

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30-015-54443
3a. Address	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.
2. A Drilling Plan.
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). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
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: SESW / 445 FSL / 1460 FWL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.0221283 / LONG: -103.7354612 (TVD: 0 feet, MD: 0 feet)

PPP: SESW / 100 FSL / 2437 FWL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.021202 / LONG: -103.7323043 (TVD: 11456 feet, MD: 11597 feet)

BHL: NESW / 2590 FSL / 2310 FWL / TWSP: 26S / RANGE: 31E / SECTION: 12 / LAT: 32.0573179 / LONG: -103.7328341 (TVD: 11604 feet, MD: 24629 feet)

BLM Point of Contact

Name: JANET D ESTES

Title: ADJUDICATOR

Phone: (575) 234-6233

Email: JESTES@BLM.GOV

District I

1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III

1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 API Number 30-015- 54443	2 Pool Code 98081	3 Pool Name Zia Hills; Wolfcamp
4 Property Code 335043	5 Property Name ZIA HILLS UNIT 2431 WC	6 Well Number 706H
7 OGRID No. 217817	8 Operator Name CONOCOPHILLIPS COMPANY	9 Elevation 3176.13'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	24	26-S	31-E		445'	SOUTH	1460'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	12	26-S	31-E		2590'	SOUTH	2310'	WEST	EDDY

12 Dedicated Acres 800	13 Joint or Infill Infill	14 Consolidation Code Unit	15 Order No. R-20080
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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.

16 Unit Boundary SURFACE HOLE LOCATION (SHL) NEW MEXICO EAST - NAD 83 X=726627.68 LAT.= 32.02212830° N Y=372301.73 LONG.= 103.73546123° W 445' FSL, 1460' FWL - SECTION 24 FIRST TAKE POINT (FTP) NEW MEXICO EAST - NAD 83 X=727607.92 LAT.= 32.02120209° N Y=371970.23 LONG.= 103.73230438° W 100' FSL, 2437' FWL - SECTION 24 LAST TAKE POINT (LTP) NEW MEXICO EAST - NAD 83 X=727370.96 LAT.= 32.05718052° N Y=385057.52 LONG.= 103.73283416° W 2540' FSL, 2310' FWL - SECTION 12 BOTTOM HOLE LOCATION (BHL) NEW MEXICO EAST - NAD 83 X=727370.70 LAT.= 32.05731797° N Y=385107.52 LONG.= 103.73283411° W 2590' FNL, 2310' FWL - SECTION 12	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Stan Wagner</i> 11/14/22 Signature Date Stan Wagner Printed Name E-mail Address 18 SURVEYOR CERTIFICATION 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. <i>Charles L. Jurica</i> 10/31/2022 Date of Survey Signature and Seal of Professional Surveyor: <i>Charles L. Jurica</i> Certificate Number
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State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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: 11/08/2022

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 2431 WC 701H	30-015-	M-24-26S-31E	445 FSL & 1310 FWL	± 695	± 2728	± 1621
Zia Hills Unit 2431 WC 702H	30-015-	N-24-26S-31E	445 FSL & 1340 FWL	± 572	± 2246	± 1335
Zia Hills Unit 2431 WC 703H	30-015-	N-24-26S-31E	445 FSL & 1370 FWL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 704H	30-015-	N-24-26S-31E	445 FSL & 1400 FWL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 705H	30-015-	N-24-26S-31E	445 FSL & 1430 FWL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 706H	30-015-	N-24-26S-31E	445 FSL & 1460 FWL	± 818	± 3209	± 1907

IV. Central Delivery Point Name: Zia Hills Unit 2431 WC East Facility SWSW 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 2431 WC	Pending	± 2/1/2024	± 25 days from spud	TBD	TBD	TBD
701H, 702H, 703H, 704H, 705H, 706H						

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

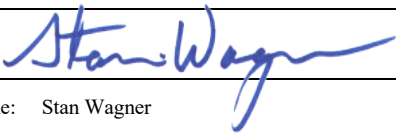
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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: 11/08/2022
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

ConocoPhillips Company - Zia Hills Unit 2431 WC 706H

1. Geologic Formations

TVD of target	11,604' EOL	Pilot hole depth	NA
MD at TD:	24,629'	Deepest expected fresh water:	317'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1038	Water	
Top of Salt	1488	Salt	
Base of Salt	3968	Salt	
Lamar	4190	Salt Water	
Bell Canyon	4227	Salt Water	
Cherry Canyon	5106	Oil/Gas	
Brushy Canyon	6520	Oil/Gas	
Bone Spring Lime	8164	Oil/Gas	
1st Bone Spring Sand	9201	Oil/Gas	
2nd Bone Spring Sand	9860	Oil/Gas	
3rd Bone Spring Sand	11041	Oil/Gas	
Wolfcamp	11402	Target	
Wolfcamp A	11623	Not Penetrated	
Wolfcamp B	11920	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								
14.75"	0	1350	10.75"	45.5	J55	BTC	3.38	1.11	11.64	12.96
9.875"	0	8500	7.625"	29.7	L80-ICY	BTC	1.45	1.15	2.88	2.90
8.750"	8500	10968	7.625"	29.7	P110-ICY	W513	1.40	1.73	3.28	1.97
6.75"	0	10468	5.5"	23	P110-CY	BTC	2.14	2.52	3.03	3.03
6.75"	10468	24,629	5.5"	23	P110-CY	W441	1.93	2.28	2.73	2.48
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 Onshore Oil and Gas Order #2 III.B.1.h

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 2431 WC 706H

	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 2431 WC 706H

3. Cementing Program

Casing	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	644	12.8	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
Inter. Stage 1	800	10.3	3.3	22	24	Halliburton tunded light
	250	14.8	1.35	6.6	8	Tail: Class H
Prod	656	12.5	1.48	10.7	72	Lead: 50:50:10 H Blend
	1192	13.2	1.34	5.7	19	Tail: 50:50:2 Class H Blend

If losses are encountered in the intermediate section a DV/ECP tool will be run ~50' above the Lamar Lime top, cement will be adjusted accordingly if this contingency is necessary.

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%
Production	10,468'	35% OH in Lateral (KOP to EOL)

ConocoPhillips Company - Zia Hills Unit 2431 WC 706H

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
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 Onshore Order 2 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 Onshore Oil and Gas Order #2 III.B.1.i.
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 Onshore Order #2 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 2431 WC 706H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9.2	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 12.5	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
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

ConocoPhillips Company - Zia Hills Unit 2431 WC 706H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7545 psi at 11604' TVD
Abnormal Temperature	NO 170 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 Onshore Oil and Gas Order #6. 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

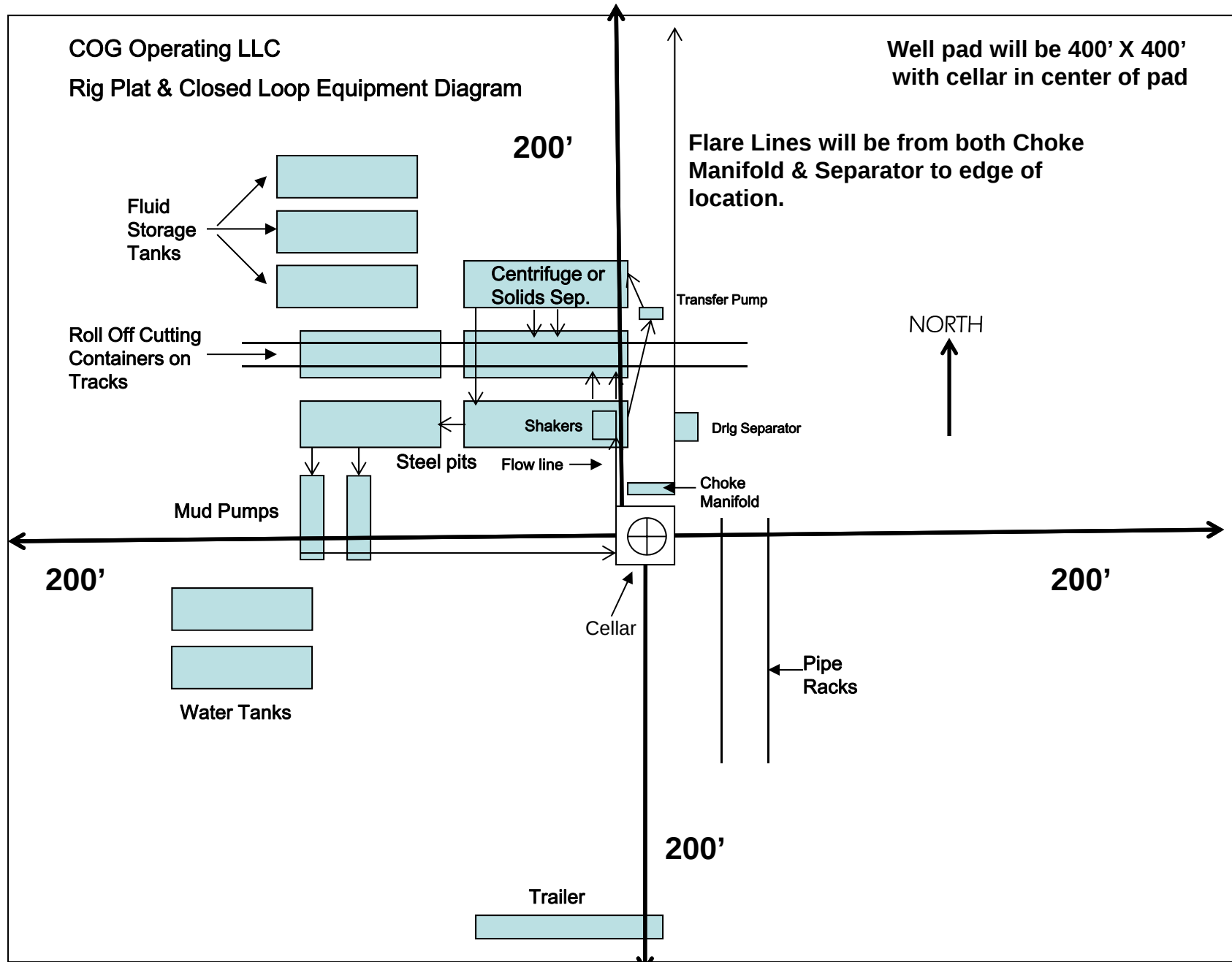


Exhibit 1

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

DELAWARE BASIN EAST

**BULLDOG PROSPECT (NM-E)
ZIA HILLS UNIT 2431 PROJECT
ZIA HILLS UNIT 2431 WC #706H**

**OWB
PWP0**

Anticollision Report

14 November, 2022

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central 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:	Maximum centre distance of 1,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	11/7/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	1,000.0	PWP0 (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp-Initilzd Cont. rev.5
1,000.0	11,118.0	PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction rev.5
11,118.0	24,586.9	PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction rev.5

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
ZIA HILLS UNIT 1932 PROJECT						
SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AW						Out of range
ZIA HILLS UNIT 2331 PROJECT						
GOLDEN SPUR FEDERAL #1H (P&A) - ST01 - AWP	9,100.0	13,450.0	739.5	646.5	7.955	SF
GOLDEN SPUR FEDERAL #1H (P&A) - ST01 - AWP	9,111.2	13,450.0	739.4	646.5	7.958	CC, ES
SHETLAND 11 FEDERAL #734H - OWB - PWP0						Out of range
ZIA HILLS UNIT 2331 WC #713H - OWB - PWP0						Out of range
ZIA HILLS UNIT 2431 PROJECT						
SNAPPING 12 1 FEDERAL #332H - OWB - AWP	24,629.1	11,361.4	597.9	468.8	4.629	CC, ES, SF
SNAPPING 12 1 FEDERAL #533H - OWB - AWP						Out of range
SNAPPING 12 1 FEDERAL #621H - OWB - AWP						Out of range
SNAPPING 12 1 FEDERAL #711H - OWB - AWP	24,629.1	11,628.4	937.3	793.3	6.506	CC, ES, SF
SNAPPING 12 1 FEDERAL #712H - OWB - AWP	24,629.1	11,667.6	139.3	16.2	1.132	Advise and Monitor, CC, ES,
ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0	1,000.0	999.1	150.0	142.0	18.778	CC, ES
ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0	1,200.0	1,198.9	156.5	147.9	18.064	SF
ZIA HILLS UNIT 2431 WC #702H - OWB - PWP0	1,000.0	999.5	120.1	112.1	15.026	CC, ES
ZIA HILLS UNIT 2431 WC #702H - OWB - PWP0	1,100.0	1,096.1	123.0	114.7	14.730	SF
ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0	1,000.0	999.4	90.2	82.2	11.289	CC, ES
ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0	1,100.0	1,098.1	92.5	84.2	11.150	SF
ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0	1,000.0	999.8	60.1	52.0	7.431	CC, ES
ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0	24,629.1	24,575.2	773.4	568.6	3.777	SF
ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0	1,002.8	1,003.1	30.4	22.3	3.746	CC
ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0	1,200.0	1,202.1	31.0	21.9	3.419	ES
ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0	24,629.1	24,771.6	410.5	201.9	1.968	Advise and Monitor, 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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

TD 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 1932 PROJECT						
SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AW	24,629.1	13,715.7				Out of Range @TD
ZIA HILLS UNIT 2331 PROJECT						
GOLDEN SPUR FEDERAL #1H (P&A) - ST01 - AWP	24,629.1	13,450.0				Out of Range @TD
SHETLAND 11 FEDERAL #734H - OWB - PWP0	24,629.1	14,436.5				Out of Range @TD
ZIA HILLS UNIT 2331 WC #713H - OWB - PWP0	24,629.1	21,875.5				Out of Range @TD
ZIA HILLS UNIT 2431 PROJECT						
SNAPPING 12 1 FEDERAL #332H - OWB - AWP	24,629.1	11,361.4	597.9	468.8	4.629	CC, ES, SF
SNAPPING 12 1 FEDERAL #533H - OWB - AWP	24,629.1	9,327.0				Out of Range @TD
SNAPPING 12 1 FEDERAL #621H - OWB - AWP	24,629.1	11,498.0				Out of Range @TD
SNAPPING 12 1 FEDERAL #711H - OWB - AWP	24,629.1	11,628.4	937.3	793.3	6.506	CC, ES, SF
SNAPPING 12 1 FEDERAL #712H - OWB - AWP	24,629.1	11,667.6	139.3	16.2	1.132	Shut in Producers, CC, ES, SF
ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0	24,629.1	24,793.0				Out of Range @TD
ZIA HILLS UNIT 2431 WC #702H - OWB - PWP0	24,629.1	24,605.0				Out of Range @TD
ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0	24,629.1	24,738.4				Out of Range @TD
ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0	24,629.1	24,575.2	773.4	568.6	3.777	SF
ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0	24,629.1	24,771.6	410.5	201.9	1.968	Advise and Monitor, SF

Offset Design: ZIA HILLS UNIT 2331 PROJECT - GOLDEN SPUR FEDERAL #1H (P&A) - ST01 - AWP													Offset Site Error:	0.0 usft
Survey Program:		100-SDI_KPR_WL_NS-CT, 8346-MWD - OWSG R1					Rule Assigned:			Offset Well Error:	3.0 usft			
Reference	Offset	Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Minimum Separation		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)	Separation Factor			
8,500.0	8,412.7	13,450.0	9,023.9	32.5	79.8	-121.30	-760.3	348.1	959.3	878.0	81.37	11.790		
8,600.0	8,512.7	13,450.0	9,023.9	32.5	79.8	-121.30	-760.3	348.1	898.9	814.8	84.16	10.681		
8,700.0	8,612.7	13,450.0	9,023.9	32.5	79.8	-121.30	-760.3	348.1	846.1	759.2	86.92	9.734		
8,800.0	8,712.7	13,450.0	9,023.9	32.5	79.8	-121.30	-760.3	348.1	802.2	712.8	89.44	8.969		
8,900.0	8,812.7	13,450.0	9,023.9	32.5	79.8	-121.30	-760.3	348.1	769.0	677.5	91.47	8.407		
9,000.0	8,912.7	13,450.0	9,023.9	32.6	79.8	-121.30	-760.3	348.1	747.7	655.0	92.71	8.065		
9,100.0	9,012.7	13,450.0	9,023.9	32.6	79.8	-121.30	-760.3	348.1	739.5	646.5	92.96	7.955	SF	
9,111.2	9,023.9	13,450.0	9,023.9	32.6	79.8	-121.30	-760.3	348.1	739.4	646.5	92.92	7.958	CC, ES	
9,200.0	9,112.7	13,450.0	9,023.9	32.6	79.8	-121.30	-760.3	348.1	744.7	652.6	92.15	8.082		
9,300.0	9,212.7	13,450.0	9,023.9	32.6	79.8	-121.30	-760.3	348.1	763.1	672.7	90.41	8.441		
9,400.0	9,312.7	13,450.0	9,023.9	32.6	79.8	-121.30	-760.3	348.1	793.8	705.8	88.00	9.020		
9,500.0	9,412.7	13,450.0	9,023.9	32.7	79.8	-121.30	-760.3	348.1	835.4	750.1	85.25	9.799		
9,600.0	9,512.7	13,450.0	9,023.9	32.7	79.8	-121.30	-760.3	348.1	886.4	803.9	82.44	10.752		
9,700.0	9,612.7	13,450.0	9,023.9	32.7	79.8	-121.30	-760.3	348.1	945.2	865.4	79.76	11.851		

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - SNAPPING 12 1 FEDERAL #332H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 179-MWD - OWSG R1													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)	Minimum Separation (usft)	Separation Factor		
24,100.0	11,604.0	11,239.0	11,156.2	100.6	39.2	-40.60	12,997.3	355.7	936.7	831.3	105.41	8.886		
24,200.0	11,604.0	11,239.0	11,156.2	101.3	39.2	-40.60	12,997.3	355.7	861.3	751.4	109.91	7.837		
24,300.0	11,604.0	11,239.0	11,156.2	102.0	39.2	-40.60	12,997.3	355.7	791.4	676.5	114.88	6.889		
24,400.0	11,604.0	11,288.7	11,196.6	102.7	39.3	-43.51	13,026.1	352.1	724.0	605.5	118.44	6.113		
24,500.0	11,604.0	11,335.0	11,230.3	103.5	39.4	-46.20	13,057.6	348.6	665.0	542.6	122.41	5.432		
24,586.9	11,604.0	11,335.0	11,230.3	104.1	39.4	-46.20	13,057.6	348.6	618.3	490.7	127.62	4.845		
24,600.0	11,604.0	11,335.0	11,230.3	104.2	39.4	-46.20	13,057.6	348.6	612.0	483.6	128.38	4.767		
24,629.1	11,604.0	11,361.4	11,247.9	104.4	39.5	-47.69	13,077.2	346.8	597.9	468.8	129.16	4.629 CC, ES, SF		

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

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Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - SNAPPING 12 1 FEDERAL #711H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 180-MWD - OWSG R1												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)	Minimum Separation (usft)	Separation Factor	
24,400.0	11,604.0	11,566.7	11,455.4	102.7	41.4	-80.83	12,912.1	-179.7	996.8	858.4	138.33	7.206	
24,500.0	11,604.0	11,594.0	11,479.9	103.5	41.5	-82.32	12,924.2	-179.6	965.4	824.2	141.21	6.837	
24,586.9	11,604.0	11,615.2	11,498.4	104.1	41.5	-83.46	12,934.5	-179.6	944.9	801.7	143.25	6.596	
24,600.0	11,604.0	11,619.2	11,501.8	104.2	41.5	-83.67	12,936.5	-179.7	942.4	798.9	143.52	6.567	
24,629.1	11,604.0	11,628.4	11,509.7	104.4	41.5	-84.15	12,941.4	-179.7	937.3	793.3	144.07	6.506 CC, ES, SF	

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Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - SNAPPING 12 1 FEDERAL #712H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 179-MWD - OWSG R1													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)	Minimum Separation (usft)	Separation Factor		
23,800.0	11,604.0	11,620.0	11,536.9	98.4	41.0	-55.76	12,891.9	642.8	925.0	848.1	76.85	12.036		
23,900.0	11,604.0	11,620.0	11,536.9	99.1	41.0	-55.76	12,891.9	642.8	825.9	748.3	77.64	10.638		
24,000.0	11,604.0	11,620.0	11,536.9	99.8	41.0	-55.76	12,891.9	642.8	727.1	648.4	78.67	9.243		
24,100.0	11,604.0	11,620.0	11,536.9	100.6	41.0	-55.76	12,891.9	642.8	628.7	548.6	80.06	7.852		
24,200.0	11,604.0	11,620.0	11,536.9	101.3	41.0	-55.76	12,891.9	642.8	530.8	448.7	82.07	6.468		
24,300.0	11,604.0	11,620.0	11,536.9	102.0	41.0	-55.76	12,891.9	642.8	433.9	348.8	85.17	5.095		
24,400.0	11,604.0	11,637.3	11,554.1	102.7	41.0	-63.19	12,894.3	642.5	338.3	248.8	89.45	3.782		
24,500.0	11,604.0	11,649.0	11,565.6	103.5	41.0	-68.81	12,896.1	642.3	245.6	147.8	97.79	2.512		
24,586.9	11,604.0	11,661.0	11,577.4	104.1	41.1	-75.01	12,898.2	642.1	170.9	58.8	112.06	1.525 Advise and Monitor		
24,600.0	11,604.0	11,663.0	11,579.4	104.2	41.1	-76.07	12,898.5	642.0	160.6	45.5	115.15	1.395 Advise and Monitor		
24,629.1	11,604.0	11,667.6	11,583.9	104.4	41.1	-78.56	12,899.3	641.9	139.3	16.2	123.09	1.132 Advise and Monitor, CC, ES, SF		

