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

Sundry Print Report

10/06/2025

Well Name: RICK VAUGHN WC FED COM

Well Location: T26S / R29E / SEC 7 / SESW / 32.0501274 / -104.027554

County or Parish/State: EDDY / NM

Well Number: 811H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM143617

Unit or CA Name:

Unit or CA Number:

US Well Number: 3001555645

Operator: MARATHON OIL PERMIAN LLC

Notice of Intent

Sundry ID: 2870803

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 08/29/2025

Time Sundry Submitted: 10:01

Date proposed operation will begin: 08/29/2025

Procedure Description: Marathon Oil Permian LLC requests a change to our approved APD for this well to reflect a change in BHL. Change FROM: 330’ FNL & 660’ FWL, 6-26S-29E Change TO: 200’ FNL & 660’ FWL, Lot 1 6-26S-29E, Eddy Co., NM. Additionally, Marathon requests permission for offline intermediate cementing, a break testing variance, and the ability to batch drill the Rick Vaughn Fed Com project. Revised C-102s, directional plans, and drill procedures attached.

NOI Attachments

Procedure Description

Tenaris_Data_Sheets___3_String___WCA___Rick_Vaughn_800s_20250829100124.pdf

RICK_VAUGHN_FEDERAL_COM_811H_WPlot_20250829100112.pdf

RICK_VAUGHN_FEDERAL_COM_811H_PWP1_PLAN_RPT_20250829100058.pdf

RICK_VAUGHN_FEDERAL_COM_811H_PWP1_AC_RPT_20250829100047.pdf

RICK_VAUGHN_FEDERAL_COM_811H_C102_signed_6_10_25_20250829100034.pdf

Rick_Vaughn_Fed_Com_811H_revised_drill_procedure_8_28_25_20250829100019.pdf

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Conditions of Approval

Additional

SEC31_T25S_R29E_RICK_VAUGHN_FED_COM_Eddy__CONOCOPHILLIPS_COMPANY_45930_JS_20250930112115.pdf

RICK_VAUGHN_FED_COM_811H_COAs_20250930112114.pdf

Operator

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

Operator Electronic Signature: STAN WAGNER

Signed on: AUG 29, 2025 10:01 AM

Name: MARATHON OIL PERMIAN LLC

Title: Regulatory Advisor

Street Address: 600 WEST ILLINOIS AVE

City: MIDLAND **State:** TX

Phone: (432) 253-9685

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

Field

Representative Name:

Street Address:

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

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: CWALLS@BLM.GOV

Disposition: Approved

Disposition Date: 10/02/2025

Signature: Chris Walls

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

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

10. Field and Pool or Exploratory Area

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

11. Country or Parish, State

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

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

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

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

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

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

Office

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

Additional Information

Location of Well

0. SHL: SESW / 88 FSL / 1419 FWL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.0501274 / LONG: -104.027554 (TVD: 0 feet, MD: 0 feet)

PPP: SWNW / 0 FSL / 660 FWL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.0643998 / LONG: -104.0299966 (TVD: 10500 feet, MD: 15307 feet)

PPP: SWNW / 1316 FSL / 660 FWL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.0680165 / LONG: -104.0299944 (TVD: 10500 feet, MD: 16626 feet)

PPP: SWSW / 330 FSL / 660 FWL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.0508001 / LONG: -104.0300048 (TVD: 10500 feet, MD: 10840 feet)

BHL: LOT 1 / 330 FNL / 660 FWL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.0780372 / LONG: -104.0299883 (TVD: 10500 feet, MD: 20271 feet)

SEC31-T25S-R29E_RICK VAUGHN FED COM_Eddy__CONOCOPHILLIPS COMPANY_45930_JS

RICK VAUGHN FED COM

10 3/4 surface csg in a 14 3/4 inch hole. Design Factors — Surface

Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	45.50	J 55	BTC	44.92	13.06	0.65	350	23	1.13	25.18	15,925
"B"			BTC				**0**				**0**
	w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500		Tail Cmt	does not	circ to sfc.	Totals:	350				15,925

Comparison of Proposed to Minimum Required Cement Volumes

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
14 3/4	0.5563	211	293	195	50	8.80	3167	5M	1.50

Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK. Alt burst ok

7 5/8 casing inside the 10 3/4 Design Factors — Int 1

Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70	L 80	BTC	2.18	1.23	0.91	7,500	1	1.32	2.13	222,750
"B"	**29.70**	**P 110**	W-513	6.18	**0.97**	**1.25**	**3,075**	**2**	**1.82**	1.69	**91,328**
	w/8.4#/g mud, 30min Sfc Csg Test psig: 1,650					Totals:	10,575				314,078
	The cement volume(s) are intended to achieve a top of			0	ft from surface or a		350				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
9 7/8	0.2148	1173	2845	2274	25	10.00	5216	10M	0.69
D V Tool(s):			2772				sum of sx	Σ CuFt	Σ%excess
t by stage % :		70	11				1579	3509	54

Class 'H' tail cmt yld > 1.20 MASP is within 10% of 5000psig, need exrta equip?

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.92, b, c, d All > 0.70, OK. Keep Casing Full, Alt Burst ok, Does not meet CFO 25% excess

Tail cmt

5 1/2 casing inside the 7 5/8 Design Factors — Prod 1

Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	P 110	BTC	2.96	1.52	1.66	10,375	2	2.42	2.22	207,500
"B"	**20.00**	**P 110**	W441	6.93	**1.48**	**1.89**	**10,576**	**2**	**2.75**	2.36	**211,520**
	w/8.4#/g mud, 30min Sfc Csg Test psig: 2,283					Totals:	20,951				419,020
	The cement volume(s) are intended to achieve a top of			10375	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
6 3/4	0.0835	1584	2156	885	144	13.50			0.35

Class 'C' tail cmt yld > 1.35

Clearance ok must tie back 500ft

#N/A

0 5 1/2 Design Factors — <Choose Casing>

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.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	RICK VAUGHN FED COM 811H
LOCATION:	Section 7, T.26 S., R.29 E., NMP
COUNTY:	Eddy County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	(•) None	( ) Secretary	( ) R-111-P
Cave/Karst Potential	( ) Low	(•) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Wellhead Variance	( ) Diverter		
Other	[ ] 4 String	[ ] Capitan Reef	[ ] WIPP
Other	[x] Fluid Filled	[ ] Pilot Hole	[ ] Open Annulus
Cementing	[x] Contingency Cement Squeeze	[x] EchoMeter	[ ] Primary Cement Squeeze
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit
Special Requirements	[ ] Batch Sundry		
Special Requirements Variance	[x] Break Testing	[x] Offline Cementing	[x] Casing Clearance

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.

B. CASING

Primary Casing Design:

1. The **10-3/4** inch surface casing shall be set at approximately **350 feet** (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. **Keep casing full during run for collapse safety factor.** The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

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

❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Contingency Squeeze:

Operator has proposed to pump down 10-3/4" X 7-5/8" annulus. Operator must top out cement after the bradenhead squeeze and verify cement to surface. Operator can also check TOC with Echo-meter. CBL must be run from TD of the 7-5/8" casing to surface if confidence is lacking on the quality of the bradenhead squeeze cement job. Submit results to BLM.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

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

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
- **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

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 **10-3/4** 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 Onshore Order 1 and 2.
- 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.

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

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 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 Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Casing Clearance:

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

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

Offline Cementing:
Contact the BLM prior to the commencement of any offline cementing procedure.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

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

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
    a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
    b. When the operator proposes to set surface casing with Spudder Rig
        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 9/30/2025

Tenaris

TXP® BTC

Coupling	Pipe Body
Grade: **J55 (Casing)**	Grade: **J55 (Casing)**
Body: **Bright Green**	1st Band: **Bright Green**
1st Band: **White**	2nd Band: **-**
2nd Band: **-**	3rd Band: **-**
3rd Band: **-**	4th Band: **-**
	5th Band: **-**
	6th Band: **-**

Outside Diameter	10.750 in.	**Wall Thickness**	0.400 in.	**Grade**	J55 (Casing)
Min. Wall Thickness	87.50 %	**Pipe Body Drift**	API Standard	**Type**	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	10.750 in.	**Wall Thickness**	0.400 in.	**Body Yield Strength**	715 x1000 lb
Nominal Weight	45.50 lb/ft	**Plain End Weight**	44.26 lb/ft	**Min. Internal Yield Pressure**	3580 psi
Drift	9.794 in.	**OD Tolerance**	API	**SMYS**	55,000 psi
Nominal ID	9.950 in.			**Collapse Pressure**	2090 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	11.750 in.	**Tension Efficiency**	100 %	**Minimum**	19,520 ft-lb
Coupling Length	10.825 in.	**Joint Yield Strength**	715 x1000 lb	**Optimum**	21,690 ft-lb
Connection ID	9.938 in.	**Internal Pressure Capacity**	3580 psi	**Maximum**	23,860 ft-lb
Make-up Loss	4.891 in.	**Compression Efficiency**	100 %		
Threads per inch	5	**Compression Strength**	715 x1000 lb	**Operation Limit Torques**	
Connection OD Option	Regular	**Max. Allowable Bending**	23 °/100 ft	**Operating Torque**	27,400 ft-lb
		External Pressure Capacity	2090 psi	**Yield Torque**	34,700 ft-lb

Notes

This connection is fully interchangeable with:
TXP® BTC - 10.75 in. - 0.35 (40.50) / 0.45 (51.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
Standard coupling design comes with optimized 20° bevel.

For the lastest performance data, always visit our website: www.tenaris.com
For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Tenaris

TXP® BTC

Coupling	Pipe Body
Grade: **L80-ICY**	Grade: **L80-ICY**
Body: **Red**	1st Band: **Red**
1st Band: **Brown**	2nd Band: **Brown**
2nd Band: **Pale Green**	3rd Band: **Pale Green**
3rd Band: **-**	4th Band: **Pale Green**
	5th Band: **-**
	6th Band: **-**

Outside Diameter	7.625 in.	**Wall Thickness**	0.375 in.	**Grade**	L80-ICY
Min. Wall Thickness	87.50 %	**Pipe Body Drift**	API Standard	**Type**	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	7.625 in.	**Wall Thickness**	0.375 in.	**Body Yield Strength**	726 x1000 lb
Nominal Weight	29.70 lb/ft	**Plain End Weight**	29.06 lb/ft	**Min. Internal Yield Pressure**	7320 psi
Drift	6.750 in.	**OD Tolerance**	API	**SMYS**	85,000 psi
Nominal ID	6.875 in.			**Collapse Pressure**	5900 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	8.500 in.	**Tension Efficiency**	100 %	**Minimum**	16,100 ft-lb
Coupling Length	10.575 in.	**Joint Yield Strength**	726 x1000 lb	**Optimum**	17,890 ft-lb
Connection ID	6.863 in.	**Internal Pressure Capacity**	7320 psi	**Maximum**	19,680 ft-lb
Make-up Loss	4.766 in.	**Compression Efficiency**	100 %		
Threads per inch	5	**Compression Strength**	726 x1000 lb	**Operation Limit Torques**	
Connection OD Option	Regular	**Max. Allowable Bending**	51 °/100 ft	**Operating Torque**	20,600 ft-lb
		External Pressure Capacity	5900 psi	**Yield Torque**	25,100 ft-lb

Notes

This connection is fully interchangeable with:
TXP® BTC - 7.625 in. - 0.328 (26.40) / 0.43 (33.70) / 0.5 (39.00) / 0.562 (42.80) / 0.595 (45.30) / 0.625 (47.10) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
Standard coupling design comes with optimized 20° bevel.

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For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Tenaris

Wedge 513®

Coupling	Pipe Body
Grade: **P110-ICY**	Grade: **P110-ICY**
Body: **White**	1st Band: **White**
1st Band: **Pale Green**	2nd Band: **Pale Green**
2nd Band: **-**	3rd Band: **Pale Green**
3rd Band: **-**	4th Band: **-**
	5th Band: **-**
	6th Band: **-**

Outside Diameter	7.625 in.	**Wall Thickness**	0.375 in.	**Grade**	P110-ICY
Min. Wall Thickness	90.00 %	**Pipe Body Drift**	API Standard	**Type**	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	7.625 in.	**Wall Thickness**	0.375 in.	**Body Yield Strength**	1068 x1000 lb
Nominal Weight	29.70 lb/ft	**Plain End Weight**	29.06 lb/ft	**Min. Internal Yield Pressure**	11,070 psi
Drift	6.750 in.	**OD Tolerance**	API	**SMYS**	125,000 psi
Nominal ID	6.875 in.			**Collapse Pressure**	7360 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	7.625 in.	**Tension Efficiency**	60 %	**Minimum**	9000 ft-lb
Connection ID	6.800 in.	**Joint Yield Strength**	641 x1000 lb	**Optimum**	10,800 ft-lb
Make-up Loss	4.420 in.	**Internal Pressure Capacity**	11,070 psi	**Maximum**	15,800 ft-lb
Threads per inch	3.29	**Compression Efficiency**	75.20 %		
Connection OD Option	Regular	**Compression Strength**	803 x1000 lb	**Operation Limit Torques**	
		Max. Allowable Bending	45 °/100 ft	**Operating Torque**	53,000 ft-lb
		External Pressure Capacity	7360 psi	**Yield Torque**	79,000 ft-lb

Notes

This connection is fully interchangeable with:
Wedge 523® - 7.625 in. - 0.375 (29.70) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

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For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Tenaris

TXP® BTC

Coupling	Pipe Body
Grade: **P110-ICY**	Grade: **P110-ICY**
Body: **White**	1st Band: **White**
1st Band: **Pale Green**	2nd Band: **Pale Green**
2nd Band: **-**	3rd Band: **Pale Green**
3rd Band: **-**	4th Band: **-**
	5th Band: **-**
	6th Band: **-**

Outside Diameter	5.500 in.	**Wall Thickness**	0.361 in.	**Grade**	P110-ICY
Min. Wall Thickness	87.50 %	**Pipe Body Drift**	API Standard	**Type**	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	5.500 in.	**Wall Thickness**	0.361 in.	**Body Yield Strength**	729 x1000 lb
Nominal Weight	20.00 lb/ft	**Plain End Weight**	19.83 lb/ft	**Min. Internal Yield Pressure**	14,360 psi
Drift	4.653 in.	**OD Tolerance**	API	**SMYS**	125,000 psi
Nominal ID	4.778 in.			**Collapse Pressure**	12,300 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.100 in.	**Tension Efficiency**	100 %	**Minimum**	11,540 ft-lb
Coupling Length	9.450 in.	**Joint Yield Strength**	729 x1000 lb	**Optimum**	12,820 ft-lb
Connection ID	4.766 in.	**Internal Pressure Capacity**	14,360 psi	**Maximum**	14,100 ft-lb
Make-up Loss	4.204 in.	**Compression Efficiency**	100 %		
Threads per inch	5	**Compression Strength**	729 x1000 lb	**Operation Limit Torques**	
Connection OD Option	Regular	**Max. Allowable Bending**	104 °/100 ft	**Operating Torque**	22,700 ft-lb
		External Pressure Capacity	12,300 psi	**Yield Torque**	25,250 ft-lb
		Coupling Face Load	343,000 lb		

Notes

This connection is fully interchangeable with:
TXP® BTC - 5.5 in. - 0.275 (15.50) / 0.304 (17.00) / 0.415 (23.00) / 0.476 (26.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
Standard coupling design comes with optimized 20° bevel.

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For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

Tenaris

TenarisHydril Wedge 441®

Coupling	Pipe Body
Grade: **P110-ICY**	Grade: **P110-ICY**
Body: **White**	1st Band: **White**
1st Band: **Pale Green**	2nd Band: **Pale Green**
2nd Band: **-**	3rd Band: **Pale Green**
3rd Band: **-**	4th Band: **-**
	5th Band: **-**
	6th Band: **-**

Outside Diameter	5.500 in.	**Wall Thickness**	0.361 in.	**Grade**	P110-ICY
Min. Wall Thickness	87.50 %	**Pipe Body Drift**	API Standard	**Type**	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	5.500 in.	**Wall Thickness**	0.361 in.	**Body Yield Strength**	729 x1000 lb
Nominal Weight	20.00 lb/ft	**Plain End Weight**	19.83 lb/ft	**Min. Internal Yield Pressure**	14,360 psi
Drift	4.653 in.	**OD Tolerance**	API	**SMYS**	125,000 psi
Nominal ID	4.778 in.			**Collapse Pressure**	12,300 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	5.852 in.	**Tension Efficiency**	81.50 %	**Minimum**	15,000 ft-lb
Coupling Length	8.714 in.	**Joint Yield Strength**	594 x1000 lb	**Optimum**	16,000 ft-lb
Connection ID	4.778 in.	**Internal Pressure Capacity**	14,360 psi	**Maximum**	19,200 ft-lb
Make-up Loss	3.780 in.	**Compression Efficiency**	81.50 %		
Threads per inch	3.40	**Compression Strength**	594 x1000 lb	**Operation Limit Torques**	
Connection OD Option	Regular	**Max. Allowable Bending**	82.06 °/100 ft	**Operating Torque**	36,000 ft-lb
		External Pressure Capacity	12,300 psi	**Yield Torque**	42,000 ft-lb
				Buck-On	
				Minimum	19,200 ft-lb
				Maximum	20,700 ft-lb

Notes

This connection is fully interchangeable with:
Wedge 441® - 5.5 in. - 0.304 (17.00) in. (lb/ft)
Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) / 0.415 (23.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

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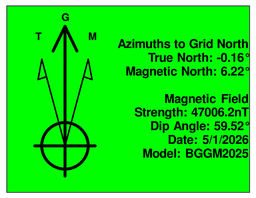


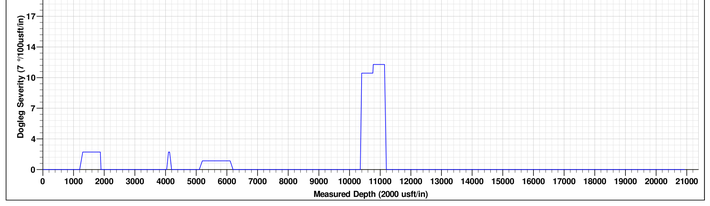
Project:	ATLAS PROSPECT_NME
Site:	RICK VAUGHN FED COM PROJECT
Well:	RICK VAUGHN FED COM 811H
Wellbore:	OWB
Design:	PWP1
GL:	2912.0
KB @ 2944.0usft (NABORS X09)	

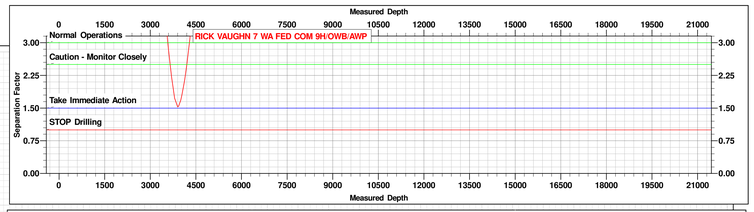
RICK VAUGHN FED COM 811H

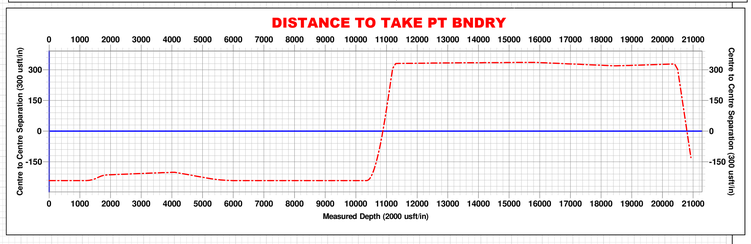
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	382050.94	594888.84	32° 3' 0.011 N	104° 1' 37.450 W

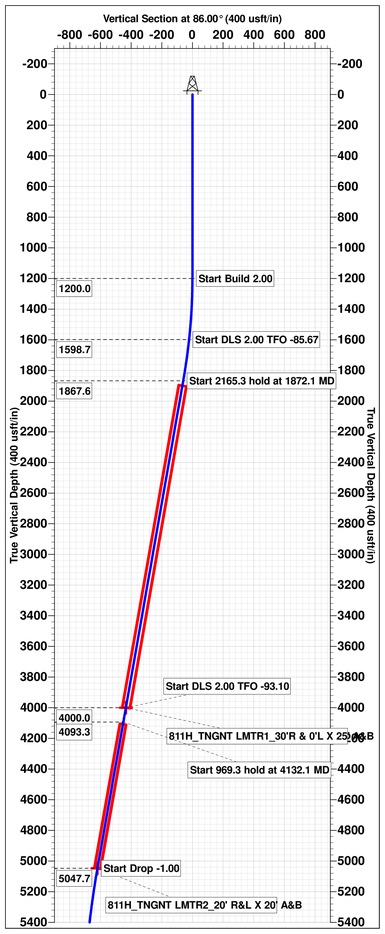
TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
811H_TNGNT LMTR1_30'R & 0'L X 25' A&B	4000.0	40.8	-437.8	382091.74	594451.04
811H_TNGNT LMTR2_20' R&L X 20' A&B	5047.7	13.6	-621.7	382064.54	594267.14
811H_KOP BOX_50'W & 0'E X 35' N&S	10318.5	0.0	-709.0	382050.94	594179.84
FTP/PP1_RICK VAUGHN FED COM 811H	10805.0	242.7	-760.1	382293.59	594128.75
PP2_RICK VAUGHN FED COM 811H	10813.1	5189.8	-777.3	387240.70	594111.53
PP3_RICK VAUGHN FED COM 811H	10815.4	6504.7	-778.7	388555.59	594110.14
PP4_RICK VAUGHN FED COM 811H	10817.7	7820.8	-780.1	389871.79	594108.75
LTP_RICK VAUGHN FED COM 811H	10822.0	10150.6	-782.5	392201.53	594106.29
PBHL_RICK VAUGHN FED COM 811H	10822.0	10280.6	-782.5	392331.53	594106.29



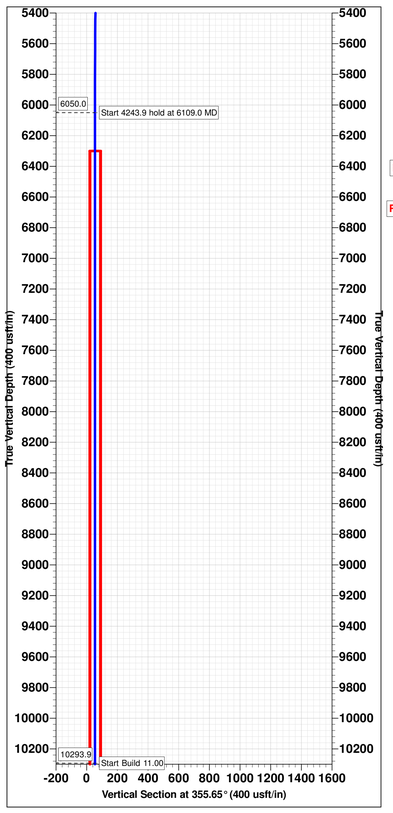


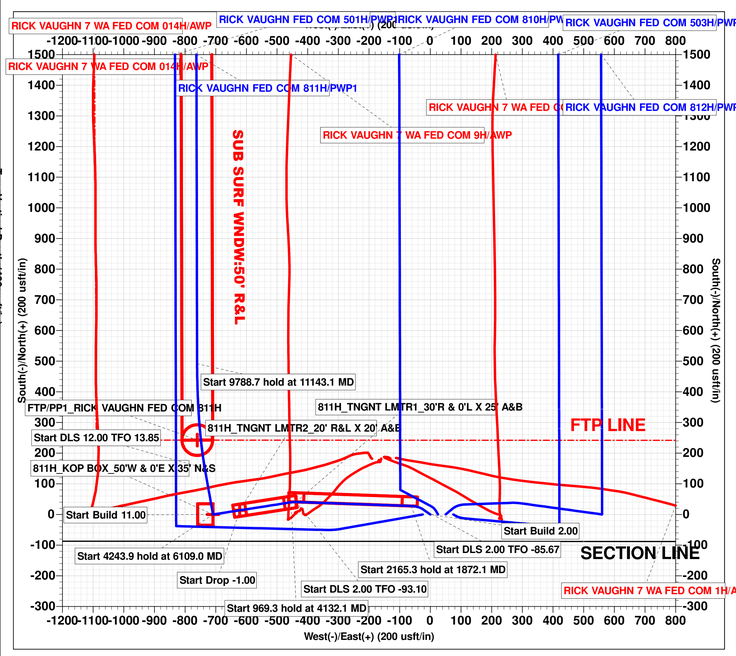


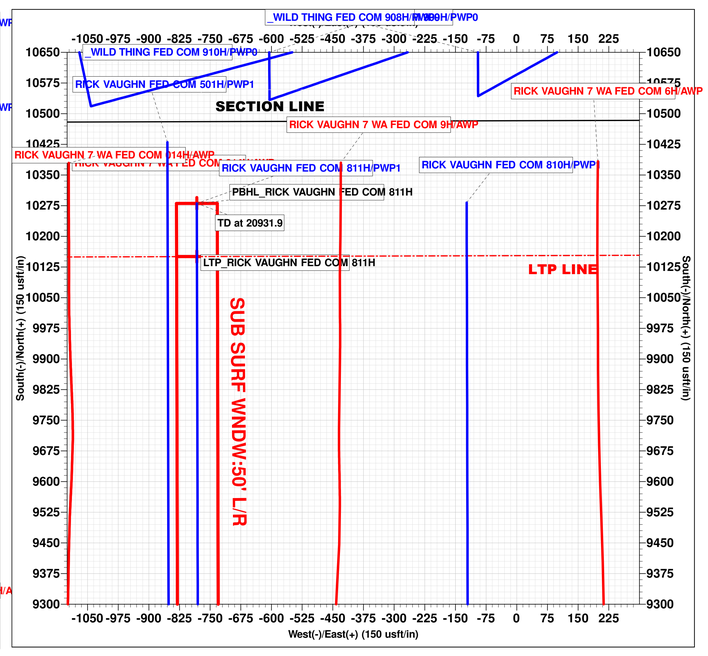


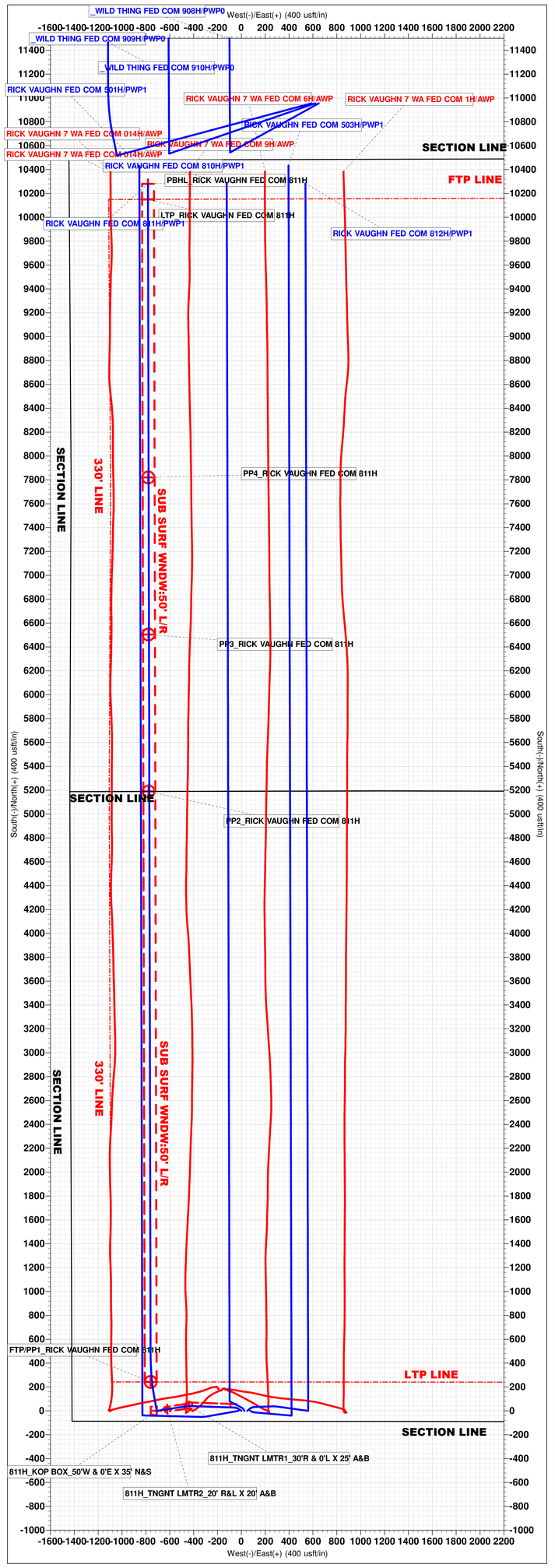
RICK VAUGHN FED COM 811H
OWB
PWP1

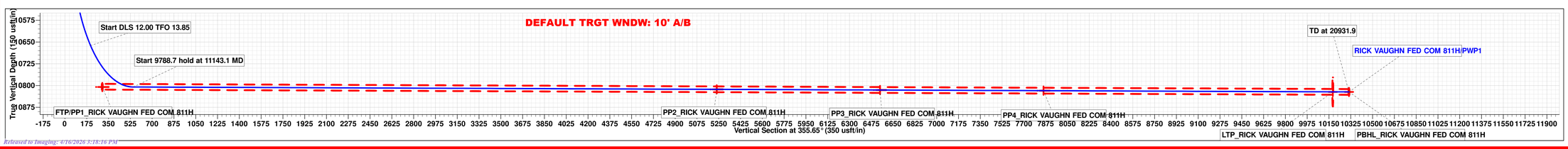
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1200.0	0.00	0.00	1200.0	0.0	0.0	0.0	0.0	Start Build 2.00
1600.0	8.00	305.00	1598.7	16.0	-22.8	17.7	27.9	Start DLS 2.00 TFO -85.67
1872.1	10.00	272.00	1867.6	27.7	-62.0	32.3	69.5	Start 2165.3 hold at 1872.1 MD
4037.4	10.00	272.00	4000.0	40.8	-437.8	73.9	445.5	Start DLS 2.00 TFO -93.10
4132.1	10.08	261.12	4093.3	39.8	-454.2	74.2	461.9	Start 969.3 hold at 4132.1 MD
5101.4	10.08	261.12	5047.7	13.6	-621.7	60.8	631.5	Start Drop -1.00
6109.0	0.00	0.00	6050.0	0.0	-709.0	53.8	719.9	Start 4243.9 hold at 6109.0 MD
10352.9	0.00	0.00	10293.9	0.0	-709.0	53.8	719.9	Start Build 11.00
10761.9	45.00	350.00	10662.2	150.2	-735.5	205.6	872.4	Start DLS 12.00 TFO 13.85
11143.1	89.90	359.87	10805.0	491.9	-760.7	548.2	1215.4	Start 9788.7 hold at 11143.1 MD
20931.9	89.90	359.87	10822.0	10280.6	-782.5	10310.3	11004.1	TD at 20931.9











