

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No.	
9. API Well No.	
10. Field and Pool or Exploratory Area	
11. Country or Parish, State	

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well		
☐ Oil Well	☐ Gas Well	☐ Other
2. Name of Operator		
3a. Address	3b. Phone No. (include area code)	
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

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

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

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

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

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

(Instructions on page 2)

Additional Information

Location of Well

0. SHL: NWSW / 1433 FSL / 265 FWL / TWSP: 23S / RANGE: 30E / SECTION: 26 / LAT: 32.2726 / LONG: -103.859421 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 330 FSL / 100 FEL / TWSP: 23S / RANGE: 30E / SECTION: 27 / LAT: 32.269566 / LONG: -103.860604 (TVD: 9418 feet, MD: 9598 feet)

BHL: SWSW / 330 FSL / 50 FWL / TWSP: 23S / RANGE: 30E / SECTION: 28 / LAT: 32.269541 / LONG: -103.894727 (TVD: 9533 feet, MD: 20056 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	IRON THRONE FED COM 505H
LOCATION:	Section 26, T.23 S., R.30 E., NMP
COUNTY:	Eddy County, New Mexico

COA

H ₂ S	☐ No			☒ Yes
Potash / WIPP	☐ None	☐ Secretary	☒ R-111-Q	☐ Open Annulus ☐ WIPP
Cave / Karst	3-String Design: Open Production Casing Annulus			
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 cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours**

- or **500 pounds compressive strength**, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** 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.**

Option 1 (Primary + Post Frac Bradenhead):

- **A monitored open annulus will be incorporated during completion by leaving the Intermediate 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 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).

- **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.**

3. 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.

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 6/17/2025

SEC26-T23SR30E_IRON THRONE FED COM_Eddy__CONOCOPHILLIPS COMPANY_45825_JS

IRON THRONE FED COM

13 3/8		surface csg in a		17 1/2	inch hole.		Design Factors			Surface				
Segment	#/ft	Grade			Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	54.50			j 55	btc	62.62	9.89	1.4	250	24	2.43	19.06	13,625	
"B"					btc				0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500					Tail Cmt	does not	circ to sfc.	Totals:	250				13,625	
Comparison of Proposed to Minimum Required Cement Volumes														
Hole	Annular	1 Stage		1 Stage	Min	1 Stage	Drilling	Calc					Min Dist	
Size	Volume	Cmt Sx		CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP					BOPE	Hole-Cplg
17 1/2	0.6946	269		403	174	132	8.80	1123	2M					1.56
Class 'C' tail cmt yield above 1.35.														
Site plat (pipe racks S or E) as per O.O. 1.III.D-4-I: not found.														

9 5/8		casing inside the		13 3/8		Design Factors				Int 1				
Segment	#/ft	Grade			Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	40.00			L 80	btc	6.11	1.59	1.3	3,750	3	2.34	2.75	150,000	
									0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500									Totals:		3,750			150,000
The cement volume(s) are intended to achieve a top of									0	ft from surface or a		250		overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx		1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg	
12 1/4	0.3132	1081		1784	1187	50	10.00	2455	3M				0.81	
D V Tool(s):								sum of sx		Σ CuFt		Σ%excess		
t by stage % :								#VALUE!		#VALUE!		1081 1784 50		
Class 'H' tail cmt yld > 1.20														

5 1/2		casing inside the		9 5/8		Design Factors				Prod 1				
Segment	#/ft	Grade			Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	23.00			P 110	TXP-BTC	2.41	2.79	3.28	25,820	3	5.92	5.92	593,860	
									0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,975									Totals:	25,820				593,860
The cement volume(s) are intended to achieve a top of						3550	ft from surface or a		200				overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx		1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg	
8 3/4	0.2526	3690		6566	5627	17	9.50						1.28	
Class 'C' tail cmt yld > 1.35														
Does not meet CFO 25%,														

#N/A						Design Factors			<Choose Casing>		
0	5 1/2										
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"			0.00				0				0
"B"			0.00				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0	0		
Cmt vol calc below includes this csg, TOC intended				#N/A	ft from surface or a		#N/A			overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A						
#N/A											
Capitan Reef est top XXXX.											
Does not meet CFO 25%											

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

WELL LOCATION INFORMATION

API Number 30-015-56341	Pool Code 96526	Pool Name Forty Niner Ridge; Bone Spring, West
Property Code 337105	Property Name IRON THRONE FEDERAL COM	Well Number 505H
OGRID No. 217817	Operator Name CONOCOPHILLIPS COMPANY	Ground Level Elevation 3,362.47'
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
L	26	23S	30E		1,433' FSL	265' FWL	32.272600°	-103.859421°	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
M	29	23S	30E		330' FSL	50' FWL	32.269461°	-103.912053°	EDDY

Dedicated Acres 1920	Infill or Defining Well Infill	Defining Well API 30-015-56340	Overlapping Spacing Unit (Y/N)	Consolidation Code 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
L	26	23S	30E		1,433' FSL	265' FWL	32.272600°	-103.859421°	EDDY

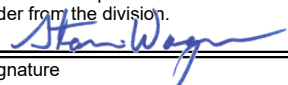
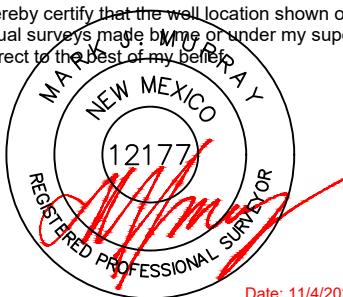
First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	27	23S	30E		330' FSL	100' FEL	32.269566°	-103.860604°	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
M	29	23S	30E		330' FSL	100' FWL	32.269462°	-103.911891°	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:
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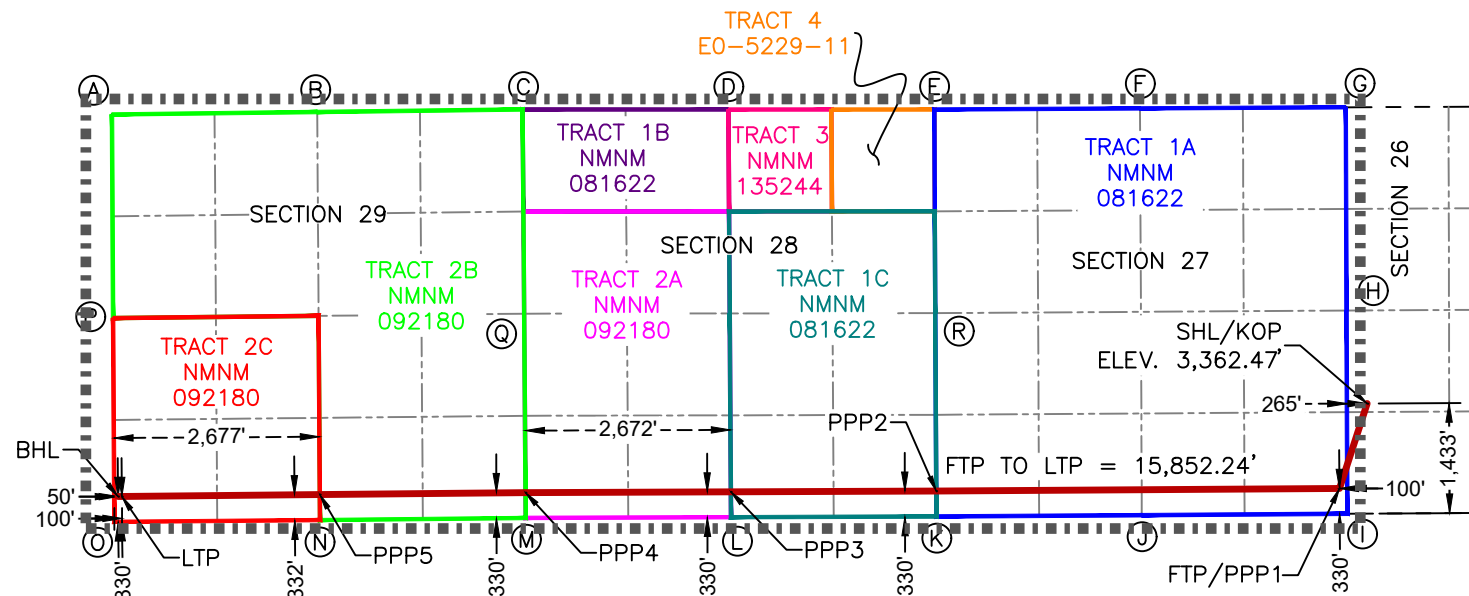
OPERATOR CERTIFICATIONS I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the 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.  Signature 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: 11/4/2024 Signature and Seal of Professional Surveyor Certificate Number 12177 Date of Survey 11/4/2024	
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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**
1,433' FSL & 265' FWL
ELEV.=3,362.47'

NAD 83 X = 687,809.06'
NAD 83 Y = 463,228.15'
NAD 83 LAT = 32.272600°
NAD 83 LONG = -103.859421°

**FIRST TAKE POINT &
PENETRATION POINT 1**
330' FSL & 100' FEL

NAD 83 X = 687,448.44'
NAD 83 Y = 462,122.93'
NAD 83 LAT = 32.269566°
NAD 83 LONG = -103.860604°

PENETRATION POINT 2
330' FSL & 0' FEL

NAD 83 X = 682,198.56'
NAD 83 Y = 462,088.24'
NAD 83 LAT = 32.269533°
NAD 83 LONG = -103.877589°

PENETRATION POINT 3
330' FSL & 2,672' FWL

NAD 83 X = 679,524.02'
NAD 83 Y = 462,078.50'
NAD 83 LAT = 32.269537°
NAD 83 LONG = -103.886242°

PENETRATION POINT 4
330' FSL & 0' FWL

NAD 83 X = 676,851.56'
NAD 83 Y = 462,068.77'
NAD 83 LAT = 32.269541°
NAD 83 LONG = -103.894889°

PENETRATION POINT 5
332' FSL & 2,677' FWL

NAD 83 X = 674,173.60'
NAD 83 Y = 462,043.50'
NAD 83 LAT = 32.269501°
NAD 83 LONG = -103.903553°

LAST TAKE POINT
330' FSL & 100' FWL

NAD 83 X = 671,596.58'
NAD 83 Y = 462,018.91'
NAD 83 LAT = 32.269462°
NAD 83 LONG = -103.911891°

BOTTOM HOLE LOCATION
330' FSL & 50' FWL

NAD 83 X = 671,546.58'
NAD 83 Y = 462,018.47'
NAD 83 LAT = 32.269461°
NAD 83 LONG = -103.912053°

CORNER COORDINATES NEW MEXICO EAST - NAD 83

A	IRON PIPE W/BRASS CAP N:466,991.31' E:671,467.47'	G	IRON PIPE W/BRASS CAP N:467,084.70' E:687,530.34'	M	IRON PIPE W/BRASS CAP N:461,738.78' E:676,854.09'
B	IRON PIPE W/BRASS CAP N:467,023.94' E:674,139.54'	H	IRON PIPE W/BRASS CAP N:464,439.06' E:687,539.26'	N	IRON PIPE W/BRASS CAP N:461,711.29' E:674,175.87'
C	IRON PIPE W/BRASS CAP N:467,057.04' E:676,813.29'	I	IRON PIPE W/BRASS CAP N:461,793.64' E:687,549.74'	O	IRON PIPE W/BRASS CAP N:461,688.04' E:671,498.61'
D	IRON PIPE W/BRASS CAP N:467,055.39' E:679,493.28'	J	IRON PIPE W/BRASS CAP N:461,774.47' E:684,874.62'	P	IRON PIPE W/BRASS CAP N:464,340.62' E:671,482.37'
E	IRON PIPE W/BRASS CAP (LAYED OVER) N:467,055.75' E:682,173.55'	K	IRON PIPE W/BRASS CAP N:461,758.24' E:682,200.45'	Q	CALCULATED CORNER N:464,462.12' E:676,833.20'
F	IRON PIPE W/BRASS CAP N:467,070.06' E:684,851.49'	L	IRON PIPE W/BRASS CAP N:461,748.40' E:679,526.06'	R	IRON PIPE W/BRASS CAP N:464,404.77' E:682,185.29'

ConocoPhillips Company - Iron Throne Fed Com 505H

1. Geologic Formations

TVD of target	9,875' EOL	Pilot hole depth	NA
MD at TD:	25,820'	Deepest expected fresh water:	0'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	390	Water	
Top of Salt	654	Salt	
USGS Marker Bed 126	1909	Salt	
Base of Salt	3662	Salt Water	
Lamar	3880	Salt Water	
Bell Canyon	3913	Oil/Gas	
Cherry Canyon	4848	Oil/Gas	
Brushy Canyon	6137	Oil/Gas	
Bone Spring	7757	Oil/Gas	
1st Bone Spring Sand	8737	Oil/Gas	
2nd Bone Spring Sand	9375	Target	

Potash well archetype: 3-String Design Open Production Casing Annulua (Figure B). Sundry aims to comply with R-111-Q as passed on 5/10/2024.

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	250	13.375"	54.5	J55	BTC	9.88	1.73	66.72
12.25"	0	3750	9.625"	40	L80-IC	BTC	1.98	1.48	6.31
8.75"	0	25,820	5.5"	23	P110-CY	TXP BTC	2.98	3.73	3.21
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse. Intermediate burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface.

All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172

ConocoPhillips Company - Iron Throne Fed Com 505H

	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 3 rd 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 2 nd 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?	

ConocoPhillips Company - Iron Throne Fed Com 505H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	90	13.5	1.75	9.21	12	Lead: Class C
	179	14.8	1.35	6.8	8	Tail: Class C
Inter.	730	12.8	1.8	9.21	12	Lead: Class C
	351	14.8	1.34	6.52	8	Tail: Class C
Prod.	850	10.2	2.98	14.92	72	Lead: Tuned Light
	2840	13.2	1.42	7.45	19	Tail: Class H

Intermediate #1 Salt string cemented to surface. Intermediate cement job to be performed offline. Drill out to wait for 500PSI compressive strength.

Production 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.

Casing String	TOC	% Excess
Surface	0'	50%
1 st Intermediate	0'	50%
Production	4,750'	0% OH in Lateral (KOP to EOL)

ConocoPhillips Company - Iron Throne Fed Com 505H

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	2500 psi
			Blind Ram		5M
			Pipe Ram		
			Double Ram		
			Other*		
8-3/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram	x	10M
			Pipe Ram	x	
			Double Ram		
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR Part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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

Y	Formation integrity test will be performed per Onshore Order #2.
Y	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?
N	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.

