

Form 3160-5
(June 2015)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.
NMLC065194

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM1345178. Well Name and No.
WHITE WING 7909 18-19 FED COM 4H9. API Well No.
30-025-46151-00-X110. Field and Pool or Exploratory Area
BELL LAKE11. County or Parish, State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
BTA OIL PRODUCERSContact: SAMMY HAJAR
E-Mail: shajar@btaoil.com3a. Address
104 SOUTH PECOS STREET
MIDLAND, TX 797013b. Phone No. (include area code)
Ph: 432-682-3753

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

Sec 18 T23S R34E NWNE 210FNL 1665FEL
32.311302 N Lat, 103.506065 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 PD
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat 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 recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

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

OLD APD/PERMIT NAME: STARCASER 7909 FEDERAL COM 8H
NEW APD/PERMIT NAME: WHITE WING 7909 18-19 FED COM 4H

ORIGINAL FOOTAGES:
FTP: 330' FNL & 600'FEL in Section 18
LTP: 330' FSL & 600'FEL in Section 18
BHL: 50' FSL & 600'FEL in Section 18

NEW FOOTAGES:

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

Electronic Submission #529325 verified by the BLM Well Information System
For BTA OIL PRODUCERS, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 09/10/2020 (20PP3609SE)

Name (Printed/Typed) SAMMY HAJAR

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 09/09/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By OLABODE AJIBOLA

Title PETROLEUM ENGINEER

Date 09/24/2020

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

Office Hobbs

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

(Instructions on page 2)

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

Additional data for EC transaction #529325 that would not fit on the form

32. Additional remarks, continued

FTP: 100' FNL & 600'FEL in Section 18
LTP: 100' FSL & 600'FEL in Section 19
BHL: 50' FSL & 600'FEL in Section 19

Revisions to Operator-Submitted EC Data for Sundry Notice #529325

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	OTHER NOI	APDCH NOI
Lease:	NMLC065194	NMLC065194
Agreement:		NMNM134517 (NMNM134517)
Operator:	BTA OIL PRODUCERS, LLC 104 S. PECOS MIDLAND, TX 79701 Ph: 432-682-3753	BTA OIL PRODUCERS 104 SOUTH PECOS STREET MIDLAND, TX 79701 Ph: 432.682.3753 Fx: 432.683.0325
Admin Contact:	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753
Tech Contact:	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753	SAMMY HAJAR REGULATORY ANALYST E-Mail: shajar@btaoil.com Ph: 432-682-3753
Location: State: County:	NM LEA COUNTY	NM LEA
Field/Pool:	BELL LAKE/BONE SPRING NOR	BELL LAKE
Well/Facility:	STARCASTER 7909 FEDERAL COM 8H Sec 18 T23S R34E NWNE 210FNL 1665FEL 32.311302 N Lat, 103.506067 W Lon	WHITE WING 7909 18-19 FED COM 4H Sec 18 T23S R34E NWNE 210FNL 1665FEL 32.311302 N Lat, 103.506065 W Lon

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BTA Oil Producers LLC
LEASE NO.:	NMLC0065194
WELL NAME & NO.:	WHITE WING 7909 18-19 FED COM 4H
SURFACE HOLE FOOTAGE:	210'/N & 1665'/E
BOTTOM HOLE FOOTAGE:	50'/S & 600'/E
LOCATION:	Section 18, T.23 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

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 **10-3/4** inch surface casing shall be set at approximately **1220 feet** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **7-5/8 inch** intermediate casing shall be set at approximately **10951 feet** is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess cement calculates to -37%, additional cement might be required.**

Option 2:

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

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job. **Excess cement calculates to 17%, additional cement might be required.**
 - b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.
3. The minimum required fill of cement behind the **5-1/2 X 5 inch** production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

B. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

C. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

OTA09242020

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

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

DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-46151	Pool Code	Pool Name BELL LAKE ; BONE SPRING NORTH
Property Code	Property Name WHITE WING 7909 18-19 FED COM	Well Number 4H
OGRID No. 260297	Operator Name BTA OIL PRODUCERS, LLC	Elevation 3489'

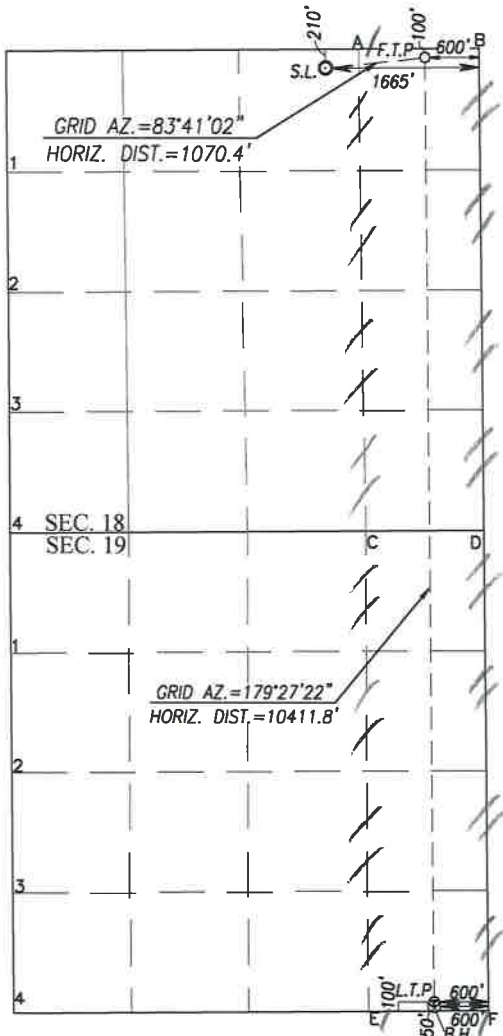
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	18	23-S	34-E		210	NORTH	1665	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	23-S	34-E		50	SOUTH	600	EAST	LEA
Dedicated Acres 320	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'

GEODETIC COORDINATES NAD 83 NME SURFACE LOCATION	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION
Y= 477970.5 N X= 796913.7 E LAT.=32.311302° N LONG.=103.506067° W	Y= 477910.8 N X= 755730.3 E LAT.=32.311179° N LONG.=103.505587° W
FIRST TAKE POINT NAD 83 NME	FIRST TAKE POINT NAD 27 NME
Y= 478088.2 N X= 797977.4 E LAT.=32.311604° N LONG.=103.502622° W	Y= 478028.6 N X= 756794.1 E LAT.=32.311480° N LONG.=103.502142° W

CORNER COORDINATES TABLE

NAD 27 NME
A - Y= 478123.2 N, X= 756068.6 E
B - Y= 478132.9 N, X= 757393.0 E
C - Y= 472843.6 N, X= 756123.1 E
D - Y= 472852.7 N, X= 757443.3 E
E - Y= 467564.5 N, X= 756172.9 E
F - Y= 467573.5 N, X= 757493.1 E

CORNER COORDINATES TABLE

NAD 83 NME
A - Y= 478182.9 N, X= 797251.9 E
B - Y= 478192.6 N, X= 798576.3 E
C - Y= 472903.2 N, X= 797306.5 E
D - Y= 472912.3 N, X= 798626.7 E
E - Y= 467623.9 N, X= 797356.5 E
F - Y= 467632.8 N, X= 798676.6 E

