

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. 30-025-53970
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

(Continued on page 2)

*(Instructions on page 2)



Additional Operator Remarks

Location of Well

0. SHL: SWSE / 330 FSL / 1510 FEL / TWSP: 25S / RANGE: 35E / SECTION: 22 / LAT: 32.109509 / LONG: -103.351741 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 100 FNL / 1130 FEL / TWSP: 25S / RANGE: 35E / SECTION: 27 / LAT: 32.108322 / LONG: -103.350514 (TVD: 12350 feet, MD: 12778 feet)

PPP: NENE / 1 FSL / 1130 FEL / TWSP: 25S / RANGE: 35E / SECTION: 34 / LAT: 32.094073 / LONG: -103.35051 (TVD: 12350 feet, MD: 17959 feet)

PPP: NESE / 2639 FSL / 1130 FEL / TWSP: 25S / RANGE: 35E / SECTION: 27 / LAT: 32.101334 / LONG: -103.350512 (TVD: 12350 feet, MD: 15319 feet)

BHL: SESE / 50 FSL / 1130 FEL / TWSP: 26S / RANGE: 35E / SECTION: 3 / LAT: 32.065177 / LONG: -103.350502 (TVD: 12350 feet, MD: 28471 feet)

BLM Point of Contact

Name: JANET D ESTES

Title: ADJUDICATOR

Phone: (575) 234-6233

Email: JESTES@BLM.GOV

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION		Revised July 9, 2024	
			Submittal Type:	☒ Initial Submittal
				☐ Amended Report
		☐ As Drilled		

WELL LOCATION INFORMATION

API Number 30-025-53970	Pool Code 98117	Pool Name WC-025 G-09 S263504N; Wolfcamp
Property Code 336534	Property Name HENNIN FEDERAL COM	Well Number 703H
OGRID No. 229137	Operator Name COG OPERATING LLC	Ground Level Elevation 3193.2'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
O	22	25-S	35-E		330 FSL	1510 FEL	32.109509°N	103.351741°W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	34	26-S	35-E		50 FSL	1130 FEL	32.065177°N	103.350502°W	LEA

Dedicated Acres 960	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code Com
Order Numbers.			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
O	22	25-S	35-E		330 FSL	1510 FEL	32.109509°N	103.351741°W	LEA

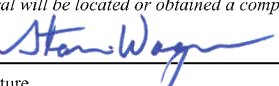
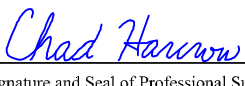
First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	27	25-S	35-E		100 FNL	1130 FEL	32.108322°N	103.350514°W	LEA

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	34	26-S	34-E		100 FSL	1130 FEL	32.065314°N	103.350502°W	LEA

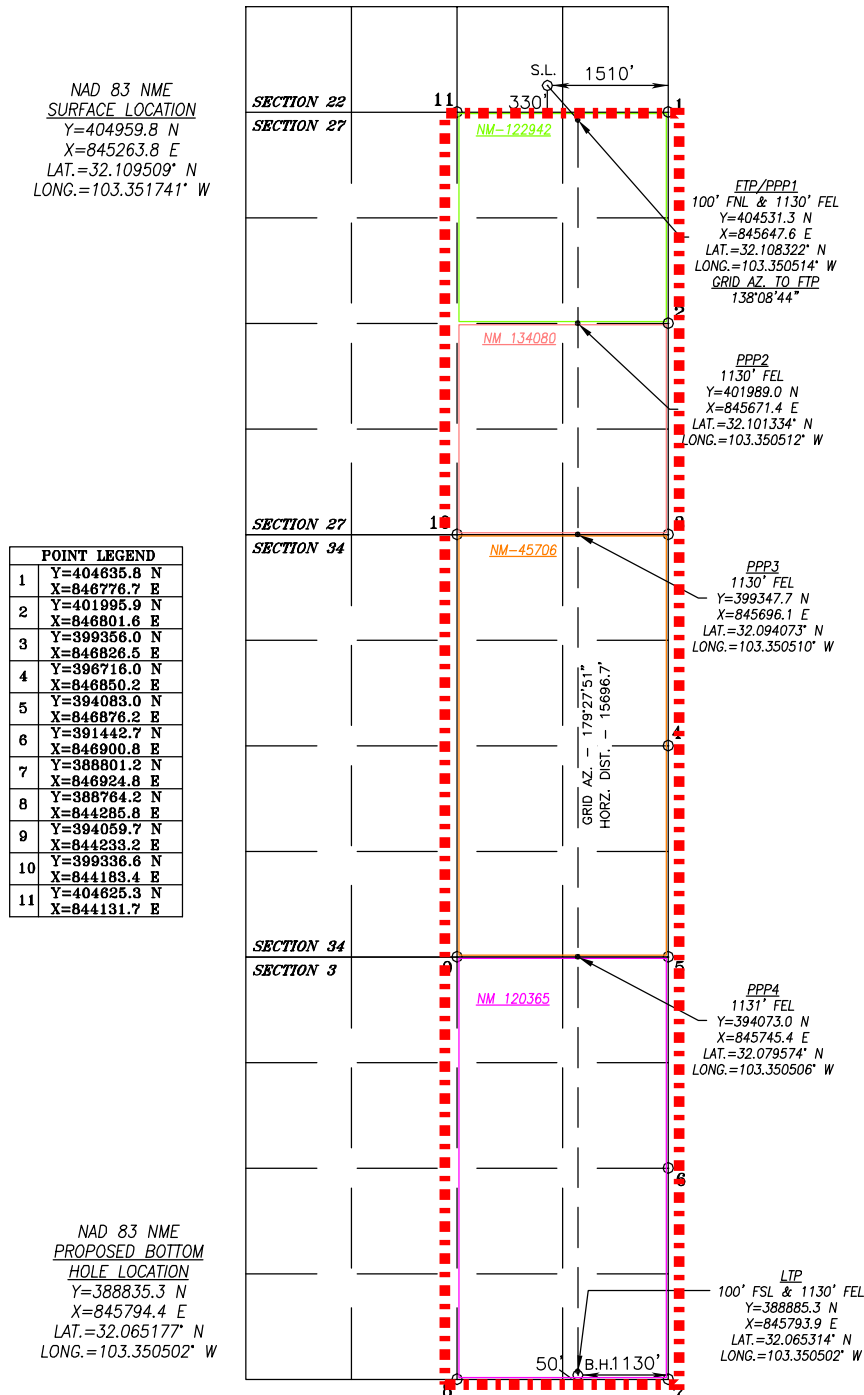
Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3193.2'
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OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i>  9/11/23		SURVEYOR CERTIFICATIONS <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i>  11/7/24	
Signature	Date	Signature and Seal of Professional Surveyor	
Printed Name Stan Wagner		Certificate Number 17777	Date of Survey JUNE 19, 2023
Email Address		W.O.#24-1125	DRAWN BY: WN PAGE 1 OF 2

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

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

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



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: COG Operating LLC

OGRID: 229137

Date: 09/19/2023

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
Hennin Federal Com 702H	30-025-	O-22-25S-35E	330 FSL & 1540 FEL	± 822	± 990	± 1480
Hennin Federal Com 703H	30-025-	O-22-25S-35E	330 FSL & 1510 FEL	± 1385	± 1670	± 2495
Hennin Federal Com 802H	30-025-	O-22-25S-35E	330 FSL & 1480 FEL	± 1150	± 1370	± 5590

IV. Central Delivery Point Name: 27 C CTB NENW 27-25S-35E [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
Hennin Federal Com	Pending	± 8/1/2025	± 25 days from spud	TBD	TBD	TBD
702H, 703H, 802H						

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

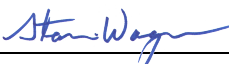
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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: 09/19/2023
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

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1. Geologic Formations

TVD of target	12,600' EOL	Pilot hole depth	NA
MD at TD:	28,471'	Deepest expected fresh water:	230'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	803	Water	
Top of Salt	1162	Salt	
Base of Salt	4903	Salt	
Lamar	5247	Salt Water	
Bell Canyon	5272	Salt Water	
Cherry Canyon	6220	Oil/Gas	
Brushy Canyon	7656	Oil/Gas	
Bone Spring Lime	8943	Oil/Gas	
1st Bone Spring Sand	10240	Oil/Gas	
2nd Bone Spring Sand	10810	Oil/Gas	
3rd Bone Spring Carb	11329	Oil/Gas	
3rd Bone Spring Sand	11910	Oil/Gas	
Wolfcamp A	12271	Target	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	1350	10.75"	45.5	J55	BTC	3.38	1.11	11.64	12.96
9.875"	0	8500	7.625"	29.7	L80-ICY	BTC	1.45	1.06	2.88	2.90
8.750"	8500	11700	7.625"	29.7	P110-ICY	W513	1.31	1.60	3.07	1.84
6.75"	0	11200	5.5"	23	P110-CY	BTC	2.00	2.36	2.83	2.83
6.75"	11200	28,471	5.5"	23	P110-CY	W441	1.78	2.10	2.52	2.28
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse. Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

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

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	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?	

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3. Cementing Program

Casing	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	644	13.5	1.75	9.21	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	250	14.8	1.34	6.4	8	Tail: Class C + 2% CaCl ₂
Inter. Stage 1	840	10.3	3.3	22	24	Halliburton tunded light
	250	14.8	1.35	6.6	8	Tail: Class H
Prod	702	12.5	1.48	10.7	72	Lead: 50:50:10 H Blend
	1453	13.2	1.34	5.7	19	Tail: 50:50:2 Class H Blend

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

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	50%
1 st Intermediate	0'	50%
Production	11,200'	35% OH in Lateral (KOP to EOL)

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4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4"	13-5/8"	10M	5M Annular	x	5000psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9.2	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 12.5	35-45	<20

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

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

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

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

ConocoPhillips Company - Hennin Fed Com 703H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	8190 psi at 12600' TVD
Abnormal Temperature	NO 180 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

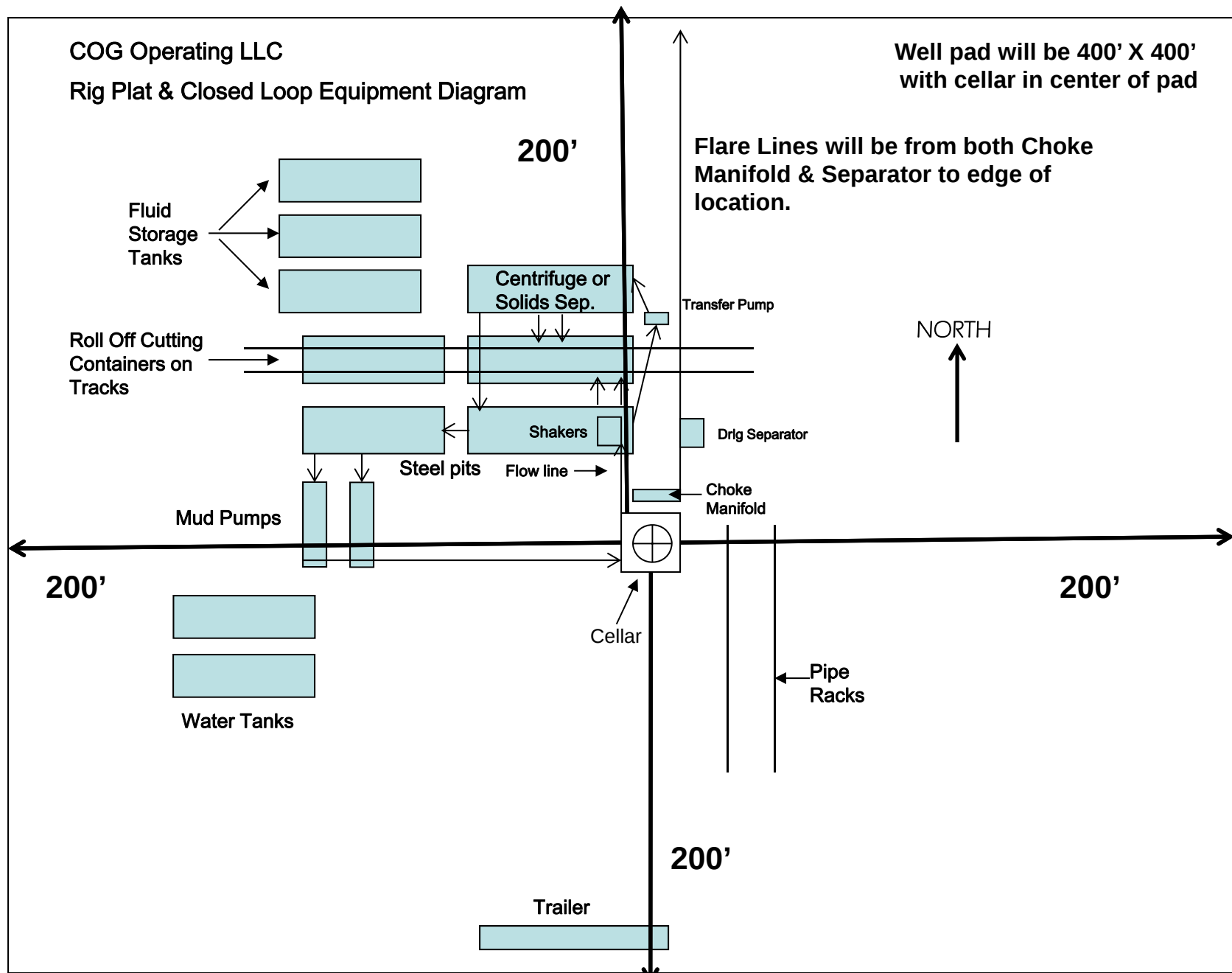


Exhibit 1

"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)

HENNIN PROJECT

***HENNIN FED COM #703H**

OWB

PWP0

Anticollision Report

29 June, 2023

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Reference	PWP0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 2,000.0usft	Error Surface:	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Added to Error Values

Survey Tool Program		Date	6/29/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	28,471.7	PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction rev.5	

Summary							
		Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)		Separation Factor	Warning
Site Name	Offset Well - Wellbore - Design						
HENNIN PROJECT							
	JAVELINA FEDERAL #1 (P&A) - OWB - AWP	26,526.2	12,294.8	474.2	-72.2	0.868	Stop Drilling Now, CC, ES, S
	*HENNIN FED COM #601H - OWB - PWP0						Out of range
	*HENNIN FED COM #602H - OWB - PWP0	28,471.7	28,705.2	1,858.4	1,610.2	7.488	CC, ES, SF
	*HENNIN FED COM #701H - OWB - PWP0						Out of range
	*HENNIN FED COM #702H - OWB - PWP0	1,200.0	1,200.0	29.9	19.1	2.756	CC, ES, SF
	*HENNIN FED COM #801H - OWB - PWP0						Out of range
	*HENNIN FED COM #802H - OWB - PWP0	1,200.0	1,200.0	30.1	19.3	2.775	CC
	*HENNIN FED COM #802H - OWB - PWP0	1,300.0	1,299.2	30.2	19.0	2.699	ES
	*HENNIN FED COM #802H - OWB - PWP0	1,500.0	1,497.7	31.3	19.4	2.633	SF
	HENNIN FED #12H - OWB - AWP	24,767.3	13,634.0	824.1	686.2	5.973	CC
	HENNIN FED #12H - OWB - AWP	28,200.0	17,059.3	840.3	656.1	4.562	ES
	HENNIN FED #12H - OWB - AWP	28,300.0	17,150.2	842.5	657.2	4.546	SF
	HENNIN FED #24H - OWB - AWP	23,343.1	12,353.0	1,160.5	1,038.8	9.537	CC
	HENNIN FED #24H - OWB - AWP	28,200.0	17,287.4	1,208.1	1,021.9	6.488	ES
	HENNIN FED #24H - OWB - AWP	28,400.0	17,431.0	1,213.1	1,025.1	6.452	SF
	JAZZBASS 34 FEDERAL 003H - OWB - AWP	22,121.5	12,368.6	952.1	843.6	8.775	CC, ES
	JAZZBASS 34 FEDERAL 003H - OWB - AWP	22,200.0	12,315.2	953.4	844.6	8.768	SF

