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

Sundry Print Report

12/13/2021

Well Name: ZHU 2331 WC	**Well Location:** T26S / R31E / SEC 23 / SWSW /	**County or Parish/State:**
Well Number: 3H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMLC064756	**Unit or CA Name:**	**Unit or CA Number:** NMNM038329X
US Well Number: 3001548514	**Well Status:** Approved Application for Permit to Drill	**Operator:** CONOCOPHILLIPS COMPANY

Notice of Intent

Sundry ID: 2644559

Type of Submission: Notice of Intent

Type of Action: Other

Date Sundry Submitted: 11/16/2021

Time Sundry Submitted: 03:10

Date proposed operation will begin: 11/15/2021

Procedure Description: ConocoPhillips Company requests an amendment to our approved APD for this well to reflect a change in BHL. Change BHL to: 50' FNL & 1170' FWL NWNW 14-26S-31E Eddy Co. Revised C-102 and drill plan attached.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

ZHU_2331_WC_3H_Revised_drill_plan_11_16_21_20211116151016.pdf

ZHU_2331_WC_3H_signed_C_102_11_16_21_20211116150906.pdf

ZHU_2331_WC__20211116150906

ZHU_2331_WC__20211116150906

Well Name: ZHU 2331 WC

Well Location: T26S / R31E / SEC 23 / SWSW /

County or Parish/State:

Well Number: 3H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMLC064756

Unit or CA Name:

Unit or CA Number: NMNM038329X

US Well Number: 3001548514

Well Status: Approved Application for Permit to Drill

Operator: CONOCOPHILLIPS COMPANY

Conditions of Approval

Specialist Review

ZHU_2331_WC_BATCH_WELLS_COA_20211210114421.pdf

Operator Certification

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

Operator Electronic Signature: STAN WAGNER

Signed on: NOV 16, 2021 03:10 PM

Name: CONOCOPHILLIPS COMPANY

Title: Regulatory Advisor

Street Address: 600 WEST ILLINOIS AVE

City: MIDLAND **State:** TX

Phone: (432) 253-9685

Email address: STAN.S.WAGNER@CONOCOPHILLIPS.COM

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: ZOTA M STEVENS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752345998

BLM POC Email Address: ZSTEVENS@BLM.GOV

Disposition: Approved

Disposition Date: 12/10/2021

Signature: Zota Stevens

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**ConocoPhillips**
LEASE NO.:	**NMLC064756**
LOCATION:	Section 23, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

WELL NAME & NO.:	**ZHU 2331 BS 1H**
SURFACE HOLE FOOTAGE:	1050'/S & 1014'/W
BOTTOM HOLE FOOTAGE	50'/N & 330'/W

WELL NAME & NO.:	**ZHU 2331 BS 2H**
SURFACE HOLE FOOTAGE:	1050'/S & 1034'/W
BOTTOM HOLE FOOTAGE	50'/N & 750'/W

WELL NAME & NO.:	**ZHU 2331 BS 3H**
SURFACE HOLE FOOTAGE:	1050'/S & 1054'/W
BOTTOM HOLE FOOTAGE	50'/N & 1170'/W

WELL NAME & NO.:	**ZHU 2331 BS 4H**
SURFACE HOLE FOOTAGE:	1050'/S & 1074'/W
BOTTOM HOLE FOOTAGE	50'/N & 1590'/W

WELL NAME & NO.:	**ZHU 2331 BS 5H**
SURFACE HOLE FOOTAGE:	1050'/S & 1094'/W
BOTTOM HOLE FOOTAGE	50'/N & 2010'/W

WELL NAME & NO.:	**ZHU 2331 BS 6H**
SURFACE HOLE FOOTAGE:	1050'/S & 1114'/W
BOTTOM HOLE FOOTAGE	50'/N & 2430'/W

COA

ALL PREVIOUS COA STILL APPLY

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Cave/Karst Potential	○ Critical		
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

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **836** 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.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
    - Cement to surface. If cement does not circulate see B.1.a, c-d above.**Excess calculates to 22%. Addition cement maybe requried.**

Wait on cement (WOC) time for a primary cement job is to include the tail cement slurry due to cave/karst.

    ❖ 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.

C. 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. 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.

D. SPECIAL REQUIREMENT (S)

Unit Wells

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months. (This is not necessary for secondary recovery unit wells)

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)

☒ 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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. 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.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been

done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. 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.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
ZS121021

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, NM 87505

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

[X] AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-48514	98081	Zia Hills; Wolfcamp

[4] Property Code	[5] Property Name	[6] Well Number
330828	ZHU 2331 WC	3H

[7] OGRID No.	[8] Operator Name	[9] Elevation
217817	ConocoPhillips Company	3179.8'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	23	26S	31E		1050	SOUTH	1054	WEST	EDDY

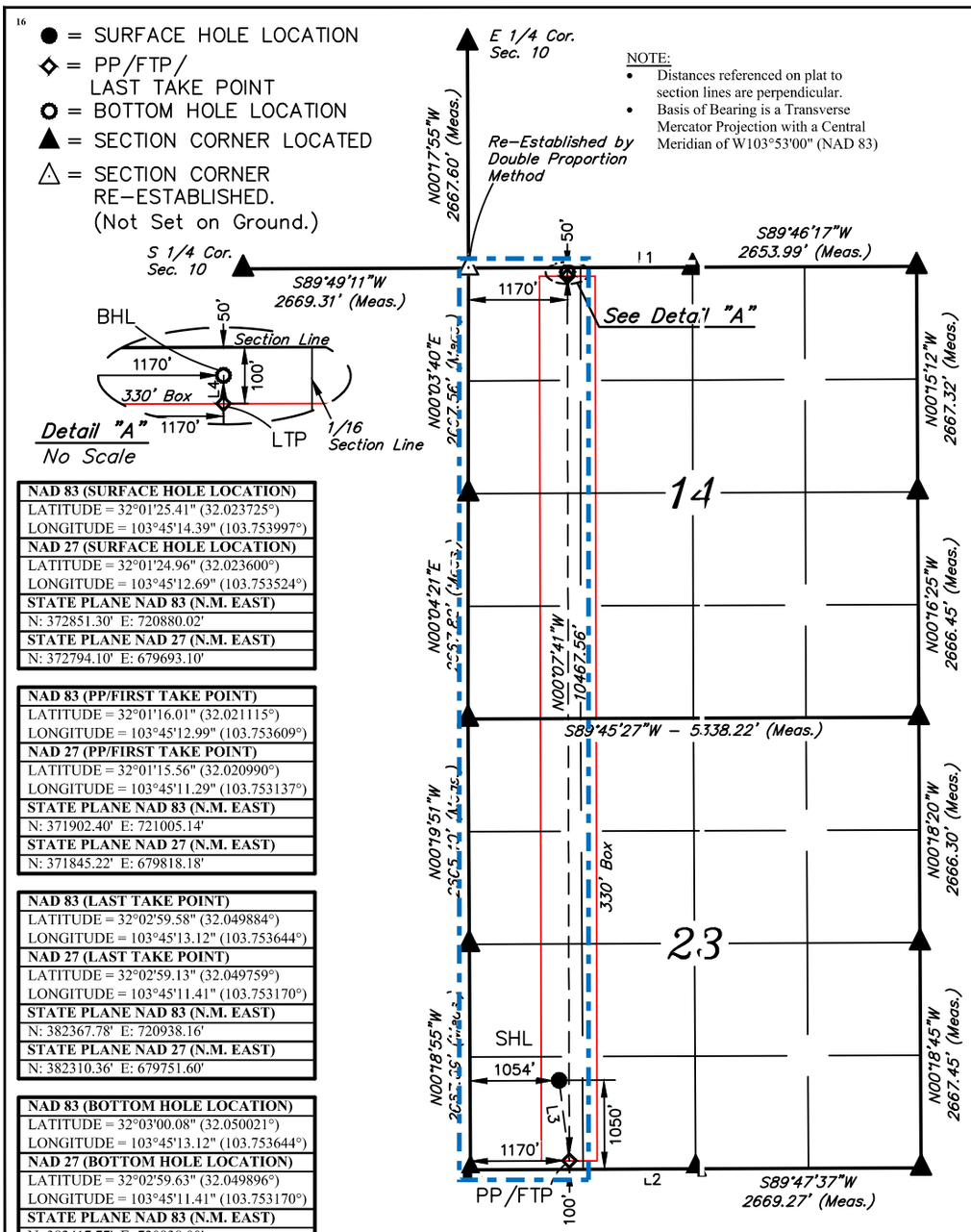
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	14	26S	31E		50	NORTH	1170	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