LAST TAKE POINT

NAD 83 NME
Y= 467728.7 N X= 798075.8 E LAT.=32.283127° N LONG.=103.502563° W

LAST TAKE POINT

NAD 27 NME
Y= 467669.4 N X= 756892.2 E LAT.=32.283004° N LONG.=103.502084° W

BOTTOM HOLE LOCATION

NAD 83 NME
Y= 467678.7 N X= 798076.3 E LAT.=32.282990° N LONG.=103.502563° W

BOTTOM HOLE LOCATION

NAD 27 NME
Y= 467619.4 N X= 756892.7 E LAT.=32.282866° N LONG.=103.502084° W

OPERATOR CERTIFICATION

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

Signature *Sammy Hajar* Date **9/9/2020**
SAMMY HAJAR

Printed Name

SHAJAR@BTAOIL.COM

E-mail Address

SURVEYOR CERTIFICATION

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

APR 12 2017

Date of Survey

Signature & Seal of Professional Surveyor

Ronald J. Eidson

RONALD J. EIDSON

NEW MEXICO

REGISTERED SURVEYOR

3239

Ronald J. Eidson

27/02/2020

Certificate Number

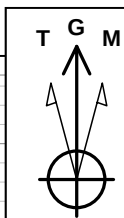
12641

Ronald J. Eidson

3239

LSL Rel. W.O.: 17.11.0356 JWSC W.O.: 20.11.0269

BTA Oil Producers, LLC



Azimuths to Grid North
True North: -0.44°
Magnetic North: 7.28°

Magnetic Field
Strength: 48852.6nT
Dip Angle: 60.33°
Date: 12/31/2009
Model: IGRF200510

SITE DETAILS: White Wing

Site Centre Northing: 477970.00
Easting: 796913.00

Positional Uncertainty: 0.0
Convergence: 0.44
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	2836.4	0.00	0.00	2836.4	0.0	0.0	0.00
3	3236.4	8.00	81.46	3235.1	4.1	27.6	2.00
4	10574.0	8.00	81.46	10501.3	155.9	1037.4	0.00
5	10974.0	0.00	0.00	10900.0	160.0	1065.0	2.00
6	11000.5	0.00	0.00	10926.5	160.0	1065.0	0.00
7	11750.5	90.00	179.46	11404.0	-317.4	1069.5	12.00
8	21725.7	90.00	179.46	11404.0	-10292.2	1163.0	0.00

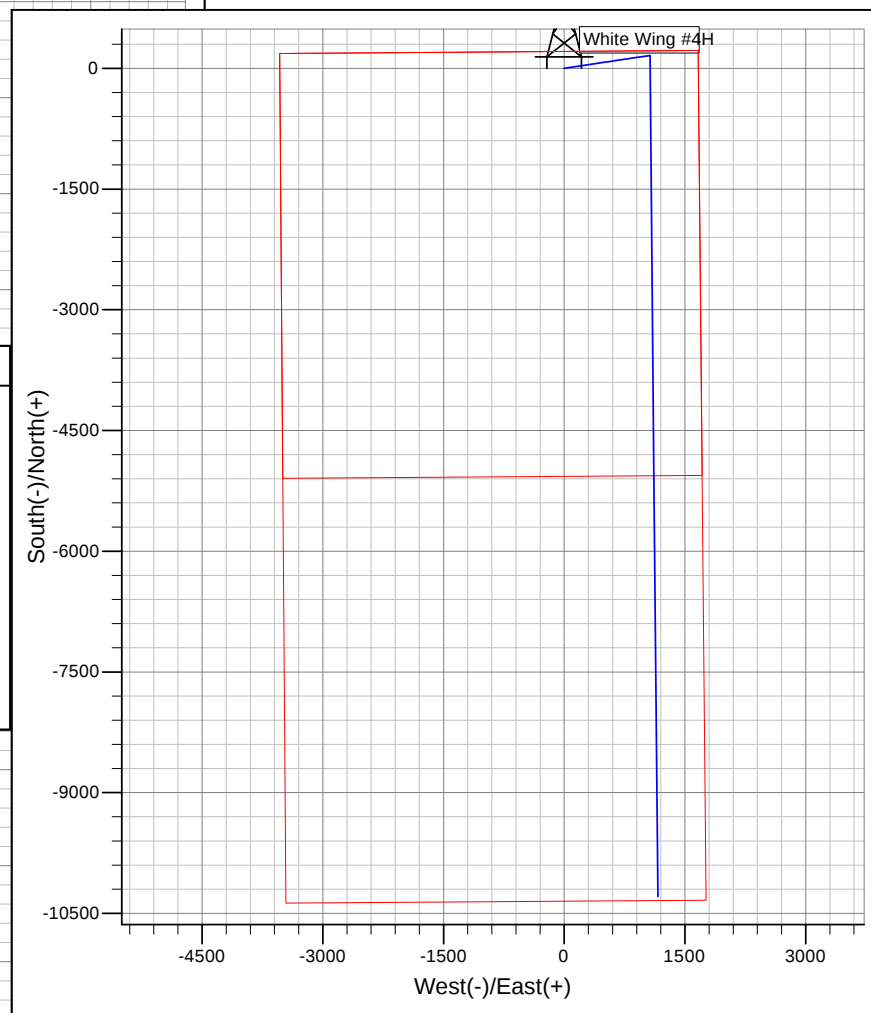
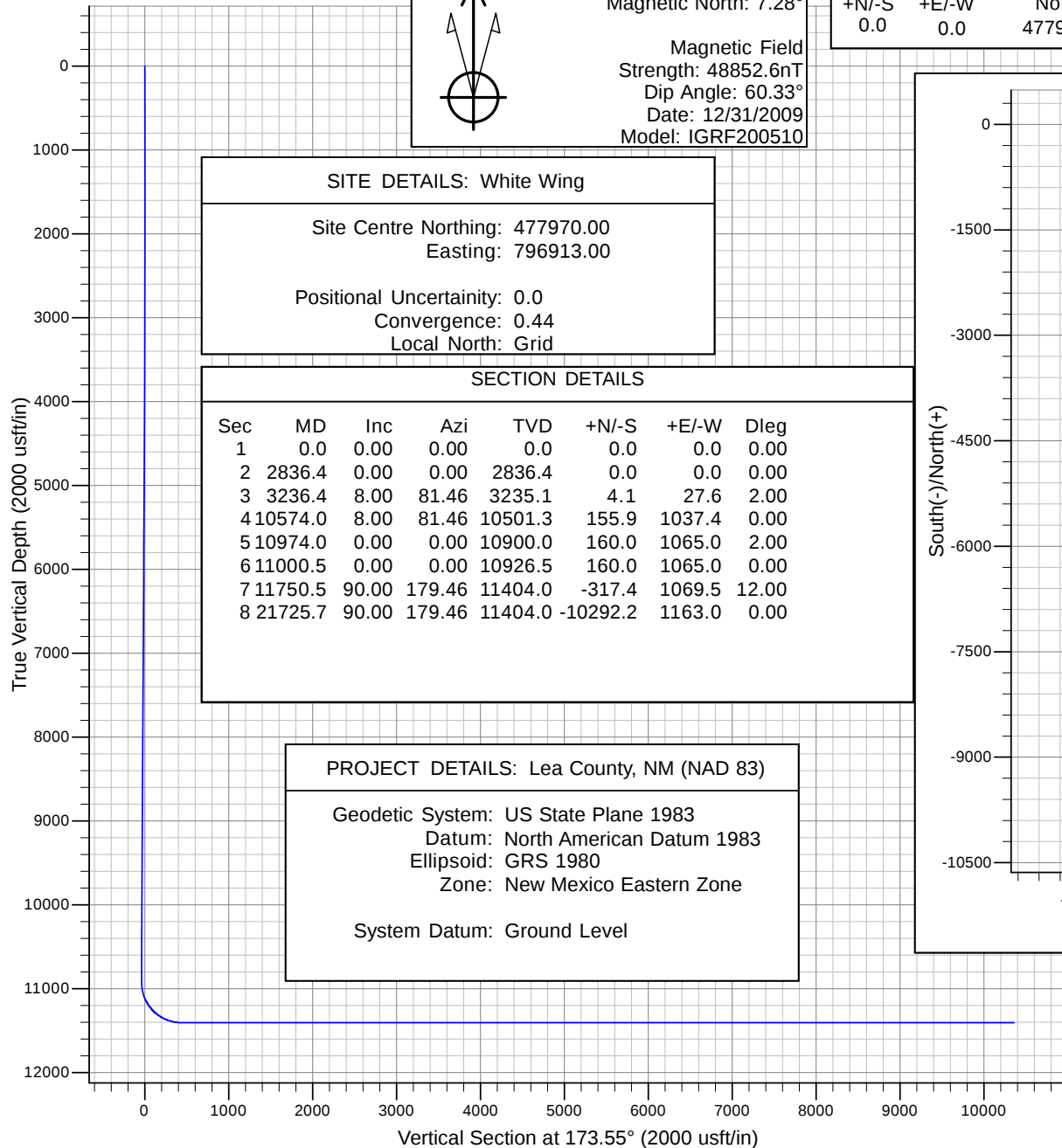
PROJECT DETAILS: Lea County, NM (NAD 83)

