

Form 3160-3
(October 2024)FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. 30-025-55666
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

25. Signature	Name (Printed/Typed)	Date
Title		
Approved by (Signature)	Name (Printed/Typed)	Date
Title		
Office		

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

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

(Continued on page 2)

*(Instructions on page 2)



Additional Operator Remarks

Location of Well

0. SHL: NENE / 505 FNL / 943 FEL / TWSP: 26S / RANGE: 32E / SECTION: 28 / LAT: 32.019473 / LONG: -103.674408 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 100 FNL / 290 FEL / TWSP: 26S / RANGE: 32E / SECTION: 28 / LAT: 32.020588 / LONG: -103.672298 (TVD: 12066 feet, MD: 12495 feet)

BHL: LOT 1 / 50 FSL / 290 FEL / TWSP: 26S / RANGE: 32E / SECTION: 33 / LAT: 32.000363 / LONG: -103.672333 (TVD: 12066 feet, MD: 19773 feet)

BLM Point of Contact

Name: JANET D ESTES

Title: ADJUDICATOR

Phone: (575) 234-6233

Email: JESTES@BLM.GOV

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 30-025- 55666	Pool Code 98081	Pool Name Zia Hills; Wolfcamp
Property Code 338328	Property Name ZIA HILLS UNIT 2832 WC	Well Number 712H
OGRID No. 217817	Operator Name CONOCOPHILLIPS COMPANY	Ground Level Elevation 3,141'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL A	Section 28	Township 26S	Range 32E	Lot	Ft. from N/S 505' FNL	Ft. from E/W 943' FEL	Latitude 32.019473°	Longitude -103.674408°	County LEA
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Bottom Hole Location

UL LOT 1	Section 33	Township 26S	Range 32E	Lot	Ft. from N/S 50' FSL	Ft. from E/W 290' FEL	Latitude 32.000363°	Longitude -103.672333°	County LEA
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Dedicated Acres 898.92	Infill or Defining Well Infill	Defining Well API Pending 710H	Overlapping Spacing Unit (Y/N)	Consolidation Code Unit
Order Numbers. R-20080			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL P	Section 21	Township 26S	Range 32E	Lot	Ft. from N/S 376' FSL	Ft. from E/W 119' FEL	Latitude 32.021898°	Longitude -103.671748°	County LEA
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First Take Point (FTP)

UL A	Section 28	Township 26S	Range 32E	Lot	Ft. from N/S 100' FNL	Ft. from E/W 290' FEL	Latitude 32.020588°	Longitude -103.672298°	County LEA
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Last Take Point (LTP)

UL LOT 1	Section 33	Township 26S	Range 32E	Lot	Ft. from N/S 100' FSL	Ft. from E/W 290' FEL	Latitude 32.000501°	Longitude -103.672332°	County LEA
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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.  Date: 3/7/2025	
Signature 	Date 5/12/25	Signature and Seal of Professional Surveyor	
Printed Name Stan Wagner	Email Address	Certificate Number 12177	Date of Survey 3/7/2025

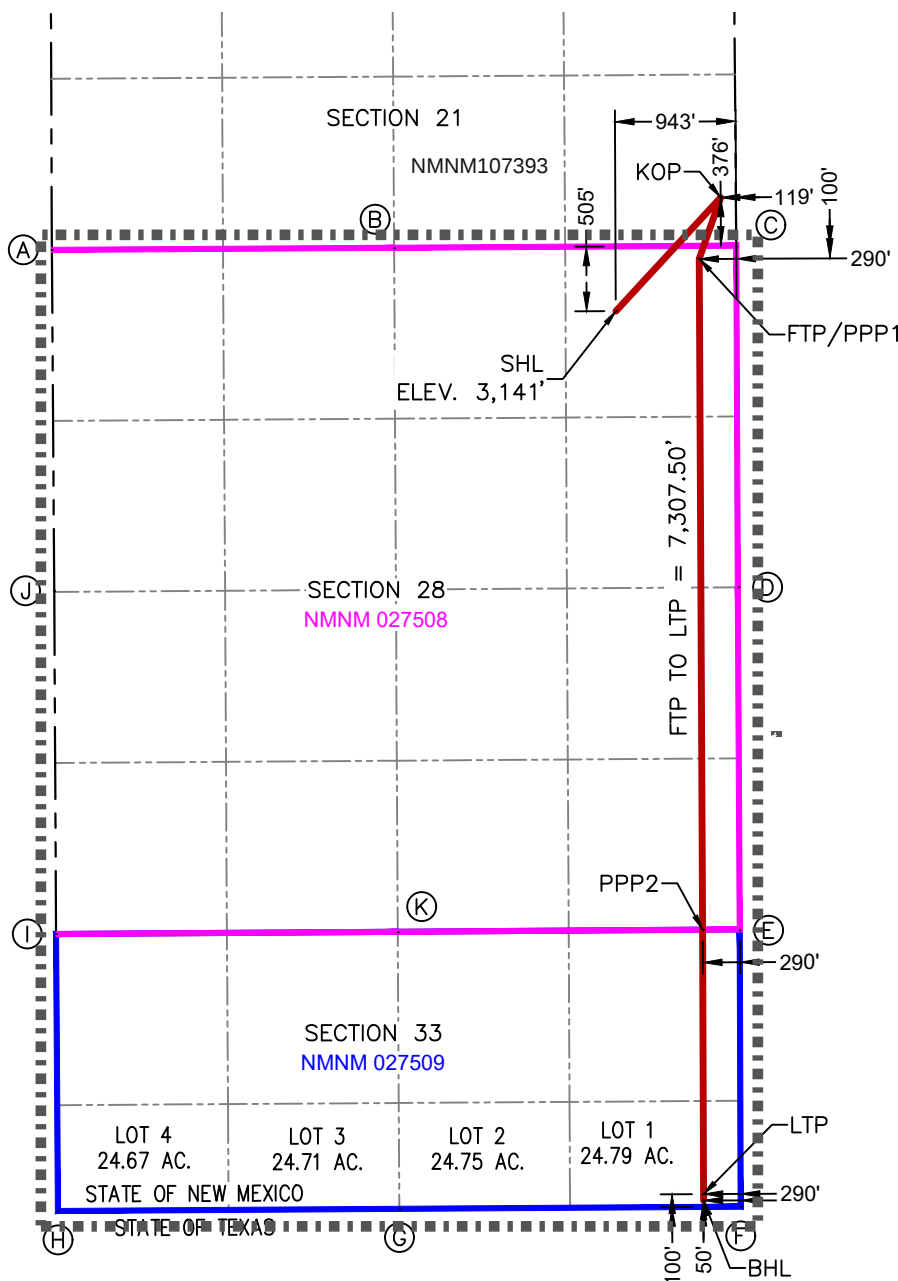
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

ACREAGE DEDICATION PLATS

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

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

ZIA HILLS UNIT 2832 WC 712H



SURFACE HOLE LOCATION
505' FNL & 943' FEL
ELEV.=3,141'

NAD 83 X = 745,555.42'
NAD 83 Y = 371,445.83'
NAD 83 LAT = 32.019473°
NAD 83 LONG = -103.674408°

KICK-OFF POINT
376' FSL & 119' FEL
NAD 83 X = 746,374.40'
NAD 83 Y = 372,332.95'
NAD 83 LAT = 32.021898°
NAD 83 LONG = -103.671748°

FIRST TAKE POINT & PENETRATION POINT 1
100' FNL & 290' FEL
NAD 83 X = 746,206.72'
NAD 83 Y = 371,855.51'
NAD 83 LAT = 32.020588°
NAD 83 LONG = -103.672298°

PENETRATION POINT 2
0' FSL & 290' FEL
NAD 83 X = 746,233.29'
NAD 83 Y = 366,613.44'
NAD 83 LAT = 32.006178°
NAD 83 LONG = -103.672316°

LAST TAKE POINT
100' FSL & 290' FEL
NAD 83 X = 746,240.80'
NAD 83 Y = 364,548.09'
NAD 83 LAT = 32.000501°
NAD 83 LONG = -103.672332°

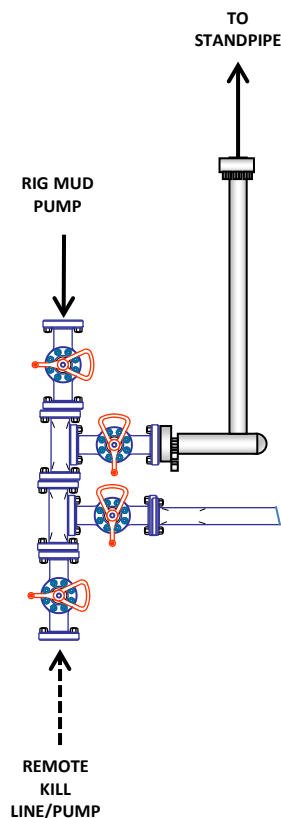
BOTTOM HOLE LOCATION
50' FSL & 290' FEL
NAD 83 X = 746,240.98'
NAD 83 Y = 364,498.09'
NAD 83 LAT = 32.000363°
NAD 83 LONG = -103.672333°

CORNER COORDINATES
NEW MEXICO EAST - NAD 83

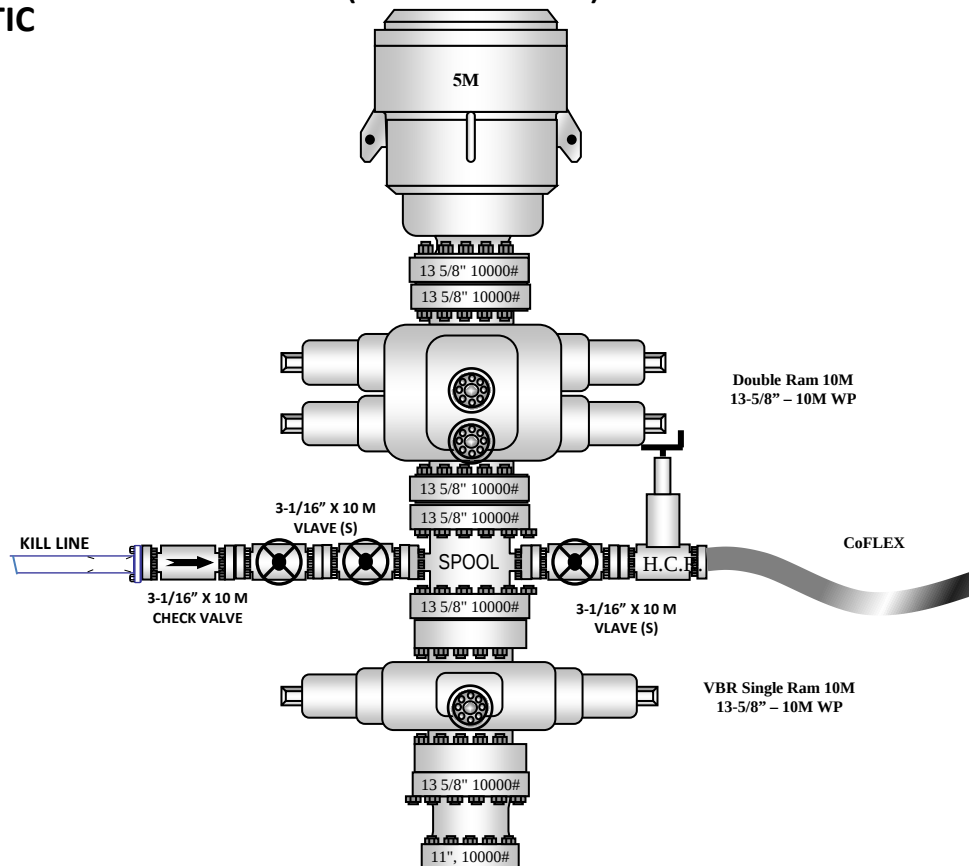
A	IRON PIPE W/BRASS CAP N:371,924.06' E:741,150.79'	E	IRON PIPE W/BRASS CAP N:366,615.44' E:746,523.28'	I	IRON PIPE W/BRASS CAP N:366,579.65' E:741,183.39'
B	IRON PIPE W/BRASS CAP N:371,940.66' E:743,823.97'	F	CALCULATED CORNER N:364,449.93' E:746,531.16'	J	IRON PIPE W/BRASS CAP N:369,251.80' E:741,169.27'
C	IRON PIPE W/BRASS CAP N:371,957.31' E:746,496.25'	G	CALCULATED CORNER N:364,433.03' E:743,864.87'	K	CALCULATED CORNER N:366,596.96' E:743,852.02'
D	IRON PIPE W/BRASS CAP N:369,288.55' E:746,508.78'	H	CALCULATED CORNER N:364,416.13' E:741,198.04'		



10M REMOTE KILL SCHEMATIC



10M BOP Stack (5M Annular)



ConocoPhillips Company - Zia Hills Unit 2832 WC 712H

1. Geologic Formations

TVD of target	12,066' EOL	Pilot hole depth	NA
MD at TD:	19,773'	Deepest expected fresh water:	202'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	688	Water	
Top of Salt	961	Salt	
Base of Salt	4212	Salt	
Lamar	4430	Salt Water	
Bell Canyon	4447	Salt Water	
Cherry Canyon	5375	Oil/Gas	
Brushy Canyon	6881	Oil/Gas	
Bone Spring	8537	Oil/Gas	
1st Bone Spring Sand	9501	Oil/Gas	
2nd Bone Spring Sand	10181	Oil/Gas	
3rd Bone Spring Sand	11288	Oil/Gas	
Wolfcamp	11666	Oil/Gas	
Wolfcamp A	11877	Target	
Wolfcamp B	12196	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
17.50"	0	820	13.375"	54.5	J55	BTC	3.01	1.50	19.09	20.34
12.25"	0	4330	9.625"	40	L80-IC	BTC	1.72	1.27	5.29	5.47
8.75"	4130	11600	7.625"	29.7	P110-ICY	W513	1.22	1.52	3.10	1.86
6.75"	0	11400	5.5"	23	P110-CY	BTC	1.82	2.12	2.78	2.78
6.75"	11400	19,773	5.5"	23	P110-CY	W441	1.72	2.00	2.63	2.39
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

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

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

ConocoPhillips Company - Zia Hills Unit 2832 WC 712H

	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 Company - Zia Hills Unit 2832 WC 712H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	490	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl ₂
Int. #1	630	12.8	1.75	9.21	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	390	14.8	1.35	6.6	8	Tail: Class C + 2% CaCl ₂
Inter. #2 (Liner)	200	10.5	3.3	22	24	Tuned light
	90	14.8	1.35	6.6	8	Tail: Class H
Prod	810	12.5	1.48	10.7	72	Lead: 50:50:10 H Blend
	630	13.2	1.34	5.7	19	Tail: 50:50:2 Class H Blend

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%
1 st Intermediate	0'	50%
2 nd Intermediate	4,130'	20%
Production	11,100'	20% OH in Lateral (KOP to EOL)

ConocoPhillips Company - Zia Hills Unit 2832 WC 712H

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*		
6-3/4"	13-5/8"	10M	5M Annular	x	5000psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

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

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

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

ConocoPhillips Company - Zia Hills Unit 2832 WC 712H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Brine	8.4 - 10	28-34	N/C
9-5/8" Int shoe	7-5/8" Int shoe	Brine	8.4 - 10	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 13.5	35-45	<20

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

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

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

Additional logs planned		Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
N	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

ConocoPhillips Company - Zia Hills Unit 2832 WC 712H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	8475 psi at 12066' TVD
Abnormal Temperature	NO 175 Deg. F.

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

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

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR Part 3170 Subpart 3176. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N H₂S is present

Y H₂S Plan attached

8. Other Facets of Operation

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

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

COG OPERATING LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

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

- a. The hazards and characteristics of hydrogen sulfide (H₂S).
- b. The proper use and maintenance of personal protective equipment and life support systems.
- c. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- d. The proper techniques for first aid and rescue procedures.

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

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

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

2. H₂S SAFETY EQUIPMENT AND SYSTEMS

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

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

- b. Protective equipment for essential personnel:
Mark II Surviveair 30-minute units located in the dog house and at briefing areas.
- c. H2S detection and monitoring equipment:
2 - portable H2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- d. Visual warning systems:
Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.
- e. Mud Program:
The mud program has been designed to minimize the volume of H2S circulated to the surface.
- f. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- g. Communication:
Company vehicles equipped with cellular telephone.

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

W A R N I N G

**YOU ARE ENTERING AN H₂S AREA
AUTHORIZED PERSONNEL ONLY**

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

COG OPERATING LLC

1-575-748-6940

EMERGENCY CALL LIST

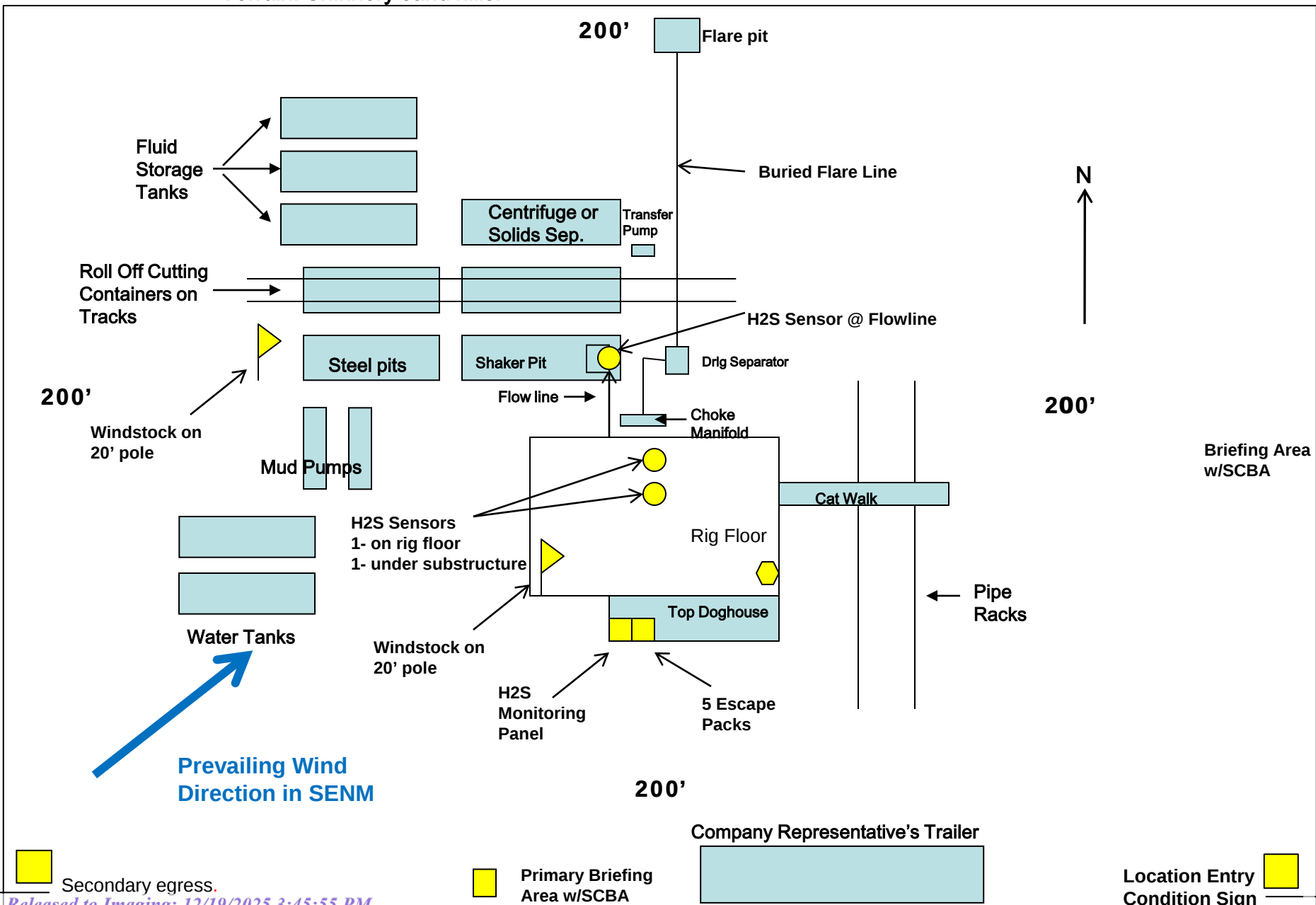
	<u>OFFICE</u>	<u>MOBILE</u>
COG OPERATING LLC OFFICE	575-748-6940	
Dallas Daley	432-818-2329	432-631-6977

EMERGENCY RESPONSE NUMBERS

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

COC Operating LLC
H₂S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 400' x 400'
with cellar in center of pad



DELAWARE BASIN EAST

ZIA HILLS UNIT AREA

ZIA HILLS UNIT 2832 PROJECT

_ZIA HILLS UNIT 2832 WC 712H

OWB

Plan: PWP0

Standard Planning Report

26 February, 2025

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB @ 3171.0usft
Project:	ZIA HILLS UNIT AREA	MD Reference:	KB @ 3171.0usft
Site:	ZIA HILLS UNIT 2832 PROJECT	North Reference:	Grid
Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2024	10/16/2024	6.26	59.51	47,132.10295834

Design	PWP0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	174.22

Plan Survey Tool Program		Date	2/25/2025		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	19,773.0 PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-St	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,566.5	13.33	42.71	2,560.5	56.7	52.4	2.00	2.00	0.00	42.71	
6,799.1	13.33	42.71	6,679.0	773.7	714.3	0.00	0.00	0.00	0.00	
8,132.0	0.00	0.00	8,000.0	887.1	819.0	1.00	-1.00	0.00	180.00	
11,720.5	0.00	0.00	11,588.5	887.1	819.0	0.00	0.00	0.00	0.00	
12,470.5	90.00	192.15	12,066.0	420.3	718.5	12.00	12.00	0.00	192.15	
13,095.9	90.00	179.64	12,066.0	-200.5	654.4	2.00	0.00	-2.00	-90.00	
19,773.0	90.00	179.64	12,066.0	-6,877.5	696.2	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB @ 3171.0usft
Project:	ZIA HILLS UNIT AREA	MD Reference:	KB @ 3171.0usft
Site:	ZIA HILLS UNIT 2832 PROJECT	North Reference:	Grid
Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	2.00	42.71	2,000.0	1.3	1.2	-1.2	2.00	2.00	0.00
2,100.0	4.00	42.71	2,099.8	5.1	4.7	-4.6	2.00	2.00	0.00
2,200.0	6.00	42.71	2,199.5	11.5	10.6	-10.4	2.00	2.00	0.00
2,300.0	8.00	42.71	2,298.7	20.5	18.9	-18.5	2.00	2.00	0.00
2,400.0	10.00	42.71	2,397.5	32.0	29.5	-28.8	2.00	2.00	0.00
2,500.0	12.00	42.71	2,495.6	46.0	42.5	-41.5	2.00	2.00	0.00
2,566.5	13.33	42.71	2,560.5	56.7	52.4	-51.1	2.00	2.00	0.00
2,600.0	13.33	42.71	2,593.1	62.4	57.6	-56.3	0.00	0.00	0.00
2,700.0	13.33	42.71	2,690.4	79.3	73.2	-71.5	0.00	0.00	0.00
2,800.0	13.33	42.71	2,787.7	96.3	88.9	-86.8	0.00	0.00	0.00
2,900.0	13.33	42.71	2,885.0	113.2	104.5	-102.1	0.00	0.00	0.00
3,000.0	13.33	42.71	2,982.3	130.1	120.2	-117.4	0.00	0.00	0.00
3,100.0	13.33	42.71	3,079.6	147.1	135.8	-132.7	0.00	0.00	0.00
3,200.0	13.33	42.71	3,176.9	164.0	151.4	-147.9	0.00	0.00	0.00
3,300.0	13.33	42.71	3,274.2	181.0	167.1	-163.2	0.00	0.00	0.00
3,400.0	13.33	42.71	3,371.5	197.9	182.7	-178.5	0.00	0.00	0.00
3,500.0	13.33	42.71	3,468.9	214.8	198.3	-193.8	0.00	0.00	0.00
3,600.0	13.33	42.71	3,566.2	231.8	214.0	-209.1	0.00	0.00	0.00
3,700.0	13.33	42.71	3,663.5	248.7	229.6	-224.3	0.00	0.00	0.00
3,800.0	13.33	42.71	3,760.8	265.7	245.3	-239.6	0.00	0.00	0.00
3,900.0	13.33	42.71	3,858.1	282.6	260.9	-254.9	0.00	0.00	0.00
4,000.0	13.33	42.71	3,955.4	299.5	276.5	-270.2	0.00	0.00	0.00
4,100.0	13.33	42.71	4,052.7	316.5	292.2	-285.4	0.00	0.00	0.00
4,200.0	13.33	42.71	4,150.0	333.4	307.8	-300.7	0.00	0.00	0.00
4,300.0	13.33	42.71	4,247.3	350.4	323.5	-316.0	0.00	0.00	0.00
4,400.0	13.33	42.71	4,344.6	367.3	339.1	-331.3	0.00	0.00	0.00
4,500.0	13.33	42.71	4,441.9	384.2	354.7	-346.6	0.00	0.00	0.00
4,600.0	13.33	42.71	4,539.2	401.2	370.4	-361.8	0.00	0.00	0.00
4,700.0	13.33	42.71	4,636.5	418.1	386.0	-377.1	0.00	0.00	0.00
4,800.0	13.33	42.71	4,733.8	435.1	401.7	-392.4	0.00	0.00	0.00
4,900.0	13.33	42.71	4,831.1	452.0	417.3	-407.7	0.00	0.00	0.00
5,000.0	13.33	42.71	4,928.4	468.9	432.9	-423.0	0.00	0.00	0.00
5,100.0	13.33	42.71	5,025.8	485.9	448.6	-438.2	0.00	0.00	0.00
5,200.0	13.33	42.71	5,123.1	502.8	464.2	-453.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB @ 3171.0usft
Project:	ZIA HILLS UNIT AREA	MD Reference:	KB @ 3171.0usft
Site:	ZIA HILLS UNIT 2832 PROJECT	North Reference:	Grid
Well:	_ZIA HILLS UNIT 2832 WC 712H	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)
5,300.0	13.33	42.71	5,220.4	519.8	479.9	-468.8	0.00	0.00	0.00
5,400.0	13.33	42.71	5,317.7	536.7	495.5	-484.1	0.00	0.00	0.00
5,500.0	13.33	42.71	5,415.0	553.6	511.1	-499.3	0.00	0.00	0.00
5,600.0	13.33	42.71	5,512.3	570.6	526.8	-514.6	0.00	0.00	0.00
5,700.0	13.33	42.71	5,609.6	587.5	542.4	-529.9	0.00	0.00	0.00
5,800.0	13.33	42.71	5,706.9	604.5	558.1	-545.2	0.00	0.00	0.00
5,900.0	13.33	42.71	5,804.2	621.4	573.7	-560.5	0.00	0.00	0.00
6,000.0	13.33	42.71	5,901.5	638.3	589.3	-575.7	0.00	0.00	0.00
6,100.0	13.33	42.71	5,998.8	655.3	605.0	-591.0	0.00	0.00	0.00
6,200.0	13.33	42.71	6,096.1	672.2	620.6	-606.3	0.00	0.00	0.00
6,300.0	13.33	42.71	6,193.4	689.2	636.2	-621.6	0.00	0.00	0.00
6,400.0	13.33	42.71	6,290.7	706.1	651.9	-636.8	0.00	0.00	0.00
6,500.0	13.33	42.71	6,388.0	723.0	667.5	-652.1	0.00	0.00	0.00
6,600.0	13.33	42.71	6,485.3	740.0	683.2	-667.4	0.00	0.00	0.00
6,700.0	13.33	42.71	6,582.6	756.9	698.8	-682.7	0.00	0.00	0.00
6,799.1	13.33	42.71	6,679.0	773.7	714.3	-697.8	0.00	0.00	0.00
6,800.0	13.32	42.71	6,680.0	773.8	714.4	-698.0	1.00	-1.00	0.00
6,900.0	12.32	42.71	6,777.5	790.2	729.5	-712.7	1.00	-1.00	0.00
7,000.0	11.32	42.71	6,875.3	805.2	743.4	-726.2	1.00	-1.00	0.00
7,100.0	10.32	42.71	6,973.6	819.0	756.1	-738.7	1.00	-1.00	0.00
7,200.0	9.32	42.71	7,072.1	831.5	767.7	-750.0	1.00	-1.00	0.00
7,300.0	8.32	42.71	7,170.9	842.8	778.1	-760.1	1.00	-1.00	0.00
7,400.0	7.32	42.71	7,270.0	852.8	787.3	-769.2	1.00	-1.00	0.00
7,500.0	6.32	42.71	7,369.3	861.5	795.4	-777.0	1.00	-1.00	0.00
7,600.0	5.32	42.71	7,468.8	869.0	802.3	-783.8	1.00	-1.00	0.00
7,700.0	4.32	42.71	7,568.4	875.1	808.0	-789.3	1.00	-1.00	0.00
7,800.0	3.32	42.71	7,668.2	880.0	812.5	-793.7	1.00	-1.00	0.00
7,900.0	2.32	42.71	7,768.1	883.6	815.8	-797.0	1.00	-1.00	0.00
8,000.0	1.32	42.71	7,868.0	886.0	818.0	-799.1	1.00	-1.00	0.00
8,100.0	0.32	42.71	7,968.0	887.0	818.9	-800.1	1.00	-1.00	0.00
8,132.0	0.00	0.00	8,000.0	887.1	819.0	-800.1	1.00	-1.00	0.00
8,200.0	0.00	0.00	8,068.0	887.1	819.0	-800.1	0.00	0.00	0.00
8,300.0	0.00	0.00	8,168.0	887.1	819.0	-800.1	0.00	0.00	0.00
8,400.0	0.00	0.00	8,268.0	887.1	819.0	-800.1	0.00	0.00	0.00
8,500.0	0.00	0.00	8,368.0	887.1	819.0	-800.1	0.00	0.00	0.00
8,600.0	0.00	0.00	8,468.0	887.1	819.0	-800.1	0.00	0.00	0.00
8,700.0	0.00	0.00	8,568.0	887.1	819.0	-800.1	0.00	0.00	0.00
8,800.0	0.00	0.00	8,668.0	887.1	819.0	-800.1	0.00	0.00	0.00
8,900.0	0.00	0.00	8,768.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,000.0	0.00	0.00	8,868.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,100.0	0.00	0.00	8,968.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,200.0	0.00	0.00	9,068.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,300.0	0.00	0.00	9,168.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,400.0	0.00	0.00	9,268.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,500.0	0.00	0.00	9,368.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,600.0	0.00	0.00	9,468.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,700.0	0.00	0.00	9,568.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,800.0	0.00	0.00	9,668.0	887.1	819.0	-800.1	0.00	0.00	0.00
9,900.0	0.00	0.00	9,768.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,000.0	0.00	0.00	9,868.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,100.0	0.00	0.00	9,968.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,200.0	0.00	0.00	10,068.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,168.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,400.0	0.00	0.00	10,268.0	887.1	819.0	-800.1	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB @ 3171.0usft
Project:	ZIA HILLS UNIT AREA	MD Reference:	KB @ 3171.0usft
Site:	ZIA HILLS UNIT 2832 PROJECT	North Reference:	Grid
Well:	_ZIA HILLS UNIT 2832 WC 712H	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)
10,500.0	0.00	0.00	10,368.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,600.0	0.00	0.00	10,468.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,700.0	0.00	0.00	10,568.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,800.0	0.00	0.00	10,668.0	887.1	819.0	-800.1	0.00	0.00	0.00
10,900.0	0.00	0.00	10,768.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,000.0	0.00	0.00	10,868.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,100.0	0.00	0.00	10,968.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,200.0	0.00	0.00	11,068.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,300.0	0.00	0.00	11,168.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,400.0	0.00	0.00	11,268.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,500.0	0.00	0.00	11,368.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,600.0	0.00	0.00	11,468.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,700.0	0.00	0.00	11,568.0	887.1	819.0	-800.1	0.00	0.00	0.00
11,720.5	0.00	0.00	11,588.5	887.1	819.0	-800.1	0.00	0.00	0.00
11,800.0	9.54	192.15	11,667.6	880.6	817.6	-793.8	12.00	12.00	0.00
11,900.0	21.54	192.15	11,763.8	854.5	812.0	-768.4	12.00	12.00	0.00
12,000.0	33.54	192.15	11,852.3	809.4	802.3	-724.5	12.00	12.00	0.00
12,100.0	45.54	192.15	11,929.3	747.3	788.9	-664.0	12.00	12.00	0.00
12,200.0	57.54	192.15	11,991.4	670.9	772.4	-589.7	12.00	12.00	0.00
12,300.0	69.54	192.15	12,035.8	583.5	753.6	-504.6	12.00	12.00	0.00
12,400.0	81.54	192.15	12,060.8	489.0	733.3	-412.7	12.00	12.00	0.00
12,470.5	90.00	192.15	12,066.0	420.3	718.5	-345.8	12.00	12.00	0.00
12,500.0	90.00	191.56	12,066.0	391.5	712.4	-317.7	2.00	0.00	-2.00
12,600.0	90.00	189.56	12,066.0	293.2	694.1	-221.8	2.00	0.00	-2.00
12,700.0	90.00	187.56	12,066.0	194.3	679.2	-124.9	2.00	0.00	-2.00
12,800.0	90.00	185.56	12,066.0	94.9	667.8	-27.2	2.00	0.00	-2.00
12,900.0	90.00	183.56	12,066.0	-4.7	659.9	71.2	2.00	0.00	-2.00
13,000.0	90.00	181.56	12,066.0	-104.6	655.4	170.1	2.00	0.00	-2.00
13,095.9	90.00	179.64	12,066.0	-200.5	654.4	265.4	2.00	0.00	-2.00
13,100.0	90.00	179.64	12,066.0	-204.6	654.4	269.5	0.00	0.00	0.00
13,200.0	90.00	179.64	12,066.0	-304.6	655.0	369.0	0.00	0.00	0.00
13,300.0	90.00	179.64	12,066.0	-404.6	655.7	468.6	0.00	0.00	0.00
13,400.0	90.00	179.64	12,066.0	-504.6	656.3	568.1	0.00	0.00	0.00
13,500.0	90.00	179.64	12,066.0	-604.6	656.9	667.7	0.00	0.00	0.00
13,600.0	90.00	179.64	12,066.0	-704.6	657.5	767.2	0.00	0.00	0.00
13,700.0	90.00	179.64	12,066.0	-804.6	658.2	866.8	0.00	0.00	0.00
13,800.0	90.00	179.64	12,066.0	-904.6	658.8	966.3	0.00	0.00	0.00
13,900.0	90.00	179.64	12,066.0	-1,004.6	659.4	1,065.9	0.00	0.00	0.00
14,000.0	90.00	179.64	12,066.0	-1,104.6	660.0	1,165.5	0.00	0.00	0.00
14,100.0	90.00	179.64	12,066.0	-1,204.6	660.7	1,265.0	0.00	0.00	0.00
14,200.0	90.00	179.64	12,066.0	-1,304.6	661.3	1,364.6	0.00	0.00	0.00
14,300.0	90.00	179.64	12,066.0	-1,404.6	661.9	1,464.1	0.00	0.00	0.00
14,400.0	90.00	179.64	12,066.0	-1,504.6	662.5	1,563.7	0.00	0.00	0.00
14,500.0	90.00	179.64	12,066.0	-1,604.6	663.2	1,663.2	0.00	0.00	0.00
14,600.0	90.00	179.64	12,066.0	-1,704.6	663.8	1,762.8	0.00	0.00	0.00
14,700.0	90.00	179.64	12,066.0	-1,804.6	664.4	1,862.3	0.00	0.00	0.00
14,800.0	90.00	179.64	12,066.0	-1,904.6	665.1	1,961.9	0.00	0.00	0.00
14,900.0	90.00	179.64	12,066.0	-2,004.6	665.7	2,061.4	0.00	0.00	0.00
15,000.0	90.00	179.64	12,066.0	-2,104.6	666.3	2,161.0	0.00	0.00	0.00
15,100.0	90.00	179.64	12,066.0	-2,204.6	666.9	2,260.5	0.00	0.00	0.00
15,200.0	90.00	179.64	12,066.0	-2,304.6	667.6	2,360.1	0.00	0.00	0.00
15,300.0	90.00	179.64	12,066.0	-2,404.6	668.2	2,459.6	0.00	0.00	0.00
15,400.0	90.00	179.64	12,066.0	-2,504.6	668.8	2,559.2	0.00	0.00	0.00
15,500.0	90.00	179.64	12,066.0	-2,604.6	669.4	2,658.7	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB @ 3171.0usft
Project:	ZIA HILLS UNIT AREA	MD Reference:	KB @ 3171.0usft
Site:	ZIA HILLS UNIT 2832 PROJECT	North Reference:	Grid
Well:	_ZIA HILLS UNIT 2832 WC 712H	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)	
15,600.0	90.00	179.64	12,066.0	-2,704.6	670.1	2,758.3	0.00	0.00	0.00	
15,700.0	90.00	179.64	12,066.0	-2,804.6	670.7	2,857.8	0.00	0.00	0.00	
15,800.0	90.00	179.64	12,066.0	-2,904.6	671.3	2,957.4	0.00	0.00	0.00	
15,900.0	90.00	179.64	12,066.0	-3,004.6	671.9	3,057.0	0.00	0.00	0.00	
16,000.0	90.00	179.64	12,066.0	-3,104.6	672.6	3,156.5	0.00	0.00	0.00	
16,100.0	90.00	179.64	12,066.0	-3,204.6	673.2	3,256.1	0.00	0.00	0.00	
16,200.0	90.00	179.64	12,066.0	-3,304.6	673.8	3,355.6	0.00	0.00	0.00	
16,300.0	90.00	179.64	12,066.0	-3,404.6	674.4	3,455.2	0.00	0.00	0.00	
16,400.0	90.00	179.64	12,066.0	-3,504.6	675.1	3,554.7	0.00	0.00	0.00	
16,500.0	90.00	179.64	12,066.0	-3,604.5	675.7	3,654.3	0.00	0.00	0.00	
16,600.0	90.00	179.64	12,066.0	-3,704.5	676.3	3,753.8	0.00	0.00	0.00	
16,700.0	90.00	179.64	12,066.0	-3,804.5	676.9	3,853.4	0.00	0.00	0.00	
16,800.0	90.00	179.64	12,066.0	-3,904.5	677.6	3,952.9	0.00	0.00	0.00	
16,900.0	90.00	179.64	12,066.0	-4,004.5	678.2	4,052.5	0.00	0.00	0.00	
17,000.0	90.00	179.64	12,066.0	-4,104.5	678.8	4,152.0	0.00	0.00	0.00	
17,100.0	90.00	179.64	12,066.0	-4,204.5	679.4	4,251.6	0.00	0.00	0.00	
17,200.0	90.00	179.64	12,066.0	-4,304.5	680.1	4,351.1	0.00	0.00	0.00	
17,300.0	90.00	179.64	12,066.0	-4,404.5	680.7	4,450.7	0.00	0.00	0.00	
17,400.0	90.00	179.64	12,066.0	-4,504.5	681.3	4,550.2	0.00	0.00	0.00	
17,500.0	90.00	179.64	12,066.0	-4,604.5	681.9	4,649.8	0.00	0.00	0.00	
17,600.0	90.00	179.64	12,066.0	-4,704.5	682.6	4,749.3	0.00	0.00	0.00	
17,700.0	90.00	179.64	12,066.0	-4,804.5	683.2	4,848.9	0.00	0.00	0.00	
17,800.0	90.00	179.64	12,066.0	-4,904.5	683.8	4,948.5	0.00	0.00	0.00	
17,900.0	90.00	179.64	12,066.0	-5,004.5	684.4	5,048.0	0.00	0.00	0.00	
18,000.0	90.00	179.64	12,066.0	-5,104.5	685.1	5,147.6	0.00	0.00	0.00	
18,100.0	90.00	179.64	12,066.0	-5,204.5	685.7	5,247.1	0.00	0.00	0.00	
18,200.0	90.00	179.64	12,066.0	-5,304.5	686.3	5,346.7	0.00	0.00	0.00	
18,300.0	90.00	179.64	12,066.0	-5,404.5	686.9	5,446.2	0.00	0.00	0.00	
18,400.0	90.00	179.64	12,066.0	-5,504.5	687.6	5,545.8	0.00	0.00	0.00	
18,500.0	90.00	179.64	12,066.0	-5,604.5	688.2	5,645.3	0.00	0.00	0.00	
18,600.0	90.00	179.64	12,066.0	-5,704.5	688.8	5,744.9	0.00	0.00	0.00	
18,700.0	90.00	179.64	12,066.0	-5,804.5	689.4	5,844.4	0.00	0.00	0.00	
18,800.0	90.00	179.64	12,066.0	-5,904.5	690.1	5,944.0	0.00	0.00	0.00	
18,900.0	90.00	179.64	12,066.0	-6,004.5	690.7	6,043.5	0.00	0.00	0.00	
19,000.0	90.00	179.64	12,066.0	-6,104.5	691.3	6,143.1	0.00	0.00	0.00	
19,100.0	90.00	179.64	12,066.0	-6,204.5	692.0	6,242.6	0.00	0.00	0.00	
19,200.0	90.00	179.64	12,066.0	-6,304.5	692.6	6,342.2	0.00	0.00	0.00	
19,300.0	90.00	179.64	12,066.0	-6,404.5	693.2	6,441.7	0.00	0.00	0.00	
19,400.0	90.00	179.64	12,066.0	-6,504.5	693.8	6,541.3	0.00	0.00	0.00	
19,500.0	90.00	179.64	12,066.0	-6,604.5	694.5	6,640.8	0.00	0.00	0.00	
19,600.0	90.00	179.64	12,066.0	-6,704.5	695.1	6,740.4	0.00	0.00	0.00	
19,700.0	90.00	179.64	12,066.0	-6,804.5	695.7	6,840.0	0.00	0.00	0.00	
19,773.0	90.00	179.64	12,066.0	-6,877.5	696.2	6,912.6	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB @ 3171.0usft
Project:	ZIA HILLS UNIT AREA	MD Reference:	KB @ 3171.0usft
Site:	ZIA HILLS UNIT 2832 PROJECT	North Reference:	Grid
Well:	_ZIA HILLS UNIT 2832 WC 712H	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)		
FTP_ZHU 2832 712H	0.00	0.01	12,066.0	409.5	650.9	371,798.31	705,018.95	32° 1' 13.665 N	103° 40' 18.588 W
- plan misses target center by 64.0usft at 12495.0usft MD (12066.0 TVD, 396.4 N, 713.5 E)									
- Circle (radius 50.0)									
PBHL_ZHU 2832 712H	0.00	359.64	12,066.0	-6,947.5	696.6	364,441.31	705,064.68	32° 0' 0.857 N	103° 40' 18.580 W
- plan misses target center by 70.0usft at 19773.0usft MD (12066.0 TVD, -6877.5 N, 696.2 E)									
- Rectangle (sides W100.0 H7,357.7 D20.0)									
LTP_ZHU 2832 712H	90.00	0.00	12,066.0	-6,897.5	696.6	364,491.30	705,064.69	32° 0' 1.352 N	103° 40' 18.576 W
- plan misses target center by 20.0usft at 19773.0usft MD (12066.0 TVD, -6877.5 N, 696.2 E)									
- Circle (radius 50.0)									