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.

[16]
● = SURFACE HOLE LOCATION
◇ = PP/FTP/ LAST TAKE POINT
○ = BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)



NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°01'25.41" (32.023725°)
LONGITUDE = 103°45'14.39" (103.753997°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°01'24.96" (32.023600°)
LONGITUDE = 103°45'12.69" (103.753524°)
STATE PLANE NAD 83 (N.M. EAST)
N: 372851.30' E: 720880.02'
STATE PLANE NAD 27 (N.M. EAST)
N: 372794.10' E: 679693.10'

NAD 83 (PP/FIRST TAKE POINT)
LATITUDE = 32°01'16.01" (32.021115°)
LONGITUDE = 103°45'12.99" (103.753609°)
NAD 27 (PP/FIRST TAKE POINT)
LATITUDE = 32°01'15.56" (32.020990°)
LONGITUDE = 103°45'11.29" (103.753137°)
STATE PLANE NAD 83 (N.M. EAST)
N: 371902.40' E: 721005.14'
STATE PLANE NAD 27 (N.M. EAST)
N: 371845.22' E: 679818.18'

NAD 83 (LAST TAKE POINT)
LATITUDE = 32°02'59.58" (32.049884°)
LONGITUDE = 103°45'13.12" (103.753644°)
NAD 27 (LAST TAKE POINT)
LATITUDE = 32°02'59.13" (32.049759°)
LONGITUDE = 103°45'11.41" (103.753170°)
STATE PLANE NAD 83 (N.M. EAST)
N: 382367.78' E: 720938.16'
STATE PLANE NAD 27 (N.M. EAST)
N: 382310.36' E: 679751.60'

NAD 83 (BOTTOM HOLE LOCATION)
LATITUDE = 32°03'00.08" (32.050021°)
LONGITUDE = 103°45'13.12" (103.753644°)
NAD 27 (BOTTOM HOLE LOCATION)
LATITUDE = 32°02'59.63" (32.049896°)
LONGITUDE = 103°45'11.41" (103.753170°)
STATE PLANE NAD 83 (N.M. EAST)
N: 382417.77' E: 720938.00'
STATE PLANE NAD 27 (N.M. EAST)
N: 382360.35' E: 679751.44'

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Stan Wagner 11/16/21
Signature Date

Stan Wagner
Printed Name

E-mail Address

[18] SURVEYOR CERTIFICATION

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

October 03, 2019
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 11-04-21

Certificate Number:

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°46'35"W	2653.48'
L2	S89°44'08"W	2667.65'
L3	S07°16'22"E	957.30'
L4	N00°03'40"E	50.00'

2000' 1000' 0' 2000'
SCALE

DRAWN BY: R.J. 02-13-20
REV: 1 S.T.O. 11-04-21 (WELL BORE CHANGE)

ConocoPhillips - ZHU 2331 WC 3H

1. Geologic Formations

TVD of target	11,459' EOL	Pilot hole depth	NA
MD at TD:	21,849'	Deepest expected fresh water:	317'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1120	Water	
Top of Salt	1489	Salt	
Base of Salt	3861	Salt	
Lamar	4073	Salt Water	
Bell Canyon	4100	Salt Water	
Cherry Canyon	5042	Oil/Gas	
Brushy Canyon	6417	Oil/Gas	
Bone Spring Lime	8084	Oil/Gas	
1st Bone Spring Sand	9113	Oil/Gas	
2nd Bone Spring Sand	9707	Oil/Gas	
3rd Bone Spring Sand	10926	Oil/Gas	
Wolfcamp A	11314	Target	
Wolfcamp B	0	Not Penetrated	
Wolfcamp D	0	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	1350	10.75"	45.5	N80	BTC	4.00	1.67	16.93	17.86
9.875"	0	8500	7.625"	29.7	HCL80	BTC	1.56	1.16	2.88	2.90
8.750"	8500	11800	7.625"	29.7	P110 RY	W 513	1.33	1.55	2.68	1.61
6.75"	0	11300	5.5"	23	P110	BTC	1.98	2.34	2.80	2.79
6.75"	11300	21,849	5.5"	23	P110	W441	1.95	2.31	2.77	2.51
					BLM Minimum Safety Factor		1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse. Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

The 5 1/2" talon casing will be run back 200’ into the intermediate casing to ensure the coupling OD clearance is greater than .422” for the cement bond tie in.

ConocoPhillips - ZHU 2331 WC 3H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

ConocoPhillips - ZHU 2331 WC 3H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	644	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Inter. Stage 1	840	10.3	3.3	22	24	Halliburton tunded light
	250	14.8	1.35	6.6	8	Tail: Class H
Prod	524	12.7	2	10.7	72	Lead: 50:50:10 H Blend
	995	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend

If losses are encountered in the intermediate section a DV/ECP tool will be run ~50' above the Lamar Lime top, cement will be adjusted accordingly if this contingency is necessary.

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results
Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0’	50%
1st Intermediate	0’	50%
Production	11,300'	35% OH in Lateral (KOP to EOL)

ConocoPhillips - ZHU 2331 WC 3H

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8”	13-5/8”	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4”	13-5/8”	10M	5M Annular	x	5000psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	N Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

ConocoPhillips - ZHU 2331 WC 3H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 12.5	35-45	<20

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
Y	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Additional logs planned		Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

ConocoPhillips - ZHU 2331 WC 3H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7450 psi at 11459' TVD
Abnormal Temperature	NO 170 Deg. F.