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

System Datum: Ground Level

WELL DETAILS: White Wing #4H

+N/-S	+E/-W	Northing	Easting	Ground Level	3489.0	Latitude	Longitude
0.0	0.0	477970.00	796913.00			32° 18' 40.684 N	103° 30' 21.851 W



BTA Oil Producers, LLC

Lea County, NM (NAD 83)

White Wing

White Wing #4H

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

09 September, 2020

Microsoft
Planning Report - Geographic

Database:	Old	Local Co-ordinate Reference:	Well White Wing #4H
Company:	BTA Oil Producers, LLC	TVD Reference:	WELL @ 3489.0usft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	MD Reference:	WELL @ 3489.0usft (Original Well Elev)
Site:	White Wing	North Reference:	Grid
Well:	White Wing #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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

Site	White Wing					
Site Position:		Northing:	477,970.00 usft	Latitude:	32° 18' 40.684 N	
From:	Map	Easting:	796,913.00 usft	Longitude:	103° 30' 21.851 W	
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	White Wing #4H					
Well Position	+N/-S	0.0 usft	Northing:	477,970.00 usft	Latitude:	32° 18' 40.684 N
	+E/-W	0.0 usft	Easting:	796,913.00 usft	Longitude:	103° 30' 21.851 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,489.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.73	60.33	48,852.61979564

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	173.55

Plan Survey Tool Program	Date	8/26/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	21,725.7 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	
2,836.4	0.00	0.00	2,836.4	0.0	0.0	0.00	0.00	0.00	0.00	
3,236.4	8.00	81.46	3,235.1	4.1	27.6	2.00	2.00	0.00	81.46	
10,574.0	8.00	81.46	10,501.3	155.9	1,037.4	0.00	0.00	0.00	0.00	
10,974.0	0.00	0.00	10,900.0	160.0	1,065.0	2.00	-2.00	0.00	180.00	
11,000.5	0.00	0.00	10,926.5	160.0	1,065.0	0.00	0.00	0.00	0.00	
11,750.5	90.00	179.46	11,404.0	-317.4	1,069.5	12.00	12.00	0.00	179.46	
21,725.7	90.00	179.46	11,404.0	-10,292.2	1,163.0	0.00	0.00	0.00	0.00	White Wing 4H BHL

Microsoft
Planning Report - Geographic

Database:	Old	Local Co-ordinate Reference:	Well White Wing #4H
Company:	BTA Oil Producers, LLC	TVD Reference:	WELL @ 3489.0usft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	MD Reference:	WELL @ 3489.0usft (Original Well Elev)
Site:	White Wing	North Reference:	Grid
Well:	White Wing #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
100.0	0.00	0.00	100.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
200.0	0.00	0.00	200.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
300.0	0.00	0.00	300.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
400.0	0.00	0.00	400.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
500.0	0.00	0.00	500.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
600.0	0.00	0.00	600.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
700.0	0.00	0.00	700.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
800.0	0.00	0.00	800.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
900.0	0.00	0.00	900.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,836.4	0.00	0.00	2,836.4	0.0	0.0	477,970.00	796,913.00	32° 18' 40.684 N	103° 30' 21.851 W
2,900.0	1.27	81.46	2,900.0	0.1	0.7	477,970.11	796,913.70	32° 18' 40.685 N	103° 30' 21.842 W
3,000.0	3.27	81.46	2,999.9	0.7	4.6	477,970.69	796,917.61	32° 18' 40.691 N	103° 30' 21.797 W
3,100.0	5.27	81.46	3,099.6	1.8	12.0	477,971.80	796,924.98	32° 18' 40.701 N	103° 30' 21.711 W
3,200.0	7.27	81.46	3,199.0	3.4	22.8	477,973.42	796,935.78	32° 18' 40.716 N	103° 30' 21.585 W
3,236.4	8.00	81.46	3,235.1	4.1	27.6	477,974.14	796,940.57	32° 18' 40.723 N	103° 30' 21.529 W
3,300.0	8.00	81.46	3,298.1	5.5	36.3	477,975.46	796,949.32	32° 18' 40.735 N	103° 30' 21.427 W
3,400.0	8.00	81.46	3,397.1	7.5	50.1	477,977.52	796,963.08	32° 18' 40.755 N	103° 30' 21.266 W
3,500.0	8.00	81.46	3,496.1	9.6	63.8	477,979.59	796,976.84	32° 18' 40.774 N	103° 30' 21.106 W
3,600.0	8.00	81.46	3,595.2	11.7	77.6	477,981.66	796,990.60	32° 18' 40.794 N	103° 30' 20.945 W
3,700.0	8.00	81.46	3,694.2	13.7	91.4	477,983.73	797,004.37	32° 18' 40.813 N	103° 30' 20.785 W
3,800.0	8.00	81.46	3,793.2	15.8	105.1	477,985.79	797,018.13	32° 18' 40.832 N	103° 30' 20.624 W
3,900.0	8.00	81.46	3,892.2	17.9	118.9	477,987.86	797,031.89	32° 18' 40.852 N	103° 30' 20.464 W
4,000.0	8.00	81.46	3,991.3	19.9	132.7	477,989.93	797,045.65	32° 18' 40.871 N	103° 30' 20.303 W
4,100.0	8.00	81.46	4,090.3	22.0	146.4	477,992.00	797,059.42	32° 18' 40.891 N	103° 30' 20.143 W
4,200.0	8.00	81.46	4,189.3	24.1	160.2	477,994.07	797,073.18	32° 18' 40.910 N	103° 30' 19.982 W
4,300.0	8.00	81.46	4,288.4	26.1	173.9	477,996.13	797,086.94	32° 18' 40.929 N	103° 30' 19.821 W
4,400.0	8.00	81.46	4,387.4	28.2	187.7	477,998.20	797,100.70	32° 18' 40.949 N	103° 30' 19.661 W
4,500.0	8.00	81.46	4,486.4	30.3	201.5	478,000.27	797,114.47	32° 18' 40.968 N	103° 30' 19.500 W
4,600.0	8.00	81.46	4,585.4	32.3	215.2	478,002.34	797,128.23	32° 18' 40.988 N	103° 30' 19.340 W
4,700.0	8.00	81.46	4,684.5	34.4	229.0	478,004.40	797,141.99	32° 18' 41.007 N	103° 30' 19.179 W
4,800.0	8.00	81.46	4,783.5	36.5	242.8	478,006.47	797,155.76	32° 18' 41.026 N	103° 30' 19.019 W
4,900.0	8.00	81.46	4,882.5	38.5	256.5	478,008.54	797,169.52	32° 18' 41.046 N	103° 30' 18.858 W
5,000.0	8.00	81.46	4,981.5	40.6	270.3	478,010.61	797,183.28	32° 18' 41.065 N	103° 30' 18.698 W
5,100.0	8.00	81.46	5,080.6	42.7	284.0	478,012.67	797,197.04	32° 18' 41.085 N	103° 30' 18.537 W
5,200.0	8.00	81.46	5,179.6	44.7	297.8	478,014.74	797,210.81	32° 18' 41.104 N	103° 30' 18.377 W