ConocoPhillips Company - Iron Throne Fed Com 505H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Saturated Brine	9 - 10	28-34	N/C
9-5/8" Int shoe	Lateral TD	Cut Brine or OBM	8.6 - 9.5	28-34	N/C

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
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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
N	CBL	Production casing
Y	Mud log	Intermediate shoe to TD
N	PEX	

ConocoPhillips Company - Iron Throne Fed Com 505H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	4880 psi at 9875' 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 43 CFR Part 3170 Subpart 3176. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

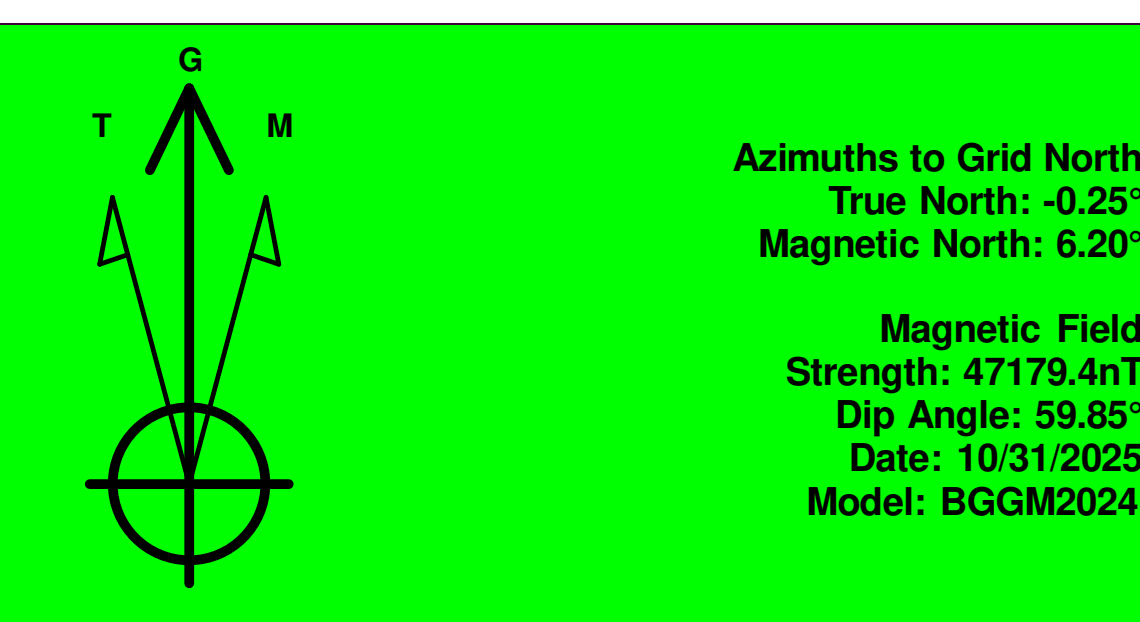
N H₂S is present

Y H₂S Plan attached

8. Other Facets of Operation

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

x	H ₂ S Plan.
x	BOP & Choke Schematics.
x	Directional Plan



DELAWARE BASIN WEST

ATLAS PROSPECT (DBW)

IRON THRONE PROJECT

IRON THRONE FEDERAL COM 505H

OWB

Plan: PWP2

Standard Planning Report

29 January, 2025

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

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
From:	Map	Easting:	641,023.57 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 16' 32.516 N
		Longitude:	103° 52' 37.352 W

Well	IRON THRONE FEDERAL COM 505H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
Grid Convergence:	0.25 °		
		Latitude:	32° 16' 20.917 N
		Longitude:	103° 51' 32.161 W
		Ground Level:	3,362.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2024	10/31/2025	6.46	59.85	47,179.41326448

Design	PWP2				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		0.0	0.0	0.0	265.75

