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

Sundry Print Report

07/01/2024

Well Name: AKUBRA FEDERAL COM

Well Location: T26S / R35E / SEC 4 / NWNW / 32.07882 / -103.377192

County or Parish/State: LEA / NM

Well Number: 801H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM112943

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: COG OPERATING LLC

Notice of Intent

Sundry ID: 2788515

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 05/06/2024

Time Sundry Submitted: 10:02

Date proposed operation will begin: 05/06/2024

Procedure Description: COG Operating requests a change to our approved APD for this well to reflect a change in surface casing and BHL. Additionally, we request the addition of a contingency 4-string casing design be added to the drill plan in the event water flows are encountered during drilling. Change BHL FROM: 50' FNL & 1023' FWL Change BHL TO: 50' FNL & 1011' FEL NWNW 28-25S-35E Lea Co, NM Change surface casing FROM: 14.75 inch hole, 10.75 inch, 45.5#, J55, BTC Change surface casing TO: 17.50 inch hole, 13.375 inch, 54.5#, J55, BTC, 0 – 1250' ft. Also, COG Operating requests a variance to allow for break testing as attached. Detailed contingency casing plan and procedure attached API Number is 30-025-52895

NOI Attachments

Procedure Description

AKUBRA_FED_COM_801H_PWP2_WP_20240506100120.pdf

AKUBRA_FED_COM_801H_PWP2_AC_RPT_20240506100120.pdf

AKUBRA_FED_COM_801H_C102_NAD83_signed_5_06_2024_20240506100120.pdf

AKUBRA_FED_COM_801H_PWP2_PLAN_RPT_20240506100120.pdf

COP_BOP_Break_Testing_Documentation_6_07_23_20240506100120.pdf

Akubra_Fed_Com_801H_BHL_and_Casing_Sundry_Contingent_Plan_20240506100120.pdf

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Lease Number: NMNM112943

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: COG OPERATING LLC

Conditions of Approval

Additional

AKUBRA_FED_COM_801H___SUNDRY_COA_20240625104348.pdf

Operator

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

Operator Electronic Signature: STAN WAGNER

Signed on: MAY 06, 2024 10:01 AM

Name: COG OPERATING LLC

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 Name:

Street Address:

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

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KEITH P IMMATTY

BLM POC Title: ENGINEER

BLM POC Phone: 5759884722

BLM POC Email Address: KIMMATTY@BLM.GOV

Disposition: Approved

Disposition Date: 06/25/2024

Signature: Keith Immatty

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

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.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ 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 recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

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

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)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: NWNW / 280 FNL / 1175 FWL / TWSP: 26S / RANGE: 35E / SECTION: 4 / LAT: 32.07882 / LONG: -103.377192 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 100 FSL / 1023 FWL / TWSP: 25S / RANGE: 35E / SECTION: 33 / LAT: 32.079865 / LONG: -103.377684 (TVD: 13094 feet, MD: 13308 feet)

PPP: SWSW / 1 FSL / 1023 FWL / TWSP: 25S / RANGE: 35E / SECTION: 28 / LAT: 32.094092 / LONG: -103.377698 (TVD: 13100 feet, MD: 18489 feet)

PPP: NWSW / 1321 FSL / 1023 FWL / TWSP: 25S / RANGE: 35E / SECTION: 28 / LAT: 32.083216 / LONG: -103.377687 (TVD: 13100 feet, MD: 14529 feet)

BHL: NWNW / 50 FNL / 1023 FWL / TWSP: 25S / RANGE: 35E / SECTION: 28 / LAT: 32.108477 / LONG: -103.377712 (TVD: 13100 feet, MD: 23717 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG PRODUCTION LLC
WELL NAME & NO.:	AKUBRA FED COM 801H
SURFACE HOLE FOOTAGE:	280'/N & 1175'/W
BOTTOM HOLE FOOTAGE	50'/N & 1011'/W
LOCATION:	Section 4, T.26 S., R.35 E.
COUNTY:	Lea County, New Mexico

COA

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
Wellhead Variance	( ) Diverter		
Other	[ ] 4 String	[ ] Capitan Reef	[ ] WIPP
Other	[ ] Fluid Filled	[ ] Pilot Hole	[ ] Open Annulus
Cementing	[ ] Contingency Cement Squeeze	[ ] EchoMeter	[ ] Primary Cement Squeeze
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit
Special Requirements	[ ] Batch Sundry		
Special Requirements Variance	[x] Break Testing	[ ] Offline Cementing	[x] Casing Clearance

Drill plan change addressed in this COA. All previous COAs still apply

A. CASING

Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1250** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. **Cement volume not listed for surface lead. Please review and ensure cement to 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 **7-5/8** inch intermediate casing shall be set at approximately **12,500** feet. **Cement volume excess less than 25% CFO requirement. Please review.** The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

Option 2:

Operator has proposed a DV tool ~50' above the Lamar Lime top. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. The **5-1/2** inch production casing shall be set at approximately **23,725** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Alternate Casing Design(Contingency:)

1. The **13-3/8** inch surface casing shall be set at approximately **1250** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) 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 **9-5/8** inch intermediate casing shall be set at approximately **5,200** feet. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. The **7-5/8** inch intermediate liner shall be set at approximately **12,500** feet tying back in a minimum of 200' into the 9-5/8" casing. The minimum required fill of cement behind the **7-5/8** inch intermediate liner top is:

Option 1 (Single Stage):

- Cement to liner top. Verify excess circulated to surface.

4. The **5-1/2** inch production casing shall be set at approximately **23,725** feet. The minimum required fill of cement behind the **5-1/2** inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Casing Clearance:
THE 5.5" W441 CASING NEEDS TO TIE BACK A MINIMUM OF 200' INTO THE 7.625" W513 TO MEET BLM CLEARANCE REQUIREMENT

Break Testing:
Approved for the intermediate interval. Procedure attached in sundry.

(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system)
BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Operator shall clean up cycles until wellbore is clear of cuttings and any large debris, ensure cutting sizes are adequate "coffee ground or less" before cementing.

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)

- If well located in Eddy County
  EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
  BLM_NM_CFO_DrillingNotifications@BLM.GOV
  (575) 361-2822

- If well located in Lea County
  Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
  (575) 689-5981

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 **43 CFR part 3170 Subpart 3172** 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 integrity 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 **43 CFR part 3170 Subpart 3172** and **API STD 53 Sec. 5.3**.

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 **43 CFR part 3170 Subpart 3172** 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 cement), 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

    c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** 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 **43 CFR part 3170 Subpart 3172**.

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

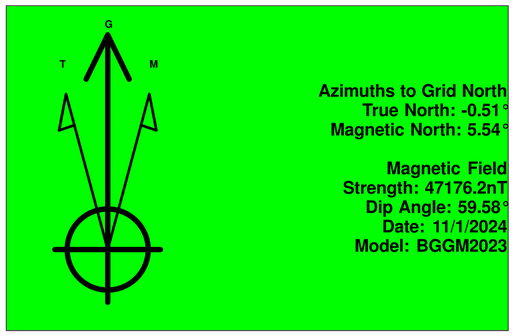
All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location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

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

KPI 6/24/2024

ConocoPhillips

Project:	LEA COUNTY SOUTHEAST
Site:	AKUBRA PROJECT
Well:	AKUBRA FED COM #801H
Wellbore:	OWB
Design:	PWP2
GL:	3199.0
KB=26 @ 3225.0usft	

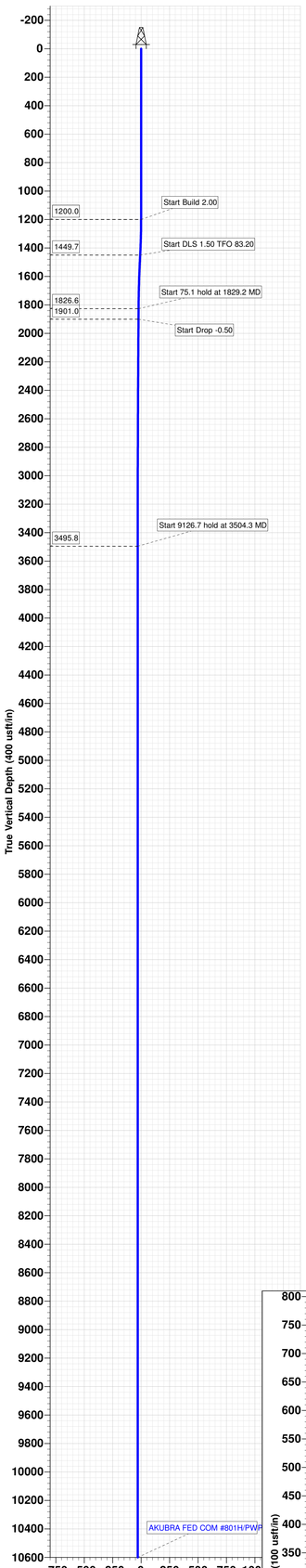


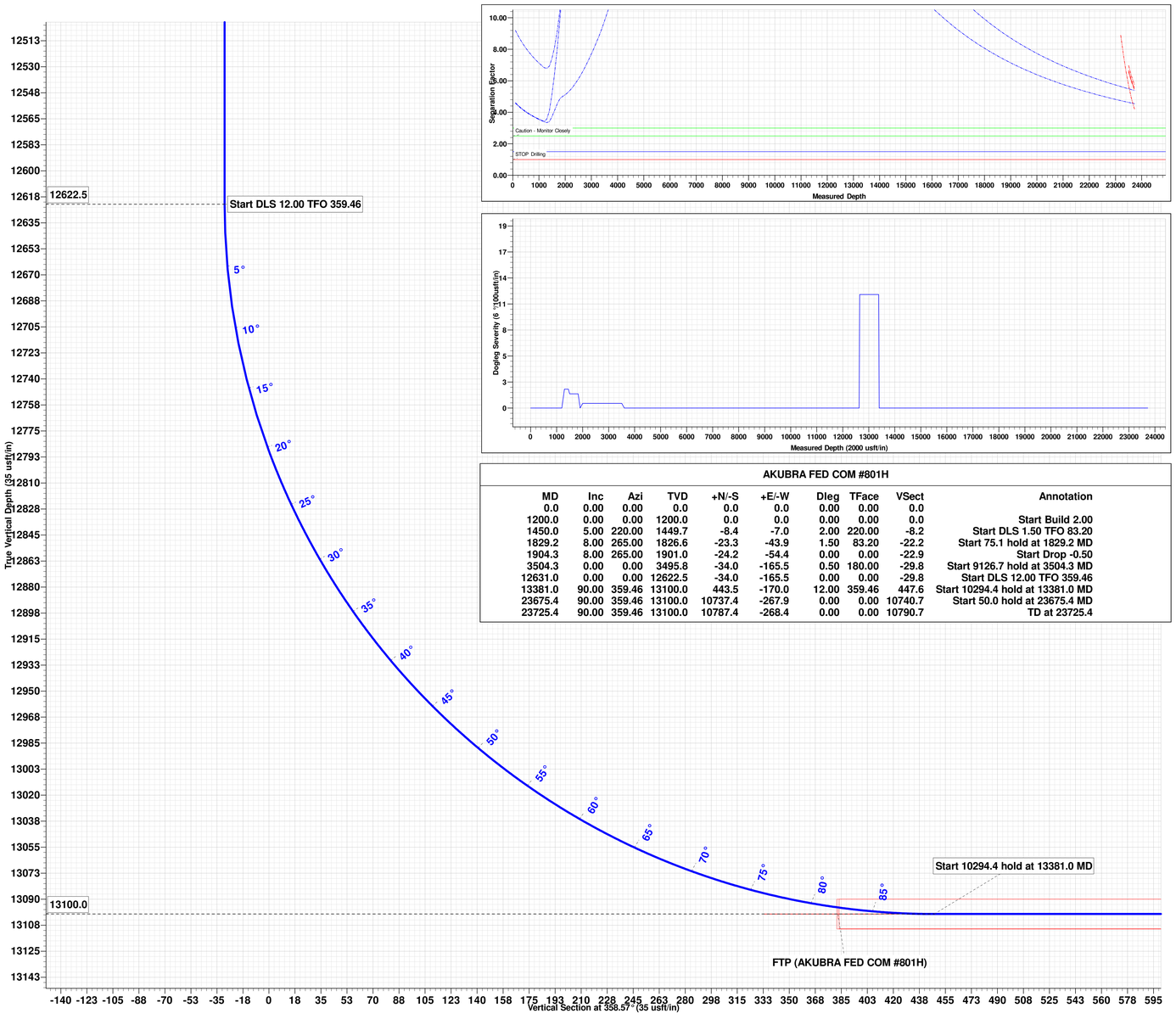
WELL DETAILS: AKUBRA FED COM #801H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	393666.60	796294.70	32° 4' 43.298 N	103° 22' 36.225 W

DESIGN TARGET DETAILS

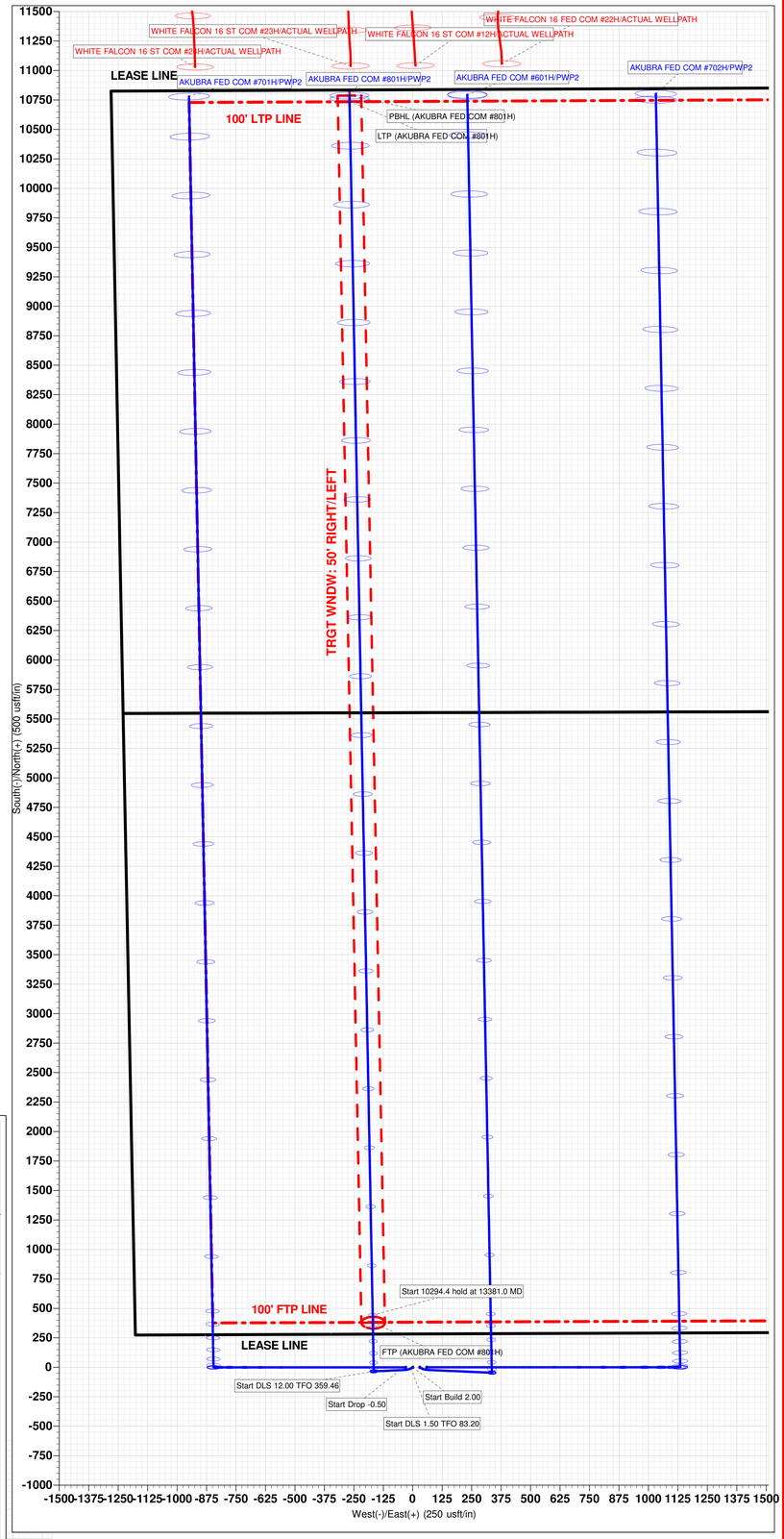
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (AKUBRA FED COM #801H)	13100.0	378.7	-167.8	394045.30	796126.90	32° 4' 47.060 N	103° 22' 38.136 W
LTP (AKUBRA FED COM #801H)	13100.0	10737.4	-267.9	404404.00	796026.80	32° 6' 29.570 N	103° 22' 38.232 W
PBHL (AKUBRA FED COM #801H)	13100.0	10787.4	-268.4	404454.00	796026.30	32° 6' 30.065 N	103° 22' 38.233 W

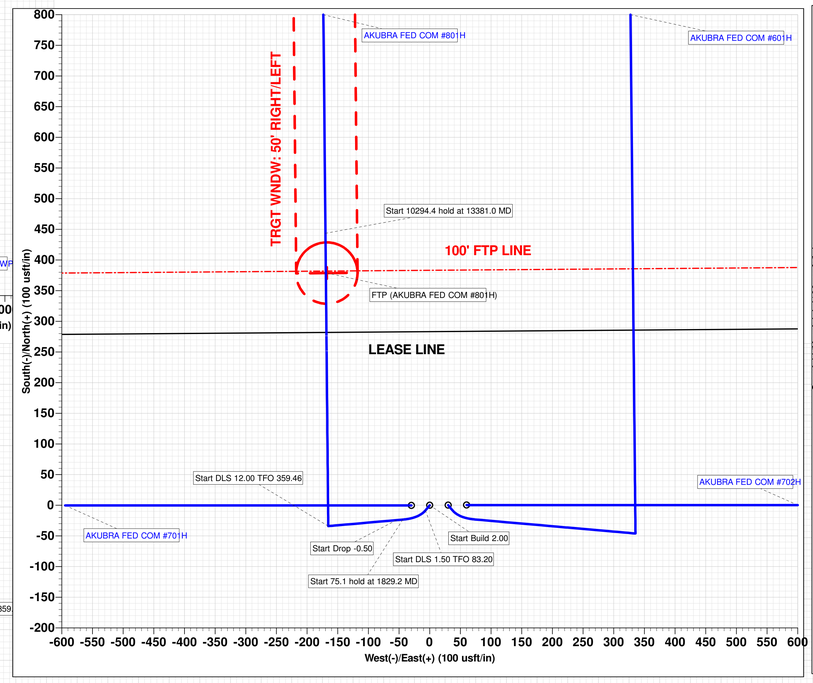


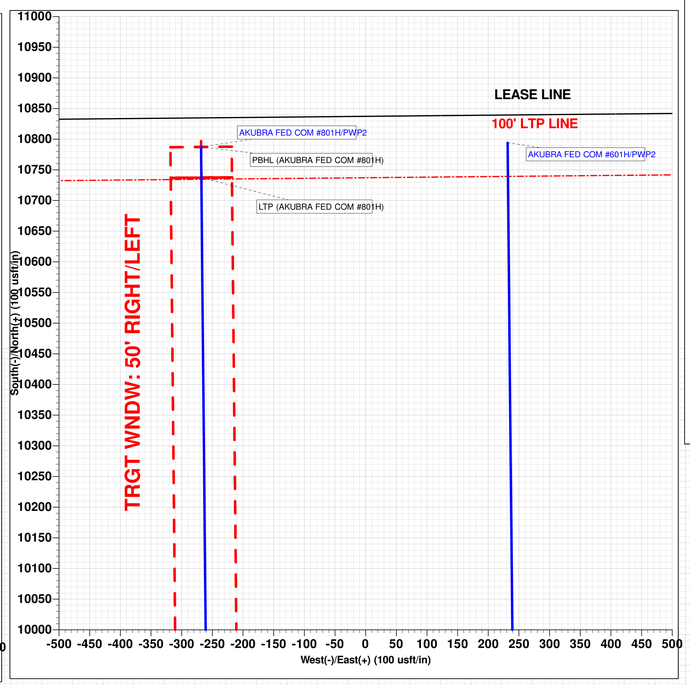


AKUBRA FED COM #801H

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	
1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
1450.0	5.00	220.00	1449.7	-8.4	-7.0	2.00	220.00	-8.2	Start DLS 1.50 TFO 83.20
1829.2	8.00	265.00	1826.6	-23.3	-43.9	1.50	83.20	-22.2	Start 75.1 hold at 1829.2 MD
1904.3	8.00	265.00	1901.0	-24.2	-54.4	0.00	0.00	-22.9	Start Drop -0.50
3504.3	0.00	0.00	3495.8	-34.0	-165.5	0.50	180.00	-29.8	Start 9126.7 hold at 3504.3 MD
12631.0	0.00	0.00	12622.5	-34.0	-165.5	0.00	0.00	-29.8	Start DLS 12.00 TFO 359.46
13381.0	90.00	359.46	13100.0	443.5	-170.0	12.00	359.46	447.6	Start 10294.4 hold at 13381.0 MD
23675.4	90.00	359.46	13100.0	10737.4	-267.9	0.00	0.00	10740.7	Start 50.0 hold at 23675.4 MD
23725.4	90.00	359.46	13100.0	10787.4	-268.4	0.00	0.00	10790.7	TD at 23725.4