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

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Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11290-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Distance	Rule Assigned:									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.9	3.0	3.0	-90.79	-2.1	-150.0	150.0				
100.0	100.0	99.1	100.0	3.0	3.0	-90.79	-2.1	-150.0	150.0	144.0	6.05	24.793	
200.0	200.0	199.1	200.0	3.2	3.2	-90.79	-2.1	-150.0	150.0	143.7	6.30	23.832	
300.0	300.0	299.1	300.0	3.3	3.3	-90.79	-2.1	-150.0	150.0	143.5	6.53	22.971	
400.0	400.0	399.1	400.0	3.4	3.4	-90.79	-2.1	-150.0	150.0	143.3	6.76	22.197	
500.0	500.0	499.1	500.0	3.5	3.5	-90.79	-2.1	-150.0	150.0	143.0	6.98	21.496	
600.0	600.0	599.1	600.0	3.6	3.6	-90.79	-2.1	-150.0	150.0	142.8	7.19	20.858	
700.0	700.0	699.1	700.0	3.8	3.8	-90.79	-2.1	-150.0	150.0	142.6	7.40	20.274	
800.0	800.0	799.1	800.0	3.9	3.9	-90.79	-2.1	-150.0	150.0	142.4	7.60	19.736	
900.0	900.0	899.1	900.0	4.0	4.0	-90.79	-2.1	-150.0	150.0	142.2	7.80	19.239	
1,000.0	1,000.0	999.1	1,000.0	4.1	4.1	-90.79	-2.1	-150.0	150.0	142.0	7.99	18.778	CC, ES
1,100.0	1,100.0	1,099.1	1,100.0	4.3	4.2	158.44	-2.1	-150.0	151.6	143.4	8.28	18.313	
1,200.0	1,199.8	1,198.9	1,199.8	4.5	4.4	159.11	-2.1	-150.0	156.5	147.9	8.66	18.064	SF
1,300.0	1,299.5	1,298.6	1,299.5	4.9	4.5	160.13	-2.1	-150.0	164.7	155.6	9.06	18.176	
1,400.0	1,398.7	1,397.8	1,398.7	5.2	4.6	161.40	-2.1	-150.0	176.2	166.7	9.47	18.599	
1,500.0	1,497.5	1,496.6	1,497.5	5.5	4.7	162.81	-2.1	-150.0	191.1	181.2	9.91	19.290	
1,512.5	1,509.8	1,508.5	1,509.4	5.6	4.7	162.98	-2.1	-150.0	193.2	183.3	9.94	19.432	
1,600.0	1,595.9	1,590.6	1,591.5	5.8	4.8	164.04	-2.5	-151.0	209.2	198.9	10.27	20.370	
1,700.0	1,694.3	1,683.8	1,684.6	6.1	5.0	164.80	-3.8	-154.1	229.4	218.7	10.74	21.356	
1,800.0	1,792.7	1,776.2	1,776.9	6.4	5.1	165.18	-6.0	-159.2	251.8	240.5	11.24	22.398	
1,900.0	1,891.1	1,867.7	1,868.0	6.8	5.3	165.26	-9.0	-166.3	276.2	264.4	11.76	23.493	
2,000.0	1,989.5	1,958.2	1,958.0	7.1	5.5	165.11	-12.8	-175.3	302.6	290.3	12.29	24.630	
2,100.0	2,087.9	2,047.6	2,046.6	7.5	5.8	164.81	-17.4	-186.1	331.0	318.1	12.83	25.799	
2,200.0	2,186.3	2,135.8	2,133.8	7.8	6.0	164.38	-22.7	-198.6	361.3	347.9	13.38	26.995	
2,300.0	2,284.7	2,222.8	2,219.4	8.2	6.3	163.88	-28.7	-212.8	393.6	379.7	13.92	28.266	
2,400.0	2,383.1	2,316.0	2,310.9	8.6	6.5	163.33	-35.7	-229.1	427.1	412.6	14.50	29.443	
2,500.0	2,481.5	2,410.2	2,403.3	9.0	6.8	162.86	-42.7	-245.7	460.6	445.4	15.16	30.388	
2,600.0	2,579.9	2,504.3	2,495.8	9.4	7.2	162.45	-49.7	-262.2	494.1	478.3	15.83	31.222	
2,700.0	2,678.3	2,598.5	2,588.2	9.8	7.5	162.09	-56.7	-278.7	527.7	511.2	16.51	31.959	
2,800.0	2,776.7	2,692.7	2,680.6	10.2	7.9	161.78	-63.7	-295.3	561.2	544.0	17.21	32.611	
2,900.0	2,875.1	2,786.8	2,773.0	10.6	8.2	161.50	-70.8	-311.8	594.8	576.9	17.92	33.191	
3,000.0	2,973.5	2,881.0	2,865.5	11.1	8.6	161.25	-77.8	-328.4	628.4	609.8	18.64	33.708	
3,100.0	3,071.9	2,975.1	2,957.9	11.5	8.9	161.02	-84.8	-344.9	662.0	642.7	19.37	34.170	
3,200.0	3,170.3	3,069.3	3,050.3	11.9	9.3	160.82	-91.8	-361.4	695.6	675.5	20.11	34.584	
3,300.0	3,268.7	3,163.4	3,142.7	12.3	9.7	160.64	-98.8	-378.0	729.3	708.4	20.86	34.957	
3,400.0	3,367.1	3,257.6	3,235.2	12.8	10.1	160.47	-105.9	-394.5	762.9	741.3	21.62	35.293	
3,500.0	3,465.6	3,351.7	3,327.6	13.2	10.5	160.31	-112.9	-411.0	796.5	774.1	22.38	35.598	
3,600.0	3,564.0	3,445.9	3,420.0	13.6	10.9	160.17	-119.9	-427.6	830.2	807.0	23.14	35.874	
3,700.0	3,662.4	3,540.0	3,512.4	14.1	11.3	160.04	-126.9	-444.1	863.8	839.9	23.91	36.125	
3,800.0	3,760.8	3,634.2	3,604.9	14.5	11.7	159.92	-133.9	-460.7	897.5	872.8	24.69	36.354	
3,900.0	3,859.2	3,728.3	3,697.3	14.9	12.1	159.81	-141.0	-477.2	931.1	905.6	25.46	36.564	
4,000.0	3,957.6	3,822.5	3,789.7	15.4	12.5	159.71	-148.0	-493.7	964.8	938.5	26.25	36.756	
4,100.0	4,056.0	3,916.7	3,882.1	15.8	12.9	159.61	-155.0	-510.3	998.4	971.4	27.03	36.933	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #702H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11094-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Distance	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.5	3.0	3.0	-90.85	-1.8	-120.0	120.1					
100.0	100.0	99.5	100.0	3.0	3.0	-90.85	-1.8	-120.0	120.1	114.0	6.05	19.839		
200.0	200.0	199.5	200.0	3.2	3.2	-90.85	-1.8	-120.0	120.1	113.8	6.30	19.069		
300.0	300.0	299.5	300.0	3.3	3.3	-90.85	-1.8	-120.0	120.1	113.5	6.53	18.380		
400.0	400.0	399.5	400.0	3.4	3.4	-90.85	-1.8	-120.0	120.1	113.3	6.76	17.761		
500.0	500.0	499.5	500.0	3.5	3.5	-90.85	-1.8	-120.0	120.1	113.1	6.98	17.201		
600.0	600.0	599.5	600.0	3.6	3.6	-90.85	-1.8	-120.0	120.1	112.9	7.19	16.690		
700.0	700.0	699.5	700.0	3.8	3.8	-90.85	-1.8	-120.0	120.1	112.7	7.40	16.223		
800.0	800.0	799.5	800.0	3.9	3.9	-90.85	-1.8	-120.0	120.1	112.5	7.60	15.793		
900.0	900.0	899.5	900.0	4.0	4.0	-90.85	-1.8	-120.0	120.1	112.3	7.80	15.395		
1,000.0	1,000.0	999.5	1,000.0	4.1	4.1	-90.85	-1.8	-120.0	120.1	112.1	7.99	15.026 CC, ES		
1,100.0	1,100.0	1,096.1	1,096.6	4.3	4.3	157.99	-2.7	-121.3	123.0	114.7	8.35	14.730 SF		
1,200.0	1,199.8	1,192.2	1,192.6	4.5	4.6	157.53	-5.6	-125.3	132.0	123.1	8.89	14.852		
1,300.0	1,299.5	1,287.2	1,287.3	4.9	4.8	156.88	-10.2	-131.7	146.9	137.5	9.44	15.571		
1,400.0	1,398.7	1,380.8	1,380.2	5.2	5.2	156.15	-16.6	-140.5	167.7	157.7	9.99	16.779		
1,500.0	1,497.5	1,476.5	1,474.9	5.5	5.4	155.55	-24.4	-151.2	193.4	182.8	10.54	18.338		
1,512.5	1,509.8	1,488.5	1,486.8	5.6	5.4	155.51	-25.4	-152.6	196.8	186.2	10.59	18.575		
1,600.0	1,595.9	1,572.6	1,570.1	5.8	5.7	155.46	-32.3	-162.0	221.0	210.0	11.01	20.067		
1,700.0	1,694.3	1,668.7	1,665.3	6.1	6.0	155.41	-40.1	-172.8	248.7	237.1	11.54	21.547		
1,800.0	1,792.7	1,764.8	1,760.4	6.4	6.2	155.38	-48.0	-183.7	276.3	264.2	12.10	22.845		
1,900.0	1,891.1	1,860.9	1,855.6	6.8	6.5	155.35	-55.9	-194.5	304.0	291.3	12.67	23.985		
2,000.0	1,989.5	1,957.0	1,950.7	7.1	6.9	155.32	-63.7	-205.3	331.6	318.4	13.27	24.986		
2,100.0	2,087.9	2,053.1	2,045.9	7.5	7.2	155.30	-71.6	-216.1	359.3	345.4	13.89	25.868		
2,200.0	2,186.3	2,149.2	2,141.1	7.8	7.5	155.28	-79.5	-226.9	387.0	372.5	14.52	26.645		
2,300.0	2,284.7	2,245.3	2,236.2	8.2	7.9	155.27	-87.3	-237.8	414.6	399.5	15.17	27.334		
2,400.0	2,383.1	2,341.4	2,331.4	8.6	8.2	155.25	-95.2	-248.6	442.3	426.5	15.83	27.944		
2,500.0	2,481.5	2,437.4	2,426.6	9.0	8.6	155.24	-103.0	-259.4	470.0	453.5	16.50	28.488		
2,600.0	2,579.9	2,533.5	2,521.7	9.4	8.9	155.23	-110.9	-270.2	497.6	480.4	17.17	28.974		
2,700.0	2,678.3	2,629.6	2,616.9	9.8	9.3	155.22	-118.8	-281.0	525.3	507.4	17.86	29.409		
2,800.0	2,776.7	2,725.7	2,712.0	10.2	9.7	155.21	-126.6	-291.9	553.0	534.4	18.56	29.800		
2,900.0	2,875.1	2,821.8	2,807.2	10.6	10.1	155.20	-134.5	-302.7	580.6	561.4	19.26	30.153		
3,000.0	2,973.5	2,917.9	2,902.4	11.1	10.4	155.19	-142.3	-313.5	608.3	588.3	19.96	30.472		
3,100.0	3,071.9	3,014.0	2,997.5	11.5	10.8	155.19	-150.2	-324.3	635.9	615.3	20.67	30.761		
3,200.0	3,170.3	3,110.1	3,092.7	11.9	11.2	155.18	-158.1	-335.1	663.6	642.2	21.39	31.024		
3,300.0	3,268.7	3,206.2	3,187.9	12.3	11.6	155.18	-165.9	-346.0	691.3	669.2	22.11	31.264		
3,400.0	3,367.1	3,302.3	3,283.0	12.8	12.0	155.17	-173.8	-356.8	718.9	696.1	22.84	31.483		
3,500.0	3,465.6	3,398.4	3,378.2	13.2	12.4	155.17	-181.6	-367.6	746.6	723.0	23.56	31.685		
3,600.0	3,564.0	3,494.5	3,473.3	13.6	12.8	155.16	-189.5	-378.4	774.3	750.0	24.29	31.869		
3,700.0	3,662.4	3,590.6	3,568.5	14.1	13.1	155.16	-197.4	-389.2	801.9	776.9	25.03	32.040		
3,800.0	3,760.8	3,686.7	3,663.7	14.5	13.5	155.15	-205.2	-400.1	829.6	803.8	25.77	32.197		
3,900.0	3,859.2	3,782.8	3,758.8	14.9	13.9	155.15	-213.1	-410.9	857.2	830.7	26.51	32.342		
4,000.0	3,957.6	3,878.9	3,854.0	15.4	14.3	155.15	-221.0	-421.7	884.9	857.7	27.25	32.477		
4,100.0	4,056.0	3,975.0	3,949.2	15.8	14.7	155.14	-228.8	-432.5	912.6	884.6	27.99	32.602		
4,200.0	4,154.4	4,071.1	4,044.3	16.3	15.1	155.14	-236.7	-443.3	940.2	911.5	28.74	32.719		
4,300.0	4,252.8	4,167.2	4,139.5	16.7	15.5	155.14	-244.5	-454.2	967.9	938.4	29.48	32.827		
4,400.0	4,351.2	4,263.3	4,234.6	17.1	15.9	155.14	-252.4	-465.0	995.6	965.3	30.23	32.929		

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11231-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Distance	Rule Assigned:									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.6	3.0	3.0	-90.90	-1.4	-90.2	90.2				
100.0	100.0	99.4	100.0	3.0	3.0	-90.90	-1.4	-90.2	90.2	84.1	6.05	14.906	
200.0	200.0	199.4	200.0	3.2	3.2	-90.90	-1.4	-90.2	90.2	83.9	6.30	14.328	
300.0	300.0	299.4	300.0	3.3	3.3	-90.90	-1.4	-90.2	90.2	83.7	6.53	13.810	
400.0	400.0	399.4	400.0	3.4	3.4	-90.90	-1.4	-90.2	90.2	83.4	6.76	13.345	
500.0	500.0	499.4	500.0	3.5	3.5	-90.90	-1.4	-90.2	90.2	83.2	6.98	12.924	
600.0	600.0	599.4	600.0	3.6	3.6	-90.90	-1.4	-90.2	90.2	83.0	7.19	12.540	
700.0	700.0	699.4	700.0	3.8	3.8	-90.90	-1.4	-90.2	90.2	82.8	7.40	12.189	
800.0	800.0	799.4	800.0	3.9	3.9	-90.90	-1.4	-90.2	90.2	82.6	7.60	11.866	
900.0	900.0	899.4	900.0	4.0	4.0	-90.90	-1.4	-90.2	90.2	82.4	7.80	11.567	
1,000.0	1,000.0	999.4	1,000.0	4.1	4.1	-90.90	-1.4	-90.2	90.2	82.2	7.99	11.289 CC, ES	
1,100.0	1,100.0	1,098.1	1,098.7	4.3	4.3	157.52	-3.0	-90.8	92.5	84.2	8.30	11.150 SF	
1,200.0	1,199.8	1,196.4	1,196.9	4.5	4.6	155.94	-7.6	-92.8	99.5	90.7	8.78	11.331	
1,300.0	1,299.5	1,294.1	1,294.1	4.9	4.9	153.73	-15.3	-96.0	111.2	101.9	9.27	11.995	
1,400.0	1,398.7	1,390.6	1,390.0	5.2	5.2	151.30	-26.0	-100.4	127.7	118.0	9.77	13.074	
1,500.0	1,497.5	1,488.2	1,486.6	5.5	5.5	149.35	-38.5	-105.6	148.4	138.2	10.27	14.449	
1,512.5	1,509.8	1,500.3	1,498.7	5.6	5.5	149.18	-40.1	-106.3	151.2	140.9	10.32	14.659	
1,600.0	1,595.9	1,585.5	1,583.0	5.8	5.8	148.38	-51.0	-110.8	171.0	160.3	10.69	15.995	
1,700.0	1,694.3	1,682.9	1,679.5	6.1	6.0	147.67	-63.5	-116.0	193.7	182.5	11.16	17.347	
1,800.0	1,792.7	1,780.3	1,775.9	6.4	6.3	147.11	-76.0	-121.2	216.3	204.7	11.66	18.560	
1,900.0	1,891.1	1,877.7	1,872.3	6.8	6.7	146.65	-88.5	-126.5	239.0	226.9	12.16	19.649	
2,000.0	1,989.5	1,975.0	1,968.7	7.1	7.0	146.27	-101.0	-131.7	261.7	249.0	12.69	20.627	
2,100.0	2,087.9	2,072.4	2,065.2	7.5	7.3	145.96	-113.6	-136.9	284.4	271.2	13.22	21.506	
2,200.0	2,186.3	2,169.8	2,161.6	7.8	7.6	145.69	-126.1	-142.1	307.1	293.4	13.77	22.299	
2,300.0	2,284.7	2,267.2	2,258.0	8.2	8.0	145.45	-138.6	-147.3	329.8	315.5	14.33	23.015	
2,400.0	2,383.1	2,364.6	2,354.5	8.6	8.4	145.25	-151.1	-152.5	352.6	337.7	14.90	23.663	
2,500.0	2,481.5	2,461.9	2,450.9	9.0	8.7	145.07	-163.6	-157.7	375.3	359.8	15.48	24.251	
2,600.0	2,579.9	2,559.3	2,547.3	9.4	9.1	144.91	-176.1	-162.9	398.0	382.0	16.06	24.786	
2,700.0	2,678.3	2,656.7	2,643.8	9.8	9.5	144.77	-188.6	-168.1	420.8	404.1	16.65	25.274	
2,800.0	2,776.7	2,754.1	2,740.2	10.2	9.8	144.65	-201.1	-173.3	443.5	426.2	17.24	25.719	
2,900.0	2,875.1	2,851.4	2,836.6	10.6	10.2	144.53	-213.6	-178.5	466.2	448.4	17.84	26.128	
3,000.0	2,973.5	2,948.8	2,933.0	11.1	10.6	144.43	-226.2	-183.7	489.0	470.5	18.45	26.503	
3,100.0	3,071.9	3,046.2	3,029.5	11.5	11.0	144.33	-238.7	-188.9	511.7	492.6	19.06	26.849	
3,200.0	3,170.3	3,143.6	3,125.9	11.9	11.4	144.25	-251.2	-194.2	534.4	514.8	19.67	27.168	
3,300.0	3,268.7	3,240.9	3,222.3	12.3	11.8	144.17	-263.7	-199.4	557.2	536.9	20.29	27.463	
3,400.0	3,367.1	3,338.3	3,318.8	12.8	12.1	144.10	-276.2	-204.6	579.9	559.0	20.91	27.736	
3,500.0	3,465.6	3,435.7	3,415.2	13.2	12.5	144.03	-288.7	-209.8	602.7	581.1	21.53	27.990	
3,600.0	3,564.0	3,533.1	3,511.6	13.6	12.9	143.97	-301.2	-215.0	625.4	603.2	22.16	28.226	
3,700.0	3,662.4	3,630.5	3,608.1	14.1	13.3	143.91	-313.7	-220.2	648.1	625.4	22.79	28.446	
3,800.0	3,760.8	3,727.8	3,704.5	14.5	13.7	143.85	-326.3	-225.4	670.9	647.5	23.42	28.652	
3,900.0	3,859.2	3,825.2	3,800.9	14.9	14.1	143.80	-338.8	-230.6	693.6	669.6	24.03	28.860	
4,000.0	3,957.6	3,930.6	3,905.4	15.4	14.5	143.81	-351.4	-235.9	715.8	691.1	24.70	28.986	
4,100.0	4,056.0	4,036.4	4,010.5	15.8	15.0	143.95	-362.3	-240.4	737.0	711.6	25.36	29.055	
4,200.0	4,154.4	4,142.6	4,116.3	16.3	15.4	144.20	-371.5	-244.2	757.0	731.0	26.02	29.090	
4,300.0	4,252.8	4,249.2	4,222.6	16.7	15.8	144.55	-378.8	-247.3	776.0	749.3	26.67	29.099	
4,400.0	4,351.2	4,356.1	4,329.3	17.1	16.1	145.01	-384.4	-249.6	793.9	766.6	27.29	29.085	
4,500.0	4,449.6	4,463.2	4,436.3	17.6	16.5	145.56	-388.1	-251.1	810.7	782.8	27.90	29.056	
4,600.0	4,548.0	4,570.4	4,543.5	18.0	16.7	146.20	-390.0	-251.9	826.6	798.2	28.48	29.024	
4,700.0	4,646.4	4,673.3	4,646.4	18.5	16.8	146.89	-390.2	-252.0	841.7	812.8	28.93	29.090	
4,800.0	4,744.8	4,771.7	4,744.8	18.9	16.9	147.54	-390.2	-252.0	856.7	827.4	29.35	29.192	
4,900.0	4,843.2	4,870.1	4,843.2	19.4	16.9	148.16	-390.2	-252.0	871.9	842.1	29.77	29.284	
5,000.0	4,941.6	4,968.5	4,941.6	19.8	16.9	148.76	-390.2	-252.0	887.1	856.9	30.20	29.372	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11231-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Rule Assigned:					
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
5,100.0	5,040.0	5,066.9	5,040.0	20.3	17.0	149.35	-390.2	-252.0	902.4	871.8	30.64	29.456		
5,200.0	5,138.4	5,165.3	5,138.4	20.7	17.0	149.91	-390.2	-252.0	917.8	886.8	31.07	29.536		
5,300.0	5,236.8	5,263.7	5,236.8	21.2	17.0	150.46	-390.2	-252.0	933.3	901.8	31.52	29.613		
5,400.0	5,335.2	5,362.1	5,335.2	21.6	17.1	150.99	-390.2	-252.0	948.9	916.9	31.96	29.687		
5,500.0	5,433.6	5,460.5	5,433.6	22.1	17.1	151.50	-390.2	-252.0	964.6	932.2	32.41	29.758		
5,600.0	5,532.0	5,558.9	5,532.0	22.5	17.1	151.99	-390.2	-252.0	980.3	947.4	32.87	29.825		
5,700.0	5,630.4	5,657.3	5,630.4	23.0	17.2	152.47	-390.2	-252.0	996.1	962.8	33.33	29.890		

