

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM100335

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
OGDEN 20509 29-32 FED COM 4H9. API Well No.
30-015-45395-00-X110. Field and Pool or Exploratory Area
PURPLE SAGE-WOLFCAMP (GAS)11. County or Parish, State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
BTA OIL PRODUCERS LLCContact: KATY REDDELL
E-Mail: kreddell@btaoil.com3a. Address
104 S. PECOS
MIDLAND, TX 797013b. Phone No. (include area code)
Ph: 432-557-2869 Ext: 139

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 29 T23S R28E NWNE 270FNL 1830FEL
32.282574 N Lat, 104.106895 W Lon**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

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

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

BTA OIL PRODUCERS LLC RESPECTFULLY REQUEST THE FOLLOWING CHANGES TO THE ORIGINAL APD AS APPROVED.

Ogden #4H:

Mud Program #4H

Original APD

-Surface Section ? Fresh water 8.4 ppg
-Intermediate ? Brine 10.0 ? 10.2 ppg
-2nd Intermediate ? Cut brine 8.6 ? 9.2 ppg
-Production ? OBM 11.5 ? 12.0 ppg

RECEIVED

Carlsbad Field Office
OCD Artesia
APR 25 2019
DISTRICT II-ARTESIA O.C.D.

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

Electronic Submission #461775 verified by the BLM Well Information System
For BTA OIL PRODUCERS LLC, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 04/17/2019 (19PP1708SE)

Name (Printed/Typed) KATY REDDELL

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 04/17/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By LONG VO

Title PETROLEUM ENGINEER

Date 04/18/2019

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad

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

(Instructions on page 2)

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

RVP 5-24-19

Additional data for EC transaction #461775 that would not fit on the form

32. Additional remarks, continued

Proposed Change

- Surface Section ? Fresh water 8.4 ppg
- Intermediate ? DBE 9.4 ppg
- Production ? OBM 11.5 ? 12.0 ppg

Casing Program #4H

Original APD

- Surface ? 13-3/8? 54.5# J-55 STC set at 325? in a 17-1/2? hole
- Intermediate - 9-5/8? 36# J-55 @ 2550? in a 12-1/4? hole
- 2nd Intermediate - 7? 29# P-110 @ 9421? in a 8-3/4? hole
- Liner - 4-1/2? 11.6# P-110 liner from 8900? ? 17074?

Proposed Change

- Surface - same
- Intermediate - 9-5/8? 43.5# P-110 BTC @ 9787? in a 12-1/4? hole with DV tool at 2507?
- Production - 5-1/2? 23# P-110 BTC @ 18045? in a 8-1/2? hole

Cement Program 4H

Original

-Surface Cement

Tail 300 sx; 1.34 cfs; 14.8 ppg; 100% Class C; 100% excess

-Intermediate Cement

Lead 500 sx; 2.08 cfs; 12.9 ppg 100% Class C; 100% excess

Tail 250 sx; 1.38 cfs; 14.8 ppg; 100% Class C; 25% excess

-2nd Intermediate Cement

Lead 270 sx; 4.42 cfs; 10.5 ppg 50:50 Class H; 15% excess

Tail 200 sx; 1.18 cfs; 15.6 ppg; 100% Class H; 15% excess

-Liner Cement

Lead 720 sx; 1.22 cfs; 14.4 ppg; 50:50 Class H; 10% excess

Proposed Change

-Surface Cement

Tail 365 sx; 1.34 cfs; 14.8 ppg; 100% Class C ; 100% excess

-Intermediate Cement

Stage 1 Lead 885 sx; 2.64 cfs; 10.5 ppg; 50:50 Class H; 15% excess

Stage 1 Tail 250 sx; 1.19 cfs; 15.6 ppg; 100% Class H; 15% excess

Stage 2 Lead 455 sx; 2.19 cfs; 12.7 ppg 100% Class C; 50% excess

Stage 2 Tail 250 sx; 1.33 cfs; 14.8 ppg; 100% Class C; 25% excess

-Production Cement

Tail 1840 sx; 1.27 cfs; 14.8 ppg; 50% POZ 50% Class H; 10% excess

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BTA OIL Producers LLC
LEASE NO.:	NMNM100335
WELL NAME & NO.:	4H:OGDEN 20509 29-32 Fed Com
SURFACE HOLE FOOTAGE:	270'/N & 1830'/E
BOTTOM HOLE FOOTAGE:	2600'/N & 1950'/E
LOCATION:	T-23S, R-28E, S29. NMPM
COUNTY:	Eddy, NM