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other Facets of Operation

Y	Is it a walking operation?
Y	Is casing pre-set?

x	H2S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)
ZIA HILLS UNIT 2331 PROJECT
ZHU 2331 WC #3H

OWB

Plan: PWP1

Standard Survey Report

15 November, 2021

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well ZHU 2331 WC #3H
Project:	BULLDOG PROSPECT (NM-E)	**TVD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Site:	ZIA HILLS UNIT 2331 PROJECT	**MD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Well:	ZHU 2331 WC #3H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDT 15 Central Prod

Project	BULLDOG PROSPECT (NM-E)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	ZHU 2331 WC #3H				
Well Position	**+N/-S**	0.0 usft	**Northing:**	372,794.10 usft	**Latitude:**	32° 1' 24.959 N
	+E/-W	0.0 usft	**Easting:**	679,693.10 usft	**Longitude:**	103° 45' 12.687 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,179.8 usft

Wellbore	OWB				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2021	11/15/2021	6.51	59.59	47,474.26483439

Design	PWP1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	0.35	

Survey Tool Program **Date** 11/15/2021

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	11,061.4	PWP1 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
11,061.4	21,849.3	PWP1 (OWB)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well ZHU 2331 WC #3H
Project:	BULLDOG PROSPECT (NM-E)	**TVD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Site:	ZIA HILLS UNIT 2331 PROJECT	**MD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Well:	ZHU 2331 WC #3H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
2,600.0	2.00	172.49	2,600.0	-1.7	0.2	-1.7	2.00	2.00	0.00
2,700.0	4.00	172.49	2,699.8	-6.9	0.9	-6.9	2.00	2.00	0.00
2,800.0	6.00	172.49	2,799.5	-15.6	2.1	-15.5	2.00	2.00	0.00
2,900.0	8.00	172.49	2,898.7	-27.6	3.6	-27.6	2.00	2.00	0.00
3,000.0	10.00	172.49	2,997.5	-43.1	5.7	-43.1	2.00	2.00	0.00
Start 4759.7 hold at 3000.0 MD									
3,100.0	10.00	172.49	3,095.9	-60.4	8.0	-60.3	0.00	0.00	0.00
3,200.0	10.00	172.49	3,194.4	-77.6	10.2	-77.5	0.00	0.00	0.00
3,300.0	10.00	172.49	3,292.9	-94.8	12.5	-94.7	0.00	0.00	0.00
3,400.0	10.00	172.49	3,391.4	-112.0	14.8	-111.9	0.00	0.00	0.00
3,500.0	10.00	172.49	3,489.9	-129.2	17.0	-129.1	0.00	0.00	0.00
3,600.0	10.00	172.49	3,588.3	-146.4	19.3	-146.3	0.00	0.00	0.00
3,700.0	10.00	172.49	3,686.8	-163.7	21.6	-163.5	0.00	0.00	0.00
3,800.0	10.00	172.49	3,785.3	-180.9	23.8	-180.7	0.00	0.00	0.00
3,900.0	10.00	172.49	3,883.8	-198.1	26.1	-197.9	0.00	0.00	0.00
4,000.0	10.00	172.49	3,982.3	-215.3	28.4	-215.1	0.00	0.00	0.00
4,100.0	10.00	172.49	4,080.8	-232.5	30.7	-232.3	0.00	0.00	0.00
4,200.0	10.00	172.49	4,179.2	-249.7	32.9	-249.5	0.00	0.00	0.00
4,300.0	10.00	172.49	4,277.7	-267.0	35.2	-266.7	0.00	0.00	0.00
4,400.0	10.00	172.49	4,376.2	-284.2	37.5	-283.9	0.00	0.00	0.00
4,500.0	10.00	172.49	4,474.7	-301.4	39.7	-301.1	0.00	0.00	0.00
4,600.0	10.00	172.49	4,573.2	-318.6	42.0	-318.3	0.00	0.00	0.00
4,700.0	10.00	172.49	4,671.6	-335.8	44.3	-335.5	0.00	0.00	0.00
4,800.0	10.00	172.49	4,770.1	-353.0	46.5	-352.7	0.00	0.00	0.00
4,900.0	10.00	172.49	4,868.6	-370.3	48.8	-369.9	0.00	0.00	0.00
5,000.0	10.00	172.49	4,967.1	-387.5	51.1	-387.1	0.00	0.00	0.00
5,100.0	10.00	172.49	5,065.6	-404.7	53.3	-404.4	0.00	0.00	0.00
5,200.0	10.00	172.49	5,164.0	-421.9	55.6	-421.6	0.00	0.00	0.00
5,300.0	10.00	172.49	5,262.5	-439.1	57.9	-438.8	0.00	0.00	0.00
5,400.0	10.00	172.49	5,361.0	-456.3	60.2	-456.0	0.00	0.00	0.00
5,500.0	10.00	172.49	5,459.5	-473.5	62.4	-473.2	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well ZHU 2331 WC #3H
Project:	BULLDOG PROSPECT (NM-E)	**TVD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Site:	ZIA HILLS UNIT 2331 PROJECT	**MD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Well:	ZHU 2331 WC #3H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,600.0	10.00	172.49	5,558.0	-490.8	64.7	-490.4	0.00	0.00	0.00
5,700.0	10.00	172.49	5,656.4	-508.0	67.0	-507.6	0.00	0.00	0.00
5,800.0	10.00	172.49	5,754.9	-525.2	69.2	-524.8	0.00	0.00	0.00
5,900.0	10.00	172.49	5,853.4	-542.4	71.5	-542.0	0.00	0.00	0.00
6,000.0	10.00	172.49	5,951.9	-559.6	73.8	-559.2	0.00	0.00	0.00
6,100.0	10.00	172.49	6,050.4	-576.8	76.0	-576.4	0.00	0.00	0.00
6,200.0	10.00	172.49	6,148.9	-594.1	78.3	-593.6	0.00	0.00	0.00
6,300.0	10.00	172.49	6,247.3	-611.3	80.6	-610.8	0.00	0.00	0.00
6,400.0	10.00	172.49	6,345.8	-628.5	82.8	-628.0	0.00	0.00	0.00
6,500.0	10.00	172.49	6,444.3	-645.7	85.1	-645.2	0.00	0.00	0.00
6,600.0	10.00	172.49	6,542.8	-662.9	87.4	-662.4	0.00	0.00	0.00
6,700.0	10.00	172.49	6,641.3	-680.1	89.7	-679.6	0.00	0.00	0.00
6,800.0	10.00	172.49	6,739.7	-697.4	91.9	-696.8	0.00	0.00	0.00
6,900.0	10.00	172.49	6,838.2	-714.6	94.2	-714.0	0.00	0.00	0.00
7,000.0	10.00	172.49	6,936.7	-731.8	96.5	-731.2	0.00	0.00	0.00
7,100.0	10.00	172.49	7,035.2	-749.0	98.7	-748.4	0.00	0.00	0.00
7,200.0	10.00	172.49	7,133.7	-766.2	101.0	-765.6	0.00	0.00	0.00
7,300.0	10.00	172.49	7,232.1	-783.4	103.3	-782.8	0.00	0.00	0.00
7,400.0	10.00	172.49	7,330.6	-800.6	105.5	-800.0	0.00	0.00	0.00
7,500.0	10.00	172.49	7,429.1	-817.9	107.8	-817.2	0.00	0.00	0.00
7,600.0	10.00	172.49	7,527.6	-835.1	110.1	-834.4	0.00	0.00	0.00
7,700.0	10.00	172.49	7,626.1	-852.3	112.3	-851.6	0.00	0.00	0.00
7,759.7	10.00	172.49	7,684.9	-862.6	113.7	-861.9	0.00	0.00	0.00
Start Drop -1.00									
