30.291	180.122	5361.76	19.025	0	19.932	0	9.014	0	0	19.932	19.477	0.118	SG MWD+IFR1+ MS XOM_R2OW
5700	30.291	180.122	5448.108	19.465	0	20.329	0	9.279	0	0	20.329	19.853	0.119	SG MWD+IFR1+ MS XOM_R2OW
5800	30.291	180.122	5534.455	19.909	0	20.728	0	9.548	0	0	20.728	20.232	0.119	SG MWD+IFR1+ MS XOM_R2OW
5900	30.291	180.122	5620.803	20.355	0	21.13	0	9.819	0	0	21.13	20.614	0.12	SG MWD+IFR1+ MS XOM_R2OW
6000	30.291	180.122	5707.151	20.804	0	21.533	0	10.094	0	0	21.533	20.998	0.12	SG MWD+IFR1+ MS XOM_R2OW
6100	30.291	180.122	5793.499	21.256	0	21.938	0	10.372	0	0	21.938	21.385	0.12	SG MWD+IFR1+ MS XOM_R2OW
6200	30.291	180.122	5879.846	21.71	0	22.346	0	10.653	0	0	22.346	21.775	0.121	SG MWD+IFR1+ MS XOM_R2OW
6300	30.291	180.122	5966.194	22.166	0	22.755	0	10.936	0	0	22.755	22.167	0.121	SG MWD+IFR1+ MS XOM_R2OW
6400	30.291	180.122	6052.542	22.624	0	23.165	0	11.222	0	0	23.165	22.561	0.121	SG MWD+IFR1+ MS

6500	30.291	180.122	6138.89	23.085	0	23.577	0	11.511	0	0	23.577	22.957	0.122	XOM_R2OW SG MWD+IFR1+ MS
6600	30.291	180.122	6225.237	23.547	0	23.991	0	11.801	0	0	23.991	23.355	0.122	XOM_R2OW SG MWD+IFR1+ MS
6700	30.291	180.122	6311.585	24.011	0	24.406	0	12.094	0	0	24.406	23.756	0.123	XOM_R2OW SG MWD+IFR1+ MS
6800	30.291	180.122	6397.933	24.476	0	24.822	0	12.389	0	0	24.822	24.158	0.123	XOM_R2OW SG MWD+IFR1+ MS
6900	30.291	180.122	6484.281	24.944	0	25.24	0	12.687	0	0	25.24	24.562	0.123	XOM_R2OW SG MWD+IFR1+ MS
7000	30.291	180.122	6570.628	25.412	0	25.659	0	12.986	0	0	25.659	24.967	0.124	XOM_R2OW SG MWD+IFR1+ MS
7100	30.291	180.122	6656.976	25.882	0	26.078	0	13.287	0	0	26.078	25.375	0.124	XOM_R2OW SG MWD+IFR1+ MS
7200	30.291	180.122	6743.324	26.354	0	26.499	0	13.591	0	0	26.499	25.784	0.124	XOM_R2OW SG MWD+IFR1+ MS
7300	30.291	180.122	6829.671	26.826	0	26.921	0	13.896	0	0	26.921	26.194	0.125	XOM_R2OW SG MWD+IFR1+ MS
7400	30.291	180.122	6916.019	27.3	0	27.345	0	14.203	0	0	27.345	26.606	0.125	XOM_R2OW SG MWD+IFR1+ MS
7500	30.291	180.122	7002.367	27.775	0	27.769	0	14.512	0	0	27.769	27.019	0.125	XOM_R2OW SG MWD+IFR1+ MS
7600	30.291	180.122	7088.715	28.251	0	28.193	0	14.823	0	0	28.193	27.434	0.125	XOM_R2OW SG MWD+IFR1+ MS

7700	30.291	180.122	7175.062	28.728	0	28.619	0	15.136	0	0	28.619	27.85	0.126	XOM_R2OW SG MWD+IFR1+ MS XOM_R2OW
7800	30.291	180.122	7261.41	29.206	0	29.046	0	15.45	0	0	29.046	28.268	0.126	SG MWD+IFR1+ MS XOM_R2OW
7900	30.291	180.122	7347.758	29.685	0	29.473	0	15.766	0	0	29.473	28.686	0.126	SG MWD+IFR1+ MS XOM_R2OW
8000	30.291	180.122	7434.106	30.165	0	29.901	0	16.084	0	0	29.901	29.106	0.127	SG MWD+IFR1+ MS XOM_R2OW
8100	30.291	180.122	7520.453	30.645	0	30.33	0	16.403	0	0	30.33	29.527	0.127	SG MWD+IFR1+ MS XOM_R2OW
8200	30.291	180.122	7606.801	31.127	0	30.759	0	16.725	0	0	30.759	29.949	0.127	SG MWD+IFR1+ MS XOM_R2OW
8300	30.291	180.122	7693.149	31.609	0	31.19	0	17.047	0	0	31.19	30.372	0.128	SG MWD+IFR1+ MS XOM_R2OW
8400	30.291	180.122	7779.497	32.092	0	31.62	0	17.372	0	0	31.62	30.797	0.128	SG MWD+IFR1+ MS XOM_R2OW
8500	30.291	180.122	7865.844	32.576	0	32.052	0	17.698	0	0	32.052	31.222	0.128	SG MWD+IFR1+ MS XOM_R2OW
8600	30.291	180.122	7952.192	33.06	0	32.484	0	18.025	0	0	32.484	31.648	0.129	SG MWD+IFR1+ MS XOM_R2OW
8700	30.291	180.122	8038.54	33.545	0	32.916	0	18.354	0	0	32.916	32.076	0.129	SG MWD+IFR1+ MS XOM_R2OW
8800	30.291	180.122	8124.888	34.03	0	33.35	0	18.685	0	0	33.35	32.504	0.129	SG MWD+IFR1+ MS

8900	30.291	180.122	8211.235	34.516	0	33.783	0	19.018	0	0	33.783	32.933	0.13	XOM_R2OW SG MWD+IFR1+ MS
9000	30.291	180.122	8297.583	35.003	0	34.217	0	19.352	0	0	34.217	33.363	0.13	XOM_R2OW SG MWD+IFR1+ MS
9100	30.291	180.122	8383.931	35.49	0	34.652	0	19.687	0	0	34.652	33.795	0.13	XOM_R2OW SG MWD+IFR1+ MS
9200	30.291	180.122	8470.279	35.978	0	35.087	0	20.024	0	0	35.087	34.227	0.131	XOM_R2OW SG MWD+IFR1+ MS
9300	30.291	180.122	8556.626	36.466	0	35.523	0	20.363	0	0	35.523	34.659	0.131	XOM_R2OW SG MWD+IFR1+ MS
9400	30.291	180.122	8642.974	36.955	0	35.959	0	20.703	0	0	35.959	35.093	0.131	XOM_R2OW SG MWD+IFR1+ MS
9500	30.291	180.122	8729.322	37.444	0	36.395	0	21.044	0	0	36.395	35.528	0.132	XOM_R2OW SG MWD+IFR1+ MS
9600	30.291	180.122	8815.67	37.934	0	36.832	0	21.388	0	0	36.832	35.963	0.132	XOM_R2OW SG MWD+IFR1+ MS
9700	30.291	180.122	8902.017	38.424	0	37.269	0	21.732	0	0	37.269	36.399	0.132	XOM_R2OW SG MWD+IFR1+ MS
9800	30.291	180.122	8988.365	38.914	0	37.706	0	22.079	0	0	37.706	36.836	0.133	XOM_R2OW SG MWD+IFR1+ MS
9900	30.291	180.122	9074.713	39.405	0	38.144	0	22.426	0	0	38.144	37.273	0.133	XOM_R2OW SG MWD+IFR1+ MS
10000	30.291	180.122	9161.061	39.896	0	38.582	0	22.776	0	0	38.582	37.712	0.133	XOM_R2OW SG MWD+IFR1+ MS