COA

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

All Previous COAs Still Apply

A. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **275 feet** (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Option 2:

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

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
Cement excess is less than 25%, more cement might be required.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.

During office hours call (575) 627-0272.

After office hours call (575)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

Well: **Ogden 20509 29-32 Fed Com #4H (WLBG)**[illegible]

BTA Oil Producers, LLC

Eddy County, NM (NAD 83)

Ogden

Ogden #04H

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

17 April, 2019

Microsoft
Planning Report - Geographic

Database: Old
Company: BTA Oil Producers, LLC
Project: Eddy County, NM (NAD 83)
Site: Ogden
Well: Ogden #04H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Ogden #04H
TVD Reference: GL @ 3074.0usft
MD Reference: GL @ 3074.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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

Site	Ogden			
Site Position:		Northing:	458,731.15 usft	Latitude: 32° 15' 39.390 N
From:	Map	Easting:	608,206.70 usft	Longitude: 104° 7' 1.212 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.12 °

Well	Ogden #04H			
Well Position	+N/-S	0.0 usft	Northing:	466,606.90 usft
	+E/-W	0.0 usft	Easting:	611,324.60 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 3,074.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.00	60.20	48,770.55077491

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

Plan Survey Tool Program	Date	4/17/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,045.3 Design #1 (Wellbore #1)		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,892.3	0.00	0.00	1,892.3	0.0	0.0	0.00	0.00	0.00	0.00	
2,142.3	5.00	0.00	2,142.0	10.9	0.0	2.00	2.00	0.00	0.00	
4,760.6	5.00	0.00	4,750.3	239.1	0.0	0.00	0.00	0.00	0.00	
5,010.6	0.00	0.00	5,000.0	250.0	0.0	2.00	-2.00	0.00	180.00	
9,837.6	0.00	0.00	9,827.0	250.0	0.0	0.00	0.00	0.00	0.00	
10,737.6	90.00	180.80	10,400.0	-322.9	-8.0	10.00	10.00	0.00	180.80	
18,045.5	90.00	180.80	10,400.0	-7,630.1	-110.5	0.00	0.00	0.00	0.00	Ogden #4H BHL