Plan Survey Tool Program		Date	1/29/2025		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	2,100.0 PWP2 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG +	
2	2,100.0	9,564.5 PWP2 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG +	
3	9,564.5	25,820.4 PWP2 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG +	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,025.0	18.50	194.39	3,009.0	-143.4	-36.8	2.00	2.00	0.00	194.39	
5,636.9	18.50	194.39	5,486.0	-946.2	-242.7	0.00	0.00	0.00	0.00	
6,562.0	0.00	0.00	6,395.0	-1,089.6	-279.5	2.00	-2.00	0.00	180.00	
9,564.5	0.00	0.00	9,397.5	-1,089.6	-279.5	0.00	0.00	0.00	0.00	
10,314.5	90.00	269.46	9,875.0	-1,094.1	-756.9	12.00	12.00	-12.07	269.46	
15,168.3	90.00	269.46	9,875.0	-1,139.9	-5,610.5	0.00	0.00	0.00	0.00	
15,184.9	90.00	269.79	9,875.0	-1,140.0	-5,627.1	2.00	0.00	2.00	90.00	
20,515.3	90.00	269.79	9,875.0	-1,159.3	-10,957.5	0.00	0.00	0.00	0.00	
20,532.1	90.00	269.46	9,875.0	-1,159.4	-10,974.3	2.00	0.00	-2.00	-90.00	
25,820.4	90.00	269.46	9,875.0	-1,209.6	-16,262.4	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
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	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	2.00	194.39	2,200.0	-1.7	-0.4	0.6	2.00	2.00	0.00
2,300.0	4.00	194.39	2,299.8	-6.8	-1.7	2.2	2.00	2.00	0.00
2,400.0	6.00	194.39	2,399.5	-15.2	-3.9	5.0	2.00	2.00	0.00
2,500.0	8.00	194.39	2,498.7	-27.0	-6.9	8.9	2.00	2.00	0.00
2,600.0	10.00	194.39	2,597.5	-42.2	-10.8	13.9	2.00	2.00	0.00
2,700.0	12.00	194.39	2,695.6	-60.6	-15.6	20.0	2.00	2.00	0.00
2,800.0	14.00	194.39	2,793.1	-82.4	-21.1	27.2	2.00	2.00	0.00
2,900.0	16.00	194.39	2,889.6	-107.5	-27.6	35.5	2.00	2.00	0.00
3,000.0	18.00	194.39	2,985.3	-135.8	-34.8	44.8	2.00	2.00	0.00
3,025.0	18.50	194.39	3,009.0	-143.4	-36.8	47.3	2.00	2.00	0.00
3,100.0	18.50	194.39	3,080.1	-166.5	-42.7	54.9	0.00	0.00	0.00
3,200.0	18.50	194.39	3,175.0	-197.2	-50.6	65.1	0.00	0.00	0.00
3,300.0	18.50	194.39	3,269.8	-227.9	-58.5	75.2	0.00	0.00	0.00
3,400.0	18.50	194.39	3,364.6	-258.7	-66.3	85.4	0.00	0.00	0.00
3,500.0	18.50	194.39	3,459.5	-289.4	-74.2	95.5	0.00	0.00	0.00
3,600.0	18.50	194.39	3,554.3	-320.1	-82.1	105.6	0.00	0.00	0.00
3,700.0	18.50	194.39	3,649.1	-350.9	-90.0	115.8	0.00	0.00	0.00
3,800.0	18.50	194.39	3,744.0	-381.6	-97.9	125.9	0.00	0.00	0.00
3,900.0	18.50	194.39	3,838.8	-412.3	-105.8	136.1	0.00	0.00	0.00
4,000.0	18.50	194.39	3,933.6	-443.1	-113.7	146.2	0.00	0.00	0.00
4,100.0	18.50	194.39	4,028.5	-473.8	-121.5	156.3	0.00	0.00	0.00
4,200.0	18.50	194.39	4,123.3	-504.5	-129.4	166.5	0.00	0.00	0.00
4,300.0	18.50	194.39	4,218.1	-535.3	-137.3	176.6	0.00	0.00	0.00
4,400.0	18.50	194.39	4,313.0	-566.0	-145.2	186.8	0.00	0.00	0.00
4,500.0	18.50	194.39	4,407.8	-596.7	-153.1	196.9	0.00	0.00	0.00
4,600.0	18.50	194.39	4,502.6	-627.5	-161.0	207.1	0.00	0.00	0.00
4,700.0	18.50	194.39	4,597.5	-658.2	-168.8	217.2	0.00	0.00	0.00
4,800.0	18.50	194.39	4,692.3	-689.0	-176.7	227.3	0.00	0.00	0.00
4,900.0	18.50	194.39	4,787.1	-719.7	-184.6	237.5	0.00	0.00	0.00
5,000.0	18.50	194.39	4,881.9	-750.4	-192.5	247.6	0.00	0.00	0.00
5,100.0	18.50	194.39	4,976.8	-781.2	-200.4	257.8	0.00	0.00	0.00
5,200.0	18.50	194.39	5,071.6	-811.9	-208.3	267.9	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,300.0	18.50	194.39	5,166.4	-842.6	-216.1	278.1	0.00	0.00	0.00	
5,400.0	18.50	194.39	5,261.3	-873.4	-224.0	288.2	0.00	0.00	0.00	
5,500.0	18.50	194.39	5,356.1	-904.1	-231.9	298.3	0.00	0.00	0.00	
5,600.0	18.50	194.39	5,450.9	-934.8	-239.8	308.5	0.00	0.00	0.00	
5,636.9	18.50	194.39	5,486.0	-946.2	-242.7	312.2	0.00	0.00	0.00	
5,700.0	17.24	194.39	5,546.0	-964.9	-247.5	318.4	2.00	-2.00	0.00	
5,800.0	15.24	194.39	5,642.0	-992.0	-254.5	327.4	2.00	-2.00	0.00	
5,900.0	13.24	194.39	5,738.9	-1,015.8	-260.6	335.2	2.00	-2.00	0.00	
6,000.0	11.24	194.39	5,836.6	-1,036.4	-265.8	342.0	2.00	-2.00	0.00	
6,100.0	9.24	194.39	5,935.0	-1,053.6	-270.3	347.7	2.00	-2.00	0.00	
6,200.0	7.24	194.39	6,034.0	-1,067.5	-273.8	352.3	2.00	-2.00	0.00	
6,300.0	5.24	194.39	6,133.4	-1,078.0	-276.5	355.7	2.00	-2.00	0.00	
6,400.0	3.24	194.39	6,233.1	-1,085.2	-278.4	358.1	2.00	-2.00	0.00	
6,500.0	1.24	194.39	6,333.0	-1,089.0	-279.3	359.3	2.00	-2.00	0.00	
6,562.0	0.00	0.00	6,395.0	-1,089.6	-279.5	359.6	2.00	-2.00	0.00	
6,600.0	0.00	0.00	6,433.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,533.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,633.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,733.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,833.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,100.0	0.00	0.00	6,933.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,033.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,133.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,233.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,333.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,433.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,533.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,633.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,733.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,833.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,100.0	0.00	0.00	7,933.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,033.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,133.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,233.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,333.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,433.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,533.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,633.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,733.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,833.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,100.0	0.00	0.00	8,933.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,033.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,133.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,233.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,333.0	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,564.5	0.00	0.00	9,397.5	-1,089.6	-279.5	359.6	0.00	0.00	0.00	
9,575.0	1.26	269.46	9,408.0	-1,089.6	-279.6	359.7	12.00	12.00	0.00	
9,600.0	4.26	269.46	9,433.0	-1,089.6	-280.8	360.9	12.00	12.00	0.00	
9,625.0	7.26	269.46	9,457.9	-1,089.6	-283.3	363.4	12.00	12.00	0.00	
9,650.0	10.26	269.46	9,482.6	-1,089.7	-287.1	367.2	12.00	12.00	0.00	
9,675.0	13.26	269.46	9,507.1	-1,089.7	-292.2	372.3	12.00	12.00	0.00	
9,700.0	16.26	269.46	9,531.2	-1,089.8	-298.6	378.6	12.00	12.00	0.00	
9,725.0	19.26	269.46	9,555.0	-1,089.9	-306.2	386.2	12.00	12.00	0.00	
9,750.0	22.26	269.46	9,578.4	-1,089.9	-315.1	395.1	12.00	12.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,775.0	25.26	269.46	9,601.3	-1,090.0	-325.2	405.1	12.00	12.00	0.00	
9,800.0	28.26	269.46	9,623.6	-1,090.1	-336.4	416.3	12.00	12.00	0.00	
9,825.0	31.26	269.46	9,645.3	-1,090.3	-348.8	428.7	12.00	12.00	0.00	
9,850.0	34.26	269.46	9,666.3	-1,090.4	-362.3	442.2	12.00	12.00	0.00	
9,875.0	37.26	269.46	9,686.6	-1,090.5	-377.0	456.8	12.00	12.00	0.00	
9,900.0	40.26	269.46	9,706.1	-1,090.7	-392.6	472.4	12.00	12.00	0.00	
9,925.0	43.26	269.46	9,724.8	-1,090.8	-409.3	489.0	12.00	12.00	0.00	
9,950.0	46.26	269.46	9,742.5	-1,091.0	-426.9	506.6	12.00	12.00	0.00	
9,975.0	49.26	269.46	9,759.3	-1,091.2	-445.4	525.1	12.00	12.00	0.00	
10,000.0	52.26	269.46	9,775.1	-1,091.3	-464.7	544.4	12.00	12.00	0.00	
10,025.0	55.26	269.46	9,789.9	-1,091.5	-484.9	564.5	12.00	12.00	0.00	
10,050.0	58.26	269.46	9,803.6	-1,091.7	-505.8	585.4	12.00	12.00	0.00	
10,075.0	61.26	269.46	9,816.2	-1,091.9	-527.4	606.9	12.00	12.00	0.00	
10,100.0	64.26	269.46	9,827.6	-1,092.1	-549.6	629.1	12.00	12.00	0.00	
10,125.0	67.26	269.46	9,837.9	-1,092.4	-572.4	651.8	12.00	12.00	0.00	
10,150.0	70.26	269.46	9,846.9	-1,092.6	-595.7	675.1	12.00	12.00	0.00	
10,175.0	73.26	269.46	9,854.8	-1,092.8	-619.4	698.8	12.00	12.00	0.00	
10,200.0	76.26	269.46	9,861.3	-1,093.0	-643.6	722.9	12.00	12.00	0.00	
10,225.0	79.26	269.46	9,866.6	-1,093.3	-668.0	747.2	12.00	12.00	0.00	
10,250.0	82.26	269.46	9,870.7	-1,093.5	-692.7	771.9	12.00	12.00	0.00	
10,275.0	85.26	269.46	9,873.4	-1,093.7	-717.5	796.6	12.00	12.00	0.00	
10,300.0	88.26	269.46	9,874.8	-1,094.0	-742.5	821.6	12.00	12.00	0.00	
10,314.5	90.00	269.46	9,875.0	-1,094.1	-756.9	836.0	12.00	12.00	0.00	
10,400.0	90.00	269.46	9,875.0	-1,094.9	-842.4	921.3	0.00	0.00	0.00	
10,500.0	90.00	269.46	9,875.0	-1,095.9	-942.4	1,021.1	0.00	0.00	0.00	
10,600.0	90.00	269.46	9,875.0	-1,096.8	-1,042.4	1,120.9	0.00	0.00	0.00	
10,700.0	90.00	269.46	9,875.0	-1,097.7	-1,142.4	1,220.7	0.00	0.00	0.00	
10,800.0	90.00	269.46	9,875.0	-1,098.7	-1,242.4	1,320.5	0.00	0.00	0.00	
10,900.0	90.00	269.46	9,875.0	-1,099.6	-1,342.4	1,420.3	0.00	0.00	0.00	
11,000.0	90.00	269.46	9,875.0	-1,100.6	-1,442.4	1,520.1	0.00	0.00	0.00	
11,100.0	90.00	269.46	9,875.0	-1,101.5	-1,542.4	1,619.9	0.00	0.00	0.00	
11,200.0	90.00	269.46	9,875.0	-1,102.5	-1,642.4	1,719.7	0.00	0.00	0.00	
11,300.0	90.00	269.46	9,875.0	-1,103.4	-1,742.4	1,819.5	0.00	0.00	0.00	
11,400.0	90.00	269.46	9,875.0	-1,104.3	-1,842.4	1,919.2	0.00	0.00	0.00	
11,500.0	90.00	269.46	9,875.0	-1,105.3	-1,942.4	2,019.0	0.00	0.00	0.00	
11,600.0	90.00	269.46	9,875.0	-1,106.2	-2,042.4	2,118.8	0.00	0.00	0.00	
11,700.0	90.00	269.46	9,875.0	-1,107.2	-2,142.4	2,218.6	0.00	0.00	0.00	
11,800.0	90.00	269.46	9,875.0	-1,108.1	-2,242.4	2,318.4	0.00	0.00	0.00	
11,900.0	90.00	269.46	9,875.0	-1,109.1	-2,342.4	2,418.2	0.00	0.00	0.00	
12,000.0	90.00	269.46	9,875.0	-1,110.0	-2,442.4	2,518.0	0.00	0.00	0.00	
12,100.0	90.00	269.46	9,875.0	-1,110.9	-2,542.4	2,617.8	0.00	0.00	0.00	
12,200.0	90.00	269.46	9,875.0	-1,111.9	-2,642.4	2,717.6	0.00	0.00	0.00	
12,300.0	90.00	269.46	9,875.0	-1,112.8	-2,742.4	2,817.4	0.00	0.00	0.00	
12,400.0	90.00	269.46	9,875.0	-1,113.8	-2,842.4	2,917.1	0.00	0.00	0.00	
12,500.0	90.00	269.46	9,875.0	-1,114.7	-2,942.4	3,016.9	0.00	0.00	0.00	
12,600.0	90.00	269.46	9,875.0	-1,115.7	-3,042.3	3,116.7	0.00	0.00	0.00	
12,700.0	90.00	269.46	9,875.0	-1,116.6	-3,142.3	3,216.5	0.00	0.00	0.00	
12,800.0	90.00	269.46	9,875.0	-1,117.5	-3,242.3	3,316.3	0.00	0.00	0.00	
12,900.0	90.00	269.46	9,875.0	-1,118.5	-3,342.3	3,416.1	0.00	0.00	0.00	
13,000.0	90.00	269.46	9,875.0	-1,119.4	-3,442.3	3,515.9	0.00	0.00	0.00	
13,100.0	90.00	269.46	9,875.0	-1,120.4	-3,542.3	3,615.7	0.00	0.00	0.00	
13,200.0	90.00	269.46	9,875.0	-1,121.3	-3,642.3	3,715.5	0.00	0.00	0.00	
13,300.0	90.00	269.46	9,875.0	-1,122.3	-3,742.3	3,815.3	0.00	0.00	0.00	
13,400.0	90.00	269.46	9,875.0	-1,123.2	-3,842.3	3,915.0	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.0	90.00	269.46	9,875.0	-1,124.1	-3,942.3	4,014.8	0.00	0.00	0.00
13,600.0	90.00	269.46	9,875.0	-1,125.1	-4,042.3	4,114.6	0.00	0.00	0.00
13,700.0	90.00	269.46	9,875.0	-1,126.0	-4,142.3	4,214.4	0.00	0.00	0.00
13,800.0	90.00	269.46	9,875.0	-1,127.0	-4,242.3	4,314.2	0.00	0.00	0.00
13,900.0	90.00	269.46	9,875.0	-1,127.9	-4,342.3	4,414.0	0.00	0.00	0.00
14,000.0	90.00	269.46	9,875.0	-1,128.9	-4,442.3	4,513.8	0.00	0.00	0.00
14,100.0	90.00	269.46	9,875.0	-1,129.8	-4,542.3	4,613.6	0.00	0.00	0.00
14,200.0	90.00	269.46	9,875.0	-1,130.7	-4,642.3	4,713.4	0.00	0.00	0.00
14,300.0	90.00	269.46	9,875.0	-1,131.7	-4,742.3	4,813.2	0.00	0.00	0.00
14,400.0	90.00	269.46	9,875.0	-1,132.6	-4,842.3	4,912.9	0.00	0.00	0.00
14,500.0	90.00	269.46	9,875.0	-1,133.6	-4,942.3	5,012.7	0.00	0.00	0.00
14,600.0	90.00	269.46	9,875.0	-1,134.5	-5,042.3	5,112.5	0.00	0.00	0.00
14,700.0	90.00	269.46	9,875.0	-1,135.5	-5,142.3	5,212.3	0.00	0.00	0.00
14,800.0	90.00	269.46	9,875.0	-1,136.4	-5,242.3	5,312.1	0.00	0.00	0.00
14,900.0	90.00	269.46	9,875.0	-1,137.3	-5,342.2	5,411.9	0.00	0.00	0.00
15,000.0	90.00	269.46	9,875.0	-1,138.3	-5,442.2	5,511.7	0.00	0.00	0.00
15,100.0	90.00	269.46	9,875.0	-1,139.2	-5,542.2	5,611.5	0.00	0.00	0.00
15,168.3	90.00	269.46	9,875.0	-1,139.9	-5,610.5	5,679.6	0.00	0.00	0.00
15,184.9	90.00	269.79	9,875.0	-1,140.0	-5,627.1	5,696.2	2.00	0.00	2.00
15,200.0	90.00	269.79	9,875.0	-1,140.0	-5,642.2	5,711.3	0.00	0.00	0.00
15,300.0	90.00	269.79	9,875.0	-1,140.4	-5,742.2	5,811.0	0.00	0.00	0.00
15,400.0	90.00	269.79	9,875.0	-1,140.8	-5,842.2	5,910.8	0.00	0.00	0.00
15,500.0	90.00	269.79	9,875.0	-1,141.1	-5,942.2	6,010.5	0.00	0.00	0.00
15,600.0	90.00	269.79	9,875.0	-1,141.5	-6,042.2	6,110.3	0.00	0.00	0.00
15,700.0	90.00	269.79	9,875.0	-1,141.9	-6,142.2	6,210.0	0.00	0.00	0.00
15,800.0	90.00	269.79	9,875.0	-1,142.2	-6,242.2	6,309.8	0.00	0.00	0.00
15,900.0	90.00	269.79	9,875.0	-1,142.6	-6,342.2	6,409.5	0.00	0.00	0.00
16,000.0	90.00	269.79	9,875.0	-1,142.9	-6,442.2	6,509.3	0.00	0.00	0.00
16,100.0	90.00	269.79	9,875.0	-1,143.3	-6,542.2	6,609.0	0.00	0.00	0.00
16,200.0	90.00	269.79	9,875.0	-1,143.7	-6,642.2	6,708.8	0.00	0.00	0.00
16,300.0	90.00	269.79	9,875.0	-1,144.0	-6,742.2	6,808.5	0.00	0.00	0.00
16,400.0	90.00	269.79	9,875.0	-1,144.4	-6,842.2	6,908.3	0.00	0.00	0.00
16,500.0	90.00	269.79	9,875.0	-1,144.8	-6,942.2	7,008.0	0.00	0.00	0.00
16,600.0	90.00	269.79	9,875.0	-1,145.1	-7,042.2	7,107.8	0.00	0.00	0.00
16,700.0	90.00	269.79	9,875.0	-1,145.5	-7,142.2	7,207.5	0.00	0.00	0.00
16,800.0	90.00	269.79	9,875.0	-1,145.9	-7,242.2	7,307.3	0.00	0.00	0.00
16,900.0	90.00	269.79	9,875.0	-1,146.2	-7,342.2	7,407.0	0.00	0.00	0.00
17,000.0	90.00	269.79	9,875.0	-1,146.6	-7,442.2	7,506.8	0.00	0.00	0.00
17,100.0	90.00	269.79	9,875.0	-1,146.9	-7,542.2	7,606.5	0.00	0.00	0.00
17,200.0	90.00	269.79	9,875.0	-1,147.3	-7,642.2	7,706.3	0.00	0.00	0.00
17,300.0	90.00	269.79	9,875.0	-1,147.7	-7,742.2	7,806.0	0.00	0.00	0.00
17,400.0	90.00	269.79	9,875.0	-1,148.0	-7,842.2	7,905.8	0.00	0.00	0.00
17,500.0	90.00	269.79	9,875.0	-1,148.4	-7,942.2	8,005.5	0.00	0.00	0.00
17,600.0	90.00	269.79	9,875.0	-1,148.8	-8,042.2	8,105.3	0.00	0.00	0.00
17,700.0	90.00	269.79	9,875.0	-1,149.1	-8,142.2	8,205.0	0.00	0.00	0.00
17,800.0	90.00	269.79	9,875.0	-1,149.5	-8,242.2	8,304.8	0.00	0.00	0.00
17,900.0	90.00	269.79	9,875.0	-1,149.8	-8,342.2	8,404.5	0.00	0.00	0.00
18,000.0	90.00	269.79	9,875.0	-1,150.2	-8,442.2	8,504.3	0.00	0.00	0.00
18,100.0	90.00	269.79	9,875.0	-1,150.6	-8,542.2	8,604.0	0.00	0.00	0.00
18,200.0	90.00	269.79	9,875.0	-1,150.9	-8,642.2	8,703.8	0.00	0.00	0.00
18,300.0	90.00	269.79	9,875.0	-1,151.3	-8,742.2	8,803.5	0.00	0.00	0.00
18,400.0	90.00	269.79	9,875.0	-1,151.7	-8,842.2	8,903.3	0.00	0.00	0.00
18,500.0	90.00	269.79	9,875.0	-1,152.0	-8,942.2	9,003.0	0.00	0.00	0.00
18,600.0	90.00	269.79	9,875.0	-1,152.4	-9,042.2	9,102.8	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,700.0	90.00	269.79	9,875.0	-1,152.7	-9,142.2	9,202.5	0.00	0.00	0.00
18,800.0	90.00	269.79	9,875.0	-1,153.1	-9,242.2	9,302.3	0.00	0.00	0.00
18,900.0	90.00	269.79	9,875.0	-1,153.5	-9,342.2	9,402.0	0.00	0.00	0.00
19,000.0	90.00	269.79	9,875.0	-1,153.8	-9,442.2	9,501.8	0.00	0.00	0.00
19,100.0	90.00	269.79	9,875.0	-1,154.2	-9,542.2	9,601.5	0.00	0.00	0.00
19,200.0	90.00	269.79	9,875.0	-1,154.6	-9,642.2	9,701.3	0.00	0.00	0.00
19,300.0	90.00	269.79	9,875.0	-1,154.9	-9,742.2	9,801.0	0.00	0.00	0.00
19,400.0	90.00	269.79	9,875.0	-1,155.3	-9,842.2	9,900.8	0.00	0.00	0.00
19,500.0	90.00	269.79	9,875.0	-1,155.7	-9,942.2	10,000.5	0.00	0.00	0.00
19,600.0	90.00	269.79	9,875.0	-1,156.0	-10,042.2	10,100.3	0.00	0.00	0.00
19,700.0	90.00	269.79	9,875.0	-1,156.4	-10,142.2	10,200.0	0.00	0.00	0.00
19,800.0	90.00	269.79	9,875.0	-1,156.7	-10,242.2	10,299.8	0.00	0.00	0.00
19,900.0	90.00	269.79	9,875.0	-1,157.1	-10,342.2	10,399.5	0.00	0.00	0.00
20,000.0	90.00	269.79	9,875.0	-1,157.5	-10,442.2	10,499.3	0.00	0.00	0.00
20,100.0	90.00	269.79	9,875.0	-1,157.8	-10,542.2	10,599.0	0.00	0.00	0.00
20,200.0	90.00	269.79	9,875.0	-1,158.2	-10,642.2	10,698.8	0.00	0.00	0.00
20,300.0	90.00	269.79	9,875.0	-1,158.6	-10,742.2	10,798.5	0.00	0.00	0.00
20,400.0	90.00	269.79	9,875.0	-1,158.9	-10,842.2	10,898.3	0.00	0.00	0.00
20,500.0	90.00	269.79	9,875.0	-1,159.3	-10,942.2	10,998.0	0.00	0.00	0.00
20,515.3	90.00	269.79	9,875.0	-1,159.3	-10,957.5	11,013.3	0.00	0.00	0.00
20,532.1	90.00	269.46	9,875.0	-1,159.4	-10,974.3	11,030.0	2.00	0.00	-2.00
20,600.0	90.00	269.46	9,875.0	-1,160.1	-11,042.2	11,097.8	0.00	0.00	0.00
20,700.0	90.00	269.46	9,875.0	-1,161.0	-11,142.2	11,197.6	0.00	0.00	0.00
20,800.0	90.00	269.46	9,875.0	-1,162.0	-11,242.2	11,297.4	0.00	0.00	0.00
20,900.0	90.00	269.46	9,875.0	-1,162.9	-11,342.2	11,397.2	0.00	0.00	0.00
21,000.0	90.00	269.46	9,875.0	-1,163.9	-11,442.2	11,497.0	0.00	0.00	0.00
21,100.0	90.00	269.46	9,875.0	-1,164.8	-11,542.2	11,596.8	0.00	0.00	0.00
21,200.0	90.00	269.46	9,875.0	-1,165.8	-11,642.2	11,696.6	0.00	0.00	0.00
21,300.0	90.00	269.46	9,875.0	-1,166.7	-11,742.2	11,796.4	0.00	0.00	0.00
21,400.0	90.00	269.46	9,875.0	-1,167.7	-11,842.2	11,896.2	0.00	0.00	0.00
21,500.0	90.00	269.46	9,875.0	-1,168.6	-11,942.2	11,995.9	0.00	0.00	0.00
21,600.0	90.00	269.46	9,875.0	-1,169.6	-12,042.2	12,095.7	0.00	0.00	0.00
21,700.0	90.00	269.46	9,875.0	-1,170.5	-12,142.1	12,195.5	0.00	0.00	0.00
21,800.0	90.00	269.46	9,875.0	-1,171.5	-12,242.1	12,295.3	0.00	0.00	0.00
21,900.0	90.00	269.46	9,875.0	-1,172.4	-12,342.1	12,395.1	0.00	0.00	0.00
22,000.0	90.00	269.46	9,875.0	-1,173.4	-12,442.1	12,494.9	0.00	0.00	0.00
22,100.0	90.00	269.46	9,875.0	-1,174.3	-12,542.1	12,594.7	0.00	0.00	0.00
22,200.0	90.00	269.46	9,875.0	-1,175.3	-12,642.1	12,694.5	0.00	0.00	0.00
22,300.0	90.00	269.46	9,875.0	-1,176.2	-12,742.1	12,794.3	0.00	0.00	0.00
22,400.0	90.00	269.46	9,875.0	-1,177.2	-12,842.1	12,894.1	0.00	0.00	0.00
22,500.0	90.00	269.46	9,875.0	-1,178.1	-12,942.1	12,993.8	0.00	0.00	0.00
22,600.0	90.00	269.46	9,875.0	-1,179.1	-13,042.1	13,093.6	0.00	0.00	0.00
22,700.0	90.00	269.46	9,875.0	-1,180.0	-13,142.1	13,193.4	0.00	0.00	0.00
22,800.0	90.00	269.46	9,875.0	-1,181.0	-13,242.1	13,293.2	0.00	0.00	0.00
22,900.0	90.00	269.46	9,875.0	-1,181.9	-13,342.1	13,393.0	0.00	0.00	0.00
23,000.0	90.00	269.46	9,875.0	-1,182.8	-13,442.1	13,492.8	0.00	0.00	0.00
23,100.0	90.00	269.46	9,875.0	-1,183.8	-13,542.1	13,592.6	0.00	0.00	0.00
23,200.0	90.00	269.46	9,875.0	-1,184.7	-13,642.1	13,692.4	0.00	0.00	0.00
23,300.0	90.00	269.46	9,875.0	-1,185.7	-13,742.1	13,792.2	0.00	0.00	0.00
23,400.0	90.00	269.46	9,875.0	-1,186.6	-13,842.1	13,892.0	0.00	0.00	0.00
23,500.0	90.00	269.46	9,875.0	-1,187.6	-13,942.1	13,991.7	0.00	0.00	0.00
23,600.0	90.00	269.46	9,875.0	-1,188.5	-14,042.1	14,091.5	0.00	0.00	0.00
23,700.0	90.00	269.46	9,875.0	-1,189.5	-14,142.1	14,191.3	0.00	0.00	0.00
23,800.0	90.00	269.46	9,875.0	-1,190.4	-14,242.1	14,291.1	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
23,900.0	90.00	269.46	9,875.0	-1,191.4	-14,342.0	14,390.9	0.00	0.00	0.00	
24,000.0	90.00	269.46	9,875.0	-1,192.3	-14,442.0	14,490.7	0.00	0.00	0.00	
24,100.0	90.00	269.46	9,875.0	-1,193.3	-14,542.0	14,590.5	0.00	0.00	0.00	
24,200.0	90.00	269.46	9,875.0	-1,194.2	-14,642.0	14,690.3	0.00	0.00	0.00	
24,300.0	90.00	269.46	9,875.0	-1,195.2	-14,742.0	14,790.1	0.00	0.00	0.00	
24,400.0	90.00	269.46	9,875.0	-1,196.1	-14,842.0	14,889.9	0.00	0.00	0.00	
24,500.0	90.00	269.46	9,875.0	-1,197.1	-14,942.0	14,989.7	0.00	0.00	0.00	
24,600.0	90.00	269.46	9,875.0	-1,198.0	-15,042.0	15,089.4	0.00	0.00	0.00	
24,700.0	90.00	269.46	9,875.0	-1,199.0	-15,142.0	15,189.2	0.00	0.00	0.00	
24,800.0	90.00	269.46	9,875.0	-1,199.9	-15,242.0	15,289.0	0.00	0.00	0.00	
24,900.0	90.00	269.46	9,875.0	-1,200.9	-15,342.0	15,388.8	0.00	0.00	0.00	
25,000.0	90.00	269.46	9,875.0	-1,201.8	-15,442.0	15,488.6	0.00	0.00	0.00	
25,100.0	90.00	269.46	9,875.0	-1,202.8	-15,542.0	15,588.4	0.00	0.00	0.00	
25,200.0	90.00	269.46	9,875.0	-1,203.7	-15,642.0	15,688.2	0.00	0.00	0.00	
25,300.0	90.00	269.46	9,875.0	-1,204.7	-15,742.0	15,788.0	0.00	0.00	0.00	
25,400.0	90.00	269.46	9,875.0	-1,205.6	-15,842.0	15,887.8	0.00	0.00	0.00	
25,500.0	90.00	269.46	9,875.0	-1,206.6	-15,942.0	15,987.6	0.00	0.00	0.00	
25,600.0	90.00	269.46	9,875.0	-1,207.5	-16,042.0	16,087.3	0.00	0.00	0.00	
25,700.0	90.00	269.46	9,875.0	-1,208.4	-16,142.0	16,187.1	0.00	0.00	0.00	
25,800.0	90.00	269.46	9,875.0	-1,209.4	-16,242.0	16,286.9	0.00	0.00	0.00	
25,820.4	90.00	269.46	9,875.0	-1,209.6	-16,262.4	16,307.3	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SURF BOX 10°N/S x 10 - hit/miss target - Shape	0.00	14.39	2,010.0	0.0	0.0	463,168.81	646,625.58	32° 16' 20.917 N	103° 51' 32.161 W	
- plan hits target center - Rectangle (sides W20.0 H20.0 D2,010.0)										
TNGT WNDW_50°A/B x - plan hits target center - Rectangle (sides W70.0 H100.0 D2,611.9)	18.50	14.39	5,486.0	-946.2	-242.7	462,222.61	646,382.87	32° 16' 11.564 N	103° 51' 35.036 W	
KOP BOX 50°N/S x 50°E - plan hits target center - Rectangle (sides W100.0 H100.0 D3,002.5)	0.00	89.46	9,397.5	-1,089.6	-279.5	462,079.21	646,346.08	32° 16' 10.146 N	103° 51' 35.472 W	
POI 1_IRON THRONE 5 - plan hits target center - Rectangle (sides W100.0 H5,250.1 D20.0)	0.00	89.62	9,875.0	-1,139.9	-5,610.5	462,028.93	641,015.07	32° 16' 9.877 N	103° 52' 37.565 W	
FTP_IRON THRONE 50 - plan misses target center by 143.7usft at 9982.7usft MD (9764.3 TVD, -1091.2 N, -451.2 E) - Circle (radius 50.0)	0.00	0.00	9,875.0	-1,105.2	-360.6	462,063.62	646,264.93	32° 16' 9.996 N	103° 51' 36.418 W	
PBHL_IRON THRONE 5 - plan hits target center - Rectangle (sides W100.0 H5,304.2 D20.0)	0.00	89.46	9,875.0	-1,209.6	-16,262.4	461,959.22	630,363.19	32° 16' 9.619 N	103° 54' 41.630 W	
POI 2_IRON THRONE 5 - plan hits target center - Rectangle (sides W100.0 H5,347.3 D20.0)	0.00	89.79	9,875.0	-1,159.3	-10,957.5	462,009.47	635,668.08	32° 16' 9.905 N	103° 53' 39.842 W	
LTP_IRON THRONE 50 - plan misses target center by 0.1usft at 25770.5usft MD (9875.0 TVD, -1209.1 N, -16212.5 E) - Circle (radius 50.0)	90.00	269.43	9,875.0	-1,209.2	-16,212.5	461,959.60	630,413.11	32° 16' 9.620 N	103° 54' 41.048 W	

