

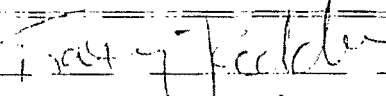
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

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

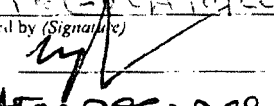
1a Type of work: ☒ DRILL ☐ REENTER		5 Lease Serial No NMNM015091
1b Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other		6 If Indian, Allottee or Tribe Name
1c Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		7 If Unit or CA Agreement, Name and No
2 Name of Operator BTA Oil Producers, LLC		8 Lease Name and Well No. ROJO 7811 FEDERAL COM #14Y
3a Address 104 S. Pecos Midland, TX. 79701		9 API Well No.
3b Phone No (include area code) 432-682-3753		10 Field and Pool, or Exploratory BOBCAT DRAW ; UPPER WOLFCAMP
4 Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESE / 220 FSL / 1220 FEL / LAT 32.109261 / LONG -103.555127 At proposed prod zone NENE / 50 FNL / 330 FEL / LAT 32.123033 / LONG -103.552258		11 Sec, T, R, M or Bk and Survey or Area SEC 22/ T25S/ R33E / NMP
14 Distance in miles and direction from nearest town or post office* 21		12 County or Parish LEA
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg. unit line, if any) 50		13 State NM
16 No of acres in lease 840		17 Spacing Unit dedicated to this well 160
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1231		20 BLM/BIA Bond No. in file NMB000849
19 Proposed Depth 12408 feet / 17434 feet		21 Estimated duration 45 days
22 Approximate date work will start* 05/01/2019		23 Estimated duration 45 days
24 Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|--|---|
| 1 Well plat certified by a registered surveyor | 4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2 A Drilling Plan | 5 Operator certification |
| 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office) | 6 Such other site specific information and/or plans as may be requested by the BLM |

25 Signature 	Name (Printed/Typed) Katy Reddell	Date 12/17/2018
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Title FIELD OPERATOR ANALYST	Name (Printed/Typed) Ty Allen	Date 20 Dec 2018
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Approved by (Signature) 	Office MMP2000 CARLSBAD
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Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Conditions of approval, if any, are attached.

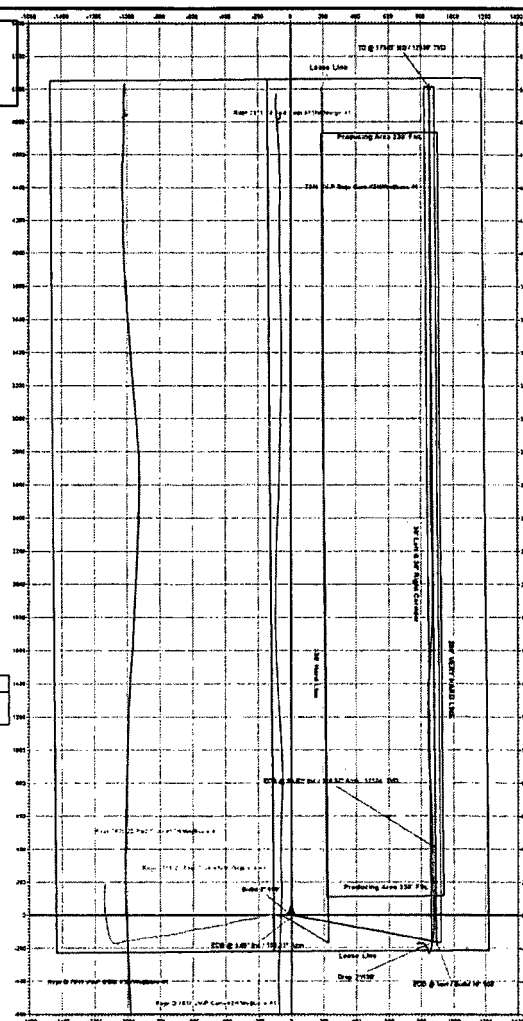
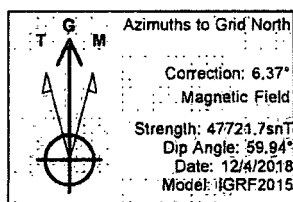
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

