

Well Name: VALKYRIE BS FED COM	Well Location: T23S / R28E / SEC 11 / NESE / 32.3196163 / -104.051272	County or Parish/State: EDDY / NM
Well Number: 502H	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 02:58 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

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

2. Name of Operator

3a. Address 3b. Phone No. (include area code)

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

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

8. Well Name and No.

9. API Well No.

10. Field and Pool or Exploratory Area

11. Country or Parish, State

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

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

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

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

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE 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.

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 / 2463 FSL / 569 FEL / TWSP: 23S / RANGE: 28E / SECTION: 11 / LAT: 32.3196163 / LONG: -104.051272 (TVD: 0 feet, MD: 0 feet)

PPP: NWSW / 2300 FSL / 100 FWL / TWSP: 23S / RANGE: 28E / SECTION: 12 / LAT: 32.3191814 / LONG: -104.0491121 (TVD: 7788 feet, MD: 7867 feet)

BHL: NESE / 2308 FSL / 100 FEL / TWSP: 23S / RANGE: 29E / SECTION: 7 / LAT: 32.3187415 / LONG: -104.0158616 (TVD: 8582 feet, MD: 18522 feet)

CONFIDENTIAL

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

WELL LOCATION INFORMATION

API Number 30-015-57023	Pool Code 15011	Pool Name Culebra Bluff; Bone Spring, South	
Property Code 337450	Property Name VALKYRIE FED COM		Well Number 502H
OGRID No. 372098	Operator Name MARATHON OIL PERMIAN LLC		Ground Level Elevation 2,993'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☒ Fee ☐ Tribal ☒ Federal	

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	11	23S	28E		2,460' FSL	569' FEL	32.319624°	-104.051273°	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	7	23S	29E		1,990' FSL	50' FEL	32.317854°	-104.015664°	EDDY

Dedicated Acres 634.72	Infill or Defining Well Defining	Defining Well API 30-015-57023	Overlapping Spacing Unit (Y/N)	Consolidation Code Com
Order Numbers.			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
I	11	23S	28E		2,460' FSL	569' FEL	32.319624°	-104.051273°	EDDY

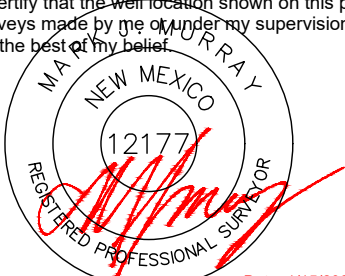
First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
L	12	23S	28E		1,990' FSL	100' FWL	32.318330°	-104.049123°	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		1,990' FSL	100' FEL	32.317859°	-104.015826°	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:
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OPERATOR CERTIFICATIONS I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.		SURVEYOR CERTIFICATIONS I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.	
Signature  Date 1/20/26		Signature and Seal of Professional Surveyor  Date: 1/15/2026	
Printed Name Stan Wagner Email Address		Certificate Number 12177	Date of Survey 1/15/2026
		Revision Number 1	

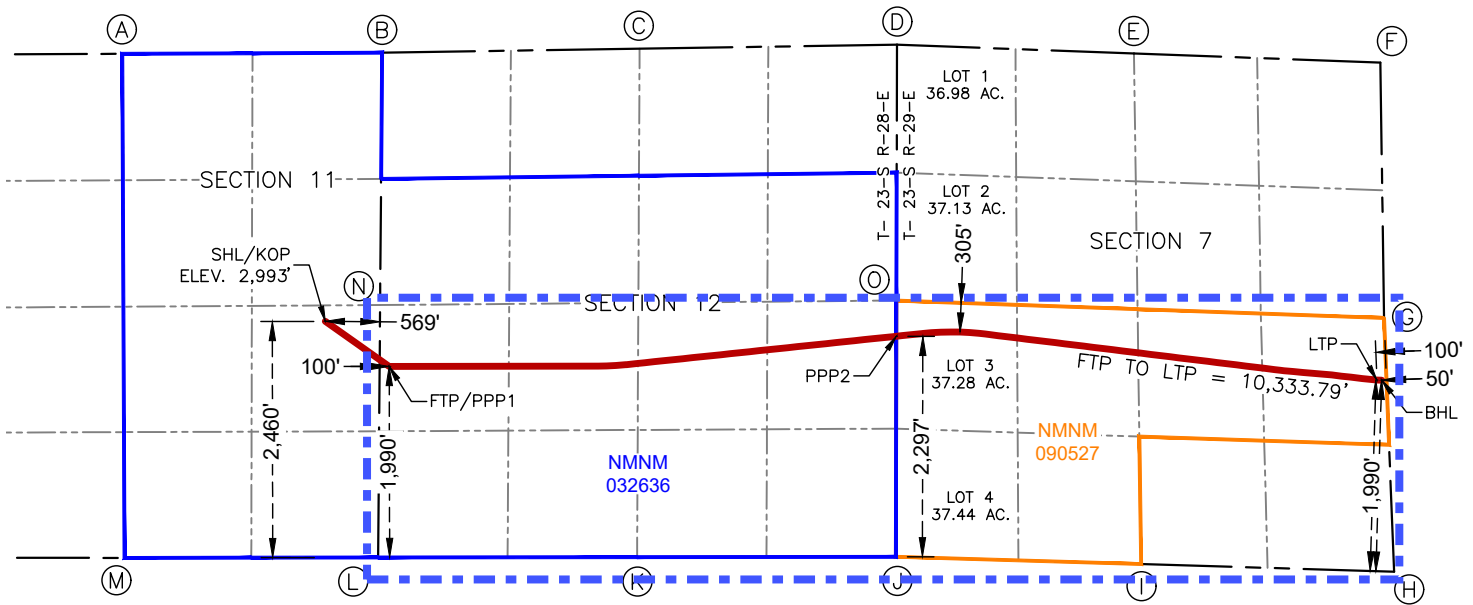
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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 502H



**SURFACE HOLE LOCATION
& KICK-OFF POINT**
2,460' FSL & 569' FEL
ELEV.=2,993'

NAD 83 X = 628,468.40'
NAD 83 Y = 480,126.16'
NAD 83 LAT = 32.319624°
NAD 83 LONG = -104.051273°

**FIRST TAKE POINT &
PENETRATION POINT 1**
1,990' FSL & 100' FWL

NAD 83 X = 629,133.73'
NAD 83 Y = 479,657.26'
NAD 83 LAT = 32.318330°
NAD 83 LONG = -104.049123°

PENETRATION POINT 2
2,297' FSL & 0' FWL

NAD 83 X = 634,414.65'
NAD 83 Y = 479,971.14'
NAD 83 LAT = 32.319153°
NAD 83 LONG = -104.032025°

LAST TAKE POINT
1,990' FSL & 100' FEL
NAD 83 X = 639,420.20'
NAD 83 Y = 479,514.67'
NAD 83 LAT = 32.317859°
NAD 83 LONG = -104.015826°

BOTTOM HOLE LOCATION
1,990' FSL & 50' FEL
NAD 83 X = 639,470.30'
NAD 83 Y = 479,512.89'
NAD 83 LAT = 32.317854°
NAD 83 LONG = -104.015664°

**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'

ConocoPhillips - Valkyrie Fed Com 502H

1. Geologic Formations

TVD of target	8,402' EOL	Pilot hole depth	N/A
MD at TD:	18,961'	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	2677	Salt Water	
Cherry Canyon	3498	Oil/Gas	
Brushy Canyon	4787	Oil/Gas	
Bone Spring	6237	Oil/Gas	
1st Bone Spring Sand	7295	Oil/Gas	
2nd Bone Spring Sand	8025	Target Oil/Gas	
		Not Penetrated	
		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	2.69	10.29	8.85	9.15
8.75"	0	7,870	5.500"	20	P110-ICY	TXP-BTC	6.74	4.07	4.63	4.63
7.875"	7,870	18,961	5.500"	20	P110-ICY	TXP-BTC	6.74	4.07	4.63	4.63
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	3.76	1.78	2.98	2.63
8.75"	8,200	7,870	7.625"	29.7	P110-ICY	W513	4.71	2.51	4.57	2.74
6.75"	0	7,670	5.500"	20	P110-ICY	TXP-BTC	7.90	3.26	4.75	4.75
6.75"	7,670	18,961	5.500"	20	P110-ICY	W441	6.86	3.26	1.92	1.57
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?	

ConocoPhillips - Valkyrie Fed Com 502H**3a. Cementing Program**

Casing	# Sk	Wt. lb/ gal	Yld ft ³ / 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	770	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	# Sk	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	1380	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	430	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	7,370'	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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ConocoPhillips - Valkyrie Fed Com 502H

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	4370 psi at 8402' TVD
Abnormal Temperature	NO 145 Deg. F.

7b. Drilling Conditions (OBM)

Condition	Specify what type and where?
BH Pressure at deepest TVD	5245 psi at 8402' TVD
Abnormal Temperature	NO 145 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	H ₂ S is present
Y	H ₂ S Plan attached

8. Other Facets of Operation

Y	Is it a walking operation?
N	Is casing pre-set?
X	H ₂ S Plan.
X	BOP & Choke Schematics.
X	Directional Plan

DELAWARE BASIN WEST

EDDY COUNTY _DBW_NM_E

VALKYRIE FED COM

_VALKYRIE FED COM 502H

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 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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 502H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	
Grid Convergence:	0.15 °		
		Latitude:	32° 19' 10.211 N
		Longitude:	104° 3' 2.801 W
		Ground Level:	2,993.00 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2025	12/31/2026	6.51	59.86	47,003.32040868

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	93.13

Plan Survey Tool Program	Date	1/20/2026		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,961.23 PWP0 (OWB)	r.5 MWD+IFR1+SAG+FDIR	
			OWSG MWD + IFR1 + SAG +	

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Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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	
2,463.62	9.27	150.53	2,461.60	-32.59	18.41	2.00	2.00	0.00	150.53	
5,113.45	9.27	150.53	5,076.80	-404.32	228.45	0.00	0.00	0.00	0.00	
6,040.69	0.00	0.00	6,000.00	-469.50	265.28	1.00	-1.00	0.00	180.00	
7,965.23	0.00	0.00	7,924.54	-469.50	265.28	0.00	0.00	0.00	0.00	
8,715.23	90.00	89.92	8,402.01	-468.83	742.74	12.00	12.00	0.00	89.92	
10,815.23	90.00	89.92	8,402.01	-465.90	2,842.74	0.00	0.00	0.00	0.00	
11,111.23	90.00	84.00	8,402.01	-450.21	3,138.19	2.00	0.00	-2.00	-90.00	
14,211.23	90.00	84.00	8,402.01	-126.17	6,221.21	0.00	0.00	0.00	0.00	
14,861.23	90.00	97.00	8,402.01	-131.83	6,869.79	2.00	0.00	2.00	90.00	
17,961.23	90.00	97.00	8,402.01	-509.63	9,946.69	0.00	0.00	0.00	0.00	
18,061.23	90.00	95.00	8,402.01	-520.08	10,046.13	2.00	0.00	-2.00	-90.00	
18,961.23	90.00	95.00	8,402.01	-598.52	10,942.71	0.00	0.00	0.00	0.00	

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Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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

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Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
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