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB=32ft @ 3394.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	RKB=32ft @ 3394.0usft
Site:	IRON THRONE PROJECT	North Reference:	Grid
Well:	IRON THRONE FEDERAL COM 505H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	HOLD TO NUDGE KOP
1,909.0	1,909.0	0.0	0.0	USGS MARKER BED 126
2,100.0	2,100.0	0.0	0.0	NUDGE @ DLS 2.00
3,025.0	3,009.0	-143.4	-36.8	HOLD TANGENT
5,636.9	5,485.9	-946.2	-242.7	END NUDGE
6,562.0	6,395.0	-1,089.6	-279.5	HOLD TO CURVE KOP
9,564.5	9,397.5	-1,089.6	-279.5	KOP-START DLS 12.00 TFO 269.46
10,314.5	9,875.0	-1,094.1	-757.0	EOC-HOLD
15,168.3	9,875.0	-1,139.9	-5,610.5	START DLS 2.00 TFO 90.00
15,184.9	9,875.0	-1,140.0	-5,627.1	END TURN-HOLD
20,515.3	9,875.0	-1,159.3	-10,957.5	START DLS 2.00 TFO -90.00
20,532.1	9,875.0	-1,159.5	-10,974.3	END TURN-HOLD
25,820.4	9,875.0	-1,209.6	-16,262.4	TD @ 25820.4 MD / 16307.3 VS

DELAWARE BASIN WEST

ATLAS PROSPECT (DBW)

IRON THRONE PROJECT

IRON THRONE FEDERAL COM 505H

OWB

PWP2

Anticollision Report

29 January, 2025

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Reference	PWP2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	0.0 to 25,820.4usft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,000.0usft	Error Surface:	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Added to Error Values

Survey Tool Program		Date	1/29/2025		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	2,100.0	PWP2 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr.	
2,100.0	9,564.5	PWP2 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr.	
9,564.5	25,820.4	PWP2 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr.	

Summary						
	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Site Name Offset Well - Wellbore - Design						
IRON THRONE PROJECT						
EEYORE FED COM 27_28_PML_4H - OWB - AWP	6,284.9	6,117.8	359.2	327.9	11.448	CC
EEYORE FED COM 27_28_PML_4H - OWB - AWP	6,300.0	6,133.0	359.3	327.8	11.429	ES
EEYORE FED COM 27_28_PML_4H - OWB - AWP	7,200.0	7,032.7	373.3	339.5	11.049	SF
FNR FEDERAL 26_1 - OWB - AWP	4,598.5	4,509.1	576.2	370.6	2.804	Normal Operations, CC
FNR FEDERAL 26_1 - OWB - AWP	9,600.0	9,446.1	749.7	337.5	1.819	Caution - Monitor Closely, ES, SF
FORTY NINER RIDGE 26 FEDERAL_2H - OWB - AWP	0.0	0.0	630.7			
FORTY NINER RIDGE 26 FEDERAL_2H - OWB - AWP	100.0	72.5	630.9	629.2	369.844	ES
FORTY NINER RIDGE 26 FEDERAL_2H - OWB - AWP	2,500.0	2,481.3	671.8	658.3	49.931	SF
FORTY NINER RIDGE 26 FEDERAL_4H - OWB - AWP	4,631.4	4,519.3	295.9	277.3	15.899	CC, ES
FORTY NINER RIDGE 26 FEDERAL_4H - OWB - AWP	4,900.0	4,773.5	309.2	289.3	15.553	SF
IRON THRONE FEDERAL COM 504H - PILOT HOLE - P	2,100.0	2,100.0	30.0	18.2	2.548	Normal Operations, CC, ES, SF
IRON THRONE FEDERAL COM 504H - ST01 - PWP2	2,100.0	2,100.0	30.0	18.2	2.548	Normal Operations, CC, ES, SF

Offset Design:	IRON THRONE PROJECT - EEYORE FED COM 27_28_PML_4H - OWB - AWP										Offset Site Error:	0.0 usft
Survey Program:	230-r.5 MWD										Offset Well Error:	3.0 usft
Reference	Vertical	Offset	Semi Major Axis	Offset	Highside	Offset Wellbore Centre	Distance	Distance	No-Go	Separation	Warning	
Measured Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Factor
3,300.0	3,269.8	3,272.0	3,271.7	8.0	12.2	20.29	-1,051.7	-608.3	990.4	969.6	20.83	47.539
3,400.0	3,364.6	3,369.4	3,369.1	8.1	12.4	20.88	-1,052.5	-607.3	960.7	939.5	21.15	45.414
3,500.0	3,459.5	3,469.5	3,469.1	8.3	12.6	21.47	-1,053.5	-605.3	930.6	909.1	21.48	43.323
3,600.0	3,554.3	3,555.0	3,554.7	8.4	12.8	21.98	-1,054.6	-603.3	900.6	878.8	21.80	41.305
3,700.0	3,649.1	3,637.2	3,636.8	8.6	13.0	22.54	-1,056.3	-602.6	872.1	850.0	22.13	39.408
3,800.0	3,744.0	3,725.4	3,725.0	8.8	13.2	23.23	-1,058.6	-603.1	845.0	822.6	22.49	37.577
3,900.0	3,838.8	3,819.1	3,818.7	8.9	13.4	24.08	-1,060.7	-604.7	818.5	795.6	22.88	35.774
4,000.0	3,933.6	3,911.2	3,910.7	9.1	13.5	25.04	-1,062.5	-607.1	792.4	769.2	23.21	34.136
4,100.0	4,028.5	4,011.1	4,010.5	9.3	13.7	26.22	-1,064.0	-610.7	766.9	743.4	23.53	32.587
4,200.0	4,123.3	4,124.2	4,123.6	9.5	13.9	27.65	-1,064.2	-613.4	739.9	716.0	23.92	30.935
4,300.0	4,218.1	4,222.6	4,222.0	9.7	14.1	28.99	-1,063.2	-614.6	711.7	687.5	24.25	29.344
4,400.0	4,313.0	4,316.7	4,316.1	9.8	14.2	30.37	-1,062.4	-615.6	683.9	659.3	24.58	27.823
4,500.0	4,407.8	4,411.6	4,411.0	10.0	14.3	31.87	-1,061.6	-616.6	656.5	631.6	24.91	26.358

