Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

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

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-015-56337

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

Application approval 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.
Conditions of approval, if any, are attached.

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 02/28/2025

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws 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, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: 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 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., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. 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 of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: SWNW / 1861 FNL / 201 FWL / TWSP: 23S / RANGE: 30E / SECTION: 26 / LAT: 32.278088 / LONG: -103.859624 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 330 FNL / 100 FEL / TWSP: 23S / RANGE: 30E / SECTION: 27 / LAT: 32.282296 / LONG: -103.860593 (TVD: 9411 feet, MD: 9646 feet)

PPP: NENE / 330 FNL / 1 FEL / TWSP: 23S / RANGE: 30E / SECTION: 28 / LAT: 32.282281 / LONG: -103.877602 (TVD: 9533 feet, MD: 15027 feet)

PPP: NWNE / 330 FNL / 1340 FEL / TWSP: 23S / RANGE: 30E / SECTION: 28 / LAT: 32.282297 / LONG: -103.881937 (TVD: 9533 feet, MD: 16367 feet)

BHL: NWNW / 330 FNL / 50 FWL / TWSP: 23S / RANGE: 30E / SECTION: 28 / LAT: 32.282345 / LONG: -103.894781 (TVD: 9533 feet, MD: 20119 feet)

BLM Point of Contact

Name: JANET D ESTES
Title: ADJUDICATOR
Phone: (575) 234-6233
Email: JESTES@BLM.GOV

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

C-102	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
Submit Electronically Via OCD Permitting		Submittal Type: ☑ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
30-015- 56337	96526	Forty Niner Ridge; Bone Spring
Property Code	**Property Name**	**Well Number**
337105	**IRON THRONE FEDERAL COM**	**501H**
OGRID No.	**Operator Name**	**Ground Level Elevation**
217817	**CONOCOPHILLIPS COMPANY**	**3,330.95'**
Surface Owner: ☑ State ☐ Fee ☐ Tribal ☑ Federal		Mineral Owner: ☑ State ☐ Fee ☐ Tribal ☑ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
E	**26**	**23S**	**30E**		**1,861' FNL**	**201' FWL**	**32.278088**	**-103.859624**	**EDDY**

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	**28**	**23S**	**30E**		**330' FNL**	**50' FWL**	**32.282345**	**-103.894781**	**EDDY**

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
1280	Infill	Pending 502H		Com
Order Numbers.			Well setbacks are under Common Ownership: ☒Yes ☐No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
E	**26**	**23S**	**30E**		**1,861' FNL**	**201' FWL**	**32.278088**	**-103.859624**	**EDDY**

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	**27**	**23S**	**30E**		**330' FNL**	**100' FEL**	**32.282296**	**-103.860593**	**EDDY**

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	**28**	**23S**	**30E**		**330' FNL**	**100' FWL**	**32.282345**	**-103.894619**	**EDDY**

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Stan Wagner 8/15/2024

Signature Date

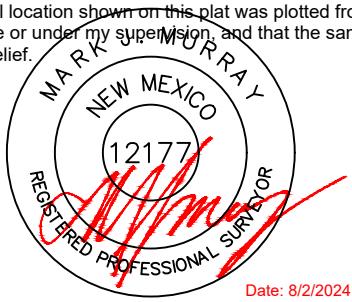
Stan Wagner

Printed Name

Email Address

SURVEYOR CERTIFICATIONS

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.



Date: 8/2/2024

Signature and Seal of Professional Surveyor

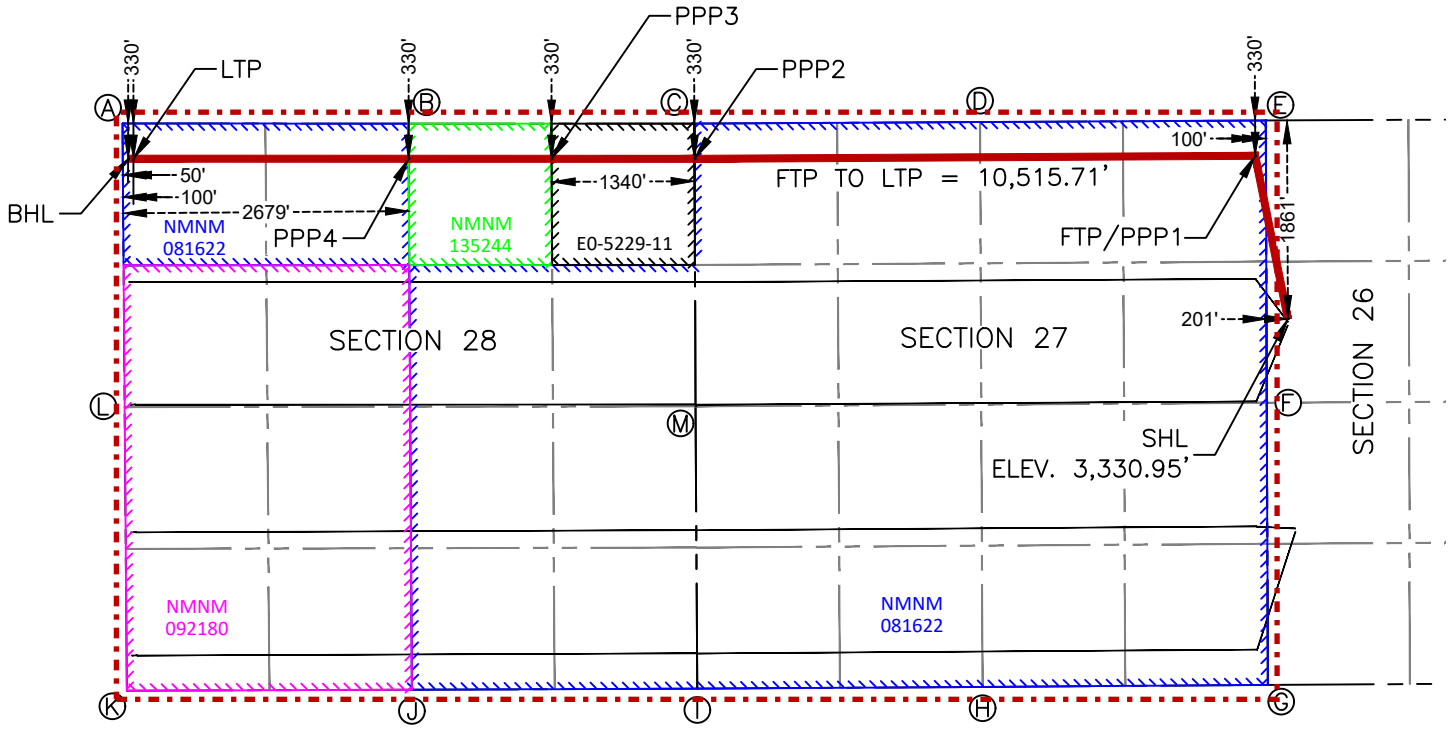
Certificate Number	Date of Survey
12177	8/2/2024

Note: 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.

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



SURFACE HOLE LOCATION
& KICK-OFF POINT
1,861' FNL & 201' FWL
ELEV. = 3,330.95'
NAD 83 X = 687,737.61'
NAD 83 Y = 465,224.66'
NAD 83 LAT = 32.278088˚
NAD 83 LONG = -103.859624˚

FIRST TAKE POINT &
PENETRATION POINT 1
330' FNL & 100' FEL
NAD 83 X = 687,431.46'
NAD 83 Y = 466,754.15'
NAD 83 LAT = 32.282296˚
NAD 83 LONG = -103.860593˚

PENETRATION POINT 2
330' FNL & 0' FEL
NAD 83 X = 682,175.02'
NAD 83 Y = 466,725.76'
NAD 83 LAT = 32.282281˚
NAD 83 LONG = -103.877602˚

PENETRATION POINT 3
330' FNL & 1,340' FEL
NAD 83 X = 680,835.27'
NAD 83 Y = 466,726.07'
NAD 83 LAT = 32.282297˚
NAD 83 LONG = -103.881937˚

PENETRATION POINT 4
329' FNL & 2,679' FWL
NAD 83 X = 679,495.31'
NAD 83 Y = 466,726.38'
NAD 83 LAT = 32.282314˚
NAD 83 LONG = -103.886273˚

LAST TAKE POINT
330' FNL & 100' FWL
NAD 83 X = 676,915.82'
NAD 83 Y = 466,726.98'
NAD 83 LAT = 32.282345˚
NAD 83 LONG = -103.894619˚

BOTTOM HOLE LOCATION
330' FNL & 50' FWL
NAD 83 X = 676,865.82'
NAD 83 Y = 466,727.01'
NAD 83 LAT = 32.282345˚
NAD 83 LONG = -103.894781˚

CORNER COORDINATES NEW MEXICO EAST - NAD 83	
A	IRON PIPE W/ BRASS CAP N:467,057.04' E:676,813.29'
B	IRON PIPE W/ BRASS CAP N:467,055.39' E:679,493.28'
C	IRON PIPE W/ BRASS CAP (LAYED OVER) N:467,055.75' E:682,173.55'
D	IRON PIPE W/ BRASS CAP N:467,070.06' E:684,851.49'
E	IRON PIPE W/ BRASS CAP N:467,084.70' E:687,530.34'
F	IRON PIPE W/ BRASS CAP N:464,439.06' E:687,539.26'
G	IRON PIPE W/ BRASS CAP N:461,793.64' E:687,549.74'
H	IRON PIPE W/ BRASS CAP N:461,774.47' E:684,874.62'
I	IRON PIPE W/ BRASS CAP N:461,758.24' E:682,200.45'
J	IRON PIPE W/ BRASS CAP N:461,748.40' E:679,526.06'
K	IRON PIPE W/ BRASS CAP N:461,738.78' E:676,854.09'
L	CALCULATED CORNER N:464,397.91' E:676,833.69'
M	IRON PIPE W/ BRASS CAP N:464,404.77' E:682,185.29'

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: ConocoPhillips Company **OGRID: 217817** **Date: 08/15/2024**

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Iron Throne Federal Com 501H	30-015-	E-26-23S-30E	1861 FNL & 201 FWL	± 1546	± 2264	± 4823
Iron Throne Federal Com 502H	30-015-	E-26-23S-30E	1891 FNL & 201 FWL	± 1546	± 2264	± 4823
Iron Throne Federal Com 503H	30-015-	E-26-23S-30E	1921 FNL & 201 FWL	± 1546	± 2264	± 4823
Iron Throne Federal Com 504H	30-015-	L-26-23S-30E	1463 FSL & 265 FWL	± 1546	± 2264	± 4823
Iron Throne Federal Com 505H	30-015-	L-23-23S-30E	1433 FSL & 265 FWL	± 1546	± 2264	± 4823

IV. Central Delivery Point Name: 27 CTB NESE 27-23S-30E [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Iron Throne Federal Com	Pending	± 06/01/2025	± 25 days from spud	TBD	TBD	TBD
501H, 502H, 503H, 504H, 505H						

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

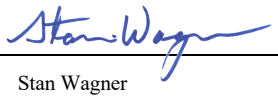
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	
Printed Name:	Stan Wagner
Title:	Regulatory Advisor
E-mail Address:	stan.s.wagner@conocophillips.com
Date:	08/15/2024
Phone:	432-253-9685

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

All ConocoPhillips production facility equipment will be sized per industry standards (API 12J) with adequate retention time to effectively separate all phases of production. Each project will take into consideration the number of wells and type curves for each formation pool to ensure adequate facility capacity. Design considerations will also include review of all piping, tanks, VRU's and associated equipment to ensure optimized gas capture minimized risk of release.

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

- During drilling, flare stacks will be located a minimum of 100 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety, and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

C. Completion Operations

- During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
- Individual well test separators will be set to properly separate gas and liquids. A temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline.

D. Venting and flaring during production operations

- During each phase of well life (drilling, completion and production) of a ConocoPhillips well, COP personnel will follow all necessary procedures to ensure both the operation and the equipment are within the NMAC 19.15.27.8 Subsection D guidelines.
- During well operations that require unloading of the well to atmospheric pressure, all reasonable actions will be taken to minimize vented gas
- Through the life of the well all flaring shall be measured, and venting events quantified using the data available and industry best practice.

E. Performance standards for separation, storage tank and flare equipment

- All storage tanks and separation equipment are designed minimize risk of liquid or vapor release and optimize gas capture. This includes automation for automatic gauging and pressure monitoring.

- All flare stacks are equipped with auto ignition devices and/or continuous pilots and are designed to operate at maximum combustion efficiency pursuant NMAC 19.15.27.8 Subsection E. Flares will follow COP spacing guidelines to ensure they are a safe distance from combustibles and operations equipment.
- COP personnel will conduct routine AVO inspections on a regular basis per NMAC 19.15.27.8 Subsection E guidelines.

F. Measurement of vented and flared natural gas.

- Measurement equipment will be installed to quantify gas flared during drilling, completion and production of the well.
- All measurement devices installed will meet accuracy ratings per AGA and API standards.
- Measurement devices will be installed without manifolds that allow diversion of gas around the metering element, except for the sole purpose of inspection of servicing the measurement device.

VIII. Best Management Practices

- Operator will curtail or shut in production, within reasonable limits, during upset conditions to minimize venting and flaring.
- When feasible, Operator will use equipment to capture gas that would otherwise be vented or flared.
- During completions and production operations Operator will minimize blowdowns to atmosphere
- When feasible, Operator will use electric or air actuated equipment to reduce bleed emissions

Waste Minimization Plan

Per § 3162.3-1 Drilling applications and plans. Part J:

(1) The anticipated initial oil production rate from the oil well and the anticipated production decline over the first 3 years of production.

   a. See attached Anticipated Production & Decline Curve

(2) The anticipated initial oil-well gas production rate from the oil well and the anticipated production decline over the first 3 years of production.

   a. See attached Anticipated Production & Decline Curve

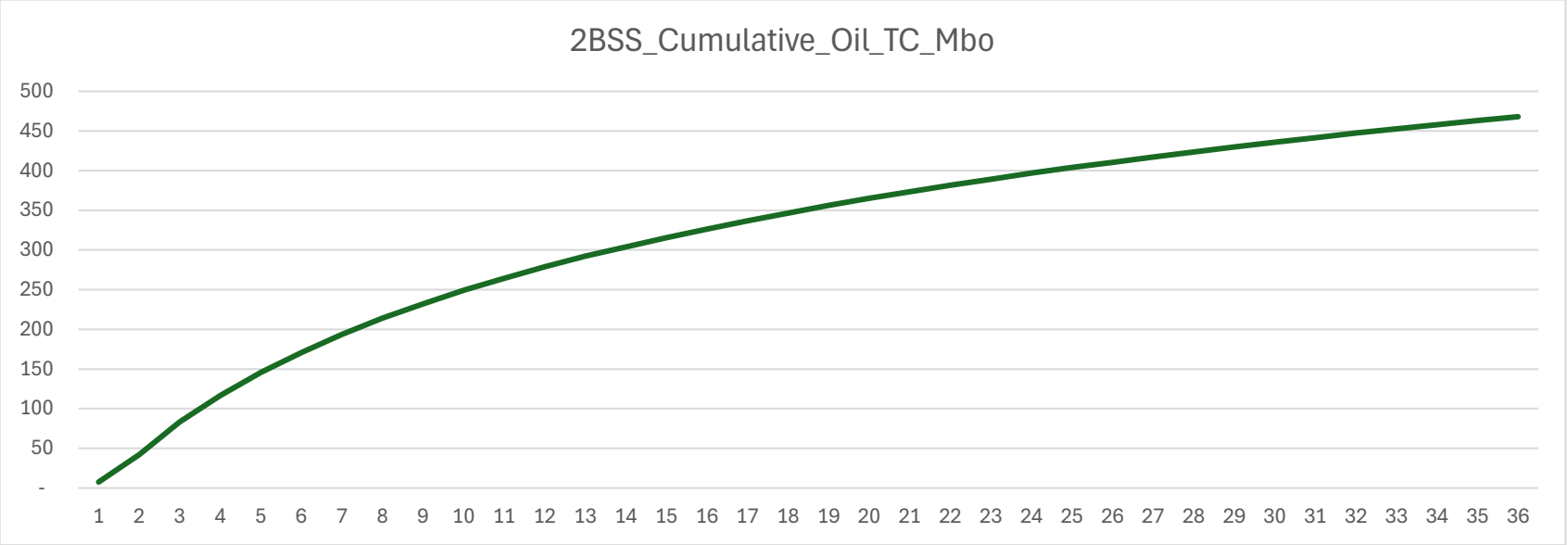
(3) Certification that the operator has a valid, executed gas sales contract to sell to a purchaser 100 percent of the produced oil-well gas, less gas anticipated for use on-lease pursuant to 43 CFR subpart 3178.

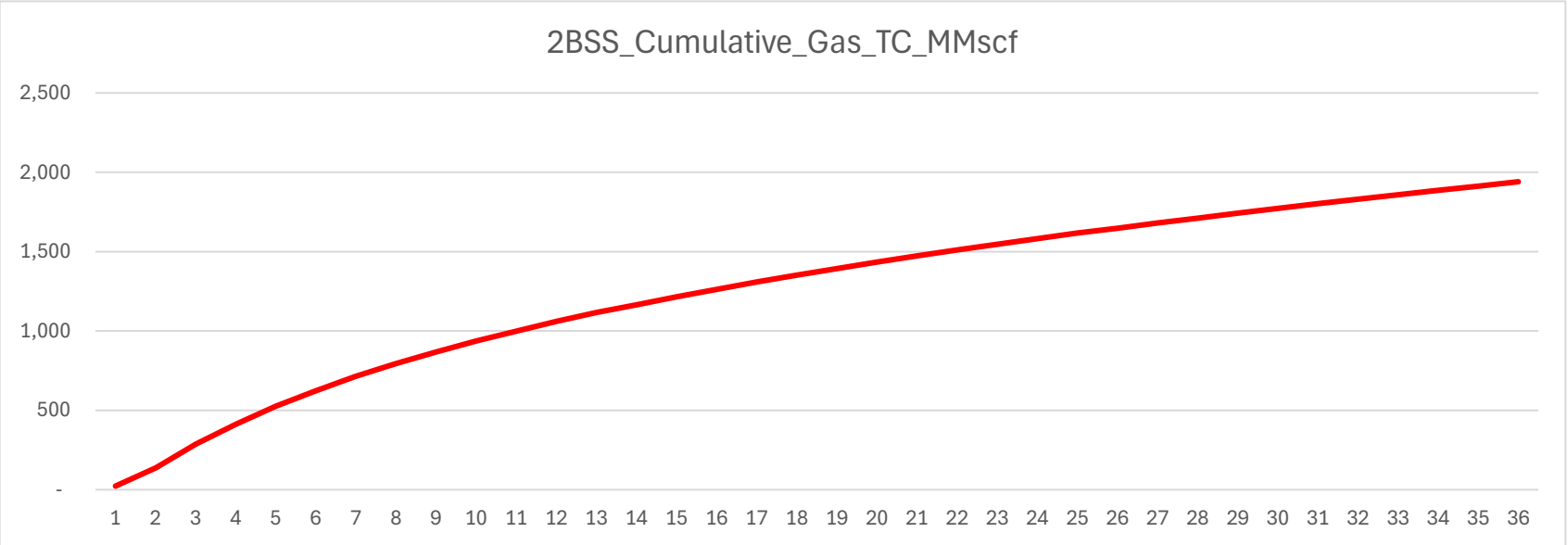
   a. See attached NMOCD – Natural Gas Management Plan

(4) Any other information demonstrating the operator's plans to avoid the waste of gas production from any source, including, as appropriate, from pneumatic equipment, storage tanks, and leaks.

   a. This location will comply with NSPS OOOOb which will include reduced associated gas flaring, non-emitting pneumatic equipment, storage tanks that are controlled and a rigorous leak detection and repair program. In addition, this facility complies with 20.2.50 NMAC (Ozone Precursor Pollutants) which also imposes standards on pneumatic equipment, tank controls, and leak detection and repair. Finally, this facility must comply with 19.15.27 NMAC (Venting and Flaring of Natural Gas) which significantly reduces instances of flaring.