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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)
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	150.53	2,010.00	-0.02	0.01	0.01	2.00	2.00	0.00
2,025.00	0.50	150.53	2,025.00	-0.09	0.05	0.06	2.00	2.00	0.00
2,040.00	0.80	150.53	2,040.00	-0.24	0.14	0.15	2.00	2.00	0.00
2,055.00	1.10	150.53	2,055.00	-0.46	0.26	0.28	2.00	2.00	0.00
2,070.00	1.40	150.53	2,069.99	-0.74	0.42	0.46	2.00	2.00	0.00
2,085.00	1.70	150.53	2,084.99	-1.10	0.62	0.68	2.00	2.00	0.00
2,100.00	2.00	150.53	2,099.98	-1.52	0.86	0.94	2.00	2.00	0.00
2,115.00	2.30	150.53	2,114.97	-2.01	1.14	1.24	2.00	2.00	0.00
2,130.00	2.60	150.53	2,129.96	-2.57	1.45	1.59	2.00	2.00	0.00
2,145.00	2.90	150.53	2,144.94	-3.19	1.80	1.98	2.00	2.00	0.00
2,160.00	3.20	150.53	2,159.92	-3.89	2.20	2.41	2.00	2.00	0.00
2,175.00	3.50	150.53	2,174.89	-4.65	2.63	2.88	2.00	2.00	0.00
2,190.00	3.80	150.53	2,189.86	-5.48	3.10	3.39	2.00	2.00	0.00
2,205.00	4.10	150.53	2,204.83	-6.38	3.61	3.95	2.00	2.00	0.00
2,220.00	4.40	150.53	2,219.78	-7.35	4.15	4.55	2.00	2.00	0.00
2,235.00	4.70	150.53	2,234.74	-8.39	4.74	5.19	2.00	2.00	0.00
2,250.00	5.00	150.53	2,249.68	-9.49	5.36	5.87	2.00	2.00	0.00
2,265.00	5.30	150.53	2,264.62	-10.66	6.03	6.60	2.00	2.00	0.00
2,280.00	5.60	150.53	2,279.55	-11.90	6.73	7.37	2.00	2.00	0.00
2,295.00	5.90	150.53	2,294.48	-13.21	7.47	8.18	2.00	2.00	0.00
2,310.00	6.20	150.53	2,309.40	-14.59	8.24	9.03	2.00	2.00	0.00
2,325.00	6.50	150.53	2,324.30	-16.03	9.06	9.92	2.00	2.00	0.00
2,340.00	6.80	150.53	2,339.20	-17.55	9.91	10.86	2.00	2.00	0.00
2,355.00	7.10	150.53	2,354.09	-19.13	10.81	11.83	2.00	2.00	0.00
2,370.00	7.40	150.53	2,368.97	-20.77	11.74	12.85	2.00	2.00	0.00
2,385.00	7.70	150.53	2,383.84	-22.49	12.71	13.92	2.00	2.00	0.00
2,400.00	8.00	150.53	2,398.70	-24.27	13.72	15.02	2.00	2.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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	150.53	2,413.55	-26.12	14.76	16.17	2.00	2.00	0.00	
2,430.00	8.60	150.53	2,428.39	-28.04	15.85	17.35	2.00	2.00	0.00	
2,445.00	8.90	150.53	2,443.21	-30.03	16.97	18.58	2.00	2.00	0.00	
2,460.00	9.20	150.53	2,458.03	-32.08	18.13	19.85	2.00	2.00	0.00	
2,463.62	9.27	150.53	2,461.60	-32.59	18.41	20.17	2.00	2.00	0.00	
2,475.00	9.27	150.53	2,472.83	-34.19	19.32	21.15	0.00	0.00	0.00	
2,490.00	9.27	150.53	2,487.63	-36.29	20.51	22.46	0.00	0.00	0.00	
2,505.00	9.27	150.53	2,502.44	-38.40	21.69	23.76	0.00	0.00	0.00	
2,520.00	9.27	150.53	2,517.24	-40.50	22.88	25.06	0.00	0.00	0.00	
2,535.00	9.27	150.53	2,532.05	-42.60	24.07	26.36	0.00	0.00	0.00	
2,550.00	9.27	150.53	2,546.85	-44.71	25.26	27.67	0.00	0.00	0.00	
2,565.00	9.27	150.53	2,561.65	-46.81	26.45	28.97	0.00	0.00	0.00	
2,580.00	9.27	150.53	2,576.46	-48.92	27.64	30.27	0.00	0.00	0.00	
2,595.00	9.27	150.53	2,591.26	-51.02	28.83	31.57	0.00	0.00	0.00	
2,610.00	9.27	150.53	2,606.07	-53.13	30.02	32.87	0.00	0.00	0.00	
2,625.00	9.27	150.53	2,620.87	-55.23	31.21	34.18	0.00	0.00	0.00	
2,640.00	9.27	150.53	2,635.67	-57.33	32.40	35.48	0.00	0.00	0.00	
2,655.00	9.27	150.53	2,650.48	-59.44	33.58	36.78	0.00	0.00	0.00	
2,670.00	9.27	150.53	2,665.28	-61.54	34.77	38.08	0.00	0.00	0.00	
2,685.00	9.27	150.53	2,680.09	-63.65	35.96	39.38	0.00	0.00	0.00	
2,700.00	9.27	150.53	2,694.89	-65.75	37.15	40.69	0.00	0.00	0.00	
2,715.00	9.27	150.53	2,709.69	-67.86	38.34	41.99	0.00	0.00	0.00	
2,730.00	9.27	150.53	2,724.50	-69.96	39.53	43.29	0.00	0.00	0.00	
2,745.00	9.27	150.53	2,739.30	-72.06	40.72	44.59	0.00	0.00	0.00	
2,760.00	9.27	150.53	2,754.11	-74.17	41.91	45.89	0.00	0.00	0.00	
2,775.00	9.27	150.53	2,768.91	-76.27	43.10	47.20	0.00	0.00	0.00	
2,790.00	9.27	150.53	2,783.71	-78.38	44.28	48.50	0.00	0.00	0.00	
2,805.00	9.27	150.53	2,798.52	-80.48	45.47	49.80	0.00	0.00	0.00	
2,820.00	9.27	150.53	2,813.32	-82.58	46.66	51.10	0.00	0.00	0.00	
2,835.00	9.27	150.53	2,828.13	-84.69	47.85	52.41	0.00	0.00	0.00	
2,850.00	9.27	150.53	2,842.93	-86.79	49.04	53.71	0.00	0.00	0.00	
2,865.00	9.27	150.53	2,857.73	-88.90	50.23	55.01	0.00	0.00	0.00	
2,880.00	9.27	150.53	2,872.54	-91.00	51.42	56.31	0.00	0.00	0.00	
2,895.00	9.27	150.53	2,887.34	-93.11	52.61	57.61	0.00	0.00	0.00	
2,910.00	9.27	150.53	2,902.15	-95.21	53.80	58.92	0.00	0.00	0.00	
2,925.00	9.27	150.53	2,916.95	-97.31	54.99	60.22	0.00	0.00	0.00	
2,940.00	9.27	150.53	2,931.75	-99.42	56.17	61.52	0.00	0.00	0.00	
2,955.00	9.27	150.53	2,946.56	-101.52	57.36	62.82	0.00	0.00	0.00	
2,970.00	9.27	150.53	2,961.36	-103.63	58.55	64.12	0.00	0.00	0.00	
2,985.00	9.27	150.53	2,976.17	-105.73	59.74	65.43	0.00	0.00	0.00	
3,000.00	9.27	150.53	2,990.97	-107.84	60.93	66.73	0.00	0.00	0.00	
3,015.00	9.27	150.53	3,005.77	-109.94	62.12	68.03	0.00	0.00	0.00	
3,030.00	9.27	150.53	3,020.58	-112.04	63.31	69.33	0.00	0.00	0.00	
3,045.00	9.27	150.53	3,035.38	-114.15	64.50	70.63	0.00	0.00	0.00	
3,060.00	9.27	150.53	3,050.19	-116.25	65.69	71.94	0.00	0.00	0.00	
3,075.00	9.27	150.53	3,064.99	-118.36	66.88	73.24	0.00	0.00	0.00	
3,090.00	9.27	150.53	3,079.79	-120.46	68.06	74.54	0.00	0.00	0.00	
3,105.00	9.27	150.53	3,094.60	-122.57	69.25	75.84	0.00	0.00	0.00	
3,120.00	9.27	150.53	3,109.40	-124.67	70.44	77.15	0.00	0.00	0.00	
3,135.00	9.27	150.53	3,124.21	-126.77	71.63	78.45	0.00	0.00	0.00	
3,150.00	9.27	150.53	3,139.01	-128.88	72.82	79.75	0.00	0.00	0.00	
3,165.00	9.27	150.53	3,153.81	-130.98	74.01	81.05	0.00	0.00	0.00	
3,180.00	9.27	150.53	3,168.62	-133.09	75.20	82.35	0.00	0.00	0.00	
3,195.00	9.27	150.53	3,183.42	-135.19	76.39	83.66	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 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
3,210.00	9.27	150.53	3,198.23	-137.30	77.58	84.96	0.00	0.00	0.00
3,225.00	9.27	150.53	3,213.03	-139.40	78.76	86.26	0.00	0.00	0.00
3,240.00	9.27	150.53	3,227.83	-141.50	79.95	87.56	0.00	0.00	0.00
3,255.00	9.27	150.53	3,242.64	-143.61	81.14	88.86	0.00	0.00	0.00
3,270.00	9.27	150.53	3,257.44	-145.71	82.33	90.17	0.00	0.00	0.00
3,285.00	9.27	150.53	3,272.25	-147.82	83.52	91.47	0.00	0.00	0.00
3,300.00	9.27	150.53	3,287.05	-149.92	84.71	92.77	0.00	0.00	0.00
3,315.00	9.27	150.53	3,301.85	-152.03	85.90	94.07	0.00	0.00	0.00
3,330.00	9.27	150.53	3,316.66	-154.13	87.09	95.38	0.00	0.00	0.00
3,345.00	9.27	150.53	3,331.46	-156.23	88.28	96.68	0.00	0.00	0.00
3,360.00	9.27	150.53	3,346.27	-158.34	89.47	97.98	0.00	0.00	0.00
3,375.00	9.27	150.53	3,361.07	-160.44	90.65	99.28	0.00	0.00	0.00
3,390.00	9.27	150.53	3,375.87	-162.55	91.84	100.58	0.00	0.00	0.00
3,405.00	9.27	150.53	3,390.68	-164.65	93.03	101.89	0.00	0.00	0.00
3,420.00	9.27	150.53	3,405.48	-166.76	94.22	103.19	0.00	0.00	0.00
3,435.00	9.27	150.53	3,420.29	-168.86	95.41	104.49	0.00	0.00	0.00
3,450.00	9.27	150.53	3,435.09	-170.96	96.60	105.79	0.00	0.00	0.00
3,465.00	9.27	150.53	3,449.89	-173.07	97.79	107.09	0.00	0.00	0.00
3,480.00	9.27	150.53	3,464.70	-175.17	98.98	108.40	0.00	0.00	0.00
3,495.00	9.27	150.53	3,479.50	-177.28	100.17	109.70	0.00	0.00	0.00
3,510.00	9.27	150.53	3,494.31	-179.38	101.36	111.00	0.00	0.00	0.00
3,525.00	9.27	150.53	3,509.11	-181.49	102.54	112.30	0.00	0.00	0.00
3,540.00	9.27	150.53	3,523.91	-183.59	103.73	113.60	0.00	0.00	0.00
3,555.00	9.27	150.53	3,538.72	-185.69	104.92	114.91	0.00	0.00	0.00
3,570.00	9.27	150.53	3,553.52	-187.80	106.11	116.21	0.00	0.00	0.00
3,585.00	9.27	150.53	3,568.33	-189.90	107.30	117.51	0.00	0.00	0.00
3,600.00	9.27	150.53	3,583.13	-192.01	108.49	118.81	0.00	0.00	0.00
3,615.00	9.27	150.53	3,597.93	-194.11	109.68	120.12	0.00	0.00	0.00
3,630.00	9.27	150.53	3,612.74	-196.22	110.87	121.42	0.00	0.00	0.00
3,645.00	9.27	150.53	3,627.54	-198.32	112.06	122.72	0.00	0.00	0.00
3,660.00	9.27	150.53	3,642.35	-200.42	113.24	124.02	0.00	0.00	0.00
3,675.00	9.27	150.53	3,657.15	-202.53	114.43	125.32	0.00	0.00	0.00
3,690.00	9.27	150.53	3,671.95	-204.63	115.62	126.63	0.00	0.00	0.00
3,705.00	9.27	150.53	3,686.76	-206.74	116.81	127.93	0.00	0.00	0.00
3,720.00	9.27	150.53	3,701.56	-208.84	118.00	129.23	0.00	0.00	0.00
3,735.00	9.27	150.53	3,716.37	-210.94	119.19	130.53	0.00	0.00	0.00
3,750.00	9.27	150.53	3,731.17	-213.05	120.38	131.83	0.00	0.00	0.00
3,765.00	9.27	150.53	3,745.97	-215.15	121.57	133.14	0.00	0.00	0.00
3,780.00	9.27	150.53	3,760.78	-217.26	122.76	134.44	0.00	0.00	0.00
3,795.00	9.27	150.53	3,775.58	-219.36	123.95	135.74	0.00	0.00	0.00
3,810.00	9.27	150.53	3,790.39	-221.47	125.13	137.04	0.00	0.00	0.00
3,825.00	9.27	150.53	3,805.19	-223.57	126.32	138.34	0.00	0.00	0.00
3,840.00	9.27	150.53	3,819.99	-225.67	127.51	139.65	0.00	0.00	0.00
3,855.00	9.27	150.53	3,834.80	-227.78	128.70	140.95	0.00	0.00	0.00
3,870.00	9.27	150.53	3,849.60	-229.88	129.89	142.25	0.00	0.00	0.00
3,885.00	9.27	150.53	3,864.41	-231.99	131.08	143.55	0.00	0.00	0.00
3,900.00	9.27	150.53	3,879.21	-234.09	132.27	144.86	0.00	0.00	0.00
3,915.00	9.27	150.53	3,894.01	-236.20	133.46	146.16	0.00	0.00	0.00
3,930.00	9.27	150.53	3,908.82	-238.30	134.65	147.46	0.00	0.00	0.00
3,945.00	9.27	150.53	3,923.62	-240.40	135.83	148.76	0.00	0.00	0.00
3,960.00	9.27	150.53	3,938.43	-242.51	137.02	150.06	0.00	0.00	0.00
3,975.00	9.27	150.53	3,953.23	-244.61	138.21	151.37	0.00	0.00	0.00
3,990.00	9.27	150.53	3,968.03	-246.72	139.40	152.67	0.00	0.00	0.00
4,005.00	9.27	150.53	3,982.84	-248.82	140.59	153.97	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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	9.27	150.53	3,997.64	-250.93	141.78	155.27	0.00	0.00	0.00
4,035.00	9.27	150.53	4,012.45	-253.03	142.97	156.57	0.00	0.00	0.00
4,050.00	9.27	150.53	4,027.25	-255.13	144.16	157.88	0.00	0.00	0.00
4,065.00	9.27	150.53	4,042.05	-257.24	145.35	159.18	0.00	0.00	0.00
4,080.00	9.27	150.53	4,056.86	-259.34	146.54	160.48	0.00	0.00	0.00
4,095.00	9.27	150.53	4,071.66	-261.45	147.72	161.78	0.00	0.00	0.00
4,110.00	9.27	150.53	4,086.47	-263.55	148.91	163.08	0.00	0.00	0.00
4,125.00	9.27	150.53	4,101.27	-265.66	150.10	164.39	0.00	0.00	0.00
4,140.00	9.27	150.53	4,116.07	-267.76	151.29	165.69	0.00	0.00	0.00
4,155.00	9.27	150.53	4,130.88	-269.86	152.48	166.99	0.00	0.00	0.00
4,170.00	9.27	150.53	4,145.68	-271.97	153.67	168.29	0.00	0.00	0.00
4,185.00	9.27	150.53	4,160.49	-274.07	154.86	169.60	0.00	0.00	0.00
4,200.00	9.27	150.53	4,175.29	-276.18	156.05	170.90	0.00	0.00	0.00
4,215.00	9.27	150.53	4,190.09	-278.28	157.24	172.20	0.00	0.00	0.00
4,230.00	9.27	150.53	4,204.90	-280.39	158.43	173.50	0.00	0.00	0.00
4,245.00	9.27	150.53	4,219.70	-282.49	159.61	174.80	0.00	0.00	0.00
4,260.00	9.27	150.53	4,234.51	-284.59	160.80	176.11	0.00	0.00	0.00
4,275.00	9.27	150.53	4,249.31	-286.70	161.99	177.41	0.00	0.00	0.00
4,290.00	9.27	150.53	4,264.11	-288.80	163.18	178.71	0.00	0.00	0.00
4,305.00	9.27	150.53	4,278.92	-290.91	164.37	180.01	0.00	0.00	0.00
4,320.00	9.27	150.53	4,293.72	-293.01	165.56	181.31	0.00	0.00	0.00
4,335.00	9.27	150.53	4,308.53	-295.12	166.75	182.62	0.00	0.00	0.00
4,350.00	9.27	150.53	4,323.33	-297.22	167.94	183.92	0.00	0.00	0.00
4,365.00	9.27	150.53	4,338.13	-299.32	169.13	185.22	0.00	0.00	0.00
4,380.00	9.27	150.53	4,352.94	-301.43	170.31	186.52	0.00	0.00	0.00
4,395.00	9.27	150.53	4,367.74	-303.53	171.50	187.83	0.00	0.00	0.00
4,410.00	9.27	150.53	4,382.55	-305.64	172.69	189.13	0.00	0.00	0.00
4,425.00	9.27	150.53	4,397.35	-307.74	173.88	190.43	0.00	0.00	0.00
4,440.00	9.27	150.53	4,412.15	-309.85	175.07	191.73	0.00	0.00	0.00
4,455.00	9.27	150.53	4,426.96	-311.95	176.26	193.03	0.00	0.00	0.00
4,470.00	9.27	150.53	4,441.76	-314.05	177.45	194.34	0.00	0.00	0.00
4,485.00	9.27	150.53	4,456.57	-316.16	178.64	195.64	0.00	0.00	0.00
4,500.00	9.27	150.53	4,471.37	-318.26	179.83	196.94	0.00	0.00	0.00
4,515.00	9.27	150.53	4,486.17	-320.37	181.02	198.24	0.00	0.00	0.00
4,530.00	9.27	150.53	4,500.98	-322.47	182.20	199.54	0.00	0.00	0.00
4,545.00	9.27	150.53	4,515.78	-324.58	183.39	200.85	0.00	0.00	0.00
4,560.00	9.27	150.53	4,530.59	-326.68	184.58	202.15	0.00	0.00	0.00
4,575.00	9.27	150.53	4,545.39	-328.78	185.77	203.45	0.00	0.00	0.00
4,590.00	9.27	150.53	4,560.19	-330.89	186.96	204.75	0.00	0.00	0.00
4,605.00	9.27	150.53	4,575.00	-332.99	188.15	206.05	0.00	0.00	0.00
4,620.00	9.27	150.53	4,589.80	-335.10	189.34	207.36	0.00	0.00	0.00
4,635.00	9.27	150.53	4,604.61	-337.20	190.53	208.66	0.00	0.00	0.00
4,650.00	9.27	150.53	4,619.41	-339.30	191.72	209.96	0.00	0.00	0.00
4,665.00	9.27	150.53	4,634.21	-341.41	192.91	211.26	0.00	0.00	0.00
4,680.00	9.27	150.53	4,649.02	-343.51	194.09	212.57	0.00	0.00	0.00
4,695.00	9.27	150.53	4,663.82	-345.62	195.28	213.87	0.00	0.00	0.00
4,710.00	9.27	150.53	4,678.63	-347.72	196.47	215.17	0.00	0.00	0.00
4,725.00	9.27	150.53	4,693.43	-349.83	197.66	216.47	0.00	0.00	0.00
4,740.00	9.27	150.53	4,708.23	-351.93	198.85	217.77	0.00	0.00	0.00
4,755.00	9.27	150.53	4,723.04	-354.03	200.04	219.08	0.00	0.00	0.00
4,770.00	9.27	150.53	4,737.84	-356.14	201.23	220.38	0.00	0.00	0.00
4,785.00	9.27	150.53	4,752.65	-358.24	202.42	221.68	0.00	0.00	0.00
4,800.00	9.27	150.53	4,767.45	-360.35	203.61	222.98	0.00	0.00	0.00
4,815.00	9.27	150.53	4,782.25	-362.45	204.79	224.28	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
4,830.00	9.27	150.53	4,797.06	-364.56	205.98	225.59	0.00	0.00	0.00
4,845.00	9.27	150.53	4,811.86	-366.66	207.17	226.89	0.00	0.00	0.00
4,860.00	9.27	150.53	4,826.67	-368.76	208.36	228.19	0.00	0.00	0.00
4,875.00	9.27	150.53	4,841.47	-370.87	209.55	229.49	0.00	0.00	0.00
4,890.00	9.27	150.53	4,856.27	-372.97	210.74	230.79	0.00	0.00	0.00
4,905.00	9.27	150.53	4,871.08	-375.08	211.93	232.10	0.00	0.00	0.00
4,920.00	9.27	150.53	4,885.88	-377.18	213.12	233.40	0.00	0.00	0.00
4,935.00	9.27	150.53	4,900.69	-379.29	214.31	234.70	0.00	0.00	0.00
4,950.00	9.27	150.53	4,915.49	-381.39	215.50	236.00	0.00	0.00	0.00
4,965.00	9.27	150.53	4,930.29	-383.49	216.68	237.31	0.00	0.00	0.00
4,980.00	9.27	150.53	4,945.10	-385.60	217.87	238.61	0.00	0.00	0.00
4,995.00	9.27	150.53	4,959.90	-387.70	219.06	239.91	0.00	0.00	0.00
5,010.00	9.27	150.53	4,974.71	-389.81	220.25	241.21	0.00	0.00	0.00
5,025.00	9.27	150.53	4,989.51	-391.91	221.44	242.51	0.00	0.00	0.00
5,040.00	9.27	150.53	5,004.31	-394.02	222.63	243.82	0.00	0.00	0.00
5,055.00	9.27	150.53	5,019.12	-396.12	223.82	245.12	0.00	0.00	0.00
5,070.00	9.27	150.53	5,033.92	-398.22	225.01	246.42	0.00	0.00	0.00
5,085.00	9.27	150.53	5,048.73	-400.33	226.20	247.72	0.00	0.00	0.00
5,100.00	9.27	150.53	5,063.53	-402.43	227.39	249.02	0.00	0.00	0.00
5,113.45	9.27	150.53	5,076.80	-404.32	228.45	250.19	0.00	0.00	0.00
5,115.00	9.26	150.53	5,078.33	-404.54	228.57	250.33	1.00	-1.00	0.00
5,130.00	9.11	150.53	5,093.14	-406.62	229.75	251.62	1.00	-1.00	0.00
5,145.00	8.96	150.53	5,107.96	-408.67	230.91	252.88	1.00	-1.00	0.00
5,160.00	8.81	150.53	5,122.78	-410.69	232.05	254.13	1.00	-1.00	0.00
5,175.00	8.66	150.53	5,137.60	-412.67	233.17	255.36	1.00	-1.00	0.00
5,190.00	8.51	150.53	5,152.43	-414.62	234.27	256.56	1.00	-1.00	0.00
5,205.00	8.36	150.53	5,167.27	-416.53	235.35	257.75	1.00	-1.00	0.00
5,220.00	8.21	150.53	5,182.12	-418.41	236.42	258.91	1.00	-1.00	0.00
5,235.00	8.06	150.53	5,196.97	-420.26	237.46	260.06	1.00	-1.00	0.00
5,250.00	7.91	150.53	5,211.82	-422.08	238.48	261.18	1.00	-1.00	0.00
5,265.00	7.76	150.53	5,226.68	-423.86	239.49	262.28	1.00	-1.00	0.00
5,280.00	7.61	150.53	5,241.55	-425.60	240.48	263.36	1.00	-1.00	0.00
5,295.00	7.46	150.53	5,256.42	-427.31	241.44	264.42	1.00	-1.00	0.00
5,310.00	7.31	150.53	5,271.29	-428.99	242.39	265.46	1.00	-1.00	0.00
5,325.00	7.16	150.53	5,286.17	-430.63	243.32	266.48	1.00	-1.00	0.00
5,340.00	7.01	150.53	5,301.06	-432.24	244.23	267.47	1.00	-1.00	0.00
5,355.00	6.86	150.53	5,315.95	-433.82	245.12	268.45	1.00	-1.00	0.00
5,370.00	6.71	150.53	5,330.84	-435.36	245.99	269.40	1.00	-1.00	0.00
5,385.00	6.56	150.53	5,345.74	-436.87	246.84	270.33	1.00	-1.00	0.00
5,400.00	6.41	150.53	5,360.65	-438.35	247.68	271.25	1.00	-1.00	0.00
5,415.00	6.26	150.53	5,375.56	-439.79	248.49	272.14	1.00	-1.00	0.00
5,430.00	6.11	150.53	5,390.47	-441.19	249.29	273.01	1.00	-1.00	0.00
5,445.00	5.96	150.53	5,405.39	-442.56	250.06	273.86	1.00	-1.00	0.00
5,460.00	5.81	150.53	5,420.31	-443.90	250.82	274.69	1.00	-1.00	0.00
5,475.00	5.66	150.53	5,435.23	-445.21	251.55	275.49	1.00	-1.00	0.00
5,490.00	5.51	150.53	5,450.16	-446.48	252.27	276.28	1.00	-1.00	0.00
5,505.00	5.36	150.53	5,465.09	-447.71	252.97	277.04	1.00	-1.00	0.00
5,520.00	5.21	150.53	5,480.03	-448.92	253.65	277.79	1.00	-1.00	0.00
5,535.00	5.06	150.53	5,494.97	-450.08	254.31	278.51	1.00	-1.00	0.00
5,550.00	4.91	150.53	5,509.91	-451.22	254.95	279.21	1.00	-1.00	0.00
5,565.00	4.76	150.53	5,524.86	-452.32	255.57	279.89	1.00	-1.00	0.00
5,580.00	4.61	150.53	5,539.81	-453.38	256.17	280.55	1.00	-1.00	0.00
5,595.00	4.46	150.53	5,554.76	-454.42	256.76	281.19	1.00	-1.00	0.00
5,610.00	4.31	150.53	5,569.72	-455.41	257.32	281.81	1.00	-1.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,625.00	4.16	150.53	5,584.68	-456.38	257.87	282.41	1.00	-1.00	0.00	
5,640.00	4.01	150.53	5,599.64	-457.31	258.39	282.98	1.00	-1.00	0.00	
5,655.00	3.86	150.53	5,614.60	-458.20	258.90	283.53	1.00	-1.00	0.00	
5,670.00	3.71	150.53	5,629.57	-459.06	259.38	284.07	1.00	-1.00	0.00	
5,685.00	3.56	150.53	5,644.54	-459.89	259.85	284.58	1.00	-1.00	0.00	
5,700.00	3.41	150.53	5,659.51	-460.68	260.30	285.07	1.00	-1.00	0.00	
5,715.00	3.26	150.53	5,674.49	-461.44	260.73	285.54	1.00	-1.00	0.00	
5,730.00	3.11	150.53	5,689.46	-462.17	261.14	285.99	1.00	-1.00	0.00	
5,745.00	2.96	150.53	5,704.44	-462.86	261.53	286.42	1.00	-1.00	0.00	
5,760.00	2.81	150.53	5,719.42	-463.52	261.90	286.82	1.00	-1.00	0.00	
5,775.00	2.66	150.53	5,734.41	-464.14	262.25	287.21	1.00	-1.00	0.00	
5,790.00	2.51	150.53	5,749.39	-464.73	262.58	287.57	1.00	-1.00	0.00	
5,805.00	2.36	150.53	5,764.38	-465.28	262.90	287.91	1.00	-1.00	0.00	
5,820.00	2.21	150.53	5,779.37	-465.80	263.19	288.24	1.00	-1.00	0.00	
5,835.00	2.06	150.53	5,794.36	-466.29	263.46	288.54	1.00	-1.00	0.00	
5,850.00	1.91	150.53	5,809.35	-466.74	263.72	288.82	1.00	-1.00	0.00	
5,865.00	1.76	150.53	5,824.34	-467.16	263.96	289.07	1.00	-1.00	0.00	
5,880.00	1.61	150.53	5,839.33	-467.54	264.17	289.31	1.00	-1.00	0.00	
5,895.00	1.46	150.53	5,854.33	-467.89	264.37	289.53	1.00	-1.00	0.00	
5,910.00	1.31	150.53	5,869.32	-468.20	264.55	289.72	1.00	-1.00	0.00	
5,925.00	1.16	150.53	5,884.32	-468.48	264.71	289.90	1.00	-1.00	0.00	
5,940.00	1.01	150.53	5,899.32	-468.73	264.84	290.05	1.00	-1.00	0.00	
5,955.00	0.86	150.53	5,914.32	-468.94	264.96	290.18	1.00	-1.00	0.00	
5,970.00	0.71	150.53	5,929.31	-469.12	265.07	290.29	1.00	-1.00	0.00	
5,985.00	0.56	150.53	5,944.31	-469.26	265.15	290.38	1.00	-1.00	0.00	
6,000.00	0.41	150.53	5,959.31	-469.37	265.21	290.45	1.00	-1.00	0.00	
6,015.00	0.26	150.53	5,974.31	-469.45	265.25	290.49	1.00	-1.00	0.00	
6,030.00	0.11	150.53	5,989.31	-469.49	265.28	290.52	1.00	-1.00	0.00	
6,040.69	0.00	0.00	6,000.00	-469.50	265.28	290.53	1.00	-1.00	0.00	
6,045.00	0.00	0.00	6,004.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,060.00	0.00	0.00	6,019.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,075.00	0.00	0.00	6,034.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,090.00	0.00	0.00	6,049.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,105.00	0.00	0.00	6,064.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,120.00	0.00	0.00	6,079.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,135.00	0.00	0.00	6,094.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,150.00	0.00	0.00	6,109.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,165.00	0.00	0.00	6,124.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,180.00	0.00	0.00	6,139.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,195.00	0.00	0.00	6,154.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,210.00	0.00	0.00	6,169.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,225.00	0.00	0.00	6,184.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,240.00	0.00	0.00	6,199.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,255.00	0.00	0.00	6,214.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,270.00	0.00	0.00	6,229.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,285.00	0.00	0.00	6,244.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,259.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,315.00	0.00	0.00	6,274.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,330.00	0.00	0.00	6,289.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,345.00	0.00	0.00	6,304.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,360.00	0.00	0.00	6,319.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,375.00	0.00	0.00	6,334.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,390.00	0.00	0.00	6,349.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,405.00	0.00	0.00	6,364.31	-469.50	265.28	290.53	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)	
6,420.00	0.00	0.00	6,379.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,435.00	0.00	0.00	6,394.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,450.00	0.00	0.00	6,409.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,465.00	0.00	0.00	6,424.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,480.00	0.00	0.00	6,439.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,495.00	0.00	0.00	6,454.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,510.00	0.00	0.00	6,469.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,525.00	0.00	0.00	6,484.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,540.00	0.00	0.00	6,499.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,555.00	0.00	0.00	6,514.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,570.00	0.00	0.00	6,529.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,585.00	0.00	0.00	6,544.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,559.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,615.00	0.00	0.00	6,574.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,630.00	0.00	0.00	6,589.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,645.00	0.00	0.00	6,604.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,660.00	0.00	0.00	6,619.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,675.00	0.00	0.00	6,634.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,690.00	0.00	0.00	6,649.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,705.00	0.00	0.00	6,664.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,720.00	0.00	0.00	6,679.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,735.00	0.00	0.00	6,694.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,750.00	0.00	0.00	6,709.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,765.00	0.00	0.00	6,724.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,780.00	0.00	0.00	6,739.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,795.00	0.00	0.00	6,754.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,810.00	0.00	0.00	6,769.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,825.00	0.00	0.00	6,784.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,840.00	0.00	0.00	6,799.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,855.00	0.00	0.00	6,814.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,870.00	0.00	0.00	6,829.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,885.00	0.00	0.00	6,844.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,859.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,915.00	0.00	0.00	6,874.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,930.00	0.00	0.00	6,889.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,945.00	0.00	0.00	6,904.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,960.00	0.00	0.00	6,919.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,975.00	0.00	0.00	6,934.31	-469.50	265.28	290.53	0.00	0.00	0.00	
6,990.00	0.00	0.00	6,949.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,005.00	0.00	0.00	6,964.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,020.00	0.00	0.00	6,979.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,035.00	0.00	0.00	6,994.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,050.00	0.00	0.00	7,009.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,065.00	0.00	0.00	7,024.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,080.00	0.00	0.00	7,039.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,095.00	0.00	0.00	7,054.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,110.00	0.00	0.00	7,069.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,125.00	0.00	0.00	7,084.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,140.00	0.00	0.00	7,099.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,155.00	0.00	0.00	7,114.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,170.00	0.00	0.00	7,129.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,185.00	0.00	0.00	7,144.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,159.31	-469.50	265.28	290.53	0.00	0.00	0.00	
7,215.00	0.00	0.00	7,174.31	-469.50	265.28	290.53	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
7,230.00	0.00	0.00	7,189.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,245.00	0.00	0.00	7,204.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,260.00	0.00	0.00	7,219.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,275.00	0.00	0.00	7,234.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,290.00	0.00	0.00	7,249.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,305.00	0.00	0.00	7,264.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,320.00	0.00	0.00	7,279.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,335.00	0.00	0.00	7,294.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,350.00	0.00	0.00	7,309.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,365.00	0.00	0.00	7,324.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,380.00	0.00	0.00	7,339.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,395.00	0.00	0.00	7,354.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,410.00	0.00	0.00	7,369.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,425.00	0.00	0.00	7,384.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,440.00	0.00	0.00	7,399.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,455.00	0.00	0.00	7,414.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,470.00	0.00	0.00	7,429.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,485.00	0.00	0.00	7,444.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,500.00	0.00	0.00	7,459.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,515.00	0.00	0.00	7,474.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,530.00	0.00	0.00	7,489.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,545.00	0.00	0.00	7,504.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,560.00	0.00	0.00	7,519.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,575.00	0.00	0.00	7,534.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,590.00	0.00	0.00	7,549.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,605.00	0.00	0.00	7,564.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,620.00	0.00	0.00	7,579.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,635.00	0.00	0.00	7,594.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,650.00	0.00	0.00	7,609.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,665.00	0.00	0.00	7,624.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,680.00	0.00	0.00	7,639.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,695.00	0.00	0.00	7,654.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,710.00	0.00	0.00	7,669.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,725.00	0.00	0.00	7,684.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,740.00	0.00	0.00	7,699.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,755.00	0.00	0.00	7,714.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,770.00	0.00	0.00	7,729.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,785.00	0.00	0.00	7,744.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,800.00	0.00	0.00	7,759.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,815.00	0.00	0.00	7,774.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,830.00	0.00	0.00	7,789.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,845.00	0.00	0.00	7,804.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,860.00	0.00	0.00	7,819.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,875.00	0.00	0.00	7,834.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,890.00	0.00	0.00	7,849.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,905.00	0.00	0.00	7,864.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,920.00	0.00	0.00	7,879.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,935.00	0.00	0.00	7,894.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,950.00	0.00	0.00	7,909.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,965.00	0.00	0.00	7,924.31	-469.50	265.28	290.53	0.00	0.00	0.00
7,965.23	0.00	0.00	7,924.54	-469.50	265.28	290.53	0.00	0.00	0.00
7,980.00	1.77	89.92	7,939.31	-469.50	265.51	290.75	12.00	12.00	0.00
7,995.00	3.57	89.92	7,954.29	-469.50	266.21	291.45	12.00	12.00	0.00
8,010.00	5.37	89.92	7,969.25	-469.50	267.38	292.62	12.00	12.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
8,025.00	7.17	89.92	7,984.16	-469.49	269.02	294.26	12.00	12.00	0.00
8,040.00	8.97	89.92	7,999.01	-469.49	271.12	296.36	12.00	12.00	0.00
8,055.00	10.77	89.92	8,013.78	-469.49	273.69	298.93	12.00	12.00	0.00
8,070.00	12.57	89.92	8,028.47	-469.48	276.73	301.96	12.00	12.00	0.00
8,085.00	14.37	89.92	8,043.06	-469.48	280.22	305.45	12.00	12.00	0.00
8,100.00	16.17	89.92	8,057.53	-469.47	284.17	309.39	12.00	12.00	0.00
8,115.00	17.97	89.92	8,071.87	-469.47	288.58	313.79	12.00	12.00	0.00
8,130.00	19.77	89.92	8,086.06	-469.46	293.43	318.63	12.00	12.00	0.00
8,145.00	21.57	89.92	8,100.10	-469.45	298.73	323.92	12.00	12.00	0.00
8,160.00	23.37	89.92	8,113.96	-469.45	304.46	329.64	12.00	12.00	0.00
8,175.00	25.17	89.92	8,127.63	-469.44	310.62	335.80	12.00	12.00	0.00
8,190.00	26.97	89.92	8,141.10	-469.43	317.22	342.38	12.00	12.00	0.00
8,205.00	28.77	89.92	8,154.36	-469.42	324.23	349.38	12.00	12.00	0.00
8,220.00	30.57	89.92	8,167.39	-469.41	331.65	356.80	12.00	12.00	0.00
8,235.00	32.37	89.92	8,180.19	-469.40	339.49	364.61	12.00	12.00	0.00
8,250.00	34.17	89.92	8,192.73	-469.38	347.72	372.83	12.00	12.00	0.00
8,265.00	35.97	89.92	8,205.00	-469.37	356.33	381.44	12.00	12.00	0.00
8,280.00	37.77	89.92	8,217.00	-469.36	365.33	390.42	12.00	12.00	0.00
8,295.00	39.57	89.92	8,228.71	-469.35	374.71	399.78	12.00	12.00	0.00
8,310.00	41.37	89.92	8,240.12	-469.33	384.44	409.50	12.00	12.00	0.00
8,325.00	43.17	89.92	8,251.22	-469.32	394.53	419.57	12.00	12.00	0.00
8,340.00	44.97	89.92	8,262.00	-469.30	404.97	429.99	12.00	12.00	0.00
8,355.00	46.77	89.92	8,272.44	-469.29	415.73	440.74	12.00	12.00	0.00
8,370.00	48.57	89.92	8,282.54	-469.27	426.82	451.81	12.00	12.00	0.00
8,385.00	50.37	89.92	8,292.29	-469.26	438.22	463.20	12.00	12.00	0.00
8,400.00	52.17	89.92	8,301.67	-469.24	449.92	474.88	12.00	12.00	0.00
8,415.00	53.97	89.92	8,310.68	-469.23	461.91	486.85	12.00	12.00	0.00
8,430.00	55.77	89.92	8,319.31	-469.21	474.18	499.10	12.00	12.00	0.00
8,445.00	57.57	89.92	8,327.56	-469.19	486.71	511.61	12.00	12.00	0.00
8,460.00	59.37	89.92	8,335.40	-469.17	499.50	524.38	12.00	12.00	0.00
8,475.00	61.17	89.92	8,342.84	-469.15	512.52	537.38	12.00	12.00	0.00
8,490.00	62.97	89.92	8,349.86	-469.14	525.78	550.61	12.00	12.00	0.00
8,505.00	64.77	89.92	8,356.47	-469.12	539.24	564.06	12.00	12.00	0.00
8,520.00	66.57	89.92	8,362.65	-469.10	552.91	577.71	12.00	12.00	0.00
8,535.00	68.37	89.92	8,368.39	-469.08	566.77	591.54	12.00	12.00	0.00
8,550.00	70.17	89.92	8,373.70	-469.06	580.80	605.55	12.00	12.00	0.00
8,565.00	71.97	89.92	8,378.57	-469.04	594.98	619.71	12.00	12.00	0.00
8,580.00	73.77	89.92	8,382.98	-469.02	609.32	634.02	12.00	12.00	0.00
8,595.00	75.57	89.92	8,386.95	-469.00	623.78	648.47	12.00	12.00	0.00
8,610.00	77.37	89.92	8,390.46	-468.98	638.37	663.03	12.00	12.00	0.00
8,625.00	79.17	89.92	8,393.51	-468.96	653.05	677.69	12.00	12.00	0.00
8,640.00	80.97	89.92	8,396.09	-468.94	667.83	692.44	12.00	12.00	0.00
8,655.00	82.77	89.92	8,398.21	-468.92	682.68	707.27	12.00	12.00	0.00
8,670.00	84.57	89.92	8,399.86	-468.90	697.58	722.15	12.00	12.00	0.00
8,685.00	86.37	89.92	8,401.05	-468.88	712.54	737.08	12.00	12.00	0.00
8,700.00	88.17	89.92	8,401.76	-468.85	727.52	752.04	12.00	12.00	0.00
8,715.00	89.97	89.92	8,402.00	-468.83	742.52	767.01	12.00	12.00	0.00
8,715.23	90.00	89.92	8,402.01	-468.83	742.74	767.24	12.00	12.00	0.00
8,730.00	90.00	89.92	8,402.01	-468.81	757.52	781.99	0.00	0.00	0.00
8,745.00	90.00	89.92	8,402.01	-468.79	772.52	796.97	0.00	0.00	0.00
8,760.00	90.00	89.92	8,402.01	-468.77	787.52	811.94	0.00	0.00	0.00
8,775.00	90.00	89.92	8,402.01	-468.75	802.52	826.92	0.00	0.00	0.00
8,790.00	90.00	89.92	8,402.01	-468.73	817.52	841.90	0.00	0.00	0.00
8,805.00	90.00	89.92	8,402.01	-468.71	832.52	856.87	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
8,820.00	90.00	89.92	8,402.01	-468.69	847.52	871.85	0.00	0.00	0.00
8,835.00	90.00	89.92	8,402.01	-468.67	862.52	886.83	0.00	0.00	0.00
8,850.00	90.00	89.92	8,402.01	-468.65	877.52	901.80	0.00	0.00	0.00
8,865.00	90.00	89.92	8,402.01	-468.62	892.52	916.78	0.00	0.00	0.00
8,880.00	90.00	89.92	8,402.01	-468.60	907.52	931.75	0.00	0.00	0.00
8,895.00	90.00	89.92	8,402.01	-468.58	922.52	946.73	0.00	0.00	0.00
8,910.00	90.00	89.92	8,402.01	-468.56	937.52	961.71	0.00	0.00	0.00
8,925.00	90.00	89.92	8,402.01	-468.54	952.52	976.68	0.00	0.00	0.00
8,940.00	90.00	89.92	8,402.01	-468.52	967.52	991.66	0.00	0.00	0.00
8,955.00	90.00	89.92	8,402.01	-468.50	982.52	1,006.64	0.00	0.00	0.00
8,970.00	90.00	89.92	8,402.01	-468.48	997.52	1,021.61	0.00	0.00	0.00
8,985.00	90.00	89.92	8,402.01	-468.46	1,012.52	1,036.59	0.00	0.00	0.00
9,000.00	90.00	89.92	8,402.01	-468.44	1,027.52	1,051.57	0.00	0.00	0.00
9,015.00	90.00	89.92	8,402.01	-468.41	1,042.52	1,066.54	0.00	0.00	0.00
9,030.00	90.00	89.92	8,402.01	-468.39	1,057.52	1,081.52	0.00	0.00	0.00
9,045.00	90.00	89.92	8,402.01	-468.37	1,072.52	1,096.50	0.00	0.00	0.00
9,060.00	90.00	89.92	8,402.01	-468.35	1,087.52	1,111.47	0.00	0.00	0.00
9,075.00	90.00	89.92	8,402.01	-468.33	1,102.52	1,126.45	0.00	0.00	0.00
9,090.00	90.00	89.92	8,402.01	-468.31	1,117.52	1,141.42	0.00	0.00	0.00
9,105.00	90.00	89.92	8,402.01	-468.29	1,132.52	1,156.40	0.00	0.00	0.00
9,120.00	90.00	89.92	8,402.01	-468.27	1,147.52	1,171.38	0.00	0.00	0.00
9,135.00	90.00	89.92	8,402.01	-468.25	1,162.52	1,186.35	0.00	0.00	0.00
9,150.00	90.00	89.92	8,402.01	-468.23	1,177.52	1,201.33	0.00	0.00	0.00
9,165.00	90.00	89.92	8,402.01	-468.21	1,192.52	1,216.31	0.00	0.00	0.00
9,180.00	90.00	89.92	8,402.01	-468.18	1,207.52	1,231.28	0.00	0.00	0.00
9,195.00	90.00	89.92	8,402.01	-468.16	1,222.52	1,246.26	0.00	0.00	0.00
9,210.00	90.00	89.92	8,402.01	-468.14	1,237.52	1,261.24	0.00	0.00	0.00
9,225.00	90.00	89.92	8,402.01	-468.12	1,252.52	1,276.21	0.00	0.00	0.00
9,240.00	90.00	89.92	8,402.01	-468.10	1,267.52	1,291.19	0.00	0.00	0.00
9,255.00	90.00	89.92	8,402.01	-468.08	1,282.52	1,306.17	0.00	0.00	0.00
9,270.00	90.00	89.92	8,402.01	-468.06	1,297.52	1,321.14	0.00	0.00	0.00
9,285.00	90.00	89.92	8,402.01	-468.04	1,312.52	1,336.12	0.00	0.00	0.00
9,300.00	90.00	89.92	8,402.01	-468.02	1,327.52	1,351.10	0.00	0.00	0.00
9,315.00	90.00	89.92	8,402.01	-468.00	1,342.52	1,366.07	0.00	0.00	0.00
9,330.00	90.00	89.92	8,402.01	-467.97	1,357.52	1,381.05	0.00	0.00	0.00
9,345.00	90.00	89.92	8,402.01	-467.95	1,372.52	1,396.02	0.00	0.00	0.00
9,360.00	90.00	89.92	8,402.01	-467.93	1,387.52	1,411.00	0.00	0.00	0.00
9,375.00	90.00	89.92	8,402.01	-467.91	1,402.52	1,425.98	0.00	0.00	0.00
9,390.00	90.00	89.92	8,402.01	-467.89	1,417.52	1,440.95	0.00	0.00	0.00
9,405.00	90.00	89.92	8,402.01	-467.87	1,432.52	1,455.93	0.00	0.00	0.00
9,420.00	90.00	89.92	8,402.01	-467.85	1,447.52	1,470.91	0.00	0.00	0.00
9,435.00	90.00	89.92	8,402.01	-467.83	1,462.52	1,485.88	0.00	0.00	0.00
9,450.00	90.00	89.92	8,402.01	-467.81	1,477.52	1,500.86	0.00	0.00	0.00
9,465.00	90.00	89.92	8,402.01	-467.79	1,492.52	1,515.84	0.00	0.00	0.00
9,480.00	90.00	89.92	8,402.01	-467.77	1,507.52	1,530.81	0.00	0.00	0.00
9,495.00	90.00	89.92	8,402.01	-467.74	1,522.52	1,545.79	0.00	0.00	0.00
9,510.00	90.00	89.92	8,402.01	-467.72	1,537.52	1,560.77	0.00	0.00	0.00
9,525.00	90.00	89.92	8,402.01	-467.70	1,552.52	1,575.74	0.00	0.00	0.00
9,540.00	90.00	89.92	8,402.01	-467.68	1,567.52	1,590.72	0.00	0.00	0.00
9,555.00	90.00	89.92	8,402.01	-467.66	1,582.52	1,605.70	0.00	0.00	0.00
9,570.00	90.00	89.92	8,402.01	-467.64	1,597.52	1,620.67	0.00	0.00	0.00
9,585.00	90.00	89.92	8,402.01	-467.62	1,612.52	1,635.65	0.00	0.00	0.00
9,600.00	90.00	89.92	8,402.01	-467.60	1,627.52	1,650.62	0.00	0.00	0.00
9,615.00	90.00	89.92	8,402.01	-467.58	1,642.52	1,665.60	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,630.00	90.00	89.92	8,402.01	-467.56	1,657.52	1,680.58	0.00	0.00	0.00	
9,645.00	90.00	89.92	8,402.01	-467.54	1,672.52	1,695.55	0.00	0.00	0.00	
9,660.00	90.00	89.92	8,402.01	-467.51	1,687.52	1,710.53	0.00	0.00	0.00	
9,675.00	90.00	89.92	8,402.01	-467.49	1,702.52	1,725.51	0.00	0.00	0.00	
9,690.00	90.00	89.92	8,402.01	-467.47	1,717.52	1,740.48	0.00	0.00	0.00	
9,705.00	90.00	89.92	8,402.01	-467.45	1,732.52	1,755.46	0.00	0.00	0.00	
9,720.00	90.00	89.92	8,402.01	-467.43	1,747.52	1,770.44	0.00	0.00	0.00	
9,735.00	90.00	89.92	8,402.01	-467.41	1,762.52	1,785.41	0.00	0.00	0.00	
9,750.00	90.00	89.92	8,402.01	-467.39	1,777.52	1,800.39	0.00	0.00	0.00	
9,765.00	90.00	89.92	8,402.01	-467.37	1,792.52	1,815.37	0.00	0.00	0.00	
9,780.00	90.00	89.92	8,402.01	-467.35	1,807.52	1,830.34	0.00	0.00	0.00	
9,795.00	90.00	89.92	8,402.01	-467.33	1,822.52	1,845.32	0.00	0.00	0.00	
9,810.00	90.00	89.92	8,402.01	-467.30	1,837.52	1,860.29	0.00	0.00	0.00	
9,825.00	90.00	89.92	8,402.01	-467.28	1,852.52	1,875.27	0.00	0.00	0.00	
9,840.00	90.00	89.92	8,402.01	-467.26	1,867.52	1,890.25	0.00	0.00	0.00	
9,855.00	90.00	89.92	8,402.01	-467.24	1,882.52	1,905.22	0.00	0.00	0.00	
9,870.00	90.00	89.92	8,402.01	-467.22	1,897.52	1,920.20	0.00	0.00	0.00	
9,885.00	90.00	89.92	8,402.01	-467.20	1,912.52	1,935.18	0.00	0.00	0.00	
9,900.00	90.00	89.92	8,402.01	-467.18	1,927.52	1,950.15	0.00	0.00	0.00	
9,915.00	90.00	89.92	8,402.01	-467.16	1,942.52	1,965.13	0.00	0.00	0.00	
9,930.00	90.00	89.92	8,402.01	-467.14	1,957.52	1,980.11	0.00	0.00	0.00	
9,945.00	90.00	89.92	8,402.01	-467.12	1,972.52	1,995.08	0.00	0.00	0.00	
9,960.00	90.00	89.92	8,402.01	-467.10	1,987.52	2,010.06	0.00	0.00	0.00	
9,975.00	90.00	89.92	8,402.01	-467.07	2,002.52	2,025.04	0.00	0.00	0.00	
9,990.00	90.00	89.92	8,402.01	-467.05	2,017.52	2,040.01	0.00	0.00	0.00	
10,005.00	90.00	89.92	8,402.01	-467.03	2,032.52	2,054.99	0.00	0.00	0.00	
10,020.00	90.00	89.92	8,402.01	-467.01	2,047.52	2,069.97	0.00	0.00	0.00	
10,035.00	90.00	89.92	8,402.01	-466.99	2,062.52	2,084.94	0.00	0.00	0.00	
10,050.00	90.00	89.92	8,402.01	-466.97	2,077.52	2,099.92	0.00	0.00	0.00	
10,065.00	90.00	89.92	8,402.01	-466.95	2,092.52	2,114.89	0.00	0.00	0.00	
10,080.00	90.00	89.92	8,402.01	-466.93	2,107.52	2,129.87	0.00	0.00	0.00	
10,095.00	90.00	89.92	8,402.01	-466.91	2,122.52	2,144.85	0.00	0.00	0.00	
10,110.00	90.00	89.92	8,402.01	-466.89	2,137.52	2,159.82	0.00	0.00	0.00	
10,125.00	90.00	89.92	8,402.01	-466.86	2,152.52	2,174.80	0.00	0.00	0.00	
10,140.00	90.00	89.92	8,402.01	-466.84	2,167.52	2,189.78	0.00	0.00	0.00	
10,155.00	90.00	89.92	8,402.01	-466.82	2,182.52	2,204.75	0.00	0.00	0.00	
10,170.00	90.00	89.92	8,402.01	-466.80	2,197.52	2,219.73	0.00	0.00	0.00	
10,185.00	90.00	89.92	8,402.01	-466.78	2,212.52	2,234.71	0.00	0.00	0.00	
10,200.00	90.00	89.92	8,402.01	-466.76	2,227.52	2,249.68	0.00	0.00	0.00	
10,215.00	90.00	89.92	8,402.01	-466.74	2,242.52	2,264.66	0.00	0.00	0.00	
10,230.00	90.00	89.92	8,402.01	-466.72	2,257.52	2,279.64	0.00	0.00	0.00	
10,245.00	90.00	89.92	8,402.01	-466.70	2,272.52	2,294.61	0.00	0.00	0.00	
10,260.00	90.00	89.92	8,402.01	-466.68	2,287.52	2,309.59	0.00	0.00	0.00	
10,275.00	90.00	89.92	8,402.01	-466.66	2,302.52	2,324.56	0.00	0.00	0.00	
10,290.00	90.00	89.92	8,402.01	-466.63	2,317.52	2,339.54	0.00	0.00	0.00	
10,305.00	90.00	89.92	8,402.01	-466.61	2,332.52	2,354.52	0.00	0.00	0.00	
10,320.00	90.00	89.92	8,402.01	-466.59	2,347.52	2,369.49	0.00	0.00	0.00	
10,335.00	90.00	89.92	8,402.01	-466.57	2,362.52	2,384.47	0.00	0.00	0.00	
10,350.00	90.00	89.92	8,402.01	-466.55	2,377.52	2,399.45	0.00	0.00	0.00	
10,365.00	90.00	89.92	8,402.01	-466.53	2,392.52	2,414.42	0.00	0.00	0.00	
10,380.00	90.00	89.92	8,402.01	-466.51	2,407.52	2,429.40	0.00	0.00	0.00	
10,395.00	90.00	89.92	8,402.01	-466.49	2,422.52	2,444.38	0.00	0.00	0.00	
10,410.00	90.00	89.92	8,402.01	-466.47	2,437.52	2,459.35	0.00	0.00	0.00	
10,425.00	90.00	89.92	8,402.01	-466.45	2,452.52	2,474.33	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)	
10,440.00	90.00	89.92	8,402.01	-466.43	2,467.52	2,489.31	0.00	0.00	0.00	
10,455.00	90.00	89.92	8,402.01	-466.40	2,482.52	2,504.28	0.00	0.00	0.00	
10,470.00	90.00	89.92	8,402.01	-466.38	2,497.52	2,519.26	0.00	0.00	0.00	
10,485.00	90.00	89.92	8,402.01	-466.36	2,512.52	2,534.24	0.00	0.00	0.00	
10,500.00	90.00	89.92	8,402.01	-466.34	2,527.52	2,549.21	0.00	0.00	0.00	
10,515.00	90.00	89.92	8,402.01	-466.32	2,542.52	2,564.19	0.00	0.00	0.00	
10,530.00	90.00	89.92	8,402.01	-466.30	2,557.52	2,579.16	0.00	0.00	0.00	
10,545.00	90.00	89.92	8,402.01	-466.28	2,572.52	2,594.14	0.00	0.00	0.00	
10,560.00	90.00	89.92	8,402.01	-466.26	2,587.52	2,609.12	0.00	0.00	0.00	
10,575.00	90.00	89.92	8,402.01	-466.24	2,602.52	2,624.09	0.00	0.00	0.00	
10,590.00	90.00	89.92	8,402.01	-466.22	2,617.52	2,639.07	0.00	0.00	0.00	
10,605.00	90.00	89.92	8,402.01	-466.19	2,632.52	2,654.05	0.00	0.00	0.00	
10,620.00	90.00	89.92	8,402.01	-466.17	2,647.52	2,669.02	0.00	0.00	0.00	
10,635.00	90.00	89.92	8,402.01	-466.15	2,662.52	2,684.00	0.00	0.00	0.00	
10,650.00	90.00	89.92	8,402.01	-466.13	2,677.52	2,698.98	0.00	0.00	0.00	
10,665.00	90.00	89.92	8,402.01	-466.11	2,692.51	2,713.95	0.00	0.00	0.00	
10,680.00	90.00	89.92	8,402.01	-466.09	2,707.51	2,728.93	0.00	0.00	0.00	
10,695.00	90.00	89.92	8,402.01	-466.07	2,722.51	2,743.91	0.00	0.00	0.00	
10,710.00	90.00	89.92	8,402.01	-466.05	2,737.51	2,758.88	0.00	0.00	0.00	
10,725.00	90.00	89.92	8,402.01	-466.03	2,752.51	2,773.86	0.00	0.00	0.00	
10,740.00	90.00	89.92	8,402.01	-466.01	2,767.51	2,788.84	0.00	0.00	0.00	
10,755.00	90.00	89.92	8,402.01	-465.99	2,782.51	2,803.81	0.00	0.00	0.00	
10,770.00	90.00	89.92	8,402.01	-465.96	2,797.51	2,818.79	0.00	0.00	0.00	
10,785.00	90.00	89.92	8,402.01	-465.94	2,812.51	2,833.76	0.00	0.00	0.00	
10,800.00	90.00	89.92	8,402.01	-465.92	2,827.51	2,848.74	0.00	0.00	0.00	
10,815.00	90.00	89.92	8,402.01	-465.90	2,842.51	2,863.72	0.00	0.00	0.00	
