

Well Name: JAMES RANCH UNIT DI 2	Well Location: T22S / R30E / SEC 25 / SENW / 32.363202 / -103.836857	County or Parish/State: EDDY / NM
Well Number: 707H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM089052, NMNM89052	Unit or CA Name: JAMES RANCH	Unit or CA Number: NMNM070965X
US Well Number: 3001545401	Well Status: Approved Application for Permit to Drill	Operator: XTO PERMIAN OPERATING LLC

Notice of Intent

Type of Submission: Notice of Intent	Type of Action Other
Date Sundry Submitted: 05/01/2021	Time Sundry Submitted: 07:03
Date proposed operation will begin: 05/14/2021	

Procedure Description: **Well Name, SHL Change, Spacing, Casing/Cement, Drilling Variance Changes XTO Permian Operating, LLC requests permission to make the following changes to the original APD: Change well name fr/James Ranch Unit DI 2 BS2B-2W 228H to James Ranch Unit DI 2 707H No Additional Surface Disturbance Change SHL fr/2600'FNL & 1880'FWL to 2500'FSL & 2050'FWL Total SHL Move: 180' North & 170' West SHL change requested to optimize drill island space and for safety purposes. Change BHL fr/1300'FNL & 2440'FEL to 1330'FSL & 2590'FEL Casing/Cement design per the attached drilling program. XTO also requests the following variances: Approval to utilize a spudder rig to pre-set surface casing per the attached description of operations. Batch drill this well if necessary. In doing so, XTO will set each casing string and ensure that the well is cemented properly and the well is static. With floats holding, no pressure on the csg annulus, and the installation of a 10K TA cap as per recommendations, XTO will contact the BLM to skid the rig to drill the remaining wells on the pad. Once surface and intermediate strings are all completed, XTO will begin drilling the production hole on each of the wells. ONLY test broken pressure seals on the BOP equipment per the attached procedure. A variance is requested to cement offline for the surface and intermediate casing strings. Attachments: C102 Drilling Program Directional Plan Multibowl Diagram 5MBOP/5MCM Spudder Rig Description of Operations BOP Break Test Procedure Offline Cementing Procedure

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

JRU_DI_2_707H_Attachments_20210501070333.pdf

Received by OCD: 10/6/2022 5:48:13 AM

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Conditions of Approval

Authorized Officer
Break_Testing_Conditions_of_Approval_20210608161430.pdf

Operator Certification

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 submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: STEPHANIE RABADUE	Signed on: MAY 01, 2021 07:03 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

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: 06/08/2021
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 30-015-4 54 0 1	² Pool Code 40295	³ Pool Name Los Medanos; Bone Spring
⁴ Property Code X322722 X326259	⁵ Property Name JAMES RANCH UNIT DI 2	⁶ Well Number 707H
⁷ OGRID No. 373075	⁸ Operator Name XTO PERMIAN OPERATING, LLC.	⁹ Elevation 3,343'

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	25	22 S	30 E		2,500	SOUTH	2,050	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
J	28	22 S	30 E		1,330	SOUTH	2,590	EAST	EDDY

¹² Dedicated Acres 800	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.

¹⁶				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. <i>Stephanie Rabadue</i> 04/30/2021 Signature _____ Date _____ Stephanie Rabadue Printed Name _____ stephanie.rabadue@exxonmobil.com E-mail Address _____	
SHL (NAD83 NME) Y = 496,042.9 X = 694,801.5 LAT. = 32.362713 °N LONG. = 103.836305 °W LTP (NAD83 NME) Y = 494,840.6 X = 679,509.3 LAT. = 32.359593 °N LONG. = 103.885847 °W SHL (NAD27 NME) Y = 495,982.5 X = 653,619.7 LAT. = 32.362590 °N LONG. = 103.835812 °W LTP (NAD27 NME) Y = 494,780.0 X = 638,327.5 LAT. = 32.359470 °N LONG. = 103.885354 °W				SHL (NAD83 NME) Y = 494,866.5 X = 692,661.7 LAT. = 32.359506 °N LONG. = 103.843253 °W BHL (NAD83 NME) Y = 494,840.5 X = 679,459.3 LAT. = 32.359594 °N LONG. = 103.886009 °W FTP (NAD27 NME) Y = 494,806.1 X = 651,479.9 LAT. = 32.359383 °N LONG. = 103.842760 °W BHL (NAD27 NME) Y = 494,779.9 X = 638,277.5 LAT. = 32.359470 °N LONG. = 103.885515 °W	
CORNER COORDINATES (NAD83 NME) A - Y = 496,175.7 N , X = 692,750.6 E B - Y = 496,169.8 N , X = 690,067.9 E C - Y = 496,163.8 N , X = 687,385.2 E D - Y = 496,158.9 N , X = 684,714.8 E E - Y = 496,154.0 N , X = 682,045.0 E F - Y = 496,150.0 N , X = 679,366.4 E G - Y = 494,856.2 N , X = 692,761.8 E H - Y = 494,850.4 N , X = 690,076.2 E I - Y = 494,844.7 N , X = 687,391.3 E J - Y = 494,839.4 N , X = 684,719.9 E K - Y = 494,833.9 N , X = 682,049.4 E L - Y = 494,830.2 N , X = 679,372.2 E				CORNER COORDINATES (NAD27 NME) A - Y = 496,115.3 N , X = 651,568.9 E B - Y = 496,109.3 N , X = 648,886.2 E C - Y = 496,103.4 N , X = 646,203.4 E D - Y = 496,098.5 N , X = 643,533.0 E E - Y = 496,093.4 N , X = 640,863.2 E F - Y = 496,089.3 N , X = 638,184.5 E G - Y = 494,795.8 N , X = 651,580.0 E H - Y = 494,790.0 N , X = 648,894.4 E I - Y = 494,784.3 N , X = 646,209.5 E J - Y = 494,778.9 N , X = 643,538.2 E K - Y = 494,773.3 N , X = 640,867.5 E L - Y = 494,769.6 N , X = 638,190.3 E	

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.

2-12-2021

Date of Survey

Signature and Seal of
Professional Surveyor:

MARK DILLON HARP 23786

Certificate Number

JC

2019051251



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

XTO Energy Inc.
James Ranch Unit DI 2 707H
Projected TD: 23833' MD / 9655' TVD
SHL: 2500' FSL & 2050' FWL , Section 25, T22S, R30E
BHL: 1330' FSL & 2590' FEL , Section 28, T22S, R30E
Eddy County, NM

1. Geologic Name of Surface Formation

A. Quaternary

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

Formation	Well Depth (TVD)	Water/Oil/Gas
Rustler	381'	Water
Top of Salt	681'	Water
Base of Salt	3567'	Water
Delaware	3822'	Water
Brushy Canyon	6368'	Water/Oil/Gas
Bone Spring	7701'	Water
1st Bone Spring Ss	8682'	Water/Oil/Gas
2nd Bone Spring Ss	9563'	Water/Oil/Gas
Target/Land Curve	9794'	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 13.375 inch casing @ 656' (25' above the salt) and circulating cement back to surface. The salt will be isolated by setting 9.625 inch casing at 3667' and circulating cement to surface. The second intermediate will isolate from the salt down to the next casing seat by setting 7.625 inch casing at 9640' and cemented to 200' inside the previous casing string. A 6.75 inch curve and 6.75 inch lateral hole will be drilled to 23833 MD/TD and 5.5 x 5 inch production casing will be set at TD and cemented back up to 2nd intermediate (estimated TOC 9140 feet) per Potash regulations.

3. Casing Design

Hole Size	Depth	OD Csg	Weight	Grade	Collar	New/Used	SF Burst	SF Collapse	SF Tension
17.5	0' – 656'	13.375	54.5	J-55	BTC	New	2.33	3.81	23.86
12.25	0' – 3667'	9.625	40	J-55	BTC	New	1.44	2.16	4.30
8.75	0' – 3767'	7.625	29.7	RY P-110	Flush Joint	New	2.96	2.82	1.95
8.75	3767' – 9640'	7.625	29.7	HC L-80	Flush Joint	New	2.15	2.77	2.33
6.75	0' – 9540'	5.5	23	RY P-110	Semi-Premium	New	1.21	2.79	2.25
6.75	9540' - 9996'	5.5	23	RY P-110	Semi-Flush	New	1.21	2.66	5.76
6.75	9996' - 23833'	5	18	RY P-110	Semi-Premium	New	1.16	2.52	6.13

- 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
- 9.625 Collapse analyzed using 50% evacuation based on regional experience.
- 7.625 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 13-3/8" SOW 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 7-5/8" casing per BLM Onshore Order 2
- Wellhead Manufacturer representative will not be present for BOP test plug installation

4. Cement Program

Surface Casing: 13.375, 54.5 New BTC, J-55 casing to be set at +/- 656'

Lead: 260 sxs EconoCem-HLTRRC (mixed at 12.9 ppg, 1.87 ft³/sx, 10.13 gal/sx water)