Microsoft
Planning Report - Geographic

Database: Old
Company: BTA Oil Producers, LLC
Project: Eddy County, NM (NAD 83)
Site: Ogden
Well: Ogden #04H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Ogden #04H
TVD Reference: GL @ 3074.0usft
MD Reference: GL @ 3074.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
100.0	0.00	0.00	100.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
200.0	0.00	0.00	200.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
300.0	0.00	0.00	300.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
400.0	0.00	0.00	400.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
500.0	0.00	0.00	500.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
600.0	0.00	0.00	600.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
700.0	0.00	0.00	700.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
800.0	0.00	0.00	800.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
900.0	0.00	0.00	900.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,892.3	0.00	0.00	1,892.3	0.0	0.0	466,606.90	611,324.60	32° 16' 57.264 N	104° 6' 24.706 W
1,900.0	0.15	0.00	1,900.0	0.0	0.0	466,606.91	611,324.60	32° 16' 57.265 N	104° 6' 24.706 W
2,000.0	2.15	0.00	2,000.0	2.0	0.0	466,608.92	611,324.60	32° 16' 57.284 N	104° 6' 24.706 W
2,100.0	4.15	0.00	2,099.8	7.5	0.0	466,614.42	611,324.60	32° 16' 57.339 N	104° 6' 24.706 W
2,142.3	5.00	0.00	2,142.0	10.9	0.0	466,617.80	611,324.60	32° 16' 57.372 N	104° 6' 24.706 W
2,200.0	5.00	0.00	2,199.5	15.9	0.0	466,622.83	611,324.60	32° 16' 57.422 N	104° 6' 24.705 W
2,300.0	5.00	0.00	2,299.1	24.6	0.0	466,631.54	611,324.60	32° 16' 57.508 N	104° 6' 24.705 W
2,400.0	5.00	0.00	2,398.7	33.4	0.0	466,640.26	611,324.60	32° 16' 57.595 N	104° 6' 24.705 W
2,500.0	5.00	0.00	2,498.3	42.1	0.0	466,648.97	611,324.60	32° 16' 57.681 N	104° 6' 24.705 W
2,600.0	5.00	0.00	2,597.9	50.8	0.0	466,657.69	611,324.60	32° 16' 57.767 N	104° 6' 24.705 W
2,700.0	5.00	0.00	2,697.6	59.5	0.0	466,666.40	611,324.60	32° 16' 57.853 N	104° 6' 24.704 W
2,800.0	5.00	0.00	2,797.2	68.2	0.0	466,675.12	611,324.60	32° 16' 57.939 N	104° 6' 24.704 W
2,900.0	5.00	0.00	2,896.8	76.9	0.0	466,683.83	611,324.60	32° 16' 58.026 N	104° 6' 24.704 W
3,000.0	5.00	0.00	2,996.4	85.7	0.0	466,692.55	611,324.60	32° 16' 58.112 N	104° 6' 24.704 W
3,100.0	5.00	0.00	3,096.0	94.4	0.0	466,701.26	611,324.60	32° 16' 58.198 N	104° 6' 24.704 W
3,200.0	5.00	0.00	3,195.7	103.1	0.0	466,709.98	611,324.60	32° 16' 58.284 N	104° 6' 24.703 W
3,300.0	5.00	0.00	3,295.3	111.8	0.0	466,718.69	611,324.60	32° 16' 58.371 N	104° 6' 24.703 W
3,400.0	5.00	0.00	3,394.9	120.5	0.0	466,727.40	611,324.60	32° 16' 58.457 N	104° 6' 24.703 W
3,500.0	5.00	0.00	3,494.5	129.2	0.0	466,736.12	611,324.60	32° 16' 58.543 N	104° 6' 24.703 W
3,600.0	5.00	0.00	3,594.1	137.9	0.0	466,744.83	611,324.60	32° 16' 58.629 N	104° 6' 24.702 W
3,700.0	5.00	0.00	3,693.8	146.7	0.0	466,753.55	611,324.60	32° 16' 58.716 N	104° 6' 24.702 W
3,800.0	5.00	0.00	3,793.4	155.4	0.0	466,762.26	611,324.60	32° 16' 58.802 N	104° 6' 24.702 W
3,900.0	5.00	0.00	3,893.0	164.1	0.0	466,770.98	611,324.60	32° 16' 58.888 N	104° 6' 24.702 W
4,000.0	5.00	0.00	3,992.6	172.8	0.0	466,779.69	611,324.60	32° 16' 58.974 N	104° 6' 24.702 W
4,100.0	5.00	0.00	4,092.2	181.5	0.0	466,788.41	611,324.60	32° 16' 59.061 N	104° 6' 24.701 W
4,200.0	5.00	0.00	4,191.9	190.2	0.0	466,797.12	611,324.60	32° 16' 59.147 N	104° 6' 24.701 W
4,300.0	5.00	0.00	4,291.5	199.0	0.0	466,805.84	611,324.60	32° 16' 59.233 N	104° 6' 24.701 W
4,400.0	5.00	0.00	4,391.1	207.7	0.0	466,814.55	611,324.60	32° 16' 59.319 N	104° 6' 24.701 W
4,500.0	5.00	0.00	4,490.7	216.4	0.0	466,823.27	611,324.60	32° 16' 59.406 N	104° 6' 24.701 W
4,600.0	5.00	0.00	4,590.3	225.1	0.0	466,831.98	611,324.60	32° 16' 59.492 N	104° 6' 24.700 W
4,700.0	5.00	0.00	4,690.0	233.8	0.0	466,840.70	611,324.60	32° 16' 59.578 N	104° 6' 24.700 W
4,760.6	5.00	0.00	4,750.3	239.1	0.0	466,845.98	611,324.60	32° 16' 59.630 N	104° 6' 24.700 W
4,800.0	4.21	0.00	4,789.6	242.3	0.0	466,849.14	611,324.60	32° 16' 59.662 N	104° 6' 24.700 W
4,900.0	2.21	0.00	4,889.4	247.9	0.0	466,854.74	611,324.60	32° 16' 59.717 N	104° 6' 24.700 W
5,000.0	0.21	0.00	4,989.4	250.0	0.0	466,856.86	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,010.6	0.00	0.00	5,000.0	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W

