

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address BTA OIL Producers, LLC 104 S. Pecos Midland, TX, 79701		² OGRID Number 260297	
		³ Reason for Filing Code/ Effective Date New Well, 5/22/21	
⁴ API Number 30 – 015-47171	⁵ Pool Name PURPLE SAGE ; WOLFCAMP		⁶ Pool Code 98220
⁷ Property Code 328285	⁸ Property Name HARROUN RANCH 20702 20-17 FEDERAL COM		⁹ Well Number 7H

II. ¹⁰ Surface Location

UL or lot no. 9	Section 30	Township 23-S	Range 29-E	Lot Idn	Feet from the 333	North/South Line SOUTH	Feet from the 821	East/West line EAST	County EDDY
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¹¹ Bottom Hole Location

UL or lot no. B	Section 17	Township 23-S	Range 29-E	Lot Idn	Feet from the 65	North/South line NORTH	Feet from the 1967	East/West line EAST	County EDDY
¹² Lse Code F	¹³ Producing Method Code FLOWING	¹⁴ Gas Connection Date 5/22/21	¹⁵ C-129 Permit Number		¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date		

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
14035	MARATHON OIL CO P.O. BOX 1234	O
	ARTESIA, NM	
327139	SENDERO CARLSBAD MIDSTREAM, LLC 1000 LOUISIANA AVE., SUITE 6900	G
	HOUSTON, TX 77002	

IV. Well Completion Data

²¹ Spud Date 11/5/20	²² Ready Date 5/22/2021	²³ TD 20430	²⁴ PBTD 20390	²⁵ Perforations 10270-20150	²⁶ DHC, MC	
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set		³⁰ Sacks Cement
14.75		10.75		463		400
9.875		7.625		9536		1590
6.75		5.5		9439		N/A
6.75		5		20415		1755

V. Well Test Data

³¹ Date New Oil 5/22/2021	³² Gas Delivery Date 5/22/31	³³ Test Date 5/31/2021	³⁴ Test Length 24hrs	³⁵ Tbg. Pressure N/A	³⁶ Csg. Pressure 2575
³⁷ Choke Size 36/64	³⁸ Oil 1157	³⁹ Water 5822	⁴⁰ Gas 2158		⁴¹ Test Method FLOWING
⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: SAMMY HAJAR			OIL CONSERVATION DIVISION		
Printed name: SAMMY HAJAR			Approved by: KURT SIMMONS		
Title: Regulatory Analyst			Title: NMOCD, SANTA FE		
E-mail Address: SHAJAR@BTAOIL.COM			Approval Date: 09/03/2021		
Date: 6/17/2021		Phone: 432-682-3753			

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
As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-47171	Pool Code 98220	Pool Name PURPLE SAGE ; WOLFCAMP
Property Code 328285	Property Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Number 7H
OGRID No. 260297	Operator Name BTA OIL PRODUCERS, LLC	Elevation 3018'

Surface Location

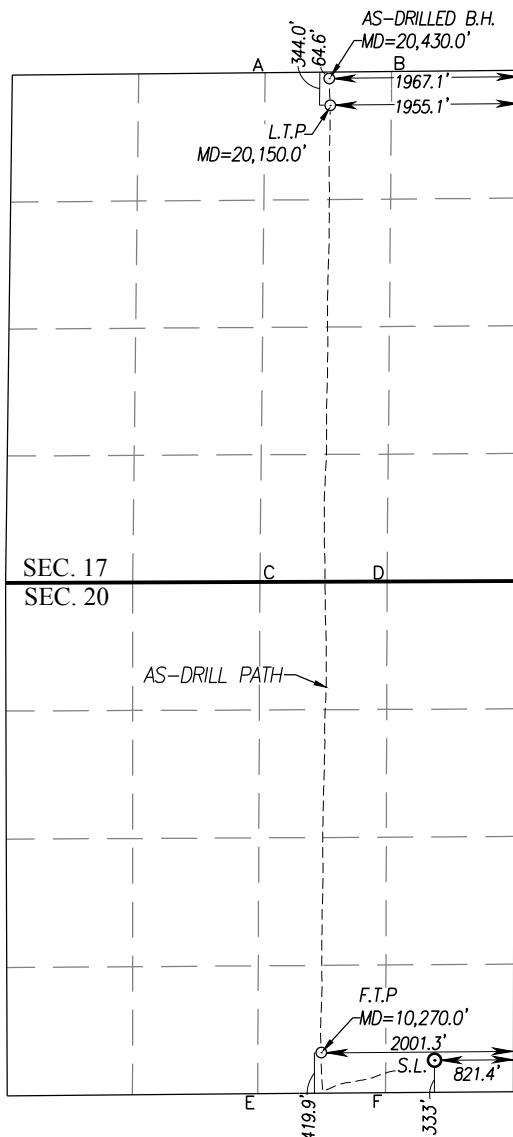
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	20	23-S	29-E		333	SOUTH	821.4	EAST	EDDY

As-Drilled 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
B	17	23-S	29-E		64.6	NORTH	1967.1	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640			

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'

AS-DRILLED BOTTOM HOLE LOCATION NAD 83 NME Y=477485.2 N X=642899.1 E LAT.=32.312251° N LONG.=104.004584° W LAST TAKE POINT NAD 83 NME Y=477205.9 N X=642909.0 E LAT.=32.311484° N LONG.=104.004555° W	AS-DRILLED BOTTOM HOLE LOCATION NAD 27 NME Y=477425.5 N X=601716.1 E LAT.=32.312130° N LONG.=104.004092° W LAST TAKE POINT NAD 27 NME Y=477146.3 N X=601726.0 E LAT.=32.311362° N LONG.=104.004063° W
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CORNER COORDINATES TABLE	
NAD 27 NME	
A - Y= 477483.9 N, X= 601051.2 E	
B - Y= 477496.2 N, X= 602367.2 E	
C - Y= 472180.9 N, X= 600996.0 E	
D - Y= 472185.4 N, X= 602319.5 E	
E - Y= 466853.3 N, X= 600973.0 E	
F - Y= 466863.5 N, X= 602303.2 E	

CORNER COORDINATES TABLE	
NAD 83 NME	
A - Y= 477543.6 N, X= 642234.1 E	
B - Y= 477555.8 N, X= 643550.1 E	
C - Y= 472240.4 N, X= 642179.1 E	
D - Y= 472245.0 N, X= 643502.6 E	
E - Y= 466912.7 N, X= 642156.3 E	
F - Y= 466922.9 N, X= 643486.5 E	

FIRST TAKE POINT NAD 83 NME Y=467337.6 N X=642816.6 E LAT.=32.284358° N LONG.=104.004952° W	FIRST TAKE POINT NAD 27 NME Y=467278.1 N X=601633.4 E LAT.=32.284236° N LONG.=104.004460° W
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SURFACE LOCATION GEODETIC COORDINATES NAD 83 NME Y=467259.7 N X=643996.1 E LAT.=32.284134° N LONG.=104.001136° W	SURFACE LOCATION GEODETIC COORDINATES NAD 27 NME Y=467200.3 N X=602812.8 E LAT.=32.284012° N LONG.=104.000645° W
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NOTE: AS-DRILLED BOTTOM HOLE, LAST TAKE POINT AND FIRST TAKE POINT PLOTTED FROM DATA FURNISHED BY QES DIRECTIONAL DRILLING ON JANUARY 09, 2021.

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.

