

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

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

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30-015-54508
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
13. State		
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Additional Operator Remarks

Location of Well

0. SHL: SESE / 60 FSL / 475 FEL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.0211449 / LONG: -103.7245501 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 100 FSL / 1645 FEL / TWSP: 26S / RANGE: 31E / SECTION: 24 / LAT: 32.0212293 / LONG: -103.7283255 (TVD: 11663 feet, MD: 11812 feet)

BHL: NWNE / 50 FNL / 1645 FEL / TWSP: 26S / RANGE: 31E / SECTION: 13 / LAT: 32.050073 / LONG: -103.7283839 (TVD: 11816 feet, MD: 22183 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- 54508	² Pool Code 98081	³ Pool Name Zia Hills; Wolfcamp
⁴ Property Code 335043	⁵ Property Name ZIA HILLS UNIT 2431 WC	⁶ Well Number 709H
⁷ OGRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 3,167'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	24	26-S	31-E		60'	SOUTH	475'	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	13	26-S	31-E		50'	NORTH	1,645'	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
60' FSL & 475' FEL
NEW MEXICO EAST-NAD 83
NORTH: 371,962.90'
EAST: 730,011.27'
LAT: 32.02114496
LONG: 103.72455015

FIRST TAKE POINT
100' FSL & 1,645' FEL
NEW MEXICO EAST-NAD 83
NORTH: 371,987.03'
EAST: 728,841.02'
LAT: 32.02122935
LONG: 103.72832551

LAST TAKE POINT
100' FNL & 1,645' FEL
NEW MEXICO EAST-NAD 83
NORTH: 382,429.65'
EAST: 728,764.45'
LAT: 32.04993557
LONG: 103.72838384

BOTTOM HOLE LOCATION
50' FNL & 1,645' FEL
NEW MEXICO EAST-NAD 83
NORTH: 382,479.65'
EAST: 728,764.15'
LAT: 32.05007302
LONG: 103.72838390

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

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description Effective May 25, 2021

I. Operator: ConocoPhillips Company

OGRID: 217817

Date: 03/20/2023

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Zia Hills Unit 2431 WC 707H	30-015-	N-24-26S-31E	445 FSL & 1490 FWL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 708H	30-015-	P-24-26S-31E	30 FSL & 475 FEL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 709H	30-015-	P-24-26S-31E	60 FSL & 475 FEL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 710H	30-015-	P-24-26S-31E	90 FSL & 475 FWL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 711H	30-015-	P-24-26S-31E	120 FSL & 475 FEL	± 818	± 3209	± 1907
Zia Hills Unit 2431 WC 712H	30-015-	P-24-26S-31E	150 FSL & 475 FEL	± 818	± 3209	± 1907

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

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

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

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

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

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

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

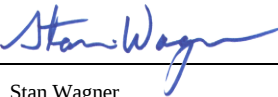
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Stan Wagner
Title: Regulatory Advisor
E-mail Address: stan.s.wagner@conocophillips.com
Date: 03/20/2023
Phone: 432-253-9685
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

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

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

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

C. Completion Operations

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

D. Venting and flaring during production operations

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

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

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

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

F. Measurement of vented and flared natural gas.

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

VIII. Best Management Practices

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

ConocoPhillips Company - Zia Hills Unit 2431 WC #709H

1. Geologic Formations

TVD of target	11,816' EOL	Pilot hole depth	NA
MD at TD:	22,183'	Deepest expected fresh water:	250'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	988	Water	
Top of Salt	1544	Salt	
Base of Salt	3989	Salt	
Lamar	4203	Salt Water	
Bell Canyon	4245	Salt Water	
Cherry Canyon	5120	Oil/Gas	
Brushy Canyon	6554	Oil/Gas	
Bone Spring (BSGL)	8180	Oil/Gas	
BS1S	9214	Oil/Gas	
BS2S	9894	Oil/Gas	
BS3C	10368	Oil/Gas	
BS3S	11066	Oil/Gas	
WFMP	11421	Oil/Gas	
WFMP A	11655	Oil/Gas	
WFMP B	11931	Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	1494	10.75"	45.5	J55	BTC	3.06	1.08	10.52	11.71
9.875"	0	8500	7.625"	29.7	L80-ICY	TXP BTC	1.42	1.13	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	22,183	5.5"	23	P110-CY	W441	1.89	2.24	2.68	2.44
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 #709H

	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 #709H**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
	870	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 #709H

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 #709H

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 #709H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7685 psi at 11816' TVD
Abnormal Temperature	NO 175 Deg. F.

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

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

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N H₂S is present

Y H₂S Plan attached

8. Other Facets of Operation

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

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

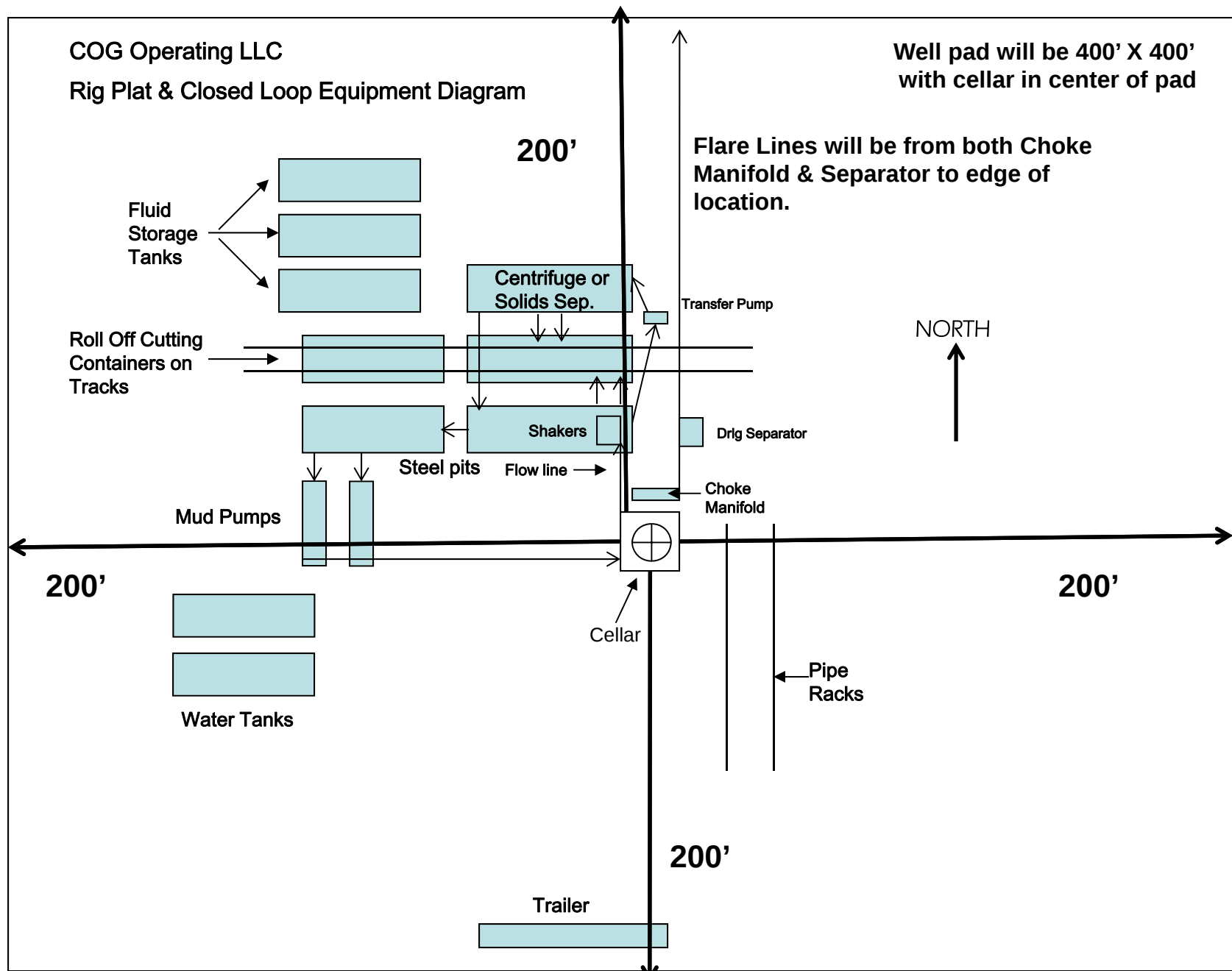


Exhibit 1

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

DELAWARE BASIN EAST

**BULLDOG PROSPECT (NM-E)
ZIA HILLS UNIT 2431 PROJECT
ZIA HILLS UNIT 2431 WC #709H**

**OWB
PWP1**

Anticollision Report

15 March, 2023

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program		Date	3/15/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	1,000.0	PWP1 (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp-Initiald Cont. rev.5	
1,000.0	11,455.3	PWP1 (OWB)	r.5 MWD+IFR1	OWSG MWD + IFR1 rev.5	
11,455.3	22,183.2	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 1932 PROJECT						
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	645.3	625.0	413.9	389.1	16.689	CC
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	1,200.0	1,175.7	417.0	371.8	9.222	ES
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	4,300.0	4,211.1	878.2	706.7	5.122	SF
SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AW	22,183.2	11,618.2	806.0	686.2	6.728	CC, ES, SF
ZIA HILLS UNIT 2431 PROJECT						
GOLDEN SPUR 36 COM W1 #2H - OWB - AWP	11,750.0	19,013.0	885.4	771.6	7.779	SF
GOLDEN SPUR 36 COM W1 #2H - OWB - AWP	11,775.0	19,013.0	884.2	770.6	7.788	ES
GOLDEN SPUR 36 COM W1 #2H - OWB - AWP	11,787.4	19,013.0	884.0	770.7	7.799	CC
HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AW	4,400.0	4,228.0	696.6	522.3	3.996	ES, SF
HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AW	4,425.6	4,228.0	696.1	522.7	4.013	CC
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	2,460.4	2,423.4	604.5	556.1	12.506	CC
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	2,900.0	2,860.0	611.1	551.1	10.170	ES
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	4,300.0	4,223.3	714.5	610.7	6.881	SF
ZIA HILLS UNIT 2431 WC #707H - OWB - PWP1	22,181.3	22,328.8	822.0	650.2	4.786	CC
ZIA HILLS UNIT 2431 WC #707H - OWB - PWP1	22,183.2	22,329.6	822.0	650.2	4.786	ES, SF
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	1,000.0	1,000.0	30.0	21.3	3.440	CC
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	1,300.0	1,300.1	30.5	21.0	3.187	ES
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	22,183.2	22,135.2	446.7	272.0	2.556	SF
ZIA HILLS UNIT 2431 WC #710H - OWB - PWP1	1,000.0	1,000.0	30.0	21.3	3.440	CC
ZIA HILLS UNIT 2431 WC #710H - OWB - PWP1	1,300.0	1,299.7	30.5	21.0	3.186	ES
ZIA HILLS UNIT 2431 WC #710H - OWB - PWP1	22,183.2	21,912.0	446.6	277.8	2.645	SF
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	1,000.0	1,000.0	60.0	51.3	6.880	CC
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	1,100.0	1,099.7	60.1	51.2	6.736	ES
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	22,183.2	22,049.3	822.0	654.7	4.913	SF
ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1	1,000.0	1,000.0	90.0	81.3	10.320	CC, ES
ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1	1,200.0	1,198.0	91.8	82.5	9.967	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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

TD Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
ZIA HILLS UNIT 1932 PROJECT						
HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AW	22,183.2	4,258.0				Out of Range @TD
SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AW	22,183.2	11,618.2	806.0	686.2	6.728	CC, ES, SF
ZIA HILLS UNIT 2431 PROJECT						
GOLDEN SPUR 36 COM W1 #2H - OWB - AWP	22,183.2	19,013.0				Out of Range @TD
HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AW	22,183.2	4,228.0				Out of Range @TD
R T WILSON FEDERAL #2 (P&A) - OWB - AWP	22,183.2	4,251.0				Out of Range @TD
ZIA HILLS UNIT 2431 WC #707H - OWB - PWP1	22,183.2	22,329.6	822.0	650.2	4.786	ES, SF
ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1	22,183.2	22,135.2	446.7	272.0	2.556	SF
ZIA HILLS UNIT 2431 WC #710H - OWB - PWP1	22,183.2	21,912.0	446.6	277.8	2.645	SF
ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1	22,183.2	22,049.3	822.0	654.7	4.913	SF
ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1	22,183.2	21,864.1				Out of Range @TD

Offset Design: ZIA HILLS UNIT 1932 PROJECT - HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AWP													Offset Site Error: 0.0 usft
Survey Program: 250-INC-ONLY													Offset Well Error: 10.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	10.0	159.11	-388.1	148.1	415.9				
100.0	100.0	79.4	79.4	3.1	10.0	159.11	-388.1	148.1	415.4	400.1	15.27	27.204	
200.0	200.0	179.4	179.4	3.2	10.2	159.11	-388.1	148.1	415.4	399.9	15.50	26.808	
300.0	300.0	279.5	279.4	3.3	10.6	159.11	-388.1	148.1	415.4	399.3	16.08	25.840	
395.5	395.5	375.0	374.9	3.4	11.8	159.08	-387.6	148.1	414.9	397.2	17.74	23.384	
400.0	400.0	379.3	379.3	3.4	11.8	159.08	-387.6	148.1	414.9	397.1	17.84	23.261	
500.0	500.0	476.7	476.7	3.6	13.6	159.10	-387.9	148.1	415.2	395.0	20.25	20.509	
600.0	600.0	579.6	579.4	3.7	15.8	159.11	-388.1	148.1	415.4	392.1	23.32	17.811	
645.3	645.3	625.0	624.7	3.7	16.9	159.03	-386.5	148.1	413.9	389.1	24.80	16.689	CC
700.0	700.0	675.6	675.4	3.8	18.2	159.04	-386.7	148.1	414.1	387.6	26.51	15.621	
800.0	800.0	779.8	779.4	3.9	20.8	159.11	-388.1	148.1	415.4	385.2	30.20	13.754	
895.4	895.4	875.2	874.9	4.0	23.4	159.08	-387.6	148.1	414.9	381.3	33.60	12.350	
900.0	900.0	879.7	879.3	4.0	23.5	159.08	-387.6	148.1	414.9	381.1	33.76	12.289	
1,000.0	1,000.0	977.0	976.7	4.2	26.2	159.10	-387.9	148.1	415.2	377.8	37.46	11.085	
1,100.0	1,100.0	1,079.9	1,079.4	4.3	29.0	-114.10	-388.1	148.1	416.1	374.7	41.45	10.040	
1,200.0	1,199.8	1,175.7	1,175.2	4.5	31.7	-114.74	-386.7	148.1	417.0	371.8	45.22	9.222	ES
1,300.0	1,299.5	1,279.6	1,278.9	4.9	34.7	-115.72	-388.1	148.1	422.0	372.6	49.36	8.550	
1,400.0	1,398.7	1,378.7	1,378.0	5.2	37.6	-117.11	-387.6	148.1	427.0	373.6	53.34	8.004	
1,500.0	1,497.5	1,474.9	1,474.2	5.5	40.3	-118.73	-387.9	148.1	434.7	377.5	57.23	7.595	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 1932 PROJECT - HANSON FEDERAL BATTERY 1 #12 (P&A) - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 250-INC-ONLY												Offset Well Error:	10.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
1,600.0	1,595.6	1,575.9	1,575.1	5.9	43.3	-120.73	-388.1	148.1	444.5	383.1	61.35	7.245	
1,700.0	1,693.4	1,670.1	1,669.2	6.2	46.0	-122.95	-386.7	148.1	454.4	389.2	65.19	6.970	
1,800.0	1,791.3	1,771.7	1,770.7	6.5	49.0	-125.05	-388.1	148.1	467.4	398.0	69.36	6.739	
1,900.0	1,889.1	1,869.5	1,868.5	6.9	51.9	-127.06	-388.1	148.1	479.8	406.4	73.39	6.538	
2,000.0	1,986.9	1,964.9	1,963.9	7.2	54.7	-128.93	-387.8	148.1	492.6	415.3	77.32	6.371	
2,100.0	2,084.7	2,065.3	2,064.1	7.6	57.6	-130.77	-388.1	148.1	506.3	424.8	81.48	6.214	
2,200.0	2,182.5	2,160.2	2,159.0	8.0	60.4	-132.54	-386.6	148.1	519.1	433.7	85.41	6.078	
2,300.0	2,280.3	2,261.1	2,259.8	8.4	63.4	-134.11	-388.1	148.1	534.7	445.1	89.60	5.967	
2,400.0	2,378.1	2,358.9	2,357.6	8.8	66.3	-135.65	-388.1	148.1	549.5	455.9	93.67	5.867	
2,500.0	2,476.0	2,454.5	2,453.2	9.2	69.2	-137.10	-387.8	148.1	564.5	466.9	97.66	5.781	
2,600.0	2,573.8	2,554.7	2,553.2	9.6	72.1	-138.49	-388.1	148.1	580.3	478.5	101.84	5.698	
2,700.0	2,671.6	2,650.4	2,648.9	10.0	75.0	-139.89	-386.5	148.1	595.1	489.3	105.84	5.623	
2,800.0	2,769.4	2,750.5	2,748.8	10.4	77.9	-141.05	-388.1	148.1	612.4	502.3	110.03	5.565	
2,900.0	2,867.2	2,848.3	2,846.7	10.9	80.8	-142.23	-388.1	148.1	628.8	514.7	114.12	5.510	
3,000.0	2,965.0	2,944.2	2,942.5	11.3	83.7	-143.36	-387.7	148.1	645.2	527.1	118.14	5.462	
3,100.0	3,062.8	3,044.1	3,042.3	11.7	86.7	-144.42	-388.1	148.1	662.4	540.1	122.33	5.415	
3,200.0	3,160.7	3,140.6	3,138.7	12.2	89.5	-145.53	-386.5	148.1	678.6	552.2	126.38	5.369	
3,300.0	3,258.5	3,230.9	3,229.0	12.6	92.2	-146.34	-387.6	148.1	696.7	566.5	130.17	5.352	
3,400.0	3,356.3	3,337.7	3,335.7	13.0	95.4	-147.31	-388.1	148.1	714.4	579.7	134.66	5.305	
3,500.0	3,454.1	3,433.9	3,431.9	13.5	98.3	-148.20	-387.7	148.1	731.9	593.2	138.70	5.276	
3,600.0	3,551.9	3,533.5	3,531.4	13.9	101.3	-149.02	-388.1	148.1	750.0	607.1	142.90	5.248	
3,700.0	3,649.7	3,630.8	3,628.6	14.4	104.2	-149.91	-386.5	148.1	767.1	620.1	146.99	5.218	
3,800.0	3,747.5	3,721.0	3,718.8	14.8	106.8	-150.55	-387.4	148.1	785.8	635.0	150.78	5.211	
3,900.0	3,845.4	3,827.1	3,824.8	15.3	110.0	-151.29	-388.1	148.1	804.4	649.1	155.26	5.181	
4,000.0	3,943.2	3,923.5	3,921.2	15.7	112.9	-152.00	-387.6	148.1	822.5	663.2	159.32	5.163	
4,100.0	4,041.0	4,022.9	4,020.4	16.2	115.9	-152.65	-388.1	148.1	841.2	677.7	163.51	5.145	
4,200.0	4,138.8	4,120.7	4,118.3	16.6	118.8	-153.28	-388.1	148.1	859.8	692.2	167.63	5.129	
4,300.0	4,236.6	4,211.1	4,208.6	17.1	121.5	-153.89	-387.2	148.1	878.2	706.7	171.44	5.122 SF	
4,400.0	4,334.4	4,258.0	4,255.3	17.6	122.8	-154.12	-388.1	148.1	899.2	726.3	172.97	5.199	
4,500.0	4,432.3	4,258.0	4,255.3	18.0	122.8	-154.12	-388.1	148.1	929.5	758.5	170.93	5.438	
4,600.0	4,530.1	4,258.0	4,255.3	18.5	122.8	-154.12	-388.1	148.1	969.1	801.7	167.43	5.788	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 1932 PROJECT - SUMIDEROS 12 W1PA FEDERAL COM #2H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 136-MWD - OWSG R1, 1290-MWD - OWSG R1, 4379-MWD - OWSG R1, 11947-MWD - OWSG R1													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
21,800.0	11,816.0	11,484.0	11,419.5	84.0	29.7	56.69	10,720.8	-579.4	990.0	884.8	105.14	9.416		
21,900.0	11,816.0	11,504.9	11,434.7	84.7	29.7	57.55	10,735.2	-581.0	934.0	824.6	109.43	8.535		
22,000.0	11,816.0	11,537.0	11,456.5	85.4	29.8	58.81	10,758.5	-583.6	883.6	770.2	113.41	7.791		
22,100.0	11,816.0	11,578.0	11,482.0	86.1	29.8	60.32	10,790.3	-587.2	838.9	721.9	117.04	7.168		
22,133.2	11,816.0	11,592.1	11,490.3	86.3	29.9	60.83	10,801.7	-588.4	825.4	707.1	118.21	6.982		
22,183.2	11,816.0	11,618.2	11,505.3	86.7	29.9	61.75	10,823.0	-590.6	806.0	686.2	119.79	6.728 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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - GOLDEN SPUR 36 COM W1 #2H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 13-MWD+IFR1, 4170-MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,455.3	11,338.5	19,013.0	11,868.0	32.2	78.2	102.36	-113.7	-373.2	985.8	873.5	112.26	8.781	
11,475.0	11,358.2	19,013.0	11,868.0	32.2	78.2	104.26	-113.7	-373.2	975.0	862.3	112.69	8.652	
11,500.0	11,383.1	19,013.0	11,868.0	32.2	78.2	106.03	-113.7	-373.2	962.0	849.0	113.04	8.510	
11,525.0	11,407.9	19,013.0	11,868.0	32.2	78.2	107.63	-113.7	-373.2	949.8	836.4	113.35	8.379	
11,550.0	11,432.6	19,013.0	11,868.0	32.2	78.2	109.08	-113.7	-373.2	938.4	824.8	113.63	8.259	
11,575.0	11,456.9	19,013.0	11,868.0	32.2	78.2	110.38	-113.7	-373.2	928.0	814.2	113.86	8.151	
11,600.0	11,481.0	19,013.0	11,868.0	32.2	78.2	111.52	-113.7	-373.2	918.6	804.5	114.04	8.055	
11,625.0	11,504.6	19,013.0	11,868.0	32.2	78.2	112.52	-113.7	-373.2	910.2	796.0	114.17	7.972	
11,650.0	11,527.8	19,013.0	11,868.0	32.2	78.2	113.36	-113.7	-373.2	902.9	788.6	114.24	7.903	
11,675.0	11,550.5	19,013.0	11,868.0	32.2	78.2	114.06	-113.7	-373.2	896.7	782.5	114.24	7.849	
11,700.0	11,572.6	19,013.0	11,868.0	32.2	78.2	114.62	-113.7	-373.2	891.7	777.6	114.18	7.810	
11,725.0	11,594.1	19,013.0	11,868.0	32.2	78.2	115.03	-113.7	-373.2	888.0	773.9	114.04	7.787	
11,750.0	11,614.8	19,013.0	11,868.0	32.2	78.2	115.31	-113.7	-373.2	885.4	771.6	113.82	7.779 SF	
11,775.0	11,634.8	19,013.0	11,868.0	32.2	78.2	115.44	-113.7	-373.2	884.2	770.6	113.53	7.788 ES	
11,787.4	11,644.5	19,013.0	11,868.0	32.3	78.2	115.46	-113.7	-373.2	884.0	770.7	113.35	7.799 CC	
11,800.0	11,654.0	19,013.0	11,868.0	32.3	78.2	115.44	-113.7	-373.2	884.2	771.0	113.15	7.814	
11,825.0	11,672.4	19,013.0	11,868.0	32.3	78.2	115.31	-113.7	-373.2	885.4	772.7	112.70	7.857	
11,850.0	11,689.8	19,013.0	11,868.0	32.3	78.2	115.03	-113.7	-373.2	888.0	775.8	112.17	7.916	
11,875.0	11,706.2	19,013.0	11,868.0	32.3	78.2	114.61	-113.7	-373.2	891.7	780.2	111.57	7.993	
11,900.0	11,721.6	19,013.0	11,868.0	32.3	78.2	114.06	-113.7	-373.2	896.7	785.8	110.90	8.086	
11,925.0	11,736.0	19,013.0	11,868.0	32.3	78.2	113.36	-113.7	-373.2	902.9	792.7	110.16	8.196	
11,950.0	11,749.3	19,013.0	11,868.0	32.3	78.2	112.51	-113.7	-373.2	910.2	800.8	109.37	8.323	
11,975.0	11,761.5	19,013.0	11,868.0	32.3	78.2	111.52	-113.7	-373.2	918.6	810.1	108.52	8.465	
12,000.0	11,772.5	19,013.0	11,868.0	32.3	78.2	110.38	-113.7	-373.2	928.1	820.4	107.62	8.623	
12,025.0	11,782.3	19,013.0	11,868.0	32.3	78.2	109.08	-113.7	-373.2	938.5	831.8	106.69	8.796	
12,050.0	11,791.0	19,013.0	11,868.0	32.3	78.2	107.63	-113.7	-373.2	949.8	844.1	105.73	8.984	
12,075.0	11,798.3	19,013.0	11,868.0	32.4	78.2	106.02	-113.7	-373.2	962.0	857.3	104.74	9.185	
12,100.0	11,804.4	19,013.0	11,868.0	32.4	78.2	104.26	-113.7	-373.2	975.1	871.3	103.73	9.400	
12,125.0	11,809.3	19,013.0	11,868.0	32.4	78.2	102.33	-113.7	-373.2	988.8	886.1	102.72	9.626	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - HANSON FEDERAL BATTERY 1 #13 (P&A) - OWB - AWP											Offset Site Error:	0.0 usft
Survey Program: 100-INC-ONLY											Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
2,700.0	2,671.6	2,649.4	2,647.7	10.0	77.3	-27.66	-388.4	-1,191.4	986.8	877.7	109.16	9.040
2,800.0	2,769.4	2,747.3	2,745.6	10.4	80.2	-28.23	-388.4	-1,191.4	968.4	855.1	113.28	8.548
2,900.0	2,867.2	2,845.2	2,843.4	10.9	83.2	-28.82	-388.4	-1,191.4	950.0	832.6	117.40	8.092
3,000.0	2,965.0	2,943.0	2,941.2	11.3	86.1	-29.43	-388.4	-1,191.4	931.7	810.2	121.52	7.667
3,100.0	3,062.8	3,040.9	3,039.0	11.7	89.0	-30.07	-388.4	-1,191.4	913.6	788.0	125.64	7.272
3,200.0	3,160.7	3,138.8	3,136.8	12.2	92.0	-30.73	-388.4	-1,191.4	895.6	765.8	129.76	6.902
3,300.0	3,258.5	3,236.7	3,234.6	12.6	94.9	-31.42	-388.4	-1,191.4	877.7	743.8	133.87	6.556
3,400.0	3,356.3	3,334.6	3,332.5	13.0	97.8	-32.14	-388.4	-1,191.4	859.9	721.9	137.99	6.231
3,500.0	3,454.1	3,432.4	3,430.3	13.5	100.8	-32.88	-388.4	-1,191.4	842.2	700.1	142.11	5.927
3,600.0	3,551.9	3,530.3	3,528.1	13.9	103.7	-33.66	-388.4	-1,191.4	824.7	678.5	146.22	5.640
3,700.0	3,649.7	3,628.2	3,625.9	14.4	106.6	-34.48	-388.4	-1,191.4	807.4	657.1	150.34	5.371
3,800.0	3,747.5	3,726.1	3,723.7	14.8	109.6	-35.32	-388.4	-1,191.4	790.2	635.8	154.45	5.116
3,900.0	3,845.4	3,824.0	3,821.5	15.3	112.5	-36.21	-388.4	-1,191.4	773.2	614.7	158.56	4.876
4,000.0	3,943.2	3,921.9	3,919.3	15.7	115.4	-37.13	-388.4	-1,191.4	756.4	593.7	162.67	4.650
4,100.0	4,041.0	4,019.7	4,017.2	16.2	118.3	-38.09	-388.4	-1,191.4	739.8	573.0	166.78	4.436
4,200.0	4,138.8	4,117.6	4,115.0	16.6	121.3	-39.10	-388.4	-1,191.4	723.4	552.5	170.89	4.233
4,300.0	4,236.6	4,215.5	4,212.8	17.1	124.2	-40.15	-388.4	-1,191.4	707.3	532.3	174.99	4.042
4,400.0	4,334.4	4,228.0	4,225.3	17.6	124.6	-40.29	-388.4	-1,191.4	696.6	522.3	174.31	3.996 ES, SF
4,425.6	4,359.5	4,228.0	4,225.3	17.7	124.6	-40.29	-388.4	-1,191.4	696.1	522.7	173.45	4.013 CC
4,500.0	4,432.3	4,228.0	4,225.3	18.0	124.6	-40.29	-388.4	-1,191.4	700.1	530.4	169.71	4.125
4,600.0	4,530.1	4,228.0	4,225.3	18.5	124.6	-40.29	-388.4	-1,191.4	717.6	555.6	162.06	4.428
4,700.0	4,627.9	4,228.0	4,225.3	18.9	124.6	-40.29	-388.4	-1,191.4	748.2	596.0	152.20	4.916
4,800.0	4,725.7	4,228.0	4,225.3	19.4	124.6	-40.29	-388.4	-1,191.4	790.4	649.2	141.17	5.599
4,900.0	4,823.5	4,228.0	4,225.3	19.9	124.6	-40.29	-388.4	-1,191.4	842.4	712.5	129.87	6.486
5,000.0	4,921.3	4,228.0	4,225.3	20.3	124.6	-40.29	-388.4	-1,191.4	902.5	783.6	118.94	7.588
5,100.0	5,019.1	4,228.0	4,225.3	20.8	124.6	-40.29	-388.4	-1,191.4	969.2	860.4	108.77	8.911

