

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, New Mexico 87505

Revised August 1, 2011

Submit one copy to appropriate
District Office

AMENDED REPORT

AS DRILLED PLAT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-45493	Pool Code 98094	Pool Name BOBCAT DRAW-UPPER WOLFCAMP
Property Code 322775	Property Name ROJO 7811 22 FEDERAL COM	Well Number 22H
OGRID No. 260297	Operator Name BTA OIL PRODUCERS, LLC	Elevation 3347'

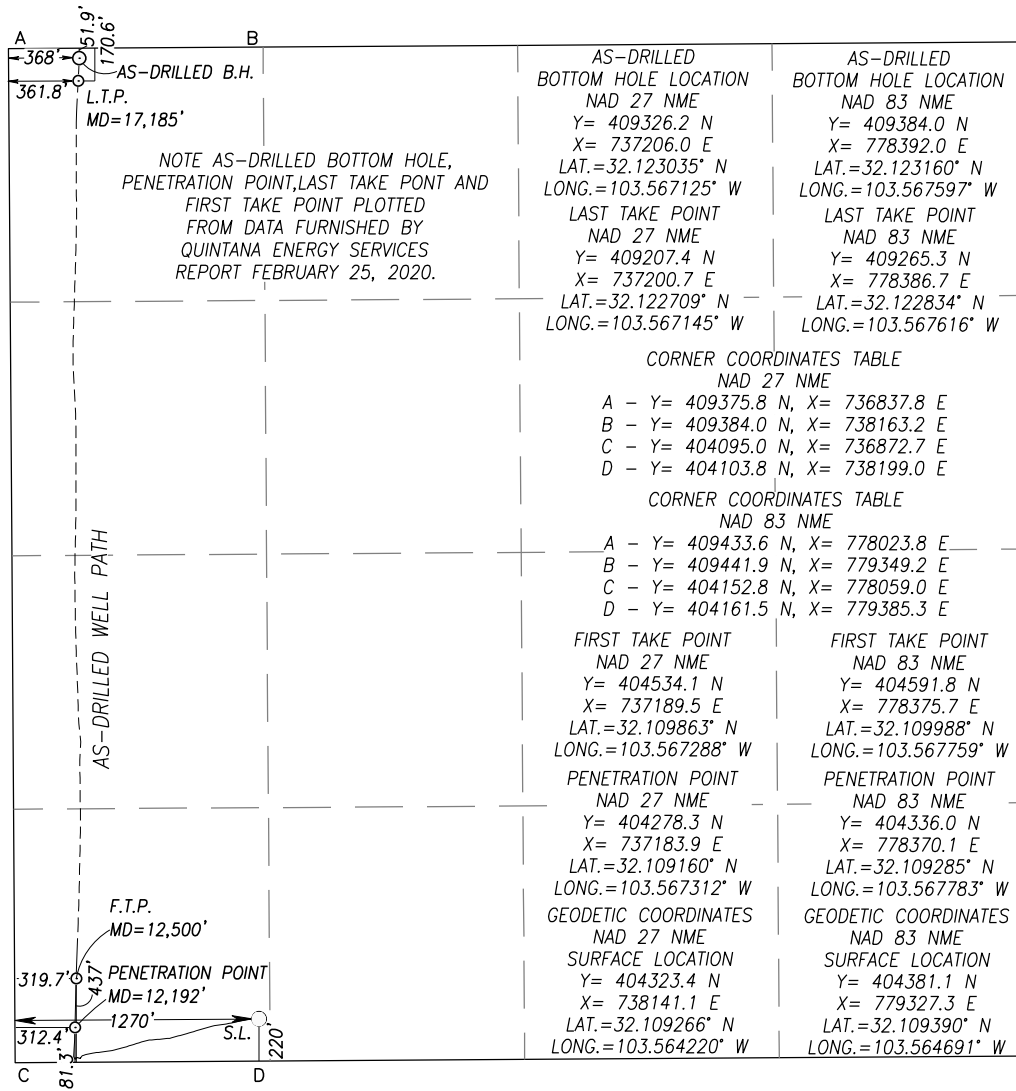
Surface Location									
UL or lot No. M	Section 22	Township 25-S	Range 33-E	Lot Idn	Feet from the 220	North/South line SOUTH	Feet from the 1270	East/West line WEST	County LEA

AS-Drilled Bottom Hole Location If Different From Surface									
UL or lot No. D	Section 22	Township 25-S	Range 33-E	Lot Idn	Feet from the 51.9	North/South line NORTH	Feet from the 368	East/West line WEST	County LEA

Penetration Point Location									
UL or lot No. M	Section 22	Township 25-S	Range 33-E	Lot Idn	Feet from the 181.3	North/South line SOUTH	Feet from the 312.4	East/West line WEST	County LEA

Dedicated Acres 160	Joint or Infill	Consolidation Code	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



OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

KATY REDDELL 9/10/20

Signature Date

KATY REDDELL

Printed Name

kreddell@btaoil.com

E-mail Address

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.

