Rec'd 08/10/2020 - NMOCD

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM05792

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
ROJO 7811 34-27 FED COM 20H

2. Name of Operator
BTA OIL PRODUCERS LLC
Contact: SAMMY HAJAR
E-Mail: shajar@btaoil.com

9. API Well No.
30-025-47460-00-X1

3a. Address
104 S. PECOS
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 432-682-3753

10. Field and Pool or Exploratory Area
BOBCAT DRAW-UPR WOLFCAMP

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 34 T25S R33E NWSW 2280FSL 1240FWL
32.086030 N Lat, 103.564733 W Lon

11. County or Parish, State
LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

BTA OIL PRODUCERS LLC RESPECTFULLY REQUESTS THE FOLLOWING FOOTAGE, CASING, and DRILLING DESIGN CHANGES TO THE ORIGINAL APD AS APPROVED. PLEASE SEE ATTACHED DOCUMENTS FOR MORE DETAILS.

ORIGINAL SHL FOOTAGE:

SHL: 2600' FSL & 690'FWL in section 34

NEW SHL FOOTAGE:

SHL: 2280' FSL & 1240'FWL in section 34

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #523475 verified by the BLM Well Information System
For BTA OIL PRODUCERS LLC, sent to the Hobbs
Committed to AFMSS for processing by JUANA MEDRANO on 07/29/2020 (20JM0177SE)

Name *(Printed/Typed)* SAMMY HAJAR — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 07/29/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CODY LAYTON — Title ASSISTANT FIELD MANAGER — Date 08/10/2020

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Hobbs

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Entered - KMS NMOCD

Revisions to Operator-Submitted EC Data for Sundry Notice #523475

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	OTHER NOI	OTHER NOI
Lease:	NMNM05792	NMNM05792
Agreement:		
Operator:	BTA OIL PRODUCERS, LLC 104 S. PECOS MIDLAND, TX 79701 Ph: 432-682-3753	BTA OIL PRODUCERS LLC 104 S. PECOS MIDLAND, TX 79701 Ph: 4326823753
Admin Contact:	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753
Tech Contact:	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753
Location: State: County:	 NM LEA COUNTY	 NM LEA
Field/Pool:	BOBCAT DRAW/UPPER WOLFCAM	BOBCAT DRAW-UPR WOLFCAMP
Well/Facility:	ROJO 7811 34-27 FED COM 20H Sec 34 T25S R33E NWSW 2600FSL 690FWL 32.086913 N Lat, 103.566511 W Lon	ROJO 7811 34-27 FED COM 20H Sec 34 T25S R33E NWSW 2280FSL 1240FWL 32.086030 N Lat, 103.564733 W Lon

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BTA OIL PRODUCERS LLC**
LEASE NO.:	**NMNM0005792**
WELL NAME & NO.:	ROJO 7811 34-27 FED COM 20H
SURFACE HOLE FOOTAGE:	2280'/S & 1240'/W
BOTTOM HOLE FOOTAGE	50'/N & 990'/W
LOCATION:	Section 34, T.25 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	○ Multibowl	◉ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

All Previous COAs Still Apply.

A. CASING

Casing Design:

1. The **10-3/4** inch surface casing shall be set at approximately **1,050** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing, which shall be set at approximately **12,469** feet is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess cement calculates to -43%, additional cement might be required.**

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
Excess cement calculates to -4%, additional cement might be required.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. The minimum required fill of cement behind the **5 1/2 X 5** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

B. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

C. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

OTA08032020

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

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-47460	98094	BOBCAT DRAW ; UPPER WOLFCAMP

Property Code	Property Name	Well Number
320524	ROJO 7811 34-27 FED COM	20H

OGRID No.	Operator Name	Elevation
260297	BTA OIL PRODUCERS, LLC	3325'

Surface Location

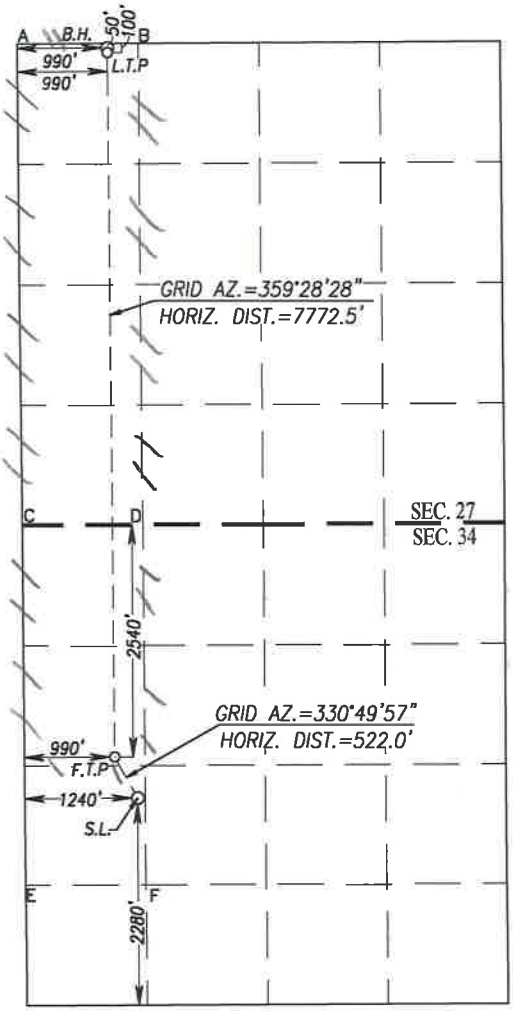
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	34	25-S	33-E		2280	SOUTH	1240	WEST	LEA

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
D	27	25-S	33-E		50	NORTH	990	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			

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



SCALE: 1"=2000'

BOTTOM HOLE LOCATION
NAD 27 NME
Y= 404051.6 N
X= 737863.0 E
LAT.=32.108524° N
LONG.=103.565124° W

BOTTOM HOLE LOCATION
NAD 83 NME
Y= 404109.3 N
X= 779049.3 E
LAT.=32.108649° N
LONG.=103.565595° W

LAST TAKE POINT
NAD 27 NME
Y= 404001.6 N
X= 737863.4 E
LAT.=32.108386° N
LONG.=103.565124° W

LAST TAKE POINT
NAD 83 NME
Y= 404059.3 N
X= 779049.7 E
LAT.=32.108511° N
LONG.=103.565595° W

CORNER COORDINATES TABLE
NAD 27 NME
A - Y= 404095.0 N, X= 736872.7 E
B - Y= 404103.8 N, X= 738199.0 E
C - Y= 398814.0 N, X= 736921.4 E
D - Y= 398822.6 N, X= 738243.9 E
E - Y= 394858.9 N, X= 736957.7 E
F - Y= 394866.1 N, X= 738279.6 E

CORNER COORDINATES TABLE
NAD 83 NME
A - Y= 404152.8 N, X= 778059.0 E
B - Y= 404161.5 N, X= 779385.3 E
C - Y= 398871.6 N, X= 778107.9 E
D - Y= 398880.1 N, X= 779430.4 E
E - Y= 394916.4 N, X= 778144.4 E
F - Y= 394923.6 N, X= 779466.4 E

FIRST TAKE POINT
NAD 27 NME
Y= 396281.0 N
X= 737933.9 E
LAT.=32.087163° N
LONG.=103.565074° W

FIRST TAKE POINT
NAD 83 NME
Y= 396338.6 N
X= 779120.6 E
LAT.=32.087288° N
LONG.=103.565543° W

GEODETIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 395825.3 N
X= 738188.3 E
LAT.=32.085905° N
LONG.=103.564263° W

GEODETIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 395882.8 N
X= 779374.9 E
LAT.=32.086030° N
LONG.=103.564733° W

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.

