

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. 30-015-54509
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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Additional Operator Remarks

Location of Well

0. SHL: SESE / 90 FSL / 475 FEL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.0212274 / LONG: -103.7245504 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 100 FSL / 1234 FEL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.0212383 / LONG: -103.7269994 (TVD: 11477 feet, MD: 11556 feet)

BHL: NENE / 50 FNL / 1234 FEL / TWSP: 26S / RANGE: 31E / SECTION: 13 / LAT: 32.0500773 / LONG: -103.7270574 (TVD: 11641 feet, MD: 21912 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
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazon Road, Artec, NM 87410
District IV
1220 S. St Francis Dr., 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 30-015-54509	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 710H
⁷ OGRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 3,167'

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
P	24	26-S	31-E		90'	SOUTH	475'	EAST	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
A	13	26-S	31-E		50'	NORTH	1,234'	EAST	EDDY

¹² Dedicated Acres 640	¹³ Joint or 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

SURFACE HOLE LOCATION
90' FSL & 475' FEL
NEW MEXICO EAST-NAD 83
NORTH: 371,992.90'
EAST: 730,011.01'
LAT: 32.02122742
LONG: 103.72455043

FIRST TAKE POINT
100' FSL & 1,234' FEL
NEW MEXICO EAST-NAD 83
NORTH: 371,992.60'
EAST: 729,251.98'
LAT: 32.02123834
LONG: 103.72699943

LAST TAKE POINT
100' FNL & 1,234' FEL
NEW MEXICO EAST-NAD 83
NORTH: 382,433.52'
EAST: 729,175.44'
LAT: 32.04993989
LONG: 103.72705732

BOTTOM HOLE LOCATION
50' FNL & 1,234' FEL
NEW MEXICO EAST-NAD 83
NORTH: 382,483.52'
EAST: 729,175.14'
LAT: 32.05007733
LONG: 103.72705737

CORNER COORDINATES
NEW MEXICO EAST - NAD 83

A-FOUND 2" IRON PIPE
N: 382,501.63' E: 725,074.41'
B-FOUND 1" IRON PIPE
N: 382,520.03' E: 727,743.54'
C-FOUND IRON PIPE W/ BRASS CAP
N: 382,545.16' E: 730,408.79'
D-FOUND 1" IRON PIPE
N: 379,872.18' E: 730,424.72'
E-FOUND 2" IRON PIPE
N: 377,203.52' E: 730,441.03'
F-FOUND 1" IRON PIPE
N: 377,191.27' E: 727,789.71'
G-FOUND 2" IRON PIPE
N: 377,168.86' E: 725,121.18'
H-FOUND 1" IRON PIPE
N: 379,834.54' E: 725,095.84'
I-FOUND 1" IRON PIPE
N: 374,533.91' E: 730,464.25'
J-FOUND 2" IRON PIPE W/ CAP
N: 371,909.34' E: 730,486.74'
K-FOUND 1" IRON PIPE
N: 371,873.29' E: 727,828.90'
L-FOUND 2" IRON PIPE
N: 371,836.37' E: 725,172.10'
M-FOUND 1" IRON PIPE
N: 374,503.18' E: 725,146.54'

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.

Stan Wagner 2/9/2023

Signature _____ Date _____

Printed Name **Stan Wagner** Date _____

Email Address _____ Date _____

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.

Date: 1/26/23

MARK J. MURRAY P.L.S. NO. 12177

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: 03/20/2023

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 707H	30-015-	N-24-26S-31E	445 FSL & 1490 FWL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 708H	30-015-	P-24-26S-31E	30 FSL & 475 FEL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 709H	30-015-	P-24-26S-31E	60 FSL & 475 FEL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 710H	30-015-	P-24-26S-31E	90 FSL & 475 FWL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 711H	30-015-	P-24-26S-31E	120 FSL & 475 FEL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 712H	30-015-	P-24-26S-31E	150 FSL & 475 FEL	± 818	± 3209	± 1907

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

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Zia Hills Unit 2431 WC	Pending	± 2/1/2024	± 25 days from spud	TBD	TBD	TBD
707H, 708H, 709H, 710H, 711H, 712H						

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

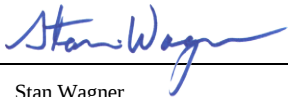
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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: 03/20/2023
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 #710H

1. Geologic Formations

TVD of target	11,641' EOL	Pilot hole depth	NA
MD at TD:	21,912'	Deepest expected fresh water:	250'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	988	Water	
Top of Salt	1545	Salt	
Base of Salt	3990	Salt	
Lamar	4204	Salt Water	
Bell Canyon	4245	Salt Water	
Cherry Canyon	5120	Oil/Gas	
Brushy Canyon	6555	Oil/Gas	
Bone Spring (BSGL)	8181	Oil/Gas	
BS1S	9214	Oil/Gas	
BS2S	9894	Oil/Gas	
BS3C	10368	Oil/Gas	
BS3S	11066	Oil/Gas	
WFMP	11421	Oil/Gas	
WFMP A	11655	Oil/Gas	
WFMP B	11931	Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	1495	10.75"	45.5	J55	BTC	3.05	1.08	10.51	11.70
9.875"	0	8500	7.625"	29.7	L80-ICY	TXP BTC	1.42	1.14	2.88	2.88
8.750"	8500	11,100	7.625"	29.7	P110-ICY	W513	1.36	1.73	3.24	1.94
6.75"	0	10600	5.5"	23	P110-CY	TXP BTC	2.11	2.49	2.99	2.99
6.75"	10600	21,912	5.5"	23	P110-CY	W441	1.92	2.27	2.72	2.47
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 at least 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 #710H

	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 #710H**3. Cementing Program**

Casing	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	720	13.5	1.73	9.22	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	250	14.8	1.35	6.45	8	Tail: Class C + 2% CaCl ₂
Inter.	790	10.5	3.6	22.81	24	NeoCem-C
Stage 1	250	15.6	1.2	5.4	8	HalCem-C
Prod	580	12.5	1.71	9.32	72	VersaCem
	860	13.2	1.48	7.49	19	NeoCem-C

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	10,600'	35% OH in Lateral (KOP to EOL)

ConocoPhillips Company - Zia Hills Unit 2431 WC #710H

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	2500 psi
			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 #710H

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 - 9.4	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	11 - 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 #710H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7570 psi at 11641' 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 (H ₂ S) monitors will be installed prior to drilling out the surface shoe. If H ₂ S 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	H ₂ S is present
Y	H ₂ S 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

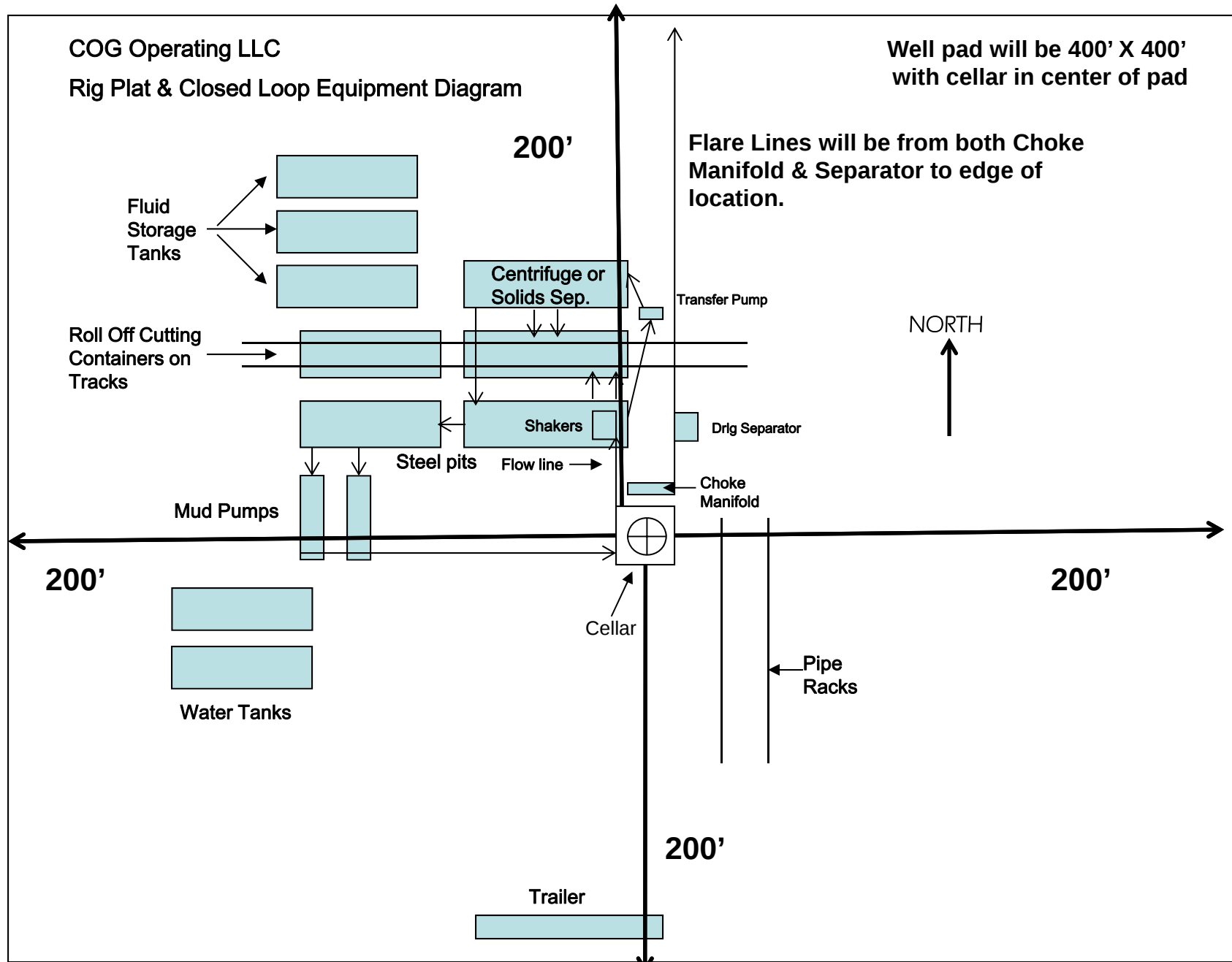


Exhibit 1

"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 #710H**

**OWB
PWP1**

Anticollision Report

15 March, 2023

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference	PWP1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD + Stations Interval 100.0usft
Depth Range:	Unlimited
Results Limited by:	Maximum centre distance of 1,000.0usft
Warning Levels Evaluated at:	2.79 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Combined Pedal Curve
Casing Method:	Added to Error Values

Survey Tool Program		Date	3/15/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	1,000.0	PWP1 (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp-Initialzd Cont. rev.5	
1,000.0	11,213.6	PWP1 (OWB)	r.5 MWD+IFR1	OWSG MWD + IFR1 rev.5	
11,213.6	21,912.1	PWP1 (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						
GOLDEN SPUR 36 COM W1 #1H - OWB - AWP	11,500.0	18,785.0	719.6	608.5	6.477	SF
GOLDEN SPUR 36 COM W1 #1H - OWB - AWP	11,537.7	18,785.0	717.8	607.2	6.491	CC, ES
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	645.3	624.9	442.1	417.3	17.828	CC
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	1,200.0	1,175.5	445.3	400.1	9.850	ES
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	4,300.0	4,252.6	736.2	563.4	4.260	SF
SUMIDEROS 12 W1PA FEDERAL COM #1H - OWB - AW	21,912.1	11,621.9	899.0	775.7	7.294	CC, ES, SF
SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AW	21,912.1	11,531.8	414.8	307.6	3.869	CC, ES, SF
ZIA HILLS UNIT 2431 PROJECT						
GOLDEN SPUR 36 COM W1 #2H - OWB - AWP	11,525.0	19,013.0	647.0	551.0	6.744	SF
GOLDEN SPUR 36 COM W1 #2H - OWB - AWP	11,600.0	19,013.0	637.7	544.5	6.839	CC, ES
HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AW	4,300.0	4,228.0	887.7	712.3	5.062	SF
HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AW	4,378.9	4,228.0	884.2	709.8	5.070	CC, ES
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	3,075.2	3,047.7	565.7	500.5	8.677	CC
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	4,100.0	4,072.7	583.5	485.1	5.925	ES
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	4,300.0	4,251.0	590.9	486.8	5.673	SF
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	1,000.0	1,000.0	60.0	51.3	6.881	CC
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	1,100.0	1,100.1	60.1	51.2	6.738	ES
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	21,912.1	22,135.2	821.9	649.8	4.776	SF
ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1	1,000.0	1,000.0	30.0	21.3	3.440	CC
ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1	1,300.0	1,300.2	30.5	21.0	3.186	ES
ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1	21,912.1	22,183.2	446.6	277.8	2.645	SF
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	1,000.0	1,000.0	30.0	21.3	3.439	CC
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	1,400.0	1,399.6	30.8	20.9	3.107	ES
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	21,912.1	22,050.2	447.2	280.8	2.688	SF
ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1	1,000.0	1,000.0	60.0	51.3	6.880	CC, ES
ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1	21,912.1	21,865.0	822.1	657.7	4.999	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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset 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						
GOLDEN SPUR 36 COM W1 #1H - OWB - AWP	21,912.1	18,785.0				Out of Range @TD
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	21,912.1	4,258.0				Out of Range @TD
SUMIDEROS 12 W1PA FEDERAL COM #1H - OWB - AW	21,912.1	11,621.9	899.0	775.7	7.294	CC, ES, SF
SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AW	21,912.1	11,531.8	414.8	307.6	3.869	CC, ES, SF
ZIA HILLS UNIT 2431 PROJECT						
GOLDEN SPUR 36 COM W1 #2H - OWB - AWP	21,912.1	19,013.0				Out of Range @TD
HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AW	21,912.1	4,228.0				Out of Range @TD
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	21,912.1	4,251.0				Out of Range @TD
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	21,912.1	22,135.2	821.9	649.8	4.776	SF
ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1	21,912.1	22,183.2	446.6	277.8	2.645	SF
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	21,912.1	22,050.2	447.2	280.8	2.688	SF
ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1	21,912.1	21,865.0	822.1	657.7	4.999	SF

Offset Design: ZIA HILLS UNIT 1932 PROJECT - GOLDEN SPUR 36 COM W1 #1H - OWB - AWP													Offset Site Error: 0.0 usft		
Survey Program:		13-MWD+IFR1, 1162-MWD+IFR1						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			
11,000.0	10,950.0	18,785.0	11,698.1	28.0	82.5	108.99	-139.7	-146.4	992.3	888.2	104.13	9.530			
11,100.0	11,050.0	18,785.0	11,698.1	28.0	82.5	108.99	-139.7	-146.4	917.1	811.2	105.91	8.659			
11,200.0	11,150.0	18,785.0	11,698.1	28.0	82.5	108.99	-139.7	-146.4	847.0	739.1	107.93	7.848			
11,213.6	11,163.5	18,785.0	11,698.1	28.0	82.5	108.99	-139.7	-146.4	838.0	729.7	108.32	7.737			
11,225.0	11,175.0	18,785.0	11,698.1	28.0	82.5	110.63	-139.7	-146.4	830.5	721.9	108.56	7.650			
11,250.0	11,199.9	18,785.0	11,698.1	28.1	82.5	112.90	-139.7	-146.4	814.7	705.6	109.08	7.469			
11,275.0	11,224.8	18,785.0	11,698.1	28.1	82.5	114.94	-139.7	-146.4	799.8	690.2	109.56	7.300			
11,300.0	11,249.5	18,785.0	11,698.1	28.1	82.5	116.75	-139.7	-146.4	785.9	675.9	110.01	7.144			
11,325.0	11,274.0	18,785.0	11,698.1	28.1	82.5	118.35	-139.7	-146.4	773.0	662.6	110.42	7.001			
11,350.0	11,298.1	18,785.0	11,698.1	28.1	82.5	119.74	-139.7	-146.4	761.3	650.5	110.76	6.873			
11,375.0	11,321.9	18,785.0	11,698.1	28.1	82.5	120.94	-139.7	-146.4	750.8	639.8	111.04	6.761			
11,400.0	11,345.3	18,785.0	11,698.1	28.1	82.5	121.94	-139.7	-146.4	741.7	630.4	111.25	6.667			
11,425.0	11,368.1	18,785.0	11,698.1	28.1	82.5	122.77	-139.7	-146.4	733.9	622.5	111.36	6.590			
11,450.0	11,390.4	18,785.0	11,698.1	28.1	82.5	123.43	-139.7	-146.4	727.6	616.2	111.38	6.533			
11,475.0	11,412.1	18,785.0	11,698.1	28.1	82.5	123.91	-139.7	-146.4	722.8	611.5	111.30	6.495			
11,500.0	11,433.1	18,785.0	11,698.1	28.1	82.5	124.23	-139.7	-146.4	719.6	608.5	111.10	6.477	SF		
11,525.0	11,453.4	18,785.0	11,698.1	28.1	82.5	124.40	-139.7	-146.4	718.0	607.2	110.79	6.481			
11,537.7	11,463.3	18,785.0	11,698.1	28.1	82.5	124.42	-139.7	-146.4	717.8	607.2	110.59	6.491	CC, ES		

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 1932 PROJECT - GOLDEN SPUR 36 COM W1 #1H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 13-MWD+IFR1, 1162-MWD+IFR1													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
11,550.0	11,472.8	18,785.0	11,698.1	28.1	82.5	124.40	-139.7	-146.4	718.0	607.6	110.36	6.506		
11,575.0	11,491.4	18,785.0	11,698.1	28.1	82.5	124.24	-139.7	-146.4	719.6	609.8	109.82	6.552		
11,600.0	11,509.1	18,785.0	11,698.1	28.1	82.5	123.92	-139.7	-146.4	722.8	613.6	109.17	6.621		
11,625.0	11,525.9	18,785.0	11,698.1	28.1	82.5	123.44	-139.7	-146.4	727.5	619.1	108.42	6.710		
11,650.0	11,541.7	18,785.0	11,698.1	28.1	82.5	122.78	-139.7	-146.4	733.8	626.2	107.57	6.821		
11,675.0	11,556.4	18,785.0	11,698.1	28.1	82.5	121.96	-139.7	-146.4	741.5	634.9	106.65	6.953		
11,700.0	11,570.1	18,785.0	11,698.1	28.1	82.5	120.95	-139.7	-146.4	750.7	645.0	105.65	7.105		
11,725.0	11,582.6	18,785.0	11,698.1	28.1	82.5	119.76	-139.7	-146.4	761.1	656.5	104.60	7.277		
11,750.0	11,594.0	18,785.0	11,698.1	28.1	82.5	118.37	-139.7	-146.4	772.8	669.3	103.50	7.467		
11,775.0	11,604.3	18,785.0	11,698.1	28.2	82.5	116.78	-139.7	-146.4	785.7	683.3	102.37	7.675		
11,800.0	11,613.3	18,785.0	11,698.1	28.2	82.5	114.97	-139.7	-146.4	799.6	698.4	101.22	7.900		
11,825.0	11,621.0	18,785.0	11,698.1	28.2	82.5	112.94	-139.7	-146.4	814.5	714.4	100.06	8.140		
11,850.0	11,627.6	18,785.0	11,698.1	28.2	82.5	110.67	-139.7	-146.4	830.2	731.3	98.89	8.395		
11,875.0	11,632.8	18,785.0	11,698.1	28.2	82.5	108.17	-139.7	-146.4	846.8	749.1	97.74	8.664		
11,900.0	11,636.8	18,785.0	11,698.1	28.2	82.5	105.43	-139.7	-146.4	864.1	767.5	96.60	8.945		
11,925.0	11,639.4	18,785.0	11,698.1	28.3	82.5	102.45	-139.7	-146.4	881.9	786.5	95.48	9.237		
11,950.0	11,640.8	18,785.0	11,698.1	28.3	82.5	99.24	-139.7	-146.4	900.3	805.9	94.39	9.539		
11,963.6	11,641.0	18,785.0	11,698.1	28.3	82.5	97.42	-139.7	-146.4	910.5	816.7	93.81	9.706		
12,000.0	11,641.0	18,785.0	11,698.1	28.3	82.5	97.42	-139.7	-146.4	938.3	846.0	92.30	10.166		

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
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Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 1932 PROJECT - HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AWP													Offset Site Error: 0.0 usft		
Survey Program: 250-INC-ONLY		Offset		Semi Major Axis			Offset Wellbore Centre			Rule Assigned:				Offset Well Error: 10.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	3.0	10.0	160.46	-418.1	148.4	444.1						
100.0	100.0	79.4	79.4	3.1	10.0	160.46	-418.1	148.4	443.6	428.4	15.27	29.054			
200.0	200.0	179.4	179.4	3.2	10.2	160.46	-418.1	148.4	443.6	428.1	15.50	28.631			
300.0	300.0	279.5	279.4	3.3	10.6	160.46	-418.1	148.4	443.6	427.6	16.08	27.597			
395.5	395.5	375.0	374.9	3.4	11.8	160.44	-417.6	148.4	443.1	425.4	17.74	24.975			
400.0	400.0	379.3	379.3	3.4	11.8	160.44	-417.6	148.4	443.1	425.3	17.84	24.844			
500.0	500.0	476.5	476.5	3.6	13.6	160.45	-417.9	148.4	443.5	423.2	20.24	21.909			
600.0	600.0	579.6	579.4	3.7	15.8	160.46	-418.1	148.4	443.6	420.3	23.32	19.022			
645.3	645.3	624.9	624.7	3.7	16.9	160.39	-416.5	148.4	442.1	417.3	24.80	17.828 CC			
700.0	700.0	675.3	675.1	3.8	18.1	160.40	-416.7	148.4	442.4	415.9	26.50	16.691			
800.0	800.0	779.8	779.4	3.9	20.8	160.46	-418.1	148.4	443.6	413.4	30.20	14.689			
895.4	895.4	875.2	874.9	4.0	23.4	160.44	-417.6	148.4	443.1	409.5	33.60	13.190			
900.0	900.0	879.6	879.3	4.0	23.5	160.44	-417.6	148.4	443.1	409.4	33.76	13.125			
1,000.0	1,000.0	976.8	976.5	4.2	26.2	160.45	-417.9	148.4	443.5	406.0	37.45	11.841			
1,100.0	1,100.0	1,079.9	1,079.4	4.3	29.0	-114.73	-418.1	148.4	444.4	402.9	41.45	10.722			
1,200.0	1,199.8	1,175.5	1,174.9	4.5	31.7	-115.32	-416.7	148.4	445.3	400.1	45.21	9.850 ES			
1,300.0	1,299.5	1,279.6	1,278.9	4.9	34.7	-116.23	-418.1	148.4	450.4	401.0	49.36	9.125			
1,400.0	1,398.7	1,378.7	1,378.0	5.2	37.6	-117.52	-417.6	148.4	455.4	402.1	53.34	8.538			
1,500.0	1,497.7	1,474.9	1,474.2	5.4	40.3	-118.98	-417.9	148.4	462.4	405.2	57.23	8.079			
1,600.0	1,596.8	1,577.0	1,576.2	5.7	43.3	-120.49	-418.1	148.4	469.5	408.1	61.38	7.649			
1,700.0	1,695.8	1,672.0	1,671.1	6.0	46.1	-121.94	-416.7	148.4	475.6	410.3	65.25	7.288			
1,800.0	1,794.8	1,775.3	1,774.3	6.3	49.1	-123.31	-418.1	148.4	484.3	414.9	69.48	6.971			
1,900.0	1,893.8	1,874.3	1,873.3	6.7	52.0	-124.65	-418.1	148.4	492.2	418.6	73.55	6.691			
2,000.0	1,992.9	1,970.5	1,969.5	7.0	54.8	-125.93	-417.9	148.4	500.1	422.6	77.51	6.452			
2,100.0	2,091.9	2,072.5	2,071.3	7.3	57.9	-127.22	-418.1	148.4	508.6	426.9	81.73	6.223			
2,200.0	2,190.9	2,167.7	2,166.5	7.7	60.7	-128.48	-416.7	148.4	516.0	430.4	85.67	6.024			
2,300.0	2,289.9	2,270.7	2,269.4	8.1	63.7	-129.62	-418.1	148.4	526.0	436.1	89.94	5.849			
2,400.0	2,389.0	2,369.7	2,368.4	8.4	66.6	-130.76	-418.1	148.4	535.1	441.0	94.05	5.689			
2,500.0	2,488.0	2,466.0	2,464.7	8.8	69.5	-131.85	-417.8	148.4	544.1	446.1	98.05	5.549			
2,600.0	2,587.0	2,568.0	2,566.5	9.2	72.5	-132.93	-418.1	148.4	553.7	451.4	102.29	5.413			
2,700.0	2,686.1	2,663.5	2,662.0	9.6	75.4	-134.02	-416.6	148.4	562.2	455.9	106.27	5.290			
2,800.0	2,785.1	2,766.2	2,764.5	10.0	78.4	-134.96	-418.1	148.4	573.1	462.6	110.55	5.184			
2,900.0	2,884.1	2,865.2	2,863.5	10.4	81.4	-135.92	-418.1	148.4	583.1	468.4	114.69	5.084			
3,000.0	2,983.1	2,961.6	2,959.9	10.8	84.2	-136.85	-417.8	148.4	593.0	474.3	118.72	4.995			
3,100.0	3,082.2	3,063.4	3,061.6	11.2	87.2	-137.75	-418.1	148.4	603.5	480.5	122.97	4.908			
3,200.0	3,181.2	3,159.3	3,157.4	11.6	90.1	-138.69	-416.6	148.4	612.8	485.9	126.99	4.826			
3,300.0	3,280.2	3,261.6	3,259.7	12.0	93.1	-139.46	-418.1	148.4	624.5	493.2	131.27	4.757			
3,400.0	3,379.2	3,360.7	3,358.7	12.4	96.1	-140.28	-418.1	148.4	635.2	499.7	135.42	4.690			
3,500.0	3,478.3	3,457.2	3,455.2	12.8	99.0	-141.06	-417.8	148.4	645.8	506.3	139.46	4.630			
3,600.0	3,577.3	3,558.9	3,556.7	13.2	102.0	-141.82	-418.1	148.4	656.9	513.2	143.73	4.570			
3,700.0	3,676.3	3,655.1	3,652.9	13.6	104.9	-142.64	-416.6	148.4	666.9	519.1	147.77	4.513			
3,800.0	3,775.3	3,757.1	3,754.8	14.0	107.9	-143.27	-418.1	148.4	679.1	527.0	152.05	4.466			
3,900.0	3,874.4	3,856.1	3,853.8	14.4	110.9	-143.96	-418.1	148.4	690.3	534.1	156.21	4.419			
4,000.0	3,973.4	3,952.7	3,950.4	14.8	113.8	-144.63	-417.8	148.4	701.4	541.2	160.27	4.377			
4,100.0	4,072.4	4,054.4	4,051.9	15.2	116.8	-145.27	-418.1	148.4	713.1	548.6	164.54	4.334			
4,200.0	4,171.5	4,150.9	4,148.4	15.7	119.7	-145.98	-416.5	148.4	723.6	555.0	168.60	4.292			
4,300.0	4,270.5	4,252.6	4,249.9	16.1	122.7	-146.50	-418.1	148.4	736.2	563.4	172.83	4.260 SF			
4,400.0	4,369.5	4,258.0	4,255.3	16.5	122.8	-146.53	-418.1	148.4	753.7	582.0	171.71	4.390			
4,500.0	4,468.5	4,258.0	4,255.3	16.9	122.8	-146.53	-418.1	148.4	783.7	615.8	167.84	4.669			
4,600.0	4,567.6	4,258.0	4,255.3	17.3	122.8	-146.53	-418.1	148.4	824.8	662.6	162.11	5.088			
4,700.0	4,666.6	4,258.0	4,255.3	17.8	122.8	-146.53	-418.1	148.4	875.4	720.1	155.26	5.638			
4,800.0	4,765.6	4,258.0	4,255.3	18.2	122.8	-146.53	-418.1	148.4	934.0	786.1	147.93	6.314			

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design:	ZIA HILLS UNIT 1932 PROJECT - HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program:	250-INC-ONLY												Offset Well Error:	10.0 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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
4,900.0	4,864.6	4,258.0	4,255.3	18.6	122.8	-146.53	-418.1	148.4	999.2	858.6	140.58	7.108		