Sammy Hajar 6/15/2021

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.

OCTOBER 24, 2019
Date of Survey
Signature & Seal of Professional Surveyor:

Ronald J. Eidson 06/10/2021

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

ACK REL. W.O.:19111173 JWSC W.O.: 21.13.0233



BTA Oil Producers, LLC

Eddy County, New Mexico (NAD 83)

Sec 20, T23-S, R29-E

Harroun Ranch 20702 20-17 Fed Com #7H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

09 January, 2021





QES
Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Harroun Ranch 20702 20-17 Fed Com #7H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3043.0usft (Patterson #288)
Site:	Sec 20, T23-S, R29-E	MD Reference:	WELL @ 3043.0usft (Patterson #288)
Well:	Harroun Ranch 20702 20-17 Fed Com #7H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Eddy County, New Mexico (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 20, T23-S, R29-E		
Site Position:		Northing:	467,071.70 usft
From:	Map	Easting:	642,041.70 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 17' 1.081 N
		Longitude:	104° 0' 26.864 W
		Grid Convergence:	0.17 °

Well	Harroun Ranch 20702 20-17 Fed Com #7H		
Well Position	+N/-S	0.0 usft	Northing: 467,259.70 usft
	+E/-W	0.0 usft	Easting: 643,996.10 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 17' 2.883 N
		Longitude:	104° 0' 4.090 W
		Ground Level:	3,018.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	10/27/2020	6.88	60.00	47,771.60000000

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	353.78

Survey Program	Date	1/9/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
137.0	20,430.0	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	467,259.70	643,996.10	32° 17' 2.883 N	104° 0' 4.090 W
137.0	0.30	210.80	137.0	-0.3	-0.2	467,259.39	643,995.92	32° 17' 2.879 N	104° 0' 4.092 W
First MWD Survey @ 137.0' MD / 137.0' TVD									
230.0	0.80	193.60	230.0	-1.1	-0.5	467,258.55	643,995.64	32° 17' 2.871 N	104° 0' 4.095 W
349.0	1.60	172.40	349.0	-3.6	-0.4	467,256.10	643,995.67	32° 17' 2.847 N	104° 0' 4.095 W
421.0	1.60	174.80	420.9	-5.6	-0.2	467,254.10	643,995.89	32° 17' 2.827 N	104° 0' 4.093 W
496.0	1.70	181.80	495.9	-7.8	-0.2	467,251.95	643,995.95	32° 17' 2.806 N	104° 0' 4.092 W
592.0	2.70	242.70	591.8	-10.2	-2.2	467,249.49	643,993.90	32° 17' 2.782 N	104° 0' 4.116 W
687.0	6.90	263.20	686.5	-11.9	-9.9	467,247.78	643,986.24	32° 17' 2.765 N	104° 0' 4.205 W
782.0	8.50	263.50	780.6	-13.4	-22.5	467,246.31	643,973.60	32° 17' 2.751 N	104° 0' 4.353 W
877.0	9.40	264.90	874.5	-14.9	-37.2	467,244.83	643,958.89	32° 17' 2.737 N	104° 0' 4.524 W
972.0	9.30	256.80	968.2	-17.3	-52.4	467,242.38	643,943.69	32° 17' 2.713 N	104° 0' 4.701 W