10031.688	30.291	180.122	9188.422	40.052	0	38.721	0	22.887	0	0	38.721	37.851	0.134	XOM_R2OW SG MWD+IFR1+ MS
10100	30.761	190.853	9247.31	40.284	0	38.99	0	23.127	0	0	39.02	38.15	0.085	XOM_R2OW SG MWD+IFR1+ MS
10200	32.95	205.469	9332.371	40.239	0	39.292	0	23.482	0	0	39.45	38.58	0.14	XOM_R2OW SG MWD+IFR1+ MS
10300	36.617	217.965	9414.594	39.701	0	39.541	0	23.844	0	0	39.86	38.993	0.48	XOM_R2OW SG MWD+IFR1+ MS
10400	41.364	228.224	9492.379	38.67	0	39.782	0	24.22	0	0	40.24	39.378	1.281	XOM_R2OW SG MWD+IFR1+ MS
10500	46.859	236.594	9564.212	37.199	0	40.029	0	24.613	0	0	40.583	39.729	2.75	XOM_R2OW SG MWD+IFR1+ MS
10600	52.86	243.526	9628.695	35.392	0	40.274	0	25.025	0	0	40.884	40.04	5.162	XOM_R2OW SG MWD+IFR1+ MS
10700	59.205	249.409	9684.572	33.392	0	40.506	0	25.46	0	0	41.143	40.302	8.8	XOM_R2OW SG MWD+IFR1+ MS
10800	65.782	254.55	9730.756	31.384	0	40.716	0	25.917	0	0	41.367	40.509	13.797	XOM_R2OW SG MWD+IFR1+ MS
10900	72.514	259.179	9766.349	29.592	0	40.892	0	26.394	0	0	41.569	40.65	19.871	XOM_R2OW SG MWD+IFR1+ MS
11000	79.345	263.474	9790.657	28.266	0	41.026	0	26.888	0	0	41.76	40.718	26.208	XOM_R2OW SG MWD+IFR1+ MS
11100	86.233	267.579	9803.207	27.646	0	41.109	0	27.392	0	0	41.953	40.71	31.891	XOM_R2OW SG MWD+IFR1+ MS

11154.551	90	269.783	9805	27.668	0	41.13	0	27.668	0	0	42.062	40.674	34.518	XOM_R2OW SG MWD+IFR1+ MS
11200	90	269.783	9805	27.9	0	41.183	0	27.9	0	0	42.154	40.637	36.399	XOM_R2OW SG MWD+IFR1+ MS
11300	90	269.783	9805	28.42	0	41.312	0	28.42	0	0	42.366	40.555	39.735	XOM_R2OW SG MWD+IFR1+ MS
11400	90	269.783	9805	28.952	0	41.456	0	28.952	0	0	42.594	40.474	42.315	XOM_R2OW SG MWD+IFR1+ MS
11500	90	269.783	9805	29.494	0	41.616	0	29.494	0	0	42.835	40.395	44.399	XOM_R2OW SG MWD+IFR1+ MS
11600	90	269.783	9805	30.048	0	41.792	0	30.048	0	0	43.088	40.318	46.145	XOM_R2OW SG MWD+IFR1+ MS
11700	90	269.783	9805	30.612	0	41.982	0	30.612	0	0	43.352	40.246	47.65	XOM_R2OW SG MWD+IFR1+ MS
11800	90	269.783	9805	31.185	0	42.188	0	31.185	0	0	43.626	40.177	48.978	XOM_R2OW SG MWD+IFR1+ MS
11900	90	269.783	9805	31.767	0	42.408	0	31.767	0	0	43.912	40.113	50.17	XOM_R2OW SG MWD+IFR1+ MS
12000	90	269.783	9805	32.358	0	42.643	0	32.358	0	0	44.207	40.052	51.255	XOM_R2OW SG MWD+IFR1+ MS
12100	90	269.783	9805	32.957	0	42.892	0	32.957	0	0	44.513	39.996	52.256	XOM_R2OW SG MWD+IFR1+ MS
12200	90	269.783	9805	33.564	0	43.155	0	33.564	0	0	44.828	39.943	53.186	XOM_R2OW SG MWD+IFR1+ MS

12300	90	269.783	9805	34.178	0	43.432	0	34.178	0	0	45.153	39.895	54.057	XOM_R2OW SG MWD+IFR1+ MS
12400	90	269.783	9805	34.798	0	43.722	0	34.798	0	0	45.489	39.85	54.878	XOM_R2OW SG MWD+IFR1+ MS
12500	90	269.783	9805	35.426	0	44.026	0	35.426	0	0	45.833	39.809	55.656	XOM_R2OW SG MWD+IFR1+ MS
12600	90	269.783	9805	36.059	0	44.343	0	36.059	0	0	46.188	39.771	56.396	XOM_R2OW SG MWD+IFR1+ MS
12700	90	269.783	9805	36.698	0	44.672	0	36.698	0	0	46.551	39.737	57.101	XOM_R2OW SG MWD+IFR1+ MS
12800	90	269.783	9805	37.343	0	45.013	0	37.343	0	0	46.924	39.706	57.776	XOM_R2OW SG MWD+IFR1+ MS
12900	90	269.783	9805	37.993	0	45.367	0	37.993	0	0	47.306	39.679	58.423	XOM_R2OW SG MWD+IFR1+ MS
13000	90	269.783	9805	38.648	0	45.733	0	38.648	0	0	47.697	39.654	59.045	XOM_R2OW SG MWD+IFR1+ MS
13100	90	269.783	9805	39.308	0	46.11	0	39.308	0	0	48.097	39.633	59.643	XOM_R2OW SG MWD+IFR1+ MS
13200	90	269.783	9805	39.972	0	46.499	0	39.972	0	0	48.506	39.614	60.22	XOM_R2OW SG MWD+IFR1+ MS
13300	90	269.783	9805	40.641	0	46.898	0	40.641	0	0	48.924	39.598	60.776	XOM_R2OW SG MWD+IFR1+ MS
13400	90	269.783	9805	41.314	0	47.308	0	41.314	0	0	49.35	39.586	61.314	XOM_R2OW SG MWD+IFR1+ MS

