

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.
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

(Continued on page 2)

*(Instructions on page 2)



Additional Operator Remarks

Location of Well

0. SHL: SESW / 445 FSL / 1490 FWL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.0221289 / LONG: -103.7353644 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 100 FSL / 2467 FEL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.0221289 / LONG: -103.7353644 (TVD: 11713 feet, MD: 11903 feet)

BHL: NWNE / 50 FNL / 2467 FEL / TWSP: 26S / RANGE: 31E / SECTION: 13 / LAT: 32.0500643 / LONG: -103.731037 (TVD: 11832 feet, MD: 22328 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-	² Pool Code 98081	³ Pool Name Zia Hills; Wolfcamp
⁴ Property Code	⁵ Property Name ZIA HILLS UNIT 2431 WC	⁶ Well Number 707H
⁷ OGRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 3,180'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	24	26-S	31-E		445'	SOUTH	1,490'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	13	26-S	31-E		50'	NORTH	2,467'	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
445' FSL & 1,490' FVL
NEW MEXICO EAST-NAD 83
NORTH: 372,302.15'
EAST: 726,657.67'
LAT: 32.02212899
LONG: 103.73536443

FIRST TAKE POINT
100' FSL & 2,467' FEL
NEW MEXICO EAST-NAD 83
NORTH: 371,975.88'
EAST: 728,019.08'
LAT: 32.02121133
LONG: 103.73097768

LAST TAKE POINT
100' FNL & 2,467' FEL
NEW MEXICO EAST-NAD 83
NORTH: 382,421.90'
EAST: 727,942.48'
LAT: 32.04992690
LONG: 103.73103688

BOTTOM HOLE LOCATION
50' FNL & 2,467' FEL
NEW MEXICO EAST-NAD 83
NORTH: 382,471.90'
EAST: 727,942.18'
LAT: 32.05006435
LONG: 103.73103695

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

Stan Wagner
Printed Name 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: ConocoPhillips Company

OGRID: 217817

Date: 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

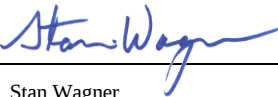
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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 #707H

1. Geologic Formations

TVD of target	11,832' EOL	Pilot hole depth	NA
MD at TD:	22,329'	Deepest expected fresh water:	250'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	989	Water	
Top of Salt	1541	Salt	
Base of Salt	3989	Salt	
Lamar	4203	Salt Water	
Bell Canyon	4245	Salt Water	
Cherry Canyon	5119	Oil/Gas	
Brushy Canyon	6553	Oil/Gas	
Bone Spring (BSGL)	8179	Oil/Gas	
BS1S	9214	Oil/Gas	
BS2S	9892	Oil/Gas	
BS3C	10366	Oil/Gas	
BS3S	11065	Oil/Gas	
WFMP	11420	Oil/Gas	
WFMP A	11654	Oil/Gas	
WFMP B	11930	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	1491	10.75"	45.5	J55	BTC	3.06	1.08	10.54	11.73
9.875"	0	8500	7.625"	29.7	L80-ICY	TXP BTC	1.42	1.12	2.88	2.88
8.750"	8500	11,300	7.625"	29.7	P110-ICY	W513	1.33	1.70	3.18	1.91
6.75"	0	10800	5.5"	23	P110-CY	TXP BTC	2.07	2.45	2.93	2.93
6.75"	10800	22,329	5.5"	23	P110-CY	W441	1.89	2.23	2.68	2.43
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 #707H

	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 #707H**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.	800	10.5	3.6	22.81	24	NeoCem-C
Stage 1	250	15.6	1.2	5.4	8	HalCem-C
Prod	590	12.5	1.71	9.32	72	VersaCem
	880	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	10,800'	35% OH in Lateral (KOP to EOL)

ConocoPhillips Company - Zia Hills Unit 2431 WC #707H

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 #707H

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 #707H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7695 psi at 11832' TVD
Abnormal Temperature	NO 175 Deg. F.

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

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

Hydrogen Sulfide (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

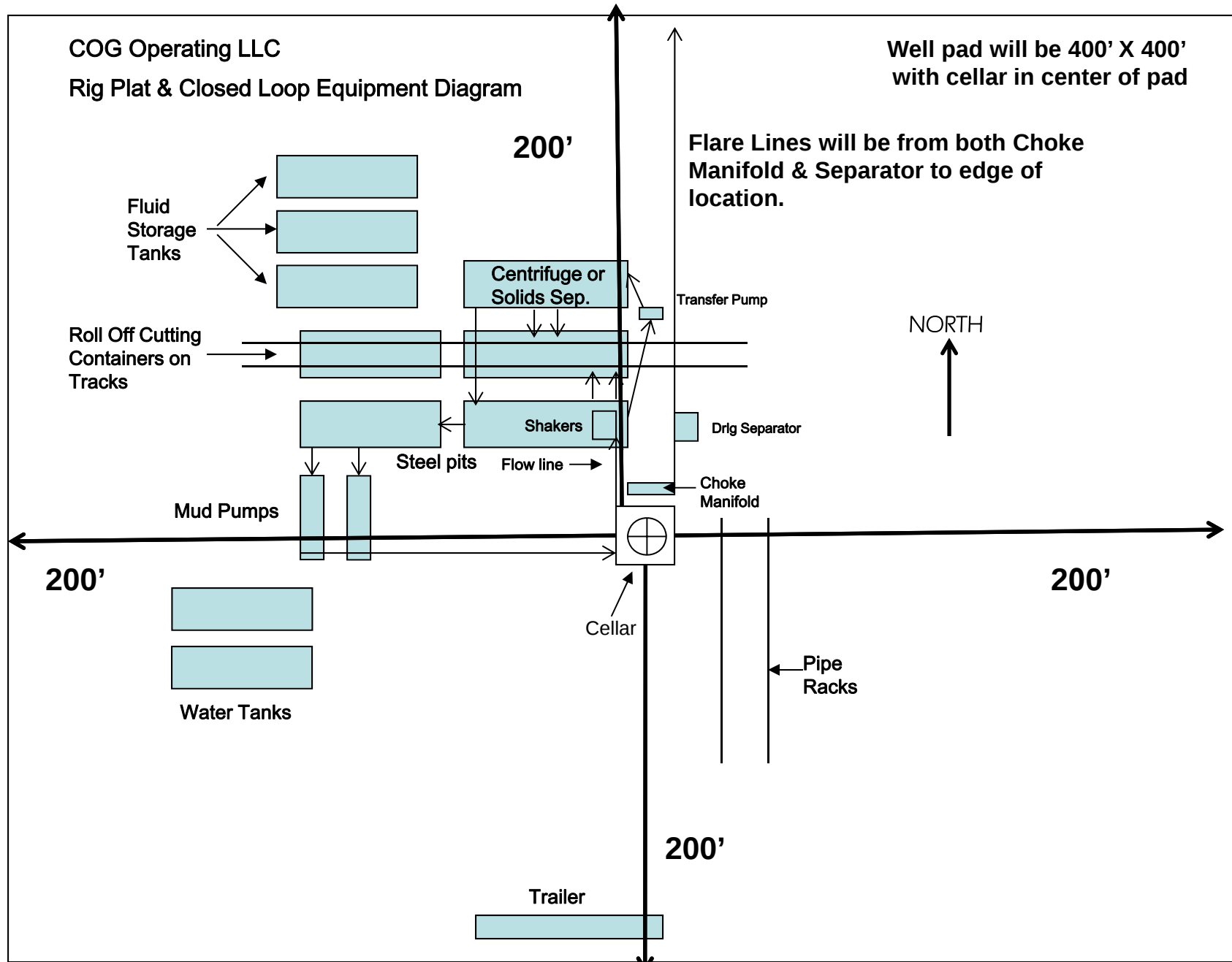


Exhibit 1

"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 #707H

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 #707H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=30ft @ 3210.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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 #707H					
Well Position	+N/-S	0.0 usft	Northing:	372,244.99 usft	Latitude:	32° 1' 19.213 N
	+E/-W	0.0 usft	Easting:	685,470.64 usft	Longitude:	103° 44' 5.613 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,180.0 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	47,263.41268454

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	7.20	

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	11,496.6 PWP1 (OWB)	r.5 MWD+IFR1 OWSG MWD + IFR1 rev.5		
3	11,496.6	22,328.7 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 #707H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=30ft @ 3210.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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	
1,600.0	12.00	106.00	1,595.6	-17.3	60.2	2.00	2.00	0.00	106.00	
7,499.3	12.00	106.00	7,366.0	-355.3	1,239.2	0.00	0.00	0.00	0.00	
8,699.3	0.00	0.00	8,557.2	-389.8	1,359.5	1.00	-1.00	-8.83	-180.00	
11,496.6	0.00	0.00	11,354.5	-389.8	1,359.5	0.00	0.00	0.00	0.00	
12,246.6	90.00	359.59	11,832.0	87.6	1,356.2	12.00	12.00	-0.05	359.59	
22,278.7	90.00	359.59	11,832.0	10,119.5	1,285.2	0.00	0.00	0.00	0.00	
22,328.7	90.00	359.59	11,832.0	10,169.5	1,284.8	0.00	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 #707H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=30ft @ 3210.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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	106.00	1,100.0	-0.5	1.7	-0.3	2.00	2.00	0.00
1,200.0	4.00	106.00	1,199.8	-1.9	6.7	-1.1	2.00	2.00	0.00
1,300.0	6.00	106.00	1,299.5	-4.3	15.1	-2.4	2.00	2.00	0.00
1,400.0	8.00	106.00	1,398.7	-7.7	26.8	-4.3	2.00	2.00	0.00
1,500.0	10.00	106.00	1,497.5	-12.0	41.8	-6.7	2.00	2.00	0.00
1,600.0	12.00	106.00	1,595.6	-17.3	60.2	-9.6	2.00	2.00	0.00
Start 5899.3 hold at 1600.0 MD									
1,700.0	12.00	106.00	1,693.4	-23.0	80.2	-12.8	0.00	0.00	0.00
1,800.0	12.00	106.00	1,791.3	-28.7	100.1	-15.9	0.00	0.00	0.00
1,900.0	12.00	106.00	1,889.1	-34.4	120.1	-19.1	0.00	0.00	0.00
2,000.0	12.00	106.00	1,986.9	-40.2	140.1	-22.3	0.00	0.00	0.00
2,100.0	12.00	106.00	2,084.7	-45.9	160.1	-25.5	0.00	0.00	0.00
2,200.0	12.00	106.00	2,182.5	-51.6	180.1	-28.7	0.00	0.00	0.00
2,300.0	12.00	106.00	2,280.3	-57.4	200.1	-31.8	0.00	0.00	0.00
2,400.0	12.00	106.00	2,378.1	-63.1	220.1	-35.0	0.00	0.00	0.00
2,500.0	12.00	106.00	2,476.0	-68.8	240.0	-38.2	0.00	0.00	0.00
2,600.0	12.00	106.00	2,573.8	-74.6	260.0	-41.4	0.00	0.00	0.00
2,700.0	12.00	106.00	2,671.6	-80.3	280.0	-44.6	0.00	0.00	0.00
2,800.0	12.00	106.00	2,769.4	-86.0	300.0	-47.7	0.00	0.00	0.00
2,900.0	12.00	106.00	2,867.2	-91.8	320.0	-50.9	0.00	0.00	0.00
3,000.0	12.00	106.00	2,965.0	-97.5	340.0	-54.1	0.00	0.00	0.00
3,100.0	12.00	106.00	3,062.8	-103.2	360.0	-57.3	0.00	0.00	0.00
3,200.0	12.00	106.00	3,160.7	-108.9	379.9	-60.5	0.00	0.00	0.00
3,300.0	12.00	106.00	3,258.5	-114.7	399.9	-63.6	0.00	0.00	0.00
3,400.0	12.00	106.00	3,356.3	-120.4	419.9	-66.8	0.00	0.00	0.00
3,500.0	12.00	106.00	3,454.1	-126.1	439.9	-70.0	0.00	0.00	0.00
3,600.0	12.00	106.00	3,551.9	-131.9	459.9	-73.2	0.00	0.00	0.00
3,700.0	12.00	106.00	3,649.7	-137.6	479.9	-76.4	0.00	0.00	0.00
3,800.0	12.00	106.00	3,747.5	-143.3	499.9	-79.5	0.00	0.00	0.00
3,900.0	12.00	106.00	3,845.4	-149.1	519.8	-82.7	0.00	0.00	0.00
4,000.0	12.00	106.00	3,943.2	-154.8	539.8	-85.9	0.00	0.00	0.00
4,100.0	12.00	106.00	4,041.0	-160.5	559.8	-89.1	0.00	0.00	0.00
4,200.0	12.00	106.00	4,138.8	-166.3	579.8	-92.3	0.00	0.00	0.00
4,300.0	12.00	106.00	4,236.6	-172.0	599.8	-95.4	0.00	0.00	0.00
4,400.0	12.00	106.00	4,334.4	-177.7	619.8	-98.6	0.00	0.00	0.00
4,500.0	12.00	106.00	4,432.3	-183.4	639.8	-101.8	0.00	0.00	0.00
4,600.0	12.00	106.00	4,530.1	-189.2	659.8	-105.0	0.00	0.00	0.00
4,700.0	12.00	106.00	4,627.9	-194.9	679.7	-108.2	0.00	0.00	0.00
4,800.0	12.00	106.00	4,725.7	-200.6	699.7	-111.3	0.00	0.00	0.00
4,900.0	12.00	106.00	4,823.5	-206.4	719.7	-114.5	0.00	0.00	0.00
5,000.0	12.00	106.00	4,921.3	-212.1	739.7	-117.7	0.00	0.00	0.00
5,100.0	12.00	106.00	5,019.1	-217.8	759.7	-120.9	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 #707H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=30ft @ 3210.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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	12.00	106.00	5,117.0	-223.6	779.7	-124.1	0.00	0.00	0.00
5,300.0	12.00	106.00	5,214.8	-229.3	799.7	-127.2	0.00	0.00	0.00
5,400.0	12.00	106.00	5,312.6	-235.0	819.6	-130.4	0.00	0.00	0.00
5,500.0	12.00	106.00	5,410.4	-240.8	839.6	-133.6	0.00	0.00	0.00
5,600.0	12.00	106.00	5,508.2	-246.5	859.6	-136.8	0.00	0.00	0.00
5,700.0	12.00	106.00	5,606.0	-252.2	879.6	-140.0	0.00	0.00	0.00
5,800.0	12.00	106.00	5,703.8	-258.0	899.6	-143.2	0.00	0.00	0.00
5,900.0	12.00	106.00	5,801.7	-263.7	919.6	-146.3	0.00	0.00	0.00
6,000.0	12.00	106.00	5,899.5	-269.4	939.6	-149.5	0.00	0.00	0.00
6,100.0	12.00	106.00	5,997.3	-275.1	959.5	-152.7	0.00	0.00	0.00
6,200.0	12.00	106.00	6,095.1	-280.9	979.5	-155.9	0.00	0.00	0.00
6,300.0	12.00	106.00	6,192.9	-286.6	999.5	-159.1	0.00	0.00	0.00
6,400.0	12.00	106.00	6,290.7	-292.3	1,019.5	-162.2	0.00	0.00	0.00
6,500.0	12.00	106.00	6,388.5	-298.1	1,039.5	-165.4	0.00	0.00	0.00
6,600.0	12.00	106.00	6,486.4	-303.8	1,059.5	-168.6	0.00	0.00	0.00
6,700.0	12.00	106.00	6,584.2	-309.5	1,079.5	-171.8	0.00	0.00	0.00
6,800.0	12.00	106.00	6,682.0	-315.3	1,099.4	-175.0	0.00	0.00	0.00
6,900.0	12.00	106.00	6,779.8	-321.0	1,119.4	-178.1	0.00	0.00	0.00
7,000.0	12.00	106.00	6,877.6	-326.7	1,139.4	-181.3	0.00	0.00	0.00
7,100.0	12.00	106.00	6,975.4	-332.5	1,159.4	-184.5	0.00	0.00	0.00
7,200.0	12.00	106.00	7,073.2	-338.2	1,179.4	-187.7	0.00	0.00	0.00
7,300.0	12.00	106.00	7,171.1	-343.9	1,199.4	-190.9	0.00	0.00	0.00
7,400.0	12.00	106.00	7,268.9	-349.6	1,219.4	-194.0	0.00	0.00	0.00
7,499.3	12.00	106.00	7,366.0	-355.3	1,239.2	-197.2	0.00	0.00	0.00
Start DLS 1.00 TFO -180.00									
7,600.0	10.99	106.00	7,464.7	-360.9	1,258.5	-200.3	1.00	-1.00	0.00
7,700.0	9.99	106.00	7,563.0	-365.9	1,276.0	-203.1	1.00	-1.00	0.00
7,800.0	8.99	106.00	7,661.6	-370.4	1,291.8	-205.6	1.00	-1.00	0.00
7,900.0	7.99	106.00	7,760.5	-374.5	1,306.0	-207.8	1.00	-1.00	0.00
8,000.0	6.99	106.00	7,859.7	-378.1	1,318.6	-209.8	1.00	-1.00	0.00
8,100.0	5.99	106.00	7,959.0	-381.2	1,329.4	-211.6	1.00	-1.00	0.00
8,200.0	4.99	106.00	8,058.6	-383.9	1,338.7	-213.0	1.00	-1.00	0.00
8,300.0	3.99	106.00	8,158.3	-386.0	1,346.2	-214.2	1.00	-1.00	0.00
8,400.0	2.99	106.00	8,258.1	-387.7	1,352.0	-215.2	1.00	-1.00	0.00
8,500.0	1.99	106.00	8,358.0	-388.9	1,356.2	-215.8	1.00	-1.00	0.00
8,600.0	0.99	106.00	8,458.0	-389.6	1,358.7	-216.2	1.00	-1.00	0.00
8,699.3	0.00	0.00	8,557.2	-389.8	1,359.5	-216.3	1.00	-1.00	-106.76
Start 2797.3 hold at 8699.3 MD									
8,800.0	0.00	0.00	8,658.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
8,900.0	0.00	0.00	8,758.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,000.0	0.00	0.00	8,858.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,100.0	0.00	0.00	8,958.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,200.0	0.00	0.00	9,058.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,300.0	0.00	0.00	9,158.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,400.0	0.00	0.00	9,258.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,500.0	0.00	0.00	9,358.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,600.0	0.00	0.00	9,458.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,700.0	0.00	0.00	9,558.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,800.0	0.00	0.00	9,658.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
9,900.0	0.00	0.00	9,758.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,000.0	0.00	0.00	9,858.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,100.0	0.00	0.00	9,958.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,200.0	0.00	0.00	10,058.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,300.0	0.00	0.00	10,158.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00

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Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
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Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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)
10,400.0	0.00	0.00	10,258.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,500.0	0.00	0.00	10,358.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,600.0	0.00	0.00	10,458.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,700.0	0.00	0.00	10,558.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,800.0	0.00	0.00	10,658.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
10,900.0	0.00	0.00	10,758.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
11,000.0	0.00	0.00	10,858.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
11,100.0	0.00	0.00	10,958.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
11,200.0	0.00	0.00	11,058.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
11,300.0	0.00	0.00	11,158.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
11,400.0	0.00	0.00	11,258.0	-389.8	1,359.5	-216.3	0.00	0.00	0.00
11,496.6	0.00	0.00	11,354.5	-389.8	1,359.5	-216.3	0.00	0.00	0.00
Start DLS 12.00 TFO 359.59									
11,500.0	0.41	359.59	11,358.0	-389.8	1,359.5	-216.3	12.00	12.00	-11.85
11,525.0	3.41	359.59	11,382.9	-389.0	1,359.5	-215.5	12.00	12.00	0.00
11,550.0	6.41	359.59	11,407.8	-386.9	1,359.5	-213.4	12.00	12.00	0.00
11,575.0	9.41	359.59	11,432.6	-383.4	1,359.5	-210.0	12.00	12.00	0.00
11,600.0	12.41	359.59	11,457.1	-378.7	1,359.5	-205.3	12.00	12.00	0.00
11,625.0	15.41	359.59	11,481.4	-372.7	1,359.4	-199.3	12.00	12.00	0.00
11,650.0	18.41	359.59	11,505.3	-365.4	1,359.4	-192.1	12.00	12.00	0.00
11,675.0	21.41	359.59	11,528.8	-356.9	1,359.3	-183.7	12.00	12.00	0.00
11,700.0	24.41	359.59	11,551.9	-347.2	1,359.2	-174.0	12.00	12.00	0.00
11,725.0	27.41	359.59	11,574.3	-336.2	1,359.2	-163.2	12.00	12.00	0.00
11,750.0	30.41	359.59	11,596.2	-324.2	1,359.1	-151.2	12.00	12.00	0.00
11,775.0	33.41	359.59	11,617.4	-310.9	1,359.0	-138.1	12.00	12.00	0.00
11,800.0	36.41	359.59	11,637.9	-296.6	1,358.9	-124.0	12.00	12.00	0.00
11,825.0	39.41	359.59	11,657.7	-281.3	1,358.8	-108.7	12.00	12.00	0.00
11,850.0	42.41	359.59	11,676.6	-264.9	1,358.7	-92.5	12.00	12.00	0.00
11,875.0	45.41	359.59	11,694.6	-247.6	1,358.5	-75.3	12.00	12.00	0.00
11,900.0	48.41	359.59	11,711.6	-229.3	1,358.4	-57.2	12.00	12.00	0.00
11,925.0	51.41	359.59	11,727.7	-210.2	1,358.3	-38.3	12.00	12.00	0.00
11,950.0	54.41	359.59	11,742.8	-190.3	1,358.1	-18.5	12.00	12.00	0.00
11,975.0	57.41	359.59	11,756.8	-169.6	1,358.0	2.0	12.00	12.00	0.00
12,000.0	60.41	359.59	11,769.7	-148.1	1,357.8	23.2	12.00	12.00	0.00
12,025.0	63.41	359.59	11,781.5	-126.1	1,357.7	45.1	12.00	12.00	0.00
12,050.0	66.41	359.59	11,792.1	-103.5	1,357.5	67.5	12.00	12.00	0.00
12,075.0	69.41	359.59	11,801.5	-80.3	1,357.4	90.5	12.00	12.00	0.00
12,100.0	72.41	359.59	11,809.7	-56.7	1,357.2	113.9	12.00	12.00	0.00
12,125.0	75.41	359.59	11,816.6	-32.7	1,357.0	137.7	12.00	12.00	0.00
12,150.0	78.41	359.59	11,822.3	-8.3	1,356.9	161.8	12.00	12.00	0.00
12,175.0	81.41	359.59	11,826.6	16.3	1,356.7	186.2	12.00	12.00	0.00
12,200.0	84.41	359.59	11,829.7	41.1	1,356.5	210.8	12.00	12.00	0.00
12,225.0	87.41	359.59	11,831.5	66.0	1,356.3	235.5	12.00	12.00	0.00
12,246.6	90.00	359.59	11,832.0	87.6	1,356.2	256.9	12.00	12.00	0.00
Start 10032.2 hold at 12246.6 MD									
12,300.0	90.00	359.59	11,832.0	141.0	1,355.8	309.9	0.00	0.00	0.00
12,400.0	90.00	359.59	11,832.0	241.0	1,355.1	409.0	0.00	0.00	0.00
12,500.0	90.00	359.59	11,832.0	341.0	1,354.4	508.1	0.00	0.00	0.00
12,600.0	90.00	359.59	11,832.0	441.0	1,353.7	607.2	0.00	0.00	0.00
12,700.0	90.00	359.59	11,832.0	541.0	1,353.0	706.3	0.00	0.00	0.00
12,800.0	90.00	359.59	11,832.0	641.0	1,352.3	805.5	0.00	0.00	0.00
12,900.0	90.00	359.59	11,832.0	741.0	1,351.5	904.6	0.00	0.00	0.00
13,000.0	90.00	359.59	11,832.0	841.0	1,350.8	1,003.7	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 #707H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=30ft @ 3210.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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)
13,100.0	90.00	359.59	11,832.0	941.0	1,350.1	1,102.8	0.00	0.00	0.00
13,200.0	90.00	359.59	11,832.0	1,041.0	1,349.4	1,201.9	0.00	0.00	0.00
13,300.0	90.00	359.59	11,832.0	1,141.0	1,348.7	1,301.1	0.00	0.00	0.00
13,400.0	90.00	359.59	11,832.0	1,241.0	1,348.0	1,400.2	0.00	0.00	0.00
13,500.0	90.00	359.59	11,832.0	1,341.0	1,347.3	1,499.3	0.00	0.00	0.00
13,600.0	90.00	359.59	11,832.0	1,441.0	1,346.6	1,598.4	0.00	0.00	0.00
13,700.0	90.00	359.59	11,832.0	1,541.0	1,345.9	1,697.5	0.00	0.00	0.00
13,800.0	90.00	359.59	11,832.0	1,641.0	1,345.2	1,796.7	0.00	0.00	0.00
13,900.0	90.00	359.59	11,832.0	1,741.0	1,344.5	1,895.8	0.00	0.00	0.00
14,000.0	90.00	359.59	11,832.0	1,841.0	1,343.8	1,994.9	0.00	0.00	0.00
14,100.0	90.00	359.59	11,832.0	1,941.0	1,343.1	2,094.0	0.00	0.00	0.00
14,200.0	90.00	359.59	11,832.0	2,041.0	1,342.4	2,193.1	0.00	0.00	0.00
14,300.0	90.00	359.59	11,832.0	2,141.0	1,341.6	2,292.3	0.00	0.00	0.00
14,400.0	90.00	359.59	11,832.0	2,241.0	1,340.9	2,391.4	0.00	0.00	0.00
14,500.0	90.00	359.59	11,832.0	2,341.0	1,340.2	2,490.5	0.00	0.00	0.00
14,600.0	90.00	359.59	11,832.0	2,441.0	1,339.5	2,589.6	0.00	0.00	0.00
14,700.0	90.00	359.59	11,832.0	2,541.0	1,338.8	2,688.7	0.00	0.00	0.00
14,800.0	90.00	359.59	11,832.0	2,641.0	1,338.1	2,787.9	0.00	0.00	0.00
14,900.0	90.00	359.59	11,832.0	2,741.0	1,337.4	2,887.0	0.00	0.00	0.00
15,000.0	90.00	359.59	11,832.0	2,841.0	1,336.7	2,986.1	0.00	0.00	0.00
15,100.0	90.00	359.59	11,832.0	2,941.0	1,336.0	3,085.2	0.00	0.00	0.00
15,200.0	90.00	359.59	11,832.0	3,041.0	1,335.3	3,184.3	0.00	0.00	0.00
15,300.0	90.00	359.59	11,832.0	3,141.0	1,334.6	3,283.5	0.00	0.00	0.00
15,400.0	90.00	359.59	11,832.0	3,241.0	1,333.9	3,382.6	0.00	0.00	0.00
15,500.0	90.00	359.59	11,832.0	3,340.9	1,333.2	3,481.7	0.00	0.00	0.00
15,600.0	90.00	359.59	11,832.0	3,440.9	1,332.4	3,580.8	0.00	0.00	0.00
15,700.0	90.00	359.59	11,832.0	3,540.9	1,331.7	3,679.9	0.00	0.00	0.00
15,800.0	90.00	359.59	11,832.0	3,640.9	1,331.0	3,779.1	0.00	0.00	0.00
15,900.0	90.00	359.59	11,832.0	3,740.9	1,330.3	3,878.2	0.00	0.00	0.00
16,000.0	90.00	359.59	11,832.0	3,840.9	1,329.6	3,977.3	0.00	0.00	0.00
16,100.0	90.00	359.59	11,832.0	3,940.9	1,328.9	4,076.4	0.00	0.00	0.00
16,200.0	90.00	359.59	11,832.0	4,040.9	1,328.2	4,175.5	0.00	0.00	0.00
16,300.0	90.00	359.59	11,832.0	4,140.9	1,327.5	4,274.7	0.00	0.00	0.00
16,400.0	90.00	359.59	11,832.0	4,240.9	1,326.8	4,373.8	0.00	0.00	0.00
16,500.0	90.00	359.59	11,832.0	4,340.9	1,326.1	4,472.9	0.00	0.00	0.00
16,600.0	90.00	359.59	11,832.0	4,440.9	1,325.4	4,572.0	0.00	0.00	0.00
16,700.0	90.00	359.59	11,832.0	4,540.9	1,324.7	4,671.1	0.00	0.00	0.00
16,800.0	90.00	359.59	11,832.0	4,640.9	1,324.0	4,770.3	0.00	0.00	0.00
16,900.0	90.00	359.59	11,832.0	4,740.9	1,323.2	4,869.4	0.00	0.00	0.00
17,000.0	90.00	359.59	11,832.0	4,840.9	1,322.5	4,968.5	0.00	0.00	0.00
17,100.0	90.00	359.59	11,832.0	4,940.9	1,321.8	5,067.6	0.00	0.00	0.00
17,200.0	90.00	359.59	11,832.0	5,040.9	1,321.1	5,166.7	0.00	0.00	0.00
17,300.0	90.00	359.59	11,832.0	5,140.9	1,320.4	5,265.9	0.00	0.00	0.00
17,400.0	90.00	359.59	11,832.0	5,240.9	1,319.7	5,365.0	0.00	0.00	0.00
17,500.0	90.00	359.59	11,832.0	5,340.9	1,319.0	5,464.1	0.00	0.00	0.00
17,600.0	90.00	359.59	11,832.0	5,440.9	1,318.3	5,563.2	0.00	0.00	0.00
17,700.0	90.00	359.59	11,832.0	5,540.9	1,317.6	5,662.3	0.00	0.00	0.00
17,800.0	90.00	359.59	11,832.0	5,640.9	1,316.9	5,761.5	0.00	0.00	0.00
17,900.0	90.00	359.59	11,832.0	5,740.9	1,316.2	5,860.6	0.00	0.00	0.00
18,000.0	90.00	359.59	11,832.0	5,840.9	1,315.5	5,959.7	0.00	0.00	0.00
18,100.0	90.00	359.59	11,832.0	5,940.9	1,314.8	6,058.8	0.00	0.00	0.00
18,200.0	90.00	359.59	11,832.0	6,040.9	1,314.0	6,157.9	0.00	0.00	0.00
18,300.0	90.00	359.59	11,832.0	6,140.9	1,313.3	6,257.1	0.00	0.00	0.00
18,400.0	90.00	359.59	11,832.0	6,240.9	1,312.6	6,356.2	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 #707H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=30ft @ 3210.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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)	
18,500.0	90.00	359.59	11,832.0	6,340.9	1,311.9	6,455.3	0.00	0.00	0.00	
18,600.0	90.00	359.59	11,832.0	6,440.9	1,311.2	6,554.4	0.00	0.00	0.00	
18,700.0	90.00	359.59	11,832.0	6,540.9	1,310.5	6,653.6	0.00	0.00	0.00	
18,800.0	90.00	359.59	11,832.0	6,640.9	1,309.8	6,752.7	0.00	0.00	0.00	
18,900.0	90.00	359.59	11,832.0	6,740.9	1,309.1	6,851.8	0.00	0.00	0.00	
19,000.0	90.00	359.59	11,832.0	6,840.9	1,308.4	6,950.9	0.00	0.00	0.00	
19,100.0	90.00	359.59	11,832.0	6,940.9	1,307.7	7,050.0	0.00	0.00	0.00	
19,200.0	90.00	359.59	11,832.0	7,040.9	1,307.0	7,149.2	0.00	0.00	0.00	
19,300.0	90.00	359.59	11,832.0	7,140.9	1,306.3	7,248.3	0.00	0.00	0.00	
19,400.0	90.00	359.59	11,832.0	7,240.8	1,305.6	7,347.4	0.00	0.00	0.00	
19,500.0	90.00	359.59	11,832.0	7,340.8	1,304.9	7,446.5	0.00	0.00	0.00	
19,600.0	90.00	359.59	11,832.0	7,440.8	1,304.1	7,545.6	0.00	0.00	0.00	
19,700.0	90.00	359.59	11,832.0	7,540.8	1,303.4	7,644.8	0.00	0.00	0.00	
19,800.0	90.00	359.59	11,832.0	7,640.8	1,302.7	7,743.9	0.00	0.00	0.00	
19,900.0	90.00	359.59	11,832.0	7,740.8	1,302.0	7,843.0	0.00	0.00	0.00	
20,000.0	90.00	359.59	11,832.0	7,840.8	1,301.3	7,942.1	0.00	0.00	0.00	
20,100.0	90.00	359.59	11,832.0	7,940.8	1,300.6	8,041.2	0.00	0.00	0.00	
20,200.0	90.00	359.59	11,832.0	8,040.8	1,299.9	8,140.4	0.00	0.00	0.00	
20,300.0	90.00	359.59	11,832.0	8,140.8	1,299.2	8,239.5	0.00	0.00	0.00	
20,400.0	90.00	359.59	11,832.0	8,240.8	1,298.5	8,338.6	0.00	0.00	0.00	
20,500.0	90.00	359.59	11,832.0	8,340.8	1,297.8	8,437.7	0.00	0.00	0.00	
20,600.0	90.00	359.59	11,832.0	8,440.8	1,297.1	8,536.8	0.00	0.00	0.00	
20,700.0	90.00	359.59	11,832.0	8,540.8	1,296.4	8,636.0	0.00	0.00	0.00	
20,800.0	90.00	359.59	11,832.0	8,640.8	1,295.7	8,735.1	0.00	0.00	0.00	
20,900.0	90.00	359.59	11,832.0	8,740.8	1,294.9	8,834.2	0.00	0.00	0.00	
21,000.0	90.00	359.59	11,832.0	8,840.8	1,294.2	8,933.3	0.00	0.00	0.00	
21,100.0	90.00	359.59	11,832.0	8,940.8	1,293.5	9,032.4	0.00	0.00	0.00	
21,200.0	90.00	359.59	11,832.0	9,040.8	1,292.8	9,131.6	0.00	0.00	0.00	
21,300.0	90.00	359.59	11,832.0	9,140.8	1,292.1	9,230.7	0.00	0.00	0.00	
21,400.0	90.00	359.59	11,832.0	9,240.8	1,291.4	9,329.8	0.00	0.00	0.00	
21,500.0	90.00	359.59	11,832.0	9,340.8	1,290.7	9,428.9	0.00	0.00	0.00	
21,600.0	90.00	359.59	11,832.0	9,440.8	1,290.0	9,528.0	0.00	0.00	0.00	
21,700.0	90.00	359.59	11,832.0	9,540.8	1,289.3	9,627.2	0.00	0.00	0.00	
21,800.0	90.00	359.59	11,832.0	9,640.8	1,288.6	9,726.3	0.00	0.00	0.00	
21,900.0	90.00	359.59	11,832.0	9,740.8	1,287.9	9,825.4	0.00	0.00	0.00	
22,000.0	90.00	359.59	11,832.0	9,840.8	1,287.2	9,924.5	0.00	0.00	0.00	
22,100.0	90.00	359.59	11,832.0	9,940.8	1,286.5	10,023.6	0.00	0.00	0.00	
22,200.0	90.00	359.59	11,832.0	10,040.8	1,285.7	10,122.8	0.00	0.00	0.00	
22,278.7	90.00	359.59	11,832.0	10,119.5	1,285.2	10,200.8	0.00	0.00	0.00	
Start 50.0 hold at 22278.7 MD										
22,300.0	90.00	359.59	11,832.0	10,140.8	1,285.0	10,221.9	0.00	0.00	0.00	
22,328.7	90.00	359.59	11,832.0	10,169.5	1,284.8	10,250.4	0.00	0.00	0.00	
TD at 22328.7										