DELAWARE BASIN EAST

LEA COUNTY SOUTHEAST
AKUBRA PROJECT
AKUBRA FED COM #801H

OWB
PWP2

Anticollision Report

10 April, 2024

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Reference PWP2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,000.0usft	**Error Surface:**	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 **Sigma**	**Casing Method:**	Added to Error Values

Survey Tool Program **Date** 4/10/2024

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	1,200.0	PWP2 (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp-Initilzd Cont. rev.5
1,200.0	23,725.4	PWP2 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction rev.5

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
AKUBRA PROJECT						
AKUBRA FED COM #601H - OWB - PWP2	1,200.0	1,200.0	30.1	21.3	3.422	CC, ES, SF
AKUBRA FED COM #701H - OWB - PWP2	1,200.0	1,200.0	29.9	21.1	3.399	CC, ES
AKUBRA FED COM #701H - OWB - PWP2	1,300.0	1,298.9	30.5	21.4	3.346	SF
AKUBRA FED COM #702H - OWB - PWP2	1,200.0	1,200.0	60.1	51.3	6.832	CC, ES
AKUBRA FED COM #702H - OWB - PWP2	1,300.0	1,300.0	61.2	52.2	6.788	SF
WHITE FALCON PROJECT						
WHITE FALCON 16 FED COM #22H - OWB - ACTUAL W	23,725.4	22,531.0	898.6	742.3	5.750	CC, ES, SF
WHITE FALCON 16 ST COM #12H - OWB - ACTUAL W	23,725.4	22,232.0	900.3	737.3	5.524	CC, ES, SF
WHITE FALCON 16 ST COM #23H - OWB - ACTUAL W	23,725.4	22,410.0	676.9	516.1	4.210	CC, ES, SF
WHITE FALCON 16 ST COM #24H - OWB - ACTUAL W	23,725.4	22,388.0	884.6	721.7	5.431	CC, ES, SF

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

TD Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
AKUBRA PROJECT						
AKUBRA FED COM #601H - OWB - PWP2	23,725.4	22,940.1	953.6	776.6	5.388	
AKUBRA FED COM #701H - OWB - PWP2	23,725.4	23,240.0	844.8	658.9	4.545	
AKUBRA FED COM #702H - OWB - PWP2	23,725.4	23,296.2				Out of Range @TD
WHITE FALCON PROJECT						
WHITE FALCON 16 FED COM #22H - OWB - ACTUAL W	23,725.4	22,531.0	898.6	742.3	5.750	CC, ES, SF
WHITE FALCON 16 ST COM #12H - OWB - ACTUAL W	23,725.4	22,232.0	900.3	737.3	5.524	CC, ES, SF
WHITE FALCON 16 ST COM #23H - OWB - ACTUAL W	23,725.4	22,410.0	676.9	516.1	4.210	CC, ES, SF
WHITE FALCON 16 ST COM #24H - OWB - ACTUAL W	23,725.4	22,388.0	884.6	721.7	5.431	CC, ES, SF