Microsoft
Planning Report - Geographic

Database: Old
Company: BTA Oil Producers, LLC
Project: Eddy County, NM (NAD 83)
Site: Ogden
Well: Ogden #04H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Ogden #04H
TVD Reference: GL @ 3074.0usft
MD Reference: GL @ 3074.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,100.0	0.00	0.00	5,089.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,200.0	0.00	0.00	5,189.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,300.0	0.00	0.00	5,289.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,400.0	0.00	0.00	5,389.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,500.0	0.00	0.00	5,489.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,600.0	0.00	0.00	5,589.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,700.0	0.00	0.00	5,689.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,800.0	0.00	0.00	5,789.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
5,900.0	0.00	0.00	5,889.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,000.0	0.00	0.00	5,989.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,100.0	0.00	0.00	6,089.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,200.0	0.00	0.00	6,189.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,300.0	0.00	0.00	6,289.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,400.0	0.00	0.00	6,389.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,500.0	0.00	0.00	6,489.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,600.0	0.00	0.00	6,589.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,700.0	0.00	0.00	6,689.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,800.0	0.00	0.00	6,789.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
6,900.0	0.00	0.00	6,889.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,000.0	0.00	0.00	6,989.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,100.0	0.00	0.00	7,089.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,200.0	0.00	0.00	7,189.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,300.0	0.00	0.00	7,289.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,400.0	0.00	0.00	7,389.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,500.0	0.00	0.00	7,489.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,600.0	0.00	0.00	7,589.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,700.0	0.00	0.00	7,689.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,800.0	0.00	0.00	7,789.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
7,900.0	0.00	0.00	7,889.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,000.0	0.00	0.00	7,989.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,100.0	0.00	0.00	8,089.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,200.0	0.00	0.00	8,189.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,300.0	0.00	0.00	8,289.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,400.0	0.00	0.00	8,389.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,500.0	0.00	0.00	8,489.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,600.0	0.00	0.00	8,589.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,700.0	0.00	0.00	8,689.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,800.0	0.00	0.00	8,789.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
8,900.0	0.00	0.00	8,889.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,000.0	0.00	0.00	8,989.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,100.0	0.00	0.00	9,089.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,200.0	0.00	0.00	9,189.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,300.0	0.00	0.00	9,289.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,400.0	0.00	0.00	9,389.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,500.0	0.00	0.00	9,489.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,600.0	0.00	0.00	9,589.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,700.0	0.00	0.00	9,689.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,800.0	0.00	0.00	9,789.4	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,837.6	0.00	0.00	9,827.0	250.0	0.0	466,856.88	611,324.60	32° 16' 59.738 N	104° 6' 24.700 W
9,900.0	6.24	180.80	9,889.3	246.6	0.0	466,853.49	611,324.56	32° 16' 59.705 N	104° 6' 24.700 W
10,000.0	16.24	180.80	9,987.2	227.2	-0.3	466,834.03	611,324.28	32° 16' 59.512 N	104° 6' 24.704 W
10,100.0	26.24	180.80	10,080.3	191.0	-0.8	466,797.86	611,323.78	32° 16' 59.154 N	104° 6' 24.711 W
10,200.0	36.24	180.80	10,165.7	139.2	-1.6	466,746.08	611,323.05	32° 16' 58.642 N	104° 6' 24.721 W
10,300.0	46.24	180.80	10,240.8	73.4	-2.5	466,680.26	611,322.13	32° 16' 57.990 N	104° 6' 24.733 W
10,400.0	56.24	180.80	10,303.4	-4.5	-3.6	466,602.40	611,321.03	32° 16' 57.220 N	104° 6' 24.748 W