DELAWARE BASIN WEST

ATLAS PROSPECT_NME
RICK VAUGHN FED COM PROJECT
RICK VAUGHN FED COM 811H

OWB

Plan: PWP1

Standard Planning Report

12 August, 2025

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Project ATLAS PROSPECT_NME

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 RICK VAUGHN FED COM PROJECT

Site Position:		**Northing:**	387,208.98 usft	**Latitude:**	32° 3' 51.062 N
From:	Map	**Easting:**	594,727.42 usft	**Longitude:**	104° 1' 39.156 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well RICK VAUGHN FED COM 811H

Well Position	**+N/-S**	0.0 usft	**Northing:**	382,050.94 usft	**Latitude:**	32° 3' 0.011 N
	+E/-W	0.0 usft	**Easting:**	594,888.84 usft	**Longitude:**	104° 1' 37.450 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	2,912.0 usft
Grid Convergence:		0.16 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2025	5/1/2026	6.38	59.52	47,006.18776142

Design PWP1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	355.65

Plan Survey Tool Program **Date** 8/12/2025

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	1,000.0	PWP1 (OWB)	r.5 SDI_KPR_WL_NS-CT SDI Keeper Wireline Gyrocomp	
2	1,000.0	10,434.4	PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR OWSG MWD + IFR1 + SAG +	
3	10,434.4	20,931.9	PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR OWSG MWD + IFR1 + SAG +	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.0	8.00	305.00	1,598.7	16.0	-22.8	2.00	2.00	0.00	305.00	
1,872.1	10.00	272.00	1,867.6	27.7	-62.0	2.00	0.73	-12.13	-85.67	
4,037.4	10.00	272.00	4,000.0	40.8	-437.8	0.00	0.00	0.00	0.00	
4,132.1	10.08	261.12	4,093.3	39.8	-454.2	2.00	0.08	-11.48	-93.10	
5,101.4	10.08	261.12	5,047.7	13.6	-621.7	0.00	0.00	0.00	0.00	
6,109.0	0.00	0.00	6,050.0	0.0	-709.0	1.00	-1.00	0.00	180.00	
10,352.9	0.00	0.00	10,293.9	0.0	-709.0	0.00	0.00	0.00	0.00	
10,761.9	45.00	350.00	10,662.2	150.2	-735.5	11.00	11.00	0.00	350.00	
11,143.1	89.90	359.87	10,805.0	491.9	-760.7	12.00	11.78	2.59	13.85	
20,931.9	89.90	359.87	10,822.0	10,280.6	-782.5	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,300.0	2.00	305.00	1,300.0	1.0	-1.4	1.1	2.00	2.00	0.00
1,400.0	4.00	305.00	1,399.8	4.0	-5.7	4.4	2.00	2.00	0.00
1,500.0	6.00	305.00	1,499.5	9.0	-12.9	10.0	2.00	2.00	0.00
1,600.0	8.00	305.00	1,598.7	16.0	-22.8	17.7	2.00	2.00	0.00
Start DLS 2.00 TFO -85.67									
1,700.0	8.39	291.20	1,697.7	22.6	-35.3	25.2	2.00	0.39	-13.80
1,800.0	9.20	279.22	1,796.5	26.5	-50.0	30.3	2.00	0.81	-11.98
1,872.1	10.00	272.00	1,867.6	27.7	-62.0	32.3	2.00	1.10	-10.02
Start 2165.3 hold at 1872.1 MD									
1,900.0	10.00	272.00	1,895.1	27.9	-66.8	32.8	0.00	0.00	0.00
2,000.0	10.00	272.00	1,993.6	28.5	-84.2	34.8	0.00	0.00	0.00
2,100.0	10.00	272.00	2,092.1	29.1	-101.5	36.7	0.00	0.00	0.00
2,200.0	10.00	272.00	2,190.5	29.7	-118.9	38.6	0.00	0.00	0.00
2,300.0	10.00	272.00	2,289.0	30.3	-136.2	40.5	0.00	0.00	0.00
2,400.0	10.00	272.00	2,387.5	30.9	-153.6	42.5	0.00	0.00	0.00
2,500.0	10.00	272.00	2,486.0	31.5	-171.0	44.4	0.00	0.00	0.00
2,600.0	10.00	272.00	2,584.5	32.1	-188.3	46.3	0.00	0.00	0.00
2,700.0	10.00	272.00	2,682.9	32.7	-205.7	48.2	0.00	0.00	0.00
2,800.0	10.00	272.00	2,781.4	33.3	-223.0	50.1	0.00	0.00	0.00
2,900.0	10.00	272.00	2,879.9	33.9	-240.4	52.1	0.00	0.00	0.00
3,000.0	10.00	272.00	2,978.4	34.5	-257.7	54.0	0.00	0.00	0.00
3,100.0	10.00	272.00	3,076.9	35.1	-275.1	55.9	0.00	0.00	0.00
3,200.0	10.00	272.00	3,175.3	35.7	-292.4	57.8	0.00	0.00	0.00
3,300.0	10.00	272.00	3,273.8	36.3	-309.8	59.7	0.00	0.00	0.00
3,400.0	10.00	272.00	3,372.3	36.9	-327.1	61.7	0.00	0.00	0.00
3,500.0	10.00	272.00	3,470.8	37.6	-344.5	63.6	0.00	0.00	0.00
3,600.0	10.00	272.00	3,569.3	38.2	-361.9	65.5	0.00	0.00	0.00
3,700.0	10.00	272.00	3,667.7	38.8	-379.2	67.4	0.00	0.00	0.00
3,800.0	10.00	272.00	3,766.2	39.4	-396.6	69.4	0.00	0.00	0.00
3,900.0	10.00	272.00	3,864.7	40.0	-413.9	71.3	0.00	0.00	0.00
4,000.0	10.00	272.00	3,963.2	40.6	-431.3	73.2	0.00	0.00	0.00
4,037.4	10.00	272.00	4,000.0	40.8	-437.8	73.9	0.00	0.00	0.00
Start DLS 2.00 TFO -93.10									
4,100.0	10.01	264.79	4,061.7	40.5	-448.6	74.4	2.00	0.02	-11.52
4,132.1	10.08	261.12	4,093.3	39.8	-454.2	74.2	2.00	0.20	-11.41
Start 969.3 hold at 4132.1 MD									
4,200.0	10.08	261.12	4,160.1	38.0	-465.9	73.2	0.00	0.00	0.00
4,300.0	10.08	261.12	4,258.6	35.3	-483.2	71.9	0.00	0.00	0.00
4,400.0	10.08	261.12	4,357.0	32.6	-500.5	70.5	0.00	0.00	0.00
4,500.0	10.08	261.12	4,455.5	29.9	-517.7	69.1	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	10.08	261.12	4,554.0	27.2	-535.0	67.7	0.00	0.00	0.00
4,700.0	10.08	261.12	4,652.4	24.5	-552.3	66.3	0.00	0.00	0.00
4,800.0	10.08	261.12	4,750.9	21.8	-569.6	64.9	0.00	0.00	0.00
4,900.0	10.08	261.12	4,849.3	19.1	-586.9	63.6	0.00	0.00	0.00
5,000.0	10.08	261.12	4,947.8	16.4	-604.2	62.2	0.00	0.00	0.00
5,101.4	10.08	261.12	5,047.7	13.6	-621.7	60.8	0.00	0.00	0.00
Start Drop -1.00									
5,200.0	9.09	261.12	5,144.9	11.1	-637.9	59.5	1.00	-1.00	0.00
5,300.0	8.09	261.12	5,243.7	8.8	-652.7	58.3	1.00	-1.00	0.00
5,400.0	7.09	261.12	5,342.9	6.8	-665.7	57.3	1.00	-1.00	0.00
5,500.0	6.09	261.12	5,442.2	5.0	-677.1	56.4	1.00	-1.00	0.00
5,600.0	5.09	261.12	5,541.7	3.5	-686.7	55.6	1.00	-1.00	0.00
5,700.0	4.09	261.12	5,641.4	2.3	-694.6	55.0	1.00	-1.00	0.00
5,800.0	3.09	261.12	5,741.2	1.3	-700.8	54.5	1.00	-1.00	0.00
5,900.0	2.09	261.12	5,841.1	0.6	-705.2	54.1	1.00	-1.00	0.00
6,000.0	1.09	261.12	5,941.1	0.2	-708.0	53.9	1.00	-1.00	0.00
6,109.0	0.00	0.00	6,050.0	0.0	-709.0	53.8	1.00	-1.00	0.00
Start 4243.9 hold at 6109.0 MD									
6,200.0	0.00	0.00	6,141.0	0.0	-709.0	53.8	0.00	0.00	0.00
6,300.0	0.00	0.00	6,241.0	0.0	-709.0	53.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,341.0	0.0	-709.0	53.8	0.00	0.00	0.00
6,500.0	0.00	0.00	6,441.0	0.0	-709.0	53.8	0.00	0.00	0.00
6,600.0	0.00	0.00	6,541.0	0.0	-709.0	53.8	0.00	0.00	0.00
6,700.0	0.00	0.00	6,641.0	0.0	-709.0	53.8	0.00	0.00	0.00
6,800.0	0.00	0.00	6,741.0	0.0	-709.0	53.8	0.00	0.00	0.00
6,900.0	0.00	0.00	6,841.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,000.0	0.00	0.00	6,941.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,100.0	0.00	0.00	7,041.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,200.0	0.00	0.00	7,141.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,300.0	0.00	0.00	7,241.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,400.0	0.00	0.00	7,341.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,500.0	0.00	0.00	7,441.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,600.0	0.00	0.00	7,541.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,700.0	0.00	0.00	7,641.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,800.0	0.00	0.00	7,741.0	0.0	-709.0	53.8	0.00	0.00	0.00
7,900.0	0.00	0.00	7,841.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,000.0	0.00	0.00	7,941.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,100.0	0.00	0.00	8,041.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,200.0	0.00	0.00	8,141.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,300.0	0.00	0.00	8,241.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,400.0	0.00	0.00	8,341.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,500.0	0.00	0.00	8,441.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,600.0	0.00	0.00	8,541.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,700.0	0.00	0.00	8,641.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,800.0	0.00	0.00	8,741.0	0.0	-709.0	53.8	0.00	0.00	0.00
8,900.0	0.00	0.00	8,841.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,000.0	0.00	0.00	8,941.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,100.0	0.00	0.00	9,041.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,200.0	0.00	0.00	9,141.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,300.0	0.00	0.00	9,241.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,400.0	0.00	0.00	9,341.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,500.0	0.00	0.00	9,441.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,600.0	0.00	0.00	9,541.0	0.0	-709.0	53.8	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

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)
9,700.0	0.00	0.00	9,641.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,800.0	0.00	0.00	9,741.0	0.0	-709.0	53.8	0.00	0.00	0.00
9,900.0	0.00	0.00	9,841.0	0.0	-709.0	53.8	0.00	0.00	0.00
10,000.0	0.00	0.00	9,941.0	0.0	-709.0	53.8	0.00	0.00	0.00
10,100.0	0.00	0.00	10,041.0	0.0	-709.0	53.8	0.00	0.00	0.00
10,200.0	0.00	0.00	10,141.0	0.0	-709.0	53.8	0.00	0.00	0.00
10,300.0	0.00	0.00	10,241.0	0.0	-709.0	53.8	0.00	0.00	0.00
10,352.9	0.00	0.00	10,293.9	0.0	-709.0	53.8	0.00	0.00	0.00
Start Build 11.00									
10,400.0	5.19	350.00	10,341.0	2.1	-709.4	55.9	11.00	11.00	0.00
10,450.0	10.69	350.00	10,390.5	8.9	-710.6	62.8	11.00	11.00	0.00
10,500.0	16.19	350.00	10,439.1	20.3	-712.6	74.4	11.00	11.00	0.00
10,550.0	21.69	350.00	10,486.4	36.3	-715.4	90.5	11.00	11.00	0.00
10,600.0	27.19	350.00	10,531.9	56.7	-719.0	111.1	11.00	11.00	0.00
10,650.0	32.69	350.00	10,575.2	81.2	-723.3	135.9	11.00	11.00	0.00
10,700.0	38.19	350.00	10,615.9	109.8	-728.4	164.7	11.00	11.00	0.00
10,750.0	43.69	350.00	10,653.7	142.0	-734.0	197.3	11.00	11.00	0.00
10,761.9	45.00	350.00	10,662.2	150.2	-735.5	205.6	11.00	11.00	0.00
Start DLS 12.00 TFO 13.85									
10,775.0	46.52	350.52	10,671.3	159.5	-737.1	214.9	12.00	11.66	3.96
10,800.0	49.44	351.44	10,688.0	177.8	-740.0	233.5	12.00	11.68	3.68
10,825.0	52.37	352.28	10,703.8	197.0	-742.7	252.8	12.00	11.71	3.37
10,850.0	55.30	353.06	10,718.6	217.0	-745.3	273.0	12.00	11.73	3.12
10,875.0	58.24	353.79	10,732.3	237.8	-747.7	293.9	12.00	11.75	2.90
10,900.0	61.18	354.47	10,744.9	259.3	-749.9	315.4	12.00	11.77	2.73
10,925.0	64.13	355.11	10,756.3	281.4	-751.9	337.6	12.00	11.78	2.58
10,950.0	67.08	355.72	10,766.7	304.1	-753.7	360.4	12.00	11.79	2.45
10,975.0	70.03	356.31	10,775.8	327.3	-755.3	383.7	12.00	11.80	2.35
11,000.0	72.98	356.88	10,783.7	350.9	-756.8	407.4	12.00	11.81	2.26
11,025.0	75.93	357.42	10,790.4	375.0	-758.0	431.4	12.00	11.81	2.19
11,050.0	78.89	357.96	10,795.9	399.4	-758.9	455.8	12.00	11.82	2.13
11,075.0	81.84	358.48	10,800.1	424.0	-759.7	480.4	12.00	11.82	2.09
11,100.0	84.80	358.99	10,803.0	448.8	-760.2	505.2	12.00	11.82	2.06
11,125.0	87.75	359.50	10,804.6	473.8	-760.6	530.1	12.00	11.83	2.04
11,143.1	89.90	359.87	10,805.0	491.9	-760.7	548.2	12.00	11.83	2.03
Start 9788.7 hold at 11143.1 MD									
11,200.0	89.90	359.87	10,805.1	548.8	-760.8	604.9	0.00	0.00	0.00
11,300.0	89.90	359.87	10,805.3	648.8	-761.0	704.7	0.00	0.00	0.00
11,400.0	89.90	359.87	10,805.4	748.8	-761.2	804.4	0.00	0.00	0.00
11,500.0	89.90	359.87	10,805.6	848.8	-761.5	904.1	0.00	0.00	0.00
11,600.0	89.90	359.87	10,805.8	948.8	-761.7	1,003.8	0.00	0.00	0.00
11,700.0	89.90	359.87	10,806.0	1,048.8	-761.9	1,103.6	0.00	0.00	0.00
11,800.0	89.90	359.87	10,806.1	1,148.8	-762.1	1,203.3	0.00	0.00	0.00
11,900.0	89.90	359.87	10,806.3	1,248.8	-762.4	1,303.0	0.00	0.00	0.00
12,000.0	89.90	359.87	10,806.5	1,348.8	-762.6	1,402.8	0.00	0.00	0.00
12,100.0	89.90	359.87	10,806.6	1,448.8	-762.8	1,502.5	0.00	0.00	0.00
12,200.0	89.90	359.87	10,806.8	1,548.8	-763.0	1,602.2	0.00	0.00	0.00
12,300.0	89.90	359.87	10,807.0	1,648.8	-763.3	1,701.9	0.00	0.00	0.00
12,400.0	89.90	359.87	10,807.2	1,748.8	-763.5	1,801.7	0.00	0.00	0.00
12,500.0	89.90	359.87	10,807.3	1,848.8	-763.7	1,901.4	0.00	0.00	0.00
12,600.0	89.90	359.87	10,807.5	1,948.8	-763.9	2,001.1	0.00	0.00	0.00
12,700.0	89.90	359.87	10,807.7	2,048.8	-764.2	2,100.8	0.00	0.00	0.00
12,800.0	89.90	359.87	10,807.9	2,148.8	-764.4	2,200.6	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

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)
12,900.0	89.90	359.87	10,808.0	2,248.8	-764.6	2,300.3	0.00	0.00	0.00
13,000.0	89.90	359.87	10,808.2	2,348.8	-764.8	2,400.0	0.00	0.00	0.00
13,100.0	89.90	359.87	10,808.4	2,448.8	-765.0	2,499.8	0.00	0.00	0.00
13,200.0	89.90	359.87	10,808.6	2,548.8	-765.3	2,599.5	0.00	0.00	0.00
13,300.0	89.90	359.87	10,808.7	2,648.8	-765.5	2,699.2	0.00	0.00	0.00
13,400.0	89.90	359.87	10,808.9	2,748.8	-765.7	2,798.9	0.00	0.00	0.00
13,500.0	89.90	359.87	10,809.1	2,848.8	-765.9	2,898.7	0.00	0.00	0.00
13,600.0	89.90	359.87	10,809.3	2,948.8	-766.2	2,998.4	0.00	0.00	0.00
13,700.0	89.90	359.87	10,809.4	3,048.8	-766.4	3,098.1	0.00	0.00	0.00
13,800.0	89.90	359.87	10,809.6	3,148.8	-766.6	3,197.9	0.00	0.00	0.00
13,900.0	89.90	359.87	10,809.8	3,248.8	-766.8	3,297.6	0.00	0.00	0.00
14,000.0	89.90	359.87	10,809.9	3,348.8	-767.1	3,397.3	0.00	0.00	0.00
14,100.0	89.90	359.87	10,810.1	3,448.8	-767.3	3,497.0	0.00	0.00	0.00
14,200.0	89.90	359.87	10,810.3	3,548.8	-767.5	3,596.8	0.00	0.00	0.00
14,300.0	89.90	359.87	10,810.5	3,648.8	-767.7	3,696.5	0.00	0.00	0.00
14,400.0	89.90	359.87	10,810.6	3,748.8	-768.0	3,796.2	0.00	0.00	0.00
14,500.0	89.90	359.87	10,810.8	3,848.8	-768.2	3,896.0	0.00	0.00	0.00
14,600.0	89.90	359.87	10,811.0	3,948.8	-768.4	3,995.7	0.00	0.00	0.00
14,700.0	89.90	359.87	10,811.2	4,048.8	-768.6	4,095.4	0.00	0.00	0.00
14,800.0	89.90	359.87	10,811.3	4,148.8	-768.8	4,195.1	0.00	0.00	0.00
14,900.0	89.90	359.87	10,811.5	4,248.8	-769.1	4,294.9	0.00	0.00	0.00
15,000.0	89.90	359.87	10,811.7	4,348.8	-769.3	4,394.6	0.00	0.00	0.00
15,100.0	89.90	359.87	10,811.9	4,448.7	-769.5	4,494.3	0.00	0.00	0.00
15,200.0	89.90	359.87	10,812.0	4,548.7	-769.7	4,594.1	0.00	0.00	0.00
15,300.0	89.90	359.87	10,812.2	4,648.7	-770.0	4,693.8	0.00	0.00	0.00
15,400.0	89.90	359.87	10,812.4	4,748.7	-770.2	4,793.5	0.00	0.00	0.00
15,500.0	89.90	359.87	10,812.6	4,848.7	-770.4	4,893.2	0.00	0.00	0.00
15,600.0	89.90	359.87	10,812.7	4,948.7	-770.6	4,993.0	0.00	0.00	0.00
15,700.0	89.90	359.87	10,812.9	5,048.7	-770.9	5,092.7	0.00	0.00	0.00
15,800.0	89.90	359.87	10,813.1	5,148.7	-771.1	5,192.4	0.00	0.00	0.00
15,900.0	89.90	359.87	10,813.3	5,248.7	-771.3	5,292.1	0.00	0.00	0.00
16,000.0	89.90	359.87	10,813.4	5,348.7	-771.5	5,391.9	0.00	0.00	0.00
16,100.0	89.90	359.87	10,813.6	5,448.7	-771.8	5,491.6	0.00	0.00	0.00
16,200.0	89.90	359.87	10,813.8	5,548.7	-772.0	5,591.3	0.00	0.00	0.00
16,300.0	89.90	359.87	10,813.9	5,648.7	-772.2	5,691.1	0.00	0.00	0.00
16,400.0	89.90	359.87	10,814.1	5,748.7	-772.4	5,790.8	0.00	0.00	0.00
16,500.0	89.90	359.87	10,814.3	5,848.7	-772.6	5,890.5	0.00	0.00	0.00
16,600.0	89.90	359.87	10,814.5	5,948.7	-772.9	5,990.2	0.00	0.00	0.00
16,700.0	89.90	359.87	10,814.6	6,048.7	-773.1	6,090.0	0.00	0.00	0.00
16,800.0	89.90	359.87	10,814.8	6,148.7	-773.3	6,189.7	0.00	0.00	0.00
16,900.0	89.90	359.87	10,815.0	6,248.7	-773.5	6,289.4	0.00	0.00	0.00
17,000.0	89.90	359.87	10,815.2	6,348.7	-773.8	6,389.2	0.00	0.00	0.00
17,100.0	89.90	359.87	10,815.3	6,448.7	-774.0	6,488.9	0.00	0.00	0.00
17,200.0	89.90	359.87	10,815.5	6,548.7	-774.2	6,588.6	0.00	0.00	0.00
17,300.0	89.90	359.87	10,815.7	6,648.7	-774.4	6,688.3	0.00	0.00	0.00
17,400.0	89.90	359.87	10,815.9	6,748.7	-774.7	6,788.1	0.00	0.00	0.00
17,500.0	89.90	359.87	10,816.0	6,848.7	-774.9	6,887.8	0.00	0.00	0.00
17,600.0	89.90	359.87	10,816.2	6,948.7	-775.1	6,987.5	0.00	0.00	0.00
17,700.0	89.90	359.87	10,816.4	7,048.7	-775.3	7,087.3	0.00	0.00	0.00
17,800.0	89.90	359.87	10,816.6	7,148.7	-775.6	7,187.0	0.00	0.00	0.00
17,900.0	89.90	359.87	10,816.7	7,248.7	-775.8	7,286.7	0.00	0.00	0.00
18,000.0	89.90	359.87	10,816.9	7,348.7	-776.0	7,386.4	0.00	0.00	0.00
18,100.0	89.90	359.87	10,817.1	7,448.7	-776.2	7,486.2	0.00	0.00	0.00
18,200.0	89.90	359.87	10,817.3	7,548.7	-776.4	7,585.9	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

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)
18,300.0	89.90	359.87	10,817.4	7,648.7	-776.7	7,685.6	0.00	0.00	0.00
18,400.0	89.90	359.87	10,817.6	7,748.7	-776.9	7,785.4	0.00	0.00	0.00
18,500.0	89.90	359.87	10,817.8	7,848.7	-777.1	7,885.1	0.00	0.00	0.00
18,600.0	89.90	359.87	10,817.9	7,948.7	-777.3	7,984.8	0.00	0.00	0.00
18,700.0	89.90	359.87	10,818.1	8,048.7	-777.6	8,084.5	0.00	0.00	0.00
18,800.0	89.90	359.87	10,818.3	8,148.7	-777.8	8,184.3	0.00	0.00	0.00
18,900.0	89.90	359.87	10,818.5	8,248.7	-778.0	8,284.0	0.00	0.00	0.00
19,000.0	89.90	359.87	10,818.6	8,348.7	-778.2	8,383.7	0.00	0.00	0.00
19,100.0	89.90	359.87	10,818.8	8,448.7	-778.5	8,483.4	0.00	0.00	0.00
19,200.0	89.90	359.87	10,819.0	8,548.7	-778.7	8,583.2	0.00	0.00	0.00
19,300.0	89.90	359.87	10,819.2	8,648.7	-778.9	8,682.9	0.00	0.00	0.00
19,400.0	89.90	359.87	10,819.3	8,748.7	-779.1	8,782.6	0.00	0.00	0.00
19,500.0	89.90	359.87	10,819.5	8,848.7	-779.3	8,882.4	0.00	0.00	0.00
19,600.0	89.90	359.87	10,819.7	8,948.7	-779.6	8,982.1	0.00	0.00	0.00
19,700.0	89.90	359.87	10,819.9	9,048.7	-779.8	9,081.8	0.00	0.00	0.00
19,800.0	89.90	359.87	10,820.0	9,148.7	-780.0	9,181.5	0.00	0.00	0.00
19,900.0	89.90	359.87	10,820.2	9,248.7	-780.2	9,281.3	0.00	0.00	0.00
20,000.0	89.90	359.87	10,820.4	9,348.7	-780.5	9,381.0	0.00	0.00	0.00
20,100.0	89.90	359.87	10,820.6	9,448.7	-780.7	9,480.7	0.00	0.00	0.00
20,200.0	89.90	359.87	10,820.7	9,548.7	-780.9	9,580.5	0.00	0.00	0.00
20,300.0	89.90	359.87	10,820.9	9,648.7	-781.1	9,680.2	0.00	0.00	0.00
20,400.0	89.90	359.87	10,821.1	9,748.7	-781.4	9,779.9	0.00	0.00	0.00
20,500.0	89.90	359.87	10,821.2	9,848.7	-781.6	9,879.6	0.00	0.00	0.00
20,600.0	89.90	359.87	10,821.4	9,948.7	-781.8	9,979.4	0.00	0.00	0.00
20,700.0	89.90	359.87	10,821.6	10,048.7	-782.0	10,079.1	0.00	0.00	0.00
20,800.0	89.90	359.87	10,821.8	10,148.7	-782.3	10,178.8	0.00	0.00	0.00
20,900.0	89.90	359.87	10,821.9	10,248.7	-782.5	10,278.6	0.00	0.00	0.00
20,931.9	89.90	359.87	10,822.0	10,280.6	-782.5	10,310.3	0.00	0.00	0.00
TD at 20931.9									

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Company:	DELAWARE BASIN WEST	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site:	RICK VAUGHN FED COM PROJECT	**North Reference:**	Grid
Well:	RICK VAUGHN FED COM 811H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
811H_TNGNT LMTR1_3 - plan hits target center - Rectangle (sides W30.0 H50.0 D2,132.4)	10.00	92.00	4,000.0	40.8	-437.8	382,091.74	594,451.04	32° 3' 0.427 N	104° 1' 42.535 W
811H_TNGNT LMTR2_2 - plan hits target center - Rectangle (sides W40.0 H40.0 D954.4)	10.08	81.12	5,047.7	13.6	-621.7	382,064.54	594,267.14	32° 3' 0.163 N	104° 1' 44.673 W
811H_KOP BOX_50'W & - plan misses target center by 0.6usft at 10377.4usft MD (10318.5 TVD, 0.6 N, -709.1 E) - Rectangle (sides W50.0 H70.0 D4,018.5)	0.00	179.87	10,318.5	0.0	-709.0	382,050.94	594,179.84	32° 3' 0.031 N	104° 1' 45.688 W
FTP/PP1_RICK VAUGH - plan misses target center by 61.5usft at 10913.7usft MD (10751.3 TVD, 271.3 N, -751.0 E) - Circle (radius 50.0)	0.00	0.00	10,805.0	242.6	-760.1	382,293.59	594,128.75	32° 3' 2.434 N	104° 1' 46.273 W
PP2_RICK VAUGHN FE - plan misses target center by 6.1usft at 15841.0usft MD (10813.1 TVD, 5189.8 N, -771.2 E) - Circle (radius 50.0)	0.00	0.00	10,813.1	5,189.8	-777.3	387,240.70	594,111.53	32° 3' 51.393 N	104° 1' 46.312 W
PP3_RICK VAUGHN FE - plan misses target center by 4.6usft at 17155.9usft MD (10815.4 TVD, 6504.7 N, -774.1 E) - Circle (radius 50.0)	0.00	0.00	10,815.4	6,504.6	-778.7	388,555.59	594,110.14	32° 4' 4.406 N	104° 1' 46.285 W
PP4_RICK VAUGHN FE - plan misses target center by 3.0usft at 18472.1usft MD (10817.7 TVD, 7820.9 N, -777.1 E) - Circle (radius 50.0)	0.00	0.00	10,817.7	7,820.8	-780.1	389,871.79	594,108.75	32° 4' 17.432 N	104° 1' 46.258 W
LTP_RICK VAUGHN FE - plan misses target center by 0.4usft at 20801.9usft MD (10821.8 TVD, 10150.6 N, -782.3 E) - Circle (radius 50.0)	90.00	359.87	10,822.0	10,150.6	-782.5	392,201.53	594,106.29	32° 4' 40.488 N	104° 1' 46.210 W
PBHL_RICK VAUGHN F - plan hits target center - Rectangle (sides W100.0 H10,038.0 D20.0)	-0.10	179.87	10,822.0	10,280.6	-782.5	392,331.53	594,106.29	32° 4' 41.775 N	104° 1' 46.206 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,931.9	10,822.0	5-1/2" Production Casing	5-1/2	6

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,200.0	1,200.0	0.0	0.0	Start Build 2.00
1,600.0	1,598.7	16.0	-22.8	Start DLS 2.00 TFO -85.67
1,872.1	1,867.6	27.7	-62.0	Start 2165.3 hold at 1872.1 MD
4,037.4	4,000.0	40.8	-437.8	Start DLS 2.00 TFO -93.10
4,132.1	4,093.3	39.8	-454.2	Start 969.3 hold at 4132.1 MD
5,101.4	5,047.7	13.6	-621.7	Start Drop -1.00
6,109.0	6,050.0	0.0	-709.0	Start 4243.9 hold at 6109.0 MD
10,352.9	10,293.9	0.0	-709.0	Start Build 11.00
10,761.9	10,662.2	150.2	-735.5	Start DLS 12.00 TFO 13.85
11,143.1	10,805.0	491.9	-760.7	Start 9788.7 hold at 11143.1 MD
20,931.9	10,822.0	10,280.6	-782.5	TD at 20931.9

DELAWARE BASIN WEST

ATLAS PROSPECT_NME
RICK VAUGHN FED COM PROJECT
RICK VAUGHN FED COM 811H

OWB
PWP1

Anticollision Report

12 August, 2025

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Reference PWP1

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

Survey Tool Program **Date** 8/12/2025

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	1,000.0	PWP1 (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp.-Initilzd Co
1,000.0	10,434.4	PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr.
10,434.4	20,931.9	PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr.