7,800.0	9.60	172.49	7,724.6	-869.4	114.6	-868.7	1.00	-1.00	0.00
7,900.0	8.60	172.49	7,823.3	-885.0	116.7	-884.3	1.00	-1.00	0.00
8,000.0	7.60	172.49	7,922.3	-899.0	118.5	-898.3	1.00	-1.00	0.00
8,100.0	6.60	172.49	8,021.5	-911.3	120.1	-910.5	1.00	-1.00	0.00
8,200.0	5.60	172.49	8,121.0	-921.8	121.5	-921.0	1.00	-1.00	0.00
8,300.0	4.60	172.49	8,220.6	-930.6	122.7	-929.8	1.00	-1.00	0.00
8,400.0	3.60	172.49	8,320.3	-937.7	123.6	-936.9	1.00	-1.00	0.00
8,500.0	2.60	172.49	8,420.2	-943.0	124.3	-942.3	1.00	-1.00	0.00
8,600.0	1.60	172.49	8,520.1	-946.7	124.8	-945.9	1.00	-1.00	0.00
8,700.0	0.60	172.49	8,620.1	-948.6	125.0	-947.8	1.00	-1.00	0.00
8,759.7	0.00	0.00	8,679.8	-948.9	125.1	-948.1	1.00	-1.00	0.00
Start 2301.7 hold at 8759.7 MD									
8,800.0	0.00	0.00	8,720.1	-948.9	125.1	-948.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,820.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,920.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,100.0	0.00	0.00	9,020.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,200.0	0.00	0.00	9,120.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,300.0	0.00	0.00	9,220.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,320.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,420.1	-948.9	125.1	-948.1	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well ZHU 2331 WC #3H
Project:	BULLDOG PROSPECT (NM-E)	**TVD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Site:	ZIA HILLS UNIT 2331 PROJECT	**MD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Well:	ZHU 2331 WC #3H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,600.0	0.00	0.00	9,520.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,700.0	0.00	0.00	9,620.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,800.0	0.00	0.00	9,720.1	-948.9	125.1	-948.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,820.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,000.0	0.00	0.00	9,920.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,100.0	0.00	0.00	10,020.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,200.0	0.00	0.00	10,120.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,220.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,400.0	0.00	0.00	10,320.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,500.0	0.00	0.00	10,420.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,600.0	0.00	0.00	10,520.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,700.0	0.00	0.00	10,620.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,800.0	0.00	0.00	10,720.1	-948.9	125.1	-948.1	0.00	0.00	0.00
10,900.0	0.00	0.00	10,820.1	-948.9	125.1	-948.1	0.00	0.00	0.00
11,000.0	0.00	0.00	10,920.1	-948.9	125.1	-948.1	0.00	0.00	0.00
11,061.4	0.00	0.00	10,981.5	-948.9	125.1	-948.1	0.00	0.00	0.00
Start DLS 12.00 TFO 359.64									
11,100.0	4.63	359.64	11,020.0	-947.3	125.1	-946.5	12.00	12.00	0.00
11,200.0	16.63	359.64	11,118.1	-928.9	125.0	-928.1	12.00	12.00	0.00
11,300.0	28.63	359.64	11,210.3	-890.5	124.7	-889.7	12.00	12.00	0.00
11,400.0	40.63	359.64	11,292.4	-833.8	124.3	-833.0	12.00	12.00	0.00
11,500.0	52.63	359.64	11,361.0	-761.2	123.9	-760.4	12.00	12.00	0.00
11,600.0	64.63	359.64	11,412.9	-676.0	123.3	-675.2	12.00	12.00	0.00
11,700.0	76.63	359.64	11,446.0	-581.8	122.8	-581.1	12.00	12.00	0.00
11,800.0	88.63	359.64	11,458.8	-482.8	122.1	-482.1	12.00	12.00	0.00
11,811.4	90.00	359.64	11,459.0	-471.4	122.0	-470.7	12.00	12.00	0.00
Start 10037.9 hold at 11811.4 MD									
11,900.0	90.00	359.64	11,459.0	-382.8	121.5	-382.1	0.00	0.00	0.00
12,000.0	90.00	359.64	11,459.0	-282.8	120.9	-282.1	0.00	0.00	0.00
12,100.0	90.00	359.64	11,459.0	-182.8	120.2	-182.1	0.00	0.00	0.00
12,200.0	90.00	359.64	11,459.0	-82.8	119.6	-82.1	0.00	0.00	0.00
12,300.0	90.00	359.64	11,459.0	17.2	118.9	17.9	0.00	0.00	0.00
12,400.0	90.00	359.64	11,459.0	117.1	118.3	117.9	0.00	0.00	0.00
12,500.0	90.00	359.64	11,459.0	217.1	117.7	217.9	0.00	0.00	0.00
12,600.0	90.00	359.64	11,459.0	317.1	117.0	317.9	0.00	0.00	0.00
12,700.0	90.00	359.64	11,459.0	417.1	116.4	417.8	0.00	0.00	0.00
12,800.0	90.00	359.64	11,459.0	517.1	115.8	517.8	0.00	0.00	0.00
12,900.0	90.00	359.64	11,459.0	617.1	115.1	617.8	0.00	0.00	0.00
13,000.0	90.00	359.64	11,459.0	717.1	114.5	717.8	0.00	0.00	0.00
13,100.0	90.00	359.64	11,459.0	817.1	113.9	817.8	0.00	0.00	0.00
13,200.0	90.00	359.64	11,459.0	917.1	113.2	917.8	0.00	0.00	0.00
13,300.0	90.00	359.64	11,459.0	1,017.1	112.6	1,017.8	0.00	0.00	0.00
13,400.0	90.00	359.64	11,459.0	1,117.1	112.0	1,117.8	0.00	0.00	0.00
13,500.0	90.00	359.64	11,459.0	1,217.1	111.3	1,217.8	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well ZHU 2331 WC #3H
Project:	BULLDOG PROSPECT (NM-E)	**TVD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Site:	ZIA HILLS UNIT 2331 PROJECT	**MD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Well:	ZHU 2331 WC #3H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,600.0	90.00	359.64	11,459.0	1,317.1	110.7	1,317.8	0.00	0.00	0.00
13,700.0	90.00	359.64	11,459.0	1,417.1	110.1	1,417.8	0.00	0.00	0.00
13,800.0	90.00	359.64	11,459.0	1,517.1	109.4	1,517.8	0.00	0.00	0.00
13,900.0	90.00	359.64	11,459.0	1,617.1	108.8	1,617.8	0.00	0.00	0.00
14,000.0	90.00	359.64	11,459.0	1,717.1	108.2	1,717.7	0.00	0.00	0.00
14,100.0	90.00	359.64	11,459.0	1,817.1	107.5	1,817.7	0.00	0.00	0.00
14,200.0	90.00	359.64	11,459.0	1,917.1	106.9	1,917.7	0.00	0.00	0.00
14,300.0	90.00	359.64	11,459.0	2,017.1	106.3	2,017.7	0.00	0.00	0.00