10,815.23	90.00	89.92	8,402.01	-465.90	2,842.74	2,863.94	0.00	0.00	0.00	
10,830.00	90.00	89.62	8,402.01	-465.84	2,857.51	2,878.69	2.00	0.00	-2.00	
10,845.00	90.00	89.32	8,402.01	-465.70	2,872.51	2,893.66	2.00	0.00	-2.00	
10,860.00	90.00	89.02	8,402.01	-465.49	2,887.51	2,908.63	2.00	0.00	-2.00	
10,875.00	90.00	88.72	8,402.01	-465.19	2,902.51	2,923.58	2.00	0.00	-2.00	
10,890.00	90.00	88.42	8,402.01	-464.82	2,917.50	2,938.54	2.00	0.00	-2.00	
10,905.00	90.00	88.12	8,402.01	-464.37	2,932.50	2,953.48	2.00	0.00	-2.00	
10,920.00	90.00	87.82	8,402.01	-463.84	2,947.49	2,968.42	2.00	0.00	-2.00	
10,935.00	90.00	87.52	8,402.01	-463.23	2,962.48	2,983.35	2.00	0.00	-2.00	
10,950.00	90.00	87.22	8,402.01	-462.54	2,977.46	2,998.28	2.00	0.00	-2.00	
10,965.00	90.00	86.92	8,402.01	-461.78	2,992.44	3,013.19	2.00	0.00	-2.00	
10,980.00	90.00	86.62	8,402.01	-460.93	3,007.42	3,028.10	2.00	0.00	-2.00	
10,995.00	90.00	86.32	8,402.01	-460.01	3,022.39	3,043.00	2.00	0.00	-2.00	
11,010.00	90.00	86.02	8,402.01	-459.01	3,037.36	3,057.89	2.00	0.00	-2.00	
11,025.00	90.00	85.72	8,402.01	-457.93	3,052.32	3,072.77	2.00	0.00	-2.00	
11,040.00	90.00	85.42	8,402.01	-456.77	3,067.27	3,087.64	2.00	0.00	-2.00	
11,055.00	90.00	85.12	8,402.01	-455.54	3,082.22	3,102.50	2.00	0.00	-2.00	
11,070.00	90.00	84.82	8,402.01	-454.22	3,097.16	3,117.35	2.00	0.00	-2.00	
11,085.00	90.00	84.52	8,402.01	-452.83	3,112.10	3,132.18	2.00	0.00	-2.00	
11,100.00	90.00	84.22	8,402.01	-451.36	3,127.03	3,147.01	2.00	0.00	-2.00	
11,111.23	90.00	84.00	8,402.01	-450.21	3,138.19	3,158.10	2.00	0.00	-2.00	
11,115.00	90.00	84.00	8,402.01	-449.82	3,141.95	3,161.82	0.00	0.00	0.00	
11,130.00	90.00	84.00	8,402.01	-448.25	3,156.86	3,176.63	0.00	0.00	0.00	
11,145.00	90.00	84.00	8,402.01	-446.68	3,171.78	3,191.44	0.00	0.00	0.00	
11,160.00	90.00	84.00	8,402.01	-445.11	3,186.70	3,206.25	0.00	0.00	0.00	
11,175.00	90.00	84.00	8,402.01	-443.54	3,201.62	3,221.06	0.00	0.00	0.00	
11,190.00	90.00	84.00	8,402.01	-441.98	3,216.54	3,235.87	0.00	0.00	0.00	
11,205.00	90.00	84.00	8,402.01	-440.41	3,231.45	3,250.68	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
11,220.00	90.00	84.00	8,402.01	-438.84	3,246.37	3,265.49	0.00	0.00	0.00
11,235.00	90.00	84.00	8,402.01	-437.27	3,261.29	3,280.30	0.00	0.00	0.00
11,250.00	90.00	84.00	8,402.01	-435.70	3,276.21	3,295.11	0.00	0.00	0.00
11,265.00	90.00	84.00	8,402.01	-434.14	3,291.12	3,309.92	0.00	0.00	0.00
11,280.00	90.00	84.00	8,402.01	-432.57	3,306.04	3,324.73	0.00	0.00	0.00
11,295.00	90.00	84.00	8,402.01	-431.00	3,320.96	3,339.54	0.00	0.00	0.00
11,310.00	90.00	84.00	8,402.01	-429.43	3,335.88	3,354.35	0.00	0.00	0.00
11,325.00	90.00	84.00	8,402.01	-427.87	3,350.80	3,369.16	0.00	0.00	0.00
11,340.00	90.00	84.00	8,402.01	-426.30	3,365.71	3,383.97	0.00	0.00	0.00
11,355.00	90.00	84.00	8,402.01	-424.73	3,380.63	3,398.78	0.00	0.00	0.00
11,370.00	90.00	84.00	8,402.01	-423.16	3,395.55	3,413.59	0.00	0.00	0.00
11,385.00	90.00	84.00	8,402.01	-421.59	3,410.47	3,428.40	0.00	0.00	0.00
11,400.00	90.00	84.00	8,402.01	-420.03	3,425.38	3,443.21	0.00	0.00	0.00
11,415.00	90.00	84.00	8,402.01	-418.46	3,440.30	3,458.02	0.00	0.00	0.00
11,430.00	90.00	84.00	8,402.01	-416.89	3,455.22	3,472.83	0.00	0.00	0.00
11,445.00	90.00	84.00	8,402.01	-415.32	3,470.14	3,487.64	0.00	0.00	0.00
11,460.00	90.00	84.00	8,402.01	-413.75	3,485.06	3,502.45	0.00	0.00	0.00
11,475.00	90.00	84.00	8,402.01	-412.19	3,499.97	3,517.26	0.00	0.00	0.00
11,490.00	90.00	84.00	8,402.01	-410.62	3,514.89	3,532.07	0.00	0.00	0.00
11,505.00	90.00	84.00	8,402.01	-409.05	3,529.81	3,546.88	0.00	0.00	0.00
11,520.00	90.00	84.00	8,402.01	-407.48	3,544.73	3,561.69	0.00	0.00	0.00
11,535.00	90.00	84.00	8,402.01	-405.91	3,559.65	3,576.50	0.00	0.00	0.00
11,550.00	90.00	84.00	8,402.01	-404.35	3,574.56	3,591.31	0.00	0.00	0.00
11,565.00	90.00	84.00	8,402.01	-402.78	3,589.48	3,606.12	0.00	0.00	0.00
11,580.00	90.00	84.00	8,402.01	-401.21	3,604.40	3,620.93	0.00	0.00	0.00
11,595.00	90.00	84.00	8,402.01	-399.64	3,619.32	3,635.74	0.00	0.00	0.00
11,610.00	90.00	84.00	8,402.01	-398.07	3,634.23	3,650.55	0.00	0.00	0.00
11,625.00	90.00	84.00	8,402.01	-396.51	3,649.15	3,665.36	0.00	0.00	0.00
11,640.00	90.00	84.00	8,402.01	-394.94	3,664.07	3,680.17	0.00	0.00	0.00
11,655.00	90.00	84.00	8,402.01	-393.37	3,678.99	3,694.98	0.00	0.00	0.00
11,670.00	90.00	84.00	8,402.01	-391.80	3,693.91	3,709.79	0.00	0.00	0.00
11,685.00	90.00	84.00	8,402.01	-390.23	3,708.82	3,724.60	0.00	0.00	0.00
11,700.00	90.00	84.00	8,402.01	-388.67	3,723.74	3,739.41	0.00	0.00	0.00
11,715.00	90.00	84.00	8,402.01	-387.10	3,738.66	3,754.22	0.00	0.00	0.00
11,730.00	90.00	84.00	8,402.01	-385.53	3,753.58	3,769.03	0.00	0.00	0.00
11,745.00	90.00	84.00	8,402.01	-383.96	3,768.49	3,783.84	0.00	0.00	0.00
11,760.00	90.00	84.00	8,402.01	-382.40	3,783.41	3,798.65	0.00	0.00	0.00
11,775.00	90.00	84.00	8,402.01	-380.83	3,798.33	3,813.46	0.00	0.00	0.00
11,790.00	90.00	84.00	8,402.01	-379.26	3,813.25	3,828.27	0.00	0.00	0.00
11,805.00	90.00	84.00	8,402.01	-377.69	3,828.17	3,843.08	0.00	0.00	0.00
11,820.00	90.00	84.00	8,402.01	-376.12	3,843.08	3,857.89	0.00	0.00	0.00
11,835.00	90.00	84.00	8,402.01	-374.56	3,858.00	3,872.70	0.00	0.00	0.00
11,850.00	90.00	84.00	8,402.01	-372.99	3,872.92	3,887.51	0.00	0.00	0.00
11,865.00	90.00	84.00	8,402.01	-371.42	3,887.84	3,902.32	0.00	0.00	0.00
11,880.00	90.00	84.00	8,402.01	-369.85	3,902.76	3,917.13	0.00	0.00	0.00
11,895.00	90.00	84.00	8,402.01	-368.28	3,917.67	3,931.94	0.00	0.00	0.00
11,910.00	90.00	84.00	8,402.01	-366.72	3,932.59	3,946.75	0.00	0.00	0.00
11,925.00	90.00	84.00	8,402.01	-365.15	3,947.51	3,961.56	0.00	0.00	0.00
11,940.00	90.00	84.00	8,402.01	-363.58	3,962.43	3,976.37	0.00	0.00	0.00
11,955.00	90.00	84.00	8,402.01	-362.01	3,977.34	3,991.18	0.00	0.00	0.00
11,970.00	90.00	84.00	8,402.01	-360.44	3,992.26	4,005.99	0.00	0.00	0.00
11,985.00	90.00	84.00	8,402.01	-358.88	4,007.18	4,020.80	0.00	0.00	0.00
12,000.00	90.00	84.00	8,402.01	-357.31	4,022.10	4,035.61	0.00	0.00	0.00
12,015.00	90.00	84.00	8,402.01	-355.74	4,037.02	4,050.42	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)
12,030.00	90.00	84.00	8,402.01	-354.17	4,051.93	4,065.23	0.00	0.00	0.00
12,045.00	90.00	84.00	8,402.01	-352.60	4,066.85	4,080.04	0.00	0.00	0.00
12,060.00	90.00	84.00	8,402.01	-351.04	4,081.77	4,094.85	0.00	0.00	0.00
12,075.00	90.00	84.00	8,402.01	-349.47	4,096.69	4,109.66	0.00	0.00	0.00
12,090.00	90.00	84.00	8,402.01	-347.90	4,111.61	4,124.47	0.00	0.00	0.00
12,105.00	90.00	84.00	8,402.01	-346.33	4,126.52	4,139.28	0.00	0.00	0.00
12,120.00	90.00	84.00	8,402.01	-344.76	4,141.44	4,154.09	0.00	0.00	0.00
12,135.00	90.00	84.00	8,402.01	-343.20	4,156.36	4,168.90	0.00	0.00	0.00
12,150.00	90.00	84.00	8,402.01	-341.63	4,171.28	4,183.71	0.00	0.00	0.00
12,165.00	90.00	84.00	8,402.01	-340.06	4,186.19	4,198.52	0.00	0.00	0.00
12,180.00	90.00	84.00	8,402.01	-338.49	4,201.11	4,213.33	0.00	0.00	0.00
12,195.00	90.00	84.00	8,402.01	-336.93	4,216.03	4,228.14	0.00	0.00	0.00
12,210.00	90.00	84.00	8,402.01	-335.36	4,230.95	4,242.95	0.00	0.00	0.00
12,225.00	90.00	84.00	8,402.01	-333.79	4,245.87	4,257.76	0.00	0.00	0.00
12,240.00	90.00	84.00	8,402.01	-332.22	4,260.78	4,272.57	0.00	0.00	0.00
12,255.00	90.00	84.00	8,402.01	-330.65	4,275.70	4,287.38	0.00	0.00	0.00
12,270.00	90.00	84.00	8,402.01	-329.09	4,290.62	4,302.19	0.00	0.00	0.00
12,285.00	90.00	84.00	8,402.01	-327.52	4,305.54	4,317.00	0.00	0.00	0.00
12,300.00	90.00	84.00	8,402.01	-325.95	4,320.45	4,331.81	0.00	0.00	0.00
12,315.00	90.00	84.00	8,402.01	-324.38	4,335.37	4,346.62	0.00	0.00	0.00
12,330.00	90.00	84.00	8,402.01	-322.81	4,350.29	4,361.43	0.00	0.00	0.00
12,345.00	90.00	84.00	8,402.01	-321.25	4,365.21	4,376.24	0.00	0.00	0.00
12,360.00	90.00	84.00	8,402.01	-319.68	4,380.13	4,391.05	0.00	0.00	0.00
12,375.00	90.00	84.00	8,402.01	-318.11	4,395.04	4,405.86	0.00	0.00	0.00
12,390.00	90.00	84.00	8,402.01	-316.54	4,409.96	4,420.67	0.00	0.00	0.00
12,405.00	90.00	84.00	8,402.01	-314.97	4,424.88	4,435.48	0.00	0.00	0.00
12,420.00	90.00	84.00	8,402.01	-313.41	4,439.80	4,450.29	0.00	0.00	0.00
12,435.00	90.00	84.00	8,402.01	-311.84	4,454.72	4,465.10	0.00	0.00	0.00
12,450.00	90.00	84.00	8,402.01	-310.27	4,469.63	4,479.91	0.00	0.00	0.00
12,465.00	90.00	84.00	8,402.01	-308.70	4,484.55	4,494.72	0.00	0.00	0.00
12,480.00	90.00	84.00	8,402.01	-307.13	4,499.47	4,509.53	0.00	0.00	0.00
12,495.00	90.00	84.00	8,402.01	-305.57	4,514.39	4,524.34	0.00	0.00	0.00
12,510.00	90.00	84.00	8,402.01	-304.00	4,529.30	4,539.15	0.00	0.00	0.00
12,525.00	90.00	84.00	8,402.01	-302.43	4,544.22	4,553.96	0.00	0.00	0.00
12,540.00	90.00	84.00	8,402.01	-300.86	4,559.14	4,568.77	0.00	0.00	0.00
12,555.00	90.00	84.00	8,402.01	-299.30	4,574.06	4,583.58	0.00	0.00	0.00
12,570.00	90.00	84.00	8,402.01	-297.73	4,588.98	4,598.39	0.00	0.00	0.00
12,585.00	90.00	84.00	8,402.01	-296.16	4,603.89	4,613.20	0.00	0.00	0.00
12,600.00	90.00	84.00	8,402.01	-294.59	4,618.81	4,628.01	0.00	0.00	0.00
12,615.00	90.00	84.00	8,402.01	-293.02	4,633.73	4,642.82	0.00	0.00	0.00
12,630.00	90.00	84.00	8,402.01	-291.46	4,648.65	4,657.63	0.00	0.00	0.00
12,645.00	90.00	84.00	8,402.01	-289.89	4,663.56	4,672.44	0.00	0.00	0.00
12,660.00	90.00	84.00	8,402.01	-288.32	4,678.48	4,687.25	0.00	0.00	0.00
12,675.00	90.00	84.00	8,402.01	-286.75	4,693.40	4,702.06	0.00	0.00	0.00
12,690.00	90.00	84.00	8,402.01	-285.18	4,708.32	4,716.87	0.00	0.00	0.00
12,705.00	90.00	84.00	8,402.01	-283.62	4,723.24	4,731.68	0.00	0.00	0.00
12,720.00	90.00	84.00	8,402.01	-282.05	4,738.15	4,746.49	0.00	0.00	0.00
12,735.00	90.00	84.00	8,402.01	-280.48	4,753.07	4,761.30	0.00	0.00	0.00
12,750.00	90.00	84.00	8,402.01	-278.91	4,767.99	4,776.11	0.00	0.00	0.00
12,765.00	90.00	84.00	8,402.01	-277.34	4,782.91	4,790.92	0.00	0.00	0.00
12,780.00	90.00	84.00	8,402.01	-275.78	4,797.83	4,805.73	0.00	0.00	0.00
12,795.00	90.00	84.00	8,402.01	-274.21	4,812.74	4,820.54	0.00	0.00	0.00
12,810.00	90.00	84.00	8,402.01	-272.64	4,827.66	4,835.35	0.00	0.00	0.00
12,825.00	90.00	84.00	8,402.01	-271.07	4,842.58	4,850.16	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)	
12,840.00	90.00	84.00	8,402.01	-269.50	4,857.50	4,864.97	0.00	0.00	0.00	
12,855.00	90.00	84.00	8,402.01	-267.94	4,872.41	4,879.78	0.00	0.00	0.00	
12,870.00	90.00	84.00	8,402.01	-266.37	4,887.33	4,894.59	0.00	0.00	0.00	
12,885.00	90.00	84.00	8,402.01	-264.80	4,902.25	4,909.40	0.00	0.00	0.00	
12,900.00	90.00	84.00	8,402.01	-263.23	4,917.17	4,924.21	0.00	0.00	0.00	
12,915.00	90.00	84.00	8,402.01	-261.66	4,932.09	4,939.02	0.00	0.00	0.00	
12,930.00	90.00	84.00	8,402.01	-260.10	4,947.00	4,953.83	0.00	0.00	0.00	
12,945.00	90.00	84.00	8,402.01	-258.53	4,961.92	4,968.64	0.00	0.00	0.00	
12,960.00	90.00	84.00	8,402.01	-256.96	4,976.84	4,983.45	0.00	0.00	0.00	
12,975.00	90.00	84.00	8,402.01	-255.39	4,991.76	4,998.25	0.00	0.00	0.00	
12,990.00	90.00	84.00	8,402.01	-253.83	5,006.67	5,013.06	0.00	0.00	0.00	
13,005.00	90.00	84.00	8,402.01	-252.26	5,021.59	5,027.87	0.00	0.00	0.00	
13,020.00	90.00	84.00	8,402.01	-250.69	5,036.51	5,042.68	0.00	0.00	0.00	
13,035.00	90.00	84.00	8,402.01	-249.12	5,051.43	5,057.49	0.00	0.00	0.00	
13,050.00	90.00	84.00	8,402.01	-247.55	5,066.35	5,072.30	0.00	0.00	0.00	
13,065.00	90.00	84.00	8,402.01	-245.99	5,081.26	5,087.11	0.00	0.00	0.00	
13,080.00	90.00	84.00	8,402.01	-244.42	5,096.18	5,101.92	0.00	0.00	0.00	
13,095.00	90.00	84.00	8,402.01	-242.85	5,111.10	5,116.73	0.00	0.00	0.00	
13,110.00	90.00	84.00	8,402.01	-241.28	5,126.02	5,131.54	0.00	0.00	0.00	
13,125.00	90.00	84.00	8,402.01	-239.71	5,140.94	5,146.35	0.00	0.00	0.00	
13,140.00	90.00	84.00	8,402.01	-238.15	5,155.85	5,161.16	0.00	0.00	0.00	
13,155.00	90.00	84.00	8,402.01	-236.58	5,170.77	5,175.97	0.00	0.00	0.00	
13,170.00	90.00	84.00	8,402.01	-235.01	5,185.69	5,190.78	0.00	0.00	0.00	
13,185.00	90.00	84.00	8,402.01	-233.44	5,200.61	5,205.59	0.00	0.00	0.00	
13,200.00	90.00	84.00	8,402.01	-231.87	5,215.52	5,220.40	0.00	0.00	0.00	
13,215.00	90.00	84.00	8,402.01	-230.31	5,230.44	5,235.21	0.00	0.00	0.00	
13,230.00	90.00	84.00	8,402.01	-228.74	5,245.36	5,250.02	0.00	0.00	0.00	
13,245.00	90.00	84.00	8,402.01	-227.17	5,260.28	5,264.83	0.00	0.00	0.00	
13,260.00	90.00	84.00	8,402.01	-225.60	5,275.20	5,279.64	0.00	0.00	0.00	
13,275.00	90.00	84.00	8,402.01	-224.03	5,290.11	5,294.45	0.00	0.00	0.00	
13,290.00	90.00	84.00	8,402.01	-222.47	5,305.03	5,309.26	0.00	0.00	0.00	
13,305.00	90.00	84.00	8,402.01	-220.90	5,319.95	5,324.07	0.00	0.00	0.00	
13,320.00	90.00	84.00	8,402.01	-219.33	5,334.87	5,338.88	0.00	0.00	0.00	
13,335.00	90.00	84.00	8,402.01	-217.76	5,349.78	5,353.69	0.00	0.00	0.00	
13,350.00	90.00	84.00	8,402.01	-216.19	5,364.70	5,368.50	0.00	0.00	0.00	
13,365.00	90.00	84.00	8,402.01	-214.63	5,379.62	5,383.31	0.00	0.00	0.00	
13,380.00	90.00	84.00	8,402.01	-213.06	5,394.54	5,398.12	0.00	0.00	0.00	
13,395.00	90.00	84.00	8,402.01	-211.49	5,409.46	5,412.93	0.00	0.00	0.00	
13,410.00	90.00	84.00	8,402.01	-209.92	5,424.37	5,427.74	0.00	0.00	0.00	
13,425.00	90.00	84.00	8,402.01	-208.36	5,439.29	5,442.55	0.00	0.00	0.00	
13,440.00	90.00	84.00	8,402.01	-206.79	5,454.21	5,457.36	0.00	0.00	0.00	
13,455.00	90.00	84.00	8,402.01	-205.22	5,469.13	5,472.17	0.00	0.00	0.00	
13,470.00	90.00	84.00	8,402.01	-203.65	5,484.05	5,486.98	0.00	0.00	0.00	
13,485.00	90.00	84.00	8,402.01	-202.08	5,498.96	5,501.79	0.00	0.00	0.00	
13,500.00	90.00	84.00	8,402.01	-200.52	5,513.88	5,516.60	0.00	0.00	0.00	
13,515.00	90.00	84.00	8,402.01	-198.95	5,528.80	5,531.41	0.00	0.00	0.00	
13,530.00	90.00	84.00	8,402.01	-197.38	5,543.72	5,546.22	0.00	0.00	0.00	
13,545.00	90.00	84.00	8,402.01	-195.81	5,558.63	5,561.03	0.00	0.00	0.00	
13,560.00	90.00	84.00	8,402.01	-194.24	5,573.55	5,575.84	0.00	0.00	0.00	
13,575.00	90.00	84.00	8,402.01	-192.68	5,588.47	5,590.65	0.00	0.00	0.00	
13,590.00	90.00	84.00	8,402.01	-191.11	5,603.39	5,605.46	0.00	0.00	0.00	
13,605.00	90.00	84.00	8,402.01	-189.54	5,618.31	5,620.27	0.00	0.00	0.00	
13,620.00	90.00	84.00	8,402.01	-187.97	5,633.22	5,635.08	0.00	0.00	0.00	
13,635.00	90.00	84.00	8,402.01	-186.40	5,648.14	5,649.89	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 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,650.00	90.00	84.00	8,402.01	-184.84	5,663.06	5,664.70	0.00	0.00	0.00	
13,665.00	90.00	84.00	8,402.01	-183.27	5,677.98	5,679.51	0.00	0.00	0.00	
13,680.00	90.00	84.00	8,402.01	-181.70	5,692.89	5,694.32	0.00	0.00	0.00	
13,695.00	90.00	84.00	8,402.01	-180.13	5,707.81	5,709.13	0.00	0.00	0.00	
13,710.00	90.00	84.00	8,402.01	-178.56	5,722.73	5,723.94	0.00	0.00	0.00	
13,725.00	90.00	84.00	8,402.01	-177.00	5,737.65	5,738.75	0.00	0.00	0.00	
13,740.00	90.00	84.00	8,402.01	-175.43	5,752.57	5,753.56	0.00	0.00	0.00	
13,755.00	90.00	84.00	8,402.01	-173.86	5,767.48	5,768.37	0.00	0.00	0.00	
13,770.00	90.00	84.00	8,402.01	-172.29	5,782.40	5,783.18	0.00	0.00	0.00	
13,785.00	90.00	84.00	8,402.01	-170.73	5,797.32	5,797.99	0.00	0.00	0.00	
13,800.00	90.00	84.00	8,402.01	-169.16	5,812.24	5,812.80	0.00	0.00	0.00	
13,815.00	90.00	84.00	8,402.01	-167.59	5,827.16	5,827.61	0.00	0.00	0.00	
13,830.00	90.00	84.00	8,402.01	-166.02	5,842.07	5,842.42	0.00	0.00	0.00	
13,845.00	90.00	84.00	8,402.01	-164.45	5,856.99	5,857.23	0.00	0.00	0.00	
13,860.00	90.00	84.00	8,402.01	-162.89	5,871.91	5,872.04	0.00	0.00	0.00	
13,875.00	90.00	84.00	8,402.01	-161.32	5,886.83	5,886.85	0.00	0.00	0.00	
13,890.00	90.00	84.00	8,402.01	-159.75	5,901.74	5,901.66	0.00	0.00	0.00	
13,905.00	90.00	84.00	8,402.01	-158.18	5,916.66	5,916.47	0.00	0.00	0.00	
13,920.00	90.00	84.00	8,402.01	-156.61	5,931.58	5,931.28	0.00	0.00	0.00	
13,935.00	90.00	84.00	8,402.01	-155.05	5,946.50	5,946.09	0.00	0.00	0.00	
13,950.00	90.00	84.00	8,402.01	-153.48	5,961.42	5,960.90	0.00	0.00	0.00	
13,965.00	90.00	84.00	8,402.01	-151.91	5,976.33	5,975.71	0.00	0.00	0.00	
13,980.00	90.00	84.00	8,402.01	-150.34	5,991.25	5,990.52	0.00	0.00	0.00	
13,995.00	90.00	84.00	8,402.01	-148.77	6,006.17	6,005.33	0.00	0.00	0.00	
14,010.00	90.00	84.00	8,402.01	-147.21	6,021.09	6,020.14	0.00	0.00	0.00	
14,025.00	90.00	84.00	8,402.01	-145.64	6,036.00	6,034.95	0.00	0.00	0.00	
14,040.00	90.00	84.00	8,402.01	-144.07	6,050.92	6,049.76	0.00	0.00	0.00	
14,055.00	90.00	84.00	8,402.01	-142.50	6,065.84	6,064.57	0.00	0.00	0.00	
14,070.00	90.00	84.00	8,402.01	-140.93	6,080.76	6,079.38	0.00	0.00	0.00	
14,085.00	90.00	84.00	8,402.01	-139.37	6,095.68	6,094.19	0.00	0.00	0.00	
14,100.00	90.00	84.00	8,402.01	-137.80	6,110.59	6,109.00	0.00	0.00	0.00	
14,115.00	90.00	84.00	8,402.01	-136.23	6,125.51	6,123.81	0.00	0.00	0.00	
14,130.00	90.00	84.00	8,402.01	-134.66	6,140.43	6,138.62	0.00	0.00	0.00	
14,145.00	90.00	84.00	8,402.01	-133.09	6,155.35	6,153.43	0.00	0.00	0.00	
14,160.00	90.00	84.00	8,402.01	-131.53	6,170.27	6,168.24	0.00	0.00	0.00	
14,175.00	90.00	84.00	8,402.01	-129.96	6,185.18	6,183.05	0.00	0.00	0.00	
14,190.00	90.00	84.00	8,402.01	-128.39	6,200.10	6,197.86	0.00	0.00	0.00	
14,205.00	90.00	84.00	8,402.01	-126.82	6,215.02	6,212.67	0.00	0.00	0.00	
14,211.23	90.00	84.00	8,402.01	-126.17	6,221.21	6,218.82	0.00	0.00	0.00	
14,220.00	90.00	84.18	8,402.01	-125.27	6,229.94	6,227.48	2.00	0.00	2.00	
14,235.00	90.00	84.48	8,402.01	-123.79	6,244.86	6,242.30	2.00	0.00	2.00	
14,250.00	90.00	84.78	8,402.01	-122.38	6,259.80	6,257.14	2.00	0.00	2.00	
14,265.00	90.00	85.08	8,402.01	-121.05	6,274.74	6,271.99	2.00	0.00	2.00	
14,280.00	90.00	85.38	8,402.01	-119.81	6,289.69	6,286.84	2.00	0.00	2.00	
14,295.00	90.00	85.68	8,402.01	-118.63	6,304.64	6,301.71	2.00	0.00	2.00	
14,310.00	90.00	85.98	8,402.01	-117.54	6,319.60	6,316.59	2.00	0.00	2.00	
14,325.00	90.00	86.28	8,402.01	-116.53	6,334.57	6,331.48	2.00	0.00	2.00	
14,340.00	90.00	86.58	8,402.01	-115.59	6,349.54	6,346.38	2.00	0.00	2.00	
14,355.00	90.00	86.88	8,402.01	-114.74	6,364.51	6,361.28	2.00	0.00	2.00	
14,370.00	90.00	87.18	8,402.01	-113.96	6,379.49	6,376.20	2.00	0.00	2.00	
14,385.00	90.00	87.48	8,402.01	-113.26	6,394.48	6,391.12	2.00	0.00	2.00	
14,400.00	90.00	87.78	8,402.01	-112.64	6,409.46	6,406.05	2.00	0.00	2.00	
14,415.00	90.00	88.08	8,402.01	-112.09	6,424.45	6,420.99	2.00	0.00	2.00	
14,430.00	90.00	88.38	8,402.01	-111.63	6,439.45	6,435.93	2.00	0.00	2.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)	
14,445.00	90.00	88.68	8,402.01	-111.24	6,454.44	6,450.89	2.00	0.00	2.00	
14,460.00	90.00	88.98	8,402.01	-110.94	6,469.44	6,465.84	2.00	0.00	2.00	
14,475.00	90.00	89.28	8,402.01	-110.71	6,484.44	6,480.81	2.00	0.00	2.00	
14,490.00	90.00	89.58	8,402.01	-110.56	6,499.44	6,495.77	2.00	0.00	2.00	
14,505.00	90.00	89.88	8,402.01	-110.49	6,514.44	6,510.75	2.00	0.00	2.00	
14,520.00	90.00	90.18	8,402.01	-110.49	6,529.44	6,525.73	2.00	0.00	2.00	
14,535.00	90.00	90.48	8,402.01	-110.58	6,544.44	6,540.71	2.00	0.00	2.00	
14,550.00	90.00	90.78	8,402.01	-110.74	6,559.44	6,555.69	2.00	0.00	2.00	
14,565.00	90.00	91.08	8,402.01	-110.98	6,574.43	6,570.68	2.00	0.00	2.00	
14,580.00	90.00	91.38	8,402.01	-111.30	6,589.43	6,585.67	2.00	0.00	2.00	
14,595.00	90.00	91.68	8,402.01	-111.70	6,604.42	6,600.67	2.00	0.00	2.00	
14,610.00	90.00	91.98	8,402.01	-112.18	6,619.42	6,615.66	2.00	0.00	2.00	
14,625.00	90.00	92.28	8,402.01	-112.74	6,634.41	6,630.66	2.00	0.00	2.00	
14,640.00	90.00	92.58	8,402.01	-113.37	6,649.39	6,645.66	2.00	0.00	2.00	
14,655.00	90.00	92.88	8,402.01	-114.09	6,664.38	6,660.66	2.00	0.00	2.00	
14,670.00	90.00	93.18	8,402.01	-114.88	6,679.36	6,675.66	2.00	0.00	2.00	
14,685.00	90.00	93.48	8,402.01	-115.75	6,694.33	6,690.66	2.00	0.00	2.00	
14,700.00	90.00	93.78	8,402.01	-116.70	6,709.30	6,705.66	2.00	0.00	2.00	
14,715.00	90.00	94.08	8,402.01	-117.72	6,724.27	6,720.66	2.00	0.00	2.00	
14,730.00	90.00	94.38	8,402.01	-118.83	6,739.22	6,735.66	2.00	0.00	2.00	
14,745.00	90.00	94.68	8,402.01	-120.01	6,754.18	6,750.65	2.00	0.00	2.00	
14,760.00	90.00	94.98	8,402.01	-121.27	6,769.12	6,765.64	2.00	0.00	2.00	
14,775.00	90.00	95.28	8,402.01	-122.61	6,784.06	6,780.64	2.00	0.00	2.00	
14,790.00	90.00	95.58	8,402.01	-124.03	6,799.00	6,795.62	2.00	0.00	2.00	
14,805.00	90.00	95.88	8,402.01	-125.53	6,813.92	6,810.61	2.00	0.00	2.00	
14,820.00	90.00	96.18	8,402.01	-127.10	6,828.84	6,825.59	2.00	0.00	2.00	
14,835.00	90.00	96.48	8,402.01	-128.76	6,843.75	6,840.57	2.00	0.00	2.00	
14,850.00	90.00	96.78	8,402.01	-130.49	6,858.65	6,855.54	2.00	0.00	2.00	
14,861.23	90.00	97.00	8,402.01	-131.83	6,869.79	6,866.74	2.00	0.00	2.00	
14,865.00	90.00	97.00	8,402.01	-132.29	6,873.54	6,870.51	0.00	0.00	0.00	
14,880.00	90.00	97.00	8,402.01	-134.12	6,888.43	6,885.47	0.00	0.00	0.00	
14,895.00	90.00	97.00	8,402.01	-135.95	6,903.32	6,900.44	0.00	0.00	0.00	
14,910.00	90.00	97.00	8,402.01	-137.78	6,918.20	6,915.40	0.00	0.00	0.00	
14,925.00	90.00	97.00	8,402.01	-139.60	6,933.09	6,930.37	0.00	0.00	0.00	
14,940.00	90.00	97.00	8,402.01	-141.43	6,947.98	6,945.33	0.00	0.00	0.00	
14,955.00	90.00	97.00	8,402.01	-143.26	6,962.87	6,960.30	0.00	0.00	0.00	
14,970.00	90.00	97.00	8,402.01	-145.09	6,977.76	6,975.27	0.00	0.00	0.00	
14,985.00	90.00	97.00	8,402.01	-146.92	6,992.64	6,990.23	0.00	0.00	0.00	
15,000.00	90.00	97.00	8,402.01	-148.74	7,007.53	7,005.20	0.00	0.00	0.00	
15,015.00	90.00	97.00	8,402.01	-150.57	7,022.42	7,020.16	0.00	0.00	0.00	
15,030.00	90.00	97.00	8,402.01	-152.40	7,037.31	7,035.13	0.00	0.00	0.00	
15,045.00	90.00	97.00	8,402.01	-154.23	7,052.20	7,050.09	0.00	0.00	0.00	
15,060.00	90.00	97.00	8,402.01	-156.06	7,067.09	7,065.06	0.00	0.00	0.00	
15,075.00	90.00	97.00	8,402.01	-157.88	7,081.97	7,080.03	0.00	0.00	0.00	
15,090.00	90.00	97.00	8,402.01	-159.71	7,096.86	7,094.99	0.00	0.00	0.00	
15,105.00	90.00	97.00	8,402.01	-161.54	7,111.75	7,109.96	0.00	0.00	0.00	
15,120.00	90.00	97.00	8,402.01	-163.37	7,126.64	7,124.92	0.00	0.00	0.00	
15,135.00	90.00	97.00	8,402.01	-165.20	7,141.53	7,139.89	0.00	0.00	0.00	
15,150.00	90.00	97.00	8,402.01	-167.02	7,156.41	7,154.86	0.00	0.00	0.00	
15,165.00	90.00	97.00	8,402.01	-168.85	7,171.30	7,169.82	0.00	0.00	0.00	
15,180.00	90.00	97.00	8,402.01	-170.68	7,186.19	7,184.79	0.00	0.00	0.00	
15,195.00	90.00	97.00	8,402.01	-172.51	7,201.08	7,199.75	0.00	0.00	0.00	
15,210.00	90.00	97.00	8,402.01	-174.34	7,215.97	7,214.72	0.00	0.00	0.00	
15,225.00	90.00	97.00	8,402.01	-176.16	7,230.86	7,229.68	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)	
15,240.00	90.00	97.00	8,402.01	-177.99	7,245.74	7,244.65	0.00	0.00	0.00	
15,255.00	90.00	97.00	8,402.01	-179.82	7,260.63	7,259.62	0.00	0.00	0.00	
15,270.00	90.00	97.00	8,402.01	-181.65	7,275.52	7,274.58	0.00	0.00	0.00	
15,285.00	90.00	97.00	8,402.01	-183.48	7,290.41	7,289.55	0.00	0.00	0.00	
15,300.00	90.00	97.00	8,402.01	-185.31	7,305.30	7,304.51	0.00	0.00	0.00	
15,315.00	90.00	97.00	8,402.01	-187.13	7,320.18	7,319.48	0.00	0.00	0.00	
15,330.00	90.00	97.00	8,402.01	-188.96	7,335.07	7,334.45	0.00	0.00	0.00	
15,345.00	90.00	97.00	8,402.01	-190.79	7,349.96	7,349.41	0.00	0.00	0.00	
15,360.00	90.00	97.00	8,402.01	-192.62	7,364.85	7,364.38	0.00	0.00	0.00	
15,375.00	90.00	97.00	8,402.01	-194.45	7,379.74	7,379.34	0.00	0.00	0.00	
15,390.00	90.00	97.00	8,402.01	-196.27	7,394.63	7,394.31	0.00	0.00	0.00	
15,405.00	90.00	97.00	8,402.01	-198.10	7,409.51	7,409.27	0.00	0.00	0.00	
15,420.00	90.00	97.00	8,402.01	-199.93	7,424.40	7,424.24	0.00	0.00	0.00	
15,435.00	90.00	97.00	8,402.01	-201.76	7,439.29	7,439.21	0.00	0.00	0.00	
15,450.00	90.00	97.00	8,402.01	-203.59	7,454.18	7,454.17	0.00	0.00	0.00	
15,465.00	90.00	97.00	8,402.01	-205.41	7,469.07	7,469.14	0.00	0.00	0.00	
15,480.00	90.00	97.00	8,402.01	-207.24	7,483.95	7,484.10	0.00	0.00	0.00	
15,495.00	90.00	97.00	8,402.01	-209.07	7,498.84	7,499.07	0.00	0.00	0.00	
15,510.00	90.00	97.00	8,402.01	-210.90	7,513.73	7,514.03	0.00	0.00	0.00	
15,525.00	90.00	97.00	8,402.01	-212.73	7,528.62	7,529.00	0.00	0.00	0.00	
15,540.00	90.00	97.00	8,402.01	-214.55	7,543.51	7,543.97	0.00	0.00	0.00	
15,555.00	90.00	97.00	8,402.01	-216.38	7,558.40	7,558.93	0.00	0.00	0.00	
15,570.00	90.00	97.00	8,402.01	-218.21	7,573.28	7,573.90	0.00	0.00	0.00	
15,585.00	90.00	97.00	8,402.01	-220.04	7,588.17	7,588.86	0.00	0.00	0.00	
15,600.00	90.00	97.00	8,402.01	-221.87	7,603.06	7,603.83	0.00	0.00	0.00	
15,615.00	90.00	97.00	8,402.01	-223.69	7,617.95	7,618.80	0.00	0.00	0.00	
15,630.00	90.00	97.00	8,402.01	-225.52	7,632.84	7,633.76	0.00	0.00	0.00	
15,645.00	90.00	97.00	8,402.01	-227.35	7,647.72	7,648.73	0.00	0.00	0.00	
15,660.00	90.00	97.00	8,402.01	-229.18	7,662.61	7,663.69	0.00	0.00	0.00	
15,675.00	90.00	97.00	8,402.01	-231.01	7,677.50	7,678.66	0.00	0.00	0.00	
15,690.00	90.00	97.00	8,402.01	-232.83	7,692.39	7,693.62	0.00	0.00	0.00	
15,705.00	90.00	97.00	8,402.01	-234.66	7,707.28	7,708.59	0.00	0.00	0.00	
15,720.00	90.00	97.00	8,402.01	-236.49	7,722.17	7,723.56	0.00	0.00	0.00	
15,735.00	90.00	97.00	8,402.01	-238.32	7,737.05	7,738.52	0.00	0.00	0.00	
15,750.00	90.00	97.00	8,402.01	-240.15	7,751.94	7,753.49	0.00	0.00	0.00	
15,765.00	90.00	97.00	8,402.01	-241.97	7,766.83	7,768.45	0.00	0.00	0.00	
15,780.00	90.00	97.00	8,402.01	-243.80	7,781.72	7,783.42	0.00	0.00	0.00	
15,795.00	90.00	97.00	8,402.01	-245.63	7,796.61	7,798.39	0.00	0.00	0.00	
15,810.00	90.00	97.00	8,402.01	-247.46	7,811.49	7,813.35	0.00	0.00	0.00	
15,825.00	90.00	97.00	8,402.01	-249.29	7,826.38	7,828.32	0.00	0.00	0.00	
15,840.00	90.00	97.00	8,402.01	-251.11	7,841.27	7,843.28	0.00	0.00	0.00	
15,855.00	90.00	97.00	8,402.01	-252.94	7,856.16	7,858.25	0.00	0.00	0.00	
15,870.00	90.00	97.00	8,402.01	-254.77	7,871.05	7,873.21	0.00	0.00	0.00	
15,885.00	90.00	97.00	8,402.01	-256.60	7,885.94	7,888.18	0.00	0.00	0.00	
15,900.00	90.00	97.00	8,402.01	-258.43	7,900.82	7,903.15	0.00	0.00	0.00	
15,915.00	90.00	97.00	8,402.01	-260.25	7,915.71	7,918.11	0.00	0.00	0.00	
15,930.00	90.00	97.00	8,402.01	-262.08	7,930.60	7,933.08	0.00	0.00	0.00	
15,945.00	90.00	97.00	8,402.01	-263.91	7,945.49	7,948.04	0.00	0.00	0.00	
15,960.00	90.00	97.00	8,402.01	-265.74	7,960.38	7,963.01	0.00	0.00	0.00	
15,975.00	90.00	97.00	8,402.01	-267.57	7,975.26	7,977.98	0.00	0.00	0.00	
15,990.00	90.00	97.00	8,402.01	-269.39	7,990.15	7,992.94	0.00	0.00	0.00	
16,005.00	90.00	97.00	8,402.01	-271.22	8,005.04	8,007.91	0.00	0.00	0.00	
16,020.00	90.00	97.00	8,402.01	-273.05	8,019.93	8,022.87	0.00	0.00	0.00	
16,035.00	90.00	97.00	8,402.01	-274.88	8,034.82	8,037.84	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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	97.00	8,402.01	-276.71	8,049.71	8,052.80	0.00	0.00	0.00	
16,065.00	90.00	97.00	8,402.01	-278.54	8,064.59	8,067.77	0.00	0.00	0.00	
16,080.00	90.00	97.00	8,402.01	-280.36	8,079.48	8,082.74	0.00	0.00	0.00	
16,095.00	90.00	97.00	8,402.01	-282.19	8,094.37	8,097.70	0.00	0.00	0.00	
16,110.00	90.00	97.00	8,402.01	-284.02	8,109.26	8,112.67	0.00	0.00	0.00	
16,125.00	90.00	97.00	8,402.01	-285.85	8,124.15	8,127.63	0.00	0.00	0.00	
16,140.00	90.00	97.00	8,402.01	-287.68	8,139.03	8,142.60	0.00	0.00	0.00	
16,155.00	90.00	97.00	8,402.01	-289.50	8,153.92	8,157.56	0.00	0.00	0.00	
16,170.00	90.00	97.00	8,402.01	-291.33	8,168.81	8,172.53	0.00	0.00	0.00	
16,185.00	90.00	97.00	8,402.01	-293.16	8,183.70	8,187.50	0.00	0.00	0.00	
16,200.00	90.00	97.00	8,402.01	-294.99	8,198.59	8,202.46	0.00	0.00	0.00	
16,215.00	90.00	97.00	8,402.01	-296.82	8,213.48	8,217.43	0.00	0.00	0.00	
16,230.00	90.00	97.00	8,402.01	-298.64	8,228.36	8,232.39	0.00	0.00	0.00	
16,245.00	90.00	97.00	8,402.01	-300.47	8,243.25	8,247.36	0.00	0.00	0.00	
16,260.00	90.00	97.00	8,402.01	-302.30	8,258.14	8,262.33	0.00	0.00	0.00	
16,275.00	90.00	97.00	8,402.01	-304.13	8,273.03	8,277.29	0.00	0.00	0.00	
16,290.00	90.00	97.00	8,402.01	-305.96	8,287.92	8,292.26	0.00	0.00	0.00	
16,305.00	90.00	97.00	8,402.01	-307.78	8,302.81	8,307.22	0.00	0.00	0.00	
16,320.00	90.00	97.00	8,402.01	-309.61	8,317.69	8,322.19	0.00	0.00	0.00	
16,335.00	90.00	97.00	8,402.01	-311.44	8,332.58	8,337.15	0.00	0.00	0.00	
16,350.00	90.00	97.00	8,402.01	-313.27	8,347.47	8,352.12	0.00	0.00	0.00	
16,365.00	90.00	97.00	8,402.01	-315.10	8,362.36	8,367.09	0.00	0.00	0.00	
16,380.00	90.00	97.00	8,402.01	-316.92	8,377.25	8,382.05	0.00	0.00	0.00	
16,395.00	90.00	97.00	8,402.01	-318.75	8,392.13	8,397.02	0.00	0.00	0.00	
16,410.00	90.00	97.00	8,402.01	-320.58	8,407.02	8,411.98	0.00	0.00	0.00	
16,425.00	90.00	97.00	8,402.01	-322.41	8,421.91	8,426.95	0.00	0.00	0.00	
16,440.00	90.00	97.00	8,402.01	-324.24	8,436.80	8,441.92	0.00	0.00	0.00	
16,455.00	90.00	97.00	8,402.01	-326.06	8,451.69	8,456.88	0.00	0.00	0.00	
16,470.00	90.00	97.00	8,402.01	-327.89	8,466.58	8,471.85	0.00	0.00	0.00	
16,485.00	90.00	97.00	8,402.01	-329.72	8,481.46	8,486.81	0.00	0.00	0.00	
16,500.00	90.00	97.00	8,402.01	-331.55	8,496.35	8,501.78	0.00	0.00	0.00	
16,515.00	90.00	97.00	8,402.01	-333.38	8,511.24	8,516.74	0.00	0.00	0.00	
16,530.00	90.00	97.00	8,402.01	-335.20	8,526.13	8,531.71	0.00	0.00	0.00	
16,545.00	90.00	97.00	8,402.01	-337.03	8,541.02	8,546.68	0.00	0.00	0.00	
16,560.00	90.00	97.00	8,402.01	-338.86	8,555.90	8,561.64	0.00	0.00	0.00	
16,575.00	90.00	97.00	8,402.01	-340.69	8,570.79	8,576.61	0.00	0.00	0.00	
16,590.00	90.00	97.00	8,402.01	-342.52	8,585.68	8,591.57	0.00	0.00	0.00	
16,605.00	90.00	97.00	8,402.01	-344.34	8,600.57	8,606.54	0.00	0.00	0.00	
16,620.00	90.00	97.00	8,402.01	-346.17	8,615.46	8,621.50	0.00	0.00	0.00	
16,635.00	90.00	97.00	8,402.01	-348.00	8,630.35	8,636.47	0.00	0.00	0.00	
16,650.00	90.00	97.00	8,402.01	-349.83	8,645.23	8,651.44	0.00	0.00	0.00	
16,665.00	90.00	97.00	8,402.01	-351.66	8,660.12	8,666.40	0.00	0.00	0.00	
16,680.00	90.00	97.00	8,402.01	-353.48	8,675.01	8,681.37	0.00	0.00	0.00	
16,695.00	90.00	97.00	8,402.01	-355.31	8,689.90	8,696.33	0.00	0.00	0.00	
16,710.00	90.00	97.00	8,402.01	-357.14	8,704.79	8,711.30	0.00	0.00	0.00	
16,725.00	90.00	97.00	8,402.01	-358.97	8,719.67	8,726.27	0.00	0.00	0.00	
16,740.00	90.00	97.00	8,402.01	-360.80	8,734.56	8,741.23	0.00	0.00	0.00	
16,755.00	90.00	97.00	8,402.01	-362.63	8,749.45	8,756.20	0.00	0.00	0.00	
16,770.00	90.00	97.00	8,402.01	-364.45	8,764.34	8,771.16	0.00	0.00	0.00	
16,785.00	90.00	97.00	8,402.01	-366.28	8,779.23	8,786.13	0.00	0.00	0.00	
16,800.00	90.00	97.00	8,402.01	-368.11	8,794.12	8,801.09	0.00	0.00	0.00	
16,815.00	90.00	97.00	8,402.01	-369.94	8,809.00	8,816.06	0.00	0.00	0.00	
16,830.00	90.00	97.00	8,402.01	-371.77	8,823.89	8,831.03	0.00	0.00	0.00	
16,845.00	90.00	97.00	8,402.01	-373.59	8,838.78	8,845.99	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)	
16,860.00	90.00	97.00	8,402.01	-375.42	8,853.67	8,860.96	0.00	0.00	0.00	
16,875.00	90.00	97.00	8,402.01	-377.25	8,868.56	8,875.92	0.00	0.00	0.00	
16,890.00	90.00	97.00	8,402.01	-379.08	8,883.44	8,890.89	0.00	0.00	0.00	
16,905.00	90.00	97.00	8,402.01	-380.91	8,898.33	8,905.86	0.00	0.00	0.00	
16,920.00	90.00	97.00	8,402.01	-382.73	8,913.22	8,920.82	0.00	0.00	0.00	
16,935.00	90.00	97.00	8,402.01	-384.56	8,928.11	8,935.79	0.00	0.00	0.00	
16,950.00	90.00	97.00	8,402.01	-386.39	8,943.00	8,950.75	0.00	0.00	0.00	
16,965.00	90.00	97.00	8,402.01	-388.22	8,957.89	8,965.72	0.00	0.00	0.00	
16,980.00	90.00	97.00	8,402.01	-390.05	8,972.77	8,980.68	0.00	0.00	0.00	
16,995.00	90.00	97.00	8,402.01	-391.87	8,987.66	8,995.65	0.00	0.00	0.00	
17,010.00	90.00	97.00	8,402.01	-393.70	9,002.55	9,010.62	0.00	0.00	0.00	
17,025.00	90.00	97.00	8,402.01	-395.53	9,017.44	9,025.58	0.00	0.00	0.00	
17,040.00	90.00	97.00	8,402.01	-397.36	9,032.33	9,040.55	0.00	0.00	0.00	
17,055.00	90.00	97.00	8,402.01	-399.19	9,047.21	9,055.51	0.00	0.00	0.00	
17,070.00	90.00	97.00	8,402.01	-401.01	9,062.10	9,070.48	0.00	0.00	0.00	
17,085.00	90.00	97.00	8,402.01	-402.84	9,076.99	9,085.44	0.00	0.00	0.00	
17,100.00	90.00	97.00	8,402.01	-404.67	9,091.88	9,100.41	0.00	0.00	0.00	
17,115.00	90.00	97.00	8,402.01	-406.50	9,106.77	9,115.38	0.00	0.00	0.00	
17,130.00	90.00	97.00	8,402.01	-408.33	9,121.66	9,130.34	0.00	0.00	0.00	
17,145.00	90.00	97.00	8,402.01	-410.15	9,136.54	9,145.31	0.00	0.00	0.00	
17,160.00	90.00	97.00	8,402.01	-411.98	9,151.43	9,160.27	0.00	0.00	0.00	
17,175.00	90.00	97.00	8,402.01	-413.81	9,166.32	9,175.24	0.00	0.00	0.00	
17,190.00	90.00	97.00	8,402.01	-415.64	9,181.21	9,190.21	0.00	0.00	0.00	
17,205.00	90.00	97.00	8,402.01	-417.47	9,196.10	9,205.17	0.00	0.00	0.00	
17,220.00	90.00	97.00	8,402.01	-419.29	9,210.98	9,220.14	0.00	0.00	0.00	
17,235.00	90.00	97.00	8,402.01	-421.12	9,225.87	9,235.10	0.00	0.00	0.00	
17,250.00	90.00	97.00	8,402.01	-422.95	9,240.76	9,250.07	0.00	0.00	0.00	
17,265.00	90.00	97.00	8,402.01	-424.78	9,255.65	9,265.03	0.00	0.00	0.00	
17,280.00	90.00	97.00	8,402.01	-426.61	9,270.54	9,280.00	0.00	0.00	0.00	
17,295.00	90.00	97.00	8,402.01	-428.43	9,285.43	9,294.97	0.00	0.00	0.00	
17,310.00	90.00	97.00	8,402.01	-430.26	9,300.31	9,309.93	0.00	0.00	0.00	
17,325.00	90.00	97.00	8,402.01	-432.09	9,315.20	9,324.90	0.00	0.00	0.00	
17,340.00	90.00	97.00	8,402.01	-433.92	9,330.09	9,339.86	0.00	0.00	0.00	
17,355.00	90.00	97.00	8,402.01	-435.75	9,344.98	9,354.83	0.00	0.00	0.00	
17,370.00	90.00	97.00	8,402.01	-437.57	9,359.87	9,369.80	0.00	0.00	0.00	
17,385.00	90.00	97.00	8,402.01	-439.40	9,374.75	9,384.76	0.00	0.00	0.00	
17,400.00	90.00	97.00	8,402.01	-441.23	9,389.64	9,399.73	0.00	0.00	0.00	
17,415.00	90.00	97.00	8,402.01	-443.06	9,404.53	9,414.69	0.00	0.00	0.00	
17,430.00	90.00	97.00	8,402.01	-444.89	9,419.42	9,429.66	0.00	0.00	0.00	
17,445.00	90.00	97.00	8,402.01	-446.71	9,434.31	9,444.62	0.00	0.00	0.00	
17,460.00	90.00	97.00	8,402.01	-448.54	9,449.20	9,459.59	0.00	0.00	0.00	
17,475.00	90.00	97.00	8,402.01	-450.37	9,464.08	9,474.56	0.00	0.00	0.00	
17,490.00	90.00	97.00	8,402.01	-452.20	9,478.97	9,489.52	0.00	0.00	0.00	
17,505.00	90.00	97.00	8,402.01	-454.03	9,493.86	9,504.49	0.00	0.00	0.00	
17,520.00	90.00	97.00	8,402.01	-455.86	9,508.75	9,519.45	0.00	0.00	0.00	
17,535.00	90.00	97.00	8,402.01	-457.68	9,523.64	9,534.42	0.00	0.00	0.00	
17,550.00	90.00	97.00	8,402.01	-459.51	9,538.53	9,549.38	0.00	0.00	0.00	
17,565.00	90.00	97.00	8,402.01	-461.34	9,553.41	9,564.35	0.00	0.00	0.00	
17,580.00	90.00	97.00	8,402.01	-463.17	9,568.30	9,579.32	0.00	0.00	0.00	
17,595.00	90.00	97.00	8,402.01	-465.00	9,583.19	9,594.28	0.00	0.00	0.00	
17,610.00	90.00	97.00	8,402.01	-466.82	9,598.08	9,609.25	0.00	0.00	0.00	
17,625.00	90.00	97.00	8,402.01	-468.65	9,612.97	9,624.21	0.00	0.00	0.00	
17,640.00	90.00	97.00	8,402.01	-470.48	9,627.85	9,639.18	0.00	0.00	0.00	
17,655.00	90.00	97.00	8,402.01	-472.31	9,642.74	9,654.15	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	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)	
17,670.00	90.00	97.00	8,402.01	-474.14	9,657.63	9,669.11	0.00	0.00	0.00	
17,685.00	90.00	97.00	8,402.01	-475.96	9,672.52	9,684.08	0.00	0.00	0.00	
17,700.00	90.00	97.00	8,402.01	-477.79	9,687.41	9,699.04	0.00	0.00	0.00	
17,715.00	90.00	97.00	8,402.01	-479.62	9,702.30	9,714.01	0.00	0.00	0.00	
17,730.00	90.00	97.00	8,402.01	-481.45	9,717.18	9,728.97	0.00	0.00	0.00	
17,745.00	90.00	97.00	8,402.01	-483.28	9,732.07	9,743.94	0.00	0.00	0.00	
17,760.00	90.00	97.00	8,402.01	-485.10	9,746.96	9,758.91	0.00	0.00	0.00	
17,775.00	90.00	97.00	8,402.01	-486.93	9,761.85	9,773.87	0.00	0.00	0.00	
17,790.00	90.00	97.00	8,402.01	-488.76	9,776.74	9,788.84	0.00	0.00	0.00	
17,805.00	90.00	97.00	8,402.01	-490.59	9,791.62	9,803.80	0.00	0.00	0.00	
17,820.00	90.00	97.00	8,402.01	-492.42	9,806.51	9,818.77	0.00	0.00	0.00	
17,835.00	90.00	97.00	8,402.01	-494.24	9,821.40	9,833.74	0.00	0.00	0.00	
17,850.00	90.00	97.00	8,402.01	-496.07	9,836.29	9,848.70	0.00	0.00	0.00	
17,865.00	90.00	97.00	8,402.01	-497.90	9,851.18	9,863.67	0.00	0.00	0.00	
17,880.00	90.00	97.00	8,402.01	-499.73	9,866.07	9,878.63	0.00	0.00	0.00	
17,895.00	90.00	97.00	8,402.01	-501.56	9,880.95	9,893.60	0.00	0.00	0.00	
17,910.00	90.00	97.00	8,402.01	-503.38	9,895.84	9,908.56	0.00	0.00	0.00	
17,925.00	90.00	97.00	8,402.01	-505.21	9,910.73	9,923.53	0.00	0.00	0.00	
17,940.00	90.00	97.00	8,402.01	-507.04	9,925.62	9,938.50	0.00	0.00	0.00	
17,955.00	90.00	97.00	8,402.01	-508.87	9,940.51	9,953.46	0.00	0.00	0.00	
17,961.23	90.00	97.00	8,402.01	-509.63	9,946.69	9,959.68	0.00	0.00	0.00	
17,970.00	90.00	96.82	8,402.01	-510.68	9,955.40	9,968.43	2.00	0.00	-2.00	
17,985.00	90.00	96.52	8,402.01	-512.43	9,970.29	9,983.40	2.00	0.00	-2.00	
18,000.00	90.00	96.22	8,402.01	-514.09	9,985.20	9,998.38	2.00	0.00	-2.00	
18,015.00	90.00	95.92	8,402.01	-515.68	10,000.12	10,013.36	2.00	0.00	-2.00	
18,030.00	90.00	95.62	8,402.01	-517.19	10,015.04	10,028.34	2.00	0.00	-2.00	
18,045.00	90.00	95.32	8,402.01	-518.62	10,029.97	10,043.33	2.00	0.00	-2.00	
18,060.00	90.00	95.02	8,402.01	-519.97	10,044.91	10,058.32	2.00	0.00	-2.00	
18,061.23	90.00	95.00	8,402.01	-520.08	10,046.13	10,059.54	2.00	0.00	-2.00	
18,075.00	90.00	95.00	8,402.01	-521.28	10,059.85	10,073.31	0.00	0.00	0.00	
18,090.00	90.00	95.00	8,402.01	-522.59	10,074.80	10,088.30	0.00	0.00	0.00	
18,105.00	90.00	95.00	8,402.01	-523.89	10,089.74	10,103.29	0.00	0.00	0.00	
18,120.00	90.00	95.00	8,402.01	-525.20	10,104.68	10,118.29	0.00	0.00	0.00	
18,135.00	90.00	95.00	8,402.01	-526.51	10,119.63	10,133.28	0.00	0.00	0.00	
18,150.00	90.00	95.00	8,402.01	-527.82	10,134.57	10,148.27	0.00	0.00	0.00	
18,165.00	90.00	95.00	8,402.01	-529.12	10,149.51	10,163.26	0.00	0.00	0.00	
18,180.00	90.00	95.00	8,402.01	-530.43	10,164.46	10,178.25	0.00	0.00	0.00	
18,195.00	90.00	95.00	8,402.01	-531.74	10,179.40	10,193.25	0.00	0.00	0.00	
18,210.00	90.00	95.00	8,402.01	-533.05	10,194.34	10,208.24	0.00	0.00	0.00	
18,225.00	90.00	95.00	8,402.01	-534.35	10,209.28	10,223.23	0.00	0.00	0.00	
18,240.00	90.00	95.00	8,402.01	-535.66	10,224.23	10,238.22	0.00	0.00	0.00	
18,255.00	90.00	95.00	8,402.01	-536.97	10,239.17	10,253.21	0.00	0.00	0.00	
18,270.00	90.00	95.00	8,402.01	-538.28	10,254.11	10,268.21	0.00	0.00	0.00	
18,285.00	90.00	95.00	8,402.01	-539.58	10,269.06	10,283.20	0.00	0.00	0.00	
18,300.00	90.00	95.00	8,402.01	-540.89	10,284.00	10,298.19	0.00	0.00	0.00	
18,315.00	90.00	95.00	8,402.01	-542.20	10,298.94	10,313.18	0.00	0.00	0.00	
18,330.00	90.00	95.00	8,402.01	-543.50	10,313.88	10,328.17	0.00	0.00	0.00	
18,345.00	90.00	95.00	8,402.01	-544.81	10,328.83	10,343.17	0.00	0.00	0.00	
18,360.00	90.00	95.00	8,402.01	-546.12	10,343.77	10,358.16	0.00	0.00	0.00	
18,375.00	90.00	95.00	8,402.01	-547.43	10,358.71	10,373.15	0.00	0.00	0.00	
18,390.00	90.00	95.00	8,402.01	-548.73	10,373.66	10,388.14	0.00	0.00	0.00	
18,405.00	90.00	95.00	8,402.01	-550.04	10,388.60	10,403.13	0.00	0.00	0.00	
18,420.00	90.00	95.00	8,402.01	-551.35	10,403.54	10,418.13	0.00	0.00	0.00	
18,435.00	90.00	95.00	8,402.01	-552.66	10,418.48	10,433.12	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
18,450.00	90.00	95.00	8,402.01	-553.96	10,433.43	10,448.11	0.00	0.00	0.00	
18,465.00	90.00	95.00	8,402.01	-555.27	10,448.37	10,463.10	0.00	0.00	0.00	
18,480.00	90.00	95.00	8,402.01	-556.58	10,463.31	10,478.09	0.00	0.00	0.00	
18,495.00	90.00	95.00	8,402.01	-557.89	10,478.26	10,493.09	0.00	0.00	0.00	
18,510.00	90.00	95.00	8,402.01	-559.19	10,493.20	10,508.08	0.00	0.00	0.00	
18,525.00	90.00	95.00	8,402.01	-560.50	10,508.14	10,523.07	0.00	0.00	0.00	
18,540.00	90.00	95.00	8,402.01	-561.81	10,523.09	10,538.06	0.00	0.00	0.00	
18,555.00	90.00	95.00	8,402.01	-563.11	10,538.03	10,553.05	0.00	0.00	0.00	
18,570.00	90.00	95.00	8,402.01	-564.42	10,552.97	10,568.05	0.00	0.00	0.00	
18,585.00	90.00	95.00	8,402.01	-565.73	10,567.91	10,583.04	0.00	0.00	0.00	
18,600.00	90.00	95.00	8,402.01	-567.04	10,582.86	10,598.03	0.00	0.00	0.00	
18,615.00	90.00	95.00	8,402.01	-568.34	10,597.80	10,613.02	0.00	0.00	0.00	
18,630.00	90.00	95.00	8,402.01	-569.65	10,612.74	10,628.01	0.00	0.00	0.00	
18,645.00	90.00	95.00	8,402.01	-570.96	10,627.69	10,643.01	0.00	0.00	0.00	
18,660.00	90.00	95.00	8,402.01	-572.27	10,642.63	10,658.00	0.00	0.00	0.00	
18,675.00	90.00	95.00	8,402.01	-573.57	10,657.57	10,672.99	0.00	0.00	0.00	
18,690.00	90.00	95.00	8,402.01	-574.88	10,672.51	10,687.98	0.00	0.00	0.00	
18,705.00	90.00	95.00	8,402.01	-576.19	10,687.46	10,702.97	0.00	0.00	0.00	
18,720.00	90.00	95.00	8,402.01	-577.50	10,702.40	10,717.97	0.00	0.00	0.00	
18,735.00	90.00	95.00	8,402.01	-578.80	10,717.34	10,732.96	0.00	0.00	0.00	
18,750.00	90.00	95.00	8,402.01	-580.11	10,732.29	10,747.95	0.00	0.00	0.00	
18,765.00	90.00	95.00	8,402.01	-581.42	10,747.23	10,762.94	0.00	0.00	0.00	
18,780.00	90.00	95.00	8,402.01	-582.72	10,762.17	10,777.93	0.00	0.00	0.00	
18,795.00	90.00	95.00	8,402.01	-584.03	10,777.11	10,792.93	0.00	0.00	0.00	
18,810.00	90.00	95.00	8,402.01	-585.34	10,792.06	10,807.92	0.00	0.00	0.00	
18,825.00	90.00	95.00	8,402.01	-586.65	10,807.00	10,822.91	0.00	0.00	0.00	
18,840.00	90.00	95.00	8,402.01	-587.95	10,821.94	10,837.90	0.00	0.00	0.00	
18,855.00	90.00	95.00	8,402.01	-589.26	10,836.89	10,852.89	0.00	0.00	0.00	
18,870.00	90.00	95.00	8,402.01	-590.57	10,851.83	10,867.89	0.00	0.00	0.00	
18,885.00	90.00	95.00	8,402.01	-591.88	10,866.77	10,882.88	0.00	0.00	0.00	
18,900.00	90.00	95.00	8,402.01	-593.18	10,881.72	10,897.87	0.00	0.00	0.00	
18,915.00	90.00	95.00	8,402.01	-594.49	10,896.66	10,912.86	0.00	0.00	0.00	
18,930.00	90.00	95.00	8,402.01	-595.80	10,911.60	10,927.85	0.00	0.00	0.00	
18,945.00	90.00	95.00	8,402.01	-597.11	10,926.54	10,942.85	0.00	0.00	0.00	
18,960.00	90.00	95.00	8,402.01	-598.41	10,941.49	10,957.84	0.00	0.00	0.00	
18,961.23	90.00	95.00	8,402.01	-598.52	10,942.71	10,959.07	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Project:	EDDY COUNTY _DBW_NM_E	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site:	VALKYRIE FED COM	North Reference:	Grid
Well:	_VALKYRIE FED COM 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
POI1.r_VALKYRIE FED	0.00	269.92	8,402.00	-461.74	5,946.14	479,604.88	593,231.86	32° 19' 5.481 N	104° 1' 53.522 W
- plan misses target center by 304.98usft at 13902.59usft MD (8402.00 TVD, -158.43 N, 5914.26 E)									
- Rectangle (sides W100.00 H5,281.00 D20.00)									
FTP.r_VALKYRIE FED C	0.00	0.00	8,402.00	-468.82	665.28	479,597.80	587,951.00	32° 19' 5.554 N	104° 2' 55.062 W
- plan misses target center by 6.24usft at 8638.51usft MD (8395.85 TVD, -468.94 N, 666.36 E)									
- Circle (radius 50.00)									
PBHL.r_VALKYRIE FED	0.00	271.71	8,402.00	-612.87	11,001.71	479,453.75	598,287.43	32° 19' 3.841 N	104° 0' 54.613 W
- plan misses target center by 60.72usft at 18961.23usft MD (8402.00 TVD, -598.52 N, 10942.71 E)									
- Rectangle (sides W100.00 H5,058.00 D20.00)									
LTP.r_VALKYRIE FED C	90.00	91.71	8,402.00	-611.34	10,951.61	479,455.28	598,237.33	32° 19' 3.857 N	104° 0' 55.197 W
- plan misses target center by 15.61usft at 18961.23usft MD (8402.00 TVD, -598.52 N, 10942.71 E)									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
18,961.23	8,402.01	5-1/2" Production Casing	5-1/2	6-3/4	