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
PUDGE FED COM PROJECT						
RICK VAUGHN 7 WA FED COM 014H - OWB - AWP	2,217.8	2,172.9	259.8	245.5	18.138	CC, ES
RICK VAUGHN 7 WA FED COM 014H - OWB - AWP	9,600.0	9,638.0	390.3	343.7	8.373	SF
RICK VAUGHN FED COM PROJECT						
RICK VAUGHN 7 WA FED COM 014H - OWB - AWP	2,217.8	2,172.8	259.8	245.5	18.138	CC, ES
RICK VAUGHN 7 WA FED COM 014H - OWB - AWP	9,600.0	9,638.0	390.3	343.7	8.373	SF
RICK VAUGHN 7 WA FED COM 1H - OWB - AWP	1,815.1	1,809.5	144.8	129.5	9.476	CC, ES, SF
RICK VAUGHN 7 WA FED COM 6H - OWB - AWP	2,050.2	2,045.5	126.6	115.6	11.573	CC, ES
RICK VAUGHN 7 WA FED COM 6H - OWB - AWP	2,100.0	2,093.3	127.4	116.4	11.521	SF
RICK VAUGHN 7 WA FED COM 9H - OWB - AWP	3,900.0	3,878.9	30.1	10.4	1.527	Caution - Monitor Closely, ES, SF
RICK VAUGHN 7 WA FED COM 9H - OWB - AWP	3,931.4	3,909.8	29.6	10.4	1.544	Caution - Monitor Closely, CC
RICK VAUGHN FED COM 501H - OWB - PWP1	1,200.0	1,200.0	25.0	18.2	3.697	CC
RICK VAUGHN FED COM 501H - OWB - PWP1	1,300.0	1,299.1	25.3	17.8	3.406	ES
RICK VAUGHN FED COM 501H - OWB - PWP1	1,400.0	1,398.2	26.6	18.6	3.319	SF
RICK VAUGHN FED COM 503H - OWB - PWP1	1,200.0	1,200.0	75.0	68.2	11.103	CC, ES
RICK VAUGHN FED COM 503H - OWB - PWP1	1,300.0	1,297.7	77.9	70.5	10.535	SF
RICK VAUGHN FED COM 810H - OWB - PWP1	1,200.0	1,200.0	25.0	18.4	3.833	CC, ES
RICK VAUGHN FED COM 810H - OWB - PWP1	1,300.0	1,300.4	25.5	18.5	3.649	SF
RICK VAUGHN FED COM 812H - OWB - PWP1	1,200.0	1,200.0	49.9	43.2	7.393	CC, ES
RICK VAUGHN FED COM 812H - OWB - PWP1	1,300.0	1,298.6	52.7	45.3	7.144	SF
WILD THING FED COM PROJECT						
_WILD THING FED COM 908H - OWB - PWP0	20,931.9	10,587.9	856.6	757.9	8.674	CC, ES, SF
_WILD THING FED COM 909H - OWB - PWP0	20,931.9	10,738.1	450.9	377.5	6.144	CC, ES, SF
_WILD THING FED COM 910H - OWB - PWP0	20,931.9	10,714.6	583.8	505.1	7.414	CC, ES, SF

Offset Design: PUDGE FED COM PROJECT - RICK VAUGHN 7 WA FED COM 014H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 133-r.5 MWD+IFR1 **Rule Assigned:** **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	8.0	0.0	0.0	-46.19	182.2	-190.0	263.3				
100.0	100.0	89.0	97.0	0.5	0.6	-46.24	182.4	-190.5	263.7	262.1	1.60	164.800	

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

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: PUDGE FED COM PROJECT - RICK VAUGHN 7 WA FED COM 014H - OWB - AWP — **Offset Site Error:** 0.0 usft

Survey Program: 133-r.5 MWD+IFR1 — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
200.0	200.0	186.5	194.5	1.0	1.2	-46.35	183.2	-192.0	265.4	262.7	2.71	98.101	
300.0	300.0	286.6	294.5	1.4	1.7	-46.29	184.9	-193.4	267.6	264.1	3.55	75.364	
400.0	400.0	386.8	394.7	1.6	2.3	-46.15	186.7	-194.3	269.6	265.2	4.35	61.919	
500.0	500.0	486.2	494.1	1.9	2.7	-46.02	188.5	-195.4	271.6	266.6	5.03	54.034	
600.0	600.0	584.6	592.5	2.1	3.0	-45.88	190.7	-196.7	274.0	268.4	5.58	49.152	
700.0	700.0	683.1	690.9	2.3	3.4	-45.73	193.3	-198.3	277.0	270.9	6.11	45.355	
800.0	800.0	782.2	790.0	2.5	3.7	-45.55	196.3	-200.1	280.5	273.9	6.62	42.384	
900.0	900.0	881.4	889.1	2.7	4.0	-45.37	199.5	-202.1	284.2	277.1	7.13	39.858	
1,000.0	1,000.0	987.1	994.7	2.9	4.3	-45.43	201.3	-204.4	286.9	279.3	7.64	37.546	
1,100.0	1,100.0	1,087.6	1,095.3	3.2	4.6	-45.78	201.2	-206.8	288.5	280.4	8.16	35.364	
1,200.0	1,200.0	1,186.1	1,193.6	3.4	4.8	-46.17	201.1	-209.5	290.5	281.9	8.63	33.658	
1,300.0	1,300.0	1,285.7	1,293.3	3.7	5.1	8.49	201.3	-212.5	291.1	281.8	9.22	31.567	
1,400.0	1,399.8	1,382.0	1,389.5	4.0	5.4	8.12	201.1	-216.2	288.5	278.7	9.82	29.388	
1,500.0	1,499.5	1,472.7	1,479.9	4.3	5.8	7.24	200.1	-223.2	284.9	274.4	10.45	27.255	
1,600.0	1,598.7	1,563.8	1,570.2	4.6	6.3	5.73	198.8	-235.0	281.5	270.4	11.10	25.360	
1,700.0	1,697.7	1,665.6	1,670.6	4.8	6.7	17.41	195.7	-251.5	278.3	266.6	11.71	23.774	
1,800.0	1,796.5	1,771.8	1,775.4	5.0	7.0	27.48	189.1	-267.9	272.6	260.4	12.26	22.233	
1,872.1	1,867.6	1,840.9	1,843.4	5.1	7.3	33.77	184.1	-278.3	268.0	255.4	12.57	21.321	
1,900.0	1,895.1	1,866.1	1,868.2	5.1	7.4	33.44	182.3	-282.5	266.6	254.0	12.67	21.039	
2,000.0	1,993.6	1,959.5	1,959.7	5.3	7.7	32.04	175.9	-300.1	263.6	250.5	13.16	20.040	
2,100.0	2,092.1	2,061.3	2,059.3	5.5	8.1	30.42	169.3	-320.2	261.9	248.2	13.70	19.110	
2,200.0	2,190.5	2,156.5	2,152.5	5.6	8.5	28.91	163.1	-338.7	259.9	245.6	14.23	18.259	
2,217.8	2,208.1	2,172.9	2,168.5	5.7	8.6	28.64	162.1	-342.1	259.8	245.5	14.33	18.138 CC, ES	
2,300.0	2,289.0	2,250.7	2,244.3	5.8	8.9	27.32	157.7	-359.1	260.6	245.8	14.78	17.632	
2,400.0	2,387.5	2,353.0	2,343.8	6.0	9.3	25.52	151.9	-382.2	262.3	246.9	15.41	17.021	
2,500.0	2,486.0	2,448.1	2,436.3	6.2	9.7	23.84	146.3	-403.4	264.0	248.0	16.00	16.502	
2,600.0	2,584.5	2,543.2	2,528.5	6.4	10.1	22.18	141.6	-426.5	268.0	251.4	16.60	16.142	
2,700.0	2,682.9	2,644.0	2,626.0	6.6	10.5	20.53	137.0	-451.4	273.0	255.7	17.28	15.797	
2,800.0	2,781.4	2,746.0	2,724.9	6.7	11.0	18.94	132.1	-475.9	277.3	259.4	17.97	15.431	
2,900.0	2,879.9	2,845.9	2,821.9	6.9	11.4	17.41	127.1	-499.5	281.4	262.8	18.65	15.091	
3,000.0	2,978.4	2,945.3	2,918.3	7.1	11.9	15.90	122.0	-522.9	285.6	266.3	19.32	14.782	
3,100.0	3,076.9	3,043.5	3,013.6	7.3	12.3	14.56	117.5	-546.2	290.4	270.4	19.99	14.527	
3,200.0	3,175.3	3,141.4	3,108.6	7.5	12.8	13.45	114.2	-569.8	295.9	275.2	20.66	14.323	
3,300.0	3,273.8	3,242.7	3,206.8	7.7	13.2	12.40	110.9	-594.1	301.5	280.1	21.37	14.110	
3,400.0	3,372.3	3,343.3	3,304.5	7.9	13.7	11.39	107.6	-617.8	306.7	284.6	22.07	13.897	
3,500.0	3,470.8	3,442.9	3,401.3	8.1	14.2	10.36	104.0	-641.3	311.9	289.2	22.77	13.701	
3,600.0	3,569.3	3,543.6	3,499.0	8.3	14.6	9.29	99.9	-665.0	317.2	293.7	23.48	13.511	
3,700.0	3,667.7	3,644.7	3,597.3	8.5	15.1	8.19	95.4	-688.3	322.1	297.9	24.20	13.312	
3,800.0	3,766.2	3,745.1	3,694.9	8.7	15.5	7.04	90.4	-711.4	326.8	301.9	24.91	13.120	
3,900.0	3,864.7	3,842.0	3,789.1	8.9	16.0	5.90	85.2	-733.7	331.7	306.1	25.58	12.966	
4,000.0	3,963.2	3,935.2	3,879.3	9.1	16.4	4.86	80.5	-756.6	338.3	312.1	26.23	12.900	
4,037.4	4,000.0	3,969.7	3,912.6	9.1	16.6	4.49	78.9	-765.5	341.3	314.9	26.45	12.904	
4,100.0	4,061.7	4,031.3	3,971.9	9.2	16.9	10.93	75.9	-781.8	346.9	320.0	26.86	12.915	
4,132.1	4,093.3	4,063.1	4,002.5	9.3	17.0	14.29	74.3	-790.2	349.8	322.7	27.07	12.920	
4,200.0	4,160.1	4,130.9	4,067.8	9.4	17.4	13.93	70.9	-808.2	356.0	328.5	27.54	12.927	
4,300.0	4,258.6	4,231.7	4,164.9	9.6	17.9	13.42	65.8	-834.7	365.1	336.8	28.26	12.917	
4,400.0	4,357.0	4,332.1	4,261.7	9.8	18.3	12.88	60.3	-860.9	373.8	344.8	28.98	12.898	
4,500.0	4,455.5	4,433.5	4,359.5	10.0	18.8	12.31	54.4	-886.9	382.3	352.6	29.71	12.867	
4,600.0	4,554.0	4,528.2	4,450.8	10.2	19.3	11.80	48.9	-911.5	391.0	360.6	30.37	12.874	
4,700.0	4,652.4	4,627.8	4,546.6	10.4	19.8	11.30	43.3	-938.2	400.6	369.5	31.08	12.887	
4,800.0	4,750.9	4,729.7	4,644.7	10.6	20.3	10.80	37.4	-965.1	409.8	378.0	31.82	12.877	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: PUDGE FED COM PROJECT - RICK VAUGHN 7 WA FED COM 014H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 133-r.5 MWD+IFR1

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,900.0	4,849.3	4,846.7	4,758.1	10.8	20.8	10.35	31.2	-993.2	416.6	383.9	32.70	12.739	
5,000.0	4,947.8	4,957.6	4,866.5	11.0	21.4	10.06	26.2	-1,015.9	419.8	386.3	33.47	12.542	
5,100.0	5,046.3	5,061.1	4,968.1	11.2	21.8	9.80	21.6	-1,035.6	421.5	387.4	34.17	12.336	
5,101.4	5,047.7	5,062.6	4,969.5	11.2	21.8	9.80	21.5	-1,035.9	421.6	387.4	34.18	12.333	
5,200.0	5,144.9	5,171.0	5,076.1	11.4	22.3	9.51	16.6	-1,055.2	422.9	388.0	34.89	12.121	
5,300.0	5,243.7	5,283.5	5,187.2	11.6	22.8	9.22	11.9	-1,071.7	422.9	387.3	35.59	11.881	
5,400.0	5,342.9	5,403.1	5,306.0	11.8	23.3	8.96	7.5	-1,085.1	421.0	384.8	36.23	11.622	
5,500.0	5,442.2	5,522.8	5,425.4	12.0	23.8	8.90	5.1	-1,092.7	416.0	379.3	36.71	11.334	
5,600.0	5,541.7	5,634.7	5,537.3	12.1	24.1	9.03	4.3	-1,095.2	408.6	371.5	37.09	11.015	
5,700.0	5,641.4	5,736.5	5,639.1	12.3	24.3	9.15	4.0	-1,095.9	401.3	363.5	37.76	10.627	
5,800.0	5,741.2	5,837.0	5,739.6	12.5	24.5	9.20	3.4	-1,096.4	395.6	357.3	38.34	10.320	
5,900.0	5,841.1	5,937.9	5,840.5	12.6	24.6	9.22	2.9	-1,096.7	391.5	352.6	38.86	10.075	
6,000.0	5,941.1	6,038.5	5,941.0	12.8	24.7	9.19	2.2	-1,096.8	388.8	349.7	39.09	9.946	
6,100.0	6,041.0	6,138.9	6,041.5	12.9	24.7	9.10	1.5	-1,096.7	387.7	348.5	39.19	9.894	
6,109.0	6,050.0	6,147.9	6,050.5	12.9	24.7	-89.79	1.4	-1,096.7	387.7	348.5	39.20	9.891	
6,200.0	6,141.0	6,239.0	6,141.6	13.0	24.8	-89.90	0.6	-1,096.6	387.6	348.4	39.23	9.880	
6,300.0	6,241.0	6,338.5	6,241.0	13.0	24.8	-90.04	-0.3	-1,096.5	387.5	348.2	39.32	9.855	
6,304.4	6,245.5	6,342.9	6,245.5	13.0	24.8	-90.04	-0.3	-1,096.5	387.5	348.2	39.33	9.853	
6,400.0	6,341.0	6,438.2	6,340.8	13.1	24.9	-90.17	-1.1	-1,096.5	387.5	348.1	39.44	9.826	
6,500.0	6,441.0	6,537.4	6,440.0	13.1	25.0	-90.28	-1.9	-1,096.6	387.7	348.0	39.69	9.768	
6,600.0	6,541.0	6,634.9	6,537.5	13.2	25.1	-90.33	-2.3	-1,097.2	388.2	348.4	39.81	9.751	
6,700.0	6,641.0	6,732.2	6,634.8	13.2	25.4	-90.31	-2.1	-1,098.4	389.5	349.3	40.17	9.697	
6,800.0	6,741.0	6,830.5	6,733.1	13.3	25.6	-90.29	-2.0	-1,100.3	391.4	350.8	40.56	9.650	
6,900.0	6,841.0	6,930.7	6,833.2	13.4	25.9	-90.29	-2.0	-1,102.4	393.4	352.5	40.94	9.611	
7,000.0	6,941.0	7,031.4	6,933.9	13.4	26.2	-90.27	-1.8	-1,104.3	395.4	354.1	41.28	9.576	
7,100.0	7,041.0	7,135.9	7,038.3	13.5	26.3	-90.18	-1.3	-1,105.8	396.8	355.3	41.49	9.563	
7,200.0	7,141.0	7,237.6	7,140.1	13.5	26.4	-90.03	-0.2	-1,106.1	397.1	355.4	41.66	9.532	
7,300.0	7,241.0	7,341.8	7,244.3	13.6	26.4	-89.84	1.1	-1,105.9	396.9	355.5	41.45	9.576	
7,400.0	7,341.0	7,445.6	7,348.0	13.7	26.2	-89.62	2.7	-1,104.5	395.6	354.3	41.25	9.590	
7,500.0	7,441.0	7,544.7	7,447.1	13.7	26.0	-89.43	3.9	-1,102.9	393.9	352.8	41.07	9.590	
7,600.0	7,541.0	7,644.0	7,546.4	13.8	25.9	-89.25	5.1	-1,101.4	392.5	351.6	40.91	9.593	
7,700.0	7,641.0	7,743.1	7,645.5	13.9	25.7	-89.08	6.3	-1,100.1	391.2	350.4	40.77	9.595	
7,800.0	7,741.0	7,840.1	7,742.4	13.9	25.6	-88.87	7.7	-1,099.4	390.5	349.6	40.87	9.554	
7,870.9	7,811.9	7,909.5	7,811.9	14.0	25.6	-88.71	8.8	-1,099.2	390.3	349.3	40.99	9.523	
7,900.0	7,841.0	7,938.1	7,840.4	14.0	25.6	-88.65	9.2	-1,099.2	390.4	349.4	41.00	9.521	
8,000.0	7,941.0	8,036.4	7,938.8	14.0	25.7	-88.57	9.8	-1,099.6	390.8	349.5	41.28	9.465	
8,100.0	8,041.0	8,135.9	8,038.3	14.1	25.9	-88.61	9.5	-1,100.2	391.3	349.5	41.80	9.363	
8,200.0	8,141.0	8,233.4	8,135.8	14.2	26.1	-88.79	8.3	-1,101.3	392.4	350.3	42.11	9.320	
8,300.0	8,241.0	8,333.5	8,235.8	14.2	26.4	-89.00	6.9	-1,102.7	393.8	351.4	42.39	9.289	
8,400.0	8,341.0	8,433.9	8,336.2	14.3	26.6	-89.22	5.4	-1,104.0	395.1	352.4	42.67	9.259	
8,500.0	8,441.0	8,535.6	8,437.8	14.4	26.7	-89.46	3.8	-1,105.1	396.2	353.2	42.91	9.233	
8,600.0	8,541.0	8,635.5	8,537.8	14.4	26.9	-89.56	3.0	-1,105.8	396.8	353.8	43.05	9.218	
8,700.0	8,641.0	8,735.1	8,637.4	14.5	27.1	-89.60	2.8	-1,106.8	397.8	354.5	43.25	9.197	
8,800.0	8,741.0	8,837.0	8,739.3	14.5	27.3	-89.59	2.9	-1,107.5	398.5	355.1	43.46	9.169	
8,900.0	8,841.0	8,936.9	8,839.2	14.6	27.5	-89.54	3.2	-1,107.9	398.9	355.2	43.67	9.133	
9,000.0	8,941.0	9,036.7	8,938.9	14.7	27.7	-89.51	3.4	-1,108.4	399.4	355.4	44.00	9.078	
9,100.0	9,041.0	9,135.8	9,038.0	14.7	27.9	-89.50	3.5	-1,109.0	400.0	355.7	44.35	9.021	
9,200.0	9,141.0	9,237.0	9,139.2	14.8	28.1	-89.53	3.3	-1,109.7	400.7	355.9	44.74	8.956	
9,300.0	9,241.0	9,337.4	9,239.7	14.9	28.3	-89.58	2.9	-1,110.0	401.0	356.0	44.97	8.916	
9,400.0	9,341.0	9,458.4	9,360.2	14.9	29.9	-88.41	11.1	-1,107.6	399.2	352.5	46.66	8.555	
9,500.0	9,441.0	9,568.9	9,465.4	15.0	29.9	-83.78	42.5	-1,098.6	392.6	346.2	46.39	8.463	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: PUDGE FED COM PROJECT - RICK VAUGHN 7 WA FED COM 014H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 133-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
9,578.2	9,519.3	9,630.8	9,519.2	15.0	29.9	-79.32	72.3	-1,092.2	390.0	343.5	46.47	8.392	
9,600.0	9,541.0	9,638.0	9,525.1	15.1	29.9	-78.71	76.3	-1,091.4	390.3	343.7	46.62	8.373 SF	
9,700.0	9,641.0	9,701.5	9,574.6	15.1	29.9	-72.92	115.8	-1,085.7	399.7	353.0	46.65	8.567	
9,800.0	9,741.0	9,733.0	9,597.1	15.2	29.9	-69.82	137.6	-1,083.5	424.2	377.5	46.70	9.084	
9,900.0	9,841.0	9,779.7	9,627.5	15.3	30.0	-65.10	173.0	-1,081.7	463.0	416.5	46.49	9.959	
10,000.0	9,941.0	9,827.0	9,654.3	15.3	30.1	-60.39	211.9	-1,081.9	515.9	469.6	46.32	11.139	
10,100.0	10,041.0	9,836.1	9,659.0	15.4	30.1	-59.52	219.7	-1,082.2	577.5	531.4	46.07	12.535	
10,200.0	10,141.0	9,886.2	9,685.1	15.5	30.1	-55.01	262.4	-1,083.9	646.0	600.2	45.79	14.108	
10,300.0	10,241.0	9,922.0	9,703.9	15.5	30.1	-52.12	292.9	-1,085.4	718.4	672.7	45.63	15.742	
10,352.9	10,293.9	9,950.7	9,718.6	15.5	30.2	-49.96	317.4	-1,086.7	757.9	712.3	45.62	16.612	
10,400.0	10,341.0	9,967.3	9,726.9	15.6	30.2	-35.34	331.8	-1,087.4	792.9	747.3	45.63	17.376	
10,450.0	10,390.5	9,986.7	9,736.3	15.6	30.2	-31.30	348.7	-1,088.2	828.3	782.8	45.52	18.197	
10,500.0	10,439.1	10,016.0	9,750.0	15.6	30.2	-27.67	374.7	-1,089.2	861.6	815.9	45.60	18.892	
10,550.0	10,486.4	10,016.0	9,750.0	15.7	30.2	-25.73	374.7	-1,089.2	892.5	846.8	45.68	19.536	
10,600.0	10,531.9	10,049.4	9,764.6	15.7	30.3	-23.18	404.6	-1,090.2	920.6	874.7	45.86	20.073	
10,650.0	10,575.2	10,071.1	9,773.6	15.7	30.3	-21.40	424.4	-1,090.6	946.2	900.2	46.03	20.557	
10,700.0	10,615.9	10,110.0	9,788.3	15.7	30.3	-19.58	460.4	-1,090.9	969.2	922.9	46.26	20.953	
10,750.0	10,653.7	10,110.0	9,788.3	15.8	30.3	-18.82	460.4	-1,090.9	988.7	942.4	46.37	21.322	
10,761.9	10,662.2	10,110.0	9,788.3	15.8	30.3	-18.65	460.4	-1,090.9	993.1	946.7	46.38	21.411	
10,775.0	10,671.3	10,110.0	9,788.3	15.8	30.3	-18.69	460.4	-1,090.9	997.7	951.3	46.40	21.504	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 014H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 133-r.5 MWD+IFR1