Anticipated Production Decline Curve





COG Operating, LLC - Iron Throne Fed Com 501H

1. Geologic Formations

TVD of target	9,533' EOL	Pilot hole depth	NA
MD at TD:	20,120'	Deepest expected fresh water:	0'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	246	Water	
Top of Salt	550	Salt	
USGS Marker Bed 126	1900	Salt	
Base of Salt	3634	Salt Water	
Lamar	3859	Salt Water	
Bell Canyon	3902	Oil/Gas	
Cherry Canyon	4795	Oil/Gas	
Brushy Canyon	6099	Oil/Gas	
Bone Spring	7690	Oil/Gas	
1st Bone Spring Sand	8712	Oil/Gas	
2nd Bone Spring Sand	9348	Oil/Gas	
0	0	Oil/Gas	
		Oil/Gas	
		Oil/Gas	

Potash well archetype: 4-String Design Open 1st Int x 2nd Int Annulus w/ ICP 2 below relief zone (Figure D). Sundry aims to comply with R-111-Q as passed on 5/10/2024.

2. Casing Program

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
17.50"	0	200	13.375"	54.5	J55	BTC	12.35	38.17	78.26	83.39
12.25"	0	3750	10.75"	45.5	J55	BTC	1.27	1.51	6.43	6.10
9.875"	0	9000	7.625"	29.7	L80-ICY	BTC	1.43	1.27	2.72	2.74
8.750"	9000	9100	7.625"	29.7	P110 ICY	W513	1.52	1.65	3.48	2.06
6.75"	0	8900	5.5"	23	P110 CY	BTC	2.33	2.71	3.56	3.54
6.75"	8900	20,120	5.5"	23	P110 CY	W441	2.17	2.53	3.32	3.22
					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.

The 5 1/2" wedge 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.

Intend to use new casing meeting API standards.

COG Operating, LLC - Iron Throne Fed Com 501H

	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?	Y
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	Y
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?	

COG Operating, LLC - Iron Throne Fed Com 501H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf	119	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Inter 1	468	12.8	2.26	12.84	12	Lead: Class C + 5% Gel + 1% CaCl2
	250	14.8	1.2	5.35	10	50:50 Class H Premium
Inter 2						
	458	14.8	1.35	6.6	10	Tail: Class H - Single Slurry
Prod						
	891	13.2	1.24	5.7	19	Tail: 50:50:2 Class H Blend Single Slurry

Intermediate #1 Salt string cemented to surface. Drill out to wait for 500PSI compressive strength.

Intermediate #2 long string cemented Tail single slurry leaving Brushy Canyon Delaware Mountain group open as a relief zone. Section to be monitored during completions, and then Bradenhead cemented after completion is complete within 180 days to tie back. Drill out of intermediate to wait for 500psi compressive strength.

Production cement tied back 1000' into intermediate 2 string but not above engineered weak point with minimal excess to ensure annulus remains open.

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%
2nd Intermediate	6,149'	0%
Production	8,100'	10% OH in Lateral (KOP to EOL)

COG Operating, LLC - Iron Throne Fed Com 501H

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"	13-5/8”	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
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 43 CFR part 3170 Subpart 3172. 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.

COG Operating, LLC - Iron Throne Fed Com 501H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	9.8 - 10	28-34	N/C
Surf csg	10 3/4" Int 1 shoe	Saturated Brine	10	28-34	N/C
10 3/4" Int1 shoe	7-5/8" Int 2 shoe	Cut Brine	8.4 - 9.3	28-34	N/C
7-5/8" Int 2 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

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	

COG Operating, LLC - Iron Throne Fed Com 501H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	6695 psi at 9533' TVD
Abnormal Temperature	NO 155 Deg. F.

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

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

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

8. Other Facets of Operation

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

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

COG Operating LLC

Rig Plat & Closed Loop Equipment Diagram

Well pad will be 740' X 750'

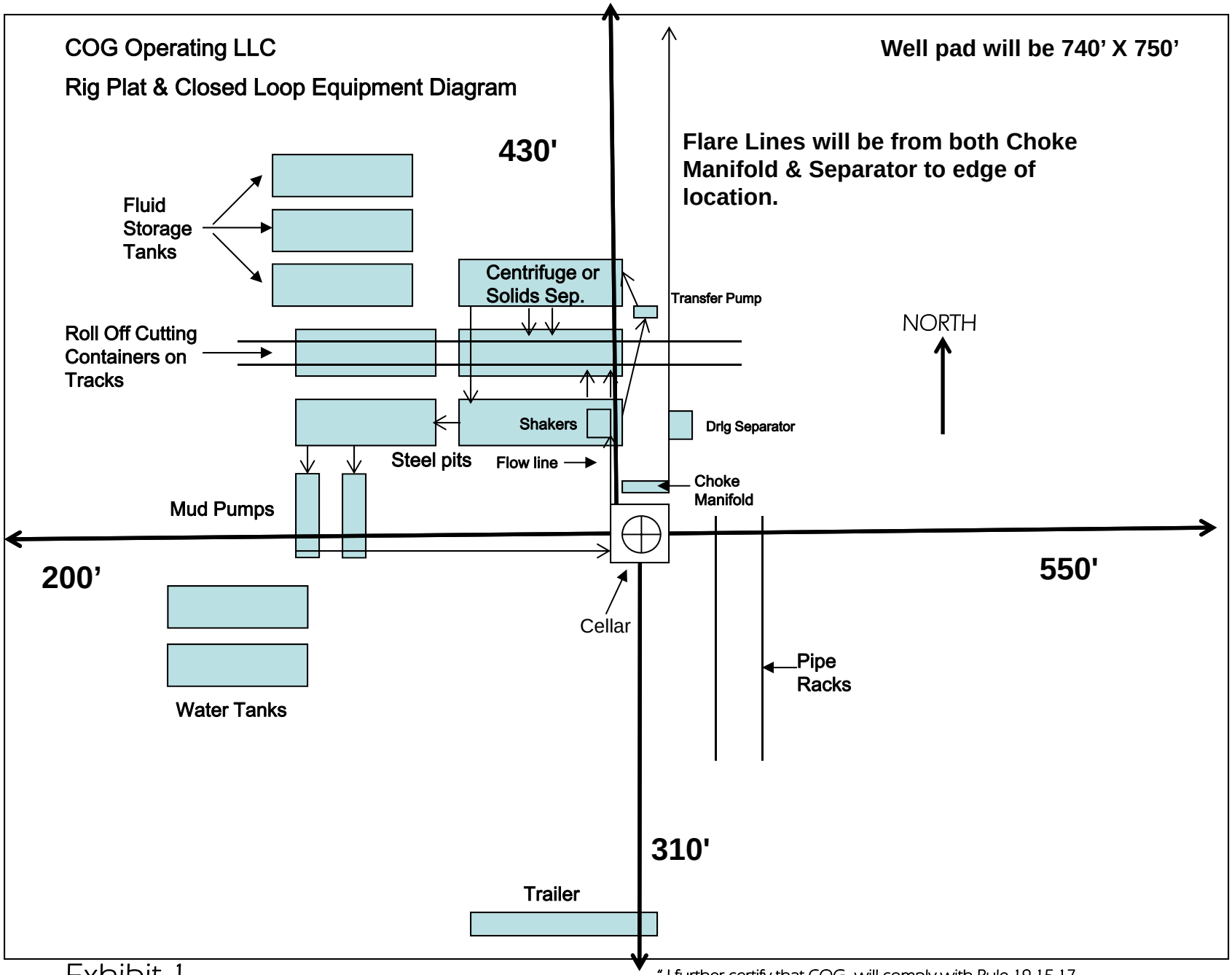


Exhibit 1

" I further certify that COG will comply with Rule 19.15.17 NMAC by using a Closed Loop System."

DELAWARE BASIN WEST

ATLAS PROSPECT (DBW)
IRON THRONE PROJECT
_IRON THRONE FED COM 501H

OWB
PWP0

Anticollision Report

18 July, 2024

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Reference PWP0

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Max. Cent. Dist. of 1,000.0usft or Max. SF of 2	**Error Surface:**	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 **Sigma**	**Casing Method:**	Added to Error Values

Survey Tool Program **Date** 7/17/2024

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	20,118.4	PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correc

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
IRON THRONE PROJECT						
_IRON THRONE FED COM 502H - OWB - PWP0	1,700.0	1,700.0	30.0	19.3	2.802	Normal Operations, CC, ES, SF
_IRON THRONE FED COM 503H - OWB - PWP0	1,700.0	1,700.0	60.0	49.3	5.604	CC, ES
_IRON THRONE FED COM 503H - OWB - PWP0	1,800.0	1,800.0	61.7	50.6	5.553	SF
FNRU FEDERAL COM 22 23 PPI_16H - OWB - AWP	7,834.9	8,033.9	885.8	831.4	16.296	CC, ES
FNRU FEDERAL COM 22 23 PPI_16H - OWB - AWP	7,900.0	8,033.6	888.5	833.9	16.251	SF
FORTY NINER RIDGE UNIT 105H - OWB - AWP	9,768.0	9,353.0	821.9	767.4	15.061	CC, ES
FORTY NINER RIDGE UNIT 105H - OWB - AWP	9,800.0	9,353.0	822.4	767.8	15.049	SF
FORTY NINER RIDGE UNIT 106H - OWB - AWP	9,882.5	9,248.0	840.3	785.0	15.176	CC, ES
FORTY NINER RIDGE UNIT 106H - OWB - AWP	9,900.0	9,249.8	840.4	785.0	15.166	SF
FORTY NINER RIDGE UNIT 119H_WELL START - OWB	12,568.6	9,400.0	475.6	394.8	5.889	CC, ES
FORTY NINER RIDGE UNIT 119H_WELL START - OWB	12,600.0	9,400.0	476.6	395.4	5.869	SF
FORTY NINER RIDGE UNIT 120H_WELL START - OWB	13,469.1	9,383.8	416.0	327.3	4.693	CC, ES
FORTY NINER RIDGE UNIT 120H_WELL START - OWB	13,500.0	9,383.8	417.1	328.2	4.690	SF
FORTY NINER RIDGE UNIT 121H_WELL START - OWB	14,369.0	9,267.5	503.8	403.2	5.004	CC, ES
FORTY NINER RIDGE UNIT 121H_WELL START - OWB	14,400.0	9,267.5	504.8	403.6	4.987	SF
FORTY NINER RIDGE UNIT 170H_WELL START - OWB	12,540.7	9,525.7	117.3	45.5	1.634	Caution - Monitor Closely, CC, ES, SF
FORTY NINER RIDGE UNIT 171H_WELL START - OWB	12,700.0	9,519.3	126.0	52.5	1.713	Caution - Monitor Closely, ES, SF
FORTY NINER RIDGE UNIT 171H_WELL START - OWB	12,704.4	9,519.1	126.0	52.5	1.714	Caution - Monitor Closely, CC
FORTY NINER RIDGE UNIT 172H_WELL START - OWB	12,692.7	9,521.1	119.7	46.6	1.637	Caution - Monitor Closely, CC, ES, SF
FORTY NINER RIDGE UNIT 173H_WELL START - OWB	13,428.2	9,514.1	121.4	39.3	1.479	Take Immediate Action, CC, ES, SF
FORTY NINER RIDGE UNIT 174H_WELL START - OWB	13,443.0	9,512.8	129.3	47.1	1.574	Caution - Monitor Closely, CC, ES, SF
FORTY NINER RIDGE UNIT 175H_WELL START - OWB	13,922.7	9,539.4	95.5	6.8	1.076	Take Immediate Action, CC, ES, SF
FORTY NINER RIDGE UNIT 176H_WELL START - OWB	14,189.9	9,562.8	131.5	40.4	1.444	Take Immediate Action, CC, ES
FORTY NINER RIDGE UNIT 176H_WELL START - OWB	14,200.0	9,563.9	131.9	40.5	1.444	Take Immediate Action, SF
FORTY NINER RIDGE UNIT 177H_WELL START - OWB	14,357.1	9,581.3	124.1	30.6	1.328	Take Immediate Action, CC, ES, SF

Offset Design: IRON THRONE PROJECT - _IRON THRONE FED COM 502H - OWB - PWP0 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 MWD+IFR1 — **Rule Assigned:** — **Offset Well Error:** 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-30.0	0.0	30.0	29.5	0.51	58.744	
100.0	100.0	100.0	100.0	1.2	1.2	180.00	-30.0	0.0	30.0	27.1	2.90	10.352	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - _IRON THRONE FED COM 502H - OWB - PWP0 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 MWD+IFR1 — **Rule Assigned:** — **Offset Well Error:** 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
200.0	200.0	200.0	200.0	1.7	1.7	180.00	-30.0	0.0	30.0	26.1	3.89	7.703	
300.0	300.0	300.0	300.0	2.1	2.1	180.00	-30.0	0.0	30.0	25.3	4.66	6.431	
400.0	400.0	400.0	400.0	2.4	2.4	180.00	-30.0	0.0	30.0	24.7	5.32	5.641	
500.0	500.0	500.0	500.0	2.7	2.7	180.00	-30.0	0.0	30.0	24.1	5.90	5.087	
600.0	600.0	600.0	600.0	3.0	3.0	180.00	-30.0	0.0	30.0	23.6	6.42	4.669	
700.0	700.0	700.0	700.0	3.2	3.2	180.00	-30.0	0.0	30.0	23.1	6.91	4.340	
800.0	800.0	800.0	800.0	3.5	3.5	180.00	-30.0	0.0	30.0	22.6	7.37	4.070	
900.0	900.0	900.0	900.0	3.7	3.7	180.00	-30.0	0.0	30.0	22.2	7.80	3.845	
1,000.0	1,000.0	1,000.0	1,000.0	3.9	3.9	180.00	-30.0	0.0	30.0	21.8	8.21	3.652	
1,100.0	1,100.0	1,100.0	1,100.0	4.1	4.1	180.00	-30.0	0.0	30.0	21.4	8.61	3.485	
1,200.0	1,200.0	1,200.0	1,200.0	4.3	4.3	180.00	-30.0	0.0	30.0	21.0	8.99	3.339	
1,300.0	1,300.0	1,300.0	1,300.0	4.5	4.5	180.00	-30.0	0.0	30.0	20.6	9.35	3.208	
1,400.0	1,400.0	1,400.0	1,400.0	4.7	4.7	180.00	-30.0	0.0	30.0	20.3	9.70	3.091	
1,500.0	1,500.0	1,500.0	1,500.0	4.8	4.8	180.00	-30.0	0.0	30.0	20.0	10.05	2.986	Normal Operations
1,600.0	1,600.0	1,600.0	1,600.0	5.0	5.0	180.00	-30.0	0.0	30.0	19.6	10.38	2.890	Normal Operations
1,700.0	1,700.0	1,700.0	1,700.0	5.2	5.2	180.00	-30.0	0.0	30.0	19.3	10.71	2.802	Normal Operations, CC, ES, SF
1,800.0	1,800.0	1,800.0	1,800.0	5.4	5.3	-178.11	-30.0	0.0	31.7	20.6	11.12	2.855	Normal Operations
1,900.0	1,899.8	1,899.8	1,899.8	5.7	5.5	-178.37	-30.0	0.0	37.0	25.4	11.53	3.206	
2,000.0	1,999.5	1,999.5	1,999.5	6.0	5.6	-178.68	-30.0	0.0	45.7	33.7	11.96	3.820	
2,100.0	2,098.7	2,098.7	2,098.7	6.3	5.8	-178.95	-30.0	0.0	57.9	45.5	12.40	4.666	
2,200.0	2,197.5	2,197.5	2,197.5	6.6	5.9	-179.17	-30.0	0.0	73.5	60.7	12.86	5.716	
2,300.0	2,295.6	2,295.6	2,295.6	6.9	6.1	-179.34	-30.0	0.0	92.6	79.3	13.34	6.941	
2,400.0	2,393.1	2,393.1	2,393.1	7.2	6.2	-179.46	-30.0	0.0	115.1	101.2	13.83	8.319	
2,450.0	2,441.5	2,441.5	2,441.5	7.4	6.3	-179.51	-30.0	0.0	127.6	113.6	14.03	9.093	
2,500.0	2,489.8	2,489.8	2,489.8	7.5	6.4	-179.56	-30.0	0.0	140.5	126.3	14.23	9.876	
2,600.0	2,586.4	2,588.9	2,588.9	7.8	6.5	-179.58	-29.3	-0.1	165.8	151.1	14.70	11.273	
2,700.0	2,682.9	2,689.1	2,689.1	8.2	6.6	-179.51	-26.9	-0.6	189.3	174.1	15.21	12.450	
2,800.0	2,779.5	2,790.2	2,790.0	8.5	6.8	-179.36	-22.8	-1.5	211.2	195.5	15.74	13.418	
2,900.0	2,876.1	2,892.0	2,891.7	8.9	7.0	-179.15	-16.9	-2.8	231.4	215.1	16.31	14.191	
3,000.0	2,972.7	2,994.5	2,993.9	9.3	7.2	-178.89	-9.1	-4.4	249.9	233.0	16.90	14.782	
3,100.0	3,069.3	3,102.7	3,101.5	9.7	7.5	-178.63	1.9	-6.4	265.7	248.2	17.59	15.107	
3,200.0	3,165.9	3,206.6	3,204.4	10.1	7.7	-178.43	15.8	-8.1	278.4	260.2	18.21	15.290	
3,300.0	3,262.5	3,305.8	3,302.7	10.5	7.9	-178.26	29.5	-9.8	290.7	271.8	18.89	15.387	
3,400.0	3,359.1	3,405.0	3,401.0	10.9	8.2	-178.10	43.2	-11.5	302.9	283.3	19.60	15.460	
3,500.0	3,455.7	3,504.3	3,499.2	11.3	8.5	-177.95	57.0	-13.2	315.2	294.9	20.32	15.514	
3,600.0	3,552.3	3,603.5	3,597.5	11.7	8.8	-177.82	70.7	-14.9	327.5	306.4	21.06	15.553	
3,700.0	3,648.9	3,702.8	3,695.8	12.2	9.1	-177.69	84.4	-16.5	339.8	318.0	21.81	15.578	
3,800.0	3,745.5	3,802.0	3,794.1	12.6	9.4	-177.57	98.1	-18.2	352.0	329.5	22.58	15.592	
3,900.0	3,842.1	3,901.2	3,892.3	13.0	9.7	-177.46	111.8	-19.9	364.3	341.0	23.36	15.598	
4,000.0	3,938.6	4,000.5	3,990.6	13.5	10.0	-177.36	125.5	-21.6	376.6	352.5	24.15	15.596	
4,100.0	4,035.2	4,099.7	4,088.9	13.9	10.4	-177.27	139.2	-23.3	388.9	363.9	24.95	15.588	
4,200.0	4,131.8	4,199.0	4,187.2	14.4	10.7	-177.18	152.9	-25.0	401.2	375.4	25.76	15.576	
4,300.0	4,228.4	4,298.2	4,285.4	14.9	11.1	-177.09	166.6	-26.6	413.5	386.9	26.57	15.560	
4,400.0	4,325.0	4,397.5	4,383.7	15.3	11.4	-177.01	180.3	-28.3	425.7	398.3	27.40	15.540	
4,500.0	4,421.6	4,496.7	4,482.0	15.8	11.8	-176.94	194.0	-30.0	438.0	409.8	28.23	15.519	
4,600.0	4,518.2	4,595.9	4,580.3	16.2	12.1	-176.87	207.8	-31.7	450.3	421.2	29.06	15.495	
4,700.0	4,614.8	4,695.2	4,678.5	16.7	12.5	-176.80	221.5	-33.4	462.6	432.7	29.90	15.470	
4,800.0	4,711.4	4,794.4	4,776.8	17.2	12.9	-176.74	235.2	-35.1	474.9	444.1	30.75	15.443	
4,900.0	4,808.0	4,893.7	4,875.1	17.6	13.3	-176.68	248.9	-36.7	487.2	455.6	31.60	15.416	
5,000.0	4,904.6	4,992.9	4,973.4	18.1	13.6	-176.62	262.6	-38.4	499.5	467.0	32.46	15.388	
5,100.0	5,001.2	5,092.1	5,071.6	18.6	14.0	-176.56	276.3	-40.1	511.7	478.4	33.32	15.360	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - _IRON THRONE FED COM 502H - OWB - PWP0