Microsoft
Planning Report - Geographic

Database: Old
Company: BTA Oil Producers, LLC
Project: Eddy County, NM (NAD 83)
Site: Ogden
Well: Ogden #04H
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Design: Design #1

Local Co-ordinate Reference: Well Ogden #04H
TVD Reference: GL @ 3074.0usft
MD Reference: GL @ 3074.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,500.0	66.24	180.80	10,351.4	-92.0	-4.8	466,514.87	611,319.81	32° 16' 56.354 N	104° 6' 24.764 W
10,600.0	76.24	180.80	10,383.5	-186.6	-6.1	466,420.32	611,318.48	32° 16' 55.418 N	104° 6' 24.782 W
10,700.0	86.24	180.80	10,398.8	-285.3	-7.5	466,321.63	611,317.10	32° 16' 54.442 N	104° 6' 24.800 W
10,737.6	90.00	180.80	10,400.0	-322.9	-8.0	466,284.03	611,316.57	32° 16' 54.069 N	104° 6' 24.807 W
10,800.0	90.00	180.80	10,400.0	-385.3	-8.9	466,221.68	611,315.70	32° 16' 53.452 N	104° 6' 24.819 W
10,900.0	90.00	180.80	10,400.0	-485.2	-10.3	466,121.70	611,314.29	32° 16' 52.463 N	104° 6' 24.838 W
11,000.0	90.00	180.80	10,400.0	-585.2	-11.7	466,021.71	611,312.89	32° 16' 51.474 N	104° 6' 24.857 W
11,100.0	90.00	180.80	10,400.0	-685.2	-13.1	465,921.73	611,311.49	32° 16' 50.484 N	104° 6' 24.875 W
11,200.0	90.00	180.80	10,400.0	-785.2	-14.5	465,821.75	611,310.09	32° 16' 49.495 N	104° 6' 24.894 W
11,300.0	90.00	180.80	10,400.0	-885.2	-15.9	465,721.77	611,308.68	32° 16' 48.506 N	104° 6' 24.913 W
11,400.0	90.00	180.80	10,400.0	-985.2	-17.3	465,621.79	611,307.28	32° 16' 47.516 N	104° 6' 24.932 W
11,500.0	90.00	180.80	10,400.0	-1,085.2	-18.7	465,521.81	611,305.88	32° 16' 46.527 N	104° 6' 24.951 W
11,600.0	90.00	180.80	10,400.0	-1,185.2	-20.1	465,421.82	611,304.48	32° 16' 45.537 N	104° 6' 24.969 W
11,700.0	90.00	180.80	10,400.0	-1,285.2	-21.5	465,321.84	611,303.08	32° 16' 44.548 N	104° 6' 24.988 W
11,800.0	90.00	180.80	10,400.0	-1,385.2	-22.9	465,221.86	611,301.67	32° 16' 43.559 N	104° 6' 25.007 W
11,900.0	90.00	180.80	10,400.0	-1,485.1	-24.3	465,121.88	611,300.27	32° 16' 42.569 N	104° 6' 25.026 W
12,000.0	90.00	180.80	10,400.0	-1,585.1	-25.7	465,021.90	611,298.87	32° 16' 41.580 N	104° 6' 25.045 W
12,100.0	90.00	180.80	10,400.0	-1,685.1	-27.1	464,921.92	611,297.47	32° 16' 40.591 N	104° 6' 25.063 W
12,200.0	90.00	180.80	10,400.0	-1,785.1	-28.5	464,821.93	611,296.07	32° 16' 39.601 N	104° 6' 25.082 W
12,300.0	90.00	180.80	10,400.0	-1,885.1	-29.9	464,721.95	611,294.66	32° 16' 38.612 N	104° 6' 25.101 W
12,400.0	90.00	180.80	10,400.0	-1,985.1	-31.3	464,621.97	611,293.26	32° 16' 37.622 N	104° 6' 25.120 W
12,500.0	90.00	180.80	10,400.0	-2,085.1	-32.7	464,521.99	611,291.86	32° 16' 36.633 N	104° 6' 25.139 W
12,600.0	90.00	180.80	10,400.0	-2,185.1	-34.1	464,422.01	611,290.46	32° 16' 35.644 N	104° 6' 25.157 W
12,700.0	90.00	180.80	10,400.0	-2,285.1	-35.6	464,322.03	611,289.06	32° 16' 34.654 N	104° 6' 25.176 W
12,800.0	90.00	180.80	10,400.0	-2,385.1	-37.0	464,222.05	611,287.65	32° 16' 33.665 N	104° 6' 25.195 W
12,900.0	90.00	180.80	10,400.0	-2,485.0	-38.4	464,122.06	611,286.25	32° 16' 32.676 N	104° 6' 25.214 W