DELAWARE BASIN WEST

EDDY COUNTY _DBW_NM_E

VALKYRIE FED COM

_VALKYRIE FED COM 502H

OWB

PWP0

Anticollision Report

20 January, 2026

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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	18,961.23	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	3,800.00	3,748.25	568.05	433.30	4.216 CC	
AMOCO FEDERAL 11 001_PA - OWB - AWP	7,975.00	7,902.88	636.15	355.22	2.264 Caution - Monitor Closely, ES	
AMOCO FEDERAL 11 001_PA - OWB - AWP	8,000.00	7,927.74	637.32	355.66	2.263 Caution - Monitor Closely, SF	
VALKYRIE FED COM						
_VALKYRIE FED COM 501H - OWB - PWP0.r	1,000.00	999.00	89.60	81.62	11.233 CC, ES	
_VALKYRIE FED COM 501H - OWB - PWP0.r	1,100.00	1,096.08	91.19	82.73	10.773 SF	
_VALKYRIE FED COM 551H - OWB - PWP0	1,000.00	998.00	119.58	111.61	14.991 CC, ES	
_VALKYRIE FED COM 551H - OWB - PWP0	1,200.00	1,190.00	125.98	117.07	14.135 SF	
_VALKYRIE FED COM 552H - OWB - PWP0	2,231.99	2,227.61	29.87	17.50	2.416 Caution - Monitor Closely, CC	
_VALKYRIE FED COM 552H - OWB - PWP0	2,400.00	2,393.86	30.06	17.14	2.326 Caution - Monitor Closely, ES	
_VALKYRIE FED COM 552H - OWB - PWP0	2,463.62	2,456.81	30.29	17.24	2.321 Caution - Monitor Closely, 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	18,961.23	8,509.07	483.16	313.71	2.851 Normal Operations, CC, ES, SF	
ASTRODOG FEE 0809 213H - OWB - AWP	18,961.23	8,536.17	228.96	84.80	1.588 Caution - Monitor Closely, CC, ES, SF	
ASTRODOG FEE 0809 214H - OWB - AWP					Out of range	
ASTRODOG FEE 0809 224H - OWB - AWP					Out of range	
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	14,600.00	8,379.57	196.74	70.39	1.557 Caution - Monitor Closely, ES, SF	
H F 7 FEDERAL COM 001 - 0°WB - 0°WP	14,604.45	8,379.56	196.72	70.42	1.558 Caution - Monitor Closely, CC	
H F 7 FEDERAL COM 001 - 105° WB - 105° WP	14,800.00	8,365.28	409.14	283.87	3.266 ES, SF	
H F 7 FEDERAL COM 001 - 105° WB - 105° WP	14,812.06	8,365.91	408.98	283.89	3.269 CC	
H F 7 FEDERAL COM 001 - 120° WB - 120° WP	14,796.05	8,359.47	453.44	327.96	3.614 CC, ES, SF	
H F 7 FEDERAL COM 001 - 135° WB - 135° WP	14,766.22	8,352.68	492.65	366.60	3.908 CC, ES, SF	
H F 7 FEDERAL COM 001 - 15° WB - 15° WP	14,653.02	8,379.55	200.91	74.21	1.586 Caution - Monitor Closely, CC, ES, SF	
H F 7 FEDERAL COM 001 - 150° WB - 150° WP	14,700.00	8,345.85	524.13	397.40	4.136 SF	
H F 7 FEDERAL COM 001 - 150° WB - 150° WP	14,724.00	8,346.56	523.67	397.07	4.136 CC, ES	
H F 7 FEDERAL COM 001 - 165° WB - 165° WP	14,673.35	8,342.17	544.06	417.22	4.289 CC, ES, SF	
H F 7 FEDERAL COM 001 - 180° WB - 180° WP	14,617.23	8,340.34	552.20	425.61	4.362 CC, ES, SF	
H F 7 FEDERAL COM 001 - 195° WB - 195° WP	14,560.49	8,341.42	547.43	421.66	4.353 CC, ES, SF	
H F 7 FEDERAL COM 001 - 210° WB - 210° WP	14,507.74	8,345.21	530.13	405.64	4.258 CC, ES, SF	
H F 7 FEDERAL COM 001 - 225° WB - 225° WP	14,463.14	8,350.97	501.70	378.69	4.078 CC, ES	
H F 7 FEDERAL COM 001 - 225° WB - 225° WP	14,500.00	8,349.59	502.82	379.37	4.073 SF	
H F 7 FEDERAL COM 001 - 240° WB - 240° WP	14,429.91	8,357.68	464.37	342.70	3.817 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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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

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 - 255°WB - 255°WP	14,410.17	8,364.30	420.99	300.22	3.486 CC, ES, SF	
H F 7 FEDERAL COM 001 - 270° WB - 270° WP	14,404.72	8,369.99	374.73	254.24	3.110 CC, ES, SF	
H F 7 FEDERAL COM 001 - 30°WB - 30°WP	14,700.00	8,379.42	216.22	89.55	1.707 Caution - Monitor Closely, CC, ES, SF	
H F 7 FEDERAL COM 001 - 330°WB - 330°WP	14,507.18	8,379.35	221.99	97.61	1.785 Caution - Monitor Closely, CC, ES, SF	
H F 7 FEDERAL COM 001 - 345° WB - 345° WP	14,553.58	8,379.54	203.88	78.36	1.624 Caution - Monitor Closely, CC, ES, SF	
VALKYRIE 12 WXY FEDERAL COM 007H - OWB - AWP	8,758.96	8,412.92	336.16	295.89	8.348 CC, ES	
VALKYRIE 12 WXY FEDERAL COM 007H - OWB - AWP	8,900.00	8,395.34	364.13	317.59	7.824 SF	
VALKYRIE 12 WXY FEDERAL COM 011H - OWB - AWP					Out of range	

Offset Design: TROJAN SHIELD - AMOCO FEDERAL 11 001_PA - OWB - AWP													Offset Site Error:	0.00 usft	
Survey Program:		200-r.5 INC-ONLY		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0.00 usft
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)	Distance Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning		
0.00	0.00	0.00	33.00	0.00	0.00	-143.48	-499.73	-370.09	622.73						
100.00	100.00	67.00	100.00	0.77	2.16	-143.48	-499.73	-370.09	621.85	618.14	3.71	167.520			
200.00	200.00	167.00	200.00	1.44	5.39	-143.48	-499.73	-370.09	621.85	613.56	8.29	74.974			
300.00	300.00	267.04	300.00	1.88	7.87	-143.48	-499.73	-370.09	621.85	610.06	11.79	52.722			
337.39	337.39	304.07	337.02	2.02	8.65	-143.43	-498.86	-370.09	621.15	608.26	12.90	48.168			
400.00	400.00	361.71	394.64	2.25	9.86	-143.45	-499.19	-370.09	621.44	606.83	14.61	42.524			
500.00	500.00	467.08	500.00	2.56	12.65	-143.48	-499.73	-370.09	621.85	603.34	18.52	33.582			
600.00	600.00	567.08	600.00	2.84	15.62	-143.48	-499.73	-370.09	621.85	599.20	22.65	27.450			
700.00	700.00	667.12	700.00	3.10	18.00	-143.48	-499.73	-370.09	621.85	595.87	25.99	23.930			
732.86	732.86	699.98	732.85	3.18	18.68	-143.43	-498.86	-370.09	621.15	594.20	26.95	23.048			
800.00	800.00	761.79	794.64	3.34	19.98	-143.45	-499.19	-370.09	621.44	592.68	28.76	21.604			
900.00	900.00	867.16	900.00	3.57	22.77	-143.48	-499.73	-370.09	621.85	589.19	32.66	19.041			
1,000.00	1,000.00	967.16	1,000.00	3.79	25.73	-143.48	-499.73	-370.09	621.85	585.06	36.79	16.901			
1,100.00	1,100.00	1,067.20	1,100.00	3.99	28.11	-143.48	-499.73	-370.09	621.85	581.74	40.12	15.501			
1,132.78	1,132.78	1,099.98	1,132.76	4.05	28.80	-143.43	-498.86	-370.09	621.15	580.08	41.08	15.122			
1,200.00	1,200.00	1,161.86	1,194.63	4.19	30.09	-143.45	-499.19	-370.09	621.44	578.56	42.89	14.491			
1,300.00	1,300.00	1,267.24	1,300.00	4.38	32.88	-143.48	-499.73	-370.09	621.85	575.07	46.78	13.293			
1,400.00	1,400.00	1,367.24	1,400.00	4.56	35.84	-143.48	-499.73	-370.09	621.85	570.94	50.92	12.213			
1,500.00	1,500.00	1,467.28	1,500.00	4.74	38.22	-143.48	-499.73	-370.09	621.85	567.62	54.24	11.466			
1,532.71	1,532.71	1,500.00	1,532.70	4.79	38.90	-143.43	-498.86	-370.09	621.15	565.96	55.19	11.254			
1,600.00	1,600.00	1,561.94	1,594.63	4.91	40.20	-143.45	-499.19	-370.09	621.44	564.44	57.00	10.902			
1,700.00	1,700.00	1,667.32	1,700.00	5.08	42.99	-143.48	-499.73	-370.09	621.85	560.96	60.90	10.212			
1,800.00	1,800.00	1,767.32	1,800.00	5.24	45.95	-143.48	-499.73	-370.09	621.85	556.82	65.03	9.562			
1,900.00	1,900.00	1,867.37	1,900.00	5.40	48.33	-143.48	-499.73	-370.09	621.85	553.50	68.35	9.098			
1,932.62	1,932.62	1,899.98	1,932.60	5.45	49.01	-143.43	-498.86	-370.09	621.15	551.85	69.30	8.963			
2,000.00	2,000.00	1,962.01	1,994.62	5.56	50.31	-143.45	-499.19	-370.09	621.44	550.33	71.11	8.739			
2,100.00	2,099.98	2,067.39	2,099.98	5.77	53.10	66.15	-499.73	-370.09	621.14	546.14	75.01	8.281			
2,200.00	2,199.84	2,167.24	2,199.84	5.97	56.06	66.63	-499.73	-370.09	619.05	539.91	79.13	7.823			
2,300.00	2,299.45	2,266.90	2,299.45	6.16	58.43	67.44	-499.73	-370.09	615.63	533.20	82.44	7.468			
2,400.00	2,398.70	2,361.13	2,393.66	6.35	60.39	68.54	-499.18	-370.09	610.64	525.45	85.18	7.169			
2,463.62	2,461.60	2,429.09	2,461.60	6.41	62.07	69.47	-499.73	-370.09	607.58	520.07	87.51	6.943			
2,500.00	2,497.50	2,464.99	2,497.50	6.42	63.13	69.98	-499.73	-370.09	605.53	516.54	88.99	6.804			
2,600.00	2,596.20	2,563.68	2,596.20	6.54	66.06	71.41	-499.73	-370.09	600.14	507.07	93.07	6.448			
2,700.00	2,694.89	2,662.42	2,694.89	6.66	68.44	72.86	-499.73	-370.09	595.14	498.74	96.39	6.174			
2,800.00	2,793.58	2,756.98	2,789.43	6.79	70.41	74.31	-499.14	-370.09	590.13	490.98	99.15	5.952			

