

OCT 18 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: (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

RECEIVED

AMENDED REPORT
AS DRILLED

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-44339	Pool Code 98220	Pool Name PURPLE SAGE (WOLFCAMP) GAS
Property Code 320813	Property Name OGDEN 20509 32-29 FEDERAL COM	
OGRID No. 260297	Operator Name BTA OIL PRODUCERS, LLC	Well Number 5H Elevation 3107'

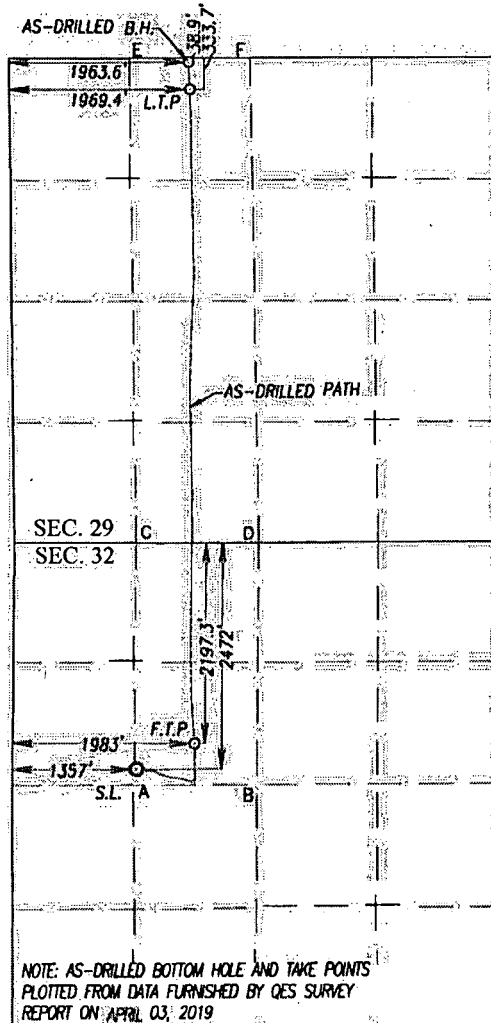
Surface Location									
UL or lot No. F	Section 32	Township 23-S	Range 28-E	Lot Idn	Feet from the 2472	North/South line NORTH	Feet from the 1357	East/West line WEST	County EDDY

As-Drilled Bottom Hole Location If Different From Surface

UL or lot No. C	Section 29	Township 23-S	Range 28-E	Lot Idn	Feet from the 38.9	North/South line NORTH	Feet from the 1963.6	East/West line WEST	County EDDY
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Dedicated Acres 84.0	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



SCALE: 1"=2000'

GEODEIC COORDINATES NAD 83 NME AS-DRILLED BOTTOM HOLE LOCATION Y = 466833.9 N X = 609807.1 E LAT. = 32.283206° N LONG. = 104.111772° W GEODEIC COORDINATES NAD 83 NME LAST TAKE POINT Y = 466539.2 N X = 609814.5 E LAT. = 32.282396° N LONG. = 104.111750° W CORNER COORDINATES TABLE NAD 27 NME A - Y = 458878.7 N, X = 568001.6 E B - Y = 458880.6 N, X = 569337.6 E C - Y = 461518.4 N, X = 568027.7 E D - Y = 461515.2 N, X = 569367.1 E E - Y = 466812.1 N, X = 567978.9 E F - Y = 466815.6 N, X = 569296.7 E SURFACE LOCATION NAD 83 NME Y = 459379.5 N X = 609834.9 E LAT. = 32.262715° N LONG. = 104.111731° W FIRST TAKE POINT NAD 83 NME Y = 459105.8 N X = 609206.7 E LAT. = 32.261966° N LONG. = 104.113766° W	GEODEIC COORDINATES NAD 27 NME AS-DRILLED BOTTOM HOLE LOCATION Y = 466775.0 N X = 568624.4 E LAT. = 32.283086° N LONG. = 104.111276° W GEODEIC COORDINATES NAD 27 NME LAST TAKE POINT Y = 466480.2 N X = 568631.7 E LAT. = 32.282276° N LONG. = 104.111254° W CORNER COORDINATES TABLE NAD 27 NME A - Y = 458878.7 N, X = 568001.6 E B - Y = 458880.6 N, X = 569337.6 E C - Y = 461518.4 N, X = 568027.7 E D - Y = 461515.2 N, X = 569367.1 E E - Y = 466812.1 N, X = 567978.9 E F - Y = 466815.6 N, X = 569296.7 E SURFACE LOCATION NAD 27 NME Y = 459320.7 N X = 568652.0 E LAT. = 32.262594° N LONG. = 104.111236° W FIRST TAKE POINT NAD 27 NME Y = 459047.1 N X = 568023.8 E LAT. = 32.261846° N LONG. = 104.113270° W
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OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division

