

Well Name: VALKYRIE BS FED COM	Well Location: T23S / R28E / SEC 11 / NESE / 32.319539 / -104.0512382	County or Parish/State: EDDY / NM
Well Number: 552H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM32636	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: MARATHON OIL PERMIAN LLC	

Notice of Intent

Sundry ID: 2885708

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 12/08/2025

Time Sundry Submitted: 08:52

Date proposed operation will begin: 12/08/2025

Procedure Description: Marathon Oil Permian LLC requests a change to our approved APD for this well to reflect a change in SHL & BHL. Change SHL FROM: 2434' FSL & 558' FEL Change SHL TO: 2432' FSL & 558' FEL, 11-23S-28E Change BHL FROM: 1980' FSL & 100' FEL Change BHL TO: 1740' FSL & 50' FEL, NESE 07-23S-29E, Eddy Co., NM. Revised C-102s, directional plans, and drill procedures attached.

NOI Attachments

Procedure Description

VALKYRIE_FED_COM_552H_AC_REPORT_20260121150053.pdf

VALKYRIE_FED_COM_552H_PERMIT_PLAN_20260121150053.pdf

Valkyrie_Fed_Com_552H_APD_20260121150035.pdf

VALKYRIE_FED_COM_552H__C102_NAD83_signed_1_20_26_20260121150024.pdf

Well Name: VALKYRIE BS FED COM

Well Location: T23S / R28E / SEC 11 / NESE / 32.319539 / -104.0512382

County or Parish/State: EDDY / NM

Well Number: 552H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM32636

Unit or CA Name:

Unit or CA Number:

US Well Number:

Operator: MARATHON OIL PERMIAN LLC

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: JAN 21, 2026 03:00 PM

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: 01/27/2026

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.

5. Lease Serial No.
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> 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			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 performed 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 determined that the site is ready for final inspection.)

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

THE SPACE FOR FEDERAL OR STATE OFFICE USE

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

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

(Instructions on page 2)

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 of this form to U.S. Department of the Interior, Bureau of Land 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: NESE / 2434 FSL / 558 FEL / TWSP: 23S / RANGE: 28E / SECTION: 11 / LAT: 32.319539 / LONG: -104.0512382 (TVD: 0 feet, MD: 0 feet)

PPP: NWSW / 1980 FSL / 100 FWL / TWSP: 23S / RANGE: 28E / SECTION: 12 / LAT: 32.3183025 / LONG: -104.0491231 (TVD: 8243 feet, MD: 8333 feet)

BHL: NESE / 1980 FSL / 100 FEL / TWSP: 23S / RANGE: 29E / SECTION: 7 / LAT: 32.3178373 / LONG: -104.0158211 (TVD: 9037 feet, MD: 19003 feet)

CONFIDENTIAL

DELAWARE BASIN WEST

EDDY COUNTY _DBW_NM_E

VALKYRIE FED COM

_VALKYRIE FED COM 552H

OWB

PWP0

Anticollision Report

20 January, 2026

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Reference	PWP0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Max. Cent. Dist. of 1,000.00usft or Max. Ell. Sep. of 500.00usft	Error Surface:	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Added to Error Values

Survey Tool Program		Date	1/20/2026	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,488.00	PWP0 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr.

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
TROJAN SHIELD						
AMOCO FEDERAL 11 001_PA - OWB - AWP	3,610.26	3,544.37	519.38	392.36	4.089	CC
AMOCO FEDERAL 11 001_PA - OWB - AWP	8,525.00	8,415.59	670.92	372.35	2.247	Caution - Monitor Closely, ES
AMOCO FEDERAL 11 001_PA - OWB - AWP	8,550.00	8,440.52	672.64	373.04	2.245	Caution - Monitor Closely, SF
VALKYRIE FED COM						
_VALKYRIE FED COM 501H - OWB - PWP0.r	966.33	967.33	59.62	51.77	7.601	CC
_VALKYRIE FED COM 501H - OWB - PWP0.r	1,000.00	1,000.00	59.63	51.64	7.469	ES
_VALKYRIE FED COM 501H - OWB - PWP0.r	1,100.00	1,098.98	61.30	52.82	7.229	SF
_VALKYRIE FED COM 502H - OWB - PWP0.r	2,227.61	2,231.99	29.87	17.50	2.416	Caution - Monitor Closely, CC
_VALKYRIE FED COM 502H - OWB - PWP0.r	2,400.00	2,406.12	30.08	17.14	2.325	Caution - Monitor Closely, ES, SF
_VALKYRIE FED COM 551H - OWB - PWP0	1,000.00	1,000.00	89.60	81.61	11.218	CC, ES
_VALKYRIE FED COM 551H - OWB - PWP0	1,100.00	1,097.01	91.25	82.77	10.762	SF
ASTRODOG FEE 08 114H - OWB - AWP						Out of range
ASTRODOG FEE 0809 124H - OWB - AWP						Out of range
ASTRODOG FEE 0809 133H - OWB - AWP	19,488.00	9,036.57	258.74	103.11	1.663	Caution - Monitor Closely, CC, ES, SF
ASTRODOG FEE 0809 213H - OWB - AWP	19,488.00	9,050.10	451.19	282.81	2.680	Normal Operations, CC, ES, SF
ASTRODOG FEE 0809 214H - OWB - AWP						Out of range
ASTRODOG FEE 0809 224H - OWB - AWP	15,462.85	9,176.08	709.41	592.17	6.051	CC, ES
ASTRODOG FEE 0809 224H - OWB - AWP	15,500.00	9,175.33	710.38	592.35	6.019	SF
ASTRODOG FEE 0809 234H - OWB - AWP						Out of range
ASTRODOG FEE 0809 236H - OWB - AWP						Out of range
H F 7 FEDERAL COM 001 - 0°WB - 0°WP	15,132.30	8,838.10	607.60	480.25	4.771	CC, ES, SF
H F 7 FEDERAL COM 001 - 105°WB - 105°WP	15,354.38	8,876.07	341.90	215.83	2.712	Normal Operations, CC, ES, SF
H F 7 FEDERAL COM 001 - 120°WB - 120°WP	15,327.08	8,878.67	294.38	167.70	2.324	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 135°WB - 135°WP	15,287.93	8,879.95	254.38	127.04	1.998	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 15°WB - 15°WP	15,198.61	8,839.86	599.63	471.93	4.696	CC, ES, SF
H F 7 FEDERAL COM 001 - 150°WB - 150°WP	15,239.78	8,880.39	224.23	96.42	1.754	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 165°WB - 165°WP	15,185.59	8,880.43	205.63	77.71	1.607	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 180°WB - 180°WP	15,128.42	8,880.40	199.59	72.03	1.565	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 195°WB - 195°WP	15,071.35	8,880.43	206.43	79.73	1.629	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 210°WB - 210°WP	15,017.50	8,880.37	225.80	100.37	1.800	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 225°WB - 225°WP	14,969.78	8,879.90	256.62	132.70	2.071	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 240°WB - 240°WP	14,931.32	8,878.55	297.18	174.76	2.428	Caution - Monitor Closely, CC, ES, SF
H F 7 FEDERAL COM 001 - 255°WB - 255°WP	14,904.82	8,875.85	345.08	223.85	2.847	Normal Operations, CC, ES, SF
H F 7 FEDERAL COM 001 - 270°WB - 270°WP	14,892.68	8,871.50	397.36	276.74	3.294	CC
H F 7 FEDERAL COM 001 - 270°WB - 270°WP	14,900.00	8,871.12	397.41	276.72	3.293	ES, SF

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
VALKYRIE FED COM						
H F 7 FEDERAL COM 001 - 30°WB - 30°WP	15,259.15	8,844.57	577.32	449.87	4.530	CC, ES, SF
H F 7 FEDERAL COM 001 - 330°WB - 330°WP	15,004.86	8,844.21	579.12	454.27	4.639	CC, ES, SF
H F 7 FEDERAL COM 001 - 345° WB - 345° WP	15,065.91	8,839.66	600.57	474.22	4.753	CC, ES
H F 7 FEDERAL COM 001 - 345° WB - 345° WP	15,100.00	8,839.18	601.33	474.80	4.753	SF
VALKYRIE 12 WXY FEDERAL COM 007H - OWB - AWP	9,270.36	8,970.73	609.38	567.62	14.592	CC
VALKYRIE 12 WXY FEDERAL COM 007H - OWB - AWP	9,300.00	8,970.35	610.10	567.30	14.256	ES
VALKYRIE 12 WXY FEDERAL COM 007H - OWB - AWP	9,500.00	8,967.69	651.20	602.85	13.470	SF
VALKYRIE 12 WXY FEDERAL COM 011H - OWB - AWP	9,255.16	8,967.14	765.21	724.41	18.754	CC, ES
VALKYRIE 12 WXY FEDERAL COM 011H - OWB - AWP	9,500.00	8,983.21	803.27	757.43	17.525	SF

Offset Design: TROJAN SHIELD - AMOCO FEDERAL 11 OO1_PA - OWB - AWP													Offset Site Error: 0.00 usft
Survey Program: 200-r.5 INC-ONLY													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	31.00	0.00	0.00	-141.08	-471.75	-380.87	607.10				
100.00	100.00	69.00	100.00	0.79	2.23	-141.08	-471.75	-380.87	606.31	602.50	3.81	159.181	
200.00	200.00	169.00	200.00	1.45	5.46	-141.08	-471.75	-380.87	606.31	597.93	8.39	72.298	
300.00	300.00	269.04	300.00	1.89	7.91	-141.08	-471.75	-380.87	606.31	594.46	11.86	51.142	
330.95	330.95	299.99	330.93	2.01	8.56	-141.03	-470.88	-380.87	605.63	592.86	12.77	47.409	
400.00	400.00	363.84	394.77	2.26	9.90	-141.05	-471.23	-380.87	605.93	591.26	14.68	41.283	
500.00	500.00	469.08	500.00	2.57	12.71	-141.08	-471.75	-380.87	606.31	587.71	18.60	32.596	
600.00	600.00	569.08	600.00	2.85	15.68	-141.08	-471.75	-380.87	606.31	583.57	22.74	26.666	
700.00	700.00	669.12	700.00	3.11	18.04	-141.08	-471.75	-380.87	606.31	580.27	26.05	23.279	
730.89	730.89	700.01	730.87	3.18	18.68	-141.03	-470.88	-380.87	605.63	578.68	26.95	22.471	
800.00	800.00	763.92	794.77	3.35	20.02	-141.05	-471.23	-380.87	605.93	577.11	28.83	21.019	
900.00	900.00	869.16	900.00	3.58	22.83	-141.08	-471.75	-380.87	606.31	573.57	32.74	18.518	
1,000.00	1,000.00	969.16	1,000.00	3.79	25.79	-141.08	-471.75	-380.87	606.31	569.44	36.88	16.442	
1,100.00	1,100.00	1,069.20	1,100.00	4.00	28.15	-141.08	-471.75	-380.87	606.31	566.14	40.18	15.091	
1,130.78	1,130.78	1,099.99	1,130.77	4.06	28.80	-141.03	-470.88	-380.87	605.63	564.56	41.08	14.744	
1,200.00	1,200.00	1,163.99	1,194.76	4.19	30.13	-141.05	-471.24	-380.87	605.93	562.99	42.95	14.108	
1,300.00	1,300.00	1,269.24	1,300.00	4.38	32.94	-141.08	-471.75	-380.87	606.31	559.45	46.86	12.938	
1,400.00	1,400.00	1,369.24	1,400.00	4.56	35.90	-141.08	-471.75	-380.87	606.31	555.31	51.00	11.889	
1,500.00	1,500.00	1,469.28	1,500.00	4.74	38.26	-141.08	-471.75	-380.87	606.31	552.02	54.29	11.167	
1,530.74	1,530.74	1,500.02	1,530.72	4.79	38.90	-141.03	-470.88	-380.87	605.63	550.44	55.19	10.973	
1,600.00	1,600.00	1,564.07	1,594.75	4.91	40.24	-141.05	-471.24	-380.87	605.93	548.87	57.06	10.619	
1,700.00	1,700.00	1,669.32	1,700.00	5.08	43.05	-141.08	-471.75	-380.87	606.31	545.33	60.98	9.943	
1,800.00	1,800.00	1,769.32	1,800.00	5.24	46.01	-141.08	-471.75	-380.87	606.31	541.20	65.12	9.311	
1,900.00	1,900.00	1,869.37	1,900.00	5.40	48.37	-141.08	-471.75	-380.87	606.31	537.90	68.41	8.863	
1,930.61	1,930.61	1,899.98	1,930.60	5.45	49.01	-141.03	-470.88	-380.87	605.63	536.33	69.30	8.739	
2,000.00	2,000.00	1,964.14	1,994.75	5.56	50.35	-141.05	-471.24	-380.87	605.94	534.76	71.17	8.513	
2,100.00	2,099.98	2,069.39	2,099.98	5.78	53.16	59.13	-471.75	-380.87	605.41	530.32	75.09	8.062	
2,200.00	2,199.84	2,169.24	2,199.84	5.97	56.12	59.61	-471.75	-380.87	602.74	523.53	79.22	7.609	
2,300.00	2,299.45	2,268.90	2,299.45	6.16	58.47	60.40	-471.75	-380.87	598.37	515.88	82.50	7.253	
2,400.00	2,398.70	2,363.28	2,393.81	6.35	60.44	61.50	-471.23	-380.87	592.05	506.80	85.25	6.945	
2,500.00	2,497.47	2,466.95	2,497.47	6.54	63.19	62.99	-471.75	-380.87	585.07	495.98	89.09	6.567	
2,600.00	2,595.62	2,565.11	2,595.62	6.73	66.10	64.81	-471.75	-380.87	576.55	483.40	93.15	6.190	
2,699.99	2,693.05	2,662.58	2,693.05	6.93	68.44	66.99	-471.75	-380.87	567.16	470.75	96.41	5.883	
2,702.75	2,695.72	2,665.25	2,695.72	6.94	68.50	67.06	-471.75	-380.87	566.90	470.40	96.49	5.875	

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: TROJAN SHIELD - AMOCO FEDERAL 11 OO1_PA - OWB - AWP														Offset Site Error: 0.00 usft		
Survey Program: 200-r.5 INC-ONLY														Offset Well Error: 0.00 usft		
Reference				Offset				Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor				
2,800.00	2,790.06	2,756.03	2,786.48	7.05	70.39	69.19	-471.15	-380.87	557.49	458.35	99.13	5.624				
2,900.00	2,887.07	2,856.64	2,887.07	7.18	72.99	71.54	-471.75	-380.87	549.49	446.74	102.76	5.347				
3,000.00	2,984.07	2,953.64	2,984.07	7.30	75.87	73.91	-471.75	-380.87	542.08	435.31	106.77	5.077				
3,100.00	3,081.08	3,050.69	3,081.08	7.44	78.30	76.33	-471.75	-380.87	535.66	425.49	110.17	4.862				
3,200.00	3,178.09	3,145.53	3,175.89	7.58	80.28	78.81	-471.06	-380.87	529.92	416.99	112.93	4.692				
3,300.00	3,275.09	3,244.74	3,275.09	7.72	82.75	81.33	-471.75	-380.87	525.96	409.59	116.37	4.520				
3,400.00	3,372.10	3,341.75	3,372.10	7.87	85.62	83.88	-471.75	-380.87	522.74	402.35	120.39	4.342				
3,500.00	3,469.11	3,438.80	3,469.11	8.02	88.16	86.46	-471.75	-380.87	520.64	396.70	123.93	4.201				
3,600.00	3,566.11	3,534.70	3,564.99	8.17	90.16	89.10	-470.98	-380.87	519.38	392.65	126.73	4.098				
3,610.26	3,576.07	3,544.37	3,574.65	8.19	90.36	89.35	-471.05	-380.87	519.38	392.36	127.02	4.089 CC				
3,700.00	3,663.12	3,632.85	3,663.12	8.33	92.50	91.65	-471.75	-380.87	519.81	389.81	130.00	3.999				
3,800.00	3,760.13	3,729.86	3,760.13	8.49	95.38	94.24	-471.75	-380.87	521.10	387.08	134.02	3.888				
3,900.00	3,857.13	3,826.90	3,857.13	8.65	98.02	96.82	-471.75	-380.87	523.51	385.80	137.71	3.801				
4,000.00	3,954.14	3,923.53	3,953.74	8.82	100.04	99.44	-470.93	-380.87	526.89	386.35	140.54	3.749				
4,100.00	4,051.14	4,020.96	4,051.14	8.99	102.25	101.87	-471.75	-380.87	531.64	388.00	143.64	3.701				
4,200.00	4,148.15	4,117.96	4,148.15	9.16	105.13	104.34	-471.75	-380.87	537.31	389.65	147.66	3.639				
4,300.00	4,245.16	4,215.01	4,245.16	9.33	107.88	106.75	-471.75	-380.87	544.01	392.50	151.50	3.591				
4,400.00	4,342.16	4,312.02	4,342.15	9.51	109.90	109.19	-470.89	-380.87	551.68	397.34	154.34	3.574				
4,500.00	4,439.17	4,409.06	4,439.17	9.69	112.01	111.38	-471.75	-380.87	560.32	403.03	157.29	3.562				
4,600.00	4,536.18	4,506.07	4,536.18	9.87	114.88	113.60	-471.75	-380.87	569.86	408.54	161.31	3.533				
4,674.61	4,608.56	4,578.45	4,608.56	9.99	117.03	115.21	-471.75	-380.87	577.53	413.22	164.31	3.515				
4,700.00	4,633.20	4,603.13	4,633.20	10.02	117.74	115.77	-471.75	-380.87	580.23	414.93	165.30	3.510				
4,800.00	4,730.51	4,700.45	4,730.50	10.21	119.77	117.91	-470.88	-380.87	590.95	422.81	168.14	3.515				
4,900.00	4,828.21	4,800.00	4,830.03	10.39	121.84	119.72	-471.75	-380.87	601.26	430.21	171.05	3.515				
5,000.00	4,926.27	4,896.25	4,926.27	10.57	124.70	121.34	-471.75	-380.87	611.36	436.31	175.04	3.493				
5,100.00	5,024.66	4,994.64	5,024.66	10.75	127.62	122.82	-471.75	-380.87	620.97	441.84	179.12	3.467				
5,200.00	5,123.35	5,093.36	5,123.35	10.93	129.73	124.12	-471.75	-380.87	629.96	447.89	182.07	3.460				
5,300.00	5,222.30	5,195.23	5,225.18	11.10	131.85	125.29	-471.67	-380.87	638.27	453.22	185.05	3.449				
5,400.00	5,321.48	5,291.54	5,321.48	11.27	134.67	126.23	-471.75	-380.87	645.70	456.72	188.98	3.417				
5,500.00	5,420.88	5,390.93	5,420.88	11.44	137.62	127.05	-471.75	-380.87	652.28	459.18	193.10	3.378				
5,600.00	5,520.45	5,490.55	5,520.45	11.60	139.77	127.74	-471.75	-380.87	657.90	461.79	196.12	3.355				
5,700.00	5,620.17	5,593.76	5,623.62	11.76	141.93	128.31	-471.64	-380.87	662.57	463.45	199.12	3.327				
5,800.00	5,720.00	5,690.14	5,720.00	11.92	144.73	128.70	-471.75	-380.87	666.12	463.08	203.04	3.281				
5,900.00	5,819.92	5,790.06	5,819.92	12.06	147.70	128.99	-471.75	-380.87	668.64	461.46	207.18	3.227				
6,000.00	5,919.89	5,890.07	5,919.89	12.19	149.87	129.15	-471.75	-380.87	670.07	459.86	210.21	3.188				
6,080.11	6,000.00	5,973.05	6,002.84	12.25	151.60	-70.83	-471.34	-380.87	670.56	457.94	212.62	3.154				
6,100.00	6,019.89	5,993.75	6,023.54	12.25	152.03	-70.86	-471.64	-380.87	670.47	457.24	213.22	3.144				
6,139.85	6,059.74	6,029.96	6,059.74	12.28	153.05	-70.87	-471.75	-380.87	670.42	455.78	214.65	3.123				
6,200.00	6,119.89	6,090.11	6,119.89	12.31	154.84	-70.87	-471.75	-380.87	670.42	453.29	217.13	3.088				
6,300.00	6,219.89	6,190.11	6,219.89	12.37	157.80	-70.87	-471.75	-380.87	670.42	449.16	221.26	3.030				
6,400.00	6,319.89	6,290.15	6,319.89	12.42	159.98	-70.87	-471.75	-380.87	670.42	446.13	224.29	2.989 Normal Operations				
6,500.00	6,419.89	6,393.84	6,423.54	12.47	162.14	-70.86	-471.65	-380.87	670.47	443.16	227.31	2.950 Normal Operations				
6,539.77	6,459.66	6,429.96	6,459.66	12.49	163.16	-70.87	-471.75	-380.87	670.42	441.70	228.73	2.931 Normal Operations				
6,600.00	6,519.89	6,490.19	6,519.89	12.52	164.95	-70.87	-471.75	-380.87	670.42	439.21	231.21	2.900 Normal Operations				
6,700.00	6,619.89	6,590.19	6,619.89	12.58	167.91	-70.87	-471.75	-380.87	670.42	435.07	235.35	2.849 Normal Operations				
6,800.00	6,719.89	6,690.23	6,719.89	12.63	170.09	-70.87	-471.75	-380.87	670.42	432.05	238.38	2.812 Normal Operations				
6,900.00	6,819.89	6,793.92	6,823.54	12.68	172.25	-70.86	-471.65	-380.87	670.47	429.08	241.39	2.778 Normal Operations				
6,939.69	6,859.58	6,829.96	6,859.58	12.70	173.26	-70.87	-471.75	-380.87	670.42	427.61	242.81	2.761 Normal Operations				
7,000.00	6,919.89	6,890.27	6,919.89	12.74	175.05	-70.87	-471.75	-380.87	670.42	425.12	245.30	2.733 Normal Operations				
7,100.00	7,019.89	6,990.27	7,019.89	12.79	178.02	-70.87	-471.75	-380.87	670.42	420.99	249.43	2.688 Normal Operations				
7,200.00	7,119.89	7,090.31	7,119.89	12.84	180.19	-70.87	-471.75	-380.87	670.42	417.96	252.46	2.656 Normal Operations				

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: TROJAN SHIELD - AMOCO FEDERAL 11 OO1_PA - OWB - AWP														Offset Site Error: 0.00 usft
Survey Program: 200-r.5 INC-ONLY														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
7,300.00	7,219.89	7,194.01	7,223.55	12.90	182.36	-70.86	-471.65	-380.87	670.47	414.99	255.48	2.624	Normal Operations	
7,339.61	7,259.49	7,229.96	7,259.49	12.92	183.37	-70.87	-471.75	-380.87	670.42	413.53	256.89	2.610	Normal Operations	
7,400.00	7,319.89	7,290.35	7,319.89	12.95	185.16	-70.87	-471.75	-380.87	670.42	411.03	259.39	2.585	Normal Operations	
7,500.00	7,419.89	7,390.35	7,419.89	13.01	188.13	-70.87	-471.75	-380.87	670.42	406.90	263.52	2.544	Normal Operations	
7,600.00	7,519.89	7,490.39	7,519.89	13.07	190.30	-70.87	-471.75	-380.87	670.42	403.87	266.55	2.515	Normal Operations	
7,700.00	7,619.89	7,594.09	7,623.55	13.12	192.47	-70.86	-471.65	-380.87	670.47	400.90	269.57	2.487	Caution - Monitor Closely	
7,739.52	7,659.41	7,629.96	7,659.41	13.14	193.48	-70.87	-471.75	-380.87	670.42	399.44	270.98	2.474	Caution - Monitor Closely	
7,800.00	7,719.89	7,690.43	7,719.89	13.18	195.27	-70.87	-471.75	-380.87	670.42	396.94	273.48	2.451	Caution - Monitor Closely	
7,900.00	7,819.89	7,790.43	7,819.89	13.23	198.24	-70.87	-471.75	-380.87	670.42	392.81	277.61	2.415	Caution - Monitor Closely	
8,000.00	7,919.89	7,890.47	7,919.89	13.29	200.41	-70.87	-471.75	-380.87	670.42	389.78	280.64	2.389	Caution - Monitor Closely	
8,100.00	8,019.89	7,994.18	8,023.55	13.35	202.57	-70.86	-471.65	-380.87	670.46	386.81	283.66	2.364	Caution - Monitor Closely	
8,139.44	8,059.33	8,029.96	8,059.33	13.37	203.58	-70.87	-471.75	-380.87	670.42	385.35	285.07	2.352	Caution - Monitor Closely	
8,200.00	8,119.89	8,090.51	8,119.89	13.41	205.38	-70.87	-471.75	-380.87	670.42	382.85	287.57	2.331	Caution - Monitor Closely	
8,300.00	8,219.89	8,190.51	8,219.89	13.46	208.35	-70.87	-471.75	-380.87	670.42	378.71	291.71	2.298	Caution - Monitor Closely	
8,400.00	8,319.89	8,290.55	8,319.89	13.52	210.52	-70.87	-471.75	-380.87	670.42	375.69	294.73	2.275	Caution - Monitor Closely	
8,499.98	8,419.87	8,394.24	8,423.54	13.58	212.68	-70.86	-471.65	-380.87	670.46	372.72	297.75	2.252	Caution - Monitor Closely	
8,502.65	8,422.54	8,397.02	8,426.32	13.58	212.74	-70.86	-471.70	-380.87	670.45	372.62	297.83	2.251	Caution - Monitor Closely	
8,505.56	8,425.45	8,400.00	8,429.29	13.58	212.80	-160.79	-471.75	-380.87	670.44	372.53	297.91	2.250	Caution - Monitor Closely	
8,525.00	8,444.88	8,415.59	8,444.88	13.59	213.26	-160.78	-471.75	-380.87	670.92	372.35	298.56	2.247	Caution - Monitor Closely, ES	
8,550.00	8,469.81	8,440.52	8,469.81	13.60	214.00	-160.76	-471.75	-380.87	672.64	373.04	299.60	2.245	Caution - Monitor Closely, SF	
8,575.00	8,494.61	8,465.32	8,494.61	13.62	214.74	-160.73	-471.75	-380.87	675.59	374.97	300.62	2.247	Caution - Monitor Closely	
8,600.00	8,519.22	8,489.92	8,519.22	13.63	215.47	-160.69	-471.75	-380.87	679.77	378.13	301.64	2.254	Caution - Monitor Closely	
8,625.00	8,543.55	8,514.26	8,543.55	13.65	216.19	-160.63	-471.75	-380.87	685.16	382.51	302.65	2.264	Caution - Monitor Closely	
8,650.00	8,567.56	8,538.27	8,567.56	13.66	216.90	-160.55	-471.75	-380.87	691.76	388.12	303.64	2.278	Caution - Monitor Closely	
8,675.00	8,591.17	8,561.88	8,591.17	13.68	217.60	-160.44	-471.75	-380.87	699.55	394.93	304.62	2.296	Caution - Monitor Closely	
8,700.00	8,614.32	8,585.02	8,614.32	13.70	218.29	-160.31	-471.75	-380.87	708.51	402.93	305.58	2.319	Caution - Monitor Closely	
8,725.00	8,636.94	8,607.68	8,636.94	13.72	218.89	-160.15	-471.75	-380.87	718.63	412.20	306.42	2.345	Caution - Monitor Closely	
8,750.00	8,658.97	8,629.72	8,658.97	13.74	219.35	-159.95	-471.75	-380.87	729.87	422.81	307.07	2.377	Caution - Monitor Closely	
8,775.00	8,680.36	8,651.10	8,680.36	13.76	219.80	-159.70	-471.75	-380.87	742.22	434.53	307.69	2.412	Caution - Monitor Closely	
8,800.00	8,701.04	8,671.78	8,701.04	13.79	220.23	-159.40	-471.75	-380.87	755.64	447.35	308.29	2.451	Caution - Monitor Closely	
8,825.00	8,720.95	8,691.70	8,720.95	13.81	220.65	-159.04	-471.75	-380.87	770.10	461.23	308.87	2.493	Caution - Monitor Closely	
8,850.00	8,740.05	8,711.24	8,740.47	13.84	221.06	-158.54	-470.89	-380.87	785.81	476.37	309.44	2.539	Normal Operations	
8,875.00	8,758.28	8,730.21	8,759.44	13.86	221.45	-158.04	-470.96	-380.87	802.22	492.22	310.00	2.588	Normal Operations	
8,900.00	8,775.59	8,748.22	8,777.45	13.90	221.83	-157.44	-471.08	-380.87	819.54	509.02	310.52	2.639	Normal Operations	
8,925.00	8,791.93	8,765.23	8,794.45	13.93	222.18	-156.72	-471.25	-380.87	837.72	526.71	311.02	2.694	Normal Operations	
8,950.00	8,807.25	8,781.18	8,810.40	13.97	222.51	-155.85	-471.45	-380.87	856.74	545.26	311.48	2.751	Normal Operations	
8,975.00	8,821.53	8,796.04	8,825.26	14.01	222.82	-154.80	-471.68	-380.87	876.52	564.61	311.91	2.810	Normal Operations	
9,000.00	8,834.70	8,805.49	8,834.70	14.06	223.07	-153.31	-471.75	-380.87	897.07	584.81	312.26	2.873	Normal Operations	
9,025.00	8,846.75	8,817.54	8,846.75	14.11	223.43	-151.66	-471.75	-380.87	918.32	605.56	312.76	2.936	Normal Operations	
9,050.00	8,857.64	8,828.43	8,857.64	14.17	223.75	-149.62	-471.75	-380.87	940.18	626.97	313.21	3.002		
9,075.00	8,867.33	8,838.12	8,867.33	14.24	224.04	-147.07	-471.75	-380.87	962.59	648.98	313.61	3.069		
9,100.00	8,875.81	8,846.60	8,875.81	14.31	224.29	-143.84	-471.75	-380.87	985.49	671.53	313.96	3.139		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 501H - OWB - PWP0.r														Offset Site Error: 0.00 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	1.00	0.00	0.00	0.01	159.83	-55.96	20.56	59.62	59.62	2.05	29.018		
100.00	100.00	101.00	100.00	0.79	0.77	159.83	-55.96	20.56	59.62	57.56	3.36	17.738		
200.00	200.00	201.00	200.00	1.45	1.44	159.83	-55.96	20.56	59.62	56.26	4.24	14.058		
300.00	300.00	301.00	300.00	1.89	1.89	159.83	-55.96	20.56	59.62	55.38	4.96	12.031		
400.00	400.00	401.00	400.00	2.26	2.25	159.83	-55.96	20.56	59.62	54.66	5.57	10.694		
500.00	500.00	501.00	500.00	2.57	2.56	159.83	-55.96	20.56	59.62	54.04	6.13	9.724		
600.00	600.00	601.00	600.00	2.85	2.85	159.83	-55.96	20.56	59.62	53.49	6.64	8.977		
700.00	700.00	701.00	700.00	3.11	3.11	159.83	-55.96	20.56	59.62	52.98	7.12	8.378		
800.00	800.00	801.00	800.00	3.35	3.35	159.83	-55.96	20.56	59.62	52.50	7.56	7.883		
900.00	900.00	901.00	900.00	3.58	3.57	159.83	-55.96	20.56	59.62	52.05	7.84	7.601	CC	
966.33	966.33	967.33	966.33	3.72	3.72	159.83	-55.96	20.56	59.62	51.77	7.98	7.469	ES	
1,000.00	1,000.00	1,000.00	999.00	3.79	3.79	159.83	-55.96	20.56	59.63	51.64	8.48	7.229	SF	
1,100.00	1,100.00	1,098.98	1,097.96	4.00	4.09	160.27	-57.67	20.68	61.30	52.82	8.93	7.422		
1,200.00	1,200.00	1,196.75	1,195.59	4.19	4.37	161.44	-62.70	21.05	66.28	57.35	9.36	7.972		
1,300.00	1,300.00	1,294.06	1,292.54	4.38	4.63	163.04	-71.00	21.65	74.60	65.24	9.77	8.833		
1,400.00	1,400.00	1,390.70	1,388.49	4.56	4.88	164.76	-82.49	22.48	86.27	76.50	10.16	9.972		
1,500.00	1,500.00	1,486.45	1,483.11	4.74	5.13	166.37	-97.05	23.53	101.28	91.13	10.53	11.359		
1,600.00	1,600.00	1,581.11	1,576.13	4.91	5.36	167.78	-114.54	24.80	119.60	109.07	10.88	12.970		
1,700.00	1,700.00	1,674.51	1,667.29	5.08	5.59	168.97	-134.79	26.27	141.17	130.29	11.22	14.783		
1,800.00	1,800.00	1,766.47	1,756.35	5.24	5.82	169.96	-157.62	27.92	165.91	154.69	11.55	16.778		
1,900.00	1,900.00	1,856.83	1,843.12	5.40	6.03	170.76	-182.81	29.74	193.75	182.21	12.15	20.958		
2,000.00	2,000.00	1,946.90	1,928.77	5.56	6.19	171.43	-210.56	31.75	224.54	212.73	12.50	22.521		
2,100.00	2,099.98	2,042.22	2,019.14	5.78	6.32	11.99	-240.80	33.94	254.65	242.50	12.86	23.731		
2,200.00	2,199.84	2,138.49	2,110.41	5.97	6.48	12.53	-271.34	36.15	281.51	269.01	13.22	24.614		
2,300.00	2,299.45	2,235.60	2,202.48	6.16	6.65	13.12	-302.15	38.38	305.12	292.26	13.59	25.195		
2,400.00	2,398.70	2,333.42	2,295.22	6.35	6.82	13.78	-333.19	40.62	325.45	312.23	13.97	25.500		
2,500.00	2,497.47	2,431.84	2,388.53	6.54	6.99	14.50	-364.41	42.88	342.52	328.92	14.37	25.535		
2,600.00	2,595.62	2,530.74	2,482.29	6.73	7.17	15.30	-395.78	45.15	356.31	342.34	14.38	25.532		
2,699.99	2,693.05	2,629.98	2,576.38	6.93	7.36	16.21	-427.27	47.43	366.86	352.49	14.69	25.574		
2,702.75	2,695.72	2,632.72	2,578.98	6.94	7.36	16.24	-428.14	47.50	367.11	352.73	15.03	25.601		
2,800.00	2,790.06	2,729.38	2,670.62	7.05	7.55	17.20	-458.80	49.71	375.76	361.06	15.37	25.621		
2,900.00	2,887.07	2,828.78	2,764.85	7.18	7.74	18.15	-490.34	52.00	384.76	369.73	15.72	25.635		
3,000.00	2,984.07	2,928.18	2,859.09	7.30	7.93	19.05	-521.87	54.28	393.86	378.49	16.08	25.644		
3,100.00	3,081.08	3,027.57	2,953.32	7.44	8.13	19.91	-553.40	56.56	403.05	387.33	16.44	25.648		
3,200.00	3,178.09	3,126.97	3,047.56	7.58	8.33	20.74	-584.94	58.84	412.33	396.26	16.81	25.648		
3,300.00	3,275.09	3,226.37	3,141.79	7.72	8.53	21.52	-616.47	61.13	421.70	405.26	17.18	25.644		
3,400.00	3,372.10	3,325.76	3,236.03	7.87	8.74	22.28	-648.00	63.41	431.13	414.33	17.56	25.637		
3,500.00	3,469.11	3,425.16	3,330.26	8.02	8.94	23.00	-679.54	65.69	440.64	423.46	17.94	25.627		
3,600.00	3,566.11	3,524.56	3,424.49	8.17	9.15	23.69	-711.07	67.97	450.22	432.66	18.33	25.615		
3,700.00	3,663.12	3,623.95	3,518.73	8.33	9.36	24.35	-742.60	70.25	459.86	441.91	18.72	25.600		
3,800.00	3,760.13	3,723.35	3,612.96	8.49	9.57	24.99	-774.14	72.54	469.55	451.22	19.12	25.583		
3,900.00	3,857.13	3,822.75	3,707.20	8.65	9.80	25.60	-805.67	74.82	479.30	460.58	19.52	25.565		
4,000.00	3,954.14	3,922.14	3,801.43	8.82	10.06	26.18	-837.20	77.10	489.11	469.99	19.92	25.545		
4,100.00	4,051.14	4,021.54	3,895.67	8.99	10.32	26.74	-868.74	79.38	498.96	479.44	20.33	25.524		
4,200.00	4,148.15	4,120.94	3,989.90	9.16	10.59	27.28	-900.27	81.66	508.85	488.93	20.73	25.502		
4,300.00	4,245.16	4,220.33	4,084.14	9.33	10.86	27.80	-931.80	83.95	518.79	498.47	21.15	25.480		
4,400.00	4,342.16	4,319.73	4,178.37	9.51	11.12	28.30	-963.34	86.23	528.77	508.04	21.56	25.456		
4,500.00	4,439.17	4,419.13	4,272.60	9.69	11.39	28.78	-994.87	88.51	538.79	517.65	21.86	25.456		
4,600.00	4,536.18	4,518.52	4,366.84	9.87	11.66	29.25	-1,026.40	90.79	548.85	527.29	21.95	25.467		
4,674.61	4,608.56	4,592.69	4,437.15	9.99	11.86	29.58	-1,049.93	92.50	556.37	534.52	21.95	25.467		
4,700.00	4,633.20	4,617.92	4,461.07	10.02	11.93	29.70	-1,057.94	93.07	558.99	537.04				