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

TD Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
HENNIN PROJECT						
JAVELINA FEDERAL #1 (P&A) - OWB - AWP	28,471.7	12,298.1				Out of Range @TD
*HENNIN FED COM #601H - OWB - PWP0	28,471.7	28,746.7				Out of Range @TD
*HENNIN FED COM #602H - OWB - PWP0	28,471.7	28,705.2	1,858.4	1,610.2	7.488	CC, ES, SF
*HENNIN FED COM #701H - OWB - PWP0	28,471.7	28,963.5				Out of Range @TD
*HENNIN FED COM #702H - OWB - PWP0	28,471.7	23,481.2				Out of Range @TD
*HENNIN FED COM #801H - OWB - PWP0	28,471.7	29,458.3				Out of Range @TD
*HENNIN FED COM #802H - OWB - PWP0	28,471.7	29,398.9	1,096.6	840.0	4.273	
HENNIN FED #12H - OWB - AWP	28,471.7	17,199.0	856.0	672.3	4.659	
HENNIN FED #24H - OWB - AWP	28,471.7	17,431.0	1,219.6	1,032.3	6.509	
JAZZBASS 34 FEDERAL 003H - OWB - AWP	28,471.7	11,638.0				Out of Range @TD

Offset Design: HENNIN PROJECT - JAVELINA FEDERAL #1 (P&A) - OWB - AWP													Offset Site Error: 0.0 usft
Survey Program: 500-INC-ONLY													Offset Well Error: 50.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
24,600.0	12,350.0	12,292.0	12,347.2	95.5	375.5	-89.66	-14,171.7	987.1	1,983.7	1,456.8	526.84	3.765	
24,700.0	12,350.0	12,292.1	12,347.3	96.3	375.5	-89.67	-14,171.7	987.1	1,886.7	1,359.8	526.96	3.580	
24,800.0	12,350.0	12,292.3	12,347.4	97.0	375.5	-89.69	-14,171.7	987.1	1,790.1	1,263.0	527.10	3.396	
24,900.0	12,350.0	12,292.4	12,347.6	97.8	375.5	-89.71	-14,171.7	987.1	1,693.9	1,166.6	527.26	3.213	
25,000.0	12,350.0	12,292.5	12,347.7	98.5	375.5	-89.72	-14,171.7	987.1	1,598.1	1,070.7	527.44	3.030	
25,100.0	12,350.0	12,292.7	12,347.9	99.3	375.5	-89.74	-14,171.7	987.1	1,502.9	975.3	527.66	2.848	
25,200.0	12,350.0	12,292.8	12,348.0	100.0	375.5	-89.76	-14,171.7	987.1	1,408.4	880.5	527.92	2.668	
25,300.0	12,350.0	12,293.0	12,348.1	100.8	375.5	-89.78	-14,171.7	987.1	1,314.7	786.4	528.23	2.489	
25,400.0	12,350.0	12,293.1	12,348.3	101.5	375.5	-89.79	-14,171.7	987.1	1,221.9	693.3	528.61	2.312	
25,500.0	12,350.0	12,293.3	12,348.4	102.3	375.5	-89.81	-14,171.7	987.1	1,130.4	601.3	529.09	2.137	
25,600.0	12,350.0	12,293.4	12,348.6	103.0	375.5	-89.83	-14,171.7	987.1	1,040.5	510.8	529.68	1.964	Advise and Monitor
25,700.0	12,350.0	12,293.6	12,348.7	103.8	375.5	-89.85	-14,171.7	987.1	952.6	422.1	530.44	1.796	Advise and Monitor
25,800.0	12,350.0	12,293.7	12,348.9	104.5	375.5	-89.87	-14,171.7	987.1	867.3	335.9	531.41	1.632	Advise and Monitor
25,900.0	12,350.0	12,293.9	12,349.0	105.2	375.5	-89.88	-14,171.7	987.1	785.5	252.8	532.67	1.475	Shut in Producers
26,000.0	12,350.0	12,294.0	12,349.2	106.0	375.5	-89.90	-14,171.7	987.1	708.3	174.0	534.31	1.326	Shut in Producers
26,100.0	12,350.0	12,294.2	12,349.3	106.7	375.5	-89.92	-14,171.7	987.1	637.5	101.2	536.39	1.189	Shut in Producers
26,200.0	12,350.0	12,294.3	12,349.5	107.5	375.5	-89.94	-14,171.7	987.1	575.5	36.6	538.94	1.068	Shut in Producers
26,300.0	12,350.0	12,294.5	12,349.6	108.2	375.5	-89.96	-14,171.7	987.1	525.4	-16.4	541.79	0.970	Stop Drilling Now
26,400.0	12,350.0	12,294.6	12,349.8	109.0	375.5	-89.98	-14,171.7	987.1	490.7	-53.8	544.46	0.901	Stop Drilling Now
26,500.0	12,350.0	12,294.8	12,350.0	109.7	375.5	-90.00	-14,171.7	987.1	474.9	-71.3	546.16	0.870	Stop Drilling Now

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - JAVELINA FEDERAL #1 (P&A) - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 500-INC-ONLY												Offset Well Error:	50.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		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)			
26,526.2	12,350.0	12,294.8	12,350.0	109.9	375.5	-90.00	-14,171.7	987.1	474.2	-72.2	546.36	0.868	Stop Drilling Now, CC, ES, SF
26,600.0	12,350.0	12,294.9	12,350.1	110.5	375.5	-90.01	-14,171.7	987.1	479.9	-66.4	546.30	0.878	Stop Drilling Now
26,700.0	12,350.0	12,295.1	12,350.3	111.2	375.6	-90.03	-14,171.7	987.1	505.0	-39.9	544.92	0.927	Stop Drilling Now
26,800.0	12,350.0	12,295.3	12,350.4	112.0	375.6	-90.05	-14,171.7	987.1	547.6	4.9	542.68	1.009	Shut in Producers
26,900.0	12,350.0	12,295.4	12,350.6	112.7	375.6	-90.07	-14,171.7	987.1	603.8	63.5	540.27	1.118	Shut in Producers
27,000.0	12,350.0	12,295.6	12,350.8	113.5	375.6	-90.09	-14,171.7	987.1	670.3	132.3	538.08	1.246	Shut in Producers
27,100.0	12,350.0	12,295.7	12,350.9	114.2	375.6	-90.11	-14,171.7	987.1	744.4	208.1	536.25	1.388	Shut in Producers
27,200.0	12,350.0	12,295.9	12,351.1	115.0	375.6	-90.13	-14,171.7	987.1	823.9	289.2	534.77	1.541	Advise and Monitor
27,300.0	12,350.0	12,296.1	12,351.2	115.7	375.6	-90.15	-14,171.7	987.1	907.6	373.9	533.61	1.701	Advise and Monitor
27,400.0	12,350.0	12,296.2	12,351.4	116.5	375.6	-90.17	-14,171.7	987.1	994.2	461.5	532.68	1.866	Advise and Monitor
27,500.0	12,350.0	12,296.4	12,351.6	117.2	375.6	-90.19	-14,171.7	987.1	1,083.1	551.2	531.95	2.036	
27,600.0	12,350.0	12,296.6	12,351.8	118.0	375.6	-90.21	-14,171.7	987.1	1,173.9	642.5	531.36	2.209	
27,700.0	12,350.0	12,296.8	12,351.9	118.7	375.6	-90.23	-14,171.7	987.1	1,266.0	735.1	530.89	2.385	
27,800.0	12,350.0	12,296.9	12,352.1	119.5	375.6	-90.25	-14,171.7	987.1	1,359.2	828.7	530.51	2.562	
27,900.0	12,350.0	12,297.1	12,352.3	120.2	375.6	-90.27	-14,171.7	987.1	1,453.4	923.2	530.20	2.741	
28,000.0	12,350.0	12,297.3	12,352.4	121.0	375.6	-90.30	-14,171.7	987.1	1,548.2	1,018.3	529.94	2.922	
28,100.0	12,350.0	12,297.4	12,352.6	121.8	375.6	-90.32	-14,171.7	987.1	1,643.7	1,114.0	529.73	3.103	
28,200.0	12,350.0	12,297.6	12,352.8	122.5	375.6	-90.34	-14,171.7	987.1	1,739.7	1,210.1	529.55	3.285	
28,300.0	12,350.0	12,297.8	12,353.0	123.3	375.6	-90.36	-14,171.7	987.1	1,836.1	1,306.7	529.41	3.468	
28,400.0	12,350.0	12,298.0	12,353.2	124.0	375.6	-90.38	-14,171.7	987.1	1,932.9	1,403.6	529.29	3.652	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #602H - OWB - PWP0													Offset Site Error: 0.0 usft		
Survey Program: 0-r.5 MWD+IFR1+MS				Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error: 3.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
4,700.0	4,673.4	5,024.4	4,973.0	16.9	19.2	-148.09	281.4	-1,612.4	1,995.9	1,963.0	32.90	60.664			
4,800.0	4,773.2	5,123.7	5,070.8	17.3	19.6	-147.89	289.6	-1,597.2	1,985.7	1,952.1	33.54	59.212			
4,900.0	4,873.1	5,222.9	5,168.5	17.6	20.0	-147.68	297.8	-1,582.1	1,974.7	1,940.6	34.16	57.815			
5,000.0	4,973.0	5,322.0	5,266.1	17.9	20.5	-147.45	306.0	-1,567.0	1,963.1	1,928.3	34.75	56.484			
5,100.0	5,073.0	5,400.0	5,343.0	18.2	20.8	-147.26	312.3	-1,555.3	1,951.1	1,915.8	35.25	55.351			
5,200.0	5,173.0	5,480.8	5,422.8	18.5	21.1	-147.06	318.4	-1,544.1	1,939.4	1,903.7	35.74	54.257			
5,300.0	5,272.9	5,557.7	5,498.9	18.7	21.5	-146.87	323.6	-1,534.3	1,928.2	1,892.0	36.19	53.274			
5,400.0	5,372.9	5,634.9	5,575.4	18.9	21.8	-146.69	328.4	-1,525.5	1,917.5	1,880.9	36.56	52.453			
5,500.0	5,472.9	5,712.2	5,652.2	18.9	22.1	-86.55	332.7	-1,517.5	1,907.5	1,870.6	36.84	51.777			
5,600.0	5,572.9	5,800.0	5,739.5	19.0	22.4	-86.40	337.0	-1,509.6	1,898.7	1,861.5	37.16	51.094			
5,700.0	5,672.9	5,867.5	5,806.8	19.0	22.7	-86.30	339.9	-1,504.3	1,891.0	1,853.6	37.39	50.582			
5,800.0	5,772.9	5,945.5	5,884.5	19.1	23.0	-86.21	342.7	-1,499.0	1,884.5	1,846.9	37.64	50.060			
5,900.0	5,872.9	6,023.6	5,962.4	19.1	23.3	-86.13	345.1	-1,494.7	1,879.2	1,841.3	37.90	49.588			
6,000.0	5,972.9	6,100.0	6,038.8	19.2	23.5	-86.07	346.9	-1,491.3	1,875.0	1,836.9	38.13	49.177			
6,100.0	6,072.9	6,180.1	6,118.8	19.3	23.8	-86.02	348.2	-1,488.8	1,872.0	1,833.6	38.36	48.804			
6,200.0	6,172.9	6,258.4	6,197.1	19.3	24.0	-85.99	349.1	-1,487.3	1,870.1	1,831.5	38.55	48.506			
6,300.0	6,272.9	6,336.8	6,275.5	19.4	24.1	-85.98	349.4	-1,486.7	1,869.4	1,830.7	38.69	48.312			
6,337.9	6,310.8	6,372.1	6,310.8	19.4	24.2	-85.98	349.4	-1,486.7	1,869.4	1,830.6	38.72	48.274			
6,400.0	6,372.9	6,434.3	6,372.9	19.4	24.2	-85.98	349.4	-1,486.7	1,869.4	1,830.6	38.78	48.204			
6,500.0	6,472.9	6,534.3	6,472.9	19.5	24.2	-85.98	349.4	-1,486.7	1,869.4	1,830.5	38.88	48.080			
6,600.0	6,572.9	6,634.3	6,572.9	19.5	24.3	-85.98	349.4	-1,486.7	1,869.4	1,830.4	38.98	47.957			
6,700.0	6,672.9	6,734.3	6,672.9	19.6	24.3	-85.98	349.4	-1,486.7	1,869.4	1,830.3	39.08	47.833			
6,800.0	6,772.9	6,834.3	6,772.9	19.6	24.3	-85.98	349.4	-1,486.7	1,869.4	1,830.2	39.18	47.710			
6,900.0	6,872.9	6,934.3	6,872.9	19.7	24.4	-85.98	349.4	-1,486.7	1,869.4	1,830.1	39.28	47.587			
7,000.0	6,972.9	7,034.3	6,972.9	19.7	24.4	-85.98	349.4	-1,486.7	1,869.4	1,830.0	39.39	47.464			
7,100.0	7,072.9	7,134.3	7,072.9	19.8	24.5	-85.98	349.4	-1,486.7	1,869.4	1,829.9	39.49	47.341			
7,200.0	7,172.9	7,234.3	7,172.9	19.8	24.5	-85.98	349.4	-1,486.7	1,869.4	1,829.8	39.59	47.218			
7,300.0	7,272.9	7,334.3	7,272.9	19.9	24.5	-85.98	349.4	-1,486.7	1,869.4	1,829.7	39.69	47.095			
7,400.0	7,372.9	7,434.3	7,372.9	19.9	24.6	-85.98	349.4	-1,486.7	1,869.4	1,829.6	39.80	46.973			
7,500.0	7,472.9	7,534.3	7,472.9	20.0	24.6	-85.98	349.4	-1,486.7	1,869.4	1,829.5	39.90	46.851			
7,600.0	7,572.9	7,634.3	7,572.9	20.0	24.7	-85.98	349.4	-1,486.7	1,869.4	1,829.4	40.00	46.729			
7,700.0	7,672.9	7,734.3	7,672.9	20.1	24.7	-85.98	349.4	-1,486.7	1,869.4	1,829.3	40.11	46.607			
7,800.0	7,772.9	7,834.3	7,772.9	20.2	24.8	-85.98	349.4	-1,486.7	1,869.4	1,829.2	40.21	46.485			
7,900.0	7,872.9	7,934.3	7,872.9	20.2	24.8	-85.98	349.4	-1,486.7	1,869.4	1,829.1	40.32	46.364			
8,000.0	7,972.9	8,034.3	7,972.9	20.3	24.9	-85.98	349.4	-1,486.7	1,869.4	1,828.9	40.43	46.243			
8,100.0	8,072.9	8,134.3	8,072.9	20.3	24.9	-85.98	349.4	-1,486.7	1,869.4	1,828.8	40.53	46.122			
8,200.0	8,172.9	8,234.3	8,172.9	20.4	24.9	-85.98	349.4	-1,486.7	1,869.4	1,828.7	40.64	46.001			
8,300.0	8,272.9	8,334.3	8,272.9	20.4	25.0	-85.98	349.4	-1,486.7	1,869.4	1,828.6	40.74	45.880			
8,400.0	8,372.9	8,434.3	8,372.9	20.5	25.0	-85.98	349.4	-1,486.7	1,869.4	1,828.5	40.85	45.760			
8,500.0	8,472.9	8,534.3	8,472.9	20.5	25.1	-85.98	349.4	-1,486.7	1,869.4	1,828.4	40.96	45.640			
8,600.0	8,572.9	8,634.3	8,572.9	20.6	25.1	-85.98	349.4	-1,486.7	1,869.4	1,828.3	41.07	45.520			
8,700.0	8,672.9	8,734.3	8,672.9	20.7	25.2	-85.98	349.4	-1,486.7	1,869.4	1,828.2	41.18	45.400			
8,800.0	8,772.9	8,834.3	8,772.9	20.7	25.2	-85.98	349.4	-1,486.7	1,869.4	1,828.1	41.28	45.281			
8,900.0	8,872.9	8,934.3	8,872.9	20.8	25.3	-85.98	349.4	-1,486.7	1,869.4	1,828.0	41.39	45.162			
9,000.0	8,972.9	9,034.3	8,972.9	20.8	25.3	-85.98	349.4	-1,486.7	1,869.4	1,827.9	41.50	45.043			
9,100.0	9,072.9	9,134.3	9,072.9	20.9	25.3	-85.98	349.4	-1,486.7	1,869.4	1,827.8	41.61	44.924			
9,200.0	9,172.9	9,234.3	9,172.9	20.9	25.4	-85.98	349.4	-1,486.7	1,869.4	1,827.7	41.72	44.806			
9,300.0	9,272.9	9,334.3	9,272.9	21.0	25.4	-85.98	349.4	-1,486.7	1,869.4	1,827.5	41.83	44.688			
9,400.0	9,372.9	9,434.3	9,372.9	21.1	25.5	-85.98	349.4	-1,486.7	1,869.4	1,827.4	41.94	44.570			
9,500.0	9,472.9	9,534.3	9,472.9	21.1	25.5	-85.98	349.4	-1,486.7	1,869.4	1,827.3	42.05	44.452			
9,600.0	9,572.9	9,634.3	9,572.9	21.2	25.6	-85.98	349.4	-1,486.7	1,869.4	1,827.2	42.16	44.335			

