



Received
Jul 24, 2019
Dist. II-DED

XTO Energy

Eddy County, NM (NAD-27)

Big Eddy Unit (John Wayne)

Rio Bravo #107H 3D-015-46224

Wellbore #1

Plan: PERMIT

Standard Planning Report

15 February, 2019



Project: Eddy County, NM (NAD-27)
Site: Big Eddy Unit (John Wayne)
Well: Rio Bravo #107H
Wellbore: Wellbore #1
Design: PERMIT

PROJECT DETAILS: Eddy County, NM (NAD-27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BEU Rio Bravo 107H: SHL (215' FNL & 410' FWL)	0.00	0.00	0.00	524818.10	598688.20	32.442432	-104.013434	Point
BEU Rio Bravo 107H: FTP/LP	8717.00	-185.00	0.60	524633.10	598688.80	32.441923	-104.013434	Point
BEU Rio Bravo 107H: LTP	8744.69	-4721.80	20.40	520096.30	598708.60	32.429452	-104.013414	Point
BEU Rio Bravo 107H: PBHL (50' FSL & 410' FWL)	8745.00	-4771.80	20.70	520046.30	598708.90	32.429314	-104.013413	Point

WELL DETAILS: Rio Bravo #107H

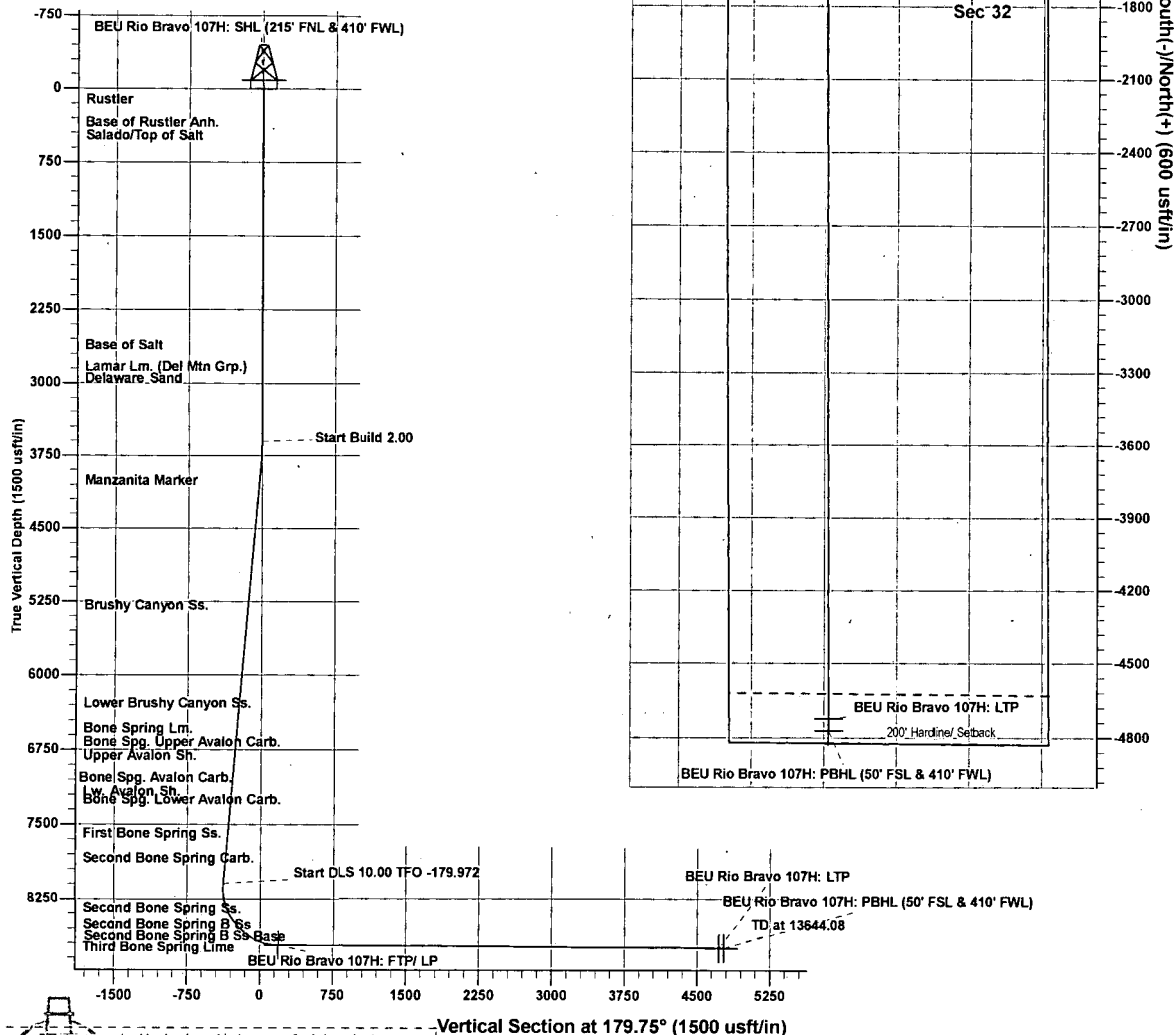
Rig Name: RKB = 28 @ 3317.00usft Ground Level: 3292.00							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
0.00	0.00	524818.10	598688.20	32.442432	-104.013434		