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11080-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	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)	Separation (usft)	Factor	
0.0	0.0	0.0	0.2	3.0	3.0	-90.91	-0.9	-60.1	60.1				
100.0	100.0	99.8	100.0	3.0	3.0	-90.91	-0.9	-60.1	60.1	54.1	6.05	9.934	
200.0	200.0	199.8	200.0	3.2	3.2	-90.91	-0.9	-60.1	60.1	53.8	6.30	9.548	
300.0	300.0	299.8	300.0	3.3	3.3	-90.91	-0.9	-60.1	60.1	53.6	6.53	9.203	
400.0	400.0	399.8	400.0	3.4	3.4	-90.91	-0.9	-60.1	60.1	53.4	6.76	8.894	
500.0	500.0	499.8	500.0	3.5	3.5	-90.91	-0.9	-60.1	60.1	53.1	6.98	8.613	
600.0	600.0	599.8	600.0	3.6	3.6	-90.91	-0.9	-60.1	60.1	52.9	7.19	8.357	
700.0	700.0	699.8	700.0	3.8	3.8	-90.91	-0.9	-60.1	60.1	52.7	7.40	8.123	
800.0	800.0	799.8	800.0	3.9	3.9	-90.91	-0.9	-60.1	60.1	52.5	7.60	7.908	
900.0	900.0	899.8	900.0	4.0	4.0	-90.91	-0.9	-60.1	60.1	52.3	7.80	7.709	
1,000.0	1,000.0	999.8	1,000.0	4.1	4.2	-90.91	-0.9	-60.1	60.1	52.0	8.09	7.431	CC, ES
1,100.0	1,100.0	1,100.8	1,101.0	4.3	4.5	157.24	-2.5	-59.3	60.9	52.4	8.49	7.178	
1,200.0	1,199.8	1,201.7	1,201.7	4.5	4.8	154.78	-7.2	-56.7	63.4	54.4	8.95	7.079	
1,300.0	1,299.5	1,302.4	1,302.0	4.9	5.1	151.10	-14.9	-52.4	67.7	58.3	9.40	7.202	
1,400.0	1,398.7	1,402.8	1,401.7	5.2	5.4	146.70	-25.7	-46.4	74.2	64.3	9.83	7.544	
1,500.0	1,497.5	1,502.3	1,500.2	5.5	5.6	143.33	-37.8	-39.7	83.4	73.1	10.25	8.131	
1,512.5	1,509.8	1,514.7	1,512.5	5.6	5.7	143.06	-39.3	-38.9	84.7	74.5	10.29	8.237	
1,600.0	1,595.9	1,601.7	1,598.6	5.8	5.9	141.54	-49.9	-33.0	94.5	83.9	10.60	8.908	
1,700.0	1,694.3	1,701.0	1,697.0	6.1	6.2	140.15	-62.0	-26.3	105.6	94.6	11.00	9.602	
1,800.0	1,792.7	1,800.3	1,795.3	6.4	6.5	139.02	-74.1	-19.6	116.9	105.5	11.41	10.243	
1,900.0	1,891.1	1,899.7	1,893.7	6.8	6.8	138.09	-86.2	-12.9	128.1	116.3	11.83	10.835	
2,000.0	1,989.5	1,999.0	1,992.1	7.1	7.1	137.31	-98.2	-6.2	139.4	127.2	12.25	11.383	
2,100.0	2,087.9	2,098.4	2,090.5	7.5	7.5	136.65	-110.3	0.5	150.8	138.1	12.68	11.892	
2,200.0	2,186.3	2,197.7	2,188.8	7.8	7.8	136.08	-122.4	7.2	162.1	149.0	13.11	12.363	
2,300.0	2,284.7	2,297.1	2,287.2	8.2	8.2	135.59	-134.5	13.9	173.4	159.9	13.55	12.802	
2,400.0	2,383.1	2,396.4	2,385.6	8.6	8.5	135.15	-146.6	20.6	184.8	170.8	13.99	13.211	
2,500.0	2,481.5	2,495.7	2,484.0	9.0	8.9	134.77	-158.7	27.3	196.2	181.7	14.43	13.592	
2,600.0	2,579.9	2,595.1	2,582.4	9.4	9.3	134.43	-170.8	34.0	207.6	192.7	14.88	13.949	
2,700.0	2,678.3	2,694.4	2,680.7	9.8	9.6	134.12	-182.9	40.7	218.9	203.6	15.33	14.283	
2,800.0	2,776.7	2,793.8	2,779.1	10.2	10.0	133.84	-195.0	47.4	230.3	214.5	15.78	14.596	
2,900.0	2,875.1	2,893.1	2,877.5	10.6	10.4	133.59	-207.1	54.2	241.7	225.5	16.23	14.891	
3,000.0	2,973.5	2,992.5	2,975.9	11.1	10.8	133.37	-219.2	60.9	253.1	236.4	16.69	15.168	
3,100.0	3,071.9	3,091.8	3,074.2	11.5	11.2	133.16	-231.3	67.6	264.5	247.4	17.14	15.430	
3,200.0	3,170.3	3,191.1	3,172.6	11.9	11.6	132.97	-243.4	74.3	275.9	258.3	17.60	15.677	
3,300.0	3,268.7	3,290.5	3,271.0	12.3	12.0	132.79	-255.5	81.0	287.3	269.3	18.06	15.910	
3,400.0	3,367.1	3,389.8	3,369.4	12.8	12.4	132.63	-267.5	87.7	298.7	280.2	18.52	16.131	
3,500.0	3,465.6	3,489.2	3,467.7	13.2	12.8	132.48	-279.6	94.4	310.2	291.2	18.98	16.340	
3,600.0	3,564.0	3,588.5	3,566.1	13.6	13.2	132.34	-291.7	101.1	321.6	302.1	19.44	16.539	
3,700.0	3,662.4	3,687.9	3,664.5	14.1	13.6	132.21	-303.8	107.8	333.0	313.1	19.91	16.728	
3,800.0	3,760.8	3,787.2	3,762.9	14.5	14.0	132.09	-315.9	114.5	344.4	324.0	20.37	16.908	
3,900.0	3,859.2	3,886.6	3,861.3	14.9	14.4	131.98	-328.0	121.2	355.8	335.0	20.83	17.079	
4,000.0	3,957.6	3,985.9	3,959.6	15.4	14.8	131.87	-340.1	127.9	367.2	345.9	21.30	17.242	
4,100.0	4,056.0	4,085.1	4,057.9	15.8	15.2	131.82	-351.9	134.4	378.7	356.9	21.74	17.422	
4,200.0	4,154.4	4,184.1	4,156.2	16.3	15.6	132.00	-362.4	140.2	390.2	367.9	22.23	17.554	
4,300.0	4,252.8	4,283.1	4,254.7	16.7	16.0	132.41	-371.3	145.2	401.8	379.0	22.75	17.659	
4,400.0	4,351.2	4,381.9	4,353.1	17.1	16.4	133.04	-378.8	149.3	413.5	390.1	23.30	17.741	
4,500.0	4,449.6	4,480.6	4,451.5	17.6	16.7	133.86	-384.7	152.6	425.3	401.4	23.89	17.803	
4,600.0	4,548.0	4,578.9	4,549.7	18.0	17.1	134.86	-389.2	155.1	437.4	412.9	24.51	17.847	
4,700.0	4,646.4	4,677.0	4,647.7	18.5	17.4	136.01	-392.1	156.7	449.9	424.7	25.17	17.876	
4,800.0	4,744.8	4,774.6	4,745.4	18.9	17.6	137.31	-393.6	157.6	462.7	436.8	25.86	17.895	
4,900.0	4,843.2	4,872.5	4,843.2	19.4	17.7	138.72	-393.9	157.7	476.0	449.4	26.52	17.946	
5,000.0	4,941.6	4,970.9	4,941.6	19.8	17.7	140.08	-393.9	157.7	489.6	462.4	27.20	18.000	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11080-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Distance	Rule Assigned:									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,040.0	5,069.3	5,040.0	20.3	17.8	141.37	-393.9	157.7	503.4	475.6	27.88	18.056	
5,200.0	5,138.4	5,167.7	5,138.4	20.7	17.8	142.59	-393.9	157.7	517.5	489.0	28.57	18.118	
5,300.0	5,236.8	5,266.1	5,236.8	21.2	17.8	143.75	-393.9	157.7	531.9	502.6	29.25	18.186	
5,400.0	5,335.2	5,364.5	5,335.2	21.6	17.8	144.85	-393.9	157.7	546.4	516.5	29.92	18.259	
5,500.0	5,433.6	5,462.9	5,433.6	22.1	17.9	145.89	-393.9	157.7	561.1	530.5	30.60	18.338	
5,600.0	5,532.0	5,561.3	5,532.0	22.5	17.9	146.88	-393.9	157.7	576.0	544.7	31.27	18.421	
5,700.0	5,630.4	5,659.7	5,630.4	23.0	17.9	147.82	-393.9	157.7	591.1	559.1	31.93	18.509	
5,800.0	5,728.8	5,758.1	5,728.8	23.4	18.0	148.71	-393.9	157.7	606.3	573.7	32.59	18.601	
5,900.0	5,827.2	5,856.5	5,827.2	23.9	18.0	149.56	-393.9	157.7	621.6	588.3	33.25	18.696	
6,000.0	5,925.7	5,954.9	5,925.7	24.3	18.0	150.37	-393.9	157.7	637.1	603.2	33.90	18.794	
6,100.0	6,024.1	6,053.3	6,024.1	24.8	18.1	151.13	-393.9	157.7	652.6	618.1	34.54	18.894	
6,126.4	6,050.0	6,079.3	6,050.0	24.9	18.1	151.33	-393.9	157.7	656.8	622.1	34.71	18.925	
6,200.0	6,122.5	6,151.8	6,122.5	25.2	18.1	151.89	-393.9	157.7	668.1	633.0	35.16	19.001	
6,300.0	6,221.1	6,250.4	6,221.1	25.6	18.1	152.58	-393.9	157.7	683.0	647.2	35.78	19.087	
6,400.0	6,319.8	6,349.1	6,319.8	26.1	18.2	153.21	-393.9	157.7	697.2	660.8	36.38	19.161	
6,500.0	6,418.7	6,448.0	6,418.7	26.5	18.2	153.79	-393.9	157.7	710.6	673.6	36.97	19.221	
6,600.0	6,517.7	6,546.9	6,517.7	27.0	18.2	154.31	-393.9	157.7	723.4	685.8	37.54	19.269	
6,700.0	6,616.8	6,646.1	6,616.8	27.4	18.3	154.78	-393.9	157.7	735.4	697.3	38.09	19.304	
6,800.0	6,716.0	6,745.3	6,716.0	27.8	18.3	155.21	-393.9	157.7	746.6	708.0	38.63	19.326	
6,900.0	6,815.4	6,844.6	6,815.4	28.2	18.3	155.60	-393.9	157.7	757.2	718.0	39.16	19.336	
7,000.0	6,914.8	6,944.0	6,914.8	28.6	18.4	155.95	-393.9	157.7	766.9	727.2	39.67	19.333	
7,100.0	7,014.3	7,043.6	7,014.3	29.0	18.4	156.26	-393.9	157.7	775.9	735.7	40.16	19.319	
7,200.0	7,113.9	7,143.2	7,113.9	29.4	18.5	156.54	-393.9	157.7	784.1	743.4	40.64	19.293	
7,300.0	7,213.6	7,242.8	7,213.6	29.8	18.5	156.79	-393.9	157.7	791.5	750.4	41.11	19.255	
7,400.0	7,313.3	7,342.6	7,313.3	30.2	18.5	157.00	-393.9	157.7	798.1	756.6	41.55	19.207	
7,500.0	7,413.1	7,442.4	7,413.1	30.5	18.6	157.19	-393.9	157.7	804.0	762.0	41.99	19.148	
7,600.0	7,513.0	7,542.2	7,513.0	30.9	18.6	157.35	-393.9	157.7	809.0	766.6	42.40	19.080	
7,700.0	7,612.9	7,642.1	7,612.9	31.2	18.6	157.48	-393.9	157.7	813.2	770.5	42.80	19.002	
7,800.0	7,712.8	7,742.0	7,712.8	31.5	18.7	157.59	-393.9	157.7	816.7	773.5	43.17	18.917	
7,900.0	7,812.7	7,842.0	7,812.7	31.8	18.7	157.67	-393.9	157.7	819.3	775.8	43.52	18.824	
8,000.0	7,912.7	7,942.0	7,912.7	32.1	18.8	157.73	-393.9	157.7	821.1	777.3	43.85	18.727	
8,100.0	8,012.7	8,042.0	8,012.7	32.3	18.8	157.76	-393.9	157.7	822.2	778.0	44.13	18.629	
8,176.4	8,089.1	8,118.3	8,089.1	32.4	18.8	-91.23	-393.9	157.7	822.4	778.1	44.26	18.583	
8,200.0	8,112.7	8,142.0	8,112.7	32.4	18.8	-91.23	-393.9	157.7	822.4	778.1	44.27	18.578	
8,300.0	8,212.7	8,242.0	8,212.7	32.4	18.9	-91.23	-393.9	157.7	822.4	778.1	44.34	18.549	
8,400.0	8,312.7	8,342.0	8,312.7	32.5	18.9	-91.23	-393.9	157.7	822.4	778.0	44.41	18.519	
8,500.0	8,412.7	8,442.0	8,412.7	32.5	19.0	-91.23	-393.9	157.7	822.4	777.9	44.48	18.490	
8,600.0	8,512.7	8,542.0	8,512.7	32.5	19.0	-91.23	-393.9	157.7	822.4	777.9	44.55	18.460	
8,700.0	8,612.7	8,642.0	8,612.7	32.5	19.0	-91.23	-393.9	157.7	822.4	777.8	44.62	18.430	
8,800.0	8,712.7	8,742.0	8,712.7	32.5	19.1	-91.23	-393.9	157.7	822.4	777.7	44.70	18.400	
8,900.0	8,812.7	8,842.0	8,812.7	32.5	19.1	-91.23	-393.9	157.7	822.4	777.6	44.77	18.370	
9,000.0	8,912.7	8,942.0	8,912.7	32.6	19.2	-91.23	-393.9	157.7	822.4	777.6	44.84	18.340	
9,100.0	9,012.7	9,042.0	9,012.7	32.6	19.2	-91.23	-393.9	157.7	822.4	777.5	44.92	18.310	
9,200.0	9,112.7	9,142.0	9,112.7	32.6	19.2	-91.23	-393.9	157.7	822.4	777.4	44.99	18.279	
9,300.0	9,212.7	9,242.0	9,212.7	32.6	19.3	-91.23	-393.9	157.7	822.4	777.3	45.07	18.249	
9,400.0	9,312.7	9,342.0	9,312.7	32.6	19.3	-91.23	-393.9	157.7	822.4	777.3	45.14	18.218	
9,500.0	9,412.7	9,442.0	9,412.7	32.7	19.4	-91.23	-393.9	157.7	822.4	777.2	45.22	18.188	
9,600.0	9,512.7	9,542.0	9,512.7	32.7	19.4	-91.23	-393.9	157.7	822.4	777.1	45.29	18.157	
9,700.0	9,612.7	9,642.0	9,612.7	32.7	19.5	-91.23	-393.9	157.7	822.4	777.0	45.37	18.126	
9,800.0	9,712.7	9,742.0	9,712.7	32.7	19.5	-91.23	-393.9	157.7	822.4	777.0	45.45	18.096	
9,900.0	9,812.7	9,842.0	9,812.7	32.7	19.5	-91.23	-393.9	157.7	822.4	776.9	45.53	18.065	
10,000.0	9,912.7	9,942.0	9,912.7	32.8	19.6	-91.23	-393.9	157.7	822.4	776.8	45.60	18.034	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11080-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	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)	Separation (usft)		
10,100.0	10,012.7	10,042.0	10,012.7	32.8	19.6	-91.23	-393.9	157.7	822.4	776.7	45.68	18.003	
10,200.0	10,112.7	10,142.0	10,112.7	32.8	19.7	-91.23	-393.9	157.7	822.4	776.6	45.76	17.972	
10,300.0	10,212.7	10,242.0	10,212.7	32.8	19.7	-91.23	-393.9	157.7	822.4	776.6	45.84	17.941	
10,400.0	10,312.7	10,342.0	10,312.7	32.9	19.8	-91.23	-393.9	157.7	822.4	776.5	45.92	17.909	
10,500.0	10,412.7	10,442.0	10,412.7	32.9	19.8	-91.23	-393.9	157.7	822.4	776.4	46.00	17.878	
10,600.0	10,512.7	10,542.0	10,512.7	32.9	19.9	-91.23	-393.9	157.7	822.4	776.3	46.08	17.847	
10,700.0	10,612.7	10,642.0	10,612.7	32.9	19.9	-91.23	-393.9	157.7	822.4	776.2	46.16	17.816	
10,800.0	10,712.7	10,742.0	10,712.7	32.9	20.0	-91.23	-393.9	157.7	822.4	776.2	46.24	17.784	
10,900.0	10,812.7	10,842.0	10,812.7	33.0	20.0	-91.23	-393.9	157.7	822.4	776.1	46.33	17.753	
11,000.0	10,912.7	10,942.0	10,912.7	33.0	20.0	-91.23	-393.9	157.7	822.4	776.0	46.41	17.721	
11,100.0	11,012.7	11,042.0	11,012.7	33.0	20.1	-91.23	-393.9	157.7	822.4	775.9	46.48	17.694	
11,118.3	11,031.0	11,060.3	11,031.0	33.0	20.1	-91.23	-393.9	157.7	822.4	775.9	46.49	17.691	
11,150.0	11,062.7	11,092.3	11,063.0	33.0	20.1	-90.20	-392.9	157.7	822.4	775.9	46.50	17.687	
11,200.0	11,112.4	11,142.8	11,113.3	33.0	20.2	-90.18	-387.7	157.6	822.4	775.9	46.51	17.680	
11,250.0	11,161.6	11,193.3	11,162.8	33.0	20.2	-90.17	-378.1	157.5	822.3	775.8	46.53	17.675	
11,300.0	11,209.7	11,243.8	11,211.3	33.0	20.3	-90.15	-364.1	157.3	822.3	775.8	46.53	17.671	
11,350.0	11,256.5	11,294.2	11,258.4	33.0	20.3	-90.14	-346.0	157.0	822.2	775.7	46.54	17.667	
11,400.0	11,301.5	11,344.6	11,303.6	33.1	20.4	-90.12	-323.9	156.7	822.1	775.6	46.54	17.664	
11,450.0	11,344.5	11,395.0	11,346.7	33.1	20.5	-90.10	-297.8	156.3	822.0	775.5	46.54	17.662	
11,500.0	11,385.1	11,445.3	11,387.3	33.1	20.5	-90.08	-268.1	155.9	821.9	775.4	46.54	17.659	
11,550.0	11,423.0	11,495.6	11,425.2	33.1	20.6	-90.06	-235.0	155.4	821.8	775.3	46.55	17.655	
11,600.0	11,457.9	11,545.9	11,459.9	33.1	20.6	-90.04	-198.8	154.9	821.7	775.1	46.55	17.650	
11,650.0	11,489.6	11,596.1	11,491.3	33.1	20.7	-90.02	-159.6	154.3	821.5	775.0	46.56	17.643	
11,700.0	11,517.8	11,646.2	11,519.2	33.1	20.7	-90.00	-117.9	153.7	821.4	774.8	46.58	17.633	
11,750.0	11,542.3	11,696.3	11,543.2	33.2	20.8	-89.98	-74.0	153.1	821.2	774.6	46.61	17.620	
11,800.0	11,562.9	11,746.4	11,563.4	33.2	20.8	-89.96	-28.2	152.5	821.0	774.4	46.64	17.603	
11,850.0	11,579.4	11,796.4	11,579.4	33.2	20.9	-89.94	19.2	151.8	820.9	774.2	46.69	17.583	
11,900.0	11,591.8	11,846.4	11,591.2	33.3	20.9	-89.92	67.7	151.1	820.7	773.9	46.74	17.557	
11,950.0	11,599.9	11,896.3	11,598.8	33.3	20.9	-89.90	117.0	150.4	820.5	773.7	46.81	17.527	
12,000.0	11,603.7	11,946.2	11,602.0	33.3	21.0	-89.88	166.8	149.7	820.3	773.4	46.89	17.493	
12,018.3	11,604.0	11,964.4	11,602.2	33.3	21.0	-89.87	185.0	149.4	820.3	773.3	46.93	17.480	
12,100.0	11,604.0	12,046.2	11,602.2	33.4	21.0	-89.87	266.7	148.3	819.9	772.8	47.12	17.401	
12,200.0	11,604.0	12,146.2	11,602.2	33.5	21.1	-89.87	366.7	146.8	819.6	772.2	47.41	17.287	
12,300.0	11,604.0	12,246.2	11,602.2	33.7	21.1	-89.87	466.7	145.4	819.2	771.5	47.75	17.155	
12,400.0	11,604.0	12,346.2	11,602.2	33.8	21.2	-89.87	566.7	144.0	818.8	770.7	48.15	17.007	
12,500.0	11,604.0	12,446.2	11,602.2	33.9	21.3	-89.87	666.7	142.6	818.5	769.9	48.59	16.844	
12,600.0	11,604.0	12,546.2	11,602.2	34.1	21.4	-89.87	766.7	141.1	818.1	769.0	49.08	16.669	
12,700.0	11,604.0	12,646.2	11,602.2	34.3	21.5	-89.87	866.7	139.7	817.7	768.1	49.61	16.482	
12,800.0	11,604.0	12,746.2	11,602.2	34.5	21.6	-89.87	966.7	138.3	817.3	767.2	50.19	16.285	
12,900.0	11,604.0	12,846.2	11,602.2	34.7	21.7	-89.87	1,066.6	136.9	817.0	766.2	50.81	16.079	
13,000.0	11,604.0	12,946.2	11,602.2	34.9	21.9	-89.87	1,166.6	135.4	816.6	765.1	51.47	15.866	
13,100.0	11,604.0	13,046.2	11,602.2	35.2	22.0	-89.87	1,266.6	134.0	816.2	764.1	52.16	15.648	
13,200.0	11,604.0	13,146.2	11,602.2	35.4	22.2	-89.87	1,366.6	132.6	815.9	763.0	52.89	15.424	
13,300.0	11,604.0	13,246.1	11,602.2	35.7	22.5	-89.87	1,466.6	131.2	815.5	761.8	53.66	15.198	
13,400.0	11,604.0	13,346.1	11,602.2	35.9	22.7	-89.87	1,566.6	129.7	815.1	760.7	54.45	14.969	
13,500.0	11,604.0	13,446.1	11,602.2	36.2	23.0	-89.87	1,666.6	128.3	814.7	759.5	55.28	14.738	
13,600.0	11,604.0	13,546.1	11,602.2	36.5	23.3	-89.87	1,766.6	126.9	814.4	758.2	56.14	14.507	
13,700.0	11,604.0	13,646.1	11,602.2	36.8	23.7	-89.87	1,866.6	125.4	814.0	757.0	57.02	14.275	
13,800.0	11,604.0	13,746.1	11,602.2	37.2	24.0	-89.87	1,966.6	124.0	813.6	755.7	57.93	14.045	
13,900.0	11,604.0	13,846.1	11,602.2	37.5	24.4	-89.87	2,066.5	122.6	813.3	754.4	58.86	13.816	
14,000.0	11,604.0	13,946.1	11,602.2	37.8	24.9	-89.87	2,166.5	121.2	812.9	753.1	59.82	13.588	
14,100.0	11,604.0	14,046.1	11,602.2	38.2	25.3	-89.87	2,266.5	119.7	812.5	751.7	60.80	13.363	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11080-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	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)	Separation (usft)		
14,200.0	11,604.0	14,146.1	11,602.2	38.6	25.8	-89.87	2,366.5	118.3	812.1	750.3	61.80	13.141	
14,300.0	11,604.0	14,246.1	11,602.2	38.9	26.3	-89.87	2,466.5	116.9	811.8	748.9	62.82	12.921	
14,400.0	11,604.0	14,346.1	11,602.2	39.3	26.9	-89.87	2,566.5	115.5	811.4	747.5	63.87	12.705	
14,500.0	11,604.0	14,446.1	11,602.2	39.7	27.4	-89.87	2,666.5	114.0	811.0	746.1	64.92	12.492	
14,600.0	11,604.0	14,546.1	11,602.2	40.1	28.0	-89.87	2,766.5	112.6	810.7	744.7	66.00	12.283	
14,700.0	11,604.0	14,646.1	11,602.2	40.6	28.6	-89.87	2,866.5	111.2	810.3	743.2	67.09	12.077	
14,800.0	11,604.0	14,746.1	11,602.2	41.0	29.2	-89.87	2,966.4	109.8	809.9	741.7	68.20	11.875	
14,900.0	11,604.0	14,846.1	11,602.2	41.4	29.8	-89.87	3,066.4	108.3	809.5	740.2	69.32	11.678	
15,000.0	11,604.0	14,946.1	11,602.2	41.9	30.4	-89.87	3,166.4	106.9	809.2	738.7	70.46	11.484	
15,100.0	11,604.0	15,046.1	11,602.2	42.3	31.0	-89.87	3,266.4	105.5	808.8	737.2	71.61	11.294	
15,200.0	11,604.0	15,146.1	11,602.2	42.8	31.7	-89.87	3,366.4	104.1	808.4	735.6	72.78	11.108	
15,300.0	11,604.0	15,246.1	11,602.2	43.3	32.3	-89.87	3,466.4	102.6	808.1	734.1	73.95	10.926	
15,400.0	11,604.0	15,346.1	11,602.2	43.8	32.9	-89.87	3,566.4	101.2	807.7	732.5	75.14	10.749	
15,500.0	11,604.0	15,446.1	11,602.2	44.3	33.6	-89.87	3,666.4	99.8	807.3	731.0	76.34	10.575	
15,600.0	11,604.0	15,546.1	11,602.2	44.8	34.3	-89.87	3,766.4	98.4	806.9	729.4	77.55	10.405	
15,700.0	11,604.0	15,646.1	11,602.2	45.3	34.9	-89.87	3,866.3	96.9	806.6	727.8	78.77	10.239	
15,800.0	11,604.0	15,746.1	11,602.2	45.8	35.6	-89.87	3,966.3	95.5	806.2	726.2	80.01	10.077	
15,900.0	11,604.0	15,846.1	11,602.2	46.3	36.3	-89.87	4,066.3	94.1	805.8	724.6	81.25	9.918	
16,000.0	11,604.0	15,946.1	11,602.2	46.8	37.0	-89.87	4,166.3	92.7	805.4	723.0	82.50	9.764	
16,100.0	11,604.0	16,046.1	11,602.2	47.4	37.6	-89.87	4,266.3	91.2	805.1	721.3	83.75	9.612	
16,200.0	11,604.0	16,146.1	11,602.2	47.9	38.3	-89.87	4,366.3	89.8	804.7	719.7	85.02	9.465	
16,300.0	11,604.0	16,246.1	11,602.2	48.5	39.0	-89.87	4,466.3	88.4	804.3	718.0	86.29	9.321	
16,400.0	11,604.0	16,346.1	11,602.2	49.0	39.7	-89.87	4,566.3	87.0	804.0	716.4	87.58	9.180	
16,500.0	11,604.0	16,446.1	11,602.2	49.6	40.4	-89.87	4,666.3	85.5	803.6	714.7	88.87	9.043	
16,600.0	11,604.0	16,546.1	11,602.2	50.1	41.1	-89.87	4,766.2	84.1	803.2	713.1	90.16	8.908	
16,700.0	11,604.0	16,646.1	11,602.2	50.7	41.8	-89.87	4,866.2	82.7	802.8	711.4	91.47	8.777	
16,800.0	11,604.0	16,746.1	11,602.2	51.3	42.5	-89.87	4,966.2	81.2	802.5	709.7	92.78	8.650	
16,900.0	11,604.0	16,846.1	11,602.2	51.9	43.2	-89.87	5,066.2	79.8	802.1	708.0	94.09	8.525	
17,000.0	11,604.0	16,946.1	11,602.2	52.4	43.9	-89.87	5,166.2	78.4	801.7	706.3	95.41	8.403	
17,100.0	11,604.0	17,046.1	11,602.2	53.0	44.6	-89.87	5,266.2	77.0	801.4	704.6	96.74	8.283	
17,200.0	11,604.0	17,146.1	11,602.2	53.6	45.4	-89.87	5,366.2	75.5	801.0	702.9	98.08	8.167	
17,300.0	11,604.0	17,246.1	11,602.2	54.2	46.1	-89.87	5,466.2	74.1	800.6	701.2	99.41	8.053	
17,400.0	11,604.0	17,346.1	11,602.2	54.8	46.8	-89.87	5,566.2	72.7	800.2	699.5	100.76	7.942	
17,500.0	11,604.0	17,446.1	11,602.2	55.4	47.5	-89.87	5,666.1	71.3	799.9	697.8	102.11	7.834	
17,600.0	11,604.0	17,546.1	11,602.2	56.0	48.2	-89.87	5,766.1	69.8	799.5	696.0	103.46	7.728	
17,700.0	11,604.0	17,646.1	11,602.2	56.7	49.0	-89.87	5,866.1	68.4	799.1	694.3	104.82	7.624	
17,800.0	11,604.0	17,746.1	11,602.2	57.3	49.7	-89.87	5,966.1	67.0	798.8	692.6	106.18	7.523	
17,900.0	11,604.0	17,846.1	11,602.2	57.9	50.4	-89.87	6,066.1	65.6	798.4	690.8	107.55	7.423	
18,000.0	11,604.0	17,946.1	11,602.2	58.5	51.1	-89.87	6,166.1	64.1	798.0	689.1	108.92	7.327	
18,100.0	11,604.0	18,046.1	11,602.2	59.2	51.9	-89.87	6,266.1	62.7	797.6	687.3	110.29	7.232	
18,200.0	11,604.0	18,146.1	11,602.2	59.8	52.6	-89.87	6,366.1	61.3	797.3	685.6	111.67	7.139	
18,300.0	11,604.0	18,246.1	11,602.2	60.4	53.3	-89.87	6,466.1	59.9	796.9	683.8	113.06	7.049	
18,400.0	11,604.0	18,346.1	11,602.2	61.1	54.0	-89.87	6,566.1	58.4	796.5	682.1	114.44	6.960	
18,500.0	11,604.0	18,446.1	11,602.2	61.7	54.8	-89.87	6,666.0	57.0	796.2	680.3	115.83	6.873	
18,600.0	11,604.0	18,546.1	11,602.2	62.4	55.5	-89.87	6,766.0	55.6	795.8	678.6	117.22	6.789	
18,700.0	11,604.0	18,646.1	11,602.2	63.0	56.2	-89.87	6,866.0	54.2	795.4	676.8	118.62	6.705	
18,800.0	11,604.0	18,746.1	11,602.2	63.7	57.0	-89.87	6,966.0	52.7	795.0	675.0	120.02	6.624	
18,900.0	11,604.0	18,846.1	11,602.2	64.3	57.7	-89.87	7,066.0	51.3	794.7	673.2	121.42	6.545	
19,000.0	11,604.0	18,946.1	11,602.2	65.0	58.4	-89.87	7,166.0	49.9	794.3	671.5	122.83	6.467	
19,100.0	11,604.0	19,046.1	11,602.2	65.6	59.2	-89.87	7,266.0	48.5	793.9	669.7	124.23	6.390	
19,200.0	11,604.0	19,146.1	11,602.2	66.3	59.9	-89.87	7,366.0	47.0	793.5	667.9	125.65	6.316	
19,300.0	11,604.0	19,246.1	11,602.2	67.0	60.7	-89.87	7,466.0	45.6	793.2	666.1	127.06	6.243	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11080-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface		Offset Wellbore Centre		Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,400.0	11,604.0	19,346.1	11,602.2	67.6	61.4	-89.87	7,565.9	44.2	792.8	664.3	128.47	6.171	
19,500.0	11,604.0	19,446.1	11,602.2	68.3	62.1	-89.87	7,665.9	42.8	792.4	662.5	129.89	6.101	
19,600.0	11,604.0	19,546.1	11,602.2	69.0	62.9	-89.87	7,765.9	41.3	792.1	660.7	131.31	6.032	
19,700.0	11,604.0	19,646.1	11,602.2	69.6	63.6	-89.87	7,865.9	39.9	791.7	659.0	132.74	5.964	
19,800.0	11,604.0	19,746.1	11,602.2	70.3	64.3	-89.87	7,965.9	38.5	791.3	657.2	134.16	5.898	
19,900.0	11,604.0	19,846.1	11,602.2	71.0	65.1	-89.87	8,065.9	37.0	790.9	655.4	135.59	5.833	
20,000.0	11,604.0	19,946.1	11,602.2	71.7	65.8	-89.87	8,165.9	35.6	790.6	653.6	137.02	5.770	
20,100.0	11,604.0	20,046.1	11,602.2	72.3	66.6	-89.87	8,265.9	34.2	790.2	651.8	138.45	5.707	
20,200.0	11,604.0	20,146.1	11,602.2	73.0	67.3	-89.87	8,365.9	32.8	789.8	649.9	139.88	5.646	
20,300.0	11,604.0	20,246.1	11,602.2	73.7	68.1	-89.87	8,465.8	31.3	789.5	648.1	141.32	5.586	
20,400.0	11,604.0	20,346.1	11,602.2	74.4	68.8	-89.87	8,565.8	29.9	789.1	646.3	142.76	5.527	
20,500.0	11,604.0	20,446.1	11,602.2	75.1	69.6	-89.87	8,665.8	28.5	788.7	644.5	144.20	5.470	
20,600.0	11,604.0	20,546.1	11,602.2	75.8	70.3	-89.87	8,765.8	27.1	788.3	642.7	145.64	5.413	
20,700.0	11,604.0	20,646.1	11,602.2	76.4	71.0	-89.87	8,865.8	25.6	788.0	640.9	147.08	5.357	
20,800.0	11,604.0	20,746.1	11,602.2	77.1	71.8	-89.87	8,965.8	24.2	787.6	639.1	148.52	5.303	
20,900.0	11,604.0	20,846.1	11,602.2	77.8	72.5	-89.87	9,065.8	22.8	787.2	637.3	149.97	5.249	
21,000.0	11,604.0	20,946.1	11,602.2	78.5	73.3	-89.87	9,165.8	21.4	786.9	635.4	151.42	5.197	
21,100.0	11,604.0	21,046.1	11,602.2	79.2	74.0	-89.87	9,265.8	19.9	786.5	633.6	152.87	5.145	
21,200.0	11,604.0	21,146.1	11,602.2	79.9	74.8	-89.87	9,365.7	18.5	786.1	631.8	154.32	5.094	
21,300.0	11,604.0	21,246.1	11,602.2	80.6	75.5	-89.87	9,465.7	17.1	785.7	630.0	155.77	5.044	
21,400.0	11,604.0	21,346.1	11,602.2	81.3	76.3	-89.87	9,565.7	15.7	785.4	628.1	157.22	4.995	
21,500.0	11,604.0	21,446.1	11,602.2	82.0	77.0	-89.87	9,665.7	14.2	785.0	626.3	158.68	4.947	
21,600.0	11,604.0	21,546.1	11,602.2	82.7	77.8	-89.87	9,765.7	12.8	784.6	624.5	160.13	4.900	
21,700.0	11,604.0	21,646.1	11,602.2	83.4	78.5	-89.87	9,865.7	11.4	784.3	622.7	161.59	4.853	
21,800.0	11,604.0	21,746.1	11,602.2	84.1	79.3	-89.87	9,965.7	10.0	783.9	620.8	163.05	4.808	
21,900.0	11,604.0	21,846.1	11,602.2	84.8	80.0	-89.87	10,065.7	8.5	783.5	619.0	164.51	4.763	
22,000.0	11,604.0	21,946.1	11,602.2	85.5	80.8	-89.87	10,165.7	7.1	783.1	617.2	165.97	4.718	
22,100.0	11,604.0	22,046.1	11,602.2	86.2	81.5	-89.87	10,265.6	5.7	782.8	615.3	167.44	4.675	
22,200.0	11,604.0	22,146.1	11,602.2	86.9	82.3	-89.87	10,365.6	4.3	782.4	613.5	168.90	4.632	