Tail: 300 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: 9.625, 40 New BTC, J-55 casing to be set at +/- 3667'

Lead: 1510 sxs Class C (mixed at 12.9 ppg, 1.39 ft³/sx, 10.13 gal/sx water)

Tail: 130 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 = 900 psi 24 hr = 1500 psi

2nd Intermediate Casing: 7.625, 29.7 New casing to be set at +/- 9640'

1st Stage

Optional Lead: 150 sxs Class C (mixed at 10.5 ppg, 2.77 ft³/sx, 15.59 gal/sx water)

TOC: 3467

Tail: 300 sxs Class C (mixed at 14.8 ppg, 1.35 ft³/sx, 6.39 gal/sx water)

TOC: Brushy Canyon @ 6368

Compressives: 12-hr = 900 psi 24 hr = 1150 psi

2nd Stage

Lead: 0 sxs Class C (mixed at 12.9 ppg, 2.16 ft³/sx, 9.61 gal/sx water)

Tail: 390 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 to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brush Canyon (6368') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon 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 inside the first intermediate casing. If cement reaches the desired height, 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, 18 New Semi-Premium, RY P-110 casing to be set at +/- 23833'

Lead: 20 sxs NeoCem (mixed at 11.5 ppg, 2.69 ft³/sx, 15.00 gal/sx water) Top of Cement: 9140 feet

Tail: 1350 sxs VersaCem (mixed at 13.2 ppg, 1.51 ft³/sx, 8.38 gal/sx water) Top of Cement: 9796 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 13.375 casing, the blow out preventer equipment (BOP) will consist of a 13-5/8" minimum 5M Hydril and a 13-5/8" minimum 5M Double Ram BOP. MASP should not exceed 3193 psi. In any instance where 10M BOP is required by BLM, XTO requests a variance to utilize 5M annular with 10M ram preventers (a common BOP configuration, which allows use of 10M rams in unlikely event that pressures exceed 5M).

All BOP testing will be done by an independent service company. Annular pressure tests will be limited to 50% of the working pressure. When nipping up on the 13.375, 5M bradenhead and flange, the BOP test will be limited to 5000 psi. When nipping up on the 7.625, the BOP will be tested to a minimum of 5000 psi. All BOP tests will include a low pressure test as per BLM regulations. The 5M BOP diagrams are attached. Blind rams will be functioned tested each trip, pipe rams will be functioned tested each day.

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

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' - 656'	17.5	FW/Native	8.7-9.2	35-40	NC
656' - 3667'	12.25	Brine	10.4-10.9	30-32	NC
3667' to 9640'	8.75	FW / Cut Brine	9.7-10.2	30-32	NC
9640' to 23833'	6.75	OBM	10.5-11	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 13-3/8" surface casing with brine solution. A 9.8 ppg - 10.2 ppg brine mud will be used while drilling through the salt formation. Use fibrous materials as needed to control seepage and lost circulation. Pump viscous sweeps as needed for hole cleaning. Pump speed will be recorded on a daily drilling report after mudding up. A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system.

7. Auxiliary Well Control and Monitoring Equipment

- A. A Kelly cock will be in the drill string at all times.
- B. A full opening drill pipe stabbing valve having appropriate connections will be on the rig floor at all times.
- C. H2S monitors will be on location when drilling below the 13.375 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 5348 psi.

10. Anticipated Starting Date and Duration of Operations

Anticipated spud date will be after DI 1A drilling is completed and BLM approval. Move in operations and drilling is expected to take 40 days.



XTO James Ranch Unit DI 2 707H Rev0 LP 09MAR21 Proposal Geodetic

Report
Def Plan

Report Date: March 11, 2021 - 11:10 PM (UTC 0)
Client: XTO Energy
Field: NM Eddy County (NAD 27)
Structure / Slot: XTO James Ranch Unit DI 2 707H / James Ranch Unit DI 2 707H
Well: James Ranch Unit DI 2 707H
Borehole: James Ranch Unit DI 2 707H
UWI / API#: Unknown / Unknown
Survey Name: XTO James Ranch Unit DI 2 707H Rev0 LP 09MAR21
Survey Date: March 10, 2021
Tert / AHD / DDI / ERD Ratio: 101.493 / 15781.798 ft / 6.591 / 1.611
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: 32°21'45.32316"N, 103°53'08.92435"W
Location Grid N/E Y/X: N 495982.500 RUS, E 653619.700 RUS
CRS Grid Convergence Angle: 0.2663°
Grid Scale Factor: 0.99993612
Version / Patch: 2020.5.0.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 265.518° (GRID North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3375.000 ft above MSL
Seabed / Ground Elevation: 3343.000 ft above MSL
Magnetic Declination: 6.747°
Total Gravity Field Strength: 990.4601mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47811.949 nT
Magnetic Dip Angle: 60.052°
Declination Date: March 09, 2021
Magnetic Declination Model: HDGM 2020
North Reference: Grid North
Grid Convergence Used: 0.2663°
Total Corr Mag North->Grid North: 6.4804°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
Surface Location	0.00	0.00	165.00	0.00	-3.375.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232		#####	#####
	100.00	0.00	165.00	100.00	-3.275.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	200.00	0.00	165.00	200.00	-3.175.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	300.00	0.00	165.00	300.00	-3.075.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Rustler	380.00	0.00	165.00	380.00	-2.985.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	400.00	0.00	165.00	400.00	-2.975.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	500.00	0.00	165.00	500.00	-2.875.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	600.00	0.00	165.00	600.00	-2.775.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Salado/Top of Salt	680.00	0.00	165.00	680.00	-2.695.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	700.00	0.00	165.00	700.00	-2.675.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	800.00	0.00	165.00	800.00	-2.575.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	900.00	0.00	165.00	900.00	-2.475.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,000.00	0.00	165.00	1,000.00	-2.375.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,100.00	0.00	165.00	1,100.00	-2.275.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,200.00	0.00	165.00	1,200.00	-2.175.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,300.00	0.00	165.00	1,300.00	-2.075.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,400.00	0.00	165.00	1,400.00	-1.975.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,500.00	0.00	165.00	1,500.00	-1.875.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,600.00	0.00	165.00	1,600.00	-1.775.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,700.00	0.00	165.00	1,700.00	-1.675.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,800.00	0.00	165.00	1,800.00	-1.575.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	1,900.00	0.00	165.00	1,900.00	-1.475.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,000.00	0.00	165.00	2,000.00	-1.375.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,100.00	0.00	165.00	2,100.00	-1.275.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,200.00	0.00	165.00	2,200.00	-1.175.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,300.00	0.00	165.00	2,300.00	-1.075.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,400.00	0.00	165.00	2,400.00	-0.975.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,500.00	0.00	165.00	2,500.00	-0.875.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Castle Anhydrite 1 Top	2,531.00	0.00	165.00	2,531.00	-844.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,600.00	0.00	165.00	2,600.00	-775.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,700.00	0.00	165.00	2,700.00	-675.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,800.00	0.00	165.00	2,800.00	-575.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	2,900.00	0.00	165.00	2,900.00	-475.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Castle Anhydrite 1 Base	2,948.00	0.00	165.00	2,948.00	-427.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,000.00	0.00	165.00	3,000.00	-375.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,100.00	0.00	165.00	3,100.00	-275.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Castle Anhydrite 2 Top	3,170.00	0.00	165.00	3,170.00	-205.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,200.00	0.00	165.00	3,200.00	-175.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Castle Anhydrite 2 Base	3,275.00	0.00	165.00	3,275.00	-100.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,300.00	0.00	165.00	3,300.00	-75.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,400.00	0.00	165.00	3,400.00	25.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Base Salt	3,500.00	0.00	165.00	3,500.00	125.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,566.00	0.00	165.00	3,566.00	191.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,600.00	0.00	165.00	3,600.00	225.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,700.00	0.00	165.00	3,700.00	325.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,800.00	0.00	165.00	3,800.00	425.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Delaware/Lamar	3,821.00	0.00	165.00	3,821.00	446.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Bell Canyon	3,856.00	0.00	165.00	3,856.00	481.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	3,900.00	0.00	165.00	3,900.00	525.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	4,000.00	0.00	165.00	4,000.00	625.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	4,100.00	0.00	165.00	4,100.00	725.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	4,200.00	0.00	165.00	4,200.00	825.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	4,300.00	0.00	165.00	4,300.00	925.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	4,400.00	0.00	165.00	4,400.00	1,025.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
Nudge, KOP Build 2°/100' DLS	4,500.00	0.00	165.00	4,500.00	1,125.00	0.00	0.00	0.00	495,982.50	653,619.70	32.36258977	-103.83581232	0.00	0.00	0.00
	4,600.00	2.00	165.00	4,599.98	1,224.98	-0.32	-1.69	0.45	495,980.81	653,620.15	32.36258513	-103.83581088	2.00	2.00	0.00
	4,700.00	4.00	165.00	4,699.84	1,324.84	-1.27	-6.74	1.81	495,975.76	653,621.51	32.36257122	-103.83580657	2.00	2.00	0.00
	4,800.00	6.00	165.00	4,799.45	1,424.45	-2.86	-15.16	4.66	495,967.34	653,623.76	32.36254805	-103.83579940	2.00	2.00	0.00
Hold	4,900.00	8.00	165.00	4,898.70	1,523.70	-5.09	-26.93	7.22	495,955.57	653,626.92	32.36251565	-103.83578936	2.00	2.00	0.00
Cherry Canyon	4,975.03	8.00	165.00	4,973.00	1,598.00	-7.00	-37.02	9.92	495,945.49	653,629.62	32.36248790	-103.83577076	2.00	2.00	0