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Offset Well Error: 0.0 usft

Rule Assigned: Distance

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)	No-Go Distance (usft)	Separation Factor	Warning
5,200.0	5,097.8	5,191.4	5,169.9	19.1	14.4	-176.51	290.0	-41.8	524.0	489.9	34.18	15.332	
5,300.0	5,194.4	5,290.6	5,268.2	19.5	14.8	-176.46	303.7	-43.5	536.3	501.3	35.05	15.304	
5,400.0	5,290.9	5,389.9	5,366.5	20.0	15.2	-176.41	317.4	-45.2	548.6	512.7	35.92	15.275	
5,500.0	5,387.5	5,481.5	5,457.3	20.5	15.5	-176.38	329.6	-46.6	561.5	524.7	36.74	15.284	
5,600.0	5,484.1	5,571.7	5,546.8	21.0	15.9	-176.37	340.1	-47.9	575.9	538.3	37.53	15.342	
5,700.0	5,580.7	5,661.3	5,636.0	21.4	16.2	-176.38	349.2	-49.1	591.8	553.5	38.32	15.445	
5,800.0	5,677.3	5,750.6	5,724.9	21.9	16.6	-176.41	356.9	-50.0	609.3	570.2	39.08	15.590	
5,900.0	5,773.9	5,839.3	5,813.4	22.4	16.9	-176.46	363.2	-50.8	628.2	588.4	39.82	15.775	
6,000.0	5,870.5	5,927.4	5,901.4	22.9	17.2	-176.52	368.1	-51.4	648.7	608.1	40.55	15.999	
6,100.0	5,967.1	6,015.0	5,988.9	23.4	17.4	-176.59	371.6	-51.8	670.6	629.4	41.24	16.261	
6,200.0	6,063.7	6,100.0	6,073.9	23.9	17.7	-176.68	373.7	-52.1	694.0	652.2	41.89	16.569	
6,300.0	6,160.3	6,188.3	6,162.2	24.3	17.8	-176.78	374.6	-52.2	718.9	676.4	42.48	16.923	
6,400.0	6,256.9	6,283.0	6,256.9	24.8	17.9	-176.89	374.7	-52.2	744.7	701.7	43.08	17.289	
6,500.0	6,353.5	6,379.6	6,353.5	25.3	18.0	-176.99	374.7	-52.2	770.6	726.9	43.68	17.641	
6,600.0	6,450.1	6,476.2	6,450.1	25.8	18.0	-177.09	374.7	-52.2	796.4	752.1	44.29	17.982	
6,700.0	6,546.6	6,572.8	6,546.6	26.3	18.1	-177.18	374.7	-52.2	822.3	777.4	44.90	18.314	
6,800.0	6,643.2	6,669.4	6,643.2	26.8	18.1	-177.27	374.7	-52.2	848.1	802.6	45.51	18.635	
6,900.0	6,739.8	6,766.0	6,739.8	27.3	18.2	-177.35	374.7	-52.2	874.0	827.9	46.13	18.946	
7,000.0	6,836.4	6,862.6	6,836.4	27.7	18.3	-177.42	374.7	-52.2	899.8	853.1	46.75	19.249	
7,100.0	6,933.0	6,959.2	6,933.0	28.2	18.3	-177.50	374.7	-52.2	925.7	878.3	47.37	19.542	
7,200.0	7,029.6	7,055.7	7,029.6	28.7	18.4	-177.56	374.7	-52.2	951.6	903.6	47.99	19.827	
7,231.5	7,060.0	7,086.1	7,060.0	28.9	18.4	-177.58	374.7	-52.2	959.7	911.5	48.18	19.918	
7,300.0	7,126.3	7,152.4	7,126.3	29.2	18.5	-177.63	374.7	-52.2	977.0	928.4	48.60	20.102	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - _IRON THRONE FED COM 503H - OWB - PWP0

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Offset Well Error: 0.0 usft

Rule Assigned:

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)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-60.0	0.0	60.0	59.5	0.51	117.487	
100.0	100.0	100.0	100.0	1.2	1.2	180.00	-60.0	0.0	60.0	57.1	2.90	20.704	
200.0	200.0	200.0	200.0	1.7	1.7	180.00	-60.0	0.0	60.0	56.1	3.89	15.406	
300.0	300.0	300.0	300.0	2.1	2.1	180.00	-60.0	0.0	60.0	55.3	4.66	12.863	
400.0	400.0	400.0	400.0	2.4	2.4	180.00	-60.0	0.0	60.0	54.7	5.32	11.282	
500.0	500.0	500.0	500.0	2.7	2.7	180.00	-60.0	0.0	60.0	54.1	5.90	10.174	
600.0	600.0	600.0	600.0	3.0	3.0	180.00	-60.0	0.0	60.0	53.6	6.42	9.339	
700.0	700.0	700.0	700.0	3.2	3.2	180.00	-60.0	0.0	60.0	53.1	6.91	8.679	
800.0	800.0	800.0	800.0	3.5	3.5	180.00	-60.0	0.0	60.0	52.6	7.37	8.141	
900.0	900.0	900.0	900.0	3.7	3.7	180.00	-60.0	0.0	60.0	52.2	7.80	7.690	
1,000.0	1,000.0	1,000.0	1,000.0	3.9	3.9	180.00	-60.0	0.0	60.0	51.8	8.21	7.305	
1,100.0	1,100.0	1,100.0	1,100.0	4.1	4.1	180.00	-60.0	0.0	60.0	51.4	8.61	6.971	
1,200.0	1,200.0	1,200.0	1,200.0	4.3	4.3	180.00	-60.0	0.0	60.0	51.0	8.99	6.677	
1,300.0	1,300.0	1,300.0	1,300.0	4.5	4.5	180.00	-60.0	0.0	60.0	50.6	9.35	6.417	
1,400.0	1,400.0	1,400.0	1,400.0	4.7	4.7	180.00	-60.0	0.0	60.0	50.3	9.70	6.183	
1,500.0	1,500.0	1,500.0	1,500.0	4.8	4.8	180.00	-60.0	0.0	60.0	50.0	10.05	5.972	
1,600.0	1,600.0	1,600.0	1,600.0	5.0	5.0	180.00	-60.0	0.0	60.0	49.6	10.38	5.780	
1,700.0	1,700.0	1,700.0	1,700.0	5.2	5.2	180.00	-60.0	0.0	60.0	49.3	10.71	5.604 CC, ES	
1,800.0	1,800.0	1,800.0	1,800.0	5.4	5.3	-178.06	-60.0	0.0	61.7	50.6	11.12	5.553 SF	
1,900.0	1,899.8	1,899.8	1,899.8	5.7	5.5	-178.20	-60.0	0.0	67.0	55.4	11.53	5.807	
2,000.0	1,999.5	1,999.5	1,999.5	6.0	5.6	-178.41	-60.0	0.0	75.7	63.7	11.96	6.328	
2,100.0	2,098.7	2,098.7	2,098.7	6.3	5.8	-178.62	-60.0	0.0	87.9	75.5	12.40	7.085	
2,200.0	2,197.5	2,197.5	2,197.5	6.6	5.9	-178.82	-60.0	0.0	103.5	90.6	12.86	8.048	
2,300.0	2,295.6	2,295.6	2,295.6	6.9	6.1	-179.00	-60.0	0.0	122.6	109.2	13.34	9.190	
2,400.0	2,393.1	2,393.1	2,393.1	7.2	6.2	-179.15	-60.0	0.0	145.1	131.2	13.83	10.487	
2,450.0	2,441.5	2,441.5	2,441.5	7.4	6.3	-179.21	-60.0	0.0	157.6	143.6	14.03	11.230	
2,500.0	2,489.8	2,489.8	2,489.8	7.5	6.4	-179.27	-60.0	0.0	170.5	156.3	14.23	11.983	
2,600.0	2,586.4	2,580.8	2,580.8	7.8	6.5	-179.33	-61.1	-0.1	197.6	182.9	14.71	13.437	
2,700.0	2,682.9	2,669.6	2,669.5	8.2	6.7	-179.32	-65.0	-0.3	227.7	212.5	15.18	15.003	
2,800.0	2,779.5	2,756.6	2,756.3	8.5	6.9	-179.25	-71.5	-0.7	260.7	245.0	15.65	16.658	
2,900.0	2,876.1	2,841.8	2,841.0	8.9	7.0	-179.16	-80.3	-1.2	296.4	280.3	16.12	18.384	
3,000.0	2,972.7	2,924.9	2,923.4	9.3	7.2	-179.05	-91.4	-1.9	334.9	318.3	16.59	20.188	
3,100.0	3,069.3	3,010.1	3,007.5	9.7	7.3	-178.93	-105.0	-2.8	375.9	358.8	17.05	22.042	
3,200.0	3,165.9	3,101.1	3,097.2	10.1	7.5	-178.81	-120.0	-3.7	417.3	399.7	17.62	23.676	
3,300.0	3,262.5	3,192.2	3,187.0	10.5	7.7	-178.72	-135.0	-4.6	458.7	440.5	18.22	25.180	
3,400.0	3,359.1	3,283.2	3,276.8	10.9	7.9	-178.65	-150.0	-5.5	500.1	481.3	18.83	26.556	
3,500.0	3,455.7	3,374.2	3,366.5	11.3	8.1	-178.58	-165.0	-6.4	541.6	522.1	19.47	27.816	
3,600.0	3,552.3	3,465.2	3,456.3	11.7	8.4	-178.53	-180.0	-7.3	583.0	562.9	20.12	28.970	
3,700.0	3,648.9	3,556.2	3,546.1	12.2	8.6	-178.48	-195.0	-8.3	624.4	603.6	20.79	30.027	
3,800.0	3,745.5	3,647.2	3,635.8	12.6	8.9	-178.44	-210.0	-9.2	665.8	644.3	21.48	30.996	
3,900.0	3,842.1	3,738.2	3,725.6	13.0	9.2	-178.40	-225.0	-10.1	707.2	685.1	22.18	31.885	
4,000.0	3,938.6	3,829.3	3,815.4	13.5	9.4	-178.37	-239.9	-11.0	748.7	725.8	22.89	32.703	
4,100.0	4,035.2	3,920.3	3,905.1	13.9	9.7	-178.34	-254.9	-11.9	790.1	766.5	23.62	33.454	
4,200.0	4,131.8	4,011.3	3,994.9	14.4	10.0	-178.32	-269.9	-12.8	831.5	807.2	24.35	34.147	
4,300.0	4,228.4	4,102.3	4,084.7	14.9	10.3	-178.29	-284.9	-13.8	872.9	847.9	25.10	34.786	
4,400.0	4,325.0	4,193.3	4,174.4	15.3	10.7	-178.27	-299.9	-14.7	914.4	888.5	25.85	35.375	
4,500.0	4,421.6	4,284.3	4,264.2	15.8	11.0	-178.25	-314.9	-15.6	955.8	929.2	26.61	35.921	
4,600.0	4,518.2	4,375.4	4,354.0	16.2	11.3	-178.23	-329.9	-16.5	997.2	969.8	27.38	36.427	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FNRU FEDERAL COM 22 23 PPI_16H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 100-r.5 MWD

Offset Well Error: 0.0 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)	Rule Assigned: No-Go Distance (usft)	Separation Factor	Warning
7,500.0	7,320.9	8,035.8	7,465.0	30.1	21.2	1.86	2,334.4	-53.1	956.0	906.3	49.71	19.232	
7,600.0	7,418.8	8,035.2	7,465.0	30.6	21.2	1.81	2,334.4	-53.7	921.0	869.5	51.50	17.882	
7,700.0	7,517.0	8,034.6	7,465.0	31.1	21.2	1.77	2,334.4	-54.3	897.5	844.5	53.01	16.932	
7,800.0	7,615.6	8,034.1	7,465.0	31.5	21.2	1.73	2,334.4	-54.8	886.6	832.5	54.10	16.389	
7,834.9	7,650.1	8,033.9	7,465.0	31.7	21.2	1.72	2,334.4	-54.9	885.8	831.4	54.36	16.296	CC, ES
7,900.0	7,714.4	8,033.6	7,465.0	32.0	21.2	1.70	2,334.4	-55.2	888.5	833.9	54.67	16.251	SF
8,000.0	7,813.4	8,033.2	7,465.0	32.4	21.2	1.68	2,334.4	-55.6	903.4	848.6	54.73	16.506	
8,100.0	7,912.7	8,032.9	7,465.0	32.8	21.2	1.66	2,334.4	-56.0	930.5	876.1	54.32	17.129	
8,200.0	8,012.2	8,032.6	7,465.0	33.2	21.1	1.65	2,334.4	-56.3	968.8	915.2	53.55	18.091	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 105H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 113-r.5 MWD

Offset Well Error: 0.0 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)	Rule Assigned: No-Go Distance (usft)	Separation Factor	Warning
7,700.0	7,517.0	7,482.4	7,479.0	31.1	12.6	-16.58	2,372.6	-359.8	985.6	940.0	45.61	21.607	
7,800.0	7,615.6	7,582.6	7,579.2	31.5	12.6	-16.93	2,371.2	-361.1	968.4	922.3	46.16	20.978	
7,900.0	7,714.4	7,679.5	7,676.1	32.0	12.6	-17.24	2,369.9	-362.4	952.9	906.2	46.73	20.392	
8,000.0	7,813.4	7,775.5	7,772.0	32.4	12.7	-17.53	2,369.0	-363.7	939.5	892.2	47.29	19.867	
8,100.0	7,912.7	7,875.9	7,872.4	32.8	12.7	-17.79	2,368.3	-364.5	927.7	879.9	47.80	19.409	
8,200.0	8,012.2	7,978.0	7,974.6	33.2	12.8	-18.00	2,367.4	-365.1	917.5	869.2	48.30	18.995	
8,300.0	8,111.9	8,078.0	8,074.6	33.6	12.9	-18.17	2,366.3	-365.3	908.6	859.8	48.81	18.613	
8,400.0	8,211.6	8,174.2	8,170.7	34.0	13.0	-18.34	2,365.4	-366.0	901.6	852.2	49.32	18.278	
8,500.0	8,311.5	8,274.9	8,271.5	34.3	13.1	-18.47	2,364.8	-366.6	896.5	846.8	49.76	18.016	
8,600.0	8,411.5	8,377.4	8,373.9	34.6	13.2	-18.59	2,363.7	-367.2	892.8	842.6	50.16	17.799	
8,700.0	8,511.5	8,478.5	8,475.0	34.9	13.3	-18.69	2,362.5	-368.0	890.6	840.0	50.51	17.632	
8,731.5	8,542.9	8,510.8	8,507.3	34.9	13.3	-20.71	2,362.0	-368.2	890.2	839.6	50.56	17.606	
8,800.0	8,611.5	8,582.8	8,579.3	34.9	13.4	-20.78	2,360.8	-368.9	889.3	838.7	50.60	17.577	
8,900.0	8,711.5	8,689.5	8,686.0	34.9	13.6	-20.89	2,358.4	-369.8	887.5	836.8	50.65	17.521	
9,000.0	8,811.5	8,794.6	8,791.1	35.0	13.8	-20.99	2,355.4	-370.3	885.0	834.2	50.74	17.440	
9,100.0	8,911.5	8,897.4	8,893.7	35.0	14.0	-21.08	2,352.1	-370.5	882.1	831.3	50.87	17.342	
9,200.0	9,011.5	9,002.9	8,999.1	35.1	14.2	-21.17	2,348.1	-370.5	878.5	827.5	50.97	17.234	
9,244.0	9,055.5	9,044.3	9,040.6	35.1	14.3	-21.20	2,346.6	-370.3	876.9	825.9	51.06	17.173	
9,250.0	9,061.5	9,049.9	9,046.2	35.1	14.3	69.40	2,346.4	-370.2	876.7	825.6	51.08	17.164	
9,275.0	9,086.4	9,073.9	9,070.2	35.1	14.4	69.58	2,345.6	-370.1	875.5	824.4	51.16	17.112	
9,300.0	9,111.3	9,098.9	9,095.1	35.1	14.4	69.89	2,344.8	-369.9	873.9	822.7	51.26	17.048	
9,325.0	9,136.1	9,123.6	9,119.8	35.1	14.5	70.34	2,344.0	-369.6	871.9	820.5	51.38	16.970	
9,350.0	9,160.6	9,148.1	9,144.3	35.1	14.5	70.92	2,343.3	-369.3	869.4	817.9	51.51	16.878	
9,375.0	9,184.8	9,171.0	9,167.2	35.1	14.6	71.61	2,342.6	-369.0	866.5	814.9	51.67	16.772	
9,400.0	9,208.7	9,192.3	9,188.5	35.1	14.6	72.38	2,342.0	-368.7	863.4	811.5	51.84	16.653	
9,425.0	9,232.2	9,213.3	9,209.4	35.1	14.7	73.25	2,341.5	-368.3	859.9	807.9	52.03	16.528	
9,450.0	9,255.1	9,233.7	9,229.9	35.1	14.7	74.21	2,341.1	-368.0	856.3	804.1	52.22	16.397	
9,475.0	9,277.6	9,254.0	9,250.2	35.1	14.8	75.26	2,340.8	-367.6	852.5	800.1	52.42	16.264	
9,500.0	9,299.4	9,269.4	9,265.6	35.1	14.8	76.23	2,340.6	-367.3	848.6	796.0	52.64	16.121	
9,525.0	9,320.5	9,284.7	9,280.8	35.2	14.8	77.24	2,340.5	-367.0	844.8	791.9	52.86	15.982	
9,550.0	9,340.9	9,299.3	9,295.5	35.2	14.8	78.27	2,340.6	-366.8	841.0	787.9	53.07	15.848	
9,575.0	9,360.6	9,321.0	9,317.2	35.2	14.9	79.65	2,340.8	-366.4	837.4	784.2	53.19	15.742	
9,600.0	9,379.4	9,321.0	9,317.2	35.2	14.9	80.06	2,340.8	-366.4	833.9	780.3	53.51	15.582	
9,625.0	9,397.3	9,321.0	9,317.2	35.2	14.9	80.42	2,340.8	-366.4	830.9	777.1	53.80	15.443	
9,650.0	9,414.3	9,335.1	9,331.2	35.2	14.9	81.46	2,341.3	-366.1	828.1	774.1	53.93	15.354	
9,675.0	9,430.3	9,340.2	9,336.4	35.3	14.9	82.00	2,341.5	-365.9	825.8	771.7	54.12	15.260	
9,700.0	9,445.3	9,353.0	9,349.1	35.3	14.9	82.95	2,342.6	-365.6	824.2	770.0	54.20	15.206	
9,725.0	9,459.2	9,353.0	9,349.1	35.3	14.9	83.11	2,342.6	-365.6	822.8	768.5	54.37	15.134	
9,750.0	9,471.9	9,353.0	9,349.1	35.3	14.9	83.20	2,342.6	-365.6	822.1	767.6	54.50	15.084	
9,768.0	9,480.5	9,353.0	9,349.1	35.4	14.9	83.22	2,342.6	-365.6	821.9	767.4	54.57	15.061 CC, ES	
9,775.0	9,483.6	9,353.0	9,349.1	35.4	14.9	83.22	2,342.6	-365.6	822.0	767.4	54.60	15.055	
9,800.0	9,494.1	9,353.0	9,349.1	35.4	14.9	83.16	2,342.6	-365.6	822.4	767.8	54.65	15.049 SF	
9,825.0	9,503.4	9,353.0	9,349.1	35.4	14.9	83.03	2,342.6	-365.6	823.5	768.8	54.66	15.065	
9,850.0	9,511.4	9,364.5	9,360.5	35.4	14.8	83.61	2,343.9	-365.1	824.9	770.4	54.54	15.126	
9,875.0	9,518.2	9,366.3	9,362.3	35.5	14.8	83.47	2,344.1	-365.1	827.1	772.6	54.45	15.189	
9,900.0	9,523.7	9,367.7	9,363.7	35.5	14.8	83.23	2,344.3	-365.0	829.9	775.5	54.34	15.272	
9,925.0	9,528.0	9,368.7	9,364.7	35.5	14.8	82.90	2,344.4	-365.0	833.2	779.0	54.19	15.376	
9,950.0	9,530.9	9,369.3	9,365.2	35.6	14.8	82.47	2,344.5	-364.9	837.1	783.1	54.01	15.500	
9,975.0	9,532.6	9,369.5	9,365.4	35.6	14.8	81.94	2,344.5	-364.9	841.6	787.8	53.79	15.645	
9,994.0	9,533.0	9,369.3	9,365.3	35.6	14.8	81.47	2,344.5	-364.9	845.4	791.8	53.61	15.768	
10,000.0	9,533.0	9,369.3	9,365.2	35.6	14.8	81.47	2,344.5	-365.0	846.6	793.1	53.55	15.809	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 105H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 113-r.5 MWD