QES

Survey Report - Geographic



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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
1,067.0	9.90	250.80	1,061.9	-21.8	-67.6	467,237.95	643,928.50	32° 17' 2.669 N	104° 0' 4.878 W
1,162.0	8.80	247.40	1,155.6	-27.2	-82.0	467,232.47	643,914.08	32° 17' 2.616 N	104° 0' 5.046 W
1,257.0	8.40	241.00	1,249.6	-33.4	-94.8	467,226.31	643,901.31	32° 17' 2.555 N	104° 0' 5.195 W
1,352.0	8.50	243.50	1,343.5	-39.9	-107.2	467,219.81	643,888.95	32° 17' 2.491 N	104° 0' 5.340 W
1,447.0	8.30	245.90	1,437.5	-45.8	-119.7	467,213.88	643,876.41	32° 17' 2.433 N	104° 0' 5.486 W
1,542.0	8.30	247.40	1,531.5	-51.3	-132.3	467,208.45	643,863.82	32° 17' 2.379 N	104° 0' 5.633 W
1,637.0	8.30	248.40	1,625.5	-56.4	-145.0	467,203.29	643,851.11	32° 17' 2.329 N	104° 0' 5.781 W
1,732.0	8.30	249.30	1,719.5	-61.4	-157.8	467,198.34	643,838.33	32° 17' 2.280 N	104° 0' 5.930 W
1,827.0	8.40	249.70	1,813.5	-66.2	-170.7	467,193.51	643,825.40	32° 17' 2.233 N	104° 0' 6.081 W
1,922.0	8.40	248.80	1,907.5	-71.1	-183.7	467,188.59	643,812.43	32° 17' 2.184 N	104° 0' 6.232 W
2,017.0	8.00	258.00	2,001.5	-75.0	-196.6	467,184.71	643,799.49	32° 17' 2.146 N	104° 0' 6.383 W
2,112.0	7.00	253.30	2,095.7	-78.0	-208.6	467,181.67	643,787.48	32° 17' 2.117 N	104° 0' 6.523 W
2,207.0	5.80	242.00	2,190.1	-81.9	-218.4	467,177.75	643,777.69	32° 17' 2.078 N	104° 0' 6.637 W
2,302.0	5.60	242.20	2,284.7	-86.4	-226.7	467,173.34	643,769.36	32° 17' 2.035 N	104° 0' 6.734 W
2,398.0	7.20	259.60	2,380.1	-89.6	-236.8	467,170.07	643,759.29	32° 17' 2.003 N	104° 0' 6.852 W
2,493.0	6.60	256.10	2,474.4	-92.0	-248.0	467,167.68	643,748.14	32° 17' 1.980 N	104° 0' 6.982 W
2,588.0	7.40	252.40	2,568.7	-95.2	-259.1	467,164.52	643,737.01	32° 17' 1.949 N	104° 0' 7.112 W
2,683.0	8.10	247.80	2,662.8	-99.6	-271.1	467,160.14	643,724.98	32° 17' 1.906 N	104° 0' 7.252 W
2,778.0	7.80	257.10	2,756.9	-103.5	-283.6	467,156.17	643,712.50	32° 17' 1.867 N	104° 0' 7.397 W
2,873.0	7.60	262.30	2,851.0	-105.8	-296.1	467,153.89	643,699.99	32° 17' 1.845 N	104° 0' 7.543 W
2,968.0	7.10	261.10	2,945.3	-107.6	-308.1	467,152.14	643,687.96	32° 17' 1.828 N	104° 0' 7.683 W
3,063.0	6.80	259.40	3,039.6	-109.5	-319.5	467,150.20	643,676.63	32° 17' 1.809 N	104° 0' 7.815 W
3,157.0	8.60	269.20	3,132.7	-110.6	-332.0	467,149.08	643,664.13	32° 17' 1.798 N	104° 0' 7.961 W
3,252.0	10.10	273.10	3,226.5	-110.3	-347.4	467,149.43	643,648.71	32° 17' 1.802 N	104° 0' 8.141 W
3,347.0	9.90	272.20	3,320.0	-109.5	-363.9	467,150.19	643,632.24	32° 17' 1.810 N	104° 0' 8.333 W
3,442.0	9.50	270.10	3,413.7	-109.2	-379.9	467,150.52	643,616.23	32° 17' 1.814 N	104° 0' 8.519 W
3,537.0	9.50	269.30	3,507.4	-109.3	-395.5	467,150.44	643,600.56	32° 17' 1.813 N	104° 0' 8.702 W
3,632.0	9.40	268.40	3,601.1	-109.6	-411.1	467,150.12	643,584.96	32° 17' 1.811 N	104° 0' 8.883 W
3,727.0	9.40	267.40	3,694.8	-110.1	-426.6	467,149.55	643,569.46	32° 17' 1.806 N	104° 0' 9.064 W
3,822.0	9.50	256.00	3,788.5	-112.4	-442.0	467,147.31	643,554.10	32° 17' 1.784 N	104° 0' 9.243 W
3,917.0	9.30	254.70	3,882.2	-116.3	-457.0	467,143.38	643,539.09	32° 17' 1.745 N	104° 0' 9.418 W
4,012.0	9.20	254.10	3,976.0	-120.4	-471.7	467,139.28	643,524.38	32° 17' 1.705 N	104° 0' 9.589 W
4,107.0	9.30	253.60	4,069.8	-124.7	-486.4	467,135.03	643,509.71	32° 17' 1.664 N	104° 0' 9.760 W
4,202.0	9.40	252.80	4,163.5	-129.1	-501.2	467,130.57	643,494.94	32° 17' 1.620 N	104° 0' 9.933 W
4,297.0	9.00	252.40	4,257.3	-133.7	-515.7	467,126.03	643,480.44	32° 17' 1.576 N	104° 0' 10.102 W
4,391.0	8.70	252.40	4,350.2	-138.0	-529.4	467,121.65	643,466.66	32° 17' 1.533 N	104° 0' 10.263 W
4,486.0	8.50	252.20	4,444.1	-142.4	-543.0	467,117.34	643,453.12	32° 17' 1.490 N	104° 0' 10.420 W
4,581.0	8.20	250.60	4,538.1	-146.8	-556.1	467,112.94	643,440.05	32° 17' 1.447 N	104° 0' 10.573 W
4,676.0	8.20	249.70	4,632.1	-151.4	-568.8	467,108.34	643,427.31	32° 17' 1.402 N	104° 0' 10.721 W
4,771.0	8.20	249.10	4,726.1	-156.1	-581.5	467,103.57	643,414.62	32° 17' 1.355 N	104° 0' 10.869 W
4,866.0	8.30	249.10	4,820.2	-161.0	-594.2	467,098.71	643,401.89	32° 17' 1.308 N	104° 0' 11.018 W
4,961.0	8.20	247.90	4,914.2	-166.0	-606.9	467,093.71	643,389.20	32° 17' 1.259 N	104° 0' 11.166 W
5,056.0	7.90	247.40	5,008.2	-171.0	-619.2	467,088.66	643,376.90	32° 17' 1.209 N	104° 0' 11.309 W
5,151.0	7.70	245.90	5,102.4	-176.2	-631.0	467,083.55	643,365.06	32° 17' 1.159 N	104° 0' 11.447 W
5,246.0	7.30	247.40	5,196.5	-181.1	-642.4	467,078.63	643,353.68	32° 17' 1.110 N	104° 0' 11.580 W
5,341.0	8.30	259.00	5,290.7	-184.7	-654.7	467,075.00	643,341.38	32° 17' 1.075 N	104° 0' 11.724 W
5,436.0	7.90	259.80	5,384.7	-187.2	-667.9	467,072.54	643,328.22	32° 17' 1.051 N	104° 0' 11.877 W
5,531.0	7.30	257.40	5,478.9	-189.6	-680.2	467,070.06	643,315.90	32° 17' 1.027 N	104° 0' 12.021 W
5,626.0	7.30	257.20	5,573.1	-192.3	-692.0	467,067.41	643,304.13	32° 17' 1.001 N	104° 0' 12.158 W
5,721.0	7.10	256.10	5,667.4	-195.0	-703.6	467,064.66	643,292.54	32° 17' 0.974 N	104° 0' 12.293 W
5,816.0	6.90	255.10	5,761.7	-197.9	-714.8	467,061.78	643,281.33	32° 17' 0.946 N	104° 0' 12.424 W
5,911.0	7.70	257.50	5,855.9	-200.8	-726.5	467,058.94	643,269.60	32° 17' 0.918 N	104° 0' 12.560 W
6,006.0	8.00	260.30	5,950.0	-203.3	-739.2	467,056.45	643,256.87	32° 17' 0.894 N	104° 0' 12.709 W
6,101.0	9.50	260.50	6,043.9	-205.7	-753.5	467,054.04	643,242.62	32° 17' 0.870 N	104° 0' 12.875 W
6,196.0	9.50	260.10	6,137.6	-208.3	-768.9	467,051.40	643,227.17	32° 17' 0.845 N	104° 0' 13.055 W