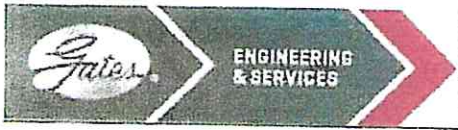
Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°100ft)	BR (°100ft)	TR (°100ft)
First Bone Spring Ss.	8,900.00	27.37	239.69	8,581.29	5,206.29	1,190.02	-856.08	-1,126.57	495,126.48	652,493.21	32.36025104	-103.83947331	0.00	0.00	0.00
	9,000.00	27.37	239.69	8,670.09	5,295.09	1,231.40	-879.28	-1,166.25	495,103.28	652,453.52	32.36018777	-103.83960218	0.00	0.00	0.00
	9,012.28	27.37	239.69	8,681.00	5,306.00	1,236.48	-882.13	-1,171.13	495,100.43	652,448.65	32.36018000	-103.83961801	0.00	0.00	0.00
	9,100.00	27.37	239.69	8,758.90	5,363.90	1,272.78	-902.48	-1,205.94	495,080.07	652,413.84	32.36012450	-103.83973105	0.00	0.00	0.00
	9,200.00	27.37	239.69	8,847.70	5,417.70	1,314.16	-925.61	-1,245.63	495,056.87	652,374.15	32.36006123	-103.83985992	0.00	0.00	0.00
Second Bone Spring Carb.	9,300.00	27.37	239.69	8,936.51	5,561.51	1,355.54	-948.89	-1,285.32	495,033.67	652,334.46	32.35999796	-103.83998879	0.00	0.00	0.00
	9,400.00	27.37	239.69	9,025.31	5,650.31	1,396.92	-972.09	-1,325.01	495,010.47	652,294.78	32.35993469	-103.84011766	0.00	0.00	0.00
	9,500.00	27.37	239.69	9,114.12	5,739.12	1,438.31	-995.29	-1,364.70	494,987.27	652,255.09	32.35987142	-103.84024653	0.00	0.00	0.00
	9,600.00	27.37	239.69	9,202.92	5,827.92	1,479.69	-1,018.49	-1,404.39	494,964.07	652,215.40	32.35980814	-103.84037540	0.00	0.00	0.00
	9,700.00	27.37	239.69	9,215.00	5,846.31	1,485.31	-1,021.69	-1,409.79	494,960.92	652,210.01	32.35979854	-103.84039292	0.00	0.00	0.00
Build & Turn 2°100' DLS	9,795.66	27.37	239.69	9,376.68	6,001.68	1,560.65	-1,063.89	-1,482.05	494,918.68	652,137.75	32.35968435	-103.84062754	0.00	0.00	0.00
	9,800.00	27.37	239.69	9,380.53	6,005.53	1,562.46	-1,064.90	-1,483.78	494,917.67	652,136.02	32.35968160	-103.84063318	8.00	6.72	9.40
	9,900.00	34.64	247.70	9,466.09	6,091.09	1,610.56	-1,087.29	-1,530.28	494,895.28	652,089.53	32.35962064	-103.84078407	8.00	6.98	7.60
	10,000.00	41.95	252.97	9,544.54	6,189.54	1,670.35	-1,107.90	-1,588.63	494,874.68	652,031.18	32.35956473	-103.84097333	8.00	7.31	5.27
	10,023.81	41.95	252.97	9,562.00	6,197.00	1,682.15	-1,109.15	-1,590.65	494,870.00	652,016.48	32.35956196	-103.84108447	8.00	7.34	4.98
Second Bone Spring A/B Carb.	10,100.00	49.44	256.91	9,614.35	6,239.35	1,740.65	-1,126.32	-1,657.70	494,856.26	651,962.11	32.35951497	-103.84119727	8.00	7.51	3.82
	10,137.47	52.28	258.16	9,638.00	6,263.00	1,769.42	-1,132.58	-1,686.07	494,849.99	651,933.74	32.35949811	-103.84128924	8.00	7.57	3.34
	10,200.00	57.04	260.05	9,674.16	6,299.16	1,820.09	-1,142.20	-1,736.15	494,830.18	651,883.67	32.35947233	-103.84145154	8.00	7.61	3.02
	10,280.50	61.67	261.69	9,705.00	6,330.00	1,871.96	-1,150.43	-1,787.52	494,832.14	651,832.30	32.35945033	-103.84161803	8.00	7.65	2.71
	10,300.00	64.70	262.89	9,722.82	6,341.82	1,907.14	-1,155.22	-1,822.44	494,827.36	651,797.38	32.35945712	-103.84171718	8.00	7.68	2.52
Second Bone Spring B Ss.	10,400.00	72.40	265.01	9,759.36	6,384.36	2,000.10	-1,165.33	-1,914.91	494,812.45	651,704.92	32.35941154	-103.84203075	0.00	7.70	2.32
	10,500.00	80.13	267.14	9,783.09	6,408.09	2,097.16	-1,171.74	-2,011.74	494,810.83	651,608.09	32.35939458	-103.84234443	8.00	7.73	2.13
	10,600.00	87.87	269.17	9,793.53	6,418.53	2,196.42	-1,174.93	-2,111.06	494,807.65	651,508.78	32.35938708	-103.84266610	8.00	7.74	2.03
	10,635.28	90.60	269.88	9,794.00	6,419.00	2,231.61	-1,175.22	-2,146.34	494,807.36	651,473.50	32.35938673	-103.84278033	0.00	7.74	2.01
	10,700.00	90.60	269.88	9,793.32	6,418.32	2,296.14	-1,175.35	-2,211.05	494,807.22	651,408.79	32.35938717	-103.84298899	0.00	0.00	0.00
Landing Point	10,800.00	90.60	269.88	9,793.88	6,417.88	2,359.84	-1,175.55	-2,311.05	494,807.01	651,308.74	32.35938766	-103.84331369	0.00	0.00	0.00
	10,900.00	90.60	269.88	9,791.22	6,416.22	2,495.55	-1,175.77	-2,411.04	494,806.81	651,208.82	32.35938854	-103.84363750	0.00	0.00	0.00
	11,000.00	90.60	269.88	9,790.16	6,415.16	2,595.25	-1,175.98	-2,511.03	494,806.60	651,108.83	32.35938923	-103.84396131	0.00	0.00	0.00
	11,100.00	90.60	269.88	9,789.11	6,414.11	2,694.96	-1,176.19	-2,611.03	494,806.39	651,008.84	32.35938991	-103.84428512	0.00	0.00	0.00
	11,200.00	90.60	269.88	9,788.06	6,413.06	2,794.66	-1,176.40	-2,711.02	494,806.18	650,908.86	32.35939060	-103.84460892	0.00	0.00	0.00
Second Bone Spring B Ss.	11,300.00	90.60	269.88	9,787.00	6,412.00	2,894.37	-1,176.60	-2,802.02	494,805.97	650,808.87	32.35939128	-103.84493273	0.00	0.00	0.00
	11,400.00	90.60	269.88	9,785.95	6,410.95	2,994.07	-1,176.81	-2,911.01	494,805.77	650,708.88	32.35939196	-103.84525654	0.00	0.00	0.00
	11,500.00	90.60	269.88	9,784.90	6,409.90	3,093.78	-1,177.02	-3,011.01	494,805.56	650,608.89	32.35939264	-103.84558034	0.00	0.00	0.00
	11,600.00	90.60	269.88	9,783.84	6,408.84	3,193.48	-1,177.23	-3,111.00	494,805.35	650,508.91	32.35939332	-103.84590415	0.00	0.00	0.00
	11,700.00	90.60	269.88	9,782.79	6,407.79	3,293.19	-1,177.44	-3,210.99	494,805.14	650,408.92	32.35939400	-103.84622796	0.00	0.00	0.00
Second Bone Spring B Ss.	11,800.00	90.60	269.88	9,781.74	6,406.74	3,392.89	-1,177.64	-3,310.99	494,804.93	650,308.93	32.35939468	-103.84655176	0.00	0.00	0.00
	11,900.00	90.60	269.88	9,780.68	6,405.68	3,492.60	-1,177.85	-3,410.98	494,804.73	650,208.94	32.35939536	-103.84687557	0.00	0.00	0.00
	12,000.00	90.60	269.88	9,779.63	6,404.63	3,592.30	-1,178.06	-3,510.98	494,804.52	650,108.95	32.35939603	-103.84719938	0.00	0.00	0.00
	12,100.00	90.60	269.88	9,778.58	6,403.58	3,692.00	-1,178.27	-3,610.97	494,804.31	650,008.97	32.35939671	-103.84752319	0.00	0.00	0.00
	12,200.00	90.60	269.88	9,777.52	6,402.52	3,791.71	-1,178.48	-3,710.97	494,804.10	649,908.98	32.35939738	-103.84784699	0.00	0.00	0.00
Second Bone Spring B Ss.	12,300.00	90.60	269.88	9,776.47	6,401.47	3,891.41	-1,178.68	-3,810.96	494,803.89	649,808.99	32.35939806	-103.84817080	0.00	0.00	0.00
	12,400.00	90.60	269.88	9,775.42	6,400.42	3,991.12	-1,178.89	-3,910.95	494,803.69	649,709.00	32.35939874	-103.84849461	0.00	0.00	0.00
	12,500.00	90.60	269.88	9,774.37	6,399.37	4,090.82	-1,179.10	-4,010.95	494,803.48	649,609.01	32.35939942	-103.84881841	0.00	0.00	0.00
	12,600.00	90.60	269.88	9,773.31	6,398.31	4,190.53	-1,179.31	-4,110.94	494,803.27	649,509.03	32.35940008	-103.84914222	0.00	0.00	0.00
	12,700.00	90.60	269.88	9,772.26	6,397.26	4,290.23	-1,179.52	-4,210.94	494,803.06	649,409.04	32.35940075	-103.84946603	0.00	0.00	0.00
Second Bone Spring B Ss.	12,800.00	90.60	269.88	9,771.20	6,396.20	4,389.94	-1,179.72	-4,310.93	494,802.85	649,309.05	32.35940142	-103.84978984	0.00	0.00	0.00
	12,900.00	90.60	269.88	9,770.15	6,395.15	4,489.64	-1,179.93	-4,410.92	494,802.65	649,209.07	32.35940209	-103.85011364	0.00	0.00	0.00
	13,000.00	90.60	269.88	9,769.10	6,394.10	4,589.35	-1,180.14	-4,510.92	494,802.44	649,109.08	32.35940275	-103.85043743	0.00	0.00	0.00
	13,100.00	90.60	269.88	9,768.04	6,393.04	4,689.05	-1,180.35	-4,610.91	494,802.23	649,009.09	32.35940342	-103.85076126	0.00	0.00	0.00
	13,200.00	90.60	269.88	9,766.99	6,391.99	4,788.76	-1,180.56	-4,710.91	494,802.02	648,909.10	32.35940409	-103.85108507	0.00	0.00	0.00
Second Bone Spring B Ss.	13,300.00	90.60	269.88	9,765.94	6,390.94	4,888.46	-1,180.76	-4,810.90	494,801.81	648,809.12	32.35940475	-103.85140887	0.00	0.00	0.00
	13,400.00	9													