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	8.0	0.0	0.0	-46.20	182.2	-190.0	263.3				
100.0	100.0	89.0	97.0	0.5	0.6	-46.24	182.4	-190.5	263.7	262.1	1.60	164.801	
200.0	200.0	186.5	194.5	1.0	1.2	-46.35	183.2	-192.0	265.4	262.7	2.71	98.101	
300.0	300.0	286.6	294.5	1.4	1.7	-46.29	184.9	-193.4	267.6	264.1	3.55	75.365	
400.0	400.0	386.8	394.7	1.6	2.3	-46.15	186.7	-194.4	269.6	265.2	4.35	61.919	
500.0	500.0	486.2	494.1	1.9	2.7	-46.03	188.5	-195.4	271.6	266.6	5.03	54.035	
600.0	600.0	584.6	592.5	2.1	3.0	-45.89	190.7	-196.7	274.0	268.4	5.58	49.152	
700.0	700.0	683.1	690.9	2.3	3.4	-45.74	193.3	-198.3	277.0	270.9	6.11	45.355	
800.0	800.0	782.2	790.0	2.5	3.7	-45.55	196.3	-200.1	280.5	273.9	6.62	42.384	
900.0	900.0	881.4	889.1	2.7	4.0	-45.38	199.5	-202.2	284.3	277.1	7.13	39.858	
1,000.0	1,000.0	987.1	994.7	2.9	4.3	-45.44	201.3	-204.4	286.9	279.3	7.64	37.546	
1,100.0	1,100.0	1,087.6	1,095.3	3.2	4.6	-45.79	201.2	-206.8	288.5	280.4	8.16	35.364	
1,200.0	1,200.0	1,186.1	1,193.6	3.4	4.8	-46.18	201.1	-209.5	290.5	281.9	8.63	33.658	
1,300.0	1,300.0	1,285.7	1,293.3	3.7	5.1	8.48	201.2	-212.5	291.1	281.8	9.22	31.567	
1,400.0	1,399.8	1,382.0	1,389.5	4.0	5.4	8.11	201.1	-216.2	288.5	278.7	9.82	29.388	
1,500.0	1,499.5	1,472.7	1,479.9	4.3	5.8	7.24	200.1	-223.2	284.9	274.4	10.45	27.255	
1,600.0	1,598.7	1,563.8	1,570.2	4.6	6.3	5.72	198.8	-235.0	281.5	270.4	11.10	25.360	
1,700.0	1,697.7	1,665.6	1,670.6	4.8	6.7	17.41	195.7	-251.6	278.3	266.6	11.71	23.774	
1,800.0	1,796.5	1,771.8	1,775.4	5.0	7.0	27.48	189.1	-267.9	272.6	260.4	12.26	22.233	
1,872.1	1,867.6	1,840.9	1,843.4	5.1	7.3	33.76	184.1	-278.3	268.0	255.4	12.57	21.321	
1,900.0	1,895.1	1,866.1	1,868.2	5.1	7.4	33.44	182.2	-282.5	266.6	254.0	12.67	21.039	
2,000.0	1,993.6	1,959.4	1,959.7	5.3	7.7	32.03	175.9	-300.1	263.6	250.5	13.16	20.040	
2,100.0	2,092.1	2,061.3	2,059.3	5.5	8.1	30.41	169.3	-320.3	261.9	248.2	13.70	19.110	
2,200.0	2,190.5	2,156.5	2,152.5	5.6	8.5	28.91	163.0	-338.7	259.9	245.6	14.23	18.259	
2,217.8	2,208.0	2,172.8	2,168.4	5.7	8.6	28.64	162.1	-342.1	259.8	245.5	14.33	18.138 CC, ES	
2,300.0	2,289.0	2,250.7	2,244.3	5.8	8.9	27.32	157.7	-359.1	260.6	245.8	14.78	17.632	
2,400.0	2,387.5	2,353.0	2,343.8	6.0	9.3	25.52	151.9	-382.2	262.3	246.9	15.41	17.021	
2,500.0	2,486.0	2,448.1	2,436.3	6.2	9.7	23.84	146.3	-403.4	264.0	248.0	16.00	16.502	
2,600.0	2,584.5	2,543.2	2,528.5	6.4	10.1	22.18	141.5	-426.5	268.0	251.4	16.60	16.142	
2,700.0	2,682.9	2,644.0	2,626.0	6.6	10.5	20.53	137.0	-451.4	273.0	255.7	17.28	15.797	
2,800.0	2,781.4	2,746.0	2,724.9	6.7	11.0	18.94	132.1	-475.9	277.3	259.4	17.97	15.432	
2,900.0	2,879.9	2,845.9	2,821.9	6.9	11.4	17.40	127.1	-499.5	281.4	262.8	18.65	15.092	
3,000.0	2,978.4	2,945.3	2,918.3	7.1	11.9	15.89	122.0	-523.0	285.7	266.3	19.32	14.783	
3,100.0	3,076.9	3,043.5	3,013.6	7.3	12.3	14.56	117.5	-546.2	290.4	270.4	19.99	14.528	
3,200.0	3,175.3	3,141.4	3,108.6	7.5	12.8	13.44	114.1	-569.8	295.9	275.2	20.66	14.324	
3,300.0	3,273.8	3,242.6	3,206.8	7.7	13.2	12.40	110.9	-594.1	301.5	280.1	21.37	14.110	
3,400.0	3,372.3	3,343.3	3,304.5	7.9	13.7	11.39	107.6	-617.8	306.7	284.6	22.07	13.897	
3,500.0	3,470.8	3,442.9	3,401.3	8.1	14.2	10.36	104.0	-641.3	311.9	289.2	22.77	13.701	
3,600.0	3,569.3	3,543.5	3,499.0	8.3	14.6	9.29	99.9	-665.0	317.2	293.7	23.48	13.511	
3,700.0	3,667.7	3,644.7	3,597.3	8.5	15.1	8.19	95.4	-688.4	322.1	297.9	24.20	13.312	
3,800.0	3,766.2	3,745.1	3,694.9	8.7	15.5	7.03	90.4	-711.4	326.8	301.9	24.91	13.121	
3,900.0	3,864.7	3,842.0	3,789.1	8.9	16.0	5.89	85.2	-733.7	331.7	306.2	25.58	12.967	
4,000.0	3,963.2	3,935.2	3,879.3	9.1	16.4	4.86	80.5	-756.6	338.3	312.1	26.23	12.900	
4,037.4	4,000.0	3,969.7	3,912.6	9.1	16.6	4.48	78.9	-765.5	341.4	314.9	26.45	12.905	
4,100.0	4,061.7	4,031.2	3,971.9	9.2	16.9	10.93	75.9	-781.8	346.9	320.0	26.86	12.915	
4,132.1	4,093.3	4,063.1	4,002.5	9.3	17.0	14.28	74.3	-790.2	349.8	322.7	27.07	12.921	
4,200.0	4,160.1	4,130.9	4,067.8	9.4	17.4	13.93	70.9	-808.2	356.1	328.5	27.54	12.928	
4,300.0	4,258.6	4,231.7	4,164.9	9.6	17.9	13.41	65.7	-834.7	365.1	336.8	28.26	12.918	
4,400.0	4,357.0	4,332.1	4,261.7	9.8	18.3	12.88	60.3	-860.9	373.8	344.8	28.98	12.898	
4,500.0	4,455.5	4,433.5	4,359.5	10.0	18.8	12.31	54.4	-887.0	382.3	352.6	29.71	12.867	
4,600.0	4,554.0	4,528.2	4,450.8	10.2	19.3	11.79	48.9	-911.5	391.0	360.6	30.37	12.874	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 014H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 133-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,700.0	4,652.4	4,627.8	4,546.6	10.4	19.8	11.30	43.3	-938.2	400.6	369.5	31.08	12.887	
4,800.0	4,750.9	4,729.7	4,644.7	10.6	20.3	10.80	37.4	-965.1	409.8	378.0	31.82	12.878	
4,900.0	4,849.3	4,846.7	4,758.1	10.8	20.8	10.34	31.2	-993.2	416.6	383.9	32.70	12.740	
5,000.0	4,947.8	4,957.6	4,866.5	11.0	21.4	10.05	26.2	-1,015.9	419.8	386.3	33.47	12.542	
5,100.0	5,046.3	5,061.1	4,968.0	11.2	21.8	9.80	21.6	-1,035.6	421.5	387.4	34.17	12.336	
5,101.4	5,047.7	5,062.6	4,969.5	11.2	21.8	9.79	21.5	-1,035.9	421.6	387.4	34.18	12.333	
5,200.0	5,144.9	5,171.0	5,076.1	11.4	22.3	9.50	16.6	-1,055.2	422.9	388.0	34.89	12.121	
5,300.0	5,243.7	5,283.5	5,187.2	11.6	22.8	9.22	11.9	-1,071.7	422.9	387.3	35.59	11.881	
5,400.0	5,342.9	5,403.1	5,306.0	11.8	23.3	8.95	7.5	-1,085.1	421.0	384.8	36.23	11.622	
5,500.0	5,442.2	5,522.8	5,425.4	12.0	23.8	8.90	5.1	-1,092.8	416.0	379.3	36.71	11.334	
5,600.0	5,541.7	5,634.7	5,537.3	12.1	24.1	9.02	4.3	-1,095.2	408.6	371.5	37.09	11.016	
5,700.0	5,641.4	5,736.5	5,639.1	12.3	24.3	9.15	4.0	-1,095.9	401.3	363.6	37.76	10.627	
5,800.0	5,741.2	5,837.0	5,739.6	12.5	24.5	9.20	3.4	-1,096.4	395.7	357.3	38.34	10.321	
5,900.0	5,841.1	5,937.9	5,840.5	12.6	24.6	9.22	2.9	-1,096.7	391.5	352.6	38.86	10.075	
6,000.0	5,941.1	6,038.5	5,941.0	12.8	24.7	9.19	2.2	-1,096.8	388.8	349.7	39.09	9.947	
6,100.0	6,041.0	6,138.9	6,041.5	12.9	24.7	9.10	1.5	-1,096.7	387.7	348.6	39.19	9.894	
6,109.0	6,050.0	6,147.9	6,050.5	12.9	24.7	-89.79	1.4	-1,096.7	387.7	348.5	39.20	9.892	
6,200.0	6,141.0	6,239.0	6,141.6	13.0	24.8	-89.91	0.6	-1,096.6	387.6	348.4	39.23	9.881	
6,300.0	6,241.0	6,338.5	6,241.0	13.0	24.8	-90.04	-0.3	-1,096.5	387.5	348.2	39.32	9.855	
6,304.4	6,245.5	6,342.9	6,245.5	13.0	24.8	-90.05	-0.3	-1,096.5	387.5	348.2	39.33	9.854	
6,400.0	6,341.0	6,438.2	6,340.8	13.1	24.9	-90.17	-1.1	-1,096.6	387.6	348.1	39.44	9.826	
6,500.0	6,441.0	6,537.4	6,440.0	13.1	25.0	-90.29	-1.9	-1,096.7	387.7	348.0	39.69	9.768	
6,600.0	6,541.0	6,634.9	6,537.5	13.2	25.1	-90.33	-2.3	-1,097.2	388.3	348.4	39.81	9.752	
6,700.0	6,641.0	6,732.2	6,634.8	13.2	25.4	-90.31	-2.1	-1,098.5	389.5	349.3	40.17	9.698	
6,800.0	6,741.0	6,830.5	6,733.1	13.3	25.6	-90.29	-2.0	-1,100.3	391.4	350.8	40.56	9.650	
6,900.0	6,841.0	6,930.7	6,833.2	13.4	25.9	-90.29	-2.0	-1,102.4	393.5	352.5	40.94	9.611	
7,000.0	6,941.0	7,031.4	6,933.9	13.4	26.2	-90.27	-1.9	-1,104.3	395.4	354.1	41.28	9.577	
7,100.0	7,041.0	7,135.9	7,038.3	13.5	26.3	-90.18	-1.3	-1,105.8	396.8	355.3	41.49	9.563	
7,200.0	7,141.0	7,237.6	7,140.1	13.5	26.4	-90.03	-0.2	-1,106.1	397.1	355.4	41.66	9.532	
7,300.0	7,241.0	7,341.8	7,244.3	13.6	26.4	-89.84	1.1	-1,105.9	396.9	355.5	41.45	9.576	
7,400.0	7,341.0	7,445.6	7,348.0	13.7	26.2	-89.62	2.6	-1,104.5	395.6	354.4	41.25	9.590	
7,500.0	7,441.0	7,544.7	7,447.1	13.7	26.0	-89.43	3.9	-1,102.9	393.9	352.9	41.07	9.591	
7,600.0	7,541.0	7,644.0	7,546.4	13.8	25.9	-89.26	5.1	-1,101.4	392.5	351.6	40.91	9.593	
7,700.0	7,641.0	7,743.1	7,645.5	13.9	25.7	-89.08	6.3	-1,100.1	391.2	350.4	40.77	9.596	
7,800.0	7,741.0	7,840.1	7,742.4	13.9	25.6	-88.87	7.7	-1,099.4	390.5	349.6	40.87	9.555	
7,870.9	7,811.9	7,909.5	7,811.9	14.0	25.6	-88.71	8.8	-1,099.2	390.3	349.4	40.99	9.523	
7,900.0	7,841.0	7,938.1	7,840.4	14.0	25.6	-88.65	9.2	-1,099.3	390.4	349.4	41.00	9.521	
8,000.0	7,941.0	8,036.4	7,938.8	14.0	25.7	-88.57	9.8	-1,099.7	390.8	349.5	41.28	9.466	
8,100.0	8,041.0	8,135.9	8,038.3	14.1	25.9	-88.61	9.5	-1,100.2	391.3	349.5	41.80	9.363	
8,200.0	8,141.0	8,233.4	8,135.8	14.2	26.1	-88.80	8.2	-1,101.3	392.4	350.3	42.11	9.320	
8,300.0	8,241.0	8,333.5	8,235.8	14.2	26.4	-89.00	6.9	-1,102.7	393.8	351.4	42.39	9.289	
8,400.0	8,341.0	8,433.9	8,336.2	14.3	26.6	-89.22	5.4	-1,104.0	395.1	352.4	42.67	9.259	
8,500.0	8,441.0	8,535.6	8,437.8	14.4	26.7	-89.46	3.7	-1,105.1	396.2	353.3	42.91	9.233	
8,600.0	8,541.0	8,635.5	8,537.8	14.4	26.9	-89.57	3.0	-1,105.8	396.8	353.8	43.05	9.218	
8,700.0	8,641.0	8,735.1	8,637.4	14.5	27.1	-89.60	2.8	-1,106.8	397.8	354.6	43.25	9.197	
8,800.0	8,741.0	8,837.0	8,739.3	14.5	27.3	-89.59	2.9	-1,107.5	398.5	355.1	43.46	9.170	
8,900.0	8,841.0	8,936.9	8,839.2	14.6	27.5	-89.55	3.2	-1,107.9	398.9	355.2	43.67	9.134	
9,000.0	8,941.0	9,036.7	8,938.9	14.7	27.7	-89.51	3.4	-1,108.4	399.4	355.4	44.00	9.078	
9,100.0	9,041.0	9,135.8	9,038.0	14.7	27.9	-89.51	3.4	-1,109.0	400.0	355.7	44.35	9.021	
9,200.0	9,141.0	9,237.0	9,139.2	14.8	28.1	-89.53	3.3	-1,109.7	400.7	356.0	44.74	8.957	
9,300.0	9,241.0	9,337.4	9,239.7	14.9	28.3	-89.58	2.9	-1,110.0	401.0	356.0	44.97	8.917	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 014H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 133-r.5 MWD+IFR1

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
9,400.0	9,341.0	9,458.4	9,360.2	14.9	29.9	-88.41	11.1	-1,107.6	399.2	352.5	46.66	8.555	
9,500.0	9,441.0	9,568.9	9,465.4	15.0	29.9	-83.78	42.5	-1,098.6	392.6	346.2	46.39	8.463	
9,578.2	9,519.3	9,630.8	9,519.2	15.0	29.9	-79.32	72.3	-1,092.2	390.0	343.5	46.47	8.392	
9,600.0	9,541.0	9,638.0	9,525.1	15.1	29.9	-78.72	76.3	-1,091.5	390.3	343.7	46.62	8.373 SF	
9,700.0	9,641.0	9,701.5	9,574.6	15.1	29.9	-72.92	115.7	-1,085.7	399.7	353.0	46.65	8.567	
9,800.0	9,741.0	9,733.0	9,597.1	15.2	29.9	-69.82	137.6	-1,083.5	424.2	377.5	46.70	9.085	
9,900.0	9,841.0	9,779.7	9,627.5	15.3	30.0	-65.11	173.0	-1,081.7	463.0	416.5	46.49	9.959	
10,000.0	9,941.0	9,827.0	9,654.3	15.3	30.1	-60.40	211.9	-1,081.9	515.9	469.6	46.32	11.139	
10,100.0	10,041.0	9,836.1	9,659.0	15.4	30.1	-59.52	219.7	-1,082.2	577.5	531.4	46.07	12.535	
10,200.0	10,141.0	9,886.2	9,685.1	15.5	30.1	-55.01	262.4	-1,083.9	646.0	600.2	45.79	14.108	
10,300.0	10,241.0	9,922.0	9,703.9	15.5	30.1	-52.12	292.9	-1,085.4	718.4	672.7	45.63	15.742	
10,352.9	10,293.9	9,950.7	9,718.6	15.5	30.2	-49.96	317.4	-1,086.7	757.9	712.3	45.62	16.612	
10,400.0	10,341.0	9,967.3	9,726.9	15.6	30.2	-35.34	331.8	-1,087.4	792.9	747.3	45.63	17.376	
10,450.0	10,390.5	9,986.7	9,736.3	15.6	30.2	-31.30	348.7	-1,088.2	828.3	782.8	45.52	18.197	
10,500.0	10,439.1	10,016.0	9,750.0	15.6	30.2	-27.67	374.6	-1,089.3	861.6	815.9	45.60	18.892	
10,550.0	10,486.4	10,016.0	9,750.0	15.7	30.2	-25.73	374.6	-1,089.3	892.5	846.8	45.68	19.536	
10,600.0	10,531.9	10,049.4	9,764.7	15.7	30.3	-23.18	404.6	-1,090.2	920.6	874.7	45.86	20.073	
10,650.0	10,575.2	10,071.1	9,773.6	15.7	30.3	-21.40	424.4	-1,090.6	946.2	900.2	46.03	20.557	
10,700.0	10,615.9	10,110.0	9,788.3	15.7	30.3	-19.58	460.4	-1,090.9	969.2	922.9	46.26	20.953	
10,750.0	10,653.7	10,110.0	9,788.3	15.8	30.3	-18.82	460.4	-1,090.9	988.7	942.4	46.37	21.322	
10,761.9	10,662.2	10,110.0	9,788.3	15.8	30.3	-18.65	460.4	-1,090.9	993.1	946.7	46.38	21.411	
10,775.0	10,671.3	10,110.0	9,788.3	15.8	30.3	-18.69	460.4	-1,090.9	997.7	951.3	46.40	21.504	

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 1H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 150-r.5 MWD

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	10.0	0.0	0.0	-28.73	182.2	-99.9	208.1				
100.0	100.0	90.1	100.1	0.5	0.7	-28.71	182.3	-99.8	207.8	206.1	1.70	122.371	
200.0	200.0	190.8	200.8	1.0	1.4	-28.65	182.3	-99.6	207.7	204.9	2.85	72.819	
300.0	300.0	290.3	300.3	1.4	1.8	-28.55	182.0	-99.0	207.2	203.6	3.55	58.335	
314.9	314.9	305.0	314.9	1.4	1.8	-28.54	182.0	-99.0	207.2	203.5	3.64	56.970	
400.0	400.0	388.9	398.9	1.6	2.1	-28.51	182.3	-99.0	207.4	203.3	4.15	49.969	
500.0	500.0	488.9	498.9	1.9	2.4	-28.47	182.9	-99.2	208.0	203.3	4.69	44.320	
600.0	600.0	588.6	598.6	2.1	2.7	-28.58	183.2	-99.8	208.6	203.4	5.17	40.324	
700.0	700.0	688.7	698.7	2.3	2.9	-28.86	183.3	-101.0	209.3	203.6	5.61	37.284	
800.0	800.0	787.9	797.9	2.5	3.1	-29.23	183.4	-102.6	210.1	204.1	6.03	34.873	
900.0	900.0	888.2	898.1	2.7	3.3	-29.72	183.2	-104.6	211.0	204.5	6.42	32.862	
1,000.0	1,000.0	986.7	996.6	2.9	3.6	-30.22	183.4	-106.8	212.2	205.4	6.81	31.187	
1,100.0	1,100.0	1,085.9	1,095.8	3.2	3.9	-30.73	184.0	-109.4	214.1	206.8	7.30	29.342	
1,200.0	1,200.0	1,188.2	1,198.0	3.4	4.1	-31.23	184.5	-111.9	215.8	208.1	7.75	27.852	
1,300.0	1,300.0	1,300.5	1,310.3	3.7	7.9	24.44	184.0	-109.7	212.9	201.6	11.30	18.838	
1,400.0	1,399.8	1,407.3	1,416.5	4.0	9.0	27.60	181.7	-98.7	201.2	188.7	12.53	16.064	
1,500.0	1,499.5	1,505.3	1,513.6	4.3	9.1	32.20	179.2	-85.8	185.7	172.6	13.10	14.171	
1,600.0	1,598.7	1,604.7	1,611.9	4.6	9.2	38.87	176.2	-71.2	167.9	154.1	13.77	12.192	
1,700.0	1,697.7	1,699.8	1,705.3	4.8	9.3	62.59	173.6	-53.4	152.3	137.7	14.55	10.467	
1,800.0	1,796.5	1,795.6	1,798.6	5.0	9.4	88.01	170.4	-32.2	144.9	129.7	15.22	9.522	
1,815.1	1,811.4	1,809.5	1,812.1	5.0	9.4	91.74	169.8	-29.0	144.8	129.5	15.28	9.476	CC, ES, SF
1,872.1	1,867.6	1,861.9	1,863.0	5.1	9.5	105.41	167.5	-16.7	147.0	131.6	15.39	9.555	
1,900.0	1,895.1	1,887.4	1,887.8	5.1	9.5	109.29	166.4	-10.8	149.6	134.3	15.37	9.736	
2,000.0	1,993.6	1,978.4	1,976.3	5.3	9.6	121.79	162.8	10.2	165.1	149.9	15.18	10.874	
2,100.0	2,092.1	2,069.6	2,065.0	5.5	9.8	131.89	159.8	31.1	188.2	173.2	14.92	12.614	
2,200.0	2,190.5	2,160.7	2,153.6	5.6	9.9	139.81	156.9	52.2	216.3	201.6	14.74	14.676	
2,300.0	2,289.0	2,254.3	2,244.6	5.8	10.1	146.07	153.9	73.6	247.6	232.9	14.73	16.811	
2,400.0	2,387.5	2,342.3	2,330.1	6.0	10.3	150.81	150.7	94.2	281.1	266.3	14.82	18.966	
2,500.0	2,486.0	2,427.4	2,412.3	6.2	10.4	154.86	146.3	116.1	317.8	302.8	15.00	21.190	
2,600.0	2,584.5	2,516.3	2,497.5	6.4	10.7	158.54	140.6	140.7	357.1	341.9	15.28	23.376	
2,700.0	2,682.9	2,610.0	2,587.5	6.6	10.9	161.64	134.6	166.0	397.0	381.4	15.67	25.340	
2,800.0	2,781.4	2,706.9	2,680.9	6.7	11.1	164.15	128.7	190.9	436.5	420.3	16.14	27.041	
2,900.0	2,879.9	2,796.0	2,767.2	6.9	11.4	166.01	123.6	212.9	475.6	459.0	16.59	28.659	
3,000.0	2,978.4	2,881.5	2,849.7	7.1	11.6	167.45	119.6	234.7	516.0	499.0	17.06	30.255	
3,100.0	3,076.9	2,970.7	2,935.8	7.3	11.9	168.71	115.9	258.1	557.4	539.8	17.58	31.705	
3,200.0	3,175.3	3,062.7	3,024.5	7.5	12.2	169.80	112.3	281.9	598.8	580.6	18.16	32.977	
3,300.0	3,273.8	3,155.3	3,113.9	7.7	12.4	170.71	109.0	305.8	640.2	621.4	18.76	34.122	
3,400.0	3,372.3	3,251.5	3,207.0	7.9	12.7	171.50	106.1	329.9	681.0	661.6	19.42	35.073	
3,500.0	3,470.8	3,346.5	3,299.1	8.1	13.0	172.15	103.5	353.0	721.4	701.3	20.09	35.916	
3,600.0	3,569.3	3,441.2	3,391.0	8.3	13.3	172.70	101.2	375.7	761.4	740.6	20.77	36.656	
3,700.0	3,667.7	3,532.7	3,479.9	8.5	13.6	173.17	99.1	397.2	801.1	779.6	21.45	37.340	
3,800.0	3,766.2	3,618.3	3,563.0	8.7	13.9	173.57	97.1	417.8	841.3	819.2	22.11	38.057	
3,900.0	3,864.7	3,702.1	3,644.2	8.9	14.2	173.92	95.3	438.5	882.2	859.5	22.77	38.750	
4,000.0	3,963.2	3,783.7	3,723.0	9.1	14.4	174.23	93.7	459.4	924.0	900.6	23.43	39.438	
4,037.4	4,000.0	3,813.7	3,752.0	9.1	14.6	174.34	93.0	467.4	939.9	916.2	23.67	39.705	
4,100.0	4,061.7	3,863.9	3,800.3	9.2	14.7	-177.81	91.9	480.8	966.9	942.8	24.05	40.195	
4,132.1	4,093.3	3,891.9	3,827.3	9.3	14.8	-173.84	91.2	488.5	980.8	956.5	24.28	40.394	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 6H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 150-r.5 MWD

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	9.4	0.0	0.0	-35.51	182.2	-130.0	224.0				
100.0	100.0	89.4	98.8	0.5	0.7	-35.52	182.4	-130.2	224.1	222.4	1.69	132.522	
200.0	200.0	189.1	198.5	1.0	1.4	-35.56	182.9	-130.7	224.8	222.0	2.85	78.898	
300.0	300.0	290.5	299.9	1.4	1.8	-35.62	183.0	-131.1	225.2	221.6	3.57	63.082	
400.0	400.0	389.5	398.9	1.6	2.1	-35.65	183.1	-131.3	225.3	221.1	4.21	53.507	
500.0	500.0	488.9	498.3	1.9	2.5	-35.66	183.6	-131.8	226.0	221.2	4.79	47.166	
600.0	600.0	588.4	597.8	2.1	2.8	-35.72	184.2	-132.4	226.9	221.6	5.31	42.747	
700.0	700.0	687.2	696.6	2.3	3.1	-35.85	184.8	-133.6	228.1	222.3	5.79	39.380	
800.0	800.0	784.9	794.3	2.5	3.4	-36.11	185.8	-135.5	230.1	223.8	6.26	36.766	
900.0	900.0	884.6	893.9	2.7	3.7	-36.56	186.8	-138.5	232.6	225.9	6.72	34.614	
1,000.0	1,000.0	983.8	993.0	2.9	4.0	-37.30	187.2	-142.6	235.4	228.2	7.16	32.864	
1,100.0	1,100.0	1,083.3	1,092.4	3.2	4.3	-38.05	187.8	-147.0	238.6	230.9	7.70	30.976	
1,200.0	1,200.0	1,189.4	1,198.5	3.4	4.6	-38.68	188.2	-150.7	241.1	232.9	8.18	29.465	
1,300.0	1,300.0	1,298.3	1,307.4	3.7	4.8	16.28	186.4	-150.2	237.8	229.2	8.60	27.645	
1,400.0	1,399.8	1,410.8	1,419.6	4.0	5.1	17.39	183.0	-144.4	227.3	218.1	9.23	24.617	
1,500.0	1,499.5	1,512.9	1,521.0	4.3	5.2	19.80	178.5	-133.8	209.4	199.9	9.54	21.945	
1,600.0	1,598.7	1,614.4	1,621.6	4.6	5.3	23.67	173.4	-120.9	186.8	177.0	9.86	18.945	
1,700.0	1,697.7	1,710.0	1,716.0	4.8	5.3	43.57	168.3	-107.0	163.4	153.3	10.12	16.148	
1,800.0	1,796.5	1,803.9	1,808.8	5.0	5.4	64.22	163.8	-93.5	144.5	134.1	10.41	13.883	
1,872.1	1,867.6	1,872.4	1,876.6	5.1	5.4	79.32	160.8	-84.3	135.2	124.7	10.55	12.819	
1,900.0	1,895.1	1,899.0	1,903.0	5.1	5.5	82.62	159.5	-80.9	132.7	122.1	10.58	12.542	
2,000.0	1,993.6	1,995.8	1,998.9	5.3	5.6	95.47	154.6	-68.4	127.2	116.4	10.80	11.779	
2,050.2	2,043.0	2,045.5	2,047.9	5.4	5.8	102.75	151.2	-61.1	126.6	115.6	10.94	11.573 CC, ES	
2,100.0	2,092.1	2,093.3	2,094.9	5.5	6.0	110.33	146.8	-53.0	127.4	116.4	11.06	11.521 SF	
2,200.0	2,190.5	2,186.3	2,185.9	5.6	6.2	124.61	138.0	-36.4	136.3	124.9	11.38	11.972	
2,300.0	2,289.0	2,280.6	2,278.4	5.8	6.4	136.57	129.4	-20.2	153.0	141.2	11.80	12.969	
2,400.0	2,387.5	2,373.3	2,369.3	6.0	6.7	145.81	121.2	-4.5	175.3	163.0	12.26	14.300	
2,500.0	2,486.0	2,465.8	2,460.0	6.2	6.9	153.10	112.8	11.9	201.8	189.0	12.76	15.815	
2,600.0	2,584.5	2,561.3	2,553.6	6.4	7.2	158.89	104.0	28.6	230.6	217.3	13.32	17.314	
2,700.0	2,682.9	2,658.5	2,649.2	6.6	7.5	163.29	95.5	44.4	260.0	246.1	13.92	18.680	
2,800.0	2,781.4	2,756.4	2,745.7	6.7	7.8	166.57	87.8	58.7	289.1	274.6	14.53	19.895	
2,900.0	2,879.9	2,851.8	2,839.9	6.9	8.1	169.03	80.9	71.8	318.2	303.0	15.13	21.029	
3,000.0	2,978.4	2,941.8	2,928.8	7.1	8.4	171.07	74.0	84.8	348.3	332.6	15.70	22.190	
3,100.0	3,076.9	3,030.3	3,015.7	7.3	8.7	173.02	65.7	99.0	380.3	364.0	16.27	23.371	
3,200.0	3,175.3	3,125.7	3,109.2	7.5	9.1	174.93	56.0	114.9	413.1	396.2	16.95	24.380	
3,300.0	3,273.8	3,222.7	3,204.5	7.7	9.4	176.52	46.6	130.5	445.8	428.1	17.66	25.250	
3,400.0	3,372.3	3,320.9	3,301.2	7.9	9.8	177.79	37.9	145.4	477.9	459.5	18.37	26.007	
3,500.0	3,470.8	3,414.7	3,393.7	8.1	10.1	178.81	30.0	159.4	509.8	490.8	19.04	26.772	
3,600.0	3,569.3	3,512.5	3,490.0	8.3	10.5	179.73	21.9	173.9	541.8	522.0	19.75	27.438	
3,700.0	3,667.7	3,622.6	3,598.9	8.5	10.9	-179.48	14.0	188.0	571.9	551.4	20.57	27.810	
3,800.0	3,766.2	3,725.5	3,701.0	8.7	11.3	-179.01	8.6	199.6	600.5	579.2	21.31	28.178	
3,900.0	3,864.7	3,833.6	3,808.5	8.9	11.7	-178.68	4.2	210.2	627.6	605.6	22.00	28.524	
4,000.0	3,963.2	3,955.7	3,930.2	9.1	12.2	-178.48	1.0	218.9	652.2	629.4	22.75	28.668	
4,037.4	4,000.0	3,998.8	3,973.3	9.1	12.3	-178.47	0.5	220.7	660.3	637.3	22.96	28.757	
4,100.0	4,061.7	4,065.9	4,040.3	9.2	12.5	-171.16	0.1	223.1	673.3	650.2	23.13	29.108	
4,132.1	4,093.3	4,100.1	4,074.5	9.3	12.6	-167.50	-0.1	224.1	679.7	656.6	23.16	29.345	
4,200.0	4,160.1	4,172.6	4,147.0	9.4	12.8	-167.70	-0.7	225.8	692.9	669.7	23.21	29.849	
4,300.0	4,258.6	4,277.9	4,252.3	9.6	13.0	-167.95	-1.6	227.1	711.3	688.4	22.89	31.067	
4,400.0	4,357.0	4,377.3	4,351.7	9.8	13.2	-168.16	-2.7	227.9	729.2	706.2	23.08	31.601	
4,500.0	4,455.5	4,477.5	4,451.9	10.0	13.5	-168.36	-3.7	228.4	746.9	723.7	23.25	32.131	
4,600.0	4,554.0	4,575.4	4,549.8	10.2	13.6	-168.54	-4.7	228.9	764.6	741.0	23.58	32.429	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 6H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 150-r.5 MWD