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 1932 PROJECT - SUMIDEROS 12 W1PA FEDERAL COM #1H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 195-r.5 MWD, 1527-r.5 MWD, 4288-r.5 MWD, 12231-r.5 MWD													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	
21,600.0	11,641.0	11,547.0	11,537.4	82.7	28.3	80.62	10,573.6	51.3	979.5	865.6	113.86	8.603		
21,700.0	11,641.0	11,564.5	11,553.9	83.4	28.3	81.66	10,579.5	51.6	944.1	826.5	117.60	8.028		
21,800.0	11,641.0	11,584.6	11,572.5	84.1	28.2	82.85	10,587.0	52.0	917.6	796.9	120.73	7.600		
21,862.1	11,641.0	11,601.4	11,587.9	84.6	28.2	83.83	10,593.8	52.4	905.8	783.6	122.27	7.408		
21,900.0	11,641.0	11,615.1	11,600.2	84.8	28.2	84.62	10,599.7	52.8	900.4	777.4	123.04	7.318		
21,912.1	11,641.0	11,621.9	11,606.4	84.9	28.2	85.01	10,602.7	52.9	899.0	775.7	123.25	7.294	CC, ES, SF	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 1932 PROJECT - SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AWP													Offset Site Error: 0.0 usft		
Survey Program:		136-MWD - OWSG R1, 1290-MWD - OWSG R1, 4379-MWD - OWSG R1, 11947-MWD - OWSG R1										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			
21,200.0	11,641.0	11,344.5	11,304.3	79.8	29.4	35.36	10,613.8	-567.3	954.4	881.1	73.30	13.021			
21,300.0	11,641.0	11,358.0	11,316.3	80.5	29.4	36.13	10,619.9	-568.4	868.1	791.7	76.39	11.364			
21,400.0	11,641.0	11,390.0	11,344.2	81.2	29.5	38.01	10,635.4	-571.3	784.0	705.0	78.97	9.928			
21,500.0	11,641.0	11,402.6	11,354.9	82.0	29.5	38.79	10,641.9	-572.4	702.4	618.9	83.52	8.410			
21,600.0	11,641.0	11,421.0	11,370.2	82.7	29.6	39.97	10,652.0	-574.0	624.4	535.7	88.69	7.040			
21,700.0	11,641.0	11,452.0	11,395.1	83.4	29.6	42.06	10,670.3	-576.6	550.7	456.8	93.90	5.864			
21,800.0	11,641.0	11,484.0	11,419.5	84.1	29.7	44.32	10,690.8	-579.1	482.6	382.4	100.15	4.819			
21,862.1	11,641.0	11,515.0	11,441.7	84.6	29.7	46.58	10,712.3	-581.6	443.8	340.4	103.43	4.291			
21,900.0	11,641.0	11,526.5	11,449.5	84.8	29.8	47.43	10,720.7	-582.5	421.6	315.2	106.41	3.962			
21,912.1	11,641.0	11,531.8	11,453.1	84.9	29.8	47.82	10,724.6	-582.9	414.8	307.6	107.21	3.869	CC, ES, SF		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - GOLDEN SPUR 36 COM W1 #2H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 13-MWD+IFR1, 4170-MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,100.0	11,050.0	19,013.0	11,868.0	28.0	78.2	119.57	-143.7	-373.0	938.5	841.7	96.79	9.696	
11,200.0	11,150.0	19,013.0	11,868.0	28.0	78.2	119.57	-143.7	-373.0	850.4	752.9	97.49	8.723	
11,213.6	11,163.5	19,013.0	11,868.0	28.0	78.2	119.57	-143.7	-373.0	838.7	741.0	97.69	8.585	
11,225.0	11,175.0	19,013.0	11,868.0	28.0	78.2	122.07	-143.7	-373.0	828.8	731.1	97.78	8.477	
11,250.0	11,199.9	19,013.0	11,868.0	28.1	78.2	125.95	-143.7	-373.0	807.8	709.8	97.95	8.247	
11,275.0	11,224.8	19,013.0	11,868.0	28.1	78.2	129.29	-143.7	-373.0	787.4	689.3	98.09	8.027	
11,300.0	11,249.5	19,013.0	11,868.0	28.1	78.2	132.16	-143.7	-373.0	767.8	669.6	98.20	7.819	
11,325.0	11,274.0	19,013.0	11,868.0	28.1	78.2	134.62	-143.7	-373.0	749.1	650.9	98.25	7.624	
11,350.0	11,298.1	19,013.0	11,868.0	28.1	78.2	136.72	-143.7	-373.0	731.5	633.2	98.26	7.444	
11,375.0	11,321.9	19,013.0	11,868.0	28.1	78.2	138.50	-143.7	-373.0	714.9	616.7	98.20	7.281	
11,400.0	11,345.3	19,013.0	11,868.0	28.1	78.2	140.01	-143.7	-373.0	699.7	601.6	98.07	7.135	
11,425.0	11,368.1	19,013.0	11,868.0	28.1	78.2	141.27	-143.7	-373.0	685.9	588.0	97.85	7.009	
11,450.0	11,390.4	19,013.0	11,868.0	28.1	78.2	142.32	-143.7	-373.0	673.6	576.0	97.53	6.906	
11,475.0	11,412.1	19,013.0	11,868.0	28.1	78.2	143.18	-143.7	-373.0	662.9	565.8	97.11	6.826	
11,500.0	11,433.1	19,013.0	11,868.0	28.1	78.2	143.86	-143.7	-373.0	654.0	557.4	96.58	6.772	
11,525.0	11,453.4	19,013.0	11,868.0	28.1	78.2	144.38	-143.7	-373.0	647.0	551.0	95.93	6.744 SF	
11,550.0	11,472.8	19,013.0	11,868.0	28.1	78.2	144.74	-143.7	-373.0	641.9	546.7	95.15	6.746	
11,575.0	11,491.4	19,013.0	11,868.0	28.1	78.2	144.95	-143.7	-373.0	638.8	544.5	94.26	6.777	
11,600.0	11,509.1	19,013.0	11,868.0	28.1	78.2	145.03	-143.7	-373.0	637.7	544.5	93.25	6.839 CC, ES	
11,601.1	11,509.9	19,013.0	11,868.0	28.1	78.2	145.03	-143.7	-373.0	637.7	544.5	93.20	6.842	
11,625.0	11,525.9	19,013.0	11,868.0	28.1	78.2	144.96	-143.7	-373.0	638.7	546.6	92.14	6.932	
11,650.0	11,541.7	19,013.0	11,868.0	28.1	78.2	144.75	-143.7	-373.0	641.7	550.8	90.94	7.057	
11,675.0	11,556.4	19,013.0	11,868.0	28.1	78.2	144.39	-143.7	-373.0	646.7	557.1	89.67	7.213	
11,700.0	11,570.1	19,013.0	11,868.0	28.1	78.2	143.88	-143.7	-373.0	653.7	565.4	88.34	7.400	
11,725.0	11,582.6	19,013.0	11,868.0	28.1	78.2	143.21	-143.7	-373.0	662.5	575.6	86.99	7.617	
11,750.0	11,594.0	19,013.0	11,868.0	28.1	78.2	142.36	-143.7	-373.0	673.1	587.5	85.62	7.862	
11,775.0	11,604.3	19,013.0	11,868.0	28.2	78.2	141.31	-143.7	-373.0	685.4	601.1	84.25	8.135	
11,800.0	11,613.3	19,013.0	11,868.0	28.2	78.2	140.06	-143.7	-373.0	699.2	616.3	82.91	8.433	
11,825.0	11,621.0	19,013.0	11,868.0	28.2	78.2	138.56	-143.7	-373.0	714.4	632.8	81.60	8.755	
11,850.0	11,627.6	19,013.0	11,868.0	28.2	78.2	136.79	-143.7	-373.0	730.9	650.5	80.33	9.098	
11,875.0	11,632.8	19,013.0	11,868.0	28.2	78.2	134.70	-143.7	-373.0	748.5	669.4	79.12	9.460	
11,900.0	11,636.8	19,013.0	11,868.0	28.2	78.2	132.26	-143.7	-373.0	767.1	689.2	77.97	9.840	
11,925.0	11,639.4	19,013.0	11,868.0	28.3	78.2	129.40	-143.7	-373.0	786.7	709.8	76.88	10.233	
11,950.0	11,640.8	19,013.0	11,868.0	28.3	78.2	126.08	-143.7	-373.0	807.1	731.2	75.85	10.640	
11,963.6	11,641.0	19,013.0	11,868.0	28.3	78.2	124.05	-143.7	-373.0	818.4	743.1	75.33	10.865	
12,000.0	11,641.0	19,013.0	11,868.0	28.3	78.2	124.05	-143.7	-373.0	849.3	775.3	73.99	11.479	
12,100.0	11,641.0	19,013.0	11,868.0	28.5	78.2	124.05	-143.7	-373.0	936.2	865.4	70.81	13.221	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 100-INC-ONLY													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		
3,400.0	3,379.2	3,357.0	3,354.9	12.4	98.5	-31.91	-418.1	-1,191.2	991.5	852.7	138.81	7.143		
3,500.0	3,478.3	3,455.4	3,453.2	12.8	101.4	-32.31	-417.7	-1,191.2	979.5	836.5	142.95	6.852		
3,600.0	3,577.3	3,555.3	3,553.0	13.2	104.4	-32.77	-418.1	-1,191.2	967.9	820.8	147.15	6.578		
3,700.0	3,676.3	3,653.9	3,651.5	13.6	107.4	-33.20	-417.7	-1,191.2	956.0	804.7	151.29	6.319		
3,800.0	3,775.3	3,753.6	3,751.2	14.0	110.4	-33.69	-418.1	-1,191.2	944.6	789.1	155.48	6.075		
3,900.0	3,874.4	3,852.4	3,849.9	14.4	113.3	-34.13	-417.7	-1,191.2	932.8	773.1	159.63	5.843		
4,000.0	3,973.4	3,951.9	3,949.4	14.8	116.3	-34.64	-418.1	-1,191.2	921.5	757.6	163.81	5.625		
4,100.0	4,072.4	4,050.9	4,048.3	15.2	119.3	-35.12	-417.7	-1,191.2	909.8	741.8	167.97	5.416		
4,200.0	4,171.5	4,150.2	4,147.6	15.7	122.3	-35.65	-418.1	-1,191.2	898.6	726.5	172.14	5.220		
4,300.0	4,270.5	4,228.0	4,225.3	16.1	124.6	-36.07	-418.4	-1,191.2	887.7	712.3	175.37	5.062 SF		
4,378.9	4,348.6	4,228.0	4,225.3	16.4	124.6	-36.07	-418.4	-1,191.2	884.2	709.8	174.39	5.070 CC, ES		
4,400.0	4,369.5	4,228.0	4,225.3	16.5	124.6	-36.07	-418.4	-1,191.2	884.4	710.5	173.89	5.086		
4,500.0	4,468.5	4,228.0	4,225.3	16.9	124.6	-36.07	-418.4	-1,191.2	892.4	722.1	170.28	5.241		
4,600.0	4,567.6	4,228.0	4,225.3	17.3	124.6	-36.07	-418.4	-1,191.2	911.4	746.6	164.79	5.531		
4,700.0	4,666.6	4,228.0	4,225.3	17.8	124.6	-36.07	-418.4	-1,191.2	940.7	782.9	157.83	5.960		
4,800.0	4,765.6	4,228.0	4,225.3	18.2	124.6	-36.07	-418.4	-1,191.2	979.3	829.4	149.90	6.533		

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - R T WILSON FEDERAL #2 (P&A) - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 314-INC-ONLY, 1065-INC-ONLY												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	3.0	3.0	-19.76	586.3	-210.7	623.2				
100.0	100.0	86.0	86.0	3.1	3.1	-19.76	586.3	-210.7	623.0	616.3	6.70	93.006	
200.0	200.0	186.0	186.0	3.2	3.4	-19.76	586.3	-210.7	623.0	615.9	7.12	87.470	
300.0	300.0	286.0	286.0	3.3	3.9	-19.76	586.3	-210.7	623.0	615.3	7.72	80.668	
400.0	400.0	386.0	386.0	3.4	4.9	-19.76	586.3	-210.7	623.0	614.0	9.02	69.065	
500.0	500.0	487.2	487.2	3.6	6.4	-19.76	586.3	-210.7	623.0	612.2	10.89	57.231	
535.8	535.8	521.8	521.8	3.6	7.0	-19.76	586.3	-210.7	623.0	611.4	11.59	53.772	
600.0	600.0	586.0	586.0	3.7	8.0	-19.76	586.3	-210.7	623.0	610.1	12.94	48.143	
700.0	700.0	686.0	686.0	3.8	9.7	-19.76	586.3	-210.7	623.0	607.9	15.18	41.047	
800.0	800.0	787.2	787.2	3.9	11.5	-19.76	586.5	-210.7	623.2	605.6	17.60	35.417	
900.0	900.0	887.2	887.2	4.0	13.4	-19.76	586.5	-210.7	623.2	603.0	20.10	31.001	
1,000.0	1,000.0	986.0	986.0	4.2	14.6	-19.76	586.3	-210.7	623.0	601.2	21.84	28.526	
1,100.0	1,100.0	1,086.0	1,086.0	4.3	15.5	65.39	586.3	-210.7	622.3	599.3	22.98	27.086	
1,200.0	1,199.8	1,189.2	1,189.2	4.5	15.9	65.90	586.5	-210.7	620.3	596.7	23.61	26.274	
1,300.0	1,299.5	1,285.5	1,285.4	4.9	16.6	66.67	586.3	-210.7	616.6	592.1	24.57	25.094	
1,400.0	1,398.7	1,388.3	1,388.2	5.2	17.4	67.85	586.4	-210.7	611.9	586.2	25.74	23.775	
1,500.0	1,497.7	1,484.5	1,484.4	5.4	18.5	69.03	586.7	-210.7	607.0	579.8	27.21	22.312	
1,600.0	1,596.8	1,582.9	1,582.7	5.7	19.6	70.24	586.3	-210.7	601.8	573.0	28.83	20.877	
1,700.0	1,695.8	1,684.9	1,684.8	6.0	21.0	71.52	586.4	-210.7	597.3	566.6	30.71	19.451	
1,800.0	1,794.8	1,781.0	1,780.9	6.3	22.4	72.75	586.7	-210.7	593.3	560.5	32.73	18.127	
1,900.0	1,893.8	1,880.0	1,879.8	6.7	24.0	74.03	586.3	-210.7	588.9	554.0	34.89	16.879	
2,000.0	1,992.9	1,981.5	1,981.3	7.0	25.7	75.36	586.6	-210.7	585.5	548.2	37.25	15.716	
2,100.0	2,091.9	2,078.1	2,077.9	7.3	27.4	76.64	586.3	-210.7	581.8	542.2	39.58	14.700	
2,200.0	2,190.9	2,181.3	2,181.1	7.7	29.2	78.03	586.5	-210.7	578.8	536.7	42.12	13.742	
2,300.0	2,289.9	2,276.4	2,276.2	8.1	30.9	79.32	586.7	-210.7	576.3	531.7	44.55	12.936	
2,400.0	2,389.0	2,375.2	2,375.0	8.4	32.7	80.66	586.3	-210.7	573.5	526.4	47.07	12.183	
2,500.0	2,488.0	2,477.2	2,477.0	8.8	34.6	82.07	586.6	-210.7	571.6	522.0	49.65	11.513	
2,600.0	2,587.0	2,573.3	2,573.0	9.2	36.4	83.40	586.3	-210.7	569.6	517.4	52.18	10.915	
2,700.0	2,686.1	2,675.8	2,675.5	9.6	38.4	84.83	586.4	-210.7	568.2	513.2	54.94	10.342	
2,800.0	2,785.1	2,771.4	2,771.1	10.0	40.3	86.17	586.8	-210.7	567.5	510.0	57.56	9.860	
2,900.0	2,884.1	2,870.4	2,870.1	10.4	42.2	87.56	586.3	-210.7	566.3	506.0	60.27	9.395	
3,000.0	2,983.1	2,970.1	2,969.9	10.8	44.2	88.96	586.6	-210.7	566.1	503.1	63.04	8.980	
3,075.2	3,057.6	3,047.7	3,047.5	11.1	45.8	90.06	586.3	-210.7	565.7	500.5	65.20	8.677 CC	
3,100.0	3,082.2	3,068.5	3,068.2	11.2	46.2	90.35	586.3	-210.7	565.7	500.0	65.78	8.601	
3,200.0	3,181.2	3,171.4	3,171.1	11.6	48.3	91.80	586.6	-210.7	566.3	497.6	68.67	8.247	
3,232.4	3,213.3	3,206.2	3,205.9	11.7	49.0	92.29	586.3	-210.7	566.1	496.5	69.64	8.129	
3,300.0	3,280.2	3,266.6	3,266.2	12.0	50.1	93.14	586.3	-210.7	566.6	495.4	71.21	7.957	
3,400.0	3,379.2	3,365.6	3,365.2	12.4	51.9	94.53	586.3	-210.7	567.5	493.7	73.82	7.688	
3,500.0	3,478.3	3,465.8	3,465.4	12.8	53.9	95.92	586.6	-210.7	569.1	492.5	76.56	7.433	
3,600.0	3,577.3	3,563.7	3,563.3	13.2	55.9	97.29	586.3	-210.7	570.4	491.1	79.37	7.187	
3,700.0	3,676.3	3,662.7	3,662.3	13.6	58.2	98.66	586.3	-210.7	572.4	489.9	82.53	6.935	
3,800.0	3,775.3	3,763.8	3,763.4	14.0	61.0	100.03	586.9	-210.7	575.2	488.7	86.50	6.650	
3,900.0	3,874.4	3,860.9	3,860.4	14.4	63.7	101.36	586.3	-210.7	577.3	487.0	90.30	6.393	
4,000.0	3,973.4	3,961.3	3,960.7	14.8	66.5	102.67	587.8	-210.7	581.6	487.4	94.19	6.174	
4,100.0	4,072.4	4,072.7	4,072.1	15.2	69.6	104.20	586.3	-210.7	583.5	485.1	98.49	5.925 ES	
4,200.0	4,171.5	4,158.1	4,157.4	15.7	71.5	105.33	586.3	-210.7	587.0	485.8	101.21	5.800	
4,300.0	4,270.5	4,251.0	4,250.3	16.1	73.6	106.54	586.3	-210.7	590.9	486.8	104.15	5.673 SF	
4,400.0	4,369.5	4,251.0	4,250.3	16.5	73.6	106.54	586.3	-210.7	604.3	501.6	102.66	5.886	
4,500.0	4,468.5	4,251.0	4,250.3	16.9	73.6	106.54	586.3	-210.7	633.3	534.5	98.88	6.405	
4,600.0	4,567.6	4,251.0	4,250.3	17.3	73.6	106.54	586.3	-210.7	676.1	582.4	93.66	7.219	
4,700.0	4,666.6	4,251.0	4,250.3	17.8	73.6	106.54	586.3	-210.7	730.1	642.3	87.82	8.314	
4,800.0	4,765.6	4,251.0	4,250.3	18.2	73.6	106.54	586.3	-210.7	793.1	711.2	81.97	9.676	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - R T WILSON FEDERAL #2 (P&A) - OWB - AWP												Offset Site Error: 0.0 usft	
Survey Program: 314-INC-ONLY, 1065-INC-ONLY												Offset Well Error: 3.0 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned: 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	
4,900.0	4,864.6	4,251.0	4,250.3	18.6	73.6	106.54	586.3	-210.7	863.1	786.7	76.47	11.288	
5,000.0	4,963.7	4,251.0	4,250.3	19.0	73.6	106.54	586.3	-210.7	938.6	867.1	71.47	13.132	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11347-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	0.0	3.0	3.0	179.51	-60.0	0.5	60.0				
100.0	100.0	100.0	100.0	3.1	3.1	179.51	-60.0	0.5	60.0	53.5	6.54	9.179	
200.0	200.0	200.0	200.0	3.2	3.2	179.51	-60.0	0.5	60.0	53.2	6.79	8.842	
300.0	300.0	300.0	300.0	3.3	3.3	179.51	-60.0	0.5	60.0	53.0	7.03	8.532	
400.0	400.0	400.0	400.0	3.4	3.4	179.51	-60.0	0.5	60.0	52.7	7.28	8.244	
500.0	500.0	500.0	500.0	3.6	3.6	179.51	-60.0	0.5	60.0	52.5	7.52	7.977	
600.0	600.0	600.0	600.0	3.7	3.7	179.51	-60.0	0.5	60.0	52.2	7.76	7.728	
700.0	700.0	700.0	700.0	3.8	3.8	179.51	-60.0	0.5	60.0	52.0	8.00	7.496	
800.0	800.0	800.0	800.0	3.9	3.9	179.51	-60.0	0.5	60.0	51.8	8.24	7.278	
900.0	900.0	900.0	900.0	4.0	4.0	179.51	-60.0	0.5	60.0	51.5	8.48	7.074	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	179.51	-60.0	0.5	60.0	51.3	8.72	6.881 CC	
1,100.0	1,100.0	1,100.1	1,100.0	4.3	4.3	-95.48	-60.0	-1.2	60.1	51.2	8.92	6.738 ES	
1,200.0	1,199.8	1,200.1	1,199.9	4.5	4.5	-95.45	-59.9	-6.5	60.5	51.2	9.26	6.533	
1,300.0	1,299.5	1,300.2	1,299.6	4.9	4.9	-95.39	-59.7	-15.2	61.1	51.5	9.59	6.373	
1,400.0	1,398.7	1,400.2	1,398.9	5.2	5.2	-95.33	-59.5	-27.4	61.9	52.0	9.91	6.250	
1,500.0	1,497.7	1,500.2	1,497.7	5.4	5.5	-93.68	-59.2	-43.0	62.9	52.7	10.23	6.147	
1,600.0	1,596.8	1,600.0	1,595.6	5.7	5.9	-88.98	-58.9	-62.1	64.1	53.6	10.56	6.072	
1,700.0	1,695.8	1,699.2	1,692.3	6.0	6.3	-81.57	-58.5	-84.4	66.4	55.5	10.94	6.070	
1,800.0	1,794.8	1,798.7	1,788.8	6.3	6.6	-73.41	-58.1	-108.4	70.3	58.9	11.43	6.154	
1,900.0	1,893.8	1,898.1	1,885.3	6.7	7.0	-66.22	-57.7	-132.5	75.5	63.5	12.02	6.285	
2,000.0	1,992.9	1,997.6	1,981.8	7.0	7.3	-60.04	-57.3	-156.6	81.8	69.1	12.69	6.442	
2,100.0	2,091.9	2,097.0	2,078.3	7.3	7.7	-54.79	-56.8	-180.6	88.8	75.4	13.43	6.613	
2,200.0	2,190.9	2,196.5	2,174.8	7.7	8.1	-50.33	-56.4	-204.7	96.5	82.3	14.21	6.790	
2,300.0	2,289.9	2,295.9	2,271.3	8.1	8.5	-46.54	-56.0	-228.7	104.7	89.7	15.02	6.968	
2,400.0	2,389.0	2,395.3	2,367.7	8.4	8.9	-43.32	-55.6	-252.8	113.3	97.4	15.86	7.143	
2,500.0	2,488.0	2,494.8	2,464.2	8.8	9.3	-40.55	-55.2	-276.8	122.1	105.4	16.70	7.312	
2,600.0	2,587.0	2,594.2	2,560.7	9.2	9.7	-38.16	-54.7	-300.9	131.3	113.7	17.56	7.475	
2,700.0	2,686.1	2,693.7	2,657.2	9.6	10.1	-36.09	-54.3	-324.9	140.6	122.1	18.42	7.630	
2,800.0	2,785.1	2,793.1	2,753.7	10.0	10.6	-34.27	-53.9	-349.0	150.1	130.8	19.29	7.777	
2,900.0	2,884.1	2,892.6	2,850.2	10.4	11.0	-32.67	-53.5	-373.0	159.7	139.5	20.17	7.916	
3,000.0	2,983.1	2,992.0	2,946.7	10.8	11.4	-31.26	-53.1	-397.1	169.4	148.3	21.05	8.047	
3,100.0	3,082.2	3,091.5	3,043.2	11.2	11.9	-29.99	-52.6	-421.1	179.2	157.3	21.93	8.171	
3,200.0	3,181.2	3,190.9	3,139.7	11.6	12.3	-28.86	-52.2	-445.2	189.1	166.3	22.81	8.288	
3,300.0	3,280.2	3,290.3	3,236.2	12.0	12.8	-27.84	-51.8	-469.3	199.0	175.3	23.70	8.398	
3,400.0	3,379.2	3,389.8	3,332.6	12.4	13.2	-26.92	-51.4	-493.3	209.1	184.5	24.59	8.501	
3,500.0	3,478.3	3,489.2	3,429.1	12.8	13.7	-26.09	-51.0	-517.4	219.1	193.6	25.48	8.599	
3,600.0	3,577.3	3,588.7	3,525.6	13.2	14.1	-25.32	-50.5	-541.4	229.2	202.8	26.37	8.691	
3,700.0	3,676.3	3,688.1	3,622.1	13.6	14.6	-24.62	-50.1	-565.5	239.4	212.1	27.27	8.778	
3,800.0	3,775.3	3,787.6	3,718.6	14.0	15.1	-23.98	-49.7	-589.5	249.5	221.4	28.16	8.860	
3,900.0	3,874.4	3,887.0	3,815.1	14.4	15.5	-23.39	-49.3	-613.6	259.7	230.7	29.06	8.937	
4,000.0	3,973.4	3,986.5	3,911.6	14.8	16.0	-22.84	-48.9	-637.6	270.0	240.0	29.96	9.011	
4,100.0	4,072.4	4,085.9	4,008.1	15.2	16.5	-22.34	-48.4	-661.7	280.2	249.3	30.86	9.080	
4,200.0	4,171.5	4,185.3	4,104.6	15.7	16.9	-21.87	-48.0	-685.7	290.5	258.7	31.76	9.146	
4,300.0	4,270.5	4,284.8	4,201.1	16.1	17.4	-21.43	-47.6	-709.8	300.8	268.1	32.66	9.209	
4,400.0	4,369.5	4,384.2	4,297.5	16.5	17.9	-21.02	-47.2	-733.8	311.1	277.5	33.56	9.269	
4,500.0	4,468.5	4,483.7	4,394.0	16.9	18.3	-20.63	-46.8	-757.9	321.4	286.9	34.46	9.325	
4,600.0	4,567.6	4,583.1	4,490.5	17.3	18.8	-20.27	-46.3	-782.0	331.7	296.3	35.37	9.379	
4,700.0	4,666.6	4,682.6	4,587.0	17.8	19.3	-19.93	-45.9	-806.0	342.1	305.8	36.27	9.431	
4,800.0	4,765.6	4,782.0	4,683.5	18.2	19.8	-19.62	-45.5	-830.1	352.4	315.2	37.18	9.480	
4,900.0	4,864.6	4,881.4	4,780.0	18.6	20.2	-19.32	-45.1	-854.1	362.8	324.7	38.08	9.526	
5,000.0	4,963.7	4,980.9	4,876.5	19.0	20.7	-19.03	-44.7	-878.2	373.1	334.2	38.99	9.571	
5,100.0	5,062.7	5,080.3	4,973.0	19.4	21.2	-18.77	-44.2	-902.2	383.5	343.6	39.89	9.614	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11347-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)		
5,200.0	5,161.7	5,179.8	5,069.5	19.9	21.7	-18.51	-43.8	-926.3	393.9	353.1	40.80	9.655	
5,300.0	5,260.7	5,279.2	5,166.0	20.3	22.1	-18.27	-43.4	-950.3	404.3	362.6	41.71	9.694	
5,400.0	5,359.8	5,378.7	5,262.5	20.7	22.6	-18.04	-43.0	-974.4	414.7	372.1	42.62	9.732	
5,500.0	5,458.8	5,478.1	5,358.9	21.1	23.1	-17.82	-42.6	-998.4	425.1	381.6	43.52	9.768	
5,600.0	5,557.8	5,577.6	5,455.4	21.6	23.6	-17.62	-42.1	-1,022.5	435.5	391.1	44.43	9.802	
5,700.0	5,656.9	5,677.0	5,551.9	22.0	24.0	-17.42	-41.7	-1,046.6	446.0	400.6	45.34	9.836	
5,800.0	5,755.9	5,776.4	5,648.4	22.4	24.5	-17.23	-41.3	-1,070.6	456.4	410.1	46.25	9.868	
5,900.0	5,854.9	5,875.9	5,744.9	22.8	25.0	-17.05	-40.9	-1,094.7	466.8	419.7	47.16	9.899	
6,000.0	5,953.9	5,975.3	5,841.4	23.3	25.5	-16.88	-40.5	-1,118.7	477.3	429.2	48.07	9.928	
6,100.0	6,053.0	6,074.8	5,937.9	23.7	26.0	-16.71	-40.0	-1,142.8	487.7	438.7	48.98	9.957	
6,139.4	6,092.0	6,114.0	5,975.9	23.9	26.1	-16.65	-39.9	-1,152.2	491.8	442.5	49.33	9.969	
6,200.0	6,152.0	6,174.2	6,034.3	24.1	26.4	-16.56	-39.6	-1,166.8	498.4	448.6	49.88	9.994	
6,300.0	6,251.3	6,273.4	6,130.6	24.5	26.9	-16.39	-39.2	-1,190.8	510.7	460.0	50.78	10.057	
6,400.0	6,350.8	6,372.4	6,226.7	24.9	27.4	-16.17	-38.8	-1,214.8	524.7	473.0	51.68	10.152	
6,500.0	6,450.4	6,471.1	6,322.5	25.3	27.9	-15.92	-38.4	-1,238.6	540.3	487.7	52.57	10.278	
6,600.0	6,550.2	6,569.6	6,418.0	25.7	28.4	-15.64	-38.0	-1,262.5	557.6	504.2	53.45	10.432	
6,700.0	6,650.1	6,667.7	6,513.2	26.0	28.8	-15.34	-37.5	-1,286.2	576.6	522.3	54.31	10.617	
6,800.0	6,750.0	6,765.5	6,608.1	26.3	29.3	-15.02	-37.1	-1,309.8	597.2	542.1	55.14	10.831	
6,900.0	6,850.0	6,862.9	6,702.6	26.6	29.8	-14.69	-36.7	-1,333.4	619.5	563.6	55.93	11.077	
6,939.4	6,889.4	6,901.2	6,739.7	26.6	30.0	-99.55	-36.6	-1,342.7	628.8	572.6	56.19	11.190	
7,000.0	6,950.0	6,959.9	6,796.7	26.6	30.2	-99.31	-36.3	-1,356.9	643.2	586.7	56.54	11.376	
7,100.0	7,050.0	7,057.0	6,890.9	26.7	30.7	-98.94	-35.9	-1,380.3	667.1	609.9	57.13	11.676	
7,200.0	7,150.0	7,154.0	6,985.0	26.7	31.2	-98.59	-35.5	-1,403.8	690.9	633.2	57.72	11.970	
7,300.0	7,250.0	7,259.4	7,087.5	26.7	31.7	-98.25	-35.0	-1,428.9	714.4	656.1	58.38	12.238	
7,400.0	7,350.0	7,370.9	7,196.2	26.7	32.2	-97.93	-34.6	-1,453.5	736.3	677.2	59.06	12.466	
7,500.0	7,450.0	7,483.3	7,306.3	26.8	32.8	-97.66	-34.2	-1,476.2	756.2	696.5	59.71	12.665	
7,600.0	7,550.0	7,596.6	7,417.7	26.8	33.3	-97.43	-33.9	-1,496.9	774.3	713.9	60.32	12.836	
7,700.0	7,650.0	7,710.7	7,530.2	26.8	33.8	-97.23	-33.5	-1,515.5	790.4	729.5	60.90	12.978	
7,800.0	7,750.0	7,825.5	7,643.8	26.9	34.3	-97.06	-33.3	-1,531.9	804.6	743.1	61.44	13.095	
7,900.0	7,850.0	7,940.9	7,758.4	26.9	34.8	-96.92	-33.0	-1,546.1	816.8	754.8	61.94	13.186	
8,000.0	7,950.0	8,056.9	7,873.7	26.9	35.3	-96.81	-32.8	-1,558.1	827.0	764.6	62.40	13.252	
8,100.0	8,050.0	8,173.3	7,989.7	27.0	35.7	-96.71	-32.6	-1,567.7	835.2	772.4	62.82	13.296	
8,200.0	8,150.0	8,290.0	8,106.2	27.0	36.1	-96.65	-32.5	-1,575.0	841.4	778.2	63.18	13.319	
8,300.0	8,250.0	8,407.0	8,223.1	27.0	36.5	-96.60	-32.4	-1,580.0	845.6	782.1	63.47	13.322	
8,400.0	8,350.0	8,524.1	8,340.2	27.1	36.8	-96.58	-32.4	-1,582.6	847.8	784.1	63.65	13.319	
8,500.0	8,450.0	8,633.9	8,450.0	27.1	36.9	-96.58	-32.4	-1,582.9	848.1	784.4	63.68	13.317	
8,600.0	8,550.0	8,733.9	8,550.0	27.1	36.9	-96.58	-32.4	-1,582.9	848.1	784.4	63.75	13.305	
8,700.0	8,650.0	8,833.9	8,650.0	27.2	37.0	-96.58	-32.4	-1,582.9	848.1	784.3	63.79	13.294	
8,800.0	8,750.0	8,933.9	8,750.0	27.2	37.0	-96.58	-32.4	-1,582.9	848.1	784.3	63.85	13.284	
8,900.0	8,850.0	9,033.9	8,850.0	27.2	37.0	-96.58	-32.4	-1,582.9	848.1	784.2	63.90	13.273	
9,000.0	8,950.0	9,133.9	8,950.0	27.3	37.0	-96.58	-32.4	-1,582.9	848.1	784.2	63.95	13.263	
9,100.0	9,050.0	9,233.9	9,050.0	27.3	37.0	-96.58	-32.4	-1,582.9	848.1	784.1	64.00	13.252	
9,200.0	9,150.0	9,333.9	9,150.0	27.3	37.1	-96.58	-32.4	-1,582.9	848.1	784.1	64.05	13.242	
9,300.0	9,250.0	9,433.9	9,250.0	27.4	37.1	-96.58	-32.4	-1,582.9	848.1	784.0	64.10	13.231	
9,400.0	9,350.0	9,533.9	9,350.0	27.4	37.1	-96.58	-32.4	-1,582.9	848.1	784.0	64.15	13.220	
9,500.0	9,450.0	9,633.9	9,450.0	27.4	37.1	-96.58	-32.4	-1,582.9	848.1	783.9	64.21	13.209	
9,600.0	9,550.0	9,733.9	9,550.0	27.5	37.1	-96.58	-32.4	-1,582.9	848.1	783.9	64.26	13.198	
9,700.0	9,650.0	9,833.9	9,650.0	27.5	37.2	-96.58	-32.4	-1,582.9	848.1	783.8	64.31	13.187	
9,800.0	9,750.0	9,933.9	9,750.0	27.5	37.2	-96.58	-32.4	-1,582.9	848.1	783.7	64.37	13.176	
9,900.0	9,850.0	10,033.9	9,850.0	27.6	37.2	-96.58	-32.4	-1,582.9	848.1	783.7	64.42	13.165	
10,000.0	9,950.0	10,133.9	9,950.0	27.6	37.2	-96.58	-32.4	-1,582.9	848.1	783.6	64.48	13.154	
10,100.0	10,050.0	10,233.9	10,050.0	27.6	37.3	-96.58	-32.4	-1,582.9	848.1	783.6	64.53	13.143	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11347-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
10,200.0	10,150.0	10,333.9	10,150.0	27.7	37.3	-96.58	-32.4	-1,582.9	848.1	783.5	64.59	13.132	
10,300.0	10,250.0	10,433.9	10,250.0	27.7	37.3	-96.58	-32.4	-1,582.9	848.1	783.5	64.64	13.120	
10,400.0	10,350.0	10,533.9	10,350.0	27.7	37.3	-96.58	-32.4	-1,582.9	848.1	783.4	64.70	13.109	
10,500.0	10,450.0	10,633.9	10,450.0	27.8	37.4	-96.58	-32.4	-1,582.9	848.1	783.4	64.75	13.097	
10,600.0	10,550.0	10,733.9	10,550.0	27.8	37.4	-96.58	-32.4	-1,582.9	848.1	783.3	64.81	13.086	
10,700.0	10,650.0	10,833.9	10,650.0	27.9	37.4	-96.58	-32.4	-1,582.9	848.1	783.2	64.87	13.075	
10,800.0	10,750.0	10,933.9	10,750.0	27.9	37.4	-96.58	-32.4	-1,582.9	848.1	783.2	64.93	13.063	
10,900.0	10,850.0	11,033.9	10,850.0	27.9	37.4	-96.58	-32.4	-1,582.9	848.1	783.1	64.98	13.051	
11,000.0	10,950.0	11,133.9	10,950.0	28.0	37.5	-96.58	-32.4	-1,582.9	848.1	783.1	65.04	13.040	
11,100.0	11,050.0	11,233.9	11,050.0	28.0	37.5	-96.58	-32.4	-1,582.9	848.1	783.0	65.10	13.028	
11,200.0	11,150.0	11,333.9	11,150.0	28.0	37.5	-96.58	-32.4	-1,582.9	848.1	783.0	65.15	13.017	
11,213.6	11,163.5	11,347.5	11,163.5	28.0	37.5	-96.58	-32.4	-1,582.9	848.1	783.0	65.16	13.017	
11,225.0	11,175.0	11,361.6	11,177.7	28.0	37.5	-96.05	-32.2	-1,582.9	848.1	783.0	65.13	13.022	
11,250.0	11,199.9	11,392.5	11,208.5	28.1	37.5	-96.03	-30.2	-1,583.0	848.1	783.0	65.07	13.033	
11,275.0	11,224.8	11,423.4	11,239.1	28.1	37.5	-95.99	-26.3	-1,583.0	848.0	783.0	65.02	13.043	
11,300.0	11,249.5	11,454.1	11,269.3	28.1	37.5	-95.93	-20.5	-1,583.0	847.9	782.9	64.97	13.050	
11,325.0	11,274.0	11,484.8	11,299.0	28.1	37.5	-95.84	-12.8	-1,583.1	847.8	782.8	64.94	13.056	
11,350.0	11,298.1	11,515.3	11,328.0	28.1	37.5	-95.74	-3.2	-1,583.2	847.6	782.7	64.91	13.059	
11,375.0	11,321.9	11,545.7	11,356.1	28.1	37.5	-95.62	8.2	-1,583.2	847.4	782.5	64.89	13.060	
11,400.0	11,345.3	11,576.0	11,383.4	28.1	37.5	-95.48	21.3	-1,583.3	847.2	782.3	64.88	13.059	
11,425.0	11,368.1	11,606.0	11,409.6	28.1	37.5	-95.32	35.9	-1,583.4	846.9	782.1	64.87	13.055	
11,450.0	11,390.4	11,635.8	11,434.6	28.1	37.5	-95.14	52.1	-1,583.5	846.7	781.8	64.88	13.049	
11,475.0	11,412.1	11,665.4	11,458.5	28.1	37.5	-94.95	69.6	-1,583.7	846.4	781.5	64.90	13.042	
11,500.0	11,433.1	11,694.7	11,480.9	28.1	37.5	-94.74	88.4	-1,583.8	846.1	781.2	64.92	13.032	
11,525.0	11,453.4	11,723.8	11,502.1	28.1	37.5	-94.52	108.4	-1,583.9	845.8	780.8	64.96	13.021	
11,550.0	11,472.8	11,752.6	11,521.7	28.1	37.6	-94.29	129.4	-1,584.1	845.5	780.5	65.00	13.007	
11,575.0	11,491.4	11,781.1	11,539.9	28.1	37.6	-94.04	151.3	-1,584.2	845.2	780.1	65.05	12.993	
11,600.0	11,509.1	11,809.3	11,556.6	28.1	37.6	-93.79	174.1	-1,584.4	844.9	779.8	65.11	12.977	
11,625.0	11,525.9	11,837.2	11,571.8	28.1	37.6	-93.52	197.5	-1,584.6	844.6	779.4	65.17	12.959	
11,650.0	11,541.7	11,864.9	11,585.5	28.1	37.6	-93.24	221.6	-1,584.7	844.3	779.0	65.24	12.941	
11,675.0	11,556.4	11,892.2	11,597.6	28.1	37.6	-92.96	246.1	-1,584.9	844.0	778.7	65.31	12.922	
11,700.0	11,570.1	11,919.3	11,608.1	28.1	37.6	-92.67	271.0	-1,585.1	843.7	778.3	65.39	12.902	
11,725.0	11,582.6	11,946.0	11,617.2	28.1	37.6	-92.37	296.2	-1,585.3	843.5	778.0	65.48	12.882	
11,750.0	11,594.0	11,972.5	11,624.7	28.1	37.6	-92.07	321.5	-1,585.5	843.2	777.7	65.56	12.861	
11,775.0	11,604.3	11,998.7	11,630.8	28.2	37.6	-91.77	347.0	-1,585.6	843.0	777.4	65.65	12.841	
11,800.0	11,613.3	12,024.6	11,635.4	28.2	37.7	-91.46	372.5	-1,585.8	842.9	777.1	65.75	12.820	
11,825.0	11,621.0	12,050.2	11,638.7	28.2	37.7	-91.15	397.9	-1,586.0	842.7	776.8	65.84	12.799	
11,850.0	11,627.6	12,075.6	11,640.5	28.2	37.7	-90.84	423.2	-1,586.2	842.6	776.6	65.93	12.779	
11,875.0	11,632.8	12,100.6	11,641.0	28.2	37.7	-90.53	448.2	-1,586.3	842.4	776.4	66.03	12.758	
11,900.0	11,636.8	12,125.3	11,641.0	28.2	37.7	-90.27	472.9	-1,586.5	842.4	776.2	66.12	12.740	
11,925.0	11,639.4	12,150.1	11,641.0	28.3	37.8	-90.10	497.7	-1,586.7	842.3	776.1	66.20	12.725	
11,950.0	11,640.8	12,175.1	11,641.0	28.3	37.8	-90.01	522.7	-1,586.9	842.3	776.0	66.26	12.712	
11,963.6	11,641.0	12,188.6	11,641.0	28.3	37.8	-90.00	536.3	-1,587.0	842.2	775.9	66.28	12.706	
12,000.0	11,641.0	12,225.1	11,641.0	28.3	37.8	-90.00	572.7	-1,587.2	842.1	775.8	66.36	12.691	
12,100.0	11,641.0	12,325.1	11,641.0	28.5	37.9	-90.00	672.7	-1,587.9	841.9	775.4	66.59	12.644	
12,200.0	11,641.0	12,425.1	11,641.0	28.6	38.1	-90.00	772.7	-1,588.6	841.7	774.9	66.86	12.590	
12,300.0	11,641.0	12,525.1	11,641.0	28.8	38.2	-90.00	872.7	-1,589.4	841.5	774.4	67.15	12.531	
12,400.0	11,641.0	12,625.1	11,641.0	28.9	38.4	-90.00	972.7	-1,590.1	841.3	773.8	67.49	12.467	
12,500.0	11,641.0	12,725.1	11,641.0	29.1	38.5	-90.00	1,072.7	-1,590.8	841.1	773.3	67.85	12.397	
12,600.0	11,641.0	12,825.1	11,641.0	29.4	38.7	-90.00	1,172.7	-1,591.5	840.9	772.7	68.24	12.322	
12,700.0	11,641.0	12,925.1	11,641.0	29.6	38.9	-90.00	1,272.7	-1,592.2	840.7	772.0	68.67	12.243	
12,800.0	11,641.0	13,025.1	11,641.0	29.9	39.1	-90.00	1,372.7	-1,592.9	840.5	771.4	69.13	12.159	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11347-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,900.0	11,641.0	13,125.1	11,641.0	30.1	39.3	-90.00	1,472.7	-1,593.6	840.3	770.7	69.61	12.071	
13,000.0	11,641.0	13,225.1	11,641.0	30.4	39.6	-90.00	1,572.7	-1,594.3	840.1	770.0	70.13	11.980	
13,100.0	11,641.0	13,325.1	11,641.0	30.7	39.8	-90.00	1,672.7	-1,595.0	839.9	769.2	70.67	11.885	
13,200.0	11,641.0	13,425.1	11,641.0	31.1	40.1	-90.00	1,772.7	-1,595.7	839.7	768.5	71.24	11.786	
13,300.0	11,641.0	13,525.1	11,641.0	31.4	40.4	-90.00	1,872.7	-1,596.4	839.5	767.6	71.84	11.685	
13,400.0	11,641.0	13,625.1	11,641.0	31.8	40.7	-90.00	1,972.7	-1,597.2	839.3	766.8	72.47	11.581	
13,500.0	11,641.0	13,725.1	11,641.0	32.1	41.0	-90.00	2,072.7	-1,597.9	839.1	766.0	73.12	11.475	
13,600.0	11,641.0	13,825.1	11,641.0	32.5	41.3	-90.00	2,172.7	-1,598.6	838.9	765.1	73.80	11.367	
13,700.0	11,641.0	13,925.1	11,641.0	32.9	41.6	-90.00	2,272.7	-1,599.3	838.7	764.2	74.50	11.258	
13,800.0	11,641.0	14,025.1	11,641.0	33.3	42.0	-90.00	2,372.6	-1,600.0	838.5	763.2	75.22	11.147	
13,900.0	11,641.0	14,125.1	11,641.0	33.7	42.3	-90.00	2,472.6	-1,600.7	838.3	762.3	75.97	11.034	
14,000.0	11,641.0	14,225.1	11,641.0	34.2	42.7	-90.00	2,572.6	-1,601.4	838.1	761.3	76.74	10.921	
14,100.0	11,641.0	14,325.1	11,641.0	34.6	43.1	-90.00	2,672.6	-1,602.1	837.9	760.3	77.53	10.806	
14,200.0	11,641.0	14,425.1	11,641.0	35.1	43.5	-90.00	2,772.6	-1,602.8	837.7	759.3	78.35	10.692	
14,300.0	11,641.0	14,525.1	11,641.0	35.6	43.9	-90.00	2,872.6	-1,603.5	837.4	758.3	79.18	10.576	
14,400.0	11,641.0	14,625.1	11,641.0	36.0	44.3	-90.00	2,972.6	-1,604.2	837.2	757.2	80.03	10.461	
14,500.0	11,641.0	14,725.1	11,641.0	36.5	44.7	-90.00	3,072.6	-1,604.9	837.0	756.1	80.91	10.346	
14,600.0	11,641.0	14,825.1	11,641.0	37.0	45.1	-90.00	3,172.6	-1,605.7	836.8	755.0	81.80	10.230	
14,700.0	11,641.0	14,925.1	11,641.0	37.5	45.5	-90.00	3,272.6	-1,606.4	836.6	753.9	82.71	10.116	
14,800.0	11,641.0	15,025.1	11,641.0	38.0	46.0	-90.00	3,372.6	-1,607.1	836.4	752.8	83.63	10.001	
14,900.0	11,641.0	15,125.1	11,641.0	38.6	46.4	-90.00	3,472.6	-1,607.8	836.2	751.6	84.58	9.887	
15,000.0	11,641.0	15,225.1	11,641.0	39.1	46.9	-90.00	3,572.6	-1,608.5	836.0	750.5	85.54	9.774	
15,100.0	11,641.0	15,325.1	11,641.0	39.6	47.3	-90.00	3,672.6	-1,609.2	835.8	749.3	86.51	9.661	
15,200.0	11,641.0	15,425.1	11,641.0	40.2	47.8	-90.00	3,772.6	-1,609.9	835.6	748.1	87.50	9.550	
15,300.0	11,641.0	15,525.1	11,641.0	40.7	48.3	-90.00	3,872.6	-1,610.6	835.4	746.9	88.51	9.439	
15,400.0	11,641.0	15,625.1	11,641.0	41.3	48.8	-90.00	3,972.6	-1,611.3	835.2	745.7	89.53	9.329	
15,500.0	11,641.0	15,725.1	11,641.0	41.9	49.3	-90.00	4,072.6	-1,612.0	835.0	744.4	90.56	9.220	
15,600.0	11,641.0	15,825.1	11,641.0	42.4	49.8	-90.00	4,172.6	-1,612.7	834.8	743.2	91.61	9.113	
15,700.0	11,641.0	15,925.1	11,641.0	43.0	50.3	-90.00	4,272.6	-1,613.5	834.6	741.9	92.66	9.007	
15,800.0	11,641.0	16,025.1	11,641.0	43.6	50.8	-90.00	4,372.6	-1,614.2	834.4	740.6	93.74	8.901	
15,900.0	11,641.0	16,125.1	11,641.0	44.2	51.3	-90.00	4,472.6	-1,614.9	834.2	739.4	94.82	8.798	
16,000.0	11,641.0	16,225.1	11,641.0	44.8	51.8	-90.00	4,572.6	-1,615.6	834.0	738.1	95.91	8.695	
16,100.0	11,641.0	16,325.1	11,641.0	45.4	52.4	-90.00	4,672.6	-1,616.3	833.8	736.8	97.02	8.594	
16,200.0	11,641.0	16,425.1	11,641.0	46.0	52.9	-90.00	4,772.6	-1,617.0	833.6	735.4	98.14	8.494	
16,300.0	11,641.0	16,525.1	11,641.0	46.6	53.4	-90.00	4,872.6	-1,617.7	833.4	734.1	99.26	8.396	
16,400.0	11,641.0	16,625.1	11,641.0	47.2	54.0	-90.00	4,972.6	-1,618.4	833.2	732.8	100.40	8.298	
16,500.0	11,641.0	16,725.1	11,641.0	47.8	54.5	-90.00	5,072.6	-1,619.1	833.0	731.4	101.55	8.203	
16,600.0	11,641.0	16,825.1	11,641.0	48.5	55.1	-90.00	5,172.6	-1,619.8	832.7	730.0	102.70	8.108	
16,700.0	11,641.0	16,925.1	11,641.0	49.1	55.7	-90.00	5,272.6	-1,620.5	832.5	728.7	103.87	8.016	
16,800.0	11,641.0	17,025.1	11,641.0	49.7	56.2	-90.00	5,372.6	-1,621.2	832.3	727.3	105.04	7.924	
16,900.0	11,641.0	17,125.1	11,641.0	50.4	56.8	-90.00	5,472.6	-1,622.0	832.1	725.9	106.22	7.834	
17,000.0	11,641.0	17,225.1	11,641.0	51.0	57.4	-90.00	5,572.6	-1,622.7	831.9	724.5	107.41	7.745	
17,100.0	11,641.0	17,325.1	11,641.0	51.6	58.0	-90.00	5,672.6	-1,623.4	831.7	723.1	108.61	7.658	
17,200.0	11,641.0	17,425.1	11,641.0	52.3	58.5	-90.00	5,772.6	-1,624.1	831.5	721.7	109.81	7.572	
17,300.0	11,641.0	17,525.1	11,641.0	52.9	59.1	-90.00	5,872.6	-1,624.8	831.3	720.3	111.03	7.487	
17,400.0	11,641.0	17,625.1	11,641.0	53.6	59.7	-90.00	5,972.6	-1,625.5	831.1	718.9	112.25	7.404	
17,500.0	11,641.0	17,725.1	11,641.0	54.2	60.3	-90.00	6,072.5	-1,626.2	830.9	717.4	113.48	7.322	
17,600.0	11,641.0	17,825.1	11,641.0	54.9	60.9	-90.00	6,172.5	-1,626.9	830.7	716.0	114.71	7.242	
17,700.0	11,641.0	17,925.1	11,641.0	55.6	61.5	-90.00	6,272.5	-1,627.6	830.5	714.6	115.95	7.163	
17,800.0	11,641.0	18,025.1	11,641.0	56.2	62.1	-90.00	6,372.5	-1,628.3	830.3	713.1	117.20	7.085	
17,900.0	11,641.0	18,125.1	11,641.0	56.9	62.7	-90.00	6,472.5	-1,629.0	830.1	711.6	118.45	7.008	
18,000.0	11,641.0	18,225.1	11,641.0	57.5	63.4	-90.00	6,572.5	-1,629.8	829.9	710.2	119.71	6.933	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1														Offset Site Error:	0.0 usft
Survey Program:		0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11347-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		
18,100.0	11,641.0	18,325.1	11,641.0	58.2	64.0	-90.00	6,672.5	-1,630.5	829.7	708.7	120.97		6.859		
18,200.0	11,641.0	18,425.1	11,641.0	58.9	64.6	-90.00	6,772.5	-1,631.2	829.5	707.2	122.24		6.786		
18,300.0	11,641.0	18,525.1	11,641.0	59.6	65.2	-90.00	6,872.5	-1,631.9	829.3	705.8	123.52		6.714		
18,400.0	11,641.0	18,625.1	11,641.0	60.2	65.8	-90.00	6,972.5	-1,632.6	829.1	704.3	124.80		6.643		
18,500.0	11,641.0	18,725.1	11,641.0	60.9	66.5	-90.00	7,072.5	-1,633.3	828.9	702.8	126.08		6.574		
18,600.0	11,641.0	18,825.1	11,641.0	61.6	67.1	-90.00	7,172.5	-1,634.0	828.7	701.3	127.37		6.506		
18,700.0	11,641.0	18,925.1	11,641.0	62.3	67.7	-90.00	7,272.5	-1,634.7	828.5	699.8	128.67		6.439		
18,800.0	11,641.0	19,025.1	11,641.0	63.0	68.4	-90.00	7,372.5	-1,635.4	828.3	698.3	129.96		6.373		
18,900.0	11,641.0	19,125.1	11,641.0	63.7	69.0	-90.00	7,472.5	-1,636.1	828.0	696.8	131.27		6.308		
19,000.0	11,641.0	19,225.1	11,641.0	64.3	69.7	-90.00	7,572.5	-1,636.8	827.8	695.3	132.58		6.244		
19,100.0	11,641.0	19,325.1	11,641.0	65.0	70.3	-90.00	7,672.5	-1,637.5	827.6	693.8	133.89		6.182		
19,200.0	11,641.0	19,425.1	11,641.0	65.7	70.9	-90.00	7,772.5	-1,638.3	827.4	692.2	135.21		6.120		
19,300.0	11,641.0	19,525.1	11,641.0	66.4	71.6	-90.00	7,872.5	-1,639.0	827.2	690.7	136.53		6.059		
19,400.0	11,641.0	19,625.1	11,641.0	67.1	72.2	-90.00	7,972.5	-1,639.7	827.0	689.2	137.85		5.999		
19,500.0	11,641.0	19,725.1	11,641.0	67.8	72.9	-90.00	8,072.5	-1,640.4	826.8	687.6	139.18		5.941		
19,600.0	11,641.0	19,825.1	11,641.0	68.5	73.6	-90.00	8,172.5	-1,641.1	826.6	686.1	140.51		5.883		
19,700.0	11,641.0	19,925.1	11,641.0	69.2	74.2	-90.00	8,272.5	-1,641.8	826.4	684.6	141.84		5.826		
19,800.0	11,641.0	20,025.1	11,641.0	69.9	74.9	-90.00	8,372.5	-1,642.5	826.2	683.0	143.18		5.770		
19,900.0	11,641.0	20,125.1	11,641.0	70.6	75.5	-90.00	8,472.5	-1,643.2	826.0	681.5	144.52		5.715		
20,000.0	11,641.0	20,225.1	11,641.0	71.3	76.2	-90.00	8,572.5	-1,643.9	825.8	679.9	145.87		5.661		
20,100.0	11,641.0	20,325.1	11,641.0	72.0	76.9	-90.00	8,672.5	-1,644.6	825.6	678.4	147.22		5.608		
20,200.0	11,641.0	20,425.1	11,641.0	72.7	77.5	-90.00	8,772.5	-1,645.3	825.4	676.8	148.57		5.556		
20,300.0	11,641.0	20,525.1	11,641.0	73.4	78.2	-90.00	8,872.5	-1,646.1	825.2	675.3	149.92		5.504		
20,400.0	11,641.0	20,625.1	11,641.0	74.1	78.9	-90.00	8,972.5	-1,646.8	825.0	673.7	151.28		5.453		
20,500.0	11,641.0	20,725.1	11,641.0	74.8	79.5	-90.00	9,072.5	-1,647.5	824.8	672.1	152.64		5.403		
20,600.0	11,641.0	20,825.1	11,641.0	75.5	80.2	-90.00	9,172.5	-1,648.2	824.6	670.6	154.00		5.354		
20,700.0	11,641.0	20,925.1	11,641.0	76.2	80.9	-90.00	9,272.5	-1,648.9	824.4	669.0	155.37		5.306		
20,800.0	11,641.0	21,025.1	11,641.0	77.0	81.6	-90.00	9,372.5	-1,649.6	824.2	667.4	156.73		5.258		
20,900.0	11,641.0	21,125.1	11,641.0	77.7	82.2	-90.00	9,472.5	-1,650.3	824.0	665.9	158.10		5.211		
21,000.0	11,641.0	21,225.1	11,641.0	78.4	82.9	-90.00	9,572.5	-1,651.0	823.8	664.3	159.48		5.165		
21,100.0	11,641.0	21,325.1	11,641.0	79.1	83.6	-90.00	9,672.5	-1,651.7	823.6	662.7	160.85		5.120		
21,200.0	11,641.0	21,425.1	11,641.0	79.8	84.3	-90.00	9,772.4	-1,652.4	823.3	661.1	162.23		5.075		
21,300.0	11,641.0	21,525.1	11,641.0	80.5	85.0	-90.00	9,872.4	-1,653.1	823.1	659.5	163.61		5.031		
21,400.0	11,641.0	21,625.1	11,641.0	81.2	85.6	-90.00	9,972.4	-1,653.8	822.9	657.9	164.99		4.988		
21,500.0	11,641.0	21,725.1	11,641.0	82.0	86.3	-90.00	10,072.4	-1,654.6	822.7	656.4	166.38		4.945		
21,600.0	11,641.0	21,825.1	11,641.0	82.7	87.0	-90.00	10,172.4	-1,655.3	822.5	654.8	167.76		4.903		
21,700.0	11,641.0	21,925.1	11,641.0	83.4	87.7	-90.00	10,272.4	-1,656.0	822.3	653.2	169.15		4.861		
21,800.0	11,641.0	22,025.1	11,641.0	84.1	88.4	-90.00	10,372.4	-1,656.7	822.1	651.6	170.54		4.821		
21,862.1	11,641.0	22,087.2	11,641.0	84.6	88.8	-90.00	10,434.5	-1,657.1	822.0	650.6	171.40		4.796		
21,900.0	11,641.0	22,125.1	11,641.0	84.8	89.1	-90.00	10,472.4	-1,657.4	821.9	650.0	171.93		4.781		
21,911.9	11,641.0	22,135.2	11,641.0	84.9	89.2	-90.00	10,482.6	-1,657.5	821.9	649.8	172.10		4.776		
21,912.1	11,641.0	22,135.2	11,641.0	84.9	89.2	-90.00	10,482.6	-1,657.5	821.9	649.8	172.10		4.776 SF		