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - R T WILSON FEDERAL #2 (P&A) - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 314-INC-ONLY, 1065-INC-ONLY												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		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)			
0.0	0.0	0.0	0.0	3.0	3.0	-18.89	616.3	-210.9	651.6				
100.0	100.0	86.0	86.0	3.1	3.1	-18.89	616.3	-210.9	651.4	644.7	6.70	97.244	
200.0	200.0	186.0	186.0	3.2	3.4	-18.89	616.3	-210.9	651.4	644.3	7.12	91.456	
300.0	300.0	286.0	286.0	3.3	3.9	-18.89	616.3	-210.9	651.4	643.7	7.72	84.343	
400.0	400.0	386.0	386.0	3.4	4.9	-18.89	616.3	-210.9	651.4	642.4	9.02	72.211	
500.0	500.0	487.3	487.3	3.6	6.4	-18.89	616.3	-210.9	651.4	640.5	10.89	59.831	
535.8	535.8	521.8	521.8	3.6	7.0	-18.89	616.3	-210.9	651.4	639.8	11.59	56.224	
600.0	600.0	586.0	586.0	3.7	8.0	-18.89	616.3	-210.9	651.4	638.5	12.94	50.335	
700.0	700.0	686.0	686.0	3.8	9.7	-18.89	616.3	-210.9	651.4	636.2	15.18	42.916	
800.0	800.0	787.3	787.3	3.9	11.5	-18.89	616.5	-210.9	651.6	634.0	17.60	37.026	
900.0	900.0	887.3	887.3	4.0	13.4	-18.89	616.5	-210.9	651.5	631.4	20.10	32.410	
1,000.0	1,000.0	986.0	986.0	4.2	14.6	-18.89	616.3	-210.9	651.4	629.6	21.84	29.825	
1,100.0	1,100.0	1,086.0	1,086.0	4.3	15.5	68.26	616.3	-210.9	650.8	627.8	22.97	28.326	
1,200.0	1,199.8	1,189.4	1,189.4	4.5	15.9	68.75	616.5	-210.9	649.0	625.4	23.61	27.492	
1,300.0	1,299.5	1,285.5	1,285.4	4.9	16.6	69.50	616.3	-210.9	645.7	621.2	24.57	26.284	
1,400.0	1,398.7	1,388.5	1,388.4	5.2	17.4	70.64	616.4	-210.9	641.6	615.9	25.73	24.932	
1,500.0	1,497.5	1,484.3	1,484.2	5.5	18.5	72.02	616.7	-210.9	636.8	609.6	27.20	23.412	
1,600.0	1,595.6	1,581.7	1,581.6	5.9	19.6	73.73	616.3	-210.9	630.8	602.0	28.81	21.897	
1,700.0	1,693.4	1,682.6	1,682.5	6.2	20.9	75.58	616.4	-210.9	625.2	594.6	30.67	20.388	
1,800.0	1,791.3	1,777.4	1,777.2	6.5	22.4	77.35	616.3	-210.9	620.2	587.5	32.65	18.993	
1,900.0	1,889.1	1,875.2	1,875.1	6.9	23.9	79.20	616.3	-210.9	615.8	581.1	34.78	17.705	
2,000.0	1,986.9	1,975.2	1,975.1	7.2	25.6	81.11	616.6	-210.9	612.5	575.4	37.12	16.503	
2,100.0	2,084.7	2,070.9	2,070.7	7.6	27.2	82.96	616.3	-210.9	609.3	569.8	39.41	15.458	
2,200.0	2,182.5	2,172.5	2,172.4	8.0	29.0	84.94	616.5	-210.9	607.2	565.3	41.93	14.482	
2,300.0	2,280.3	2,266.5	2,266.3	8.4	30.8	86.78	616.3	-210.9	605.4	561.1	44.32	13.660	
2,400.0	2,378.1	2,364.4	2,364.1	8.8	32.6	88.70	616.3	-210.9	604.6	557.8	46.83	12.910	
2,460.4	2,437.2	2,423.4	2,423.2	9.0	33.6	89.87	616.3	-210.9	604.5	556.1	48.33	12.506 CC	
2,500.0	2,476.0	2,464.5	2,464.3	9.2	34.4	90.68	616.6	-210.9	604.8	555.4	49.38	12.248	
2,544.0	2,519.0	2,510.5	2,510.3	9.4	35.2	91.58	616.3	-210.9	604.7	554.1	50.55	11.963	
2,600.0	2,573.8	2,560.0	2,559.8	9.6	36.2	92.56	616.3	-210.9	605.1	553.2	51.89	11.661	
2,700.0	2,671.6	2,660.8	2,660.6	10.0	38.1	94.54	616.4	-210.9	606.5	551.9	54.61	11.105	
2,800.0	2,769.4	2,755.7	2,755.4	10.4	40.0	96.39	616.3	-210.9	608.4	551.2	57.22	10.633	
2,900.0	2,867.2	2,860.0	2,859.8	10.9	42.0	98.41	616.3	-210.9	611.1	551.1	60.09	10.170 ES	
3,000.0	2,965.0	2,951.3	2,951.0	11.3	43.8	100.16	616.3	-210.9	614.5	551.9	62.65	9.808	
3,100.0	3,062.8	3,049.2	3,048.8	11.7	45.8	102.02	616.3	-210.9	618.6	553.2	65.40	9.459	
3,200.0	3,160.7	3,149.3	3,148.9	12.2	47.8	103.88	616.7	-210.9	623.7	555.5	68.23	9.141	
3,300.0	3,258.5	3,244.8	3,244.5	12.6	49.7	105.65	616.3	-210.9	628.8	557.9	70.86	8.874	
3,400.0	3,356.3	3,346.6	3,346.3	13.0	51.6	107.50	616.3	-210.9	634.8	561.3	73.54	8.632	
3,500.0	3,454.1	3,440.6	3,440.3	13.5	53.4	109.15	616.6	-210.9	641.7	565.6	76.15	8.427	
3,600.0	3,551.9	3,538.3	3,537.9	13.9	55.3	110.86	616.3	-210.9	648.7	569.8	78.90	8.222	
3,700.0	3,649.7	3,640.5	3,640.1	14.4	57.6	112.60	616.4	-210.9	656.6	574.5	82.09	7.999	
3,800.0	3,747.5	3,734.0	3,733.5	14.8	60.2	114.15	616.3	-210.9	664.9	579.2	85.71	7.758	
3,900.0	3,845.4	3,831.9	3,831.4	15.3	62.9	115.74	616.3	-210.9	673.9	584.3	89.59	7.522	
4,000.0	3,943.2	3,929.7	3,929.2	15.7	65.6	117.28	616.3	-210.9	683.3	589.9	93.42	7.315	
4,100.0	4,041.0	4,038.0	4,037.4	16.2	68.6	118.91	617.0	-210.9	693.9	596.2	97.65	7.106	
4,200.0	4,138.8	4,125.5	4,124.8	16.6	70.8	120.24	616.3	-210.9	703.7	603.0	100.70	6.988	
4,300.0	4,236.6	4,223.3	4,222.6	17.1	73.0	121.66	616.3	-210.9	714.5	610.7	103.84	6.881 SF	
4,400.0	4,334.4	4,251.0	4,250.3	17.6	73.6	122.05	616.3	-210.9	729.2	624.9	104.29	6.992	
4,500.0	4,432.3	4,251.0	4,250.3	18.0	73.6	122.05	616.3	-210.9	756.4	654.2	102.29	7.395	
4,600.0	4,530.1	4,251.0	4,250.3	18.5	73.6	122.05	616.3	-210.9	795.4	696.3	99.07	8.029	
4,700.0	4,627.9	4,251.0	4,250.3	18.9	73.6	122.05	616.3	-210.9	844.4	749.3	95.11	8.879	
4,800.0	4,725.7	4,251.0	4,250.3	19.4	73.6	122.05	616.3	-210.9	901.9	811.1	90.82	9.931	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design:		ZIA HILLS UNIT 2431 PROJECT - R T WILSON FEDERAL #2 (P&A) - OWB - AWP										Offset Site Error:		0.0 usft	
Survey Program:		314-INC-ONLY, 1065-INC-ONLY										Offset Well Error:		3.0 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned:						
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		
4,900.0	4,823.5	4,251.0	4,250.3	19.9	73.6	122.05	616.3	-210.9	966.4	879.9	86.52	11.170			