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,700.0	4,652.4	4,674.4	4,648.7	10.4	13.8	-168.73	-5.7	229.4	782.3	758.4	23.87	32.767	
4,800.0	4,750.9	4,772.9	4,747.3	10.6	14.0	-168.90	-6.8	229.8	799.9	775.7	24.14	33.129	
4,900.0	4,849.3	4,870.8	4,845.2	10.8	14.2	-169.04	-8.1	230.2	817.5	793.1	24.43	33.461	
5,000.0	4,947.8	4,968.3	4,942.7	11.0	14.4	-169.15	-9.7	230.7	835.3	810.5	24.75	33.754	
5,100.0	5,046.3	5,066.5	5,040.8	11.2	14.7	-169.26	-11.4	231.3	853.1	828.0	25.05	34.054	
5,101.4	5,047.7	5,067.9	5,042.2	11.2	14.7	-169.26	-11.5	231.3	853.4	828.3	25.06	34.059	
5,200.0	5,144.9	5,166.7	5,141.0	11.4	14.9	-169.37	-13.3	231.8	870.0	844.7	25.34	34.335	
5,300.0	5,243.7	5,265.7	5,240.0	11.6	15.1	-169.50	-14.6	232.1	885.1	859.4	25.68	34.466	
5,400.0	5,342.9	5,363.2	5,337.5	11.8	15.3	-169.62	-15.4	232.6	898.6	872.5	26.10	34.433	
5,500.0	5,442.2	5,466.8	5,441.1	12.0	15.5	-169.73	-16.2	233.0	910.3	884.1	26.26	34.663	
5,600.0	5,541.7	5,569.5	5,543.8	12.1	15.5	-169.87	-16.0	232.9	919.8	893.5	26.37	34.880	
5,700.0	5,641.4	5,668.4	5,642.7	12.3	15.4	-169.99	-15.7	232.8	927.5	901.4	26.07	35.573	
5,800.0	5,741.2	5,769.8	5,744.1	12.5	15.3	-170.07	-15.6	232.5	933.5	907.7	25.75	36.257	
5,900.0	5,841.1	5,867.8	5,842.0	12.6	15.3	-170.13	-15.5	232.3	937.7	911.3	26.41	35.500	
6,000.0	5,941.1	5,968.7	5,943.0	12.8	15.2	-170.17	-15.4	232.2	940.3	914.4	25.91	36.285	
6,100.0	6,041.0	6,068.0	6,042.3	12.9	15.1	-170.18	-15.4	232.0	941.1	914.8	26.31	35.771	
6,109.0	6,050.0	6,077.1	6,051.4	12.9	15.1	90.94	-15.4	232.0	941.1	914.3	26.83	35.074	
6,200.0	6,141.0	6,168.5	6,142.8	13.0	15.1	90.93	-15.3	231.8	941.0	914.6	26.39	35.660	
6,300.0	6,241.0	6,268.1	6,242.3	13.0	15.0	90.88	-14.5	231.7	940.8	914.2	26.65	35.300	
6,400.0	6,341.0	6,366.8	6,341.1	13.1	14.9	90.84	-13.7	231.6	940.7	913.9	26.79	35.117	
6,404.4	6,345.5	6,371.0	6,345.3	13.1	14.9	90.83	-13.7	231.6	940.7	913.9	26.80	35.094	
6,500.0	6,441.0	6,464.6	6,438.9	13.1	14.9	90.81	-13.3	231.8	940.9	913.8	27.11	34.707	
6,600.0	6,541.0	6,567.2	6,541.5	13.2	14.9	90.79	-13.0	231.9	941.0	913.9	27.06	34.774	
6,700.0	6,641.0	6,671.5	6,645.7	13.2	14.9	90.78	-12.7	231.6	940.7	913.6	27.16	34.641	
6,800.0	6,741.0	6,776.5	6,750.7	13.3	14.8	90.76	-12.5	230.8	940.0	912.8	27.18	34.582	
6,900.0	6,841.0	6,879.4	6,853.7	13.4	14.6	90.73	-12.0	229.6	938.8	911.6	27.12	34.609	
7,000.0	6,941.0	6,977.0	6,951.3	13.4	14.5	90.72	-11.7	228.4	937.5	910.3	27.16	34.520	
7,100.0	7,041.0	7,077.6	7,051.9	13.5	14.4	90.72	-11.7	227.3	936.4	909.3	27.14	34.497	
7,200.0	7,141.0	7,175.5	7,149.7	13.5	14.4	90.75	-12.2	226.2	935.3	908.2	27.17	34.429	
7,300.0	7,241.0	7,271.5	7,245.7	13.6	14.5	90.80	-13.0	225.5	934.6	907.5	27.16	34.409	
7,400.0	7,341.0	7,369.0	7,343.2	13.7	14.5	90.84	-13.7	225.2	934.3	907.0	27.24	34.299	
7,500.0	7,441.0	7,467.9	7,442.2	13.7	14.6	90.87	-14.1	225.0	934.1	906.8	27.31	34.204	
7,568.6	7,509.6	7,535.4	7,509.6	13.8	14.7	90.86	-14.0	224.9	934.0	906.7	27.32	34.190	
7,600.0	7,541.0	7,566.3	7,540.5	13.8	14.7	90.85	-13.8	225.0	934.1	906.8	27.30	34.216	
7,700.0	7,641.0	7,666.1	7,640.3	13.9	14.6	90.79	-12.9	225.0	934.1	906.7	27.42	34.063	
7,800.0	7,741.0	7,765.7	7,739.9	13.9	14.6	90.74	-12.1	225.1	934.2	906.7	27.53	33.931	
7,900.0	7,841.0	7,861.3	7,835.5	14.0	14.5	90.67	-10.9	225.5	934.6	906.8	27.76	33.670	
8,000.0	7,941.0	7,960.4	7,934.6	14.0	14.6	90.58	-9.5	226.2	935.2	907.3	27.91	33.505	
8,100.0	8,041.0	8,060.2	8,034.4	14.1	14.6	90.50	-8.2	226.8	935.9	907.8	28.08	33.333	
8,200.0	8,141.0	8,156.8	8,131.0	14.2	14.6	90.44	-7.3	227.7	936.8	908.6	28.22	33.199	
8,300.0	8,241.0	8,257.0	8,231.1	14.2	14.8	90.41	-6.6	228.8	937.9	909.5	28.44	32.982	
8,400.0	8,341.0	8,358.8	8,332.9	14.3	14.9	90.37	-6.1	229.8	938.8	910.2	28.65	32.764	
8,500.0	8,441.0	8,460.3	8,434.5	14.4	15.0	90.34	-5.5	230.6	939.6	910.8	28.87	32.546	
8,600.0	8,541.0	8,565.6	8,539.7	14.4	15.1	90.31	-5.0	231.1	940.1	911.3	28.83	32.605	
8,670.1	8,611.1	8,637.0	8,611.1	14.5	15.1	90.28	-4.6	231.1	940.1	911.1	29.00	32.413	
8,700.0	8,641.0	8,665.7	8,639.9	14.5	15.1	90.27	-4.5	231.1	940.1	911.0	29.16	32.242	
8,800.0	8,741.0	8,767.1	8,741.2	14.5	15.1	90.25	-4.2	231.3	940.3	911.4	28.84	32.598	
8,876.1	8,817.1	8,842.9	8,817.1	14.6	15.1	90.26	-4.2	231.2	940.2	910.2	29.98	31.362	
8,900.0	8,841.0	8,866.4	8,840.5	14.6	15.1	90.26	-4.3	231.2	940.2	910.3	29.88	31.464	
9,000.0	8,941.0	8,966.3	8,940.5	14.7	15.2	90.29	-4.8	231.3	940.3	910.5	29.80	31.549	
9,100.0	9,041.0	9,067.1	9,041.3	14.7	15.3	90.34	-5.5	231.3	940.3	910.5	29.83	31.526	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 6H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 150-r.5 MWD

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
9,200.0	9,141.0	9,175.1	9,149.3	14.8	15.4	90.40	-6.5	230.9	939.9	910.2	29.77	31.571	
9,300.0	9,241.0	9,284.1	9,258.2	14.9	15.5	90.44	-7.2	229.4	938.6	908.8	29.80	31.492	
9,400.0	9,341.0	9,389.7	9,363.4	14.9	16.0	89.93	1.1	227.0	936.3	905.9	30.39	30.809	
9,500.0	9,441.0	9,473.8	9,445.6	15.0	16.1	88.86	18.6	225.3	934.5	903.9	30.62	30.525	
9,512.6	9,453.7	9,482.2	9,453.7	15.0	16.1	88.71	21.0	225.3	934.5	903.9	30.64	30.496	
9,600.0	9,541.0	9,545.0	9,512.7	15.1	16.1	87.41	42.3	225.7	936.1	905.3	30.83	30.368	
9,700.0	9,641.0	9,624.1	9,583.1	15.1	16.2	85.22	78.3	226.9	941.0	910.1	30.92	30.430	
9,800.0	9,741.0	9,731.6	9,669.7	15.2	16.5	81.38	141.7	225.5	947.8	916.8	31.06	30.514	
9,900.0	9,841.0	9,783.6	9,707.3	15.3	16.6	79.22	177.6	223.3	958.5	927.1	31.34	30.581	
10,000.0	9,941.0	9,829.0	9,737.7	15.3	16.7	77.22	211.1	221.8	975.9	944.2	31.75	30.739	
10,100.0	10,041.0	9,888.9	9,776.0	15.4	16.8	74.53	257.2	219.9	999.6	967.5	32.19	31.052	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 9H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 163-r.5 MWD

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	9.4	0.0	0.0	-41.27	182.3	-160.0	242.7				
100.0	100.0	91.3	100.7	0.5	0.8	-41.31	182.1	-160.0	242.4	240.6	1.77	136.573	
200.0	200.0	192.3	201.7	1.0	1.5	-41.43	181.4	-160.1	241.9	239.0	2.96	81.725	
300.0	300.0	292.9	302.3	1.4	1.9	-41.75	179.8	-160.5	241.1	237.4	3.65	66.112	
400.0	400.0	392.9	402.3	1.6	2.6	-42.23	177.8	-161.4	240.1	235.4	4.72	50.877	
500.0	500.0	493.0	502.3	1.9	3.6	-42.90	175.2	-162.8	239.1	233.1	5.99	39.909	
584.2	584.2	574.9	584.2	2.1	3.8	-43.49	173.2	-164.3	238.7	232.4	6.30	37.896	
600.0	600.0	589.4	598.7	2.1	3.9	-43.58	173.0	-164.6	238.8	232.4	6.36	37.534	
700.0	700.0	680.7	689.9	2.3	4.4	-43.94	173.7	-167.4	241.5	234.8	6.67	36.178	
800.0	800.0	788.2	797.4	2.5	4.5	-43.83	176.2	-169.2	244.3	237.2	7.15	34.166	
900.0	900.0	897.9	907.0	2.7	4.8	-43.09	177.5	-166.1	243.2	235.5	7.73	31.468	
1,000.0	1,000.0	999.4	1,008.5	2.9	5.0	-42.78	175.7	-162.6	239.6	231.4	8.13	29.467	
1,100.0	1,100.0	1,093.6	1,102.6	3.2	5.2	-43.38	172.2	-162.8	237.0	228.4	8.56	27.672	
1,134.4	1,134.4	1,125.3	1,134.3	3.2	5.3	-43.61	171.5	-163.3	236.8	228.1	8.69	27.256	
1,200.0	1,200.0	1,184.9	1,193.9	3.4	5.4	-44.02	170.9	-165.1	237.7	228.8	8.92	26.639	
1,300.0	1,300.0	1,282.4	1,291.2	3.7	5.6	10.32	171.2	-169.7	239.5	230.1	9.34	25.642	
1,400.0	1,399.8	1,379.8	1,388.3	4.0	5.9	9.25	170.2	-176.3	238.5	228.7	9.79	24.364	
1,500.0	1,499.5	1,479.5	1,487.5	4.3	6.1	7.30	166.9	-186.4	234.9	224.7	10.22	22.987	
1,600.0	1,598.7	1,578.8	1,586.0	4.6	6.4	4.89	162.0	-197.6	228.0	217.4	10.65	21.418	
1,700.0	1,697.7	1,678.7	1,685.2	4.8	6.6	16.61	157.0	-208.7	219.8	208.7	11.01	19.963	
1,800.0	1,796.5	1,778.8	1,784.6	5.0	6.9	27.40	152.2	-219.5	211.3	199.9	11.39	18.555	
1,872.1	1,867.6	1,851.0	1,856.2	5.1	7.2	34.03	147.8	-227.7	205.0	193.3	11.63	17.618	
1,900.0	1,895.1	1,878.8	1,883.7	5.1	7.3	33.75	145.7	-231.1	202.5	190.8	11.71	17.287	
2,000.0	1,993.6	1,977.7	1,981.5	5.3	7.6	32.64	138.3	-243.5	193.8	181.7	12.10	16.014	
2,100.0	2,092.1	2,078.1	2,080.8	5.5	7.9	31.41	130.7	-256.1	185.3	172.8	12.51	14.808	
2,200.0	2,190.5	2,180.1	2,181.8	5.6	8.3	30.17	122.7	-267.6	175.7	162.7	12.93	13.582	
2,300.0	2,289.0	2,280.3	2,281.1	5.8	8.6	28.64	114.1	-278.6	165.4	152.0	13.36	12.375	
2,400.0	2,387.5	2,381.1	2,380.7	6.0	9.0	26.19	103.5	-289.9	154.6	140.7	13.83	11.176	
2,500.0	2,486.0	2,482.1	2,480.5	6.2	9.4	23.23	91.9	-300.2	142.7	128.4	14.32	9.966	
2,600.0	2,584.5	2,581.1	2,578.4	6.4	9.8	19.69	80.0	-309.6	130.6	115.7	14.85	8.792	
2,700.0	2,682.9	2,678.5	2,674.5	6.6	10.1	15.34	68.2	-319.6	119.7	104.2	15.44	7.750	
2,800.0	2,781.4	2,776.6	2,771.3	6.7	10.5	10.17	56.6	-331.0	111.0	94.9	16.11	6.888	
2,900.0	2,879.9	2,875.3	2,868.5	6.9	10.9	3.83	44.4	-342.9	103.7	86.8	16.88	6.143	
3,000.0	2,978.4	2,972.1	2,963.6	7.1	11.3	-3.16	32.5	-355.6	99.0	81.3	17.66	5.606	
3,100.0	3,076.9	3,071.2	3,061.1	7.3	11.7	-9.48	22.4	-370.7	97.8	79.3	18.40	5.311	
3,200.0	3,175.3	3,173.4	3,161.9	7.5	12.1	-15.59	13.1	-384.9	96.1	76.9	19.21	5.004	
3,300.0	3,273.8	3,275.3	3,262.9	7.7	12.5	-21.74	5.1	-396.2	92.5	72.5	19.99	4.627	
3,400.0	3,372.3	3,379.7	3,366.7	7.9	13.0	-28.03	-0.7	-404.4	86.1	65.4	20.69	4.160	
3,500.0	3,470.8	3,481.9	3,468.9	8.1	13.3	-33.52	-1.7	-409.1	75.6	54.0	21.54	3.510	
3,600.0	3,569.3	3,582.2	3,569.0	8.3	13.5	-38.19	1.4	-412.9	62.9	40.8	22.15	2.841	Normal Operations
3,700.0	3,667.7	3,681.8	3,668.5	8.5	13.5	-46.49	4.6	-414.6	49.2	27.0	22.16	2.219	Caution - Monitor Closely
3,800.0	3,766.2	3,780.3	3,767.0	8.7	13.4	-62.70	7.3	-415.0	37.0	15.6	21.44	1.726	Caution - Monitor Closely
3,900.0	3,864.7	3,878.9	3,865.5	8.9	13.4	-89.17	9.9	-415.5	30.1	10.4	19.72	1.527	Caution - Monitor Closely, ES, SF
3,931.4	3,895.6	3,909.8	3,896.4	8.9	13.4	-99.10	10.7	-415.8	29.6	10.4	19.20	1.544	Caution - Monitor Closely, CC
4,000.0	3,963.2	3,977.5	3,964.0	9.1	13.4	-120.01	12.6	-416.3	31.8	12.9	18.93	1.680	Caution - Monitor Closely
4,037.4	4,000.0	4,014.3	4,000.9	9.1	13.4	-129.65	13.5	-416.6	34.6	15.3	19.23	1.797	Caution - Monitor Closely
4,100.0	4,061.7	4,075.9	4,062.4	9.2	13.4	-135.75	15.2	-417.0	40.5	20.5	20.04	2.022	Caution - Monitor Closely
4,132.1	4,093.3	4,107.4	4,093.9	9.3	13.4	-137.83	15.8	-417.1	44.1	23.6	20.48	2.154	Caution - Monitor Closely
4,200.0	4,160.1	4,173.9	4,160.5	9.4	13.4	-147.30	16.9	-417.3	53.0	31.7	21.28	2.491	Caution - Monitor Closely
4,300.0	4,258.6	4,272.4	4,258.9	9.6	13.4	-155.90	17.8	-417.4	68.0	45.9	22.09	3.079	
4,400.0	4,357.0	4,371.0	4,357.5	9.8	13.5	-160.95	18.2	-417.9	83.8	61.2	22.55	3.716	

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 9H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 163-r.5 MWD

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,500.0	4,455.5	4,469.5	4,456.0	10.0	13.7	-164.37	18.5	-418.4	100.0	76.8	23.12	4.323	
4,600.0	4,554.0	4,568.2	4,554.7	10.2	13.8	-166.84	18.9	-419.0	116.4	92.9	23.50	4.951	
4,700.0	4,652.4	4,667.0	4,653.5	10.4	14.0	-168.69	19.2	-419.7	132.7	108.9	23.80	5.575	
4,800.0	4,750.9	4,765.6	4,752.1	10.6	14.2	-170.05	19.4	-420.6	149.1	125.3	23.81	6.261	
4,900.0	4,849.3	4,864.9	4,851.4	10.8	14.4	-170.84	18.6	-421.5	165.4	141.0	24.44	6.768	
5,000.0	4,947.8	4,963.8	4,950.3	11.0	14.6	-171.21	17.0	-422.9	181.3	156.4	24.93	7.271	
5,100.0	5,046.3	5,062.3	5,048.8	11.2	14.8	-171.47	15.2	-424.2	197.3	171.9	25.42	7.761	
5,101.4	5,047.7	5,063.7	5,050.2	11.2	14.8	-171.47	15.2	-424.2	197.5	172.1	25.43	7.768	
5,200.0	5,144.9	5,160.7	5,147.2	11.4	15.0	-171.63	13.3	-425.3	212.6	186.7	25.88	8.214	
5,300.0	5,243.7	5,259.3	5,245.7	11.6	15.3	-171.78	11.7	-426.3	226.4	200.4	26.03	8.697	
5,400.0	5,342.9	5,357.6	5,344.1	11.8	15.5	-172.12	11.2	-427.0	238.8	212.5	26.29	9.081	
5,500.0	5,442.2	5,458.2	5,444.6	12.0	15.6	-172.53	11.3	-427.7	249.5	223.0	26.48	9.422	
5,600.0	5,541.7	5,557.5	5,543.9	12.1	15.9	-172.80	11.2	-428.6	258.2	231.5	26.69	9.673	
5,700.0	5,641.4	5,658.2	5,644.6	12.3	16.1	-172.99	11.0	-429.6	265.1	238.0	27.13	9.772	
5,800.0	5,741.2	5,758.3	5,744.7	12.5	16.3	-173.10	10.6	-430.9	270.0	242.6	27.49	9.824	
5,900.0	5,841.1	5,858.2	5,844.6	12.6	16.6	-173.15	10.3	-432.1	273.3	245.4	27.88	9.802	
6,000.0	5,941.1	5,959.0	5,945.4	12.8	16.8	-173.14	9.8	-433.6	274.6	246.3	28.27	9.712	
6,100.0	6,041.0	6,058.9	6,045.3	12.9	17.1	-173.04	9.2	-435.1	274.0	244.9	29.10	9.418	
6,109.0	6,050.0	6,067.9	6,054.2	12.9	17.1	88.10	9.1	-435.3	273.9	244.0	29.87	9.171	
6,200.0	6,141.0	6,159.1	6,145.4	13.0	17.3	88.23	8.4	-436.7	272.5	242.4	30.13	9.043	
6,300.0	6,241.0	6,259.3	6,245.6	13.0	17.6	88.38	7.7	-438.4	270.8	240.3	30.45	8.894	
6,400.0	6,341.0	6,359.0	6,345.3	13.1	17.8	88.56	6.7	-439.9	269.2	238.3	30.84	8.730	
6,500.0	6,441.0	6,457.9	6,444.2	13.1	18.1	88.80	5.6	-441.4	267.7	236.6	31.09	8.610	
6,584.3	6,525.4	6,539.1	6,525.4	13.2	18.2	88.87	5.3	-441.9	267.1	236.7	30.38	8.793	
6,600.0	6,541.0	6,553.9	6,540.2	13.2	18.2	88.87	5.3	-441.9	267.1	236.3	30.88	8.651	
6,700.0	6,641.0	6,651.1	6,637.4	13.2	18.1	88.78	5.7	-440.9	268.2	237.3	30.93	8.671	
6,800.0	6,741.0	6,751.1	6,737.4	13.3	17.9	88.73	6.0	-439.5	269.6	238.8	30.84	8.742	
6,900.0	6,841.0	6,851.0	6,837.3	13.4	17.8	88.72	6.1	-438.1	271.0	240.2	30.73	8.817	
7,000.0	6,941.0	6,952.2	6,938.5	13.4	17.6	88.74	6.0	-436.9	272.2	241.6	30.63	8.887	
7,100.0	7,041.0	7,052.7	7,039.0	13.5	17.5	88.72	6.1	-436.1	273.0	242.5	30.52	8.945	
7,200.0	7,141.0	7,154.8	7,141.1	13.5	17.5	88.69	6.2	-435.6	273.4	242.9	30.56	8.948	
7,300.0	7,241.0	7,255.8	7,242.0	13.6	17.6	88.73	6.1	-435.8	273.2	242.1	31.12	8.780	
7,400.0	7,341.0	7,356.1	7,342.3	13.7	17.8	88.83	5.5	-436.2	272.8	241.5	31.29	8.718	
7,500.0	7,441.0	7,456.3	7,442.6	13.7	18.0	88.95	5.0	-436.7	272.3	240.8	31.49	8.647	
7,600.0	7,541.0	7,556.9	7,543.1	13.8	18.2	89.06	4.5	-437.4	271.6	240.0	31.67	8.577	
7,700.0	7,641.0	7,657.5	7,643.7	13.9	18.4	89.22	3.7	-438.2	270.8	238.9	31.96	8.472	
7,800.0	7,741.0	7,759.4	7,745.6	13.9	18.6	89.46	2.5	-439.6	269.5	237.3	32.17	8.377	
7,900.0	7,841.0	7,860.8	7,846.9	14.0	18.9	89.75	1.2	-441.6	267.5	235.0	32.46	8.241	
8,000.0	7,941.0	7,961.0	7,947.1	14.0	19.2	90.15	-0.7	-443.9	265.2	232.4	32.77	8.092	
8,100.0	8,041.0	8,060.2	8,046.4	14.1	19.4	90.57	-2.6	-446.1	263.0	229.9	33.06	7.954	
8,200.0	8,141.0	8,160.4	8,146.5	14.2	19.7	91.06	-4.8	-448.1	261.0	227.7	33.32	7.834	
8,300.0	8,241.0	8,261.8	8,247.8	14.2	20.0	91.64	-7.4	-450.5	258.7	225.2	33.53	7.714	
8,400.0	8,341.0	8,363.1	8,349.0	14.3	20.3	92.23	-9.9	-453.5	255.8	222.1	33.75	7.581	
8,500.0	8,441.0	8,463.2	8,449.1	14.4	20.6	92.77	-12.2	-456.8	252.6	218.7	33.99	7.433	
8,600.0	8,541.0	8,562.1	8,547.9	14.4	20.9	93.27	-14.2	-459.9	249.6	215.4	34.26	7.287	
8,700.0	8,641.0	8,660.9	8,646.7	14.5	21.1	93.69	-15.9	-462.4	247.2	212.7	34.47	7.172	
8,800.0	8,741.0	8,758.2	8,743.9	14.5	21.4	93.90	-16.7	-464.4	245.2	210.6	34.60	7.086	
8,860.9	8,802.0	8,816.2	8,802.0	14.6	21.4	93.87	-16.5	-464.7	244.9	210.3	34.61	7.076	
8,900.0	8,841.0	8,854.4	8,840.1	14.6	21.4	93.83	-16.4	-464.6	245.0	210.4	34.57	7.087	
9,000.0	8,941.0	8,954.3	8,940.0	14.7	21.3	93.75	-16.1	-464.0	245.5	211.0	34.54	7.109	
9,100.0	9,041.0	9,054.7	9,040.4	14.7	21.1	93.70	-15.9	-463.7	245.8	211.3	34.53	7.119	

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

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN 7 WA FED COM 9H - OWB - AWP

Offset Site Error: 0.0 usft

Survey Program: 163-r.5 MWD

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
9,200.0	9,141.0	9,156.1	9,141.6	14.8	21.4	92.63	-11.3	-463.4	245.8	210.8	35.03	7.018	
9,231.4	9,172.4	9,187.1	9,172.4	14.8	21.4	91.69	-7.3	-463.3	245.8	210.6	35.21	6.979	
9,300.0	9,241.0	9,252.7	9,236.5	14.9	21.4	88.50	6.5	-462.8	246.3	210.8	35.49	6.940	
9,400.0	9,341.0	9,338.0	9,316.8	14.9	21.4	81.98	34.9	-461.0	251.6	215.8	35.82	7.023	
9,500.0	9,441.0	9,417.9	9,387.0	15.0	21.4	73.79	72.8	-458.6	266.3	230.2	36.07	7.383	
9,600.0	9,541.0	9,484.4	9,440.1	15.1	21.4	65.86	112.7	-457.5	293.5	257.3	36.16	8.117	
9,700.0	9,641.0	9,544.0	9,483.0	15.1	21.4	58.57	154.1	-456.9	335.1	298.8	36.30	9.230	
9,800.0	9,741.0	9,592.1	9,514.7	15.2	21.4	52.95	190.3	-457.0	388.6	352.1	36.44	10.663	
9,900.0	9,841.0	9,638.0	9,542.9	15.3	21.5	47.97	226.4	-457.8	450.8	414.1	36.69	12.288	
10,000.0	9,941.0	9,672.6	9,562.7	15.3	21.5	44.49	254.8	-458.7	520.3	483.2	37.11	14.023	
10,100.0	10,041.0	9,701.4	9,577.9	15.4	21.5	41.82	279.2	-459.2	595.7	558.1	37.57	15.855	
10,200.0	10,141.0	9,732.0	9,592.9	15.5	21.6	39.18	305.9	-459.6	675.5	637.4	38.04	17.754	
10,300.0	10,241.0	9,732.0	9,592.9	15.5	21.6	39.18	305.9	-459.6	758.9	720.4	38.51	19.707	
10,352.9	10,293.9	9,758.4	9,604.7	15.5	21.6	37.08	329.5	-460.0	803.5	764.7	38.76	20.731	
10,400.0	10,341.0	9,767.9	9,608.7	15.6	21.7	40.75	338.1	-460.1	843.4	804.5	38.94	21.658	
10,450.0	10,390.5	9,779.1	9,613.2	15.6	21.7	35.39	348.3	-460.3	884.3	845.6	38.78	22.806	
10,500.0	10,439.1	9,791.2	9,617.9	15.6	21.7	31.18	359.5	-460.4	923.6	884.7	38.94	23.720	
10,550.0	10,486.4	9,827.0	9,630.4	15.7	21.8	27.44	393.1	-461.1	961.6	922.7	38.91	24.714	
10,600.0	10,531.9	9,827.0	9,630.4	15.7	21.8	25.11	393.1	-461.1	996.2	957.6	38.60	25.810	