22,300.0	11,604.0	22,246.1	11,602.2	87.7	83.0	-89.87	10,465.6	2.8	782.0	611.7	170.36	4.590	
22,400.0	11,604.0	22,346.1	11,602.2	88.4	83.8	-89.87	10,565.6	1.4	781.7	609.8	171.83	4.549	
22,500.0	11,604.0	22,446.1	11,602.2	89.1	84.5	-89.87	10,665.6	0.0	781.3	608.0	173.30	4.508	
22,600.0	11,604.0	22,546.1	11,602.2	89.8	85.3	-89.87	10,765.6	-1.4	780.9	606.1	174.76	4.468	
22,700.0	11,604.0	22,646.1	11,602.2	90.5	86.0	-89.87	10,865.6	-2.9	780.5	604.3	176.23	4.429	
22,800.0	11,604.0	22,746.1	11,602.2	91.2	86.8	-89.87	10,965.6	-4.3	780.2	602.5	177.70	4.390	
22,900.0	11,604.0	22,846.1	11,602.2	91.9	87.5	-89.87	11,065.6	-5.7	779.8	600.6	179.17	4.352	
23,000.0	11,604.0	22,946.1	11,602.2	92.6	88.3	-89.87	11,165.6	-7.2	779.4	598.8	180.65	4.315	
23,100.0	11,604.0	23,046.1	11,602.2	93.4	89.0	-89.87	11,265.5	-8.6	779.0	596.9	182.12	4.278	
23,200.0	11,604.0	23,146.1	11,602.2	94.1	89.8	-89.87	11,365.5	-10.0	778.7	595.1	183.59	4.241	
23,300.0	11,604.0	23,246.1	11,602.2	94.8	90.5	-89.87	11,465.5	-11.4	778.3	593.2	185.07	4.206	
23,400.0	11,604.0	23,346.1	11,602.2	95.5	91.3	-89.87	11,565.5	-12.9	777.9	591.4	186.54	4.170	
23,500.0	11,604.0	23,446.1	11,602.2	96.2	92.0	-89.87	11,665.5	-14.3	777.6	589.5	188.02	4.136	
23,600.0	11,604.0	23,546.1	11,602.2	97.0	92.8	-89.87	11,765.5	-15.7	777.2	587.7	189.50	4.101	
23,700.0	11,604.0	23,646.1	11,602.2	97.7	93.5	-89.87	11,865.5	-17.1	776.8	585.8	190.97	4.068	
23,800.0	11,604.0	23,746.1	11,602.2	98.4	94.3	-89.87	11,965.5	-18.6	776.4	584.0	192.45	4.034	
23,900.0	11,604.0	23,846.1	11,602.2	99.1	95.1	-89.87	12,065.5	-20.0	776.1	582.1	193.93	4.002	
24,000.0	11,604.0	23,946.1	11,602.2	99.8	95.8	-89.87	12,165.4	-21.4	775.7	580.3	195.41	3.970	
24,100.0	11,604.0	24,046.1	11,602.2	100.6	96.6	-89.87	12,265.4	-22.8	775.3	578.4	196.89	3.938	
24,200.0	11,604.0	24,146.1	11,602.2	101.3	97.3	-89.87	12,365.4	-24.3	775.0	576.6	198.38	3.907	
24,300.0	11,604.0	24,246.1	11,602.2	102.0	98.1	-89.87	12,465.4	-25.7	774.6	574.7	199.86	3.876	
24,400.0	11,604.0	24,346.1	11,602.2	102.7	98.8	-89.87	12,565.4	-27.1	774.2	572.9	201.34	3.845	
24,500.0	11,604.0	24,446.1	11,602.2	103.5	99.6	-89.87	12,665.4	-28.5	773.8	571.0	202.82	3.815	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11080-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		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)	Minimum Separation (usft)	Separation Factor		
24,586.9	11,604.0	24,533.0	11,602.2	104.1	100.2	-89.87	12,752.3	-29.8	773.5	569.4	204.11	3.790		
24,600.0	11,604.0	24,546.1	11,602.2	104.2	100.3	-89.87	12,765.4	-30.0	773.5	569.2	204.31	3.786		
24,629.1	11,604.0	24,575.2	11,602.2	104.4	100.6	-89.87	12,794.5	-30.4	773.4	568.6	204.74	3.777 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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11252-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Distance	Rule Assigned:									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.3	0.0	3.0	3.0	-90.91	-0.5	-30.3	30.4				
100.0	100.0	100.3	100.0	3.0	3.0	-90.91	-0.5	-30.3	30.4	24.3	6.05	5.016	
200.0	200.0	200.3	200.0	3.2	3.2	-90.91	-0.5	-30.3	30.4	24.1	6.30	4.820	
300.0	300.0	300.3	300.0	3.3	3.3	-90.91	-0.5	-30.3	30.4	23.8	6.53	4.646	
400.0	400.0	400.3	400.0	3.4	3.4	-90.91	-0.5	-30.3	30.4	23.6	6.76	4.490	
500.0	500.0	500.3	500.0	3.5	3.5	-90.91	-0.5	-30.3	30.4	23.4	6.98	4.348	
600.0	600.0	600.3	600.0	3.6	3.6	-90.91	-0.5	-30.3	30.4	23.2	7.19	4.219	
700.0	700.0	700.3	700.0	3.8	3.8	-90.91	-0.5	-30.3	30.4	23.0	7.40	4.101	
800.0	800.0	800.3	800.0	3.9	3.9	-90.91	-0.5	-30.3	30.4	22.8	7.60	3.993	
900.0	900.0	900.3	900.0	4.0	4.0	-90.91	-0.5	-30.3	30.4	22.6	7.80	3.892	
1,000.0	1,000.0	1,000.3	1,000.0	4.1	4.2	-90.91	-0.5	-30.3	30.4	22.3	8.09	3.752	
1,002.8	1,002.8	1,003.1	1,002.8	4.1	4.2	158.09	-0.5	-30.3	30.4	22.3	8.10	3.746 CC	
1,100.0	1,100.0	1,101.2	1,100.9	4.3	4.5	157.45	-1.5	-28.9	30.5	22.0	8.54	3.571	
1,200.0	1,199.8	1,202.1	1,201.6	4.5	4.7	155.60	-4.4	-24.4	31.0	21.9	9.07	3.419 ES	
1,300.0	1,299.5	1,302.9	1,302.1	4.9	5.0	152.65	-9.2	-16.9	31.9	22.3	9.58	3.329	
1,400.0	1,398.7	1,403.7	1,402.1	5.2	5.4	148.81	-15.9	-6.5	33.3	23.2	10.07	3.303	
1,500.0	1,497.5	1,503.7	1,501.0	5.5	5.6	146.56	-23.5	5.1	36.6	26.0	10.56	3.463	
1,512.5	1,509.8	1,516.1	1,513.4	5.6	5.6	146.51	-24.5	6.6	37.2	26.6	10.60	3.507	
1,600.0	1,595.9	1,603.5	1,599.9	5.8	5.9	146.41	-31.1	16.8	41.6	30.7	11.00	3.787	
1,700.0	1,694.3	1,703.4	1,698.8	6.1	6.2	146.32	-38.7	28.4	46.8	35.3	11.50	4.067	
1,800.0	1,792.7	1,803.3	1,797.7	6.4	6.5	146.25	-46.2	40.1	51.9	39.9	12.03	4.315	
1,900.0	1,891.1	1,903.1	1,896.6	6.8	6.8	146.19	-53.8	51.8	57.0	44.4	12.57	4.535	
2,000.0	1,989.5	2,003.0	1,995.5	7.1	7.1	146.14	-61.4	63.4	62.1	49.0	13.14	4.730	
2,100.0	2,087.9	2,102.9	2,094.4	7.5	7.5	146.10	-68.9	75.1	67.3	53.5	13.71	4.904	
2,200.0	2,186.3	2,202.7	2,193.3	7.8	7.8	146.07	-76.5	86.7	72.4	58.1	14.31	5.059	
2,300.0	2,284.7	2,302.6	2,292.2	8.2	8.2	146.03	-84.1	98.4	77.5	62.6	14.91	5.198	
2,400.0	2,383.1	2,402.5	2,391.1	8.6	8.5	146.01	-91.7	110.0	82.6	67.1	15.52	5.322	
2,500.0	2,481.5	2,502.3	2,490.0	9.0	8.9	145.98	-99.2	121.7	87.7	71.6	16.15	5.434	
2,600.0	2,579.9	2,602.2	2,588.9	9.4	9.3	145.96	-106.8	133.4	92.9	76.1	16.78	5.535	
2,700.0	2,678.3	2,702.1	2,687.8	9.8	9.7	145.94	-114.4	145.0	98.0	80.6	17.41	5.627	
2,800.0	2,776.7	2,801.9	2,786.7	10.2	10.0	145.93	-121.9	156.7	103.1	85.0	18.06	5.710	
2,900.0	2,875.1	2,901.8	2,885.6	10.6	10.4	145.91	-129.5	168.3	108.2	89.5	18.71	5.785	
3,000.0	2,973.5	3,001.7	2,984.5	11.1	10.8	145.90	-137.1	180.0	113.3	94.0	19.36	5.854	
3,100.0	3,071.9	3,101.6	3,083.4	11.5	11.2	145.88	-144.6	191.6	118.5	98.4	20.02	5.917	
3,200.0	3,170.3	3,201.4	3,182.3	11.9	11.6	145.87	-152.2	203.3	123.6	102.9	20.69	5.974	
3,300.0	3,268.7	3,301.3	3,281.2	12.3	12.0	145.86	-159.8	215.0	128.7	107.4	21.35	6.027	
3,400.0	3,367.1	3,401.2	3,380.1	12.8	12.4	145.85	-167.4	226.6	133.8	111.8	22.02	6.076	
3,500.0	3,465.6	3,501.0	3,479.0	13.2	12.8	145.84	-174.9	238.3	138.9	116.2	22.70	6.122	
3,600.0	3,564.0	3,600.9	3,577.9	13.6	13.2	145.83	-182.5	249.9	144.1	120.7	23.37	6.163	
3,700.0	3,662.4	3,700.8	3,676.8	14.1	13.6	145.82	-190.1	261.6	149.2	125.1	24.05	6.202	
3,800.0	3,760.8	3,800.6	3,775.7	14.5	14.1	145.82	-197.6	273.2	154.3	129.6	24.74	6.238	
3,900.0	3,859.2	3,900.5	3,874.6	14.9	14.5	145.81	-205.2	284.9	159.4	134.0	25.42	6.272	
4,000.0	3,957.6	4,000.4	3,973.5	15.4	14.9	145.80	-212.8	296.5	164.6	138.4	26.11	6.303	
4,100.0	4,056.0	4,100.2	4,072.4	15.8	15.3	145.80	-220.3	308.2	169.7	142.9	26.80	6.332	
4,200.0	4,154.4	4,200.1	4,171.3	16.3	15.7	145.79	-227.9	319.9	174.8	147.3	27.48	6.360	
4,300.0	4,252.8	4,300.0	4,270.2	16.7	16.1	145.78	-235.5	331.5	179.9	151.7	28.18	6.385	
4,400.0	4,351.2	4,399.8	4,369.1	17.1	16.5	145.78	-243.1	343.2	185.0	156.2	28.87	6.409	
4,500.0	4,449.6	4,499.7	4,468.0	17.6	17.0	145.77	-250.6	354.8	190.2	160.6	29.56	6.432	
4,600.0	4,548.0	4,599.6	4,566.8	18.0	17.4	145.77	-258.2	366.5	195.3	165.0	30.26	6.453	
4,700.0	4,646.4	4,699.5	4,665.7	18.5	17.8	145.77	-265.8	378.1	200.4	169.4	30.96	6.474	
4,800.0	4,744.8	4,799.3	4,764.6	18.9	18.2	145.76	-273.3	389.8	205.5	173.9	31.65	6.493	
4,900.0	4,843.2	4,899.2	4,863.5	19.4	18.6	145.76	-280.9	401.5	210.6	178.3	32.35	6.511	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11252-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
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)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,941.6	4,999.1	4,962.4	19.8	19.0	145.75	-288.5	413.1	215.8	182.7	33.05	6.528	
5,100.0	5,040.0	5,098.9	5,061.3	20.3	19.5	145.75	-296.0	424.8	220.9	187.1	33.75	6.544	
5,200.0	5,138.4	5,198.8	5,160.2	20.7	19.9	145.75	-303.6	436.4	226.0	191.5	34.46	6.559	
5,300.0	5,236.8	5,298.7	5,259.1	21.2	20.3	145.74	-311.2	448.1	231.1	196.0	35.16	6.574	
5,400.0	5,335.2	5,398.5	5,358.0	21.6	20.7	145.74	-318.7	459.7	236.2	200.4	35.86	6.588	
5,500.0	5,433.6	5,498.4	5,456.9	22.1	21.2	145.74	-326.3	471.4	241.4	204.8	36.57	6.601	
5,600.0	5,532.0	5,597.4	5,555.0	22.5	21.6	145.76	-333.8	482.8	246.6	209.3	37.25	6.620	
5,700.0	5,630.4	5,695.8	5,652.5	23.0	22.0	145.90	-340.7	493.6	252.3	214.4	37.99	6.642	
5,800.0	5,728.8	5,794.0	5,750.1	23.4	22.4	146.17	-347.2	503.6	258.7	219.9	38.77	6.673	
5,900.0	5,827.2	5,892.2	5,847.6	23.9	22.8	146.56	-353.3	512.9	265.7	226.1	39.58	6.711	
6,000.0	5,925.7	5,990.3	5,945.1	24.3	23.2	147.06	-358.9	521.5	273.2	232.8	40.44	6.757	
6,100.0	6,024.1	6,088.2	6,042.6	24.8	23.6	147.64	-364.0	529.4	281.4	240.1	41.32	6.812	
6,126.4	6,050.0	6,114.0	6,068.3	24.9	23.7	147.81	-365.3	531.4	283.7	242.2	41.55	6.829	
6,200.0	6,122.5	6,186.0	6,140.0	25.2	23.9	148.30	-368.6	536.6	290.1	247.9	42.20	6.874	
6,300.0	6,221.1	6,283.8	6,237.5	25.6	24.3	148.96	-372.9	543.1	298.7	255.6	43.09	6.932	
6,400.0	6,319.8	6,381.4	6,334.9	26.1	24.7	149.60	-376.6	548.8	307.2	263.2	43.96	6.988	
6,500.0	6,418.7	6,479.1	6,432.3	26.5	25.0	150.23	-379.9	553.9	315.6	270.8	44.82	7.041	
6,600.0	6,517.7	6,576.6	6,529.7	27.0	25.3	150.85	-382.7	558.3	324.0	278.3	45.67	7.094	
6,700.0	6,616.8	6,674.1	6,627.1	27.4	25.7	151.46	-385.1	562.0	332.2	285.7	46.50	7.145	
6,800.0	6,716.0	6,771.5	6,724.5	27.8	26.0	152.07	-387.1	565.0	340.4	293.1	47.31	7.195	
6,900.0	6,815.4	6,868.9	6,821.8	28.2	26.3	152.67	-388.6	567.2	348.5	300.4	48.09	7.246	
7,000.0	6,914.8	6,966.1	6,919.0	28.6	26.5	153.26	-389.6	568.8	356.5	307.6	48.85	7.297	
7,100.0	7,014.3	7,063.4	7,016.3	29.0	26.8	153.85	-390.2	569.7	364.4	314.8	49.58	7.350	
7,200.0	7,113.9	7,161.0	7,113.9	29.4	26.9	154.44	-390.3	570.0	372.3	322.0	50.21	7.414	
7,300.0	7,213.6	7,260.7	7,213.6	29.8	26.9	154.98	-390.3	570.0	379.6	328.8	50.77	7.477	
7,400.0	7,313.3	7,360.4	7,313.3	30.2	26.9	155.44	-390.3	570.0	386.1	334.8	51.29	7.528	
7,500.0	7,413.1	7,460.2	7,413.1	30.5	26.9	155.84	-390.3	570.0	391.9	340.1	51.78	7.568	
7,600.0	7,513.0	7,560.1	7,513.0	30.9	27.0	156.17	-390.3	570.0	396.9	344.6	52.24	7.597	
7,700.0	7,612.9	7,660.0	7,612.9	31.2	27.0	156.45	-390.3	570.0	401.1	348.4	52.67	7.615	
7,800.0	7,712.8	7,759.9	7,712.8	31.5	27.0	156.66	-390.3	570.0	404.5	351.4	53.06	7.623	
7,900.0	7,812.7	7,859.8	7,812.7	31.8	27.0	156.83	-390.3	570.0	407.1	353.7	53.42	7.621	
8,000.0	7,912.7	7,959.8	7,912.7	32.1	27.0	156.94	-390.3	570.0	408.9	355.2	53.74	7.609	
8,100.0	8,012.7	8,059.8	8,012.7	32.3	27.1	157.00	-390.3	570.0	409.9	355.9	54.01	7.590	
8,176.4	8,089.1	8,136.2	8,089.1	32.4	27.1	-91.98	-390.3	570.0	410.2	356.1	54.11	7.580	
8,200.0	8,112.7	8,159.8	8,112.7	32.4	27.1	-91.98	-390.3	570.0	410.2	356.1	54.12	7.579	
8,300.0	8,212.7	8,259.8	8,212.7	32.4	27.1	-91.98	-390.3	570.0	410.2	356.0	54.16	7.573	
8,400.0	8,312.7	8,359.8	8,312.7	32.5	27.1	-91.98	-390.3	570.0	410.2	356.0	54.20	7.567	
8,500.0	8,412.7	8,459.8	8,412.7	32.5	27.2	-91.98	-390.3	570.0	410.2	355.9	54.25	7.561	
8,600.0	8,512.7	8,559.8	8,512.7	32.5	27.2	-91.98	-390.3	570.0	410.2	355.9	54.29	7.555	
8,700.0	8,612.7	8,659.8	8,612.7	32.5	27.2	-91.98	-390.3	570.0	410.2	355.8	54.34	7.549	
8,800.0	8,712.7	8,759.8	8,712.7	32.5	27.2	-91.98	-390.3	570.0	410.2	355.8	54.38	7.543	
8,900.0	8,812.7	8,859.8	8,812.7	32.5	27.2	-91.98	-390.3	570.0	410.2	355.7	54.43	7.536	
9,000.0	8,912.7	8,959.8	8,912.7	32.6	27.3	-91.98	-390.3	570.0	410.2	355.7	54.47	7.530	
9,100.0	9,012.7	9,059.8	9,012.7	32.6	27.3	-91.98	-390.3	570.0	410.2	355.7	54.52	7.524	
9,200.0	9,112.7	9,159.8	9,112.7	32.6	27.3	-91.98	-390.3	570.0	410.2	355.6	54.56	7.517	
9,300.0	9,212.7	9,259.8	9,212.7	32.6	27.3	-91.98	-390.3	570.0	410.2	355.6	54.61	7.511	
9,400.0	9,312.7	9,359.8	9,312.7	32.6	27.4	-91.98	-390.3	570.0	410.2	355.5	54.66	7.504	
9,500.0	9,412.7	9,459.8	9,412.7	32.7	27.4	-91.98	-390.3	570.0	410.2	355.5	54.71	7.497	
9,600.0	9,512.7	9,559.8	9,512.7	32.7	27.4	-91.98	-390.3	570.0	410.2	355.4	54.76	7.491	
9,700.0	9,612.7	9,659.8	9,612.7	32.7	27.4	-91.98	-390.3	570.0	410.2	355.4	54.80	7.484	
9,800.0	9,712.7	9,759.8	9,712.7	32.7	27.5	-91.98	-390.3	570.0	410.2	355.3	54.85	7.477	
9,900.0	9,812.7	9,859.8	9,812.7	32.7	27.5	-91.98	-390.3	570.0	410.2	355.3	54.90	7.471	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11252-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 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)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.0	9,912.7	9,959.8	9,912.7	32.8	27.5	-91.98	-390.3	570.0	410.2	355.2	54.95	7.464	
10,100.0	10,012.7	10,059.8	10,012.7	32.8	27.5	-91.98	-390.3	570.0	410.2	355.2	55.01	7.457	
10,200.0	10,112.7	10,159.8	10,112.7	32.8	27.6	-91.98	-390.3	570.0	410.2	355.1	55.06	7.450	
10,300.0	10,212.7	10,259.8	10,212.7	32.8	27.6	-91.98	-390.3	570.0	410.2	355.1	55.11	7.443	
10,400.0	10,312.7	10,359.8	10,312.7	32.9	27.6	-91.98	-390.3	570.0	410.2	355.0	55.16	7.436	
10,500.0	10,412.7	10,459.8	10,412.7	32.9	27.6	-91.98	-390.3	570.0	410.2	355.0	55.21	7.429	
10,600.0	10,512.7	10,559.8	10,512.7	32.9	27.7	-91.98	-390.3	570.0	410.2	354.9	55.27	7.422	
10,700.0	10,612.7	10,659.8	10,612.7	32.9	27.7	-91.98	-390.3	570.0	410.2	354.8	55.32	7.415	
10,800.0	10,712.7	10,759.8	10,712.7	32.9	27.7	-91.98	-390.3	570.0	410.2	354.8	55.37	7.407	
10,900.0	10,812.7	10,859.8	10,812.7	33.0	27.8	-91.98	-390.3	570.0	410.2	354.7	55.43	7.400	
11,000.0	10,912.7	10,959.8	10,912.7	33.0	27.8	-91.98	-390.3	570.0	410.2	354.7	55.48	7.393	
11,100.0	11,012.7	11,059.8	11,012.7	33.0	27.8	-91.98	-390.3	570.0	410.2	354.6	55.54	7.386	
11,118.3	11,031.0	11,078.1	11,031.0	33.0	27.8	-91.98	-390.3	570.0	410.2	354.6	55.54	7.385	
11,150.0	11,062.7	11,109.8	11,062.7	33.0	27.8	-91.07	-390.3	570.0	410.2	354.7	55.51	7.389	
11,200.0	11,112.4	11,159.5	11,112.4	33.0	27.8	-91.75	-390.3	570.0	410.3	355.0	55.29	7.421	
11,250.0	11,161.6	11,208.7	11,161.6	33.0	27.9	-92.98	-390.3	570.0	410.7	355.9	54.84	7.489	
11,300.0	11,209.7	11,257.1	11,210.0	33.0	27.9	-94.70	-390.3	570.0	411.6	357.5	54.14	7.602	
11,350.0	11,256.5	11,308.7	11,261.5	33.0	27.9	-96.71	-387.6	569.9	413.2	359.8	53.41	7.737	
11,400.0	11,301.5	11,361.9	11,314.1	33.1	27.9	-98.69	-380.0	569.8	415.3	362.6	52.72	7.877	
11,450.0	11,344.5	11,416.8	11,367.5	33.1	27.9	-100.62	-367.0	569.6	417.8	365.7	52.14	8.014	
11,500.0	11,385.1	11,473.5	11,421.0	33.1	27.9	-102.50	-348.3	569.3	420.7	369.0	51.69	8.140	
11,550.0	11,423.0	11,532.1	11,474.1	33.1	28.0	-104.28	-323.6	569.0	423.9	372.5	51.40	8.246	
11,600.0	11,457.9	11,592.7	11,526.0	33.1	28.0	-105.97	-292.4	568.5	427.3	375.9	51.33	8.324	
11,650.0	11,489.6	11,655.3	11,575.9	33.1	28.0	-107.53	-254.7	567.9	430.6	379.2	51.48	8.365	
11,700.0	11,517.8	11,719.8	11,622.7	33.1	28.0	-108.94	-210.4	567.3	433.9	382.1	51.86	8.367	
11,750.0	11,542.3	11,786.1	11,665.3	33.2	28.1	-110.19	-159.5	566.5	437.0	384.5	52.47	8.327	
11,800.0	11,562.9	11,854.2	11,702.6	33.2	28.1	-111.24	-102.6	565.6	439.6	386.3	53.29	8.250	
11,850.0	11,579.4	11,923.8	11,733.5	33.2	28.2	-112.08	-40.4	564.7	441.8	387.5	54.26	8.142	
11,900.0	11,591.8	11,994.6	11,756.9	33.3	28.2	-112.69	26.3	563.7	443.3	388.0	55.33	8.012	
11,950.0	11,599.9	12,066.1	11,772.1	33.3	28.3	-113.06	96.2	562.7	444.2	387.7	56.45	7.868	
12,000.0	11,603.7	12,138.0	11,778.5	33.3	28.3	-113.17	167.8	561.6	444.3	386.8	57.56	7.719	
12,018.3	11,604.0	12,160.8	11,778.7	33.3	28.3	-113.16	190.6	561.2	444.2	386.4	57.79	7.687	
12,100.0	11,604.0	12,242.5	11,778.7	33.4	28.4	-113.17	272.3	560.0	444.0	386.0	57.94	7.663	
12,200.0	11,604.0	12,342.5	11,778.7	33.5	28.5	-113.19	372.3	558.5	443.7	385.5	58.17	7.629	
12,300.0	11,604.0	12,442.5	11,778.7	33.7	28.6	-113.20	472.3	557.0	443.4	385.0	58.43	7.589	
12,400.0	11,604.0	12,542.5	11,778.7	33.8	28.8	-113.22	572.3	555.5	443.2	384.4	58.74	7.545	
12,500.0	11,604.0	12,642.5	11,778.7	33.9	28.9	-113.23	672.2	554.0	442.9	383.8	59.08	7.497	
12,600.0	11,604.0	12,742.5	11,778.7	34.1	29.1	-113.25	772.2	552.5	442.6	383.2	59.46	7.444	
12,700.0	11,604.0	12,842.5	11,778.7	34.3	29.2	-113.26	872.2	551.0	442.4	382.5	59.88	7.387	
12,800.0	11,604.0	12,942.5	11,778.7	34.5	29.4	-113.28	972.2	549.5	442.1	381.8	60.34	7.327	
12,900.0	11,604.0	13,042.5	11,778.7	34.7	29.6	-113.29	1,072.2	548.0	441.8	381.0	60.83	7.263	
13,000.0	11,604.0	13,142.5	11,778.7	34.9	29.9	-113.31	1,172.2	546.5	441.6	380.2	61.36	7.197	
13,100.0	11,604.0	13,242.5	11,778.7	35.2	30.1	-113.32	1,272.2	545.0	441.3	379.4	61.92	7.127	
13,200.0	11,604.0	13,342.5	11,778.7	35.4	30.3	-113.34	1,372.2	543.5	441.0	378.5	62.51	7.055	
13,300.0	11,604.0	13,442.5	11,778.7	35.7	30.6	-113.35	1,472.1	542.0	440.8	377.6	63.13	6.981	
13,400.0	11,604.0	13,542.5	11,778.7	35.9	30.9	-113.37	1,572.1	540.4	440.5	376.7	63.79	6.905	
13,500.0	11,604.0	13,642.5	11,778.7	36.2	31.2	-113.38	1,672.1	538.9	440.2	375.7	64.48	6.828	
13,600.0	11,604.0	13,742.5	11,778.7	36.5	31.5	-113.40	1,772.1	537.4	439.9	374.8	65.19	6.748	
13,700.0	11,604.0	13,842.5	11,778.7	36.8	31.8	-113.41	1,872.1	535.9	439.7	373.7	65.93	6.668	
13,800.0	11,604.0	13,942.5	11,778.7	37.2	32.1	-113.43	1,972.1	534.4	439.4	372.7	66.71	6.587	
13,900.0	11,604.0	14,042.5	11,778.7	37.5	32.5	-113.44	2,072.1	532.9	439.1	371.6	67.50	6.505	
14,000.0	11,604.0	14,142.5	11,778.7	37.8	32.8	-113.46	2,172.1	531.4	438.9	370.5	68.32	6.423	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0													Offset Site Error:	0.0 usft	
Survey Program:		0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11252-r.5 MWD+IFR1+MS								Rule Assigned:				Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.0	11,604.0	14,242.5	11,778.7	38.2	33.2	-113.47	2,272.1	529.9	438.6	369.4	69.17	6.341			
14,200.0	11,604.0	14,342.5	11,778.7	38.6	33.6	-113.49	2,372.0	528.4	438.3	368.3	70.04	6.258			
14,300.0	11,604.0	14,442.5	11,778.7	38.9	34.0	-113.50	2,472.0	526.9	438.1	367.1	70.93	6.176			
14,400.0	11,604.0	14,542.5	11,778.7	39.3	34.4	-113.52	2,572.0	525.4	437.8	365.9	71.85	6.093			
14,500.0	11,604.0	14,642.5	11,778.7	39.7	34.9	-113.54	2,672.0	523.9	437.5	364.7	72.78	6.011			
14,600.0	11,604.0	14,742.5	11,778.7	40.1	35.3	-113.55	2,772.0	522.4	437.3	363.5	73.74	5.930			
14,700.0	11,604.0	14,842.5	11,778.7	40.6	35.8	-113.57	2,872.0	520.9	437.0	362.3	74.71	5.849			
14,800.0	11,604.0	14,942.5	11,778.7	41.0	36.2	-113.58	2,972.0	519.4	436.7	361.0	75.71	5.768			
14,900.0	11,604.0	15,042.5	11,778.7	41.4	36.7	-113.60	3,072.0	517.9	436.4	359.7	76.72	5.689			
15,000.0	11,604.0	15,142.5	11,778.7	41.9	37.2	-113.61	3,171.9	516.4	436.2	358.4	77.75	5.610			
15,100.0	11,604.0	15,242.5	11,778.7	42.3	37.7	-113.63	3,271.9	514.9	435.9	357.1	78.79	5.532			
15,200.0	11,604.0	15,342.5	11,778.7	42.8	38.2	-113.64	3,371.9	513.4	435.6	355.8	79.85	5.456			
15,300.0	11,604.0	15,442.5	11,778.7	43.3	38.7	-113.66	3,471.9	511.9	435.4	354.4	80.93	5.380			
15,400.0	11,604.0	15,542.5	11,778.7	43.8	39.2	-113.67	3,571.9	510.4	435.1	353.1	82.02	5.305			
15,500.0	11,604.0	15,642.5	11,778.7	44.3	39.8	-113.69	3,671.9	508.9	434.8	351.7	83.12	5.231			
15,600.0	11,604.0	15,742.5	11,778.7	44.8	40.3	-113.71	3,771.9	507.4	434.6	350.3	84.24	5.159			
15,700.0	11,604.0	15,842.5	11,778.7	45.3	40.8	-113.72	3,871.9	505.9	434.3	348.9	85.37	5.087			
15,800.0	11,604.0	15,942.5	11,778.7	45.8	41.4	-113.74	3,971.9	504.3	434.0	347.5	86.52	5.017			
15,900.0	11,604.0	16,042.5	11,778.7	46.3	42.0	-113.75	4,071.8	502.8	433.8	346.1	87.67	4.947			
16,000.0	11,604.0	16,142.5	11,778.7	46.8	42.5	-113.77	4,171.8	501.3	433.5	344.7	88.84	4.879			
16,100.0	11,604.0	16,242.5	11,778.7	47.4	43.1	-113.78	4,271.8	499.8	433.2	343.2	90.02	4.813			
16,200.0	11,604.0	16,342.5	11,778.7	47.9	43.7	-113.80	4,371.8	498.3	433.0	341.7	91.21	4.747			
16,300.0	11,604.0	16,442.5	11,778.7	48.5	44.3	-113.82	4,471.8	496.8	432.7	340.3	92.41	4.682			
16,400.0	11,604.0	16,542.5	11,778.7	49.0	44.9	-113.83	4,571.8	495.3	432.4	338.8	93.62	4.619			
16,500.0	11,604.0	16,642.5	11,778.7	49.6	45.5	-113.85	4,671.8	493.8	432.1	337.3	94.83	4.557			
16,600.0	11,604.0	16,742.5	11,778.7	50.1	46.1	-113.86	4,771.8	492.3	431.9	335.8	96.06	4.496			
16,700.0	11,604.0	16,842.5	11,778.7	50.7	46.7	-113.88	4,871.7	490.8	431.6	334.3	97.30	4.436			
16,800.0	11,604.0	16,942.5	11,778.7	51.3	47.3	-113.89	4,971.7	489.3	431.3	332.8	98.54	4.377			
16,900.0	11,604.0	17,042.5	11,778.7	51.9	48.0	-113.91	5,071.7	487.8	431.1	331.3	99.80	4.320			
17,000.0	11,604.0	17,142.5	11,778.7	52.4	48.6	-113.93	5,171.7	486.3	430.8	329.8	101.06	4.263			
17,100.0	11,604.0	17,242.5	11,778.7	53.0	49.2	-113.94	5,271.7	484.8	430.5	328.2	102.33	4.208			
17,200.0	11,604.0	17,342.5	11,778.7	53.6	49.9	-113.96	5,371.7	483.3	430.3	326.7	103.60	4.153			
17,300.0	11,604.0	17,442.5	11,778.7	54.2	50.5	-113.97	5,471.7	481.8	430.0	325.1	104.88	4.100			
17,400.0	11,604.0	17,542.5	11,778.7	54.8	51.2	-113.99	5,571.7	480.3	429.7	323.6	106.17	4.047			
17,500.0	11,604.0	17,642.5	11,778.7	55.4	51.8	-114.01	5,671.7	478.8	429.5	322.0	107.47	3.996			
17,600.0	11,604.0	17,742.5	11,778.7	56.0	52.5	-114.02	5,771.6	477.3	429.2	320.4	108.77	3.946			
17,700.0	11,604.0	17,842.5	11,778.7	56.7	53.1	-114.04	5,871.6	475.8	428.9	318.9	110.08	3.897			
17,800.0	11,604.0	17,942.5	11,778.7	57.3	53.8	-114.05	5,971.6	474.3	428.7	317.3	111.39	3.848			
17,900.0	11,604.0	18,042.5	11,778.7	57.9	54.4	-114.07	6,071.6	472.8	428.4	315.7	112.71	3.801			
18,000.0	11,604.0	18,142.5	11,778.7	58.5	55.1	-114.09	6,171.6	471.3	428.1	314.1	114.04	3.754			
18,100.0	11,604.0	18,242.5	11,778.7	59.2	55.8	-114.10	6,271.6	469.8	427.9	312.5	115.37	3.709			
18,200.0	11,604.0	18,342.5	11,778.7	59.8	56.4	-114.12	6,371.6	468.2	427.6	310.9	116.71	3.664			
18,300.0	11,604.0	18,442.5	11,778.7	60.4	57.1	-114.13	6,471.6	466.7	427.3	309.3	118.05	3.620			
18,400.0	11,604.0	18,542.5	11,778.7	61.1	57.8	-114.15	6,571.5	465.2	427.1	307.7	119.39	3.577			
18,500.0	11,604.0	18,642.5	11,778.7	61.7	58.5	-114.17	6,671.5	463.7	426.8	306.0	120.74	3.535			
18,600.0	11,604.0	18,742.5	11,778.7	62.4	59.1	-114.18	6,771.5	462.2	426.5	304.4	122.10	3.493			
18,700.0	11,604.0	18,842.5	11,778.7	63.0	59.8	-114.20	6,871.5	460.7	426.3	302.8	123.46	3.453			
18,800.0	11,604.0	18,942.5	11,778.7	63.7	60.5	-114.21	6,971.5	459.2	426.0	301.2	124.82	3.413			
18,900.0	11,604.0	19,042.5	11,778.7	64.3	61.2	-114.23	7,071.5	457.7	425.7	299.5	126.18	3.374			
19,000.0	11,604.0	19,142.5	11,778.7	65.0	61.9	-114.25	7,171.5	456.2	425.5	297.9	127.56	3.335			
19,100.0	11,604.0	19,242.5	11,778.7	65.6	62.6	-114.26	7,271.5	454.7	425.2	296.3	128.93	3.298			
19,200.0	11,604.0	19,342.5	11,778.7	66.3	63.3	-114.28	7,371.5	453.2	424.9	294.6	130.31	3.261			