13500	90	269.783	9805	41.99	0	47.729	0	41.99	0	0	49.784	39.575	61.834	XOM_R2OW SG MWD+IFR1+ MS
13600	90	269.783	9805	42.671	0	48.16	0	42.671	0	0	50.226	39.567	62.336	XOM_R2OW SG MWD+IFR1+ MS
13700	90	269.783	9805	43.355	0	48.6	0	43.355	0	0	50.677	39.562	62.823	XOM_R2OW SG MWD+IFR1+ MS
13800	90	269.783	9805	44.042	0	49.051	0	44.042	0	0	51.135	39.559	63.295	XOM_R2OW SG MWD+IFR1+ MS
13900	90	269.783	9805	44.732	0	49.511	0	44.732	0	0	51.602	39.559	63.752	XOM_R2OW SG MWD+IFR1+ MS
14000	90	269.783	9805	45.426	0	49.979	0	45.426	0	0	52.075	39.56	64.196	XOM_R2OW SG MWD+IFR1+ MS
14100	90	269.783	9805	46.122	0	50.457	0	46.122	0	0	52.557	39.564	64.626	XOM_R2OW SG MWD+IFR1+ MS
14200	90	269.783	9805	46.821	0	50.943	0	46.821	0	0	53.045	39.57	65.044	XOM_R2OW SG MWD+IFR1+ MS
14300	90	269.783	9805	47.523	0	51.438	0	47.523	0	0	53.541	39.578	65.45	XOM_R2OW SG MWD+IFR1+ MS
14400	90	269.783	9805	48.228	0	51.941	0	48.228	0	0	54.044	39.588	65.844	XOM_R2OW SG MWD+IFR1+ MS
14500	90	269.783	9805	48.935	0	52.452	0	48.935	0	0	54.553	39.6	66.227	XOM_R2OW SG MWD+IFR1+ MS
14600	90	269.783	9805	49.644	0	52.97	0	49.644	0	0	55.069	39.614	66.6	XOM_R2OW SG MWD+IFR1+ MS

14700	90	269.783	9805	50.355	0	53.496	0	50.355	0	0	55.592	39.63	66.962	XOM_R2OW SG MWD+IFR1+ MS
14800	90	269.783	9805	51.069	0	54.029	0	51.069	0	0	56.121	39.647	67.315	XOM_R2OW SG MWD+IFR1+ MS
14900	90	269.783	9805	51.785	0	54.569	0	51.785	0	0	56.656	39.666	67.658	XOM_R2OW SG MWD+IFR1+ MS
15000	90	269.783	9805	52.502	0	55.116	0	52.502	0	0	57.198	39.687	67.992	XOM_R2OW SG MWD+IFR1+ MS
15100	90	269.783	9805	53.222	0	55.67	0	53.222	0	0	57.745	39.71	68.317	XOM_R2OW SG MWD+IFR1+ MS
15200	90	269.783	9805	53.943	0	56.229	0	53.943	0	0	58.298	39.734	68.633	XOM_R2OW SG MWD+IFR1+ MS
15300	90	269.783	9805	54.666	0	56.796	0	54.666	0	0	58.857	39.759	68.942	XOM_R2OW SG MWD+IFR1+ MS
15400	90	269.783	9805	55.391	0	57.368	0	55.391	0	0	59.421	39.787	69.242	XOM_R2OW SG MWD+IFR1+ MS
15500	90	269.783	9805	56.118	0	57.946	0	56.118	0	0	59.991	39.815	69.535	XOM_R2OW SG MWD+IFR1+ MS
15600	90	269.783	9805	56.845	0	58.529	0	56.845	0	0	60.566	39.845	69.82	XOM_R2OW SG MWD+IFR1+ MS
15700	90	269.783	9805	57.575	0	59.119	0	57.575	0	0	61.146	39.877	70.099	XOM_R2OW SG MWD+IFR1+ MS
15800	90	269.783	9805	58.306	0	59.713	0	58.306	0	0	61.731	39.91	70.37	XOM_R2OW SG MWD+IFR1+ MS

15900	90	269.783	9805	59.038	0	60.313	0	59.038	0	0	62.321	39.945	70.635	XOM_R2OW SG MWD+IFR1+ MS
16000	90	269.783	9805	59.772	0	60.918	0	59.772	0	0	62.915	39.98	70.894	XOM_R2OW SG MWD+IFR1+ MS
16100	90	269.783	9805	60.507	0	61.528	0	60.507	0	0	63.515	40.017	71.146	XOM_R2OW SG MWD+IFR1+ MS
16200	90	269.783	9805	61.243	0	62.142	0	61.243	0	0	64.118	40.056	71.392	XOM_R2OW SG MWD+IFR1+ MS
16300	90	269.783	9805	61.98	0	62.761	0	61.98	0	0	64.727	40.095	71.632	XOM_R2OW SG MWD+IFR1+ MS
16400	90	269.783	9805	62.719	0	63.385	0	62.719	0	0	65.339	40.136	71.867	XOM_R2OW SG MWD+IFR1+ MS
16500	90	269.783	9805	63.458	0	64.013	0	63.458	0	0	65.956	40.178	72.096	XOM_R2OW SG MWD+IFR1+ MS
16600	90	269.783	9805	64.199	0	64.645	0	64.199	0	0	66.576	40.222	72.32	XOM_R2OW SG MWD+IFR1+ MS
16700	90	269.783	9805	64.94	0	65.281	0	64.94	0	0	67.201	40.266	72.539	XOM_R2OW SG MWD+IFR1+ MS
16800	90	269.783	9805	65.683	0	65.921	0	65.683	0	0	67.83	40.312	72.753	XOM_R2OW SG MWD+IFR1+ MS
16900	90	269.783	9805	66.427	0	66.565	0	66.427	0	0	68.462	40.359	72.962	XOM_R2OW SG MWD+IFR1+ MS
17000	90	269.783	9805	67.171	0	67.213	0	67.171	0	0	69.098	40.407	73.167	XOM_R2OW SG MWD+IFR1+ MS

17100	90	269.783	9805	67.917	0	67.865	0	67.917	0	0	69.738	40.456	73.366	XOM_R2OW SG MWD+IFR1+ MS
17200	90	269.783	9805	68.663	0	68.52	0	68.663	0	0	70.381	40.506	73.562	XOM_R2OW SG MWD+IFR1+ MS
17300	90	269.783	9805	69.411	0	69.178	0	69.411	0	0	71.027	40.557	73.753	XOM_R2OW SG MWD+IFR1+ MS
17400	90	269.783	9805	70.159	0	69.84	0	70.159	0	0	71.677	40.61	73.94	XOM_R2OW SG MWD+IFR1+ MS
17500	90	269.783	9805	70.907	0	70.505	0	70.907	0	0	72.33	40.663	74.123	XOM_R2OW SG MWD+IFR1+ MS
17600	90	269.783	9805	71.657	0	71.173	0	71.657	0	0	72.986	40.718	74.303	XOM_R2OW SG MWD+IFR1+ MS
17700	90	269.783	9805	72.407	0	71.844	0	72.407	0	0	73.645	40.773	74.478	XOM_R2OW SG MWD+IFR1+ MS
17800	90	269.783	9805	73.159	0	72.518	0	73.159	0	0	74.308	40.83	74.65	XOM_R2OW SG MWD+IFR1+ MS
17900	90	269.783	9805	73.91	0	73.196	0	73.91	0	0	74.973	40.887	74.818	XOM_R2OW SG MWD+IFR1+ MS
18000	90	269.783	9805	74.663	0	73.876	0	74.663	0	0	75.641	40.946	74.983	XOM_R2OW SG MWD+IFR1+ MS
18100	90	269.783	9805	75.416	0	74.558	0	75.416	0	0	76.312	41.005	75.144	XOM_R2OW SG MWD+IFR1+ MS
18200	90	269.783	9805	76.17	0	75.244	0	76.17	0	0	76.985	41.065	75.303	XOM_R2OW SG MWD+IFR1+ MS