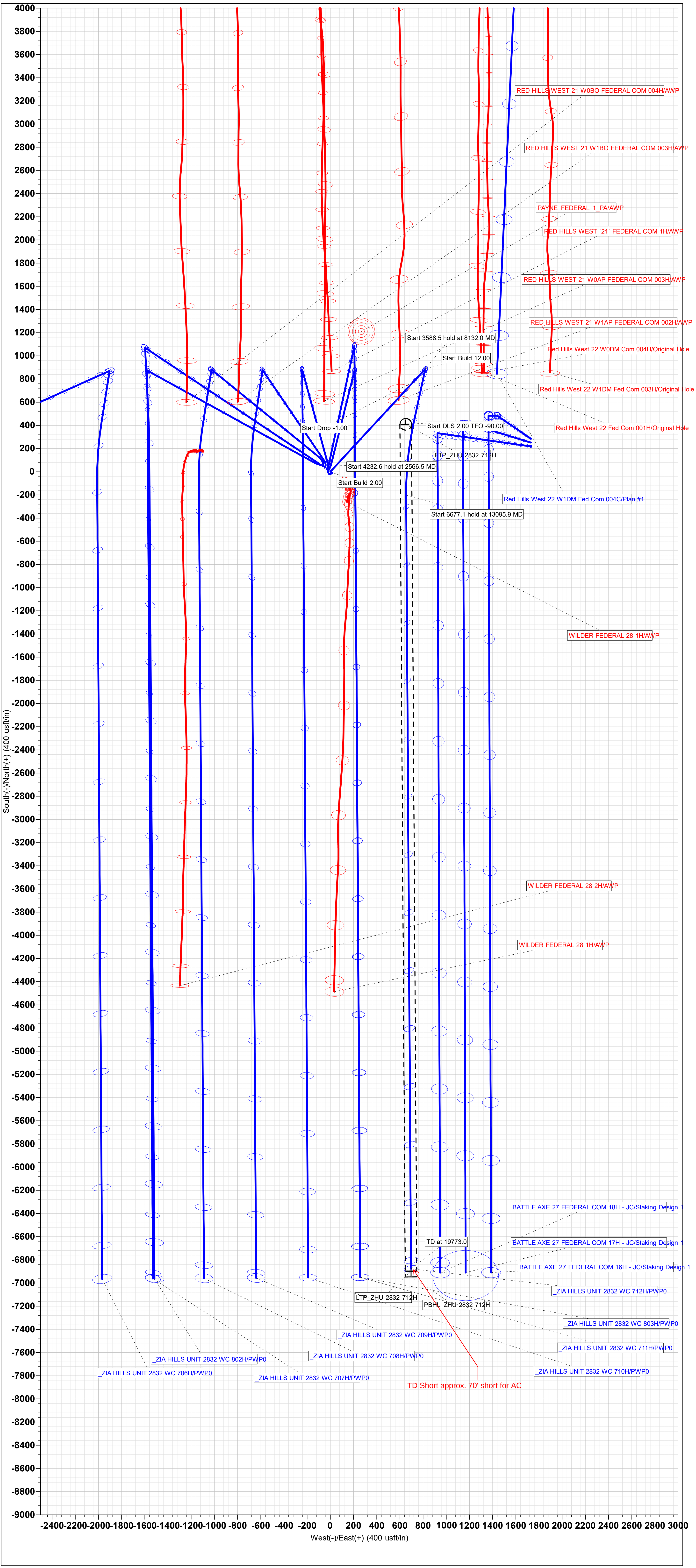
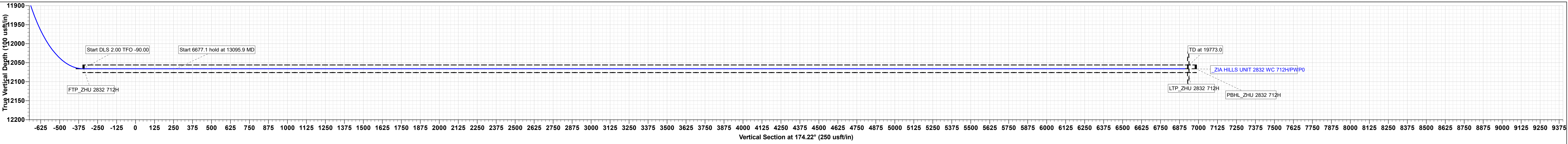
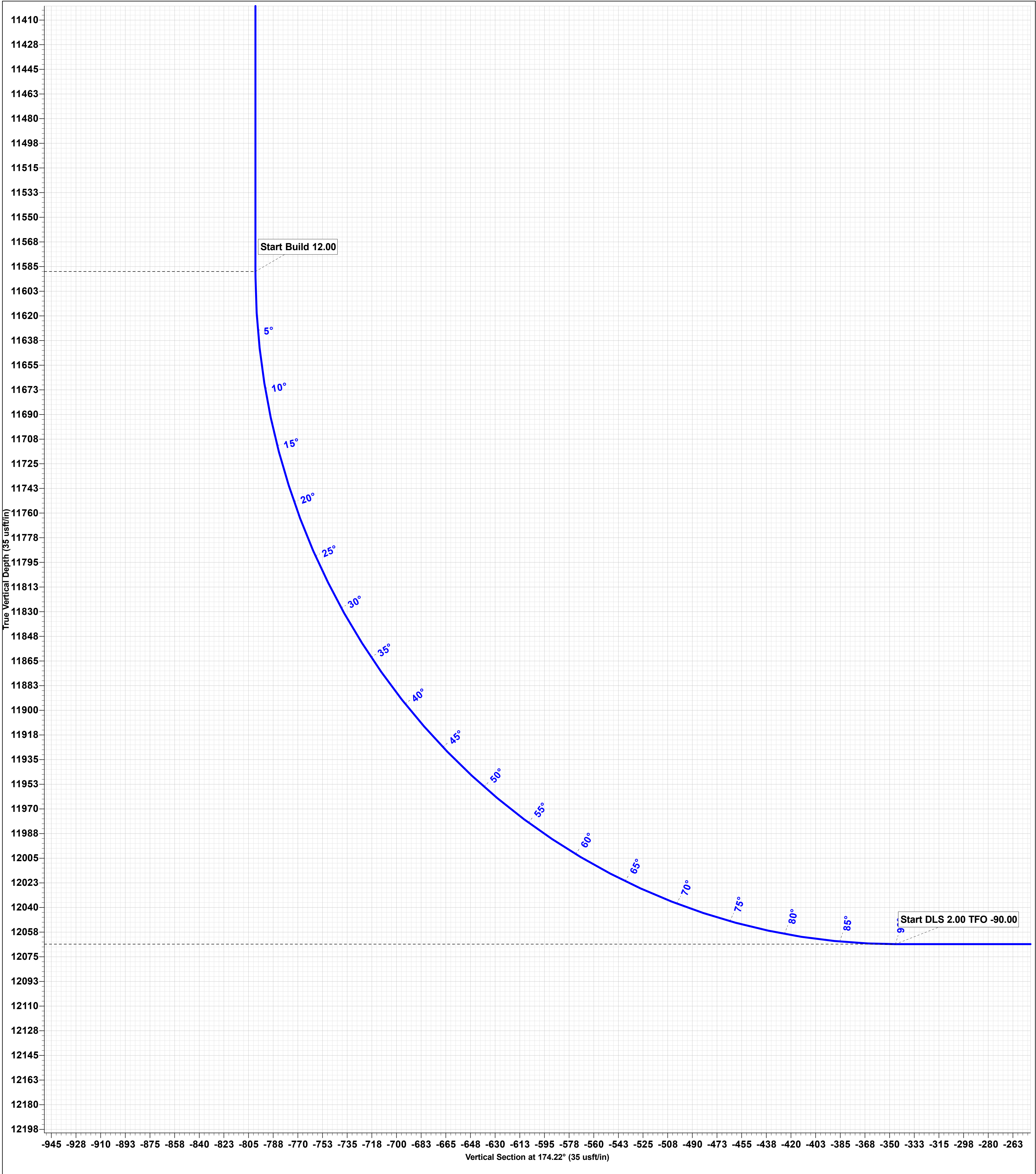
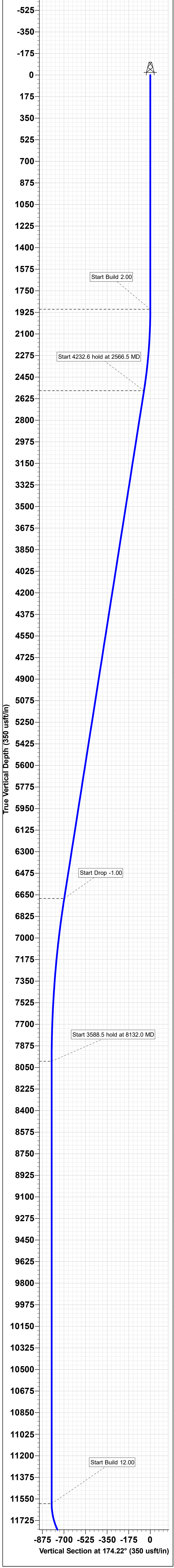
Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	19,773.0	12,066.0	5-1/2" Production Casing	5-1/2	6



Project: ZIA HILLS UNIT AREA
Site: ZIA HILLS UNIT 2832 PROJECT
Well: ZIA HILLS UNIT 2832 WC 712H
Wellbore: OWB
Design: PWP0

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
1900.0	0.00	0.00	1900.0	0.0	0.0	0.00	0.00	0.0
2566.5	13.33	42.71	2566.5	56.7	52.4	2.00	42.71	-51.1
6799.1	13.33	42.71	6679.0	773.7	714.3	0.00	0.00	-697.8
8132.0	0.00	0.00	8000.0	887.1	819.0	1.00	180.00	-800.1
11720.5	0.00	0.00	11588.5	887.1	819.0	0.00	0.00	-800.1
12470.5	90.00	192.15	12066.0	420.3	718.5	12.00	192.15	-345.8
13095.9	90.00	179.64	12066.0	-200.5	654.4	2.00	-90.00	265.4
19773.0	90.00	179.64	12066.0	-6877.5	696.2	0.00	0.00	6912.6



DELAWARE BASIN EAST

ZIA HILLS UNIT AREA

ZIA HILLS UNIT 2832 PROJECT

_ZIA HILLS UNIT 2832 WC 712H

OWB

PWP0

Anticollision Report

22 April, 2025

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Max. Cent. Dist. of 1,000.0usft or Max. Ell. Sep. of 500.0usft	Error Surface:	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Added to Error Values

Survey Tool Program	Date	4/22/2025		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	19,765.0	PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correc

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						
BATTLE AXE 27 FEDERAL COM 16H - JC						
BATTLE AXE 27 FEDERAL COM 16H - JC - Original Hol	11,410.0	11,296.5	678.4	616.6	10.976 CC	
BATTLE AXE 27 FEDERAL COM 16H - JC - Original Hol	19,765.0	19,024.3	729.1	583.9	5.023 ES, SF	
BATTLE AXE 27 FEDERAL COM 17H - JC						
BATTLE AXE 27 FEDERAL COM 17H - JC - Original Hol	12,763.0	12,110.5	490.5	423.2	7.282 CC	
BATTLE AXE 27 FEDERAL COM 17H - JC - Original Hol	19,765.0	19,065.7	490.8	195.9	1.664 Caution - Monitor Closely, ES, SF	
BATTLE AXE 27 FEDERAL COM 18H - JC						
BATTLE AXE 27 FEDERAL COM 18H - JC - Original Hol	12,764.2	12,147.0	258.4	190.2	3.792 CC	
BATTLE AXE 27 FEDERAL COM 18H - JC - Original Hol	19,765.0	19,143.3	264.9	124.2	1.882 Caution - Monitor Closely, ES, SF	
Mewbourne - Red Hills West 22 Fed Com 001H						
Red Hills West 22 Fed Com 001H - Original Hole - Origin	9,500.0	13,550.7	506.1	391.1	4.403 CC	
Red Hills West 22 Fed Com 001H - Original Hole - Origin	9,504.4	13,550.6	506.1	391.0	4.398 ES, SF	
Mewbourne - Red Hills West 22 W0DM Com 004H						
Red Hills West 22 W0DM Com 004H - Original Hole - Or	11,963.3	16,670.0	506.3	379.2	3.984 CC	
Red Hills West 22 W0DM Com 004H - Original Hole - Or	11,975.0	16,670.0	506.5	378.7	3.966 ES	
Red Hills West 22 W0DM Com 004H - Original Hole - Or	12,025.0	16,670.0	511.2	381.5	3.942 SF	
Mewbourne - Red Hills West 22 W1DM Fed Com 003H						
Red Hills West 22 W1DM Fed Com 003H - Original Hole						Out of range
Mewbourne - Red Hills West 22 W1DM Fed Com 004C						
Red Hills West 22 W1DM Fed Com 004C - Original Hole	12,083.4	16,732.1	684.9	572.1	6.074 CC, ES	
Red Hills West 22 W1DM Fed Com 004C - Original Hole	12,100.0	16,732.1	685.2	572.3	6.068 SF	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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						
ZIA HILLS UNIT 2832 PROJECT						
_ZIA HILLS UNIT 2832 WC 706H - OWB - PWP0						Out of range
_ZIA HILLS UNIT 2832 WC 707H - OWB - PWP0	1,900.0	1,898.0	99.9	87.3	7.885 CC	
_ZIA HILLS UNIT 2832 WC 707H - OWB - PWP0	2,000.0	1,998.0	100.2	87.2	7.739 ES	
_ZIA HILLS UNIT 2832 WC 707H - OWB - PWP0	2,100.0	2,095.4	102.2	89.0	7.729 SF	
_ZIA HILLS UNIT 2832 WC 708H - OWB - PWP0	1,900.0	1,900.0	79.9	67.3	6.309 CC	
_ZIA HILLS UNIT 2832 WC 708H - OWB - PWP0	2,000.0	2,000.0	80.2	67.2	6.196 ES	
_ZIA HILLS UNIT 2832 WC 708H - OWB - PWP0	2,100.0	2,099.2	81.5	68.2	6.168 SF	
_ZIA HILLS UNIT 2832 WC 709H - OWB - PWP0	1,900.0	1,899.8	60.0	47.3	4.735 CC	
_ZIA HILLS UNIT 2832 WC 709H - OWB - PWP0	2,000.0	1,999.8	60.2	47.3	4.655 ES	
_ZIA HILLS UNIT 2832 WC 709H - OWB - PWP0	2,100.0	2,099.5	61.4	48.2	4.646 SF	
_ZIA HILLS UNIT 2832 WC 710H - OWB - PWP0	1,900.0	1,899.5	40.0	27.3	3.156 CC	
_ZIA HILLS UNIT 2832 WC 710H - OWB - PWP0	2,000.0	1,999.5	40.3	27.3	3.110 ES, SF	
_ZIA HILLS UNIT 2832 WC 711H - OWB - PWP0	1,900.0	1,899.5	20.0	8.1	1.676 Caution - Monitor Closely, CC, ES	
_ZIA HILLS UNIT 2832 WC 711H - OWB - PWP0	2,000.0	1,999.5	20.3	8.1	1.660 Caution - Monitor Closely, SF	
_ZIA HILLS UNIT 2832 WC 802H - OWB - PWP0	1,900.0	1,902.0	120.0	107.3	9.464 CC	
_ZIA HILLS UNIT 2832 WC 802H - OWB - PWP0	2,000.0	2,000.0	120.2	107.3	9.289 ES	
_ZIA HILLS UNIT 2832 WC 802H - OWB - PWP0	2,100.0	2,097.7	122.7	109.5	9.251 SF	
_ZIA HILLS UNIT 2832 WC 803H - OWB - PWP0	2,016.0	2,015.6	19.9	6.9	1.530 Caution - Monitor Closely, CC, ES, SF	
PAYNE FEDERAL 1_PA - OWB - AWP	4,700.0	4,544.0	803.4	640.8	4.940 SF	
PAYNE FEDERAL 1_PA - OWB - AWP	4,753.3	4,544.0	801.7	640.2	4.964 CC, ES	
RED HILLS WEST '21' FEDERAL COM 1H - OWB - AW	9,487.8	13,758.0	807.3	692.6	7.034 CC, ES, SF	
RED HILLS WEST 21 W0AP FEDERAL COM 003H - OW	12,350.0	16,820.0	829.6	697.9	6.301 SF	
RED HILLS WEST 21 W0AP FEDERAL COM 003H - OW	12,400.0	16,820.0	827.9	696.9	6.319 ES	
RED HILLS WEST 21 W0AP FEDERAL COM 003H - OW	12,428.5	16,820.0	827.7	697.2	6.342 CC	
RED HILLS WEST 21 W0BO FEDERAL COM 004H - OW					Out of range	
RED HILLS WEST 21 W1AP FEDERAL COM 002H - OW	12,300.0	17,035.0	189.1	63.1	1.501 Caution - Monitor Closely, ES, SF	
RED HILLS WEST 21 W1AP FEDERAL COM 002H - OW	12,328.0	17,035.0	186.7	65.7	1.543 Caution - Monitor Closely, CC	
RED HILLS WEST 21 W1BO FEDERAL COM 003H - OW					Out of range	
WILDER FEDERAL 28 1H - OWB - AWP	853.3	843.7	138.5	86.8	2.682 Normal Operations, CC, ES, SF	
WILDER FEDERAL 28 1H - ST01 - AWP	853.3	843.7	138.5	86.8	2.682 Normal Operations, CC, ES, SF	
WILDER FEDERAL 28 2H - OWB - AWP					Out of range	

Offset Design: BATTLE AXE 27 FEDERAL COM 16H - JC - BATTLE AXE 27 FEDERAL COM 16H - JC - Original Hole - Staking Design 1													Offset Site Error: 0.0 usft	
Survey Program: 0-MWD+IFR1													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,700.0	5,609.6	5,685.3	5,672.7	20.4	20.2	58.10	425.0	1,525.8	998.7	963.4	35.33	28.269		
5,800.0	5,706.9	5,782.1	5,769.3	20.9	20.5	59.06	428.8	1,520.2	980.1	944.2	35.83	27.356		
5,900.0	5,804.2	5,878.9	5,865.9	21.3	20.9	60.06	432.6	1,514.7	961.7	925.4	36.31	26.483		
6,000.0	5,901.5	5,975.8	5,962.5	21.8	21.2	61.10	436.5	1,509.1	943.6	906.8	36.79	25.649		
6,100.0	5,998.8	6,072.6	6,059.1	22.3	21.6	62.17	440.3	1,503.5	925.9	888.6	37.26	24.852		
6,200.0	6,096.1	6,169.5	6,155.7	22.7	21.9	63.29	444.1	1,497.9	908.5	870.8	37.71	24.090		
6,300.0	6,193.4	6,266.3	6,252.3	23.2	22.3	64.44	447.9	1,492.4	891.4	853.3	38.16	23.361		
6,400.0	6,290.7	6,363.1	6,348.9	23.7	22.6	65.64	451.7	1,486.8	874.7	836.1	38.59	22.666		
6,500.0	6,388.0	6,460.0	6,445.5	24.1	23.0	66.89	455.6	1,481.2	858.5	819.5	39.02	22.001		
6,600.0	6,485.3	6,556.8	6,542.1	24.6	23.3	68.18	459.4	1,475.7	842.6	803.2	39.44	21.366		
6,700.0	6,582.6	6,653.6	6,638.7	25.1	23.7	69.51	463.2	1,470.1	827.2	787.4	39.85	20.759		
6,799.1	6,679.0	6,749.6	6,734.4	25.5	24.0	70.88	467.0	1,464.6	812.4	772.2	40.25	20.186		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 16H - JC - BATTLE AXE 27 FEDERAL COM 16H - JC - Original Hole - Staking Design 1											Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
6,800.0	6,679.9	6,750.5	6,735.3	25.5	24.0	70.89	467.0	1,464.5	812.3	772.1	40.25	20.180
6,900.0	6,777.5	6,847.5	6,832.2	26.0	24.4	72.13	470.9	1,458.9	798.1	757.5	40.66	19.631
7,000.0	6,875.3	6,945.0	6,929.3	26.5	24.7	73.32	474.7	1,453.3	785.0	743.9	41.07	19.113
7,100.0	6,973.6	7,042.8	7,026.9	26.9	25.1	74.43	478.6	1,447.7	772.7	731.2	41.49	18.623
7,200.0	7,072.1	7,125.7	7,109.7	27.4	25.4	75.31	481.4	1,443.6	762.1	720.2	41.89	18.191
7,300.0	7,170.9	7,200.0	7,183.9	27.8	25.6	76.05	483.1	1,441.1	754.4	712.2	42.26	17.852
7,400.0	7,270.0	7,290.9	7,274.8	28.2	26.0	76.91	484.0	1,439.8	749.4	706.8	42.67	17.565
7,500.0	7,369.3	7,385.4	7,369.3	28.6	26.3	77.72	484.1	1,439.7	746.7	703.6	43.08	17.331
7,600.0	7,468.8	7,484.8	7,468.8	29.0	26.6	78.46	484.1	1,439.7	744.6	701.1	43.53	17.105
7,700.0	7,568.4	7,584.5	7,568.4	29.4	27.0	79.07	484.1	1,439.7	743.0	699.0	43.99	16.891
7,800.0	7,668.2	7,684.3	7,668.2	29.8	27.3	79.57	484.1	1,439.7	741.7	697.3	44.45	16.688
7,900.0	7,768.1	7,784.1	7,768.1	30.1	27.7	79.93	484.1	1,439.7	740.9	695.9	44.92	16.494
8,000.0	7,868.0	7,884.1	7,868.0	30.4	28.0	80.17	484.1	1,439.7	740.3	694.9	45.39	16.309
8,100.0	7,968.0	7,984.1	7,968.0	30.7	28.4	80.28	484.1	1,439.7	740.1	694.2	45.87	16.133
8,132.0	8,000.0	8,016.1	8,000.0	30.7	28.5	123.00	484.1	1,439.7	740.1	694.0	46.02	16.081
8,200.0	8,068.0	8,084.1	8,068.0	30.7	28.8	123.00	484.1	1,439.7	740.1	693.7	46.34	15.971
8,300.0	8,168.0	8,184.1	8,168.0	30.7	29.1	123.00	484.1	1,439.7	740.1	693.2	46.82	15.808
8,400.0	8,268.0	8,284.1	8,268.0	30.8	29.5	123.00	484.1	1,439.7	740.1	692.8	47.30	15.647
8,500.0	8,368.0	8,384.1	8,368.0	30.8	29.8	123.00	484.1	1,439.7	740.1	692.3	47.78	15.490
8,600.0	8,468.0	8,484.1	8,468.0	30.9	30.2	123.00	484.1	1,439.7	740.1	691.8	48.26	15.335
8,700.0	8,568.0	8,584.1	8,568.0	30.9	30.5	123.00	484.1	1,439.7	740.1	691.3	48.74	15.184
8,800.0	8,668.0	8,684.1	8,668.0	30.9	30.9	123.00	484.1	1,439.7	740.1	690.8	49.22	15.035
8,900.0	8,768.0	8,784.1	8,768.0	31.0	31.3	123.04	484.1	1,438.7	739.4	689.6	49.77	14.857
9,000.0	8,868.0	8,917.2	8,901.1	31.0	31.7	123.23	484.1	1,434.2	736.2	685.9	50.30	14.635
9,100.0	8,968.0	9,026.9	9,010.5	31.1	32.1	123.54	484.1	1,427.0	730.7	679.9	50.80	14.385
9,200.0	9,068.0	9,126.7	9,110.0	31.1	32.4	123.84	484.1	1,420.1	724.9	673.6	51.26	14.140
9,300.0	9,168.0	9,226.4	9,209.5	31.1	32.8	124.15	484.1	1,413.1	719.1	667.4	51.73	13.900
9,400.0	9,268.0	9,326.2	9,309.0	31.2	33.2	124.47	484.1	1,406.1	713.3	661.1	52.20	13.664
9,500.0	9,368.0	9,425.9	9,408.6	31.2	33.5	124.79	484.1	1,399.2	707.6	654.9	52.68	13.433
9,600.0	9,468.0	9,525.7	9,508.1	31.2	33.9	125.11	484.1	1,392.2	701.9	648.7	53.15	13.205
9,700.0	9,568.0	9,625.5	9,607.6	31.3	34.2	125.44	484.1	1,385.3	696.2	642.5	53.63	12.982
9,800.0	9,668.0	9,725.2	9,707.1	31.3	34.6	125.78	484.1	1,378.3	690.5	636.4	54.10	12.762
9,900.0	9,768.0	9,820.1	9,801.8	31.4	34.9	126.09	484.1	1,371.8	685.0	630.4	54.57	12.553
10,000.0	9,868.0	9,907.4	9,888.9	31.4	35.2	126.31	484.1	1,367.5	681.0	626.0	55.00	12.382
10,100.0	9,968.0	10,000.0	9,981.5	31.5	35.5	126.43	484.1	1,365.1	678.9	623.4	55.45	12.243
10,158.8	10,026.8	10,046.3	10,027.8	31.5	35.7	126.45	484.1	1,364.7	678.4	622.8	55.67	12.187
10,200.0	10,068.0	10,086.5	10,068.0	31.5	35.8	126.45	484.1	1,364.7	678.4	622.6	55.86	12.145
10,300.0	10,168.0	10,186.5	10,168.0	31.5	36.2	126.45	484.1	1,364.7	678.4	622.1	56.35	12.039
10,400.0	10,268.0	10,286.5	10,268.0	31.6	36.6	126.45	484.1	1,364.7	678.4	621.6	56.84	11.936
10,500.0	10,368.0	10,386.5	10,368.0	31.6	36.9	126.45	484.1	1,364.7	678.4	621.1	57.33	11.833
10,600.0	10,468.0	10,486.5	10,468.0	31.7	37.3	126.45	484.1	1,364.7	678.4	620.6	57.82	11.733
10,700.0	10,568.0	10,586.5	10,568.0	31.7	37.6	126.45	484.1	1,364.7	678.4	620.1	58.31	11.634
10,800.0	10,668.0	10,686.5	10,668.0	31.7	38.0	126.45	484.1	1,364.7	678.4	619.6	58.80	11.537
10,900.0	10,768.0	10,786.5	10,768.0	31.8	38.3	126.45	484.1	1,364.7	678.4	619.1	59.30	11.441
11,000.0	10,868.0	10,886.5	10,868.0	31.8	38.7	126.45	484.1	1,364.7	678.4	618.6	59.79	11.347
11,100.0	10,968.0	10,986.5	10,968.0	31.9	39.0	126.45	484.1	1,364.7	678.4	618.1	60.28	11.255
11,200.0	11,068.0	11,086.5	11,068.0	31.9	39.4	126.45	484.1	1,364.7	678.4	617.7	60.77	11.163
11,300.0	11,168.0	11,186.5	11,168.0	32.0	39.7	126.45	484.1	1,364.7	678.4	617.2	61.27	11.074
11,400.0	11,268.0	11,286.5	11,268.0	32.0	40.1	126.45	484.1	1,364.7	678.4	616.7	61.76	10.985
11,410.0	11,278.0	11,296.5	11,278.0	32.0	40.1	126.45	484.1	1,364.7	678.4	616.6	61.81	10.976 CC
11,500.0	11,368.0	11,369.9	11,351.4	32.0	40.4	126.48	483.6	1,364.7	678.9	616.8	62.13	10.927

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 16H - JC - BATTLE AXE 27 FEDERAL COM 16H - JC - Original Hole - Staking Design 1											Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
11,600.0	11,468.0	11,428.0	11,409.2	32.1	40.6	126.84	478.3	1,364.8	684.4	622.2	62.21	11.002
11,700.0	11,568.0	11,484.4	11,464.6	32.1	40.7	127.55	467.6	1,364.8	696.1	634.0	62.13	11.204
11,720.5	11,588.5	11,500.0	11,479.7	32.1	40.8	127.81	463.6	1,364.8	699.3	637.2	62.15	11.253
11,725.0	11,593.0	11,500.0	11,479.7	32.1	40.8	-64.27	463.6	1,364.8	700.0	637.9	62.11	11.271
11,750.0	11,618.0	11,511.8	11,491.1	32.1	40.8	-63.66	460.4	1,364.8	704.0	641.9	62.02	11.350
11,775.0	11,642.9	11,525.5	11,504.1	32.0	40.9	-63.08	456.3	1,364.8	707.7	645.7	61.95	11.423
11,800.0	11,667.6	11,550.0	11,527.3	31.9	40.9	-62.45	448.3	1,364.8	711.4	649.4	62.03	11.469
11,825.0	11,692.2	11,550.0	11,527.3	31.8	40.9	-62.11	448.3	1,364.8	714.6	652.8	61.76	11.571
11,850.0	11,716.4	11,566.6	11,542.8	31.7	41.0	-61.68	442.3	1,364.9	717.7	656.0	61.72	11.628
11,875.0	11,740.3	11,580.3	11,555.4	31.6	41.0	-61.33	437.0	1,364.9	720.6	659.0	61.64	11.691
11,900.0	11,763.8	11,600.0	11,573.3	31.5	41.1	-61.04	428.9	1,364.9	723.3	661.6	61.64	11.733
11,925.0	11,786.8	11,600.0	11,573.3	31.4	41.1	-60.78	428.9	1,364.9	725.7	664.4	61.36	11.827
11,950.0	11,809.3	11,621.4	11,592.5	31.3	41.1	-60.63	419.4	1,364.9	727.8	666.4	61.40	11.853
11,975.0	11,831.1	11,635.1	11,604.5	31.2	41.2	-60.50	412.9	1,365.0	729.7	668.4	61.33	11.898
12,000.0	11,852.3	11,650.0	11,617.5	31.1	41.2	-60.45	405.5	1,365.0	731.3	670.0	61.29	11.932
12,025.0	11,872.8	11,662.4	11,628.1	31.0	41.2	-60.43	399.2	1,365.0	732.7	671.5	61.22	11.969
12,050.0	11,892.5	11,676.0	11,639.6	31.0	41.3	-60.47	391.9	1,365.0	733.8	672.7	61.18	11.995
12,075.0	11,911.3	11,700.0	11,659.5	30.9	41.3	-60.72	378.4	1,365.1	734.9	673.6	61.30	11.988
12,100.0	11,929.3	11,700.0	11,659.5	30.8	41.3	-60.67	378.4	1,365.1	735.4	674.3	61.11	12.034
12,125.0	11,946.3	11,716.7	11,673.0	30.7	41.4	-60.92	368.6	1,365.1	735.8	674.6	61.16	12.029
12,150.0	11,962.4	11,730.2	11,683.6	30.6	41.4	-61.18	360.3	1,365.1	735.9	674.7	61.20	12.026
12,175.0	11,977.4	11,750.0	11,699.0	30.5	41.4	-61.63	347.8	1,365.2	735.9	674.6	61.33	12.000
12,200.0	11,991.4	11,750.0	11,699.0	30.5	41.4	-61.65	347.8	1,365.2	735.7	674.4	61.25	12.010
12,225.0	12,004.2	11,770.5	11,714.3	30.4	41.5	-62.24	334.2	1,365.2	735.1	673.7	61.43	11.966
12,250.0	12,015.9	11,783.8	11,724.1	30.3	41.5	-62.68	325.1	1,365.2	734.5	672.9	61.56	11.930
12,275.0	12,026.5	11,800.0	11,735.6	30.3	41.5	-63.26	313.8	1,365.3	733.6	671.9	61.74	11.882
12,300.0	12,035.8	11,810.4	11,742.9	30.2	41.5	-63.71	306.3	1,365.3	732.7	670.7	61.90	11.836
12,325.0	12,044.0	11,823.6	11,751.9	30.2	41.6	-64.29	296.6	1,365.3	731.5	669.4	62.11	11.778
12,350.0	12,050.8	11,836.8	11,760.6	30.1	41.6	-64.90	286.8	1,365.3	730.3	667.9	62.35	11.713
12,375.0	12,056.4	11,850.0	11,769.2	30.1	41.6	-65.55	276.7	1,365.4	729.0	666.4	62.61	11.643
12,400.0	12,060.8	11,863.0	11,777.3	30.1	41.6	-66.23	266.6	1,365.4	727.6	664.7	62.90	11.568
12,425.0	12,063.8	11,875.9	11,785.3	30.1	41.7	-66.94	256.4	1,365.4	726.1	662.9	63.20	11.488
12,450.0	12,065.5	11,888.8	11,792.9	30.1	41.7	-67.68	246.0	1,365.5	724.6	661.1	63.53	11.406
12,475.0	12,066.0	11,900.0	11,799.4	30.1	41.7	-68.33	236.9	1,365.5	723.4	659.6	63.82	11.336
12,500.0	12,066.0	11,914.8	11,807.6	30.1	41.7	-69.01	224.6	1,365.5	721.9	657.7	64.23	11.240
12,600.0	12,066.0	11,971.5	11,836.3	30.1	41.9	-71.38	175.6	1,365.7	719.4	653.9	65.56	10.973
12,619.2	12,066.0	11,983.2	11,841.5	30.1	41.9	-71.82	165.2	1,365.7	719.4	653.6	65.80	10.932
12,700.0	12,066.0	12,035.1	11,862.4	30.1	42.0	-73.58	117.7	1,365.9	720.2	653.5	66.72	10.795
12,800.0	12,066.0	12,100.0	11,882.4	30.2	42.1	-75.28	56.0	1,366.0	723.0	655.3	67.70	10.679
12,900.0	12,066.0	12,179.8	11,897.1	30.2	42.2	-76.55	-22.3	1,366.3	726.5	658.2	68.38	10.625
13,000.0	12,066.0	12,259.3	11,900.9	30.3	42.3	-76.93	-101.7	1,366.5	730.0	661.1	68.95	10.588
13,091.0	12,066.0	12,350.3	11,900.5	30.4	42.4	-76.93	-192.7	1,366.8	731.4	662.2	69.21	10.567
13,100.0	12,066.0	12,359.3	11,900.5	30.4	42.4	-76.92	-201.7	1,366.8	731.4	662.2	69.24	10.563
13,200.0	12,066.0	12,459.3	11,900.1	30.5	42.5	-76.89	-301.7	1,367.1	731.4	661.8	69.56	10.514
13,300.0	12,066.0	12,559.3	11,899.6	30.5	42.7	-76.85	-401.7	1,367.4	731.3	661.4	69.92	10.459
13,400.0	12,066.0	12,659.3	11,899.2	30.7	42.9	-76.82	-501.7	1,367.7	731.3	660.9	70.33	10.398
13,500.0	12,066.0	12,759.3	11,898.7	30.8	43.1	-76.78	-601.7	1,368.1	731.2	660.4	70.77	10.332
13,600.0	12,066.0	12,859.3	11,898.3	30.9	43.3	-76.74	-701.7	1,368.4	731.2	659.9	71.26	10.261
13,700.0	12,066.0	12,959.3	11,897.9	31.0	43.6	-76.71	-801.7	1,368.7	731.1	659.3	71.78	10.185
13,800.0	12,066.0	13,059.3	11,897.4	31.2	43.9	-76.67	-901.7	1,369.0	731.1	658.7	72.35	10.105
13,900.0	12,066.0	13,159.3	11,897.0	31.3	44.1	-76.63	-1,001.7	1,369.3	731.0	658.1	72.95	10.021

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 16H - JC - BATTLE AXE 27 FEDERAL COM 16H - JC - Original Hole - Staking Design 1											Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
14,000.0	12,066.0	13,259.3	11,896.5	31.5	44.5	-76.60	-1,101.7	1,369.6	731.0	657.4	73.59	9.934
14,100.0	12,066.0	13,359.3	11,896.1	31.7	44.8	-76.56	-1,201.7	1,369.9	731.0	656.7	74.26	9.843
14,200.0	12,066.0	13,459.3	11,895.7	31.9	45.1	-76.53	-1,301.7	1,370.2	730.9	656.0	74.97	9.750
14,300.0	12,066.0	13,559.3	11,895.2	32.1	45.5	-76.49	-1,401.7	1,370.5	730.9	655.2	75.71	9.654
14,400.0	12,066.0	13,659.3	11,894.8	32.3	45.9	-76.45	-1,501.7	1,370.8	730.8	654.4	76.49	9.555
14,500.0	12,066.0	13,759.3	11,894.3	32.5	46.3	-76.42	-1,601.7	1,371.1	730.8	653.5	77.29	9.455
14,600.0	12,066.0	13,859.3	11,893.9	32.8	46.7	-76.38	-1,701.7	1,371.4	730.8	652.6	78.13	9.353
14,700.0	12,066.0	13,959.3	11,893.5	33.1	47.2	-76.34	-1,801.7	1,371.7	730.7	651.7	79.00	9.250
14,800.0	12,066.0	14,059.3	11,893.0	33.3	47.6	-76.31	-1,901.7	1,372.0	730.7	650.8	79.89	9.146
14,900.0	12,066.0	14,159.3	11,892.6	33.6	48.1	-76.27	-2,001.7	1,372.3	730.6	649.8	80.82	9.041
15,000.0	12,066.0	14,259.3	11,892.1	33.9	48.6	-76.24	-2,101.7	1,372.6	730.6	648.8	81.77	8.935
15,100.0	12,066.0	14,359.3	11,891.7	34.2	49.1	-76.20	-2,201.7	1,372.9	730.6	647.8	82.74	8.829
15,200.0	12,066.0	14,459.3	11,891.3	34.5	49.6	-76.16	-2,301.7	1,373.2	730.5	646.8	83.74	8.723
15,300.0	12,066.0	14,559.3	11,890.8	34.9	50.1	-76.13	-2,401.7	1,373.6	730.5	645.7	84.77	8.617
15,400.0	12,066.0	14,659.3	11,890.4	35.2	50.7	-76.09	-2,501.7	1,373.9	730.4	644.6	85.82	8.512
15,500.0	12,066.0	14,759.3	11,889.9	35.6	51.2	-76.05	-2,601.7	1,374.2	730.4	643.5	86.89	8.406
15,600.0	12,066.0	14,859.3	11,889.5	36.0	51.8	-76.02	-2,701.6	1,374.5	730.4	642.4	87.98	8.301
15,700.0	12,066.0	14,959.3	11,889.1	36.4	52.4	-75.98	-2,801.6	1,374.8	730.3	641.2	89.09	8.197
15,800.0	12,066.0	15,059.3	11,888.6	36.8	53.0	-75.95	-2,901.6	1,375.1	730.3	640.1	90.23	8.094
15,900.0	12,066.0	15,159.3	11,888.2	37.2	53.6	-75.91	-3,001.6	1,375.4	730.3	638.9	91.38	7.992
16,000.0	12,066.0	15,259.3	11,887.7	37.6	54.2	-75.87	-3,101.6	1,375.7	730.2	637.7	92.55	7.890
16,100.0	12,066.0	15,359.3	11,887.3	38.1	54.9	-75.84	-3,201.6	1,376.0	730.2	636.4	93.74	7.790
16,200.0	12,066.0	15,459.3	11,886.9	38.5	55.5	-75.80	-3,301.6	1,376.3	730.1	635.2	94.94	7.690
16,300.0	12,066.0	15,559.3	11,886.4	39.0	56.1	-75.76	-3,401.6	1,376.6	730.1	633.9	96.16	7.592
16,400.0	12,066.0	15,659.3	11,886.0	39.5	56.8	-75.73	-3,501.6	1,376.9	730.1	632.7	97.40	7.495
16,500.0	12,066.0	15,759.3	11,885.5	39.9	57.5	-75.69	-3,601.6	1,377.2	730.0	631.4	98.65	7.400
16,600.0	12,066.0	15,859.3	11,885.1	40.4	58.1	-75.66	-3,701.6	1,377.5	730.0	630.1	99.92	7.306
16,700.0	12,066.0	15,959.3	11,884.7	41.0	58.8	-75.62	-3,801.6	1,377.8	730.0	628.8	101.20	7.213
16,800.0	12,066.0	16,059.3	11,884.2	41.5	59.5	-75.58	-3,901.6	1,378.1	729.9	627.4	102.50	7.121
16,900.0	12,066.0	16,159.3	11,883.8	42.0	60.2	-75.55	-4,001.6	1,378.4	729.9	626.1	103.81	7.031
17,000.0	12,066.0	16,259.3	11,883.3	42.5	60.9	-75.51	-4,101.6	1,378.7	729.9	624.7	105.13	6.943
17,100.0	12,066.0	16,359.3	11,882.9	43.1	61.7	-75.47	-4,201.6	1,379.1	729.8	623.4	106.46	6.856
17,200.0	12,066.0	16,459.3	11,882.5	43.6	62.4	-75.44	-4,301.6	1,379.4	729.8	622.0	107.80	6.770
17,300.0	12,066.0	16,559.3	11,882.0	44.2	63.1	-75.40	-4,401.6	1,379.7	729.8	620.6	109.16	6.685
17,400.0	12,066.0	16,659.3	11,881.6	44.8	63.9	-75.36	-4,501.6	1,380.0	729.7	619.2	110.52	6.602
17,500.0	12,066.0	16,759.3	11,881.1	45.3	64.6	-75.33	-4,601.6	1,380.3	729.7	617.8	111.90	6.521
17,600.0	12,066.0	16,859.3	11,880.7	45.9	65.4	-75.29	-4,701.6	1,380.6	729.7	616.4	113.29	6.441
17,700.0	12,066.0	16,959.3	11,880.3	46.5	66.1	-75.26	-4,801.6	1,380.9	729.6	615.0	114.68	6.362
17,800.0	12,066.0	17,059.3	11,879.8	47.1	66.9	-75.22	-4,901.6	1,381.2	729.6	613.5	116.09	6.285
17,900.0	12,066.0	17,159.3	11,879.4	47.7	67.7	-75.18	-5,001.6	1,381.5	729.6	612.1	117.50	6.209
18,000.0	12,066.0	17,259.3	11,878.9	48.3	68.4	-75.15	-5,101.6	1,381.8	729.5	610.6	118.92	6.135
18,100.0	12,066.0	17,359.3	11,878.5	48.9	69.2	-75.11	-5,201.6	1,382.1	729.5	609.2	120.35	6.061
18,200.0	12,066.0	17,459.3	11,878.1	49.5	70.0	-75.07	-5,301.6	1,382.4	729.5	607.7	121.79	5.990
18,300.0	12,066.0	17,559.3	11,877.6	50.1	70.8	-75.04	-5,401.6	1,382.7	729.5	606.2	123.24	5.919
18,400.0	12,066.0	17,659.3	11,877.2	50.8	71.6	-75.00	-5,501.6	1,383.0	729.4	604.7	124.69	5.850
18,500.0	12,066.0	17,759.3	11,876.8	51.4	72.4	-74.96	-5,601.6	1,383.3	729.4	603.2	126.15	5.782
18,600.0	12,066.0	17,859.3	11,876.3	52.0	73.2	-74.93	-5,701.6	1,383.6	729.4	601.7	127.62	5.715
18,700.0	12,066.0	17,959.3	11,875.9	52.7	74.0	-74.89	-5,801.6	1,383.9	729.3	600.2	129.09	5.650
18,800.0	12,066.0	18,059.3	11,875.4	53.3	74.8	-74.86	-5,901.6	1,384.2	729.3	598.7	130.57	5.585
18,900.0	12,066.0	18,159.3	11,875.0	54.0	75.7	-74.82	-6,001.6	1,384.6	729.3	597.2	132.06	5.522
19,000.0	12,066.0	18,259.3	11,874.6	54.6	76.5	-74.78	-6,101.6	1,384.9	729.3	595.7	133.55	5.460