Rojo 7811 22 Fed Com #14Y
Lea County, NM (NAD 83)
Q181*** & WT-18****
Design #1

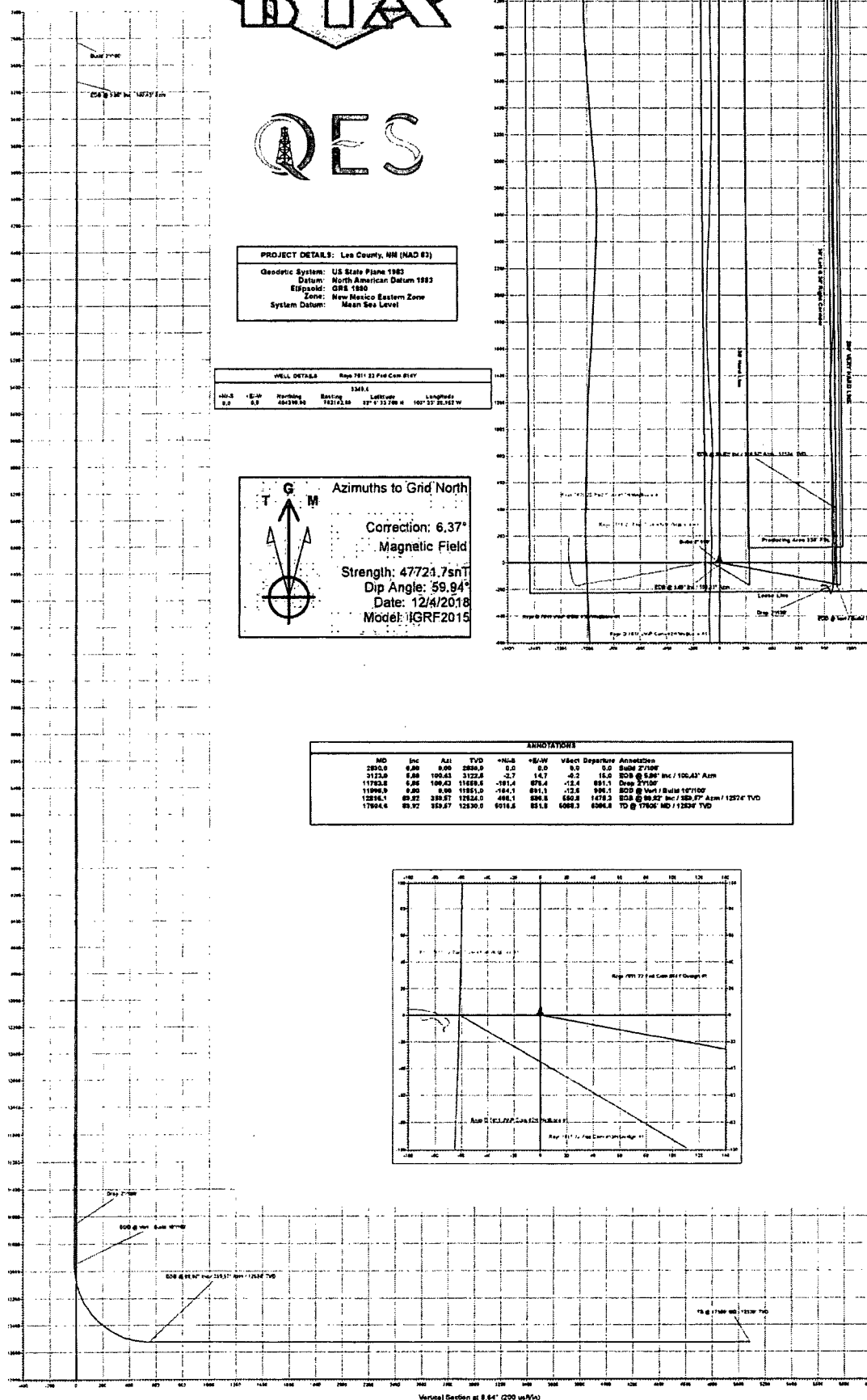
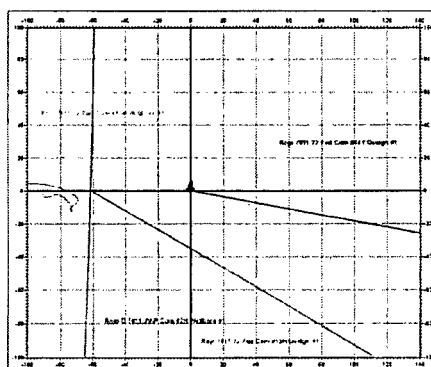


Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

Alt S	E-W	Heading	Rolling	Latitude	Longitude
0.0	0.0	404300.00	2821.02.00	33° 4' 35.700 N	103° 55' 29.562 E



MD	Inc	Azi	TVD	+N-E	+E-W	Vsect	Departure	Annotations
2850.0	0.00	0.00	2830.0	0.0	0.0	0.0	0.0	SUBD 2710F
3112.0	0.00	100.01	3122.0	-2.7	14.7	-4.2	16.0	DRIP @ 5.90" Inc / 100.01" Azm
11763.2	0.00	100.01	11658.6	-101.4	878.4	-12.4	891.1	Drop 27100
11996.9	0.00	0.00	11951.0	-164.1	891.1	-12.6	901.0	DRIP @ Vert 1/ Subd 107100
12316.1	89.92	339.57	12324.0	468.1	536.5	550.5	1478.2	SOS @ 90.27" Inc / 339.57" Azm / 12324" TVD
12604.4	89.92	357.63	12510.0	1018.6	558.3	508.8	6396.5	TD @ 78.05" MD / 12510" TVD





BTA Oil Producers, LLC

Lea County, NM (NAD 83)

Sec 22, T25-S, R33-E

Rojo 7811 22 Fed Com #14Y

Wellbore #1

Plan: Design #1

QES Well Planning Report

04 December, 2018





Well Planning Report

QES

Database: EDM 5000.1 Single User Db
 Company: BTA Oil Producers, LLC
 Project: Lea County, NM (NAD 83)
 Site: Sec 22, T25-S, R33-E
 Well: Rojo 7811 22 Fed Com #14Y
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Rojo 7811 22 Fed Com #14Y
 TVD Reference: WELL @ 3370.0usft (Patterson #566)
 MD Reference: WELL @ 3370.0usft (Patterson #566)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project: Lea County, NM (NAD 83)

Map System: US State Plane 1983
 Geo Datum: North American Datum 1983
 Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site: Sec 22, T25-S, R33-E

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

Well: Rojo 7811 22 Fed Com #14Y

Well Position: +N/-S -4,843.8 usft Northing: 404,399.60 usft Latitude: 32° 6' 33.788 N
 +E/-W 994.5 usft Easting: 782,142.80 usft Longitude: 103° 33' 20.152 W
 Position Uncertainty: 0.0 usft Wellhead Elevation: Ground Level: 3,345.0 usft

Wellbore: Wellbore #1

Magnetics: Model Name Sample Date Declination Dip Angle Field Strength
 (°) (°) (nT)
 IGRF2015 12/4/2018 6.78 59.94 47,721.72705822

Design: Design #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 0.0

Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
 (usft) (usft) (usft) (°)
 0.0 0.0 0.0 9.64

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,830.0	0.00	0.00	2,830.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,123.0	5.86	100.43	3,122.5	-2.7	14.7	2.00	2.00	0.00	100.43	
11,703.8	5.86	100.43	11,658.5	-161.4	876.4	0.00	0.00	0.00	0.00	
11,996.9	0.00	0.01	11,951.0	-164.1	891.1	2.00	-2.00	0.00	180.00	VP Rojo 7811 22 Fed
12,896.1	89.92	359.57	12,524.0	408.1	886.8	10.00	10.00	-0.05	359.57	
17,504.6	89.92	359.57	12,530.0	5,016.5	851.8	0.00	0.00	0.00	0.00	PBHL Rojo 7811 22