JANUARY 19, 2017

Date of Survey
Signature & Seal of Professional Surveyor:

RONALD J. EIDSON
NEW MEXICO
REGISTERED SURVEYOR
3239
08/24/2020

Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

LSL Rel.W.O.: 17.13.0497 JWSC W.O.: 20.13.0393

Intent ☐ As Drilled ☒

API #
30-025-45493

Operator Name: BTA OIL PRODUCERS, LLC	Property Name: ROJO 7811 22 FEDERAL COM	Well Number 22H
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Kick Off Point (KOP)

UL M	Section 22	Township 25S	Range 33E	Lot M	Feet 220	From N/S SOUTH	Feet 1270	From E/W WEST	County LEA
Latitude 32.109390					Longitude -103.564691			NAD 83	

First Take Point (FTP)

UL	Section 22	Township 25S	Range 33E	Lot	Feet 437	From N/S S	Feet 320	From E/W W	County LEA
Latitude 32.107212					Longitude -103.557332			NAD 83	

Last Take Point (LTP)

UL	Section 27	Township 25S	Range 33E	Lot	Feet 171	From N/S N	Feet 362	From E/W W	County LEA
Latitude 32.094698					Longitude -103.556951			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☒

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number
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KZ 06/29/2018



BTA Oil Producers, LLC

Lea County, NM (NAD 83)

Sec 22, T25-S, R33-E

Rojo 7811 22 Fed Com #22H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

25 February, 2020





QES
Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Rojo 7811 22 Fed Com #22H
Project:	Lea County, NM (NAD 83)	TVD Reference:	WELL @ 3372.0usft (Patterson #566)
Site:	Sec 22, T25-S, R33-E	MD Reference:	WELL @ 3372.0usft (Patterson #566)
Well:	Rojo 7811 22 Fed Com #22H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Lea County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 22, T25-S, R33-E		
Site Position:		Northing:	409,243.40 usft
From:	Map	Easting:	781,148.30 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 21.790 N
		Longitude:	103° 33' 31.310 W
		Grid Convergence:	0.41 °

Well	Rojo 7811 22 Fed Com #22H		
Well Position	+N/-S	0.0 usft	Northing: 404,381.10 usft
	+E/-W	0.0 usft	Easting: 779,327.30 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 6' 33.805 N
		Longitude:	103° 33' 52.887 W
		Ground Level:	3,347.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	2/14/2020	6.55	59.70	47,701.00000000

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	348.99	

Survey Program	Date	2/25/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
234.0	17,304.0	QES MWD Surveys (Wellbore #1)	MWD	OWSG MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	404,381.10	779,327.30	32° 6' 33.805 N	103° 33' 52.887 W
234.0	0.30	76.00	234.0	0.1	0.6	404,381.25	779,327.89	32° 6' 33.806 N	103° 33' 52.880 W
First MWD Survey @ 234.0' MD / 234.0' TVD									
263.0	0.10	134.00	263.0	0.1	0.7	404,381.25	779,327.98	32° 6' 33.806 N	103° 33' 52.879 W
357.0	0.20	163.50	357.0	-0.1	0.8	404,381.03	779,328.09	32° 6' 33.804 N	103° 33' 52.878 W
428.0	0.30	83.90	428.0	-0.2	1.0	404,380.93	779,328.31	32° 6' 33.803 N	103° 33' 52.875 W
528.0	0.40	40.10	528.0	0.1	1.5	404,381.23	779,328.79	32° 6' 33.806 N	103° 33' 52.870 W
596.0	0.40	347.90	596.0	0.5	1.6	404,381.64	779,328.90	32° 6' 33.810 N	103° 33' 52.868 W
663.0	0.60	328.70	663.0	1.1	1.4	404,382.17	779,328.67	32° 6' 33.815 N	103° 33' 52.871 W
752.0	0.70	311.00	752.0	1.8	0.7	404,382.93	779,328.01	32° 6' 33.823 N	103° 33' 52.879 W
849.0	1.40	330.00	849.0	3.2	-0.3	404,384.34	779,326.97	32° 6' 33.837 N	103° 33' 52.891 W
942.0	1.50	329.40	941.9	5.3	-1.5	404,386.37	779,325.79	32° 6' 33.857 N	103° 33' 52.904 W