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11455-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	0.0	3.0	3.0	179.52	-30.0	0.2	30.0				
100.0	100.0	100.0	100.0	3.1	3.1	179.52	-30.0	0.2	30.0	23.5	6.54	4.590	
200.0	200.0	200.0	200.0	3.2	3.2	179.52	-30.0	0.2	30.0	23.2	6.79	4.421	
300.0	300.0	300.0	300.0	3.3	3.3	179.52	-30.0	0.2	30.0	23.0	7.03	4.266	
400.0	400.0	400.0	400.0	3.4	3.4	179.52	-30.0	0.2	30.0	22.7	7.28	4.122	
500.0	500.0	500.0	500.0	3.6	3.6	179.52	-30.0	0.2	30.0	22.5	7.52	3.989	
600.0	600.0	600.0	600.0	3.7	3.7	179.52	-30.0	0.2	30.0	22.2	7.76	3.864	
700.0	700.0	700.0	700.0	3.8	3.8	179.52	-30.0	0.2	30.0	22.0	8.00	3.748	
800.0	800.0	800.0	800.0	3.9	3.9	179.52	-30.0	0.2	30.0	21.8	8.24	3.639	
900.0	900.0	900.0	900.0	4.0	4.0	179.52	-30.0	0.2	30.0	21.5	8.48	3.537	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	179.52	-30.0	0.2	30.0	21.3	8.72	3.440 CC	
1,100.0	1,100.0	1,100.1	1,100.0	4.3	4.3	-95.47	-29.9	-1.5	30.1	21.1	8.92	3.369	
1,200.0	1,199.8	1,200.1	1,200.0	4.5	4.5	-95.43	-29.6	-6.7	30.2	21.0	9.26	3.266	
1,300.0	1,299.5	1,300.2	1,299.6	4.9	4.9	-95.37	-29.2	-15.4	30.5	21.0	9.59	3.186 ES	
1,400.0	1,398.7	1,400.3	1,399.0	5.2	5.2	-95.29	-28.5	-27.6	31.0	21.1	9.91	3.124	
1,500.0	1,497.7	1,500.3	1,497.7	5.4	5.5	-92.02	-27.7	-43.3	31.4	21.2	10.23	3.070	
1,600.0	1,596.8	1,600.0	1,595.7	5.7	5.9	-82.70	-26.7	-62.3	32.3	21.7	10.58	3.055	
1,700.0	1,695.8	1,699.8	1,693.2	6.0	6.2	-71.36	-25.6	-83.0	34.6	23.5	11.06	3.128	
1,800.0	1,794.8	1,799.6	1,790.8	6.3	6.5	-61.75	-24.6	-103.7	38.1	26.4	11.68	3.259	
1,900.0	1,893.8	1,899.3	1,888.4	6.7	6.9	-53.91	-23.5	-124.4	42.4	30.0	12.39	3.422	
2,000.0	1,992.9	1,999.1	1,986.0	7.0	7.2	-47.61	-22.4	-145.1	47.4	34.2	13.16	3.601	
2,100.0	2,091.9	2,098.8	2,083.5	7.3	7.6	-42.56	-21.3	-165.8	52.8	38.9	13.95	3.785	
2,200.0	2,190.9	2,198.6	2,181.1	7.7	8.0	-38.48	-20.2	-186.5	58.6	43.8	14.77	3.967	
2,300.0	2,289.9	2,298.3	2,278.7	8.1	8.4	-35.14	-19.1	-207.3	64.6	49.0	15.59	4.143	
2,400.0	2,389.0	2,398.1	2,376.3	8.4	8.8	-32.38	-18.0	-228.0	70.8	54.4	16.43	4.310	
2,500.0	2,488.0	2,497.8	2,473.8	8.8	9.2	-30.06	-17.0	-248.7	77.1	59.9	17.26	4.468	
2,600.0	2,587.0	2,597.6	2,571.4	9.2	9.6	-28.10	-15.9	-269.4	83.6	65.5	18.11	4.616	
2,700.0	2,686.1	2,697.3	2,669.0	9.6	10.0	-26.42	-14.8	-290.1	90.1	71.1	18.95	4.754	
2,800.0	2,785.1	2,797.1	2,766.6	10.0	10.4	-24.97	-13.7	-310.8	96.7	76.9	19.80	4.882	
2,900.0	2,884.1	2,896.9	2,864.1	10.4	10.8	-23.71	-12.6	-331.5	103.3	82.7	20.66	5.002	
3,000.0	2,983.1	2,996.6	2,961.7	10.8	11.3	-22.60	-11.5	-352.2	110.0	88.5	21.51	5.114	
3,100.0	3,082.2	3,096.4	3,059.3	11.2	11.7	-21.61	-10.4	-373.0	116.8	94.4	22.37	5.218	
3,200.0	3,181.2	3,196.1	3,156.9	11.6	12.1	-20.74	-9.4	-393.7	123.5	100.3	23.24	5.315	
3,300.0	3,280.2	3,295.9	3,254.4	12.0	12.6	-19.95	-8.3	-414.4	130.3	106.2	24.10	5.406	
3,400.0	3,379.2	3,395.6	3,352.0	12.4	13.0	-19.24	-7.2	-435.1	137.1	112.1	24.97	5.491	
3,500.0	3,478.3	3,495.4	3,449.6	12.8	13.5	-18.60	-6.1	-455.8	143.9	118.1	25.84	5.570	
3,600.0	3,577.3	3,595.1	3,547.2	13.2	13.9	-18.02	-5.0	-476.5	150.8	124.1	26.71	5.645	
3,700.0	3,676.3	3,694.9	3,644.7	13.6	14.4	-17.49	-3.9	-497.2	157.6	130.0	27.58	5.714	
3,800.0	3,775.3	3,794.6	3,742.3	14.0	14.8	-17.00	-2.8	-517.9	164.5	136.0	28.46	5.780	
3,900.0	3,874.4	3,894.4	3,839.9	14.4	15.3	-16.55	-1.8	-538.6	171.4	142.0	29.33	5.842	
4,000.0	3,973.4	3,994.2	3,937.5	14.8	15.7	-16.14	-0.7	-559.4	178.2	148.0	30.21	5.900	
4,100.0	4,072.4	4,093.9	4,035.0	15.2	16.2	-15.75	0.4	-580.1	185.1	154.0	31.09	5.955	
4,200.0	4,171.5	4,193.7	4,132.6	15.7	16.6	-15.40	1.5	-600.8	192.0	160.1	31.97	6.007	
4,300.0	4,270.5	4,293.4	4,230.2	16.1	17.1	-15.07	2.6	-621.5	198.9	166.1	32.85	6.056	
4,400.0	4,369.5	4,393.2	4,327.8	16.5	17.5	-14.76	3.7	-642.2	205.9	172.1	33.73	6.103	
4,500.0	4,468.5	4,492.9	4,425.3	16.9	18.0	-14.47	4.8	-662.9	212.8	178.2	34.62	6.147	
4,600.0	4,567.6	4,592.7	4,522.9	17.3	18.4	-14.20	5.8	-683.6	219.7	184.2	35.50	6.189	
4,700.0	4,666.6	4,692.4	4,620.5	17.8	18.9	-13.95	6.9	-704.3	226.6	190.3	36.39	6.229	
4,800.0	4,765.6	4,792.2	4,718.1	18.2	19.4	-13.71	8.0	-725.1	233.6	196.3	37.27	6.266	
4,900.0	4,864.6	4,891.9	4,815.6	18.6	19.8	-13.48	9.1	-745.8	240.5	202.4	38.16	6.303	
5,000.0	4,963.7	4,991.7	4,913.2	19.0	20.3	-13.27	10.2	-766.5	247.5	208.4	39.05	6.337	
5,100.0	5,062.7	5,091.5	5,010.8	19.4	20.7	-13.07	11.3	-787.2	254.4	214.5	39.94	6.370	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11455-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	
5,200.0	5,161.7	5,191.2	5,108.4	19.9	21.2	-12.88	12.4	-807.9	261.4	220.5	40.83	6.401	
5,300.0	5,260.7	5,291.0	5,205.9	20.3	21.7	-12.70	13.4	-828.6	268.3	226.6	41.72	6.431	
5,400.0	5,359.8	5,390.7	5,303.5	20.7	22.1	-12.53	14.5	-849.3	275.3	232.7	42.61	6.460	
5,500.0	5,458.8	5,490.5	5,401.1	21.1	22.6	-12.36	15.6	-870.0	282.2	238.7	43.50	6.488	
5,600.0	5,557.8	5,590.2	5,498.7	21.6	23.1	-12.21	16.7	-890.7	289.2	244.8	44.39	6.514	
5,700.0	5,656.9	5,690.0	5,596.2	22.0	23.5	-12.06	17.8	-911.5	296.1	250.9	45.28	6.540	
5,800.0	5,755.9	5,789.7	5,693.8	22.4	24.0	-11.92	18.9	-932.2	303.1	256.9	46.18	6.564	
5,900.0	5,854.9	5,889.5	5,791.4	22.8	24.5	-11.79	20.0	-952.9	310.1	263.0	47.07	6.587	
6,000.0	5,953.9	5,989.3	5,899.0	23.3	24.9	-11.66	21.0	-973.6	317.0	269.1	47.96	6.610	
6,100.0	6,053.0	6,089.0	5,986.5	23.7	25.4	-11.53	22.1	-994.3	324.0	275.1	48.86	6.631	
6,139.4	6,092.0	6,128.3	6,025.0	23.9	25.6	-11.49	22.6	-1,002.5	326.7	277.5	49.20	6.641	
6,200.0	6,152.0	6,188.7	6,084.1	24.1	25.9	-11.41	23.2	-1,015.0	331.3	281.5	49.73	6.661	
6,300.0	6,251.3	6,288.3	6,181.5	24.5	26.3	-11.25	24.3	-1,035.7	340.1	289.5	50.62	6.719	
6,400.0	6,350.8	6,390.5	6,281.5	24.9	26.8	-11.05	25.4	-1,056.7	350.5	299.0	51.51	6.805	
6,500.0	6,450.4	6,496.5	6,385.5	25.3	27.3	-10.84	26.5	-1,076.9	361.1	308.7	52.41	6.889	
6,600.0	6,550.2	6,602.6	6,490.1	25.7	27.8	-10.63	27.4	-1,095.3	371.6	318.3	53.27	6.975	
6,700.0	6,650.1	6,709.0	6,595.1	26.0	28.2	-10.42	28.3	-1,111.7	381.9	327.8	54.08	7.062	
6,800.0	6,750.0	6,815.6	6,700.7	26.3	28.7	-10.22	29.0	-1,126.1	392.2	337.3	54.84	7.152	
6,900.0	6,850.0	6,922.4	6,806.8	26.6	29.1	-10.02	29.7	-1,138.7	402.3	346.8	55.51	7.247	
6,939.4	6,889.4	6,964.6	6,848.7	26.6	29.3	-94.95	29.9	-1,143.1	406.2	350.5	55.71	7.292	
7,000.0	6,950.0	7,029.5	6,913.3	26.6	29.5	-94.83	30.2	-1,149.3	412.0	356.0	55.96	7.362	
7,100.0	7,050.0	7,136.9	7,020.4	26.7	30.0	-94.67	30.7	-1,157.9	419.9	363.6	56.35	7.452	
7,200.0	7,150.0	7,244.5	7,127.9	26.7	30.3	-94.55	31.0	-1,164.6	426.1	369.4	56.69	7.515	
7,300.0	7,250.0	7,352.5	7,235.7	26.7	30.7	-94.47	31.3	-1,169.2	430.3	373.3	56.99	7.551	
7,400.0	7,350.0	7,460.5	7,343.7	26.7	31.0	-94.42	31.4	-1,171.8	432.7	375.5	57.21	7.563	
7,500.0	7,450.0	7,566.8	7,450.0	26.8	31.2	-94.41	31.5	-1,172.4	433.3	376.0	57.29	7.562	
7,600.0	7,550.0	7,666.8	7,550.0	26.8	31.2	-94.41	31.5	-1,172.4	433.3	375.9	57.34	7.556	
7,700.0	7,650.0	7,766.8	7,650.0	26.8	31.2	-94.41	31.5	-1,172.4	433.3	375.9	57.40	7.549	
7,800.0	7,750.0	7,866.8	7,750.0	26.9	31.2	-94.41	31.5	-1,172.4	433.3	375.8	57.45	7.542	
7,900.0	7,850.0	7,966.8	7,850.0	26.9	31.2	-94.41	31.5	-1,172.4	433.3	375.8	57.50	7.535	
8,000.0	7,950.0	8,066.8	7,950.0	26.9	31.3	-94.41	31.5	-1,172.4	433.3	375.7	57.56	7.527	
8,100.0	8,050.0	8,166.8	8,050.0	27.0	31.3	-94.41	31.5	-1,172.4	433.3	375.7	57.61	7.520	
8,200.0	8,150.0	8,266.8	8,150.0	27.0	31.3	-94.41	31.5	-1,172.4	433.3	375.6	57.67	7.513	
8,300.0	8,250.0	8,366.8	8,250.0	27.0	31.3	-94.41	31.5	-1,172.4	433.3	375.5	57.73	7.506	
8,400.0	8,350.0	8,466.8	8,350.0	27.1	31.4	-94.41	31.5	-1,172.4	433.3	375.5	57.78	7.498	
8,500.0	8,450.0	8,566.8	8,450.0	27.1	31.4	-94.41	31.5	-1,172.4	433.3	375.4	57.84	7.491	
8,600.0	8,550.0	8,666.8	8,550.0	27.1	31.4	-94.41	31.5	-1,172.4	433.3	375.4	57.90	7.484	
8,700.0	8,650.0	8,766.8	8,650.0	27.2	31.5	-94.41	31.5	-1,172.4	433.3	375.3	57.95	7.476	
8,800.0	8,750.0	8,866.8	8,750.0	27.2	31.5	-94.41	31.5	-1,172.4	433.3	375.3	58.01	7.469	
8,900.0	8,850.0	8,966.8	8,850.0	27.2	31.5	-94.41	31.5	-1,172.4	433.3	375.2	58.07	7.461	
9,000.0	8,950.0	9,066.8	8,950.0	27.3	31.5	-94.41	31.5	-1,172.4	433.3	375.1	58.13	7.454	
9,100.0	9,050.0	9,166.8	9,050.0	27.3	31.6	-94.41	31.5	-1,172.4	433.3	375.1	58.19	7.446	
9,200.0	9,150.0	9,266.8	9,150.0	27.3	31.6	-94.41	31.5	-1,172.4	433.3	375.0	58.25	7.438	
9,300.0	9,250.0	9,366.8	9,250.0	27.4	31.6	-94.41	31.5	-1,172.4	433.3	375.0	58.31	7.431	
9,400.0	9,350.0	9,466.8	9,350.0	27.4	31.6	-94.41	31.5	-1,172.4	433.3	374.9	58.37	7.423	
9,500.0	9,450.0	9,566.8	9,450.0	27.4	31.7	-94.41	31.5	-1,172.4	433.3	374.8	58.43	7.415	
9,600.0	9,550.0	9,666.8	9,550.0	27.5	31.7	-94.41	31.5	-1,172.4	433.3	374.8	58.49	7.408	
9,700.0	9,650.0	9,766.8	9,650.0	27.5	31.7	-94.41	31.5	-1,172.4	433.3	374.7	58.55	7.400	
9,800.0	9,750.0	9,866.8	9,750.0	27.5	31.8	-94.41	31.5	-1,172.4	433.3	374.7	58.61	7.392	
9,900.0	9,850.0	9,966.8	9,850.0	27.6	31.8	-94.41	31.5	-1,172.4	433.3	374.6	58.67	7.384	
10,000.0	9,950.0	10,066.8	9,950.0	27.6	31.8	-94.41	31.5	-1,172.4	433.3	374.5	58.74	7.376	
10,100.0	10,050.0	10,166.8	10,050.0	27.6	31.8	-94.41	31.5	-1,172.4	433.3	374.5	58.80	7.369	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11455-r.5 MWD+IFR1+MS												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	
10,200.0	10,150.0	10,266.8	10,150.0	27.7	31.9	-94.41	31.5	-1,172.4	433.3	374.4	58.86	7.361	
10,300.0	10,250.0	10,366.8	10,250.0	27.7	31.9	-94.41	31.5	-1,172.4	433.3	374.3	58.93	7.353	
10,400.0	10,350.0	10,466.8	10,350.0	27.7	31.9	-94.41	31.5	-1,172.4	433.3	374.3	58.99	7.345	
10,500.0	10,450.0	10,566.8	10,450.0	27.8	32.0	-94.41	31.5	-1,172.4	433.3	374.2	59.06	7.337	
10,600.0	10,550.0	10,666.8	10,550.0	27.8	32.0	-94.41	31.5	-1,172.4	433.3	374.1	59.12	7.329	
10,700.0	10,650.0	10,766.8	10,650.0	27.9	32.0	-94.41	31.5	-1,172.4	433.3	374.1	59.19	7.321	
10,800.0	10,750.0	10,866.8	10,750.0	27.9	32.1	-94.41	31.5	-1,172.4	433.3	374.0	59.25	7.312	
10,900.0	10,850.0	10,966.8	10,850.0	27.9	32.1	-94.41	31.5	-1,172.4	433.3	374.0	59.32	7.304	
11,000.0	10,950.0	11,066.8	10,950.0	28.0	32.1	-94.41	31.5	-1,172.4	433.3	373.9	59.38	7.296	
11,100.0	11,050.0	11,166.8	11,050.0	28.0	32.1	-94.41	31.5	-1,172.4	433.3	373.8	59.45	7.288	
11,200.0	11,150.0	11,266.8	11,150.0	28.0	32.2	-94.41	31.5	-1,172.4	433.3	373.8	59.52	7.280	
11,213.6	11,163.5	11,280.3	11,163.5	28.0	32.2	-94.41	31.5	-1,172.4	433.3	373.7	59.52	7.279	
11,225.0	11,175.0	11,291.8	11,175.0	28.0	32.2	-93.90	31.5	-1,172.4	433.3	373.8	59.53	7.279	
11,250.0	11,199.9	11,316.8	11,199.9	28.1	32.2	-94.06	31.5	-1,172.4	433.4	373.8	59.52	7.281	
11,275.0	11,224.8	11,341.6	11,224.8	28.1	32.2	-94.37	31.5	-1,172.4	433.6	374.1	59.49	7.288	
11,300.0	11,249.5	11,366.3	11,249.5	28.1	32.2	-94.84	31.5	-1,172.4	433.9	374.4	59.44	7.300	
11,325.0	11,274.0	11,390.8	11,274.0	28.1	32.2	-95.44	31.5	-1,172.4	434.3	375.0	59.36	7.317	
11,350.0	11,298.1	11,414.9	11,298.1	28.1	32.2	-96.17	31.5	-1,172.4	435.0	375.8	59.25	7.341	
11,375.0	11,321.9	11,438.7	11,321.9	28.1	32.2	-97.02	31.5	-1,172.4	435.9	376.8	59.12	7.374	
11,400.0	11,345.3	11,463.2	11,346.4	28.1	32.2	-98.00	31.5	-1,172.4	437.2	378.2	58.92	7.419	
11,425.0	11,368.1	11,490.5	11,373.7	28.1	32.2	-99.12	32.8	-1,172.4	438.6	380.0	58.66	7.477	
11,450.0	11,390.4	11,518.5	11,401.5	28.1	32.2	-100.22	35.6	-1,172.4	440.2	381.8	58.37	7.542	
11,475.0	11,412.1	11,547.3	11,429.9	28.1	32.2	-101.31	40.3	-1,172.5	442.0	383.9	58.07	7.611	
11,500.0	11,433.1	11,576.8	11,458.7	28.1	32.2	-102.37	46.8	-1,172.5	443.8	386.1	57.76	7.684	
11,525.0	11,453.4	11,607.0	11,487.7	28.1	32.2	-103.42	55.3	-1,172.6	445.8	388.3	57.44	7.760	
11,550.0	11,472.8	11,638.1	11,516.9	28.1	32.2	-104.43	66.0	-1,172.6	447.8	390.7	57.13	7.838	
11,575.0	11,491.4	11,670.0	11,546.1	28.1	32.2	-105.41	78.9	-1,172.7	449.9	393.0	56.84	7.915	
11,600.0	11,509.1	11,702.8	11,575.1	28.1	32.2	-106.36	94.2	-1,172.8	451.9	395.4	56.56	7.991	
11,625.0	11,525.9	11,736.4	11,603.7	28.1	32.2	-107.26	111.8	-1,173.0	454.0	397.7	56.31	8.062	
11,650.0	11,541.7	11,770.9	11,631.6	28.1	32.2	-108.11	132.0	-1,173.1	456.0	399.9	56.10	8.129	
11,675.0	11,556.4	11,806.3	11,658.7	28.1	32.3	-108.91	154.7	-1,173.3	457.9	402.0	55.92	8.189	
11,700.0	11,570.1	11,842.4	11,684.6	28.1	32.3	-109.64	180.0	-1,173.4	459.7	403.9	55.79	8.240	
11,725.0	11,582.6	11,879.4	11,709.0	28.1	32.3	-110.29	207.7	-1,173.6	461.4	405.7	55.71	8.282	
11,750.0	11,594.0	11,917.0	11,731.6	28.1	32.3	-110.87	237.8	-1,173.9	462.9	407.2	55.67	8.314	
11,775.0	11,604.3	11,955.3	11,752.0	28.2	32.3	-111.36	270.2	-1,174.1	464.1	408.4	55.68	8.335	
11,800.0	11,613.3	11,994.2	11,770.0	28.2	32.3	-111.76	304.5	-1,174.3	465.1	409.4	55.73	8.346	
11,825.0	11,621.0	12,033.4	11,785.4	28.2	32.3	-112.06	340.7	-1,174.6	465.9	410.1	55.82	8.346	
11,850.0	11,627.6	12,073.0	11,797.8	28.2	32.3	-112.26	378.3	-1,174.9	466.3	410.4	55.94	8.336	
11,875.0	11,632.8	12,112.8	11,807.1	28.2	32.4	-112.35	416.9	-1,175.1	466.5	410.4	56.09	8.318	
11,900.0	11,636.8	12,152.6	11,813.1	28.2	32.4	-112.33	456.2	-1,175.4	466.4	410.2	56.26	8.291	
11,925.0	11,639.4	12,192.3	11,815.8	28.3	32.4	-112.21	495.8	-1,175.7	466.0	409.6	56.44	8.256	
11,950.0	11,640.8	12,222.1	11,816.0	28.3	32.5	-112.10	525.6	-1,175.9	465.5	408.9	56.56	8.229	
11,963.6	11,641.0	12,235.6	11,816.0	28.3	32.5	-112.09	539.2	-1,176.0	465.4	408.8	56.60	8.223	
12,000.0	11,641.0	12,272.1	11,816.0	28.3	32.5	-112.09	575.6	-1,176.3	465.3	408.6	56.68	8.210	
12,100.0	11,641.0	12,372.1	11,816.0	28.5	32.6	-112.10	675.6	-1,177.0	465.1	408.2	56.94	8.169	
12,200.0	11,641.0	12,472.0	11,816.0	28.6	32.8	-112.11	775.6	-1,177.7	464.9	407.7	57.23	8.124	
12,300.0	11,641.0	12,572.0	11,816.0	28.8	32.9	-112.12	875.6	-1,178.4	464.8	407.2	57.57	8.073	
12,400.0	11,641.0	12,672.0	11,816.0	28.9	33.1	-112.13	975.6	-1,179.1	464.6	406.6	57.94	8.017	
12,500.0	11,641.0	12,772.0	11,816.0	29.1	33.3	-112.14	1,075.6	-1,179.8	464.4	406.0	58.36	7.958	
12,600.0	11,641.0	12,872.0	11,816.0	29.4	33.5	-112.15	1,175.6	-1,180.5	464.2	405.4	58.80	7.894	
12,700.0	11,641.0	12,972.0	11,816.0	29.6	33.7	-112.16	1,275.6	-1,181.2	464.0	404.7	59.29	7.826	
12,800.0	11,641.0	13,072.0	11,816.0	29.9	33.9	-112.17	1,375.6	-1,181.9	463.8	404.0	59.80	7.755	