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 16H - JC - BATTLE AXE 27 FEDERAL COM 16H - JC - Original Hole - Staking Design 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,100.0	12,066.0	18,359.3	11,874.1	55.3	77.3	-74.75	-6,201.6	1,385.2	729.2	594.2	135.05	5.400	
19,200.0	12,066.0	18,459.3	11,873.7	55.9	78.1	-74.71	-6,301.6	1,385.5	729.2	592.6	136.56	5.340	
19,300.0	12,066.0	18,559.3	11,873.2	56.6	79.0	-74.67	-6,401.6	1,385.8	729.2	591.1	138.07	5.281	
19,400.0	12,066.0	18,659.3	11,872.8	57.3	79.8	-74.64	-6,501.6	1,386.1	729.1	589.6	139.58	5.224	
19,500.0	12,066.0	18,759.3	11,872.4	57.9	80.7	-74.60	-6,601.5	1,386.4	729.1	588.0	141.10	5.167	
19,600.0	12,066.0	18,859.3	11,871.9	58.6	81.5	-74.56	-6,701.5	1,386.7	729.1	586.5	142.62	5.112	
19,700.0	12,066.0	18,959.3	11,871.5	59.3	82.4	-74.53	-6,801.5	1,387.0	729.1	584.9	144.15	5.058	
19,765.0	12,066.0	19,024.3	11,871.2	59.7	82.9	-74.50	-6,866.5	1,387.2	729.1	583.9	145.15	5.023 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 EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 17H - JC - BATTLE AXE 27 FEDERAL COM 17H - JC - Original Hole - Staking Design 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,400.0	5,317.7	5,419.6	5,403.4	19.0	19.2	60.80	335.0	1,459.1	988.2	955.0	33.24	29.726	
5,500.0	5,415.0	5,515.7	5,499.1	19.5	19.6	61.93	337.5	1,451.1	968.2	934.4	33.73	28.706	
5,600.0	5,512.3	5,611.7	5,594.8	20.0	19.9	63.10	340.0	1,443.1	948.5	914.3	34.20	27.734	
5,700.0	5,609.6	5,707.8	5,690.5	20.4	20.3	64.32	342.4	1,435.1	929.3	894.6	34.66	26.808	
5,800.0	5,706.9	5,803.9	5,786.2	20.9	20.6	65.59	344.9	1,427.1	910.4	875.3	35.12	25.926	
5,900.0	5,804.2	5,899.9	5,881.9	21.3	21.0	66.90	347.3	1,419.1	892.1	856.5	35.56	25.087	
6,000.0	5,901.5	5,996.0	5,977.6	21.8	21.3	68.27	349.8	1,411.1	874.3	838.3	36.00	24.287	
6,100.0	5,998.8	6,092.1	6,073.3	22.3	21.7	69.70	352.3	1,403.1	857.0	820.5	36.43	23.526	
6,200.0	6,096.1	6,188.1	6,169.0	22.7	22.0	71.18	354.7	1,395.1	840.2	803.4	36.85	22.802	
6,300.0	6,193.4	6,284.2	6,264.7	23.2	22.4	72.71	357.2	1,387.1	824.0	786.8	37.27	22.112	
6,400.0	6,290.7	6,380.3	6,360.4	23.7	22.7	74.30	359.6	1,379.1	808.5	770.8	37.68	21.456	
6,500.0	6,388.0	6,476.3	6,456.1	24.1	23.1	75.95	362.1	1,371.1	793.7	755.6	38.10	20.832	
6,600.0	6,485.3	6,572.4	6,551.8	24.6	23.4	77.66	364.6	1,363.1	779.5	741.0	38.52	20.238	
6,700.0	6,582.6	6,668.5	6,647.5	25.1	23.8	79.42	367.0	1,355.1	766.1	727.2	38.94	19.672	
6,799.1	6,679.0	6,763.6	6,742.4	25.5	24.1	81.22	369.4	1,347.1	753.6	714.2	39.38	19.138	
6,800.0	6,679.9	6,764.5	6,743.2	25.5	24.1	81.24	369.5	1,347.1	753.5	714.1	39.38	19.133	
6,900.0	6,777.5	6,860.8	6,839.2	26.0	24.5	82.94	371.9	1,339.0	741.8	702.0	39.84	18.621	
7,000.0	6,875.3	6,957.6	6,935.5	26.5	24.8	84.58	374.4	1,331.0	731.1	690.8	40.31	18.137	
7,100.0	6,973.6	7,054.7	7,032.3	26.9	25.2	86.16	376.9	1,322.9	721.2	680.4	40.80	17.675	
7,200.0	7,072.1	7,152.2	7,129.5	27.4	25.5	87.65	379.4	1,314.8	712.0	670.7	41.31	17.235	
7,300.0	7,170.9	7,250.1	7,227.0	27.8	25.9	89.06	381.9	1,306.6	703.5	661.6	41.84	16.814	
7,400.0	7,270.0	7,348.3	7,324.8	28.2	26.2	90.37	384.4	1,298.4	695.4	653.0	42.38	16.409	
7,500.0	7,369.3	7,446.7	7,422.8	28.6	26.6	91.57	386.9	1,290.2	687.7	644.8	42.93	16.020	
7,600.0	7,468.8	7,545.5	7,521.2	29.0	27.0	92.67	389.5	1,282.0	680.3	636.8	43.49	15.645	
7,700.0	7,568.4	7,644.4	7,619.8	29.4	27.3	93.65	392.0	1,273.8	673.1	629.0	44.05	15.281	
7,800.0	7,668.2	7,743.5	7,718.5	29.8	27.7	94.51	394.5	1,265.5	665.9	621.3	44.61	14.930	
7,900.0	7,768.1	7,842.9	7,817.5	30.1	28.0	95.24	397.1	1,257.2	658.8	613.7	45.16	14.588	
8,000.0	7,868.0	7,942.3	7,916.5	30.4	28.4	95.84	399.6	1,248.9	651.6	605.9	45.71	14.256	
8,100.0	7,968.0	8,041.9	8,015.7	30.7	28.8	96.29	402.2	1,240.6	644.4	598.1	46.25	13.932	
8,132.0	8,000.0	8,073.7	8,047.5	30.7	28.9	139.12	403.0	1,238.0	642.0	595.6	46.41	13.833	
8,200.0	8,068.0	8,139.6	8,113.1	30.7	29.1	139.40	404.7	1,232.5	637.0	590.3	46.75	13.626	
8,300.0	8,168.0	8,227.1	8,200.3	30.7	29.4	139.71	406.5	1,226.5	630.9	583.7	47.20	13.366	
8,400.0	8,268.0	8,314.8	8,287.9	30.8	29.8	139.92	407.8	1,222.4	626.8	579.1	47.63	13.158	
8,500.0	8,368.0	8,400.0	8,373.1	30.8	30.1	140.03	408.5	1,220.2	624.6	576.5	48.02	13.007	
8,600.0	8,468.0	8,494.9	8,468.0	30.9	30.4	140.06	408.6	1,219.7	624.1	575.7	48.46	12.881	
8,700.0	8,568.0	8,594.9	8,568.0	30.9	30.7	140.06	408.6	1,219.7	624.1	575.2	48.93	12.755	
8,800.0	8,668.0	8,694.9	8,668.0	30.9	31.1	140.06	408.6	1,219.7	624.1	574.7	49.41	12.632	
8,900.0	8,768.0	8,803.3	8,776.4	31.0	31.5	140.11	408.6	1,218.9	623.7	573.7	49.96	12.482	
9,000.0	8,868.0	8,914.9	8,887.9	31.0	31.9	140.40	408.6	1,214.9	621.4	570.8	50.56	12.290	
9,100.0	8,968.0	9,022.4	8,995.2	31.1	32.2	140.88	408.6	1,208.1	617.4	566.2	51.14	12.072	
9,200.0	9,068.0	9,122.1	9,094.7	31.1	32.6	141.39	408.6	1,201.2	613.0	561.3	51.68	11.862	
9,300.0	9,168.0	9,221.9	9,194.2	31.1	33.0	141.90	408.6	1,194.2	608.6	556.4	52.22	11.657	
9,400.0	9,268.0	9,321.7	9,293.7	31.2	33.3	142.42	408.6	1,187.3	604.4	551.6	52.76	11.456	
9,500.0	9,368.0	9,421.4	9,393.3	31.2	33.7	142.95	408.6	1,180.3	600.1	546.8	53.30	11.260	
9,600.0	9,468.0	9,521.2	9,492.8	31.2	34.0	143.48	408.6	1,173.3	595.9	542.1	53.84	11.068	
9,700.0	9,568.0	9,620.9	9,592.3	31.3	34.4	144.02	408.6	1,166.4	591.8	537.4	54.39	10.881	
9,800.0	9,668.0	9,720.7	9,691.8	31.3	34.8	144.57	408.6	1,159.4	587.7	532.8	54.94	10.698	
9,900.0	9,768.0	9,818.6	9,789.5	31.4	35.1	145.11	408.6	1,152.7	583.7	528.3	55.47	10.523	
10,000.0	9,868.0	9,910.5	9,881.3	31.4	35.4	145.50	408.6	1,147.8	580.8	524.8	55.95	10.381	
10,100.0	9,968.0	10,002.6	9,973.3	31.5	35.8	145.71	408.6	1,145.2	579.2	522.8	56.39	10.271	
10,200.0	10,068.0	10,097.3	10,068.0	31.5	36.1	145.76	408.6	1,144.7	578.9	522.0	56.83	10.187	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 17H - JC - BATTLE AXE 27 FEDERAL COM 17H - JC - Original Hole - Staking Design 1													Offset Site Error: 0.0 usft	
Survey Program: 0-MWD+IFR1				Rule Assigned:									Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,300.0	10,168.0	10,197.3	10,168.0	31.5	36.5	145.76	408.6	1,144.7	578.9	521.6	57.30	10.102		
10,400.0	10,268.0	10,297.3	10,268.0	31.6	36.8	145.76	408.6	1,144.7	578.9	521.1	57.78	10.018		
10,500.0	10,368.0	10,397.3	10,368.0	31.6	37.1	145.76	408.6	1,144.7	578.9	520.6	58.26	9.935		
10,600.0	10,468.0	10,497.3	10,468.0	31.7	37.5	145.76	408.6	1,144.7	578.9	520.1	58.74	9.854		
10,700.0	10,568.0	10,597.3	10,568.0	31.7	37.8	145.76	408.6	1,144.7	578.9	519.6	59.22	9.774		
10,800.0	10,668.0	10,697.3	10,668.0	31.7	38.2	145.76	408.6	1,144.7	578.9	519.2	59.71	9.695		
10,900.0	10,768.0	10,797.3	10,768.0	31.8	38.5	145.76	408.6	1,144.7	578.9	518.7	60.19	9.618		
11,000.0	10,868.0	10,897.3	10,868.0	31.8	38.9	145.76	408.6	1,144.7	578.9	518.2	60.67	9.541		
11,100.0	10,968.0	10,997.3	10,968.0	31.9	39.2	145.76	408.6	1,144.7	578.9	517.7	61.15	9.466		
11,200.0	11,068.0	11,097.3	11,068.0	31.9	39.6	145.76	408.6	1,144.7	578.9	517.2	61.64	9.392		
11,300.0	11,168.0	11,197.3	11,168.0	32.0	39.9	145.76	408.6	1,144.7	578.9	516.7	62.12	9.318		
11,400.0	11,268.0	11,297.3	11,268.0	32.0	40.3	145.76	408.6	1,144.7	578.9	516.3	62.60	9.246		
11,500.0	11,368.0	11,397.3	11,368.0	32.0	40.6	145.76	408.6	1,144.7	578.9	515.8	63.09	9.175		
11,510.0	11,378.0	11,407.3	11,378.0	32.0	40.7	145.76	408.6	1,144.7	578.9	515.7	63.14	9.168		
11,600.0	11,468.0	11,481.3	11,452.0	32.1	40.9	145.77	408.3	1,144.7	579.3	515.9	63.41	9.136		
11,700.0	11,568.0	11,535.4	11,505.9	32.1	41.1	146.01	403.9	1,144.8	586.0	522.7	63.31	9.257		
11,720.5	11,588.5	11,550.0	11,520.4	32.1	41.2	146.12	401.9	1,144.8	588.4	525.1	63.32	9.293		
11,725.0	11,593.0	11,550.0	11,520.4	32.1	41.2	-45.98	401.9	1,144.8	588.9	525.6	63.26	9.309		
11,750.0	11,618.0	11,562.1	11,532.3	32.1	41.2	-45.67	399.9	1,144.8	591.7	528.5	63.15	9.369		
11,775.0	11,642.9	11,575.4	11,545.4	32.0	41.2	-45.42	397.5	1,144.8	594.0	531.0	63.03	9.424		
11,800.0	11,667.6	11,600.0	11,569.4	31.9	41.3	-45.23	392.1	1,144.8	596.1	533.0	63.11	9.446		
11,825.0	11,692.2	11,600.0	11,569.4	31.8	41.3	-45.12	392.1	1,144.8	597.4	534.7	62.69	9.529		
11,850.0	11,716.4	11,615.4	11,584.3	31.7	41.4	-45.08	388.3	1,144.8	598.4	535.9	62.56	9.565		
11,875.0	11,740.3	11,628.7	11,597.1	31.6	41.4	-45.10	384.6	1,144.8	599.0	536.7	62.38	9.603		
11,900.0	11,763.8	11,650.0	11,617.4	31.5	41.5	-45.26	378.1	1,144.8	599.3	536.9	62.36	9.610		
11,925.0	11,786.8	11,650.0	11,617.4	31.4	41.5	-45.29	378.1	1,144.8	599.0	537.1	61.85	9.684		
11,950.0	11,809.3	11,668.6	11,634.8	31.3	41.5	-45.58	371.9	1,144.9	598.3	536.5	61.76	9.686		
11,975.0	11,831.1	11,681.8	11,647.2	31.2	41.6	-45.87	367.0	1,144.9	597.2	535.6	61.55	9.702		
12,000.0	11,852.3	11,700.0	11,663.9	31.1	41.6	-46.32	360.0	1,144.9	595.7	534.2	61.46	9.692		
12,025.0	11,872.8	11,700.0	11,663.9	31.0	41.6	-46.48	360.0	1,144.9	593.8	532.9	60.92	9.748		
12,050.0	11,892.5	11,721.4	11,683.4	31.0	41.7	-47.16	351.0	1,144.9	591.4	530.5	60.92	9.707		
12,075.0	11,911.3	11,734.5	11,695.1	30.9	41.7	-47.72	345.1	1,144.9	588.7	528.0	60.73	9.694		
12,100.0	11,929.3	11,750.0	11,708.8	30.8	41.7	-48.42	337.9	1,145.0	585.7	525.1	60.62	9.662		
12,125.0	11,946.3	11,750.0	11,708.8	30.7	41.7	-48.72	337.9	1,145.0	582.5	522.3	60.12	9.688		
12,150.0	11,962.4	11,773.7	11,729.3	30.6	41.8	-49.83	326.0	1,145.0	578.6	518.3	60.26	9.601		
12,175.0	11,977.4	11,786.7	11,740.3	30.5	41.8	-50.67	319.2	1,145.0	574.6	514.4	60.15	9.552		
12,200.0	11,991.4	11,800.0	11,751.5	30.5	41.9	-51.59	311.9	1,145.0	570.3	510.2	60.09	9.491		
12,225.0	12,004.2	11,812.4	11,761.7	30.4	41.9	-52.55	304.9	1,145.1	565.7	505.7	60.03	9.424		
12,250.0	12,015.9	11,825.2	11,772.1	30.3	41.9	-53.59	297.5	1,145.1	561.0	500.9	60.03	9.345		
12,275.0	12,026.5	11,837.9	11,782.3	30.3	41.9	-54.70	289.8	1,145.1	556.0	496.0	60.07	9.257		
12,300.0	12,035.8	11,850.0	11,791.8	30.2	42.0	-55.84	282.3	1,145.1	550.9	490.8	60.14	9.161		
12,325.0	12,044.0	11,863.1	11,801.9	30.2	42.0	-57.09	274.0	1,145.2	545.7	485.4	60.29	9.052		
12,350.0	12,050.8	11,875.6	11,811.4	30.1	42.0	-58.37	265.9	1,145.2	540.4	479.9	60.47	8.937		
12,375.0	12,056.4	11,888.0	11,820.6	30.1	42.0	-59.70	257.6	1,145.2	535.1	474.4	60.71	8.814		
12,400.0	12,060.8	11,900.0	11,829.4	30.1	42.1	-61.06	249.4	1,145.2	529.8	468.8	61.00	8.685		
12,425.0	12,063.8	11,912.5	11,838.3	30.1	42.1	-62.49	240.7	1,145.3	524.5	463.2	61.34	8.551		
12,450.0	12,065.5	11,924.5	11,846.7	30.1	42.1	-63.93	232.0	1,145.3	519.4	457.6	61.74	8.413		
12,470.5	12,066.0	11,934.4	11,853.4	30.1	42.1	-65.13	224.9	1,145.3	515.3	453.2	62.10	8.298		
12,500.0	12,066.0	11,950.0	11,863.9	30.1	42.2	-66.28	213.3	1,145.3	509.9	447.2	62.66	8.137		
12,600.0	12,066.0	12,000.0	11,895.2	30.1	42.2	-69.83	174.3	1,145.5	497.0	432.4	64.63	7.690		
12,700.0	12,066.0	12,065.9	11,931.0	30.1	42.3	-74.05	119.0	1,145.6	491.3	424.9	66.43	7.396		

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 17H - JC - BATTLE AXE 27 FEDERAL COM 17H - JC - Original Hole - Staking Design 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,763.0	12,066.0	12,110.5	11,951.5	30.2	42.4	-76.51	79.4	1,145.8	490.5	423.2	67.37	7.282	CC
12,800.0	12,066.0	12,138.4	11,962.8	30.2	42.4	-77.86	53.9	1,145.8	490.7	422.9	67.82	7.236	
12,900.0	12,066.0	12,219.5	11,988.3	30.2	42.5	-80.93	-23.0	1,146.1	492.7	424.0	68.74	7.168	
13,000.0	12,066.0	12,307.0	12,003.3	30.3	42.7	-82.73	-109.2	1,146.3	494.9	425.6	69.30	7.142	
13,091.0	12,066.0	12,391.8	12,005.9	30.4	42.8	-83.04	-193.8	1,146.6	495.9	426.3	69.64	7.121	
13,100.0	12,066.0	12,400.8	12,005.8	30.4	42.8	-83.03	-202.8	1,146.6	495.9	426.2	69.66	7.118	
13,200.0	12,066.0	12,500.8	12,005.4	30.5	42.9	-82.98	-302.8	1,146.9	495.8	425.9	69.92	7.090	
13,300.0	12,066.0	12,600.8	12,004.9	30.5	43.1	-82.93	-402.8	1,147.2	495.7	425.5	70.23	7.058	
13,400.0	12,066.0	12,700.8	12,004.5	30.7	43.2	-82.88	-502.8	1,147.6	495.6	425.0	70.58	7.022	
13,500.0	12,066.0	12,800.8	12,004.1	30.8	43.4	-82.82	-602.8	1,147.9	495.5	424.6	70.97	6.982	
13,600.0	12,066.0	12,900.8	12,003.6	30.9	43.7	-82.77	-702.8	1,148.2	495.4	424.0	71.40	6.939	
13,700.0	12,066.0	13,000.8	12,003.2	31.0	43.9	-82.72	-802.8	1,148.5	495.4	423.5	71.87	6.892	
13,800.0	12,066.0	13,100.8	12,002.7	31.2	44.2	-82.66	-902.8	1,148.8	495.3	422.9	72.38	6.842	
13,900.0	12,066.0	13,200.8	12,002.3	31.3	44.4	-82.61	-1,002.8	1,149.1	495.2	422.2	72.93	6.790	
14,000.0	12,066.0	13,300.8	12,001.8	31.5	44.7	-82.56	-1,102.8	1,149.4	495.1	421.6	73.52	6.734	
14,100.0	12,066.0	13,400.8	12,001.4	31.7	45.1	-82.50	-1,202.8	1,149.7	495.0	420.9	74.14	6.676	
14,200.0	12,066.0	13,500.8	12,000.9	31.9	45.4	-82.45	-1,302.8	1,150.0	494.9	420.1	74.81	6.616	
14,300.0	12,066.0	13,600.8	12,000.5	32.1	45.8	-82.40	-1,402.8	1,150.3	494.8	419.3	75.50	6.554	
14,400.0	12,066.0	13,700.8	12,000.0	32.3	46.1	-82.34	-1,502.8	1,150.6	494.8	418.5	76.23	6.490	
14,500.0	12,066.0	13,800.8	11,999.6	32.5	46.5	-82.29	-1,602.8	1,151.0	494.7	417.7	77.00	6.425	
14,600.0	12,066.0	13,900.8	11,999.2	32.8	46.9	-82.24	-1,702.8	1,151.3	494.6	416.8	77.79	6.358	
14,700.0	12,066.0	14,000.8	11,998.7	33.1	47.4	-82.18	-1,802.8	1,151.6	494.5	415.9	78.62	6.290	
14,800.0	12,066.0	14,100.8	11,998.3	33.3	47.8	-82.13	-1,902.8	1,151.9	494.4	414.9	79.48	6.221	
14,900.0	12,066.0	14,200.8	11,997.8	33.6	48.3	-82.08	-2,002.8	1,152.2	494.3	414.0	80.36	6.151	
15,000.0	12,066.0	14,300.8	11,997.4	33.9	48.8	-82.02	-2,102.8	1,152.5	494.3	413.0	81.28	6.081	
15,100.0	12,066.0	14,400.8	11,996.9	34.2	49.2	-81.97	-2,202.8	1,152.8	494.2	412.0	82.22	6.010	
15,200.0	12,066.0	14,500.8	11,996.5	34.5	49.7	-81.92	-2,302.8	1,153.1	494.1	410.9	83.19	5.940	
15,300.0	12,066.0	14,600.8	11,996.0	34.9	50.3	-81.86	-2,402.8	1,153.4	494.0	409.8	84.18	5.869	
15,400.0	12,066.0	14,700.7	11,995.6	35.2	50.8	-81.81	-2,502.8	1,153.7	493.9	408.7	85.20	5.797	
15,500.0	12,066.0	14,800.7	11,995.2	35.6	51.4	-81.76	-2,602.8	1,154.0	493.8	407.6	86.24	5.726	
15,600.0	12,066.0	14,900.7	11,994.7	36.0	51.9	-81.70	-2,702.8	1,154.3	493.8	406.5	87.30	5.656	
15,700.0	12,066.0	15,000.7	11,994.3	36.4	52.5	-81.65	-2,802.8	1,154.7	493.7	405.3	88.39	5.585	
15,800.0	12,066.0	15,100.7	11,993.8	36.8	53.1	-81.60	-2,902.8	1,155.0	493.6	404.1	89.50	5.515	
15,900.0	12,066.0	15,200.7	11,993.4	37.2	53.7	-81.54	-3,002.8	1,155.3	493.5	402.9	90.63	5.446	
16,000.0	12,066.0	15,300.7	11,992.9	37.6	54.3	-81.49	-3,102.8	1,155.6	493.5	401.7	91.77	5.377	
16,100.0	12,066.0	15,400.7	11,992.5	38.1	54.9	-81.44	-3,202.8	1,155.9	493.4	400.4	92.94	5.309	
16,200.0	12,066.0	15,500.7	11,992.0	38.5	55.5	-81.38	-3,302.7	1,156.2	493.3	399.2	94.12	5.241	
16,300.0	12,066.0	15,600.7	11,991.6	39.0	56.2	-81.33	-3,402.7	1,156.5	493.2	397.9	95.32	5.174	
16,400.0	12,066.0	15,700.7	11,991.2	39.5	56.8	-81.27	-3,502.7	1,156.8	493.1	396.6	96.54	5.108	
16,500.0	12,066.0	15,800.7	11,990.7	39.9	57.5	-81.22	-3,602.7	1,157.1	493.1	395.3	97.78	5.043	
16,600.0	12,066.0	15,900.7	11,990.3	40.4	58.2	-81.17	-3,702.7	1,157.4	493.0	394.0	99.03	4.978	
16,700.0	12,066.0	16,000.7	11,989.8	41.0	58.8	-81.11	-3,802.7	1,157.7	492.9	392.6	100.29	4.915	
16,800.0	12,066.0	16,100.7	11,989.4	41.5	59.5	-81.06	-3,902.7	1,158.1	492.8	391.3	101.57	4.852	
16,900.0	12,066.0	16,200.7	11,988.9	42.0	60.2	-81.01	-4,002.7	1,158.4	492.8	389.9	102.87	4.790	
17,000.0	12,066.0	16,300.7	11,988.5	42.5	60.9	-80.95	-4,102.7	1,158.7	492.7	388.5	104.17	4.730	
17,100.0	12,066.0	16,400.7	11,988.0	43.1	61.6	-80.90	-4,202.7	1,159.0	492.6	387.1	105.49	4.670	
17,200.0	12,066.0	16,500.7	11,987.6	43.6	62.3	-80.85	-4,302.7	1,159.3	492.6	385.7	106.82	4.611	
17,300.0	12,066.0	16,600.7	11,987.2	44.2	63.1	-80.79	-4,402.7	1,159.6	492.5	384.3	108.17	4.553	
17,400.0	12,066.0	16,700.7	11,986.7	44.8	63.8	-80.74	-4,502.7	1,159.9	492.4	382.9	109.52	4.496	
17,500.0	12,066.0	16,800.7	11,986.3	45.3	64.5	-80.68	-4,602.7	1,160.2	492.3	381.5	110.89	4.440	
17,600.0	12,066.0	16,900.7	11,985.8	45.9	65.3	-80.63	-4,702.7	1,160.5	492.3	380.0	112.27	4.385	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 17H - JC - BATTLE AXE 27 FEDERAL COM 17H - JC - Original Hole - Staking Design 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
17,700.0	12,066.0	17,000.7	11,985.4	46.5	66.0	-80.58	-4,802.7	1,160.8	492.2	378.5	113.65	4.331	
17,800.0	12,066.0	17,100.7	11,984.9	47.1	66.8	-80.52	-4,902.7	1,161.1	492.1	377.1	115.05	4.278	
17,900.0	12,066.0	17,200.7	11,984.5	47.7	67.6	-80.47	-5,002.7	1,161.5	492.1	375.6	116.46	4.225	
18,000.0	12,066.0	17,300.7	11,984.0	48.3	68.3	-80.41	-5,102.7	1,161.8	492.0	374.1	117.87	4.174	
18,100.0	12,066.0	17,400.7	11,983.6	48.9	69.1	-80.36	-5,202.7	1,162.1	491.9	372.6	119.29	4.124	
18,200.0	12,066.0	17,500.7	11,983.1	49.5	69.9	-80.31	-5,302.7	1,162.4	491.9	371.1	120.73	4.074	
18,300.0	12,066.0	17,600.7	11,982.7	50.1	70.7	-80.25	-5,402.7	1,162.7	491.8	369.6	122.17	4.026	
18,400.0	12,066.0	17,700.7	11,982.3	50.8	71.5	-80.20	-5,502.7	1,163.0	491.7	368.1	123.62	3.978	
18,500.0	12,066.0	17,800.7	11,981.8	51.4	72.3	-80.14	-5,602.7	1,163.3	491.7	366.6	125.07	3.931	
18,600.0	12,066.0	17,900.7	11,981.4	52.0	73.1	-80.09	-5,702.7	1,163.6	491.6	365.1	126.53	3.885	
18,700.0	12,066.0	18,000.7	11,980.9	52.7	73.9	-80.04	-5,802.7	1,163.9	491.5	363.5	128.00	3.840	
18,800.0	12,066.0	18,100.7	11,980.5	53.3	74.7	-79.98	-5,902.7	1,164.2	491.5	362.0	129.48	3.796	
18,900.0	12,066.0	18,200.7	11,980.0	54.0	75.5	-79.93	-6,002.7	1,164.5	491.4	360.4	130.97	3.752	
19,000.0	12,066.0	18,300.7	11,979.6	54.6	76.3	-79.87	-6,102.7	1,164.8	491.3	358.9	132.46	3.709	
19,100.0	12,066.0	18,400.7	11,979.1	55.3	77.2	-79.82	-6,202.7	1,165.2	491.3	357.3	133.95	3.667	
19,200.0	12,066.0	18,500.7	11,978.7	55.9	78.0	-79.77	-6,302.7	1,165.5	491.2	355.7	135.45	3.626	
19,300.0	12,066.0	18,600.7	11,978.3	56.6	78.8	-79.71	-6,402.7	1,165.8	491.1	354.2	136.96	3.586	
19,400.0	12,066.0	18,700.7	11,977.8	57.3	79.6	-79.66	-6,502.7	1,166.1	491.1	352.6	138.47	3.546	
19,500.0	12,066.0	18,800.7	11,977.4	57.9	80.5	-79.60	-6,602.7	1,166.4	491.0	351.0	139.99	3.507	
19,600.0	12,066.0	18,900.7	11,976.9	58.6	81.3	-79.55	-6,702.7	1,166.7	490.9	349.4	141.52	3.469	
19,700.0	12,066.0	19,000.7	11,976.5	59.3	83.5	-79.50	-6,802.7	1,167.0	490.9	346.4	144.47	3.398	
19,765.0	12,066.0	19,065.7	11,976.2	59.7	204.8	-79.46	-6,867.7	1,167.2	490.8	195.9	294.97	1.664	Caution - Monitor Closely, 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 EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 18H - JC - BATTLE AXE 27 FEDERAL COM 18H - JC - Original Hole - Staking Design 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,700.0	5,609.6	5,728.3	5,710.9	20.4	20.2	68.81	256.0	1,468.5	988.9	954.7	34.16	28.950	
5,800.0	5,706.9	5,823.7	5,805.7	20.9	20.6	70.17	257.4	1,458.6	970.2	935.6	34.60	28.040	
5,900.0	5,804.2	5,919.2	5,900.6	21.3	20.9	71.58	258.8	1,448.8	952.1	917.1	35.04	27.172	
6,000.0	5,901.5	6,014.6	5,995.5	21.8	21.3	73.03	260.2	1,438.9	934.7	899.2	35.48	26.347	
6,100.0	5,998.8	6,110.0	6,090.4	22.3	21.6	74.54	261.6	1,429.0	917.8	881.9	35.91	25.561	
6,200.0	6,096.1	6,205.4	6,185.3	22.7	22.0	76.10	263.0	1,419.1	901.7	865.4	36.34	24.812	
6,300.0	6,193.4	6,300.8	6,280.1	23.2	22.3	77.71	264.4	1,409.3	886.3	849.5	36.78	24.099	
6,400.0	6,290.7	6,396.2	6,375.0	23.7	22.7	79.37	265.8	1,399.4	871.6	834.4	37.22	23.420	
6,500.0	6,388.0	6,491.6	6,469.9	24.1	23.0	81.08	267.2	1,389.5	857.8	820.1	37.67	22.773	
6,600.0	6,485.3	6,587.0	6,564.8	24.6	23.4	82.84	268.6	1,379.6	844.8	806.6	38.13	22.156	
6,700.0	6,582.6	6,682.4	6,659.7	25.1	23.7	84.66	270.0	1,369.8	832.6	794.0	38.60	21.568	
6,799.1	6,679.0	6,776.9	6,753.7	25.5	24.1	86.50	271.4	1,360.0	821.5	782.4	39.09	21.012	
6,800.0	6,679.9	6,777.8	6,754.5	25.5	24.1	86.52	271.4	1,359.9	821.4	782.3	39.10	21.007	
6,900.0	6,777.5	6,873.4	6,849.7	26.0	24.4	88.27	272.8	1,350.0	811.1	771.5	39.62	20.472	
7,000.0	6,875.3	6,969.6	6,945.3	26.5	24.8	89.96	274.2	1,340.1	801.8	761.6	40.16	19.964	
7,100.0	6,973.6	7,066.1	7,041.3	26.9	25.1	91.59	275.6	1,330.1	793.2	752.5	40.73	19.478	
7,200.0	7,072.1	7,163.1	7,137.8	27.4	25.5	93.14	277.0	1,320.0	785.4	744.1	41.31	19.013	
7,300.0	7,170.9	7,260.5	7,234.6	27.8	25.8	94.62	278.5	1,309.9	778.1	736.1	41.91	18.566	
7,400.0	7,270.0	7,358.2	7,331.8	28.2	26.2	96.01	279.9	1,299.8	771.1	728.6	42.52	18.137	
7,500.0	7,369.3	7,456.2	7,429.3	28.6	26.5	97.31	281.4	1,289.7	764.5	721.4	43.14	17.723	
7,600.0	7,468.8	7,554.6	7,527.1	29.0	26.9	98.50	282.8	1,279.5	758.1	714.4	43.76	17.323	
7,700.0	7,568.4	7,653.2	7,625.1	29.4	27.3	99.60	284.3	1,269.3	751.8	707.4	44.39	16.935	
7,800.0	7,668.2	7,752.0	7,723.4	29.8	27.6	100.59	285.7	1,259.1	745.5	700.5	45.02	16.559	
7,900.0	7,768.1	7,851.0	7,821.9	30.1	28.0	101.47	287.2	1,248.8	739.1	693.4	45.64	16.194	
8,000.0	7,868.0	7,950.3	7,920.6	30.4	28.3	102.23	288.6	1,238.6	732.5	686.2	46.25	15.838	
8,100.0	7,968.0	8,049.6	8,019.4	30.7	28.7	102.87	290.1	1,228.3	725.6	678.8	46.84	15.492	
8,132.0	8,000.0	8,081.4	8,051.1	30.7	28.8	145.76	290.5	1,225.0	723.4	676.4	47.02	15.385	
8,200.0	8,068.0	8,149.1	8,118.3	30.7	29.1	146.18	291.5	1,218.0	718.6	671.2	47.40	15.162	
8,300.0	8,168.0	8,248.5	8,217.2	30.7	29.4	146.80	293.0	1,207.7	711.7	663.7	47.97	14.836	
8,400.0	8,268.0	8,348.0	8,316.1	30.8	29.8	147.44	294.5	1,197.4	704.8	656.2	48.55	14.518	
8,500.0	8,368.0	8,447.4	8,415.0	30.8	30.2	148.09	295.9	1,187.1	698.0	648.9	49.13	14.208	
8,600.0	8,468.0	8,546.9	8,513.9	30.9	30.5	148.75	297.4	1,176.8	691.3	641.6	49.71	13.907	
8,700.0	8,568.0	8,646.3	8,612.8	30.9	30.9	149.43	298.9	1,166.5	684.7	634.4	50.30	13.613	
8,800.0	8,668.0	8,745.8	8,711.8	30.9	31.3	150.11	300.3	1,156.2	678.2	627.3	50.89	13.327	
8,900.0	8,768.0	8,845.2	8,810.7	31.0	31.6	150.81	301.8	1,145.9	671.8	620.3	51.48	13.049	
9,000.0	8,868.0	8,944.7	8,909.6	31.0	32.0	151.53	303.2	1,135.6	665.5	613.4	52.08	12.778	
9,100.0	8,968.0	9,044.1	9,008.5	31.1	32.4	152.25	304.7	1,125.4	659.3	606.6	52.68	12.514	
9,200.0	9,068.0	9,143.6	9,107.4	31.1	32.7	153.00	306.2	1,115.1	653.2	599.9	53.29	12.258	
9,300.0	9,168.0	9,243.0	9,206.3	31.1	33.1	153.75	307.6	1,104.8	647.2	593.3	53.90	12.008	
9,400.0	9,268.0	9,342.5	9,305.2	31.2	33.5	154.52	309.1	1,094.5	641.4	586.9	54.51	11.766	
9,500.0	9,368.0	9,441.9	9,404.1	31.2	33.8	155.30	310.5	1,084.2	635.6	580.5	55.13	11.530	
9,600.0	9,468.0	9,541.4	9,503.0	31.2	34.2	156.10	312.0	1,073.9	630.0	574.3	55.75	11.301	
9,700.0	9,568.0	9,640.8	9,601.9	31.3	34.6	156.91	313.5	1,063.6	624.5	568.2	56.38	11.078	
9,800.0	9,668.0	9,740.3	9,700.8	31.3	34.9	157.73	314.9	1,053.3	619.2	562.2	57.00	10.862	
9,900.0	9,768.0	9,839.7	9,799.7	31.4	35.3	158.57	316.4	1,043.0	613.9	556.3	57.63	10.652	
10,000.0	9,868.0	9,939.2	9,898.6	31.4	35.7	159.42	317.9	1,032.7	608.8	550.5	58.27	10.448	
10,100.0	9,968.0	10,038.6	9,997.5	31.5	36.0	160.29	319.3	1,022.4	603.9	544.9	58.91	10.251	
10,200.0	10,068.0	10,138.1	10,096.5	31.5	36.4	161.17	320.8	1,012.1	599.0	539.5	59.55	10.060	
10,300.0	10,168.0	10,237.6	10,195.4	31.5	36.8	162.06	322.2	1,001.8	594.3	534.2	60.19	9.874	
10,400.0	10,268.0	10,337.0	10,294.3	31.6	37.1	162.97	323.7	991.6	589.8	529.0	60.84	9.695	
10,500.0	10,368.0	10,436.5	10,393.2	31.6	37.5	163.89	325.2	981.3	585.4	524.0	61.49	9.522	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 18H - JC - BATTLE AXE 27 FEDERAL COM 18H - JC - Original Hole - Staking Design 1												Offset Site Error: 0.0 usft	
Survey Program: 0-MWD+IFR1				Rule Assigned:								Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			No-Go Distance (usft)
10,600.0	10,468.0	10,535.9	10,492.1	31.7	37.9	164.83	326.6	971.0	581.2	519.1	62.14	9.354	
10,700.0	10,568.0	10,635.4	10,591.0	31.7	38.2	165.78	328.1	960.7	577.1	514.4	62.79	9.192	
10,800.0	10,668.0	10,734.8	10,689.9	31.7	38.6	166.74	329.6	950.4	573.2	509.8	63.45	9.035	
10,900.0	10,768.0	10,831.7	10,786.3	31.8	38.9	167.66	330.9	940.7	569.6	505.5	64.07	8.891	
11,000.0	10,868.0	10,926.5	10,880.8	31.8	39.3	168.37	332.0	933.2	566.9	502.3	64.63	8.771	
11,100.0	10,968.0	11,021.7	10,975.8	31.9	39.6	168.87	332.7	928.1	565.1	499.9	65.15	8.673	
11,200.0	11,068.0	11,117.0	11,071.1	31.9	40.0	169.14	333.1	925.3	564.1	498.5	65.62	8.596	
11,300.0	11,168.0	11,213.9	11,168.0	32.0	40.3	169.19	333.2	924.7	563.9	497.9	66.06	8.536	
11,400.0	11,268.0	11,313.9	11,268.0	32.0	40.6	169.19	333.2	924.7	563.9	497.4	66.52	8.478	
11,500.0	11,368.0	11,413.9	11,368.0	32.0	41.0	169.19	333.2	924.7	563.9	496.9	66.97	8.420	
11,600.0	11,468.0	11,513.9	11,468.0	32.1	41.3	169.19	333.2	924.7	563.9	496.5	67.43	8.363	
11,700.0	11,568.0	11,613.9	11,568.0	32.1	41.7	169.19	333.2	924.7	563.9	496.0	67.89	8.306	
11,720.5	11,588.5	11,624.3	11,578.4	32.1	41.7	169.19	333.1	924.7	564.1	496.2	67.87	8.311	
11,725.0	11,593.0	11,626.6	11,580.7	32.1	41.7	-22.95	333.1	924.7	564.2	496.3	67.86	8.314	
11,750.0	11,618.0	11,639.3	11,593.4	32.1	41.8	-22.96	332.6	924.7	564.2	496.4	67.78	8.324	
11,775.0	11,642.9	11,650.0	11,604.1	32.0	41.8	-23.02	332.1	924.7	563.5	495.9	67.62	8.333	
11,800.0	11,667.6	11,664.7	11,618.7	31.9	41.9	-23.14	330.9	924.7	562.2	494.7	67.50	8.329	
11,825.0	11,692.2	11,677.4	11,631.3	31.8	41.9	-23.31	329.7	924.8	560.2	492.9	67.31	8.323	
11,850.0	11,716.4	11,700.0	11,653.8	31.7	42.0	-23.61	326.7	924.8	557.7	490.5	67.28	8.289	
11,875.0	11,740.3	11,700.0	11,653.8	31.6	42.0	-23.78	326.7	924.8	554.3	487.5	66.80	8.298	
11,900.0	11,763.8	11,715.3	11,668.9	31.5	42.0	-24.14	324.2	924.8	550.4	483.8	66.59	8.265	
11,925.0	11,786.8	11,727.9	11,681.3	31.4	42.1	-24.54	321.9	924.8	545.8	479.5	66.31	8.232	
11,950.0	11,809.3	11,750.0	11,702.8	31.3	42.1	-25.16	317.1	924.8	540.8	474.6	66.23	8.165	
11,975.0	11,831.1	11,750.0	11,702.8	31.2	42.1	-25.47	317.1	924.8	534.9	469.3	65.58	8.155	
12,000.0	11,852.3	11,765.5	11,717.8	31.1	42.2	-26.13	313.3	924.8	528.4	463.1	65.32	8.091	
12,025.0	11,872.8	11,777.9	11,729.8	31.0	42.2	-26.80	309.9	924.8	521.4	456.5	64.95	8.029	
12,050.0	11,892.5	11,800.0	11,750.8	31.0	42.3	-27.82	303.2	924.8	514.0	449.2	64.87	7.924	
12,075.0	11,911.3	11,800.0	11,750.8	30.9	42.3	-28.32	303.2	924.8	505.8	441.7	64.09	7.892	
12,100.0	11,929.3	11,814.9	11,764.9	30.8	42.3	-29.33	298.3	924.8	497.1	433.3	63.77	7.795	
12,125.0	11,946.3	11,827.1	11,776.3	30.7	42.4	-30.36	294.0	924.9	487.9	424.5	63.35	7.701	
12,150.0	11,962.4	11,850.0	11,797.5	30.6	42.4	-31.96	285.2	924.9	478.4	415.1	63.34	7.553	
12,175.0	11,977.4	11,850.0	11,797.5	30.5	42.4	-32.69	285.2	924.9	468.0	405.6	62.47	7.492	
12,200.0	11,991.4	11,863.1	11,809.5	30.5	42.5	-34.12	279.8	924.9	457.4	395.3	62.11	7.365	
12,225.0	12,004.2	11,875.0	11,820.1	30.4	42.5	-35.62	274.7	924.9	446.4	384.7	61.70	7.235	
12,250.0	12,015.9	11,886.7	11,830.6	30.3	42.5	-37.26	269.5	924.9	435.0	373.7	61.32	7.095	
12,275.0	12,026.5	11,900.0	11,842.4	30.3	42.6	-39.16	263.2	925.0	423.3	362.3	61.02	6.937	
12,300.0	12,035.8	11,900.0	11,842.4	30.2	42.6	-40.18	263.2	925.0	411.5	351.4	60.17	6.839	
12,325.0	12,044.0	11,921.2	11,860.8	30.2	42.6	-43.05	252.7	925.0	399.1	338.8	60.32	6.617	
12,350.0	12,050.8	11,932.4	11,870.4	30.1	42.6	-45.28	246.9	925.0	386.7	326.7	60.07	6.438	
12,375.0	12,056.4	11,950.0	11,885.2	30.1	42.7	-48.38	237.4	925.0	374.3	314.2	60.19	6.220	
12,400.0	12,060.8	11,950.0	11,885.2	30.1	42.7	-49.69	237.4	925.0	361.8	302.2	59.58	6.073	
12,425.0	12,063.8	11,965.0	11,897.6	30.1	42.7	-52.86	228.9	925.1	349.4	289.6	59.76	5.846	
12,450.0	12,065.5	11,975.5	11,906.1	30.1	42.7	-55.62	222.8	925.1	337.1	277.3	59.85	5.633	
12,470.5	12,066.0	11,983.9	11,912.9	30.1	42.8	-57.95	217.8	925.1	327.3	267.3	60.02	5.454	
12,500.0	12,066.0	12,000.0	11,925.5	30.1	42.8	-60.19	208.0	925.1	314.1	253.5	60.54	5.188	
12,600.0	12,066.0	12,044.1	11,958.9	30.1	42.9	-66.55	179.1	925.2	279.1	216.2	62.84	4.441	
12,700.0	12,066.0	12,100.0	11,997.9	30.1	43.0	-74.83	139.1	925.3	261.3	195.0	66.29	3.941	
12,764.2	12,066.0	12,147.0	12,027.4	30.2	43.0	-81.42	102.6	925.5	258.4	190.2	68.13	3.792 CC	
12,800.0	12,066.0	12,174.2	12,043.2	30.2	43.1	-84.95	80.4	925.5	259.1	190.3	68.85	3.764	
12,900.0	12,066.0	12,260.5	12,085.8	30.2	43.2	-94.29	5.5	925.8	266.8	197.3	69.54	3.837	
13,000.0	12,066.0	12,361.2	12,120.8	30.3	43.2	-101.46	-88.8	926.1	276.6	207.7	68.92	4.013	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 18H - JC - BATTLE AXE 27 FEDERAL COM 18H - JC - Original Hole - Staking Design 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Distance		No-Go	Separation	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Factor	
13,091.0	12,066.0	12,462.3	12,138.7	30.4	43.4	-104.96	-188.2	926.4	281.7	213.4	68.21	4.129	
13,100.0	12,066.0	12,472.6	12,139.5	30.4	43.4	-105.13	-198.4	926.4	281.8	213.7	68.17	4.134	
13,200.0	12,066.0	12,578.4	12,140.6	30.5	43.5	-105.36	-304.2	926.7	281.9	213.8	68.17	4.136	
13,300.0	12,066.0	12,678.4	12,140.0	30.5	43.6	-105.25	-404.2	927.0	281.6	213.2	68.40	4.118	
13,400.0	12,066.0	12,778.4	12,139.4	30.7	43.8	-105.14	-504.2	927.4	281.3	212.7	68.68	4.097	
13,500.0	12,066.0	12,878.4	12,138.8	30.8	44.0	-105.03	-604.2	927.7	281.1	212.1	69.00	4.073	
13,600.0	12,066.0	12,978.4	12,138.2	30.9	44.2	-104.91	-704.2	928.0	280.8	211.4	69.36	4.048	
13,700.0	12,066.0	13,078.4	12,137.6	31.0	44.4	-104.80	-804.2	928.3	280.5	210.7	69.76	4.020	
13,800.0	12,066.0	13,178.4	12,137.0	31.2	44.7	-104.69	-904.2	928.6	280.2	210.0	70.21	3.991	
13,900.0	12,066.0	13,278.4	12,136.4	31.3	44.9	-104.58	-1,004.2	928.9	279.9	209.2	70.70	3.959	
14,000.0	12,066.0	13,378.4	12,135.8	31.5	45.2	-104.47	-1,104.2	929.2	279.6	208.4	71.22	3.926	
14,100.0	12,066.0	13,478.4	12,135.2	31.7	45.5	-104.36	-1,204.2	929.5	279.3	207.5	71.79	3.891	
14,200.0	12,066.0	13,578.4	12,134.6	31.9	45.9	-104.25	-1,304.2	929.8	279.0	206.6	72.39	3.855	
14,300.0	12,066.0	13,678.4	12,134.0	32.1	46.2	-104.13	-1,404.2	930.2	278.7	205.7	73.03	3.817	
14,400.0	12,066.0	13,778.4	12,133.4	32.3	46.6	-104.02	-1,504.2	930.5	278.5	204.8	73.70	3.778	
14,500.0	12,066.0	13,878.4	12,132.8	32.5	46.9	-103.91	-1,604.2	930.8	278.2	203.8	74.41	3.738	
14,600.0	12,066.0	13,978.4	12,132.2	32.8	47.3	-103.80	-1,704.2	931.1	277.9	202.7	75.16	3.697	
14,700.0	12,066.0	14,078.4	12,131.6	33.1	47.8	-103.68	-1,804.2	931.4	277.6	201.7	75.94	3.656	
14,800.0	12,066.0	14,178.4	12,131.0	33.3	48.2	-103.57	-1,904.1	931.7	277.3	200.6	76.75	3.614	
14,900.0	12,066.0	14,278.4	12,130.4	33.6	48.6	-103.45	-2,004.1	932.0	277.1	199.5	77.59	3.571	
15,000.0	12,066.0	14,378.3	12,129.8	33.9	49.1	-103.34	-2,104.1	932.3	276.8	198.3	78.46	3.528	
15,100.0	12,066.0	14,478.3	12,129.2	34.2	49.6	-103.23	-2,204.1	932.7	276.5	197.1	79.36	3.484	
15,200.0	12,066.0	14,578.3	12,128.6	34.5	50.1	-103.11	-2,304.1	933.0	276.2	195.9	80.29	3.440	
15,300.0	12,066.0	14,678.3	12,128.0	34.9	50.6	-103.00	-2,404.1	933.3	276.0	194.7	81.24	3.397	
15,400.0	12,066.0	14,778.3	12,127.4	35.2	51.1	-102.88	-2,504.1	933.6	275.7	193.5	82.23	3.353	
15,500.0	12,066.0	14,878.3	12,126.8	35.6	51.6	-102.77	-2,604.1	933.9	275.4	192.2	83.23	3.309	
15,600.0	12,066.0	14,978.3	12,126.2	36.0	52.2	-102.65	-2,704.1	934.2	275.1	190.9	84.27	3.265	
15,700.0	12,066.0	15,078.3	12,125.6	36.4	52.7	-102.54	-2,804.1	934.5	274.9	189.6	85.32	3.222	
15,800.0	12,066.0	15,178.3	12,125.0	36.8	53.3	-102.42	-2,904.1	934.8	274.6	188.2	86.40	3.178	
15,900.0	12,066.0	15,278.3	12,124.4	37.2	53.9	-102.31	-3,004.1	935.1	274.3	186.8	87.50	3.135	
16,000.0	12,066.0	15,378.3	12,123.8	37.6	54.5	-102.19	-3,104.1	935.5	274.1	185.4	88.62	3.093	
16,100.0	12,066.0	15,478.3	12,123.2	38.1	55.1	-102.07	-3,204.1	935.8	273.8	184.0	89.77	3.050	
16,200.0	12,066.0	15,578.3	12,122.6	38.5	55.7	-101.96	-3,304.1	936.1	273.5	182.6	90.93	3.008	
16,300.0	12,066.0	15,678.3	12,122.0	39.0	56.4	-101.84	-3,404.1	936.4	273.3	181.2	92.11	2.967 Normal Operations	
16,400.0	12,066.0	15,778.3	12,121.4	39.5	57.0	-101.72	-3,504.1	936.7	273.0	179.7	93.31	2.926 Normal Operations	
16,500.0	12,066.0	15,878.3	12,120.8	39.9	57.6	-101.60	-3,604.1	937.0	272.8	178.2	94.52	2.886 Normal Operations	
16,600.0	12,066.0	15,978.3	12,120.2	40.4	58.3	-101.49	-3,704.1	937.3	272.5	176.7	95.76	2.846 Normal Operations	
16,700.0	12,066.0	16,078.3	12,119.6	41.0	59.0	-101.37	-3,804.1	937.6	272.2	175.2	97.01	2.806 Normal Operations	
16,800.0	12,066.0	16,178.3	12,119.0	41.5	59.6	-101.25	-3,904.1	938.0	272.0	173.7	98.27	2.768 Normal Operations	
16,900.0	12,066.0	16,278.3	12,118.4	42.0	60.3	-101.13	-4,004.1	938.3	271.7	172.2	99.55	2.730 Normal Operations	
17,000.0	12,066.0	16,378.3	12,117.8	42.5	61.0	-101.01	-4,104.1	938.6	271.5	170.6	100.85	2.692 Normal Operations	
17,100.0	12,066.0	16,478.3	12,117.2	43.1	61.7	-100.90	-4,204.1	938.9	271.2	169.1	102.15	2.655 Normal Operations	
17,200.0	12,066.0	16,578.3	12,116.6	43.6	62.4	-100.78	-4,304.0	939.2	271.0	167.5	103.48	2.619 Normal Operations	
17,300.0	12,066.0	16,678.3	12,116.0	44.2	63.2	-100.66	-4,404.0	939.5	270.7	165.9	104.81	2.583 Normal Operations	
17,400.0	12,066.0	16,778.3	12,115.4	44.8	63.9	-100.54	-4,504.0	939.8	270.5	164.3	106.16	2.548 Normal Operations	
17,500.0	12,066.0	16,878.3	12,114.8	45.3	64.6	-100.42	-4,604.0	940.1	270.2	162.7	107.52	2.513 Normal Operations	
17,600.0	12,066.0	16,978.3	12,114.2	45.9	65.3	-100.30	-4,704.0	940.4	270.0	161.1	108.89	2.479 Caution - Monitor Closely	
17,700.0	12,066.0	17,078.3	12,113.6	46.5	66.1	-100.18	-4,804.0	940.8	269.7	159.5	110.27	2.446 Caution - Monitor Closely	
17,800.0	12,066.0	17,178.3	12,113.0	47.1	66.8	-100.06	-4,904.0	941.1	269.5	157.8	111.66	2.413 Caution - Monitor Closely	
17,900.0	12,066.0	17,278.3	12,112.4	47.7	67.6	-99.94	-5,004.0	941.4	269.2	156.2	113.07	2.381 Caution - Monitor Closely	
18,000.0	12,066.0	17,378.3	12,111.8	48.3	68.4	-99.82	-5,104.0	941.7	269.0	154.5	114.48	2.350 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 EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: BATTLE AXE 27 FEDERAL COM 18H - JC - BATTLE AXE 27 FEDERAL COM 18H - JC - Original Hole - Staking Design 1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
18,100.0	12,066.0	17,478.3	12,111.2	48.9	69.1	-99.70	-5,204.0	942.0	268.8	152.8	115.90	2.319	Caution - Monitor Closely
18,200.0	12,066.0	17,578.3	12,110.6	49.5	69.9	-99.58	-5,304.0	942.3	268.5	151.2	117.34	2.288	Caution - Monitor Closely
18,300.0	12,066.0	17,678.3	12,110.0	50.1	70.7	-99.46	-5,404.0	942.6	268.3	149.5	118.78	2.259	Caution - Monitor Closely
18,400.0	12,066.0	17,778.3	12,109.4	50.8	71.5	-99.33	-5,504.0	942.9	268.0	147.8	120.23	2.229	Caution - Monitor Closely
18,500.0	12,066.0	17,878.3	12,108.8	51.4	72.3	-99.21	-5,604.0	943.3	267.8	146.1	121.68	2.201	Caution - Monitor Closely
18,600.0	12,066.0	17,978.3	12,108.2	52.0	73.1	-99.09	-5,704.0	943.6	267.6	144.4	123.15	2.173	Caution - Monitor Closely
18,700.0	12,066.0	18,078.3	12,107.6	52.7	73.9	-98.97	-5,804.0	943.9	267.3	142.7	124.63	2.145	Caution - Monitor Closely
18,800.0	12,066.0	18,178.3	12,107.0	53.3	74.7	-98.85	-5,904.0	944.2	267.1	141.0	126.11	2.118	Caution - Monitor Closely
18,900.0	12,066.0	18,278.3	12,106.4	54.0	75.5	-98.72	-6,004.0	944.5	266.9	139.3	127.60	2.091	Caution - Monitor Closely
19,000.0	12,066.0	18,378.3	12,105.8	54.6	76.3	-98.60	-6,104.0	944.8	266.6	137.5	129.09	2.065	Caution - Monitor Closely
19,100.0	12,066.0	18,478.3	12,105.2	55.3	77.1	-98.48	-6,204.0	945.1	266.4	135.8	130.59	2.040	Caution - Monitor Closely
19,200.0	12,066.0	18,578.3	12,104.6	55.9	77.9	-98.35	-6,304.0	945.4	266.2	134.1	132.10	2.015	Caution - Monitor Closely
19,300.0	12,066.0	18,678.3	12,104.0	56.6	78.7	-98.23	-6,404.0	945.7	265.9	132.3	133.62	1.990	Caution - Monitor Closely
19,400.0	12,066.0	18,778.3	12,103.4	57.3	79.6	-98.11	-6,504.0	946.1	265.7	130.6	135.14	1.966	Caution - Monitor Closely
19,500.0	12,066.0	18,878.3	12,102.8	57.9	80.4	-97.98	-6,604.0	946.4	265.5	128.8	136.67	1.943	Caution - Monitor Closely
19,600.0	12,066.0	18,978.3	12,102.2	58.6	81.2	-97.86	-6,703.9	946.7	265.3	127.1	138.20	1.919	Caution - Monitor Closely
19,700.0	12,066.0	19,078.3	12,101.6	59.3	82.1	-97.74	-6,803.9	947.0	265.1	125.3	139.74	1.897	Caution - Monitor Closely
19,765.0	12,066.0	19,143.3	12,101.2	59.7	82.6	-97.65	-6,868.9	947.2	264.9	124.2	140.74	1.882	Caution - Monitor Closely, 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 EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: Mewbourne - Red Hills West 22 Fed Com 001H - Red Hills West 22 Fed Com 001H - Original Hole - Original Hole												Offset Site Error:	0.0 usft
Survey Program: 100-Keeper, 8724-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,700.0	8,568.0	13,574.4	9,367.8	30.9	76.6	91.19	876.6	1,325.5	946.7	871.4	75.30	12.573	
8,800.0	8,668.0	13,571.5	9,367.9	30.9	76.5	90.85	879.6	1,325.4	863.9	785.1	78.82	10.961	
8,900.0	8,768.0	13,568.5	9,368.0	31.0	76.5	90.52	882.5	1,325.4	785.1	702.1	83.04	9.455	
9,000.0	8,868.0	13,565.5	9,368.0	31.0	76.4	90.18	885.5	1,325.3	711.6	623.6	88.02	8.085	
9,100.0	8,968.0	13,562.6	9,368.1	31.1	76.4	89.84	888.5	1,325.2	645.3	551.5	93.72	6.885	
9,200.0	9,068.0	13,559.6	9,368.2	31.1	76.3	89.51	891.4	1,325.1	588.5	488.7	99.83	5.895	
9,300.0	9,168.0	13,556.6	9,368.3	31.1	76.3	89.17	894.4	1,325.0	544.3	438.6	105.68	5.150	
9,400.0	9,268.0	13,553.7	9,368.4	31.2	76.2	88.84	897.4	1,325.0	515.9	405.2	110.73	4.659	
9,500.0	9,368.0	13,550.7	9,368.5	31.2	76.2	88.50	900.3	1,324.9	506.1	391.1	114.95	4.403 CC	
9,504.4	9,372.4	13,550.6	9,368.5	31.2	76.2	88.49	900.5	1,324.9	506.1	391.0	115.06	4.398 ES, SF	
9,600.0	9,468.0	13,547.7	9,368.6	31.2	76.1	88.17	903.3	1,324.8	515.7	399.8	115.92	4.449	
9,700.0	9,568.0	13,544.8	9,368.7	31.3	76.1	87.83	906.3	1,324.7	543.9	430.0	113.92	4.775	
9,800.0	9,668.0	13,542.0	9,368.7	31.3	76.0	87.51	909.1	1,324.7	588.0	477.9	110.03	5.344	
9,900.0	9,768.0	13,539.1	9,368.8	31.4	76.0	87.19	911.9	1,324.6	644.6	539.2	105.39	6.117	
10,000.0	9,868.0	13,536.3	9,368.9	31.4	75.9	86.88	914.7	1,324.5	710.9	610.1	100.80	7.052	
10,100.0	9,968.0	13,533.6	9,369.0	31.5	75.9	86.56	917.5	1,324.4	784.3	687.7	96.66	8.114	
10,200.0	10,068.0	13,530.8	9,369.1	31.5	75.8	86.24	920.3	1,324.4	863.1	770.0	93.10	9.271	
10,300.0	10,168.0	13,527.9	9,369.2	31.5	75.8	85.92	923.1	1,324.3	945.9	855.8	90.11	10.497	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: Mewbourne - Red Hills West 22 W0DM Com 004H - Red Hills West 22 W0DM Com 004H - Original Hole - Original Hole											Offset Site Error:	0.0 usft
Survey Program: 100-NS-GYRO-MS, 757-MWD											Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor
11,200.0	11,068.0	16,628.1	11,893.0	31.9	86.3	89.21	893.8	1,305.9	958.0	875.2	82.79	11.571
11,300.0	11,168.0	16,627.6	11,893.0	32.0	86.3	89.15	894.4	1,305.9	873.4	786.7	86.68	10.076
11,400.0	11,268.0	16,627.1	11,893.0	32.0	86.3	89.09	894.9	1,305.9	792.3	701.0	91.33	8.675
11,500.0	11,368.0	16,626.5	11,893.0	32.0	86.3	89.02	895.4	1,305.9	716.1	619.2	96.84	7.394
11,600.0	11,468.0	16,626.0	11,893.0	32.1	86.3	88.96	895.9	1,305.9	646.3	543.1	103.21	6.262
11,700.0	11,568.0	16,625.5	11,893.0	32.1	86.3	88.90	896.4	1,305.9	585.5	475.3	110.20	5.313
11,720.5	11,588.5	16,625.4	11,893.0	32.1	86.3	88.89	896.6	1,305.9	574.3	462.7	111.65	5.144
11,725.0	11,593.0	16,625.4	11,893.0	32.1	86.3	-103.59	896.6	1,305.9	572.0	460.0	111.97	5.108
11,750.0	11,618.0	16,626.1	11,893.0	32.1	86.3	-105.18	895.8	1,305.9	559.4	445.7	113.74	4.919
11,775.0	11,642.9	16,628.1	11,893.0	32.0	86.3	-106.43	893.8	1,305.9	548.1	432.6	115.50	4.745
11,800.0	11,667.6	16,631.4	11,893.0	31.9	86.4	-107.32	890.5	1,306.0	538.0	420.7	117.22	4.589
11,825.0	11,692.2	16,635.9	11,893.0	31.8	86.4	-107.89	886.0	1,306.1	529.2	410.3	118.88	4.451
11,850.0	11,716.4	16,641.7	11,892.9	31.7	86.5	-108.13	880.3	1,306.2	521.8	401.3	120.45	4.332
11,875.0	11,740.3	16,648.7	11,892.9	31.6	86.6	-108.07	873.3	1,306.4	515.8	393.9	121.89	4.232
11,900.0	11,763.8	16,656.9	11,892.9	31.5	86.8	-107.72	865.1	1,306.6	511.3	388.1	123.19	4.150
11,925.0	11,786.8	16,666.3	11,892.8	31.4	86.9	-107.09	855.7	1,306.8	508.2	383.6	124.59	4.079
11,950.0	11,809.3	16,670.0	11,892.8	31.3	87.0	-106.90	852.0	1,306.9	506.5	380.2	126.31	4.010
11,963.3	11,821.0	16,670.0	11,892.8	31.3	87.0	-106.93	852.0	1,306.9	506.3	379.2	127.09	3.984 CC
11,975.0	11,831.1	16,670.0	11,892.8	31.2	87.0	-106.91	852.0	1,306.9	506.5	378.7	127.71	3.966 ES
12,000.0	11,852.3	16,670.0	11,892.8	31.1	87.0	-106.73	852.0	1,306.9	508.0	379.2	128.84	3.943
12,025.0	11,872.8	16,670.0	11,892.8	31.0	87.0	-106.37	852.0	1,306.9	511.2	381.5	129.67	3.942 SF
12,050.0	11,892.5	16,670.0	11,892.8	31.0	87.0	-105.81	852.0	1,306.9	515.9	385.7	130.21	3.962
12,075.0	11,911.3	16,670.0	11,892.8	30.9	87.0	-105.07	852.0	1,306.9	522.1	391.6	130.47	4.002
12,100.0	11,929.3	16,670.0	11,892.8	30.8	87.0	-104.14	852.0	1,306.9	529.7	399.2	130.46	4.060
12,125.0	11,946.3	16,670.0	11,892.8	30.7	87.0	-103.02	852.0	1,306.9	538.7	408.5	130.22	4.137
12,150.0	11,962.4	16,670.0	11,892.8	30.6	87.0	-101.70	852.0	1,306.9	548.9	419.2	129.75	4.231
12,175.0	11,977.4	16,670.0	11,892.8	30.5	87.0	-100.19	852.0	1,306.9	560.4	431.3	129.10	4.340
12,200.0	11,991.4	16,670.0	11,892.8	30.5	87.0	-98.48	852.0	1,306.9	572.8	444.5	128.29	4.465
12,225.0	12,004.2	16,670.0	11,892.8	30.4	87.0	-96.59	852.0	1,306.9	586.3	458.9	127.35	4.604
12,250.0	12,015.9	16,670.0	11,892.8	30.3	87.0	-94.50	852.0	1,306.9	600.6	474.3	126.30	4.755
12,275.0	12,026.5	16,670.0	11,892.8	30.3	87.0	-92.24	852.0	1,306.9	615.6	490.5	125.17	4.918
12,300.0	12,035.8	16,670.0	11,892.8	30.2	87.0	-89.81	852.0	1,306.9	631.4	507.4	123.98	5.092
12,325.0	12,044.0	16,670.0	11,892.8	30.2	87.0	-87.23	852.0	1,306.9	647.7	524.9	122.74	5.277
12,350.0	12,050.8	16,670.0	11,892.8	30.1	87.0	-84.51	852.0	1,306.9	664.5	543.0	121.48	5.470
12,375.0	12,056.4	16,670.0	11,892.8	30.1	87.0	-81.68	852.0	1,306.9	681.7	561.5	120.20	5.671
12,400.0	12,060.8	16,670.0	11,892.8	30.1	87.0	-78.77	852.0	1,306.9	699.2	580.3	118.91	5.880
12,425.0	12,063.8	16,670.0	11,892.8	30.1	87.0	-75.79	852.0	1,306.9	717.1	599.4	117.63	6.096
12,450.0	12,065.5	16,670.0	11,892.8	30.1	87.0	-72.79	852.0	1,306.9	735.1	618.7	116.35	6.318
12,470.5	12,066.0	16,670.0	11,892.8	30.1	87.0	-70.32	852.0	1,306.9	750.0	634.7	115.32	6.504
12,500.0	12,066.0	16,670.0	11,892.8	30.1	87.0	-70.54	852.0	1,306.9	771.6	657.8	113.84	6.778
12,600.0	12,066.0	16,670.0	11,892.8	30.1	87.0	-71.29	852.0	1,306.9	847.2	738.2	108.96	7.775
12,700.0	12,066.0	16,670.0	11,892.8	30.1	87.0	-72.08	852.0	1,306.9	925.5	821.1	104.35	8.868