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #602H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,700.0	9,672.9	9,734.3	9,672.9	21.2	25.6	-85.98	349.4	-1,486.7	1,869.4	1,827.1	42.28	44.218	
9,800.0	9,772.9	9,834.3	9,772.9	21.3	25.7	-85.98	349.4	-1,486.7	1,869.4	1,827.0	42.39	44.101	
9,900.0	9,872.9	9,934.3	9,872.9	21.4	25.7	-85.98	349.4	-1,486.7	1,869.4	1,826.9	42.50	43.985	
10,000.0	9,972.9	10,034.3	9,972.9	21.4	25.8	-85.98	349.4	-1,486.7	1,869.4	1,826.8	42.61	43.869	
10,100.0	10,072.9	10,134.3	10,072.9	21.5	25.8	-85.98	349.4	-1,486.7	1,869.4	1,826.6	42.73	43.753	
10,200.0	10,172.9	10,234.3	10,172.9	21.5	25.9	-85.98	349.4	-1,486.7	1,869.4	1,826.5	42.84	43.637	
10,300.0	10,272.9	10,334.3	10,272.9	21.6	25.9	-85.98	349.4	-1,486.7	1,869.4	1,826.4	42.95	43.522	
10,400.0	10,372.9	10,434.3	10,372.9	21.6	25.9	-85.98	349.4	-1,486.7	1,869.4	1,826.3	43.07	43.407	
10,500.0	10,472.9	10,534.3	10,472.9	21.7	26.0	-85.98	349.4	-1,486.7	1,869.4	1,826.2	43.18	43.293	
10,600.0	10,572.9	10,634.3	10,572.9	21.8	26.0	-85.98	349.4	-1,486.7	1,869.4	1,826.1	43.29	43.178	
10,700.0	10,672.9	10,734.3	10,672.9	21.8	26.1	-85.98	349.4	-1,486.7	1,869.4	1,826.0	43.41	43.064	
10,800.0	10,772.9	10,834.3	10,772.9	21.9	26.1	-85.98	349.4	-1,486.7	1,869.4	1,825.8	43.52	42.950	
10,900.0	10,872.9	10,934.3	10,872.9	21.9	26.2	-85.98	349.4	-1,486.7	1,869.4	1,825.7	43.64	42.837	
11,000.0	10,972.9	11,034.3	10,972.9	22.0	26.2	-85.98	349.4	-1,486.7	1,869.4	1,825.6	43.75	42.724	
11,100.0	11,072.9	11,134.3	11,072.9	22.1	26.3	-85.98	349.4	-1,486.7	1,869.4	1,825.5	43.87	42.611	
11,200.0	11,172.9	11,234.3	11,172.9	22.1	26.3	-85.98	349.4	-1,486.7	1,869.4	1,825.4	43.99	42.499	
11,300.0	11,272.9	11,334.3	11,272.9	22.2	26.4	-85.98	349.4	-1,486.7	1,869.4	1,825.3	44.10	42.386	
11,400.0	11,372.9	11,434.3	11,372.9	22.2	26.4	-85.98	349.4	-1,486.7	1,869.4	1,825.2	44.22	42.275	
11,500.0	11,472.9	11,534.3	11,472.9	22.3	26.5	-85.98	349.4	-1,486.7	1,869.4	1,825.0	44.34	42.163	
11,600.0	11,572.9	11,634.3	11,572.9	22.4	26.5	-85.98	349.4	-1,486.7	1,869.4	1,824.9	44.45	42.052	
11,700.0	11,672.9	11,734.3	11,672.9	22.4	26.6	-85.98	349.4	-1,486.7	1,869.4	1,824.8	44.57	41.941	
11,800.0	11,772.9	11,834.3	11,772.9	22.5	26.6	-85.98	349.4	-1,486.7	1,869.4	1,824.7	44.69	41.830	
11,900.0	11,872.5	11,950.8	11,889.3	22.4	26.6	94.72	346.0	-1,486.7	1,869.8	1,825.1	44.72	41.807	
12,000.0	11,969.1	12,088.3	12,023.0	22.2	26.4	94.81	314.8	-1,486.3	1,870.0	1,825.2	44.81	41.730	
12,100.0	12,060.0	12,225.5	12,145.1	22.1	26.1	94.68	253.0	-1,485.7	1,869.7	1,824.7	44.98	41.572	
12,200.0	12,142.2	12,359.9	12,247.1	21.9	25.9	94.34	166.0	-1,484.9	1,868.8	1,823.7	45.17	41.371	
12,300.0	12,213.3	12,489.3	12,323.7	21.8	25.7	93.83	62.1	-1,483.9	1,867.7	1,822.3	45.37	41.168	
12,400.0	12,271.2	12,612.4	12,373.2	21.7	25.6	93.20	-50.4	-1,482.8	1,866.4	1,820.9	45.53	40.995	
12,500.0	12,314.0	12,729.0	12,396.9	21.6	25.6	92.47	-164.4	-1,481.7	1,865.1	1,819.5	45.64	40.867	
12,600.0	12,340.5	12,834.0	12,400.0	21.6	25.7	91.79	-269.3	-1,480.7	1,864.2	1,818.5	45.69	40.799	
12,700.0	12,349.9	12,933.5	12,400.0	21.7	25.8	91.54	-368.7	-1,479.7	1,863.9	1,818.1	45.81	40.689	
12,800.0	12,350.0	13,033.5	12,400.0	21.8	26.0	91.54	-468.7	-1,478.7	1,863.8	1,817.8	46.03	40.493	
12,900.0	12,350.0	13,133.5	12,400.0	21.9	26.1	91.54	-568.7	-1,477.8	1,863.8	1,817.5	46.30	40.255	
13,000.0	12,350.0	13,233.5	12,400.0	22.1	26.3	91.54	-668.7	-1,476.8	1,863.8	1,817.2	46.62	39.979	
13,100.0	12,350.0	13,333.5	12,400.0	22.3	26.4	91.54	-768.7	-1,475.8	1,863.7	1,816.8	46.98	39.667	
13,200.0	12,350.0	13,433.5	12,400.0	22.5	26.6	91.54	-868.7	-1,474.9	1,863.7	1,816.3	47.40	39.322	
13,300.0	12,350.0	13,533.5	12,400.0	22.7	26.8	91.54	-968.7	-1,473.9	1,863.7	1,815.8	47.85	38.947	
13,400.0	12,350.0	13,633.5	12,400.0	22.9	27.1	91.54	-1,068.7	-1,472.9	1,863.6	1,815.3	48.35	38.545	
13,500.0	12,350.0	13,733.5	12,400.0	23.2	27.3	91.54	-1,168.6	-1,471.9	1,863.6	1,814.7	48.89	38.118	
13,600.0	12,350.0	13,833.5	12,400.0	23.5	27.6	91.54	-1,268.6	-1,471.0	1,863.6	1,814.1	49.47	37.670	
13,700.0	12,350.0	13,933.5	12,400.0	23.8	27.9	91.54	-1,368.6	-1,470.0	1,863.5	1,813.4	50.09	37.203	
13,800.0	12,350.0	14,033.5	12,400.0	24.1	28.2	91.54	-1,468.6	-1,469.0	1,863.5	1,812.8	50.75	36.720	
13,900.0	12,350.0	14,133.5	12,400.0	24.4	28.5	91.54	-1,568.6	-1,468.1	1,863.5	1,812.0	51.44	36.225	
14,000.0	12,350.0	14,233.5	12,400.0	24.8	28.8	91.54	-1,668.6	-1,467.1	1,863.4	1,811.3	52.17	35.718	
14,100.0	12,350.0	14,333.5	12,400.0	25.2	29.1	91.54	-1,768.6	-1,466.1	1,863.4	1,810.5	52.93	35.204	
14,200.0	12,350.0	14,433.5	12,400.0	25.5	29.5	91.54	-1,868.6	-1,465.1	1,863.4	1,809.6	53.72	34.684	
14,300.0	12,350.0	14,533.5	12,400.0	26.0	29.9	91.54	-1,968.6	-1,464.2	1,863.3	1,808.8	54.55	34.159	
14,400.0	12,350.0	14,633.5	12,400.0	26.4	30.2	91.54	-2,068.6	-1,463.2	1,863.3	1,807.9	55.40	33.633	
14,500.0	12,350.0	14,733.5	12,400.0	26.8	30.6	91.54	-2,168.6	-1,462.2	1,863.3	1,807.0	56.28	33.107	
14,600.0	12,350.0	14,833.5	12,400.0	27.3	31.0	91.54	-2,268.6	-1,461.3	1,863.2	1,806.0	57.19	32.581	
14,700.0	12,350.0	14,933.5	12,400.0	27.7	31.5	91.54	-2,368.6	-1,460.3	1,863.2	1,805.1	58.12	32.058	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #602H - OWB - PWP0												Offset Site Error: 0.0 usft	
Survey Program: 0-r.5 MWD+IFR1+MS		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance			Offset Well Error: 3.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	12,350.0	15,033.5	12,400.0	28.2	31.9	91.54	-2,468.6	-1,459.3	1,863.2	1,804.1	59.07	31.539	
14,900.0	12,350.0	15,133.5	12,400.0	28.7	32.3	91.54	-2,568.6	-1,458.3	1,863.1	1,803.1	60.05	31.025	
15,000.0	12,350.0	15,233.5	12,400.0	29.2	32.8	91.54	-2,668.6	-1,457.4	1,863.1	1,802.0	61.05	30.516	
15,100.0	12,350.0	15,333.5	12,400.0	29.7	33.3	91.54	-2,768.6	-1,456.4	1,863.1	1,801.0	62.07	30.014	
15,200.0	12,350.0	15,433.5	12,400.0	30.3	33.8	91.54	-2,868.6	-1,455.4	1,863.0	1,799.9	63.11	29.518	
15,300.0	12,350.0	15,533.5	12,400.0	30.8	34.2	91.54	-2,968.6	-1,454.5	1,863.0	1,798.8	64.17	29.031	
15,400.0	12,350.0	15,633.5	12,400.0	31.3	34.7	91.54	-3,068.6	-1,453.5	1,863.0	1,797.7	65.25	28.551	
15,500.0	12,350.0	15,733.5	12,400.0	31.9	35.3	91.54	-3,168.6	-1,452.5	1,862.9	1,796.6	66.34	28.080	
15,600.0	12,350.0	15,833.5	12,400.0	32.5	35.8	91.54	-3,268.5	-1,451.5	1,862.9	1,795.4	67.45	27.617	
15,700.0	12,350.0	15,933.5	12,400.0	33.0	36.3	91.54	-3,368.5	-1,450.6	1,862.8	1,794.3	68.58	27.164	
15,800.0	12,350.0	16,033.5	12,400.0	33.6	36.8	91.54	-3,468.5	-1,449.6	1,862.8	1,793.1	69.72	26.719	
15,900.0	12,350.0	16,133.5	12,400.0	34.2	37.4	91.54	-3,568.5	-1,448.6	1,862.8	1,791.9	70.87	26.284	
16,000.0	12,350.0	16,233.5	12,400.0	34.8	37.9	91.54	-3,668.5	-1,447.7	1,862.7	1,790.7	72.04	25.858	
16,100.0	12,350.0	16,333.5	12,400.0	35.4	38.5	91.54	-3,768.5	-1,446.7	1,862.7	1,789.5	73.22	25.441	
16,200.0	12,350.0	16,433.5	12,400.0	36.0	39.1	91.54	-3,868.5	-1,445.7	1,862.7	1,788.3	74.41	25.034	
16,300.0	12,350.0	16,533.5	12,400.0	36.6	39.6	91.54	-3,968.5	-1,444.7	1,862.6	1,787.0	75.61	24.635	
16,400.0	12,350.0	16,633.5	12,400.0	37.2	40.2	91.54	-4,068.5	-1,443.8	1,862.6	1,785.8	76.82	24.246	
16,500.0	12,350.0	16,733.5	12,400.0	37.9	40.8	91.54	-4,168.5	-1,442.8	1,862.6	1,784.5	78.05	23.865	
16,600.0	12,350.0	16,833.5	12,400.0	38.5	41.4	91.54	-4,268.5	-1,441.8	1,862.5	1,783.3	79.28	23.494	
16,700.0	12,350.0	16,933.5	12,400.0	39.1	42.0	91.54	-4,368.5	-1,440.9	1,862.5	1,782.0	80.52	23.131	
16,800.0	12,350.0	17,033.5	12,400.0	39.8	42.6	91.54	-4,468.5	-1,439.9	1,862.5	1,780.7	81.77	22.776	
16,900.0	12,350.0	17,133.5	12,400.0	40.4	43.2	91.54	-4,568.5	-1,438.9	1,862.4	1,779.4	83.03	22.430	
17,000.0	12,350.0	17,233.5	12,400.0	41.1	43.8	91.54	-4,668.5	-1,437.9	1,862.4	1,778.1	84.30	22.092	
17,100.0	12,350.0	17,333.5	12,400.0	41.7	44.4	91.54	-4,768.5	-1,437.0	1,862.4	1,776.8	85.58	21.763	
17,200.0	12,350.0	17,433.5	12,400.0	42.4	45.0	91.54	-4,868.5	-1,436.0	1,862.3	1,775.5	86.86	21.441	