7/29/2020
Signature Date

Sammy Hajar
Printed Name

SHAJAR@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.

JUNE 23, 2020
Date of Survey

3239
Signature & Seal of Professional Surveyor

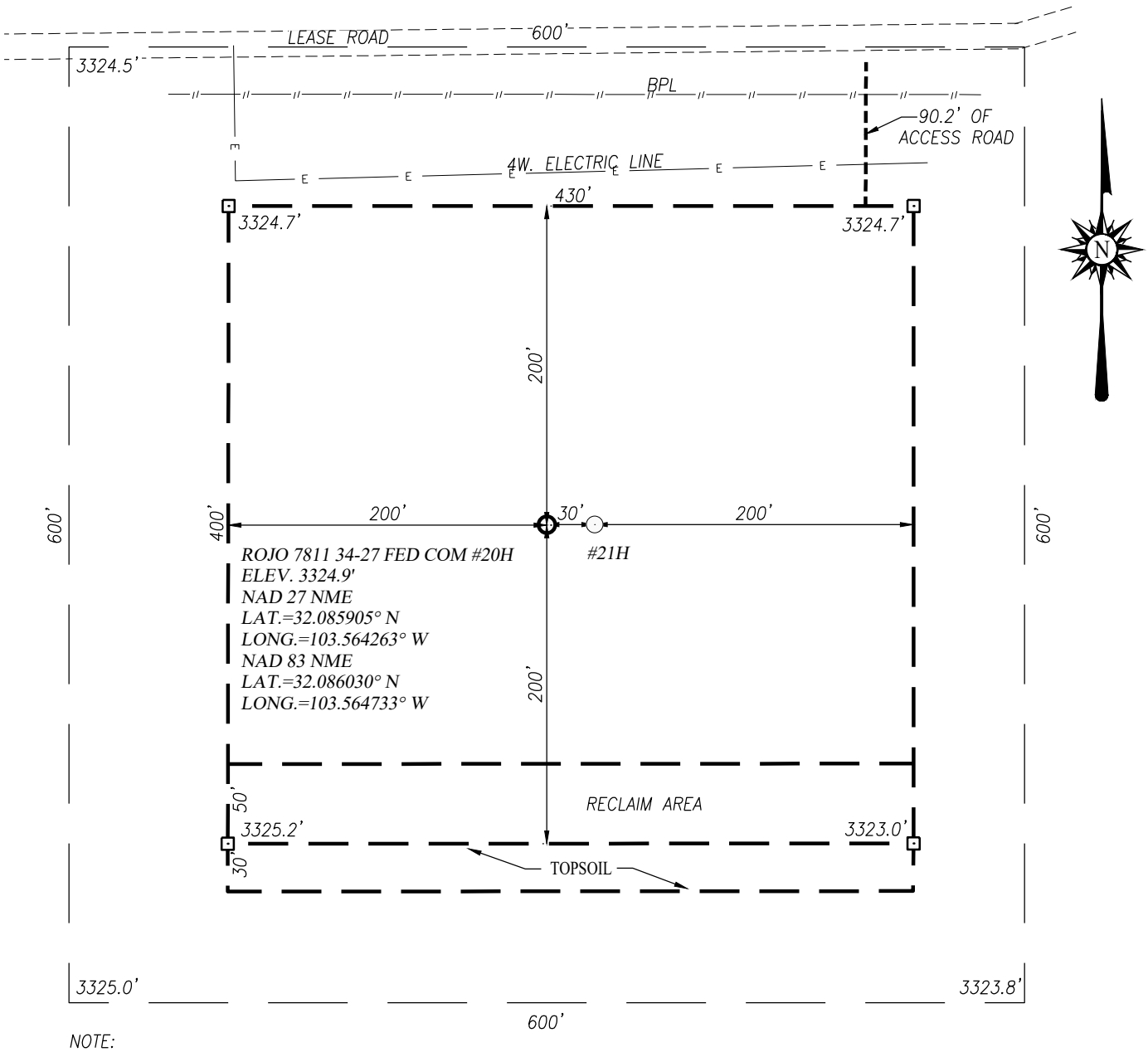
NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR

Ronald J Eidson 07/10/2020

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

LSL Rel. w.o.: 19.11.0841 JWSC W.O.: 20.11.0290

WELL SITE PLAN



NOTE:
1) SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR ACCESS ROAD LOCATION.

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J Eidson

DATE: 07/10/2020

RONALD J. EIDSON NEW MEXICO 3239 PROFESSIONAL SURVEYOR

100 0 100 200 Feet

Scale: 1"=100'

BTA OIL PRODUCERS, LLC

ROJO 7811 34-27 FED COM #20H WELL LOCATED 2280 FEET FROM THE SOUTH LINE AND 1240 FEET FROM THE WEST LINE OF SECTION 34, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 06/23/2020	CAD Date: 07/09/2020	Drawn By: LSL
W.O. No.: 20110290	Rev: .	Rel. W.O.: 19110841	Sheet 1 of 1

BTA Oil Producers, LLC
104 S Pecos
Midland, TX 79701

WELL: Rojo 7811 22 Fed #20H (WLED)
TVD: 12995
MD: 20584

DRILLING PLAN

Casing Program

Hole Size	Csg.Size	From (MD)	To (MD)	From (TVD)	To (TVD)	Tapered String	Weight (lbs)	Grade	Conn.	Collapse	Burst	Body Tension	Joint Tension	Dry/ Buoyant	Mud Weight (ppg)
14 3/4	10 3/4	0	850	0	850	No	40.5	J-55	STC	4.3	8.5	18.3	12.2	Dry	8.3
9 7/8	7 5/8	0	8027	0	8000	yes	29.7	P110	Buttress	1.4	2.4	3.9	4.0	Dry	9.4
8 3/4	7 5/8	8027	12469	8000	12443	yes	29.7	P110	FJ	1.6	1.6	2.5	2.6	Dry	9.4
6 3/4	5 1/2	0	12269	0	12243	Yes	20	P110	Buttress	1.8	1.4	2.6	2.7	Dry	14
6 3/4	5	12269	20584	12243	12995	Yes	18	P110	Buttress	1.8	1.3	1.6	1.6	Dry	14