Microsoft
Planning Report - Geographic

Database:	Old	Local Co-ordinate Reference:	Well White Wing #4H
Company:	BTA Oil Producers, LLC	TVD Reference:	WELL @ 3489.0usft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	MD Reference:	WELL @ 3489.0usft (Original Well Elev)
Site:	White Wing	North Reference:	Grid
Well:	White Wing #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,300.0	8.00	81.46	5,278.6	46.8	311.6	478,016.81	797,224.57	32° 18' 41.124 N	103° 30' 18.216 W	
5,400.0	8.00	81.46	5,377.6	48.9	325.3	478,018.88	797,238.33	32° 18' 41.143 N	103° 30' 18.055 W	
5,500.0	8.00	81.46	5,476.7	50.9	339.1	478,020.94	797,252.09	32° 18' 41.162 N	103° 30' 17.895 W	
5,600.0	8.00	81.46	5,575.7	53.0	352.9	478,023.01	797,265.86	32° 18' 41.182 N	103° 30' 17.734 W	
5,700.0	8.00	81.46	5,674.7	55.1	366.6	478,025.08	797,279.62	32° 18' 41.201 N	103° 30' 17.574 W	
5,800.0	8.00	81.46	5,773.8	57.1	380.4	478,027.15	797,293.38	32° 18' 41.221 N	103° 30' 17.413 W	
5,900.0	8.00	81.46	5,872.8	59.2	394.2	478,029.22	797,307.14	32° 18' 41.240 N	103° 30' 17.253 W	
6,000.0	8.00	81.46	5,971.8	61.3	407.9	478,031.28	797,320.91	32° 18' 41.259 N	103° 30' 17.092 W	
6,100.0	8.00	81.46	6,070.8	63.4	421.7	478,033.35	797,334.67	32° 18' 41.279 N	103° 30' 16.932 W	
6,200.0	8.00	81.46	6,169.9	65.4	435.4	478,035.42	797,348.43	32° 18' 41.298 N	103° 30' 16.771 W	
6,300.0	8.00	81.46	6,268.9	67.5	449.2	478,037.49	797,362.19	32° 18' 41.318 N	103° 30' 16.611 W	
6,400.0	8.00	81.46	6,367.9	69.6	463.0	478,039.55	797,375.96	32° 18' 41.337 N	103° 30' 16.450 W	
6,500.0	8.00	81.46	6,466.9	71.6	476.7	478,041.62	797,389.72	32° 18' 41.356 N	103° 30' 16.290 W	
6,600.0	8.00	81.46	6,566.0	73.7	490.5	478,043.69	797,403.48	32° 18' 41.376 N	103° 30' 16.129 W	
6,700.0	8.00	81.46	6,665.0	75.8	504.3	478,045.76	797,417.25	32° 18' 41.395 N	103° 30' 15.968 W	
6,800.0	8.00	81.46	6,764.0	77.8	518.0	478,047.82	797,431.01	32° 18' 41.415 N	103° 30' 15.808 W	
6,900.0	8.00	81.46	6,863.0	79.9	531.8	478,049.89	797,444.77	32° 18' 41.434 N	103° 30' 15.647 W	
7,000.0	8.00	81.46	6,962.1	82.0	545.5	478,051.96	797,458.53	32° 18' 41.453 N	103° 30' 15.487 W	
7,100.0	8.00	81.46	7,061.1	84.0	559.3	478,054.03	797,472.30	32° 18' 41.473 N	103° 30' 15.326 W	
7,200.0	8.00	81.46	7,160.1	86.1	573.1	478,056.09	797,486.06	32° 18' 41.492 N	103° 30' 15.166 W	
7,300.0	8.00	81.46	7,259.2	88.2	586.8	478,058.16	797,499.82	32° 18' 41.512 N	103° 30' 15.005 W	
7,400.0	8.00	81.46	7,358.2	90.2	600.6	478,060.23	797,513.58	32° 18' 41.531 N	103° 30' 14.845 W	
7,500.0	8.00	81.46	7,457.2	92.3	614.4	478,062.30	797,527.35	32° 18' 41.550 N	103° 30' 14.684 W	
7,600.0	8.00	81.46	7,556.2	94.4	628.1	478,064.36	797,541.11	32° 18' 41.570 N	103° 30' 14.524 W	
7,700.0	8.00	81.46	7,655.3	96.4	641.9	478,066.43	797,554.87	32° 18' 41.589 N	103° 30' 14.363 W	
7,800.0	8.00	81.46	7,754.3	98.5	655.6	478,068.50	797,568.63	32° 18' 41.609 N	103° 30' 14.202 W	
7,900.0	8.00	81.46	7,853.3	100.6	669.4	478,070.57	797,582.40	32° 18' 41.628 N	103° 30' 14.042 W	
8,000.0	8.00	81.46	7,952.3	102.6	683.2	478,072.64	797,596.16	32° 18' 41.647 N	103° 30' 13.881 W	
8,100.0	8.00	81.46	8,051.4	104.7	696.9	478,074.70	797,609.92	32° 18' 41.667 N	103° 30' 13.721 W	
8,200.0	8.00	81.46	8,150.4	106.8	710.7	478,076.77	797,623.68	32° 18' 41.686 N	103° 30' 13.560 W	
8,300.0	8.00	81.46	8,249.4	108.8	724.5	478,078.84	797,637.45	32° 18' 41.706 N	103° 30' 13.400 W	
8,400.0	8.00	81.46	8,348.5	110.9	738.2	478,080.91	797,651.21	32° 18' 41.725 N	103° 30' 13.239 W	
8,500.0	8.00	81.46	8,447.5	113.0	752.0	478,082.97	797,664.97	32° 18' 41.744 N	103° 30' 13.079 W	
8,600.0	8.00	81.46	8,546.5	115.0	765.7	478,085.04	797,678.74	32° 18' 41.764 N	103° 30' 12.918 W	
8,700.0	8.00	81.46	8,645.5	117.1	779.5	478,087.11	797,692.50	32° 18' 41.783 N	103° 30' 12.758 W	
8,800.0	8.00	81.46	8,744.6	119.2	793.3	478,089.18	797,706.26	32° 18' 41.803 N	103° 30' 12.597 W	
8,900.0	8.00	81.46	8,843.6	121.2	807.0	478,091.24	797,720.02	32° 18' 41.822 N	103° 30' 12.436 W	
9,000.0	8.00	81.46	8,942.6	123.3	820.8	478,093.31	797,733.79	32° 18' 41.842 N	103° 30' 12.276 W	
9,100.0	8.00	81.46	9,041.6	125.4	834.6	478,095.38	797,747.55	32° 18' 41.861 N	103° 30' 12.115 W	
9,200.0	8.00	81.46	9,140.7	127.4	848.3	478,097.45	797,761.31	32° 18' 41.880 N	103° 30' 11.955 W	
9,300.0	8.00	81.46	9,239.7	129.5	862.1	478,099.51	797,775.07	32° 18' 41.900 N	103° 30' 11.794 W	
9,400.0	8.00	81.46	9,338.7	131.6	875.9	478,101.58	797,788.84	32° 18' 41.919 N	103° 30' 11.634 W	
9,500.0	8.00	81.46	9,437.7	133.7	889.6	478,103.65	797,802.60	32° 18' 41.939 N	103° 30' 11.473 W	
9,600.0	8.00	81.46	9,536.8	135.7	903.4	478,105.72	797,816.36	32° 18' 41.958 N	103° 30' 11.313 W	
9,700.0	8.00	81.46	9,635.8	137.8	917.1	478,107.78	797,830.12	32° 18' 41.977 N	103° 30' 11.152 W	
9,800.0	8.00	81.46	9,734.8	139.9	930.9	478,109.85	797,843.89	32° 18' 41.997 N	103° 30' 10.992 W	
9,900.0	8.00	81.46	9,833.9	141.9	944.7	478,111.92	797,857.65	32° 18' 42.016 N	103° 30' 10.831 W	
10,000.0	8.00	81.46	9,932.9	144.0	958.4	478,113.99	797,871.41	32° 18' 42.036 N	103° 30' 10.670 W	
10,100.0	8.00	81.46	10,031.9	146.1	972.2	478,116.06	797,885.17	32° 18' 42.055 N	103° 30' 10.510 W	
10,200.0	8.00	81.46	10,130.9	148.1	986.0	478,118.12	797,898.94	32° 18' 42.074 N	103° 30' 10.349 W	
10,300.0	8.00	81.46	10,230.0	150.2	999.7	478,120.19	797,912.70	32° 18' 42.094 N	103° 30' 10.189 W	
10,400.0	8.00	81.46	10,329.0	152.3	1,013.5	478,122.26	797,926.46	32° 18' 42.113 N	103° 30' 10.028 W	
10,500.0	8.00	81.46	10,428.0	154.3	1,027.2	478,124.33	797,940.23	32° 18' 42.133 N	103° 30' 9.868 W	
10,574.0	8.00	81.46	10,501.3	155.9	1,037.4	478,125.86	797,950.41	32° 18' 42.147 N	103° 30' 9.749 W	
10,600.0	7.48	81.46	10,527.1	156.4	1,040.9	478,126.38	797,953.87	32° 18' 42.152 N	103° 30' 9.709 W	