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 501H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1+SAG+FDIR, 7959-r.5 MWD+IFR1+SAG+FDIR — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-25.0	25.0				
100.0	100.0	100.0	100.0	0.5	0.5	-90.00	0.0	-25.0	25.0	23.5	1.48	16.810	
200.0	200.0	200.0	200.0	1.0	1.0	-90.00	0.0	-25.0	25.0	22.5	2.47	10.114	
300.0	300.0	300.0	300.0	1.4	1.4	-90.00	0.0	-25.0	25.0	21.9	3.11	8.037	
400.0	400.0	400.0	400.0	1.6	1.6	-90.00	0.0	-25.0	25.0	21.3	3.62	6.902	
500.0	500.0	500.0	500.0	1.9	1.9	-90.00	0.0	-25.0	25.0	20.9	4.05	6.156	
600.0	600.0	600.0	600.0	2.1	2.1	-90.00	0.0	-25.0	25.0	20.5	4.44	5.615	
700.0	700.0	700.0	700.0	2.3	2.3	-90.00	0.0	-25.0	25.0	20.2	4.80	5.200	
800.0	800.0	800.0	800.0	2.5	2.5	-90.00	0.0	-25.0	25.0	19.8	5.13	4.867	
900.0	900.0	900.0	900.0	2.7	2.7	-90.00	0.0	-25.0	25.0	19.5	5.43	4.593	
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	-90.00	0.0	-25.0	25.0	19.2	5.72	4.361	
1,100.0	1,100.0	1,100.0	1,100.0	3.2	3.2	-90.00	0.0	-25.0	25.0	18.7	6.27	3.978	
1,200.0	1,200.0	1,200.0	1,200.0	3.4	3.4	-90.00	0.0	-25.0	25.0	18.2	6.75	3.697 CC	
1,300.0	1,300.0	1,299.1	1,299.1	3.7	3.6	-37.92	-0.3	-26.6	25.3	17.8	7.42	3.406 ES	
1,400.0	1,399.8	1,398.2	1,398.0	4.0	3.9	-46.17	-1.2	-31.7	26.6	18.6	8.01	3.319 SF	
1,500.0	1,499.5	1,497.0	1,496.4	4.3	4.2	-57.81	-2.7	-40.1	29.8	21.3	8.50	3.505	
1,600.0	1,598.7	1,595.5	1,594.2	4.6	4.5	-69.82	-4.7	-51.8	35.9	27.0	8.91	4.027	
1,700.0	1,697.7	1,693.8	1,691.4	4.8	4.8	-64.01	-7.4	-66.8	43.9	34.5	9.38	4.683	
1,800.0	1,796.5	1,793.5	1,789.5	5.0	5.0	-56.05	-10.4	-83.8	50.5	40.7	9.78	5.167	
1,872.1	1,867.6	1,865.5	1,860.5	5.1	5.1	-51.06	-12.5	-96.1	53.2	43.3	10.00	5.327	
1,900.0	1,895.1	1,893.4	1,887.9	5.1	5.1	-51.81	-13.4	-100.9	54.0	43.9	10.06	5.365	
2,000.0	1,993.6	1,993.3	1,986.3	5.3	5.3	-54.37	-16.4	-118.0	56.6	46.2	10.41	5.441	
2,100.0	2,092.1	2,093.3	2,084.7	5.5	5.5	-56.69	-19.4	-135.1	59.4	48.6	10.75	5.525	
2,200.0	2,190.5	2,193.2	2,183.2	5.6	5.7	-58.80	-22.4	-152.2	62.3	51.2	11.09	5.612	
2,300.0	2,289.0	2,293.1	2,281.6	5.8	5.9	-60.73	-25.4	-169.3	65.2	53.8	11.44	5.701	
2,400.0	2,387.5	2,393.1	2,380.0	6.0	6.1	-62.49	-28.5	-186.3	68.2	56.4	11.77	5.791	
2,500.0	2,486.0	2,493.0	2,478.4	6.2	6.3	-64.09	-31.5	-203.4	71.2	59.1	12.11	5.882	
2,600.0	2,584.5	2,592.9	2,576.8	6.4	6.4	-65.57	-34.5	-220.5	74.4	61.9	12.45	5.972	
2,700.0	2,682.9	2,692.9	2,675.2	6.6	6.6	-66.92	-37.5	-237.6	77.5	64.7	12.79	6.061	
2,800.0	2,781.4	2,792.8	2,773.7	6.7	6.8	-68.17	-40.5	-254.7	80.7	67.6	13.12	6.150	
2,900.0	2,879.9	2,892.7	2,872.1	6.9	7.0	-69.32	-43.5	-271.8	83.9	70.5	13.46	6.237	
3,000.0	2,978.4	2,992.7	2,970.5	7.1	7.2	-70.39	-46.5	-288.9	87.2	73.4	13.79	6.323	
3,100.0	3,076.9	3,092.8	3,068.9	7.3	7.4	-70.84	-49.2	-306.8	90.4	76.3	14.10	6.413	
3,200.0	3,175.3	3,192.9	3,166.8	7.5	7.6	-69.22	-50.4	-327.6	93.4	79.0	14.46	6.461	
3,300.0	3,273.8	3,292.7	3,263.8	7.7	7.8	-65.70	-50.2	-351.4	96.5	81.7	14.80	6.523	
3,400.0	3,372.3	3,392.4	3,360.4	7.9	8.0	-61.87	-49.6	-376.0	100.0	84.9	15.19	6.587	
3,500.0	3,470.8	3,492.1	3,457.1	8.1	8.2	-58.31	-48.9	-400.6	104.0	88.4	15.59	6.669	
3,600.0	3,569.3	3,591.9	3,553.7	8.3	8.4	-55.02	-48.3	-425.1	108.3	92.3	15.99	6.770	
3,700.0	3,667.7	3,691.6	3,650.4	8.5	8.6	-51.99	-47.7	-449.7	112.9	96.5	16.40	6.885	
3,800.0	3,766.2	3,791.3	3,747.0	8.7	8.8	-49.21	-47.1	-474.3	117.8	101.0	16.80	7.011	
3,900.0	3,864.7	3,891.0	3,843.7	8.9	9.0	-46.65	-46.4	-498.9	123.0	105.8	17.21	7.147	
4,000.0	3,963.2	3,990.8	3,940.3	9.1	9.2	-44.30	-45.8	-523.5	128.4	110.8	17.61	7.291	
4,037.4	4,000.0	4,028.0	3,976.4	9.1	9.3	-43.48	-45.6	-532.7	130.5	112.7	17.74	7.354	
4,100.0	4,061.7	4,090.5	4,036.9	9.2	9.4	-34.87	-45.2	-548.1	133.6	115.6	17.98	7.430	
4,132.1	4,093.3	4,122.5	4,068.0	9.3	9.5	-30.33	-45.0	-555.9	134.9	116.8	18.10	7.453	
4,200.0	4,160.1	4,190.1	4,133.5	9.4	9.7	-28.26	-44.5	-572.6	137.5	119.2	18.36	7.492	
4,300.0	4,258.6	4,289.8	4,230.1	9.6	9.9	-25.37	-43.9	-597.2	141.7	122.9	18.77	7.552	
4,400.0	4,357.0	4,389.5	4,326.7	9.8	10.1	-22.64	-43.3	-621.8	146.3	127.1	19.17	7.630	
4,500.0	4,455.5	4,489.1	4,423.3	10.0	10.3	-20.08	-42.7	-646.3	151.1	131.5	19.57	7.723	
4,600.0	4,554.0	4,588.8	4,519.9	10.2	10.5	-17.69	-42.0	-670.9	156.2	136.3	19.96	7.828	
4,700.0	4,652.4	4,688.4	4,616.4	10.4	10.7	-15.45	-41.4	-695.5	161.6	141.3	20.35	7.944	

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 501H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1+SAG+FDIR, 7959-r.5 MWD+IFR1+SAG+FDIR — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,800.0	4,750.9	4,788.1	4,713.0	10.6	10.9	-13.36	-40.8	-720.0	167.3	146.5	20.73	8.069	
4,900.0	4,849.3	4,888.8	4,810.6	10.8	11.1	-11.40	-40.1	-744.8	173.0	152.0	21.08	8.208	
5,000.0	4,947.8	4,994.6	4,913.8	11.0	11.4	-9.74	-39.5	-768.4	176.8	155.3	21.49	8.224	
5,100.0	5,046.3	5,100.8	5,018.0	11.2	11.6	-8.56	-39.0	-788.1	177.1	155.2	21.91	8.082	
5,101.4	5,047.7	5,102.3	5,019.6	11.2	11.6	-8.55	-39.0	-788.4	177.1	155.1	21.92	8.079	
5,200.0	5,144.9	5,206.9	5,123.0	11.4	11.9	-7.73	-38.6	-804.0	174.8	152.5	22.31	7.834	
5,300.0	5,243.7	5,312.9	5,228.3	11.6	12.1	-7.19	-38.3	-816.0	170.7	148.0	22.70	7.521	
5,400.0	5,342.9	5,418.6	5,333.7	11.8	12.4	-6.94	-38.1	-824.1	164.9	141.8	23.07	7.148	
5,500.0	5,442.2	5,524.0	5,439.0	12.0	12.6	-7.02	-38.0	-828.3	157.3	133.6	23.65	6.650	
5,600.0	5,541.7	5,626.7	5,541.7	12.1	12.6	-7.40	-38.0	-829.0	148.2	123.7	24.52	6.044	
5,700.0	5,641.4	5,726.4	5,641.4	12.3	12.7	-7.82	-38.0	-829.0	140.3	115.5	24.75	5.667	
5,800.0	5,741.2	5,826.2	5,741.2	12.5	12.8	-8.17	-38.0	-829.0	134.1	109.1	24.97	5.370	
5,900.0	5,841.1	5,926.1	5,841.1	12.6	12.8	-8.45	-38.0	-829.0	129.6	104.4	25.17	5.148	
6,000.0	5,941.1	6,026.1	5,941.1	12.8	12.9	-8.63	-38.0	-829.0	126.9	101.5	25.37	4.999	
6,100.0	6,041.0	6,126.1	6,041.0	12.9	12.9	-8.70	-38.0	-829.0	125.8	100.3	25.53	4.929	
6,109.0	6,050.0	6,135.0	6,050.0	12.9	12.9	-107.58	-38.0	-829.0	125.8	100.3	25.54	4.926	
6,200.0	6,141.0	6,226.1	6,141.0	13.0	13.0	-107.58	-38.0	-829.0	125.8	100.2	25.65	4.906	
6,300.0	6,241.0	6,326.1	6,241.0	13.0	13.1	-107.58	-38.0	-829.0	125.8	100.1	25.77	4.884	
6,400.0	6,341.0	6,426.1	6,341.0	13.1	13.1	-107.58	-38.0	-829.0	125.8	99.9	25.89	4.861	
6,500.0	6,441.0	6,526.1	6,441.0	13.1	13.2	-107.58	-38.0	-829.0	125.8	99.8	26.01	4.838	
6,600.0	6,541.0	6,626.1	6,541.0	13.2	13.2	-107.58	-38.0	-829.0	125.8	99.7	26.13	4.816	
6,700.0	6,641.0	6,726.1	6,641.0	13.2	13.3	-107.58	-38.0	-829.0	125.8	99.6	26.25	4.793	
6,800.0	6,741.0	6,826.1	6,741.0	13.3	13.4	-107.58	-38.0	-829.0	125.8	99.5	26.37	4.771	
6,900.0	6,841.0	6,926.1	6,841.0	13.4	13.4	-107.58	-38.0	-829.0	125.8	99.3	26.50	4.749	
7,000.0	6,941.0	7,026.1	6,941.0	13.4	13.5	-107.58	-38.0	-829.0	125.8	99.2	26.62	4.727	
7,100.0	7,041.0	7,126.1	7,041.0	13.5	13.5	-107.58	-38.0	-829.0	125.8	99.1	26.74	4.705	
7,200.0	7,141.0	7,226.1	7,141.0	13.5	13.6	-107.58	-38.0	-829.0	125.8	99.0	26.87	4.683	
7,300.0	7,241.0	7,326.1	7,241.0	13.6	13.7	-107.58	-38.0	-829.0	125.8	98.8	26.99	4.662	
7,400.0	7,341.0	7,426.1	7,341.0	13.7	13.7	-107.58	-38.0	-829.0	125.8	98.7	27.12	4.640	
7,500.0	7,441.0	7,526.1	7,441.0	13.7	13.8	-107.58	-38.0	-829.0	125.8	98.6	27.24	4.619	
7,600.0	7,541.0	7,626.1	7,541.0	13.8	13.9	-107.58	-38.0	-829.0	125.8	98.5	27.37	4.598	
7,700.0	7,641.0	7,726.1	7,641.0	13.9	13.9	-107.58	-38.0	-829.0	125.8	98.3	27.50	4.577	
7,800.0	7,741.0	7,826.1	7,741.0	13.9	14.0	-107.58	-38.0	-829.0	125.8	98.2	27.62	4.556	
7,900.0	7,841.0	7,926.1	7,841.0	14.0	14.0	-107.58	-38.0	-829.0	125.8	98.1	27.74	4.536	
8,000.0	7,941.0	8,031.9	7,946.4	14.0	14.1	-104.37	-30.7	-829.0	124.0	96.1	27.84	4.453	
8,100.0	8,041.0	8,131.7	8,042.2	14.1	14.1	-91.56	-3.3	-829.0	120.1	91.9	28.20	4.258	
8,108.4	8,049.5	8,139.5	8,049.5	14.1	14.1	-90.14	-0.3	-829.1	120.1	91.8	28.24	4.251	
8,200.0	8,141.0	8,217.3	8,118.3	14.2	14.1	-73.45	35.7	-829.1	127.4	98.8	28.56	4.460	
8,300.0	8,241.0	8,287.2	8,174.5	14.2	14.1	-57.30	77.2	-829.2	157.6	129.0	28.60	5.511	
8,400.0	8,341.0	8,343.2	8,214.7	14.3	14.1	-46.04	116.0	-829.3	209.5	180.9	28.60	7.327	
8,500.0	8,441.0	8,387.8	8,243.4	14.4	14.2	-38.72	150.2	-829.4	275.9	247.2	28.71	9.610	
8,600.0	8,541.0	8,425.0	8,264.7	14.4	14.2	-33.70	180.7	-829.5	351.4	322.5	28.91	12.157	
8,700.0	8,641.0	8,450.0	8,277.7	14.5	14.2	-30.83	202.0	-829.5	432.8	403.6	29.18	14.833	
8,800.0	8,741.0	8,475.0	8,289.6	14.5	14.3	-28.30	224.0	-829.6	518.2	488.8	29.44	17.603	
8,900.0	8,841.0	8,500.0	8,300.3	14.6	14.3	-26.07	246.6	-829.7	606.5	576.8	29.68	20.430	
9,000.0	8,941.0	8,513.5	8,305.6	14.7	14.3	-24.98	259.1	-829.7	696.8	666.8	29.97	23.251	
9,100.0	9,041.0	8,525.0	8,309.8	14.7	14.3	-24.11	269.7	-829.7	788.7	758.5	30.24	26.078	
9,200.0	9,141.0	8,540.2	8,315.0	14.8	14.3	-23.03	284.1	-829.7	881.9	851.4	30.50	28.918	
9,300.0	9,241.0	8,550.0	8,318.1	14.9	14.4	-22.38	293.3	-829.8	976.0	945.2	30.76	31.733	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 503H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1+SAG+FDIR, 7904-r.5 MWD+IFR1+SAG+FDIR — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.85	0.2	75.0	75.0				
100.0	100.0	100.0	100.0	0.5	0.5	89.85	0.2	75.0	75.0	73.5	1.48	50.486	
200.0	200.0	200.0	200.0	1.0	1.0	89.85	0.2	75.0	75.0	72.5	2.47	30.376	
300.0	300.0	300.0	300.0	1.4	1.4	89.85	0.2	75.0	75.0	71.9	3.11	24.138	
400.0	400.0	400.0	400.0	1.6	1.6	89.85	0.2	75.0	75.0	71.3	3.62	20.729	
500.0	500.0	500.0	500.0	1.9	1.9	89.85	0.2	75.0	75.0	70.9	4.05	18.487	
600.0	600.0	600.0	600.0	2.1	2.1	89.85	0.2	75.0	75.0	70.5	4.44	16.864	
700.0	700.0	700.0	700.0	2.3	2.3	89.85	0.2	75.0	75.0	70.2	4.80	15.616	
800.0	800.0	800.0	800.0	2.5	2.5	89.85	0.2	75.0	75.0	69.8	5.13	14.617	
900.0	900.0	900.0	900.0	2.7	2.7	89.85	0.2	75.0	75.0	69.5	5.43	13.793	
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	89.85	0.2	75.0	75.0	69.2	5.72	13.097	
1,100.0	1,100.0	1,100.0	1,100.0	3.2	3.2	89.85	0.2	75.0	75.0	68.7	6.27	11.947	
1,200.0	1,200.0	1,200.0	1,200.0	3.4	3.4	89.85	0.2	75.0	75.0	68.2	6.75	11.103	CC, ES
1,300.0	1,300.0	1,297.7	1,297.7	3.7	3.6	146.16	-0.6	76.4	77.9	70.5	7.39	10.535	SF
1,400.0	1,399.8	1,394.7	1,394.5	4.0	3.9	149.52	-3.1	80.7	86.9	78.8	8.01	10.845	
1,500.0	1,499.5	1,490.3	1,489.8	4.3	4.0	153.63	-6.9	87.7	102.3	93.8	8.43	12.129	
1,600.0	1,598.7	1,584.4	1,583.4	4.6	4.3	156.66	-10.2	97.5	124.1	115.2	8.96	13.854	
1,700.0	1,697.7	1,676.8	1,674.8	4.8	4.5	172.10	-12.4	110.0	151.3	141.9	9.39	16.113	
1,800.0	1,796.5	1,769.5	1,766.3	5.0	4.6	-176.06	-13.9	125.1	182.3	172.6	9.70	18.795	
1,872.1	1,867.6	1,837.6	1,833.5	5.1	4.7	-169.42	-14.9	136.4	205.8	195.9	9.90	20.780	
1,900.0	1,895.1	1,863.9	1,859.4	5.1	4.8	-169.81	-15.3	140.8	215.1	205.1	9.98	21.560	
2,000.0	1,993.6	1,958.1	1,952.2	5.3	5.0	-170.98	-16.7	156.5	248.3	238.0	10.33	24.033	
2,100.0	2,092.1	2,052.3	2,045.1	5.5	5.1	-171.88	-18.0	172.2	281.7	271.0	10.69	26.341	
2,200.0	2,190.5	2,146.5	2,138.0	5.6	5.3	-172.58	-19.4	187.9	315.1	304.0	11.06	28.488	
2,300.0	2,289.0	2,240.7	2,230.8	5.8	5.5	-173.15	-20.8	203.6	348.5	337.1	11.43	30.486	
2,400.0	2,387.5	2,334.9	2,323.7	6.0	5.7	-173.62	-22.2	219.3	382.0	370.2	11.81	32.346	
2,500.0	2,486.0	2,429.1	2,416.6	6.2	5.9	-174.01	-23.5	235.0	415.5	403.3	12.19	34.078	
2,600.0	2,584.5	2,523.3	2,509.5	6.4	6.0	-174.35	-24.9	250.6	448.9	436.4	12.58	35.693	
2,700.0	2,682.9	2,617.5	2,602.3	6.6	6.2	-174.64	-26.3	266.3	482.4	469.5	12.97	37.199	
2,800.0	2,781.4	2,711.6	2,695.2	6.7	6.4	-174.89	-27.7	282.0	516.0	502.6	13.36	38.606	
2,900.0	2,879.9	2,805.8	2,788.1	6.9	6.6	-175.11	-29.0	297.7	549.5	535.7	13.76	39.922	
3,000.0	2,978.4	2,900.0	2,880.9	7.1	6.8	-175.31	-30.4	313.4	583.0	568.8	14.17	41.156	
3,100.0	3,076.9	2,994.2	2,973.8	7.3	7.0	-175.48	-31.8	329.1	616.5	602.0	14.57	42.313	
3,200.0	3,175.3	3,091.6	3,069.8	7.5	7.1	-175.64	-33.2	345.2	650.0	635.1	14.95	43.485	
3,300.0	3,273.8	3,198.7	3,175.7	7.7	7.3	-175.80	-34.6	361.6	682.2	666.8	15.43	44.218	
3,400.0	3,372.3	3,307.2	3,283.2	7.9	7.5	-175.94	-35.9	376.1	712.6	696.7	15.91	44.783	
3,500.0	3,470.8	3,416.9	3,392.2	8.1	7.7	-176.06	-37.0	388.7	741.2	724.8	16.39	45.223	
3,600.0	3,569.3	3,527.9	3,502.6	8.3	7.9	-176.18	-37.9	399.4	768.0	751.1	16.86	45.554	
3,700.0	3,667.7	3,640.0	3,614.4	8.5	8.1	-176.28	-38.7	408.0	792.8	775.5	17.31	45.792	
3,800.0	3,766.2	3,753.2	3,727.4	8.7	8.3	-176.38	-39.2	414.5	815.8	798.0	17.75	45.948	
3,900.0	3,864.7	3,867.5	3,841.6	8.9	8.5	-176.47	-39.6	418.8	836.8	818.6	18.18	46.035	
4,000.0	3,963.2	3,982.6	3,956.7	9.1	8.7	-176.55	-39.8	420.8	855.9	837.3	18.58	46.071	
4,037.4	4,000.0	4,025.9	4,000.0	9.1	8.8	-176.58	-39.8	421.0	862.5	844.4	18.06	47.768	
4,100.0	4,061.7	4,087.6	4,061.7	9.2	8.8	-169.35	-39.8	421.0	873.3	855.1	18.20	47.988	
4,132.1	4,093.3	4,119.2	4,093.3	9.3	8.8	-165.71	-39.8	421.0	878.7	860.5	18.27	48.093	
4,200.0	4,160.1	4,186.1	4,160.1	9.4	8.9	-165.90	-39.8	421.0	890.3	871.8	18.44	48.279	
4,300.0	4,258.6	4,284.5	4,258.6	9.6	8.9	-166.17	-39.8	421.0	907.3	888.5	18.72	48.463	
4,400.0	4,357.0	4,383.0	4,357.0	9.8	9.0	-166.43	-39.8	421.0	924.3	905.3	19.00	48.641	
4,500.0	4,455.5	4,481.4	4,455.5	10.0	9.1	-166.68	-39.8	421.0	941.3	922.0	19.28	48.812	
4,600.0	4,554.0	4,579.9	4,554.0	10.2	9.2	-166.92	-39.8	421.0	958.3	938.8	19.57	48.977	
4,700.0	4,652.4	4,678.3	4,652.4	10.4	9.3	-167.15	-39.8	421.0	975.4	955.5	19.85	49.136	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 503H - OWB - PWP1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1+SAG+FDIR, 7904-r.5 MWD+IFR1+SAG+FDIR