*7 5/8" has DV Tool @ 4955'

Dv Tool Depth 4955

Cementing Program

Csg. Size		Stage Tool Depth	Top MD of Segment	Bottom MD of Segment	Cement Type	Quantity (sk)	Yield (cu. Ft./sk)	Density (lbs. gal)	Volume (cu.ft.)	% Excess	Additives
10 3/4	Lead		0	605	Class C	375	1.8	13.5	675	100%	2% CaCl2
	Tail		605	850	Class C	200	1.34	14.8	268	100%	2% CaCl2
7 5/8	Stg 2 Lead		0	4530	Class C	725	2.19	12.7	1587.75	50%	0.5% CaCl2
	Stg 2 Tail		4530	4955	Class C	150	1.33	14.8	199.5	50%	1% CaCl2
	Stg 1 Lead		4955	8920	Class H	405	2.64	10.5	1069.2	25%	0.5% CaCl2
	Stg 1 Tail		8920	12469	Class H	400	1.19	15.6	476	25%	1% CaCl2
5 1/2	Lead										
	Tail		11470	12269							
5	Lead										
	Tail		12269	20584	Class H	890	1.27	14.8	1130.3	10%	0.1% Fluid Loss

7.625 29.7# P-110 HC Stinger™

Pipe Body Data

Nominal OD	7.625	Inches
Wall Thickness	0.375	Inches
Weight	29.70	lb/ft
PE Weight	29.04	lb/ft
Nominal ID	6.875	Inches
Drift	6.750	Inches
Minimum Yield Strength	110,000	PSI
Minimum Tensile Strength	125,000	PSI
RBW	87.5%	Rating

Connection Data

Connection OD	7.625	Inches
Connection ID	6.875	Inches
Make-Up loss	3.030	Inches
Tension Efficiency	60%	Rating
Compression Efficiency	60%	Rating
Yield Strength in Tension	564,000	LBS.
Yield Strength in Compression	564,000	LBS.
MIYP (Burst)	7,570	PSI
Collapse Pressure	6,150	PSI
Uniaxial Bending	-	degrees

Make-Up torques

Yield torque	25,960	LBS.
Max Operating Torque	23,600	LBS.
Max Make-Up	18,900	LBS.
Optimum Make-Up	17,200	LBS.
Minimum Make-Up	15,500	LBS.

Technical Sales Support: Rafael Escamilla Jr., Cell: 281-949-7704, jescamilla@ofsint.com

Product is sold by OFSI under a license from Fermata Technologies, LLC

BTA Oil Producers, LLC

WELL DETAILS: Rojo #20H					
		Ground Level	Ground Level: 3325.0		
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	395882.80	779374.90	32° 5' 9.708 N	103° 33' 53.038 W

T G M

Azimuths to Grid North
True North: -0.41°
Magnetic North: 7.33°

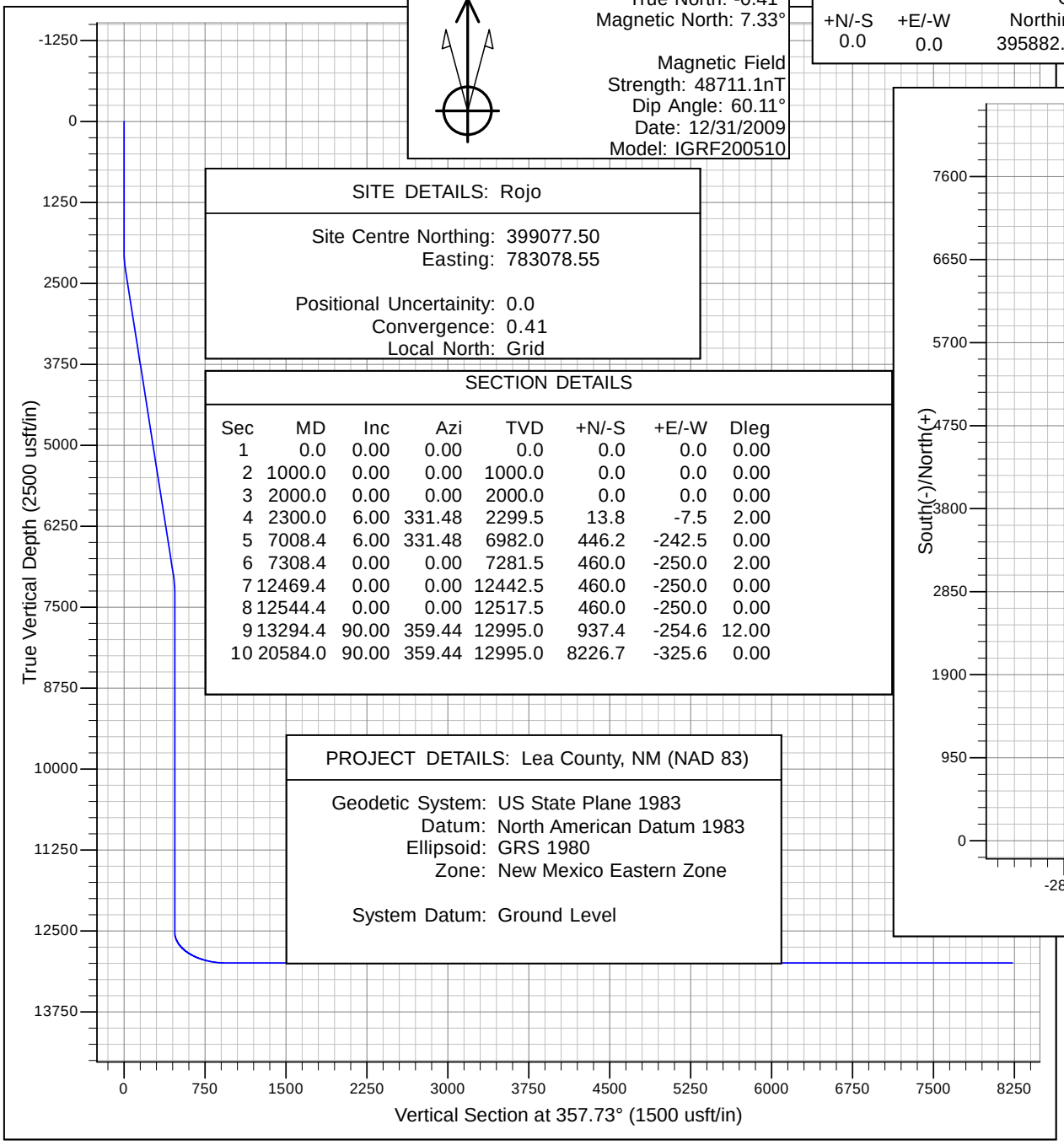
Magnetic Field
Strength: 48711.1nT
Dip Angle: 60.11°
Date: 12/31/2009
Model: IGRF200510