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #601H - OWB - PWP2 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS — **Rule Assigned:** — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	89.62	0.2	30.1	30.1				
100.0	100.0	100.0	100.0	3.1	3.1	89.62	0.2	30.1	30.1	23.6	6.53	4.606	
200.0	200.0	200.0	200.0	3.2	3.2	89.62	0.2	30.1	30.1	23.3	6.77	4.443	
300.0	300.0	300.0	300.0	3.3	3.3	89.62	0.2	30.1	30.1	23.1	7.00	4.297	
400.0	400.0	400.0	400.0	3.4	3.4	89.62	0.2	30.1	30.1	22.9	7.23	4.165	
500.0	500.0	500.0	500.0	3.6	3.6	89.62	0.2	30.1	30.1	22.7	7.44	4.044	
600.0	600.0	600.0	600.0	3.7	3.7	89.62	0.2	30.1	30.1	22.4	7.65	3.933	
700.0	700.0	700.0	700.0	3.8	3.8	89.62	0.2	30.1	30.1	22.2	7.86	3.832	
800.0	800.0	800.0	800.0	3.9	3.9	89.62	0.2	30.1	30.1	22.0	8.05	3.738	
900.0	900.0	900.0	900.0	4.0	4.0	89.62	0.2	30.1	30.1	21.9	8.25	3.650	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	89.62	0.2	30.1	30.1	21.7	8.43	3.569	
1,100.0	1,100.0	1,100.0	1,100.0	4.3	4.3	89.62	0.2	30.1	30.1	21.5	8.62	3.493	
1,200.0	1,200.0	1,200.0	1,200.0	4.4	4.4	89.62	0.2	30.1	30.1	21.3	8.80	3.422	CC, ES, SF
1,300.0	1,300.0	1,299.3	1,299.3	4.6	4.6	-130.34	-1.1	31.2	32.3	23.3	9.06	3.568	
1,400.0	1,399.8	1,398.3	1,398.1	4.8	4.8	-130.22	-5.1	34.5	39.0	29.5	9.49	4.112	
1,500.0	1,499.5	1,496.7	1,496.2	5.0	5.0	-138.45	-11.1	40.0	50.2	40.5	9.68	5.182	
1,600.0	1,599.0	1,594.2	1,593.3	5.2	5.2	-153.09	-16.3	47.5	65.6	55.5	10.08	6.506	
1,700.0	1,698.5	1,690.7	1,689.2	5.4	5.4	-164.49	-20.1	56.9	85.3	74.8	10.52	8.109	
1,800.0	1,797.7	1,785.8	1,783.6	5.6	5.6	-173.01	-22.5	68.2	109.1	98.1	10.99	9.929	
1,900.0	1,896.7	1,880.9	1,877.8	5.8	5.8	-175.04	-23.7	81.2	136.3	124.9	11.41	11.948	
2,000.0	1,995.8	1,977.2	1,973.2	6.1	6.0	-175.02	-24.9	94.6	163.4	151.4	11.96	13.661	
2,100.0	2,095.0	2,073.7	2,068.7	6.4	6.3	-174.99	-26.1	107.9	189.6	177.1	12.56	15.100	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #601H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,200.0	2,194.3	2,170.4	2,164.5	6.7	6.6	-174.95	-27.3	121.4	215.0	201.8	13.18	16.316	
2,300.0	2,293.7	2,267.3	2,260.5	7.0	6.9	-174.90	-28.4	134.8	239.6	225.8	13.82	17.338	
2,400.0	2,393.2	2,364.5	2,356.7	7.3	7.3	-174.84	-29.6	148.3	263.3	248.8	14.47	18.192	
2,500.0	2,492.8	2,461.8	2,453.1	7.7	7.6	-174.78	-30.8	161.8	286.2	271.0	15.14	18.903	
2,600.0	2,592.4	2,559.4	2,549.7	8.0	7.9	-174.71	-32.0	175.3	308.2	292.4	15.81	19.489	
2,700.0	2,692.2	2,657.1	2,646.5	8.3	8.3	-174.64	-33.2	188.8	329.4	312.9	16.49	19.968	
2,800.0	2,791.9	2,755.0	2,743.4	8.6	8.7	-174.57	-34.4	202.4	349.7	332.5	17.18	20.357	
2,900.0	2,891.8	2,853.1	2,840.6	8.9	9.0	-174.49	-35.5	216.0	369.2	351.3	17.86	20.666	
3,000.0	2,991.7	2,952.6	2,939.2	9.3	9.4	-174.40	-36.7	229.7	387.7	369.2	18.55	20.899	
3,100.0	3,091.6	3,054.7	3,040.3	9.6	9.8	-174.32	-37.9	243.1	404.7	385.5	19.26	21.012	
3,200.0	3,191.5	3,157.2	3,142.1	9.9	10.2	-174.24	-39.0	255.6	420.0	400.1	19.96	21.047	
3,300.0	3,291.5	3,260.1	3,244.3	10.1	10.6	-174.16	-40.0	267.3	433.5	412.9	20.63	21.013	
3,400.0	3,391.5	3,363.4	3,347.0	10.4	11.0	-174.08	-41.0	278.0	445.3	424.0	21.28	20.923	
3,500.0	3,491.5	3,466.9	3,450.0	10.5	11.4	-174.00	-41.8	287.9	455.3	433.5	21.84	20.847	
3,600.0	3,591.5	3,570.7	3,553.4	10.6	11.7	91.07	-42.6	296.9	464.0	441.7	22.31	20.796	
3,700.0	3,691.5	3,674.6	3,657.1	10.7	12.1	91.14	-43.3	304.9	471.7	449.0	22.78	20.712	
3,800.0	3,791.5	3,778.7	3,760.9	10.7	12.5	91.20	-43.9	312.1	478.6	455.4	23.24	20.598	
3,900.0	3,891.5	3,882.9	3,864.9	10.8	12.8	91.25	-44.5	318.2	484.5	460.9	23.68	20.458	
4,000.0	3,991.5	3,987.2	3,969.0	10.9	13.2	91.29	-44.9	323.5	489.6	465.5	24.12	20.295	
4,100.0	4,091.5	4,091.6	4,073.3	10.9	13.5	91.32	-45.3	327.8	493.7	469.2	24.55	20.112	
4,200.0	4,191.5	4,196.0	4,177.7	11.0	13.8	91.35	-45.6	331.2	496.9	472.0	24.95	19.913	
4,300.0	4,291.5	4,300.5	4,282.2	11.1	14.1	91.36	-45.8	333.6	499.2	473.9	25.34	19.702	
4,400.0	4,391.5	4,405.1	4,386.8	11.1	14.4	91.37	-46.0	335.0	500.7	475.0	25.69	19.488	
4,500.0	4,491.5	4,509.6	4,491.3	11.2	14.6	91.38	-46.0	335.5	501.1	475.2	25.97	19.299	
4,600.0	4,591.5	4,609.8	4,591.5	11.3	14.7	91.38	-46.0	335.5	501.1	475.1	26.09	19.211	
4,700.0	4,691.5	4,709.8	4,691.5	11.4	14.7	91.38	-46.0	335.5	501.1	474.9	26.20	19.129	
4,800.0	4,791.5	4,809.8	4,791.5	11.4	14.8	91.38	-46.0	335.5	501.1	474.8	26.31	19.047	
4,900.0	4,891.5	4,909.8	4,891.5	11.5	14.8	91.38	-46.0	335.5	501.1	474.7	26.42	18.965	
5,000.0	4,991.5	5,009.8	4,991.5	11.6	14.9	91.38	-46.0	335.5	501.1	474.6	26.54	18.884	
5,100.0	5,091.5	5,109.8	5,091.5	11.6	14.9	91.38	-46.0	335.5	501.1	474.5	26.65	18.803	
5,200.0	5,191.5	5,209.8	5,191.5	11.7	15.0	91.38	-46.0	335.5	501.1	474.4	26.77	18.722	
5,300.0	5,291.5	5,309.8	5,291.5	11.8	15.0	91.38	-46.0	335.5	501.1	474.3	26.88	18.642	
5,400.0	5,391.5	5,409.8	5,391.5	11.8	15.1	91.38	-46.0	335.5	501.1	474.1	27.00	18.562	
5,500.0	5,491.5	5,509.8	5,491.5	11.9	15.1	91.38	-46.0	335.5	501.1	474.0	27.12	18.482	
5,600.0	5,591.5	5,609.8	5,591.5	12.0	15.2	91.38	-46.0	335.5	501.1	473.9	27.23	18.403	
5,700.0	5,691.5	5,709.8	5,691.5	12.0	15.2	91.38	-46.0	335.5	501.1	473.8	27.35	18.324	
5,800.0	5,791.5	5,809.8	5,791.5	12.1	15.3	91.38	-46.0	335.5	501.1	473.7	27.47	18.246	
5,900.0	5,891.5	5,909.8	5,891.5	12.2	15.3	91.38	-46.0	335.5	501.1	473.6	27.58	18.167	
6,000.0	5,991.5	6,009.8	5,991.5	12.3	15.4	91.38	-46.0	335.5	501.1	473.4	27.70	18.090	
6,100.0	6,091.5	6,109.8	6,091.5	12.3	15.4	91.38	-46.0	335.5	501.1	473.3	27.82	18.012	
6,200.0	6,191.5	6,209.8	6,191.5	12.4	15.5	91.38	-46.0	335.5	501.1	473.2	27.94	17.935	
6,300.0	6,291.5	6,309.8	6,291.5	12.5	15.5	91.38	-46.0	335.5	501.1	473.1	28.06	17.859	
6,400.0	6,391.5	6,409.8	6,391.5	12.5	15.6	91.38	-46.0	335.5	501.1	473.0	28.18	17.783	
6,500.0	6,491.5	6,509.8	6,491.5	12.6	15.6	91.38	-46.0	335.5	501.1	472.8	28.30	17.707	
6,600.0	6,591.5	6,609.8	6,591.5	12.7	15.7	91.38	-46.0	335.5	501.1	472.7	28.42	17.631	
6,700.0	6,691.5	6,709.8	6,691.5	12.8	15.7	91.38	-46.0	335.5	501.1	472.6	28.54	17.556	
6,800.0	6,791.5	6,809.8	6,791.5	12.8	15.8	91.38	-46.0	335.5	501.1	472.5	28.67	17.482	
6,900.0	6,891.5	6,909.8	6,891.5	12.9	15.8	91.38	-46.0	335.5	501.1	472.4	28.79	17.408	
7,000.0	6,991.5	7,009.8	6,991.5	13.0	15.9	91.38	-46.0	335.5	501.1	472.2	28.91	17.334	
7,100.0	7,091.5	7,109.8	7,091.5	13.0	15.9	91.38	-46.0	335.5	501.1	472.1	29.03	17.260	
7,200.0	7,191.5	7,209.8	7,191.5	13.1	16.0	91.38	-46.0	335.5	501.1	472.0	29.16	17.187	
7,300.0	7,291.5	7,309.8	7,291.5	13.2	16.1	91.38	-46.0	335.5	501.1	471.9	29.28	17.115	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #601H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,400.0	7,391.5	7,409.8	7,391.5	13.3	16.1	91.38	-46.0	335.5	501.1	471.7	29.41	17.042	
7,500.0	7,491.5	7,509.8	7,491.5	13.3	16.2	91.38	-46.0	335.5	501.1	471.6	29.53	16.971	
7,600.0	7,591.5	7,609.8	7,591.5	13.4	16.2	91.38	-46.0	335.5	501.1	471.5	29.66	16.899	
7,700.0	7,691.5	7,709.8	7,691.5	13.5	16.3	91.38	-46.0	335.5	501.1	471.4	29.78	16.828	
7,800.0	7,791.5	7,809.8	7,791.5	13.6	16.3	91.38	-46.0	335.5	501.1	471.2	29.91	16.758	
7,900.0	7,891.5	7,909.8	7,891.5	13.6	16.4	91.38	-46.0	335.5	501.1	471.1	30.03	16.687	
8,000.0	7,991.5	8,009.8	7,991.5	13.7	16.4	91.38	-46.0	335.5	501.1	471.0	30.16	16.617	
8,100.0	8,091.5	8,109.8	8,091.5	13.8	16.5	91.38	-46.0	335.5	501.1	470.9	30.28	16.548	
8,200.0	8,191.5	8,209.8	8,191.5	13.8	16.6	91.38	-46.0	335.5	501.1	470.7	30.41	16.479	
8,300.0	8,291.5	8,309.8	8,291.5	13.9	16.6	91.38	-46.0	335.5	501.1	470.6	30.54	16.410	
8,400.0	8,391.5	8,409.8	8,391.5	14.0	16.7	91.38	-46.0	335.5	501.1	470.5	30.67	16.342	
8,500.0	8,491.5	8,509.8	8,491.5	14.1	16.7	91.38	-46.0	335.5	501.1	470.4	30.79	16.274	
8,600.0	8,591.5	8,609.8	8,591.5	14.1	16.8	91.38	-46.0	335.5	501.1	470.2	30.92	16.207	
8,700.0	8,691.5	8,709.8	8,691.5	14.2	16.8	91.38	-46.0	335.5	501.1	470.1	31.05	16.140	
8,800.0	8,791.5	8,809.8	8,791.5	14.3	16.9	91.38	-46.0	335.5	501.1	470.0	31.18	16.073	
8,900.0	8,891.5	8,909.8	8,891.5	14.4	17.0	91.38	-46.0	335.5	501.1	469.8	31.31	16.007	
9,000.0	8,991.5	9,009.8	8,991.5	14.4	17.0	91.38	-46.0	335.5	501.1	469.7	31.44	15.941	
9,100.0	9,091.5	9,109.8	9,091.5	14.5	17.1	91.38	-46.0	335.5	501.1	469.6	31.57	15.875	
9,200.0	9,191.5	9,209.8	9,191.5	14.6	17.1	91.38	-46.0	335.5	501.1	469.5	31.70	15.810	
9,300.0	9,291.5	9,309.8	9,291.5	14.7	17.2	91.38	-46.0	335.5	501.1	469.3	31.83	15.746	
9,400.0	9,391.5	9,409.8	9,391.5	14.7	17.2	91.38	-46.0	335.5	501.1	469.2	31.96	15.681	
9,500.0	9,491.5	9,509.8	9,491.5	14.8	17.3	91.38	-46.0	335.5	501.1	469.1	32.09	15.617	
9,600.0	9,591.5	9,609.8	9,591.5	14.9	17.4	91.38	-46.0	335.5	501.1	468.9	32.22	15.554	
9,700.0	9,691.5	9,709.8	9,691.5	15.0	17.4	91.38	-46.0	335.5	501.1	468.8	32.35	15.491	
9,800.0	9,791.5	9,809.8	9,791.5	15.0	17.5	91.38	-46.0	335.5	501.1	468.7	32.48	15.428	
9,900.0	9,891.5	9,909.8	9,891.5	15.1	17.5	91.38	-46.0	335.5	501.1	468.5	32.61	15.366	
10,000.0	9,991.5	10,009.8	9,991.5	15.2	17.6	91.38	-46.0	335.5	501.1	468.4	32.75	15.304	
10,100.0	10,091.5	10,109.8	10,091.5	15.3	17.7	91.38	-46.0	335.5	501.1	468.3	32.88	15.242	
10,200.0	10,191.5	10,209.8	10,191.5	15.3	17.7	91.38	-46.0	335.5	501.1	468.1	33.01	15.181	
10,300.0	10,291.5	10,309.8	10,291.5	15.4	17.8	91.38	-46.0	335.5	501.1	468.0	33.15	15.120	
10,400.0	10,391.5	10,409.8	10,391.5	15.5	17.8	91.38	-46.0	335.5	501.1	467.9	33.28	15.059	
10,500.0	10,491.5	10,509.8	10,491.5	15.6	17.9	91.38	-46.0	335.5	501.1	467.7	33.41	14.999	
10,600.0	10,591.5	10,609.8	10,591.5	15.6	18.0	91.38	-46.0	335.5	501.1	467.6	33.55	14.939	
10,700.0	10,691.5	10,709.8	10,691.5	15.7	18.0	91.38	-46.0	335.5	501.1	467.5	33.68	14.880	
10,800.0	10,791.5	10,809.8	10,791.5	15.8	18.1	91.38	-46.0	335.5	501.1	467.3	33.81	14.821	
10,900.0	10,891.5	10,909.8	10,891.5	15.9	18.2	91.38	-46.0	335.5	501.1	467.2	33.95	14.762	
11,000.0	10,991.5	11,009.8	10,991.5	15.9	18.2	91.38	-46.0	335.5	501.1	467.1	34.08	14.704	
11,100.0	11,091.5	11,109.8	11,091.5	16.0	18.3	91.38	-46.0	335.5	501.1	466.9	34.22	14.646	
11,200.0	11,191.5	11,209.8	11,191.5	16.1	18.3	91.38	-46.0	335.5	501.1	466.8	34.35	14.588	
11,300.0	11,291.5	11,309.8	11,291.5	16.2	18.4	91.38	-46.0	335.5	501.1	466.7	34.49	14.531	
11,400.0	11,391.5	11,409.8	11,391.5	16.2	18.5	91.38	-46.0	335.5	501.1	466.5	34.62	14.474	
11,500.0	11,491.5	11,509.8	11,491.5	16.3	18.5	91.38	-46.0	335.5	501.1	466.4	34.76	14.418	
11,600.0	11,591.5	11,609.8	11,591.5	16.4	18.6	91.38	-46.0	335.5	501.1	466.3	34.90	14.362	
11,700.0	11,691.5	11,709.8	11,691.5	16.5	18.7	91.38	-46.0	335.5	501.1	466.1	35.03	14.306	
11,800.0	11,791.5	11,809.8	11,791.5	16.5	18.7	91.38	-46.0	335.5	501.1	466.0	35.16	14.251	
11,900.0	11,891.5	11,911.9	11,893.2	16.6	18.7	90.55	-38.8	335.5	501.0	465.7	35.26	14.209	
11,944.0	11,935.5	11,955.4	11,935.6	16.6	18.7	89.47	-29.3	335.4	500.9	465.6	35.29	14.192	
12,000.0	11,991.5	12,007.6	11,985.1	16.7	18.7	87.59	-12.9	335.2	501.2	465.8	35.34	14.181	
12,100.0	12,091.5	12,090.4	12,059.2	16.8	18.7	83.41	23.9	334.9	504.7	469.2	35.51	14.214	
12,200.0	12,191.5	12,158.8	12,114.8	16.8	18.7	78.96	63.5	334.5	515.1	479.1	35.99	14.314	
12,300.0	12,291.5	12,214.2	12,155.3	16.9	18.7	74.86	101.2	334.1	535.2	498.2	37.01	14.459	
12,400.0	12,391.5	12,258.8	12,184.6	17.0	18.7	71.32	134.8	333.8	566.2	527.6	38.62	14.661	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #601H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,500.0	12,491.5	12,300.0	12,208.8	17.1	18.7	67.94	168.2	333.5	608.0	567.5	40.51	15.010	
12,600.0	12,591.5	12,325.0	12,222.1	17.1	18.7	65.87	189.4	333.3	659.6	616.9	42.71	15.445	
12,700.0	12,691.3	12,350.0	12,234.2	17.2	18.7	59.17	211.3	333.1	717.8	673.1	44.74	16.042	
12,800.0	12,788.0	12,375.0	12,245.1	17.2	18.7	50.90	233.8	332.9	774.6	728.0	46.65	16.604	
12,900.0	12,877.5	12,412.8	12,259.4	17.2	18.7	43.95	268.7	332.5	826.5	778.3	48.22	17.142	
13,000.0	12,955.8	12,450.0	12,270.7	17.2	18.8	38.93	304.2	332.2	871.4	821.8	49.61	17.567	
13,100.0	13,019.6	12,475.0	12,276.7	17.2	18.8	35.64	328.4	332.0	907.7	856.8	50.85	17.848	
13,200.0	13,066.1	12,525.0	12,284.9	17.2	18.8	33.21	377.7	331.5	934.0	882.3	51.68	18.072	
13,300.0	13,093.1	12,550.0	12,287.1	17.3	18.8	32.04	402.6	331.2	949.6	897.3	52.33	18.147	
13,400.0	13,100.0	12,614.7	12,288.0	17.4	18.9	31.67	467.3	330.6	954.0	901.4	52.67	18.114	
13,500.0	13,100.0	12,714.7	12,288.0	17.5	19.0	31.67	567.3	329.7	954.0	901.0	52.99	18.005	
13,600.0	13,100.0	12,814.7	12,288.0	17.7	19.2	31.66	667.3	328.7	954.0	900.7	53.35	17.883	
13,700.0	13,100.0	12,914.7	12,288.0	17.8	19.4	31.66	767.3	327.7	954.0	900.3	53.75	17.748	
13,800.0	13,100.0	13,014.7	12,288.0	18.1	19.6	31.66	867.3	326.8	954.0	899.8	54.20	17.603	
13,900.0	13,100.0	13,114.7	12,288.0	18.3	19.8	31.66	967.3	325.8	954.0	899.3	54.68	17.446	
14,000.0	13,100.0	13,214.7	12,288.0	18.6	20.1	31.66	1,067.3	324.9	954.0	898.8	55.21	17.281	
14,100.0	13,100.0	13,314.7	12,288.0	18.9	20.4	31.66	1,167.3	323.9	954.0	898.2	55.77	17.107	
14,200.0	13,100.0	13,414.7	12,288.0	19.2	20.7	31.66	1,267.3	323.0	954.0	897.6	56.37	16.925	
14,300.0	13,100.0	13,514.7	12,288.0	19.6	21.1	31.66	1,367.3	322.0	954.0	897.0	57.00	16.737	
14,400.0	13,100.0	13,614.7	12,288.0	20.0	21.5	31.66	1,467.2	321.0	954.0	896.3	57.67	16.543	
14,500.0	13,100.0	13,714.7	12,288.0	20.4	21.8	31.66	1,567.2	320.1	954.0	895.6	58.37	16.344	
14,600.0	13,100.0	13,814.7	12,288.0	20.8	22.2	31.66	1,667.2	319.1	954.0	894.9	59.10	16.141	
14,700.0	13,100.0	13,914.7	12,288.0	21.2	22.7	31.66	1,767.2	318.2	954.0	894.1	59.87	15.935	
14,800.0	13,100.0	14,014.7	12,288.0	21.7	23.1	31.66	1,867.2	317.2	954.0	893.3	60.66	15.726	
14,900.0	13,100.0	14,114.7	12,288.0	22.2	23.6	31.66	1,967.2	316.2	954.0	892.5	61.48	15.516	
15,000.0	13,100.0	14,214.7	12,288.0	22.7	24.0	31.66	2,067.2	315.3	954.0	891.6	62.33	15.304	
15,100.0	13,100.0	14,314.7	12,288.0	23.2	24.5	31.66	2,167.2	314.3	954.0	890.8	63.21	15.092	
15,200.0	13,100.0	14,414.7	12,288.0	23.7	25.0	31.66	2,267.2	313.4	954.0	889.8	64.11	14.880	
15,300.0	13,100.0	14,514.7	12,288.0	24.2	25.6	31.66	2,367.2	312.4	954.0	888.9	65.04	14.668	
15,400.0	13,100.0	14,614.7	12,288.0	24.8	26.1	31.66	2,467.2	311.5	953.9	888.0	65.98	14.457	
15,500.0	13,100.0	14,714.7	12,288.0	25.3	26.6	31.66	2,567.2	310.5	953.9	887.0	66.95	14.248	
15,600.0	13,100.0	14,814.7	12,288.0	25.9	27.2	31.66	2,667.2	309.5	953.9	886.0	67.95	14.040	
15,700.0	13,100.0	14,914.7	12,288.0	26.5	27.7	31.66	2,767.2	308.6	953.9	885.0	68.96	13.834	
15,800.0	13,100.0	15,014.7	12,288.0	27.1	28.3	31.66	2,867.2	307.6	953.9	883.9	69.99	13.630	
15,900.0	13,100.0	15,114.7	12,288.0	27.7	28.9	31.66	2,967.2	306.7	953.9	882.9	71.04	13.429	
16,000.0	13,100.0	15,214.7	12,288.0	28.3	29.5	31.66	3,067.2	305.7	953.9	881.8	72.10	13.230	
16,100.0	13,100.0	15,314.7	12,288.0	28.9	30.1	31.65	3,167.2	304.7	953.9	880.7	73.19	13.034	
16,200.0	13,100.0	15,414.7	12,288.0	29.5	30.7	31.65	3,267.2	303.8	953.9	879.6	74.29	12.841	
16,300.0	13,100.0	15,514.7	12,288.0	30.1	31.3	31.65	3,367.2	302.8	953.9	878.5	75.40	12.651	
16,400.0	13,100.0	15,614.7	12,288.0	30.7	31.9	31.65	3,467.2	301.9	953.9	877.4	76.53	12.464	
16,500.0	13,100.0	15,714.7	12,288.0	31.4	32.5	31.65	3,567.2	300.9	953.9	876.2	77.68	12.280	
16,600.0	13,100.0	15,814.7	12,288.0	32.0	33.1	31.65	3,667.1	299.9	953.9	875.1	78.84	12.100	
16,700.0	13,100.0	15,914.7	12,288.0	32.7	33.8	31.65	3,767.1	299.0	953.9	873.9	80.01	11.923	
16,800.0	13,100.0	16,014.7	12,288.0	33.3	34.4	31.65	3,867.1	298.0	953.9	872.7	81.19	11.749	
16,900.0	13,100.0	16,114.7	12,288.0	34.0	35.1	31.65	3,967.1	297.1	953.9	871.5	82.39	11.578	
17,000.0	13,100.0	16,214.7	12,288.0	34.6	35.7	31.65	4,067.1	296.1	953.9	870.3	83.59	11.411	
17,100.0	13,100.0	16,314.7	12,288.0	35.3	36.4	31.65	4,167.1	295.2	953.9	869.1	84.81	11.247	
17,200.0	13,100.0	16,414.7	12,288.0	36.0	37.0	31.65	4,267.1	294.2	953.9	867.8	86.04	11.087	
17,300.0	13,100.0	16,514.7	12,288.0	36.7	37.7	31.65	4,367.1	293.2	953.9	866.6	87.27	10.930	
17,400.0	13,100.0	16,614.7	12,288.0	37.3	38.3	31.65	4,467.1	292.3	953.9	865.3	88.52	10.776	
17,500.0	13,100.0	16,714.7	12,288.0	38.0	39.0	31.65	4,567.1	291.3	953.9	864.1	89.78	10.625	
17,600.0	13,100.0	16,814.7	12,288.0	38.7	39.7	31.65	4,667.1	290.4	953.9	862.8	91.04	10.477	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #601H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,700.0	13,100.0	16,914.7	12,288.0	39.4	40.4	31.65	4,767.1	289.4	953.9	861.5	92.31	10.333	
17,800.0	13,100.0	17,014.7	12,288.0	40.1	41.0	31.65	4,867.1	288.4	953.9	860.3	93.60	10.191	
17,900.0	13,100.0	17,114.7	12,288.0	40.8	41.7	31.65	4,967.1	287.5	953.8	859.0	94.88	10.053	
18,000.0	13,100.0	17,214.7	12,288.0	41.5	42.4	31.65	5,067.1	286.5	953.8	857.7	96.18	9.917	
18,100.0	13,100.0	17,314.7	12,288.0	42.1	43.1	31.65	5,167.1	285.6	953.8	856.4	97.48	9.785	
18,200.0	13,100.0	17,414.7	12,288.0	42.8	43.8	31.65	5,267.1	284.6	953.8	855.0	98.79	9.655	
18,300.0	13,100.0	17,514.7	12,288.0	43.5	44.5	31.65	5,367.1	283.6	953.8	853.7	100.11	9.528	
18,400.0	13,100.0	17,614.7	12,288.0	44.3	45.2	31.65	5,467.1	282.7	953.8	852.4	101.43	9.404	
18,500.0	13,100.0	17,714.7	12,288.0	45.0	45.9	31.65	5,567.1	281.7	953.8	851.1	102.76	9.282	
18,600.0	13,100.0	17,814.7	12,288.0	45.7	46.6	31.65	5,667.1	280.8	953.8	849.7	104.10	9.163	
18,700.0	13,100.0	17,914.7	12,288.0	46.4	47.3	31.64	5,767.1	279.8	953.8	848.4	105.44	9.046	
18,800.0	13,100.0	18,014.7	12,288.0	47.1	48.0	31.64	5,867.0	278.9	953.8	847.0	106.78	8.932	
18,900.0	13,100.0	18,114.7	12,288.0	47.8	48.7	31.64	5,967.0	277.9	953.8	845.7	108.13	8.821	
19,000.0	13,100.0	18,214.7	12,288.0	48.5	49.4	31.64	6,067.0	276.9	953.8	844.3	109.49	8.711	
19,100.0	13,100.0	18,314.7	12,288.0	49.2	50.1	31.64	6,167.0	276.0	953.8	842.9	110.85	8.605	
19,200.0	13,100.0	18,414.7	12,288.0	49.9	50.8	31.64	6,267.0	275.0	953.8	841.6	112.21	8.500	
19,300.0	13,100.0	18,514.7	12,288.0	50.7	51.5	31.64	6,367.0	274.1	953.8	840.2	113.58	8.397	
19,400.0	13,100.0	18,614.7	12,288.0	51.4	52.2	31.64	6,467.0	273.1	953.8	838.8	114.96	8.297	
19,500.0	13,100.0	18,714.7	12,288.0	52.1	52.9	31.64	6,567.0	272.1	953.8	837.4	116.34	8.199	
19,600.0	13,100.0	18,814.7	12,288.0	52.8	53.6	31.64	6,667.0	271.2	953.8	836.1	117.72	8.102	
19,700.0	13,100.0	18,914.7	12,288.0	53.5	54.4	31.64	6,767.0	270.2	953.8	834.7	119.10	8.008	
19,800.0	13,100.0	19,014.7	12,288.0	54.3	55.1	31.64	6,867.0	269.3	953.8	833.3	120.49	7.916	
19,900.0	13,100.0	19,114.7	12,288.0	55.0	55.8	31.64	6,967.0	268.3	953.8	831.9	121.89	7.825	
20,000.0	13,100.0	19,214.7	12,288.0	55.7	56.5	31.64	7,067.0	267.3	953.8	830.5	123.28	7.736	
20,100.0	13,100.0	19,314.7	12,288.0	56.4	57.2	31.64	7,167.0	266.4	953.8	829.1	124.68	7.650	
20,200.0	13,100.0	19,414.7	12,288.0	57.2	58.0	31.64	7,267.0	265.4	953.8	827.7	126.08	7.564	
20,300.0	13,100.0	19,514.7	12,288.0	57.9	58.7	31.64	7,367.0	264.5	953.7	826.3	127.49	7.481	
20,400.0	13,100.0	19,614.7	12,288.0	58.6	59.4	31.64	7,467.0	263.5	953.7	824.8	128.90	7.399	
20,500.0	13,100.0	19,714.7	12,288.0	59.4	60.1	31.64	7,567.0	262.6	953.7	823.4	130.31	7.319	
20,600.0	13,100.0	19,814.7	12,288.0	60.1	60.9	31.64	7,667.0	261.6	953.7	822.0	131.73	7.240	
20,700.0	13,100.0	19,914.7	12,288.0	60.8	61.6	31.64	7,767.0	260.6	953.7	820.6	133.15	7.163	
20,800.0	13,100.0	20,014.7	12,288.0	61.6	62.3	31.64	7,867.0	259.7	953.7	819.2	134.57	7.087	
20,900.0	13,100.0	20,114.7	12,288.0	62.3	63.0	31.64	7,967.0	258.7	953.7	817.7	135.99	7.013	
21,000.0	13,100.0	20,214.7	12,288.0	63.0	63.8	31.64	8,066.9	257.8	953.7	816.3	137.41	6.940	
21,100.0	13,100.0	20,314.7	12,288.0	63.8	64.5	31.64	8,166.9	256.8	953.7	814.9	138.84	6.869	
21,200.0	13,100.0	20,414.7	12,288.0	64.5	65.2	31.63	8,266.9	255.8	953.7	813.4	140.27	6.799	
21,300.0	13,100.0	20,514.7	12,288.0	65.2	66.0	31.63	8,366.9	254.9	953.7	812.0	141.71	6.730	
21,400.0	13,100.0	20,614.7	12,288.0	66.0	66.7	31.63	8,466.9	253.9	953.7	810.6	143.14	6.663	
21,500.0	13,100.0	20,714.7	12,288.0	66.7	67.4	31.63	8,566.9	253.0	953.7	809.1	144.58	6.596	
21,600.0	13,100.0	20,814.7	12,288.0	67.4	68.2	31.63	8,666.9	252.0	953.7	807.7	146.02	6.531	
21,700.0	13,100.0	20,914.7	12,288.0	68.2	68.9	31.63	8,766.9	251.1	953.7	806.2	147.46	6.468	
21,800.0	13,100.0	21,014.7	12,288.0	68.9	69.6	31.63	8,866.9	250.1	953.7	804.8	148.90	6.405	
21,900.0	13,100.0	21,114.7	12,288.0	69.7	70.4	31.63	8,966.9	249.1	953.7	803.3	150.34	6.343	
22,000.0	13,100.0	21,214.7	12,288.0	70.4	71.1	31.63	9,066.9	248.2	953.7	801.9	151.79	6.283	
22,100.0	13,100.0	21,314.7	12,288.0	71.1	71.8	31.63	9,166.9	247.2	953.7	800.4	153.24	6.223	
22,200.0	13,100.0	21,414.7	12,288.0	71.9	72.6	31.63	9,266.9	246.3	953.7	799.0	154.69	6.165	
22,300.0	13,100.0	21,514.7	12,288.0	72.6	73.3	31.63	9,366.9	245.3	953.7	797.5	156.14	6.108	
22,400.0	13,100.0	21,614.7	12,288.0	73.4	74.1	31.63	9,466.9	244.3	953.7	796.1	157.60	6.051	
22,500.0	13,100.0	21,714.7	12,288.0	74.1	74.8	31.63	9,566.9	243.4	953.7	794.6	159.05	5.996	
22,600.0	13,100.0	21,814.7	12,288.0	74.9	75.5	31.63	9,666.9	242.4	953.7	793.1	160.51	5.942	
22,700.0	13,100.0	21,914.7	12,288.0	75.6	76.3	31.63	9,766.9	241.5	953.7	791.7	161.97	5.888	
22,800.0	13,100.0	22,014.7	12,288.0	76.3	77.0	31.63	9,866.9	240.5	953.6	790.2	163.43	5.835	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #601H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS

Rule Assigned:

Offset Well Error: 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
22,900.0	13,100.0	22,114.7	12,288.0	77.1	77.8	31.63	9,966.9	239.5	953.6	788.8	164.89	5.784	
23,000.0	13,100.0	22,214.7	12,288.0	77.8	78.5	31.63	10,066.9	238.6	953.6	787.3	166.35	5.733	
23,100.0	13,100.0	22,314.7	12,288.0	78.6	79.2	31.63	10,166.8	237.6	953.6	785.8	167.81	5.683	
23,200.0	13,100.0	22,414.7	12,288.0	79.3	80.0	31.63	10,266.8	236.7	953.6	784.4	169.28	5.634	
23,300.0	13,100.0	22,514.7	12,288.0	80.1	80.7	31.63	10,366.8	235.7	953.6	782.9	170.74	5.585	
23,400.0	13,100.0	22,614.7	12,288.0	80.8	81.5	31.63	10,466.8	234.8	953.6	781.4	172.21	5.538	
23,500.0	13,100.0	22,714.7	12,288.0	81.6	82.2	31.63	10,566.8	233.8	953.6	779.9	173.68	5.491	
23,600.0	13,100.0	22,814.7	12,288.0	82.3	83.0	31.63	10,666.8	232.8	953.6	778.5	175.15	5.445	
23,700.0	13,100.0	22,914.7	12,288.0	83.1	83.7	31.62	10,766.8	231.9	953.6	777.0	176.62	5.399	
23,725.4	13,100.0	22,940.1	12,288.0	83.2	83.9	31.62	10,792.2	231.6	953.6	776.6	176.99	5.388	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #701H - OWB - PWP2 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS — **Rule Assigned:** — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	-90.57	-0.3	-29.9	29.9				
100.0	100.0	100.0	100.0	3.1	3.1	-90.57	-0.3	-29.9	29.9	23.4	6.53	4.576	
200.0	200.0	200.0	200.0	3.2	3.2	-90.57	-0.3	-29.9	29.9	23.1	6.77	4.414	
300.0	300.0	300.0	300.0	3.3	3.3	-90.57	-0.3	-29.9	29.9	22.9	7.00	4.269	
400.0	400.0	400.0	400.0	3.4	3.4	-90.57	-0.3	-29.9	29.9	22.7	7.23	4.137	
500.0	500.0	500.0	500.0	3.6	3.6	-90.57	-0.3	-29.9	29.9	22.5	7.44	4.017	
600.0	600.0	600.0	600.0	3.7	3.7	-90.57	-0.3	-29.9	29.9	22.2	7.65	3.907	
700.0	700.0	700.0	700.0	3.8	3.8	-90.57	-0.3	-29.9	29.9	22.0	7.86	3.806	
800.0	800.0	800.0	800.0	3.9	3.9	-90.57	-0.3	-29.9	29.9	21.8	8.05	3.713	
900.0	900.0	900.0	900.0	4.0	4.0	-90.57	-0.3	-29.9	29.9	21.7	8.25	3.626	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	-90.57	-0.3	-29.9	29.9	21.5	8.43	3.545	
1,100.0	1,100.0	1,100.0	1,100.0	4.3	4.3	-90.57	-0.3	-29.9	29.9	21.3	8.62	3.470	
1,200.0	1,200.0	1,200.0	1,200.0	4.4	4.4	-90.57	-0.3	-29.9	29.9	21.1	8.80	3.399	CC, ES
1,300.0	1,300.0	1,298.9	1,298.9	4.6	4.5	51.91	-0.3	-31.6	30.5	21.4	9.12	3.346	SF
1,400.0	1,399.8	1,397.8	1,397.6	4.8	4.7	58.72	-0.3	-36.7	32.7	23.1	9.59	3.410	
1,500.0	1,499.5	1,496.4	1,495.8	5.0	5.0	59.02	-0.3	-45.2	37.1	27.1	9.93	3.733	
1,600.0	1,599.0	1,594.9	1,593.6	5.2	5.3	49.32	-0.3	-57.1	42.9	32.5	10.39	4.126	
1,700.0	1,698.5	1,693.2	1,690.7	5.4	5.7	39.59	-0.3	-72.2	49.4	38.6	10.86	4.550	
1,800.0	1,797.7	1,792.9	1,789.0	5.6	5.9	31.15	-0.3	-89.6	55.2	43.8	11.33	4.868	
1,900.0	1,896.7	1,892.8	1,887.4	5.8	6.2	28.81	-0.3	-106.9	59.0	47.2	11.79	5.004	
2,000.0	1,995.8	1,992.7	1,985.8	6.1	6.5	28.35	-0.3	-124.3	63.1	50.8	12.34	5.113	
2,100.0	2,095.0	2,092.6	2,084.1	6.4	6.9	27.61	-0.3	-141.6	67.9	55.0	12.94	5.253	
2,200.0	2,194.3	2,192.5	2,182.4	6.7	7.2	26.66	-0.3	-158.9	73.6	60.0	13.56	5.425	
2,300.0	2,293.7	2,292.2	2,280.7	7.0	7.6	25.57	-0.3	-176.3	80.0	65.8	14.22	5.627	
2,400.0	2,393.2	2,392.0	2,378.9	7.3	7.9	24.41	-0.3	-193.6	87.3	72.4	14.91	5.856	
2,500.0	2,492.8	2,491.6	2,477.1	7.7	8.3	23.22	-0.3	-210.9	95.4	79.8	15.62	6.109	
2,600.0	2,592.4	2,591.2	2,575.1	8.0	8.7	22.05	-0.3	-228.2	104.3	88.0	16.34	6.386	
2,700.0	2,692.2	2,690.7	2,673.1	8.3	9.1	20.90	-0.3	-245.5	114.1	97.0	17.07	6.685	
2,800.0	2,791.9	2,790.1	2,771.0	8.6	9.5	19.80	-0.3	-262.7	124.8	106.9	17.81	7.004	
2,900.0	2,891.8	2,889.4	2,868.8	8.9	9.8	18.76	-0.3	-280.0	136.3	117.7	18.56	7.343	
3,000.0	2,991.7	2,988.6	2,966.5	9.3	10.3	17.78	-0.3	-297.2	148.6	129.3	19.30	7.702	
3,100.0	3,091.6	3,087.7	3,064.1	9.6	10.7	16.86	-0.3	-314.4	161.9	141.8	20.04	8.078	
3,200.0	3,191.5	3,186.7	3,161.5	9.9	11.1	16.01	-0.3	-331.6	176.0	155.2	20.77	8.473	
3,300.0	3,291.5	3,285.5	3,258.9	10.1	11.5	15.21	-0.3	-348.7	190.9	169.4	21.49	8.886	
3,400.0	3,391.5	3,384.2	3,356.1	10.4	11.9	14.48	-0.3	-365.9	206.7	184.6	22.19	9.319	
3,500.0	3,491.5	3,482.8	3,453.1	10.5	12.3	13.79	-0.3	-383.0	223.4	200.6	22.81	9.798	
3,600.0	3,591.5	3,581.2	3,550.1	10.6	12.7	-81.84	-0.3	-400.1	240.6	217.3	23.35	10.305	
3,700.0	3,691.5	3,679.7	3,647.1	10.7	13.1	-82.39	-0.3	-417.2	257.8	233.9	23.90	10.789	
3,800.0	3,791.5	3,778.2	3,744.1	10.7	13.6	-82.87	-0.3	-434.3	275.1	250.6	24.45	11.251	
3,900.0	3,891.5	3,876.7	3,841.1	10.8	14.0	-83.29	-0.3	-451.4	292.3	267.3	25.00	11.693	
4,000.0	3,991.5	3,975.2	3,938.1	10.9	14.4	-83.66	-0.3	-468.5	309.6	284.0	25.55	12.114	
4,100.0	4,091.5	4,073.6	4,035.1	10.9	14.8	-84.00	-0.3	-485.6	326.8	300.7	26.11	12.517	
4,200.0	4,191.5	4,172.1	4,132.0	11.0	15.3	-84.30	-0.3	-502.7	344.1	317.4	26.67	12.901	
4,300.0	4,291.5	4,270.6	4,229.0	11.1	15.7	-84.57	-0.3	-519.8	361.4	334.1	27.24	13.269	
4,400.0	4,391.5	4,369.1	4,326.0	11.1	16.1	-84.82	-0.3	-536.9	378.7	350.9	27.80	13.620	
4,500.0	4,491.5	4,467.6	4,423.0	11.2	16.6	-85.05	-0.3	-554.0	396.0	367.6	28.37	13.957	
4,600.0	4,591.5	4,566.0	4,520.0	11.3	17.0	-85.26	-0.3	-571.1	413.3	384.3	28.94	14.279	
4,700.0	4,691.5	4,664.5	4,617.0	11.4	17.4	-85.45	-0.3	-588.2	430.6	401.1	29.52	14.587	
4,800.0	4,791.5	4,763.0	4,713.9	11.4	17.8	-85.63	-0.3	-605.3	447.9	417.8	30.10	14.882	
4,900.0	4,891.5	4,861.5	4,810.9	11.5	18.3	-85.79	-0.3	-622.4	465.2	434.5	30.68	15.165	
5,000.0	4,991.5	4,960.0	4,907.9	11.6	18.7	-85.94	-0.3	-639.5	482.5	451.3	31.26	15.436	
5,100.0	5,091.5	5,058.5	5,004.9	11.6	19.2	-86.08	-0.3	-656.6	499.9	468.0	31.84	15.697	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #701H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.0	5,191.5	5,157.6	5,102.6	11.7	19.6	-86.21	-0.3	-673.8	517.2	484.8	32.42	15.952	
5,300.0	5,291.5	5,260.9	5,204.4	11.8	20.0	-86.34	-0.3	-691.2	533.9	500.9	33.03	16.167	
5,400.0	5,391.5	5,364.6	5,306.7	11.8	20.5	-86.45	-0.3	-707.6	549.8	516.2	33.64	16.345	
5,500.0	5,491.5	5,468.5	5,409.5	11.9	20.9	-86.55	-0.3	-723.2	564.8	530.5	34.24	16.494	
5,600.0	5,591.5	5,572.7	5,512.6	12.0	21.4	-86.64	-0.3	-737.9	578.9	544.0	34.84	16.615	
5,700.0	5,691.5	5,677.1	5,616.1	12.0	21.8	-86.71	-0.3	-751.7	592.0	556.6	35.43	16.711	
5,800.0	5,791.5	5,781.8	5,720.0	12.1	22.2	-86.79	-0.3	-764.6	604.3	568.3	36.01	16.783	
5,900.0	5,891.5	5,886.7	5,824.3	12.2	22.7	-86.85	-0.3	-776.5	615.7	579.1	36.58	16.832	
6,000.0	5,991.5	5,991.9	5,928.9	12.3	23.1	-86.90	-0.3	-787.5	626.1	589.0	37.14	16.860	
6,100.0	6,091.5	6,097.2	6,033.7	12.3	23.5	-86.95	-0.3	-797.6	635.7	598.0	37.69	16.868	
6,200.0	6,191.5	6,202.7	6,138.8	12.4	23.9	-87.00	-0.3	-806.7	644.3	606.1	38.22	16.857	
6,300.0	6,291.5	6,308.4	6,244.2	12.5	24.3	-87.03	-0.3	-814.9	652.0	613.3	38.74	16.830	
6,400.0	6,391.5	6,414.2	6,349.7	12.5	24.7	-87.07	-0.3	-822.1	658.8	619.6	39.25	16.786	
6,500.0	6,491.5	6,520.2	6,455.5	12.6	25.1	-87.09	-0.3	-828.3	664.7	625.0	39.74	16.728	
6,600.0	6,591.5	6,626.2	6,561.4	12.7	25.4	-87.12	-0.3	-833.6	669.7	629.5	40.21	16.656	
6,700.0	6,691.5	6,732.3	6,667.4	12.8	25.8	-87.14	-0.3	-837.9	673.7	633.1	40.65	16.572	
6,800.0	6,791.5	6,838.5	6,773.6	12.8	26.1	-87.15	-0.3	-841.2	676.8	635.7	41.07	16.479	
6,900.0	6,891.5	6,944.8	6,879.8	12.9	26.4	-87.16	-0.3	-843.5	679.0	637.5	41.46	16.378	
7,000.0	6,991.5	7,051.1	6,986.1	13.0	26.7	-87.16	-0.3	-844.9	680.3	638.5	41.79	16.276	
7,100.0	7,091.5	7,156.5	7,091.5	13.0	26.8	-87.17	-0.3	-845.2	680.6	638.6	41.99	16.207	
7,200.0	7,191.5	7,256.5	7,191.5	13.1	26.8	-87.17	-0.3	-845.2	680.6	638.5	42.06	16.180	
7,300.0	7,291.5	7,356.5	7,291.5	13.2	26.9	-87.17	-0.3	-845.2	680.6	638.4	42.14	16.149	
7,400.0	7,391.5	7,456.5	7,391.5	13.3	26.9	-87.17	-0.3	-845.2	680.6	638.4	42.22	16.119	
7,500.0	7,491.5	7,556.5	7,491.5	13.3	26.9	-87.17	-0.3	-845.2	680.6	638.3	42.30	16.088	
7,600.0	7,591.5	7,656.5	7,591.5	13.4	26.9	-87.17	-0.3	-845.2	680.6	638.2	42.38	16.058	
7,700.0	7,691.5	7,756.5	7,691.5	13.5	27.0	-87.17	-0.3	-845.2	680.6	638.1	42.46	16.027	
7,800.0	7,791.5	7,856.5	7,791.5	13.6	27.0	-87.17	-0.3	-845.2	680.6	638.0	42.55	15.996	
7,900.0	7,891.5	7,956.5	7,891.5	13.6	27.0	-87.17	-0.3	-845.2	680.6	638.0	42.63	15.966	
8,000.0	7,991.5	8,056.5	7,991.5	13.7	27.1	-87.17	-0.3	-845.2	680.6	637.9	42.71	15.935	
8,100.0	8,091.5	8,156.5	8,091.5	13.8	27.1	-87.17	-0.3	-845.2	680.6	637.8	42.79	15.904	
8,200.0	8,191.5	8,256.5	8,191.5	13.8	27.1	-87.17	-0.3	-845.2	680.6	637.7	42.88	15.873	
8,300.0	8,291.5	8,356.5	8,291.5	13.9	27.2	-87.17	-0.3	-845.2	680.6	637.6	42.96	15.842	
8,400.0	8,391.5	8,456.5	8,391.5	14.0	27.2	-87.17	-0.3	-845.2	680.6	637.5	43.04	15.811	
8,500.0	8,491.5	8,556.5	8,491.5	14.1	27.2	-87.17	-0.3	-845.2	680.6	637.5	43.13	15.780	
8,600.0	8,591.5	8,656.5	8,591.5	14.1	27.2	-87.17	-0.3	-845.2	680.6	637.4	43.21	15.749	
8,700.0	8,691.5	8,756.5	8,691.5	14.2	27.3	-87.17	-0.3	-845.2	680.6	637.3	43.30	15.718	
8,800.0	8,791.5	8,856.5	8,791.5	14.3	27.3	-87.17	-0.3	-845.2	680.6	637.2	43.39	15.687	
8,900.0	8,891.5	8,956.5	8,891.5	14.4	27.3	-87.17	-0.3	-845.2	680.6	637.1	43.47	15.656	
9,000.0	8,991.5	9,056.5	8,991.5	14.4	27.4	-87.17	-0.3	-845.2	680.6	637.0	43.56	15.625	
9,100.0	9,091.5	9,156.5	9,091.5	14.5	27.4	-87.17	-0.3	-845.2	680.6	636.9	43.65	15.593	
9,200.0	9,191.5	9,256.5	9,191.5	14.6	27.4	-87.17	-0.3	-845.2	680.6	636.9	43.73	15.562	
9,300.0	9,291.5	9,356.5	9,291.5	14.7	27.5	-87.17	-0.3	-845.2	680.6	636.8	43.82	15.531	
9,400.0	9,391.5	9,456.5	9,391.5	14.7	27.5	-87.17	-0.3	-845.2	680.6	636.7	43.91	15.500	
9,500.0	9,491.5	9,556.5	9,491.5	14.8	27.5	-87.17	-0.3	-845.2	680.6	636.6	44.00	15.468	
9,600.0	9,591.5	9,656.5	9,591.5	14.9	27.6	-87.17	-0.3	-845.2	680.6	636.5	44.09	15.437	
9,700.0	9,691.5	9,756.5	9,691.5	15.0	27.6	-87.17	-0.3	-845.2	680.6	636.4	44.18	15.406	
9,800.0	9,791.5	9,856.5	9,791.5	15.0	27.6	-87.17	-0.3	-845.2	680.6	636.3	44.27	15.374	
9,900.0	9,891.5	9,956.5	9,891.5	15.1	27.7	-87.17	-0.3	-845.2	680.6	636.2	44.36	15.343	
10,000.0	9,991.5	10,056.5	9,991.5	15.2	27.7	-87.17	-0.3	-845.2	680.6	636.1	44.45	15.312	
10,100.0	10,091.5	10,156.5	10,091.5	15.3	27.7	-87.17	-0.3	-845.2	680.6	636.1	44.54	15.280	
10,200.0	10,191.5	10,256.5	10,191.5	15.3	27.8	-87.17	-0.3	-845.2	680.6	636.0	44.63	15.249	
10,300.0	10,291.5	10,356.5	10,291.5	15.4	27.8	-87.17	-0.3	-845.2	680.6	635.9	44.72	15.217	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #701H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.0	10,391.5	10,456.5	10,391.5	15.5	27.8	-87.17	-0.3	-845.2	680.6	635.8	44.82	15.186	
10,500.0	10,491.5	10,556.5	10,491.5	15.6	27.9	-87.17	-0.3	-845.2	680.6	635.7	44.91	15.155	
10,600.0	10,591.5	10,656.5	10,591.5	15.6	27.9	-87.17	-0.3	-845.2	680.6	635.6	45.00	15.123	
10,700.0	10,691.5	10,756.5	10,691.5	15.7	27.9	-87.17	-0.3	-845.2	680.6	635.5	45.10	15.092	
10,800.0	10,791.5	10,856.5	10,791.5	15.8	28.0	-87.17	-0.3	-845.2	680.6	635.4	45.19	15.060	
10,900.0	10,891.5	10,956.5	10,891.5	15.9	28.0	-87.17	-0.3	-845.2	680.6	635.3	45.29	15.029	
11,000.0	10,991.5	11,056.5	10,991.5	15.9	28.0	-87.17	-0.3	-845.2	680.6	635.2	45.38	14.998	
11,100.0	11,091.5	11,156.5	11,091.5	16.0	28.1	-87.17	-0.3	-845.2	680.6	635.1	45.48	14.966	
11,200.0	11,191.5	11,256.5	11,191.5	16.1	28.1	-87.17	-0.3	-845.2	680.6	635.0	45.57	14.935	
11,300.0	11,291.5	11,356.5	11,291.5	16.2	28.1	-87.17	-0.3	-845.2	680.6	634.9	45.67	14.903	
11,400.0	11,391.5	11,456.5	11,391.5	16.2	28.2	-87.17	-0.3	-845.2	680.6	634.8	45.76	14.872	
11,500.0	11,491.5	11,556.5	11,491.5	16.3	28.2	-87.17	-0.3	-845.2	680.6	634.7	45.86	14.841	
11,600.0	11,591.5	11,656.5	11,591.5	16.4	28.2	-87.17	-0.3	-845.2	680.6	634.6	45.96	14.809	
11,700.0	11,691.5	11,756.5	11,691.5	16.5	28.3	-87.17	-0.3	-845.2	680.6	634.5	46.05	14.778	
11,800.0	11,791.5	11,856.5	11,791.5	16.5	28.3	-87.17	-0.3	-845.2	680.6	634.4	46.15	14.747	
11,900.0	11,891.5	11,956.5	11,891.5	16.6	28.4	-87.17	-0.3	-845.2	680.6	634.3	46.25	14.715	
12,000.0	11,991.5	12,056.5	11,991.5	16.7	28.4	-87.17	-0.3	-845.2	680.6	634.2	46.35	14.684	
12,100.0	12,091.5	12,156.5	12,091.5	16.8	28.4	-87.17	-0.3	-845.2	680.6	634.1	46.44	14.654	
12,110.0	12,101.5	12,166.5	12,101.5	16.8	28.4	-87.17	-0.3	-845.2	680.6	634.1	46.45	14.651	
12,200.0	12,191.5	12,250.0	12,184.9	16.8	28.5	-86.82	3.8	-845.3	680.9	634.3	46.56	14.625	
12,300.0	12,291.5	12,338.1	12,270.7	16.9	28.5	-85.19	23.3	-845.4	682.7	636.0	46.68	14.625	
12,400.0	12,391.5	12,416.3	12,342.7	17.0	28.5	-82.68	53.5	-845.7	687.6	640.7	46.87	14.671	
12,500.0	12,491.5	12,483.1	12,399.6	17.1	28.5	-79.81	88.4	-846.1	697.6	650.4	47.17	14.789	
12,600.0	12,591.5	12,538.9	12,443.1	17.1	28.6	-77.00	123.3	-846.4	714.5	666.8	47.64	14.996	
12,700.0	12,691.3	12,587.2	12,477.1	17.2	28.6	-71.93	157.5	-846.7	738.0	689.7	48.33	15.271	
12,800.0	12,788.0	12,635.3	12,507.5	17.2	28.6	-66.88	194.8	-847.1	763.3	714.0	49.26	15.496	
12,900.0	12,877.5	12,683.7	12,534.1	17.2	28.6	-62.48	235.2	-847.5	787.6	737.2	50.34	15.645	
13,000.0	12,955.8	12,732.2	12,556.5	17.2	28.7	-58.91	278.2	-847.9	809.1	757.6	51.47	15.718	
13,100.0	13,019.6	12,775.0	12,572.6	17.2	28.7	-56.32	317.8	-848.3	826.3	773.7	52.57	15.717	
13,200.0	13,066.1	12,825.0	12,586.8	17.2	28.7	-54.52	365.7	-848.7	838.1	784.7	53.47	15.674	
13,300.0	13,093.1	12,875.0	12,595.9	17.3	28.7	-53.65	414.9	-849.2	844.0	789.8	54.16	15.584	
13,400.0	13,100.0	12,925.0	12,599.8	17.4	28.8	-53.64	464.7	-849.7	843.8	789.2	54.59	15.458	
13,421.1	13,100.0	12,937.5	12,600.0	17.4	28.8	-53.65	477.1	-849.8	843.6	788.9	54.67	15.432	
13,500.0	13,100.0	13,016.3	12,600.0	17.5	28.8	-53.65	555.9	-850.6	843.6	788.5	55.16	15.294	
13,600.0	13,100.0	13,116.3	12,600.0	17.7	28.9	-53.65	655.9	-851.5	843.6	787.8	55.83	15.112	
13,700.0	13,100.0	13,216.3	12,600.0	17.8	29.1	-53.65	755.9	-852.5	843.6	787.1	56.52	14.926	
13,800.0	13,100.0	13,316.3	12,600.0	18.1	29.2	-53.65	855.9	-853.5	843.7	786.4	57.25	14.735	
13,900.0	13,100.0	13,416.3	12,600.0	18.3	29.4	-53.65	955.9	-854.4	843.7	785.7	58.01	14.542	
14,000.0	13,100.0	13,516.3	12,600.0	18.6	29.5	-53.66	1,055.9	-855.4	843.7	784.9	58.80	14.347	
14,100.0	13,100.0	13,616.3	12,600.0	18.9	29.7	-53.66	1,155.9	-856.4	843.7	784.1	59.62	14.150	
14,200.0	13,100.0	13,716.3	12,600.0	19.2	29.9	-53.66	1,255.9	-857.3	843.7	783.2	60.47	13.952	