Microsoft
Planning Report - Geographic

Database:	Old	Local Co-ordinate Reference:	Well White Wing #4H
Company:	BTA Oil Producers, LLC	TVD Reference:	WELL @ 3489.0usft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	MD Reference:	WELL @ 3489.0usft (Original Well Elev)
Site:	White Wing	North Reference:	Grid
Well:	White Wing #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
10,700.0	5.48	81.46	10,626.4	158.1	1,052.1	478,128.05	797,965.03	32° 18' 42.168 N	103° 30' 9.578 W	
10,800.0	3.48	81.46	10,726.1	159.2	1,059.8	478,129.21	797,972.76	32° 18' 42.178 N	103° 30' 9.488 W	
10,900.0	1.48	81.46	10,826.0	159.9	1,064.1	478,129.86	797,977.04	32° 18' 42.184 N	103° 30' 9.438 W	
10,974.0	0.00	0.00	10,900.0	160.0	1,065.0	478,130.00	797,977.98	32° 18' 42.186 N	103° 30' 9.427 W	
11,000.0	0.00	0.00	10,926.0	160.0	1,065.0	478,130.00	797,977.98	32° 18' 42.186 N	103° 30' 9.427 W	
11,000.5	0.00	0.00	10,926.5	160.0	1,065.0	478,130.00	797,977.98	32° 18' 42.186 N	103° 30' 9.427 W	
11,100.0	11.94	179.46	11,025.3	149.7	1,065.1	478,119.68	797,978.08	32° 18' 42.084 N	103° 30' 9.427 W	
11,200.0	23.94	179.46	11,120.2	118.9	1,065.4	478,088.94	797,978.37	32° 18' 41.780 N	103° 30' 9.427 W	
11,300.0	35.94	179.46	11,206.7	69.1	1,065.9	478,039.13	797,978.83	32° 18' 41.287 N	103° 30' 9.426 W	
11,400.0	47.94	179.46	11,281.0	2.4	1,066.5	477,972.43	797,979.46	32° 18' 40.627 N	103° 30' 9.424 W	
11,500.0	59.94	179.46	11,339.8	-78.3	1,067.2	477,891.75	797,980.21	32° 18' 39.828 N	103° 30' 9.423 W	
11,600.0	71.94	179.46	11,380.5	-169.4	1,068.1	477,800.61	797,981.07	32° 18' 38.926 N	103° 30' 9.421 W	
11,700.0	83.94	179.46	11,401.3	-267.0	1,069.0	477,703.01	797,981.98	32° 18' 37.960 N	103° 30' 9.419 W	
11,750.5	90.00	179.46	11,404.0	-317.4	1,069.5	477,652.56	797,982.46	32° 18' 37.461 N	103° 30' 9.418 W	
11,800.0	90.00	179.46	11,404.0	-366.9	1,069.9	477,603.11	797,982.92	32° 18' 36.972 N	103° 30' 9.417 W	
11,900.0	90.00	179.46	11,404.0	-466.9	1,070.9	477,503.11	797,983.86	32° 18' 35.982 N	103° 30' 9.415 W	
12,000.0	90.00	179.46	11,404.0	-566.9	1,071.8	477,403.12	797,984.80	32° 18' 34.993 N	103° 30' 9.414 W	
12,100.0	90.00	179.46	11,404.0	-666.9	1,072.8	477,303.12	797,985.73	32° 18' 34.003 N	103° 30' 9.412 W	
12,200.0	90.00	179.46	11,404.0	-766.9	1,073.7	477,203.13	797,986.67	32° 18' 33.014 N	103° 30' 9.410 W	
12,300.0	90.00	179.46	11,404.0	-866.9	1,074.6	477,103.14	797,987.61	32° 18' 32.024 N	103° 30' 9.408 W	
12,400.0	90.00	179.46	11,404.0	-966.9	1,075.6	477,003.14	797,988.55	32° 18' 31.035 N	103° 30' 9.406 W	
12,500.0	90.00	179.46	11,404.0	-1,066.9	1,076.5	476,903.15	797,989.49	32° 18' 30.045 N	103° 30' 9.404 W	
12,600.0	90.00	179.46	11,404.0	-1,166.9	1,077.4	476,803.15	797,990.42	32° 18' 29.056 N	103° 30' 9.402 W	
12,700.0	90.00	179.46	11,404.0	-1,266.9	1,078.4	476,703.16	797,991.36	32° 18' 28.066 N	103° 30' 9.400 W	
12,800.0	90.00	179.46	11,404.0	-1,366.9	1,079.3	476,603.17	797,992.30	32° 18' 27.077 N	103° 30' 9.398 W	
12,900.0	90.00	179.46	11,404.0	-1,466.9	1,080.3	476,503.17	797,993.24	32° 18' 26.087 N	103° 30' 9.396 W	
13,000.0	90.00	179.46	11,404.0	-1,566.8	1,081.2	476,403.18	797,994.17	32° 18' 25.098 N	103° 30' 9.395 W	
13,100.0	90.00	179.46	11,404.0	-1,666.8	1,082.1	476,303.18	797,995.11	32° 18' 24.108 N	103° 30' 9.393 W	
13,200.0	90.00	179.46	11,404.0	-1,766.8	1,083.1	476,203.19	797,996.05	32° 18' 23.119 N	103° 30' 9.391 W	
13,300.0	90.00	179.46	11,404.0	-1,866.8	1,084.0	476,103.20	797,996.99	32° 18' 22.129 N	103° 30' 9.389 W	
13,400.0	90.00	179.46	11,404.0	-1,966.8	1,084.9	476,003.20	797,997.93	32° 18' 21.140 N	103° 30' 9.387 W	
13,500.0	90.00	179.46	11,404.0	-2,066.8	1,085.9	475,903.21	797,998.86	32° 18' 20.150 N	103° 30' 9.385 W	
13,600.0	90.00	179.46	11,404.0	-2,166.8	1,086.8	475,803.21	797,999.80	32° 18' 19.161 N	103° 30' 9.383 W	
13,700.0	90.00	179.46	11,404.0	-2,266.8	1,087.8	475,703.22	798,000.74	32° 18' 18.171 N	103° 30' 9.381 W	
13,800.0	90.00	179.46	11,404.0	-2,366.8	1,088.7	475,603.23	798,001.68	32° 18' 17.182 N	103° 30' 9.379 W	
13,900.0	90.00	179.46	11,404.0	-2,466.8	1,089.6	475,503.23	798,002.61	32° 18' 16.192 N	103° 30' 9.377 W	
14,000.0	90.00	179.46	11,404.0	-2,566.8	1,090.6	475,403.24	798,003.55	32° 18' 15.203 N	103° 30' 9.376 W	
14,100.0	90.00	179.46	11,404.0	-2,666.8	1,091.5	475,303.24	798,004.49	32° 18' 14.213 N	103° 30' 9.374 W	
14,200.0	90.00	179.46	11,404.0	-2,766.8	1,092.4	475,203.25	798,005.43	32° 18' 13.224 N	103° 30' 9.372 W	
14,300.0	90.00	179.46	11,404.0	-2,866.8	1,093.4	475,103.26	798,006.36	32° 18' 12.234 N	103° 30' 9.370 W	
14,400.0	90.00	179.46	11,404.0	-2,966.8	1,094.3	475,003.26	798,007.30	32° 18' 11.245 N	103° 30' 9.368 W	
14,500.0	90.00	179.46	11,404.0	-3,066.8	1,095.3	474,903.27	798,008.24	32° 18' 10.255 N	103° 30' 9.366 W	
14,600.0	90.00	179.46	11,404.0	-3,166.8	1,096.2	474,803.27	798,009.18	32° 18' 9.266 N	103° 30' 9.364 W	
14,700.0	90.00	179.46	11,404.0	-3,266.8	1,097.1	474,703.28	798,010.12	32° 18' 8.276 N	103° 30' 9.362 W	
14,800.0	90.00	179.46	11,404.0	-3,366.8	1,098.1	474,603.29	798,011.05	32° 18' 7.287 N	103° 30' 9.360 W	
14,900.0	90.00	179.46	11,404.0	-3,466.8	1,099.0	474,503.29	798,011.99	32° 18' 6.297 N	103° 30' 9.358 W	
15,000.0	90.00	179.46	11,404.0	-3,566.8	1,099.9	474,403.30	798,012.93	32° 18' 5.308 N	103° 30' 9.357 W	
15,100.0	90.00	179.46	11,404.0	-3,666.8	1,100.9	474,303.30	798,013.87	32° 18' 4.318 N	103° 30' 9.355 W	
15,200.0	90.00	179.46	11,404.0	-3,766.8	1,101.8	474,203.31	798,014.80	32° 18' 3.329 N	103° 30' 9.353 W	
15,300.0	90.00	179.46	11,404.0	-3,866.7	1,102.8	474,103.32	798,015.74	32° 18' 2.339 N	103° 30' 9.351 W	
15,400.0	90.00	179.46	11,404.0	-3,966.7	1,103.7	474,003.32	798,016.68	32° 18' 1.350 N	103° 30' 9.349 W	
15,500.0	90.00	179.46	11,404.0	-4,066.7	1,104.6	473,903.33	798,017.62	32° 18' 0.360 N	103° 30' 9.347 W	
15,600.0	90.00	179.46	11,404.0	-4,166.7	1,105.6	473,803.33	798,018.56	32° 17' 59.371 N	103° 30' 9.345 W	
15,700.0	90.00	179.46	11,404.0	-4,266.7	1,106.5	473,703.34	798,019.49	32° 17' 58.381 N	103° 30' 9.343 W	
15,800.0	90.00	179.46	11,404.0	-4,366.7	1,107.5	473,603.35	798,020.43	32° 17' 57.392 N	103° 30' 9.341 W	