QES

Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Harroun Ranch 20702 20-17 Fed Com #7H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3043.0usft (Patterson #288)
Site:	Sec 20, T23-S, R29-E	MD Reference:	WELL @ 3043.0usft (Patterson #288)
Well:	Harroun Ranch 20702 20-17 Fed Com #7H	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
6,290.0	9.40	259.00	6,230.3	-211.1	-784.1	467,048.60	643,211.99	32° 17' 0.817 N	104° 0' 13.232 W
6,386.0	8.60	258.30	6,325.1	-214.1	-798.8	467,045.65	643,197.27	32° 17' 0.789 N	104° 0' 13.403 W
6,481.0	8.30	257.20	6,419.1	-217.0	-812.5	467,042.69	643,183.62	32° 17' 0.760 N	104° 0' 13.562 W
6,575.0	8.00	256.00	6,512.1	-220.1	-825.4	467,039.60	643,170.66	32° 17' 0.730 N	104° 0' 13.714 W
6,670.0	7.50	254.70	6,606.3	-223.3	-837.8	467,036.37	643,158.27	32° 17' 0.698 N	104° 0' 13.858 W
6,765.0	8.90	263.00	6,700.3	-225.9	-851.1	467,033.84	643,144.99	32° 17' 0.673 N	104° 0' 14.013 W
6,860.0	8.30	264.20	6,794.2	-227.5	-865.2	467,032.25	643,130.88	32° 17' 0.658 N	104° 0' 14.177 W
6,955.0	7.40	262.20	6,888.4	-229.0	-878.1	467,030.72	643,117.99	32° 17' 0.643 N	104° 0' 14.327 W
7,050.0	8.40	263.00	6,982.4	-230.7	-891.1	467,029.05	643,105.04	32° 17' 0.627 N	104° 0' 14.478 W
7,145.0	8.00	264.80	7,076.5	-232.1	-904.5	467,027.60	643,091.57	32° 17' 0.613 N	104° 0' 14.635 W
7,240.0	10.30	259.60	7,170.3	-234.2	-919.5	467,025.47	643,076.63	32° 17' 0.593 N	104° 0' 14.809 W
7,335.0	10.60	260.10	7,263.7	-237.3	-936.4	467,022.44	643,059.67	32° 17' 0.563 N	104° 0' 15.007 W
7,430.0	9.20	261.20	7,357.3	-239.9	-952.5	467,019.77	643,043.56	32° 17' 0.537 N	104° 0' 15.195 W
7,525.0	9.50	254.40	7,451.0	-243.2	-967.6	467,016.50	643,028.50	32° 17' 0.505 N	104° 0' 15.370 W
7,620.0	8.70	252.90	7,544.8	-247.4	-982.0	467,012.28	643,014.08	32° 17' 0.464 N	104° 0' 15.539 W
7,715.0	10.00	247.40	7,638.6	-252.7	-996.5	467,007.00	642,999.60	32° 17' 0.412 N	104° 0' 15.707 W
7,810.0	10.00	246.90	7,732.1	-259.1	-1,011.7	467,000.59	642,984.40	32° 17' 0.349 N	104° 0' 15.885 W
7,905.0	9.10	246.80	7,825.8	-265.3	-1,026.2	466,994.40	642,969.91	32° 17' 0.288 N	104° 0' 16.054 W
8,000.0	8.60	247.40	7,919.7	-271.0	-1,039.7	466,988.71	642,956.44	32° 17' 0.233 N	104° 0' 16.211 W
8,096.0	7.90	247.60	8,014.7	-276.3	-1,052.4	466,983.43	642,943.72	32° 17' 0.181 N	104° 0' 16.359 W
8,191.0	7.60	248.20	8,108.8	-281.1	-1,064.3	466,978.61	642,931.85	32° 17' 0.133 N	104° 0' 16.498 W
8,286.0	7.90	244.50	8,202.9	-286.2	-1,076.0	466,973.47	642,920.12	32° 17' 0.083 N	104° 0' 16.634 W
8,381.0	7.40	242.30	8,297.1	-291.9	-1,087.3	466,967.82	642,908.81	32° 17' 0.027 N	104° 0' 16.766 W
8,476.0	7.20	254.40	8,391.3	-296.3	-1,098.4	466,963.37	642,897.66	32° 16' 59.984 N	104° 0' 16.896 W
8,571.0	7.00	255.70	8,485.6	-299.4	-1,109.8	466,960.34	642,886.32	32° 16' 59.954 N	104° 0' 17.029 W
8,666.0	6.50	252.50	8,579.9	-302.4	-1,120.5	466,957.29	642,875.58	32° 16' 59.924 N	104° 0' 17.154 W
8,761.0	6.20	249.60	8,674.4	-305.8	-1,130.5	466,953.89	642,865.64	32° 16' 59.891 N	104° 0' 17.270 W
8,856.0	5.60	245.60	8,768.8	-309.5	-1,139.5	466,950.18	642,856.62	32° 16' 59.854 N	104° 0' 17.375 W
8,951.0	3.90	237.10	8,863.5	-313.2	-1,146.4	466,946.51	642,849.68	32° 16' 59.818 N	104° 0' 17.456 W
9,046.0	3.90	236.30	8,958.3	-316.7	-1,151.8	466,942.97	642,844.28	32° 16' 59.783 N	104° 0' 17.519 W
9,141.0	1.70	243.70	9,053.2	-319.2	-1,155.8	466,940.55	642,840.33	32° 16' 59.760 N	104° 0' 17.565 W
9,235.0	1.20	229.80	9,147.2	-320.4	-1,157.8	466,939.30	642,838.33	32° 16' 59.747 N	104° 0' 17.589 W
9,330.0	0.60	223.20	9,242.1	-321.4	-1,158.9	466,938.29	642,837.23	32° 16' 59.737 N	104° 0' 17.601 W
9,425.0	0.30	245.20	9,337.1	-321.9	-1,159.4	466,937.83	642,836.66	32° 16' 59.733 N	104° 0' 17.608 W
9,488.0	0.30	255.40	9,400.1	-322.0	-1,159.8	466,937.71	642,836.35	32° 16' 59.732 N	104° 0' 17.612 W
9,608.0	0.80	281.40	9,520.1	-321.9	-1,160.9	466,937.80	642,835.23	32° 16' 59.732 N	104° 0' 17.625 W
9,703.0	14.20	352.50	9,614.1	-310.2	-1,163.1	466,949.54	642,833.04	32° 16' 59.849 N	104° 0' 17.650 W
9,798.0	24.80	354.50	9,703.6	-278.7	-1,166.5	466,981.02	642,829.60	32° 17' 0.160 N	104° 0' 17.689 W
9,892.0	38.00	355.90	9,783.6	-230.0	-1,170.5	467,029.72	642,825.63	32° 17' 0.642 N	104° 0' 17.733 W
9,986.0	47.30	356.40	9,852.7	-166.5	-1,174.7	467,093.19	642,821.38	32° 17' 1.271 N	104° 0' 17.780 W
10,081.0	55.80	358.10	9,911.7	-92.3	-1,178.2	467,167.44	642,817.88	32° 17' 2.005 N	104° 0' 17.819 W
10,173.5	64.08	0.25	9,958.0	-12.3	-1,179.3	467,247.41	642,816.79	32° 17' 2.797 N	104° 0' 17.828 W
330' HL Crossed @ 10173.5' MD / 9958.0' TVD									
10,176.0	64.30	0.30	9,959.1	-10.0	-1,179.3	467,249.66	642,816.80	32° 17' 2.819 N	104° 0' 17.828 W
10,271.0	74.80	359.20	9,992.2	78.8	-1,179.7	467,338.55	642,816.38	32° 17' 3.699 N	104° 0' 17.830 W
10,362.0	82.90	358.00	10,009.8	168.0	-1,181.9	467,427.73	642,814.19	32° 17' 4.581 N	104° 0' 17.852 W
10,392.0	86.60	357.40	10,012.6	197.9	-1,183.1	467,457.57	642,812.99	32° 17' 4.877 N	104° 0' 17.865 W
10,487.0	90.60	359.50	10,014.9	292.8	-1,185.7	467,552.48	642,810.42	32° 17' 5.816 N	104° 0' 17.892 W
10,581.0	91.30	1.50	10,013.3	386.8	-1,184.9	467,646.46	642,811.24	32° 17' 6.746 N	104° 0' 17.879 W
10,676.0	92.50	2.30	10,010.2	481.7	-1,181.7	467,741.35	642,814.39	32° 17' 7.685 N	104° 0' 17.839 W
10,771.0	89.00	2.10	10,008.9	576.6	-1,178.1	467,836.26	642,818.04	32° 17' 8.624 N	104° 0' 17.793 W
10,865.0	90.30	2.60	10,009.5	670.5	-1,174.2	467,930.18	642,821.89	32° 17' 9.553 N	104° 0' 17.745 W
10,960.0	88.70	0.90	10,010.3	765.4	-1,171.3	468,025.12	642,824.79	32° 17' 10.493 N	104° 0' 17.708 W
11,055.0	87.60	358.10	10,013.4	860.4	-1,172.1	468,120.06	642,823.96	32° 17' 11.432 N	104° 0' 17.714 W
11,149.0	89.80	359.80	10,015.5	954.3	-1,173.9	468,214.01	642,822.24	32° 17' 12.362 N	104° 0' 17.730 W