QES
Survey Report - Geographic



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Well:	Rojo 7811 22 Fed Com #22H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,032.0	0.80	317.30	1,031.9	6.7	-2.5	404,387.85	779,324.76	32° 6' 33.872 N	103° 33' 52.916 W
1,104.0	1.00	351.60	1,103.9	7.7	-3.0	404,388.84	779,324.33	32° 6' 33.882 N	103° 33' 52.921 W
1,158.0	0.80	343.00	1,157.9	8.6	-3.1	404,389.67	779,324.15	32° 6' 33.890 N	103° 33' 52.923 W
1,251.0	1.10	311.90	1,250.9	9.8	-4.0	404,390.88	779,323.29	32° 6' 33.902 N	103° 33' 52.933 W
1,344.0	2.70	274.90	1,343.8	10.6	-6.8	404,391.67	779,320.45	32° 6' 33.910 N	103° 33' 52.966 W
1,437.0	5.90	257.50	1,436.6	9.7	-13.7	404,390.82	779,313.60	32° 6' 33.902 N	103° 33' 53.046 W
1,530.0	9.10	255.60	1,528.8	6.9	-25.5	404,387.95	779,301.80	32° 6' 33.874 N	103° 33' 53.183 W
1,623.0	9.40	254.20	1,620.6	3.0	-39.9	404,384.06	779,287.37	32° 6' 33.837 N	103° 33' 53.351 W
1,716.0	9.30	255.40	1,712.3	-1.0	-54.5	404,380.10	779,272.79	32° 6' 33.799 N	103° 33' 53.521 W
1,809.0	9.80	257.90	1,804.0	-4.6	-69.5	404,376.54	779,257.78	32° 6' 33.765 N	103° 33' 53.696 W
1,902.0	10.00	258.90	1,895.6	-7.8	-85.2	404,373.33	779,242.12	32° 6' 33.734 N	103° 33' 53.878 W
1,995.0	9.10	256.70	1,987.4	-11.0	-100.3	404,370.08	779,227.04	32° 6' 33.703 N	103° 33' 54.054 W
2,088.0	8.90	255.80	2,079.2	-14.5	-114.4	404,366.63	779,212.91	32° 6' 33.670 N	103° 33' 54.218 W
2,181.0	8.80	257.20	2,171.1	-17.8	-128.3	404,363.28	779,199.00	32° 6' 33.638 N	103° 33' 54.380 W
2,275.0	8.60	257.70	2,264.0	-20.9	-142.2	404,360.19	779,185.12	32° 6' 33.608 N	103° 33' 54.542 W
2,368.0	8.30	259.50	2,356.0	-23.6	-155.6	404,357.49	779,171.72	32° 6' 33.582 N	103° 33' 54.698 W
2,461.0	8.10	260.70	2,448.1	-25.9	-168.6	404,355.21	779,158.66	32° 6' 33.560 N	103° 33' 54.850 W
2,554.0	7.70	260.50	2,540.2	-28.0	-181.3	404,353.12	779,146.05	32° 6' 33.541 N	103° 33' 55.097 W
2,647.0	7.60	261.60	2,632.4	-29.9	-193.5	404,351.19	779,133.82	32° 6' 33.523 N	103° 33' 55.139 W
2,740.0	7.70	262.80	2,724.5	-31.6	-205.7	404,349.51	779,121.55	32° 6' 33.507 N	103° 33' 55.282 W
2,833.0	7.70	264.60	2,816.7	-33.0	-218.1	404,348.15	779,109.17	32° 6' 33.494 N	103° 33' 55.426 W
2,926.0	8.30	256.10	2,908.8	-35.2	-230.8	404,345.95	779,096.45	32° 6' 33.473 N	103° 33' 55.574 W
3,019.0	8.30	254.50	3,000.8	-38.6	-243.8	404,342.54	779,083.46	32° 6' 33.440 N	103° 33' 55.725 W
3,112.0	7.80	256.70	3,092.9	-41.8	-256.4	404,339.30	779,070.85	32° 6' 33.409 N	103° 33' 55.872 W
3,206.0	6.70	258.20	3,186.1	-44.4	-268.0	404,336.71	779,059.28	32° 6' 33.384 N	103° 33' 56.007 W
3,299.0	7.70	250.70	3,278.4	-47.6	-279.2	404,333.54	779,048.09	32° 6' 33.354 N	103° 33' 56.137 W
3,392.0	7.70	253.00	3,370.6	-51.4	-291.0	404,329.66	779,036.25	32° 6' 33.316 N	103° 33' 56.275 W