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #707H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=30ft @ 3210.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=30ft @ 3210.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #707H	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)		
LTP (ZIA HILLS UNIT 24 - plan hits target center - Point	0.00	0.00	11,832.0	10,119.5	1,285.2	382,364.50	686,755.83	32° 2' 59.287 N	103° 43' 50.029 W
FTP (ZIA HILLS UNIT 24 - plan misses target center by 154.5usft at 11903.3usft MD (11713.8 TVD, -226.8 N, 1358.4 E) - Circle (radius 50.0)	0.00	0.00	11,832.0	-326.3	1,361.4	371,918.73	686,832.02	32° 1' 15.910 N	103° 43' 49.821 W
PBHL (ZIA HILLS UNIT : - plan misses target center by 0.1usft at 22328.7usft MD (11832.0 TVD, 10169.5 N, 1284.8 E) - Rectangle (sides W100.0 H10,496.0 D20.0)	0.00	179.60	11,832.0	10,169.5	1,284.9	382,414.50	686,755.54	32° 2' 59.782 N	103° 43' 50.029 W

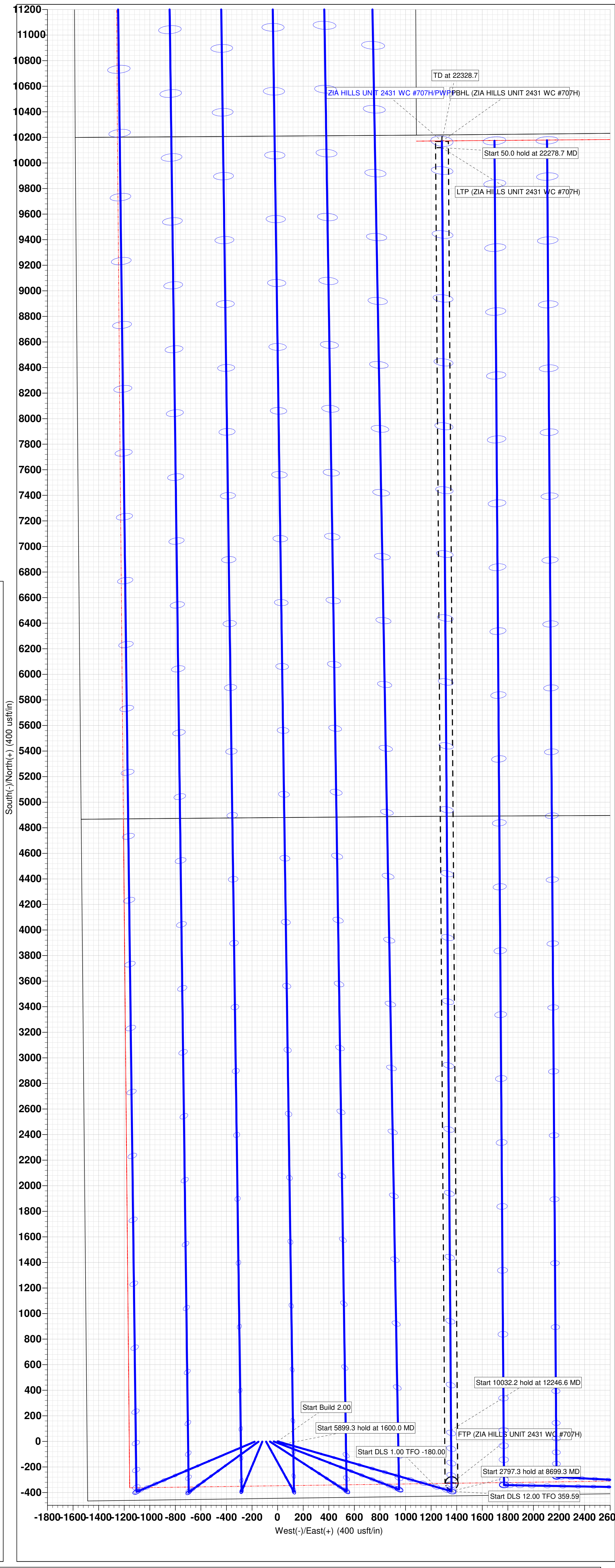
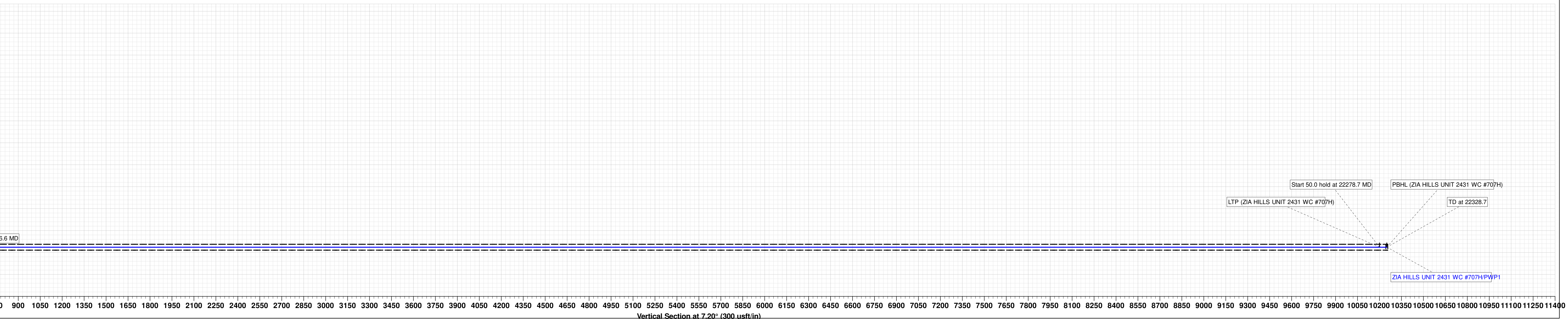
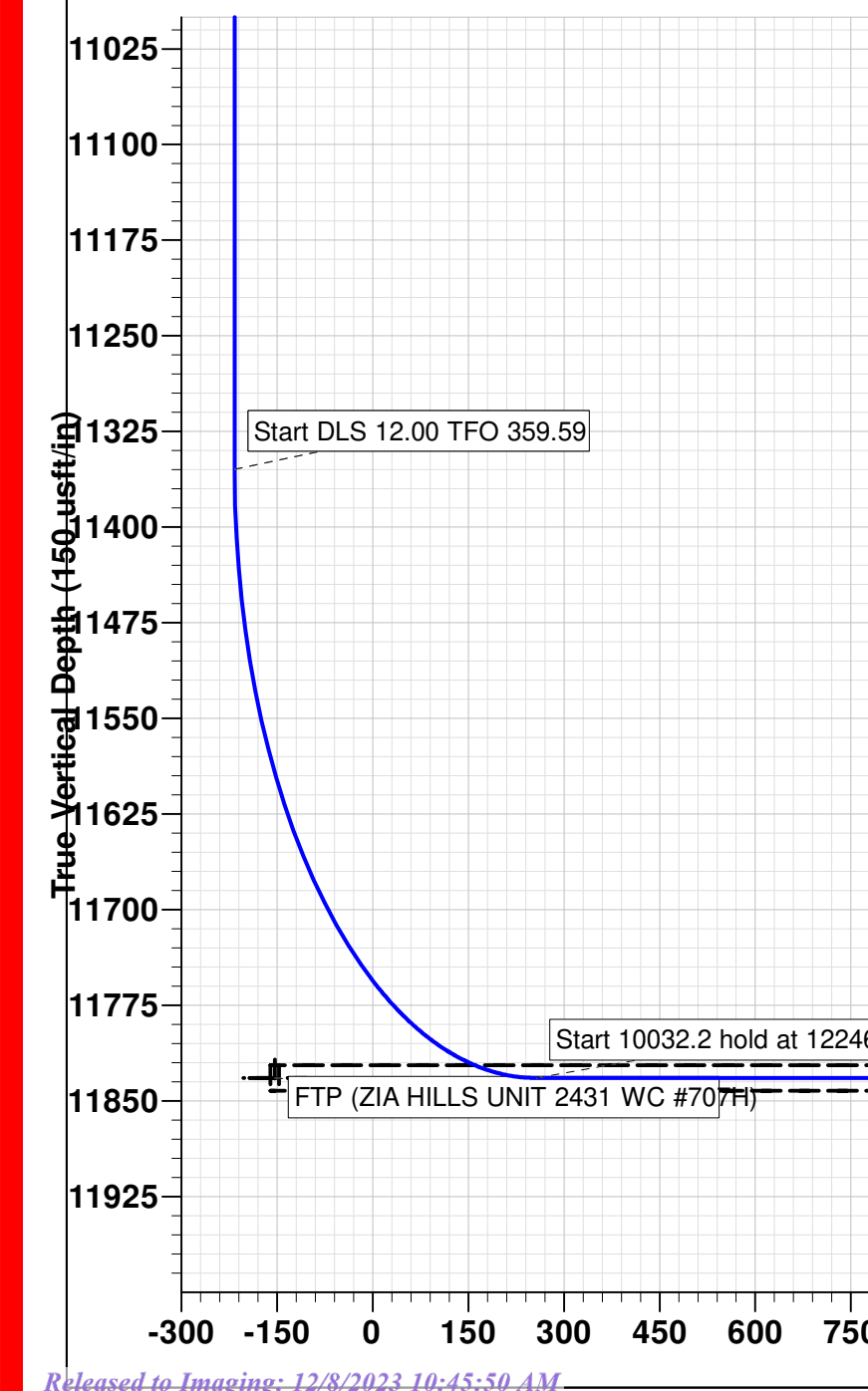
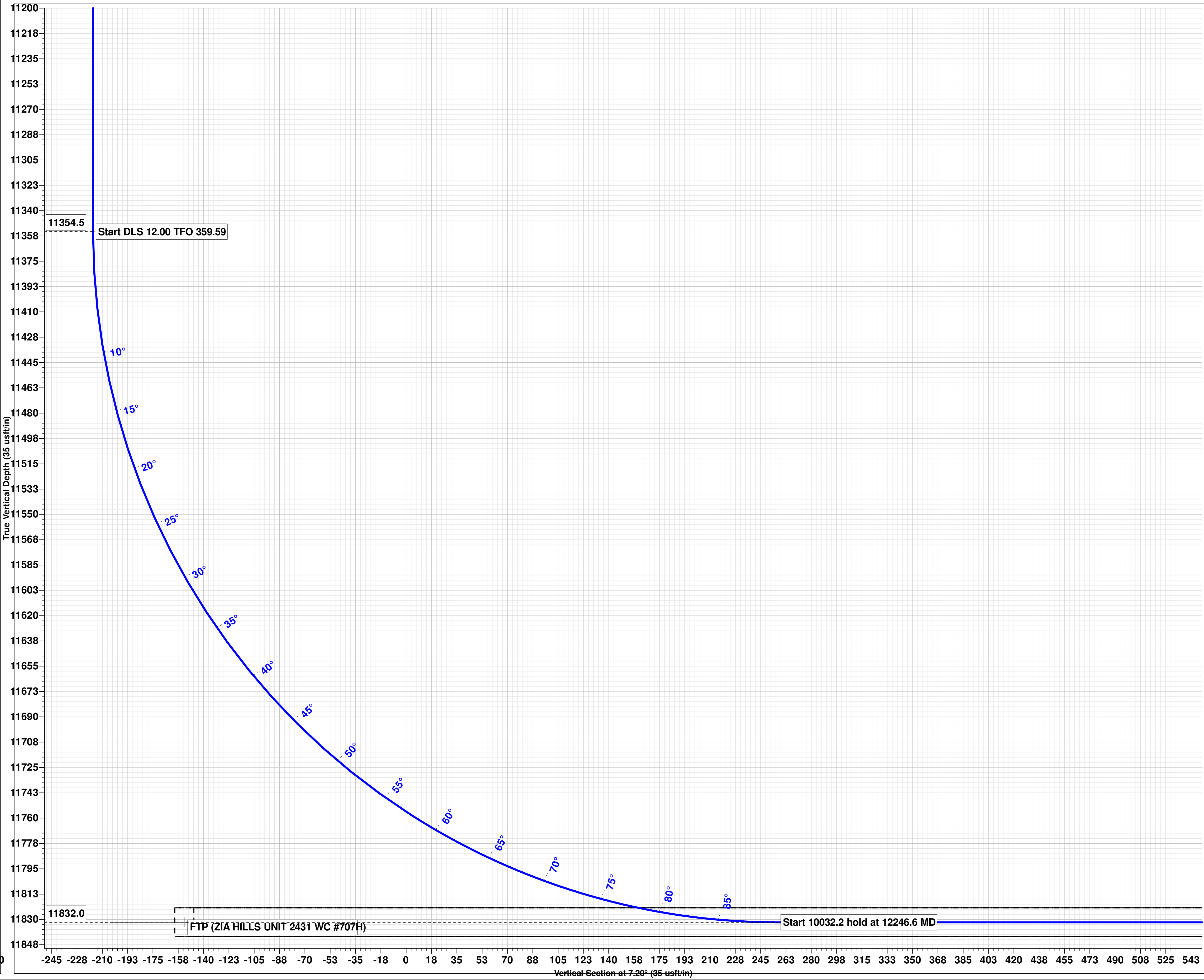
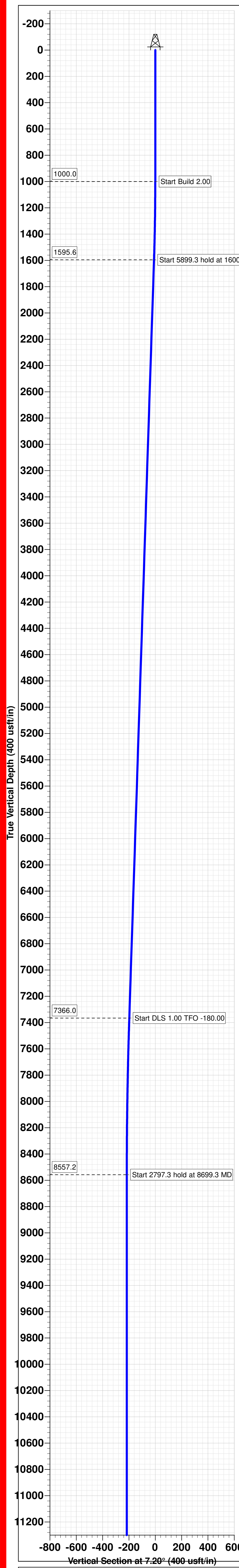
Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	Start Build 2.00
1,600.0	1,595.6	-17.3	60.2	Start 5899.3 hold at 1600.0 MD
7,499.3	7,366.0	-355.3	1,239.2	Start DLS 1.00 TFO -180.00
8,699.3	8,557.2	-389.8	1,359.5	Start 2797.3 hold at 8699.3 MD
11,496.6	11,354.5	-389.8	1,359.5	Start DLS 12.00 TFO 359.59
12,246.6	11,832.0	87.6	1,356.2	Start 10032.2 hold at 12246.6 MD
22,278.7	11,832.0	10,119.5	1,285.2	Start 50.0 hold at 22278.7 MD
22,328.7	11,832.0	10,169.5	1,284.8	TD at 22328.7

Project: BULLDOG PROSPECT (NM-E)
Site: ZIA HILLS UNIT 2431 PROJECT
Well: ZIA HILLS UNIT 2431 WC #707H
Wellbore: OWB
Design: PWP1
GL: 3180.0
KB=30ft @ 3210.0usft

WELL DETAILS: ZIA HILLS UNIT 2431 WC #707H						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	372244.99	685470.64	32° 1' 19.213 N	103° 44' 5.613 W	

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
FTP (ZIA HILLS UNIT 2431 WC #707H)	11832.0	-326.3	1361.4	371918.73	686832.02	
LTP (ZIA HILLS UNIT 2431 WC #707H)	11832.0	10119.5	1285.2	382364.50	686755.83	
PBHL (ZIA HILLS UNIT 2431 WC #707H)	11832.0	10169.5	1284.9	382414.50	686755.54	

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	
1600.0	12.00	106.00	1595.6	-17.3	60.2	2.00	106.00	-9.6	
7499.3	12.00	106.00	7366.0	-355.3	1239.2	0.00	0.00	-197.2	
8699.3	0.00	0.00	8557.2	-389.8	1359.5	1.00	-180.00	-216.3	
11496.6	0.00	0.00	11354.5	-389.8	1359.5	0.00	0.00	-216.3	
12246.6	90.00	359.59	11832.0	87.6	1356.2	12.00	359.59	255.9	
22278.7	90.00	359.59	11832.0	10119.5	1285.2	0.00	0.00	10200.8	
22328.7	90.00	359.59	11832.0	10169.5	1284.8	0.00	0.00	10250.4	



DELAWARE BASIN EAST

**BULLDOG PROSPECT (NM-E)
ZIA HILLS UNIT 2431 PROJECT
ZIA HILLS UNIT 2431 WC #707H**

**OWB
PWP1**

Anticollision Report

15 March, 2023

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,000.0usft	Error Surface:	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	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	11,496.6	PWP1 (OWB)	r.5 MWD+IFR1	OWSG MWD + IFR1 rev.5
11,496.6	22,328.7	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
Offset Well - Wellbore - Design						
ZIA HILLS UNIT 2431 PROJECT						
ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0	1,000.0	992.2	180.0	171.6	21.381	CC, ES
ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0	1,200.0	1,183.6	191.0	181.7	20.670	SF
ZIA HILLS UNIT 2431 WC #702H - OWB - PWP0	1,000.0	992.6	150.0	141.6	17.820	CC, ES
ZIA HILLS UNIT 2431 WC #702H - OWB - PWP0	1,200.0	1,184.0	161.8	152.5	17.393	SF
ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0	1,000.0	992.5	120.2	111.8	14.275	CC, ES
ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0	1,100.0	1,090.9	122.5	113.7	14.032	SF
ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0	1,000.0	992.9	90.1	81.7	10.702	CC, ES
ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0	1,300.0	1,296.9	98.4	88.7	10.151	SF
ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0	1,000.0	993.4	60.3	51.9	7.166	CC, ES
ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0	22,329.6	21,979.5	924.9	757.3	5.520	SF
ZIA HILLS UNIT 2431 WC #706H - OWB - PWP0	1,000.0	993.1	30.0	21.6	3.562	CC
ZIA HILLS UNIT 2431 WC #706H - OWB - PWP0	1,400.0	1,397.0	31.5	21.0	2.994	ES
ZIA HILLS UNIT 2431 WC #706H - OWB - PWP0	1,500.0	1,498.0	32.1	21.0	2.892	SF
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	11,322.5	11,347.4	413.6	341.6	5.746	CC
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	22,329.6	22,135.1	446.3	272.7	2.571	ES, SF
ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1	22,329.6	22,182.1	822.0	650.2	4.786	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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 2431 PROJECT						
ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0	22,329.6	22,006.4				Out of Range @TD
ZIA HILLS UNIT 2431 WC #702H - OWB - PWP0	22,329.6	21,800.1				Out of Range @TD
ZIA HILLS UNIT 2431 WC #703H - OWB - PWP0	22,329.6	21,950.1				Out of Range @TD
ZIA HILLS UNIT 2431 WC #704H - OWB - PWP0	22,329.6	21,790.5				Out of Range @TD
ZIA HILLS UNIT 2431 WC #705H - OWB - PWP0	22,329.6	21,979.5	924.9	757.3	5.520	SF
ZIA HILLS UNIT 2431 WC #706H - OWB - PWP0	22,329.6	21,840.5	639.1	470.5	3.791	
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	22,329.6	22,135.1	446.3	272.7	2.571	ES, SF
ZIA HILLS UNIT 2431 WC #709H - OWB - PWP1	22,329.6	22,182.1	822.0	650.2	4.786	CC, ES, SF

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #701H - OWB - PWP0														Offset Site Error:	0.0 usft
Survey Program:		0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11145-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			
0.0	0.0	0.0	0.0	3.0	3.0	-90.80	-2.5	-180.0	180.2						
100.0	100.0	92.2	92.2	3.0	3.0	-90.80	-2.5	-180.0	180.0	173.5	6.52	27.618			
200.0	200.0	192.2	192.2	3.2	3.2	-90.80	-2.5	-180.0	180.0	173.3	6.75	26.654			
300.0	300.0	292.2	292.2	3.3	3.3	-90.80	-2.5	-180.0	180.0	173.0	6.99	25.766			
400.0	400.0	392.2	392.2	3.4	3.4	-90.80	-2.5	-180.0	180.0	172.8	7.21	24.966			
500.0	500.0	492.2	492.2	3.5	3.5	-90.80	-2.5	-180.0	180.0	172.6	7.43	24.239			
600.0	600.0	592.2	592.2	3.7	3.7	-90.80	-2.5	-180.0	180.0	172.4	7.64	23.573			
700.0	700.0	692.2	692.2	3.8	3.8	-90.80	-2.5	-180.0	180.0	172.2	7.84	22.961			
800.0	800.0	792.2	792.2	3.9	3.9	-90.80	-2.5	-180.0	180.0	172.0	8.04	22.395			
900.0	900.0	892.2	892.2	4.0	4.0	-90.80	-2.5	-180.0	180.0	171.8	8.23	21.870			
1,000.0	1,000.0	992.2	992.2	4.2	4.2	-90.80	-2.5	-180.0	180.0	171.6	8.42	21.381	CC, ES		
1,100.0	1,100.0	1,088.3	1,088.3	4.3	4.3	163.22	-2.9	-180.9	182.7	173.9	8.74	20.891			
1,200.0	1,199.8	1,183.6	1,183.5	4.6	4.4	163.22	-4.2	-184.1	191.0	181.7	9.24	20.670	SF		
1,300.0	1,299.5	1,278.1	1,277.9	4.9	4.6	163.20	-6.5	-189.3	204.9	195.1	9.76	20.989			
1,400.0	1,398.7	1,371.4	1,370.8	5.2	4.9	163.16	-9.5	-196.6	224.3	214.0	10.30	21.772			
1,500.0	1,497.5	1,463.0	1,461.8	5.5	5.1	163.10	-13.4	-205.8	249.2	238.3	10.86	22.938			
1,600.0	1,595.6	1,552.6	1,550.6	5.9	5.4	163.01	-18.1	-216.7	279.4	267.9	11.44	24.414			
1,700.0	1,693.4	1,640.4	1,637.4	6.2	5.7	163.03	-23.4	-229.3	313.2	301.2	11.97	26.172			
1,800.0	1,791.3	1,726.9	1,722.5	6.5	6.0	162.90	-29.4	-243.5	349.0	336.5	12.47	27.976			
1,900.0	1,889.1	1,819.2	1,813.2	6.9	6.2	162.73	-36.3	-259.7	385.9	372.9	13.03	29.611			
2,000.0	1,986.9	1,912.2	1,904.4	7.2	6.6	162.58	-43.3	-276.0	422.8	409.1	13.66	30.955			
2,100.0	2,084.7	2,005.1	1,995.6	7.6	6.9	162.45	-50.2	-292.3	459.7	445.4	14.31	32.129			