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Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #707H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11497-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	
7,200.0	7,083.4	7,425.3	7,293.7	30.2	31.7	-7.41	-11.9	-2,129.1	988.6	929.4	59.22	16.694	
7,300.0	7,183.3	7,518.9	7,385.2	30.5	32.1	-7.82	-17.2	-2,110.4	964.2	904.2	59.93	16.089	
7,400.0	7,283.2	7,600.0	7,464.7	30.8	32.5	-8.17	-21.6	-2,095.0	942.4	881.7	60.67	15.534	
7,500.0	7,383.2	7,688.2	7,551.4	31.1	32.9	-8.52	-26.1	-2,079.5	923.7	862.4	61.32	15.064	
7,544.6	7,427.7	7,726.3	7,589.0	31.2	33.1	-95.67	-27.9	-2,073.2	916.4	854.8	61.55	14.889	
7,600.0	7,483.2	7,774.0	7,635.9	31.2	33.3	-95.85	-30.1	-2,065.7	907.9	846.1	61.78	14.695	
7,700.0	7,583.2	7,860.2	7,721.1	31.2	33.7	-96.17	-33.7	-2,052.9	893.6	831.4	62.20	14.366	
7,800.0	7,683.2	7,946.8	7,806.9	31.2	34.0	-96.47	-37.0	-2,041.4	880.8	818.2	62.61	14.069	
7,900.0	7,783.2	8,033.8	7,893.2	31.2	34.4	-96.74	-40.0	-2,031.1	869.4	806.4	62.99	13.802	
8,000.0	7,883.2	8,121.0	7,980.0	31.3	34.8	-96.98	-42.6	-2,022.0	859.4	796.1	63.36	13.564	
8,100.0	7,983.2	8,208.6	8,067.1	31.3	35.1	-97.20	-44.8	-2,014.2	850.8	787.1	63.71	13.354	
8,200.0	8,083.2	8,300.0	8,158.3	31.3	35.4	-97.39	-46.8	-2,007.3	843.7	779.6	64.05	13.173	
8,300.0	8,183.2	8,384.3	8,242.4	31.3	35.7	-97.53	-48.2	-2,002.3	837.9	773.6	64.36	13.020	
8,400.0	8,283.2	8,472.4	8,330.4	31.4	36.0	-97.65	-49.4	-1,998.3	833.6	769.0	64.65	12.895	
8,500.0	8,383.2	8,560.6	8,418.6	31.4	36.3	-97.72	-50.2	-1,995.6	830.7	765.8	64.91	12.798	
8,600.0	8,483.2	8,648.9	8,506.9	31.4	36.5	-97.76	-50.6	-1,994.2	829.2	764.1	65.09	12.739	
8,677.6	8,560.8	8,719.9	8,577.8	31.4	36.6	-97.77	-50.6	-1,994.0	828.9	763.8	65.17	12.720	
8,700.0	8,583.2	8,742.2	8,600.2	31.4	36.6	-97.77	-50.6	-1,994.0	828.9	763.8	65.18	12.718	
8,800.0	8,683.2	8,842.2	8,700.2	31.5	36.6	-97.77	-50.6	-1,994.0	828.9	763.7	65.22	12.710	
8,900.0	8,783.2	8,942.2	8,800.2	31.5	36.6	-97.77	-50.6	-1,994.0	828.9	763.7	65.27	12.701	
9,000.0	8,883.2	9,042.2	8,900.2	31.5	36.6	-97.77	-50.6	-1,994.0	828.9	763.6	65.31	12.692	
9,100.0	8,983.2	9,142.2	9,000.2	31.5	36.6	-97.77	-50.6	-1,994.0	828.9	763.6	65.36	12.683	
9,200.0	9,083.2	9,242.2	9,100.2	31.6	36.6	-97.77	-50.6	-1,994.0	828.9	763.5	65.40	12.674	
9,300.0	9,183.2	9,342.2	9,200.2	31.6	36.7	-97.77	-50.6	-1,994.0	828.9	763.5	65.45	12.665	
9,400.0	9,283.2	9,442.2	9,300.2	31.6	36.7	-97.77	-50.6	-1,994.0	828.9	763.4	65.50	12.657	
9,500.0	9,383.2	9,542.2	9,400.2	31.7	36.7	-97.77	-50.6	-1,994.0	828.9	763.4	65.54	12.647	
9,600.0	9,483.2	9,642.2	9,500.2	31.7	36.7	-97.77	-50.6	-1,994.0	828.9	763.4	65.59	12.638	
9,700.0	9,583.2	9,742.2	9,600.2	31.7	36.7	-97.77	-50.6	-1,994.0	828.9	763.3	65.64	12.629	
9,800.0	9,683.2	9,842.2	9,700.2	31.7	36.7	-97.77	-50.6	-1,994.0	828.9	763.3	65.69	12.620	
9,900.0	9,783.2	9,942.2	9,800.2	31.8	36.8	-97.77	-50.6	-1,994.0	828.9	763.2	65.73	12.611	
10,000.0	9,883.2	10,042.2	9,900.2	31.8	36.8	-97.77	-50.6	-1,994.0	828.9	763.2	65.78	12.601	
10,100.0	9,983.2	10,142.2	10,000.2	31.8	36.8	-97.77	-50.6	-1,994.0	828.9	763.1	65.83	12.592	
10,200.0	10,083.2	10,242.2	10,100.2	31.9	36.8	-97.77	-50.6	-1,994.0	828.9	763.1	65.88	12.583	
10,300.0	10,183.2	10,342.2	10,200.2	31.9	36.8	-97.77	-50.6	-1,994.0	828.9	763.0	65.93	12.573	
10,400.0	10,283.2	10,442.2	10,300.2	31.9	36.8	-97.77	-50.6	-1,994.0	828.9	763.0	65.98	12.564	
10,500.0	10,383.2	10,542.2	10,400.2	31.9	36.9	-97.77	-50.6	-1,994.0	828.9	762.9	66.03	12.554	
10,600.0	10,483.2	10,642.2	10,500.2	32.0	36.9	-97.77	-50.6	-1,994.0	828.9	762.9	66.08	12.544	
10,700.0	10,583.2	10,742.2	10,600.2	32.0	36.9	-97.77	-50.6	-1,994.0	828.9	762.8	66.13	12.535	
10,800.0	10,683.2	10,842.2	10,700.2	32.0	36.9	-97.77	-50.6	-1,994.0	828.9	762.8	66.18	12.525	
10,900.0	10,783.2	10,942.2	10,800.2	32.1	36.9	-97.77	-50.6	-1,994.0	828.9	762.7	66.24	12.515	
11,000.0	10,883.2	11,042.2	10,900.2	32.1	36.9	-97.77	-50.6	-1,994.0	828.9	762.7	66.29	12.505	
11,100.0	10,983.2	11,142.2	11,000.2	32.1	37.0	-97.77	-50.6	-1,994.0	828.9	762.6	66.34	12.495	
11,200.0	11,083.2	11,242.2	11,100.2	32.2	37.0	-97.77	-50.6	-1,994.0	828.9	762.6	66.39	12.485	
11,300.0	11,183.2	11,342.2	11,200.2	32.2	37.0	-97.77	-50.6	-1,994.0	828.9	762.5	66.45	12.475	
11,400.0	11,283.2	11,442.2	11,300.2	32.2	37.0	-97.77	-50.6	-1,994.0	828.9	762.4	66.50	12.465	
11,455.3	11,338.5	11,497.9	11,355.8	32.2	37.0	-97.77	-50.6	-1,994.0	828.9	762.4	66.52	12.461	
11,475.0	11,358.2	11,523.1	11,381.1	32.2	37.0	-97.35	-49.9	-1,994.0	828.9	762.4	66.54	12.457	
11,500.0	11,383.1	11,553.3	11,413.1	32.2	37.0	-97.31	-47.0	-1,994.0	828.9	762.3	66.57	12.450	
11,525.0	11,407.9	11,587.3	11,444.7	32.2	37.0	-97.24	-42.0	-1,994.0	828.7	762.1	66.62	12.440	
11,550.0	11,432.6	11,619.2	11,475.8	32.2	37.0	-97.15	-35.0	-1,994.1	828.6	761.9	66.67	12.428	
11,575.0	11,456.9	11,651.0	11,506.3	32.2	37.0	-97.03	-25.9	-1,994.2	828.4	761.6	66.73	12.414	
11,600.0	11,481.0	11,682.6	11,535.8	32.2	37.0	-96.89	-14.8	-1,994.2	828.1	761.3	66.80	12.398	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #707H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11497-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)		
11,625.0	11,504.6	11,713.9	11,564.5	32.2	37.0	-96.72	-2.0	-1,994.3	827.9	761.0	66.87	12.380	
11,650.0	11,527.8	11,745.0	11,591.9	32.2	37.0	-96.53	12.6	-1,994.4	827.5	760.6	66.95	12.360	
11,675.0	11,550.5	11,775.9	11,618.2	32.2	37.0	-96.32	28.8	-1,994.5	827.2	760.2	67.04	12.340	
11,700.0	11,572.6	11,806.5	11,643.1	32.2	37.1	-96.09	46.5	-1,994.7	826.9	759.7	67.13	12.318	
11,725.0	11,594.1	11,836.7	11,666.6	32.2	37.1	-95.84	65.5	-1,994.8	826.5	759.3	67.21	12.296	
11,750.0	11,614.8	11,866.6	11,688.6	32.2	37.1	-95.57	85.7	-1,994.9	826.1	758.8	67.31	12.274	
11,775.0	11,634.8	11,896.2	11,709.1	32.2	37.1	-95.28	107.1	-1,995.1	825.7	758.3	67.39	12.252	
11,800.0	11,654.0	11,925.4	11,728.0	32.3	37.1	-94.98	129.3	-1,995.3	825.3	757.8	67.48	12.230	
11,825.0	11,672.4	11,954.3	11,745.3	32.3	37.1	-94.67	152.5	-1,995.4	824.9	757.4	67.57	12.209	
11,850.0	11,689.8	11,982.8	11,761.0	32.3	37.1	-94.35	176.2	-1,995.6	824.6	756.9	67.65	12.189	
11,875.0	11,706.2	12,010.9	11,775.0	32.3	37.1	-94.01	200.6	-1,995.8	824.2	756.5	67.73	12.170	
11,900.0	11,721.6	12,038.7	11,787.4	32.3	37.1	-93.67	225.4	-1,995.9	823.9	756.1	67.80	12.151	
11,925.0	11,736.0	12,066.1	11,798.3	32.3	37.1	-93.32	250.6	-1,996.1	823.5	755.7	67.87	12.135	
11,950.0	11,749.3	12,093.1	11,807.6	32.3	37.1	-92.96	276.0	-1,996.3	823.3	755.3	67.93	12.119	
11,975.0	11,761.5	12,119.8	11,815.3	32.3	37.1	-92.59	301.6	-1,996.5	823.0	755.0	67.98	12.105	
12,000.0	11,772.5	12,146.2	11,821.5	32.3	37.1	-92.22	327.2	-1,996.7	822.8	754.7	68.03	12.093	
12,025.0	11,782.3	12,172.2	11,826.2	32.3	37.2	-91.85	352.8	-1,996.8	822.6	754.5	68.08	12.082	
12,050.0	11,791.0	12,197.9	11,829.5	32.3	37.2	-91.47	378.3	-1,997.0	822.4	754.3	68.12	12.073	
12,075.0	11,798.3	12,223.3	11,831.4	32.4	37.2	-91.10	403.6	-1,997.2	822.3	754.1	68.15	12.066	
12,100.0	11,804.4	12,248.3	11,832.0	32.4	37.2	-90.72	428.6	-1,997.4	822.2	754.0	68.18	12.060	
12,125.0	11,809.3	12,272.9	11,832.0	32.4	37.2	-90.39	453.1	-1,997.5	822.1	753.9	68.20	12.055	
12,150.0	11,812.8	12,297.6	11,832.0	32.4	37.2	-90.15	477.9	-1,997.7	822.1	753.9	68.22	12.051	
12,175.0	11,815.0	12,322.5	11,832.0	32.4	37.3	-90.00	502.8	-1,997.9	822.1	753.9	68.25	12.045	
12,176.8	11,815.1	12,324.3	11,832.0	32.4	37.3	-89.99	504.6	-1,997.9	822.1	753.8	68.25	12.045	
12,200.0	11,816.0	12,347.5	11,832.0	32.4	37.3	-89.93	527.7	-1,998.1	822.1	753.8	68.29	12.039	
12,205.3	11,816.0	12,352.8	11,832.0	32.4	37.3	-89.93	533.1	-1,998.1	822.1	753.8	68.29	12.038	
12,300.0	11,816.0	12,447.5	11,832.0	32.5	37.4	-89.93	627.7	-1,998.8	822.1	753.6	68.46	12.009	
12,400.0	11,816.0	12,547.5	11,832.0	32.7	37.5	-89.93	727.7	-1,999.5	822.1	753.4	68.66	11.973	
12,500.0	11,816.0	12,647.5	11,832.0	32.8	37.6	-89.93	827.7	-2,000.2	822.1	753.2	68.90	11.931	
12,600.0	11,816.0	12,747.5	11,832.0	33.0	37.7	-89.93	927.7	-2,000.9	822.1	752.9	69.17	11.884	
12,700.0	11,816.0	12,847.5	11,832.0	33.1	37.9	-89.93	1,027.7	-2,001.6	822.1	752.6	69.48	11.832	
12,800.0	11,816.0	12,947.5	11,832.0	33.3	38.1	-89.93	1,127.7	-2,002.3	822.1	752.3	69.81	11.776	
12,900.0	11,816.0	13,047.5	11,832.0	33.5	38.2	-89.93	1,227.7	-2,003.0	822.1	751.9	70.18	11.714	
13,000.0	11,816.0	13,147.5	11,832.0	33.7	38.4	-89.93	1,327.7	-2,003.7	822.1	751.5	70.57	11.649	
13,100.0	11,816.0	13,247.5	11,832.0	34.0	38.6	-89.93	1,427.7	-2,004.4	822.1	751.1	71.00	11.579	
13,200.0	11,816.0	13,347.5	11,832.0	34.2	38.8	-89.93	1,527.7	-2,005.1	822.1	750.6	71.46	11.505	
13,300.0	11,816.0	13,447.5	11,832.0	34.5	39.1	-89.93	1,627.7	-2,005.9	822.1	750.1	71.94	11.427	
13,400.0	11,816.0	13,547.5	11,832.0	34.8	39.3	-89.93	1,727.7	-2,006.6	822.1	749.6	72.45	11.346	
13,500.0	11,816.0	13,647.5	11,832.0	35.1	39.6	-89.93	1,827.7	-2,007.3	822.1	749.1	72.99	11.262	
13,600.0	11,816.0	13,747.5	11,832.0	35.4	39.8	-89.93	1,927.7	-2,008.0	822.1	748.5	73.56	11.175	
13,700.0	11,816.0	13,847.5	11,832.0	35.7	40.1	-89.93	2,027.7	-2,008.7	822.1	747.9	74.16	11.086	
13,800.0	11,816.0	13,947.5	11,832.0	36.1	40.4	-89.93	2,127.7	-2,009.4	822.1	747.3	74.78	10.994	
13,900.0	11,816.0	14,047.5	11,832.0	36.4	40.7	-89.93	2,227.7	-2,010.1	822.1	746.7	75.42	10.900	
14,000.0	11,816.0	14,147.5	11,832.0	36.8	41.0	-89.93	2,327.7	-2,010.8	822.1	746.0	76.09	10.804	
14,100.0	11,816.0	14,247.5	11,832.0	37.2	41.3	-89.93	2,427.7	-2,011.5	822.1	745.3	76.78	10.707	
14,200.0	11,816.0	14,347.5	11,832.0	37.6	41.6	-89.93	2,527.7	-2,012.2	822.1	744.6	77.50	10.608	
14,300.0	11,816.0	14,447.5	11,832.0	38.0	42.0	-89.93	2,627.7	-2,012.9	822.1	743.8	78.24	10.507	
14,400.0	11,816.0	14,547.5	11,832.0	38.4	42.3	-89.93	2,727.7	-2,013.6	822.1	743.1	79.00	10.406	
14,500.0	11,816.0	14,647.5	11,832.0	38.8	42.7	-89.93	2,827.7	-2,014.3	822.1	742.3	79.78	10.304	
14,600.0	11,816.0	14,747.5	11,832.0	39.3	43.1	-89.93	2,927.7	-2,015.1	822.1	741.5	80.58	10.201	
14,700.0	11,816.0	14,847.5	11,832.0	39.7	43.5	-89.93	3,027.7	-2,015.8	822.1	740.7	81.41	10.098	
14,800.0	11,816.0	14,947.5	11,832.0	40.2	43.9	-89.93	3,127.7	-2,016.5	822.1	739.8	82.25	9.995	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #707H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11497-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	
14,900.0	11,816.0	15,047.5	11,832.0	40.6	44.3	-89.93	3,227.7	-2,017.2	822.1	739.0	83.11	9.891	
15,000.0	11,816.0	15,147.5	11,832.0	41.1	44.7	-89.93	3,327.7	-2,017.9	822.1	738.1	83.99	9.788	
15,100.0	11,816.0	15,247.5	11,832.0	41.6	45.1	-89.93	3,427.7	-2,018.6	822.1	737.2	84.89	9.684	
15,200.0	11,816.0	15,347.5	11,832.0	42.1	45.5	-89.93	3,527.7	-2,019.3	822.1	736.3	85.80	9.581	
15,300.0	11,816.0	15,447.5	11,832.0	42.6	45.9	-89.93	3,627.7	-2,020.0	822.1	735.3	86.73	9.478	
15,400.0	11,816.0	15,547.5	11,832.0	43.1	46.4	-89.93	3,727.7	-2,020.7	822.1	734.4	87.68	9.376	
15,500.0	11,816.0	15,647.5	11,832.0	43.6	46.8	-89.93	3,827.7	-2,021.4	822.1	733.4	88.64	9.274	
15,600.0	11,816.0	15,747.5	11,832.0	44.1	47.3	-89.93	3,927.7	-2,022.1	822.1	732.4	89.62	9.173	
15,700.0	11,816.0	15,847.5	11,832.0	44.6	47.8	-89.93	4,027.7	-2,022.8	822.1	731.4	90.61	9.072	
15,800.0	11,816.0	15,947.5	11,832.0	45.2	48.2	-89.93	4,127.7	-2,023.5	822.1	730.4	91.62	8.972	
15,900.0	11,816.0	16,047.5	11,832.0	45.7	48.7	-89.93	4,227.7	-2,024.3	822.1	729.4	92.64	8.874	
16,000.0	11,816.0	16,147.5	11,832.0	46.3	49.2	-89.93	4,327.7	-2,025.0	822.1	728.4	93.67	8.776	
16,100.0	11,816.0	16,247.5	11,832.0	46.8	49.7	-89.93	4,427.6	-2,025.7	822.1	727.3	94.72	8.679	
16,200.0	11,816.0	16,347.5	11,832.0	47.4	50.2	-89.93	4,527.6	-2,026.4	822.1	726.3	95.78	8.583	
16,300.0	11,816.0	16,447.5	11,832.0	47.9	50.7	-89.93	4,627.6	-2,027.1	822.1	725.2	96.85	8.488	
16,400.0	11,816.0	16,547.5	11,832.0	48.5	51.2	-89.93	4,727.6	-2,027.8	822.1	724.1	97.93	8.394	
16,500.0	11,816.0	16,647.5	11,832.0	49.1	51.7	-89.93	4,827.6	-2,028.5	822.1	723.0	99.02	8.302	
16,600.0	11,816.0	16,747.5	11,832.0	49.7	52.3	-89.93	4,927.6	-2,029.2	822.1	721.9	100.13	8.210	
16,700.0	11,816.0	16,847.5	11,832.0	50.3	52.8	-89.93	5,027.6	-2,029.9	822.1	720.8	101.24	8.120	
16,800.0	11,816.0	16,947.5	11,832.0	50.8	53.3	-89.93	5,127.6	-2,030.6	822.1	719.7	102.37	8.030	
16,900.0	11,816.0	17,047.5	11,832.0	51.4	53.9	-89.93	5,227.6	-2,031.3	822.1	718.6	103.50	7.942	
17,000.0	11,816.0	17,147.5	11,832.0	52.0	54.4	-89.93	5,327.6	-2,032.0	822.0	717.4	104.64	7.856	
17,100.0	11,816.0	17,247.5	11,832.0	52.6	55.0	-89.93	5,427.6	-2,032.7	822.0	716.3	105.80	7.770	
17,200.0	11,816.0	17,347.5	11,832.0	53.2	55.5	-89.93	5,527.6	-2,033.4	822.0	715.1	106.96	7.686	
17,300.0	11,816.0	17,447.5	11,832.0	53.9	56.1	-89.93	5,627.6	-2,034.2	822.0	713.9	108.13	7.603	
17,400.0	11,816.0	17,547.5	11,832.0	54.5	56.7	-89.93	5,727.6	-2,034.9	822.0	712.7	109.31	7.521	
17,500.0	11,816.0	17,647.5	11,832.0	55.1	57.3	-89.93	5,827.6	-2,035.6	822.0	711.6	110.49	7.440	
17,600.0	11,816.0	17,747.5	11,832.0	55.7	57.8	-89.93	5,927.6	-2,036.3	822.0	710.4	111.69	7.360	
17,700.0	11,816.0	17,847.5	11,832.0	56.3	58.4	-89.93	6,027.6	-2,037.0	822.0	709.2	112.89	7.282	
17,800.0	11,816.0	17,947.5	11,832.0	57.0	59.0	-89.93	6,127.6	-2,037.7	822.0	707.9	114.10	7.205	
17,900.0	11,816.0	18,047.5	11,832.0	57.6	59.6	-89.93	6,227.6	-2,038.4	822.0	706.7	115.31	7.129	
18,000.0	11,816.0	18,147.5	11,832.0	58.2	60.2	-89.93	6,327.6	-2,039.1	822.0	705.5	116.54	7.054	
18,100.0	11,816.0	18,247.5	11,832.0	58.9	60.8	-89.93	6,427.6	-2,039.8	822.0	704.3	117.76	6.980	
18,200.0	11,816.0	18,347.5	11,832.0	59.5	61.4	-89.93	6,527.6	-2,040.5	822.0	703.0	119.00	6.908	
18,300.0	11,816.0	18,447.5	11,832.0	60.2	62.0	-89.93	6,627.6	-2,041.2	822.0	701.8	120.24	6.837	
18,400.0	11,816.0	18,547.5	11,832.0	60.8	62.6	-89.93	6,727.6	-2,041.9	822.0	700.5	121.49	6.766	
18,500.0	11,816.0	18,647.5	11,832.0	61.5	63.2	-89.93	6,827.6	-2,042.6	822.0	699.3	122.74	6.697	
18,600.0	11,816.0	18,747.5	11,832.0	62.1	63.8	-89.93	6,927.6	-2,043.4	822.0	698.0	124.00	6.629	
18,700.0	11,816.0	18,847.5	11,832.0	62.8	64.4	-89.93	7,027.6	-2,044.1	822.0	696.8	125.27	6.562	
18,800.0	11,816.0	18,947.5	11,832.0	63.4	65.1	-89.93	7,127.6	-2,044.8	822.0	695.5	126.54	6.496	
18,900.0	11,816.0	19,047.5	11,832.0	64.1	65.7	-89.93	7,227.6	-2,045.5	822.0	694.2	127.81	6.432	
19,000.0	11,816.0	19,147.5	11,832.0	64.7	66.3	-89.93	7,327.6	-2,046.2	822.0	692.9	129.09	6.368	
19,100.0	11,816.0	19,247.5	11,832.0	65.4	66.9	-89.93	7,427.6	-2,046.9	822.0	691.6	130.38	6.305	
19,200.0	11,816.0	19,347.5	11,832.0	66.1	67.6	-89.93	7,527.6	-2,047.6	822.0	690.4	131.67	6.243	
19,300.0	11,816.0	19,447.5	11,832.0	66.7	68.2	-89.93	7,627.6	-2,048.3	822.0	689.1	132.96	6.182	
19,400.0	11,816.0	19,547.5	11,832.0	67.4	68.8	-89.93	7,727.6	-2,049.0	822.0	687.8	134.26	6.123	
19,500.0	11,816.0	19,647.5	11,832.0	68.1	69.5	-89.93	7,827.6	-2,049.7	822.0	686.5	135.56	6.064	
19,600.0	11,816.0	19,747.5	11,832.0	68.8	70.1	-89.93	7,927.6	-2,050.4	822.0	685.2	136.87	6.006	
19,700.0	11,816.0	19,847.5	11,832.0	69.4	70.8	-89.93	8,027.6	-2,051.1	822.0	683.8	138.18	5.949	
19,800.0	11,816.0	19,947.5	11,832.0	70.1	71.4	-89.93	8,127.6	-2,051.8	822.0	682.5	139.50	5.893	
19,900.0	11,816.0	20,047.5	11,832.0	70.8	72.1	-89.93	8,227.6	-2,052.6	822.0	681.2	140.82	5.837	
20,000.0	11,816.0	20,147.5	11,832.0	71.5	72.7	-89.93	8,327.6	-2,053.3	822.0	679.9	142.14	5.783	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #707H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11497-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	
20,100.0	11,816.0	20,247.5	11,832.0	72.1	73.4	-89.93	8,427.5	-2,054.0	822.0	678.6	143.47	5.730	
20,200.0	11,816.0	20,347.5	11,832.0	72.8	74.0	-89.93	8,527.5	-2,054.7	822.0	677.2	144.80	5.677	
20,300.0	11,816.0	20,447.5	11,832.0	73.5	74.7	-89.93	8,627.5	-2,055.4	822.0	675.9	146.13	5.625	
20,400.0	11,816.0	20,547.5	11,832.0	74.2	75.4	-89.93	8,727.5	-2,056.1	822.0	674.5	147.47	5.574	
20,500.0	11,816.0	20,647.5	11,832.0	74.9	76.0	-89.93	8,827.5	-2,056.8	822.0	673.2	148.81	5.524	
20,600.0	11,816.0	20,747.5	11,832.0	75.6	76.7	-89.93	8,927.5	-2,057.5	822.0	671.9	150.15	5.475	
20,700.0	11,816.0	20,847.5	11,832.0	76.3	77.4	-89.93	9,027.5	-2,058.2	822.0	670.5	151.50	5.426	
20,800.0	11,816.0	20,947.5	11,832.0	77.0	78.0	-89.93	9,127.5	-2,058.9	822.0	669.2	152.85	5.378	
20,900.0	11,816.0	21,047.5	11,832.0	77.7	78.7	-89.93	9,227.5	-2,059.6	822.0	667.8	154.20	5.331	
21,000.0	11,816.0	21,147.5	11,832.0	78.4	79.4	-89.93	9,327.5	-2,060.3	822.0	666.5	155.55	5.284	
21,100.0	11,816.0	21,247.5	11,832.0	79.1	80.0	-89.93	9,427.5	-2,061.0	822.0	665.1	156.91	5.239	
21,200.0	11,816.0	21,347.5	11,832.0	79.8	80.7	-89.93	9,527.5	-2,061.8	822.0	663.7	158.27	5.194	
21,300.0	11,816.0	21,447.5	11,832.0	80.5	81.4	-89.93	9,627.5	-2,062.5	822.0	662.4	159.63	5.149	
21,400.0	11,816.0	21,547.5	11,832.0	81.2	82.1	-89.93	9,727.5	-2,063.2	822.0	661.0	161.00	5.106	
21,500.0	11,816.0	21,647.5	11,832.0	81.9	82.7	-89.93	9,827.5	-2,063.9	822.0	659.6	162.37	5.063	
21,600.0	11,816.0	21,747.5	11,832.0	82.6	83.4	-89.93	9,927.5	-2,064.6	822.0	658.3	163.74	5.020	
21,700.0	11,816.0	21,847.5	11,832.0	83.3	84.1	-89.93	10,027.5	-2,065.3	822.0	656.9	165.11	4.978	
21,800.0	11,816.0	21,947.5	11,832.0	84.0	84.8	-89.93	10,127.5	-2,066.0	822.0	655.5	166.49	4.937	
21,900.0	11,816.0	22,047.5	11,832.0	84.7	85.5	-89.93	10,227.5	-2,066.7	822.0	654.1	167.86	4.897	
22,000.0	11,816.0	22,147.5	11,832.0	85.4	86.2	-89.93	10,327.5	-2,067.4	822.0	652.8	169.24	4.857	
22,100.0	11,816.0	22,247.5	11,832.0	86.1	86.9	-89.93	10,427.5	-2,068.1	822.0	651.4	170.62	4.818	
22,133.2	11,816.0	22,280.7	11,832.0	86.3	87.1	-89.93	10,460.7	-2,068.4	822.0	650.9	171.08	4.805	
22,181.3	11,816.0	22,328.8	11,832.0	86.7	87.4	-89.93	10,508.8	-2,068.7	822.0	650.2	171.75	4.786 CC	
22,183.2	11,816.0	22,329.6	11,832.0	86.7	87.5	-89.93	10,509.6	-2,068.7	822.0	650.2	171.76	4.786 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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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
0.0	0.0	0.0	0.0	3.0	3.0	179.50	-30.0	0.3	30.0				
100.0	100.0	100.0	100.0	3.1	3.1	179.50	-30.0	0.3	30.0	23.5	6.54	4.590	
200.0	200.0	200.0	200.0	3.2	3.2	179.50	-30.0	0.3	30.0	23.2	6.79	4.421	
300.0	300.0	300.0	300.0	3.3	3.3	179.50	-30.0	0.3	30.0	23.0	7.03	4.266	
400.0	400.0	400.0	400.0	3.4	3.4	179.50	-30.0	0.3	30.0	22.7	7.28	4.122	
500.0	500.0	500.0	500.0	3.6	3.6	179.50	-30.0	0.3	30.0	22.5	7.52	3.989	
600.0	600.0	600.0	600.0	3.7	3.7	179.50	-30.0	0.3	30.0	22.2	7.76	3.864	
700.0	700.0	700.0	700.0	3.8	3.8	179.50	-30.0	0.3	30.0	22.0	8.00	3.748	
800.0	800.0	800.0	800.0	3.9	3.9	179.50	-30.0	0.3	30.0	21.8	8.24	3.639	
900.0	900.0	900.0	900.0	4.0	4.0	179.50	-30.0	0.3	30.0	21.5	8.48	3.537	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	179.50	-30.0	0.3	30.0	21.3	8.72	3.440 CC	
1,100.0	1,100.0	1,100.0	1,100.0	4.3	4.3	-93.49	-30.0	-1.5	30.1	21.1	8.92	3.369	
1,200.0	1,199.8	1,200.1	1,199.9	4.5	4.5	-93.47	-29.9	-6.7	30.2	21.0	9.26	3.267	
1,300.0	1,299.5	1,300.1	1,299.5	4.9	4.9	-93.43	-29.7	-15.4	30.5	21.0	9.58	3.187 ES	
1,400.0	1,398.7	1,400.1	1,398.8	5.2	5.2	-93.38	-29.5	-27.6	31.0	21.1	9.91	3.126	
1,500.0	1,497.5	1,500.1	1,497.6	5.5	5.5	-93.33	-29.2	-43.3	31.5	21.3	10.23	3.080	
1,600.0	1,595.6	1,600.2	1,595.8	5.9	5.9	-93.25	-28.9	-62.4	32.2	21.6	10.57	3.046	
1,700.0	1,693.4	1,700.1	1,693.2	6.2	6.3	-90.16	-28.5	-84.9	32.9	22.0	10.91	3.018	
1,800.0	1,791.3	1,800.1	1,790.2	6.5	6.6	-84.28	-28.1	-109.0	33.9	22.6	11.29	3.006	
1,900.0	1,889.1	1,900.0	1,887.1	6.9	7.0	-78.79	-27.7	-133.2	35.3	23.5	11.73	3.007	
2,000.0	1,986.9	1,999.9	1,984.1	7.2	7.3	-73.75	-27.2	-157.4	36.9	24.7	12.25	3.014	
2,100.0	2,084.7	2,099.9	2,081.1	7.6	7.7	-69.18	-26.8	-181.5	38.8	26.0	12.84	3.024	
2,200.0	2,182.5	2,199.8	2,178.0	8.0	8.1	-65.05	-26.4	-205.7	41.0	27.5	13.50	3.035	
2,300.0	2,280.3	2,299.8	2,275.0	8.4	8.5	-61.35	-26.0	-229.9	43.3	29.1	14.21	3.047	
2,400.0	2,378.1	2,399.7	2,372.0	8.8	8.9	-58.04	-25.6	-254.1	45.8	30.8	14.96	3.059	
2,500.0	2,476.0	2,499.6	2,468.9	9.2	9.3	-55.08	-25.1	-278.2	48.4	32.6	15.76	3.071	
2,600.0	2,573.8	2,599.6	2,565.9	9.6	9.7	-52.42	-24.7	-302.4	51.1	34.6	16.58	3.083	
2,700.0	2,671.6	2,699.5	2,662.9	10.0	10.2	-50.05	-24.3	-326.6	54.0	36.5	17.43	3.096	
2,800.0	2,769.4	2,799.4	2,759.8	10.4	10.6	-47.91	-23.9	-350.8	56.9	38.6	18.30	3.109	
2,900.0	2,867.2	2,899.4	2,866.8	10.9	11.0	-45.98	-23.5	-374.9	59.9	40.7	19.18	3.121	
3,000.0	2,965.0	2,999.3	2,953.8	11.3	11.5	-44.24	-23.0	-399.1	62.9	42.9	20.08	3.134	
3,100.0	3,062.8	3,099.2	3,050.7	11.7	11.9	-42.66	-22.6	-423.3	66.0	45.1	20.98	3.147	
3,200.0	3,160.7	3,199.2	3,147.7	12.2	12.4	-41.23	-22.2	-447.5	69.2	47.3	21.90	3.160	
3,300.0	3,258.5	3,299.1	3,244.7	12.6	12.8	-39.92	-21.8	-471.6	72.4	49.6	22.81	3.172	
3,400.0	3,356.3	3,399.0	3,341.6	13.0	13.3	-38.72	-21.3	-495.8	75.6	51.9	23.74	3.185	
3,500.0	3,454.1	3,499.0	3,438.6	13.5	13.7	-37.62	-20.9	-520.0	78.9	54.2	24.67	3.197	
3,600.0	3,551.9	3,598.9	3,535.6	13.9	14.2	-36.60	-20.5	-544.1	82.1	56.5	25.60	3.209	
3,700.0	3,649.7	3,698.9	3,632.5	14.4	14.7	-35.67	-20.1	-568.3	85.4	58.9	26.53	3.221	
3,800.0	3,747.5	3,798.8	3,729.5	14.8	15.1	-34.80	-19.7	-592.5	88.8	61.3	27.47	3.232	
3,900.0	3,845.4	3,898.7	3,826.5	15.3	15.6	-34.00	-19.2	-616.7	92.1	63.7	28.40	3.243	
4,000.0	3,943.2	3,998.7	3,923.4	15.7	16.0	-33.25	-18.8	-640.8	95.5	66.1	29.34	3.254	
4,100.0	4,041.0	4,098.6	4,020.4	16.2	16.5	-32.56	-18.4	-665.0	98.9	68.6	30.28	3.264	
4,200.0	4,138.8	4,198.5	4,117.4	16.6	17.0	-31.91	-18.0	-689.2	102.2	71.0	31.23	3.274	
4,300.0	4,236.6	4,298.5	4,214.3	17.1	17.5	-31.30	-17.5	-713.4	105.6	73.5	32.17	3.284	
4,400.0	4,334.4	4,398.4	4,311.3	17.6	17.9	-30.73	-17.1	-737.5	109.1	75.9	33.11	3.293	
4,500.0	4,432.3	4,498.3	4,408.3	18.0	18.4	-30.20	-16.7	-761.7	112.5	78.4	34.06	3.303	
4,600.0	4,530.1	4,598.3	4,505.2	18.5	18.9	-29.69	-16.3	-785.9	115.9	80.9	35.00	3.311	
4,700.0	4,627.9	4,698.2	4,602.2	18.9	19.4	-29.22	-15.9	-810.0	119.4	83.4	35.95	3.320	
4,800.0	4,725.7	4,798.2	4,699.2	19.4	19.8	-28.77	-15.4	-834.2	122.8	85.9	36.90	3.328	
4,900.0	4,823.5	4,898.1	4,796.1	19.9	20.3	-28.35	-15.0	-858.4	126.3	88.4	37.84	3.336	
5,000.0	4,921.3	4,998.0	4,893.1	20.3	20.8	-27.95	-14.6	-882.6	129.7	90.9	38.79	3.344	
5,100.0	5,019.1	5,098.0	4,990.1	20.8	21.3	-27.57	-14.2	-906.7	133.2	93.5	39.74	3.352	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11347-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
5,200.0	5,117.0	5,197.9	5,087.0	21.2	21.7	-27.21	-13.7	-930.9	136.7	96.0	40.69	3.359	
5,300.0	5,214.8	5,297.8	5,184.0	21.7	22.2	-26.86	-13.3	-955.1	140.1	98.5	41.64	3.366	
5,400.0	5,312.6	5,397.8	5,281.0	22.2	22.7	-26.54	-12.9	-979.3	143.6	101.0	42.59	3.373	
5,500.0	5,410.4	5,497.7	5,378.0	22.6	23.2	-26.23	-12.5	-1,003.4	147.1	103.6	43.54	3.379	
5,600.0	5,508.2	5,597.6	5,474.9	23.1	23.7	-25.93	-12.1	-1,027.6	150.6	106.1	44.49	3.386	
5,700.0	5,606.0	5,697.6	5,571.9	23.6	24.1	-25.65	-11.6	-1,051.8	154.1	108.7	45.44	3.392	
5,800.0	5,703.8	5,797.5	5,668.9	24.0	24.6	-25.38	-11.2	-1,076.0	157.6	111.2	46.39	3.398	
5,900.0	5,801.7	5,897.4	5,765.8	24.5	25.1	-25.12	-10.8	-1,100.1	161.1	113.8	47.34	3.404	
6,000.0	5,899.5	5,997.4	5,862.8	25.0	25.6	-24.87	-10.4	-1,124.3	164.6	116.3	48.29	3.409	
6,100.0	5,997.3	6,097.3	5,959.8	25.4	26.1	-24.64	-9.9	-1,148.5	168.1	118.9	49.24	3.415	
6,200.0	6,095.1	6,197.3	6,056.7	25.9	26.6	-24.41	-9.5	-1,172.6	171.6	121.5	50.19	3.420	
6,300.0	6,192.9	6,297.2	6,153.7	26.4	27.0	-24.19	-9.1	-1,196.8	175.2	124.0	51.14	3.425	
6,344.6	6,236.5	6,341.7	6,196.9	26.6	27.2	-24.10	-8.9	-1,207.6	176.7	125.2	51.56	3.428	
6,400.0	6,290.8	6,397.1	6,250.6	26.8	27.5	-23.95	-8.7	-1,221.0	178.9	126.8	52.08	3.435	
6,500.0	6,389.0	6,497.0	6,347.5	27.3	28.0	-23.54	-8.3	-1,245.1	184.1	131.0	53.08	3.469	
6,600.0	6,487.5	6,596.7	6,444.3	27.7	28.5	-22.96	-7.8	-1,269.3	190.9	136.8	54.12	3.528	
6,700.0	6,586.2	6,696.3	6,541.0	28.2	29.0	-22.23	-7.4	-1,293.4	199.4	144.2	55.19	3.613	
6,800.0	6,685.3	6,795.8	6,637.5	28.6	29.5	-21.39	-7.0	-1,317.4	209.5	153.2	56.27	3.723	
6,900.0	6,784.5	6,895.0	6,733.7	29.0	29.9	-20.47	-6.6	-1,341.4	221.3	163.9	57.35	3.858	
7,000.0	6,884.0	6,994.0	6,829.8	29.4	30.4	-19.52	-6.2	-1,365.4	234.7	176.3	58.43	4.017	
7,100.0	6,983.6	7,092.8	6,925.6	29.8	30.9	-18.55	-5.7	-1,389.3	249.9	190.4	59.50	4.200	
7,200.0	7,083.4	7,191.2	7,021.2	30.2	31.4	-17.58	-5.3	-1,413.1	266.7	206.2	60.53	4.406	
7,300.0	7,183.3	7,294.3	7,121.4	30.5	31.9	-16.63	-4.9	-1,437.1	284.5	222.9	61.58	4.619	
7,400.0	7,283.2	7,397.8	7,222.5	30.8	32.4	-15.78	-4.5	-1,459.4	302.2	239.6	62.54	4.832	
7,500.0	7,383.2	7,501.6	7,324.2	31.1	32.9	-15.02	-4.2	-1,480.0	319.9	256.5	63.40	5.045	
7,544.6	7,427.7	7,548.0	7,369.8	31.2	33.1	-101.71	-4.0	-1,488.5	327.8	264.0	63.71	5.144	