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: Mewbourne - Red Hills West 22 W1DM Fed Com 004C - Red Hills West 22 W1DM Fed Com 004C - Original Hole - Plan #1													Offset Site Error: 0.0 usft		
Survey Program: 0-r.5 MWD				Rule Assigned:										Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
11,500.0	11,368.0	16,720.3	12,127.3	32.0	80.1	92.78	857.0	1,438.1	980.2	887.7	92.48	10.599			
11,600.0	11,468.0	16,720.1	12,127.3	32.1	80.1	92.76	857.3	1,438.1	904.9	809.3	95.67	9.459			
11,700.0	11,568.0	16,719.9	12,127.3	32.1	80.1	92.74	857.5	1,438.1	834.9	735.6	99.30	8.408			
11,720.5	11,588.5	16,719.8	12,127.3	32.1	80.1	92.73	857.5	1,438.1	821.3	721.2	100.09	8.206			
11,725.0	11,593.0	16,719.9	12,127.3	32.1	80.1	-99.87	857.5	1,438.1	818.3	718.1	100.26	8.162			
11,750.0	11,618.0	16,720.7	12,127.3	32.1	80.1	-102.25	856.7	1,438.0	802.4	701.1	101.27	7.923			
11,775.0	11,642.9	16,722.8	12,127.3	32.0	80.2	-104.31	854.6	1,438.0	787.1	684.8	102.31	7.693			
11,800.0	11,667.6	16,726.2	12,127.3	31.9	80.2	-106.08	851.2	1,437.8	772.5	669.2	103.39	7.472			
11,825.0	11,692.2	16,730.8	12,127.3	31.8	80.3	-107.55	846.6	1,437.6	758.8	654.3	104.51	7.261			
11,850.0	11,716.4	16,732.1	12,127.3	31.7	80.3	-109.15	845.3	1,437.5	746.0	640.5	105.57	7.067			
11,875.0	11,740.3	16,732.1	12,127.3	31.6	80.3	-110.65	845.3	1,437.5	734.3	627.6	106.61	6.887			
11,900.0	11,763.8	16,732.1	12,127.3	31.5	80.3	-111.98	845.3	1,437.5	723.6	615.9	107.62	6.723			
11,925.0	11,786.8	16,732.1	12,127.3	31.4	80.3	-113.12	845.3	1,437.5	714.0	605.4	108.59	6.575			
11,950.0	11,809.3	16,732.1	12,127.3	31.3	80.3	-114.09	845.3	1,437.5	705.7	596.2	109.50	6.445			
11,975.0	11,831.1	16,732.1	12,127.3	31.2	80.3	-114.88	845.3	1,437.5	698.8	588.4	110.34	6.333			
12,000.0	11,852.3	16,732.1	12,127.3	31.1	80.3	-115.51	845.3	1,437.5	693.2	582.1	111.10	6.239			
12,025.0	11,872.8	16,732.1	12,127.3	31.0	80.3	-115.97	845.3	1,437.5	689.0	577.2	111.74	6.166			
12,050.0	11,892.5	16,732.1	12,127.3	31.0	80.3	-116.26	845.3	1,437.5	686.2	574.0	112.27	6.113			
12,075.0	11,911.3	16,732.1	12,127.3	30.9	80.3	-116.40	845.3	1,437.5	685.0	572.3	112.66	6.080			
12,083.4	11,917.5	16,732.1	12,127.3	30.8	80.3	-116.40	845.3	1,437.5	684.9	572.1	112.77	6.074 CC, ES			
12,100.0	11,929.3	16,732.1	12,127.3	30.8	80.3	-116.37	845.3	1,437.5	685.2	572.3	112.92	6.068 SF			
12,125.0	11,946.3	16,732.1	12,127.3	30.7	80.3	-116.18	845.3	1,437.5	687.0	573.9	113.04	6.078			
12,150.0	11,962.4	16,732.1	12,127.3	30.6	80.3	-115.83	845.3	1,437.5	690.2	577.2	113.00	6.108			
12,175.0	11,977.4	16,732.1	12,127.3	30.5	80.3	-115.32	845.3	1,437.5	694.8	582.0	112.83	6.158			
12,200.0	11,991.4	16,732.1	12,127.3	30.5	80.3	-114.64	845.3	1,437.5	700.9	588.4	112.52	6.229			
12,225.0	12,004.2	16,732.1	12,127.3	30.4	80.3	-113.79	845.3	1,437.5	708.3	596.2	112.07	6.320			
12,250.0	12,015.9	16,732.1	12,127.3	30.3	80.3	-112.77	845.3	1,437.5	717.0	605.5	111.51	6.430			
12,275.0	12,026.5	16,732.1	12,127.3	30.3	80.3	-111.57	845.3	1,437.5	726.9	616.1	110.84	6.558			
12,300.0	12,035.8	16,732.1	12,127.3	30.2	80.3	-110.18	845.3	1,437.5	738.0	627.9	110.07	6.705			
12,325.0	12,044.0	16,732.1	12,127.3	30.2	80.3	-108.61	845.3	1,437.5	750.1	640.9	109.22	6.868			
12,350.0	12,050.8	16,732.1	12,127.3	30.1	80.3	-106.85	845.3	1,437.5	763.2	654.9	108.31	7.047			
12,375.0	12,056.4	16,732.1	12,127.3	30.1	80.3	-104.90	845.3	1,437.5	777.2	669.9	107.34	7.241			
12,400.0	12,060.8	16,732.1	12,127.3	30.1	80.3	-102.76	845.3	1,437.5	792.0	685.7	106.32	7.450			
12,425.0	12,063.8	16,732.1	12,127.3	30.1	80.3	-100.42	845.3	1,437.5	807.6	702.3	105.28	7.671			
12,450.0	12,065.5	16,732.1	12,127.3	30.1	80.3	-97.91	845.3	1,437.5	823.8	719.6	104.21	7.905			
12,470.5	12,066.0	16,732.1	12,127.3	30.1	80.3	-95.71	845.3	1,437.5	837.5	734.2	103.33	8.105			
12,500.0	12,066.0	16,732.1	12,127.3	30.1	80.3	-95.66	845.3	1,437.5	857.6	755.6	102.05	8.404			
12,600.0	12,066.0	16,732.1	12,127.3	30.1	80.3	-95.46	845.3	1,437.5	928.1	830.3	97.76	9.493			

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 707H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Highside	Rule Assigned:				Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	2.0	3.0	3.0	-54.24	58.4	-81.1	100.0				
100.0	100.0	98.0	100.0	3.1	3.1	-54.24	58.4	-81.1	99.9	93.3	6.61	15.129	
200.0	200.0	198.0	200.0	3.3	3.3	-54.24	58.4	-81.1	99.9	92.9	7.06	14.164	
300.0	300.0	298.0	300.0	3.5	3.6	-54.24	58.4	-81.1	99.9	92.5	7.48	13.356	
400.0	400.0	398.0	400.0	3.8	3.8	-54.24	58.4	-81.1	99.9	92.1	7.89	12.670	
500.0	500.0	498.0	500.0	4.0	4.0	-54.24	58.4	-81.1	99.9	91.7	8.28	12.076	
600.0	600.0	598.0	600.0	4.1	4.1	-54.24	58.4	-81.1	99.9	91.3	8.65	11.556	
700.0	700.0	698.0	700.0	4.3	4.3	-54.24	58.4	-81.1	99.9	90.9	9.01	11.096	
800.0	800.0	798.0	800.0	4.5	4.5	-54.24	58.4	-81.1	99.9	90.6	9.36	10.683	
900.0	900.0	898.0	900.0	4.7	4.7	-54.24	58.4	-81.1	99.9	90.3	9.69	10.312	
1,000.0	1,000.0	998.0	1,000.0	4.8	4.8	-54.24	58.4	-81.1	99.9	89.9	10.02	9.974	
1,100.0	1,100.0	1,098.0	1,100.0	5.0	5.0	-54.24	58.4	-81.1	99.9	89.6	10.34	9.666	
1,200.0	1,200.0	1,198.0	1,200.0	5.2	5.2	-54.24	58.4	-81.1	99.9	89.3	10.65	9.382	
1,300.0	1,300.0	1,298.0	1,300.0	5.3	5.3	-54.24	58.4	-81.1	99.9	89.0	10.96	9.121	
1,400.0	1,400.0	1,398.0	1,400.0	5.5	5.5	-54.24	58.4	-81.1	99.9	88.7	11.26	8.879	
1,500.0	1,500.0	1,498.0	1,500.0	5.6	5.6	-54.24	58.4	-81.1	99.9	88.4	11.55	8.653	
1,600.0	1,600.0	1,598.0	1,600.0	5.8	5.8	-54.24	58.4	-81.1	99.9	88.1	11.84	8.442	
1,700.0	1,700.0	1,698.0	1,700.0	5.9	5.9	-54.24	58.4	-81.1	99.9	87.8	12.12	8.245	
1,800.0	1,800.0	1,798.0	1,800.0	6.0	6.0	-54.24	58.4	-81.1	99.9	87.5	12.40	8.060	
1,900.0	1,900.0	1,898.0	1,900.0	6.2	6.2	-54.24	58.4	-81.1	99.9	87.3	12.67	7.885 CC	
2,000.0	2,000.0	1,998.0	2,000.0	6.4	6.3	-97.94	58.4	-81.1	100.2	87.2	12.94	7.739 ES	
2,100.0	2,099.8	2,095.4	2,097.4	6.6	6.5	-100.96	58.7	-82.3	102.2	89.0	13.22	7.729 SF	
2,200.0	2,199.5	2,192.2	2,194.1	6.9	6.6	-105.82	59.7	-85.8	107.9	94.4	13.50	7.993	
2,300.0	2,298.7	2,288.1	2,289.8	7.1	6.8	-111.72	61.2	-91.6	118.1	104.3	13.79	8.566	
2,400.0	2,397.5	2,382.3	2,383.7	7.4	6.8	-117.70	63.5	-99.6	133.6	119.6	14.03	9.523	
2,500.0	2,495.6	2,474.7	2,475.4	7.7	7.0	-122.83	67.3	-109.9	155.2	140.8	14.38	10.794	
2,566.5	2,560.5	2,535.1	2,535.2	7.8	7.1	-125.64	70.7	-117.9	172.7	158.1	14.59	11.841	
2,600.0	2,593.1	2,565.3	2,565.0	7.9	7.2	-127.00	72.7	-122.4	182.4	167.7	14.68	12.425	
2,700.0	2,690.4	2,654.6	2,652.8	8.2	7.4	-130.03	79.6	-136.9	213.5	198.4	15.02	14.208	
2,800.0	2,787.7	2,742.6	2,738.8	8.5	7.5	-131.91	87.9	-153.4	247.3	232.0	15.36	16.103	
2,900.0	2,885.0	2,829.2	2,822.9	8.8	7.7	-132.99	97.5	-171.8	283.7	268.0	15.69	18.083	
3,000.0	2,982.3	2,914.2	2,904.8	9.1	7.9	-133.52	108.4	-191.9	322.3	306.3	15.99	20.152	
3,100.0	3,079.6	3,004.2	2,990.9	9.4	8.0	-133.77	120.9	-214.6	362.4	346.1	16.30	22.233	
3,200.0	3,176.9	3,095.7	3,078.6	9.8	8.1	-133.97	133.6	-237.7	402.5	385.9	16.67	24.146	
3,300.0	3,274.2	3,187.3	3,166.3	10.1	8.2	-134.13	146.4	-260.9	442.7	425.6	17.05	25.959	
3,400.0	3,371.5	3,278.9	3,254.0	10.5	8.4	-134.27	159.2	-284.0	482.9	465.4	17.45	27.674	
3,500.0	3,468.9	3,370.4	3,341.6	10.9	8.5	-134.38	171.9	-307.2	523.0	505.2	17.85	29.298	
3,600.0	3,566.2	3,462.0	3,429.3	11.3	8.6	-134.48	184.7	-330.3	563.2	545.0	18.27	30.834	
3,700.0	3,663.5	3,553.6	3,517.0	11.7	8.8	-134.57	197.5	-353.5	603.4	584.7	18.69	32.287	
3,800.0	3,760.8	3,645.2	3,604.6	12.1	8.9	-134.64	210.2	-376.6	643.6	624.5	19.12	33.661	
3,900.0	3,858.1	3,736.7	3,692.3	12.5	9.1	-134.71	223.0	-399.8	683.8	664.2	19.56	34.961	
4,000.0	3,955.4	3,828.3	3,780.0	12.9	9.2	-134.77	235.8	-422.9	723.9	703.9	20.00	36.192	
4,100.0	4,052.7	3,919.9	3,867.7	13.3	9.4	-134.82	248.5	-446.1	764.1	743.7	20.45	37.356	
4,200.0	4,150.0	4,011.4	3,955.3	13.7	9.6	-134.87	261.3	-469.2	804.3	783.4	20.91	38.459	
4,300.0	4,247.3	4,103.0	4,043.0	14.2	9.7	-134.91	274.1	-492.4	844.5	823.1	21.38	39.503	
4,400.0	4,344.6	4,194.6	4,130.7	14.6	9.9	-134.95	286.9	-515.5	884.6	862.8	21.85	40.492	
4,500.0	4,441.9	4,286.2	4,218.3	15.0	10.1	-134.98	299.6	-538.7	924.8	902.5	22.32	41.431	
4,600.0	4,539.2	4,377.7	4,306.0	15.5	10.2	-135.02	312.4	-561.8	965.0	942.2	22.80	42.321	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 708H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor		
0.0	0.0	0.0	0.0	3.0	3.0	-54.31	46.6	-64.9	79.9					
100.0	100.0	100.0	100.0	3.1	3.1	-54.31	46.6	-64.9	79.9	73.3	6.60	12.112		
200.0	200.0	200.0	200.0	3.3	3.3	-54.31	46.6	-64.9	79.9	72.9	7.05	11.336		
300.0	300.0	300.0	300.0	3.5	3.5	-54.31	46.6	-64.9	79.9	72.5	7.48	10.689		
400.0	400.0	400.0	400.0	3.8	3.8	-54.31	46.6	-64.9	79.9	72.1	7.88	10.140		
500.0	500.0	500.0	500.0	4.0	4.0	-54.31	46.6	-64.9	79.9	71.7	8.27	9.664		
600.0	600.0	600.0	600.0	4.1	4.1	-54.31	46.6	-64.9	79.9	71.3	8.64	9.248		
700.0	700.0	700.0	700.0	4.3	4.3	-54.31	46.6	-64.9	79.9	70.9	9.00	8.879		
800.0	800.0	800.0	800.0	4.5	4.5	-54.31	46.6	-64.9	79.9	70.6	9.35	8.549		
900.0	900.0	900.0	900.0	4.7	4.7	-54.31	46.6	-64.9	79.9	70.3	9.69	8.251		
1,000.0	1,000.0	1,000.0	1,000.0	4.8	4.8	-54.31	46.6	-64.9	79.9	69.9	10.02	7.981		
1,100.0	1,100.0	1,100.0	1,100.0	5.0	5.0	-54.31	46.6	-64.9	79.9	69.6	10.34	7.734		
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-54.31	46.6	-64.9	79.9	69.3	10.65	7.507		
1,300.0	1,300.0	1,300.0	1,300.0	5.3	5.3	-54.31	46.6	-64.9	79.9	69.0	10.95	7.298		
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-54.31	46.6	-64.9	79.9	68.7	11.25	7.104		
1,500.0	1,500.0	1,500.0	1,500.0	5.6	5.6	-54.31	46.6	-64.9	79.9	68.4	11.55	6.923		
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	-54.31	46.6	-64.9	79.9	68.1	11.84	6.755		
1,700.0	1,700.0	1,700.0	1,700.0	5.9	5.9	-54.31	46.6	-64.9	79.9	67.8	12.12	6.597		
1,800.0	1,800.0	1,800.0	1,800.0	6.0	6.0	-54.31	46.6	-64.9	79.9	67.5	12.40	6.449		
1,900.0	1,900.0	1,900.0	1,900.0	6.2	6.2	-54.31	46.6	-64.9	79.9	67.3	12.67	6.309 CC		
2,000.0	2,000.0	2,000.0	2,000.0	6.4	6.3	-98.26	46.6	-64.9	80.2	67.2	12.94	6.196 ES		
2,100.0	2,099.8	2,099.2	2,099.2	6.6	6.5	-101.00	47.9	-64.6	81.5	68.2	13.21	6.168 SF		
2,200.0	2,199.5	2,198.5	2,198.4	6.9	6.7	-104.20	51.6	-63.6	84.4	70.9	13.47	6.263		
2,300.0	2,298.7	2,297.8	2,297.5	7.1	6.8	-107.64	57.8	-61.9	89.1	75.3	13.74	6.480		
2,400.0	2,397.5	2,395.2	2,394.5	7.4	7.0	-111.34	66.1	-60.4	96.2	82.2	13.98	6.882		
2,500.0	2,495.6	2,490.7	2,489.5	7.7	7.2	-115.81	75.4	-61.7	108.4	94.1	14.32	7.568		
2,566.5	2,560.5	2,553.4	2,551.8	7.8	7.3	-118.85	82.2	-64.1	119.5	105.0	14.53	8.228		
2,600.0	2,593.1	2,584.8	2,583.0	7.9	7.4	-120.38	85.7	-65.8	126.0	111.4	14.62	8.618		
2,700.0	2,690.4	2,677.6	2,674.9	8.2	7.6	-123.94	96.9	-72.7	147.9	132.9	14.97	9.879		
2,800.0	2,787.7	2,769.2	2,765.2	8.5	7.8	-126.30	108.9	-82.3	173.1	157.8	15.30	11.316		
2,900.0	2,885.0	2,859.3	2,853.5	8.8	8.1	-127.81	121.8	-94.4	201.6	185.9	15.64	12.890		
3,000.0	2,982.3	2,947.8	2,939.8	9.1	8.3	-128.72	135.3	-108.8	232.9	217.0	15.98	14.581		
3,100.0	3,079.6	3,034.6	3,023.8	9.4	8.6	-129.22	149.4	-125.4	267.1	250.8	16.28	16.403		
3,200.0	3,176.9	3,127.5	3,113.4	9.8	8.8	-129.53	165.0	-144.6	302.7	286.1	16.66	18.171		
3,300.0	3,274.2	3,220.9	3,203.4	10.1	9.1	-129.78	180.7	-163.8	338.4	321.3	17.09	19.799		
3,400.0	3,371.5	3,314.3	3,293.4	10.5	9.4	-129.98	196.4	-183.1	374.1	356.5	17.54	21.323		
3,500.0	3,468.9	3,407.7	3,383.5	10.9	9.7	-130.15	212.1	-202.4	409.8	391.8	18.01	22.747		
3,600.0	3,566.2	3,501.2	3,473.5	11.3	10.0	-130.29	227.8	-221.7	445.4	426.9	18.50	24.077		
3,700.0	3,663.5	3,594.6	3,563.6	11.7	10.3	-130.41	243.5	-241.0	481.1	462.1	19.00	25.317		
3,800.0	3,760.8	3,688.0	3,653.6	12.1	10.7	-130.51	259.2	-260.3	516.8	497.3	19.52	26.473		
3,900.0	3,858.1	3,781.4	3,743.7	12.5	11.0	-130.60	274.9	-279.6	552.5	532.5	20.05	27.550		
4,000.0	3,955.4	3,874.8	3,833.7	12.9	11.4	-130.68	290.6	-298.9	588.2	567.6	20.60	28.555		
4,100.0	4,052.7	3,968.2	3,923.7	13.3	11.8	-130.75	306.3	-318.1	623.9	602.7	21.15	29.491		
4,200.0	4,150.0	4,061.6	4,013.8	13.7	12.1	-130.81	322.0	-337.4	659.6	637.9	21.72	30.365		
4,300.0	4,247.3	4,155.0	4,103.8	14.2	12.5	-130.87	337.7	-356.7	695.3	673.0	22.30	31.181		
4,400.0	4,344.6	4,248.5	4,193.9	14.6	12.9	-130.92	353.4	-376.0	731.0	708.1	22.88	31.943		
4,500.0	4,441.9	4,341.9	4,283.9	15.0	13.3	-130.96	369.1	-395.3	766.6	743.2	23.48	32.655		
4,600.0	4,539.2	4,435.3	4,373.9	15.5	13.7	-131.00	384.8	-414.6	802.3	778.3	24.08	33.321		
4,700.0	4,636.5	4,528.7	4,464.0	15.9	14.1	-131.04	400.5	-433.9	838.0	813.3	24.69	33.945		
4,800.0	4,733.8	4,622.1	4,554.0	16.3	14.5	-131.07	416.2	-453.2	873.7	848.4	25.30	34.530		
4,900.0	4,831.1	4,715.5	4,644.1	16.8	14.9	-131.11	431.9	-472.4	909.4	883.5	25.93	35.078		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 708H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor		
5,000.0	4,928.4	4,808.9	4,734.1	17.2	15.3	-131.14	447.6	-491.7	945.1	918.6	26.55	35.593		
5,100.0	5,025.8	4,902.3	4,824.1	17.7	15.7	-131.16	463.3	-511.0	980.8	953.6	27.19	36.076		