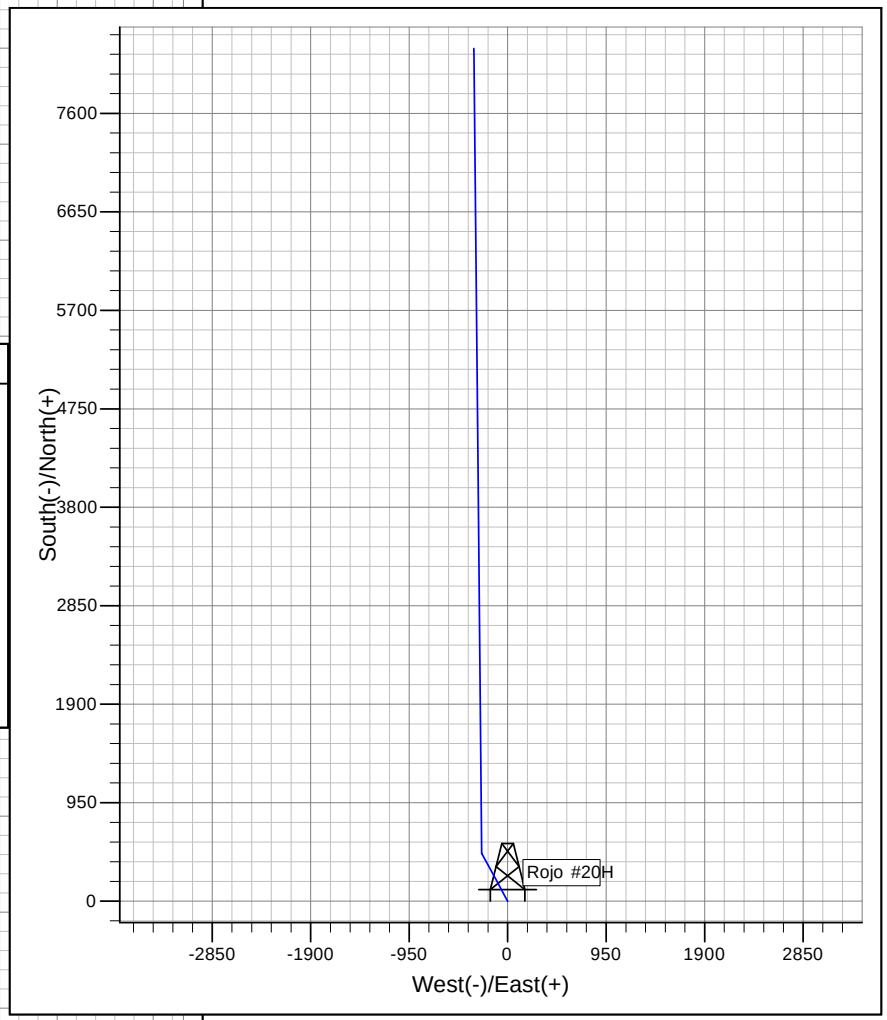
SITE DETAILS: Rojo	
Site Centre Northing:	399077.50
Easting:	783078.55
Positional Uncertainity:	0.0
Convergence:	0.41
Local North:	Grid

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00
3	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00
4	2300.0	6.00	331.48	2299.5	13.8	-7.5	2.00
5	7008.4	6.00	331.48	6982.0	446.2	-242.5	0.00
6	7308.4	0.00	0.00	7281.5	460.0	-250.0	2.00
7	12469.4	0.00	0.00	12442.5	460.0	-250.0	0.00
8	12544.4	0.00	0.00	12517.5	460.0	-250.0	0.00
9	13294.4	90.00	359.44	12995.0	937.4	-254.6	12.00
10	20584.0	90.00	359.44	12995.0	8226.7	-325.6	0.00

PROJECT DETAILS: Lea County, NM (NAD 83)	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone
System Datum:	Ground Level





BTA Oil Producers, LLC

Lea County, NM (NAD 83)
Rojo
Rojo #20H

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

27 July, 2020

Database:	Old	**Local Co-ordinate Reference:**	Well Rojo #20H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	Dont Use @ 3323.0usft
Project:	Lea County, NM (NAD 83)	**MD Reference:**	Dont Use @ 3323.0usft
Site:	Rojo	**North Reference:**	Grid
Well:	Rojo #20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, NM (NAD 83), Lea County, NM		
Map System:	US State Plane 1983	**System Datum:**	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Rojo				
Site Position:		**Northing:**	399,077.50 usft	**Latitude:**	32° 5' 41.057 N
From:	Map	**Easting:**	783,078.55 usft	**Longitude:**	103° 33' 9.721 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.41 °

Well	Rojo #20H				
Well Position	**+N/-S** 0.0 usft	**Northing:**	395,882.80 usft	**Latitude:**	32° 5' 9.708 N
	+E/-W 0.0 usft	**Easting:**	779,374.90 usft	**Longitude:**	103° 33' 53.038 W
Position Uncertainty	0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,325.0 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	12/31/2009	7.74	60.11	48,711.11401569

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	357.73	

Plan Survey Tool Program **Date** 7/27/2020

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,584.0	Design #1 (Wellbore #1)		

Database:	Old	**Local Co-ordinate Reference:**	Well Rojo #20H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	Dont Use @ 3323.0usft
Project:	Lea County, NM (NAD 83)	**MD Reference:**	Dont Use @ 3323.0usft
Site:	Rojo	**North Reference:**	Grid
Well:	Rojo #20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,300.0	6.00	331.48	2,299.5	13.8	-7.5	2.00	2.00	0.00	331.48	
7,008.4	6.00	331.48	6,982.0	446.2	-242.5	0.00	0.00	0.00	0.00	
7,308.4	0.00	0.00	7,281.5	460.0	-250.0	2.00	-2.00	0.00	180.00	
12,469.4	0.00	0.00	12,442.5	460.0	-250.0	0.00	0.00	0.00	0.00	
12,544.4	0.00	0.00	12,517.5	460.0	-250.0	0.00	0.00	0.00	0.00	
13,294.4	90.00	359.44	12,995.0	937.4	-254.6	12.00	12.00	0.00	359.44	
20,584.0	90.00	359.44	12,995.0	8,226.7	-325.6	0.00	0.00	0.00	0.00	Rojo #20H BHL