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 501H - OWB - PWPO.r													Offset Site Error:	0.00 usft	
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance			Rule Assigned:	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor			
4,800.00	4,730.51	4,717.21	4,555.21	10.21	12.20	30.12	-1,089.44	95.35	570.24	547.87	22.37	25.489			
4,900.00	4,828.21	4,816.36	4,649.21	10.39	12.47	30.45	-1,120.89	97.63	583.01	560.22	22.79	25.582			
5,000.00	4,926.27	4,915.32	4,743.03	10.57	12.74	30.69	-1,152.29	99.90	597.28	574.07	23.21	25.739			
5,100.00	5,024.66	5,014.07	4,836.65	10.75	13.01	30.85	-1,183.61	102.17	613.03	589.42	23.62	25.956			
5,200.00	5,123.35	5,112.57	4,930.03	10.93	13.28	30.92	-1,214.86	104.43	630.27	606.24	24.03	26.230			
5,300.00	5,222.30	5,210.80	5,023.16	11.10	13.55	30.93	-1,246.03	106.69	648.97	624.54	24.44	26.558			
5,400.00	5,321.48	5,308.72	5,116.00	11.27	13.82	30.87	-1,277.09	108.94	669.15	644.31	24.84	26.940			
5,500.00	5,420.88	5,406.31	5,208.52	11.44	14.09	30.75	-1,308.05	111.18	690.81	665.57	25.24	27.372			
5,600.00	5,520.45	5,503.54	5,300.70	11.60	14.36	30.58	-1,338.90	113.41	713.93	688.30	25.63	27.853			
5,700.00	5,620.17	5,600.37	5,392.50	11.76	14.63	30.37	-1,369.62	115.63	738.54	712.52	26.02	28.383			
5,800.00	5,720.00	5,696.78	5,483.90	11.92	14.90	30.12	-1,400.20	117.85	764.64	738.23	26.40	28.959			
5,900.00	5,819.92	5,792.74	5,574.87	12.06	15.17	29.83	-1,430.65	120.05	792.22	765.44	26.78	29.583			
6,000.00	5,919.89	5,888.21	5,665.39	12.19	15.43	29.52	-1,460.93	122.24	821.30	794.15	27.15	30.255			
6,080.11	6,000.00	5,975.15	5,747.97	12.25	15.67	-170.85	-1,488.05	124.20	845.26	817.82	27.44	30.801			
6,100.00	6,019.89	5,997.30	5,769.07	12.25	15.73	-170.96	-1,494.76	124.69	851.16	823.65	27.51	30.943			
6,200.00	6,119.89	6,109.48	5,876.34	12.31	16.02	-171.47	-1,527.49	127.06	879.74	851.87	27.87	31.564			
6,300.00	6,219.89	6,222.96	5,985.49	12.37	16.31	-171.91	-1,558.47	129.30	906.51	878.30	28.22	32.125			
6,400.00	6,319.89	6,337.70	6,096.45	12.42	16.58	-172.30	-1,587.60	131.41	931.44	902.88	28.56	32.618			
6,500.00	6,419.89	6,453.60	6,209.10	12.47	16.83	-172.65	-1,614.76	133.37	954.48	925.60	28.88	33.046			
6,600.00	6,519.89	6,570.60	6,323.36	12.52	17.08	-172.95	-1,639.87	135.19	975.60	946.40	29.20	33.411			
6,700.00	6,619.89	6,688.61	6,439.10	12.58	17.31	-173.21	-1,662.83	136.85	994.76	965.25	29.51	33.715			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 502H - OWB - PWP0.r													Offset Site Error:	0.00 usft		
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Highside		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor			
0.00	0.00	2.00	0.00	0.00	0.02	-21.07		27.98	-10.78	29.98						
100.00	100.00	102.00	100.00	0.79	0.78	-21.07		27.98	-10.78	29.98	27.92	2.06	14.549			
200.00	200.00	202.00	200.00	1.45	1.44	-21.07		27.98	-10.78	29.98	26.62	3.37	8.910			
300.00	300.00	302.00	300.00	1.89	1.89	-21.07		27.98	-10.78	29.98	25.74	4.24	7.065			
400.00	400.00	402.00	400.00	2.26	2.25	-21.07		27.98	-10.78	29.98	25.03	4.96	6.047			
500.00	500.00	502.00	500.00	2.57	2.57	-21.07		27.98	-10.78	29.98	24.41	5.58	5.376			
600.00	600.00	602.00	600.00	2.85	2.85	-21.07		27.98	-10.78	29.98	23.85	6.13	4.888			
700.00	700.00	702.00	700.00	3.11	3.11	-21.07		27.98	-10.78	29.98	23.34	6.64	4.513			
800.00	800.00	802.00	800.00	3.35	3.35	-21.07		27.98	-10.78	29.98	22.87	7.12	4.212			
900.00	900.00	902.00	900.00	3.58	3.58	-21.07		27.98	-10.78	29.98	22.42	7.56	3.964			
1,000.00	1,000.00	1,002.00	1,000.00	3.79	3.79	-21.07		27.98	-10.78	29.98	22.00	7.99	3.754			
1,100.00	1,100.00	1,102.00	1,100.00	4.00	3.99	-21.07		27.98	-10.78	29.98	21.59	8.39	3.573			
1,200.00	1,200.00	1,202.00	1,200.00	4.19	4.19	-21.07		27.98	-10.78	29.98	21.21	8.78	3.415			
1,300.00	1,300.00	1,302.00	1,300.00	4.38	4.38	-21.07		27.98	-10.78	29.98	20.83	9.15	3.276			
1,400.00	1,400.00	1,402.00	1,400.00	4.56	4.56	-21.07		27.98	-10.78	29.98	20.47	9.51	3.152			
1,500.00	1,500.00	1,502.00	1,500.00	4.74	4.74	-21.07		27.98	-10.78	29.98	20.12	9.86	3.040			
1,600.00	1,600.00	1,602.00	1,600.00	4.91	4.91	-21.07		27.98	-10.78	29.98	19.78	10.20	2.939 Normal Operations			
1,700.00	1,700.00	1,702.00	1,700.00	5.08	5.08	-21.07		27.98	-10.78	29.98	19.45	10.53	2.847 Normal Operations			
1,800.00	1,800.00	1,802.00	1,800.00	5.24	5.24	-21.07		27.98	-10.78	29.98	19.13	10.85	2.762 Normal Operations			
1,900.00	1,900.00	1,902.00	1,900.00	5.40	5.40	-21.07		27.98	-10.78	29.98	18.82	11.17	2.685 Normal Operations			
2,000.00	2,000.00	2,002.02	2,000.02	5.56	5.56	-21.07		27.98	-10.78	29.98	18.51	11.48	2.612 Normal Operations			
2,100.00	2,099.98	2,103.06	2,101.04	5.78	5.78	179.57		26.37	-9.87	29.92	18.01	11.90	2.513 Normal Operations			
2,200.00	2,199.84	2,204.10	2,201.93	5.97	5.98	-178.74		21.65	-7.20	29.87	17.60	12.27	2.435 Caution - Monitor Closely			
2,227.61	2,227.37	2,231.99	2,229.74	6.02	6.03	-178.07		19.81	-6.16	29.87	17.50	12.36	2.416 Caution - Monitor Closely, CC			
2,300.00	2,299.45	2,305.12	2,302.54	6.16	6.17	-175.92		13.85	-2.79	29.90	17.28	12.61	2.370 Caution - Monitor Closely			
2,400.00	2,398.70	2,406.12	2,402.76	6.35	6.36	-172.03		2.96	3.36	30.08	17.14	12.94	2.325 Caution - Monitor Closely, ES, SF			
2,500.00	2,497.47	2,506.66	2,502.07	6.54	6.43	-167.40		-10.65	11.05	30.83	17.68	13.15	2.345 Caution - Monitor Closely			
2,600.00	2,595.62	2,606.57	2,600.68	6.73	6.55	-164.29		-24.66	18.96	34.60	21.17	13.44	2.576 Normal Operations			
2,699.99	2,693.05	2,706.30	2,699.10	6.93	6.67	-163.27		-38.65	26.87	41.78	28.03	13.75	3.039			
2,702.75	2,695.72	2,709.04	2,701.81	6.94	6.67	-163.27		-39.04	27.09	42.03	28.27	13.76	3.055			
2,800.00	2,790.06	2,805.90	2,797.41	7.05	6.79	-163.20		-52.63	34.77	50.73	36.73	14.00	3.624			
2,900.00	2,887.07	2,905.50	2,895.70	7.18	6.92	-163.15		-66.60	42.66	59.67	45.42	14.26	4.186			
3,000.00	2,984.07	3,005.10	2,994.00	7.30	7.06	-163.11		-80.57	50.55	68.62	54.10	14.52	4.725			
3,100.00	3,081.08	3,104.70	3,092.30	7.44	7.19	-163.09		-94.54	58.45	77.56	62.77	14.79	5.243			
3,200.00	3,178.09	3,204.30	3,190.60	7.58	7.33	-163.06		-108.52	66.34	86.50	71.43	15.07	5.739			
3,300.00	3,275.09	3,303.90	3,288.90	7.72	7.47	-163.05		-122.49	74.24	95.45	80.09	15.36	6.215			
3,400.00	3,372.10	3,403.50	3,387.19	7.87	7.62	-163.03		-136.46	82.13	104.39	88.74	15.65	6.670			
3,500.00	3,469.11	3,503.09	3,485.49	8.02	7.76	-163.02		-150.43	90.03	113.34	97.39	15.95	7.106			
3,600.00	3,566.11	3,602.69	3,583.79	8.17	7.91	-163.01		-164.40	97.92	122.28	106.03	16.25	7.524			
3,700.00	3,663.12	3,702.29	3,682.09	8.33	8.06	-163.00		-178.38	105.82	131.23	114.67	16.56	7.924			
3,800.00	3,760.13	3,801.89	3,780.38	8.49	8.22	-162.99		-192.35	113.71	140.17	123.30	16.87	8.307			
3,900.00	3,857.13	3,901.49	3,878.68	8.65	8.37	-162.99		-206.32	121.61	149.11	131.92	17.19	8.674			
4,000.00	3,954.14	4,001.09	3,976.98	8.82	8.53	-162.98		-220.29	129.50	158.06	140.54	17.51	9.025			
4,100.00	4,051.14	4,100.69	4,075.28	8.99	8.69	-162.97		-234.27	137.40	167.00	149.16	17.84	9.362			
4,200.00	4,148.15	4,200.29	4,173.58	9.16	8.85	-162.97		-248.24	145.29	175.95	157.78	18.17	9.684			
4,300.00	4,245.16	4,299.89	4,271.87	9.33	9.01	-162.96		-262.21	153.18	184.89	166.39	18.50	9.993			
4,400.00	4,342.16	4,399.49	4,370.17	9.51	9.18	-162.96		-276.18	161.08	193.83	175.00	18.84	10.289			
4,500.00	4,439.17	4,499.09	4,468.47	9.69	9.34	-162.96		-290.15	168.97	202.78	183.60	19.18	10.573			
4,600.00	4,536.18	4,598.69	4,566.77	9.87	9.51	-162.95		-304.13	176.87	211.72	192.20	19.52	10.845			
4,674.61	4,608.56	4,673.00	4,640.11	9.99	9.64	-162.95		-314.55	182.76	218.40	198.63	19.76	11.051			
4,700.00	4,633.20	4,698.29	4,665.07	10.02	9.68	-162.95		-318.10	184.76	220.61	200.78	19.84	11.121			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 502H - OWB - PWP0.r														Offset Site Error: 0.00 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR										Rule Assigned:				Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,800.00	4,730.51	4,797.99	4,763.47	10.21	9.85	-162.87	-332.09	192.67	228.30	208.12	20.19	11.309		
4,900.00	4,828.21	4,897.80	4,861.98	10.39	10.02	-162.67	-346.09	200.58	234.33	213.80	20.53	11.414		
5,000.00	4,926.27	4,997.70	4,960.57	10.57	10.19	-162.35	-360.10	208.50	238.70	217.83	20.87	11.438		
5,100.00	5,024.66	5,097.64	5,059.20	10.75	10.37	-161.91	-374.12	216.42	241.42	220.22	21.20	11.385		
5,200.00	5,123.35	5,194.57	5,154.95	10.93	10.54	-161.42	-387.23	223.82	243.03	221.50	21.53	11.287		
5,300.00	5,222.30	5,290.92	5,250.37	11.10	10.70	-160.99	-398.87	230.40	244.47	222.62	21.85	11.189		
5,400.00	5,321.48	5,387.28	5,346.01	11.27	10.87	-160.62	-409.12	236.19	245.75	223.60	22.16	11.092		
5,500.00	5,420.88	5,483.64	5,441.83	11.44	11.03	-160.31	-417.96	241.19	246.87	224.42	22.45	10.996		
5,600.00	5,520.45	5,579.99	5,537.80	11.60	11.18	-160.04	-425.40	245.39	247.82	225.09	22.74	10.900		
5,700.00	5,620.17	5,676.35	5,633.91	11.76	11.33	-159.83	-431.44	248.80	248.60	225.60	23.01	10.805		
5,800.00	5,720.00	5,772.71	5,730.12	11.92	11.48	-159.67	-436.06	251.42	249.21	225.95	23.27	10.712		
5,900.00	5,819.92	5,869.06	5,826.40	12.06	11.62	-159.56	-439.28	253.24	249.65	226.14	23.51	10.620		
6,000.00	5,919.89	5,965.42	5,922.74	12.19	11.75	-159.50	-441.09	254.26	249.91	226.18	23.73	10.532		
6,080.11	6,000.00	6,042.69	6,000.00	12.25	11.81	0.46	-441.52	254.50	249.99	226.16	23.82	10.493		
6,100.00	6,019.89	6,062.58	6,019.89	12.25	11.81	0.46	-441.52	254.50	249.99	226.16	23.83	10.491		
6,200.00	6,119.89	6,162.58	6,119.89	12.31	11.86	0.46	-441.52	254.50	249.99	226.05	23.94	10.443		
6,300.00	6,219.89	6,262.58	6,219.89	12.37	11.91	0.46	-441.52	254.50	249.99	225.94	24.05	10.396		
6,400.00	6,319.89	6,362.58	6,319.89	12.42	11.97	0.46	-441.52	254.50	249.99	225.83	24.16	10.348		
6,500.00	6,419.89	6,462.58	6,419.89	12.47	12.02	0.46	-441.52	254.50	249.99	225.72	24.27	10.301		
6,600.00	6,519.89	6,562.58	6,519.89	12.52	12.08	0.46	-441.52	254.50	249.99	225.61	24.38	10.254		
6,700.00	6,619.89	6,662.58	6,619.89	12.58	12.13	0.46	-441.52	254.50	249.99	225.50	24.49	10.208		
6,800.00	6,719.89	6,762.58	6,719.89	12.63	12.19	0.46	-441.52	254.50	249.99	225.39	24.60	10.161		
6,900.00	6,819.89	6,862.58	6,819.89	12.68	12.25	0.46	-441.52	254.50	249.99	225.27	24.72	10.115		
7,000.00	6,919.89	6,962.58	6,919.89	12.74	12.30	0.46	-441.52	254.50	249.99	225.16	24.83	10.069		
7,100.00	7,019.89	7,062.58	7,019.89	12.79	12.36	0.46	-441.52	254.50	249.99	225.05	24.94	10.023		
7,200.00	7,119.89	7,162.58	7,119.89	12.84	12.42	0.46	-441.52	254.50	249.99	224.93	25.06	9.977		
7,300.00	7,219.89	7,262.58	7,219.89	12.90	12.48	0.46	-441.52	254.50	249.99	224.82	25.17	9.931		
7,400.00	7,319.89	7,362.58	7,319.89	12.95	12.53	0.46	-441.52	254.50	249.99	224.70	25.29	9.886		
7,500.00	7,419.89	7,462.58	7,419.89	13.01	12.59	0.46	-441.52	254.50	249.99	224.59	25.40	9.841		
7,600.00	7,519.89	7,562.58	7,519.89	13.07	12.65	0.46	-441.52	254.50	249.99	224.47	25.52	9.796		
7,700.00	7,619.89	7,662.58	7,619.89	13.12	12.71	0.46	-441.52	254.50	249.99	224.35	25.64	9.751		
7,800.00	7,719.89	7,762.58	7,719.89	13.18	12.77	0.46	-441.52	254.50	249.99	224.23	25.75	9.707		
7,900.00	7,819.89	7,862.58	7,819.89	13.23	12.83	0.46	-441.52	254.50	249.99	224.12	25.87	9.663		
8,000.00	7,919.89	7,962.58	7,919.89	13.29	12.87	0.46	-441.52	254.50	249.99	224.01	25.97	9.625		
8,004.45	7,924.34	7,967.02	7,924.33	13.29	12.87	0.46	-441.52	254.50	249.99	224.01	25.98	9.623		
8,100.00	8,019.89	8,060.80	8,017.48	13.35	12.94	2.64	-441.51	264.03	250.27	224.27	26.00	9.624		
8,200.00	8,119.89	8,151.54	8,104.16	13.41	13.03	8.62	-441.47	290.39	253.37	227.46	25.91	9.778		
8,300.00	8,219.89	8,230.12	8,174.06	13.46	13.11	16.40	-441.42	326.12	264.69	238.89	25.79	10.261		
8,400.00	8,319.89	8,295.48	8,227.08	13.52	13.19	24.07	-441.37	364.23	289.24	263.39	25.85	11.187		
8,499.98	8,419.87	8,350.00	8,267.00	13.58	13.26	30.75	-441.32	401.33	328.80	302.61	26.19	12.554		
8,502.65	8,422.54	8,350.00	8,267.00	13.58	13.26	30.75	-441.32	401.33	330.05	303.84	26.21	12.591		
8,525.00	8,444.88	8,360.74	8,274.35	13.59	13.28	-56.69	-441.30	409.16	340.67	314.35	26.31	12.946		
8,550.00	8,469.81	8,375.00	8,283.83	13.60	13.30	-53.81	-441.29	419.81	352.71	326.28	26.42	13.349		
8,575.00	8,494.61	8,384.70	8,290.09	13.62	13.31	-51.55	-441.28	427.21	364.79	338.22	26.57	13.727		
8,600.00	8,519.22	8,400.00	8,299.67	13.63	13.34	-48.92	-441.26	439.14	376.89	350.20	26.69	14.120		
8,625.00	8,543.55	8,408.74	8,304.97	13.65	13.35	-47.01	-441.25	446.10	388.87	362.00	26.87	14.475		
8,650.00	8,567.56	8,425.00	8,314.48	13.66	13.38	-44.69	-441.23	459.28	400.75	373.76	26.99	14.848		
8,675.00	8,591.17	8,432.86	8,318.91	13.68	13.39	-43.09	-441.23	465.77	412.36	385.19	27.18	15.174		
8,700.00	8,614.32	8,450.00	8,328.21	13.70	13.42	-41.07	-441.20	480.17	423.81	396.51	27.30	15.524		
8,725.00	8,636.94	8,457.04	8,331.88	13.72	13.43	-39.74	-441.20	486.18	434.86	407.37	27.49	15.818		
8,750.00	8,658.97	8,469.15	8,337.98	13.74	13.45	-38.27	-441.18	496.64	445.63	417.98	27.65	16.118		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 502H - OWB - PWP0.r														Offset Site Error: 0.00 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)			
8,775.00	8,680.36	8,481.27	8,343.82	13.76	13.48	-36.91	-441.17	507.26	456.03	428.23	27.80	16.402		
8,800.00	8,701.04	8,493.40	8,349.40	13.79	13.50	-35.67	-441.15	518.03	466.05	438.09	27.96	16.670		
8,825.00	8,720.95	8,500.00	8,352.31	13.81	13.51	-34.72	-441.14	523.95	475.70	447.56	28.14	16.906		
8,850.00	8,740.05	8,517.69	8,359.72	13.84	13.55	-33.50	-441.12	540.02	484.79	456.53	28.26	17.157		
8,875.00	8,758.28	8,525.00	8,362.61	13.86	13.57	-32.69	-441.11	546.73	493.52	465.10	28.42	17.364		
8,900.00	8,775.59	8,542.02	8,368.93	13.90	13.61	-31.71	-441.09	562.53	501.68	473.14	28.54	17.578		
8,925.00	8,791.93	8,550.00	8,371.70	13.93	13.63	-31.02	-441.08	570.02	509.42	480.72	28.69	17.755		
8,950.00	8,807.25	8,566.37	8,376.99	13.97	13.67	-30.24	-441.06	585.50	516.57	487.77	28.81	17.933		
8,975.00	8,821.53	8,575.00	8,379.56	14.01	13.70	-29.67	-441.05	593.74	523.25	494.31	28.94	18.080		
9,000.00	8,834.70	8,590.74	8,383.87	14.06	13.74	-29.06	-441.03	608.88	529.35	500.30	29.05	18.223		
9,025.00	8,846.75	8,600.00	8,386.17	14.11	13.77	-28.60	-441.01	617.85	534.93	505.76	29.17	18.339		
9,050.00	8,857.64	8,615.13	8,389.55	14.17	13.81	-28.13	-440.99	632.60	539.92	510.65	29.27	18.447		
9,075.00	8,867.33	8,625.00	8,391.51	14.24	13.85	-27.78	-440.98	642.27	544.37	514.99	29.37	18.532		
9,100.00	8,875.81	8,639.53	8,394.02	14.31	13.90	-27.43	-440.96	656.59	548.22	518.76	29.46	18.606		
9,125.00	8,883.04	8,650.00	8,395.56	14.39	13.93	-27.17	-440.94	666.94	551.50	521.95	29.55	18.660		
9,150.00	8,889.01	8,663.95	8,397.25	14.48	13.98	-26.95	-440.92	680.78	554.19	524.56	29.63	18.701		
9,175.00	8,893.70	8,675.00	8,398.31	14.57	14.02	-26.78	-440.91	691.78	556.29	526.58	29.71	18.724		
9,200.00	8,897.10	8,688.37	8,399.25	14.67	14.07	-26.66	-440.89	705.12	557.79	528.02	29.78	18.732		
9,225.00	8,899.20	8,700.00	8,399.76	14.77	14.12	-26.59	-440.87	716.74	558.70	528.86	29.84	18.724		
9,250.00	8,900.00	8,715.23	8,400.01	14.88	14.18	-26.56	-440.85	731.96	559.02	529.13	29.89	18.702		
9,252.65	8,900.01	8,715.23	8,400.01	14.89	14.18	-26.56	-440.85	731.96	559.01	529.12	29.90	18.699		
9,269.25	8,900.01	8,729.49	8,400.01	14.97	14.25	-26.56	-440.83	746.23	559.01	529.08	29.93	18.677		
9,300.00	8,900.01	8,760.24	8,400.01	15.11	14.39	-26.56	-440.79	776.97	559.01	529.01	30.00	18.636		
9,400.00	8,900.01	8,860.24	8,400.01	15.64	14.92	-26.56	-440.65	876.97	559.01	528.75	30.26	18.474		
9,500.00	8,900.01	8,960.24	8,400.01	16.24	15.52	-26.56	-440.51	976.97	559.01	528.43	30.58	18.282		
9,600.00	8,900.01	9,060.24	8,400.01	16.89	16.18	-26.56	-440.37	1,076.97	559.01	528.06	30.95	18.064		
9,700.00	8,900.01	9,160.24	8,400.01	17.58	16.90	-26.56	-440.23	1,176.97	559.01	527.64	31.37	17.822		
9,800.00	8,900.01	9,260.24	8,400.01	18.32	17.66	-26.56	-440.09	1,276.97	559.01	527.18	31.83	17.561		
9,900.00	8,900.01	9,360.24	8,400.01	19.09	18.46	-26.56	-439.95	1,376.97	559.01	526.66	32.34	17.284		
10,000.00	8,900.01	9,460.24	8,400.01	19.89	19.29	-26.56	-439.81	1,476.97	559.01	526.11	32.90	16.992		
10,031.60	8,900.01	9,491.83	8,400.01	20.16	19.55	-26.56	-439.77	1,508.57	559.01	525.92	33.08	16.897		
10,100.00	8,900.01	9,560.24	8,400.01	20.73	20.14	-26.56	-439.67	1,576.97	559.01	525.51	33.49	16.690		
10,200.00	8,900.01	9,660.24	8,400.01	21.59	21.03	-26.56	-439.53	1,676.97	559.01	524.88	34.13	16.379		
10,300.00	8,900.01	9,760.24	8,400.01	22.47	21.93	-26.56	-439.39	1,776.97	559.01	524.21	34.80	16.063		
10,400.00	8,900.01	9,860.24	8,400.01	23.37	22.86	-26.56	-439.25	1,876.97	559.01	523.50	35.51	15.743		
10,500.00	8,900.01	9,960.24	8,400.01	24.29	23.80	-26.56	-439.11	1,976.97	559.01	522.76	36.25	15.422		
10,600.00	8,900.01	10,060.24	8,400.01	25.23	24.76	-26.56	-438.98	2,076.97	559.01	521.99	37.02	15.102		
10,700.00	8,900.01	10,160.24	8,400.01	26.18	25.73	-26.56	-438.84	2,176.97	559.01	521.19	37.81	14.783		
10,800.00	8,900.01	10,260.24	8,400.01	27.15	26.71	-26.56	-438.70	2,276.97	559.01	520.37	38.64	14.467		
10,900.00	8,900.01	10,360.24	8,400.01	28.12	27.71	-26.56	-438.56	2,376.97	559.01	519.52	39.49	14.156		
11,000.00	8,900.01	10,460.24	8,400.01	29.11	28.71	-26.56	-438.42	2,476.97	559.01	518.64	40.36	13.849		
11,100.00	8,900.01	10,560.24	8,400.01	30.10	29.72	-26.56	-438.28	2,576.97	559.01	517.75	41.26	13.548		
11,200.00	8,900.01	10,660.24	8,400.01	31.11	30.74	-26.56	-438.14	2,676.97	559.01	516.83	42.18	13.254		
11,300.00	8,900.01	10,760.24	8,400.01	32.12	31.77	-26.56	-438.00	2,776.97	559.01	515.89	43.11	12.966		
11,310.00	8,900.01	10,770.24	8,400.01	32.22	31.87	-26.56	-437.98	2,786.97	559.01	515.80	43.21	12.938		
11,400.00	8,900.01	10,856.62	8,400.01	33.14	32.77	-26.59	-437.56	2,873.35	559.15	515.10	44.05	12.693		
11,500.00	8,900.01	10,948.50	8,400.01	34.17	33.73	-26.85	-434.64	2,965.18	560.52	515.45	45.07	12.436		
11,600.00	8,900.01	11,040.11	8,400.01	35.20	34.69	-27.37	-428.79	3,056.60	563.37	517.15	46.22	12.189		
11,700.00	8,900.01	11,133.14	8,400.01	36.23	35.65	-28.15	-419.94	3,149.21	567.74	520.21	47.53	11.945		
11,800.00	8,900.01	11,232.61	8,400.01	37.28	36.68	-29.05	-409.54	3,248.13	572.70	523.69	49.01	11.685		
11,900.00	8,900.01	11,332.07	8,400.01	38.32	37.71	-29.94	-399.15	3,347.05	577.80	527.25	50.55	11.430		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 502H - OWB - PWP0.r														Offset Site Error: 0.00 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
12,000.00	8,900.01	11,431.54	8,400.01	39.37	38.75	-30.82	-388.75	3,445.97	583.04	530.89	52.15	11.180		
12,100.00	8,900.01	11,531.01	8,400.01	40.43	39.79	-31.68	-378.35	3,544.89	588.41	534.61	53.80	10.937		
12,200.00	8,900.01	11,630.47	8,400.01	41.49	40.84	-32.52	-367.95	3,643.82	593.91	538.42	55.50	10.702		
12,300.00	8,900.01	11,729.94	8,400.01	42.55	41.89	-33.35	-357.56	3,742.74	599.54	542.30	57.24	10.473		
12,400.00	8,900.01	11,829.41	8,400.01	43.61	42.94	-34.16	-347.16	3,841.66	605.29	546.26	59.04	10.253		
12,500.00	8,900.01	11,928.87	8,400.01	44.68	43.99	-34.96	-336.76	3,940.58	611.17	550.30	60.87	10.041		
12,600.00	8,900.01	12,028.34	8,400.01	45.75	45.05	-35.74	-326.37	4,039.50	617.16	554.41	62.74	9.836		
12,700.00	8,900.01	12,127.81	8,400.01	46.82	46.11	-36.51	-315.97	4,138.43	623.26	558.61	64.65	9.640		
12,800.00	8,900.01	12,227.27	8,400.01	47.90	47.17	-37.26	-305.57	4,237.35	629.47	562.87	66.60	9.452		
12,900.00	8,900.01	12,326.74	8,400.01	48.98	48.24	-38.00	-295.17	4,336.27	635.79	567.22	68.57	9.272		
13,000.00	8,900.01	12,426.21	8,400.01	50.06	49.30	-38.72	-284.78	4,435.19	642.21	571.63	70.58	9.099		
13,099.97	8,900.01	12,525.65	8,400.01	51.14	50.37	-39.43	-274.38	4,534.09	648.73	576.12	72.61	8.934		
13,102.65	8,900.01	12,528.31	8,400.01	51.17	50.40	-39.45	-274.10	4,536.74	648.91	576.24	72.67	8.930		
13,200.00	8,900.01	12,624.95	8,400.01	52.23	51.44	-40.12	-264.00	4,632.85	656.42	581.64	74.77	8.779		
13,300.00	8,900.01	12,723.75	8,400.01	53.33	52.51	-40.97	-253.68	4,731.10	666.51	589.35	77.16	8.638		
13,399.97	8,900.01	12,821.93	8,400.01	54.43	53.57	-41.97	-243.41	4,828.74	679.12	599.37	79.75	8.516		
13,406.65	8,900.01	12,828.46	8,400.01	54.50	53.64	-42.04	-242.73	4,835.24	680.05	600.12	79.93	8.508		
13,500.00	8,900.01	12,919.77	8,400.01	55.52	54.63	-43.22	-233.19	4,926.05	693.35	610.91	82.45	8.410		
13,600.00	8,900.01	13,017.58	8,400.01	56.61	55.68	-44.43	-222.96	5,023.33	707.92	622.77	85.14	8.314		
13,700.00	8,900.01	13,115.40	8,400.01	57.70	56.74	-45.60	-212.74	5,120.61	722.78	634.94	87.84	8.228		
13,800.00	8,900.01	13,213.21	8,400.01	58.79	57.81	-46.71	-202.51	5,217.89	737.94	647.41	90.53	8.151		
13,900.00	8,900.01	13,311.03	8,400.01	59.89	58.87	-47.79	-192.29	5,315.16	753.36	660.15	93.21	8.082		
14,000.00	8,900.01	13,408.84	8,400.01	60.98	59.93	-48.82	-182.06	5,412.44	769.03	673.15	95.89	8.020		
14,100.00	8,900.01	13,506.66	8,400.01	62.08	61.00	-49.81	-171.84	5,509.72	784.95	686.40	98.55	7.965		
14,200.00	8,900.01	13,604.47	8,400.01	63.18	62.07	-50.76	-161.62	5,607.00	801.09	699.88	101.20	7.916		
14,300.00	8,900.01	13,702.29	8,400.01	64.27	63.13	-51.68	-151.39	5,704.28	817.43	713.59	103.84	7.872		
14,400.00	8,900.01	13,800.10	8,400.01	65.37	64.20	-52.55	-141.17	5,801.56	833.98	727.51	106.47	7.833		
14,500.00	8,900.01	13,897.92	8,400.01	66.47	65.27	-53.40	-130.94	5,898.84	850.71	741.63	109.08	7.799		
14,600.00	8,900.01	13,995.73	8,400.01	67.57	66.34	-54.21	-120.72	5,996.12	867.62	755.93	111.68	7.769		
14,700.00	8,900.01	14,093.55	8,400.01	68.68	67.41	-54.99	-110.49	6,093.40	884.69	770.42	114.27	7.742		
14,799.97	8,900.01	14,191.33	8,400.01	69.78	68.48	-55.75	-100.27	6,190.65	901.91	785.07	116.85	7.719		
14,806.65	8,900.01	14,197.87	8,400.01	69.85	68.55	-55.79	-99.59	6,197.15	903.07	786.05	117.02	7.717		
14,900.00	8,900.01	14,318.19	8,400.01	70.89	69.88	-56.69	-89.00	6,316.99	916.82	796.85	119.97	7.642		
15,000.00	8,900.01	14,454.51	8,400.01	72.00	71.40	-57.24	-83.06	6,453.17	925.06	802.24	122.82	7.532		
15,100.00	8,900.01	14,591.85	8,400.01	73.11	72.92	-57.33	-83.63	6,590.50	926.37	801.20	125.17	7.401		
15,200.00	8,900.01	14,728.73	8,400.01	74.22	74.44	-56.95	-90.75	6,727.18	920.73	793.77	126.96	7.252		
15,300.00	8,900.01	14,863.69	8,400.01	75.32	75.93	-56.12	-104.15	6,861.46	908.25	780.11	128.15	7.088		
15,356.65	8,900.01	14,918.57	8,400.01	75.93	76.53	-55.62	-110.84	6,915.93	898.90	770.15	128.75	6.982		
15,400.00	8,900.01	14,960.97	8,400.01	76.40	76.99	-55.29	-116.01	6,958.01	891.42	762.26	129.17	6.901		
15,500.00	8,900.01	15,058.78	8,400.01	77.49	78.06	-54.52	-127.93	7,055.10	874.29	744.20	130.09	6.720		
15,600.00	8,900.01	15,156.60	8,400.01	78.57	79.14	-53.72	-139.85	7,152.18	857.32	726.37	130.94	6.547		
15,700.00	8,900.01	15,254.41	8,400.01	79.66	80.21	-52.89	-151.77	7,249.27	840.52	708.81	131.71	6.382		
15,800.00	8,900.01	15,352.23	8,400.01	80.75	81.28	-52.02	-163.69	7,346.35	823.90	691.51	132.39	6.223		
15,900.00	8,900.01	15,450.04	8,400.01	81.84	82.36	-51.12	-175.61	7,443.44	807.47	674.50	132.97	6.072		
16,000.00	8,900.01	15,547.86	8,400.01	82.93	83.43	-50.19	-187.53	7,540.52	791.25	657.79	133.46	5.929		
16,100.00	8,900.01	15,645.67	8,400.01	84.02	84.51	-49.21	-199.45	7,637.61	775.25	641.42	133.83	5.793		
16,200.00	8,900.01	15,743.49	8,400.01	85.11	85.59	-48.20	-211.37	7,734.70	759.48	625.39	134.09	5.664		
16,300.00	8,900.01	15,841.30	8,400.01	86.21	86.66	-47.14	-223.29	7,831.78	743.95	609.73	134.22	5.543		
16,399.97	8,900.01	15,939.08	8,400.01	87.30	87.74	-46.04	-235.21	7,928.84	728.70	594.47	134.23	5.429		
16,406.65	8,900.01	15,945.62	8,400.01	87.37	87.81	-45.97	-236.01	7,935.33	727.68	593.46	134.22	5.422		
16,500.00	8,900.01	16,037.23	8,400.01	88.40	88.82	-45.16	-247.17	8,026.25	714.77	580.54	134.23	5.325		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 502H - OWB - PWP0.r														Offset Site Error: 0.00 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
16,600.00	8,900.01	16,135.96	8,400.01	89.51	89.91	-44.42	-259.20	8,124.24	703.52	569.08	134.44	5.233		
16,700.00	8,900.01	16,235.18	8,400.01	90.62	91.01	-43.81	-271.29	8,222.72	694.84	559.94	134.90	5.151		
16,742.65	8,900.01	16,277.62	8,400.01	91.10	91.48	-43.60	-276.47	8,264.85	691.90	556.73	135.17	5.119		
16,800.00	8,900.01	16,334.72	8,400.01	91.73	92.11	-43.29	-283.43	8,321.53	688.26	552.69	135.58	5.077		
16,900.00	8,900.01	16,434.30	8,400.01	92.85	93.21	-42.73	-295.56	8,420.36	681.97	545.72	136.25	5.005		
17,000.00	8,900.01	16,533.87	8,400.01	93.96	94.31	-42.15	-307.70	8,519.19	675.75	538.87	136.88	4.937		
17,100.00	8,900.01	16,633.45	8,400.01	95.07	95.41	-41.57	-319.83	8,618.03	669.59	532.14	137.46	4.871		
17,200.00	8,900.01	16,733.03	8,400.01	96.18	96.51	-40.98	-331.97	8,716.86	663.51	525.52	137.98	4.809		
17,300.00	8,900.01	16,832.60	8,400.01	97.30	97.62	-40.37	-344.10	8,815.69	657.50	519.03	138.46	4.749		
17,400.00	8,900.01	16,932.18	8,400.01	98.41	98.72	-39.76	-356.24	8,914.53	651.56	512.67	138.89	4.691		
17,500.00	8,900.01	17,031.75	8,400.01	99.52	99.82	-39.13	-368.37	9,013.36	645.70	506.43	139.26	4.637		
17,600.00	8,900.01	17,131.33	8,400.01	100.64	100.93	-38.50	-380.51	9,112.19	639.91	500.33	139.58	4.584		
17,700.00	8,900.01	17,230.90	8,400.01	101.75	102.03	-37.85	-392.64	9,211.03	634.21	494.36	139.85	4.535		
17,800.00	8,900.01	17,330.48	8,400.01	102.87	103.14	-37.19	-404.78	9,309.86	628.59	488.53	140.06	4.488		
17,900.00	8,900.01	17,430.06	8,400.01	103.98	104.24	-36.51	-416.91	9,408.69	623.06	482.84	140.21	4.444		
18,000.00	8,900.01	17,529.63	8,400.01	105.10	105.35	-35.83	-429.05	9,507.53	617.61	477.30	140.31	4.402		
18,100.00	8,900.01	17,629.21	8,400.01	106.21	106.45	-35.13	-441.18	9,606.36	612.25	471.91	140.35	4.362		
18,200.00	8,900.01	17,728.78	8,400.01	107.33	107.56	-34.43	-453.32	9,705.19	606.99	466.66	140.33	4.326		
18,300.00	8,900.01	17,828.36	8,400.01	108.44	108.67	-33.70	-465.45	9,804.03	601.82	461.57	140.25	4.291		
18,400.00	8,900.01	17,927.93	8,400.01	109.56	109.77	-32.97	-477.59	9,902.86	596.75	456.64	140.11	4.259		
18,500.00	8,900.01	18,020.91	8,400.01	110.68	110.81	-32.33	-488.30	9,995.21	592.14	451.99	140.16	4.225		
18,600.00	8,900.01	18,116.28	8,400.01	111.79	111.87	-31.86	-496.90	10,090.20	588.93	448.40	140.54	4.191		
18,700.00	8,900.01	18,216.12	8,400.01	112.91	112.98	-31.38	-505.60	10,189.65	585.93	445.05	140.87	4.159		
18,800.00	8,900.01	18,315.95	8,400.01	114.02	114.10	-30.90	-514.30	10,289.11	582.97	441.78	141.18	4.129		
18,900.00	8,900.01	18,415.79	8,400.01	115.14	115.21	-30.42	-523.00	10,388.56	580.04	438.59	141.46	4.100		
19,000.00	8,900.01	18,515.62	8,400.01	116.26	116.33	-29.93	-531.70	10,488.02	577.17	435.46	141.70	4.073		
19,100.00	8,900.01	18,615.46	8,400.01	117.38	117.44	-29.43	-540.40	10,587.48	574.33	432.41	141.92	4.047		
19,200.00	8,900.01	18,715.30	8,400.01	118.49	118.56	-28.93	-549.11	10,686.93	571.54	429.43	142.10	4.022		
19,300.00	8,900.01	18,815.13	8,400.01	119.61	119.68	-28.43	-557.81	10,786.39	568.79	426.53	142.26	3.998		
19,400.00	8,900.01	18,914.97	8,400.01	120.73	120.79	-27.92	-566.51	10,885.85	566.08	423.70	142.38	3.976		
19,461.38	8,900.01	18,961.23	8,400.01	121.41	121.31	-27.68	-570.54	10,931.93	564.64	422.03	142.61	3.959		
19,488.00	8,900.01	18,961.23	8,400.01	121.71	121.31	-27.68	-570.54	10,931.93	565.27	422.56	142.71	3.961		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 551H - OWB - PWP0														Offset Site Error:	0.00 usft		
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
0.00	0.00	0.00	0.00	0.00	0.00	159.53	-83.94	31.34	89.60								
100.00	100.00	100.00	100.00	0.79	0.78	159.53	-83.94	31.34	89.60	87.54	2.06	43.486					
200.00	200.00	200.00	200.00	1.45	1.44	159.53	-83.94	31.34	89.60	86.24	3.36	26.640					
300.00	300.00	300.00	300.00	1.89	1.89	159.53	-83.94	31.34	89.60	85.36	4.24	21.120					
400.00	400.00	400.00	400.00	2.26	2.25	159.53	-83.94	31.34	89.60	84.64	4.96	18.077					
500.00	500.00	500.00	500.00	2.57	2.57	159.53	-83.94	31.34	89.60	84.02	5.58	16.069					
600.00	600.00	600.00	600.00	2.85	2.85	159.53	-83.94	31.34	89.60	83.47	6.13	14.611					
700.00	700.00	700.00	700.00	3.11	3.11	159.53	-83.94	31.34	89.60	82.96	6.64	13.489					
800.00	800.00	800.00	800.00	3.35	3.35	159.53	-83.94	31.34	89.60	82.48	7.12	12.589					
900.00	900.00	900.00	900.00	3.58	3.57	159.53	-83.94	31.34	89.60	82.04	7.56	11.846					
1,000.00	1,000.00	1,000.00	1,000.00	3.79	3.79	159.53	-83.94	31.34	89.60	81.61	7.99	11.218	CC, ES				
1,100.00	1,100.00	1,097.01	1,096.99	4.00	4.09	159.77	-85.57	31.54	91.25	82.77	8.48	10.762	SF				
1,200.00	1,200.00	1,193.80	1,193.65	4.19	4.36	160.43	-90.44	32.15	96.20	87.27	8.93	10.775					
1,300.00	1,300.00	1,290.15	1,289.65	4.38	4.62	161.40	-98.51	33.15	104.45	95.10	9.35	11.167					
1,400.00	1,400.00	1,385.84	1,384.67	4.56	4.87	162.53	-109.69	34.53	116.01	106.25	9.76	11.888					
1,500.00	1,500.00	1,480.68	1,478.42	4.74	5.12	163.67	-123.87	36.29	130.86	120.72	10.15	12.897					
1,600.00	1,600.00	1,574.46	1,570.62	4.91	5.35	164.76	-140.91	38.40	148.97	138.46	10.52	14.166					
1,700.00	1,700.00	1,667.01	1,661.00	5.08	5.58	165.73	-160.65	40.85	170.29	159.42	10.87	15.667					
1,800.00	1,800.00	1,758.17	1,749.35	5.24	5.80	166.59	-182.92	43.61	194.75	183.54	11.21	17.377					
1,900.00	1,900.00	1,847.78	1,835.46	5.40	6.01	167.33	-207.52	46.66	222.28	210.75	11.53	19.276					
2,000.00	2,000.00	1,935.72	1,919.17	5.56	6.17	167.96	-234.25	49.97	252.79	241.01	11.78	21.453					
2,100.00	2,099.98	2,030.66	2,009.06	5.78	6.30	8.54	-264.57	53.73	283.24	271.12	12.11	23.385					
2,200.00	2,199.84	2,126.85	2,100.13	5.97	6.46	9.06	-295.29	57.54	310.41	297.94	12.46	24.906					
2,300.00	2,299.45	2,223.90	2,192.02	6.16	6.62	9.58	-326.29	61.38	334.27	321.45	12.82	26.069					
2,400.00	2,398.70	2,321.69	2,284.61	6.35	6.79	10.14	-357.52	65.25	354.82	341.63	13.19	26.901					
2,500.00	2,497.47	2,420.10	2,377.79	6.54	6.97	10.74	-388.95	69.15	372.04	358.48	13.57	27.425					
2,600.00	2,595.62	2,519.02	2,471.44	6.73	7.15	11.39	-420.54	73.06	385.92	371.98	13.95	27.668					
2,699.99	2,693.05	2,618.32	2,565.46	6.93	7.33	12.10	-452.26	76.99	396.47	382.13	14.35	27.634					
2,702.75	2,695.72	2,621.06	2,568.05	6.94	7.34	12.12	-453.13	77.10	396.72	382.36	14.36	27.630					
2,800.00	2,790.06	2,717.79	2,659.63	7.05	7.52	12.88	-484.03	80.93	405.30	390.63	14.68	27.617					
2,900.00	2,887.07	2,817.25	2,753.80	7.18	7.71	13.63	-515.79	84.87	414.20	399.19	15.02	27.585					
3,000.00	2,984.07	2,916.71	2,847.97	7.30	7.91	14.34	-547.56	88.81	423.17	407.81	15.36	27.547					
3,100.00	3,081.08	3,016.17	2,942.14	7.44	8.10	15.03	-579.32	92.74	432.20	416.49	15.72	27.502					
3,200.00	3,178.09	3,115.63	3,036.31	7.58	8.30	15.68	-611.09	96.68	441.29	425.21	16.08	27.452					
3,300.00	3,275.09	3,215.09	3,130.48	7.72	8.51	16.31	-642.85	100.62	450.43	433.99	16.44	27.397					
3,400.00	3,372.10	3,314.55	3,224.65	7.87	8.71	16.92	-674.62	104.55	459.63	442.82	16.81	27.339					
3,500.00	3,469.11	3,414.01	3,318.82	8.02	8.92	17.50	-706.38	108.49	468.87	451.69	17.19	27.278					
3,600.00	3,566.11	3,513.47	3,412.99	8.17	9.13	18.06	-738.15	112.43	478.17	460.60	17.57	27.215					
3,700.00	3,663.12	3,612.94	3,507.16	8.33	9.34	18.60	-769.92	116.37	487.50	469.54	17.96	27.150					
3,800.00	3,760.13	3,712.40	3,601.33	8.49	9.56	19.11	-801.68	120.30	496.88	478.53	18.35	27.084					
3,900.00	3,857.13	3,811.86	3,695.50	8.65	9.81	19.61	-833.45	124.24	506.29	487.55	18.74	27.016					
4,000.00	3,954.14	3,911.32	3,789.67	8.82	10.07	20.09	-865.21	128.18	515.74	496.60	19.14	26.948					
4,100.00	4,051.14	4,010.78	3,883.84	8.99	10.34	20.55	-896.98	132.12	525.23	505.69	19.54	26.880					
4,200.00	4,148.15	4,110.24	3,978.01	9.16	10.61	21.00	-928.74	136.05	534.74	514.80	19.94	26.812					
4,300.00	4,245.16	4,209.70	4,072.18	9.33	10.87	21.43	-960.51	139.99	544.29	523.94	20.35	26.743					
4,400.00	4,342.16	4,309.16	4,166.35	9.51	11.15	21.85	-992.28	143.93	553.87	533.11	20.76	26.675					
4,500.00	4,439.17	4,408.62	4,260.52	9.69	11.42	22.25	-1,024.04	147.87	563.48	542.30	21.18	26.607					
4,600.00	4,536.18	4,508.08	4,354.69	9.87	11.69	22.64	-1,055.81	151.80	573.11	551.52	21.59	26.540					
4,674.61	4,608.56	4,582.30	4,424.95	9.99	11.89	22.92	-1,079.51	154.74	580.32	558.43	21.89	26.510					
4,700.00	4,633.20	4,607.54	4,448.85	10.02	11.96	23.02	-1,087.57	155.74	582.82	560.84	21.98	26.510					
4,800.00	4,730.51	4,706.89	4,542.92	10.21	12.24	23.38	-1,119.30	159.67	593.71	571.30	22.41	26.494					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - _VALKYRIE FED COM 551H - OWB - PWPO													Offset Site Error: 0.00 usft		
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.00 usft		
Reference				Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance			Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
4,900.00	4,828.21	4,806.08	4,636.83	10.39	12.51	23.66	-1,150.98	163.60	606.19	583.37	22.83	26.555			
5,000.00	4,926.27	4,905.07	4,730.55	10.57	12.78	23.88	-1,182.59	167.52	620.27	597.03	23.25	26.683			
5,100.00	5,024.66	5,003.83	4,824.06	10.75	13.06	24.03	-1,214.14	171.43	635.94	612.27	23.66	26.877			
5,200.00	5,123.35	5,102.33	4,917.32	10.93	13.33	24.12	-1,245.60	175.33	653.17	629.10	24.07	27.132			
5,300.00	5,222.30	5,200.55	5,010.31	11.10	13.60	24.16	-1,276.96	179.21	671.97	647.49	24.48	27.447			
5,400.00	5,321.48	5,298.44	5,103.00	11.27	13.88	24.14	-1,308.23	183.09	692.34	667.45	24.89	27.818			
5,500.00	5,420.88	5,395.99	5,195.36	11.44	14.15	24.08	-1,339.38	186.95	714.26	688.97	25.29	28.243			
5,600.00	5,520.45	5,493.16	5,287.36	11.60	14.42	23.98	-1,370.42	190.80	737.74	712.06	25.69	28.721			
5,700.00	5,620.17	5,589.92	5,378.97	11.76	14.69	23.84	-1,401.32	194.63	762.78	736.71	26.08	29.251			
5,800.00	5,720.00	5,686.25	5,470.18	11.92	14.96	23.67	-1,432.09	198.44	789.38	762.92	26.46	29.830			
5,900.00	5,819.92	5,782.11	5,560.94	12.06	15.23	23.48	-1,462.70	202.24	817.53	790.69	26.84	30.460			
6,000.00	5,919.89	5,877.48	5,651.23	12.19	15.50	23.26	-1,493.16	206.01	847.25	820.04	27.21	31.140			
6,080.11	6,000.00	5,953.50	5,723.21	12.25	15.72	-176.99	-1,517.44	209.02	872.17	844.71	27.46	31.756			
6,100.00	6,019.89	5,972.33	5,741.04	12.25	15.77	-177.06	-1,523.45	209.77	878.48	850.96	27.52	31.924			
6,200.00	6,119.89	6,067.01	5,830.68	12.31	16.04	-177.41	-1,553.69	213.52	910.24	882.41	27.83	32.706			
6,300.00	6,219.89	6,161.69	5,920.32	12.37	16.30	-177.74	-1,583.93	217.26	942.03	913.89	28.14	33.482			
6,400.00	6,319.89	6,256.37	6,009.97	12.42	16.57	-178.04	-1,614.17	221.01	973.84	945.40	28.44	34.239			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - ASTRODOG FEE 0809 133H - OWB - AWP													Offset Site Error: 0.00 usft
Survey Program: 213-r.5 MWD+IFR1											Rule Assigned:		Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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
18,700.00	8,900.01	9,009.51	8,863.86	112.91	36.20	80.80	-1,060.44	11,072.61	944.15	877.32	66.82	14.129	
18,800.00	8,900.01	9,013.30	8,867.65	114.02	36.22	81.75	-1,060.54	11,072.73	847.39	777.59	69.79	12.141	
18,900.00	8,900.01	9,016.98	8,871.33	115.14	36.23	82.68	-1,060.64	11,072.85	751.46	677.76	73.69	10.197	
19,000.00	8,900.01	9,020.55	8,874.89	116.26	36.24	83.59	-1,060.73	11,072.96	656.73	577.78	78.95	8.318	
19,100.00	8,900.01	9,024.02	8,878.36	117.38	36.25	84.47	-1,060.82	11,073.07	563.80	477.58	86.22	6.539	
19,200.00	8,900.01	9,027.38	8,881.73	118.49	36.26	85.33	-1,060.91	11,073.17	473.74	377.19	96.55	4.907	
19,300.00	8,900.01	9,030.66	8,885.00	119.61	36.27	86.16	-1,060.99	11,073.27	388.54	277.06	111.48	3.485	
19,400.00	8,900.01	9,033.84	8,888.18	120.73	36.28	86.97	-1,061.07	11,073.36	312.22	179.56	132.66	2.353	Caution - Monitor Closely
19,488.00	8,900.01	9,036.57	8,890.91	121.71	36.29	87.67	-1,061.13	11,073.44	258.74	103.11	155.63	1.663	Caution - Monitor Closely, CC, ES, SF