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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		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)			
2,900.00	2,892.28	2,859.85	2,892.28	6.92	73.09	75.83	-499.73	-370.09	586.33	483.46	102.88	5.699	
3,000.00	2,990.97	2,958.54	2,990.97	7.05	76.02	77.35	-499.73	-370.09	582.55	475.59	106.96	5.447	
3,100.00	3,089.66	3,057.27	3,089.66	7.18	78.44	78.89	-499.73	-370.09	579.19	468.85	110.34	5.249	
3,200.00	3,188.36	3,152.67	3,185.03	7.32	80.43	80.44	-499.10	-370.09	575.87	462.75	113.12	5.091	
3,300.00	3,287.05	3,254.70	3,287.05	7.47	83.04	82.01	-499.73	-370.09	573.77	457.00	116.77	4.914	
3,400.00	3,385.74	3,353.39	3,385.74	7.61	85.97	83.59	-499.73	-370.09	571.72	450.87	120.85	4.731	
3,500.00	3,484.44	3,452.13	3,484.44	7.76	88.44	85.17	-499.73	-370.09	570.13	445.83	124.30	4.587	
3,600.00	3,583.13	3,548.27	3,580.55	7.91	90.45	86.78	-499.06	-370.09	568.62	441.52	127.10	4.474	
3,700.00	3,681.82	3,649.55	3,681.82	8.06	93.00	88.37	-499.73	-370.09	568.29	437.62	130.66	4.349	
3,800.00	3,780.52	3,748.25	3,780.52	8.21	95.92	89.97	-499.73	-370.09	568.05	433.30	134.75	4.216 CC	
3,804.45	3,784.91	3,752.64	3,784.91	8.22	96.05	90.05	-499.73	-370.09	568.05	433.12	134.93	4.210	
3,900.00	3,879.21	3,846.98	3,879.21	8.37	98.44	91.58	-499.73	-370.09	568.27	430.01	138.26	4.110	
4,000.00	3,977.90	3,943.79	3,975.99	8.53	100.46	93.21	-499.03	-370.09	568.64	427.56	141.08	4.030	
4,100.00	4,076.60	4,044.41	4,076.60	8.69	102.95	94.78	-499.73	-370.09	570.08	425.52	144.56	3.943	
4,200.00	4,175.29	4,143.10	4,175.29	8.85	105.88	96.36	-499.73	-370.09	571.67	423.01	148.65	3.846	
4,300.00	4,273.98	4,241.84	4,273.98	9.01	108.44	97.94	-499.73	-370.09	573.70	421.47	152.23	3.769	
4,400.00	4,372.68	4,339.22	4,371.35	9.18	110.47	99.56	-498.99	-370.09	575.93	420.86	155.07	3.714	
4,500.00	4,471.37	4,439.26	4,471.37	9.35	112.90	101.06	-499.73	-370.09	579.09	420.62	158.47	3.654	
4,600.00	4,570.06	4,537.96	4,570.06	9.51	115.83	102.60	-499.73	-370.09	582.43	419.88	162.56	3.583	
4,700.00	4,668.76	4,636.69	4,668.76	9.68	118.44	104.12	-499.73	-370.09	586.20	420.00	166.20	3.527	
4,800.00	4,767.45	4,734.57	4,766.61	9.85	120.48	105.67	-498.96	-370.09	590.21	421.15	169.06	3.491	
4,900.00	4,866.14	4,834.12	4,866.14	10.03	122.86	107.09	-499.73	-370.09	594.98	422.60	172.38	3.452	
5,000.00	4,964.84	4,932.81	4,964.84	10.20	125.78	108.55	-499.73	-370.09	599.97	423.50	176.47	3.400	
5,100.00	5,063.53	5,031.55	5,063.53	10.37	128.44	109.98	-499.73	-370.09	605.35	425.18	180.18	3.360	
5,113.45	5,076.80	5,044.82	5,076.80	10.39	128.71	110.17	-499.73	-370.09	606.10	425.54	180.56	3.357	
5,200.00	5,162.33	5,129.93	5,161.89	10.55	130.49	111.44	-498.94	-370.09	610.76	427.71	183.05	3.337	
5,300.00	5,261.37	5,229.43	5,261.37	10.72	132.82	112.60	-499.73	-370.09	616.06	429.75	186.31	3.307	
5,400.00	5,360.65	5,328.70	5,360.65	10.89	135.77	113.66	-499.73	-370.09	620.81	430.39	190.43	3.260	
5,500.00	5,460.11	5,428.21	5,460.11	11.05	138.47	114.56	-499.73	-370.09	625.04	430.83	194.20	3.218	
5,600.00	5,559.75	5,527.65	5,559.53	11.22	140.55	115.37	-498.92	-370.09	628.60	431.49	197.10	3.189	
5,700.00	5,659.51	5,627.65	5,659.51	11.37	142.88	115.88	-499.73	-370.09	631.60	431.24	200.36	3.152	
5,800.00	5,759.38	5,727.52	5,759.38	11.52	145.84	116.32	-499.73	-370.09	633.84	429.34	204.49	3.100	
5,900.00	5,859.33	5,827.50	5,859.33	11.66	148.56	116.60	-499.73	-370.09	635.32	427.02	208.29	3.050	
6,000.00	5,959.31	5,927.37	5,959.17	11.79	150.65	116.80	-498.92	-370.09	635.99	424.79	211.20	3.011	
6,040.69	6,000.00	5,967.88	5,999.67	11.81	151.49	-92.68	-499.26	-370.09	636.07	423.69	212.38	2.995 Normal Operations	
6,100.00	6,059.31	6,027.53	6,059.31	11.82	152.98	-92.72	-499.73	-370.09	636.09	421.64	214.45	2.966 Normal Operations	
6,200.00	6,159.31	6,127.53	6,159.31	11.88	155.95	-92.72	-499.73	-370.09	636.09	417.51	218.59	2.910 Normal Operations	
6,300.00	6,259.31	6,227.57	6,259.31	11.93	158.67	-92.72	-499.73	-370.09	636.09	413.71	222.38	2.860 Normal Operations	
6,376.75	6,336.06	6,304.30	6,336.03	11.97	160.27	-92.65	-498.86	-370.09	636.05	411.44	224.62	2.832 Normal Operations	
6,400.00	6,359.31	6,327.45	6,359.17	11.99	160.76	-92.65	-498.92	-370.09	636.06	410.77	225.29	2.823 Normal Operations	
6,500.00	6,459.31	6,427.61	6,459.31	12.04	163.09	-92.72	-499.73	-370.09	636.09	407.55	228.54	2.783 Normal Operations	
6,600.00	6,559.31	6,527.61	6,559.31	12.10	166.06	-92.72	-499.73	-370.09	636.09	403.42	232.68	2.734 Normal Operations	
6,700.00	6,659.31	6,627.65	6,659.31	12.15	168.78	-92.72	-499.73	-370.09	636.09	399.62	236.47	2.690 Normal Operations	
6,776.73	6,736.05	6,704.37	6,736.01	12.20	170.38	-92.65	-498.86	-370.09	636.05	397.35	238.71	2.665 Normal Operations	
6,800.00	6,759.31	6,727.53	6,759.17	12.21	170.86	-92.65	-498.92	-370.09	636.06	396.68	239.38	2.657 Normal Operations	
6,900.00	6,859.31	6,827.69	6,859.31	12.27	173.20	-92.72	-499.73	-370.09	636.09	393.46	242.63	2.622 Normal Operations	
7,000.00	6,959.31	6,927.69	6,959.31	12.32	176.16	-92.72	-499.73	-370.09	636.09	389.33	246.77	2.578 Normal Operations	
7,100.00	7,059.31	7,027.73	7,059.31	12.38	178.89	-92.72	-499.73	-370.09	636.09	385.53	250.57	2.539 Normal Operations	
7,172.26	7,131.57	7,099.99	7,131.55	12.42	180.40	-92.65	-498.86	-370.09	636.05	383.38	252.67	2.517 Normal Operations	
7,200.00	7,159.31	7,127.61	7,159.17	12.44	180.97	-92.65	-498.92	-370.09	636.06	382.58	253.47	2.509 Normal Operations	
7,300.00	7,259.31	7,227.77	7,259.31	12.50	183.31	-92.72	-499.73	-370.09	636.09	379.37	256.73	2.478 Caution - Monitor Closely	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _VALKYRIE FED COM 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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					Rule Assigned:			Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance		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)	Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
7,400.00	7,359.31	7,327.77	7,359.31	12.56	186.27	-92.72	-499.73	-370.09	636.09	375.23	260.86	2.438	Caution - Monitor Closely	
7,500.00	7,459.31	7,427.82	7,459.31	12.61	189.00	-92.72	-499.73	-370.09	636.09	371.43	264.66	2.403	Caution - Monitor Closely	
7,572.20	7,531.51	7,500.01	7,531.49	12.66	190.50	-92.65	-498.86	-370.09	636.05	369.29	266.76	2.384	Caution - Monitor Closely	
7,600.00	7,559.31	7,527.69	7,559.17	12.67	191.08	-92.65	-498.93	-370.09	636.06	368.49	267.57	2.377	Caution - Monitor Closely	
7,700.00	7,659.31	7,627.86	7,659.31	12.73	193.42	-92.72	-499.73	-370.09	636.09	365.27	270.82	2.349	Caution - Monitor Closely	
7,800.00	7,759.31	7,727.86	7,759.31	12.79	196.38	-92.72	-499.73	-370.09	636.09	361.14	274.96	2.313	Caution - Monitor Closely	
7,900.00	7,859.31	7,827.90	7,859.31	12.85	199.10	-92.72	-499.73	-370.09	636.09	357.34	278.75	2.282	Caution - Monitor Closely	
7,965.23	7,924.54	7,893.12	7,924.54	12.87	200.47	-92.72	-499.73	-370.09	636.09	355.44	280.65	2.266	Caution - Monitor Closely	
7,965.68	7,924.99	7,893.57	7,924.99	12.87	200.47	177.36	-499.73	-370.09	636.09	355.43	280.66	2.266	Caution - Monitor Closely	
7,975.00	7,934.31	7,902.88	7,934.28	12.87	200.67	177.43	-498.86	-370.09	636.15	355.22	280.93	2.264	Caution - Monitor Closely, ES	
8,000.00	7,959.28	7,927.74	7,959.14	12.89	201.19	177.43	-498.93	-370.09	637.32	355.66	281.66	2.263	Caution - Monitor Closely, SF	
8,025.00	7,984.16	7,952.51	7,983.90	12.91	201.70	177.41	-499.10	-370.09	639.80	357.42	282.38	2.266	Caution - Monitor Closely	
8,050.00	8,008.87	7,977.12	8,008.50	12.93	202.22	177.38	-499.38	-370.09	643.58	360.48	283.10	2.273	Caution - Monitor Closely	
8,075.00	8,033.35	8,001.97	8,033.35	12.95	202.75	177.34	-499.73	-370.09	648.64	364.80	283.85	2.285	Caution - Monitor Closely	
8,100.00	8,057.53	8,026.15	8,057.53	12.98	203.47	177.33	-499.73	-370.09	654.97	370.12	284.85	2.299	Caution - Monitor Closely	
8,125.00	8,081.35	8,049.97	8,081.35	13.00	204.18	177.31	-499.73	-370.09	662.55	376.71	285.84	2.318	Caution - Monitor Closely	
8,150.00	8,104.74	8,073.36	8,104.74	13.02	204.87	177.30	-499.73	-370.09	671.37	384.56	286.81	2.341	Caution - Monitor Closely	
8,175.00	8,127.63	8,096.25	8,127.63	13.05	205.55	177.27	-499.73	-370.09	681.39	393.64	287.76	2.368	Caution - Monitor Closely	
8,200.00	8,149.97	8,118.59	8,149.97	13.08	206.21	177.25	-499.73	-370.09	692.60	403.92	288.68	2.399	Caution - Monitor Closely	
8,225.00	8,171.69	8,140.31	8,171.69	13.11	206.86	177.21	-499.73	-370.09	704.97	415.39	289.58	2.434	Caution - Monitor Closely	
8,250.00	8,192.73	8,161.35	8,192.73	13.13	207.48	177.17	-499.73	-370.09	718.45	428.00	290.46	2.474	Caution - Monitor Closely	
8,275.00	8,213.03	8,181.66	8,213.03	13.16	208.08	177.12	-499.73	-370.09	733.02	441.72	291.30	2.516	Normal Operations	
8,300.00	8,232.55	8,201.21	8,232.55	13.20	208.65	177.06	-499.73	-370.09	748.62	456.53	292.09	2.563	Normal Operations	
8,325.00	8,251.22	8,219.89	8,251.22	13.23	209.04	176.99	-499.73	-370.09	765.23	472.59	292.64	2.615	Normal Operations	
8,350.00	8,269.00	8,237.66	8,269.00	13.26	209.41	176.90	-499.73	-370.09	782.79	489.63	293.16	2.670	Normal Operations	
8,375.00	8,285.83	8,254.50	8,285.83	13.30	209.77	176.79	-499.73	-370.09	801.26	507.61	293.65	2.729	Normal Operations	
8,400.00	8,301.67	8,270.34	8,301.67	13.34	210.10	176.66	-499.73	-370.09	820.58	526.47	294.12	2.790	Normal Operations	
8,425.00	8,316.48	8,285.15	8,316.48	13.38	210.40	176.50	-499.73	-370.09	840.71	546.16	294.55	2.854	Normal Operations	
8,450.00	8,330.21	8,298.88	8,330.21	13.42	210.69	176.30	-499.73	-370.09	861.58	566.63	294.95	2.921	Normal Operations	
8,475.00	8,342.84	8,311.45	8,342.77	13.46	210.95	176.17	-498.87	-370.09	883.12	587.80	295.32	2.990	Normal Operations	
8,500.00	8,354.31	8,322.87	8,354.19	13.51	211.19	175.86	-498.90	-370.09	905.32	609.66	295.65	3.062		
8,525.00	8,364.61	8,333.12	8,364.44	13.57	211.41	175.46	-498.95	-370.09	928.09	632.13	295.95	3.136		
8,550.00	8,373.70	8,342.17	8,373.49	13.63	211.59	174.93	-499.01	-370.09	951.36	655.14	296.22	3.212		
8,575.00	8,381.56	8,350.00	8,381.31	13.70	211.76	174.19	-499.08	-370.09	975.08	678.63	296.45	3.289		
8,600.00	8,388.17	8,356.58	8,387.89	13.77	211.90	173.12	-499.14	-370.09	999.18	702.54	296.64	3.368		