Database:	Old	**Local Co-ordinate Reference:**	Well Rojo #20H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	Dont Use @ 3323.0usft
Project:	Lea County, NM (NAD 83)	**MD Reference:**	Dont Use @ 3323.0usft
Site:	Rojo	**North Reference:**	Grid
Well:	Rojo #20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned 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	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
100.0	0.00	0.00	100.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
200.0	0.00	0.00	200.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
300.0	0.00	0.00	300.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
400.0	0.00	0.00	400.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
500.0	0.00	0.00	500.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
600.0	0.00	0.00	600.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
700.0	0.00	0.00	700.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
800.0	0.00	0.00	800.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
900.0	0.00	0.00	900.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	395,882.80	779,374.90	32° 5' 9.708 N	103° 33' 53.038 W
2,100.0	2.00	331.48	2,100.0	1.5	-0.8	395,884.33	779,374.06	32° 5' 9.723 N	103° 33' 53.048 W
2,200.0	4.00	331.48	2,199.8	6.1	-3.3	395,888.93	779,371.57	32° 5' 9.769 N	103° 33' 53.076 W
2,300.0	6.00	331.48	2,299.5	13.8	-7.5	395,896.59	779,367.40	32° 5' 9.845 N	103° 33' 53.124 W
2,400.0	6.00	331.48	2,398.9	23.0	-12.5	395,905.77	779,362.41	32° 5' 9.936 N	103° 33' 53.181 W
2,500.0	6.00	331.48	2,498.4	32.2	-17.5	395,914.96	779,357.42	32° 5' 10.027 N	103° 33' 53.238 W
2,600.0	6.00	331.48	2,597.8	41.3	-22.5	395,924.14	779,352.43	32° 5' 10.118 N	103° 33' 53.296 W
2,700.0	6.00	331.48	2,697.3	50.5	-27.5	395,933.32	779,347.44	32° 5' 10.210 N	103° 33' 53.353 W
2,800.0	6.00	331.48	2,796.7	59.7	-32.5	395,942.51	779,342.45	32° 5' 10.301 N	103° 33' 53.410 W
2,900.0	6.00	331.48	2,896.2	68.9	-37.4	395,951.69	779,337.46	32° 5' 10.392 N	103° 33' 53.467 W
3,000.0	6.00	331.48	2,995.6	78.1	-42.4	395,960.87	779,332.47	32° 5' 10.483 N	103° 33' 53.525 W
3,100.0	6.00	331.48	3,095.1	87.3	-47.4	395,970.06	779,327.47	32° 5' 10.574 N	103° 33' 53.582 W
3,200.0	6.00	331.48	3,194.5	96.4	-52.4	395,979.24	779,322.48	32° 5' 10.666 N	103° 33' 53.639 W
3,300.0	6.00	331.48	3,294.0	105.6	-57.4	395,988.43	779,317.49	32° 5' 10.757 N	103° 33' 53.697 W
3,400.0	6.00	331.48	3,393.4	114.8	-62.4	395,997.61	779,312.50	32° 5' 10.848 N	103° 33' 53.754 W
3,500.0	6.00	331.48	3,492.9	124.0	-67.4	396,006.79	779,307.51	32° 5' 10.939 N	103° 33' 53.811 W
3,600.0	6.00	331.48	3,592.3	133.2	-72.4	396,015.98	779,302.52	32° 5' 11.031 N	103° 33' 53.868 W
3,700.0	6.00	331.48	3,691.8	142.4	-77.4	396,025.16	779,297.53	32° 5' 11.122 N	103° 33' 53.926 W
3,800.0	6.00	331.48	3,791.2	151.6	-82.4	396,034.35	779,292.54	32° 5' 11.213 N	103° 33' 53.983 W
3,900.0	6.00	331.48	3,890.7	160.7	-87.4	396,043.53	779,287.54	32° 5' 11.304 N	103° 33' 54.040 W
4,000.0	6.00	331.48	3,990.1	169.9	-92.3	396,052.71	779,282.55	32° 5' 11.396 N	103° 33' 54.097 W
4,100.0	6.00	331.48	4,089.6	179.1	-97.3	396,061.90	779,277.56	32° 5' 11.487 N	103° 33' 54.155 W
4,200.0	6.00	331.48	4,189.0	188.3	-102.3	396,071.08	779,272.57	32° 5' 11.578 N	103° 33' 54.212 W
4,300.0	6.00	331.48	4,288.5	197.5	-107.3	396,080.27	779,267.58	32° 5' 11.669 N	103° 33' 54.269 W
4,400.0	6.00	331.48	4,387.9	206.7	-112.3	396,089.45	779,262.59	32° 5' 11.760 N	103° 33' 54.326 W
4,500.0	6.00	331.48	4,487.4	215.8	-117.3	396,098.63	779,257.60	32° 5' 11.852 N	103° 33' 54.384 W
4,600.0	6.00	331.48	4,586.9	225.0	-122.3	396,107.82	779,252.61	32° 5' 11.943 N	103° 33' 54.441 W
4,700.0	6.00	331.48	4,686.3	234.2	-127.3	396,117.00	779,247.61	32° 5' 12.034 N	103° 33' 54.498 W
4,800.0	6.00	331.48	4,785.8	243.4	-132.3	396,126.18	779,242.62	32° 5' 12.125 N	103° 33' 54.555 W
4,900.0	6.00	331.48	4,885.2	252.6	-137.3	396,135.37	779,237.63	32° 5' 12.217 N	103° 33' 54.613 W
5,000.0	6.00	331.48	4,984.7	261.8	-142.3	396,144.55	779,232.64	32° 5' 12.308 N	103° 33' 54.670 W
5,100.0	6.00	331.48	5,084.1	270.9	-147.3	396,153.74	779,227.65	32° 5' 12.399 N	103° 33' 54.727 W
5,200.0	6.00	331.48	5,183.6	280.1	-152.2	396,162.92	779,222.66	32° 5' 12.490 N	103° 33' 54.784 W
5,300.0	6.00	331.48	5,283.0	289.3	-157.2	396,172.10	779,217.67	32° 5' 12.581 N	103° 33' 54.842 W
5,400.0	6.00	331.48	5,382.5	298.5	-162.2	396,181.29	779,212.68	32° 5' 12.673 N	103° 33' 54.899 W