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00
2	3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.000	0.00
3	3850.03	5.00	359.72	3849.71	10.90	-0.05	2.00	359.721	-10.90
4	8110.64	5.00	359.72	8094.11	382.27	-1.86	0.00	0.000	-382.28
5	9057.15	89.65	179.75	8717.00	-185.00	0.60	10.00	-179.972	185.00
6	13594.08	89.65	179.75	8744.69	-4721.80	20.48	0.00	0.000	4721.84
7	13644.08	89.65	179.75	8745.00	-4771.80	20.70	0.00	0.000	4771.84

FORMATION TOP DETAILS

TVDPath	Formation
188.00	Rustler
482.00	Base of Rustler Anh.
553.00	Salado/Top of Salt
2690.00	Base of Salt
2907.00	Lamar Lm. (Del Mtn Grp.)
3027.00	Delaware Sand
4087.00	Manzanita Marker
5365.00	Brushy Canyon Ss.
6359.00	Lower Brushy Canyon Ss.
6650.00	Bone Spring Lm.
6742.00	Avalon Ss.
6777.00	Bone Spg. Upper Avalon Carb.
6842.00	Upper Avalon Sh.
7107.00	Bone Spg. Avalon Carb.
7245.00	Lw. Avalon Sh.
7327.00	Bone Spg. Lower Avalon Carb.
7666.00	First Bone Spring Ss.
7917.00	Second Bone Spring Carb.
8426.00	Second Bone Spring Ss.
8635.00	Second Bone Spring B Ss
8717.00	Landing Point



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented. Any decisions made or wells drilled utilizing this or any other information supplied by Prototype are at the sole risk and responsibility of the customer.

Plan: PERMIT (Rio Bravo #107H/Wellbore #1)

Created By: Matthew May Date: 8/18, February 15 2019

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-	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name BIG EDDY UNIT RIO BRAVO STATE	⁶ Well Number 108H
⁷ OGRID No. 260737	⁸ Operator Name XTO PERMIAN OPERATING, LLC.	⁹ Elevation 3,292'

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
D	32	21 S	29 E		215	NORTH	410	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
L1	32	21 S	29 E		50	SOUTH	410	WEST	EDDY