Well Planning Report

QES

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Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Rojo 7811 22 Fed Com #14Y
TVD Reference: WELL @ 3370.0usft (Patterson #566)
MD Reference: WELL @ 3370.0usft (Patterson #566)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 2°/100'									
2,830.0	0.00	0.00	2,830.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	1.40	100.43	2,900.0	-0.2	0.8	0.0	2.00	2.00	0.00
3,000.0	3.40	100.43	2,999.9	-0.9	5.0	-0.1	2.00	2.00	0.00
3,100.0	5.40	100.43	3,099.6	-2.3	12.5	-0.2	2.00	2.00	0.00
EOB @ 5.86° Inc / 100.43° Azm									
3,123.0	5.86	100.43	3,122.5	-2.7	14.7	-0.2	2.00	2.00	0.00
3,200.0	5.86	100.43	3,199.1	-4.1	22.5	-0.3	0.00	0.00	0.00
3,300.0	5.86	100.43	3,298.6	-6.0	32.5	-0.5	0.00	0.00	0.00
3,400.0	5.86	100.43	3,398.0	-7.8	42.5	-0.6	0.00	0.00	0.00
3,500.0	5.86	100.43	3,497.5	-9.7	52.6	-0.7	0.00	0.00	0.00
3,600.0	5.86	100.43	3,597.0	-11.5	62.6	-0.9	0.00	0.00	0.00
3,700.0	5.86	100.43	3,696.5	-13.4	72.7	-1.0	0.00	0.00	0.00
3,800.0	5.86	100.43	3,796.0	-15.2	82.7	-1.2	0.00	0.00	0.00
3,900.0	5.86	100.43	3,895.4	-17.1	92.7	-1.3	0.00	0.00	0.00
4,000.0	5.86	100.43	3,994.9	-18.9	102.8	-1.5	0.00	0.00	0.00
4,100.0	5.86	100.43	4,094.4	-20.8	112.8	-1.6	0.00	0.00	0.00
4,200.0	5.86	100.43	4,193.9	-22.6	122.9	-1.7	0.00	0.00	0.00
4,300.0	5.86	100.43	4,293.3	-24.5	132.9	-1.9	0.00	0.00	0.00
4,400.0	5.86	100.43	4,392.8	-26.3	143.0	-2.0	0.00	0.00	0.00
4,500.0	5.86	100.43	4,492.3	-28.2	153.0	-2.2	0.00	0.00	0.00
4,600.0	5.86	100.43	4,591.8	-30.0	163.0	-2.3	0.00	0.00	0.00
4,700.0	5.86	100.43	4,691.2	-31.9	173.1	-2.4	0.00	0.00	0.00
4,800.0	5.86	100.43	4,790.7	-33.7	183.1	-2.6	0.00	0.00	0.00
4,900.0	5.86	100.43	4,890.2	-35.6	193.2	-2.7	0.00	0.00	0.00