QES

Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Harroun Ranch 20702 20-17 Fed Com #7H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3043.0usft (Patterson #288)
Site:	Sec 20, T23-S, R29-E	MD Reference:	WELL @ 3043.0usft (Patterson #288)
Well:	Harroun Ranch 20702 20-17 Fed Com #7H	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
11,243.0	90.90	0.20	10,015.0	1,048.3	-1,173.9	468,308.01	642,822.24	32° 17' 13.292 N	104° 0' 17.727 W
11,338.0	89.90	1.00	10,014.3	1,143.3	-1,172.9	468,403.00	642,823.24	32° 17' 14.232 N	104° 0' 17.712 W
11,432.0	88.80	359.70	10,015.4	1,237.3	-1,172.3	468,496.99	642,823.81	32° 17' 15.162 N	104° 0' 17.702 W
11,526.0	88.70	0.90	10,017.4	1,331.3	-1,171.8	468,590.96	642,824.30	32° 17' 16.092 N	104° 0' 17.693 W
11,620.0	87.40	359.90	10,020.6	1,425.2	-1,171.1	468,684.90	642,824.96	32° 17' 17.022 N	104° 0' 17.682 W
11,715.0	88.60	0.30	10,023.9	1,520.1	-1,171.0	468,779.84	642,825.13	32° 17' 17.961 N	104° 0' 17.677 W
11,810.0	92.50	2.80	10,023.0	1,615.1	-1,168.4	468,874.78	642,827.69	32° 17' 18.901 N	104° 0' 17.643 W
11,904.0	92.10	1.90	10,019.3	1,708.9	-1,164.6	468,968.62	642,831.55	32° 17' 19.829 N	104° 0' 17.595 W
11,999.0	92.70	1.10	10,015.3	1,803.8	-1,162.1	469,063.50	642,834.03	32° 17' 20.768 N	104° 0' 17.563 W
12,094.0	89.80	0.50	10,013.2	1,898.8	-1,160.7	469,158.46	642,835.36	32° 17' 21.708 N	104° 0' 17.544 W
12,188.0	88.30	359.20	10,014.8	1,992.7	-1,161.0	469,252.44	642,835.11	32° 17' 22.638 N	104° 0' 17.544 W
12,283.0	90.30	359.50	10,015.9	2,087.7	-1,162.1	469,347.43	642,834.03	32° 17' 23.578 N	104° 0' 17.553 W
12,377.0	90.80	358.40	10,015.0	2,181.7	-1,163.8	469,441.40	642,832.31	32° 17' 24.508 N	104° 0' 17.569 W
12,472.0	92.70	0.20	10,012.1	2,276.6	-1,165.0	469,536.34	642,831.15	32° 17' 25.447 N	104° 0' 17.580 W
12,567.0	93.10	1.50	10,007.3	2,371.5	-1,163.5	469,631.21	642,832.56	32° 17' 26.386 N	104° 0' 17.560 W
12,662.0	95.50	1.00	10,000.2	2,466.2	-1,161.5	469,725.91	642,834.62	32° 17' 27.323 N	104° 0' 17.532 W
12,756.0	91.80	0.60	9,994.2	2,560.0	-1,160.2	469,819.70	642,835.93	32° 17' 28.251 N	104° 0' 17.514 W
12,851.0	88.70	2.10	9,993.8	2,655.0	-1,157.9	469,914.65	642,838.17	32° 17' 29.191 N	104° 0' 17.484 W
12,945.0	88.70	1.00	9,995.9	2,748.9	-1,155.4	470,008.59	642,840.71	32° 17' 30.120 N	104° 0' 17.451 W
13,039.0	92.00	2.60	9,995.3	2,842.8	-1,152.4	470,102.53	642,843.66	32° 17' 31.050 N	104° 0' 17.414 W
13,134.0	88.90	1.40	9,994.6	2,937.8	-1,149.1	470,197.46	642,846.98	32° 17' 31.989 N	104° 0' 17.372 W
13,229.0	90.00	0.50	9,995.5	3,032.7	-1,147.6	470,292.44	642,848.55	32° 17' 32.929 N	104° 0' 17.350 W
13,325.0	88.40	2.10	9,996.9	3,128.7	-1,145.4	470,388.40	642,850.73	32° 17' 33.878 N	104° 0' 17.321 W
13,419.0	89.50	2.00	9,998.6	3,222.6	-1,142.0	470,482.32	642,854.09	32° 17' 34.808 N	104° 0' 17.278 W
13,514.0	88.20	358.50	10,000.5	3,317.6	-1,141.6	470,577.28	642,854.51	32° 17' 35.747 N	104° 0' 17.270 W
13,609.0	88.90	357.90	10,002.9	3,412.5	-1,144.6	470,672.20	642,851.53	32° 17' 36.687 N	104° 0' 17.302 W
13,703.0	88.40	2.60	10,005.1	3,506.4	-1,144.2	470,766.15	642,851.93	32° 17' 37.617 N	104° 0' 17.293 W
13,798.0	88.60	3.20	10,007.6	3,601.3	-1,139.4	470,860.99	642,856.74	32° 17' 38.555 N	104° 0' 17.234 W
13,893.0	88.80	3.30	10,009.7	3,696.1	-1,134.0	470,955.82	642,862.12	32° 17' 39.493 N	104° 0' 17.168 W
13,987.0	87.80	2.10	10,012.5	3,790.0	-1,129.6	471,049.67	642,866.55	32° 17' 40.422 N	104° 0' 17.113 W
14,082.0	86.80	0.20	10,017.0	3,884.8	-1,127.6	471,144.54	642,868.46	32° 17' 41.360 N	104° 0' 17.088 W
14,177.0	90.20	1.00	10,019.5	3,979.8	-1,126.7	471,239.49	642,869.45	32° 17' 42.300 N	104° 0' 17.073 W
14,271.0	92.40	0.00	10,017.4	4,073.8	-1,125.8	471,333.45	642,870.27	32° 17' 43.230 N	104° 0' 17.060 W
14,366.0	91.90	359.50	10,013.8	4,168.7	-1,126.2	471,428.38	642,869.86	32° 17' 44.169 N	104° 0' 17.061 W
14,460.0	87.40	0.00	10,014.4	4,262.7	-1,126.7	471,522.36	642,869.45	32° 17' 45.099 N	104° 0' 17.062 W
14,554.0	86.10	359.00	10,019.7	4,356.5	-1,127.5	471,616.20	642,868.63	32° 17' 46.028 N	104° 0' 17.069 W
14,649.0	89.30	358.10	10,023.5	4,451.4	-1,129.9	471,711.08	642,866.23	32° 17' 46.967 N	104° 0' 17.093 W
14,743.0	94.20	357.70	10,020.6	4,545.2	-1,133.3	471,804.94	642,862.78	32° 17' 47.896 N	104° 0' 17.130 W
14,838.0	90.30	359.10	10,016.9	4,640.1	-1,136.0	471,899.81	642,860.14	32° 17' 48.835 N	104° 0' 17.157 W
14,932.0	88.90	359.60	10,017.6	4,734.1	-1,137.0	471,993.80	642,859.07	32° 17' 49.765 N	104° 0' 17.167 W
15,027.0	91.50	359.60	10,017.2	4,829.1	-1,137.7	472,088.79	642,858.41	32° 17' 50.705 N	104° 0' 17.171 W
15,121.0	92.90	358.40	10,013.6	4,923.0	-1,139.3	472,182.70	642,856.77	32° 17' 51.634 N	104° 0' 17.187 W
15,215.0	90.90	0.10	10,010.5	5,016.9	-1,140.6	472,276.63	642,855.54	32° 17' 52.564 N	104° 0' 17.198 W
15,310.0	88.40	359.60	10,011.1	5,111.9	-1,140.8	472,371.62	642,855.29	32° 17' 53.504 N	104° 0' 17.197 W
15,405.0	88.20	359.30	10,013.9	5,206.9	-1,141.7	472,466.58	642,854.38	32° 17' 54.444 N	104° 0' 17.204 W
15,500.0	87.50	358.40	10,017.5	5,301.8	-1,143.6	472,561.49	642,852.47	32° 17' 55.383 N	104° 0' 17.223 W
15,595.0	89.40	358.00	10,020.0	5,396.7	-1,146.6	472,656.40	642,849.49	32° 17' 56.322 N	104° 0' 17.255 W
15,689.0	91.50	0.00	10,019.3	5,490.7	-1,148.3	472,750.38	642,847.85	32° 17' 57.252 N	104° 0' 17.270 W
15,784.0	92.00	0.00	10,016.4	5,585.6	-1,148.3	472,845.33	642,847.85	32° 17' 58.192 N	104° 0' 17.267 W
15,878.0	93.10	0.10	10,012.2	5,679.5	-1,148.2	472,939.24	642,847.93	32° 17' 59.121 N	104° 0' 17.263 W
15,973.0	93.60	0.60	10,006.7	5,774.4	-1,147.6	473,034.07	642,848.51	32° 18' 0.060 N	104° 0' 17.252 W
16,068.0	90.00	1.50	10,003.7	5,869.3	-1,145.9	473,128.99	642,850.25	32° 18' 0.999 N	104° 0' 17.229 W
16,162.0	89.10	2.60	10,004.4	5,963.2	-1,142.5	473,222.93	642,853.61	32° 18' 1.928 N	104° 0' 17.186 W
16,258.0	90.10	3.40	10,005.1	6,059.1	-1,137.5	473,318.79	642,858.64	32° 18' 2.877 N	104° 0' 17.124 W
16,352.0	90.50	2.80	10,004.6	6,153.0	-1,132.4	473,412.65	642,863.72	32° 18' 3.805 N	104° 0' 17.062 W