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - ASTRODOG FEE 0809 213H - OWB - AWP													Offset Site Error: 0.00 usft
Survey Program: 165-r.5 MWD+IFR1											Rule Assigned:		Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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
18,700.00	8,900.01	9,069.80	8,938.12	112.91	21.69	-94.95	-396.42	11,057.44	986.10	904.63	81.47	12.104	
18,800.00	8,900.01	9,066.91	8,935.23	114.02	21.69	-94.57	-396.31	11,057.51	897.81	809.80	88.02	10.201	
18,900.00	8,900.01	9,064.14	8,932.47	115.14	21.69	-94.22	-396.20	11,057.58	812.24	716.32	95.92	8.468	
19,000.00	8,900.01	9,061.49	8,929.82	116.26	21.69	-93.87	-396.10	11,057.64	730.33	624.89	105.44	6.927	
19,100.00	8,900.01	9,058.94	8,927.28	117.38	21.69	-93.54	-396.01	11,057.70	653.46	536.67	116.79	5.595	
19,200.00	8,900.01	9,056.53	8,924.86	118.49	21.69	-93.23	-395.92	11,057.75	583.64	453.65	129.99	4.490	
19,300.00	8,900.01	9,054.27	8,922.61	119.61	21.69	-92.94	-395.83	11,057.80	523.70	379.21	144.48	3.625	
19,400.00	8,900.01	9,052.04	8,920.38	120.73	21.69	-92.65	-395.75	11,057.85	477.35	318.74	158.61	3.010	
19,488.00	8,900.01	9,050.10	8,918.45	121.71	21.69	-92.40	-395.68	11,057.89	451.19	282.81	168.38	2.680	Normal Operations, CC, ES, SF

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - ASTRODOG FEE 0809 224H - OWB - AWP													Offset Site Error:	0.00 usft
Survey Program: 213-r.5 MWD+IFR1											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,900.00	8,900.01	9,188.31	8,922.73	70.89	37.19	92.01	-1,549.50	6,992.24	933.05	844.98	88.08	10.594		
15,000.00	8,900.01	9,185.99	8,920.41	72.00	37.19	91.75	-1,549.53	6,992.29	865.15	771.75	93.40	9.263		
15,100.00	8,900.01	9,183.73	8,918.16	73.11	37.20	91.52	-1,549.56	6,992.34	806.88	707.61	99.27	8.128		
15,200.00	8,900.01	9,181.54	8,915.97	74.22	37.20	91.31	-1,549.59	6,992.39	760.51	655.22	105.29	7.223		
15,300.00	8,900.01	9,179.42	8,913.84	75.32	37.21	91.12	-1,549.62	6,992.43	728.40	617.53	110.87	6.570		
15,356.65	8,900.01	9,178.25	8,912.67	75.93	37.21	91.02	-1,549.63	6,992.46	717.31	603.74	113.57	6.316		
15,400.00	8,900.01	9,177.36	8,911.79	76.40	37.21	90.95	-1,549.64	6,992.48	712.19	596.88	115.30	6.177		
15,462.85	8,900.01	9,176.08	8,910.51	77.08	37.21	90.85	-1,549.66	6,992.50	709.41	592.17	117.24	6.051 CC, ES		
15,500.00	8,900.01	9,175.33	8,909.76	77.49	37.21	90.79	-1,549.67	6,992.52	710.38	592.35	118.03	6.019 SF		
15,600.00	8,900.01	9,173.32	8,907.75	78.57	37.22	90.63	-1,549.69	6,992.56	722.54	603.71	118.83	6.080		
15,700.00	8,900.01	9,171.33	8,905.75	79.66	37.22	90.46	-1,549.72	6,992.61	747.98	630.13	117.85	6.347		
15,800.00	8,900.01	9,169.35	8,903.78	80.75	37.23	90.30	-1,549.75	6,992.65	785.42	669.95	115.47	6.802		
15,900.00	8,900.01	9,167.40	8,901.83	81.84	37.23	90.15	-1,549.77	6,992.69	833.24	721.06	112.18	7.428		
16,000.00	8,900.01	9,165.46	8,899.89	82.93	37.24	89.99	-1,549.80	6,992.73	889.76	781.35	108.42	8.207		
16,100.00	8,900.01	9,163.54	8,897.97	84.02	37.24	89.84	-1,549.82	6,992.77	953.45	848.92	104.53	9.121		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 0°WB - 0°WP													Offset Site Error: 0.00 usft
Survey Program: 238-r.5 MWD											Rule Assigned:		Offset Well Error: 0.00 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Offset Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
14,300.00	8,900.01	8,841.69	8,871.79	64.27	54.08	-87.40	-256.14	6,595.46	984.35	893.38	90.98	10.820	
14,400.00	8,900.01	8,841.14	8,871.24	65.37	54.08	-87.35	-256.16	6,595.46	909.06	814.28	94.78	9.592	
14,500.00	8,900.01	8,840.60	8,870.70	66.47	54.08	-87.30	-256.19	6,595.46	838.95	739.69	99.26	8.452	
14,600.00	8,900.01	8,840.05	8,870.15	67.57	54.08	-87.25	-256.22	6,595.46	775.42	671.02	104.40	7.428	
14,700.00	8,900.01	8,839.50	8,869.60	68.68	54.08	-87.20	-256.25	6,595.46	720.22	610.19	110.03	6.546	
14,799.97	8,900.01	8,838.95	8,869.06	69.78	54.08	-87.15	-256.28	6,595.46	675.40	559.62	115.78	5.833	
14,806.65	8,900.01	8,838.92	8,869.02	69.85	54.08	-87.15	-256.28	6,595.46	672.83	556.67	116.16	5.792	
14,900.00	8,900.01	8,838.49	8,868.59	70.89	54.07	-87.07	-256.30	6,595.46	641.64	520.62	121.02	5.302	
15,000.00	8,900.01	8,838.20	8,868.30	72.00	54.07	-87.02	-256.32	6,595.46	618.85	493.83	125.02	4.950	
15,100.00	8,900.01	8,838.10	8,868.20	73.11	54.07	-87.00	-256.32	6,595.46	608.28	481.14	127.14	4.784	
15,132.30	8,900.01	8,838.10	8,868.21	73.47	54.07	-87.00	-256.32	6,595.46	607.60	480.25	127.35	4.771	CC, ES, SF
15,200.00	8,900.01	8,838.18	8,868.28	74.22	54.07	-87.01	-256.32	6,595.46	610.56	483.55	127.01	4.807	
15,300.00	8,900.01	8,838.44	8,868.54	75.32	54.07	-87.05	-256.31	6,595.46	625.56	500.86	124.70	5.017	
15,356.65	8,900.01	8,838.67	8,868.77	75.93	54.07	-87.09	-256.29	6,595.46	639.38	516.81	122.57	5.216	
15,400.00	8,900.01	8,838.87	8,868.97	76.40	54.08	-87.10	-256.28	6,595.46	652.69	532.04	120.65	5.410	
15,500.00	8,900.01	8,839.32	8,869.42	77.49	54.08	-87.15	-256.26	6,595.46	692.82	577.22	115.60	5.993	
15,600.00	8,900.01	8,839.78	8,869.88	78.57	54.08	-87.19	-256.24	6,595.46	744.30	634.02	110.28	6.749	
15,700.00	8,900.01	8,840.23	8,870.33	79.66	54.08	-87.23	-256.21	6,595.46	804.97	699.77	105.20	7.652	
15,800.00	8,900.01	8,840.69	8,870.79	80.75	54.08	-87.28	-256.19	6,595.46	872.91	772.29	100.62	8.675	
15,900.00	8,900.01	8,841.15	8,871.25	81.84	54.08	-87.32	-256.16	6,595.46	946.55	849.90	96.65	9.794	

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 105° WB - 105° WP													Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference Depth (usft)	Vertical Reference Depth (usft)	Measured Offset Depth (usft)	Vertical Offset 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	
14,400.00	8,900.01	8,827.33	8,857.45	65.37	54.06	-83.74	-511.25	6,790.64	966.03	882.09	83.94	11.509		
14,500.00	8,900.01	8,832.50	8,862.61	66.47	54.06	-84.50	-511.32	6,790.90	875.49	789.96	85.53	10.236		
14,600.00	8,900.01	8,837.67	8,867.78	67.57	54.07	-85.25	-511.39	6,791.16	787.20	699.53	87.67	8.979		
14,700.00	8,900.01	8,842.84	8,872.94	68.68	54.08	-86.01	-511.46	6,791.42	702.02	611.43	90.59	7.749		
14,799.97	8,900.01	8,848.01	8,878.10	69.78	54.09	-86.77	-511.53	6,791.68	621.26	526.69	94.57	6.569		
14,806.65	8,900.01	8,848.35	8,878.44	69.85	54.09	-86.82	-511.53	6,791.70	616.06	521.18	94.89	6.493		
14,900.00	8,900.01	8,853.17	8,883.25	70.89	54.10	-87.43	-511.60	6,791.94	545.73	445.89	99.83	5.466		
15,000.00	8,900.01	8,858.29	8,888.36	72.00	54.11	-88.15	-511.67	6,792.20	476.49	370.07	106.41	4.478		
15,100.00	8,900.01	8,863.37	8,893.44	73.11	54.11	-88.93	-511.74	6,792.46	416.76	302.69	114.06	3.654		
15,200.00	8,900.01	8,868.40	8,898.46	74.22	54.12	-89.74	-511.80	6,792.71	371.24	249.75	121.50	3.056		
15,300.00	8,900.01	8,873.38	8,903.44	75.32	54.13	-90.57	-511.87	6,792.97	345.68	219.71	125.97	2.744	Normal Operations	
15,354.38	8,900.01	8,876.07	8,906.12	75.91	54.14	-91.02	-511.91	6,793.10	341.90	215.83	126.07	2.712	Normal Operations, CC, ES, SF	
15,356.65	8,900.01	8,876.18	8,906.23	75.93	54.14	-91.04	-511.91	6,793.11	341.91	215.87	126.03	2.713	Normal Operations	
15,400.00	8,900.01	8,878.31	8,908.36	76.40	54.14	-91.40	-511.94	6,793.21	344.89	220.19	124.70	2.766	Normal Operations	
15,500.00	8,900.01	8,883.23	8,913.27	77.49	54.15	-92.22	-512.00	6,793.46	371.45	253.32	118.12	3.145		
15,600.00	8,900.01	8,888.15	8,918.18	78.57	54.16	-93.05	-512.07	6,793.71	420.65	310.97	109.68	3.835		
15,700.00	8,900.01	8,893.06	8,923.09	79.66	54.16	-93.87	-512.14	6,793.96	485.67	383.52	102.15	4.754		
15,800.00	8,900.01	8,897.98	8,928.00	80.75	54.17	-94.69	-512.20	6,794.21	561.03	464.66	96.37	5.821		
15,900.00	8,900.01	8,902.90	8,932.92	81.84	54.18	-95.51	-512.27	6,794.46	643.10	550.91	92.20	6.975		
16,000.00	8,900.01	8,907.82	8,937.83	82.93	54.19	-96.32	-512.34	6,794.71	729.63	640.41	89.23	8.177		
16,100.00	8,900.01	8,912.74	8,942.74	84.02	54.20	-97.14	-512.40	6,794.95	819.21	732.09	87.11	9.404		
16,200.00	8,900.01	8,917.65	8,947.65	85.11	54.20	-97.95	-512.47	6,795.20	910.92	825.33	85.60	10.642		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 120° WB - 120° WP													Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Offset Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
14,400.00	8,900.01	8,835.49	8,865.59	65.37	54.07	-84.18	-560.19	6,770.82	932.84	851.51	81.33	11.470		
14,500.00	8,900.01	8,840.27	8,870.37	66.47	54.08	-84.98	-560.32	6,771.04	840.46	757.79	82.67	10.166		
14,600.00	8,900.01	8,845.05	8,875.14	67.57	54.09	-85.78	-560.44	6,771.25	750.01	665.44	84.56	8.869		
14,700.00	8,900.01	8,849.83	8,879.92	68.68	54.09	-86.59	-560.57	6,771.47	662.27	575.02	87.25	7.590		
14,799.97	8,900.01	8,854.61	8,884.69	69.78	54.10	-87.40	-560.69	6,771.69	578.51	487.39	91.12	6.349		
14,806.65	8,900.01	8,854.93	8,885.01	69.85	54.10	-87.45	-560.70	6,771.70	573.09	481.67	91.43	6.268		
14,900.00	8,900.01	8,859.36	8,889.43	70.89	54.11	-88.13	-560.82	6,771.90	499.63	403.10	96.53	5.176		
15,000.00	8,900.01	8,864.03	8,894.10	72.00	54.12	-88.91	-560.94	6,772.11	426.99	323.23	103.76	4.115		
15,100.00	8,900.01	8,868.61	8,898.67	73.11	54.12	-89.75	-561.06	6,772.32	364.41	251.68	112.74	3.232		
15,200.00	8,900.01	8,873.10	8,903.16	74.22	54.13	-90.61	-561.18	6,772.53	317.98	196.16	121.82	2.610 Normal Operations		
15,300.00	8,900.01	8,877.50	8,907.55	75.32	54.14	-91.47	-561.29	6,772.72	295.49	168.77	126.72	2.332 Caution - Monitor Closely		
15,327.08	8,900.01	8,878.67	8,908.72	75.61	54.14	-91.70	-561.32	6,772.78	294.38	167.70	126.68	2.324 Caution - Monitor Closely, CC, ES, SF		
15,356.65	8,900.01	8,879.94	8,909.99	75.93	54.14	-91.94	-561.36	6,772.84	295.71	169.82	125.90	2.349 Caution - Monitor Closely		
15,400.00	8,900.01	8,881.80	8,911.85	76.40	54.14	-92.30	-561.41	6,772.92	302.68	179.23	123.45	2.452 Caution - Monitor Closely		
15,500.00	8,900.01	8,886.09	8,916.13	77.49	54.15	-93.14	-561.52	6,773.11	339.93	225.65	114.29	2.974 Normal Operations		
15,600.00	8,900.01	8,890.38	8,920.41	78.57	54.16	-93.97	-561.63	6,773.31	399.31	294.65	104.66	3.815		
15,700.00	8,900.01	8,894.66	8,924.69	79.66	54.17	-94.80	-561.74	6,773.50	472.56	375.38	97.18	4.863		
15,800.00	8,900.01	8,898.95	8,928.97	80.75	54.17	-95.63	-561.86	6,773.70	554.20	462.25	91.95	6.027		
15,900.00	8,900.01	8,903.24	8,933.25	81.84	54.18	-96.46	-561.97	6,773.89	641.03	552.64	88.39	7.252		
16,000.00	8,900.01	8,907.53	8,937.53	82.93	54.19	-97.29	-562.08	6,774.09	731.22	645.25	85.97	8.506		
16,100.00	8,900.01	8,911.81	8,941.82	84.02	54.19	-98.11	-562.19	6,774.28	823.65	739.36	84.29	9.772		
16,200.00	8,900.01	8,916.10	8,946.10	85.11	54.20	-98.93	-562.30	6,774.47	917.64	834.54	83.11	11.042		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 135° WB - 135° WP														Offset Site Error: 0.00 usft
Survey Program: 238-r.5 MWD														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,300.00	8,900.01	8,841.19	8,871.29	64.27	54.08	-84.39	-602.34	6,738.85	986.31	908.23	78.07	12.633		
14,400.00	8,900.01	8,845.26	8,875.35	65.37	54.09	-85.18	-602.49	6,739.00	891.33	812.41	78.92	11.294		
14,500.00	8,900.01	8,849.33	8,879.42	66.47	54.09	-85.97	-602.64	6,739.15	797.56	717.43	80.13	9.953		
14,600.00	8,900.01	8,853.40	8,883.48	67.57	54.10	-86.76	-602.79	6,739.30	705.48	623.60	81.88	8.616		
14,700.00	8,900.01	8,857.46	8,887.54	68.68	54.11	-87.55	-602.94	6,739.45	615.85	531.36	84.49	7.289		
14,799.97	8,900.01	8,861.53	8,891.60	69.78	54.11	-88.35	-603.10	6,739.61	529.93	441.51	88.42	5.993		
14,806.65	8,900.01	8,861.80	8,891.87	69.85	54.11	-88.40	-603.11	6,739.62	524.36	435.61	88.75	5.908		
14,900.00	8,900.01	8,865.55	8,895.61	70.89	54.12	-89.10	-603.24	6,739.75	448.81	354.55	94.26	4.761		
15,000.00	8,900.01	8,869.44	8,899.50	72.00	54.12	-89.89	-603.39	6,739.90	374.27	271.75	102.53	3.651		
15,100.00	8,900.01	8,873.22	8,903.27	73.11	54.13	-90.72	-603.53	6,740.04	311.18	197.89	113.30	2.747 Normal Operations		
15,200.00	8,900.01	8,876.86	8,906.91	74.22	54.14	-91.55	-603.66	6,740.17	267.85	143.96	123.89	2.162 Caution - Monitor Closely		
15,287.93	8,900.01	8,879.95	8,910.00	75.18	54.14	-92.25	-603.78	6,740.29	254.38	127.04	127.34	1.998 Caution - Monitor Closely, CC, ES, SF		
15,300.00	8,900.01	8,880.37	8,910.42	75.32	54.14	-92.35	-603.79	6,740.30	254.64	127.54	127.10	2.003 Caution - Monitor Closely		
15,356.65	8,900.01	8,882.30	8,912.34	75.93	54.15	-92.77	-603.86	6,740.37	262.69	138.95	123.74	2.123 Caution - Monitor Closely		
15,400.00	8,900.01	8,883.76	8,913.80	76.40	54.15	-93.10	-603.92	6,740.43	276.23	156.95	119.28	2.316 Caution - Monitor Closely		
15,500.00	8,900.01	8,887.12	8,917.16	77.49	54.15	-93.85	-604.04	6,740.55	327.81	220.46	107.35	3.054		
15,600.00	8,900.01	8,890.49	8,920.52	78.57	54.16	-94.61	-604.17	6,740.68	398.24	300.65	97.59	4.081		
15,700.00	8,900.01	8,893.85	8,923.88	79.66	54.16	-95.36	-604.29	6,740.80	479.28	388.27	91.01	5.266		
15,800.00	8,900.01	8,897.21	8,927.24	80.75	54.17	-96.11	-604.42	6,740.93	566.39	479.62	86.77	6.527		
15,900.00	8,900.01	8,900.58	8,930.60	81.84	54.18	-96.86	-604.54	6,741.05	657.16	573.13	84.03	7.821		
16,000.00	8,900.01	8,903.94	8,933.96	82.93	54.18	-97.61	-604.66	6,741.17	750.27	668.05	82.22	9.125		
16,100.00	8,900.01	8,907.31	8,937.32	84.02	54.19	-98.36	-604.79	6,741.30	844.94	763.95	80.99	10.432		
16,200.00	8,900.01	8,910.67	8,940.67	85.11	54.19	-99.11	-604.91	6,741.42	940.70	860.56	80.15	11.737		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 15° WB - 15° WP														Offset Site Error: 0.00 usft
Survey Program: 238-r.5 MWD														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Highside		Offset Wellbore Centre		Rule Assigned: Distance			Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor		
14,400.00	8,900.01	8,831.95	8,862.06	65.37	54.06	-86.50	-263.54	6,647.82	947.38	853.04	94.35	10.042		
14,500.00	8,900.01	8,832.77	8,862.88	66.47	54.07	-86.57	-263.50	6,647.83	874.30	775.85	98.46	8.880		
14,600.00	8,900.01	8,833.59	8,863.70	67.57	54.07	-86.65	-263.46	6,647.84	807.02	703.80	103.22	7.819		
14,700.00	8,900.01	8,834.41	8,864.52	68.68	54.07	-86.72	-263.42	6,647.85	747.09	638.56	108.54	6.883		
14,799.97	8,900.01	8,835.23	8,865.33	69.78	54.07	-86.80	-263.37	6,647.86	696.44	582.29	114.15	6.101		
14,806.65	8,900.01	8,835.28	8,865.39	69.85	54.07	-86.80	-263.37	6,647.87	693.44	578.91	114.53	6.055		
14,900.00	8,900.01	8,836.12	8,866.23	70.89	54.07	-86.84	-263.33	6,647.88	655.75	536.20	119.55	5.485		
15,000.00	8,900.01	8,837.20	8,867.30	72.00	54.07	-86.90	-263.27	6,647.89	625.09	501.05	124.04	5.040		
15,100.00	8,900.01	8,838.45	8,868.56	73.11	54.07	-87.00	-263.21	6,647.91	606.01	479.07	126.93	4.774		
15,198.61	8,900.01	8,839.86	8,869.97	74.20	54.08	-87.13	-263.14	6,647.93	599.63	471.93	127.70	4.696	CC, ES, SF	
15,200.00	8,900.01	8,839.88	8,869.99	74.22	54.08	-87.13	-263.14	6,647.93	599.63	471.94	127.69	4.696		
15,300.00	8,900.01	8,841.49	8,871.59	75.32	54.08	-87.29	-263.06	6,647.95	606.37	480.25	126.12	4.808		
15,356.65	8,900.01	8,842.48	8,872.57	75.93	54.08	-87.39	-263.01	6,647.96	615.87	491.60	124.27	4.956		
15,400.00	8,900.01	8,843.25	8,873.35	76.40	54.08	-87.47	-262.97	6,647.97	626.10	503.62	122.48	5.112		
15,500.00	8,900.01	8,845.04	8,875.14	77.49	54.09	-87.64	-262.88	6,648.00	660.04	542.55	117.49	5.618		
15,600.00	8,900.01	8,846.83	8,876.92	78.57	54.09	-87.81	-262.79	6,648.02	706.60	594.64	111.96	6.311		
15,700.00	8,900.01	8,848.62	8,878.71	79.66	54.09	-87.98	-262.70	6,648.05	763.49	656.96	106.52	7.167		
15,800.00	8,900.01	8,850.41	8,880.50	80.75	54.09	-88.15	-262.61	6,648.07	828.57	727.00	101.57	8.157		
15,900.00	8,900.01	8,852.20	8,882.29	81.84	54.10	-88.32	-262.52	6,648.09	900.08	802.82	97.27	9.254		
16,000.00	8,900.01	8,853.99	8,884.07	82.93	54.10	-88.49	-262.43	6,648.12	976.61	882.99	93.62	10.431		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 150° WB - 150° WP														Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
14,300.00	8,900.01	8,852.91	8,882.99	64.27	54.10	-86.19	-635.10	6,697.16	939.07	862.83	76.24	12.317			
14,400.00	8,900.01	8,855.99	8,886.07	65.37	54.10	-86.87	-635.24	6,697.24	843.29	766.23	77.06	10.944			
14,500.00	8,900.01	8,859.06	8,889.14	66.47	54.11	-87.56	-635.38	6,697.32	748.60	670.36	78.24	9.568			
14,600.00	8,900.01	8,862.14	8,892.21	67.57	54.11	-88.25	-635.52	6,697.40	655.47	575.46	80.01	8.193			
14,700.00	8,900.01	8,865.22	8,895.28	68.68	54.12	-88.94	-635.66	6,697.48	564.68	481.95	82.73	6.825			
14,799.97	8,900.01	8,868.29	8,898.35	69.78	54.12	-89.63	-635.80	6,697.56	477.59	390.56	87.03	5.488			
14,806.65	8,900.01	8,868.50	8,898.56	69.85	54.12	-89.67	-635.81	6,697.57	471.95	384.55	87.40	5.400			
14,900.00	8,900.01	8,871.30	8,901.36	70.89	54.13	-90.32	-635.93	6,697.64	395.59	301.87	93.72	4.221			
15,000.00	8,900.01	8,874.16	8,904.22	72.00	54.13	-91.03	-636.06	6,697.72	321.26	217.62	103.64	3.100			
15,100.00	8,900.01	8,876.87	8,906.92	73.11	54.14	-91.74	-636.19	6,697.79	261.29	144.67	116.62	2.240	Caution - Monitor Closely		
15,200.00	8,900.01	8,879.42	8,909.47	74.22	54.14	-92.42	-636.30	6,697.85	227.46	100.44	127.01	1.791	Caution - Monitor Closely		
15,239.78	8,900.01	8,880.39	8,910.43	74.65	54.14	-92.67	-636.35	6,697.88	224.23	96.42	127.81	1.754	Caution - Monitor Closely, CC, ES, SF		
15,300.00	8,900.01	8,881.80	8,911.85	75.32	54.14	-93.02	-636.41	6,697.92	231.56	107.32	124.23	1.864	Caution - Monitor Closely		
15,356.65	8,900.01	8,883.08	8,913.13	75.93	54.15	-93.32	-636.47	6,697.95	250.72	133.58	117.14	2.140	Caution - Monitor Closely		
15,400.00	8,900.01	8,884.04	8,914.08	76.40	54.15	-93.56	-636.51	6,697.98	272.16	161.26	110.90	2.454	Caution - Monitor Closely		
15,500.00	8,900.01	8,886.25	8,916.29	77.49	54.15	-94.12	-636.61	6,698.03	338.02	239.70	98.33	3.438			
15,600.00	8,900.01	8,888.47	8,918.50	78.57	54.16	-94.68	-636.71	6,698.09	417.66	327.64	90.02	4.640			
15,700.00	8,900.01	8,890.68	8,920.71	79.66	54.16	-95.24	-636.81	6,698.15	504.59	419.63	84.96	5.939			
15,800.00	8,900.01	8,892.89	8,922.92	80.75	54.16	-95.80	-636.91	6,698.21	595.63	513.75	81.88	7.275			
15,900.00	8,900.01	8,895.10	8,925.13	81.84	54.17	-96.36	-637.01	6,698.26	689.15	609.20	79.95	8.620			
16,000.00	8,900.01	8,897.31	8,927.34	82.93	54.17	-96.91	-637.11	6,698.32	784.26	705.56	78.70	9.965			
16,100.00	8,900.01	8,899.53	8,929.55	84.02	54.17	-97.47	-637.21	6,698.38	880.45	802.57	77.88	11.305			
16,200.00	8,900.01	8,901.74	8,931.75	85.11	54.18	-98.03	-637.31	6,698.44	977.40	900.07	77.33	12.639			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 165° WB - 165° WP														Offset Site Error: 0.00 usft
Survey Program: 238-r.5 MWD														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,200.00	8,900.01	8,863.19	8,893.26	63.18	54.11	-88.31	-655.94	6,648.24	984.22	909.61	74.60	13.192		
14,300.00	8,900.01	8,865.06	8,895.13	64.27	54.12	-88.78	-656.03	6,648.27	887.28	812.06	75.22	11.795		
14,400.00	8,900.01	8,866.94	8,897.00	65.37	54.12	-89.25	-656.13	6,648.29	791.10	714.99	76.11	10.395		
14,500.00	8,900.01	8,868.81	8,898.87	66.47	54.12	-89.72	-656.22	6,648.32	695.99	618.59	77.41	8.991		
14,600.00	8,900.01	8,870.69	8,900.75	67.57	54.13	-90.19	-656.32	6,648.34	602.47	523.08	79.39	7.589		
14,700.00	8,900.01	8,872.56	8,902.62	68.68	54.13	-90.65	-656.41	6,648.37	511.39	428.87	82.52	6.197		
14,799.97	8,900.01	8,874.44	8,904.49	69.78	54.13	-91.12	-656.51	6,648.40	424.37	336.75	87.62	4.843		
14,806.65	8,900.01	8,874.56	8,904.62	69.85	54.13	-91.15	-656.51	6,648.40	418.76	330.70	88.06	4.756		
14,900.00	8,900.01	8,876.24	8,906.29	70.89	54.14	-91.65	-656.60	6,648.42	343.39	247.58	95.81	3.584		
15,000.00	8,900.01	8,877.87	8,907.92	72.00	54.14	-92.15	-656.68	6,648.44	272.47	164.38	108.09	2.521 Normal Operations		
15,100.00	8,900.01	8,879.32	8,909.37	73.11	54.14	-92.60	-656.76	6,648.46	221.54	99.04	122.50	1.808 Caution - Monitor Closely		
15,185.59	8,900.01	8,880.43	8,910.47	74.06	54.14	-92.92	-656.81	6,648.48	205.63	77.71	127.92	1.607 Caution - Monitor Closely, CC, ES, SF		
15,200.00	8,900.01	8,880.60	8,910.65	74.22	54.14	-92.97	-656.82	6,648.48	206.10	78.59	127.51	1.616 Caution - Monitor Closely		
15,300.00	8,900.01	8,881.70	8,911.75	75.32	54.14	-93.24	-656.88	6,648.49	233.30	117.46	115.84	2.014 Caution - Monitor Closely		
15,356.65	8,900.01	8,882.24	8,912.29	75.93	54.15	-93.35	-656.90	6,648.50	263.51	156.73	106.78	2.468 Caution - Monitor Closely		
15,400.00	8,900.01	8,882.64	8,912.68	76.40	54.15	-93.45	-656.92	6,648.51	291.67	191.13	100.54	2.901 Normal Operations		
15,500.00	8,900.01	8,883.55	8,913.59	77.49	54.15	-93.70	-656.97	6,648.52	368.07	278.07	90.00	4.090		
15,600.00	8,900.01	8,884.46	8,914.50	78.57	54.15	-93.95	-657.01	6,648.53	453.74	369.91	83.83	5.412		
15,700.00	8,900.01	8,885.36	8,915.40	79.66	54.15	-94.20	-657.06	6,648.54	544.32	464.04	80.28	6.780		
15,800.00	8,900.01	8,886.27	8,916.31	80.75	54.15	-94.44	-657.11	6,648.56	637.72	559.54	78.17	8.158		
15,900.00	8,900.01	8,887.18	8,917.22	81.84	54.15	-94.69	-657.15	6,648.57	732.86	655.97	76.89	9.532		
16,000.00	8,900.01	8,888.09	8,918.13	82.93	54.15	-94.94	-657.20	6,648.58	829.14	753.06	76.08	10.898		
16,100.00	8,900.01	8,889.00	8,919.03	84.02	54.16	-95.19	-657.24	6,648.59	926.22	850.65	75.57	12.257		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 180° WB - 180° WP														Offset Site Error:	
Survey Program: 238-r.5 MWD														Offset Well Error:	
Reference														Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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		
14,200.00	8,900.01	8,876.27	8,906.32	63.18	54.14	-91.67	-663.57	6,595.46	930.89	856.27	74.62	12.475			
14,300.00	8,900.01	8,876.82	8,906.87	64.27	54.14	-91.82	-663.60	6,595.46	833.95	758.58	75.37	11.065			
14,400.00	8,900.01	8,877.36	8,907.41	65.37	54.14	-91.96	-663.63	6,595.46	737.84	661.39	76.44	9.652			
14,500.00	8,900.01	8,877.91	8,907.96	66.47	54.14	-92.11	-663.66	6,595.46	642.90	564.87	78.03	8.239			
14,600.00	8,900.01	8,878.46	8,908.51	67.57	54.14	-92.25	-663.69	6,595.46	549.77	469.29	80.48	6.831			
14,700.00	8,900.01	8,879.00	8,909.05	68.68	54.14	-92.40	-663.72	6,595.46	459.53	375.13	84.40	5.445			
14,799.97	8,900.01	8,879.55	8,909.60	69.78	54.14	-92.54	-663.75	6,595.46	374.30	283.42	90.88	4.118			
14,806.65	8,900.01	8,879.59	8,909.63	69.85	54.14	-92.55	-663.75	6,595.46	368.87	277.42	91.45	4.034			
14,900.00	8,900.01	8,880.02	8,910.07	70.89	54.14	-92.77	-663.77	6,595.46	297.25	195.95	101.30	2.934	Normal Operations		
15,000.00	8,900.01	8,880.30	8,910.35	72.00	54.14	-92.93	-663.78	6,595.46	234.90	119.11	115.79	2.029	Caution - Monitor Closely		
15,100.00	8,900.01	8,880.41	8,910.45	73.11	54.14	-93.00	-663.79	6,595.46	201.46	74.28	127.18	1.584	Caution - Monitor Closely		
15,128.42	8,900.01	8,880.40	8,910.45	73.42	54.14	-93.00	-663.79	6,595.46	199.59	72.03	127.56	1.565	Caution - Monitor Closely, CC, ES, SF		
15,200.00	8,900.01	8,880.33	8,910.38	74.22	54.14	-92.97	-663.79	6,595.46	211.19	89.75	121.44	1.739	Caution - Monitor Closely		
15,300.00	8,900.01	8,880.07	8,910.11	75.32	54.14	-92.84	-663.77	6,595.46	259.27	153.97	105.29	2.462	Caution - Monitor Closely		
15,356.65	8,900.01	8,879.84	8,909.88	75.93	54.14	-92.72	-663.76	6,595.46	297.11	199.93	97.18	3.057			
15,400.00	8,900.01	8,879.64	8,909.69	76.40	54.14	-92.67	-663.75	6,595.46	329.46	237.26	92.20	3.573			
15,500.00	8,900.01	8,879.18	8,909.23	77.49	54.14	-92.54	-663.73	6,595.46	411.87	327.48	84.39	4.880			
15,600.00	8,900.01	8,878.73	8,908.78	78.57	54.14	-92.42	-663.70	6,595.46	500.73	420.71	80.03	6.257			
15,700.00	8,900.01	8,878.27	8,908.32	79.66	54.14	-92.29	-663.68	6,595.46	593.15	515.60	77.55	7.649			
15,800.00	8,900.01	8,877.82	8,907.87	80.75	54.14	-92.17	-663.65	6,595.46	687.69	611.59	76.10	9.036			
15,900.00	8,900.01	8,877.36	8,907.41	81.84	54.14	-92.04	-663.63	6,595.46	783.59	708.35	75.24	10.414			
16,000.00	8,900.01	8,876.90	8,906.95	82.93	54.14	-91.91	-663.61	6,595.46	880.40	805.68	74.72	11.783			
16,100.00	8,900.01	8,876.45	8,906.50	84.02	54.14	-91.79	-663.58	6,595.46	977.85	903.45	74.40	13.142			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 195° WB - 195° WP														Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
14,100.00	8,900.01	8,889.01	8,919.04	62.08	54.16	-95.01	-657.25	6,542.33	976.50	901.30	75.20	12.986			
14,200.00	8,900.01	8,888.19	8,918.23	63.18	54.16	-94.80	-657.20	6,542.34	879.31	803.40	75.91	11.584			
14,300.00	8,900.01	8,887.37	8,917.41	64.27	54.15	-94.58	-657.16	6,542.35	782.82	705.93	76.89	10.181			
14,400.00	8,900.01	8,886.55	8,916.59	65.37	54.15	-94.37	-657.12	6,542.36	687.33	609.04	78.29	8.779			
14,500.00	8,900.01	8,885.74	8,915.77	66.47	54.15	-94.15	-657.08	6,542.37	593.33	512.96	80.37	7.382			
14,600.00	8,900.01	8,884.92	8,914.96	67.57	54.15	-93.94	-657.04	6,542.38	501.66	418.07	83.59	6.002			
14,700.00	8,900.01	8,884.10	8,914.14	68.68	54.15	-93.72	-657.00	6,542.39	413.85	325.10	88.75	4.663			
14,799.97	8,900.01	8,883.28	8,913.32	69.78	54.15	-93.51	-656.96	6,542.40	333.02	235.88	97.14	3.428			
14,806.65	8,900.01	8,883.23	8,913.27	69.85	54.15	-93.49	-656.95	6,542.41	328.00	230.14	97.86	3.352			
14,900.00	8,900.01	8,882.38	8,912.43	70.89	54.15	-93.37	-656.91	6,542.42	264.29	154.57	109.72	2.409	Caution - Monitor Closely		
15,000.00	8,900.01	8,881.31	8,911.35	72.00	54.14	-93.14	-656.86	6,542.43	217.57	94.31	123.27	1.765	Caution - Monitor Closely		
15,071.35	8,900.01	8,880.43	8,910.48	72.79	54.14	-92.91	-656.81	6,542.44	206.43	79.73	126.70	1.629	Caution - Monitor Closely, CC, ES, SF		
15,100.00	8,900.01	8,880.05	8,910.10	73.11	54.14	-92.80	-656.79	6,542.45	208.27	82.86	125.41	1.661	Caution - Monitor Closely		
15,200.00	8,900.01	8,878.62	8,908.67	74.22	54.14	-92.37	-656.72	6,542.47	240.77	128.47	112.30	2.144	Caution - Monitor Closely		
15,300.00	8,900.01	8,877.02	8,907.07	75.32	54.14	-91.88	-656.64	6,542.49	301.82	204.23	97.60	3.093			
15,356.65	8,900.01	8,876.03	8,906.08	75.93	54.14	-91.59	-656.59	6,542.50	343.62	252.29	91.33	3.762			
15,400.00	8,900.01	8,875.25	8,905.31	76.40	54.13	-91.38	-656.55	6,542.51	377.97	290.37	87.60	4.314			
15,500.00	8,900.01	8,873.46	8,903.52	77.49	54.13	-90.92	-656.46	6,542.54	463.01	381.18	81.83	5.658			
15,600.00	8,900.01	8,871.67	8,901.73	78.57	54.13	-90.45	-656.37	6,542.56	553.07	474.48	78.59	7.038			
15,700.00	8,900.01	8,869.88	8,899.94	79.66	54.13	-89.98	-656.28	6,542.59	646.05	569.32	76.73	8.419			
15,800.00	8,900.01	8,868.09	8,898.16	80.75	54.12	-89.52	-656.19	6,542.61	740.87	665.21	75.66	9.792			
15,900.00	8,900.01	8,866.30	8,896.37	81.84	54.12	-89.05	-656.10	6,542.63	836.88	761.86	75.02	11.155			
16,000.00	8,900.01	8,864.51	8,894.58	82.93	54.12	-88.59	-656.01	6,542.66	933.73	859.08	74.65	12.507			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 210° WB - 210° WP														Offset Site Error: 0.00 usft	
Survey Program: 238-r.5 MWD														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Highside		Offset Wellbore Centre		Distance			Rule Assigned:	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor			
14,100.00	8,900.01	8,900.27	8,930.29	62.08	54.17	-97.45	-637.25	6,492.52	930.10	852.67	77.42	12.013			
14,200.00	8,900.01	8,898.14	8,928.16	63.18	54.17	-96.93	-637.15	6,492.58	833.68	755.31	78.37	10.638			
14,300.00	8,900.01	8,896.01	8,926.04	64.27	54.17	-96.40	-637.05	6,492.63	738.22	658.54	79.68	9.265			
14,400.00	8,900.01	8,893.89	8,923.91	65.37	54.16	-95.88	-636.96	6,492.69	644.12	562.57	81.55	7.899			
14,500.00	8,900.01	8,891.76	8,921.79	66.47	54.16	-95.36	-636.86	6,492.74	552.09	467.77	84.32	6.548			
14,600.00	8,900.01	8,889.63	8,919.66	67.57	54.16	-94.84	-636.76	6,492.80	463.37	374.80	88.57	5.232			
14,700.00	8,900.01	8,887.50	8,917.54	68.68	54.15	-94.31	-636.67	6,492.85	380.28	285.06	95.22	3.994			
14,799.97	8,900.01	8,885.37	8,915.41	69.78	54.15	-93.79	-636.57	6,492.91	307.44	202.13	105.31	2.919	Normal Operations		
14,806.65	8,900.01	8,885.23	8,915.27	69.85	54.15	-93.76	-636.57	6,492.91	303.12	197.01	106.11	2.857	Normal Operations		
14,900.00	8,900.01	8,883.17	8,913.21	70.89	54.15	-93.32	-636.47	6,492.97	252.36	134.50	117.85	2.141	Caution - Monitor Closely		
15,000.00	8,900.01	8,880.80	8,910.85	72.00	54.14	-92.75	-636.36	6,493.03	226.42	100.96	125.45	1.805	Caution - Monitor Closely		
15,017.50	8,900.01	8,880.37	8,910.42	72.19	54.14	-92.64	-636.35	6,493.04	225.80	100.37	125.43	1.800	Caution - Monitor Closely, CC, ES, SF		
15,100.00	8,900.01	8,878.28	8,908.33	73.11	54.14	-92.10	-636.25	6,493.10	239.29	119.91	119.38	2.004	Caution - Monitor Closely		
15,200.00	8,900.01	8,875.59	8,905.65	74.22	54.13	-91.40	-636.13	6,493.17	285.75	179.98	105.77	2.702	Normal Operations		
15,300.00	8,900.01	8,872.75	8,902.81	75.32	54.13	-90.67	-636.00	6,493.24	352.73	258.64	94.08	3.749			
15,356.65	8,900.01	8,871.08	8,901.14	75.93	54.13	-90.26	-635.92	6,493.28	395.95	306.70	89.25	4.436			
15,400.00	8,900.01	8,869.78	8,899.84	76.40	54.13	-89.96	-635.86	6,493.32	430.88	344.53	86.35	4.990			
15,500.00	8,900.01	8,866.77	8,896.84	77.49	54.12	-89.26	-635.73	6,493.40	516.34	434.59	81.75	6.316			
15,600.00	8,900.01	8,863.77	8,893.84	78.57	54.12	-88.56	-635.59	6,493.48	606.25	527.17	79.08	7.667			
15,700.00	8,900.01	8,860.77	8,890.84	79.66	54.11	-87.86	-635.46	6,493.55	698.89	621.39	77.50	9.018			
15,800.00	8,900.01	8,857.77	8,887.84	80.75	54.11	-87.16	-635.32	6,493.63	793.31	716.75	76.57	10.361			
15,900.00	8,900.01	8,854.77	8,884.85	81.84	54.10	-86.46	-635.18	6,493.71	888.95	812.93	76.01	11.695			
16,000.00	8,900.01	8,851.76	8,881.85	82.93	54.10	-85.77	-635.05	6,493.79	985.44	909.75	75.69	13.020			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 225° WB - 225° WP														Offset Site Error:	0.00 usft		
Survey Program: 238-r.5 MWD														Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference Depth (usft)	Vertical Reference Depth (usft)	Measured Offset Depth (usft)	Vertical Offset 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				
14,000.00	8,900.01	8,912.03	8,942.03	60.98	54.19	-99.20	-604.96	6,449.45	989.56	910.17	79.39	12.465					
14,100.00	8,900.01	8,908.74	8,938.74	62.08	54.19	-98.49	-604.84	6,449.57	893.54	813.24	80.30	11.128					
14,200.00	8,900.01	8,905.44	8,935.46	63.18	54.18	-97.78	-604.72	6,449.69	798.48	716.95	81.53	9.794					
14,300.00	8,900.01	8,902.15	8,932.17	64.27	54.18	-97.06	-604.60	6,449.81	704.77	621.55	83.23	8.468					
14,400.00	8,900.01	8,898.86	8,928.88	65.37	54.17	-96.34	-604.48	6,449.93	613.04	527.39	85.65	7.158					
14,500.00	8,900.01	8,895.56	8,925.59	66.47	54.17	-95.62	-604.35	6,450.06	524.32	435.13	89.20	5.878					
14,600.00	8,900.01	8,892.27	8,922.30	67.57	54.16	-94.90	-604.23	6,450.18	440.44	345.95	94.49	4.661					
14,700.00	8,900.01	8,888.98	8,919.01	68.68	54.16	-94.18	-604.11	6,450.30	364.74	262.48	102.26	3.567					
14,799.97	8,900.01	8,885.68	8,915.72	69.78	54.15	-93.45	-603.99	6,450.42	303.44	190.91	112.52	2.697	Normal Operations				
14,806.65	8,900.01	8,885.46	8,915.50	69.85	54.15	-93.41	-603.98	6,450.43	300.08	186.83	113.25	2.650	Normal Operations				
14,900.00	8,900.01	8,882.33	8,912.37	70.89	54.15	-92.75	-603.86	6,450.55	265.11	143.24	121.87	2.175	Caution - Monitor Closely				
14,969.78	8,900.01	8,879.90	8,909.95	71.66	54.14	-92.22	-603.78	6,450.64	256.62	132.70	123.92	2.071	Caution - Monitor Closely, CC, ES, SF				
15,000.00	8,900.01	8,878.83	8,908.88	72.00	54.14	-91.98	-603.74	6,450.67	258.24	135.13	123.11	2.098	Caution - Monitor Closely				
15,100.00	8,900.01	8,875.21	8,905.26	73.11	54.13	-91.16	-603.60	6,450.81	285.08	170.51	114.57	2.488	Caution - Monitor Closely				
15,200.00	8,900.01	8,871.45	8,901.51	74.22	54.13	-90.33	-603.46	6,450.95	337.66	234.48	103.18	3.272					
15,300.00	8,900.01	8,867.57	8,897.63	75.32	54.12	-89.50	-603.32	6,451.09	406.05	312.14	93.91	4.324					
15,356.65	8,900.01	8,865.32	8,895.39	75.93	54.12	-89.06	-603.24	6,451.17	449.12	359.17	89.95	4.993					
15,400.00	8,900.01	8,863.58	8,893.65	76.40	54.12	-88.70	-603.17	6,451.24	483.71	396.20	87.51	5.528					
15,500.00	8,900.01	8,859.57	8,889.65	77.49	54.11	-87.89	-603.02	6,451.39	568.10	484.62	83.48	6.806					
15,600.00	8,900.01	8,855.56	8,885.64	78.57	54.10	-87.07	-602.87	6,451.54	656.85	575.87	80.99	8.111					
15,700.00	8,900.01	8,851.55	8,881.64	79.66	54.10	-86.26	-602.73	6,451.68	748.43	668.99	79.45	9.421					
15,800.00	8,900.01	8,847.54	8,877.63	80.75	54.09	-85.45	-602.58	6,451.83	841.91	763.42	78.48	10.727					
15,900.00	8,900.01	8,843.53	8,873.63	81.84	54.08	-84.65	-602.43	6,451.98	936.72	858.83	77.88	12.027					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 240° WB - 240° WP													Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Offset Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
14,000.00	8,900.01	8,918.06	8,948.06	60.98	54.20	-99.15	-562.36	6,416.36	965.18	883.19	81.99	11.772		
14,100.00	8,900.01	8,913.83	8,943.83	62.08	54.20	-98.36	-562.24	6,416.55	870.76	787.65	83.11	10.477		
14,200.00	8,900.01	8,909.60	8,939.60	63.18	54.19	-97.56	-562.13	6,416.74	777.71	693.08	84.63	9.190		
14,300.00	8,900.01	8,905.36	8,935.37	64.27	54.18	-96.75	-562.02	6,416.93	686.59	599.88	86.71	7.918		
14,400.00	8,900.01	8,901.13	8,931.15	65.37	54.18	-95.95	-561.91	6,417.12	598.28	508.63	89.65	6.673		
14,500.00	8,900.01	8,896.89	8,926.92	66.47	54.17	-95.14	-561.80	6,417.32	514.24	420.39	93.85	5.479		
14,600.00	8,900.01	8,892.66	8,922.69	67.57	54.16	-94.34	-561.69	6,417.51	436.94	337.13	99.80	4.378		
14,700.00	8,900.01	8,888.43	8,918.46	68.68	54.16	-93.53	-561.58	6,417.70	370.60	262.86	107.74	3.440		
14,799.97	8,900.01	8,884.19	8,914.23	69.78	54.15	-92.72	-561.47	6,417.89	322.10	205.60	116.50	2.765	Normal Operations	
14,806.65	8,900.01	8,883.91	8,913.95	69.85	54.15	-92.67	-561.46	6,417.90	319.71	202.68	117.03	2.732	Normal Operations	
14,900.00	8,900.01	8,879.91	8,909.96	70.89	54.14	-91.92	-561.36	6,418.09	298.65	176.56	122.09	2.446	Caution - Monitor Closely	
14,931.32	8,900.01	8,878.55	8,908.60	71.24	54.14	-91.66	-561.32	6,418.15	297.18	174.76	122.42	2.428	Caution - Monitor Closely, CC, ES, SF	
15,000.00	8,900.01	8,875.53	8,905.58	72.00	54.13	-91.07	-561.24	6,418.28	304.19	183.78	120.41	2.526	Normal Operations	
15,100.00	8,900.01	8,871.05	8,901.11	73.11	54.13	-90.21	-561.13	6,418.49	337.28	224.57	112.71	2.992	Normal Operations	
15,200.00	8,900.01	8,866.48	8,896.54	74.22	54.12	-89.36	-561.01	6,418.69	390.93	287.32	103.61	3.773		
15,300.00	8,900.01	8,861.82	8,891.89	75.32	54.11	-88.54	-560.88	6,418.91	457.93	361.98	95.95	4.773		
15,356.65	8,900.01	8,859.15	8,889.22	75.93	54.11	-88.10	-560.81	6,419.03	499.79	407.30	92.49	5.404		
15,400.00	8,900.01	8,857.09	8,887.17	76.40	54.10	-87.74	-560.76	6,419.12	533.40	443.12	90.28	5.908		
15,500.00	8,900.01	8,852.35	8,882.43	77.49	54.10	-86.91	-560.64	6,419.34	615.57	529.14	86.43	7.122		
15,600.00	8,900.01	8,847.60	8,877.70	78.57	54.09	-86.08	-560.51	6,419.55	702.35	618.47	83.88	8.373		
15,700.00	8,900.01	8,842.86	8,872.96	79.66	54.08	-85.26	-560.39	6,419.77	792.22	710.03	82.19	9.639		
15,800.00	8,900.01	8,838.12	8,868.22	80.75	54.07	-84.43	-560.26	6,419.98	884.24	803.18	81.07	10.908		
15,900.00	8,900.01	8,833.37	8,863.48	81.84	54.07	-83.61	-560.14	6,420.20	977.81	897.50	80.31	12.175		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 255°WB - 255°WP													Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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	
14,000.00	8,900.01	8,920.09	8,950.08	60.98	54.21	-98.24	-512.50	6,395.59	956.85	872.99	83.86	11.410		
14,100.00	8,900.01	8,915.20	8,945.20	62.08	54.20	-97.45	-512.44	6,395.84	864.51	779.33	85.18	10.150		
14,200.00	8,900.01	8,910.32	8,940.32	63.18	54.19	-96.65	-512.37	6,396.09	774.04	687.10	86.94	8.903		
14,300.00	8,900.01	8,905.43	8,935.44	64.27	54.18	-95.85	-512.31	6,396.33	686.19	596.83	89.35	7.679		
14,400.00	8,900.01	8,900.55	8,930.57	65.37	54.18	-95.05	-512.24	6,396.58	602.10	509.41	92.68	6.496		
14,500.00	8,900.01	8,895.66	8,925.69	66.47	54.17	-94.24	-512.17	6,396.83	523.59	426.32	97.27	5.383		
14,600.00	8,900.01	8,890.77	8,920.81	67.57	54.16	-93.44	-512.11	6,397.08	453.56	350.19	103.37	4.388		
14,700.00	8,900.01	8,885.89	8,915.93	68.68	54.15	-92.63	-512.04	6,397.32	396.54	285.82	110.72	3.581		
14,799.97	8,900.01	8,881.00	8,911.05	69.78	54.14	-91.83	-511.97	6,397.57	358.78	241.09	117.69	3.048		
14,806.65	8,900.01	8,880.68	8,910.72	69.85	54.14	-91.77	-511.97	6,397.59	357.11	239.04	118.07	3.025		
14,900.00	8,900.01	8,876.09	8,906.14	70.89	54.14	-91.02	-511.91	6,397.82	345.11	223.91	121.19	2.848	Normal Operations	
14,904.82	8,900.01	8,875.85	8,905.90	70.94	54.14	-90.98	-511.90	6,397.83	345.08	223.85	121.23	2.847	Normal Operations, CC, ES, SF	
15,000.00	8,900.01	8,871.12	8,901.17	72.00	54.13	-90.19	-511.84	6,398.07	356.40	237.15	119.25	2.989	Normal Operations	
15,100.00	8,900.01	8,866.09	8,896.15	73.11	54.12	-89.37	-511.77	6,398.32	390.48	277.27	113.21	3.449		
15,200.00	8,900.01	8,861.01	8,891.09	74.22	54.11	-88.58	-511.70	6,398.58	442.07	336.13	105.94	4.173		
15,300.00	8,900.01	8,855.90	8,885.98	75.32	54.10	-87.82	-511.63	6,398.84	505.79	406.44	99.34	5.091		
15,356.65	8,900.01	8,852.98	8,883.07	75.93	54.10	-87.42	-511.60	6,398.99	545.66	449.49	96.17	5.674		
15,400.00	8,900.01	8,850.75	8,880.83	76.40	54.09	-87.09	-511.56	6,399.10	577.78	483.73	94.05	6.143		
15,500.00	8,900.01	8,845.59	8,875.69	77.49	54.09	-86.31	-511.49	6,399.36	656.79	566.63	90.15	7.285		
15,600.00	8,900.01	8,840.44	8,870.54	78.57	54.08	-85.53	-511.43	6,399.62	740.85	653.47	87.38	8.479		
15,700.00	8,900.01	8,835.29	8,865.39	79.66	54.07	-84.75	-511.36	6,399.88	828.42	743.01	85.41	9.699		
15,800.00	8,900.01	8,830.13	8,860.25	80.75	54.06	-83.98	-511.29	6,400.14	918.51	834.50	84.01	10.933		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 270° WB - 270° WP														Offset Site Error: 0.00 usft	
Survey Program: 238-r.5 MWD														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Highside		Offset Wellbore Centre		Distance			Rule Assigned:	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor			
14,000.00	8,900.01	8,917.97	8,947.97	60.98	54.20	-96.87	-458.95	6,388.65	965.57	880.91	84.66	11.405			
14,100.00	8,900.01	8,912.77	8,942.77	62.08	54.20	-96.13	-458.95	6,388.93	875.57	789.43	86.14	10.164			
14,200.00	8,900.01	8,907.56	8,937.57	63.18	54.19	-95.39	-458.95	6,389.20	787.96	699.83	88.13	8.941			
14,300.00	8,900.01	8,902.36	8,932.37	64.27	54.18	-94.65	-458.95	6,389.47	703.62	612.82	90.80	7.749			
14,400.00	8,900.01	8,897.15	8,927.17	65.37	54.17	-93.90	-458.95	6,389.74	623.88	529.48	94.40	6.609			
14,500.00	8,900.01	8,891.95	8,921.98	66.47	54.16	-93.16	-458.95	6,390.02	550.75	451.59	99.16	5.554			
14,600.00	8,900.01	8,886.74	8,916.78	67.57	54.15	-92.41	-458.95	6,390.29	487.20	382.05	105.15	4.634			
14,700.00	8,900.01	8,881.54	8,911.58	68.68	54.14	-91.66	-458.95	6,390.56	437.43	325.58	111.85	3.911			
14,799.97	8,900.01	8,876.33	8,906.38	69.78	54.14	-90.92	-458.95	6,390.83	406.54	288.80	117.75	3.453			
14,806.65	8,900.01	8,875.98	8,906.04	69.85	54.14	-90.87	-458.95	6,390.85	405.27	287.21	118.06	3.433			
14,892.68	8,900.01	8,871.50	8,901.56	70.81	54.13	-90.22	-458.95	6,391.09	397.36	276.74	120.62	3.294 CC			
14,900.00	8,900.01	8,871.12	8,901.18	70.89	54.13	-90.17	-458.95	6,391.11	397.41	276.72	120.70	3.293 ES, SF			
15,000.00	8,900.01	8,865.89	8,895.96	72.00	54.12	-89.42	-458.95	6,391.38	409.61	290.06	119.55	3.426			
15,100.00	8,900.01	8,860.66	8,890.73	73.11	54.11	-88.68	-458.95	6,391.65	441.34	326.19	115.15	3.833			
15,200.00	8,900.01	8,855.43	8,885.51	74.22	54.10	-87.98	-458.95	6,391.93	488.77	379.47	109.30	4.472			
15,300.00	8,900.01	8,850.20	8,880.29	75.32	54.09	-87.33	-458.95	6,392.20	547.81	444.34	103.47	5.294			
15,356.65	8,900.01	8,847.25	8,877.34	75.93	54.09	-86.98	-458.95	6,392.36	585.07	484.61	100.46	5.824			
15,400.00	8,900.01	8,844.99	8,875.08	76.40	54.09	-86.68	-458.95	6,392.47	615.28	516.91	98.36	6.255			
15,500.00	8,900.01	8,839.77	8,869.87	77.49	54.08	-85.99	-458.95	6,392.75	690.29	595.99	94.30	7.320			
15,600.00	8,900.01	8,834.56	8,864.67	78.57	54.07	-85.30	-458.95	6,393.02	770.97	679.78	91.19	8.454			
15,700.00	8,900.01	8,829.34	8,859.46	79.66	54.06	-84.61	-458.95	6,393.29	855.70	766.85	88.85	9.631			
15,800.00	8,900.01	8,824.13	8,854.25	80.75	54.05	-83.92	-458.95	6,393.57	943.40	856.31	87.08	10.833			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 30°WB - 30°WP													Offset Site Error: 0.00 usft
Survey Program: 238-r.5 MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,400.00	8,900.01	8,824.62	8,854.74	65.37	54.05	-85.72	-284.08	6,696.42	976.81	883.23	93.59	10.438	
14,500.00	8,900.01	8,826.75	8,856.87	66.47	54.06	-85.92	-283.99	6,696.48	900.52	803.25	97.26	9.258	
14,600.00	8,900.01	8,828.88	8,858.99	67.57	54.06	-86.12	-283.89	6,696.53	829.27	727.69	101.59	8.163	
14,700.00	8,900.01	8,831.01	8,861.12	68.68	54.06	-86.32	-283.79	6,696.59	764.49	657.96	106.53	7.176	
14,799.97	8,900.01	8,833.13	8,863.25	69.78	54.07	-86.52	-283.70	6,696.64	707.96	596.03	111.94	6.325	
14,806.65	8,900.01	8,833.28	8,863.39	69.85	54.07	-86.53	-283.69	6,696.65	704.53	592.22	112.31	6.273	
14,900.00	8,900.01	8,835.34	8,865.44	70.89	54.07	-86.67	-283.60	6,696.70	660.38	542.98	117.40	5.625	
15,000.00	8,900.01	8,837.70	8,867.81	72.00	54.07	-86.85	-283.49	6,696.76	621.97	499.68	122.29	5.086	
15,100.00	8,900.01	8,840.23	8,870.33	73.11	54.08	-87.07	-283.37	6,696.83	594.56	468.63	125.93	4.721	
15,200.00	8,900.01	8,842.91	8,873.01	74.22	54.08	-87.32	-283.25	6,696.90	579.73	452.14	127.59	4.544	
15,259.15	8,900.01	8,844.57	8,874.67	74.87	54.08	-87.48	-283.18	6,696.94	577.32	449.87	127.45	4.530 CC, ES, SF	
15,300.00	8,900.01	8,845.75	8,875.85	75.32	54.09	-87.60	-283.12	6,696.97	578.47	451.64	126.84	4.561	
15,356.65	8,900.01	8,847.43	8,877.52	75.93	54.09	-87.77	-283.05	6,697.02	583.85	458.52	125.33	4.659	
15,400.00	8,900.01	8,848.73	8,878.82	76.40	54.09	-87.90	-282.99	6,697.05	591.19	467.48	123.71	4.779	
15,500.00	8,900.01	8,851.73	8,881.82	77.49	54.10	-88.20	-282.85	6,697.13	619.44	500.60	118.84	5.212	
15,600.00	8,900.01	8,854.73	8,884.82	78.57	54.10	-88.50	-282.72	6,697.21	661.74	548.60	113.14	5.849	
15,700.00	8,900.01	8,857.74	8,887.81	79.66	54.11	-88.79	-282.58	6,697.29	715.59	608.18	107.41	6.662	
15,800.00	8,900.01	8,860.74	8,890.81	80.75	54.11	-89.09	-282.44	6,697.37	778.60	676.45	102.16	7.622	
15,900.00	8,900.01	8,863.74	8,893.81	81.84	54.12	-89.39	-282.31	6,697.44	848.74	751.13	97.60	8.696	
16,000.00	8,900.01	8,866.74	8,896.81	82.93	54.12	-89.68	-282.17	6,697.52	924.38	830.59	93.79	9.856	