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 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	0.00	1.00	0.00	0.00	159.53	-83.94	31.34	89.61				
100.00	100.00	99.00	100.00	0.77	0.76	159.53	-83.94	31.34	89.60	87.58	2.01	44.468	
200.00	200.00	199.00	200.00	1.44	1.43	159.53	-83.94	31.34	89.60	86.26	3.34	26.857	
300.00	300.00	299.00	300.00	1.88	1.88	159.53	-83.94	31.34	89.60	85.38	4.22	21.221	
400.00	400.00	399.00	400.00	2.25	2.24	159.53	-83.94	31.34	89.60	84.66	4.94	18.139	
500.00	500.00	499.00	500.00	2.56	2.56	159.53	-83.94	31.34	89.60	84.04	5.56	16.112	
600.00	600.00	599.00	600.00	2.84	2.84	159.53	-83.94	31.34	89.60	83.48	6.12	14.644	
700.00	700.00	699.00	700.00	3.10	3.10	159.53	-83.94	31.34	89.60	82.97	6.63	13.515	
800.00	800.00	799.00	800.00	3.34	3.34	159.53	-83.94	31.34	89.60	82.49	7.11	12.610	
900.00	900.00	899.00	900.00	3.57	3.57	159.53	-83.94	31.34	89.60	82.05	7.55	11.863	
1,000.00	1,000.00	999.00	1,000.00	3.79	3.78	159.53	-83.94	31.34	89.60	81.62	7.98	11.233 CC, ES	
1,100.00	1,100.00	1,096.08	1,097.06	3.99	4.09	159.81	-85.55	31.46	91.19	82.73	8.47	10.773 SF	
1,200.00	1,200.00	1,192.91	1,193.76	4.19	4.36	160.62	-90.42	31.81	96.05	87.14	8.91	10.776	
1,300.00	1,300.00	1,289.30	1,289.81	4.38	4.62	161.80	-98.50	32.39	104.19	94.85	9.34	11.156	
1,400.00	1,400.00	1,385.04	1,384.88	4.56	4.87	163.16	-109.71	33.20	115.62	105.87	9.74	11.865	
1,500.00	1,500.00	1,479.92	1,478.68	4.74	5.11	164.56	-123.94	34.23	130.34	120.20	10.13	12.863	
1,600.00	1,600.00	1,573.75	1,570.92	4.91	5.35	165.88	-141.05	35.47	148.32	137.82	10.50	14.121	
1,700.00	1,700.00	1,666.35	1,661.36	5.08	5.57	167.08	-160.89	36.91	169.53	158.67	10.86	15.613	
1,800.00	1,800.00	1,757.55	1,749.75	5.24	5.79	168.13	-183.26	38.53	193.89	182.69	11.20	17.316	
1,900.00	1,900.00	1,847.21	1,835.91	5.40	6.01	169.03	-207.98	40.32	221.33	209.81	11.52	19.209	
2,000.00	2,000.00	1,935.88	1,920.32	5.56	6.17	169.80	-235.05	42.28	251.76	239.97	11.78	21.366	
2,100.00	2,099.98	2,031.17	2,010.66	5.77	6.30	19.86	-265.28	44.46	281.86	269.74	12.12	23.257	
2,200.00	2,199.84	2,127.34	2,101.85	5.97	6.46	20.56	-295.79	46.67	308.88	296.41	12.46	24.780	
2,300.00	2,299.45	2,224.29	2,193.76	6.16	6.63	21.35	-326.54	48.90	332.81	319.99	12.82	25.967	
2,400.00	2,398.70	2,321.89	2,286.29	6.35	6.80	22.24	-357.51	51.14	353.67	340.50	13.17	26.845	
2,463.62	2,461.60	2,384.27	2,345.43	6.41	6.91	22.87	-377.30	52.57	365.36	352.01	13.34	27.380	
2,500.00	2,497.50	2,419.99	2,379.29	6.42	6.97	23.29	-388.63	53.39	371.70	358.27	13.43	27.681	
2,600.00	2,596.20	2,518.19	2,472.39	6.54	7.15	24.36	-419.78	55.65	389.22	375.48	13.74	28.322	
2,700.00	2,694.89	2,616.39	2,565.49	6.66	7.33	25.35	-450.94	57.90	406.87	392.80	14.06	28.929	
2,800.00	2,793.58	2,714.59	2,658.59	6.79	7.52	26.25	-482.09	60.15	424.62	410.23	14.39	29.504	
2,900.00	2,892.28	2,812.79	2,751.69	6.92	7.71	27.08	-513.24	62.41	442.47	427.74	14.73	30.048	
3,000.00	2,990.97	2,910.99	2,844.79	7.05	7.90	27.84	-544.40	64.66	460.40	445.34	15.06	30.563	
3,100.00	3,089.66	3,009.19	2,937.89	7.18	8.09	28.55	-575.55	66.92	478.40	463.00	15.41	31.050	
3,200.00	3,188.36	3,107.39	3,030.99	7.32	8.29	29.20	-606.71	69.17	496.47	480.72	15.76	31.510	
3,300.00	3,287.05	3,205.59	3,124.09	7.47	8.49	29.81	-637.86	71.43	514.60	498.49	16.11	31.946	
3,400.00	3,385.74	3,303.79	3,217.19	7.61	8.69	30.38	-669.01	73.68	532.78	516.32	16.47	32.358	
3,500.00	3,484.44	3,401.99	3,310.29	7.76	8.89	30.91	-700.17	75.94	551.01	534.19	16.83	32.748	
3,600.00	3,583.13	3,500.19	3,403.39	7.91	9.10	31.41	-731.32	78.19	569.28	552.09	17.19	33.118	
3,700.00	3,681.82	3,598.39	3,496.50	8.06	9.31	31.88	-762.47	80.45	587.59	570.04	17.56	33.468	
3,800.00	3,780.52	3,696.59	3,589.60	8.21	9.52	32.31	-793.63	82.70	605.94	588.01	17.93	33.800	
3,900.00	3,879.21	3,794.79	3,682.70	8.37	9.74	32.73	-824.78	84.96	624.32	606.02	18.30	34.115	
4,000.00	3,977.90	3,892.99	3,775.80	8.53	9.99	33.12	-855.94	87.21	642.72	624.05	18.68	34.413	
4,100.00	4,076.60	3,991.19	3,868.90	8.69	10.24	33.48	-887.09	89.47	661.16	642.10	19.06	34.697	
4,200.00	4,175.29	4,089.39	3,962.00	8.85	10.51	33.83	-918.24	91.72	679.62	660.18	19.44	34.967	
4,300.00	4,273.98	4,187.59	4,055.10	9.01	10.77	34.16	-949.40	93.97	698.10	678.28	19.82	35.223	
4,400.00	4,372.68	4,285.79	4,148.20	9.18	11.03	34.47	-980.55	96.23	716.61	696.40	20.20	35.467	
4,500.00	4,471.37	4,383.99	4,241.30	9.35	11.30	34.77	-1,011.71	98.48	735.13	714.54	20.59	35.699	
4,600.00	4,570.06	4,482.19	4,334.40	9.51	11.56	35.05	-1,042.86	100.74	753.67	732.69	20.98	35.921	
4,700.00	4,668.76	4,580.39	4,427.50	9.68	11.83	35.32	-1,074.01	102.99	772.23	750.85	21.37	36.131	
4,800.00	4,767.45	4,678.59	4,520.60	9.85	12.09	35.57	-1,105.17	105.25	790.80	769.04	21.77	36.333	
4,900.00	4,866.14	4,776.79	4,613.70	10.03	12.36	35.82	-1,136.32	107.50	809.39	787.23	22.16	36.525	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 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)			
5,000.00	4,964.84	4,874.99	4,706.80	10.20	12.63	36.05	-1,167.47	109.76	827.99	805.43	22.56	36.708	
5,100.00	5,063.53	4,973.19	4,799.90	10.37	12.90	36.27	-1,198.63	112.01	846.61	823.65	22.95	36.884	
5,113.45	5,076.80	4,986.40	4,812.41	10.39	12.94	36.30	-1,202.82	112.32	849.11	826.11	23.00	36.917	
5,200.00	5,162.33	5,071.31	4,892.91	10.55	13.17	36.56	-1,229.75	114.26	865.75	842.39	23.35	37.072	
5,300.00	5,261.37	5,169.16	4,985.69	10.72	13.44	36.80	-1,260.80	116.51	886.26	862.51	23.75	37.317	
5,400.00	5,360.65	5,266.74	5,078.20	10.89	13.71	36.97	-1,291.75	118.75	908.13	883.99	24.14	37.614	
5,500.00	5,460.11	5,364.00	5,170.41	11.05	13.98	37.08	-1,322.61	120.98	931.37	906.84	24.53	37.963	
5,600.00	5,559.75	5,460.92	5,262.29	11.22	14.24	37.14	-1,353.36	123.21	955.96	931.04	24.92	38.361	
5,700.00	5,659.51	5,557.46	5,353.82	11.37	14.51	37.15	-1,383.98	125.43	981.90	956.60	25.30	38.806	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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													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	2.00	0.00	0.00	159.38	-111.92	42.12	119.60				
100.00	100.00	98.00	100.00	0.77	0.76	159.38	-111.92	42.12	119.58	117.56	2.02	59.208	
200.00	200.00	198.00	200.00	1.44	1.43	159.38	-111.92	42.12	119.58	116.25	3.34	35.841	
300.00	300.00	298.00	300.00	1.88	1.88	159.38	-111.92	42.12	119.58	115.36	4.22	28.317	
400.00	400.00	398.00	400.00	2.25	2.24	159.38	-111.92	42.12	119.58	114.64	4.94	24.205	
500.00	500.00	498.00	500.00	2.56	2.56	159.38	-111.92	42.12	119.58	114.02	5.56	21.500	
600.00	600.00	598.00	600.00	2.84	2.84	159.38	-111.92	42.12	119.58	113.46	6.12	19.541	
700.00	700.00	698.00	700.00	3.10	3.10	159.38	-111.92	42.12	119.58	112.95	6.63	18.035	
800.00	800.00	798.00	800.00	3.34	3.34	159.38	-111.92	42.12	119.58	112.48	7.11	16.828	
900.00	900.00	898.00	900.00	3.57	3.57	159.38	-111.92	42.12	119.58	112.03	7.55	15.832	
1,000.00	1,000.00	998.00	1,000.00	3.79	3.78	159.38	-111.92	42.12	119.58	111.61	7.98	14.991 CC, ES	
1,100.00	1,100.00	1,094.14	1,096.13	3.99	4.08	159.55	-113.46	42.31	121.15	112.69	8.46	14.313	
1,200.00	1,200.00	1,190.00	1,191.86	4.19	4.35	160.05	-118.17	42.89	125.98	117.07	8.91	14.135 SF	
1,300.00	1,300.00	1,285.43	1,286.96	4.38	4.61	160.81	-126.02	43.87	134.07	124.74	9.34	14.361	
1,400.00	1,400.00	1,380.23	1,381.12	4.56	4.86	161.72	-136.92	45.22	145.43	135.69	9.74	14.932	
1,500.00	1,500.00	1,474.20	1,474.04	4.74	5.10	162.71	-150.78	46.94	160.04	149.91	10.13	15.806	
1,600.00	1,600.00	1,567.15	1,565.45	4.91	5.33	163.69	-167.45	49.00	177.86	167.37	10.49	16.950	
1,700.00	1,700.00	1,658.91	1,655.12	5.08	5.56	164.61	-186.79	51.40	198.86	188.02	10.85	18.335	
1,800.00	1,800.00	1,749.31	1,742.80	5.24	5.78	165.46	-208.62	54.11	222.98	211.80	11.18	19.939	
1,900.00	1,900.00	1,838.21	1,828.30	5.40	5.99	166.22	-232.75	57.10	250.15	238.64	11.51	21.739	
2,000.00	2,000.00	1,925.48	1,911.47	5.56	6.16	166.88	-258.99	60.35	280.28	268.50	11.78	23.801	
2,100.00	2,099.98	2,019.38	2,000.38	5.77	6.28	16.88	-288.95	64.06	310.69	298.61	12.08	25.716	
2,200.00	2,199.84	2,115.48	2,091.37	5.97	6.44	17.49	-319.64	67.87	338.00	325.57	12.43	27.194	
2,300.00	2,299.45	2,212.39	2,183.12	6.16	6.60	18.17	-350.59	71.70	362.14	349.36	12.78	28.328	
2,400.00	2,398.70	2,309.99	2,275.53	6.35	6.77	18.94	-381.76	75.57	383.14	369.99	13.15	29.146	
2,463.62	2,461.60	2,372.38	2,334.60	6.41	6.88	19.48	-401.69	78.04	394.86	381.55	13.32	29.652	
2,500.00	2,497.50	2,408.12	2,368.44	6.42	6.94	19.84	-413.10	79.45	401.21	387.81	13.40	29.939	
2,600.00	2,596.20	2,506.36	2,461.45	6.54	7.12	20.76	-444.48	83.34	418.74	405.02	13.72	30.525	
2,700.00	2,694.89	2,604.59	2,554.46	6.66	7.31	21.60	-475.85	87.23	436.36	422.32	14.04	31.077	
2,800.00	2,793.58	2,702.83	2,647.47	6.79	7.49	22.39	-507.23	91.12	454.07	439.70	14.37	31.596	
2,900.00	2,892.28	2,801.07	2,740.48	6.92	7.68	23.11	-538.60	95.01	471.86	457.15	14.71	32.084	
3,000.00	2,990.97	2,899.30	2,833.49	7.05	7.87	23.78	-569.98	98.90	489.71	474.66	15.05	32.543	
3,100.00	3,089.66	2,997.54	2,926.50	7.18	8.07	24.40	-601.35	102.78	507.62	492.23	15.39	32.975	
3,200.00	3,188.36	3,095.78	3,019.51	7.32	8.26	24.99	-632.73	106.67	525.59	509.85	15.75	33.381	
3,300.00	3,287.05	3,194.01	3,112.52	7.47	8.46	25.53	-664.10	110.56	543.61	527.51	16.10	33.763	
3,400.00	3,385.74	3,292.25	3,205.54	7.61	8.66	26.04	-695.48	114.45	561.67	545.21	16.46	34.123	
3,500.00	3,484.44	3,390.49	3,298.55	7.76	8.87	26.51	-726.85	118.34	579.77	562.95	16.82	34.462	
3,600.00	3,583.13	3,488.73	3,391.56	7.91	9.07	26.96	-758.23	122.23	597.91	580.72	17.19	34.781	
3,700.00	3,681.82	3,586.96	3,484.57	8.06	9.28	27.38	-789.60	126.12	616.08	598.52	17.56	35.083	
3,800.00	3,780.52	3,685.20	3,577.58	8.21	9.50	27.78	-820.98	130.01	634.28	616.35	17.93	35.367	
3,900.00	3,879.21	3,783.44	3,670.59	8.37	9.73	28.15	-852.35	133.90	652.51	634.20	18.31	35.636	
4,000.00	3,977.90	3,881.67	3,763.60	8.53	9.99	28.51	-883.72	137.78	670.76	652.07	18.69	35.890	
4,100.00	4,076.60	3,979.91	3,856.61	8.69	10.25	28.85	-915.10	141.67	689.04	669.97	19.07	36.130	
4,200.00	4,175.29	4,078.15	3,949.62	8.85	10.52	29.16	-946.47	145.56	707.34	687.89	19.46	36.357	
4,300.00	4,273.98	4,176.38	4,042.63	9.01	10.78	29.47	-977.85	149.45	725.66	705.82	19.84	36.573	
4,400.00	4,372.68	4,274.62	4,135.64	9.18	11.05	29.75	-1,009.22	153.34	744.00	723.77	20.23	36.777	
4,500.00	4,471.37	4,372.86	4,228.65	9.35	11.32	30.03	-1,040.60	157.23	762.36	741.74	20.62	36.970	
4,600.00	4,570.06	4,471.10	4,321.67	9.51	11.59	30.29	-1,071.97	161.12	780.73	759.72	21.01	37.154	
4,700.00	4,668.76	4,569.33	4,414.68	9.68	11.86	30.54	-1,103.35	165.01	799.12	777.71	21.41	37.328	
4,800.00	4,767.45	4,667.57	4,507.69	9.85	12.13	30.78	-1,134.72	168.90	817.52	795.72	21.80	37.494	
4,900.00	4,866.14	4,765.81	4,600.70	10.03	12.40	31.00	-1,166.10	172.78	835.93	813.73	22.20	37.652	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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													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)			
5,000.00	4,964.84	4,864.04	4,693.71	10.20	12.67	31.22	-1,197.47	176.67	854.36	831.76	22.60	37.802	
5,100.00	5,063.53	4,962.28	4,786.72	10.37	12.94	31.43	-1,228.85	180.56	872.80	849.80	23.00	37.945	
5,113.45	5,076.80	4,975.49	4,799.23	10.39	12.98	31.46	-1,233.06	181.09	875.28	852.23	23.05	37.975	
5,200.00	5,162.33	5,060.42	4,879.64	10.55	13.21	31.69	-1,260.19	184.45	891.79	868.39	23.40	38.103	
5,300.00	5,261.37	5,158.29	4,972.31	10.72	13.49	31.92	-1,291.45	188.32	912.24	888.43	23.80	38.323	
5,400.00	5,360.65	5,255.86	5,064.68	10.89	13.76	32.08	-1,322.61	192.18	934.13	909.93	24.20	38.599	
5,500.00	5,460.11	5,353.10	5,156.75	11.05	14.03	32.20	-1,353.67	196.03	957.46	932.87	24.59	38.930	
5,600.00	5,559.75	5,449.98	5,248.47	11.22	14.30	32.27	-1,384.61	199.87	982.23	957.25	24.98	39.315	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 552H - OWB - PWP0													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	0.00	2.00	0.00	0.00	158.93	-27.98	10.78	30.05				
100.00	100.00	98.00	100.00	0.77	0.78	158.93	-27.98	10.78	29.98	27.95	2.03	14.755	
200.00	200.00	198.00	200.00	1.44	1.44	158.93	-27.98	10.78	29.98	26.64	3.34	8.968	
300.00	300.00	298.00	300.00	1.88	1.89	158.93	-27.98	10.78	29.98	25.76	4.23	7.091	
400.00	400.00	398.00	400.00	2.25	2.25	158.93	-27.98	10.78	29.98	25.04	4.95	6.064	
500.00	500.00	498.00	500.00	2.56	2.56	158.93	-27.98	10.78	29.98	24.42	5.57	5.387	
600.00	600.00	598.00	600.00	2.84	2.85	158.93	-27.98	10.78	29.98	23.86	6.12	4.897	
700.00	700.00	698.00	700.00	3.10	3.10	158.93	-27.98	10.78	29.98	23.35	6.63	4.520	
800.00	800.00	798.00	800.00	3.34	3.35	158.93	-27.98	10.78	29.98	22.88	7.11	4.218	
900.00	900.00	898.00	900.00	3.57	3.57	158.93	-27.98	10.78	29.98	22.43	7.56	3.968	
1,000.00	1,000.00	998.00	1,000.00	3.79	3.79	158.93	-27.98	10.78	29.98	22.00	7.98	3.758	
1,100.00	1,100.00	1,098.00	1,100.00	3.99	3.99	158.93	-27.98	10.78	29.98	21.60	8.38	3.576	
1,200.00	1,200.00	1,198.00	1,200.00	4.19	4.19	158.93	-27.98	10.78	29.98	21.21	8.77	3.418	
1,300.00	1,300.00	1,298.00	1,300.00	4.38	4.38	158.93	-27.98	10.78	29.98	20.84	9.15	3.279	
1,400.00	1,400.00	1,398.00	1,400.00	4.56	4.56	158.93	-27.98	10.78	29.98	20.48	9.51	3.154	
1,500.00	1,500.00	1,498.00	1,500.00	4.74	4.74	158.93	-27.98	10.78	29.98	20.13	9.86	3.043	
1,600.00	1,600.00	1,598.00	1,600.00	4.91	4.91	158.93	-27.98	10.78	29.98	19.79	10.19	2.941 Normal Operations	
1,700.00	1,700.00	1,698.00	1,700.00	5.08	5.08	158.93	-27.98	10.78	29.98	19.46	10.53	2.849 Normal Operations	
1,800.00	1,800.00	1,798.00	1,800.00	5.24	5.24	158.93	-27.98	10.78	29.98	19.14	10.85	2.764 Normal Operations	
1,900.00	1,900.00	1,898.00	1,900.00	5.40	5.40	158.93	-27.98	10.78	29.98	18.82	11.16	2.686 Normal Operations	
2,000.00	2,000.00	1,998.00	2,000.00	5.56	5.56	158.93	-27.98	10.78	29.98	18.51	11.47	2.614 Normal Operations	
2,100.00	2,099.98	2,096.99	2,098.97	5.77	5.77	8.94	-29.52	11.34	29.92	18.03	11.89	2.516 Normal Operations	
2,200.00	2,199.84	2,195.95	2,197.80	5.97	5.96	10.56	-34.27	13.08	29.87	17.62	12.25	2.438 Caution - Monitor Closely	
2,231.99	2,231.74	2,227.61	2,229.37	6.03	6.02	11.31	-36.47	13.88	29.87	17.50	12.36	2.416 Caution - Monitor Closely, CC	
2,300.00	2,299.45	2,294.91	2,296.39	6.16	6.15	13.26	-42.23	15.98	29.89	17.29	12.60	2.373 Caution - Monitor Closely	
2,400.00	2,398.70	2,393.86	2,394.62	6.35	6.34	17.02	-53.37	20.05	30.06	17.14	12.92	2.326 Caution - Monitor Closely, ES	
2,463.62	2,461.60	2,456.81	2,456.87	6.41	6.46	19.92	-62.12	23.25	30.29	17.24	13.05	2.321 Caution - Monitor Closely, SF	
2,500.00	2,497.50	2,492.80	2,492.37	6.42	6.53	21.58	-67.70	25.28	30.70	17.59	13.10	2.342 Caution - Monitor Closely	
2,600.00	2,596.20	2,591.64	2,589.44	6.54	6.71	24.80	-85.16	31.66	34.20	20.86	13.34	2.564 Normal Operations	
2,700.00	2,694.89	2,690.16	2,685.50	6.66	6.91	25.94	-105.69	39.16	41.08	27.49	13.59	3.022	
2,800.00	2,793.58	2,789.59	2,781.96	6.79	7.04	26.02	-128.35	47.43	50.00	36.15	13.84	3.612	
2,900.00	2,892.28	2,889.19	2,878.58	6.92	7.16	26.07	-151.07	55.73	58.94	44.84	14.10	4.179	
3,000.00	2,990.97	2,988.78	2,975.19	7.05	7.29	26.11	-173.79	64.02	67.89	53.51	14.37	4.723	
3,100.00	3,089.66	3,088.38	3,071.81	7.18	7.42	26.13	-196.51	72.32	76.83	62.18	14.65	5.245	
3,200.00	3,188.36	3,187.98	3,168.43	7.32	7.56	26.16	-219.23	80.62	85.77	70.84	14.93	5.744	
3,300.00	3,287.05	3,287.58	3,265.05	7.47	7.70	26.17	-241.95	88.91	94.72	79.50	15.22	6.223	
3,400.00	3,385.74	3,387.18	3,361.66	7.61	7.85	26.19	-264.67	97.21	103.66	88.15	15.52	6.681	
3,500.00	3,484.44	3,486.78	3,458.28	7.76	8.00	26.20	-287.39	105.51	112.61	96.79	15.82	7.119	
3,600.00	3,583.13	3,586.38	3,554.90	7.91	8.15	26.21	-310.11	113.80	121.55	105.43	16.12	7.539	
3,700.00	3,681.82	3,685.98	3,651.52	8.06	8.31	26.22	-332.83	122.10	130.49	114.06	16.44	7.940	
3,800.00	3,780.52	3,785.58	3,748.14	8.21	8.47	26.23	-355.55	130.40	139.44	122.69	16.75	8.324	
3,900.00	3,879.21	3,885.18	3,844.75	8.37	8.63	26.24	-378.27	138.69	148.38	131.31	17.07	8.692	
4,000.00	3,977.90	3,984.78	3,941.37	8.53	8.79	26.24	-401.00	146.99	157.33	139.93	17.40	9.043	
4,100.00	4,076.60	4,084.38	4,037.99	8.69	8.96	26.25	-423.72	155.29	166.27	148.55	17.73	9.380	
4,200.00	4,175.29	4,183.98	4,134.61	8.85	9.13	26.25	-446.44	163.58	175.22	157.16	18.06	9.703	
4,300.00	4,273.98	4,283.57	4,231.22	9.01	9.30	26.26	-469.16	171.88	184.16	165.76	18.39	10.012	
4,400.00	4,372.68	4,383.17	4,327.84	9.18	9.48	26.26	-491.88	180.18	193.10	174.37	18.73	10.308	
4,500.00	4,471.37	4,482.77	4,424.46	9.35	9.66	26.27	-514.60	188.47	202.05	182.97	19.08	10.591	
4,600.00	4,570.06	4,582.37	4,521.08	9.51	9.84	26.27	-537.32	196.77	210.99	191.57	19.42	10.863	
4,700.00	4,668.76	4,682.25	4,617.97	9.68	10.00	26.27	-560.10	205.09	219.93	200.18	19.75	11.135	
4,800.00	4,767.45	4,785.80	4,718.67	9.85	10.18	26.35	-582.74	213.36	227.89	207.77	20.12	11.327	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 552H - OWB - PWP0													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)			
4,900.00	4,866.14	4,889.60	4,820.04	10.03	10.37	26.57	-603.72	221.02	234.12	213.63	20.49	11.427	
5,000.00	4,964.84	4,993.59	4,921.97	10.20	10.56	26.91	-623.00	228.06	238.63	217.78	20.85	11.446	
5,100.00	5,063.53	5,097.68	5,024.38	10.37	10.74	27.37	-640.56	234.47	241.43	220.23	21.20	11.388	
5,113.45	5,076.80	5,111.68	5,038.17	10.39	10.77	27.44	-642.78	235.28	241.67	220.43	21.24	11.379	
5,200.00	5,162.33	5,201.82	5,127.15	10.55	10.93	27.90	-656.37	240.25	243.09	221.54	21.54	11.283	
5,300.00	5,261.37	5,305.99	5,230.23	10.72	11.11	28.36	-670.43	245.38	244.57	222.70	21.87	11.181	
5,400.00	5,360.65	5,410.18	5,333.59	10.89	11.29	28.76	-682.73	249.87	245.89	223.69	22.19	11.079	
5,500.00	5,460.11	5,514.39	5,437.19	11.05	11.46	29.10	-693.27	253.72	247.03	224.53	22.50	10.978	
5,600.00	5,559.75	5,618.61	5,541.00	11.22	11.63	29.38	-702.03	256.92	247.99	225.19	22.80	10.879	
5,700.00	5,659.51	5,722.85	5,644.97	11.37	11.80	29.60	-709.02	259.47	248.76	225.69	23.08	10.780	
5,800.00	5,759.38	5,827.09	5,749.06	11.52	11.96	29.77	-714.23	261.37	249.35	226.01	23.34	10.684	
5,900.00	5,859.33	5,931.35	5,853.25	11.66	12.10	29.87	-717.67	262.63	249.75	226.17	23.58	10.590	
6,000.00	5,959.31	6,035.61	5,957.49	11.79	12.22	29.92	-719.32	263.23	249.96	226.17	23.79	10.508	
6,040.69	6,000.00	6,078.03	5,999.91	11.81	12.25	-179.54	-719.48	263.29	249.99	226.16	23.82	10.494	
6,100.00	6,059.31	6,137.42	6,059.31	11.82	12.28	-179.54	-719.48	263.29	249.99	226.12	23.86	10.476	
6,200.00	6,159.31	6,237.42	6,159.31	11.88	12.33	-179.54	-719.48	263.29	249.99	226.01	23.98	10.425	
6,300.00	6,259.31	6,337.42	6,259.31	11.93	12.39	-179.54	-719.48	263.29	249.99	225.90	24.09	10.378	
6,400.00	6,359.31	6,437.42	6,359.31	11.99	12.44	-179.54	-719.48	263.29	249.99	225.79	24.20	10.331	
6,500.00	6,459.31	6,537.42	6,459.31	12.04	12.49	-179.54	-719.48	263.29	249.99	225.68	24.31	10.284	
6,600.00	6,559.31	6,637.42	6,559.31	12.10	12.54	-179.54	-719.48	263.29	249.99	225.57	24.42	10.237	
6,700.00	6,659.31	6,737.42	6,659.31	12.15	12.60	-179.54	-719.48	263.29	249.99	225.46	24.53	10.190	
6,800.00	6,759.31	6,837.42	6,759.31	12.21	12.65	-179.54	-719.48	263.29	249.99	225.34	24.64	10.144	
6,900.00	6,859.31	6,937.42	6,859.31	12.27	12.70	-179.54	-719.48	263.29	249.99	225.23	24.76	10.097	
7,000.00	6,959.31	7,037.42	6,959.31	12.32	12.76	-179.54	-719.48	263.29	249.99	225.12	24.87	10.051	
7,100.00	7,059.31	7,137.42	7,059.31	12.38	12.81	-179.54	-719.48	263.29	249.99	225.00	24.99	10.005	
7,200.00	7,159.31	7,237.42	7,159.31	12.44	12.87	-179.54	-719.48	263.29	249.99	224.89	25.10	9.960	
7,300.00	7,259.31	7,337.42	7,259.31	12.50	12.92	-179.54	-719.48	263.29	249.99	224.77	25.21	9.914	
7,400.00	7,359.31	7,437.42	7,359.31	12.56	12.98	-179.54	-719.48	263.29	249.99	224.66	25.33	9.869	
7,500.00	7,459.31	7,537.42	7,459.31	12.61	13.03	-179.54	-719.48	263.29	249.99	224.54	25.45	9.824	
7,600.00	7,559.31	7,637.42	7,559.31	12.67	13.09	-179.54	-719.48	263.29	249.99	224.43	25.56	9.779	
7,700.00	7,659.31	7,737.42	7,659.31	12.73	13.14	-179.54	-719.48	263.29	249.99	224.31	25.68	9.735	
7,800.00	7,759.31	7,837.42	7,759.31	12.79	13.20	-179.54	-719.48	263.29	249.99	224.19	25.80	9.690	
7,900.00	7,859.31	7,937.42	7,859.31	12.85	13.26	-179.54	-719.48	263.29	249.99	224.07	25.92	9.646	
7,965.23	7,924.54	8,002.65	7,924.54	12.87	13.29	-179.54	-719.48	263.29	249.99	224.01	25.98	9.624	
7,975.00	7,934.31	8,012.42	7,934.31	12.87	13.30	90.56	-719.48	263.29	249.99	224.01	25.98	9.621	
8,000.00	7,959.28	8,037.39	7,959.28	12.89	13.31	90.82	-719.48	263.29	250.00	224.00	26.00	9.615	
8,025.00	7,984.16	8,062.27	7,984.16	12.91	13.33	91.38	-719.48	263.29	250.05	224.04	26.01	9.614	
8,050.00	8,008.87	8,086.98	8,008.87	12.93	13.34	92.22	-719.48	263.29	250.17	224.16	26.01	9.618	
8,075.00	8,033.35	8,111.46	8,033.35	12.95	13.36	93.32	-719.48	263.29	250.42	224.42	26.00	9.631	
8,100.00	8,057.53	8,135.64	8,057.53	12.98	13.37	94.66	-719.48	263.29	250.88	224.89	25.99	9.654	
8,125.00	8,081.35	8,159.46	8,081.35	13.00	13.38	96.22	-719.48	263.29	251.63	225.67	25.96	9.692	
8,150.00	8,104.74	8,182.85	8,104.74	13.02	13.40	97.94	-719.48	263.29	252.80	226.86	25.93	9.748	
8,175.00	8,127.63	8,205.74	8,127.63	13.05	13.41	99.79	-719.48	263.29	254.48	228.59	25.89	9.829	
8,200.00	8,149.97	8,228.08	8,149.97	13.08	13.42	101.73	-719.48	263.29	256.82	230.98	25.84	9.937	
8,225.00	8,171.69	8,249.80	8,171.69	13.11	13.43	103.71	-719.48	263.29	259.94	234.15	25.79	10.078	
8,250.00	8,192.73	8,270.84	8,192.73	13.13	13.45	105.67	-719.48	263.29	263.96	238.22	25.74	10.256	
8,275.00	8,213.03	8,291.15	8,213.03	13.16	13.46	107.57	-719.48	263.29	269.00	243.32	25.68	10.475	
8,300.00	8,232.55	8,310.66	8,232.55	13.20	13.47	109.36	-719.48	263.29	275.15	249.52	25.63	10.737	
8,325.00	8,251.22	8,329.33	8,251.22	13.23	13.48	111.00	-719.48	263.29	282.50	256.92	25.58	11.045	
8,350.00	8,269.00	8,347.11	8,269.00	13.26	13.49	112.45	-719.48	263.29	291.10	265.56	25.54	11.399	
8,375.00	8,285.83	8,363.94	8,285.83	13.30	13.50	113.68	-719.48	263.29	300.99	275.48	25.51	11.801	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 552H - OWB - PWP0												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)			
8,400.00	8,301.67	8,379.78	8,301.67	13.34	13.51	114.64	-719.48	263.29	312.17	286.69	25.48	12.250	
8,425.00	8,316.48	8,394.59	8,316.48	13.38	13.52	115.32	-719.48	263.29	324.63	299.16	25.47	12.744	
8,450.00	8,330.21	8,408.33	8,330.21	13.42	13.53	115.69	-719.48	263.29	338.34	312.87	25.47	13.282	
8,475.00	8,342.84	8,420.95	8,342.84	13.46	13.53	115.71	-719.48	263.29	353.24	327.76	25.48	13.862	
8,500.00	8,354.31	8,432.42	8,354.31	13.51	13.54	115.35	-719.48	263.29	369.27	343.77	25.50	14.482	
8,525.00	8,364.61	8,442.72	8,364.61	13.57	13.55	114.57	-719.48	263.29	386.34	360.82	25.52	15.137	
8,550.00	8,373.70	8,451.81	8,373.70	13.63	13.55	113.33	-719.48	263.29	404.38	378.83	25.55	15.827	
8,575.00	8,381.56	8,459.67	8,381.56	13.70	13.56	111.58	-719.48	263.29	423.28	397.70	25.58	16.546	
8,600.00	8,388.17	8,466.28	8,388.17	13.77	13.56	109.27	-719.48	263.29	442.97	417.35	25.61	17.294	
8,625.00	8,393.51	8,471.62	8,393.51	13.85	13.56	106.34	-719.48	263.29	463.33	437.68	25.65	18.066	
8,650.00	8,397.56	8,475.67	8,397.56	13.93	13.57	102.73	-719.48	263.29	484.28	458.60	25.68	18.859	
8,675.00	8,400.31	8,478.42	8,400.31	14.02	13.57	98.42	-719.48	263.29	505.72	480.02	25.71	19.671	
8,700.00	8,401.76	8,479.87	8,401.76	14.12	13.57	93.39	-719.48	263.29	527.56	501.82	25.74	20.498	
8,715.23	8,402.01	8,480.12	8,402.01	14.18	13.57	90.00	-719.48	263.29	541.02	515.26	25.75	21.008	
8,800.00	8,402.01	9,339.76	8,902.01	14.58	15.32	153.44	-718.69	827.87	559.01	528.91	30.09	18.575	
8,900.00	8,402.01	9,439.76	8,902.01	15.14	15.88	153.44	-718.55	927.87	559.01	528.63	30.38	18.400	
9,000.00	8,402.01	9,539.76	8,902.01	15.77	16.50	153.44	-718.41	1,027.87	559.01	528.29	30.72	18.198	
9,100.00	8,402.01	9,639.76	8,902.01	16.46	17.16	153.44	-718.27	1,127.87	559.01	527.90	31.11	17.970	
9,200.00	8,402.01	9,739.76	8,902.01	17.19	17.87	153.44	-718.13	1,227.87	559.01	527.46	31.55	17.721	
9,300.00	8,402.01	9,839.76	8,902.01	17.97	18.62	153.44	-717.99	1,327.87	559.01	526.98	32.03	17.453	
9,400.00	8,402.01	9,939.76	8,902.01	18.78	19.41	153.44	-717.85	1,427.87	559.01	526.45	32.56	17.169	
9,500.00	8,402.01	10,039.76	8,902.01	19.62	20.23	153.44	-717.71	1,527.87	559.01	525.88	33.13	16.873	
9,600.00	8,402.01	10,139.76	8,902.01	20.49	21.07	153.44	-717.57	1,627.87	559.01	525.26	33.74	16.567	
9,700.00	8,402.01	10,239.76	8,902.01	21.38	21.94	153.44	-717.44	1,727.86	559.01	524.61	34.39	16.254	
9,800.00	8,402.01	10,339.76	8,902.01	22.30	22.83	153.44	-717.30	1,827.86	559.01	523.93	35.08	15.936	
9,900.00	8,402.01	10,439.76	8,902.01	23.23	23.74	153.44	-717.16	1,927.86	559.01	523.21	35.80	15.616	
10,000.00	8,402.01	10,539.76	8,902.01	24.18	24.67	153.44	-717.02	2,027.86	559.01	522.46	36.55	15.295	
10,100.00	8,402.01	10,639.76	8,902.01	25.14	25.61	153.44	-716.88	2,127.86	559.01	521.68	37.33	14.975	
10,200.00	8,402.01	10,739.76	8,902.01	26.12	26.57	153.44	-716.74	2,227.86	559.01	520.87	38.14	14.657	
10,300.00	8,402.01	10,839.76	8,902.01	27.11	27.53	153.44	-716.60	2,327.86	559.01	520.03	38.97	14.343	
10,400.00	8,402.01	10,939.76	8,902.01	28.10	28.51	153.44	-716.46	2,427.86	559.01	519.17	39.83	14.033	
10,500.00	8,402.01	11,039.76	8,902.01	29.11	29.50	153.44	-716.32	2,527.86	559.01	518.29	40.72	13.729	
10,600.00	8,402.01	11,139.76	8,902.01	30.13	30.50	153.44	-716.18	2,627.86	559.01	517.38	41.62	13.431	
10,700.00	8,402.01	11,239.76	8,902.01	31.15	31.51	153.44	-716.04	2,727.86	559.01	516.46	42.55	13.139	
10,800.00	8,402.01	11,339.76	8,902.01	32.18	32.53	153.44	-715.90	2,827.86	559.01	515.52	43.49	12.854	
10,815.23	8,402.01	11,354.99	8,902.01	32.33	32.68	153.44	-715.88	2,843.09	559.01	515.37	43.63	12.811	
10,900.00	8,402.01	11,439.75	8,902.01	33.22	33.55	153.33	-715.76	2,927.85	559.57	515.08	44.49	12.577	
11,000.00	8,402.01	11,539.64	8,902.01	34.27	34.57	152.94	-715.62	3,027.74	561.70	516.04	45.65	12.304	
11,100.00	8,402.01	11,639.29	8,902.01	35.31	35.60	152.27	-715.48	3,127.39	565.47	518.49	46.98	12.036	
11,111.23	8,402.01	11,650.46	8,902.01	35.43	35.72	152.18	-715.47	3,138.56	566.00	518.86	47.14	12.006	
11,200.00	8,402.01	11,738.76	8,902.01	36.34	36.64	151.37	-715.34	3,226.86	570.35	521.91	48.45	11.773	
11,300.00	8,402.01	11,838.23	8,902.01	37.38	37.68	150.47	-715.20	3,326.33	575.39	525.41	49.97	11.514	
11,400.00	8,402.01	11,937.70	8,902.01	38.42	38.72	149.59	-715.06	3,425.80	580.56	529.00	51.55	11.261	
11,500.00	8,402.01	12,037.16	8,902.01	39.47	39.77	148.72	-714.93	3,525.26	585.87	532.67	53.19	11.014	
11,600.00	8,402.01	12,136.63	8,902.01	40.52	40.82	147.87	-714.79	3,624.73	591.31	536.43	54.88	10.774	
11,700.00	8,402.01	12,236.10	8,902.01	41.57	41.87	147.04	-714.65	3,724.20	596.88	540.26	56.62	10.542	
11,800.00	8,402.01	12,335.56	8,902.01	42.63	42.93	146.22	-714.51	3,823.66	602.57	544.17	58.40	10.318	
11,900.00	8,402.01	12,435.03	8,902.01	43.69	43.99	145.41	-714.37	3,923.13	608.39	548.16	60.23	10.101	
12,000.00	8,402.01	12,534.50	8,902.01	44.75	45.05	144.62	-714.23	4,022.60	614.32	552.23	62.09	9.893	
12,100.00	8,402.01	12,633.96	8,902.01	45.81	46.12	143.85	-714.09	4,122.06	620.37	556.37	64.00	9.694	
12,200.00	8,402.01	12,733.43	8,902.01	46.88	47.18	143.09	-713.95	4,221.53	626.53	560.60	65.94	9.502	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 552H - 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		Offset Wellbore Centre		Distance			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)	Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
12,300.00	8,402.01	12,832.90	8,902.01	47.95	48.25	142.35	-713.81	4,321.00	632.80	564.89	67.91	9.318		
12,400.00	8,402.01	12,932.36	8,902.01	49.02	49.33	141.62	-713.68	4,420.46	639.18	569.26	69.91	9.142		
12,500.00	8,402.01	13,031.83	8,902.01	50.10	50.40	140.90	-713.54	4,519.93	645.65	573.70	71.95	8.974		
12,600.00	8,402.01	13,127.64	8,902.01	51.17	51.44	140.22	-713.51	4,615.74	652.31	578.32	73.99	8.816		
12,700.00	8,402.01	13,214.02	8,902.01	52.25	52.38	139.49	-715.45	4,702.09	660.52	584.43	76.09	8.680		
12,800.00	8,402.01	13,300.00	8,902.01	53.33	53.33	138.61	-719.96	4,787.95	670.85	592.51	78.34	8.563		
12,900.00	8,402.01	13,384.41	8,902.01	54.41	54.26	137.61	-726.89	4,872.07	683.38	602.68	80.70	8.468		
13,000.00	8,402.01	13,478.61	8,902.01	55.49	55.28	136.41	-736.65	4,965.76	697.65	614.32	83.33	8.372		
13,100.00	8,402.01	13,576.42	8,902.01	56.58	56.35	135.22	-746.87	5,063.04	712.31	626.26	86.04	8.279		
13,200.00	8,402.01	13,674.24	8,902.01	57.66	57.42	134.07	-757.10	5,160.32	727.26	638.51	88.75	8.195		
13,300.00	8,402.01	13,772.05	8,902.01	58.75	58.49	132.96	-767.32	5,257.60	742.50	651.05	91.45	8.119		
13,400.00	8,402.01	13,869.87	8,902.01	59.84	59.56	131.90	-777.55	5,354.88	758.00	663.86	94.14	8.052		
13,500.00	8,402.01	13,967.68	8,902.01	60.93	60.63	130.88	-787.77	5,452.16	773.74	676.92	96.82	7.991		
13,600.00	8,402.01	14,065.50	8,902.01	62.02	61.70	129.90	-798.00	5,549.44	789.73	690.23	99.49	7.938		
13,700.00	8,402.01	14,163.31	8,902.01	63.11	62.77	128.96	-808.22	5,646.72	805.93	703.77	102.15	7.890		
13,800.00	8,402.01	14,261.12	8,902.01	64.20	63.85	128.06	-818.45	5,743.99	822.33	717.54	104.80	7.847		
13,900.00	8,402.01	14,358.94	8,902.01	65.29	64.92	127.19	-828.67	5,841.27	838.94	731.51	107.43	7.809		
14,000.00	8,402.01	14,456.75	8,902.01	66.39	66.00	126.36	-838.89	5,938.55	855.72	745.67	110.05	7.776		
14,100.00	8,402.01	14,554.57	8,902.01	67.48	67.07	125.55	-849.12	6,035.83	872.68	760.02	112.65	7.746		
14,200.00	8,402.01	14,652.38	8,902.01	68.58	68.15	124.78	-859.34	6,133.11	889.80	774.55	115.25	7.721		
14,211.23	8,402.01	14,663.37	8,902.01	68.70	68.27	124.69	-860.49	6,144.03	891.73	776.19	115.54	7.718		
14,300.00	8,402.01	14,750.47	8,902.01	69.68	69.23	123.92	-869.60	6,230.66	905.95	788.16	117.79	7.691		
14,400.00	8,402.01	14,864.84	8,902.01	70.79	70.50	123.16	-880.96	6,344.46	918.99	798.46	120.53	7.625		
14,500.00	8,402.01	15,001.48	8,902.01	71.90	72.02	122.71	-889.23	6,480.83	925.87	802.56	123.31	7.508		
14,600.00	8,402.01	15,138.85	8,902.01	73.01	73.54	122.71	-890.98	6,618.18	925.81	800.23	125.58	7.372		
14,700.00	8,402.01	15,275.46	8,902.01	74.13	75.05	123.17	-886.19	6,754.70	918.79	791.52	127.28	7.219		
14,800.00	8,402.01	15,395.86	8,902.01	75.23	76.36	124.00	-876.84	6,874.72	905.30	776.84	128.46	7.047		
14,861.23	8,402.01	15,455.88	8,902.01	75.90	77.01	124.54	-871.61	6,934.52	895.25	766.15	129.10	6.935		
14,900.00	8,402.01	15,493.80	8,902.01	76.33	77.42	124.83	-868.31	6,972.30	888.57	759.10	129.47	6.863		
15,000.00	8,402.01	15,591.62	8,902.01	77.42	78.48	125.61	-859.78	7,069.74	871.46	741.07	130.39	6.684		
15,100.00	8,402.01	15,689.43	8,902.01	78.52	79.55	126.41	-851.26	7,167.18	854.52	723.29	131.23	6.512		
15,200.00	8,402.01	15,787.25	8,902.01	79.61	80.61	127.25	-842.73	7,264.63	837.74	705.76	131.98	6.347		
15,300.00	8,402.01	15,885.06	8,902.01	80.71	81.68	128.12	-834.21	7,362.07	821.16	688.51	132.65	6.191		
15,400.00	8,402.01	15,982.88	8,902.01	81.81	82.74	129.03	-825.68	7,459.51	804.76	671.55	133.22	6.041		
15,500.00	8,402.01	16,080.69	8,902.01	82.91	83.81	129.97	-817.16	7,556.95	788.58	654.89	133.68	5.899		
15,600.00	8,402.01	16,178.51	8,902.01	84.01	84.88	130.95	-808.63	7,654.40	772.61	638.57	134.04	5.764		
15,700.00	8,402.01	16,276.32	8,902.01	85.11	85.95	131.97	-800.11	7,751.84	756.88	622.60	134.28	5.636		
15,800.00	8,402.01	16,374.14	8,902.01	86.21	87.02	133.04	-791.58	7,849.28	741.40	607.00	134.40	5.516		
15,900.00	8,402.01	16,461.80	8,902.01	87.31	87.98	134.00	-784.47	7,936.66	726.64	592.10	134.54	5.401		
16,000.00	8,402.01	16,545.18	8,902.01	88.41	88.90	134.82	-780.01	8,019.91	714.06	579.30	134.76	5.299		
16,100.00	8,402.01	16,629.35	8,902.01	89.52	89.84	135.53	-777.98	8,104.05	703.72	568.66	135.06	5.210		
16,200.00	8,402.01	16,714.18	8,902.01	90.62	90.78	136.11	-778.42	8,188.88	695.56	560.07	135.49	5.134		
16,300.00	8,402.01	16,808.95	8,902.01	91.73	91.83	136.64	-781.13	8,283.61	689.08	552.95	136.13	5.062		
16,400.00	8,402.01	16,908.53	8,902.01	92.83	92.94	137.20	-784.12	8,383.14	682.78	545.98	136.80	4.991		
16,500.00	8,402.01	17,008.10	8,902.01	93.94	94.05	137.77	-787.10	8,482.67	676.55	539.12	137.42	4.923		
16,600.00	8,402.01	17,107.68	8,902.01	95.04	95.16	138.35	-790.09	8,582.20	670.38	532.38	138.00	4.858		
16,700.00	8,402.01	17,207.25	8,902.01	96.15	96.26	138.94	-793.08	8,681.73	664.29	525.76	138.53	4.795		
16,800.00	8,402.01	17,306.83	8,902.01	97.26	97.37	139.55	-796.07	8,781.26	658.27	519.26	139.00	4.736		
16,900.00	8,402.01	17,406.40	8,902.01	98.36	98.48	140.16	-799.06	8,880.80	652.32	512.89	139.43	4.679		
17,000.00	8,402.01	17,505.98	8,902.01	99.47	99.59	140.78	-802.05	8,980.33	646.45	506.65	139.80	4.624		
17,100.00	8,402.01	17,605.56	8,902.01	100.58	100.70	141.42	-805.04	9,079.86	640.65	500.54	140.12	4.572		