¹² Dedicated Acres	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 	SURFACE LOCATION NAD 27 NME Y= 524,818.1 X= 598,688.2 LAT.= 32.442431°N LONG.= 104.013434°W LAST TAKE POINT NAD 27 NME Y= 520,096.3 X= 598,708.6 LAT.= 32.429452°N LONG.= 104.013414°W FIRST TAKE POINT NAD 27 NME Y= 524,633.1 X= 598,688.8 LAT.= 32.441923°N LONG.= 104.013434°W BOTTOM HOLE LOCATION NAD 27 NME Y= 520,046.3 X= 598,708.9 LAT.= 32.429314°N LONG.= 104.013413°W CORNER COORDINATES TABLE NAD 27 NME A - Y= 525,032.2 N, X= 598,277.7 E B - Y= 525,034.9 N, X= 599,598.5 E C - Y= 522,390.3 N, X= 598,285.0 E D - Y= 522,393.7 N, X= 599,606.6 E E - Y= 519,998.8 N, X= 598,299.1 E F - Y= 519,997.5 N, X= 598,541.7 E G - Y= 519,989.6 N, X= 599,618.0 E	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____ E-mail Address _____
	SURFACE LOCATION NAD 83 NME Y= 524,878.8 X= 639,869.1 LAT.= 32.442552°N LONG.= 104.013934°W LAST TAKE POINT NAD 83 NME Y= 520,156.9 X= 639,889.6 LAT.= 32.429572°N LONG.= 104.013914°W FIRST TAKE POINT NAD 83 NME Y= 524,693.8 X= 639,869.7 LAT.= 32.442043°N LONG.= 104.013934°W BOTTOM HOLE LOCATION NAD 83 NME Y= 520,106.9 X= 639,889.9 LAT.= 32.429435°N LONG.= 103.013913°W CORNER COORDINATES TABLE NAD 83 NME A - Y= 525,092.9 N, X= 639,458.6 E B - Y= 525,095.7 N, X= 640,779.4 E C - Y= 522,451.0 N, X= 639,465.9 E D - Y= 522,454.4 N, X= 640,787.6 E E - Y= 520,059.4 N, X= 639,480.1 E F - Y= 520,058.1 N, X= 639,722.7 E G - Y= 520,050.2 N, X= 640,799.0 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. 02-01-2019 Date of Survey Signature and Seal of Professional Surveyor: _____	
	MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR MARK DILLON HARP 23786 Certificate Number DH 2018123066	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Rio Bravo #107H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3317.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3317.00usft
Site:	Big Eddy Unit (John Wayne)	North Reference:	Grid
Well:	Rio Bravo #107H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Project	Eddy County, NM (NAD-27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Big Eddy Unit (John Wayne)		
Site Position:		Northing:	524,818.10 usft
From:	Map	Easting:	598,718.20 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.442431
		Longitude:	-104.013337
		Grid Convergence:	0.172 °

Well	Rio Bravo #107H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	-30.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32.442432
		Longitude:	-104.013434
		Ground Level:	3,292.00 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	2/15/2019	6.996
			Dip Angle
			60.171
			Field Strength
			47,850

Design	PERMIT		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			179.75

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.000	
3,850.03	5.00	359.72	3,849.71	10.90	-0.05	2.00	2.00	0.00	359.721	
8,110.64	5.00	359.72	8,094.11	382.27	-1.86	0.00	0.00	0.00	0.000	
9,057.15	89.65	179.75	8,717.00	-185.00	0.60	10.00	8.94	-19.01	-179.972	BEU Rio Bravo 107
13,594.08	89.65	179.75	8,744.69	-4,721.80	20.48	0.00	0.00	0.00	0.000	BEU Rio Bravo 107
13,644.08	89.65	179.75	8,745.00	-4,771.80	20.70	0.00	0.00	0.00	0.000	BEU Rio Bravo 107