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 330°WB - 330°WP														Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)				
14,200.00	8,900.01	8,868.67	8,898.73	63.18	54.12	-89.88	-282.09	6,493.35	962.24	874.70	87.54	10.992			
14,300.00	8,900.01	8,865.59	8,895.66	64.27	54.12	-89.57	-282.22	6,493.43	884.93	794.01	90.93	9.732			
14,400.00	8,900.01	8,862.52	8,892.59	65.37	54.11	-89.27	-282.36	6,493.51	812.58	717.52	95.07	8.547			
14,500.00	8,900.01	8,859.44	8,889.52	66.47	54.11	-88.97	-282.50	6,493.59	746.63	646.63	100.00	7.466			
14,600.00	8,900.01	8,856.37	8,886.44	67.57	54.10	-88.67	-282.64	6,493.67	688.91	583.27	105.64	6.521			
14,700.00	8,900.01	8,853.29	8,883.37	68.68	54.10	-88.37	-282.78	6,493.75	641.65	530.00	111.66	5.747			
14,799.97	8,900.01	8,850.21	8,880.30	69.78	54.09	-88.07	-282.92	6,493.83	607.32	489.90	117.42	5.172			
14,806.65	8,900.01	8,850.01	8,880.10	69.85	54.09	-88.05	-282.93	6,493.84	605.54	487.77	117.77	5.142			
14,900.00	8,900.01	8,847.20	8,877.29	70.89	54.09	-87.76	-283.06	6,493.91	586.63	464.58	122.05	4.806			
15,000.00	8,900.01	8,844.34	8,874.44	72.00	54.08	-87.47	-283.19	6,493.98	579.13	454.36	124.77	4.642			
15,004.86	8,900.01	8,844.21	8,874.30	72.05	54.08	-87.46	-283.19	6,493.99	579.12	454.27	124.84	4.639	CC, ES, SF		
15,100.00	8,900.01	8,841.64	8,871.73	73.11	54.08	-87.21	-283.31	6,494.05	585.31	460.17	125.15	4.677			
15,200.00	8,900.01	8,839.09	8,869.19	74.22	54.08	-86.98	-283.43	6,494.12	604.75	481.47	123.28	4.905			
15,300.00	8,900.01	8,836.70	8,866.81	75.32	54.07	-86.78	-283.53	6,494.18	636.22	516.52	119.69	5.315			
15,356.65	8,900.01	8,835.42	8,865.53	75.93	54.07	-86.69	-283.59	6,494.22	658.74	541.59	117.15	5.623			
15,400.00	8,900.01	8,834.46	8,864.57	76.40	54.07	-86.59	-283.64	6,494.24	678.29	563.22	115.07	5.894			
15,500.00	8,900.01	8,832.25	8,862.36	77.49	54.06	-86.38	-283.74	6,494.30	731.24	621.08	110.15	6.638			
15,600.00	8,900.01	8,830.04	8,860.15	78.57	54.06	-86.17	-283.84	6,494.36	793.30	687.86	105.44	7.523			
15,700.00	8,900.01	8,827.83	8,857.95	79.66	54.06	-85.96	-283.94	6,494.42	862.52	761.31	101.21	8.522			
15,800.00	8,900.01	8,825.62	8,855.74	80.75	54.05	-85.74	-284.04	6,494.47	937.30	839.77	97.54	9.610			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - H F 7 FEDERAL COM 001 - 345° WB - 345° WP													Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Offset Depth (usft)	Vertical Offset Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
14,300.00	8,900.01	8,853.44	8,883.53	64.27	54.10	-88.45	-262.45	6,542.81	936.86	845.92	90.95	10.301		
14,400.00	8,900.01	8,851.57	8,881.65	65.37	54.10	-88.28	-262.55	6,542.83	863.42	768.44	94.98	9.091		
14,500.00	8,900.01	8,849.69	8,879.78	66.47	54.09	-88.10	-262.64	6,542.86	795.78	696.03	99.74	7.978		
14,600.00	8,900.01	8,847.82	8,877.91	67.57	54.09	-87.92	-262.74	6,542.89	735.54	630.37	105.18	6.993		
14,700.00	8,900.01	8,845.94	8,876.04	68.68	54.09	-87.75	-262.83	6,542.91	684.68	573.63	111.04	6.166		
14,799.97	8,900.01	8,844.07	8,874.16	69.78	54.08	-87.57	-262.93	6,542.94	645.40	528.56	116.85	5.524		
14,806.65	8,900.01	8,843.94	8,874.04	69.85	54.08	-87.56	-262.93	6,542.94	643.25	526.03	117.21	5.488		
14,900.00	8,900.01	8,842.27	8,872.36	70.89	54.08	-87.38	-263.02	6,542.96	618.41	496.57	121.84	5.076		
15,000.00	8,900.01	8,840.64	8,870.74	72.00	54.08	-87.21	-263.10	6,542.98	603.42	478.17	125.25	4.818		
15,065.91	8,900.01	8,839.66	8,869.76	72.73	54.08	-87.11	-263.15	6,543.00	600.57	474.22	126.35	4.753 CC, ES		
15,100.00	8,900.01	8,839.18	8,869.29	73.11	54.08	-87.07	-263.17	6,543.00	601.33	474.80	126.53	4.753 SF		
15,200.00	8,900.01	8,837.90	8,868.01	74.22	54.07	-86.96	-263.24	6,543.02	612.28	486.75	125.53	4.877		
15,300.00	8,900.01	8,836.80	8,866.91	75.32	54.07	-86.88	-263.29	6,543.03	635.59	513.04	122.55	5.186		
15,356.65	8,900.01	8,836.26	8,866.37	75.93	54.07	-86.85	-263.32	6,543.04	653.79	533.60	120.19	5.439		
15,400.00	8,900.01	8,835.87	8,865.97	76.40	54.07	-86.81	-263.34	6,543.05	670.23	552.06	118.17	5.672		
15,500.00	8,900.01	8,834.96	8,865.07	77.49	54.07	-86.73	-263.39	6,543.06	716.78	603.63	113.15	6.335		
15,600.00	8,900.01	8,834.05	8,864.16	78.57	54.07	-86.64	-263.43	6,543.07	773.51	665.41	108.11	7.155		
15,700.00	8,900.01	8,833.14	8,863.25	79.66	54.07	-86.56	-263.48	6,543.08	838.38	734.95	103.42	8.106		
15,800.00	8,900.01	8,832.23	8,862.34	80.75	54.06	-86.47	-263.53	6,543.10	909.63	810.35	99.28	9.162		
15,900.00	8,900.01	8,831.32	8,861.44	81.84	54.06	-86.39	-263.57	6,543.11	985.89	890.18	95.71	10.301		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - VALKYRIE 12 WXY FEDERAL COM 007H - OWB - AWP														Offset Site Error:	0.00 usft
Survey Program: 237-r.5 MWD+IFR1												Rule Assigned:		Offset Well Error:	0.00 usft
Reference				Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)			
4,300.00	4,245.16	4,362.33	4,342.39	9.33	14.43	-66.22	-542.20	1,144.68	991.79	969.22	22.57	43.944			
4,400.00	4,342.16	4,455.27	4,434.38	9.51	14.79	-68.03	-531.63	1,136.66	972.35	949.51	22.85	42.559			
4,500.00	4,439.17	4,550.54	4,528.61	9.69	15.15	-69.97	-520.40	1,128.27	953.81	930.72	23.10	41.299			
4,600.00	4,536.18	4,646.48	4,623.47	9.87	15.53	-72.00	-509.05	1,119.53	936.16	912.84	23.32	40.144			
4,674.61	4,608.56	4,716.91	4,693.08	9.99	15.81	-73.53	-500.64	1,112.88	923.56	900.11	23.45	39.380			
4,700.00	4,633.20	4,740.02	4,715.92	10.02	15.90	-74.00	-497.88	1,110.69	919.45	895.96	23.49	39.149			
4,800.00	4,730.51	4,827.04	4,801.96	10.21	16.25	-75.75	-487.60	1,102.65	904.55	880.90	23.64	38.260			
4,900.00	4,828.21	4,915.20	4,889.33	10.39	16.59	-77.42	-478.34	1,095.44	892.14	868.35	23.78	37.511			
5,000.00	4,926.27	5,015.60	4,988.99	10.57	16.98	-79.20	-469.22	1,087.33	881.09	857.14	23.95	36.787			
5,100.00	5,024.66	5,111.29	5,083.90	10.75	17.36	-80.85	-460.51	1,078.92	870.60	846.50	24.10	36.123			
5,200.00	5,123.35	5,205.73	5,177.68	10.93	17.73	-82.38	-452.23	1,071.36	861.88	837.64	24.24	35.558			
5,300.00	5,222.30	5,305.38	5,276.38	11.10	18.14	-84.05	-441.92	1,062.37	853.52	829.16	24.36	35.040			
5,400.00	5,321.48	5,399.38	5,369.43	11.27	18.52	-85.60	-431.51	1,053.99	846.39	821.94	24.45	34.624			
5,500.00	5,420.88	5,493.64	5,462.50	11.44	18.91	-87.18	-419.41	1,045.27	840.27	815.77	24.50	34.296			
5,600.00	5,520.45	5,587.04	5,554.61	11.60	19.29	-88.73	-406.49	1,036.80	835.44	810.91	24.54	34.050			
5,700.00	5,620.17	5,681.40	5,647.85	11.76	19.67	-90.14	-394.40	1,028.85	831.61	807.03	24.58	33.836			
5,800.00	5,720.00	5,782.60	5,748.07	11.92	20.08	-91.45	-382.63	1,021.05	828.57	803.92	24.65	33.616			
5,900.00	5,819.92	5,893.37	5,857.78	12.06	20.53	-92.73	-370.74	1,011.52	824.74	799.97	24.76	33.307			
6,000.00	5,919.89	5,996.39	5,959.82	12.19	20.95	-93.78	-360.45	1,001.71	820.01	795.12	24.89	32.946			
6,080.11	6,000.00	6,078.46	6,041.15	12.25	21.28	-95.45	-352.83	993.88	816.10	791.12	24.98	32.667			
6,100.00	6,019.89	6,098.91	6,061.41	12.25	21.37	-95.26	-350.82	991.82	815.09	790.09	24.99	32.610			
6,200.00	6,119.89	6,204.34	6,165.75	12.31	21.81	-96.27	-340.54	980.78	809.73	784.60	25.13	32.227			
6,300.00	6,219.89	6,308.60	6,268.81	12.37	22.25	-97.24	-330.24	968.81	803.73	778.49	25.24	31.840			
6,400.00	6,319.89	6,397.83	6,357.14	12.42	22.63	-98.00	-322.01	959.27	798.38	773.05	25.34	31.510			
6,500.00	6,419.89	6,493.40	6,451.96	12.47	23.02	-98.60	-314.09	950.38	794.03	768.59	25.44	31.214			
6,600.00	6,519.89	6,588.61	6,546.63	12.52	23.40	-99.00	-307.46	942.70	790.30	764.75	25.55	30.933			
6,700.00	6,619.89	6,677.82	6,635.48	12.58	23.74	-99.30	-302.07	936.94	787.62	761.98	25.64	30.717			
6,800.00	6,719.89	6,775.53	6,732.71	12.63	24.13	-99.60	-294.74	930.67	785.80	760.07	25.72	30.547			
6,900.00	6,819.89	6,867.00	6,823.47	12.68	24.50	-99.80	-285.59	923.94	784.60	758.84	25.76	30.454			
6,979.46	6,899.35	6,943.73	6,899.35	12.73	24.83	-99.90	-276.01	917.70	784.29	758.51	25.78	30.420			
7,000.00	6,919.89	6,962.88	6,918.23	12.74	24.91	-99.90	-273.30	916.02	784.31	758.53	25.78	30.420			
7,100.00	7,019.89	7,057.51	7,011.76	12.79	25.31	-99.90	-260.89	908.78	784.97	759.17	25.80	30.424			
7,200.00	7,119.89	7,166.34	7,119.62	12.84	25.76	-99.90	-248.63	901.20	785.45	759.58	25.87	30.362			
7,285.52	7,205.41	7,253.16	7,205.41	12.89	26.14	-99.90	-237.72	893.57	785.41	759.49	25.92	30.300			
7,300.00	7,219.89	7,266.60	7,218.66	12.90	26.19	-99.90	-235.87	892.27	785.42	759.50	25.93	30.292			
7,400.00	7,319.89	7,362.39	7,313.06	12.95	26.61	-99.90	-222.33	883.19	786.08	760.10	25.99	30.247			
7,500.00	7,419.89	7,469.09	7,418.58	13.01	27.06	-99.90	-209.43	874.07	786.59	760.50	26.09	30.145			
7,600.00	7,519.89	7,576.46	7,525.13	13.07	27.50	-99.90	-199.20	865.72	786.39	760.17	26.22	29.987			
7,700.00	7,619.89	7,686.55	7,634.53	13.12	27.94	-99.90	-190.64	856.98	785.15	758.77	26.38	29.763			
7,800.00	7,719.89	7,794.91	7,741.97	13.18	28.40	-99.90	-181.72	846.10	782.76	756.21	26.55	29.487			
7,900.00	7,819.89	7,897.73	7,843.41	13.23	28.86	-99.90	-171.30	832.95	779.78	753.07	26.72	29.187			
8,000.00	7,919.89	7,983.00	7,927.42	13.29	29.23	-99.90	-161.80	821.85	777.68	750.82	26.87	28.945			
8,044.50	7,964.39	8,020.43	7,964.38	13.32	29.39	-99.90	-157.61	817.68	777.47	750.53	26.94	28.860			
8,100.00	8,019.89	8,067.50	8,010.89	13.35	29.60	-99.90	-152.19	812.89	777.79	750.76	27.03	28.773			
8,200.00	8,119.89	8,166.58	8,108.77	13.41	30.02	-99.90	-140.20	803.34	779.41	752.16	27.24	28.610			
8,300.00	8,219.89	8,269.92	8,210.69	13.46	30.47	-99.90	-127.34	792.02	780.66	753.16	27.49	28.396			
8,400.00	8,319.89	8,363.08	8,302.44	13.52	30.89	-99.90	-115.33	781.32	782.25	754.49	27.76	28.182			
8,499.98	8,419.87	8,461.07	8,398.69	13.58	31.33	-99.90	-101.33	769.40	784.81	756.73	28.08	27.950			
8,502.65	8,422.54	8,463.74	8,401.31	13.58	31.34	-99.90	-100.96	769.08	784.88	756.79	28.09	27.943			
8,525.00	8,444.88	8,485.72	8,422.92	13.59	31.45	-99.90	-97.90	766.47	785.15	756.99	28.16	27.882			
8,550.00	8,469.81	8,509.75	8,446.60	13.60	31.57	-99.90	-94.77	763.88	784.68	756.44	28.25	27.781			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - VALKYRIE 12 WXY FEDERAL COM 007H - OWB - AWP														Offset Site Error:	0.00 usft
Survey Program: 237-r.5 MWD+IFR1												Rule Assigned:		Offset Well Error:	0.00 usft
Reference				Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
8,575.00	8,494.61	8,533.73	8,470.31	13.62	31.69	-50.01	-91.93	761.63	783.41	755.07	28.34	27.643			
8,600.00	8,519.22	8,557.64	8,494.00	13.63	31.81	-50.66	-89.36	759.73	781.36	752.91	28.45	27.468			
8,625.00	8,543.55	8,583.15	8,519.34	13.65	31.92	-51.47	-86.94	758.06	778.53	749.97	28.56	27.255			
8,650.00	8,567.56	8,611.12	8,547.19	13.66	32.05	-52.46	-84.75	756.61	774.86	746.16	28.70	27.002			
8,675.00	8,591.17	8,638.91	8,574.91	13.68	32.17	-53.58	-83.08	755.54	770.34	741.50	28.84	26.709			
8,700.00	8,614.32	8,666.62	8,602.58	13.70	32.28	-54.85	-81.91	754.86	765.01	736.01	29.00	26.379			
8,725.00	8,636.94	8,696.53	8,632.47	13.72	32.37	-56.37	-81.04	754.23	758.87	729.71	29.16	26.023			
8,750.00	8,658.97	8,725.48	8,661.41	13.74	32.45	-58.07	-80.44	753.47	751.94	722.59	29.34	25.624			
8,775.00	8,680.36	8,753.37	8,689.29	13.76	32.53	-59.96	-80.10	752.62	744.29	714.74	29.55	25.184			
8,800.00	8,701.04	8,776.51	8,712.42	13.79	32.58	-61.85	-79.97	751.84	736.07	706.29	29.78	24.721			
8,825.00	8,720.95	8,797.62	8,733.51	13.81	32.62	-63.82	-79.93	751.15	727.43	697.41	30.02	24.229			
8,850.00	8,740.05	8,817.83	8,753.71	13.84	32.66	-65.90	-79.96	750.52	718.46	688.16	30.31	23.708			
8,875.00	8,758.28	8,837.10	8,772.97	13.86	32.70	-68.07	-80.06	749.93	709.26	678.63	30.63	23.158			
8,900.00	8,775.59	8,855.38	8,791.24	13.90	32.74	-70.31	-80.20	749.39	699.90	668.91	30.99	22.584			
8,925.00	8,791.93	8,870.83	8,806.69	13.93	32.76	-72.47	-80.35	748.96	690.51	659.11	31.40	21.992			
8,950.00	8,807.25	8,885.38	8,821.23	13.97	32.77	-74.63	-80.49	748.57	681.19	649.34	31.86	21.384			
8,975.00	8,821.53	8,898.93	8,834.78	14.01	32.79	-76.77	-80.64	748.24	672.06	639.69	32.36	20.765			
9,000.00	8,834.70	8,911.46	8,847.30	14.06	32.80	-78.84	-80.77	747.95	663.19	630.26	32.93	20.140			
9,025.00	8,846.75	8,922.91	8,858.75	14.11	32.81	-80.83	-80.90	747.70	654.70	621.15	33.55	19.514			
9,050.00	8,857.64	8,933.26	8,869.10	14.17	32.83	-82.70	-81.02	747.49	646.67	612.45	34.23	18.894			
9,075.00	8,867.33	8,942.46	8,878.30	14.24	32.84	-84.43	-81.13	747.31	639.22	604.26	34.95	18.287			
9,100.00	8,875.81	8,949.00	8,884.83	14.31	32.84	-85.85	-81.21	747.19	632.42	596.68	35.74	17.695			
9,125.00	8,883.04	8,956.71	8,892.54	14.39	32.84	-87.29	-81.31	747.06	626.37	589.81	36.56	17.134			
9,150.00	8,889.01	8,961.92	8,897.75	14.48	32.84	-88.40	-81.37	746.97	621.15	583.73	37.42	16.601			
9,175.00	8,893.70	8,965.98	8,901.81	14.57	32.83	-89.30	-81.41	746.91	616.83	578.52	38.30	16.103			
9,200.00	8,897.10	8,968.86	8,904.69	14.67	32.83	-89.98	-81.44	746.87	613.45	574.25	39.21	15.646			
9,225.00	8,899.20	8,970.53	8,906.36	14.77	32.83	-90.42	-81.46	746.85	611.08	570.96	40.12	15.231			
9,250.00	8,900.00	8,970.97	8,906.80	14.88	32.83	-90.63	-81.47	746.85	609.72	568.69	41.03	14.861			
9,252.65	8,900.01	8,970.95	8,906.78	14.89	32.83	-90.64	-81.47	746.85	609.64	568.51	41.12	14.824			
9,270.36	8,900.01	8,970.73	8,906.56	14.97	32.83	-90.62	-81.46	746.85	609.38	567.62	41.76	14.592 CC			
9,300.00	8,900.01	8,970.35	8,906.18	15.11	32.83	-90.58	-81.46	746.85	610.10	567.30	42.80	14.256 ES			
9,400.00	8,900.01	8,969.05	8,904.88	15.64	32.83	-90.46	-81.44	746.87	623.01	577.07	45.95	13.559			
9,500.00	8,900.01	8,967.69	8,903.52	16.24	32.83	-90.33	-81.43	746.89	651.20	602.85	48.35	13.470 SF			
9,600.00	8,900.01	8,966.26	8,902.09	16.89	32.83	-90.20	-81.41	746.91	692.80	642.86	49.94	13.872			
9,700.00	8,900.01	8,964.77	8,900.60	17.58	32.83	-90.06	-81.40	746.93	745.58	694.73	50.85	14.662			
9,800.00	8,900.01	8,963.20	8,899.03	18.32	32.84	-89.91	-81.38	746.95	807.34	756.08	51.25	15.752			
9,900.00	8,900.01	8,961.55	8,897.38	19.09	32.84	-89.75	-81.36	746.98	876.18	824.87	51.32	17.074			
10,000.00	8,900.01	8,959.82	8,895.65	19.89	32.84	-89.59	-81.34	747.01	950.57	899.41	51.17	18.578			