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 552H - OWB - PWP0												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)			
17,200.00	8,402.01	17,705.13	8,902.01	101.69	101.81	142.07	-808.03	9,179.39	634.94	494.56	140.38	4.523	
17,300.00	8,402.01	17,804.71	8,902.01	102.80	102.92	142.73	-811.01	9,278.92	629.31	488.72	140.59	4.476	
17,400.00	8,402.01	17,904.28	8,902.01	103.91	104.03	143.40	-814.00	9,378.45	623.77	483.03	140.74	4.432	
17,500.00	8,402.01	18,003.86	8,902.01	105.02	105.14	144.08	-816.99	9,477.98	618.31	477.47	140.83	4.390	
17,600.00	8,402.01	18,103.43	8,902.01	106.13	106.25	144.78	-819.98	9,577.51	612.94	472.07	140.87	4.351	
17,700.00	8,402.01	18,203.01	8,902.01	107.24	107.36	145.48	-822.97	9,677.04	607.66	466.82	140.84	4.314	
17,800.00	8,402.01	18,302.59	8,902.01	108.35	108.47	146.20	-825.96	9,776.57	602.48	461.72	140.76	4.280	
17,900.00	8,402.01	18,402.16	8,902.01	109.46	109.58	146.93	-828.95	9,876.10	597.40	456.78	140.62	4.248	
17,961.23	8,402.01	18,463.13	8,902.01	110.14	110.26	147.39	-830.78	9,937.04	594.33	453.83	140.50	4.230	
18,000.00	8,402.01	18,501.76	8,902.01	110.57	110.70	147.62	-831.94	9,975.66	592.55	452.09	140.46	4.219	
18,061.23	8,402.01	18,562.84	8,902.01	111.25	111.38	147.93	-833.77	10,036.71	590.33	449.76	140.57	4.199	
18,100.00	8,402.01	18,601.55	8,902.01	111.69	111.81	148.11	-834.93	10,075.41	589.15	448.44	140.71	4.187	
18,200.00	8,402.01	18,701.39	8,902.01	112.80	112.92	148.58	-837.93	10,175.20	586.15	445.10	141.05	4.156	
18,300.00	8,402.01	18,801.23	8,902.01	113.92	114.04	149.06	-840.92	10,274.99	583.18	441.83	141.36	4.126	
18,400.00	8,402.01	18,901.06	8,902.01	115.04	115.15	149.55	-843.92	10,374.78	580.26	438.63	141.63	4.097	
18,500.00	8,402.01	19,000.90	8,902.01	116.15	116.27	150.04	-846.92	10,474.57	577.38	435.50	141.88	4.070	
18,600.00	8,402.01	19,100.73	8,902.01	117.27	117.38	150.53	-849.91	10,574.36	574.54	432.45	142.09	4.043	
18,700.00	8,402.01	19,200.57	8,902.01	118.39	118.50	151.03	-852.91	10,674.15	571.74	429.47	142.27	4.019	
18,800.00	8,402.01	19,300.41	8,902.01	119.51	119.61	151.53	-855.91	10,773.94	568.99	426.56	142.43	3.995	
18,900.00	8,402.01	19,400.24	8,902.01	120.63	120.73	152.04	-858.90	10,873.74	566.28	423.73	142.55	3.973	
18,961.23	8,402.01	19,461.37	8,902.01	121.31	121.41	152.35	-860.74	10,934.84	564.64	422.03	142.61	3.959	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 - ASTRODOG FEE 0809 133H - OWB - AWP													Offset Site Error: 0.00 usft
Survey Program: 213-r.5 MWD+IFR1													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)			
18,300.00	8,402.01	8,445.26	8,303.32	113.92	34.13	77.74	-1,063.72	11,048.41	931.35	828.91	102.45	9.091	
18,400.00	8,402.01	8,455.29	8,313.29	115.04	34.17	78.96	-1,064.31	11,049.29	846.11	736.51	109.60	7.720	
18,500.00	8,402.01	8,465.13	8,323.08	116.15	34.21	80.16	-1,064.88	11,050.15	764.34	646.27	118.07	6.473	
18,600.00	8,402.01	8,474.77	8,332.67	117.27	34.25	81.35	-1,065.44	11,050.98	687.28	559.28	128.00	5.369	
18,700.00	8,402.01	8,484.23	8,342.07	118.39	34.28	82.52	-1,065.99	11,051.78	616.69	477.35	139.34	4.426	
18,800.00	8,402.01	8,493.68	8,351.48	119.51	34.32	83.69	-1,066.53	11,052.58	555.07	403.47	151.59	3.662	
18,900.00	8,402.01	8,503.33	8,361.08	120.63	34.36	84.88	-1,067.08	11,053.38	505.69	342.27	163.42	3.094	
18,961.23	8,402.01	8,509.07	8,366.79	121.31	34.38	85.60	-1,067.40	11,053.85	483.16	313.71	169.45	2.851	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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 - ASTRODOG FEE 0809 213H - OWB - AWP													Offset Site Error: 0.00 usft
Survey Program: 165-r.5 MWD+IFR1													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)			
18,100.00	8,402.01	8,543.46	8,413.99	111.69	21.67	-93.47	-411.86	11,074.95	996.53	949.53	47.00	21.204	
18,200.00	8,402.01	8,542.61	8,413.14	112.80	21.67	-93.23	-411.84	11,074.96	898.74	849.96	48.78	18.423	
18,300.00	8,402.01	8,541.77	8,412.30	113.92	21.67	-92.98	-411.82	11,074.97	801.50	750.24	51.25	15.639	
18,400.00	8,402.01	8,540.93	8,411.46	115.04	21.67	-92.74	-411.81	11,074.98	705.02	650.28	54.74	12.880	
18,500.00	8,402.01	8,540.08	8,410.61	116.15	21.67	-92.49	-411.79	11,074.98	609.68	549.90	59.78	10.199	
18,600.00	8,402.01	8,539.23	8,409.77	117.27	21.67	-92.25	-411.78	11,074.99	516.10	448.83	67.28	7.671	
18,700.00	8,402.01	8,538.39	8,408.92	118.39	21.67	-92.00	-411.76	11,075.00	425.46	346.75	78.71	5.405	
18,800.00	8,402.01	8,537.54	8,408.07	119.51	21.67	-91.76	-411.75	11,075.01	340.10	243.62	96.48	3.525	
18,900.00	8,402.01	8,536.69	8,407.22	120.63	21.67	-91.51	-411.73	11,075.02	265.18	141.70	123.48	2.148	Caution - Monitor Closely
18,961.23	8,402.01	8,536.17	8,406.70	121.31	21.67	-91.36	-411.72	11,075.02	228.96	84.80	144.16	1.588	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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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													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)			
13,600.00	8,402.01	8,375.47	8,408.21	62.02	53.31	91.60	-308.52	6,606.24	999.97	926.86	73.10	13.679	
13,700.00	8,402.01	8,376.02	8,408.76	63.11	53.31	91.75	-308.49	6,606.24	902.73	829.11	73.62	12.262	
13,800.00	8,402.01	8,376.57	8,409.31	64.20	53.31	91.89	-308.46	6,606.24	806.16	731.81	74.36	10.842	
13,900.00	8,402.01	8,377.12	8,409.85	65.29	53.31	92.03	-308.43	6,606.24	710.55	635.10	75.45	9.417	
14,000.00	8,402.01	8,377.66	8,410.40	66.39	53.31	92.17	-308.40	6,606.24	616.33	539.20	77.13	7.991	
14,100.00	8,402.01	8,378.21	8,410.94	67.48	53.31	92.31	-308.37	6,606.24	524.25	444.44	79.81	6.569	
14,200.00	8,402.01	8,378.76	8,411.49	68.58	53.31	92.45	-308.34	6,606.24	435.68	351.45	84.23	5.173	
14,211.23	8,402.01	8,378.82	8,411.55	68.70	53.31	92.47	-308.34	6,606.24	426.06	341.17	84.88	5.019	
14,300.00	8,402.01	8,379.23	8,411.97	69.68	53.31	92.70	-308.32	6,606.24	352.42	260.91	91.51	3.851	
14,400.00	8,402.01	8,379.53	8,412.26	70.79	53.31	92.89	-308.30	6,606.24	277.69	174.78	102.91	2.698 Normal Operations	
14,500.00	8,402.01	8,379.64	8,412.37	71.90	53.31	92.99	-308.30	6,606.24	220.46	102.54	117.92	1.870 Caution - Monitor Closely	
14,600.00	8,402.01	8,379.57	8,412.30	73.01	53.31	93.00	-308.30	6,606.24	196.74	70.39	126.35	1.557 Caution - Monitor Closely, ES, SF	
14,604.45	8,402.01	8,379.56	8,412.29	73.06	53.31	93.00	-308.30	6,606.24	196.72	70.42	126.30	1.558 Caution - Monitor Closely, CC	
14,700.00	8,402.01	8,379.31	8,412.05	74.13	53.31	92.90	-308.32	6,606.24	217.81	101.30	116.50	1.870 Caution - Monitor Closely	
14,800.00	8,402.01	8,378.88	8,411.61	75.23	53.31	92.71	-308.34	6,606.24	273.47	173.00	100.48	2.722 Normal Operations	
14,861.23	8,402.01	8,378.52	8,411.26	75.90	53.31	92.55	-308.36	6,606.24	317.34	224.62	92.73	3.422	
14,900.00	8,402.01	8,378.28	8,411.01	76.33	53.31	92.49	-308.37	6,606.24	347.60	258.71	88.89	3.910	
15,000.00	8,402.01	8,377.64	8,410.37	77.42	53.31	92.31	-308.40	6,606.24	431.97	349.78	82.19	5.256	
15,100.00	8,402.01	8,377.00	8,409.74	78.52	53.31	92.13	-308.44	6,606.24	521.89	443.43	78.45	6.652	
15,200.00	8,402.01	8,376.36	8,409.10	79.61	53.31	91.96	-308.47	6,606.24	614.92	538.59	76.33	8.056	
15,300.00	8,402.01	8,375.72	8,408.46	80.71	53.31	91.78	-308.50	6,606.24	709.86	634.77	75.09	9.453	
15,400.00	8,402.01	8,375.09	8,407.82	81.81	53.30	91.61	-308.54	6,606.24	806.02	731.67	74.35	10.841	
15,500.00	8,402.01	8,374.45	8,407.19	82.91	53.30	91.43	-308.57	6,606.24	903.01	829.10	73.91	12.218	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 - H F 7 FEDERAL COM 001 - 105° WB - 105° WP												Offset Site Error:	0.00 usft
Survey Program: 238-r.5 MWD												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
13,900.00	8,402.01	8,320.38	8,353.19	65.29	53.22	83.97	-532.36	6,775.79	942.69	856.22	86.47	10.902	
14,000.00	8,402.01	8,325.27	8,358.07	66.39	53.22	84.57	-532.43	6,776.04	857.08	768.21	88.87	9.644	
14,100.00	8,402.01	8,330.15	8,362.95	67.48	53.23	85.17	-532.49	6,776.28	774.89	682.92	91.97	8.425	
14,200.00	8,402.01	8,335.04	8,367.83	68.58	53.24	85.77	-532.56	6,776.53	697.33	601.37	95.96	7.267	
14,211.23	8,402.01	8,335.59	8,368.38	68.70	53.24	85.84	-532.57	6,776.56	688.98	592.51	96.48	7.142	
14,300.00	8,402.01	8,339.95	8,372.74	69.68	53.25	86.26	-532.63	6,776.78	625.13	524.19	100.93	6.193	
14,400.00	8,402.01	8,344.92	8,377.70	70.79	53.26	86.79	-532.69	6,777.03	558.70	451.90	106.79	5.232	
14,500.00	8,402.01	8,349.95	8,382.72	71.90	53.26	87.39	-532.76	6,777.28	500.42	387.14	113.28	4.418	
14,600.00	8,402.01	8,355.02	8,387.78	73.01	53.27	88.04	-532.83	6,777.54	453.53	333.94	119.59	3.792	
14,700.00	8,402.01	8,360.13	8,392.89	74.13	53.28	88.73	-532.90	6,777.80	421.90	297.71	124.20	3.397	
14,800.00	8,402.01	8,365.28	8,398.04	75.23	53.29	89.44	-532.97	6,778.06	409.14	283.87	125.27	3.266 ES, SF	
14,812.06	8,402.01	8,365.91	8,398.66	75.36	53.29	89.53	-532.98	6,778.09	408.98	283.89	125.10	3.269 CC	
14,861.23	8,402.01	8,368.45	8,401.20	75.90	53.29	89.89	-533.01	6,778.22	411.50	287.76	123.74	3.326	
14,900.00	8,402.01	8,370.46	8,403.21	76.33	53.30	90.17	-533.04	6,778.32	417.24	295.27	121.97	3.421	
15,000.00	8,402.01	8,375.64	8,408.38	77.42	53.31	90.89	-533.11	6,778.58	447.43	331.94	115.49	3.874	
15,100.00	8,402.01	8,380.83	8,413.56	78.52	53.31	91.62	-533.18	6,778.85	496.23	388.16	108.07	4.592	
15,200.00	8,402.01	8,386.01	8,418.73	79.61	53.32	92.34	-533.25	6,779.11	558.79	457.42	101.37	5.512	
15,300.00	8,402.01	8,391.19	8,423.91	80.71	53.33	93.06	-533.32	6,779.37	631.03	535.05	95.98	6.575	
15,400.00	8,402.01	8,396.37	8,429.08	81.81	53.34	93.78	-533.39	6,779.63	709.99	618.11	91.88	7.728	
15,500.00	8,402.01	8,401.56	8,434.26	82.91	53.35	94.50	-533.46	6,779.89	793.68	704.85	88.83	8.935	
15,600.00	8,402.01	8,406.74	8,439.43	84.01	53.36	95.22	-533.53	6,780.16	880.74	794.16	86.58	10.173	
15,700.00	8,402.01	8,411.92	8,444.61	85.11	53.36	95.94	-533.60	6,780.42	970.28	885.36	84.92	11.426	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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												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)			
13,900.00	8,402.01	8,319.87	8,352.68	65.29	53.22	84.39	-574.68	6,758.23	944.51	856.21	88.30	10.697	
14,000.00	8,402.01	8,324.10	8,356.91	66.39	53.22	84.87	-574.79	6,758.42	861.63	770.48	91.14	9.454	
14,100.00	8,402.01	8,328.34	8,361.14	67.48	53.23	85.35	-574.90	6,758.61	782.73	688.01	94.72	8.263	
14,200.00	8,402.01	8,332.57	8,365.37	68.58	53.24	85.83	-575.01	6,758.81	709.15	609.98	99.16	7.151	
14,211.23	8,402.01	8,333.05	8,365.84	68.70	53.24	85.88	-575.03	6,758.83	701.29	601.57	99.72	7.033	
14,300.00	8,402.01	8,336.85	8,369.64	69.68	53.24	86.21	-575.13	6,759.00	641.64	537.19	104.45	6.143	
14,400.00	8,402.01	8,341.22	8,374.01	70.79	53.25	86.63	-575.24	6,759.20	580.60	470.23	110.37	5.260	
14,500.00	8,402.01	8,345.70	8,378.48	71.90	53.26	87.11	-575.36	6,759.40	528.33	411.85	116.48	4.536	
14,600.00	8,402.01	8,350.27	8,383.04	73.01	53.26	87.63	-575.48	6,759.61	487.71	365.81	121.90	4.001	
14,700.00	8,402.01	8,354.92	8,387.69	74.13	53.27	88.20	-575.60	6,759.82	461.90	336.60	125.30	3.686	
14,796.05	8,402.01	8,359.47	8,392.23	75.19	53.28	88.76	-575.72	6,760.03	453.44	327.96	125.48	3.614 CC, ES, SF	
14,800.00	8,402.01	8,359.66	8,392.41	75.23	53.28	88.79	-575.72	6,760.03	453.45	328.04	125.41	3.616	
14,861.23	8,402.01	8,362.59	8,395.35	75.90	53.28	89.16	-575.80	6,760.17	457.35	333.70	123.65	3.699	
14,900.00	8,402.01	8,364.46	8,397.21	76.33	53.29	89.40	-575.85	6,760.25	463.59	341.70	121.89	3.803	
15,000.00	8,402.01	8,369.28	8,402.02	77.42	53.29	90.00	-575.97	6,760.47	493.52	377.74	115.78	4.262	
15,100.00	8,402.01	8,374.09	8,406.83	78.52	53.30	90.61	-576.10	6,760.69	540.53	431.69	108.84	4.966	
15,200.00	8,402.01	8,378.91	8,411.65	79.61	53.31	91.22	-576.23	6,760.91	600.61	498.24	102.37	5.867	
15,300.00	8,402.01	8,383.73	8,416.46	80.71	53.32	91.82	-576.35	6,761.13	670.26	573.29	96.97	6.912	
15,400.00	8,402.01	8,388.55	8,421.27	81.81	53.33	92.43	-576.48	6,761.34	746.80	654.10	92.70	8.056	
15,500.00	8,402.01	8,393.36	8,426.08	82.91	53.33	93.03	-576.61	6,761.56	828.34	738.91	89.43	9.263	
15,600.00	8,402.01	8,398.18	8,430.89	84.01	53.34	93.63	-576.73	6,761.78	913.52	826.58	86.94	10.508	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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)			
13,900.00	8,402.01	8,322.09	8,354.90	65.29	53.22	84.97	-611.11	6,730.42	936.60	846.85	89.75	10.436	
14,000.00	8,402.01	8,325.38	8,358.19	66.39	53.22	85.32	-611.23	6,730.54	856.63	763.56	93.07	9.204	
14,100.00	8,402.01	8,328.68	8,361.48	67.48	53.23	85.67	-611.36	6,730.67	781.27	684.13	97.15	8.042	
14,200.00	8,402.01	8,331.97	8,364.77	68.58	53.23	86.03	-611.48	6,730.79	712.00	609.95	102.05	6.977	
14,211.23	8,402.01	8,332.34	8,365.14	68.70	53.24	86.06	-611.49	6,730.80	704.68	602.03	102.65	6.865	
14,300.00	8,402.01	8,335.32	8,368.11	69.68	53.24	86.29	-611.60	6,730.91	649.62	541.97	107.66	6.034	
14,400.00	8,402.01	8,338.80	8,371.59	70.79	53.25	86.60	-611.73	6,731.04	594.50	480.88	113.62	5.232	
14,500.00	8,402.01	8,342.43	8,375.21	71.90	53.25	86.95	-611.86	6,731.17	548.86	429.51	119.36	4.599	
14,600.00	8,402.01	8,346.18	8,378.95	73.01	53.26	87.34	-612.00	6,731.31	515.30	391.37	123.94	4.158	
14,700.00	8,402.01	8,350.05	8,382.82	74.13	53.26	87.77	-612.15	6,731.46	496.32	370.09	126.23	3.932	
14,766.22	8,402.01	8,352.68	8,385.45	74.86	53.27	88.07	-612.24	6,731.55	492.65	366.60	126.05	3.908 CC, ES, SF	
14,800.00	8,402.01	8,354.05	8,386.81	75.23	53.27	88.23	-612.29	6,731.60	493.61	368.20	125.41	3.936	
14,861.23	8,402.01	8,356.55	8,389.31	75.90	53.27	88.53	-612.39	6,731.70	500.16	376.83	123.33	4.055	
14,900.00	8,402.01	8,358.15	8,390.91	76.33	53.28	88.71	-612.45	6,731.76	507.69	386.20	121.50	4.179	
15,000.00	8,402.01	8,362.27	8,395.03	77.42	53.28	89.19	-612.60	6,731.91	539.61	424.08	115.53	4.671	
15,100.00	8,402.01	8,366.40	8,399.15	78.52	53.29	89.67	-612.75	6,732.06	587.00	478.09	108.91	5.390	
15,200.00	8,402.01	8,370.52	8,403.27	79.61	53.30	90.15	-612.90	6,732.21	646.47	543.78	102.69	6.295	
15,300.00	8,402.01	8,374.65	8,407.38	80.71	53.30	90.62	-613.06	6,732.37	715.02	617.64	97.37	7.343	
15,400.00	8,402.01	8,378.77	8,411.50	81.81	53.31	91.10	-613.21	6,732.52	790.28	697.22	93.06	8.492	
15,500.00	8,402.01	8,382.89	8,415.62	82.91	53.32	91.58	-613.36	6,732.67	870.51	780.86	89.65	9.710	
15,600.00	8,402.01	8,387.02	8,419.74	84.01	53.32	92.05	-613.51	6,732.83	954.47	867.47	87.00	10.971	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 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)			
13,700.00	8,402.01	8,363.37	8,396.13	63.11	53.29	88.56	-315.21	6,652.25	949.22	875.65	73.57	12.903	
13,800.00	8,402.01	8,365.25	8,398.00	64.20	53.29	89.01	-315.11	6,652.28	852.64	778.46	74.18	11.494	
13,900.00	8,402.01	8,367.12	8,399.87	65.29	53.29	89.48	-315.02	6,652.30	756.93	681.85	75.09	10.081	
14,000.00	8,402.01	8,369.00	8,401.75	66.39	53.29	89.94	-314.92	6,652.33	662.50	586.02	76.48	8.663	
14,100.00	8,402.01	8,370.87	8,403.62	67.48	53.30	90.40	-314.83	6,652.35	569.95	491.28	78.68	7.244	
14,200.00	8,402.01	8,372.75	8,405.49	68.58	53.30	90.86	-314.73	6,652.38	480.40	398.14	82.27	5.840	
14,211.23	8,402.01	8,372.96	8,405.70	68.70	53.30	90.91	-314.72	6,652.38	470.61	387.81	82.80	5.684	
14,300.00	8,402.01	8,374.56	8,407.30	69.68	53.30	91.37	-314.64	6,652.40	395.08	306.97	88.12	4.484	
14,400.00	8,402.01	8,376.19	8,408.93	70.79	53.31	91.88	-314.56	6,652.43	315.99	218.62	97.37	3.245	
14,500.00	8,402.01	8,377.66	8,410.39	71.90	53.31	92.35	-314.49	6,652.45	249.26	138.31	110.95	2.247 Caution - Monitor Closely	
14,600.00	8,402.01	8,378.94	8,411.68	73.01	53.31	92.75	-314.42	6,652.46	207.31	82.81	124.51	1.665 Caution - Monitor Closely	
14,653.02	8,402.01	8,379.55	8,412.28	73.60	53.31	92.93	-314.39	6,652.47	200.91	74.21	126.70	1.586 Caution - Monitor Closely, CC, ES, SF	
14,700.00	8,402.01	8,380.05	8,412.78	74.13	53.31	93.07	-314.36	6,652.48	205.96	82.02	123.94	1.662 Caution - Monitor Closely	
14,800.00	8,402.01	8,380.98	8,413.71	75.23	53.31	93.28	-314.32	6,652.49	245.86	136.59	109.27	2.250 Caution - Monitor Closely	
14,861.23	8,402.01	8,381.46	8,414.19	75.90	53.31	93.36	-314.29	6,652.50	284.00	183.96	100.04	2.839 Normal Operations	
14,900.00	8,402.01	8,381.74	8,414.47	76.33	53.32	93.44	-314.28	6,652.50	311.71	216.54	95.17	3.275	
15,000.00	8,402.01	8,382.47	8,415.20	77.42	53.32	93.64	-314.24	6,652.51	391.92	305.63	86.29	4.542	
15,100.00	8,402.01	8,383.20	8,415.93	78.52	53.32	93.84	-314.20	6,652.52	479.63	398.40	81.23	5.905	
15,200.00	8,402.01	8,383.93	8,416.65	79.61	53.32	94.04	-314.17	6,652.53	571.39	493.07	78.32	7.295	
15,300.00	8,402.01	8,384.66	8,417.38	80.71	53.32	94.24	-314.13	6,652.54	665.52	588.92	76.60	8.688	
15,400.00	8,402.01	8,385.38	8,418.11	81.81	53.32	94.44	-314.09	6,652.55	761.16	685.60	75.55	10.075	
15,500.00	8,402.01	8,386.11	8,418.84	82.91	53.32	94.64	-314.06	6,652.56	857.78	782.89	74.90	11.453	
15,600.00	8,402.01	8,386.84	8,419.56	84.01	53.32	94.84	-314.02	6,652.57	955.11	880.62	74.49	12.823	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
13,900.00	8,402.01	8,326.89	8,359.69	65.29	53.23	85.68	-639.24	6,694.18	919.23	828.43	90.81	10.123	
14,000.00	8,402.01	8,329.02	8,361.82	66.39	53.23	85.89	-639.34	6,694.23	842.25	747.65	94.60	8.903	
14,100.00	8,402.01	8,331.14	8,363.94	67.48	53.23	86.11	-639.43	6,694.29	770.57	671.40	99.17	7.770	
14,200.00	8,402.01	8,333.27	8,366.07	68.58	53.24	86.33	-639.53	6,694.34	705.81	601.28	104.52	6.753	
14,211.23	8,402.01	8,333.51	8,366.31	68.70	53.24	86.35	-639.54	6,694.35	699.06	593.89	105.17	6.647	
14,300.00	8,402.01	8,335.47	8,368.26	69.68	53.24	86.48	-639.63	6,694.40	648.85	538.43	110.42	5.876	
14,400.00	8,402.01	8,337.82	8,370.61	70.79	53.24	86.66	-639.73	6,694.46	600.03	483.65	116.38	5.156	
14,500.00	8,402.01	8,340.34	8,373.13	71.90	53.25	86.88	-639.85	6,694.53	561.52	439.80	121.71	4.613	
14,600.00	8,402.01	8,343.02	8,375.80	73.01	53.25	87.14	-639.97	6,694.60	535.58	410.11	125.47	4.269	
14,700.00	8,402.01	8,345.85	8,378.63	74.13	53.26	87.44	-640.10	6,694.67	524.13	397.40	126.73	4.136 SF	
14,724.00	8,402.01	8,346.56	8,379.33	74.39	53.26	87.52	-640.13	6,694.69	523.67	397.07	126.60	4.136 CC, ES	
14,800.00	8,402.01	8,348.84	8,381.61	75.23	53.26	87.77	-640.23	6,694.75	528.11	403.07	125.05	4.223	
14,861.23	8,402.01	8,350.74	8,383.51	75.90	53.26	87.99	-640.32	6,694.80	538.08	415.41	122.66	4.387	
14,900.00	8,402.01	8,351.96	8,384.73	76.33	53.27	88.12	-640.38	6,694.83	547.44	426.71	120.73	4.534	
15,000.00	8,402.01	8,355.11	8,387.88	77.42	53.27	88.46	-640.52	6,694.91	582.90	468.09	114.81	5.077	
15,100.00	8,402.01	8,358.26	8,391.02	78.52	53.28	88.80	-640.66	6,695.00	632.32	523.87	108.46	5.830	
15,200.00	8,402.01	8,361.41	8,394.17	79.61	53.28	89.15	-640.80	6,695.08	692.73	590.22	102.51	6.758	
15,300.00	8,402.01	8,364.56	8,397.31	80.71	53.29	89.49	-640.95	6,695.16	761.51	664.14	97.37	7.821	
15,400.00	8,402.01	8,367.71	8,400.46	81.81	53.29	89.83	-641.09	6,695.24	836.60	743.48	93.12	8.984	
15,500.00	8,402.01	8,370.86	8,403.60	82.91	53.30	90.17	-641.23	6,695.33	916.45	826.75	89.69	10.217	
15,600.00	8,402.01	8,374.01	8,406.75	84.01	53.30	90.52	-641.37	6,695.41	999.92	912.95	86.97	11.498	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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)			
13,800.00	8,402.01	8,333.12	8,365.91	64.20	53.24	86.40	-657.12	6,651.84	971.78	883.77	88.01	11.041	
13,900.00	8,402.01	8,333.94	8,366.73	65.29	53.24	86.48	-657.16	6,651.85	893.06	801.55	91.50	9.760	
14,000.00	8,402.01	8,334.76	8,367.55	66.39	53.24	86.56	-657.21	6,651.87	818.99	723.25	95.74	8.554	
14,100.00	8,402.01	8,335.57	8,368.37	67.48	53.24	86.64	-657.25	6,651.88	750.96	650.18	100.78	7.452	
14,200.00	8,402.01	8,336.39	8,369.19	68.58	53.24	86.72	-657.29	6,651.89	690.75	584.22	106.54	6.484	
14,211.23	8,402.01	8,336.49	8,369.28	68.70	53.24	86.73	-657.29	6,651.89	684.58	577.36	107.22	6.385	
14,300.00	8,402.01	8,337.28	8,370.07	69.68	53.24	86.75	-657.33	6,651.90	639.35	526.68	112.67	5.674	
14,400.00	8,402.01	8,338.35	8,371.14	70.79	53.24	86.81	-657.39	6,651.91	597.07	478.50	118.57	5.036	
14,500.00	8,402.01	8,339.60	8,372.38	71.90	53.25	86.90	-657.45	6,651.93	565.98	442.55	123.43	4.585	
14,600.00	8,402.01	8,341.02	8,373.81	73.01	53.25	87.03	-657.52	6,651.95	548.05	421.69	126.35	4.337	
14,673.35	8,402.01	8,342.17	8,374.96	73.83	53.25	87.15	-657.58	6,651.97	544.06	417.22	126.84	4.289 CC, ES, SF	
14,700.00	8,402.01	8,342.62	8,375.40	74.13	53.25	87.20	-657.60	6,651.97	544.59	417.95	126.64	4.300	
14,800.00	8,402.01	8,344.39	8,377.17	75.23	53.25	87.39	-657.69	6,652.00	555.87	431.70	124.17	4.477	
14,861.23	8,402.01	8,345.56	8,378.34	75.90	53.26	87.53	-657.75	6,652.01	569.72	448.21	121.51	4.689	
14,900.00	8,402.01	8,346.32	8,379.10	76.33	53.26	87.61	-657.79	6,652.02	581.27	461.78	119.49	4.865	
15,000.00	8,402.01	8,348.28	8,381.05	77.42	53.26	87.81	-657.89	6,652.05	621.32	507.71	113.61	5.469	
15,100.00	8,402.01	8,350.24	8,383.01	78.52	53.26	88.02	-657.99	6,652.08	673.94	566.40	107.54	6.267	
15,200.00	8,402.01	8,352.20	8,384.97	79.61	53.27	88.22	-658.09	6,652.10	736.43	634.52	101.92	7.226	
15,300.00	8,402.01	8,354.16	8,386.93	80.71	53.27	88.43	-658.19	6,652.13	806.52	709.48	97.04	8.311	
15,400.00	8,402.01	8,356.12	8,388.88	81.81	53.27	88.63	-658.29	6,652.15	882.38	789.42	92.97	9.491	
15,500.00	8,402.01	8,358.08	8,390.84	82.91	53.28	88.84	-658.39	6,652.18	962.67	873.02	89.64	10.739	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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:	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)			
13,800.00	8,402.01	8,343.31	8,376.09	64.20	53.25	87.42	-663.66	6,606.24	935.76	847.68	88.08	10.624	
13,900.00	8,402.01	8,342.76	8,375.54	65.29	53.25	87.36	-663.63	6,606.24	859.10	767.20	91.90	9.348	
14,000.00	8,402.01	8,342.21	8,375.00	66.39	53.25	87.31	-663.60	6,606.24	787.69	691.17	96.52	8.161	
14,100.00	8,402.01	8,341.67	8,374.45	67.48	53.25	87.26	-663.57	6,606.24	723.09	621.13	101.97	7.092	
14,200.00	8,402.01	8,341.12	8,373.90	68.58	53.25	87.20	-663.55	6,606.24	667.29	559.21	108.07	6.174	
14,211.23	8,402.01	8,341.06	8,373.84	68.70	53.25	87.19	-663.54	6,606.24	661.67	552.89	108.78	6.082	
14,300.00	8,402.01	8,340.64	8,373.43	69.68	53.25	87.11	-663.52	6,606.24	621.37	507.00	114.37	5.433	
14,400.00	8,402.01	8,340.35	8,373.14	70.79	53.25	87.04	-663.51	6,606.24	585.67	465.55	120.12	4.876	
14,500.00	8,402.01	8,340.24	8,373.02	71.90	53.25	87.00	-663.50	6,606.24	562.16	437.71	124.45	4.517	
14,600.00	8,402.01	8,340.31	8,373.09	73.01	53.25	87.00	-663.50	6,606.24	552.42	425.91	126.50	4.367	
14,617.23	8,402.01	8,340.34	8,373.12	73.21	53.25	87.00	-663.51	6,606.24	552.20	425.61	126.59	4.362 CC, ES, SF	
14,700.00	8,402.01	8,340.56	8,373.35	74.13	53.25	87.03	-663.52	6,606.24	557.19	431.33	125.85	4.427	
14,800.00	8,402.01	8,341.00	8,373.78	75.23	53.25	87.10	-663.54	6,606.24	576.10	453.42	122.68	4.696	
14,861.23	8,402.01	8,341.35	8,374.14	75.90	53.25	87.15	-663.56	6,606.24	594.11	474.32	119.79	4.960	
14,900.00	8,402.01	8,341.60	8,374.39	76.33	53.25	87.18	-663.57	6,606.24	608.06	490.35	117.71	5.166	
15,000.00	8,402.01	8,342.24	8,375.02	77.42	53.25	87.24	-663.60	6,606.24	653.33	541.41	111.92	5.837	
15,100.00	8,402.01	8,342.88	8,375.66	78.52	53.25	87.31	-663.64	6,606.24	709.90	603.74	106.16	6.687	
15,200.00	8,402.01	8,343.51	8,376.30	79.61	53.25	87.37	-663.67	6,606.24	775.28	674.37	100.92	7.682	
15,300.00	8,402.01	8,344.15	8,376.93	80.71	53.25	87.44	-663.70	6,606.24	847.45	751.06	96.39	8.792	
15,400.00	8,402.01	8,344.79	8,377.57	81.81	53.25	87.50	-663.74	6,606.24	924.81	832.21	92.60	9.987	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 - 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)			
13,700.00	8,402.01	8,356.50	8,389.27	63.11	53.27	88.71	-658.31	6,560.32	973.46	888.68	84.78	11.482	
13,800.00	8,402.01	8,354.63	8,387.40	64.20	53.27	88.52	-658.21	6,560.35	893.90	805.86	88.04	10.154	
13,900.00	8,402.01	8,352.75	8,385.52	65.29	53.27	88.33	-658.12	6,560.37	818.82	726.74	92.08	8.892	
14,000.00	8,402.01	8,350.88	8,383.65	66.39	53.26	88.14	-658.02	6,560.40	749.59	652.59	97.00	7.728	
14,100.00	8,402.01	8,349.00	8,381.78	67.48	53.26	87.95	-657.93	6,560.42	687.96	585.19	102.77	6.694	
14,200.00	8,402.01	8,347.13	8,379.90	68.58	53.26	87.76	-657.83	6,560.45	636.15	526.99	109.15	5.828	
14,211.23	8,402.01	8,346.92	8,379.69	68.70	53.26	87.74	-657.82	6,560.45	631.06	521.17	109.89	5.743	
14,300.00	8,402.01	8,345.32	8,378.10	69.68	53.26	87.54	-657.74	6,560.47	595.42	479.88	115.54	5.153	
14,400.00	8,402.01	8,343.68	8,376.46	70.79	53.25	87.34	-657.66	6,560.49	566.14	445.08	121.05	4.677	
14,500.00	8,402.01	8,342.22	8,375.00	71.90	53.25	87.18	-657.58	6,560.51	550.13	425.38	124.74	4.410	
14,560.49	8,402.01	8,341.42	8,374.21	72.57	53.25	87.09	-657.54	6,560.52	547.43	421.66	125.77	4.353 CC, ES, SF	
14,600.00	8,402.01	8,340.93	8,373.72	73.01	53.25	87.04	-657.52	6,560.53	548.58	422.69	125.89	4.358	
14,700.00	8,402.01	8,339.83	8,372.61	74.13	53.25	86.94	-657.46	6,560.55	561.62	437.29	124.33	4.517	
14,800.00	8,402.01	8,338.90	8,371.68	75.23	53.25	86.87	-657.42	6,560.56	588.27	467.73	120.54	4.880	
14,861.23	8,402.01	8,338.42	8,371.21	75.90	53.24	86.85	-657.39	6,560.57	610.56	493.09	117.47	5.197	
14,900.00	8,402.01	8,338.13	8,370.92	76.33	53.24	86.82	-657.38	6,560.57	626.99	511.64	115.36	5.435	
15,000.00	8,402.01	8,337.41	8,370.20	77.42	53.24	86.74	-657.34	6,560.58	677.83	568.10	109.72	6.178	
15,100.00	8,402.01	8,336.68	8,369.47	78.52	53.24	86.67	-657.30	6,560.59	738.77	634.44	104.33	7.081	
15,200.00	8,402.01	8,335.95	8,368.74	79.61	53.24	86.60	-657.27	6,560.60	807.53	708.01	99.52	8.114	
15,300.00	8,402.01	8,335.22	8,368.01	80.71	53.24	86.52	-657.23	6,560.61	882.29	786.87	95.41	9.247	
15,400.00	8,402.01	8,334.49	8,367.29	81.81	53.24	86.45	-657.19	6,560.62	961.64	869.66	91.98	10.454	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 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)			
13,700.00	8,402.01	8,369.39	8,402.14	63.11	53.30	90.01	-641.17	6,517.19	927.42	842.71	84.71	10.949	
13,800.00	8,402.01	8,366.31	8,399.06	64.20	53.29	89.69	-641.03	6,517.27	848.38	760.38	88.00	9.641	
13,900.00	8,402.01	8,363.24	8,395.99	65.29	53.29	89.37	-640.89	6,517.35	774.19	682.04	92.15	8.402	
14,000.00	8,402.01	8,360.16	8,392.92	66.39	53.28	89.04	-640.75	6,517.43	706.38	609.13	97.25	7.264	
14,100.00	8,402.01	8,357.08	8,389.85	67.48	53.27	88.72	-640.61	6,517.51	646.95	543.70	103.26	6.266	
14,200.00	8,402.01	8,354.01	8,386.78	68.58	53.27	88.39	-640.47	6,517.59	598.43	488.58	109.84	5.448	
14,211.23	8,402.01	8,353.66	8,386.43	68.70	53.27	88.36	-640.45	6,517.60	593.78	483.19	110.59	5.369	
14,300.00	8,402.01	8,350.99	8,383.76	69.68	53.26	88.05	-640.33	6,517.67	562.29	446.05	116.24	4.837	
14,400.00	8,402.01	8,348.12	8,380.90	70.79	53.26	87.73	-640.20	6,517.75	538.98	417.56	121.42	4.439	
14,500.00	8,402.01	8,345.41	8,378.19	71.90	53.26	87.43	-640.08	6,517.82	530.18	405.80	124.38	4.263	
14,507.74	8,402.01	8,345.21	8,377.99	71.99	53.26	87.40	-640.07	6,517.83	530.13	405.64	124.49	4.258 CC, ES, SF	
14,600.00	8,402.01	8,342.85	8,375.64	73.01	53.25	87.16	-639.96	6,517.89	536.63	412.08	124.55	4.308	
14,700.00	8,402.01	8,340.46	8,373.25	74.13	53.25	86.92	-639.85	6,517.95	557.80	435.69	122.10	4.568	
14,800.00	8,402.01	8,338.23	8,371.02	75.23	53.24	86.72	-639.75	6,518.01	592.08	474.31	117.76	5.028	
14,861.23	8,402.01	8,336.95	8,369.74	75.90	53.24	86.62	-639.69	6,518.04	618.62	504.06	114.57	5.400	
14,900.00	8,402.01	8,336.15	8,368.95	76.33	53.24	86.54	-639.66	6,518.06	637.55	525.11	112.45	5.670	
15,000.00	8,402.01	8,334.11	8,366.90	77.42	53.24	86.33	-639.57	6,518.12	694.02	587.00	107.03	6.485	
15,100.00	8,402.01	8,332.06	8,364.86	78.52	53.23	86.11	-639.47	6,518.17	759.51	657.47	102.04	7.443	
15,200.00	8,402.01	8,330.02	8,362.82	79.61	53.23	85.90	-639.38	6,518.22	831.88	734.17	97.71	8.514	
15,300.00	8,402.01	8,327.97	8,360.78	80.71	53.23	85.69	-639.29	6,518.28	909.51	815.43	94.07	9.668	
15,400.00	8,402.01	8,325.93	8,358.74	81.81	53.22	85.47	-639.20	6,518.33	991.14	900.08	91.07	10.884	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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												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)			
13,600.00	8,402.01	8,385.70	8,418.42	62.02	53.32	91.84	-613.47	6,479.70	964.44	882.05	82.39	11.706	
13,700.00	8,402.01	8,381.63	8,414.36	63.11	53.32	91.38	-613.32	6,479.85	881.28	796.43	84.85	10.387	
13,800.00	8,402.01	8,377.56	8,410.30	64.20	53.31	90.93	-613.16	6,480.01	801.95	713.90	88.05	9.108	
13,900.00	8,402.01	8,373.49	8,406.24	65.29	53.30	90.47	-613.01	6,480.16	727.72	635.54	92.17	7.895	
14,000.00	8,402.01	8,369.43	8,402.17	66.39	53.30	90.02	-612.86	6,480.31	660.29	562.95	97.34	6.784	
14,100.00	8,402.01	8,365.36	8,398.11	67.48	53.29	89.56	-612.71	6,480.46	601.96	498.47	103.49	5.817	
14,200.00	8,402.01	8,361.29	8,394.05	68.58	53.28	89.11	-612.56	6,480.61	555.61	445.40	110.21	5.041	
14,211.23	8,402.01	8,360.84	8,393.59	68.70	53.28	89.06	-612.55	6,480.62	551.29	440.33	110.97	4.968	
14,300.00	8,402.01	8,357.27	8,390.03	69.68	53.28	88.64	-612.41	6,480.76	523.08	406.51	116.57	4.487	
14,400.00	8,402.01	8,353.37	8,386.14	70.79	53.27	88.19	-612.27	6,480.90	504.96	383.64	121.33	4.162	
14,463.14	8,402.01	8,350.97	8,383.74	71.49	53.26	87.91	-612.18	6,480.99	501.70	378.69	123.01	4.078 CC, ES	
14,500.00	8,402.01	8,349.59	8,382.36	71.90	53.26	87.76	-612.13	6,481.04	502.82	379.37	123.45	4.073 SF	
14,600.00	8,402.01	8,345.94	8,378.72	73.01	53.26	87.35	-611.99	6,481.18	516.85	394.26	122.58	4.216	
14,700.00	8,402.01	8,342.42	8,375.21	74.13	53.25	86.99	-611.86	6,481.31	545.79	426.55	119.24	4.577	
14,800.00	8,402.01	8,339.04	8,371.83	75.23	53.25	86.66	-611.74	6,481.43	587.43	473.02	114.41	5.135	
14,861.23	8,402.01	8,337.04	8,369.83	75.90	53.24	86.48	-611.67	6,481.50	618.10	506.98	111.12	5.562	
14,900.00	8,402.01	8,335.79	8,368.59	76.33	53.24	86.35	-611.62	6,481.55	639.45	530.43	109.02	5.865	
15,000.00	8,402.01	8,332.57	8,365.37	77.42	53.24	86.00	-611.50	6,481.67	701.44	597.56	103.87	6.753	
15,100.00	8,402.01	8,329.35	8,362.15	78.52	53.23	85.64	-611.38	6,481.79	771.44	672.10	99.34	7.766	
15,200.00	8,402.01	8,326.13	8,358.93	79.61	53.23	85.29	-611.26	6,481.91	847.46	751.95	95.52	8.872	
15,300.00	8,402.01	8,322.91	8,355.72	80.71	53.22	84.94	-611.14	6,482.03	928.04	835.66	92.37	10.047	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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												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
13,600.00	8,402.01	8,397.17	8,429.88	62.02	53.34	93.38	-576.70	6,450.75	922.78	839.90	82.88	11.134	
13,700.00	8,402.01	8,392.39	8,425.11	63.11	53.33	92.80	-576.58	6,450.96	838.47	753.32	85.14	9.848	
13,800.00	8,402.01	8,387.61	8,420.33	64.20	53.32	92.22	-576.45	6,451.18	757.94	669.77	88.17	8.597	
13,900.00	8,402.01	8,382.83	8,415.56	65.29	53.32	91.65	-576.33	6,451.40	682.55	590.40	92.15	7.407	
14,000.00	8,402.01	8,378.05	8,410.78	66.39	53.31	91.07	-576.20	6,451.61	614.19	516.92	97.27	6.314	
14,100.00	8,402.01	8,373.27	8,406.01	67.48	53.30	90.49	-576.08	6,451.83	555.47	451.97	103.50	5.367	
14,200.00	8,402.01	8,368.49	8,401.23	68.58	53.29	89.91	-575.95	6,452.05	509.72	399.38	110.34	4.619	
14,211.23	8,402.01	8,367.95	8,400.70	68.70	53.29	89.84	-575.94	6,452.07	505.56	394.45	111.11	4.550	
14,300.00	8,402.01	8,363.73	8,396.49	69.68	53.29	89.32	-575.83	6,452.26	479.31	362.65	116.66	4.108	
14,400.00	8,402.01	8,359.06	8,391.82	70.79	53.28	88.74	-575.71	6,452.47	465.17	344.21	120.96	3.846	
14,429.91	8,402.01	8,357.68	8,390.44	71.12	53.28	88.57	-575.67	6,452.54	464.37	342.70	121.67	3.817 CC, ES, SF	
14,500.00	8,402.01	8,354.48	8,387.24	71.90	53.27	88.18	-575.59	6,452.68	468.77	346.63	122.14	3.838	
14,600.00	8,402.01	8,349.98	8,382.75	73.01	53.26	87.65	-575.47	6,452.88	489.71	369.57	120.13	4.076	
14,700.00	8,402.01	8,345.58	8,378.36	74.13	53.26	87.15	-575.35	6,453.08	525.90	410.03	115.88	4.539	
14,800.00	8,402.01	8,341.28	8,374.06	75.23	53.25	86.69	-575.24	6,453.28	574.44	463.86	110.58	5.195	
14,861.23	8,402.01	8,338.70	8,371.49	75.90	53.25	86.44	-575.17	6,453.40	608.99	501.75	107.24	5.679	
14,900.00	8,402.01	8,337.08	8,369.87	76.33	53.24	86.25	-575.13	6,453.47	632.64	527.45	105.19	6.014	
15,000.00	8,402.01	8,332.90	8,365.70	77.42	53.24	85.77	-575.02	6,453.66	699.86	599.52	100.34	6.975	
15,100.00	8,402.01	8,328.72	8,361.52	78.52	53.23	85.28	-574.91	6,453.85	774.18	677.90	96.28	8.041	
15,200.00	8,402.01	8,324.54	8,357.35	79.61	53.22	84.80	-574.80	6,454.04	853.73	760.76	92.97	9.183	
15,300.00	8,402.01	8,320.36	8,353.17	80.71	53.22	84.31	-574.69	6,454.23	937.19	846.87	90.32	10.376	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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												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)			
13,500.00	8,402.01	8,411.28	8,443.97	60.93	53.36	95.61	-533.59	6,432.10	977.66	895.82	81.84	11.946	
13,600.00	8,402.01	8,406.11	8,438.81	62.02	53.36	94.92	-533.52	6,432.36	888.89	805.55	83.34	10.666	
13,700.00	8,402.01	8,400.94	8,433.64	63.11	53.35	94.24	-533.45	6,432.62	802.72	717.35	85.38	9.402	
13,800.00	8,402.01	8,395.77	8,428.48	64.20	53.34	93.55	-533.38	6,432.88	720.11	631.95	88.16	8.168	
13,900.00	8,402.01	8,390.60	8,423.32	65.29	53.33	92.86	-533.31	6,433.14	642.41	550.47	91.94	6.987	
14,000.00	8,402.01	8,385.43	8,418.16	66.39	53.32	92.17	-533.24	6,433.40	571.65	474.71	96.94	5.897	
14,100.00	8,402.01	8,380.27	8,413.00	67.48	53.31	91.47	-533.17	6,433.66	510.70	407.49	103.21	4.948	
14,200.00	8,402.01	8,375.10	8,407.83	68.58	53.30	90.78	-533.10	6,433.92	463.46	353.20	110.26	4.203	
14,211.23	8,402.01	8,374.52	8,407.25	68.70	53.30	90.70	-533.09	6,433.95	459.21	348.16	111.04	4.135	
14,300.00	8,402.01	8,369.94	8,402.68	69.68	53.30	90.09	-533.03	6,434.19	433.07	316.40	116.67	3.712	
14,400.00	8,402.01	8,364.82	8,397.57	70.79	53.29	89.40	-532.96	6,434.44	421.09	300.52	120.57	3.492	
14,410.17	8,402.01	8,364.30	8,397.05	70.90	53.29	89.33	-532.96	6,434.47	420.99	300.22	120.76	3.486	CC, ES, SF
14,500.00	8,402.01	8,359.73	8,392.49	71.90	53.28	88.71	-532.89	6,434.70	429.06	308.34	120.72	3.554	
14,600.00	8,402.01	8,354.70	8,387.46	73.01	53.27	88.05	-532.83	6,434.96	455.92	338.47	117.45	3.882	
14,700.00	8,402.01	8,349.71	8,382.49	74.13	53.26	87.42	-532.76	6,435.21	498.61	386.41	112.21	4.444	
14,800.00	8,402.01	8,344.79	8,377.57	75.23	53.25	86.84	-532.69	6,435.46	553.43	446.98	106.45	5.199	
14,861.23	8,402.01	8,341.80	8,374.59	75.90	53.25	86.52	-532.65	6,435.61	591.54	488.47	103.07	5.739	
14,900.00	8,402.01	8,339.92	8,372.71	76.33	53.25	86.28	-532.63	6,435.70	617.30	516.23	101.07	6.108	
15,000.00	8,402.01	8,335.07	8,367.86	77.42	53.24	85.67	-532.56	6,435.95	689.34	592.79	96.55	7.140	
15,100.00	8,402.01	8,330.22	8,363.02	78.52	53.23	85.05	-532.49	6,436.19	767.64	674.69	92.95	8.259	
15,200.00	8,402.01	8,325.37	8,358.17	79.61	53.22	84.44	-532.43	6,436.44	850.48	760.34	90.14	9.435	
15,300.00	8,402.01	8,320.51	8,353.33	80.71	53.22	83.83	-532.36	6,436.68	936.65	848.68	87.96	10.648	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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
Measured Depth (usft)	Vertical Depth (usft)	Measured 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)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
13,500.00	8,402.01	8,417.11	8,449.79	60.93	53.37	97.16	-486.93	6,425.65	956.89	874.87	82.01	11.667	
13,600.00	8,402.01	8,411.90	8,444.59	62.02	53.36	96.39	-486.93	6,425.92	866.16	782.83	83.34	10.393	
13,700.00	8,402.01	8,406.70	8,439.39	63.11	53.36	95.62	-486.93	6,426.19	777.68	692.52	85.16	9.132	
13,800.00	8,402.01	8,401.49	8,434.20	64.20	53.35	94.84	-486.93	6,426.46	692.31	604.61	87.69	7.895	
13,900.00	8,402.01	8,396.29	8,429.00	65.29	53.34	94.06	-486.93	6,426.74	611.34	520.12	91.22	6.702	
14,000.00	8,402.01	8,391.08	8,423.80	66.39	53.33	93.28	-486.93	6,427.01	536.77	440.72	96.06	5.588	
14,100.00	8,402.01	8,385.88	8,418.60	67.48	53.32	92.50	-486.93	6,427.28	471.66	369.28	102.38	4.607	
14,200.00	8,402.01	8,380.67	8,413.40	68.58	53.31	91.72	-486.93	6,427.55	420.41	310.62	109.79	3.829	
14,211.23	8,402.01	8,380.09	8,412.82	68.70	53.31	91.63	-486.93	6,427.58	415.76	305.13	110.63	3.758	
14,300.00	8,402.01	8,375.46	8,408.20	69.68	53.31	90.94	-486.93	6,427.83	387.20	270.56	116.64	3.320	
14,400.00	8,402.01	8,370.24	8,402.98	70.79	53.30	90.15	-486.93	6,428.10	374.76	254.33	120.43	3.112	
14,404.72	8,402.01	8,369.99	8,402.74	70.84	53.30	90.11	-486.93	6,428.11	374.73	254.24	120.50	3.110	CC, ES, SF
14,500.00	8,402.01	8,365.00	8,397.76	71.90	53.29	89.35	-486.93	6,428.37	385.08	265.51	119.57	3.221	
14,600.00	8,402.01	8,359.77	8,392.53	73.01	53.28	88.57	-486.93	6,428.65	416.47	301.60	114.87	3.626	
14,700.00	8,402.01	8,354.54	8,387.31	74.13	53.27	87.83	-486.93	6,428.92	464.65	356.14	108.52	4.282	
14,800.00	8,402.01	8,349.33	8,382.10	75.23	53.26	87.14	-486.93	6,429.19	524.96	422.71	102.25	5.134	
14,861.23	8,402.01	8,346.14	8,378.92	75.90	53.26	86.75	-486.93	6,429.36	566.22	467.40	98.82	5.730	
14,900.00	8,402.01	8,344.13	8,376.91	76.33	53.25	86.46	-486.93	6,429.47	593.84	496.98	96.87	6.131	
15,000.00	8,402.01	8,338.94	8,371.72	77.42	53.25	85.74	-486.93	6,429.74	670.17	577.52	92.65	7.233	
15,100.00	8,402.01	8,333.74	8,366.54	78.52	53.24	85.01	-486.93	6,430.01	752.04	662.55	89.48	8.404	
15,200.00	8,402.01	8,328.55	8,361.35	79.61	53.23	84.28	-486.93	6,430.28	837.81	750.69	87.13	9.616	
15,300.00	8,402.01	8,323.35	8,356.16	80.71	53.22	83.56	-486.93	6,430.55	926.42	841.04	85.38	10.851	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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)			
13,700.00	8,402.01	8,350.49	8,383.26	63.11	53.26	85.81	-333.55	6,694.79	994.18	919.71	74.47	13.350	
13,800.00	8,402.01	8,353.56	8,386.33	64.20	53.27	86.49	-333.41	6,694.87	897.93	822.89	75.04	11.967	
13,900.00	8,402.01	8,356.64	8,389.40	65.29	53.27	87.18	-333.27	6,694.95	802.58	726.71	75.87	10.578	
14,000.00	8,402.01	8,359.72	8,392.48	66.39	53.28	87.86	-333.13	6,695.03	708.51	631.37	77.14	9.185	
14,100.00	8,402.01	8,362.79	8,395.55	67.48	53.28	88.55	-332.99	6,695.12	616.29	537.18	79.11	7.791	
14,200.00	8,402.01	8,365.87	8,398.62	68.58	53.29	89.24	-332.85	6,695.20	526.89	444.65	82.24	6.407	
14,211.23	8,402.01	8,366.21	8,398.96	68.70	53.29	89.32	-332.84	6,695.20	517.10	434.40	82.70	6.253	
14,300.00	8,402.01	8,368.89	8,401.63	69.68	53.29	89.91	-332.72	6,695.27	441.26	354.06	87.21	5.060	
14,400.00	8,402.01	8,371.75	8,404.50	70.79	53.30	90.62	-332.59	6,695.35	360.71	265.86	94.85	3.803	
14,500.00	8,402.01	8,374.47	8,407.21	71.90	53.30	91.34	-332.46	6,695.42	289.63	183.45	106.18	2.728 Normal Operations	
14,600.00	8,402.01	8,377.02	8,409.76	73.01	53.31	92.04	-332.35	6,695.49	236.82	116.98	119.84	1.976 Caution - Monitor Closely	
14,700.00	8,402.01	8,379.42	8,412.15	74.13	53.31	92.69	-332.24	6,695.55	216.22	89.55	126.67	1.707 Caution - Monitor Closely, CC, ES, SF	
14,704.45	8,402.01	8,379.52	8,412.25	74.17	53.31	92.72	-332.24	6,695.55	216.25	89.64	126.61	1.708 Caution - Monitor Closely	
14,800.00	8,402.01	8,381.65	8,414.38	75.23	53.32	93.26	-332.14	6,695.61	236.43	118.25	118.17	2.001 Caution - Monitor Closely	
14,861.23	8,402.01	8,382.93	8,415.66	75.90	53.32	93.55	-332.08	6,695.64	265.73	156.54	109.19	2.434 Caution - Monitor Closely	
14,900.00	8,402.01	8,383.72	8,416.45	76.33	53.32	93.76	-332.05	6,695.66	289.19	185.47	103.72	2.788 Normal Operations	
15,000.00	8,402.01	8,385.77	8,418.49	77.42	53.32	94.29	-331.95	6,695.72	362.03	269.33	92.70	3.906	
15,100.00	8,402.01	8,387.81	8,420.53	78.52	53.33	94.82	-331.86	6,695.77	445.53	359.61	85.92	5.186	
15,200.00	8,402.01	8,389.86	8,422.58	79.61	53.33	95.35	-331.77	6,695.82	534.71	452.82	81.89	6.530	
15,300.00	8,402.01	8,391.90	8,424.62	80.71	53.33	95.88	-331.67	6,695.88	627.16	547.71	79.45	7.894	
15,400.00	8,402.01	8,393.95	8,426.66	81.81	53.34	96.41	-331.58	6,695.93	721.62	643.69	77.93	9.260	
15,500.00	8,402.01	8,395.99	8,428.70	82.91	53.34	96.94	-331.49	6,695.98	817.39	740.44	76.95	10.622	
15,600.00	8,402.01	8,398.04	8,430.74	84.01	53.34	97.47	-331.40	6,696.04	914.06	837.75	76.32	11.977	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 - 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		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)			
13,600.00	8,402.01	8,399.38	8,432.08	62.02	53.34	97.30	-331.34	6,516.41	914.55	838.54	76.01	12.032	
13,700.00	8,402.01	8,397.25	8,429.96	63.11	53.34	96.78	-331.43	6,516.46	818.37	741.49	76.88	10.644	
13,800.00	8,402.01	8,395.12	8,427.83	64.20	53.34	96.27	-331.53	6,516.52	723.22	645.09	78.13	9.256	
13,900.00	8,402.01	8,392.99	8,425.70	65.29	53.33	95.75	-331.63	6,516.57	629.56	549.59	79.97	7.873	
14,000.00	8,402.01	8,390.86	8,423.58	66.39	53.33	95.24	-331.72	6,516.63	538.19	455.42	82.77	6.502	
14,100.00	8,402.01	8,388.73	8,421.45	67.48	53.33	94.72	-331.82	6,516.69	450.48	363.30	87.18	5.167	
14,200.00	8,402.01	8,386.60	8,419.33	68.58	53.32	94.21	-331.91	6,516.74	369.07	274.84	94.22	3.917	
14,211.23	8,402.01	8,386.36	8,419.09	68.70	53.32	94.15	-331.93	6,516.75	360.51	265.28	95.23	3.786	
14,300.00	8,402.01	8,384.41	8,417.14	69.68	53.32	93.79	-332.01	6,516.80	298.06	193.26	104.80	2.844	Normal Operations
14,400.00	8,402.01	8,382.05	8,414.78	70.79	53.32	93.27	-332.12	6,516.86	244.68	127.14	117.54	2.082	Caution - Monitor Closely
14,500.00	8,402.01	8,379.53	8,412.27	71.90	53.31	92.65	-332.24	6,516.93	222.10	97.67	124.43	1.785	Caution - Monitor Closely
14,507.18	8,402.01	8,379.35	8,412.08	71.98	53.31	92.60	-332.24	6,516.93	221.99	97.61	124.38	1.785	Caution - Monitor Closely, CC, ES, SF
14,600.00	8,402.01	8,376.85	8,409.59	73.01	53.31	91.95	-332.36	6,517.00	239.21	122.00	117.21	2.041	Caution - Monitor Closely
14,700.00	8,402.01	8,374.02	8,406.76	74.13	53.30	91.20	-332.48	6,517.07	289.03	185.49	103.54	2.791	Normal Operations
14,800.00	8,402.01	8,371.04	8,403.78	75.23	53.30	90.43	-332.62	6,517.15	358.12	265.75	92.37	3.877	
14,861.23	8,402.01	8,369.14	8,401.88	75.90	53.29	89.97	-332.71	6,517.20	405.80	318.30	87.50	4.638	
14,900.00	8,402.01	8,367.91	8,400.66	76.33	53.29	89.68	-332.76	6,517.23	437.51	352.42	85.09	5.142	
15,000.00	8,402.01	8,364.77	8,397.52	77.42	53.29	88.94	-332.90	6,517.31	523.69	442.91	80.78	6.483	
15,100.00	8,402.01	8,361.62	8,394.37	78.52	53.28	88.20	-333.05	6,517.40	614.06	535.79	78.26	7.846	
15,200.00	8,402.01	8,358.47	8,391.23	79.61	53.28	87.46	-333.19	6,517.48	707.01	630.23	76.78	9.208	
15,300.00	8,402.01	8,355.32	8,388.08	80.71	53.27	86.72	-333.33	6,517.56	801.64	725.75	75.89	10.563	
15,400.00	8,402.01	8,352.17	8,384.94	81.81	53.27	85.98	-333.48	6,517.64	897.43	822.07	75.36	11.908	
15,500.00	8,402.01	8,349.02	8,381.79	82.91	53.26	85.25	-333.62	6,517.73	994.04	919.00	75.05	13.245	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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												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)			
13,600.00	8,402.01	8,388.39	8,421.12	62.02	53.33	94.92	-313.94	6,559.89	954.82	880.72	74.10	12.886	
13,700.00	8,402.01	8,387.58	8,420.30	63.11	53.32	94.71	-313.98	6,559.90	857.90	783.14	74.76	11.475	
13,800.00	8,402.01	8,386.76	8,419.48	64.20	53.32	94.50	-314.03	6,559.91	761.78	686.06	75.71	10.061	
13,900.00	8,402.01	8,385.94	8,418.66	65.29	53.32	94.29	-314.07	6,559.92	666.80	589.68	77.12	8.646	
14,000.00	8,402.01	8,385.12	8,417.84	66.39	53.32	94.08	-314.11	6,559.93	573.52	494.25	79.28	7.234	
14,100.00	8,402.01	8,384.30	8,417.03	67.48	53.32	93.87	-314.15	6,559.94	482.95	400.24	82.71	5.839	
14,200.00	8,402.01	8,383.48	8,416.21	68.58	53.32	93.65	-314.19	6,559.95	396.92	308.57	88.36	4.492	
14,211.23	8,402.01	8,383.39	8,416.12	68.70	53.32	93.63	-314.20	6,559.96	387.68	298.50	89.19	4.347	
14,300.00	8,402.01	8,382.59	8,415.32	69.68	53.32	93.56	-314.24	6,559.97	318.20	220.75	97.45	3.265	
14,400.00	8,402.01	8,381.52	8,414.25	70.79	53.32	93.38	-314.29	6,559.98	251.93	141.31	110.62	2.277 Caution - Monitor Closely	
14,500.00	8,402.01	8,380.28	8,413.01	71.90	53.31	93.09	-314.35	6,560.00	210.32	86.79	123.53	1.703 Caution - Monitor Closely	
14,553.58	8,402.01	8,379.54	8,412.27	72.50	53.31	92.89	-314.39	6,560.01	203.88	78.36	125.52	1.624 Caution - Monitor Closely, CC, ES, SF	
14,600.00	8,402.01	8,378.86	8,411.59	73.01	53.31	92.69	-314.42	6,560.02	208.73	85.92	122.81	1.700 Caution - Monitor Closely	
14,700.00	8,402.01	8,377.26	8,409.99	74.13	53.31	92.21	-314.51	6,560.04	247.93	139.38	108.55	2.284 Caution - Monitor Closely	
14,800.00	8,402.01	8,375.49	8,408.23	75.23	53.31	91.67	-314.59	6,560.06	312.92	218.22	94.70	3.304	
14,861.23	8,402.01	8,374.32	8,407.06	75.90	53.30	91.32	-314.65	6,560.08	359.68	271.06	88.63	4.058	
14,900.00	8,402.01	8,373.56	8,406.30	76.33	53.30	91.12	-314.69	6,560.09	391.13	305.47	85.67	4.566	
15,000.00	8,402.01	8,371.60	8,404.34	77.42	53.30	90.61	-314.79	6,560.12	477.24	396.76	80.48	5.930	
15,100.00	8,402.01	8,369.64	8,402.38	78.52	53.30	90.10	-314.89	6,560.14	567.91	490.34	77.57	7.321	
15,200.00	8,402.01	8,367.68	8,400.43	79.61	53.29	89.59	-314.99	6,560.17	661.27	585.37	75.90	8.712	
15,300.00	8,402.01	8,365.72	8,398.47	80.71	53.29	89.08	-315.09	6,560.20	756.33	681.40	74.92	10.095	
15,400.00	8,402.01	8,363.76	8,396.51	81.81	53.29	88.57	-315.19	6,560.22	852.51	778.16	74.35	11.466	
15,500.00	8,402.01	8,361.80	8,394.55	82.91	53.28	88.06	-315.29	6,560.25	949.48	875.46	74.01	12.828	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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												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)			
4,500.00	4,471.37	4,606.80	4,586.25	9.35	15.37	-48.54	-541.73	1,133.97	986.67	962.53	24.15	40.863	
4,600.00	4,570.06	4,705.69	4,683.99	9.51	15.76	-49.84	-529.97	1,124.72	964.35	939.82	24.52	39.325	
4,700.00	4,668.76	4,797.68	4,774.92	9.68	16.13	-51.10	-518.97	1,116.07	942.44	917.58	24.86	37.909	
4,800.00	4,767.45	4,881.00	4,857.42	9.85	16.46	-52.25	-509.75	1,108.94	921.97	896.82	25.15	36.653	
4,900.00	4,866.14	4,973.35	4,949.05	10.03	16.82	-53.49	-500.93	1,101.58	902.82	877.36	25.45	35.467	
5,000.00	4,964.84	5,078.63	5,053.51	10.20	17.23	-54.93	-491.45	1,092.55	883.61	857.82	25.79	34.261	
5,100.00	5,063.53	5,165.00	5,139.24	10.37	17.57	-56.14	-483.84	1,085.39	865.18	839.13	26.05	33.216	
5,113.45	5,076.80	5,176.98	5,151.15	10.39	17.62	-56.31	-482.81	1,084.46	862.81	836.74	26.08	33.089	
5,200.00	5,162.33	5,273.90	5,247.22	10.55	18.01	-57.63	-473.28	1,076.03	847.25	820.91	26.35	32.160	
5,300.00	5,261.37	5,366.68	5,339.09	10.72	18.39	-58.89	-463.25	1,067.70	830.34	803.78	26.56	31.261	
5,400.00	5,360.65	5,467.62	5,438.83	10.89	18.80	-60.34	-450.87	1,058.46	814.64	787.89	26.76	30.447	
5,500.00	5,460.11	5,561.41	5,531.33	11.05	19.18	-61.74	-437.98	1,049.86	800.35	773.46	26.89	29.761	
5,600.00	5,559.75	5,653.01	5,621.78	11.22	19.56	-63.02	-425.89	1,041.93	787.96	760.95	27.01	29.175	
5,700.00	5,659.51	5,745.74	5,713.56	11.37	19.93	-64.18	-414.77	1,034.70	777.64	750.51	27.13	28.668	
5,800.00	5,759.38	5,853.64	5,820.44	11.52	20.36	-65.38	-402.91	1,025.89	768.06	740.77	27.30	28.138	
5,900.00	5,859.33	5,958.32	5,924.09	11.66	20.79	-66.42	-392.06	1,016.08	758.25	730.76	27.49	27.581	
6,000.00	5,959.31	6,058.97	6,023.85	11.79	21.20	-67.24	-382.68	1,006.57	749.20	721.49	27.71	27.038	
6,040.69	6,000.00	6,102.18	6,066.64	11.81	21.38	82.96	-378.47	1,002.27	745.57	717.79	27.78	26.836	
6,100.00	6,059.31	6,163.77	6,127.59	11.82	21.64	82.43	-372.38	995.88	740.18	712.30	27.89	26.543	
6,200.00	6,159.31	6,271.01	6,233.68	11.88	22.09	81.50	-362.05	984.07	730.58	702.48	28.10	26.002	
6,300.00	6,259.31	6,361.90	6,323.52	11.93	22.48	80.67	-353.11	973.64	720.72	692.46	28.26	25.502	
6,400.00	6,359.31	6,453.32	6,414.19	11.99	22.86	79.94	-345.36	964.81	712.57	684.15	28.42	25.069	
6,500.00	6,459.31	6,545.50	6,505.73	12.04	23.23	79.25	-338.19	956.76	705.36	676.78	28.58	24.679	
6,600.00	6,559.31	6,635.35	6,595.18	12.10	23.58	78.70	-332.62	950.30	699.48	670.75	28.73	24.343	
6,700.00	6,659.31	6,733.30	6,692.73	12.15	23.96	78.09	-326.23	944.32	694.80	665.92	28.88	24.055	
6,800.00	6,759.31	6,834.99	6,793.74	12.21	24.37	77.21	-317.00	937.13	689.80	660.84	28.96	23.816	
6,900.00	6,859.31	6,936.47	6,894.18	12.27	24.80	76.08	-304.99	929.11	684.80	655.84	28.96	23.646	
7,000.00	6,959.31	7,028.05	6,984.59	12.32	25.19	74.91	-292.48	921.58	680.23	651.35	28.88	23.557	
7,100.00	7,059.31	7,128.93	7,084.54	12.38	25.60	73.79	-280.69	914.69	676.77	647.94	28.83	23.471	
7,200.00	7,159.31	7,239.68	7,194.13	12.44	26.08	72.50	-267.54	905.66	672.37	643.56	28.81	23.339	
7,300.00	7,259.31	7,335.11	7,288.17	12.50	26.49	71.16	-254.17	896.51	667.57	638.87	28.70	23.259	
7,400.00	7,359.31	7,433.34	7,385.17	12.56	26.92	69.87	-241.37	887.78	663.49	634.88	28.61	23.189	
7,500.00	7,459.31	7,533.53	7,484.50	12.61	27.33	68.79	-230.99	879.79	659.65	631.07	28.58	23.079	
7,600.00	7,559.31	7,638.19	7,588.48	12.67	27.75	67.82	-222.30	871.78	655.59	626.97	28.62	22.908	
7,700.00	7,659.31	7,750.08	7,699.59	12.73	28.21	66.78	-213.64	861.78	650.31	621.61	28.70	22.660	
7,800.00	7,759.31	7,860.55	7,808.79	12.79	28.69	65.47	-203.25	848.73	643.23	614.50	28.73	22.388	
7,900.00	7,859.31	7,954.20	7,901.02	12.85	29.10	64.16	-192.99	836.13	635.66	606.99	28.67	22.171	
7,965.23	7,924.54	8,003.00	7,949.16	12.87	29.32	63.48	-187.55	830.36	632.00	603.40	28.59	22.103	
7,975.00	7,934.31	8,017.24	7,963.23	12.87	29.38	-26.66	-185.95	828.81	631.42	602.83	28.59	22.087	
8,000.00	7,959.28	8,038.72	7,984.44	12.89	29.47	-27.11	-183.51	826.55	629.31	600.75	28.55	22.039	
8,025.00	7,984.16	8,060.02	8,005.49	12.91	29.56	-27.66	-181.04	824.40	626.19	597.68	28.51	21.965	
8,050.00	8,008.87	8,081.10	8,026.33	12.93	29.65	-28.33	-178.57	822.37	622.08	593.63	28.45	21.865	
8,075.00	8,033.35	8,102.91	8,047.90	12.95	29.75	-29.13	-175.96	820.36	617.00	588.62	28.39	21.737	
8,100.00	8,057.53	8,128.55	8,073.23	12.98	29.86	-30.18	-172.86	817.95	610.85	582.54	28.31	21.575	
8,125.00	8,081.35	8,153.54	8,097.91	13.00	29.97	-31.41	-169.79	815.47	603.61	575.38	28.23	21.384	
8,150.00	8,104.74	8,177.81	8,121.85	13.02	30.07	-32.81	-166.78	812.94	595.32	567.19	28.13	21.163	
8,175.00	8,127.63	8,200.74	8,144.46	13.05	30.17	-34.38	-163.90	810.44	586.05	558.02	28.02	20.913	
8,200.00	8,149.97	8,221.99	8,165.42	13.08	30.26	-36.10	-161.24	808.10	575.90	547.99	27.91	20.634	
8,225.00	8,171.69	8,242.49	8,185.63	13.11	30.35	-38.01	-158.69	805.83	564.94	537.15	27.79	20.327	
8,250.00	8,192.73	8,262.17	8,205.04	13.13	30.44	-40.13	-156.27	803.66	553.24	525.57	27.67	19.992	
8,275.00	8,213.03	8,280.99	8,223.60	13.16	30.52	-42.46	-153.98	801.57	540.87	513.32	27.56	19.629	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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												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)			
8,300.00	8,232.55	8,298.37	8,240.74	13.20	30.60	-44.96	-151.86	799.63	527.93	500.49	27.45	19.236	
8,325.00	8,251.22	8,314.42	8,256.56	13.23	30.67	-47.64	-149.84	797.81	514.52	487.17	27.35	18.813	
8,350.00	8,269.00	8,329.42	8,271.33	13.26	30.74	-50.50	-147.89	796.08	500.75	473.47	27.28	18.359	
8,375.00	8,285.83	8,343.33	8,285.02	13.30	30.80	-53.50	-146.03	794.45	486.71	459.47	27.24	17.870	
8,400.00	8,301.67	8,356.12	8,297.60	13.34	30.86	-56.61	-144.28	792.93	472.52	445.27	27.24	17.343	
8,425.00	8,316.48	8,367.77	8,309.05	13.38	30.91	-59.78	-142.65	791.53	458.30	430.99	27.32	16.776	
8,450.00	8,330.21	8,378.25	8,319.34	13.42	30.96	-62.95	-141.15	790.26	444.20	416.72	27.48	16.166	
8,475.00	8,342.84	8,387.88	8,328.80	13.46	31.00	-66.09	-139.76	789.08	430.33	402.59	27.74	15.513	
8,500.00	8,354.31	8,396.52	8,337.29	13.51	31.04	-69.14	-138.51	788.02	416.83	388.71	28.13	14.819	
8,525.00	8,364.61	8,403.94	8,344.57	13.57	31.08	-71.99	-137.44	787.11	403.87	375.21	28.66	14.092	
8,550.00	8,373.70	8,410.11	8,350.62	13.63	31.10	-74.59	-136.55	786.36	391.60	362.25	29.35	13.342	
8,575.00	8,381.56	8,415.00	8,355.43	13.70	31.13	-76.88	-135.85	785.76	380.18	349.97	30.21	12.584	
8,600.00	8,388.17	8,418.61	8,358.98	13.77	31.14	-78.82	-135.33	785.32	369.77	338.53	31.24	11.836	
8,625.00	8,393.51	8,420.92	8,361.25	13.85	31.15	-80.38	-135.00	785.04	360.54	328.10	32.43	11.116	
8,650.00	8,397.56	8,421.92	8,362.23	13.93	31.16	-81.54	-134.86	784.92	352.62	318.85	33.77	10.443	
8,675.00	8,400.31	8,421.61	8,361.92	14.02	31.16	-82.29	-134.91	784.96	346.13	310.93	35.20	9.832	
8,700.00	8,401.76	8,419.98	8,360.32	14.12	31.15	-82.61	-135.14	785.16	341.18	304.48	36.71	9.295	
8,715.23	8,402.01	8,418.34	8,358.71	14.18	31.14	-82.60	-135.37	785.36	338.95	301.32	37.63	9.007	
8,758.96	8,402.01	8,412.92	8,353.39	14.39	31.12	-81.68	-136.15	786.02	336.16	295.89	40.27	8.348 CC, ES	
8,800.00	8,402.01	8,407.82	8,348.38	14.58	31.09	-80.82	-136.88	786.64	338.62	296.08	42.54	7.960	
8,900.00	8,402.01	8,395.34	8,336.13	15.14	31.04	-78.71	-138.68	788.16	364.13	317.59	46.54	7.824 SF	
9,000.00	8,402.01	8,382.79	8,323.80	15.77	30.98	-76.60	-140.50	789.70	412.57	364.35	48.22	8.556	
9,100.00	8,402.01	8,371.82	8,313.03	16.46	30.93	-74.77	-142.07	791.04	477.03	428.59	48.43	9.849	
9,200.00	8,402.01	8,361.20	8,302.59	17.19	30.88	-73.00	-143.57	792.33	551.93	503.97	47.96	11.507	
9,300.00	8,402.01	8,350.80	8,292.37	17.97	30.84	-71.29	-145.01	793.57	633.60	586.33	47.27	13.404	
9,400.00	8,402.01	8,340.63	8,282.36	18.78	30.79	-69.64	-146.40	794.77	719.74	673.20	46.55	15.463	
9,500.00	8,402.01	8,330.67	8,272.56	19.62	30.75	-68.04	-147.72	795.94	808.93	763.06	45.87	17.636	
9,600.00	8,402.01	8,320.92	8,262.96	20.49	30.70	-66.50	-149.00	797.07	900.27	855.01	45.26	19.890	
9,700.00	8,402.01	8,311.37	8,253.56	21.38	30.66	-65.01	-150.22	798.16	993.16	948.44	44.73	22.204	