17,300.0	12,350.0	17,533.5	12,400.0	43.0	45.7	91.54	-4,968.5	-1,435.0	1,862.3	1,774.1	88.15	21.127	
17,400.0	12,350.0	17,633.5	12,400.0	43.7	46.3	91.54	-5,068.5	-1,434.1	1,862.3	1,772.8	89.45	20.820	
17,500.0	12,350.0	17,733.5	12,400.0	44.4	46.9	91.54	-5,168.5	-1,433.1	1,862.2	1,771.5	90.75	20.520	
17,600.0	12,350.0	17,833.5	12,400.0	45.0	47.6	91.54	-5,268.5	-1,432.1	1,862.2	1,770.1	92.06	20.228	
17,700.0	12,350.0	17,933.5	12,400.0	45.7	48.2	91.54	-5,368.5	-1,431.1	1,862.2	1,768.8	93.38	19.942	
17,800.0	12,350.0	18,033.5	12,400.0	46.4	48.9	91.54	-5,468.4	-1,430.2	1,862.1	1,767.4	94.70	19.664	
17,900.0	12,350.0	18,133.5	12,400.0	47.1	49.5	91.54	-5,568.4	-1,429.2	1,862.1	1,766.1	96.03	19.392	
18,000.0	12,350.0	18,233.5	12,400.0	47.7	50.2	91.54	-5,668.4	-1,428.2	1,862.1	1,764.7	97.36	19.126	
18,100.0	12,350.0	18,333.5	12,400.0	48.4	50.8	91.54	-5,768.4	-1,427.3	1,862.0	1,763.3	98.69	18.866	
18,200.0	12,350.0	18,433.5	12,400.0	49.1	51.5	91.54	-5,868.4	-1,426.3	1,862.0	1,761.9	100.04	18.613	
18,300.0	12,350.0	18,533.5	12,400.0	49.8	52.2	91.54	-5,968.4	-1,425.3	1,862.0	1,760.6	101.38	18.365	
18,400.0	12,350.0	18,633.5	12,400.0	50.5	52.8	91.54	-6,068.4	-1,424.3	1,861.9	1,759.2	102.74	18.123	
18,500.0	12,350.0	18,733.5	12,400.0	51.2	53.5	91.54	-6,168.4	-1,423.4	1,861.9	1,757.8	104.09	17.887	
18,600.0	12,350.0	18,833.5	12,400.0	51.9	54.2	91.54	-6,268.4	-1,422.4	1,861.8	1,756.4	105.45	17.656	
18,700.0	12,350.0	18,933.5	12,400.0	52.6	54.8	91.54	-6,368.4	-1,421.4	1,861.8	1,755.0	106.81	17.430	
18,800.0	12,350.0	19,033.5	12,400.0	53.3	55.5	91.54	-6,468.4	-1,420.5	1,861.8	1,753.6	108.18	17.210	
18,900.0	12,350.0	19,133.5	12,400.0	54.0	56.2	91.54	-6,568.4	-1,419.5	1,861.7	1,752.2	109.55	16.994	
19,000.0	12,350.0	19,233.5	12,400.0	54.7	56.9	91.54	-6,668.4	-1,418.5	1,861.7	1,750.8	110.93	16.783	
19,100.0	12,350.0	19,333.5	12,400.0	55.4	57.5	91.54	-6,768.4	-1,417.5	1,861.7	1,749.4	112.31	16.577	
19,200.0	12,350.0	19,433.5	12,400.0	56.1	58.2	91.54	-6,868.4	-1,416.6	1,861.6	1,748.0	113.69	16.375	
19,300.0	12,350.0	19,533.5	12,400.0	56.8	58.9	91.54	-6,968.4	-1,415.6	1,861.6	1,746.5	115.07	16.178	
19,400.0	12,350.0	19,633.5	12,400.0	57.5	59.6	91.54	-7,068.4	-1,414.6	1,861.6	1,745.1	116.46	15.985	
19,500.0	12,350.0	19,733.5	12,400.0	58.2	60.3	91.54	-7,168.4	-1,413.7	1,861.5	1,743.7	117.85	15.796	
19,600.0	12,350.0	19,833.5	12,400.0	58.9	61.0	91.54	-7,268.4	-1,412.7	1,861.5	1,742.3	119.24	15.611	
19,700.0	12,350.0	19,933.5	12,400.0	59.6	61.7	91.54	-7,368.4	-1,411.7	1,861.5	1,740.8	120.64	15.430	
19,800.0	12,350.0	20,033.5	12,400.0	60.4	62.4	91.54	-7,468.4	-1,410.7	1,861.4	1,739.4	122.04	15.253	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #602H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
19,900.0	12,350.0	20,133.5	12,400.0	61.1	63.1	91.54	-7,568.3	-1,409.8	1,861.4	1,738.0	123.44	15.079		
20,000.0	12,350.0	20,233.5	12,400.0	61.8	63.8	91.54	-7,668.3	-1,408.8	1,861.4	1,736.5	124.84	14.910		
20,100.0	12,350.0	20,333.5	12,400.0	62.5	64.5	91.54	-7,768.3	-1,407.8	1,861.3	1,735.1	126.25	14.743		
20,200.0	12,350.0	20,433.5	12,400.0	63.2	65.2	91.54	-7,868.3	-1,406.9	1,861.3	1,733.6	127.66	14.580		
20,300.0	12,350.0	20,533.5	12,400.0	63.9	65.9	91.54	-7,968.3	-1,405.9	1,861.3	1,732.2	129.07	14.421		
20,400.0	12,350.0	20,633.5	12,400.0	64.7	66.6	91.54	-8,068.3	-1,404.9	1,861.2	1,730.7	130.48	14.264		
20,500.0	12,350.0	20,733.5	12,400.0	65.4	67.3	91.54	-8,168.3	-1,403.9	1,861.2	1,729.3	131.90	14.111		
20,600.0	12,350.0	20,833.5	12,400.0	66.1	68.0	91.54	-8,268.3	-1,403.0	1,861.2	1,727.8	133.31	13.961		
20,700.0	12,350.0	20,933.5	12,400.0	66.8	68.7	91.54	-8,368.3	-1,402.0	1,861.1	1,726.4	134.73	13.814		
20,800.0	12,350.0	21,033.5	12,400.0	67.6	69.4	91.54	-8,468.3	-1,401.0	1,861.1	1,724.9	136.15	13.669		
20,900.0	12,350.0	21,133.5	12,400.0	68.3	70.1	91.54	-8,568.3	-1,400.1	1,861.1	1,723.5	137.57	13.528		
21,000.0	12,350.0	21,233.5	12,400.0	69.0	70.8	91.54	-8,668.3	-1,399.1	1,861.0	1,722.0	139.00	13.389		
21,100.0	12,350.0	21,333.5	12,400.0	69.7	71.5	91.54	-8,768.3	-1,398.1	1,861.0	1,720.6	140.43	13.252		
21,200.0	12,350.0	21,433.5	12,400.0	70.5	72.3	91.54	-8,868.3	-1,397.1	1,861.0	1,719.1	141.85	13.119		
21,300.0	12,350.0	21,533.5	12,400.0	71.2	73.0	91.54	-8,968.3	-1,396.2	1,860.9	1,717.6	143.28	12.988		
21,400.0	12,350.0	21,633.5	12,400.0	71.9	73.7	91.54	-9,068.3	-1,395.2	1,860.9	1,716.2	144.71	12.859		
21,500.0	12,350.0	21,733.5	12,400.0	72.6	74.4	91.54	-9,168.3	-1,394.2	1,860.8	1,714.7	146.15	12.733		
21,600.0	12,350.0	21,833.5	12,400.0	73.4	75.1	91.54	-9,268.3	-1,393.3	1,860.8	1,713.2	147.58	12.609		
21,700.0	12,350.0	21,933.5	12,400.0	74.1	75.8	91.54	-9,368.3	-1,392.3	1,860.8	1,711.8	149.02	12.487		
21,800.0	12,350.0	22,033.5	12,400.0	74.8	76.6	91.54	-9,468.3	-1,391.3	1,860.7	1,710.3	150.45	12.368		
21,900.0	12,350.0	22,133.5	12,400.0	75.6	77.3	91.54	-9,568.3	-1,390.3	1,860.7	1,708.8	151.89	12.250		
22,000.0	12,350.0	22,233.5	12,400.0	76.3	78.0	91.54	-9,668.2	-1,389.4	1,860.7	1,707.3	153.33	12.135		
22,100.0	12,350.0	22,333.5	12,400.0	77.0	78.7	91.54	-9,768.2	-1,388.4	1,860.6	1,705.9	154.77	12.022		
22,200.0	12,350.0	22,433.5	12,400.0	77.8	79.5	91.54	-9,868.2	-1,387.4	1,860.6	1,704.4	156.21	11.911		
22,300.0	12,350.0	22,533.5	12,400.0	78.5	80.2	91.54	-9,968.2	-1,386.5	1,860.6	1,702.9	157.66	11.801		
22,400.0	12,350.0	22,633.5	12,400.0	79.2	80.9	91.54	-10,068.2	-1,385.5	1,860.5	1,701.4	159.10	11.694		
22,500.0	12,350.0	22,733.5	12,400.0	80.0	81.6	91.54	-10,168.2	-1,384.5	1,860.5	1,700.0	160.55	11.589		
22,600.0	12,350.0	22,833.5	12,400.0	80.7	82.4	91.54	-10,268.2	-1,383.5	1,860.5	1,698.5	161.99	11.485		
22,700.0	12,350.0	22,933.5	12,400.0	81.5	83.1	91.54	-10,368.2	-1,382.6	1,860.4	1,697.0	163.44	11.383		
22,800.0	12,350.0	23,033.5	12,400.0	82.2	83.8	91.54	-10,468.2	-1,381.6	1,860.4	1,695.5	164.89	11.283		
22,900.0	12,350.0	23,133.5	12,400.0	82.9	84.5	91.54	-10,568.2	-1,380.6	1,860.4	1,694.0	166.34	11.184		
23,000.0	12,350.0	23,233.5	12,400.0	83.7	85.3	91.54	-10,668.2	-1,379.7	1,860.3	1,692.5	167.79	11.087		
23,100.0	12,350.0	23,333.5	12,400.0	84.4	86.0	91.54	-10,768.2	-1,378.7	1,860.3	1,691.1	169.24	10.992		
23,200.0	12,350.0	23,433.5	12,400.0	85.2	86.7	91.54	-10,868.2	-1,377.7	1,860.3	1,689.6	170.69	10.898		
23,300.0	12,350.0	23,533.5	12,400.0	85.9	87.5	91.54	-10,968.2	-1,376.7	1,860.2	1,688.1	172.15	10.806		
23,400.0	12,350.0	23,633.5	12,400.0	86.6	88.2	91.54	-11,068.2	-1,375.8	1,860.2	1,686.6	173.60	10.715		
23,500.0	12,350.0	23,733.5	12,400.0	87.4	88.9	91.54	-11,168.2	-1,374.8	1,860.2	1,685.1	175.06	10.626		
23,600.0	12,350.0	23,833.5	12,400.0	88.1	89.7	91.54	-11,268.2	-1,373.8	1,860.1	1,683.6	176.51	10.538		
23,700.0	12,350.0	23,933.5	12,400.0	88.9	90.4	91.54	-11,368.2	-1,372.9	1,860.1	1,682.1	177.97	10.452		
23,800.0	12,350.0	24,033.5	12,400.0	89.6	91.1	91.54	-11,468.2	-1,371.9	1,860.1	1,680.6	179.43	10.366		
23,900.0	12,350.0	24,133.5	12,400.0	90.3	91.9	91.54	-11,568.2	-1,370.9	1,860.0	1,679.1	180.89	10.283		
24,000.0	12,350.0	24,233.5	12,400.0	91.1	92.6	91.54	-11,668.2	-1,369.9	1,860.0	1,677.6	182.35	10.200		
24,100.0	12,350.0	24,333.5	12,400.0	91.8	93.3	91.54	-11,768.1	-1,369.0	1,859.9	1,676.1	183.81	10.119		
24,200.0	12,350.0	24,433.5	12,400.0	92.6	94.1	91.54	-11,868.1	-1,368.0	1,859.9	1,674.6	185.27	10.039		
24,300.0	12,350.0	24,533.5	12,400.0	93.3	94.8	91.54	-11,968.1	-1,367.0	1,859.9	1,673.1	186.73	9.960		
24,400.0	12,350.0	24,633.5	12,400.0	94.1	95.5	91.54	-12,068.1	-1,366.1	1,859.8	1,671.7	188.19	9.883		
24,500.0	12,350.0	24,733.5	12,400.0	94.8	96.3	91.54	-12,168.1	-1,365.1	1,859.8	1,670.2	189.66	9.806		
24,600.0	12,350.0	24,833.5	12,400.0	95.5	97.0	91.54	-12,268.1	-1,364.1	1,859.8	1,668.7	191.12	9.731		
24,700.0	12,350.0	24,933.5	12,400.0	96.3	97.7	91.54	-12,368.1	-1,363.1	1,859.7	1,667.2	192.59	9.657		
24,800.0	12,350.0	25,033.5	12,400.0	97.0	98.5	91.54	-12,468.1	-1,362.2	1,859.7	1,665.7	194.05	9.584		
24,900.0	12,350.0	25,133.5	12,400.0	97.8	99.2	91.54	-12,568.1	-1,361.2	1,859.7	1,664.2	195.52	9.512		