18300	90	269.783	9805	76.924	0	75.932	0	76.924	0	0	77.661	41.127	75.458	XOM_R2OW SG MWD+IFR1+ MS
18400	90	269.783	9805	77.679	0	76.622	0	77.679	0	0	78.34	41.189	75.61	XOM_R2OW SG MWD+IFR1+ MS
18500	90	269.783	9805	78.435	0	77.315	0	78.435	0	0	79.021	41.252	75.759	XOM_R2OW SG MWD+IFR1+ MS
18600	90	269.783	9805	79.191	0	78.01	0	79.191	0	0	79.705	41.316	75.905	XOM_R2OW SG MWD+IFR1+ MS
18700	90	269.783	9805	79.947	0	78.708	0	79.947	0	0	80.391	41.381	76.048	XOM_R2OW SG MWD+IFR1+ MS
18800	90	269.783	9805	80.705	0	79.408	0	80.705	0	0	81.08	41.447	76.188	XOM_R2OW SG MWD+IFR1+ MS
18900	90	269.783	9805	81.462	0	80.11	0	81.462	0	0	81.771	41.514	76.326	XOM_R2OW SG MWD+IFR1+ MS
19000	90	269.783	9805	82.221	0	80.814	0	82.221	0	0	82.463	41.582	76.461	XOM_R2OW SG MWD+IFR1+ MS
19100	90	269.783	9805	82.979	0	81.521	0	82.979	0	0	83.159	41.65	76.594	XOM_R2OW SG MWD+IFR1+ MS
19200	90	269.783	9805	83.739	0	82.229	0	83.739	0	0	83.856	41.72	76.724	XOM_R2OW SG MWD+IFR1+ MS
19300	90	269.783	9805	84.498	0	82.94	0	84.498	0	0	84.555	41.79	76.852	XOM_R2OW SG MWD+IFR1+ MS
19400	90	269.783	9805	85.258	0	83.652	0	85.258	0	0	85.257	41.861	76.977	XOM_R2OW SG MWD+IFR1+ MS

19500	90	269.783	9805	86.019	0	84.366	0	86.019	0	0	85.96	41.933	77.1	XOM_R2OW SG MWD+IFR1+ MS
19600	90	269.783	9805	86.78	0	85.083	0	86.78	0	0	86.665	42.006	77.221	XOM_R2OW SG MWD+IFR1+ MS
19700	90	269.783	9805	87.541	0	85.8	0	87.541	0	0	87.372	42.08	77.34	XOM_R2OW SG MWD+IFR1+ MS
19800	90	269.783	9805	88.303	0	86.52	0	88.303	0	0	88.081	42.154	77.456	XOM_R2OW SG MWD+IFR1+ MS
19900	90	269.783	9805	89.066	0	87.241	0	89.066	0	0	88.792	42.229	77.571	XOM_R2OW SG MWD+IFR1+ MS
20000	90	269.783	9805	89.828	0	87.964	0	89.828	0	0	89.505	42.305	77.683	XOM_R2OW SG MWD+IFR1+ MS
20100	90	269.783	9805	90.591	0	88.689	0	90.591	0	0	90.219	42.382	77.794	XOM_R2OW SG MWD+IFR1+ MS
20200	90	269.783	9805	91.355	0	89.415	0	91.355	0	0	90.935	42.46	77.902	XOM_R2OW SG MWD+IFR1+ MS
20300	90	269.783	9805	92.118	0	90.143	0	92.118	0	0	91.653	42.538	78.009	XOM_R2OW SG MWD+IFR1+ MS
20400	90	269.783	9805	92.882	0	90.872	0	92.882	0	0	92.372	42.617	78.114	XOM_R2OW SG MWD+IFR1+ MS
20500	90	269.783	9805	93.647	0	91.603	0	93.647	0	0	93.093	42.697	78.217	XOM_R2OW SG MWD+IFR1+ MS
20600	90	269.783	9805	94.412	0	92.335	0	94.412	0	0	93.815	42.778	78.319	XOM_R2OW SG MWD+IFR1+ MS

20700	90	269.783	9805	95.177	0	93.069	0	95.177	0	0	94.539	42.859	78.418	XOM_R2OW SG MWD+IFR1+ MS
20800	90	269.783	9805	95.942	0	93.804	0	95.942	0	0	95.264	42.941	78.516	XOM_R2OW SG MWD+IFR1+ MS
20900	90	269.783	9805	96.708	0	94.54	0	96.708	0	0	95.991	43.024	78.613	XOM_R2OW SG MWD+IFR1+ MS
21000	90	269.783	9805	97.474	0	95.278	0	97.474	0	0	96.719	43.107	78.708	XOM_R2OW SG MWD+IFR1+ MS
21100	90	269.783	9805	98.24	0	96.017	0	98.24	0	0	97.448	43.192	78.801	XOM_R2OW SG MWD+IFR1+ MS
21200	90	269.783	9805	99.007	0	96.757	0	99.007	0	0	98.179	43.277	78.893	XOM_R2OW SG MWD+IFR1+ MS
21300	90	269.783	9805	99.774	0	97.498	0	99.774	0	0	98.911	43.362	78.983	XOM_R2OW SG MWD+IFR1+ MS
21400	90	269.783	9805	100.541	0	98.241	0	100.541	0	0	99.645	43.449	79.072	XOM_R2OW SG MWD+IFR1+ MS
21500	90	269.783	9805	101.308	0	98.985	0	101.308	0	0	100.379	43.536	79.16	XOM_R2OW SG MWD+IFR1+ MS
21600	90	269.783	9805	102.076	0	99.73	0	102.076	0	0	101.115	43.624	79.246	XOM_R2OW SG MWD+IFR1+ MS
21700	90	269.783	9805	102.844	0	100.476	0	102.844	0	0	101.852	43.712	79.331	XOM_R2OW SG MWD+IFR1+ MS
21800	90	269.783	9805	103.612	0	101.223	0	103.612	0	0	102.591	43.801	79.414	XOM_R2OW SG MWD+IFR1+ MS

21900	90	269.783	9805	104.381	0	101.971	0	104.381	0	0	103.33	43.891	79.497	XOM_R2OW SG MWD+IFR1+ MS
22000	90	269.783	9805	105.149	0	102.72	0	105.149	0	0	104.071	43.981	79.578	XOM_R2OW SG MWD+IFR1+ MS
22100	90	269.783	9805	105.918	0	103.47	0	105.918	0	0	104.812	44.072	79.658	XOM_R2OW SG MWD+IFR1+ MS
22200	90	269.783	9805	106.688	0	104.222	0	106.688	0	0	105.555	44.164	79.736	XOM_R2OW SG MWD+IFR1+ MS
22300	90	269.783	9805	107.457	0	104.974	0	107.457	0	0	106.299	44.257	79.814	XOM_R2OW SG MWD+IFR1+ MS
22400	90	269.783	9805	108.227	0	105.727	0	108.227	0	0	107.044	44.35	79.89	XOM_R2OW SG MWD+IFR1+ MS
22500	90	269.783	9805	108.996	0	106.481	0	108.996	0	0	107.79	44.443	79.965	XOM_R2OW SG MWD+IFR1+ MS
22600	90	269.783	9805	109.766	0	107.236	0	109.766	0	0	108.537	44.538	80.039	XOM_R2OW SG MWD+IFR1+ MS
22700	90	269.783	9805	110.537	0	107.992	0	110.537	0	0	109.285	44.633	80.112	XOM_R2OW SG MWD+IFR1+ MS
22800	90	269.783	9805	111.307	0	108.749	0	111.307	0	0	110.033	44.728	80.184	XOM_R2OW SG MWD+IFR1+ MS
22900	90	269.783	9805	112.078	0	109.506	0	112.078	0	0	110.783	44.824	80.255	XOM_R2OW SG MWD+IFR1+ MS
23000	90	269.783	9805	112.849	0	110.265	0	112.849	0	0	111.534	44.921	80.325	XOM_R2OW SG MWD+IFR1+ MS