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)	DLS (°/100ft)	BR (°/100ft)	TR (°/100ft)
	21,700.00	90.60	269.88	9,677.46	6,302.46	13,263.66	-1,198.24	-13,210.42	494,784.34	640,410.15	32.35945772	-103.87860874	0.00	0.00	0.00
	21,800.00	90.60	269.88	9,676.41	6,301.41	13,363.36	-1,198.45	-13,310.41	494,784.13	640,310.17	32.35945832	-103.87893255	0.00	0.00	0.00
	21,900.00	90.60	269.88	9,675.36	6,300.36	13,463.07	-1,198.66	-13,410.41	494,783.92	640,210.18	32.35945891	-103.87925636	0.00	0.00	0.00
	22,000.00	90.60	269.88	9,674.31	6,299.31	13,562.77	-1,198.87	-13,510.40	494,783.71	640,110.19	32.35945951	-103.87958017	0.00	0.00	0.00
	22,100.00	90.60	269.88	9,673.25	6,298.25	13,662.48	-1,199.07	-13,610.39	494,783.51	640,010.20	32.35946010	-103.87990398	0.00	0.00	0.00
	22,200.00	90.60	269.88	9,672.20	6,297.20	13,762.18	-1,199.28	-13,710.39	494,783.30	639,910.21	32.35946069	-103.88022778	0.00	0.00	0.00
	22,300.00	90.60	269.88	9,671.15	6,296.15	13,861.89	-1,199.49	-13,810.38	494,783.09	639,810.23	32.35946128	-103.88055159	0.00	0.00	0.00
	22,400.00	90.60	269.88	9,670.09	6,295.09	13,961.59	-1,199.70	-13,910.38	494,782.88	639,710.24	32.35946187	-103.88087540	0.00	0.00	0.00
	22,500.00	90.60	269.88	9,669.04	6,294.04	14,061.29	-1,199.91	-14,010.37	494,782.67	639,610.25	32.35946246	-103.88119921	0.00	0.00	0.00
	22,600.00	90.60	269.88	9,667.99	6,292.99	14,161.00	-1,200.11	-14,110.37	494,782.47	639,510.26	32.35946305	-103.88152302	0.00	0.00	0.00
	22,700.00	90.60	269.88	9,666.93	6,291.93	14,260.70	-1,200.32	-14,210.36	494,782.26	639,410.28	32.35946364	-103.88184683	0.00	0.00	0.00
	22,800.00	90.60	269.88	9,665.88	6,290.88	14,360.41	-1,200.53	-14,310.35	494,782.05	639,310.29	32.35946422	-103.88217064	0.00	0.00	0.00
	22,900.00	90.60	269.88	9,664.83	6,289.83	14,460.11	-1,200.74	-14,410.35	494,781.84	639,210.30	32.35946481	-103.88249444	0.00	0.00	0.00
	23,000.00	90.60	269.88	9,663.77	6,288.77	14,559.82	-1,200.95	-14,510.34	494,781.63	639,110.31	32.35946540	-103.88281825	0.00	0.00	0.00
	23,100.00	90.60	269.88	9,662.72	6,287.72	14,659.52	-1,201.15	-14,610.34	494,781.42	639,010.33	32.35946598	-103.88314206	0.00	0.00	0.00
	23,200.00	90.60	269.88	9,661.67	6,286.67	14,759.23	-1,201.36	-14,710.33	494,781.22	638,910.34	32.35946656	-103.88346587	0.00	0.00	0.00
	23,300.00	90.60	269.88	9,660.61	6,285.61	14,858.93	-1,201.57	-14,810.33	494,781.01	638,810.35	32.35946715	-103.88378968	0.00	0.00	0.00
	23,400.00	90.60	269.88	9,659.56	6,284.56	14,958.64	-1,201.78	-14,910.32	494,780.80	638,710.36	32.35946773	-103.88411349	0.00	0.00	0.00
	23,500.00	90.60	269.88	9,658.51	6,283.51	15,058.34	-1,201.99	-15,010.31	494,780.59	638,610.38	32.35946831	-103.88443730	0.00	0.00	0.00
	23,600.00	90.60	269.88	9,657.45	6,282.45	15,158.05	-1,202.19	-15,110.31	494,780.38	638,510.39	32.35946889	-103.88476111	0.00	0.00	0.00
	23,700.00	90.60	269.88	9,656.40	6,281.40	15,257.75	-1,202.40	-15,210.30	494,780.18	638,410.40	32.35946947	-103.88508492	0.00	0.00	0.00
	23,800.00	90.60	269.88	9,655.35	6,280.35	15,357.46	-1,202.61	-15,310.30	494,779.97	638,310.41	32.35947005	-103.88540872	0.00	0.00	0.00
XTO James Ranch Unit DI 2 707	23,832.92	90.60	269.88	9,655.00	6,280.00	15,390.27	-1,202.68	-15,343.21	494,779.90	638,277.50	32.35947024	-103.88551531	0.00	0.00	0.00

Survey Type: Def Plan

Survey Error Model: ISCWSA0 2 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	529.000	1/100.000	17.500			A008Mb_MWD+IFR1+MS	James Ranch Unit DI 2 707H / X'
	1	529.000	3,300.000	1/100.000	12.250			A008Mb_MWD+IFR1+MS	James Ranch Unit DI 2 707H / X'
	1	3,300.000	8,000.000	1/100.000	8.750			A008Mb_MWD+IFR1+MS	James Ranch Unit DI 2 707H / X'
	1	8,000.000	23,833.588	1/100.000	6.750			A008Mb_MWD+IFR1+MS	James Ranch Unit DI 2 707H / X'