7,600.0	7,483.2	7,605.9	7,426.8	31.2	33.3	-101.32	-3.8	-1,498.7	337.3	273.3	64.03	5.267	
7,700.0	7,583.2	7,710.7	7,530.2	31.2	33.8	-100.73	-3.5	-1,515.7	353.2	288.6	64.59	5.468	
7,800.0	7,683.2	7,816.2	7,634.6	31.2	34.3	-100.24	-3.3	-1,530.9	367.3	302.2	65.09	5.642	
7,900.0	7,783.2	7,922.2	7,739.8	31.2	34.7	-99.85	-3.0	-1,544.2	379.6	314.1	65.55	5.791	
8,000.0	7,883.2	8,028.6	7,845.6	31.3	35.1	-99.53	-2.8	-1,555.6	390.1	324.2	65.96	5.915	
8,100.0	7,983.2	8,135.5	7,952.0	31.3	35.6	-99.28	-2.7	-1,565.1	398.9	332.5	66.33	6.014	
8,200.0	8,083.2	8,242.6	8,058.9	31.3	36.0	-99.09	-2.5	-1,572.6	405.8	339.1	66.64	6.089	
8,300.0	8,183.2	8,350.0	8,166.2	31.3	36.3	-98.96	-2.4	-1,578.1	410.8	343.9	66.90	6.141	
8,400.0	8,283.2	8,457.6	8,273.7	31.4	36.6	-98.87	-2.4	-1,581.6	414.1	347.0	67.09	6.171	
8,500.0	8,383.2	8,565.3	8,381.3	31.4	36.9	-98.84	-2.4	-1,583.1	415.4	348.3	67.14	6.187	
8,600.0	8,483.2	8,667.1	8,483.2	31.4	36.9	-98.84	-2.4	-1,583.2	415.5	348.3	67.18	6.185	
8,700.0	8,583.2	8,767.1	8,583.2	31.4	36.9	-98.84	-2.4	-1,583.2	415.5	348.2	67.23	6.180	
8,800.0	8,683.2	8,867.1	8,683.2	31.5	37.0	-98.84	-2.4	-1,583.2	415.5	348.2	67.28	6.176	
8,900.0	8,783.2	8,967.1	8,783.2	31.5	37.0	-98.84	-2.4	-1,583.2	415.5	348.2	67.32	6.171	
9,000.0	8,883.2	9,067.1	8,883.2	31.5	37.0	-98.84	-2.4	-1,583.2	415.5	348.1	67.37	6.167	
9,100.0	8,983.2	9,167.1	8,983.2	31.5	37.0	-98.84	-2.4	-1,583.2	415.5	348.1	67.42	6.163	
9,200.0	9,083.2	9,267.1	9,083.2	31.6	37.0	-98.84	-2.4	-1,583.2	415.5	348.0	67.47	6.158	
9,300.0	9,183.2	9,367.1	9,183.2	31.6	37.1	-98.84	-2.4	-1,583.2	415.5	348.0	67.52	6.154	
9,400.0	9,283.2	9,467.1	9,283.2	31.6	37.1	-98.84	-2.4	-1,583.2	415.5	347.9	67.56	6.149	
9,500.0	9,383.2	9,567.1	9,383.2	31.7	37.1	-98.84	-2.4	-1,583.2	415.5	347.9	67.61	6.145	
9,600.0	9,483.2	9,667.1	9,483.2	31.7	37.1	-98.84	-2.4	-1,583.2	415.5	347.8	67.66	6.140	
9,700.0	9,583.2	9,767.1	9,583.2	31.7	37.2	-98.84	-2.4	-1,583.2	415.5	347.8	67.71	6.136	
9,800.0	9,683.2	9,867.1	9,683.2	31.7	37.2	-98.84	-2.4	-1,583.2	415.5	347.7	67.76	6.131	
9,900.0	9,783.2	9,967.1	9,783.2	31.8	37.2	-98.84	-2.4	-1,583.2	415.5	347.7	67.81	6.127	
10,000.0	9,883.2	10,067.1	9,883.2	31.8	37.2	-98.84	-2.4	-1,583.2	415.5	347.6	67.87	6.122	
10,100.0	9,983.2	10,167.1	9,983.2	31.8	37.2	-98.84	-2.4	-1,583.2	415.5	347.6	67.92	6.117	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #708H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11347-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
10,200.0	10,083.2	10,267.1	10,083.2	31.9	37.3	-98.84	-2.4	-1,583.2	415.5	347.5	67.97	6.113	
10,300.0	10,183.2	10,367.1	10,183.2	31.9	37.3	-98.84	-2.4	-1,583.2	415.5	347.5	68.02	6.108	
10,400.0	10,283.2	10,467.1	10,283.2	31.9	37.3	-98.84	-2.4	-1,583.2	415.5	347.4	68.07	6.103	
10,500.0	10,383.2	10,567.1	10,383.2	31.9	37.3	-98.84	-2.4	-1,583.2	415.5	347.4	68.13	6.099	
10,600.0	10,483.2	10,667.1	10,483.2	32.0	37.4	-98.84	-2.4	-1,583.2	415.5	347.3	68.18	6.094	
10,700.0	10,583.2	10,767.1	10,583.2	32.0	37.4	-98.84	-2.4	-1,583.2	415.5	347.2	68.23	6.089	
10,800.0	10,683.2	10,867.1	10,683.2	32.0	37.4	-98.84	-2.4	-1,583.2	415.5	347.2	68.29	6.084	
10,900.0	10,783.2	10,967.1	10,783.2	32.1	37.4	-98.84	-2.4	-1,583.2	415.5	347.1	68.34	6.080	
11,000.0	10,883.2	11,067.1	10,883.2	32.1	37.5	-98.84	-2.4	-1,583.2	415.5	347.1	68.39	6.075	
11,100.0	10,983.2	11,167.1	10,983.2	32.1	37.5	-98.84	-2.4	-1,583.2	415.5	347.0	68.45	6.070	
11,200.0	11,083.2	11,267.1	11,083.2	32.2	37.5	-98.84	-2.4	-1,583.2	415.5	347.0	68.50	6.065	
11,300.0	11,183.2	11,370.0	11,186.0	32.2	37.5	-98.76	-1.8	-1,583.2	415.4	346.9	68.49	6.066	
11,400.0	11,283.2	11,481.0	11,295.4	32.2	37.5	-96.29	16.2	-1,583.3	413.3	344.7	68.61	6.025	
11,455.3	11,338.5	11,537.4	11,348.5	32.2	37.5	-93.70	34.9	-1,583.5	411.8	342.8	68.96	5.971	
11,475.0	11,358.2	11,556.4	11,365.8	32.2	37.5	-92.32	42.6	-1,583.5	411.4	342.3	69.10	5.953	
11,500.0	11,383.1	11,580.1	11,387.1	32.2	37.5	-91.08	53.2	-1,583.6	411.1	341.8	69.29	5.933	
11,522.0	11,405.0	11,600.6	11,405.0	32.2	37.5	-90.00	63.2	-1,583.7	411.0	341.5	69.46	5.917	
11,525.0	11,407.9	11,603.4	11,407.4	32.2	37.5	-89.85	64.6	-1,583.7	411.0	341.5	69.48	5.915	
11,550.0	11,432.6	11,626.2	11,426.7	32.2	37.5	-88.63	76.7	-1,583.8	411.1	341.5	69.66	5.902	
11,575.0	11,456.9	11,648.7	11,445.2	32.2	37.5	-87.42	89.6	-1,583.8	411.5	341.6	69.83	5.892	
11,600.0	11,481.0	11,670.8	11,462.7	32.2	37.5	-86.22	103.0	-1,583.9	412.0	342.0	70.00	5.886	
11,625.0	11,504.6	11,692.6	11,479.4	32.2	37.5	-85.04	117.0	-1,584.0	412.8	342.6	70.15	5.884	
11,650.0	11,527.8	11,714.0	11,495.1	32.2	37.5	-83.88	131.6	-1,584.1	413.7	343.4	70.30	5.884	
11,675.0	11,550.5	11,735.2	11,510.0	32.2	37.5	-82.73	146.6	-1,584.2	414.8	344.3	70.44	5.888	
11,700.0	11,572.6	11,756.1	11,524.0	32.2	37.6	-81.61	162.0	-1,584.4	416.0	345.4	70.57	5.895	
11,725.0	11,594.1	11,776.7	11,537.2	32.2	37.6	-80.52	177.9	-1,584.5	417.4	346.7	70.68	5.905	
11,750.0	11,614.8	11,797.1	11,549.6	32.2	37.6	-79.45	194.1	-1,584.6	418.8	348.1	70.79	5.917	
11,775.0	11,634.8	11,817.2	11,561.1	32.2	37.6	-78.42	210.7	-1,584.7	420.4	349.5	70.89	5.931	
11,800.0	11,654.0	11,837.2	11,571.8	32.3	37.6	-77.41	227.5	-1,584.8	422.1	351.1	70.98	5.946	
11,825.0	11,672.4	11,856.9	11,581.7	32.3	37.6	-76.44	244.6	-1,584.9	423.8	352.8	71.06	5.964	
11,850.0	11,689.8	11,875.0	11,590.1	32.3	37.6	-75.56	260.6	-1,585.1	425.6	354.5	71.15	5.982	
11,875.0	11,706.2	11,895.9	11,599.1	32.3	37.6	-74.60	279.5	-1,585.2	427.4	356.2	71.20	6.003	
11,900.0	11,721.6	11,915.2	11,606.6	32.3	37.6	-73.74	297.2	-1,585.3	429.3	358.0	71.26	6.024	
11,925.0	11,736.0	11,934.3	11,613.4	32.3	37.6	-72.92	315.1	-1,585.4	431.1	359.8	71.31	6.045	
11,950.0	11,749.3	11,953.3	11,619.4	32.3	37.6	-72.14	333.1	-1,585.6	432.9	361.6	71.36	6.067	
11,975.0	11,761.5	11,975.0	11,625.4	32.3	37.6	-71.33	354.0	-1,585.7	434.7	363.4	71.38	6.090	
12,000.0	11,772.5	11,991.0	11,629.2	32.3	37.6	-70.71	369.5	-1,585.8	436.5	365.1	71.43	6.111	
12,025.0	11,782.3	12,009.6	11,632.9	32.3	37.6	-70.06	387.7	-1,586.0	438.2	366.7	71.46	6.132	
12,050.0	11,791.0	12,028.2	11,636.0	32.3	37.7	-69.45	406.0	-1,586.1	439.8	368.3	71.48	6.153	
12,075.0	11,798.3	12,046.7	11,638.3	32.4	37.7	-68.89	424.4	-1,586.2	441.4	369.9	71.49	6.174	
12,100.0	11,804.4	12,065.1	11,639.9	32.4	37.7	-68.37	442.7	-1,586.3	442.8	371.3	71.50	6.194	
12,125.0	11,809.3	12,083.4	11,640.8	32.4	37.7	-67.90	461.0	-1,586.5	444.2	372.7	71.50	6.213	
12,150.0	11,812.8	12,103.2	11,641.0	32.4	37.7	-67.45	480.8	-1,586.6	445.5	373.9	71.50	6.230	
12,175.0	11,815.0	12,128.1	11,641.0	32.4	37.7	-67.09	505.7	-1,586.8	446.3	374.8	71.53	6.240	
12,200.0	11,816.0	12,153.0	11,641.0	32.4	37.8	-66.94	530.7	-1,587.0	446.7	375.1	71.57	6.242	
12,205.3	11,816.0	12,158.4	11,641.0	32.4	37.8	-66.94	536.0	-1,587.0	446.7	375.1	71.58	6.241	
12,300.0	11,816.0	12,253.0	11,641.0	32.5	37.9	-66.94	630.6	-1,587.7	446.7	374.9	71.76	6.225	
12,400.0	11,816.0	12,353.0	11,641.0	32.7	38.0	-66.94	730.6	-1,588.4	446.7	374.7	71.98	6.205	
12,500.0	11,816.0	12,453.0	11,641.0	32.8	38.1	-66.94	830.6	-1,589.1	446.7	374.5	72.24	6.183	
12,600.0	11,816.0	12,553.0	11,641.0	33.0	38.2	-66.94	930.6	-1,589.8	446.7	374.2	72.53	6.159	
12,700.0	11,816.0	12,653.0	11,641.0	33.1	38.4	-66.94	1,030.6	-1,590.5	446.7	373.8	72.85	6.132	
12,800.0	11,816.0	12,753.0	11,641.0	33.3	38.6	-66.94	1,130.6	-1,591.2	446.7	373.5	73.20	6.103	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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	Rule Assigned:				Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,900.0	11,816.0	12,853.0	11,641.0	33.5	38.8	-66.94	1,230.6	-1,591.9	446.7	373.1	73.57	6.071	
13,000.0	11,816.0	12,953.0	11,641.0	33.7	39.0	-66.94	1,330.6	-1,592.6	446.7	372.7	73.98	6.038	
13,100.0	11,816.0	13,053.0	11,641.0	34.0	39.2	-66.94	1,430.6	-1,593.3	446.7	372.3	74.42	6.003	
13,200.0	11,816.0	13,153.0	11,641.0	34.2	39.4	-66.94	1,530.6	-1,594.1	446.7	371.8	74.88	5.965	
13,300.0	11,816.0	13,253.0	11,641.0	34.5	39.7	-66.94	1,630.6	-1,594.8	446.7	371.3	75.37	5.927	
13,400.0	11,816.0	13,353.0	11,641.0	34.8	39.9	-66.94	1,730.6	-1,595.5	446.7	370.8	75.89	5.886	
13,500.0	11,816.0	13,453.0	11,641.0	35.1	40.2	-66.94	1,830.6	-1,596.2	446.7	370.3	76.44	5.844	
13,600.0	11,816.0	13,553.0	11,641.0	35.4	40.5	-66.94	1,930.6	-1,596.9	446.7	369.7	77.01	5.801	
13,700.0	11,816.0	13,653.0	11,641.0	35.7	40.8	-66.94	2,030.6	-1,597.6	446.7	369.1	77.60	5.756	
13,800.0	11,816.0	13,753.0	11,641.0	36.1	41.1	-66.94	2,130.6	-1,598.3	446.7	368.5	78.22	5.710	
13,900.0	11,816.0	13,853.0	11,641.0	36.4	41.4	-66.94	2,230.6	-1,599.0	446.7	367.8	78.87	5.664	
14,000.0	11,816.0	13,953.0	11,641.0	36.8	41.7	-66.94	2,330.6	-1,599.7	446.7	367.2	79.54	5.616	
14,100.0	11,816.0	14,053.0	11,641.0	37.2	42.1	-66.94	2,430.6	-1,600.4	446.7	366.5	80.23	5.568	
14,200.0	11,816.0	14,153.0	11,641.0	37.6	42.4	-66.94	2,530.6	-1,601.1	446.7	365.8	80.95	5.518	
14,300.0	11,816.0	14,253.0	11,641.0	38.0	42.8	-66.94	2,630.6	-1,601.9	446.7	365.0	81.68	5.469	
14,400.0	11,816.0	14,353.0	11,641.0	38.4	43.2	-66.94	2,730.6	-1,602.6	446.7	364.3	82.44	5.418	
14,500.0	11,816.0	14,453.0	11,641.0	38.8	43.6	-66.94	2,830.6	-1,603.3	446.7	363.5	83.22	5.368	
14,600.0	11,816.0	14,553.0	11,641.0	39.3	44.0	-66.94	2,930.6	-1,604.0	446.7	362.7	84.02	5.317	
14,700.0	11,816.0	14,653.0	11,641.0	39.7	44.4	-66.94	3,030.6	-1,604.7	446.7	361.9	84.84	5.265	
14,800.0	11,816.0	14,753.0	11,641.0	40.2	44.8	-66.94	3,130.6	-1,605.4	446.7	361.0	85.67	5.214	
14,900.0	11,816.0	14,853.0	11,641.0	40.6	45.2	-66.94	3,230.6	-1,606.1	446.7	360.2	86.53	5.162	
15,000.0	11,816.0	14,953.0	11,641.0	41.1	45.7	-66.94	3,330.6	-1,606.8	446.7	359.3	87.40	5.111	
15,100.0	11,816.0	15,053.0	11,641.0	41.6	46.1	-66.94	3,430.6	-1,607.5	446.7	358.4	88.29	5.059	
15,200.0	11,816.0	15,153.0	11,641.0	42.1	46.5	-66.94	3,530.6	-1,608.2	446.7	357.5	89.20	5.008	
15,300.0	11,816.0	15,253.0	11,641.0	42.6	47.0	-66.94	3,630.6	-1,608.9	446.7	356.6	90.13	4.956	
15,400.0	11,816.0	15,353.0	11,641.0	43.1	47.5	-66.94	3,730.6	-1,609.6	446.7	355.6	91.06	4.905	
15,500.0	11,816.0	15,453.0	11,641.0	43.6	47.9	-66.94	3,830.6	-1,610.4	446.7	354.7	92.02	4.854	
15,600.0	11,816.0	15,553.0	11,641.0	44.1	48.4	-66.94	3,930.6	-1,611.1	446.7	353.7	92.99	4.804	
15,700.0	11,816.0	15,653.0	11,641.0	44.6	48.9	-66.94	4,030.6	-1,611.8	446.7	352.7	93.97	4.753	
15,800.0	11,816.0	15,753.0	11,641.0	45.2	49.4	-66.94	4,130.6	-1,612.5	446.7	351.7	94.97	4.703	
15,900.0	11,816.0	15,853.0	11,641.0	45.7	49.9	-66.94	4,230.6	-1,613.2	446.7	350.7	95.98	4.654	
16,000.0	11,816.0	15,953.0	11,641.0	46.3	50.4	-66.94	4,330.6	-1,613.9	446.7	349.7	97.01	4.605	
16,100.0	11,816.0	16,053.0	11,641.0	46.8	50.9	-66.94	4,430.6	-1,614.6	446.7	348.7	98.05	4.556	
16,200.0	11,816.0	16,153.0	11,641.0	47.4	51.5	-66.94	4,530.6	-1,615.3	446.7	347.6	99.10	4.508	
16,300.0	11,816.0	16,253.0	11,641.0	47.9	52.0	-66.94	4,630.6	-1,616.0	446.7	346.5	100.16	4.460	
16,400.0	11,816.0	16,353.0	11,641.0	48.5	52.5	-66.94	4,730.6	-1,616.7	446.7	345.5	101.23	4.413	
16,500.0	11,816.0	16,453.0	11,641.0	49.1	53.1	-66.94	4,830.6	-1,617.4	446.7	344.4	102.31	4.366	
16,600.0	11,816.0	16,553.0	11,641.0	49.7	53.6	-66.94	4,930.6	-1,618.2	446.7	343.3	103.41	4.320	
16,700.0	11,816.0	16,653.0	11,641.0	50.3	54.1	-66.94	5,030.6	-1,618.9	446.7	342.2	104.51	4.274	
16,800.0	11,816.0	16,753.0	11,641.0	50.8	54.7	-66.94	5,130.6	-1,619.6	446.7	341.1	105.63	4.229	
16,900.0	11,816.0	16,853.0	11,641.0	51.4	55.3	-66.94	5,230.6	-1,620.3	446.7	339.9	106.76	4.184	
17,000.0	11,816.0	16,953.0	11,641.0	52.0	55.8	-66.94	5,330.6	-1,621.0	446.7	338.8	107.89	4.140	
17,100.0	11,816.0	17,053.0	11,641.0	52.6	56.4	-66.94	5,430.6	-1,621.7	446.7	337.7	109.03	4.097	
17,200.0	11,816.0	17,153.0	11,641.0	53.2	57.0	-66.94	5,530.6	-1,622.4	446.7	336.5	110.19	4.054	
17,300.0	11,816.0	17,253.0	11,641.0	53.9	57.5	-66.94	5,630.6	-1,623.1	446.7	335.4	111.35	4.012	
17,400.0	11,816.0	17,353.0	11,641.0	54.5	58.1	-66.94	5,730.6	-1,623.8	446.7	334.2	112.52	3.970	
17,500.0	11,816.0	17,453.0	11,641.0	55.1	58.7	-66.94	5,830.6	-1,624.5	446.7	333.0	113.70	3.929	
17,600.0	11,816.0	17,553.0	11,641.0	55.7	59.3	-66.94	5,930.6	-1,625.2	446.7	331.8	114.88	3.888	
17,700.0	11,816.0	17,653.0	11,641.0	56.3	59.9	-66.94	6,030.6	-1,625.9	446.7	330.6	116.08	3.848	
17,800.0	11,816.0	17,753.0	11,641.0	57.0	60.5	-66.94	6,130.6	-1,626.7	446.7	329.4	117.28	3.809	
17,900.0	11,816.0	17,853.0	11,641.0	57.6	61.1	-66.94	6,230.6	-1,627.4	446.7	328.2	118.48	3.770	
18,000.0	11,816.0	17,953.0	11,641.0	58.2	61.7	-66.94	6,330.6	-1,628.1	446.7	327.0	119.70	3.732	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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			Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
18,100.0	11,816.0	18,053.0	11,641.0	58.9	62.3	-66.94	6,430.5	-1,628.8	446.7	325.8	120.92	3.694	
18,200.0	11,816.0	18,153.0	11,641.0	59.5	62.9	-66.94	6,530.5	-1,629.5	446.7	324.6	122.15	3.657	
18,300.0	11,816.0	18,253.0	11,641.0	60.2	63.5	-66.94	6,630.5	-1,630.2	446.7	323.3	123.38	3.620	
18,400.0	11,816.0	18,353.0	11,641.0	60.8	64.1	-66.94	6,730.5	-1,630.9	446.7	322.1	124.62	3.584	
18,500.0	11,816.0	18,453.0	11,641.0	61.5	64.8	-66.94	6,830.5	-1,631.6	446.7	320.8	125.87	3.549	
18,600.0	11,816.0	18,553.0	11,641.0	62.1	65.4	-66.94	6,930.5	-1,632.3	446.7	319.6	127.12	3.514	
18,700.0	11,816.0	18,653.0	11,641.0	62.8	66.0	-66.94	7,030.5	-1,633.0	446.7	318.3	128.38	3.480	
18,800.0	11,816.0	18,753.0	11,641.0	63.4	66.6	-66.94	7,130.5	-1,633.7	446.7	317.1	129.64	3.446	
18,900.0	11,816.0	18,853.0	11,641.0	64.1	67.3	-66.94	7,230.5	-1,634.5	446.7	315.8	130.91	3.412	
19,000.0	11,816.0	18,953.0	11,641.0	64.7	67.9	-66.94	7,330.5	-1,635.2	446.7	314.5	132.19	3.379	
19,100.0	11,816.0	19,053.0	11,641.0	65.4	68.6	-66.94	7,430.5	-1,635.9	446.7	313.2	133.46	3.347	
19,200.0	11,816.0	19,153.0	11,641.0	66.1	69.2	-66.94	7,530.5	-1,636.6	446.7	312.0	134.75	3.315	
19,300.0	11,816.0	19,253.0	11,641.0	66.7	69.8	-66.94	7,630.5	-1,637.3	446.7	310.7	136.04	3.284	
19,400.0	11,816.0	19,353.0	11,641.0	67.4	70.5	-66.94	7,730.5	-1,638.0	446.7	309.4	137.33	3.253	
19,500.0	11,816.0	19,453.0	11,641.0	68.1	71.1	-66.94	7,830.5	-1,638.7	446.7	308.1	138.63	3.222	
19,600.0	11,816.0	19,553.0	11,641.0	68.8	71.8	-66.94	7,930.5	-1,639.4	446.7	306.8	139.93	3.192	
19,700.0	11,816.0	19,653.0	11,641.0	69.4	72.4	-66.94	8,030.5	-1,640.1	446.7	305.5	141.23	3.163	
19,800.0	11,816.0	19,753.0	11,641.0	70.1	73.1	-66.94	8,130.5	-1,640.8	446.7	304.2	142.54	3.134	
19,900.0	11,816.0	19,853.0	11,641.0	70.8	73.7	-66.94	8,230.5	-1,641.5	446.7	302.8	143.86	3.105	
20,000.0	11,816.0	19,953.0	11,641.0	71.5	74.4	-66.94	8,330.5	-1,642.2	446.7	301.5	145.18	3.077	
20,100.0	11,816.0	20,053.0	11,641.0	72.1	75.1	-66.94	8,430.5	-1,643.0	446.7	300.2	146.50	3.049	
20,200.0	11,816.0	20,153.0	11,641.0	72.8	75.7	-66.94	8,530.4	-1,643.7	446.7	298.9	147.82	3.022	
20,300.0	11,816.0	20,253.0	11,641.0	73.5	76.4	-66.94	8,630.4	-1,644.4	446.7	297.6	149.15	2.995	
20,400.0	11,816.0	20,353.0	11,641.0	74.2	77.0	-66.94	8,730.4	-1,645.1	446.7	296.2	150.48	2.968	
20,500.0	11,816.0	20,453.0	11,641.0	74.9	77.7	-66.94	8,830.4	-1,645.8	446.7	294.9	151.82	2.942	
20,600.0	11,816.0	20,553.0	11,641.0	75.6	78.4	-66.94	8,930.4	-1,646.5	446.7	293.5	153.16	2.917	
20,700.0	11,816.0	20,653.0	11,641.0	76.3	79.1	-66.94	9,030.4	-1,647.2	446.7	292.2	154.50	2.891	
20,800.0	11,816.0	20,753.0	11,641.0	77.0	79.7	-66.94	9,130.4	-1,647.9	446.7	290.9	155.84	2.866	
20,900.0	11,816.0	20,853.0	11,641.0	77.7	80.4	-66.94	9,230.4	-1,648.6	446.7	289.5	157.19	2.842	
21,000.0	11,816.0	20,953.0	11,641.0	78.4	81.1	-66.94	9,330.4	-1,649.3	446.7	288.2	158.54	2.818	
21,100.0	11,816.0	21,053.0	11,641.0	79.1	81.7	-66.94	9,430.4	-1,650.0	446.7	286.8	159.90	2.794	
21,200.0	11,816.0	21,153.0	11,641.0	79.8	82.4	-66.94	9,530.4	-1,650.8	446.7	285.4	161.25	2.770	
21,300.0	11,816.0	21,253.0	11,641.0	80.5	83.1	-66.94	9,630.4	-1,651.5	446.7	284.1	162.61	2.747	
21,400.0	11,816.0	21,353.0	11,641.0	81.2	83.8	-66.94	9,730.4	-1,652.2	446.7	282.7	163.98	2.724	
21,500.0	11,816.0	21,453.0	11,641.0	81.9	84.5	-66.94	9,830.4	-1,652.9	446.7	281.4	165.34	2.702	
21,600.0	11,816.0	21,553.0	11,641.0	82.6	85.2	-66.94	9,930.4	-1,653.6	446.7	280.0	166.71	2.680	
21,700.0	11,816.0	21,653.0	11,641.0	83.3	85.8	-66.94	10,030.4	-1,654.3	446.7	278.6	168.08	2.658	
21,800.0	11,816.0	21,753.0	11,641.0	84.0	86.5	-66.94	10,130.4	-1,655.0	446.7	277.3	169.45	2.636	
21,900.0	11,816.0	21,853.0	11,641.0	84.7	87.2	-66.94	10,230.4	-1,655.7	446.7	275.9	170.82	2.615	
22,000.0	11,816.0	21,953.0	11,641.0	85.4	87.9	-66.94	10,330.4	-1,656.4	446.7	274.5	172.20	2.594	
22,100.0	11,816.0	22,053.0	11,641.0	86.1	88.6	-66.94	10,430.4	-1,657.1	446.7	273.1	173.58	2.573	
22,133.2	11,816.0	22,086.2	11,641.0	86.3	88.8	-66.94	10,463.6	-1,657.4	446.7	272.7	174.04	2.567	
22,138.4	11,816.0	22,091.5	11,641.0	86.4	88.9	-66.94	10,468.8	-1,657.4	446.7	272.6	174.11	2.566	
22,183.2	11,816.0	22,135.2	11,641.0	86.7	89.2	-66.94	10,512.6	-1,657.7	446.7	272.0	174.74	2.556 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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #710H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11214-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 usft
Reference	Offset	Semi Major Axis	Distance	Rule Assigned:									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	-0.48	30.0	-0.2	30.0				
100.0	100.0	100.0	100.0	3.1	3.1	-0.48	30.0	-0.2	30.0	23.5	6.54	4.590	
200.0	200.0	200.0	200.0	3.2	3.2	-0.48	30.0	-0.2	30.0	23.2	6.79	4.421	
300.0	300.0	300.0	300.0	3.3	3.3	-0.48	30.0	-0.2	30.0	23.0	7.03	4.266	
400.0	400.0	400.0	400.0	3.4	3.4	-0.48	30.0	-0.2	30.0	22.7	7.28	4.122	
500.0	500.0	500.0	500.0	3.6	3.6	-0.48	30.0	-0.2	30.0	22.5	7.52	3.989	
600.0	600.0	600.0	600.0	3.7	3.7	-0.48	30.0	-0.2	30.0	22.2	7.76	3.864	
700.0	700.0	700.0	700.0	3.8	3.8	-0.48	30.0	-0.2	30.0	22.0	8.00	3.748	
800.0	800.0	800.0	800.0	3.9	3.9	-0.48	30.0	-0.2	30.0	21.8	8.24	3.639	
900.0	900.0	900.0	900.0	4.0	4.0	-0.48	30.0	-0.2	30.0	21.5	8.48	3.537	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	-0.48	30.0	-0.2	30.0	21.3	8.72	3.440 CC	
1,100.0	1,100.0	1,099.9	1,099.9	4.3	4.3	86.53	30.2	-2.0	30.1	21.1	8.92	3.369	
1,200.0	1,199.8	1,199.8	1,199.6	4.5	4.5	86.57	30.6	-7.2	30.2	21.0	9.26	3.267	
1,300.0	1,299.5	1,299.7	1,299.2	4.9	4.9	86.62	31.4	-15.9	30.5	21.0	9.59	3.186 ES	
1,400.0	1,398.7	1,399.6	1,398.3	5.2	5.2	86.70	32.4	-28.0	31.0	21.1	9.91	3.125	
1,500.0	1,497.5	1,499.6	1,497.3	5.5	5.4	89.93	33.6	-41.8	31.4	21.2	10.23	3.070	
1,600.0	1,595.6	1,599.4	1,596.2	5.9	5.7	99.24	34.8	-55.7	32.3	21.7	10.58	3.054	
1,700.0	1,693.4	1,699.2	1,695.0	6.2	6.0	110.58	36.1	-69.5	34.6	23.5	11.07	3.124	
1,800.0	1,791.3	1,798.9	1,793.8	6.5	6.3	120.20	37.3	-83.3	38.0	26.3	11.70	3.252	
1,900.0	1,889.1	1,898.7	1,892.5	6.9	6.7	128.04	38.5	-97.2	42.4	30.0	12.42	3.412	
2,000.0	1,986.9	1,998.5	1,991.3	7.2	7.0	134.34	39.7	-111.0	47.4	34.2	13.20	3.589	
2,100.0	2,084.7	2,098.2	2,090.1	7.6	7.3	139.39	40.9	-124.8	52.8	38.8	14.00	3.772	
2,200.0	2,182.5	2,198.0	2,188.9	8.0	7.7	143.48	42.1	-138.7	58.6	43.8	14.81	3.954	
2,300.0	2,280.3	2,297.7	2,287.7	8.4	8.1	146.82	43.3	-152.5	64.6	48.9	15.64	4.129	
2,400.0	2,378.1	2,397.5	2,386.5	8.8	8.4	149.58	44.5	-166.3	70.8	54.3	16.47	4.297	
2,500.0	2,476.0	2,497.2	2,485.2	9.2	8.8	151.90	45.7	-180.1	77.1	59.8	17.31	4.455	
2,600.0	2,573.8	2,597.0	2,584.0	9.6	9.2	153.86	46.9	-194.0	83.6	65.4	18.15	4.603	
2,700.0	2,671.6	2,696.7	2,682.8	10.0	9.6	155.54	48.2	-207.8	90.1	71.1	19.00	4.741	
2,800.0	2,769.4	2,796.5	2,781.6	10.4	9.9	156.99	49.4	-221.6	96.7	76.8	19.85	4.870	
2,900.0	2,867.2	2,896.2	2,880.4	10.9	10.3	158.26	50.6	-235.5	103.3	82.6	20.70	4.991	
3,000.0	2,965.0	2,996.0	2,979.2	11.3	10.7	159.37	51.8	-249.3	110.0	88.5	21.56	5.103	
3,100.0	3,062.8	3,095.8	3,078.0	11.7	11.1	160.36	53.0	-263.1	116.7	94.3	22.42	5.208	
3,200.0	3,160.7	3,195.5	3,176.7	12.2	11.5	161.23	54.2	-277.0	123.5	100.2	23.28	5.305	
3,300.0	3,258.5	3,295.3	3,275.5	12.6	11.9	162.02	55.4	-290.8	130.3	106.1	24.14	5.396	
3,400.0	3,356.3	3,395.0	3,374.3	13.0	12.3	162.73	56.6	-304.6	137.1	112.1	25.01	5.481	
3,500.0	3,454.1	3,494.8	3,473.1	13.5	12.7	163.37	57.8	-318.5	143.9	118.0	25.88	5.561	
3,600.0	3,551.9	3,594.5	3,571.9	13.9	13.2	163.95	59.0	-332.3	150.7	124.0	26.75	5.636	
3,700.0	3,649.7	3,694.3	3,670.7	14.4	13.6	164.48	60.3	-346.1	157.6	130.0	27.62	5.706	
3,800.0	3,747.5	3,794.0	3,769.4	14.8	14.0	164.97	61.5	-359.9	164.5	136.0	28.49	5.772	
3,900.0	3,845.4	3,893.8	3,868.2	15.3	14.4	165.42	62.7	-373.8	171.3	142.0	29.37	5.834	
4,000.0	3,943.2	3,993.5	3,967.0	15.7	14.8	165.83	63.9	-387.6	178.2	148.0	30.24	5.893	
4,100.0	4,041.0	4,093.3	4,065.8	16.2	15.2	166.22	65.1	-401.4	185.1	154.0	31.12	5.948	
4,200.0	4,138.8	4,193.1	4,164.6	16.6	15.6	166.57	66.3	-415.3	192.0	160.0	32.00	6.000	
4,300.0	4,236.6	4,292.8	4,263.4	17.1	16.0	166.90	67.5	-429.1	198.9	166.0	32.88	6.049	
4,400.0	4,334.4	4,392.6	4,362.1	17.6	16.5	167.21	68.7	-442.9	205.8	172.1	33.77	6.096	
4,500.0	4,432.3	4,492.3	4,460.9	18.0	16.9	167.50	69.9	-456.8	212.8	178.1	34.65	6.141	
4,600.0	4,530.1	4,592.1	4,559.7	18.5	17.3	167.77	71.1	-470.6	219.7	184.2	35.53	6.183	
4,700.0	4,627.9	4,691.8	4,658.5	18.9	17.7	168.03	72.4	-484.4	226.6	190.2	36.42	6.223	
4,800.0	4,725.7	4,791.6	4,757.3	19.4	18.1	168.26	73.6	-498.2	233.6	196.3	37.30	6.261	
4,900.0	4,823.5	4,891.3	4,856.1	19.9	18.6	168.49	74.8	-512.1	240.5	202.3	38.19	6.297	
5,000.0	4,921.3	4,991.1	4,954.8	20.3	19.0	168.70	76.0	-525.9	247.4	208.4	39.08	6.332	
5,100.0	5,019.1	5,090.8	5,053.6	20.8	19.4	168.90	77.2	-539.7	254.4	214.4	39.97	6.365	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #710H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11214-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
5,200.0	5,117.0	5,190.6	5,152.4	21.2	19.8	169.09	78.4	-553.6	261.3	220.5	40.86	6.397	
5,300.0	5,214.8	5,290.4	5,251.2	21.7	20.2	169.27	79.6	-567.4	268.3	226.5	41.75	6.427	
5,400.0	5,312.6	5,390.1	5,350.0	22.2	20.7	169.44	80.8	-581.2	275.2	232.6	42.64	6.456	
5,500.0	5,410.4	5,489.9	5,448.8	22.6	21.1	169.61	82.0	-595.1	282.2	238.7	43.53	6.483	
5,600.0	5,508.2	5,589.6	5,547.5	23.1	21.5	169.76	83.2	-608.9	289.2	244.7	44.42	6.510	
5,700.0	5,606.0	5,689.4	5,646.3	23.6	21.9	169.91	84.5	-622.7	296.1	250.8	45.31	6.535	
5,800.0	5,703.8	5,789.1	5,745.1	24.0	22.4	170.05	85.7	-636.5	303.1	256.9	46.20	6.560	
5,900.0	5,801.7	5,888.9	5,843.9	24.5	22.8	170.19	86.9	-650.4	310.0	262.9	47.09	6.583	
6,000.0	5,899.5	5,988.6	5,942.7	25.0	23.2	170.31	88.1	-664.2	317.0	269.0	47.99	6.606	
6,100.0	5,997.3	6,088.4	6,041.5	25.4	23.6	170.44	89.3	-678.0	324.0	275.1	48.88	6.628	
6,200.0	6,095.1	6,185.5	6,137.7	25.9	24.0	170.56	90.5	-691.3	331.1	281.4	49.74	6.657	
6,300.0	6,192.9	6,279.8	6,231.2	26.4	24.4	170.72	91.5	-702.9	339.7	289.1	50.57	6.717	
6,344.6	6,236.5	6,321.6	6,272.8	26.6	24.6	170.80	91.9	-707.5	344.0	293.1	50.93	6.755	
6,400.0	6,290.8	6,373.7	6,324.6	26.8	24.8	170.92	92.3	-712.9	349.6	298.2	51.37	6.806	
6,500.0	6,389.0	6,467.5	6,418.0	27.3	25.2	171.12	93.1	-721.3	359.6	307.4	52.15	6.895	
6,600.0	6,487.5	6,561.2	6,511.4	27.7	25.5	171.33	93.7	-728.2	369.4	316.5	52.89	6.985	
6,700.0	6,586.2	6,654.7	6,604.8	28.2	25.8	171.52	94.2	-733.6	379.1	325.6	53.59	7.076	
6,800.0	6,685.3	6,748.0	6,698.1	28.6	26.2	171.71	94.5	-737.5	388.8	334.5	54.23	7.168	
6,900.0	6,784.5	6,841.3	6,791.3	29.0	26.4	171.90	94.7	-739.8	398.3	343.4	54.82	7.264	
7,000.0	6,884.0	6,934.4	6,884.4	29.4	26.6	172.09	94.8	-740.7	407.6	352.3	55.31	7.370	
7,100.0	6,983.6	7,033.7	6,983.6	29.8	26.6	172.26	94.8	-740.7	416.2	360.4	55.74	7.466	
7,200.0	7,083.4	7,133.4	7,083.4	30.2	26.7	172.39	94.8	-740.7	423.0	366.8	56.17	7.531	
7,300.0	7,183.3	7,233.3	7,183.3	30.5	26.7	172.49	94.8	-740.7	428.1	371.5	56.56	7.569	
7,400.0	7,283.2	7,333.2	7,283.2	30.8	26.7	172.56	94.8	-740.7	431.5	374.5	56.92	7.580	
7,500.0	7,383.2	7,433.2	7,383.2	31.1	26.8	172.59	94.8	-740.7	433.1	375.9	57.22	7.569	
7,544.6	7,427.7	7,477.8	7,427.7	31.2	26.8	85.59	94.8	-740.7	433.3	376.0	57.28	7.564	
7,600.0	7,483.2	7,533.2	7,483.2	31.2	26.8	85.59	94.8	-740.7	433.3	376.0	57.31	7.561	
7,700.0	7,583.2	7,633.2	7,583.2	31.2	26.8	85.59	94.8	-740.7	433.3	375.9	57.36	7.554	
7,800.0	7,683.2	7,733.2	7,683.2	31.2	26.8	85.59	94.8	-740.7	433.3	375.9	57.41	7.547	
7,900.0	7,783.2	7,833.2	7,783.2	31.2	26.9	85.59	94.8	-740.7	433.3	375.8	57.47	7.539	
8,000.0	7,883.2	7,933.2	7,883.2	31.3	26.9	85.59	94.8	-740.7	433.3	375.7	57.52	7.532	
8,100.0	7,983.2	8,033.2	7,983.2	31.3	26.9	85.59	94.8	-740.7	433.3	375.7	57.58	7.525	
8,200.0	8,083.2	8,133.2	8,083.2	31.3	27.0	85.59	94.8	-740.7	433.3	375.6	57.63	7.518	
8,300.0	8,183.2	8,233.2	8,183.2	31.3	27.0	85.59	94.8	-740.7	433.3	375.6	57.69	7.511	
8,400.0	8,283.2	8,333.2	8,283.2	31.4	27.0	85.59	94.8	-740.7	433.3	375.5	57.74	7.503	