23100	90	269.783	9805	113.62	0	111.024	0	113.62	0	0	112.285	45.019	80.394	XOM_R2OW SG MWD+IFR1+ MS
23200	90	269.783	9805	114.391	0	111.784	0	114.391	0	0	113.038	45.117	80.462	XOM_R2OW SG MWD+IFR1+ MS
23300	90	269.783	9805	115.162	0	112.545	0	115.162	0	0	113.791	45.215	80.529	XOM_R2OW SG MWD+IFR1+ MS
23400	90	269.783	9805	115.934	0	113.307	0	115.934	0	0	114.546	45.314	80.595	XOM_R2OW SG MWD+IFR1+ MS
23500	90	269.783	9805	116.706	0	114.069	0	116.706	0	0	115.301	45.414	80.66	XOM_R2OW SG MWD+IFR1+ MS
23600	90	269.783	9805	117.478	0	114.833	0	117.478	0	0	116.056	45.514	80.724	XOM_R2OW SG MWD+IFR1+ MS
23700	90	269.783	9805	118.25	0	115.597	0	118.25	0	0	116.813	45.615	80.787	XOM_R2OW SG MWD+IFR1+ MS
23800	90	269.783	9805	119.022	0	116.361	0	119.022	0	0	117.571	45.717	80.85	XOM_R2OW SG MWD+IFR1+ MS
23900	90	269.783	9805	119.794	0	117.127	0	119.794	0	0	118.329	45.819	80.912	XOM_R2OW SG MWD+IFR1+ MS
24000	90	269.783	9805	120.567	0	117.893	0	120.567	0	0	119.088	45.922	80.972	XOM_R2OW SG MWD+IFR1+ MS
24100	90	269.783	9805	121.34	0	118.659	0	121.34	0	0	119.848	46.025	81.032	XOM_R2OW SG MWD+IFR1+ MS
24200	90	269.783	9805	122.113	0	119.427	0	122.113	0	0	120.608	46.129	81.092	XOM_R2OW SG MWD+IFR1+ MS

24300	90	269.783	9805	122.886	0	120.195	0	122.886	0	0	121.369	46.233	81.15	XOM_R2OW SG MWD+IFR1+ MS
24400	90	269.783	9805	123.659	0	120.963	0	123.659	0	0	122.131	46.338	81.208	XOM_R2OW SG MWD+IFR1+ MS
24500	90	269.783	9805	124.432	0	121.733	0	124.432	0	0	122.894	46.443	81.265	XOM_R2OW SG MWD+IFR1+ MS
24600	90	269.783	9805	125.206	0	122.503	0	125.206	0	0	123.657	46.549	81.321	XOM_R2OW SG MWD+IFR1+ MS
24700	90	269.783	9805	125.979	0	123.273	0	125.979	0	0	124.421	46.655	81.377	XOM_R2OW SG MWD+IFR1+ MS
24800	90	269.783	9805	126.753	0	124.044	0	126.753	0	0	125.186	46.762	81.431	XOM_R2OW SG MWD+IFR1+ MS
24900	90	269.783	9805	127.527	0	124.816	0	127.527	0	0	125.951	46.87	81.485	XOM_R2OW SG MWD+IFR1+ MS
25000	90	269.783	9805	128.301	0	125.588	0	128.301	0	0	126.717	46.978	81.539	XOM_R2OW SG MWD+IFR1+ MS
25100	90	269.783	9805	129.075	0	126.361	0	129.075	0	0	127.483	47.087	81.592	XOM_R2OW SG MWD+IFR1+ MS
25200	90	269.783	9805	129.85	0	127.134	0	129.85	0	0	128.25	47.196	81.644	XOM_R2OW SG MWD+IFR1+ MS
25300	90	269.783	9805	130.624	0	127.908	0	130.624	0	0	129.018	47.305	81.695	XOM_R2OW SG MWD+IFR1+ MS
25400	90	269.783	9805	131.399	0	128.683	0	131.399	0	0	129.786	47.415	81.746	XOM_R2OW SG MWD+IFR1+ MS

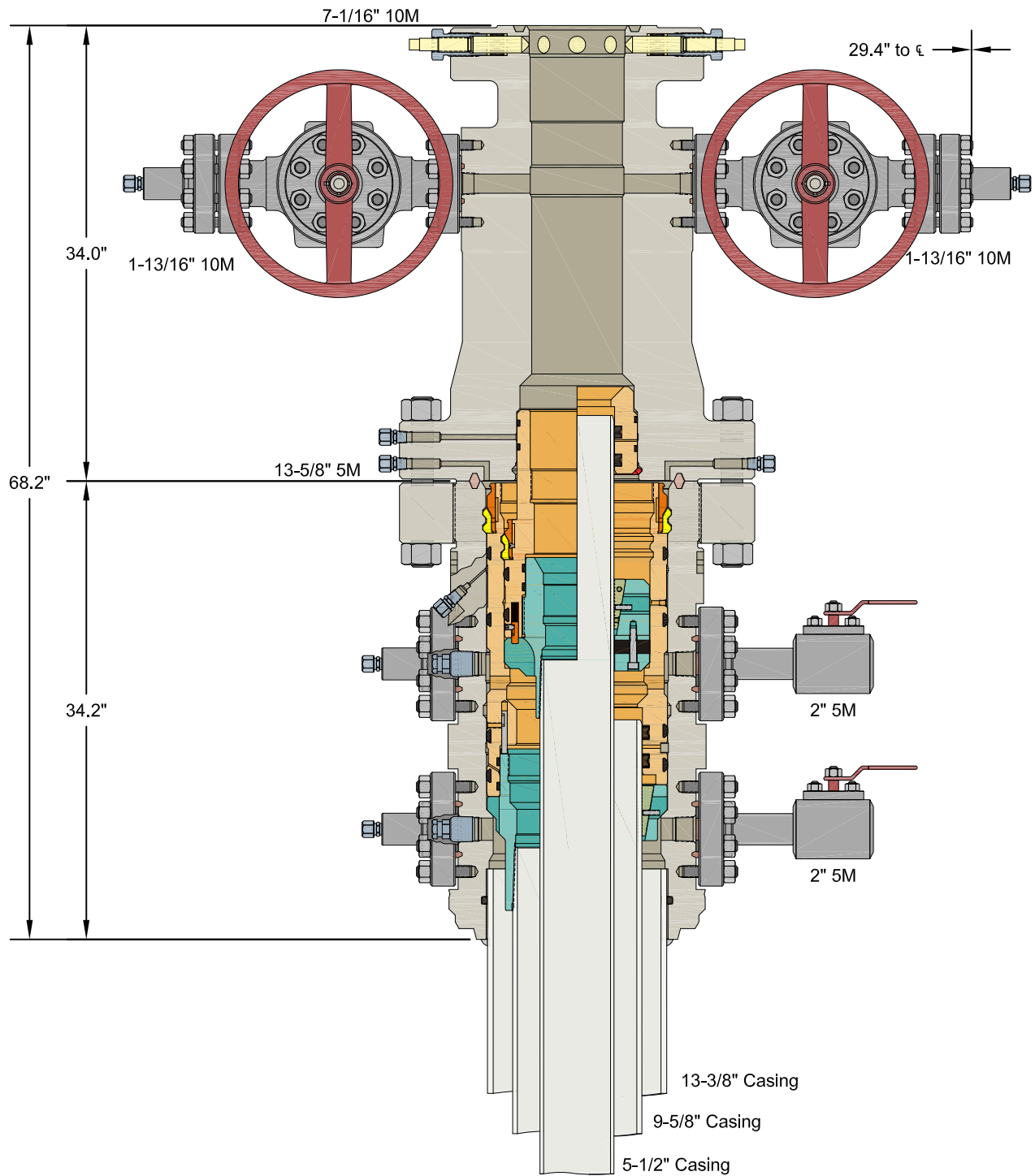
25500	90	269.783	9805	132.173	0	129.458	0	132.173	0	0	130.555	47.526	81.796	XOM_R2OW SG MWD+IFR1+ MS
25600	90	269.783	9805	132.948	0	130.233	0	132.948	0	0	131.325	47.637	81.846	XOM_R2OW SG MWD+IFR1+ MS
25700	90	269.783	9805	133.723	0	131.009	0	133.723	0	0	132.095	47.748	81.895	XOM_R2OW SG MWD+IFR1+ MS
25800	90	269.783	9805	134.498	0	131.785	0	134.498	0	0	132.865	47.861	81.943	XOM_R2OW SG MWD+IFR1+ MS
25900	90	269.783	9805	135.273	0	132.562	0	135.273	0	0	133.636	47.973	81.991	XOM_R2OW SG MWD+IFR1+ MS
26000	90	269.783	9805	136.048	0	133.34	0	136.048	0	0	134.408	48.086	82.038	XOM_R2OW SG MWD+IFR1+ MS
26100	90	269.783	9805	136.824	0	134.118	0	136.824	0	0	135.18	48.2	82.085	XOM_R2OW SG MWD+IFR1+ MS
26200	90	269.783	9805	137.599	0	134.896	0	137.599	0	0	135.953	48.314	82.131	XOM_R2OW SG MWD+IFR1+ MS
26300	90	269.783	9805	138.375	0	135.675	0	138.375	0	0	136.726	48.428	82.177	XOM_R2OW SG MWD+IFR1+ MS
26400	90	269.783	9805	139.15	0	136.454	0	139.15	0	0	137.5	48.543	82.222	XOM_R2OW SG MWD+IFR1+ MS
26500	90	269.783	9805	139.926	0	137.233	0	139.926	0	0	138.274	48.658	82.266	XOM_R2OW SG MWD+IFR1+ MS
26600	90	269.783	9805	140.702	0	138.014	0	140.702	0	0	139.049	48.774	82.31	XOM_R2OW SG MWD+IFR1+ MS