Database:	Old	**Local Co-ordinate Reference:**	Well Rojo #20H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	Dont Use @ 3323.0usft
Project:	Lea County, NM (NAD 83)	**MD Reference:**	Dont Use @ 3323.0usft
Site:	Rojo	**North Reference:**	Grid
Well:	Rojo #20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,500.0	6.00	331.48	5,481.9	307.7	-167.2	396,190.47	779,207.68	32° 5' 12.764 N	103° 33' 54.956 W
5,600.0	6.00	331.48	5,581.4	316.9	-172.2	396,199.66	779,202.69	32° 5' 12.855 N	103° 33' 55.013 W
5,700.0	6.00	331.48	5,680.8	326.0	-177.2	396,208.84	779,197.70	32° 5' 12.946 N	103° 33' 55.071 W
5,800.0	6.00	331.48	5,780.3	335.2	-182.2	396,218.02	779,192.71	32° 5' 13.038 N	103° 33' 55.128 W
5,900.0	6.00	331.48	5,879.7	344.4	-187.2	396,227.21	779,187.72	32° 5' 13.129 N	103° 33' 55.185 W
6,000.0	6.00	331.48	5,979.2	353.6	-192.2	396,236.39	779,182.73	32° 5' 13.220 N	103° 33' 55.242 W
6,100.0	6.00	331.48	6,078.6	362.8	-197.2	396,245.58	779,177.74	32° 5' 13.311 N	103° 33' 55.300 W
6,200.0	6.00	331.48	6,178.1	372.0	-202.2	396,254.76	779,172.75	32° 5' 13.403 N	103° 33' 55.357 W
6,300.0	6.00	331.48	6,277.5	381.2	-207.1	396,263.94	779,167.75	32° 5' 13.494 N	103° 33' 55.414 W
6,400.0	6.00	331.48	6,377.0	390.3	-212.1	396,273.13	779,162.76	32° 5' 13.585 N	103° 33' 55.471 W
6,500.0	6.00	331.48	6,476.4	399.5	-217.1	396,282.31	779,157.77	32° 5' 13.676 N	103° 33' 55.529 W
6,600.0	6.00	331.48	6,575.9	408.7	-222.1	396,291.49	779,152.78	32° 5' 13.767 N	103° 33' 55.586 W
6,700.0	6.00	331.48	6,675.3	417.9	-227.1	396,300.68	779,147.79	32° 5' 13.859 N	103° 33' 55.643 W
6,800.0	6.00	331.48	6,774.8	427.1	-232.1	396,309.86	779,142.80	32° 5' 13.950 N	103° 33' 55.700 W
6,900.0	6.00	331.48	6,874.3	436.3	-237.1	396,319.05	779,137.81	32° 5' 14.041 N	103° 33' 55.758 W
7,000.0	6.00	331.48	6,973.7	445.4	-242.1	396,328.23	779,132.82	32° 5' 14.132 N	103° 33' 55.815 W
7,008.4	6.00	331.48	6,982.0	446.2	-242.5	396,329.00	779,132.40	32° 5' 14.140 N	103° 33' 55.820 W
7,100.0	4.17	331.48	7,073.3	453.3	-246.4	396,336.13	779,128.52	32° 5' 14.211 N	103° 33' 55.864 W
7,200.0	2.17	331.48	7,173.1	458.2	-249.0	396,340.99	779,125.88	32° 5' 14.259 N	103° 33' 55.894 W
7,300.0	0.17	331.48	7,273.1	460.0	-250.0	396,342.78	779,124.91	32° 5' 14.277 N	103° 33' 55.906 W
7,308.4	0.00	0.00	7,281.5	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
7,400.0	0.00	0.00	7,373.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
7,500.0	0.00	0.00	7,473.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
7,600.0	0.00	0.00	7,573.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
7,700.0	0.00	0.00	7,673.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
7,800.0	0.00	0.00	7,773.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
7,900.0	0.00	0.00	7,873.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,000.0	0.00	0.00	7,973.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,100.0	0.00	0.00	8,073.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,200.0	0.00	0.00	8,173.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,300.0	0.00	0.00	8,273.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,400.0	0.00	0.00	8,373.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,500.0	0.00	0.00	8,473.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,600.0	0.00	0.00	8,573.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,700.0	0.00	0.00	8,673.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,800.0	0.00	0.00	8,773.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
8,900.0	0.00	0.00	8,873.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,000.0	0.00	0.00	8,973.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,100.0	0.00	0.00	9,073.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,200.0	0.00	0.00	9,173.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,300.0	0.00	0.00	9,273.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,400.0	0.00	0.00	9,373.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,500.0	0.00	0.00	9,473.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,600.0	0.00	0.00	9,573.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,700.0	0.00	0.00	9,673.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,800.0	0.00	0.00	9,773.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
9,900.0	0.00	0.00	9,873.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,000.0	0.00	0.00	9,973.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,100.0	0.00	0.00	10,073.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,200.0	0.00	0.00	10,173.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,300.0	0.00	0.00	10,273.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,400.0	0.00	0.00	10,373.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,500.0	0.00	0.00	10,473.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,600.0	0.00	0.00	10,573.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,700.0	0.00	0.00	10,673.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W