14,400.0	90.00	359.64	11,459.0	2,117.1	105.6	2,117.7	0.00	0.00	0.00
14,500.0	90.00	359.64	11,459.0	2,217.1	105.0	2,217.7	0.00	0.00	0.00
14,600.0	90.00	359.64	11,459.0	2,317.1	104.4	2,317.7	0.00	0.00	0.00
14,700.0	90.00	359.64	11,459.0	2,417.1	103.7	2,417.7	0.00	0.00	0.00
14,800.0	90.00	359.64	11,459.0	2,517.1	103.1	2,517.7	0.00	0.00	0.00
14,900.0	90.00	359.64	11,459.0	2,617.1	102.4	2,617.7	0.00	0.00	0.00
15,000.0	90.00	359.64	11,459.0	2,717.1	101.8	2,717.7	0.00	0.00	0.00
15,100.0	90.00	359.64	11,459.0	2,817.1	101.2	2,817.7	0.00	0.00	0.00
15,200.0	90.00	359.64	11,459.0	2,917.1	100.5	2,917.7	0.00	0.00	0.00
15,300.0	90.00	359.64	11,459.0	3,017.1	99.9	3,017.6	0.00	0.00	0.00
15,400.0	90.00	359.64	11,459.0	3,117.1	99.3	3,117.6	0.00	0.00	0.00
15,500.0	90.00	359.64	11,459.0	3,217.1	98.6	3,217.6	0.00	0.00	0.00
15,600.0	90.00	359.64	11,459.0	3,317.1	98.0	3,317.6	0.00	0.00	0.00
15,700.0	90.00	359.64	11,459.0	3,417.1	97.4	3,417.6	0.00	0.00	0.00
15,800.0	90.00	359.64	11,459.0	3,517.1	96.7	3,517.6	0.00	0.00	0.00
15,900.0	90.00	359.64	11,459.0	3,617.1	96.1	3,617.6	0.00	0.00	0.00
16,000.0	90.00	359.64	11,459.0	3,717.1	95.5	3,717.6	0.00	0.00	0.00
16,100.0	90.00	359.64	11,459.0	3,817.1	94.8	3,817.6	0.00	0.00	0.00
16,200.0	90.00	359.64	11,459.0	3,917.1	94.2	3,917.6	0.00	0.00	0.00
16,300.0	90.00	359.64	11,459.0	4,017.1	93.6	4,017.6	0.00	0.00	0.00
16,400.0	90.00	359.64	11,459.0	4,117.1	92.9	4,117.6	0.00	0.00	0.00
16,500.0	90.00	359.64	11,459.0	4,217.1	92.3	4,217.6	0.00	0.00	0.00
16,600.0	90.00	359.64	11,459.0	4,317.1	91.7	4,317.5	0.00	0.00	0.00
16,700.0	90.00	359.64	11,459.0	4,417.1	91.0	4,417.5	0.00	0.00	0.00
16,800.0	90.00	359.64	11,459.0	4,517.1	90.4	4,517.5	0.00	0.00	0.00
16,900.0	90.00	359.64	11,459.0	4,617.1	89.8	4,617.5	0.00	0.00	0.00
17,000.0	90.00	359.64	11,459.0	4,717.1	89.1	4,717.5	0.00	0.00	0.00
17,100.0	90.00	359.64	11,459.0	4,817.1	88.5	4,817.5	0.00	0.00	0.00
17,200.0	90.00	359.64	11,459.0	4,917.1	87.8	4,917.5	0.00	0.00	0.00
17,300.0	90.00	359.64	11,459.0	5,017.0	87.2	5,017.5	0.00	0.00	0.00
17,400.0	90.00	359.64	11,459.0	5,117.0	86.6	5,117.5	0.00	0.00	0.00
17,500.0	90.00	359.64	11,459.0	5,217.0	85.9	5,217.5	0.00	0.00	0.00
17,600.0	90.00	359.64	11,459.0	5,317.0	85.3	5,317.5	0.00	0.00	0.00
17,700.0	90.00	359.64	11,459.0	5,417.0	84.7	5,417.5	0.00	0.00	0.00
17,800.0	90.00	359.64	11,459.0	5,517.0	84.0	5,517.4	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well ZHU 2331 WC #3H
Project:	BULLDOG PROSPECT (NM-E)	**TVD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Site:	ZIA HILLS UNIT 2331 PROJECT	**MD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Well:	ZHU 2331 WC #3H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,900.0	90.00	359.64	11,459.0	5,617.0	83.4	5,617.4	0.00	0.00	0.00
18,000.0	90.00	359.64	11,459.0	5,717.0	82.8	5,717.4	0.00	0.00	0.00
18,100.0	90.00	359.64	11,459.0	5,817.0	82.1	5,817.4	0.00	0.00	0.00
18,200.0	90.00	359.64	11,459.0	5,917.0	81.5	5,917.4	0.00	0.00	0.00
18,300.0	90.00	359.64	11,459.0	6,017.0	80.9	6,017.4	0.00	0.00	0.00
18,400.0	90.00	359.64	11,459.0	6,117.0	80.2	6,117.4	0.00	0.00	0.00
18,500.0	90.00	359.64	11,459.0	6,217.0	79.6	6,217.4	0.00	0.00	0.00
18,600.0	90.00	359.64	11,459.0	6,317.0	79.0	6,317.4	0.00	0.00	0.00
18,700.0	90.00	359.64	11,459.0	6,417.0	78.3	6,417.4	0.00	0.00	0.00
18,800.0	90.00	359.64	11,459.0	6,517.0	77.7	6,517.4	0.00	0.00	0.00
18,900.0	90.00	359.64	11,459.0	6,617.0	77.1	6,617.4	0.00	0.00	0.00
19,000.0	90.00	359.64	11,459.0	6,717.0	76.4	6,717.4	0.00	0.00	0.00
19,100.0	90.00	359.64	11,459.0	6,817.0	75.8	6,817.3	0.00	0.00	0.00
19,200.0	90.00	359.64	11,459.0	6,917.0	75.2	6,917.3	0.00	0.00	0.00
19,300.0	90.00	359.64	11,459.0	7,017.0	74.5	7,017.3	0.00	0.00	0.00
19,400.0	90.00	359.64	11,459.0	7,117.0	73.9	7,117.3	0.00	0.00	0.00
19,500.0	90.00	359.64	11,459.0	7,217.0	73.3	7,217.3	0.00	0.00	0.00
19,600.0	90.00	359.64	11,459.0	7,317.0	72.6	7,317.3	0.00	0.00	0.00
19,700.0	90.00	359.64	11,459.0	7,417.0	72.0	7,417.3	0.00	0.00	0.00
19,800.0	90.00	359.64	11,459.0	7,517.0	71.3	7,517.3	0.00	0.00	0.00
19,900.0	90.00	359.64	11,459.0	7,617.0	70.7	7,617.3	0.00	0.00	0.00
20,000.0	90.00	359.64	11,459.0	7,717.0	70.1	7,717.3	0.00	0.00	0.00
20,100.0	90.00	359.64	11,459.0	7,817.0	69.4	7,817.3	0.00	0.00	0.00
20,200.0	90.00	359.64	11,459.0	7,917.0	68.8	7,917.3	0.00	0.00	0.00
20,300.0	90.00	359.64	11,459.0	8,017.0	68.2	8,017.3	0.00	0.00	0.00
20,400.0	90.00	359.64	11,459.0	8,117.0	67.5	8,117.2	0.00	0.00	0.00
20,500.0	90.00	359.64	11,459.0	8,217.0	66.9	8,217.2	0.00	0.00	0.00
20,600.0	90.00	359.64	11,459.0	8,317.0	66.3	8,317.2	0.00	0.00	0.00
20,700.0	90.00	359.64	11,459.0	8,417.0	65.6	8,417.2	0.00	0.00	0.00
20,800.0	90.00	359.64	11,459.0	8,517.0	65.0	8,517.2	0.00	0.00	0.00
20,900.0	90.00	359.64	11,459.0	8,617.0	64.4	8,617.2	0.00	0.00	0.00
21,000.0	90.00	359.64	11,459.0	8,717.0	63.7	8,717.2	0.00	0.00	0.00
21,100.0	90.00	359.64	11,459.0	8,817.0	63.1	8,817.2	0.00	0.00	0.00
21,200.0	90.00	359.64	11,459.0	8,917.0	62.5	8,917.2	0.00	0.00	0.00
21,300.0	90.00	359.64	11,459.0	9,017.0	61.8	9,017.2	0.00	0.00	0.00
21,400.0	90.00	359.64	11,459.0	9,117.0	61.2	9,117.2	0.00	0.00	0.00
21,500.0	90.00	359.64	11,459.0	9,217.0	60.6	9,217.2	0.00	0.00	0.00
21,600.0	90.00	359.64	11,459.0	9,317.0	59.9	9,317.2	0.00	0.00	0.00
21,700.0	90.00	359.64	11,459.0	9,417.0	59.3	9,417.1	0.00	0.00	0.00
21,800.0	90.00	359.64	11,459.0	9,517.0	58.7	9,517.1	0.00	0.00	0.00
21,849.3	90.00	359.64	11,459.0	9,566.2	58.3	9,566.4	0.00	0.00	0.00
TD at 21849.3									

