

RECEIVED

OCT 25 2019

Form C-102

Revised August 1, 2011

Submit one copy to appropriate District Office

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720
DISTRICT II
311 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-9120
DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 344-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-1460 Fax: (505) 476-1462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

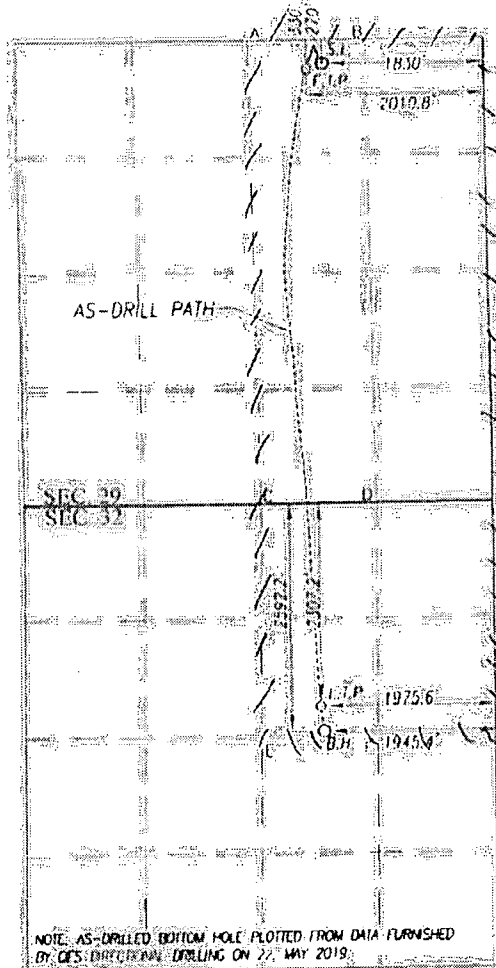
AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45395		Pool Code		Pool Name PURPLE SAGE W001FLUMP (Gas)	
Property Code		Property Name OGDEN 29-32 FEDERAL COM		Well Number 4H	
OGRID No. 260297		Operator Name BTA OIL PRODUCERS, LLC		Elevation 3074'	
Surface Location					
UL or lot No B	Section 29	Township 23-S	Range 28-E	Lot Idn	Feet from the North/South line 270
			Feet from the East/West line 1830		
			County EDDY		
As-Drilled Bottom Hole Location If Different From Surface					
UL or lot No G	Section 32	Township 23-S	Range 28-E	Lot Idn	Feet from the North/South line 2592.2
			Feet from the East/West line 1945.4		
			County EDDY		
Dedicated Acres 480		Joint or Infill		Consolidation Code	
Order No.					

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'



GEODEIC COORDINATES
NAD 83 NME
SURFACE LOCATION
Y= 466606.8 N
X= 611314.6 E
LAT.=32.282573° N
LONG.=104.106895° W
FIRST TAKE POINT
NAD 83 NME
Y= 466546.4 N
X= 611134.2 E
LAT.=32.282408° N
LONG.=104.107479° W
GEODEIC COORDINATES
NAD 27 NME
SURFACE LOCATION
Y= 466547.8 N
X= 570131.9 E
LAT.=32.282453° N
LONG.=104.106399° W
FIRST TAKE POINT
NAD 27 NME
Y= 466487.4 N
X= 569951.5 E
LAT.=32.282288° N
LONG.=104.106984° W

CORNER COORDINATES TABLE

NAD 27 NME
A - Y= 466815.6 N, X= 569296.7 E
B - Y= 466819.1 N, X= 570628.4 E
C - Y= 461515.2 N, X= 569367.1 E
D - Y= 461520.8 N, X= 570677.4 E
E - Y= 458880.6 N, X= 569337.6 E
F - Y= 458882.4 N, X= 570659.0 E

CORNER COORDINATES TABLE

NAD 83 NME
A - Y= 466874.6 N, X= 610479.4 E
B - Y= 466878.1 N, X= 611811.1 E
C - Y= 461574.1 N, X= 610549.9 E
D - Y= 461579.7 N, X= 611860.3 E
E - Y= 458939.3 N, X= 610520.5 E
F - Y= 458941.2 N, X= 611841.9 E

LAST TAKE POINT

NAD 83 NME
Y= 459270.2 N
X= 611189.2 E
LAT.=32.262407° N
LONG.=104.107351° W

LAST TAKE POINT

NAD 27 NME
Y= 459211.4 N
X= 570006.3 E
LAT.=32.262286° N
LONG.=104.106856° W

AS-DRILLED BOTTOM HOLE LOCATION

NAD 83 NME
Y= 458985.3 N
X= 611218.7 E
LAT.=32.261623° N
LONG.=104.107257° W

AS-DRILLED BOTTOM HOLE LOCATION

NAD 27 NME
Y= 458926.5 N
X= 570035.8 E
LAT.=32.261503° N
LONG.=104.106762° W

NOTE: AS-DRILLED BOTTOM HOLE PLOTTED FROM DATA FURNISHED BY OCS DIRECTIONAL DRILLING ON 22 MAY 2019.