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #602H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS											Offset Well Error:	3.0 usft
Rule Assigned:												
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Reference (usft)	Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		Warning
25,000.0	12,350.0	25,233.5	12,400.0	98.5	100.0	91.54	-12,668.1	-1,360.2	1,859.6	1,662.7	196.98	9.441
25,100.0	12,350.0	25,333.5	12,400.0	99.3	100.7	91.54	-12,768.1	-1,359.3	1,859.6	1,661.2	198.45	9.371
25,200.0	12,350.0	25,433.5	12,400.0	100.0	101.4	91.54	-12,868.1	-1,358.3	1,859.6	1,659.7	199.92	9.302
25,300.0	12,350.0	25,533.5	12,400.0	100.8	102.2	91.54	-12,968.1	-1,357.3	1,859.5	1,658.1	201.39	9.234
25,400.0	12,350.0	25,633.5	12,400.0	101.5	102.9	91.54	-13,068.1	-1,356.3	1,859.5	1,656.6	202.85	9.167
25,500.0	12,350.0	25,733.5	12,400.0	102.3	103.7	91.54	-13,168.1	-1,355.4	1,859.5	1,655.1	204.32	9.101
25,600.0	12,350.0	25,833.5	12,400.0	103.0	104.4	91.54	-13,268.1	-1,354.4	1,859.4	1,653.6	205.79	9.035
25,700.0	12,350.0	25,933.5	12,400.0	103.8	105.1	91.54	-13,368.1	-1,353.4	1,859.4	1,652.1	207.26	8.971
25,800.0	12,350.0	26,033.5	12,400.0	104.5	105.9	91.54	-13,468.1	-1,352.5	1,859.4	1,650.6	208.73	8.908
25,900.0	12,350.0	26,133.5	12,400.0	105.2	106.6	91.54	-13,568.1	-1,351.5	1,859.3	1,649.1	210.21	8.845
26,000.0	12,350.0	26,233.5	12,400.0	106.0	107.4	91.54	-13,668.1	-1,350.5	1,859.3	1,647.6	211.68	8.784
26,100.0	12,350.0	26,333.5	12,400.0	106.7	108.1	91.54	-13,768.1	-1,349.5	1,859.3	1,646.1	213.15	8.723
26,200.0	12,350.0	26,433.5	12,400.0	107.5	108.8	91.54	-13,868.0	-1,348.6	1,859.2	1,644.6	214.62	8.663
26,300.0	12,350.0	26,533.5	12,400.0	108.2	109.6	91.54	-13,968.0	-1,347.6	1,859.2	1,643.1	216.10	8.603
26,400.0	12,350.0	26,633.5	12,400.0	109.0	110.3	91.54	-14,068.0	-1,346.6	1,859.2	1,641.6	217.57	8.545
26,500.0	12,350.0	26,733.5	12,400.0	109.7	111.1	91.54	-14,168.0	-1,345.7	1,859.1	1,640.1	219.05	8.487
26,600.0	12,350.0	26,833.5	12,400.0	110.5	111.8	91.54	-14,268.0	-1,344.7	1,859.1	1,638.6	220.52	8.430
26,700.0	12,350.0	26,933.5	12,400.0	111.2	112.6	91.54	-14,368.0	-1,343.7	1,859.1	1,637.1	221.99	8.374
26,800.0	12,350.0	27,033.5	12,400.0	112.0	113.3	91.54	-14,468.0	-1,342.7	1,859.0	1,635.5	223.47	8.319
26,900.0	12,350.0	27,133.5	12,400.0	112.7	114.1	91.54	-14,568.0	-1,341.8	1,859.0	1,634.0	224.95	8.264
27,000.0	12,350.0	27,233.5	12,400.0	113.5	114.8	91.54	-14,668.0	-1,340.8	1,858.9	1,632.5	226.42	8.210
27,100.0	12,350.0	27,333.5	12,400.0	114.2	115.5	91.54	-14,768.0	-1,339.8	1,858.9	1,631.0	227.90	8.157
27,200.0	12,350.0	27,433.5	12,400.0	115.0	116.3	91.54	-14,868.0	-1,338.9	1,858.9	1,629.5	229.38	8.104
27,300.0	12,350.0	27,533.5	12,400.0	115.7	117.0	91.54	-14,968.0	-1,337.9	1,858.8	1,628.0	230.85	8.052
27,400.0	12,350.0	27,633.5	12,400.0	116.5	117.8	91.54	-15,068.0	-1,336.9	1,858.8	1,626.5	232.33	8.001
27,500.0	12,350.0	27,733.5	12,400.0	117.2	118.5	91.54	-15,168.0	-1,335.9	1,858.8	1,625.0	233.81	7.950
27,600.0	12,350.0	27,833.5	12,400.0	118.0	119.3	91.54	-15,268.0	-1,335.0	1,858.7	1,623.5	235.29	7.900
27,700.0	12,350.0	27,933.5	12,400.0	118.7	120.0	91.54	-15,368.0	-1,334.0	1,858.7	1,621.9	236.77	7.850
27,800.0	12,350.0	28,033.5	12,400.0	119.5	120.8	91.54	-15,468.0	-1,333.0	1,858.7	1,620.4	238.25	7.801
27,900.0	12,350.0	28,133.5	12,400.0	120.2	121.5	91.54	-15,568.0	-1,332.1	1,858.6	1,618.9	239.73	7.753
28,000.0	12,350.0	28,233.5	12,400.0	121.0	122.3	91.54	-15,668.0	-1,331.1	1,858.6	1,617.4	241.21	7.705
28,100.0	12,350.0	28,333.5	12,400.0	121.8	123.0	91.54	-15,768.0	-1,330.1	1,858.6	1,615.9	242.69	7.658
28,200.0	12,350.0	28,433.5	12,400.0	122.5	123.8	91.54	-15,868.0	-1,329.2	1,858.5	1,614.4	244.17	7.612
28,300.0	12,350.0	28,533.5	12,400.0	123.3	124.5	91.54	-15,967.9	-1,328.2	1,858.5	1,612.9	245.65	7.566
28,400.0	12,350.0	28,633.5	12,400.0	124.0	125.3	91.54	-16,067.9	-1,327.2	1,858.5	1,611.3	247.13	7.520
28,471.7	12,350.0	28,705.2	12,400.0	124.5	125.8	91.54	-16,139.7	-1,326.5	1,858.4	1,610.2	248.19	7.488 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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #702H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Reference (usft)	Major Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	3.0	3.0	-90.38	-0.2	-29.9	29.9	23.5	6.43	4.651	
100.0	100.0	100.0	100.0	3.2	3.2	-90.38	-0.2	-29.9	29.9	23.0	6.89	4.338	
200.0	200.0	200.0	200.0	3.5	3.5	-90.38	-0.2	-29.9	29.9	22.6	7.33	4.080	
300.0	300.0	300.0	300.0	3.7	3.7	-90.38	-0.2	-29.9	29.9	22.2	7.74	3.862	
400.0	400.0	400.0	400.0	3.9	3.9	-90.38	-0.2	-29.9	29.9	21.8	8.14	3.675	
500.0	500.0	500.0	500.0	4.1	4.1	-90.38	-0.2	-29.9	29.9	21.4	8.51	3.512	
600.0	600.0	600.0	600.0	4.2	4.2	-90.38	-0.2	-29.9	29.9	21.0	8.88	3.368	
700.0	700.0	700.0	700.0	4.4	4.4	-90.38	-0.2	-29.9	29.9	20.7	9.23	3.240	
800.0	800.0	800.0	800.0	4.6	4.6	-90.38	-0.2	-29.9	29.9	20.3	9.57	3.124	
900.0	900.0	900.0	900.0	4.8	4.8	-90.38	-0.2	-29.9	29.9	20.0	9.90	3.020	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-90.38	-0.2	-29.9	29.9	19.7	10.22	2.924	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-90.38	-0.2	-29.9	29.9	19.4	10.54	2.837	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-90.38	-0.2	-29.9	29.9	19.1	10.85	2.756	CC, ES, SF
1,300.0	1,300.0	1,299.2	1,299.2	5.4	5.4	-150.80	0.2	-31.1	32.3	21.1	11.20	2.882	
1,400.0	1,399.9	1,398.1	1,398.0	5.6	5.6	-151.73	1.4	-34.8	39.4	27.8	11.55	3.410	
1,500.0	1,499.7	1,496.3	1,496.0	5.8	5.8	-152.69	3.3	-40.8	51.2	39.3	11.93	4.296	
1,600.0	1,599.3	1,593.5	1,592.8	6.1	6.0	-153.45	6.0	-49.2	67.8	55.4	12.32	5.500	
1,700.0	1,698.6	1,689.4	1,688.0	6.3	6.3	-153.97	9.3	-59.7	88.9	76.2	12.74	6.978	
1,800.0	1,797.6	1,785.2	1,783.0	6.5	6.5	-154.38	13.3	-72.2	113.8	100.7	13.06	8.717	
1,900.0	1,896.6	1,882.0	1,878.8	6.8	6.7	-154.66	17.4	-85.0	139.0	125.5	13.51	10.292	
2,000.0	1,995.7	1,978.7	1,974.6	7.0	7.0	-154.86	21.5	-97.9	164.3	150.3	14.00	11.736	
2,100.0	2,094.7	2,075.5	2,070.4	7.3	7.2	-155.00	25.6	-110.7	189.5	175.0	14.51	13.061	
2,200.0	2,193.7	2,172.3	2,166.3	7.6	7.5	-155.11	29.7	-123.5	214.8	199.7	15.05	14.274	
2,300.0	2,292.8	2,269.0	2,262.1	8.0	7.8	-155.20	33.8	-136.3	240.0	224.4	15.60	15.383	
2,400.0	2,391.8	2,365.8	2,357.9	8.3	8.2	-155.27	37.9	-149.2	265.3	249.1	16.18	16.398	
2,500.0	2,490.8	2,462.5	2,453.7	8.6	8.5	-155.33	42.0	-162.0	290.5	273.8	16.77	17.328	
2,600.0	2,589.8	2,559.3	2,549.5	9.0	8.8	-155.38	46.1	-174.8	315.8	298.4	17.37	18.179	
2,700.0	2,688.9	2,656.1	2,645.4	9.3	9.1	-155.42	50.1	-187.7	341.0	323.0	17.99	18.959	
2,800.0	2,787.9	2,752.8	2,741.2	9.7	9.5	-155.46	54.2	-200.5	366.3	347.7	18.62	19.675	
2,900.0	2,886.9	2,849.6	2,837.0	10.1	9.8	-155.49	58.3	-213.3	391.5	372.3	19.26	20.334	
3,000.0	2,985.9	2,946.3	2,932.8	10.4	10.2	-155.52	62.4	-226.1	416.8	396.9	19.90	20.940	
3,100.0	3,085.0	3,043.1	3,028.6	10.8	10.6	-155.54	66.5	-239.0	442.0	421.5	20.56	21.500	
3,200.0	3,184.0	3,139.9	3,124.4	11.2	10.9	-155.56	70.6	-251.8	467.3	446.1	21.22	22.016	
3,300.0	3,283.0	3,236.6	3,220.3	11.6	11.3	-155.58	74.7	-264.6	492.5	470.6	21.90	22.495	
3,400.0	3,382.0	3,333.4	3,316.1	11.9	11.7	-155.60	78.8	-277.5	517.8	495.2	22.57	22.938	
3,500.0	3,481.1	3,430.1	3,411.9	12.3	12.0	-155.61	82.9	-290.3	543.0	519.8	23.26	23.350	
3,600.0	3,580.1	3,526.9	3,507.7	12.7	12.4	-155.63	87.0	-303.1	568.3	544.3	23.94	23.733	
3,700.0	3,679.1	3,623.7	3,603.5	13.1	12.8	-155.64	91.1	-315.9	593.5	568.9	24.64	24.090	
3,800.0	3,778.2	3,720.4	3,699.3	13.5	13.2	-155.65	95.2	-328.8	618.8	593.4	25.34	24.422	
3,900.0	3,877.2	3,817.3	3,795.3	13.9	13.6	-155.70	99.3	-341.6	643.7	617.6	26.04	24.722	
4,000.0	3,976.4	3,914.3	3,891.4	14.3	14.0	-155.72	103.4	-354.5	667.8	641.0	26.74	24.977	
4,100.0	4,075.7	4,011.6	3,987.7	14.7	14.3	-155.70	107.5	-367.4	691.1	663.7	27.44	25.190	
4,200.0	4,175.1	4,109.0	4,084.1	15.1	14.7	-155.66	111.6	-380.3	713.7	685.5	28.13	25.367	
4,300.0	4,274.6	4,206.6	4,180.8	15.5	15.1	-155.59	115.8	-393.2	735.5	706.6	28.83	25.510	
4,400.0	4,374.2	4,304.3	4,277.6	15.8	15.5	-155.50	119.9	-406.2	756.5	727.0	29.52	25.623	
4,500.0	4,473.9	4,402.2	4,374.5	16.2	15.9	-155.39	124.0	-419.2	776.7	746.5	30.21	25.708	
4,600.0	4,573.6	4,500.3	4,471.6	16.6	16.3	-155.26	128.2	-432.2	796.2	765.3	30.90	25.768	
4,700.0	4,673.4	4,598.5	4,568.9	16.9	16.7	-155.11	132.3	-445.2	814.9	783.3	31.58	25.805	
4,800.0	4,773.2	4,696.8	4,666.2	17.3	17.1	-154.94	136.5	-458.2	832.8	800.6	32.25	25.821	
4,900.0	4,873.1	4,795.3	4,763.7	17.6	17.5	-154.75	140.7	-471.3	850.0	817.1	32.92	25.820	
5,000.0	4,973.0	4,893.9	4,861.4	17.9	18.0	-154.54	144.8	-484.3	866.4	832.8	33.58	25.803	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #702H - OWB - PWP0													Offset Site Error: 0.0 usft	
Survey Program: Reference		0-r.5 MWD+IFR1+MS Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error: 3.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,100.0	5,073.0	4,992.5	4,959.1	18.2	18.4	-154.32	149.0	-497.4	882.1	847.8	34.22	25.773		
5,200.0	5,173.0	5,091.3	5,056.9	18.5	18.8	-154.08	153.2	-510.5	896.9	862.1	34.85	25.734		
5,300.0	5,272.9	5,190.2	5,154.9	18.7	19.2	-153.82	157.4	-523.6	911.1	875.6	35.47	25.689		
5,400.0	5,372.9	5,289.2	5,252.9	18.9	19.6	-153.55	161.6	-536.8	924.4	888.5	35.99	25.686		
5,500.0	5,472.9	5,388.2	5,350.9	18.9	20.0	-93.24	165.8	-549.9	937.4	901.0	36.45	25.722		
5,600.0	5,572.9	5,487.3	5,449.0	19.0	20.4	-92.94	170.0	-563.0	950.5	913.6	36.91	25.754		
5,700.0	5,672.9	5,586.3	5,547.1	19.0	20.8	-92.65	174.1	-576.2	963.5	926.1	37.37	25.782		
5,800.0	5,772.9	5,685.3	5,645.1	19.1	21.3	-92.37	178.3	-589.3	976.6	938.8	37.84	25.806		
5,900.0	5,872.9	5,786.9	5,745.8	19.1	21.7	-92.08	182.6	-602.7	989.7	951.4	38.32	25.824		
6,000.0	5,972.9	5,905.6	5,863.5	19.2	22.2	-91.79	187.2	-617.0	1,001.6	962.6	38.92	25.733		
6,100.0	6,072.9	6,024.8	5,982.0	19.3	22.6	-91.55	191.0	-629.0	1,011.5	972.0	39.50	25.610		
6,200.0	6,172.9	6,144.5	6,101.3	19.3	23.1	-91.36	194.1	-638.6	1,019.5	979.5	40.04	25.462		
6,300.0	6,272.9	6,264.5	6,221.1	19.4	23.5	-91.22	196.4	-646.0	1,025.6	985.0	40.55	25.294		
6,400.0	6,372.9	6,384.9	6,341.3	19.4	23.9	-91.13	198.0	-650.9	1,029.7	988.7	41.00	25.111		
6,500.0	6,472.9	6,505.4	6,461.8	19.5	24.2	-91.08	198.8	-653.4	1,031.7	990.3	41.39	24.925		
6,600.0	6,572.9	6,616.6	6,572.9	19.5	24.3	-91.08	198.9	-653.8	1,032.0	990.5	41.53	24.853		
6,700.0	6,672.9	6,716.6	6,672.9	19.6	24.4	-91.08	198.9	-653.8	1,032.0	990.4	41.62	24.798		
6,800.0	6,772.9	6,816.6	6,772.9	19.6	24.4	-91.08	198.9	-653.8	1,032.0	990.3	41.71	24.743		
6,900.0	6,872.9	6,916.6	6,872.9	19.7	24.4	-91.08	198.9	-653.8	1,032.0	990.2	41.80	24.688		
7,000.0	6,972.9	7,016.6	6,972.9	19.7	24.5	-91.08	198.9	-653.8	1,032.0	990.1	41.90	24.633		
7,100.0	7,072.9	7,116.6	7,072.9	19.8	24.5	-91.08	198.9	-653.8	1,032.0	990.0	41.99	24.578		
7,200.0	7,172.9	7,216.6	7,172.9	19.8	24.6	-91.08	198.9	-653.8	1,032.0	990.0	42.08	24.523		
7,300.0	7,272.9	7,316.6	7,272.9	19.9	24.6	-91.08	198.9	-653.8	1,032.0	989.9	42.18	24.468		
7,400.0	7,372.9	7,416.6	7,372.9	19.9	24.6	-91.08	198.9	-653.8	1,032.0	989.8	42.27	24.413		
7,500.0	7,472.9	7,516.6	7,472.9	20.0	24.7	-91.08	198.9	-653.8	1,032.0	989.7	42.37	24.358		
7,600.0	7,572.9	7,616.6	7,572.9	20.0	24.7	-91.08	198.9	-653.8	1,032.0	989.6	42.46	24.303		
7,700.0	7,672.9	7,716.6	7,672.9	20.1	24.8	-91.08	198.9	-653.8	1,032.0	989.5	42.56	24.248		
7,800.0	7,772.9	7,816.6	7,772.9	20.2	24.8	-91.08	198.9	-653.8	1,032.0	989.4	42.66	24.194		
7,900.0	7,872.9	7,916.6	7,872.9	20.2	24.8	-91.08	198.9	-653.8	1,032.0	989.3	42.75	24.139		
8,000.0	7,972.9	8,016.6	7,972.9	20.3	24.9	-91.08	198.9	-653.8	1,032.0	989.2	42.85	24.084		
8,100.0	8,072.9	8,116.6	8,072.9	20.3	24.9	-91.08	198.9	-653.8	1,032.0	989.1	42.95	24.029		
8,200.0	8,172.9	8,216.6	8,172.9	20.4	25.0	-91.08	198.9	-653.8	1,032.0	989.0	43.05	23.974		
8,300.0	8,272.9	8,316.6	8,272.9	20.4	25.0	-91.08	198.9	-653.8	1,032.0	988.9	43.15	23.920		
8,400.0	8,372.9	8,416.6	8,372.9	20.5	25.0	-91.08	198.9	-653.8	1,032.0	988.8	43.24	23.865		
8,500.0	8,472.9	8,516.6	8,472.9	20.5	25.1	-91.08	198.9	-653.8	1,032.0	988.7	43.34	23.810		
8,600.0	8,572.9	8,616.6	8,572.9	20.6	25.1	-91.08	198.9	-653.8	1,032.0	988.6	43.44	23.756		
8,700.0	8,672.9	8,716.6	8,672.9	20.7	25.2	-91.08	198.9	-653.8	1,032.0	988.5	43.54	23.701		
8,800.0	8,772.9	8,816.6	8,772.9	20.7	25.2	-91.08	198.9	-653.8	1,032.0	988.4	43.64	23.647		
8,900.0	8,872.9	8,916.6	8,872.9	20.8	25.3	-91.08	198.9	-653.8	1,032.0	988.3	43.74	23.592		
9,000.0	8,972.9	9,016.6	8,972.9	20.8	25.3	-91.08	198.9	-653.8	1,032.0	988.2	43.85	23.538		
9,100.0	9,072.9	9,116.6	9,072.9	20.9	25.3	-91.08	198.9	-653.8	1,032.0	988.1	43.95	23.483		
9,200.0	9,172.9	9,216.6	9,172.9	20.9	25.4	-91.08	198.9	-653.8	1,032.0	988.0	44.05	23.429		
9,300.0	9,272.9	9,316.6	9,272.9	21.0	25.4	-91.08	198.9	-653.8	1,032.0	987.9	44.15	23.375		
9,400.0	9,372.9	9,416.6	9,372.9	21.1	25.5	-91.08	198.9	-653.8	1,032.0	987.8	44.25	23.321		
9,500.0	9,472.9	9,516.6	9,472.9	21.1	25.5	-91.08	198.9	-653.8	1,032.0	987.7	44.36	23.267		
9,600.0	9,572.9	9,616.6	9,572.9	21.2	25.6	-91.08	198.9	-653.8	1,032.0	987.6	44.46	23.213		
9,700.0	9,672.9	9,716.6	9,672.9	21.2	25.6	-91.08	198.9	-653.8	1,032.0	987.5	44.56	23.159		
9,800.0	9,772.9	9,816.6	9,772.9	21.3	25.7	-91.08	198.9	-653.8	1,032.0	987.4	44.67	23.105		
9,900.0	9,872.9	9,916.6	9,872.9	21.4	25.7	-91.08	198.9	-653.8	1,032.0	987.3	44.77	23.051		
10,000.0	9,972.9	10,016.6	9,972.9	21.4	25.7	-91.08	198.9	-653.8	1,032.0	987.2	44.88	22.997		
10,100.0	10,072.9	10,116.6	10,072.9	21.5	25.8	-91.08	198.9	-653.8	1,032.0	987.1	44.98	22.944		