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Rio Bravo #107H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3317.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3317.00usft
Site:	Big Eddy Unit (John Wayne)	North Reference:	Grid
Well:	Rio Bravo #107H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
BEU Rio Bravo 107H: SHL (215' FNL & 410' FWL)										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
188.00	0.00	0.00	188.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rustler										
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
482.00	0.00	0.00	482.00	0.00	0.00	0.00	0.00	0.00	0.00	
Base of Rustler Anh.										
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
553.00	0.00	0.00	553.00	0.00	0.00	0.00	0.00	0.00	0.00	
Salado/Top of Salt										
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,690.00	0.00	0.00	2,690.00	0.00	0.00	0.00	0.00	0.00	0.00	
Base of Salt										
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,907.00	0.00	0.00	2,907.00	0.00	0.00	0.00	0.00	0.00	0.00	
Lamar Lm. (Del Mtn Grp.)										
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,027.00	0.00	0.00	3,027.00	0.00	0.00	0.00	0.00	0.00	0.00	
Delaware Sand										
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,700.00	2.00	359.72	3,699.98	1.75	-0.01	-1.75	2.00	2.00	0.00	
3,800.00	4.00	359.72	3,799.84	6.98	-0.03	-6.98	2.00	2.00	0.00	
3,850.03	5.00	359.72	3,849.71	10.90	-0.05	-10.90	2.00	2.00	0.00	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Rio Bravo #107H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3317.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3317.00usft
Site:	Big Eddy Unit (John Wayne)	North Reference:	Grid
Well:	Rio Bravo #107H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
3,900.00	5.00	359.72	3,899.49	15.26	-0.07	-15.26	0.00	0.00	0.00	
4,000.00	5.00	359.72	3,999.11	23.98	-0.12	-23.98	0.00	0.00	0.00	
4,088.22	5.00	359.72	4,087.00	31.67	-0.15	-31.67	0.00	0.00	0.00	
Manzanita Marker										
4,100.00	5.00	359.72	4,098.73	32.69	-0.16	-32.69	0.00	0.00	0.00	
4,200.00	5.00	359.72	4,198.35	41.41	-0.20	-41.41	0.00	0.00	0.00	
4,300.00	5.00	359.72	4,297.97	50.12	-0.24	-50.13	0.00	0.00	0.00	
4,400.00	5.00	359.72	4,397.59	58.84	-0.29	-58.84	0.00	0.00	0.00	
4,500.00	5.00	359.72	4,497.21	67.56	-0.33	-67.56	0.00	0.00	0.00	
4,600.00	5.00	359.72	4,596.83	76.27	-0.37	-76.27	0.00	0.00	0.00	
4,700.00	5.00	359.72	4,696.45	84.99	-0.41	-84.99	0.00	0.00	0.00	
4,800.00	5.00	359.72	4,796.07	93.71	-0.46	-93.71	0.00	0.00	0.00	
4,900.00	5.00	359.72	4,895.69	102.42	-0.50	-102.42	0.00	0.00	0.00	
5,000.00	5.00	359.72	4,995.31	111.14	-0.54	-111.14	0.00	0.00	0.00	
5,100.00	5.00	359.72	5,094.93	119.86	-0.58	-119.86	0.00	0.00	0.00	
5,200.00	5.00	359.72	5,194.54	128.57	-0.63	-128.57	0.00	0.00	0.00	
5,300.00	5.00	359.72	5,294.16	137.29	-0.67	-137.29	0.00	0.00	0.00	
5,371.11	5.00	359.72	5,365.00	143.49	-0.70	-143.49	0.00	0.00	0.00	