14,300.0	13,100.0	13,816.3	12,600.0	19.6	30.2	-53.66	1,355.9	-858.3	843.7	782.4	61.34	13.754	
14,400.0	13,100.0	13,916.3	12,600.0	20.0	30.4	-53.66	1,455.9	-859.3	843.7	781.5	62.24	13.556	
14,500.0	13,100.0	14,016.3	12,600.0	20.4	30.7	-53.66	1,555.9	-860.2	843.7	780.6	63.16	13.359	
14,600.0	13,100.0	14,116.3	12,600.0	20.8	31.0	-53.66	1,655.9	-861.2	843.8	779.6	64.11	13.162	
14,700.0	13,100.0	14,216.3	12,600.0	21.2	31.3	-53.66	1,755.9	-862.2	843.8	778.7	65.07	12.967	
14,800.0	13,100.0	14,316.3	12,600.0	21.7	31.6	-53.66	1,855.9	-863.1	843.8	777.7	66.06	12.773	
14,900.0	13,100.0	14,416.3	12,600.0	22.2	31.9	-53.66	1,955.9	-864.1	843.8	776.7	67.07	12.581	
15,000.0	13,100.0	14,516.3	12,600.0	22.7	32.3	-53.66	2,055.9	-865.1	843.8	775.7	68.09	12.392	
15,100.0	13,100.0	14,616.3	12,600.0	23.2	32.7	-53.66	2,155.9	-866.0	843.8	774.7	69.14	12.205	
15,200.0	13,100.0	14,716.3	12,600.0	23.7	33.0	-53.66	2,255.8	-867.0	843.8	773.6	70.20	12.020	
15,300.0	13,100.0	14,816.3	12,600.0	24.2	33.4	-53.66	2,355.8	-868.0	843.8	772.6	71.28	11.838	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #701H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,400.0	13,100.0	14,916.3	12,600.0	24.8	33.8	-53.66	2,455.8	-868.9	843.8	771.5	72.38	11.659	
15,500.0	13,100.0	15,016.3	12,600.0	25.3	34.3	-53.66	2,555.8	-869.9	843.9	770.4	73.49	11.483	
15,600.0	13,100.0	15,116.3	12,600.0	25.9	34.7	-53.66	2,655.8	-870.9	843.9	769.3	74.61	11.310	
15,700.0	13,100.0	15,216.3	12,600.0	26.5	35.1	-53.67	2,755.8	-871.8	843.9	768.1	75.75	11.141	
15,800.0	13,100.0	15,316.3	12,600.0	27.1	35.6	-53.67	2,855.8	-872.8	843.9	767.0	76.90	10.974	
15,900.0	13,100.0	15,416.3	12,600.0	27.7	36.1	-53.67	2,955.8	-873.8	843.9	765.8	78.07	10.810	
16,000.0	13,100.0	15,516.3	12,600.0	28.3	36.5	-53.67	3,055.8	-874.7	843.9	764.7	79.24	10.650	
16,100.0	13,100.0	15,616.3	12,600.0	28.9	37.0	-53.67	3,155.8	-875.7	843.9	763.5	80.43	10.493	
16,200.0	13,100.0	15,716.3	12,600.0	29.5	37.5	-53.67	3,255.8	-876.6	843.9	762.3	81.63	10.339	
16,300.0	13,100.0	15,816.3	12,600.0	30.1	38.0	-53.67	3,355.8	-877.6	843.9	761.1	82.84	10.188	
16,400.0	13,100.0	15,916.3	12,600.0	30.7	38.5	-53.67	3,455.8	-878.6	844.0	759.9	84.06	10.040	
16,500.0	13,100.0	16,016.3	12,600.0	31.4	39.0	-53.67	3,555.8	-879.5	844.0	758.7	85.29	9.895	
16,600.0	13,100.0	16,116.3	12,600.0	32.0	39.6	-53.67	3,655.8	-880.5	844.0	757.5	86.53	9.754	
16,700.0	13,100.0	16,216.3	12,600.0	32.7	40.1	-53.67	3,755.8	-881.5	844.0	756.2	87.78	9.615	
16,800.0	13,100.0	16,316.3	12,600.0	33.3	40.6	-53.67	3,855.8	-882.4	844.0	755.0	89.03	9.480	
16,900.0	13,100.0	16,416.3	12,600.0	34.0	41.2	-53.67	3,955.8	-883.4	844.0	753.7	90.30	9.347	
17,000.0	13,100.0	16,516.3	12,600.0	34.6	41.7	-53.67	4,055.8	-884.4	844.0	752.5	91.57	9.217	
17,100.0	13,100.0	16,616.3	12,600.0	35.3	42.3	-53.67	4,155.8	-885.3	844.0	751.2	92.85	9.091	
17,200.0	13,100.0	16,716.3	12,600.0	36.0	42.9	-53.67	4,255.8	-886.3	844.1	749.9	94.14	8.966	
17,300.0	13,100.0	16,816.3	12,600.0	36.7	43.5	-53.67	4,355.8	-887.3	844.1	748.6	95.43	8.845	
17,400.0	13,100.0	16,916.3	12,600.0	37.3	44.0	-53.68	4,455.7	-888.2	844.1	747.3	96.73	8.726	
17,500.0	13,100.0	17,016.3	12,600.0	38.0	44.6	-53.68	4,555.7	-889.2	844.1	746.1	98.04	8.610	
17,600.0	13,100.0	17,116.3	12,600.0	38.7	45.2	-53.68	4,655.7	-890.2	844.1	744.8	99.35	8.496	
17,700.0	13,100.0	17,216.3	12,600.0	39.4	45.8	-53.68	4,755.7	-891.1	844.1	743.4	100.67	8.385	
17,800.0	13,100.0	17,316.3	12,600.0	40.1	46.4	-53.68	4,855.7	-892.1	844.1	742.1	101.99	8.276	
17,900.0	13,100.0	17,416.3	12,600.0	40.8	47.0	-53.68	4,955.7	-893.1	844.1	740.8	103.32	8.170	
18,000.0	13,100.0	17,516.3	12,600.0	41.5	47.6	-53.68	5,055.7	-894.0	844.1	739.5	104.66	8.066	
18,100.0	13,100.0	17,616.3	12,600.0	42.1	48.2	-53.68	5,155.7	-895.0	844.2	738.2	106.00	7.964	
18,200.0	13,100.0	17,716.3	12,600.0	42.8	48.9	-53.68	5,255.7	-896.0	844.2	736.8	107.34	7.864	
18,300.0	13,100.0	17,816.3	12,600.0	43.5	49.5	-53.68	5,355.7	-896.9	844.2	735.5	108.69	7.767	
18,400.0	13,100.0	17,916.3	12,600.0	44.3	50.1	-53.68	5,455.7	-897.9	844.2	734.1	110.04	7.671	
18,500.0	13,100.0	18,016.3	12,600.0	45.0	50.7	-53.68	5,555.7	-898.9	844.2	732.8	111.40	7.578	
18,600.0	13,100.0	18,116.3	12,600.0	45.7	51.4	-53.68	5,655.7	-899.8	844.2	731.5	112.76	7.487	
18,700.0	13,100.0	18,216.3	12,600.0	46.4	52.0	-53.68	5,755.7	-900.8	844.2	730.1	114.13	7.397	
18,800.0	13,100.0	18,316.3	12,600.0	47.1	52.7	-53.68	5,855.7	-901.7	844.2	728.7	115.50	7.309	
18,900.0	13,100.0	18,416.3	12,600.0	47.8	53.3	-53.68	5,955.7	-902.7	844.2	727.4	116.87	7.224	
19,000.0	13,100.0	18,516.3	12,600.0	48.5	54.0	-53.68	6,055.7	-903.7	844.3	726.0	118.25	7.139	
19,100.0	13,100.0	18,616.3	12,600.0	49.2	54.6	-53.68	6,155.7	-904.6	844.3	724.6	119.63	7.057	
19,200.0	13,100.0	18,716.3	12,600.0	49.9	55.3	-53.69	6,255.7	-905.6	844.3	723.3	121.02	6.977	
19,300.0	13,100.0	18,816.3	12,600.0	50.7	55.9	-53.69	6,355.7	-906.6	844.3	721.9	122.40	6.898	
19,400.0	13,100.0	18,916.3	12,600.0	51.4	56.6	-53.69	6,455.7	-907.5	844.3	720.5	123.80	6.820	
19,500.0	13,100.0	19,016.3	12,600.0	52.1	57.2	-53.69	6,555.6	-908.5	844.3	719.1	125.19	6.744	
19,600.0	13,100.0	19,116.3	12,600.0	52.8	57.9	-53.69	6,655.6	-909.5	844.3	717.7	126.59	6.670	
19,700.0	13,100.0	19,216.3	12,600.0	53.5	58.6	-53.69	6,755.6	-910.4	844.3	716.4	127.98	6.597	
19,800.0	13,100.0	19,316.3	12,600.0	54.3	59.2	-53.69	6,855.6	-911.4	844.4	715.0	129.39	6.526	
19,900.0	13,100.0	19,416.3	12,600.0	55.0	59.9	-53.69	6,955.6	-912.4	844.4	713.6	130.79	6.456	
20,000.0	13,100.0	19,516.3	12,600.0	55.7	60.6	-53.69	7,055.6	-913.3	844.4	712.2	132.20	6.387	
20,100.0	13,100.0	19,616.3	12,600.0	56.4	61.3	-53.69	7,155.6	-914.3	844.4	710.8	133.61	6.320	
20,200.0	13,100.0	19,716.3	12,600.0	57.2	61.9	-53.69	7,255.6	-915.3	844.4	709.4	135.02	6.254	
20,300.0	13,100.0	19,816.3	12,600.0	57.9	62.6	-53.69	7,355.6	-916.2	844.4	708.0	136.43	6.189	
20,400.0	13,100.0	19,916.3	12,600.0	58.6	63.3	-53.69	7,455.6	-917.2	844.4	706.6	137.85	6.126	
20,500.0	13,100.0	20,016.3	12,600.0	59.4	64.0	-53.69	7,555.6	-918.2	844.4	705.2	139.27	6.063	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #701H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+MS **Rule Assigned:** **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,600.0	13,100.0	20,116.3	12,600.0	60.1	64.7	-53.69	7,655.6	-919.1	844.4	703.8	140.69	6.002	
20,700.0	13,100.0	20,216.3	12,600.0	60.8	65.4	-53.69	7,755.6	-920.1	844.5	702.3	142.11	5.942	
20,800.0	13,100.0	20,316.3	12,600.0	61.6	66.0	-53.69	7,855.6	-921.1	844.5	700.9	143.54	5.883	
20,900.0	13,100.0	20,416.3	12,600.0	62.3	66.7	-53.70	7,955.6	-922.0	844.5	699.5	144.97	5.825	
21,000.0	13,100.0	20,516.3	12,600.0	63.0	67.4	-53.70	8,055.6	-923.0	844.5	698.1	146.39	5.769	
21,100.0	13,100.0	20,616.3	12,600.0	63.8	68.1	-53.70	8,155.6	-924.0	844.5	696.7	147.82	5.713	
21,200.0	13,100.0	20,716.3	12,600.0	64.5	68.8	-53.70	8,255.6	-924.9	844.5	695.3	149.26	5.658	
21,300.0	13,100.0	20,816.3	12,600.0	65.2	69.5	-53.70	8,355.6	-925.9	844.5	693.8	150.69	5.604	
21,400.0	13,100.0	20,916.3	12,600.0	66.0	70.2	-53.70	8,455.6	-926.8	844.5	692.4	152.13	5.552	
21,500.0	13,100.0	21,016.3	12,600.0	66.7	70.9	-53.70	8,555.6	-927.8	844.5	691.0	153.56	5.500	
21,600.0	13,100.0	21,116.3	12,600.0	67.4	71.6	-53.70	8,655.6	-928.8	844.6	689.6	155.00	5.449	
21,700.0	13,100.0	21,216.3	12,600.0	68.2	72.3	-53.70	8,755.5	-929.7	844.6	688.1	156.44	5.399	
21,800.0	13,100.0	21,316.3	12,600.0	68.9	73.0	-53.70	8,855.5	-930.7	844.6	686.7	157.89	5.349	
21,900.0	13,100.0	21,416.3	12,600.0	69.7	73.7	-53.70	8,955.5	-931.7	844.6	685.3	159.33	5.301	
22,000.0	13,100.0	21,516.3	12,600.0	70.4	74.4	-53.70	9,055.5	-932.6	844.6	683.8	160.77	5.253	
22,100.0	13,100.0	21,616.3	12,600.0	71.1	75.1	-53.70	9,155.5	-933.6	844.6	682.4	162.22	5.207	
22,200.0	13,100.0	21,716.3	12,600.0	71.9	75.8	-53.70	9,255.5	-934.6	844.6	681.0	163.67	5.161	
22,300.0	13,100.0	21,816.3	12,600.0	72.6	76.5	-53.70	9,355.5	-935.5	844.6	679.5	165.12	5.115	
22,400.0	13,100.0	21,916.3	12,600.0	73.4	77.2	-53.70	9,455.5	-936.5	844.7	678.1	166.57	5.071	
22,500.0	13,100.0	22,016.3	12,600.0	74.1	78.0	-53.70	9,555.5	-937.5	844.7	676.6	168.02	5.027	
22,600.0	13,100.0	22,116.3	12,600.0	74.9	78.7	-53.71	9,655.5	-938.4	844.7	675.2	169.47	4.984	
22,700.0	13,100.0	22,216.3	12,600.0	75.6	79.4	-53.71	9,755.5	-939.4	844.7	673.8	170.92	4.942	
22,800.0	13,100.0	22,316.3	12,600.0	76.3	80.1	-53.71	9,855.5	-940.4	844.7	672.3	172.38	4.900	
22,900.0	13,100.0	22,416.3	12,600.0	77.1	80.8	-53.71	9,955.5	-941.3	844.7	670.9	173.83	4.859	
23,000.0	13,100.0	22,516.3	12,600.0	77.8	81.5	-53.71	10,055.5	-942.3	844.7	669.4	175.29	4.819	
23,100.0	13,100.0	22,616.3	12,600.0	78.6	82.2	-53.71	10,155.5	-943.3	844.7	668.0	176.75	4.779	
23,200.0	13,100.0	22,716.3	12,600.0	79.3	83.0	-53.71	10,255.5	-944.2	844.7	666.5	178.21	4.740	
23,300.0	13,100.0	22,816.3	12,600.0	80.1	83.7	-53.71	10,355.5	-945.2	844.8	665.1	179.67	4.702	
23,400.0	13,100.0	22,916.3	12,600.0	80.8	84.4	-53.71	10,455.5	-946.2	844.8	663.6	181.13	4.664	
23,500.0	13,100.0	23,016.3	12,600.0	81.6	85.1	-53.71	10,555.5	-947.1	844.8	662.2	182.59	4.627	
23,600.0	13,100.0	23,116.3	12,600.0	82.3	85.8	-53.71	10,655.5	-948.1	844.8	660.7	184.05	4.590	
23,700.0	13,100.0	23,216.3	12,600.0	83.1	86.6	-53.71	10,755.5	-949.1	844.8	659.3	185.52	4.554	
23,701.4	13,100.0	23,217.6	12,600.0	83.1	86.6	-53.71	10,756.8	-949.1	844.8	659.3	185.54	4.553	
23,725.4	13,100.0	23,240.0	12,600.0	83.2	86.7	-53.71	10,779.2	-949.3	844.8	658.9	185.89	4.545	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #702H - OWB - PWP2 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+MS — **Rule Assigned:** — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	89.62	0.4	60.1	60.1				
100.0	100.0	100.0	100.0	3.1	3.1	89.62	0.4	60.1	60.1	53.6	6.53	9.197	
200.0	200.0	200.0	200.0	3.2	3.2	89.62	0.4	60.1	60.1	53.3	6.77	8.872	
300.0	300.0	300.0	300.0	3.3	3.3	89.62	0.4	60.1	60.1	53.1	7.00	8.580	
400.0	400.0	400.0	400.0	3.4	3.4	89.62	0.4	60.1	60.1	52.9	7.23	8.315	
500.0	500.0	500.0	500.0	3.6	3.6	89.62	0.4	60.1	60.1	52.7	7.44	8.075	
600.0	600.0	600.0	600.0	3.7	3.7	89.62	0.4	60.1	60.1	52.4	7.65	7.854	
700.0	700.0	700.0	700.0	3.8	3.8	89.62	0.4	60.1	60.1	52.2	7.86	7.651	
800.0	800.0	800.0	800.0	3.9	3.9	89.62	0.4	60.1	60.1	52.0	8.05	7.463	
900.0	900.0	900.0	900.0	4.0	4.0	89.62	0.4	60.1	60.1	51.9	8.25	7.289	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	89.62	0.4	60.1	60.1	51.7	8.43	7.126	
1,100.0	1,100.0	1,100.0	1,100.0	4.3	4.3	89.62	0.4	60.1	60.1	51.5	8.62	6.974	
1,200.0	1,200.0	1,200.0	1,200.0	4.4	4.4	89.62	0.4	60.1	60.1	51.3	8.80	6.832	CC, ES
1,300.0	1,300.0	1,300.0	1,300.0	4.6	4.5	-131.61	0.4	60.1	61.2	52.2	9.02	6.788	SF
1,400.0	1,399.8	1,399.8	1,399.8	4.8	4.6	-135.01	0.4	60.1	64.8	55.5	9.35	6.934	
1,500.0	1,499.5	1,499.5	1,499.5	5.0	4.8	-147.86	0.4	60.1	71.2	61.6	9.57	7.439	
1,600.0	1,599.0	1,597.0	1,597.0	5.2	4.9	-165.14	0.4	61.3	81.1	71.1	9.93	8.162	
1,700.0	1,698.5	1,693.8	1,693.8	5.4	5.0	-177.12	0.4	65.0	95.3	84.9	10.37	9.188	
1,800.0	1,797.7	1,789.5	1,789.3	5.6	5.1	175.10	0.4	71.1	113.8	103.0	10.84	10.499	
1,900.0	1,896.7	1,884.0	1,883.3	5.8	5.3	174.41	0.4	79.4	136.1	124.8	11.27	12.076	
2,000.0	1,995.8	1,977.3	1,976.1	6.1	5.5	175.58	0.4	89.9	160.4	148.7	11.77	13.633	
2,100.0	2,095.0	2,069.7	2,067.6	6.4	5.8	176.53	0.4	102.5	186.3	174.0	12.30	15.149	
2,200.0	2,194.3	2,161.1	2,157.8	6.7	6.1	177.32	0.4	117.2	213.8	200.9	12.85	16.633	
2,300.0	2,293.7	2,251.5	2,246.6	7.0	6.4	177.99	0.4	133.8	242.6	229.2	13.41	18.086	
2,400.0	2,393.2	2,343.6	2,336.9	7.3	6.7	178.57	0.4	152.6	272.7	258.7	14.01	19.464	
2,500.0	2,492.8	2,439.1	2,430.3	7.7	7.0	179.06	0.4	172.5	302.3	287.6	14.65	20.638	
2,600.0	2,592.4	2,534.9	2,523.9	8.0	7.3	179.45	0.4	192.4	331.0	315.7	15.30	21.638	
2,700.0	2,692.2	2,630.9	2,617.8	8.3	7.7	179.79	0.4	212.4	358.9	343.0	15.96	22.486	
2,800.0	2,791.9	2,727.1	2,712.0	8.6	8.1	-179.93	0.4	232.4	386.1	369.4	16.64	23.204	
2,900.0	2,891.8	2,823.6	2,806.3	8.9	8.4	-179.68	0.4	252.4	412.3	395.0	17.32	23.809	
3,000.0	2,991.7	2,920.3	2,900.9	9.3	8.8	-179.47	0.4	272.5	437.8	419.8	18.00	24.317	
3,100.0	3,091.6	3,017.2	2,995.7	9.6	9.2	-179.27	0.4	292.7	462.3	443.7	18.69	24.742	
3,200.0	3,191.5	3,114.3	3,090.7	9.9	9.6	-179.09	0.4	312.9	486.1	466.7	19.37	25.098	
3,300.0	3,291.5	3,211.7	3,185.9	10.1	10.0	-178.93	0.4	333.1	509.0	489.0	20.04	25.397	
3,400.0	3,391.5	3,309.2	3,281.3	10.4	10.4	-178.78	0.4	353.4	531.1	510.4	20.70	25.654	
3,500.0	3,491.5	3,406.9	3,376.9	10.5	10.8	-178.65	0.4	373.7	552.3	531.0	21.28	25.954	
3,600.0	3,591.5	3,504.7	3,472.6	10.6	11.2	86.49	0.4	394.0	573.0	551.3	21.78	26.306	
3,700.0	3,691.5	3,602.6	3,568.3	10.7	11.6	86.61	0.4	414.4	593.8	571.5	22.30	26.631	
3,800.0	3,791.5	3,700.4	3,663.9	10.7	12.1	86.72	0.4	434.7	614.5	591.7	22.82	26.931	
3,900.0	3,891.5	3,798.2	3,759.6	10.8	12.5	86.83	0.4	455.1	635.3	612.0	23.35	27.209	
4,000.0	3,991.5	3,896.0	3,855.3	10.9	12.9	86.93	0.4	475.4	656.1	632.2	23.89	27.465	
4,100.0	4,091.5	3,993.8	3,951.0	10.9	13.4	87.03	0.4	495.7	676.8	652.4	24.43	27.703	
4,200.0	4,191.5	4,091.6	4,046.6	11.0	13.8	87.11	0.4	516.1	697.6	672.6	24.98	27.923	
4,300.0	4,291.5	4,189.4	4,142.3	11.1	14.2	87.20	0.4	536.4	718.4	692.8	25.54	28.127	
4,400.0	4,391.5	4,287.3	4,238.0	11.1	14.7	87.28	0.4	556.7	739.1	713.0	26.10	28.316	
4,500.0	4,491.5	4,385.1	4,333.7	11.2	15.1	87.35	0.4	577.1	759.9	733.2	26.67	28.491	
4,600.0	4,591.5	4,482.9	4,429.3	11.3	15.5	87.42	0.4	597.4	780.7	753.4	27.24	28.655	
4,700.0	4,691.5	4,580.7	4,525.0	11.4	16.0	87.49	0.4	617.8	801.4	773.6	27.82	28.806	
4,800.0	4,791.5	4,678.5	4,620.7	11.4	16.4	87.55	0.4	638.1	822.2	793.8	28.40	28.947	
4,900.0	4,891.5	4,776.3	4,716.4	11.5	16.9	87.61	0.4	658.4	843.0	814.0	28.99	29.079	
5,000.0	4,991.5	4,874.1	4,812.1	11.6	17.3	87.67	0.4	678.8	863.8	834.2	29.58	29.201	
5,100.0	5,091.5	4,972.0	4,907.7	11.6	17.8	87.72	0.4	699.1	884.5	854.4	30.17	29.315	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: AKUBRA PROJECT - AKUBRA FED COM #702H - OWB - PWP2