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

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Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - EEYORE FED COM 27_28_PML_4H - OWB - AWP													Offset Site Error: 0.0 usft
Survey Program: 230-r.5 MWD													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
4,600.0	4,502.6	4,506.9	4,506.2	10.2	14.5	33.51	-1,060.6	-617.7	629.4	604.2	25.24	24.941	
4,700.0	4,597.5	4,601.6	4,601.0	10.4	14.6	35.29	-1,059.6	-618.7	602.9	577.3	25.57	23.577	
4,800.0	4,692.3	4,696.3	4,695.6	10.6	14.8	37.22	-1,058.5	-619.7	576.9	551.0	25.91	22.265	
4,900.0	4,787.1	4,791.8	4,791.1	10.9	14.9	39.33	-1,057.5	-620.7	551.6	525.3	26.25	21.014	
5,000.0	4,881.9	4,887.5	4,886.9	11.1	15.1	41.62	-1,056.5	-621.3	526.8	500.2	26.59	19.811	
5,100.0	4,976.8	4,981.6	4,980.9	11.4	15.2	44.07	-1,055.5	-621.8	502.9	475.9	26.94	18.667	
5,200.0	5,071.6	5,075.3	5,074.6	11.6	15.3	46.76	-1,054.4	-622.6	480.1	452.8	27.29	17.590	
5,300.0	5,166.4	5,169.9	5,169.2	11.9	15.5	49.75	-1,053.2	-623.6	458.6	430.9	27.67	16.576	
5,400.0	5,261.3	5,264.7	5,264.0	12.1	15.7	53.01	-1,051.9	-624.4	438.4	410.4	28.05	15.628	
5,500.0	5,356.1	5,359.6	5,358.9	12.4	15.8	56.54	-1,050.7	-625.2	419.8	391.3	28.44	14.761	
5,600.0	5,450.9	5,454.4	5,453.6	12.6	16.0	60.37	-1,049.3	-626.0	402.8	374.0	28.83	13.972	
5,636.9	5,486.0	5,489.1	5,488.4	12.7	16.0	61.85	-1,048.8	-626.3	397.1	368.1	28.97	13.707	
5,700.0	5,546.0	5,548.4	5,547.6	12.8	16.1	64.21	-1,048.0	-626.8	388.3	359.1	29.21	13.292	
5,800.0	5,642.0	5,643.3	5,642.6	13.1	16.3	67.85	-1,046.9	-627.7	377.3	347.7	29.61	12.740	
5,900.0	5,738.9	5,740.0	5,739.2	13.3	16.5	71.31	-1,045.8	-628.8	369.5	339.5	30.01	12.311	
6,000.0	5,836.6	5,837.6	5,836.8	13.5	16.6	74.47	-1,044.8	-629.9	364.1	333.7	30.39	11.982	
6,100.0	5,935.0	5,935.0	5,934.2	13.7	16.8	77.22	-1,043.7	-631.0	360.9	330.2	30.75	11.736	
6,200.0	6,034.0	6,032.9	6,032.1	13.8	17.0	79.52	-1,042.7	-632.4	359.5	328.4	31.10	11.561	
6,284.9	6,118.3	6,117.8	6,117.0	14.0	17.2	81.11	-1,042.0	-633.7	359.2	327.9	31.38	11.448 CC	
6,300.0	6,133.4	6,133.0	6,132.1	14.0	17.2	81.35	-1,041.9	-633.9	359.3	327.8	31.43	11.429 ES	
6,400.0	6,233.1	6,233.2	6,232.3	14.1	17.4	82.61	-1,041.1	-635.2	359.6	327.8	31.75	11.324	
6,500.0	6,333.0	6,331.7	6,330.8	14.2	17.6	83.35	-1,040.3	-636.6	360.6	328.6	32.06	11.248	
6,562.0	6,395.0	6,392.7	6,391.8	14.3	17.7	-82.05	-1,039.6	-637.7	361.7	329.5	32.22	11.227	
6,600.0	6,433.0	6,430.4	6,429.6	14.3	17.8	-81.99	-1,039.1	-638.4	362.5	330.2	32.30	11.223	
6,700.0	6,533.0	6,530.3	6,529.4	14.3	18.0	-81.84	-1,037.8	-640.3	364.6	332.0	32.55	11.199	
6,800.0	6,633.0	6,630.4	6,629.4	14.3	18.2	-81.69	-1,036.6	-642.3	366.7	333.9	32.81	11.176	
6,900.0	6,733.0	6,731.0	6,730.0	14.4	18.4	-81.56	-1,035.5	-644.1	368.7	335.6	33.07	11.149	
7,000.0	6,833.0	6,831.8	6,830.8	14.4	18.7	-81.43	-1,034.4	-645.8	370.5	337.2	33.33	11.117	
7,100.0	6,933.0	6,933.0	6,932.0	14.4	18.9	-81.38	-1,033.9	-647.3	372.0	338.4	33.59	11.076	
7,200.0	7,033.0	7,032.7	7,031.7	14.5	19.0	-81.42	-1,033.9	-648.6	373.3	339.5	33.79	11.049 SF	
7,300.0	7,133.0	7,109.9	7,108.9	14.5	19.2	-81.54	-1,034.4	-650.5	376.2	342.3	33.93	11.088	
7,400.0	7,233.0	7,159.9	7,158.4	14.5	19.3	-81.80	-1,035.1	-657.5	389.9	356.0	33.89	11.506	
7,500.0	7,333.0	7,206.6	7,203.4	14.6	19.5	-81.91	-1,034.1	-669.7	416.2	382.6	33.62	12.378	
7,600.0	7,433.0	7,253.6	7,246.9	14.6	19.7	-82.01	-1,032.3	-687.2	453.5	420.2	33.26	13.634	
7,700.0	7,533.0	7,305.7	7,293.2	14.6	19.9	-82.28	-1,031.1	-711.2	499.2	466.3	32.97	15.144	
7,800.0	7,633.0	7,351.8	7,332.5	14.7	20.0	-82.62	-1,030.6	-735.1	551.2	518.5	32.63	16.893	
7,900.0	7,733.0	7,390.8	7,364.1	14.7	20.1	-82.95	-1,030.4	-757.9	609.5	577.2	32.26	18.890	
8,000.0	7,833.0	7,427.4	7,392.2	14.8	20.2	-83.33	-1,030.9	-781.4	673.2	641.3	31.95	21.069	
8,100.0	7,933.0	7,463.0	7,418.2	14.8	20.3	-83.72	-1,031.7	-805.7	741.3	709.5	31.72	23.369	
8,200.0	8,033.0	7,510.0	7,451.1	14.8	20.5	-84.19	-1,032.7	-839.3	812.4	780.6	31.73	25.604	
8,300.0	8,133.0	7,543.5	7,473.7	14.9	20.5	-84.46	-1,032.9	-864.0	886.0	854.4	31.62	28.024	
8,400.0	8,233.0	7,573.3	7,493.0	14.9	20.6	-84.64	-1,032.6	-886.7	962.1	930.6	31.53	30.510	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - FNR FEDERAL 26_1 - OWB - AWP													Offset Site Error: 0.0 usft
Survey Program: 500-r.5 INC-ONLY													Offset Well Error: 0.0 usft
Reference	Offset	Rule Assigned:											Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	5.0	5.0	0.0	0.2	152.72	-770.2	397.2	866.6				
100.0	100.0	105.0	105.0	0.8	5.1	152.72	-770.2	397.2	866.6	858.9	7.72	112.285	
200.0	200.0	205.0	205.0	1.4	10.0	152.72	-770.2	397.2	866.6	852.0	14.57	59.479	
300.0	300.0	305.0	305.0	1.9	14.8	152.72	-770.2	397.2	866.6	845.2	21.38	40.532	
400.0	400.0	405.0	405.0	2.2	19.7	152.72	-770.2	397.2	866.6	838.4	28.18	30.751	
500.0	500.0	505.2	505.0	2.6	24.5	152.72	-770.2	397.2	866.6	831.7	34.87	24.852	
600.0	600.0	605.2	605.0	2.8	27.7	152.72	-770.2	397.2	866.6	827.3	39.34	22.027	
700.0	700.0	705.2	705.0	3.1	30.9	152.72	-770.2	397.2	866.6	822.8	43.81	19.781	
744.8	744.8	750.0	749.7	3.2	32.3	152.62	-766.9	397.2	863.7	817.9	45.81	18.854	
800.0	800.0	801.2	800.8	3.3	33.9	152.62	-767.1	397.2	863.8	815.7	48.10	17.961	
900.0	900.0	893.9	893.5	3.6	36.9	152.65	-768.0	397.2	864.7	812.5	52.23	16.555	
1,000.0	1,000.0	1,005.6	1,005.0	3.8	40.5	152.72	-770.2	397.2	866.6	809.4	57.21	15.148	
1,100.0	1,100.0	1,105.6	1,105.0	4.0	43.6	152.72	-770.2	397.2	866.6	805.1	61.52	14.086	
1,200.0	1,200.0	1,205.6	1,205.0	4.2	46.6	152.72	-770.2	397.2	866.6	800.8	65.83	13.164	
1,244.7	1,244.7	1,250.2	1,249.6	4.3	48.0	152.68	-769.1	397.2	865.6	797.9	67.75	12.776	
1,300.0	1,300.0	1,304.1	1,303.5	4.4	49.7	152.68	-769.1	397.2	865.7	795.6	70.08	12.353	
1,400.0	1,400.0	1,401.5	1,400.9	4.6	52.7	152.70	-769.5	397.2	866.0	791.7	74.27	11.660	
1,500.0	1,500.0	1,505.9	1,505.0	4.7	55.9	152.72	-770.2	397.2	866.6	787.8	78.77	11.002	
1,600.0	1,600.0	1,605.9	1,605.0	4.9	58.9	152.72	-770.2	397.2	866.6	783.6	83.02	10.438	
1,700.0	1,700.0	1,705.9	1,705.0	5.1	62.0	152.72	-770.2	397.2	866.6	779.3	87.27	9.929	
1,744.0	1,744.0	1,749.8	1,748.9	5.1	63.3	152.62	-766.9	397.2	863.7	774.5	89.14	9.689	
1,800.0	1,800.0	1,801.8	1,800.8	5.2	64.9	152.62	-767.1	397.2	863.8	772.5	91.35	9.456	
1,900.0	1,900.0	1,894.5	1,893.5	5.4	67.7	152.65	-768.0	397.2	864.7	769.4	95.29	9.075	
2,000.0	2,000.0	2,006.2	2,005.0	5.6	71.1	152.72	-770.2	397.2	866.6	766.5	100.05	8.662	
2,100.0	2,100.0	2,106.2	2,105.0	5.7	74.2	152.72	-770.2	397.2	866.6	762.3	104.28	8.310	
2,200.0	2,200.0	2,206.2	2,205.0	5.9	77.2	-41.77	-770.2	397.2	865.3	756.8	108.51	7.974	
2,300.0	2,299.8	2,304.6	2,303.4	6.1	80.2	-42.08	-769.1	397.2	860.5	747.8	112.67	7.637	
2,400.0	2,399.5	2,401.7	2,400.5	6.3	83.1	-42.53	-769.5	397.2	854.3	737.6	116.78	7.316	
2,500.0	2,498.7	2,505.2	2,503.7	6.5	86.3	-43.21	-770.2	397.2	846.0	724.8	121.16	6.982	
2,600.0	2,597.5	2,604.0	2,602.5	6.8	89.2	-44.10	-770.2	397.2	834.6	709.3	125.33	6.659	
2,700.0	2,695.6	2,702.2	2,700.6	7.0	92.2	-45.21	-770.2	397.2	820.9	691.4	129.47	6.341	
2,800.0	2,793.1	2,796.3	2,794.7	7.2	95.0	-46.64	-767.0	397.2	802.3	668.9	133.44	6.013	
2,900.0	2,889.6	2,886.9	2,885.3	7.4	97.8	-48.12	-767.9	397.2	785.3	648.0	137.25	5.722	
3,000.0	2,985.3	2,977.2	2,975.5	7.6	100.5	-49.82	-769.6	397.2	767.2	626.2	141.04	5.440	
3,025.0	3,009.0	3,015.9	3,014.0	7.6	101.7	-50.59	-770.2	397.2	762.4	619.7	142.69	5.343	
3,100.0	3,080.1	3,087.0	3,085.1	7.7	103.8	-51.95	-770.2	397.2	747.0	601.3	145.68	5.128	
3,200.0	3,175.0	3,181.8	3,180.0	7.8	106.7	-53.86	-770.2	397.2	727.2	577.6	149.67	4.859	
3,300.0	3,269.8	3,276.2	3,274.3	8.0	109.5	-55.90	-769.1	397.2	707.5	553.9	153.64	4.605	
3,400.0	3,364.6	3,369.4	3,367.5	8.1	112.3	-57.95	-769.3	397.2	689.7	532.2	157.56	4.377	
3,500.0	3,459.5	3,462.8	3,460.9	8.3	115.1	-60.09	-769.9	397.2	673.2	511.7	161.49	4.168	
3,600.0	3,554.3	3,561.5	3,559.3	8.4	118.1	-62.46	-770.2	397.2	657.5	491.9	165.65	3.969	
3,700.0	3,649.1	3,656.3	3,654.1	8.6	121.0	-64.86	-770.2	397.2	642.8	473.2	169.64	3.789	
3,800.0	3,744.0	3,751.1	3,748.8	8.8	123.8	-67.58	-766.9	397.2	627.4	453.8	173.62	3.614	
3,900.0	3,838.8	3,842.7	3,840.4	8.9	126.6	-70.07	-767.4	397.2	615.7	438.2	177.47	3.469	
4,000.0	3,933.6	3,934.9	3,932.5	9.1	129.3	-72.58	-768.7	397.2	605.9	424.5	181.35	3.341	
4,100.0	4,028.5	4,036.0	4,033.5	9.3	132.4	-75.41	-770.2	397.2	597.5	411.9	185.61	3.219	
4,200.0	4,123.3	4,130.8	4,128.3	9.5	135.2	-78.24	-770.2	397.2	589.9	400.3	189.60	3.111	
4,300.0	4,218.1	4,225.7	4,223.1	9.7	138.1	-81.14	-770.2	397.2	583.9	390.3	193.59	3.016	
4,400.0	4,313.0	4,320.0	4,317.5	9.8	140.9	-84.15	-769.2	397.2	579.2	381.7	197.56	2.932 Normal Operations	
4,500.0	4,407.8	4,414.4	4,411.8	10.0	143.8	-87.08	-769.6	397.2	576.8	375.3	201.53	2.862 Normal Operations	
4,598.5	4,501.2	4,509.1	4,506.2	10.2	146.6	-90.00	-770.2	397.2	576.2	370.6	205.51	2.804 Normal Operations, CC	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - FNR FEDERAL 26_1 - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 500-r.5 INC-ONLY												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,600.0	4,502.6	4,510.5	4,507.6	10.2	146.6	-90.04	-770.2	397.2	576.2	370.6	205.57	2.803	Normal Operations
4,700.0	4,597.5	4,605.3	4,602.5	10.4	149.5	-93.03	-770.2	397.2	577.1	367.5	209.56	2.754	Normal Operations
4,800.0	4,692.3	4,700.2	4,697.3	10.6	152.3	-96.01	-770.2	397.2	579.7	366.1	213.55	2.715	Normal Operations
4,900.0	4,787.1	4,794.8	4,791.8	10.9	155.2	-99.23	-767.0	397.2	583.8	366.2	217.53	2.684	Normal Operations
5,000.0	4,881.9	4,889.8	4,886.8	11.1	158.0	-102.05	-767.9	397.2	590.0	368.5	221.52	2.663	Normal Operations
5,100.0	4,976.8	4,985.4	4,982.4	11.4	160.9	-104.73	-769.8	397.2	597.7	372.2	225.55	2.650	Normal Operations
5,200.0	5,071.6	5,079.8	5,076.6	11.6	163.8	-107.44	-770.2	397.2	606.9	377.4	229.52	2.644	Normal Operations
5,300.0	5,166.4	5,174.6	5,171.4	11.9	166.6	-110.12	-770.2	397.2	617.7	384.2	233.50	2.645	Normal Operations
5,400.0	5,261.3	5,269.5	5,266.3	12.1	169.4	-112.81	-769.1	397.2	630.0	392.5	237.49	2.653	Normal Operations
5,500.0	5,356.1	5,364.9	5,361.7	12.4	172.3	-115.30	-769.3	397.2	643.4	401.9	241.50	2.664	Normal Operations
5,600.0	5,450.9	5,460.4	5,457.2	12.6	175.2	-117.67	-769.9	397.2	658.1	412.5	245.51	2.680	Normal Operations
5,636.9	5,486.0	5,495.8	5,492.5	12.7	176.2	-118.51	-770.1	397.2	663.7	416.7	247.00	2.687	Normal Operations
5,700.0	5,546.0	5,554.5	5,551.0	12.8	178.0	-120.04	-770.2	397.2	673.5	424.1	249.47	2.700	Normal Operations
5,800.0	5,642.0	5,650.5	5,647.0	13.1	180.9	-122.25	-770.2	397.2	688.4	434.9	253.50	2.716	Normal Operations
5,900.0	5,738.9	5,747.4	5,743.9	13.3	183.8	-124.14	-770.2	397.2	702.2	444.6	257.57	2.726	Normal Operations
6,000.0	5,836.6	5,848.1	5,844.4	13.5	186.8	-125.97	-767.4	397.2	715.6	453.8	261.79	2.733	Normal Operations
6,100.0	5,935.0	5,949.9	5,946.2	13.7	189.9	-127.18	-769.0	397.2	725.7	459.6	266.06	2.728	Normal Operations
6,200.0	6,034.0	6,042.9	6,039.0	13.8	192.7	-128.06	-770.2	397.2	734.0	464.0	269.97	2.719	Normal Operations
6,300.0	6,133.4	6,142.3	6,138.4	14.0	195.6	-128.82	-770.2	397.2	740.8	466.6	274.13	2.702	Normal Operations
6,400.0	6,233.1	6,242.0	6,238.1	14.1	198.6	-129.34	-770.2	397.2	745.4	467.1	278.31	2.678	Normal Operations
6,500.0	6,333.0	6,343.0	6,339.1	14.2	201.7	-129.67	-769.2	397.2	748.3	465.8	282.54	2.649	Normal Operations
6,562.0	6,395.0	6,405.6	6,401.8	14.3	203.6	64.69	-769.5	397.2	748.6	463.5	285.16	2.625	Normal Operations
6,600.0	6,433.0	6,444.1	6,440.2	14.3	204.7	64.70	-769.8	397.2	748.5	461.8	286.77	2.610	Normal Operations
6,700.0	6,533.0	6,542.2	6,538.0	14.3	207.7	64.73	-770.2	397.2	748.3	457.5	290.87	2.573	Normal Operations
6,800.0	6,633.0	6,642.2	6,638.0	14.3	210.7	64.73	-770.2	397.2	748.3	453.3	295.05	2.536	Normal Operations
6,900.0	6,733.0	6,742.2	6,738.0	14.4	213.7	64.73	-770.2	397.2	748.3	449.1	299.23	2.501	Normal Operations
7,000.0	6,833.0	6,845.6	6,841.3	14.4	216.8	64.54	-767.4	397.2	749.5	446.0	303.54	2.469	Caution - Monitor Closely
7,100.0	6,933.0	6,949.3	6,944.9	14.4	219.9	64.65	-769.0	397.2	748.9	441.0	307.87	2.432	Caution - Monitor Closely
7,200.0	7,033.0	7,042.6	7,038.0	14.5	222.7	64.73	-770.2	397.2	748.3	436.6	311.78	2.400	Caution - Monitor Closely
7,300.0	7,133.0	7,142.6	7,138.0	14.5	225.7	64.73	-770.2	397.2	748.3	432.4	315.95	2.368	Caution - Monitor Closely
7,400.0	7,233.0	7,242.6	7,238.0	14.5	228.7	64.73	-770.2	397.2	748.3	428.2	320.13	2.338	Caution - Monitor Closely
7,500.0	7,333.0	7,343.6	7,339.1	14.6	231.7	64.67	-769.2	397.2	748.7	424.4	324.36	2.308	Caution - Monitor Closely
7,600.0	7,433.0	7,444.8	7,440.2	14.6	234.7	64.70	-769.8	397.2	748.5	419.9	328.58	2.278	Caution - Monitor Closely
7,700.0	7,533.0	7,542.9	7,538.0	14.6	237.7	64.73	-770.2	397.2	748.3	415.7	332.68	2.249	Caution - Monitor Closely
7,800.0	7,633.0	7,642.9	7,638.0	14.7	240.7	64.73	-770.2	397.2	748.3	411.5	336.86	2.221	Caution - Monitor Closely
7,900.0	7,733.0	7,742.9	7,738.0	14.7	243.7	64.73	-770.2	397.2	748.3	407.3	341.04	2.194	Caution - Monitor Closely
8,000.0	7,833.0	7,846.3	7,841.3	14.8	246.8	64.54	-767.4	397.2	749.5	404.2	345.36	2.170	Caution - Monitor Closely
8,100.0	7,933.0	7,950.0	7,945.0	14.8	249.9	64.65	-769.0	397.2	748.9	399.2	349.68	2.142	Caution - Monitor Closely
8,200.0	8,033.0	8,043.2	8,038.0	14.8	252.7	64.73	-770.2	397.2	748.3	394.7	353.59	2.116	Caution - Monitor Closely
8,300.0	8,133.0	8,143.2	8,138.0	14.9	255.7	64.73	-770.2	397.2	748.3	390.6	357.77	2.092	Caution - Monitor Closely
8,400.0	8,233.0	8,243.2	8,238.0	14.9	258.7	64.73	-770.2	397.2	748.3	386.4	361.95	2.067	Caution - Monitor Closely
8,500.0	8,333.0	8,344.3	8,339.1	14.9	261.7	64.67	-769.2	397.2	748.7	382.6	366.18	2.045	Caution - Monitor Closely
8,600.0	8,433.0	8,445.4	8,440.3	15.0	264.7	64.70	-769.8	397.2	748.5	378.1	370.40	2.021	Caution - Monitor Closely
8,700.0	8,533.0	8,543.6	8,538.0	15.0	267.7	64.73	-770.2	397.2	748.3	373.8	374.51	1.998	Caution - Monitor Closely
8,800.0	8,633.0	8,643.6	8,638.0	15.1	270.7	64.73	-770.2	397.2	748.3	369.7	378.69	1.976	Caution - Monitor Closely
8,900.0	8,733.0	8,743.6	8,738.0	15.1	273.7	64.73	-770.2	397.2	748.3	365.5	382.86	1.955	Caution - Monitor Closely
9,000.0	8,833.0	8,847.0	8,841.3	15.2	276.8	64.54	-767.4	397.2	749.5	362.4	387.18	1.936	Caution - Monitor Closely
9,100.0	8,933.0	8,950.7	8,945.0	15.2	279.9	64.65	-769.0	397.2	748.9	357.4	391.51	1.913	Caution - Monitor Closely
9,200.0	9,033.0	9,043.9	9,038.0	15.2	282.7	64.73	-770.2	397.2	748.3	352.9	395.42	1.893	Caution - Monitor Closely
9,300.0	9,133.0	9,143.9	9,138.0	15.3	285.7	64.73	-770.2	397.2	748.3	348.7	399.60	1.873	Caution - Monitor Closely
9,400.0	9,233.0	9,243.9	9,238.0	15.3	288.7	64.73	-770.2	397.2	748.3	344.6	403.78	1.853	Caution - Monitor Closely