KATY REDDELL 9/20/19

Signature Date

KATY REDDELL

Printed Name

kreddell@btaoil.com

E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 30, 2016

Date of Survey Signature

RONALD J. EIDSON

NEW MEXICO

3239

REGISTERED SURVEYOR

9/19/2019

Certificate Number

12641

Ronald J. Eidson

3239

ACK REL W.O. 17130146 REV 9/19/19 JWSC W.O. 1913 0925

RWP 10-22-19

SEP 05 2019

Intent ☐ As Drilled ☒

RECEIVED

API # 30-015-44339	
Operator Name: BTA OIL PRODUCERS, LLC	Property Name: OGDEN 20509 32-29
Well Number 5H	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	32	23S	28E		2472	NORTH	1357	WEST	EDDY
Latitude 32.261966					Longitude -104.113766				NAD 83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	32	23S	28E		2308	NORTH	1975	WEST	EDDY
Latitude 32.262409					Longitude -104.111760				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	29	23S	28E		300	NORTH	1979	WEST	EDDY
Latitude 32.282406					Longitude 104.111718				NAD 83

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

NO

Is this well an infill well?

YES

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

API # 30-015-44749	
Operator Name: BTA OIL PRODUCERS, LLC	Property Name: OGDEN 20509 32-29
Well Number 1H	

KZ 06/29/2018

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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

SEP 05 2019 Submit Original
to Appropriate
District Office

RECEIVED

GAS CAPTURE PLAN

Date: 8/27/2019

☒ Original

Operator & OGRID No.: 260297

☐ Amended - Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
OGDEN 20509 32.29 5H	30-015- 44339	SEC.32;T23S;R28E	2472FNL;1357FWL	2,500	1500	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Gas Transporter and will be connected to Gas Transporter low/high pressure gathering system located in EDDY County, New Mexico. It will require 2800' of pipeline to connect the facility to low/high pressure gathering system. Operator provides (periodically) to Gas Transporter a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Operator and Gas Transporter have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Gas Transporter Processing Plant located in Sec. 31, Twn. 23S, Rng. 28E, EDDY County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

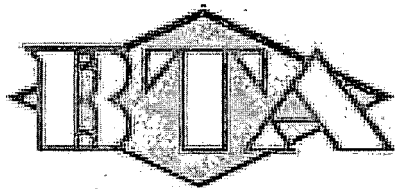
After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Gas Transporter system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 05 2019

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BTA Oil Producers, LLC

Eddy County, New Mexico (NAD 83)

Sec 32, T23-S, R28-E

Ogden 20509 32-29 Fed Com #5H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

03 April, 2019





Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 32-29 Fed Com #5H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3132.0usft (Patterson #594)
Site:	Sec 32, T23-S, R28-E	MD Reference:	WELL @ 3132.0usft (Patterson #594)
Well:	Ogden 20509 32-29 Fed Com #5H	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 32, T23-S, R28-E		
Site Position:		Northing:	459,105.80 usft
From:	Map	Easting:	609,206.70 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 15' 43.078 N
		Longitude:	104° 6' 49.556 W
		Grid Convergence:	0.12 °

Well	Ogden 20509 32-29 Fed Com #5H		
Well Position	+N/-S	0.0 usft	Northing: 459,105.80 usft
	+E/-W	0.0 usft	Easting: 609,206.70 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 15' 43.078 N
		Longitude:	104° 6' 49.556 W
		Ground Level:	3,107.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	3/8/2019	(°) 7.02
			Dip Angle (°) 59.99
			Field Strength (nT) 47,728.22263288