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+MS

Rule Assigned:

Offset Well Error: 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.0	5,191.5	5,069.8	5,003.4	11.7	18.2	87.78	0.4	719.4	905.3	874.5	30.77	29.422	
5,300.0	5,291.5	5,167.6	5,099.1	11.8	18.7	87.83	0.4	739.8	926.1	894.7	31.37	29.522	
5,400.0	5,391.5	5,265.4	5,194.8	11.8	19.1	87.87	0.4	760.1	946.9	914.9	31.97	29.615	
5,500.0	5,491.5	5,363.2	5,290.4	11.9	19.6	87.92	0.4	780.4	967.6	935.1	32.58	29.702	
5,600.0	5,591.5	5,461.0	5,386.1	12.0	20.0	87.96	0.4	800.8	988.4	955.2	33.19	29.783	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: WHITE FALCON PROJECT - WHITE FALCON 16 FED COM #22H - OWB - ACTUAL WELLPATH

Offset Site Error: 0.0 usft

Survey Program: 100-Standard Keeper 104, 11834-r.5 MWD+IFR1+MS

Rule Assigned:

Offset Well Error: 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
23,500.0	13,100.0	22,531.0	12,537.0	81.6	80.1	49.05	11,057.3	377.8	988.5	846.6	141.90	6.966	
23,600.0	13,100.0	22,531.0	12,537.0	82.3	80.1	49.05	11,057.3	377.8	943.0	794.3	148.67	6.343	
23,700.0	13,100.0	22,531.0	12,537.0	83.1	80.1	49.05	11,057.3	377.8	906.3	751.5	154.86	5.853	
23,725.4	13,100.0	22,531.0	12,537.0	83.2	80.1	49.05	11,057.3	377.8	898.6	742.3	156.28	5.750	CC, ES, SF

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: WHITE FALCON PROJECT - WHITE FALCON 16 ST COM #12H - OWB - ACTUAL WELLPATH

Offset Site Error: 0.0 usft

Survey Program: 100-Standard Keeper 104, 11602-r.5 MWD+IFR1+MS

Rule Assigned:

Offset Well Error: 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
23,500.0	13,100.0	22,232.0	12,282.8	81.6	79.2	19.06	11,041.3	11.5	987.2	839.0	148.26	6.659	
23,600.0	13,100.0	22,232.0	12,282.8	82.3	79.2	19.06	11,041.3	11.5	943.0	787.8	155.25	6.074	
23,700.0	13,100.0	22,232.0	12,282.8	83.1	79.2	19.06	11,041.3	11.5	907.7	746.2	161.56	5.619	
23,725.4	13,100.0	22,232.0	12,282.8	83.2	79.2	19.06	11,041.3	11.5	900.3	737.3	163.00	5.524	CC, ES, SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: WHITE FALCON PROJECT - WHITE FALCON 16 ST COM #23H - OWB - ACTUAL WELLPATH — **Offset Site Error:** 0.0 usft

Survey Program: 100-Standard Keeper 104, 11800-r.5 MWD+IFR1+MS — **Rule Assigned:** — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
23,200.0	13,100.0	22,410.0	12,471.4	79.3	79.3	0.64	11,038.3	-263.7	998.9	886.5	112.35	8.891	
23,300.0	13,100.0	22,410.0	12,471.4	80.1	79.3	0.64	11,038.3	-263.7	923.3	803.1	120.22	7.680	
23,400.0	13,100.0	22,410.0	12,471.4	80.8	79.3	0.64	11,038.3	-263.7	852.8	723.8	129.03	6.609	
23,500.0	13,100.0	22,410.0	12,471.4	81.6	79.3	0.64	11,038.3	-263.7	788.7	650.0	138.63	5.689	
23,600.0	13,100.0	22,410.0	12,471.4	82.3	79.3	0.64	11,038.3	-263.7	732.6	584.0	148.67	4.928	
23,700.0	13,100.0	22,410.0	12,471.4	83.1	79.3	0.64	11,038.3	-263.7	686.7	528.2	158.44	4.334	
23,725.4	13,100.0	22,410.0	12,471.4	83.2	79.3	0.64	11,038.3	-263.7	676.9	516.1	160.76	4.210	CC, ES, SF

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Offset Design: WHITE FALCON PROJECT - WHITE FALCON 16 ST COM #24H - OWB - ACTUAL WELLPATH

Offset Site Error: 0.0 usft

Survey Program: 100-Standard Keeper 104, 11455-r.5 MWD+IFR1+MS

Rule Assigned:

Offset Well Error: 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
23,500.0	13,100.0	22,388.0	12,557.3	81.6	78.3	-50.26	11,029.9	-923.5	972.3	824.2	148.07	6.566	
23,600.0	13,100.0	22,388.0	12,557.3	82.3	78.3	-50.26	11,029.9	-923.5	927.6	772.5	155.10	5.981	
23,700.0	13,100.0	22,388.0	12,557.3	83.1	78.3	-50.26	11,029.9	-923.5	892.0	730.6	161.44	5.526	
23,725.4	13,100.0	22,388.0	12,557.3	83.2	78.3	-50.26	11,029.9	-923.5	884.6	721.7	162.88	5.431	CC, ES, SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

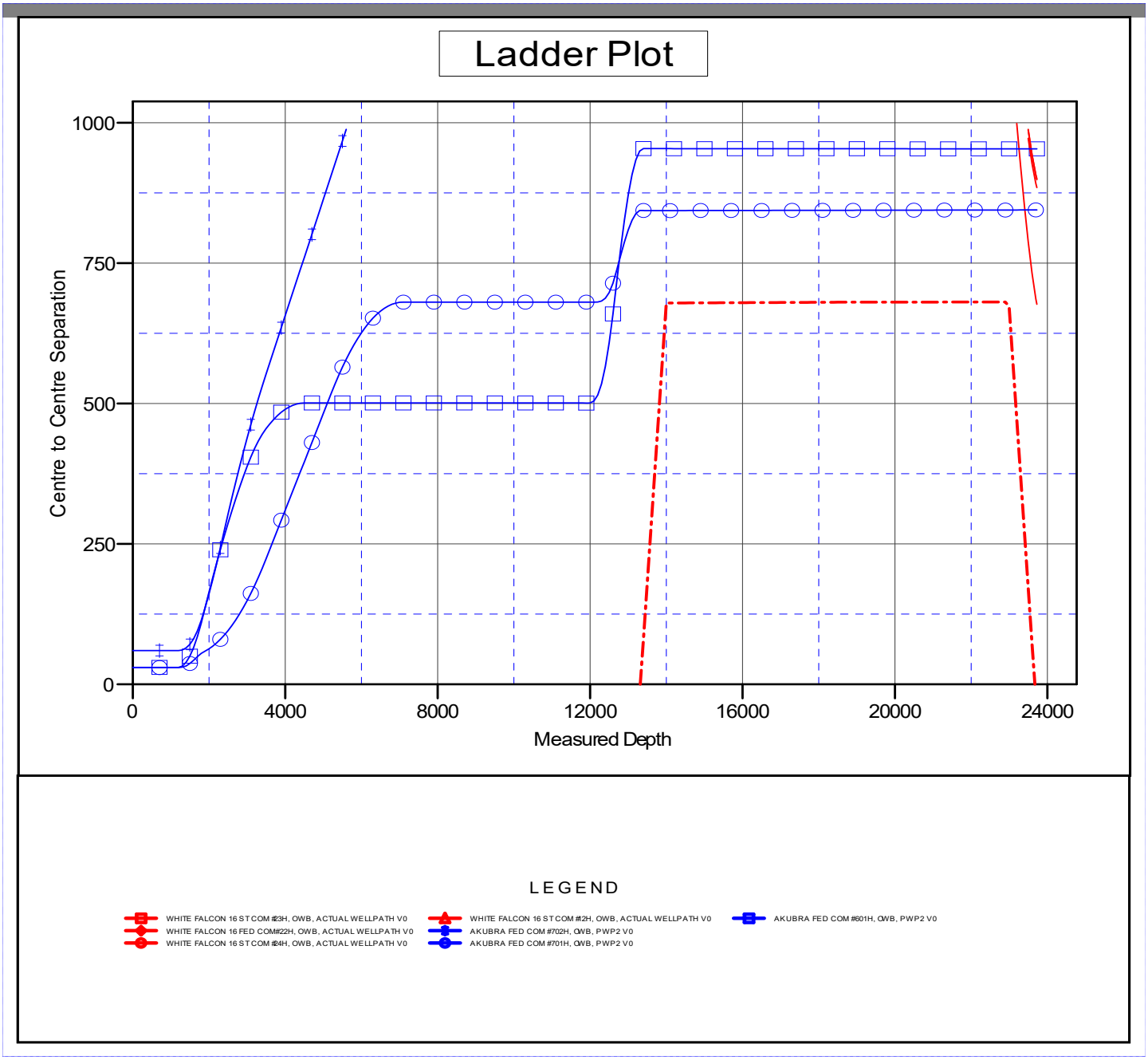
ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to KB=26 @ 3225.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: AKUBRA FED COM #801H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.51°



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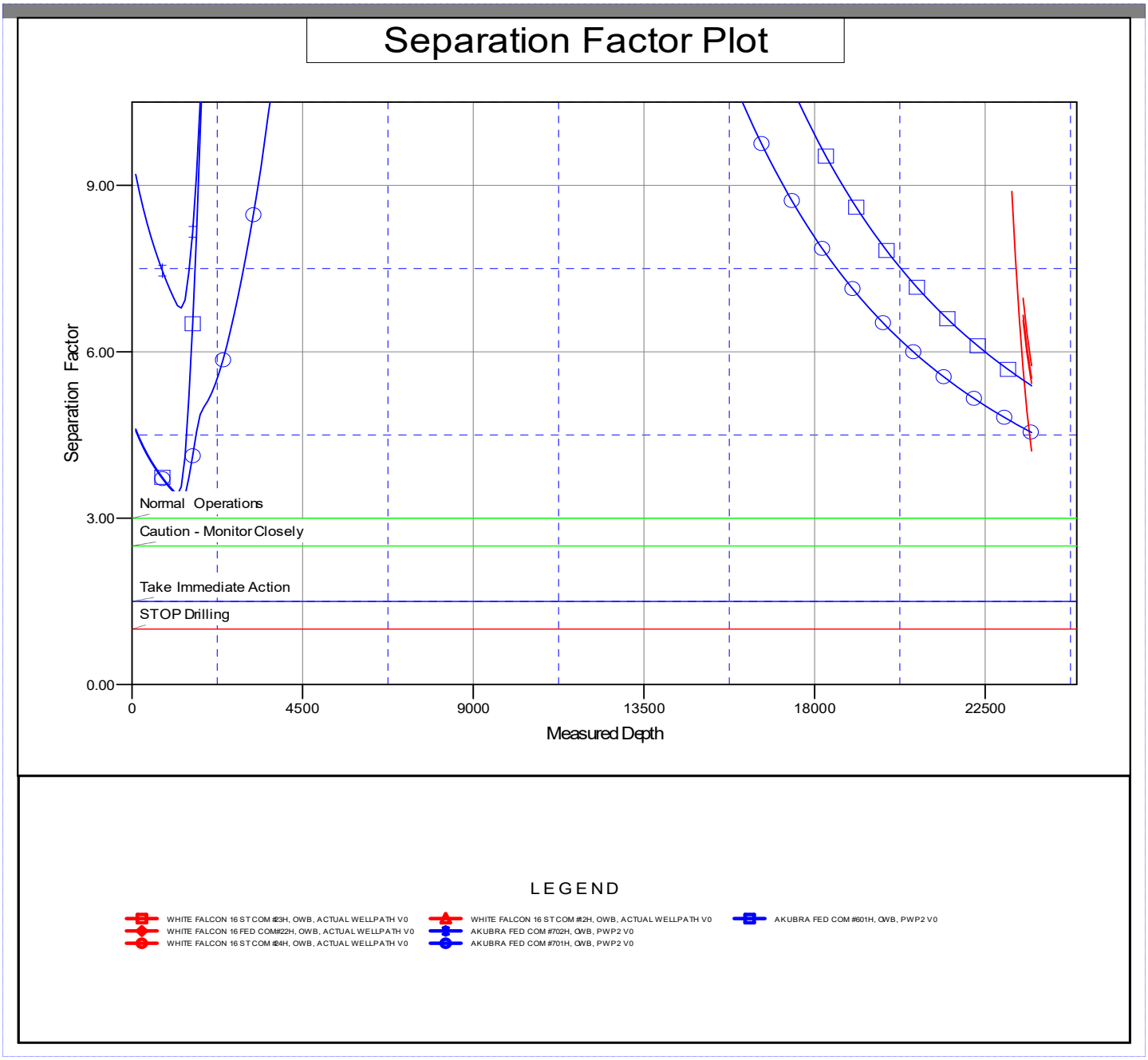
Anticollision Report

Company:	DELAWARE BASIN EAST	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Project:	LEA COUNTY SOUTHEAST	**TVD Reference:**	KB=26 @ 3225.0usft
Reference Site:	AKUBRA PROJECT	**MD Reference:**	KB=26 @ 3225.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP2	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to KB=26 @ 3225.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: AKUBRA FED COM #801H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.51°



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) 476-3460 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	Pool Code	Pool Name
30-025-	98117	WC-025 G-09 S263504N; Wolfcamp

Property Code	Property Name	Well Number
	AKUBRA FEDERAL COM	801H

OGRID No.	Operator Name	Elevation
229137	COG OPERATING LLC	3199.0'

Surface Location

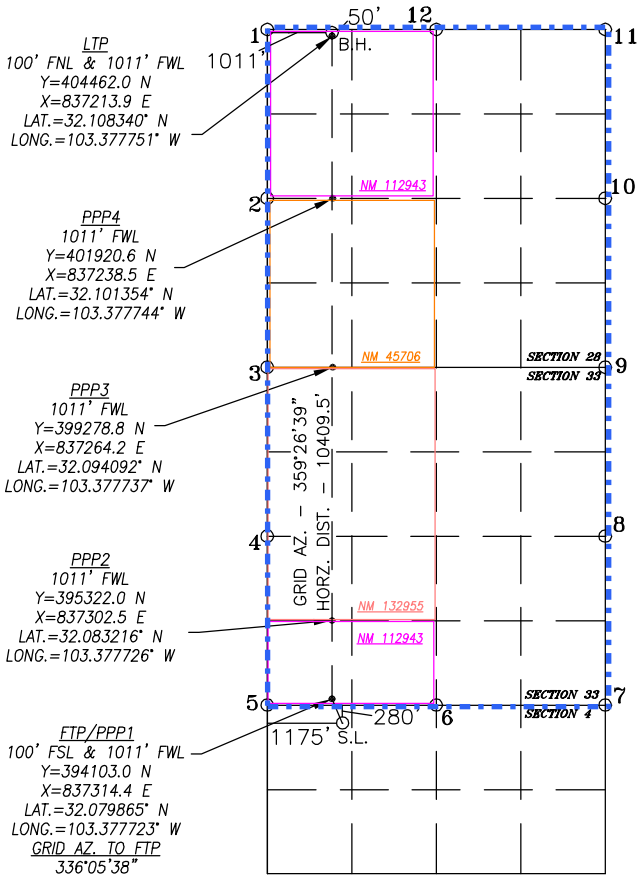
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	4	26-S	35-E		280	NORTH	1175	WEST	LEA

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
D	28	25-S	35-E		50	NORTH	1011	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
1280		Com	

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



NAD 83 NME
PROPOSED BOTTOM
HOLE LOCATION
Y=404512.0 N
X=837213.4 E
LAT.=32.108477° N
LONG.=103.377751° W

POINT LEGEND	
1	Y=404549.9 N X=836202.0 E
2	Y=401910.4 N X=836227.2 E
3	Y=399270.9 N X=836252.9 E
4	Y=396633.0 N X=836278.7 E
5	Y=393995.1 N X=836304.4 E
6	Y=394015.7 N X=838947.5 E
7	Y=394038.0 N X=841589.3 E
8	Y=396677.3 N X=841563.6 E
9	Y=399317.2 N X=841540.4 E
10	Y=401963.7 N X=841515.9 E
11	Y=404599.6 N X=841486.7 E
12	Y=404581.5 N X=838843.0 E

NAD 83 NME
SURFACE LOCATION
Y=393724.3 N
X=837482.2 E
LAT.=32.078820° N
LONG.=103.377192° 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.