Well Planning Report

QES

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North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
5,000.0	5.86	100.43	4,989.7	-37.4	203.2	-2.9	0.00	0.00	0.00
5,100.0	5.86	100.43	5,089.2	-39.3	213.3	-3.0	0.00	0.00	0.00
5,200.0	5.86	100.43	5,188.6	-41.1	223.3	-3.2	0.00	0.00	0.00
5,300.0	5.86	100.43	5,288.1	-43.0	233.3	-3.3	0.00	0.00	0.00
5,400.0	5.86	100.43	5,387.6	-44.8	243.4	-3.4	0.00	0.00	0.00
5,500.0	5.86	100.43	5,487.1	-46.7	253.4	-3.6	0.00	0.00	0.00
5,600.0	5.86	100.43	5,586.5	-48.5	263.5	-3.7	0.00	0.00	0.00
5,700.0	5.86	100.43	5,686.0	-50.4	273.5	-3.9	0.00	0.00	0.00
5,800.0	5.86	100.43	5,785.5	-52.2	283.5	-4.0	0.00	0.00	0.00
5,900.0	5.86	100.43	5,885.0	-54.1	293.6	-4.1	0.00	0.00	0.00
6,000.0	5.86	100.43	5,984.5	-55.9	303.6	-4.3	0.00	0.00	0.00
6,100.0	5.86	100.43	6,083.9	-57.7	313.7	-4.4	0.00	0.00	0.00
6,200.0	5.86	100.43	6,183.4	-59.6	323.7	-4.6	0.00	0.00	0.00
6,300.0	5.86	100.43	6,282.9	-61.4	333.8	-4.7	0.00	0.00	0.00
6,400.0	5.86	100.43	6,382.4	-63.3	343.8	-4.9	0.00	0.00	0.00
6,500.0	5.86	100.43	6,481.8	-65.1	353.8	-5.0	0.00	0.00	0.00
6,600.0	5.86	100.43	6,581.3	-67.0	363.9	-5.1	0.00	0.00	0.00
6,700.0	5.86	100.43	6,680.8	-68.8	373.9	-5.3	0.00	0.00	0.00
6,800.0	5.86	100.43	6,780.3	-70.7	384.0	-5.4	0.00	0.00	0.00
6,900.0	5.86	100.43	6,879.7	-72.5	394.0	-5.6	0.00	0.00	0.00
7,000.0	5.86	100.43	6,979.2	-74.4	404.0	-5.7	0.00	0.00	0.00
7,100.0	5.86	100.43	7,078.7	-76.2	414.1	-5.8	0.00	0.00	0.00
7,200.0	5.86	100.43	7,178.2	-78.1	424.1	-6.0	0.00	0.00	0.00
7,300.0	5.86	100.43	7,277.7	-79.9	434.2	-6.1	0.00	0.00	0.00
7,400.0	5.86	100.43	7,377.1	-81.8	444.2	-6.3	0.00	0.00	0.00
7,500.0	5.86	100.43	7,476.6	-83.6	454.3	-6.4	0.00	0.00	0.00
7,600.0	5.86	100.43	7,576.1	-85.5	464.3	-6.6	0.00	0.00	0.00
7,700.0	5.86	100.43	7,675.6	-87.3	474.3	-6.7	0.00	0.00	0.00
7,800.0	5.86	100.43	7,775.0	-89.2	484.4	-6.8	0.00	0.00	0.00
7,900.0	5.86	100.43	7,874.5	-91.0	494.4	-7.0	0.00	0.00	0.00
8,000.0	5.86	100.43	7,974.0	-92.9	504.5	-7.1	0.00	0.00	0.00
8,100.0	5.86	100.43	8,073.5	-94.7	514.5	-7.3	0.00	0.00	0.00
8,200.0	5.86	100.43	8,173.0	-96.6	524.5	-7.4	0.00	0.00	0.00
8,300.0	5.86	100.43	8,272.4	-98.4	534.6	-7.5	0.00	0.00	0.00
8,400.0	5.86	100.43	8,371.9	-100.3	544.6	-7.7	0.00	0.00	0.00
8,500.0	5.86	100.43	8,471.4	-102.1	554.7	-7.8	0.00	0.00	0.00
8,600.0	5.86	100.43	8,570.9	-104.0	564.7	-8.0	0.00	0.00	0.00
8,700.0	5.86	100.43	8,670.3	-105.8	574.8	-8.1	0.00	0.00	0.00
8,800.0	5.86	100.43	8,769.8	-107.7	584.8	-8.3	0.00	0.00	0.00
8,900.0	5.86	100.43	8,869.3	-109.5	594.8	-8.4	0.00	0.00	0.00
9,000.0	5.86	100.43	8,968.8	-111.4	604.9	-8.5	0.00	0.00	0.00
9,100.0	5.86	100.43	9,068.3	-113.2	614.9	-8.7	0.00	0.00	0.00
9,200.0	5.86	100.43	9,167.7	-115.1	625.0	-8.8	0.00	0.00	0.00
9,300.0	5.86	100.43	9,267.2	-116.9	635.0	-9.0	0.00	0.00	0.00
9,400.0	5.86	100.43	9,366.7	-118.8	645.1	-9.1	0.00	0.00	0.00
9,500.0	5.86	100.43	9,466.2	-120.6	655.1	-9.2	0.00	0.00	0.00
9,600.0	5.86	100.43	9,565.6	-122.5	665.1	-9.4	0.00	0.00	0.00
9,700.0	5.86	100.43	9,665.1	-124.3	675.2	-9.5	0.00	0.00	0.00
9,800.0	5.86	100.43	9,764.6	-126.2	685.2	-9.7	0.00	0.00	0.00
9,900.0	5.86	100.43	9,864.1	-128.0	695.3	-9.8	0.00	0.00	0.00
10,000.0	5.86	100.43	9,963.5	-129.9	705.3	-10.0	0.00	0.00	0.00
10,100.0	5.86	100.43	10,063.0	-131.7	715.3	-10.1	0.00	0.00	0.00
10,200.0	5.86	100.43	10,162.5	-133.6	725.4	-10.2	0.00	0.00	0.00
10,300.0	5.86	100.43	10,262.0	-135.4	735.4	-10.4	0.00	0.00	0.00