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - VALKYRIE 12 WXY FEDERAL COM 011H - OWB - AWP														Offset Site Error:	0.00 usft		
Survey Program: 237-r.5 MWD+IFR1														Rule Assigned:		Offset Well Error:	0.00 usft
Reference				Offset				Semi Major Axis		Offset Wellbore Centre		Distance		Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)						
5,100.00	5,024.66	5,096.80	5,048.48	10.75	18.41	-33.02	-1,214.47	1,009.62	989.88	967.83	22.05	44.883					
5,200.00	5,123.35	5,190.66	5,141.50	10.93	18.79	-32.69	-1,223.03	1,000.53	974.13	951.77	22.36	43.557					
5,300.00	5,222.30	5,286.06	5,236.00	11.10	19.17	-32.28	-1,232.38	991.38	960.33	937.66	22.67	42.358					
5,400.00	5,321.48	5,386.97	5,335.87	11.27	19.59	-31.75	-1,242.80	981.35	948.10	925.12	22.98	41.258					
5,500.00	5,420.88	5,496.96	5,444.80	11.44	20.04	-31.15	-1,253.35	970.34	936.91	913.62	23.29	40.227					
5,600.00	5,520.45	5,600.58	5,547.38	11.60	20.46	-30.51	-1,262.35	958.89	925.89	902.30	23.59	39.245					
5,700.00	5,620.17	5,698.13	5,644.04	11.76	20.85	-29.89	-1,270.68	948.60	916.77	892.88	23.89	38.380					
5,800.00	5,720.00	5,806.35	5,751.21	11.92	21.29	-29.12	-1,279.80	936.73	908.87	884.69	24.18	37.585					
5,900.00	5,819.92	5,904.92	5,848.65	12.06	21.70	-28.28	-1,288.48	924.61	901.90	877.43	24.47	36.854					
6,000.00	5,919.89	6,001.76	5,944.41	12.19	22.10	-27.42	-1,297.11	913.01	896.95	872.19	24.76	36.233					
6,080.11	6,000.00	6,078.15	6,019.96	12.25	22.42	133.23	-1,303.94	904.09	894.45	869.51	24.94	35.865					
6,100.00	6,019.89	6,097.02	6,038.64	12.25	22.50	133.40	-1,305.62	901.95	894.02	869.05	24.97	35.801					
6,200.00	6,119.89	6,200.35	6,140.76	12.31	22.94	134.40	-1,315.31	889.58	891.87	866.66	25.21	35.381					
6,300.00	6,219.89	6,295.53	6,234.61	12.37	23.34	135.41	-1,325.10	877.12	889.83	864.39	25.44	34.974					
6,400.00	6,319.89	6,392.49	6,330.30	12.42	23.76	136.41	-1,334.99	864.99	888.43	862.75	25.69	34.588					
6,500.00	6,419.89	6,494.47	6,431.20	12.47	24.19	137.36	-1,344.15	853.39	887.21	861.29	25.93	34.219					
6,600.00	6,519.89	6,590.48	6,526.46	12.52	24.58	138.14	-1,351.48	843.91	886.21	860.06	26.16	33.882					
6,696.07	6,615.96	6,681.00	6,616.42	12.57	24.93	138.79	-1,357.78	836.10	885.72	859.35	26.37	33.588					
6,700.00	6,619.89	6,681.00	6,616.42	12.58	24.93	138.79	-1,357.78	836.10	885.73	859.35	26.38	33.579					
6,800.00	6,719.89	6,775.00	6,709.79	12.63	25.31	139.48	-1,365.30	828.33	886.39	859.77	26.61	33.306					
6,900.00	6,819.89	6,866.01	6,799.83	12.68	25.73	140.33	-1,375.04	819.44	888.28	861.39	26.89	33.036					
7,000.00	6,919.89	6,971.41	6,903.85	12.74	26.18	141.42	-1,387.36	807.68	890.34	863.13	27.21	32.725					
7,100.00	7,019.89	7,078.18	7,009.62	12.79	26.65	142.35	-1,397.59	797.34	891.91	864.40	27.51	32.423					
7,200.00	7,119.89	7,192.37	7,122.81	12.84	27.12	143.31	-1,406.96	785.59	892.22	864.41	27.81	32.083					
7,300.00	7,219.89	7,296.28	7,225.72	12.90	27.54	144.24	-1,414.96	773.56	891.58	863.47	28.11	31.713					
7,400.00	7,319.89	7,397.26	7,325.71	12.95	27.96	145.14	-1,422.59	761.78	891.00	862.58	28.42	31.348					
7,500.00	7,419.89	7,496.61	7,424.20	13.01	28.36	145.98	-1,429.41	750.68	890.34	861.61	28.73	30.993					
7,600.00	7,519.89	7,593.41	7,520.37	13.07	28.74	146.69	-1,435.33	741.34	890.08	861.06	29.02	30.674					
7,613.63	7,533.52	7,606.63	7,533.52	13.07	28.80	146.78	-1,436.08	740.19	890.07	861.02	29.06	30.633					
7,700.00	7,619.89	7,692.28	7,618.78	13.12	29.12	147.31	-1,440.63	733.32	890.15	860.86	29.29	30.389					
7,800.00	7,719.89	7,791.87	7,718.04	13.18	29.49	147.82	-1,445.07	726.63	890.31	860.77	29.55	30.133					
7,900.00	7,819.89	7,899.48	7,825.46	13.23	29.85	148.23	-1,448.32	721.23	890.22	860.47	29.75	29.919					
8,000.00	7,919.89	7,997.21	7,923.13	13.29	30.13	148.44	-1,449.52	718.19	889.64	859.73	29.92	29.738					
8,100.00	8,019.89	8,094.40	8,020.32	13.35	30.22	148.48	-1,449.73	717.47	889.44	859.43	30.01	29.638					
8,120.42	8,040.31	8,114.39	8,040.31	13.36	30.22	148.48	-1,449.73	717.48	889.44	859.41	30.03	29.620					
8,200.00	8,119.89	8,192.52	8,118.44	13.41	30.20	148.48	-1,449.77	717.54	889.50	859.40	30.10	29.547					
8,300.00	8,219.89	8,291.71	8,217.63	13.46	30.28	148.48	-1,449.98	717.58	889.71	859.46	30.26	29.404					
8,400.00	8,319.89	8,390.44	8,316.35	13.52	30.45	148.51	-1,450.45	717.43	890.03	859.60	30.43	29.246					
8,499.98	8,419.87	8,486.91	8,412.82	13.58	30.62	148.54	-1,451.17	717.33	890.63	860.00	30.62	29.085					
8,502.65	8,422.54	8,489.47	8,415.38	13.58	30.62	148.54	-1,451.20	717.33	890.65	860.02	30.63	29.081					
8,525.00	8,444.88	8,510.90	8,436.81	13.59	30.63	58.66	-1,451.38	717.39	890.57	859.90	30.67	29.038					
8,550.00	8,469.81	8,534.82	8,460.73	13.60	30.65	58.83	-1,451.57	717.51	889.86	859.12	30.73	28.953					
8,575.00	8,494.61	8,558.64	8,484.54	13.62	30.67	59.13	-1,451.76	717.70	888.51	857.69	30.81	28.834					
8,600.00	8,519.22	8,582.37	8,508.27	13.63	30.68	59.56	-1,451.94	717.95	886.53	855.62	30.91	28.683					
8,625.00	8,543.55	8,606.01	8,531.91	13.65	30.69	60.12	-1,452.12	718.23	883.93	852.91	31.01	28.500					
8,650.00	8,567.56	8,629.36	8,555.26	13.66	30.66	60.82	-1,452.31	718.54	880.74	849.60	31.14	28.285					
8,675.00	8,591.17	8,652.36	8,578.26	13.68	30.65	61.64	-1,452.50	718.87	876.98	845.70	31.28	28.039					
8,700.00	8,614.32	8,669.00	8,594.89	13.70	30.65	62.45	-1,452.64	719.12	872.71	841.27	31.44	27.756					
8,725.00	8,636.94	8,694.60	8,620.49	13.72	30.63	63.59	-1,452.87	719.60	867.95	836.33	31.61	27.455					
8,750.00	8,658.97	8,714.37	8,640.25	13.74	30.61	64.71	-1,453.08	720.07	862.81	831.00	31.81	27.122					
8,775.00	8,680.36	8,733.68	8,659.55	13.76	30.60	65.92	-1,453.29	720.62	857.32	825.29	32.03	26.765					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_VALKYRIE FED COM 552H
Project:	EDDY COUNTY_DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Offset Design: VALKYRIE FED COM - VALKYRIE 12 WXY FEDERAL COM 011H - OWB - AWP														Offset Site Error: 0.00 usft
Survey Program: 237-r.5 MWD+IFR1														Offset Well Error: 0.00 usft
Reference				Semi Major Axis		Highside		Offset Wellbore Centre		Distance			Rule Assigned:	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor		
8,800.00	8,701.04	8,752.49	8,678.35	13.79	30.59	67.22	-1,453.52	721.23	851.52	819.25	32.27	26.386		
8,825.00	8,720.95	8,770.90	8,696.75	13.81	30.57	68.60	-1,453.75	721.91	845.47	812.93	32.54	25.985		
8,850.00	8,740.05	8,788.90	8,714.73	13.84	30.55	70.06	-1,453.98	722.67	839.22	806.39	32.82	25.567		
8,875.00	8,758.28	8,806.29	8,732.09	13.86	30.52	71.57	-1,454.20	723.49	832.82	799.68	33.14	25.132		
8,900.00	8,775.59	8,823.03	8,748.81	13.90	30.50	73.12	-1,454.41	724.37	826.34	792.87	33.48	24.684		
8,925.00	8,791.93	8,839.07	8,764.83	13.93	30.48	74.70	-1,454.61	725.28	819.85	786.01	33.84	24.225		
8,950.00	8,807.25	8,857.00	8,782.72	13.97	30.46	76.42	-1,454.83	726.39	813.41	779.19	34.23	23.765		
8,975.00	8,821.53	8,869.99	8,795.68	14.01	30.44	77.92	-1,454.99	727.23	807.09	772.43	34.65	23.291		
9,000.00	8,834.70	8,884.78	8,810.44	14.06	30.41	79.54	-1,455.16	728.18	800.94	765.84	35.10	22.821		
9,025.00	8,846.75	8,898.48	8,824.11	14.11	30.39	81.10	-1,455.31	729.07	795.04	759.47	35.57	22.353		
9,050.00	8,857.64	8,911.04	8,836.64	14.17	30.37	82.58	-1,455.45	729.89	789.48	753.42	36.07	21.890		
9,075.00	8,867.33	8,922.42	8,848.01	14.24	30.35	83.96	-1,455.57	730.63	784.33	747.74	36.59	21.436		
9,100.00	8,875.81	8,932.61	8,858.17	14.31	30.34	85.22	-1,455.67	731.29	779.67	742.53	37.14	20.995		
9,125.00	8,883.04	8,941.57	8,867.11	14.39	30.32	86.34	-1,455.76	731.88	775.56	737.86	37.70	20.571		
9,150.00	8,889.01	8,949.27	8,874.79	14.48	30.31	87.31	-1,455.84	732.38	772.07	733.78	38.28	20.167		
9,175.00	8,893.70	8,955.61	8,881.12	14.57	30.30	88.11	-1,455.90	732.80	769.24	730.37	38.88	19.787		
9,200.00	8,897.10	8,960.63	8,886.13	14.67	30.29	88.73	-1,455.94	733.13	767.14	727.66	39.48	19.433		
9,225.00	8,899.20	8,964.36	8,889.85	14.77	30.28	89.17	-1,455.98	733.37	765.79	725.72	40.08	19.107		
9,250.00	8,900.00	8,966.80	8,892.28	14.88	30.28	89.42	-1,456.00	733.53	765.23	724.55	40.68	18.811		
9,252.65	8,900.01	8,966.98	8,892.46	14.89	30.28	89.44	-1,456.01	733.55	765.22	724.47	40.74	18.782		
9,255.16	8,900.01	8,967.14	8,892.62	14.90	30.28	89.45	-1,456.01	733.56	765.21	724.41	40.80	18.754 CC, ES		
9,300.00	8,900.01	8,970.08	8,895.56	15.11	30.27	89.67	-1,456.04	733.75	766.52	724.66	41.86	18.313		
9,400.00	8,900.01	8,976.64	8,902.11	15.64	30.26	90.16	-1,456.10	734.18	778.74	734.71	44.03	17.686		
9,500.00	8,900.01	8,983.21	8,908.65	16.24	30.25	90.65	-1,456.16	734.61	803.27	757.43	45.84	17.525 SF		
9,600.00	8,900.01	8,989.77	8,915.20	16.89	30.24	91.14	-1,456.22	735.04	839.02	791.81	47.21	17.772		
9,700.00	8,900.01	8,996.33	8,921.75	17.58	30.23	91.63	-1,456.28	735.47	884.63	836.46	48.17	18.364		
9,800.00	8,900.01	9,002.89	8,928.29	18.32	30.22	92.12	-1,456.35	735.90	938.68	889.90	48.78	19.243		
9,900.00	8,900.01	9,009.45	8,934.84	19.09	30.21	92.61	-1,456.41	736.33	999.79	950.68	49.11	20.358		

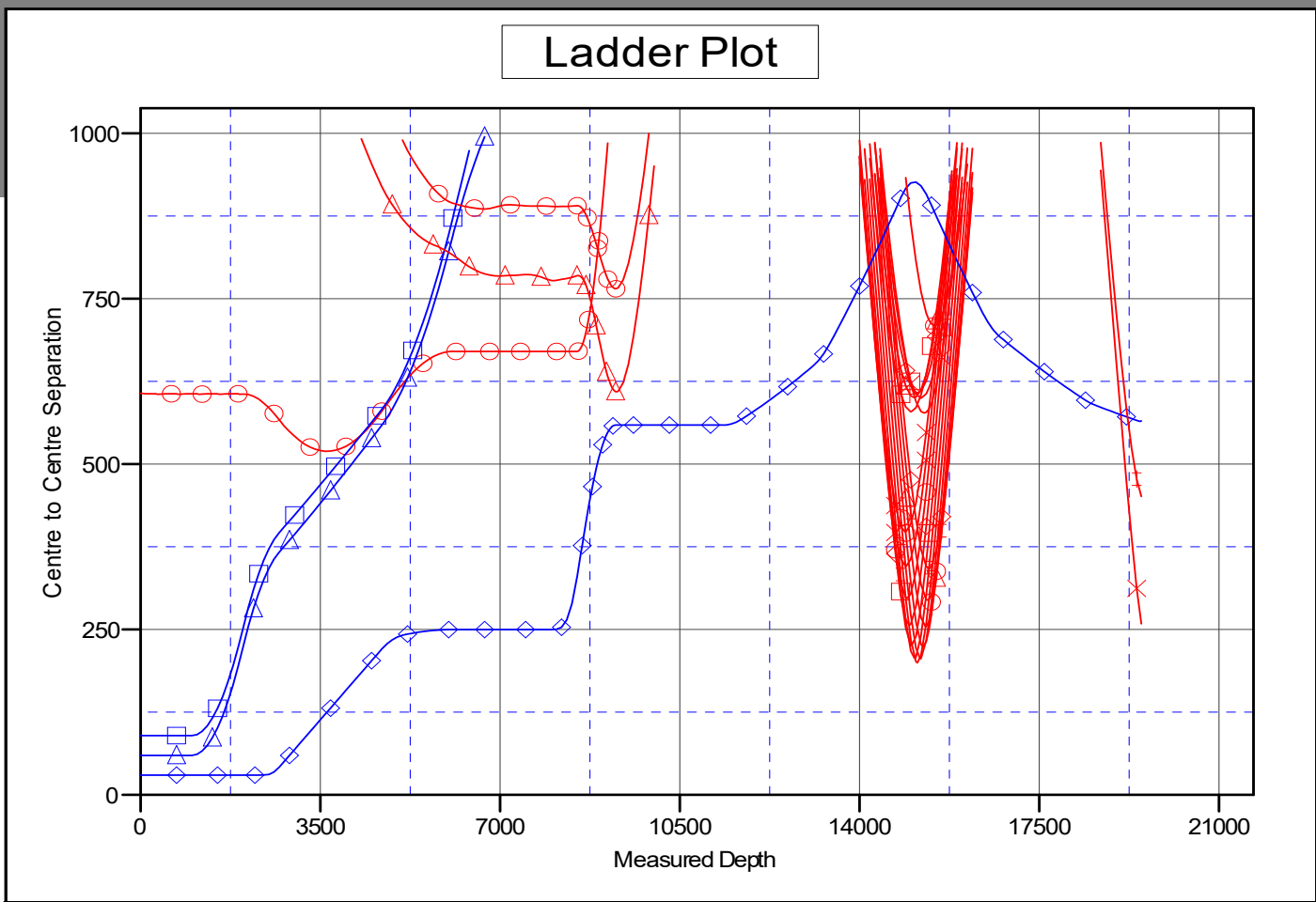
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB @ 3023.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _VALKYRIE FED COM 552H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.15°



LEGEND

- | | | |
|---|--|--|
| <ul style="list-style-type: none"> H F 7 FEDERAL COM 001, 180° WB, 180° WP V0 H F 7 FEDERAL COM 001, 15° WB, 15° WP V0 H F 7 FEDERAL COM 001, 150° WB, 150° WP V0 H F 7 FEDERAL COM 001, 0° WB, 0° WP V0 H F 7 FEDERAL COM 001, 270° WB, 270° WP V0 H F 7 FEDERAL COM 001, 135° WB, 135° WP V0 H F 7 FEDERAL COM 001, 210° WB, 210° WP V0 H F 7 FEDERAL COM 001, 165° WB, 165° WP V0 H F 7 FEDERAL COM 001, 225° WB, 225° WP V0 | <ul style="list-style-type: none"> H F 7 FEDERAL COM 001, 330° WB, 330° WP V0 H F 7 FEDERAL COM 001, 240° WB, 240° WP V0 ASTRODOG FEE 0809 133H, QWB, AWP V0 H F 7 FEDERAL COM 001, 105° WB, 105° WP V0 H F 7 FEDERAL COM 001, 255° WB, 255° WP V0 H F 7 FEDERAL COM 001, 345° WB, 345° WP V0 H F 7 FEDERAL COM 001, 30° WB, 30° WP V0 H F 7 FEDERAL COM 001, 195° WB, 195° WP V0 H F 7 FEDERAL COM 001, 120° WB, 120° WP V0 | <ul style="list-style-type: none"> AMOCO FEDERAL 11 001_PA OWB, AWP V0 _VALKYRIE FED COM 501H, QWB, PWPOr V0 _VALKYRIE FED COM 502H, QWB, PWPOr V0 _VALKYRIE FED COM 551H, QWB, PWPOr V0 ASTRODOG FEE 0809 213H, QWB, AWP V0 ASTRODOG FEE 0809 224H, QWB, AWP V0 VALKYRIE 12 WXY FEDERALCOM 007H, OWB, AWP V0 VALKYRIE 12 WXY FEDERALCOM 011H, OWB, AWP V0 |
|---|--|--|

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	RKB @ 3023.00usft
Reference Site:	VALKYRIE FED COM	MD Reference:	RKB @ 3023.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWPO	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB @ 3023.00usft

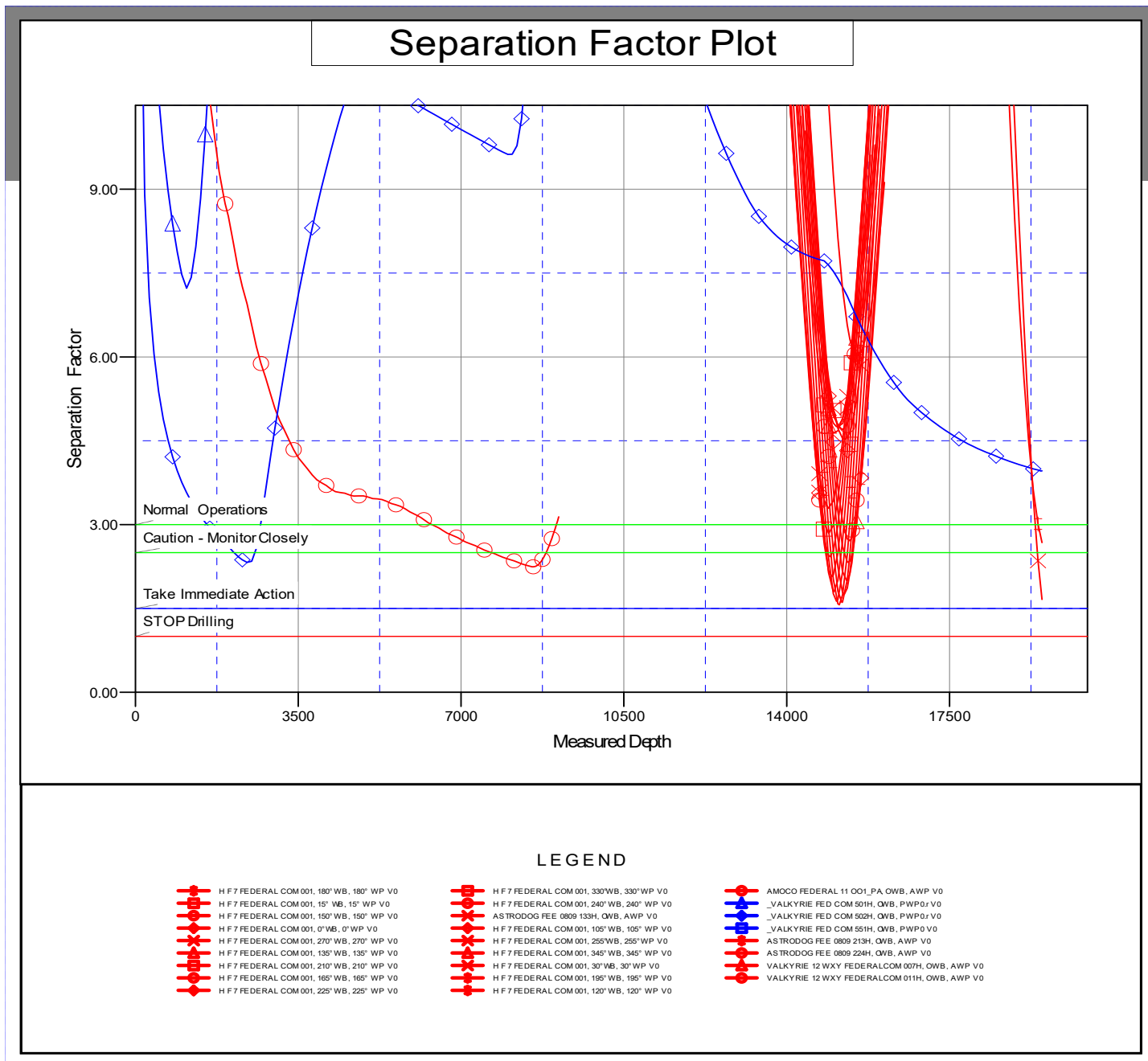
Coordinates are relative to: _VALKYRIE FED COM 552H

Offset Depths are relative to Offset Datum

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

Central Meridian is 104° 20' 0.000 W

Grid Convergence at Surface is: 0.15°



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

DELAWARE BASIN WEST

EDDY COUNTY _DBW_NM_E

VALKYRIE FED COM

_VALKYRIE FED COM 552H

OWB

Plan: PWP0

Standard Planning Report

20 January, 2026

ConocoPhillips Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY_DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project EDDY COUNTY_DBW_NM_E			
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site VALKYRIE FED COM			
Site Position:		Northing:	478,911.28 usft
From:	Map	Easting:	593,415.17 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 18' 58.612 N
		Longitude:	104° 1' 51.409 W

Well _VALKYRIE FED COM 552H						
Well Position	+N/-S	0.00 usft	Northing:	480,038.64 usft	Latitude:	32° 19' 9.934 N
	+E/-W	0.00 usft	Easting:	587,296.50 usft	Longitude:	104° 3' 2.676 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	2,993.00 usft
Grid Convergence:		0.15 °				

Wellbore OWB					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2025	10/2/2025	6.60	59.91	47,152.95155938