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 (°) 4.57

Survey Program	Date: 4/3/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
154.0	17,165.0	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	459,105.80	609,206.70	32° 15' 43.078 N	104° 6' 49.556 W	
154.0	0.40	318.40	154.0	0.4	-0.4	459,106.20	609,206.35	32° 15' 43.082 N	104° 6' 49.561 W	
First MWD Survey @ 154.0' MD / 154.0' TVD										
214.0	0.60	292.70	214.0	0.7	-0.8	459,106.48	609,205.92	32° 15' 43.084 N	104° 6' 49.566 W	
277.0	0.90	234.90	277.0	0.5	-1.5	459,106.32	609,205.21	32° 15' 43.083 N	104° 6' 49.574 W	
336.0	1.00	263.40	336.0	0.2	-2.4	459,106.00	609,204.32	32° 15' 43.080 N	104° 6' 49.584 W	
439.0	0.80	277.80	439.0	0.2	-4.0	459,105.99	609,202.71	32° 15' 43.080 N	104° 6' 49.603 W	
613.0	2.30	86.50	612.9	0.6	-1.7	459,106.37	609,204.99	32° 15' 43.083 N	104° 6' 49.576 W	
756.0	1.90	87.20	755.8	0.9	3.5	459,106.66	609,210.23	32° 15' 43.086 N	104° 6' 49.515 W	
897.0	1.50	64.40	896.8	1.8	7.5	459,107.57	609,214.23	32° 15' 43.095 N	104° 6' 49.469 W	
1,087.0	1.30	57.00	1,086.7	4.0	11.6	459,109.82	609,218.28	32° 15' 43.117 N	104° 6' 49.421 W	
1,276.0	1.30	67.40	1,275.7	6.0	15.3	459,111.81	609,222.05	32° 15' 43.137 N	104° 6' 49.377 W	



Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509.32-29 Fed Com #5H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3132.0usft (Patterson #594)
Site:	Sec 32, T23-S, R28-E	MD Reference:	WELL @ 3132.0usft (Patterson #594)
Well:	Ogden 20509 32-29 Fed Com #5H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey									
Measured			Vertical			Map	Map		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
1,466.0	1.10	80.90	1,465.6	7.1	19.1	459,112.93	609,225.84	32° 15' 43.148 N	104° 6' 49.333 W
1,656.0	1.80	91.80	1,655.6	7.3	23.9	459,113.12	609,230.63	32° 15' 43.150 N	104° 6' 49.278 W
1,845.0	2.90	103.60	1,844.4	6.1	31.5	459,111.91	609,238.24	32° 15' 43.138 N	104° 6' 49.189 W
2,035.0	4.00	95.00	2,034.1	4.4	42.8	459,110.20	609,249.52	32° 15' 43.120 N	104° 6' 49.058 W
2,224.0	4.60	100.40	2,222.5	2.5	56.8	459,108.26	609,263.54	32° 15' 43.101 N	104° 6' 48.894 W
2,414.0	3.30	106.40	2,412.1	-0.5	69.6	459,105.34	609,276.28	32° 15' 43.072 N	104° 6' 48.746 W
2,475.0	3.10	105.50	2,473.0	-1.4	72.8	459,104.40	609,279.55	32° 15' 43.062 N	104° 6' 48.708 W
2,670.0	3.60	132.20	2,667.7	-6.9	82.5	459,098.88	609,289.17	32° 15' 43.008 N	104° 6' 48.596 W
2,859.0	5.10	102.00	2,856.1	-12.7	95.1	459,093.14	609,301.78	32° 15' 42.951 N	104° 6' 48.449 W
3,049.0	4.80	105.90	3,045.4	-16.6	111.0	459,089.21	609,317.69	32° 15' 42.911 N	104° 6' 48.264 W
3,238.0	6.80	86.20	3,233.5	-18.0	129.8	459,087.79	609,336.46	32° 15' 42.897 N	104° 6' 48.046 W
3,427.0	6.10	86.20	3,421.3	-16.6	150.9	459,089.19	609,357.65	32° 15' 42.910 N	104° 6' 47.799 W
3,617.0	7.50	94.30	3,609.9	-16.9	173.4	459,088.93	609,380.09	32° 15' 42.907 N	104° 6' 47.537 W
3,806.0	7.70	106.80	3,797.3	-21.5	197.8	459,084.35	609,404.51	32° 15' 42.861 N	104° 6' 47.253 W
3,996.0	6.60	115.00	3,985.8	-29.7	219.9	459,076.05	609,426.59	32° 15' 42.779 N	104° 6' 46.996 W
4,185.0	6.20	119.10	4,173.6	-39.3	238.6	459,066.50	609,445.35	32° 15' 42.684 N	104° 6' 46.778 W
4,375.0	6.60	119.90	4,362.4	-49.7	257.1	459,056.07	609,463.78	32° 15' 42.580 N	104° 6' 46.563 W
4,565.0	4.50	127.10	4,551.5	-59.7	272.5	459,046.13	609,479.20	32° 15' 42.482 N	104° 6' 46.384 W
4,755.0	3.90	99.70	4,741.1	-65.3	284.8	459,040.54	609,491.51	32° 15' 42.426 N	104° 6' 46.241 W
4,945.0	3.40	99.40	4,930.7	-67.3	296.7	459,038.53	609,503.44	32° 15' 42.406 N	104° 6' 46.102 W
5,135.0	5.60	92.30	5,120.1	-68.6	311.6	459,037.24	609,518.26	32° 15' 42.393 N	104° 6' 45.929 W
5,325.0	6.50	106.60	5,309.0	-72.0	331.1	459,033.79	609,537.83	32° 15' 42.358 N	104° 6' 45.702 W
5,514.0	6.00	109.40	5,496.9	-78.3	350.7	459,027.46	609,557.40	32° 15' 42.295 N	104° 6' 45.474 W
5,704.0	5.50	110.40	5,685.9	-84.8	368.6	459,020.99	609,575.30	32° 15' 42.231 N	104° 6' 45.266 W
5,894.0	5.30	99.40	5,875.1	-89.4	385.8	459,016.38	609,592.50	32° 15' 42.185 N	104° 6' 45.065 W