Well Planning Report

QES

Database: EDM 5000.1 Single User Db
 Company: BTA Oil Producers, LLC
 Project: Lea County, NM (NAD 83)
 Site: Sec 22, T25-S, R33-E
 Well: Rojo 7811 22 Fed Com #14Y
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Rojo 7811 22 Fed Com #14Y
 TVD Reference: WELL @ 3370.0usft (Patterson #566)
 MD Reference: WELL @ 3370.0usft (Patterson #566)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
10,400.0	5.86	100.43	10,361.5	-137.2	745.5	-10.5	0.00	0.00	0.00
10,500.0	5.86	100.43	10,460.9	-139.1	755.5	-10.7	0.00	0.00	0.00
10,600.0	5.86	100.43	10,560.4	-140.9	765.6	-10.8	0.00	0.00	0.00
10,700.0	5.86	100.43	10,659.9	-142.8	775.6	-10.9	0.00	0.00	0.00
10,800.0	5.86	100.43	10,759.4	-144.6	785.6	-11.1	0.00	0.00	0.00
10,900.0	5.86	100.43	10,858.8	-146.5	795.7	-11.2	0.00	0.00	0.00
11,000.0	5.86	100.43	10,958.3	-148.3	805.7	-11.4	0.00	0.00	0.00
11,100.0	5.86	100.43	11,057.8	-150.2	815.8	-11.5	0.00	0.00	0.00
11,200.0	5.86	100.43	11,157.3	-152.0	825.8	-11.7	0.00	0.00	0.00
11,300.0	5.86	100.43	11,256.8	-153.9	835.8	-11.8	0.00	0.00	0.00
11,400.0	5.86	100.43	11,356.2	-155.7	845.9	-11.9	0.00	0.00	0.00
11,500.0	5.86	100.43	11,455.7	-157.6	855.9	-12.1	0.00	0.00	0.00
11,600.0	5.86	100.43	11,555.2	-159.4	866.0	-12.2	0.00	0.00	0.00
Drop 2°/100'									
11,703.8	5.86	100.43	11,658.5	-161.4	876.4	-12.4	0.00	0.00	0.00
11,800.0	3.94	100.43	11,754.3	-162.8	884.5	-12.5	2.00	-2.00	0.00
11,900.0	1.94	100.43	11,854.1	-163.8	889.5	-12.6	2.00	-2.00	0.00
EOD @ Vert / Build 10°/100'									
11,996.9	0.00	0.01	11,951.0	-164.1	891.1	-12.6	2.00	-2.00	0.00
12,000.0	0.31	359.57	11,954.1	-164.1	891.1	-12.6	10.00	10.00	0.00
12,050.0	5.31	359.57	12,004.1	-161.6	891.1	-10.1	10.00	10.00	0.00
12,100.0	10.31	359.57	12,053.6	-154.8	891.1	-3.5	10.00	10.00	0.00
12,150.0	15.31	359.57	12,102.3	-143.7	891.0	7.5	10.00	10.00	0.00
12,200.0	20.31	359.57	12,149.9	-128.4	890.9	22.5	10.00	10.00	0.00