26700	90	269.783	9805	141.478	0	138.794	0	141.478	0	0	139.824	48.89	82.354	XOM_R2OW SG MWD+IFR1+ MS
26800	90	269.783	9805	142.254	0	139.575	0	142.254	0	0	140.599	49.007	82.397	XOM_R2OW SG MWD+IFR1+ MS
26873.213	90	269.783	9805	142.822	0	140.147	0	142.822	0	0	141.167	49.093	82.428	XOM_R2OW SG MWD+IFR1+ MS

Plan Targets					BEU BB JABBA 104H				
Target Name	Measured Depth (ft)	Grid Northing (ft)	Grid Easting (ft)	TVD MSL (ft)	Target Shape				
FTP 6	11154.54	561442.89	675894.07	6262	CIRCLE				
LTP 6	26823.25	561383.64	660225.48	6262	CIRCLE				
BHL 6	26873.21	561383.57	660175.52	6262	CIRCLE				



GE Oil & Gas



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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

Subject: Request for a Variance Allowing break Testing of the Blowout Preventer Equipment (BOPE)

XTO Energy requests a variance to ONLY test broken pressure seals on the BOPE and function test BOP when skidding a drilling rig between multiple wells on a pad.

Background

Onshore Oil and Gas Order (OOGO) No. 2, Drilling Operations, Sections III.A.2.i.iv.B states that the BOP test must be performed whenever any seal subject to test pressure is broken. The current interpretation of the Bureau of Land Management (BLM) requires a complete BOP test and not just a test of the affected component. OOGO No. 2, Section I.D.2 states, "Some situation may exist either on a well-by-well basis or field-wide basis whereby it is commonly accepted practice to vary a particular minimum standard(s) established in this order. This situation can be resolved by requesting a variance...". XTO Energy feels the break testing the BOPE is such a situation. Therefore, as per OOGO No. 2, Section IV., XTO Energy submits this request for the variance.

Supporting Documentation

OOGO No. 2 became effective on December 19, 1988 and has remained the standard for regulating BLM onshore drilling operations for over 30 years. During this time there have been significant changes in drilling technology. BLM continues to use the variance request process to allow for the use of modern technology and acceptable engineering practices that have arisen since OOGO No. 2 was originally released. The XTO Energy drilling rig fleet has many modern upgrades that allow the intact BOP stack to be moved between well slots on a multi-well pad, as well as, wellhead designs that incorporate quick connects facilitating release of the BOP from the wellhead without breaking any BOP stack components apart. These technologies have been used extensively offshore, and other regulators, API, and many operators around the world have endorsed break testing as safe and reliable.



Figure 1: Winch System attached to BOP Stack



Figure 2: BOP Winch System

American Petroleum Institute (API) standards, specification and recommended practices are considered the industry standard and are consistently utilized and referenced by the industry. OOGO No. 2 recognizes API recommended Practices (RP) 53 in its original development. API Standard 53, *Well Control Equipment Systems for Drilling Wells* (Fifth Edition, December 2018, Annex C, Table C.4) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 5.3.7.1 states “A pressure test of the pressure containing component shall be performed following the disconnection or repair, limited to the affected component.” See Table C.4 below for reference.

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API STANDARD 53

Table C.4—Initial Pressure Testing, Surface BOP Stacks

Component to be Pressure Tested	Pressure Test—Low Pressure ^{ac} psig (MPa)	Pressure Test—High Pressure ^{ac}	
		Change Out of Component, Elastomer, or Ring Gasket	No Change Out of Component, Elastomer, or Ring Gasket
Annular preventer ^b	250 to 350 (1.72 to 2.41)	RWP of annular preventer	MASP or 70% annular RWP, whichever is lower.
Fixed pipe, variable bore, blind, and BSR preventers ^{bd}	250 to 350 (1.72 to 2.41)	RWP of ram preventer or wellhead system, whichever is lower	ITP
Choke and kill line and BOP side outlet valves below ram preventers (both sides)	250 to 350 (1.72 to 2.41)	RWP of side outlet valve or wellhead system, whichever is lower	ITP
Choke manifold—upstream of chokes ^e	250 to 350 (1.72 to 2.41)	RWP of ram preventers or wellhead system, whichever is lower	ITP
Choke manifold—downstream of chokes ^e	250 to 350 (1.72 to 2.41)	RWP of valve(s), line(s), or MASP for the well program, whichever is lower	
Kelly, kelly valves, drill pipe safety valves, IBOPs	250 to 350 (1.72 to 2.41)	MASP for the well program	

^a Pressure test evaluation periods shall be a minimum of five minutes.

No visible leaks.

The pressure shall remain stable during the evaluation period. The pressure shall not decrease below the intended test pressure.

^b Annular(s) and VBR(s) shall be pressure tested on the largest and smallest OD drill pipe to be used in well program.