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 709H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 3.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)		
0.0	0.0	0.0	0.2	3.0	3.0	-54.32	35.0	-48.7	60.0				
100.0	100.0	99.8	100.0	3.1	3.1	-54.32	35.0	-48.7	60.0	53.4	6.60	9.092	
200.0	200.0	199.8	200.0	3.3	3.3	-54.32	35.0	-48.7	60.0	53.0	7.05	8.509	
300.0	300.0	299.8	300.0	3.5	3.5	-54.32	35.0	-48.7	60.0	52.5	7.48	8.024	
400.0	400.0	399.8	400.0	3.8	3.8	-54.32	35.0	-48.7	60.0	52.1	7.88	7.611	
500.0	500.0	499.8	500.0	4.0	3.9	-54.32	35.0	-48.7	60.0	51.7	8.27	7.254	
600.0	600.0	599.8	600.0	4.1	4.1	-54.32	35.0	-48.7	60.0	51.4	8.64	6.942	
700.0	700.0	699.8	700.0	4.3	4.3	-54.32	35.0	-48.7	60.0	51.0	9.00	6.665	
800.0	800.0	799.8	800.0	4.5	4.5	-54.32	35.0	-48.7	60.0	50.7	9.35	6.417	
900.0	900.0	899.8	900.0	4.7	4.7	-54.32	35.0	-48.7	60.0	50.3	9.69	6.193	
1,000.0	1,000.0	999.8	1,000.0	4.8	4.8	-54.32	35.0	-48.7	60.0	50.0	10.02	5.991	
1,100.0	1,100.0	1,099.8	1,100.0	5.0	5.0	-54.32	35.0	-48.7	60.0	49.7	10.34	5.805	
1,200.0	1,200.0	1,199.8	1,200.0	5.2	5.2	-54.32	35.0	-48.7	60.0	49.4	10.65	5.635	
1,300.0	1,300.0	1,299.8	1,300.0	5.3	5.3	-54.32	35.0	-48.7	60.0	49.1	10.95	5.478	
1,400.0	1,400.0	1,399.8	1,400.0	5.5	5.5	-54.32	35.0	-48.7	60.0	48.8	11.25	5.332	
1,500.0	1,500.0	1,499.8	1,500.0	5.6	5.6	-54.32	35.0	-48.7	60.0	48.5	11.55	5.197	
1,600.0	1,600.0	1,599.8	1,600.0	5.8	5.8	-54.32	35.0	-48.7	60.0	48.2	11.84	5.070	
1,700.0	1,700.0	1,699.8	1,700.0	5.9	5.9	-54.32	35.0	-48.7	60.0	47.9	12.12	4.952	
1,800.0	1,800.0	1,799.8	1,800.0	6.0	6.0	-54.32	35.0	-48.7	60.0	47.6	12.40	4.840	
1,900.0	1,900.0	1,899.8	1,900.0	6.2	6.2	-54.32	35.0	-48.7	60.0	47.3	12.67	4.735 CC	
2,000.0	2,000.0	1,999.8	2,000.0	6.4	6.3	-98.67	35.0	-48.7	60.2	47.3	12.94	4.655 ES	
2,100.0	2,099.8	2,099.5	2,099.7	6.6	6.5	-102.28	36.2	-48.2	61.4	48.2	13.21	4.646 SF	
2,200.0	2,199.5	2,199.3	2,199.4	6.9	6.7	-106.39	39.7	-46.5	63.8	50.3	13.47	4.731	
2,300.0	2,298.7	2,299.1	2,299.0	7.1	6.8	-110.73	45.6	-43.8	67.6	53.8	13.75	4.911	
2,400.0	2,397.5	2,397.2	2,396.7	7.4	7.0	-115.22	53.6	-40.9	73.6	59.6	14.01	5.254	
2,500.0	2,495.6	2,493.8	2,492.8	7.7	7.2	-120.18	63.1	-40.6	84.8	70.4	14.40	5.892	
2,566.5	2,560.5	2,557.3	2,555.9	7.8	7.3	-123.28	70.3	-41.9	95.3	80.7	14.62	6.522	
2,600.0	2,593.1	2,589.2	2,587.5	7.9	7.4	-124.73	74.1	-43.0	101.5	86.8	14.72	6.894	
2,700.0	2,690.4	2,683.5	2,680.9	8.2	7.6	-127.73	86.5	-48.2	122.0	106.9	15.07	8.098	
2,800.0	2,787.7	2,776.8	2,772.8	8.5	7.8	-129.28	100.3	-55.9	145.6	130.2	15.39	9.460	
2,900.0	2,885.0	2,871.0	2,865.2	8.8	8.0	-129.96	115.6	-66.1	171.7	156.0	15.69	10.949	
3,000.0	2,982.3	2,967.4	2,959.7	9.1	8.3	-130.42	131.4	-76.8	198.3	182.2	16.04	12.363	
3,100.0	3,079.6	3,063.8	3,054.2	9.4	8.6	-130.76	147.2	-87.6	224.8	208.4	16.41	13.699	
3,200.0	3,176.9	3,160.2	3,148.7	9.8	8.8	-131.04	163.0	-98.3	251.3	234.5	16.80	14.961	
3,300.0	3,274.2	3,256.6	3,243.2	10.1	9.1	-131.26	178.8	-109.0	277.9	260.7	17.20	16.152	
3,400.0	3,371.5	3,353.0	3,337.7	10.5	9.4	-131.44	194.6	-119.8	304.4	286.8	17.62	17.276	
3,500.0	3,468.9	3,449.4	3,432.2	10.9	9.8	-131.59	210.4	-130.5	330.9	312.9	18.05	18.334	
3,600.0	3,566.2	3,545.8	3,526.7	11.3	10.1	-131.73	226.2	-141.3	357.5	339.0	18.49	19.331	
3,700.0	3,663.5	3,642.2	3,621.2	11.7	10.4	-131.84	242.0	-152.0	384.0	365.1	18.95	20.269	
3,800.0	3,760.8	3,738.7	3,715.7	12.1	10.8	-131.94	257.8	-162.8	410.6	391.2	19.41	21.151	
3,900.0	3,858.1	3,835.1	3,810.2	12.5	11.1	-132.02	273.6	-173.5	437.1	417.3	19.89	21.982	
4,000.0	3,955.4	3,931.5	3,904.7	12.9	11.5	-132.10	289.4	-184.3	463.7	443.3	20.37	22.764	
4,100.0	4,052.7	4,027.9	3,999.2	13.3	11.9	-132.17	305.2	-195.0	490.2	469.4	20.86	23.500	
4,200.0	4,150.0	4,124.3	4,093.7	13.7	12.2	-132.23	321.0	-205.7	516.8	495.4	21.36	24.193	
4,300.0	4,247.3	4,220.7	4,188.2	14.2	12.6	-132.28	336.8	-216.5	543.4	521.5	21.87	24.846	
4,400.0	4,344.6	4,317.1	4,282.7	14.6	13.0	-132.33	352.6	-227.2	569.9	547.5	22.38	25.462	
4,500.0	4,441.9	4,413.5	4,377.2	15.0	13.4	-132.38	368.4	-238.0	596.5	573.6	22.90	26.042	
4,600.0	4,539.2	4,509.9	4,471.7	15.5	13.8	-132.42	384.2	-248.7	623.0	599.6	23.43	26.590	
4,700.0	4,636.5	4,606.3	4,566.1	15.9	14.2	-132.46	400.1	-259.5	649.6	625.6	23.96	27.108	
4,800.0	4,733.8	4,702.7	4,660.6	16.3	14.6	-132.49	415.9	-270.2	676.1	651.6	24.50	27.597	
4,900.0	4,831.1	4,799.2	4,755.1	16.8	15.0	-132.53	431.7	-281.0	702.7	677.6	25.04	28.060	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 709H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		No-Go Distance (usft)	Separation Factor
5,000.0	4,928.4	4,895.6	4,849.6	17.2	15.4	-132.56	447.5	-291.7	729.2	703.6		25.59	28.498
5,100.0	5,025.8	4,992.0	4,944.1	17.7	15.8	-132.59	463.3	-302.5	755.8	729.7		26.14	28.913
5,200.0	5,123.1	5,088.4	5,038.6	18.1	16.2	-132.61	479.1	-313.2	782.3	755.7		26.70	29.307
5,300.0	5,220.4	5,184.8	5,133.1	18.6	16.6	-132.64	494.9	-323.9	808.9	781.6		27.25	29.680
5,400.0	5,317.7	5,281.2	5,227.6	19.0	17.0	-132.66	510.7	-334.7	835.5	807.6		27.82	30.034
5,500.0	5,415.0	5,377.6	5,322.1	19.5	17.4	-132.68	526.5	-345.4	862.0	833.6		28.38	30.371
5,600.0	5,512.3	5,474.0	5,416.6	20.0	17.9	-132.70	542.3	-356.2	888.6	859.6		28.95	30.691
5,700.0	5,609.6	5,570.4	5,511.1	20.4	18.3	-132.72	558.1	-366.9	915.1	885.6		29.52	30.996
5,800.0	5,706.9	5,666.8	5,605.6	20.9	18.7	-132.74	573.9	-377.7	941.7	911.6		30.10	31.286
5,900.0	5,804.2	5,763.2	5,700.1	21.3	19.1	-132.75	589.7	-388.4	968.2	937.6		30.68	31.563
6,000.0	5,901.5	5,859.6	5,794.6	21.8	19.5	-132.77	605.5	-399.2	994.8	963.5		31.26	31.827

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 710H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.5	3.0	3.0	-54.47	23.2	-32.5	40.0				
100.0	100.0	99.5	100.0	3.1	3.1	-54.47	23.2	-32.5	40.0	33.4	6.60	6.060	
200.0	200.0	199.5	200.0	3.3	3.3	-54.47	23.2	-32.5	40.0	32.9	7.05	5.672	
300.0	300.0	299.5	300.0	3.5	3.5	-54.47	23.2	-32.5	40.0	32.5	7.48	5.349	
400.0	400.0	399.5	400.0	3.8	3.8	-54.47	23.2	-32.5	40.0	32.1	7.88	5.073	
500.0	500.0	499.5	500.0	4.0	3.9	-54.47	23.2	-32.5	40.0	31.7	8.27	4.836	
600.0	600.0	599.5	600.0	4.1	4.1	-54.47	23.2	-32.5	40.0	31.4	8.64	4.627	
700.0	700.0	699.5	700.0	4.3	4.3	-54.47	23.2	-32.5	40.0	31.0	9.00	4.442	
800.0	800.0	799.5	800.0	4.5	4.5	-54.47	23.2	-32.5	40.0	30.6	9.35	4.277	
900.0	900.0	899.5	900.0	4.7	4.7	-54.47	23.2	-32.5	40.0	30.3	9.69	4.128	
1,000.0	1,000.0	999.5	1,000.0	4.8	4.8	-54.47	23.2	-32.5	40.0	30.0	10.02	3.993	
1,100.0	1,100.0	1,099.5	1,100.0	5.0	5.0	-54.47	23.2	-32.5	40.0	29.7	10.34	3.870	
1,200.0	1,200.0	1,199.5	1,200.0	5.2	5.2	-54.47	23.2	-32.5	40.0	29.3	10.65	3.756	
1,300.0	1,300.0	1,299.5	1,300.0	5.3	5.3	-54.47	23.2	-32.5	40.0	29.0	10.95	3.651	
1,400.0	1,400.0	1,399.5	1,400.0	5.5	5.5	-54.47	23.2	-32.5	40.0	28.7	11.25	3.554	
1,500.0	1,500.0	1,499.5	1,500.0	5.6	5.6	-54.47	23.2	-32.5	40.0	28.4	11.55	3.464	
1,600.0	1,600.0	1,599.5	1,600.0	5.8	5.8	-54.47	23.2	-32.5	40.0	28.2	11.83	3.379	
1,700.0	1,700.0	1,699.5	1,700.0	5.9	5.9	-54.47	23.2	-32.5	40.0	27.9	12.12	3.300	
1,800.0	1,800.0	1,799.5	1,800.0	6.0	6.0	-54.47	23.2	-32.5	40.0	27.6	12.40	3.226	
1,900.0	1,900.0	1,899.5	1,900.0	6.2	6.2	-54.47	23.2	-32.5	40.0	27.3	12.67	3.156 CC	
2,000.0	2,000.0	1,999.5	2,000.0	6.4	6.3	-99.65	23.2	-32.5	40.3	27.3	12.94	3.110 ES, SF	
2,100.0	2,099.8	2,099.3	2,099.8	6.6	6.5	-106.76	23.2	-32.5	41.5	28.2	13.21	3.137	
2,200.0	2,199.5	2,199.0	2,199.5	6.9	6.6	-117.42	23.2	-32.5	44.8	31.2	13.52	3.311	
2,300.0	2,298.7	2,298.2	2,298.7	7.1	6.7	-129.37	23.2	-32.5	51.5	37.7	13.87	3.715	
2,400.0	2,397.5	2,397.0	2,397.5	7.4	6.8	-140.30	23.2	-32.5	62.7	48.4	14.29	4.386	
2,500.0	2,495.6	2,495.1	2,495.6	7.7	7.0	-149.03	23.2	-32.5	78.4	63.6	14.75	5.316	
2,566.5	2,560.5	2,561.6	2,562.1	7.8	7.1	-153.48	23.8	-32.2	90.7	75.7	15.04	6.034	
2,600.0	2,593.1	2,595.4	2,595.8	7.9	7.2	-155.26	24.5	-31.6	97.0	81.8	15.17	6.390	
2,700.0	2,690.4	2,696.9	2,697.3	8.2	7.4	-158.86	28.8	-28.7	114.0	98.3	15.65	7.284	
2,800.0	2,787.7	2,797.2	2,797.2	8.5	7.5	-160.68	35.8	-24.2	128.6	112.5	16.04	8.015	
2,900.0	2,885.0	2,895.1	2,894.6	8.8	7.6	-160.86	45.3	-21.5	143.5	126.9	16.52	8.684	
3,000.0	2,982.3	2,992.6	2,991.3	9.1	7.8	-159.82	57.1	-21.0	159.2	142.2	16.98	9.371	
3,100.0	3,079.6	3,089.5	3,087.2	9.4	8.1	-157.92	71.4	-22.7	175.8	158.4	17.41	10.097	
3,200.0	3,176.9	3,185.9	3,182.1	9.8	8.3	-155.42	87.9	-26.5	193.6	175.8	17.77	10.893	
3,300.0	3,274.2	3,283.8	3,278.2	10.1	8.5	-152.94	105.8	-31.4	212.3	194.1	18.15	11.696	
3,400.0	3,371.5	3,381.6	3,374.3	10.5	8.7	-150.86	123.6	-36.3	231.2	212.7	18.52	12.482	
3,500.0	3,468.9	3,479.5	3,470.4	10.9	9.0	-149.10	141.5	-41.1	250.4	231.5	18.91	13.247	
3,600.0	3,566.2	3,577.4	3,566.5	11.3	9.3	-147.59	159.3	-46.0	269.9	250.6	19.29	13.988	
3,700.0	3,663.5	3,675.2	3,662.6	11.7	9.6	-146.28	177.2	-50.8	289.4	269.7	19.69	14.703	
3,800.0	3,760.8	3,773.1	3,758.7	12.1	9.9	-145.14	195.1	-55.7	309.1	289.0	20.09	15.390	
3,900.0	3,858.1	3,870.9	3,854.8	12.5	10.2	-144.13	212.9	-60.5	328.9	308.4	20.49	16.051	
4,000.0	3,955.4	3,968.8	3,950.9	12.9	10.5	-143.24	230.8	-65.4	348.8	327.9	20.91	16.686	
4,100.0	4,052.7	4,066.7	4,047.0	13.3	10.8	-142.44	248.6	-70.3	368.8	347.5	21.33	17.294	
4,200.0	4,150.0	4,164.5	4,143.1	13.7	11.2	-141.73	266.5	-75.1	388.8	367.1	21.75	17.877	
4,300.0	4,247.3	4,262.4	4,239.2	14.2	11.5	-141.08	284.3	-80.0	408.9	386.7	22.18	18.434	
4,400.0	4,344.6	4,360.3	4,335.3	14.6	11.9	-140.50	302.2	-84.8	429.0	406.4	22.62	18.968	
4,500.0	4,441.9	4,458.1	4,431.4	15.0	12.2	-139.97	320.0	-89.7	449.2	426.1	23.06	19.480	
4,600.0	4,539.2	4,556.0	4,527.5	15.5	12.6	-139.48	337.9	-94.6	469.4	445.9	23.51	19.969	
4,700.0	4,636.5	4,653.9	4,623.6	15.9	13.0	-139.03	355.7	-99.4	489.6	465.7	23.96	20.437	
4,800.0	4,733.8	4,751.7	4,719.7	16.3	13.4	-138.62	373.6	-104.3	509.9	485.4	24.41	20.885	
4,900.0	4,831.1	4,849.6	4,815.8	16.8	13.7	-138.24	391.4	-109.1	530.1	505.3	24.87	21.314	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 710H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,928.4	4,947.5	4,911.9	17.2	14.1	-137.89	409.3	-114.0	550.4	525.1	25.34	21.725	
5,100.0	5,025.8	5,045.3	5,008.0	17.7	14.5	-137.56	427.1	-118.9	570.7	544.9	25.80	22.118	
5,200.0	5,123.1	5,143.2	5,104.1	18.1	14.9	-137.26	445.0	-123.7	591.1	564.8	26.28	22.495	
5,300.0	5,220.4	5,241.1	5,200.2	18.6	15.3	-136.98	462.8	-128.6	611.4	584.7	26.75	22.856	
5,400.0	5,317.7	5,338.9	5,296.3	19.0	15.7	-136.71	480.7	-133.4	631.8	604.6	27.23	23.203	
5,500.0	5,415.0	5,436.8	5,392.4	19.5	16.1	-136.46	498.6	-138.3	652.2	624.4	27.71	23.535	
5,600.0	5,512.3	5,534.6	5,488.5	20.0	16.5	-136.23	516.4	-143.2	672.5	644.3	28.19	23.854	
5,700.0	5,609.6	5,632.5	5,584.6	20.4	17.0	-136.01	534.3	-148.0	692.9	664.3	28.68	24.160	
5,800.0	5,706.9	5,730.4	5,680.7	20.9	17.4	-135.80	552.1	-152.9	713.3	684.2	29.17	24.454	
5,900.0	5,804.2	5,828.2	5,776.8	21.3	17.8	-135.60	570.0	-157.7	733.7	704.1	29.66	24.737	
6,000.0	5,901.5	5,926.1	5,872.9	21.8	18.2	-135.42	587.8	-162.6	754.2	724.0	30.16	25.008	
6,100.0	5,998.8	6,024.0	5,969.0	22.3	18.6	-135.24	605.7	-167.5	774.6	743.9	30.65	25.269	
6,200.0	6,096.1	6,121.8	6,065.1	22.7	19.0	-135.08	623.5	-172.3	795.0	763.9	31.15	25.520	
6,300.0	6,193.4	6,219.7	6,161.2	23.2	19.5	-134.92	641.4	-177.2	815.5	783.8	31.65	25.762	
6,400.0	6,290.7	6,317.6	6,257.3	23.7	19.9	-134.77	659.2	-182.0	835.9	803.8	32.16	25.995	
6,500.0	6,388.0	6,415.4	6,353.4	24.1	20.3	-134.62	677.1	-186.9	856.4	823.7	32.66	26.219	
6,600.0	6,485.3	6,513.3	6,449.5	24.6	20.7	-134.49	694.9	-191.8	876.8	843.6	33.17	26.435	
6,700.0	6,582.6	6,611.2	6,545.6	25.1	21.2	-134.36	712.8	-196.6	897.3	863.6	33.68	26.644	
6,799.1	6,679.0	6,708.1	6,640.8	25.5	21.6	-134.23	730.5	-201.4	917.5	883.4	34.18	26.843	
6,800.0	6,679.9	6,709.0	6,641.7	25.5	21.6	-134.23	730.6	-201.5	917.7	883.5	34.19	26.845	
6,900.0	6,777.5	6,807.0	6,737.9	26.0	22.0	-134.22	748.5	-206.3	937.6	902.9	34.69	27.030	
7,000.0	6,875.3	6,905.2	6,834.3	26.5	22.5	-134.13	766.4	-211.2	956.3	921.1	35.17	27.194	
7,100.0	6,973.6	7,004.1	6,931.4	26.9	22.9	-133.96	784.4	-216.1	973.8	938.2	35.62	27.340	
7,200.0	7,072.1	7,106.8	7,032.5	27.4	23.4	-133.77	802.1	-220.9	989.8	953.7	36.10	27.417	
12,275.0	12,026.5	12,198.0	11,997.3	30.3	26.6	83.07	586.3	-240.2	999.4	956.7	42.70	23.404	
12,300.0	12,035.8	12,221.0	12,005.6	30.2	26.5	83.64	564.9	-240.1	994.3	951.7	42.65	23.316	
12,325.0	12,044.0	12,243.9	12,012.8	30.2	26.5	84.23	543.1	-239.9	989.2	946.6	42.59	23.224	
12,350.0	12,050.8	12,266.8	12,018.9	30.1	26.5	84.84	521.1	-239.7	984.0	941.4	42.55	23.127	
12,375.0	12,056.4	12,289.6	12,024.0	30.1	26.4	85.47	498.8	-239.5	978.7	936.2	42.51	23.024	
12,400.0	12,060.8	12,312.4	12,028.0	30.1	26.4	86.12	476.4	-239.4	973.3	930.8	42.47	22.917	
12,425.0	12,063.8	12,335.3	12,030.9	30.1	26.4	86.77	453.7	-239.2	967.9	925.4	42.44	22.805	
12,450.0	12,065.5	12,358.1	12,032.7	30.1	26.4	87.44	431.0	-239.0	962.4	920.0	42.42	22.689	
12,470.5	12,066.0	12,376.8	12,033.4	30.1	26.4	88.00	412.3	-238.9	958.0	915.6	42.41	22.590	
12,500.0	12,066.0	12,405.0	12,033.5	30.1	26.4	88.00	384.0	-238.6	951.7	909.3	42.41	22.441	
12,600.0	12,066.0	12,503.1	12,033.5	30.1	26.4	87.97	286.0	-237.9	932.6	890.1	42.52	21.934	
12,700.0	12,066.0	12,601.8	12,033.5	30.1	26.4	87.95	187.3	-237.1	917.0	874.3	42.70	21.476	
12,800.0	12,066.0	12,700.9	12,033.5	30.2	26.4	87.93	88.2	-236.4	904.8	861.9	42.94	21.069	
12,900.0	12,066.0	12,800.4	12,033.5	30.2	26.4	87.92	-11.3	-235.6	896.1	852.9	43.26	20.716	
13,000.0	12,066.0	12,900.2	12,033.5	30.3	26.5	87.91	-111.1	-234.9	890.9	847.3	43.64	20.417	
13,091.0	12,066.0	12,991.1	12,033.5	30.4	26.5	87.91	-202.0	-234.3	889.2	845.2	44.03	20.195	
13,100.0	12,066.0	13,000.1	12,033.5	30.4	26.5	87.91	-211.0	-234.2	889.2	845.1	44.07	20.177	
13,200.0	12,066.0	13,100.0	12,033.5	30.5	26.5	87.90	-310.9	-233.5	889.0	844.4	44.55	19.952	
13,300.0	12,066.0	13,199.8	12,033.5	30.5	26.6	87.90	-410.8	-232.8	888.7	843.6	45.10	19.706	
13,400.0	12,066.0	13,299.7	12,033.5	30.7	26.6	87.90	-510.6	-232.1	888.5	842.8	45.70	19.441	
13,500.0	12,066.0	13,399.6	12,033.5	30.8	26.7	87.90	-610.5	-231.4	888.3	841.9	46.36	19.160	
13,600.0	12,066.0	13,499.5	12,033.5	30.9	26.8	87.90	-710.4	-230.8	888.1	841.0	47.07	18.865	
13,700.0	12,066.0	13,599.4	12,033.5	31.0	26.9	87.90	-810.3	-230.1	887.9	840.0	47.84	18.560	
13,800.0	12,066.0	13,699.3	12,033.5	31.2	27.0	87.90	-910.2	-229.5	887.7	839.0	48.65	18.246	
13,900.0	12,066.0	13,799.2	12,033.5	31.3	27.1	87.90	-1,010.1	-228.8	887.5	838.0	49.51	17.926	
14,000.0	12,066.0	13,899.1	12,033.5	31.5	27.3	87.90	-1,110.0	-228.2	887.3	836.9	50.41	17.601	
14,100.0	12,066.0	13,999.0	12,033.5	31.7	27.6	87.90	-1,209.9	-227.6	887.2	835.8	51.36	17.275	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 710H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,200.0	12,066.0	14,098.9	12,033.5	31.9	27.9	87.90	-1,309.8	-227.0	887.0	834.7	52.34	16.947	
14,300.0	12,066.0	14,198.8	12,033.5	32.1	28.3	87.90	-1,409.7	-226.5	886.9	833.6	53.36	16.620	
14,400.0	12,066.0	14,298.7	12,033.5	32.3	28.7	87.90	-1,509.6	-225.9	886.8	832.4	54.42	16.296	
14,500.0	12,066.0	14,398.6	12,033.5	32.5	29.3	87.90	-1,609.5	-225.3	886.7	831.2	55.51	15.974	
14,600.0	12,066.0	14,498.5	12,033.5	32.8	29.8	87.90	-1,709.4	-224.8	886.6	830.0	56.63	15.656	
14,700.0	12,066.0	14,598.4	12,033.5	33.1	30.5	87.90	-1,809.3	-224.2	886.5	828.7	57.78	15.343	
14,800.0	12,066.0	14,698.3	12,033.5	33.3	31.2	87.90	-1,909.2	-223.7	886.4	827.5	58.96	15.035	
14,900.0	12,066.0	14,798.2	12,033.5	33.6	31.9	87.90	-2,009.1	-223.2	886.4	826.2	60.16	14.734	
15,000.0	12,066.0	14,898.1	12,033.5	33.9	32.6	87.90	-2,109.0	-222.7	886.3	825.0	61.39	14.438	
15,100.0	12,066.0	14,998.0	12,033.5	34.2	33.4	87.90	-2,208.9	-222.2	886.3	823.7	62.64	14.149	
15,200.0	12,066.0	15,097.9	12,033.5	34.5	34.2	87.90	-2,308.8	-221.7	886.3	822.4	63.91	13.867	
15,300.0	12,066.0	15,197.8	12,033.5	34.9	35.0	87.90	-2,408.7	-221.3	886.3	821.1	65.20	13.592	
15,359.7	12,066.0	15,257.4	12,033.5	35.1	35.4	87.90	-2,468.3	-221.0	886.3	820.3	65.99	13.431	
15,400.0	12,066.0	15,297.7	12,033.5	35.2	35.8	87.90	-2,508.6	-220.8	886.3	819.8	66.51	13.324	
15,500.0	12,066.0	15,397.6	12,033.5	35.6	36.6	87.90	-2,608.5	-220.4	886.3	818.4	67.84	13.063	
15,600.0	12,066.0	15,497.5	12,033.5	36.0	37.4	87.90	-2,708.4	-219.9	886.3	817.1	69.19	12.810	
15,700.0	12,066.0	15,597.4	12,033.5	36.4	38.2	87.90	-2,808.3	-219.5	886.3	815.8	70.55	12.563	
15,800.0	12,066.0	15,697.3	12,033.5	36.8	39.1	87.90	-2,908.2	-219.1	886.4	814.4	71.93	12.323	
15,900.0	12,066.0	15,797.2	12,033.5	37.2	39.9	87.90	-3,008.1	-218.7	886.4	813.1	73.32	12.090	
16,000.0	12,066.0	15,897.1	12,033.5	37.6	40.8	87.90	-3,108.0	-218.3	886.5	811.8	74.73	11.863	
16,100.0	12,066.0	15,997.0	12,033.5	38.1	41.6	87.90	-3,207.8	-218.0	886.6	810.4	76.14	11.643	
16,200.0	12,066.0	16,096.9	12,033.5	38.5	42.5	87.90	-3,307.7	-217.6	886.7	809.1	77.57	11.430	
16,300.0	12,066.0	16,196.9	12,033.5	39.0	43.3	87.90	-3,407.7	-217.2	886.8	807.8	79.01	11.223	
16,400.0	12,066.0	16,296.9	12,033.5	39.5	44.2	87.90	-3,507.7	-216.9	886.9	806.4	80.47	11.022	
16,500.0	12,066.0	16,396.9	12,033.5	39.9	45.1	87.90	-3,607.7	-216.5	887.0	805.0	81.93	10.826	
16,600.0	12,066.0	16,496.9	12,033.5	40.4	46.0	87.90	-3,707.7	-216.2	887.1	803.7	83.40	10.636	
16,700.0	12,066.0	16,596.9	12,033.5	41.0	46.9	87.90	-3,807.7	-215.8	887.2	802.3	84.88	10.452	
16,800.0	12,066.0	16,696.9	12,033.5	41.5	47.7	87.90	-3,907.7	-215.5	887.3	800.9	86.37	10.272	
16,900.0	12,066.0	16,796.9	12,033.5	42.0	48.6	87.90	-4,007.7	-215.1	887.4	799.5	87.87	10.098	
17,000.0	12,066.0	16,896.9	12,033.5	42.5	49.5	87.90	-4,107.7	-214.8	887.5	798.1	89.38	9.929	
17,100.0	12,066.0	16,996.9	12,033.5	43.1	50.4	87.90	-4,207.7	-214.4	887.6	796.7	90.89	9.765	
17,200.0	12,066.0	17,096.9	12,033.5	43.6	51.3	87.90	-4,307.7	-214.1	887.7	795.3	92.41	9.605	
17,300.0	12,066.0	17,196.9	12,033.5	44.2	52.2	87.90	-4,407.7	-213.7	887.8	793.8	93.94	9.450	
17,400.0	12,066.0	17,296.9	12,033.5	44.8	53.1	87.90	-4,507.7	-213.4	887.9	792.4	95.48	9.299	
17,500.0	12,066.0	17,396.9	12,033.5	45.3	54.0	87.90	-4,607.7	-213.0	888.0	791.0	97.02	9.153	
17,600.0	12,066.0	17,496.9	12,033.5	45.9	54.9	87.90	-4,707.7	-212.7	888.1	789.5	98.56	9.010	
17,700.0	12,066.0	17,596.9	12,033.5	46.5	55.8	87.90	-4,807.7	-212.3	888.2	788.1	100.11	8.872	
17,800.0	12,066.0	17,696.9	12,033.5	47.1	56.8	87.90	-4,907.7	-211.9	888.3	786.6	101.67	8.737	
17,900.0	12,066.0	17,796.9	12,033.5	47.7	57.7	87.90	-5,007.7	-211.6	888.4	785.1	103.23	8.606	
18,000.0	12,066.0	17,896.9	12,033.5	48.3	58.6	87.91	-5,107.7	-211.2	888.5	783.7	104.80	8.478	
18,100.0	12,066.0	17,996.9	12,033.5	48.9	59.5	87.91	-5,207.7	-210.9	888.6	782.2	106.37	8.354	
18,200.0	12,066.0	18,096.9	12,033.5	49.5	60.4	87.91	-5,307.7	-210.5	888.7	780.7	107.94	8.233	
18,300.0	12,066.0	18,196.9	12,033.5	50.1	61.3	87.91	-5,407.7	-210.2	888.8	779.3	109.52	8.115	
18,400.0	12,066.0	18,296.9	12,033.5	50.8	62.3	87.91	-5,507.7	-209.8	888.9	777.8	111.11	8.000	
18,500.0	12,066.0	18,396.9	12,033.5	51.4	63.2	87.91	-5,607.7	-209.5	889.0	776.3	112.69	7.888	
18,600.0	12,066.0	18,496.9	12,033.5	52.0	64.1	87.91	-5,707.7	-209.1	889.1	774.8	114.28	7.780	
18,700.0	12,066.0	18,596.9	12,033.5	52.7	65.0	87.91	-5,807.7	-208.8	889.2	773.3	115.88	7.673	
18,800.0	12,066.0	18,696.9	12,033.5	53.3	65.9	87.91	-5,907.7	-208.4	889.3	771.8	117.48	7.570	
18,900.0	12,066.0	18,796.9	12,033.5	54.0	66.9	87.91	-6,007.7	-208.1	889.4	770.3	119.08	7.469	
19,000.0	12,066.0	18,896.8	12,033.5	54.6	67.8	87.91	-6,107.7	-207.7	889.5	768.8	120.68	7.370	
19,100.0	12,066.0	18,996.8	12,033.5	55.3	68.7	87.91	-6,207.7	-207.3	889.6	767.3	122.29	7.274	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 710H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
19,200.0	12,066.0	19,096.8	12,033.5	55.9	69.7	87.91	-6,307.7	-207.0	889.7	765.8	123.90	7.181	
19,300.0	12,066.0	19,196.8	12,033.5	56.6	70.6	87.91	-6,407.7	-206.6	889.8	764.3	125.51	7.089	
19,400.0	12,066.0	19,296.8	12,033.5	57.3	71.5	87.91	-6,507.7	-206.3	889.9	762.8	127.13	7.000	
19,500.0	12,066.0	19,396.8	12,033.5	57.9	72.5	87.91	-6,607.7	-205.9	890.0	761.2	128.74	6.913	
19,600.0	12,066.0	19,496.8	12,033.5	58.6	73.4	87.91	-6,707.7	-205.6	890.1	759.7	130.36	6.828	
19,700.0	12,066.0	19,596.8	12,033.5	59.3	74.3	87.91	-6,807.7	-205.2	890.2	758.2	131.99	6.744	
19,765.0	12,066.0	19,661.8	12,033.5	59.7	74.9	87.91	-6,872.7	-205.0	890.2	757.2	133.04	6.691	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 711H - OWB - PWP0													Offset Site Error: 0.0 usft	
Survey Program: 0-r.5 MWD+IFR1		Offset		Semi Major Axis			Offset Wellbore Centre		Rule Assigned: Distance			Offset Well Error: 0.0 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)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.5	3.0	0.0	-54.34	11.7	-16.2	20.0					
100.0	100.0	99.5	100.0	3.1	0.8	-54.34	11.7	-16.2	20.0	15.1	4.95	4.045		
200.0	200.0	199.5	200.0	3.3	1.4	-54.34	11.7	-16.2	20.0	14.5	5.55	3.606		
300.0	300.0	299.5	300.0	3.5	1.9	-54.34	11.7	-16.2	20.0	13.9	6.09	3.285		
400.0	400.0	399.5	400.0	3.8	2.3	-54.34	11.7	-16.2	20.0	13.4	6.59	3.036		
500.0	500.0	499.5	500.0	4.0	2.6	-54.34	11.7	-16.2	20.0	12.9	7.05	2.836	Normal Operations	
600.0	600.0	599.5	600.0	4.1	2.9	-54.34	11.7	-16.2	20.0	12.5	7.49	2.670	Normal Operations	
700.0	700.0	699.5	700.0	4.3	3.1	-54.34	11.7	-16.2	20.0	12.1	7.90	2.530	Normal Operations	
800.0	800.0	799.5	800.0	4.5	3.3	-54.34	11.7	-16.2	20.0	11.7	8.30	2.409	Caution - Monitor Closely	
900.0	900.0	899.5	900.0	4.7	3.6	-54.34	11.7	-16.2	20.0	11.3	8.68	2.304	Caution - Monitor Closely	
1,000.0	1,000.0	999.5	1,000.0	4.8	3.8	-54.34	11.7	-16.2	20.0	11.0	9.05	2.210	Caution - Monitor Closely	
1,100.0	1,100.0	1,099.5	1,100.0	5.0	4.0	-54.34	11.7	-16.2	20.0	10.6	9.40	2.127	Caution - Monitor Closely	
1,200.0	1,200.0	1,199.5	1,200.0	5.2	4.2	-54.34	11.7	-16.2	20.0	10.3	9.75	2.052	Caution - Monitor Closely	
1,300.0	1,300.0	1,299.5	1,300.0	5.3	4.4	-54.34	11.7	-16.2	20.0	9.9	10.08	1.984	Caution - Monitor Closely	
1,400.0	1,400.0	1,399.5	1,400.0	5.5	4.6	-54.34	11.7	-16.2	20.0	9.6	10.41	1.922	Caution - Monitor Closely	
1,500.0	1,500.0	1,499.5	1,500.0	5.6	4.7	-54.34	11.7	-16.2	20.0	9.3	10.72	1.865	Caution - Monitor Closely	
1,600.0	1,600.0	1,599.5	1,600.0	5.8	4.9	-54.34	11.7	-16.2	20.0	9.0	11.04	1.812	Caution - Monitor Closely	
1,700.0	1,700.0	1,699.5	1,700.0	5.9	5.1	-54.34	11.7	-16.2	20.0	8.7	11.34	1.764	Caution - Monitor Closely	
1,800.0	1,800.0	1,799.5	1,800.0	6.0	5.2	-54.34	11.7	-16.2	20.0	8.4	11.64	1.719	Caution - Monitor Closely	
1,900.0	1,900.0	1,899.5	1,900.0	6.2	5.4	-54.34	11.7	-16.2	20.0	8.1	11.93	1.676	Caution - Monitor Closely, CC, ES	
2,000.0	2,000.0	1,999.5	2,000.0	6.4	5.6	-101.94	11.7	-16.2	20.3	8.1	12.22	1.660	Caution - Monitor Closely, SF	
2,100.0	2,099.8	2,099.4	2,099.9	6.6	5.7	-112.06	12.8	-15.6	21.7	9.2	12.52	1.736	Caution - Monitor Closely	
2,200.0	2,199.5	2,199.5	2,199.9	6.9	5.9	-121.85	16.2	-13.6	24.7	11.9	12.85	1.925	Caution - Monitor Closely	
2,300.0	2,298.7	2,299.6	2,299.8	7.1	6.2	-130.03	21.8	-10.4	29.3	16.1	13.22	2.219	Caution - Monitor Closely	
2,400.0	2,397.5	2,399.6	2,399.3	7.4	6.3	-135.82	30.0	-6.0	35.6	22.1	13.58	2.625	Normal Operations	
2,500.0	2,495.6	2,499.5	2,498.4	7.7	6.6	-138.41	41.5	-1.2	44.0	30.0	14.00	3.141		
2,566.5	2,560.5	2,565.9	2,564.0	7.8	6.8	-138.92	51.1	2.2	50.6	36.3	14.24	3.552		
2,600.0	2,593.1	2,599.3	2,597.0	7.9	6.9	-138.83	56.5	4.0	54.1	39.7	14.34	3.771		
2,700.0	2,690.4	2,699.2	2,695.1	8.2	7.2	-136.58	74.9	9.6	64.0	49.3	14.66	4.363		
2,800.0	2,787.7	2,799.0	2,792.3	8.5	7.6	-132.25	96.6	15.5	73.5	58.6	14.92	4.925		
2,900.0	2,885.0	2,898.4	2,888.3	8.8	7.9	-126.71	121.4	21.8	83.2	68.1	15.06	5.523		
3,000.0	2,982.3	2,997.6	2,984.0	9.1	8.2	-121.92	146.8	28.1	93.6	78.3	15.26	6.129		
3,100.0	3,079.6	3,096.8	3,079.6	9.4	8.5	-118.10	172.3	34.4	104.4	88.9	15.49	6.743		
3,200.0	3,176.9	3,196.0	3,175.3	9.8	8.9	-115.01	197.7	40.8	115.7	99.9	15.73	7.352		
3,300.0	3,274.2	3,295.2	3,271.0	10.1	9.2	-112.47	223.1	47.1	127.2	111.2	16.00	7.949		
3,400.0	3,371.5	3,394.4	3,366.6	10.5	9.6	-110.36	248.5	53.4	138.9	122.6	16.29	8.530		
3,500.0	3,468.9	3,493.5	3,462.3	10.9	10.0	-108.57	274.0	59.8	150.8	134.2	16.59	9.090		
3,600.0	3,566.2	3,592.7	3,558.0	11.3	10.4	-107.05	299.4	66.1	162.8	145.9	16.91	9.630		
3,700.0	3,663.5	3,691.9	3,653.6	11.7	10.8	-105.74	324.8	72.4	174.9	157.7	17.24	10.147		
3,800.0	3,760.8	3,791.1	3,749.3	12.1	11.2	-104.60	350.2	78.7	187.1	169.5	17.58	10.643		
3,900.0	3,858.1	3,890.3	3,845.0	12.5	11.7	-103.59	375.7	85.1	199.4	181.4	17.94	11.116		
4,000.0	3,955.4	3,989.5	3,940.6	12.9	12.1	-102.71	401.1	91.4	211.7	193.4	18.30	11.567		
4,100.0	4,052.7	4,088.7	4,036.3	13.3	12.5	-101.92	426.5	97.7	224.0	205.4	18.67	11.998		
4,200.0	4,150.0	4,187.9	4,132.0	13.7	12.9	-101.21	451.9	104.0	236.4	217.4	19.05	12.408		
4,300.0	4,247.3	4,287.1	4,227.6	14.2	13.4	-100.58	477.4	110.4	248.8	229.4	19.44	12.799		
4,400.0	4,344.6	4,386.3	4,323.3	14.6	13.8	-100.00	502.8	116.7	261.3	241.5	19.84	13.171		
4,500.0	4,441.9	4,485.4	4,419.0	15.0	14.3	-99.48	528.2	123.0	273.8	253.5	20.24	13.525		
4,600.0	4,539.2	4,584.6	4,514.6	15.5	14.7	-99.00	553.6	129.4	286.3	265.6	20.65	13.863		
4,700.0	4,636.5	4,683.8	4,610.3	15.9	15.2	-98.56	579.1	135.7	298.8	277.7	21.06	14.185		
4,800.0	4,733.8	4,783.0	4,706.0	16.3	15.6	-98.16	604.5	142.0	311.3	289.8	21.48	14.491		
4,900.0	4,831.1	4,882.2	4,801.6	16.8	16.1	-97.79	629.9	148.3	323.8	301.9	21.90	14.783		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 711H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)		
5,000.0	4,928.4	4,981.4	4,897.3	17.2	16.6	-97.44	655.3	154.7	336.4	314.0	22.33	15.062	
5,100.0	5,025.8	5,080.7	4,993.1	17.7	17.0	-97.12	680.8	161.0	348.9	326.2	22.75	15.340	
5,200.0	5,123.1	5,182.2	5,091.3	18.1	17.5	-96.97	705.9	167.2	361.2	338.0	23.18	15.583	
5,300.0	5,220.4	5,283.9	5,190.0	18.6	17.9	-97.09	729.3	173.1	372.7	349.2	23.59	15.800	
5,400.0	5,317.7	5,385.6	5,289.2	19.0	18.4	-97.45	751.0	178.5	383.7	359.7	23.98	15.998	
5,500.0	5,415.0	5,487.4	5,388.9	19.5	18.9	-98.04	771.0	183.5	394.1	369.7	24.36	16.179	
5,600.0	5,512.3	5,589.1	5,488.9	20.0	19.3	-98.85	789.3	188.0	403.9	379.2	24.71	16.345	
5,700.0	5,609.6	5,690.8	5,589.1	20.4	19.8	-99.85	805.9	192.1	413.3	388.2	25.06	16.494	
5,800.0	5,706.9	5,792.2	5,689.4	20.9	20.2	-101.03	820.7	195.8	422.2	396.8	25.39	16.628	
5,900.0	5,804.2	5,893.5	5,789.8	21.3	20.6	-102.40	833.7	199.1	430.9	405.1	25.73	16.742	
6,000.0	5,901.5	5,994.4	5,890.0	21.8	21.0	-103.92	845.0	201.9	439.3	413.2	26.09	16.835	
6,100.0	5,998.8	6,095.1	5,990.2	22.3	21.4	-105.61	854.6	204.3	447.6	421.1	26.48	16.904	
6,200.0	6,096.1	6,195.3	6,090.1	22.7	21.8	-107.44	862.4	206.2	456.0	429.1	26.91	16.944	
6,300.0	6,193.4	6,295.0	6,189.6	23.2	22.1	-109.41	868.5	207.7	464.6	437.2	27.40	16.953	
6,400.0	6,290.7	6,394.2	6,288.7	23.7	22.5	-111.50	872.9	208.8	473.4	445.5	27.97	16.928	
6,500.0	6,388.0	6,492.9	6,387.3	24.1	22.8	-113.69	875.6	209.5	482.8	454.2	28.62	16.870	
6,600.0	6,485.3	6,590.9	6,485.3	24.6	22.9	-115.99	876.6	209.7	492.8	463.4	29.37	16.778	
6,700.0	6,582.6	6,688.2	6,582.6	25.1	23.0	-118.30	876.7	209.7	503.5	473.3	30.20	16.670	
6,799.1	6,679.0	6,784.6	6,679.0	25.5	23.0	-120.49	876.7	209.7	514.9	483.9	31.09	16.562	
6,800.0	6,679.9	6,785.5	6,679.9	25.5	23.0	-120.51	876.7	209.7	515.1	484.0	31.10	16.561	
6,900.0	6,777.5	6,883.0	6,777.5	26.0	23.1	-122.65	876.7	209.7	526.9	494.9	32.02	16.454	
7,000.0	6,875.3	6,980.9	6,875.3	26.5	23.1	-124.56	876.7	209.7	538.4	505.5	32.93	16.352	
7,100.0	6,973.6	7,079.1	6,973.6	26.9	23.2	-126.24	876.7	209.7	549.4	515.6	33.80	16.255	
7,200.0	7,072.1	7,177.7	7,072.1	27.4	23.2	-127.72	876.7	209.7	559.8	525.1	34.63	16.163	
7,300.0	7,170.9	7,276.5	7,170.9	27.8	23.3	-129.01	876.7	209.7	569.4	533.9	35.42	16.073	
7,400.0	7,270.0	7,375.5	7,270.0	28.2	23.3	-130.12	876.7	209.7	578.1	541.9	36.17	15.984	
7,500.0	7,369.3	7,474.8	7,369.3	28.6	23.4	-131.06	876.7	209.7	585.8	549.0	36.86	15.895	
7,600.0	7,468.8	7,574.3	7,468.8	29.0	23.4	-131.85	876.7	209.7	592.6	555.1	37.49	15.804	
7,700.0	7,568.4	7,674.0	7,568.4	29.4	23.5	-132.49	876.7	209.7	598.2	560.1	38.08	15.711	
7,800.0	7,668.2	7,773.7	7,668.2	29.8	23.6	-132.99	876.7	209.7	602.7	564.1	38.60	15.615	
7,900.0	7,768.1	7,873.6	7,768.1	30.1	23.6	-133.35	876.7	209.7	606.1	567.0	39.06	15.517	
8,000.0	7,868.0	7,973.6	7,868.0	30.4	23.7	-133.58	876.7	209.7	608.3	568.8	39.45	15.419	
8,100.0	7,968.0	8,073.6	7,968.0	30.7	23.7	-133.69	876.7	209.7	609.3	569.5	39.75	15.326	
8,132.0	8,000.0	8,105.6	8,000.0	30.7	23.7	-90.98	876.7	209.7	609.3	569.5	39.80	15.309	
8,200.0	8,068.0	8,173.6	8,068.0	30.7	23.8	-90.98	876.7	209.7	609.3	569.5	39.87	15.284	
8,300.0	8,168.0	8,273.6	8,168.0	30.7	23.8	-90.98	876.7	209.7	609.3	569.4	39.98	15.242	
8,400.0	8,268.0	8,373.6	8,268.0	30.8	23.9	-90.98	876.7	209.7	609.3	569.3	40.09	15.200	
8,500.0	8,368.0	8,473.6	8,368.0	30.8	23.9	-90.98	876.7	209.7	609.3	569.1	40.20	15.158	
8,600.0	8,468.0	8,573.6	8,468.0	30.9	24.0	-90.98	876.7	209.7	609.3	569.0	40.31	15.116	
8,700.0	8,568.0	8,673.6	8,568.0	30.9	24.0	-90.98	876.7	209.7	609.3	568.9	40.42	15.074	
8,800.0	8,668.0	8,773.6	8,668.0	30.9	24.1	-90.98	876.7	209.7	609.3	568.8	40.54	15.032	
8,900.0	8,768.0	8,873.6	8,768.0	31.0	24.1	-90.98	876.7	209.7	609.3	568.7	40.65	14.991	
9,000.0	8,868.0	8,973.6	8,868.0	31.0	24.2	-90.98	876.7	209.7	609.3	568.6	40.76	14.949	
9,100.0	8,968.0	9,073.6	8,968.0	31.1	24.2	-90.98	876.7	209.7	609.3	568.5	40.87	14.908	
9,200.0	9,068.0	9,173.6	9,068.0	31.1	24.3	-90.98	876.7	209.7	609.3	568.4	40.99	14.866	
9,300.0	9,168.0	9,273.6	9,168.0	31.1	24.3	-90.98	876.7	209.7	609.3	568.2	41.10	14.825	
9,400.0	9,268.0	9,373.6	9,268.0	31.2	24.4	-90.98	876.7	209.7	609.3	568.1	41.22	14.784	
9,500.0	9,368.0	9,473.6	9,368.0	31.2	24.5	-90.98	876.7	209.7	609.3	568.0	41.33	14.743	
9,600.0	9,468.0	9,573.6	9,468.0	31.2	24.5	-90.98	876.7	209.7	609.3	567.9	41.45	14.702	
9,700.0	9,568.0	9,673.6	9,568.0	31.3	24.6	-90.98	876.7	209.7	609.3	567.8	41.56	14.662	
9,800.0	9,668.0	9,773.6	9,668.0	31.3	24.6	-90.98	876.7	209.7	609.3	567.7	41.68	14.621	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 711H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,900.0	9,768.0	9,873.6	9,768.0	31.4	24.7	-90.98	876.7	209.7	609.3	567.5	41.79	14.581	
10,000.0	9,868.0	9,973.6	9,868.0	31.4	24.7	-90.98	876.7	209.7	609.3	567.4	41.91	14.540	
10,100.0	9,968.0	10,073.6	9,968.0	31.5	24.8	-90.98	876.7	209.7	609.3	567.3	42.02	14.500	
10,200.0	10,068.0	10,173.6	10,068.0	31.5	24.8	-90.98	876.7	209.7	609.3	567.2	42.14	14.460	
10,300.0	10,168.0	10,273.6	10,168.0	31.5	24.9	-90.98	876.7	209.7	609.3	567.1	42.26	14.420	
10,400.0	10,268.0	10,373.6	10,268.0	31.6	25.0	-90.98	876.7	209.7	609.3	567.0	42.37	14.380	
10,500.0	10,368.0	10,473.6	10,368.0	31.6	25.0	-90.98	876.7	209.7	609.3	566.8	42.49	14.340	
10,600.0	10,468.0	10,573.6	10,468.0	31.7	25.1	-90.98	876.7	209.7	609.3	566.7	42.61	14.301	
10,700.0	10,568.0	10,673.6	10,568.0	31.7	25.1	-90.98	876.7	209.7	609.3	566.6	42.73	14.261	
10,800.0	10,668.0	10,773.6	10,668.0	31.7	25.2	-90.98	876.7	209.7	609.3	566.5	42.85	14.222	
10,900.0	10,768.0	10,873.6	10,768.0	31.8	25.2	-90.98	876.7	209.7	609.3	566.4	42.96	14.182	
11,000.0	10,868.0	10,973.6	10,868.0	31.8	25.3	-90.98	876.7	209.7	609.3	566.3	43.08	14.143	
11,100.0	10,968.0	11,073.6	10,968.0	31.9	25.3	-90.98	876.7	209.7	609.3	566.1	43.20	14.104	
11,200.0	11,068.0	11,173.6	11,068.0	31.9	25.4	-90.98	876.7	209.7	609.3	566.0	43.32	14.065	
11,300.0	11,168.0	11,273.6	11,168.0	32.0	25.5	-90.98	876.7	209.7	609.3	565.9	43.44	14.027	
11,400.0	11,268.0	11,373.6	11,268.0	32.0	25.5	-90.98	876.7	209.7	609.3	565.8	43.56	13.988	
11,413.8	11,281.8	11,387.3	11,281.8	32.0	25.5	-90.98	876.7	209.7	609.3	565.8	43.58	13.983	
11,500.0	11,368.0	11,473.4	11,367.9	32.0	25.6	-90.99	876.6	209.8	609.3	565.7	43.67	13.954	
11,600.0	11,468.0	11,570.1	11,463.7	32.1	25.3	-92.05	865.3	209.8	609.6	565.6	44.04	13.842	
11,700.0	11,568.0	11,658.9	11,548.1	32.1	24.9	-94.61	838.0	209.9	611.4	566.5	44.82	13.639	
11,720.5	11,588.5	11,675.0	11,562.8	32.1	24.9	-95.22	831.5	210.0	612.1	567.1	44.99	13.606	
11,725.0	11,593.0	11,679.3	11,566.7	32.1	24.8	72.44	829.6	210.0	612.3	567.3	45.04	13.595	
11,750.0	11,618.0	11,700.0	11,585.1	32.1	24.8	71.52	820.3	210.0	613.2	568.0	45.23	13.560	
11,775.0	11,642.9	11,718.9	11,601.6	32.0	24.7	70.70	811.0	210.0	614.1	568.7	45.34	13.544	
11,800.0	11,667.6	11,738.3	11,618.1	31.9	24.6	69.90	800.9	210.1	614.7	569.3	45.43	13.531	
11,825.0	11,692.2	11,757.4	11,634.0	31.8	24.5	69.14	790.2	210.1	615.2	569.8	45.49	13.525	
11,850.0	11,716.4	11,775.0	11,648.2	31.7	24.5	68.47	779.9	210.2	615.6	570.1	45.49	13.534	
11,875.0	11,740.3	11,794.9	11,663.9	31.6	24.4	67.75	767.5	210.2	615.8	570.3	45.51	13.530	
11,900.0	11,763.8	11,813.4	11,677.9	31.5	24.3	67.12	755.5	210.3	615.8	570.3	45.48	13.540	
11,925.0	11,786.8	11,831.7	11,691.3	31.4	24.3	66.54	743.1	210.4	615.6	570.2	45.42	13.554	
11,950.0	11,809.3	11,850.0	11,704.2	31.3	24.2	65.99	730.1	210.4	615.2	569.9	45.34	13.569	
11,975.0	11,831.1	11,867.7	11,716.2	31.2	24.2	65.50	717.1	210.5	614.7	569.4	45.23	13.591	
12,000.0	11,852.3	11,885.4	11,727.8	31.1	24.1	65.05	703.7	210.5	613.9	568.8	45.10	13.612	
12,025.0	11,872.8	11,900.0	11,736.9	31.0	24.1	64.73	692.3	210.6	612.9	568.0	44.88	13.656	
12,050.0	11,892.5	11,920.5	11,749.2	31.0	24.0	64.28	675.8	210.7	611.6	566.8	44.79	13.656	
12,075.0	11,911.3	11,937.9	11,759.0	30.9	24.0	63.97	661.5	210.7	610.2	565.5	44.61	13.677	
12,100.0	11,929.3	11,955.1	11,768.2	30.8	23.9	63.70	646.9	210.8	608.5	564.0	44.42	13.698	
12,125.0	11,946.3	11,975.0	11,778.1	30.7	23.9	63.40	629.7	210.9	606.5	562.3	44.28	13.697	
12,150.0	11,962.4	11,989.3	11,784.9	30.6	23.8	63.29	617.1	210.9	604.4	560.4	44.01	13.731	
12,175.0	11,977.4	12,006.3	11,792.3	30.5	23.8	63.15	601.8	211.0	602.0	558.2	43.80	13.744	
12,200.0	11,991.4	12,025.0	11,799.9	30.5	23.8	63.02	584.7	211.1	599.3	555.7	43.62	13.739	
12,225.0	12,004.2	12,040.0	11,805.5	30.4	23.7	63.02	570.8	211.1	596.4	553.1	43.36	13.755	
12,250.0	12,015.9	12,056.7	11,811.3	30.3	23.7	63.02	555.1	211.2	593.3	550.2	43.14	13.754	
12,275.0	12,026.5	12,075.0	11,816.9	30.3	23.7	63.04	537.7	211.3	590.0	547.0	42.95	13.736	
12,300.0	12,035.8	12,090.1	11,821.1	30.2	23.7	63.17	523.3	211.4	586.4	543.7	42.69	13.734	
12,325.0	12,044.0	12,106.7	11,825.1	30.2	23.6	63.32	507.2	211.4	582.5	540.1	42.47	13.715	
12,350.0	12,050.8	12,125.0	11,828.9	30.1	23.6	63.49	489.2	211.5	578.5	536.2	42.29	13.678	
12,375.0	12,056.4	12,139.8	11,831.5	30.1	23.6	63.75	474.7	211.6	574.2	532.2	42.04	13.657	
12,400.0	12,060.8	12,156.3	11,833.8	30.1	23.6	64.05	458.3	211.6	569.7	527.9	41.83	13.618	
12,425.0	12,063.8	12,175.0	11,835.7	30.1	23.6	64.37	439.7	211.7	565.0	523.3	41.67	13.558	
12,450.0	12,065.5	12,189.3	11,836.7	30.1	23.6	64.78	425.5	211.8	560.1	518.7	41.43	13.520	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 711H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,470.5	12,066.0	12,202.8	11,837.3	30.1	23.6	65.14	411.9	211.9	555.9	514.7	41.26	13.473	
12,500.0	12,066.0	12,225.6	11,837.5	30.1	23.6	64.99	389.2	212.0	550.2	509.1	41.10	13.386	
12,600.0	12,066.0	12,323.8	11,837.5	30.1	23.6	64.29	291.0	212.4	533.2	492.1	41.05	12.989	
12,700.0	12,066.0	12,422.6	11,837.5	30.1	23.6	63.69	192.2	212.9	519.4	478.3	41.06	12.649	
12,800.0	12,066.0	12,521.9	11,837.5	30.2	23.7	63.19	92.9	213.3	508.7	467.6	41.13	12.367	
12,900.0	12,066.0	12,621.5	11,837.5	30.2	23.7	62.83	-6.8	213.8	501.2	460.0	41.27	12.146	
13,000.0	12,066.0	12,721.4	11,837.5	30.3	23.7	62.61	-106.6	214.2	496.8	455.4	41.45	11.985	
13,091.0	12,066.0	12,812.4	11,837.5	30.4	23.8	62.54	-197.6	214.6	495.6	453.9	41.66	11.894	
13,100.0	12,066.0	12,821.4	11,837.5	30.4	23.8	62.54	-206.6	214.7	495.6	453.9	41.69	11.888	
13,200.0	12,066.0	12,921.4	11,837.5	30.5	23.9	62.54	-306.6	215.1	495.6	453.6	41.97	11.807	
13,300.0	12,066.0	13,021.4	11,837.5	30.5	24.0	62.54	-406.6	215.6	495.6	453.2	42.32	11.710	
13,400.0	12,066.0	13,121.4	11,837.5	30.7	24.1	62.54	-506.6	216.0	495.6	452.8	42.73	11.597	
13,500.0	12,066.0	13,221.4	11,837.5	30.8	24.2	62.54	-606.6	216.5	495.6	452.4	43.21	11.469	
13,600.0	12,066.0	13,321.4	11,837.5	30.9	24.4	62.54	-706.6	216.9	495.6	451.8	43.74	11.329	
13,700.0	12,066.0	13,421.4	11,837.5	31.0	24.6	62.54	-806.6	217.4	495.6	451.2	44.34	11.177	
13,800.0	12,066.0	13,521.4	11,837.5	31.2	24.9	62.54	-906.6	217.8	495.6	450.6	44.99	11.016	
13,900.0	12,066.0	13,621.4	11,837.5	31.3	25.2	62.54	-1,006.6	218.3	495.6	449.9	45.69	10.847	
14,000.0	12,066.0	13,721.4	11,837.5	31.5	25.6	62.54	-1,106.6	218.8	495.6	449.1	46.44	10.671	
14,100.0	12,066.0	13,821.4	11,837.5	31.7	26.1	62.54	-1,206.6	219.2	495.6	448.3	47.24	10.490	
14,200.0	12,066.0	13,921.4	11,837.5	31.9	26.6	62.54	-1,306.6	219.7	495.6	447.5	48.09	10.305	
14,300.0	12,066.0	14,021.4	11,837.5	32.1	27.2	62.54	-1,406.6	220.1	495.6	446.6	48.98	10.118	
14,400.0	12,066.0	14,121.4	11,837.5	32.3	27.8	62.54	-1,506.6	220.6	495.6	445.7	49.91	9.929	
14,500.0	12,066.0	14,221.4	11,837.5	32.5	28.5	62.54	-1,606.6	221.0	495.6	444.7	50.88	9.740	
14,600.0	12,066.0	14,321.4	11,837.5	32.8	29.1	62.54	-1,706.6	221.5	495.6	443.7	51.88	9.551	
14,700.0	12,066.0	14,421.4	11,837.5	33.1	29.9	62.54	-1,806.6	221.9	495.6	442.6	52.92	9.364	
14,800.0	12,066.0	14,521.4	11,837.5	33.3	30.6	62.54	-1,906.6	222.4	495.6	441.6	54.00	9.177	
14,900.0	12,066.0	14,621.4	11,837.5	33.6	31.3	62.54	-2,006.6	222.8	495.6	440.5	55.10	8.994	
15,000.0	12,066.0	14,721.4	11,837.5	33.9	32.1	62.54	-2,106.6	223.3	495.6	439.3	56.23	8.812	
15,100.0	12,066.0	14,821.4	11,837.5	34.2	32.9	62.54	-2,206.6	223.7	495.6	438.2	57.39	8.634	
15,200.0	12,066.0	14,921.4	11,837.5	34.5	33.7	62.54	-2,306.6	224.2	495.6	437.0	58.58	8.460	
15,300.0	12,066.0	15,021.4	11,837.5	34.9	34.5	62.54	-2,406.6	224.6	495.6	435.8	59.79	8.289	
15,400.0	12,066.0	15,121.4	11,837.5	35.2	35.3	62.54	-2,506.6	225.1	495.6	434.5	61.02	8.121	
15,500.0	12,066.0	15,221.4	11,837.5	35.6	36.1	62.54	-2,606.6	225.6	495.6	433.3	62.27	7.958	
15,600.0	12,066.0	15,321.4	11,837.5	36.0	37.0	62.54	-2,706.6	226.0	495.6	432.0	63.54	7.799	
15,700.0	12,066.0	15,421.4	11,837.5	36.4	37.8	62.54	-2,806.6	226.5	495.6	430.7	64.83	7.644	
15,800.0	12,066.0	15,521.4	11,837.5	36.8	38.7	62.54	-2,906.6	226.9	495.6	429.4	66.14	7.492	
15,900.0	12,066.0	15,621.4	11,837.5	37.2	39.5	62.54	-3,006.6	227.4	495.6	428.1	67.47	7.345	
16,000.0	12,066.0	15,721.4	11,837.5	37.6	40.4	62.54	-3,106.6	227.8	495.6	426.8	68.81	7.202	
16,100.0	12,066.0	15,821.4	11,837.5	38.1	41.2	62.54	-3,206.6	228.3	495.6	425.4	70.16	7.063	
16,200.0	12,066.0	15,921.4	11,837.5	38.5	42.1	62.54	-3,306.6	228.7	495.6	424.0	71.53	6.928	
16,300.0	12,066.0	16,021.4	11,837.5	39.0	43.0	62.54	-3,406.6	229.2	495.6	422.6	72.91	6.796	
16,400.0	12,066.0	16,121.4	11,837.5	39.5	43.8	62.54	-3,506.6	229.6	495.6	421.3	74.31	6.669	
16,500.0	12,066.0	16,221.4	11,837.5	39.9	44.7	62.54	-3,606.6	230.1	495.6	419.8	75.71	6.545	
16,600.0	12,066.0	16,321.4	11,837.5	40.4	45.6	62.54	-3,706.6	230.5	495.6	418.4	77.13	6.425	
16,700.0	12,066.0	16,421.4	11,837.5	41.0	46.5	62.54	-3,806.6	231.0	495.6	417.0	78.56	6.308	
16,800.0	12,066.0	16,521.4	11,837.5	41.5	47.4	62.54	-3,906.6	231.5	495.6	415.6	80.00	6.195	
16,900.0	12,066.0	16,621.4	11,837.5	42.0	48.3	62.54	-4,006.6	231.9	495.6	414.1	81.44	6.085	
17,000.0	12,066.0	16,721.4	11,837.5	42.5	49.2	62.54	-4,106.6	232.4	495.6	412.7	82.90	5.978	
17,100.0	12,066.0	16,821.4	11,837.5	43.1	50.1	62.54	-4,206.6	232.8	495.6	411.2	84.36	5.874	
17,200.0	12,066.0	16,921.4	11,837.5	43.6	51.0	62.54	-4,306.6	233.3	495.6	409.7	85.83	5.773	
17,300.0	12,066.0	17,021.4	11,837.5	44.2	51.9	62.55	-4,406.6	233.7	495.6	408.2	87.31	5.676	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 711H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor
17,400.0	12,066.0	17,121.4	11,837.5	44.8	52.8	62.55	-4,506.6	234.2	495.6	406.8	88.80	5.581
17,500.0	12,066.0	17,221.4	11,837.5	45.3	53.7	62.55	-4,606.6	234.6	495.6	405.3	90.29	5.488
17,600.0	12,066.0	17,321.4	11,837.5	45.9	54.6	62.55	-4,706.6	235.1	495.6	403.8	91.79	5.399
17,700.0	12,066.0	17,421.4	11,837.5	46.5	55.5	62.55	-4,806.6	235.5	495.6	402.3	93.30	5.312
17,800.0	12,066.0	17,521.4	11,837.5	47.1	56.4	62.55	-4,906.6	236.0	495.6	400.7	94.81	5.227
17,900.0	12,066.0	17,621.4	11,837.5	47.7	57.3	62.55	-5,006.6	236.4	495.6	399.2	96.33	5.145
18,000.0	12,066.0	17,721.4	11,837.5	48.3	58.3	62.55	-5,106.6	236.9	495.6	397.7	97.85	5.064
18,100.0	12,066.0	17,821.4	11,837.5	48.9	59.2	62.55	-5,206.6	237.4	495.6	396.2	99.38	4.987
18,200.0	12,066.0	17,921.4	11,837.5	49.5	60.1	62.55	-5,306.6	237.8	495.6	394.6	100.91	4.911
18,300.0	12,066.0	18,021.4	11,837.5	50.1	61.0	62.55	-5,406.6	238.3	495.6	393.1	102.45	4.837
18,400.0	12,066.0	18,121.4	11,837.5	50.8	61.9	62.55	-5,506.6	238.7	495.6	391.6	103.99	4.766
18,500.0	12,066.0	18,221.4	11,837.5	51.4	62.9	62.55	-5,606.6	239.2	495.6	390.0	105.53	4.696
18,600.0	12,066.0	18,321.4	11,837.5	52.0	63.8	62.55	-5,706.6	239.6	495.6	388.5	107.08	4.628
18,700.0	12,066.0	18,421.4	11,837.5	52.7	64.7	62.55	-5,806.6	240.1	495.6	386.9	108.64	4.562
18,800.0	12,066.0	18,521.4	11,837.5	53.3	65.6	62.55	-5,906.6	240.5	495.6	385.4	110.19	4.497
18,900.0	12,066.0	18,621.4	11,837.5	54.0	66.6	62.55	-6,006.6	241.0	495.6	383.8	111.75	4.434
19,000.0	12,066.0	18,721.4	11,837.5	54.6	67.5	62.55	-6,106.6	241.4	495.6	382.2	113.32	4.373
19,100.0	12,066.0	18,821.4	11,837.5	55.3	68.4	62.55	-6,206.5	241.9	495.6	380.7	114.89	4.313
19,200.0	12,066.0	18,921.4	11,837.5	55.9	69.4	62.55	-6,306.5	242.3	495.6	379.1	116.46	4.255
19,300.0	12,066.0	19,021.4	11,837.5	56.6	70.3	62.55	-6,406.5	242.8	495.6	377.5	118.03	4.198
19,400.0	12,066.0	19,121.4	11,837.5	57.3	71.2	62.55	-6,506.5	243.3	495.6	375.9	119.61	4.143
19,500.0	12,066.0	19,221.4	11,837.5	57.9	72.2	62.55	-6,606.5	243.7	495.6	374.4	121.19	4.089
19,600.0	12,066.0	19,321.4	11,837.5	58.6	73.1	62.55	-6,706.5	244.2	495.6	372.8	122.77	4.036
19,700.0	12,066.0	19,421.4	11,837.5	59.3	74.0	62.55	-6,806.5	244.6	495.6	371.2	124.35	3.985
19,765.0	12,066.0	19,486.4	11,837.5	59.7	74.6	62.55	-6,871.5	244.9	495.6	370.2	125.38	3.952