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

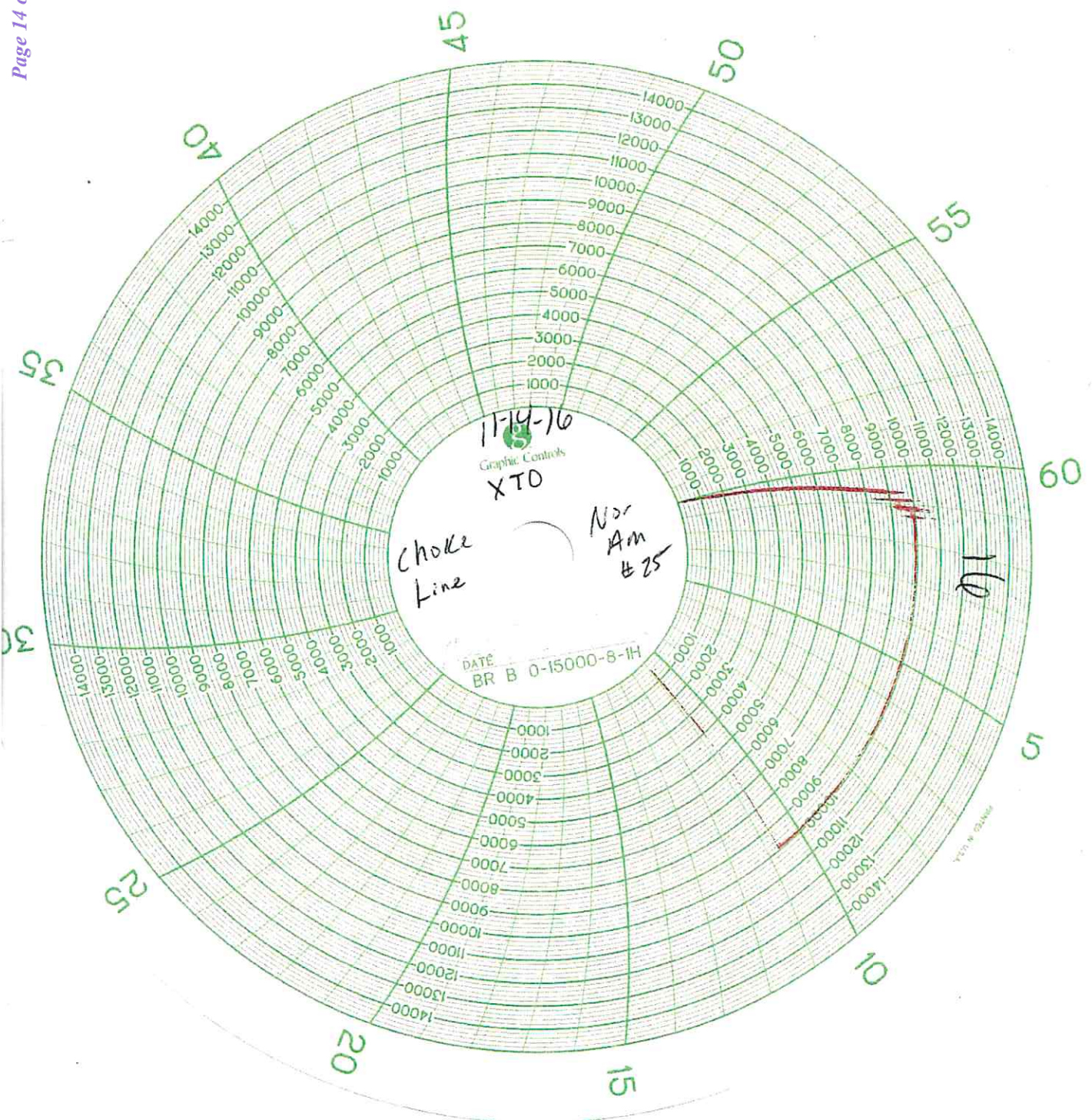
GRADE D PRESSURE TEST CERTIFICATE

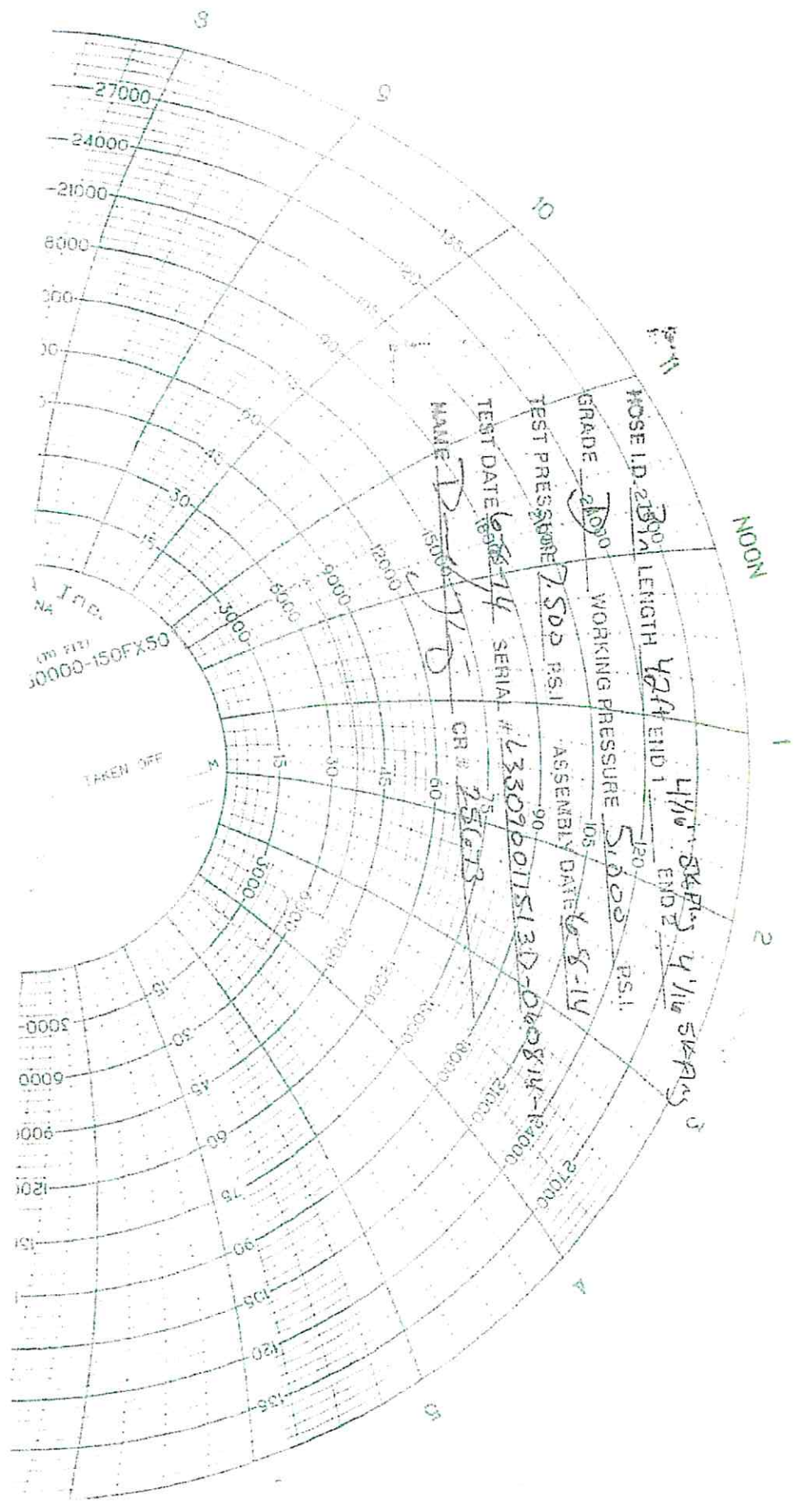
Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	NORMA
Product Description:	FD3.042.0R41/16.5KFLGE/E LE		
End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