^c For pad drilling operations, moving from one wellhead to another within the 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

^d For surface offshore operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented during the initial test. For land operations, the ram BOPs shall be pressure tested with the ram locks engaged and the closing and locking pressure vented at commissioning and annually.

^e Adjustable chokes are not required to be full sealing devices. Pressure testing against a closed choke is not required.

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specification and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations.

Break testing has been approved by the BLM in the past with other operators based on the detailed information provided in this document.

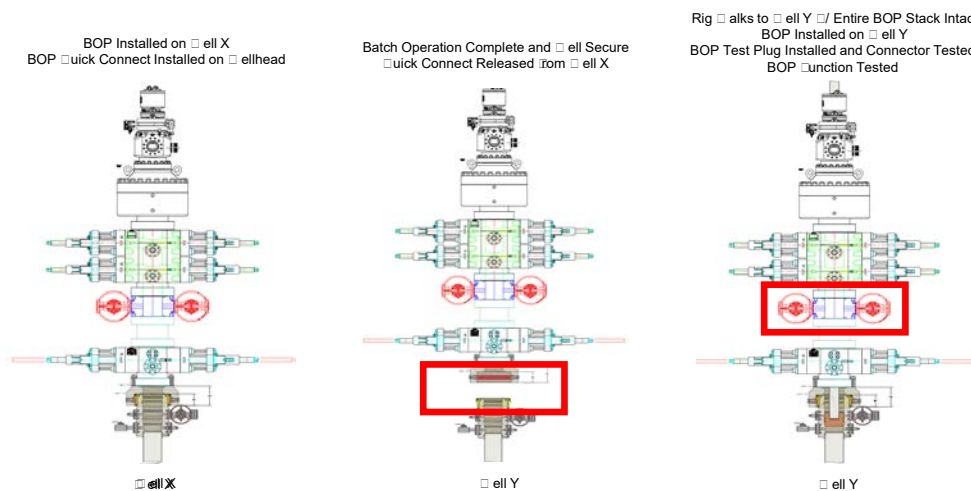
XTO Energy feels break testing and our current procedures meet the intent of OOGO No. 2 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that of OOGO No. 2 (Every 21 days). In addition to function testing the annular, pipe rams and blind rams after each BOP nipple up, XTO Energy performs a choke drill with the rig crew prior to drilling out every casing shoe. This is additional training for the rig crew that exceeds the requirements of the OOGO No.2.

Procedures

1. XTO Energy will use this document for our break testing plan for New Mexico Delaware basin. The summary below will be referenced in the APD or Sundry Notice and receive approval prior to implementing this variance.
2. XTO Energy will perform BOP break testing on multi-wells pads where multiple intermediate sections can be drilled and cased within the 21-day BOP test window.
 - a. A full BOP test will be conducted on the first well on the pad.
 - b. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
 - i. Our Lower WC targets set the intermediate casing shoe no deeper than the Wolfcamp B.
 - ii. Our Upper WC targets set the intermediate casing shoe shallower than the Wolfcamp B.
 - c. A Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
 - d. A full BOP test will be required prior to drilling any production hole.
3. After performing a complete BOP test on the first well, the intermediate hole section will be drilled and cased, two breaks would be made on the BOP equipment.
 - a. Between the HCV valve and choke line connection
 - b. Between the BOP quick connect and the wellhead
4. The BOP is then lifted and removed from the wellhead by a hydraulic system.
5. After skidding to the next well, the BOP is moved to the wellhead by the same hydraulic system and installed.
6. The connections mentioned in 3a and 3b will then be reconnected.
7. Install test plug into the wellhead using test joint or drill pipe.
8. A shell test is performed against the upper pipe rams testing the two breaks.
9. The shell test will consist of a 250 psi low test and a high test to the value submitted in the APD or Sundry (e.g. 5,000 psi or 10,000psi).
10. Function test will be performed on the following components: lower pipe rams, blind rams, and annular.

11. For a multi-well pad the same two breaks on the BOP would be made and on the next wells and steps 4 through 10 would be repeated.
12. A second break test would only be done if the intermediate hole section being drilled could not be completed within the 21 day BOP test window.

Note: Picture below highlights BOP components that will be tested during batch operations



Summary

A variance is requested to **ONLY** test broken pressure seals on the BOP equipment when moving from wellhead to wellhead which is in compliance with API Standard 53. API Standard 53 states, that for pad drilling operation, moving from one wellhead to another within 21 days, pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken.

The BOP will be secured by a hydraulic carrier or cradle. The BLM will be contacted if a Well Control event occurs prior to the commencement of a BOPE Break Testing operation.

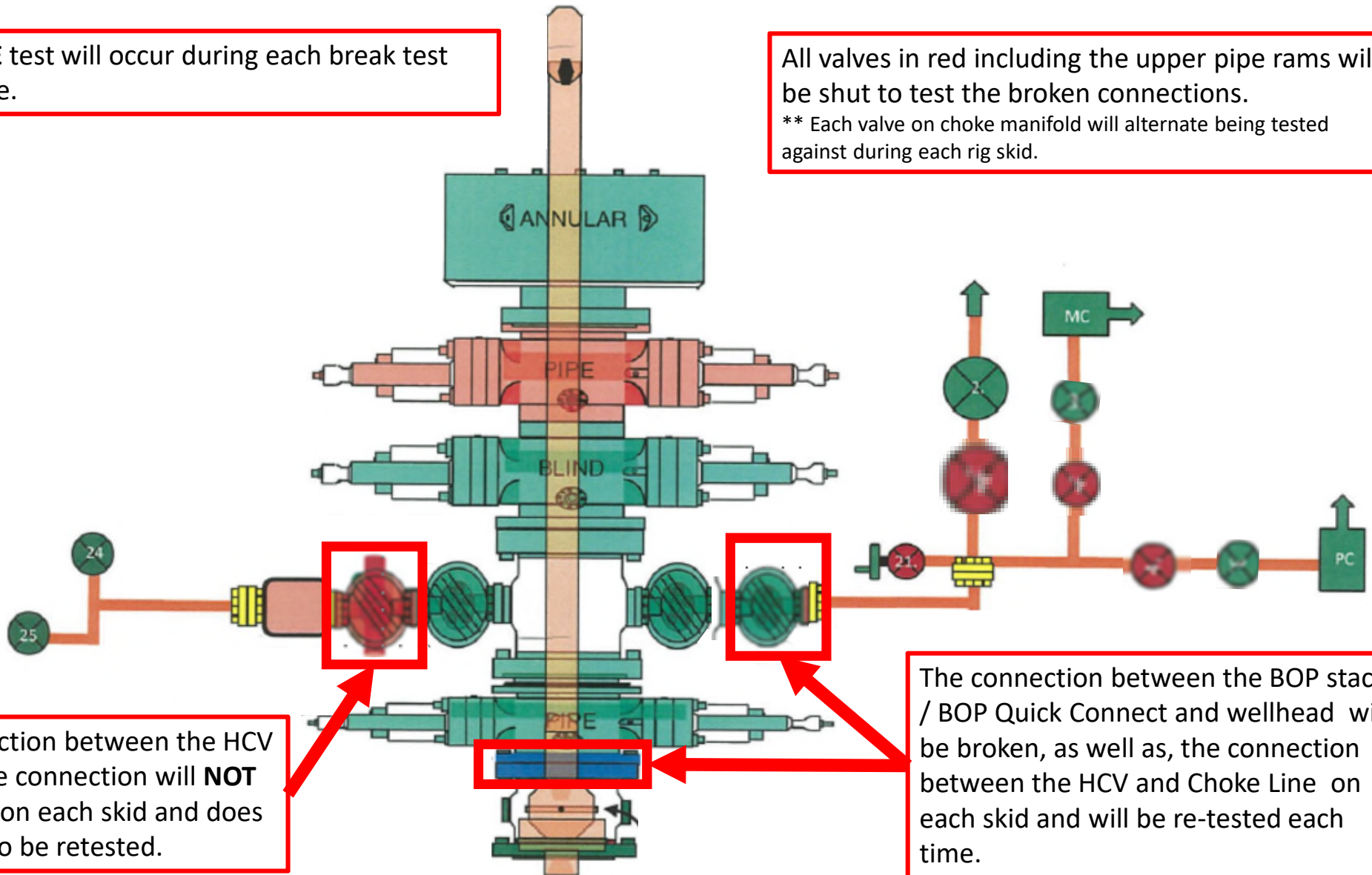
Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met:

1. After a full BOP test is conducted on the first well on the pad.
2. The first intermediate hole section drilled on the pad will be the deepest. All of the remaining hole sections will be the same depth or shallower.
3. Full BOP test will be required if the intermediate hole section being drilled has a MASP over 5M.
4. Full BOP test will be required prior to drilling the production hole.

Only **ONE** test will occur during each break test procedure.

All valves in red including the upper pipe rams will be shut to test the broken connections.

** Each valve on choke manifold will alternate being tested against during each rig skid.



The connection between the HCV and kill line connection will **NOT** be broken on each skid and does not need to be retested.

The connection between the BOP stack / BOP Quick Connect and wellhead will be broken, as well as, the connection between the HCV and Choke Line on each skid and will be re-tested each time.

XTO Permian Operating, LLC Offline Cementing Variance Request

XTO requests the option to cement the surface and intermediate casing strings offline as a prudent batch drilling efficiency of acreage development.

1. Cement Program

No changes to the cement program will take place for offline cementing.

2. Offline Cementing Procedure

The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal. Pressure ratings of wellhead components and valves is 5,000 psi.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
 - a. If any barrier fails to test, the BOP stack will not be nippedled down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50-psi compressive strength if kill weight fluid cannot be verified.



Annular packoff with both external and internal seals

XTO Permian Operating, LLC Offline Cementing Variance Request



Wellhead diagram during skidding operations

6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nipping up for further remediation.
 - a. Well Control Plan
 - i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
 - ii. Rig pumps or a 3rd party pump will be tied into the upper casing valve to pump down the casing ID
 - iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
 - iv. Once influx is circulated out of the hole, kill weight mud will be circulated
 - v. Well will be confirmed static
 - vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment

XTO Permian Operating, LLC Offline Cementing Variance Request

Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
 - a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
 - b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

XTO respectfully requests approval to utilize a spudder rig to pre-set surface casing.

Description of Operations:

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
 - a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
 - b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wing valves.
 - a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling Operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nipped up and tested on the wellhead before drilling operations resume on each well.
 - a. The larger rig will move back onto the location within 180 days from the point at which the wells are secured and the spudder rig is moved off location.
 - b. The BLM will be notified 24 hours before the larger rig moves back on the pre-set locations
7. XTO will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, XTO will secure the wellhead area by placing a guard rail around the cellar area.

Sec 22 20S 32E MP 2682661 Big Eddy Unit DI BB Jabba 104H Lea M M033955 XTO 13 22 44804 Illison
Morency

Big Eddy Unit DI BB Jabba 104H

18 5/8	surface csg in a	24	inch hole.	Design Factors					Surface		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"□"	87.50	J 55	BTC	14.25	1.24	1.49	1066	5	2.50	2.29	93275
"B"			BTC				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,110				Tail Cmt	does not	circ to sfc.	Totals:	1066			93275
<u>Comparison of Proposed to Minimum Required Cement Volumes</u>											
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
24	1.2496	1890	3356	1332	152	9.20	901	2M			12.00
Site plat (pipe racks S or E) as per O.O.I.III D.4.1. not found.											

13 3/8	casing inside the	18 5/8	Design Factors					Int 1				
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"□"	54.50	J 55	BTC	5.65	0.75	1.93	2769	2	3.48	1.25	150.911	
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	2769				150.911
The cement volume(s) are intended to achieve a top of				0	ft from surface or a			1066				overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg
17 1/2	0.6946	2060	3825	1976	94	10.50	785	2M				1.56
Class 'H' tail cmt yld > 1.20												

9 5/8	casing inside the		13 3/8	Design Factors					Int 2		
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"□"	40.00	HCP 110	BTC	10.98	2.99	3.08	2,869	6	5.35	5.39	114,760
"B"	40.00	HCL 80	BTC	∞	2.99	2.24	2,166	4	3.89	5.39	86,640
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500							Totals:	5,035	201,400		
The cement volume(s) are intended to achieve a top of				0	ft from surface or a		2769			overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
12 1/4	0.3132	1390	3149	1714	84	9.50	1478	2M			0.81
Class 'C' tail cmt yld > 1.35											

5 1/2	casing inside the		9 5/8	Design Factors					Prod 1		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"□"	20.00	RY P 110	Semi-Premiur	6.49	4.33	4.93	4935	5	8.55	7.51	98700
"B"	20.00	RY P 110	Semi-Flush	∞	4.33	4.93	21,938	5	8.55	7.51	438,760
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500							Totals:	26873	537460		
The cement volume(s) are intended to achieve a top of					4400	ft from surface or a		635	overlap.		
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg		
8 1/2	0.2291	3320	5438	5168	5	10.00			1.30		
Class 'C' tail cmt yld > 1.35 Capitan Reef est top XXXX.											

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	XTO Permian Operating LLC
WELL NAME & NO.:	Big Eddy Unit DI BB Jabba 104H
LOCATION:	Sec 22-20S-32E-NMP
COUNTY:	Lea County, New Mexico

Updated COAs per Sundry 2682661 approved through engineering on 08/31/2022.

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input type="radio"/> None	<input type="radio"/> Secretary	<input checked="" type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Cave/Karst Potential	<input type="radio"/> Critical		
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	<input type="radio"/> Both
Other	<input checked="" type="checkbox"/> 4 String Area	<input checked="" type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit

A. HYDROGEN SULFIDE

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.

B. CASING

1. The **18 5/8** inch surface casing shall be set at approximately 1177 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - 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 will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever

is greater. (This is to include the lead cement)

- 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing set at 2,800 ft 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 or potash.
 - ❖ In R111 Potash Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
 - ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
 - ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
 - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
3. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is: Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.
 - a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - 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 cave/karst or potash.

4. The minimum required fill of cement behind the **5-1/2** inch production casing is: Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.
 - a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool:
 - Cement should tie-back at least **50 feet** on top of Capitan Reef top. 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 or potash.**

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface 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. 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.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

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.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months. (This is not necessary for secondary recovery unit wells)

GENERAL 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

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

1. 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.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. 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 are located, this does not include the dog house or stairway area.

3. 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.

A. CASING

1. 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.
2. 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. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: 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 at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. 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.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. 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.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. 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 RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - 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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

- a. In a water basin, 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. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
- b. 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, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. 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.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. BOP/BOPE must be tested by an independent service company within 500

feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. 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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District IV
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 140777

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 140777
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	9/7/2022