QES

Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Harroun Ranch 20702 20-17 Fed Com #7H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3043.0usft (Patterson #288)
Site:	Sec 20, T23-S, R29-E	MD Reference:	WELL @ 3043.0usft (Patterson #288)
Well:	Harroun Ranch 20702 20-17 Fed Com #7H	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
16,447.0	90.90	3.10	10,003.4	6,247.8	-1,127.5	473,507.52	642,868.61	32° 18' 4.744 N	104° 0' 17.001 W
16,541.0	90.70	1.70	10,002.1	6,341.7	-1,123.6	473,601.43	642,872.55	32° 18' 5.673 N	104° 0' 16.952 W
16,636.0	84.40	358.70	10,006.2	6,436.6	-1,123.2	473,696.28	642,872.88	32° 18' 6.612 N	104° 0' 16.945 W
16,731.0	85.30	359.90	10,014.7	6,531.2	-1,124.4	473,790.89	642,871.73	32° 18' 7.548 N	104° 0' 16.955 W
16,826.0	87.30	0.40	10,020.9	6,626.0	-1,124.1	473,885.68	642,871.98	32° 18' 8.486 N	104° 0' 16.949 W
16,921.0	86.90	359.50	10,025.7	6,720.9	-1,124.2	473,980.56	642,871.89	32° 18' 9.425 N	104° 0' 16.946 W
17,015.0	91.10	1.90	10,027.3	6,814.8	-1,123.1	474,074.51	642,873.04	32° 18' 10.355 N	104° 0' 16.929 W
17,110.0	92.70	2.10	10,024.1	6,909.7	-1,119.7	474,169.40	642,876.36	32° 18' 11.294 N	104° 0' 16.887 W
17,205.0	90.50	1.30	10,021.5	7,004.6	-1,116.9	474,264.31	642,879.17	32° 18' 12.233 N	104° 0' 16.851 W
17,300.0	91.30	2.00	10,020.0	7,099.6	-1,114.2	474,359.26	642,881.91	32° 18' 13.172 N	104° 0' 16.816 W
17,394.0	88.60	0.00	10,020.1	7,193.5	-1,112.6	474,453.23	642,883.55	32° 18' 14.102 N	104° 0' 16.794 W
17,489.0	88.70	359.90	10,022.3	7,288.5	-1,112.6	474,548.20	642,883.46	32° 18' 15.042 N	104° 0' 16.791 W
17,584.0	92.70	1.70	10,021.2	7,383.5	-1,111.3	474,643.17	642,884.79	32° 18' 15.982 N	104° 0' 16.772 W
17,678.0	89.50	359.20	10,019.4	7,477.4	-1,110.6	474,737.13	642,885.53	32° 18' 16.911 N	104° 0' 16.760 W
17,773.0	89.80	359.20	10,019.9	7,572.4	-1,111.9	474,832.11	642,884.20	32° 18' 17.851 N	104° 0' 16.772 W
17,867.0	91.70	0.30	10,018.7	7,666.4	-1,112.3	474,926.10	642,883.79	32° 18' 18.782 N	104° 0' 16.774 W
17,962.0	89.90	359.70	10,017.4	7,761.4	-1,112.3	475,021.09	642,883.79	32° 18' 19.721 N	104° 0' 16.770 W
18,057.0	89.80	0.10	10,017.6	7,856.4	-1,112.5	475,116.09	642,883.62	32° 18' 20.662 N	104° 0' 16.769 W
18,151.0	89.10	359.90	10,018.5	7,950.4	-1,112.5	475,210.08	642,883.62	32° 18' 21.592 N	104° 0' 16.766 W
18,246.0	90.20	1.20	10,019.1	8,045.4	-1,111.6	475,305.07	642,884.54	32° 18' 22.532 N	104° 0' 16.752 W
18,341.0	90.70	1.00	10,018.4	8,140.3	-1,109.7	475,400.05	642,886.36	32° 18' 23.472 N	104° 0' 16.727 W
18,435.0	90.30	2.00	10,017.5	8,234.3	-1,107.3	475,494.01	642,888.82	32° 18' 24.401 N	104° 0' 16.695 W
18,531.0	89.30	3.20	10,017.9	8,330.2	-1,102.9	475,589.91	642,893.18	32° 18' 25.350 N	104° 0' 16.641 W
18,625.0	91.70	1.80	10,017.1	8,424.1	-1,098.8	475,683.81	642,897.27	32° 18' 26.279 N	104° 0' 16.590 W
18,720.0	89.10	359.40	10,016.4	8,519.1	-1,097.8	475,778.79	642,898.27	32° 18' 27.219 N	104° 0' 16.575 W
18,814.0	90.90	0.60	10,016.4	8,613.1	-1,097.8	475,872.78	642,898.27	32° 18' 28.149 N	104° 0' 16.571 W
18,908.0	93.10	1.80	10,013.1	8,707.0	-1,095.9	475,966.69	642,900.24	32° 18' 29.079 N	104° 0' 16.545 W
19,003.0	91.70	359.20	10,009.1	8,801.9	-1,095.0	476,061.60	642,901.06	32° 18' 30.018 N	104° 0' 16.532 W
19,098.0	89.20	359.90	10,008.4	8,896.9	-1,095.8	476,156.58	642,900.32	32° 18' 30.958 N	104° 0' 16.537 W
19,192.0	91.50	2.10	10,007.8	8,990.9	-1,094.1	476,250.55	642,901.96	32° 18' 31.887 N	104° 0' 16.515 W
19,287.0	88.30	358.80	10,008.0	9,085.8	-1,093.4	476,345.53	642,902.70	32° 18' 32.827 N	104° 0' 16.503 W
19,382.0	88.80	357.80	10,010.4	9,180.8	-1,096.2	476,440.45	642,899.89	32° 18' 33.767 N	104° 0' 16.532 W
19,477.0	90.70	1.30	10,010.8	9,275.7	-1,097.0	476,535.43	642,899.14	32° 18' 34.707 N	104° 0' 16.537 W
19,571.0	89.50	0.80	10,010.6	9,369.7	-1,095.2	476,629.41	642,900.86	32° 18' 35.637 N	104° 0' 16.514 W
19,666.0	89.90	0.60	10,011.1	9,464.7	-1,094.1	476,724.40	642,902.02	32° 18' 36.577 N	104° 0' 16.497 W
19,761.0	90.80	2.00	10,010.6	9,559.7	-1,091.9	476,819.37	642,904.18	32° 18' 37.516 N	104° 0' 16.469 W
19,855.0	93.00	2.70	10,007.4	9,653.5	-1,088.1	476,913.24	642,908.03	32° 18' 38.445 N	104° 0' 16.420 W
19,950.0	91.40	0.70	10,003.8	9,748.4	-1,085.3	477,008.12	642,910.84	32° 18' 39.384 N	104° 0' 16.384 W
20,046.0	89.60	358.90	10,003.0	9,844.4	-1,085.6	477,104.10	642,910.51	32° 18' 40.334 N	104° 0' 16.385 W
20,140.0	88.70	359.20	10,004.4	9,938.4	-1,087.2	477,198.08	642,908.95	32° 18' 41.264 N	104° 0' 16.399 W
20,161.7	88.17	359.02	10,004.9	9,960.1	-1,087.5	477,219.77	642,908.61	32° 18' 41.478 N	104° 0' 16.403 W
330' HL Crossed @ 20161.7' MD / 10004.9' TVD									
20,235.0	86.40	358.40	10,008.4	10,033.3	-1,089.1	477,292.97	642,906.96	32° 18' 42.203 N	104° 0' 16.419 W
20,329.0	86.30	357.40	10,014.4	10,127.0	-1,092.6	477,386.71	642,903.53	32° 18' 43.131 N	104° 0' 16.456 W
20,367.0	86.70	357.40	10,016.7	10,164.9	-1,094.3	477,424.60	642,901.81	32° 18' 43.506 N	104° 0' 16.475 W
20,430.0	86.70	357.40	10,020.3	10,227.7	-1,097.2	477,487.43	642,898.95	32° 18' 44.127 N	104° 0' 16.506 W
TD @ 20430.0' MD / 10020.3' TVD									