Brushy Canyon Ss.										
5,400.00	5.00	359.72	5,393.78	146.00	-0.71	-146.01	0.00	0.00	0.00	
5,500.00	5.00	359.72	5,493.40	154.72	-0.75	-154.72	0.00	0.00	0.00	
5,600.00	5.00	359.72	5,593.02	163.44	-0.80	-163.44	0.00	0.00	0.00	
5,700.00	5.00	359.72	5,692.64	172.15	-0.84	-172.16	0.00	0.00	0.00	
5,800.00	5.00	359.72	5,792.26	180.87	-0.88	-180.87	0.00	0.00	0.00	
5,900.00	5.00	359.72	5,891.88	189.59	-0.92	-189.59	0.00	0.00	0.00	
6,000.00	5.00	359.72	5,991.50	198.30	-0.96	-198.31	0.00	0.00	0.00	
6,100.00	5.00	359.72	6,091.12	207.02	-1.01	-207.02	0.00	0.00	0.00	
6,200.00	5.00	359.72	6,190.74	215.74	-1.05	-215.74	0.00	0.00	0.00	
6,300.00	5.00	359.72	6,290.36	224.45	-1.09	-224.45	0.00	0.00	0.00	
6,368.90	5.00	359.72	6,359.00	230.46	-1.12	-230.46	0.00	0.00	0.00	
Lower Brushy Canyon Ss.										
6,400.00	5.00	359.72	6,389.98	233.17	-1.13	-233.17	0.00	0.00	0.00	
6,500.00	5.00	359.72	6,489.60	241.88	-1.18	-241.89	0.00	0.00	0.00	
6,600.00	5.00	359.72	6,589.22	250.60	-1.22	-250.60	0.00	0.00	0.00	
6,661.02	5.00	359.72	6,650.00	255.92	-1.25	-255.92	0.00	0.00	0.00	
Bone Spring Lm.										
6,700.00	5.00	359.72	6,688.84	259.32	-1.26	-259.32	0.00	0.00	0.00	
6,753.37	5.00	359.72	6,742.00	263.97	-1.28	-263.97	0.00	0.00	0.00	
Avalon Ss.										
6,788.50	5.00	359.72	6,777.00	267.03	-1.30	-267.03	0.00	0.00	0.00	
Bone Spg. Upper Avalon Carb.										
6,800.00	5.00	359.72	6,788.46	268.03	-1.30	-268.04	0.00	0.00	0.00	
6,853.75	5.00	359.72	6,842.00	272.72	-1.33	-272.72	0.00	0.00	0.00	
Upper Avalon Sh.										
6,900.00	5.00	359.72	6,888.07	276.75	-1.35	-276.75	0.00	0.00	0.00	
7,000.00	5.00	359.72	6,987.69	285.47	-1.39	-285.47	0.00	0.00	0.00	
7,100.00	5.00	359.72	7,087.31	294.18	-1.43	-294.19	0.00	0.00	0.00	
7,119.76	5.00	359.72	7,107.00	295.91	-1.44	-295.91	0.00	0.00	0.00	
Bone Spg. Avalon Carb.										
7,200.00	5.00	359.72	7,186.93	302.90	-1.47	-302.90	0.00	0.00	0.00	
7,258.29	5.00	359.72	7,245.00	307.98	-1.50	-307.98	0.00	0.00	0.00	
Lw. Avalon Sh.										
7,300.00	5.00	359.72	7,286.55	311.62	-1.52	-311.62	0.00	0.00	0.00	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Rio Bravo #107H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3317.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3317.00usft
Site:	Big Eddy Unit (John Wayne)	North Reference:	Grid
Well:	Rio Bravo #107H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,340.60	5.00	359.72	7,327.00	315.15	-1.53	-315.16	0.00	0.00	0.00
Bone Spg. Lower Avalon Carb.									
7,400.00	5.00	359.72	7,386.17	320.33	-1.56	-320.34	0.00	0.00	0.00
7,500.00	5.00	359.72	7,485.79	329.05	-1.60	-329.05	0.00	0.00	0.00
7,600.00	5.00	359.72	7,585.41	337.76	-1.64	-337.77	0.00	0.00	0.00
7,680.90	5.00	359.72	7,666.00	344.82	-1.68	-344.82	0.00	0.00	0.00
First Bone Spring Ss.									
7,700.00	5.00	359.72	7,685.03	346.48	-1.69	-346.49	0.00	0.00	0.00
7,800.00	5.00	359.72	7,784.65	355.20	-1.73	-355.20	0.00	0.00	0.00