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

ConocoPhillips

Anticollision Report

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Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11455-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	
12,900.0	11,641.0	13,172.0	11,816.0	30.1	34.2	-112.18	1,475.6	-1,182.6	463.6	403.3	60.36	7.681	
13,000.0	11,641.0	13,272.0	11,816.0	30.4	34.4	-112.19	1,575.6	-1,183.3	463.4	402.5	60.94	7.604	
13,100.0	11,641.0	13,372.0	11,816.0	30.7	34.7	-112.20	1,675.6	-1,184.0	463.2	401.7	61.56	7.525	
13,200.0	11,641.0	13,472.0	11,816.0	31.1	35.0	-112.21	1,775.6	-1,184.8	463.0	400.8	62.21	7.444	
13,300.0	11,641.0	13,572.0	11,816.0	31.4	35.3	-112.22	1,875.6	-1,185.5	462.9	400.0	62.88	7.361	
13,400.0	11,641.0	13,672.0	11,816.0	31.8	35.7	-112.22	1,975.6	-1,186.2	462.7	399.1	63.59	7.276	
13,500.0	11,641.0	13,772.0	11,816.0	32.1	36.0	-112.23	2,075.6	-1,186.9	462.5	398.2	64.32	7.190	
13,600.0	11,641.0	13,872.0	11,816.0	32.5	36.3	-112.24	2,175.6	-1,187.6	462.3	397.2	65.09	7.103	
13,700.0	11,641.0	13,972.0	11,816.0	32.9	36.7	-112.25	2,275.6	-1,188.3	462.1	396.2	65.87	7.015	
13,800.0	11,641.0	14,072.0	11,816.0	33.3	37.1	-112.26	2,375.6	-1,189.0	461.9	395.2	66.69	6.926	
13,900.0	11,641.0	14,172.0	11,816.0	33.7	37.5	-112.27	2,475.6	-1,189.7	461.7	394.2	67.53	6.838	
14,000.0	11,641.0	14,272.0	11,816.0	34.2	37.9	-112.28	2,575.6	-1,190.4	461.5	393.1	68.39	6.749	
14,100.0	11,641.0	14,372.0	11,816.0	34.6	38.3	-112.29	2,675.6	-1,191.1	461.3	392.1	69.27	6.660	
14,200.0	11,641.0	14,472.0	11,816.0	35.1	38.7	-112.30	2,775.6	-1,191.8	461.2	391.0	70.18	6.571	
14,300.0	11,641.0	14,572.0	11,816.0	35.6	39.1	-112.31	2,875.6	-1,192.6	461.0	389.9	71.10	6.483	
14,400.0	11,641.0	14,672.0	11,816.0	36.0	39.6	-112.32	2,975.6	-1,193.3	460.8	388.7	72.05	6.395	
14,500.0	11,641.0	14,772.0	11,816.0	36.5	40.0	-112.33	3,075.5	-1,194.0	460.6	387.6	73.01	6.308	
14,600.0	11,641.0	14,872.0	11,816.0	37.0	40.5	-112.34	3,175.5	-1,194.7	460.4	386.4	74.00	6.222	
14,700.0	11,641.0	14,972.0	11,816.0	37.5	41.0	-112.35	3,275.5	-1,195.4	460.2	385.2	75.00	6.136	
14,800.0	11,641.0	15,072.0	11,816.0	38.0	41.5	-112.36	3,375.5	-1,196.1	460.0	384.0	76.02	6.052	
14,900.0	11,641.0	15,172.0	11,816.0	38.6	41.9	-112.37	3,475.5	-1,196.8	459.8	382.8	77.05	5.968	
15,000.0	11,641.0	15,272.0	11,816.0	39.1	42.4	-112.38	3,575.5	-1,197.5	459.6	381.5	78.10	5.885	
15,100.0	11,641.0	15,372.0	11,816.0	39.6	42.9	-112.39	3,675.5	-1,198.2	459.5	380.3	79.17	5.803	
15,200.0	11,641.0	15,472.0	11,816.0	40.2	43.5	-112.40	3,775.5	-1,198.9	459.3	379.0	80.25	5.723	
15,300.0	11,641.0	15,572.0	11,816.0	40.7	44.0	-112.41	3,875.5	-1,199.6	459.1	377.7	81.34	5.644	
15,400.0	11,641.0	15,672.0	11,816.0	41.3	44.5	-112.42	3,975.5	-1,200.3	458.9	376.4	82.45	5.565	
15,500.0	11,641.0	15,772.0	11,816.0	41.9	45.0	-112.43	4,075.5	-1,201.1	458.7	375.1	83.57	5.489	
15,600.0	11,641.0	15,872.0	11,816.0	42.4	45.6	-112.44	4,175.5	-1,201.8	458.5	373.8	84.71	5.413	
15,700.0	11,641.0	15,972.0	11,816.0	43.0	46.1	-112.45	4,275.5	-1,202.5	458.3	372.5	85.85	5.339	
15,800.0	11,641.0	16,072.0	11,816.0	43.6	46.7	-112.46	4,375.5	-1,203.2	458.1	371.1	87.01	5.265	
15,900.0	11,641.0	16,172.0	11,816.0	44.2	47.2	-112.47	4,475.5	-1,203.9	457.9	369.8	88.17	5.194	
16,000.0	11,641.0	16,272.0	11,816.0	44.8	47.8	-112.48	4,575.5	-1,204.6	457.8	368.4	89.35	5.123	
16,100.0	11,641.0	16,372.0	11,816.0	45.4	48.4	-112.49	4,675.5	-1,205.3	457.6	367.0	90.54	5.054	
16,200.0	11,641.0	16,472.0	11,816.0	46.0	48.9	-112.50	4,775.5	-1,206.0	457.4	365.6	91.74	4.986	
16,300.0	11,641.0	16,572.0	11,816.0	46.6	49.5	-112.51	4,875.5	-1,206.7	457.2	364.2	92.94	4.919	
16,400.0	11,641.0	16,672.0	11,816.0	47.2	50.1	-112.52	4,975.5	-1,207.4	457.0	362.8	94.16	4.854	
16,500.0	11,641.0	16,772.0	11,816.0	47.8	50.7	-112.53	5,075.5	-1,208.1	456.8	361.4	95.38	4.789	
16,600.0	11,641.0	16,872.0	11,816.0	48.5	51.3	-112.54	5,175.5	-1,208.8	456.6	360.0	96.61	4.726	
16,700.0	11,641.0	16,972.0	11,816.0	49.1	51.9	-112.55	5,275.5	-1,209.6	456.4	358.6	97.85	4.664	
16,800.0	11,641.0	17,072.0	11,816.0	49.7	52.5	-112.55	5,375.5	-1,210.3	456.2	357.1	99.10	4.604	
16,900.0	11,641.0	17,172.0	11,816.0	50.4	53.1	-112.56	5,475.5	-1,211.0	456.1	355.7	100.36	4.544	
17,000.0	11,641.0	17,272.0	11,816.0	51.0	53.7	-112.57	5,575.5	-1,211.7	455.9	354.2	101.62	4.486	
17,100.0	11,641.0	17,372.0	11,816.0	51.6	54.3	-112.58	5,675.5	-1,212.4	455.7	352.8	102.89	4.429	
17,200.0	11,641.0	17,472.0	11,816.0	52.3	54.9	-112.59	5,775.5	-1,213.1	455.5	351.3	104.16	4.373	
17,300.0	11,641.0	17,572.0	11,816.0	52.9	55.5	-112.60	5,875.5	-1,213.8	455.3	349.9	105.45	4.318	
17,400.0	11,641.0	17,672.0	11,816.0	53.6	56.2	-112.61	5,975.5	-1,214.5	455.1	348.4	106.73	4.264	
17,500.0	11,641.0	17,772.0	11,816.0	54.2	56.8	-112.62	6,075.5	-1,215.2	454.9	346.9	108.03	4.211	
17,600.0	11,641.0	17,872.0	11,816.0	54.9	57.4	-112.63	6,175.5	-1,215.9	454.7	345.4	109.33	4.159	
17,700.0	11,641.0	17,972.0	11,816.0	55.6	58.1	-112.64	6,275.5	-1,216.6	454.5	343.9	110.63	4.109	
17,800.0	11,641.0	18,072.0	11,816.0	56.2	58.7	-112.65	6,375.5	-1,217.4	454.4	342.4	111.94	4.059	
17,900.0	11,641.0	18,172.0	11,816.0	56.9	59.3	-112.66	6,475.5	-1,218.1	454.2	340.9	113.26	4.010	
18,000.0	11,641.0	18,272.0	11,816.0	57.5	60.0	-112.67	6,575.4	-1,218.8	454.0	339.4	114.58	3.962	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11455-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
18,100.0	11,641.0	18,372.0	11,816.0	58.2	60.6	-112.68	6,675.4	-1,219.5	453.8	337.9	115.91	3.915	
18,200.0	11,641.0	18,472.0	11,816.0	58.9	61.3	-112.69	6,775.4	-1,220.2	453.6	336.4	117.24	3.869	
18,300.0	11,641.0	18,572.0	11,816.0	59.6	61.9	-112.70	6,875.4	-1,220.9	453.4	334.8	118.57	3.824	
18,400.0	11,641.0	18,672.0	11,816.0	60.2	62.6	-112.71	6,975.4	-1,221.6	453.2	333.3	119.91	3.780	
18,500.0	11,641.0	18,772.0	11,816.0	60.9	63.2	-112.72	7,075.4	-1,222.3	453.0	331.8	121.25	3.736	
18,600.0	11,641.0	18,872.0	11,816.0	61.6	63.9	-112.73	7,175.4	-1,223.0	452.8	330.2	122.60	3.694	
18,700.0	11,641.0	18,972.0	11,816.0	62.3	64.6	-112.74	7,275.4	-1,223.7	452.7	328.7	123.95	3.652	
18,800.0	11,641.0	19,072.0	11,816.0	63.0	65.2	-112.75	7,375.4	-1,224.4	452.5	327.2	125.30	3.611	
18,900.0	11,641.0	19,172.0	11,816.0	63.7	65.9	-112.76	7,475.4	-1,225.1	452.3	325.6	126.66	3.571	
19,000.0	11,641.0	19,272.0	11,816.0	64.3	66.6	-112.77	7,575.4	-1,225.9	452.1	324.1	128.02	3.531	
19,100.0	11,641.0	19,372.0	11,816.0	65.0	67.2	-112.78	7,675.4	-1,226.6	451.9	322.5	129.39	3.493	
19,200.0	11,641.0	19,472.0	11,816.0	65.7	67.9	-112.79	7,775.4	-1,227.3	451.7	321.0	130.76	3.455	
19,300.0	11,641.0	19,572.0	11,816.0	66.4	68.6	-112.80	7,875.4	-1,228.0	451.5	319.4	132.13	3.417	
19,400.0	11,641.0	19,672.0	11,816.0	67.1	69.2	-112.81	7,975.4	-1,228.7	451.3	317.8	133.50	3.381	
19,500.0	11,641.0	19,772.0	11,816.0	67.8	69.9	-112.82	8,075.4	-1,229.4	451.2	316.3	134.88	3.345	
19,600.0	11,641.0	19,872.0	11,816.0	68.5	70.6	-112.83	8,175.4	-1,230.1	451.0	314.7	136.26	3.310	
19,700.0	11,641.0	19,972.0	11,816.0	69.2	71.3	-112.84	8,275.4	-1,230.8	450.8	313.1	137.64	3.275	
19,800.0	11,641.0	20,072.0	11,816.0	69.9	72.0	-112.85	8,375.4	-1,231.5	450.6	311.6	139.03	3.241	
19,900.0	11,641.0	20,172.0	11,816.0	70.6	72.6	-112.86	8,475.4	-1,232.2	450.4	310.0	140.42	3.208	
20,000.0	11,641.0	20,272.0	11,816.0	71.3	73.3	-112.87	8,575.4	-1,232.9	450.2	308.4	141.81	3.175	
20,100.0	11,641.0	20,372.0	11,816.0	72.0	74.0	-112.88	8,675.4	-1,233.7	450.0	306.8	143.21	3.142	
20,200.0	11,641.0	20,472.0	11,816.0	72.7	74.7	-112.89	8,775.4	-1,234.4	449.8	305.2	144.60	3.111	
20,300.0	11,641.0	20,572.0	11,816.0	73.4	75.4	-112.90	8,875.4	-1,235.1	449.6	303.6	146.00	3.080	
20,400.0	11,641.0	20,672.0	11,816.0	74.1	76.1	-112.91	8,975.4	-1,235.8	449.5	302.1	147.40	3.049	
20,500.0	11,641.0	20,772.0	11,816.0	74.8	76.8	-112.92	9,075.4	-1,236.5	449.3	300.5	148.80	3.019	
20,600.0	11,641.0	20,872.0	11,816.0	75.5	77.5	-112.94	9,175.4	-1,237.2	449.1	298.9	150.21	2.990	
20,700.0	11,641.0	20,972.0	11,816.0	76.2	78.2	-112.95	9,275.4	-1,237.9	448.9	297.3	151.62	2.961	
20,800.0	11,641.0	21,072.0	11,816.0	77.0	78.9	-112.96	9,375.4	-1,238.6	448.7	295.7	153.03	2.932	
20,900.0	11,641.0	21,172.0	11,816.0	77.7	79.6	-112.97	9,475.4	-1,239.3	448.5	294.1	154.44	2.904	
21,000.0	11,641.0	21,272.0	11,816.0	78.4	80.3	-112.98	9,575.4	-1,240.0	448.3	292.5	155.85	2.877	
21,100.0	11,641.0	21,372.0	11,816.0	79.1	81.0	-112.99	9,675.4	-1,240.7	448.1	290.9	157.27	2.850	
21,200.0	11,641.0	21,472.0	11,816.0	79.8	81.7	-113.00	9,775.4	-1,241.4	447.9	289.3	158.69	2.823	
21,300.0	11,641.0	21,572.0	11,816.0	80.5	82.4	-113.01	9,875.4	-1,242.2	447.8	287.7	160.10	2.797	
21,400.0	11,641.0	21,672.0	11,816.0	81.2	83.1	-113.02	9,975.4	-1,242.9	447.6	286.0	161.53	2.771	
21,500.0	11,641.0	21,772.0	11,816.0	82.0	83.8	-113.03	10,075.4	-1,243.6	447.4	284.4	162.95	2.746	
21,600.0	11,641.0	21,872.0	11,816.0	82.7	84.5	-113.04	10,175.4	-1,244.3	447.2	282.8	164.37	2.721	
21,700.0	11,641.0	21,972.0	11,816.0	83.4	85.2	-113.05	10,275.3	-1,245.0	447.0	281.2	165.80	2.696	
21,800.0	11,641.0	22,072.0	11,816.0	84.1	85.9	-113.06	10,375.3	-1,245.7	446.8	279.6	167.23	2.672	
21,862.1	11,641.0	22,134.1	11,816.0	84.6	86.3	-113.06	10,437.5	-1,246.1	446.7	278.6	168.11	2.657	
21,900.0	11,641.0	22,172.0	11,816.0	84.8	86.6	-113.07	10,475.3	-1,246.4	446.6	278.0	168.65	2.648	
21,911.9	11,641.0	22,183.2	11,816.0	84.9	86.7	-113.07	10,486.5	-1,246.5	446.6	277.8	168.82	2.646	
21,912.1	11,641.0	22,183.2	11,816.0	84.9	86.7	-113.07	10,486.5	-1,246.5	446.6	277.8	168.82	2.645 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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-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	0.0	3.0	3.0	-0.50	30.0	-0.3	30.0					
100.0	100.0	100.0	100.0	3.1	3.1	-0.50	30.0	-0.3	30.0	23.5	6.54	4.588		
200.0	200.0	200.0	200.0	3.2	3.2	-0.50	30.0	-0.3	30.0	23.2	6.79	4.420		
300.0	300.0	300.0	300.0	3.3	3.3	-0.50	30.0	-0.3	30.0	23.0	7.03	4.264		
400.0	400.0	400.0	400.0	3.4	3.4	-0.50	30.0	-0.3	30.0	22.7	7.28	4.121		
500.0	500.0	500.0	500.0	3.6	3.6	-0.50	30.0	-0.3	30.0	22.5	7.52	3.987		
600.0	600.0	600.0	600.0	3.7	3.7	-0.50	30.0	-0.3	30.0	22.2	7.76	3.863		
700.0	700.0	700.0	700.0	3.8	3.8	-0.50	30.0	-0.3	30.0	22.0	8.00	3.747		
800.0	800.0	800.0	800.0	3.9	3.9	-0.50	30.0	-0.3	30.0	21.7	8.24	3.638		
900.0	900.0	900.0	900.0	4.0	4.0	-0.50	30.0	-0.3	30.0	21.5	8.48	3.536		
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	-0.50	30.0	-0.3	30.0	21.3	8.72	3.439 CC		
1,100.0	1,100.0	1,099.9	1,099.8	4.3	4.3	84.52	30.2	-2.0	30.1	21.1	8.92	3.367		
1,200.0	1,199.8	1,199.7	1,199.6	4.5	4.5	84.57	30.8	-7.2	30.2	21.0	9.26	3.264		
1,300.0	1,299.5	1,299.6	1,299.0	4.9	4.9	84.65	31.9	-15.8	30.5	20.9	9.59	3.183		
1,400.0	1,398.7	1,399.6	1,398.5	5.2	5.1	87.95	33.2	-26.2	30.8	20.9	9.91	3.107 ES		
1,500.0	1,497.7	1,499.5	1,497.9	5.4	5.3	94.40	34.4	-36.5	31.2	21.0	10.22	3.055		
1,600.0	1,596.8	1,599.4	1,597.3	5.7	5.6	100.59	35.7	-46.9	32.0	21.5	10.56	3.033		
1,700.0	1,695.8	1,699.4	1,696.6	6.0	5.9	106.41	37.0	-57.3	33.2	22.3	10.94	3.035		
1,800.0	1,794.8	1,799.3	1,796.0	6.3	6.2	111.78	38.3	-67.6	34.7	23.3	11.37	3.051		
1,900.0	1,893.8	1,899.3	1,895.4	6.7	6.5	116.67	39.5	-78.0	36.5	24.6	11.86	3.076		
2,000.0	1,992.9	1,999.2	1,994.8	7.0	6.8	121.08	40.8	-88.4	38.5	26.1	12.40	3.104		
2,100.0	2,091.9	2,099.1	2,094.2	7.3	7.2	125.04	42.1	-98.7	40.7	27.7	12.98	3.135		
2,200.0	2,190.9	2,199.1	2,193.6	7.7	7.5	128.57	43.4	-109.1	43.1	29.5	13.61	3.165		
2,300.0	2,289.9	2,299.0	2,293.0	8.1	7.8	131.71	44.6	-119.5	45.6	31.3	14.28	3.196		
2,400.0	2,389.0	2,399.0	2,392.4	8.4	8.2	134.52	45.9	-129.9	48.3	33.3	14.97	3.226		
2,500.0	2,488.0	2,498.9	2,491.8	8.8	8.5	137.03	47.2	-140.2	51.0	35.4	15.68	3.254		
2,600.0	2,587.0	2,598.8	2,591.2	9.2	8.9	139.28	48.4	-150.6	53.9	37.5	16.42	3.282		
2,700.0	2,686.1	2,698.8	2,690.6	9.6	9.3	141.31	49.7	-161.0	56.8	39.6	17.17	3.309		
2,800.0	2,785.1	2,798.7	2,789.9	10.0	9.6	143.13	51.0	-171.3	59.8	41.9	17.93	3.335		
2,900.0	2,884.1	2,898.6	2,889.3	10.4	10.0	144.77	52.3	-181.7	62.8	44.1	18.70	3.360		
3,000.0	2,983.1	2,998.6	2,988.7	10.8	10.4	146.27	53.5	-192.1	65.9	46.5	19.48	3.385		
3,100.0	3,082.2	3,098.5	3,088.1	11.2	10.7	147.63	54.8	-202.4	69.1	48.8	20.27	3.408		
3,200.0	3,181.2	3,198.5	3,187.5	11.6	11.1	148.87	56.1	-212.8	72.2	51.2	21.06	3.430		
3,300.0	3,280.2	3,298.4	3,286.9	12.0	11.5	150.00	57.4	-223.2	75.4	53.6	21.85	3.451		
3,400.0	3,379.2	3,398.3	3,386.3	12.4	11.9	151.05	58.6	-233.5	78.6	56.0	22.65	3.472		
3,500.0	3,478.3	3,498.3	3,485.7	12.8	12.3	152.01	59.9	-243.9	81.9	58.4	23.45	3.492		
3,600.0	3,577.3	3,598.2	3,585.1	13.2	12.6	152.89	61.2	-254.3	85.2	60.9	24.26	3.511		
3,700.0	3,676.3	3,698.1	3,684.5	13.6	13.0	153.71	62.5	-264.6	88.5	63.4	25.07	3.529		
3,800.0	3,775.3	3,798.1	3,783.9	14.0	13.4	154.48	63.7	-275.0	91.8	65.9	25.88	3.546		
3,900.0	3,874.4	3,898.0	3,883.2	14.4	13.8	155.19	65.0	-285.4	95.1	68.4	26.69	3.563		
4,000.0	3,973.4	3,998.0	3,982.6	14.8	14.2	155.85	66.3	-295.7	98.4	70.9	27.50	3.579		
4,100.0	4,072.4	4,097.9	4,082.0	15.2	14.6	156.47	67.5	-306.1	101.8	73.4	28.31	3.594		
4,200.0	4,171.5	4,197.8	4,181.4	15.7	15.0	157.04	68.8	-316.5	105.1	76.0	29.12	3.609		
4,300.0	4,270.5	4,296.6	4,279.7	16.1	15.3	157.67	70.0	-326.3	108.9	78.9	29.92	3.638		
4,400.0	4,369.5	4,394.7	4,377.4	16.5	15.7	158.57	71.0	-334.5	114.1	83.3	30.76	3.710		
4,500.0	4,468.5	4,492.6	4,475.1	16.9	16.0	159.70	71.8	-341.1	121.0	89.3	31.61	3.826		
4,600.0	4,567.6	4,590.2	4,572.6	17.3	16.4	160.98	72.4	-345.9	129.4	97.0	32.46	3.988		
4,700.0	4,666.6	4,687.5	4,669.8	17.8	16.7	162.33	72.8	-349.1	139.6	106.3	33.28	4.194		
4,800.0	4,765.6	4,784.4	4,766.7	18.2	16.9	163.69	73.0	-350.7	151.4	117.3	34.05	4.445		
4,900.0	4,864.6	4,882.3	4,864.6	18.6	17.0	165.01	73.0	-350.8	164.6	129.9	34.68	4.747		
5,000.0	4,963.7	4,981.4	4,963.7	19.0	17.0	166.17	73.0	-350.8	178.1	142.8	35.28	5.049		
5,100.0	5,062.7	5,080.4	5,062.7	19.4	17.1	167.17	73.0	-350.8	191.7	155.8	35.86	5.345		