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #702H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)		Reference (usft)	Offset (usft)	+N/-S (usft)	+E/-W (usft)					
10,200.0	10,172.9	10,216.6	10,172.9	21.5	25.8	-91.08	198.9	-653.8	1,032.0	986.9	45.09	22.890	
10,300.0	10,272.9	10,316.6	10,272.9	21.6	25.9	-91.08	198.9	-653.8	1,032.0	986.8	45.19	22.837	
10,400.0	10,372.9	10,416.6	10,372.9	21.6	25.9	-91.08	198.9	-653.8	1,032.0	986.7	45.30	22.783	
10,500.0	10,472.9	10,516.6	10,472.9	21.7	26.0	-91.08	198.9	-653.8	1,032.0	986.6	45.40	22.730	
10,600.0	10,572.9	10,616.6	10,572.9	21.8	26.0	-91.08	198.9	-653.8	1,032.0	986.5	45.51	22.677	
10,700.0	10,672.9	10,716.6	10,672.9	21.8	26.1	-91.08	198.9	-653.8	1,032.0	986.4	45.62	22.624	
10,800.0	10,772.9	10,816.6	10,772.9	21.9	26.1	-91.08	198.9	-653.8	1,032.0	986.3	45.72	22.571	
10,900.0	10,872.9	10,916.6	10,872.9	21.9	26.1	-91.08	198.9	-653.8	1,032.0	986.2	45.83	22.518	
11,000.0	10,972.9	11,016.6	10,972.9	22.0	26.2	-91.08	198.9	-653.8	1,032.0	986.1	45.94	22.465	
11,100.0	11,072.9	11,116.6	11,072.9	22.1	26.2	-91.08	198.9	-653.8	1,032.0	986.0	46.05	22.412	
11,200.0	11,172.9	11,216.6	11,172.9	22.1	26.3	-91.08	198.9	-653.8	1,032.0	985.9	46.16	22.359	
11,300.0	11,272.9	11,316.6	11,272.9	22.2	26.3	-91.08	198.9	-653.8	1,032.0	985.8	46.27	22.307	
11,400.0	11,372.9	11,416.6	11,372.9	22.2	26.4	-91.08	198.9	-653.8	1,032.0	985.7	46.37	22.254	
11,500.0	11,472.9	11,516.6	11,472.9	22.3	26.4	-91.08	198.9	-653.8	1,032.0	985.6	46.48	22.202	
11,600.0	11,572.9	11,616.6	11,572.9	22.4	26.5	-91.08	198.9	-653.8	1,032.0	985.4	46.59	22.150	
11,700.0	11,672.9	11,716.6	11,672.9	22.4	26.5	-91.08	198.9	-653.8	1,032.0	985.3	46.70	22.097	
11,800.0	11,772.9	11,816.6	11,772.9	22.5	26.6	-91.08	198.9	-653.8	1,032.0	985.2	46.82	22.045	
11,900.0	11,872.5	11,916.1	11,872.5	22.4	26.6	89.91	198.9	-653.8	1,032.0	985.1	46.87	22.017	
11,909.7	11,882.0	11,925.7	11,882.0	22.4	26.6	90.00	198.9	-653.8	1,032.0	985.1	46.88	22.015	
12,000.0	11,969.1	12,012.8	11,969.1	22.2	26.7	91.23	198.9	-653.8	1,032.3	985.3	46.93	21.998	
12,100.0	12,060.0	12,103.6	12,060.0	22.1	26.7	93.14	198.9	-653.8	1,034.0	987.1	46.98	22.009	
12,200.0	12,142.2	12,192.5	12,148.9	21.9	26.7	95.40	198.2	-653.8	1,039.1	992.1	46.99	22.115	
12,300.0	12,213.3	12,313.1	12,267.2	21.8	26.6	98.32	176.5	-653.6	1,047.2	1,000.4	46.83	22.360	
12,400.0	12,271.2	12,466.7	12,403.6	21.7	26.3	101.30	107.4	-652.9	1,056.2	1,009.5	46.69	22.620	
12,500.0	12,314.0	12,659.9	12,532.9	21.6	26.1	103.64	-34.4	-651.6	1,062.9	1,016.2	46.76	22.733	
12,600.0	12,340.5	12,877.6	12,598.4	21.6	26.1	104.00	-240.0	-649.6	1,063.9	1,017.0	46.87	22.697	
12,700.0	12,349.9	12,997.9	12,600.0	21.7	26.2	103.62	-360.3	-648.5	1,061.8	1,014.9	46.93	22.627	
12,780.5	12,350.3	13,078.4	12,600.0	21.8	26.3	103.60	-440.8	-647.7	1,061.7	1,014.7	47.04	22.570	
12,800.0	12,350.0	13,097.9	12,600.0	21.8	26.3	103.62	-460.3	-647.5	1,061.8	1,014.7	47.07	22.558	
12,900.0	12,350.0	13,197.9	12,600.0	21.9	26.4	103.62	-560.3	-646.6	1,061.8	1,014.5	47.26	22.466	
13,000.0	12,350.0	13,297.9	12,600.0	22.1	26.6	103.62	-660.3	-645.7	1,061.8	1,014.3	47.50	22.352	
13,100.0	12,350.0	13,397.9	12,600.0	22.3	26.7	103.62	-760.3	-644.7	1,061.8	1,014.0	47.79	22.218	
13,200.0	12,350.0	13,497.9	12,600.0	22.5	26.9	103.62	-860.3	-643.8	1,061.8	1,013.6	48.12	22.063	
13,300.0	12,350.0	13,597.9	12,600.0	22.7	27.1	103.62	-960.3	-642.8	1,061.8	1,013.3	48.50	21.891	
13,400.0	12,350.0	13,697.9	12,600.0	22.9	27.3	103.62	-1,060.3	-641.9	1,061.8	1,012.8	48.93	21.702	
13,500.0	12,350.0	13,797.9	12,600.0	23.2	27.6	103.62	-1,160.3	-640.9	1,061.8	1,012.4	49.39	21.497	
13,600.0	12,350.0	13,897.9	12,600.0	23.5	27.8	103.62	-1,260.3	-640.0	1,061.7	1,011.8	49.90	21.278	
13,700.0	12,350.0	13,997.9	12,600.0	23.8	28.1	103.62	-1,360.3	-639.1	1,061.7	1,011.3	50.45	21.046	
13,800.0	12,350.0	14,097.9	12,600.0	24.1	28.4	103.62	-1,460.3	-638.1	1,061.7	1,010.7	51.03	20.804	
13,900.0	12,350.0	14,197.9	12,600.0	24.4	28.7	103.62	-1,560.3	-637.2	1,061.7	1,010.1	51.66	20.552	
14,000.0	12,350.0	14,297.9	12,600.0	24.8	29.0	103.62	-1,660.3	-636.2	1,061.7	1,009.4	52.32	20.292	
14,100.0	12,350.0	14,397.9	12,600.0	25.2	29.4	103.62	-1,760.3	-635.3	1,061.7	1,008.7	53.02	20.025	
14,200.0	12,350.0	14,497.9	12,600.0	25.5	29.7	103.62	-1,860.3	-634.3	1,061.7	1,008.0	53.75	19.753	
14,300.0	12,350.0	14,597.9	12,600.0	26.0	30.1	103.62	-1,960.3	-633.4	1,061.7	1,007.2	54.51	19.477	
14,400.0	12,350.0	14,697.9	12,600.0	26.4	30.5	103.62	-2,060.2	-632.5	1,061.7	1,006.4	55.30	19.197	
14,500.0	12,350.0	14,797.9	12,600.0	26.8	30.9	103.62	-2,160.2	-631.5	1,061.7	1,005.6	56.13	18.915	
14,600.0	12,350.0	14,897.9	12,600.0	27.3	31.3	103.62	-2,260.2	-630.6	1,061.7	1,004.7	56.98	18.633	
14,700.0	12,350.0	14,997.9	12,600.0	27.7	31.7	103.62	-2,360.2	-629.6	1,061.7	1,003.8	57.86	18.349	
14,800.0	12,350.0	15,097.9	12,600.0	28.2	32.1	103.62	-2,460.2	-628.7	1,061.7	1,002.9	58.76	18.067	
14,900.0	12,350.0	15,197.9	12,600.0	28.7	32.6	103.62	-2,560.2	-627.7	1,061.7	1,002.0	59.69	17.785	
15,000.0	12,350.0	15,297.9	12,600.0	29.2	33.0	103.62	-2,660.2	-626.8	1,061.7	1,001.0	60.65	17.506	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #702H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS											Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Rule Assigned:		Distance		Minimum		Separation		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation Factor	
15,100.0	12,350.0	15,397.9	12,600.0	29.7	33.5	103.62	-2,760.2	-625.8	1,061.6	1,000.0	61.62	17.229
15,200.0	12,350.0	15,497.9	12,600.0	30.3	34.0	103.62	-2,860.2	-624.9	1,061.6	999.0	62.62	16.954
15,300.0	12,350.0	15,597.9	12,600.0	30.8	34.5	103.62	-2,960.2	-624.0	1,061.6	998.0	63.63	16.683
15,400.0	12,350.0	15,697.9	12,600.0	31.3	35.0	103.62	-3,060.2	-623.0	1,061.6	997.0	64.67	16.416
15,500.0	12,350.0	15,797.9	12,600.0	31.9	35.5	103.62	-3,160.2	-622.1	1,061.6	995.9	65.73	16.152
15,600.0	12,350.0	15,897.9	12,600.0	32.5	36.0	103.62	-3,260.2	-621.1	1,061.6	994.8	66.80	15.893
15,700.0	12,350.0	15,997.9	12,600.0	33.0	36.5	103.62	-3,360.2	-620.2	1,061.6	993.7	67.89	15.638
15,800.0	12,350.0	16,097.9	12,600.0	33.6	37.0	103.62	-3,460.2	-619.2	1,061.6	992.6	68.99	15.387
15,900.0	12,350.0	16,197.9	12,600.0	34.2	37.6	103.62	-3,560.2	-618.3	1,061.6	991.5	70.11	15.141
16,000.0	12,350.0	16,297.9	12,600.0	34.8	38.1	103.62	-3,660.2	-617.4	1,061.6	990.3	71.25	14.900
16,100.0	12,350.0	16,397.9	12,600.0	35.4	38.7	103.62	-3,760.2	-616.4	1,061.6	989.2	72.40	14.663
16,200.0	12,350.0	16,497.9	12,600.0	36.0	39.2	103.62	-3,860.2	-615.5	1,061.6	988.0	73.56	14.432
16,300.0	12,350.0	16,597.9	12,600.0	36.6	39.8	103.62	-3,960.2	-614.5	1,061.6	986.8	74.73	14.205
16,400.0	12,350.0	16,697.9	12,600.0	37.2	40.4	103.62	-4,060.2	-613.6	1,061.6	985.6	75.92	13.983
16,500.0	12,350.0	16,797.9	12,600.0	37.9	41.0	103.62	-4,160.2	-612.6	1,061.6	984.4	77.12	13.766
16,600.0	12,350.0	16,897.9	12,600.0	38.5	41.5	103.62	-4,260.2	-611.7	1,061.6	983.2	78.33	13.553
16,700.0	12,350.0	16,997.9	12,600.0	39.1	42.1	103.62	-4,360.1	-610.7	1,061.5	982.0	79.54	13.345
16,800.0	12,350.0	17,097.9	12,600.0	39.8	42.7	103.62	-4,460.1	-609.8	1,061.5	980.8	80.77	13.142
16,900.0	12,350.0	17,197.9	12,600.0	40.4	43.3	103.62	-4,560.1	-608.9	1,061.5	979.5	82.01	12.944
17,000.0	12,350.0	17,297.9	12,600.0	41.1	43.9	103.62	-4,660.1	-607.9	1,061.5	978.3	83.26	12.750
17,100.0	12,350.0	17,397.9	12,600.0	41.7	44.6	103.62	-4,760.1	-607.0	1,061.5	977.0	84.51	12.560
17,200.0	12,350.0	17,497.9	12,600.0	42.4	45.2	103.62	-4,860.1	-606.0	1,061.5	975.7	85.78	12.375
17,300.0	12,350.0	17,597.9	12,600.0	43.0	45.8	103.62	-4,960.1	-605.1	1,061.5	974.5	87.05	12.194
17,400.0	12,350.0	17,697.9	12,600.0	43.7	46.4	103.62	-5,060.1	-604.1	1,061.5	973.2	88.33	12.018
17,500.0	12,350.0	17,797.9	12,600.0	44.4	47.1	103.62	-5,160.1	-603.2	1,061.5	971.9	89.62	11.845
17,600.0	12,350.0	17,897.9	12,600.0	45.0	47.7	103.62	-5,260.1	-602.3	1,061.5	970.6	90.91	11.676
17,700.0	12,350.0	17,997.9	12,600.0	45.7	48.3	103.62	-5,360.1	-601.3	1,061.5	969.3	92.21	11.512
17,800.0	12,350.0	18,097.9	12,600.0	46.4	49.0	103.62	-5,460.1	-600.4	1,061.5	968.0	93.52	11.351
17,900.0	12,350.0	18,197.9	12,600.0	47.1	49.6	103.62	-5,560.1	-599.4	1,061.5	966.6	94.83	11.194
18,000.0	12,350.0	18,297.9	12,600.0	47.7	50.3	103.62	-5,660.1	-598.5	1,061.5	965.3	96.15	11.040
18,100.0	12,350.0	18,397.9	12,600.0	48.4	50.9	103.62	-5,760.1	-597.5	1,061.5	964.0	97.47	10.890
18,200.0	12,350.0	18,497.9	12,600.0	49.1	51.6	103.62	-5,860.1	-596.6	1,061.4	962.6	98.80	10.744
18,300.0	12,350.0	18,597.9	12,600.0	49.8	52.2	103.62	-5,960.1	-595.7	1,061.4	961.3	100.13	10.600
18,400.0	12,350.0	18,697.9	12,600.0	50.5	52.9	103.62	-6,060.1	-594.7	1,061.4	960.0	101.47	10.460
18,500.0	12,350.0	18,797.9	12,600.0	51.2	53.6	103.62	-6,160.1	-593.8	1,061.4	958.6	102.82	10.324
18,600.0	12,350.0	18,897.9	12,600.0	51.9	54.2	103.62	-6,260.1	-592.8	1,061.4	957.3	104.17	10.190
18,700.0	12,350.0	18,997.9	12,600.0	52.6	54.9	103.62	-6,360.1	-591.9	1,061.4	955.9	105.52	10.059
18,800.0	12,350.0	19,097.9	12,600.0	53.3	55.6	103.62	-6,460.1	-590.9	1,061.4	954.5	106.88	9.931
18,900.0	12,350.0	19,197.9	12,600.0	54.0	56.2	103.62	-6,560.0	-590.0	1,061.4	953.2	108.24	9.806
19,000.0	12,350.0	19,297.9	12,600.0	54.7	56.9	103.62	-6,660.0	-589.0	1,061.4	951.8	109.60	9.684
19,100.0	12,350.0	19,397.9	12,600.0	55.4	57.6	103.62	-6,760.0	-588.1	1,061.4	950.4	110.97	9.565
19,200.0	12,350.0	19,497.9	12,600.0	56.1	58.3	103.62	-6,860.0	-587.2	1,061.4	949.0	112.34	9.448
19,300.0	12,350.0	19,597.9	12,600.0	56.8	58.9	103.62	-6,960.0	-586.2	1,061.4	947.7	113.72	9.333
19,400.0	12,350.0	19,697.9	12,600.0	57.5	59.6	103.62	-7,060.0	-585.3	1,061.4	946.3	115.10	9.221
19,500.0	12,350.0	19,797.9	12,600.0	58.2	60.3	103.62	-7,160.0	-584.3	1,061.4	944.9	116.48	9.112
19,600.0	12,350.0	19,897.9	12,600.0	58.9	61.0	103.62	-7,260.0	-583.4	1,061.4	943.5	117.87	9.005
19,700.0	12,350.0	19,997.9	12,600.0	59.6	61.7	103.62	-7,360.0	-582.4	1,061.4	942.1	119.26	8.900
19,800.0	12,350.0	20,097.9	12,600.0	60.4	62.4	103.62	-7,460.0	-581.5	1,061.3	940.7	120.65	8.797
19,900.0	12,350.0	20,197.9	12,600.0	61.1	63.1	103.62	-7,560.0	-580.6	1,061.3	939.3	122.04	8.697
20,000.0	12,350.0	20,297.9	12,600.0	61.8	63.8	103.62	-7,660.0	-579.6	1,061.3	937.9	123.44	8.598
20,100.0	12,350.0	20,397.9	12,600.0	62.5	64.5	103.63	-7,760.0	-578.7	1,061.3	936.5	124.84	8.502