6,084.0	6.20	89.20	6,064.2	-90.7	404.7	459,015.09	609,611.41	32° 15' 42.172 N	104° 6' 44.845 W
6,273.0	8.10	95.20	6,251.7	-91.8	428.2	459,014.02	609,634.88	32° 15' 42.161 N	104° 6' 44.572 W
6,463.0	4.30	98.30	6,440.5	-94.0	448.6	459,011.78	609,655.27	32° 15' 42.138 N	104° 6' 44.334 W
6,653.0	3.10	98.70	6,630.1	-95.8	460.7	459,009.98	609,667.39	32° 15' 42.120 N	104° 6' 44.193 W
6,846.0	5.60	94.60	6,822.6	-97.4	475.2	459,008.43	609,681.94	32° 15' 42.105 N	104° 6' 44.024 W
7,035.0	5.20	95.50	7,010.7	-98.9	493.0	459,006.87	609,699.66	32° 15' 42.089 N	104° 6' 43.818 W
7,225.0	5.80	104.80	7,199.9	-102.2	510.8	459,003.59	609,717.51	32° 15' 42.056 N	104° 6' 43.610 W
7,414.0	6.70	112.20	7,387.7	-108.8	530.2	458,996.99	609,736.95	32° 15' 41.990 N	104° 6' 43.383 W
7,603.0	6.50	114.00	7,575.5	-117.3	550.2	458,988.47	609,756.93	32° 15' 41.905 N	104° 6' 43.151 W
7,790.0	5.60	104.60	7,761.4	-123.9	568.7	458,981.87	609,775.43	32° 15' 41.840 N	104° 6' 42.936 W
7,982.0	5.50	99.70	7,952.5	-127.8	586.9	458,977.95	609,793.57	32° 15' 41.801 N	104° 6' 42.725 W
8,171.0	3.30	112.40	8,141.0	-131.4	600.8	458,974.35	609,807.53	32° 15' 41.765 N	104° 6' 42.562 W
8,361.0	2.00	116.20	8,330.8	-135.0	608.9	458,970.81	609,815.56	32° 15' 41.729 N	104° 6' 42.469 W
8,550.0	3.30	91.10	8,519.6	-136.6	617.3	458,969.25	609,823.96	32° 15' 41.714 N	104° 6' 42.371 W
8,739.0	1.20	96.00	8,708.4	-136.9	624.7	458,968.93	609,831.37	32° 15' 41.711 N	104° 6' 42.285 W
8,871.0	0.70	143.50	8,840.4	-137.7	626.5	458,968.14	609,833.22	32° 15' 41.703 N	104° 6' 42.263 W
9,047.0	9.80	10.60	9,015.6	-123.8	629.9	458,982.04	609,836.62	32° 15' 41.840 N	104° 6' 42.223 W
9,142.0	18.10	3.40	9,107.7	-101.0	632.3	459,004.76	609,838.99	32° 15' 42.065 N	104° 6' 42.195 W
9,237.0	26.50	1.80	9,195.5	-65.1	633.8	459,040.74	609,840.53	32° 15' 42.421 N	104° 6' 42.176 W
9,333.0	34.40	357.20	9,278.2	-16.5	633.2	459,089.31	609,839.88	32° 15' 42.902 N	104° 6' 42.182 W
9,428.0	44.60	358.50	9,351.4	43.8	631.0	459,149.62	609,837.69	32° 15' 43.499 N	104° 6' 42.207 W
9,544.0	56.50	0.80	9,425.0	133.2	630.6	459,239.02	609,837.30	32° 15' 44.383 N	104° 6' 42.209 W
9,578.6	59.64	0.05	9,443.3	162.6	630.8	459,268.38	609,837.51	32° 15' 44.674 N	104° 6' 42.206 W
330' HL Crossed @ 9578.6' MD / 9443.3' TVD									
9,631.0	64.40	359.00	9,467.9	208.8	630.4	459,314.64	609,837.12	32° 15' 45.132 N	104° 6' 42.209 W
9,725.0	76.60	357.40	9,499.2	297.2	627.6	459,403.03	609,834.30	32° 15' 46.006 N	104° 6' 42.240 W
9,820.0	89.20	356.20	9,510.9	391.2	622.3	459,496.96	609,829.03	32° 15' 46.936 N	104° 6' 42.299 W
9,914.0	89.00	356.00	9,512.4	484.9	615.9	459,590.73	609,822.64	32° 15' 47.864 N	104° 6' 42.371 W
10,008.0	91.00	357.40	9,512.4	578.8	610.5	459,684.57	609,817.23	32° 15' 48.793 N	104° 6' 42.432 W
10,102.0	90.80	356.40	9,510.9	672.6	605.4	459,778.42	609,812.15	32° 15' 49.722 N	104° 6' 42.489 W



Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 32-29 Fed Com #5H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3132.0usft (Patterson #594)
Site:	Sec 32, T23-S, R28-E	MD Reference:	WELL @ 3132.0usft (Patterson #594)
Well:	Ogden 20509 32-29 Fed Com #5H	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
10,197.0	91.70	357.20	9,508.9	767.4	600.1	459,873.25	609,806.84	32° 15' 50.660 N	104° 6' 42.548 W
10,291.0	93.70	0.20	9,504.4	861.3	598.0	459,967.10	609,804.71	32° 15' 51.589 N	104° 6' 42.571 W
10,385.0	92.90	0.10	9,499.0	955.1	598.3	460,060.95	609,804.96	32° 15' 52.518 N	104° 6' 42.566 W
10,479.0	89.80	358.60	9,496.8	1,049.1	597.2	460,154.90	609,803.89	32° 15' 53.447 N	104° 6' 42.576 W
10,574.0	91.40	359.20	9,495.8	1,144.1	595.4	460,249.87	609,802.07	32° 15' 54.387 N	104° 6' 42.595 W
10,668.0	91.20	358.80	9,493.7	1,238.0	593.7	460,343.83	609,800.43	32° 15' 55.317 N	104° 6' 42.612 W
10,762.0	91.50	0.60	9,491.5	1,332.0	593.2	460,437.80	609,799.93	32° 15' 56.247 N	104° 6' 42.615 W
10,856.0	92.00	0.60	9,488.6	1,426.0	594.2	460,531.75	609,800.92	32° 15' 57.177 N	104° 6' 42.602 W
10,951.0	92.40	1.10	9,484.9	1,520.9	595.6	460,626.67	609,802.33	32° 15' 58.116 N	104° 6' 42.583 W
11,046.0	89.30	0.10	9,483.5	1,615.8	596.6	460,721.64	609,803.32	32° 15' 59.056 N	104° 6' 42.569 W
11,140.0	89.00	0.60	9,484.9	1,709.8	597.2	460,815.63	609,803.89	32° 15' 59.986 N	104° 6' 42.560 W
11,235.0	90.70	1.10	9,485.2	1,804.8	598.6	460,910.62	609,805.30	32° 16' 0.926 N	104° 6' 42.541 W
11,329.0	92.20	1.50	9,482.8	1,898.8	600.7	461,004.56	609,807.44	32° 16' 1.856 N	104° 6' 42.514 W
11,424.0	89.10	359.90	9,481.7	1,993.7	601.9	461,099.53	609,808.60	32° 16' 2.795 N	104° 6' 42.499 W
11,518.0	92.80	0.90	9,480.2	2,087.7	602.5	461,193.50	609,809.25	32° 16' 3.725 N	104° 6' 42.489 W
11,612.0	92.90	0.60	9,475.5	2,181.6	603.8	461,287.38	609,810.48	32° 16' 4.654 N	104° 6' 42.472 W
11,706.0	93.60	0.90	9,470.2	2,275.4	605.0	461,381.22	609,811.71	32° 16' 5.583 N	104° 6' 42.455 W
11,801.0	92.50	1.50	9,465.1	2,370.3	607.0	461,476.06	609,813.70	32° 16' 6.521 N	104° 6' 42.430 W
11,895.0	90.70	0.90	9,462.5	2,464.2	609.0	461,570.00	609,815.66	32° 16' 7.451 N	104° 6' 42.405 W
11,989.0	90.30	0.20	9,461.7	2,558.2	609.9	461,663.99	609,816.57	32° 16' 8.381 N	104° 6' 42.392 W
12,083.0	88.50	359.40	9,462.6	2,652.2	609.5	461,757.98	609,816.24	32° 16' 9.311 N	104° 6' 42.394 W
12,178.0	88.20	359.40	9,465.4	2,747.1	608.5	461,852.93	609,815.24	32° 16' 10.251 N	104° 6' 42.403 W
12,272.0	90.50	0.20	9,466.4	2,841.1	608.2	461,946.92	609,814.92	32° 16' 11.181 N	104° 6' 42.405 W
12,367.0	92.60	0.20	9,463.9	2,936.1	608.5	462,041.88	609,815.25	32° 16' 12.121 N	104° 6' 42.398 W
12,461.0	93.00	0.10	9,459.3	3,030.0	608.8	462,135.77	609,815.49	32° 16' 13.050 N	104° 6' 42.393 W
12,555.0	91.20	359.50	9,455.8	3,123.9	608.5	462,229.70	609,815.16	32° 16' 13.979 N	104° 6' 42.395 W