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well ZHU 2331 WC #3H
Project:	BULLDOG PROSPECT (NM-E)	**TVD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Site:	ZIA HILLS UNIT 2331 PROJECT	**MD Reference:**	KB=31' @ 3210.8usft (Nabors 894)
Well:	ZHU 2331 WC #3H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDT 15 Central Prod

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
FTP (ZHU 2331 WC #	0.00	0.00	11,459.0	-948.9	125.1	371,845.22	679,818.18	32° 1' 15.562 N	103° 45' 11.293 W
- plan misses target center by 197.9usft at 11430.8usft MD (11315.1 TVD, -813.0 N, 124.2 E) - Circle (radius 50.0)									
PBHL (ZHU 2331 WC	0.00	179.64	11,459.0	9,566.2	58.3	382,360.35	679,751.44	32° 2' 59.625 N	103° 45' 11.412 W
- plan hits target center - Rectangle (sides W100.0 H10,525.0 D20.0)									
LTP (ZHU 2331 WC #	0.00	0.00	11,459.0	9,516.3	58.5	382,310.36	679,751.60	32° 2' 59.131 N	103° 45' 11.413 W
- plan misses target center by 0.2usft at 21799.3usft MD (11459.0 TVD, 9516.3 N, 58.7 E) - Point									

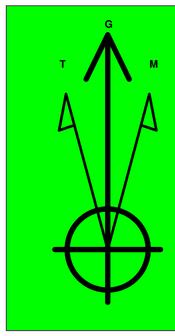
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2500	2500	0	0	Start Build 2.00
3000	2997	-43	6	Start 4759.7 hold at 3000.0 MD
7760	7685	-863	114	Start Drop -1.00
8760	8680	-949	125	Start 2301.7 hold at 8759.7 MD
11,061	10,981	-949	125	Start DLS 12.00 TFO 359.64
11,811	11,459	-471	122	Start 10037.9 hold at 11811.4 MD
21,849	11,459	9566	58	TD at 21849.3

Checked By: _____ Approved By: _____ Date: _____

ConocoPhillips

Project: BULLDOG PROSPECT (NM-E)
Site: ZIA HILLS UNIT 2331 PROJECT
Well: ZHU 2331 WC #3H
Wellbore: OWB
Design: PWP1
GL: 3179.8
KB=31' @ 3210.8usft (Nabors 894)



Azimuths to Grid North
True North: -0.31°
Magnetic North: 6.21°

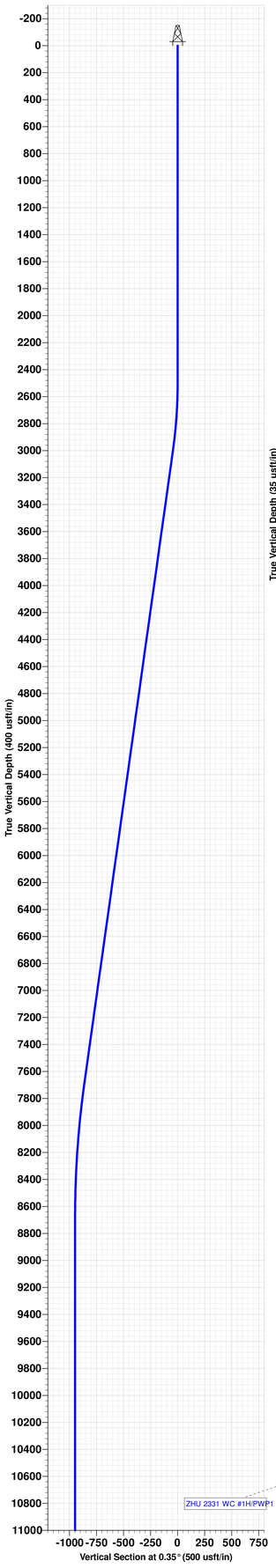
Magnetic Field
Strength: 47474.3nT
Dip Angle: 59.59°
Date: 11/15/2021
Model: BGGM2021