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #702H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,200.0	12,350.0	20,497.9	12,600.0	63.2	65.2	103.63	-7,860.0	-577.7	1,061.3	935.1	126.24	8.407	
20,300.0	12,350.0	20,597.9	12,600.0	63.9	65.9	103.63	-7,960.0	-576.8	1,061.3	933.7	127.65	8.315	
20,400.0	12,350.0	20,697.9	12,600.0	64.7	66.6	103.63	-8,060.0	-575.8	1,061.3	932.3	129.05	8.224	
20,500.0	12,350.0	20,797.9	12,600.0	65.4	67.3	103.63	-8,160.0	-574.9	1,061.3	930.8	130.46	8.135	
20,600.0	12,350.0	20,897.9	12,600.0	66.1	68.0	103.63	-8,260.0	-574.0	1,061.3	929.4	131.87	8.048	
20,700.0	12,350.0	20,997.9	12,600.0	66.8	68.7	103.63	-8,360.0	-573.0	1,061.3	928.0	133.29	7.962	
20,800.0	12,350.0	21,097.9	12,600.0	67.6	69.4	103.63	-8,460.0	-572.1	1,061.3	926.6	134.70	7.879	
20,900.0	12,350.0	21,197.9	12,600.0	68.3	70.1	103.63	-8,560.0	-571.1	1,061.3	925.2	136.12	7.796	
21,000.0	12,350.0	21,297.9	12,600.0	69.0	70.8	103.63	-8,660.0	-570.2	1,061.3	923.7	137.54	7.716	
21,100.0	12,350.0	21,397.9	12,600.0	69.7	71.5	103.63	-8,760.0	-569.2	1,061.3	922.3	138.96	7.637	
21,200.0	12,350.0	21,497.9	12,600.0	70.5	72.2	103.63	-8,859.9	-568.3	1,061.3	920.9	140.39	7.559	
21,300.0	12,350.0	21,597.9	12,600.0	71.2	72.9	103.63	-8,959.9	-567.3	1,061.2	919.4	141.81	7.483	
21,400.0	12,350.0	21,697.9	12,600.0	71.9	73.6	103.63	-9,059.9	-566.4	1,061.2	918.0	143.24	7.409	
21,500.0	12,350.0	21,797.9	12,600.0	72.6	74.4	103.63	-9,159.9	-565.5	1,061.2	916.6	144.67	7.336	
21,600.0	12,350.0	21,897.9	12,600.0	73.4	75.1	103.63	-9,259.9	-564.5	1,061.2	915.1	146.10	7.264	
21,700.0	12,350.0	21,997.9	12,600.0	74.1	75.8	103.63	-9,359.9	-563.6	1,061.2	913.7	147.53	7.193	
21,800.0	12,350.0	22,097.9	12,600.0	74.8	76.5	103.63	-9,459.9	-562.6	1,061.2	912.2	148.96	7.124	
21,900.0	12,350.0	22,197.9	12,600.0	75.6	77.2	103.63	-9,559.9	-561.7	1,061.2	910.8	150.40	7.056	
22,000.0	12,350.0	22,297.9	12,600.0	76.3	77.9	103.63	-9,659.9	-560.7	1,061.2	909.4	151.84	6.989	
22,100.0	12,350.0	22,397.9	12,600.0	77.0	78.7	103.63	-9,759.9	-559.8	1,061.2	907.9	153.27	6.924	
22,200.0	12,350.0	22,497.9	12,600.0	77.8	79.4	103.63	-9,859.9	-558.9	1,061.2	906.5	154.71	6.859	
22,300.0	12,350.0	22,597.9	12,600.0	78.5	80.1	103.63	-9,959.9	-557.9	1,061.2	905.0	156.15	6.796	
22,400.0	12,350.0	22,697.9	12,600.0	79.2	80.8	103.63	-10,059.9	-557.0	1,061.2	903.6	157.60	6.734	
22,500.0	12,350.0	22,797.9	12,600.0	80.0	81.5	103.63	-10,159.9	-556.0	1,061.2	902.1	159.04	6.672	
22,600.0	12,350.0	22,897.9	12,600.0	80.7	82.3	103.63	-10,259.9	-555.1	1,061.2	900.7	160.48	6.612	
22,700.0	12,350.0	22,997.9	12,600.0	81.5	83.0	103.63	-10,359.9	-554.1	1,061.2	899.2	161.93	6.553	
22,800.0	12,350.0	23,097.9	12,600.0	82.2	83.7	103.63	-10,459.9	-553.2	1,061.1	897.8	163.38	6.495	
22,900.0	12,350.0	23,197.9	12,600.0	82.9	84.4	103.63	-10,559.9	-552.3	1,061.1	896.3	164.82	6.438	
23,000.0	12,350.0	23,297.9	12,600.0	83.7	85.2	103.63	-10,659.9	-551.3	1,061.1	894.9	166.27	6.382	
23,100.0	12,350.0	23,397.9	12,600.0	84.4	85.9	103.63	-10,759.9	-550.4	1,061.1	893.4	167.72	6.327	
23,183.4	12,350.0	23,481.2	12,600.0	85.0	86.5	103.63	-10,843.2	-549.6	1,061.1	892.2	168.93	6.281	
23,200.0	12,350.0	23,481.2	12,600.0	85.2	86.5	103.63	-10,843.2	-549.6	1,061.3	892.3	168.98	6.280	
23,300.0	12,350.0	23,481.2	12,600.0	85.9	86.5	103.63	-10,843.2	-549.6	1,067.5	899.0	168.49	6.336	
23,400.0	12,350.0	23,481.2	12,600.0	86.6	86.5	103.63	-10,843.2	-549.6	1,083.0	916.2	166.77	6.494	
23,500.0	12,350.0	23,481.2	12,600.0	87.4	86.5	103.63	-10,843.2	-549.6	1,107.3	943.4	163.95	6.754	
23,600.0	12,350.0	23,481.2	12,600.0	88.1	86.5	103.63	-10,843.2	-549.6	1,140.0	979.7	160.27	7.113	
23,700.0	12,350.0	23,481.2	12,600.0	88.9	86.5	103.63	-10,843.2	-549.6	1,180.2	1,024.3	155.94	7.568	
23,800.0	12,350.0	23,481.2	12,600.0	89.6	86.5	103.63	-10,843.2	-549.6	1,227.3	1,076.0	151.22	8.116	
23,900.0	12,350.0	23,481.2	12,600.0	90.3	86.5	103.63	-10,843.2	-549.6	1,280.4	1,134.1	146.31	8.752	
24,000.0	12,350.0	23,481.2	12,600.0	91.1	86.5	103.63	-10,843.2	-549.6	1,339.0	1,197.6	141.37	9.472	
24,100.0	12,350.0	23,481.2	12,600.0	91.8	86.5	103.63	-10,843.2	-549.6	1,402.2	1,265.7	136.52	10.271	
24,200.0	12,350.0	23,481.2	12,600.0	92.6	86.5	103.63	-10,843.2	-549.6	1,469.5	1,337.7	131.85	11.145	
24,300.0	12,350.0	23,481.2	12,600.0	93.3	86.5	103.63	-10,843.2	-549.6	1,540.4	1,413.0	127.42	12.089	
24,400.0	12,350.0	23,481.2	12,600.0	94.1	86.5	103.63	-10,843.2	-549.6	1,614.3	1,491.1	123.25	13.098	
24,500.0	12,350.0	23,481.2	12,600.0	94.8	86.5	103.63	-10,843.2	-549.6	1,691.0	1,571.6	119.37	14.165	
24,600.0	12,350.0	23,481.2	12,600.0	95.5	86.5	103.63	-10,843.2	-549.6	1,770.0	1,654.2	115.78	15.287	
24,700.0	12,350.0	23,481.2	12,600.0	96.3	86.5	103.63	-10,843.2	-549.6	1,851.0	1,738.5	112.46	16.459	
24,800.0	12,350.0	23,481.2	12,600.0	97.0	86.5	103.63	-10,843.2	-549.6	1,933.8	1,824.3	109.41	17.675	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #802H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		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)	Between Centres (usft)	Between Ellipses (usft)					
0.0	0.0	0.0	0.0		3.0	3.0	90.38	-0.2	30.1	30.1	23.7	6.43	4.682
100.0	100.0	100.0	100.0		3.2	3.2	90.38	-0.2	30.1	30.1	23.2	6.89	4.367
200.0	200.0	200.0	200.0		3.5	3.5	90.38	-0.2	30.1	30.1	22.8	7.33	4.108
300.0	300.0	300.0	300.0		3.7	3.7	90.38	-0.2	30.1	30.1	22.4	7.74	3.888
400.0	400.0	400.0	400.0		3.9	3.9	90.38	-0.2	30.1	30.1	22.0	8.14	3.700
500.0	500.0	500.0	500.0		4.1	4.1	90.38	-0.2	30.1	30.1	21.6	8.51	3.536
600.0	600.0	600.0	600.0		4.2	4.2	90.38	-0.2	30.1	30.1	21.2	8.88	3.391
700.0	700.0	700.0	700.0		4.4	4.4	90.38	-0.2	30.1	30.1	20.9	9.23	3.261
800.0	800.0	800.0	800.0		4.6	4.6	90.38	-0.2	30.1	30.1	20.5	9.57	3.145
900.0	900.0	900.0	900.0		4.8	4.8	90.38	-0.2	30.1	30.1	20.2	9.90	3.040
1,000.0	1,000.0	1,000.0	1,000.0		4.9	4.9	90.38	-0.2	30.1	30.1	19.9	10.22	2.944
1,100.0	1,100.0	1,100.0	1,100.0		5.1	5.1	90.38	-0.2	30.1	30.1	19.6	10.54	2.856
1,200.0	1,200.0	1,200.0	1,200.0		5.2	5.2	90.38	-0.2	30.1	30.1	19.3	10.85	2.775 CC
1,300.0	1,300.0	1,299.2	1,299.2		5.4	5.4	30.98	0.1	31.3	30.2	19.0	11.20	2.699 ES
1,400.0	1,399.9	1,398.5	1,398.4		5.6	5.6	32.73	1.1	35.1	30.6	19.1	11.55	2.652
1,500.0	1,499.7	1,497.7	1,497.4		5.8	5.8	35.56	2.8	41.3	31.3	19.4	11.90	2.633 SF
1,600.0	1,599.3	1,596.9	1,596.2		6.1	6.0	39.28	5.1	50.0	32.5	20.2	12.27	2.646
1,700.0	1,698.6	1,696.1	1,694.7		6.3	6.3	43.68	8.1	61.2	34.1	21.5	12.63	2.700
1,800.0	1,797.6	1,795.2	1,792.8		6.5	6.6	47.81	11.8	74.8	36.7	23.8	12.91	2.845
1,900.0	1,896.6	1,894.3	1,890.5		6.8	6.8	49.43	16.1	90.9	41.6	28.3	13.30	3.126
2,000.0	1,995.7	1,993.1	1,987.4		7.0	7.2	48.92	21.0	109.3	48.5	34.8	13.73	3.533
2,100.0	2,094.7	2,091.8	2,083.8		7.3	7.4	47.18	26.6	130.1	57.6	43.4	14.18	4.060
2,200.0	2,193.7	2,191.3	2,180.7		7.6	7.7	45.58	32.4	151.8	67.3	52.5	14.73	4.568
2,300.0	2,292.8	2,290.8	2,277.7		8.0	8.1	44.38	38.2	173.4	77.0	61.7	15.31	5.032
2,400.0	2,391.8	2,390.4	2,374.6		8.3	8.4	43.45	44.0	195.0	86.8	70.9	15.91	5.456
2,500.0	2,490.8	2,489.9	2,471.6		8.6	8.8	42.72	49.8	216.6	96.6	80.1	16.52	5.845
2,600.0	2,589.8	2,589.4	2,568.6		9.0	9.2	42.11	55.6	238.2	106.4	89.2	17.16	6.199
2,700.0	2,688.9	2,688.9	2,665.5		9.3	9.6	41.61	61.4	259.9	116.2	98.4	17.81	6.524
2,800.0	2,787.9	2,788.4	2,762.5		9.7	9.9	41.19	67.2	281.5	126.0	107.5	18.47	6.821
2,900.0	2,886.9	2,887.9	2,859.5		10.1	10.3	40.83	73.0	303.1	135.8	116.7	19.15	7.094
3,000.0	2,985.9	2,987.4	2,956.4		10.4	10.8	40.51	78.7	324.7	145.7	125.8	19.83	7.344
3,100.0	3,085.0	3,087.0	3,053.4		10.8	11.2	40.24	84.5	346.4	155.5	135.0	20.53	7.574
3,200.0	3,184.0	3,186.5	3,150.3		11.2	11.6	40.00	90.3	368.0	165.3	144.1	21.24	7.786
3,300.0	3,283.0	3,286.0	3,247.3		11.6	12.0	39.78	96.1	389.6	175.2	153.2	21.95	7.981
3,400.0	3,382.0	3,385.5	3,344.3		11.9	12.4	39.59	101.9	411.2	185.0	162.3	22.67	8.162
3,500.0	3,481.1	3,485.0	3,441.2		12.3	12.9	39.42	107.7	432.8	194.9	171.5	23.39	8.329
3,600.0	3,580.1	3,584.5	3,538.2		12.7	13.3	39.27	113.5	454.5	204.7	180.6	24.13	8.484
3,700.0	3,679.1	3,684.0	3,635.2		13.1	13.7	39.13	119.3	476.1	214.5	189.7	24.86	8.629
3,800.0	3,778.2	3,783.5	3,732.1		13.5	14.2	39.00	125.1	497.7	224.4	198.8	25.61	8.763
3,900.0	3,877.2	3,883.0	3,829.0		13.9	14.6	38.85	130.9	519.3	234.6	208.2	26.36	8.898
4,000.0	3,976.4	3,982.4	3,925.9		14.3	15.1	38.58	136.7	540.9	245.4	218.3	27.13	9.045
4,100.0	4,075.7	4,081.7	4,022.7		14.7	15.5	38.23	142.5	562.5	257.0	229.0	27.92	9.203
4,200.0	4,175.1	4,181.0	4,119.4		15.1	16.0	37.79	148.2	584.1	269.2	240.5	28.72	9.372
4,300.0	4,274.6	4,280.1	4,215.9		15.5	16.4	37.29	154.0	605.6	282.1	252.6	29.54	9.552
4,400.0	4,374.2	4,379.1	4,312.4		15.8	16.9	36.74	159.8	627.1	295.8	265.4	30.37	9.741
4,500.0	4,473.9	4,478.0	4,408.8		16.2	17.3	36.15	165.5	648.6	310.2	279.0	31.20	9.942
4,600.0	4,573.6	4,576.8	4,505.0		16.6	17.8	35.52	171.3	670.1	325.3	293.3	32.04	10.153
4,700.0	4,673.4	4,675.4	4,601.2		16.9	18.2	34.87	177.0	691.5	341.2	308.3	32.88	10.375
4,800.0	4,773.2	4,774.0	4,697.2		17.3	18.7	34.20	182.8	712.9	357.8	324.1	33.73	10.608
4,900.0	4,873.1	4,872.3	4,793.0		17.6	19.1	33.52	188.5	734.3	375.2	340.6	34.57	10.852
5,000.0	4,973.0	4,970.5	4,888.7		17.9	19.6	32.84	194.2	755.6	393.3	357.9	35.41	11.108