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11252-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface		Offset Wellbore Centre		Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,300.0	11,604.0	19,442.5	11,778.7	67.0	64.0	-114.30	7,471.4	451.7	424.6	293.0	131.69	3.225	
19,400.0	11,604.0	19,542.5	11,778.7	67.6	64.7	-114.31	7,571.4	450.2	424.4	291.3	133.08	3.189	
19,500.0	11,604.0	19,642.5	11,778.7	68.3	65.4	-114.33	7,671.4	448.7	424.1	289.7	134.46	3.154	
19,600.0	11,604.0	19,742.5	11,778.7	69.0	66.1	-114.35	7,771.4	447.2	423.8	288.0	135.86	3.120	
19,700.0	11,604.0	19,842.5	11,778.7	69.6	66.8	-114.36	7,871.4	445.7	423.6	286.3	137.25	3.086	
19,800.0	11,604.0	19,942.5	11,778.7	70.3	67.5	-114.38	7,971.4	444.2	423.3	284.7	138.65	3.053	
19,900.0	11,604.0	20,042.5	11,778.7	71.0	68.2	-114.39	8,071.4	442.7	423.0	283.0	140.05	3.021	
20,000.0	11,604.0	20,142.5	11,778.7	71.7	68.9	-114.41	8,171.4	441.2	422.8	281.3	141.45	2.989	
20,100.0	11,604.0	20,242.5	11,778.7	72.3	69.6	-114.43	8,271.3	439.7	422.5	279.7	142.86	2.958	
20,200.0	11,604.0	20,342.5	11,778.7	73.0	70.3	-114.44	8,371.3	438.2	422.2	278.0	144.27	2.927	
20,300.0	11,604.0	20,442.5	11,778.7	73.7	71.0	-114.46	8,471.3	436.7	422.0	276.3	145.68	2.897	
20,400.0	11,604.0	20,542.5	11,778.7	74.4	71.7	-114.48	8,571.3	435.2	421.7	274.6	147.10	2.867	
20,500.0	11,604.0	20,642.5	11,778.7	75.1	72.4	-114.49	8,671.3	433.7	421.4	272.9	148.51	2.838	
20,600.0	11,604.0	20,742.5	11,778.7	75.8	73.1	-114.51	8,771.3	432.1	421.2	271.2	149.93	2.809	
20,700.0	11,604.0	20,842.5	11,778.7	76.4	73.8	-114.53	8,871.3	430.6	420.9	269.6	151.35	2.781	
20,800.0	11,604.0	20,942.5	11,778.7	77.1	74.6	-114.54	8,971.3	429.1	420.6	267.9	152.78	2.753	
20,900.0	11,604.0	21,042.5	11,778.7	77.8	75.3	-114.56	9,071.3	427.6	420.4	266.2	154.20	2.726	
21,000.0	11,604.0	21,142.5	11,778.7	78.5	76.0	-114.58	9,171.2	426.1	420.1	264.5	155.63	2.699	
21,100.0	11,604.0	21,242.5	11,778.7	79.2	76.7	-114.59	9,271.2	424.6	419.8	262.8	157.06	2.673	
21,200.0	11,604.0	21,342.5	11,778.7	79.9	77.4	-114.61	9,371.2	423.1	419.6	261.1	158.50	2.647	
21,300.0	11,604.0	21,442.5	11,778.7	80.6	78.2	-114.63	9,471.2	421.6	419.3	259.4	159.93	2.622	
21,400.0	11,604.0	21,542.5	11,778.7	81.3	78.9	-114.64	9,571.2	420.1	419.0	257.7	161.37	2.597	
21,500.0	11,604.0	21,642.5	11,778.7	82.0	79.6	-114.66	9,671.2	418.6	418.8	256.0	162.81	2.572	
21,600.0	11,604.0	21,742.5	11,778.7	82.7	80.3	-114.68	9,771.2	417.1	418.5	254.3	164.25	2.548	
21,700.0	11,604.0	21,842.5	11,778.7	83.4	81.0	-114.69	9,871.2	415.6	418.2	252.6	165.69	2.524	
21,800.0	11,604.0	21,942.5	11,778.7	84.1	81.8	-114.71	9,971.1	414.1	418.0	250.8	167.13	2.501	
21,900.0	11,604.0	22,042.5	11,778.7	84.8	82.5	-114.73	10,071.1	412.6	417.7	249.1	168.58	2.478	
22,000.0	11,604.0	22,142.5	11,778.7	85.5	83.2	-114.74	10,171.1	411.1	417.4	247.4	170.02	2.455	
22,100.0	11,604.0	22,242.5	11,778.7	86.2	83.9	-114.76	10,271.1	409.6	417.2	245.7	171.47	2.433	
22,200.0	11,604.0	22,342.5	11,778.7	86.9	84.7	-114.78	10,371.1	408.1	416.9	244.0	172.92	2.411	
22,300.0	11,604.0	22,442.5	11,778.7	87.7	85.4	-114.80	10,471.1	406.6	416.6	242.3	174.37	2.389	
22,400.0	11,604.0	22,542.5	11,778.7	88.4	86.1	-114.81	10,571.1	405.1	416.4	240.6	175.83	2.368	
22,500.0	11,604.0	22,642.5	11,778.7	89.1	86.9	-114.83	10,671.1	403.6	416.1	238.8	177.28	2.347	
22,600.0	11,604.0	22,742.5	11,778.7	89.8	87.6	-114.85	10,771.1	402.1	415.8	237.1	178.74	2.327	
22,700.0	11,604.0	22,842.5	11,778.7	90.5	88.3	-114.86	10,871.0	400.6	415.6	235.4	180.20	2.306	
22,800.0	11,604.0	22,942.5	11,778.7	91.2	89.0	-114.88	10,971.0	399.1	415.3	233.7	181.66	2.286	
22,900.0	11,604.0	23,042.5	11,778.7	91.9	89.8	-114.90	11,071.0	397.6	415.0	231.9	183.12	2.267	
23,000.0	11,604.0	23,142.5	11,778.7	92.6	90.5	-114.92	11,171.0	396.0	414.8	230.2	184.58	2.247	
23,100.0	11,604.0	23,242.5	11,778.7	93.4	91.2	-114.93	11,271.0	394.5	414.5	228.5	186.04	2.228	
23,200.0	11,604.0	23,342.5	11,778.7	94.1	92.0	-114.95	11,371.0	393.0	414.3	226.7	187.50	2.209	
23,300.0	11,604.0	23,442.5	11,778.7	94.8	92.7	-114.97	11,471.0	391.5	414.0	225.0	188.97	2.191	
23,400.0	11,604.0	23,542.5	11,778.7	95.5	93.4	-114.98	11,571.0	390.0	413.7	223.3	190.44	2.172	
23,500.0	11,604.0	23,642.5	11,778.7	96.2	94.2	-115.00	11,670.9	388.5	413.5	221.5	191.90	2.154	
23,600.0	11,604.0	23,742.5	11,778.7	97.0	94.9	-115.02	11,770.9	387.0	413.2	219.8	193.37	2.137	
23,700.0	11,604.0	23,842.5	11,778.7	97.7	95.7	-115.04	11,870.9	385.5	412.9	218.1	194.84	2.119	
23,800.0	11,604.0	23,942.5	11,778.7	98.4	96.4	-115.05	11,970.9	384.0	412.7	216.3	196.31	2.102	
23,900.0	11,604.0	24,042.5	11,778.7	99.1	97.1	-115.07	12,070.9	382.5	412.4	214.6	197.79	2.085	
24,000.0	11,604.0	24,142.5	11,778.7	99.8	97.9	-115.09	12,170.9	381.0	412.1	212.9	199.26	2.068	
24,100.0	11,604.0	24,242.5	11,778.7	100.6	98.6	-115.10	12,270.9	379.5	411.9	211.1	200.73	2.052	
24,200.0	11,604.0	24,342.5	11,778.7	101.3	99.3	-115.12	12,370.9	378.0	411.6	209.4	202.21	2.035	
24,300.0	11,604.0	24,442.5	11,778.7	102.0	100.1	-115.14	12,470.9	376.5	411.3	207.6	203.68	2.019	
24,400.0	11,604.0	24,542.5	11,778.7	102.7	100.8	-115.16	12,570.8	375.0	411.1	205.9	205.16	2.004	