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 802H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 3.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)		
0.0	0.0	2.0	0.0	3.0	3.0	-54.31	70.0	-97.4	120.0				
100.0	100.0	102.0	100.0	3.1	3.1	-54.31	70.0	-97.4	120.0	113.4	6.60	18.165	
200.0	200.0	202.0	200.0	3.3	3.3	-54.31	70.0	-97.4	120.0	112.9	7.06	17.000	
300.0	300.0	302.0	300.0	3.5	3.6	-54.31	70.0	-97.4	120.0	112.5	7.48	16.031	
400.0	400.0	402.0	400.0	3.8	3.8	-54.31	70.0	-97.4	120.0	112.1	7.89	15.207	
500.0	500.0	502.0	500.0	4.0	4.0	-54.31	70.0	-97.4	120.0	111.7	8.28	14.495	
600.0	600.0	602.0	600.0	4.1	4.1	-54.31	70.0	-97.4	120.0	111.3	8.65	13.871	
700.0	700.0	702.0	700.0	4.3	4.3	-54.31	70.0	-97.4	120.0	111.0	9.01	13.318	
800.0	800.0	802.0	800.0	4.5	4.5	-54.31	70.0	-97.4	120.0	110.6	9.35	12.823	
900.0	900.0	902.0	900.0	4.7	4.7	-54.31	70.0	-97.4	120.0	110.3	9.69	12.377	
1,000.0	1,000.0	1,002.0	1,000.0	4.8	4.8	-54.31	70.0	-97.4	120.0	109.9	10.02	11.972	
1,100.0	1,100.0	1,102.0	1,100.0	5.0	5.0	-54.31	70.0	-97.4	120.0	109.6	10.34	11.601	
1,200.0	1,200.0	1,202.0	1,200.0	5.2	5.2	-54.31	70.0	-97.4	120.0	109.3	10.65	11.261	
1,300.0	1,300.0	1,302.0	1,300.0	5.3	5.3	-54.31	70.0	-97.4	120.0	109.0	10.96	10.948	
1,400.0	1,400.0	1,402.0	1,400.0	5.5	5.5	-54.31	70.0	-97.4	120.0	108.7	11.26	10.657	
1,500.0	1,500.0	1,502.0	1,500.0	5.6	5.6	-54.31	70.0	-97.4	120.0	108.4	11.55	10.386	
1,600.0	1,600.0	1,602.0	1,600.0	5.8	5.8	-54.31	70.0	-97.4	120.0	108.1	11.84	10.133	
1,700.0	1,700.0	1,702.0	1,700.0	5.9	5.9	-54.31	70.0	-97.4	120.0	107.8	12.12	9.896	
1,800.0	1,800.0	1,802.0	1,800.0	6.0	6.0	-54.31	70.0	-97.4	120.0	107.6	12.40	9.674	
1,900.0	1,900.0	1,902.0	1,900.0	6.2	6.2	-54.31	70.0	-97.4	120.0	107.3	12.67	9.464 CC	
1,901.3	1,901.3	1,903.3	1,901.3	6.2	6.2	-97.03	70.0	-97.4	120.0	107.3	12.68	9.462	
2,000.0	2,000.0	2,000.0	1,998.0	6.4	6.3	-97.81	70.0	-97.4	120.2	107.3	12.94	9.289 ES	
2,100.0	2,099.8	2,097.7	2,095.7	6.6	6.5	-100.13	70.9	-98.8	122.7	109.5	13.27	9.251 SF	
2,200.0	2,199.5	2,192.9	2,190.8	6.9	6.7	-103.58	73.6	-102.8	129.6	116.0	13.59	9.540	
2,300.0	2,298.7	2,287.2	2,284.8	7.1	6.9	-107.66	78.0	-109.4	141.3	127.4	13.92	10.153	
2,400.0	2,397.5	2,380.3	2,377.2	7.4	7.2	-111.84	84.0	-118.4	158.1	143.8	14.26	11.089	
2,500.0	2,495.6	2,471.8	2,467.6	7.7	7.4	-115.70	91.5	-129.7	180.2	165.6	14.62	12.331	
2,566.5	2,560.5	2,531.5	2,526.5	7.8	7.6	-117.98	97.3	-138.3	197.9	183.1	14.83	13.342	
2,600.0	2,593.1	2,561.4	2,555.8	7.9	7.7	-119.16	100.4	-143.0	207.6	192.7	14.93	13.900	
2,700.0	2,690.4	2,649.5	2,641.9	8.2	7.9	-121.94	110.6	-158.4	238.7	223.4	15.30	15.601	
2,800.0	2,787.7	2,736.2	2,726.1	8.5	8.2	-123.80	122.2	-175.7	272.9	257.2	15.64	17.442	
2,900.0	2,885.0	2,827.3	2,814.1	8.8	8.4	-125.16	135.3	-195.5	309.0	293.0	16.02	19.287	
3,000.0	2,982.3	2,920.3	2,903.8	9.1	8.7	-126.25	148.8	-215.7	345.4	328.9	16.48	20.961	
3,100.0	3,079.6	3,013.3	2,993.6	9.4	8.9	-127.14	162.3	-235.9	381.8	364.9	16.95	22.523	
3,200.0	3,176.9	3,106.3	3,083.3	9.8	9.2	-127.87	175.8	-256.1	418.3	400.9	17.45	23.977	
3,300.0	3,274.2	3,199.2	3,173.1	10.1	9.6	-128.48	189.3	-276.4	454.9	436.9	17.96	25.329	
3,400.0	3,371.5	3,292.2	3,262.8	10.5	9.9	-129.00	202.7	-296.6	491.5	473.0	18.49	26.584	
3,500.0	3,468.9	3,385.2	3,352.6	10.9	10.2	-129.45	216.2	-316.8	528.1	509.1	19.03	27.749	
3,600.0	3,566.2	3,478.2	3,442.3	11.3	10.6	-129.84	229.7	-337.0	564.8	545.2	19.59	28.831	
3,700.0	3,663.5	3,571.1	3,532.1	11.7	10.9	-130.19	243.2	-357.2	601.4	581.3	20.16	29.834	
3,800.0	3,760.8	3,664.1	3,621.8	12.1	11.3	-130.49	256.7	-377.5	638.1	617.4	20.74	30.767	
3,900.0	3,858.1	3,757.1	3,711.5	12.5	11.7	-130.76	270.1	-397.7	674.8	653.5	21.33	31.633	
4,000.0	3,955.4	3,850.1	3,801.3	12.9	12.0	-131.00	283.6	-417.9	711.5	689.6	21.93	32.439	
4,100.0	4,052.7	3,943.1	3,891.0	13.3	12.4	-131.22	297.1	-438.1	748.2	725.7	22.55	33.189	
4,200.0	4,150.0	4,036.0	3,980.8	13.7	12.8	-131.42	310.6	-458.4	785.0	761.8	23.16	33.887	
4,300.0	4,247.3	4,129.0	4,070.5	14.2	13.2	-131.60	324.1	-478.6	821.7	797.9	23.79	34.538	
4,400.0	4,344.6	4,222.0	4,160.3	14.6	13.6	-131.77	337.6	-498.8	858.4	834.0	24.43	35.146	
4,500.0	4,441.9	4,315.0	4,250.0	15.0	14.0	-131.92	351.0	-519.0	895.2	870.1	25.07	35.714	
4,600.0	4,539.2	4,407.9	4,339.8	15.5	14.4	-132.06	364.5	-539.2	932.0	906.2	25.71	36.246	
4,700.0	4,636.5	4,500.9	4,429.5	15.9	14.8	-132.19	378.0	-559.5	968.7	942.3	26.36	36.743	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 803H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		No-Go	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Factor	
0.0	0.0	0.0	0.4	3.0	3.0	125.97	-11.7	16.2	20.0				
100.0	100.0	99.6	100.0	3.1	3.1	125.97	-11.7	16.2	20.0	13.4	6.60	3.031	
200.0	200.0	199.6	200.0	3.3	3.3	125.97	-11.7	16.2	20.0	13.0	7.05	2.837	Normal Operations
300.0	300.0	299.6	300.0	3.5	3.5	125.97	-11.7	16.2	20.0	12.5	7.48	2.675	Normal Operations
400.0	400.0	399.6	400.0	3.8	3.8	125.97	-11.7	16.2	20.0	12.1	7.88	2.538	Normal Operations
500.0	500.0	499.6	500.0	4.0	3.9	125.97	-11.7	16.2	20.0	11.7	8.27	2.419	Caution - Monitor Closely
600.0	600.0	599.6	600.0	4.1	4.1	125.97	-11.7	16.2	20.0	11.4	8.64	2.314	Caution - Monitor Closely
700.0	700.0	699.6	700.0	4.3	4.3	125.97	-11.7	16.2	20.0	11.0	9.00	2.222	Caution - Monitor Closely
800.0	800.0	799.6	800.0	4.5	4.5	125.97	-11.7	16.2	20.0	10.7	9.35	2.139	Caution - Monitor Closely
900.0	900.0	899.6	900.0	4.7	4.7	125.97	-11.7	16.2	20.0	10.3	9.69	2.065	Caution - Monitor Closely
1,000.0	1,000.0	999.6	1,000.0	4.8	4.8	125.97	-11.7	16.2	20.0	10.0	10.02	1.997	Caution - Monitor Closely
1,100.0	1,100.0	1,099.6	1,100.0	5.0	5.0	125.97	-11.7	16.2	20.0	9.7	10.34	1.935	Caution - Monitor Closely
1,200.0	1,200.0	1,199.6	1,200.0	5.2	5.2	125.97	-11.7	16.2	20.0	9.4	10.65	1.879	Caution - Monitor Closely
1,300.0	1,300.0	1,299.6	1,300.0	5.3	5.3	125.97	-11.7	16.2	20.0	9.1	10.95	1.826	Caution - Monitor Closely
1,400.0	1,400.0	1,399.6	1,400.0	5.5	5.5	125.97	-11.7	16.2	20.0	8.8	11.25	1.778	Caution - Monitor Closely
1,500.0	1,500.0	1,499.6	1,500.0	5.6	5.6	125.97	-11.7	16.2	20.0	8.5	11.55	1.732	Caution - Monitor Closely
1,600.0	1,600.0	1,599.6	1,600.0	5.8	5.8	125.97	-11.7	16.2	20.0	8.2	11.83	1.690	Caution - Monitor Closely
1,700.0	1,700.0	1,699.6	1,700.0	5.9	5.9	125.97	-11.7	16.2	20.0	7.9	12.12	1.651	Caution - Monitor Closely
1,800.0	1,800.0	1,799.6	1,800.0	6.0	6.0	125.97	-11.7	16.2	20.0	7.6	12.40	1.614	Caution - Monitor Closely
1,900.0	1,900.0	1,899.6	1,900.0	6.2	6.2	125.97	-11.7	16.2	20.0	7.3	12.67	1.579	Caution - Monitor Closely
2,000.0	2,000.0	1,999.6	2,000.0	6.4	6.3	88.26	-11.7	16.2	19.9	6.9	12.94	1.536	Caution - Monitor Closely
2,016.0	2,016.0	2,015.6	2,016.0	6.4	6.3	90.00	-11.7	16.2	19.9	6.9	12.98	1.530	Caution - Monitor Closely, CC, ES, SF
2,100.0	2,099.8	2,099.4	2,099.8	6.6	6.5	103.09	-11.7	16.2	20.4	7.2	13.21	1.544	Caution - Monitor Closely
2,200.0	2,199.5	2,199.1	2,199.5	6.9	6.6	123.74	-11.7	16.2	23.9	10.4	13.55	1.767	Caution - Monitor Closely
2,300.0	2,298.7	2,298.3	2,298.7	7.1	6.7	141.84	-11.7	16.2	32.3	18.4	13.97	2.316	Caution - Monitor Closely
2,400.0	2,397.5	2,397.1	2,397.5	7.4	6.8	153.90	-11.7	16.2	45.7	31.3	14.42	3.170	
2,500.0	2,495.6	2,495.2	2,495.6	7.7	7.0	161.37	-11.7	16.2	63.4	48.6	14.88	4.265	
2,566.5	2,560.5	2,560.1	2,560.5	7.8	7.1	164.74	-11.7	16.2	77.4	62.3	15.13	5.118	
2,600.0	2,593.1	2,592.7	2,593.1	7.9	7.1	166.11	-11.7	16.2	84.9	69.7	15.24	5.571	
2,700.0	2,690.4	2,690.0	2,690.4	8.2	7.2	169.06	-11.7	16.2	107.5	91.8	15.65	6.866	
2,800.0	2,787.7	2,787.3	2,787.7	8.5	7.3	170.98	-11.7	16.2	130.2	114.1	16.07	8.099	
2,900.0	2,885.0	2,884.6	2,885.0	8.8	7.5	172.34	-11.7	16.2	153.0	136.5	16.51	9.266	
3,000.0	2,982.3	2,981.9	2,982.3	9.1	7.6	173.34	-11.7	16.2	175.9	158.9	16.97	10.366	
3,100.0	3,079.6	3,079.2	3,079.6	9.4	7.7	174.11	-11.7	16.2	198.8	181.4	17.44	11.402	
3,200.0	3,176.9	3,176.5	3,176.9	9.8	7.8	174.72	-11.7	16.2	221.8	203.9	17.92	12.375	
3,300.0	3,274.2	3,273.8	3,274.2	10.1	7.9	175.22	-11.7	16.2	244.7	226.3	18.42	13.288	
3,400.0	3,371.5	3,371.1	3,371.5	10.5	8.0	175.63	-11.7	16.2	267.7	248.8	18.93	14.145	
3,500.0	3,468.9	3,468.5	3,468.9	10.9	8.2	175.97	-11.7	16.2	290.7	271.3	19.45	14.950	
3,600.0	3,566.2	3,565.8	3,566.2	11.3	8.3	176.27	-11.7	16.2	313.7	293.8	19.98	15.705	
3,700.0	3,663.5	3,663.1	3,663.5	11.7	8.4	176.52	-11.7	16.2	336.7	316.2	20.52	16.413	
3,800.0	3,760.8	3,760.4	3,760.8	12.1	8.5	176.75	-11.7	16.2	359.8	338.7	21.06	17.079	
3,900.0	3,858.1	3,857.7	3,858.1	12.5	8.6	176.94	-11.7	16.2	382.8	361.2	21.62	17.704	
4,000.0	3,955.4	3,955.0	3,955.4	12.9	8.7	177.12	-11.7	16.2	405.8	383.6	22.19	18.292	
4,100.0	4,052.7	4,047.5	4,047.9	13.3	8.8	177.28	-11.9	15.9	429.1	406.4	22.73	18.884	
4,200.0	4,150.0	4,135.0	4,135.4	13.7	8.9	177.52	-12.8	14.0	454.3	431.0	23.24	19.550	
4,300.0	4,247.3	4,221.6	4,221.9	14.2	9.0	177.84	-14.5	10.4	481.4	457.7	23.74	20.283	
4,400.0	4,344.6	4,307.1	4,307.1	14.6	9.1	178.21	-17.0	5.0	510.6	486.3	24.23	21.072	
4,500.0	4,441.9	4,413.3	4,413.1	15.0	9.2	178.75	-19.8	-2.8	540.3	515.5	24.87	21.726	
4,600.0	4,539.2	4,531.4	4,531.0	15.5	9.4	179.41	-18.9	-9.8	566.7	541.0	25.64	22.102	
4,700.0	4,636.5	4,651.7	4,651.0	15.9	9.6	-179.82	-13.5	-14.9	589.3	562.9	26.40	22.322	
4,800.0	4,733.8	4,773.9	4,772.7	16.3	9.7	-178.96	-3.3	-17.9	608.0	580.9	27.11	22.431	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 803H - OWB - PWP0													Offset Site Error: 0.0 usft		
Survey Program: 0-r.5 MWD+IFR1				Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error: 3.0 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)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning		
4,900.0	4,831.1	4,897.4	4,895.3	16.8	9.9	-177.98	11.9	-18.7	622.8	595.0	27.78	22.417			
5,000.0	4,928.4	5,022.0	5,018.2	17.2	10.0	-176.87	32.0	-17.3	633.8	605.3	28.44	22.282			
5,100.0	5,025.8	5,147.1	5,140.7	17.7	10.3	-175.63	57.1	-13.6	640.9	611.8	29.08	22.035			
5,200.0	5,123.1	5,272.2	5,262.0	18.1	10.5	-174.23	87.0	-7.7	644.1	614.5	29.67	21.709			
5,300.0	5,220.4	5,369.7	5,356.1	18.6	10.7	-173.09	112.0	-2.3	645.9	615.7	30.28	21.335			
5,400.0	5,317.7	5,468.8	5,451.8	19.0	11.0	-171.94	137.3	3.1	648.0	617.1	30.89	20.978			
5,500.0	5,415.0	5,567.9	5,547.4	19.5	11.2	-170.79	162.7	8.6	650.3	618.8	31.50	20.644			
5,600.0	5,512.3	5,667.0	5,643.1	20.0	11.5	-169.65	188.1	14.1	652.9	620.8	32.11	20.332			
5,700.0	5,609.6	5,766.1	5,738.7	20.4	11.7	-168.52	213.5	19.5	655.7	623.0	32.72	20.042			
5,800.0	5,706.9	5,865.2	5,834.4	20.9	12.0	-167.40	238.8	25.0	658.8	625.5	33.32	19.773			
5,900.0	5,804.2	5,964.3	5,930.0	21.3	12.3	-166.29	264.2	30.5	662.2	628.3	33.92	19.524			
6,000.0	5,901.5	6,063.5	6,025.7	21.8	12.6	-165.19	289.6	36.0	665.8	631.3	34.51	19.295			
6,100.0	5,998.8	6,162.6	6,121.3	22.3	12.9	-164.11	314.9	41.4	669.6	634.6	35.09	19.085			
6,200.0	6,096.1	6,261.7	6,217.0	22.7	13.3	-163.04	340.3	46.9	673.7	638.1	35.66	18.893			
6,300.0	6,193.4	6,360.8	6,312.6	23.2	13.6	-161.98	365.7	52.4	678.1	641.8	36.23	18.718			
6,400.0	6,290.7	6,459.9	6,408.3	23.7	14.0	-160.93	391.0	57.8	682.6	645.8	36.78	18.559			
6,500.0	6,388.0	6,559.0	6,503.9	24.1	14.3	-159.90	416.4	63.3	687.4	650.1	37.33	18.416			
6,600.0	6,485.3	6,658.1	6,599.6	24.6	14.7	-158.88	441.8	68.8	692.4	654.5	37.86	18.288			
6,700.0	6,582.6	6,757.2	6,695.2	25.1	15.1	-157.88	467.2	74.2	697.6	659.2	38.39	18.174			
6,799.1	6,679.0	6,855.4	6,790.0	25.5	15.4	-156.90	492.3	79.7	703.0	664.1	38.90	18.074			
6,800.0	6,679.9	6,856.3	6,790.9	25.5	15.4	-156.89	492.5	79.7	703.1	664.2	38.90	18.073			
6,900.0	6,777.5	6,955.4	6,886.5	26.0	15.8	-155.91	517.9	85.2	707.9	668.5	39.40	17.969			
7,000.0	6,875.3	7,054.5	6,982.1	26.5	16.2	-154.88	543.3	90.7	711.4	671.5	39.86	17.849			
7,100.0	6,973.6	7,153.6	7,077.7	26.9	16.6	-153.79	568.6	96.1	713.5	673.3	40.27	17.717			
7,200.0	7,072.1	7,252.5	7,173.2	27.4	17.0	-152.65	593.9	101.6	714.4	673.7	40.65	17.574			
7,300.0	7,170.9	7,351.3	7,268.6	27.8	17.4	-151.43	619.2	107.0	714.0	673.0	40.98	17.424			
7,400.0	7,270.0	7,450.0	7,363.8	28.2	17.8	-150.15	644.5	112.5	712.5	671.2	41.26	17.269			
7,500.0	7,369.3	7,548.5	7,458.9	28.6	18.2	-148.78	669.7	117.9	709.8	668.3	41.47	17.114			
7,600.0	7,468.8	7,646.8	7,553.8	29.0	18.7	-147.33	694.9	123.4	706.0	664.4	41.62	16.962			
7,700.0	7,568.4	7,744.9	7,648.4	29.4	19.1	-145.79	720.0	128.8	701.3	659.6	41.70	16.816			
7,800.0	7,668.2	7,842.7	7,742.8	29.8	19.5	-144.14	745.0	134.2	695.6	653.9	41.70	16.681			
7,900.0	7,768.1	7,940.2	7,836.9	30.1	19.9	-142.38	770.0	139.6	689.2	647.6	41.61	16.562			
8,000.0	7,868.0	8,037.3	7,930.7	30.4	20.4	-140.50	794.8	144.9	682.1	640.7	41.42	16.465			
8,100.0	7,968.0	8,134.2	8,024.1	30.7	20.8	-138.49	819.6	150.3	674.4	633.3	41.12	16.402			
8,132.0	8,000.0	8,165.1	8,054.0	30.7	20.9	-95.10	827.5	152.0	671.9	630.9	40.96	16.402			
8,200.0	8,068.0	8,230.7	8,117.3	30.7	21.2	-93.69	844.3	155.6	666.6	626.0	40.58	16.426			
8,300.0	8,168.0	8,327.2	8,210.4	30.7	21.6	-91.57	869.0	160.9	659.7	619.7	40.02	16.482			
8,400.0	8,268.0	8,423.6	8,303.5	30.8	22.1	-89.42	893.7	166.2	653.8	614.3	39.46	16.570			
8,500.0	8,368.0	8,518.3	8,395.1	30.8	22.5	-87.34	917.2	171.3	649.0	610.1	38.91	16.678			
8,600.0	8,468.0	8,613.8	8,487.9	30.9	22.9	-85.36	939.3	176.1	645.4	606.9	38.43	16.794			
8,700.0	8,568.0	8,710.1	8,581.8	30.9	23.3	-83.48	960.1	180.6	642.8	604.7	38.01	16.912			
8,800.0	8,668.0	8,807.1	8,676.7	30.9	23.8	-81.71	979.5	184.7	641.0	603.4	37.65	17.027			
8,900.0	8,768.0	8,904.7	8,772.6	31.0	24.2	-80.08	997.4	188.6	640.0	602.6	37.36	17.132			
9,000.0	8,868.0	9,002.9	8,869.4	31.0	24.6	-78.57	1,013.8	192.1	639.5	602.4	37.13	17.223			
9,053.2	8,921.1	9,055.4	8,921.1	31.0	24.8	-77.83	1,021.9	193.9	639.5	602.4	37.04	17.266			
9,100.0	8,968.0	9,101.7	8,967.0	31.1	25.0	-77.21	1,028.7	195.3	639.5	602.6	36.97	17.299			
9,200.0	9,068.0	9,201.0	9,065.3	31.1	25.4	-75.99	1,042.0	198.2	639.8	603.0	36.86	17.356			
9,300.0	9,168.0	9,300.8	9,164.4	31.1	25.8	-74.93	1,053.6	200.7	640.3	603.5	36.81	17.395			
9,400.0	9,268.0	9,400.9	9,264.0	31.2	26.2	-74.01	1,063.6	202.9	640.9	604.1	36.80	17.417			
9,500.0	9,368.0	9,501.4	9,364.1	31.2	26.5	-73.25	1,072.0	204.7	641.5	604.7	36.83	17.420			
9,600.0	9,468.0	9,602.1	9,464.6	31.2	26.9	-72.65	1,078.6	206.1	642.1	605.2	36.89	17.408			