3,485.0	7.40	253.70	3,462.8	-54.9	-302.8	404,326.16	779,024.54	32° 6' 33.282 N	103° 33' 56.412 W
3,578.0	6.80	254.00	3,555.1	-58.1	-313.8	404,322.96	779,013.50	32° 6' 33.252 N	103° 33' 56.540 W
3,672.0	8.60	253.30	3,648.2	-61.7	-325.9	404,319.40	779,001.42	32° 6' 33.217 N	103° 33' 56.681 W
3,765.0	8.50	254.40	3,740.2	-65.5	-339.2	404,315.56	778,988.14	32° 6' 33.180 N	103° 33' 56.836 W
3,858.0	8.20	253.10	3,832.2	-69.3	-352.1	404,311.78	778,975.17	32° 6' 33.144 N	103° 33' 56.987 W
3,951.0	7.30	254.50	3,924.3	-72.8	-364.2	404,308.27	778,963.13	32° 6' 33.110 N	103° 33' 57.127 W
4,044.0	6.40	252.10	4,016.7	-76.0	-374.8	404,305.10	778,952.51	32° 6' 33.079 N	103° 33' 57.251 W
4,137.0	7.70	252.60	4,109.0	-79.5	-385.7	404,301.64	778,941.63	32° 6' 33.046 N	103° 33' 57.377 W
4,230.0	7.10	254.20	4,201.2	-82.9	-397.1	404,298.22	778,930.15	32° 6' 33.013 N	103° 33' 57.511 W
4,324.0	7.40	258.40	4,294.4	-85.7	-408.7	404,295.42	778,918.63	32° 6' 32.986 N	103° 33' 57.645 W
4,417.0	6.30	253.70	4,386.8	-88.3	-419.4	404,292.78	778,907.87	32° 6' 32.960 N	103° 33' 57.771 W
4,510.0	8.30	257.70	4,479.0	-91.2	-430.9	404,289.92	778,896.41	32° 6' 32.933 N	103° 33' 57.904 W
4,603.0	7.50	255.30	4,571.1	-94.2	-443.3	404,286.95	778,883.98	32° 6' 32.904 N	103° 33' 58.049 W
4,696.0	6.80	245.80	4,663.4	-97.9	-454.2	404,283.15	778,873.09	32° 6' 32.868 N	103° 33' 58.176 W
4,789.0	7.20	263.00	4,755.7	-100.9	-465.0	404,280.18	778,862.28	32° 6' 32.839 N	103° 33' 58.302 W
4,883.0	8.70	266.70	4,848.8	-102.0	-478.0	404,279.06	778,849.34	32° 6' 32.829 N	103° 33' 58.452 W
4,976.0	7.90	264.40	4,940.8	-103.1	-491.3	404,278.03	778,835.95	32° 6' 32.820 N	103° 33' 58.608 W
5,069.0	7.90	265.30	5,033.0	-104.2	-504.1	404,276.88	778,823.22	32° 6' 32.809 N	103° 33' 58.756 W
5,162.0	8.00	263.90	5,125.1	-105.4	-516.9	404,275.67	778,810.42	32° 6' 32.798 N	103° 33' 58.905 W
5,255.0	8.40	266.30	5,217.1	-106.6	-530.1	404,274.54	778,797.21	32° 6' 32.788 N	103° 33' 59.059 W
5,348.0	8.60	264.20	5,309.1	-107.7	-543.8	404,273.40	778,783.51	32° 6' 32.777 N	103° 33' 59.218 W
5,441.0	8.40	266.30	5,401.1	-108.8	-557.5	404,272.26	778,769.81	32° 6' 32.767 N	103° 33' 59.377 W
5,534.0	8.20	264.90	5,493.1	-109.9	-570.9	404,271.23	778,756.43	32° 6' 32.758 N	103° 33' 59.533 W
5,627.0	8.20	256.10	5,585.2	-112.0	-583.9	404,269.05	778,743.38	32° 6' 32.737 N	103° 33' 59.685 W
5,721.0	8.80	252.80	5,678.1	-115.8	-597.3	404,265.31	778,730.01	32° 6' 32.701 N	103° 33' 59.841 W
5,814.0	8.60	252.40	5,770.1	-120.0	-610.7	404,261.11	778,716.58	32° 6' 32.660 N	103° 33' 59.997 W
5,907.0	8.50	251.90	5,862.0	-124.2	-623.9	404,256.87	778,703.42	32° 6' 32.619 N	103° 34' 0.151 W
6,000.0	8.70	254.40	5,954.0	-128.3	-637.2	404,252.84	778,690.12	32° 6' 32.581 N	103° 34' 0.306 W