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #701H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program:		0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11145-r.5 MWD+IFR1+MS						Rule Assigned:				Offset Well Error:	3.0 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,200.0	2,182.5	2,098.0	2,086.8	8.0	7.2	162.35	-57.1	-308.7	496.6	481.6	14.98	33.156		
2,300.0	2,280.3	2,191.0	2,178.1	8.4	7.6	162.25	-64.0	-325.0	533.5	517.9	15.67	34.057		
2,400.0	2,378.1	2,283.9	2,269.3	8.8	8.0	162.17	-71.0	-341.3	570.4	554.1	16.37	34.851		
2,500.0	2,476.0	2,376.8	2,360.5	9.2	8.3	162.10	-77.9	-357.6	607.4	590.3	17.08	35.552		
2,600.0	2,573.8	2,469.8	2,451.8	9.6	8.7	162.04	-84.8	-374.0	644.3	626.5	17.81	36.173		
2,700.0	2,671.6	2,562.7	2,543.0	10.0	9.1	161.99	-91.8	-390.3	681.2	662.6	18.55	36.726		
2,800.0	2,769.4	2,655.6	2,634.2	10.4	9.5	161.94	-98.7	-406.6	718.1	698.8	19.29	37.218		
2,900.0	2,867.2	2,748.6	2,725.4	10.9	9.8	161.89	-105.6	-422.9	755.0	735.0	20.05	37.660		
3,000.0	2,965.0	2,841.5	2,816.7	11.3	10.2	161.85	-112.5	-439.2	791.9	771.1	20.81	38.056		
3,100.0	3,062.8	2,934.5	2,907.9	11.7	10.6	161.81	-119.5	-455.6	828.9	807.3	21.58	38.413		
3,200.0	3,160.7	3,027.4	2,999.1	12.2	11.0	161.78	-126.4	-471.9	865.8	843.4	22.35	38.736		
3,300.0	3,258.5	3,120.3	3,090.3	12.6	11.4	161.75	-133.3	-488.2	902.7	879.6	23.13	39.029		
3,400.0	3,356.3	3,213.3	3,181.6	13.0	11.8	161.72	-140.3	-504.5	939.6	915.7	23.91	39.295		
3,500.0	3,454.1	3,306.2	3,272.8	13.5	12.2	161.69	-147.2	-520.9	976.5	951.8	24.70	39.537		

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #702H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10931-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	3.0	3.0	-90.84	-2.2	-150.0	150.2				
100.0	100.0	92.6	92.6	3.0	3.0	-90.84	-2.2	-150.0	150.0	143.5	6.52	23.019	
200.0	200.0	192.6	192.6	3.2	3.2	-90.84	-2.2	-150.0	150.0	143.3	6.75	22.215	
300.0	300.0	292.6	292.6	3.3	3.3	-90.84	-2.2	-150.0	150.0	143.1	6.99	21.475	
400.0	400.0	392.6	392.6	3.4	3.4	-90.84	-2.2	-150.0	150.0	142.8	7.21	20.809	
500.0	500.0	492.6	492.6	3.5	3.5	-90.84	-2.2	-150.0	150.0	142.6	7.43	20.202	
600.0	600.0	592.6	592.6	3.7	3.7	-90.84	-2.2	-150.0	150.0	142.4	7.64	19.648	
700.0	700.0	692.6	692.6	3.8	3.8	-90.84	-2.2	-150.0	150.0	142.2	7.84	19.137	
800.0	800.0	792.6	792.6	3.9	3.9	-90.84	-2.2	-150.0	150.0	142.0	8.04	18.666	
900.0	900.0	892.6	892.6	4.0	4.0	-90.84	-2.2	-150.0	150.0	141.8	8.23	18.228	
1,000.0	1,000.0	992.6	992.6	4.2	4.2	-90.84	-2.2	-150.0	150.0	141.6	8.42	17.820 CC, ES	
1,100.0	1,100.0	1,088.7	1,088.7	4.3	4.3	163.03	-3.0	-151.1	152.9	144.1	8.78	17.419	
1,200.0	1,199.8	1,184.0	1,183.9	4.6	4.6	162.57	-5.7	-154.8	161.8	152.5	9.30	17.393 SF	
1,300.0	1,299.5	1,278.3	1,277.8	4.9	4.8	161.87	-10.1	-161.0	176.7	166.9	9.85	17.947	
1,400.0	1,398.7	1,371.0	1,370.0	5.2	5.1	161.03	-16.3	-169.4	197.6	187.2	10.40	18.995	
1,500.0	1,497.5	1,465.8	1,463.9	5.5	5.4	160.24	-24.0	-180.0	223.7	212.7	10.96	20.415	
1,600.0	1,595.6	1,561.4	1,558.5	5.9	5.7	159.79	-31.8	-190.8	253.1	241.6	11.53	21.956	
1,700.0	1,693.4	1,656.4	1,652.6	6.2	5.9	159.73	-39.6	-201.5	284.1	272.0	12.05	23.566	
1,800.0	1,791.3	1,751.5	1,746.8	6.5	6.2	159.69	-47.3	-212.2	315.1	302.4	12.61	24.991	
1,900.0	1,889.1	1,846.6	1,841.0	6.9	6.5	159.65	-55.1	-222.9	346.0	332.8	13.18	26.245	
2,000.0	1,986.9	1,941.7	1,935.1	7.2	6.8	159.62	-62.9	-233.6	377.0	363.2	13.79	27.348	
2,100.0	2,084.7	2,036.8	2,029.3	7.6	7.2	159.59	-70.7	-244.3	408.0	393.6	14.41	28.319	
2,200.0	2,182.5	2,131.8	2,123.4	8.0	7.5	159.57	-78.5	-255.0	439.0	423.9	15.04	29.178	
2,300.0	2,280.3	2,226.9	2,217.6	8.4	7.8	159.55	-86.2	-265.7	469.9	454.2	15.70	29.937	
2,400.0	2,378.1	2,322.0	2,311.7	8.8	8.2	159.53	-94.0	-276.4	500.9	484.5	16.36	30.611	
2,500.0	2,476.0	2,417.1	2,405.9	9.2	8.5	159.52	-101.8	-287.1	531.9	514.8	17.04	31.211	
2,600.0	2,573.8	2,512.2	2,500.1	9.6	8.9	159.50	-109.6	-297.8	562.9	545.1	17.73	31.747	
2,700.0	2,671.6	2,607.3	2,594.2	10.0	9.2	159.49	-117.3	-308.5	593.8	575.4	18.43	32.227	
2,800.0	2,769.4	2,702.3	2,688.4	10.4	9.6	159.48	-125.1	-319.2	624.8	605.7	19.13	32.658	
2,900.0	2,867.2	2,797.4	2,782.5	10.9	10.0	159.47	-132.9	-329.9	655.8	635.9	19.84	33.046	
3,000.0	2,965.0	2,892.5	2,876.7	11.3	10.3	159.46	-140.7	-340.6	686.8	666.2	20.56	33.397	
3,100.0	3,062.8	2,987.6	2,970.8	11.7	10.7	159.45	-148.5	-351.3	717.7	696.5	21.29	33.715	
3,200.0	3,160.7	3,082.7	3,065.0	12.2	11.1	159.44	-156.2	-362.0	748.7	726.7	22.02	34.005	
3,300.0	3,258.5	3,177.7	3,159.1	12.6	11.5	159.44	-164.0	-372.7	779.7	756.9	22.75	34.268	
3,400.0	3,356.3	3,272.8	3,253.3	13.0	11.9	159.43	-171.8	-383.5	810.7	787.2	23.49	34.509	
3,500.0	3,454.1	3,367.9	3,347.5	13.5	12.2	159.42	-179.6	-394.2	841.6	817.4	24.23	34.729	
3,600.0	3,551.9	3,463.0	3,441.6	13.9	12.6	159.42	-187.3	-404.9	872.6	847.6	24.98	34.932	
3,700.0	3,649.7	3,558.1	3,535.8	14.4	13.0	159.41	-195.1	-415.6	903.6	877.9	25.73	35.118	
3,800.0	3,747.5	3,653.2	3,629.9	14.8	13.4	159.41	-202.9	-426.3	934.6	908.1	26.48	35.290	
3,900.0	3,845.4	3,748.2	3,724.1	15.3	13.8	159.40	-210.7	-437.0	965.6	938.3	27.24	35.449	
4,000.0	3,943.2	3,843.3	3,818.2	15.7	14.2	159.40	-218.5	-447.7	996.5	968.5	28.00	35.596	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #703H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11085-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Reference	Offset	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
0.0	0.0	0.0	0.0	3.0	3.0	-90.88	-1.8	-120.2	120.4				
100.0	100.0	92.5	92.5	3.0	3.0	-90.88	-1.8	-120.2	120.2	113.7	6.52	18.439	
200.0	200.0	192.5	192.5	3.2	3.2	-90.88	-1.8	-120.2	120.2	113.4	6.75	17.795	
300.0	300.0	292.5	292.5	3.3	3.3	-90.88	-1.8	-120.2	120.2	113.2	6.99	17.203	
400.0	400.0	392.5	392.5	3.4	3.4	-90.88	-1.8	-120.2	120.2	113.0	7.21	16.669	
500.0	500.0	492.5	492.5	3.5	3.5	-90.88	-1.8	-120.2	120.2	112.8	7.43	16.183	
600.0	600.0	592.5	592.5	3.7	3.7	-90.88	-1.8	-120.2	120.2	112.6	7.64	15.739	
700.0	700.0	692.5	692.5	3.8	3.8	-90.88	-1.8	-120.2	120.2	112.4	7.84	15.330	
800.0	800.0	792.5	792.5	3.9	3.9	-90.88	-1.8	-120.2	120.2	112.2	8.04	14.952	
900.0	900.0	892.5	892.5	4.0	4.0	-90.88	-1.8	-120.2	120.2	112.0	8.23	14.602	
1,000.0	1,000.0	992.5	992.5	4.2	4.2	-90.88	-1.8	-120.2	120.2	111.8	8.42	14.275 CC, ES	
1,100.0	1,100.0	1,090.9	1,090.9	4.3	4.3	162.72	-3.2	-120.7	122.5	113.7	8.73	14.032 SF	
1,200.0	1,199.8	1,188.8	1,188.7	4.6	4.6	161.41	-7.6	-122.6	129.5	120.3	9.20	14.067	
1,300.0	1,299.5	1,286.0	1,285.5	4.9	4.9	159.46	-15.0	-125.7	141.3	131.6	9.70	14.572	
1,400.0	1,398.7	1,382.1	1,380.9	5.2	5.2	157.18	-25.3	-130.0	158.1	147.9	10.20	15.495	
1,500.0	1,497.5	1,479.1	1,477.1	5.5	5.5	155.08	-37.7	-135.1	179.3	168.6	10.71	16.734	
1,600.0	1,595.6	1,576.0	1,573.0	5.9	5.8	153.78	-50.2	-140.3	203.7	192.5	11.24	18.124	
1,700.0	1,693.4	1,672.6	1,668.6	6.2	6.0	153.13	-62.6	-145.5	229.7	218.0	11.72	19.604	
1,800.0	1,791.3	1,769.1	1,764.2	6.5	6.3	152.61	-75.0	-150.6	255.8	243.6	12.22	20.936	
1,900.0	1,889.1	1,865.6	1,859.8	6.9	6.6	152.18	-87.4	-155.8	281.8	269.1	12.74	22.129	
2,000.0	1,986.9	1,962.2	1,955.4	7.2	6.9	151.83	-99.8	-161.0	307.9	294.6	13.27	23.197	
2,100.0	2,084.7	2,058.7	2,051.0	7.6	7.3	151.54	-112.2	-166.1	333.9	320.1	13.82	24.156	
2,200.0	2,182.5	2,155.2	2,146.6	8.0	7.6	151.28	-124.6	-171.3	360.0	345.6	14.39	25.016	
2,300.0	2,280.3	2,251.7	2,242.2	8.4	8.0	151.06	-137.0	-176.4	386.1	371.1	14.97	25.791	
2,400.0	2,378.1	2,348.3	2,337.7	8.8	8.3	150.87	-149.4	-181.6	412.2	396.6	15.56	26.490	
2,500.0	2,476.0	2,444.8	2,433.3	9.2	8.7	150.70	-161.8	-186.8	438.2	422.1	16.16	27.122	
2,600.0	2,573.8	2,541.3	2,528.9	9.6	9.0	150.55	-174.2	-191.9	464.3	447.6	16.77	27.694	
2,700.0	2,671.6	2,637.9	2,624.5	10.0	9.4	150.42	-186.6	-197.1	490.4	473.0	17.38	28.214	
2,800.0	2,769.4	2,734.4	2,720.1	10.4	9.8	150.30	-199.0	-202.3	516.5	498.5	18.00	28.687	
2,900.0	2,867.2	2,830.9	2,815.7	10.9	10.1	150.19	-211.4	-207.4	542.6	524.0	18.63	29.120	
3,000.0	2,965.0	2,927.5	2,911.3	11.3	10.5	150.09	-223.8	-212.6	568.7	549.4	19.27	29.516	
3,100.0	3,062.8	3,024.0	3,006.9	11.7	10.9	150.00	-236.2	-217.8	594.8	574.9	19.91	29.879	
3,200.0	3,160.7	3,120.5	3,102.5	12.2	11.3	149.92	-248.6	-222.9	620.9	600.4	20.55	30.212	
3,300.0	3,258.5	3,217.0	3,198.1	12.6	11.7	149.84	-261.0	-228.1	647.0	625.8	21.20	30.520	
3,400.0	3,356.3	3,313.6	3,293.7	13.0	12.1	149.77	-273.4	-233.2	673.1	651.3	21.85	30.804	
3,500.0	3,454.1	3,410.1	3,389.2	13.5	12.4	149.71	-285.8	-238.4	699.2	676.7	22.51	31.067	
3,600.0	3,551.9	3,506.6	3,484.8	13.9	12.8	149.65	-298.3	-243.6	725.3	702.2	23.16	31.311	
3,700.0	3,649.7	3,603.2	3,580.4	14.4	13.2	149.59	-310.7	-248.7	751.4	727.6	23.83	31.538	
3,800.0	3,747.5	3,699.7	3,676.0	14.8	13.6	149.54	-323.1	-253.9	777.5	753.0	24.49	31.749	
3,900.0	3,845.4	3,796.2	3,771.6	15.3	14.0	149.49	-335.5	-259.1	803.6	778.5	25.16	31.945	
4,000.0	3,943.2	3,899.1	3,873.6	15.7	14.4	149.47	-348.2	-264.4	829.5	803.6	25.84	32.100	
4,100.0	4,041.0	4,005.2	3,978.9	16.2	14.8	149.55	-359.7	-269.1	854.3	827.8	26.56	32.166	
4,200.0	4,138.8	4,111.8	4,085.0	16.6	15.3	149.74	-369.4	-273.2	878.1	850.8	27.27	32.197	
4,300.0	4,236.6	4,218.9	4,191.8	17.1	15.7	150.02	-377.3	-276.5	900.8	872.8	27.98	32.199	
4,400.0	4,334.4	4,326.4	4,299.0	17.6	16.0	150.39	-383.4	-279.0	922.5	893.8	28.67	32.176	
4,500.0	4,432.3	4,434.1	4,406.7	18.0	16.4	150.84	-387.7	-280.8	943.1	913.8	29.35	32.133	
4,600.0	4,530.1	4,542.2	4,514.7	18.5	16.7	151.38	-390.1	-281.8	962.8	932.7	30.01	32.078	
4,700.0	4,627.9	4,647.9	4,620.4	18.9	16.8	151.98	-390.6	-282.0	981.5	950.9	30.60	32.070	
4,800.0	4,725.7	4,745.7	4,718.2	19.4	16.9	152.53	-390.6	-282.0	999.9	968.8	31.12	32.135	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #704H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10917-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	-90.87	-1.4	-90.1	90.4				
100.0	100.0	92.9	92.9	3.0	3.0	-90.87	-1.4	-90.1	90.1	83.6	6.52	13.823	
200.0	200.0	192.9	192.9	3.2	3.2	-90.87	-1.4	-90.1	90.1	83.4	6.75	13.340	
300.0	300.0	292.9	292.9	3.3	3.3	-90.87	-1.4	-90.1	90.1	83.1	6.99	12.896	
400.0	400.0	392.9	392.9	3.4	3.4	-90.87	-1.4	-90.1	90.1	82.9	7.21	12.496	
500.0	500.0	492.9	492.9	3.5	3.5	-90.87	-1.4	-90.1	90.1	82.7	7.43	12.132	
600.0	600.0	592.9	592.9	3.7	3.7	-90.87	-1.4	-90.1	90.1	82.5	7.64	11.799	
700.0	700.0	692.9	692.9	3.8	3.8	-90.87	-1.4	-90.1	90.1	82.3	7.84	11.492	
800.0	800.0	792.9	792.9	3.9	3.9	-90.87	-1.4	-90.1	90.1	82.1	8.04	11.209	
900.0	900.0	892.9	892.9	4.0	4.0	-90.87	-1.4	-90.1	90.1	81.9	8.23	10.946	
1,000.0	1,000.0	992.9	992.9	4.2	4.2	-90.87	-1.4	-90.1	90.1	81.7	8.42	10.702 CC, ES	
1,100.0	1,100.0	1,094.3	1,094.3	4.3	4.4	162.59	-2.7	-89.3	91.1	82.3	8.74	10.424	
1,200.0	1,199.8	1,195.7	1,195.5	4.6	4.6	160.76	-7.2	-86.9	93.8	84.5	9.22	10.174	
1,300.0	1,299.5	1,296.9	1,296.3	4.9	5.0	157.86	-14.8	-82.7	98.4	88.7	9.69	10.151 SF	
1,400.0	1,398.7	1,397.7	1,396.4	5.2	5.3	154.19	-25.5	-76.7	105.2	95.0	10.16	10.356	
1,500.0	1,497.5	1,497.1	1,494.8	5.5	5.5	150.94	-37.6	-70.0	114.8	104.2	10.61	10.823	
1,600.0	1,595.6	1,596.2	1,593.0	5.9	5.8	148.97	-49.6	-63.3	127.8	116.7	11.09	11.525	
1,700.0	1,693.4	1,695.1	1,690.9	6.2	6.1	147.85	-61.7	-56.7	142.3	130.8	11.52	12.352	
1,800.0	1,791.3	1,794.0	1,788.9	6.5	6.4	146.94	-73.7	-50.0	156.8	144.9	11.96	13.108	
1,900.0	1,889.1	1,892.9	1,886.8	6.9	6.7	146.18	-85.8	-43.3	171.4	159.0	12.42	13.796	
2,000.0	1,986.9	1,991.8	1,984.7	7.2	7.0	145.54	-97.8	-36.7	186.0	173.1	12.90	14.423	
2,100.0	2,084.7	2,090.7	2,082.7	7.6	7.4	145.00	-109.8	-30.0	200.6	187.2	13.38	14.995	
2,200.0	2,182.5	2,189.6	2,180.6	8.0	7.7	144.52	-121.9	-23.3	215.2	201.4	13.87	15.519	
2,300.0	2,280.3	2,288.5	2,278.6	8.4	8.1	144.11	-133.9	-16.6	229.9	215.5	14.37	15.998	
2,400.0	2,378.1	2,387.4	2,376.5	8.8	8.4	143.75	-145.9	-10.0	244.5	229.7	14.88	16.438	
2,500.0	2,476.0	2,486.3	2,474.5	9.2	8.8	143.43	-158.0	-3.3	259.2	243.8	15.39	16.843	
2,600.0	2,573.8	2,585.3	2,572.4	9.6	9.2	143.14	-170.0	3.4	273.9	258.0	15.91	17.215	
2,700.0	2,671.6	2,684.2	2,670.4	10.0	9.6	142.88	-182.1	10.1	288.6	272.1	16.43	17.559	
2,800.0	2,769.4	2,783.1	2,768.3	10.4	9.9	142.65	-194.1	16.7	303.2	286.3	16.96	17.878	
2,900.0	2,867.2	2,882.0	2,866.3	10.9	10.3	142.44	-206.1	23.4	317.9	300.4	17.50	18.173	
3,000.0	2,965.0	2,980.9	2,964.2	11.3	10.7	142.25	-218.2	30.1	332.6	314.6	18.03	18.447	
3,100.0	3,062.8	3,079.8	3,062.2	11.7	11.1	142.07	-230.2	36.8	347.3	328.8	18.57	18.702	
3,200.0	3,160.7	3,178.7	3,160.1	12.2	11.5	141.91	-242.3	43.4	362.0	342.9	19.11	18.940	
3,300.0	3,258.5	3,277.6	3,258.0	12.6	11.9	141.76	-254.3	50.1	376.7	357.1	19.66	19.162	
3,400.0	3,356.3	3,376.5	3,356.0	13.0	12.3	141.62	-266.3	56.8	391.4	371.2	20.21	19.369	
3,500.0	3,454.1	3,475.4	3,453.9	13.5	12.7	141.49	-278.4	63.5	406.1	385.4	20.76	19.564	
3,600.0	3,551.9	3,574.3	3,551.9	13.9	13.1	141.37	-290.4	70.1	420.8	399.5	21.31	19.747	
3,700.0	3,649.7	3,673.3	3,649.8	14.4	13.5	141.26	-302.5	76.8	435.6	413.7	21.87	19.918	
3,800.0	3,747.5	3,772.2	3,747.8	14.8	13.9	141.16	-314.5	83.5	450.3	427.8	22.42	20.080	
3,900.0	3,845.4	3,871.1	3,845.7	15.3	14.3	141.06	-326.5	90.1	465.0	442.0	22.98	20.232	
4,000.0	3,943.2	3,970.0	3,943.7	15.7	14.7	140.97	-338.6	96.8	479.7	456.1	23.54	20.376	
4,100.0	4,041.0	4,068.5	4,041.2	16.2	15.1	140.90	-350.4	103.4	494.4	470.3	24.08	20.530	
4,200.0	4,138.8	4,166.4	4,138.4	16.6	15.5	141.00	-361.0	109.3	509.3	484.7	24.66	20.657	
4,300.0	4,236.6	4,264.2	4,235.6	17.1	15.9	141.27	-370.1	114.3	524.4	499.1	25.26	20.761	
4,400.0	4,334.4	4,361.8	4,332.9	17.6	16.3	141.70	-377.8	118.5	539.7	513.8	25.89	20.849	
4,500.0	4,432.3	4,459.2	4,430.0	18.0	16.6	142.28	-384.0	122.0	555.3	528.7	26.54	20.925	
4,600.0	4,530.1	4,556.3	4,527.0	18.5	17.0	143.00	-388.7	124.6	571.1	543.9	27.21	20.989	
4,700.0	4,627.9	4,653.1	4,623.7	18.9	17.3	143.83	-392.0	126.4	587.4	559.5	27.91	21.045	
4,800.0	4,725.7	4,749.5	4,720.1	19.4	17.5	144.77	-393.8	127.4	604.0	575.4	28.63	21.097	
4,900.0	4,823.5	4,845.9	4,816.4	19.9	17.7	145.80	-394.3	127.7	621.1	591.8	29.35	21.166	
5,000.0	4,921.3	4,943.7	4,914.2	20.3	17.7	146.85	-394.3	127.7	638.5	608.5	30.06	21.245	
5,100.0	5,019.1	5,041.5	5,012.0	20.8	17.7	147.83	-394.3	127.7	656.2	625.4	30.77	21.322	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #704H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10917-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.0	5,117.0	5,139.3	5,109.9	21.3	17.8	148.77	-394.3	127.7	674.0	642.5	31.49	21.402		
5,300.0	5,214.8	5,237.1	5,207.7	21.7	17.8	149.66	-394.3	127.7	691.9	659.7	32.21	21.484		
5,400.0	5,312.6	5,334.9	5,305.5	22.2	17.8	150.50	-394.3	127.7	710.0	677.1	32.92	21.568		
5,500.0	5,410.4	5,432.8	5,403.3	22.6	17.9	151.30	-394.3	127.7	728.3	694.7	33.63	21.655		
5,600.0	5,508.2	5,530.6	5,501.1	23.1	17.9	152.06	-394.3	127.7	746.7	712.3	34.34	21.742		
5,700.0	5,606.0	5,628.4	5,598.9	23.6	17.9	152.79	-394.3	127.7	765.2	730.2	35.05	21.831		
5,800.0	5,703.8	5,726.2	5,696.7	24.0	17.9	153.48	-394.3	127.7	783.8	748.1	35.76	21.921		
5,900.0	5,801.7	5,824.0	5,794.6	24.5	18.0	154.14	-394.3	127.7	802.6	766.1	36.46	22.012		
6,000.0	5,899.5	5,921.8	5,892.4	25.0	18.0	154.77	-394.3	127.7	821.4	784.2	37.16	22.103		
6,100.0	5,997.3	6,019.6	5,990.2	25.4	18.0	155.37	-394.3	127.7	840.3	802.5	37.86	22.194		
6,200.0	6,095.1	6,117.5	6,088.0	25.9	18.1	155.95	-394.3	127.7	859.3	820.8	38.56	22.285		
6,300.0	6,192.9	6,215.3	6,185.8	26.4	18.1	156.50	-394.3	127.7	878.4	839.2	39.26	22.376		
6,400.0	6,290.7	6,313.1	6,283.6	26.8	18.1	157.03	-394.3	127.7	897.6	857.7	39.95	22.467		
6,500.0	6,388.5	6,410.9	6,381.4	27.3	18.2	157.53	-394.3	127.7	916.9	876.2	40.64	22.558		
6,600.0	6,486.4	6,508.7	6,479.3	27.8	18.2	158.02	-394.3	127.7	936.2	894.8	41.34	22.648		
6,700.0	6,584.2	6,606.5	6,577.1	28.3	18.2	158.48	-394.3	127.7	955.5	913.5	42.03	22.737		
6,800.0	6,682.0	6,704.4	6,674.9	28.7	18.3	158.93	-394.3	127.7	975.0	932.2	42.71	22.825		
6,900.0	6,779.8	6,802.2	6,772.7	29.2	18.3	159.36	-394.3	127.7	994.4	951.0	43.40	22.913		