Offset Well Error: 0.0 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)	Rule Assigned: No-Go Distance (usft)	Separation Factor	Warning
10,100.0	9,533.0	9,368.0	9,364.0	35.8	14.8	81.38	2,344.3	-365.0	873.4	821.0	52.41	16.665	
10,200.0	9,533.0	9,366.8	9,362.7	36.0	14.8	81.29	2,344.2	-365.1	910.4	859.3	51.06	17.828	
10,300.0	9,533.0	9,365.5	9,361.5	36.2	14.8	81.21	2,344.0	-365.1	956.4	906.8	49.64	19.268	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 106H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 127-r.5 MWD

Offset Well Error: 0.0 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)	Rule Assigned: No-Go Distance (usft)	Separation Factor	Warning
7,700.0	7,517.0	7,494.3	7,493.2	31.1	11.6	-23.15	2,342.8	-467.3	997.6	953.4	44.15	22.596	
7,800.0	7,615.6	7,581.0	7,579.9	31.5	11.7	-23.46	2,341.4	-467.4	980.4	935.6	44.78	21.893	
7,900.0	7,714.4	7,679.0	7,677.9	32.0	11.9	-23.78	2,340.4	-467.4	965.5	920.2	45.32	21.305	
8,000.0	7,813.4	7,783.2	7,782.1	32.4	12.0	-24.11	2,339.1	-467.4	951.9	906.1	45.80	20.786	
8,100.0	7,912.7	7,889.5	7,888.4	32.8	12.2	-24.42	2,337.0	-467.3	939.3	893.0	46.25	20.309	
8,200.0	8,012.2	7,991.4	7,990.2	33.2	12.4	-24.69	2,334.4	-466.8	927.6	880.8	46.74	19.847	
8,300.0	8,111.9	8,086.0	8,084.8	33.6	12.6	-24.91	2,332.2	-466.8	917.8	870.5	47.27	19.417	
8,400.0	8,211.6	8,182.3	8,181.1	34.0	12.7	-25.16	2,329.7	-467.6	909.9	862.2	47.74	19.059	
8,500.0	8,311.5	8,273.4	8,272.1	34.3	12.8	-25.39	2,327.9	-469.0	904.3	856.1	48.21	18.757	
8,600.0	8,411.5	8,367.0	8,365.7	34.6	12.9	-25.60	2,326.7	-470.9	901.3	852.7	48.61	18.543	
8,700.0	8,511.5	8,466.9	8,465.6	34.9	12.9	-25.78	2,325.7	-472.9	900.1	851.2	48.88	18.415	
8,722.1	8,533.6	8,488.6	8,487.3	34.9	13.0	-25.81	2,325.6	-473.3	900.1	851.1	48.91	18.403	
8,731.5	8,542.9	8,497.7	8,496.4	34.9	13.0	-27.82	2,325.5	-473.4	900.1	851.1	48.92	18.399	
8,800.0	8,611.5	8,569.1	8,567.8	34.9	13.0	-27.90	2,325.0	-474.6	900.1	851.2	48.92	18.401	
8,900.0	8,711.5	8,676.2	8,674.8	34.9	13.1	-28.02	2,323.5	-476.0	899.5	850.6	48.92	18.386	
9,000.0	8,811.5	8,781.5	8,780.1	35.0	13.3	-28.14	2,321.5	-477.0	898.3	849.4	48.97	18.344	
9,100.0	8,911.5	8,888.3	8,886.9	35.0	13.5	-28.27	2,318.8	-477.9	896.4	847.4	49.02	18.288	
9,200.0	9,011.5	8,987.5	8,986.1	35.1	13.7	-28.39	2,315.9	-478.4	894.1	845.0	49.15	18.192	
9,244.0	9,055.5	9,030.2	9,028.8	35.1	13.8	-28.42	2,314.9	-478.4	893.2	844.0	49.21	18.151	
9,250.0	9,061.5	9,036.0	9,034.5	35.1	13.8	62.16	2,314.7	-478.4	893.1	843.8	49.22	18.144	
9,275.0	9,086.4	9,063.0	9,061.6	35.1	13.8	62.31	2,314.1	-478.4	892.1	842.8	49.28	18.102	
9,300.0	9,111.3	9,083.2	9,081.8	35.1	13.9	62.57	2,313.6	-478.3	890.5	841.1	49.43	18.017	
9,325.0	9,136.1	9,104.0	9,102.5	35.1	13.9	62.95	2,313.3	-478.3	888.5	838.9	49.59	17.917	
9,350.0	9,160.6	9,104.0	9,102.5	35.1	13.9	63.18	2,313.3	-478.3	886.3	836.4	49.95	17.745	
9,375.0	9,184.8	9,122.3	9,120.8	35.1	13.9	63.70	2,313.5	-478.3	883.8	833.6	50.16	17.619	
9,400.0	9,208.7	9,136.0	9,134.5	35.1	13.9	64.24	2,314.0	-478.4	881.2	830.8	50.43	17.475	
9,425.0	9,232.2	9,136.0	9,134.5	35.1	13.9	64.54	2,314.0	-478.4	878.5	827.7	50.80	17.291	
9,450.0	9,255.1	9,150.0	9,148.5	35.1	13.9	65.19	2,314.8	-478.4	875.6	824.5	51.07	17.144	
9,475.0	9,277.6	9,167.0	9,165.4	35.1	13.8	66.00	2,316.4	-478.6	872.8	821.5	51.33	17.006	
9,500.0	9,299.4	9,167.0	9,165.4	35.1	13.8	66.33	2,316.4	-478.6	869.8	818.1	51.71	16.822	
9,525.0	9,320.5	9,167.0	9,165.4	35.2	13.8	66.65	2,316.4	-478.6	866.9	814.9	52.08	16.647	
9,550.0	9,340.9	9,180.3	9,178.6	35.2	13.8	67.46	2,318.0	-478.9	864.0	811.6	52.36	16.500	
9,575.0	9,360.6	9,187.2	9,185.4	35.2	13.8	68.05	2,319.0	-479.1	861.2	808.5	52.68	16.346	
9,600.0	9,379.4	9,199.0	9,197.1	35.2	13.8	68.87	2,320.9	-479.6	858.4	805.5	52.97	16.207	
9,625.0	9,397.3	9,199.0	9,197.1	35.2	13.8	69.18	2,320.9	-479.6	855.8	802.4	53.30	16.054	
9,650.0	9,414.3	9,199.0	9,197.1	35.2	13.8	69.45	2,320.9	-479.6	853.3	799.7	53.62	15.913	
9,675.0	9,430.3	9,212.6	9,210.4	35.3	13.8	70.39	2,323.4	-480.3	850.9	797.0	53.87	15.796	
9,700.0	9,445.3	9,218.4	9,216.1	35.3	13.8	70.95	2,324.6	-480.6	848.7	794.5	54.13	15.679	
9,725.0	9,459.2	9,230.0	9,227.4	35.3	13.7	71.81	2,327.1	-481.5	846.7	792.4	54.34	15.581	
9,750.0	9,471.9	9,230.0	9,227.4	35.3	13.7	72.02	2,327.1	-481.5	844.9	790.3	54.59	15.477	
9,775.0	9,483.6	9,230.0	9,227.4	35.4	13.7	72.19	2,327.1	-481.5	843.4	788.6	54.81	15.388	
9,800.0	9,494.1	9,230.0	9,227.4	35.4	13.7	72.32	2,327.1	-481.5	842.3	787.2	55.00	15.313	
9,825.0	9,503.4	9,240.8	9,237.9	35.4	13.7	73.09	2,329.7	-482.4	841.2	786.1	55.13	15.259	
9,850.0	9,511.4	9,244.1	9,241.0	35.4	13.7	73.36	2,330.5	-482.8	840.6	785.4	55.25	15.213	
9,875.0	9,518.2	9,247.1	9,243.9	35.5	13.7	73.58	2,331.3	-483.1	840.3	785.0	55.35	15.182	
9,882.5	9,520.0	9,248.0	9,244.7	35.5	13.7	73.64	2,331.5	-483.2	840.3	785.0	55.37	15.176 CC, ES	
9,900.0	9,523.7	9,249.8	9,246.4	35.5	13.7	73.75	2,332.0	-483.4	840.4	785.0	55.42	15.166 SF	
9,925.0	9,528.0	9,262.0	9,258.1	35.5	13.7	74.50	2,335.4	-484.9	841.0	785.6	55.42	15.176	
9,950.0	9,530.9	9,262.0	9,258.1	35.6	13.7	74.42	2,335.4	-484.9	841.7	786.3	55.42	15.187	
9,975.0	9,532.6	9,262.0	9,258.1	35.6	13.7	74.29	2,335.4	-484.9	842.8	787.4	55.40	15.214	
9,994.0	9,533.0	9,262.0	9,258.1	35.6	13.7	74.16	2,335.4	-484.9	844.0	788.6	55.36	15.245	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 106H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 127-r.5 MWD

Offset Well Error: 0.0 usft

Rule Assigned:

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)	No-Go Distance (usft)	Separation Factor	Warning
10,000.0	9,533.0	9,262.0	9,258.1	35.6	13.7	74.16	2,335.4	-484.9	844.4	789.0	55.34	15.257	
10,100.0	9,533.0	9,262.0	9,258.1	35.8	13.7	74.16	2,335.4	-484.9	857.3	802.4	54.85	15.631	
10,200.0	9,533.0	9,262.0	9,258.1	36.0	13.7	74.16	2,335.4	-484.9	881.4	827.5	53.97	16.331	
10,300.0	9,533.0	9,273.9	9,269.3	36.2	13.7	74.96	2,339.1	-486.6	915.8	863.0	52.79	17.347	
10,400.0	9,533.0	9,281.9	9,276.7	36.5	13.6	75.49	2,341.7	-487.9	959.3	907.8	51.47	18.638	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 119H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Offset Well Error: 0.0 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)	Rule Assigned: No-Go Distance (usft)	Separation Factor	Warning
11,700.0	9,533.0	9,400.0	9,269.8	42.7	41.6	62.42	1,920.6	-3,109.5	990.3	925.4	64.88	15.264	
11,800.0	9,533.0	9,400.0	9,269.8	43.4	41.6	62.42	1,920.6	-3,109.5	903.8	838.4	65.45	13.808	
11,900.0	9,533.0	9,400.0	9,269.8	44.0	41.6	62.42	1,920.6	-3,109.5	820.5	754.2	66.26	12.382	
12,000.0	9,533.0	9,400.0	9,269.8	44.7	41.6	62.42	1,920.6	-3,109.5	741.3	673.9	67.39	11.000	
12,100.0	9,533.0	9,400.0	9,269.8	45.4	41.6	62.42	1,920.6	-3,109.5	667.6	598.7	68.94	9.684	
12,200.0	9,533.0	9,400.0	9,269.8	46.1	41.6	62.42	1,920.6	-3,109.5	601.7	530.7	71.02	8.472	
12,300.0	9,533.0	9,400.0	9,269.8	46.9	41.6	62.42	1,920.6	-3,109.5	546.2	472.5	73.63	7.418	
12,400.0	9,533.0	9,400.0	9,269.8	47.6	41.6	62.42	1,920.6	-3,109.5	504.6	428.0	76.57	6.589	
12,500.0	9,533.0	9,400.0	9,269.8	48.4	41.6	62.42	1,920.6	-3,109.5	480.5	401.2	79.33	6.057	
12,568.6	9,533.0	9,400.0	9,269.8	48.9	41.6	62.42	1,920.6	-3,109.5	475.6	394.8	80.75	5.889	CC, ES
12,600.0	9,533.0	9,400.0	9,269.8	49.2	41.6	62.42	1,920.6	-3,109.5	476.6	395.4	81.20	5.869	SF
12,700.0	9,533.0	9,400.0	9,269.8	50.0	41.6	62.42	1,920.6	-3,109.5	493.4	411.6	81.78	6.033	
12,800.0	9,533.0	9,400.0	9,269.8	50.8	41.6	62.42	1,920.6	-3,109.5	528.9	447.7	81.18	6.515	
12,900.0	9,533.0	9,400.0	9,269.8	51.6	41.6	62.42	1,920.6	-3,109.5	579.6	499.8	79.89	7.256	
13,000.0	9,533.0	9,400.0	9,269.8	52.4	41.6	62.42	1,920.6	-3,109.5	642.1	563.7	78.36	8.194	
13,100.0	9,533.0	9,400.0	9,269.8	53.2	41.6	62.42	1,920.6	-3,109.5	713.1	636.3	76.86	9.278	
13,200.0	9,533.0	9,400.0	9,269.8	54.1	41.6	62.42	1,920.6	-3,109.5	790.5	714.9	75.53	10.466	
13,300.0	9,533.0	9,400.0	9,269.8	54.9	41.6	62.42	1,920.6	-3,109.5	872.4	798.0	74.38	11.729	
13,400.0	9,533.0	9,400.0	9,269.8	55.8	41.6	62.42	1,920.6	-3,109.5	957.8	884.4	73.42	13.046	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 120H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Offset Well Error: 0.0 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)	Rule Assigned: No-Go Distance (usft)	Separation Factor	Warning
12,600.0	9,533.0	9,384.7	9,351.3	49.2	24.8	70.38	1,882.0	-4,009.6	963.5	912.0	51.50	18.711	
12,700.0	9,533.0	9,384.6	9,351.2	50.0	24.8	70.36	1,882.0	-4,009.6	874.4	821.0	53.44	16.362	
12,800.0	9,533.0	9,384.5	9,351.1	50.8	24.8	70.35	1,882.0	-4,009.6	787.9	731.9	55.97	14.078	
12,900.0	9,533.0	9,384.4	9,351.0	51.6	24.8	70.34	1,881.9	-4,009.6	704.9	645.7	59.24	11.899	
13,000.0	9,533.0	9,384.3	9,350.9	52.4	24.8	70.32	1,881.9	-4,009.6	627.0	563.5	63.46	9.880	
13,100.0	9,533.0	9,384.2	9,350.8	53.2	24.8	70.31	1,881.9	-4,009.6	556.1	487.4	68.74	8.090	
13,200.0	9,533.0	9,384.1	9,350.7	54.1	24.8	70.30	1,881.8	-4,009.6	495.5	420.5	74.97	6.609	
13,300.0	9,533.0	9,384.0	9,350.6	54.9	24.8	70.28	1,881.8	-4,009.6	449.1	367.6	81.46	5.513	
13,400.0	9,533.0	9,383.9	9,350.5	55.8	24.8	70.27	1,881.8	-4,009.6	421.7	335.0	86.71	4.864	
13,469.1	9,533.0	9,383.8	9,350.5	56.4	24.8	70.26	1,881.7	-4,009.6	416.0	327.3	88.65	4.693 CC, ES	
13,500.0	9,533.0	9,383.8	9,350.4	56.7	24.8	70.25	1,881.7	-4,009.6	417.1	328.2	88.95	4.690 SF	
13,600.0	9,533.0	9,383.7	9,350.3	57.6	24.8	70.24	1,881.7	-4,009.6	436.1	348.6	87.55	4.981	
13,700.0	9,533.0	9,383.6	9,350.3	58.5	24.8	70.23	1,881.7	-4,009.6	475.8	392.2	83.55	5.694	
13,800.0	9,533.0	9,383.5	9,350.2	59.4	24.8	70.21	1,881.6	-4,009.6	531.6	453.0	78.58	6.764	
13,900.0	9,533.0	9,383.4	9,350.1	60.3	24.8	70.20	1,881.6	-4,009.6	598.9	525.2	73.76	8.121	
14,000.0	9,533.0	9,383.3	9,350.0	61.2	24.8	70.19	1,881.6	-4,009.6	674.5	604.9	69.55	9.697	
14,100.0	9,533.0	9,383.2	9,349.9	62.1	24.8	70.17	1,881.5	-4,009.6	755.7	689.6	66.07	11.438	
14,200.0	9,533.0	9,383.1	9,349.8	63.0	24.8	70.16	1,881.5	-4,009.6	841.0	777.8	63.23	13.300	
14,300.0	9,533.0	9,383.0	9,349.7	64.0	24.8	70.15	1,881.5	-4,009.6	929.2	868.3	60.95	15.247	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 121H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Offset Well Error: 0.0 usft

Rule Assigned:

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)	No-Go Distance (usft)	Separation Factor	Warning
13,600.0	9,533.0	9,268.6	9,242.1	57.6	22.1	60.39	1,919.3	-4,909.9	919.3	862.3	57.07	16.108	
13,700.0	9,533.0	9,268.4	9,241.9	58.5	22.1	60.38	1,919.2	-4,909.9	837.5	776.5	61.02	13.724	
13,800.0	9,533.0	9,268.3	9,241.8	59.4	22.1	60.36	1,919.2	-4,909.9	760.0	694.1	65.86	11.540	
13,900.0	9,533.0	9,268.2	9,241.7	60.3	22.1	60.35	1,919.1	-4,909.9	688.3	616.7	71.66	9.605	
14,000.0	9,533.0	9,268.0	9,241.6	61.2	22.1	60.33	1,919.0	-4,909.9	624.5	546.1	78.39	7.966	
14,100.0	9,533.0	9,267.9	9,241.5	62.1	22.1	60.32	1,919.0	-4,909.9	571.1	485.4	85.70	6.664	
14,200.0	9,533.0	9,267.8	9,241.4	63.0	22.1	60.30	1,918.9	-4,909.9	531.4	438.6	92.78	5.728	
14,300.0	9,533.0	9,267.6	9,241.2	64.0	22.1	60.29	1,918.8	-4,909.9	508.5	410.2	98.37	5.170	
14,369.0	9,533.0	9,267.5	9,241.2	64.6	22.1	60.28	1,918.8	-4,909.9	503.8	403.2	100.68	5.004	CC, ES
14,400.0	9,533.0	9,267.5	9,241.1	64.9	22.1	60.27	1,918.8	-4,909.9	504.8	403.6	101.23	4.987	SF
14,500.0	9,533.0	9,267.4	9,241.0	65.8	22.1	60.26	1,918.7	-4,909.9	520.6	419.7	100.86	5.162	
14,600.0	9,533.0	9,267.2	9,240.9	66.8	22.1	60.24	1,918.6	-4,909.9	554.3	456.4	97.84	5.665	
14,700.0	9,533.0	9,267.1	9,240.8	67.7	22.1	60.23	1,918.6	-4,909.9	602.9	509.6	93.30	6.462	
14,800.0	9,533.0	9,267.0	9,240.7	68.7	22.1	60.21	1,918.5	-4,909.9	663.1	574.8	88.26	7.513	
14,900.0	9,533.0	9,266.8	9,240.5	69.7	22.1	60.20	1,918.5	-4,909.9	732.0	648.7	83.37	8.780	
15,000.0	9,533.0	9,266.7	9,240.4	70.6	22.1	60.18	1,918.4	-4,909.9	807.5	728.6	78.95	10.229	
15,100.0	9,533.0	9,266.6	9,240.3	71.6	22.1	60.17	1,918.3	-4,909.9	887.8	812.8	75.08	11.826	
15,200.0	9,533.0	9,266.4	9,240.2	72.6	22.1	60.15	1,918.3	-4,909.9	971.8	900.1	71.75	13.544	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 170H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
11,600.0	9,533.0	9,582.0	9,564.9	42.1	34.6	116.43	1,616.0	-3,075.1	946.3	891.4	54.83	17.257	
11,700.0	9,533.0	9,576.0	9,558.9	42.7	34.6	114.01	1,616.0	-3,075.5	847.3	792.4	54.93	15.426	
11,800.0	9,533.0	9,570.1	9,552.9	43.4	34.6	111.50	1,616.1	-3,075.9	748.6	693.5	55.06	13.597	
11,900.0	9,533.0	9,564.1	9,546.9	44.0	34.5	108.90	1,616.2	-3,076.2	650.2	594.9	55.24	11.770	
12,000.0	9,533.0	9,558.1	9,541.0	44.7	34.5	106.22	1,616.3	-3,076.6	552.3	496.8	55.53	9.947	
12,100.0	9,533.0	9,552.1	9,535.0	45.4	34.5	103.47	1,616.4	-3,076.9	455.3	399.3	55.99	8.131	
12,200.0	9,533.0	9,546.1	9,529.0	46.1	34.5	100.67	1,616.5	-3,077.3	359.7	302.9	56.82	6.331	
12,300.0	9,533.0	9,540.1	9,523.0	46.9	34.5	97.81	1,616.5	-3,077.6	267.4	208.8	58.54	4.567	
12,400.0	9,533.0	9,534.1	9,517.1	47.6	34.4	94.92	1,616.6	-3,078.0	183.0	120.4	62.56	2.925	Normal Operations
12,500.0	9,533.0	9,528.1	9,511.1	48.4	34.4	92.01	1,616.7	-3,078.4	124.1	53.8	70.35	1.765	Caution - Monitor Closely
12,540.7	9,533.0	9,525.7	9,508.7	48.7	34.4	90.82	1,616.7	-3,078.5	117.3	45.5	71.79	1.634	Caution - Monitor Closely, CC, ES, SF
12,600.0	9,533.0	9,522.1	9,505.1	49.2	34.4	89.09	1,616.8	-3,078.7	131.4	63.1	68.37	1.922	Caution - Monitor Closely
12,700.0	9,533.0	9,516.2	9,499.1	50.0	34.4	86.18	1,616.9	-3,079.1	197.6	136.8	60.83	3.249	
12,800.0	9,533.0	9,510.2	9,493.2	50.8	34.3	83.29	1,616.9	-3,079.4	284.2	226.6	57.58	4.936	
12,900.0	9,533.0	9,504.2	9,487.2	51.6	34.3	80.45	1,617.0	-3,079.8	377.4	321.1	56.26	6.709	
13,000.0	9,533.0	9,498.2	9,481.2	52.4	34.3	77.65	1,617.1	-3,080.2	473.3	417.6	55.64	8.507	
13,100.0	9,533.0	9,492.2	9,475.2	53.2	34.3	74.92	1,617.2	-3,080.5	570.5	515.2	55.32	10.314	
13,200.0	9,533.0	9,486.2	9,469.2	54.1	34.3	72.25	1,617.3	-3,080.9	668.5	613.4	55.14	12.124	
13,300.0	9,533.0	9,480.2	9,463.3	54.9	34.2	69.67	1,617.4	-3,081.2	767.0	712.0	55.04	13.936	
13,400.0	9,533.0	9,474.2	9,457.3	55.8	34.2	67.18	1,617.4	-3,081.6	865.8	810.8	54.98	15.747	
13,500.0	9,533.0	9,468.3	9,451.3	56.7	34.2	64.77	1,617.5	-3,082.0	964.8	909.8	54.95	17.557	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 171H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
11,800.0	9,533.0	9,559.0	9,549.4	43.4	32.5	108.27	1,623.3	-3,238.6	910.3	858.1	52.20	17.439	
11,900.0	9,533.0	9,554.6	9,545.0	44.0	32.5	106.43	1,623.4	-3,238.8	811.5	759.1	52.37	15.495	
12,000.0	9,533.0	9,550.2	9,540.6	44.7	32.5	104.56	1,623.4	-3,239.0	712.9	660.3	52.60	13.554	
12,100.0	9,533.0	9,545.8	9,536.2	45.4	32.5	102.65	1,623.5	-3,239.2	614.9	561.9	52.94	11.615	
12,200.0	9,533.0	9,541.4	9,531.8	46.1	32.4	100.72	1,623.5	-3,239.4	517.5	464.0	53.45	9.681	
12,300.0	9,533.0	9,537.0	9,527.4	46.9	32.4	98.77	1,623.6	-3,239.5	421.3	367.0	54.31	7.757	
12,400.0	9,533.0	9,532.5	9,523.0	47.6	32.4	96.80	1,623.6	-3,239.7	327.3	271.4	55.89	5.857	
12,500.0	9,533.0	9,528.1	9,518.6	48.4	32.4	94.81	1,623.7	-3,239.9	238.3	179.1	59.16	4.027	
12,600.0	9,533.0	9,523.7	9,514.2	49.2	32.4	92.81	1,623.8	-3,240.1	162.3	96.0	66.28	2.449	Caution - Monitor Closely
12,700.0	9,533.0	9,519.3	9,509.8	50.0	32.4	90.81	1,623.8	-3,240.3	126.0	52.5	73.57	1.713	Caution - Monitor Closely, ES, SF
12,704.4	9,533.0	9,519.1	9,509.6	50.0	32.4	90.72	1,623.8	-3,240.3	126.0	52.5	73.54	1.714	Caution - Monitor Closely, CC
12,800.0	9,533.0	9,514.9	9,505.4	50.8	32.4	88.81	1,623.9	-3,240.5	159.3	93.6	65.71	2.425	Caution - Monitor Closely
12,900.0	9,533.0	9,510.5	9,501.0	51.6	32.3	86.81	1,623.9	-3,240.7	234.2	175.8	58.36	4.013	
13,000.0	9,533.0	9,506.1	9,496.6	52.4	32.3	84.83	1,624.0	-3,240.9	322.9	267.7	55.20	5.850	
13,100.0	9,533.0	9,501.7	9,492.1	53.2	32.3	82.85	1,624.0	-3,241.1	416.7	362.9	53.80	7.746	
13,200.0	9,533.0	9,497.3	9,487.7	54.1	32.3	80.90	1,624.1	-3,241.3	512.8	459.7	53.11	9.657	
13,300.0	9,533.0	9,492.9	9,483.3	54.9	32.3	78.97	1,624.1	-3,241.5	610.2	557.4	52.73	11.571	
13,400.0	9,533.0	9,488.5	9,478.9	55.8	32.3	77.06	1,624.2	-3,241.7	708.2	655.7	52.52	13.485	
13,500.0	9,533.0	9,484.1	9,474.5	56.7	32.3	75.19	1,624.3	-3,241.9	806.7	754.3	52.40	15.396	
13,600.0	9,533.0	9,479.6	9,470.1	57.6	32.2	73.35	1,624.3	-3,242.1	905.5	853.2	52.33	17.304	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 172H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
11,700.0	9,533.0	9,573.4	9,561.1	42.7	30.8	114.46	1,616.8	-3,227.8	998.5	948.5	50.01	19.966	
11,800.0	9,533.0	9,568.1	9,555.8	43.4	30.8	112.31	1,616.9	-3,228.1	899.5	849.4	50.12	17.946	
11,900.0	9,533.0	9,562.8	9,550.5	44.0	30.8	110.10	1,617.0	-3,228.4	800.6	750.3	50.27	15.926	
12,000.0	9,533.0	9,557.6	9,545.3	44.7	30.8	107.82	1,617.1	-3,228.7	702.0	651.6	50.48	13.907	
12,100.0	9,533.0	9,552.3	9,540.0	45.4	30.7	105.49	1,617.2	-3,228.9	603.9	553.1	50.79	11.889	
12,200.0	9,533.0	9,547.0	9,534.8	46.1	30.7	103.11	1,617.2	-3,229.2	506.4	455.1	51.28	9.875	
12,300.0	9,533.0	9,541.8	9,529.5	46.9	30.7	100.69	1,617.3	-3,229.5	410.0	357.9	52.12	7.867	
12,400.0	9,533.0	9,536.5	9,524.2	47.6	30.7	98.22	1,617.4	-3,229.8	315.9	262.2	53.73	5.879	
12,500.0	9,533.0	9,531.2	9,519.0	48.4	30.7	95.74	1,617.5	-3,230.0	226.7	169.4	57.26	3.958	
12,600.0	9,533.0	9,526.0	9,513.7	49.2	30.7	93.23	1,617.6	-3,230.3	151.4	86.0	65.40	2.314	Caution - Monitor Closely
12,692.7	9,533.0	9,521.1	9,508.8	49.9	30.6	90.90	1,617.6	-3,230.6	119.7	46.6	73.15	1.637	Caution - Monitor Closely, CC, ES, SF
12,700.0	9,533.0	9,520.7	9,508.5	50.0	30.6	90.71	1,617.6	-3,230.6	120.0	46.9	73.08	1.641	Caution - Monitor Closely
12,800.0	9,533.0	9,515.4	9,503.2	50.8	30.6	88.20	1,617.7	-3,230.9	160.7	96.8	63.85	2.516	Normal Operations
12,900.0	9,533.0	9,510.2	9,497.9	51.6	30.6	85.69	1,617.8	-3,231.2	239.1	182.5	56.61	4.224	
13,000.0	9,533.0	9,504.9	9,492.7	52.4	30.6	83.21	1,617.9	-3,231.4	329.4	275.8	53.55	6.151	
13,100.0	9,533.0	9,499.6	9,487.4	53.2	30.6	80.75	1,617.9	-3,231.7	424.0	371.8	52.16	8.128	
13,200.0	9,533.0	9,494.3	9,482.2	54.1	30.5	78.33	1,618.0	-3,232.0	520.5	469.1	51.45	10.117	
13,300.0	9,533.0	9,489.1	9,476.9	54.9	30.5	75.96	1,618.1	-3,232.3	618.1	567.1	51.06	12.107	
13,400.0	9,533.0	9,483.8	9,471.6	55.8	30.5	73.63	1,618.2	-3,232.6	716.4	665.6	50.82	14.096	
13,500.0	9,533.0	9,478.5	9,466.4	56.7	30.5	71.37	1,618.3	-3,232.8	815.0	764.3	50.68	16.081	
13,600.0	9,533.0	9,473.3	9,461.1	57.6	30.5	69.16	1,618.3	-3,233.1	913.9	863.3	50.60	18.063	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 173H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
12,500.0	9,533.0	9,484.5	9,479.1	48.4	30.5	77.11	1,612.4	-3,965.1	935.7	888.9	46.72	20.027	
12,600.0	9,533.0	9,487.7	9,482.3	49.2	30.5	78.54	1,612.4	-3,965.2	836.7	790.0	46.70	17.915	
12,700.0	9,533.0	9,490.9	9,485.5	50.0	30.5	79.98	1,612.3	-3,965.3	737.9	691.2	46.70	15.801	
12,800.0	9,533.0	9,494.1	9,488.7	50.8	30.5	81.44	1,612.3	-3,965.4	639.5	592.8	46.74	13.683	
12,900.0	9,533.0	9,497.3	9,491.8	51.6	30.5	82.91	1,612.2	-3,965.5	541.7	494.9	46.88	11.556	
13,000.0	9,533.0	9,500.5	9,495.0	52.4	30.5	84.39	1,612.2	-3,965.6	444.9	397.6	47.27	9.412	
13,100.0	9,533.0	9,503.6	9,498.2	53.2	30.5	85.87	1,612.1	-3,965.7	349.8	301.5	48.31	7.241	
13,200.0	9,533.0	9,506.8	9,501.4	54.1	30.5	87.37	1,612.1	-3,965.8	258.4	207.2	51.24	5.043	
13,300.0	9,533.0	9,510.0	9,504.6	54.9	30.6	88.87	1,612.0	-3,965.9	176.5	116.6	59.89	2.947	Normal Operations
13,400.0	9,533.0	9,513.2	9,507.8	55.8	30.6	90.37	1,612.0	-3,966.0	124.6	46.3	78.34	1.591	Caution - Monitor Closely
13,428.2	9,533.0	9,514.1	9,508.7	56.1	30.6	90.79	1,612.0	-3,966.1	121.4	39.3	82.07	1.479	Take Immediate Action, CC, ES, SF
13,500.0	9,533.0	9,516.4	9,510.9	56.7	30.6	91.87	1,611.9	-3,966.1	141.0	61.3	79.74	1.768	Caution - Monitor Closely
13,600.0	9,533.0	9,519.6	9,514.1	57.6	30.6	93.37	1,611.9	-3,966.2	210.3	142.1	68.17	3.084	
13,700.0	9,533.0	9,522.8	9,517.3	58.5	30.6	94.87	1,611.9	-3,966.3	297.5	236.2	61.32	4.852	
13,800.0	9,533.0	9,525.9	9,520.5	59.4	30.6	96.36	1,611.8	-3,966.5	390.9	333.2	57.71	6.774	
13,900.0	9,533.0	9,529.1	9,523.7	60.3	30.6	97.85	1,611.8	-3,966.6	486.9	431.3	55.65	8.750	
14,000.0	9,533.0	9,532.3	9,526.9	61.2	30.6	99.32	1,611.7	-3,966.7	584.2	529.9	54.37	10.745	
14,100.0	9,533.0	9,535.5	9,530.0	62.1	30.6	100.78	1,611.7	-3,966.8	682.3	628.8	53.53	12.746	
14,200.0	9,533.0	9,538.7	9,533.2	63.0	30.6	102.24	1,611.6	-3,966.9	780.9	727.9	52.95	14.747	
14,300.0	9,533.0	9,541.9	9,536.4	64.0	30.7	103.67	1,611.6	-3,967.0	879.7	827.2	52.54	16.745	
14,400.0	9,533.0	9,545.0	9,539.6	64.9	30.7	105.09	1,611.5	-3,967.1	978.8	926.6	52.24	18.737	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 174H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
12,500.0	9,533.0	9,483.3	9,478.2	48.4	30.3	77.90	1,620.1	-3,980.0	951.3	904.6	46.76	20.347	
12,600.0	9,533.0	9,486.5	9,481.3	49.2	30.3	79.23	1,620.1	-3,980.1	852.4	805.7	46.75	18.233	
12,700.0	9,533.0	9,489.6	9,484.4	50.0	30.3	80.56	1,620.0	-3,980.2	753.8	707.0	46.77	16.118	
12,800.0	9,533.0	9,492.7	9,487.6	50.8	30.4	81.91	1,620.0	-3,980.3	655.5	608.7	46.83	13.998	
12,900.0	9,533.0	9,495.9	9,490.7	51.6	30.4	83.27	1,619.9	-3,980.4	557.9	510.9	47.01	11.868	
13,000.0	9,533.0	9,499.0	9,493.8	52.4	30.4	84.63	1,619.9	-3,980.5	461.3	413.8	47.45	9.721	
13,100.0	9,533.0	9,502.1	9,496.9	53.2	30.4	86.00	1,619.9	-3,980.6	366.4	317.8	48.53	7.549	
13,200.0	9,533.0	9,505.2	9,500.1	54.1	30.4	87.38	1,619.8	-3,980.7	275.1	223.7	51.39	5.354	
13,300.0	9,533.0	9,508.4	9,503.2	54.9	30.4	88.76	1,619.8	-3,980.8	192.7	133.5	59.24	3.253	
13,400.0	9,533.0	9,511.5	9,506.3	55.8	30.4	90.15	1,619.7	-3,980.9	136.2	60.0	76.23	1.787	Caution - Monitor Closely
13,443.0	9,533.0	9,512.8	9,507.7	56.2	30.4	90.74	1,619.7	-3,980.9	129.3	47.1	82.15	1.574	Caution - Monitor Closely, CC, ES, SF
13,500.0	9,533.0	9,514.6	9,509.4	56.7	30.4	91.53	1,619.7	-3,981.0	141.3	59.7	81.61	1.731	Caution - Monitor Closely
13,600.0	9,533.0	9,517.7	9,512.6	57.6	30.4	92.92	1,619.6	-3,981.1	203.3	132.7	70.59	2.880	Normal Operations
13,700.0	9,533.0	9,520.9	9,515.7	58.5	30.4	94.30	1,619.6	-3,981.2	287.6	224.7	62.92	4.570	
13,800.0	9,533.0	9,524.0	9,518.8	59.4	30.4	95.68	1,619.6	-3,981.3	379.5	320.8	58.78	6.457	
13,900.0	9,533.0	9,527.1	9,521.9	60.3	30.5	97.05	1,619.5	-3,981.4	474.7	418.3	56.40	8.417	
14,000.0	9,533.0	9,530.2	9,525.1	61.2	30.5	98.41	1,619.5	-3,981.5	571.6	516.6	54.94	10.404	
14,100.0	9,533.0	9,533.4	9,528.2	62.1	30.5	99.77	1,619.4	-3,981.6	669.3	615.3	53.98	12.400	
14,200.0	9,533.0	9,536.5	9,531.3	63.0	30.5	101.12	1,619.4	-3,981.6	767.6	714.3	53.31	14.398	
14,300.0	9,533.0	9,539.6	9,534.4	64.0	30.5	102.45	1,619.4	-3,981.7	866.3	813.5	52.84	16.394	
14,400.0	9,533.0	9,542.7	9,537.6	64.9	30.5	103.77	1,619.3	-3,981.8	965.2	912.7	52.50	18.385	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 175H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
13,000.0	9,533.0	9,463.2	9,426.4	52.4	37.1	-49.31	1,393.2	-4,452.1	924.5	867.2	57.28	16.139	
13,100.0	9,533.0	9,471.4	9,434.6	53.2	37.1	-52.46	1,392.9	-4,452.7	825.4	767.7	57.66	14.314	
13,200.0	9,533.0	9,479.7	9,442.9	54.1	37.1	-55.89	1,392.6	-4,453.4	726.5	668.4	58.14	12.495	
13,300.0	9,533.0	9,488.0	9,451.1	54.9	37.2	-59.58	1,392.3	-4,454.1	627.8	569.1	58.77	10.684	
13,400.0	9,533.0	9,496.2	9,459.3	55.8	37.2	-63.55	1,391.9	-4,454.8	529.6	469.9	59.63	8.881	
13,500.0	9,533.0	9,504.5	9,467.5	56.7	37.2	-67.79	1,391.6	-4,455.5	431.9	371.0	60.92	7.090	
13,600.0	9,533.0	9,512.7	9,475.8	57.6	37.2	-72.26	1,391.3	-4,456.1	335.4	272.4	63.05	5.321	
13,700.0	9,533.0	9,521.0	9,484.0	58.5	37.3	-76.94	1,391.0	-4,456.8	241.6	174.5	67.09	3.601	
13,800.0	9,533.0	9,529.3	9,492.2	59.4	37.3	-81.77	1,390.7	-4,457.5	155.1	79.1	76.04	2.040	Caution - Monitor Closely
13,900.0	9,533.0	9,537.5	9,500.5	60.3	37.3	-86.69	1,390.3	-4,458.2	98.1	8.6	89.54	1.096	Take Immediate Action
13,922.7	9,533.0	9,539.4	9,502.3	60.5	37.4	-87.81	1,390.3	-4,458.3	95.5	6.8	88.74	1.076	Take Immediate Action, CC, ES, SF
14,000.0	9,533.0	9,545.8	9,508.7	61.2	37.4	-91.62	1,390.0	-4,458.9	122.7	50.9	71.80	1.709	Caution - Monitor Closely
14,100.0	9,533.0	9,554.1	9,516.9	62.1	37.4	-96.50	1,389.7	-4,459.5	200.9	141.8	59.10	3.399	
14,200.0	9,533.0	9,562.3	9,525.1	63.0	37.4	-101.26	1,389.4	-4,460.2	292.4	236.5	55.96	5.225	
14,300.0	9,533.0	9,570.6	9,533.4	64.0	37.5	-105.83	1,389.1	-4,460.9	388.0	332.8	55.21	7.027	
14,400.0	9,533.0	9,578.8	9,541.6	64.9	37.5	-110.18	1,388.7	-4,461.6	485.2	430.1	55.11	8.804	
14,500.0	9,533.0	9,587.1	9,549.8	65.8	37.5	-114.27	1,388.4	-4,462.3	583.2	528.0	55.21	10.565	
14,600.0	9,533.0	9,595.4	9,558.1	66.8	37.6	-118.09	1,388.1	-4,462.9	681.7	626.4	55.37	12.312	
14,700.0	9,533.0	9,603.6	9,566.3	67.7	37.6	-121.64	1,387.8	-4,463.6	780.5	725.0	55.55	14.050	
14,800.0	9,533.0	9,611.9	9,574.5	68.7	37.6	-124.91	1,387.4	-4,464.3	879.5	823.8	55.74	15.779	
14,900.0	9,533.0	9,620.2	9,582.7	69.7	37.7	-127.93	1,387.1	-4,465.0	978.7	922.7	55.93	17.499	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 176H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Offset Well Error: 0.0 usft