12,649.0	91.30	358.30	9,453.8	3,217.9	606.7	462,323.66	609,813.36	32° 16' 14.909 N	104° 6' 42.414 W
12,743.0	91.70	358.10	9,451.3	3,311.8	603.7	462,417.58	609,810.41	32° 16' 15.839 N	104° 6' 42.446 W
12,838.0	94.20	359.90	9,446.4	3,406.6	602.0	462,512.43	609,808.75	32° 16' 16.777 N	104° 6' 42.463 W
12,932.0	93.50	0.20	9,440.1	3,500.4	602.1	462,606.21	609,808.83	32° 16' 17.705 N	104° 6' 42.460 W
13,026.0	95.20	359.90	9,433.0	3,594.1	602.2	462,699.94	609,808.92	32° 16' 18.633 N	104° 6' 42.456 W
13,120.0	89.90	359.90	9,428.8	3,688.0	602.0	462,793.81	609,808.75	32° 16' 19.562 N	104° 6' 42.456 W
13,215.0	87.50	359.70	9,431.0	3,783.0	601.7	462,888.78	609,808.42	32° 16' 20.502 N	104° 6' 42.458 W
13,308.0	87.00	358.30	9,435.4	3,875.9	600.1	462,981.66	609,806.80	32° 16' 21.421 N	104° 6' 42.474 W
13,402.0	88.20	357.80	9,439.4	3,969.7	596.9	463,075.52	609,803.60	32° 16' 22.350 N	104° 6' 42.509 W
13,496.0	88.50	0.60	9,442.1	4,063.7	595.6	463,169.46	609,802.29	32° 16' 23.279 N	104° 6' 42.522 W
13,589.0	88.60	0.40	9,444.4	4,156.6	596.4	463,262.43	609,803.10	32° 16' 24.199 N	104° 6' 42.510 W
13,684.0	90.20	1.50	9,445.4	4,251.6	598.0	463,357.40	609,804.68	32° 16' 25.139 N	104° 6' 42.490 W
13,778.0	91.00	2.30	9,444.4	4,345.5	601.1	463,451.35	609,807.79	32° 16' 26.069 N	104° 6' 42.451 W
13,873.0	86.90	359.50	9,446.2	4,440.5	602.6	463,546.29	609,809.29	32° 16' 27.008 N	104° 6' 42.432 W
13,967.0	87.20	0.10	9,451.0	4,534.4	602.3	463,640.16	609,808.96	32° 16' 27.937 N	104° 6' 42.433 W
14,061.0	90.30	2.20	9,453.1	4,628.3	604.1	463,734.10	609,810.85	32° 16' 28.867 N	104° 6' 42.409 W
14,155.0	92.10	2.30	9,451.1	4,722.2	607.8	463,828.01	609,814.54	32° 16' 29.796 N	104° 6' 42.364 W
14,249.0	91.00	3.90	9,448.6	4,816.0	612.9	463,921.83	609,819.62	32° 16' 30.724 N	104° 6' 42.302 W
14,343.0	85.80	2.30	9,451.2	4,909.8	618.0	464,015.62	609,824.70	32° 16' 31.652 N	104° 6' 42.241 W
14,437.0	86.50	2.50	9,457.5	5,003.5	621.9	464,109.33	609,828.63	32° 16' 32.580 N	104° 6' 42.193 W
14,530.0	89.40	4.30	9,460.8	5,096.3	627.4	464,202.09	609,834.14	32° 16' 33.497 N	104° 6' 42.126 W
14,625.0	88.80	2.50	9,462.3	5,191.1	633.1	464,296.91	609,839.77	32° 16' 34.436 N	104° 6' 42.058 W
14,720.0	90.50	3.20	9,462.9	5,286.0	637.8	464,391.78	609,844.50	32° 16' 35.374 N	104° 6' 42.001 W
14,814.0	87.80	0.10	9,464.3	5,379.9	640.5	464,485.71	609,847.20	32° 16' 36.304 N	104° 6' 41.967 W
14,909.0	89.10	359.40	9,466.9	5,474.9	640.1	464,580.67	609,846.79	32° 16' 37.244 N	104° 6' 41.970 W
15,003.0	90.50	359.20	9,467.2	5,568.9	638.9	464,674.66	609,845.64	32° 16' 38.174 N	104° 6' 41.981 W
15,097.0	90.70	359.00	9,466.2	5,662.8	637.5	464,768.65	609,844.16	32° 16' 39.104 N	104° 6' 41.996 W
15,191.0	92.30	359.90	9,463.7	5,756.8	636.6	464,862.61	609,843.26	32° 16' 40.034 N	104° 6' 42.004 W
15,285.0	89.70	359.00	9,462.1	5,850.8	635.7	464,956.58	609,842.36	32° 16' 40.964 N	104° 6' 42.012 W