8,500.0	8,383.2	8,433.2	8,383.2	31.4	27.1	85.59	94.8	-740.7	433.3	375.5	57.80	7.496	
8,600.0	8,483.2	8,533.2	8,483.2	31.4	27.1	85.59	94.8	-740.7	433.3	375.4	57.86	7.489	
8,700.0	8,583.2	8,633.2	8,583.2	31.4	27.1	85.59	94.8	-740.7	433.3	375.4	57.91	7.481	
8,800.0	8,683.2	8,733.2	8,683.2	31.5	27.2	85.59	94.8	-740.7	433.3	375.3	57.97	7.474	
8,900.0	8,783.2	8,833.2	8,783.2	31.5	27.2	85.59	94.8	-740.7	433.3	375.2	58.03	7.466	
9,000.0	8,883.2	8,933.2	8,883.2	31.5	27.2	85.59	94.8	-740.7	433.3	375.2	58.09	7.459	
9,100.0	8,983.2	9,033.2	8,983.2	31.5	27.3	85.59	94.8	-740.7	433.3	375.1	58.15	7.451	
9,200.0	9,083.2	9,133.2	9,083.2	31.6	27.3	85.59	94.8	-740.7	433.3	375.1	58.21	7.444	
9,300.0	9,183.2	9,233.2	9,183.2	31.6	27.3	85.59	94.8	-740.7	433.3	375.0	58.27	7.436	
9,400.0	9,283.2	9,333.2	9,283.2	31.6	27.4	85.59	94.8	-740.7	433.3	374.9	58.33	7.428	
9,500.0	9,383.2	9,433.2	9,383.2	31.7	27.4	85.59	94.8	-740.7	433.3	374.9	58.39	7.421	
9,600.0	9,483.2	9,533.2	9,483.2	31.7	27.4	85.59	94.8	-740.7	433.3	374.8	58.45	7.413	
9,700.0	9,583.2	9,633.2	9,583.2	31.7	27.5	85.59	94.8	-740.7	433.3	374.8	58.51	7.405	
9,800.0	9,683.2	9,733.2	9,683.2	31.7	27.5	85.59	94.8	-740.7	433.3	374.7	58.57	7.397	
9,900.0	9,783.2	9,833.2	9,783.2	31.8	27.5	85.59	94.8	-740.7	433.3	374.6	58.63	7.390	
10,000.0	9,883.2	9,933.2	9,883.2	31.8	27.6	85.59	94.8	-740.7	433.3	374.6	58.70	7.382	
10,100.0	9,983.2	10,033.2	9,983.2	31.8	27.6	85.59	94.8	-740.7	433.3	374.5	58.76	7.374	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #710H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11214-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
10,200.0	10,083.2	10,133.2	10,083.2	31.9	27.7	85.59	94.8	-740.7	433.3	374.4	58.82	7.366	
10,300.0	10,183.2	10,233.2	10,183.2	31.9	27.7	85.59	94.8	-740.7	433.3	374.4	58.88	7.358	
10,400.0	10,283.2	10,333.2	10,283.2	31.9	27.7	85.59	94.8	-740.7	433.3	374.3	58.95	7.350	
10,500.0	10,383.2	10,433.2	10,383.2	31.9	27.8	85.59	94.8	-740.7	433.3	374.3	59.01	7.342	
10,600.0	10,483.2	10,533.2	10,483.2	32.0	27.8	85.59	94.8	-740.7	433.3	374.2	59.08	7.334	
10,700.0	10,583.2	10,633.2	10,583.2	32.0	27.8	85.59	94.8	-740.7	433.3	374.1	59.14	7.326	
10,800.0	10,683.2	10,733.2	10,683.2	32.0	27.9	85.59	94.8	-740.7	433.3	374.1	59.21	7.318	
10,900.0	10,783.2	10,833.2	10,783.2	32.1	27.9	85.59	94.8	-740.7	433.3	374.0	59.27	7.310	
11,000.0	10,883.2	10,933.2	10,883.2	32.1	27.9	85.59	94.8	-740.7	433.3	373.9	59.34	7.302	
11,100.0	10,983.2	11,033.2	10,983.2	32.1	28.0	85.59	94.8	-740.7	433.3	373.9	59.41	7.293	
11,200.0	11,083.2	11,133.2	11,083.2	32.2	28.0	85.59	94.8	-740.7	433.3	373.8	59.47	7.285	
11,203.0	11,086.2	11,136.2	11,086.2	32.2	28.0	85.59	94.8	-740.7	433.3	373.8	59.47	7.285	
11,300.0	11,183.2	11,232.1	11,182.0	32.2	28.0	85.54	95.1	-740.7	433.3	373.8	59.51	7.281	
11,400.0	11,283.2	11,325.0	11,274.0	32.2	28.1	83.88	107.7	-740.8	434.4	375.2	59.22	7.337	
11,455.3	11,338.5	11,372.3	11,319.4	32.2	28.1	82.16	120.9	-740.9	436.2	377.4	58.82	7.417	
11,475.0	11,358.2	11,388.8	11,334.8	32.2	28.1	81.76	126.6	-741.0	437.1	378.5	58.62	7.458	
11,500.0	11,383.1	11,409.5	11,354.0	32.2	28.1	80.77	134.4	-741.0	438.4	380.0	58.38	7.509	
11,525.0	11,407.9	11,430.0	11,372.6	32.2	28.1	79.80	143.0	-741.1	439.7	381.6	58.15	7.563	
11,550.0	11,432.6	11,450.0	11,390.4	32.2	28.1	78.87	152.1	-741.2	441.1	383.2	57.91	7.618	
11,575.0	11,456.9	11,470.3	11,408.1	32.2	28.1	77.95	162.2	-741.3	442.6	385.0	57.67	7.675	
11,600.0	11,481.0	11,490.2	11,425.0	32.2	28.1	77.07	172.7	-741.4	444.2	386.7	57.44	7.732	
11,625.0	11,504.6	11,510.0	11,441.3	32.2	28.1	76.22	183.9	-741.5	445.7	388.5	57.23	7.789	
11,650.0	11,527.8	11,529.5	11,456.9	32.2	28.1	75.40	195.6	-741.6	447.3	390.3	57.02	7.845	
11,675.0	11,550.5	11,550.0	11,472.8	32.2	28.1	74.60	208.5	-741.7	448.9	392.1	56.82	7.900	
11,700.0	11,572.6	11,568.2	11,486.5	32.2	28.1	73.89	220.5	-741.8	450.5	393.9	56.64	7.954	
11,725.0	11,594.1	11,587.4	11,500.3	32.2	28.1	73.18	233.8	-741.9	452.1	395.6	56.48	8.005	
11,750.0	11,614.8	11,606.4	11,513.5	32.2	28.1	72.52	247.5	-742.1	453.7	397.3	56.33	8.053	
11,775.0	11,634.8	11,625.0	11,525.9	32.2	28.1	71.90	261.3	-742.2	455.2	399.0	56.20	8.099	
11,800.0	11,654.0	11,644.2	11,538.1	32.3	28.1	71.31	276.1	-742.3	456.6	400.5	56.09	8.141	
11,825.0	11,672.4	11,662.9	11,549.4	32.3	28.1	70.77	291.1	-742.5	458.0	402.0	56.00	8.179	
11,850.0	11,689.8	11,681.6	11,560.1	32.3	28.1	70.27	306.3	-742.6	459.3	403.4	55.92	8.213	
11,875.0	11,706.2	11,700.0	11,570.1	32.3	28.1	69.81	321.9	-742.7	460.5	404.6	55.87	8.243	
11,900.0	11,721.6	11,718.7	11,579.6	32.3	28.1	69.40	337.9	-742.9	461.6	405.8	55.83	8.269	
11,925.0	11,736.0	11,737.1	11,588.3	32.3	28.1	69.02	354.2	-743.0	462.7	406.9	55.80	8.291	
11,950.0	11,749.3	11,755.5	11,596.4	32.3	28.1	68.70	370.7	-743.2	463.6	407.8	55.80	8.308	
11,975.0	11,761.5	11,775.0	11,604.3	32.3	28.2	68.40	388.5	-743.3	464.4	408.6	55.80	8.323	
12,000.0	11,772.5	11,792.2	11,610.6	32.3	28.2	68.17	404.5	-743.5	465.1	409.2	55.83	8.330	
12,025.0	11,782.3	11,810.5	11,616.7	32.3	28.2	67.97	421.8	-743.6	465.6	409.8	55.87	8.335	
12,050.0	11,791.0	11,828.8	11,622.1	32.3	28.2	67.82	439.2	-743.8	466.0	410.1	55.92	8.335	
12,075.0	11,798.3	11,850.0	11,627.6	32.4	28.2	67.70	459.7	-744.0	466.4	410.4	55.96	8.334	
12,100.0	11,804.4	11,865.2	11,630.9	32.4	28.2	67.64	474.6	-744.1	466.5	410.4	56.05	8.323	
12,125.0	11,809.3	11,883.5	11,634.3	32.4	28.2	67.62	492.5	-744.3	466.5	410.4	56.13	8.311	
12,150.0	11,812.8	11,900.0	11,636.8	32.4	28.2	67.65	508.9	-744.4	466.4	410.2	56.24	8.294	
12,175.0	11,815.0	11,919.9	11,639.0	32.4	28.3	67.72	528.7	-744.6	466.2	409.8	56.33	8.276	
12,200.0	11,816.0	11,938.2	11,640.3	32.4	28.3	67.83	546.8	-744.8	465.8	409.4	56.44	8.253	
12,205.3	11,816.0	11,942.1	11,640.5	32.4	28.3	67.86	550.7	-744.8	465.7	409.2	56.47	8.247	
12,300.0	11,816.0	12,028.8	11,641.0	32.5	28.4	67.91	637.5	-745.6	465.3	408.5	56.74	8.200	
12,400.0	11,816.0	12,128.8	11,641.0	32.7	28.5	67.90	737.5	-746.5	465.1	408.1	57.01	8.158	
12,500.0	11,816.0	12,228.8	11,641.0	32.8	28.6	67.89	837.5	-747.4	464.9	407.6	57.32	8.110	
12,600.0	11,816.0	12,328.8	11,641.0	33.0	28.8	67.88	937.5	-748.4	464.7	407.0	57.67	8.058	
12,700.0	11,816.0	12,428.8	11,641.0	33.1	29.0	67.87	1,037.5	-749.3	464.5	406.5	58.05	8.002	
12,800.0	11,816.0	12,528.8	11,641.0	33.3	29.2	67.86	1,137.5	-750.2	464.3	405.8	58.47	7.941	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #710H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11214-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface		Offset Wellbore Centre		Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,900.0	11,816.0	12,628.8	11,641.0	33.5	29.4	67.85	1,237.5	-751.1	464.1	405.2	58.93	7.876	
13,000.0	11,816.0	12,728.8	11,641.0	33.7	29.7	67.84	1,337.5	-752.0	463.9	404.5	59.43	7.807	
13,100.0	11,816.0	12,828.8	11,641.0	34.0	29.9	67.83	1,437.5	-752.9	463.8	403.8	59.95	7.735	
13,200.0	11,816.0	12,928.8	11,641.0	34.2	30.2	67.82	1,537.5	-753.8	463.6	403.0	60.52	7.660	
13,300.0	11,816.0	13,028.8	11,641.0	34.5	30.5	67.81	1,637.5	-754.7	463.4	402.3	61.11	7.583	
13,400.0	11,816.0	13,128.8	11,641.0	34.8	30.8	67.80	1,737.4	-755.7	463.2	401.4	61.74	7.503	
13,500.0	11,816.0	13,228.8	11,641.0	35.1	31.2	67.79	1,837.4	-756.6	463.0	400.6	62.39	7.421	
13,600.0	11,816.0	13,328.8	11,641.0	35.4	31.5	67.78	1,937.4	-757.5	462.8	399.7	63.08	7.337	
13,700.0	11,816.0	13,428.8	11,641.0	35.7	31.9	67.77	2,037.4	-758.4	462.6	398.8	63.79	7.252	
13,800.0	11,816.0	13,528.8	11,641.0	36.1	32.2	67.76	2,137.4	-759.3	462.4	397.9	64.54	7.165	
13,900.0	11,816.0	13,628.8	11,641.0	36.4	32.6	67.75	2,237.4	-760.2	462.2	396.9	65.31	7.078	
14,000.0	11,816.0	13,728.8	11,641.0	36.8	33.0	67.74	2,337.4	-761.1	462.0	395.9	66.10	6.990	
14,100.0	11,816.0	13,828.8	11,641.0	37.2	33.4	67.73	2,437.4	-762.1	461.9	394.9	66.92	6.902	
14,200.0	11,816.0	13,928.8	11,641.0	37.6	33.9	67.72	2,537.4	-763.0	461.7	393.9	67.77	6.813	
14,300.0	11,816.0	14,028.8	11,641.0	38.0	34.3	67.71	2,637.4	-763.9	461.5	392.8	68.63	6.724	
14,400.0	11,816.0	14,128.8	11,641.0	38.4	34.8	67.71	2,737.4	-764.8	461.3	391.8	69.52	6.635	
14,500.0	11,816.0	14,228.8	11,641.0	38.8	35.2	67.70	2,837.4	-765.7	461.1	390.7	70.44	6.546	
14,600.0	11,816.0	14,328.8	11,641.0	39.3	35.7	67.69	2,937.4	-766.6	460.9	389.5	71.37	6.458	
14,700.0	11,816.0	14,428.8	11,641.0	39.7	36.2	67.68	3,037.4	-767.5	460.7	388.4	72.32	6.371	
14,800.0	11,816.0	14,528.8	11,641.0	40.2	36.7	67.67	3,137.4	-768.4	460.5	387.2	73.29	6.284	
14,900.0	11,816.0	14,628.8	11,641.0	40.6	37.2	67.66	3,237.4	-769.4	460.3	386.1	74.28	6.198	
15,000.0	11,816.0	14,728.8	11,641.0	41.1	37.7	67.65	3,337.4	-770.3	460.2	384.9	75.29	6.112	
15,100.0	11,816.0	14,828.8	11,641.0	41.6	38.2	67.64	3,437.4	-771.2	460.0	383.7	76.31	6.028	
15,200.0	11,816.0	14,928.8	11,641.0	42.1	38.7	67.63	3,537.4	-772.1	459.8	382.4	77.35	5.944	
15,300.0	11,816.0	15,028.8	11,641.0	42.6	39.3	67.62	3,637.4	-773.0	459.6	381.2	78.40	5.862	
15,400.0	11,816.0	15,128.8	11,641.0	43.1	39.8	67.61	3,737.4	-773.9	459.4	379.9	79.48	5.780	
15,500.0	11,816.0	15,228.8	11,641.0	43.6	40.3	67.60	3,837.4	-774.8	459.2	378.7	80.56	5.700	
15,600.0	11,816.0	15,328.8	11,641.0	44.1	40.9	67.59	3,937.4	-775.7	459.0	377.4	81.66	5.621	
15,700.0	11,816.0	15,428.8	11,641.0	44.6	41.5	67.58	4,037.3	-776.7	458.8	376.1	82.77	5.544	
15,800.0	11,816.0	15,528.8	11,641.0	45.2	42.0	67.57	4,137.3	-777.6	458.6	374.8	83.89	5.467	
15,900.0	11,816.0	15,628.8	11,641.0	45.7	42.6	67.56	4,237.3	-778.5	458.5	373.4	85.03	5.392	
16,000.0	11,816.0	15,728.8	11,641.0	46.3	43.2	67.55	4,337.3	-779.4	458.3	372.1	86.18	5.318	
16,100.0	11,816.0	15,828.8	11,641.0	46.8	43.8	67.54	4,437.3	-780.3	458.1	370.7	87.34	5.245	
16,200.0	11,816.0	15,928.8	11,641.0	47.4	44.4	67.53	4,537.3	-781.2	457.9	369.4	88.51	5.173	
16,300.0	11,816.0	16,028.8	11,641.0	47.9	45.0	67.52	4,637.3	-782.1	457.7	368.0	89.69	5.103	
16,400.0	11,816.0	16,128.8	11,641.0	48.5	45.6	67.51	4,737.3	-783.1	457.5	366.6	90.88	5.034	
16,500.0	11,816.0	16,228.8	11,641.0	49.1	46.2	67.50	4,837.3	-784.0	457.3	365.2	92.08	4.967	
16,600.0	11,816.0	16,328.8	11,641.0	49.7	46.8	67.49	4,937.3	-784.9	457.1	363.8	93.29	4.900	
16,700.0	11,816.0	16,428.8	11,641.0	50.3	47.4	67.48	5,037.3	-785.8	456.9	362.4	94.51	4.835	
16,800.0	11,816.0	16,528.8	11,641.0	50.8	48.0	67.47	5,137.3	-786.7	456.8	361.0	95.73	4.771	
16,900.0	11,816.0	16,628.8	11,641.0	51.4	48.6	67.46	5,237.3	-787.6	456.6	359.6	96.97	4.708	
17,000.0	11,816.0	16,728.8	11,641.0	52.0	49.3	67.45	5,337.3	-788.5	456.4	358.2	98.21	4.647	
17,100.0	11,816.0	16,828.8	11,641.0	52.6	49.9	67.44	5,437.3	-789.4	456.2	356.7	99.46	4.587	
17,200.0	11,816.0	16,928.8	11,641.0	53.2	50.5	67.43	5,537.3	-790.4	456.0	355.3	100.72	4.528	
17,300.0	11,816.0	17,028.8	11,641.0	53.9	51.2	67.42	5,637.3	-791.3	455.8	353.8	101.98	4.470	
17,400.0	11,816.0	17,128.8	11,641.0	54.5	51.8	67.41	5,737.3	-792.2	455.6	352.4	103.25	4.413	
17,500.0	11,816.0	17,228.8	11,641.0	55.1	52.5	67.40	5,837.3	-793.1	455.4	350.9	104.53	4.357	
17,600.0	11,816.0	17,328.8	11,641.0	55.7	53.1	67.39	5,937.3	-794.0	455.2	349.4	105.81	4.302	
17,700.0	11,816.0	17,428.8	11,641.0	56.3	53.8	67.38	6,037.3	-794.9	455.1	348.0	107.10	4.249	
17,800.0	11,816.0	17,528.8	11,641.0	57.0	54.4	67.37	6,137.3	-795.8	454.9	346.5	108.40	4.196	
17,900.0	11,816.0	17,628.8	11,641.0	57.6	55.1	67.36	6,237.3	-796.7	454.7	345.0	109.70	4.145	
18,000.0	11,816.0	17,728.8	11,641.0	58.2	55.7	67.35	6,337.2	-797.7	454.5	343.5	111.01	4.094	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	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 #710H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11214-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)		
18,100.0	11,816.0	17,828.8	11,641.0	58.9	56.4	67.34	6,437.2	-798.6	454.3	342.0	112.32	4.045	
18,200.0	11,816.0	17,928.8	11,641.0	59.5	57.1	67.33	6,537.2	-799.5	454.1	340.5	113.64	3.996	
18,300.0	11,816.0	18,028.8	11,641.0	60.2	57.7	67.32	6,637.2	-800.4	453.9	339.0	114.96	3.949	
18,400.0	11,816.0	18,128.8	11,641.0	60.8	58.4	67.31	6,737.2	-801.3	453.7	337.5	116.29	3.902	
18,500.0	11,816.0	18,228.8	11,641.0	61.5	59.1	67.30	6,837.2	-802.2	453.5	335.9	117.62	3.856	
18,600.0	11,816.0	18,328.8	11,641.0	62.1	59.8	67.29	6,937.2	-803.1	453.4	334.4	118.95	3.811	
18,700.0	11,816.0	18,428.8	11,641.0	62.8	60.4	67.28	7,037.2	-804.1	453.2	332.9	120.29	3.767	
18,800.0	11,816.0	18,528.8	11,641.0	63.4	61.1	67.27	7,137.2	-805.0	453.0	331.3	121.64	3.724	
18,900.0	11,816.0	18,628.8	11,641.0	64.1	61.8	67.26	7,237.2	-805.9	452.8	329.8	122.98	3.682	
19,000.0	11,816.0	18,728.8	11,641.0	64.7	62.5	67.25	7,337.2	-806.8	452.6	328.3	124.34	3.640	
19,100.0	11,816.0	18,828.8	11,641.0	65.4	63.2	67.24	7,437.2	-807.7	452.4	326.7	125.69	3.599	
19,200.0	11,816.0	18,928.8	11,641.0	66.1	63.8	67.23	7,537.2	-808.6	452.2	325.2	127.05	3.559	
19,300.0	11,816.0	19,028.8	11,641.0	66.7	64.5	67.22	7,637.2	-809.5	452.0	323.6	128.41	3.520	
19,400.0	11,816.0	19,128.8	11,641.0	67.4	65.2	67.21	7,737.2	-810.4	451.9	322.1	129.78	3.482	
19,500.0	11,816.0	19,228.8	11,641.0	68.1	65.9	67.20	7,837.2	-811.4	451.7	320.5	131.15	3.444	
19,600.0	11,816.0	19,328.8	11,641.0	68.8	66.6	67.19	7,937.2	-812.3	451.5	319.0	132.52	3.407	
19,700.0	11,816.0	19,428.8	11,641.0	69.4	67.3	67.18	8,037.2	-813.2	451.3	317.4	133.90	3.370	
19,800.0	11,816.0	19,528.8	11,641.0	70.1	68.0	67.17	8,137.2	-814.1	451.1	315.8	135.28	3.335	
19,900.0	11,816.0	19,628.8	11,641.0	70.8	68.7	67.16	8,237.2	-815.0	450.9	314.3	136.66	3.300	
20,000.0	11,816.0	19,728.8	11,641.0	71.5	69.4	67.15	8,337.2	-815.9	450.7	312.7	138.04	3.265	
20,100.0	11,816.0	19,828.8	11,641.0	72.1	70.1	67.14	8,437.2	-816.8	450.5	311.1	139.43	3.231	
20,200.0	11,816.0	19,928.8	11,641.0	72.8	70.8	67.13	8,537.2	-817.7	450.3	309.5	140.82	3.198	
20,300.0	11,816.0	20,028.8	11,641.0	73.5	71.5	67.12	8,637.1	-818.7	450.2	307.9	142.21	3.165	
20,400.0	11,816.0	20,128.8	11,641.0	74.2	72.2	67.11	8,737.1	-819.6	450.0	306.4	143.61	3.133	
20,500.0	11,816.0	20,228.8	11,641.0	74.9	72.9	67.10	8,837.1	-820.5	449.8	304.8	145.00	3.102	
20,600.0	11,816.0	20,328.8	11,641.0	75.6	73.6	67.09	8,937.1	-821.4	449.6	303.2	146.40	3.071	
20,700.0	11,816.0	20,428.8	11,641.0	76.3	74.3	67.08	9,037.1	-822.3	449.4	301.6	147.80	3.041	
20,800.0	11,816.0	20,528.8	11,641.0	77.0	75.0	67.07	9,137.1	-823.2	449.2	300.0	149.21	3.011	
20,900.0	11,816.0	20,628.8	11,641.0	77.7	75.7	67.06	9,237.1	-824.1	449.0	298.4	150.61	2.981	
21,000.0	11,816.0	20,728.8	11,641.0	78.4	76.5	67.05	9,337.1	-825.1	448.8	296.8	152.02	2.952	
21,100.0	11,816.0	20,828.8	11,641.0	79.1	77.2	67.04	9,437.1	-826.0	448.6	295.2	153.43	2.924	
21,200.0	11,816.0	20,928.8	11,641.0	79.8	77.9	67.03	9,537.1	-826.9	448.5	293.6	154.84	2.896	
21,300.0	11,816.0	21,028.8	11,641.0	80.5	78.6	67.02	9,637.1	-827.8	448.3	292.0	156.26	2.869	
21,400.0	11,816.0	21,128.8	11,641.0	81.2	79.3	67.01	9,737.1	-828.7	448.1	290.4	157.67	2.842	
21,500.0	11,816.0	21,228.8	11,641.0	81.9	80.0	67.00	9,837.1	-829.6	447.9	288.8	159.09	2.815	
21,600.0	11,816.0	21,328.8	11,641.0	82.6	80.7	66.99	9,937.1	-830.5	447.7	287.2	160.51	2.789	
21,700.0	11,816.0	21,428.8	11,641.0	83.3	81.5	66.98	10,037.1	-831.4	447.5	285.6	161.93	2.764	
21,800.0	11,816.0	21,528.8	11,641.0	84.0	82.2	66.97	10,137.1	-832.4	447.3	284.0	163.36	2.738	
21,900.0	11,816.0	21,628.8	11,641.0	84.7	82.9	66.96	10,237.1	-833.3	447.1	282.4	164.78	2.714	
22,000.0	11,816.0	21,728.8	11,641.0	85.4	83.6	66.95	10,337.1	-834.2	447.0	280.7	166.21	2.689	
22,100.0	11,816.0	21,828.8	11,641.0	86.1	84.3	66.94	10,437.1	-835.1	446.8	279.1	167.63	2.665	
22,133.2	11,816.0	21,862.0	11,641.0	86.3	84.6	66.94	10,470.2	-835.4	446.7	278.6	168.11	2.657	
22,183.2	11,816.0	21,912.0	11,641.0	86.7	84.9	66.93	10,520.2	-835.9	446.6	277.8	168.82	2.645 SF	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
0.0	0.0	0.0	0.0	3.0	3.0	-0.49	60.0	-0.5	60.0				
100.0	100.0	100.0	100.0	3.1	3.1	-0.49	60.0	-0.5	60.0	53.5	6.54	9.177	
200.0	200.0	200.0	200.0	3.2	3.2	-0.49	60.0	-0.5	60.0	53.2	6.79	8.841	
300.0	300.0	300.0	300.0	3.3	3.3	-0.49	60.0	-0.5	60.0	53.0	7.03	8.530	
400.0	400.0	400.0	400.0	3.4	3.4	-0.49	60.0	-0.5	60.0	52.7	7.28	8.243	
500.0	500.0	500.0	500.0	3.6	3.6	-0.49	60.0	-0.5	60.0	52.5	7.52	7.976	
600.0	600.0	600.0	600.0	3.7	3.7	-0.49	60.0	-0.5	60.0	52.2	7.76	7.727	
700.0	700.0	700.0	700.0	3.8	3.8	-0.49	60.0	-0.5	60.0	52.0	8.00	7.495	
800.0	800.0	800.0	800.0	3.9	3.9	-0.49	60.0	-0.5	60.0	51.7	8.24	7.277	
900.0	900.0	900.0	900.0	4.0	4.0	-0.49	60.0	-0.5	60.0	51.5	8.48	7.072	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	-0.49	60.0	-0.5	60.0	51.3	8.72	6.880 CC	
1,100.0	1,100.0	1,099.7	1,099.7	4.3	4.3	86.53	60.2	-2.2	60.1	51.2	8.92	6.736 ES	
1,200.0	1,199.8	1,199.5	1,199.3	4.5	4.5	86.57	60.8	-7.4	60.5	51.2	9.26	6.531	
1,300.0	1,299.5	1,299.2	1,298.6	4.9	4.9	86.63	61.9	-16.0	61.1	51.5	9.59	6.370	
1,400.0	1,398.7	1,399.2	1,398.1	5.2	5.1	88.30	63.2	-26.4	61.7	51.8	9.91	6.230	
1,500.0	1,497.5	1,499.0	1,497.4	5.5	5.3	93.12	64.4	-36.7	62.5	52.3	10.22	6.116	
1,600.0	1,595.6	1,598.6	1,596.4	5.9	5.6	100.81	65.7	-47.1	64.3	53.7	10.57	6.082	
1,700.0	1,693.4	1,698.1	1,695.3	6.2	5.9	109.39	67.0	-57.4	67.8	56.8	11.01	6.154	
1,800.0	1,791.3	1,797.5	1,794.2	6.5	6.2	116.99	68.2	-67.7	72.6	61.1	11.55	6.288	
1,900.0	1,889.1	1,897.0	1,893.1	6.9	6.5	123.55	69.5	-78.0	78.5	66.4	12.16	6.461	
2,000.0	1,986.9	1,996.4	1,992.0	7.2	6.8	129.13	70.8	-88.3	85.4	72.5	12.83	6.653	
2,100.0	2,084.7	2,095.9	2,090.9	7.6	7.1	133.86	72.0	-98.7	92.9	79.3	13.55	6.855	
2,200.0	2,182.5	2,195.3	2,189.8	8.0	7.5	137.85	73.3	-109.0	100.9	86.6	14.30	7.058	
2,300.0	2,280.3	2,294.7	2,288.7	8.4	7.8	141.25	74.6	-119.3	109.4	94.3	15.08	7.257	
2,400.0	2,378.1	2,394.2	2,387.7	8.8	8.2	144.15	75.8	-129.6	118.2	102.3	15.86	7.451	
2,500.0	2,476.0	2,493.6	2,486.6	9.2	8.5	146.64	77.1	-139.9	127.3	110.6	16.66	7.636	
2,600.0	2,573.8	2,593.1	2,585.5	9.6	8.9	148.80	78.4	-150.2	136.5	119.0	17.47	7.813	
2,700.0	2,671.6	2,692.5	2,684.4	10.0	9.2	150.69	79.6	-160.6	145.9	127.7	18.29	7.980	
2,800.0	2,769.4	2,792.0	2,783.3	10.4	9.6	152.34	80.9	-170.9	155.5	136.4	19.11	8.137	
2,900.0	2,867.2	2,891.4	2,882.2	10.9	10.0	153.80	82.2	-181.2	165.2	145.3	19.94	8.286	
3,000.0	2,965.0	2,990.9	2,981.1	11.3	10.3	155.10	83.4	-191.5	175.0	154.2	20.77	8.426	
3,100.0	3,062.8	3,090.3	3,080.0	11.7	10.7	156.26	84.7	-201.8	184.8	163.2	21.60	8.557	
3,200.0	3,160.7	3,189.8	3,178.9	12.2	11.1	157.31	86.0	-212.1	194.7	172.3	22.44	8.680	
3,300.0	3,258.5	3,289.2	3,277.8	12.6	11.5	158.25	87.2	-222.5	204.7	181.5	23.27	8.796	
3,400.0	3,356.3	3,388.7	3,376.7	13.0	11.8	159.11	88.5	-232.8	214.8	190.6	24.11	8.906	
3,500.0	3,454.1	3,488.1	3,475.6	13.5	12.2	159.88	89.8	-243.1	224.8	199.9	24.96	9.009	
3,600.0	3,551.9	3,587.6	3,574.5	13.9	12.6	160.60	91.0	-253.4	234.9	209.1	25.80	9.106	
3,700.0	3,649.7	3,687.0	3,673.4	14.4	13.0	161.25	92.3	-263.7	245.1	218.4	26.65	9.197	
3,800.0	3,747.5	3,786.5	3,772.3	14.8	13.4	161.85	93.6	-274.1	255.3	227.8	27.50	9.284	
3,900.0	3,845.4	3,885.9	3,871.2	15.3	13.7	162.40	94.8	-284.4	265.5	237.1	28.35	9.365	
4,000.0	3,943.2	3,985.3	3,970.1	15.7	14.1	162.92	96.1	-294.7	275.7	246.5	29.20	9.442	
4,100.0	4,041.0	4,084.8	4,069.0	16.2	14.5	163.39	97.4	-305.0	285.9	255.9	30.05	9.516	
4,200.0	4,138.8	4,184.2	4,167.9	16.6	14.9	163.84	98.6	-315.3	296.2	265.3	30.90	9.585	
4,300.0	4,236.6	4,281.0	4,264.2	17.1	15.3	164.26	99.8	-325.1	306.7	275.0	31.71	9.671	
4,400.0	4,334.4	4,375.4	4,358.2	17.6	15.6	164.72	100.9	-333.3	318.6	286.1	32.52	9.798	
4,500.0	4,432.3	4,469.4	4,452.0	18.0	15.9	165.24	101.7	-339.9	332.1	298.8	33.31	9.969	
4,600.0	4,530.1	4,563.0	4,545.4	18.5	16.3	165.80	102.3	-345.0	347.2	313.1	34.09	10.184	
4,700.0	4,627.9	4,656.0	4,638.3	18.9	16.6	166.38	102.7	-348.5	363.8	329.0	34.84	10.443	
4,800.0	4,725.7	4,748.5	4,730.8	19.4	16.8	166.98	103.0	-350.5	382.0	346.4	35.55	10.746	
4,900.0	4,823.5	4,841.2	4,823.5	19.9	17.0	167.59	103.0	-351.1	401.7	365.5	36.17	11.105	
5,000.0	4,921.3	4,939.0	4,921.3	20.3	17.0	168.20	103.0	-351.1	422.1	385.3	36.75	11.484	
5,100.0	5,019.1	5,036.8	5,019.1	20.8	17.1	168.75	103.0	-351.1	442.5	405.1	37.34	11.850	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
5,200.0	5,117.0	5,134.6	5,117.0	21.2	17.1	169.25	103.0	-351.1	462.9	425.0	37.92	12.206	
5,300.0	5,214.8	5,232.5	5,214.8	21.7	17.1	169.71	103.0	-351.1	483.3	444.8	38.50	12.553	
5,400.0	5,312.6	5,330.3	5,312.6	22.2	17.2	170.13	103.0	-351.1	503.8	464.7	39.09	12.889	
5,500.0	5,410.4	5,428.1	5,410.4	22.6	17.2	170.52	103.0	-351.1	524.3	484.7	39.67	13.217	
5,600.0	5,508.2	5,525.9	5,508.2	23.1	17.3	170.88	103.0	-351.1	544.9	504.6	40.26	13.535	
5,700.0	5,606.0	5,623.7	5,606.0	23.6	17.3	171.21	103.0	-351.1	565.4	524.6	40.84	13.844	
5,800.0	5,703.8	5,721.5	5,703.8	24.0	17.4	171.52	103.0	-351.1	586.0	544.5	41.43	14.144	
5,900.0	5,801.7	5,819.3	5,801.7	24.5	17.4	171.81	103.0	-351.1	606.5	564.5	42.02	14.436	
6,000.0	5,899.5	5,917.2	5,899.5	25.0	17.5	172.08	103.0	-351.1	627.1	584.5	42.61	14.720	
6,100.0	5,997.3	6,015.0	5,997.3	25.4	17.5	172.34	103.0	-351.1	647.8	604.6	43.20	14.996	
6,200.0	6,095.1	6,112.8	6,095.1	25.9	17.6	172.57	103.0	-351.1	668.4	624.6	43.79	15.264	
6,300.0	6,192.9	6,210.6	6,192.9	26.4	17.6	172.80	103.0	-351.1	689.0	644.6	44.38	15.524	
6,344.6	6,236.5	6,254.2	6,236.5	26.6	17.6	172.89	103.0	-351.1	698.2	653.6	44.64	15.641	
6,400.0	6,290.8	6,308.5	6,290.8	26.8	17.7	173.02	103.0	-351.1	709.4	664.4	44.96	15.779	
6,500.0	6,389.0	6,406.7	6,389.0	27.3	17.7	173.22	103.0	-351.1	728.2	682.7	45.54	15.990	
6,600.0	6,487.5	6,505.1	6,487.5	27.7	17.7	173.40	103.0	-351.1	745.4	699.3	46.12	16.163	
6,700.0	6,586.2	6,603.9	6,586.2	28.2	17.8	173.55	103.0	-351.1	760.8	714.2	46.68	16.299	
6,800.0	6,685.3	6,703.0	6,685.3	28.6	17.8	173.68	103.0	-351.1	774.6	727.3	47.23	16.399	
6,900.0	6,784.5	6,802.2	6,784.5	29.0	17.9	173.79	103.0	-351.1	786.6	738.8	47.77	16.467	
7,000.0	6,884.0	6,901.7	6,884.0	29.4	17.9	173.88	103.0	-351.1	796.9	748.6	48.29	16.503	
7,100.0	6,983.6	7,001.3	6,983.6	29.8	18.0	173.96	103.0	-351.1	805.5	756.7	48.79	16.510	
7,200.0	7,083.4	7,101.1	7,083.4	30.2	18.0	174.02	103.0	-351.1	812.3	763.1	49.27	16.489	
7,300.0	7,183.3	7,201.0	7,183.3	30.5	18.1	174.06	103.0	-351.1	817.4	767.7	49.71	16.443	
7,400.0	7,283.2	7,300.9	7,283.2	30.8	18.1	174.09	103.0	-351.1	820.8	770.7	50.12	16.376	
7,500.0	7,383.2	7,400.9	7,383.2	31.1	18.2	174.10	103.0	-351.1	822.4	772.0	50.47	16.295	
7,544.6	7,427.7	7,445.4	7,427.7	31.2	18.2	87.10	103.0	-351.1	822.6	772.1	50.55	16.274	
7,600.0	7,483.2	7,500.9	7,483.2	31.2	18.2	87.10	103.0	-351.1	822.6	772.0	50.58	16.265	
7,700.0	7,583.2	7,600.9	7,583.2	31.2	18.3	87.10	103.0	-351.1	822.6	772.0	50.64	16.244	
7,800.0	7,683.2	7,700.9	7,683.2	31.2	18.4	87.10	103.0	-351.1	822.6	771.9	50.71	16.223	
7,900.0	7,783.2	7,800.9	7,783.2	31.2	18.4	87.10	103.0	-351.1	822.6	771.8	50.78	16.201	
8,000.0	7,883.2	7,900.9	7,883.2	31.3	18.5	87.10	103.0	-351.1	822.6	771.8	50.84	16.180	
8,100.0	7,983.2	8,000.9	7,983.2	31.3	18.5	87.10	103.0	-351.1	822.6	771.7	50.91	16.158	
8,200.0	8,083.2	8,100.9	8,083.2	31.3	18.6	87.10	103.0	-351.1	822.6	771.6	50.98	16.137	
8,300.0	8,183.2	8,200.9	8,183.2	31.3	18.6	87.10	103.0	-351.1	822.6	771.6	51.05	16.115	
8,400.0	8,283.2	8,300.9	8,283.2	31.4	18.7	87.10	103.0	-351.1	822.6	771.5	51.12	16.093	
8,500.0	8,383.2	8,400.9	8,383.2	31.4	18.7	87.10	103.0	-351.1	822.6	771.4	51.19	16.071	
8,600.0	8,483.2	8,500.9	8,483.2	31.4	18.8	87.10	103.0	-351.1	822.6	771.4	51.26	16.049	
8,700.0	8,583.2	8,600.9	8,583.2	31.4	18.8	87.10	103.0	-351.1	822.6	771.3	51.33	16.027	
8,800.0	8,683.2	8,700.9	8,683.2	31.5	18.9	87.10	103.0	-351.1	822.6	771.2	51.40	16.005	
8,900.0	8,783.2	8,800.9	8,783.2	31.5	18.9	87.10	103.0	-351.1	822.6	771.2	51.47	15.983	
9,000.0	8,883.2	8,900.9	8,883.2	31.5	19.0	87.10	103.0	-351.1	822.6	771.1	51.54	15.961	
9,100.0	8,983.2	9,000.9	8,983.2	31.5	19.0	87.10	103.0	-351.1	822.6	771.0	51.61	15.939	
9,200.0	9,083.2	9,100.9	9,083.2	31.6	19.1	87.10	103.0	-351.1	822.6	770.9	51.68	15.916	
9,300.0	9,183.2	9,200.9	9,183.2	31.6	19.2	87.10	103.0	-351.1	822.6	770.9	51.76	15.894	
9,400.0	9,283.2	9,300.9	9,283.2	31.6	19.2	87.10	103.0	-351.1	822.6	770.8	51.83	15.871	
9,500.0	9,383.2	9,400.9	9,383.2	31.7	19.3	87.10	103.0	-351.1	822.6	770.7	51.90	15.849	
9,600.0	9,483.2	9,500.9	9,483.2	31.7	19.3	87.10	103.0	-351.1	822.6	770.6	51.98	15.826	
9,700.0	9,583.2	9,600.9	9,583.2	31.7	19.4	87.10	103.0	-351.1	822.6	770.6	52.05	15.804	
9,800.0	9,683.2	9,700.9	9,683.2	31.7	19.4	87.10	103.0	-351.1	822.6	770.5	52.13	15.781	
9,900.0	9,783.2	9,800.9	9,783.2	31.8	19.5	87.10	103.0	-351.1	822.6	770.4	52.20	15.758	
10,000.0	9,883.2	9,900.9	9,883.2	31.8	19.5	87.10	103.0	-351.1	822.6	770.3	52.28	15.735	
10,100.0	9,983.2	10,000.9	9,983.2	31.8	19.6	87.10	103.0	-351.1	822.6	770.3	52.35	15.713	