12,250.0	25.31	359.57	12,196.0	-109.1	890.7	41.6	10.00	10.00	0.00
12,300.0	30.31	359.57	12,240.2	-85.7	890.5	64.6	10.00	10.00	0.00
12,350.0	35.31	359.57	12,282.2	-58.6	890.3	91.2	10.00	10.00	0.00
12,400.0	40.31	359.57	12,321.7	-28.0	890.1	121.4	10.00	10.00	0.00
12,450.0	45.31	359.57	12,358.3	6.0	889.8	154.8	10.00	10.00	0.00
12,500.0	50.31	359.57	12,391.9	43.0	889.6	191.3	10.00	10.00	0.00
12,550.0	55.31	359.57	12,422.1	82.8	889.3	230.5	10.00	10.00	0.00
12,600.0	60.31	359.57	12,448.8	125.1	888.9	272.2	10.00	10.00	0.00
12,650.0	65.31	359.57	12,471.6	169.6	888.6	315.9	10.00	10.00	0.00
12,700.0	70.31	359.57	12,490.5	215.9	888.2	361.5	10.00	10.00	0.00
12,750.0	75.31	359.57	12,505.2	263.6	887.9	408.5	10.00	10.00	0.00
12,800.0	80.31	359.57	12,515.8	312.5	887.5	456.6	10.00	10.00	0.00
12,850.0	85.31	359.57	12,522.0	362.1	887.1	505.5	10.00	10.00	0.00
EOB @ 89.92° Inc / 359.57° Azm / 12524' TVD									
12,896.1	89.92	359.57	12,524.0	408.1	886.8	550.8	10.00	10.00	0.00
12,900.0	89.92	359.57	12,524.0	412.0	886.8	554.6	0.00	0.00	0.00
13,000.0	89.92	359.57	12,524.1	512.0	886.0	653.1	0.00	0.00	0.00
13,100.0	89.92	359.57	12,524.2	612.0	885.2	751.6	0.00	0.00	0.00
13,200.0	89.92	359.57	12,524.4	712.0	884.5	850.0	0.00	0.00	0.00
13,300.0	89.92	359.57	12,524.5	812.0	883.7	948.5	0.00	0.00	0.00
13,400.0	89.92	359.57	12,524.6	912.0	883.0	1,046.9	0.00	0.00	0.00
13,500.0	89.92	359.57	12,524.7	1,012.0	882.2	1,145.4	0.00	0.00	0.00
13,600.0	89.92	359.57	12,524.9	1,112.0	881.4	1,243.8	0.00	0.00	0.00
13,700.0	89.92	359.57	12,525.0	1,212.0	880.7	1,342.3	0.00	0.00	0.00
13,800.0	89.92	359.57	12,525.1	1,312.0	879.9	1,440.8	0.00	0.00	0.00
13,900.0	89.92	359.57	12,525.3	1,412.0	879.2	1,539.2	0.00	0.00	0.00
14,000.0	89.92	359.57	12,525.4	1,512.0	878.4	1,637.7	0.00	0.00	0.00
14,100.0	89.92	359.57	12,525.5	1,612.0	877.6	1,736.1	0.00	0.00	0.00
14,200.0	89.92	359.57	12,525.7	1,712.0	876.9	1,834.6	0.00	0.00	0.00