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #705H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11104-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Distance	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	3.0	3.0	-90.85	-0.9	-60.3	60.7				
100.0	100.0	93.4	93.4	3.0	3.0	-90.85	-0.9	-60.3	60.3	53.8	6.52	9.257	
200.0	200.0	193.4	193.4	3.2	3.2	-90.85	-0.9	-60.3	60.3	53.6	6.76	8.933	
300.0	300.0	293.4	293.4	3.3	3.3	-90.85	-0.9	-60.3	60.3	53.4	6.99	8.636	
400.0	400.0	393.4	393.4	3.4	3.4	-90.85	-0.9	-60.3	60.3	53.1	7.21	8.368	
500.0	500.0	493.4	493.4	3.5	3.5	-90.85	-0.9	-60.3	60.3	52.9	7.43	8.124	
600.0	600.0	593.4	593.4	3.7	3.7	-90.85	-0.9	-60.3	60.3	52.7	7.64	7.901	
700.0	700.0	693.4	693.4	3.8	3.8	-90.85	-0.9	-60.3	60.3	52.5	7.84	7.696	
800.0	800.0	793.4	793.4	3.9	3.9	-90.85	-0.9	-60.3	60.3	52.3	8.04	7.506	
900.0	900.0	893.4	893.4	4.0	4.0	-90.85	-0.9	-60.3	60.3	52.1	8.23	7.330	
1,000.0	1,000.0	993.4	993.4	4.2	4.2	-90.85	-0.9	-60.3	60.3	51.9	8.42	7.166 CC, ES	
1,100.0	1,100.0	1,095.1	1,095.0	4.3	4.3	162.80	-1.8	-59.0	60.7	51.9	8.79	6.910	
1,200.0	1,199.8	1,196.8	1,196.7	4.6	4.6	161.55	-4.6	-54.7	61.5	52.2	9.33	6.597	
1,300.0	1,299.5	1,298.6	1,298.0	4.9	4.9	159.45	-9.4	-47.3	62.8	52.9	9.87	6.365	
1,400.0	1,398.7	1,400.3	1,399.0	5.2	5.2	156.61	-16.1	-36.9	64.6	54.2	10.40	6.214	
1,500.0	1,497.5	1,500.2	1,497.9	5.5	5.5	154.23	-23.7	-25.3	68.5	57.6	10.91	6.275	
1,600.0	1,595.6	1,599.9	1,596.7	5.9	5.8	153.31	-31.2	-13.6	75.5	64.0	11.46	6.586	
1,700.0	1,693.4	1,699.5	1,695.3	6.2	6.1	153.15	-38.8	-2.0	84.1	72.1	11.99	7.016	
1,800.0	1,791.3	1,799.2	1,794.0	6.5	6.4	153.02	-46.3	9.6	92.7	80.2	12.53	7.394	
1,900.0	1,889.1	1,898.8	1,892.6	6.9	6.7	152.91	-53.9	21.3	101.3	88.2	13.11	7.727	
2,000.0	1,986.9	1,998.4	1,991.3	7.2	7.0	152.82	-61.4	32.9	109.9	96.2	13.70	8.021	
2,100.0	2,084.7	2,098.0	2,090.0	7.6	7.4	152.74	-69.0	44.5	118.5	104.2	14.31	8.280	
2,200.0	2,182.5	2,197.7	2,188.6	8.0	7.7	152.68	-76.5	56.1	127.1	112.1	14.93	8.509	
2,300.0	2,280.3	2,297.3	2,287.3	8.4	8.1	152.62	-84.1	67.8	135.7	120.1	15.57	8.712	
2,400.0	2,378.1	2,396.9	2,385.9	8.8	8.4	152.57	-91.7	79.4	144.2	128.0	16.22	8.893	
2,500.0	2,476.0	2,496.6	2,484.6	9.2	8.8	152.52	-99.2	91.0	152.8	136.0	16.88	9.054	
2,600.0	2,573.8	2,596.2	2,583.3	9.6	9.2	152.48	-106.8	102.7	161.4	143.9	17.55	9.199	
2,700.0	2,671.6	2,695.8	2,681.9	10.0	9.6	152.44	-114.3	114.3	170.0	151.8	18.23	9.328	
2,800.0	2,769.4	2,795.5	2,780.6	10.4	10.0	152.41	-121.9	125.9	178.6	159.7	18.91	9.445	
2,900.0	2,867.2	2,895.1	2,879.2	10.9	10.4	152.38	-129.4	137.5	187.2	167.6	19.60	9.551	
3,000.0	2,965.0	2,994.7	2,977.9	11.3	10.7	152.35	-137.0	149.2	195.8	175.5	20.30	9.646	
3,100.0	3,062.8	3,094.3	3,076.6	11.7	11.1	152.32	-144.5	160.8	204.4	183.4	21.00	9.733	
3,200.0	3,160.7	3,194.0	3,175.2	12.2	11.5	152.30	-152.1	172.4	213.0	191.3	21.71	9.812	
3,300.0	3,258.5	3,293.6	3,273.9	12.6	11.9	152.28	-159.6	184.1	221.6	199.2	22.42	9.885	
3,400.0	3,356.3	3,393.2	3,372.5	13.0	12.3	152.26	-167.2	195.7	230.2	207.1	23.13	9.951	
3,500.0	3,454.1	3,492.9	3,471.2	13.5	12.8	152.24	-174.7	207.3	238.8	214.9	23.85	10.012	
3,600.0	3,551.9	3,592.5	3,569.9	13.9	13.2	152.22	-182.3	219.0	247.4	222.8	24.57	10.068	
3,700.0	3,649.7	3,692.1	3,668.5	14.4	13.6	152.21	-189.8	230.6	256.0	230.7	25.30	10.119	
3,800.0	3,747.5	3,791.8	3,767.2	14.8	14.0	152.19	-197.4	242.2	264.6	238.5	26.02	10.167	
3,900.0	3,845.4	3,891.4	3,865.8	15.3	14.4	152.18	-204.9	253.8	273.2	246.4	26.75	10.211	
4,000.0	3,943.2	3,991.0	3,964.5	15.7	14.8	152.16	-212.5	265.5	281.8	254.3	27.48	10.253	
4,100.0	4,041.0	4,090.6	4,063.2	16.2	15.2	152.15	-220.0	277.1	290.3	262.1	28.21	10.291	
4,200.0	4,138.8	4,190.3	4,161.8	16.6	15.6	152.14	-227.6	288.7	298.9	270.0	28.95	10.326	
4,300.0	4,236.6	4,289.9	4,260.5	17.1	16.0	152.13	-235.1	300.4	307.5	277.9	29.69	10.360	
4,400.0	4,334.4	4,389.5	4,359.1	17.6	16.5	152.12	-242.7	312.0	316.1	285.7	30.42	10.391	
4,500.0	4,432.3	4,489.2	4,457.8	18.0	16.9	152.11	-250.2	323.6	324.7	293.6	31.16	10.420	
4,600.0	4,530.1	4,588.8	4,556.5	18.5	17.3	152.10	-257.8	335.2	333.3	301.4	31.90	10.447	
4,700.0	4,627.9	4,688.4	4,655.1	18.9	17.7	152.09	-265.3	346.9	341.9	309.3	32.65	10.473	
4,800.0	4,725.7	4,788.1	4,753.8	19.4	18.1	152.08	-272.9	358.5	350.5	317.1	33.39	10.497	
4,900.0	4,823.5	4,887.7	4,852.4	19.9	18.6	152.07	-280.4	370.1	359.1	325.0	34.14	10.520	
5,000.0	4,921.3	4,987.3	4,951.1	20.3	19.0	152.07	-288.0	381.8	367.7	332.8	34.88	10.542	
5,100.0	5,019.1	5,086.9	5,049.8	20.8	19.4	152.06	-295.6	393.4	376.3	340.7	35.63	10.562	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #705H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11104-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	
5,200.0	5,117.0	5,186.6	5,148.4	21.3	19.8	152.05	-303.1	405.0	384.9	348.5	36.38	10.581	
5,300.0	5,214.8	5,286.2	5,247.1	21.7	20.2	152.04	-310.7	416.6	393.5	356.4	37.12	10.599	
5,400.0	5,312.6	5,385.8	5,345.7	22.2	20.7	152.04	-318.2	428.3	402.1	364.2	37.87	10.616	
5,500.0	5,410.4	5,485.5	5,444.4	22.6	21.1	152.03	-325.8	439.9	410.7	372.0	38.62	10.633	
5,600.0	5,508.2	5,584.0	5,542.0	23.1	21.5	152.03	-333.2	451.3	419.3	380.0	39.35	10.656	
5,700.0	5,606.0	5,681.0	5,638.2	23.6	21.9	152.10	-340.1	462.0	428.5	388.4	40.10	10.686	
5,800.0	5,703.8	5,777.9	5,734.3	24.0	22.3	152.24	-346.6	472.0	438.2	397.4	40.87	10.724	
5,900.0	5,801.7	5,874.7	5,830.5	24.5	22.7	152.45	-352.6	481.3	448.6	407.0	41.65	10.771	
6,000.0	5,899.5	5,971.3	5,926.6	25.0	23.1	152.72	-358.2	489.9	459.6	417.1	42.45	10.827	
6,100.0	5,997.3	6,067.8	6,022.6	25.4	23.5	153.04	-363.4	497.8	471.2	427.9	43.26	10.892	
6,200.0	6,095.1	6,164.1	6,118.5	25.9	23.8	153.42	-368.1	505.0	483.4	439.3	44.08	10.966	
6,300.0	6,192.9	6,260.2	6,214.3	26.4	24.2	153.84	-372.3	511.6	496.2	451.3	44.91	11.049	
6,400.0	6,290.7	6,356.1	6,309.9	26.8	24.5	154.30	-376.1	517.4	509.7	463.9	45.75	11.142	
6,500.0	6,388.5	6,451.8	6,405.4	27.3	24.9	154.80	-379.4	522.6	523.8	477.2	46.59	11.243	
6,600.0	6,486.4	6,547.3	6,500.7	27.8	25.2	155.32	-382.4	527.1	538.6	491.1	47.43	11.354	
6,700.0	6,584.2	6,642.5	6,595.8	28.3	25.5	155.88	-384.8	530.9	554.0	505.7	48.28	11.475	
6,800.0	6,682.0	6,737.5	6,690.7	28.7	25.9	156.45	-386.9	534.0	570.2	521.0	49.13	11.606	
6,900.0	6,779.8	6,832.2	6,785.4	29.2	26.1	157.04	-388.5	536.5	587.0	537.0	49.97	11.748	
7,000.0	6,877.6	6,926.6	6,879.8	29.7	26.4	157.65	-389.7	538.3	604.5	553.7	50.79	11.900	
7,100.0	6,975.4	7,020.8	6,974.0	30.1	26.7	158.26	-390.4	539.4	622.7	571.1	51.61	12.065	
7,200.0	7,073.2	7,114.6	7,067.8	30.6	26.8	158.89	-390.7	540.0	641.6	589.2	52.39	12.247	
7,300.0	7,171.1	7,211.3	7,164.5	31.1	26.9	159.53	-390.8	540.0	661.0	608.0	53.08	12.453	
7,400.0	7,268.9	7,309.1	7,262.3	31.5	26.9	160.14	-390.8	540.0	680.6	626.8	53.78	12.655	
7,499.3	7,366.0	7,406.2	7,359.4	32.0	26.9	160.71	-390.8	540.0	700.1	645.6	54.47	12.853	
7,500.0	7,366.7	7,406.9	7,360.1	32.0	26.9	160.71	-390.8	540.0	700.3	645.8	54.47	12.855	
7,600.0	7,464.7	7,504.9	7,458.1	32.5	26.9	161.30	-390.8	540.0	719.1	664.0	55.14	13.041	
7,700.0	7,563.0	7,603.2	7,556.4	32.9	27.0	161.81	-390.8	540.0	736.4	680.6	55.79	13.201	
7,800.0	7,661.6	7,701.8	7,655.0	33.4	27.0	162.25	-390.8	540.0	752.1	695.7	56.40	13.335	
7,900.0	7,760.5	7,800.7	7,753.9	33.8	27.0	162.63	-390.8	540.0	766.2	709.2	56.99	13.445	
8,000.0	7,859.7	7,899.9	7,853.1	34.3	27.0	162.95	-390.8	540.0	778.7	721.1	57.56	13.529	
8,100.0	7,959.0	7,999.2	7,952.4	34.7	27.0	163.22	-390.8	540.0	789.5	731.4	58.09	13.591	
8,200.0	8,058.6	8,098.8	8,052.0	35.1	27.1	163.45	-390.8	540.0	798.7	740.1	58.60	13.629	
8,300.0	8,158.3	8,198.5	8,151.7	35.4	27.1	163.63	-390.8	540.0	806.2	747.1	59.08	13.645	
8,400.0	8,258.1	8,298.3	8,251.5	35.8	27.1	163.76	-390.8	540.0	812.1	752.5	59.53	13.641	
8,500.0	8,358.0	8,398.2	8,351.4	36.1	27.1	163.86	-390.8	540.0	816.2	756.3	59.94	13.618	
8,600.0	8,458.0	8,498.2	8,451.4	36.4	27.1	163.92	-390.8	540.0	818.7	758.4	60.30	13.579	
8,699.3	8,557.2	8,597.4	8,550.6	36.6	27.2	-90.06	-390.8	540.0	819.6	759.1	60.48	13.552	
8,700.0	8,558.0	8,598.2	8,551.4	36.6	27.2	-90.06	-390.8	540.0	819.6	759.1	60.48	13.552	
8,800.0	8,658.0	8,698.2	8,651.4	36.6	27.2	-90.06	-390.8	540.0	819.6	759.1	60.52	13.543	
8,900.0	8,758.0	8,798.2	8,751.4	36.6	27.2	-90.06	-390.8	540.0	819.6	759.0	60.55	13.534	
9,000.0	8,858.0	8,898.2	8,851.4	36.6	27.2	-90.06	-390.8	540.0	819.6	759.0	60.59	13.526	
9,100.0	8,958.0	8,998.2	8,951.4	36.6	27.3	-90.06	-390.8	540.0	819.6	758.9	60.63	13.517	
9,200.0	9,058.0	9,098.2	9,051.4	36.6	27.3	-90.06	-390.8	540.0	819.6	758.9	60.67	13.508	
9,300.0	9,158.0	9,198.2	9,151.4	36.7	27.3	-90.06	-390.8	540.0	819.6	758.9	60.71	13.499	
9,400.0	9,258.0	9,298.2	9,251.4	36.7	27.3	-90.06	-390.8	540.0	819.6	758.8	60.75	13.490	
9,500.0	9,358.0	9,398.2	9,351.4	36.7	27.4	-90.06	-390.8	540.0	819.6	758.8	60.80	13.481	
9,600.0	9,458.0	9,498.2	9,451.4	36.7	27.4	-90.06	-390.8	540.0	819.6	758.7	60.84	13.471	
9,700.0	9,558.0	9,598.2	9,551.4	36.7	27.4	-90.06	-390.8	540.0	819.6	758.7	60.88	13.462	
9,800.0	9,658.0	9,698.2	9,651.4	36.7	27.4	-90.06	-390.8	540.0	819.6	758.6	60.92	13.453	
9,900.0	9,758.0	9,798.2	9,751.4	36.7	27.5	-90.06	-390.8	540.0	819.6	758.6	60.96	13.443	
10,000.0	9,858.0	9,898.2	9,851.4	36.8	27.5	-90.06	-390.8	540.0	819.6	758.6	61.01	13.434	
10,100.0	9,958.0	9,998.2	9,951.4	36.8	27.5	-90.06	-390.8	540.0	819.6	758.5	61.05	13.424	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #705H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11104-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	
10,200.0	10,058.0	10,098.2	10,051.4	36.8	27.5	-90.06	-390.8	540.0	819.6	758.5	61.10	13.415	
10,300.0	10,158.0	10,198.2	10,151.4	36.8	27.6	-90.06	-390.8	540.0	819.6	758.4	61.14	13.405	
10,400.0	10,258.0	10,298.2	10,251.4	36.8	27.6	-90.06	-390.8	540.0	819.6	758.4	61.18	13.395	
10,500.0	10,358.0	10,398.2	10,351.4	36.8	27.6	-90.06	-390.8	540.0	819.6	758.3	61.23	13.385	
10,600.0	10,458.0	10,498.2	10,451.4	36.9	27.6	-90.06	-390.8	540.0	819.6	758.3	61.28	13.375	
10,700.0	10,558.0	10,598.2	10,551.4	36.9	27.7	-90.06	-390.8	540.0	819.6	758.2	61.32	13.365	
10,800.0	10,658.0	10,698.2	10,651.4	36.9	27.7	-90.06	-390.8	540.0	819.6	758.2	61.37	13.355	
10,900.0	10,758.0	10,798.2	10,751.4	36.9	27.7	-90.06	-390.8	540.0	819.6	758.2	61.41	13.345	
11,000.0	10,858.0	10,898.2	10,851.4	36.9	27.7	-90.06	-390.8	540.0	819.6	758.1	61.46	13.335	
11,100.0	10,958.0	10,998.2	10,951.4	37.0	27.8	-90.06	-390.8	540.0	819.6	758.1	61.51	13.324	
11,200.0	11,058.0	11,098.2	11,051.4	37.0	27.8	-90.06	-390.8	540.0	819.6	758.0	61.56	13.314	
11,300.0	11,158.0	11,195.5	11,148.3	37.0	27.8	-89.55	-383.4	539.9	819.7	758.0	61.70	13.286	
11,400.0	11,258.0	11,287.8	11,237.8	37.0	27.9	-88.02	-361.5	539.5	820.6	758.6	62.01	13.234	
11,496.6	11,354.5	11,368.5	11,312.4	37.0	27.9	-85.88	-330.7	539.1	823.4	761.1	62.27	13.222	
11,500.0	11,358.0	11,371.1	11,314.8	37.0	27.9	-85.37	-329.5	539.1	823.5	761.2	62.28	13.223	
11,525.0	11,382.9	11,390.7	11,332.1	37.0	27.9	-84.65	-320.4	538.9	824.7	762.4	62.32	13.233	
11,550.0	11,407.8	11,410.1	11,348.9	37.0	27.9	-83.93	-310.8	538.8	825.9	763.6	62.33	13.251	
11,575.0	11,432.6	11,429.4	11,365.3	37.0	27.9	-83.24	-300.7	538.6	827.3	764.9	62.32	13.274	
11,600.0	11,457.1	11,450.0	11,382.5	37.0	27.9	-82.53	-289.3	538.5	828.7	766.3	62.32	13.297	
11,625.0	11,481.4	11,467.6	11,396.8	37.0	27.9	-81.92	-279.1	538.3	830.1	767.9	62.25	13.335	
11,650.0	11,505.3	11,486.5	11,411.9	37.0	27.9	-81.29	-267.7	538.1	831.6	769.4	62.19	13.372	
11,675.0	11,528.8	11,505.3	11,426.5	37.0	28.0	-80.69	-255.8	537.9	833.1	771.0	62.11	13.412	
11,700.0	11,551.9	11,524.1	11,440.6	37.0	28.0	-80.12	-243.4	537.8	834.6	772.6	62.03	13.455	
11,725.0	11,574.3	11,542.8	11,454.3	37.0	28.0	-79.57	-230.7	537.6	836.1	774.2	61.93	13.500	
11,750.0	11,596.2	11,561.4	11,467.5	37.0	28.0	-79.06	-217.6	537.4	837.6	775.7	61.82	13.548	
11,775.0	11,617.4	11,579.9	11,480.2	37.0	28.0	-78.57	-204.1	537.2	839.0	777.3	61.71	13.596	
11,800.0	11,637.9	11,600.0	11,493.5	37.1	28.0	-78.10	-189.0	536.9	840.4	778.7	61.62	13.638	
11,825.0	11,657.7	11,616.9	11,504.2	37.1	28.0	-77.70	-176.0	536.7	841.7	780.2	61.46	13.695	
11,850.0	11,676.6	11,635.3	11,515.5	37.1	28.0	-77.32	-161.5	536.5	842.9	781.6	61.33	13.744	
11,875.0	11,694.6	11,650.0	11,524.2	37.1	28.0	-77.01	-149.6	536.3	844.1	782.9	61.12	13.809	
11,900.0	11,711.6	11,671.9	11,536.5	37.1	28.0	-76.66	-131.5	536.1	845.1	784.1	61.06	13.841	
11,925.0	11,727.7	11,690.2	11,546.3	37.1	28.0	-76.38	-116.0	535.8	846.1	785.2	60.92	13.888	
11,950.0	11,742.8	11,708.5	11,555.5	37.1	28.1	-76.15	-100.3	535.6	846.9	786.2	60.79	13.933	
11,975.0	11,756.8	11,726.7	11,564.3	37.1	28.1	-75.95	-84.3	535.4	847.7	787.0	60.65	13.977	
12,000.0	11,769.7	11,750.0	11,574.7	37.1	28.1	-75.77	-63.4	535.0	848.3	787.7	60.62	13.995	
12,025.0	11,781.5	11,763.1	11,580.2	37.1	28.1	-75.67	-51.5	534.9	848.8	788.4	60.39	14.056	
12,050.0	11,792.1	11,781.3	11,587.3	37.1	28.1	-75.58	-34.8	534.6	849.2	789.0	60.26	14.092	
12,075.0	11,801.5	11,800.0	11,594.1	37.1	28.1	-75.54	-17.4	534.3	849.5	789.3	60.15	14.123	
12,100.0	11,809.7	11,817.7	11,600.0	37.1	28.1	-75.54	-0.7	534.1	849.6	789.6	60.03	14.154	
12,125.0	11,816.6	11,835.9	11,605.6	37.1	28.1	-75.57	16.6	533.8	849.6	789.7	59.92	14.180	
12,150.0	11,822.3	11,850.0	11,609.5	37.1	28.1	-75.63	30.2	533.6	849.5	789.8	59.73	14.222	
12,175.0	11,826.6	11,872.3	11,615.0	37.2	28.2	-75.76	51.8	533.3	849.3	789.5	59.72	14.220	
12,200.0	11,829.7	11,890.6	11,618.8	37.2	28.2	-75.91	69.6	533.0	848.9	789.3	59.64	14.235	
12,225.0	11,831.5	11,908.8	11,622.1	37.2	28.2	-76.10	87.6	532.8	848.4	788.9	59.56	14.245	
12,246.6	11,832.0	11,924.6	11,624.5	37.2	28.2	-76.29	103.2	532.5	847.9	788.4	59.50	14.250	
12,300.0	11,832.0	11,964.0	11,628.6	37.2	28.2	-76.57	142.3	531.9	847.0	787.7	59.36	14.269	
12,327.6	11,832.0	11,984.5	11,629.7	37.3	28.2	-76.64	162.8	531.6	846.9	787.6	59.28	14.287	
12,400.0	11,832.0	12,050.3	11,630.0	37.3	28.3	-76.67	228.6	530.6	847.4	788.1	59.27	14.297	
12,500.0	11,832.0	12,150.3	11,630.0	37.4	28.4	-76.68	328.6	529.1	848.2	788.7	59.46	14.263	
12,600.0	11,832.0	12,250.3	11,630.0	37.5	28.5	-76.69	428.6	527.6	848.9	789.2	59.70	14.221	
12,700.0	11,832.0	12,350.3	11,630.0	37.7	28.6	-76.70	528.5	526.1	849.7	789.7	59.96	14.170	
12,800.0	11,832.0	12,450.3	11,630.0	37.8	28.8	-76.72	628.5	524.6	850.5	790.2	60.27	14.111	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #705H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11104-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	
12,900.0	11,832.0	12,550.3	11,630.0	38.0	28.9	-76.73	728.5	523.1	851.3	790.7	60.61	14.045	
13,000.0	11,832.0	12,650.3	11,630.0	38.1	29.1	-76.74	828.5	521.6	852.0	791.1	60.99	13.970	
13,100.0	11,832.0	12,750.3	11,630.0	38.3	29.3	-76.75	928.5	520.1	852.8	791.4	61.40	13.889	
13,200.0	11,832.0	12,850.3	11,630.0	38.5	29.5	-76.77	1,028.5	518.6	853.6	791.8	61.85	13.801	
13,300.0	11,832.0	12,950.3	11,630.0	38.7	29.7	-76.78	1,128.5	517.1	854.4	792.1	62.33	13.707	
13,400.0	11,832.0	13,050.3	11,630.0	39.0	29.9	-76.79	1,228.4	515.6	855.2	792.3	62.84	13.608	
13,500.0	11,832.0	13,150.3	11,630.0	39.2	30.2	-76.80	1,328.4	514.1	855.9	792.6	63.39	13.503	
13,600.0	11,832.0	13,250.3	11,630.0	39.4	30.4	-76.82	1,428.4	512.5	856.7	792.8	63.97	13.394	
13,700.0	11,832.0	13,350.3	11,630.0	39.7	30.7	-76.83	1,528.4	511.0	857.5	792.9	64.57	13.280	
13,800.0	11,832.0	13,450.3	11,630.0	40.0	31.0	-76.84	1,628.4	509.5	858.3	793.1	65.21	13.162	
13,900.0	11,832.0	13,550.2	11,630.0	40.2	31.3	-76.85	1,728.4	508.0	859.1	793.2	65.87	13.041	
14,000.0	11,832.0	13,650.2	11,630.0	40.5	31.6	-76.86	1,828.4	506.5	859.8	793.3	66.57	12.917	
14,100.0	11,832.0	13,750.2	11,630.0	40.8	31.9	-76.88	1,928.3	505.0	860.6	793.3	67.29	12.791	
14,200.0	11,832.0	13,850.2	11,630.0	41.2	32.3	-76.89	2,028.3	503.5	861.4	793.4	68.03	12.662	
14,300.0	11,832.0	13,950.2	11,630.0	41.5	32.6	-76.90	2,128.3	502.0	862.2	793.4	68.80	12.531	
14,400.0	11,832.0	14,050.2	11,630.0	41.8	33.0	-76.91	2,228.3	500.5	863.0	793.4	69.60	12.399	
14,500.0	11,832.0	14,150.2	11,630.0	42.2	33.4	-76.92	2,328.3	499.0	863.7	793.3	70.42	12.266	
14,600.0	11,832.0	14,250.2	11,630.0	42.5	33.8	-76.94	2,428.3	497.5	864.5	793.3	71.26	12.133	
14,700.0	11,832.0	14,350.2	11,630.0	42.9	34.2	-76.95	2,528.3	496.0	865.3	793.2	72.12	11.998	
14,800.0	11,832.0	14,450.2	11,630.0	43.3	34.6	-76.96	2,628.2	494.5	866.1	793.1	73.00	11.863	
14,900.0	11,832.0	14,550.2	11,630.0	43.7	35.1	-76.97	2,728.2	492.9	866.9	792.9	73.91	11.729	
15,000.0	11,832.0	14,650.2	11,630.0	44.1	35.5	-76.98	2,828.2	491.4	867.6	792.8	74.83	11.594	
15,100.0	11,832.0	14,750.2	11,630.0	44.5	36.0	-77.00	2,928.2	489.9	868.4	792.6	75.77	11.460	
15,200.0	11,832.0	14,850.2	11,630.0	44.9	36.4	-77.01	3,028.2	488.4	869.2	792.5	76.74	11.327	
15,300.0	11,832.0	14,950.2	11,630.0	45.3	36.9	-77.02	3,128.2	486.9	870.0	792.3	77.71	11.195	
15,400.0	11,832.0	15,050.2	11,630.0	45.7	37.4	-77.03	3,228.2	485.4	870.8	792.0	78.71	11.063	
15,500.0	11,832.0	15,150.2	11,630.0	46.2	37.9	-77.04	3,328.1	483.9	871.5	791.8	79.72	10.932	
15,600.0	11,832.0	15,250.2	11,630.0	46.6	38.4	-77.06	3,428.1	482.4	872.3	791.6	80.75	10.803	
15,700.0	11,832.0	15,350.2	11,630.0	47.1	38.9	-77.07	3,528.1	480.9	873.1	791.3	81.79	10.675	
15,800.0	11,832.0	15,450.2	11,630.0	47.5	39.5	-77.08	3,628.1	479.4	873.9	791.0	82.85	10.548	
15,900.0	11,832.0	15,550.2	11,630.0	48.0	40.0	-77.09	3,728.1	477.9	874.7	790.7	83.92	10.423	
16,000.0	11,832.0	15,650.2	11,630.0	48.5	40.6	-77.10	3,828.1	476.4	875.4	790.4	85.00	10.299	
16,100.0	11,832.0	15,750.2	11,630.0	49.0	41.1	-77.11	3,928.1	474.9	876.2	790.1	86.10	10.177	
16,200.0	11,832.0	15,850.2	11,630.0	49.5	41.7	-77.13	4,028.0	473.3	877.0	789.8	87.21	10.056	
16,300.0	11,832.0	15,950.2	11,630.0	50.0	42.3	-77.14	4,128.0	471.8	877.8	789.4	88.33	9.938	
16,400.0	11,832.0	16,050.2	11,630.0	50.5	42.8	-77.15	4,228.0	470.3	878.6	789.1	89.46	9.821	
16,500.0	11,832.0	16,150.2	11,630.0	51.0	43.4	-77.16	4,328.0	468.8	879.3	788.7	90.60	9.705	
16,600.0	11,832.0	16,250.2	11,630.0	51.5	44.0	-77.17	4,428.0	467.3	880.1	788.4	91.76	9.592	
16,700.0	11,832.0	16,350.2	11,630.0	52.0	44.6	-77.18	4,528.0	465.8	880.9	788.0	92.92	9.480	
16,800.0	11,832.0	16,450.2	11,630.0	52.6	45.2	-77.20	4,628.0	464.3	881.7	787.6	94.10	9.370	
16,900.0	11,832.0	16,550.2	11,630.0	53.1	45.8	-77.21	4,727.9	462.8	882.5	787.2	95.28	9.262	
17,000.0	11,832.0	16,650.1	11,630.0	53.6	46.4	-77.22	4,827.9	461.3	883.2	786.8	96.47	9.155	
17,100.0	11,832.0	16,750.1	11,630.0	54.2	47.0	-77.23	4,927.9	459.8	884.0	786.3	97.67	9.051	
17,200.0	11,832.0	16,850.1	11,630.0	54.7	47.7	-77.24	5,027.9	458.3	884.8	785.9	98.88	8.948	
17,300.0	11,832.0	16,950.1	11,630.0	55.3	48.3	-77.25	5,127.9	456.8	885.6	785.5	100.10	8.847	
17,400.0	11,832.0	17,050.1	11,630.0	55.8	48.9	-77.26	5,227.9	455.3	886.4	785.0	101.33	8.748	
17,500.0	11,832.0	17,150.1	11,630.0	56.4	49.6	-77.28	5,327.8	453.7	887.1	784.6	102.56	8.650	
17,600.0	11,832.0	17,250.1	11,630.0	57.0	50.2	-77.29	5,427.8	452.2	887.9	784.1	103.80	8.554	
17,700.0	11,832.0	17,350.1	11,630.0	57.6	50.8	-77.30	5,527.8	450.7	888.7	783.7	105.05	8.460	
17,800.0	11,832.0	17,450.1	11,630.0	58.1	51.5	-77.31	5,627.8	449.2	889.5	783.2	106.30	8.368	
17,900.0	11,832.0	17,550.1	11,630.0	58.7	52.1	-77.32	5,727.8	447.7	890.3	782.7	107.56	8.277	
18,000.0	11,832.0	17,650.1	11,630.0	59.3	52.8	-77.33	5,827.8	446.2	891.0	782.2	108.83	8.188	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #705H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11104-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)			
18,100.0	11,832.0	17,750.1	11,630.0	59.9	53.5	-77.34	5,927.8	444.7	891.8	781.7	110.10	8.100	
18,200.0	11,832.0	17,850.1	11,630.0	60.5	54.1	-77.35	6,027.7	443.2	892.6	781.2	111.38	8.014	
18,300.0	11,832.0	17,950.1	11,630.0	61.1	54.8	-77.37	6,127.7	441.7	893.4	780.7	112.67	7.930	
18,400.0	11,832.0	18,050.1	11,630.0	61.7	55.4	-77.38	6,227.7	440.2	894.2	780.2	113.96	7.847	
18,500.0	11,832.0	18,150.1	11,630.0	62.3	56.1	-77.39	6,327.7	438.7	895.0	779.7	115.25	7.765	
18,600.0	11,832.0	18,250.1	11,630.0	62.9	56.8	-77.40	6,427.7	437.2	895.7	779.2	116.55	7.685	
18,700.0	11,832.0	18,350.1	11,630.0	63.5	57.5	-77.41	6,527.7	435.7	896.5	778.7	117.86	7.607	
18,800.0	11,832.0	18,450.1	11,630.0	64.1	58.1	-77.42	6,627.7	434.1	897.3	778.1	119.17	7.530	
18,900.0	11,832.0	18,550.1	11,630.0	64.8	58.8	-77.43	6,727.6	432.6	898.1	777.6	120.48	7.454	
19,000.0	11,832.0	18,650.1	11,630.0	65.4	59.5	-77.44	6,827.6	431.1	898.9	777.1	121.80	7.380	
19,100.0	11,832.0	18,750.1	11,630.0	66.0	60.2	-77.46	6,927.6	429.6	899.6	776.5	123.13	7.307	
19,200.0	11,832.0	18,850.1	11,630.0	66.6	60.9	-77.47	7,027.6	428.1	900.4	776.0	124.46	7.235	
19,300.0	11,832.0	18,950.1	11,630.0	67.3	61.6	-77.48	7,127.6	426.6	901.2	775.4	125.79	7.164	
19,400.0	11,832.0	19,050.1	11,630.0	67.9	62.2	-77.49	7,227.6	425.1	902.0	774.9	127.12	7.095	
19,500.0	11,832.0	19,150.1	11,630.0	68.5	62.9	-77.50	7,327.6	423.6	902.8	774.3	128.46	7.027	
19,600.0	11,832.0	19,250.1	11,630.0	69.2	63.6	-77.51	7,427.5	422.1	903.5	773.7	129.81	6.961	
19,700.0	11,832.0	19,350.1	11,630.0	69.8	64.3	-77.52	7,527.5	420.6	904.3	773.2	131.15	6.895	
19,800.0	11,832.0	19,450.1	11,630.0	70.5	65.0	-77.53	7,627.5	419.1	905.1	772.6	132.50	6.831	
19,900.0	11,832.0	19,550.1	11,630.0	71.1	65.7	-77.54	7,727.5	417.6	905.9	772.0	133.86	6.767	
20,000.0	11,832.0	19,650.1	11,630.0	71.8	66.4	-77.55	7,827.5	416.0	906.7	771.5	135.22	6.705	
20,100.0	11,832.0	19,750.1	11,630.0	72.4	67.1	-77.56	7,927.5	414.5	907.5	770.9	136.58	6.644	
20,200.0	11,832.0	19,850.0	11,630.0	73.1	67.8	-77.58	8,027.5	413.0	908.2	770.3	137.94	6.584	
20,300.0	11,832.0	19,950.0	11,630.0	73.7	68.5	-77.59	8,127.4	411.5	909.0	769.7	139.31	6.525	
20,400.0	11,832.0	20,050.0	11,630.0	74.4	69.2	-77.60	8,227.4	410.0	909.8	769.1	140.68	6.467	
20,500.0	11,832.0	20,150.0	11,630.0	75.0	70.0	-77.61	8,327.4	408.5	910.6	768.5	142.05	6.410	
20,600.0	11,832.0	20,250.0	11,630.0	75.7	70.7	-77.62	8,427.4	407.0	911.4	767.9	143.42	6.354	
20,700.0	11,832.0	20,350.0	11,630.0	76.4	71.4	-77.63	8,527.4	405.5	912.1	767.3	144.80	6.299	
20,800.0	11,832.0	20,450.0	11,630.0	77.0	72.1	-77.64	8,627.4	404.0	912.9	766.7	146.18	6.245	
20,900.0	11,832.0	20,550.0	11,630.0	77.7	72.8	-77.65	8,727.4	402.5	913.7	766.1	147.56	6.192	
21,000.0	11,832.0	20,650.0	11,630.0	78.4	73.5	-77.66	8,827.3	401.0	914.5	765.5	148.95	6.140	
21,100.0	11,832.0	20,750.0	11,630.0	79.0	74.2	-77.67	8,927.3	399.5	915.3	764.9	150.34	6.088	
21,200.0	11,832.0	20,850.0	11,630.0	79.7	74.9	-77.68	9,027.3	398.0	916.1	764.3	151.73	6.038	
21,300.0	11,832.0	20,950.0	11,630.0	80.4	75.7	-77.69	9,127.3	396.4	916.8	763.7	153.12	5.988	
21,400.0	11,832.0	21,050.0	11,630.0	81.1	76.4	-77.70	9,227.3	394.9	917.6	763.1	154.51	5.939	
21,500.0	11,832.0	21,150.0	11,630.0	81.7	77.1	-77.72	9,327.3	393.4	918.4	762.5	155.91	5.891	
21,600.0	11,832.0	21,250.0	11,630.0	82.4	77.8	-77.73	9,427.3	391.9	919.2	761.9	157.31	5.843	
21,700.0	11,832.0	21,350.0	11,630.0	83.1	78.5	-77.74	9,527.2	390.4	920.0	761.3	158.71	5.797	
21,800.0	11,832.0	21,450.0	11,630.0	83.8	79.3	-77.75	9,627.2	388.9	920.7	760.6	160.11	5.751	
21,900.0	11,832.0	21,550.0	11,630.0	84.5	80.0	-77.76	9,727.2	387.4	921.5	760.0	161.51	5.706	
22,000.0	11,832.0	21,650.0	11,630.0	85.2	80.7	-77.77	9,827.2	385.9	922.3	759.4	162.92	5.661	
22,100.0	11,832.0	21,750.0	11,630.0	85.8	81.4	-77.78	9,927.2	384.4	923.1	758.8	164.33	5.617	
22,200.0	11,832.0	21,850.0	11,630.0	86.5	82.2	-77.79	10,027.2	382.9	923.9	758.1	165.74	5.574	
22,278.7	11,832.0	21,928.7	11,630.0	87.1	82.7	-77.80	10,105.9	381.7	924.5	757.6	166.85	5.541	
22,300.0	11,832.0	21,950.0	11,630.0	87.2	82.9	-77.80	10,127.1	381.4	924.7	757.5	167.14	5.532	