Database:	Old	**Local Co-ordinate Reference:**	Well Rojo #20H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	Dont Use @ 3323.0usft
Project:	Lea County, NM (NAD 83)	**MD Reference:**	Dont Use @ 3323.0usft
Site:	Rojo	**North Reference:**	Grid
Well:	Rojo #20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,800.0	0.00	0.00	10,773.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
10,900.0	0.00	0.00	10,873.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,000.0	0.00	0.00	10,973.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,100.0	0.00	0.00	11,073.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,200.0	0.00	0.00	11,173.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,300.0	0.00	0.00	11,273.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,400.0	0.00	0.00	11,373.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,500.0	0.00	0.00	11,473.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,600.0	0.00	0.00	11,573.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,700.0	0.00	0.00	11,673.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,800.0	0.00	0.00	11,773.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
11,900.0	0.00	0.00	11,873.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,000.0	0.00	0.00	11,973.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,100.0	0.00	0.00	12,073.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,200.0	0.00	0.00	12,173.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,300.0	0.00	0.00	12,273.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,400.0	0.00	0.00	12,373.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,469.4	0.00	0.00	12,442.5	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,500.0	0.00	0.00	12,473.1	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,544.4	0.00	0.00	12,517.5	460.0	-250.0	396,342.79	779,124.90	32° 5' 14.277 N	103° 33' 55.906 W
12,600.0	6.67	359.44	12,573.0	463.2	-250.0	396,346.02	779,124.87	32° 5' 14.309 N	103° 33' 55.906 W
12,700.0	18.67	359.44	12,670.4	485.1	-250.2	396,367.91	779,124.66	32° 5' 14.526 N	103° 33' 55.906 W
12,800.0	30.67	359.44	12,761.1	526.8	-250.7	396,409.57	779,124.25	32° 5' 14.938 N	103° 33' 55.908 W
12,900.0	42.67	359.44	12,841.1	586.4	-251.2	396,469.17	779,123.67	32° 5' 15.528 N	103° 33' 55.910 W
13,000.0	54.67	359.44	12,907.1	661.3	-252.0	396,544.12	779,122.94	32° 5' 16.269 N	103° 33' 55.912 W
13,100.0	66.67	359.44	12,956.0	748.4	-252.8	396,631.14	779,122.10	32° 5' 17.131 N	103° 33' 55.914 W
13,200.0	78.67	359.44	12,985.7	843.6	-253.7	396,726.41	779,121.17	32° 5' 18.073 N	103° 33' 55.917 W
13,294.4	90.00	359.44	12,995.0	937.4	-254.6	396,820.22	779,120.26	32° 5' 19.002 N	103° 33' 55.920 W
13,300.0	90.00	359.44	12,995.0	943.0	-254.7	396,825.79	779,120.20	32° 5' 19.057 N	103° 33' 55.920 W
13,400.0	90.00	359.44	12,995.0	1,043.0	-255.7	396,925.78	779,119.23	32° 5' 20.046 N	103° 33' 55.923 W
13,500.0	90.00	359.44	12,995.0	1,143.0	-256.6	397,025.78	779,118.26	32° 5' 21.036 N	103° 33' 55.926 W
13,600.0	90.00	359.44	12,995.0	1,243.0	-257.6	397,125.77	779,117.28	32° 5' 22.025 N	103° 33' 55.929 W
13,700.0	90.00	359.44	12,995.0	1,343.0	-258.6	397,225.76	779,116.31	32° 5' 23.015 N	103° 33' 55.933 W
13,800.0	90.00	359.44	12,995.0	1,443.0	-259.6	397,325.76	779,115.33	32° 5' 24.005 N	103° 33' 55.936 W
13,900.0	90.00	359.44	12,995.0	1,543.0	-260.5	397,425.75	779,114.36	32° 5' 24.994 N	103° 33' 55.939 W
14,000.0	90.00	359.44	12,995.0	1,643.0	-261.5	397,525.74	779,113.39	32° 5' 25.984 N	103° 33' 55.942 W
14,100.0	90.00	359.44	12,995.0	1,743.0	-262.5	397,625.73	779,112.41	32° 5' 26.973 N	103° 33' 55.945 W
14,200.0	90.00	359.44	12,995.0	1,843.0	-263.5	397,725.73	779,111.44	32° 5' 27.963 N	103° 33' 55.948 W
14,300.0	90.00	359.44	12,995.0	1,943.0	-264.4	397,825.72	779,110.47	32° 5' 28.952 N	103° 33' 55.951 W
14,400.0	90.00	359.44	12,995.0	2,043.0	-265.4	397,925.71	779,109.49	32° 5' 29.942 N	103° 33' 55.954 W
14,500.0	90.00	359.44	12,995.0	2,143.0	-266.4	398,025.70	779,108.52	32° 5' 30.931 N	103° 33' 55.957 W
14,600.0	90.00	359.44	12,995.0	2,243.0	-267.4	398,125.70	779,107.55	32° 5' 31.921 N	103° 33' 55.960 W
14,700.0	90.00	359.44	12,995.0	2,343.0	-268.3	398,225.69	779,106.57	32° 5' 32.910 N	103° 33' 55.963 W
14,800.0	90.00	359.44	12,995.0	2,442.9	-269.3	398,325.68	779,105.60	32° 5' 33.900 N	103° 33' 55.966 W
14,900.0	90.00	359.44	12,995.0	2,542.9	-270.3	398,425.67	779,104.63	32° 5' 34.889 N	103° 33' 55.969 W
15,000.0	90.00	359.44	12,995.0	2,642.9	-271.3	398,525.67	779,103.65	32° 5' 35.879 N	103° 33' 55.972 W
15,100.0	90.00	359.44	12,995.0	2,742.9	-272.2	398,625.66	779,102.68	32° 5' 36.868 N	103° 33' 55.975 W
15,200.0	90.00	359.44	12,995.0	2,842.9	-273.2	398,725.65	779,101.71	32° 5' 37.858 N	103° 33' 55.978 W
15,300.0	90.00	359.44	12,995.0	2,942.9	-274.2	398,825.65	779,100.73	32° 5' 38.848 N	103° 33' 55.981 W
15,400.0	90.00	359.44	12,995.0	3,042.9	-275.1	398,925.64	779,099.76	32° 5' 39.837 N	103° 33' 55.984 W
15,500.0	90.00	359.44	12,995.0	3,142.9	-276.1	399,025.63	779,098.79	32° 5' 40.827 N	103° 33' 55.987 W
15,600.0	90.00	359.44	12,995.0	3,242.9	-277.1	399,125.62	779,097.81	32° 5' 41.816 N	103° 33' 55.990 W
15,700.0	90.00	359.44	12,995.0	3,342.9	-278.1	399,225.62	779,096.84	32° 5' 42.806 N	103° 33' 55.993 W
15,800.0	90.00	359.44	12,995.0	3,442.9	-279.0	399,325.61	779,095.87	32° 5' 43.795 N	103° 33' 55.996 W
15,900.0	90.00	359.44	12,995.0	3,542.9	-280.0	399,425.60	779,094.89	32° 5' 44.785 N	103° 33' 55.999 W