Design PWP0				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	94.35

Plan Survey Tool Program		Date	1/20/2026		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	19,488.00 PWP0 (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG +	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,702.75	14.05	159.94	2,695.72	-80.56	29.42	2.00	2.00	0.00	159.94	
4,674.61	14.05	159.94	4,608.56	-530.38	193.68	0.00	0.00	0.00	0.00	
6,080.11	0.00	0.00	6,000.00	-691.50	252.51	1.00	-1.00	0.00	180.00	
8,502.65	0.00	0.00	8,422.54	-691.50	252.51	0.00	0.00	0.00	0.00	
9,252.65	90.00	89.92	8,900.01	-690.83	729.97	12.00	12.00	0.00	89.92	
13,102.65	90.00	89.92	8,900.01	-685.46	4,579.97	0.00	0.00	0.00	0.00	
13,406.65	90.00	96.00	8,900.01	-701.15	4,883.42	2.00	0.00	2.00	90.00	
14,806.65	90.00	96.00	8,900.01	-847.49	6,275.75	0.00	0.00	0.00	0.00	
15,356.65	90.00	85.00	8,900.01	-852.28	6,824.89	2.00	0.00	-2.00	-90.00	
16,406.65	90.00	85.00	8,900.01	-760.77	7,870.89	0.00	0.00	0.00	0.00	
16,742.65	90.00	91.72	8,900.01	-751.16	8,206.56	2.00	0.00	2.00	90.00	
19,488.00	90.00	91.72	8,900.01	-833.56	10,950.67	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00
45.00	0.00	0.00	45.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	0.00	0.00	60.00	0.00	0.00	0.00	0.00	0.00	0.00
75.00	0.00	0.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00
90.00	0.00	0.00	90.00	0.00	0.00	0.00	0.00	0.00	0.00
105.00	0.00	0.00	105.00	0.00	0.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00
165.00	0.00	0.00	165.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00	0.00
195.00	0.00	0.00	195.00	0.00	0.00	0.00	0.00	0.00	0.00
210.00	0.00	0.00	210.00	0.00	0.00	0.00	0.00	0.00	0.00
225.00	0.00	0.00	225.00	0.00	0.00	0.00	0.00	0.00	0.00
240.00	0.00	0.00	240.00	0.00	0.00	0.00	0.00	0.00	0.00
255.00	0.00	0.00	255.00	0.00	0.00	0.00	0.00	0.00	0.00
270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00
285.00	0.00	0.00	285.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
315.00	0.00	0.00	315.00	0.00	0.00	0.00	0.00	0.00	0.00
330.00	0.00	0.00	330.00	0.00	0.00	0.00	0.00	0.00	0.00
345.00	0.00	0.00	345.00	0.00	0.00	0.00	0.00	0.00	0.00
360.00	0.00	0.00	360.00	0.00	0.00	0.00	0.00	0.00	0.00
375.00	0.00	0.00	375.00	0.00	0.00	0.00	0.00	0.00	0.00
390.00	0.00	0.00	390.00	0.00	0.00	0.00	0.00	0.00	0.00
405.00	0.00	0.00	405.00	0.00	0.00	0.00	0.00	0.00	0.00
420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00
435.00	0.00	0.00	435.00	0.00	0.00	0.00	0.00	0.00	0.00
450.00	0.00	0.00	450.00	0.00	0.00	0.00	0.00	0.00	0.00
465.00	0.00	0.00	465.00	0.00	0.00	0.00	0.00	0.00	0.00
480.00	0.00	0.00	480.00	0.00	0.00	0.00	0.00	0.00	0.00
495.00	0.00	0.00	495.00	0.00	0.00	0.00	0.00	0.00	0.00
510.00	0.00	0.00	510.00	0.00	0.00	0.00	0.00	0.00	0.00
525.00	0.00	0.00	525.00	0.00	0.00	0.00	0.00	0.00	0.00
540.00	0.00	0.00	540.00	0.00	0.00	0.00	0.00	0.00	0.00
555.00	0.00	0.00	555.00	0.00	0.00	0.00	0.00	0.00	0.00
570.00	0.00	0.00	570.00	0.00	0.00	0.00	0.00	0.00	0.00
585.00	0.00	0.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
615.00	0.00	0.00	615.00	0.00	0.00	0.00	0.00	0.00	0.00
630.00	0.00	0.00	630.00	0.00	0.00	0.00	0.00	0.00	0.00
645.00	0.00	0.00	645.00	0.00	0.00	0.00	0.00	0.00	0.00
660.00	0.00	0.00	660.00	0.00	0.00	0.00	0.00	0.00	0.00
675.00	0.00	0.00	675.00	0.00	0.00	0.00	0.00	0.00	0.00
690.00	0.00	0.00	690.00	0.00	0.00	0.00	0.00	0.00	0.00
705.00	0.00	0.00	705.00	0.00	0.00	0.00	0.00	0.00	0.00
720.00	0.00	0.00	720.00	0.00	0.00	0.00	0.00	0.00	0.00
735.00	0.00	0.00	735.00	0.00	0.00	0.00	0.00	0.00	0.00
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
765.00	0.00	0.00	765.00	0.00	0.00	0.00	0.00	0.00	0.00
780.00	0.00	0.00	780.00	0.00	0.00	0.00	0.00	0.00	0.00
795.00	0.00	0.00	795.00	0.00	0.00	0.00	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)	
810.00	0.00	0.00	810.00	0.00	0.00	0.00	0.00	0.00	0.00	
825.00	0.00	0.00	825.00	0.00	0.00	0.00	0.00	0.00	0.00	
840.00	0.00	0.00	840.00	0.00	0.00	0.00	0.00	0.00	0.00	
855.00	0.00	0.00	855.00	0.00	0.00	0.00	0.00	0.00	0.00	
870.00	0.00	0.00	870.00	0.00	0.00	0.00	0.00	0.00	0.00	
885.00	0.00	0.00	885.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
915.00	0.00	0.00	915.00	0.00	0.00	0.00	0.00	0.00	0.00	
930.00	0.00	0.00	930.00	0.00	0.00	0.00	0.00	0.00	0.00	
945.00	0.00	0.00	945.00	0.00	0.00	0.00	0.00	0.00	0.00	
960.00	0.00	0.00	960.00	0.00	0.00	0.00	0.00	0.00	0.00	
975.00	0.00	0.00	975.00	0.00	0.00	0.00	0.00	0.00	0.00	
990.00	0.00	0.00	990.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,005.00	0.00	0.00	1,005.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,020.00	0.00	0.00	1,020.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,035.00	0.00	0.00	1,035.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,065.00	0.00	0.00	1,065.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,080.00	0.00	0.00	1,080.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,095.00	0.00	0.00	1,095.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,110.00	0.00	0.00	1,110.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,125.00	0.00	0.00	1,125.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,140.00	0.00	0.00	1,140.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,155.00	0.00	0.00	1,155.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,170.00	0.00	0.00	1,170.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,185.00	0.00	0.00	1,185.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,215.00	0.00	0.00	1,215.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,230.00	0.00	0.00	1,230.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,245.00	0.00	0.00	1,245.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,260.00	0.00	0.00	1,260.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,275.00	0.00	0.00	1,275.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,290.00	0.00	0.00	1,290.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,305.00	0.00	0.00	1,305.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,320.00	0.00	0.00	1,320.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,335.00	0.00	0.00	1,335.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,350.00	0.00	0.00	1,350.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,365.00	0.00	0.00	1,365.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,380.00	0.00	0.00	1,380.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,395.00	0.00	0.00	1,395.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,410.00	0.00	0.00	1,410.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,425.00	0.00	0.00	1,425.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,440.00	0.00	0.00	1,440.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,455.00	0.00	0.00	1,455.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,470.00	0.00	0.00	1,470.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,485.00	0.00	0.00	1,485.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,515.00	0.00	0.00	1,515.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,530.00	0.00	0.00	1,530.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,545.00	0.00	0.00	1,545.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,560.00	0.00	0.00	1,560.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,575.00	0.00	0.00	1,575.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,590.00	0.00	0.00	1,590.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,605.00	0.00	0.00	1,605.00	0.00	0.00	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,620.00	0.00	0.00	1,620.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,635.00	0.00	0.00	1,635.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,650.00	0.00	0.00	1,650.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,665.00	0.00	0.00	1,665.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,680.00	0.00	0.00	1,680.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,695.00	0.00	0.00	1,695.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,710.00	0.00	0.00	1,710.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,725.00	0.00	0.00	1,725.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,740.00	0.00	0.00	1,740.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,755.00	0.00	0.00	1,755.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,770.00	0.00	0.00	1,770.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,785.00	0.00	0.00	1,785.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,815.00	0.00	0.00	1,815.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,830.00	0.00	0.00	1,830.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,845.00	0.00	0.00	1,845.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,860.00	0.00	0.00	1,860.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,875.00	0.00	0.00	1,875.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,890.00	0.00	0.00	1,890.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,905.00	0.00	0.00	1,905.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,920.00	0.00	0.00	1,920.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,935.00	0.00	0.00	1,935.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,965.00	0.00	0.00	1,965.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,980.00	0.00	0.00	1,980.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,995.00	0.00	0.00	1,995.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,010.00	0.20	159.94	2,010.00	-0.02	0.01	0.01	2.00	2.00	0.00	
2,025.00	0.50	159.94	2,025.00	-0.10	0.04	0.05	2.00	2.00	0.00	
2,040.00	0.80	159.94	2,040.00	-0.26	0.10	0.12	2.00	2.00	0.00	
2,055.00	1.10	159.94	2,055.00	-0.50	0.18	0.22	2.00	2.00	0.00	
2,070.00	1.40	159.94	2,069.99	-0.80	0.29	0.35	2.00	2.00	0.00	
2,085.00	1.70	159.94	2,084.99	-1.18	0.43	0.52	2.00	2.00	0.00	
2,100.00	2.00	159.94	2,099.98	-1.64	0.60	0.72	2.00	2.00	0.00	
2,115.00	2.30	159.94	2,114.97	-2.17	0.79	0.95	2.00	2.00	0.00	
2,130.00	2.60	159.94	2,129.96	-2.77	1.01	1.22	2.00	2.00	0.00	
2,145.00	2.90	159.94	2,144.94	-3.45	1.26	1.52	2.00	2.00	0.00	
2,160.00	3.20	159.94	2,159.92	-4.20	1.53	1.85	2.00	2.00	0.00	
2,175.00	3.50	159.94	2,174.89	-5.02	1.83	2.21	2.00	2.00	0.00	
2,190.00	3.80	159.94	2,189.86	-5.92	2.16	2.60	2.00	2.00	0.00	
2,205.00	4.10	159.94	2,204.83	-6.89	2.51	3.03	2.00	2.00	0.00	
2,220.00	4.40	159.94	2,219.78	-7.93	2.90	3.49	2.00	2.00	0.00	
2,235.00	4.70	159.94	2,234.74	-9.05	3.30	3.98	2.00	2.00	0.00	
2,250.00	5.00	159.94	2,249.68	-10.24	3.74	4.51	2.00	2.00	0.00	
2,265.00	5.30	159.94	2,264.62	-11.50	4.20	5.06	2.00	2.00	0.00	
2,280.00	5.60	159.94	2,279.55	-12.84	4.69	5.65	2.00	2.00	0.00	
2,295.00	5.90	159.94	2,294.48	-14.25	5.21	6.27	2.00	2.00	0.00	
2,310.00	6.20	159.94	2,309.40	-15.74	5.75	6.93	2.00	2.00	0.00	
2,325.00	6.50	159.94	2,324.30	-17.30	6.32	7.61	2.00	2.00	0.00	
2,340.00	6.80	159.94	2,339.20	-18.93	6.91	8.33	2.00	2.00	0.00	
2,355.00	7.10	159.94	2,354.09	-20.63	7.54	9.08	2.00	2.00	0.00	
2,370.00	7.40	159.94	2,368.97	-22.41	8.18	9.86	2.00	2.00	0.00	
2,385.00	7.70	159.94	2,383.84	-24.26	8.86	10.68	2.00	2.00	0.00	
2,400.00	8.00	159.94	2,398.70	-26.19	9.56	11.52	2.00	2.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
2,415.00	8.30	159.94	2,413.55	-28.19	10.29	12.40	2.00	2.00	0.00	
2,430.00	8.60	159.94	2,428.39	-30.26	11.05	13.31	2.00	2.00	0.00	
2,445.00	8.90	159.94	2,443.21	-32.40	11.83	14.26	2.00	2.00	0.00	
2,460.00	9.20	159.94	2,458.03	-34.62	12.64	15.23	2.00	2.00	0.00	
2,475.00	9.50	159.94	2,472.83	-36.91	13.48	16.24	2.00	2.00	0.00	
2,490.00	9.80	159.94	2,487.61	-39.27	14.34	17.28	2.00	2.00	0.00	
2,505.00	10.10	159.94	2,502.39	-41.70	15.23	18.35	2.00	2.00	0.00	
2,520.00	10.40	159.94	2,517.15	-44.21	16.14	19.45	2.00	2.00	0.00	
2,535.00	10.70	159.94	2,531.90	-46.79	17.09	20.59	2.00	2.00	0.00	
2,550.00	11.00	159.94	2,546.63	-49.44	18.05	21.75	2.00	2.00	0.00	
2,565.00	11.30	159.94	2,561.34	-52.17	19.05	22.95	2.00	2.00	0.00	
2,580.00	11.60	159.94	2,576.05	-54.96	20.07	24.18	2.00	2.00	0.00	
2,595.00	11.90	159.94	2,590.73	-57.83	21.12	25.45	2.00	2.00	0.00	
2,610.00	12.20	159.94	2,605.40	-60.77	22.19	26.74	2.00	2.00	0.00	
2,625.00	12.50	159.94	2,620.05	-63.79	23.29	28.07	2.00	2.00	0.00	
2,640.00	12.80	159.94	2,634.69	-66.87	24.42	29.42	2.00	2.00	0.00	
2,655.00	13.10	159.94	2,649.31	-70.03	25.57	30.81	2.00	2.00	0.00	
2,670.00	13.40	159.94	2,663.91	-73.26	26.75	32.23	2.00	2.00	0.00	
2,685.00	13.70	159.94	2,678.49	-76.56	27.96	33.69	2.00	2.00	0.00	
2,700.00	14.00	159.94	2,693.06	-79.93	29.19	35.17	2.00	2.00	0.00	
2,702.75	14.05	159.94	2,695.72	-80.56	29.42	35.45	2.00	2.00	0.00	
2,715.00	14.05	159.94	2,707.61	-83.35	30.44	36.68	0.00	0.00	0.00	
2,730.00	14.05	159.94	2,722.16	-86.78	31.69	38.18	0.00	0.00	0.00	
2,745.00	14.05	159.94	2,736.71	-90.20	32.94	39.69	0.00	0.00	0.00	
2,760.00	14.05	159.94	2,751.26	-93.62	34.19	41.19	0.00	0.00	0.00	
2,775.00	14.05	159.94	2,765.81	-97.04	35.44	42.70	0.00	0.00	0.00	
2,790.00	14.05	159.94	2,780.36	-100.46	36.69	44.20	0.00	0.00	0.00	
2,805.00	14.05	159.94	2,794.91	-103.89	37.93	45.71	0.00	0.00	0.00	
2,820.00	14.05	159.94	2,809.46	-107.31	39.18	47.22	0.00	0.00	0.00	
2,835.00	14.05	159.94	2,824.01	-110.73	40.43	48.72	0.00	0.00	0.00	
2,850.00	14.05	159.94	2,838.57	-114.15	41.68	50.23	0.00	0.00	0.00	
2,865.00	14.05	159.94	2,853.12	-117.57	42.93	51.73	0.00	0.00	0.00	
2,880.00	14.05	159.94	2,867.67	-120.99	44.18	53.24	0.00	0.00	0.00	
2,895.00	14.05	159.94	2,882.22	-124.42	45.43	54.74	0.00	0.00	0.00	
2,910.00	14.05	159.94	2,896.77	-127.84	46.68	56.25	0.00	0.00	0.00	
2,925.00	14.05	159.94	2,911.32	-131.26	47.93	57.76	0.00	0.00	0.00	
2,940.00	14.05	159.94	2,925.87	-134.68	49.18	59.26	0.00	0.00	0.00	
2,955.00	14.05	159.94	2,940.42	-138.10	50.43	60.77	0.00	0.00	0.00	
2,970.00	14.05	159.94	2,954.97	-141.52	51.68	62.27	0.00	0.00	0.00	
2,985.00	14.05	159.94	2,969.52	-144.95	52.93	63.78	0.00	0.00	0.00	
3,000.00	14.05	159.94	2,984.07	-148.37	54.18	65.28	0.00	0.00	0.00	
3,015.00	14.05	159.94	2,998.63	-151.79	55.43	66.79	0.00	0.00	0.00	
3,030.00	14.05	159.94	3,013.18	-155.21	56.68	68.29	0.00	0.00	0.00	
3,045.00	14.05	159.94	3,027.73	-158.63	57.93	69.80	0.00	0.00	0.00	
3,060.00	14.05	159.94	3,042.28	-162.06	59.18	71.31	0.00	0.00	0.00	
3,075.00	14.05	159.94	3,056.83	-165.48	60.43	72.81	0.00	0.00	0.00	
3,090.00	14.05	159.94	3,071.38	-168.90	61.68	74.32	0.00	0.00	0.00	
3,105.00	14.05	159.94	3,085.93	-172.32	62.93	75.82	0.00	0.00	0.00	
3,120.00	14.05	159.94	3,100.48	-175.74	64.17	77.33	0.00	0.00	0.00	
3,135.00	14.05	159.94	3,115.03	-179.16	65.42	78.83	0.00	0.00	0.00	
3,150.00	14.05	159.94	3,129.58	-182.59	66.67	80.34	0.00	0.00	0.00	
3,165.00	14.05	159.94	3,144.13	-186.01	67.92	81.85	0.00	0.00	0.00	
3,180.00	14.05	159.94	3,158.69	-189.43	69.17	83.35	0.00	0.00	0.00	
3,195.00	14.05	159.94	3,173.24	-192.85	70.42	84.86	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
3,210.00	14.05	159.94	3,187.79	-196.27	71.67	86.36	0.00	0.00	0.00
3,225.00	14.05	159.94	3,202.34	-199.70	72.92	87.87	0.00	0.00	0.00
3,240.00	14.05	159.94	3,216.89	-203.12	74.17	89.37	0.00	0.00	0.00
3,255.00	14.05	159.94	3,231.44	-206.54	75.42	90.88	0.00	0.00	0.00
3,270.00	14.05	159.94	3,245.99	-209.96	76.67	92.38	0.00	0.00	0.00
3,285.00	14.05	159.94	3,260.54	-213.38	77.92	93.89	0.00	0.00	0.00
3,300.00	14.05	159.94	3,275.09	-216.80	79.17	95.40	0.00	0.00	0.00
3,315.00	14.05	159.94	3,289.64	-220.23	80.42	96.90	0.00	0.00	0.00
3,330.00	14.05	159.94	3,304.20	-223.65	81.67	98.41	0.00	0.00	0.00
3,345.00	14.05	159.94	3,318.75	-227.07	82.92	99.91	0.00	0.00	0.00
3,360.00	14.05	159.94	3,333.30	-230.49	84.17	101.42	0.00	0.00	0.00
3,375.00	14.05	159.94	3,347.85	-233.91	85.42	102.92	0.00	0.00	0.00
3,390.00	14.05	159.94	3,362.40	-237.34	86.67	104.43	0.00	0.00	0.00
3,405.00	14.05	159.94	3,376.95	-240.76	87.92	105.94	0.00	0.00	0.00
3,420.00	14.05	159.94	3,391.50	-244.18	89.16	107.44	0.00	0.00	0.00
3,435.00	14.05	159.94	3,406.05	-247.60	90.41	108.95	0.00	0.00	0.00
3,450.00	14.05	159.94	3,420.60	-251.02	91.66	110.45	0.00	0.00	0.00
3,465.00	14.05	159.94	3,435.15	-254.44	92.91	111.96	0.00	0.00	0.00
3,480.00	14.05	159.94	3,449.70	-257.87	94.16	113.46	0.00	0.00	0.00
3,495.00	14.05	159.94	3,464.26	-261.29	95.41	114.97	0.00	0.00	0.00
3,510.00	14.05	159.94	3,478.81	-264.71	96.66	116.47	0.00	0.00	0.00
3,525.00	14.05	159.94	3,493.36	-268.13	97.91	117.98	0.00	0.00	0.00
3,540.00	14.05	159.94	3,507.91	-271.55	99.16	119.49	0.00	0.00	0.00
3,555.00	14.05	159.94	3,522.46	-274.97	100.41	120.99	0.00	0.00	0.00
3,570.00	14.05	159.94	3,537.01	-278.40	101.66	122.50	0.00	0.00	0.00
3,585.00	14.05	159.94	3,551.56	-281.82	102.91	124.00	0.00	0.00	0.00
3,600.00	14.05	159.94	3,566.11	-285.24	104.16	125.51	0.00	0.00	0.00
3,615.00	14.05	159.94	3,580.66	-288.66	105.41	127.01	0.00	0.00	0.00
3,630.00	14.05	159.94	3,595.21	-292.08	106.66	128.52	0.00	0.00	0.00
3,645.00	14.05	159.94	3,609.77	-295.51	107.91	130.03	0.00	0.00	0.00
3,660.00	14.05	159.94	3,624.32	-298.93	109.16	131.53	0.00	0.00	0.00
3,675.00	14.05	159.94	3,638.87	-302.35	110.41	133.04	0.00	0.00	0.00
3,690.00	14.05	159.94	3,653.42	-305.77	111.66	134.54	0.00	0.00	0.00
3,705.00	14.05	159.94	3,667.97	-309.19	112.91	136.05	0.00	0.00	0.00
3,720.00	14.05	159.94	3,682.52	-312.61	114.16	137.55	0.00	0.00	0.00
3,735.00	14.05	159.94	3,697.07	-316.04	115.40	139.06	0.00	0.00	0.00
3,750.00	14.05	159.94	3,711.62	-319.46	116.65	140.56	0.00	0.00	0.00
3,765.00	14.05	159.94	3,726.17	-322.88	117.90	142.07	0.00	0.00	0.00
3,780.00	14.05	159.94	3,740.72	-326.30	119.15	143.58	0.00	0.00	0.00
3,795.00	14.05	159.94	3,755.27	-329.72	120.40	145.08	0.00	0.00	0.00
3,810.00	14.05	159.94	3,769.83	-333.15	121.65	146.59	0.00	0.00	0.00
3,825.00	14.05	159.94	3,784.38	-336.57	122.90	148.09	0.00	0.00	0.00
3,840.00	14.05	159.94	3,798.93	-339.99	124.15	149.60	0.00	0.00	0.00
3,855.00	14.05	159.94	3,813.48	-343.41	125.40	151.10	0.00	0.00	0.00
3,870.00	14.05	159.94	3,828.03	-346.83	126.65	152.61	0.00	0.00	0.00
3,885.00	14.05	159.94	3,842.58	-350.25	127.90	154.12	0.00	0.00	0.00
3,900.00	14.05	159.94	3,857.13	-353.68	129.15	155.62	0.00	0.00	0.00
3,915.00	14.05	159.94	3,871.68	-357.10	130.40	157.13	0.00	0.00	0.00
3,930.00	14.05	159.94	3,886.23	-360.52	131.65	158.63	0.00	0.00	0.00
3,945.00	14.05	159.94	3,900.78	-363.94	132.90	160.14	0.00	0.00	0.00
3,960.00	14.05	159.94	3,915.34	-367.36	134.15	161.64	0.00	0.00	0.00
3,975.00	14.05	159.94	3,929.89	-370.78	135.40	163.15	0.00	0.00	0.00
3,990.00	14.05	159.94	3,944.44	-374.21	136.65	164.65	0.00	0.00	0.00
4,005.00	14.05	159.94	3,958.99	-377.63	137.90	166.16	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,020.00	14.05	159.94	3,973.54	-381.05	139.15	167.67	0.00	0.00	0.00
4,035.00	14.05	159.94	3,988.09	-384.47	140.39	169.17	0.00	0.00	0.00
4,050.00	14.05	159.94	4,002.64	-387.89	141.64	170.68	0.00	0.00	0.00
4,065.00	14.05	159.94	4,017.19	-391.32	142.89	172.18	0.00	0.00	0.00
4,080.00	14.05	159.94	4,031.74	-394.74	144.14	173.69	0.00	0.00	0.00
4,095.00	14.05	159.94	4,046.29	-398.16	145.39	175.19	0.00	0.00	0.00
4,110.00	14.05	159.94	4,060.84	-401.58	146.64	176.70	0.00	0.00	0.00
4,125.00	14.05	159.94	4,075.40	-405.00	147.89	178.20	0.00	0.00	0.00
4,140.00	14.05	159.94	4,089.95	-408.42	149.14	179.71	0.00	0.00	0.00
4,155.00	14.05	159.94	4,104.50	-411.85	150.39	181.22	0.00	0.00	0.00
4,170.00	14.05	159.94	4,119.05	-415.27	151.64	182.72	0.00	0.00	0.00
4,185.00	14.05	159.94	4,133.60	-418.69	152.89	184.23	0.00	0.00	0.00
4,200.00	14.05	159.94	4,148.15	-422.11	154.14	185.73	0.00	0.00	0.00
4,215.00	14.05	159.94	4,162.70	-425.53	155.39	187.24	0.00	0.00	0.00
4,230.00	14.05	159.94	4,177.25	-428.96	156.64	188.74	0.00	0.00	0.00
4,245.00	14.05	159.94	4,191.80	-432.38	157.89	190.25	0.00	0.00	0.00
4,260.00	14.05	159.94	4,206.35	-435.80	159.14	191.76	0.00	0.00	0.00
4,275.00	14.05	159.94	4,220.91	-439.22	160.39	193.26	0.00	0.00	0.00
4,290.00	14.05	159.94	4,235.46	-442.64	161.64	194.77	0.00	0.00	0.00
4,305.00	14.05	159.94	4,250.01	-446.06	162.89	196.27	0.00	0.00	0.00
4,320.00	14.05	159.94	4,264.56	-449.49	164.14	197.78	0.00	0.00	0.00
4,335.00	14.05	159.94	4,279.11	-452.91	165.39	199.28	0.00	0.00	0.00
4,350.00	14.05	159.94	4,293.66	-456.33	166.63	200.79	0.00	0.00	0.00
4,365.00	14.05	159.94	4,308.21	-459.75	167.88	202.29	0.00	0.00	0.00
4,380.00	14.05	159.94	4,322.76	-463.17	169.13	203.80	0.00	0.00	0.00
4,395.00	14.05	159.94	4,337.31	-466.60	170.38	205.31	0.00	0.00	0.00
4,410.00	14.05	159.94	4,351.86	-470.02	171.63	206.81	0.00	0.00	0.00
4,425.00	14.05	159.94	4,366.41	-473.44	172.88	208.32	0.00	0.00	0.00
4,440.00	14.05	159.94	4,380.97	-476.86	174.13	209.82	0.00	0.00	0.00
4,455.00	14.05	159.94	4,395.52	-480.28	175.38	211.33	0.00	0.00	0.00
4,470.00	14.05	159.94	4,410.07	-483.70	176.63	212.83	0.00	0.00	0.00
4,485.00	14.05	159.94	4,424.62	-487.13	177.88	214.34	0.00	0.00	0.00
4,500.00	14.05	159.94	4,439.17	-490.55	179.13	215.85	0.00	0.00	0.00
4,515.00	14.05	159.94	4,453.72	-493.97	180.38	217.35	0.00	0.00	0.00
4,530.00	14.05	159.94	4,468.27	-497.39	181.63	218.86	0.00	0.00	0.00
4,545.00	14.05	159.94	4,482.82	-500.81	182.88	220.36	0.00	0.00	0.00
4,560.00	14.05	159.94	4,497.37	-504.23	184.13	221.87	0.00	0.00	0.00
4,575.00	14.05	159.94	4,511.92	-507.66	185.38	223.37	0.00	0.00	0.00
4,590.00	14.05	159.94	4,526.47	-511.08	186.63	224.88	0.00	0.00	0.00
4,605.00	14.05	159.94	4,541.03	-514.50	187.88	226.38	0.00	0.00	0.00
4,620.00	14.05	159.94	4,555.58	-517.92	189.13	227.89	0.00	0.00	0.00
4,635.00	14.05	159.94	4,570.13	-521.34	190.38	229.40	0.00	0.00	0.00
4,650.00	14.05	159.94	4,584.68	-524.77	191.62	230.90	0.00	0.00	0.00
4,665.00	14.05	159.94	4,599.23	-528.19	192.87	232.41	0.00	0.00	0.00
4,674.61	14.05	159.94	4,608.56	-530.38	193.68	233.37	0.00	0.00	0.00
4,680.00	14.00	159.94	4,613.78	-531.61	194.12	233.91	1.00	-1.00	0.00
4,695.00	13.85	159.94	4,628.34	-535.00	195.36	235.40	1.00	-1.00	0.00
4,710.00	13.70	159.94	4,642.91	-538.35	196.59	236.88	1.00	-1.00	0.00
4,725.00	13.55	159.94	4,657.49	-541.67	197.80	238.34	1.00	-1.00	0.00
4,740.00	13.40	159.94	4,672.07	-544.96	199.00	239.79	1.00	-1.00	0.00
4,755.00	13.25	159.94	4,686.67	-548.20	200.18	241.21	1.00	-1.00	0.00
4,770.00	13.10	159.94	4,701.27	-551.42	201.36	242.63	1.00	-1.00	0.00
4,785.00	12.95	159.94	4,715.89	-554.59	202.52	244.03	1.00	-1.00	0.00
4,800.00	12.80	159.94	4,730.51	-557.73	203.66	245.41	1.00	-1.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
4,815.00	12.65	159.94	4,745.14	-560.84	204.80	246.77	1.00	-1.00	0.00
4,830.00	12.50	159.94	4,759.78	-563.90	205.92	248.12	1.00	-1.00	0.00
4,845.00	12.35	159.94	4,774.43	-566.93	207.02	249.46	1.00	-1.00	0.00
4,860.00	12.20	159.94	4,789.09	-569.93	208.12	250.77	1.00	-1.00	0.00
4,875.00	12.05	159.94	4,803.75	-572.89	209.20	252.08	1.00	-1.00	0.00
4,890.00	11.90	159.94	4,818.43	-575.81	210.27	253.36	1.00	-1.00	0.00
4,905.00	11.75	159.94	4,833.11	-578.70	211.32	254.63	1.00	-1.00	0.00
4,920.00	11.60	159.94	4,847.80	-581.55	212.36	255.89	1.00	-1.00	0.00
4,935.00	11.45	159.94	4,862.50	-584.37	213.39	257.13	1.00	-1.00	0.00
4,950.00	11.30	159.94	4,877.20	-587.15	214.40	258.35	1.00	-1.00	0.00
4,965.00	11.15	159.94	4,891.91	-589.89	215.41	259.56	1.00	-1.00	0.00
4,980.00	11.00	159.94	4,906.64	-592.60	216.39	260.75	1.00	-1.00	0.00
4,995.00	10.85	159.94	4,921.36	-595.27	217.37	261.92	1.00	-1.00	0.00
5,010.00	10.70	159.94	4,936.10	-597.90	218.33	263.08	1.00	-1.00	0.00
5,025.00	10.55	159.94	4,950.84	-600.50	219.28	264.23	1.00	-1.00	0.00
5,040.00	10.40	159.94	4,965.59	-603.06	220.22	265.35	1.00	-1.00	0.00
5,055.00	10.25	159.94	4,980.35	-605.59	221.14	266.46	1.00	-1.00	0.00
5,070.00	10.10	159.94	4,995.11	-608.08	222.05	267.56	1.00	-1.00	0.00
5,085.00	9.95	159.94	5,009.88	-610.53	222.94	268.64	1.00	-1.00	0.00
5,100.00	9.80	159.94	5,024.66	-612.95	223.83	269.70	1.00	-1.00	0.00
5,115.00	9.65	159.94	5,039.45	-615.33	224.69	270.75	1.00	-1.00	0.00
5,130.00	9.50	159.94	5,054.24	-617.67	225.55	271.78	1.00	-1.00	0.00
5,145.00	9.35	159.94	5,069.03	-619.98	226.39	272.80	1.00	-1.00	0.00
5,160.00	9.20	159.94	5,083.84	-622.25	227.22	273.80	1.00	-1.00	0.00
5,175.00	9.05	159.94	5,098.65	-624.49	228.04	274.78	1.00	-1.00	0.00
5,190.00	8.90	159.94	5,113.46	-626.68	228.84	275.75	1.00	-1.00	0.00
5,205.00	8.75	159.94	5,128.29	-628.85	229.63	276.70	1.00	-1.00	0.00
5,220.00	8.60	159.94	5,143.12	-630.97	230.41	277.63	1.00	-1.00	0.00
5,235.00	8.45	159.94	5,157.95	-633.06	231.17	278.55	1.00	-1.00	0.00
5,250.00	8.30	159.94	5,172.79	-635.11	231.92	279.46	1.00	-1.00	0.00
5,265.00	8.15	159.94	5,187.63	-637.13	232.66	280.34	1.00	-1.00	0.00
5,280.00	8.00	159.94	5,202.49	-639.11	233.38	281.21	1.00	-1.00	0.00
5,295.00	7.85	159.94	5,217.34	-641.05	234.09	282.07	1.00	-1.00	0.00
5,310.00	7.70	159.94	5,232.20	-642.96	234.78	282.91	1.00	-1.00	0.00
5,325.00	7.55	159.94	5,247.07	-644.83	235.47	283.73	1.00	-1.00	0.00
5,340.00	7.40	159.94	5,261.94	-646.66	236.14	284.54	1.00	-1.00	0.00
5,355.00	7.25	159.94	5,276.82	-648.46	236.79	285.33	1.00	-1.00	0.00
5,370.00	7.10	159.94	5,291.70	-650.22	237.44	286.10	1.00	-1.00	0.00
5,385.00	6.95	159.94	5,306.59	-651.94	238.06	286.86	1.00	-1.00	0.00
5,400.00	6.80	159.94	5,321.48	-653.63	238.68	287.60	1.00	-1.00	0.00
5,415.00	6.65	159.94	5,336.38	-655.28	239.28	288.33	1.00	-1.00	0.00
5,430.00	6.50	159.94	5,351.28	-656.89	239.87	289.04	1.00	-1.00	0.00
5,445.00	6.35	159.94	5,366.19	-658.47	240.45	289.73	1.00	-1.00	0.00
5,460.00	6.20	159.94	5,381.10	-660.01	241.01	290.41	1.00	-1.00	0.00
5,475.00	6.05	159.94	5,396.01	-661.51	241.56	291.07	1.00	-1.00	0.00
5,490.00	5.90	159.94	5,410.93	-662.98	242.10	291.72	1.00	-1.00	0.00
5,505.00	5.75	159.94	5,425.85	-664.41	242.62	292.35	1.00	-1.00	0.00
5,520.00	5.60	159.94	5,440.78	-665.80	243.13	292.96	1.00	-1.00	0.00
5,535.00	5.45	159.94	5,455.71	-667.16	243.62	293.56	1.00	-1.00	0.00
5,550.00	5.30	159.94	5,470.64	-668.48	244.10	294.14	1.00	-1.00	0.00
5,565.00	5.15	159.94	5,485.58	-669.76	244.57	294.70	1.00	-1.00	0.00
5,580.00	5.00	159.94	5,500.52	-671.01	245.03	295.25	1.00	-1.00	0.00
5,595.00	4.85	159.94	5,515.47	-672.22	245.47	295.78	1.00	-1.00	0.00
5,610.00	4.70	159.94	5,530.42	-673.39	245.90	296.30	1.00	-1.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,625.00	4.55	159.94	5,545.37	-674.53	246.31	296.80	1.00	-1.00	0.00
5,640.00	4.40	159.94	5,560.32	-675.63	246.71	297.28	1.00	-1.00	0.00
5,655.00	4.25	159.94	5,575.28	-676.69	247.10	297.75	1.00	-1.00	0.00
5,670.00	4.10	159.94	5,590.24	-677.72	247.48	298.20	1.00	-1.00	0.00
5,685.00	3.95	159.94	5,605.20	-678.71	247.84	298.64	1.00	-1.00	0.00
5,700.00	3.80	159.94	5,620.17	-679.66	248.19	299.06	1.00	-1.00	0.00
5,715.00	3.65	159.94	5,635.14	-680.58	248.52	299.46	1.00	-1.00	0.00
5,730.00	3.50	159.94	5,650.11	-681.46	248.84	299.85	1.00	-1.00	0.00
5,745.00	3.35	159.94	5,665.08	-682.30	249.15	300.22	1.00	-1.00	0.00
5,760.00	3.20	159.94	5,680.05	-683.10	249.44	300.57	1.00	-1.00	0.00
5,775.00	3.05	159.94	5,695.03	-683.87	249.72	300.91	1.00	-1.00	0.00
5,790.00	2.90	159.94	5,710.01	-684.60	249.99	301.23	1.00	-1.00	0.00
5,805.00	2.75	159.94	5,724.99	-685.30	250.24	301.54	1.00	-1.00	0.00
5,820.00	2.60	159.94	5,739.98	-685.95	250.49	301.83	1.00	-1.00	0.00
5,835.00	2.45	159.94	5,754.96	-686.58	250.71	302.10	1.00	-1.00	0.00
5,850.00	2.30	159.94	5,769.95	-687.16	250.93	302.36	1.00	-1.00	0.00
5,865.00	2.15	159.94	5,784.94	-687.71	251.13	302.60	1.00	-1.00	0.00
5,880.00	2.00	159.94	5,799.93	-688.22	251.31	302.82	1.00	-1.00	0.00
5,895.00	1.85	159.94	5,814.92	-688.69	251.48	303.03	1.00	-1.00	0.00
5,910.00	1.70	159.94	5,829.91	-689.13	251.64	303.22	1.00	-1.00	0.00
5,925.00	1.55	159.94	5,844.91	-689.53	251.79	303.40	1.00	-1.00	0.00
5,940.00	1.40	159.94	5,859.90	-689.89	251.92	303.56	1.00	-1.00	0.00
5,955.00	1.25	159.94	5,874.90	-690.22	252.04	303.70	1.00	-1.00	0.00
5,970.00	1.10	159.94	5,889.90	-690.51	252.15	303.83	1.00	-1.00	0.00
5,985.00	0.95	159.94	5,904.89	-690.76	252.24	303.94	1.00	-1.00	0.00
6,000.00	0.80	159.94	5,919.89	-690.97	252.32	304.03	1.00	-1.00	0.00
6,015.00	0.65	159.94	5,934.89	-691.15	252.38	304.11	1.00	-1.00	0.00
6,030.00	0.50	159.94	5,949.89	-691.29	252.43	304.18	1.00	-1.00	0.00
6,045.00	0.35	159.94	5,964.89	-691.40	252.47	304.22	1.00	-1.00	0.00
6,060.00	0.20	159.94	5,979.89	-691.47	252.50	304.25	1.00	-1.00	0.00
6,075.00	0.05	159.94	5,994.89	-691.50	252.51	304.27	1.00	-1.00	0.00
6,080.11	0.00	0.00	6,000.00	-691.50	252.51	304.27	1.00	-1.00	0.00
6,090.00	0.00	0.00	6,009.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,105.00	0.00	0.00	6,024.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,120.00	0.00	0.00	6,039.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,135.00	0.00	0.00	6,054.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,150.00	0.00	0.00	6,069.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,165.00	0.00	0.00	6,084.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,180.00	0.00	0.00	6,099.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,195.00	0.00	0.00	6,114.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,210.00	0.00	0.00	6,129.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,225.00	0.00	0.00	6,144.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,240.00	0.00	0.00	6,159.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,255.00	0.00	0.00	6,174.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,270.00	0.00	0.00	6,189.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,285.00	0.00	0.00	6,204.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,300.00	0.00	0.00	6,219.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,315.00	0.00	0.00	6,234.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,330.00	0.00	0.00	6,249.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,345.00	0.00	0.00	6,264.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,360.00	0.00	0.00	6,279.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,375.00	0.00	0.00	6,294.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,390.00	0.00	0.00	6,309.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,405.00	0.00	0.00	6,324.89	-691.50	252.51	304.27	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
6,420.00	0.00	0.00	6,339.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,435.00	0.00	0.00	6,354.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,450.00	0.00	0.00	6,369.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,465.00	0.00	0.00	6,384.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,480.00	0.00	0.00	6,399.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,495.00	0.00	0.00	6,414.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,510.00	0.00	0.00	6,429.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,525.00	0.00	0.00	6,444.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,540.00	0.00	0.00	6,459.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,555.00	0.00	0.00	6,474.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,570.00	0.00	0.00	6,489.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,585.00	0.00	0.00	6,504.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,600.00	0.00	0.00	6,519.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,615.00	0.00	0.00	6,534.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,630.00	0.00	0.00	6,549.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,645.00	0.00	0.00	6,564.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,660.00	0.00	0.00	6,579.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,675.00	0.00	0.00	6,594.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,690.00	0.00	0.00	6,609.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,705.00	0.00	0.00	6,624.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,720.00	0.00	0.00	6,639.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,735.00	0.00	0.00	6,654.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,750.00	0.00	0.00	6,669.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,765.00	0.00	0.00	6,684.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,780.00	0.00	0.00	6,699.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,795.00	0.00	0.00	6,714.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,810.00	0.00	0.00	6,729.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,825.00	0.00	0.00	6,744.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,840.00	0.00	0.00	6,759.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,855.00	0.00	0.00	6,774.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,870.00	0.00	0.00	6,789.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,885.00	0.00	0.00	6,804.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,900.00	0.00	0.00	6,819.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,915.00	0.00	0.00	6,834.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,930.00	0.00	0.00	6,849.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,945.00	0.00	0.00	6,864.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,960.00	0.00	0.00	6,879.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,975.00	0.00	0.00	6,894.89	-691.50	252.51	304.27	0.00	0.00	0.00
6,990.00	0.00	0.00	6,909.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,005.00	0.00	0.00	6,924.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,020.00	0.00	0.00	6,939.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,035.00	0.00	0.00	6,954.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,050.00	0.00	0.00	6,969.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,065.00	0.00	0.00	6,984.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,080.00	0.00	0.00	6,999.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,095.00	0.00	0.00	7,014.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,110.00	0.00	0.00	7,029.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,125.00	0.00	0.00	7,044.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,140.00	0.00	0.00	7,059.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,155.00	0.00	0.00	7,074.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,170.00	0.00	0.00	7,089.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,185.00	0.00	0.00	7,104.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,200.00	0.00	0.00	7,119.89	-691.50	252.51	304.27	0.00	0.00	0.00
7,215.00	0.00	0.00	7,134.89	-691.50	252.51	304.27	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)	
7,230.00	0.00	0.00	7,149.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,245.00	0.00	0.00	7,164.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,260.00	0.00	0.00	7,179.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,275.00	0.00	0.00	7,194.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,290.00	0.00	0.00	7,209.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,305.00	0.00	0.00	7,224.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,320.00	0.00	0.00	7,239.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,335.00	0.00	0.00	7,254.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,350.00	0.00	0.00	7,269.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,365.00	0.00	0.00	7,284.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,380.00	0.00	0.00	7,299.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,395.00	0.00	0.00	7,314.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,410.00	0.00	0.00	7,329.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,425.00	0.00	0.00	7,344.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,440.00	0.00	0.00	7,359.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,455.00	0.00	0.00	7,374.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,470.00	0.00	0.00	7,389.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,485.00	0.00	0.00	7,404.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,419.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,515.00	0.00	0.00	7,434.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,530.00	0.00	0.00	7,449.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,545.00	0.00	0.00	7,464.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,560.00	0.00	0.00	7,479.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,575.00	0.00	0.00	7,494.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,590.00	0.00	0.00	7,509.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,605.00	0.00	0.00	7,524.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,620.00	0.00	0.00	7,539.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,635.00	0.00	0.00	7,554.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,650.00	0.00	0.00	7,569.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,665.00	0.00	0.00	7,584.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,680.00	0.00	0.00	7,599.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,695.00	0.00	0.00	7,614.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,710.00	0.00	0.00	7,629.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,725.00	0.00	0.00	7,644.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,740.00	0.00	0.00	7,659.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,755.00	0.00	0.00	7,674.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,770.00	0.00	0.00	7,689.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,785.00	0.00	0.00	7,704.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,719.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,815.00	0.00	0.00	7,734.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,830.00	0.00	0.00	7,749.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,845.00	0.00	0.00	7,764.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,860.00	0.00	0.00	7,779.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,875.00	0.00	0.00	7,794.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,890.00	0.00	0.00	7,809.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,905.00	0.00	0.00	7,824.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,920.00	0.00	0.00	7,839.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,935.00	0.00	0.00	7,854.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,950.00	0.00	0.00	7,869.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,965.00	0.00	0.00	7,884.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,980.00	0.00	0.00	7,899.89	-691.50	252.51	304.27	0.00	0.00	0.00	
7,995.00	0.00	0.00	7,914.89	-691.50	252.51	304.27	0.00	0.00	0.00	
8,010.00	0.00	0.00	7,929.89	-691.50	252.51	304.27	0.00	0.00	0.00	
8,025.00	0.00	0.00	7,944.89	-691.50	252.51	304.27	0.00	0.00	0.00	