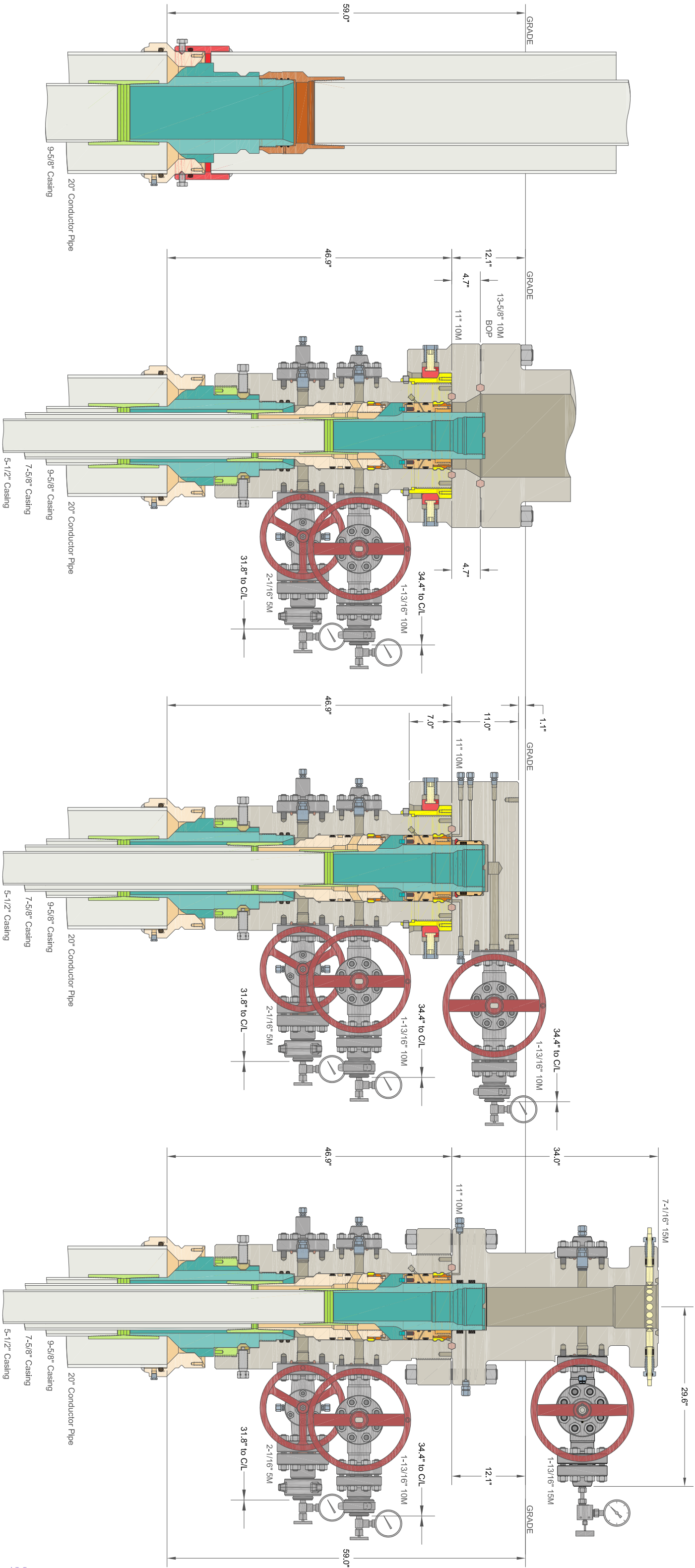
Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance 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







CACTUS WELLHEAD LLC

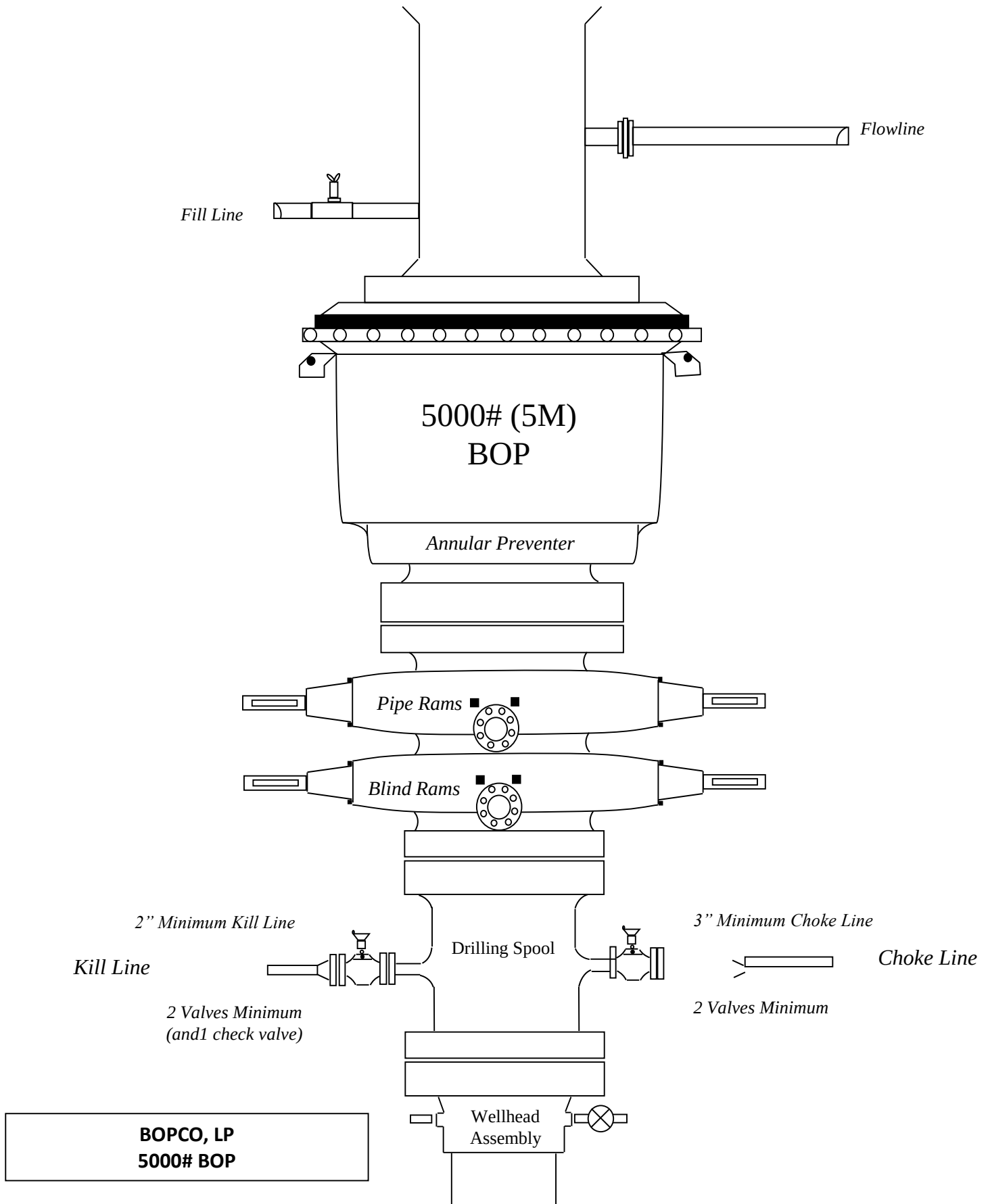
XTO ENERGY INC
ICARUS PAD

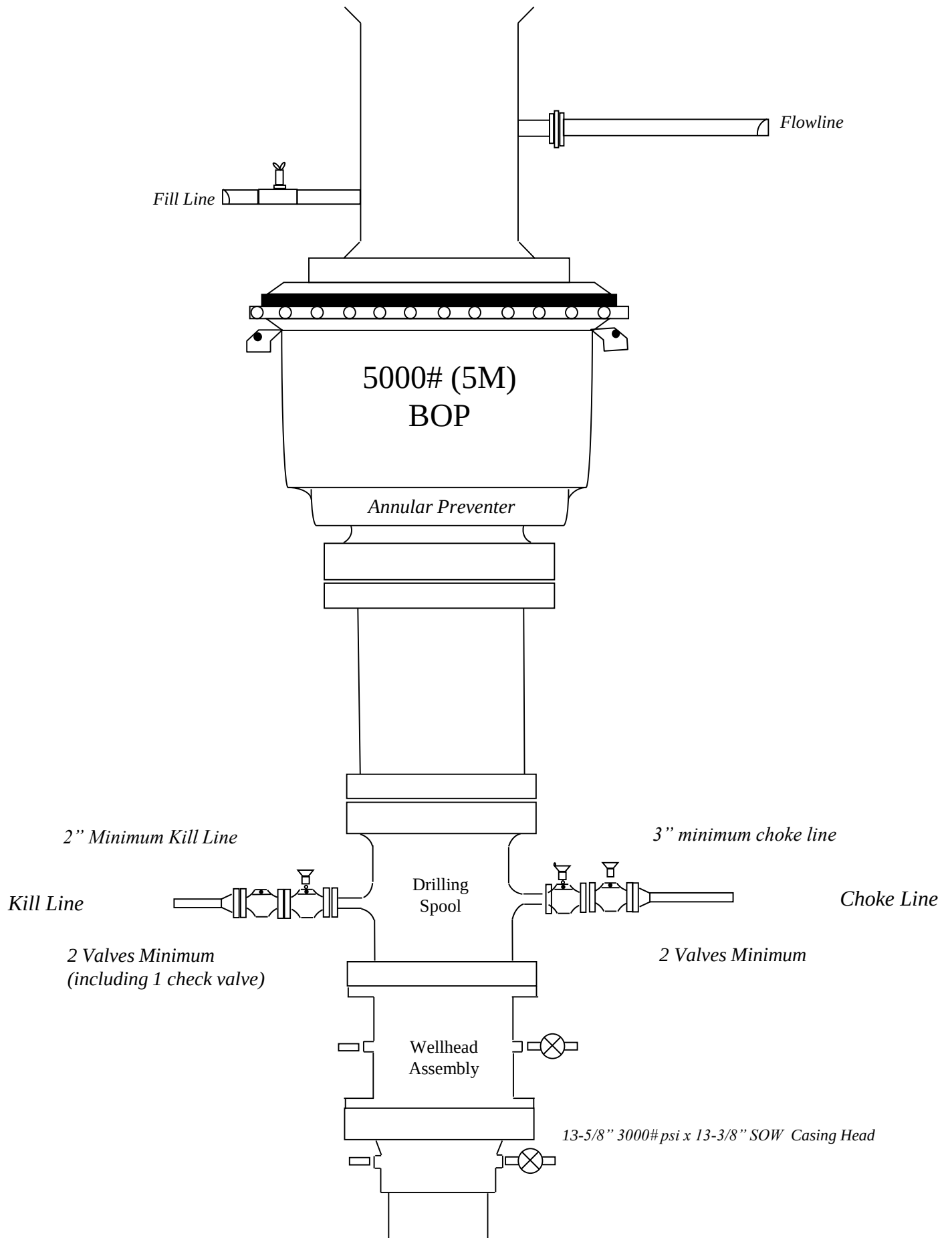
ALL DIMENSIONS APPROXIMATE

20" x 9-5/8" x 7-5/8" x 5-1/2" MBU-T-CFL-R-DBLO Wellhead
With 11" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head
And 9-5/8", 7-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers

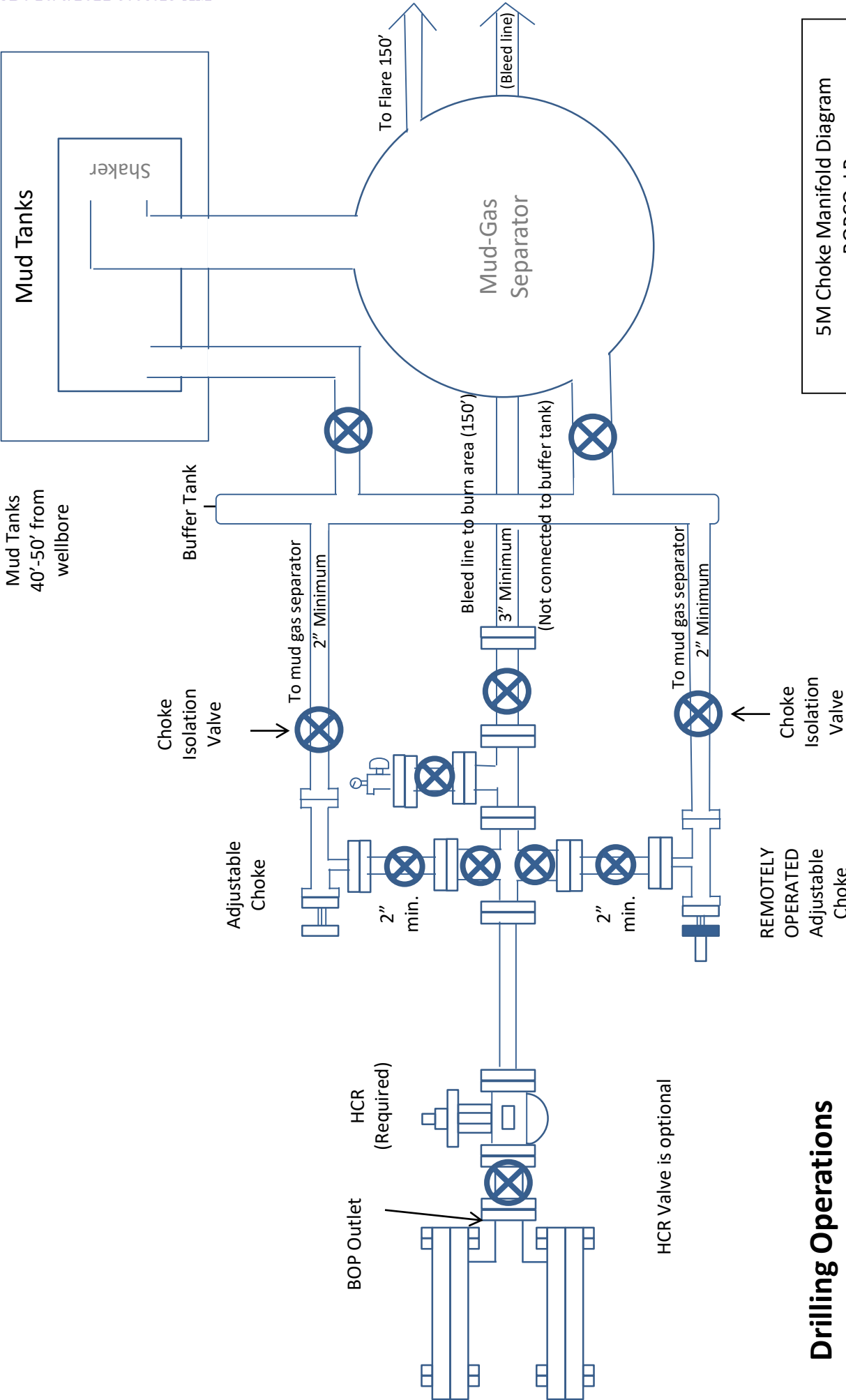
DRAWN	DLE	18JAN21
APPRV		

DRAWING NO. HBE0000479





BOPCO, LP
5000# BOP



**Drilling Operations
Choke Manifold
5M Service**

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

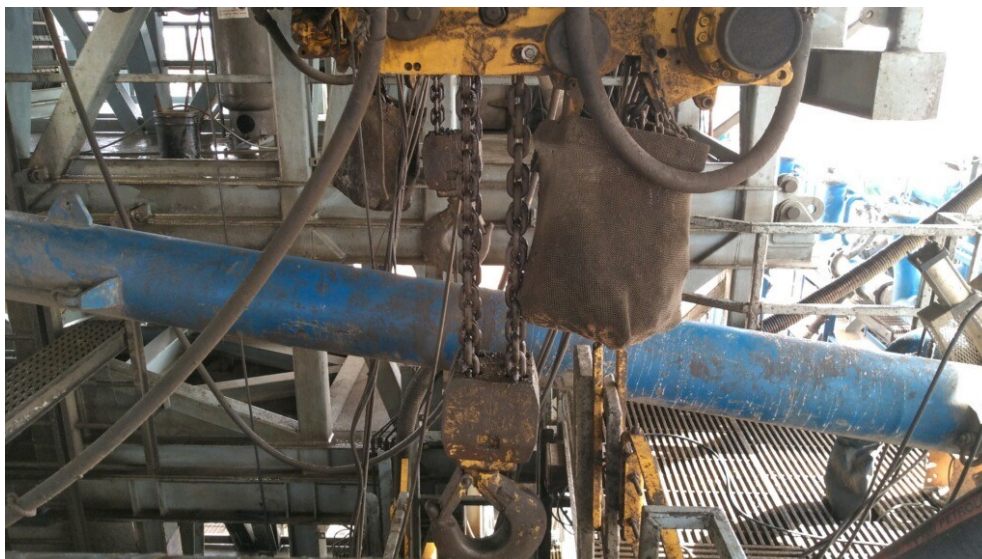


Figure 2: BOP Winch System

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.

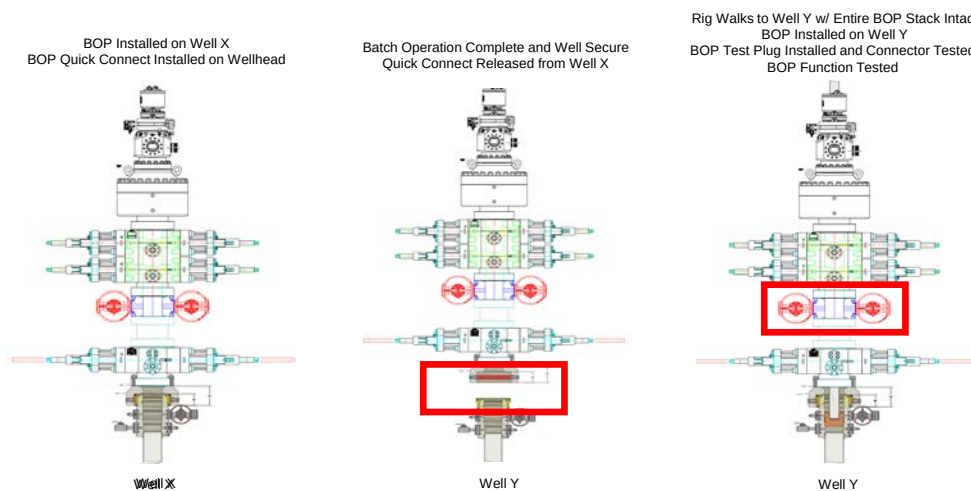
XTO Energy feels break testing and our current procedures meet the intent of OOGO No. 2 and often exceed it. There has been no evidence that break testing results in more components failing than seen on full BOP tests. XTO Energy's internal standards requires complete BOPE tests more often than that 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.