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

ConocoPhillips

Anticollision Report

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Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside 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	10,083.2	10,100.9	10,083.2	31.9	19.7	87.10	103.0	-351.1	822.6	770.2	52.43	15.690	
10,300.0	10,183.2	10,200.9	10,183.2	31.9	19.7	87.10	103.0	-351.1	822.6	770.1	52.51	15.667	
10,400.0	10,283.2	10,300.9	10,283.2	31.9	19.8	87.10	103.0	-351.1	822.6	770.0	52.58	15.644	
10,500.0	10,383.2	10,400.9	10,383.2	31.9	19.8	87.10	103.0	-351.1	822.6	770.0	52.66	15.621	
10,600.0	10,483.2	10,500.9	10,483.2	32.0	19.9	87.10	103.0	-351.1	822.6	769.9	52.74	15.598	
10,700.0	10,583.2	10,600.9	10,583.2	32.0	19.9	87.10	103.0	-351.1	822.6	769.8	52.82	15.575	
10,800.0	10,683.2	10,700.9	10,683.2	32.0	20.0	87.10	103.0	-351.1	822.6	769.7	52.90	15.551	
10,900.0	10,783.2	10,800.9	10,783.2	32.1	20.1	87.10	103.0	-351.1	822.6	769.6	52.98	15.528	
11,000.0	10,883.2	10,900.9	10,883.2	32.1	20.1	87.10	103.0	-351.1	822.6	769.6	53.06	15.505	
11,100.0	10,983.2	11,000.9	10,983.2	32.1	20.2	87.10	103.0	-351.1	822.6	769.5	53.13	15.482	
11,200.0	11,083.2	11,100.9	11,083.2	32.2	20.2	87.10	103.0	-351.1	822.6	769.4	53.22	15.458	
11,300.0	11,183.2	11,200.9	11,183.2	32.2	20.3	87.10	103.0	-351.1	822.6	769.3	53.30	15.435	
11,400.0	11,283.2	11,300.9	11,283.2	32.2	20.3	87.10	103.0	-351.1	822.6	769.2	53.38	15.412	
11,455.3	11,338.5	11,356.2	11,338.5	32.2	20.4	87.10	103.0	-351.1	822.6	769.2	53.40	15.405	
11,475.0	11,358.2	11,375.0	11,357.3	32.2	20.4	87.51	103.4	-351.1	822.6	769.2	53.40	15.405	
11,500.0	11,383.1	11,397.8	11,380.1	32.2	20.4	87.52	104.8	-351.1	822.6	769.2	53.39	15.408	
11,525.0	11,407.9	11,421.1	11,403.2	32.2	20.4	87.54	107.3	-351.1	822.6	769.2	53.38	15.410	
11,550.0	11,432.6	11,444.4	11,426.2	32.2	20.4	87.57	111.0	-351.1	822.6	769.2	53.37	15.412	
11,575.0	11,456.9	11,467.7	11,449.0	32.2	20.4	87.60	115.8	-351.2	822.6	769.2	53.37	15.412	
11,600.0	11,481.0	11,491.0	11,471.6	32.2	20.4	87.63	121.7	-351.2	822.5	769.2	53.37	15.413	
11,625.0	11,504.6	11,514.4	11,493.9	32.2	20.4	87.68	128.7	-351.3	822.5	769.2	53.37	15.412	
11,650.0	11,527.8	11,537.7	11,515.8	32.2	20.4	87.73	136.8	-351.3	822.5	769.1	53.37	15.411	
11,675.0	11,550.5	11,561.1	11,537.3	32.2	20.4	87.78	145.9	-351.4	822.5	769.1	53.37	15.410	
11,700.0	11,572.6	11,584.6	11,558.4	32.2	20.4	87.84	156.2	-351.5	822.4	769.0	53.38	15.407	
11,725.0	11,594.1	11,608.1	11,579.0	32.2	20.4	87.91	167.4	-351.5	822.4	769.0	53.39	15.404	
11,750.0	11,614.8	11,631.6	11,599.1	32.2	20.4	87.98	179.7	-351.6	822.4	769.0	53.40	15.401	
11,775.0	11,634.8	11,655.2	11,618.5	32.2	20.4	88.05	193.0	-351.7	822.3	768.9	53.41	15.396	
11,800.0	11,654.0	11,678.8	11,637.3	32.3	20.4	88.14	207.3	-351.8	822.3	768.9	53.43	15.391	
11,825.0	11,672.4	11,702.4	11,655.5	32.3	20.4	88.22	222.5	-351.9	822.2	768.8	53.44	15.385	
11,850.0	11,689.8	11,726.2	11,672.9	32.3	20.4	88.31	238.6	-352.0	822.2	768.7	53.47	15.378	
11,875.0	11,706.2	11,750.0	11,689.5	32.3	20.4	88.41	255.7	-352.2	822.2	768.7	53.49	15.371	
11,900.0	11,721.6	11,773.8	11,705.3	32.3	20.4	88.51	273.5	-352.3	822.1	768.6	53.52	15.362	
11,925.0	11,736.0	11,797.7	11,720.2	32.3	20.4	88.62	292.2	-352.4	822.1	768.5	53.55	15.353	
11,950.0	11,749.3	11,821.7	11,734.2	32.3	20.5	88.72	311.7	-352.6	822.0	768.5	53.58	15.343	
11,975.0	11,761.5	11,845.8	11,747.2	32.3	20.5	88.83	331.9	-352.7	822.0	768.4	53.61	15.332	
12,000.0	11,772.5	11,869.9	11,759.2	32.3	20.5	88.95	352.9	-352.8	822.0	768.3	53.65	15.320	
12,025.0	11,782.3	11,894.2	11,770.2	32.3	20.5	89.07	374.4	-353.0	822.0	768.3	53.70	15.308	
12,050.0	11,791.0	11,918.5	11,780.2	32.3	20.5	89.19	396.6	-353.2	821.9	768.2	53.74	15.294	
12,075.0	11,798.3	11,942.8	11,789.0	32.4	20.5	89.31	419.3	-353.3	821.9	768.1	53.79	15.280	
12,100.0	11,804.4	11,967.3	11,796.6	32.4	20.6	89.44	442.6	-353.5	821.9	768.0	53.84	15.265	
12,125.0	11,809.3	11,991.9	11,803.1	32.4	20.6	89.56	466.3	-353.6	821.9	768.0	53.90	15.249	
12,150.0	11,812.8	12,016.5	11,808.4	32.4	20.6	89.69	490.3	-353.8	821.9	767.9	53.95	15.233	
12,175.0	11,815.0	12,041.3	11,812.5	32.4	20.6	89.82	514.8	-354.0	821.9	767.8	54.01	15.216	
12,200.0	11,816.0	12,066.1	11,815.2	32.4	20.7	89.95	539.4	-354.2	821.8	767.8	54.08	15.198	
12,205.3	11,816.0	12,071.4	11,815.7	32.4	20.7	89.98	544.7	-354.2	821.8	767.8	54.09	15.194	
12,209.6	11,816.0	12,075.7	11,816.0	32.4	20.7	90.00	549.0	-354.2	821.8	767.7	54.10	15.191	
12,300.0	11,816.0	12,166.1	11,817.0	32.5	20.8	90.07	639.4	-354.9	821.9	767.5	54.33	15.128	
12,400.0	11,816.0	12,266.1	11,817.0	32.7	21.0	90.07	739.4	-355.6	821.9	767.2	54.61	15.050	
12,500.0	11,816.0	12,366.1	11,817.0	32.8	21.2	90.07	839.4	-356.3	821.9	766.9	54.93	14.962	
12,600.0	11,816.0	12,466.1	11,817.0	33.0	21.4	90.07	939.4	-357.0	821.9	766.6	55.29	14.864	
12,700.0	11,816.0	12,566.1	11,817.0	33.1	21.6	90.07	1,039.4	-357.7	821.9	766.2	55.69	14.757	
12,800.0	11,816.0	12,666.1	11,817.0	33.3	21.9	90.07	1,139.4	-358.4	821.9	765.7	56.13	14.641	

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

ConocoPhillips

Anticollision Report

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Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface		Offset Wellbore Centre		Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,900.0	11,816.0	12,766.1	11,817.0	33.5	22.2	90.07	1,239.4	-359.1	821.9	765.3	56.61	14.518	
13,000.0	11,816.0	12,866.1	11,817.0	33.7	22.5	90.07	1,339.4	-359.8	821.9	764.7	57.12	14.388	
13,100.0	11,816.0	12,966.1	11,817.0	34.0	22.9	90.07	1,439.4	-360.5	821.9	764.2	57.67	14.252	
13,200.0	11,816.0	13,066.1	11,817.0	34.2	23.2	90.07	1,539.3	-361.2	821.9	763.6	58.25	14.110	
13,300.0	11,816.0	13,166.1	11,817.0	34.5	23.6	90.07	1,639.3	-361.9	821.9	763.0	58.86	13.962	
13,400.0	11,816.0	13,266.1	11,817.0	34.8	24.0	90.07	1,739.3	-362.7	821.9	762.4	59.51	13.811	
13,500.0	11,816.0	13,366.1	11,817.0	35.1	24.4	90.07	1,839.3	-363.4	821.9	761.7	60.19	13.655	
13,600.0	11,816.0	13,466.1	11,817.0	35.4	24.9	90.07	1,939.3	-364.1	821.9	761.0	60.89	13.497	
13,700.0	11,816.0	13,566.1	11,817.0	35.7	25.3	90.07	2,039.3	-364.8	821.9	760.2	61.63	13.336	
13,800.0	11,816.0	13,666.1	11,817.0	36.1	25.8	90.07	2,139.3	-365.5	821.9	759.5	62.39	13.172	
13,900.0	11,816.0	13,766.1	11,817.0	36.4	26.3	90.07	2,239.3	-366.2	821.9	758.7	63.19	13.007	
14,000.0	11,816.0	13,866.1	11,817.0	36.8	26.8	90.07	2,339.3	-366.9	821.9	757.9	64.00	12.841	
14,100.0	11,816.0	13,966.1	11,817.0	37.2	27.3	90.07	2,439.3	-367.6	821.9	757.0	64.84	12.675	
14,200.0	11,816.0	14,066.1	11,817.0	37.6	27.8	90.07	2,539.3	-368.3	821.9	756.2	65.71	12.508	
14,300.0	11,816.0	14,166.1	11,817.0	38.0	28.3	90.07	2,639.3	-369.0	821.9	755.3	66.60	12.341	
14,400.0	11,816.0	14,266.1	11,817.0	38.4	28.9	90.07	2,739.3	-369.7	821.9	754.4	67.51	12.174	
14,500.0	11,816.0	14,366.1	11,817.0	38.8	29.4	90.07	2,839.3	-370.4	821.9	753.4	68.44	12.009	
14,600.0	11,816.0	14,466.1	11,817.0	39.3	30.0	90.07	2,939.3	-371.1	821.9	752.5	69.39	11.844	
14,700.0	11,816.0	14,566.1	11,817.0	39.7	30.5	90.07	3,039.3	-371.8	821.9	751.5	70.37	11.680	
14,800.0	11,816.0	14,666.1	11,817.0	40.2	31.1	90.07	3,139.3	-372.6	821.9	750.5	71.36	11.518	
14,900.0	11,816.0	14,766.1	11,817.0	40.6	31.7	90.07	3,239.3	-373.3	821.9	749.5	72.36	11.358	
15,000.0	11,816.0	14,866.1	11,817.0	41.1	32.3	90.07	3,339.3	-374.0	821.9	748.5	73.39	11.199	
15,100.0	11,816.0	14,966.1	11,817.0	41.6	32.9	90.07	3,439.3	-374.7	821.9	747.5	74.43	11.042	
15,200.0	11,816.0	15,066.1	11,817.0	42.1	33.5	90.07	3,539.3	-375.4	821.9	746.4	75.49	10.887	
15,300.0	11,816.0	15,166.1	11,817.0	42.6	34.1	90.07	3,639.3	-376.1	821.9	745.3	76.56	10.735	
15,400.0	11,816.0	15,266.1	11,817.0	43.1	34.7	90.07	3,739.3	-376.8	821.9	744.2	77.65	10.584	
15,500.0	11,816.0	15,366.1	11,817.0	43.6	35.4	90.07	3,839.3	-377.5	821.9	743.1	78.75	10.436	
15,600.0	11,816.0	15,466.1	11,817.0	44.1	36.0	90.07	3,939.3	-378.2	821.9	742.0	79.87	10.291	
15,700.0	11,816.0	15,566.1	11,817.0	44.6	36.6	90.07	4,039.3	-378.9	821.9	740.9	80.99	10.148	
15,800.0	11,816.0	15,666.1	11,817.0	45.2	37.3	90.07	4,139.3	-379.6	821.9	739.8	82.13	10.007	
15,900.0	11,816.0	15,766.1	11,817.0	45.7	37.9	90.07	4,239.3	-380.3	821.9	738.6	83.29	9.868	
16,000.0	11,816.0	15,866.1	11,817.0	46.3	38.5	90.07	4,339.3	-381.0	821.9	737.5	84.45	9.733	
16,100.0	11,816.0	15,966.1	11,817.0	46.8	39.2	90.07	4,439.3	-381.7	821.9	736.3	85.62	9.599	
16,200.0	11,816.0	16,066.1	11,817.0	47.4	39.9	90.07	4,539.3	-382.5	821.9	735.1	86.81	9.468	
16,300.0	11,816.0	16,166.1	11,817.0	47.9	40.5	90.07	4,639.3	-383.2	821.9	733.9	88.00	9.340	
16,400.0	11,816.0	16,266.1	11,817.0	48.5	41.2	90.07	4,739.3	-383.9	821.9	732.7	89.20	9.214	
16,500.0	11,816.0	16,366.1	11,817.0	49.1	41.8	90.07	4,839.3	-384.6	821.9	731.5	90.41	9.091	
16,600.0	11,816.0	16,466.1	11,817.0	49.7	42.5	90.07	4,939.3	-385.3	821.9	730.3	91.64	8.969	
16,700.0	11,816.0	16,566.1	11,817.0	50.3	43.2	90.07	5,039.3	-386.0	821.9	729.1	92.86	8.851	
16,800.0	11,816.0	16,666.1	11,817.0	50.8	43.9	90.07	5,139.3	-386.7	821.9	727.8	94.10	8.734	
16,900.0	11,816.0	16,766.1	11,817.0	51.4	44.5	90.07	5,239.3	-387.4	821.9	726.6	95.35	8.620	
17,000.0	11,816.0	16,866.1	11,817.0	52.0	45.2	90.07	5,339.3	-388.1	821.9	725.3	96.60	8.508	
17,100.0	11,816.0	16,966.1	11,817.0	52.6	45.9	90.07	5,439.3	-388.8	821.9	724.1	97.86	8.399	
17,200.0	11,816.0	17,066.1	11,817.0	53.2	46.6	90.07	5,539.2	-389.5	821.9	722.8	99.13	8.292	
17,300.0	11,816.0	17,166.1	11,817.0	53.9	47.3	90.07	5,639.2	-390.2	821.9	721.5	100.40	8.186	
17,400.0	11,816.0	17,266.1	11,817.0	54.5	48.0	90.07	5,739.2	-390.9	821.9	720.2	101.68	8.083	
17,500.0	11,816.0	17,366.1	11,817.0	55.1	48.7	90.07	5,839.2	-391.6	821.9	719.0	102.97	7.982	
17,600.0	11,816.0	17,466.1	11,817.0	55.7	49.4	90.07	5,939.2	-392.4	821.9	717.7	104.26	7.884	
17,700.0	11,816.0	17,566.1	11,817.0	56.3	50.1	90.07	6,039.2	-393.1	821.9	716.4	105.56	7.787	
17,800.0	11,816.0	17,666.1	11,817.0	57.0	50.8	90.07	6,139.2	-393.8	821.9	715.1	106.86	7.692	
17,900.0	11,816.0	17,766.1	11,817.0	57.6	51.5	90.07	6,239.2	-394.5	821.9	713.8	108.17	7.599	
18,000.0	11,816.0	17,866.1	11,817.0	58.2	52.2	90.07	6,339.2	-395.2	821.9	712.5	109.48	7.507	

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

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Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #711H - OWB - PWP1													Offset Site Error: 0.0 usft	
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1000-r.5 MWD+IFR1, 11357-r.5 MWD+IFR1+MS													Offset Well Error: 3.0 usft	
Reference		Offset		Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Rule Assigned: Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
18,100.0	11,816.0	17,966.1	11,817.0	58.9	52.9	90.07	6,439.2	-395.9	821.9	711.1	110.80	7.418		
18,200.0	11,816.0	18,066.1	11,817.0	59.5	53.6	90.07	6,539.2	-396.6	821.9	709.8	112.12	7.331		
18,300.0	11,816.0	18,166.1	11,817.0	60.2	54.3	90.07	6,639.2	-397.3	821.9	708.5	113.45	7.245		
18,400.0	11,816.0	18,266.1	11,817.0	60.8	55.0	90.07	6,739.2	-398.0	821.9	707.2	114.78	7.161		
18,500.0	11,816.0	18,366.1	11,817.0	61.5	55.7	90.07	6,839.2	-398.7	821.9	705.8	116.12	7.078		
18,600.0	11,816.0	18,466.1	11,817.0	62.1	56.4	90.07	6,939.2	-399.4	821.9	704.5	117.46	6.998		
18,700.0	11,816.0	18,566.1	11,817.0	62.8	57.1	90.07	7,039.2	-400.1	821.9	703.1	118.81	6.918		
18,800.0	11,816.0	18,666.1	11,817.0	63.4	57.8	90.07	7,139.2	-400.8	821.9	701.8	120.15	6.841		
18,900.0	11,816.0	18,766.1	11,817.0	64.1	58.6	90.07	7,239.2	-401.5	821.9	700.4	121.51	6.765		
19,000.0	11,816.0	18,866.1	11,817.0	64.7	59.3	90.07	7,339.2	-402.3	821.9	699.1	122.86	6.690		
19,100.0	11,816.0	18,966.1	11,817.0	65.4	60.0	90.07	7,439.2	-403.0	822.0	697.7	124.22	6.617		
19,200.0	11,816.0	19,066.1	11,817.0	66.1	60.7	90.07	7,539.2	-403.7	822.0	696.4	125.58	6.545		
19,300.0	11,816.0	19,166.1	11,817.0	66.7	61.4	90.07	7,639.2	-404.4	822.0	695.0	126.95	6.475		
19,400.0	11,816.0	19,266.1	11,817.0	67.4	62.2	90.07	7,739.2	-405.1	822.0	693.6	128.32	6.406		
19,500.0	11,816.0	19,366.1	11,817.0	68.1	62.9	90.07	7,839.2	-405.8	822.0	692.3	129.69	6.338		
19,600.0	11,816.0	19,466.1	11,817.0	68.8	63.6	90.07	7,939.2	-406.5	822.0	690.9	131.07	6.271		
19,700.0	11,816.0	19,566.1	11,817.0	69.4	64.3	90.07	8,039.2	-407.2	822.0	689.5	132.44	6.206		
19,800.0	11,816.0	19,666.1	11,817.0	70.1	65.0	90.07	8,139.2	-407.9	822.0	688.1	133.83	6.142		
19,900.0	11,816.0	19,766.1	11,817.0	70.8	65.8	90.07	8,239.2	-408.6	822.0	686.8	135.21	6.079		
20,000.0	11,816.0	19,866.1	11,817.0	71.5	66.5	90.07	8,339.2	-409.3	822.0	685.4	136.59	6.018		
20,100.0	11,816.0	19,966.1	11,817.0	72.1	67.2	90.07	8,439.2	-410.0	822.0	684.0	137.98	5.957		
20,200.0	11,816.0	20,066.1	11,817.0	72.8	68.0	90.07	8,539.2	-410.7	822.0	682.6	139.37	5.898		
20,300.0	11,816.0	20,166.1	11,817.0	73.5	68.7	90.07	8,639.2	-411.4	822.0	681.2	140.77	5.839		
20,400.0	11,816.0	20,266.1	11,817.0	74.2	69.4	90.07	8,739.2	-412.2	822.0	679.8	142.16	5.782		
20,500.0	11,816.0	20,366.1	11,817.0	74.9	70.1	90.07	8,839.2	-412.9	822.0	678.4	143.56	5.726		
20,600.0	11,816.0	20,466.1	11,817.0	75.6	70.9	90.07	8,939.2	-413.6	822.0	677.0	144.96	5.670		
20,700.0	11,816.0	20,566.1	11,817.0	76.3	71.6	90.07	9,039.2	-414.3	822.0	675.6	146.36	5.616		
20,800.0	11,816.0	20,666.1	11,817.0	77.0	72.3	90.07	9,139.2	-415.0	822.0	674.2	147.77	5.563		
20,900.0	11,816.0	20,766.1	11,817.0	77.7	73.1	90.07	9,239.2	-415.7	822.0	672.8	149.17	5.510		
21,000.0	11,816.0	20,866.1	11,817.0	78.4	73.8	90.07	9,339.2	-416.4	822.0	671.4	150.58	5.459		
21,100.0	11,816.0	20,966.1	11,817.0	79.1	74.5	90.07	9,439.2	-417.1	822.0	670.0	151.99	5.408		
21,200.0	11,816.0	21,066.1	11,817.0	79.8	75.3	90.07	9,539.1	-417.8	822.0	668.6	153.40	5.358		
21,300.0	11,816.0	21,166.1	11,817.0	80.5	76.0	90.07	9,639.1	-418.5	822.0	667.2	154.82	5.309		
21,400.0	11,816.0	21,266.1	11,817.0	81.2	76.8	90.07	9,739.1	-419.2	822.0	665.8	156.23	5.261		
21,500.0	11,816.0	21,366.1	11,817.0	81.9	77.5	90.07	9,839.1	-419.9	822.0	664.3	157.65	5.214		
21,600.0	11,816.0	21,466.1	11,817.0	82.6	78.2	90.07	9,939.1	-420.6	822.0	662.9	159.07	5.167		
21,700.0	11,816.0	21,566.1	11,817.0	83.3	79.0	90.07	10,039.1	-421.3	822.0	661.5	160.49	5.122		
21,800.0	11,816.0	21,666.1	11,817.0	84.0	79.7	90.07	10,139.1	-422.1	822.0	660.1	161.91	5.077		
21,900.0	11,816.0	21,766.1	11,817.0	84.7	80.4	90.07	10,239.1	-422.8	822.0	658.7	163.33	5.033		
22,000.0	11,816.0	21,866.1	11,817.0	85.4	81.2	90.07	10,339.1	-423.5	822.0	657.2	164.76	4.989		
22,100.0	11,816.0	21,966.1	11,817.0	86.1	81.9	90.07	10,439.1	-424.2	822.0	655.8	166.19	4.946		
22,133.2	11,816.0	21,999.3	11,817.0	86.3	82.2	90.07	10,472.3	-424.4	822.0	655.3	166.66	4.932		
22,183.2	11,816.0	22,049.3	11,817.0	86.7	82.5	90.07	10,522.3	-424.8	822.0	654.7	167.29	4.913 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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11167-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis	Distance	Rule Assigned:									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	-0.48	90.0	-0.8	90.0				
100.0	100.0	100.0	100.0	3.1	3.1	-0.48	90.0	-0.8	90.0	83.5	6.54	13.767	
200.0	200.0	200.0	200.0	3.2	3.2	-0.48	90.0	-0.8	90.0	83.2	6.79	13.262	
300.0	300.0	300.0	300.0	3.3	3.3	-0.48	90.0	-0.8	90.0	83.0	7.03	12.796	
400.0	400.0	400.0	400.0	3.4	3.4	-0.48	90.0	-0.8	90.0	82.7	7.28	12.365	
500.0	500.0	500.0	500.0	3.6	3.6	-0.48	90.0	-0.8	90.0	82.5	7.52	11.964	
600.0	600.0	600.0	600.0	3.7	3.7	-0.48	90.0	-0.8	90.0	82.2	7.76	11.591	
700.0	700.0	700.0	700.0	3.8	3.8	-0.48	90.0	-0.8	90.0	82.0	8.00	11.243	
800.0	800.0	800.0	800.0	3.9	3.9	-0.48	90.0	-0.8	90.0	81.7	8.24	10.916	
900.0	900.0	900.0	900.0	4.0	4.0	-0.48	90.0	-0.8	90.0	81.5	8.48	10.609	
1,000.0	1,000.0	1,000.0	1,000.0	4.2	4.2	-0.48	90.0	-0.8	90.0	81.3	8.72	10.320 CC, ES	
1,100.0	1,100.0	1,099.4	1,099.3	4.3	4.3	88.69	90.3	0.9	90.2	81.3	8.93	10.104	
1,200.0	1,199.8	1,198.0	1,197.9	4.5	4.5	95.02	91.2	6.0	91.8	82.5	9.21	9.967 SF	
1,300.0	1,299.5	1,296.0	1,295.5	4.9	4.5	104.56	92.6	13.9	96.5	87.0	9.45	10.213	
1,400.0	1,398.7	1,393.8	1,393.0	5.2	4.6	114.83	94.1	22.3	105.5	95.7	9.80	10.765	
1,500.0	1,497.5	1,490.9	1,489.7	5.5	4.7	124.52	95.5	30.7	119.4	109.2	10.22	11.679	
1,600.0	1,595.6	1,587.1	1,585.5	5.9	4.8	132.99	97.0	38.9	138.5	127.8	10.68	12.968	
1,700.0	1,693.4	1,685.3	1,683.4	6.2	5.0	139.98	98.3	46.5	160.5	149.3	11.23	14.288	
1,800.0	1,791.3	1,784.4	1,782.3	6.5	5.2	145.10	99.4	52.4	182.7	170.9	11.79	15.493	
1,900.0	1,889.1	1,884.4	1,882.3	6.9	5.4	148.96	100.1	56.7	204.3	192.0	12.37	16.523	
2,000.0	1,986.9	1,985.3	1,983.1	7.2	5.6	151.98	100.6	59.3	225.0	212.1	12.96	17.365	
2,100.0	2,084.7	2,086.9	2,084.7	7.6	5.8	154.40	100.7	60.2	244.5	231.0	13.51	18.094	
2,200.0	2,182.5	2,184.7	2,182.5	8.0	5.9	156.35	100.7	60.2	263.4	249.4	14.07	18.729	
2,300.0	2,280.3	2,282.6	2,280.3	8.4	6.0	158.03	100.7	60.2	282.7	268.1	14.62	19.335	
2,400.0	2,378.1	2,380.4	2,378.1	8.8	6.2	159.50	100.7	60.2	302.1	286.9	15.18	19.905	
2,500.0	2,476.0	2,478.2	2,476.0	9.2	6.3	160.80	100.7	60.2	321.7	306.0	15.74	20.434	
2,600.0	2,573.8	2,576.0	2,573.8	9.6	6.4	161.94	100.7	60.2	341.5	325.1	16.32	20.924	
2,700.0	2,671.6	2,673.8	2,671.6	10.0	6.5	162.96	100.7	60.2	361.3	344.4	16.90	21.378	
2,800.0	2,769.4	2,771.6	2,769.4	10.4	6.6	163.88	100.7	60.2	381.3	363.8	17.49	21.799	
2,900.0	2,867.2	2,869.4	2,867.2	10.9	6.7	164.70	100.7	60.2	401.3	383.3	18.09	22.191	
3,000.0	2,965.0	2,967.3	2,965.0	11.3	6.9	165.44	100.7	60.2	421.5	402.8	18.69	22.554	
3,100.0	3,062.8	3,065.1	3,062.8	11.7	7.0	166.12	100.7	60.2	441.6	422.3	19.29	22.893	
3,200.0	3,160.7	3,162.9	3,160.7	12.2	7.1	166.74	100.7	60.2	461.9	442.0	19.90	23.208	
3,300.0	3,258.5	3,260.7	3,258.5	12.6	7.2	167.31	100.7	60.2	482.2	461.6	20.52	23.502	
3,400.0	3,356.3	3,358.5	3,356.3	13.0	7.3	167.83	100.7	60.2	502.5	481.3	21.13	23.777	
3,500.0	3,454.1	3,456.3	3,454.1	13.5	7.4	168.31	100.7	60.2	522.8	501.1	21.75	24.035	
3,600.0	3,551.9	3,554.1	3,551.9	13.9	7.5	168.75	100.7	60.2	543.2	520.9	22.38	24.276	
3,700.0	3,649.7	3,652.0	3,649.7	14.4	7.6	169.16	100.7	60.2	563.7	540.7	23.00	24.502	
3,800.0	3,747.5	3,749.8	3,747.5	14.8	7.7	169.55	100.7	60.2	584.1	560.5	23.63	24.715	
3,900.0	3,845.4	3,847.6	3,845.4	15.3	7.8	169.90	100.7	60.2	604.6	580.3	24.27	24.915	
4,000.0	3,943.2	3,945.4	3,943.2	15.7	8.0	170.24	100.7	60.2	625.1	600.2	24.90	25.103	
4,100.0	4,041.0	4,043.2	4,041.0	16.2	8.1	170.55	100.7	60.2	645.6	620.0	25.54	25.281	
4,200.0	4,138.8	4,141.0	4,138.8	16.6	8.2	170.84	100.7	60.2	666.1	639.9	26.17	25.449	
4,300.0	4,236.6	4,238.8	4,236.6	17.1	8.3	171.12	100.7	60.2	686.7	659.8	26.81	25.608	
4,400.0	4,334.4	4,336.7	4,334.4	17.6	8.4	171.38	100.7	60.2	707.2	679.8	27.46	25.759	
4,500.0	4,432.3	4,434.5	4,432.3	18.0	8.5	171.62	100.7	60.2	727.8	699.7	28.10	25.902	
4,600.0	4,530.1	4,532.3	4,530.1	18.5	8.6	171.86	100.7	60.2	748.4	719.6	28.74	26.037	
4,700.0	4,627.9	4,630.1	4,627.9	18.9	8.7	172.08	100.7	60.2	769.0	739.6	29.39	26.166	
4,800.0	4,725.7	4,727.9	4,725.7	19.4	8.8	172.28	100.7	60.2	789.6	759.5	30.04	26.288	
4,900.0	4,823.5	4,825.7	4,823.5	19.9	8.9	172.48	100.7	60.2	810.2	779.5	30.68	26.405	
5,000.0	4,921.3	4,923.5	4,921.3	20.3	9.0	172.67	100.7	60.2	830.8	799.5	31.33	26.516	
5,100.0	5,019.1	5,021.4	5,019.1	20.8	9.1	172.85	100.7	60.2	851.4	819.5	31.98	26.622	