22,328.7	11,832.0	21,978.7	11,630.0	87.4	83.1	-77.80	10,155.9	380.9	924.9	757.3	167.55	5.520	
22,329.6	11,832.0	21,979.5	11,630.0	87.5	83.1	-77.80	10,156.7	380.9	924.9	757.3	167.55	5.520 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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #706H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10974-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	-90.80	-0.4	-30.0	30.8				
100.0	100.0	93.1	93.1	3.0	3.0	-90.80	-0.4	-30.0	30.0	23.5	6.52	4.601	
200.0	200.0	193.1	193.1	3.2	3.2	-90.80	-0.4	-30.0	30.0	23.2	6.76	4.440	
300.0	300.0	293.1	293.1	3.3	3.3	-90.80	-0.4	-30.0	30.0	23.0	6.99	4.292	
400.0	400.0	393.1	393.1	3.4	3.4	-90.80	-0.4	-30.0	30.0	22.8	7.21	4.159	
500.0	500.0	493.1	493.1	3.5	3.5	-90.80	-0.4	-30.0	30.0	22.6	7.43	4.038	
600.0	600.0	593.1	593.1	3.7	3.7	-90.80	-0.4	-30.0	30.0	22.4	7.64	3.927	
700.0	700.0	693.1	693.1	3.8	3.8	-90.80	-0.4	-30.0	30.0	22.2	7.84	3.825	
800.0	800.0	793.1	793.1	3.9	3.9	-90.80	-0.4	-30.0	30.0	22.0	8.04	3.731	
900.0	900.0	893.1	893.1	4.0	4.0	-90.80	-0.4	-30.0	30.0	21.8	8.23	3.643	
1,000.0	1,000.0	993.1	993.1	4.2	4.2	-90.80	-0.4	-30.0	30.0	21.6	8.42	3.562 CC	
1,100.0	1,100.0	1,094.0	1,094.0	4.3	4.3	163.08	-1.0	-28.5	30.2	21.4	8.81	3.434	
1,200.0	1,199.8	1,195.0	1,194.9	4.6	4.6	162.39	-2.8	-23.8	30.6	21.2	9.37	3.265	
1,300.0	1,299.5	1,296.0	1,295.5	4.9	4.9	161.17	-5.9	-15.7	31.0	21.1	9.94	3.118	
1,400.0	1,398.7	1,397.0	1,395.7	5.2	5.2	159.44	-10.3	-4.4	31.5	21.0	10.52	2.994 ES	
1,500.0	1,497.5	1,498.0	1,495.5	5.5	5.5	157.24	-15.9	10.3	32.1	21.0	11.11	2.892 SF	
1,600.0	1,595.6	1,598.1	1,594.0	5.9	5.8	155.74	-22.3	26.9	34.1	22.4	11.70	2.910	
1,700.0	1,693.4	1,698.0	1,692.4	6.2	6.1	155.54	-28.6	43.5	37.5	25.3	12.27	3.060	
1,800.0	1,791.3	1,798.0	1,790.7	6.5	6.5	155.37	-35.0	60.1	41.0	28.2	12.86	3.189	
1,900.0	1,889.1	1,897.9	1,889.0	6.9	6.8	155.23	-41.4	76.7	44.5	31.0	13.49	3.299	
2,000.0	1,986.9	1,997.9	1,987.4	7.2	7.1	155.11	-47.8	93.3	48.0	33.8	14.14	3.393	
2,100.0	2,084.7	2,097.8	2,085.7	7.6	7.5	155.01	-54.1	109.9	51.5	36.7	14.81	3.475	
2,200.0	2,182.5	2,197.7	2,184.1	8.0	7.9	154.91	-60.5	126.5	54.9	39.4	15.50	3.545	
2,300.0	2,280.3	2,297.7	2,282.4	8.4	8.3	154.83	-66.9	143.1	58.4	42.2	16.21	3.605	
2,400.0	2,378.1	2,397.6	2,380.8	8.8	8.6	154.76	-73.2	159.7	61.9	45.0	16.93	3.658	
2,500.0	2,476.0	2,497.6	2,479.1	9.2	9.0	154.70	-79.6	176.3	65.4	47.7	17.66	3.704	
2,600.0	2,573.8	2,597.5	2,577.5	9.6	9.4	154.64	-86.0	192.9	68.9	50.5	18.40	3.744	
2,700.0	2,671.6	2,697.4	2,675.8	10.0	9.8	154.59	-92.4	209.5	72.4	53.2	19.15	3.779	
2,800.0	2,769.4	2,797.4	2,774.1	10.4	10.2	154.54	-98.7	226.1	75.8	55.9	19.91	3.810	
2,900.0	2,867.2	2,897.3	2,872.5	10.9	10.7	154.50	-105.1	242.7	79.3	58.7	20.67	3.837	
3,000.0	2,965.0	2,997.3	2,970.8	11.3	11.1	154.46	-111.5	259.3	82.8	61.4	21.45	3.861	
3,100.0	3,062.8	3,097.2	3,069.2	11.7	11.5	154.43	-117.9	276.0	86.3	64.1	22.23	3.883	
3,200.0	3,160.7	3,197.1	3,167.5	12.2	11.9	154.39	-124.2	292.6	89.8	66.8	23.01	3.902	
3,300.0	3,258.5	3,297.1	3,265.9	12.6	12.3	154.36	-130.6	309.2	93.3	69.5	23.80	3.919	
3,400.0	3,356.3	3,397.0	3,364.2	13.0	12.8	154.33	-137.0	325.8	96.8	72.2	24.59	3.935	
3,500.0	3,454.1	3,497.0	3,462.6	13.5	13.2	154.31	-143.4	342.4	100.2	74.9	25.38	3.949	
3,600.0	3,551.9	3,596.9	3,560.9	13.9	13.6	154.28	-149.7	359.0	103.7	77.5	26.18	3.961	
3,700.0	3,649.7	3,696.8	3,659.2	14.4	14.1	154.26	-156.1	375.6	107.2	80.2	26.99	3.973	
3,800.0	3,747.5	3,796.8	3,757.6	14.8	14.5	154.24	-162.5	392.2	110.7	82.9	27.79	3.983	
3,900.0	3,845.4	3,896.7	3,855.9	15.3	14.9	154.22	-168.8	408.8	114.2	85.6	28.60	3.992	
4,000.0	3,943.2	3,996.7	3,954.3	15.7	15.4	154.20	-175.2	425.4	117.7	88.2	29.41	4.001	
4,100.0	4,041.0	4,096.6	4,052.6	16.2	15.8	154.18	-181.6	442.0	121.1	90.9	30.22	4.008	
4,200.0	4,138.8	4,196.5	4,151.0	16.6	16.3	154.16	-188.0	458.6	124.6	93.6	31.04	4.016	
4,300.0	4,236.6	4,296.5	4,249.3	17.1	16.7	154.15	-194.3	475.2	128.1	96.3	31.85	4.022	
4,400.0	4,334.4	4,396.4	4,347.7	17.6	17.1	154.13	-200.7	491.8	131.6	98.9	32.67	4.028	
4,500.0	4,432.3	4,496.3	4,446.0	18.0	17.6	154.12	-207.1	508.4	135.1	101.6	33.49	4.034	
4,600.0	4,530.1	4,596.3	4,544.3	18.5	18.0	154.10	-213.5	525.0	138.6	104.3	34.31	4.039	
4,700.0	4,627.9	4,696.2	4,642.7	18.9	18.5	154.09	-219.8	541.6	142.0	106.9	35.13	4.043	
4,800.0	4,725.7	4,796.2	4,741.0	19.4	18.9	154.08	-226.2	558.2	145.5	109.6	35.95	4.048	
4,900.0	4,823.5	4,896.1	4,839.4	19.9	19.4	154.07	-232.6	574.8	149.0	112.2	36.78	4.052	
5,000.0	4,921.3	4,996.0	4,937.7	20.3	19.8	154.05	-238.9	591.4	152.5	114.9	37.60	4.055	
5,100.0	5,019.1	5,096.0	5,036.1	20.8	20.3	154.04	-245.3	608.0	156.0	117.5	38.43	4.059	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #706H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10974-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	
5,200.0	5,117.0	5,195.9	5,134.4	21.3	20.7	154.03	-251.7	624.6	159.5	120.2	39.26	4.062	
5,300.0	5,214.8	5,295.9	5,232.8	21.7	21.2	154.02	-258.1	641.2	162.9	122.9	40.09	4.065	
5,400.0	5,312.6	5,395.8	5,331.1	22.2	21.6	154.01	-264.4	657.8	166.4	125.5	40.92	4.068	
5,500.0	5,410.4	5,495.7	5,429.4	22.6	22.0	154.00	-270.8	674.4	169.9	128.2	41.75	4.070	
5,600.0	5,508.2	5,595.7	5,527.8	23.1	22.5	154.00	-277.2	691.0	173.4	130.8	42.58	4.073	
5,700.0	5,606.0	5,695.6	5,626.1	23.6	22.9	153.99	-283.6	707.6	176.9	133.5	43.41	4.075	
5,800.0	5,703.8	5,795.6	5,724.5	24.0	23.4	153.98	-289.9	724.2	180.4	136.1	44.24	4.077	
5,900.0	5,801.7	5,895.5	5,822.8	24.5	23.8	153.97	-296.3	740.8	183.9	138.8	45.07	4.079	
6,000.0	5,899.5	5,995.4	5,921.2	25.0	24.3	153.96	-302.7	757.4	187.3	141.4	45.91	4.081	
6,100.0	5,997.3	6,095.4	6,019.5	25.4	24.8	153.96	-309.1	774.0	190.8	144.1	46.74	4.083	
6,200.0	6,095.1	6,194.3	6,116.9	25.9	25.2	153.98	-315.3	790.3	194.5	146.9	47.56	4.089	
6,300.0	6,192.9	6,292.8	6,214.0	26.4	25.6	154.12	-321.2	805.7	198.8	150.4	48.43	4.106	
6,400.0	6,290.7	6,391.2	6,311.1	26.8	26.1	154.38	-326.8	820.3	203.9	154.6	49.31	4.136	
6,500.0	6,388.5	6,489.4	6,408.3	27.3	26.5	154.74	-332.1	834.2	209.8	159.6	50.23	4.177	
6,600.0	6,486.4	6,587.6	6,505.4	27.8	26.9	155.19	-337.2	847.2	216.4	165.2	51.16	4.230	
6,700.0	6,584.2	6,685.7	6,602.6	28.3	27.3	155.72	-341.9	859.5	223.7	171.6	52.11	4.293	
6,800.0	6,682.0	6,783.6	6,699.8	28.7	27.7	156.32	-346.3	871.0	231.9	178.8	53.08	4.368	
6,900.0	6,779.8	6,881.4	6,796.9	29.2	28.1	156.97	-350.4	881.7	240.8	186.7	54.05	4.454	
7,000.0	6,877.6	6,979.1	6,894.0	29.7	28.5	157.66	-354.2	891.6	250.4	195.4	55.03	4.551	
7,100.0	6,975.4	7,076.5	6,990.9	30.1	28.9	158.38	-357.7	900.7	260.9	204.9	56.00	4.659	
7,200.0	7,073.2	7,173.8	7,087.8	30.6	29.3	159.12	-360.9	909.0	272.2	215.2	56.97	4.778	
7,300.0	7,171.1	7,270.8	7,184.5	31.1	29.7	159.88	-363.8	916.5	284.3	226.3	57.93	4.907	
7,400.0	7,268.9	7,367.7	7,281.1	31.5	30.0	160.63	-366.3	923.3	297.2	238.3	58.88	5.047	
7,499.3	7,366.0	7,463.6	7,376.8	32.0	30.4	161.38	-368.6	929.2	310.8	251.0	59.81	5.196	
7,500.0	7,366.7	7,464.3	7,377.5	32.0	30.4	161.39	-368.6	929.3	310.9	251.0	59.82	5.197	
7,600.0	7,464.7	7,560.8	7,473.9	32.5	30.7	162.13	-370.6	934.5	324.6	263.8	60.72	5.345	
7,700.0	7,563.0	7,657.4	7,570.3	32.9	31.1	162.78	-372.4	938.9	337.4	275.9	61.57	5.480	
7,800.0	7,661.6	7,753.9	7,666.7	33.4	31.4	163.35	-373.8	942.6	349.4	287.1	62.37	5.602	
7,900.0	7,760.5	7,850.5	7,763.2	33.8	31.7	163.85	-374.9	945.6	360.6	297.5	63.13	5.712	
8,000.0	7,859.7	7,947.0	7,859.7	34.3	32.0	164.29	-375.7	947.8	370.9	307.1	63.84	5.810	
8,100.0	7,959.0	8,043.6	7,956.3	34.7	32.2	164.68	-376.3	949.2	380.3	315.8	64.50	5.897	
8,200.0	8,058.6	8,140.1	8,052.8	35.1	32.4	165.03	-376.5	949.8	388.9	323.8	65.06	5.977	
8,300.0	8,158.3	8,238.7	8,151.4	35.4	32.4	165.33	-376.6	949.9	396.4	330.9	65.52	6.050	
8,400.0	8,258.1	8,338.5	8,251.2	35.8	32.5	165.57	-376.6	949.9	402.3	336.3	65.95	6.100	
8,500.0	8,358.0	8,438.4	8,351.1	36.1	32.5	165.73	-376.6	949.9	406.5	340.2	66.34	6.127	
8,600.0	8,458.0	8,538.3	8,451.1	36.4	32.5	165.83	-376.6	949.9	409.0	342.4	66.68	6.135	
8,699.3	8,557.2	8,637.6	8,550.3	36.6	32.5	-88.14	-376.6	949.9	409.9	343.0	66.84	6.132	
8,700.0	8,558.0	8,638.3	8,551.1	36.6	32.5	-88.14	-376.6	949.9	409.9	343.0	66.84	6.132	
8,800.0	8,658.0	8,738.3	8,651.1	36.6	32.5	-88.14	-376.6	949.9	409.9	343.0	66.88	6.128	
8,900.0	8,758.0	8,838.3	8,751.1	36.6	32.5	-88.14	-376.6	949.9	409.9	342.9	66.91	6.125	
9,000.0	8,858.0	8,938.3	8,851.1	36.6	32.6	-88.14	-376.6	949.9	409.9	342.9	66.95	6.122	
9,100.0	8,958.0	9,038.3	8,951.1	36.6	32.6	-88.14	-376.6	949.9	409.9	342.9	66.98	6.119	
9,200.0	9,058.0	9,138.3	9,051.1	36.6	32.6	-88.14	-376.6	949.9	409.9	342.8	67.02	6.116	
9,300.0	9,158.0	9,238.3	9,151.1	36.7	32.6	-88.14	-376.6	949.9	409.9	342.8	67.06	6.112	
9,400.0	9,258.0	9,338.3	9,251.1	36.7	32.6	-88.14	-376.6	949.9	409.9	342.8	67.09	6.109	
9,500.0	9,358.0	9,438.3	9,351.1	36.7	32.7	-88.14	-376.6	949.9	409.9	342.7	67.13	6.106	
9,600.0	9,458.0	9,538.3	9,451.1	36.7	32.7	-88.14	-376.6	949.9	409.9	342.7	67.17	6.102	
9,700.0	9,558.0	9,638.3	9,551.1	36.7	32.7	-88.14	-376.6	949.9	409.9	342.7	67.20	6.099	
9,800.0	9,658.0	9,738.3	9,651.1	36.7	32.7	-88.14	-376.6	949.9	409.9	342.6	67.24	6.095	
9,900.0	9,758.0	9,838.3	9,751.1	36.7	32.7	-88.14	-376.6	949.9	409.9	342.6	67.28	6.092	
10,000.0	9,858.0	9,938.3	9,851.1	36.8	32.8	-88.14	-376.6	949.9	409.9	342.5	67.32	6.088	
10,100.0	9,958.0	10,038.3	9,951.1	36.8	32.8	-88.14	-376.6	949.9	409.9	342.5	67.36	6.085	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #706H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10974-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	
10,200.0	10,058.0	10,138.3	10,051.1	36.8	32.8	-88.14	-376.6	949.9	409.9	342.5	67.40	6.081	
10,300.0	10,158.0	10,238.3	10,151.1	36.8	32.8	-88.14	-376.6	949.9	409.9	342.4	67.44	6.078	
10,400.0	10,258.0	10,338.3	10,251.1	36.8	32.9	-88.14	-376.6	949.9	409.9	342.4	67.48	6.074	
10,500.0	10,358.0	10,438.3	10,351.1	36.8	32.9	-88.14	-376.6	949.9	409.9	342.3	67.52	6.070	
10,600.0	10,458.0	10,538.3	10,451.1	36.9	32.9	-88.14	-376.6	949.9	409.9	342.3	67.56	6.067	
10,700.0	10,558.0	10,638.3	10,551.1	36.9	32.9	-88.14	-376.6	949.9	409.9	342.3	67.60	6.063	
10,800.0	10,658.0	10,738.3	10,651.1	36.9	32.9	-88.14	-376.6	949.9	409.9	342.2	67.64	6.059	
10,900.0	10,758.0	10,838.3	10,751.1	36.9	33.0	-88.14	-376.6	949.9	409.9	342.2	67.68	6.055	
11,000.0	10,858.0	10,938.3	10,851.1	36.9	33.0	-88.14	-376.6	949.9	409.9	342.1	67.72	6.052	
11,034.0	10,892.0	10,972.3	10,885.1	36.9	33.0	-88.14	-376.6	949.9	409.9	342.1	67.74	6.051	
11,100.0	10,958.0	11,035.9	10,948.5	37.0	33.0	-87.68	-373.3	949.8	410.0	342.3	67.80	6.048	
11,200.0	11,058.0	11,128.8	11,039.6	37.0	33.0	-85.26	-355.9	949.5	411.6	343.5	68.11	6.043	
11,300.0	11,158.0	11,214.1	11,119.9	37.0	33.0	-81.31	-327.1	949.0	416.5	348.2	68.23	6.104	
11,400.0	11,258.0	11,289.5	11,186.6	37.0	33.0	-76.62	-292.1	948.4	427.5	359.8	67.69	6.316	
11,496.6	11,354.5	11,350.0	11,236.4	37.0	33.1	-72.22	-257.8	947.8	446.5	380.4	66.09	6.756	
11,500.0	11,358.0	11,350.0	11,236.4	37.0	33.1	-71.71	-257.8	947.8	447.4	381.4	65.96	6.783	
11,525.0	11,382.9	11,369.5	11,251.7	37.0	33.1	-69.53	-245.6	947.5	453.6	388.0	65.61	6.914	
11,550.0	11,407.8	11,384.6	11,263.1	37.0	33.1	-67.73	-235.9	947.4	460.1	395.0	65.09	7.068	
11,575.0	11,432.6	11,400.0	11,274.6	37.0	33.1	-65.98	-225.6	947.2	466.6	402.1	64.57	7.227	
11,600.0	11,457.1	11,414.7	11,285.3	37.0	33.1	-64.33	-215.5	947.0	473.2	409.2	64.02	7.392	
11,625.0	11,481.4	11,429.8	11,296.0	37.0	33.1	-62.74	-204.9	946.8	479.9	416.4	63.48	7.559	
11,650.0	11,505.3	11,450.0	11,309.9	37.0	33.1	-60.96	-190.2	946.6	486.5	423.4	63.10	7.710	
11,675.0	11,528.8	11,459.9	11,316.5	37.0	33.1	-59.79	-182.9	946.4	492.9	430.5	62.43	7.895	
11,700.0	11,551.9	11,474.9	11,326.3	37.0	33.1	-58.43	-171.5	946.2	499.3	437.3	61.93	8.062	
11,725.0	11,574.3	11,490.0	11,335.8	37.0	33.1	-57.16	-159.8	946.0	505.4	444.0	61.44	8.227	
11,750.0	11,596.2	11,500.0	11,342.0	37.0	33.1	-56.16	-151.9	945.9	511.5	450.6	60.84	8.407	
11,775.0	11,617.4	11,520.0	11,353.9	37.0	33.1	-54.87	-135.8	945.6	517.2	456.6	60.52	8.545	
11,800.0	11,637.9	11,535.1	11,362.5	37.1	33.1	-53.85	-123.4	945.4	522.6	462.5	60.09	8.697	
11,825.0	11,657.7	11,550.0	11,370.6	37.1	33.1	-52.92	-110.9	945.1	527.8	468.1	59.68	8.844	
11,850.0	11,676.6	11,565.2	11,378.6	37.1	33.1	-52.06	-98.0	944.9	532.7	473.4	59.31	8.982	
11,875.0	11,694.6	11,580.2	11,386.2	37.1	33.1	-51.28	-85.0	944.7	537.2	478.3	58.95	9.114	
11,900.0	11,711.6	11,600.0	11,395.6	37.1	33.1	-50.49	-67.6	944.3	541.5	482.8	58.71	9.222	
11,925.0	11,727.7	11,610.3	11,400.2	37.1	33.2	-49.96	-58.4	944.2	545.2	487.0	58.29	9.354	
11,950.0	11,742.8	11,625.3	11,406.7	37.1	33.2	-49.41	-44.9	943.9	548.7	490.7	58.00	9.461	
11,975.0	11,756.8	11,650.0	11,416.6	37.1	33.2	-48.82	-22.3	943.5	551.8	493.9	57.92	9.528	
12,000.0	11,769.7	11,650.0	11,416.6	37.1	33.2	-48.59	-22.3	943.5	554.4	497.0	57.35	9.666	
12,025.0	11,781.5	11,670.4	11,424.1	37.1	33.2	-48.21	-3.3	943.2	556.5	499.3	57.23	9.724	
12,050.0	11,792.1	11,685.5	11,429.2	37.1	33.2	-47.95	10.9	942.9	558.3	501.3	57.02	9.792	
12,075.0	11,801.5	11,700.0	11,433.7	37.1	33.2	-47.76	24.7	942.7	559.7	502.9	56.81	9.852	
12,100.0	11,809.7	11,715.6	11,438.1	37.1	33.2	-47.64	39.6	942.4	560.6	503.9	56.64	9.898	
12,125.0	11,816.6	11,730.6	11,442.1	37.1	33.2	-47.59	54.1	942.2	561.1	504.6	56.47	9.935	
12,150.0	11,822.3	11,750.0	11,446.6	37.1	33.2	-47.62	73.0	941.8	561.1	504.7	56.42	9.946	
12,175.0	11,826.6	11,760.7	11,448.8	37.2	33.2	-47.70	83.4	941.6	560.7	504.5	56.20	9.978	
12,200.0	11,829.7	11,775.7	11,451.5	37.2	33.3	-47.85	98.2	941.4	559.9	503.8	56.08	9.983	
12,225.0	11,831.5	11,800.0	11,455.2	37.2	33.3	-48.15	122.2	940.9	558.7	502.6	56.17	9.947	
12,246.6	11,832.0	11,800.0	11,455.2	37.2	33.3	-48.29	122.2	940.9	557.2	501.4	55.83	9.981	
12,300.0	11,832.0	11,836.1	11,458.7	37.2	33.3	-48.59	158.1	940.3	554.2	498.5	55.70	9.951	
12,351.1	11,832.0	11,867.2	11,460.0	37.3	33.3	-48.71	189.2	939.7	553.3	497.9	55.43	9.983	
12,400.0	11,832.0	11,911.6	11,460.0	37.3	33.4	-48.74	233.5	938.9	553.7	498.2	55.44	9.987	
12,500.0	11,832.0	12,011.6	11,460.0	37.4	33.5	-48.82	333.5	937.1	554.5	498.8	55.69	9.956	
12,600.0	11,832.0	12,111.6	11,460.0	37.5	33.6	-48.89	433.5	935.3	555.3	499.3	55.99	9.917	
12,700.0	11,832.0	12,211.6	11,460.0	37.7	33.7	-48.96	533.5	933.5	556.1	499.8	56.33	9.872	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #706H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10974-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)			
12,800.0	11,832.0	12,311.5	11,460.0	37.8	33.9	-49.04	633.5	931.7	556.9	500.2	56.71	9.821	
12,900.0	11,832.0	12,411.5	11,460.0	38.0	34.0	-49.11	733.4	929.9	557.8	500.6	57.13	9.764	
13,000.0	11,832.0	12,511.5	11,460.0	38.1	34.2	-49.18	833.4	928.1	558.6	501.0	57.58	9.701	
13,100.0	11,832.0	12,611.5	11,460.0	38.3	34.4	-49.26	933.4	926.3	559.4	501.4	58.07	9.634	
13,200.0	11,832.0	12,711.5	11,460.0	38.5	34.6	-49.33	1,033.4	924.6	560.2	501.7	58.59	9.561	
13,300.0	11,832.0	12,811.5	11,460.0	38.7	34.8	-49.40	1,133.3	922.8	561.1	501.9	59.15	9.485	
13,400.0	11,832.0	12,911.5	11,460.0	39.0	35.0	-49.47	1,233.3	921.0	561.9	502.2	59.75	9.405	
13,500.0	11,832.0	13,011.5	11,460.0	39.2	35.3	-49.55	1,333.3	919.2	562.7	502.4	60.37	9.321	
13,600.0	11,832.0	13,111.5	11,460.0	39.4	35.5	-49.62	1,433.3	917.4	563.6	502.5	61.03	9.234	
13,700.0	11,832.0	13,211.5	11,460.0	39.7	35.8	-49.69	1,533.3	915.6	564.4	502.7	61.72	9.144	
13,800.0	11,832.0	13,311.5	11,460.0	40.0	36.1	-49.76	1,633.2	913.8	565.2	502.8	62.44	9.053	
13,900.0	11,832.0	13,411.5	11,460.0	40.2	36.4	-49.83	1,733.2	912.0	566.1	502.9	63.18	8.959	
14,000.0	11,832.0	13,511.5	11,460.0	40.5	36.7	-49.90	1,833.2	910.2	566.9	502.9	63.96	8.863	
14,100.0	11,832.0	13,611.5	11,460.0	40.8	37.0	-49.98	1,933.2	908.4	567.7	503.0	64.76	8.767	
14,200.0	11,832.0	13,711.5	11,460.0	41.2	37.3	-50.05	2,033.1	906.6	568.6	503.0	65.58	8.669	
14,300.0	11,832.0	13,811.5	11,460.0	41.5	37.7	-50.12	2,133.1	904.8	569.4	503.0	66.43	8.571	
14,400.0	11,832.0	13,911.5	11,460.0	41.8	38.0	-50.19	2,233.1	903.0	570.2	502.9	67.31	8.472	
14,500.0	11,832.0	14,011.4	11,460.0	42.2	38.4	-50.26	2,333.1	901.2	571.1	502.9	68.21	8.373	
14,600.0	11,832.0	14,111.4	11,460.0	42.5	38.8	-50.33	2,433.1	899.4	571.9	502.8	69.12	8.274	
14,700.0	11,832.0	14,211.4	11,460.0	42.9	39.1	-50.40	2,533.0	897.6	572.8	502.7	70.06	8.175	
14,800.0	11,832.0	14,311.4	11,460.0	43.3	39.5	-50.47	2,633.0	895.8	573.6	502.6	71.02	8.076	
14,900.0	11,832.0	14,411.4	11,460.0	43.7	39.9	-50.54	2,733.0	894.0	574.4	502.4	72.00	7.978	
15,000.0	11,832.0	14,511.4	11,460.0	44.1	40.4	-50.60	2,833.0	892.2	575.3	502.3	73.00	7.881	
15,100.0	11,832.0	14,611.4	11,460.0	44.5	40.8	-50.67	2,932.9	890.4	576.1	502.1	74.01	7.784	
15,200.0	11,832.0	14,711.4	11,460.0	44.9	41.2	-50.74	3,032.9	888.6	577.0	501.9	75.05	7.688	
15,300.0	11,832.0	14,811.4	11,460.0	45.3	41.7	-50.81	3,132.9	886.8	577.8	501.7	76.09	7.593	
15,400.0	11,832.0	14,911.4	11,460.0	45.7	42.1	-50.88	3,232.9	885.0	578.7	501.5	77.16	7.500	
15,500.0	11,832.0	15,011.4	11,460.0	46.2	42.6	-50.95	3,332.9	883.2	579.5	501.3	78.24	7.407	
15,600.0	11,832.0	15,111.4	11,460.0	46.6	43.1	-51.01	3,432.8	881.4	580.3	501.0	79.33	7.316	
15,700.0	11,832.0	15,211.4	11,460.0	47.1	43.5	-51.08	3,532.8	879.6	581.2	500.8	80.44	7.225	
15,800.0	11,832.0	15,311.4	11,460.0	47.5	44.0	-51.15	3,632.8	877.8	582.0	500.5	81.56	7.137	
15,900.0	11,832.0	15,411.4	11,460.0	48.0	44.5	-51.22	3,732.8	876.0	582.9	500.2	82.69	7.049	
16,000.0	11,832.0	15,511.4	11,460.0	48.5	45.0	-51.28	3,832.7	874.2	583.7	499.9	83.83	6.963	
16,100.0	11,832.0	15,611.4	11,460.0	49.0	45.5	-51.35	3,932.7	872.4	584.6	499.6	84.99	6.878	
16,200.0	11,832.0	15,711.3	11,460.0	49.5	46.1	-51.42	4,032.7	870.6	585.4	499.3	86.16	6.795	
16,300.0	11,832.0	15,811.3	11,460.0	50.0	46.6	-51.48	4,132.7	868.8	586.3	499.0	87.34	6.713	
16,400.0	11,832.0	15,911.3	11,460.0	50.5	47.1	-51.55	4,232.7	867.0	587.2	498.6	88.53	6.633	
16,500.0	11,832.0	16,011.3	11,460.0	51.0	47.7	-51.62	4,332.6	865.2	588.0	498.3	89.72	6.553	
16,600.0	11,832.0	16,111.3	11,460.0	51.5	48.2	-51.68	4,432.6	863.4	588.9	497.9	90.93	6.476	
16,700.0	11,832.0	16,211.3	11,460.0	52.0	48.7	-51.75	4,532.6	861.6	589.7	497.6	92.15	6.400	
16,800.0	11,832.0	16,311.3	11,460.0	52.6	49.3	-51.81	4,632.6	859.8	590.6	497.2	93.38	6.325	
16,900.0	11,832.0	16,411.3	11,460.0	53.1	49.9	-51.88	4,732.5	858.0	591.4	496.8	94.61	6.251	
17,000.0	11,832.0	16,511.3	11,460.0	53.6	50.4	-51.94	4,832.5	856.2	592.3	496.4	95.85	6.179	
17,100.0	11,832.0	16,611.3	11,460.0	54.2	51.0	-52.01	4,932.5	854.4	593.1	496.0	97.10	6.108	
17,200.0	11,832.0	16,711.3	11,460.0	54.7	51.6	-52.07	5,032.5	852.6	594.0	495.6	98.36	6.039	
17,300.0	11,832.0	16,811.3	11,460.0	55.3	52.2	-52.14	5,132.5	850.8	594.9	495.2	99.62	5.971	
17,400.0	11,832.0	16,911.3	11,460.0	55.8	52.8	-52.20	5,232.4	849.0	595.7	494.8	100.90	5.904	
17,500.0	11,832.0	17,011.3	11,460.0	56.4	53.4	-52.27	5,332.4	847.2	596.6	494.4	102.17	5.839	
17,600.0	11,832.0	17,111.3	11,460.0	57.0	54.0	-52.33	5,432.4	845.5	597.5	494.0	103.46	5.775	
17,700.0	11,832.0	17,211.3	11,460.0	57.6	54.6	-52.39	5,532.4	843.7	598.3	493.6	104.75	5.712	
17,800.0	11,832.0	17,311.2	11,460.0	58.1	55.2	-52.46	5,632.3	841.9	599.2	493.1	106.05	5.650	
17,900.0	11,832.0	17,411.2	11,460.0	58.7	55.8	-52.52	5,732.3	840.1	600.0	492.7	107.35	5.590	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 #706H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 10974-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	11,832.0	17,511.2	11,460.0	59.3	56.4	-52.58	5,832.3	838.3	600.9	492.3	108.66		
18,100.0	11,832.0	17,611.2	11,460.0	59.9	57.0	-52.65	5,932.3	836.5	601.8	491.8	109.97		
18,200.0	11,832.0	17,711.2	11,460.0	60.5	57.6	-52.71	6,032.3	834.7	602.6	491.4	111.29		
18,300.0	11,832.0	17,811.2	11,460.0	61.1	58.3	-52.77	6,132.2	832.9	603.5	490.9	112.61		
18,400.0	11,832.0	17,911.2	11,460.0	61.7	58.9	-52.84	6,232.2	831.1	604.4	490.4	113.94		
18,500.0	11,832.0	18,011.2	11,460.0	62.3	59.5	-52.90	6,332.2	829.3	605.3	490.0	115.27		
18,600.0	11,832.0	18,111.2	11,460.0	62.9	60.1	-52.96	6,432.2	827.5	606.1	489.5	116.61		
18,700.0	11,832.0	18,211.2	11,460.0	63.5	60.8	-53.02	6,532.1	825.7	607.0	489.0	117.95		
18,800.0	11,832.0	18,311.2	11,460.0	64.1	61.4	-53.08	6,632.1	823.9	607.9	488.6	119.29		
18,900.0	11,832.0	18,411.2	11,460.0	64.8	62.1	-53.15	6,732.1	822.1	608.7	488.1	120.64		
19,000.0	11,832.0	18,511.2	11,460.0	65.4	62.7	-53.21	6,832.1	820.3	609.6	487.6	121.99		
19,100.0	11,832.0	18,611.2	11,460.0	66.0	63.4	-53.27	6,932.1	818.5	610.5	487.1	123.35		
19,200.0	11,832.0	18,711.2	11,460.0	66.6	64.0	-53.33	7,032.0	816.7	611.4	486.6	124.71		
19,300.0	11,832.0	18,811.2	11,460.0	67.3	64.7	-53.39	7,132.0	814.9	612.2	486.2	126.07		
19,400.0	11,832.0	18,911.2	11,460.0	67.9	65.3	-53.45	7,232.0	813.1	613.1	485.7	127.44		
19,500.0	11,832.0	19,011.1	11,460.0	68.5	66.0	-53.51	7,332.0	811.3	614.0	485.2	128.81		
19,600.0	11,832.0	19,111.1	11,460.0	69.2	66.7	-53.57	7,432.0	809.5	614.9	484.7	130.18		
19,700.0	11,832.0	19,211.1	11,460.0	69.8	67.3	-53.63	7,531.9	807.7	615.7	484.2	131.56		
19,800.0	11,832.0	19,311.1	11,460.0	70.5	68.0	-53.69	7,631.9	805.9	616.6	483.7	132.94		
19,900.0	11,832.0	19,411.1	11,460.0	71.1	68.7	-53.75	7,731.9	804.1	617.5	483.2	134.32		
20,000.0	11,832.0	19,511.1	11,460.0	71.8	69.3	-53.81	7,831.9	802.3	618.4	482.7	135.71		
20,100.0	11,832.0	19,611.1	11,460.0	72.4	70.0	-53.87	7,931.8	800.5	619.3	482.2	137.10		
20,200.0	11,832.0	19,711.1	11,460.0	73.1	70.7	-53.93	8,031.8	798.7	620.1	481.7	138.49		
20,300.0	11,832.0	19,811.1	11,460.0	73.7	71.4	-53.99	8,131.8	796.9	621.0	481.1	139.88		
20,400.0	11,832.0	19,911.1	11,460.0	74.4	72.0	-54.05	8,231.8	795.1	621.9	480.6	141.27		
20,500.0	11,832.0	20,011.1	11,460.0	75.0	72.7	-54.11	8,331.8	793.3	622.8	480.1	142.67		
20,600.0	11,832.0	20,111.1	11,460.0	75.7	73.4	-54.17	8,431.7	791.5	623.7	479.6	144.07		
20,700.0	11,832.0	20,211.1	11,460.0	76.4	74.1	-54.23	8,531.7	789.7	624.6	479.1	145.47		
20,800.0	11,832.0	20,311.1	11,460.0	77.0	74.8	-54.28	8,631.7	787.9	625.4	478.6	146.88		
20,900.0	11,832.0	20,411.1	11,460.0	77.7	75.5	-54.34	8,731.7	786.1	626.3	478.0	148.28		
21,000.0	11,832.0	20,511.1	11,460.0	78.4	76.1	-54.40	8,831.6	784.3	627.2	477.5	149.69		
21,100.0	11,832.0	20,611.1	11,460.0	79.0	76.8	-54.46	8,931.6	782.5	628.1	477.0	151.10		
21,200.0	11,832.0	20,711.0	11,460.0	79.7	77.5	-54.52	9,031.6	780.7	629.0	476.5	152.51		
21,300.0	11,832.0	20,811.0	11,460.0	80.4	78.2	-54.57	9,131.6	778.9	629.9	475.9	153.93		
21,400.0	11,832.0	20,911.0	11,460.0	81.1	78.9	-54.63	9,231.6	777.1	630.8	475.4	155.34		
21,500.0	11,832.0	21,011.0	11,460.0	81.7	79.6	-54.69	9,331.5	775.3	631.6	474.9	156.76		
21,600.0	11,832.0	21,111.0	11,460.0	82.4	80.3	-54.74	9,431.5	773.5	632.5	474.4	158.18		
21,700.0	11,832.0	21,211.0	11,460.0	83.1	81.0	-54.80	9,531.5	771.7	633.4	473.8	159.60		
21,800.0	11,832.0	21,311.0	11,460.0	83.8	81.7	-54.86	9,631.5	769.9	634.3	473.3	161.02		
21,900.0	11,832.0	21,411.0	11,460.0	84.5	82.4	-54.92	9,731.4	768.1	635.2	472.8	162.45		
22,000.0	11,832.0	21,511.0	11,460.0	85.2	83.1	-54.97	9,831.4	766.4	636.1	472.2	163.87		
22,100.0	11,832.0	21,611.0	11,460.0	85.8	83.8	-55.03	9,931.4	764.6	637.0	471.7	165.30		
22,200.0	11,832.0	21,711.0	11,460.0	86.5	84.5	-55.08	10,031.4	762.8	637.9	471.2	166.73		
22,278.7	11,832.0	21,789.7	11,460.0	87.1	85.1	-55.13	10,110.1	761.3	638.6	470.7	167.85		
22,300.0	11,832.0	21,811.0	11,460.0	87.2	85.2	-55.14	10,131.4	761.0	638.8	470.6	168.16		
22,328.7	11,832.0	21,839.7	11,460.0	87.4	85.4	-55.16	10,160.1	760.4	639.0	470.5	168.57		
22,329.6	11,832.0	21,840.5	11,460.0	87.5	85.4	-55.16	10,160.9	760.4	639.1	470.5	168.56		