7,900.00	5.00	359.72	7,884.27	363.91	-1.77	-363.92	0.00	0.00	0.00
7,932.86	5.00	359.72	7,917.00	366.78	-1.78	-366.78	0.00	0.00	0.00
Second Bone Spring Carb.									
8,000.00	5.00	359.72	7,983.89	372.63	-1.81	-372.63	0.00	0.00	0.00
8,100.00	5.00	359.72	8,083.51	381.35	-1.86	-381.35	0.00	0.00	0.00
8,110.64	5.00	359.72	8,094.11	382.27	-1.86	-382.28	0.00	0.00	0.00
8,150.00	1.06	359.62	8,133.40	384.36	-1.87	-384.36	10.00	-10.00	-0.26
8,200.00	3.94	179.78	8,183.37	383.10	-1.87	-383.11	10.00	5.74	-359.67
8,250.00	8.94	179.76	8,233.04	377.50	-1.84	-377.51	10.00	10.00	-0.04
8,300.00	13.94	179.76	8,282.03	367.59	-1.80	-367.60	10.00	10.00	-0.01
8,350.00	18.94	179.76	8,329.98	353.45	-1.74	-353.46	10.00	10.00	-0.01
8,400.00	23.94	179.75	8,376.50	335.18	-1.67	-335.19	10.00	10.00	0.00
8,450.00	28.94	179.75	8,421.26	312.93	-1.57	-312.94	10.00	10.00	0.00
8,455.43	29.48	179.75	8,426.00	310.28	-1.56	-310.29	10.00	10.00	0.00
Second Bone Spring Ss.									
8,500.00	33.94	179.75	8,463.91	286.86	-1.46	-286.87	10.00	10.00	0.00
8,550.00	38.94	179.75	8,504.12	257.18	-1.33	-257.18	10.00	10.00	0.00
8,600.00	43.94	179.75	8,541.60	224.10	-1.19	-224.10	10.00	10.00	0.00
8,650.00	48.94	179.75	8,576.04	187.88	-1.03	-187.89	10.00	10.00	0.00
8,700.00	53.94	179.75	8,607.20	148.80	-0.86	-148.80	10.00	10.00	0.00
8,750.00	58.94	179.75	8,634.84	107.15	-0.68	-107.15	10.00	10.00	0.00
8,750.31	58.97	179.75	8,635.00	106.88	-0.68	-106.89	10.00	10.00	0.00
Second Bone Spring B Ss									
8,800.00	63.94	179.75	8,658.74	63.25	-0.49	-63.25	10.00	10.00	0.00
8,850.00	68.94	179.75	8,678.72	17.44	-0.29	-17.44	10.00	10.00	0.00
8,900.00	73.94	179.75	8,694.64	-29.95	-0.08	-29.95	10.00	10.00	0.00
8,950.00	78.94	179.75	8,706.36	-78.54	0.13	78.53	10.00	10.00	0.00
9,000.00	83.94	179.75	8,713.80	-127.96	0.35	127.96	10.00	10.00	0.00
9,050.00	88.94	179.75	8,716.91	-177.85	0.57	177.85	10.00	10.00	0.00
9,057.15	89.65	179.75	8,717.00	-185.00	0.60	185.00	10.00	10.00	0.00
Landing Point - BEU Rio Bravo 107H: FTP/ LP									
9,100.00	89.65	179.75	8,717.26	-227.85	0.79	227.85	0.00	0.00	0.00
9,200.00	89.65	179.75	8,717.87	-327.84	1.23	327.85	0.00	0.00	0.00
9,300.00	89.65	179.75	8,718.48	-427.84	1.66	427.84	0.00	0.00	0.00
9,400.00	89.65	179.75	8,719.09	-527.84	2.10	527.84	0.00	0.00	0.00
9,500.00	89.65	179.75	8,719.70	-627.84	2.54	627.84	0.00	0.00	0.00
9,600.00	89.65	179.75	8,720.31	-727.83	2.98	727.84	0.00	0.00	0.00
9,700.00	89.65	179.75	8,720.92	-827.83	3.42	827.84	0.00	0.00	0.00
9,800.00	89.65	179.75	8,721.53	-927.83	3.86	927.83	0.00	0.00	0.00
9,900.00	89.65	179.75	8,722.15	-1,027.82	4.29	1,027.83	0.00	0.00	0.00
10,000.00	89.65	179.75	8,722.76	-1,127.82	4.73	1,127.83	0.00	0.00	0.00
10,100.00	89.65	179.75	8,723.37	-1,227.82	5.17	1,227.83	0.00	0.00	0.00
10,200.00	89.65	179.75	8,723.98	-1,327.82	5.61	1,327.83	0.00	0.00	0.00