QES
Survey Report - Geographic



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Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,093.0	8.40	252.60	6,045.9	-132.2	-650.4	404,248.92	778,676.86	32° 6' 32.543 N	103° 34' 0.460 W
6,186.0	8.00	253.80	6,138.0	-136.0	-663.1	404,245.08	778,664.16	32° 6' 32.506 N	103° 34' 0.608 W
6,279.0	8.20	252.60	6,230.1	-139.8	-675.7	404,241.29	778,651.62	32° 6' 32.469 N	103° 34' 0.754 W
6,372.0	8.20	253.10	6,322.1	-143.7	-688.4	404,237.38	778,638.94	32° 6' 32.431 N	103° 34' 0.902 W
6,465.0	8.10	253.30	6,414.2	-147.5	-701.0	404,233.57	778,626.32	32° 6' 32.394 N	103° 34' 1.049 W
6,558.0	8.20	252.40	6,506.2	-151.4	-713.6	404,229.68	778,613.73	32° 6' 32.357 N	103° 34' 1.196 W
6,652.0	8.10	255.10	6,599.3	-155.1	-726.4	404,225.95	778,600.94	32° 6' 32.321 N	103° 34' 1.345 W
6,745.0	8.20	255.40	6,691.3	-158.5	-739.1	404,222.60	778,588.19	32° 6' 32.288 N	103° 34' 1.493 W
6,838.0	7.60	253.70	6,783.5	-161.9	-751.4	404,219.20	778,575.87	32° 6' 32.256 N	103° 34' 1.637 W
6,931.0	7.90	261.20	6,875.6	-164.6	-763.7	404,216.50	778,563.65	32° 6' 32.230 N	103° 34' 1.779 W
7,024.0	7.90	264.00	6,967.7	-166.2	-776.3	404,214.85	778,550.97	32° 6' 32.214 N	103° 34' 1.926 W
7,117.0	7.50	261.90	7,059.9	-167.8	-788.7	404,213.33	778,538.61	32° 6' 32.200 N	103° 34' 2.070 W
7,210.0	7.40	263.30	7,152.1	-169.3	-800.6	404,211.77	778,526.65	32° 6' 32.186 N	103° 34' 2.210 W
7,304.0	7.20	263.70	7,245.3	-170.7	-812.5	404,210.42	778,514.78	32° 6' 32.173 N	103° 34' 2.348 W
7,397.0	6.70	261.10	7,337.7	-172.2	-823.7	404,208.94	778,503.63	32° 6' 32.159 N	103° 34' 2.477 W
7,490.0	6.90	262.60	7,430.0	-173.7	-834.6	404,207.38	778,492.73	32° 6' 32.145 N	103° 34' 2.604 W
7,583.0	6.40	262.10	7,522.4	-175.1	-845.2	404,205.95	778,482.06	32° 6' 32.131 N	103° 34' 2.728 W
7,676.0	5.60	259.10	7,614.9	-176.7	-854.8	404,204.38	778,472.47	32° 6' 32.116 N	103° 34' 2.840 W
7,769.0	5.50	260.00	7,707.4	-178.4	-863.7	404,202.75	778,463.62	32° 6' 32.101 N	103° 34' 2.943 W
7,862.0	5.50	259.10	7,800.0	-180.0	-872.4	404,201.13	778,454.86	32° 6' 32.085 N	103° 34' 3.045 W
7,955.0	5.30	260.00	7,892.6	-181.6	-881.0	404,199.54	778,446.25	32° 6' 32.070 N	103° 34' 3.145 W
8,048.0	5.10	257.00	7,985.2	-183.2	-889.3	404,197.87	778,437.99	32° 6' 32.054 N	103° 34' 3.241 W
8,137.0	5.00	258.40	8,073.9	-184.9	-897.0	404,196.20	778,430.34	32° 6' 32.038 N	103° 34' 3.331 W
8,230.0	4.90	257.70	8,166.5	-186.6	-904.8	404,194.54	778,422.49	32° 6' 32.022 N	103° 34' 3.422 W
8,323.0	4.80	250.20	8,259.2	-188.7	-912.3	404,192.37	778,414.95	32° 6' 32.002 N	103° 34' 3.510 W
8,416.0	3.70	239.60	8,351.9	-191.6	-918.6	404,189.54	778,408.70	32° 6' 31.974 N	103° 34' 3.583 W
8,509.0	1.10	229.60	8,444.8	-193.7	-921.9	404,187.44	778,405.43	32° 6' 31.953 N	103° 34' 3.621 W
8,602.0	0.90	211.00	8,537.8	-194.9	-922.9	404,186.23	778,404.37	32° 6' 31.942 N	103° 34' 3.633 W
8,695.0	1.10	211.30	8,630.8	-196.3	-923.8	404,184.84	778,403.53	32° 6' 31.928 N	103° 34' 3.643 W
8,788.0	1.00	221.30	8,723.8	-197.6	-924.8	404,183.47	778,402.53	32° 6' 31.914 N	103° 34' 3.655 W
8,881.0	1.10	220.10	8,816.8	-198.9	-925.9	404,182.18	778,401.42	32° 6' 31.902 N	103° 34' 3.668 W
8,974.0	1.10	201.10	8,909.8	-200.4	-926.8	404,180.66	778,400.53	32° 6' 31.887 N	103° 34' 3.678 W
9,067.0	1.10	220.80	9,002.7	-201.9	-927.7	404,179.16	778,399.62	32° 6' 31.872 N	103° 34' 3.689 W
9,160.0	1.00	209.40	9,095.7	-203.3	-928.7	404,177.77	778,398.64	32° 6' 31.858 N	103° 34' 3.701 W
9,254.0	1.20	206.90	9,189.7	-204.9	-929.5	404,176.18	778,397.79	32° 6' 31.843 N	103° 34' 3.711 W
9,347.0	0.50	24.30	9,282.7	-205.4	-929.8	404,175.68	778,397.52	32° 6' 31.838 N	103° 34' 3.714 W
9,440.0	0.70	349.50	9,375.7	-204.5	-929.7	404,176.61	778,397.58	32° 6' 31.847 N	103° 34' 3.713 W
9,533.0	0.70	320.80	9,468.7	-203.5	-930.2	404,177.61	778,397.12	32° 6' 31.857 N	103° 34' 3.718 W
9,626.0	0.40	255.10	9,561.7	-203.1	-930.9	404,177.97	778,396.45	32° 6' 31.860 N	103° 34' 3.726 W
9,719.0	1.00	237.30	9,654.7	-203.7	-931.8	404,177.44	778,395.45	32° 6' 31.855 N	103° 34' 3.738 W
9,812.0	1.40	235.20	9,747.7	-204.7	-933.5	404,176.36	778,393.83	32° 6' 31.845 N	103° 34' 3.757 W
9,905.0	1.70	279.00	9,840.6	-205.2	-935.8	404,175.92	778,391.54	32° 6' 31.840 N	103° 34' 3.783 W
9,998.0	1.90	323.10	9,933.6	-203.7	-938.0	404,177.37	778,389.25	32° 6' 31.855 N	103° 34' 3.810 W
10,091.0	1.90	299.00	10,026.5	-201.7	-940.3	404,179.35	778,386.98	32° 6' 31.875 N	103° 34' 3.836 W
10,184.0	1.00	256.30	10,119.5	-201.2	-942.5	404,179.91	778,384.84	32° 6' 31.880 N	103° 34' 3.861 W
10,277.0	1.40	224.30	10,212.5	-202.2	-944.0	404,178.90	778,383.26	32° 6' 31.870 N	103° 34' 3.879 W
10,371.0	0.90	340.00	10,306.5	-202.3	-945.1	404,178.78	778,382.20	32° 6' 31.869 N	103° 34' 3.892 W
10,464.0	0.80	270.00	10,399.5	-201.6	-946.0	404,179.46	778,381.30	32° 6' 31.876 N	103° 34' 3.902 W
10,558.0	1.40	277.60	10,493.5	-201.5	-947.8	404,179.61	778,379.51	32° 6' 31.878 N	103° 34' 3.923 W
10,651.0	1.30	258.20	10,586.4	-201.6	-949.9	404,179.55	778,377.35	32° 6' 31.877 N	103° 34' 3.948 W
10,744.0	1.30	239.80	10,679.4	-202.3	-951.9	404,178.80	778,375.41	32° 6' 31.870 N	103° 34' 3.971 W
10,838.0	1.30	245.10	10,773.4	-203.3	-953.8	404,177.82	778,373.52	32° 6' 31.860 N	103° 34' 3.993 W
10,911.0	1.80	262.80	10,846.4	-203.8	-955.7	404,177.32	778,371.63	32° 6' 31.856 N	103° 34' 4.015 W
11,024.0	1.00	93.00	10,959.3	-204.0	-956.4	404,177.05	778,370.85	32° 6' 31.853 N	103° 34' 4.024 W
11,118.0	1.70	102.10	11,053.3	-204.4	-954.3	404,176.71	778,373.04	32° 6' 31.850 N	103° 34' 3.998 W