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - FNR FEDERAL 26_1 - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 500-r.5 INC-ONLY												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,500.0	9,333.0	9,345.0	9,339.1	15.4	291.7	64.67	-769.3	397.2	748.7	340.7	408.00	1.835 Caution - Monitor Closely	
9,564.5	9,397.5	9,410.2	9,404.3	15.4	293.7	64.69	-769.5	397.2	748.6	337.9	410.73	1.823 Caution - Monitor Closely	
9,565.8	9,398.8	9,411.5	9,405.6	15.4	293.7	155.23	-769.5	397.2	748.6	337.8	410.78	1.822 Caution - Monitor Closely	
9,575.0	9,408.0	9,420.8	9,415.0	15.4	294.0	155.23	-769.6	397.2	748.7	337.5	411.17	1.821 Caution - Monitor Closely	
9,600.0	9,433.0	9,446.1	9,440.2	15.4	294.7	155.23	-769.8	397.2	749.7	337.5	412.23	1.819 Caution - Monitor Closely, ES, SF	
9,625.0	9,457.9	9,471.2	9,465.4	15.4	295.5	155.21	-769.9	397.2	751.9	338.6	413.28	1.819 Caution - Monitor Closely	
9,650.0	9,482.6	9,496.2	9,490.4	15.4	296.2	155.18	-770.2	397.2	755.3	341.0	414.32	1.823 Caution - Monitor Closely	
9,675.0	9,507.1	9,518.2	9,512.1	15.4	296.9	155.09	-770.2	397.2	759.9	344.7	415.24	1.830 Caution - Monitor Closely	
9,700.0	9,531.2	9,542.4	9,536.2	15.4	297.6	154.99	-770.2	397.2	765.7	349.5	416.25	1.840 Caution - Monitor Closely	
9,725.0	9,555.0	9,566.2	9,560.0	15.4	298.3	154.86	-770.2	397.2	772.7	355.4	417.25	1.852 Caution - Monitor Closely	
9,750.0	9,578.4	9,589.6	9,583.4	15.4	299.0	154.69	-770.2	397.2	780.8	362.6	418.22	1.867 Caution - Monitor Closely	
9,775.0	9,601.3	9,612.5	9,606.3	15.4	299.7	154.49	-770.2	397.2	790.0	370.9	419.18	1.885 Caution - Monitor Closely	
9,800.0	9,623.6	9,634.8	9,628.6	15.4	300.4	154.25	-770.2	397.2	800.4	380.3	420.11	1.905 Caution - Monitor Closely	
9,825.0	9,645.3	9,656.5	9,650.3	15.5	301.1	153.95	-770.2	397.2	811.8	390.8	421.02	1.928 Caution - Monitor Closely	
9,850.0	9,666.3	9,677.5	9,671.3	15.5	301.7	153.59	-770.2	397.2	824.3	402.4	421.90	1.954 Caution - Monitor Closely	
9,875.0	9,686.6	9,697.8	9,691.6	15.5	302.3	153.16	-770.2	397.2	837.9	415.1	422.75	1.982 Caution - Monitor Closely	
9,900.0	9,706.1	9,717.3	9,711.1	15.5	302.9	152.64	-770.2	397.2	852.4	428.8	423.56	2.012 Caution - Monitor Closely	
9,925.0	9,724.8	9,735.9	9,729.8	15.6	303.4	152.03	-770.2	397.2	867.9	443.6	424.34	2.045 Caution - Monitor Closely	
9,950.0	9,742.5	9,753.7	9,747.5	15.6	304.0	151.30	-770.2	397.2	884.3	459.3	425.08	2.080 Caution - Monitor Closely	
9,975.0	9,759.3	9,770.5	9,764.3	15.6	304.5	150.44	-770.2	397.2	901.7	475.9	425.79	2.118 Caution - Monitor Closely	
10,000.0	9,775.1	9,786.3	9,780.1	15.7	304.9	149.41	-770.2	397.2	919.8	493.4	426.45	2.157 Caution - Monitor Closely	
10,025.0	9,789.9	9,801.1	9,794.9	15.7	305.4	148.18	-770.2	397.2	938.8	511.8	427.06	2.198 Caution - Monitor Closely	
10,050.0	9,803.6	9,814.8	9,808.6	15.8	305.8	146.70	-770.2	397.2	958.6	530.9	427.64	2.242 Caution - Monitor Closely	
10,075.0	9,816.2	9,827.4	9,821.2	15.9	306.2	144.94	-770.2	397.2	979.0	550.8	428.16	2.287 Caution - Monitor Closely	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE 26 FEDERAL_2H - OWB - AWP														Offset Site Error:	0.0 usft
Survey Program: 100-r.5 MWD														Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	5.69	627.3	62.5	630.7						
100.0	100.0	72.5	72.5	0.8	0.4	5.68	627.7	62.4	630.9	629.2	1.71	369.844 ES			
200.0	200.0	167.2	167.2	1.4	1.1	5.65	629.4	62.3	632.6	629.5	3.03	209.107			
300.0	300.0	264.1	264.1	1.9	1.7	5.64	631.6	62.4	634.9	630.8	4.06	156.466			
400.0	400.0	362.8	362.8	2.2	2.2	5.64	634.2	62.6	637.5	632.6	4.88	130.576			
500.0	500.0	465.2	465.1	2.6	3.1	5.62	636.9	62.7	640.1	634.0	6.08	105.312			
600.0	600.0	569.8	569.7	2.8	4.3	5.50	639.0	61.6	642.1	634.4	7.67	83.673			
700.0	700.0	671.1	670.9	3.1	4.5	5.33	640.7	59.8	643.6	635.4	8.15	78.940			
800.0	800.0	772.9	772.7	3.3	4.8	5.18	642.2	58.3	644.9	636.3	8.58	75.139			
900.0	900.0	875.5	875.3	3.6	5.0	5.09	643.2	57.3	645.8	636.8	9.00	71.764			
1,000.0	1,000.0	978.3	978.1	3.8	5.2	5.05	643.8	56.9	646.3	636.9	9.40	68.755			
1,100.0	1,100.0	1,080.1	1,079.9	4.0	5.4	5.04	643.9	56.8	646.4	636.7	9.76	66.226			
1,200.0	1,200.0	1,181.2	1,181.0	4.2	5.5	5.07	643.8	57.1	646.4	636.3	10.05	64.286			
1,300.0	1,300.0	1,281.4	1,281.2	4.4	5.5	5.09	643.6	57.4	646.2	635.9	10.30	62.711			
1,400.0	1,400.0	1,380.5	1,380.3	4.6	5.6	5.11	643.5	57.5	646.0	635.5	10.56	61.192			
1,500.0	1,500.0	1,480.8	1,480.6	4.7	5.7	5.13	643.4	57.8	646.0	635.2	10.82	59.688			
1,578.2	1,578.2	1,558.4	1,558.2	4.9	5.8	5.15	643.3	58.0	646.0	634.9	11.03	58.541			
1,600.0	1,600.0	1,579.9	1,579.7	4.9	5.8	5.16	643.3	58.0	646.0	634.9	11.09	58.230			
1,700.0	1,700.0	1,679.2	1,679.0	5.1	5.9	5.17	643.4	58.3	646.1	634.7	11.39	56.709			
1,800.0	1,800.0	1,781.7	1,781.4	5.2	6.0	5.17	643.4	58.3	646.1	634.4	11.67	55.384			
1,900.0	1,900.0	1,881.5	1,881.3	5.4	6.1	5.17	643.2	58.2	645.8	634.0	11.88	54.371			
2,000.0	2,000.0	1,980.4	1,980.2	5.6	6.2	5.16	643.1	58.0	645.7	633.6	12.11	53.314			
2,100.0	2,100.0	2,081.2	2,081.0	5.7	6.3	5.15	643.0	57.9	645.6	633.3	12.34	52.317			
2,105.1	2,105.1	2,086.5	2,086.3	5.7	6.3	170.76	643.0	57.9	645.6	633.3	12.36	52.256			
2,200.0	2,200.0	2,183.0	2,182.8	5.9	6.4	170.76	642.7	57.7	647.1	634.4	12.62	51.261			
2,300.0	2,299.8	2,282.7	2,282.5	6.1	6.4	170.79	642.3	57.3	651.8	638.9	12.89	50.551			
2,400.0	2,399.5	2,381.2	2,381.0	6.3	6.5	170.84	642.1	56.8	660.1	646.9	13.17	50.109			
2,500.0	2,498.7	2,481.3	2,481.1	6.5	6.6	170.94	641.8	56.5	671.8	658.3	13.45	49.931 SF			
2,600.0	2,597.5	2,579.5	2,579.3	6.8	6.8	171.07	641.5	56.1	687.0	673.2	13.74	50.013			
2,700.0	2,695.6	2,677.8	2,677.6	7.0	6.9	171.21	641.3	55.5	705.5	691.5	14.02	50.318			
2,800.0	2,793.1	2,775.5	2,775.3	7.2	7.0	171.38	641.1	55.1	727.5	713.2	14.31	50.850			
2,900.0	2,889.6	2,873.5	2,873.2	7.4	7.1	171.57	640.8	54.6	752.8	738.2	14.59	51.581			
3,000.0	2,985.3	2,969.0	2,968.8	7.6	7.2	171.76	640.3	54.0	781.2	766.3	14.88	52.501			
3,025.0	3,009.0	2,992.3	2,992.0	7.6	7.2	171.81	640.3	53.9	788.9	774.0	14.92	52.863			
3,100.0	3,080.1	3,064.0	3,063.7	7.7	7.3	172.02	640.0	53.6	812.2	797.1	15.08	53.873			
3,200.0	3,175.0	3,159.3	3,159.1	7.8	7.4	172.31	639.6	53.3	843.2	827.9	15.31	55.084			
3,300.0	3,269.8	3,256.8	3,256.6	8.0	7.5	172.59	639.0	53.2	874.2	858.6	15.55	56.233			
3,400.0	3,364.6	3,360.9	3,360.6	8.1	7.6	172.92	637.7	53.7	904.5	888.7	15.80	57.248			
3,500.0	3,459.5	3,457.5	3,457.3	8.3	7.7	173.21	635.7	54.1	934.1	918.1	16.06	58.178			
3,600.0	3,554.3	3,547.1	3,546.8	8.4	7.7	173.50	634.1	55.2	964.1	947.8	16.31	59.116			
3,700.0	3,649.1	3,636.8	3,636.5	8.6	7.8	173.83	632.9	57.4	994.7	978.2	16.56	60.073			