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: ZIA HILLS UNIT 2431 PROJECT - ZIA HILLS UNIT 2431 WC #712H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1, 11167-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.0	5,117.0	5,119.2	5,117.0	21.2	9.2	173.02	100.7	60.2	872.1	839.5	32.63	26.723		
5,300.0	5,214.8	5,217.0	5,214.8	21.7	9.3	173.18	100.7	60.2	892.7	859.4	33.29	26.820		
5,400.0	5,312.6	5,314.8	5,312.6	22.2	9.4	173.33	100.7	60.2	913.4	879.5	33.94	26.913		
5,500.0	5,410.4	5,412.6	5,410.4	22.6	9.5	173.48	100.7	60.2	934.0	899.5	34.59	27.001		
5,600.0	5,508.2	5,510.4	5,508.2	23.1	9.6	173.62	100.7	60.2	954.7	919.5	35.25	27.086		
5,700.0	5,606.0	5,608.3	5,606.0	23.6	9.7	173.76	100.7	60.2	975.4	939.5	35.90	27.167		
5,800.0	5,703.8	5,706.1	5,703.8	24.0	9.8	173.89	100.7	60.2	996.1	959.5	36.56	27.245		

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 #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

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

Offset Depths are relative to Offset Datum

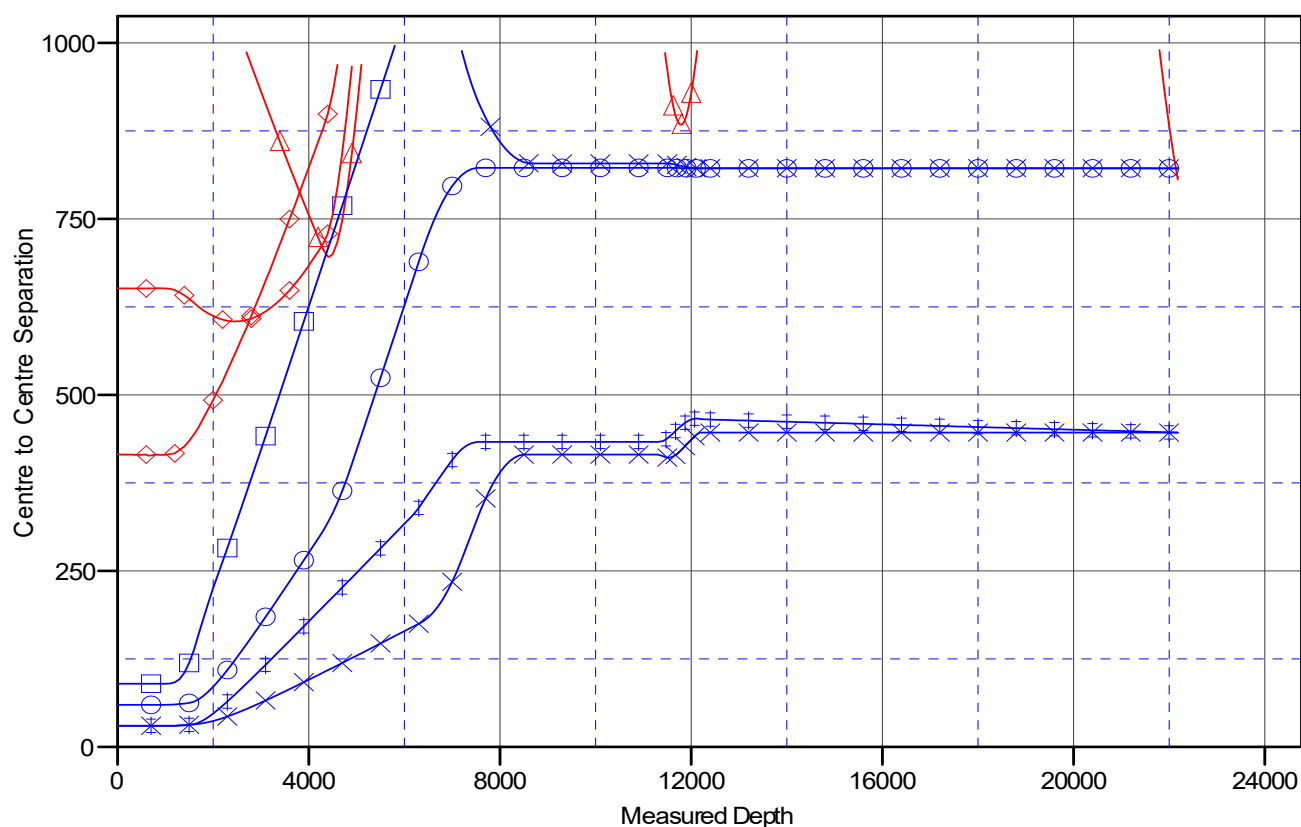
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #709H

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

Grid Convergence at Surface is: 0.32°

Ladder Plot



LEGEND

—●— SUMDEROS 12 WIPA FEDERAL COM #2H, OWB, AWP V0	—●— ZIA HILLS UNIT 2431 WC #710H, OWB, PWP1 V0	—●— GOLDEN SPUR 36 COM W 1 #2H, OWB, AWP V0
—●— HANSON FEDERAL BATTERY 1 #12 (P&A), OWB, AWP V0	—●— ZIA HILLS UNIT 2431 WC #709H, OWB, PWP1 V0	—●— ZIA HILLS UNIT 2431 WC #712H, OWB, PWP1 V0
—●— ZIA HILLS UNIT 2431 WC #707H, OWB, PWP1 V0	—●— ZIA HILLS UNIT 2431 WC #711H, OWB, PWP1 V0	
—●— HANSON FEDERAL BATTERY 1 #13 (P&A), OWB, AWP V0	—●— R T WILSON FEDERAL #2 (P&A), OWB, AWP V0	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=26ft @ 3193.0usft
Reference Site:	ZIA HILLS UNIT 2431 PROJECT	MD Reference:	KB=26ft @ 3193.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Central Planning Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

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

Offset Depths are relative to Offset Datum

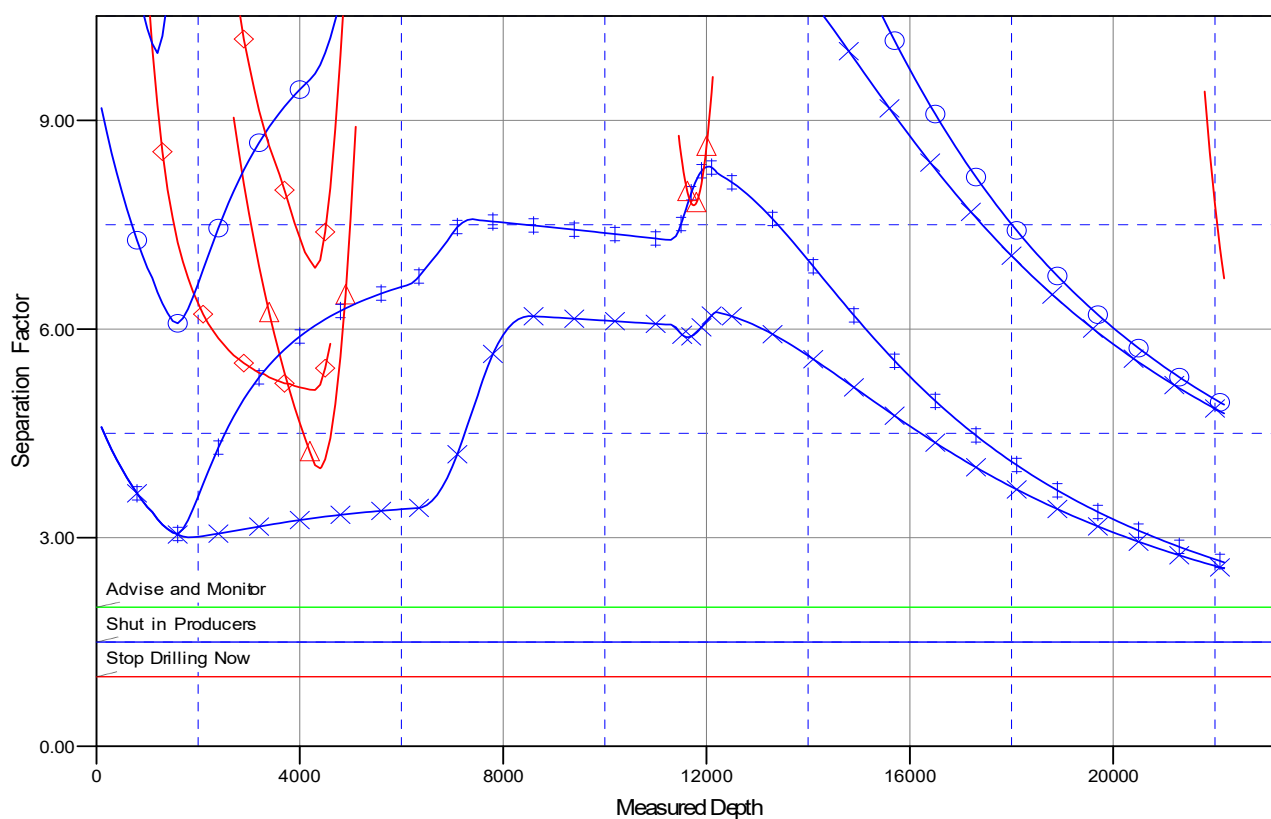
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: ZIA HILLS UNIT 2431 WC #709H

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

Grid Convergence at Surface is: 0.32°

Separation Factor Plot



LEGEND

SUMEROS 12 WIPA FEDERAL COM #2H, OWB, AWP V0	ZIA HILLS UNIT 2431 WC #710H OWB, PWP1 V0	GOLDEN SPUR 36 COM W 1 #2H, OWB, AWP V0
HANSON FEDERAL BATTERY 1 #12 (P&A), OWB, AWP V0	ZIA HILLS UNIT 2431 WC #708H OWB, PWP1 V0	ZIA HILLS UNIT 2431 WC #712H OWB, PWP1 V0
ZIA HILLS UNIT 2431 WC #709H OWB, PWP1 V0	ZIA HILLS UNIT 2431 WC #711H OWB, PWP1 V0	
HANSON FEDERAL BATTERY 1 #13 (P&A), OWB, AWP V0	R T WILSON FEDERAL #2 (P&A), OWB, AWP V0	

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

DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

ZIA HILLS UNIT 2431 PROJECT

ZIA HILLS UNIT 2431 WC #709H

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 #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	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 #709H					
Well Position	+N/-S	0.0 usft	Northing:	371,905.76 usft	Latitude:	32° 1' 15.671 N
	+E/-W	0.0 usft	Easting:	688,824.17 usft	Longitude:	103° 43' 26.683 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,167.0 usft
Grid Convergence:		0.32 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	12/31/2023	6.34	59.52	47,261.29110166

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	353.24	

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	11,455.3 PWP1 (OWB)	r.5 MWD+IFR1 OWSG MWD + IFR1 rev.5		
3	11,455.3	22,183.2 PWP1 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-Si		

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	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	273.00	1,595.6	3.3	-62.5	2.00	2.00	0.00	273.00	
6,344.6	12.00	273.00	6,236.5	54.9	-1,047.6	0.00	0.00	0.00	0.00	
7,544.6	0.00	0.00	7,427.7	61.5	-1,172.6	1.00	-1.00	0.00	180.00	
11,455.3	0.00	0.00	11,338.5	61.5	-1,172.6	0.00	0.00	0.00	0.00	
12,205.3	90.00	359.59	11,816.0	538.9	-1,176.0	12.00	12.00	-0.05	359.59	
22,133.2	90.00	359.59	11,816.0	10,466.5	-1,246.4	0.00	0.00	0.00	0.00	
22,183.2	90.00	359.59	11,816.0	10,516.5	-1,246.7	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 #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	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	273.00	1,100.0	0.1	-1.7	0.3	2.00	2.00	0.00
1,200.0	4.00	273.00	1,199.8	0.4	-7.0	1.2	2.00	2.00	0.00
1,300.0	6.00	273.00	1,299.5	0.8	-15.7	2.7	2.00	2.00	0.00
1,400.0	8.00	273.00	1,398.7	1.5	-27.8	4.7	2.00	2.00	0.00
1,500.0	10.00	273.00	1,497.5	2.3	-43.5	7.4	2.00	2.00	0.00
1,600.0	12.00	273.00	1,595.6	3.3	-62.5	10.6	2.00	2.00	0.00
Start 4744.6 hold at 1600.0 MD									
1,700.0	12.00	273.00	1,693.4	4.4	-83.3	14.1	0.00	0.00	0.00
1,800.0	12.00	273.00	1,791.3	5.5	-104.0	17.7	0.00	0.00	0.00
1,900.0	12.00	273.00	1,889.1	6.5	-124.8	21.2	0.00	0.00	0.00
2,000.0	12.00	273.00	1,986.9	7.6	-145.6	24.7	0.00	0.00	0.00
2,100.0	12.00	273.00	2,084.7	8.7	-166.3	28.2	0.00	0.00	0.00
2,200.0	12.00	273.00	2,182.5	9.8	-187.1	31.8	0.00	0.00	0.00
2,300.0	12.00	273.00	2,280.3	10.9	-207.9	35.3	0.00	0.00	0.00
2,400.0	12.00	273.00	2,378.1	12.0	-228.6	38.8	0.00	0.00	0.00
2,500.0	12.00	273.00	2,476.0	13.1	-249.4	42.3	0.00	0.00	0.00
2,600.0	12.00	273.00	2,573.8	14.2	-270.1	45.9	0.00	0.00	0.00
2,700.0	12.00	273.00	2,671.6	15.2	-290.9	49.4	0.00	0.00	0.00
2,800.0	12.00	273.00	2,769.4	16.3	-311.7	52.9	0.00	0.00	0.00
2,900.0	12.00	273.00	2,867.2	17.4	-332.4	56.4	0.00	0.00	0.00
3,000.0	12.00	273.00	2,965.0	18.5	-353.2	60.0	0.00	0.00	0.00
3,100.0	12.00	273.00	3,062.8	19.6	-374.0	63.5	0.00	0.00	0.00
3,200.0	12.00	273.00	3,160.7	20.7	-394.7	67.0	0.00	0.00	0.00
3,300.0	12.00	273.00	3,258.5	21.8	-415.5	70.5	0.00	0.00	0.00
3,400.0	12.00	273.00	3,356.3	22.9	-436.2	74.1	0.00	0.00	0.00
3,500.0	12.00	273.00	3,454.1	24.0	-457.0	77.6	0.00	0.00	0.00
3,600.0	12.00	273.00	3,551.9	25.0	-477.8	81.1	0.00	0.00	0.00
3,700.0	12.00	273.00	3,649.7	26.1	-498.5	84.6	0.00	0.00	0.00
3,800.0	12.00	273.00	3,747.5	27.2	-519.3	88.2	0.00	0.00	0.00
3,900.0	12.00	273.00	3,845.4	28.3	-540.1	91.7	0.00	0.00	0.00
4,000.0	12.00	273.00	3,943.2	29.4	-560.8	95.2	0.00	0.00	0.00
4,100.0	12.00	273.00	4,041.0	30.5	-581.6	98.7	0.00	0.00	0.00
4,200.0	12.00	273.00	4,138.8	31.6	-602.3	102.3	0.00	0.00	0.00
4,300.0	12.00	273.00	4,236.6	32.7	-623.1	105.8	0.00	0.00	0.00
4,400.0	12.00	273.00	4,334.4	33.7	-643.9	109.3	0.00	0.00	0.00
4,500.0	12.00	273.00	4,432.3	34.8	-664.6	112.8	0.00	0.00	0.00
4,600.0	12.00	273.00	4,530.1	35.9	-685.4	116.4	0.00	0.00	0.00
4,700.0	12.00	273.00	4,627.9	37.0	-706.2	119.9	0.00	0.00	0.00
4,800.0	12.00	273.00	4,725.7	38.1	-726.9	123.4	0.00	0.00	0.00
4,900.0	12.00	273.00	4,823.5	39.2	-747.7	126.9	0.00	0.00	0.00
5,000.0	12.00	273.00	4,921.3	40.3	-768.4	130.5	0.00	0.00	0.00
5,100.0	12.00	273.00	5,019.1	41.4	-789.2	134.0	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 #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	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	273.00	5,117.0	42.4	-810.0	137.5	0.00	0.00	0.00	
5,300.0	12.00	273.00	5,214.8	43.5	-830.7	141.0	0.00	0.00	0.00	
5,400.0	12.00	273.00	5,312.6	44.6	-851.5	144.6	0.00	0.00	0.00	
5,500.0	12.00	273.00	5,410.4	45.7	-872.3	148.1	0.00	0.00	0.00	
5,600.0	12.00	273.00	5,508.2	46.8	-893.0	151.6	0.00	0.00	0.00	
5,700.0	12.00	273.00	5,606.0	47.9	-913.8	155.1	0.00	0.00	0.00	
5,800.0	12.00	273.00	5,703.8	49.0	-934.5	158.7	0.00	0.00	0.00	
5,900.0	12.00	273.00	5,801.7	50.1	-955.3	162.2	0.00	0.00	0.00	
6,000.0	12.00	273.00	5,899.5	51.2	-976.1	165.7	0.00	0.00	0.00	
6,100.0	12.00	273.00	5,997.3	52.2	-996.8	169.2	0.00	0.00	0.00	
6,200.0	12.00	273.00	6,095.1	53.3	-1,017.6	172.8	0.00	0.00	0.00	
6,300.0	12.00	273.00	6,192.9	54.4	-1,038.4	176.3	0.00	0.00	0.00	
6,344.6	12.00	273.00	6,236.5	54.9	-1,047.6	177.8	0.00	0.00	0.00	
Start Drop -1.00										
6,400.0	11.45	273.00	6,290.8	55.5	-1,058.9	179.8	1.00	-1.00	0.00	
6,500.0	10.45	273.00	6,389.0	56.5	-1,077.8	183.0	1.00	-1.00	0.00	
6,600.0	9.45	273.00	6,487.5	57.4	-1,095.1	185.9	1.00	-1.00	0.00	
6,700.0	8.45	273.00	6,586.2	58.2	-1,110.6	188.5	1.00	-1.00	0.00	
6,800.0	7.45	273.00	6,685.3	58.9	-1,124.4	190.9	1.00	-1.00	0.00	
6,900.0	6.45	273.00	6,784.5	59.6	-1,136.5	192.9	1.00	-1.00	0.00	
7,000.0	5.45	273.00	6,884.0	60.1	-1,146.8	194.7	1.00	-1.00	0.00	
7,100.0	4.45	273.00	6,983.6	60.6	-1,155.4	196.2	1.00	-1.00	0.00	
7,200.0	3.45	273.00	7,083.4	60.9	-1,162.3	197.3	1.00	-1.00	0.00	
7,300.0	2.45	273.00	7,183.3	61.2	-1,167.4	198.2	1.00	-1.00	0.00	
7,400.0	1.45	273.00	7,283.2	61.4	-1,170.8	198.8	1.00	-1.00	0.00	
7,500.0	0.45	273.00	7,383.2	61.4	-1,172.5	199.0	1.00	-1.00	0.00	
7,544.6	0.00	0.00	7,427.7	61.5	-1,172.6	199.1	1.00	-1.00	0.00	
Start 3910.8 hold at 7544.6 MD										
7,600.0	0.00	0.00	7,483.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,583.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,683.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,783.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,883.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,100.0	0.00	0.00	7,983.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,083.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,183.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,283.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,383.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,483.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,583.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,683.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,783.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,883.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,100.0	0.00	0.00	8,983.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,083.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,183.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,283.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,383.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,483.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,583.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,683.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,783.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,883.2	61.5	-1,172.6	199.1	0.00	0.00	0.00	
10,100.0	0.00	0.00	9,983.2	61.5	-1,172.6	199.1	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 #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,200.0	0.00	0.00	10,083.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
10,300.0	0.00	0.00	10,183.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
10,400.0	0.00	0.00	10,283.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
10,500.0	0.00	0.00	10,383.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
10,600.0	0.00	0.00	10,483.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
10,700.0	0.00	0.00	10,583.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
10,800.0	0.00	0.00	10,683.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
10,900.0	0.00	0.00	10,783.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
11,000.0	0.00	0.00	10,883.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
11,100.0	0.00	0.00	10,983.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
11,200.0	0.00	0.00	11,083.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
11,300.0	0.00	0.00	11,183.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
11,400.0	0.00	0.00	11,283.2	61.5	-1,172.6	199.1	0.00	0.00	0.00
11,455.3	0.00	0.00	11,338.5	61.5	-1,172.6	199.1	0.00	0.00	0.00
Start DLS 12.00 TFO 359.59									
11,475.0	2.36	359.59	11,358.2	61.9	-1,172.6	199.5	12.00	12.00	0.00
11,500.0	5.36	359.59	11,383.1	63.5	-1,172.7	201.1	12.00	12.00	0.00
11,525.0	8.36	359.59	11,407.9	66.5	-1,172.7	204.1	12.00	12.00	0.00
11,550.0	11.36	359.59	11,432.6	70.8	-1,172.7	208.4	12.00	12.00	0.00
11,575.0	14.36	359.59	11,456.9	76.4	-1,172.8	213.9	12.00	12.00	0.00
11,600.0	17.36	359.59	11,481.0	83.2	-1,172.8	220.7	12.00	12.00	0.00
11,625.0	20.36	359.59	11,504.6	91.3	-1,172.9	228.7	12.00	12.00	0.00
11,650.0	23.36	359.59	11,527.8	100.6	-1,172.9	238.0	12.00	12.00	0.00
11,675.0	26.36	359.59	11,550.5	111.1	-1,173.0	248.4	12.00	12.00	0.00
11,700.0	29.36	359.59	11,572.6	122.8	-1,173.1	260.0	12.00	12.00	0.00
11,725.0	32.36	359.59	11,594.1	135.6	-1,173.2	272.8	12.00	12.00	0.00
11,750.0	35.36	359.59	11,614.8	149.5	-1,173.3	286.6	12.00	12.00	0.00
11,775.0	38.36	359.59	11,634.8	164.5	-1,173.4	301.5	12.00	12.00	0.00
11,800.0	41.36	359.59	11,654.0	180.5	-1,173.5	317.4	12.00	12.00	0.00
11,825.0	44.36	359.59	11,672.4	197.5	-1,173.6	334.3	12.00	12.00	0.00
11,850.0	47.36	359.59	11,689.8	215.5	-1,173.7	352.2	12.00	12.00	0.00
11,875.0	50.36	359.59	11,706.2	234.3	-1,173.9	370.9	12.00	12.00	0.00
11,900.0	53.36	359.59	11,721.6	254.0	-1,174.0	390.4	12.00	12.00	0.00
11,925.0	56.36	359.59	11,736.0	274.4	-1,174.2	410.7	12.00	12.00	0.00
11,950.0	59.36	359.59	11,749.3	295.6	-1,174.3	431.8	12.00	12.00	0.00
11,975.0	62.36	359.59	11,761.5	317.4	-1,174.5	453.5	12.00	12.00	0.00
12,000.0	65.36	359.59	11,772.5	339.8	-1,174.6	475.8	12.00	12.00	0.00
12,025.0	68.36	359.59	11,782.3	362.8	-1,174.8	498.6	12.00	12.00	0.00
12,050.0	71.36	359.59	11,791.0	386.3	-1,174.9	521.9	12.00	12.00	0.00
12,075.0	74.36	359.59	11,798.3	410.2	-1,175.1	545.7	12.00	12.00	0.00
12,100.0	77.36	359.59	11,804.4	434.4	-1,175.3	569.8	12.00	12.00	0.00
12,125.0	80.36	359.59	11,809.3	458.9	-1,175.5	594.1	12.00	12.00	0.00
12,150.0	83.36	359.59	11,812.8	483.7	-1,175.6	618.7	12.00	12.00	0.00
12,175.0	86.36	359.59	11,815.0	508.6	-1,175.8	643.5	12.00	12.00	0.00
12,200.0	89.36	359.59	11,816.0	533.6	-1,176.0	668.3	12.00	12.00	0.00
12,205.3	90.00	359.59	11,816.0	538.9	-1,176.0	673.6	12.00	12.00	0.00
Start 9927.8 hold at 12205.3 MD									
12,300.0	90.00	359.59	11,816.0	633.6	-1,176.7	767.7	0.00	0.00	0.00
12,400.0	90.00	359.59	11,816.0	733.6	-1,177.4	867.1	0.00	0.00	0.00
12,500.0	90.00	359.59	11,816.0	833.6	-1,178.1	966.4	0.00	0.00	0.00
12,600.0	90.00	359.59	11,816.0	933.6	-1,178.8	1,065.8	0.00	0.00	0.00
12,700.0	90.00	359.59	11,816.0	1,033.6	-1,179.5	1,165.2	0.00	0.00	0.00
12,800.0	90.00	359.59	11,816.0	1,133.5	-1,180.2	1,264.6	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 #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
12,900.0	90.00	359.59	11,816.0	1,233.5	-1,181.0	1,364.0	0.00	0.00	0.00	
13,000.0	90.00	359.59	11,816.0	1,333.5	-1,181.7	1,463.4	0.00	0.00	0.00	
13,100.0	90.00	359.59	11,816.0	1,433.5	-1,182.4	1,562.8	0.00	0.00	0.00	
13,200.0	90.00	359.59	11,816.0	1,533.5	-1,183.1	1,662.1	0.00	0.00	0.00	
13,300.0	90.00	359.59	11,816.0	1,633.5	-1,183.8	1,761.5	0.00	0.00	0.00	
13,400.0	90.00	359.59	11,816.0	1,733.5	-1,184.5	1,860.9	0.00	0.00	0.00	
13,500.0	90.00	359.59	11,816.0	1,833.5	-1,185.2	1,960.3	0.00	0.00	0.00	
13,600.0	90.00	359.59	11,816.0	1,933.5	-1,185.9	2,059.7	0.00	0.00	0.00	
13,700.0	90.00	359.59	11,816.0	2,033.5	-1,186.6	2,159.1	0.00	0.00	0.00	
13,800.0	90.00	359.59	11,816.0	2,133.5	-1,187.3	2,258.5	0.00	0.00	0.00	
13,900.0	90.00	359.59	11,816.0	2,233.5	-1,188.0	2,357.8	0.00	0.00	0.00	
14,000.0	90.00	359.59	11,816.0	2,333.5	-1,188.7	2,457.2	0.00	0.00	0.00	
14,100.0	90.00	359.59	11,816.0	2,433.5	-1,189.5	2,556.6	0.00	0.00	0.00	
14,200.0	90.00	359.59	11,816.0	2,533.5	-1,190.2	2,656.0	0.00	0.00	0.00	
14,300.0	90.00	359.59	11,816.0	2,633.5	-1,190.9	2,755.4	0.00	0.00	0.00	
14,400.0	90.00	359.59	11,816.0	2,733.5	-1,191.6	2,854.8	0.00	0.00	0.00	
14,500.0	90.00	359.59	11,816.0	2,833.5	-1,192.3	2,954.2	0.00	0.00	0.00	
14,600.0	90.00	359.59	11,816.0	2,933.5	-1,193.0	3,053.5	0.00	0.00	0.00	
14,700.0	90.00	359.59	11,816.0	3,033.5	-1,193.7	3,152.9	0.00	0.00	0.00	
14,800.0	90.00	359.59	11,816.0	3,133.5	-1,194.4	3,252.3	0.00	0.00	0.00	
14,900.0	90.00	359.59	11,816.0	3,233.5	-1,195.1	3,351.7	0.00	0.00	0.00	
15,000.0	90.00	359.59	11,816.0	3,333.5	-1,195.8	3,451.1	0.00	0.00	0.00	
15,100.0	90.00	359.59	11,816.0	3,433.5	-1,196.5	3,550.5	0.00	0.00	0.00	
15,200.0	90.00	359.59	11,816.0	3,533.5	-1,197.3	3,649.9	0.00	0.00	0.00	
15,300.0	90.00	359.59	11,816.0	3,633.5	-1,198.0	3,749.2	0.00	0.00	0.00	
15,400.0	90.00	359.59	11,816.0	3,733.5	-1,198.7	3,848.6	0.00	0.00	0.00	
15,500.0	90.00	359.59	11,816.0	3,833.5	-1,199.4	3,948.0	0.00	0.00	0.00	
15,600.0	90.00	359.59	11,816.0	3,933.5	-1,200.1	4,047.4	0.00	0.00	0.00	
15,700.0	90.00	359.59	11,816.0	4,033.5	-1,200.8	4,146.8	0.00	0.00	0.00	
15,800.0	90.00	359.59	11,816.0	4,133.5	-1,201.5	4,246.2	0.00	0.00	0.00	
15,900.0	90.00	359.59	11,816.0	4,233.5	-1,202.2	4,345.6	0.00	0.00	0.00	
16,000.0	90.00	359.59	11,816.0	4,333.5	-1,202.9	4,444.9	0.00	0.00	0.00	
16,100.0	90.00	359.59	11,816.0	4,433.5	-1,203.6	4,544.3	0.00	0.00	0.00	
16,200.0	90.00	359.59	11,816.0	4,533.5	-1,204.3	4,643.7	0.00	0.00	0.00	
16,300.0	90.00	359.59	11,816.0	4,633.5	-1,205.0	4,743.1	0.00	0.00	0.00	
16,400.0	90.00	359.59	11,816.0	4,733.5	-1,205.8	4,842.5	0.00	0.00	0.00	
16,500.0	90.00	359.59	11,816.0	4,833.5	-1,206.5	4,941.9	0.00	0.00	0.00	
16,600.0	90.00	359.59	11,816.0	4,933.5	-1,207.2	5,041.3	0.00	0.00	0.00	
16,700.0	90.00	359.59	11,816.0	5,033.5	-1,207.9	5,140.6	0.00	0.00	0.00	
16,800.0	90.00	359.59	11,816.0	5,133.4	-1,208.6	5,240.0	0.00	0.00	0.00	
16,900.0	90.00	359.59	11,816.0	5,233.4	-1,209.3	5,339.4	0.00	0.00	0.00	
17,000.0	90.00	359.59	11,816.0	5,333.4	-1,210.0	5,438.8	0.00	0.00	0.00	
17,100.0	90.00	359.59	11,816.0	5,433.4	-1,210.7	5,538.2	0.00	0.00	0.00	
17,200.0	90.00	359.59	11,816.0	5,533.4	-1,211.4	5,637.6	0.00	0.00	0.00	
17,300.0	90.00	359.59	11,816.0	5,633.4	-1,212.1	5,737.0	0.00	0.00	0.00	
17,400.0	90.00	359.59	11,816.0	5,733.4	-1,212.8	5,836.3	0.00	0.00	0.00	
17,500.0	90.00	359.59	11,816.0	5,833.4	-1,213.5	5,935.7	0.00	0.00	0.00	
17,600.0	90.00	359.59	11,816.0	5,933.4	-1,214.3	6,035.1	0.00	0.00	0.00	
17,700.0	90.00	359.59	11,816.0	6,033.4	-1,215.0	6,134.5	0.00	0.00	0.00	
17,800.0	90.00	359.59	11,816.0	6,133.4	-1,215.7	6,233.9	0.00	0.00	0.00	
17,900.0	90.00	359.59	11,816.0	6,233.4	-1,216.4	6,333.3	0.00	0.00	0.00	
18,000.0	90.00	359.59	11,816.0	6,333.4	-1,217.1	6,432.7	0.00	0.00	0.00	
18,100.0	90.00	359.59	11,816.0	6,433.4	-1,217.8	6,532.0	0.00	0.00	0.00	
18,200.0	90.00	359.59	11,816.0	6,533.4	-1,218.5	6,631.4	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	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)
18,300.0	90.00	359.59	11,816.0	6,633.4	-1,219.2	6,730.8	0.00	0.00	0.00
18,400.0	90.00	359.59	11,816.0	6,733.4	-1,219.9	6,830.2	0.00	0.00	0.00
18,500.0	90.00	359.59	11,816.0	6,833.4	-1,220.6	6,929.6	0.00	0.00	0.00
18,600.0	90.00	359.59	11,816.0	6,933.4	-1,221.3	7,029.0	0.00	0.00	0.00
18,700.0	90.00	359.59	11,816.0	7,033.4	-1,222.1	7,128.4	0.00	0.00	0.00
18,800.0	90.00	359.59	11,816.0	7,133.4	-1,222.8	7,227.7	0.00	0.00	0.00
18,900.0	90.00	359.59	11,816.0	7,233.4	-1,223.5	7,327.1	0.00	0.00	0.00
19,000.0	90.00	359.59	11,816.0	7,333.4	-1,224.2	7,426.5	0.00	0.00	0.00
19,100.0	90.00	359.59	11,816.0	7,433.4	-1,224.9	7,525.9	0.00	0.00	0.00
19,200.0	90.00	359.59	11,816.0	7,533.4	-1,225.6	7,625.3	0.00	0.00	0.00
19,300.0	90.00	359.59	11,816.0	7,633.4	-1,226.3	7,724.7	0.00	0.00	0.00
19,400.0	90.00	359.59	11,816.0	7,733.4	-1,227.0	7,824.1	0.00	0.00	0.00
19,500.0	90.00	359.59	11,816.0	7,833.4	-1,227.7	7,923.4	0.00	0.00	0.00
19,600.0	90.00	359.59	11,816.0	7,933.4	-1,228.4	8,022.8	0.00	0.00	0.00
19,700.0	90.00	359.59	11,816.0	8,033.4	-1,229.1	8,122.2	0.00	0.00	0.00
19,800.0	90.00	359.59	11,816.0	8,133.4	-1,229.8	8,221.6	0.00	0.00	0.00
19,900.0	90.00	359.59	11,816.0	8,233.4	-1,230.6	8,321.0	0.00	0.00	0.00
20,000.0	90.00	359.59	11,816.0	8,333.4	-1,231.3	8,420.4	0.00	0.00	0.00
20,100.0	90.00	359.59	11,816.0	8,433.4	-1,232.0	8,519.8	0.00	0.00	0.00
20,200.0	90.00	359.59	11,816.0	8,533.4	-1,232.7	8,619.1	0.00	0.00	0.00
20,300.0	90.00	359.59	11,816.0	8,633.4	-1,233.4	8,718.5	0.00	0.00	0.00
20,400.0	90.00	359.59	11,816.0	8,733.4	-1,234.1	8,817.9	0.00	0.00	0.00
20,500.0	90.00	359.59	11,816.0	8,833.4	-1,234.8	8,917.3	0.00	0.00	0.00
20,600.0	90.00	359.59	11,816.0	8,933.4	-1,235.5	9,016.7	0.00	0.00	0.00
20,700.0	90.00	359.59	11,816.0	9,033.3	-1,236.2	9,116.1	0.00	0.00	0.00
20,800.0	90.00	359.59	11,816.0	9,133.3	-1,236.9	9,215.5	0.00	0.00	0.00
20,900.0	90.00	359.59	11,816.0	9,233.3	-1,237.6	9,314.8	0.00	0.00	0.00
21,000.0	90.00	359.59	11,816.0	9,333.3	-1,238.4	9,414.2	0.00	0.00	0.00
21,100.0	90.00	359.59	11,816.0	9,433.3	-1,239.1	9,513.6	0.00	0.00	0.00
21,200.0	90.00	359.59	11,816.0	9,533.3	-1,239.8	9,613.0	0.00	0.00	0.00
21,300.0	90.00	359.59	11,816.0	9,633.3	-1,240.5	9,712.4	0.00	0.00	0.00
21,400.0	90.00	359.59	11,816.0	9,733.3	-1,241.2	9,811.8	0.00	0.00	0.00
21,500.0	90.00	359.59	11,816.0	9,833.3	-1,241.9	9,911.2	0.00	0.00	0.00
21,600.0	90.00	359.59	11,816.0	9,933.3	-1,242.6	10,010.5	0.00	0.00	0.00
21,700.0	90.00	359.59	11,816.0	10,033.3	-1,243.3	10,109.9	0.00	0.00	0.00
21,800.0	90.00	359.59	11,816.0	10,133.3	-1,244.0	10,209.3	0.00	0.00	0.00
21,900.0	90.00	359.59	11,816.0	10,233.3	-1,244.7	10,308.7	0.00	0.00	0.00
22,000.0	90.00	359.59	11,816.0	10,333.3	-1,245.4	10,408.1	0.00	0.00	0.00
22,100.0	90.00	359.59	11,816.0	10,433.3	-1,246.1	10,507.5	0.00	0.00	0.00
22,133.2	90.00	359.59	11,816.0	10,466.5	-1,246.4	10,540.4	0.00	0.00	0.00
Start 50.0 hold at 22133.2 MD									
22,183.2	90.00	359.59	11,816.0	10,516.5	-1,246.7	10,590.1	0.00	0.00	0.00
TD at 22183.2									