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 an undivided 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.

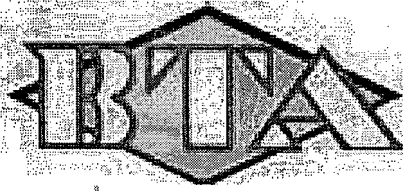
Signature: *Katy Peddle* Date: *8/14/19*
Printed Name: *KATY PEDDELL*
E-mail Address: *fredde@btaoil.com*

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.

Date of Survey: *10/1/19*
Signature: *Ronald J. Eidson*
Printed Name: *Ronald J. Eidson*
E-mail Address: *REidson@nmsurveyors.com*
ACK. REG. W.O. 19110218 JWSC W.O. 19130714

Rwp 3-26-20



BTA Oil Producers, LLC

Eddy County, New Mexico (NAD 83)

Sec 29, T23, R28-E

Ogden 20509 29-32 Fed Com #4H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

22 May, 2019





Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 29-32 Fed Com #4H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3099.0usft (Patterson #594)
Site:	Sec 29, T23, R28-E	MD Reference:	WELL @ 3099.0usft (Patterson #594)
Well:	Ogden 20509 29-32 Fed Com #4H	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 29, T23, R28-E		
Site Position:		Northing:	466,607.70 usft
From:	Map	Easting:	611,639.60 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 16' 57.266 N
		Longitude:	104° 6' 21.036 W
		Grid Convergence:	0.12 °

Well	Ogden 20509 29-32 Fed Com #4H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 16' 57.264 N
		Longitude:	104° 6' 24.706 W
		Ground Level:	3,074.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	4/11/2019	7.17
			Dip Angle
			(°)
			60.02
			Field Strength
			(nT)
			47,910.60000000

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			180.83

Survey Program	Date 5/22/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		Description
133.0	17,986.0	QES MWD Surveys (Wellbore #1)	OWSG (Rev2) MWD
			OWSG MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting		
(usft)			(usft)			(usft)	(usft)		
0.0	0.00	0.00	0.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
133.0	0.20	88.30	133.0	0.0	0.2	466,606.91	611,324.84	32° 16' 57.264 N	104° 6' 24.703 W
First MWD Survey @ 133.0' MD / 133.0' TVD									
243.0	0.30	257.40	243.0	-0.1	0.1	466,606.85	611,324.75	32° 16' 57.264 N	104° 6' 24.704 W
367.0	1.30	321.20	367.0	1.0	-1.1	466,607.88	611,323.55	32° 16' 57.274 N	104° 6' 24.718 W
428.0	1.30	314.30	428.0	2.0	-2.0	466,608.90	611,322.62	32° 16' 57.284 N	104° 6' 24.729 W
549.0	1.20	331.00	548.9	4.1	-3.6	466,610.96	611,321.02	32° 16' 57.305 N	104° 6' 24.747 W
706.0	1.20	350.50	705.9	7.1	-4.6	466,614.02	611,319.95	32° 16' 57.335 N	104° 6' 24.760 W
794.0	1.30	353.20	793.9	9.0	-4.9	466,615.92	611,319.68	32° 16' 57.354 N	104° 6' 24.763 W
889.0	1.20	352.80	888.9	11.1	-5.2	466,617.98	611,319.43	32° 16' 57.374 N	104° 6' 24.766 W
984.0	1.40	348.90	983.8	13.2	-5.5	466,620.11	611,319.08	32° 16' 57.395 N	104° 6' 24.770 W
1,079.0	1.40	353.50	1,078.8	15.5	-5.9	466,622.40	611,318.73	32° 16' 57.418 N	104° 6' 24.774 W



Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 29-32 Fed Com #4H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3099 0usft (Patterson #594)
Site:	Sec 29, T23, R28-E	MD Reference:	WELL @ 3099 0usft (Patterson #594)
Well:	Ogden 20509 29-32 Fed Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM:5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,174.0	1.60	347.50	1,173.8	17.9	-6.3	466,624.85	611,318.31	32° 16' 57.442 N	104° 6' 24.779 W
1,268.0	1.70	345.40	1,267.7	20.6	-6.9	466,627.48	611,317.68	32° 16' 57.468 N	104° 6' 24.786 W
1,457.0	1.80	341.70	1,456.7	26.1	-8.6	466,633.01	611,316.04	32° 16' 57.523 N	104° 6' 24.805 W
1,551.0	1.90	344.70	1,550.6	29.0	-9.4	466,635.91	611,315.16	32° 16' 57.552 N	104° 6' 24.815 W
1,646.0	1.80	342.80	1,645.6	32.0	-10.3	466,638.86	611,314.30	32° 16' 57.581 N	104° 6' 24.825 W
1,739.0	1.60	333.80	1,738.5	34.5	-11.3	466,641.42	611,313.30	32° 16' 57.606 N	104° 6' 24.837 W
1,833.0	1.30	332.60	1,832.5	36.6	-12.4	466,643.54	611,312.23	32° 16' 57.627 N	104° 6' 24.849 W
1,927.0	0.60	24.80	1,926.5	38.0	-12.7	466,644.94	611,311.95	32° 16' 57.641 N	104° 6' 24.852 W
2,022.0	1.30	58.40	2,021.5	39.1	-11.5	466,645.95	611,313.07	32° 16' 57.651 N	104° 6' 24.839 W
2,115.0	1.50	49.20	2,114.4	40.4	-9.7	466,647.30	611,314.89	32° 16' 57.664 N	104° 6' 24.818 W
2,209.0	1.10	54.00	2,208.4	41.7	-8.1	466,648.63	611,316.55	32° 16' 57.678 N	104° 6' 24.799 W
2,304.0	1.00	52.80	2,303.4	42.8	-6.7	466,649.67	611,317.95	32° 16' 57.688 N	104° 6' 24.782 W
2,397.0	0.70	355.40	2,396.4	43.8	-6.1	466,650.73	611,318.55	32° 16' 57.698 N	104° 6' 24.775 W
2,491.0	1.90	313.40	2,490.4	45.5	-7.2	466,652.37	611,317.37	32° 16' 57.715 N	104° 6' 24.789 W
2,585.0	1.80	312.90	2,584.3	47.5	-9.4	466,654.45	611,315.16	32° 16' 57.735 N	104° 6' 24.815 W
2,680.0	1.70	312.60	2,679.3	49.5	-11.6	466,656.42	611,313.03	32° 16' 57.755 N	104° 6' 24.839 W
2,774.0	1.60	310.10	2,773.2	51.3	-13.6	466,658.21	611,311.00	32° 16' 57.772 N	104° 6' 24.863 W
2,869.0	1.60	303.90	2,868.2	52.9	-15.7	466,659.80	611,308.88	32° 16' 57.788 N	104° 6' 24.888 W
2,964.0	1.60	305.90	2,963.2	54.4	-17.9	466,661.32	611,306.71	32° 16' 57.803 N	104° 6' 24.913 W
3,059.0	1.70	306.90	3,058.1	56.0	-20.1	466,662.94	611,304.51	32° 16' 57.819 N	104° 6' 24.939 W
3,153.0	1.70	301.80	3,152.1	57.6	-22.4	466,664.51	611,302.21	32° 16' 57.835 N	104° 6' 24.965 W
3,341.0	1.80	314.00	3,340.0	61.1	-26.9	466,668.03	611,297.71	32° 16' 57.870 N	104° 6' 25.018 W
3,530.0	1.90	321.50	3,528.9	65.6	-31.0	466,672.55	611,293.63	32° 16' 57.915 N	104° 6' 25.065 W
3,718.0	2.00	321.70	3,716.8	70.7	-34.9	466,677.56	611,289.65	32° 16' 57.964 N	104° 6' 25.111 W
3,907.0	1.20	327.10	3,905.7	74.9	-38.1	466,681.81	611,286.54	32° 16' 58.007 N	104° 6' 25.147 W
4,096.0	1.10	324.90	4,094.7	78.1	-40.2	466,684.96	611,284.42	32° 16' 58.038 N	104° 6' 25.172 W
4,285.0	1.10	321.00	4,283.6	81.0	-42.4	466,687.85	611,282.23	32° 16' 58.066 N	104° 6' 25.197 W
4,475.0	1.20	320.30	4,473.6	83.9	-44.8	466,690.80	611,279.81	32° 16' 58.096 N	104° 6' 25.226 W
4,664.0	1.30	319.60	4,662.5	87.1	-47.4	466,693.95	611,277.16	32° 16' 58.127 N	104° 6' 25.256 W
4,853.0	0.80	338.40	4,851.5	89.9	-49.3	466,696.81	611,275.29	32° 16' 58.155 N	104° 6' 25.278 W
4,948.0	0.60	46.20	4,946.5	90.9	-49.2	466,697.77	611,275.40	32° 16' 58.165 N	104° 6' 25.277 W
5,043.0	0.60	58.70	5,041.5	91.5	-48.4	466,698.38	611,276.18	32° 16' 58.171 N	104° 6' 25.268 W
5,137.0	0.60	64.20	5,135.5	91.9	-47.6	466,698.85	611,277.05	32° 16' 58.175 N	104° 6' 25.258 W
5,232.0	0.50	70.50	5,230.5	92.3	-46.7	466,699.20	611,277.89	32° 16' 58.179 N	104° 6' 25.248 W
5,359.0	0.60	74.20	5,357.5	92.7	-45.6	466,699.57	611,279.05	32° 16' 58.182 N	104° 6' 25.234 W
5,423.0	0.60	74.20	5,421.5	92.9	-44.9	466,699.75	611,279.69	32° 16' 58.184 N	104° 6' 25.227 W
5,518.0	0.50	69.10	5,516.5	93.1	-44.0	466,700.03	611,280.56	32° 16' 58.187 N	104° 6' 25.217 W
5,611.0	0.40	79.10	5,609.5	93.3	-43.3	466,700.24	611,281.26	32° 16' 58.189 N	104° 6' 25.209 W
5,705.0	0.40	69.10	5,703.5	93.5	-42.7	466,700.42	611,281.89	32° 16' 58.191 N	104° 6' 25.201 W
5,800.0	0.40	86.30	5,798.5	93.7	-42.1	466,700.56	611,282.53	32° 16' 58.192 N	104° 6' 25.194 W
5,893.0	0.30	82.50	5,891.5	93.7	-41.5	466,700.61	611,283.09	32° 16' 58.193 N	104° 6' 25.187 W
5,988.0	0.30	81.80	5,986.5	93.8	-41.0	466,700.68	611,283.58	32° 16' 58.193 N	104° 6' 25.181 W
6,083.0	0.40	98.60	6,081.5	93.8	-40.4	466,700.67	611,284.16	32° 16' 58.193 N	104° 6' 25.175 W
6,173.0	0.90	356.30	6,171.5	94.4	-40.2	466,701.32	611,284.42	32° 16' 58.200 N	104° 6' 25.172 W
6,268.0	1.80	346.30	6,266.4	96.6	-40.6	466,703.52	611,284.02	32° 16' 58.221 N	104° 6' 25.176 W
6,362.0	1.40	331.70	6,360.4	99.1	-41.5	466,705.96	611,283.13	32° 16' 58.246 N	104° 6' 25.187 W
6,460.0	1.60	328.60	6,458.4	101.3	-42.8	466,708.19	611,281.85	32° 16' 58.268 N	104° 6' 25.201 W
6,554.0	2.40	334.40	6,552.3	104.2	-44.3	466,711.08	611,280.31	32° 16' 58.296 N	104° 6' 25.219 W
6,648.0	2.50	329.10	6,646.2	107.7	-46.2	466,714.61	611,278.41	32° 16' 58.331 N	104° 6' 25.241 W
6,743.0	3.20	317.80	6,741.1	111.5	-49.0	466,718.36	611,275.57	32° 16' 58.368 N	104° 6' 25.274 W
6,827.0	3.70	329.10	6,825.0	115.5	-52.0	466,722.42	611,272.60	32° 16' 58.409 N	104° 6' 25.309 W
6,919.0	3.50	344.40	6,916.8	120.8	-54.3	466,727.67	611,270.32	32° 16' 58.461 N	104° 6' 25.335 W
7,013.0	3.50	348.10	7,010.6	126.3	-55.6	466,733.24	611,268.96	32° 16' 58.516 N	104° 6' 25.351 W
7,107.0	3.00	344.00	7,104.4	131.5	-56.9	466,738.41	611,267.69	32° 16' 58.567 N	104° 6' 25.366 W
7,202.0	2.70	340.30	7,199.3	136.0	-58.4	466,742.91	611,266.25	32° 16' 58.612 N	104° 6' 25.382 W



Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 29-32 Fed Com #4H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3099.0usft (Patterson #594)
Site:	Sec 29, T23, R28-E	MD Reference:	WELL @ 3099.0usft (Patterson #594)
Well:	Ogden 20509 29-32 Fed Com #4H	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
7,296.0	2.70	337.70	7,293.2	140.1	-59.9	466,747.04	611,264.66	32° 16' 58.653 N	104° 6' 25.401 W
7,390.0	2.30	342.30	7,387.1	144.0	-61.4	466,750.89	611,263.25	32° 16' 58.691 N	104° 6' 25.417 W
7,484.0	1.80	345.80	7,481.1	147.2	-62.3	466,754.12	611,262.31	32° 16' 58.723 N	104° 6' 25.428 W
7,579.0	1.80	337.30	7,576.0	150.0	-63.2	466,756.94	611,261.37	32° 16' 58.751 N	104° 6' 25.439 W
7,674.0	2.40	335.10	7,671.0	153.2	-64.6	466,760.12	611,259.96	32° 16' 58.782 N	104° 6' 25.455 W
7,768.0	2.60	337.30	7,764.9	157.0	-66.3	466,763.87	611,258.30	32° 16' 58.819 N	104° 6' 25.474 W
7,863.0	2.20	334.40	7,859.8	160.6	-67.9	466,767.51	611,256.68	32° 16' 58.855 N	104° 6' 25.493 W
7,958.0	2.30	334.70	7,954.7	164.0	-69.5	466,770.87	611,255.08	32° 16' 58.889 N	104° 6' 25.512 W
8,053.0	2.20	330.70	8,049.6	167.3	-71.2	466,774.19	611,253.38	32° 16' 58.921 N	104° 6' 25.532 W
8,146.0	2.50	333.10	8,142.6	170.7	-73.0	466,777.55	611,251.58	32° 16' 58.955 N	104° 6' 25.552 W
8,240.0	2.40	330.80	8,236.5	174.2	-74.9	466,781.10	611,249.70	32° 16' 58.990 N	104° 6' 25.574 W
8,334.0	2.30	330.70	8,330.4	177.6	-76.8	466,784.46	611,247.81	32° 16' 59.023 N	104° 6' 25.596 W
8,428.0	2.00	344.00	8,424.3	180.8	-78.2	466,787.68	611,246.44	32° 16' 59.055 N	104° 6' 25.612 W
8,522.0	1.80	348.90	8,518.3	183.8	-78.9	466,790.71	611,245.70	32° 16' 59.085 N	104° 6' 25.621 W
8,616.0	1.50	347.40	8,612.2	186.5	-79.5	466,793.36	611,245.15	32° 16' 59.111 N	104° 6' 25.627 W
8,711.0	1.80	345.30	8,707.2	189.1	-80.1	466,796.01	611,244.50	32° 16' 59.138 N	104° 6' 25.634 W
8,805.0	1.80	339.50	8,801.2	191.9	-81.0	466,798.83	611,243.61	32° 16' 59.165 N	104° 6' 25.645 W
8,899.0	1.50	333.80	8,895.1	194.4	-82.1	466,801.31	611,242.55	32° 16' 59.190 N	104° 6' 25.657 W
8,994.0	1.20	339.10	8,990.1	196.5	-83.0	466,803.36	611,241.64	32° 16' 59.210 N	104° 6' 25.667 W
9,088.0	1.10	337.90	9,084.1	198.2	-83.7	466,805.11	611,240.95	32° 16' 59.228 N	104° 6' 25.675 W
9,182.0	1.10	337.70	9,178.1	199.9	-84.3	466,806.78	611,240.27	32° 16' 59.244 N	104° 6' 25.683 W
9,277.0	1.10	335.40	9,273.0	201.6	-85.1	466,808.46	611,239.55	32° 16' 59.261 N	104° 6' 25.692 W
9,372.0	0.90	326.80	9,368.0	203.0	-85.8	466,809.91	611,238.76	32° 16' 59.275 N	104° 6' 25.701 W
9,467.0	0.80	325.70	9,463.0	204.2	-86.6	466,811.08	611,237.97	32° 16' 59.287 N	104° 6' 25.710 W
9,562.0	0.90	331.90	9,558.0	205.4	-87.4	466,812.29	611,237.25	32° 16' 59.299 N	104° 6' 25.718 W
9,657.0	0.60	295.50	9,653.0	206.3	-88.2	466,813.16	611,236.45	32° 16' 59.307 N	104° 6' 25.728 W