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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		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	
6,600.0	6,486.4	6,869.1	6,708.6	27.8	29.8	-14.54	-345.9	2,018.4	989.2	933.3	55.96	17.678	
6,700.0	6,584.2	6,959.1	6,796.0	28.3	30.2	-14.82	-345.5	1,996.6	945.9	889.1	56.80	16.653	
6,800.0	6,682.0	7,049.2	6,883.3	28.7	30.7	-15.14	-345.2	1,974.8	902.7	845.0	57.65	15.658	
6,900.0	6,779.8	7,139.2	6,970.7	29.2	31.1	-15.48	-344.8	1,953.0	859.5	801.0	58.49	14.694	
7,000.0	6,877.6	7,224.5	7,053.5	29.7	31.5	-15.84	-344.4	1,932.5	816.4	757.0	59.36	13.753	
7,100.0	6,975.4	7,300.0	7,127.0	30.1	31.9	-16.19	-344.1	1,915.2	774.4	714.1	60.31	12.840	
7,200.0	7,073.2	7,384.6	7,209.6	30.6	32.3	-16.62	-343.8	1,896.9	733.7	672.5	61.18	11.993	
7,300.0	7,171.1	7,466.2	7,289.5	31.1	32.7	-17.08	-343.5	1,880.4	694.3	632.3	62.06	11.189	
7,400.0	7,268.9	7,548.8	7,370.6	31.5	33.1	-17.59	-343.2	1,864.9	656.4	593.4	62.92	10.431	
7,499.3	7,366.0	7,631.7	7,452.3	32.0	33.5	-18.16	-343.0	1,850.4	620.0	556.3	63.76	9.725	
7,500.0	7,366.7	7,632.3	7,452.8	32.0	33.5	-18.16	-343.0	1,850.3	619.8	556.0	63.77	9.720	
7,600.0	7,464.7	7,717.1	7,536.5	32.5	33.8	-18.65	-342.8	1,836.9	585.4	520.8	64.59	9.064	
7,700.0	7,563.0	7,800.0	7,618.6	32.9	34.2	-19.14	-342.5	1,824.8	554.1	488.7	65.40	8.473	
7,800.0	7,661.6	7,890.8	7,708.6	33.4	34.6	-19.68	-342.3	1,813.1	525.9	459.7	66.14	7.951	
7,900.0	7,760.5	7,979.5	7,796.7	33.8	34.9	-20.20	-342.2	1,802.9	500.8	433.9	66.87	7.489	
8,000.0	7,859.7	8,069.3	7,886.0	34.3	35.3	-20.71	-342.0	1,794.1	478.8	411.3	67.57	7.087	
8,100.0	7,959.0	8,160.0	7,976.4	34.7	35.6	-21.19	-341.9	1,786.5	460.1	391.8	68.22	6.743	
8,200.0	8,058.6	8,251.5	8,067.7	35.1	36.0	-21.63	-341.8	1,780.4	444.5	375.7	68.85	6.457	
8,300.0	8,158.3	8,343.7	8,159.8	35.4	36.3	-22.00	-341.7	1,775.7	432.2	362.7	69.43	6.225	
8,400.0	8,258.1	8,436.3	8,252.4	35.8	36.6	-22.31	-341.6	1,772.4	423.1	353.1	69.96	6.047	
8,500.0	8,358.0	8,529.4	8,345.4	36.1	36.8	-22.53	-341.6	1,770.7	417.2	346.7	70.42	5.924	
8,600.0	8,458.0	8,624.9	8,441.0	36.4	36.9	-22.66	-341.6	1,770.3	414.4	343.7	70.72	5.860	
8,699.3	8,557.2	8,724.2	8,540.2	36.6	36.9	83.30	-341.6	1,770.3	413.6	342.7	70.87	5.836	
8,700.0	8,558.0	8,724.9	8,541.0	36.6	36.9	83.30	-341.6	1,770.3	413.6	342.7	70.87	5.836	
8,800.0	8,658.0	8,824.9	8,641.0	36.6	37.0	83.30	-341.6	1,770.3	413.6	342.7	70.91	5.833	
8,900.0	8,758.0	8,924.9	8,741.0	36.6	37.0	83.30	-341.6	1,770.3	413.6	342.7	70.95	5.830	
9,000.0	8,858.0	9,024.9	8,841.0	36.6	37.0	83.30	-341.6	1,770.3	413.6	342.6	70.99	5.826	
9,100.0	8,958.0	9,124.9	8,941.0	36.6	37.0	83.30	-341.6	1,770.3	413.6	342.6	71.03	5.823	
9,200.0	9,058.0	9,224.9	9,041.0	36.6	37.0	83.30	-341.6	1,770.3	413.6	342.5	71.07	5.820	
9,300.0	9,158.0	9,324.9	9,141.0	36.7	37.1	83.30	-341.6	1,770.3	413.6	342.5	71.11	5.817	
9,400.0	9,258.0	9,424.9	9,241.0	36.7	37.1	83.30	-341.6	1,770.3	413.6	342.5	71.15	5.813	
9,500.0	9,358.0	9,524.9	9,341.0	36.7	37.1	83.30	-341.6	1,770.3	413.6	342.4	71.19	5.810	
9,600.0	9,458.0	9,624.9	9,441.0	36.7	37.1	83.30	-341.6	1,770.3	413.6	342.4	71.23	5.807	
9,700.0	9,558.0	9,724.9	9,541.0	36.7	37.1	83.30	-341.6	1,770.3	413.6	342.3	71.27	5.803	
9,800.0	9,658.0	9,824.9	9,641.0	36.7	37.2	83.30	-341.6	1,770.3	413.6	342.3	71.31	5.800	
9,900.0	9,758.0	9,924.9	9,741.0	36.7	37.2	83.30	-341.6	1,770.3	413.6	342.3	71.35	5.797	
10,000.0	9,858.0	10,024.9	9,841.0	36.8	37.2	83.30	-341.6	1,770.3	413.6	342.2	71.40	5.793	
10,100.0	9,958.0	10,124.9	9,941.0	36.8	37.2	83.30	-341.6	1,770.3	413.6	342.2	71.44	5.790	
10,200.0	10,058.0	10,224.9	10,041.0	36.8	37.3	83.30	-341.6	1,770.3	413.6	342.1	71.48	5.786	
10,300.0	10,158.0	10,324.9	10,141.0	36.8	37.3	83.30	-341.6	1,770.3	413.6	342.1	71.53	5.783	
10,400.0	10,258.0	10,424.9	10,241.0	36.8	37.3	83.30	-341.6	1,770.3	413.6	342.0	71.57	5.779	
10,500.0	10,358.0	10,524.9	10,341.0	36.8	37.3	83.30	-341.6	1,770.3	413.6	342.0	71.61	5.776	
10,600.0	10,458.0	10,624.9	10,441.0	36.9	37.4	83.30	-341.6	1,770.3	413.6	342.0	71.66	5.772	
10,700.0	10,558.0	10,724.9	10,541.0	36.9	37.4	83.30	-341.6	1,770.3	413.6	341.9	71.70	5.768	
10,800.0	10,658.0	10,824.9	10,641.0	36.9	37.4	83.30	-341.6	1,770.3	413.6	341.9	71.75	5.765	
10,900.0	10,758.0	10,924.9	10,741.0	36.9	37.4	83.30	-341.6	1,770.3	413.6	341.8	71.79	5.761	
11,000.0	10,858.0	11,024.9	10,841.0	36.9	37.4	83.30	-341.6	1,770.3	413.6	341.8	71.84	5.757	
11,100.0	10,958.0	11,124.9	10,941.0	37.0	37.5	83.30	-341.6	1,770.3	413.6	341.7	71.89	5.754	
11,200.0	11,058.0	11,224.9	11,041.0	37.0	37.5	83.30	-341.6	1,770.3	413.6	341.7	71.93	5.750	
11,300.0	11,158.0	11,324.9	11,141.0	37.0	37.5	83.30	-341.6	1,770.3	413.6	341.6	71.97	5.747	
11,322.5	11,180.5	11,347.4	11,163.5	37.0	37.5	83.30	-341.6	1,770.3	413.6	341.6	71.98	5.746 CC	
11,400.0	11,258.0	11,417.7	11,233.5	37.0	37.5	82.59	-336.4	1,770.3	414.3	342.5	71.81	5.769	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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
11,496.6	11,354.5	11,500.0	11,313.5	37.0	37.5	80.00	-317.4	1,770.2	417.6	346.6	71.08	5.875	
11,500.0	11,358.0	11,503.7	11,317.0	37.0	37.5	80.22	-316.3	1,770.2	417.8	346.8	71.04	5.881	
11,525.0	11,382.9	11,525.0	11,337.0	37.0	37.5	79.16	-309.0	1,770.1	419.3	348.5	70.77	5.925	
11,550.0	11,407.8	11,544.3	11,354.8	37.0	37.5	78.20	-301.6	1,770.1	420.8	350.3	70.50	5.969	
11,575.0	11,432.6	11,564.3	11,373.0	37.0	37.5	77.24	-293.2	1,770.0	422.4	352.2	70.23	6.015	
11,600.0	11,457.1	11,584.1	11,390.6	37.0	37.5	76.31	-284.1	1,769.9	424.1	354.1	69.98	6.061	
11,625.0	11,481.4	11,603.8	11,407.7	37.0	37.5	75.42	-274.4	1,769.9	425.8	356.1	69.73	6.106	
11,650.0	11,505.3	11,625.0	11,425.7	37.0	37.5	74.50	-263.2	1,769.8	427.6	358.1	69.49	6.153	
11,675.0	11,528.8	11,642.6	11,440.2	37.0	37.5	73.74	-253.3	1,769.7	429.3	360.0	69.29	6.196	
11,700.0	11,551.9	11,661.8	11,455.6	37.0	37.5	72.96	-241.8	1,769.6	431.0	361.9	69.09	6.238	
11,725.0	11,574.3	11,680.9	11,470.5	37.0	37.5	72.22	-229.8	1,769.5	432.7	363.8	68.92	6.279	
11,750.0	11,596.2	11,700.0	11,484.9	37.0	37.5	71.52	-217.3	1,769.5	434.4	365.7	68.76	6.318	
11,775.0	11,617.4	11,718.7	11,498.5	37.0	37.5	70.86	-204.4	1,769.4	436.1	367.4	68.62	6.354	
11,800.0	11,637.9	11,737.4	11,511.6	37.1	37.6	70.25	-191.0	1,769.3	437.6	369.1	68.51	6.388	
11,825.0	11,657.7	11,756.1	11,524.1	37.1	37.6	69.68	-177.2	1,769.2	439.2	370.7	68.42	6.419	
11,850.0	11,676.6	11,775.0	11,536.2	37.1	37.6	69.15	-162.6	1,769.1	440.6	372.2	68.34	6.447	
11,875.0	11,694.6	11,793.2	11,547.3	37.1	37.6	68.68	-148.2	1,769.0	441.9	373.6	68.30	6.471	
11,900.0	11,711.6	11,811.7	11,558.0	37.1	37.6	68.24	-133.2	1,768.9	443.2	374.9	68.27	6.491	
11,925.0	11,727.7	11,830.0	11,568.0	37.1	37.6	67.85	-117.8	1,768.7	444.3	376.0	68.26	6.508	
11,950.0	11,742.8	11,850.0	11,578.3	37.1	37.6	67.49	-100.7	1,768.6	445.3	377.0	68.25	6.525	
11,975.0	11,756.8	11,866.7	11,586.3	37.1	37.6	67.21	-86.1	1,768.5	446.2	377.9	68.31	6.531	
12,000.0	11,769.7	11,884.9	11,594.5	37.1	37.6	66.95	-69.7	1,768.4	447.0	378.6	68.37	6.537	
12,025.0	11,781.5	11,900.0	11,600.7	37.1	37.6	66.76	-56.0	1,768.3	447.6	379.1	68.50	6.534	
12,050.0	11,792.1	11,921.4	11,608.9	37.1	37.6	66.58	-36.3	1,768.2	448.1	379.5	68.54	6.538	
12,075.0	11,801.5	11,939.5	11,615.1	37.1	37.6	66.47	-19.2	1,768.1	448.4	379.8	68.65	6.533	
12,100.0	11,809.7	11,957.7	11,620.7	37.1	37.6	66.40	-1.9	1,767.9	448.6	379.9	68.77	6.524	
12,125.0	11,816.6	11,975.0	11,625.4	37.1	37.6	66.38	14.7	1,767.8	448.7	379.8	68.93	6.510	
12,150.0	11,822.3	11,994.0	11,629.8	37.1	37.6	66.40	33.2	1,767.7	448.6	379.6	69.07	6.496	
12,175.0	11,826.6	12,012.2	11,633.4	37.2	37.7	66.47	51.0	1,767.6	448.4	379.2	69.24	6.477	
12,200.0	11,829.7	12,030.4	11,636.3	37.2	37.7	66.59	69.0	1,767.4	448.1	378.7	69.42	6.455	
12,225.0	11,831.5	12,050.0	11,638.6	37.2	37.7	66.76	88.5	1,767.3	447.6	378.0	69.58	6.432	
12,246.6	11,832.0	12,064.3	11,639.8	37.2	37.7	66.92	102.7	1,767.2	447.0	377.3	69.78	6.406	
12,300.0	11,832.0	12,105.6	11,641.0	37.2	37.7	67.06	143.9	1,766.9	446.4	376.3	70.11	6.367	
12,400.0	11,832.0	12,205.6	11,641.0	37.3	37.8	67.06	243.9	1,766.2	446.4	376.1	70.28	6.352	
12,500.0	11,832.0	12,305.6	11,641.0	37.4	37.9	67.06	343.9	1,765.5	446.4	375.9	70.48	6.334	
12,600.0	11,832.0	12,405.6	11,641.0	37.5	38.0	67.06	443.9	1,764.8	446.4	375.7	70.71	6.314	
12,700.0	11,832.0	12,505.6	11,641.0	37.7	38.2	67.06	543.9	1,764.1	446.4	375.4	70.97	6.290	
12,800.0	11,832.0	12,605.6	11,641.0	37.8	38.3	67.06	643.9	1,763.4	446.4	375.2	71.26	6.265	
12,900.0	11,832.0	12,705.6	11,641.0	38.0	38.5	67.06	743.9	1,762.6	446.4	374.8	71.58	6.236	
13,000.0	11,832.0	12,805.6	11,641.0	38.1	38.7	67.06	843.9	1,761.9	446.4	374.5	71.94	6.206	
13,100.0	11,832.0	12,905.6	11,641.0	38.3	38.9	67.06	943.9	1,761.2	446.4	374.1	72.32	6.173	
13,200.0	11,832.0	13,005.6	11,641.0	38.5	39.1	67.06	1,043.9	1,760.5	446.4	373.7	72.74	6.137	
13,300.0	11,832.0	13,105.6	11,641.0	38.7	39.3	67.06	1,143.9	1,759.8	446.4	373.2	73.18	6.100	
13,400.0	11,832.0	13,205.6	11,641.0	39.0	39.5	67.06	1,243.9	1,759.1	446.4	372.8	73.65	6.061	
13,500.0	11,832.0	13,305.6	11,641.0	39.2	39.8	67.06	1,343.9	1,758.4	446.4	372.3	74.15	6.020	
13,600.0	11,832.0	13,405.6	11,641.0	39.4	40.1	67.06	1,443.9	1,757.7	446.4	371.7	74.68	5.978	
13,700.0	11,832.0	13,505.6	11,641.0	39.7	40.3	67.06	1,543.9	1,757.0	446.4	371.2	75.23	5.934	
13,800.0	11,832.0	13,605.6	11,641.0	40.0	40.6	67.06	1,643.9	1,756.3	446.4	370.6	75.81	5.888	
13,900.0	11,832.0	13,705.6	11,641.0	40.2	40.9	67.06	1,743.9	1,755.6	446.4	370.0	76.42	5.841	
14,000.0	11,832.0	13,805.6	11,641.0	40.5	41.3	67.06	1,843.9	1,754.8	446.4	369.3	77.05	5.794	
14,100.0	11,832.0	13,905.6	11,641.0	40.8	41.6	67.06	1,943.9	1,754.1	446.4	368.7	77.71	5.745	
14,200.0	11,832.0	14,005.6	11,641.0	41.2	41.9	67.06	2,043.9	1,753.4	446.4	368.0	78.39	5.695	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,300.0	11,832.0	14,105.6	11,641.0	41.5	42.3	67.06	2,143.9	1,752.7	446.4	367.3	79.09	5.644	
14,400.0	11,832.0	14,205.6	11,641.0	41.8	42.6	67.06	2,243.9	1,752.0	446.4	366.6	79.82	5.593	
14,500.0	11,832.0	14,305.6	11,641.0	42.2	43.0	67.06	2,343.9	1,751.3	446.4	365.8	80.57	5.541	
14,600.0	11,832.0	14,405.6	11,641.0	42.5	43.4	67.06	2,443.9	1,750.6	446.4	365.1	81.34	5.488	
14,700.0	11,832.0	14,505.6	11,641.0	42.9	43.8	67.06	2,543.9	1,749.9	446.4	364.3	82.13	5.435	
14,800.0	11,832.0	14,605.6	11,641.0	43.3	44.2	67.06	2,643.9	1,749.2	446.4	363.5	82.94	5.382	
14,900.0	11,832.0	14,705.6	11,641.0	43.7	44.6	67.06	2,743.9	1,748.5	446.4	362.6	83.77	5.329	
15,000.0	11,832.0	14,805.6	11,641.0	44.1	45.0	67.06	2,843.9	1,747.8	446.4	361.8	84.62	5.275	
15,100.0	11,832.0	14,905.6	11,641.0	44.5	45.4	67.06	2,943.9	1,747.1	446.4	360.9	85.48	5.222	
15,200.0	11,832.0	15,005.6	11,641.0	44.9	45.9	67.06	3,043.9	1,746.3	446.4	360.0	86.37	5.168	
15,300.0	11,832.0	15,105.6	11,641.0	45.3	46.3	67.06	3,143.9	1,745.6	446.4	359.1	87.27	5.115	
15,400.0	11,832.0	15,205.6	11,641.0	45.7	46.8	67.06	3,243.9	1,744.9	446.4	358.2	88.19	5.062	
15,500.0	11,832.0	15,305.6	11,641.0	46.2	47.2	67.06	3,343.9	1,744.2	446.4	357.3	89.13	5.008	
15,600.0	11,832.0	15,405.6	11,641.0	46.6	47.7	67.06	3,443.9	1,743.5	446.4	356.3	90.08	4.955	
15,700.0	11,832.0	15,505.6	11,641.0	47.1	48.2	67.06	3,543.9	1,742.8	446.4	355.3	91.05	4.903	
15,800.0	11,832.0	15,605.6	11,641.0	47.5	48.7	67.06	3,643.9	1,742.1	446.4	354.4	92.03	4.850	
15,900.0	11,832.0	15,705.6	11,641.0	48.0	49.2	67.06	3,743.9	1,741.4	446.4	353.4	93.03	4.798	
16,000.0	11,832.0	15,805.6	11,641.0	48.5	49.7	67.06	3,843.8	1,740.7	446.4	352.3	94.04	4.747	
16,100.0	11,832.0	15,905.6	11,641.0	49.0	50.2	67.06	3,943.8	1,740.0	446.4	351.3	95.06	4.696	
16,200.0	11,832.0	16,005.6	11,641.0	49.5	50.7	67.06	4,043.8	1,739.3	446.4	350.3	96.10	4.645	
16,300.0	11,832.0	16,105.6	11,641.0	50.0	51.2	67.06	4,143.8	1,738.5	446.4	349.2	97.15	4.595	
16,400.0	11,832.0	16,205.6	11,641.0	50.5	51.7	67.06	4,243.8	1,737.8	446.4	348.2	98.21	4.545	
16,500.0	11,832.0	16,305.6	11,641.0	51.0	52.3	67.06	4,343.8	1,737.1	446.4	347.1	99.28	4.496	
16,600.0	11,832.0	16,405.6	11,641.0	51.5	52.8	67.06	4,443.8	1,736.4	446.4	346.0	100.37	4.447	
16,700.0	11,832.0	16,505.6	11,641.0	52.0	53.3	67.06	4,543.8	1,735.7	446.4	344.9	101.46	4.399	
16,800.0	11,832.0	16,605.6	11,641.0	52.6	53.9	67.06	4,643.8	1,735.0	446.4	343.8	102.57	4.352	
16,900.0	11,832.0	16,705.6	11,641.0	53.1	54.4	67.06	4,743.8	1,734.3	446.4	342.7	103.69	4.305	
17,000.0	11,832.0	16,805.6	11,641.0	53.6	55.0	67.06	4,843.8	1,733.6	446.4	341.6	104.81	4.259	
17,100.0	11,832.0	16,905.6	11,641.0	54.2	55.6	67.06	4,943.8	1,732.9	446.4	340.4	105.95	4.213	
17,200.0	11,832.0	17,005.6	11,641.0	54.7	56.1	67.06	5,043.8	1,732.2	446.4	339.3	107.10	4.168	
17,300.0	11,832.0	17,105.6	11,641.0	55.3	56.7	67.06	5,143.8	1,731.5	446.4	338.1	108.25	4.123	
17,400.0	11,832.0	17,205.6	11,641.0	55.8	57.3	67.06	5,243.8	1,730.8	446.4	336.9	109.41	4.080	
17,500.0	11,832.0	17,305.6	11,641.0	56.4	57.8	67.06	5,343.8	1,730.0	446.4	335.8	110.59	4.036	
17,600.0	11,832.0	17,405.6	11,641.0	57.0	58.4	67.06	5,443.8	1,729.3	446.4	334.6	111.77	3.994	
17,700.0	11,832.0	17,505.6	11,641.0	57.6	59.0	67.06	5,543.8	1,728.6	446.4	333.4	112.96	3.952	
17,800.0	11,832.0	17,605.6	11,641.0	58.1	59.6	67.06	5,643.8	1,727.9	446.4	332.2	114.15	3.910	
17,900.0	11,832.0	17,705.6	11,641.0	58.7	60.2	67.06	5,743.8	1,727.2	446.4	331.0	115.36	3.869	
18,000.0	11,832.0	17,805.6	11,641.0	59.3	60.8	67.06	5,843.8	1,726.5	446.4	329.8	116.57	3.829	
18,100.0	11,832.0	17,905.6	11,641.0	59.9	61.4	67.06	5,943.8	1,725.8	446.4	328.6	117.79	3.790	
18,200.0	11,832.0	18,005.6	11,641.0	60.5	62.0	67.06	6,043.8	1,725.1	446.4	327.3	119.01	3.751	
18,300.0	11,832.0	18,105.6	11,641.0	61.1	62.6	67.06	6,143.8	1,724.4	446.4	326.1	120.24	3.712	
18,400.0	11,832.0	18,205.6	11,641.0	61.7	63.2	67.06	6,243.8	1,723.7	446.4	324.9	121.48	3.674	
18,500.0	11,832.0	18,305.6	11,641.0	62.3	63.9	67.06	6,343.8	1,723.0	446.4	323.6	122.72	3.637	
18,600.0	11,832.0	18,405.6	11,641.0	62.9	64.5	67.06	6,443.8	1,722.2	446.4	322.4	123.97	3.600	
18,700.0	11,832.0	18,505.6	11,641.0	63.5	65.1	67.06	6,543.8	1,721.5	446.4	321.1	125.23	3.564	
18,800.0	11,832.0	18,605.6	11,641.0	64.1	65.7	67.06	6,643.8	1,720.8	446.3	319.9	126.49	3.529	
18,900.0	11,832.0	18,705.6	11,641.0	64.8	66.3	67.06	6,743.8	1,720.1	446.3	318.6	127.76	3.494	
19,000.0	11,832.0	18,805.6	11,641.0	65.4	67.0	67.06	6,843.8	1,719.4	446.3	317.3	129.03	3.459	
19,100.0	11,832.0	18,905.6	11,641.0	66.0	67.6	67.06	6,943.8	1,718.7	446.3	316.0	130.31	3.425	
19,200.0	11,832.0	19,005.6	11,641.0	66.6	68.2	67.06	7,043.8	1,718.0	446.3	314.8	131.59	3.392	
19,300.0	11,832.0	19,105.6	11,641.0	67.3	68.9	67.06	7,143.8	1,717.3	446.3	313.5	132.88	3.359	
19,400.0	11,832.0	19,205.6	11,641.0	67.9	69.5	67.06	7,243.8	1,716.6	446.3	312.2	134.17	3.327	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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
19,500.0	11,832.0	19,305.6	11,641.0	68.5	70.2	67.06	7,343.8	1,715.9	446.3	310.9	135.47	3.295	
19,600.0	11,832.0	19,405.6	11,641.0	69.2	70.8	67.06	7,443.8	1,715.2	446.3	309.6	136.77	3.263	
19,700.0	11,832.0	19,505.6	11,641.0	69.8	71.5	67.06	7,543.8	1,714.5	446.3	308.3	138.08	3.233	
19,800.0	11,832.0	19,605.6	11,641.0	70.5	72.1	67.06	7,643.8	1,713.7	446.3	307.0	139.39	3.202	
19,900.0	11,832.0	19,705.6	11,641.0	71.1	72.8	67.06	7,743.8	1,713.0	446.3	305.6	140.70	3.172	
20,000.0	11,832.0	19,805.6	11,641.0	71.8	73.4	67.06	7,843.7	1,712.3	446.3	304.3	142.02	3.143	
20,100.0	11,832.0	19,905.6	11,641.0	72.4	74.1	67.06	7,943.7	1,711.6	446.3	303.0	143.34	3.114	
20,200.0	11,832.0	20,005.6	11,641.0	73.1	74.7	67.06	8,043.7	1,710.9	446.3	301.7	144.67	3.085	
20,300.0	11,832.0	20,105.6	11,641.0	73.7	75.4	67.06	8,143.7	1,710.2	446.3	300.3	146.00	3.057	
20,400.0	11,832.0	20,205.6	11,641.0	74.4	76.1	67.06	8,243.7	1,709.5	446.3	299.0	147.33	3.030	
20,500.0	11,832.0	20,305.6	11,641.0	75.0	76.7	67.06	8,343.7	1,708.8	446.3	297.7	148.66	3.002	
20,600.0	11,832.0	20,405.6	11,641.0	75.7	77.4	67.06	8,443.7	1,708.1	446.3	296.3	150.00	2.975	
20,700.0	11,832.0	20,505.6	11,641.0	76.4	78.1	67.06	8,543.7	1,707.4	446.3	295.0	151.35	2.949	
20,800.0	11,832.0	20,605.6	11,641.0	77.0	78.7	67.05	8,643.7	1,706.7	446.3	293.6	152.69	2.923	
20,900.0	11,832.0	20,705.6	11,641.0	77.7	79.4	67.05	8,743.7	1,705.9	446.3	292.3	154.04	2.897	
21,000.0	11,832.0	20,805.6	11,641.0	78.4	80.1	67.05	8,843.7	1,705.2	446.3	290.9	155.40	2.872	
21,100.0	11,832.0	20,905.6	11,641.0	79.0	80.8	67.05	8,943.7	1,704.5	446.3	289.6	156.75	2.847	
21,200.0	11,832.0	21,005.6	11,641.0	79.7	81.4	67.05	9,043.7	1,703.8	446.3	288.2	158.11	2.823	
21,300.0	11,832.0	21,105.6	11,641.0	80.4	82.1	67.05	9,143.7	1,703.1	446.3	286.9	159.47	2.799	
21,400.0	11,832.0	21,205.6	11,641.0	81.1	82.8	67.05	9,243.7	1,702.4	446.3	285.5	160.83	2.775	
21,500.0	11,832.0	21,305.6	11,641.0	81.7	83.5	67.05	9,343.7	1,701.7	446.3	284.1	162.20	2.752	
21,600.0	11,832.0	21,405.6	11,641.0	82.4	84.1	67.05	9,443.7	1,701.0	446.3	282.7	163.57	2.729	
21,700.0	11,832.0	21,505.6	11,641.0	83.1	84.8	67.05	9,543.7	1,700.3	446.3	281.4	164.94	2.706	
21,800.0	11,832.0	21,605.6	11,641.0	83.8	85.5	67.05	9,643.7	1,699.6	446.3	280.0	166.32	2.684	
21,900.0	11,832.0	21,705.6	11,641.0	84.5	86.2	67.05	9,743.7	1,698.9	446.3	278.6	167.69	2.662	
22,000.0	11,832.0	21,805.6	11,641.0	85.2	86.9	67.05	9,843.7	1,698.2	446.3	277.2	169.07	2.640	
22,100.0	11,832.0	21,905.6	11,641.0	85.8	87.6	67.05	9,943.7	1,697.4	446.3	275.9	170.45	2.618	
22,200.0	11,832.0	22,005.6	11,641.0	86.5	88.3	67.05	10,043.7	1,696.7	446.3	274.5	171.84	2.597	
22,278.7	11,832.0	22,084.3	11,641.0	87.1	88.8	67.05	10,122.4	1,696.2	446.3	273.4	172.93	2.581	
22,300.0	11,832.0	22,105.6	11,641.0	87.2	89.0	67.05	10,143.7	1,696.0	446.3	273.1	173.22	2.577	
22,328.7	11,832.0	22,134.3	11,641.0	87.4	89.2	67.05	10,172.4	1,695.8	446.3	272.7	173.62	2.571	
22,329.6	11,832.0	22,135.1	11,641.0	87.5	89.2	67.05	10,173.3	1,695.8	446.3	272.7	173.63	2.571 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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,300.0	7,171.1	7,310.9	7,194.1	31.1	30.6	-20.40	-278.0	2,185.6	989.3	929.4	59.91	16.512	
7,400.0	7,268.9	7,400.0	7,283.2	31.5	30.8	-20.82	-277.9	2,182.7	966.5	906.0	60.56	15.959	
7,499.3	7,366.0	7,476.9	7,360.1	32.0	31.0	-21.18	-277.8	2,181.3	945.3	884.2	61.14	15.461	
7,500.0	7,366.7	7,477.5	7,360.7	32.0	31.0	-21.18	-277.8	2,181.3	945.2	884.0	61.15	15.457	
7,600.0	7,464.7	7,564.5	7,447.7	32.5	31.2	-21.51	-277.8	2,180.9	926.1	864.5	61.62	15.030	
7,700.0	7,563.0	7,662.8	7,546.0	32.9	31.2	-21.86	-277.8	2,180.9	909.2	847.2	61.99	14.667	
7,800.0	7,661.6	7,761.5	7,644.6	33.4	31.2	-22.20	-277.8	2,180.9	893.8	831.5	62.35	14.335	
7,900.0	7,760.5	7,860.4	7,743.5	33.8	31.2	-22.51	-277.8	2,180.9	880.2	817.5	62.71	14.035	
8,000.0	7,859.7	7,959.5	7,842.7	34.3	31.2	-22.79	-277.8	2,180.9	868.1	805.1	63.07	13.765	
8,100.0	7,959.0	8,058.9	7,942.0	34.7	31.3	-23.04	-277.8	2,180.9	857.7	794.3	63.42	13.525	
8,200.0	8,058.6	8,158.4	8,041.6	35.1	31.3	-23.26	-277.8	2,180.9	848.9	785.1	63.76	13.314	
8,300.0	8,158.3	8,258.1	8,141.3	35.4	31.3	-23.44	-277.8	2,180.9	841.7	777.6	64.09	13.133	
8,400.0	8,258.1	8,357.9	8,241.1	35.8	31.3	-23.58	-277.8	2,180.9	836.1	771.7	64.41	12.981	
8,500.0	8,358.0	8,457.8	8,341.0	36.1	31.4	-23.69	-277.8	2,180.9	832.1	767.4	64.72	12.857	
8,600.0	8,458.0	8,557.8	8,441.0	36.4	31.4	-23.75	-277.8	2,180.9	829.7	764.7	65.00	12.764	
8,699.3	8,557.2	8,657.1	8,540.2	36.6	31.4	82.23	-277.8	2,180.9	828.9	763.8	65.16	12.722	
8,700.0	8,558.0	8,657.8	8,541.0	36.6	31.4	82.23	-277.8	2,180.9	828.9	763.8	65.16	12.722	
8,800.0	8,658.0	8,757.8	8,641.0	36.6	31.5	82.23	-277.8	2,180.9	828.9	763.7	65.20	12.713	
8,900.0	8,758.0	8,857.8	8,741.0	36.6	31.5	82.23	-277.8	2,180.9	828.9	763.7	65.25	12.705	
9,000.0	8,858.0	8,957.8	8,841.0	36.6	31.5	82.23	-277.8	2,180.9	828.9	763.7	65.29	12.696	
9,100.0	8,958.0	9,057.8	8,941.0	36.6	31.5	82.23	-277.8	2,180.9	828.9	763.6	65.34	12.687	
9,200.0	9,058.0	9,157.8	9,041.0	36.6	31.6	82.23	-277.8	2,180.9	828.9	763.6	65.38	12.678	
9,300.0	9,158.0	9,257.8	9,141.0	36.7	31.6	82.23	-277.8	2,180.9	828.9	763.5	65.43	12.669	
9,400.0	9,258.0	9,357.8	9,241.0	36.7	31.6	82.23	-277.8	2,180.9	828.9	763.5	65.48	12.660	
9,500.0	9,358.0	9,457.8	9,341.0	36.7	31.6	82.23	-277.8	2,180.9	828.9	763.4	65.52	12.651	
9,600.0	9,458.0	9,557.8	9,441.0	36.7	31.7	82.23	-277.8	2,180.9	828.9	763.4	65.57	12.642	
9,700.0	9,558.0	9,657.8	9,541.0	36.7	31.7	82.23	-277.8	2,180.9	828.9	763.3	65.62	12.633	
9,800.0	9,658.0	9,757.8	9,641.0	36.7	31.7	82.23	-277.8	2,180.9	828.9	763.3	65.66	12.624	
9,900.0	9,758.0	9,857.8	9,741.0	36.7	31.8	82.23	-277.8	2,180.9	828.9	763.2	65.71	12.615	
10,000.0	9,858.0	9,957.8	9,841.0	36.8	31.8	82.23	-277.8	2,180.9	828.9	763.2	65.76	12.605	
10,100.0	9,958.0	10,057.8	9,941.0	36.8	31.8	82.23	-277.8	2,180.9	828.9	763.1	65.81	12.596	
10,200.0	10,058.0	10,157.8	10,041.0	36.8	31.8	82.23	-277.8	2,180.9	828.9	763.1	65.86	12.587	
10,300.0	10,158.0	10,257.8	10,141.0	36.8	31.9	82.23	-277.8	2,180.9	828.9	763.0	65.91	12.577	
10,400.0	10,258.0	10,357.8	10,241.0	36.8	31.9	82.23	-277.8	2,180.9	828.9	763.0	65.96	12.568	
10,500.0	10,358.0	10,457.8	10,341.0	36.8	31.9	82.23	-277.8	2,180.9	828.9	762.9	66.01	12.558	
10,600.0	10,458.0	10,557.8	10,441.0	36.9	32.0	82.23	-277.8	2,180.9	828.9	762.9	66.06	12.548	
10,700.0	10,558.0	10,657.8	10,541.0	36.9	32.0	82.23	-277.8	2,180.9	828.9	762.8	66.11	12.539	
10,800.0	10,658.0	10,757.8	10,641.0	36.9	32.0	82.23	-277.8	2,180.9	828.9	762.8	66.16	12.529	
10,900.0	10,758.0	10,857.8	10,741.0	36.9	32.0	82.23	-277.8	2,180.9	828.9	762.7	66.21	12.519	
11,000.0	10,858.0	10,957.8	10,841.0	36.9	32.1	82.23	-277.8	2,180.9	828.9	762.7	66.27	12.509	
11,100.0	10,958.0	11,057.8	10,941.0	37.0	32.1	82.23	-277.8	2,180.9	828.9	762.6	66.32	12.499	
11,200.0	11,058.0	11,157.8	11,041.0	37.0	32.1	82.23	-277.8	2,180.9	828.9	762.6	66.37	12.489	
11,300.0	11,158.0	11,257.8	11,141.0	37.0	32.2	82.23	-277.8	2,180.9	828.9	762.5	66.42	12.480	
11,400.0	11,258.0	11,357.8	11,241.0	37.0	32.2	82.23	-277.8	2,180.9	828.9	762.5	66.48	12.469	
11,496.6	11,354.5	11,454.3	11,337.5	37.0	32.2	82.23	-277.8	2,180.9	828.9	762.4	66.52	12.461	
11,500.0	11,358.0	11,457.3	11,340.5	37.0	32.2	82.64	-277.8	2,180.9	828.9	762.4	66.52	12.461	
11,525.0	11,382.9	11,477.8	11,361.0	37.0	32.2	82.65	-277.2	2,180.9	828.9	762.4	66.54	12.457	
11,550.0	11,407.8	11,500.0	11,383.1	37.0	32.2	82.68	-275.7	2,180.9	828.9	762.3	66.56	12.453	
11,575.0	11,432.6	11,518.7	11,401.7	37.0	32.2	82.73	-273.6	2,180.9	828.8	762.2	66.59	12.446	
11,600.0	11,457.1	11,539.2	11,422.0	37.0	32.2	82.79	-270.4	2,180.8	828.7	762.0	66.62	12.439	
11,625.0	11,481.4	11,559.7	11,442.1	37.0	32.2	82.87	-266.4	2,180.8	828.5	761.9	66.66	12.430	
11,650.0	11,505.3	11,580.3	11,462.1	37.0	32.2	82.97	-261.5	2,180.8	828.4	761.7	66.70	12.419	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 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	
11,675.0	11,528.8	11,600.0	11,481.0	37.0	32.2	83.08	-256.0	2,180.7	828.2	761.4	66.75	12.407	
11,700.0	11,551.9	11,621.5	11,501.4	37.0	32.2	83.22	-249.1	2,180.7	827.9	761.1	66.80	12.395	
11,725.0	11,574.3	11,642.3	11,520.7	37.0	32.2	83.36	-241.7	2,180.6	827.7	760.8	66.85	12.381	
11,750.0	11,596.2	11,663.0	11,539.7	37.0	32.2	83.52	-233.3	2,180.6	827.4	760.5	66.91	12.366	
11,775.0	11,617.4	11,683.9	11,558.4	37.0	32.2	83.70	-224.1	2,180.5	827.2	760.2	66.97	12.351	
11,800.0	11,637.9	11,704.8	11,576.8	37.1	32.2	83.89	-214.1	2,180.4	826.9	759.8	67.04	12.334	
11,825.0	11,657.7	11,725.0	11,594.1	37.1	32.2	84.09	-203.6	2,180.4	826.6	759.4	67.11	12.316	
11,850.0	11,676.6	11,746.9	11,612.3	37.1	32.2	84.32	-191.5	2,180.3	826.2	759.1	67.17	12.300	
11,875.0	11,694.6	11,768.1	11,629.4	37.1	32.2	84.55	-179.0	2,180.2	825.9	758.7	67.24	12.282	
11,900.0	11,711.6	11,789.3	11,646.0	37.1	32.3	84.80	-165.6	2,180.1	825.6	758.3	67.31	12.264	
11,925.0	11,727.7	11,810.8	11,662.0	37.1	32.3	85.06	-151.5	2,180.0	825.2	757.9	67.39	12.246	
11,950.0	11,742.8	11,832.3	11,677.5	37.1	32.3	85.33	-136.5	2,179.9	824.9	757.5	67.46	12.228	
11,975.0	11,756.8	11,854.0	11,692.4	37.1	32.3	85.61	-120.8	2,179.8	824.6	757.1	67.53	12.211	
12,000.0	11,769.7	11,875.0	11,706.2	37.1	32.3	85.90	-104.9	2,179.7	824.3	756.7	67.61	12.192	
12,025.0	11,781.5	11,897.7	11,720.3	37.1	32.3	86.21	-87.1	2,179.5	824.0	756.3	67.67	12.176	
12,050.0	11,792.1	11,919.9	11,733.2	37.1	32.3	86.53	-69.1	2,179.4	823.7	755.9	67.74	12.160	
12,075.0	11,801.5	11,942.2	11,745.3	37.1	32.3	86.85	-50.4	2,179.3	823.4	755.6	67.80	12.144	
12,100.0	11,809.7	11,964.6	11,756.6	37.1	32.3	87.19	-30.9	2,179.1	823.1	755.3	67.86	12.129	
12,125.0	11,816.6	11,987.3	11,767.1	37.1	32.3	87.53	-10.9	2,179.0	822.9	755.0	67.92	12.116	
12,150.0	11,822.3	12,010.2	11,776.7	37.1	32.3	87.87	9.9	2,178.8	822.7	754.7	67.98	12.103	
12,175.0	11,826.6	12,033.3	11,785.3	37.2	32.3	88.23	31.3	2,178.7	822.5	754.5	68.03	12.091	
12,200.0	11,829.7	12,056.6	11,793.0	37.2	32.3	88.59	53.3	2,178.5	822.4	754.3	68.07	12.080	
12,225.0	11,831.5	12,080.1	11,799.7	37.2	32.4	88.95	75.9	2,178.4	822.2	754.1	68.12	12.071	
12,246.6	11,832.0	12,100.6	11,804.6	37.2	32.4	89.27	95.8	2,178.2	822.2	754.0	68.15	12.064	
12,300.0	11,832.0	12,152.6	11,813.1	37.2	32.4	89.87	147.1	2,177.9	822.1	753.9	68.22	12.051	
12,340.9	11,832.0	12,193.4	11,815.8	37.3	32.4	90.06	187.7	2,177.6	822.1	753.8	68.28	12.041	
12,400.0	11,832.0	12,252.5	11,816.0	37.3	32.5	90.07	246.9	2,177.2	822.1	753.7	68.37	12.024	
12,500.0	11,832.0	12,352.5	11,816.0	37.4	32.6	90.07	346.8	2,176.5	822.1	753.5	68.56	11.991	
12,600.0	11,832.0	12,452.5	11,816.0	37.5	32.7	90.07	446.8	2,175.7	822.1	753.3	68.79	11.952	
12,700.0	11,832.0	12,552.5	11,816.0	37.7	32.9	90.07	546.8	2,175.0	822.1	753.1	69.04	11.907	
12,800.0	11,832.0	12,652.5	11,816.0	37.8	33.0	90.07	646.8	2,174.3	822.1	752.8	69.33	11.858	
12,900.0	11,832.0	12,752.5	11,816.0	38.0	33.2	90.07	746.8	2,173.6	822.1	752.4	69.65	11.803	
13,000.0	11,832.0	12,852.5	11,816.0	38.1	33.4	90.07	846.8	2,172.9	822.1	752.1	70.00	11.744	
13,100.0	11,832.0	12,952.5	11,816.0	38.3	33.6	90.07	946.8	2,172.2	822.1	751.7	70.38	11.680	
13,200.0	11,832.0	13,052.5	11,816.0	38.5	33.9	90.07	1,046.8	2,171.5	822.1	751.3	70.79	11.612	
13,300.0	11,832.0	13,152.5	11,816.0	38.7	34.1	90.07	1,146.8	2,170.8	822.1	750.9	71.24	11.540	
13,400.0	11,832.0	13,252.5	11,816.0	39.0	34.4	90.07	1,246.8	2,170.1	822.1	750.4	71.71	11.465	
13,500.0	11,832.0	13,352.5	11,816.0	39.2	34.7	90.07	1,346.8	2,169.4	822.1	749.9	72.21	11.385	
13,600.0	11,832.0	13,452.5	11,816.0	39.4	35.0	90.07	1,446.8	2,168.7	822.1	749.4	72.73	11.303	
13,700.0	11,832.0	13,552.5	11,816.0	39.7	35.3	90.07	1,546.8	2,168.0	822.1	748.8	73.29	11.217	
13,800.0	11,832.0	13,652.5	11,816.0	40.0	35.6	90.07	1,646.8	2,167.2	822.1	748.2	73.87	11.129	
13,900.0	11,832.0	13,752.5	11,816.0	40.2	35.9	90.07	1,746.8	2,166.5	822.1	747.6	74.48	11.038	
14,000.0	11,832.0	13,852.5	11,816.0	40.5	36.3	90.07	1,846.8	2,165.8	822.1	747.0	75.11	10.945	
14,100.0	11,832.0	13,952.5	11,816.0	40.8	36.6	90.07	1,946.8	2,165.1	822.1	746.3	75.77	10.850	
14,200.0	11,832.0	14,052.5	11,816.0	41.2	37.0	90.07	2,046.8	2,164.4	822.1	745.6	76.45	10.753	
14,300.0	11,832.0	14,152.5	11,816.0	41.5	37.4	90.07	2,146.8	2,163.7	822.1	744.9	77.16	10.655	
14,400.0	11,832.0	14,252.5	11,816.0	41.8	37.8	90.07	2,246.8	2,163.0	822.1	744.2	77.88	10.555	
14,500.0	11,832.0	14,352.5	11,816.0	42.2	38.2	90.07	2,346.8	2,162.3	822.1	743.4	78.63	10.454	
14,600.0	11,832.0	14,452.5	11,816.0	42.5	38.6	90.07	2,446.8	2,161.6	822.1	742.7	79.41	10.353	
14,700.0	11,832.0	14,552.5	11,816.0	42.9	39.1	90.07	2,546.8	2,160.9	822.1	741.9	80.20	10.250	
14,800.0	11,832.0	14,652.5	11,816.0	43.3	39.5	90.07	2,646.8	2,160.2	822.1	741.1	81.01	10.147	
14,900.0	11,832.0	14,752.5	11,816.0	43.7	40.0	90.07	2,746.8	2,159.5	822.1	740.2	81.85	10.044	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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 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)			
15,000.0	11,832.0	14,852.5	11,816.0	44.1	40.4	90.07	2,846.8	2,158.7	822.1	739.4	82.70	9.940	
15,100.0	11,832.0	14,952.5	11,816.0	44.5	40.9	90.07	2,946.8	2,158.0	822.1	738.5	83.57	9.837	
15,200.0	11,832.0	15,052.5	11,816.0	44.9	41.4	90.07	3,046.8	2,157.3	822.1	737.6	84.46	9.733	
15,300.0	11,832.0	15,152.5	11,816.0	45.3	41.8	90.07	3,146.8	2,156.6	822.1	736.7	85.37	9.630	
15,400.0	11,832.0	15,252.5	11,816.0	45.7	42.3	90.07	3,246.8	2,155.9	822.1	735.8	86.29	9.527	
15,500.0	11,832.0	15,352.5	11,816.0	46.2	42.8	90.07	3,346.8	2,155.2	822.1	734.8	87.23	9.424	
15,600.0	11,832.0	15,452.5	11,816.0	46.6	43.4	90.07	3,446.8	2,154.5	822.1	733.9	88.18	9.322	
15,700.0	11,832.0	15,552.5	11,816.0	47.1	43.9	90.07	3,546.8	2,153.8	822.1	732.9	89.16	9.221	
15,800.0	11,832.0	15,652.5	11,816.0	47.5	44.4	90.07	3,646.8	2,153.1	822.1	731.9	90.14	9.120	
15,900.0	11,832.0	15,752.5	11,816.0	48.0	44.9	90.07	3,746.8	2,152.4	822.1	730.9	91.14	9.020	
16,000.0	11,832.0	15,852.5	11,816.0	48.5	45.5	90.07	3,846.8	2,151.7	822.1	729.9	92.15	8.920	
16,100.0	11,832.0	15,952.5	11,816.0	49.0	46.0	90.07	3,946.8	2,150.9	822.1	728.9	93.18	8.822	
16,200.0	11,832.0	16,052.5	11,816.0	49.5	46.6	90.07	4,046.8	2,150.2	822.1	727.8	94.22	8.725	
16,300.0	11,832.0	16,152.5	11,816.0	50.0	47.1	90.07	4,146.8	2,149.5	822.1	726.8	95.27	8.628	
16,400.0	11,832.0	16,252.5	11,816.0	50.5	47.7	90.07	4,246.8	2,148.8	822.1	725.7	96.34	8.533	
16,500.0	11,832.0	16,352.5	11,816.0	51.0	48.2	90.07	4,346.7	2,148.1	822.1	724.6	97.42	8.439	
16,600.0	11,832.0	16,452.5	11,816.0	51.5	48.8	90.07	4,446.7	2,147.4	822.1	723.6	98.50	8.345	
16,700.0	11,832.0	16,552.5	11,816.0	52.0	49.4	90.07	4,546.7	2,146.7	822.1	722.5	99.60	8.253	
16,800.0	11,832.0	16,652.5	11,816.0	52.6	50.0	90.07	4,646.7	2,146.0	822.1	721.3	100.71	8.162	
16,900.0	11,832.0	16,752.5	11,816.0	53.1	50.6	90.07	4,746.7	2,145.3	822.1	720.2	101.83	8.073	
17,000.0	11,832.0	16,852.5	11,816.0	53.6	51.2	90.07	4,846.7	2,144.6	822.1	719.1	102.96	7.984	
17,100.0	11,832.0	16,952.5	11,816.0	54.2	51.8	90.07	4,946.7	2,143.9	822.1	718.0	104.10	7.897	
17,200.0	11,832.0	17,052.5	11,816.0	54.7	52.4	90.07	5,046.7	2,143.2	822.0	716.8	105.25	7.811	
17,300.0	11,832.0	17,152.5	11,816.0	55.3	53.0	90.07	5,146.7	2,142.4	822.0	715.6	106.41	7.726	
17,400.0	11,832.0	17,252.5	11,816.0	55.8	53.6	90.07	5,246.7	2,141.7	822.0	714.5	107.57	7.642	
17,500.0	11,832.0	17,352.5	11,816.0	56.4	54.2	90.07	5,346.7	2,141.0	822.0	713.3	108.75	7.559	
17,600.0	11,832.0	17,452.5	11,816.0	57.0	54.8	90.07	5,446.7	2,140.3	822.0	712.1	109.93	7.478	
17,700.0	11,832.0	17,552.5	11,816.0	57.6	55.4	90.07	5,546.7	2,139.6	822.0	710.9	111.12	7.398	
17,800.0	11,832.0	17,652.5	11,816.0	58.1	56.0	90.07	5,646.7	2,138.9	822.0	709.7	112.32	7.319	
17,900.0	11,832.0	17,752.5	11,816.0	58.7	56.7	90.07	5,746.7	2,138.2	822.0	708.5	113.52	7.241	
18,000.0	11,832.0	17,852.5	11,816.0	59.3	57.3	90.07	5,846.7	2,137.5	822.0	707.3	114.73	7.165	
18,100.0	11,832.0	17,952.5	11,816.0	59.9	57.9	90.07	5,946.7	2,136.8	822.0	706.1	115.95	7.089	
18,200.0	11,832.0	18,052.5	11,816.0	60.5	58.6	90.07	6,046.7	2,136.1	822.0	704.9	117.18	7.015	
18,300.0	11,832.0	18,152.5	11,816.0	61.1	59.2	90.07	6,146.7	2,135.4	822.0	703.6	118.41	6.942	
18,400.0	11,832.0	18,252.5	11,816.0	61.7	59.9	90.07	6,246.7	2,134.6	822.0	702.4	119.65	6.870	
18,500.0	11,832.0	18,352.5	11,816.0	62.3	60.5	90.07	6,346.7	2,133.9	822.0	701.1	120.90	6.799	
18,600.0	11,832.0	18,452.5	11,816.0	62.9	61.1	90.07	6,446.7	2,133.2	822.0	699.9	122.15	6.730	
18,700.0	11,832.0	18,552.5	11,816.0	63.5	61.8	90.07	6,546.7	2,132.5	822.0	698.6	123.40	6.661	
18,800.0	11,832.0	18,652.5	11,816.0	64.1	62.5	90.07	6,646.7	2,131.8	822.0	697.4	124.67	6.594	
18,900.0	11,832.0	18,752.5	11,816.0	64.8	63.1	90.07	6,746.7	2,131.1	822.0	696.1	125.93	6.527	
19,000.0	11,832.0	18,852.5	11,816.0	65.4	63.8	90.07	6,846.7	2,130.4	822.0	694.8	127.21	6.462	
19,100.0	11,832.0	18,952.5	11,816.0	66.0	64.4	90.07	6,946.7	2,129.7	822.0	693.5	128.48	6.398	
19,200.0	11,832.0	19,052.5	11,816.0	66.6	65.1	90.07	7,046.7	2,129.0	822.0	692.3	129.77	6.335	
19,300.0	11,832.0	19,152.5	11,816.0	67.3	65.8	90.07	7,146.7	2,128.3	822.0	691.0	131.05	6.272	
19,400.0	11,832.0	19,252.5	11,816.0	67.9	66.4	90.07	7,246.7	2,127.6	822.0	689.7	132.35	6.211	
19,500.0	11,832.0	19,352.5	11,816.0	68.5	67.1	90.07	7,346.7	2,126.9	822.0	688.4	133.64	6.151	
19,600.0	11,832.0	19,452.5	11,816.0	69.2	67.8	90.07	7,446.7	2,126.1	822.0	687.1	134.94	6.092	
19,700.0	11,832.0	19,552.5	11,816.0	69.8	68.4	90.07	7,546.7	2,125.4	822.0	685.8	136.25	6.033	
19,800.0	11,832.0	19,652.5	11,816.0	70.5	69.1	90.07	7,646.7	2,124.7	822.0	684.5	137.56	5.976	
19,900.0	11,832.0	19,752.5	11,816.0	71.1	69.8	90.07	7,746.7	2,124.0	822.0	683.1	138.87	5.919	
20,000.0	11,832.0	19,852.5	11,816.0	71.8	70.5	90.07	7,846.7	2,123.3	822.0	681.8	140.19	5.864	
20,100.0	11,832.0	19,952.5	11,816.0	72.4	71.1	90.07	7,946.7	2,122.6	822.0	680.5	141.51	5.809	