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well ZIA HILLS UNIT 2431 WC #709H
Company:	DELAWARE BASIN EAST	TVD Reference:	KB=26ft @ 3193.0usft
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	KB=26ft @ 3193.0usft
Site:	ZIA HILLS UNIT 2431 PROJECT	North Reference:	Grid
Well:	ZIA HILLS UNIT 2431 WC #709H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
PBHL (ZIA HILLS UNIT : - plan misses target center by 0.1usft at 22183.2usft MD (11816.0 TVD, 10516.5 N, -1246.7 E) - Rectangle (sides W100.0 H10,491.0 D20.0)	0.00	179.59	11,816.0	10,516.5	-1,246.7	382,422.25	687,577.50	32° 2' 59.813 N	103° 43' 40.479 W
LTP (ZIA HILLS UNIT 24 - plan hits target center - Point	0.00	0.00	11,816.0	10,466.5	-1,246.4	382,372.25	687,577.79	32° 2' 59.318 N	103° 43' 40.479 W
FTP (ZIA HILLS UNIT 24 - plan misses target center by 224.7usft at 11812.3usft MD (11663.2 TVD, 188.8 N, -1173.5 E) - Circle (radius 50.0)	0.00	0.00	11,816.0	24.1	-1,170.2	371,929.88	687,653.94	32° 1' 15.975 N	103° 43' 40.274 W

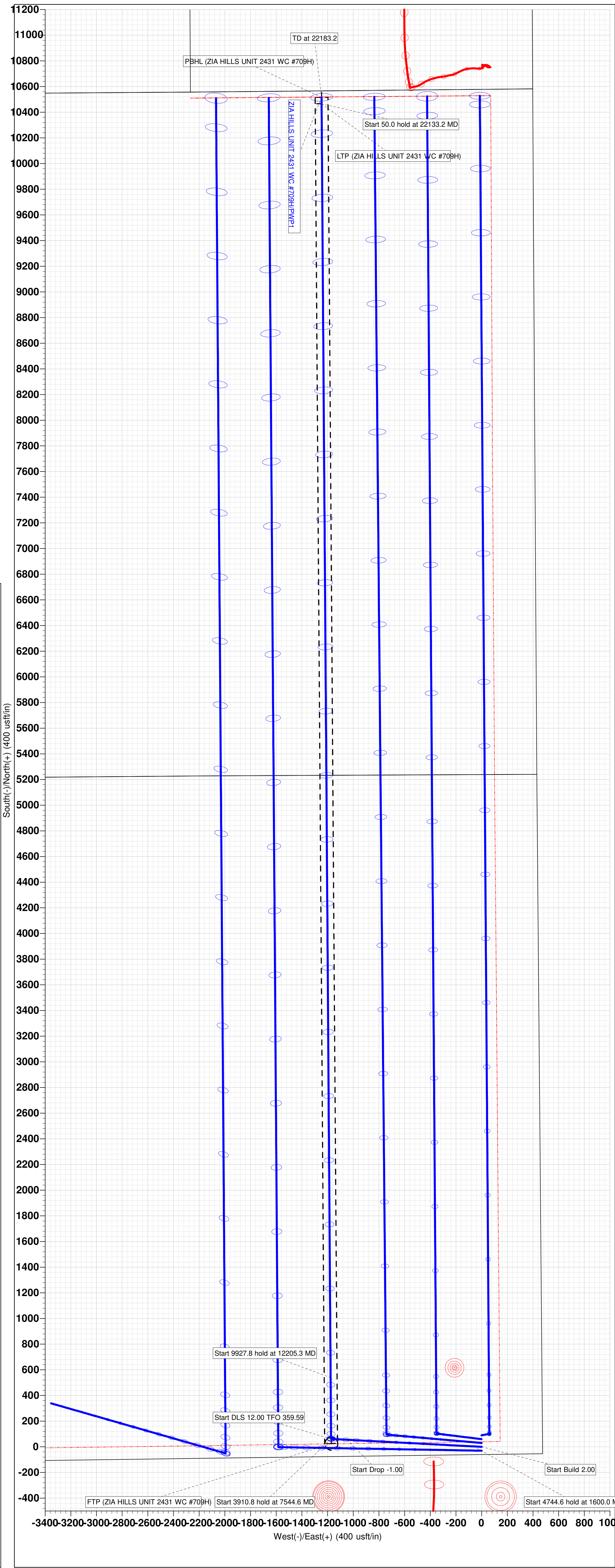
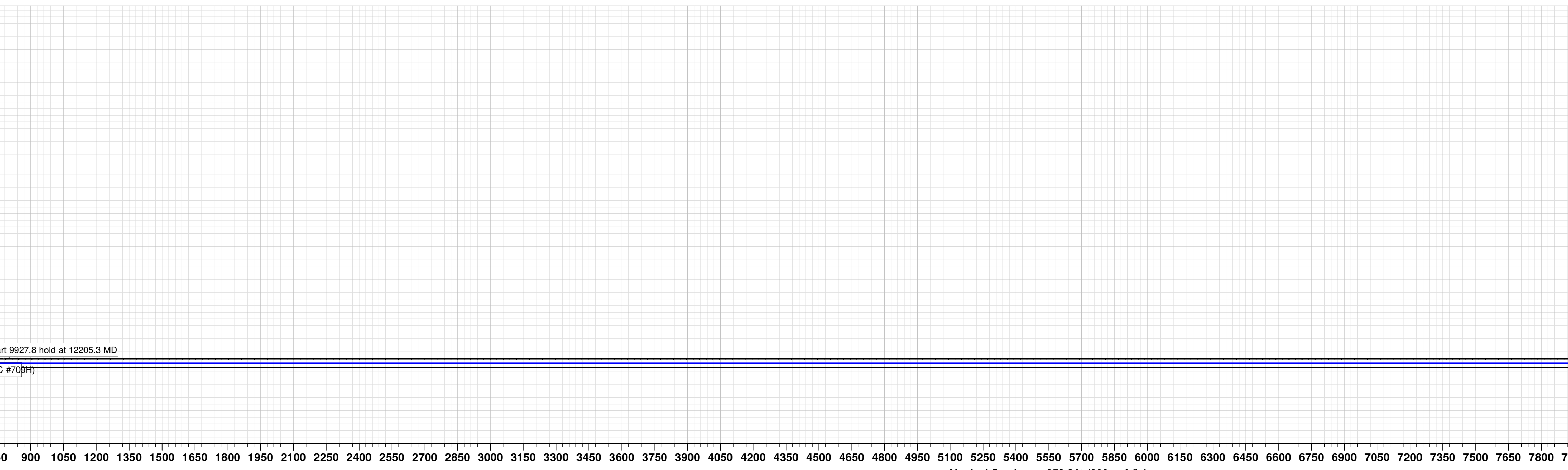
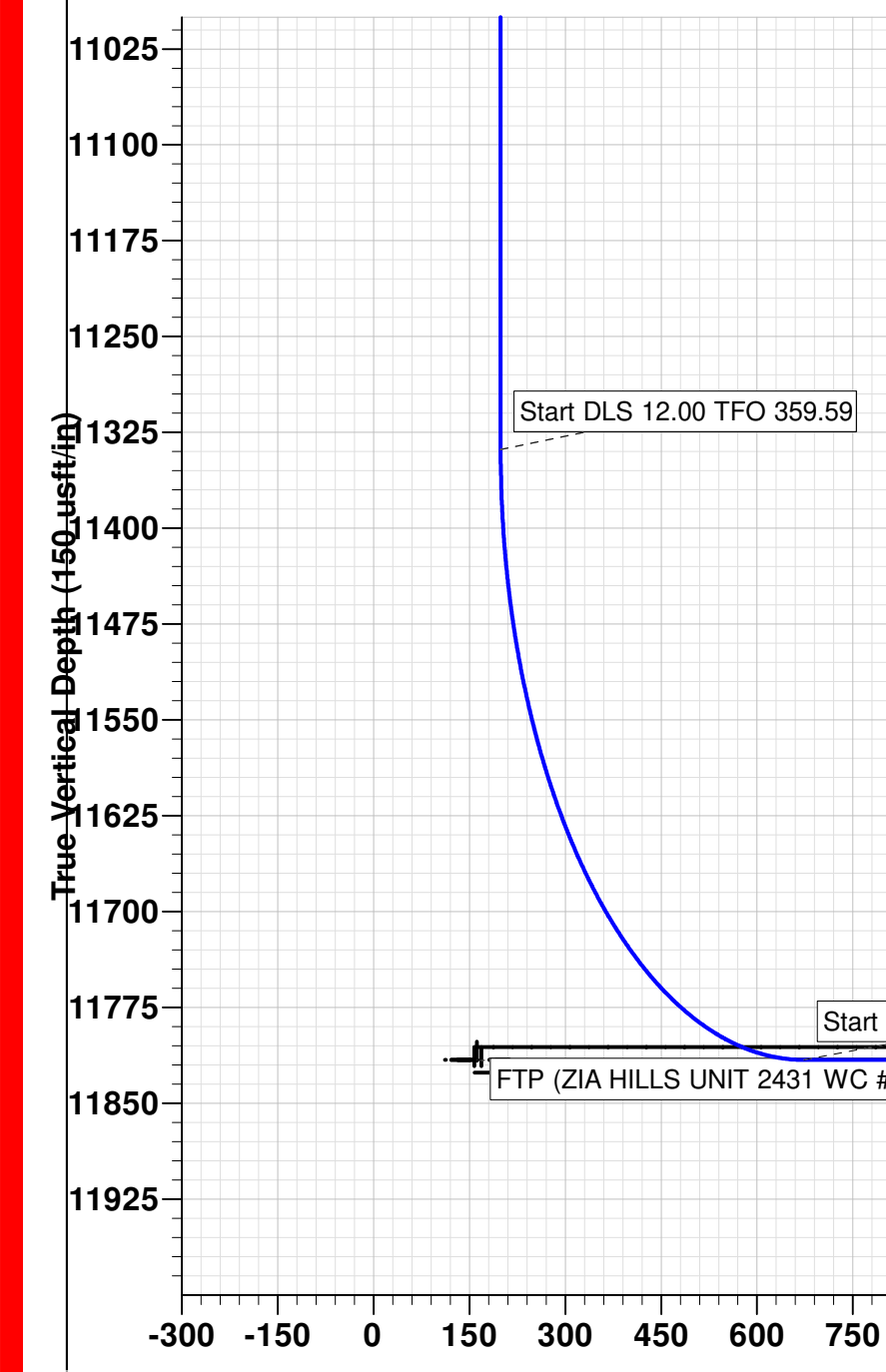
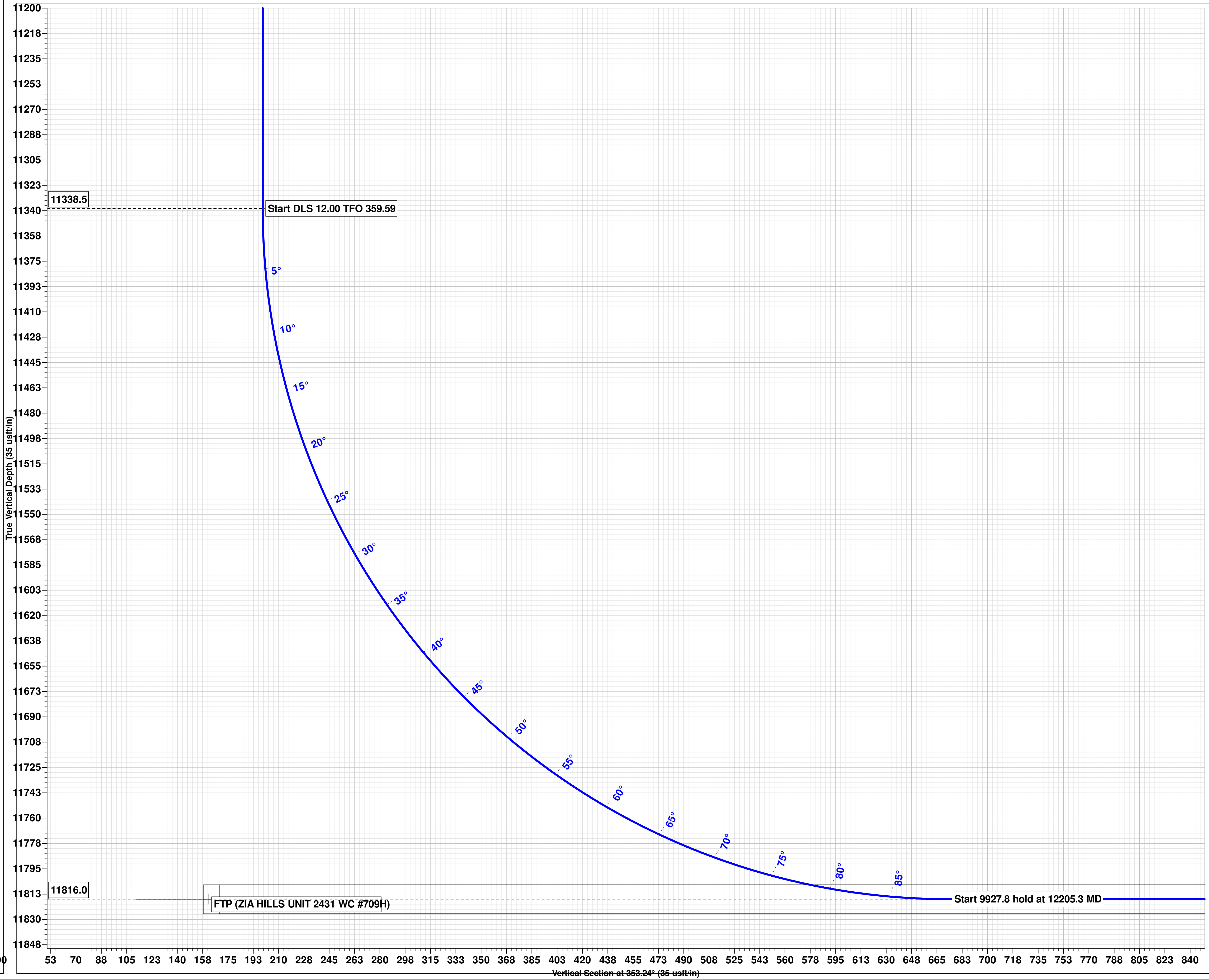
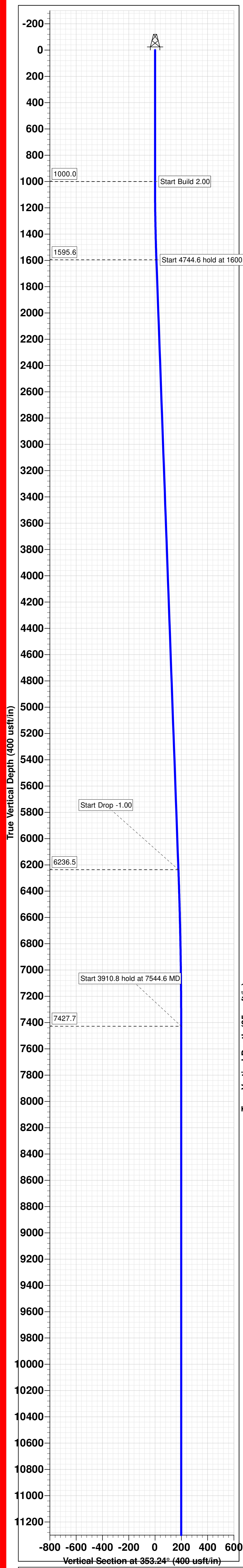
Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	Start Build 2.00
1,600.0	1,595.6	3.3	-62.5	Start 4744.6 hold at 1600.0 MD
6,344.6	6,236.5	54.9	-1,047.6	Start Drop -1.00
7,544.6	7,427.7	61.5	-1,172.6	Start 3910.8 hold at 7544.6 MD
11,455.3	11,338.5	61.5	-1,172.6	Start DLS 12.00 TFO 359.59
12,205.3	11,816.0	538.9	-1,176.0	Start 9927.8 hold at 12205.3 MD
22,133.2	11,816.0	10,466.5	-1,246.4	Start 50.0 hold at 22133.2 MD
22,183.2	11,816.0	10,516.5	-1,246.7	TD at 22183.2

Project: BULLDOG PROSPECT (NM-E)
Site: ZIA HILLS UNIT 2431 PROJECT
Well: ZIA HILLS UNIT 2431 WC #709H
Wellbore: OWB
Design: PWP1
GL: 3167.0
KB=26ft @ 3193.0usft

WELL DETAILS: ZIA HILLS UNIT 2431 WC #709H						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	371905.76	688824.17	32° 1' 15.671 N	103° 43' 26.683 W	

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
FTP (ZIA HILLS UNIT 2431 WC #709H)	11816.0	24.1	-1170.2	371929.88	687653.94	
LTP (ZIA HILLS UNIT 2431 WC #709H)	11816.0	10466.5	-1246.4	382372.25	687577.79	
PBHL (ZIA HILLS UNIT 2431 WC #709H)	11816.0	10516.5	-1246.7	382422.25	687577.50	

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	273.00	1595.6	3.3	-62.5	2.00	273.00	10.6	
6344.6	12.00	273.00	6236.5	54.9	-1047.6	0.00	0.00	177.8	
7544.6	0.00	0.00	7427.7	61.5	-1172.6	1.00	180.00	199.1	
11455.3	0.00	0.00	11338.5	61.5	-1172.6	0.00	0.00	199.1	
12205.3	90.00	359.59	11816.0	538.9	-1176.0	12.00	359.59	673.6	
22133.2	90.00	359.59	11816.0	10466.5	-1246.4	0.00	0.00	10540.4	
22183.2	90.00	359.59	11816.0	10516.5	-1246.7	0.00	0.00	10590.1	



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 709H
SURFACE HOLE FOOTAGE:	60'/S & 475'/E
BOTTOM HOLE FOOTAGE:	50'/N & 1645'/E

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1495** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to

- include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above.
- Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.

D. SPECIAL REQUIREMENT (S)**Unit Wells**

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

Commercial Well Determination

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

GENERAL REQUIREMENTS

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

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

☒ Eddy County

Email **or** call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, BLM_NM_CFO_DrillingNotifications@BLM.GOV
(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.

- BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

- c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - e. The results of the test shall be reported to the appropriate BLM office.

- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR part 3170 Subpart 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

ZS 11/14/2023

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 288487

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID:
	217817
	Action Number: 288487
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	12/19/2023
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	12/19/2023
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	12/19/2023
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	12/19/2023
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	12/19/2023
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	12/19/2023