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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 Depths are relative to KB @ 3025.00usft (NABORS X09)

Offset Depths are relative to Offset Datum

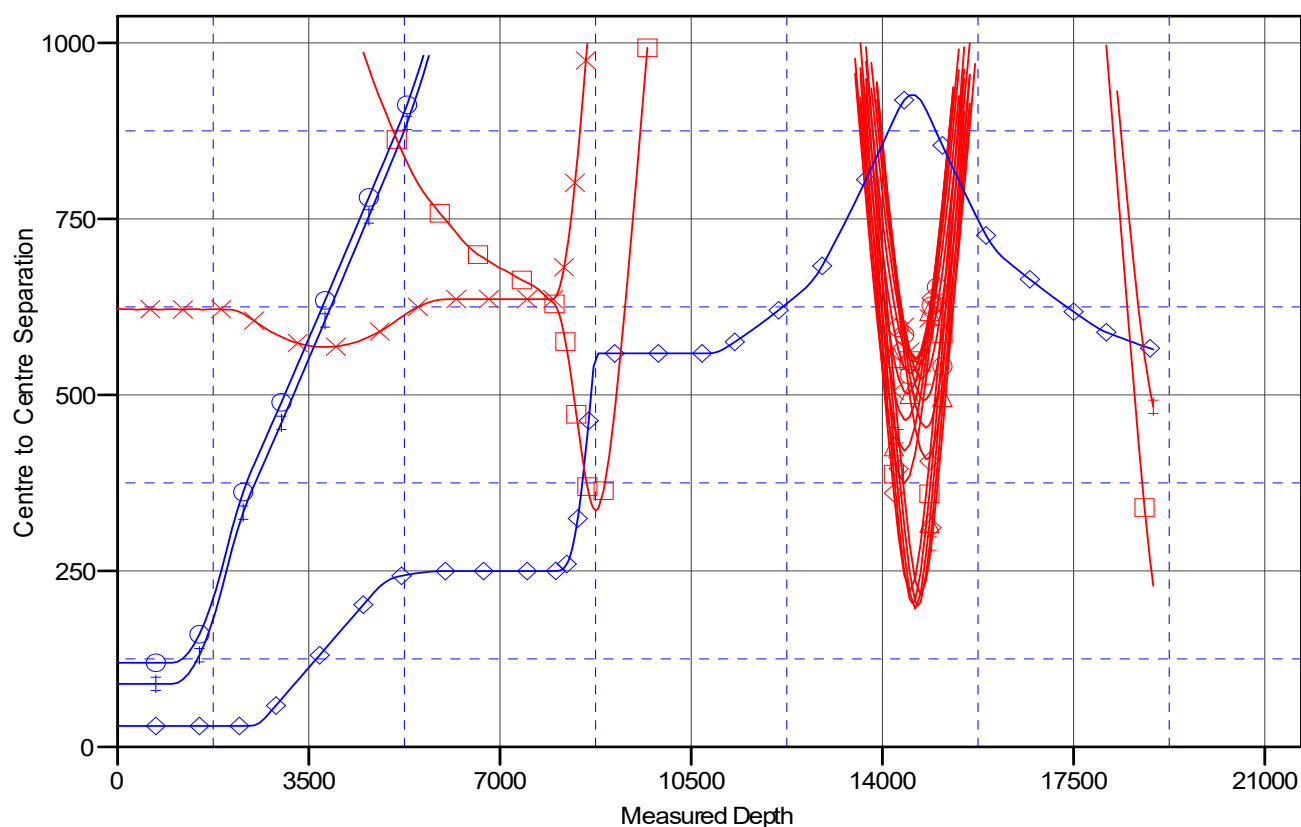
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _VALKYRIE FED COM 502H

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

Grid Convergence at Surface is: 0.15°

Ladder Plot



LEGEND

ASTRODOG FEE 0809 213H, QWB, AWP V0
 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, 120° WB, 120° 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
 H F 7 FEDERAL COM 001, 330° WB, 330° WP V0
 H F 7 FEDERAL COM 001, 240° WB, 240° WP V0
 H F 7 FEDERAL COM 001, 135° WB, 135° WP 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
 AMOCO FEDERAL 11 001 PA OWB, AWP V0
 _VALKYRIE FED COM 501H, QWB, PWP0 V0
 _VALKYRIE FED COM 551H, QWB, PWP0 V0
 _VALKYRIE FED COM 552H, QWB, PWP0 V0
 ASTRODOG FEE 0809 133H, QWB, AWP V0
 VALKYRIE 12 WXY FEDERALCOM 007H, 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 502H
Project:	EDDY COUNTY _DBW_NM_E	TVD Reference:	KB @ 3025.00usft (NABORS X09)
Reference Site:	VALKYRIE FED COM	MD Reference:	KB @ 3025.00usft (NABORS X09)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	_VALKYRIE FED COM 502H	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 Depths are relative to KB @ 3025.00usft (NABORS X09)

Offset Depths are relative to Offset Datum

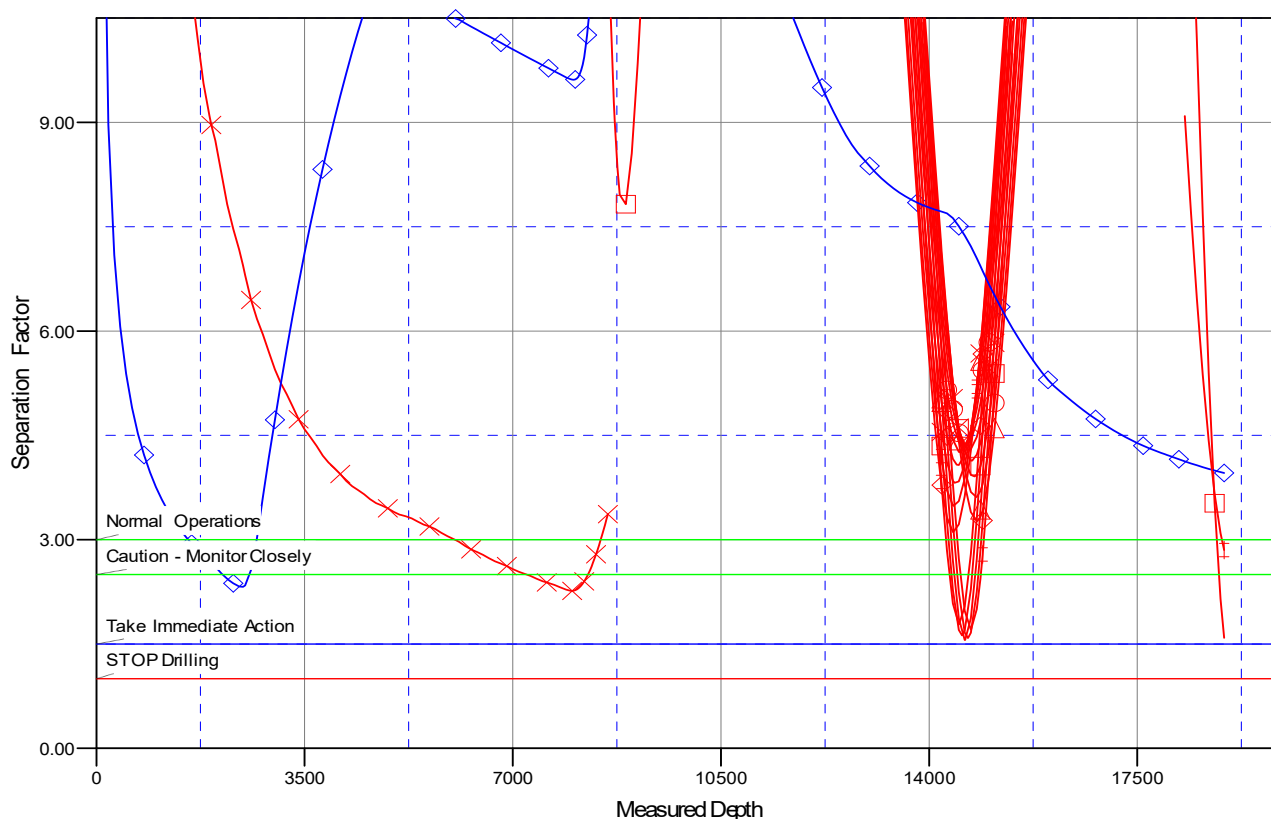
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _VALKYRIE FED COM 502H

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

Grid Convergence at Surface is: 0.15°

Separation Factor Plot



LEGEND

ASTRODOG FEE 0809 213H, QWB, AWP V0
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, 120° WB, 120° 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
H F 7 FEDERAL COM 001, 330° WB, 330° WP V0
H F 7 FEDERAL COM 001, 240° WB, 240° WP V0
H F 7 FEDERAL COM 001, 135° WB, 135° WP 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
AMOCO FEDERAL 11 001_PA QWB, AWP V0
_VALKYRIE FED COM 501H, QWB, PWP0 V0
_VALKYRIE FED COM 551H, QWB, PWP0 V0
_VALKYRIE FED COM 552H, QWB, PWP0 V0
ASTRODOG FEE 0809 133H, QWB, AWP V0
VALKYRIE 12 WXY FEDERALCOM 007H, QWB, AWP V0

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

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 547616

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 372098
	Action Number: 547616
	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