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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11252-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 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)	Minimum Separation (usft)	Separation Factor	Warning	
24,500.0	11,604.0	24,642.5	11,778.7	103.5	101.6	-115.17	12,670.8	373.5	410.8	204.2	206.64	1.988	Advise and Monitor	
24,586.9	11,604.0	24,729.4	11,778.7	104.1	102.2	-115.19	12,757.8	372.2	410.6	202.6	207.92	1.975	Advise and Monitor	
24,600.0	11,604.0	24,742.5	11,778.7	104.2	102.3	-115.19	12,770.8	372.0	410.5	202.4	208.12	1.973	Advise and Monitor	
24,629.1	11,604.0	24,771.6	11,778.7	104.4	102.5	-115.20	12,799.9	371.5	410.5	201.9	208.55	1.968	Advise and Monitor, SF	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to KB 27 @ 3203.1usft

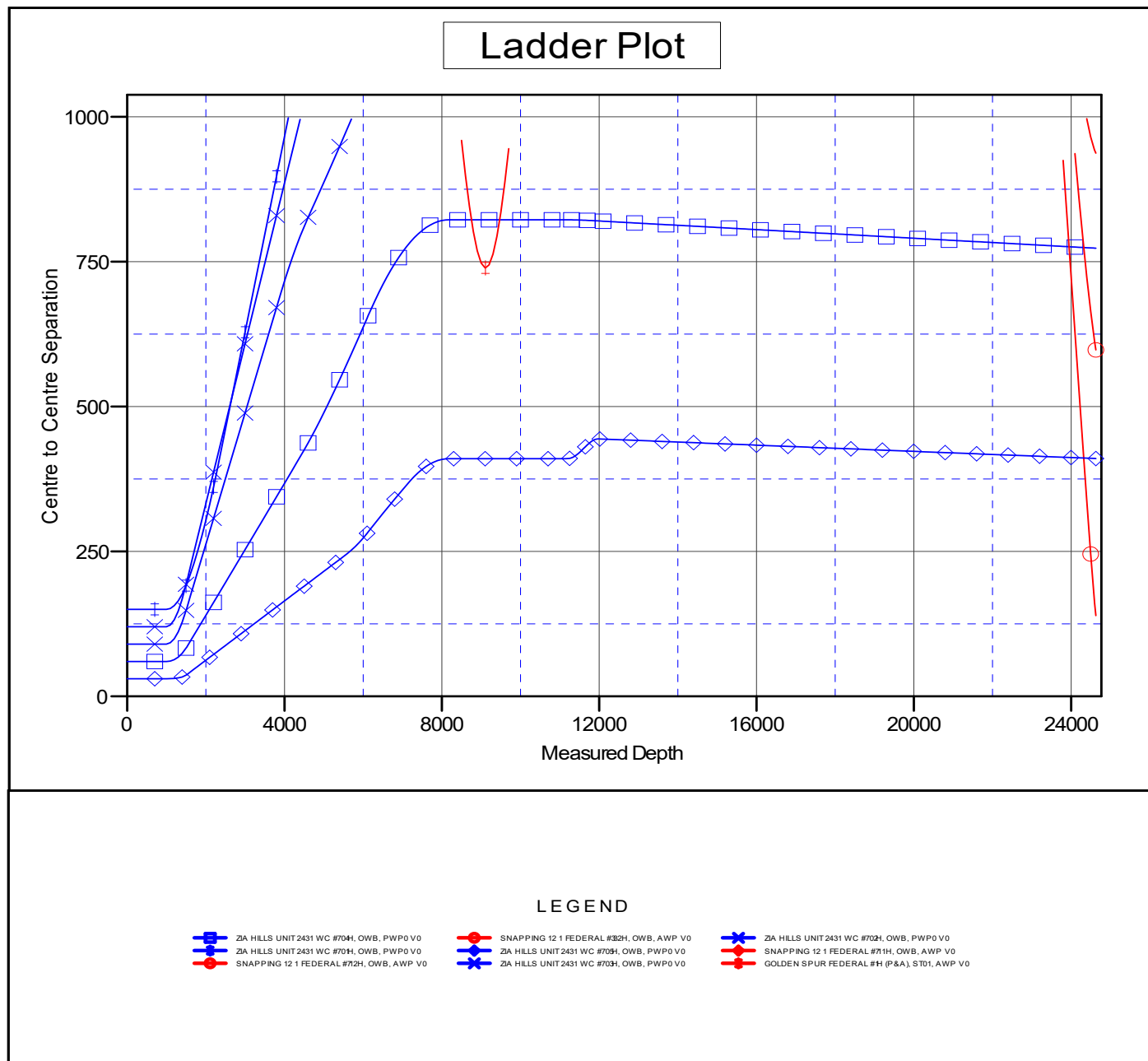
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #706H