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE 26 FEDERAL_4H - OWB - AWP													Offset Site Error: 0.0 usft
Survey Program: 100-r.5 MWD													Offset Well Error: 0.0 usft
Reference	Offset	Rule Assigned:											Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	171.56	-742.5	110.2	750.8				
100.0	100.0	93.2	93.2	0.8	0.8	171.57	-742.2	110.0	750.3	748.3	2.01	373.915	
200.0	200.0	194.7	194.7	1.4	1.5	171.60	-741.3	109.4	749.3	746.0	3.35	223.354	
300.0	300.0	299.4	299.4	1.9	2.0	171.64	-740.0	108.7	748.0	743.7	4.31	173.627	
400.0	400.0	396.6	396.6	2.2	2.4	171.68	-738.6	108.1	746.5	741.5	5.06	147.415	
500.0	500.0	497.3	497.2	2.6	2.8	171.66	-737.3	108.0	745.2	739.5	5.74	129.775	
600.0	600.0	597.0	597.0	2.8	2.9	171.57	-735.7	109.1	743.8	737.6	6.22	119.631	
700.0	700.0	699.0	698.9	3.1	3.2	171.44	-733.9	110.5	742.3	735.5	6.77	109.676	
800.0	800.0	796.9	796.8	3.3	3.5	171.30	-732.2	112.0	740.8	733.5	7.27	101.856	
900.0	900.0	896.0	895.9	3.6	3.8	171.19	-730.8	113.3	739.6	731.9	7.75	95.458	
1,000.0	1,000.0	996.8	996.6	3.8	4.1	171.07	-729.3	114.5	738.4	730.1	8.22	89.845	
1,100.0	1,100.0	1,097.3	1,097.2	4.0	4.4	170.98	-727.8	115.5	737.0	728.3	8.68	84.904	
1,200.0	1,200.0	1,198.6	1,198.5	4.2	4.7	170.88	-726.2	116.5	735.6	726.4	9.14	80.498	
1,300.0	1,300.0	1,300.8	1,300.6	4.4	5.0	170.81	-724.3	117.2	733.9	724.3	9.60	76.441	
1,400.0	1,400.0	1,398.7	1,398.5	4.6	5.3	170.73	-722.5	117.9	732.1	722.1	10.04	72.908	
1,500.0	1,500.0	1,501.8	1,501.5	4.7	5.6	170.63	-720.5	118.9	730.4	719.9	10.49	69.647	
1,600.0	1,600.0	1,599.0	1,598.7	4.9	5.8	170.53	-718.5	119.9	728.5	717.6	10.91	66.785	
1,700.0	1,700.0	1,697.3	1,697.0	5.1	6.1	170.42	-716.8	121.0	727.0	715.7	11.31	64.268	
1,800.0	1,800.0	1,800.3	1,800.0	5.2	6.4	170.30	-714.8	122.2	725.3	713.6	11.72	61.899	
1,900.0	1,900.0	1,897.0	1,896.7	5.4	6.7	170.14	-713.0	123.9	723.8	711.7	12.09	59.864	
2,000.0	2,000.0	1,997.0	1,996.7	5.6	7.0	169.96	-711.3	126.0	722.5	710.0	12.44	58.053	
2,100.0	2,100.0	2,097.2	2,096.8	5.7	7.2	169.80	-709.6	127.7	721.1	708.3	12.80	56.330	
2,200.0	2,200.0	2,196.8	2,196.4	5.9	7.5	-24.84	-708.0	129.5	718.2	705.0	13.20	54.407	
2,300.0	2,299.8	2,295.2	2,294.8	6.1	7.8	-25.22	-706.3	131.2	712.1	698.6	13.58	52.427	
2,400.0	2,399.5	2,390.3	2,389.8	6.3	8.0	-25.62	-705.6	131.6	703.5	689.6	13.96	50.385	
2,500.0	2,498.7	2,489.0	2,488.5	6.5	8.2	-26.17	-705.2	131.7	692.2	677.9	14.34	48.281	
2,600.0	2,597.5	2,589.7	2,589.3	6.8	8.4	-26.91	-704.6	131.7	677.6	662.9	14.71	46.072	
2,700.0	2,695.6	2,688.9	2,688.4	7.0	8.6	-27.80	-703.9	131.1	659.8	644.7	15.07	43.781	
2,800.0	2,793.1	2,780.7	2,780.2	7.2	8.7	-28.82	-703.4	130.4	639.2	623.9	15.36	41.606	
2,900.0	2,889.6	2,872.2	2,871.7	7.4	8.7	-30.00	-704.3	129.0	617.1	601.5	15.56	39.664	
3,000.0	2,985.3	2,968.3	2,967.8	7.6	8.6	-31.44	-705.7	127.0	592.4	576.7	15.70	37.732	
3,025.0	3,009.0	2,992.4	2,991.9	7.6	8.6	-31.84	-706.0	126.5	585.8	570.1	15.71	37.283	
3,100.0	3,080.1	3,065.8	3,065.2	7.7	8.5	-32.93	-707.0	124.7	565.9	550.1	15.79	35.836	
3,200.0	3,175.0	3,162.2	3,161.6	7.8	8.5	-34.46	-707.9	122.1	539.2	523.2	15.94	33.828	
3,300.0	3,269.8	3,255.5	3,254.8	8.0	8.5	-36.03	-709.2	119.1	513.0	496.9	16.09	31.875	
3,400.0	3,364.6	3,347.8	3,347.1	8.1	8.4	-37.74	-710.9	116.3	487.8	471.5	16.23	30.060	
3,500.0	3,459.5	3,443.9	3,443.2	8.3	8.4	-39.92	-712.4	115.3	463.5	447.2	16.34	28.375	
3,600.0	3,554.3	3,538.9	3,538.1	8.4	8.3	-42.47	-713.0	115.1	439.6	423.2	16.45	26.729	
3,700.0	3,649.1	3,632.1	3,631.4	8.6	8.4	-45.36	-713.5	116.1	417.2	400.6	16.55	25.210	
3,800.0	3,744.0	3,726.1	3,725.4	8.8	8.4	-48.56	-714.4	117.0	396.1	379.5	16.64	23.808	
3,900.0	3,838.8	3,821.6	3,820.9	8.9	8.4	-52.15	-715.3	118.2	376.8	360.0	16.74	22.505	
4,000.0	3,933.6	3,919.0	3,918.2	9.1	8.4	-56.16	-715.9	119.0	358.5	341.7	16.87	21.254	
4,100.0	4,028.5	4,015.7	4,014.9	9.3	8.6	-60.56	-715.9	119.5	341.6	324.6	17.05	20.039	
4,200.0	4,123.3	4,110.4	4,109.6	9.5	8.7	-65.27	-715.6	119.9	326.7	309.4	17.27	18.920	
4,300.0	4,218.1	4,205.1	4,204.3	9.7	8.9	-70.39	-715.3	120.5	314.4	296.9	17.51	17.958	
4,400.0	4,313.0	4,299.6	4,298.8	9.8	9.0	-75.86	-714.8	121.1	305.0	287.3	17.79	17.151	
4,500.0	4,407.8	4,394.6	4,393.9	10.0	9.2	-81.61	-714.3	121.7	298.9	280.8	18.11	16.505	
4,600.0	4,502.6	4,489.5	4,488.7	10.2	9.4	-87.56	-713.6	122.3	296.1	277.6	18.48	16.018	
4,631.4	4,532.4	4,519.3	4,518.5	10.3	9.5	-89.44	-713.3	122.5	295.9	277.3	18.61	15.899 CC, ES	
4,700.0	4,597.5	4,582.8	4,582.0	10.4	9.6	-93.45	-712.8	123.0	296.9	278.0	18.90	15.703	
4,800.0	4,692.3	4,678.0	4,677.2	10.6	9.8	-99.39	-711.9	123.9	301.5	282.2	19.38	15.560	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - FORTY NINER RIDGE 26 FEDERAL_4H - OWB - AWP													Offset Site Error: 0.0 usft
Survey Program: 100-r.5 MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.0	4,787.1	4,773.5	4,772.6	10.9	10.0	-105.13	-711.0	124.4	309.2	289.3	19.88	15.553 SF	
5,000.0	4,881.9	4,868.8	4,867.9	11.1	10.2	-110.59	-709.9	124.8	319.8	299.4	20.39	15.688	
5,100.0	4,976.8	4,962.9	4,962.0	11.4	10.4	-115.62	-708.9	124.9	333.2	312.3	20.90	15.947	
5,200.0	5,071.6	5,056.2	5,055.3	11.6	10.6	-120.24	-707.7	125.3	349.5	328.1	21.41	16.321	
5,300.0	5,166.4	5,150.4	5,149.5	11.9	10.8	-124.54	-706.2	125.8	368.2	346.3	21.93	16.787	
5,400.0	5,261.3	5,245.7	5,244.8	12.1	11.0	-128.48	-704.7	126.2	388.8	366.3	22.45	17.318	
5,500.0	5,356.1	5,340.3	5,339.4	12.4	11.2	-132.00	-703.4	126.5	410.8	387.8	22.94	17.902	
5,600.0	5,450.9	5,436.2	5,435.3	12.6	11.4	-135.19	-702.3	126.7	434.1	410.6	23.43	18.525	
5,636.9	5,486.0	5,471.7	5,470.8	12.7	11.5	-136.28	-702.0	126.7	442.9	419.3	23.59	18.772	
5,700.0	5,546.0	5,531.2	5,530.4	12.8	11.6	-138.16	-701.4	126.7	457.7	433.9	23.86	19.182	
5,800.0	5,642.0	5,633.6	5,632.7	13.1	11.7	-140.82	-701.1	126.6	479.5	455.2	24.28	19.750	
5,900.0	5,738.9	5,734.2	5,733.4	13.3	11.6	-142.77	-702.6	126.2	497.8	473.3	24.52	20.298	
6,000.0	5,836.6	5,830.8	5,829.9	13.5	11.5	-144.24	-704.2	125.8	513.6	488.9	24.73	20.771	
6,100.0	5,935.0	5,931.6	5,930.7	13.7	11.4	-145.40	-706.1	125.6	526.8	501.9	24.92	21.139	
6,200.0	6,034.0	6,032.3	6,031.4	13.8	11.3	-146.25	-708.3	125.1	536.9	511.8	25.09	21.400	
6,300.0	6,133.4	6,130.7	6,129.7	14.0	11.2	-146.82	-710.4	124.7	544.2	519.0	25.24	21.562	
6,400.0	6,233.1	6,230.2	6,229.2	14.1	11.1	-147.13	-712.7	124.5	548.7	523.3	25.39	21.615	
6,500.0	6,333.0	6,328.5	6,327.4	14.2	11.0	-147.21	-714.8	124.4	550.5	525.0	25.52	21.576	
6,562.0	6,395.0	6,391.9	6,390.8	14.3	11.0	47.24	-716.1	124.4	550.2	524.7	25.53	21.549	
6,600.0	6,433.0	6,430.4	6,429.3	14.3	11.0	47.30	-717.0	124.3	549.6	524.0	25.51	21.539	
6,700.0	6,533.0	6,530.2	6,529.1	14.3	10.9	47.46	-719.2	124.1	547.8	522.3	25.50	21.482	
6,800.0	6,633.0	6,630.3	6,629.2	14.3	10.8	47.57	-721.1	123.7	546.3	520.8	25.49	21.429	
6,900.0	6,733.0	6,732.7	6,731.6	14.4	10.7	47.70	-723.4	123.0	544.3	518.8	25.49	21.357	
7,000.0	6,833.0	6,832.5	6,831.3	14.4	10.7	47.85	-725.8	122.4	542.2	516.7	25.48	21.279	
7,100.0	6,933.0	6,930.8	6,929.6	14.4	10.6	48.00	-728.2	121.9	540.2	514.8	25.47	21.212	
7,184.8	7,017.8	7,006.0	7,004.8	14.5	10.6	48.12	-729.7	121.9	539.1	513.7	25.44	21.191	
7,200.0	7,033.0	7,015.5	7,014.3	14.5	10.6	48.15	-729.9	122.1	539.2	513.8	25.44	21.195	
7,300.0	7,133.0	7,069.0	7,067.7	14.5	10.6	48.41	-730.0	125.6	544.2	518.8	25.40	21.426	
7,400.0	7,233.0	7,132.0	7,129.9	14.5	10.7	48.96	-728.7	135.0	556.9	531.5	25.43	21.900	
7,500.0	7,333.0	7,184.9	7,181.2	14.6	10.9	49.69	-726.9	148.0	577.5	552.1	25.43	22.709	
7,600.0	7,433.0	7,244.7	7,237.7	14.6	11.0	50.81	-725.4	167.2	604.5	579.0	25.49	23.712	
7,700.0	7,533.0	7,298.4	7,286.8	14.6	11.1	52.12	-725.0	189.2	637.9	612.4	25.56	24.956	
7,800.0	7,633.0	7,353.0	7,334.4	14.7	11.3	53.71	-726.0	215.7	677.5	651.8	25.68	26.382	
7,900.0	7,733.0	7,395.3	7,369.8	14.7	11.4	55.04	-727.2	238.8	723.0	697.2	25.78	28.040	
8,000.0	7,833.0	7,432.8	7,399.8	14.8	11.5	56.25	-728.2	261.4	774.4	748.5	25.92	29.877	
8,100.0	7,933.0	7,468.8	7,427.3	14.8	11.7	57.39	-728.8	284.4	831.2	805.1	26.09	31.855	
8,200.0	8,033.0	7,510.0	7,457.3	14.8	11.8	58.68	-729.2	312.7	892.9	866.5	26.33	33.909	
8,300.0	8,133.0	7,541.0	7,478.9	14.9	12.0	59.62	-729.4	335.0	958.3	931.7	26.55	36.088	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - IRON THRONE FEDERAL COM 504H - PILOT HOLE - PWP2													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	0.0	0.0	-0.21	30.0	-0.1	30.0				
100.0	100.0	100.0	100.0	0.8	0.8	-0.21	30.0	-0.1	30.0	28.0	2.02	14.833	
200.0	200.0	200.0	200.0	1.4	1.4	-0.21	30.0	-0.1	30.0	26.7	3.34	8.975	
300.0	300.0	300.0	300.0	1.9	1.9	-0.21	30.0	-0.1	30.0	25.8	4.23	7.098	
400.0	400.0	400.0	400.0	2.2	2.2	-0.21	30.0	-0.1	30.0	25.1	4.94	6.069	
500.0	500.0	500.0	500.0	2.6	2.6	-0.21	30.0	-0.1	30.0	24.4	5.56	5.392	
600.0	600.0	600.0	600.0	2.8	2.8	-0.21	30.0	-0.1	30.0	23.9	6.12	4.901	
700.0	700.0	700.0	700.0	3.1	3.1	-0.21	30.0	-0.1	30.0	23.4	6.63	4.523	
800.0	800.0	800.0	800.0	3.3	3.3	-0.21	30.0	-0.1	30.0	22.9	7.11	4.221	
900.0	900.0	900.0	900.0	3.6	3.6	-0.21	30.0	-0.1	30.0	22.4	7.55	3.971	
1,000.0	1,000.0	1,000.0	1,000.0	3.8	3.8	-0.21	30.0	-0.1	30.0	22.0	7.98	3.760	
1,100.0	1,100.0	1,100.0	1,100.0	4.0	4.0	-0.21	30.0	-0.1	30.0	21.6	8.38	3.579	
1,200.0	1,200.0	1,200.0	1,200.0	4.2	4.2	-0.21	30.0	-0.1	30.0	21.2	8.77	3.421	
1,300.0	1,300.0	1,300.0	1,300.0	4.4	4.4	-0.21	30.0	-0.1	30.0	20.9	9.14	3.281	
1,400.0	1,400.0	1,400.0	1,400.0	4.6	4.6	-0.21	30.0	-0.1	30.0	20.5	9.50	3.156	
1,500.0	1,500.0	1,500.0	1,500.0	4.7	4.7	-0.21	30.0	-0.1	30.0	20.1	9.85	3.044	
1,600.0	1,600.0	1,600.0	1,600.0	4.9	4.9	-0.21	30.0	-0.1	30.0	19.8	10.19	2.943 Normal Operations	
1,700.0	1,700.0	1,700.0	1,700.0	5.1	5.1	-0.21	30.0	-0.1	30.0	19.5	10.52	2.851 Normal Operations	
1,800.0	1,800.0	1,800.0	1,800.0	5.2	5.2	-0.21	30.0	-0.1	30.0	19.2	10.85	2.766 Normal Operations	
1,900.0	1,900.0	1,900.0	1,900.0	5.4	5.4	-0.21	30.0	-0.1	30.0	18.8	11.16	2.688 Normal Operations	
2,000.0	2,000.0	2,000.0	2,000.0	5.6	5.6	-0.21	30.0	-0.1	30.0	18.5	11.47	2.615 Normal Operations	
2,100.0	2,100.0	2,100.0	2,100.0	5.7	5.7	-0.21	30.0	-0.1	30.0	18.2	11.77	2.548 Normal Operations, CC, ES, SF	
2,200.0	2,200.0	2,200.0	2,200.0	5.9	5.9	166.19	30.0	-0.1	31.7	19.6	12.14	2.611 Normal Operations	
2,300.0	2,299.8	2,299.8	2,299.8	6.1	6.0	168.11	30.0	-0.1	36.8	24.3	12.49	2.947 Normal Operations	
2,400.0	2,399.5	2,399.5	2,399.5	6.3	6.2	170.35	30.0	-0.1	45.4	32.5	12.83	3.535	
2,500.0	2,498.7	2,498.7	2,498.7	6.5	6.3	172.36	30.0	-0.1	57.4	44.2	13.18	4.357	
2,600.0	2,597.5	2,597.5	2,597.5	6.8	6.4	173.96	30.0	-0.1	72.9	59.4	13.52	5.397	
2,700.0	2,695.6	2,695.6	2,695.6	7.0	6.6	175.18	30.0	-0.1	91.9	78.1	13.85	6.638	
2,800.0	2,793.1	2,793.1	2,793.1	7.2	6.7	176.09	30.0	-0.1	114.4	100.2	14.18	8.064	
2,900.0	2,889.6	2,889.6	2,889.6	7.4	6.8	176.78	30.0	-0.1	140.2	125.7	14.51	9.661	
3,000.0	2,985.3	2,985.3	2,985.3	7.6	7.0	177.31	30.0	-0.1	169.4	154.6	14.84	11.416	
3,025.0	3,009.0	3,009.1	3,009.1	7.6	7.0	177.42	30.0	-0.1	177.2	162.3	14.89	11.901	
3,100.0	3,080.1	3,080.5	3,080.5	7.7	7.1	177.39	30.2	-1.2	200.9	185.9	15.06	13.339	
3,200.0	3,175.0	3,175.7	3,175.6	7.8	7.3	176.64	30.8	-5.4	232.4	217.1	15.31	15.181	
3,300.0	3,269.8	3,270.8	3,270.4	8.0	7.5	175.36	31.9	-12.7	263.8	248.3	15.56	16.958	
3,400.0	3,364.6	3,365.5	3,364.5	8.1	7.6	173.76	33.5	-22.8	295.4	279.6	15.78	18.714	
3,500.0	3,459.5	3,460.0	3,458.5	8.3	7.7	172.38	35.1	-33.4	327.0	311.0	16.03	20.400	
3,600.0	3,554.3	3,554.6	3,552.4	8.4	7.8	171.25	36.7	-44.0	358.9	342.6	16.30	22.024	
3,700.0	3,649.1	3,649.2	3,646.4	8.6	7.9	170.30	38.3	-54.6	390.8	374.3	16.56	23.595	
3,800.0	3,744.0	3,743.8	3,740.4	8.8	8.0	169.49	40.0	-65.2	422.8	406.0	16.84	25.114	
3,900.0	3,838.8	3,838.3	3,834.4	8.9	8.1	168.80	41.6	-75.8	454.9	437.8	17.11	26.581	
4,000.0	3,933.6	3,932.9	3,928.3	9.1	8.2	168.19	43.2	-86.3	487.1	469.7	17.40	27.994	
4,100.0	4,028.5	4,027.7	4,022.5	9.3	8.4	167.67	44.8	-96.9	519.2	501.5	17.69	29.354	
4,200.0	4,123.3	4,123.3	4,117.6	9.5	8.5	167.32	46.3	-106.4	551.3	533.3	17.98	30.668	
4,300.0	4,218.1	4,219.2	4,213.1	9.7	8.6	167.18	47.5	-114.4	583.2	565.0	18.27	31.920	
4,400.0	4,313.0	4,315.1	4,308.9	9.8	8.7	167.21	48.5	-120.9	615.0	596.4	18.57	33.119	
4,500.0	4,407.8	4,411.2	4,404.8	10.0	8.8	167.39	49.2	-125.7	646.6	627.7	18.87	34.269	
4,600.0	4,502.6	4,507.2	4,500.8	10.2	9.0	167.69	49.7	-128.9	678.0	658.8	19.17	35.373	
4,700.0	4,597.5	4,603.3	4,596.8	10.4	9.1	168.10	50.0	-130.6	709.2	689.8	19.46	36.438	
4,800.0	4,692.3	4,698.7	4,692.3	10.6	9.1	168.59	50.0	-130.8	740.4	720.7	19.73	37.532	
4,900.0	4,787.1	4,793.6	4,787.1	10.9	9.2	169.06	50.0	-130.8	771.6	751.5	20.03	38.513	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - IRON THRONE FEDERAL COM 504H - PILOT HOLE - PWP2												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,881.9	4,888.4	4,881.9	11.1	9.3	169.49	50.0	-130.8	802.8	782.5	20.34	39.463	
5,100.0	4,976.8	4,983.2	4,976.8	11.4	9.4	169.88	50.0	-130.8	834.1	813.4	20.65	40.382	
5,200.0	5,071.6	5,078.1	5,071.6	11.6	9.5	170.25	50.0	-130.8	865.4	844.4	20.97	41.272	
5,300.0	5,166.4	5,172.9	5,166.4	11.9	9.6	170.60	50.0	-130.8	896.7	875.4	21.28	42.134	
5,400.0	5,261.3	5,267.7	5,261.3	12.1	9.7	170.92	50.0	-130.8	928.1	906.5	21.60	42.969	
5,500.0	5,356.1	5,362.6	5,356.1	12.4	9.8	171.21	50.0	-130.8	959.4	937.5	21.92	43.779	
5,600.0	5,450.9	5,457.4	5,450.9	12.6	9.9	171.49	50.0	-130.8	990.9	968.6	22.24	44.563	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - IRON THRONE FEDERAL COM 504H - ST01 - PWP2													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 9416-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.0 usft
Reference	Offset			Semi Major Axis			Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-0.21	30.0	-0.1	30.0					
100.0	100.0	100.0	100.0	0.8	0.8	-0.21	30.0	-0.1	30.0	28.0	2.02	14.833		
200.0	200.0	200.0	200.0	1.4	1.4	-0.21	30.0	-0.1	30.0	26.7	3.34	8.975		
300.0	300.0	300.0	300.0	1.9	1.9	-0.21	30.0	-0.1	30.0	25.8	4.23	7.098		
400.0	400.0	400.0	400.0	2.2	2.2	-0.21	30.0	-0.1	30.0	25.1	4.94	6.069		
500.0	500.0	500.0	500.0	2.6	2.6	-0.21	30.0	-0.1	30.0	24.4	5.56	5.392		
600.0	600.0	600.0	600.0	2.8	2.8	-0.21	30.0	-0.1	30.0	23.9	6.12	4.901		
700.0	700.0	700.0	700.0	3.1	3.1	-0.21	30.0	-0.1	30.0	23.4	6.63	4.523		
800.0	800.0	800.0	800.0	3.3	3.3	-0.21	30.0	-0.1	30.0	22.9	7.11	4.221		
900.0	900.0	900.0	900.0	3.6	3.6	-0.21	30.0	-0.1	30.0	22.4	7.55	3.971		
1,000.0	1,000.0	1,000.0	1,000.0	3.8	3.8	-0.21	30.0	-0.1	30.0	22.0	7.98	3.760		
1,100.0	1,100.0	1,100.0	1,100.0	4.0	4.0	-0.21	30.0	-0.1	30.0	21.6	8.38	3.579		
1,200.0	1,200.0	1,200.0	1,200.0	4.2	4.2	-0.21	30.0	-0.1	30.0	21.2	8.77	3.421		
1,300.0	1,300.0	1,300.0	1,300.0	4.4	4.4	-0.21	30.0	-0.1	30.0	20.9	9.14	3.281		
1,400.0	1,400.0	1,400.0	1,400.0	4.6	4.6	-0.21	30.0	-0.1	30.0	20.5	9.50	3.156		
1,500.0	1,500.0	1,500.0	1,500.0	4.7	4.7	-0.21	30.0	-0.1	30.0	20.1	9.85	3.044		
1,600.0	1,600.0	1,600.0	1,600.0	4.9	4.9	-0.21	30.0	-0.1	30.0	19.8	10.19	2.943 Normal Operations		
1,700.0	1,700.0	1,700.0	1,700.0	5.1	5.1	-0.21	30.0	-0.1	30.0	19.5	10.52	2.851 Normal Operations		
1,800.0	1,800.0	1,800.0	1,800.0	5.2	5.2	-0.21	30.0	-0.1	30.0	19.2	10.85	2.766 Normal Operations		
1,900.0	1,900.0	1,900.0	1,900.0	5.4	5.4	-0.21	30.0	-0.1	30.0	18.8	11.16	2.688 Normal Operations		
2,000.0	2,000.0	2,000.0	2,000.0	5.6	5.6	-0.21	30.0	-0.1	30.0	18.5	11.47	2.615 Normal Operations		
2,100.0	2,100.0	2,100.0	2,100.0	5.7	5.7	-0.21	30.0	-0.1	30.0	18.2	11.77	2.548 Normal Operations, CC, ES, SF		
2,200.0	2,200.0	2,200.0	2,200.0	5.9	5.9	166.19	30.0	-0.1	31.7	19.6	12.14	2.611 Normal Operations		
2,300.0	2,299.8	2,299.8	2,299.8	6.1	6.0	168.11	30.0	-0.1	36.8	24.3	12.49	2.947 Normal Operations		
2,400.0	2,399.5	2,399.5	2,399.5	6.3	6.2	170.35	30.0	-0.1	45.4	32.5	12.83	3.535		
2,500.0	2,498.7	2,498.7	2,498.7	6.5	6.3	172.36	30.0	-0.1	57.4	44.2	13.18	4.357		
2,600.0	2,597.5	2,597.5	2,597.5	6.8	6.4	173.96	30.0	-0.1	72.9	59.4	13.52	5.397		
2,700.0	2,695.6	2,695.6	2,695.6	7.0	6.6	175.18	30.0	-0.1	91.9	78.1	13.85	6.638		
2,800.0	2,793.1	2,793.1	2,793.1	7.2	6.7	176.09	30.0	-0.1	114.4	100.2	14.18	8.064		
2,900.0	2,889.6	2,889.6	2,889.6	7.4	6.8	176.78	30.0	-0.1	140.2	125.7	14.51	9.661		
3,000.0	2,985.3	2,985.3	2,985.3	7.6	7.0	177.31	30.0	-0.1	169.4	154.6	14.84	11.416		
3,025.0	3,009.0	3,009.1	3,009.1	7.6	7.0	177.42	30.0	-0.1	177.2	162.3	14.89	11.901		
3,100.0	3,080.1	3,080.5	3,080.5	7.7	7.1	177.39	30.2	-1.2	200.9	185.9	15.06	13.339		
3,200.0	3,175.0	3,175.7	3,175.6	7.8	7.3	176.64	30.8	-5.4	232.4	217.1	15.31	15.181		
3,300.0	3,269.8	3,270.8	3,270.4	8.0	7.5	175.36	31.9	-12.7	263.8	248.3	15.56	16.958		
3,400.0	3,364.6	3,365.5	3,364.5	8.1	7.6	173.76	33.5	-22.8	295.4	279.6	15.78	18.714		
3,500.0	3,459.5	3,460.0	3,458.5	8.3	7.7	172.38	35.1	-33.4	327.0	311.0	16.03	20.400		
3,600.0	3,554.3	3,554.6	3,552.4	8.4	7.8	171.25	36.7	-44.0	358.9	342.6	16.30	22.024		
3,700.0	3,649.1	3,649.2	3,646.4	8.6	7.9	170.30	38.3	-54.6	390.8	374.3	16.56	23.595		
3,800.0	3,744.0	3,743.8	3,740.4	8.8	8.0	169.49	40.0	-65.2	422.8	406.0	16.84	25.114		
3,900.0	3,838.8	3,838.3	3,834.4	8.9	8.1	168.80	41.6	-75.8	454.9	437.8	17.11	26.581		
4,000.0	3,933.6	3,932.9	3,928.3	9.1	8.2	168.19	43.2	-86.3	487.1	469.7	17.40	27.994		
4,100.0	4,028.5	4,027.7	4,022.5	9.3	8.4	167.67	44.8	-96.9	519.2	501.5	17.69	29.354		
4,200.0	4,123.3	4,123.3	4,117.6	9.5	8.5	167.32	46.3	-106.4	551.3	533.3	17.98	30.668		
4,300.0	4,218.1	4,219.2	4,213.1	9.7	8.6	167.18	47.5	-114.4	583.2	565.0	18.27	31.920		
4,400.0	4,313.0	4,315.1	4,308.9	9.8	8.7	167.21	48.5	-120.9	615.0	596.4	18.57	33.119		
4,500.0	4,407.8	4,411.2	4,404.8	10.0	8.8	167.39	49.2	-125.7	646.6	627.7	18.87	34.269		
4,600.0	4,502.6	4,507.2	4,500.8	10.2	9.0	167.69	49.7	-128.9	678.0	658.8	19.17	35.373		
4,700.0	4,597.5	4,603.3	4,596.8	10.4	9.1	168.10	50.0	-130.6	709.2	689.8	19.46	36.438		
4,800.0	4,692.3	4,698.7	4,692.3	10.6	9.1	168.59	50.0	-130.8	740.4	720.7	19.73	37.532		
4,900.0	4,787.1	4,793.6	4,787.1	10.9	9.2	169.06	50.0	-130.8	771.6	751.5	20.03	38.513		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Offset Design: IRON THRONE PROJECT - IRON THRONE FEDERAL COM 504H - ST01 - PWP2												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 9416-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,881.9	4,888.4	4,881.9	11.1	9.3	169.49	50.0	-130.8	802.8	782.5	20.34	39.463	
5,100.0	4,976.8	4,983.2	4,976.8	11.4	9.4	169.88	50.0	-130.8	834.1	813.4	20.65	40.382	
5,200.0	5,071.6	5,078.1	5,071.6	11.6	9.5	170.25	50.0	-130.8	865.4	844.4	20.97	41.272	
5,300.0	5,166.4	5,172.9	5,166.4	11.9	9.6	170.60	50.0	-130.8	896.7	875.4	21.28	42.134	
5,400.0	5,261.3	5,267.7	5,261.3	12.1	9.7	170.92	50.0	-130.8	928.1	906.5	21.60	42.969	
5,500.0	5,356.1	5,362.6	5,356.1	12.4	9.8	171.21	50.0	-130.8	959.4	937.5	21.92	43.779	
5,600.0	5,450.9	5,457.4	5,450.9	12.6	9.9	171.49	50.0	-130.8	990.9	968.6	22.24	44.563	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=32ft @ 3394.0usft