QES
Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Rojo 7811 22 Fed Com #22H
Project:	Lea County, NM (NAD 83)	TVD Reference:	WELL @ 3372.0usft (Patterson #566)
Site:	Sec 22, T25-S, R33-E	MD Reference:	WELL @ 3372.0usft (Patterson #566)
Well:	Rojo 7811 22 Fed Com #22H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
11,211.0	1.10	122.40	11,146.3	-205.2	-952.2	404,175.95	778,375.14	32° 6' 31.842 N	103° 34' 3.974 W	
11,304.0	1.10	191.30	11,239.3	-206.5	-951.6	404,174.59	778,375.72	32° 6' 31.828 N	103° 34' 3.967 W	
11,397.0	2.90	236.60	11,332.2	-208.7	-953.7	404,172.42	778,373.58	32° 6' 31.807 N	103° 34' 3.992 W	
11,490.0	2.00	287.80	11,425.1	-209.5	-957.2	404,171.62	778,370.07	32° 6' 31.799 N	103° 34' 4.033 W	
11,583.0	2.80	334.20	11,518.1	-206.9	-959.8	404,174.17	778,367.53	32° 6' 31.825 N	103° 34' 4.063 W	
11,676.0	2.50	331.70	11,611.0	-203.1	-961.7	404,178.00	778,365.58	32° 6' 31.863 N	103° 34' 4.085 W	
11,763.0	2.50	335.40	11,697.9	-199.7	-963.4	404,181.39	778,363.89	32° 6' 31.896 N	103° 34' 4.104 W	
11,817.0	2.20	336.30	11,751.8	-197.7	-964.3	404,183.41	778,362.99	32° 6' 31.917 N	103° 34' 4.115 W	
11,912.0	8.10	1.60	11,846.4	-189.3	-964.9	404,191.78	778,362.44	32° 6' 31.999 N	103° 34' 4.120 W	
12,007.0	28.40	4.90	11,936.2	-159.8	-962.7	404,221.29	778,364.58	32° 6' 32.291 N	103° 34' 4.093 W	
12,102.0	41.00	2.80	12,014.1	-106.0	-959.3	404,275.14	778,368.05	32° 6' 32.824 N	103° 34' 4.048 W	
12,196.0	44.20	0.70	12,083.3	-42.4	-957.3	404,338.73	778,369.95	32° 6' 33.453 N	103° 34' 4.021 W	
12,291.0	52.80	1.20	12,146.2	28.7	-956.1	404,409.80	778,371.15	32° 6' 34.156 N	103° 34' 4.001 W	
12,381.4	59.75	1.01	12,196.4	103.8	-954.7	404,484.92	778,372.60	32° 6' 34.899 N	103° 34' 3.978 W	
330' FSL Crossed @ 12381.4' MD / 12196.4' TVD										
12,386.0	60.10	1.00	12,198.7	107.8	-954.6	404,488.90	778,372.67	32° 6' 34.939 N	103° 34' 3.977 W	
12,481.0	67.10	1.90	12,240.9	192.8	-952.5	404,573.92	778,374.84	32° 6' 35.780 N	103° 34' 3.945 W	
12,576.0	74.00	2.60	12,272.5	282.3	-948.9	404,663.37	778,378.36	32° 6' 36.665 N	103° 34' 3.896 W	
12,671.0	84.60	1.60	12,290.1	375.4	-945.5	404,756.52	778,381.77	32° 6' 37.586 N	103° 34' 3.849 W	
12,793.0	89.00	1.90	12,296.9	497.1	-941.8	404,878.24	778,385.49	32° 6' 38.791 N	103° 34' 3.796 W	
12,888.0	89.30	2.30	12,298.3	592.1	-938.3	404,973.17	778,388.97	32° 6' 39.730 N	103° 34' 3.747 W	
12,983.0	88.50	1.20	12,300.2	687.0	-935.4	405,068.11	778,391.87	32° 6' 40.669 N	103° 34' 3.706 W	
13,077.0	88.60	1.00	12,302.5	781.0	-933.6	405,162.06	778,393.67	32° 6' 41.598 N	103° 34' 3.677 W	
13,172.0	89.60	1.60	12,304.0	875.9	-931.5	405,257.02	778,395.83	32° 6' 42.538 N	103° 34' 3.644 W	
13,267.0	88.70	0.00	12,305.4	970.9	-930.1	405,352.00	778,397.15	32° 6' 43.478 N	103° 34' 3.621 W	
13,361.0	89.40	0.00	12,307.0	1,064.9	-930.1	405,445.98	778,397.15	32° 6' 44.408 N	103° 34' 3.613 W	