Rule Assigned:

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)	No-Go Distance (usft)	Separation Factor	Warning
13,200.0	9,533.0	9,453.7	9,399.3	54.1	38.6	51.23	1,616.0	-4,715.8	992.6	932.1	60.48	16.412	
13,300.0	9,533.0	9,464.7	9,410.2	54.9	38.6	54.19	1,615.9	-4,717.0	894.2	833.5	60.62	14.750	
13,400.0	9,533.0	9,475.7	9,421.2	55.8	38.7	57.39	1,615.7	-4,718.2	796.0	735.2	60.80	13.092	
13,500.0	9,533.0	9,486.8	9,432.1	56.7	38.7	60.85	1,615.6	-4,719.4	698.1	637.1	61.03	11.440	
13,600.0	9,533.0	9,497.8	9,443.1	57.6	38.8	64.57	1,615.4	-4,720.6	600.8	539.5	61.36	9.792	
13,700.0	9,533.0	9,508.8	9,454.0	58.5	38.8	68.54	1,615.3	-4,721.8	504.3	442.4	61.89	8.148	
13,800.0	9,533.0	9,519.8	9,465.0	59.4	38.9	72.75	1,615.1	-4,723.0	409.2	346.3	62.85	6.510	
13,900.0	9,533.0	9,530.8	9,475.9	60.3	38.9	77.16	1,615.0	-4,724.3	316.7	251.9	64.81	4.887	
14,000.0	9,533.0	9,541.9	9,486.9	61.2	39.0	81.75	1,614.8	-4,725.5	230.0	160.6	69.36	3.316	
14,100.0	9,533.0	9,552.9	9,497.8	62.1	39.0	86.46	1,614.6	-4,726.7	158.9	78.8	80.12	1.984	Caution - Monitor Closely
14,189.9	9,533.0	9,562.8	9,507.7	62.9	39.0	90.74	1,614.5	-4,727.8	131.5	40.4	91.06	1.444	Take Immediate Action, CC, ES
14,200.0	9,533.0	9,563.9	9,508.8	63.0	39.0	91.22	1,614.5	-4,727.9	131.9	40.5	91.33	1.444	Take Immediate Action, SF
14,300.0	9,533.0	9,574.9	9,519.7	64.0	39.1	95.98	1,614.3	-4,729.1	171.1	87.6	83.50	2.049	Caution - Monitor Closely
14,400.0	9,533.0	9,585.9	9,530.7	64.9	39.1	100.67	1,614.2	-4,730.3	246.8	172.1	74.72	3.303	
14,500.0	9,533.0	9,597.0	9,541.6	65.8	39.2	105.23	1,614.0	-4,731.5	335.1	264.9	70.23	4.772	
14,600.0	9,533.0	9,608.0	9,552.6	66.8	39.2	109.61	1,613.9	-4,732.7	428.3	360.4	67.93	6.305	
14,700.0	9,533.0	9,619.0	9,563.6	67.7	39.3	113.77	1,613.7	-4,734.0	523.8	457.1	66.65	7.859	
14,800.0	9,533.0	9,630.0	9,574.5	68.7	39.3	117.69	1,613.6	-4,735.2	620.5	554.6	65.90	9.417	
14,900.0	9,533.0	9,641.0	9,585.5	69.7	39.4	121.35	1,613.4	-4,736.4	718.0	652.5	65.43	10.973	
15,000.0	9,533.0	9,652.1	9,596.4	70.6	39.4	124.76	1,613.3	-4,737.6	815.9	750.7	65.13	12.526	
15,100.0	9,533.0	9,663.1	9,607.4	71.6	39.5	127.91	1,613.1	-4,738.8	914.1	849.1	64.95	14.074	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE UNIT 177H_WELL START - OWB - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	Warning
13,400.0	9,533.0	9,460.1	9,388.4	55.8	39.8	46.68	1,607.2	-4,879.6	957.4	895.1	62.36	15.352	
13,500.0	9,533.0	9,472.8	9,401.0	56.7	39.8	49.83	1,607.1	-4,881.2	859.2	796.6	62.54	13.739	
13,600.0	9,533.0	9,485.4	9,413.6	57.6	39.9	53.31	1,606.9	-4,882.8	761.2	698.4	62.75	12.131	
13,700.0	9,533.0	9,498.1	9,426.1	58.5	39.9	57.15	1,606.7	-4,884.4	663.5	600.5	63.02	10.528	
13,800.0	9,533.0	9,510.8	9,438.7	59.4	40.0	61.36	1,606.5	-4,886.0	566.3	502.9	63.41	8.931	
13,900.0	9,533.0	9,523.4	9,451.3	60.3	40.0	65.95	1,606.3	-4,887.6	470.1	406.0	64.05	7.339	
14,000.0	9,533.0	9,536.1	9,463.8	61.2	40.1	70.91	1,606.1	-4,889.2	375.3	310.1	65.21	5.755	
14,100.0	9,533.0	9,548.8	9,476.4	62.1	40.2	76.20	1,605.9	-4,890.8	283.6	215.9	67.66	4.191	
14,200.0	9,533.0	9,561.4	9,489.0	63.0	40.2	81.75	1,605.7	-4,892.4	199.2	125.5	73.67	2.704	Normal Operations
14,300.0	9,533.0	9,574.1	9,501.5	64.0	40.3	87.48	1,605.5	-4,894.0	136.4	49.3	87.10	1.566	Caution - Monitor Closely
14,357.1	9,533.0	9,581.3	9,508.7	64.5	40.3	90.79	1,605.4	-4,894.9	124.1	30.6	93.45	1.328	Take Immediate Action, CC, ES, SF
14,400.0	9,533.0	9,586.8	9,514.1	64.9	40.3	93.28	1,605.4	-4,895.6	131.2	38.9	92.32	1.421	Take Immediate Action
14,500.0	9,533.0	9,599.4	9,526.7	65.8	40.4	99.03	1,605.2	-4,897.2	188.4	107.4	81.02	2.325	Caution - Monitor Closely
14,600.0	9,533.0	9,612.1	9,539.2	66.8	40.4	104.61	1,605.0	-4,898.8	271.0	197.1	73.89	3.668	
14,700.0	9,533.0	9,624.8	9,551.8	67.7	40.5	109.94	1,604.8	-4,900.4	362.1	291.6	70.52	5.135	
14,800.0	9,533.0	9,637.4	9,564.3	68.7	40.5	114.95	1,604.6	-4,902.0	456.5	387.7	68.81	6.635	
14,900.0	9,533.0	9,650.1	9,576.9	69.7	40.6	119.60	1,604.4	-4,903.6	552.7	484.8	67.86	8.144	
15,000.0	9,533.0	9,662.8	9,589.5	70.6	40.6	123.86	1,604.2	-4,905.2	649.7	582.4	67.31	9.653	
15,100.0	9,533.0	9,675.4	9,602.0	71.6	40.7	127.75	1,604.0	-4,906.8	747.3	680.3	66.98	11.158	
15,200.0	9,533.0	9,688.1	9,614.6	72.6	40.7	131.28	1,603.8	-4,908.4	845.3	778.5	66.78	12.657	
15,300.0	9,533.0	9,700.8	9,627.2	73.6	40.8	134.47	1,603.6	-4,910.0	943.5	876.8	66.67	14.151	

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

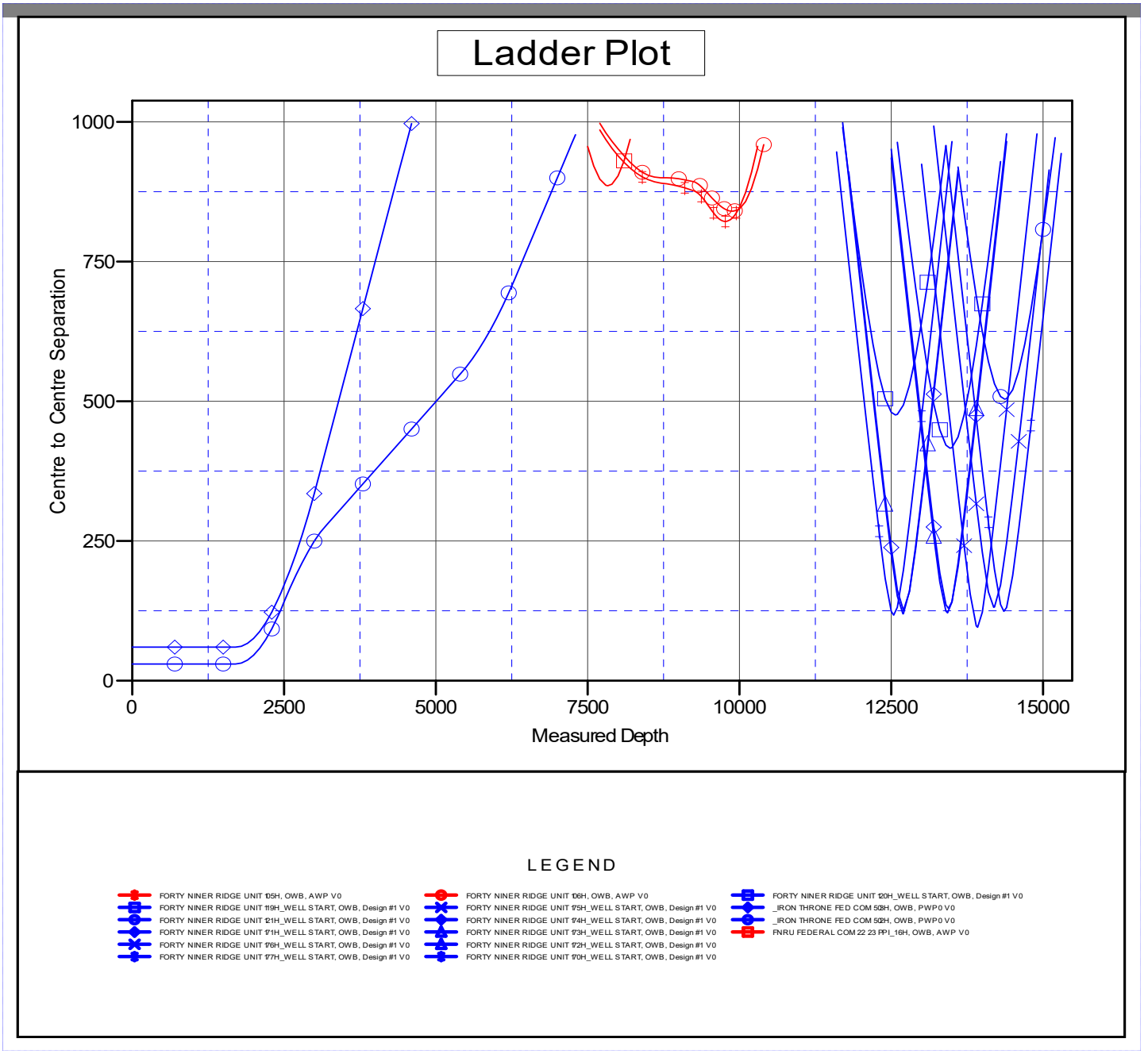
ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL @ 3332.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _IRON THRONE FED COM 501H - Slot IRON THRO
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.25°



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

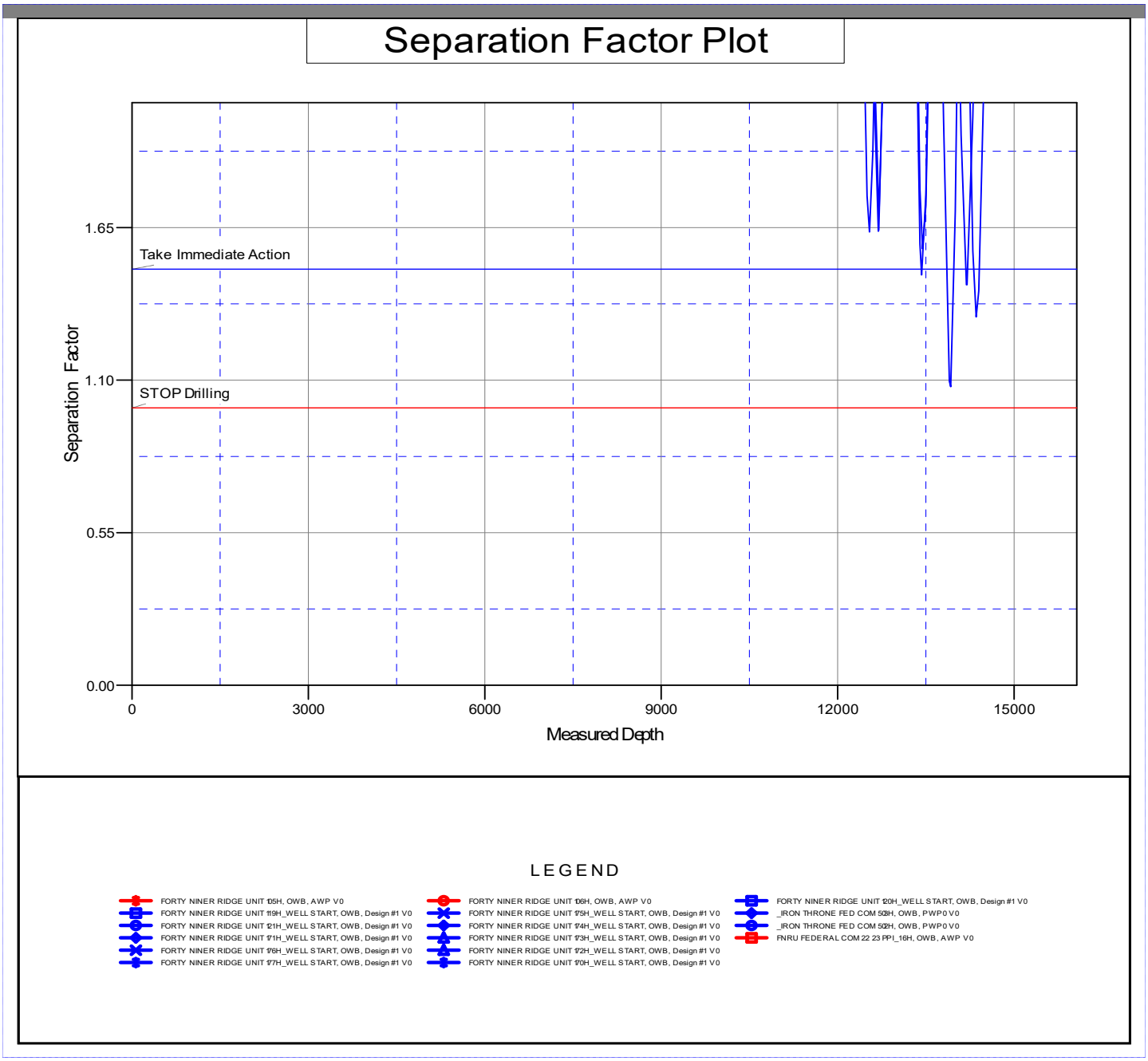
ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Project:	ATLAS PROSPECT (DBW)	**TVD Reference:**	GL @ 3332.0usft
Reference Site:	IRON THRONE PROJECT	**MD Reference:**	GL @ 3332.0usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	EDT 17 Permian Prod
Reference Design:	PWP0	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL @ 3332.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _IRON THRONE FED COM 501H - Slot IRON THRO
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.25°



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

DELAWARE BASIN WEST

ATLAS PROSPECT (DBW)
IRON THRONE PROJECT
_IRON THRONE FED COM 501H - Slot IRON THRONE 501H

OWB

Plan: PWP0

Standard Planning Report

18 July, 2024

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	GL @ 3332.0usft
Project:	ATLAS PROSPECT (DBW)	**MD Reference:**	GL @ 3332.0usft
Site:	IRON THRONE PROJECT	**North Reference:**	Grid
Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project	ATLAS PROSPECT (DBW)		
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	IRON THRONE PROJECT				
Site Position:		**Northing:**	464,316.67 usft	**Latitude:**	32° 16' 32.516 N
From:	Map	**Easting:**	641,023.57 usft	**Longitude:**	103° 52' 37.352 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well	_IRON THRONE FED COM 501H - Slot IRON THRONE 501H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	465,165.09 usft	**Latitude:**	32° 16' 40.684 N
	+E/-W	0.0 usft	**Easting:**	646,348.82 usft	**Longitude:**	103° 51' 35.282 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,332.0 usft
Grid Convergence:		0.25 °				

Wellbore	OWB				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2022	10/31/2023	6.61	59.91	47,441.07831631

Design	PWP0			
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	277.61

Plan Survey Tool Program **Date** 7/17/2024

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,118.4	PWP0 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St	