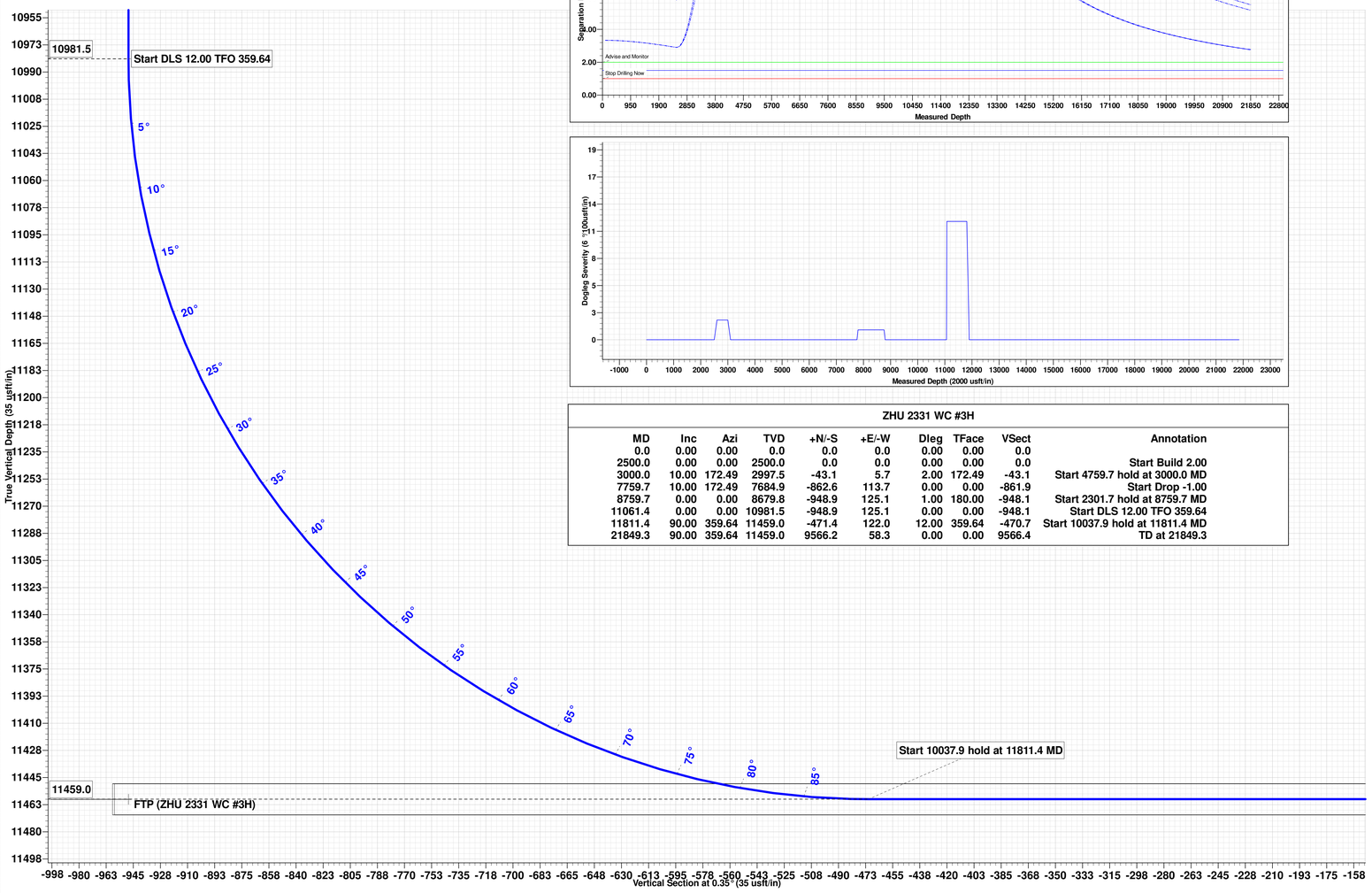
WELL DETAILS: ZHU 2331 WC #3H

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	372794.10	679693.10	32° 1' 24.959 N	103° 45' 12.687 W

DESIGN TARGET DETAILS

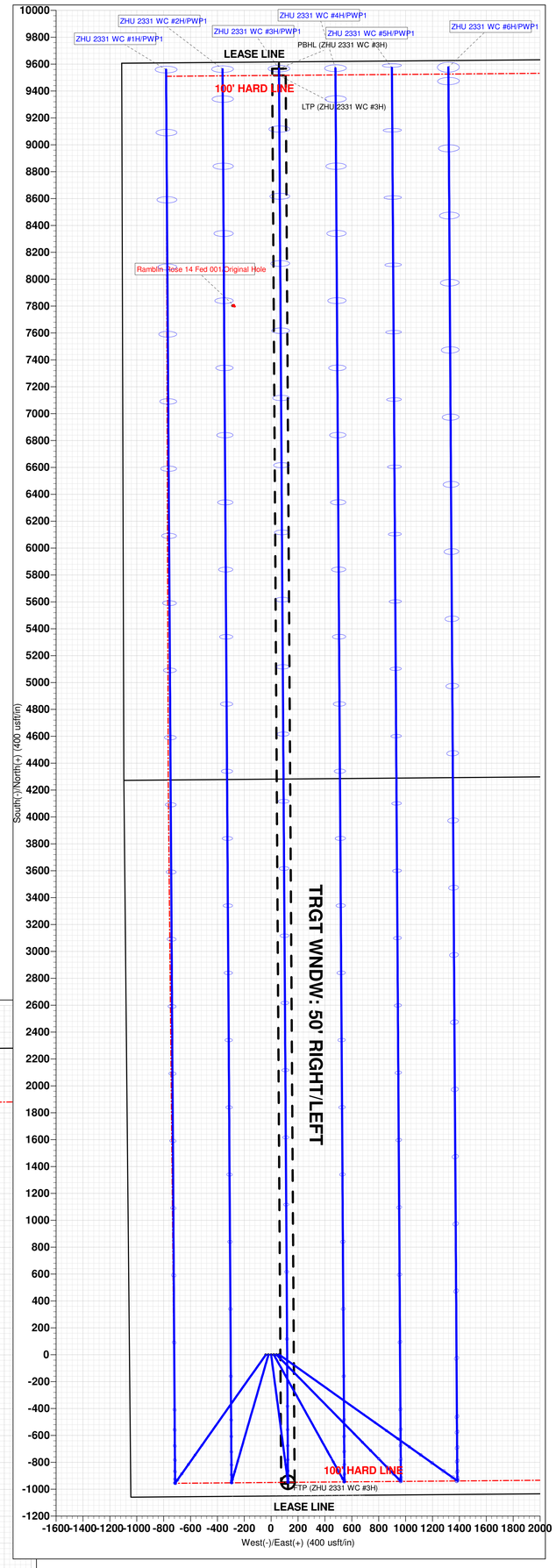
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (ZHU 2331 WC #3H)	11459.0	-948.9	125.1	371845.22	679818.18	32° 1' 15.562 N	103° 45' 11.293 W
LTP (ZHU 2331 WC #3H)	11459.0	9516.3	58.5	382310.36	679751.60	32° 2' 59.131 N	103° 45' 11.413 W
PBHL (ZHU 2331 WC #3H)	11459.0	9566.2	58.3	382360.35	679751.44	32° 2' 59.625 N	103° 45' 11.412 W