Stan Wagner 5-06-2024
Signature Date

Stan Wagner
Printed Name

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.

JUNE 6, 2023
Date of Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW
NEW MEXICO
17777
LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 11/6/23
Certificate No. CHAD HARCROW 17777
W.O. #23-886 DRAWN BY: WN

DELAWARE BASIN EAST

LEA COUNTY SOUTHEAST
AKUBRA PROJECT
AKUBRA FED COM #801H

OWB

Plan: PWP2

Standard Planning Report

10 April, 2024

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=26 @ 3225.0usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=26 @ 3225.0usft
Site:	AKUBRA PROJECT	**North Reference:**	Grid
Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Project LEA COUNTY SOUTHEAST

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		

Site AKUBRA PROJECT

Site Position:		**Northing:**	399,228.16 usft	**Latitude:**	32° 5' 38.189 N
From:	Map	**Easting:**	797,901.87 usft	**Longitude:**	103° 22' 16.971 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well AKUBRA FED COM #801H

Well Position	**+N/-S**	0.0 usft	**Northing:**	393,666.60 usft	**Latitude:**	32° 4' 43.298 N
	+E/-W	0.0 usft	**Easting:**	796,294.70 usft	**Longitude:**	103° 22' 36.225 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,199.0 usft
Grid Convergence:		0.51 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2023	11/1/2024	6.04	59.58	47,176.21282491

Design PWP2

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	358.57

Plan Survey Tool Program **Date** 4/10/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	1,200.0	PWP2 (OWB)	r.5 SDI_KPR_WL_NS-CT SDI Keeper Wireline Gyrocomp	
2	1,200.0	23,725.4	PWP2 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St	

ConocoPhillips

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Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,450.0	5.00	220.00	1,449.7	-8.4	-7.0	2.00	2.00	0.00	220.00	
1,829.2	8.00	265.00	1,826.6	-23.3	-43.9	1.50	0.79	11.87	83.20	
1,904.3	8.00	265.00	1,901.0	-24.2	-54.4	0.00	0.00	0.00	0.00	
3,504.3	0.00	0.00	3,495.8	-34.0	-165.5	0.50	-0.50	0.00	180.00	
12,631.0	0.00	0.00	12,622.5	-34.0	-165.5	0.00	0.00	0.00	0.00	
13,381.0	90.00	359.46	13,100.0	443.5	-170.0	12.00	12.00	-0.07	359.46	
23,675.4	90.00	359.46	13,100.0	10,737.4	-267.9	0.00	0.00	0.00	0.00	
23,725.4	90.00	359.46	13,100.0	10,787.4	-268.4	0.00	0.00	0.00	0.00	

ConocoPhillips

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Site:	AKUBRA PROJECT	**North Reference:**	Grid
Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

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
Start Build 2.00									
1,300.0	2.00	220.00	1,300.0	-1.3	-1.1	-1.3	2.00	2.00	0.00
1,400.0	4.00	220.00	1,399.8	-5.3	-4.5	-5.2	2.00	2.00	0.00
1,450.0	5.00	220.00	1,449.7	-8.4	-7.0	-8.2	2.00	2.00	0.00
Start DLS 1.50 TFO 83.20									
1,500.0	5.14	228.34	1,499.5	-11.5	-10.1	-11.3	1.50	0.29	16.67
1,600.0	5.72	243.03	1,599.0	-16.7	-17.9	-16.3	1.50	0.58	14.69
1,700.0	6.59	254.45	1,698.5	-20.5	-27.8	-19.9	1.50	0.87	11.42
1,800.0	7.66	262.96	1,797.7	-22.9	-40.0	-21.9	1.50	1.07	8.51
1,829.2	8.00	265.00	1,826.6	-23.3	-43.9	-22.2	1.50	1.16	7.00
Start 75.1 hold at 1829.2 MD									
1,900.0	8.00	265.00	1,896.7	-24.2	-53.8	-22.8	0.00	0.00	0.00
1,904.3	8.00	265.00	1,901.0	-24.2	-54.4	-22.9	0.00	0.00	0.00
Start Drop -0.50									
2,000.0	7.52	265.00	1,995.8	-25.4	-67.2	-23.7	0.50	-0.50	0.00
2,100.0	7.02	265.00	2,095.0	-26.5	-79.8	-24.5	0.50	-0.50	0.00
2,200.0	6.52	265.00	2,194.3	-27.5	-91.6	-25.2	0.50	-0.50	0.00
2,300.0	6.02	265.00	2,293.7	-28.4	-102.5	-25.9	0.50	-0.50	0.00
2,400.0	5.52	265.00	2,393.2	-29.3	-112.5	-26.5	0.50	-0.50	0.00
2,500.0	5.02	265.00	2,492.8	-30.1	-121.6	-27.1	0.50	-0.50	0.00
2,600.0	4.52	265.00	2,592.4	-30.8	-129.9	-27.6	0.50	-0.50	0.00
2,700.0	4.02	265.00	2,692.2	-31.5	-137.3	-28.1	0.50	-0.50	0.00
2,800.0	3.52	265.00	2,791.9	-32.1	-143.9	-28.5	0.50	-0.50	0.00
2,900.0	3.02	265.00	2,891.8	-32.6	-149.6	-28.8	0.50	-0.50	0.00
3,000.0	2.52	265.00	2,991.7	-33.0	-154.4	-29.1	0.50	-0.50	0.00
3,100.0	2.02	265.00	3,091.6	-33.3	-158.4	-29.4	0.50	-0.50	0.00
3,200.0	1.52	265.00	3,191.5	-33.6	-161.4	-29.6	0.50	-0.50	0.00
3,300.0	1.02	265.00	3,291.5	-33.8	-163.6	-29.7	0.50	-0.50	0.00
3,400.0	0.52	265.00	3,391.5	-33.9	-165.0	-29.8	0.50	-0.50	0.00
3,500.0	0.02	265.00	3,491.5	-34.0	-165.5	-29.8	0.50	-0.50	0.00
3,504.3	0.00	0.00	3,495.8	-34.0	-165.5	-29.8	0.50	-0.50	0.00
Start 9126.7 hold at 3504.3 MD									
3,600.0	0.00	0.00	3,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
3,700.0	0.00	0.00	3,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
3,800.0	0.00	0.00	3,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
3,900.0	0.00	0.00	3,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,000.0	0.00	0.00	3,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,100.0	0.00	0.00	4,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,200.0	0.00	0.00	4,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,300.0	0.00	0.00	4,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,400.0	0.00	0.00	4,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00

ConocoPhillips

Planning Report

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Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=26 @ 3225.0usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=26 @ 3225.0usft
Site:	AKUBRA PROJECT	**North Reference:**	Grid
Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

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)
4,500.0	0.00	0.00	4,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,600.0	0.00	0.00	4,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,700.0	0.00	0.00	4,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,800.0	0.00	0.00	4,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
4,900.0	0.00	0.00	4,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,000.0	0.00	0.00	4,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,100.0	0.00	0.00	5,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,200.0	0.00	0.00	5,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,300.0	0.00	0.00	5,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,400.0	0.00	0.00	5,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,500.0	0.00	0.00	5,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,600.0	0.00	0.00	5,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,700.0	0.00	0.00	5,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,800.0	0.00	0.00	5,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
5,900.0	0.00	0.00	5,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,100.0	0.00	0.00	6,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,300.0	0.00	0.00	6,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,500.0	0.00	0.00	6,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,700.0	0.00	0.00	6,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
6,900.0	0.00	0.00	6,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,100.0	0.00	0.00	7,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,200.0	0.00	0.00	7,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,300.0	0.00	0.00	7,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,500.0	0.00	0.00	7,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,600.0	0.00	0.00	7,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,700.0	0.00	0.00	7,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,800.0	0.00	0.00	7,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
7,900.0	0.00	0.00	7,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,000.0	0.00	0.00	7,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,100.0	0.00	0.00	8,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,200.0	0.00	0.00	8,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,300.0	0.00	0.00	8,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,400.0	0.00	0.00	8,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,500.0	0.00	0.00	8,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,600.0	0.00	0.00	8,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,700.0	0.00	0.00	8,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,800.0	0.00	0.00	8,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
8,900.0	0.00	0.00	8,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,000.0	0.00	0.00	8,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,100.0	0.00	0.00	9,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,200.0	0.00	0.00	9,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,300.0	0.00	0.00	9,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,400.0	0.00	0.00	9,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,500.0	0.00	0.00	9,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,600.0	0.00	0.00	9,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,700.0	0.00	0.00	9,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
9,800.0	0.00	0.00	9,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00

ConocoPhillips

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Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

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)
9,900.0	0.00	0.00	9,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,000.0	0.00	0.00	9,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,100.0	0.00	0.00	10,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,200.0	0.00	0.00	10,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,300.0	0.00	0.00	10,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,400.0	0.00	0.00	10,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,500.0	0.00	0.00	10,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,600.0	0.00	0.00	10,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,700.0	0.00	0.00	10,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,800.0	0.00	0.00	10,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
10,900.0	0.00	0.00	10,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,000.0	0.00	0.00	10,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,100.0	0.00	0.00	11,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,200.0	0.00	0.00	11,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,300.0	0.00	0.00	11,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,400.0	0.00	0.00	11,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,500.0	0.00	0.00	11,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,600.0	0.00	0.00	11,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,700.0	0.00	0.00	11,691.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,800.0	0.00	0.00	11,791.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
11,900.0	0.00	0.00	11,891.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,000.0	0.00	0.00	11,991.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,100.0	0.00	0.00	12,091.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,200.0	0.00	0.00	12,191.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,300.0	0.00	0.00	12,291.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,400.0	0.00	0.00	12,391.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,500.0	0.00	0.00	12,491.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,600.0	0.00	0.00	12,591.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
12,631.0	0.00	0.00	12,622.5	-34.0	-165.5	-29.8	0.00	0.00	0.00
Start DLS 12.00 TFO 359.46									
12,700.0	8.28	359.46	12,691.3	-29.0	-165.5	-24.8	12.00	12.00	0.00
12,800.0	20.28	359.46	12,788.0	-4.4	-165.7	-0.2	12.00	12.00	0.00
12,900.0	32.28	359.46	12,877.5	39.8	-166.2	44.0	12.00	12.00	0.00
13,000.0	44.28	359.46	12,955.8	101.7	-166.7	105.8	12.00	12.00	0.00
13,100.0	56.28	359.46	13,019.6	178.4	-167.5	182.6	12.00	12.00	0.00
13,200.0	68.28	359.46	13,066.1	266.8	-168.3	270.9	12.00	12.00	0.00
13,300.0	80.28	359.46	13,093.1	362.9	-169.2	367.0	12.00	12.00	0.00
13,316.3	82.24	359.46	13,095.6	379.0	-169.4	383.1	12.00	12.00	0.00
FTP (AKUBRA FED COM #801H)									
13,381.0	90.00	359.46	13,100.0	443.5	-170.0	447.6	12.00	12.00	0.00
Start 10294.4 hold at 13381.0 MD									
13,400.0	90.00	359.46	13,100.0	462.5	-170.2	466.6	0.00	0.00	0.00
13,500.0	90.00	359.46	13,100.0	562.5	-171.1	566.6	0.00	0.00	0.00
13,600.0	90.00	359.46	13,100.0	662.5	-172.1	666.6	0.00	0.00	0.00
13,700.0	90.00	359.46	13,100.0	762.5	-173.0	766.5	0.00	0.00	0.00
13,800.0	90.00	359.46	13,100.0	862.5	-174.0	866.5	0.00	0.00	0.00
13,900.0	90.00	359.46	13,100.0	962.5	-174.9	966.5	0.00	0.00	0.00
14,000.0	90.00	359.46	13,100.0	1,062.5	-175.9	1,066.5	0.00	0.00	0.00
14,100.0	90.00	359.46	13,100.0	1,162.5	-176.8	1,166.5	0.00	0.00	0.00
14,200.0	90.00	359.46	13,100.0	1,262.5	-177.8	1,266.5	0.00	0.00	0.00
14,300.0	90.00	359.46	13,100.0	1,362.5	-178.7	1,366.5	0.00	0.00	0.00
14,400.0	90.00	359.46	13,100.0	1,462.4	-179.7	1,466.5	0.00	0.00	0.00
14,500.0	90.00	359.46	13,100.0	1,562.4	-180.6	1,566.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=26 @ 3225.0usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=26 @ 3225.0usft
Site:	AKUBRA PROJECT	**North Reference:**	Grid
Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

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)
14,600.0	90.00	359.46	13,100.0	1,662.4	-181.6	1,666.4	0.00	0.00	0.00
14,700.0	90.00	359.46	13,100.0	1,762.4	-182.5	1,766.4	0.00	0.00	0.00
14,800.0	90.00	359.46	13,100.0	1,862.4	-183.5	1,866.4	0.00	0.00	0.00
14,900.0	90.00	359.46	13,100.0	1,962.4	-184.4	1,966.4	0.00	0.00	0.00
15,000.0	90.00	359.46	13,100.0	2,062.4	-185.4	2,066.4	0.00	0.00	0.00
15,100.0	90.00	359.46	13,100.0	2,162.4	-186.3	2,166.4	0.00	0.00	0.00
15,200.0	90.00	359.46	13,100.0	2,262.4	-187.3	2,266.4	0.00	0.00	0.00
15,300.0	90.00	359.46	13,100.0	2,362.4	-188.2	2,366.4	0.00	0.00	0.00
15,400.0	90.00	359.46	13,100.0	2,462.4	-189.2	2,466.3	0.00	0.00	0.00
15,500.0	90.00	359.46	13,100.0	2,562.4	-190.1	2,566.3	0.00	0.00	0.00
15,600.0	90.00	359.46	13,100.0	2,662.4	-191.1	2,666.3	0.00	0.00	0.00
15,700.0	90.00	359.46	13,100.0	2,762.4	-192.1	2,766.3	0.00	0.00	0.00
15,800.0	90.00	359.46	13,100.0	2,862.4	-193.0	2,866.3	0.00	0.00	0.00
15,900.0	90.00	359.46	13,100.0	2,962.4	-194.0	2,966.3	0.00	0.00	0.00
16,000.0	90.00	359.46	13,100.0	3,062.4	-194.9	3,066.3	0.00	0.00	0.00
16,100.0	90.00	359.46	13,100.0	3,162.4	-195.9	3,166.3	0.00	0.00	0.00
16,200.0	90.00	359.46	13,100.0	3,262.4	-196.8	3,266.3	0.00	0.00	0.00
16,300.0	90.00	359.46	13,100.0	3,362.4	-197.8	3,366.2	0.00	0.00	0.00
16,400.0	90.00	359.46	13,100.0	3,462.4	-198.7	3,466.2	0.00	0.00	0.00
16,500.0	90.00	359.46	13,100.0	3,562.4	-199.7	3,566.2	0.00	0.00	0.00
16,600.0	90.00	359.46	13,100.0	3,662.3	-200.6	3,666.2	0.00	0.00	0.00
16,700.0	90.00	359.46	13,100.0	3,762.3	-201.6	3,766.2	0.00	0.00	0.00
16,800.0	90.00	359.46	13,100.0	3,862.3	-202.5	3,866.2	0.00	0.00	0.00
16,900.0	90.00	359.46	13,100.0	3,962.3	-203.5	3,966.2	0.00	0.00	0.00
17,000.0	90.00	359.46	13,100.0	4,062.3	-204.4	4,066.2	0.00	0.00	0.00
17,100.0	90.00	359.46	13,100.0	4,162.3	-205.4	4,166.1	0.00	0.00	0.00
17,200.0	90.00	359.46	13,100.0	4,262.3	-206.3	4,266.1	0.00	0.00	0.00
17,300.0	90.00	359.46	13,100.0	4,362.3	-207.3	4,366.1	0.00	0.00	0.00
17,400.0	90.00	359.46	13,100.0	4,462.3	-208.2	4,466.1	0.00	0.00	0.00
17,500.0	90.00	359.46	13,100.0	4,562.3	-209.2	4,566.1	0.00	0.00	0.00
17,600.0	90.00	359.46	13,100.0	4,662.3	-210.1	4,666.1	0.00	0.00	0.00
17,700.0	90.00	359.46	13,100.0	4,762.3	-211.1	4,766.1	0.00	0.00	0.00
17,800.0	90.00	359.46	13,100.0	4,862.3	-212.0	4,866.1	0.00	0.00	0.00
17,900.0	90.00	359.46	13,100.0	4,962.3	-213.0	4,966.1	0.00	0.00	0.00
18,000.0	90.00	359.46	13,100.0	5,062.3	-213.9	5,066.0	0.00	0.00	0.00
18,100.0	90.00	359.46	13,100.0	5,162.3	-214.9	5,166.0	0.00	0.00	0.00
18,200.0	90.00	359.46	13,100.0	5,262.3	-215.8	5,266.0	0.00	0.00	0.00
18,300.0	90.00	359.46	13,100.0	5,362.3	-216.8	5,366.0	0.00	0.00	0.00
18,400.0	90.00	359.46	13,100.0	5,462.3	-217.7	5,466.0	0.00	0.00	0.00
18,500.0	90.00	359.46	13,100.0	5,562.3	-218.7	5,566.0	0.00	0.00	0.00
18,600.0	90.00	359.46	13,100.0	5,662.3	-219.6	5,666.0	0.00	0.00	0.00
18,700.0	90.00	359.46	13,100.0	5,762.3	-220.6	5,766.0	0.00	0.00	0.00
18,800.0	90.00	359.46	13,100.0	5,862.2	-221.5	5,865.9	0.00	0.00	0.00
18,900.0	90.00	359.46	13,100.0	5,962.2	-222.5	5,965.9	0.00	0.00	0.00
19,000.0	90.00	359.46	13,100.0	6,062.2	-223.4	6,065.9	0.00	0.00	0.00
19,100.0	90.00	359.46	13,100.0	6,162.2	-224.4	6,165.9	0.00	0.00	0.00
19,200.0	90.00	359.46	13,100.0	6,262.2	-225.3	6,265.9	0.00	0.00	0.00
19,300.0	90.00	359.46	13,100.0	6,362.2	-226.3	6,365.9	0.00	0.00	0.00
19,400.0	90.00	359.46	13,100.0	6,462.2	-227.2	6,465.9	0.00	0.00	0.00
19,500.0	90.00	359.46	13,100.0	6,562.2	-228.2	6,565.9	0.00	0.00	0.00
19,600.0	90.00	359.46	13,100.0	6,662.2	-229.1	6,665.8	0.00	0.00	0.00
19,700.0	90.00	359.46	13,100.0	6,762.2	-230.1	6,765.8	0.00	0.00	0.00
19,800.0	90.00	359.46	13,100.0	6,862.2	-231.0	6,865.8	0.00	0.00	0.00
19,900.0	90.00	359.46	13,100.0	6,962.2	-232.0	6,965.8	0.00	0.00	0.00