13,000.0	90.00	180.80	10,400.0	-2,585.0	-39.8	464,022.08	611,284.85	32° 16' 31.686 N	104° 6' 25.233 W
13,100.0	90.00	180.80	10,400.0	-2,685.0	-41.2	463,922.10	611,283.45	32° 16' 30.697 N	104° 6' 25.251 W
13,200.0	90.00	180.80	10,400.0	-2,785.0	-42.6	463,822.12	611,282.04	32° 16' 29.707 N	104° 6' 25.270 W
13,300.0	90.00	180.80	10,400.0	-2,885.0	-44.0	463,722.14	611,280.64	32° 16' 28.718 N	104° 6' 25.289 W
13,400.0	90.00	180.80	10,400.0	-2,985.0	-45.4	463,622.16	611,279.24	32° 16' 27.729 N	104° 6' 25.308 W
13,500.0	90.00	180.80	10,400.0	-3,085.0	-46.8	463,522.17	611,277.84	32° 16' 26.739 N	104° 6' 25.326 W
13,600.0	90.00	180.80	10,400.0	-3,185.0	-48.2	463,422.19	611,276.44	32° 16' 25.750 N	104° 6' 25.345 W
13,700.0	90.00	180.80	10,400.0	-3,285.0	-49.6	463,322.21	611,275.03	32° 16' 24.760 N	104° 6' 25.364 W
13,800.0	90.00	180.80	10,400.0	-3,385.0	-51.0	463,222.23	611,273.63	32° 16' 23.771 N	104° 6' 25.383 W
13,900.0	90.00	180.80	10,400.0	-3,485.0	-52.4	463,122.25	611,272.23	32° 16' 22.782 N	104° 6' 25.402 W
14,000.0	90.00	180.80	10,400.0	-3,584.9	-53.8	463,022.27	611,270.83	32° 16' 21.792 N	104° 6' 25.420 W
14,100.0	90.00	180.80	10,400.0	-3,684.9	-55.2	462,922.28	611,269.43	32° 16' 20.803 N	104° 6' 25.439 W
14,200.0	90.00	180.80	10,400.0	-3,784.9	-56.6	462,822.30	611,268.02	32° 16' 19.814 N	104° 6' 25.458 W
14,300.0	90.00	180.80	10,400.0	-3,884.9	-58.0	462,722.32	611,266.62	32° 16' 18.824 N	104° 6' 25.477 W
14,400.0	90.00	180.80	10,400.0	-3,984.9	-59.4	462,622.34	611,265.22	32° 16' 17.835 N	104° 6' 25.496 W
14,500.0	90.00	180.80	10,400.0	-4,084.9	-60.8	462,522.36	611,263.82	32° 16' 16.845 N	104° 6' 25.514 W
14,600.0	90.00	180.80	10,400.0	-4,184.9	-62.2	462,422.38	611,262.41	32° 16' 15.856 N	104° 6' 25.533 W
14,700.0	90.00	180.80	10,400.0	-4,284.9	-63.6	462,322.39	611,261.01	32° 16' 14.867 N	104° 6' 25.552 W
14,800.0	90.00	180.80	10,400.0	-4,384.9	-65.0	462,222.41	611,259.61	32° 16' 13.877 N	104° 6' 25.571 W
14,900.0	90.00	180.80	10,400.0	-4,484.9	-66.4	462,122.43	611,258.21	32° 16' 12.888 N	104° 6' 25.589 W
15,000.0	90.00	180.80	10,400.0	-4,584.8	-67.8	462,022.45	611,256.81	32° 16' 11.899 N	104° 6' 25.608 W
15,100.0	90.00	180.80	10,400.0	-4,684.8	-69.2	461,922.47	611,255.40	32° 16' 10.909 N	104° 6' 25.627 W
15,200.0	90.00	180.80	10,400.0	-4,784.8	-70.6	461,822.49	611,254.00	32° 16' 9.920 N	104° 6' 25.646 W
15,300.0	90.00	180.80	10,400.0	-4,884.8	-72.0	461,722.50	611,252.60	32° 16' 8.930 N	104° 6' 25.665 W
15,400.0	90.00	180.80	10,400.0	-4,984.8	-73.4	461,622.52	611,251.20	32° 16' 7.941 N	104° 6' 25.683 W
15,500.0	90.00	180.80	10,400.0	-5,084.8	-74.8	461,522.54	611,249.80	32° 16' 6.952 N	104° 6' 25.702 W
15,600.0	90.00	180.80	10,400.0	-5,184.8	-76.2	461,422.56	611,248.39	32° 16' 5.962 N	104° 6' 25.721 W
15,700.0	90.00	180.80	10,400.0	-5,284.8	-77.6	461,322.58	611,246.99	32° 16' 4.973 N	104° 6' 25.740 W
15,800.0	90.00	180.80	10,400.0	-5,384.8	-79.0	461,222.60	611,245.59	32° 16' 3.983 N	104° 6' 25.759 W