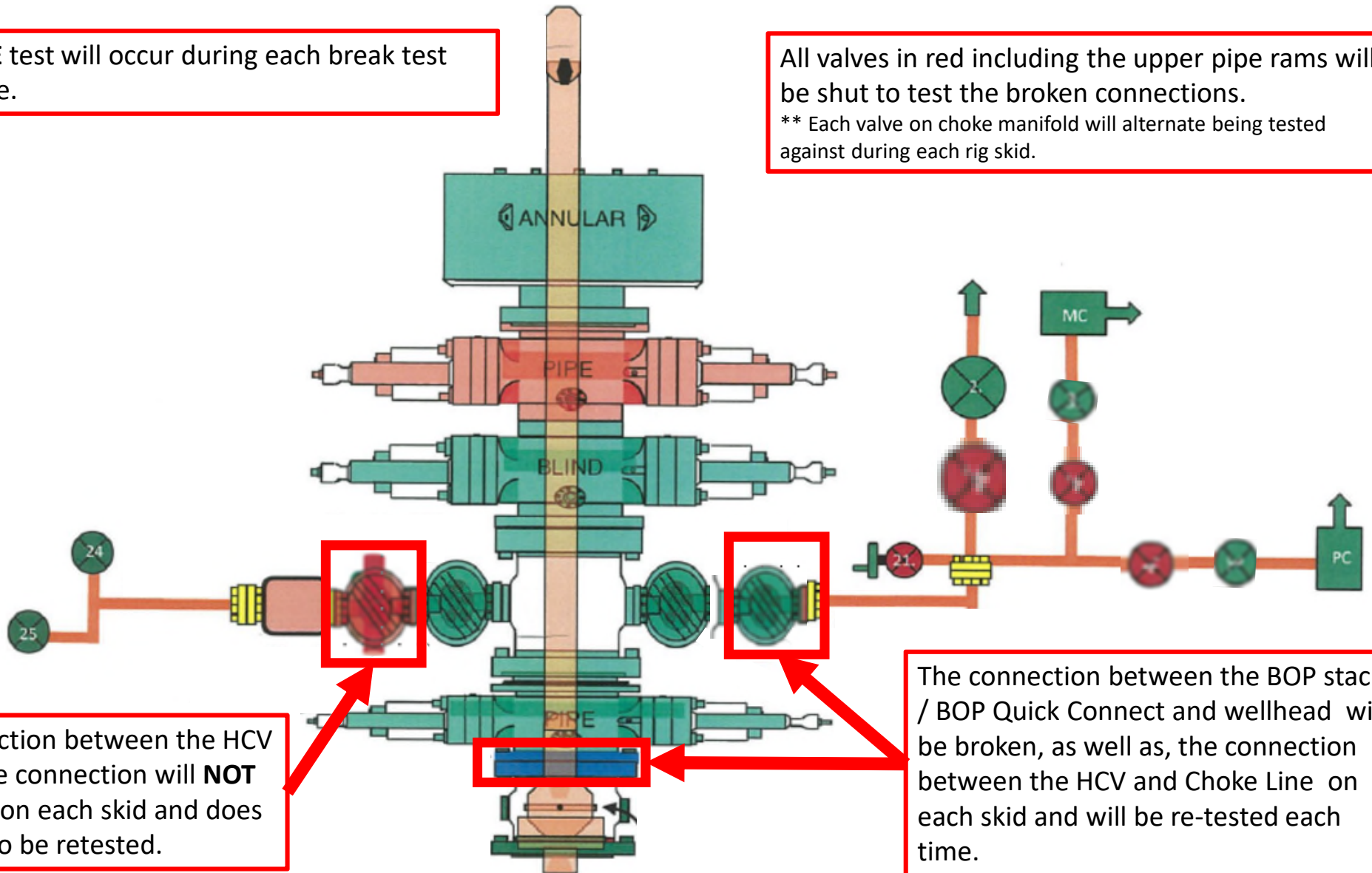
Based on discussions with the BLM on February 27th 2020 and the supporting documentation submitted to the BLM, we will request permission to **ONLY** retest broken pressure seals if the following conditions are met:

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.

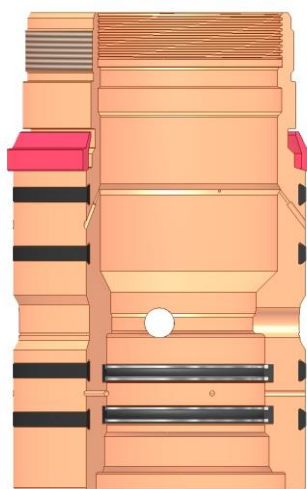
1. Cement Program

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

2. Offline Cementing Procedure

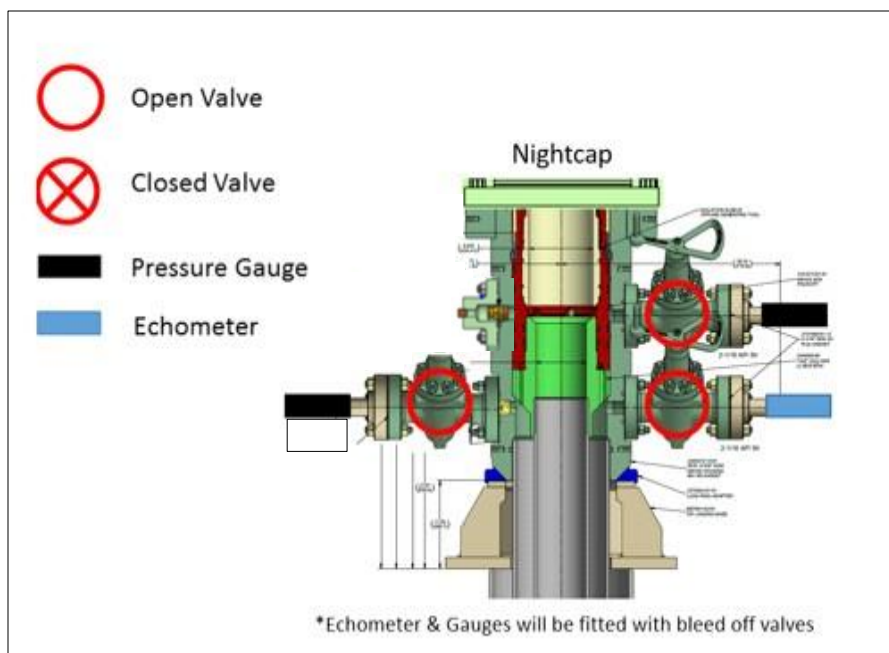
The operational sequence will be as follows. If a well control event occurs, the BLM will be contacted for approval prior to conducting offline cementing operations.

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 nipped 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.



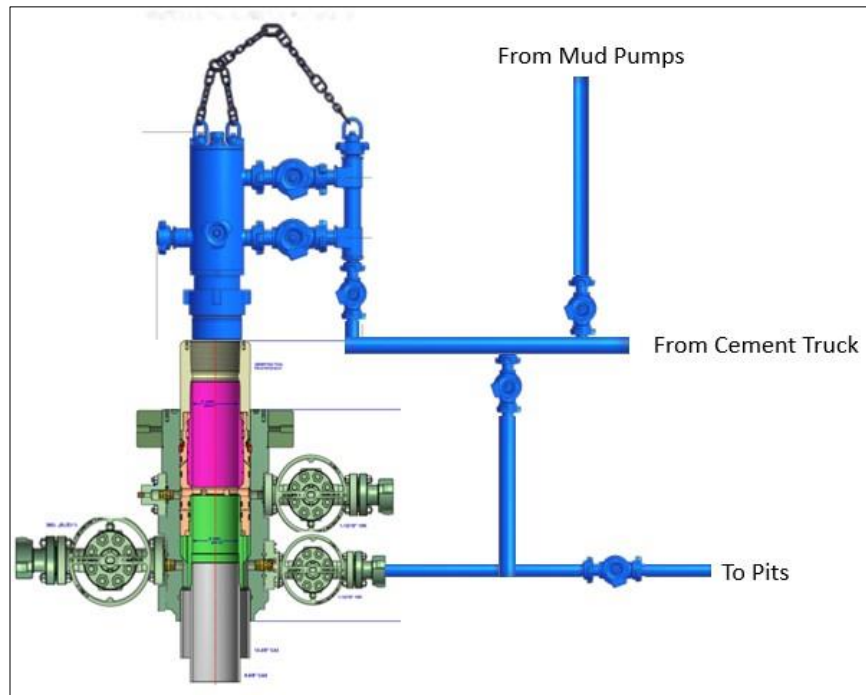
Annular packoff with both external and internal seals

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.

Conditions of Approval

BOP Break Testing Variance (Note: Shell testing is not approved for any portion of the hole with a MASP of 5000 psi or greater)

- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOP Break Testing operations.

A full BOP test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOP test will be required.

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 149205

CONDITIONS

Operator: XTO PERMIAN OPERATING LLC. 6401 HOLIDAY HILL ROAD MIDLAND, TX 79707	OGRID: 373075
	Action Number: 149205
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
jagarcia	Adhere to previous COAs	3/29/2023
jagarcia	New property code is 326259	3/29/2023