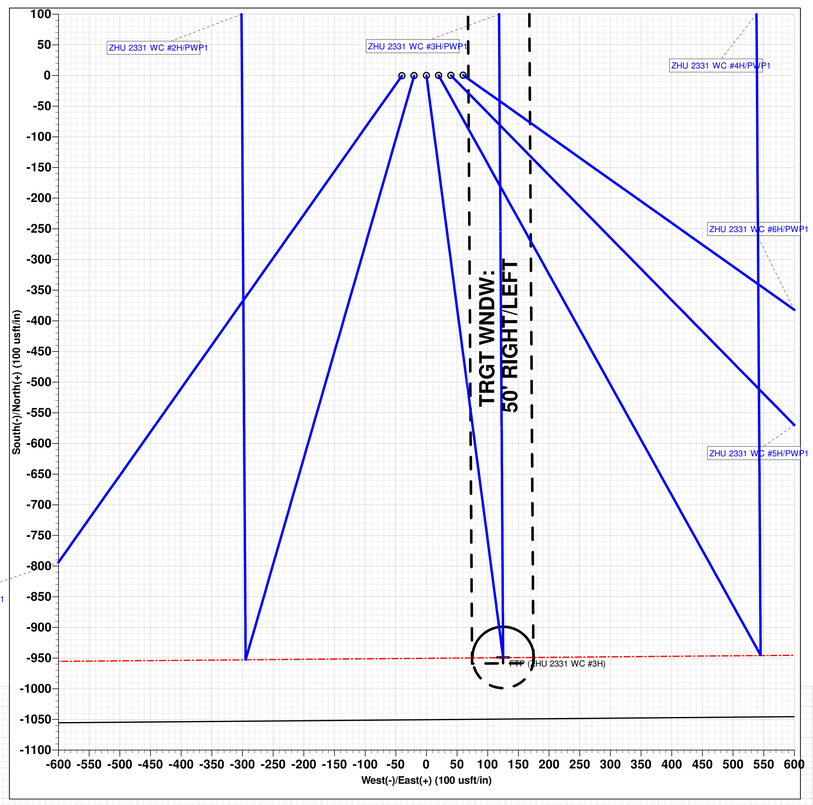


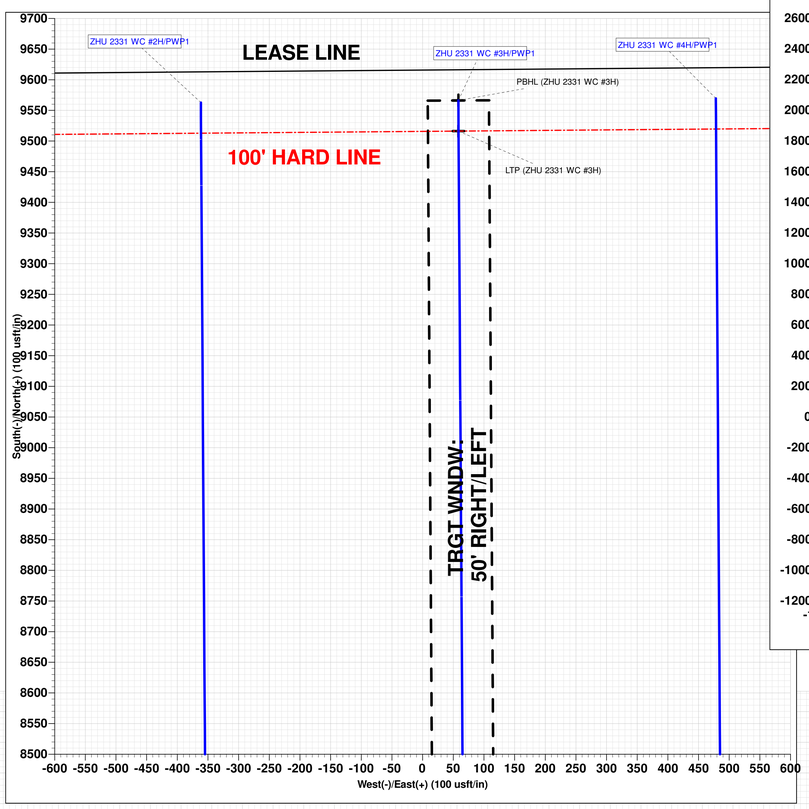


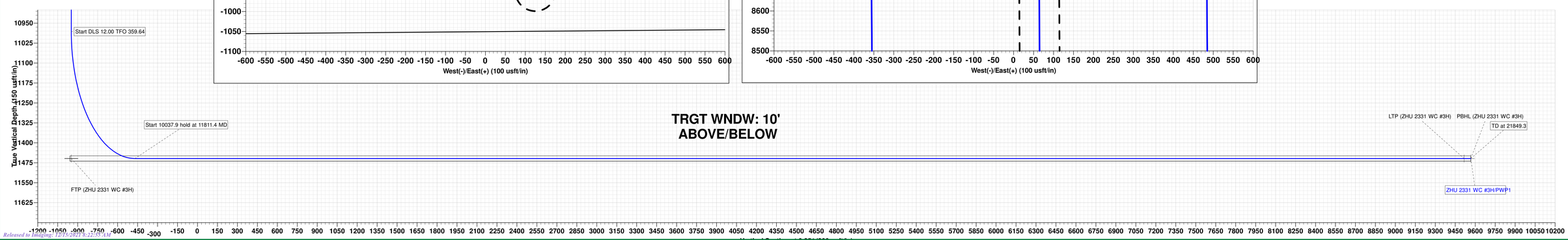
ZHU 2331 WC #3H

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
3000.0	10.00	172.49	2997.5	-43.1	5.7	2.00	172.49	-43.1	Start 4759.7 hold at 3000.0 MD
7759.7	10.00	172.49	7684.9	-862.6	113.7	0.00	0.00	-861.9	Start Drop -1.00
8759.7	0.00	0.00	8679.8	-948.9	125.1	1.00	180.00	-948.1	Start 2301.7 hold at 8759.7 MD
11061.4	0.00	0.00	10981.5	-948.9	125.1	0.00	0.00	-948.1	Start DLS 12.00 TFO 359.64
11811.4	90.00	359.64	11459.0	-471.4	122.0	12.00	359.64	-470.7	Start 10037.9 hold at 11811.4 MD
21849.3	90.00	359.64	11459.0	9566.2	58.3	0.00	0.00	9566.4	TD at 21849.3









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

COMMENTS

Action 66584

COMMENTS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 66584
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 12/14/2021	12/14/2021

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CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	12/14/2021