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=26 @ 3225.0usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=26 @ 3225.0usft
Site:	AKUBRA PROJECT	**North Reference:**	Grid
Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

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)
20,000.0	90.00	359.46	13,100.0	7,062.2	-232.9	7,065.8	0.00	0.00	0.00
20,100.0	90.00	359.46	13,100.0	7,162.2	-233.9	7,165.8	0.00	0.00	0.00
20,200.0	90.00	359.46	13,100.0	7,262.2	-234.8	7,265.8	0.00	0.00	0.00
20,300.0	90.00	359.46	13,100.0	7,362.2	-235.8	7,365.8	0.00	0.00	0.00
20,400.0	90.00	359.46	13,100.0	7,462.2	-236.7	7,465.8	0.00	0.00	0.00
20,500.0	90.00	359.46	13,100.0	7,562.2	-237.7	7,565.7	0.00	0.00	0.00
20,600.0	90.00	359.46	13,100.0	7,662.2	-238.7	7,665.7	0.00	0.00	0.00
20,700.0	90.00	359.46	13,100.0	7,762.2	-239.6	7,765.7	0.00	0.00	0.00
20,800.0	90.00	359.46	13,100.0	7,862.2	-240.6	7,865.7	0.00	0.00	0.00
20,900.0	90.00	359.46	13,100.0	7,962.2	-241.5	7,965.7	0.00	0.00	0.00
21,000.0	90.00	359.46	13,100.0	8,062.1	-242.5	8,065.7	0.00	0.00	0.00
21,100.0	90.00	359.46	13,100.0	8,162.1	-243.4	8,165.7	0.00	0.00	0.00
21,200.0	90.00	359.46	13,100.0	8,262.1	-244.4	8,265.7	0.00	0.00	0.00
21,300.0	90.00	359.46	13,100.0	8,362.1	-245.3	8,365.6	0.00	0.00	0.00
21,400.0	90.00	359.46	13,100.0	8,462.1	-246.3	8,465.6	0.00	0.00	0.00
21,500.0	90.00	359.46	13,100.0	8,562.1	-247.2	8,565.6	0.00	0.00	0.00
21,600.0	90.00	359.46	13,100.0	8,662.1	-248.2	8,665.6	0.00	0.00	0.00
21,700.0	90.00	359.46	13,100.0	8,762.1	-249.1	8,765.6	0.00	0.00	0.00
21,800.0	90.00	359.46	13,100.0	8,862.1	-250.1	8,865.6	0.00	0.00	0.00
21,900.0	90.00	359.46	13,100.0	8,962.1	-251.0	8,965.6	0.00	0.00	0.00
22,000.0	90.00	359.46	13,100.0	9,062.1	-252.0	9,065.6	0.00	0.00	0.00
22,100.0	90.00	359.46	13,100.0	9,162.1	-252.9	9,165.6	0.00	0.00	0.00
22,200.0	90.00	359.46	13,100.0	9,262.1	-253.9	9,265.5	0.00	0.00	0.00
22,300.0	90.00	359.46	13,100.0	9,362.1	-254.8	9,365.5	0.00	0.00	0.00
22,400.0	90.00	359.46	13,100.0	9,462.1	-255.8	9,465.5	0.00	0.00	0.00
22,500.0	90.00	359.46	13,100.0	9,562.1	-256.7	9,565.5	0.00	0.00	0.00
22,600.0	90.00	359.46	13,100.0	9,662.1	-257.7	9,665.5	0.00	0.00	0.00
22,700.0	90.00	359.46	13,100.0	9,762.1	-258.6	9,765.5	0.00	0.00	0.00
22,800.0	90.00	359.46	13,100.0	9,862.1	-259.6	9,865.5	0.00	0.00	0.00
22,900.0	90.00	359.46	13,100.0	9,962.1	-260.5	9,965.5	0.00	0.00	0.00
23,000.0	90.00	359.46	13,100.0	10,062.1	-261.5	10,065.4	0.00	0.00	0.00
23,100.0	90.00	359.46	13,100.0	10,162.1	-262.4	10,165.4	0.00	0.00	0.00
23,200.0	90.00	359.46	13,100.0	10,262.0	-263.4	10,265.4	0.00	0.00	0.00
23,300.0	90.00	359.46	13,100.0	10,362.0	-264.3	10,365.4	0.00	0.00	0.00
23,400.0	90.00	359.46	13,100.0	10,462.0	-265.3	10,465.4	0.00	0.00	0.00
23,500.0	90.00	359.46	13,100.0	10,562.0	-266.2	10,565.4	0.00	0.00	0.00
23,600.0	90.00	359.46	13,100.0	10,662.0	-267.2	10,665.4	0.00	0.00	0.00
23,675.4	90.00	359.46	13,100.0	10,737.4	-267.9	10,740.7	0.00	0.00	0.00
Start 50.0 hold at 23675.4 MD - LTP (AKUBRA FED COM #801H)									
23,700.0	90.00	359.46	13,100.0	10,762.0	-268.1	10,765.4	0.00	0.00	0.00
23,725.4	90.00	359.46	13,100.0	10,787.4	-268.4	10,790.7	0.00	0.00	0.00
TD at 23725.4 - PBHL (AKUBRA FED COM #801H)									

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well AKUBRA FED COM #801H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=26 @ 3225.0usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=26 @ 3225.0usft
Site:	AKUBRA PROJECT	**North Reference:**	Grid
Well:	AKUBRA FED COM #801H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

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 (AKUBRA FED COI	0.00	0.00	13,100.0	378.7	-167.8	394,045.30	796,126.90	32° 4' 47.060 N	103° 22' 38.136 W
- plan misses target center by 4.7usft at 13316.3usft MD (13095.6 TVD, 379.0 N, -169.4 E)									
- Circle (radius 50.0)									
PBHL (AKUBRA FED C(	0.00	179.45	13,100.0	10,787.4	-268.4	404,454.00	796,026.30	32° 6' 30.065 N	103° 22' 38.233 W
- plan hits target center									
- Rectangle (sides W100.0 H10,409.2 D20.0)									
LTP (AKUBRA FED COI	90.00	359.45	13,100.0	10,737.4	-267.9	404,404.00	796,026.80	32° 6' 29.570 N	103° 22' 38.232 W
- plan hits target center									
- Circle (radius 50.0)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
23,725.4	13,100.0	6-3/4" Open Hole	5-1/2	6-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,200.0	1,200.0	0.0	0.0	Start Build 2.00
1,450.0	1,449.7	-8.4	-7.0	Start DLS 1.50 TFO 83.20
1,829.2	1,826.6	-23.3	-43.9	Start 75.1 hold at 1829.2 MD
1,904.3	1,901.0	-24.2	-54.4	Start Drop -0.50
3,504.3	3,495.8	-34.0	-165.5	Start 9126.7 hold at 3504.3 MD
12,631.0	12,622.5	-34.0	-165.5	Start DLS 12.00 TFO 359.46
13,381.0	13,100.0	443.5	-170.0	Start 10294.4 hold at 13381.0 MD
23,675.4	13,100.0	10,737.4	-267.9	Start 50.0 hold at 23675.4 MD
23,725.4	13,100.0	10,787.4	-268.4	TD at 23725.4

BOPE Break Testing Variance

Initial and 21 Day Testing of 10K BOP's:

Component	High Test Pressure	Low Test Pressure	Duration
Annular Preventer	5,000 psig	250 psig	10 min
Rams	5,000 psig	250 psig	10 min
Manifold	5,000 psig	250 psig	10 min
Wellhead	1,500 psig	-	10 min
Upper / Lower / Kelly Valves	5,000 psig	250 psig	10 min
TIW safety valves / Dart	5,000 psig	250 psig	10 min
Standpipe and mud line to pumps	5,000 psig	250 psig	10 min
Surface Casing (with 8.4 ppg fluid)	1,500 psig	-	30 min

*Equipment satisfies 10M BOPE but break test variance applies to 5M system

COG Production LLC formally requests variance from the minimum standards for well control equipment testing of Onshore Order No. 2 (item III.A.2.a.i) to allow break/shell testing of blowout preventor (BOP) and blowout prevention equipment (BOPE) during batch drilling operations of the intermediate hole section. This variance only applies to 5M BOPE or less formation.

Initial testing of the BOP will be conducted, verifying all components of BOP, BOPE, and choke manifold meet the minimum and maximum anticipated surface pressure (MASP) in accordance with API RP 53 and Onshore Order No. 2, reference table above. Once initial test pressures are achieved, shell testing of the BOP and choke manifold would be conducted within the time limit from initial test to the congruent 21-day test. A complete pressure test of the BOPE components will be completed no later than 21 days following the completion of the initial pressure test or latest complete BOP pressure test date succeeding the initial test, per API RP 53 (6.5.3.4.1 (d)).

BOP and BOPE Testing

- Minimum of Class 3 stack arrangement with one set of blind/blind shear rams and pipe rams shall be installed for a 5K pressure rated system per API RP 53 (6.1.2.9)
    - Classification - COP minimum of Class 3 arrangement apply for all Delaware Basin area wells.
    - Arrangement - Annular preventer, upper pipe rams, blind rams, mud cross, lower pipe rams
- Complete BOP and BOPE test performed at initial installation on well pad.
    - Initial test performed on well with deepest planned intermediate hole section (allowable 200' TVD variance between intermediate hole sections)
    - Annular preventer tested to 100 percent of MASP, or 70 percent of rated working pressure (RWP), whichever is greater.
    - Notify BLM 4 Hrs. prior to testing
- Complete BOP and BOPE test every 21 days in accordance with API RP 53 (6.5.3.4.1 (d)).
- BOP/BOPE shell test (inclusive of manifold shell test) performed during batch drilling operations during rig transition between wells (within the 21-day time limit per API RP 53).
- Function test BOP elements per API RP 53 (6.5.3.1).
    - Required on (1) initial installation of stack, (2) every 7 days, (3) after repair/replacement of any control components
    - Alternate between drillers panel and remote panel

Securing the Wellhead

- Prior to moving rig off check for flow
    - Ensure floats are holding, casing is full of kill mud and backside is static.
- Secure the well with sleeve/plug with BPV
- Disconnect BOP from the wellhead and walk with the rig to another well on the pad.
    - Utilizing BOP wrangler/cradle, maintaining control and upright position of the BOP during movement
- Once BOP is separated from wellhead the Temporary Abandonment (TA) cap will be installed per Wellhead vendor procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.
- Test TA cap to 5,000 psi for 10 min.

COG Production LLC believes that the combination of drilling fluid inside the casing, abandonment plug with BPV, casing and annular valves and the TA cap provide multiple barriers to ensure complete closure of the wellbore prior to skidding/walking the rig.

Break Testing

- Skid rig over the next well on pad and center over wellhead, N/U BOP with the use of the BOP quick connect.
- Shell test the BOP and choke manifold to 5,000 psig and 250 psig. Hold each test for 10 minutes.
    - In accordance with API RP 53 (6.5.3.4.1(b)) BOP shell test will satisfy pressure test of quick connect seals
    - Notify BLM 4 hours prior to testing
- RWP of BOP quick connect is 10K (Certificate of Conformance attached)

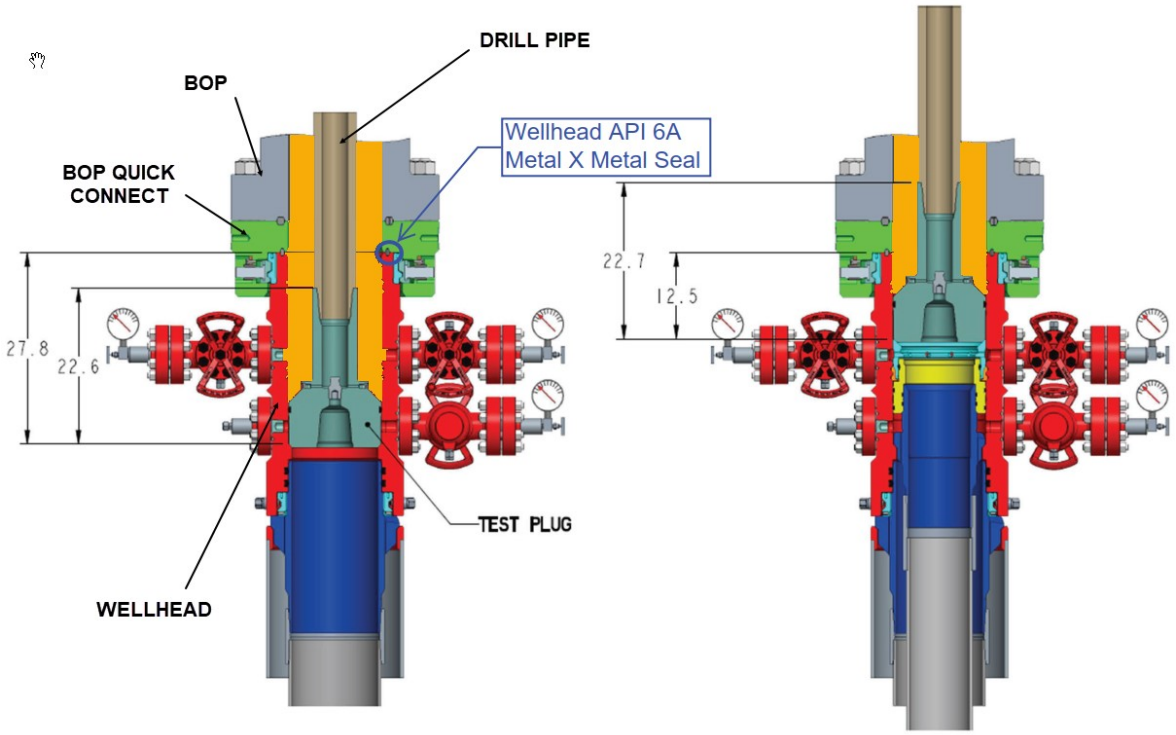

Figure 1: Test plug installed (The orange sections above indicate the areas exposed to the pressure test)

Example Well Control Plan Content

A. Well Control Component Table

This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the BOP nippled up to the wellhead.

Intermediate hole section, 5M requirement

Component	RWP
Pack-off	10M
Casing Wellhead Valves	10M
Annular Wellhead Valves	5M
TA Plug	10M
Float Valves	5M
2” 1502 Lo-Torque Valves	10M

B. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while circulating.

General Procedure

1. Sound alarm (alert crew).
2. Shut down pumps.
3. Shut-in Well (close valves to rig pits and open valve to rig choke line. Rig choke will already be in the closed position).
4. Confirm shut in.
5. Notify tool pusher/company representative.
6. Read and record the following:
    a. SICP (Shut in Casing Pressure) and AP (Annular Pressure)
    b. Pit gain
    c. Time
    d. Regroup and identify forward plan to continue circulating out kick via rig choke and mud/gas separator. Circulate and adjust mud density as needed to control well.

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1. Geologic Formations

TVD of target	13,100' EOL	Pilot hole depth	NA
MD at TD:	23,725'	Deepest expected fresh water:	118'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1041	Water	
Top of Salt	1400	Salt	
Base of Salt	4925	Salt	
Lamar	5278	Salt Water	
Bell Canyon	5295	Salt Water	
Cherry Canyon	6262	Oil/Gas	
Brushy Canyon	7834	Oil/Gas	
Bone Spring	9175	Oil/Gas	
Bone Spring 1st Sand - BS1S	10398	Oil/Gas	
Bone Spring Shale - BS1SH	10557	Oil/Gas	
Bone Spring 2nd Sand - BS2S	10907	Oil/Gas	
Bone Spring 3rd Carb - BS3C	11425	Oil/Gas	
Bone Spring 3rd Sand - BS3S	12007	Oil/Gas	
Wolfcamp A	12552	Oil/Gas	
Wolfcamp B	12771	Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
17.50"	0	1250	13.375"	54.5	J55	BTC	1.98	1.25	12.52	13.34
9.875"	0	8000	7.625"	29.7	L80-ICY	BTC	1.42	1.01	3.06	3.09
8.750"	8000	12500	7.625"	29.7	P110-ICY	W513	1.13	1.40	2.88	1.73
6.75"	0	12300	5.5"	23	P110-CY	BTC	1.68	1.96	2.58	2.58
6.75"	12300	23,725	5.5"	23	P110-CY	W441	1.58	1.84	2.42	2.20
						BLM Minimum Safety Factor	1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

2b. Contingtency Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
17.50"	0	1250	13.375"	54.5	J55	BTC	1.98	1.25	12.52	13.34
12.25"	0	5180	9.625"	40	L80-IC	BTC	1.44	1.18	4.42	4.57
8.75"	4980	12500	7.625"	29.7	P110-ICY	W513	1.13	1.40	2.88	1.73
6.75"	0	12300	5.5"	23	P110-CY	BTC	1.68	1.96	2.58	2.58
6.75"	12300	23,725	5.5"	23	P110-CY	W441	1.58	1.84	2.42	2.20
						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 43 CFR Part 3170 Subpart 3172

Contingency program will be run if large water flows or losses are encountered.

The 5 1/2" W441 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.

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	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?	

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3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	#VALUE!	12.8	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	850	10.3	3.3	22	24	Halliburton tuned light
	250	14.8	1.35	6.6	8	Tail: Class H
Prod	780	12.5	1.48	10.7	72	Lead: 50:50:10 H Blend
	860	13.2	1.34	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	12,000'	20% OH in Lateral (KOP to EOL)

3b. Contingency Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	750	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
Int. #1	790	12.8	1.75	9.21	12	Lead: Class C + 4% Gel + 1% CaCl2
	390	14.8	1.35	6.6	8	Tail: Class C + 2% CaCl2
Inter. #2 (Liner)	200	10.5	3.3	22	24	Tuned light
	90	14.8	1.35	6.6	8	Tail: Class H
Prod	960	12.5	1.48	10.7	72	Lead: 50:50:10 H Blend
	860	13.2	1.34	5.7	19	Tail: 50:50:2 Class H Blend

Contingency program will be run if large water flows or losses are encountered.

Casing String	TOC	% Excess
Surface	0'	50%
1st Intermediate	0'	50%
2nd Intermediate	4,980'	20%
Production	12,250'	20% OH in Lateral (KOP to EOL)

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4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
Y	A variance is requested for the use of BOPE break testing on intermediate skids (in accordance with the 30 day full BOPE test requirements).

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
12-1/4" or 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 43 CFR Part 3170 Subpart 3172 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 43 CFR Part 3170 Subpart 3172.
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 43 CFR Part 3170 Subpart 3172 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.

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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 - 10	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 13.5	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

5b. Contingency 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	9-5/8" Int shoe	Brine	8.4 - 10	28-34	N/C
9-5/8" Int shoe	7-5/8" Int shoe	Brine	8.4 - 10	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 13.5	35-45	<20

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	

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7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	9200 psi at 13100' TVD
Abnormal Temperature	NO 185 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 43 CFR Part 3170 Subpart 3176. 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

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 360562

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 360562
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	ALL PREVIOUS COA's APPLY.	8/24/2024