Well Planning Report



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 Well: Rojo 7811 22 Fed Com #14Y
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well Rojo 7811 22 Fed Com #14Y
 WELL @ 3370.0usft (Patterson #566)
 WELL @ 3370.0usft (Patterson #566)
 Grid
 Minimum Curvature

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)
14,300.0	89.92	359.57	12,525.8	1,812.0	876.1	1,933.1	0.00	0.00	0.00
14,400.0	89.92	359.57	12,525.9	1,912.0	875.4	2,031.5	0.00	0.00	0.00
14,500.0	89.92	359.57	12,526.1	2,012.0	874.6	2,130.0	0.00	0.00	0.00
14,600.0	89.92	359.57	12,526.2	2,112.0	873.8	2,228.4	0.00	0.00	0.00
14,700.0	89.92	359.57	12,526.3	2,212.0	873.1	2,326.9	0.00	0.00	0.00
14,800.0	89.92	359.57	12,526.5	2,312.0	872.3	2,425.4	0.00	0.00	0.00
14,900.0	89.92	359.57	12,526.6	2,411.9	871.6	2,523.8	0.00	0.00	0.00
15,000.0	89.92	359.57	12,526.7	2,511.9	870.8	2,622.3	0.00	0.00	0.00
15,100.0	89.92	359.57	12,526.8	2,611.9	870.1	2,720.7	0.00	0.00	0.00
15,200.0	89.92	359.57	12,527.0	2,711.9	869.3	2,819.2	0.00	0.00	0.00
15,300.0	89.92	359.57	12,527.1	2,811.9	868.5	2,917.7	0.00	0.00	0.00
15,400.0	89.92	359.57	12,527.2	2,911.9	867.8	3,016.1	0.00	0.00	0.00
15,500.0	89.92	359.57	12,527.4	3,011.9	867.0	3,114.6	0.00	0.00	0.00
15,600.0	89.92	359.57	12,527.5	3,111.9	866.3	3,213.0	0.00	0.00	0.00
15,700.0	89.92	359.57	12,527.6	3,211.9	865.5	3,311.5	0.00	0.00	0.00
15,800.0	89.92	359.57	12,527.8	3,311.9	864.7	3,409.9	0.00	0.00	0.00
15,900.0	89.92	359.57	12,527.9	3,411.9	864.0	3,508.4	0.00	0.00	0.00
16,000.0	89.92	359.57	12,528.0	3,511.9	863.2	3,606.9	0.00	0.00	0.00
16,100.0	89.92	359.57	12,528.2	3,611.9	862.5	3,705.3	0.00	0.00	0.00
16,200.0	89.92	359.57	12,528.3	3,711.9	861.7	3,803.8	0.00	0.00	0.00
16,300.0	89.92	359.57	12,528.4	3,811.9	860.9	3,902.2	0.00	0.00	0.00
16,400.0	89.92	359.57	12,528.6	3,911.9	860.2	4,000.7	0.00	0.00	0.00
16,500.0	89.92	359.57	12,528.7	4,011.9	859.4	4,099.2	0.00	0.00	0.00
16,600.0	89.92	359.57	12,528.8	4,111.9	858.7	4,197.6	0.00	0.00	0.00
16,700.0	89.92	359.57	12,528.9	4,211.9	857.9	4,296.1	0.00	0.00	0.00
16,800.0	89.92	359.57	12,529.1	4,311.9	857.1	4,394.5	0.00	0.00	0.00
16,900.0	89.92	359.57	12,529.2	4,411.9	856.4	4,493.0	0.00	0.00	0.00
17,000.0	89.92	359.57	12,529.3	4,511.9	855.6	4,591.5	0.00	0.00	0.00
17,100.0	89.92	359.57	12,529.5	4,611.9	854.9	4,689.9	0.00	0.00	0.00
17,200.0	89.92	359.57	12,529.6	4,711.9	854.1	4,788.4	0.00	0.00	0.00
17,300.0	89.92	359.57	12,529.7	4,811.9	853.4	4,886.8	0.00	0.00	0.00
17,400.0	89.92	359.57	12,529.9	4,911.9	852.6	4,985.3	0.00	0.00	0.00
TD @ 17505' MD / 12530' TVD									
17,504.6	89.92	359.57	12,530.0	5,016.5	851.8	5,088.3	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP Rojo 7811 22 Fed - hit/miss target - Shape - Point	0.00	0.00	11,951.0	-164.1	891.1	404,235.53	783,033.92	32° 6' 32.101 N	103° 33' 9.806 W
PBHL Rojo 7811 22 F - plan hits target center - Point	0.00	0.00	12,530.0	5,016.5	851.8	409,416.10	782,994.60	32° 7' 23.367 N	103° 33' 9.827 W



Well Planning Report



Database: EDM 5000.1 Single User Db
Company: BTA Oil Producers, LLC
Project: Lea County, NM (NAD 83)
Site: Sec 22, T25-S, R33-E
Well: Rojo 7811 22 Fed Com #14Y
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Rojo 7811 22 Fed Com #14Y
TVD Reference: WELL @ 3370.0usft (Patterson #566)
MD Reference: WELL @ 3370.0usft (Patterson #566)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,830.0	2,830.0	0.0	0.0	Build 2°/100'
3,123.0	3,122.5	-2.7	14.7	EOB @ 5.86° Inc / 100.43° Azm
11,703.8	11,658.5	-161.4	876.4	Drop 2°/100'
11,996.9	11,951.0	-164.1	891.1	EOD @ Vert / Build 10°/100'
12,896.1	12,524.0	408.1	886.8	EOB @ 89.92° Inc / 359.57° Azm / 12524' TVD
17,504.6	12,530.0	5,016.5	851.8	TD @ 17505' MD / 12530' TVD