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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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		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	
20,200.0	11,832.0	20,052.5	11,816.0	73.1	71.8	90.07	8,046.7	2,121.9	822.0	679.2	142.84	5.755	
20,300.0	11,832.0	20,152.5	11,816.0	73.7	72.5	90.07	8,146.7	2,121.2	822.0	677.9	144.16	5.702	
20,400.0	11,832.0	20,252.5	11,816.0	74.4	73.2	90.07	8,246.6	2,120.5	822.0	676.5	145.50	5.650	
20,500.0	11,832.0	20,352.5	11,816.0	75.0	73.9	90.07	8,346.6	2,119.8	822.0	675.2	146.83	5.598	
20,600.0	11,832.0	20,452.5	11,816.0	75.7	74.6	90.07	8,446.6	2,119.1	822.0	673.8	148.17	5.548	
20,700.0	11,832.0	20,552.5	11,816.0	76.4	75.3	90.07	8,546.6	2,118.4	822.0	672.5	149.51	5.498	
20,800.0	11,832.0	20,652.5	11,816.0	77.0	75.9	90.07	8,646.6	2,117.6	822.0	671.2	150.86	5.449	
20,900.0	11,832.0	20,752.5	11,816.0	77.7	76.6	90.07	8,746.6	2,116.9	822.0	669.8	152.20	5.401	
21,000.0	11,832.0	20,852.5	11,816.0	78.4	77.3	90.07	8,846.6	2,116.2	822.0	668.5	153.56	5.353	
21,100.0	11,832.0	20,952.5	11,816.0	79.0	78.0	90.07	8,946.6	2,115.5	822.0	667.1	154.91	5.306	
21,200.0	11,832.0	21,052.5	11,816.0	79.7	78.7	90.07	9,046.6	2,114.8	822.0	665.7	156.27	5.260	
21,300.0	11,832.0	21,152.5	11,816.0	80.4	79.4	90.07	9,146.6	2,114.1	822.0	664.4	157.62	5.215	
21,400.0	11,832.0	21,252.5	11,816.0	81.1	80.1	90.07	9,246.6	2,113.4	822.0	663.0	158.99	5.170	
21,500.0	11,832.0	21,352.5	11,816.0	81.7	80.8	90.07	9,346.6	2,112.7	822.0	661.7	160.35	5.126	
21,600.0	11,832.0	21,452.5	11,816.0	82.4	81.5	90.07	9,446.6	2,112.0	822.0	660.3	161.72	5.083	
21,700.0	11,832.0	21,552.5	11,816.0	83.1	82.2	90.07	9,546.6	2,111.3	822.0	658.9	163.09	5.040	
21,800.0	11,832.0	21,652.5	11,816.0	83.8	82.9	90.07	9,646.6	2,110.6	822.0	657.5	164.46	4.998	
21,900.0	11,832.0	21,752.5	11,816.0	84.5	83.6	90.07	9,746.6	2,109.8	822.0	656.2	165.83	4.957	
22,000.0	11,832.0	21,852.5	11,816.0	85.2	84.3	90.07	9,846.6	2,109.1	822.0	654.8	167.21	4.916	
22,100.0	11,832.0	21,952.5	11,816.0	85.8	85.0	90.07	9,946.6	2,108.4	822.0	653.4	168.59	4.876	
22,200.0	11,832.0	22,052.5	11,816.0	86.5	85.7	90.07	10,046.6	2,107.7	822.0	652.0	169.97	4.836	
22,278.7	11,832.0	22,131.3	11,816.0	87.1	86.3	90.07	10,125.3	2,107.2	822.0	650.9	171.06	4.805	
22,300.0	11,832.0	22,152.5	11,816.0	87.2	86.5	90.07	10,146.6	2,107.0	822.0	650.6	171.35	4.797	
22,328.7	11,832.0	22,181.3	11,816.0	87.4	86.7	90.07	10,175.3	2,106.8	822.0	650.2	171.74	4.786	
22,329.6	11,832.0	22,182.1	11,816.0	87.5	86.7	90.07	10,176.2	2,106.8	822.0	650.2	171.75	4.786	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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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=30ft @ 3210.0usft