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1													Offset Site Error: 0.0 usft	
Survey Program: Reference		0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-r.5 MWD+IFR1+MS						Rule Assigned:				Offset Well Error: 3.0 usft		
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	Warning	
5,200.0	5,161.7	5,179.4	5,161.7	19.9	17.1	168.03	73.0	-350.8	205.3	168.8	36.42	5.635		
5,300.0	5,260.7	5,278.4	5,260.7	20.3	17.2	168.78	73.0	-350.8	218.9	181.9	36.98	5.919		
5,400.0	5,359.8	5,377.5	5,359.8	20.7	17.2	169.45	73.0	-350.8	232.6	195.0	37.53	6.197		
5,500.0	5,458.8	5,476.5	5,458.8	21.1	17.3	170.04	73.0	-350.8	246.3	208.2	38.08	6.468		
5,600.0	5,557.8	5,575.5	5,557.8	21.6	17.3	170.57	73.0	-350.8	260.0	221.4	38.62	6.733		
5,700.0	5,656.9	5,674.5	5,656.9	22.0	17.3	171.05	73.0	-350.8	273.7	234.6	39.16	6.991		
5,800.0	5,755.9	5,773.6	5,755.9	22.4	17.4	171.48	73.0	-350.8	287.5	247.8	39.70	7.243		
5,900.0	5,854.9	5,872.6	5,854.9	22.8	17.4	171.87	73.0	-350.8	301.3	261.0	40.23	7.488		
6,000.0	5,953.9	5,971.6	5,953.9	23.3	17.5	172.23	73.0	-350.8	315.1	274.3	40.77	7.728		
6,100.0	6,053.0	6,070.6	6,053.0	23.7	17.5	172.56	73.0	-350.8	328.9	287.5	41.31	7.961		
6,139.4	6,092.0	6,109.7	6,092.0	23.9	17.6	172.68	73.0	-350.8	334.3	292.8	41.51	8.053		
6,200.0	6,152.0	6,169.7	6,152.0	24.1	17.6	172.86	73.0	-350.8	342.3	300.5	41.82	8.185		
6,300.0	6,251.3	6,269.0	6,251.3	24.5	17.6	173.12	73.0	-350.8	354.3	311.9	42.34	8.366		
6,400.0	6,350.8	6,368.5	6,350.8	24.9	17.7	173.32	73.0	-350.8	364.5	321.6	42.85	8.506		
6,500.0	6,450.4	6,468.1	6,450.4	25.3	17.7	173.49	73.0	-350.8	372.9	329.6	43.33	8.606		
6,600.0	6,550.2	6,567.9	6,550.2	25.7	17.8	173.61	73.0	-350.8	379.7	335.9	43.80	8.669		
6,700.0	6,650.1	6,667.7	6,650.1	26.0	17.8	173.70	73.0	-350.8	384.7	340.5	44.23	8.698		
6,800.0	6,750.0	6,767.7	6,750.0	26.3	17.9	173.76	73.0	-350.8	388.0	343.4	44.63	8.694		
6,900.0	6,850.0	6,867.7	6,850.0	26.6	17.9	173.78	73.0	-350.8	389.5	344.6	44.96	8.663		
6,939.4	6,889.4	6,907.1	6,889.4	26.6	17.9	88.79	73.0	-350.8	389.7	344.6	45.03	8.654		
7,000.0	6,950.0	6,967.7	6,950.0	26.6	18.0	88.79	73.0	-350.8	389.7	344.6	45.06	8.647		
7,100.0	7,050.0	7,067.7	7,050.0	26.7	18.0	88.79	73.0	-350.8	389.7	344.5	45.14	8.633		
7,200.0	7,150.0	7,167.7	7,150.0	26.7	18.1	88.79	73.0	-350.8	389.7	344.5	45.21	8.619		
7,300.0	7,250.0	7,267.7	7,250.0	26.7	18.1	88.79	73.0	-350.8	389.7	344.4	45.28	8.605		
7,400.0	7,350.0	7,367.7	7,350.0	26.7	18.2	88.79	73.0	-350.8	389.7	344.3	45.36	8.591		
7,500.0	7,450.0	7,467.7	7,450.0	26.8	18.2	88.79	73.0	-350.8	389.7	344.2	45.43	8.577		
7,600.0	7,550.0	7,567.7	7,550.0	26.8	18.3	88.79	73.0	-350.8	389.7	344.2	45.51	8.563		
7,700.0	7,650.0	7,667.7	7,650.0	26.8	18.3	88.79	73.0	-350.8	389.7	344.1	45.58	8.548		
7,800.0	7,750.0	7,767.7	7,750.0	26.9	18.4	88.79	73.0	-350.8	389.7	344.0	45.66	8.534		
7,900.0	7,850.0	7,867.7	7,850.0	26.9	18.4	88.79	73.0	-350.8	389.7	343.9	45.74	8.520		
8,000.0	7,950.0	7,967.7	7,950.0	26.9	18.5	88.79	73.0	-350.8	389.7	343.9	45.81	8.505		
8,100.0	8,050.0	8,067.7	8,050.0	27.0	18.5	88.79	73.0	-350.8	389.7	343.8	45.89	8.491		
8,200.0	8,150.0	8,167.7	8,150.0	27.0	18.6	88.79	73.0	-350.8	389.7	343.7	45.97	8.477		
8,300.0	8,250.0	8,267.7	8,250.0	27.0	18.6	88.79	73.0	-350.8	389.7	343.6	46.05	8.462		
8,400.0	8,350.0	8,367.7	8,350.0	27.1	18.7	88.79	73.0	-350.8	389.7	343.5	46.13	8.448		
8,500.0	8,450.0	8,467.7	8,450.0	27.1	18.8	88.79	73.0	-350.8	389.7	343.5	46.21	8.433		
8,600.0	8,550.0	8,567.7	8,550.0	27.1	18.8	88.79	73.0	-350.8	389.7	343.4	46.29	8.419		
8,700.0	8,650.0	8,667.7	8,650.0	27.2	18.9	88.79	73.0	-350.8	389.7	343.3	46.37	8.404		
8,800.0	8,750.0	8,767.7	8,750.0	27.2	18.9	88.79	73.0	-350.8	389.7	343.2	46.45	8.390		
8,900.0	8,850.0	8,867.7	8,850.0	27.2	19.0	88.79	73.0	-350.8	389.7	343.1	46.53	8.375		
9,000.0	8,950.0	8,967.7	8,950.0	27.3	19.0	88.79	73.0	-350.8	389.7	343.1	46.61	8.360		
9,100.0	9,050.0	9,067.7	9,050.0	27.3	19.1	88.79	73.0	-350.8	389.7	343.0	46.69	8.346		
9,200.0	9,150.0	9,167.7	9,150.0	27.3	19.1	88.79	73.0	-350.8	389.7	342.9	46.77	8.331		
9,300.0	9,250.0	9,267.7	9,250.0	27.4	19.2	88.79	73.0	-350.8	389.7	342.8	46.86	8.316		
9,400.0	9,350.0	9,367.7	9,350.0	27.4	19.2	88.79	73.0	-350.8	389.7	342.7	46.94	8.302		
9,500.0	9,450.0	9,467.7	9,450.0	27.4	19.3	88.79	73.0	-350.8	389.7	342.6	47.02	8.287		
9,600.0	9,550.0	9,567.7	9,550.0	27.5	19.4	88.79	73.0	-350.8	389.7	342.6	47.11	8.272		
9,700.0	9,650.0	9,667.7	9,650.0	27.5	19.4	88.79	73.0	-350.8	389.7	342.5	47.19	8.257		
9,800.0	9,750.0	9,767.7	9,750.0	27.5	19.5	88.79	73.0	-350.8	389.7	342.4	47.28	8.243		
9,900.0	9,850.0	9,867.7	9,850.0	27.6	19.5	88.79	73.0	-350.8	389.7	342.3	47.36	8.228		
10,000.0	9,950.0	9,967.7	9,950.0	27.6	19.6	88.79	73.0	-350.8	389.7	342.2	47.45	8.213		
10,100.0	10,050.0	10,067.7	10,050.0	27.6	19.6	88.79	73.0	-350.8	389.7	342.1	47.53	8.198		

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-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
10,200.0	10,150.0	10,167.7	10,150.0	27.7	19.7	88.79	73.0	-350.8	389.7	342.1	47.62	8.183	
10,300.0	10,250.0	10,267.7	10,250.0	27.7	19.7	88.79	73.0	-350.8	389.7	342.0	47.70	8.168	
10,400.0	10,350.0	10,367.7	10,350.0	27.7	19.8	88.79	73.0	-350.8	389.7	341.9	47.79	8.153	
10,500.0	10,450.0	10,467.7	10,450.0	27.8	19.9	88.79	73.0	-350.8	389.7	341.8	47.88	8.139	
10,600.0	10,550.0	10,567.7	10,550.0	27.8	19.9	88.79	73.0	-350.8	389.7	341.7	47.97	8.124	
10,700.0	10,650.0	10,667.7	10,650.0	27.9	20.0	88.79	73.0	-350.8	389.7	341.6	48.06	8.109	
10,800.0	10,750.0	10,767.7	10,750.0	27.9	20.0	88.79	73.0	-350.8	389.7	341.5	48.14	8.094	
10,900.0	10,850.0	10,867.7	10,850.0	27.9	20.1	88.79	73.0	-350.8	389.7	341.4	48.23	8.079	
11,000.0	10,950.0	10,967.7	10,950.0	28.0	20.2	88.79	73.0	-350.8	389.7	341.3	48.32	8.064	
11,100.0	11,050.0	11,067.7	11,050.0	28.0	20.2	88.79	73.0	-350.8	389.7	341.3	48.41	8.049	
11,200.0	11,150.0	11,167.7	11,150.0	28.0	20.3	88.79	73.0	-350.8	389.7	341.2	48.50	8.034	
11,213.6	11,163.5	11,181.2	11,163.5	28.0	20.3	88.79	73.0	-350.8	389.7	341.2	48.51	8.033	
11,225.0	11,175.0	11,192.7	11,175.0	28.0	20.3	89.33	73.0	-350.8	389.7	341.2	48.52	8.031	
11,250.0	11,199.9	11,217.6	11,199.9	28.1	20.3	89.51	73.0	-350.8	389.7	341.1	48.55	8.027	
11,275.0	11,224.8	11,242.5	11,224.8	28.1	20.3	89.89	73.0	-350.8	389.6	341.1	48.58	8.020	
11,280.6	11,230.4	11,248.0	11,230.4	28.1	20.3	90.00	73.0	-350.8	389.6	341.0	48.59	8.018	
11,300.0	11,249.5	11,267.2	11,249.5	28.1	20.3	90.45	73.0	-350.8	389.7	341.0	48.63	8.012	
11,325.0	11,274.0	11,291.7	11,274.0	28.1	20.3	91.18	73.0	-350.8	389.7	341.0	48.69	8.004	
11,350.0	11,298.1	11,315.8	11,298.1	28.1	20.3	92.07	73.0	-350.8	389.9	341.2	48.75	7.999	
11,375.0	11,321.9	11,339.6	11,321.9	28.1	20.4	93.10	73.0	-350.8	390.3	341.5	48.80	7.998	
11,400.0	11,345.3	11,363.4	11,345.3	28.1	20.4	94.26	73.1	-350.8	390.9	342.0	48.85	8.002	
11,425.0	11,368.1	11,388.4	11,370.7	28.1	20.4	95.51	74.1	-350.8	391.7	342.8	48.90	8.012	
11,450.0	11,390.4	11,414.1	11,396.2	28.1	20.4	96.75	76.4	-350.9	392.8	343.9	48.94	8.026	
11,475.0	11,412.1	11,440.2	11,422.1	28.1	20.4	97.99	80.2	-350.9	394.1	345.1	48.97	8.046	
11,500.0	11,433.1	11,467.0	11,448.4	28.1	20.4	99.21	85.6	-350.9	395.5	346.5	49.01	8.071	
11,525.0	11,453.4	11,494.5	11,474.9	28.1	20.4	100.42	92.6	-351.0	397.2	348.1	49.04	8.099	
11,550.0	11,472.8	11,522.6	11,501.6	28.1	20.4	101.62	101.4	-351.0	399.0	349.9	49.07	8.131	
11,575.0	11,491.4	11,551.5	11,528.5	28.1	20.4	102.79	112.0	-351.1	401.0	351.9	49.11	8.164	
11,600.0	11,509.1	11,581.0	11,555.2	28.1	20.4	103.94	124.5	-351.2	403.1	353.9	49.16	8.199	
11,625.0	11,525.9	11,611.4	11,581.9	28.1	20.4	105.06	139.1	-351.3	405.3	356.0	49.22	8.234	
11,650.0	11,541.7	11,642.6	11,608.2	28.1	20.4	106.14	155.8	-351.4	407.5	358.2	49.29	8.268	
11,675.0	11,556.4	11,674.6	11,634.0	28.1	20.4	107.19	174.7	-351.5	409.8	360.5	49.38	8.300	
11,700.0	11,570.1	11,707.4	11,659.1	28.1	20.4	108.19	195.8	-351.7	412.2	362.7	49.48	8.330	
11,725.0	11,582.6	11,741.1	11,683.4	28.1	20.4	109.13	219.2	-351.9	414.5	364.9	49.60	8.356	
11,750.0	11,594.0	11,775.6	11,706.4	28.1	20.4	110.02	244.9	-352.0	416.7	367.0	49.74	8.378	
11,775.0	11,604.3	11,810.9	11,728.0	28.2	20.4	110.85	272.9	-352.2	418.8	368.9	49.88	8.396	
11,800.0	11,613.3	11,847.1	11,747.9	28.2	20.5	111.60	303.0	-352.5	420.8	370.8	50.04	8.410	
11,825.0	11,621.0	11,884.0	11,765.8	28.2	20.5	112.27	335.3	-352.7	422.7	372.5	50.19	8.421	
11,850.0	11,627.6	11,921.6	11,781.4	28.2	20.5	112.86	369.5	-352.9	424.3	374.0	50.34	8.429	
11,875.0	11,632.8	11,959.8	11,794.4	28.2	20.5	113.35	405.4	-353.2	425.7	375.2	50.47	8.434	
11,900.0	11,636.8	11,998.5	11,804.7	28.2	20.6	113.74	442.7	-353.4	426.8	376.2	50.59	8.438	
11,925.0	11,639.4	12,037.6	11,811.9	28.3	20.6	114.02	481.2	-353.7	427.7	377.0	50.67	8.441	
11,950.0	11,640.8	12,077.1	11,816.0	28.3	20.7	114.20	520.3	-354.0	428.2	377.5	50.72	8.443	
11,963.6	11,641.0	12,098.5	11,816.9	28.3	20.7	114.25	541.8	-354.1	428.4	377.7	50.73	8.445	
12,000.0	11,641.0	12,138.2	11,817.0	28.3	20.8	114.25	581.4	-354.4	428.5	377.7	50.81	8.434	
12,100.0	11,641.0	12,238.2	11,817.0	28.5	20.9	114.24	681.4	-355.1	428.7	377.6	51.08	8.392	
12,200.0	11,641.0	12,338.2	11,817.0	28.6	21.1	114.23	781.4	-355.8	428.9	377.5	51.40	8.343	
12,300.0	11,641.0	12,438.2	11,817.0	28.8	21.3	114.22	881.4	-356.5	429.1	377.3	51.77	8.288	
12,400.0	11,641.0	12,538.2	11,817.0	28.9	21.6	114.21	981.4	-357.3	429.3	377.1	52.17	8.227	
12,500.0	11,641.0	12,638.2	11,817.0	29.1	21.8	114.19	1,081.4	-358.0	429.4	376.8	52.62	8.161	
12,600.0	11,641.0	12,738.2	11,817.0	29.4	22.1	114.18	1,181.4	-358.7	429.6	376.5	53.11	8.090	
12,700.0	11,641.0	12,838.2	11,817.0	29.6	22.4	114.17	1,281.4	-359.4	429.8	376.2	53.63	8.014	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program:		0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-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	
12,800.0	11,641.0	12,938.2	11,817.0	29.9	22.8	114.16	1,381.4	-360.1	430.0	375.8	54.19	7.935		
12,900.0	11,641.0	13,038.2	11,817.0	30.1	23.1	114.15	1,481.4	-360.8	430.2	375.4	54.79	7.852		
13,000.0	11,641.0	13,138.2	11,817.0	30.4	23.5	114.14	1,581.4	-361.5	430.4	375.0	55.42	7.765		
13,100.0	11,641.0	13,238.2	11,817.0	30.7	23.9	114.13	1,681.4	-362.2	430.6	374.5	56.09	7.676		
13,200.0	11,641.0	13,338.2	11,817.0	31.1	24.3	114.12	1,781.4	-362.9	430.8	374.0	56.79	7.585		
13,300.0	11,641.0	13,438.2	11,817.0	31.4	24.8	114.10	1,881.4	-363.6	430.9	373.4	57.52	7.492		
13,400.0	11,641.0	13,538.2	11,817.0	31.8	25.2	114.09	1,981.4	-364.3	431.1	372.8	58.29	7.397		
13,500.0	11,641.0	13,638.2	11,817.0	32.1	25.7	114.08	2,081.4	-365.0	431.3	372.2	59.08	7.301		
13,600.0	11,641.0	13,738.2	11,817.0	32.5	26.1	114.07	2,181.4	-365.7	431.5	371.6	59.90	7.204		
13,700.0	11,641.0	13,838.2	11,817.0	32.9	26.6	114.06	2,281.4	-366.4	431.7	371.0	60.74	7.107		
13,800.0	11,641.0	13,938.2	11,817.0	33.3	27.1	114.05	2,381.4	-367.2	431.9	370.3	61.61	7.010		
13,900.0	11,641.0	14,038.2	11,817.0	33.7	27.7	114.04	2,481.4	-367.9	432.1	369.6	62.51	6.912		
14,000.0	11,641.0	14,138.2	11,817.0	34.2	28.2	114.03	2,581.4	-368.6	432.3	368.8	63.43	6.815		
14,100.0	11,641.0	14,238.2	11,817.0	34.6	28.7	114.02	2,681.4	-369.3	432.4	368.1	64.37	6.718		
14,200.0	11,641.0	14,338.2	11,817.0	35.1	29.3	114.00	2,781.4	-370.0	432.6	367.3	65.34	6.622		
14,300.0	11,641.0	14,438.2	11,817.0	35.6	29.8	113.99	2,881.4	-370.7	432.8	366.5	66.32	6.526		
14,400.0	11,641.0	14,538.2	11,817.0	36.0	30.4	113.98	2,981.4	-371.4	433.0	365.7	67.33	6.432		
14,500.0	11,641.0	14,638.2	11,817.0	36.5	31.0	113.97	3,081.4	-372.1	433.2	364.9	68.35	6.338		
14,600.0	11,641.0	14,738.2	11,817.0	37.0	31.5	113.96	3,181.4	-372.8	433.4	364.0	69.39	6.246		
14,700.0	11,641.0	14,838.2	11,817.0	37.5	32.1	113.95	3,281.4	-373.5	433.6	363.1	70.45	6.155		
14,800.0	11,641.0	14,938.2	11,817.0	38.0	32.7	113.94	3,381.4	-374.2	433.8	362.2	71.52	6.065		
14,900.0	11,641.0	15,038.2	11,817.0	38.6	33.3	113.93	3,481.4	-374.9	434.0	361.3	72.61	5.976		
15,000.0	11,641.0	15,138.2	11,817.0	39.1	33.9	113.92	3,581.3	-375.6	434.1	360.4	73.72	5.889		
15,100.0	11,641.0	15,238.2	11,817.0	39.6	34.6	113.91	3,681.3	-376.3	434.3	359.5	74.84	5.804		
15,200.0	11,641.0	15,338.2	11,817.0	40.2	35.2	113.89	3,781.3	-377.1	434.5	358.5	75.97	5.719		
15,300.0	11,641.0	15,438.2	11,817.0	40.7	35.8	113.88	3,881.3	-377.8	434.7	357.6	77.12	5.637		
15,400.0	11,641.0	15,538.2	11,817.0	41.3	36.4	113.87	3,981.3	-378.5	434.9	356.6	78.28	5.556		
15,500.0	11,641.0	15,638.2	11,817.0	41.9	37.1	113.86	4,081.3	-379.2	435.1	355.6	79.45	5.476		
15,600.0	11,641.0	15,738.2	11,817.0	42.4	37.7	113.85	4,181.3	-379.9	435.3	354.6	80.63	5.398		
15,700.0	11,641.0	15,838.2	11,817.0	43.0	38.4	113.84	4,281.3	-380.6	435.5	353.6	81.82	5.322		
15,800.0	11,641.0	15,938.2	11,817.0	43.6	39.0	113.83	4,381.3	-381.3	435.6	352.6	83.03	5.247		
15,900.0	11,641.0	16,038.2	11,817.0	44.2	39.7	113.82	4,481.3	-382.0	435.8	351.6	84.24	5.174		
16,000.0	11,641.0	16,138.2	11,817.0	44.8	40.3	113.81	4,581.3	-382.7	436.0	350.6	85.47	5.102		
16,100.0	11,641.0	16,238.2	11,817.0	45.4	41.0	113.80	4,681.3	-383.4	436.2	349.5	86.70	5.031		
16,200.0	11,641.0	16,338.2	11,817.0	46.0	41.7	113.78	4,781.3	-384.1	436.4	348.5	87.94	4.963		
16,300.0	11,641.0	16,438.2	11,817.0	46.6	42.3	113.77	4,881.3	-384.8	436.6	347.4	89.19	4.895		
16,400.0	11,641.0	16,538.2	11,817.0	47.2	43.0	113.76	4,981.3	-385.5	436.8	346.3	90.45	4.829		
16,500.0	11,641.0	16,638.2	11,817.0	47.8	43.7	113.75	5,081.3	-386.2	437.0	345.3	91.71	4.765		
16,600.0	11,641.0	16,738.2	11,817.0	48.5	44.4	113.74	5,181.3	-387.0	437.2	344.2	92.98	4.701		
16,700.0	11,641.0	16,838.2	11,817.0	49.1	45.0	113.73	5,281.3	-387.7	437.3	343.1	94.26	4.640		
16,800.0	11,641.0	16,938.2	11,817.0	49.7	45.7	113.72	5,381.3	-388.4	437.5	342.0	95.55	4.579		
16,900.0	11,641.0	17,038.2	11,817.0	50.4	46.4	113.71	5,481.3	-389.1	437.7	340.9	96.84	4.520		
17,000.0	11,641.0	17,138.2	11,817.0	51.0	47.1	113.70	5,581.3	-389.8	437.9	339.8	98.14	4.462		
17,100.0	11,641.0	17,238.2	11,817.0	51.6	47.8	113.69	5,681.3	-390.5	438.1	338.6	99.45	4.405		
17,200.0	11,641.0	17,338.2	11,817.0	52.3	48.5	113.68	5,781.3	-391.2	438.3	337.5	100.76	4.350		
17,300.0	11,641.0	17,438.2	11,817.0	52.9	49.2	113.67	5,881.3	-391.9	438.5	336.4	102.08	4.296		
17,400.0	11,641.0	17,538.2	11,817.0	53.6	49.9	113.65	5,981.3	-392.6	438.7	335.3	103.40	4.242		
17,500.0	11,641.0	17,638.2	11,817.0	54.2	50.6	113.64	6,081.3	-393.3	438.9	334.1	104.73	4.190		
17,600.0	11,641.0	17,738.2	11,817.0	54.9	51.3	113.63	6,181.3	-394.0	439.0	333.0	106.06	4.140		
17,700.0	11,641.0	17,838.2	11,817.0	55.6	52.0	113.62	6,281.3	-394.7	439.2	331.8	107.40	4.090		
17,800.0	11,641.0	17,938.2	11,817.0	56.2	52.7	113.61	6,381.3	-395.4	439.4	330.7	108.74	4.041		
17,900.0	11,641.0	18,038.2	11,817.0	56.9	53.4	113.60	6,481.3	-396.1	439.6	329.5	110.08	3.993		