Microsoft
Planning Report - Geographic

Database:	Old	Local Co-ordinate Reference:	Well White Wing #4H
Company:	BTA Oil Producers, LLC	TVD Reference:	WELL @ 3489.0usft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	MD Reference:	WELL @ 3489.0usft (Original Well Elev)
Site:	White Wing	North Reference:	Grid
Well:	White Wing #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
15,900.0	90.00	179.46	11,404.0	-4,466.7	1,108.4	473,503.35	798,021.37	32° 17' 56.402 N	103° 30' 9.340 W	
16,000.0	90.00	179.46	11,404.0	-4,566.7	1,109.3	473,403.36	798,022.31	32° 17' 55.413 N	103° 30' 9.338 W	
16,100.0	90.00	179.46	11,404.0	-4,666.7	1,110.3	473,303.36	798,023.24	32° 17' 54.423 N	103° 30' 9.336 W	
16,200.0	90.00	179.46	11,404.0	-4,766.7	1,111.2	473,203.37	798,024.18	32° 17' 53.434 N	103° 30' 9.334 W	
16,300.0	90.00	179.46	11,404.0	-4,866.7	1,112.1	473,103.38	798,025.12	32° 17' 52.444 N	103° 30' 9.332 W	
16,400.0	90.00	179.46	11,404.0	-4,966.7	1,113.1	473,003.38	798,026.06	32° 17' 51.455 N	103° 30' 9.330 W	
16,500.0	90.00	179.46	11,404.0	-5,066.7	1,114.0	472,903.39	798,026.99	32° 17' 50.465 N	103° 30' 9.328 W	
16,600.0	90.00	179.46	11,404.0	-5,166.7	1,115.0	472,803.39	798,027.93	32° 17' 49.476 N	103° 30' 9.326 W	
16,700.0	90.00	179.46	11,404.0	-5,266.7	1,115.9	472,703.40	798,028.87	32° 17' 48.486 N	103° 30' 9.324 W	
16,800.0	90.00	179.46	11,404.0	-5,366.7	1,116.8	472,603.41	798,029.81	32° 17' 47.497 N	103° 30' 9.322 W	
16,900.0	90.00	179.46	11,404.0	-5,466.7	1,117.8	472,503.41	798,030.75	32° 17' 46.507 N	103° 30' 9.321 W	
17,000.0	90.00	179.46	11,404.0	-5,566.7	1,118.7	472,403.42	798,031.68	32° 17' 45.518 N	103° 30' 9.319 W	
17,100.0	90.00	179.46	11,404.0	-5,666.7	1,119.6	472,303.42	798,032.62	32° 17' 44.528 N	103° 30' 9.317 W	
17,200.0	90.00	179.46	11,404.0	-5,766.7	1,120.6	472,203.43	798,033.56	32° 17' 43.539 N	103° 30' 9.315 W	
17,300.0	90.00	179.46	11,404.0	-5,866.7	1,121.5	472,103.44	798,034.50	32° 17' 42.549 N	103° 30' 9.313 W	
17,400.0	90.00	179.46	11,404.0	-5,966.7	1,122.5	472,003.44	798,035.43	32° 17' 41.560 N	103° 30' 9.311 W	
17,500.0	90.00	179.46	11,404.0	-6,066.7	1,123.4	471,903.45	798,036.37	32° 17' 40.570 N	103° 30' 9.309 W	
17,600.0	90.00	179.46	11,404.0	-6,166.6	1,124.3	471,803.45	798,037.31	32° 17' 39.581 N	103° 30' 9.307 W	
17,700.0	90.00	179.46	11,404.0	-6,266.6	1,125.3	471,703.46	798,038.25	32° 17' 38.591 N	103° 30' 9.305 W	
17,800.0	90.00	179.46	11,404.0	-6,366.6	1,126.2	471,603.47	798,039.19	32° 17' 37.602 N	103° 30' 9.303 W	
17,900.0	90.00	179.46	11,404.0	-6,466.6	1,127.1	471,503.47	798,040.12	32° 17' 36.612 N	103° 30' 9.302 W	
18,000.0	90.00	179.46	11,404.0	-6,566.6	1,128.1	471,403.48	798,041.06	32° 17' 35.623 N	103° 30' 9.300 W	
18,100.0	90.00	179.46	11,404.0	-6,666.6	1,129.0	471,303.48	798,042.00	32° 17' 34.633 N	103° 30' 9.298 W	
18,200.0	90.00	179.46	11,404.0	-6,766.6	1,130.0	471,203.49	798,042.94	32° 17' 33.644 N	103° 30' 9.296 W	
18,300.0	90.00	179.46	11,404.0	-6,866.6	1,130.9	471,103.50	798,043.87	32° 17' 32.654 N	103° 30' 9.294 W	
18,400.0	90.00	179.46	11,404.0	-6,966.6	1,131.8	471,003.50	798,044.81	32° 17' 31.665 N	103° 30' 9.292 W	