13,456.0	91.30	359.80	12,306.4	1,159.9	-930.3	405,540.98	778,396.99	32° 6' 45.348 N	103° 34' 3.607 W	
13,551.0	87.70	358.60	12,307.2	1,254.8	-931.6	405,635.95	778,395.66	32° 6' 46.288 N	103° 34' 3.615 W	
13,645.0	88.60	359.30	12,310.3	1,348.8	-933.4	405,729.88	778,393.94	32° 6' 47.217 N	103° 34' 3.627 W	
13,740.0	87.60	358.40	12,313.4	1,443.7	-935.3	405,824.81	778,392.03	32° 6' 48.157 N	103° 34' 3.641 W	
13,835.0	88.00	358.10	12,317.1	1,538.6	-938.2	405,919.69	778,389.13	32° 6' 49.096 N	103° 34' 3.667 W	
13,930.0	88.00	358.20	12,320.4	1,633.5	-941.2	406,014.58	778,386.07	32° 6' 50.035 N	103° 34' 3.695 W	
14,025.0	86.70	358.10	12,324.8	1,728.3	-944.3	406,109.43	778,383.01	32° 6' 50.974 N	103° 34' 3.723 W	
14,120.0	87.40	357.50	12,329.7	1,823.1	-947.9	406,204.23	778,379.36	32° 6' 51.912 N	103° 34' 3.757 W	
14,214.0	88.30	358.10	12,333.2	1,917.0	-951.5	406,298.10	778,375.76	32° 6' 52.841 N	103° 34' 3.792 W	
14,310.0	88.20	358.60	12,336.1	2,012.9	-954.3	406,394.01	778,373.00	32° 6' 53.791 N	103° 34' 3.816 W	
14,405.0	89.90	359.10	12,337.7	2,107.9	-956.2	406,488.98	778,371.09	32° 6' 54.730 N	103° 34' 3.830 W	
14,500.0	89.30	359.50	12,338.4	2,202.9	-957.4	406,583.97	778,369.93	32° 6' 55.670 N	103° 34' 3.836 W	
14,595.0	89.40	358.80	12,339.4	2,297.9	-958.8	406,678.95	778,368.52	32° 6' 56.610 N	103° 34' 3.844 W	
14,690.0	88.40	1.90	12,341.3	2,392.8	-958.2	406,773.92	778,369.10	32° 6' 57.550 N	103° 34' 3.830 W	
14,785.0	88.50	1.60	12,343.8	2,487.7	-955.3	406,868.84	778,372.00	32° 6' 58.489 N	103° 34' 3.788 W	
14,879.0	86.80	0.50	12,347.7	2,581.6	-953.6	406,962.74	778,373.72	32° 6' 59.418 N	103° 34' 3.760 W	
14,975.0	88.00	0.30	12,352.1	2,677.5	-952.9	407,058.64	778,374.39	32° 7' 0.367 N	103° 34' 3.745 W	
15,070.0	87.90	0.00	12,355.5	2,772.5	-952.7	407,153.57	778,374.64	32° 7' 1.307 N	103° 34' 3.734 W	
15,165.0	89.20	359.80	12,357.9	2,867.4	-952.8	407,248.54	778,374.47	32° 7' 2.246 N	103° 34' 3.728 W	
15,260.0	89.00	0.00	12,359.3	2,962.4	-953.0	407,343.53	778,374.31	32° 7' 3.186 N	103° 34' 3.722 W	
15,355.0	90.00	0.70	12,360.2	3,057.4	-952.4	407,438.52	778,374.89	32° 7' 4.126 N	103° 34' 3.707 W	
15,450.0	87.80	357.20	12,362.0	3,152.4	-954.1	407,533.47	778,373.15	32° 7' 5.066 N	103° 34' 3.720 W	
15,544.0	86.30	356.10	12,366.8	3,246.1	-959.6	407,627.18	778,367.66	32° 7' 5.993 N	103° 34' 3.776 W	
15,639.0	87.80	357.50	12,371.7	3,340.8	-964.9	407,721.90	778,362.37	32° 7' 6.931 N	103° 34' 3.830 W	
15,734.0	87.50	358.90	12,375.6	3,435.7	-967.9	407,816.77	778,359.39	32° 7' 7.870 N	103° 34' 3.856 W	
15,828.0	87.80	1.20	12,379.5	3,529.6	-967.8	407,910.69	778,359.47	32° 7' 8.799 N	103° 34' 3.848 W	
15,923.0	89.80	2.40	12,381.5	3,624.5	-964.8	408,005.61	778,362.45	32° 7' 9.739 N	103° 34' 3.805 W	
16,019.0	88.30	1.40	12,383.1	3,720.4	-961.7	408,101.54	778,365.64	32° 7' 10.688 N	103° 34' 3.760 W	
16,114.0	85.90	1.90	12,387.9	3,815.3	-958.9	408,196.37	778,368.37	32° 7' 11.626 N	103° 34' 3.721 W	