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-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)		
18,000.0	11,641.0	18,138.2	11,817.0	57.5	54.1	113.59	6,581.3	-396.9	439.8	328.4	111.43	3.947	
18,100.0	11,641.0	18,238.2	11,817.0	58.2	54.8	113.58	6,681.3	-397.6	440.0	327.2	112.79	3.901	
18,200.0	11,641.0	18,338.2	11,817.0	58.9	55.5	113.57	6,781.3	-398.3	440.2	326.0	114.15	3.856	
18,300.0	11,641.0	18,438.2	11,817.0	59.6	56.2	113.56	6,881.3	-399.0	440.4	324.9	115.51	3.812	
18,400.0	11,641.0	18,538.2	11,817.0	60.2	56.9	113.55	6,981.3	-399.7	440.6	323.7	116.88	3.769	
18,500.0	11,641.0	18,638.2	11,817.0	60.9	57.6	113.54	7,081.3	-400.4	440.7	322.5	118.25	3.727	
18,600.0	11,641.0	18,738.2	11,817.0	61.6	58.4	113.53	7,181.3	-401.1	440.9	321.3	119.62	3.686	
18,700.0	11,641.0	18,838.2	11,817.0	62.3	59.1	113.51	7,281.2	-401.8	441.1	320.1	120.99	3.646	
18,800.0	11,641.0	18,938.2	11,817.0	63.0	59.8	113.50	7,381.2	-402.5	441.3	318.9	122.37	3.606	
18,900.0	11,641.0	19,038.2	11,817.0	63.7	60.5	113.49	7,481.2	-403.2	441.5	317.7	123.76	3.567	
19,000.0	11,641.0	19,138.2	11,817.0	64.3	61.2	113.48	7,581.2	-403.9	441.7	316.5	125.14	3.529	
19,100.0	11,641.0	19,238.1	11,817.0	65.0	62.0	113.47	7,681.2	-404.6	441.9	315.3	126.53	3.492	
19,200.0	11,641.0	19,338.1	11,817.0	65.7	62.7	113.46	7,781.2	-405.3	442.1	314.1	127.92	3.456	
19,300.0	11,641.0	19,438.1	11,817.0	66.4	63.4	113.45	7,881.2	-406.0	442.3	312.9	129.32	3.420	
19,400.0	11,641.0	19,538.1	11,817.0	67.1	64.1	113.44	7,981.2	-406.8	442.4	311.7	130.71	3.385	
19,500.0	11,641.0	19,638.1	11,817.0	67.8	64.8	113.43	8,081.2	-407.5	442.6	310.5	132.11	3.350	
19,600.0	11,641.0	19,738.1	11,817.0	68.5	65.6	113.42	8,181.2	-408.2	442.8	309.3	133.51	3.317	
19,700.0	11,641.0	19,838.1	11,817.0	69.2	66.3	113.41	8,281.2	-408.9	443.0	308.1	134.92	3.284	
19,800.0	11,641.0	19,938.1	11,817.0	69.9	67.0	113.40	8,381.2	-409.6	443.2	306.9	136.32	3.251	
19,900.0	11,641.0	20,038.1	11,817.0	70.6	67.8	113.39	8,481.2	-410.3	443.4	305.7	137.73	3.219	
20,000.0	11,641.0	20,138.1	11,817.0	71.3	68.5	113.38	8,581.2	-411.0	443.6	304.4	139.14	3.188	
20,100.0	11,641.0	20,238.1	11,817.0	72.0	69.2	113.37	8,681.2	-411.7	443.8	303.2	140.55	3.157	
20,200.0	11,641.0	20,338.1	11,817.0	72.7	69.9	113.36	8,781.2	-412.4	444.0	302.0	141.97	3.127	
20,300.0	11,641.0	20,438.1	11,817.0	73.4	70.7	113.35	8,881.2	-413.1	444.1	300.8	143.39	3.098	
20,400.0	11,641.0	20,538.1	11,817.0	74.1	71.4	113.33	8,981.2	-413.8	444.3	299.5	144.80	3.068	
20,500.0	11,641.0	20,638.1	11,817.0	74.8	72.1	113.32	9,081.2	-414.5	444.5	298.3	146.22	3.040	
20,600.0	11,641.0	20,738.1	11,817.0	75.5	72.9	113.31	9,181.2	-415.2	444.7	297.1	147.65	3.012	
20,700.0	11,641.0	20,838.1	11,817.0	76.2	73.6	113.30	9,281.2	-415.9	444.9	295.8	149.07	2.984	
20,800.0	11,641.0	20,938.1	11,817.0	77.0	74.3	113.29	9,381.2	-416.7	445.1	294.6	150.50	2.957	
20,900.0	11,641.0	21,038.1	11,817.0	77.7	75.1	113.28	9,481.2	-417.4	445.3	293.4	151.92	2.931	
21,000.0	11,641.0	21,138.1	11,817.0	78.4	75.8	113.27	9,581.2	-418.1	445.5	292.1	153.35	2.905	
21,100.0	11,641.0	21,238.1	11,817.0	79.1	76.5	113.26	9,681.2	-418.8	445.7	290.9	154.78	2.879	
21,200.0	11,641.0	21,338.1	11,817.0	79.8	77.3	113.25	9,781.2	-419.5	445.8	289.6	156.22	2.854	
21,300.0	11,641.0	21,438.1	11,817.0	80.5	78.0	113.24	9,881.2	-420.2	446.0	288.4	157.65	2.829	
21,400.0	11,641.0	21,538.1	11,817.0	81.2	78.8	113.23	9,981.2	-420.9	446.2	287.1	159.08	2.805	
21,500.0	11,641.0	21,638.1	11,817.0	82.0	79.5	113.22	10,081.2	-421.6	446.4	285.9	160.52	2.781	
21,600.0	11,641.0	21,738.1	11,817.0	82.7	80.2	113.21	10,181.2	-422.3	446.6	284.6	161.96	2.757	
21,700.0	11,641.0	21,838.1	11,817.0	83.4	81.0	113.20	10,281.2	-423.0	446.8	283.4	163.40	2.734	
21,800.0	11,641.0	21,938.1	11,817.0	84.1	81.7	113.19	10,381.2	-423.7	447.0	282.1	164.84	2.712	
21,862.1	11,641.0	22,000.3	11,817.0	84.6	82.2	113.18	10,443.3	-424.2	447.1	281.4	165.73	2.698	
21,900.0	11,641.0	22,038.1	11,817.0	84.8	82.4	113.18	10,481.2	-424.4	447.2	281.0	166.20	2.690	
21,912.1	11,641.0	22,050.2	11,817.0	84.9	82.5	113.18	10,493.3	-424.5	447.2	280.8	166.36	2.688 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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11167-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	0.0	3.0	3.0	-0.49	60.0	-0.5	60.0				
100.0	100.0	100.0	100.0	3.1	3.1	-0.49	60.0	-0.5	60.0	53.5	6.54	9.177	
200.0	200.0	200.0	200.0	3.2	3.2	-0.49	60.0	-0.5	60.0	53.2	6.79	8.841	
300.0	300.0	300.0	300.0	3.3	3.3	-0.49	60.0	-0.5	60.0	53.0	7.03	8.530	
400.0	400.0	400.0	400.0	3.4	3.4	-0.49	60.0	-0.5	60.0	52.7	7.28	8.243	
500.0	500.0	500.0	500.0	3.6	3.6	-0.49	60.0	-0.5	60.0	52.5	7.52	7.976	
600.0	600.0	600.0	600.0	3.7	3.7	-0.49	60.0	-0.5	60.0	52.2	7.76	7.727	
700.0	700.0	700.0	700.0	3.8	3.8	-0.49	60.0	-0.5	60.0	52.0	8.00	7.495	
800.0	800.0	800.0	800.0	3.9	3.9	-0.49	60.0	-0.5	60.0	51.7	8.24	7.277	
900.0	900.0	900.0	900.0	4.0	4.0	-0.49	60.0	-0.5	60.0	51.5	8.48	7.072	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	-0.49	60.0	-0.5	60.0	51.3	8.72	6.880 CC, ES	
1,100.0	1,100.0	1,099.5	1,099.5	4.3	4.3	87.78	60.3	1.2	60.2	51.3	8.93	6.741	
1,200.0	1,199.8	1,198.4	1,198.2	4.5	4.5	97.17	61.2	6.3	62.0	52.8	9.21	6.731	
1,300.0	1,299.5	1,296.4	1,296.0	4.9	4.5	110.60	62.6	14.2	68.2	58.7	9.48	7.194	
1,400.0	1,398.7	1,394.3	1,393.4	5.2	4.6	123.56	64.1	22.6	79.8	69.9	9.87	8.081	
1,500.0	1,497.7	1,491.8	1,490.5	5.4	4.7	133.84	65.5	31.0	95.7	85.4	10.28	9.306	
1,600.0	1,596.8	1,589.3	1,587.7	5.7	4.8	141.09	67.0	39.3	113.8	103.1	10.66	10.668	
1,700.0	1,695.8	1,689.0	1,687.1	6.0	5.0	146.28	68.4	47.0	132.3	121.1	11.18	11.827	
1,800.0	1,794.8	1,789.4	1,787.3	6.3	5.2	150.03	69.4	52.9	149.9	138.1	11.70	12.803	
1,900.0	1,893.8	1,890.5	1,888.3	6.7	5.4	152.86	70.2	57.2	166.2	154.0	12.24	13.577	
2,000.0	1,992.9	1,992.2	1,990.0	7.0	5.6	155.09	70.6	59.7	181.2	168.4	12.80	14.159	
2,100.0	2,091.9	2,094.1	2,091.9	7.3	5.8	156.90	70.7	60.4	194.7	181.4	13.30	14.638	
2,200.0	2,190.9	2,193.1	2,190.9	7.7	5.9	158.41	70.7	60.4	207.5	193.7	13.82	15.014	
2,300.0	2,289.9	2,292.2	2,289.9	8.1	6.0	159.74	70.7	60.4	220.6	206.2	14.33	15.387	
2,400.0	2,389.0	2,391.2	2,389.0	8.4	6.2	160.92	70.7	60.4	233.7	218.8	14.85	15.736	
2,500.0	2,488.0	2,490.2	2,488.0	8.8	6.3	161.97	70.7	60.4	246.9	231.5	15.38	16.058	
2,600.0	2,587.0	2,589.2	2,587.0	9.2	6.4	162.92	70.7	60.4	260.2	244.3	15.91	16.356	
2,700.0	2,686.1	2,688.3	2,686.1	9.6	6.5	163.78	70.7	60.4	273.5	257.1	16.44	16.633	
2,800.0	2,785.1	2,787.3	2,785.1	10.0	6.6	164.55	70.7	60.4	286.9	269.9	16.99	16.889	
2,900.0	2,884.1	2,886.3	2,884.1	10.4	6.8	165.26	70.7	60.4	300.4	282.8	17.54	17.128	
3,000.0	2,983.1	2,985.4	2,983.1	10.8	6.9	165.91	70.7	60.4	313.9	295.8	18.09	17.349	
3,100.0	3,082.2	3,084.4	3,082.2	11.2	7.0	166.50	70.7	60.4	327.4	308.7	18.65	17.555	
3,200.0	3,181.2	3,183.4	3,181.2	11.6	7.1	167.04	70.7	60.4	340.9	321.7	19.21	17.748	
3,300.0	3,280.2	3,282.4	3,280.2	12.0	7.2	167.55	70.7	60.4	354.5	334.7	19.77	17.928	
3,400.0	3,379.2	3,381.5	3,379.2	12.4	7.3	168.02	70.7	60.4	368.1	347.8	20.34	18.096	
3,500.0	3,478.3	3,480.5	3,478.3	12.8	7.4	168.45	70.7	60.4	381.8	360.8	20.91	18.254	
3,600.0	3,577.3	3,579.5	3,577.3	13.2	7.6	168.85	70.7	60.4	395.4	373.9	21.49	18.402	
3,700.0	3,676.3	3,678.5	3,676.3	13.6	7.7	169.23	70.7	60.4	409.1	387.0	22.06	18.541	
3,800.0	3,775.3	3,777.6	3,775.3	14.0	7.8	169.58	70.7	60.4	422.8	400.1	22.64	18.672	
3,900.0	3,874.4	3,876.6	3,874.4	14.4	7.9	169.91	70.7	60.4	436.5	413.2	23.22	18.795	
4,000.0	3,973.4	3,975.6	3,973.4	14.8	8.0	170.22	70.7	60.4	450.2	426.4	23.80	18.911	
4,100.0	4,072.4	4,074.7	4,072.4	15.2	8.1	170.51	70.7	60.4	463.9	439.5	24.39	19.021	
4,200.0	4,171.5	4,173.7	4,171.5	15.7	8.2	170.79	70.7	60.4	477.6	452.7	24.97	19.125	
4,300.0	4,270.5	4,272.7	4,270.5	16.1	8.3	171.05	70.7	60.4	491.4	465.8	25.56	19.224	
4,400.0	4,369.5	4,371.7	4,369.5	16.5	8.4	171.29	70.7	60.4	505.1	479.0	26.15	19.317	
4,500.0	4,468.5	4,470.8	4,468.5	16.9	8.5	171.53	70.7	60.4	518.9	492.2	26.74	19.406	
4,600.0	4,567.6	4,569.8	4,567.6	17.3	8.6	171.75	70.7	60.4	532.7	505.3	27.33	19.490	
4,700.0	4,666.6	4,668.8	4,666.6	17.8	8.7	171.96	70.7	60.4	546.4	518.5	27.92	19.570	
4,800.0	4,765.6	4,767.8	4,765.6	18.2	8.8	172.16	70.7	60.4	560.2	531.7	28.52	19.646	
4,900.0	4,864.6	4,866.9	4,864.6	18.6	8.9	172.35	70.7	60.4	574.0	544.9	29.11	19.719	
5,000.0	4,963.7	4,965.9	4,963.7	19.0	9.0	172.53	70.7	60.4	587.8	558.1	29.71	19.789	
5,100.0	5,062.7	5,064.9	5,062.7	19.4	9.1	172.70	70.7	60.4	601.6	571.3	30.30	19.855	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1													Offset Site Error: 0.0 usft	
Survey Program:		0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11167-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		
5,200.0	5,161.7	5,163.9	5,161.7	19.9	9.2	172.86	70.7	60.4	615.4	584.5	30.90	19.918		
5,300.0	5,260.7	5,263.0	5,260.7	20.3	9.3	173.02	70.7	60.4	629.2	597.8	31.50	19.979		
5,400.0	5,359.8	5,362.0	5,359.8	20.7	9.4	173.17	70.7	60.4	643.1	611.0	32.09	20.037		
5,500.0	5,458.8	5,461.0	5,458.8	21.1	9.5	173.32	70.7	60.4	656.9	624.2	32.69	20.093		
5,600.0	5,557.8	5,560.1	5,557.8	21.6	9.6	173.45	70.7	60.4	670.7	637.4	33.29	20.146		
5,700.0	5,656.9	5,659.1	5,656.9	22.0	9.7	173.59	70.7	60.4	684.5	650.7	33.89	20.197		
5,800.0	5,755.9	5,758.1	5,755.9	22.4	9.8	173.71	70.7	60.4	698.4	663.9	34.49	20.246		
5,900.0	5,854.9	5,857.1	5,854.9	22.8	9.9	173.84	70.7	60.4	712.2	677.1	35.10	20.294		
6,000.0	5,953.9	5,956.2	5,953.9	23.3	10.0	173.95	70.7	60.4	726.1	690.4	35.70	20.339		
6,100.0	6,053.0	6,055.2	6,053.0	23.7	10.1	174.07	70.7	60.4	739.9	703.6	36.30	20.383		
6,139.4	6,092.0	6,094.2	6,092.0	23.9	10.2	174.11	70.7	60.4	745.4	708.8	36.53	20.406		
6,200.0	6,152.0	6,154.3	6,152.0	24.1	10.2	174.18	70.7	60.4	753.4	716.6	36.88	20.430		
6,300.0	6,251.3	6,253.5	6,251.3	24.5	10.3	174.29	70.7	60.4	765.4	727.9	37.46	20.430		
6,400.0	6,350.8	6,353.0	6,350.8	24.9	10.4	174.37	70.7	60.4	775.6	737.6	38.03	20.394		
6,500.0	6,450.4	6,452.6	6,450.4	25.3	10.5	174.44	70.7	60.4	784.1	745.5	38.58	20.325		
6,600.0	6,550.2	6,552.4	6,550.2	25.7	10.6	174.50	70.7	60.4	790.8	751.7	39.10	20.227		
6,700.0	6,650.1	6,652.3	6,650.1	26.0	10.7	174.54	70.7	60.4	795.9	756.3	39.59	20.103		
6,800.0	6,750.0	6,752.2	6,750.0	26.3	10.8	174.56	70.7	60.4	799.2	759.1	40.04	19.959		
6,900.0	6,850.0	6,852.2	6,850.0	26.6	10.9	174.57	70.7	60.4	800.7	760.3	40.42	19.809		
6,939.4	6,889.4	6,891.6	6,889.4	26.6	10.9	89.57	70.7	60.4	800.8	760.4	40.50	19.775		
7,000.0	6,950.0	6,952.2	6,950.0	26.6	11.0	89.57	70.7	60.4	800.8	760.3	40.54	19.754		
7,100.0	7,050.0	7,052.2	7,050.0	26.7	11.1	89.57	70.7	60.4	800.8	760.2	40.63	19.711		
7,200.0	7,150.0	7,152.2	7,150.0	26.7	11.2	89.57	70.7	60.4	800.8	760.1	40.72	19.668		
7,300.0	7,250.0	7,252.2	7,250.0	26.7	11.3	89.57	70.7	60.4	800.8	760.0	40.81	19.624		
7,400.0	7,350.0	7,352.2	7,350.0	26.7	11.4	89.57	70.7	60.4	800.8	759.9	40.90	19.581		
7,500.0	7,450.0	7,452.2	7,450.0	26.8	11.5	89.57	70.7	60.4	800.8	759.9	40.99	19.537		
7,600.0	7,550.0	7,552.2	7,550.0	26.8	11.6	89.57	70.7	60.4	800.8	759.8	41.08	19.494		
7,700.0	7,650.0	7,652.2	7,650.0	26.8	11.7	89.57	70.7	60.4	800.8	759.7	41.17	19.451		
7,800.0	7,750.0	7,752.2	7,750.0	26.9	11.8	89.57	70.7	60.4	800.8	759.6	41.27	19.407		
7,900.0	7,850.0	7,852.2	7,850.0	26.9	11.9	89.57	70.7	60.4	800.8	759.5	41.36	19.364		
8,000.0	7,950.0	7,952.2	7,950.0	26.9	12.0	89.57	70.7	60.4	800.8	759.4	41.45	19.320		
8,100.0	8,050.0	8,052.2	8,050.0	27.0	12.1	89.57	70.7	60.4	800.8	759.3	41.54	19.277		
8,200.0	8,150.0	8,152.2	8,150.0	27.0	12.1	89.57	70.7	60.4	800.8	759.2	41.64	19.233		
8,300.0	8,250.0	8,252.2	8,250.0	27.0	12.2	89.57	70.7	60.4	800.8	759.1	41.73	19.190		
8,400.0	8,350.0	8,352.2	8,350.0	27.1	12.3	89.57	70.7	60.4	800.8	759.0	41.83	19.146		
8,500.0	8,450.0	8,452.2	8,450.0	27.1	12.4	89.57	70.7	60.4	800.8	758.9	41.92	19.103		
8,600.0	8,550.0	8,552.2	8,550.0	27.1	12.5	89.57	70.7	60.4	800.8	758.8	42.02	19.060		
8,700.0	8,650.0	8,652.2	8,650.0	27.2	12.6	89.57	70.7	60.4	800.8	758.7	42.11	19.016		
8,800.0	8,750.0	8,752.2	8,750.0	27.2	12.7	89.57	70.7	60.4	800.8	758.6	42.21	18.973		
8,900.0	8,850.0	8,852.2	8,850.0	27.2	12.8	89.57	70.7	60.4	800.8	758.5	42.31	18.929		
9,000.0	8,950.0	8,952.2	8,950.0	27.3	12.9	89.57	70.7	60.4	800.8	758.4	42.40	18.886		
9,100.0	9,050.0	9,052.2	9,050.0	27.3	13.0	89.57	70.7	60.4	800.8	758.3	42.50	18.843		
9,200.0	9,150.0	9,152.2	9,150.0	27.3	13.1	89.57	70.7	60.4	800.8	758.2	42.60	18.799		
9,300.0	9,250.0	9,252.2	9,250.0	27.4	13.2	89.57	70.7	60.4	800.8	758.2	42.70	18.756		
9,400.0	9,350.0	9,352.2	9,350.0	27.4	13.3	89.57	70.7	60.4	800.8	758.1	42.80	18.713		
9,500.0	9,450.0	9,452.2	9,450.0	27.4	13.4	89.57	70.7	60.4	800.8	758.0	42.90	18.670		
9,600.0	9,550.0	9,552.2	9,550.0	27.5	13.4	89.57	70.7	60.4	800.8	757.9	42.99	18.627		
9,700.0	9,650.0	9,652.2	9,650.0	27.5	13.5	89.57	70.7	60.4	800.8	757.8	43.09	18.583		
9,800.0	9,750.0	9,752.2	9,750.0	27.5	13.6	89.57	70.7	60.4	800.8	757.7	43.19	18.540		
9,900.0	9,850.0	9,852.2	9,850.0	27.6	13.7	89.57	70.7	60.4	800.8	757.6	43.30	18.497		
10,000.0	9,950.0	9,952.2	9,950.0	27.6	13.8	89.57	70.7	60.4	800.8	757.5	43.40	18.454		
10,100.0	10,050.0	10,052.2	10,050.0	27.6	13.9	89.57	70.7	60.4	800.8	757.4	43.50	18.411		

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1													Offset Site Error: 0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11167-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		
10,200.0	10,150.0	10,152.2	10,150.0	27.7	14.0	89.57	70.7	60.4	800.8	757.3	43.60	18.368			
10,300.0	10,250.0	10,252.2	10,250.0	27.7	14.1	89.57	70.7	60.4	800.8	757.1	43.70	18.326			
10,400.0	10,350.0	10,352.2	10,350.0	27.7	14.2	89.57	70.7	60.4	800.8	757.0	43.80	18.283			
10,500.0	10,450.0	10,452.2	10,450.0	27.8	14.3	89.57	70.7	60.4	800.8	756.9	43.91	18.240			
10,600.0	10,550.0	10,552.2	10,550.0	27.8	14.4	89.57	70.7	60.4	800.8	756.8	44.01	18.197			
10,700.0	10,650.0	10,652.2	10,650.0	27.9	14.4	89.57	70.7	60.4	800.8	756.7	44.11	18.155			
10,800.0	10,750.0	10,752.2	10,750.0	27.9	14.5	89.57	70.7	60.4	800.8	756.6	44.22	18.112			
10,900.0	10,850.0	10,852.2	10,850.0	27.9	14.6	89.57	70.7	60.4	800.8	756.5	44.32	18.069			
11,000.0	10,950.0	10,952.2	10,950.0	28.0	14.7	89.57	70.7	60.4	800.8	756.4	44.43	18.027			
11,100.0	11,050.0	11,052.2	11,050.0	28.0	14.8	89.57	70.7	60.4	800.8	756.3	44.53	17.985			
11,200.0	11,150.0	11,152.2	11,150.0	28.0	14.9	89.57	70.7	60.4	800.8	756.2	44.63	17.945			
11,213.6	11,163.5	11,165.8	11,163.5	28.0	14.9	89.57	70.7	60.4	800.8	756.2	44.64	17.942			
11,225.0	11,175.0	11,177.2	11,175.0	28.0	14.9	90.10	70.8	60.4	800.8	756.2	44.64	17.941			
11,250.0	11,199.9	11,202.2	11,199.9	28.1	14.9	90.10	72.0	60.4	800.9	756.2	44.65	17.938			
11,275.0	11,224.8	11,227.2	11,224.8	28.1	14.9	90.11	74.6	60.4	800.9	756.2	44.65	17.937			
11,300.0	11,249.5	11,252.2	11,249.5	28.1	14.9	90.11	78.4	60.4	800.9	756.2	44.65	17.935			
11,325.0	11,274.0	11,277.2	11,274.0	28.1	14.9	90.11	83.4	60.3	800.9	756.2	44.66	17.933			
11,350.0	11,298.1	11,302.2	11,298.1	28.1	14.9	90.11	89.8	60.3	800.9	756.2	44.66	17.932			
11,375.0	11,321.9	11,327.2	11,321.9	28.1	14.9	90.12	97.4	60.2	800.9	756.2	44.67	17.930			
11,400.0	11,345.3	11,352.2	11,345.3	28.1	14.9	90.12	106.3	60.2	800.9	756.2	44.67	17.928			
11,425.0	11,368.1	11,377.2	11,368.2	28.1	15.0	90.12	116.4	60.1	800.9	756.3	44.68	17.926			
11,450.0	11,390.4	11,402.2	11,390.5	28.1	15.0	90.12	127.6	60.0	801.0	756.3	44.69	17.923			
11,475.0	11,412.1	11,427.2	11,412.3	28.1	15.0	90.12	140.0	59.9	801.0	756.3	44.70	17.921			
11,500.0	11,433.1	11,452.2	11,433.3	28.1	15.0	90.12	153.6	59.8	801.0	756.3	44.71	17.917			
11,525.0	11,453.4	11,477.2	11,453.6	28.1	15.0	90.12	168.2	59.7	801.0	756.3	44.72	17.914			
11,550.0	11,472.8	11,502.3	11,473.1	28.1	15.1	90.12	183.8	59.6	801.1	756.4	44.73	17.910			
11,575.0	11,491.4	11,527.3	11,491.8	28.1	15.1	90.12	200.5	59.5	801.1	756.4	44.74	17.905			
11,600.0	11,509.1	11,552.3	11,509.5	28.1	15.1	90.12	218.1	59.4	801.2	756.4	44.76	17.899			
11,625.0	11,525.9	11,577.3	11,526.4	28.1	15.1	90.12	236.7	59.2	801.2	756.4	44.78	17.893			
11,650.0	11,541.7	11,602.4	11,542.2	28.1	15.2	90.12	256.0	59.1	801.2	756.4	44.80	17.886			
11,675.0	11,556.4	11,627.4	11,557.0	28.1	15.2	90.11	276.2	59.0	801.3	756.5	44.82	17.878			
11,700.0	11,570.1	11,652.4	11,570.7	28.1	15.2	90.11	297.2	58.8	801.3	756.5	44.85	17.868			
11,725.0	11,582.6	11,677.5	11,583.3	28.1	15.3	90.11	318.8	58.7	801.4	756.5	44.87	17.858			
11,750.0	11,594.0	11,702.5	11,594.7	28.1	15.3	90.11	341.1	58.5	801.4	756.5	44.90	17.847			
11,775.0	11,604.3	11,727.6	11,605.0	28.2	15.3	90.10	363.9	58.3	801.4	756.5	44.94	17.834			
11,800.0	11,613.3	11,752.6	11,614.1	28.2	15.3	90.10	387.3	58.2	801.5	756.5	44.98	17.820			
11,825.0	11,621.0	11,777.7	11,621.9	28.2	15.3	90.10	411.0	58.0	801.5	756.5	45.02	17.805			
11,850.0	11,627.6	11,802.7	11,628.4	28.2	15.4	90.09	435.2	57.8	801.6	756.5	45.06	17.789			
11,875.0	11,632.8	11,827.7	11,633.7	28.2	15.4	90.09	459.7	57.7	801.6	756.5	45.11	17.771			
11,900.0	11,636.8	11,852.8	11,637.7	28.2	15.4	90.08	484.4	57.5	801.7	756.5	45.16	17.752			
11,925.0	11,639.4	11,877.8	11,640.4	28.3	15.4	90.08	509.3	57.3	801.7	756.5	45.22	17.732			
11,950.0	11,640.8	11,902.9	11,641.8	28.3	15.4	90.07	534.3	57.1	801.8	756.5	45.27	17.710			
11,963.6	11,641.0	11,916.5	11,642.0	28.3	15.4	90.07	547.9	57.0	801.8	756.5	45.31	17.698			
12,000.0	11,641.0	11,952.9	11,642.0	28.3	15.5	90.07	584.4	56.8	801.9	756.5	45.40	17.662			
12,100.0	11,641.0	12,052.9	11,642.0	28.5	15.7	90.07	684.4	56.1	802.1	756.4	45.71	17.546			
12,200.0	11,641.0	12,152.9	11,642.0	28.6	15.9	90.07	784.3	55.4	802.3	756.2	46.08	17.413			
12,300.0	11,641.0	12,252.9	11,642.0	28.8	16.2	90.07	884.3	54.6	802.5	756.0	46.48	17.265			
12,400.0	11,641.0	12,352.9	11,642.0	28.9	16.5	90.07	984.3	53.9	802.7	755.8	46.93	17.103			
12,500.0	11,641.0	12,452.9	11,642.0	29.1	16.9	90.07	1,084.3	53.2	802.9	755.5	47.43	16.928			
12,600.0	11,641.0	12,552.9	11,642.0	29.4	17.2	90.07	1,184.3	52.5	803.1	755.2	47.97	16.743			
12,700.0	11,641.0	12,652.9	11,642.0	29.6	17.6	90.07	1,284.3	51.8	803.3	754.8	48.55	16.547			
12,800.0	11,641.0	12,752.9	11,642.0	29.9	18.1	90.07	1,384.3	51.1	803.5	754.4	49.17	16.342			