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

Grid Convergence at Surface is: 0.32°



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 2431 WC #706H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB 27 @ 3203.1usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB 27 @ 3203.1usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to KB 27 @ 3203.1usft

Offset Depths are relative to Offset Datum

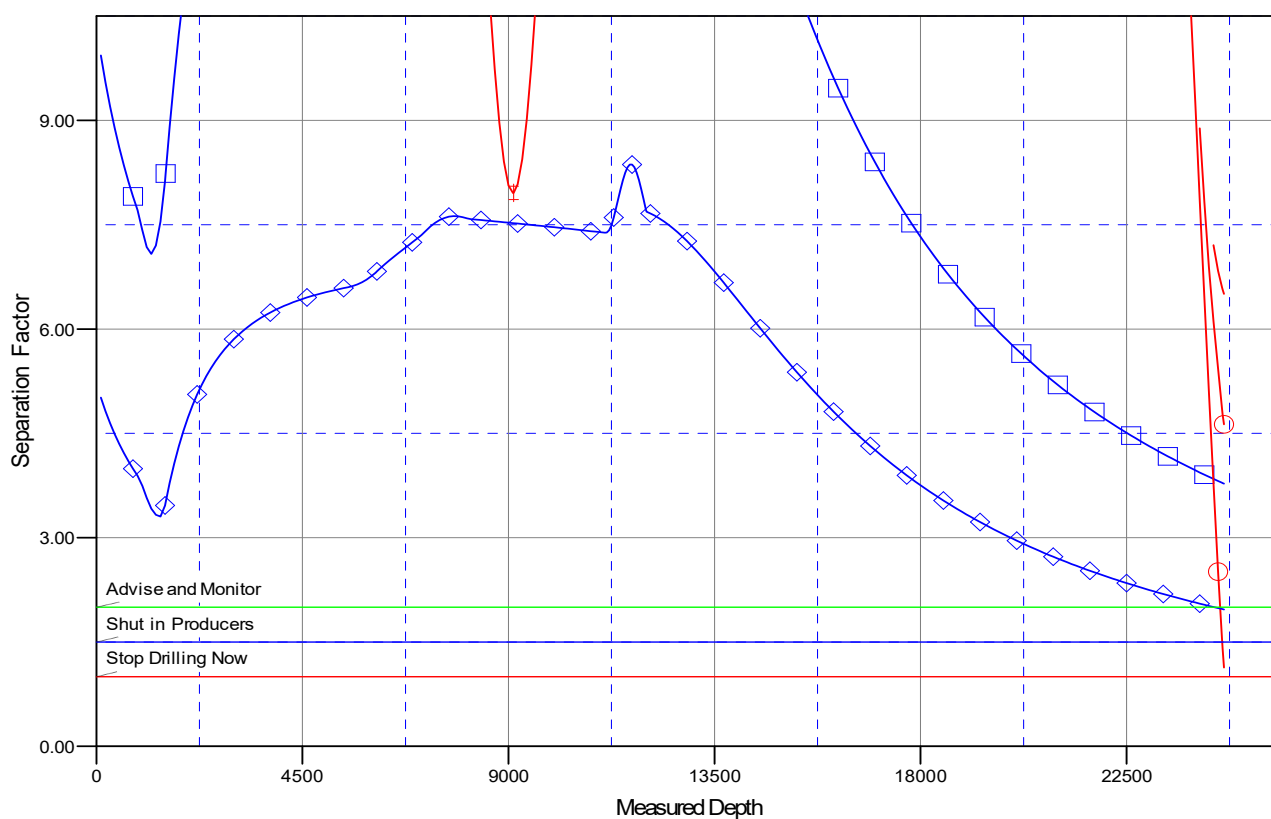
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #706H

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

Grid Convergence at Surface is: 0.32°

Separation Factor Plot



LEGEND

ZIA HILLS UNIT 2431 WC #704H, OWB, PWP0 V0	SNAPPING 12 1 FEDERAL #32H, OWB, AWP V0	ZIA HILLS UNIT 2431 WC #702H, OWB, PWP0 V0
ZIA HILLS UNIT 2431 WC #705H, OWB, PWP0 V0	SNAPPING 12 1 FEDERAL #71H, OWB, AWP V0	ZIA HILLS UNIT 2431 WC #703H, OWB, PWP0 V0
SNAPPING 12 1 FEDERAL #72H, OWB, AWP V0		GOLDEN SPUR FEDERAL #H (P&A), ST01, AWP V0

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

DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

ZIA HILLS UNIT 2431 PROJECT

ZIA HILLS UNIT 2431 WC #706H

OWB

Plan: PWP0

Standard Planning Report

07 November, 2022

ConocoPhillips

Planning Report

Database:	EDT 15 Central Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB 27 @ 3203.1usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB 27 @ 3203.1usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project	BULLDOG PROSPECT (NM-E)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	ZIA HILLS UNIT 2431 WC #706H			
Well Position	+N/-S	465.4 usft	Northing:	372,244.57 usft
	+E/-W	1,455.6 usft	Easting:	685,440.65 usft
Position Uncertainty		3.0 usft	Wellhead Elevation:	
			Latitude:	32° 1' 19.211 N
			Longitude:	103° 44' 5.961 W
			Ground Level:	3,176.1 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	12/31/2023	6.34	59.52	47,263.48115457