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,900.0	90.00	180.80	10,400.0	-5,484.8	-80.4	461,122.61	611,244.19	32° 16' 2.994 N	104° 6' 25.777 W
16,000.0	90.00	180.80	10,400.0	-5,584.7	-81.8	461,022.63	611,242.78	32° 16' 2.005 N	104° 6' 25.796 W
16,100.0	90.00	180.80	10,400.0	-5,684.7	-83.2	460,922.65	611,241.38	32° 16' 1.015 N	104° 6' 25.815 W
16,200.0	90.00	180.80	10,400.0	-5,784.7	-84.6	460,822.67	611,239.98	32° 16' 0.026 N	104° 6' 25.834 W
16,300.0	90.00	180.80	10,400.0	-5,884.7	-86.0	460,722.69	611,238.58	32° 15' 59.037 N	104° 6' 25.852 W
16,400.0	90.00	180.80	10,400.0	-5,984.7	-87.4	460,622.71	611,237.18	32° 15' 58.047 N	104° 6' 25.871 W
16,500.0	90.00	180.80	10,400.0	-6,084.7	-88.8	460,522.72	611,235.77	32° 15' 57.058 N	104° 6' 25.890 W
16,600.0	90.00	180.80	10,400.0	-6,184.7	-90.2	460,422.74	611,234.37	32° 15' 56.068 N	104° 6' 25.909 W
16,700.0	90.00	180.80	10,400.0	-6,284.7	-91.6	460,322.76	611,232.97	32° 15' 55.079 N	104° 6' 25.928 W
16,800.0	90.00	180.80	10,400.0	-6,384.7	-93.0	460,222.78	611,231.57	32° 15' 54.090 N	104° 6' 25.946 W
16,900.0	90.00	180.80	10,400.0	-6,484.7	-94.4	460,122.80	611,230.17	32° 15' 53.100 N	104° 6' 25.965 W
17,000.0	90.00	180.80	10,400.0	-6,584.6	-95.8	460,022.82	611,228.76	32° 15' 52.111 N	104° 6' 25.984 W
17,100.0	90.00	180.80	10,400.0	-6,684.6	-97.3	459,922.83	611,227.36	32° 15' 51.122 N	104° 6' 26.003 W
17,200.0	90.00	180.80	10,400.0	-6,784.6	-98.7	459,822.85	611,225.96	32° 15' 50.132 N	104° 6' 26.022 W
17,300.0	90.00	180.80	10,400.0	-6,884.6	-100.1	459,722.87	611,224.56	32° 15' 49.143 N	104° 6' 26.040 W
17,400.0	90.00	180.80	10,400.0	-6,984.6	-101.5	459,622.89	611,223.15	32° 15' 48.153 N	104° 6' 26.059 W
17,500.0	90.00	180.80	10,400.0	-7,084.6	-102.9	459,522.91	611,221.75	32° 15' 47.164 N	104° 6' 26.078 W
17,600.0	90.00	180.80	10,400.0	-7,184.6	-104.3	459,422.93	611,220.35	32° 15' 46.175 N	104° 6' 26.097 W
17,700.0	90.00	180.80	10,400.0	-7,284.6	-105.7	459,322.94	611,218.95	32° 15' 45.185 N	104° 6' 26.115 W
17,800.0	90.00	180.80	10,400.0	-7,384.6	-107.1	459,222.96	611,217.55	32° 15' 44.196 N	104° 6' 26.134 W
17,900.0	90.00	180.80	10,400.0	-7,484.6	-108.5	459,122.98	611,216.14	32° 15' 43.206 N	104° 6' 26.153 W
18,000.0	90.00	180.80	10,400.0	-7,584.5	-109.9	459,023.00	611,214.74	32° 15' 42.217 N	104° 6' 26.172 W
18,045.5	90.00	180.80	10,400.0	-7,630.1	-110.5	458,977.50	611,214.10	32° 15' 41.767 N	104° 6' 26.180 W