QES
Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Rojo 7811 22 Fed Com #22H
Project:	Lea County, NM (NAD 83)	TVD Reference:	WELL @ 3372.0usft (Patterson #566)
Site:	Sec 22, T25-S, R33-E	MD Reference:	WELL @ 3372.0usft (Patterson #566)
Well:	Rojo 7811 22 Fed Com #22H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,208.0	87.50	2.40	12,393.3	3,909.0	-955.4	408,290.15	778,371.89	32° 7' 12.553 N	103° 34' 3.672 W
16,304.0	87.40	0.70	12,397.5	4,004.9	-952.8	408,386.02	778,374.48	32° 7' 13.502 N	103° 34' 3.634 W
16,399.0	91.00	1.90	12,398.9	4,099.9	-950.7	408,480.96	778,376.64	32° 7' 14.441 N	103° 34' 3.601 W
16,493.0	88.80	359.80	12,399.0	4,193.8	-949.3	408,574.94	778,378.03	32° 7' 15.371 N	103° 34' 3.577 W
16,588.0	86.10	359.10	12,403.3	4,288.7	-950.2	408,669.83	778,377.12	32° 7' 16.310 N	103° 34' 3.580 W
16,683.0	87.10	359.30	12,408.9	4,383.6	-951.5	408,764.66	778,375.80	32° 7' 17.249 N	103° 34' 3.587 W
16,777.0	90.20	1.60	12,411.1	4,477.5	-950.8	408,858.61	778,376.54	32° 7' 18.178 N	103° 34' 3.571 W
16,872.0	86.40	358.90	12,413.9	4,572.4	-950.3	408,953.54	778,376.95	32° 7' 19.118 N	103° 34' 3.558 W
16,967.0	93.60	1.00	12,413.9	4,667.4	-950.4	409,048.47	778,376.87	32° 7' 20.057 N	103° 34' 3.551 W
17,024.4	91.73	2.21	12,411.3	4,724.7	-948.8	409,105.79	778,378.48	32° 7' 20.624 N	103° 34' 3.528 W
330' FNL Crossed @ 17024.4' MD / 12411.3' TVD									
17,062.0	90.50	3.00	12,410.5	4,762.2	-947.1	409,143.34	778,380.18	32° 7' 20.996 N	103° 34' 3.505 W
17,156.0	89.00	3.00	12,410.9	4,856.1	-942.2	409,237.21	778,385.10	32° 7' 21.924 N	103° 34' 3.440 W
17,251.0	86.40	2.40	12,414.8	4,950.9	-937.7	409,332.02	778,389.57	32° 7' 22.862 N	103° 34' 3.380 W
17,304.0	86.40	2.40	12,418.1	5,003.8	-935.5	409,384.86	778,391.79	32° 7' 23.385 N	103° 34' 3.350 W
TD @ 17304.0' MD / 12418.1' TVD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
234.0	234.0	0.1	0.6	First MWD Survey @ 234.0'MD / 234.0' TVD
12,381.4	12,196.4	103.8	-954.7	330' FSL Crossed @ 12381.4' MD / 12196.4' TVD
17,024.4	12,411.3	4,724.7	-948.8	330' FNL Crossed @ 17024.4' MD / 12411.3' TVD
17,304.0	12,418.1	5,003.8	-935.5	TD @ 17304.0' MD / 12418.1' TVD

Checked By: _____	Approved By: _____	Date: _____
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