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11167-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	
12,900.0	11,641.0	12,852.9	11,642.0	30.1	18.5	90.07	1,484.3	50.4	803.7	753.9	49.83	16.131	
13,000.0	11,641.0	12,952.9	11,642.0	30.4	19.0	90.07	1,584.3	49.7	803.9	753.4	50.52	15.913	
13,100.0	11,641.0	13,052.9	11,642.0	30.7	19.5	90.07	1,684.3	49.0	804.1	752.9	51.25	15.690	
13,200.0	11,641.0	13,152.9	11,642.0	31.1	20.0	90.07	1,784.3	48.3	804.3	752.3	52.01	15.464	
13,300.0	11,641.0	13,252.9	11,642.0	31.4	20.5	90.07	1,884.3	47.6	804.5	751.7	52.81	15.235	
13,400.0	11,641.0	13,352.9	11,642.0	31.8	21.0	90.07	1,984.3	46.8	804.8	751.1	53.64	15.004	
13,500.0	11,641.0	13,452.9	11,642.0	32.1	21.6	90.07	2,084.3	46.1	805.0	750.5	54.49	14.772	
13,600.0	11,641.0	13,552.9	11,642.0	32.5	22.1	90.07	2,184.3	45.4	805.2	749.8	55.38	14.539	
13,700.0	11,641.0	13,652.9	11,642.0	32.9	22.7	90.07	2,284.3	44.7	805.4	749.1	56.29	14.308	
13,800.0	11,641.0	13,752.9	11,642.0	33.3	23.3	90.07	2,384.3	44.0	805.6	748.3	57.22	14.077	
13,900.0	11,641.0	13,852.9	11,642.0	33.7	23.9	90.07	2,484.3	43.3	805.8	747.6	58.18	13.848	
14,000.0	11,641.0	13,952.9	11,642.0	34.2	24.5	90.07	2,584.3	42.6	806.0	746.8	59.17	13.622	
14,100.0	11,641.0	14,052.9	11,642.0	34.6	25.1	90.07	2,684.3	41.9	806.2	746.0	60.17	13.398	
14,200.0	11,641.0	14,152.9	11,642.0	35.1	25.7	90.07	2,784.3	41.2	806.4	745.2	61.20	13.176	
14,300.0	11,641.0	14,252.9	11,642.0	35.6	26.3	90.07	2,884.3	40.5	806.6	744.3	62.24	12.958	
14,400.0	11,641.0	14,352.9	11,642.0	36.0	27.0	90.07	2,984.3	39.8	806.8	743.5	63.31	12.744	
14,500.0	11,641.0	14,452.9	11,642.0	36.5	27.6	90.07	3,084.3	39.0	807.0	742.6	64.39	12.533	
14,600.0	11,641.0	14,552.9	11,642.0	37.0	28.3	90.07	3,184.3	38.3	807.2	741.7	65.49	12.325	
14,700.0	11,641.0	14,652.9	11,642.0	37.5	28.9	90.07	3,284.3	37.6	807.4	740.8	66.61	12.122	
14,800.0	11,641.0	14,752.9	11,642.0	38.0	29.6	90.07	3,384.3	36.9	807.6	739.9	67.74	11.923	
14,900.0	11,641.0	14,852.9	11,642.0	38.6	30.2	90.07	3,484.3	36.2	807.8	738.9	68.88	11.728	
15,000.0	11,641.0	14,952.9	11,642.0	39.1	30.9	90.07	3,584.3	35.5	808.0	738.0	70.04	11.537	
15,100.0	11,641.0	15,052.9	11,642.0	39.6	31.6	90.07	3,684.3	34.8	808.2	737.0	71.21	11.350	
15,200.0	11,641.0	15,152.9	11,642.0	40.2	32.3	90.07	3,784.3	34.1	808.4	736.0	72.40	11.167	
15,300.0	11,641.0	15,252.9	11,642.0	40.7	32.9	90.07	3,884.3	33.4	808.6	735.0	73.59	10.988	
15,400.0	11,641.0	15,352.9	11,642.0	41.3	33.6	90.07	3,984.3	32.7	808.8	734.0	74.80	10.813	
15,500.0	11,641.0	15,452.9	11,642.0	41.9	34.3	90.07	4,084.3	31.9	809.0	733.0	76.02	10.643	
15,600.0	11,641.0	15,552.9	11,642.0	42.4	35.0	90.07	4,184.3	31.2	809.2	732.0	77.24	10.476	
15,700.0	11,641.0	15,652.9	11,642.0	43.0	35.7	90.07	4,284.3	30.5	809.4	731.0	78.48	10.314	
15,800.0	11,641.0	15,752.9	11,642.0	43.6	36.4	90.07	4,384.3	29.8	809.6	729.9	79.73	10.155	
15,900.0	11,641.0	15,852.9	11,642.0	44.2	37.1	90.07	4,484.2	29.1	809.8	728.9	80.99	10.000	
16,000.0	11,641.0	15,952.9	11,642.0	44.8	37.8	90.07	4,584.2	28.4	810.0	727.8	82.25	9.848	
16,100.0	11,641.0	16,052.9	11,642.0	45.4	38.5	90.07	4,684.2	27.7	810.3	726.7	83.52	9.701	
16,200.0	11,641.0	16,152.9	11,642.0	46.0	39.2	90.07	4,784.2	27.0	810.5	725.7	84.80	9.557	
16,300.0	11,641.0	16,252.9	11,642.0	46.6	39.9	90.07	4,884.2	26.3	810.7	724.6	86.09	9.416	
16,400.0	11,641.0	16,352.9	11,642.0	47.2	40.6	90.07	4,984.2	25.6	810.9	723.5	87.39	9.279	
16,500.0	11,641.0	16,452.9	11,642.0	47.8	41.3	90.07	5,084.2	24.9	811.1	722.4	88.69	9.145	
16,600.0	11,641.0	16,552.9	11,642.0	48.5	42.0	90.07	5,184.2	24.1	811.3	721.3	90.00	9.014	
16,700.0	11,641.0	16,652.9	11,642.0	49.1	42.8	90.07	5,284.2	23.4	811.5	720.2	91.31	8.887	
16,800.0	11,641.0	16,752.9	11,642.0	49.7	43.5	90.07	5,384.2	22.7	811.7	719.0	92.63	8.762	
16,900.0	11,641.0	16,852.9	11,642.0	50.4	44.2	90.07	5,484.2	22.0	811.9	717.9	93.96	8.641	
17,000.0	11,641.0	16,952.9	11,642.0	51.0	44.9	90.07	5,584.2	21.3	812.1	716.8	95.29	8.522	
17,100.0	11,641.0	17,052.9	11,642.0	51.6	45.6	90.07	5,684.2	20.6	812.3	715.7	96.62	8.407	
17,200.0	11,641.0	17,152.9	11,642.0	52.3	46.4	90.07	5,784.2	19.9	812.5	714.5	97.97	8.294	
17,300.0	11,641.0	17,252.9	11,642.0	52.9	47.1	90.07	5,884.2	19.2	812.7	713.4	99.31	8.183	
17,400.0	11,641.0	17,352.9	11,642.0	53.6	47.8	90.07	5,984.2	18.5	812.9	712.2	100.66	8.076	
17,500.0	11,641.0	17,452.9	11,642.0	54.2	48.5	90.07	6,084.2	17.8	813.1	711.1	102.02	7.970	
17,600.0	11,641.0	17,552.9	11,642.0	54.9	49.3	90.07	6,184.2	17.1	813.3	709.9	103.38	7.867	
17,700.0	11,641.0	17,652.9	11,642.0	55.6	50.0	90.07	6,284.2	16.3	813.5	708.8	104.74	7.767	
17,800.0	11,641.0	17,752.9	11,642.0	56.2	50.7	90.07	6,384.2	15.6	813.7	707.6	106.11	7.669	
17,900.0	11,641.0	17,852.9	11,642.0	56.9	51.4	90.07	6,484.2	14.9	813.9	706.4	107.48	7.573	
18,000.0	11,641.0	17,952.9	11,642.0	57.5	52.2	90.07	6,584.2	14.2	814.1	705.3	108.85	7.479	

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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11167-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
18,100.0	11,641.0	18,052.9	11,642.0	58.2	52.9	90.07	6,684.2	13.5	814.3	704.1	110.23	7.388	
18,200.0	11,641.0	18,152.9	11,642.0	58.9	53.6	90.07	6,784.2	12.8	814.5	702.9	111.61	7.298	
18,300.0	11,641.0	18,252.9	11,642.0	59.6	54.4	90.07	6,884.2	12.1	814.7	701.7	113.00	7.210	
18,400.0	11,641.0	18,352.9	11,642.0	60.2	55.1	90.07	6,984.2	11.4	814.9	700.6	114.38	7.125	
18,500.0	11,641.0	18,452.9	11,642.0	60.9	55.8	90.07	7,084.2	10.7	815.1	699.4	115.77	7.041	
18,600.0	11,641.0	18,552.9	11,642.0	61.6	56.6	90.07	7,184.2	10.0	815.3	698.2	117.17	6.959	
18,700.0	11,641.0	18,652.9	11,642.0	62.3	57.3	90.07	7,284.2	9.3	815.6	697.0	118.56	6.879	
18,800.0	11,641.0	18,752.9	11,642.0	63.0	58.1	90.07	7,384.2	8.5	815.8	695.8	119.96	6.800	
18,900.0	11,641.0	18,852.9	11,642.0	63.7	58.8	90.07	7,484.2	7.8	816.0	694.6	121.36	6.723	
19,000.0	11,641.0	18,952.9	11,642.0	64.3	59.5	90.07	7,584.2	7.1	816.2	693.4	122.77	6.648	
19,100.0	11,641.0	19,052.9	11,642.0	65.0	60.3	90.07	7,684.2	6.4	816.4	692.2	124.17	6.574	
19,200.0	11,641.0	19,152.9	11,642.0	65.7	61.0	90.07	7,784.2	5.7	816.6	691.0	125.58	6.502	
19,300.0	11,641.0	19,252.9	11,642.0	66.4	61.8	90.07	7,884.2	5.0	816.8	689.8	126.99	6.432	
19,400.0	11,641.0	19,352.9	11,642.0	67.1	62.5	90.07	7,984.2	4.3	817.0	688.6	128.41	6.362	
19,500.0	11,641.0	19,452.9	11,642.0	67.8	63.2	90.07	8,084.2	3.6	817.2	687.4	129.82	6.295	
19,600.0	11,641.0	19,552.9	11,642.0	68.5	64.0	90.07	8,184.1	2.9	817.4	686.1	131.24	6.228	
19,700.0	11,641.0	19,652.9	11,642.0	69.2	64.7	90.07	8,284.1	2.2	817.6	684.9	132.66	6.163	
19,800.0	11,641.0	19,752.9	11,642.0	69.9	65.5	90.07	8,384.1	1.4	817.8	683.7	134.08	6.099	
19,900.0	11,641.0	19,852.9	11,642.0	70.6	66.2	90.07	8,484.1	0.7	818.0	682.5	135.50	6.037	
20,000.0	11,641.0	19,952.9	11,642.0	71.3	67.0	90.07	8,584.1	0.0	818.2	681.3	136.93	5.975	
20,100.0	11,641.0	20,052.9	11,642.0	72.0	67.7	90.07	8,684.1	-0.7	818.4	680.1	138.35	5.915	
20,200.0	11,641.0	20,152.9	11,642.0	72.7	68.4	90.07	8,784.1	-1.4	818.6	678.8	139.78	5.856	
20,300.0	11,641.0	20,252.9	11,642.0	73.4	69.2	90.07	8,884.1	-2.1	818.8	677.6	141.21	5.798	
20,400.0	11,641.0	20,352.9	11,642.0	74.1	69.9	90.07	8,984.1	-2.8	819.0	676.4	142.64	5.742	
20,500.0	11,641.0	20,452.9	11,642.0	74.8	70.7	90.07	9,084.1	-3.5	819.2	675.1	144.08	5.686	
20,600.0	11,641.0	20,552.9	11,642.0	75.5	71.4	90.07	9,184.1	-4.2	819.4	673.9	145.51	5.631	
20,700.0	11,641.0	20,652.9	11,642.0	76.2	72.2	90.07	9,284.1	-4.9	819.6	672.7	146.95	5.578	
20,800.0	11,641.0	20,752.9	11,642.0	77.0	72.9	90.07	9,384.1	-5.6	819.8	671.4	148.38	5.525	
20,900.0	11,641.0	20,852.9	11,642.0	77.7	73.7	90.07	9,484.1	-6.4	820.0	670.2	149.82	5.473	
21,000.0	11,641.0	20,952.9	11,642.0	78.4	74.4	90.07	9,584.1	-7.1	820.2	669.0	151.26	5.423	
21,100.0	11,641.0	21,052.9	11,642.0	79.1	75.2	90.07	9,684.1	-7.8	820.4	667.7	152.70	5.373	
21,200.0	11,641.0	21,152.9	11,642.0	79.8	75.9	90.07	9,784.1	-8.5	820.6	666.5	154.15	5.324	
21,300.0	11,641.0	21,252.9	11,642.0	80.5	76.7	90.07	9,884.1	-9.2	820.8	665.3	155.59	5.276	
21,400.0	11,641.0	21,352.9	11,642.0	81.2	77.4	90.07	9,984.1	-9.9	821.1	664.0	157.03	5.228	
21,500.0	11,641.0	21,452.9	11,642.0	82.0	78.2	90.07	10,084.1	-10.6	821.3	662.8	158.48	5.182	
21,600.0	11,641.0	21,552.9	11,642.0	82.7	78.9	90.07	10,184.1	-11.3	821.5	661.5	159.93	5.136	
21,700.0	11,641.0	21,652.9	11,642.0	83.4	79.7	90.07	10,284.1	-12.0	821.7	660.3	161.38	5.092	
21,800.0	11,641.0	21,752.9	11,642.0	84.1	80.4	90.07	10,384.1	-12.7	821.9	659.0	162.83	5.048	
21,862.1	11,641.0	21,815.0	11,642.0	84.6	80.9	90.07	10,446.2	-13.2	822.0	658.3	163.72	5.021	
21,900.0	11,641.0	21,852.9	11,642.0	84.8	81.2	90.07	10,484.1	-13.4	822.1	657.8	164.27	5.004	
21,912.1	11,641.0	21,865.0	11,642.0	84.9	81.3	90.07	10,496.2	-13.5	822.1	657.7	164.45	4.999 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 #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=26ft @ 3193.0usft

Offset Depths are relative to Offset Datum

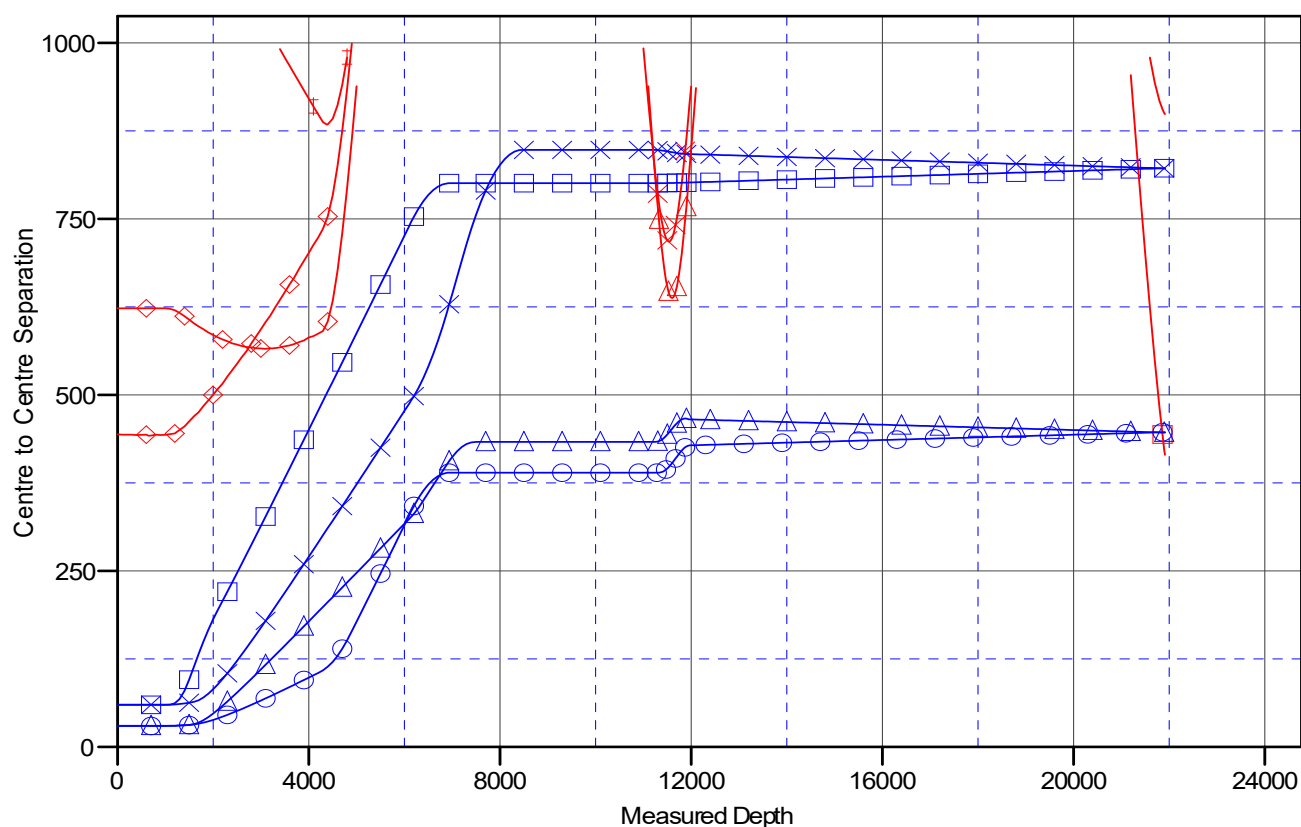
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #710H

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

Grid Convergence at Surface is: 0.32°

Ladder Plot



LEGEND

SUMDEROS 12 WIPA FEDERAL COM #2H, OWB, AWP V0
 SUMDEROS 12 WIPA FEDERAL COM #1H, OWB, AWP V0
 HANSON FEDERAL BATTERY1 #12 (P&A), OWB, AWP V0
 GOLDEN SPUR 36 COM W1 #H, OWB, AWP V0

ZA HILLS UNIT 2431 WC #709H OWB, PWP1 V0
 HANSON FEDERAL BATTERY1 #13 (P&A), OWB, AWP V0
 ZA HILLS UNIT 2431 WC #708H OWB, PWP1 V0
 ZA HILLS UNIT 2431 WC #711H OWB, PWP1 V0

R T WILSON FEDERAL #2 (P&A), OWB, AWP V0
 GOLDEN SPUR 36 COM W1 #2H, OWB, AWP V0
 ZA HILLS UNIT 2431 WC #712H OWB, PWP1 V0

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=26ft @ 3193.0usft

Offset Depths are relative to Offset Datum

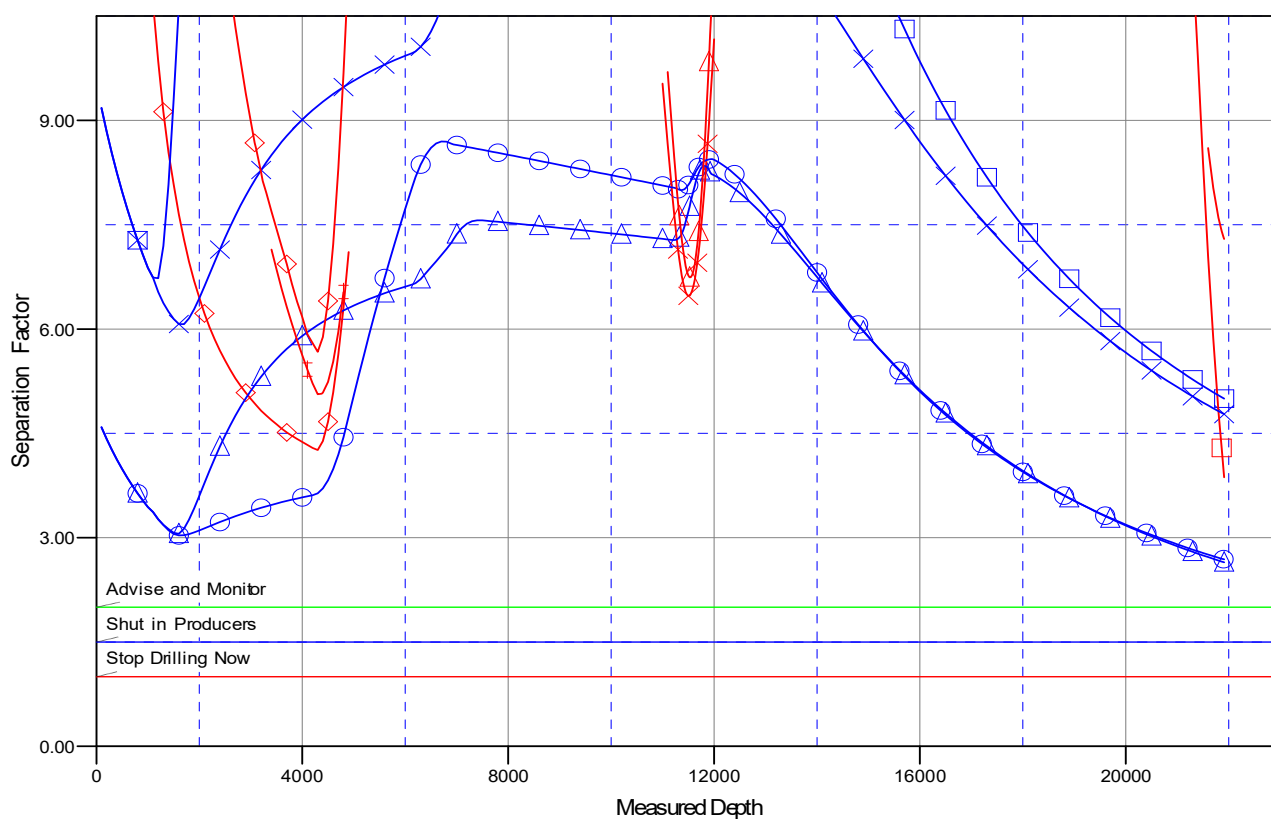
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #710H

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

Grid Convergence at Surface is: 0.32°

Separation Factor Plot



LEGEND

SUMIDEROS 12 W1P A FEDERAL COM #2H, OWB, AWP V0	ZA HILLS UNIT 2431 WC #709H OWB, PWP1 V0	R T WILSON FEDERAL #2 (P&A) OWB, AWP V0
SUMIDEROS 12 W1P A FEDERAL COM #1H, OWB, AWP V0	HANSON FEDERAL BATTERY1 #13 (P&A) OWB, AWP V0	GOLDEN SPUR 36 COM W1 #2H, OWB, AWP V0
HANSON FEDERAL BATTERY1 #12 (P&A) OWB, AWP V0	ZA HILLS UNIT 2431 WC #709H OWB, PWP1 V0	ZA HILLS UNIT 2431 WC #712H OWB, PWP1 V0
GOLDEN SPUR 36 COM W1 #H, OWB, AWP V0	ZA HILLS UNIT 2431 WC #711H OWB, PWP1 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 #710H

OWB

Plan: PWP1

Standard Planning Report

15 March, 2023

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

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		

Site	ZIA HILLS UNIT 2431 PROJECT		
Site Position:		Northing:	371,779.13 usft
From:	Map	Easting:	683,985.08 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 14.684 N
		Longitude:	103° 44' 22.898 W

Well	ZIA HILLS UNIT 2431 WC #710H					
Well Position	+N/-S	0.0 usft	Northing:	371,935.76 usft	Latitude:	32° 1' 15.968 N
	+E/-W	0.0 usft	Easting:	688,823.92 usft	Longitude:	103° 43' 26.684 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,167.0 usft
Grid Convergence:		0.32 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	12/31/2023	6.34	59.52	47,261.36610722

Design	PWP1				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	355.45	

Plan Survey Tool Program	Date	3/15/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	1,000.0 PWP1 (OWB)	r.5 SDI_KPR_WL_NS-CT SDI Keeper Wireline Gyrocomp		
2	1,000.0	11,213.6 PWP1 (OWB)	r.5 MWD+IFR1 OWSG MWD + IFR1 rev.5		
3	11,213.6	21,912.1 PWP1 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St		

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,400.0	8.00	275.00	1,398.7	2.4	-27.8	2.00	2.00	0.00	275.00	
6,139.4	8.00	275.00	6,092.0	59.9	-684.9	0.00	0.00	0.00	0.00	
6,939.4	0.00	0.00	6,889.4	64.8	-740.4	1.00	-1.00	10.63	180.00	
11,213.6	0.00	0.00	11,163.5	64.8	-740.4	0.00	0.00	0.00	0.00	
11,963.6	90.00	359.48	11,641.0	542.2	-744.8	12.00	12.00	-0.07	359.48	
21,862.1	90.00	359.48	11,641.0	10,440.4	-835.1	0.00	0.00	0.00	0.00	
21,912.1	90.00	359.48	11,641.0	10,490.4	-835.6	0.00	0.00	0.00	0.00	