18,500.0	90.00	179.46	11,404.0	-7,066.6	1,132.8	470,903.51	798,045.75	32° 17' 30.675 N	103° 30' 9.290 W	
18,600.0	90.00	179.46	11,404.0	-7,166.6	1,133.7	470,803.51	798,046.69	32° 17' 29.686 N	103° 30' 9.288 W	
18,700.0	90.00	179.46	11,404.0	-7,266.6	1,134.6	470,703.52	798,047.63	32° 17' 28.696 N	103° 30' 9.286 W	
18,800.0	90.00	179.46	11,404.0	-7,366.6	1,135.6	470,603.53	798,048.56	32° 17' 27.707 N	103° 30' 9.284 W	
18,900.0	90.00	179.46	11,404.0	-7,466.6	1,136.5	470,503.53	798,049.50	32° 17' 26.717 N	103° 30' 9.283 W	
19,000.0	90.00	179.46	11,404.0	-7,566.6	1,137.5	470,403.54	798,050.44	32° 17' 25.728 N	103° 30' 9.281 W	
19,100.0	90.00	179.46	11,404.0	-7,666.6	1,138.4	470,303.54	798,051.38	32° 17' 24.738 N	103° 30' 9.279 W	
19,200.0	90.00	179.46	11,404.0	-7,766.6	1,139.3	470,203.55	798,052.31	32° 17' 23.749 N	103° 30' 9.277 W	
19,300.0	90.00	179.46	11,404.0	-7,866.6	1,140.3	470,103.56	798,053.25	32° 17' 22.759 N	103° 30' 9.275 W	
19,400.0	90.00	179.46	11,404.0	-7,966.6	1,141.2	470,003.56	798,054.19	32° 17' 21.770 N	103° 30' 9.273 W	
19,500.0	90.00	179.46	11,404.0	-8,066.6	1,142.1	469,903.57	798,055.13	32° 17' 20.780 N	103° 30' 9.271 W	
19,600.0	90.00	179.46	11,404.0	-8,166.6	1,143.1	469,803.57	798,056.06	32° 17' 19.791 N	103° 30' 9.269 W	
19,700.0	90.00	179.46	11,404.0	-8,266.6	1,144.0	469,703.58	798,057.00	32° 17' 18.801 N	103° 30' 9.267 W	
19,800.0	90.00	179.46	11,404.0	-8,366.5	1,145.0	469,603.59	798,057.94	32° 17' 17.812 N	103° 30' 9.265 W	
19,900.0	90.00	179.46	11,404.0	-8,466.5	1,145.9	469,503.59	798,058.88	32° 17' 16.822 N	103° 30' 9.264 W	
20,000.0	90.00	179.46	11,404.0	-8,566.5	1,146.8	469,403.60	798,059.82	32° 17' 15.833 N	103° 30' 9.262 W	
20,100.0	90.00	179.46	11,404.0	-8,666.5	1,147.8	469,303.60	798,060.75	32° 17' 14.843 N	103° 30' 9.260 W	
20,200.0	90.00	179.46	11,404.0	-8,766.5	1,148.7	469,203.61	798,061.69	32° 17' 13.854 N	103° 30' 9.258 W	
20,300.0	90.00	179.46	11,404.0	-8,866.5	1,149.6	469,103.62	798,062.63	32° 17' 12.864 N	103° 30' 9.256 W	
20,400.0	90.00	179.46	11,404.0	-8,966.5	1,150.6	469,003.62	798,063.57	32° 17' 11.875 N	103° 30' 9.254 W	
20,500.0	90.00	179.46	11,404.0	-9,066.5	1,151.5	468,903.63	798,064.50	32° 17' 10.885 N	103° 30' 9.252 W	
20,600.0	90.00	179.46	11,404.0	-9,166.5	1,152.5	468,803.63	798,065.44	32° 17' 9.896 N	103° 30' 9.250 W	
20,700.0	90.00	179.46	11,404.0	-9,266.5	1,153.4	468,703.64	798,066.38	32° 17' 8.906 N	103° 30' 9.248 W	
20,800.0	90.00	179.46	11,404.0	-9,366.5	1,154.3	468,603.65	798,067.32	32° 17' 7.917 N	103° 30' 9.246 W	
20,900.0	90.00	179.46	11,404.0	-9,466.5	1,155.3	468,503.65	798,068.26	32° 17' 6.927 N	103° 30' 9.245 W	
21,000.0	90.00	179.46	11,404.0	-9,566.5	1,156.2	468,403.66	798,069.19	32° 17' 5.938 N	103° 30' 9.243 W	
21,100.0	90.00	179.46	11,404.0	-9,666.5	1,157.2	468,303.66	798,070.13	32° 17' 4.948 N	103° 30' 9.241 W	
21,200.0	90.00	179.46	11,404.0	-9,766.5	1,158.1	468,203.67	798,071.07	32° 17' 3.959 N	103° 30' 9.239 W	
21,300.0	90.00	179.46	11,404.0	-9,866.5	1,159.0	468,103.68	798,072.01	32° 17' 2.969 N	103° 30' 9.237 W	