QES
Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Harroun Ranch 20702 20-17 Fed Com #7H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3043.0usft (Patterson #288)
Site:	Sec 20, T23-S, R29-E	MD Reference:	WELL @ 3043.0usft (Patterson #288)
Well:	Harroun Ranch 20702 20-17 Fed Com #7H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
137.0	137.0	-0.3	-0.2	First MWD Survey @ 137.0' MD / 137.0' TVD
10,173.5	9,958.0	-12.3	-1,179.3	330' HL Crossed @ 10173.5' MD / 9958.0' TVD
20,161.7	10,004.9	9,960.1	-1,087.5	330' HL Crossed @ 20161.7' MD / 10004.9' TVD
20,430.0	10,020.3	10,227.7	-1,097.2	TD @ 20430.0' MD / 10020.3' TVD

Well Name: HARROUN RANCH 20702 20-17 FEDERAL COM	Well Location: T23S / R29E / SEC 20 / SESE / 32.284134 / -104.001136	County or Parish/State: EDDY / NM
Well Number: 7H	Type of Well: OTHER	Allottee or Tribe Name:
Lease Number: NMNM119271	Unit or CA Name:	Unit or CA Number: NMNM138686
US Well Number: 3001547171	Well Status: Drilling Well	Operator: BTA OIL PRODUCERS LLC

Subsequent Report

Type of Submission: Subsequent Report	Type of Action: Hydraulic Fracturing
Date Sundry Submitted: 06/15/2021	Time Sundry Submitted: 09:51
Date Operation Actually Began: 04/18/2021	

Actual Procedure: TD reached: 1/9/2021 @ 20,430' 4/18/2021 - 5/8/2021: PERF AND FRAC wolfcamp 10,270'-20,150'. 505,844 total fluid. 24.3MM#sand 5/18/2021: DRILLED OUT PLUGS. 5/22/2021: BEGIN FLOWBACK OPERATIONS 5/22/2021: DATE OF FIRST PRODUCTION

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: SAMMY HAJAR	Signed on: JUN 15, 2021 09:41 AM
Name: BTA OIL PRODUCERS LLC	
Title: Regulatory Analyst	
Street Address: 104 S. Pecos	
City: Midland	State: TX
Phone: (432) 682-3753	
Email address: shajar@btaoil.com	

Field Representative

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

Received by OCD: 6/17/2021 2:23:22 PM

Page 11 of 19

Well Name: HARROUN RANCH 20702 20-17 FEDERAL COM	Well Location: T23S / R29E / SEC 20 / SESE / 32.284134 / -104.001136	County or Parish/State: EDDY / NM
Well Number: 7H	Type of Well: OTHER	Allottee or Tribe Name:
Lease Number: NMNM119271	Unit or CA Name:	Unit or CA Number: NMNM138686
US Well Number: 3001547171	Well Status: Drilling Well	Operator: BTA OIL PRODUCERS LLC

CONFIDENTIAL



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Well Completion Print Report

06/17/2021

Operator Name BTA OIL PRODUCERS LLC	Well Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Number 7H	US Well Number 3001547171
SHL SESE Sec 20 23S 29E	County EDDY	State NM	Lease Number(s) NMNM119271
Well Type OTHER	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM138686
Allottee/Tribe Name	Well Pad Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Pad Number 5H, 6H, & 7H	ID 10400051925

Section 1 - General

Well Completion Report Id: 76790**Submission Date:** N/A until DB Work**BLM Office:** Carlsbad Field Office**User:** Sammy Hajar**Title:** Regulatory Analyst**Federal/Indian:** FEDERAL**Lease Number:** NMNM119271**Lease Acres:** 160**Agreement in place?:** YES**Federal or Indian Agreement:** FEDERAL**Agreement Number:** NMNM138686**Agreement Name:****Keep this Well Completion Report confidential?:** YES**APD Operator:** BTA OIL PRODUCERS LLC

Section 2 - Well Information

Field/Pool or Exploratory: Field/Pool**Pool Name:** PURPLE SAGE;**Field Name:** WOLFCAMP**Well Type:** OTHER**Describe Other Well Type:** GAS WELL**Spud Date:** 11-05-2020**Date Total Measured Depth Reached:** 01-09-2021**Drill & Abandon or Ready To Produce:** READY TO PRODUCE**Well Class:** HORIZONTAL

Section 3 - Geologic Formations

Formation Name	Lithology	Describe Lithology	Elevation	TVD	MD	Mineral Resources	Describe Mineral Resources

Operator Name BTA OIL PRODUCERS LLC	Well Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Number 7H	US Well Number 3001547171
SHL SESE Sec 20 23S 29E	County EDDY	State NM	Lease Number(s) NMNM119271
Well Type OTHER	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM138686
Allottee/Tribe Name	Well Pad Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Pad Number 5H, 6H, & 7H	ID 10400051925