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
8,040.00	0.00	0.00	7,959.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,055.00	0.00	0.00	7,974.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,070.00	0.00	0.00	7,989.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,085.00	0.00	0.00	8,004.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,100.00	0.00	0.00	8,019.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,115.00	0.00	0.00	8,034.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,130.00	0.00	0.00	8,049.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,145.00	0.00	0.00	8,064.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,160.00	0.00	0.00	8,079.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,175.00	0.00	0.00	8,094.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,190.00	0.00	0.00	8,109.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,205.00	0.00	0.00	8,124.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,220.00	0.00	0.00	8,139.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,235.00	0.00	0.00	8,154.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,250.00	0.00	0.00	8,169.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,265.00	0.00	0.00	8,184.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,280.00	0.00	0.00	8,199.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,295.00	0.00	0.00	8,214.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,310.00	0.00	0.00	8,229.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,325.00	0.00	0.00	8,244.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,340.00	0.00	0.00	8,259.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,355.00	0.00	0.00	8,274.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,370.00	0.00	0.00	8,289.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,385.00	0.00	0.00	8,304.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,400.00	0.00	0.00	8,319.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,415.00	0.00	0.00	8,334.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,430.00	0.00	0.00	8,349.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,445.00	0.00	0.00	8,364.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,460.00	0.00	0.00	8,379.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,475.00	0.00	0.00	8,394.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,490.00	0.00	0.00	8,409.89	-691.50	252.51	304.27	0.00	0.00	0.00
8,502.65	0.00	0.00	8,422.54	-691.50	252.51	304.27	0.00	0.00	0.00
8,505.00	0.28	89.92	8,424.89	-691.50	252.52	304.27	12.00	12.00	0.00
8,520.00	2.08	89.92	8,439.88	-691.50	252.83	304.58	12.00	12.00	0.00
8,535.00	3.88	89.92	8,454.86	-691.50	253.61	305.36	12.00	12.00	0.00
8,550.00	5.68	89.92	8,469.81	-691.50	254.86	306.61	12.00	12.00	0.00
8,565.00	7.48	89.92	8,484.71	-691.49	256.57	308.32	12.00	12.00	0.00
8,580.00	9.28	89.92	8,499.55	-691.49	258.76	310.50	12.00	12.00	0.00
8,595.00	11.08	89.92	8,514.31	-691.49	261.41	313.14	12.00	12.00	0.00
8,610.00	12.88	89.92	8,528.99	-691.48	264.53	316.25	12.00	12.00	0.00
8,625.00	14.68	89.92	8,543.55	-691.48	268.10	319.81	12.00	12.00	0.00
8,640.00	16.48	89.92	8,558.00	-691.47	272.13	323.83	12.00	12.00	0.00
8,655.00	18.28	89.92	8,572.32	-691.47	276.61	328.29	12.00	12.00	0.00
8,670.00	20.08	89.92	8,586.48	-691.46	281.54	333.21	12.00	12.00	0.00
8,685.00	21.88	89.92	8,600.49	-691.45	286.91	338.56	12.00	12.00	0.00
8,700.00	23.68	89.92	8,614.32	-691.44	292.72	344.35	12.00	12.00	0.00
8,715.00	25.48	89.92	8,627.96	-691.44	298.96	350.57	12.00	12.00	0.00
8,730.00	27.28	89.92	8,641.39	-691.43	305.62	357.22	12.00	12.00	0.00
8,745.00	29.08	89.92	8,654.62	-691.42	312.71	364.28	12.00	12.00	0.00
8,760.00	30.88	89.92	8,667.61	-691.41	320.20	371.75	12.00	12.00	0.00
8,775.00	32.68	89.92	8,680.36	-691.39	328.10	379.63	12.00	12.00	0.00
8,790.00	34.48	89.92	8,692.85	-691.38	336.40	387.90	12.00	12.00	0.00
8,805.00	36.28	89.92	8,705.08	-691.37	345.08	396.56	12.00	12.00	0.00
8,820.00	38.08	89.92	8,717.03	-691.36	354.15	405.60	12.00	12.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
8,835.00	39.88	89.92	8,728.69	-691.34	363.58	415.01	12.00	12.00	0.00
8,850.00	41.68	89.92	8,740.05	-691.33	373.38	424.78	12.00	12.00	0.00
8,865.00	43.48	89.92	8,751.10	-691.32	383.53	434.89	12.00	12.00	0.00
8,880.00	45.28	89.92	8,761.82	-691.30	394.02	445.35	12.00	12.00	0.00
8,895.00	47.08	89.92	8,772.20	-691.29	404.84	456.14	12.00	12.00	0.00
8,910.00	48.88	89.92	8,782.24	-691.27	415.99	467.25	12.00	12.00	0.00
8,925.00	50.68	89.92	8,791.93	-691.26	427.44	478.67	12.00	12.00	0.00
8,940.00	52.48	89.92	8,801.25	-691.24	439.19	490.39	12.00	12.00	0.00
8,955.00	54.28	89.92	8,810.19	-691.22	451.23	502.39	12.00	12.00	0.00
8,970.00	56.08	89.92	8,818.76	-691.21	463.54	514.67	12.00	12.00	0.00
8,985.00	57.88	89.92	8,826.93	-691.19	476.12	527.21	12.00	12.00	0.00
9,000.00	59.68	89.92	8,834.70	-691.17	488.95	540.00	12.00	12.00	0.00
9,015.00	61.48	89.92	8,842.07	-691.15	502.01	553.02	12.00	12.00	0.00
9,030.00	63.28	89.92	8,849.03	-691.13	515.30	566.28	12.00	12.00	0.00
9,045.00	65.08	89.92	8,855.56	-691.11	528.81	579.74	12.00	12.00	0.00
9,060.00	66.88	89.92	8,861.66	-691.10	542.51	593.40	12.00	12.00	0.00
9,075.00	68.68	89.92	8,867.33	-691.08	556.39	607.24	12.00	12.00	0.00
9,090.00	70.48	89.92	8,872.57	-691.06	570.45	621.26	12.00	12.00	0.00
9,105.00	72.28	89.92	8,877.36	-691.04	584.66	635.43	12.00	12.00	0.00
9,120.00	74.08	89.92	8,881.70	-691.02	599.02	649.74	12.00	12.00	0.00
9,135.00	75.88	89.92	8,885.58	-691.00	613.51	664.19	12.00	12.00	0.00
9,150.00	77.68	89.92	8,889.01	-690.98	628.11	678.74	12.00	12.00	0.00
9,165.00	79.48	89.92	8,891.98	-690.96	642.81	693.40	12.00	12.00	0.00
9,180.00	81.28	89.92	8,894.49	-690.93	657.60	708.15	12.00	12.00	0.00
9,195.00	83.08	89.92	8,896.53	-690.91	672.46	722.96	12.00	12.00	0.00
9,210.00	84.88	89.92	8,898.10	-690.89	687.38	737.84	12.00	12.00	0.00
9,225.00	86.68	89.92	8,899.20	-690.87	702.34	752.75	12.00	12.00	0.00
9,240.00	88.48	89.92	8,899.84	-690.85	717.32	767.69	12.00	12.00	0.00
9,252.65	90.00	89.92	8,900.01	-690.83	729.97	780.30	12.00	12.00	0.00
9,255.00	90.00	89.92	8,900.01	-690.83	732.32	782.64	0.00	0.00	0.00
9,270.00	90.00	89.92	8,900.01	-690.81	747.32	797.60	0.00	0.00	0.00
9,285.00	90.00	89.92	8,900.01	-690.79	762.32	812.55	0.00	0.00	0.00
9,300.00	90.00	89.92	8,900.01	-690.77	777.32	827.51	0.00	0.00	0.00
9,315.00	90.00	89.92	8,900.01	-690.75	792.32	842.46	0.00	0.00	0.00
9,330.00	90.00	89.92	8,900.01	-690.73	807.32	857.42	0.00	0.00	0.00
9,345.00	90.00	89.92	8,900.01	-690.70	822.32	872.37	0.00	0.00	0.00
9,360.00	90.00	89.92	8,900.01	-690.68	837.32	887.33	0.00	0.00	0.00
9,375.00	90.00	89.92	8,900.01	-690.66	852.32	902.28	0.00	0.00	0.00
9,390.00	90.00	89.92	8,900.01	-690.64	867.32	917.24	0.00	0.00	0.00
9,405.00	90.00	89.92	8,900.01	-690.62	882.32	932.20	0.00	0.00	0.00
9,420.00	90.00	89.92	8,900.01	-690.60	897.32	947.15	0.00	0.00	0.00
9,435.00	90.00	89.92	8,900.01	-690.58	912.32	962.11	0.00	0.00	0.00
9,450.00	90.00	89.92	8,900.01	-690.56	927.32	977.06	0.00	0.00	0.00
9,465.00	90.00	89.92	8,900.01	-690.54	942.32	992.02	0.00	0.00	0.00
9,480.00	90.00	89.92	8,900.01	-690.52	957.32	1,006.97	0.00	0.00	0.00
9,495.00	90.00	89.92	8,900.01	-690.49	972.32	1,021.93	0.00	0.00	0.00
9,510.00	90.00	89.92	8,900.01	-690.47	987.32	1,036.88	0.00	0.00	0.00
9,525.00	90.00	89.92	8,900.01	-690.45	1,002.32	1,051.84	0.00	0.00	0.00
9,540.00	90.00	89.92	8,900.01	-690.43	1,017.32	1,066.79	0.00	0.00	0.00
9,555.00	90.00	89.92	8,900.01	-690.41	1,032.32	1,081.75	0.00	0.00	0.00
9,570.00	90.00	89.92	8,900.01	-690.39	1,047.32	1,096.70	0.00	0.00	0.00
9,585.00	90.00	89.92	8,900.01	-690.37	1,062.32	1,111.66	0.00	0.00	0.00
9,600.00	90.00	89.92	8,900.01	-690.35	1,077.32	1,126.61	0.00	0.00	0.00
9,615.00	90.00	89.92	8,900.01	-690.33	1,092.32	1,141.57	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
9,630.00	90.00	89.92	8,900.01	-690.31	1,107.32	1,156.52	0.00	0.00	0.00
9,645.00	90.00	89.92	8,900.01	-690.29	1,122.32	1,171.48	0.00	0.00	0.00
9,660.00	90.00	89.92	8,900.01	-690.26	1,137.32	1,186.43	0.00	0.00	0.00
9,675.00	90.00	89.92	8,900.01	-690.24	1,152.32	1,201.39	0.00	0.00	0.00
9,690.00	90.00	89.92	8,900.01	-690.22	1,167.32	1,216.34	0.00	0.00	0.00
9,705.00	90.00	89.92	8,900.01	-690.20	1,182.32	1,231.30	0.00	0.00	0.00
9,720.00	90.00	89.92	8,900.01	-690.18	1,197.32	1,246.25	0.00	0.00	0.00
9,735.00	90.00	89.92	8,900.01	-690.16	1,212.32	1,261.21	0.00	0.00	0.00
9,750.00	90.00	89.92	8,900.01	-690.14	1,227.32	1,276.16	0.00	0.00	0.00
9,765.00	90.00	89.92	8,900.01	-690.12	1,242.32	1,291.12	0.00	0.00	0.00
9,780.00	90.00	89.92	8,900.01	-690.10	1,257.32	1,306.07	0.00	0.00	0.00
9,795.00	90.00	89.92	8,900.01	-690.08	1,272.32	1,321.03	0.00	0.00	0.00
9,810.00	90.00	89.92	8,900.01	-690.06	1,287.32	1,335.98	0.00	0.00	0.00
9,825.00	90.00	89.92	8,900.01	-690.03	1,302.32	1,350.94	0.00	0.00	0.00
9,840.00	90.00	89.92	8,900.01	-690.01	1,317.32	1,365.89	0.00	0.00	0.00
9,855.00	90.00	89.92	8,900.01	-689.99	1,332.32	1,380.85	0.00	0.00	0.00
9,870.00	90.00	89.92	8,900.01	-689.97	1,347.32	1,395.80	0.00	0.00	0.00
9,885.00	90.00	89.92	8,900.01	-689.95	1,362.32	1,410.76	0.00	0.00	0.00
9,900.00	90.00	89.92	8,900.01	-689.93	1,377.32	1,425.71	0.00	0.00	0.00
9,915.00	90.00	89.92	8,900.01	-689.91	1,392.32	1,440.67	0.00	0.00	0.00
9,930.00	90.00	89.92	8,900.01	-689.89	1,407.32	1,455.62	0.00	0.00	0.00
9,945.00	90.00	89.92	8,900.01	-689.87	1,422.32	1,470.58	0.00	0.00	0.00
9,960.00	90.00	89.92	8,900.01	-689.85	1,437.32	1,485.53	0.00	0.00	0.00
9,975.00	90.00	89.92	8,900.01	-689.82	1,452.32	1,500.49	0.00	0.00	0.00
9,990.00	90.00	89.92	8,900.01	-689.80	1,467.32	1,515.45	0.00	0.00	0.00
10,005.00	90.00	89.92	8,900.01	-689.78	1,482.32	1,530.40	0.00	0.00	0.00
10,020.00	90.00	89.92	8,900.01	-689.76	1,497.32	1,545.36	0.00	0.00	0.00
10,035.00	90.00	89.92	8,900.01	-689.74	1,512.32	1,560.31	0.00	0.00	0.00
10,050.00	90.00	89.92	8,900.01	-689.72	1,527.32	1,575.27	0.00	0.00	0.00
10,065.00	90.00	89.92	8,900.01	-689.70	1,542.32	1,590.22	0.00	0.00	0.00
10,080.00	90.00	89.92	8,900.01	-689.68	1,557.32	1,605.18	0.00	0.00	0.00
10,095.00	90.00	89.92	8,900.01	-689.66	1,572.32	1,620.13	0.00	0.00	0.00
10,110.00	90.00	89.92	8,900.01	-689.64	1,587.32	1,635.09	0.00	0.00	0.00
10,125.00	90.00	89.92	8,900.01	-689.62	1,602.32	1,650.04	0.00	0.00	0.00
10,140.00	90.00	89.92	8,900.01	-689.59	1,617.32	1,665.00	0.00	0.00	0.00
10,155.00	90.00	89.92	8,900.01	-689.57	1,632.32	1,679.95	0.00	0.00	0.00
10,170.00	90.00	89.92	8,900.01	-689.55	1,647.32	1,694.91	0.00	0.00	0.00
10,185.00	90.00	89.92	8,900.01	-689.53	1,662.32	1,709.86	0.00	0.00	0.00
10,200.00	90.00	89.92	8,900.01	-689.51	1,677.32	1,724.82	0.00	0.00	0.00
10,215.00	90.00	89.92	8,900.01	-689.49	1,692.32	1,739.77	0.00	0.00	0.00
10,230.00	90.00	89.92	8,900.01	-689.47	1,707.32	1,754.73	0.00	0.00	0.00
10,245.00	90.00	89.92	8,900.01	-689.45	1,722.32	1,769.68	0.00	0.00	0.00
10,260.00	90.00	89.92	8,900.01	-689.43	1,737.32	1,784.64	0.00	0.00	0.00
10,275.00	90.00	89.92	8,900.01	-689.41	1,752.32	1,799.59	0.00	0.00	0.00
10,290.00	90.00	89.92	8,900.01	-689.38	1,767.32	1,814.55	0.00	0.00	0.00
10,305.00	90.00	89.92	8,900.01	-689.36	1,782.32	1,829.50	0.00	0.00	0.00
10,320.00	90.00	89.92	8,900.01	-689.34	1,797.32	1,844.46	0.00	0.00	0.00
10,335.00	90.00	89.92	8,900.01	-689.32	1,812.32	1,859.41	0.00	0.00	0.00
10,350.00	90.00	89.92	8,900.01	-689.30	1,827.32	1,874.37	0.00	0.00	0.00
10,365.00	90.00	89.92	8,900.01	-689.28	1,842.32	1,889.32	0.00	0.00	0.00
10,380.00	90.00	89.92	8,900.01	-689.26	1,857.32	1,904.28	0.00	0.00	0.00
10,395.00	90.00	89.92	8,900.01	-689.24	1,872.32	1,919.23	0.00	0.00	0.00
10,410.00	90.00	89.92	8,900.01	-689.22	1,887.32	1,934.19	0.00	0.00	0.00
10,425.00	90.00	89.92	8,900.01	-689.20	1,902.32	1,949.14	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)	
10,440.00	90.00	89.92	8,900.01	-689.18	1,917.32	1,964.10	0.00	0.00	0.00	
10,455.00	90.00	89.92	8,900.01	-689.15	1,932.32	1,979.05	0.00	0.00	0.00	
10,470.00	90.00	89.92	8,900.01	-689.13	1,947.32	1,994.01	0.00	0.00	0.00	
10,485.00	90.00	89.92	8,900.01	-689.11	1,962.32	2,008.96	0.00	0.00	0.00	
10,500.00	90.00	89.92	8,900.01	-689.09	1,977.32	2,023.92	0.00	0.00	0.00	
10,515.00	90.00	89.92	8,900.01	-689.07	1,992.32	2,038.87	0.00	0.00	0.00	
10,530.00	90.00	89.92	8,900.01	-689.05	2,007.32	2,053.83	0.00	0.00	0.00	
10,545.00	90.00	89.92	8,900.01	-689.03	2,022.32	2,068.78	0.00	0.00	0.00	
10,560.00	90.00	89.92	8,900.01	-689.01	2,037.32	2,083.74	0.00	0.00	0.00	
10,575.00	90.00	89.92	8,900.01	-688.99	2,052.32	2,098.70	0.00	0.00	0.00	
10,590.00	90.00	89.92	8,900.01	-688.97	2,067.32	2,113.65	0.00	0.00	0.00	
10,605.00	90.00	89.92	8,900.01	-688.95	2,082.32	2,128.61	0.00	0.00	0.00	
10,620.00	90.00	89.92	8,900.01	-688.92	2,097.32	2,143.56	0.00	0.00	0.00	
10,635.00	90.00	89.92	8,900.01	-688.90	2,112.32	2,158.52	0.00	0.00	0.00	
10,650.00	90.00	89.92	8,900.01	-688.88	2,127.32	2,173.47	0.00	0.00	0.00	
10,665.00	90.00	89.92	8,900.01	-688.86	2,142.32	2,188.43	0.00	0.00	0.00	
10,680.00	90.00	89.92	8,900.01	-688.84	2,157.32	2,203.38	0.00	0.00	0.00	
10,695.00	90.00	89.92	8,900.01	-688.82	2,172.32	2,218.34	0.00	0.00	0.00	
10,710.00	90.00	89.92	8,900.01	-688.80	2,187.32	2,233.29	0.00	0.00	0.00	
10,725.00	90.00	89.92	8,900.01	-688.78	2,202.32	2,248.25	0.00	0.00	0.00	
10,740.00	90.00	89.92	8,900.01	-688.76	2,217.32	2,263.20	0.00	0.00	0.00	
10,755.00	90.00	89.92	8,900.01	-688.74	2,232.32	2,278.16	0.00	0.00	0.00	
10,770.00	90.00	89.92	8,900.01	-688.71	2,247.32	2,293.11	0.00	0.00	0.00	
10,785.00	90.00	89.92	8,900.01	-688.69	2,262.32	2,308.07	0.00	0.00	0.00	
10,800.00	90.00	89.92	8,900.01	-688.67	2,277.32	2,323.02	0.00	0.00	0.00	
10,815.00	90.00	89.92	8,900.01	-688.65	2,292.32	2,337.98	0.00	0.00	0.00	
10,830.00	90.00	89.92	8,900.01	-688.63	2,307.32	2,352.93	0.00	0.00	0.00	
10,845.00	90.00	89.92	8,900.01	-688.61	2,322.32	2,367.89	0.00	0.00	0.00	
10,860.00	90.00	89.92	8,900.01	-688.59	2,337.32	2,382.84	0.00	0.00	0.00	
10,875.00	90.00	89.92	8,900.01	-688.57	2,352.32	2,397.80	0.00	0.00	0.00	
10,890.00	90.00	89.92	8,900.01	-688.55	2,367.32	2,412.75	0.00	0.00	0.00	
10,905.00	90.00	89.92	8,900.01	-688.53	2,382.32	2,427.71	0.00	0.00	0.00	
10,920.00	90.00	89.92	8,900.01	-688.51	2,397.32	2,442.66	0.00	0.00	0.00	
10,935.00	90.00	89.92	8,900.01	-688.48	2,412.32	2,457.62	0.00	0.00	0.00	
10,950.00	90.00	89.92	8,900.01	-688.46	2,427.32	2,472.57	0.00	0.00	0.00	
10,965.00	90.00	89.92	8,900.01	-688.44	2,442.32	2,487.53	0.00	0.00	0.00	
10,980.00	90.00	89.92	8,900.01	-688.42	2,457.32	2,502.48	0.00	0.00	0.00	
10,995.00	90.00	89.92	8,900.01	-688.40	2,472.32	2,517.44	0.00	0.00	0.00	
11,010.00	90.00	89.92	8,900.01	-688.38	2,487.32	2,532.39	0.00	0.00	0.00	
11,025.00	90.00	89.92	8,900.01	-688.36	2,502.32	2,547.35	0.00	0.00	0.00	
11,040.00	90.00	89.92	8,900.01	-688.34	2,517.32	2,562.30	0.00	0.00	0.00	
11,055.00	90.00	89.92	8,900.01	-688.32	2,532.32	2,577.26	0.00	0.00	0.00	
11,070.00	90.00	89.92	8,900.01	-688.30	2,547.32	2,592.21	0.00	0.00	0.00	
11,085.00	90.00	89.92	8,900.01	-688.27	2,562.32	2,607.17	0.00	0.00	0.00	
11,100.00	90.00	89.92	8,900.01	-688.25	2,577.32	2,622.12	0.00	0.00	0.00	
11,115.00	90.00	89.92	8,900.01	-688.23	2,592.32	2,637.08	0.00	0.00	0.00	
11,130.00	90.00	89.92	8,900.01	-688.21	2,607.32	2,652.03	0.00	0.00	0.00	
11,145.00	90.00	89.92	8,900.01	-688.19	2,622.32	2,666.99	0.00	0.00	0.00	
11,160.00	90.00	89.92	8,900.01	-688.17	2,637.32	2,681.95	0.00	0.00	0.00	
11,175.00	90.00	89.92	8,900.01	-688.15	2,652.32	2,696.90	0.00	0.00	0.00	
11,190.00	90.00	89.92	8,900.01	-688.13	2,667.32	2,711.86	0.00	0.00	0.00	
11,205.00	90.00	89.92	8,900.01	-688.11	2,682.32	2,726.81	0.00	0.00	0.00	
11,220.00	90.00	89.92	8,900.01	-688.09	2,697.32	2,741.77	0.00	0.00	0.00	
11,235.00	90.00	89.92	8,900.01	-688.07	2,712.32	2,756.72	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)	
11,250.00	90.00	89.92	8,900.01	-688.04	2,727.32	2,771.68	0.00	0.00	0.00	
11,265.00	90.00	89.92	8,900.01	-688.02	2,742.32	2,786.63	0.00	0.00	0.00	
11,280.00	90.00	89.92	8,900.01	-688.00	2,757.32	2,801.59	0.00	0.00	0.00	
11,295.00	90.00	89.92	8,900.01	-687.98	2,772.32	2,816.54	0.00	0.00	0.00	
11,310.00	90.00	89.92	8,900.01	-687.96	2,787.32	2,831.50	0.00	0.00	0.00	
11,325.00	90.00	89.92	8,900.01	-687.94	2,802.32	2,846.45	0.00	0.00	0.00	
11,340.00	90.00	89.92	8,900.01	-687.92	2,817.32	2,861.41	0.00	0.00	0.00	
11,355.00	90.00	89.92	8,900.01	-687.90	2,832.32	2,876.36	0.00	0.00	0.00	
11,370.00	90.00	89.92	8,900.01	-687.88	2,847.32	2,891.32	0.00	0.00	0.00	
11,385.00	90.00	89.92	8,900.01	-687.86	2,862.32	2,906.27	0.00	0.00	0.00	
11,400.00	90.00	89.92	8,900.01	-687.84	2,877.32	2,921.23	0.00	0.00	0.00	
11,415.00	90.00	89.92	8,900.01	-687.81	2,892.32	2,936.18	0.00	0.00	0.00	
11,430.00	90.00	89.92	8,900.01	-687.79	2,907.32	2,951.14	0.00	0.00	0.00	
11,445.00	90.00	89.92	8,900.01	-687.77	2,922.32	2,966.09	0.00	0.00	0.00	
11,460.00	90.00	89.92	8,900.01	-687.75	2,937.32	2,981.05	0.00	0.00	0.00	
11,475.00	90.00	89.92	8,900.01	-687.73	2,952.32	2,996.00	0.00	0.00	0.00	
11,490.00	90.00	89.92	8,900.01	-687.71	2,967.32	3,010.96	0.00	0.00	0.00	
11,505.00	90.00	89.92	8,900.01	-687.69	2,982.32	3,025.91	0.00	0.00	0.00	
11,520.00	90.00	89.92	8,900.01	-687.67	2,997.32	3,040.87	0.00	0.00	0.00	
11,535.00	90.00	89.92	8,900.01	-687.65	3,012.32	3,055.82	0.00	0.00	0.00	
11,550.00	90.00	89.92	8,900.01	-687.63	3,027.32	3,070.78	0.00	0.00	0.00	
11,565.00	90.00	89.92	8,900.01	-687.60	3,042.32	3,085.73	0.00	0.00	0.00	
11,580.00	90.00	89.92	8,900.01	-687.58	3,057.32	3,100.69	0.00	0.00	0.00	
11,595.00	90.00	89.92	8,900.01	-687.56	3,072.32	3,115.64	0.00	0.00	0.00	
11,610.00	90.00	89.92	8,900.01	-687.54	3,087.32	3,130.60	0.00	0.00	0.00	
11,625.00	90.00	89.92	8,900.01	-687.52	3,102.32	3,145.55	0.00	0.00	0.00	
11,640.00	90.00	89.92	8,900.01	-687.50	3,117.32	3,160.51	0.00	0.00	0.00	
11,655.00	90.00	89.92	8,900.01	-687.48	3,132.32	3,175.46	0.00	0.00	0.00	
11,670.00	90.00	89.92	8,900.01	-687.46	3,147.32	3,190.42	0.00	0.00	0.00	
11,685.00	90.00	89.92	8,900.01	-687.44	3,162.32	3,205.37	0.00	0.00	0.00	
11,700.00	90.00	89.92	8,900.01	-687.42	3,177.32	3,220.33	0.00	0.00	0.00	
11,715.00	90.00	89.92	8,900.01	-687.40	3,192.32	3,235.28	0.00	0.00	0.00	
11,730.00	90.00	89.92	8,900.01	-687.37	3,207.32	3,250.24	0.00	0.00	0.00	
11,745.00	90.00	89.92	8,900.01	-687.35	3,222.32	3,265.20	0.00	0.00	0.00	
11,760.00	90.00	89.92	8,900.01	-687.33	3,237.32	3,280.15	0.00	0.00	0.00	
11,775.00	90.00	89.92	8,900.01	-687.31	3,252.32	3,295.11	0.00	0.00	0.00	
11,790.00	90.00	89.92	8,900.01	-687.29	3,267.32	3,310.06	0.00	0.00	0.00	
11,805.00	90.00	89.92	8,900.01	-687.27	3,282.32	3,325.02	0.00	0.00	0.00	
11,820.00	90.00	89.92	8,900.01	-687.25	3,297.32	3,339.97	0.00	0.00	0.00	
11,835.00	90.00	89.92	8,900.01	-687.23	3,312.32	3,354.93	0.00	0.00	0.00	
11,850.00	90.00	89.92	8,900.01	-687.21	3,327.32	3,369.88	0.00	0.00	0.00	
11,865.00	90.00	89.92	8,900.01	-687.19	3,342.32	3,384.84	0.00	0.00	0.00	
11,880.00	90.00	89.92	8,900.01	-687.16	3,357.32	3,399.79	0.00	0.00	0.00	
11,895.00	90.00	89.92	8,900.01	-687.14	3,372.32	3,414.75	0.00	0.00	0.00	
11,910.00	90.00	89.92	8,900.01	-687.12	3,387.32	3,429.70	0.00	0.00	0.00	
11,925.00	90.00	89.92	8,900.01	-687.10	3,402.32	3,444.66	0.00	0.00	0.00	
11,940.00	90.00	89.92	8,900.01	-687.08	3,417.32	3,459.61	0.00	0.00	0.00	
11,955.00	90.00	89.92	8,900.01	-687.06	3,432.32	3,474.57	0.00	0.00	0.00	
11,970.00	90.00	89.92	8,900.01	-687.04	3,447.32	3,489.52	0.00	0.00	0.00	
11,985.00	90.00	89.92	8,900.01	-687.02	3,462.32	3,504.48	0.00	0.00	0.00	
12,000.00	90.00	89.92	8,900.01	-687.00	3,477.32	3,519.43	0.00	0.00	0.00	
12,015.00	90.00	89.92	8,900.01	-686.98	3,492.32	3,534.39	0.00	0.00	0.00	
12,030.00	90.00	89.92	8,900.01	-686.96	3,507.32	3,549.34	0.00	0.00	0.00	
12,045.00	90.00	89.92	8,900.01	-686.93	3,522.32	3,564.30	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
12,060.00	90.00	89.92	8,900.01	-686.91	3,537.32	3,579.25	0.00	0.00	0.00
12,075.00	90.00	89.92	8,900.01	-686.89	3,552.32	3,594.21	0.00	0.00	0.00
12,090.00	90.00	89.92	8,900.01	-686.87	3,567.32	3,609.16	0.00	0.00	0.00
12,105.00	90.00	89.92	8,900.01	-686.85	3,582.32	3,624.12	0.00	0.00	0.00
12,120.00	90.00	89.92	8,900.01	-686.83	3,597.32	3,639.07	0.00	0.00	0.00
12,135.00	90.00	89.92	8,900.01	-686.81	3,612.32	3,654.03	0.00	0.00	0.00
12,150.00	90.00	89.92	8,900.01	-686.79	3,627.32	3,668.98	0.00	0.00	0.00
12,165.00	90.00	89.92	8,900.01	-686.77	3,642.32	3,683.94	0.00	0.00	0.00
12,180.00	90.00	89.92	8,900.01	-686.75	3,657.32	3,698.89	0.00	0.00	0.00
12,195.00	90.00	89.92	8,900.01	-686.73	3,672.32	3,713.85	0.00	0.00	0.00
12,210.00	90.00	89.92	8,900.01	-686.70	3,687.32	3,728.80	0.00	0.00	0.00
12,225.00	90.00	89.92	8,900.01	-686.68	3,702.32	3,743.76	0.00	0.00	0.00
12,240.00	90.00	89.92	8,900.01	-686.66	3,717.32	3,758.71	0.00	0.00	0.00
12,255.00	90.00	89.92	8,900.01	-686.64	3,732.32	3,773.67	0.00	0.00	0.00
12,270.00	90.00	89.92	8,900.01	-686.62	3,747.32	3,788.62	0.00	0.00	0.00
12,285.00	90.00	89.92	8,900.01	-686.60	3,762.32	3,803.58	0.00	0.00	0.00
12,300.00	90.00	89.92	8,900.01	-686.58	3,777.32	3,818.53	0.00	0.00	0.00
12,315.00	90.00	89.92	8,900.01	-686.56	3,792.32	3,833.49	0.00	0.00	0.00
12,330.00	90.00	89.92	8,900.01	-686.54	3,807.32	3,848.45	0.00	0.00	0.00
12,345.00	90.00	89.92	8,900.01	-686.52	3,822.32	3,863.40	0.00	0.00	0.00
12,360.00	90.00	89.92	8,900.01	-686.49	3,837.32	3,878.36	0.00	0.00	0.00
12,375.00	90.00	89.92	8,900.01	-686.47	3,852.32	3,893.31	0.00	0.00	0.00
12,390.00	90.00	89.92	8,900.01	-686.45	3,867.32	3,908.27	0.00	0.00	0.00
12,405.00	90.00	89.92	8,900.01	-686.43	3,882.32	3,923.22	0.00	0.00	0.00
12,420.00	90.00	89.92	8,900.01	-686.41	3,897.32	3,938.18	0.00	0.00	0.00
12,435.00	90.00	89.92	8,900.01	-686.39	3,912.32	3,953.13	0.00	0.00	0.00
12,450.00	90.00	89.92	8,900.01	-686.37	3,927.32	3,968.09	0.00	0.00	0.00
12,465.00	90.00	89.92	8,900.01	-686.35	3,942.32	3,983.04	0.00	0.00	0.00
12,480.00	90.00	89.92	8,900.01	-686.33	3,957.32	3,998.00	0.00	0.00	0.00
12,495.00	90.00	89.92	8,900.01	-686.31	3,972.32	4,012.95	0.00	0.00	0.00
12,510.00	90.00	89.92	8,900.01	-686.29	3,987.32	4,027.91	0.00	0.00	0.00
12,525.00	90.00	89.92	8,900.01	-686.26	4,002.32	4,042.86	0.00	0.00	0.00
12,540.00	90.00	89.92	8,900.01	-686.24	4,017.32	4,057.82	0.00	0.00	0.00
12,555.00	90.00	89.92	8,900.01	-686.22	4,032.32	4,072.77	0.00	0.00	0.00
12,570.00	90.00	89.92	8,900.01	-686.20	4,047.32	4,087.73	0.00	0.00	0.00
12,585.00	90.00	89.92	8,900.01	-686.18	4,062.32	4,102.68	0.00	0.00	0.00
12,600.00	90.00	89.92	8,900.01	-686.16	4,077.32	4,117.64	0.00	0.00	0.00
12,615.00	90.00	89.92	8,900.01	-686.14	4,092.32	4,132.59	0.00	0.00	0.00
12,630.00	90.00	89.92	8,900.01	-686.12	4,107.32	4,147.55	0.00	0.00	0.00
12,645.00	90.00	89.92	8,900.01	-686.10	4,122.32	4,162.50	0.00	0.00	0.00
12,660.00	90.00	89.92	8,900.01	-686.08	4,137.32	4,177.46	0.00	0.00	0.00
12,675.00	90.00	89.92	8,900.01	-686.05	4,152.32	4,192.41	0.00	0.00	0.00
12,690.00	90.00	89.92	8,900.01	-686.03	4,167.32	4,207.37	0.00	0.00	0.00
12,705.00	90.00	89.92	8,900.01	-686.01	4,182.32	4,222.32	0.00	0.00	0.00
12,720.00	90.00	89.92	8,900.01	-685.99	4,197.32	4,237.28	0.00	0.00	0.00
12,735.00	90.00	89.92	8,900.01	-685.97	4,212.32	4,252.23	0.00	0.00	0.00
12,750.00	90.00	89.92	8,900.01	-685.95	4,227.32	4,267.19	0.00	0.00	0.00
12,765.00	90.00	89.92	8,900.01	-685.93	4,242.32	4,282.14	0.00	0.00	0.00
12,780.00	90.00	89.92	8,900.01	-685.91	4,257.32	4,297.10	0.00	0.00	0.00
12,795.00	90.00	89.92	8,900.01	-685.89	4,272.32	4,312.05	0.00	0.00	0.00
12,810.00	90.00	89.92	8,900.01	-685.87	4,287.32	4,327.01	0.00	0.00	0.00
12,825.00	90.00	89.92	8,900.01	-685.85	4,302.32	4,341.96	0.00	0.00	0.00
12,840.00	90.00	89.92	8,900.01	-685.82	4,317.32	4,356.92	0.00	0.00	0.00
12,855.00	90.00	89.92	8,900.01	-685.80	4,332.32	4,371.87	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)	
12,870.00	90.00	89.92	8,900.01	-685.78	4,347.32	4,386.83	0.00	0.00	0.00	
12,885.00	90.00	89.92	8,900.01	-685.76	4,362.32	4,401.78	0.00	0.00	0.00	
12,900.00	90.00	89.92	8,900.01	-685.74	4,377.32	4,416.74	0.00	0.00	0.00	
12,915.00	90.00	89.92	8,900.01	-685.72	4,392.32	4,431.70	0.00	0.00	0.00	
12,930.00	90.00	89.92	8,900.01	-685.70	4,407.32	4,446.65	0.00	0.00	0.00	
12,945.00	90.00	89.92	8,900.01	-685.68	4,422.32	4,461.61	0.00	0.00	0.00	
12,960.00	90.00	89.92	8,900.01	-685.66	4,437.32	4,476.56	0.00	0.00	0.00	
12,975.00	90.00	89.92	8,900.01	-685.64	4,452.32	4,491.52	0.00	0.00	0.00	
12,990.00	90.00	89.92	8,900.01	-685.62	4,467.32	4,506.47	0.00	0.00	0.00	
13,005.00	90.00	89.92	8,900.01	-685.59	4,482.32	4,521.43	0.00	0.00	0.00	
13,020.00	90.00	89.92	8,900.01	-685.57	4,497.32	4,536.38	0.00	0.00	0.00	
13,035.00	90.00	89.92	8,900.01	-685.55	4,512.32	4,551.34	0.00	0.00	0.00	
13,050.00	90.00	89.92	8,900.01	-685.53	4,527.32	4,566.29	0.00	0.00	0.00	
13,065.00	90.00	89.92	8,900.01	-685.51	4,542.32	4,581.25	0.00	0.00	0.00	
13,080.00	90.00	89.92	8,900.01	-685.49	4,557.32	4,596.20	0.00	0.00	0.00	
13,095.00	90.00	89.92	8,900.01	-685.47	4,572.32	4,611.16	0.00	0.00	0.00	
13,102.65	90.00	89.92	8,900.01	-685.46	4,579.97	4,618.79	0.00	0.00	0.00	
13,110.00	90.00	90.07	8,900.01	-685.46	4,587.32	4,626.11	2.00	0.00	2.00	
13,125.00	90.00	90.37	8,900.01	-685.51	4,602.32	4,641.07	2.00	0.00	2.00	
13,140.00	90.00	90.67	8,900.01	-685.65	4,617.32	4,656.04	2.00	0.00	2.00	
13,155.00	90.00	90.97	8,900.01	-685.86	4,632.32	4,671.01	2.00	0.00	2.00	
13,170.00	90.00	91.27	8,900.01	-686.16	4,647.31	4,685.99	2.00	0.00	2.00	
13,185.00	90.00	91.57	8,900.01	-686.53	4,662.31	4,700.97	2.00	0.00	2.00	
13,200.00	90.00	91.87	8,900.01	-686.98	4,677.30	4,715.95	2.00	0.00	2.00	
13,215.00	90.00	92.17	8,900.01	-687.50	4,692.29	4,730.94	2.00	0.00	2.00	
13,230.00	90.00	92.47	8,900.01	-688.11	4,707.28	4,745.93	2.00	0.00	2.00	
13,245.00	90.00	92.77	8,900.01	-688.79	4,722.27	4,760.92	2.00	0.00	2.00	
13,260.00	90.00	93.07	8,900.01	-689.56	4,737.25	4,775.92	2.00	0.00	2.00	
13,275.00	90.00	93.37	8,900.01	-690.40	4,752.22	4,790.92	2.00	0.00	2.00	
13,290.00	90.00	93.67	8,900.01	-691.32	4,767.19	4,805.91	2.00	0.00	2.00	
13,305.00	90.00	93.97	8,900.01	-692.32	4,782.16	4,820.91	2.00	0.00	2.00	
13,320.00	90.00	94.27	8,900.01	-693.40	4,797.12	4,835.91	2.00	0.00	2.00	
13,335.00	90.00	94.57	8,900.01	-694.55	4,812.08	4,850.91	2.00	0.00	2.00	
13,350.00	90.00	94.87	8,900.01	-695.78	4,827.03	4,865.91	2.00	0.00	2.00	
13,365.00	90.00	95.17	8,900.01	-697.10	4,841.97	4,880.91	2.00	0.00	2.00	
13,380.00	90.00	95.47	8,900.01	-698.49	4,856.90	4,895.91	2.00	0.00	2.00	
13,395.00	90.00	95.77	8,900.01	-699.95	4,871.83	4,910.91	2.00	0.00	2.00	
13,406.65	90.00	96.00	8,900.01	-701.15	4,883.42	4,922.55	2.00	0.00	2.00	
13,410.00	90.00	96.00	8,900.01	-701.50	4,886.75	4,925.90	0.00	0.00	0.00	
13,425.00	90.00	96.00	8,900.01	-703.07	4,901.67	4,940.89	0.00	0.00	0.00	
13,440.00	90.00	96.00	8,900.01	-704.63	4,916.59	4,955.89	0.00	0.00	0.00	
13,455.00	90.00	96.00	8,900.01	-706.20	4,931.51	4,970.88	0.00	0.00	0.00	
13,470.00	90.00	96.00	8,900.01	-707.77	4,946.42	4,985.88	0.00	0.00	0.00	
13,485.00	90.00	96.00	8,900.01	-709.34	4,961.34	5,000.87	0.00	0.00	0.00	
13,500.00	90.00	96.00	8,900.01	-710.91	4,976.26	5,015.86	0.00	0.00	0.00	
13,515.00	90.00	96.00	8,900.01	-712.47	4,991.18	5,030.86	0.00	0.00	0.00	
13,530.00	90.00	96.00	8,900.01	-714.04	5,006.10	5,045.85	0.00	0.00	0.00	
13,545.00	90.00	96.00	8,900.01	-715.61	5,021.01	5,060.84	0.00	0.00	0.00	
13,560.00	90.00	96.00	8,900.01	-717.18	5,035.93	5,075.84	0.00	0.00	0.00	
13,575.00	90.00	96.00	8,900.01	-718.75	5,050.85	5,090.83	0.00	0.00	0.00	
13,590.00	90.00	96.00	8,900.01	-720.31	5,065.77	5,105.83	0.00	0.00	0.00	
13,605.00	90.00	96.00	8,900.01	-721.88	5,080.68	5,120.82	0.00	0.00	0.00	
13,620.00	90.00	96.00	8,900.01	-723.45	5,095.60	5,135.81	0.00	0.00	0.00	
13,635.00	90.00	96.00	8,900.01	-725.02	5,110.52	5,150.81	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY_DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,650.00	90.00	96.00	8,900.01	-726.59	5,125.44	5,165.80	0.00	0.00	0.00	
13,665.00	90.00	96.00	8,900.01	-728.15	5,140.36	5,180.79	0.00	0.00	0.00	
13,680.00	90.00	96.00	8,900.01	-729.72	5,155.27	5,195.79	0.00	0.00	0.00	
13,695.00	90.00	96.00	8,900.01	-731.29	5,170.19	5,210.78	0.00	0.00	0.00	
13,710.00	90.00	96.00	8,900.01	-732.86	5,185.11	5,225.78	0.00	0.00	0.00	
13,725.00	90.00	96.00	8,900.01	-734.42	5,200.03	5,240.77	0.00	0.00	0.00	
13,740.00	90.00	96.00	8,900.01	-735.99	5,214.94	5,255.76	0.00	0.00	0.00	
13,755.00	90.00	96.00	8,900.01	-737.56	5,229.86	5,270.76	0.00	0.00	0.00	
13,770.00	90.00	96.00	8,900.01	-739.13	5,244.78	5,285.75	0.00	0.00	0.00	
13,785.00	90.00	96.00	8,900.01	-740.70	5,259.70	5,300.75	0.00	0.00	0.00	
13,800.00	90.00	96.00	8,900.01	-742.26	5,274.62	5,315.74	0.00	0.00	0.00	
13,815.00	90.00	96.00	8,900.01	-743.83	5,289.53	5,330.73	0.00	0.00	0.00	
13,830.00	90.00	96.00	8,900.01	-745.40	5,304.45	5,345.73	0.00	0.00	0.00	
13,845.00	90.00	96.00	8,900.01	-746.97	5,319.37	5,360.72	0.00	0.00	0.00	
13,860.00	90.00	96.00	8,900.01	-748.54	5,334.29	5,375.71	0.00	0.00	0.00	
13,875.00	90.00	96.00	8,900.01	-750.10	5,349.21	5,390.71	0.00	0.00	0.00	
13,890.00	90.00	96.00	8,900.01	-751.67	5,364.12	5,405.70	0.00	0.00	0.00	
13,905.00	90.00	96.00	8,900.01	-753.24	5,379.04	5,420.70	0.00	0.00	0.00	
13,920.00	90.00	96.00	8,900.01	-754.81	5,393.96	5,435.69	0.00	0.00	0.00	
13,935.00	90.00	96.00	8,900.01	-756.38	5,408.88	5,450.68	0.00	0.00	0.00	
13,950.00	90.00	96.00	8,900.01	-757.94	5,423.79	5,465.68	0.00	0.00	0.00	
13,965.00	90.00	96.00	8,900.01	-759.51	5,438.71	5,480.67	0.00	0.00	0.00	
13,980.00	90.00	96.00	8,900.01	-761.08	5,453.63	5,495.66	0.00	0.00	0.00	
13,995.00	90.00	96.00	8,900.01	-762.65	5,468.55	5,510.66	0.00	0.00	0.00	
14,010.00	90.00	96.00	8,900.01	-764.22	5,483.47	5,525.65	0.00	0.00	0.00	
14,025.00	90.00	96.00	8,900.01	-765.78	5,498.38	5,540.65	0.00	0.00	0.00	
14,040.00	90.00	96.00	8,900.01	-767.35	5,513.30	5,555.64	0.00	0.00	0.00	
14,055.00	90.00	96.00	8,900.01	-768.92	5,528.22	5,570.63	0.00	0.00	0.00	
14,070.00	90.00	96.00	8,900.01	-770.49	5,543.14	5,585.63	0.00	0.00	0.00	
14,085.00	90.00	96.00	8,900.01	-772.06	5,558.05	5,600.62	0.00	0.00	0.00	
14,100.00	90.00	96.00	8,900.01	-773.62	5,572.97	5,615.61	0.00	0.00	0.00	
14,115.00	90.00	96.00	8,900.01	-775.19	5,587.89	5,630.61	0.00	0.00	0.00	
14,130.00	90.00	96.00	8,900.01	-776.76	5,602.81	5,645.60	0.00	0.00	0.00	
14,145.00	90.00	96.00	8,900.01	-778.33	5,617.73	5,660.60	0.00	0.00	0.00	
14,160.00	90.00	96.00	8,900.01	-779.89	5,632.64	5,675.59	0.00	0.00	0.00	
14,175.00	90.00	96.00	8,900.01	-781.46	5,647.56	5,690.58	0.00	0.00	0.00	
14,190.00	90.00	96.00	8,900.01	-783.03	5,662.48	5,705.58	0.00	0.00	0.00	
14,205.00	90.00	96.00	8,900.01	-784.60	5,677.40	5,720.57	0.00	0.00	0.00	
14,220.00	90.00	96.00	8,900.01	-786.17	5,692.32	5,735.57	0.00	0.00	0.00	
14,235.00	90.00	96.00	8,900.01	-787.73	5,707.23	5,750.56	0.00	0.00	0.00	
14,250.00	90.00	96.00	8,900.01	-789.30	5,722.15	5,765.55	0.00	0.00	0.00	
14,265.00	90.00	96.00	8,900.01	-790.87	5,737.07	5,780.55	0.00	0.00	0.00	
14,280.00	90.00	96.00	8,900.01	-792.44	5,751.99	5,795.54	0.00	0.00	0.00	
14,295.00	90.00	96.00	8,900.01	-794.01	5,766.90	5,810.53	0.00	0.00	0.00	
14,310.00	90.00	96.00	8,900.01	-795.57	5,781.82	5,825.53	0.00	0.00	0.00	
14,325.00	90.00	96.00	8,900.01	-797.14	5,796.74	5,840.52	0.00	0.00	0.00	
14,340.00	90.00	96.00	8,900.01	-798.71	5,811.66	5,855.52	0.00	0.00	0.00	
14,355.00	90.00	96.00	8,900.01	-800.28	5,826.58	5,870.51	0.00	0.00	0.00	
14,370.00	90.00	96.00	8,900.01	-801.85	5,841.49	5,885.50	0.00	0.00	0.00	
14,385.00	90.00	96.00	8,900.01	-803.41	5,856.41	5,900.50	0.00	0.00	0.00	
14,400.00	90.00	96.00	8,900.01	-804.98	5,871.33	5,915.49	0.00	0.00	0.00	
14,415.00	90.00	96.00	8,900.01	-806.55	5,886.25	5,930.48	0.00	0.00	0.00	
14,430.00	90.00	96.00	8,900.01	-808.12	5,901.16	5,945.48	0.00	0.00	0.00	
14,445.00	90.00	96.00	8,900.01	-809.69	5,916.08	5,960.47	0.00	0.00	0.00	

ConocoPhillips Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,460.00	90.00	96.00	8,900.01	-811.25	5,931.00	5,975.47	0.00	0.00	0.00
14,475.00	90.00	96.00	8,900.01	-812.82	5,945.92	5,990.46	0.00	0.00	0.00
14,490.00	90.00	96.00	8,900.01	-814.39	5,960.84	6,005.45	0.00	0.00	0.00
14,505.00	90.00	96.00	8,900.01	-815.96	5,975.75	6,020.45	0.00	0.00	0.00
14,520.00	90.00	96.00	8,900.01	-817.53	5,990.67	6,035.44	0.00	0.00	0.00
14,535.00	90.00	96.00	8,900.01	-819.09	6,005.59	6,050.44	0.00	0.00	0.00
14,550.00	90.00	96.00	8,900.01	-820.66	6,020.51	6,065.43	0.00	0.00	0.00
14,565.00	90.00	96.00	8,900.01	-822.23	6,035.43	6,080.42	0.00	0.00	0.00
14,580.00	90.00	96.00	8,900.01	-823.80	6,050.34	6,095.42	0.00	0.00	0.00
14,595.00	90.00	96.00	8,900.01	-825.36	6,065.26	6,110.41	0.00	0.00	0.00
14,610.00	90.00	96.00	8,900.01	-826.93	6,080.18	6,125.40	0.00	0.00	0.00
14,625.00	90.00	96.00	8,900.01	-828.50	6,095.10	6,140.40	0.00	0.00	0.00
14,640.00	90.00	96.00	8,900.01	-830.07	6,110.01	6,155.39	0.00	0.00	0.00
14,655.00	90.00	96.00	8,900.01	-831.64	6,124.93	6,170.39	0.00	0.00	0.00
14,670.00	90.00	96.00	8,900.01	-833.20	6,139.85	6,185.38	0.00	0.00	0.00
14,685.00	90.00	96.00	8,900.01	-834.77	6,154.77	6,200.37	0.00	0.00	0.00
14,700.00	90.00	96.00	8,900.01	-836.34	6,169.69	6,215.37	0.00	0.00	0.00
14,715.00	90.00	96.00	8,900.01	-837.91	6,184.60	6,230.36	0.00	0.00	0.00
14,730.00	90.00	96.00	8,900.01	-839.48	6,199.52	6,245.35	0.00	0.00	0.00
14,745.00	90.00	96.00	8,900.01	-841.04	6,214.44	6,260.35	0.00	0.00	0.00
14,760.00	90.00	96.00	8,900.01	-842.61	6,229.36	6,275.34	0.00	0.00	0.00
14,775.00	90.00	96.00	8,900.01	-844.18	6,244.27	6,290.34	0.00	0.00	0.00
14,790.00	90.00	96.00	8,900.01	-845.75	6,259.19	6,305.33	0.00	0.00	0.00
14,805.00	90.00	96.00	8,900.01	-847.32	6,274.11	6,320.32	0.00	0.00	0.00
14,806.65	90.00	96.00	8,900.01	-847.49	6,275.75	6,321.97	0.00	0.00	0.00
14,820.00	90.00	95.73	8,900.01	-848.85	6,289.03	6,335.32	2.00	0.00	-2.00
14,835.00	90.00	95.43	8,900.01	-850.31	6,303.96	6,350.31	2.00	0.00	-2.00
14,850.00	90.00	95.13	8,900.01	-851.69	6,318.90	6,365.31	2.00	0.00	-2.00
14,865.00	90.00	94.83	8,900.01	-853.00	6,333.84	6,380.31	2.00	0.00	-2.00
14,880.00	90.00	94.53	8,900.01	-854.22	6,348.79	6,395.31	2.00	0.00	-2.00
14,895.00	90.00	94.23	8,900.01	-855.37	6,363.75	6,410.31	2.00	0.00	-2.00
14,910.00	90.00	93.93	8,900.01	-856.44	6,378.71	6,425.31	2.00	0.00	-2.00
14,925.00	90.00	93.63	8,900.01	-857.42	6,393.68	6,440.31	2.00	0.00	-2.00
14,940.00	90.00	93.33	8,900.01	-858.34	6,408.65	6,455.31	2.00	0.00	-2.00
14,955.00	90.00	93.03	8,900.01	-859.17	6,423.62	6,470.31	2.00	0.00	-2.00
14,970.00	90.00	92.73	8,900.01	-859.92	6,438.61	6,485.30	2.00	0.00	-2.00
14,985.00	90.00	92.43	8,900.01	-860.60	6,453.59	6,500.29	2.00	0.00	-2.00
15,000.00	90.00	92.13	8,900.01	-861.20	6,468.58	6,515.28	2.00	0.00	-2.00
15,015.00	90.00	91.83	8,900.01	-861.72	6,483.57	6,530.27	2.00	0.00	-2.00
15,030.00	90.00	91.53	8,900.01	-862.16	6,498.56	6,545.25	2.00	0.00	-2.00
15,045.00	90.00	91.23	8,900.01	-862.52	6,513.56	6,560.23	2.00	0.00	-2.00
15,060.00	90.00	90.93	8,900.01	-862.80	6,528.56	6,575.21	2.00	0.00	-2.00
15,075.00	90.00	90.63	8,900.01	-863.01	6,543.55	6,590.18	2.00	0.00	-2.00
15,090.00	90.00	90.33	8,900.01	-863.13	6,558.55	6,605.15	2.00	0.00	-2.00
15,105.00	90.00	90.03	8,900.01	-863.18	6,573.55	6,620.11	2.00	0.00	-2.00
15,120.00	90.00	89.73	8,900.01	-863.15	6,588.55	6,635.06	2.00	0.00	-2.00
15,135.00	90.00	89.43	8,900.01	-863.04	6,603.55	6,650.01	2.00	0.00	-2.00
15,150.00	90.00	89.13	8,900.01	-862.85	6,618.55	6,664.95	2.00	0.00	-2.00
15,165.00	90.00	88.83	8,900.01	-862.59	6,633.55	6,679.88	2.00	0.00	-2.00
15,180.00	90.00	88.53	8,900.01	-862.24	6,648.55	6,694.81	2.00	0.00	-2.00
15,195.00	90.00	88.23	8,900.01	-861.82	6,663.54	6,709.73	2.00	0.00	-2.00
15,210.00	90.00	87.93	8,900.01	-861.32	6,678.53	6,724.64	2.00	0.00	-2.00
15,225.00	90.00	87.63	8,900.01	-860.74	6,693.52	6,739.54	2.00	0.00	-2.00
15,240.00	90.00	87.33	8,900.01	-860.08	6,708.51	6,754.43	2.00	0.00	-2.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
15,255.00	90.00	87.03	8,900.01	-859.34	6,723.49	6,769.32	2.00	0.00	-2.00
15,270.00	90.00	86.73	8,900.01	-858.53	6,738.47	6,784.19	2.00	0.00	-2.00
15,285.00	90.00	86.43	8,900.01	-857.63	6,753.44	6,799.05	2.00	0.00	-2.00
15,300.00	90.00	86.13	8,900.01	-856.66	6,768.41	6,813.90	2.00	0.00	-2.00
15,315.00	90.00	85.83	8,900.01	-855.61	6,783.37	6,828.74	2.00	0.00	-2.00
15,330.00	90.00	85.53	8,900.01	-854.48	6,798.33	6,843.57	2.00	0.00	-2.00
15,345.00	90.00	85.23	8,900.01	-853.27	6,813.28	6,858.39	2.00	0.00	-2.00
15,356.65	90.00	85.00	8,900.01	-852.28	6,824.89	6,869.89	2.00	0.00	-2.00
15,360.00	90.00	85.00	8,900.01	-851.99	6,828.22	6,873.19	0.00	0.00	0.00
15,375.00	90.00	85.00	8,900.01	-850.68	6,843.17	6,887.99	0.00	0.00	0.00
15,390.00	90.00	85.00	8,900.01	-849.37	6,858.11	6,902.79	0.00	0.00	0.00
15,405.00	90.00	85.00	8,900.01	-848.07	6,873.05	6,917.59	0.00	0.00	0.00
15,420.00	90.00	85.00	8,900.01	-846.76	6,888.00	6,932.40	0.00	0.00	0.00
15,435.00	90.00	85.00	8,900.01	-845.45	6,902.94	6,947.20	0.00	0.00	0.00
15,450.00	90.00	85.00	8,900.01	-844.14	6,917.88	6,962.00	0.00	0.00	0.00
15,465.00	90.00	85.00	8,900.01	-842.84	6,932.82	6,976.80	0.00	0.00	0.00
15,480.00	90.00	85.00	8,900.01	-841.53	6,947.77	6,991.60	0.00	0.00	0.00
15,495.00	90.00	85.00	8,900.01	-840.22	6,962.71	7,006.40	0.00	0.00	0.00
15,510.00	90.00	85.00	8,900.01	-838.92	6,977.65	7,021.20	0.00	0.00	0.00
15,525.00	90.00	85.00	8,900.01	-837.61	6,992.60	7,036.00	0.00	0.00	0.00
15,540.00	90.00	85.00	8,900.01	-836.30	7,007.54	7,050.80	0.00	0.00	0.00
15,555.00	90.00	85.00	8,900.01	-834.99	7,022.48	7,065.60	0.00	0.00	0.00
15,570.00	90.00	85.00	8,900.01	-833.69	7,037.42	7,080.40	0.00	0.00	0.00
15,585.00	90.00	85.00	8,900.01	-832.38	7,052.37	7,095.20	0.00	0.00	0.00
15,600.00	90.00	85.00	8,900.01	-831.07	7,067.31	7,110.00	0.00	0.00	0.00
15,615.00	90.00	85.00	8,900.01	-829.76	7,082.25	7,124.80	0.00	0.00	0.00
15,630.00	90.00	85.00	8,900.01	-828.46	7,097.20	7,139.60	0.00	0.00	0.00
15,645.00	90.00	85.00	8,900.01	-827.15	7,112.14	7,154.40	0.00	0.00	0.00
15,660.00	90.00	85.00	8,900.01	-825.84	7,127.08	7,169.20	0.00	0.00	0.00
15,675.00	90.00	85.00	8,900.01	-824.53	7,142.02	7,184.01	0.00	0.00	0.00
15,690.00	90.00	85.00	8,900.01	-823.23	7,156.97	7,198.81	0.00	0.00	0.00
15,705.00	90.00	85.00	8,900.01	-821.92	7,171.91	7,213.61	0.00	0.00	0.00
15,720.00	90.00	85.00	8,900.01	-820.61	7,186.85	7,228.41	0.00	0.00	0.00
15,735.00	90.00	85.00	8,900.01	-819.31	7,201.80	7,243.21	0.00	0.00	0.00
15,750.00	90.00	85.00	8,900.01	-818.00	7,216.74	7,258.01	0.00	0.00	0.00
15,765.00	90.00	85.00	8,900.01	-816.69	7,231.68	7,272.81	0.00	0.00	0.00
15,780.00	90.00	85.00	8,900.01	-815.38	7,246.63	7,287.61	0.00	0.00	0.00
15,795.00	90.00	85.00	8,900.01	-814.08	7,261.57	7,302.41	0.00	0.00	0.00
15,810.00	90.00	85.00	8,900.01	-812.77	7,276.51	7,317.21	0.00	0.00	0.00
15,825.00	90.00	85.00	8,900.01	-811.46	7,291.45	7,332.01	0.00	0.00	0.00
15,840.00	90.00	85.00	8,900.01	-810.15	7,306.40	7,346.81	0.00	0.00	0.00
15,855.00	90.00	85.00	8,900.01	-808.85	7,321.34	7,361.61	0.00	0.00	0.00
15,870.00	90.00	85.00	8,900.01	-807.54	7,336.28	7,376.41	0.00	0.00	0.00
15,885.00	90.00	85.00	8,900.01	-806.23	7,351.23	7,391.21	0.00	0.00	0.00
15,900.00	90.00	85.00	8,900.01	-804.92	7,366.17	7,406.01	0.00	0.00	0.00
15,915.00	90.00	85.00	8,900.01	-803.62	7,381.11	7,420.81	0.00	0.00	0.00
15,930.00	90.00	85.00	8,900.01	-802.31	7,396.05	7,435.62	0.00	0.00	0.00
15,945.00	90.00	85.00	8,900.01	-801.00	7,411.00	7,450.42	0.00	0.00	0.00
15,960.00	90.00	85.00	8,900.01	-799.70	7,425.94	7,465.22	0.00	0.00	0.00
15,975.00	90.00	85.00	8,900.01	-798.39	7,440.88	7,480.02	0.00	0.00	0.00
15,990.00	90.00	85.00	8,900.01	-797.08	7,455.83	7,494.82	0.00	0.00	0.00
16,005.00	90.00	85.00	8,900.01	-795.77	7,470.77	7,509.62	0.00	0.00	0.00
16,020.00	90.00	85.00	8,900.01	-794.47	7,485.71	7,524.42	0.00	0.00	0.00
16,035.00	90.00	85.00	8,900.01	-793.16	7,500.66	7,539.22	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,050.00	90.00	85.00	8,900.01	-791.85	7,515.60	7,554.02	0.00	0.00	0.00	
16,065.00	90.00	85.00	8,900.01	-790.54	7,530.54	7,568.82	0.00	0.00	0.00	
16,080.00	90.00	85.00	8,900.01	-789.24	7,545.48	7,583.62	0.00	0.00	0.00	
16,095.00	90.00	85.00	8,900.01	-787.93	7,560.43	7,598.42	0.00	0.00	0.00	
16,110.00	90.00	85.00	8,900.01	-786.62	7,575.37	7,613.22	0.00	0.00	0.00	
16,125.00	90.00	85.00	8,900.01	-785.31	7,590.31	7,628.02	0.00	0.00	0.00	
16,140.00	90.00	85.00	8,900.01	-784.01	7,605.26	7,642.82	0.00	0.00	0.00	
16,155.00	90.00	85.00	8,900.01	-782.70	7,620.20	7,657.62	0.00	0.00	0.00	
16,170.00	90.00	85.00	8,900.01	-781.39	7,635.14	7,672.42	0.00	0.00	0.00	
16,185.00	90.00	85.00	8,900.01	-780.09	7,650.08	7,687.23	0.00	0.00	0.00	
16,200.00	90.00	85.00	8,900.01	-778.78	7,665.03	7,702.03	0.00	0.00	0.00	
16,215.00	90.00	85.00	8,900.01	-777.47	7,679.97	7,716.83	0.00	0.00	0.00	
16,230.00	90.00	85.00	8,900.01	-776.16	7,694.91	7,731.63	0.00	0.00	0.00	
16,245.00	90.00	85.00	8,900.01	-774.86	7,709.86	7,746.43	0.00	0.00	0.00	
16,260.00	90.00	85.00	8,900.01	-773.55	7,724.80	7,761.23	0.00	0.00	0.00	
16,275.00	90.00	85.00	8,900.01	-772.24	7,739.74	7,776.03	0.00	0.00	0.00	
16,290.00	90.00	85.00	8,900.01	-770.93	7,754.68	7,790.83	0.00	0.00	0.00	
16,305.00	90.00	85.00	8,900.01	-769.63	7,769.63	7,805.63	0.00	0.00	0.00	
16,320.00	90.00	85.00	8,900.01	-768.32	7,784.57	7,820.43	0.00	0.00	0.00	
16,335.00	90.00	85.00	8,900.01	-767.01	7,799.51	7,835.23	0.00	0.00	0.00	
16,350.00	90.00	85.00	8,900.01	-765.70	7,814.46	7,850.03	0.00	0.00	0.00	
16,365.00	90.00	85.00	8,900.01	-764.40	7,829.40	7,864.83	0.00	0.00	0.00	
16,380.00	90.00	85.00	8,900.01	-763.09	7,844.34	7,879.63	0.00	0.00	0.00	
16,395.00	90.00	85.00	8,900.01	-761.78	7,859.29	7,894.43	0.00	0.00	0.00	
16,406.65	90.00	85.00	8,900.01	-760.77	7,870.89	7,905.93	0.00	0.00	0.00	
16,410.00	90.00	85.07	8,900.01	-760.48	7,874.23	7,909.23	2.00	0.00	2.00	
16,425.00	90.00	85.37	8,900.01	-759.23	7,889.18	7,924.04	2.00	0.00	2.00	
16,440.00	90.00	85.67	8,900.01	-758.05	7,904.13	7,938.87	2.00	0.00	2.00	
16,455.00	90.00	85.97	8,900.01	-756.96	7,919.09	7,953.70	2.00	0.00	2.00	
16,470.00	90.00	86.27	8,900.01	-755.94	7,934.06	7,968.55	2.00	0.00	2.00	
16,485.00	90.00	86.57	8,900.01	-755.01	7,949.03	7,983.40	2.00	0.00	2.00	
16,500.00	90.00	86.87	8,900.01	-754.15	7,964.00	7,998.27	2.00	0.00	2.00	
16,515.00	90.00	87.17	8,900.01	-753.37	7,978.98	8,013.15	2.00	0.00	2.00	
16,530.00	90.00	87.47	8,900.01	-752.66	7,993.96	8,028.03	2.00	0.00	2.00	
16,545.00	90.00	87.77	8,900.01	-752.04	8,008.95	8,042.93	2.00	0.00	2.00	
16,560.00	90.00	88.07	8,900.01	-751.50	8,023.94	8,057.83	2.00	0.00	2.00	
16,575.00	90.00	88.37	8,900.01	-751.03	8,038.93	8,072.75	2.00	0.00	2.00	
16,590.00	90.00	88.67	8,900.01	-750.64	8,053.93	8,087.67	2.00	0.00	2.00	
16,605.00	90.00	88.97	8,900.01	-750.33	8,068.93	8,102.60	2.00	0.00	2.00	
16,620.00	90.00	89.27	8,900.01	-750.10	8,083.92	8,117.54	2.00	0.00	2.00	
16,635.00	90.00	89.57	8,900.01	-749.95	8,098.92	8,132.48	2.00	0.00	2.00	
16,650.00	90.00	89.87	8,900.01	-749.87	8,113.92	8,147.43	2.00	0.00	2.00	
16,665.00	90.00	90.17	8,900.01	-749.88	8,128.92	8,162.39	2.00	0.00	2.00	
16,680.00	90.00	90.47	8,900.01	-749.96	8,143.92	8,177.35	2.00	0.00	2.00	
16,695.00	90.00	90.77	8,900.01	-750.12	8,158.92	8,192.32	2.00	0.00	2.00	
16,710.00	90.00	91.07	8,900.01	-750.36	8,173.92	8,207.29	2.00	0.00	2.00	
16,725.00	90.00	91.37	8,900.01	-750.68	8,188.92	8,222.27	2.00	0.00	2.00	
16,740.00	90.00	91.67	8,900.01	-751.08	8,203.91	8,237.25	2.00	0.00	2.00	
16,742.65	90.00	91.72	8,900.01	-751.16	8,206.56	8,239.90	2.00	0.00	2.00	
16,755.00	90.00	91.72	8,900.01	-751.53	8,218.91	8,252.24	0.00	0.00	0.00	
16,770.00	90.00	91.72	8,900.01	-751.98	8,233.90	8,267.22	0.00	0.00	0.00	
16,785.00	90.00	91.72	8,900.01	-752.43	8,248.89	8,282.21	0.00	0.00	0.00	
16,800.00	90.00	91.72	8,900.01	-752.88	8,263.88	8,297.19	0.00	0.00	0.00	
16,815.00	90.00	91.72	8,900.01	-753.33	8,278.88	8,312.17	0.00	0.00	0.00	