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 803H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,700.0	9,568.0	9,703.1	9,565.4	31.3	27.2	-72.20	1,083.5	207.2	642.6	605.6	36.97	17.381	
9,800.0	9,668.0	9,804.2	9,666.4	31.3	27.5	-71.91	1,086.7	207.9	642.9	605.8	37.08	17.340	
9,900.0	9,768.0	9,905.3	9,767.6	31.4	27.7	-71.78	1,088.2	208.2	643.1	605.9	37.20	17.287	
10,000.0	9,868.0	10,005.7	9,868.0	31.4	27.8	-71.77	1,088.2	208.2	643.1	605.8	37.31	17.237	
10,100.0	9,968.0	10,105.7	9,968.0	31.5	27.9	-71.77	1,088.2	208.2	643.1	605.6	37.44	17.178	
10,200.0	10,068.0	10,205.7	10,068.0	31.5	27.9	-71.77	1,088.2	208.2	643.1	605.5	37.57	17.119	
10,300.0	10,168.0	10,305.7	10,168.0	31.5	28.0	-71.77	1,088.2	208.2	643.1	605.4	37.69	17.060	
10,400.0	10,268.0	10,405.7	10,268.0	31.6	28.0	-71.77	1,088.2	208.2	643.1	605.3	37.82	17.002	
10,500.0	10,368.0	10,505.7	10,368.0	31.6	28.1	-71.77	1,088.2	208.2	643.1	605.1	37.95	16.944	
10,600.0	10,468.0	10,605.7	10,468.0	31.7	28.1	-71.77	1,088.2	208.2	643.1	605.0	38.08	16.887	
10,700.0	10,568.0	10,705.7	10,568.0	31.7	28.1	-71.77	1,088.2	208.2	643.1	604.9	38.21	16.829	
10,800.0	10,668.0	10,805.7	10,668.0	31.7	28.2	-71.77	1,088.2	208.2	643.1	604.7	38.34	16.772	
10,900.0	10,768.0	10,905.7	10,768.0	31.8	28.2	-71.77	1,088.2	208.2	643.1	604.6	38.47	16.716	
11,000.0	10,868.0	11,005.7	10,868.0	31.8	28.3	-71.77	1,088.2	208.2	643.1	604.5	38.60	16.659	
11,100.0	10,968.0	11,105.7	10,968.0	31.9	28.3	-71.77	1,088.2	208.2	643.1	604.3	38.73	16.603	
11,200.0	11,068.0	11,205.7	11,068.0	31.9	28.4	-71.77	1,088.2	208.2	643.1	604.2	38.86	16.547	
11,300.0	11,168.0	11,305.7	11,168.0	32.0	28.4	-71.77	1,088.2	208.2	643.1	604.1	38.99	16.492	
11,400.0	11,268.0	11,405.7	11,268.0	32.0	28.5	-71.77	1,088.2	208.2	643.1	604.0	39.13	16.436	
11,500.0	11,368.0	11,505.7	11,368.0	32.0	28.5	-71.77	1,088.2	208.2	643.1	603.8	39.26	16.381	
11,600.0	11,468.0	11,605.7	11,468.0	32.1	28.6	-71.77	1,088.2	208.2	643.1	603.7	39.39	16.326	
11,700.0	11,568.0	11,705.7	11,568.0	32.1	28.6	-71.77	1,088.2	208.2	643.1	603.6	39.52	16.272	
11,720.5	11,588.5	11,726.2	11,588.5	32.1	28.7	-71.77	1,088.2	208.2	643.1	603.5	39.54	16.263	
11,725.0	11,593.0	11,730.7	11,593.0	32.1	28.7	96.08	1,088.2	208.2	643.1	603.5	39.55	16.262	
11,750.0	11,618.0	11,755.7	11,618.0	32.1	28.7	96.15	1,088.2	208.2	643.2	603.6	39.55	16.262	
11,775.0	11,642.9	11,780.6	11,642.9	32.0	28.7	96.31	1,088.2	208.2	643.4	603.9	39.54	16.274	
11,800.0	11,667.6	11,805.4	11,667.6	31.9	28.7	96.57	1,088.2	208.2	643.8	604.3	39.51	16.297	
11,825.0	11,692.2	11,829.9	11,692.2	31.8	28.7	96.92	1,088.2	208.2	644.4	604.9	39.46	16.330	
11,850.0	11,716.4	11,854.1	11,716.4	31.7	28.7	97.34	1,088.2	208.2	645.2	605.8	39.40	16.374	
11,875.0	11,740.3	11,878.0	11,740.3	31.6	28.7	97.84	1,088.2	208.2	646.2	606.8	39.33	16.428	
11,900.0	11,763.8	11,901.5	11,763.8	31.5	28.7	98.39	1,088.2	208.2	647.5	608.2	39.26	16.492	
11,925.0	11,786.8	11,924.5	11,786.8	31.4	28.8	98.99	1,088.2	208.2	649.1	609.9	39.18	16.564	
11,950.0	11,809.3	11,947.0	11,809.3	31.3	28.8	99.62	1,088.2	208.2	651.0	611.9	39.11	16.646	
11,975.0	11,831.1	11,968.8	11,831.1	31.2	28.8	100.25	1,088.2	208.2	653.4	614.4	39.04	16.736	
12,000.0	11,852.3	11,990.0	11,852.3	31.1	28.8	100.89	1,088.2	208.2	656.3	617.3	38.99	16.833	
12,025.0	11,872.8	12,010.5	11,872.8	31.0	28.8	101.50	1,088.2	208.2	659.6	620.7	38.95	16.937	
12,050.0	11,892.5	12,030.2	11,892.5	31.0	28.8	102.07	1,088.2	208.2	663.6	624.7	38.92	17.048	
12,075.0	11,911.3	12,049.0	11,911.3	30.9	28.8	102.58	1,088.2	208.2	668.2	629.2	38.93	17.165	
12,100.0	11,929.3	12,067.0	11,929.3	30.8	28.8	103.02	1,088.2	208.2	673.4	634.5	38.95	17.287	
12,125.0	11,946.3	12,084.0	11,946.3	30.7	28.8	103.36	1,088.2	208.2	679.4	640.4	39.01	17.415	
12,150.0	11,962.4	12,100.1	11,962.4	30.6	28.8	103.59	1,088.2	208.2	686.1	647.0	39.10	17.547	
12,175.0	11,977.4	12,115.1	11,977.4	30.5	28.9	103.69	1,088.2	208.2	693.6	654.3	39.22	17.686	
12,200.0	11,991.4	12,129.1	11,991.4	30.5	28.9	103.65	1,088.2	208.2	701.9	662.5	39.36	17.830	
12,225.0	12,004.2	12,142.0	12,004.2	30.4	28.9	103.44	1,088.2	208.2	711.0	671.4	39.54	17.980	
12,250.0	12,015.9	12,153.7	12,015.9	30.3	28.9	103.06	1,088.2	208.2	720.9	681.1	39.75	18.135	
12,275.0	12,026.5	12,912.8	12,495.4	30.3	26.6	125.60	603.6	210.4	721.3	669.7	51.57	13.987	
12,300.0	12,035.8	12,935.4	12,495.4	30.2	26.6	126.31	581.0	210.5	711.4	659.8	51.62	13.781	
12,325.0	12,044.0	12,958.5	12,495.4	30.2	26.6	127.00	557.9	210.6	702.3	650.6	51.69	13.586	
12,350.0	12,050.8	12,982.0	12,495.4	30.1	26.6	127.67	534.4	210.7	693.9	642.2	51.79	13.400	
12,375.0	12,056.4	13,005.8	12,495.4	30.1	26.6	128.35	510.6	210.9	686.3	634.4	51.90	13.224	
12,400.0	12,060.8	13,029.8	12,495.4	30.1	26.6	129.02	486.6	211.0	679.5	627.5	52.04	13.057	
12,425.0	12,063.8	13,054.0	12,495.4	30.1	26.6	129.69	462.4	211.1	673.5	621.2	52.21	12.900	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 803H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,450.0	12,065.5	13,078.4	12,495.4	30.1	26.6	130.36	438.0	211.2	668.2	615.8	52.39	12.754	
12,470.5	12,066.0	13,098.4	12,495.4	30.1	26.6	130.92	418.0	211.3	664.6	612.0	52.57	12.643	
12,500.0	12,066.0	13,127.3	12,495.4	30.1	26.6	131.21	389.2	211.4	659.9	607.0	52.83	12.490	
12,600.0	12,066.0	13,225.5	12,495.4	30.1	26.6	132.10	290.9	211.9	645.7	592.0	53.75	12.013	
12,700.0	12,066.0	13,324.3	12,495.4	30.1	26.6	132.87	192.1	212.3	634.4	579.7	54.68	11.601	
12,800.0	12,066.0	13,423.6	12,495.4	30.2	26.6	133.49	92.9	212.8	625.7	570.1	55.60	11.252	
12,900.0	12,066.0	13,523.2	12,495.4	30.2	26.6	133.94	-6.8	213.2	619.6	563.1	56.52	10.963	
13,000.0	12,066.0	13,623.1	12,495.4	30.3	26.6	134.21	-106.7	213.7	616.0	558.6	57.41	10.730	
13,091.0	12,066.0	13,714.1	12,495.4	30.4	26.7	134.29	-197.7	214.1	615.0	556.8	58.20	10.567	
13,100.0	12,066.0	13,723.1	12,495.4	30.4	26.7	134.29	-206.6	214.2	615.0	556.7	58.28	10.553	
13,200.0	12,066.0	13,823.1	12,495.4	30.5	26.7	134.29	-306.6	214.6	615.0	555.8	59.15	10.397	
13,300.0	12,066.0	13,923.1	12,495.4	30.5	26.7	134.29	-406.6	215.1	615.0	554.9	60.05	10.240	
13,400.0	12,066.0	14,023.1	12,495.4	30.7	26.7	134.29	-506.6	215.5	615.0	554.0	60.99	10.083	
13,500.0	12,066.0	14,123.1	12,495.4	30.8	26.8	134.29	-606.6	216.0	615.0	553.0	61.95	9.926	
13,600.0	12,066.0	14,223.1	12,495.4	30.9	26.8	134.29	-706.6	216.5	615.0	552.0	62.95	9.770	
13,700.0	12,066.0	14,323.1	12,495.4	31.0	26.9	134.29	-806.6	216.9	615.0	551.0	63.96	9.614	
13,800.0	12,066.0	14,423.1	12,495.4	31.2	27.0	134.29	-906.6	217.4	614.9	549.9	65.01	9.460	
13,900.0	12,066.0	14,523.1	12,495.4	31.3	27.1	134.29	-1,006.6	217.9	614.9	548.9	66.08	9.306	
14,000.0	12,066.0	14,623.1	12,495.4	31.5	27.4	134.29	-1,106.6	218.3	614.9	547.8	67.17	9.155	
14,100.0	12,066.0	14,723.1	12,495.4	31.7	27.7	134.29	-1,206.6	218.8	614.9	546.7	68.28	9.006	
14,200.0	12,066.0	14,823.1	12,495.4	31.9	28.2	134.29	-1,306.6	219.2	614.9	545.5	69.42	8.858	
14,300.0	12,066.0	14,923.1	12,495.4	32.1	28.8	134.29	-1,406.6	219.7	614.9	544.4	70.57	8.713	
14,400.0	12,066.0	15,023.1	12,495.4	32.3	29.4	134.29	-1,506.6	220.2	614.9	543.2	71.74	8.571	
14,500.0	12,066.0	15,123.1	12,495.4	32.5	30.1	134.29	-1,606.6	220.6	614.9	542.0	72.94	8.431	
14,600.0	12,066.0	15,223.1	12,495.4	32.8	30.8	134.29	-1,706.6	221.1	614.9	540.8	74.14	8.293	
14,700.0	12,066.0	15,323.1	12,495.4	33.1	31.6	134.29	-1,806.6	221.5	614.9	539.5	75.37	8.159	
14,800.0	12,066.0	15,423.1	12,495.4	33.3	32.4	134.29	-1,906.6	222.0	614.9	538.3	76.61	8.026	
14,900.0	12,066.0	15,523.1	12,495.4	33.6	33.1	134.29	-2,006.6	222.5	614.9	537.0	77.86	7.897	
15,000.0	12,066.0	15,623.1	12,495.4	33.9	33.9	134.30	-2,106.6	222.9	614.9	535.8	79.13	7.770	
15,100.0	12,066.0	15,723.1	12,495.4	34.2	34.7	134.30	-2,206.6	223.4	614.9	534.5	80.42	7.646	
15,200.0	12,066.0	15,823.1	12,495.4	34.5	35.6	134.30	-2,306.6	223.8	614.9	533.2	81.71	7.525	
15,300.0	12,066.0	15,923.1	12,495.4	34.9	36.4	134.30	-2,406.6	224.3	614.9	531.9	83.02	7.406	
15,400.0	12,066.0	16,023.1	12,495.4	35.2	37.2	134.30	-2,506.6	224.8	614.9	530.5	84.34	7.291	
15,500.0	12,066.0	16,123.1	12,495.4	35.6	38.0	134.30	-2,606.6	225.2	614.9	529.2	85.67	7.177	
15,600.0	12,066.0	16,223.1	12,495.4	36.0	38.9	134.30	-2,706.6	225.7	614.9	527.9	87.01	7.067	
15,700.0	12,066.0	16,323.1	12,495.4	36.4	39.7	134.30	-2,806.6	226.2	614.9	526.5	88.36	6.959	
15,800.0	12,066.0	16,423.1	12,495.4	36.8	40.6	134.30	-2,906.6	226.6	614.8	525.1	89.72	6.853	
15,900.0	12,066.0	16,523.1	12,495.4	37.2	41.4	134.30	-3,006.6	227.1	614.8	523.8	91.09	6.750	
16,000.0	12,066.0	16,623.1	12,495.4	37.6	42.3	134.30	-3,106.6	227.5	614.8	522.4	92.47	6.649	
16,100.0	12,066.0	16,723.1	12,495.4	38.1	43.2	134.30	-3,206.6	228.0	614.8	521.0	93.85	6.551	
16,200.0	12,066.0	16,823.1	12,495.4	38.5	44.0	134.30	-3,306.6	228.5	614.8	519.6	95.25	6.455	
16,300.0	12,066.0	16,923.1	12,495.4	39.0	44.9	134.30	-3,406.6	228.9	614.8	518.2	96.65	6.361	
16,400.0	12,066.0	17,023.1	12,495.4	39.5	45.8	134.30	-3,506.6	229.4	614.8	516.8	98.06	6.270	
16,500.0	12,066.0	17,123.1	12,495.4	39.9	46.7	134.30	-3,606.6	229.8	614.8	515.3	99.47	6.181	
16,600.0	12,066.0	17,223.1	12,495.4	40.4	47.6	134.30	-3,706.6	230.3	614.8	513.9	100.90	6.093	
16,700.0	12,066.0	17,323.1	12,495.4	41.0	48.5	134.30	-3,806.6	230.8	614.8	512.5	102.33	6.008	
16,800.0	12,066.0	17,423.1	12,495.4	41.5	49.4	134.30	-3,906.6	231.2	614.8	511.0	103.76	5.925	
16,900.0	12,066.0	17,523.1	12,495.4	42.0	50.2	134.31	-4,006.6	231.7	614.8	509.6	105.20	5.844	
17,000.0	12,066.0	17,623.1	12,495.4	42.5	51.1	134.31	-4,106.6	232.2	614.8	508.1	106.65	5.765	
17,100.0	12,066.0	17,723.1	12,495.4	43.1	52.0	134.31	-4,206.6	232.6	614.8	506.7	108.10	5.687	
17,200.0	12,066.0	17,823.1	12,495.4	43.6	52.9	134.31	-4,306.6	233.1	614.8	505.2	109.56	5.611	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - _ZIA HILLS UNIT 2832 WC 803H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
17,300.0	12,066.0	17,923.1	12,495.4	44.2	53.9	134.31	-4,406.6	233.5	614.8	503.7	111.02	5.537	
17,400.0	12,066.0	18,023.1	12,495.4	44.8	54.8	134.31	-4,506.6	234.0	614.8	502.3	112.49	5.465	
17,500.0	12,066.0	18,123.1	12,495.4	45.3	55.7	134.31	-4,606.6	234.5	614.8	500.8	113.96	5.394	
17,600.0	12,066.0	18,223.1	12,495.4	45.9	56.6	134.31	-4,706.6	234.9	614.8	499.3	115.44	5.325	
17,700.0	12,066.0	18,323.1	12,495.4	46.5	57.5	134.31	-4,806.6	235.4	614.8	497.8	116.92	5.258	
17,800.0	12,066.0	18,423.1	12,495.4	47.1	58.4	134.31	-4,906.6	235.8	614.7	496.3	118.41	5.192	
17,900.0	12,066.0	18,523.1	12,495.4	47.7	59.3	134.31	-5,006.6	236.3	614.7	494.8	119.89	5.127	
18,000.0	12,066.0	18,623.1	12,495.4	48.3	60.2	134.31	-5,106.6	236.8	614.7	493.4	121.39	5.064	
18,100.0	12,066.0	18,723.1	12,495.4	48.9	61.2	134.31	-5,206.6	237.2	614.7	491.8	122.88	5.003	
18,200.0	12,066.0	18,823.1	12,495.4	49.5	62.1	134.31	-5,306.6	237.7	614.7	490.3	124.38	4.942	
18,300.0	12,066.0	18,923.1	12,495.4	50.1	63.0	134.31	-5,406.6	238.1	614.7	488.8	125.89	4.883	
18,400.0	12,066.0	19,023.1	12,495.4	50.8	63.9	134.31	-5,506.6	238.6	614.7	487.3	127.39	4.825	
18,500.0	12,066.0	19,123.1	12,495.4	51.4	64.8	134.31	-5,606.6	239.1	614.7	485.8	128.90	4.769	
18,600.0	12,066.0	19,223.1	12,495.4	52.0	65.8	134.31	-5,706.6	239.5	614.7	484.3	130.42	4.713	
18,700.0	12,066.0	19,323.1	12,495.4	52.7	66.7	134.31	-5,806.6	240.0	614.7	482.8	131.93	4.659	
18,800.0	12,066.0	19,423.1	12,495.4	53.3	67.6	134.32	-5,906.6	240.5	614.7	481.2	133.45	4.606	
18,900.0	12,066.0	19,523.1	12,495.4	54.0	68.5	134.32	-6,006.6	240.9	614.7	479.7	134.97	4.554	
19,000.0	12,066.0	19,623.1	12,495.4	54.6	69.5	134.32	-6,106.6	241.4	614.7	478.2	136.50	4.503	
19,100.0	12,066.0	19,723.1	12,495.4	55.3	70.4	134.32	-6,206.6	241.8	614.7	476.7	138.03	4.453	
19,200.0	12,066.0	19,823.1	12,495.4	55.9	71.3	134.32	-6,306.6	242.3	614.7	475.1	139.56	4.405	
19,300.0	12,066.0	19,923.1	12,495.4	56.6	72.3	134.32	-6,406.6	242.8	614.7	473.6	141.09	4.357	
19,400.0	12,066.0	20,023.1	12,495.4	57.3	73.2	134.32	-6,506.6	243.2	614.7	472.0	142.62	4.310	
19,500.0	12,066.0	20,123.1	12,495.4	57.9	74.1	134.32	-6,606.6	243.7	614.7	470.5	144.16	4.264	
19,600.0	12,066.0	20,223.1	12,495.4	58.6	75.1	134.32	-6,706.6	244.1	614.7	469.0	145.70	4.219	
19,700.0	12,066.0	20,323.1	12,495.4	59.3	76.0	134.32	-6,806.6	244.6	614.7	467.4	147.24	4.175	
19,765.0	12,066.0	20,388.1	12,495.4	59.7	76.6	134.32	-6,871.6	244.9	614.6	466.4	148.24	4.146	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - PAYNE FEDERAL 1_PA - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 200-r.5 INC-ONLY												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		No-Go Distance (usft)	Warning
3,500.0	3,468.9	3,440.0	3,468.9	10.9	88.0	-39.49	1,210.2	267.9	997.8	873.8	124.06	8.043	
3,600.0	3,566.2	3,545.1	3,573.9	11.3	90.7	-40.40	1,210.9	267.9	980.7	852.9	127.77	7.675	
3,700.0	3,663.5	3,634.7	3,663.5	11.7	92.9	-41.21	1,210.2	267.9	962.3	831.3	130.96	7.348	
3,800.0	3,760.8	3,734.9	3,763.7	12.1	95.5	-42.15	1,210.6	267.9	945.2	810.7	134.51	7.027	
3,900.0	3,858.1	3,829.4	3,858.1	12.5	97.9	-43.06	1,210.2	267.9	927.7	789.8	137.86	6.729	
4,000.0	3,955.4	3,931.8	3,960.4	12.9	100.4	-44.09	1,211.0	267.9	911.5	770.0	141.48	6.443	
4,100.0	4,052.7	4,024.1	4,052.7	13.3	102.8	-45.06	1,210.2	267.9	894.1	749.3	144.75	6.177	
4,200.0	4,150.0	4,123.2	4,151.8	13.7	105.3	-46.12	1,210.6	267.9	878.1	729.9	148.25	5.923	
4,300.0	4,247.3	4,218.8	4,247.3	14.2	107.7	-47.19	1,210.2	267.9	861.7	710.0	151.64	5.682	
4,400.0	4,344.6	4,318.9	4,347.4	14.6	110.2	-48.35	1,211.1	267.9	846.8	691.6	155.17	5.457	
4,500.0	4,441.9	4,413.4	4,441.9	15.0	112.6	-49.49	1,210.2	267.9	830.5	672.0	158.52	5.239	
4,600.0	4,539.2	4,510.8	4,539.2	15.5	115.1	-50.70	1,210.2	267.9	815.5	653.6	161.94	5.036	
4,700.0	4,636.5	4,544.0	4,572.4	15.9	115.9	-51.13	1,210.2	267.9	803.4	640.8	162.65	4.940 SF	
4,753.3	4,688.4	4,544.0	4,572.4	16.1	115.9	-51.13	1,210.2	267.9	801.7	640.2	161.51	4.964 CC, ES	
4,800.0	4,733.8	4,544.0	4,572.4	16.3	115.9	-51.13	1,210.2	267.9	803.0	643.1	159.96	5.020	
4,900.0	4,831.1	4,544.0	4,572.4	16.8	115.9	-51.13	1,210.2	267.9	815.0	659.9	155.03	5.257	
5,000.0	4,928.4	4,544.0	4,572.4	17.2	115.9	-51.13	1,210.2	267.9	838.8	690.5	148.26	5.657	
5,100.0	5,025.8	4,544.0	4,572.4	17.7	115.9	-51.13	1,210.2	267.9	873.4	733.2	140.25	6.227	
5,200.0	5,123.1	4,544.0	4,572.4	18.1	115.9	-51.13	1,210.2	267.9	917.7	786.1	131.60	6.973	
5,300.0	5,220.4	4,544.0	4,572.4	18.6	115.9	-51.13	1,210.2	267.9	970.3	847.5	122.84	7.899	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - RED HILLS WEST '21' FEDERAL COM 1H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 100-r.5 MWD												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		No-Go Distance (usft)	Separation Factor
8,900.0	8,768.0	13,758.0	9,355.7	31.0	78.2	-91.46	866.5	11.9	998.6	898.7		99.90	9.996
9,000.0	8,868.0	13,758.0	9,355.7	31.0	78.2	-91.46	866.5	11.9	943.2	839.7		103.56	9.108
9,100.0	8,968.0	13,758.0	9,355.7	31.1	78.2	-91.46	866.5	11.9	895.6	788.5		107.11	8.362
9,200.0	9,068.0	13,758.0	9,355.7	31.1	78.2	-91.46	866.5	11.9	857.1	746.8		110.29	7.771
9,300.0	9,168.0	13,758.0	9,355.7	31.1	78.2	-91.46	866.5	11.9	828.9	716.1		112.81	7.347
9,400.0	9,268.0	13,758.0	9,355.7	31.2	78.2	-91.46	866.5	11.9	812.1	697.7		114.37	7.101
9,487.8	9,355.7	13,758.0	9,355.7	31.2	78.2	-91.46	866.5	11.9	807.3	692.6		114.78	7.034 CC, ES, SF
9,500.0	9,368.0	13,758.0	9,355.7	31.2	78.2	-91.46	866.5	11.9	807.4	692.7		114.76	7.036
9,600.0	9,468.0	13,758.0	9,355.7	31.2	78.2	-91.46	866.5	11.9	815.1	701.2		113.92	7.155
9,700.0	9,568.0	13,758.0	9,355.7	31.3	78.2	-91.46	866.5	11.9	834.8	722.8		111.97	7.455
9,800.0	9,668.0	13,758.0	9,355.7	31.3	78.2	-91.46	866.5	11.9	865.6	756.4		109.17	7.929
9,900.0	9,768.0	13,758.0	9,355.7	31.4	78.2	-91.46	866.5	11.9	906.5	800.7		105.85	8.564
10,000.0	9,868.0	13,758.0	9,355.7	31.4	78.2	-91.46	866.5	11.9	956.1	853.9		102.28	9.348

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - RED HILLS WEST 21 W0AP FEDERAL COM 003H - OWB - AWP											Offset Site Error:	0.0 usft
Survey Program: 99-r.5 MWD											Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor
11,500.0	11,368.0	16,539.1	11,836.2	32.0	86.7	-89.81	890.0	-52.2	989.1	878.3	110.78	8.928
11,600.0	11,468.0	16,538.1	11,836.2	32.1	86.6	-89.75	890.9	-52.2	945.8	830.9	114.93	8.230
11,700.0	11,568.0	16,537.2	11,836.2	32.1	86.6	-89.69	891.8	-52.2	911.6	792.7	118.84	7.670
11,720.5	11,588.5	16,537.0	11,836.2	32.1	86.6	-89.68	892.0	-52.2	905.7	786.2	119.59	7.574
11,725.0	11,593.0	16,537.0	11,836.2	32.1	86.6	78.32	892.0	-52.2	904.5	784.8	119.75	7.553
11,750.0	11,618.0	16,537.7	11,836.2	32.1	86.6	79.08	891.3	-52.2	898.0	777.3	120.63	7.444
11,775.0	11,642.9	16,539.6	11,836.1	32.0	86.7	79.70	889.4	-52.2	891.8	770.3	121.49	7.341
11,800.0	11,667.6	16,542.8	11,836.1	31.9	86.7	80.19	886.2	-52.3	886.1	763.7	122.32	7.244
11,825.0	11,692.2	16,547.2	11,836.1	31.8	86.8	80.54	881.8	-52.3	880.8	757.6	123.12	7.154
11,850.0	11,716.4	16,552.8	11,836.0	31.7	86.9	80.77	876.3	-52.3	875.9	752.0	123.88	7.070
11,875.0	11,740.3	16,560.1	11,835.9	31.6	87.0	80.84	869.0	-52.4	871.5	746.9	124.62	6.993
11,900.0	11,763.8	16,568.9	11,835.8	31.5	87.1	80.76	860.1	-52.5	867.5	742.1	125.33	6.921
11,925.0	11,786.8	16,579.0	11,835.7	31.4	87.3	80.56	850.0	-52.6	863.9	737.9	126.00	6.856
11,950.0	11,809.3	16,590.5	11,835.5	31.3	87.4	80.25	838.6	-52.6	860.7	734.0	126.64	6.796
11,975.0	11,831.1	16,603.2	11,835.4	31.2	87.6	79.84	825.9	-52.7	857.8	730.5	127.23	6.742
12,000.0	11,852.3	16,617.1	11,835.2	31.1	87.8	79.34	811.9	-52.7	855.2	727.4	127.79	6.692
12,025.0	11,872.8	16,632.3	11,835.1	31.0	88.1	78.77	796.8	-52.8	852.8	724.5	128.32	6.646
12,050.0	11,892.5	16,648.6	11,834.9	31.0	88.3	78.14	780.4	-52.8	850.7	721.9	128.81	6.605
12,075.0	11,911.3	16,663.8	11,834.8	30.9	88.5	77.58	765.3	-52.8	848.8	719.6	129.23	6.568
12,100.0	11,929.3	16,680.1	11,834.8	30.8	88.8	76.98	749.0	-52.8	847.0	717.4	129.62	6.534
12,125.0	11,946.3	16,697.3	11,834.8	30.7	89.0	76.36	731.7	-52.8	845.3	715.3	130.00	6.502
12,150.0	11,962.4	16,715.5	11,834.8	30.6	89.3	75.74	713.5	-52.9	843.6	713.3	130.35	6.472
12,175.0	11,977.4	16,734.6	11,834.9	30.5	89.6	75.14	694.4	-53.0	841.9	711.2	130.70	6.442
12,200.0	11,991.4	16,749.1	11,835.1	30.5	89.8	74.76	680.0	-53.1	840.3	709.3	130.94	6.417
12,225.0	12,004.2	16,765.6	11,835.3	30.4	90.1	74.36	663.4	-53.4	838.6	707.4	131.20	6.392
12,250.0	12,015.9	16,787.5	11,835.6	30.3	90.4	73.84	641.6	-53.8	836.9	705.3	131.53	6.362
12,275.0	12,026.5	16,809.9	11,835.9	30.3	90.7	73.39	619.2	-54.2	834.9	703.0	131.87	6.331
12,300.0	12,035.8	16,820.0	11,836.0	30.2	90.9	73.35	609.1	-54.4	832.8	700.8	131.99	6.310
12,325.0	12,044.0	16,820.0	11,836.0	30.2	90.9	73.55	609.1	-54.4	831.0	699.1	131.87	6.302
12,350.0	12,050.8	16,820.0	11,836.0	30.1	90.9	73.72	609.1	-54.4	829.6	697.9	131.67	6.301 SF
12,375.0	12,056.4	16,820.0	11,836.0	30.1	90.9	73.84	609.1	-54.4	828.6	697.2	131.39	6.306
12,400.0	12,060.8	16,820.0	11,836.0	30.1	90.9	73.91	609.1	-54.4	827.9	696.9	131.02	6.319 ES
12,425.0	12,063.8	16,820.0	11,836.0	30.1	90.9	73.94	609.1	-54.4	827.7	697.1	130.58	6.339
12,428.5	12,064.1	16,820.0	11,836.0	30.1	90.9	73.94	609.1	-54.4	827.7	697.2	130.51	6.342 CC
12,450.0	12,065.5	16,820.0	11,836.0	30.1	90.9	73.92	609.1	-54.4	827.8	697.8	130.05	6.365
12,470.5	12,066.0	16,820.0	11,836.0	30.1	90.9	73.88	609.1	-54.4	828.2	698.7	129.55	6.393
12,500.0	12,066.0	16,820.0	11,836.0	30.1	90.9	73.87	609.1	-54.4	829.7	700.9	128.73	6.445
12,600.0	12,066.0	16,820.0	11,836.0	30.1	90.9	73.78	609.1	-54.4	844.4	719.3	125.09	6.750
12,700.0	12,066.0	16,820.0	11,836.0	30.1	90.9	73.61	609.1	-54.4	873.6	753.2	120.40	7.256
12,800.0	12,066.0	16,820.0	11,836.0	30.2	90.9	73.35	609.1	-54.4	915.9	800.7	115.15	7.954
12,900.0	12,066.0	16,820.0	11,836.0	30.2	90.9	72.98	609.1	-54.4	969.5	859.7	109.81	8.829