Completion and Completed Intervals

Completion Data

Wellbore Code	Completion Code	Interval Number	Case Number	Lease Number	Well Completion Type	Describe Well Completion Type	Completion Status	Date Completed	Date First Produced	Formation	Interval Top (MD)	Interval Bottom (MD)	Interval Perforated?	Perforation Size	Number of Holes	Status of Interval
00	S1	1	NMNM138686	NMNM119271	NEW		PGW	05-22-2021	05-22-2021	WOLFCA MP	9890	10020	Y	.42	2304	OPEN

Treatment Data

Wellbore Code	Completion Code	Interval Number	Interval Treated?	Treatment Type	Totle Fluid (bbls)	Total Proppant (lbs)	Treatment Remarks
00	S1	1	Y	FRAC	505844		

Production Data

Wellbore Code	Completion Code	Interval Number	API Oil Gravity	Gas Gravity	Production Method	Describe Production	Disposition of Gas	Describe Disposition
00	S1	1			FLows FROM WELL		SOLD	

Operator Name BTA OIL PRODUCERS LLC	Well Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Number 7H	US Well Number 3001547171
SHL SESE Sec 20 23S 29E	County EDDY	State NM	Lease Number(s) NMNM119271
Well Type OTHER	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM138686
Allottee/Tribe Name	Well Pad Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Pad Number 5H, 6H, & 7H	ID 10400051925

Test Data

Wellbore Code	Completion Code	Interval Number	Test Date	Hours Tested	24-Hour Rate Oil (bbls)	24-Hour Rate Gas (MCF)	24-Hour Rate Water(BWPD)	Gas-Oil Ratio (SCF/Bbl)	Choke Size	Tubing Pressure	Tubing Pressure Shut-In (psi)	Casing Pressure (psi)
00	S1	1	05/31/2021	24	1157	2158	5822	1865	36/64	2575		

Well Location

Survey Type: RECTANGULAR

Survey Number:

Datum: NAD83

Vertical Datum: NGVD29

Reference Datum: GL

	State	Meridian	County	Latitude	Longitude	Elevation (MSL)	Lease Type	Lease Number	Plug TVD (ft)	Plug MD (ft)	Plug Type	NS-Foot	NS-Indicator	EW-Foot	EW-Indicator	Township	Range	Section	Aliquot/Lot/Tract
SHL	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.284134	-104.001136	3018	FEDERAL	NMNM119271				333	FSL	821	FEL	23S	29E	20	SESE
KOP Wellbore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.284358	-104.004952	-7002	FEDERAL	NMNM119271				420	FSL	2001	FEL	23S	29E	20	SWSE
PPP Wellbore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.284358	-104.004952	-7002	FEDERAL	NMNM119271				420	FSL	2001	FEL	23S	29E	20	SWSE
EXIT Wellbore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.311484	-104.004555	-7002	FEE	FEE				344	FNL	1955	FEL	23S	29E	17	NWNE

Operator Name BTA OIL PRODUCERS LLC	Well Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Number 7H	US Well Number 3001547171
SHL SESE Sec 20 23S 29E	County EDDY	State NM	Lease Number(s) NMNM119271
Well Type OTHER	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM138686
Allottee/Tribe Name	Well Pad Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Pad Number 5H, 6H, & 7H	ID 10400051925

State	Meridian	County	Latitude	Longitude	Elevation (MSL)	Lease Type	Lease Number	Plug TVD (ft)	Plug MD (ft)	Plug Type	NS-Foot	NS-Indicator	EW-Foot	EW-Indicator	Township	Range	Section	Aliquot/Lot/Tract
BHL Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.312251	-104.004584	-7002	FEE	FEE			65	FNL	1967	FEL	23S	29E	17	NWNE

Casing, Liner and Tubing

Casing and Liner

Wellbore Code	Casing String Type	Hole Size	Top Setting Depth (MD)	Bottom Setting Depth (MD)	Casing Size	Wt(lbs/ft)	Casing Grade	Describe Other Casing Grade	Joint	Other Joint	Amount Pulled (ft)
00	SURFACE	14.75	0	463	10.75	40.5	J-55		ST&C		
00	PRODUCT ION	6.75	0	9439	5.5	20	P-110		BUTT		
00	INTERMEDIATE	9.875	0	9536	7.625	29.7	P-110		BUTT		
00	PRODUCT ION	6.75	9439	20415	5.0	18	P-110		BUTT		

Operator Name BTA OIL PRODUCERS LLC	Well Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Number 7H	US Well Number 3001547171
SHL SESE Sec 20 23S 29E	County EDDY	State NM	Lease Number(s) NMNM119271
Well Type OTHER	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM138686
Allottee/Tribe Name	Well Pad Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Pad Number 5H, 6H, & 7H	ID 10400051925

Cementing

Wellbore Code	Casing String Type	Stage Tool Depth	Cement Lead Type	Cement Lead Qty (sks)	Cement Lead Yield (cu.ft/sks)	Cement Lead Top (MD)	Cement Tail Type	Cement Tail Qty (sks)	Cement Tail Yield (cu.ft/sks)	Cement Tail Top (MD)	Total (Lead + Tail) Cement Slurry Volume (bbls)
00	SURFACE		Class C	200	1.74	0	Class C	200	1.34		109.7
00	PRODUCT ION		n/a	0	0	0					0
00	INTERMEDIATE		35% Poz 65% Class C	595	1.83	0	Class C	150	1.33		1297.1
00	INTERMEDIATE	2896	Power Cem	445	3.84	2896	Class H	400	1.19		1297.1
00	PRODUCT ION		50% Poz 50% Class H	575	1.42	2326	50% Poz 50% Class H	1180	1.27		412.3

Logs

Wellbore Code	Log Upload	Was Well Cored?	Was DST Run?	Directional Survey?	Geologic Report Completed?	Wellbore Diagram
00	YES	NO	NO	YES	NO	NO

Operator Name BTA OIL PRODUCERS LLC	Well Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Number 7H	US Well Number 3001547171
SHL SESE Sec 20 23S 29E	County EDDY	State NM	Lease Number(s) NMNM119271
Well Type OTHER	Well Status Drilling Well	Agreement Name	Agreement Number(s) NMNM138686
Allottee/Tribe Name	Well Pad Name HARROUN RANCH 20702 20-17 FEDERAL COM	Well Pad Number 5H, 6H, & 7H	ID 10400051925

Operator Certification

I hereby certify that the foregoing and attached information is complete and correct as determined from all available records. 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 any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Well Completion Reports through this system satisfies regulations requiring a submission of Form 3160-4 or a Well Completion Report.

Name: BTA OIL PRODUCERS LLC

Signed By: Sammy Hajar

Title: Regulatory Analyst

Signed on: 06/17/2021

Street Address: 104 S. Pecos

City: Midland

State: TX

Zip: 79701

Phone: (432)682-3753

Email address: shajar@btaoil.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Extension:

Email address:

Attachments

30015471710000_2in_MD_digital_color_20210617132642.pdf

QES___Harroun_Ranch_20702_20_17_Fed_Com_7H___Final_Survey_Geo_Rpt_20210617133038.pdf

21130233_Harroun_Ranch_7H_C102_AS_DRILLED_20210617133056.pdf

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

ACKNOWLEDGMENTS

Action 32624

ACKNOWLEDGMENTS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 32624
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 32624

CONDITIONS

Operator: BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX 79701	OGRID: 260297
	Action Number: 32624
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
ksimmons	Submit all drilling, casing, and completion sundries/reports.	9/3/2021