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Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	GL @ 3332.0usft
Project:	ATLAS PROSPECT (DBW)	**MD Reference:**	GL @ 3332.0usft
Site:	IRON THRONE PROJECT	**North Reference:**	Grid
Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,450.0	15.00	358.00	2,441.5	97.6	-3.4	2.00	2.00	0.00	358.00	
7,231.5	15.00	358.00	7,060.0	1,334.3	-46.6	0.00	0.00	0.00	0.00	
8,731.5	0.00	0.00	8,542.9	1,529.4	-53.4	1.00	-1.00	0.00	180.00	
9,244.0	0.00	0.00	9,055.5	1,529.4	-53.4	0.00	0.00	0.00	0.00	
9,994.0	90.00	269.43	9,533.0	1,524.7	-530.8	12.00	12.00	-12.08	269.43	
20,119.1	90.00	269.43	9,533.0	1,424.2	-10,655.4	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	GL @ 3332.0usft
Project:	ATLAS PROSPECT (DBW)	**MD Reference:**	GL @ 3332.0usft
Site:	IRON THRONE PROJECT	**North Reference:**	Grid
Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	2.00	358.00	1,800.0	1.7	-0.1	0.3	2.00	2.00	0.00
1,900.0	4.00	358.00	1,899.8	7.0	-0.2	1.2	2.00	2.00	0.00
2,000.0	6.00	358.00	1,999.5	15.7	-0.5	2.6	2.00	2.00	0.00
2,100.0	8.00	358.00	2,098.7	27.9	-1.0	4.7	2.00	2.00	0.00
2,200.0	10.00	358.00	2,197.5	43.5	-1.5	7.3	2.00	2.00	0.00
2,300.0	12.00	358.00	2,295.6	62.6	-2.2	10.5	2.00	2.00	0.00
2,400.0	14.00	358.00	2,393.1	85.0	-3.0	14.2	2.00	2.00	0.00
2,450.0	15.00	358.00	2,441.5	97.6	-3.4	16.3	2.00	2.00	0.00
2,500.0	15.00	358.00	2,489.8	110.5	-3.9	18.5	0.00	0.00	0.00
2,600.0	15.00	358.00	2,586.4	136.4	-4.8	22.8	0.00	0.00	0.00
2,700.0	15.00	358.00	2,682.9	162.2	-5.7	27.1	0.00	0.00	0.00
2,800.0	15.00	358.00	2,779.5	188.1	-6.6	31.4	0.00	0.00	0.00
2,900.0	15.00	358.00	2,876.1	214.0	-7.5	35.8	0.00	0.00	0.00
3,000.0	15.00	358.00	2,972.7	239.8	-8.4	40.1	0.00	0.00	0.00
3,100.0	15.00	358.00	3,069.3	265.7	-9.3	44.4	0.00	0.00	0.00
3,200.0	15.00	358.00	3,165.9	291.6	-10.2	48.7	0.00	0.00	0.00
3,300.0	15.00	358.00	3,262.5	317.4	-11.1	53.0	0.00	0.00	0.00
3,400.0	15.00	358.00	3,359.1	343.3	-12.0	57.4	0.00	0.00	0.00
3,500.0	15.00	358.00	3,455.7	369.2	-12.9	61.7	0.00	0.00	0.00
3,600.0	15.00	358.00	3,552.3	395.0	-13.8	66.0	0.00	0.00	0.00
3,700.0	15.00	358.00	3,648.9	420.9	-14.7	70.3	0.00	0.00	0.00
3,800.0	15.00	358.00	3,745.5	446.7	-15.6	74.6	0.00	0.00	0.00
3,900.0	15.00	358.00	3,842.1	472.6	-16.5	79.0	0.00	0.00	0.00
4,000.0	15.00	358.00	3,938.6	498.5	-17.4	83.3	0.00	0.00	0.00
4,100.0	15.00	358.00	4,035.2	524.3	-18.3	87.6	0.00	0.00	0.00
4,200.0	15.00	358.00	4,131.8	550.2	-19.2	91.9	0.00	0.00	0.00
4,300.0	15.00	358.00	4,228.4	576.1	-20.1	96.3	0.00	0.00	0.00
4,400.0	15.00	358.00	4,325.0	601.9	-21.0	100.6	0.00	0.00	0.00
4,500.0	15.00	358.00	4,421.6	627.8	-21.9	104.9	0.00	0.00	0.00
4,600.0	15.00	358.00	4,518.2	653.7	-22.8	109.2	0.00	0.00	0.00
4,700.0	15.00	358.00	4,614.8	679.5	-23.7	113.5	0.00	0.00	0.00
4,800.0	15.00	358.00	4,711.4	705.4	-24.6	117.9	0.00	0.00	0.00
4,900.0	15.00	358.00	4,808.0	731.3	-25.5	122.2	0.00	0.00	0.00
5,000.0	15.00	358.00	4,904.6	757.1	-26.4	126.5	0.00	0.00	0.00
5,100.0	15.00	358.00	5,001.2	783.0	-27.3	130.8	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	GL @ 3332.0usft
Project:	ATLAS PROSPECT (DBW)	**MD Reference:**	GL @ 3332.0usft
Site:	IRON THRONE PROJECT	**North Reference:**	Grid
Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	15.00	358.00	5,097.8	808.9	-28.2	135.2	0.00	0.00	0.00
5,300.0	15.00	358.00	5,194.4	834.7	-29.1	139.5	0.00	0.00	0.00
5,400.0	15.00	358.00	5,290.9	860.6	-30.1	143.8	0.00	0.00	0.00
5,500.0	15.00	358.00	5,387.5	886.5	-31.0	148.1	0.00	0.00	0.00
5,600.0	15.00	358.00	5,484.1	912.3	-31.9	152.4	0.00	0.00	0.00
5,700.0	15.00	358.00	5,580.7	938.2	-32.8	156.8	0.00	0.00	0.00
5,800.0	15.00	358.00	5,677.3	964.1	-33.7	161.1	0.00	0.00	0.00
5,900.0	15.00	358.00	5,773.9	989.9	-34.6	165.4	0.00	0.00	0.00
6,000.0	15.00	358.00	5,870.5	1,015.8	-35.5	169.7	0.00	0.00	0.00
6,100.0	15.00	358.00	5,967.1	1,041.7	-36.4	174.1	0.00	0.00	0.00
6,200.0	15.00	358.00	6,063.7	1,067.5	-37.3	178.4	0.00	0.00	0.00
6,300.0	15.00	358.00	6,160.3	1,093.4	-38.2	182.7	0.00	0.00	0.00
6,400.0	15.00	358.00	6,256.9	1,119.3	-39.1	187.0	0.00	0.00	0.00
6,500.0	15.00	358.00	6,353.5	1,145.1	-40.0	191.3	0.00	0.00	0.00
6,600.0	15.00	358.00	6,450.1	1,171.0	-40.9	195.7	0.00	0.00	0.00
6,700.0	15.00	358.00	6,546.6	1,196.9	-41.8	200.0	0.00	0.00	0.00
6,800.0	15.00	358.00	6,643.2	1,222.7	-42.7	204.3	0.00	0.00	0.00
6,900.0	15.00	358.00	6,739.8	1,248.6	-43.6	208.6	0.00	0.00	0.00
7,000.0	15.00	358.00	6,836.4	1,274.5	-44.5	213.0	0.00	0.00	0.00
7,100.0	15.00	358.00	6,933.0	1,300.3	-45.4	217.3	0.00	0.00	0.00
7,200.0	15.00	358.00	7,029.6	1,326.2	-46.3	221.6	0.00	0.00	0.00
7,231.5	15.00	358.00	7,060.0	1,334.3	-46.6	223.0	0.00	0.00	0.00
7,300.0	14.31	358.00	7,126.3	1,351.7	-47.2	225.9	1.00	-1.00	0.00
7,400.0	13.31	358.00	7,223.4	1,375.5	-48.0	229.8	1.00	-1.00	0.00
7,500.0	12.31	358.00	7,320.9	1,397.7	-48.8	233.5	1.00	-1.00	0.00
7,600.0	11.31	358.00	7,418.8	1,418.2	-49.5	237.0	1.00	-1.00	0.00
7,700.0	10.31	358.00	7,517.0	1,436.9	-50.2	240.1	1.00	-1.00	0.00
7,800.0	9.31	358.00	7,615.6	1,453.9	-50.8	242.9	1.00	-1.00	0.00
7,900.0	8.31	358.00	7,714.4	1,469.3	-51.3	245.5	1.00	-1.00	0.00
8,000.0	7.31	358.00	7,813.4	1,482.8	-51.8	247.8	1.00	-1.00	0.00
8,100.0	6.31	358.00	7,912.7	1,494.7	-52.2	249.8	1.00	-1.00	0.00
8,200.0	5.31	358.00	8,012.2	1,504.8	-52.5	251.4	1.00	-1.00	0.00
8,300.0	4.31	358.00	8,111.9	1,513.2	-52.8	252.8	1.00	-1.00	0.00
8,400.0	3.31	358.00	8,211.6	1,519.9	-53.1	254.0	1.00	-1.00	0.00
8,500.0	2.31	358.00	8,311.5	1,524.8	-53.2	254.8	1.00	-1.00	0.00
8,600.0	1.31	358.00	8,411.5	1,527.9	-53.4	255.3	1.00	-1.00	0.00
8,700.0	0.31	358.00	8,511.5	1,529.4	-53.4	255.5	1.00	-1.00	0.00
8,731.5	0.00	0.00	8,542.9	1,529.4	-53.4	255.6	1.00	-1.00	0.00
8,800.0	0.00	0.00	8,611.5	1,529.4	-53.4	255.6	0.00	0.00	0.00
8,900.0	0.00	0.00	8,711.5	1,529.4	-53.4	255.6	0.00	0.00	0.00
9,000.0	0.00	0.00	8,811.5	1,529.4	-53.4	255.6	0.00	0.00	0.00
9,100.0	0.00	0.00	8,911.5	1,529.4	-53.4	255.6	0.00	0.00	0.00
9,200.0	0.00	0.00	9,011.5	1,529.4	-53.4	255.6	0.00	0.00	0.00
9,244.0	0.00	0.00	9,055.5	1,529.4	-53.4	255.6	0.00	0.00	0.00
9,250.0	0.72	269.43	9,061.5	1,529.4	-53.4	255.6	12.00	12.00	0.00
9,275.0	3.72	269.43	9,086.4	1,529.4	-54.4	256.6	12.00	12.00	0.00
9,300.0	6.72	269.43	9,111.3	1,529.4	-56.7	258.8	12.00	12.00	0.00
9,325.0	9.72	269.43	9,136.1	1,529.4	-60.3	262.3	12.00	12.00	0.00
9,350.0	12.72	269.43	9,160.6	1,529.3	-65.1	267.2	12.00	12.00	0.00
9,375.0	15.72	269.43	9,184.8	1,529.3	-71.3	273.2	12.00	12.00	0.00
9,400.0	18.72	269.43	9,208.7	1,529.2	-78.7	280.5	12.00	12.00	0.00
9,425.0	21.72	269.43	9,232.2	1,529.1	-87.3	289.1	12.00	12.00	0.00
9,450.0	24.72	269.43	9,255.1	1,529.0	-97.1	298.9	12.00	12.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	GL @ 3332.0usft
Project:	ATLAS PROSPECT (DBW)	**MD Reference:**	GL @ 3332.0usft
Site:	IRON THRONE PROJECT	**North Reference:**	Grid
Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
9,475.0	27.72	269.43	9,277.6	1,528.9	-108.2	309.8	12.00	12.00	0.00
9,500.0	30.72	269.43	9,299.4	1,528.8	-120.4	321.9	12.00	12.00	0.00
9,525.0	33.72	269.43	9,320.5	1,528.6	-133.7	335.1	12.00	12.00	0.00
9,550.0	36.72	269.43	9,340.9	1,528.5	-148.1	349.3	12.00	12.00	0.00
9,575.0	39.72	269.43	9,360.6	1,528.4	-163.6	364.6	12.00	12.00	0.00
9,600.0	42.72	269.43	9,379.4	1,528.2	-180.1	380.9	12.00	12.00	0.00
9,625.0	45.72	269.43	9,397.3	1,528.0	-197.5	398.2	12.00	12.00	0.00
9,650.0	48.72	269.43	9,414.3	1,527.8	-215.8	416.3	12.00	12.00	0.00
9,675.0	51.72	269.43	9,430.3	1,527.6	-235.0	435.4	12.00	12.00	0.00
9,700.0	54.72	269.43	9,445.3	1,527.4	-255.1	455.2	12.00	12.00	0.00
9,725.0	57.72	269.43	9,459.2	1,527.2	-275.8	475.7	12.00	12.00	0.00
9,750.0	60.72	269.43	9,471.9	1,527.0	-297.3	497.0	12.00	12.00	0.00
9,775.0	63.72	269.43	9,483.6	1,526.8	-319.4	518.9	12.00	12.00	0.00
9,800.0	66.72	269.43	9,494.1	1,526.6	-342.1	541.3	12.00	12.00	0.00
9,825.0	69.72	269.43	9,503.4	1,526.4	-365.3	564.3	12.00	12.00	0.00
9,850.0	72.72	269.43	9,511.4	1,526.1	-389.0	587.7	12.00	12.00	0.00
9,875.0	75.72	269.43	9,518.2	1,525.9	-413.0	611.6	12.00	12.00	0.00
9,900.0	78.72	269.43	9,523.7	1,525.6	-437.4	635.7	12.00	12.00	0.00
9,925.0	81.72	269.43	9,528.0	1,525.4	-462.1	660.1	12.00	12.00	0.00
9,950.0	84.72	269.43	9,530.9	1,525.1	-486.9	684.6	12.00	12.00	0.00
9,975.0	87.72	269.43	9,532.6	1,524.9	-511.8	709.3	12.00	12.00	0.00
9,994.0	90.00	269.43	9,533.0	1,524.7	-530.8	728.2	12.00	12.00	0.00
10,000.0	90.00	269.43	9,533.0	1,524.6	-536.8	734.1	0.00	0.00	0.00
10,100.0	90.00	269.43	9,533.0	1,523.7	-636.8	833.0	0.00	0.00	0.00
10,200.0	90.00	269.43	9,533.0	1,522.7	-736.8	932.0	0.00	0.00	0.00
10,300.0	90.00	269.43	9,533.0	1,521.7	-836.8	1,031.0	0.00	0.00	0.00
10,400.0	90.00	269.43	9,533.0	1,520.7	-936.8	1,130.0	0.00	0.00	0.00
10,500.0	90.00	269.43	9,533.0	1,519.7	-1,036.8	1,229.0	0.00	0.00	0.00
10,600.0	90.00	269.43	9,533.0	1,518.7	-1,136.8	1,328.0	0.00	0.00	0.00
10,700.0	90.00	269.43	9,533.0	1,517.7	-1,236.8	1,426.9	0.00	0.00	0.00
10,800.0	90.00	269.43	9,533.0	1,516.7	-1,336.8	1,525.9	0.00	0.00	0.00
10,900.0	90.00	269.43	9,533.0	1,515.7	-1,436.8	1,624.9	0.00	0.00	0.00
11,000.0	90.00	269.43	9,533.0	1,514.7	-1,536.8	1,723.9	0.00	0.00	0.00
11,100.0	90.00	269.43	9,533.0	1,513.7	-1,636.8	1,822.9	0.00	0.00	0.00
11,200.0	90.00	269.43	9,533.0	1,512.7	-1,736.8	1,921.9	0.00	0.00	0.00
11,300.0	90.00	269.43	9,533.0	1,511.7	-1,836.7	2,020.8	0.00	0.00	0.00
11,400.0	90.00	269.43	9,533.0	1,510.7	-1,936.7	2,119.8	0.00	0.00	0.00
11,500.0	90.00	269.43	9,533.0	1,509.8	-2,036.7	2,218.8	0.00	0.00	0.00
11,600.0	90.00	269.43	9,533.0	1,508.8	-2,136.7	2,317.8	0.00	0.00	0.00
11,700.0	90.00	269.43	9,533.0	1,507.8	-2,236.7	2,416.8	0.00	0.00	0.00
11,800.0	90.00	269.43	9,533.0	1,506.8	-2,336.7	2,515.7	0.00	0.00	0.00
11,900.0	90.00	269.43	9,533.0	1,505.8	-2,436.7	2,614.7	0.00	0.00	0.00
12,000.0	90.00	269.43	9,533.0	1,504.8	-2,536.7	2,713.7	0.00	0.00	0.00
12,100.0	90.00	269.43	9,533.0	1,503.8	-2,636.7	2,812.7	0.00	0.00	0.00
12,200.0	90.00	269.43	9,533.0	1,502.8	-2,736.7	2,911.7	0.00	0.00	0.00
12,300.0	90.00	269.43	9,533.0	1,501.8	-2,836.7	3,010.7	0.00	0.00	0.00
12,400.0	90.00	269.43	9,533.0	1,500.8	-2,936.7	3,109.6	0.00	0.00	0.00
12,500.0	90.00	269.43	9,533.0	1,499.8	-3,036.7	3,208.6	0.00	0.00	0.00
12,600.0	90.00	269.43	9,533.0	1,498.8	-3,136.7	3,307.6	0.00	0.00	0.00
12,700.0	90.00	269.43	9,533.0	1,497.8	-3,236.7	3,406.6	0.00	0.00	0.00
12,800.0	90.00	269.43	9,533.0	1,496.8	-3,336.7	3,505.6	0.00	0.00	0.00
12,900.0	90.00	269.43	9,533.0	1,495.9	-3,436.7	3,604.5	0.00	0.00	0.00
13,000.0	90.00	269.43	9,533.0	1,494.9	-3,536.7	3,703.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	GL @ 3332.0usft
Project:	ATLAS PROSPECT (DBW)	**MD Reference:**	GL @ 3332.0usft
Site:	IRON THRONE PROJECT	**North Reference:**	Grid
Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,100.0	90.00	269.43	9,533.0	1,493.9	-3,636.7	3,802.5	0.00	0.00	0.00
13,200.0	90.00	269.43	9,533.0	1,492.9	-3,736.7	3,901.5	0.00	0.00	0.00
13,300.0	90.00	269.43	9,533.0	1,491.9	-3,836.6	4,000.5	0.00	0.00	0.00
13,400.0	90.00	269.43	9,533.0	1,490.9	-3,936.6	4,099.5	0.00	0.00	0.00
13,500.0	90.00	269.43	9,533.0	1,489.9	-4,036.6	4,198.4	0.00	0.00	0.00
13,600.0	90.00	269.43	9,533.0	1,488.9	-4,136.6	4,297.4	0.00	0.00	0.00
13,700.0	90.00	269.43	9,533.0	1,487.9	-4,236.6	4,396.4	0.00	0.00	0.00
13,800.0	90.00	269.43	9,533.0	1,486.9	-4,336.6	4,495.4	0.00	0.00	0.00
13,900.0	90.00	269.43	9,533.0	1,485.9	-4,436.6	4,594.4	0.00	0.00	0.00
14,000.0	90.00	269.43	9,533.0	1,484.9	-4,536.6	4,693.4	0.00	0.00	0.00
14,100.0	90.00	269.43	9,533.0	1,483.9	-4,636.6	4,792.3	0.00	0.00	0.00
14,200.0	90.00	269.43	9,533.0	1,482.9	-4,736.6	4,891.3	0.00	0.00	0.00
14,300.0	90.00	269.43	9,533.0	1,482.0	-4,836.6	4,990.3	0.00	0.00	0.00
14,400.0	90.00	269.43	9,533.0	1,481.0	-4,936.6	5,089.3	0.00	0.00	0.00
14,500.0	90.00	269.43	9,533.0	1,480.0	-5,036.6	5,188.3	0.00	0.00	0.00
14,600.0	90.00	269.43	9,533.0	1,479.0	-5,136.6	5,287.2	0.00	0.00	0.00
14,700.0	90.00	269.43	9,533.0	1,478.0	-5,236.6	5,386.2	0.00	0.00	0.00
14,800.0	90.00	269.43	9,533.0	1,477.0	-5,336.6	5,485.2	0.00	0.00	0.00
14,900.0	90.00	269.43	9,533.0	1,476.0	-5,436.6	5,584.2	0.00	0.00	0.00
15,000.0	90.00	269.43	9,533.0	1,475.0	-5,536.6	5,683.2	0.00	0.00	0.00
15,100.0	90.00	269.43	9,533.0	1,474.0	-5,636.6	5,782.2	0.00	0.00	0.00
15,200.0	90.00	269.43	9,533.0	1,473.0	-5,736.6	5,881.1	0.00	0.00	0.00
15,300.0	90.00	269.43	9,533.0	1,472.0	-5,836.6	5,980.1	0.00	0.00	0.00
15,400.0	90.00	269.43	9,533.0	1,471.0	-5,936.5	6,079.1	0.00	0.00	0.00
15,500.0	90.00	269.43	9,533.0	1,470.0	-6,036.5	6,178.1	0.00	0.00	0.00
15,600.0	90.00	269.43	9,533.0	1,469.0	-6,136.5	6,277.1	0.00	0.00	0.00
15,700.0	90.00	269.43	9,533.0	1,468.1	-6,236.5	6,376.0	0.00	0.00	0.00
15,800.0	90.00	269.43	9,533.0	1,467.1	-6,336.5	6,475.0	0.00	0.00	0.00
15,900.0	90.00	269.43	9,533.0	1,466.1	-6,436.5	6,574.0	0.00	0.00	0.00
16,000.0	90.00	269.43	9,533.0	1,465.1	-6,536.5	6,673.0	0.00	0.00	0.00
16,100.0	90.00	269.43	9,533.0	1,464.1	-6,636.5	6,772.0	0.00	0.00	0.00
16,200.0	90.00	269.43	9,533.0	1,463.1	-6,736.5	6,871.0	0.00	0.00	0.00
16,300.0	90.00	269.43	9,533.0	1,462.1	-6,836.5	6,969.9	0.00	0.00	0.00
16,400.0	90.00	269.43	9,533.0	1,461.1	-6,936.5	7,068.9	0.00	0.00	0.00
16,500.0	90.00	269.43	9,533.0	1,460.1	-7,036.5	7,167.9	0.00	0.00	0.00
16,600.0	90.00	269.43	9,533.0	1,459.1	-7,136.5	7,266.9	0.00	0.00	0.00
16,700.0	90.00	269.43	9,533.0	1,458.1	-7,236.5	7,365.9	0.00	0.00	0.00
16,800.0	90.00	269.43	9,533.0	1,457.1	-7,336.5	7,464.9	0.00	0.00	0.00
16,900.0	90.00	269.43	9,533.0	1,456.1	-7,436.5	7,563.8	0.00	0.00	0.00
17,000.0	90.00	269.43	9,533.0	1,455.1	-7,536.5	7,662.8	0.00	0.00	0.00
17,100.0	90.00	269.43	9,533.0	1,454.2	-7,636.5	7,761.8	0.00	0.00	0.00
17,200.0	90.00	269.43	9,533.0	1,453.2	-7,736.5	7,860.8	0.00	0.00	0.00
17,300.0	90.00	269.43	9,533.0	1,452.2	-7,836.5	7,959.8	0.00	0.00	0.00
17,400.0	90.00	269.43	9,533.0	1,451.2	-7,936.4	8,058.7	0.00	0.00	0.00
17,500.0	90.00	269.43	9,533.0	1,450.2	-8,036.4	8,157.7	0.00	0.00	0.00
17,600.0	90.00	269.43	9,533.0	1,449.2	-8,136.4	8,256.7	0.00	0.00	0.00
17,700.0	90.00	269.43	9,533.0	1,448.2	-8,236.4	8,355.7	0.00	0.00	0.00
17,800.0	90.00	269.43	9,533.0	1,447.2	-8,336.4	8,454.7	0.00	0.00	0.00
17,900.0	90.00	269.43	9,533.0	1,446.2	-8,436.4	8,553.7	0.00	0.00	0.00
18,000.0	90.00	269.43	9,533.0	1,445.2	-8,536.4	8,652.6	0.00	0.00	0.00
18,100.0	90.00	269.43	9,533.0	1,444.2	-8,636.4	8,751.6	0.00	0.00	0.00
18,200.0	90.00	269.43	9,533.0	1,443.2	-8,736.4	8,850.6	0.00	0.00	0.00
18,300.0	90.00	269.43	9,533.0	1,442.2	-8,836.4	8,949.6	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well _IRON THRONE FED COM 501H - Slot IRON THRONE 501H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	GL @ 3332.0usft
Project:	ATLAS PROSPECT (DBW)	**MD Reference:**	GL @ 3332.0usft
Site:	IRON THRONE PROJECT	**North Reference:**	Grid
Well:	_IRON THRONE FED COM 501H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
18,400.0	90.00	269.43	9,533.0	1,441.2	-8,936.4	9,048.6	0.00	0.00	0.00
18,500.0	90.00	269.43	9,533.0	1,440.3	-9,036.4	9,147.5	0.00	0.00	0.00
18,600.0	90.00	269.43	9,533.0	1,439.3	-9,136.4	9,246.5	0.00	0.00	0.00
18,700.0	90.00	269.43	9,533.0	1,438.3	-9,236.4	9,345.5	0.00	0.00	0.00
18,800.0	90.00	269.43	9,533.0	1,437.3	-9,336.4	9,444.5	0.00	0.00	0.00
18,900.0	90.00	269.43	9,533.0	1,436.3	-9,436.4	9,543.5	0.00	0.00	0.00
19,000.0	90.00	269.43	9,533.0	1,435.3	-9,536.4	9,642.5	0.00	0.00	0.00
19,100.0	90.00	269.43	9,533.0	1,434.3	-9,636.4	9,741.4	0.00	0.00	0.00
19,200.0	90.00	269.43	9,533.0	1,433.3	-9,736.4	9,840.4	0.00	0.00	0.00
19,300.0	90.00	269.43	9,533.0	1,432.3	-9,836.4	9,939.4	0.00	0.00	0.00
19,400.0	90.00	269.43	9,533.0	1,431.3	-9,936.3	10,038.4	0.00	0.00	0.00
19,500.0	90.00	269.43	9,533.0	1,430.3	-10,036.3	10,137.4	0.00	0.00	0.00
19,600.0	90.00	269.43	9,533.0	1,429.3	-10,136.3	10,236.4	0.00	0.00	0.00
19,700.0	90.00	269.43	9,533.0	1,428.3	-10,236.3	10,335.3	0.00	0.00	0.00
19,800.0	90.00	269.43	9,533.0	1,427.3	-10,336.3	10,434.3	0.00	0.00	0.00
19,900.0	90.00	269.43	9,533.0	1,426.4	-10,436.3	10,533.3	0.00	0.00	0.00
20,000.0	90.00	269.43	9,533.0	1,425.4	-10,536.3	10,632.3	0.00	0.00	0.00
20,100.0	90.00	269.43	9,533.0	1,424.4	-10,636.3	10,731.3	0.00	0.00	0.00
20,119.1	90.00	269.43	9,533.0	1,424.2	-10,655.4	10,750.1	0.00	0.00	0.00