Survey Report - Geographic



Company:	BTA Oil Producers, LLC	Local Co-ordinate Reference:	Well Ogden 20509 32-29 Fed Com #5H
Project:	Eddy County, New Mexico (NAD 83)	TVD Reference:	WELL @ 3132.0usft (Patterson #594)
Site:	Sec 32, T23-S, R28-E	MD Reference:	WELL @ 3132.0usft (Patterson #594)
Well:	Ogden 20509 32-29 Fed Com #5H	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
15,380.0	92.20	359.70	9,460.5	5,945.8	634.6	465,051.55	609,841.28	32° 16' 41.904 N	104° 6' 42.023 W
15,474.0	86.90	357.60	9,461.3	6,039.7	632.4	465,145.48	609,839.07	32° 16' 42.833 N	104° 6' 42.046 W
15,567.0	90.90	359.70	9,463.0	6,132.6	630.2	465,238.42	609,836.88	32° 16' 43.753 N	104° 6' 42.070 W
15,660.0	90.40	358.30	9,462.0	6,225.6	628.6	465,331.40	609,835.26	32° 16' 44.673 N	104° 6' 42.086 W
15,754.0	90.70	358.50	9,461.1	6,319.6	625.9	465,425.35	609,832.63	32° 16' 45.603 N	104° 6' 42.114 W
15,848.0	89.90	358.80	9,460.6	6,413.5	623.7	465,519.33	609,830.42	32° 16' 46.533 N	104° 6' 42.138 W
15,942.0	90.00	359.00	9,460.7	6,507.5	621.9	465,613.31	609,828.61	32° 16' 47.463 N	104° 6' 42.157 W
16,036.0	90.00	359.00	9,460.7	6,601.5	620.3	465,707.29	609,826.97	32° 16' 48.393 N	104° 6' 42.174 W
16,130.0	92.90	0.20	9,458.3	6,695.4	619.6	465,801.25	609,826.31	32° 16' 49.323 N	104° 6' 42.179 W
16,224.0	89.20	359.90	9,456.6	6,789.4	619.7	465,895.22	609,826.40	32° 16' 50.253 N	104° 6' 42.176 W
16,319.0	91.20	0.40	9,456.2	6,884.4	619.9	465,990.21	609,826.65	32° 16' 51.193 N	104° 6' 42.171 W
16,412.0	92.40	0.60	9,453.3	6,977.4	620.8	466,083.16	609,827.46	32° 16' 52.112 N	104° 6' 42.159 W
16,506.0	90.40	358.60	9,451.0	7,071.3	620.1	466,177.12	609,826.80	32° 16' 53.042 N	104° 6' 42.164 W
16,600.0	91.00	358.60	9,449.9	7,165.3	617.8	466,271.08	609,824.50	32° 16' 53.972 N	104° 6' 42.189 W
16,695.0	89.70	357.60	9,449.3	7,260.2	614.6	466,366.03	609,821.35	32° 16' 54.912 N	104° 6' 42.223 W
16,789.0	89.30	357.60	9,450.1	7,354.1	610.7	466,459.94	609,817.42	32° 16' 55.841 N	104° 6' 42.267 W
16,871.9	90.80	358.39	9,450.0	7,437.0	607.8	466,542.79	609,814.52	32° 16' 56.661 N	104° 6' 42.299 W
330' HL Crossed @ 16871.9' MD / 9450.0' TVD									
16,883.0	91.00	358.50	9,449.9	7,448.1	607.5	466,553.88	609,814.22	32° 16' 56.771 N	104° 6' 42.302 W
16,977.0	91.60	358.60	9,447.7	7,542.0	605.1	466,647.83	609,811.84	32° 16' 57.701 N	104° 6' 42.327 W
17,072.0	91.70	358.60	9,445.0	7,637.0	602.8	466,742.76	609,809.52	32° 16' 58.640 N	104° 6' 42.352 W
17,117.0	92.00	358.60	9,443.6	7,681.9	601.7	466,787.72	609,808.42	32° 16' 59.085 N	104° 6' 42.364 W
17,165.0	92.00	358.60	9,441.9	7,729.9	600.5	466,835.68	609,807.25	32° 16' 59.560 N	104° 6' 42.376 W
TD @ 17165.0' MD / 9441.9' TVD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
154.0	154.0	0.4	-0.4	First MWD Survey @ 154.0' MD / 154.0' TVD
9,578.6	9,443.3	162.6	630.8	330' HL Crossed @ 9578.6' MD / 9443.3' TVD
16,871.9	9,450.0	7,437.0	607.8	330' HL Crossed @ 16871.9' MD / 9450.0' TVD
17,165.0	9,441.9	7,729.9	600.5	TD @ 17165.0' MD / 9441.9' TVD