9,742.0	0.40	287.20	9,738.0	206.5	-88.8	466,813.44	611,235.76	32° 16' 59.310 N	104° 6' 25.736 W
9,863.0	4.60	202.00	9,858.9	202.2	-91.1	466,809.06	611,233.54	32° 16' 59.267 N	104° 6' 25.762 W
9,956.0	18.00	193.70	9,949.9	184.7	-95.9	466,791.56	611,228.72	32° 16' 59.094 N	104° 6' 25.818 W
10,050.0	29.30	199.00	10,035.8	148.7	-106.8	466,755.59	611,217.75	32° 16' 58.738 N	104° 6' 25.947 W
10,143.0	41.80	200.90	10,111.3	98.0	-125.4	466,704.91	611,199.22	32° 16' 58.237 N	104° 6' 26.164 W
10,237.0	50.20	200.20	10,176.6	34.7	-149.1	466,641.64	611,175.53	32° 16' 57.611 N	104° 6' 26.442 W
10,332.0	54.70	197.40	10,234.5	-36.5	-173.3	466,570.36	611,151.32	32° 16' 56.906 N	104° 6' 26.725 W
10,362.4	56.69	195.91	10,251.6	-60.6	-180.5	466,546.30	611,144.13	32° 16' 56.668 N	104° 6' 26.810 W
Cross 330° FNL @ 10362.4 MD / 10251.6 TVD									
10,426.0	60.90	193.00	10,284.6	-113.3	-194.0	466,493.64	611,130.58	32° 16' 56.148 N	104° 6' 26.969 W
10,547.0	72.20	190.60	10,332.6	-221.8	-216.6	466,385.14	611,108.02	32° 16' 55.074 N	104° 6' 27.234 W
10,641.0	83.30	190.20	10,352.6	-312.0	-233.1	466,294.93	611,091.47	32° 16' 54.182 N	104° 6' 27.429 W
10,736.0	89.30	190.90	10,358.7	-405.1	-250.5	466,201.78	611,074.12	32° 16' 53.261 N	104° 6' 27.634 W
10,831.0	89.30	191.30	10,359.8	-498.3	-268.8	466,108.56	611,055.83	32° 16' 52.339 N	104° 6' 27.849 W
10,926.0	89.20	190.40	10,361.1	-591.6	-286.7	466,015.27	611,037.95	32° 16' 51.416 N	104° 6' 28.060 W
11,022.0	88.80	189.30	10,362.8	-686.2	-303.1	465,920.70	611,021.53	32° 16' 50.480 N	104° 6' 28.253 W
11,117.0	88.50	189.30	10,365.0	-779.9	-318.4	465,826.97	611,006.18	32° 16' 49.553 N	104° 6' 28.434 W
11,212.0	87.90	187.40	10,368.0	-873.9	-332.2	465,733.03	610,992.39	32° 16' 48.624 N	104° 6' 28.597 W
11,309.0	87.80	187.80	10,371.6	-969.9	-345.0	465,636.95	610,979.57	32° 16' 47.673 N	104° 6' 28.749 W
11,405.0	87.60	187.80	10,375.5	-1,065.0	-358.0	465,541.92	610,966.55	32° 16' 46.733 N	104° 6' 28.903 W
11,501.0	88.80	186.30	10,378.5	-1,160.2	-369.8	465,446.69	610,954.78	32° 16' 45.791 N	104° 6' 29.042 W
11,598.0	88.80	186.20	10,380.5	-1,256.6	-380.4	465,350.29	610,944.22	32° 16' 44.837 N	104° 6' 29.168 W
11,694.0	90.90	185.80	10,380.8	-1,352.1	-390.4	465,254.82	610,934.19	32° 16' 43.893 N	104° 6' 29.287 W
11,789.0	90.30	184.90	10,379.8	-1,446.7	-399.3	465,160.24	610,925.33	32° 16' 42.957 N	104° 6' 29.392 W
11,884.0	89.60	184.10	10,379.9	-1,541.4	-406.7	465,065.54	610,917.88	32° 16' 42.020 N	104° 6' 29.482 W
11,979.0	91.20	184.20	10,379.2	-1,636.1	-413.6	464,970.79	610,911.00	32° 16' 41.082 N	104° 6' 29.564 W
12,073.0	91.30	184.80	10,377.1	-1,729.8	-421.0	464,877.11	610,903.63	32° 16' 40.155 N	104° 6' 29.652 W
12,168.0	91.40	184.60	10,374.9	-1,824.4	-428.8	464,782.45	610,895.85	32° 16' 39.219 N	104° 6' 29.745 W
12,263.0	91.30	184.90	10,372.7	-1,919.1	-436.6	464,687.80	610,887.98	32° 16' 38.282 N	104° 6' 29.839 W



Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 29-32 Fed Com #4H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3099 0usft (Patterson #594)
Site:	Sec 29, T23, R28-E	MD Reference:	WELL @ 3099 0usft (Patterson #594)
Well:	Ogden 20509 29-32 Fed Com #4H	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
12,357.0	90.00	183.20	10,371.6	-2,012.9	-443.3	464,594.05	610,881.34	32° 16' 37.355 N	104° 6' 29.919 W
12,452.0	89.90	182.80	10,371.7	-2,107.7	-448.2	464,499.18	610,876.37	32° 16' 36.416 N	104° 6' 29.979 W
12,547.0	89.90	182.50	10,371.9	-2,202.6	-452.6	464,404.28	610,871.98	32° 16' 35.477 N	104° 6' 30.032 W
12,642.0	90.30	182.50	10,371.7	-2,297.5	-456.8	464,309.37	610,867.84	32° 16' 34.538 N	104° 6' 30.083 W
12,737.0	89.40	179.00	10,371.9	-2,392.5	-458.0	464,214.40	610,866.59	32° 16' 33.598 N	104° 6' 30.100 W
12,832.0	89.90	177.90	10,372.5	-2,487.5	-455.4	464,119.44	610,869.16	32° 16' 32.658 N	104° 6' 30.072 W
12,927.0	89.70	176.00	10,372.9	-2,582.3	-450.4	464,024.57	610,874.22	32° 16' 31.719 N	104° 6' 30.016 W
13,023.0	88.80	174.70	10,374.1	-2,678.0	-442.6	463,928.90	610,882.00	32° 16' 30.772 N	104° 6' 29.927 W
13,118.0	88.40	173.90	10,376.4	-2,772.5	-433.2	463,834.40	610,891.43	32° 16' 29.837 N	104° 6' 29.820 W
13,214.0	88.30	173.90	10,379.2	-2,867.9	-423.0	463,738.98	610,901.63	32° 16' 28.893 N	104° 6' 29.703 W
13,309.0	88.00	174.00	10,382.3	-2,962.3	-413.0	463,644.56	610,911.63	32° 16' 27.958 N	104° 6' 29.589 W
13,403.0	88.40	174.00	10,385.2	-3,055.8	-403.1	463,551.12	610,921.46	32° 16' 27.033 N	104° 6' 29.477 W
13,498.0	89.40	174.60	10,387.0	-3,150.3	-393.7	463,456.61	610,930.89	32° 16' 26.098 N	104° 6' 29.369 W
13,592.0	89.30	174.70	10,388.1	-3,243.9	-385.0	463,363.03	610,939.65	32° 16' 25.171 N	104° 6' 29.270 W
13,686.0	90.50	175.40	10,388.3	-3,337.5	-376.8	463,269.38	610,947.76	32° 16' 24.245 N	104° 6' 29.177 W
13,781.0	90.50	176.20	10,387.4	-3,432.3	-369.9	463,174.64	610,954.72	32° 16' 23.307 N	104° 6' 29.099 W
13,877.0	91.20	177.40	10,386.0	-3,528.1	-364.5	463,078.80	610,960.08	32° 16' 22.358 N	104° 6' 29.039 W
13,972.0	91.50	177.70	10,383.8	-3,623.0	-360.5	462,983.92	610,964.14	32° 16' 21.419 N	104° 6' 28.994 W
14,067.0	90.30	176.90	10,382.3	-3,717.9	-356.0	462,889.04	610,968.61	32° 16' 20.480 N	104° 6' 28.944 W
14,162.0	89.50	174.90	10,382.4	-3,812.6	-349.2	462,794.29	610,975.40	32° 16' 19.542 N	104° 6' 28.867 W
14,256.0	89.70	175.40	10,383.1	-3,906.3	-341.3	462,700.62	610,983.35	32° 16' 18.615 N	104° 6' 28.777 W
14,351.0	90.80	175.40	10,382.7	-4,001.0	-333.6	462,605.93	610,990.97	32° 16' 17.678 N	104° 6' 28.690 W
14,445.0	91.30	175.30	10,381.0	-4,094.6	-326.0	462,512.26	610,998.59	32° 16' 16.751 N	104° 6' 28.604 W
14,540.0	90.90	174.90	10,379.1	-4,189.3	-317.9	462,417.62	611,006.70	32° 16' 15.814 N	104° 6' 28.512 W
14,635.0	90.50	174.70	10,378.0	-4,283.9	-309.3	462,323.02	611,015.31	32° 16' 14.878 N	104° 6' 28.414 W
14,730.0	91.80	174.60	10,376.1	-4,378.4	-300.4	462,228.46	611,024.17	32° 16' 13.942 N	104° 6' 28.313 W