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
PBHL_IRON THRONE 5	0.00	89.43	9,533.0	1,424.2	-10,655.4	466,589.27	635,693.45	32° 16' 55.226 N	103° 53' 39.328 W
- plan hits target center - Rectangle (sides W100.0 H10,555.3 D20.0)									
LTP_IRON THRONE 50	90.00	269.43	9,533.0	1,424.9	-10,605.4	466,590.00	635,743.45	32° 16' 55.231 N	103° 53' 38.745 W
- plan misses target center by 0.2usft at 20069.1usft MD (9533.0 TVD, 1424.7 N, -10605.4 E) - Circle (radius 50.0)									
FTP_IRON THRONE 50	0.00	0.00	9,533.0	1,529.6	-100.6	466,694.72	646,248.20	32° 16' 55.825 N	103° 51' 36.375 W
- plan misses target center by 165.3usft at 9646.1usft MD (9411.7 TVD, 1527.9 N, -212.9 E) - Circle (radius 50.0)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,119.1	9,533.0	5-1/2" Production Casing	5-1/2	6-3/4

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Project:	ATLAS PROSPECT (DBW)
Site:	IRON THRONE PROJECT
Well:	_IRON THRONE FED COM 501H
Wellbore:	OWB
Design:	PWP0
GL:	3332.0
GL @ 3332.0usft	

WELL DETAILS: _IRON THRONE FED COM 501H

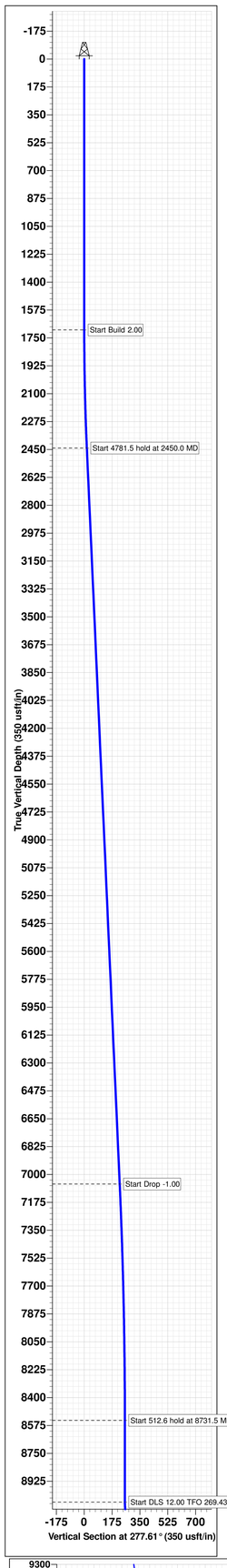
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	
0.0	0.0	465165.09	646348.82	32° 16' 40.684 N	103° 51' 35.282 W	IRON THRONE 501H

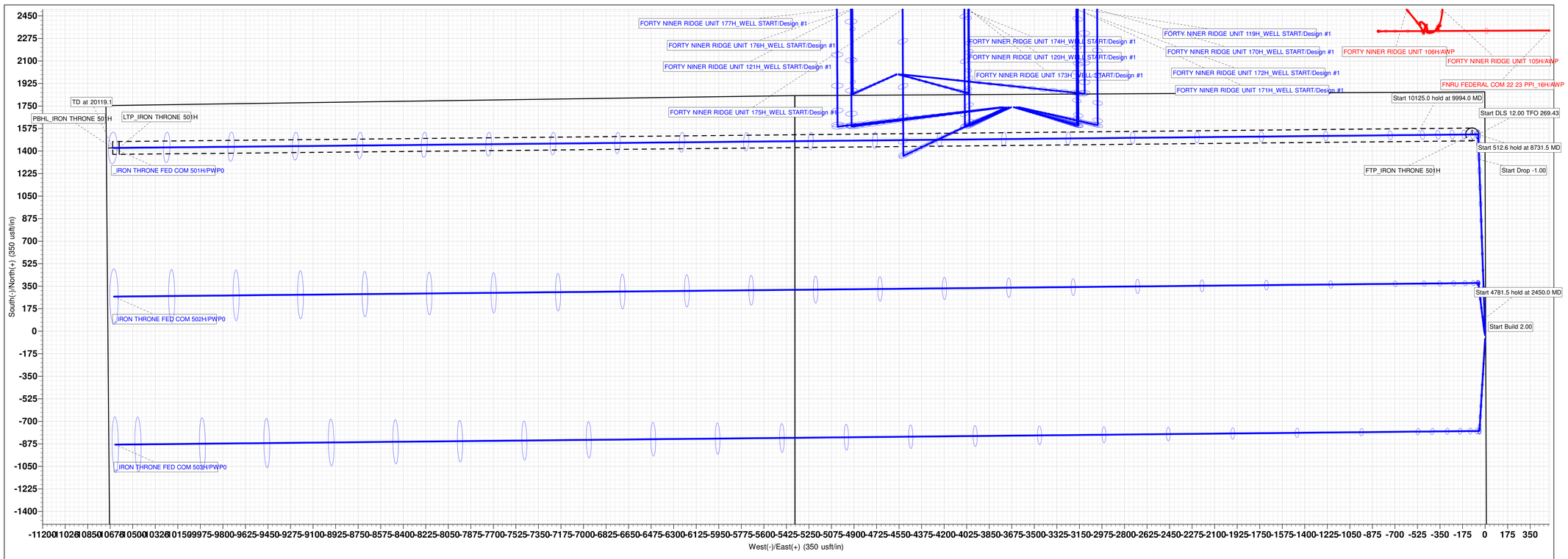
DESIGN TARGET DETAILS

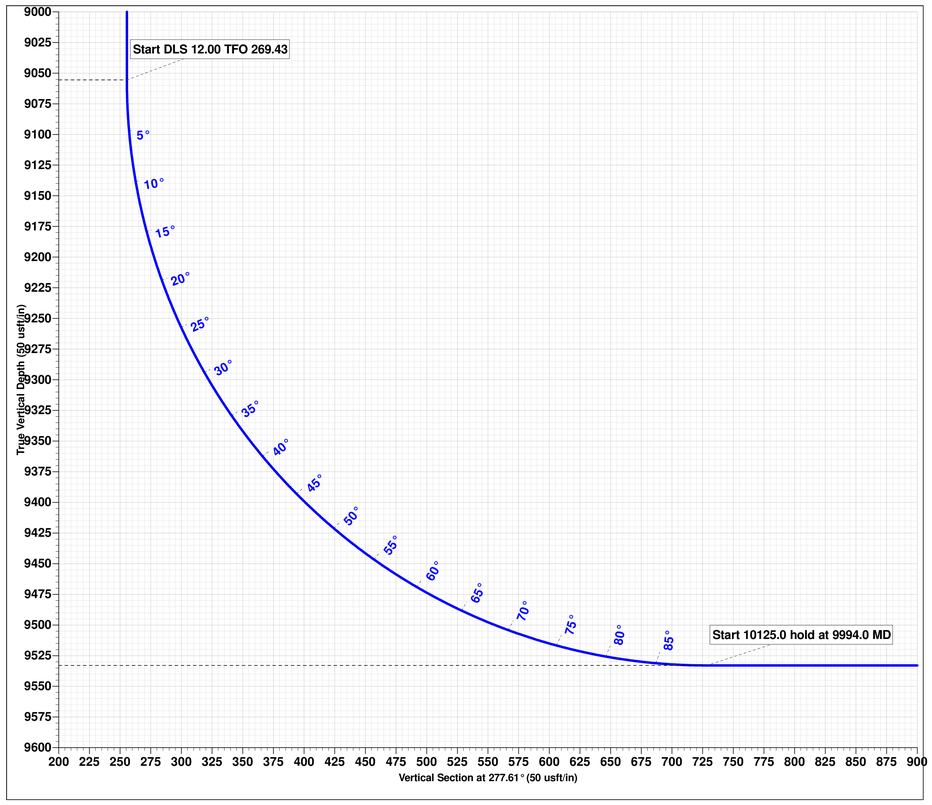
Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP_IRON THRONE 501H	9533.0	1529.6	-100.6	466694.72	646248.20
LTP_IRON THRONE 501H	9533.0	1424.9	-10605.4	466590.00	635743.45
PBHL_IRON THRONE 501H	9533.0	1424.2	-10655.4	466589.27	635693.45

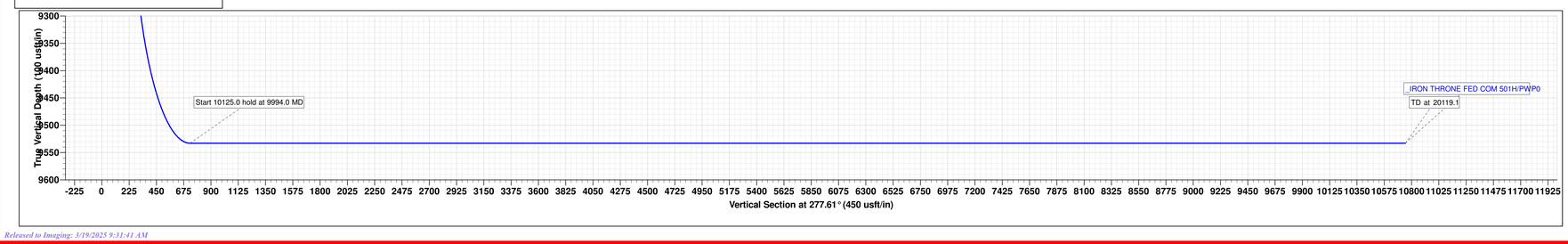
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
1700.0	0.00	0.00	1700.0	0.0	0.0	0.00	0.00	0.0
2450.0	15.00	358.00	2441.5	97.6	-3.4	2.00	358.00	16.3
7231.5	15.00	358.00	7060.0	1334.3	-46.6	0.00	0.00	223.0
8731.5	0.00	0.00	8542.9	1529.4	-53.4	1.00	180.00	255.6
9244.0	0.00	0.00	9055.5	1529.4	-53.4	0.00	0.00	255.6
9994.0	90.00	269.43	9533.0	1524.7	-530.8	12.00	269.43	728.2
20119.1	90.00	269.43	9533.0	1424.2	-10655.4	0.00	0.00	10750.1









PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	IRON THRONE FED COM 501H
SURFACE HOLE FOOTAGE:	1861'/N & 201'/W
BOTTOM HOLE FOOTAGE	330'/N & 50'/W
LOCATION:	Section 26, T.23 S., R.30 E., NMP
COUNTY:	Eddy County, New Mexico

COA

H_2S	○ No		◉ Yes	
Potash / WIPP	○ None	○ Secretary	◉ R-111-Q	☐ Open Annulus
	4-String Design: Open 1st Int x 2nd Annulus (ICP 2 below Relief Zone)			☐ WIPP
Cave / Karst	◉ Low	○ Medium	○ High	○ Critical
Wellhead	○ Conventional	◉ Multibowl	○ Both	○ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☑ EchoMeter	☐ DV Tool
Special Req	☐ Capitan Reef	☐ Water Disposal	☑ COM	☐ Unit
Waste Prev.	○ Self-Certification	◉ Waste Min. Plan	○ APD Submitted prior to 06/10/2024	
Additional Language	☑ Flex Hose	☑ Casing Clearance	☐ Pilot Hole	☑ Break Testing
	☑ Four-String	☐ Offline Cementing	☑ Fluid-Filled	

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet 43 CFR part 3170 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the updated order.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **316 feet per BLM Geologist** (a minimum of 70 feet (Eddy 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

Approval Date: 02/28/2025

cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **10-3/4** inch intermediate casing is:

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

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

3. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

Option 1 (Primary + Post Frac Bradenhead):

- **A monitored open annulus will be incorporated during completion by leaving the Intermediate 2 x Production annulus un-cemented and monitored inside the Intermediate String.** Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within **180 days.**

Operator has proposed to pump down **intermediate 2 x production** annulus post completion. **Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the intermediate 2/production casing to surface after the second stage BH to verify TOC.** Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry during second stage bradenhead when running Echo-meter if cement is required to surface. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM. Pressure monitoring device and Pressure Safety Valves must be installed at surface on both the intermediate annulus and the production annulus for the life of the well.**

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-361-2822 Eddy County).

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- **After bradenhead mentioned above** cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
- **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    - Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, or potash.**
    - **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

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

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR 3171 and 3172.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 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 (575-361-2822 Eddy 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 **43 CFR 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Casing Clearance

- **The W441 connection should tie back 500’+ into the W513 intermediate casing for clearance overlap.**

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)

Contact Eddy County Petroleum Engineering Inspection Staff:

Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220; **BLM_NM_CFO_DrillingNotifications@BLM.GOV**; (575) 361-2822

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
        i. Notify the BLM when moving in and removing the Spudder Rig.
        ii. 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.
        iii. BOP/BOPE test to be conducted per **43 CFR 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity 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-Q 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 3172**.
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:
    i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    ii. 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.
    iii. Manufacturer representative shall install the test plug for the initial BOP test.
    iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
    v. 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.
    i. 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).
    ii. 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.)

iii. 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 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

iv. 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.

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

vi. 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.

vii. 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.

viii. 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 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.

JS 11/13/2024

 Approval Date: 02/28/2025

COG OPERATING LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

a. The hazards and characteristics of hydrogen sulfide (H_2S).
b. The proper use and maintenance of personal protective equipment and life support systems.
c. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
d. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

a. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
b. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
c. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S. If H2S greater than 100 ppm is encountered in the gas stream we will shut in and install H2S equipment.

a. Well Control Equipment:
Flare line.
Choke manifold with remotely operated choke.
Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

b. Protective equipment for essential personnel:
Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

c. H2S detection and monitoring equipment:
2 - portable H2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.

d. Visual warning systems:
Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

e. Mud Program:
The mud program has been designed to minimize the volume of H2S circulated to the surface.

f. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

g. Communication:
Company vehicles equipped with cellular telephone.

COG OPERATING LLC has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary.

W A R N I N G

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. ***BEARDS OR CONTACT LENSES NOT ALLOWED***
2. ***HARD HATS REQUIRED***
3. ***SMOKING IN DESIGNATED AREAS ONLY***
4. ***BE WIND CONSCIOUS AT ALL TIMES***
5. ***CK WITH COG OPERATING LLC FOREMAN AT MAIN OFFICE***

COG OPERATING LLC

1-575-748-6940

EMERGENCY CALL LIST

	OFFICE	MOBILE
Jenaya Rohlfing	432-683-7443	713-478-0376
Chad Gregory		432-238-5840

EMERGENCY RESPONSE NUMBERS

	OFFICE
STATE POLICE	575-748-9718
EDDY COUNTY SHERIFF	575-746-2701
EMERGENCY MEDICAL SERVICES (AMBULANCE)	911 or 575-746-2701
EDDY COUNTY EMERGENCY MANAGEMENT (HARRY BURGESS)	575-887-9511
STATE EMERGENCY RESPONSE CENTER (SERC)	575-476-9620
CARLSBAD POLICE DEPARTMENT	575-885-2111
CARLSBAD FIRE DEPARTMENT	575-885-3125
NEW MEXICO OIL CONSERVATION DIVISION	575-748-1283
INDIAN FIRE & SAFETY	800-530-8693
HALLIBURTON SERVICES	800-844-8451

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Operator:	OGRID:
CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	217817
	Action Number: 438307
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
stanwagner	Cement is required to circulate on both surface and intermediate1 strings of casing.	3/3/2025
stanwagner	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	3/3/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	3/19/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	3/19/2025
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	3/19/2025
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	3/19/2025
ward.rikala	Operator must comply with all of the R-111-Q requirements.	3/19/2025