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)	
16,830.00	90.00	91.72	8,900.01	-753.78	8,293.87	8,327.16	0.00	0.00	0.00	
16,845.00	90.00	91.72	8,900.01	-754.23	8,308.86	8,342.14	0.00	0.00	0.00	
16,860.00	90.00	91.72	8,900.01	-754.68	8,323.86	8,357.13	0.00	0.00	0.00	
16,875.00	90.00	91.72	8,900.01	-755.13	8,338.85	8,372.11	0.00	0.00	0.00	
16,890.00	90.00	91.72	8,900.01	-755.58	8,353.84	8,387.10	0.00	0.00	0.00	
16,905.00	90.00	91.72	8,900.01	-756.03	8,368.84	8,402.08	0.00	0.00	0.00	
16,920.00	90.00	91.72	8,900.01	-756.48	8,383.83	8,417.06	0.00	0.00	0.00	
16,935.00	90.00	91.72	8,900.01	-756.93	8,398.82	8,432.05	0.00	0.00	0.00	
16,950.00	90.00	91.72	8,900.01	-757.38	8,413.82	8,447.03	0.00	0.00	0.00	
16,965.00	90.00	91.72	8,900.01	-757.83	8,428.81	8,462.02	0.00	0.00	0.00	
16,980.00	90.00	91.72	8,900.01	-758.28	8,443.80	8,477.00	0.00	0.00	0.00	
16,995.00	90.00	91.72	8,900.01	-758.73	8,458.80	8,491.98	0.00	0.00	0.00	
17,010.00	90.00	91.72	8,900.01	-759.18	8,473.79	8,506.97	0.00	0.00	0.00	
17,025.00	90.00	91.72	8,900.01	-759.63	8,488.78	8,521.95	0.00	0.00	0.00	
17,040.00	90.00	91.72	8,900.01	-760.08	8,503.78	8,536.94	0.00	0.00	0.00	
17,055.00	90.00	91.72	8,900.01	-760.53	8,518.77	8,551.92	0.00	0.00	0.00	
17,070.00	90.00	91.72	8,900.01	-760.98	8,533.76	8,566.91	0.00	0.00	0.00	
17,085.00	90.00	91.72	8,900.01	-761.43	8,548.76	8,581.89	0.00	0.00	0.00	
17,100.00	90.00	91.72	8,900.01	-761.88	8,563.75	8,596.87	0.00	0.00	0.00	
17,115.00	90.00	91.72	8,900.01	-762.33	8,578.74	8,611.86	0.00	0.00	0.00	
17,130.00	90.00	91.72	8,900.01	-762.78	8,593.74	8,626.84	0.00	0.00	0.00	
17,145.00	90.00	91.72	8,900.01	-763.23	8,608.73	8,641.83	0.00	0.00	0.00	
17,160.00	90.00	91.72	8,900.01	-763.68	8,623.72	8,656.81	0.00	0.00	0.00	
17,175.00	90.00	91.72	8,900.01	-764.13	8,638.72	8,671.79	0.00	0.00	0.00	
17,190.00	90.00	91.72	8,900.01	-764.58	8,653.71	8,686.78	0.00	0.00	0.00	
17,205.00	90.00	91.72	8,900.01	-765.03	8,668.70	8,701.76	0.00	0.00	0.00	
17,220.00	90.00	91.72	8,900.01	-765.48	8,683.70	8,716.75	0.00	0.00	0.00	
17,235.00	90.00	91.72	8,900.01	-765.93	8,698.69	8,731.73	0.00	0.00	0.00	
17,250.00	90.00	91.72	8,900.01	-766.38	8,713.68	8,746.72	0.00	0.00	0.00	
17,265.00	90.00	91.72	8,900.01	-766.83	8,728.68	8,761.70	0.00	0.00	0.00	
17,280.00	90.00	91.72	8,900.01	-767.29	8,743.67	8,776.68	0.00	0.00	0.00	
17,295.00	90.00	91.72	8,900.01	-767.74	8,758.66	8,791.67	0.00	0.00	0.00	
17,310.00	90.00	91.72	8,900.01	-768.19	8,773.66	8,806.65	0.00	0.00	0.00	
17,325.00	90.00	91.72	8,900.01	-768.64	8,788.65	8,821.64	0.00	0.00	0.00	
17,340.00	90.00	91.72	8,900.01	-769.09	8,803.64	8,836.62	0.00	0.00	0.00	
17,355.00	90.00	91.72	8,900.01	-769.54	8,818.63	8,851.60	0.00	0.00	0.00	
17,370.00	90.00	91.72	8,900.01	-769.99	8,833.63	8,866.59	0.00	0.00	0.00	
17,385.00	90.00	91.72	8,900.01	-770.44	8,848.62	8,881.57	0.00	0.00	0.00	
17,400.00	90.00	91.72	8,900.01	-770.89	8,863.61	8,896.56	0.00	0.00	0.00	
17,415.00	90.00	91.72	8,900.01	-771.34	8,878.61	8,911.54	0.00	0.00	0.00	
17,430.00	90.00	91.72	8,900.01	-771.79	8,893.60	8,926.53	0.00	0.00	0.00	
17,445.00	90.00	91.72	8,900.01	-772.24	8,908.59	8,941.51	0.00	0.00	0.00	
17,460.00	90.00	91.72	8,900.01	-772.69	8,923.59	8,956.49	0.00	0.00	0.00	
17,475.00	90.00	91.72	8,900.01	-773.14	8,938.58	8,971.48	0.00	0.00	0.00	
17,490.00	90.00	91.72	8,900.01	-773.59	8,953.57	8,986.46	0.00	0.00	0.00	
17,505.00	90.00	91.72	8,900.01	-774.04	8,968.57	9,001.45	0.00	0.00	0.00	
17,520.00	90.00	91.72	8,900.01	-774.49	8,983.56	9,016.43	0.00	0.00	0.00	
17,535.00	90.00	91.72	8,900.01	-774.94	8,998.55	9,031.41	0.00	0.00	0.00	
17,550.00	90.00	91.72	8,900.01	-775.39	9,013.55	9,046.40	0.00	0.00	0.00	
17,565.00	90.00	91.72	8,900.01	-775.84	9,028.54	9,061.38	0.00	0.00	0.00	
17,580.00	90.00	91.72	8,900.01	-776.29	9,043.53	9,076.37	0.00	0.00	0.00	
17,595.00	90.00	91.72	8,900.01	-776.74	9,058.53	9,091.35	0.00	0.00	0.00	
17,610.00	90.00	91.72	8,900.01	-777.19	9,073.52	9,106.34	0.00	0.00	0.00	
17,625.00	90.00	91.72	8,900.01	-777.64	9,088.51	9,121.32	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
17,640.00	90.00	91.72	8,900.01	-778.09	9,103.51	9,136.30	0.00	0.00	0.00	
17,655.00	90.00	91.72	8,900.01	-778.54	9,118.50	9,151.29	0.00	0.00	0.00	
17,670.00	90.00	91.72	8,900.01	-778.99	9,133.49	9,166.27	0.00	0.00	0.00	
17,685.00	90.00	91.72	8,900.01	-779.44	9,148.49	9,181.26	0.00	0.00	0.00	
17,700.00	90.00	91.72	8,900.01	-779.89	9,163.48	9,196.24	0.00	0.00	0.00	
17,715.00	90.00	91.72	8,900.01	-780.34	9,178.47	9,211.22	0.00	0.00	0.00	
17,730.00	90.00	91.72	8,900.01	-780.79	9,193.47	9,226.21	0.00	0.00	0.00	
17,745.00	90.00	91.72	8,900.01	-781.24	9,208.46	9,241.19	0.00	0.00	0.00	
17,760.00	90.00	91.72	8,900.01	-781.69	9,223.45	9,256.18	0.00	0.00	0.00	
17,775.00	90.00	91.72	8,900.01	-782.14	9,238.45	9,271.16	0.00	0.00	0.00	
17,790.00	90.00	91.72	8,900.01	-782.59	9,253.44	9,286.15	0.00	0.00	0.00	
17,805.00	90.00	91.72	8,900.01	-783.04	9,268.43	9,301.13	0.00	0.00	0.00	
17,820.00	90.00	91.72	8,900.01	-783.49	9,283.43	9,316.11	0.00	0.00	0.00	
17,835.00	90.00	91.72	8,900.01	-783.94	9,298.42	9,331.10	0.00	0.00	0.00	
17,850.00	90.00	91.72	8,900.01	-784.39	9,313.41	9,346.08	0.00	0.00	0.00	
17,865.00	90.00	91.72	8,900.01	-784.84	9,328.41	9,361.07	0.00	0.00	0.00	
17,880.00	90.00	91.72	8,900.01	-785.29	9,343.40	9,376.05	0.00	0.00	0.00	
17,895.00	90.00	91.72	8,900.01	-785.74	9,358.39	9,391.03	0.00	0.00	0.00	
17,910.00	90.00	91.72	8,900.01	-786.19	9,373.38	9,406.02	0.00	0.00	0.00	
17,925.00	90.00	91.72	8,900.01	-786.64	9,388.38	9,421.00	0.00	0.00	0.00	
17,940.00	90.00	91.72	8,900.01	-787.10	9,403.37	9,435.99	0.00	0.00	0.00	
17,955.00	90.00	91.72	8,900.01	-787.55	9,418.36	9,450.97	0.00	0.00	0.00	
17,970.00	90.00	91.72	8,900.01	-788.00	9,433.36	9,465.96	0.00	0.00	0.00	
17,985.00	90.00	91.72	8,900.01	-788.45	9,448.35	9,480.94	0.00	0.00	0.00	
18,000.00	90.00	91.72	8,900.01	-788.90	9,463.34	9,495.92	0.00	0.00	0.00	
18,015.00	90.00	91.72	8,900.01	-789.35	9,478.34	9,510.91	0.00	0.00	0.00	
18,030.00	90.00	91.72	8,900.01	-789.80	9,493.33	9,525.89	0.00	0.00	0.00	
18,045.00	90.00	91.72	8,900.01	-790.25	9,508.32	9,540.88	0.00	0.00	0.00	
18,060.00	90.00	91.72	8,900.01	-790.70	9,523.32	9,555.86	0.00	0.00	0.00	
18,075.00	90.00	91.72	8,900.01	-791.15	9,538.31	9,570.84	0.00	0.00	0.00	
18,090.00	90.00	91.72	8,900.01	-791.60	9,553.30	9,585.83	0.00	0.00	0.00	
18,105.00	90.00	91.72	8,900.01	-792.05	9,568.30	9,600.81	0.00	0.00	0.00	
18,120.00	90.00	91.72	8,900.01	-792.50	9,583.29	9,615.80	0.00	0.00	0.00	
18,135.00	90.00	91.72	8,900.01	-792.95	9,598.28	9,630.78	0.00	0.00	0.00	
18,150.00	90.00	91.72	8,900.01	-793.40	9,613.28	9,645.77	0.00	0.00	0.00	
18,165.00	90.00	91.72	8,900.01	-793.85	9,628.27	9,660.75	0.00	0.00	0.00	
18,180.00	90.00	91.72	8,900.01	-794.30	9,643.26	9,675.73	0.00	0.00	0.00	
18,195.00	90.00	91.72	8,900.01	-794.75	9,658.26	9,690.72	0.00	0.00	0.00	
18,210.00	90.00	91.72	8,900.01	-795.20	9,673.25	9,705.70	0.00	0.00	0.00	
18,225.00	90.00	91.72	8,900.01	-795.65	9,688.24	9,720.69	0.00	0.00	0.00	
18,240.00	90.00	91.72	8,900.01	-796.10	9,703.24	9,735.67	0.00	0.00	0.00	
18,255.00	90.00	91.72	8,900.01	-796.55	9,718.23	9,750.65	0.00	0.00	0.00	
18,270.00	90.00	91.72	8,900.01	-797.00	9,733.22	9,765.64	0.00	0.00	0.00	
18,285.00	90.00	91.72	8,900.01	-797.45	9,748.22	9,780.62	0.00	0.00	0.00	
18,300.00	90.00	91.72	8,900.01	-797.90	9,763.21	9,795.61	0.00	0.00	0.00	
18,315.00	90.00	91.72	8,900.01	-798.35	9,778.20	9,810.59	0.00	0.00	0.00	
18,330.00	90.00	91.72	8,900.01	-798.80	9,793.20	9,825.58	0.00	0.00	0.00	
18,345.00	90.00	91.72	8,900.01	-799.25	9,808.19	9,840.56	0.00	0.00	0.00	
18,360.00	90.00	91.72	8,900.01	-799.70	9,823.18	9,855.54	0.00	0.00	0.00	
18,375.00	90.00	91.72	8,900.01	-800.15	9,838.18	9,870.53	0.00	0.00	0.00	
18,390.00	90.00	91.72	8,900.01	-800.60	9,853.17	9,885.51	0.00	0.00	0.00	
18,405.00	90.00	91.72	8,900.01	-801.05	9,868.16	9,900.50	0.00	0.00	0.00	
18,420.00	90.00	91.72	8,900.01	-801.50	9,883.15	9,915.48	0.00	0.00	0.00	
18,435.00	90.00	91.72	8,900.01	-801.95	9,898.15	9,930.46	0.00	0.00	0.00	

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 552H
Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)
18,450.00	90.00	91.72	8,900.01	-802.40	9,913.14	9,945.45	0.00	0.00	0.00
18,465.00	90.00	91.72	8,900.01	-802.85	9,928.13	9,960.43	0.00	0.00	0.00
18,480.00	90.00	91.72	8,900.01	-803.30	9,943.13	9,975.42	0.00	0.00	0.00
18,495.00	90.00	91.72	8,900.01	-803.75	9,958.12	9,990.40	0.00	0.00	0.00
18,510.00	90.00	91.72	8,900.01	-804.20	9,973.11	10,005.39	0.00	0.00	0.00
18,525.00	90.00	91.72	8,900.01	-804.65	9,988.11	10,020.37	0.00	0.00	0.00
18,540.00	90.00	91.72	8,900.01	-805.10	10,003.10	10,035.35	0.00	0.00	0.00
18,555.00	90.00	91.72	8,900.01	-805.55	10,018.09	10,050.34	0.00	0.00	0.00
18,570.00	90.00	91.72	8,900.01	-806.00	10,033.09	10,065.32	0.00	0.00	0.00
18,585.00	90.00	91.72	8,900.01	-806.45	10,048.08	10,080.31	0.00	0.00	0.00
18,600.00	90.00	91.72	8,900.01	-806.91	10,063.07	10,095.29	0.00	0.00	0.00
18,615.00	90.00	91.72	8,900.01	-807.36	10,078.07	10,110.27	0.00	0.00	0.00
18,630.00	90.00	91.72	8,900.01	-807.81	10,093.06	10,125.26	0.00	0.00	0.00
18,645.00	90.00	91.72	8,900.01	-808.26	10,108.05	10,140.24	0.00	0.00	0.00
18,660.00	90.00	91.72	8,900.01	-808.71	10,123.05	10,155.23	0.00	0.00	0.00
18,675.00	90.00	91.72	8,900.01	-809.16	10,138.04	10,170.21	0.00	0.00	0.00
18,690.00	90.00	91.72	8,900.01	-809.61	10,153.03	10,185.20	0.00	0.00	0.00
18,705.00	90.00	91.72	8,900.01	-810.06	10,168.03	10,200.18	0.00	0.00	0.00
18,720.00	90.00	91.72	8,900.01	-810.51	10,183.02	10,215.16	0.00	0.00	0.00
18,735.00	90.00	91.72	8,900.01	-810.96	10,198.01	10,230.15	0.00	0.00	0.00
18,750.00	90.00	91.72	8,900.01	-811.41	10,213.01	10,245.13	0.00	0.00	0.00
18,765.00	90.00	91.72	8,900.01	-811.86	10,228.00	10,260.12	0.00	0.00	0.00
18,780.00	90.00	91.72	8,900.01	-812.31	10,242.99	10,275.10	0.00	0.00	0.00
18,795.00	90.00	91.72	8,900.01	-812.76	10,257.99	10,290.08	0.00	0.00	0.00
18,810.00	90.00	91.72	8,900.01	-813.21	10,272.98	10,305.07	0.00	0.00	0.00
18,825.00	90.00	91.72	8,900.01	-813.66	10,287.97	10,320.05	0.00	0.00	0.00
18,840.00	90.00	91.72	8,900.01	-814.11	10,302.97	10,335.04	0.00	0.00	0.00
18,855.00	90.00	91.72	8,900.01	-814.56	10,317.96	10,350.02	0.00	0.00	0.00
18,870.00	90.00	91.72	8,900.01	-815.01	10,332.95	10,365.01	0.00	0.00	0.00
18,885.00	90.00	91.72	8,900.01	-815.46	10,347.95	10,379.99	0.00	0.00	0.00
18,900.00	90.00	91.72	8,900.01	-815.91	10,362.94	10,394.97	0.00	0.00	0.00
18,915.00	90.00	91.72	8,900.01	-816.36	10,377.93	10,409.96	0.00	0.00	0.00
18,930.00	90.00	91.72	8,900.01	-816.81	10,392.93	10,424.94	0.00	0.00	0.00
18,945.00	90.00	91.72	8,900.01	-817.26	10,407.92	10,439.93	0.00	0.00	0.00
18,960.00	90.00	91.72	8,900.01	-817.71	10,422.91	10,454.91	0.00	0.00	0.00
18,975.00	90.00	91.72	8,900.01	-818.16	10,437.90	10,469.89	0.00	0.00	0.00
18,990.00	90.00	91.72	8,900.01	-818.61	10,452.90	10,484.88	0.00	0.00	0.00
19,005.00	90.00	91.72	8,900.01	-819.06	10,467.89	10,499.86	0.00	0.00	0.00
19,020.00	90.00	91.72	8,900.01	-819.51	10,482.88	10,514.85	0.00	0.00	0.00
19,035.00	90.00	91.72	8,900.01	-819.96	10,497.88	10,529.83	0.00	0.00	0.00
19,050.00	90.00	91.72	8,900.01	-820.41	10,512.87	10,544.82	0.00	0.00	0.00
19,065.00	90.00	91.72	8,900.01	-820.86	10,527.86	10,559.80	0.00	0.00	0.00
19,080.00	90.00	91.72	8,900.01	-821.31	10,542.86	10,574.78	0.00	0.00	0.00
19,095.00	90.00	91.72	8,900.01	-821.76	10,557.85	10,589.77	0.00	0.00	0.00
19,110.00	90.00	91.72	8,900.01	-822.21	10,572.84	10,604.75	0.00	0.00	0.00
19,125.00	90.00	91.72	8,900.01	-822.66	10,587.84	10,619.74	0.00	0.00	0.00
19,140.00	90.00	91.72	8,900.01	-823.11	10,602.83	10,634.72	0.00	0.00	0.00
19,155.00	90.00	91.72	8,900.01	-823.56	10,617.82	10,649.70	0.00	0.00	0.00
19,170.00	90.00	91.72	8,900.01	-824.01	10,632.82	10,664.69	0.00	0.00	0.00
19,185.00	90.00	91.72	8,900.01	-824.46	10,647.81	10,679.67	0.00	0.00	0.00
19,200.00	90.00	91.72	8,900.01	-824.91	10,662.80	10,694.66	0.00	0.00	0.00
19,215.00	90.00	91.72	8,900.01	-825.36	10,677.80	10,709.64	0.00	0.00	0.00
19,230.00	90.00	91.72	8,900.01	-825.81	10,692.79	10,724.63	0.00	0.00	0.00
19,245.00	90.00	91.72	8,900.01	-826.26	10,707.78	10,739.61	0.00	0.00	0.00

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Planning Report

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Company:	DELAWARE BASIN WEST	TVD Reference:	RKB @ 3023.00usft
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	RKB @ 3023.00usft
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 552H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWPO		

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)	
19,260.00	90.00	91.72	8,900.01	-826.72	10,722.78	10,754.59	0.00	0.00	0.00	
19,275.00	90.00	91.72	8,900.01	-827.17	10,737.77	10,769.58	0.00	0.00	0.00	
19,290.00	90.00	91.72	8,900.01	-827.62	10,752.76	10,784.56	0.00	0.00	0.00	
19,305.00	90.00	91.72	8,900.01	-828.07	10,767.76	10,799.55	0.00	0.00	0.00	
19,320.00	90.00	91.72	8,900.01	-828.52	10,782.75	10,814.53	0.00	0.00	0.00	
19,335.00	90.00	91.72	8,900.01	-828.97	10,797.74	10,829.51	0.00	0.00	0.00	
19,350.00	90.00	91.72	8,900.01	-829.42	10,812.74	10,844.50	0.00	0.00	0.00	
19,365.00	90.00	91.72	8,900.01	-829.87	10,827.73	10,859.48	0.00	0.00	0.00	
19,380.00	90.00	91.72	8,900.01	-830.32	10,842.72	10,874.47	0.00	0.00	0.00	
19,395.00	90.00	91.72	8,900.01	-830.77	10,857.72	10,889.45	0.00	0.00	0.00	
19,410.00	90.00	91.72	8,900.01	-831.22	10,872.71	10,904.44	0.00	0.00	0.00	
19,425.00	90.00	91.72	8,900.01	-831.67	10,887.70	10,919.42	0.00	0.00	0.00	
19,440.00	90.00	91.72	8,900.01	-832.12	10,902.70	10,934.40	0.00	0.00	0.00	
19,455.00	90.00	91.72	8,900.01	-832.57	10,917.69	10,949.39	0.00	0.00	0.00	
19,470.00	90.00	91.72	8,900.01	-833.02	10,932.68	10,964.37	0.00	0.00	0.00	
19,485.00	90.00	91.72	8,900.01	-833.47	10,947.68	10,979.36	0.00	0.00	0.00	
19,488.00	90.00	91.72	8,900.01	-833.56	10,950.67	10,982.35	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
POI1_r_VALKYRIE FED - hit/miss target - Shape	0.00	269.92	8,900.00	-683.76	5,934.76	479,354.88	593,231.26	32° 19' 3.007 N	104° 1' 53.538 W	- plan misses target center by 127.19usft at 14450.41usft MD (8900.00 TVD, -810.25 N, 5921.47 E) - Rectangle (sides W100.00 H5,282.00 D20.00)
FTP_r_VALKYRIE FED C - plan misses target center by 6.24usft at 9175.90usft MD (8893.85 TVD, -690.94 N, 653.55 E) - Circle (radius 50.00)	0.00	0.00	8,900.00	-690.84	652.51	479,347.80	587,949.01	32° 19' 3.080 N	104° 2' 55.093 W	
PBHL_r_VALKYRIE FED - plan misses target center by 50.15usft at 19488.00usft MD (8900.00 TVD, -833.56 N, 10950.67 E) - Rectangle (sides W100.00 H5,068.00 D20.00)	0.00	271.71	8,900.00	-835.31	11,000.79	479,203.33	598,297.29	32° 19' 1.362 N	104° 0' 54.507 W	
LTP_r_VALKYRIE FED C - plan misses target center by 0.22usft at 19488.00usft MD (8900.00 TVD, -833.56 N, 10950.67 E) - Circle (radius 50.00)	90.00	91.71	8,900.00	-833.78	10,950.69	479,204.86	598,247.19	32° 19' 1.379 N	104° 0' 55.091 W	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
19,488.01	8,900.01	5-1/2" Production Casing	5-1/2	6-3/4	

ConocoPhillips - Valkyrie Fed Com 552H

1. Geologic Formations

TVD of target	8,900' EOL	Pilot hole depth	N/A
MD at TD:	19,488'	Deepest expected fresh water:	90'

Formation	Depth (KB TVD)	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	201	Water	
Top of Salt	414	Salt	
Base of Salt	2418	Salt	
Lamar	2638	Salt Water	
Bell Canyon	2676	Salt Water	
Cherry Canyon	3494	Oil/Gas	
Brushy Canyon	4784	Oil/Gas	
Bone Spring	6236	Oil/Gas	
1st Bone Spring Sand	7298	Oil/Gas	
2nd Bone Spring Sand	8024	Oil/Gas	
3rd Bone Spring Carb	8376	Target Oil/Gas	
		Not Penetrated	
		Not Penetrated	
		Not Penetrated	

2a. Casing Program: Big Hole & WBM

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
17.50"	0	270'	13.375"	54.5	J55	BTC	9.15	16.56	57.97	61.77
12.250"	0	2,588	9.625"	40	L80-IC	BTC	2.55	11.39	8.85	9.15
8.75"	0	8,410	5.500"	20	P110-ICY	TXP-BTC	6.34	3.84	4.33	4.33
7.875"	8,410	19,488	5.500"	20	P110-ICY	TXP-BTC	6.34	3.84	4.33	4.33
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.
- New casing meeting API standards will be utilized.

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2b. Contingency Casing Program: Slim Hole & OBM

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	270	10.750"	45.5	J55	BTC	16.92	21.72	58.20	64.79
9.875"	0	8,200	7.625"	29.7	L80-ICY	BTC	3.57	1.66	2.98	2.63
8.75"	8,200	8,410	7.625"	29.7	P110-ICY	W513	4.44	2.37	4.28	2.57
6.75"	0	8,210	5.500"	20	P110-ICY	TXP-BTC	7.45	3.08	4.44	4.44
6.75"	8,210	19,488	5.500"	20	P110-ICY	W441	6.52	3.08	1.87	1.52
COP Minimum Safety Factor							1.05	1.15	1.4	1.4

- Contingency casing design will be used where water based mud is not deemed applicable.
- If drilling conditions dictate, 9.875" open hole may be taken to section TD.
- 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.
- New casing meeting API standards will be utilized.
- The 5-1/2" W441 casing will be run back 200' into intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

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

Casing	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hrs)	Slurry Description
Surface	0	13.5	1.75	9	12	Lead: Class C
	160	14.8	1.34	6.34	8	Tail: Class C
Intermediate	530	12.8	1.8	9.21	12	Lead: Class C
	190	14.8	1.34	6.52	8	Tail: Class C
Production	820	11	2.63	16.17	72	Lead: Class C
	1330	13.2	1.45	7.46	19	Tail: Class H

- Surface and intermediate cement jobs 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.

Casing String	TOC	% Excess
Surface	0'	50% in OH
1st Intermediate	0'	50% in OH
Production	2,088'	20% OH in Lateral

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3b. Cementing Program for OBM Design

Casing	# Sks	Wt. lb/ gal	Yld ft ³ / sack	H ₂ O gal/sk	500# Comp. Strength (hrs)	Slurry Description
Surface	110	13.5	1.75	9	12	Lead: Class C
	160	14.8	1.34	6.34	8	Tail: Class C
Intermediate Stage 1	1430	12.8	1.75	9.21	12	Lead: Class C
	120	14.8	1.35	6.6	8	Tail: Class C
Intermediate Stage 2	180	10.5	3.3	22	24	Lead: Class C
	160	14.8	1.35	6.6	8	Tail: Class H
Production	460	12.7	1.68	9.09	72	Lead: Class C
	960	14.5	1.18	5.26	19	Tail: Class H

- Surface and intermediate cement jobs to be performed offline.
- Cement design to be run in the event the deep set intermediate design is used.
- If losses are encountered, a DV tool will be run ~50' into the Lamar 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%
1st Stage Int	0'	50%
2nd Stage Int (if necessary)	0'	50%
Production	7,910'	20% OH in Lateral

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4. Pressure Control Equipment

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
12-1/4" or 9-7/8"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
8-3/4" (int)	13-5/8"	5M	5M Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
8-3/4" (prod) or 6-3/4"	13-5/8"	10M	5M Annular	x	5000psi
			Blind Ram	x	10000 psi
			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.

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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.	

5a. Mud Program

Depth		Type	Weight (ppg)	Visc.	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf. Shoe	9-5/8" Int 1 shoe	Saturated Brine	9 - 10	28-34	N/C
9-5/8" Int 1 shoe	Lateral TD	WBM	8.6 - 10	28-34	N/C

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

5b. Mud Program

Depth		Type	Weight (ppg)	Visc.	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf. Shoe	7 5/8" Int 1 shoe	Brine Diesel Emulsion	9 - 10	28-34	N/C
7 5/8" Int 1 shoe	Lateral TD	OBM	9.6 - 12	35-45	<20

Mud program to be used in the event 4-string design is run. Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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6. Logging and Testing Procedures

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

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

7a. Drilling Conditions (WBM)

Condition	Specify what type and where?
BH Pressure at deepest TVD	4630 psi at 8900' TVD
Abnormal Temperature	NO 150 Deg. F.

7b. Drilling Conditions (OBM)

Condition	Specify what type and where?
BH Pressure at deepest TVD	5555 psi at 8900' TVD
Abnormal Temperature	NO 150 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?
N	Is casing pre-set?
X	H2S Plan.
X	BOP & Choke Schematics.
X	Directional Plan

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: <input type="checkbox"/> Initial Submittal <input checked="" type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled
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WELL LOCATION INFORMATION

API Number 30-015-57025	Pool Code 15011	Pool Name Culebra Bluff; Bone Spring; South
Property Code 337450	Property Name VALKYRIE FED COM	Well Number 552H
OGRID No. 372098	Operator Name MARATHON OIL PERMIAN LLC	Ground Level Elevation 2,993'
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	11	23S	28E		2,432' FSL	558' FEL	32.319547°	-104.051238°	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	7	23S	29E		1,740' FSL	50' FEL	32.317167°	-104.015634°	EDDY

Dedicated Acres 634.72	Infill or Defining Well Infill	Defining Well API 30-015-57023	Overlapping Spacing Unit (Y/N)	Consolidation Code Com
Order Numbers.			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	11	23S	28E		2,432' FSL	558' FEL	32.319547°	-104.051238°	EDDY


First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
L	12	23S	28E		1,740' FSL	100' FWL	32.317643°	-104.049132°	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	7	23S	29E		1,740' FSL	100' FEL	32.317171°	-104.015796°	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation:
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<p>OPERATOR CERTIFICATIONS</p> <p>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.</p> <p>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.</p>	<p>SURVEYOR CERTIFICATIONS</p> <p>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.</p> <div style="text-align: center;">  <p>Date: 1/15/2026</p> </div>			
Signature <i>Stan Wagner</i>	Date 1/20/26	Signature and Seal of Professional Surveyor		
Printed Name Stan Wagner	Email Address	Certificate Number 12177	Date of Survey 1/15/2026	Revision Number 1

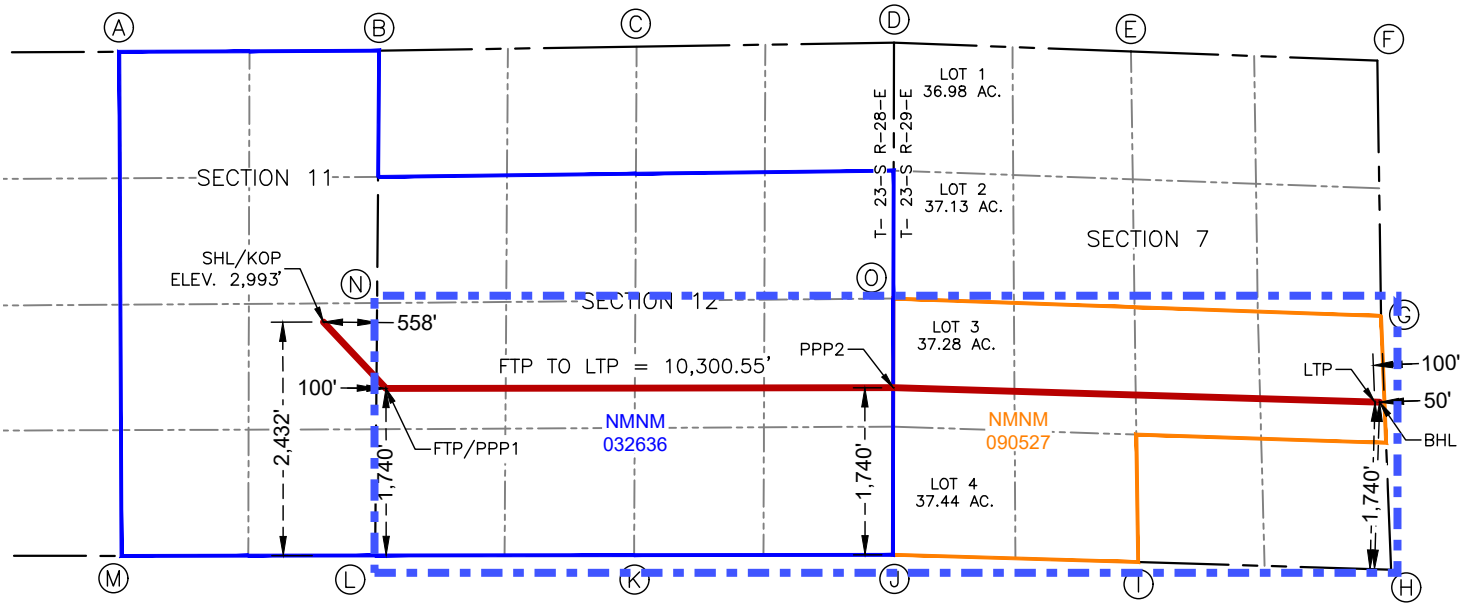
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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.

VALKYRIE FED COM 552H



**SURFACE HOLE LOCATION
& KICK-OFF POINT**
2,432' FSL & 558' FEL
ELEV.=2,993'

NAD 83 X = 628,479.18'
NAD 83 Y = 480,098.17'
NAD 83 LAT = 32.319547°
NAD 83 LONG = -104.051238°

**FIRST TAKE POINT &
PENETRATION POINT 1**
1,740' FSL & 100' FWL

NAD 83 X = 629,131.75'
NAD 83 Y = 479,407.25'
NAD 83 LAT = 32.317643°
NAD 83 LONG = -104.049132°

PENETRATION POINT 2
1,740' FSL & 0' FWL

NAD 83 X = 634,413.50'
NAD 83 Y = 479,414.42'
NAD 83 LAT = 32.317623°
NAD 83 LONG = -104.032034°

LAST TAKE POINT
1,740' FSL & 100' FEL

NAD 83 X = 639,430.05'
NAD 83 Y = 479,264.47'
NAD 83 LAT = 32.317171°
NAD 83 LONG = -104.015796°

BOTTOM HOLE LOCATION
1,740' FSL & 50' FEL

NAD 83 X = 639,480.15'
NAD 83 Y = 479,262.94'
NAD 83 LAT = 32.317167°
NAD 83 LONG = -104.015634°

**CORNER COORDINATES
NEW MEXICO EAST - NAD 83**

A	N:482,913.27' E:626,359.83'
B	N:482,925.02' E:629,059.50'
C	N:482,966.63' E:631,741.28'
D	N:483,007.92' E:634,422.58'
E	N:482,916.72' E:636,890.24'
F	N:482,821.70' E:639,456.31'
G	N:480,162.43' E:639,494.75'
H	N:477,518.50' E:639,598.93'
I	N:477,598.98' E:636,964.45'
J	N:477,674.42' E:634,409.91'
K	N:477,670.11' E:631,715.39'
L	N:477,667.13' E:629,018.02'
M	N:477,662.44' E:626,376.12'
N	N:480,296.05' E:629,041.43'
O	N:480,343.16' E:634,418.08'

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 547622

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 547622
	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.	4/13/2026