10,300.00	89.65	179.75	8,724.59	-1,427.81	6.05	1,427.83	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Rio Bravo #107H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3317.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3317.00usft
Site:	Big Eddy Unit (John Wayne)	North Reference:	Grid
Well:	Rio Bravo #107H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,400.00	89.65	179.75	8,725.20	-1,527.81	6.48	1,527.82	0.00	0.00	0.00
10,500.00	89.65	179.75	8,725.81	-1,627.81	6.92	1,627.82	0.00	0.00	0.00
10,600.00	89.65	179.75	8,726.42	-1,727.80	7.36	1,727.82	0.00	0.00	0.00
10,700.00	89.65	179.75	8,727.03	-1,827.80	7.80	1,827.82	0.00	0.00	0.00
10,800.00	89.65	179.75	8,727.64	-1,927.80	8.24	1,927.82	0.00	0.00	0.00
10,900.00	89.65	179.75	8,728.25	-2,027.80	8.68	2,027.81	0.00	0.00	0.00
11,000.00	89.65	179.75	8,728.86	-2,127.79	9.11	2,127.81	0.00	0.00	0.00
11,100.00	89.65	179.75	8,729.47	-2,227.79	9.55	2,227.81	0.00	0.00	0.00
11,200.00	89.65	179.75	8,730.08	-2,327.79	9.99	2,327.81	0.00	0.00	0.00
11,300.00	89.65	179.75	8,730.69	-2,427.78	10.43	2,427.81	0.00	0.00	0.00
11,400.00	89.65	179.75	8,731.30	-2,527.78	10.87	2,527.80	0.00	0.00	0.00
11,500.00	89.65	179.75	8,731.91	-2,627.78	11.30	2,627.80	0.00	0.00	0.00
11,600.00	89.65	179.75	8,732.52	-2,727.78	11.74	2,727.80	0.00	0.00	0.00
11,700.00	89.65	179.75	8,733.13	-2,827.77	12.18	2,827.80	0.00	0.00	0.00
11,800.00	89.65	179.75	8,733.74	-2,927.77	12.62	2,927.80	0.00	0.00	0.00
11,900.00	89.65	179.75	8,734.35	-3,027.77	13.06	3,027.80	0.00	0.00	0.00
12,000.00	89.65	179.75	8,734.96	-3,127.76	13.50	3,127.79	0.00	0.00	0.00
12,100.00	89.65	179.75	8,735.57	-3,227.76	13.93	3,227.79	0.00	0.00	0.00
12,200.00	89.65	179.75	8,736.19	-3,327.76	14.37	3,327.79	0.00	0.00	0.00
12,300.00	89.65	179.75	8,736.80	-3,427.76	14.81	3,427.79	0.00	0.00	0.00
12,400.00	89.65	179.75	8,737.41	-3,527.75	15.25	3,527.79	0.00	0.00	0.00
12,500.00	89.65	179.75	8,738.02	-3,627.75	15.69	3,627.78	0.00	0.00	0.00
12,600.00	89.65	179.75	8,738.63	-3,727.75	16.12	3,727.78	0.00	0.00	0.00
12,700.00	89.65	179.75	8,739.24	-3,827.74	16.56	3,827.78	0.00	0.00	0.00
12,800.00	89.65	179.75	8,739.85	-3,927.74	17.00	3,927.78	0.00	0.00	0.00
12,900.00	89.65	179.75	8,740.46	-4,027.74	17.44	4,027.78	0.00	0.00	0.00
13,000.00	89.65	179.75	8,741.07	-4,127.74	17.88	4,127.78	0.00	0.00	0.00
13,100.00	89.65	179.75	8,741.68	-4,227.73	18.32	4,227.77	0.00	0.00	0.00
13,200.00	89.65	179.75	8,742.29	-4,327.73	18.75	4,327.77	0.00	0.00	0.00
13,300.00	89.65	179.75	8,742.90	-4,427.73	19.19	4,427.77	0.00	0.00	0.00
13,400.00	89.65	179.75	8,743.51	-4,527.73	19.63	4,527.77	0.00	0.00	0.00
13,500.00	89.65	179.75	8,744.12	-4,627.72	20.07	4,627.77	0.00	0.00	0.00
13,594.08	89.65	179.75	8,744.69	-4,721.80	20.48	4,721.84	0.00	0.00	0.00
BEU Rio Bravo 107H: LTP									
13,600.00	89.65	179.75	8,744.73	-4,727.72	20.51	4,727.76	0.00	0.00	0.00
13,644.08	89.65	179.75	8,745.00	-4,771.80	20.70	4,771.85	0.00	0.00	0.00
BEU Rio Bravo 107H: PBHL (50' FSL & 410' FWL)									