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - RED HILLS WEST 21 W1AP FEDERAL COM 002H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 648-r.5 MWD												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
11,300.0	11,168.0	16,774.4	12,119.7	32.0	89.2	-92.78	876.4	599.3	976.8	893.5	83.34	11.722	
11,400.0	11,268.0	16,772.2	12,119.8	32.0	89.2	-92.22	878.6	599.4	879.7	795.0	84.67	10.390	
11,500.0	11,368.0	16,770.0	12,119.8	32.0	89.1	-91.64	880.8	599.5	783.2	696.9	86.34	9.071	
11,600.0	11,468.0	16,767.7	12,119.9	32.1	89.1	-91.05	883.1	599.7	687.8	599.3	88.51	7.771	
11,700.0	11,568.0	16,765.4	12,119.9	32.1	89.1	-90.44	885.4	599.8	593.9	502.5	91.42	6.496	
11,720.5	11,588.5	16,764.9	12,120.0	32.1	89.1	-90.32	885.9	599.8	574.9	482.7	92.14	6.239	
11,725.0	11,593.0	16,764.8	12,120.0	32.1	89.1	78.83	886.0	599.8	570.7	478.4	92.30	6.183	
11,750.0	11,618.0	16,765.0	12,120.0	32.1	89.1	85.86	885.7	599.8	547.7	454.4	93.25	5.873	
11,775.0	11,642.9	16,766.5	12,119.9	32.0	89.1	92.37	884.3	599.7	524.8	430.5	94.28	5.566	
11,800.0	11,667.6	16,769.1	12,119.9	31.9	89.1	98.18	881.7	599.6	502.0	406.7	95.39	5.263	
11,825.0	11,692.2	16,773.0	12,119.8	31.8	89.2	103.21	877.8	599.4	479.6	383.0	96.58	4.966	
11,850.0	11,716.4	16,778.1	12,119.6	31.7	89.2	107.46	872.7	599.1	457.6	359.7	97.87	4.675	
11,875.0	11,740.3	16,784.5	12,119.5	31.6	89.3	110.97	866.4	598.7	435.9	336.7	99.25	4.392	
11,900.0	11,763.8	16,792.0	12,119.3	31.5	89.4	113.82	858.8	598.3	414.8	314.1	100.73	4.118	
11,925.0	11,786.8	16,800.7	12,119.1	31.4	89.6	116.07	850.1	597.8	394.3	292.0	102.30	3.854	
11,950.0	11,809.3	16,810.7	12,118.9	31.3	89.7	117.80	840.2	597.2	374.4	270.4	103.98	3.601	
11,975.0	11,831.1	16,821.8	12,118.7	31.2	89.9	119.06	829.1	596.6	355.3	249.5	105.75	3.359	
12,000.0	11,852.3	16,834.0	12,118.5	31.1	90.1	119.92	816.9	595.9	336.9	229.3	107.62	3.131	
12,025.0	11,872.8	16,847.3	12,118.3	31.0	90.3	120.42	803.7	595.1	319.4	209.8	109.56	2.915 Normal Operations	
12,050.0	11,892.5	16,861.7	12,118.2	31.0	90.5	120.62	789.2	594.4	302.8	191.2	111.56	2.714 Normal Operations	
12,075.0	11,911.3	16,877.4	12,118.2	30.9	90.7	120.53	773.6	593.7	287.1	173.5	113.61	2.527 Normal Operations	
12,100.0	11,929.3	16,894.3	12,118.4	30.8	90.9	120.21	756.7	593.1	272.4	156.7	115.67	2.355 Caution - Monitor Closely	
12,125.0	11,946.3	16,912.4	12,118.8	30.7	91.2	119.70	738.6	592.6	258.6	140.9	117.71	2.197 Caution - Monitor Closely	
12,150.0	11,962.4	16,931.5	12,119.4	30.6	91.5	119.07	719.5	592.2	245.7	126.0	119.71	2.053 Caution - Monitor Closely	
12,175.0	11,977.4	16,950.6	12,120.0	30.5	91.8	118.40	700.4	591.8	233.8	112.2	121.56	1.923 Caution - Monitor Closely	
12,200.0	11,991.4	16,970.2	12,120.4	30.5	92.1	117.57	680.9	591.1	222.9	99.5	123.36	1.807 Caution - Monitor Closely	
12,225.0	12,004.2	16,991.5	12,120.8	30.4	92.4	116.51	659.6	590.1	212.8	87.6	125.20	1.700 Caution - Monitor Closely	
12,250.0	12,015.9	17,013.5	12,121.1	30.3	92.7	115.44	637.6	589.2	203.6	76.7	126.91	1.605 Caution - Monitor Closely	
12,275.0	12,026.5	17,035.0	12,121.5	30.3	93.0	114.47	616.1	588.2	195.2	66.9	128.35	1.521 Caution - Monitor Closely	
12,300.0	12,035.8	17,035.0	12,121.5	30.2	93.0	115.17	616.1	588.2	189.1	63.1	125.96	1.501 Caution - Monitor Closely, ES, SF	
12,325.0	12,044.0	17,035.0	12,121.5	30.2	93.0	115.43	616.1	588.2	186.7	65.0	121.65	1.535 Caution - Monitor Closely	
12,328.0	12,044.9	17,035.0	12,121.5	30.2	93.0	115.43	616.1	588.2	186.7	65.7	121.00	1.543 Caution - Monitor Closely, CC	
12,350.0	12,050.8	17,035.0	12,121.5	30.1	93.0	115.27	616.1	588.2	188.2	72.6	115.58	1.628 Caution - Monitor Closely	
12,375.0	12,056.4	17,035.0	12,121.5	30.1	93.0	114.68	616.1	588.2	193.4	85.2	108.28	1.787 Caution - Monitor Closely	
12,400.0	12,060.8	17,035.0	12,121.5	30.1	93.0	113.65	616.1	588.2	202.2	101.7	100.49	2.012 Caution - Monitor Closely	
12,425.0	12,063.8	17,035.0	12,121.5	30.1	93.0	112.17	616.1	588.2	214.0	121.1	92.87	2.304 Caution - Monitor Closely	
12,450.0	12,065.5	17,035.0	12,121.5	30.1	93.0	110.21	616.1	588.2	228.3	142.4	85.91	2.658 Normal Operations	
12,470.5	12,066.0	17,035.0	12,121.5	30.1	93.0	108.23	616.1	588.2	241.6	160.8	80.88	2.988 Normal Operations	
12,500.0	12,066.0	17,035.0	12,121.5	30.1	93.0	108.42	616.1	588.2	262.6	187.8	74.84	3.509	
12,600.0	12,066.0	17,035.0	12,121.5	30.1	93.0	109.35	616.1	588.2	344.4	281.2	63.19	5.450	
12,700.0	12,066.0	17,035.0	12,121.5	30.1	93.0	110.85	616.1	588.2	435.1	375.8	59.30	7.337	
12,800.0	12,066.0	17,035.0	12,121.5	30.2	93.0	113.17	616.1	588.2	530.1	471.8	58.30	9.093	
12,900.0	12,066.0	17,035.0	12,121.5	30.2	93.0	116.77	616.1	588.2	627.4	569.2	58.23	10.774	
13,000.0	12,066.0	17,035.0	12,121.5	30.3	93.0	122.61	616.1	588.2	726.0	667.6	58.42	12.427	
13,091.0	12,066.0	17,035.0	12,121.5	30.4	93.0	131.63	616.1	588.2	816.3	757.7	58.62	13.926	
13,100.0	12,066.0	17,035.0	12,121.5	30.4	93.0	131.63	616.1	588.2	825.3	766.6	58.64	14.074	
13,200.0	12,066.0	17,035.0	12,121.5	30.5	93.0	131.63	616.1	588.2	924.8	866.0	58.83	15.719	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - WILDER FEDERAL 28 1H - OWB - AWP													Offset Site Error: 0.0 usft
Survey Program: 797-r.5 MWD													Offset Well Error: 0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	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
0.0	0.0	0.0	10.0	3.0	0.0	133.86	-104.1	108.3	150.6				
100.0	100.0	90.5	100.5	3.1	4.1	133.78	-103.8	108.3	150.1	142.1	8.00	18.764	
200.0	200.0	191.1	201.1	3.3	8.7	133.52	-103.0	108.4	149.5	135.7	13.79	10.844	
300.0	300.0	291.6	301.6	3.5	13.3	133.06	-101.5	108.6	148.6	128.7	19.96	7.447	
400.0	400.0	392.2	402.1	3.8	17.8	132.41	-99.4	108.8	147.4	121.1	26.23	5.618	
500.0	500.0	492.6	502.6	4.0	22.4	131.55	-96.7	109.1	145.8	113.2	32.55	4.479	
600.0	600.0	593.1	603.0	4.1	27.0	130.47	-93.3	109.4	143.8	105.0	38.88	3.700	
700.0	700.0	693.5	703.3	4.3	31.5	129.15	-89.4	109.8	141.6	96.4	45.22	3.132	
800.0	800.0	793.9	803.6	4.5	36.1	127.58	-84.9	110.3	139.2	87.8	51.41	2.707 Normal Operations	
853.3	853.3	843.7	853.3	4.6	36.3	126.76	-82.9	110.9	138.5	86.8	51.63	2.682 Normal Operations, CC, ES, SF	
900.0	900.0	888.0	897.6	4.7	36.3	126.10	-81.9	112.3	139.0	87.4	51.64	2.692 Normal Operations	
1,000.0	1,000.0	985.9	995.4	4.8	36.3	125.00	-81.3	116.1	141.9	90.2	51.66	2.746 Normal Operations	
1,100.0	1,100.0	1,086.1	1,095.6	5.0	36.3	124.27	-81.6	119.8	145.0	93.3	51.72	2.804 Normal Operations	
1,200.0	1,200.0	1,186.7	1,196.1	5.2	36.3	123.84	-82.3	122.7	147.8	96.1	51.79	2.855 Normal Operations	
1,300.0	1,300.0	1,287.2	1,296.5	5.3	36.4	123.66	-83.3	125.1	150.3	98.5	51.86	2.899 Normal Operations	
1,400.0	1,400.0	1,387.8	1,397.1	5.5	36.4	123.71	-84.6	126.7	152.4	100.5	51.93	2.934 Normal Operations	
1,500.0	1,500.0	1,488.1	1,497.4	5.6	36.4	123.90	-86.0	128.0	154.2	102.2	52.00	2.966 Normal Operations	
1,600.0	1,600.0	1,588.8	1,598.1	5.8	36.4	124.21	-87.5	128.7	155.6	103.6	52.07	2.989 Normal Operations	
1,700.0	1,700.0	1,689.7	1,699.0	5.9	36.5	124.63	-89.0	128.9	156.6	104.5	52.14	3.004	
1,800.0	1,800.0	1,790.8	1,800.1	6.0	36.5	125.22	-90.5	128.1	156.9	104.7	52.21	3.004	
1,900.0	1,900.0	1,891.5	1,900.8	6.2	36.5	126.08	-92.2	126.5	156.6	104.3	52.27	2.995 Normal Operations	
2,000.0	2,000.0	1,991.9	2,001.2	6.4	36.5	85.11	-94.2	124.2	155.8	103.4	52.32	2.977 Normal Operations	
2,100.0	2,099.8	2,091.6	2,100.8	6.6	36.5	88.09	-95.9	121.9	154.7	102.3	52.37	2.954 Normal Operations	
2,200.0	2,199.5	2,191.4	2,200.5	6.9	36.5	92.30	-97.4	119.7	154.1	101.7	52.43	2.940 Normal Operations	
2,230.4	2,229.7	2,221.7	2,230.8	6.9	36.5	93.80	-97.8	119.0	154.1	101.6	52.44	2.938 Normal Operations	
2,300.0	2,298.7	2,290.8	2,299.9	7.1	36.5	97.63	-98.4	117.4	154.4	101.9	52.48	2.943 Normal Operations	
2,400.0	2,397.5	2,389.4	2,398.5	7.4	36.6	104.06	-99.3	115.0	156.7	104.1	52.54	2.982 Normal Operations	
2,500.0	2,495.6	2,487.3	2,496.3	7.7	36.6	111.37	-100.2	112.3	162.1	109.4	52.61	3.081	
2,566.5	2,560.5	2,551.5	2,560.5	7.8	36.6	116.40	-100.8	110.5	167.9	115.3	52.65	3.189	
2,600.0	2,593.1	2,583.7	2,592.7	7.9	36.6	118.95	-101.1	109.6	171.6	118.9	52.66	3.258	
2,700.0	2,690.4	2,680.3	2,689.3	8.2	36.6	125.90	-102.2	107.1	184.7	131.9	52.76	3.500	
2,800.0	2,787.7	2,777.3	2,786.3	8.5	36.6	131.80	-103.2	105.0	200.1	147.2	52.87	3.784	
2,900.0	2,885.0	2,874.2	2,883.1	8.8	36.6	136.73	-104.0	103.4	217.2	164.2	53.00	4.099	
3,000.0	2,982.3	2,972.0	2,980.9	9.1	36.7	140.64	-104.8	103.0	235.5	182.4	53.15	4.432	
3,100.0	3,079.6	3,070.2	3,079.1	9.4	36.7	143.54	-105.3	104.7	254.3	201.0	53.30	4.772	
3,200.0	3,176.9	3,173.0	3,181.8	9.8	36.7	145.75	-105.1	108.5	272.6	219.1	53.48	5.097	
3,300.0	3,274.2	3,273.1	3,281.8	10.1	36.7	147.54	-103.7	112.9	289.8	236.2	53.64	5.404	
3,400.0	3,371.5	3,373.6	3,382.2	10.5	36.7	149.10	-101.4	117.6	306.5	252.7	53.80	5.698	
3,500.0	3,468.9	3,469.1	3,477.6	10.9	36.8	150.55	-99.3	121.5	323.5	269.6	53.95	5.997	
3,600.0	3,566.2	3,564.0	3,572.4	11.3	36.8	152.05	-97.7	123.9	341.6	287.5	54.11	6.314	
3,700.0	3,663.5	3,660.3	3,668.7	11.7	36.8	153.56	-96.4	125.3	360.6	306.3	54.28	6.643	
3,800.0	3,760.8	3,755.5	3,763.9	12.1	36.8	154.79	-96.0	127.3	380.4	325.9	54.46	6.984	
3,900.0	3,858.1	3,851.8	3,860.1	12.5	36.9	155.73	-96.4	130.5	400.8	346.1	54.66	7.333	
4,000.0	3,955.4	3,947.6	3,955.9	12.9	36.9	156.52	-97.2	133.8	421.6	366.8	54.85	7.686	
4,100.0	4,052.7	4,041.9	4,050.0	13.3	36.9	157.12	-98.8	137.6	443.1	388.1	55.04	8.051	
4,200.0	4,150.0	4,135.6	4,143.7	13.7	37.0	157.55	-101.4	142.0	465.4	410.1	55.24	8.425	
4,300.0	4,247.3	4,221.0	4,228.9	14.2	37.0	158.01	-104.9	144.6	489.5	434.1	55.37	8.840	
4,400.0	4,344.6	4,333.2	4,341.0	14.6	37.0	158.65	-107.8	147.9	512.1	456.4	55.73	9.190	
4,500.0	4,441.9	4,430.6	4,438.4	15.0	37.1	159.32	-109.2	149.6	534.4	478.4	55.98	9.546	
4,600.0	4,539.2	4,526.7	4,534.5	15.5	37.1	159.99	-110.4	150.7	556.8	500.6	56.23	9.902	
4,700.0	4,636.5	4,624.1	4,631.9	15.9	37.2	160.65	-111.7	151.5	579.4	522.9	56.50	10.255	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - WILDER FEDERAL 28 1H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 797-r.5 MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,800.0	4,733.8	4,721.9	4,729.7	16.3	37.2	161.28	-112.7	152.1	602.0	545.2	56.78	10.602	
4,900.0	4,831.1	4,819.1	4,826.8	16.8	37.3	161.86	-113.7	152.7	624.6	567.5	57.06	10.946	
5,000.0	4,928.4	4,916.5	4,924.2	17.2	37.3	162.38	-114.9	153.6	647.2	589.9	57.35	11.286	
5,100.0	5,025.8	5,012.9	5,020.7	17.7	37.3	162.88	-115.9	154.3	669.9	612.3	57.64	11.623	
5,200.0	5,123.1	5,110.4	5,118.2	18.1	37.4	163.34	-117.2	155.0	692.8	634.9	57.94	11.957	
5,300.0	5,220.4	5,209.1	5,216.8	18.6	37.4	163.77	-118.2	155.9	715.5	657.2	58.26	12.281	
5,400.0	5,317.7	5,304.9	5,312.6	19.0	37.5	164.19	-119.1	156.5	738.3	679.7	58.57	12.605	
5,500.0	5,415.0	5,401.3	5,409.0	19.5	37.5	164.58	-120.3	157.1	761.3	702.4	58.89	12.928	
5,600.0	5,512.3	5,498.7	5,506.4	20.0	37.6	164.95	-121.4	157.6	784.3	725.1	59.22	13.244	
5,700.0	5,609.6	5,596.8	5,604.5	20.4	37.6	165.30	-122.5	158.2	807.3	747.7	59.56	13.554	
5,800.0	5,706.9	5,695.0	5,702.7	20.9	37.7	165.65	-123.4	158.7	830.2	770.3	59.91	13.858	
5,900.0	5,804.2	5,792.2	5,799.9	21.3	37.8	165.97	-124.3	159.4	853.1	792.8	60.25	14.157	
6,000.0	5,901.5	5,889.6	5,897.3	21.8	37.8	166.26	-125.2	160.0	876.0	815.4	60.61	14.453	
6,100.0	5,998.8	5,988.3	5,996.0	22.3	37.9	166.58	-125.8	160.3	898.8	837.8	60.98	14.740	
6,200.0	6,096.1	6,082.5	6,090.2	22.7	37.9	166.86	-126.5	160.7	921.7	860.3	61.33	15.029	
6,300.0	6,193.4	6,179.0	6,186.6	23.2	38.0	167.11	-127.7	161.2	944.9	883.2	61.69	15.316	
6,400.0	6,290.7	6,275.9	6,283.6	23.7	38.0	167.35	-128.7	161.7	968.1	906.0	62.07	15.596	
6,500.0	6,388.0	6,372.0	6,379.6	24.1	38.1	167.59	-129.8	162.1	991.4	928.9	62.48	15.868	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - WILDER FEDERAL 28 1H - ST01 - AWP													Offset Site Error: 0.0 usft
Survey Program: 797-r.5 MWD, 8616-r.5 MWD													Offset Well Error: 0.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	10.0	3.0	0.0	133.86	-104.1	108.3	150.6				
100.0	100.0	90.5	100.5	3.1	4.1	133.78	-103.8	108.3	150.1	142.1	8.00	18.764	
200.0	200.0	191.1	201.1	3.3	8.7	133.52	-103.0	108.4	149.5	135.7	13.79	10.844	
300.0	300.0	291.6	301.6	3.5	13.3	133.06	-101.5	108.6	148.6	128.7	19.96	7.447	
400.0	400.0	392.2	402.1	3.8	17.8	132.41	-99.4	108.8	147.4	121.1	26.23	5.618	
500.0	500.0	492.6	502.6	4.0	22.4	131.55	-96.7	109.1	145.8	113.2	32.55	4.479	
600.0	600.0	593.1	603.0	4.1	27.0	130.47	-93.3	109.4	143.8	105.0	38.88	3.700	
700.0	700.0	693.5	703.3	4.3	31.5	129.15	-89.4	109.8	141.6	96.4	45.22	3.132	
800.0	800.0	793.9	803.6	4.5	36.1	127.58	-84.9	110.3	139.2	87.8	51.41	2.707 Normal Operations	
853.3	853.3	843.7	853.3	4.6	36.3	126.76	-82.9	110.9	138.5	86.8	51.63	2.682 Normal Operations, CC, ES, SF	
900.0	900.0	888.0	897.6	4.7	36.3	126.10	-81.9	112.3	139.0	87.4	51.64	2.692 Normal Operations	
1,000.0	1,000.0	985.9	995.4	4.8	36.3	125.00	-81.3	116.1	141.9	90.2	51.66	2.746 Normal Operations	
1,100.0	1,100.0	1,086.1	1,095.6	5.0	36.3	124.27	-81.6	119.8	145.0	93.3	51.72	2.804 Normal Operations	
1,200.0	1,200.0	1,186.7	1,196.1	5.2	36.3	123.84	-82.3	122.7	147.8	96.1	51.79	2.855 Normal Operations	
1,300.0	1,300.0	1,287.2	1,296.5	5.3	36.4	123.66	-83.3	125.1	150.3	98.5	51.86	2.899 Normal Operations	
1,400.0	1,400.0	1,387.8	1,397.1	5.5	36.4	123.71	-84.6	126.7	152.4	100.5	51.93	2.934 Normal Operations	
1,500.0	1,500.0	1,488.1	1,497.4	5.6	36.4	123.90	-86.0	128.0	154.2	102.2	52.00	2.966 Normal Operations	
1,600.0	1,600.0	1,588.8	1,598.1	5.8	36.4	124.21	-87.5	128.7	155.6	103.6	52.07	2.989 Normal Operations	
1,700.0	1,700.0	1,689.7	1,699.0	5.9	36.5	124.63	-89.0	128.9	156.6	104.5	52.14	3.004	
1,800.0	1,800.0	1,790.8	1,800.1	6.0	36.5	125.22	-90.5	128.1	156.9	104.7	52.21	3.004	
1,900.0	1,900.0	1,891.5	1,900.8	6.2	36.5	126.08	-92.2	126.5	156.6	104.3	52.27	2.995 Normal Operations	
2,000.0	2,000.0	1,991.9	2,001.2	6.4	36.5	85.11	-94.2	124.2	155.8	103.4	52.32	2.977 Normal Operations	
2,100.0	2,099.8	2,091.6	2,100.8	6.6	36.5	88.09	-95.9	121.9	154.7	102.3	52.37	2.954 Normal Operations	
2,200.0	2,199.5	2,191.4	2,200.5	6.9	36.5	92.30	-97.4	119.7	154.1	101.7	52.43	2.940 Normal Operations	
2,230.4	2,229.7	2,221.7	2,230.8	6.9	36.5	93.80	-97.8	119.0	154.1	101.6	52.44	2.938 Normal Operations	
2,300.0	2,298.7	2,290.8	2,299.9	7.1	36.5	97.63	-98.4	117.4	154.4	101.9	52.48	2.943 Normal Operations	
2,400.0	2,397.5	2,389.4	2,398.5	7.4	36.6	104.06	-99.3	115.0	156.7	104.1	52.54	2.982 Normal Operations	
2,500.0	2,495.6	2,487.3	2,496.3	7.7	36.6	111.37	-100.2	112.3	162.1	109.4	52.61	3.081	
2,566.5	2,560.5	2,551.5	2,560.5	7.8	36.6	116.40	-100.8	110.5	167.9	115.3	52.65	3.189	
2,600.0	2,593.1	2,583.7	2,592.7	7.9	36.6	118.95	-101.1	109.6	171.6	118.9	52.66	3.258	
2,700.0	2,690.4	2,680.3	2,689.3	8.2	36.6	125.90	-102.2	107.1	184.7	131.9	52.76	3.500	
2,800.0	2,787.7	2,777.3	2,786.3	8.5	36.6	131.80	-103.2	105.0	200.1	147.2	52.87	3.784	
2,900.0	2,885.0	2,874.2	2,883.1	8.8	36.6	136.73	-104.0	103.4	217.2	164.2	53.00	4.099	
3,000.0	2,982.3	2,972.0	2,980.9	9.1	36.7	140.64	-104.8	103.0	235.5	182.4	53.15	4.432	
3,100.0	3,079.6	3,070.2	3,079.1	9.4	36.7	143.54	-105.3	104.7	254.3	201.0	53.30	4.772	
3,200.0	3,176.9	3,173.0	3,181.8	9.8	36.7	145.75	-105.1	108.5	272.6	219.1	53.48	5.097	
3,300.0	3,274.2	3,273.1	3,281.8	10.1	36.7	147.54	-103.7	112.9	289.8	236.2	53.64	5.404	
3,400.0	3,371.5	3,373.6	3,382.2	10.5	36.7	149.10	-101.4	117.6	306.5	252.7	53.80	5.698	
3,500.0	3,468.9	3,469.1	3,477.6	10.9	36.8	150.55	-99.3	121.5	323.5	269.6	53.95	5.997	
3,600.0	3,566.2	3,564.0	3,572.4	11.3	36.8	152.05	-97.7	123.9	341.6	287.5	54.11	6.314	
3,700.0	3,663.5	3,660.3	3,668.7	11.7	36.8	153.56	-96.4	125.3	360.6	306.3	54.28	6.643	
3,800.0	3,760.8	3,755.5	3,763.9	12.1	36.8	154.79	-96.0	127.3	380.4	325.9	54.46	6.984	
3,900.0	3,858.1	3,851.8	3,860.1	12.5	36.9	155.73	-96.4	130.5	400.8	346.1	54.66	7.333	
4,000.0	3,955.4	3,947.6	3,955.9	12.9	36.9	156.52	-97.2	133.8	421.6	366.8	54.85	7.686	
4,100.0	4,052.7	4,041.9	4,050.0	13.3	36.9	157.12	-98.8	137.6	443.1	388.1	55.04	8.051	
4,200.0	4,150.0	4,135.6	4,143.7	13.7	37.0	157.55	-101.4	142.0	465.4	410.1	55.24	8.425	
4,300.0	4,247.3	4,221.0	4,228.9	14.2	37.0	158.01	-104.9	144.6	489.5	434.1	55.37	8.840	
4,400.0	4,344.6	4,333.2	4,341.0	14.6	37.0	158.65	-107.8	147.9	512.1	456.4	55.73	9.190	
4,500.0	4,441.9	4,430.6	4,438.4	15.0	37.1	159.32	-109.2	149.6	534.4	478.5	55.87	9.565	
4,600.0	4,539.2	4,526.7	4,534.5	15.5	37.1	159.99	-110.4	150.7	556.8	500.7	56.12	9.922	
4,700.0	4,636.5	4,624.1	4,631.9	15.9	37.2	160.65	-111.7	151.5	579.4	523.0	56.39	10.275	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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: ZIA HILLS UNIT 2832 PROJECT - WILDER FEDERAL 28 1H - ST01 - AWP												Offset Site Error:	0.0 usft
Survey Program: 797-r.5 MWD, 8616-r.5 MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,800.0	4,733.8	4,721.9	4,729.7	16.3	37.2	161.28	-112.7	152.1	602.0	545.3	56.67	10.623	
4,900.0	4,831.1	4,819.1	4,826.8	16.8	37.3	161.86	-113.7	152.7	624.6	567.6	56.95	10.967	
5,000.0	4,928.4	4,916.5	4,924.2	17.2	37.3	162.38	-114.9	153.6	647.2	590.0	57.24	11.307	
5,100.0	5,025.8	5,012.9	5,020.7	17.7	37.3	162.88	-115.9	154.3	669.9	612.4	57.53	11.645	
5,200.0	5,123.1	5,110.4	5,118.2	18.1	37.4	163.34	-117.2	155.0	692.8	635.0	57.83	11.980	
5,300.0	5,220.4	5,209.1	5,216.8	18.6	37.4	163.77	-118.2	155.9	715.5	657.3	58.15	12.304	
5,400.0	5,317.7	5,304.9	5,312.6	19.0	37.5	164.19	-119.1	156.5	738.3	679.8	58.46	12.629	
5,500.0	5,415.0	5,401.3	5,409.0	19.5	37.5	164.58	-120.3	157.1	761.3	702.5	58.78	12.952	
5,600.0	5,512.3	5,498.7	5,506.4	20.0	37.6	164.95	-121.4	157.6	784.3	725.2	59.11	13.269	
5,700.0	5,609.6	5,596.8	5,604.5	20.4	37.6	165.30	-122.5	158.2	807.3	747.8	59.45	13.579	
5,800.0	5,706.9	5,695.0	5,702.7	20.9	37.7	165.65	-123.4	158.7	830.2	770.4	59.80	13.883	
5,900.0	5,804.2	5,792.2	5,799.9	21.3	37.8	165.97	-124.3	159.4	853.1	792.9	60.15	14.183	
6,000.0	5,901.5	5,889.6	5,897.3	21.8	37.8	166.26	-125.2	160.0	876.0	815.5	60.50	14.479	
6,100.0	5,998.8	5,988.3	5,996.0	22.3	37.9	166.58	-125.8	160.3	898.8	837.9	60.87	14.766	
6,200.0	6,096.1	6,082.5	6,090.2	22.7	37.9	166.86	-126.5	160.7	921.7	860.4	61.22	15.055	
6,300.0	6,193.4	6,179.0	6,186.6	23.2	38.0	167.11	-127.7	161.2	944.9	883.3	61.59	15.343	
6,400.0	6,290.7	6,275.9	6,283.6	23.7	38.0	167.35	-128.7	161.7	968.1	906.1	61.96	15.623	
6,500.0	6,388.0	6,372.0	6,379.6	24.1	38.1	167.59	-129.8	162.1	991.4	929.0	62.37	15.895	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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 @ 3171.0usft

Offset Depths are relative to Offset Datum

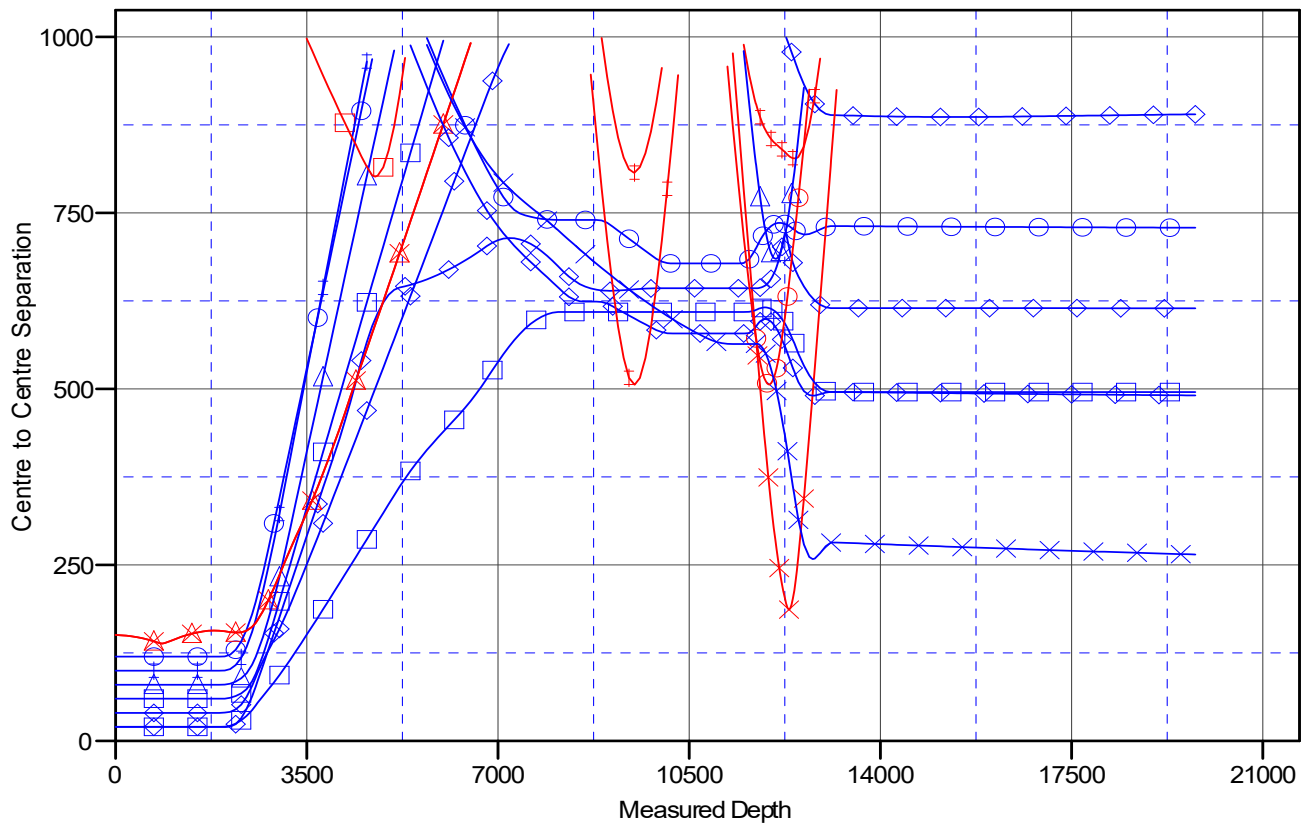
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _ZIA HILLS UNIT 2832 WC 712H

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

Grid Convergence at Surface is: 0.35°

Ladder Plot



LEGEND

BATTLE AXE 27 FEDERAL COM 16H -JC, Original Hole, Staking Design 1 V0
_ZIA HILLS UNIT 2832 WC 710H OWB, PWP0 V0
_ZIA HILLS UNIT 2832 WC 708H OWB, PWP0 V0
RED HILLS WEST 21' FEDERAL COM 1H, OWB, AWP V0
RED HILLS WEST 21' W1AP FEDERAL COM 002H, OWB, AWP V0
_ZIA HILLS UNIT 2832 WC 709H OWB, PWP0 V0
_ZIA HILLS UNIT 2832 WC 802H OWB, PWP0 V0

_ZIA HILLS UNIT 2832 WC 803H OWB, PWP0 V0
_ZIA HILLS UNIT 2832 WC 707H OWB, PWP0 V0
PAYNE FEDERAL 1_PA, OWB, AWP V0
RED HILLS WEST 21' W0AP FEDERAL COM 003H, OWB, AWP V0
_ZIA HILLS UNIT 2832 WC 711H OWB, PWP0 V0
WILDER FEDERAL 28 1H, OWB, AWP V0
WILDER FEDERAL 28 1H, STD, AWP V0

Red Hills West 22 W1DM Fed Com 004C, Original Hole, Plan #1 V0
BATTLE AXE 27 FEDERAL COM 17H -JC, Original Hole, Staking Design 1 V0
Red Hills West 22 W0DM Com 004H, Original Hole, Original Hole V0
Red Hills West 22 Fed Com 001H Original Hole, Original Hole V0
BATTLE AXE 27 FEDERAL COM 18H -JC, Original Hole, Staking Design 1 V0

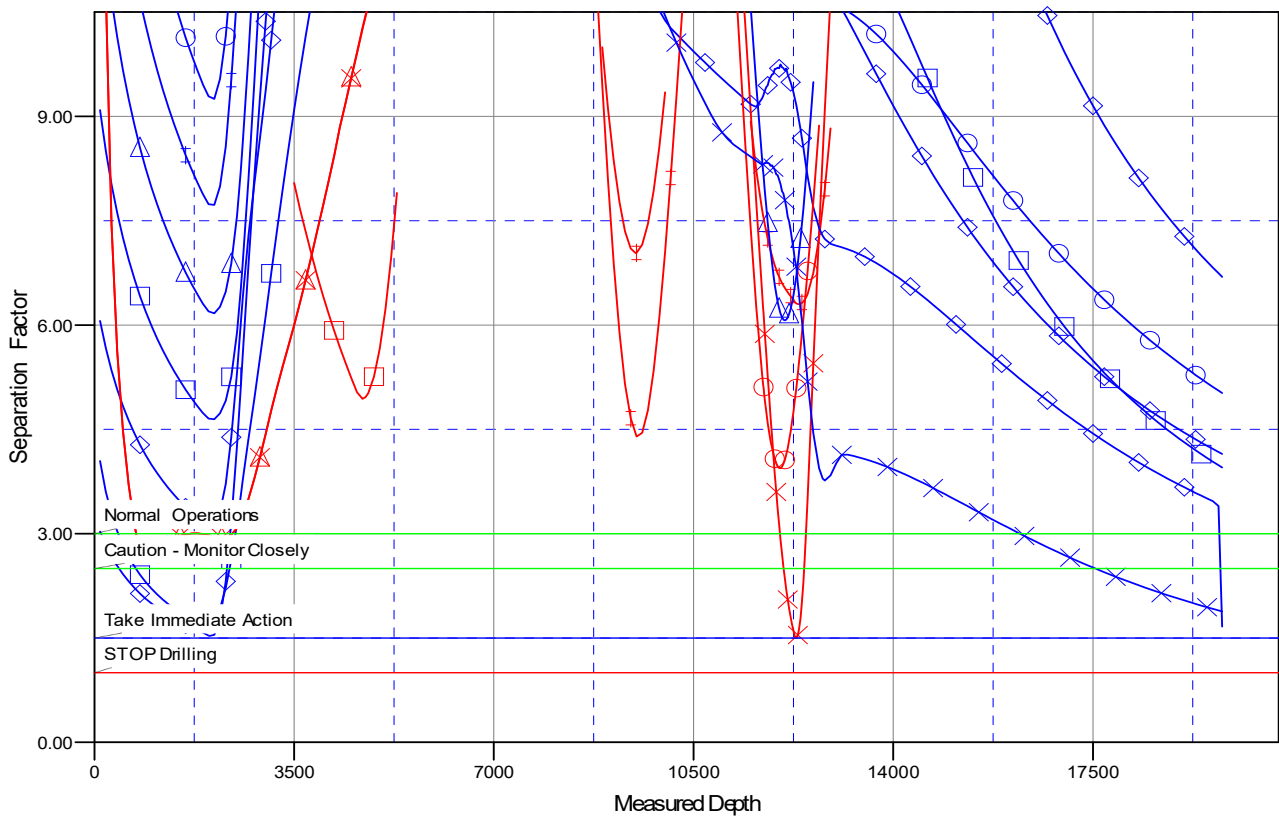
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well _ZIA HILLS UNIT 2832 WC 712H
Project:	ZIA HILLS UNIT AREA	TVD Reference:	KB @ 3171.0usft
Reference Site:	ZIA HILLS UNIT 2832 PROJECT	MD Reference:	KB @ 3171.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ZIA HILLS UNIT 2832 WC 712H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 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 @ 3171.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _ZIA HILLS UNIT 2832 WC 712H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.35°

Separation Factor Plot**LEGEND**

BATTLE AXE 27 FEDERAL COM 16H - JC, Original Hole, Staking Design 1 V0	_ZIA HILLS UNIT 2832 WC 803H OWB, PWP0 V0	Red Hills West 22 W1DM Fed Com 004C, Original Hole, Plan #1 V0
_ZIA HILLS UNIT 2832 WC 710H OWB, PWP0 V0	_ZIA HILLS UNIT 2832 WC 707H OWB, PWP0 V0	BATTLE AXE 27 FEDERAL COM 17H - JC, Original Hole, Staking Design 1 V0
_ZIA HILLS UNIT 2832 WC 708H OWB, PWP0 V0	PAYNE FEDERAL 1_PA, OWB, AWP V0	Red Hills West 22 W0DM Com 004H, Original Hole, Original Hole V0
RED HILLS WEST 21' FEDERAL COM 1H, OWB, AWP V0	RED HILLS WEST 21 W0AP FEDERAL COM 003H, OWB, AWP V0	Red Hills West 22 Fed Com 001H, Original Hole, Original Hole V0
RED HILLS WEST 21 W1AP FEDERAL COM 002H, OWB, AWP V0	_ZIA HILLS UNIT 2832 WC 711H OWB, PWP0 V0	BATTLE AXE 27 FEDERAL COM 18H - JC, Original Hole, Staking Design 1 V0
_ZIA HILLS UNIT 2832 WC 709H OWB, PWP0 V0	WILDER FEDERAL 28 1H, OWB, AWP V0	
_ZIA HILLS UNIT 2832 WC 802H OWB, PWP0 V0		

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

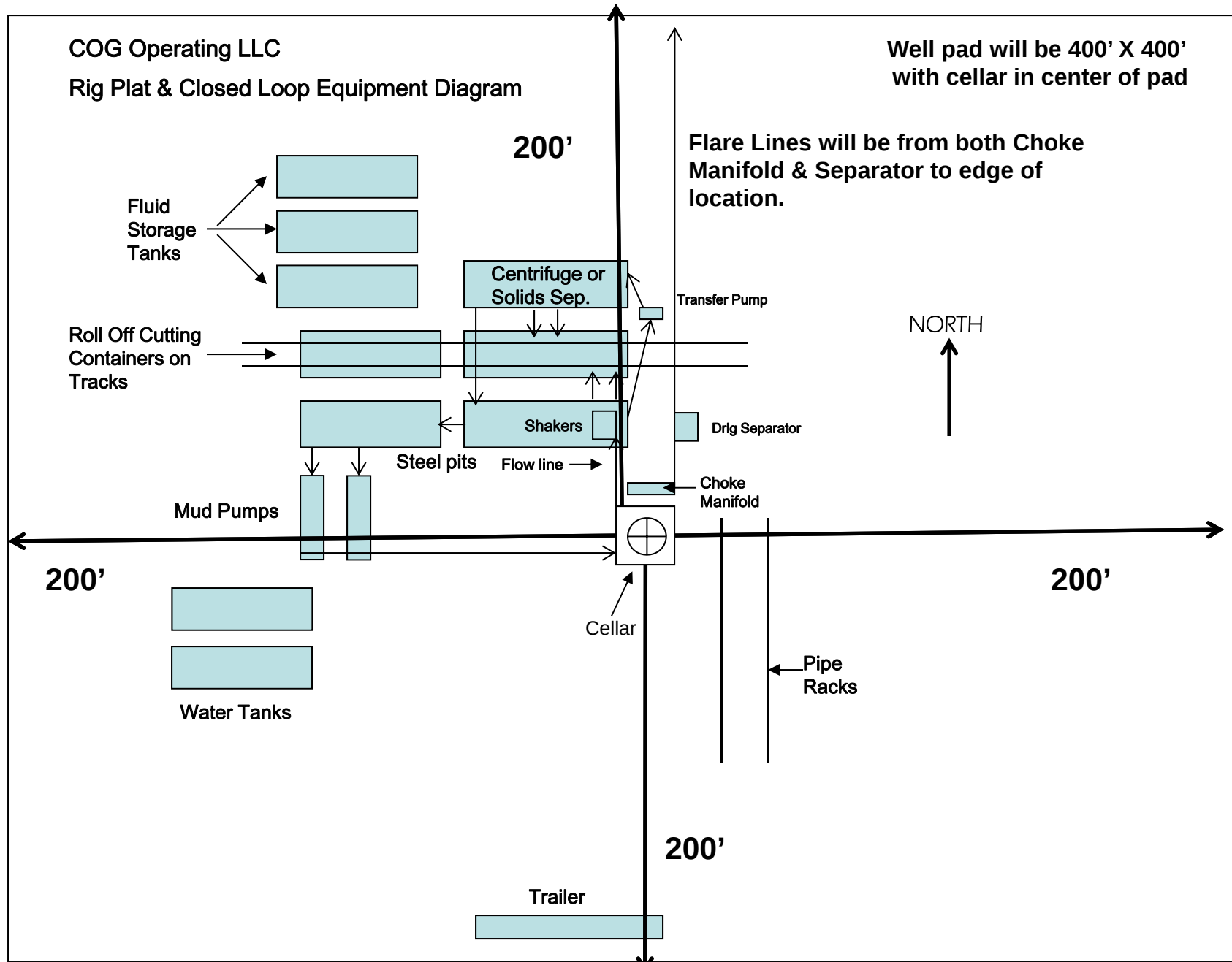


Exhibit 1

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

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

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: ConocoPhillips Company

OGRID: 217817

Date: 01/28/2025

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Zia Hills Unit 2832 WC 707H	30-025-	A-28-26S-32E	447 FNL & 1024 FEL	± 742	± 1956	± 1707
Zia Hills Unit 2832 WC 708H	30-025-	A-28-26S-32E	458 FNL & 1008 FEL	± 742	± 1956	± 1707
Zia Hills Unit 2832 WC 709H	30-025-	A-28-26S-32E	470 FNL & 991 FEL	± 742	± 1956	± 1707
Zia Hills Unit 2832 WC 710H	30-025-	A-28-26S-32E	482 FNL & 975 FEL	± 742	± 1956	± 1707
Zia Hills Unit 2832 WC 711H	30-025-	A-28-26S-32E	494 FNL & 959 FEL	± 742	± 1956	± 1707
Zia Hills Unit 2832 WC 712H	30-025-	A-28-26S-32E	505 FNL & 943 FEL	± 742	± 1956	± 1707
Zia Hills Unit 2832 WC 802H	30-025-	A-28-26S-32E	435 FNL & 1040 FEL	± 742	± 1956	± 1707
Zia Hills Unit 2832 WC 803H	30-025-	A-28-26S-32E	517 FNL & 927 FEL	± 742	± 1956	± 1707

IV. Central Delivery Point Name: Zia Hills Unit CF2 Facility NESW 24-26S-31E [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Zia Hills Unit 2832 WC	Pending	± 2/1/2026	± 25 days from spud	TBD	TBD	TBD
707H, 708H, 709H, 710H, 711H, 712H, 802H, 803H						

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

If Operator checks this box, Operator will select one of the following:

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

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

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

Section 4 - Notices

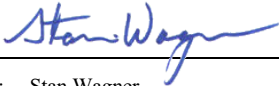
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Stan Wagner
Title: Regulatory Advisor
E-mail Address: stan.s.wagner@conocophillips.com
Date: 01/30/2025
Phone: 432-253-9685
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

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

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

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

C. Completion Operations

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

D. Venting and flaring during production operations

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

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

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

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

F. Measurement of vented and flared natural gas.

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

VIII. Best Management Practices

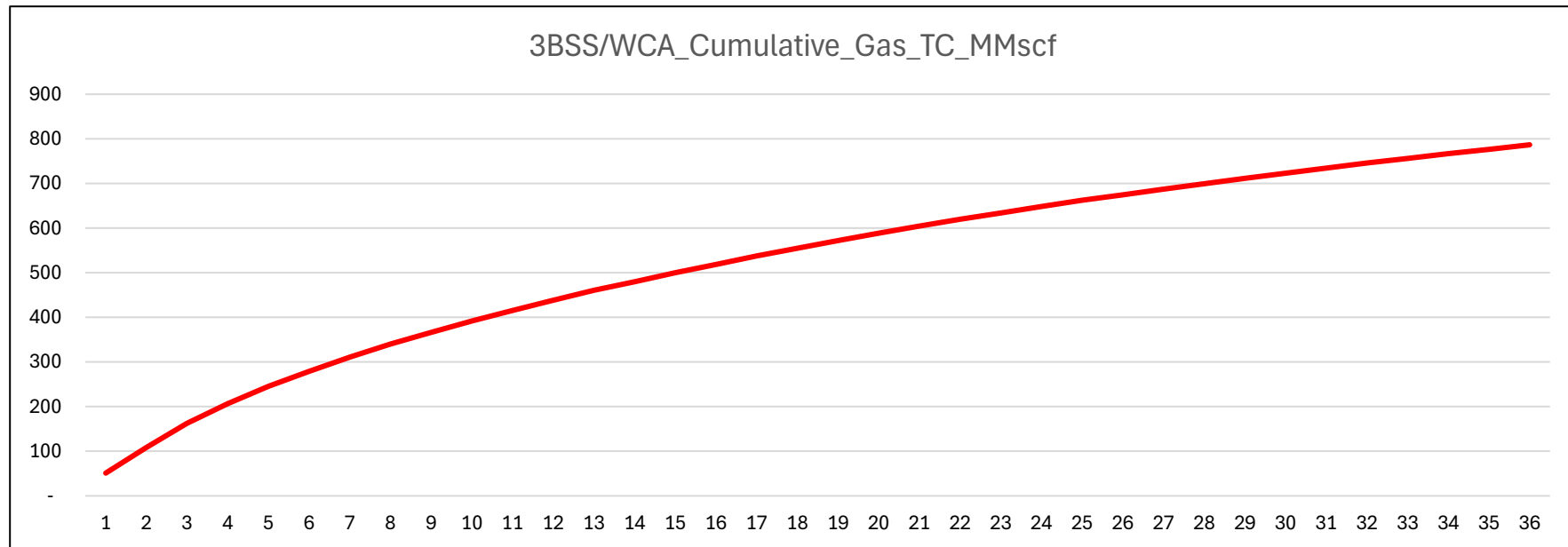
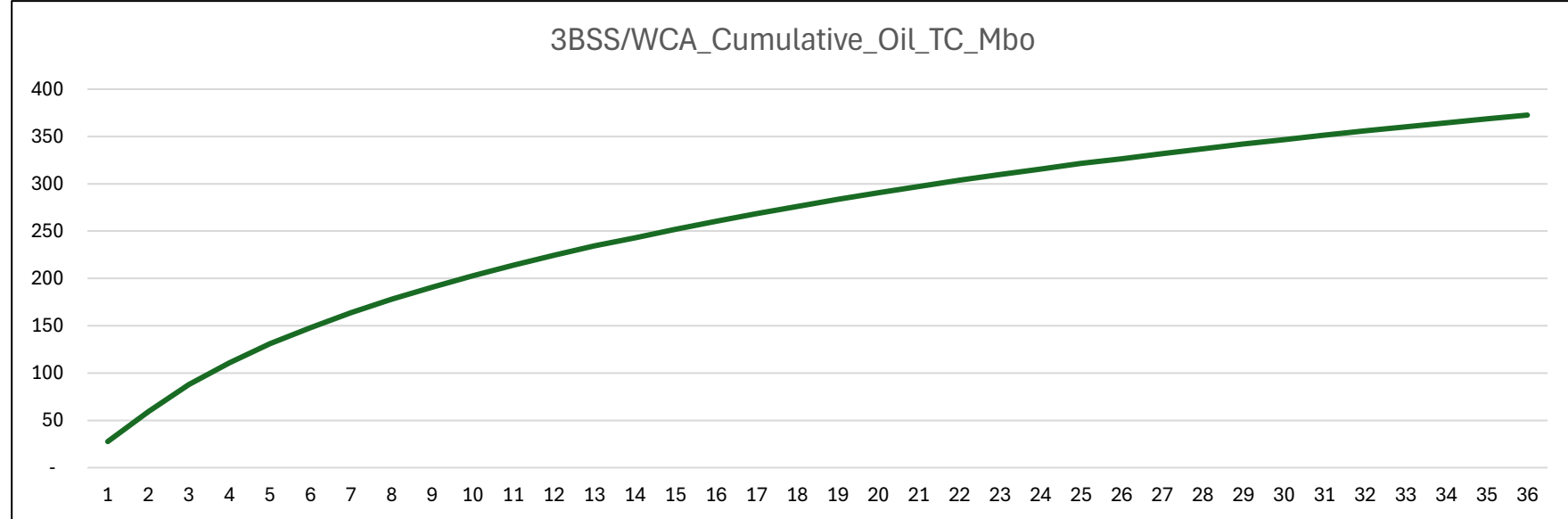
- Operator will curtail or shut in production, within reasonable limits, during upset conditions to minimize venting and flaring.
- When feasible, Operator will use equipment to capture gas that would otherwise be vented or flared.
- During completions and production operations Operator will minimize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

Waste Minimization Plan

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

- (1) The anticipated initial oil production rate from the oil well and the anticipated production decline over the first 3 years of production.
 - a. See attached Anticipated Production & Decline Curve
- (2) The anticipated initial oil-well gas production rate from the oil well and the anticipated production decline over the first 3 years of production.
 - a. See attached Anticipated Production & Decline Curve
- (3) Certification that the operator has a valid, executed gas sales contract to sell to a purchaser 100 percent of the produced oil-well gas, less gas anticipated for use on-lease pursuant to 43 CFR subpart 3178.
 - a. See attached NMOCD – Natural Gas Management Plan
- (4) Any other information demonstrating the operator's plans to avoid the waste of gas production from any source, including, as appropriate, from pneumatic equipment, storage tanks, and leaks.
 - a. This location will comply with NSPS OOOOb which will include reduced associated gas flaring, non-emitting pneumatic equipment, storage tanks that are controlled and a rigorous leak detection and repair program. In addition, this facility complies with 20.2.50 NMAC (Ozone Precursor Pollutants) which also imposes standards on pneumatic equipment, tank controls, and leak detection and repair. Finally, this facility must comply with 19.15.27 NMAC (Venting and Flaring of Natural Gas) which significantly reduces instances of flaring.

Anticipated Production Decline Curve



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	ZIA HILLS UNIT 2832 WC 712H
LOCATION:	Section 28, T.26 S., R.32 E., NMP
COUNTY:	Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

Primary Casing Design:

1. The 13-3/8 inch surface casing shall be set at approximately **820 feet** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature

survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The **9-5/8** inch intermediate casing shall be set at approximately **4418 feet per BLM Geologist. Keep casing full during run for collapse safety factor.** The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.
 - ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
3. **Keep casing full during run for collapse safety factor.** The minimum required fill of cement behind the **7-5/8** inch intermediate liner is:
 - Cement should tie-back **100 feet** into the previous casing. Operator shall provide method of verification.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
 - **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Unit Wells

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

Commercial Well Determination

A commercial well determination shall be submitted after production has been established for at least six months. (This is not necessary for secondary recovery unit wells)

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

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.

- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Casing Clearance:

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

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

GENERAL REQUIREMENTS

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

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

☒ Eddy County

EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

BLM_NM_CFO_DrillingNotifications@BLM.GOV

(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,

(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

- a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
- b. When the operator proposes to set surface casing with Spudder Rig
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review.

These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.
 - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the

cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

- iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.)

created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

JS 7/1/2025

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

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

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

ACKNOWLEDGMENTS

Action 520277

ACKNOWLEDGMENTS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 520277
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☒	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
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State of New Mexico
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Santa Fe, NM 87505

CONDITIONS

Action 520277

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 520277
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
stanwagner	Cement is required to circulate on both surface and intermediate1 strings of casing.	10/27/2025
stanwagner	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	10/27/2025
jeffrey.harrison	Prior to production of this well a change to the well name/number is required to comply with the OCD well naming convention.	12/19/2025
jeffrey.harrison	Any string of casing or liner that is not circulated to surface must have a minimum of 200' of cement tie-back into the previous string of casing.	12/19/2025
jeffrey.harrison	Administrative order required for non-standard spacing unit prior to production.	12/19/2025
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.	12/19/2025
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.	12/19/2025
jeffrey.harrison	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	12/19/2025
jeffrey.harrison	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	12/19/2025