Offset Depths are relative to Offset Datum

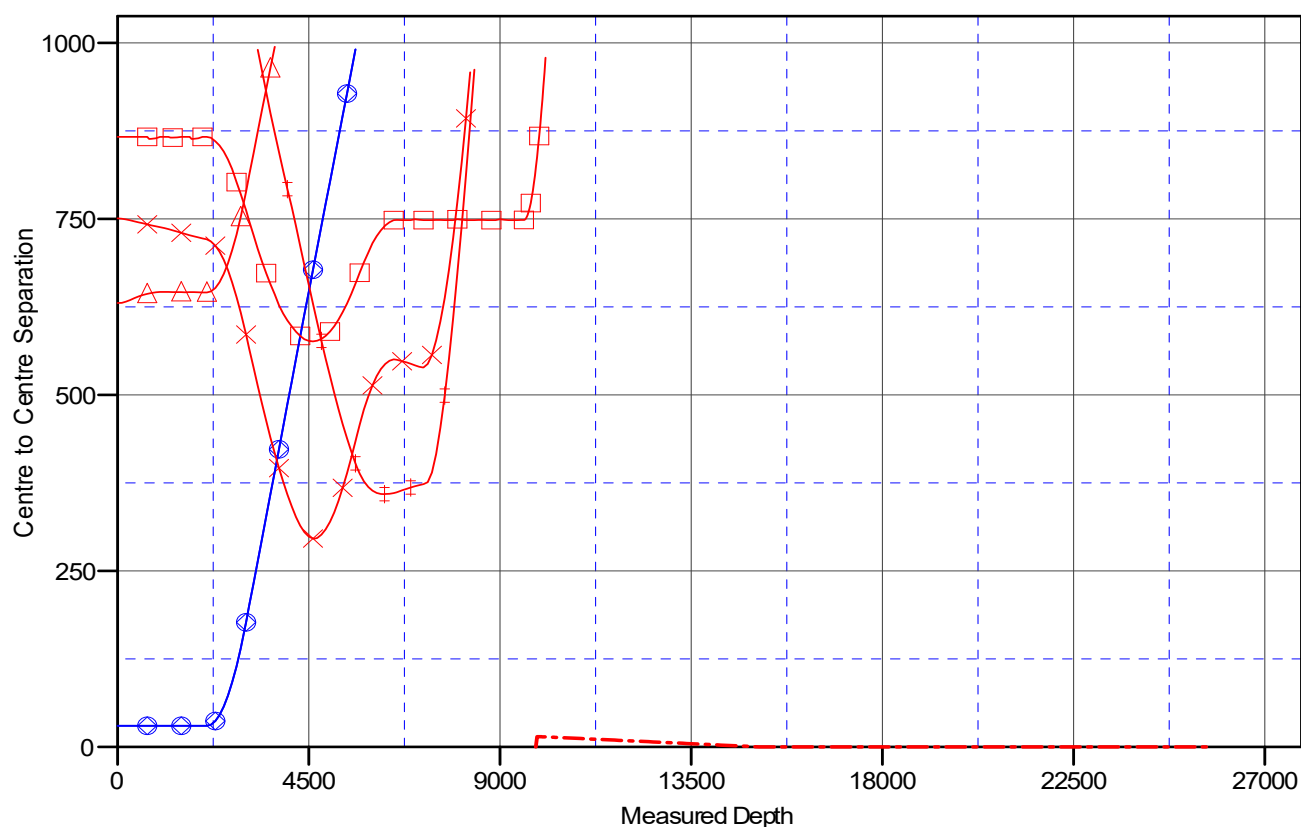
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: IRON THRONE FEDERAL COM 505H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.25°

Ladder Plot



LEGEND

IRON THRONE FEDERAL COM505H, PILOT HOLE, PWP2 V0
IRON THRONE FEDERAL COM505H, STD1, PWP2 V0
FORTY NINER RIDGE 26 FEDERAL_4H, OWB, AWP V0
FORTY NINER RIDGE 26 FEDERAL_2H, OWB, AWP V0
EYORE FED COM 27_26_P1M_4H, OWB, AWP V0
RNR FEDERAL 26_1, OWB, AWP V0

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

ConocoPhillips

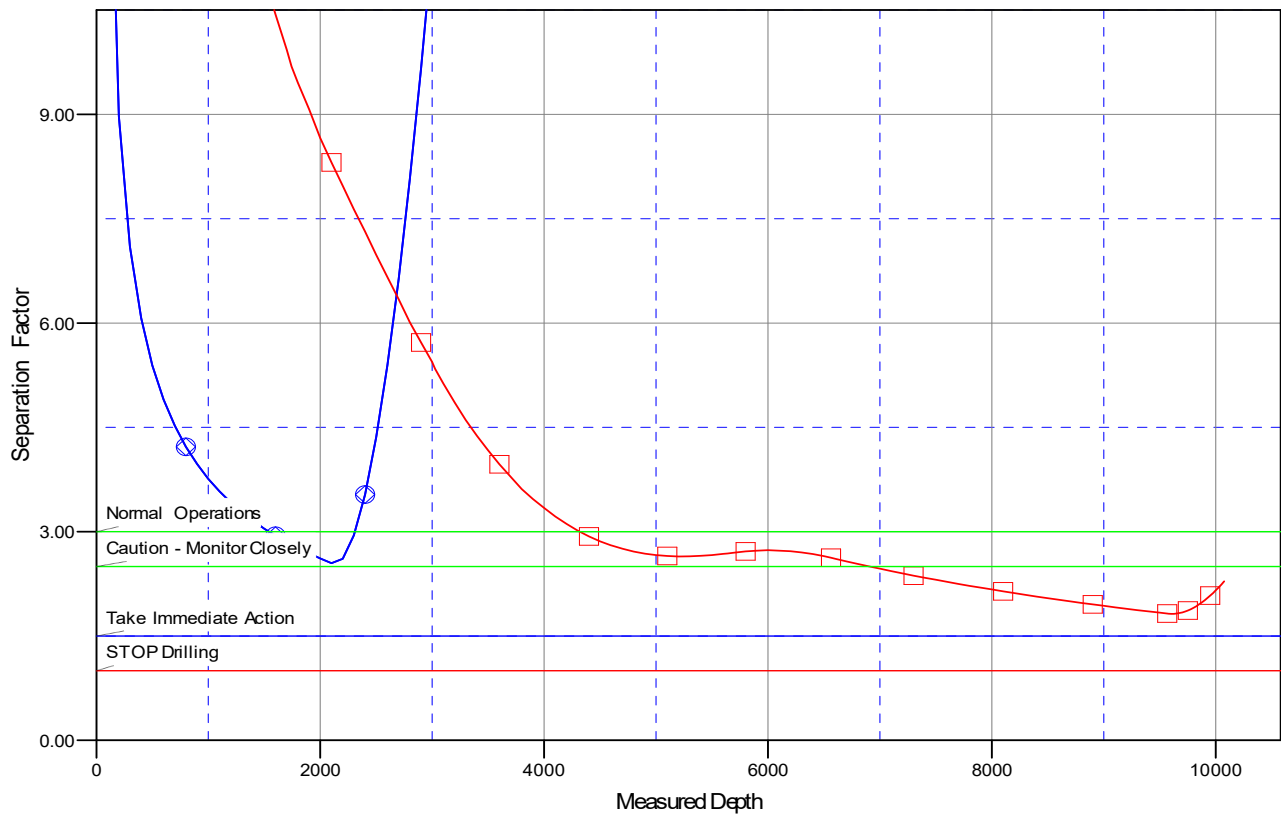
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well IRON THRONE FEDERAL COM 505H
Project:	ATLAS PROSPECT (DBW)	TVD Reference:	RKB=32ft @ 3394.0usft
Reference Site:	IRON THRONE PROJECT	MD Reference:	RKB=32ft @ 3394.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	IRON THRONE FEDERAL COM 505H	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:	PWP2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=32ft @ 3394.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: IRON THRONE FEDERAL COM 505H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.25°

Separation Factor Plot



LEGEND

IRON THRONE FEDERAL COM504H, PILOT HOLE, PWP2 V0
 IRON THRONE FEDERAL COM504H, ST01, PWP2 V0
 FORTY NINER RIDGE 26 FEDERAL_4H, OWB, AWP V0
 FORTY NINER RIDGE 26 FEDERAL_2H, OWB, AWP V0
 EBYORE FED COM 27_28, PM_4H, OWB, AWP V0
 FNR FEDERAL 26_1, OWB, AWP V0

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

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<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

Action 484621

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 484621
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	8/12/2025