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Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Rio Bravo #107H
Company:	XTO Energy	TVD Reference:	RKB = 25' @ 3317.00usft
Project:	Eddy County, NM (NAD-27)	MD Reference:	RKB = 25' @ 3317.00usft
Site:	Big Eddy Unit (John Wayne)	North Reference:	Grid
Well:	Rio Bravo #107H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PERMIT		

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BEU Rio Bravo 107H: - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	524,818.10	598,688.20	32.442432	-104.013434
BEU Rio Bravo 107H: - plan hits target center - Point	0.00	0.00	8,717.00	-185.00	0.60	524,633.10	598,688.80	32.441923	-104.013434
BEU Rio Bravo 107H: - plan misses target center by 0.08usft at 13594.08usft MD (8744.69 TVD, -4721.80 N, 20.48 E) - Point	0.00	0.00	8,744.69	-4,721.80	20.40	520,096.30	598,708.60	32.429452	-104.013414
BEU Rio Bravo 107H: - plan hits target center - Point	0.00	0.00	8,745.00	-4,771.80	20.70	520,046.30	598,708.90	32.429314	-104.013413

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
188.00	188.00	Rustler			
482.00	482.00	Base of Rustler Anh.			
553.00	553.00	Salado/Top of Salt			
2,690.00	2,690.00	Base of Salt			
2,907.00	2,907.00	Lamar Lm. (Del Mtn Grp.)			
3,027.00	3,027.00	Delaware Sand			
4,088.22	4,087.00	Manzanita Marker			
5,371.11	5,365.00	Brushy Canyon Ss.			
6,368.90	6,359.00	Lower Brushy Canyon Ss.			
6,661.02	6,650.00	Bone Spring Lm.			
6,753.37	6,742.00	Avalon Ss.			
6,788.50	6,777.00	Bone Spg. Upper Avalon Carb.			
6,853.75	6,842.00	Upper Avalon Sh.			
7,119.76	7,107.00	Bone Spg. Avalon Carb.			
7,258.29	7,245.00	Lw. Avalon Sh.			
7,340.60	7,327.00	Bone Spg. Lower Avalon Carb.			
7,680.90	7,666.00	First Bone Spring Ss.			
7,932.86	7,917.00	Second Bone Spring Carb.			
8,455.43	8,426.00	Second Bone Spring Ss.			
8,750.31	8,635.00	Second Bone Spring B Ss			
9,057.15	8,717.00	Landing Point			