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,800.0	4,750.9	4,776.8	4,750.9	10.6	9.4	-167.37	-39.8	421.0	992.5	972.3	20.14	49.289	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 810H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10123-r.5 MWD+IFR1+SAG+FDIR — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.54	0.2	24.9	25.0				
100.0	100.0	100.0	100.0	0.5	0.5	89.54	0.2	24.9	25.0	23.5	1.48	16.804	
200.0	200.0	200.0	200.0	1.0	1.0	89.54	0.2	24.9	25.0	22.5	2.47	10.111	
300.0	300.0	300.0	300.0	1.4	1.4	89.54	0.2	24.9	25.0	21.8	3.11	8.034	
400.0	400.0	400.0	400.0	1.6	1.6	89.54	0.2	24.9	25.0	21.3	3.62	6.900	
500.0	500.0	500.0	500.0	1.9	1.9	89.54	0.2	24.9	25.0	20.9	4.05	6.154	
600.0	600.0	600.0	600.0	2.1	2.1	89.54	0.2	24.9	25.0	20.5	4.44	5.613	
700.0	700.0	700.0	700.0	2.3	2.3	89.54	0.2	24.9	25.0	20.2	4.80	5.198	
800.0	800.0	800.0	800.0	2.5	2.5	89.54	0.2	24.9	25.0	19.8	5.13	4.865	
900.0	900.0	900.0	900.0	2.7	2.7	89.54	0.2	24.9	25.0	19.5	5.43	4.591	
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	89.54	0.2	24.9	25.0	19.2	5.72	4.360	
1,100.0	1,100.0	1,100.0	1,100.0	3.2	3.0	89.54	0.2	24.9	25.0	18.8	6.14	4.065	
1,200.0	1,200.0	1,200.0	1,200.0	3.4	3.2	89.54	0.2	24.9	25.0	18.4	6.51	3.833	CC, ES
1,300.0	1,300.0	1,300.4	1,300.4	3.7	3.5	143.38	1.7	24.1	25.5	18.5	6.99	3.649	SF
1,400.0	1,399.8	1,400.8	1,400.7	4.0	3.8	140.19	6.3	21.4	27.3	19.8	7.42	3.674	
1,500.0	1,499.5	1,501.1	1,500.6	4.3	4.0	135.71	13.9	17.0	30.3	22.5	7.79	3.892	
1,600.0	1,598.7	1,602.1	1,601.0	4.6	4.2	134.93	21.9	10.3	33.8	25.5	8.23	4.103	
1,700.0	1,697.7	1,702.8	1,701.1	4.8	4.3	150.60	27.9	0.9	36.7	28.2	8.54	4.301	
1,800.0	1,796.5	1,802.7	1,800.3	5.0	4.5	161.46	33.3	-9.3	41.5	32.6	8.86	4.682	
1,872.1	1,867.6	1,874.6	1,871.8	5.1	4.6	166.28	37.1	-16.6	46.6	37.6	9.03	5.161	
1,900.0	1,895.1	1,902.4	1,899.4	5.1	4.6	165.24	38.6	-19.4	48.9	39.8	9.07	5.386	
2,000.0	1,993.6	2,002.0	1,998.3	5.3	4.7	162.20	43.9	-29.5	57.1	47.7	9.36	6.097	
2,100.0	2,092.1	2,101.6	2,097.3	5.5	4.9	159.93	49.3	-39.6	65.4	55.8	9.64	6.785	
2,200.0	2,190.5	2,201.3	2,196.2	5.6	5.0	158.17	54.6	-49.7	73.8	63.8	9.99	7.389	
2,300.0	2,289.0	2,300.9	2,295.2	5.8	5.2	156.77	60.0	-59.8	82.3	71.9	10.34	7.958	
2,400.0	2,387.5	2,400.0	2,393.7	6.0	5.2	155.75	65.2	-69.6	90.9	80.3	10.61	8.570	
2,500.0	2,486.0	2,498.5	2,491.7	6.2	5.4	155.58	69.6	-78.1	100.6	89.6	10.97	9.171	
2,600.0	2,584.5	2,596.7	2,589.6	6.4	5.5	156.10	73.3	-85.0	111.3	100.0	11.32	9.831	
2,700.0	2,682.9	2,694.7	2,687.4	6.6	5.7	157.13	76.2	-90.5	123.2	111.5	11.68	10.546	
2,800.0	2,781.4	2,792.3	2,784.9	6.7	5.8	158.50	78.3	-94.5	136.2	124.2	12.04	11.317	
2,900.0	2,879.9	2,889.5	2,882.1	6.9	6.0	160.09	79.6	-97.0	150.5	138.1	12.39	12.144	
3,000.0	2,978.4	2,986.3	2,978.8	7.1	6.1	161.79	80.2	-98.0	166.1	153.4	12.75	13.024	
3,100.0	3,076.9	3,084.3	3,076.9	7.3	6.2	163.48	80.2	-98.0	182.7	169.6	13.10	13.944	
3,200.0	3,175.3	3,182.8	3,175.3	7.5	6.4	164.90	80.2	-98.0	199.4	186.0	13.44	14.831	
3,300.0	3,273.8	3,281.3	3,273.8	7.7	6.5	166.09	80.2	-98.0	216.2	202.4	13.79	15.683	
3,400.0	3,372.3	3,379.7	3,372.3	7.9	6.6	167.12	80.2	-98.0	233.1	219.0	14.13	16.503	
3,500.0	3,470.8	3,478.2	3,470.8	8.1	6.7	168.00	80.2	-98.0	250.1	235.6	14.47	17.291	
3,600.0	3,569.3	3,576.7	3,569.3	8.3	6.8	168.78	80.2	-98.0	267.1	252.3	14.80	18.048	
3,700.0	3,667.7	3,675.2	3,667.7	8.5	6.9	169.46	80.2	-98.0	284.2	269.1	15.13	18.778	
3,800.0	3,766.2	3,773.7	3,766.2	8.7	7.1	170.06	80.2	-98.0	301.3	285.8	15.47	19.480	
3,900.0	3,864.7	3,872.1	3,864.7	8.9	7.2	170.60	80.2	-98.0	318.4	302.6	15.80	20.156	
4,000.0	3,963.2	3,970.6	3,963.2	9.1	7.3	171.09	80.2	-98.0	335.6	319.4	16.13	20.808	
4,037.4	4,000.0	4,007.4	4,000.0	9.1	7.3	171.25	80.2	-98.0	342.0	325.8	16.23	21.075	
4,100.0	4,061.7	4,069.1	4,061.7	9.2	7.4	178.73	80.2	-98.0	352.8	336.4	16.41	21.503	
4,132.1	4,093.3	4,100.8	4,093.3	9.3	7.4	-177.55	80.2	-98.0	358.4	341.9	16.49	21.732	
4,200.0	4,160.1	4,167.6	4,160.1	9.4	7.5	-177.63	80.2	-98.0	370.3	353.6	16.69	22.191	
4,300.0	4,258.6	4,266.0	4,258.6	9.6	7.6	-177.74	80.2	-98.0	387.7	370.7	17.00	22.802	
4,400.0	4,357.0	4,364.5	4,357.0	9.8	7.7	-177.83	80.2	-98.0	405.2	387.9	17.32	23.390	
4,500.0	4,455.5	4,462.9	4,455.5	10.0	7.8	-177.92	80.2	-98.0	422.7	405.1	17.64	23.958	
4,600.0	4,554.0	4,561.4	4,554.0	10.2	7.9	-178.01	80.2	-98.0	440.2	422.2	17.96	24.506	
4,700.0	4,652.4	4,659.9	4,652.4	10.4	8.1	-178.08	80.2	-98.0	457.7	439.4	18.28	25.035	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 810H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10123-r.5 MWD+IFR1+SAG+FDIR — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,800.0	4,750.9	4,758.3	4,750.9	10.6	8.2	-178.15	80.2	-98.0	475.2	456.6	18.60	25.546	
4,900.0	4,849.3	4,856.8	4,849.3	10.8	8.3	-178.22	80.2	-98.0	492.6	473.7	18.92	26.040	
5,000.0	4,947.8	4,955.2	4,947.8	11.0	8.4	-178.28	80.2	-98.0	510.1	490.9	19.24	26.518	
5,100.0	5,046.3	5,053.7	5,046.3	11.2	8.5	-178.34	80.2	-98.0	527.6	508.1	19.56	26.979	
5,101.4	5,047.7	5,055.1	5,047.7	11.2	8.5	-178.34	80.2	-98.0	527.9	508.3	19.56	26.985	
5,200.0	5,144.9	5,152.3	5,144.9	11.4	8.6	-178.39	80.2	-98.0	544.3	524.4	19.87	27.390	
5,300.0	5,243.7	5,251.2	5,243.7	11.6	8.7	-178.44	80.2	-98.0	559.2	539.0	20.18	27.707	
5,400.0	5,342.9	5,350.3	5,342.9	11.8	8.8	-178.48	80.2	-98.0	572.4	551.9	20.49	27.936	
5,500.0	5,442.2	5,449.6	5,442.2	12.0	8.9	-178.51	80.2	-98.0	583.9	563.1	20.79	28.082	
5,600.0	5,541.7	5,549.2	5,541.7	12.1	9.0	-178.54	80.2	-98.0	593.6	572.5	21.09	28.149	
5,700.0	5,641.4	5,648.8	5,641.4	12.3	9.1	-178.56	80.2	-98.0	601.6	580.2	21.38	28.141	
5,800.0	5,741.2	5,748.6	5,741.2	12.5	9.2	-178.58	80.2	-98.0	607.9	586.2	21.66	28.064	
5,900.0	5,841.1	5,848.5	5,841.1	12.6	9.3	-178.59	80.2	-98.0	612.4	590.5	21.93	27.922	
6,000.0	5,941.1	5,948.5	5,941.1	12.8	9.4	-178.60	80.2	-98.0	615.2	593.0	22.19	27.721	
6,100.0	6,041.0	6,048.5	6,041.0	12.9	9.5	-178.60	80.2	-98.0	616.2	593.8	22.39	27.520	
6,109.0	6,050.0	6,057.4	6,050.0	12.9	9.5	82.52	80.2	-98.0	616.2	593.8	22.41	27.499	
6,200.0	6,141.0	6,148.5	6,141.0	13.0	9.6	82.52	80.2	-98.0	616.2	593.7	22.54	27.339	
6,300.0	6,241.0	6,248.5	6,241.0	13.0	9.7	82.52	80.2	-98.0	616.2	593.5	22.69	27.155	
6,400.0	6,341.0	6,348.5	6,341.0	13.1	9.8	82.52	80.2	-98.0	616.2	593.3	22.84	26.974	
6,500.0	6,441.0	6,448.5	6,441.0	13.1	9.9	82.52	80.2	-98.0	616.2	593.2	23.00	26.795	
6,600.0	6,541.0	6,548.5	6,541.0	13.2	10.0	82.52	80.2	-98.0	616.2	593.0	23.15	26.618	
6,700.0	6,641.0	6,648.5	6,641.0	13.2	10.1	82.52	80.2	-98.0	616.2	592.9	23.30	26.443	
6,800.0	6,741.0	6,748.5	6,741.0	13.3	10.2	82.52	80.2	-98.0	616.2	592.7	23.46	26.270	
6,900.0	6,841.0	6,848.5	6,841.0	13.4	10.3	82.52	80.2	-98.0	616.2	592.6	23.61	26.100	
7,000.0	6,941.0	6,948.5	6,941.0	13.4	10.4	82.52	80.2	-98.0	616.2	592.4	23.76	25.932	
7,100.0	7,041.0	7,048.5	7,041.0	13.5	10.5	82.52	80.2	-98.0	616.2	592.3	23.92	25.765	
7,200.0	7,141.0	7,148.5	7,141.0	13.5	10.6	82.52	80.2	-98.0	616.2	592.1	24.07	25.601	
7,300.0	7,241.0	7,248.5	7,241.0	13.6	10.7	82.52	80.2	-98.0	616.2	592.0	24.22	25.439	
7,400.0	7,341.0	7,348.5	7,341.0	13.7	10.8	82.52	80.2	-98.0	616.2	591.8	24.38	25.278	
7,500.0	7,441.0	7,448.5	7,441.0	13.7	10.9	82.52	80.2	-98.0	616.2	591.7	24.53	25.120	
7,600.0	7,541.0	7,548.5	7,541.0	13.8	11.0	82.52	80.2	-98.0	616.2	591.5	24.68	24.963	
7,700.0	7,641.0	7,648.5	7,641.0	13.9	11.1	82.52	80.2	-98.0	616.2	591.4	24.84	24.808	
7,800.0	7,741.0	7,748.5	7,741.0	13.9	11.2	82.52	80.2	-98.0	616.2	591.2	24.99	24.655	
7,900.0	7,841.0	7,848.5	7,841.0	14.0	11.3	82.52	80.2	-98.0	616.2	591.0	25.15	24.504	
8,000.0	7,941.0	7,948.5	7,941.0	14.0	11.4	82.52	80.2	-98.0	616.2	590.9	25.30	24.355	
8,100.0	8,041.0	8,048.5	8,041.0	14.1	11.5	82.52	80.2	-98.0	616.2	590.7	25.45	24.207	
8,200.0	8,141.0	8,148.5	8,141.0	14.2	11.6	82.52	80.2	-98.0	616.2	590.6	25.61	24.061	
8,300.0	8,241.0	8,248.5	8,241.0	14.2	11.7	82.52	80.2	-98.0	616.2	590.4	25.76	23.917	
8,400.0	8,341.0	8,348.5	8,341.0	14.3	11.8	82.52	80.2	-98.0	616.2	590.3	25.92	23.774	
8,500.0	8,441.0	8,448.5	8,441.0	14.4	11.9	82.52	80.2	-98.0	616.2	590.1	26.07	23.633	
8,600.0	8,541.0	8,548.5	8,541.0	14.4	12.0	82.52	80.2	-98.0	616.2	590.0	26.23	23.494	
8,700.0	8,641.0	8,648.5	8,641.0	14.5	12.1	82.52	80.2	-98.0	616.2	589.8	26.38	23.356	
8,800.0	8,741.0	8,748.5	8,741.0	14.5	12.1	82.52	80.2	-98.0	616.2	589.7	26.54	23.220	
8,900.0	8,841.0	8,848.5	8,841.0	14.6	12.2	82.52	80.2	-98.0	616.2	589.5	26.69	23.085	
9,000.0	8,941.0	8,948.5	8,941.0	14.7	12.3	82.52	80.2	-98.0	616.2	589.3	26.85	22.952	
9,100.0	9,041.0	9,048.5	9,041.0	14.7	12.4	82.52	80.2	-98.0	616.2	589.2	27.00	22.820	
9,200.0	9,141.0	9,148.5	9,141.0	14.8	12.5	82.52	80.2	-98.0	616.2	589.0	27.16	22.690	
9,300.0	9,241.0	9,248.5	9,241.0	14.9	12.6	82.52	80.2	-98.0	616.2	588.9	27.31	22.561	
9,400.0	9,341.0	9,348.5	9,341.0	14.9	12.7	82.52	80.2	-98.0	616.2	588.7	27.47	22.433	
9,500.0	9,441.0	9,448.5	9,441.0	15.0	12.8	82.52	80.2	-98.0	616.2	588.6	27.62	22.307	
9,600.0	9,541.0	9,548.5	9,541.0	15.1	12.9	82.52	80.2	-98.0	616.2	588.4	27.78	22.182	

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 810H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10123-r.5 MWD+IFR1+SAG+FDIR — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
9,700.0	9,641.0	9,648.5	9,641.0	15.1	13.0	82.52	80.2	-98.0	616.2	588.3	27.93	22.059	
9,800.0	9,741.0	9,748.5	9,741.0	15.2	13.1	82.52	80.2	-98.0	616.2	588.1	28.09	21.937	
9,900.0	9,841.0	9,848.5	9,841.0	15.3	13.2	82.52	80.2	-98.0	616.2	587.9	28.25	21.816	
10,000.0	9,941.0	9,948.5	9,941.0	15.3	13.3	82.52	80.2	-98.0	616.2	587.8	28.40	21.696	
10,100.0	10,041.0	10,048.5	10,041.0	15.4	13.4	82.52	80.2	-98.0	616.2	587.6	28.56	21.578	
10,104.7	10,045.7	10,053.2	10,045.7	15.4	13.4	82.52	80.2	-98.0	616.2	587.6	28.56	21.572	
10,200.0	10,141.0	10,144.7	10,137.3	15.5	13.4	82.47	80.7	-98.1	616.3	587.6	28.69	21.481	
10,300.0	10,241.0	10,228.8	10,220.4	15.5	13.5	81.43	92.1	-98.1	618.2	589.4	28.77	21.487	
10,352.9	10,293.9	10,270.9	10,261.1	15.5	13.5	80.41	103.3	-98.1	620.4	591.6	28.80	21.540	
10,400.0	10,341.0	10,307.2	10,295.1	15.6	13.5	89.09	115.7	-98.1	623.4	594.5	28.84	21.614	
10,450.0	10,390.5	10,344.9	10,329.5	15.6	13.5	87.68	131.3	-98.2	627.5	598.6	28.86	21.745	
10,500.0	10,439.1	10,382.0	10,361.9	15.6	13.6	86.26	149.3	-98.2	632.5	603.6	28.94	21.858	
10,550.0	10,486.4	10,418.4	10,392.3	15.7	13.6	84.85	169.3	-98.3	638.3	609.2	29.04	21.977	
10,600.0	10,531.9	10,454.3	10,420.6	15.7	13.6	83.45	191.3	-98.3	644.8	615.6	29.18	22.098	
10,650.0	10,575.2	10,489.7	10,446.9	15.7	13.6	82.09	214.9	-98.4	651.8	622.5	29.34	22.218	
10,700.0	10,615.9	10,525.0	10,471.4	15.7	13.7	80.77	240.5	-98.4	659.4	629.9	29.52	22.338	
10,750.0	10,653.7	10,559.2	10,493.2	15.8	13.7	79.51	266.8	-98.5	667.3	637.6	29.72	22.451	
10,761.9	10,662.2	10,567.4	10,498.1	15.8	13.7	79.21	273.4	-98.5	669.2	639.4	29.77	22.480	
10,775.0	10,671.3	10,575.0	10,502.6	15.8	13.7	78.55	279.5	-98.5	671.3	641.5	29.83	22.503	
10,800.0	10,688.0	10,593.5	10,513.1	15.8	13.7	77.37	294.8	-98.6	675.1	645.1	29.93	22.558	
10,825.0	10,703.8	10,610.6	10,522.2	15.8	13.7	76.33	309.2	-98.6	678.6	648.5	30.03	22.596	
10,850.0	10,718.6	10,625.0	10,529.5	15.8	13.7	75.44	321.6	-98.6	681.8	651.6	30.15	22.613	
10,875.0	10,732.3	10,644.8	10,538.9	15.8	13.8	74.63	339.0	-98.7	684.7	654.5	30.24	22.643	
10,900.0	10,744.9	10,661.8	10,546.5	15.8	13.8	73.95	354.3	-98.7	687.3	657.0	30.34	22.652	
10,925.0	10,756.3	10,675.0	10,551.9	15.8	13.8	73.37	366.3	-98.7	689.7	659.2	30.46	22.638	
10,950.0	10,766.7	10,695.9	10,559.9	15.8	13.8	72.88	385.6	-98.8	691.6	661.1	30.55	22.643	
10,975.0	10,775.8	10,712.9	10,565.7	15.8	13.8	72.48	401.5	-98.8	693.3	662.7	30.64	22.625	
11,000.0	10,783.7	10,729.9	10,571.0	15.9	13.8	72.17	417.7	-98.9	694.7	663.9	30.74	22.599	
11,025.0	10,790.4	10,750.0	10,576.5	15.9	13.8	71.95	437.0	-98.9	695.7	664.9	30.82	22.573	
11,050.0	10,795.9	10,764.0	10,579.8	15.9	13.8	71.81	450.7	-98.9	696.4	665.4	30.92	22.523	
11,075.0	10,800.1	10,781.1	10,583.3	16.0	13.8	71.75	467.3	-99.0	696.7	665.7	31.00	22.473	
11,100.0	10,803.0	10,800.0	10,586.6	16.0	13.9	71.78	486.0	-99.0	696.7	665.7	31.08	22.419	
11,125.0	10,804.6	10,815.3	10,588.6	16.1	13.9	71.87	501.1	-99.1	696.4	665.3	31.16	22.351	
11,143.1	10,805.0	10,825.0	10,589.7	16.1	13.9	71.97	510.8	-99.1	696.0	664.8	31.21	22.299	
11,200.0	10,805.1	10,866.9	10,591.9	16.3	13.9	72.14	552.6	-99.2	695.1	663.7	31.40	22.138	
11,249.1	10,805.2	10,914.3	10,592.1	16.4	13.9	72.15	600.0	-99.3	695.1	663.5	31.62	21.984	
11,300.0	10,805.3	10,965.2	10,592.2	16.5	14.0	72.15	650.9	-99.4	695.1	663.2	31.86	21.815	
11,400.0	10,805.4	11,065.2	10,592.5	16.8	14.4	72.16	750.9	-99.7	695.0	662.6	32.40	21.449	
11,500.0	10,805.6	11,165.2	10,592.8	17.2	14.7	72.17	850.9	-99.9	695.0	661.9	33.02	21.047	
11,600.0	10,805.8	11,265.2	10,593.1	17.6	15.1	72.18	950.9	-100.1	694.9	661.2	33.70	20.619	
11,700.0	10,806.0	11,365.2	10,593.3	18.0	15.5	72.18	1,050.9	-100.4	694.9	660.4	34.45	20.169	
11,800.0	10,806.1	11,465.2	10,593.6	18.4	16.0	72.19	1,150.9	-100.6	694.8	659.6	35.26	19.704	
11,900.0	10,806.3	11,565.2	10,593.9	18.9	16.5	72.20	1,250.9	-100.9	694.8	658.6	36.13	19.230	
12,000.0	10,806.5	11,665.2	10,594.2	19.4	17.1	72.21	1,350.9	-101.1	694.7	657.7	37.05	18.751	
12,100.0	10,806.6	11,765.2	10,594.4	19.9	17.6	72.21	1,450.9	-101.3	694.7	656.7	38.02	18.272	
12,200.0	10,806.8	11,865.2	10,594.7	20.5	18.2	72.22	1,550.9	-101.6	694.6	655.6	39.03	17.796	
12,300.0	10,807.0	11,965.2	10,595.0	21.0	18.8	72.23	1,650.9	-101.8	694.6	654.5	40.09	17.326	
12,400.0	10,807.2	12,065.2	10,595.3	21.6	19.4	72.24	1,750.9	-102.1	694.5	653.3	41.19	16.864	
12,500.0	10,807.3	12,165.2	10,595.6	22.2	20.1	72.25	1,850.9	-102.3	694.5	652.2	42.32	16.411	
12,600.0	10,807.5	12,265.2	10,595.8	22.8	20.7	72.25	1,950.9	-102.5	694.4	650.9	43.49	15.969	
12,700.0	10,807.7	12,365.2	10,596.1	23.5	21.4	72.26	2,050.9	-102.8	694.4	649.7	44.69	15.538	

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

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Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 810H - OWB - PWP1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10123-r.5 MWD+IFR1+SAG+FDIR

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
12,800.0	10,807.9	12,465.2	10,596.4	24.1	22.1	72.27	2,150.9	-103.0	694.3	648.4	45.92	15.119	
12,900.0	10,808.0	12,565.2	10,596.7	24.8	22.8	72.28	2,250.9	-103.3	694.3	651.1	43.15	16.090	
13,000.0	10,808.2	12,665.2	10,597.0	25.5	23.5	72.28	2,350.9	-103.5	694.2	651.4	42.88	16.190	
13,100.0	10,808.4	12,765.2	10,597.2	26.1	24.2	72.29	2,450.9	-103.7	694.2	650.7	43.51	15.956	
13,200.0	10,808.6	12,865.2	10,597.5	26.8	24.9	72.30	2,550.9	-104.0	694.1	649.8	44.30	15.669	
13,300.0	10,808.7	12,965.2	10,597.8	27.5	25.6	72.31	2,650.9	-104.2	694.1	648.9	45.16	15.369	
13,400.0	10,808.9	13,065.2	10,598.1	28.2	26.4	72.31	2,750.9	-104.5	694.1	648.0	46.06	15.067	
13,500.0	10,809.1	13,165.2	10,598.3	28.9	27.1	72.32	2,850.9	-104.7	694.0	647.0	46.99	14.769	
13,600.0	10,809.3	13,265.2	10,598.6	29.7	27.9	72.33	2,950.9	-104.9	694.0	646.0	47.94	14.475	
13,700.0	10,809.4	13,365.2	10,598.9	30.4	28.6	72.34	3,050.9	-105.2	693.9	645.0	48.91	14.188	
13,800.0	10,809.6	13,465.2	10,599.2	31.1	29.4	72.35	3,150.9	-105.4	693.9	644.0	49.89	13.907	
13,900.0	10,809.8	13,565.2	10,599.5	31.9	30.2	72.35	3,250.9	-105.7	693.8	642.9	50.89	13.634	
14,000.0	10,809.9	13,665.2	10,599.7	32.6	30.9	72.36	3,350.9	-105.9	693.8	641.9	51.90	13.367	
14,100.0	10,810.1	13,765.2	10,600.0	33.4	31.7	72.37	3,450.9	-106.1	693.7	640.8	52.92	13.108	
14,200.0	10,810.3	13,865.2	10,600.3	34.1	32.5	72.38	3,550.9	-106.4	693.7	639.7	53.96	12.856	
14,300.0	10,810.5	13,965.2	10,600.6	34.9	33.3	72.38	3,650.9	-106.6	693.6	638.6	55.00	12.612	
14,400.0	10,810.6	14,065.2	10,600.8	35.7	34.1	72.39	3,750.9	-106.9	693.6	637.5	56.05	12.374	
14,500.0	10,810.8	14,165.2	10,601.1	36.5	34.9	72.40	3,850.9	-107.1	693.5	636.4	57.11	12.143	
14,600.0	10,811.0	14,265.2	10,601.4	37.2	35.7	72.41	3,950.9	-107.3	693.5	635.3	58.18	11.919	
14,700.0	10,811.2	14,365.2	10,601.7	38.0	36.5	72.42	4,050.9	-107.6	693.4	634.2	59.26	11.702	
14,800.0	10,811.3	14,465.2	10,602.0	38.8	37.3	72.42	4,150.9	-107.8	693.4	633.0	60.34	11.491	
14,900.0	10,811.5	14,565.2	10,602.2	39.6	38.1	72.43	4,250.9	-108.1	693.3	631.9	61.43	11.286	
15,000.0	10,811.7	14,665.2	10,602.5	40.4	38.9	72.44	4,350.9	-108.3	693.3	630.8	62.53	11.087	
15,100.0	10,811.9	14,765.2	10,602.8	41.2	39.7	72.45	4,450.9	-108.6	693.2	629.6	63.64	10.894	
15,200.0	10,812.0	14,865.2	10,603.1	41.9	40.5	72.45	4,550.9	-108.8	693.2	628.5	64.75	10.706	
15,300.0	10,812.2	14,965.2	10,603.3	42.7	41.3	72.46	4,650.9	-109.0	693.2	627.3	65.86	10.524	
15,400.0	10,812.4	15,065.2	10,603.6	43.5	42.1	72.47	4,750.9	-109.3	693.1	626.1	66.98	10.348	
15,500.0	10,812.6	15,165.2	10,603.9	44.3	42.9	72.48	4,850.9	-109.5	693.1	624.9	68.11	10.176	
15,600.0	10,812.7	15,265.2	10,604.2	45.1	43.8	72.49	4,950.9	-109.8	693.0	623.8	69.24	10.009	
15,700.0	10,812.9	15,365.2	10,604.5	46.0	44.6	72.49	5,050.9	-110.0	693.0	622.6	70.37	9.847	
15,800.0	10,813.1	15,465.2	10,604.7	46.8	45.4	72.50	5,150.9	-110.2	692.9	621.4	71.51	9.689	
15,900.0	10,813.3	15,565.2	10,605.0	47.6	46.2	72.51	5,250.9	-110.5	692.9	620.2	72.66	9.536	
16,000.0	10,813.4	15,665.2	10,605.3	48.4	47.1	72.52	5,350.9	-110.7	692.8	619.0	73.80	9.387	
16,100.0	10,813.6	15,765.2	10,605.6	49.2	47.9	72.53	5,450.9	-111.0	692.8	617.8	74.95	9.243	
16,200.0	10,813.8	15,865.2	10,605.8	50.0	48.7	72.53	5,550.9	-111.2	692.7	616.6	76.11	9.102	
16,300.0	10,813.9	15,965.2	10,606.1	50.8	49.5	72.54	5,650.9	-111.4	692.7	615.4	77.27	8.965	
16,400.0	10,814.1	16,065.2	10,606.4	51.6	50.4	72.55	5,750.9	-111.7	692.6	614.2	78.43	8.831	
16,500.0	10,814.3	16,165.2	10,606.7	52.5	51.2	72.56	5,850.9	-111.9	692.6	613.0	79.59	8.702	
16,600.0	10,814.5	16,265.2	10,607.0	53.3	52.0	72.56	5,950.9	-112.2	692.5	611.8	80.76	8.575	
16,700.0	10,814.6	16,365.2	10,607.2	54.1	52.8	72.57	6,050.9	-112.4	692.5	610.6	81.93	8.452	
16,800.0	10,814.8	16,465.2	10,607.5	54.9	53.7	72.58	6,150.9	-112.6	692.4	609.3	83.10	8.332	
16,900.0	10,815.0	16,565.2	10,607.8	55.7	54.5	72.59	6,250.9	-112.9	692.4	608.1	84.28	8.216	
17,000.0	10,815.2	16,665.2	10,608.1	56.6	55.3	72.60	6,350.9	-113.1	692.3	606.9	85.46	8.102	
17,100.0	10,815.3	16,765.2	10,608.3	57.4	56.2	72.60	6,450.9	-113.4	692.3	605.7	86.64	7.991	
17,200.0	10,815.5	16,865.2	10,608.6	58.2	57.0	72.61	6,550.9	-113.6	692.3	604.4	87.82	7.883	
17,300.0	10,815.7	16,965.2	10,608.9	59.0	57.8	72.62	6,650.9	-113.8	692.2	603.2	89.00	7.777	
17,400.0	10,815.9	17,065.2	10,609.2	59.9	58.7	72.63	6,750.9	-114.1	692.2	602.0	90.19	7.674	
17,500.0	10,816.0	17,165.2	10,609.5	60.7	59.5	72.63	6,850.9	-114.3	692.1	600.7	91.38	7.574	
17,600.0	10,816.2	17,265.2	10,609.7	61.5	60.4	72.64	6,950.9	-114.6	692.1	599.5	92.57	7.476	
17,700.0	10,816.4	17,365.2	10,610.0	62.4	61.2	72.65	7,050.9	-114.8	692.0	598.3	93.77	7.380	
17,800.0	10,816.6	17,465.2	10,610.3	63.2	62.0	72.66	7,150.9	-115.0	692.0	597.0	94.96	7.287	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 810H - OWB - PWP1