Offset Depths are relative to Offset Datum

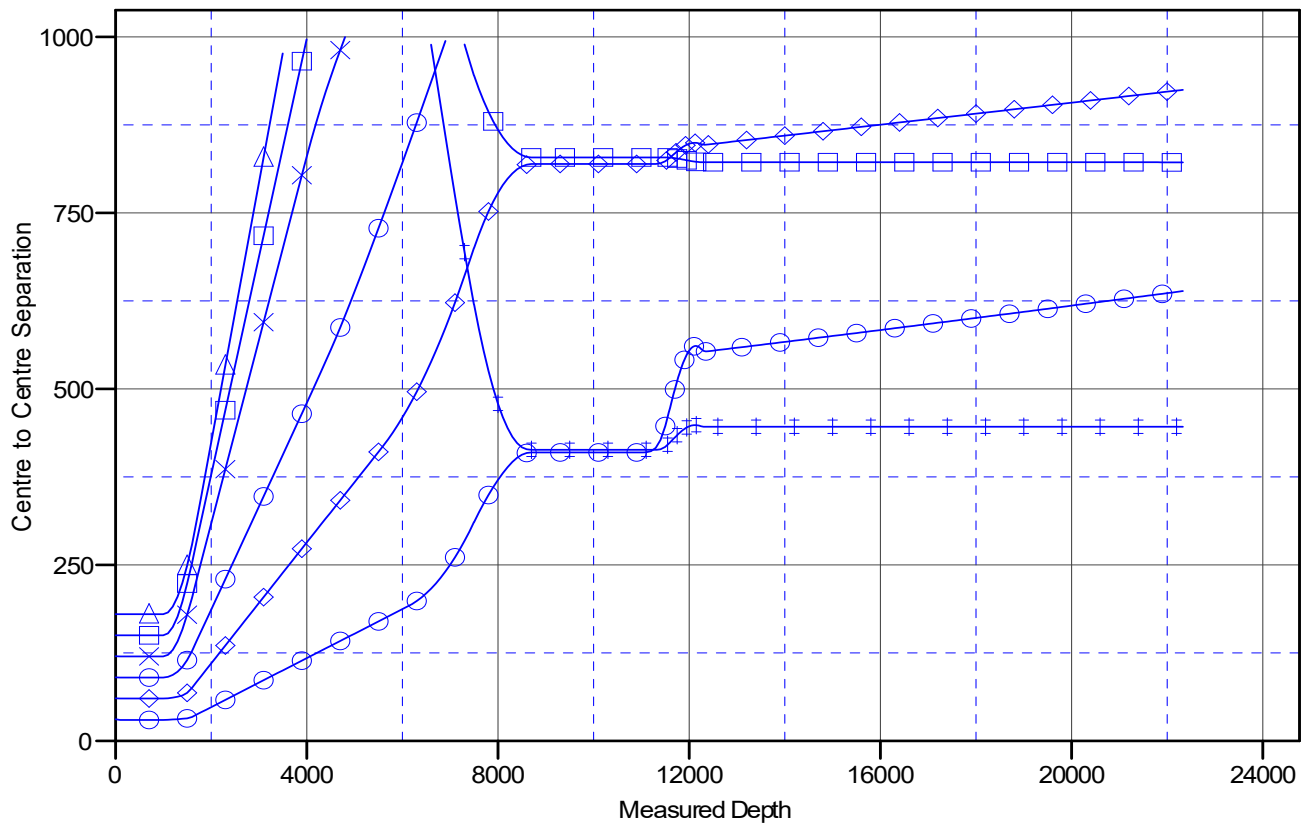
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #707H

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

Grid Convergence at Surface is: 0.32°

Ladder Plot



LEGEND

	ZIA HILLS UNIT 2431 WC #709H OWB, PWP1 V0		ZIA HILLS UNIT 2431 WC #705H OWB, PWP0 V0		ZIA HILLS UNIT 2431 WC #702H OWB, PWP0 V0
	ZIA HILLS UNIT 2431 WC #704H OWB, PWP0 V0		ZIA HILLS UNIT 2431 WC #708H OWB, PWP1 V0		ZIA HILLS UNIT 2431 WC #706H OWB, PWP0 V0
	ZIA HILLS UNIT 2431 WC #701H OWB, PWP0 V0		ZIA HILLS UNIT 2431 WC #703H OWB, PWP0 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 #707H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30ft @ 3210.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=30ft @ 3210.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #707H	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=30ft @ 3210.0usft

Offset Depths are relative to Offset Datum

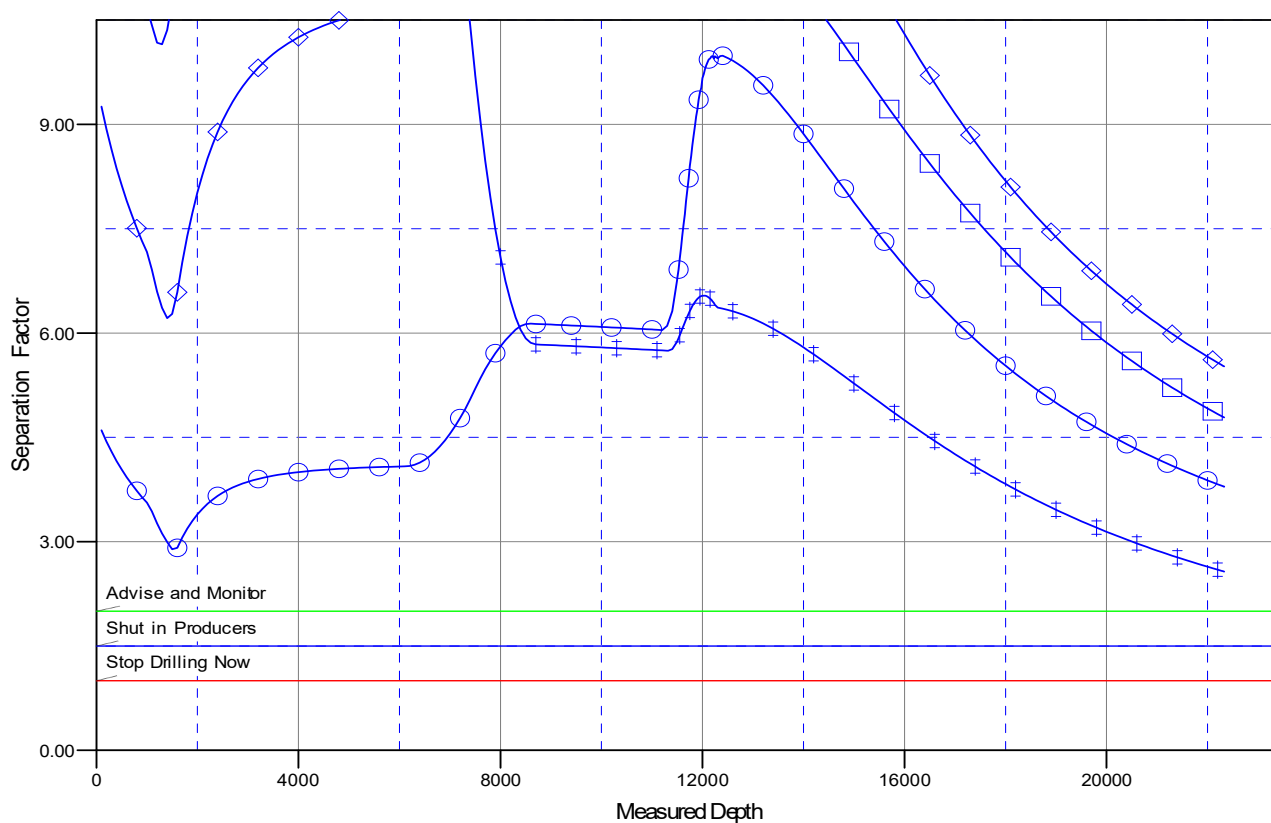
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #707H

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

Grid Convergence at Surface is: 0.32°

Separation Factor Plot



LEGEND

	ZIA HILLS UNIT 2431 WC #709H OWB, PWP1 V0		ZIA HILLS UNIT 2431 WC #705H OWB, PWP0 V0		ZIA HILLS UNIT 2431 WC #702H OWB, PWP0 V0
	ZIA HILLS UNIT 2431 WC #704H OWB, PWP0 V0		ZIA HILLS UNIT 2431 WC #708H OWB, PWP1 V0		ZIA HILLS UNIT 2431 WC #706H OWB, PWP0 V0
	ZIA HILLS UNIT 2431 WC #701H OWB, PWP0 V0		ZIA HILLS UNIT 2431 WC #703H OWB, PWP0 V0		

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

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 707H
SURFACE HOLE FOOTAGE:	445'/S & 1490'/W
BOTTOM HOLE FOOTAGE:	50'/N & 2467'/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 **1491** 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 11/1/2023

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 288330

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 288330
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	12/8/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	12/8/2023
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	12/8/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	12/8/2023
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	12/8/2023
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	12/8/2023