Microsoft
Planning Report - Geographic

Database:	Old	Local Co-ordinate Reference:	Well White Wing #4H
Company:	BTA Oil Producers, LLC	TVD Reference:	WELL @ 3489.0usft (Original Well Elev)
Project:	Lea County, NM (NAD 83)	MD Reference:	WELL @ 3489.0usft (Original Well Elev)
Site:	White Wing	North Reference:	Grid
Well:	White Wing #4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
21,400.0	90.00	179.46	11,404.0	-9,966.5	1,160.0	468,003.68	798,072.94	32° 17' 1.980 N	103° 30' 9.235 W	
21,500.0	90.00	179.46	11,404.0	-10,066.5	1,160.9	467,903.69	798,073.88	32° 17' 0.990 N	103° 30' 9.233 W	
21,600.0	90.00	179.46	11,404.0	-10,166.5	1,161.8	467,803.69	798,074.82	32° 17' 0.001 N	103° 30' 9.231 W	
21,700.0	90.00	179.46	11,404.0	-10,266.5	1,162.8	467,703.70	798,075.76	32° 16' 59.011 N	103° 30' 9.229 W	
21,725.7	90.00	179.46	11,404.0	-10,292.2	1,163.0	467,678.00	798,076.00	32° 16' 58.757 N	103° 30' 9.229 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	
White Wing 4H BHL - plan hits target center - Point	0.00	0.00	11,404.0	-10,292.2	1,163.0	467,678.00	798,076.00	32° 16' 58.757 N	103° 30' 9.229 W	



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

WELL: White Wing 7909 18 – 19 Fed Com #4H (I
TVD: 11404
MD: 21726

DRILLING PLAN

Casing Program

Hole Size	Csg.Size	From (MD)	To (MD)	From (TVD)	To (TVD)	Tapered String	Weight (lbs)	Grade	Conn.	Collapse	Burst	Body Tension	Joint Tension	Dry/ Buoyant	Mud Weight (ppg)
14 3/4	10 3/4	0	1220	0	1220	No	40.5	J-55	STC	3.0	5.9	12.7	8.5	Dry	8.3
9 7/8	7 5/8	0	10951	0	10877	No	29.7	P110	Buttress	1.8	1.8	2.9	3.0	Dry	9.4
6 3/4	5 1/2	0	10751	0	10002	Yes	20	P110	Buttress	1.5	1.7	3.0	3.1	Dry	11.5
6 3/4	5	10751	21726	10002	11404	Yes	18	P110	Buttress	1.6	1.6	1.5	1.5	Dry	11.5

*7 5/8" has DV Tool @ 4938'

Dv Tool Depth 4938

Cementing Program

Csg. Size		Stage Tool Depth	Top MD of Segment	Bottom MD of Segment	Cement Type	Quantity (sk)	Yield (cu. Ft./sk)	Density (lbs. gal)	Volume (cu.ft.)	% Excess	Additives
10 3/4	Lead		0	975	Class C	605	1.8	13.5	1089	100%	2% CaCl2
	Tail		975	1220	Class C	200	1.34	14.8	268	100%	2% CaCl2
7 5/8	Stg 2 Lead		0	4510	Class C	725	2.19	12.7	1587.75	50%	0.5% CaCl2
	Stg 2 Tail		4510	4938	Class C	150	1.33	14.8	199.5	50%	1% CaCl2
	Stg 1 Lead		4938	9065	Class H	390	2.64	10.5	1029.6	15%	0.5% CaCl2
	Stg 1 Tail		9065	10951	Class H	400	1.19	15.6	476	15%	1% CaCl2
5 1/2	Lead										
	Tail		9750	10751							
5	Lead										
	Tail		10751	21726	Class H	1140	1.27	14.8	1447.8	10%	0.1% Fluid Loss

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

Mud Program White Wing 7909 #4H:

Original Permit

- Surface Section – Fresh water 8.4 ppg
- Intermediate – Brine 10.0 – 10.2 ppg
- Production – Cut Brine 8.9 – 9.4 ppg

Proposed Change

- Surface Section – Fresh water 8.3 - 8.4 ppg
- Intermediate – DBE 9.0 - 9.4 ppg
- Production – OBM 10.5 – 11.5 ppg

Casing Programs

White Wing 7909 #4H

Original APD (Starcaster 7909 #8H)

- Surface
13-3/8” 54.5# J-55 STC set at 1165’ in an 17-1/2” hole
- Intermediate
9-5/8” 40# J-55 @ 4920’ in an 12-1/4” hole
- Production Casing
5-1/2” 17# P-110 @ 16421’ in an 8-3/4” hole

Proposed Change

- Surface
10-3/4” 40.5# J-55 STC set at 1220’ in a 14-3/4” hole
- Intermediate
7-5/8” 29.7# P-110 BTC @ 10951’ (DV Tool @ 4938’) in a 9-7/8” hole
- Production
10751’ of 5-1/2” 20# P-110 BTC and 10975’ of 5” 18# P-110 BTC set at 21726’ (11404’ TVD) in a 6-3/4” hole

Cement Programs

White Wing 7909 #4H

Original APD (Starcaster 7909 #8H)

- Surface Cement
1010 sx
- Intermediate Cement
1490 sx
- Production Cement
3195 sx

Proposed Change

- Surface Cement
 - Lead: 605 sx
100% Class C
13.5 ppg, 1.8 ft3/sx
 - Tail: 200 sx
100% Class C

	14.8 ppg, 1.34 ft3/sx
-Intermediate Cement	
Stg 1 Lead:	385 sx 100% TXI Lite 10.5 ppg, 2.64 ft3/sx
Stg 1 Tail:	400 sx 100% Class H 15.0 ppg, 1.19 ft3/sx
Stg 2 Lead:	720 sx 100% Class C Blend 12.7 ppg, 2.19 ft3/sx
Stg 2 Tail:	150 sx 100% Class C 14.8 ppg, 1.33 ft3/sx
-Production Cement	
Tail:	1140 sx 50:50 Class H Blend 14.8 ppg, 1.27 ft3/sx

Variances:

-Wave the centralizer requirements for the 5-1/2” and 5” casing in the 6-3/4” hole size. An expansion additive will be utilized in the cement slurry for the entire length of the 6-3/4” hole interval to maximize cement bond and zonal isolation.

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

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

CONDITIONS

Action 20535

CONDITIONS OF APPROVAL

Operator:	BTA OIL PRODUCERS, LLC 104 S Pecos Midland, TX79701			OGRID:	260297	Action Number:	20535	Action Type:	C-103X
OCD Reviewer					Condition				
pkautz					None				