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	3.32

Plan Survey Tool Program	Date	11/7/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	1,000.0 PWP0 (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp
2	1,000.0	11,118.0 PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-St
3	11,118.0	24,629.1 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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,512.5	10.25	111.00	1,509.8	-16.4	42.7	2.00	2.00	0.00	111.00	
6,126.4	10.25	111.00	6,050.0	-310.6	809.2	0.00	0.00	0.00	0.00	
8,176.4	0.00	0.00	8,089.1	-376.1	979.9	0.50	-0.50	0.00	180.00	
11,118.3	0.00	0.00	11,031.0	-376.1	979.9	0.00	0.00	0.00	0.00	
12,018.3	90.00	358.97	11,604.0	196.7	969.6	10.00	10.00	0.00	358.97	
24,586.9	90.00	358.97	11,604.0	12,763.4	743.7	0.00	0.00	0.00	0.00	
24,629.1	90.00	358.97	11,604.0	12,805.5	742.9	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 15 Central Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB 27 @ 3203.1usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB 27 @ 3203.1usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #706H	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	2.00	111.00	1,100.0	-0.6	1.6	-0.5	2.00	2.00	0.00
1,200.0	4.00	111.00	1,199.8	-2.5	6.5	-2.1	2.00	2.00	0.00
1,300.0	6.00	111.00	1,299.5	-5.6	14.7	-4.8	2.00	2.00	0.00
1,400.0	8.00	111.00	1,398.7	-10.0	26.0	-8.5	2.00	2.00	0.00
1,500.0	10.00	111.00	1,497.5	-15.6	40.6	-13.2	2.00	2.00	0.00
1,512.5	10.25	111.00	1,509.8	-16.4	42.7	-13.9	2.00	2.00	0.00
1,600.0	10.25	111.00	1,595.9	-22.0	57.2	-18.6	0.00	0.00	0.00
1,700.0	10.25	111.00	1,694.3	-28.3	73.8	-24.0	0.00	0.00	0.00
1,800.0	10.25	111.00	1,792.7	-34.7	90.4	-29.4	0.00	0.00	0.00
1,900.0	10.25	111.00	1,891.1	-41.1	107.1	-34.8	0.00	0.00	0.00
2,000.0	10.25	111.00	1,989.5	-47.5	123.7	-40.2	0.00	0.00	0.00
2,100.0	10.25	111.00	2,087.9	-53.8	140.3	-45.6	0.00	0.00	0.00
2,200.0	10.25	111.00	2,186.3	-60.2	156.9	-51.0	0.00	0.00	0.00
2,300.0	10.25	111.00	2,284.7	-66.6	173.5	-56.4	0.00	0.00	0.00
2,400.0	10.25	111.00	2,383.1	-73.0	190.1	-61.8	0.00	0.00	0.00
2,500.0	10.25	111.00	2,481.5	-79.4	206.7	-67.2	0.00	0.00	0.00
2,600.0	10.25	111.00	2,579.9	-85.7	223.3	-72.6	0.00	0.00	0.00
2,700.0	10.25	111.00	2,678.3	-92.1	240.0	-78.0	0.00	0.00	0.00
2,800.0	10.25	111.00	2,776.7	-98.5	256.6	-83.5	0.00	0.00	0.00
2,900.0	10.25	111.00	2,875.1	-104.9	273.2	-88.9	0.00	0.00	0.00
3,000.0	10.25	111.00	2,973.5	-111.2	289.8	-94.3	0.00	0.00	0.00
3,100.0	10.25	111.00	3,071.9	-117.6	306.4	-99.7	0.00	0.00	0.00
3,200.0	10.25	111.00	3,170.3	-124.0	323.0	-105.1	0.00	0.00	0.00
3,300.0	10.25	111.00	3,268.7	-130.4	339.6	-110.5	0.00	0.00	0.00
3,400.0	10.25	111.00	3,367.1	-136.7	356.2	-115.9	0.00	0.00	0.00
3,500.0	10.25	111.00	3,465.6	-143.1	372.9	-121.3	0.00	0.00	0.00
3,600.0	10.25	111.00	3,564.0	-149.5	389.5	-126.7	0.00	0.00	0.00
3,700.0	10.25	111.00	3,662.4	-155.9	406.1	-132.1	0.00	0.00	0.00
3,800.0	10.25	111.00	3,760.8	-162.3	422.7	-137.5	0.00	0.00	0.00
3,900.0	10.25	111.00	3,859.2	-168.6	439.3	-142.9	0.00	0.00	0.00
4,000.0	10.25	111.00	3,957.6	-175.0	455.9	-148.3	0.00	0.00	0.00
4,100.0	10.25	111.00	4,056.0	-181.4	472.5	-153.7	0.00	0.00	0.00
4,200.0	10.25	111.00	4,154.4	-187.8	489.1	-159.1	0.00	0.00	0.00
4,300.0	10.25	111.00	4,252.8	-194.1	505.8	-164.5	0.00	0.00	0.00
4,400.0	10.25	111.00	4,351.2	-200.5	522.4	-169.9	0.00	0.00	0.00
4,500.0	10.25	111.00	4,449.6	-206.9	539.0	-175.3	0.00	0.00	0.00
4,600.0	10.25	111.00	4,548.0	-213.3	555.6	-180.7	0.00	0.00	0.00
4,700.0	10.25	111.00	4,646.4	-219.6	572.2	-186.1	0.00	0.00	0.00
4,800.0	10.25	111.00	4,744.8	-226.0	588.8	-191.5	0.00	0.00	0.00
4,900.0	10.25	111.00	4,843.2	-232.4	605.4	-196.9	0.00	0.00	0.00
5,000.0	10.25	111.00	4,941.6	-238.8	622.0	-202.3	0.00	0.00	0.00
5,100.0	10.25	111.00	5,040.0	-245.2	638.7	-207.7	0.00	0.00	0.00
5,200.0	10.25	111.00	5,138.4	-251.5	655.3	-213.1	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 15 Central Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB 27 @ 3203.1usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB 27 @ 3203.1usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #706H	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	10.25	111.00	5,236.8	-257.9	671.9	-218.5	0.00	0.00	0.00
5,400.0	10.25	111.00	5,335.2	-264.3	688.5	-223.9	0.00	0.00	0.00
5,500.0	10.25	111.00	5,433.6	-270.7	705.1	-229.3	0.00	0.00	0.00
5,600.0	10.25	111.00	5,532.0	-277.0	721.7	-234.7	0.00	0.00	0.00
5,700.0	10.25	111.00	5,630.4	-283.4	738.3	-240.1	0.00	0.00	0.00
5,800.0	10.25	111.00	5,728.8	-289.8	754.9	-245.5	0.00	0.00	0.00
5,900.0	10.25	111.00	5,827.2	-296.2	771.6	-251.0	0.00	0.00	0.00
6,000.0	10.25	111.00	5,925.7	-302.5	788.2	-256.4	0.00	0.00	0.00
6,100.0	10.25	111.00	6,024.1	-308.9	804.8	-261.8	0.00	0.00	0.00
6,126.4	10.25	111.00	6,050.0	-310.6	809.2	-263.2	0.00	0.00	0.00
6,200.0	9.88	111.00	6,122.5	-315.2	821.2	-267.1	0.50	-0.50	0.00
6,300.0	9.38	111.00	6,221.1	-321.2	836.8	-272.2	0.50	-0.50	0.00
6,400.0	8.88	111.00	6,319.8	-326.9	851.6	-277.0	0.50	-0.50	0.00
6,500.0	8.38	111.00	6,418.7	-332.3	865.6	-281.5	0.50	-0.50	0.00
6,600.0	7.88	111.00	6,517.7	-337.4	878.8	-285.8	0.50	-0.50	0.00
6,700.0	7.38	111.00	6,616.8	-342.1	891.2	-289.9	0.50	-0.50	0.00
6,800.0	6.88	111.00	6,716.0	-346.6	902.8	-293.6	0.50	-0.50	0.00
6,900.0	6.38	111.00	6,815.4	-350.7	913.6	-297.2	0.50	-0.50	0.00
7,000.0	5.88	111.00	6,914.8	-354.5	923.6	-300.4	0.50	-0.50	0.00
7,100.0	5.38	111.00	7,014.3	-358.0	932.7	-303.4	0.50	-0.50	0.00
7,200.0	4.88	111.00	7,113.9	-361.2	941.1	-306.1	0.50	-0.50	0.00
7,300.0	4.38	111.00	7,213.6	-364.1	948.6	-308.5	0.50	-0.50	0.00
7,400.0	3.88	111.00	7,313.3	-366.7	955.3	-310.7	0.50	-0.50	0.00
7,500.0	3.38	111.00	7,413.1	-369.0	961.3	-312.7	0.50	-0.50	0.00
7,600.0	2.88	111.00	7,513.0	-371.0	966.4	-314.3	0.50	-0.50	0.00
7,700.0	2.38	111.00	7,612.9	-372.6	970.7	-315.7	0.50	-0.50	0.00
7,800.0	1.88	111.00	7,712.8	-373.9	974.1	-316.8	0.50	-0.50	0.00
7,900.0	1.38	111.00	7,812.7	-375.0	976.8	-317.7	0.50	-0.50	0.00
8,000.0	0.88	111.00	7,912.7	-375.7	978.6	-318.3	0.50	-0.50	0.00
8,100.0	0.38	111.00	8,012.7	-376.1	979.7	-318.6	0.50	-0.50	0.00
8,176.4	0.00	0.00	8,089.1	-376.1	979.9	-318.7	0.50	-0.50	0.00
8,200.0	0.00	0.00	8,112.7	-376.1	979.9	-318.7	0.00	0.00	0.00
8,300.0	0.00	0.00	8,212.7	-376.1	979.9	-318.7	0.00	0.00	0.00
8,400.0	0.00	0.00	8,312.7	-376.1	979.9	-318.7	0.00	0.00	0.00
8,500.0	0.00	0.00	8,412.7	-376.1	979.9	-318.7	0.00	0.00	0.00
8,600.0	0.00	0.00	8,512.7	-376.1	979.9	-318.7	0.00	0.00	0.00
8,700.0	0.00	0.00	8,612.7	-376.1	979.9	-318.7	0.00	0.00	0.00
8,800.0	0.00	0.00	8,712.7	-376.1	979.9	-318.7	0.00	0.00	0.00
8,900.0	0.00	0.00	8,812.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,000.0	0.00	0.00	8,912.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,100.0	0.00	0.00	9,012.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,200.0	0.00	0.00	9,112.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,300.0	0.00	0.00	9,212.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,400.0	0.00	0.00	9,312.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,500.0	0.00	0.00	9,412.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,600.0	0.00	0.00	9,512.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,700.0	0.00	0.00	9,612.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,800.0	0.00	0.00	9,712.7	-376.1	979.9	-318.7	0.00	0.00	0.00
9,900.0	0.00	0.00	9,812.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,000.0	0.00	0.00	9,912.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,100.0	0.00	0.00	10,012.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,200.0	0.00	0.00	10,112.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,300.0	0.00	0.00	10,212.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,400.0	0.00	0.00	10,312.7	-376.1	979.9	-318.7	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 15 Central Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB 27 @ 3203.1usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB 27 @ 3203.1usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #706H	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	10,412.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,600.0	0.00	0.00	10,512.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,700.0	0.00	0.00	10,612.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,800.0	0.00	0.00	10,712.7	-376.1	979.9	-318.7	0.00	0.00	0.00
10,900.0	0.00	0.00	10,812.7	-376.1	979.9	-318.7	0.00	0.00	0.00
11,000.0	0.00	0.00	10,912.7	-376.1	979.9	-318.7	0.00	0.00	0.00
11,100.0	0.00	0.00	11,012.7	-376.1	979.9	-318.7	0.00	0.00	0.00
11,118.3	0.00	0.00	11,031.0	-376.1	979.9	-318.7	0.00	0.00	0.00
11,150.0	3.17	358.97	11,062.7	-375.3	979.9	-317.8	10.00	10.00	0.00
11,200.0	8.17	358.97	11,112.4	-370.3	979.8	-312.9	10.00	10.00	0.00
11,250.0	13.17	358.97	11,161.6	-361.1	979.6	-303.7	10.00	10.00	0.00
11,300.0	18.17	358.97	11,209.7	-347.6	979.4	-290.2	10.00	10.00	0.00
11,350.0	23.17	358.97	11,256.5	-329.9	979.1	-272.6	10.00	10.00	0.00
11,400.0	28.17	358.97	11,301.5	-308.3	978.7	-251.0	10.00	10.00	0.00
11,450.0	33.17	358.97	11,344.5	-282.8	978.2	-225.6	10.00	10.00	0.00
11,500.0	38.17	358.97	11,385.1	-253.6	977.7	-196.5	10.00	10.00	0.00
11,550.0	43.17	358.97	11,423.0	-221.1	977.1	-164.1	10.00	10.00	0.00
11,600.0	48.17	358.97	11,457.9	-185.3	976.5	-128.4	10.00	10.00	0.00
11,650.0	53.17	358.97	11,489.6	-146.7	975.8	-89.9	10.00	10.00	0.00
11,700.0	58.17	358.97	11,517.8	-105.4	975.0	-48.7	10.00	10.00	0.00
11,750.0	63.17	358.97	11,542.3	-61.8	974.2	-5.2	10.00	10.00	0.00
11,800.0	68.17	358.97	11,562.9	-16.3	973.4	40.2	10.00	10.00	0.00
11,850.0	73.17	358.97	11,579.4	30.9	972.6	87.2	10.00	10.00	0.00
11,900.0	78.17	358.97	11,591.8	79.3	971.7	135.5	10.00	10.00	0.00
11,950.0	83.17	358.97	11,599.9	128.6	970.8	184.7	10.00	10.00	0.00
12,000.0	88.17	358.97	11,603.7	178.4	969.9	234.4	10.00	10.00	0.00
12,018.3	90.00	358.97	11,604.0	196.7	969.6	252.6	10.00	10.00	0.00
12,100.0	90.00	358.97	11,604.0	278.4	968.1	334.1	0.00	0.00	0.00
12,200.0	90.00	358.97	11,604.0	378.4	966.3	433.8	0.00	0.00	0.00
12,300.0	90.00	358.97	11,604.0	478.4	964.5	533.5	0.00	0.00	0.00
12,400.0	90.00	358.97	11,604.0	578.4	962.7	633.2	0.00	0.00	0.00
12,500.0	90.00	358.97	11,604.0	678.4	960.9	732.9	0.00	0.00	0.00
12,600.0	90.00	358.97	11,604.0	778.3	959.1	832.6	0.00	0.00	0.00
12,700.0	90.00	358.97	11,604.0	878.3	957.3	932.3	0.00	0.00	0.00
12,800.0	90.00	358.97	11,604.0	978.3	955.5	1,032.1	0.00	0.00	0.00
12,900.0	90.00	358.97	11,604.0	1,078.3	953.7	1,131.8	0.00	0.00	0.00
13,000.0	90.00	358.97	11,604.0	1,178.3	951.9	1,231.5	0.00	0.00	0.00
13,100.0	90.00	358.97	11,604.0	1,278.3	950.1	1,331.2	0.00	0.00	0.00
13,200.0	90.00	358.97	11,604.0	1,378.2	948.4	1,430.9	0.00	0.00	0.00
13,300.0	90.00	358.97	11,604.0	1,478.2	946.6	1,530.6	0.00	0.00	0.00
13,400.0	90.00	358.97	11,604.0	1,578.2	944.8	1,630.3	0.00	0.00	0.00
13,500.0	90.00	358.97	11,604.0	1,678.2	943.0	1,730.0	0.00	0.00	0.00
13,600.0	90.00	358.97	11,604.0	1,778.2	941.2	1,829.7	0.00	0.00	0.00
13,700.0	90.00	358.97	11,604.0	1,878.2	939.4	1,929.5	0.00	0.00	0.00
13,800.0	90.00	358.97	11,604.0	1,978.2	937.6	2,029.2	0.00	0.00	0.00
13,900.0	90.00	358.97	11,604.0	2,078.1	935.8	2,128.9	0.00	0.00	0.00
14,000.0	90.00	358.97	11,604.0	2,178.1	934.0	2,228.6	0.00	0.00	0.00
14,100.0	90.00	358.97	11,604.0	2,278.1	932.2	2,328.3	0.00	0.00	0.00
14,200.0	90.00	358.97	11,604.0	2,378.1	930.4	2,428.0	0.00	0.00	0.00
14,300.0	90.00	358.97	11,604.0	2,478.1	928.6	2,527.7	0.00	0.00	0.00
14,400.0	90.00	358.97	11,604.0	2,578.1	926.8	2,627.4	0.00	0.00	0.00
14,500.0	90.00	358.97	11,604.0	2,678.0	925.0	2,727.2	0.00	0.00	0.00
14,600.0	90.00	358.97	11,604.0	2,778.0	923.2	2,826.9	0.00	0.00	0.00
14,700.0	90.00	358.97	11,604.0	2,878.0	921.4	2,926.6	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 15 Central Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB 27 @ 3203.1usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB 27 @ 3203.1usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #706H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,800.0	90.00	358.97	11,604.0	2,978.0	919.6	3,026.3	0.00	0.00	0.00	
14,900.0	90.00	358.97	11,604.0	3,078.0	917.8	3,126.0	0.00	0.00	0.00	
15,000.0	90.00	358.97	11,604.0	3,178.0	916.0	3,225.7	0.00	0.00	0.00	
15,100.0	90.00	358.97	11,604.0	3,277.9	914.2	3,325.4	0.00	0.00	0.00	
15,200.0	90.00	358.97	11,604.0	3,377.9	912.4	3,425.1	0.00	0.00	0.00	
15,300.0	90.00	358.97	11,604.0	3,477.9	910.6	3,524.8	0.00	0.00	0.00	
15,400.0	90.00	358.97	11,604.0	3,577.9	908.8	3,624.6	0.00	0.00	0.00	
15,500.0	90.00	358.97	11,604.0	3,677.9	907.0	3,724.3	0.00	0.00	0.00	
15,600.0	90.00	358.97	11,604.0	3,777.9	905.2	3,824.0	0.00	0.00	0.00	
15,700.0	90.00	358.97	11,604.0	3,877.8	903.4	3,923.7	0.00	0.00	0.00	
15,800.0	90.00	358.97	11,604.0	3,977.8	901.6	4,023.4	0.00	0.00	0.00	
15,900.0	90.00	358.97	11,604.0	4,077.8	899.8	4,123.1	0.00	0.00	0.00	
16,000.0	90.00	358.97	11,604.0	4,177.8	898.0	4,222.8	0.00	0.00	0.00	
16,100.0	90.00	358.97	11,604.0	4,277.8	896.2	4,322.5	0.00	0.00	0.00	
16,200.0	90.00	358.97	11,604.0	4,377.8	894.4	4,422.2	0.00	0.00	0.00	
16,300.0	90.00	358.97	11,604.0	4,477.7	892.6	4,522.0	0.00	0.00	0.00	
16,400.0	90.00	358.97	11,604.0	4,577.7	890.8	4,621.7	0.00	0.00	0.00	
16,500.0	90.00	358.97	11,604.0	4,677.7	889.0	4,721.4	0.00	0.00	0.00	
16,600.0	90.00	358.97	11,604.0	4,777.7	887.2	4,821.1	0.00	0.00	0.00	
16,700.0	90.00	358.97	11,604.0	4,877.7	885.4	4,920.8	0.00	0.00	0.00	
16,800.0	90.00	358.97	11,604.0	4,977.7	883.6	5,020.5	0.00	0.00	0.00	
16,900.0	90.00	358.97	11,604.0	5,077.7	881.8	5,120.2	0.00	0.00	0.00	
17,000.0	90.00	358.97	11,604.0	5,177.6	880.0	5,219.9	0.00	0.00	0.00	
17,100.0	90.00	358.97	11,604.0	5,277.6	878.2	5,319.7	0.00	0.00	0.00	
17,200.0	90.00	358.97	11,604.0	5,377.6	876.4	5,419.4	0.00	0.00	0.00	
17,300.0	90.00	358.97	11,604.0	5,477.6	874.6	5,519.1	0.00	0.00	0.00	
17,400.0	90.00	358.97	11,604.0	5,577.6	872.9	5,618.8	0.00	0.00	0.00	
17,500.0	90.00	358.97	11,604.0	5,677.6	871.1	5,718.5	0.00	0.00	0.00	
17,600.0	90.00	358.97	11,604.0	5,777.5	869.3	5,818.2	0.00	0.00	0.00	
17,700.0	90.00	358.97	11,604.0	5,877.5	867.5	5,917.9	0.00	0.00	0.00	
17,800.0	90.00	358.97	11,604.0	5,977.5	865.7	6,017.6	0.00	0.00	0.00	
17,900.0	90.00	358.97	11,604.0	6,077.5	863.9	6,117.3	0.00	0.00	0.00	
18,000.0	90.00	358.97	11,604.0	6,177.5	862.1	6,217.1	0.00	0.00	0.00	
18,100.0	90.00	358.97	11,604.0	6,277.5	860.3	6,316.8	0.00	0.00	0.00	
18,200.0	90.00	358.97	11,604.0	6,377.4	858.5	6,416.5	0.00	0.00	0.00	
18,300.0	90.00	358.97	11,604.0	6,477.4	856.7	6,516.2	0.00	0.00	0.00	
18,400.0	90.00	358.97	11,604.0	6,577.4	854.9	6,615.9	0.00	0.00	0.00	
18,500.0	90.00	358.97	11,604.0	6,677.4	853.1	6,715.6	0.00	0.00	0.00	
18,600.0	90.00	358.97	11,604.0	6,777.4	851.3	6,815.3	0.00	0.00	0.00	
18,700.0	90.00	358.97	11,604.0	6,877.4	849.5	6,915.0	0.00	0.00	0.00	
18,800.0	90.00	358.97	11,604.0	6,977.3	847.7	7,014.7	0.00	0.00	0.00	
18,900.0	90.00	358.97	11,604.0	7,077.3	845.9	7,114.5	0.00	0.00	0.00	
19,000.0	90.00	358.97	11,604.0	7,177.3	844.1	7,214.2	0.00	0.00	0.00	
19,100.0	90.00	358.97	11,604.0	7,277.3	842.3	7,313.9	0.00	0.00	0.00	
19,200.0	90.00	358.97	11,604.0	7,377.3	840.5	7,413.6	0.00	0.00	0.00	
19,300.0	90.00	358.97	11,604.0	7,477.3	838.7	7,513.3	0.00	0.00	0.00	
19,400.0	90.00	358.97	11,604.0	7,577.2	836.9	7,613.0	0.00	0.00	0.00	
19,500.0	90.00	358.97	11,604.0	7,677.2	835.1	7,712.7	0.00	0.00	0.00	
19,600.0	90.00	358.97	11,604.0	7,777.2	833.3	7,812.4	0.00	0.00	0.00	
19,700.0	90.00	358.97	11,604.0	7,877.2	831.5	7,912.2	0.00	0.00	0.00	
19,800.0	90.00	358.97	11,604.0	7,977.2	829.7	8,011.9	0.00	0.00	0.00	
19,900.0	90.00	358.97	11,604.0	8,077.2	827.9	8,111.6	0.00	0.00	0.00	
20,000.0	90.00	358.97	11,604.0	8,177.1	826.1	8,211.3	0.00	0.00	0.00	
20,100.0	90.00	358.97	11,604.0	8,277.1	824.3	8,311.0	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 15 Central Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB 27 @ 3203.1usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB 27 @ 3203.1usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #706H	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)	
20,200.0	90.00	358.97	11,604.0	8,377.1	822.5	8,410.7	0.00	0.00	0.00	
20,300.0	90.00	358.97	11,604.0	8,477.1	820.7	8,510.4	0.00	0.00	0.00	
20,400.0	90.00	358.97	11,604.0	8,577.1	818.9	8,610.1	0.00	0.00	0.00	
20,500.0	90.00	358.97	11,604.0	8,677.1	817.1	8,709.8	0.00	0.00	0.00	
20,600.0	90.00	358.97	11,604.0	8,777.1	815.3	8,809.6	0.00	0.00	0.00	
20,700.0	90.00	358.97	11,604.0	8,877.0	813.5	8,909.3	0.00	0.00	0.00	
20,800.0	90.00	358.97	11,604.0	8,977.0	811.7	9,009.0	0.00	0.00	0.00	
20,900.0	90.00	358.97	11,604.0	9,077.0	809.9	9,108.7	0.00	0.00	0.00	
21,000.0	90.00	358.97	11,604.0	9,177.0	808.1	9,208.4	0.00	0.00	0.00	
21,100.0	90.00	358.97	11,604.0	9,277.0	806.3	9,308.1	0.00	0.00	0.00	
21,200.0	90.00	358.97	11,604.0	9,377.0	804.5	9,407.8	0.00	0.00	0.00	
21,300.0	90.00	358.97	11,604.0	9,476.9	802.7	9,507.5	0.00	0.00	0.00	
21,400.0	90.00	358.97	11,604.0	9,576.9	800.9	9,607.2	0.00	0.00	0.00	
21,500.0	90.00	358.97	11,604.0	9,676.9	799.2	9,707.0	0.00	0.00	0.00	
21,600.0	90.00	358.97	11,604.0	9,776.9	797.4	9,806.7	0.00	0.00	0.00	
21,700.0	90.00	358.97	11,604.0	9,876.9	795.6	9,906.4	0.00	0.00	0.00	
21,800.0	90.00	358.97	11,604.0	9,976.9	793.8	10,006.1	0.00	0.00	0.00	
21,900.0	90.00	358.97	11,604.0	10,076.8	792.0	10,105.8	0.00	0.00	0.00	
22,000.0	90.00	358.97	11,604.0	10,176.8	790.2	10,205.5	0.00	0.00	0.00	
22,100.0	90.00	358.97	11,604.0	10,276.8	788.4	10,305.2	0.00	0.00	0.00	
22,200.0	90.00	358.97	11,604.0	10,376.8	786.6	10,404.9	0.00	0.00	0.00	
22,300.0	90.00	358.97	11,604.0	10,476.8	784.8	10,504.7	0.00	0.00	0.00	
22,400.0	90.00	358.97	11,604.0	10,576.8	783.0	10,604.4	0.00	0.00	0.00	
22,500.0	90.00	358.97	11,604.0	10,676.7	781.2	10,704.1	0.00	0.00	0.00	
22,600.0	90.00	358.97	11,604.0	10,776.7	779.4	10,803.8	0.00	0.00	0.00	
22,700.0	90.00	358.97	11,604.0	10,876.7	777.6	10,903.5	0.00	0.00	0.00	
22,800.0	90.00	358.97	11,604.0	10,976.7	775.8	11,003.2	0.00	0.00	0.00	
22,900.0	90.00	358.97	11,604.0	11,076.7	774.0	11,102.9	0.00	0.00	0.00	
23,000.0	90.00	358.97	11,604.0	11,176.7	772.2	11,202.6	0.00	0.00	0.00	
23,100.0	90.00	358.97	11,604.0	11,276.6	770.4	11,302.3	0.00	0.00	0.00	
23,200.0	90.00	358.97	11,604.0	11,376.6	768.6	11,402.1	0.00	0.00	0.00	
23,300.0	90.00	358.97	11,604.0	11,476.6	766.8	11,501.8	0.00	0.00	0.00	
23,400.0	90.00	358.97	11,604.0	11,576.6	765.0	11,601.5	0.00	0.00	0.00	
23,500.0	90.00	358.97	11,604.0	11,676.6	763.2	11,701.2	0.00	0.00	0.00	
23,600.0	90.00	358.97	11,604.0	11,776.6	761.4	11,800.9	0.00	0.00	0.00	
23,700.0	90.00	358.97	11,604.0	11,876.6	759.6	11,900.6	0.00	0.00	0.00	
23,800.0	90.00	358.97	11,604.0	11,976.5	757.8	12,000.3	0.00	0.00	0.00	
23,900.0	90.00	358.97	11,604.0	12,076.5	756.0	12,100.0	0.00	0.00	0.00	
24,000.0	90.00	358.97	11,604.0	12,176.5	754.2	12,199.7	0.00	0.00	0.00	
24,100.0	90.00	358.97	11,604.0	12,276.5	752.4	12,299.5	0.00	0.00	0.00	
24,200.0	90.00	358.97	11,604.0	12,376.5	750.6	12,399.2	0.00	0.00	0.00	
24,300.0	90.00	358.97	11,604.0	12,476.5	748.8	12,498.9	0.00	0.00	0.00	
24,400.0	90.00	358.97	11,604.0	12,576.4	747.0	12,598.6	0.00	0.00	0.00	
24,500.0	90.00	358.97	11,604.0	12,676.4	745.2	12,698.3	0.00	0.00	0.00	
24,586.9	90.00	358.97	11,604.0	12,763.4	743.7	12,785.0	0.00	0.00	0.00	
24,600.0	90.00	358.97	11,604.0	12,776.4	743.4	12,798.0	0.00	0.00	0.00	
24,629.1	90.00	358.97	11,604.0	12,805.5	742.9	12,827.0	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 15 Central Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #706H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB 27 @ 3203.1usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB 27 @ 3203.1usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #706H	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)		
PBHL (ZIA HILLS UNIT : - plan misses target center by 0.6usft at 24629.1usft MD (11604.0 TVD, 12805.5 N, 742.9 E) - Rectangle (sides W100.0 H13,150.0 D20.0)	0.00	178.97	11,604.0	12,805.5	743.5	385,050.05	686,184.16	32° 3' 25.895 N	103° 43' 56.498 W
LTP (ZIA HILLS UNIT 24 - plan misses target center by 0.1usft at 24579.1usft MD (11604.0 TVD, 12755.5 N, 743.8 E) - Point	0.00	0.00	11,604.0	12,755.5	743.8	385,000.06	686,184.42	32° 3' 25.400 N	103° 43' 56.498 W
FTP (ZIA HILLS UNIT 24 - plan misses target center by 206.6usft at 11597.5usft MD (11456.2 TVD, -187.2 N, 976.5 E) - Circle (radius 50.0)	0.00	0.00	11,604.0	-331.5	980.2	371,913.08	686,420.87	32° 1' 15.877 N	103° 43' 54.597 W

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ConocoPhillips
LEASE NO.:	NMLC064756
LOCATION:	Section 24, T.26 S, R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
WELL NAME & NO.:	Zia Hills Unit 2431 WC 706H
SURFACE HOLE FOOTAGE:	445'/S & 1460'/W
BOTTOM HOLE FOOTAGE:	2590'/S & 2310'/W

COA

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

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H₂S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware Group** formation. As a result, the Hydrogen Sulfide area must meet all requirements from **43 CFR 3176**, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1050** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to

- include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 7 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.**
- ❖ 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. 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.

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 surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) 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 43 CFR 3172 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)

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
 - Notify the BLM when moving in and removing the Spudder Rig.
 - 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.

- BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 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. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

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, 2) until cement has been in place at least 24 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-P 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 part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
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:
 - 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. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
 - e. 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.
 - a. 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).
 - b. 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.)
 - c. 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 part 3170 Subpart 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 water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. 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.
 - e. The results of the test shall be reported to the appropriate BLM office.

- f. 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.
- g. 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.
- h. 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 part 3170 Subpart 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.

ZS 9/28/2023

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

District I

1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 288325

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 288325
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	12/8/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	12/8/2023
ward.rikala	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	12/8/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	12/8/2023
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	12/8/2023
ward.rikala	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	12/8/2023
ward.rikala	The SW/4 of Section 12-T26S-R-31E is in the Purplesage Wolfcamp Pool therefore, before this well can be produced there will need to be a corrected C-102 submitted for the Zia Hills Wolfcamp with the correct dedicated acreage for that pool and another C-102 showing the correct dedicated acreage for the PurpleSage Wolfcamp.	12/8/2023