Database:	Old	**Local Co-ordinate Reference:**	Well Rojo #20H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	Dont Use @ 3323.0usft
Project:	Lea County, NM (NAD 83)	**MD Reference:**	Dont Use @ 3323.0usft
Site:	Rojo	**North Reference:**	Grid
Well:	Rojo #20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,000.0	90.00	359.44	12,995.0	3,642.9	-281.0	399,525.59	779,093.92	32° 5' 45.774 N	103° 33' 56.002 W
16,100.0	90.00	359.44	12,995.0	3,742.9	-282.0	399,625.59	779,092.95	32° 5' 46.764 N	103° 33' 56.005 W
16,200.0	90.00	359.44	12,995.0	3,842.9	-282.9	399,725.58	779,091.97	32° 5' 47.753 N	103° 33' 56.008 W
16,300.0	90.00	359.44	12,995.0	3,942.9	-283.9	399,825.57	779,091.00	32° 5' 48.743 N	103° 33' 56.012 W
16,400.0	90.00	359.44	12,995.0	4,042.9	-284.9	399,925.56	779,090.03	32° 5' 49.732 N	103° 33' 56.015 W
16,500.0	90.00	359.44	12,995.0	4,142.9	-285.9	400,025.56	779,089.05	32° 5' 50.722 N	103° 33' 56.018 W
16,600.0	90.00	359.44	12,995.0	4,242.9	-286.8	400,125.55	779,088.08	32° 5' 51.711 N	103° 33' 56.021 W
16,700.0	90.00	359.44	12,995.0	4,342.9	-287.8	400,225.54	779,087.11	32° 5' 52.701 N	103° 33' 56.024 W
16,800.0	90.00	359.44	12,995.0	4,442.9	-288.8	400,325.54	779,086.13	32° 5' 53.691 N	103° 33' 56.027 W
16,900.0	90.00	359.44	12,995.0	4,542.8	-289.7	400,425.53	779,085.16	32° 5' 54.680 N	103° 33' 56.030 W
17,000.0	90.00	359.44	12,995.0	4,642.8	-290.7	400,525.52	779,084.19	32° 5' 55.670 N	103° 33' 56.033 W
17,100.0	90.00	359.44	12,995.0	4,742.8	-291.7	400,625.51	779,083.21	32° 5' 56.659 N	103° 33' 56.036 W
17,200.0	90.00	359.44	12,995.0	4,842.8	-292.7	400,725.51	779,082.24	32° 5' 57.649 N	103° 33' 56.039 W
17,300.0	90.00	359.44	12,995.0	4,942.8	-293.6	400,825.50	779,081.27	32° 5' 58.638 N	103° 33' 56.042 W
17,400.0	90.00	359.44	12,995.0	5,042.8	-294.6	400,925.49	779,080.29	32° 5' 59.628 N	103° 33' 56.045 W
17,500.0	90.00	359.44	12,995.0	5,142.8	-295.6	401,025.48	779,079.32	32° 6' 0.617 N	103° 33' 56.048 W
17,600.0	90.00	359.44	12,995.0	5,242.8	-296.6	401,125.48	779,078.34	32° 6' 1.607 N	103° 33' 56.051 W
17,700.0	90.00	359.44	12,995.0	5,342.8	-297.5	401,225.47	779,077.37	32° 6' 2.596 N	103° 33' 56.054 W
17,800.0	90.00	359.44	12,995.0	5,442.8	-298.5	401,325.46	779,076.40	32° 6' 3.586 N	103° 33' 56.057 W
17,900.0	90.00	359.44	12,995.0	5,542.8	-299.5	401,425.45	779,075.42	32° 6' 4.575 N	103° 33' 56.060 W
18,000.0	90.00	359.44	12,995.0	5,642.8	-300.5	401,525.45	779,074.45	32° 6' 5.565 N	103° 33' 56.063 W
18,100.0	90.00	359.44	12,995.0	5,742.8	-301.4	401,625.44	779,073.48	32° 6' 6.554 N	103° 33' 56.066 W
18,200.0	90.00	359.44	12,995.0	5,842.8	-302.4	401,725.43	779,072.50	32° 6' 7.544 N	103° 33' 56.069 W
18,300.0	90.00	359.44	12,995.0	5,942.8	-303.4	401,825.43	779,071.53	32° 6' 8.534 N	103° 33' 56.072 W
18,400.0	90.00	359.44	12,995.0	6,042.8	-304.3	401,925.42	779,070.56	32° 6' 9.523 N	103° 33' 56.075 W
18,500.0	90.00	359.44	12,995.0	6,142.8	-305.3	402,025.41	779,069.58	32° 6' 10.513 N	103° 33' 56.078 W
18,600.0	90.00	359.44	12,995.0	6,242.8	-306.3	402,125.40	779,068.61	32° 6' 11.502 N	103° 33' 56.081 W
18,700.0	90.00	359.44	12,995.0	6,342.8	-307.3	402,225.40	779,067.64	32° 6' 12.492 N	103° 33' 56.084 W
18,800.0	90.00	359.44	12,995.0	6,442.8	-308.2	402,325.39	779,066.66	32° 6' 13.481 N	103° 33' 56.087 W
18,900.0	90.00	359.44	12,995.0	6,542.8	-309.2	402,425.38	779,065.69	32° 6' 14.471 N	103° 33' 56.091 W
19,000.0	90.00	359.44	12,995.0	6,642.7	-310.2	402,525.37	779,064.72	32° 6' 15.460 N	103° 33' 56.094 W
19,100.0	90.00	359.44	12,995.0	6,742.7	-311.2	402,625.37	779,063.74	32° 6' 16.450 N	103° 33' 56.097 W
19,200.0	90.00	359.44	12,995.0	6,842.7	-312.1	402,725.36	779,062.77	32° 6' 17.439 N	103° 33' 56.100 W
19,300.0	90.00	359.44	12,995.0	6,942.7	-313.1	402,825.35	779,061.80	32° 6' 18.429 N	103° 33' 56.103 W
19,400.0	90.00	359.44	12,995.0	7,042.7	-314.1	402,925.34	779,060.82	32° 6' 19.418 N	103° 33' 56.106 W
19,500.0	90.00	359.44	12,995.0	7,142.7	-315.1	403,025.34	779,059.85	32° 6' 20.408 N	103° 33' 56.109 W
19,600.0	90.00	359.44	12,995.0	7,242.7	-316.0	403,125.33	779,058.88	32° 6' 21.397 N	103° 33' 56.112 W
19,700.0	90.00	359.44	12,995.0	7,342.7	-317.0	403,225.32	779,057.90	32° 6' 22.387 N	103° 33' 56.115 W
19,800.0	90.00	359.44	12,995.0	7,442.7	-318.0	403,325.32	779,056.93	32° 6' 23.377 N	103° 33' 56.118 W
19,900.0	90.00	359.44	12,995.0	7,542.7	-318.9	403,425.31	779,055.96	32° 6' 24.366 N	103° 33' 56.121 W
20,000.0	90.00	359.44	12,995.0	7,642.7	-319.9	403,525.30	779,054.98	32° 6' 25.356 N	103° 33' 56.124 W
20,100.0	90.00	359.44	12,995.0	7,742.7	-320.9	403,625.29	779,054.01	32° 6' 26.345 N	103° 33' 56.127 W
20,200.0	90.00	359.44	12,995.0	7,842.7	-321.9	403,725.29	779,053.04	32° 6' 27.335 N	103° 33' 56.130 W
20,300.0	90.00	359.44	12,995.0	7,942.7	-322.8	403,825.28	779,052.06	32° 6' 28.324 N	103° 33' 56.133 W
20,400.0	90.00	359.44	12,995.0	8,042.7	-323.8	403,925.27	779,051.09	32° 6' 29.314 N	103° 33' 56.136 W
20,500.0	90.00	359.44	12,995.0	8,142.7	-324.8	404,025.26	779,050.12	32° 6' 30.303 N	103° 33' 56.139 W
20,584.0	90.00	359.44	12,995.0	8,226.7	-325.6	404,109.30	779,049.30	32° 6' 31.135 N	103° 33' 56.142 W

Database:	Old	**Local Co-ordinate Reference:**	Well Rojo #20H
Company:	BTA Oil Producers, LLC	**TVD Reference:**	Dont Use @ 3323.0usft
Project:	Lea County, NM (NAD 83)	**MD Reference:**	Dont Use @ 3323.0usft
Site:	Rojo	**North Reference:**	Grid
Well:	Rojo #20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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
Rojo #20H BHL - plan hits target center - Point	0.00	0.07	12,995.0	8,226.7	-325.6	404,109.30	779,049.30	32° 6' 31.135 N	103° 33' 56.142 W