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10123-r.5 MWD+IFR1+SAG+FDIR **Rule Assigned:** **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
17,900.0	10,816.7	17,565.2	10,610.6	64.0	62.9	72.67	7,250.9	-115.3	691.9	595.8	96.16	7.196	
18,000.0	10,816.9	17,665.2	10,610.9	64.8	63.7	72.67	7,350.9	-115.5	691.9	594.5	97.35	7.107	
18,100.0	10,817.1	17,765.2	10,611.1	65.7	64.5	72.68	7,450.9	-115.8	691.8	593.3	98.55	7.020	
18,200.0	10,817.3	17,865.2	10,611.4	66.5	65.4	72.69	7,550.9	-116.0	691.8	592.0	99.76	6.935	
18,300.0	10,817.4	17,965.2	10,611.7	67.3	66.2	72.70	7,650.9	-116.2	691.7	590.8	100.96	6.852	
18,400.0	10,817.6	18,065.2	10,612.0	68.2	67.1	72.70	7,750.9	-116.5	691.7	589.5	102.16	6.770	
18,500.0	10,817.8	18,165.2	10,612.2	69.0	67.9	72.71	7,850.9	-116.7	691.6	588.3	103.37	6.691	
18,600.0	10,817.9	18,265.2	10,612.5	69.9	68.8	72.72	7,950.9	-117.0	691.6	587.0	104.58	6.613	
18,700.0	10,818.1	18,365.2	10,612.8	70.7	69.6	72.73	8,050.9	-117.2	691.6	585.8	105.79	6.537	
18,800.0	10,818.3	18,465.2	10,613.1	71.5	70.4	72.74	8,150.9	-117.4	691.5	584.5	106.99	6.463	
18,900.0	10,818.5	18,565.2	10,613.4	72.4	71.3	72.74	8,250.9	-117.7	691.5	583.3	108.21	6.390	
19,000.0	10,818.6	18,665.2	10,613.6	73.2	72.1	72.75	8,350.9	-117.9	691.4	582.0	109.42	6.319	
19,100.0	10,818.8	18,765.2	10,613.9	74.0	73.0	72.76	8,450.9	-118.2	691.4	580.7	110.63	6.249	
19,200.0	10,819.0	18,865.2	10,614.2	74.9	73.8	72.77	8,550.9	-118.4	691.3	579.5	111.85	6.181	
19,300.0	10,819.2	18,965.2	10,614.5	75.7	74.7	72.78	8,650.9	-118.6	691.3	578.2	113.06	6.114	
19,400.0	10,819.3	19,065.2	10,614.7	76.6	75.5	72.78	8,750.9	-118.9	691.2	576.9	114.28	6.049	
19,500.0	10,819.5	19,165.2	10,615.0	77.4	76.3	72.79	8,850.9	-119.1	691.2	575.7	115.50	5.984	
19,600.0	10,819.7	19,265.2	10,615.3	78.2	77.2	72.80	8,950.9	-119.4	691.1	574.4	116.71	5.922	
19,700.0	10,819.9	19,365.2	10,615.6	79.1	78.0	72.81	9,050.9	-119.6	691.1	573.1	117.93	5.860	
19,800.0	10,820.0	19,465.2	10,615.9	79.9	78.9	72.81	9,150.9	-119.8	691.0	571.9	119.16	5.799	
19,900.0	10,820.2	19,565.2	10,616.1	80.8	79.7	72.82	9,250.9	-120.1	691.0	570.6	120.38	5.740	
20,000.0	10,820.4	19,665.2	10,616.4	81.6	80.6	72.83	9,350.9	-120.3	690.9	569.3	121.60	5.682	
20,100.0	10,820.6	19,765.2	10,616.7	82.4	81.4	72.84	9,450.9	-120.6	690.9	568.1	122.82	5.625	
20,200.0	10,820.7	19,865.2	10,617.0	83.3	82.3	72.85	9,550.9	-120.8	690.8	566.8	124.05	5.569	
20,300.0	10,820.9	19,965.2	10,617.2	84.1	83.1	72.85	9,650.9	-121.0	690.8	565.5	125.27	5.514	
20,400.0	10,821.1	20,065.2	10,617.5	85.0	84.0	72.86	9,750.9	-121.3	690.8	564.3	126.50	5.461	
20,500.0	10,821.2	20,165.2	10,617.8	85.8	84.8	72.87	9,850.9	-121.5	690.7	563.0	127.72	5.408	
20,600.0	10,821.4	20,265.2	10,618.1	86.7	85.7	72.88	9,950.9	-121.8	690.7	561.7	128.95	5.356	
20,700.0	10,821.6	20,365.2	10,618.4	87.5	86.5	72.88	10,050.9	-122.0	690.6	560.4	130.18	5.305	
20,800.0	10,821.8	20,465.2	10,618.6	88.3	87.4	72.89	10,150.9	-122.2	690.6	559.2	131.41	5.255	
20,900.0	10,821.9	20,565.2	10,618.9	89.2	88.2	72.90	10,250.9	-122.5	690.5	557.9	132.64	5.206	
20,931.9	10,822.0	20,596.8	10,619.0	89.5	88.5	72.90	10,282.5	-122.6	690.5	557.5	133.02	5.191	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: RICK VAUGHN FED COM PROJECT - RICK VAUGHN FED COM 812H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1+SAG+FDIR, 10409-r.5 MWD+IFR1+SAG+FDIR — **Rule Assigned:** — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.77	0.2	49.9	49.9				
100.0	100.0	100.0	100.0	0.5	0.5	89.77	0.2	49.9	49.9	48.4	1.48	33.615	
200.0	200.0	200.0	200.0	1.0	1.0	89.77	0.2	49.9	49.9	47.4	2.47	20.225	
300.0	300.0	300.0	300.0	1.4	1.4	89.77	0.2	49.9	49.9	46.8	3.11	16.071	
400.0	400.0	400.0	400.0	1.6	1.6	89.77	0.2	49.9	49.9	46.3	3.62	13.802	
500.0	500.0	500.0	500.0	1.9	1.9	89.77	0.2	49.9	49.9	45.9	4.05	12.309	
600.0	600.0	600.0	600.0	2.1	2.1	89.77	0.2	49.9	49.9	45.5	4.44	11.228	
700.0	700.0	700.0	700.0	2.3	2.3	89.77	0.2	49.9	49.9	45.1	4.80	10.398	
800.0	800.0	800.0	800.0	2.5	2.5	89.77	0.2	49.9	49.9	44.8	5.13	9.732	
900.0	900.0	900.0	900.0	2.7	2.7	89.77	0.2	49.9	49.9	44.5	5.43	9.184	
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	89.77	0.2	49.9	49.9	44.2	5.72	8.721	
1,100.0	1,100.0	1,100.0	1,100.0	3.2	3.2	89.77	0.2	49.9	49.9	43.6	6.27	7.955	
1,200.0	1,200.0	1,200.0	1,200.0	3.4	3.4	89.77	0.2	49.9	49.9	43.2	6.75	7.393	CC, ES
1,300.0	1,300.0	1,298.6	1,298.6	3.7	3.7	144.64	1.3	51.2	52.7	45.3	7.37	7.144	SF
1,400.0	1,399.8	1,396.8	1,396.6	4.0	4.0	144.30	4.5	55.1	60.9	52.9	7.94	7.666	
1,500.0	1,499.5	1,494.0	1,493.5	4.3	4.3	143.88	9.9	61.5	74.6	66.1	8.48	8.797	
1,600.0	1,598.7	1,590.0	1,588.8	4.6	4.6	143.46	17.2	70.2	93.6	84.6	8.97	10.428	
1,700.0	1,697.7	1,684.9	1,682.8	4.8	4.8	157.12	24.7	81.1	117.4	108.1	9.36	12.542	
1,800.0	1,796.5	1,778.3	1,775.2	5.0	5.0	169.10	29.8	93.8	145.4	135.7	9.71	14.974	
1,872.1	1,867.6	1,844.6	1,840.6	5.1	5.1	176.39	31.9	103.9	168.1	158.2	9.93	16.935	
1,900.0	1,895.1	1,869.9	1,865.7	5.1	5.2	176.36	32.4	108.0	177.4	167.4	10.00	17.743	
2,000.0	1,993.6	1,962.5	1,956.9	5.3	5.4	176.56	33.1	124.0	211.4	201.1	10.34	20.449	
2,100.0	2,092.1	2,056.5	2,049.4	5.5	5.5	176.75	33.7	140.3	245.6	234.9	10.68	22.985	
2,200.0	2,190.5	2,150.5	2,142.0	5.6	5.7	176.90	34.3	156.6	279.8	268.7	11.04	25.344	
2,300.0	2,289.0	2,244.5	2,234.5	5.8	5.8	177.02	34.8	172.9	313.9	302.5	11.40	27.550	
2,400.0	2,387.5	2,338.4	2,327.1	6.0	6.0	177.11	35.4	189.2	348.1	336.4	11.75	29.616	
2,500.0	2,486.0	2,432.4	2,419.6	6.2	6.2	177.19	36.0	205.5	382.3	370.2	12.12	31.554	
2,600.0	2,584.5	2,526.4	2,512.2	6.4	6.3	177.25	36.5	221.8	416.5	404.0	12.48	33.375	
2,700.0	2,682.9	2,620.4	2,604.7	6.6	6.5	177.31	37.1	238.1	450.6	437.8	12.84	35.089	
2,800.0	2,781.4	2,714.4	2,697.3	6.7	6.7	177.35	37.7	254.4	484.8	471.6	13.21	36.704	
2,900.0	2,879.9	2,808.3	2,789.8	6.9	6.8	177.39	38.3	270.7	519.0	505.4	13.57	38.238	
3,000.0	2,978.4	2,902.6	2,882.6	7.1	7.0	177.57	37.6	287.1	553.2	539.2	13.96	39.632	
3,100.0	3,076.9	2,996.5	2,975.1	7.3	7.2	177.88	35.4	303.3	587.3	572.9	14.45	40.634	
3,200.0	3,175.3	3,090.5	3,067.6	7.5	7.3	178.16	33.1	319.6	621.5	606.6	14.90	41.709	
3,300.0	3,273.8	3,184.4	3,160.1	7.7	7.5	178.41	30.9	335.9	655.6	640.3	15.32	42.785	
3,400.0	3,372.3	3,278.4	3,252.6	7.9	7.7	178.63	28.7	352.2	689.8	674.1	15.74	43.825	
3,500.0	3,470.8	3,372.3	3,345.1	8.1	7.8	178.84	26.5	368.4	724.0	707.9	16.15	44.819	
3,600.0	3,569.3	3,466.2	3,437.6	8.3	8.0	179.02	24.2	384.7	758.2	741.6	16.57	45.765	
3,700.0	3,667.7	3,560.2	3,530.1	8.5	8.2	179.19	22.0	401.0	792.4	775.4	16.98	46.665	
3,800.0	3,766.2	3,654.1	3,622.6	8.7	8.4	179.35	19.8	417.2	826.6	809.2	17.39	47.521	
3,900.0	3,864.7	3,748.1	3,715.1	8.9	8.5	179.49	17.5	433.5	860.8	843.0	17.81	48.335	
4,000.0	3,963.2	3,842.0	3,807.6	9.1	8.7	179.63	15.3	449.8	895.0	876.8	18.23	49.111	
4,037.4	4,000.0	3,877.1	3,842.2	9.1	8.8	179.67	14.5	455.9	907.8	889.5	18.37	49.428	
4,100.0	4,061.7	3,936.0	3,900.1	9.2	8.9	-172.74	13.1	466.1	929.2	910.7	18.56	50.062	
4,132.1	4,093.3	3,966.2	3,929.9	9.3	8.9	-168.91	12.4	471.3	940.2	921.5	18.64	50.431	
4,200.0	4,160.1	4,041.1	4,003.6	9.4	9.1	-168.99	10.6	483.9	963.0	944.0	18.97	50.770	
4,300.0	4,258.6	4,155.2	4,116.4	9.6	9.3	-169.11	8.3	501.3	995.0	975.5	19.51	51.008	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 908H - OWB - PWP0

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1+MS

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
20,700.0	10,821.6	10,520.7	10,443.0	87.5	28.2	61.12	10,635.5	-95.0	979.6	886.5	93.10	10.522	
20,800.0	10,821.8	10,550.0	10,467.1	88.3	28.1	62.68	10,652.1	-95.1	922.7	827.0	95.72	9.639	
20,900.0	10,821.9	10,577.3	10,488.9	89.2	28.1	64.13	10,668.6	-95.2	871.6	773.5	98.08	8.887	
20,931.9	10,822.0	10,587.9	10,497.1	89.5	28.0	64.68	10,675.3	-95.2	856.6	757.9	98.76	8.674	CC, ES, SF

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 909H - OWB - PWP0

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1+MS

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
20,300.0	10,820.9	10,600.0	10,471.6	84.1	34.4	26.93	10,566.4	-605.0	997.6	945.7	51.90	19.222	
20,400.0	10,821.1	10,622.7	10,492.9	85.0	34.3	28.39	10,574.4	-605.0	905.8	852.4	53.45	16.949	
20,500.0	10,821.2	10,650.0	10,518.0	85.8	34.3	30.33	10,585.1	-605.1	815.7	760.4	55.30	14.750	
20,600.0	10,821.4	10,650.0	10,518.0	86.7	34.3	30.33	10,585.1	-605.1	726.8	668.7	58.15	12.499	
20,700.0	10,821.6	10,676.5	10,541.9	87.5	34.3	32.40	10,596.6	-605.1	640.1	578.8	61.32	10.440	
20,800.0	10,821.8	10,700.0	10,562.6	88.3	34.2	34.41	10,607.7	-605.2	556.1	490.5	65.59	8.478	
20,900.0	10,821.9	10,728.2	10,586.8	89.2	34.2	37.06	10,622.2	-605.3	475.6	404.4	71.22	6.678	
20,931.9	10,822.0	10,738.1	10,595.1	89.5	34.2	38.05	10,627.6	-605.3	450.9	377.5	73.38	6.144	CC, ES, SF

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 910H - OWB - PWP0

Offset Site Error: 0.0 usft

Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10273-r.5 MWD+IFR1+SAG+FDIR

Rule Assigned:

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
20,400.0	10,821.1	10,600.0	10,384.3	85.0	20.6	-32.06	10,593.4	-1,057.7	990.3	934.9	55.37	17.885	
20,500.0	10,821.2	10,600.0	10,384.3	85.8	20.6	-32.06	10,593.4	-1,057.7	906.5	848.2	58.33	15.541	
20,600.0	10,821.4	10,624.9	10,405.9	86.7	20.6	-33.62	10,605.4	-1,060.3	825.5	763.9	61.56	13.409	
20,700.0	10,821.6	10,650.0	10,427.3	87.5	20.6	-35.28	10,618.4	-1,063.0	747.6	682.0	65.57	11.401	
20,800.0	10,821.8	10,674.5	10,447.5	88.3	20.6	-36.99	10,631.8	-1,065.9	673.7	603.1	70.56	9.547	
20,900.0	10,821.9	10,700.0	10,468.1	89.2	20.6	-38.86	10,646.5	-1,069.0	604.6	527.9	76.67	7.886	
20,931.9	10,822.0	10,714.6	10,479.6	89.5	20.6	-39.96	10,655.3	-1,070.9	583.8	505.1	78.74	7.414	CC, ES, SF

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

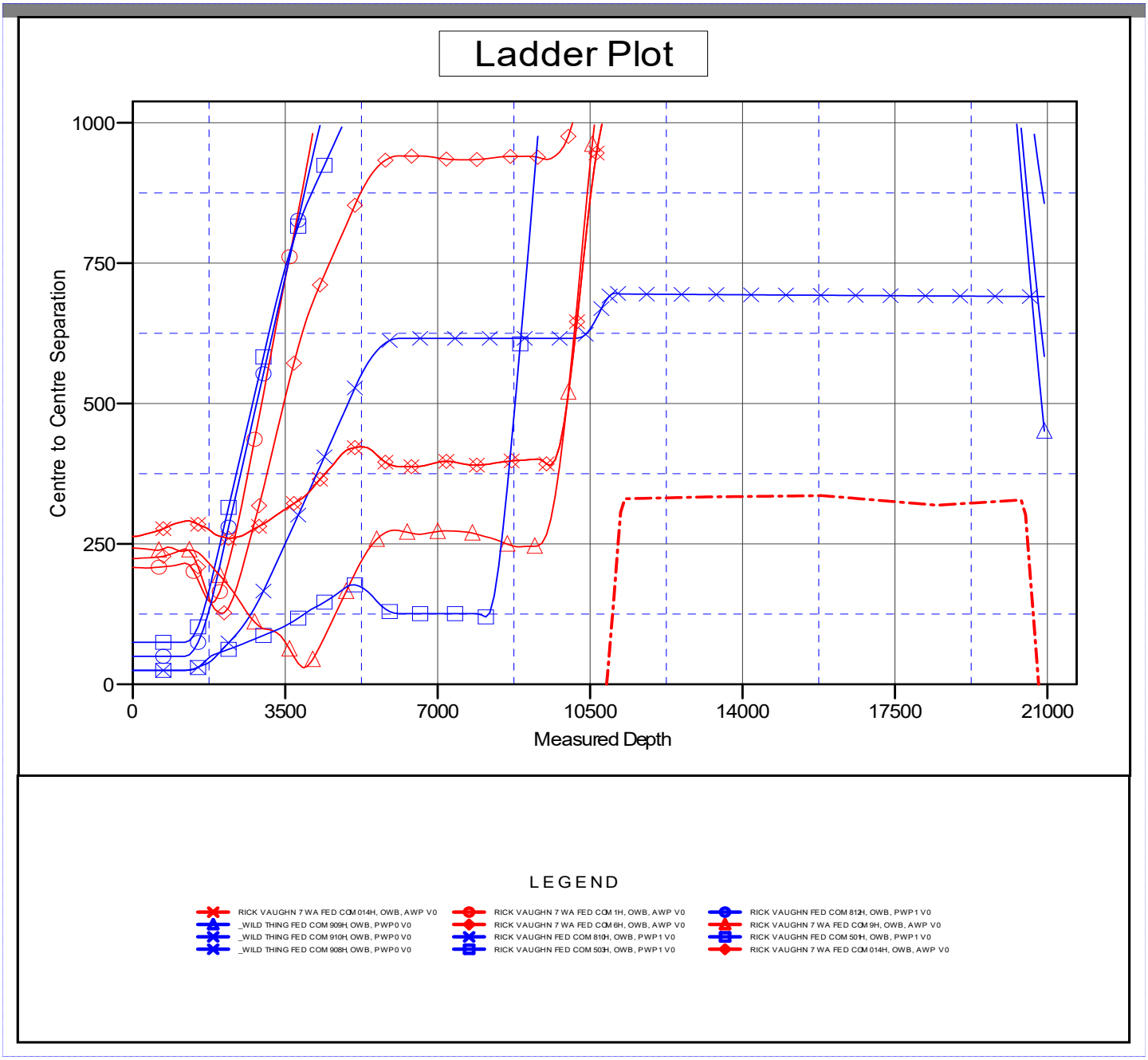
ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to KB @ 2944.0usft (NABORS X09)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: RICK VAUGHN FED COM 811H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.16°



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

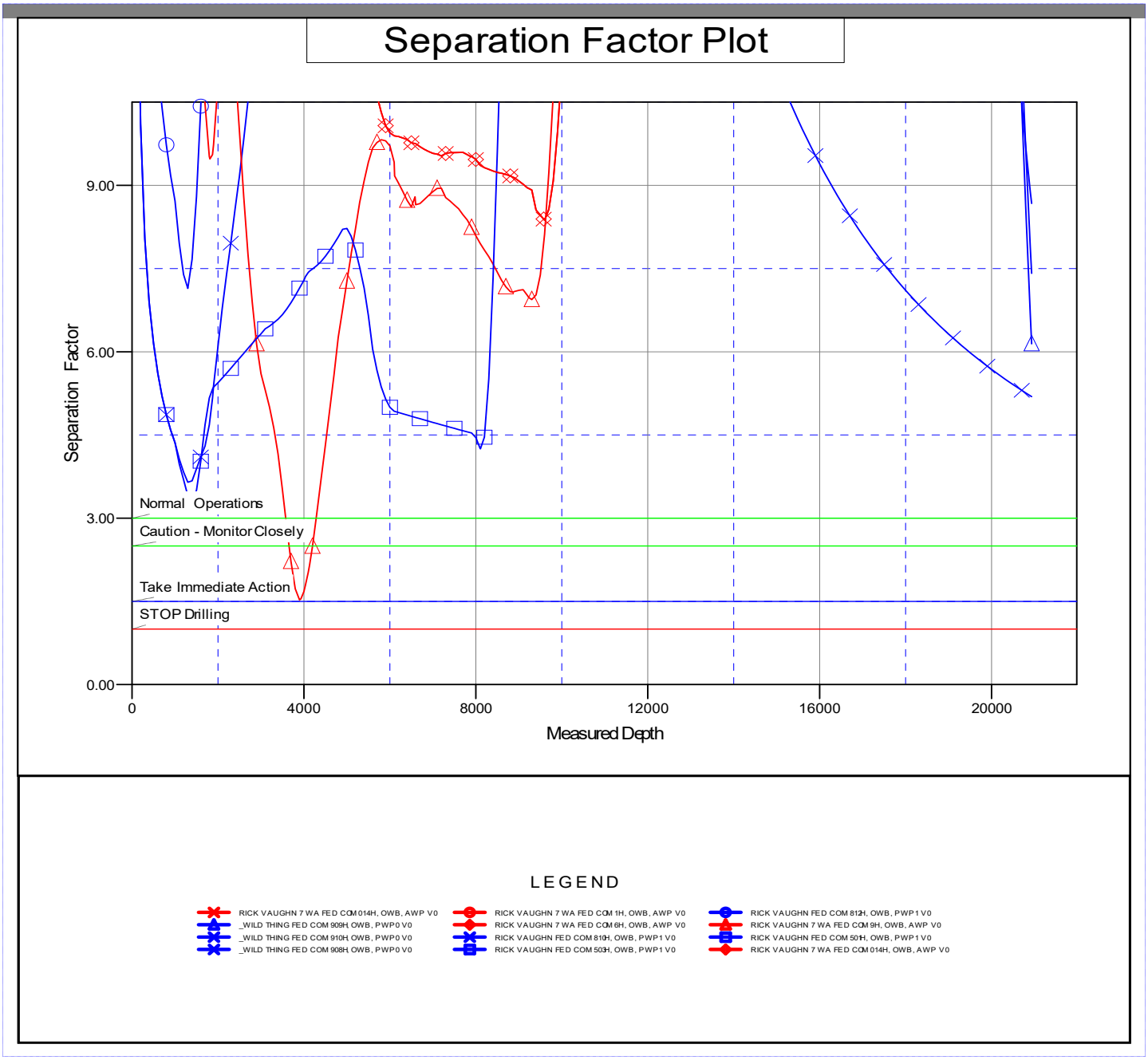
ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	**Local Co-ordinate Reference:**	Well RICK VAUGHN FED COM 811H
Project:	ATLAS PROSPECT_NME	**TVD Reference:**	KB @ 2944.0usft (NABORS X09)
Reference Site:	RICK VAUGHN FED COM PROJECT	**MD Reference:**	KB @ 2944.0usft (NABORS X09)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	RICK VAUGHN FED COM 811H	**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:	PWP1	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to KB @ 2944.0usft (NABORS X09)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: RICK VAUGHN FED COM 811H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.16°



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	Pool Code	Pool Name	
30-015-55645	98220	Purple Sage; Wolfcamp (Gas)	
Property Code 336292	Property Name **RICK VAUGHN FED COM**		Well Number **811H**
OGRID No. **372098**	Operator Name **MARATHON OIL PERMIAN LLC**		Ground Level Elevation **2,912'**
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
N	**7**	**26S**	**29E**		**88' FSL**	**1,419' FWL**	**32.050127°**	**-104.027554°**	**EDDY**

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
LOT 1	**6**	**26S**	**29E**		**200' FNL**	**660' FWL**	**32.078395°**	**-104.029987°**	**EDDY**

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
638.40				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
N	**7**	**26S**	**29E**		**88' FSL**	**1,419' FWL**	**32.050127°**	**-104.027554°**	**EDDY**

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
LOT 4	**7**	**26S**	**29E**		**330' FSL**	**660' FWL**	**32.050800°**	**-104.030005°**	**EDDY**

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
LOT 1	**6**	**26S**	**29E**		**330' FNL**	**660' FWL**	**32.078037°**	**-104.029989°**	**EDDY**

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

OPERATOR CERTIFICATIONS

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

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

Signature: Stan Wagner Date: 6/10/2025

Printed Name: Stan Wagner

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.

MARY L. MURRAY NEW MEXICO 12177 REGISTERED PROFESSIONAL SURVEYOR

Date: 5/22/2025

Signature and Seal of Professional Surveyor

Certificate Number	Date of Survey
12177	5/22/2025

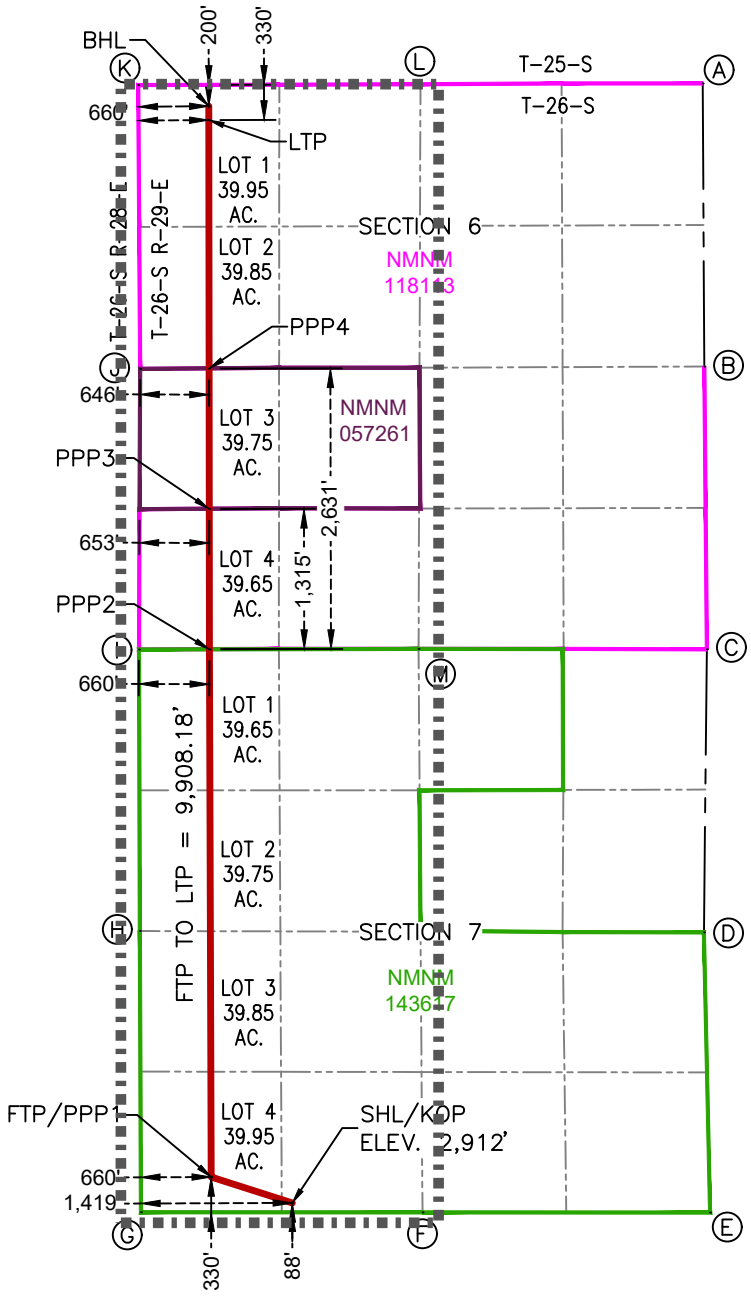
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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.

RICK VAUGHN FED COM 811H



SURFACE HOLE LOCATION
& KICK-OFF POINT
88' FSL & 1,419' FWL
ELEV.=2,912'

NAD 83 X = 636,074.02'
NAD 83 Y = 382,108.52'
NAD 83 LAT = 32.050127°
NAD 83 LONG = -104.027554°

FIRST TAKE POINT &
PENETRATION POINT 1
330' FSL & 660' FWL

NAD 83 X = 635,313.90'
NAD 83 Y = 382,351.16'
NAD 83 LAT = 32.050800°
NAD 83 LONG = -104.030005°

PENETRATION POINT 2
0' FNL & 660' FWL

NAD 83 X = 635,296.57'
NAD 83 Y = 387,298.37'
NAD 83 LAT = 32.064400°
NAD 83 LONG = -104.030016°

PENETRATION POINT 3
1,315' FSL & 653' FWL

NAD 83 X = 635,295.15'
NAD 83 Y = 388,613.29'
NAD 83 LAT = 32.068015°
NAD 83 LONG = -104.030009°

PENETRATION POINT 4
2,631' FSL & 646' FWL

NAD 83 X = 635,293.73'
NAD 83 Y = 389,929.51'
NAD 83 LAT = 32.071633°
NAD 83 LONG = -104.030002°

LAST TAKE POINT
330' FNL & 660' FWL

NAD 83 X = 635,291.21'
NAD 83 Y = 392,259.30'
NAD 83 LAT = 32.078037°
NAD 83 LONG = -104.029989°

BOTTOM HOLE LOCATION
200' FNL & 660' FWL

NAD 83 X = 635,291.21'
NAD 83 Y = 392,389.30'
NAD 83 LAT = 32.078395°
NAD 83 LONG = -104.029987°

CORNER COORDINATES NEW MEXICO EAST - NAD 83					
A	N:392,602.51' E:639,919.75'	F	N:382,020.16' E:637,293.61'	K	N:392,587.31' E:634,628.96'
B	N:389,949.16' E:639,935.13'	G	N:382,021.35' E:634,655.33'	L	N:392,595.03' E:637,274.83'
C	N:387,298.24' E:639,958.45'	H	N:384,657.30' E:634,644.87'	M	N:387,302.75' E:637,257.20'
D	N:384,644.57' E:639,931.43'	I	N:387,296.79' E:634,636.66'		
E	N:382,018.12' E:639,989.46'	J	N:389,926.86' E:634,647.74'		

ConocoPhillips - Rick Vaughn Federal Com 811H

1. Geologic Formations

TVD of Target:	10,822' EOL	Pilot hole depth:	N/A
MD at TD:	20,932'	Deepest expected fresh water:	90'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	417	Water	
Top of Salt	901	Salt	
Base of Salt	2514	Salt	
Lamar	2698	Salt Water	
Bell Canyon	2744	Salt Water	
Cherry Canyon	3586	Oil/Gas	
Brushy Canyon	4836	Oil/Gas	
Bone Spring	6437	Oil/Gas	
1st Bone Spring Sand	7341	Oil/Gas	
2nd Bone Spring Sand	8204	Oil/Gas	
3rd Bone Spring Sand	9201	Oil/Gas	
Wolfcamp A	9680	Oil/Gas	
Wolfcamp B	9969	Oil/Gas	
Wolfcamp C	10536	Target Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	350	10.75"	45.5	J55	BTC	13.05	16.76	44.90	49.98
9.875"	0	7500	7.625"	29.7	L80-ICY	BTC	2.84	1.12	3.26	3.29
8.750"	7500	10550	7.625"	29.7	P110-ICY	W513	3.29	1.70	3.41	2.05
6.75"	0	10350	5.5"	20	P110-ICY	BTC	2.99	2.20	3.52	3.52
6.75"	10350	20,932	5.5"	20	P110-ICY	W441	2.91	2.20	3.37	2.74
				COP Minimum Safety Factor			1.05	1.15	1.4	1.4

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse. Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface.
All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172

The 5 1/2" W441 casing will be run back 200’ into the intermediate casing to ensure the coupling OD clearance is greater than .422” for the cement bond tie in.

ConocoPhillips - Rick Vaughn Federal Com 811H

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

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3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hrs)	Slurry Description
Surf.	24	13.5	1.75	9	12	Lead: Class C
	187	14.8	1.34	6.34	8	Tail: Class C
Int. Stage 1	1059	11	2.54	15.33	12	Lead: Class C
	112	14.8	1.34	6.52	8	Tail: Class C
Int. Stage 2	213	12.9	1.9	10.52	24	Lead: Class C
	192	14.8	1.34	6.52	8	Tail: Class C
Prod	572	12.7	1.68	9.09	72	Lead: Class C
	1011	14.5	1.18	5.26	19	Tail: Class H

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

Stage tool ~50' into Lamar if required.

Casing String	TOC	% Excess
Surface	0’	50% in OH
Int Stg 1	0’	50% in OH
Int Stg 2	0’	20% in OH
Production	10,050'	35% OH in Lateral (KOP to EOL)

3b. Contingency Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hrs)	Slurry Description
Surf.	24	13.5	1.75	9	12	Lead: Class C
	187	14.8	1.34	6.34	8	Tail: Class C
Bradenhead Stage 1	536	15.6	1.216	5.28	6	Stage 1 Lead: Class H
Bradenhead Stage 2	2000	13.0	1.93	10.57	4	Bradenhead: Thixotropic Class C
	400	14.8	1.33	6.4	5	Top Out: Class C
Prod	572	12.7	1.68	9.09	72	Lead: Class C
	1011	14.2	1.18	5.26	19	Tail: Class H

If conditions dictate, an offline bradenhead cement job will be performed to ensure cement to surface.

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

Casing String	TOC	% Excess
Surface	0’	50% in OH
BH Stg 1	6,437'	50% in OH
BH Stg 2	0'	271%
Production	10,050'	35% OH in Lateral (KOP to EOL)

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4. Pressure Control Equipment

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

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

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

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

Y	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR Part 3170 Subpart 3172.	
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.	

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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.6 - 10	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9 - 13.5	35-45	<20

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

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

6. Logging and Testing Procedures

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

Additional logs planned		Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
N	CBL	Production casing
Y	Mud log	Intermediate shoe to TD
N	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7600 psi at 10822' TVD
Abnormal Temperature	NO 165 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?
Y	Is it a batch drilling operation?

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

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 512315

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 512315
	Action Type: [C-103A] 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.	4/16/2026