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Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,100.0	2.00	275.00	1,100.0	0.2	-1.7	0.3	2.00	2.00	0.00
1,200.0	4.00	275.00	1,199.8	0.6	-7.0	1.2	2.00	2.00	0.00
1,300.0	6.00	275.00	1,299.5	1.4	-15.6	2.6	2.00	2.00	0.00
1,400.0	8.00	275.00	1,398.7	2.4	-27.8	4.6	2.00	2.00	0.00
Start 4739.4 hold at 1400.0 MD									
1,500.0	8.00	275.00	1,497.7	3.6	-41.6	6.9	0.00	0.00	0.00
1,600.0	8.00	275.00	1,596.8	4.9	-55.5	9.2	0.00	0.00	0.00
1,700.0	8.00	275.00	1,695.8	6.1	-69.4	11.6	0.00	0.00	0.00
1,800.0	8.00	275.00	1,794.8	7.3	-83.2	13.9	0.00	0.00	0.00
1,900.0	8.00	275.00	1,893.8	8.5	-97.1	16.2	0.00	0.00	0.00
2,000.0	8.00	275.00	1,992.9	9.7	-111.0	18.5	0.00	0.00	0.00
2,100.0	8.00	275.00	2,091.9	10.9	-124.8	20.8	0.00	0.00	0.00
2,200.0	8.00	275.00	2,190.9	12.1	-138.7	23.1	0.00	0.00	0.00
2,300.0	8.00	275.00	2,289.9	13.3	-152.6	25.4	0.00	0.00	0.00
2,400.0	8.00	275.00	2,389.0	14.6	-166.4	27.7	0.00	0.00	0.00
2,500.0	8.00	275.00	2,488.0	15.8	-180.3	30.0	0.00	0.00	0.00
2,600.0	8.00	275.00	2,587.0	17.0	-194.1	32.3	0.00	0.00	0.00
2,700.0	8.00	275.00	2,686.1	18.2	-208.0	34.7	0.00	0.00	0.00
2,800.0	8.00	275.00	2,785.1	19.4	-221.9	37.0	0.00	0.00	0.00
2,900.0	8.00	275.00	2,884.1	20.6	-235.7	39.3	0.00	0.00	0.00
3,000.0	8.00	275.00	2,983.1	21.8	-249.6	41.6	0.00	0.00	0.00
3,100.0	8.00	275.00	3,082.2	23.1	-263.5	43.9	0.00	0.00	0.00
3,200.0	8.00	275.00	3,181.2	24.3	-277.3	46.2	0.00	0.00	0.00
3,300.0	8.00	275.00	3,280.2	25.5	-291.2	48.5	0.00	0.00	0.00
3,400.0	8.00	275.00	3,379.2	26.7	-305.1	50.8	0.00	0.00	0.00
3,500.0	8.00	275.00	3,478.3	27.9	-318.9	53.1	0.00	0.00	0.00
3,600.0	8.00	275.00	3,577.3	29.1	-332.8	55.4	0.00	0.00	0.00
3,700.0	8.00	275.00	3,676.3	30.3	-346.7	57.8	0.00	0.00	0.00
3,800.0	8.00	275.00	3,775.3	31.5	-360.5	60.1	0.00	0.00	0.00
3,900.0	8.00	275.00	3,874.4	32.8	-374.4	62.4	0.00	0.00	0.00
4,000.0	8.00	275.00	3,973.4	34.0	-388.2	64.7	0.00	0.00	0.00
4,100.0	8.00	275.00	4,072.4	35.2	-402.1	67.0	0.00	0.00	0.00
4,200.0	8.00	275.00	4,171.5	36.4	-416.0	69.3	0.00	0.00	0.00
4,300.0	8.00	275.00	4,270.5	37.6	-429.8	71.6	0.00	0.00	0.00
4,400.0	8.00	275.00	4,369.5	38.8	-443.7	73.9	0.00	0.00	0.00
4,500.0	8.00	275.00	4,468.5	40.0	-457.6	76.2	0.00	0.00	0.00
4,600.0	8.00	275.00	4,567.6	41.2	-471.4	78.5	0.00	0.00	0.00
4,700.0	8.00	275.00	4,666.6	42.5	-485.3	80.9	0.00	0.00	0.00
4,800.0	8.00	275.00	4,765.6	43.7	-499.2	83.2	0.00	0.00	0.00
4,900.0	8.00	275.00	4,864.6	44.9	-513.0	85.5	0.00	0.00	0.00
5,000.0	8.00	275.00	4,963.7	46.1	-526.9	87.8	0.00	0.00	0.00
5,100.0	8.00	275.00	5,062.7	47.3	-540.8	90.1	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	8.00	275.00	5,161.7	48.5	-554.6	92.4	0.00	0.00	0.00
5,300.0	8.00	275.00	5,260.7	49.7	-568.5	94.7	0.00	0.00	0.00
5,400.0	8.00	275.00	5,359.8	50.9	-582.3	97.0	0.00	0.00	0.00
5,500.0	8.00	275.00	5,458.8	52.2	-596.2	99.3	0.00	0.00	0.00
5,600.0	8.00	275.00	5,557.8	53.4	-610.1	101.6	0.00	0.00	0.00
5,700.0	8.00	275.00	5,656.9	54.6	-623.9	103.9	0.00	0.00	0.00
5,800.0	8.00	275.00	5,755.9	55.8	-637.8	106.3	0.00	0.00	0.00
5,900.0	8.00	275.00	5,854.9	57.0	-651.7	108.6	0.00	0.00	0.00
6,000.0	8.00	275.00	5,953.9	58.2	-665.5	110.9	0.00	0.00	0.00
6,100.0	8.00	275.00	6,053.0	59.4	-679.4	113.2	0.00	0.00	0.00
6,139.4	8.00	275.00	6,092.0	59.9	-684.9	114.1	0.00	0.00	0.00
Start DLS 1.00 TFO 180.00									
6,200.0	7.39	275.00	6,152.0	60.6	-692.9	115.4	1.00	-1.00	0.00
6,300.0	6.39	275.00	6,251.3	61.7	-704.9	117.4	1.00	-1.00	0.00
6,400.0	5.39	275.00	6,350.8	62.6	-715.1	119.1	1.00	-1.00	0.00
6,500.0	4.39	275.00	6,450.4	63.3	-723.6	120.6	1.00	-1.00	0.00
6,600.0	3.39	275.00	6,550.2	63.9	-730.4	121.7	1.00	-1.00	0.00
6,700.0	2.39	275.00	6,650.1	64.3	-735.4	122.5	1.00	-1.00	0.00
6,800.0	1.39	275.00	6,750.0	64.6	-738.7	123.1	1.00	-1.00	0.00
6,900.0	0.39	275.00	6,850.0	64.8	-740.3	123.3	1.00	-1.00	0.00
6,939.4	0.00	0.00	6,889.4	64.8	-740.4	123.4	1.00	-1.00	215.61
Start 4274.1 hold at 6939.4 MD									
7,000.0	0.00	0.00	6,950.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,100.0	0.00	0.00	7,050.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,200.0	0.00	0.00	7,150.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,300.0	0.00	0.00	7,250.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,350.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,500.0	0.00	0.00	7,450.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,550.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,700.0	0.00	0.00	7,650.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,800.0	0.00	0.00	7,750.0	64.8	-740.4	123.4	0.00	0.00	0.00
7,900.0	0.00	0.00	7,850.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,950.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,100.0	0.00	0.00	8,050.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,200.0	0.00	0.00	8,150.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,300.0	0.00	0.00	8,250.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,400.0	0.00	0.00	8,350.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,500.0	0.00	0.00	8,450.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,600.0	0.00	0.00	8,550.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,700.0	0.00	0.00	8,650.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,800.0	0.00	0.00	8,750.0	64.8	-740.4	123.4	0.00	0.00	0.00
8,900.0	0.00	0.00	8,850.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,000.0	0.00	0.00	8,950.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,100.0	0.00	0.00	9,050.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,200.0	0.00	0.00	9,150.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,300.0	0.00	0.00	9,250.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,400.0	0.00	0.00	9,350.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,500.0	0.00	0.00	9,450.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,600.0	0.00	0.00	9,550.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,700.0	0.00	0.00	9,650.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,800.0	0.00	0.00	9,750.0	64.8	-740.4	123.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,850.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,000.0	0.00	0.00	9,950.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,100.0	0.00	0.00	10,050.0	64.8	-740.4	123.4	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,200.0	0.00	0.00	10,150.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,300.0	0.00	0.00	10,250.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,400.0	0.00	0.00	10,350.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,500.0	0.00	0.00	10,450.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,600.0	0.00	0.00	10,550.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,700.0	0.00	0.00	10,650.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,800.0	0.00	0.00	10,750.0	64.8	-740.4	123.4	0.00	0.00	0.00
10,900.0	0.00	0.00	10,850.0	64.8	-740.4	123.4	0.00	0.00	0.00
11,000.0	0.00	0.00	10,950.0	64.8	-740.4	123.4	0.00	0.00	0.00
11,100.0	0.00	0.00	11,050.0	64.8	-740.4	123.4	0.00	0.00	0.00
11,200.0	0.00	0.00	11,150.0	64.8	-740.4	123.4	0.00	0.00	0.00
11,213.6	0.00	0.00	11,163.5	64.8	-740.4	123.4	0.00	0.00	0.00
Start DLS 12.00 TFO 359.48									
11,225.0	1.37	359.48	11,175.0	64.9	-740.4	123.5	12.00	12.00	-4.57
11,250.0	4.37	359.48	11,199.9	66.2	-740.4	124.7	12.00	12.00	0.00
11,275.0	7.37	359.48	11,224.8	68.7	-740.4	127.3	12.00	12.00	0.00
11,300.0	10.37	359.48	11,249.5	72.6	-740.5	131.1	12.00	12.00	0.00
11,325.0	13.37	359.48	11,274.0	77.7	-740.5	136.3	12.00	12.00	0.00
11,350.0	16.37	359.48	11,298.1	84.1	-740.6	142.7	12.00	12.00	0.00
11,375.0	19.37	359.48	11,321.9	91.8	-740.7	150.3	12.00	12.00	0.00
11,400.0	22.37	359.48	11,345.3	100.7	-740.7	159.2	12.00	12.00	0.00
11,425.0	25.37	359.48	11,368.1	110.8	-740.8	169.3	12.00	12.00	0.00
11,450.0	28.37	359.48	11,390.4	122.1	-740.9	180.6	12.00	12.00	0.00
11,475.0	31.37	359.48	11,412.1	134.6	-741.0	193.0	12.00	12.00	0.00
11,500.0	34.37	359.48	11,433.1	148.2	-741.2	206.5	12.00	12.00	0.00
11,525.0	37.37	359.48	11,453.4	162.8	-741.3	221.1	12.00	12.00	0.00
11,550.0	40.37	359.48	11,472.8	178.5	-741.4	236.8	12.00	12.00	0.00
11,575.0	43.37	359.48	11,491.4	195.2	-741.6	253.4	12.00	12.00	0.00
11,600.0	46.37	359.48	11,509.1	212.8	-741.8	271.0	12.00	12.00	0.00
11,625.0	49.37	359.48	11,525.9	231.3	-741.9	289.5	12.00	12.00	0.00
11,650.0	52.37	359.48	11,541.7	250.7	-742.1	308.9	12.00	12.00	0.00
11,675.0	55.37	359.48	11,556.4	270.9	-742.3	329.0	12.00	12.00	0.00
11,700.0	58.37	359.48	11,570.1	291.9	-742.5	349.9	12.00	12.00	0.00
11,725.0	61.37	359.48	11,582.6	313.5	-742.7	371.5	12.00	12.00	0.00
11,750.0	64.37	359.48	11,594.0	335.7	-742.9	393.6	12.00	12.00	0.00
11,775.0	67.37	359.48	11,604.3	358.5	-743.1	416.4	12.00	12.00	0.00
11,800.0	70.37	359.48	11,613.3	381.9	-743.3	439.7	12.00	12.00	0.00
11,825.0	73.37	359.48	11,621.0	405.6	-743.5	463.4	12.00	12.00	0.00
11,850.0	76.37	359.48	11,627.6	429.7	-743.7	487.4	12.00	12.00	0.00
11,875.0	79.37	359.48	11,632.8	454.2	-744.0	511.8	12.00	12.00	0.00
11,900.0	82.37	359.48	11,636.8	478.9	-744.2	536.4	12.00	12.00	0.00
11,925.0	85.37	359.48	11,639.4	503.7	-744.4	561.2	12.00	12.00	0.00
11,950.0	88.37	359.48	11,640.8	528.7	-744.6	586.1	12.00	12.00	0.00
11,963.6	90.00	359.48	11,641.0	542.2	-744.8	599.6	12.00	12.00	0.00
Start 9898.6 hold at 11963.6 MD									
12,000.0	90.00	359.48	11,641.0	578.7	-745.1	636.0	0.00	0.00	0.00
12,100.0	90.00	359.48	11,641.0	678.7	-746.0	735.7	0.00	0.00	0.00
12,200.0	90.00	359.48	11,641.0	778.7	-746.9	835.5	0.00	0.00	0.00
12,300.0	90.00	359.48	11,641.0	878.7	-747.8	935.3	0.00	0.00	0.00
12,400.0	90.00	359.48	11,641.0	978.7	-748.8	1,035.0	0.00	0.00	0.00
12,500.0	90.00	359.48	11,641.0	1,078.6	-749.7	1,134.8	0.00	0.00	0.00
12,600.0	90.00	359.48	11,641.0	1,178.6	-750.6	1,234.5	0.00	0.00	0.00
12,700.0	90.00	359.48	11,641.0	1,278.6	-751.5	1,334.3	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,800.0	90.00	359.48	11,641.0	1,378.6	-752.4	1,434.0	0.00	0.00	0.00
12,900.0	90.00	359.48	11,641.0	1,478.6	-753.3	1,533.8	0.00	0.00	0.00
13,000.0	90.00	359.48	11,641.0	1,578.6	-754.2	1,633.5	0.00	0.00	0.00
13,100.0	90.00	359.48	11,641.0	1,678.6	-755.1	1,733.3	0.00	0.00	0.00
13,200.0	90.00	359.48	11,641.0	1,778.6	-756.1	1,833.0	0.00	0.00	0.00
13,300.0	90.00	359.48	11,641.0	1,878.6	-757.0	1,932.8	0.00	0.00	0.00
13,400.0	90.00	359.48	11,641.0	1,978.6	-757.9	2,032.5	0.00	0.00	0.00
13,500.0	90.00	359.48	11,641.0	2,078.6	-758.8	2,132.3	0.00	0.00	0.00
13,600.0	90.00	359.48	11,641.0	2,178.6	-759.7	2,232.0	0.00	0.00	0.00
13,700.0	90.00	359.48	11,641.0	2,278.6	-760.6	2,331.8	0.00	0.00	0.00
13,800.0	90.00	359.48	11,641.0	2,378.6	-761.5	2,431.5	0.00	0.00	0.00
13,900.0	90.00	359.48	11,641.0	2,478.6	-762.5	2,531.3	0.00	0.00	0.00
14,000.0	90.00	359.48	11,641.0	2,578.6	-763.4	2,631.0	0.00	0.00	0.00
14,100.0	90.00	359.48	11,641.0	2,678.6	-764.3	2,730.8	0.00	0.00	0.00
14,200.0	90.00	359.48	11,641.0	2,778.6	-765.2	2,830.6	0.00	0.00	0.00
14,300.0	90.00	359.48	11,641.0	2,878.6	-766.1	2,930.3	0.00	0.00	0.00
14,400.0	90.00	359.48	11,641.0	2,978.6	-767.0	3,030.1	0.00	0.00	0.00
14,500.0	90.00	359.48	11,641.0	3,078.6	-767.9	3,129.8	0.00	0.00	0.00
14,600.0	90.00	359.48	11,641.0	3,178.6	-768.8	3,229.6	0.00	0.00	0.00
14,700.0	90.00	359.48	11,641.0	3,278.6	-769.8	3,329.3	0.00	0.00	0.00
14,800.0	90.00	359.48	11,641.0	3,378.6	-770.7	3,429.1	0.00	0.00	0.00
14,900.0	90.00	359.48	11,641.0	3,478.5	-771.6	3,528.8	0.00	0.00	0.00
15,000.0	90.00	359.48	11,641.0	3,578.5	-772.5	3,628.6	0.00	0.00	0.00
15,100.0	90.00	359.48	11,641.0	3,678.5	-773.4	3,728.3	0.00	0.00	0.00
15,200.0	90.00	359.48	11,641.0	3,778.5	-774.3	3,828.1	0.00	0.00	0.00
15,300.0	90.00	359.48	11,641.0	3,878.5	-775.2	3,927.8	0.00	0.00	0.00
15,400.0	90.00	359.48	11,641.0	3,978.5	-776.1	4,027.6	0.00	0.00	0.00
15,500.0	90.00	359.48	11,641.0	4,078.5	-777.1	4,127.3	0.00	0.00	0.00
15,600.0	90.00	359.48	11,641.0	4,178.5	-778.0	4,227.1	0.00	0.00	0.00
15,700.0	90.00	359.48	11,641.0	4,278.5	-778.9	4,326.8	0.00	0.00	0.00
15,800.0	90.00	359.48	11,641.0	4,378.5	-779.8	4,426.6	0.00	0.00	0.00
15,900.0	90.00	359.48	11,641.0	4,478.5	-780.7	4,526.3	0.00	0.00	0.00
16,000.0	90.00	359.48	11,641.0	4,578.5	-781.6	4,626.1	0.00	0.00	0.00
16,100.0	90.00	359.48	11,641.0	4,678.5	-782.5	4,725.9	0.00	0.00	0.00
16,200.0	90.00	359.48	11,641.0	4,778.5	-783.5	4,825.6	0.00	0.00	0.00
16,300.0	90.00	359.48	11,641.0	4,878.5	-784.4	4,925.4	0.00	0.00	0.00
16,400.0	90.00	359.48	11,641.0	4,978.5	-785.3	5,025.1	0.00	0.00	0.00
16,500.0	90.00	359.48	11,641.0	5,078.5	-786.2	5,124.9	0.00	0.00	0.00
16,600.0	90.00	359.48	11,641.0	5,178.5	-787.1	5,224.6	0.00	0.00	0.00
16,700.0	90.00	359.48	11,641.0	5,278.5	-788.0	5,324.4	0.00	0.00	0.00
16,800.0	90.00	359.48	11,641.0	5,378.5	-788.9	5,424.1	0.00	0.00	0.00
16,900.0	90.00	359.48	11,641.0	5,478.5	-789.8	5,523.9	0.00	0.00	0.00
17,000.0	90.00	359.48	11,641.0	5,578.5	-790.8	5,623.6	0.00	0.00	0.00
17,100.0	90.00	359.48	11,641.0	5,678.5	-791.7	5,723.4	0.00	0.00	0.00
17,200.0	90.00	359.48	11,641.0	5,778.5	-792.6	5,823.1	0.00	0.00	0.00
17,300.0	90.00	359.48	11,641.0	5,878.4	-793.5	5,922.9	0.00	0.00	0.00
17,400.0	90.00	359.48	11,641.0	5,978.4	-794.4	6,022.6	0.00	0.00	0.00
17,500.0	90.00	359.48	11,641.0	6,078.4	-795.3	6,122.4	0.00	0.00	0.00
17,600.0	90.00	359.48	11,641.0	6,178.4	-796.2	6,222.1	0.00	0.00	0.00
17,700.0	90.00	359.48	11,641.0	6,278.4	-797.1	6,321.9	0.00	0.00	0.00
17,800.0	90.00	359.48	11,641.0	6,378.4	-798.1	6,421.7	0.00	0.00	0.00
17,900.0	90.00	359.48	11,641.0	6,478.4	-799.0	6,521.4	0.00	0.00	0.00
18,000.0	90.00	359.48	11,641.0	6,578.4	-799.9	6,621.2	0.00	0.00	0.00
18,100.0	90.00	359.48	11,641.0	6,678.4	-800.8	6,720.9	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,200.0	90.00	359.48	11,641.0	6,778.4	-801.7	6,820.7	0.00	0.00	0.00
18,300.0	90.00	359.48	11,641.0	6,878.4	-802.6	6,920.4	0.00	0.00	0.00
18,400.0	90.00	359.48	11,641.0	6,978.4	-803.5	7,020.2	0.00	0.00	0.00
18,500.0	90.00	359.48	11,641.0	7,078.4	-804.5	7,119.9	0.00	0.00	0.00
18,600.0	90.00	359.48	11,641.0	7,178.4	-805.4	7,219.7	0.00	0.00	0.00
18,700.0	90.00	359.48	11,641.0	7,278.4	-806.3	7,319.4	0.00	0.00	0.00
18,800.0	90.00	359.48	11,641.0	7,378.4	-807.2	7,419.2	0.00	0.00	0.00
18,900.0	90.00	359.48	11,641.0	7,478.4	-808.1	7,518.9	0.00	0.00	0.00
19,000.0	90.00	359.48	11,641.0	7,578.4	-809.0	7,618.7	0.00	0.00	0.00
19,100.0	90.00	359.48	11,641.0	7,678.4	-809.9	7,718.4	0.00	0.00	0.00
19,200.0	90.00	359.48	11,641.0	7,778.4	-810.8	7,818.2	0.00	0.00	0.00
19,300.0	90.00	359.48	11,641.0	7,878.4	-811.8	7,917.9	0.00	0.00	0.00
19,400.0	90.00	359.48	11,641.0	7,978.4	-812.7	8,017.7	0.00	0.00	0.00
19,500.0	90.00	359.48	11,641.0	8,078.4	-813.6	8,117.4	0.00	0.00	0.00
19,600.0	90.00	359.48	11,641.0	8,178.4	-814.5	8,217.2	0.00	0.00	0.00
19,700.0	90.00	359.48	11,641.0	8,278.3	-815.4	8,317.0	0.00	0.00	0.00
19,800.0	90.00	359.48	11,641.0	8,378.3	-816.3	8,416.7	0.00	0.00	0.00
19,900.0	90.00	359.48	11,641.0	8,478.3	-817.2	8,516.5	0.00	0.00	0.00
20,000.0	90.00	359.48	11,641.0	8,578.3	-818.1	8,616.2	0.00	0.00	0.00
20,100.0	90.00	359.48	11,641.0	8,678.3	-819.1	8,716.0	0.00	0.00	0.00
20,200.0	90.00	359.48	11,641.0	8,778.3	-820.0	8,815.7	0.00	0.00	0.00
20,300.0	90.00	359.48	11,641.0	8,878.3	-820.9	8,915.5	0.00	0.00	0.00
20,400.0	90.00	359.48	11,641.0	8,978.3	-821.8	9,015.2	0.00	0.00	0.00
20,500.0	90.00	359.48	11,641.0	9,078.3	-822.7	9,115.0	0.00	0.00	0.00
20,600.0	90.00	359.48	11,641.0	9,178.3	-823.6	9,214.7	0.00	0.00	0.00
20,700.0	90.00	359.48	11,641.0	9,278.3	-824.5	9,314.5	0.00	0.00	0.00
20,800.0	90.00	359.48	11,641.0	9,378.3	-825.5	9,414.2	0.00	0.00	0.00
20,900.0	90.00	359.48	11,641.0	9,478.3	-826.4	9,514.0	0.00	0.00	0.00
21,000.0	90.00	359.48	11,641.0	9,578.3	-827.3	9,613.7	0.00	0.00	0.00
21,100.0	90.00	359.48	11,641.0	9,678.3	-828.2	9,713.5	0.00	0.00	0.00
21,200.0	90.00	359.48	11,641.0	9,778.3	-829.1	9,813.2	0.00	0.00	0.00
21,300.0	90.00	359.48	11,641.0	9,878.3	-830.0	9,913.0	0.00	0.00	0.00
21,400.0	90.00	359.48	11,641.0	9,978.3	-830.9	10,012.7	0.00	0.00	0.00
21,500.0	90.00	359.48	11,641.0	10,078.3	-831.8	10,112.5	0.00	0.00	0.00
21,600.0	90.00	359.48	11,641.0	10,178.3	-832.8	10,212.3	0.00	0.00	0.00
21,700.0	90.00	359.48	11,641.0	10,278.3	-833.7	10,312.0	0.00	0.00	0.00
21,800.0	90.00	359.48	11,641.0	10,378.3	-834.6	10,411.8	0.00	0.00	0.00
21,862.1	90.00	359.48	11,641.0	10,440.4	-835.1	10,473.7	0.00	0.00	0.00
Start 50.0 hold at 21862.1 MD									
21,900.0	90.00	359.48	11,641.0	10,478.3	-835.5	10,511.5	0.00	0.00	0.00
21,912.1	90.00	359.48	11,641.0	10,490.4	-835.6	10,523.6	0.00	0.00	0.00
TD at 21912.1									

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #710H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #710H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

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 0.2usft at 21912.1usft MD (11641.0 TVD, 10490.4 N, -835.6 E) - Rectangle (sides W100.0 H10,488.0 D20.0)	0.00	179.48	11,641.0	10,490.4	-835.4	382,426.13	687,988.47	32° 2' 59.828 N	103° 43' 35.704 W
FTP (ZIA HILLS UNIT 24 - plan misses target center by 245.9usft at 11556.0usft MD (11477.4 TVD, 182.4 N, -741.5 E) - Circle (radius 50.0)	0.00	0.00	11,641.0	-0.3	-759.0	371,935.46	688,064.90	32° 1' 16.007 N	103° 43' 35.500 W
LTP (ZIA HILLS UNIT 24 - plan hits target center - Point	0.00	0.00	11,641.0	10,440.4	-835.1	382,376.13	687,988.77	32° 2' 59.334 N	103° 43' 35.703 W

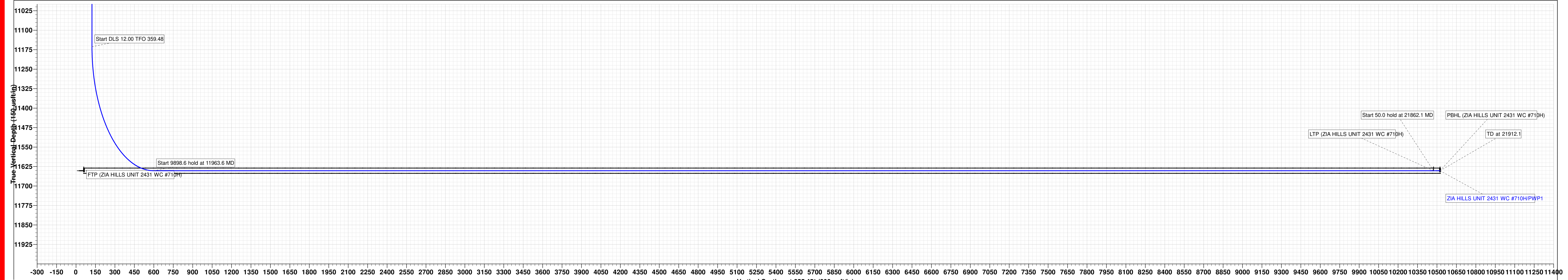
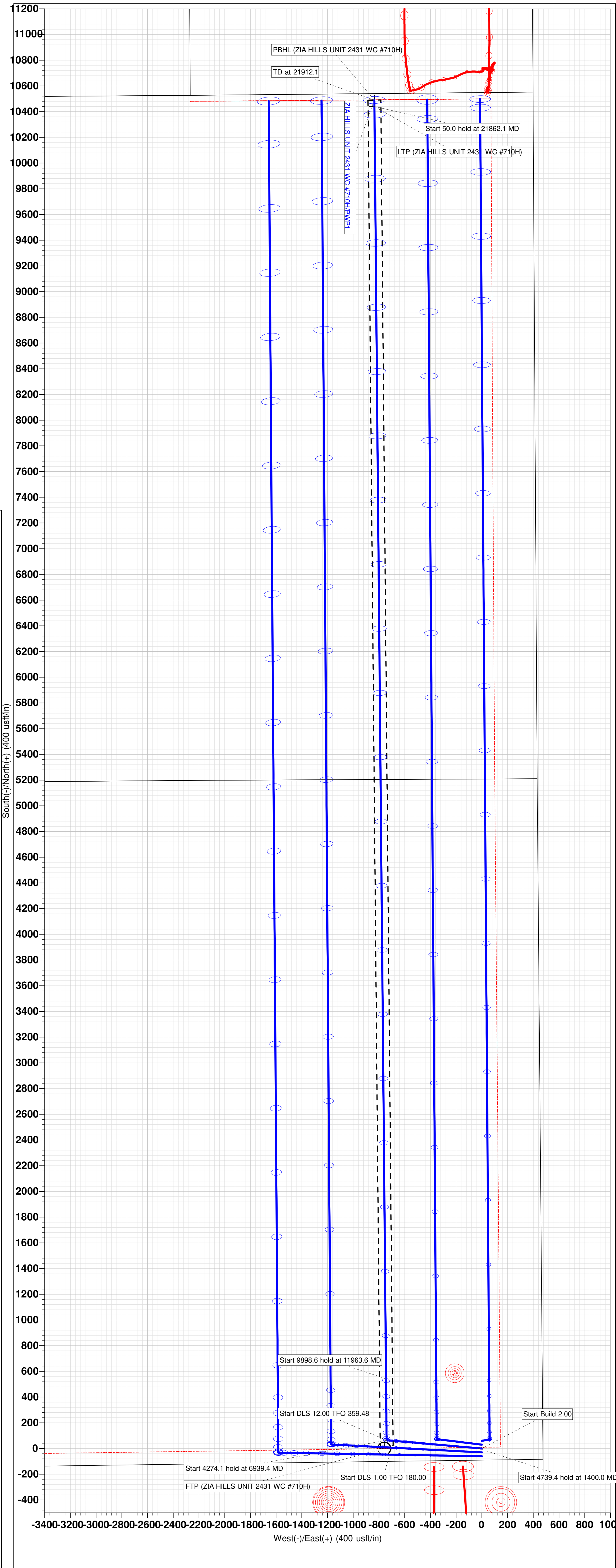
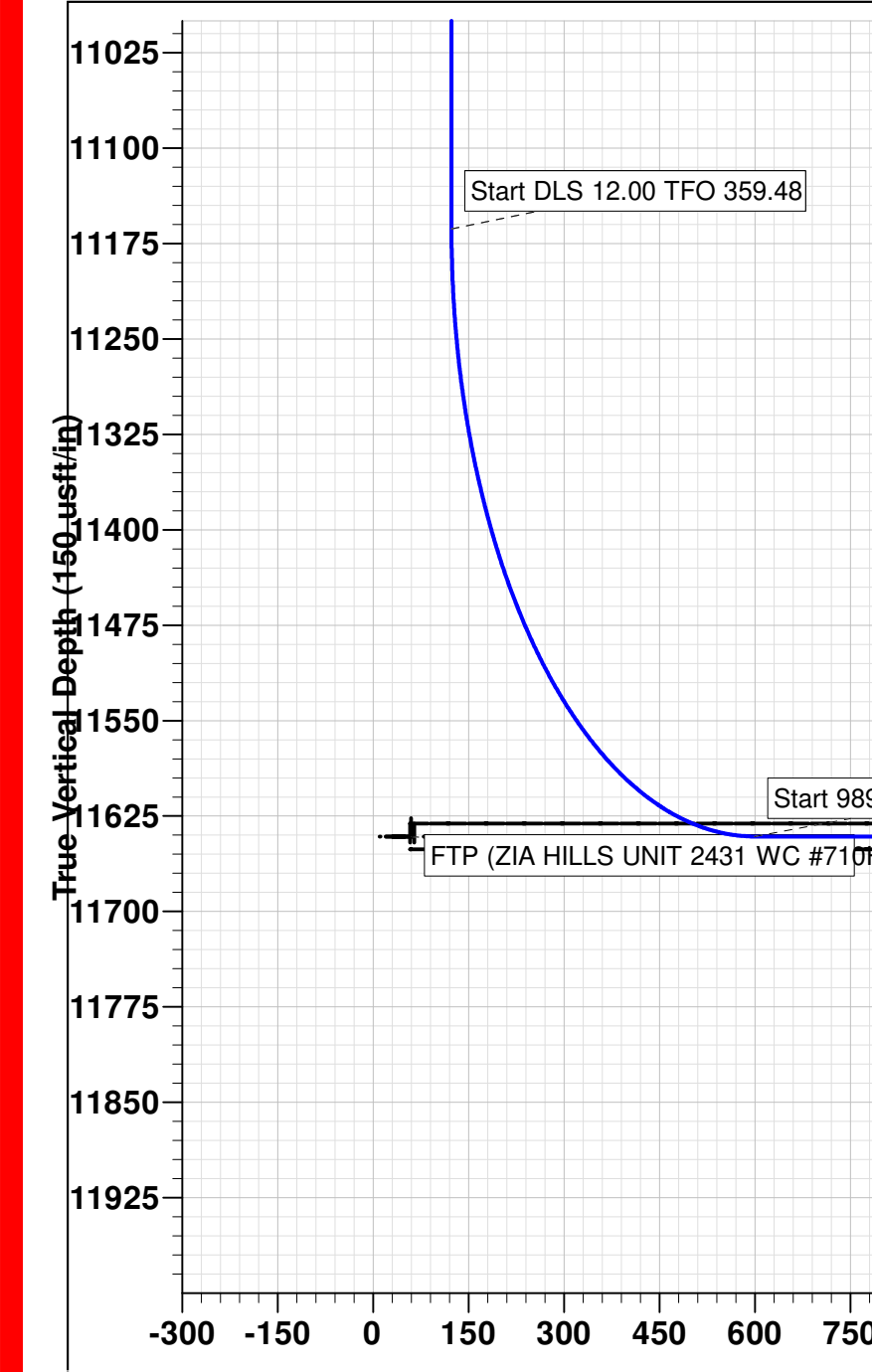
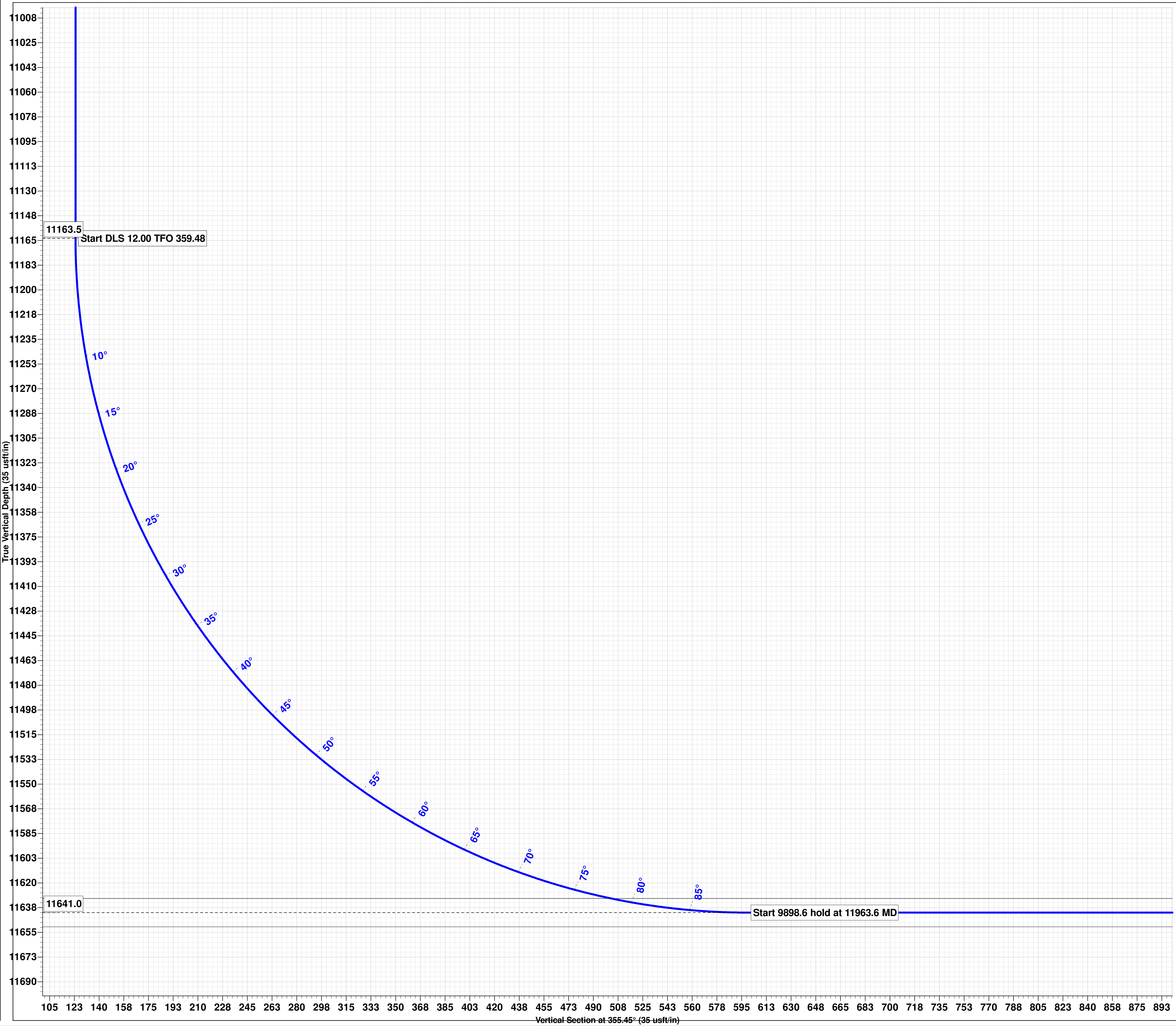
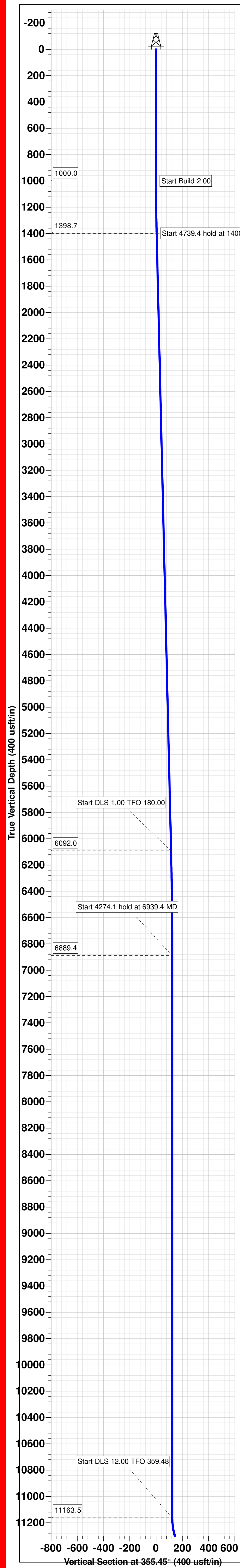
Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	Start Build 2.00
1,400.0	1,398.7	2.4	-27.8	Start 4739.4 hold at 1400.0 MD
6,139.4	6,092.0	59.9	-684.9	Start DLS 1.00 TFO 180.00
6,939.4	6,889.4	64.8	-740.4	Start 4274.1 hold at 6939.4 MD
11,213.6	11,163.5	64.8	-740.4	Start DLS 12.00 TFO 359.48
11,963.6	11,641.0	542.2	-744.8	Start 9898.6 hold at 11963.6 MD
21,862.1	11,641.0	10,440.4	-835.1	Start 50.0 hold at 21862.1 MD
21,912.1	11,641.0	10,490.4	-835.6	TD at 21912.1

Project: BULLDOG PROSPECT (NM-E)
Site: ZIA HILLS UNIT 2431 PROJECT
Well: ZIA HILLS UNIT 2431 WC #710H
Wellbore: OWB
Design: PWP1
GL: 3167.0
KB=26ft @ 3193.0usft

WELL DETAILS: ZIA HILLS UNIT 2431 WC #710H						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	371935.76	688823.92	32° 1' 15.968 N	103° 43' 26.684 W	

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
FTP (ZIA HILLS UNIT 2431 WC #710H)	11641.0	-0.3	-759.0	371935.46	688064.90	
LTP (ZIA HILLS UNIT 2431 WC #710H)	11641.0	10440.4	-835.2	382376.13	687988.77	
PBHL (ZIA HILLS UNIT 2431 WC #710H)	11641.0	10490.4	-835.5	382426.13	687988.47	

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0
1400.0	8.00	275.00	1398.7	2.4	-27.8	2.00	275.00	4.6
6139.4	8.00	275.00	6092.0	59.9	-684.9	0.00	0.00	114.1
6939.4	0.00	0.00	6889.4	64.8	-740.4	1.00	180.00	123.4
11213.6	0.00	0.00	11163.5	64.8	-740.4	0.00	0.00	123.4
11963.6	90.00	359.48	11641.0	542.2	-744.8	12.00	359.48	599.6
21862.1	90.00	359.48	11641.0	10440.4	-835.2	0.00	0.00	10473.7
21912.1	90.00	359.48	11641.0	10490.4	-835.6	0.00	0.00	10523.6



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 710H
SURFACE HOLE FOOTAGE:	90'/S & 475'/E
BOTTOM HOLE FOOTAGE:	50'/N & 1234'/E

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 **1495** 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 7-5/8 inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above.
- Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**
- ❖ 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 11/13/2023

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	
Albert Gonzales		346-287-8169

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 288496

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID:
	217817
	Action Number: 288496
	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	12/19/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	12/19/2023
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	12/19/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	12/19/2023
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	12/19/2023
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	12/19/2023