14,824.0	91.40	174.00	10,373.5	-4,471.9	-291.1	462,134.96	611,033.50	32° 16' 13.017 N	104° 6' 28.206 W
14,919.0	92.00	174.60	10,370.6	-4,566.4	-281.7	462,040.47	611,042.93	32° 16' 12.081 N	104° 6' 28.099 W
15,014.0	92.30	175.10	10,367.1	-4,661.0	-273.2	461,945.92	611,051.45	32° 16' 11.146 N	104° 6' 28.002 W
15,108.0	92.20	175.10	10,363.4	-4,754.6	-265.1	461,852.34	611,059.48	32° 16' 10.219 N	104° 6' 27.911 W
15,203.0	92.20	176.30	10,359.7	-4,849.2	-258.0	461,757.68	611,066.59	32° 16' 9.282 N	104° 6' 27.830 W
15,298.0	92.50	177.60	10,355.8	-4,944.0	-253.0	461,662.89	611,071.64	32° 16' 8.344 N	104° 6' 27.774 W
15,388.0	92.40	176.30	10,352.0	-5,033.8	-248.2	461,573.10	611,076.43	32° 16' 7.456 N	104° 6' 27.720 W
15,483.0	91.40	177.60	10,348.8	-5,128.6	-243.1	461,478.29	611,081.48	32° 16' 6.517 N	104° 6' 27.664 W
15,577.0	90.50	177.40	10,347.3	-5,222.5	-239.0	461,384.40	611,085.58	32° 16' 5.588 N	104° 6' 27.618 W
15,672.0	90.70	177.20	10,346.3	-5,317.4	-234.5	461,289.51	611,090.05	32° 16' 4.649 N	104° 6' 27.568 W
15,767.0	90.90	178.10	10,345.0	-5,412.3	-230.7	461,194.60	611,093.95	32° 16' 3.710 N	104° 6' 27.525 W
15,862.0	90.60	177.70	10,343.7	-5,507.2	-227.2	461,099.67	611,097.43	32° 16' 2.770 N	104° 6' 27.487 W
15,956.0	90.00	179.10	10,343.2	-5,601.2	-224.5	461,005.71	611,100.05	32° 16' 1.840 N	104° 6' 27.459 W
16,050.0	86.90	178.40	10,345.8	-5,695.1	-222.5	460,911.78	611,102.10	32° 16' 0.911 N	104° 6' 27.437 W
16,145.0	85.50	176.70	10,352.1	-5,789.8	-218.4	460,817.08	611,106.15	32° 15' 59.973 N	104° 6' 27.393 W
16,240.0	85.00	177.60	10,359.9	-5,884.4	-213.7	460,722.53	611,110.86	32° 15' 59.038 N	104° 6' 27.340 W
16,334.0	88.80	177.40	10,365.0	-5,978.1	-209.6	460,628.77	611,114.96	32° 15' 58.110 N	104° 6' 27.295 W
16,429.0	89.10	176.50	10,366.8	-6,073.0	-204.6	460,533.92	611,120.01	32° 15' 57.171 N	104° 6' 27.238 W
16,524.0	91.40	177.20	10,366.3	-6,167.8	-199.4	460,439.07	611,125.23	32° 15' 56.232 N	104° 6' 27.180 W
16,619.0	86.90	176.20	10,367.7	-6,262.6	-193.9	460,344.27	611,130.70	32° 15' 55.294 N	104° 6' 27.118 W
16,714.0	87.70	176.20	10,372.2	-6,357.3	-187.6	460,249.58	611,136.98	32° 15' 54.357 N	104° 6' 27.047 W
16,808.0	86.30	176.20	10,377.1	-6,451.0	-181.4	460,155.92	611,143.21	32° 15' 53.430 N	104° 6' 26.977 W
16,903.0	86.80	178.30	10,382.9	-6,545.7	-176.8	460,061.21	611,147.75	32° 15' 52.493 N	104° 6' 26.927 W
16,997.0	86.90	177.20	10,388.0	-6,639.5	-173.2	459,967.42	611,151.44	32° 15' 51.564 N	104° 6' 26.886 W
17,092.0	87.80	177.20	10,392.4	-6,734.3	-168.5	459,872.64	611,156.08	32° 15' 50.626 N	104° 6' 26.834 W
17,187.0	91.20	177.90	10,393.2	-6,829.2	-164.5	459,777.74	611,160.14	32° 15' 49.687 N	104° 6' 26.789 W
17,281.0	90.30	177.60	10,392.0	-6,923.1	-160.8	459,683.82	611,163.83	32° 15' 48.758 N	104° 6' 26.749 W
17,376.0	88.50	176.20	10,393.0	-7,017.9	-155.6	459,588.97	611,168.96	32° 15' 47.819 N	104° 6' 26.691 W
17,471.0	84.40	175.10	10,398.9	-7,112.4	-148.5	459,494.45	611,176.15	32° 15' 46.883 N	104° 6' 26.610 W



Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 29-32 Fed Com #4H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3099.0usft (Patterson #594)
Site:	Sec 29, T23, R28-E	MD Reference:	WELL @ 3099.0usft (Patterson #594)
Well:	Ogden 20509 29-32 Fed Com #4H	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
17,565.0	82.20	174.00	10,409.9	-7,205.4	-139.6	459,401.52	611,185.01	32° 15' 45.964 N	104° 6' 26.509 W
17,660.0	85.80	173.90	10,419.8	-7,299.3	-129.6	459,307.58	611,194.97	32° 15' 45.034 N	104° 6' 26.395 W
17,697.6	85.80	173.74	10,422.5	-7,336.6	-125.6	459,270.30	611,199.01	32° 15' 44.665 N	104° 6' 26.349 W
Cross 330' FSL @ 17697.6' MD / 10422.5' TVD									
17,754.0	85.80	173.50	10,426.7	-7,392.5	-119.3	459,214.40	611,205.26	32° 15' 44.111 N	104° 6' 26.278 W
17,849.0	89.10	174.90	10,430.9	-7,486.9	-109.8	459,120.00	611,214.85	32° 15' 43.177 N	104° 6' 26.168 W
17,930.0	89.50	173.90	10,431.9	-7,567.5	-101.9	459,039.39	611,222.75	32° 15' 42.379 N	104° 6' 26.078 W
17,986.0	89.50	173.90	10,432.4	-7,623.2	-95.9	458,983.71	611,228.70	32° 15' 41.828 N	104° 6' 26.010 W
TD @ 17986.0' MD / 10432.4' TVD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
133.0	133.0	0.0	0.2	First MWD Survey @ 133.0' MD / 133.0' TVD
10,362.4	10,251.6	-60.6	-180.5	Cross 330' FNL @ 10362.4' MD / 10251.6' TVD
17,697.6	10,422.5	-7,336.6	-125.6	Cross 330' FSL @ 17697.6' MD / 10422.5' TVD
17,986.0	10,432.4	-7,623.2	-95.9	TD @ 17986.0' MD / 10432.4' TVD