Design Targets

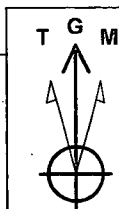
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Ogden #4H BHL - plan hits target center - Point	0.00	0.07	10,400.0	-7,630.1	-110.5	458,977.50	611,214.10	32° 15' 41.767 N	104° 6' 26.180 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,073.6	6,063.0	Bone Spring Lime		0.00	
8,781.6	8,771.0	Third Bone spring carb		0.00	
9,001.6	8,991.0	Third Bone Spring sand		0.00	
9,341.6	9,331.0	Top Wolfcamp		0.00	

BTA Oil Producers, LLC



Azimuths to Grid North
 True North: -0.12°
 Magnetic North: 7.88°
 Magnetic Field
 Strength: 48770.6nT
 Dip Angle: 60.20°
 Date: 12/31/2009
 Model: IGRF200510

SITE DETAILS: Ogden

Site Centre Northing: 458731.15
 Easting: 608206.70

Positional Uncertainty: 0.0
 Convergence: 0.12
 Local North: Grid

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00
2	1892.3	0.00	0.00	1892.3	0.0	0.0	0.00
3	2142.3	5.00	0.00	2142.0	10.9	0.0	2.00
4	4760.6	5.00	0.00	4750.3	239.1	0.0	0.00
5	5010.6	0.00	0.00	5000.0	250.0	0.0	2.00
6	9837.6	0.00	0.00	9827.0	250.0	0.0	0.00
7	10737.6	90.00	180.80	10400.0	-322.9	-8.0	10.00
8	18045.5	90.00	180.80	10400.0	-7630.1	-110.5	0.00

PROJECT DETAILS: Eddy County, NM (NAD 83)

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

System Datum: Ground Level

WELL DETAILS: Ogden #04H

+N/-S	+E/-W	Ground Level	3074.0	Latitude	Longitude
0.0	0.0	Northing	466606.90	Easting	611324.60
				32° 16' 57.264 N	104° 6' 24.706 W