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #802H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1											Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		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)				
5,100.0	5,073.0	5,068.6	4,984.2	32.16	18.2	20.0	199.9	776.9	412.3	376.1	36.24	11.376
5,200.0	5,173.0	5,166.5	5,079.6	31.49	18.5	20.5	205.6	798.2	432.0	395.0	37.06	11.657
5,300.0	5,272.9	5,264.2	5,174.8	30.82	18.7	20.9	211.3	819.4	452.6	414.7	37.86	11.953
5,400.0	5,372.9	5,361.7	5,269.9	30.16	18.9	21.4	217.0	840.6	473.9	435.3	38.58	12.282
5,500.0	5,472.9	5,459.2	5,364.8	89.48	18.9	21.9	222.7	861.8	495.7	456.4	39.24	12.633
5,600.0	5,572.9	5,556.6	5,459.8	88.86	19.0	22.3	228.3	883.0	517.5	477.6	39.88	12.977
5,700.0	5,672.9	5,654.1	5,554.7	88.29	19.0	22.8	234.0	904.2	539.4	498.9	40.52	13.312
5,800.0	5,772.9	5,751.5	5,649.6	87.76	19.1	23.2	239.7	925.3	561.4	520.2	41.16	13.640
5,900.0	5,872.9	5,848.9	5,744.6	87.27	19.1	23.7	245.3	946.5	583.4	541.6	41.79	13.960
6,000.0	5,972.9	5,946.4	5,839.5	86.82	19.2	24.1	251.0	967.7	605.4	563.0	42.42	14.272
6,100.0	6,072.9	6,043.8	5,934.5	86.40	19.3	24.6	256.7	988.8	627.4	584.4	43.04	14.577
6,200.0	6,172.9	6,141.2	6,029.4	86.01	19.3	25.1	262.4	1,010.0	649.5	605.9	43.67	14.874
6,300.0	6,272.9	6,238.7	6,124.3	85.64	19.4	25.5	268.0	1,031.2	671.6	627.4	44.29	15.166
6,400.0	6,372.9	6,347.1	6,230.2	85.27	19.4	26.0	274.2	1,054.0	693.1	648.2	44.98	15.411
6,500.0	6,472.9	6,458.6	6,339.4	84.95	19.5	26.5	279.9	1,075.5	712.8	667.1	45.67	15.608
6,600.0	6,572.9	6,570.9	6,449.8	84.67	19.5	27.0	285.2	1,095.1	730.6	684.3	46.34	15.768
6,700.0	6,672.9	6,684.0	6,561.4	84.43	19.6	27.5	289.9	1,112.7	746.5	699.5	46.97	15.893
6,800.0	6,772.9	6,797.7	6,674.0	84.23	19.6	28.0	294.1	1,128.3	760.5	712.9	47.58	15.984
6,900.0	6,872.9	6,912.1	6,787.5	84.07	19.7	28.5	297.7	1,141.7	772.5	724.4	48.14	16.046
7,000.0	6,972.9	7,027.0	6,901.8	83.93	19.7	29.0	300.7	1,153.1	782.6	733.9	48.67	16.078
7,100.0	7,072.9	7,142.3	7,016.7	83.82	19.8	29.4	303.1	1,162.2	790.7	741.5	49.16	16.084
7,200.0	7,172.9	7,257.9	7,132.2	83.74	19.8	29.8	305.0	1,169.1	796.8	747.2	49.60	16.065
7,300.0	7,272.9	7,373.8	7,247.9	83.69	19.9	30.2	306.2	1,173.8	800.9	750.9	49.97	16.026
7,400.0	7,372.9	7,489.8	7,363.9	83.67	19.9	30.5	306.9	1,176.2	803.0	752.8	50.27	15.974
7,500.0	7,472.9	7,598.8	7,472.9	83.66	20.0	30.6	307.0	1,176.5	803.3	753.0	50.35	15.955
7,600.0	7,572.9	7,698.8	7,572.9	83.66	20.0	30.6	307.0	1,176.5	803.3	752.9	50.43	15.930
7,700.0	7,672.9	7,798.8	7,672.9	83.66	20.1	30.7	307.0	1,176.5	803.3	752.8	50.51	15.905
7,800.0	7,772.9	7,898.8	7,772.9	83.66	20.2	30.7	307.0	1,176.5	803.3	752.8	50.59	15.881
7,900.0	7,872.9	7,998.8	7,872.9	83.66	20.2	30.7	307.0	1,176.5	803.3	752.7	50.67	15.856
8,000.0	7,972.9	8,098.8	7,972.9	83.66	20.3	30.8	307.0	1,176.5	803.3	752.6	50.75	15.831
8,100.0	8,072.9	8,198.8	8,072.9	83.66	20.3	30.8	307.0	1,176.5	803.3	752.5	50.83	15.806
8,200.0	8,172.9	8,298.8	8,172.9	83.66	20.4	30.8	307.0	1,176.5	803.3	752.4	50.91	15.781
8,300.0	8,272.9	8,398.8	8,272.9	83.66	20.4	30.8	307.0	1,176.5	803.3	752.4	50.99	15.756
8,400.0	8,372.9	8,498.8	8,372.9	83.66	20.5	30.9	307.0	1,176.5	803.3	752.3	51.07	15.731
8,500.0	8,472.9	8,598.8	8,472.9	83.66	20.5	30.9	307.0	1,176.5	803.3	752.2	51.15	15.706
8,600.0	8,572.9	8,698.8	8,572.9	83.66	20.6	30.9	307.0	1,176.5	803.3	752.1	51.23	15.681
8,700.0	8,672.9	8,798.8	8,672.9	83.66	20.7	31.0	307.0	1,176.5	803.3	752.0	51.31	15.656
8,800.0	8,772.9	8,898.8	8,772.9	83.66	20.7	31.0	307.0	1,176.5	803.3	752.0	51.40	15.631
8,900.0	8,872.9	8,998.8	8,872.9	83.66	20.8	31.0	307.0	1,176.5	803.3	751.9	51.48	15.606
9,000.0	8,972.9	9,098.8	8,972.9	83.66	20.8	31.1	307.0	1,176.5	803.3	751.8	51.56	15.580
9,100.0	9,072.9	9,198.8	9,072.9	83.66	20.9	31.1	307.0	1,176.5	803.3	751.7	51.64	15.555
9,200.0	9,172.9	9,298.8	9,172.9	83.66	20.9	31.1	307.0	1,176.5	803.3	751.6	51.73	15.530
9,300.0	9,272.9	9,398.8	9,272.9	83.66	21.0	31.2	307.0	1,176.5	803.3	751.5	51.81	15.505
9,400.0	9,372.9	9,498.8	9,372.9	83.66	21.1	31.2	307.0	1,176.5	803.3	751.4	51.90	15.479
9,500.0	9,472.9	9,598.8	9,472.9	83.66	21.1	31.2	307.0	1,176.5	803.3	751.4	51.98	15.454
9,600.0	9,572.9	9,698.8	9,572.9	83.66	21.2	31.3	307.0	1,176.5	803.3	751.3	52.07	15.429
9,700.0	9,672.9	9,798.8	9,672.9	83.66	21.2	31.3	307.0	1,176.5	803.3	751.2	52.15	15.403
9,800.0	9,772.9	9,898.8	9,772.9	83.66	21.3	31.3	307.0	1,176.5	803.3	751.1	52.24	15.378
9,900.0	9,872.9	9,998.8	9,872.9	83.66	21.4	31.4	307.0	1,176.5	803.3	751.0	52.33	15.352
10,000.0	9,972.9	10,098.8	9,972.9	83.66	21.4	31.4	307.0	1,176.5	803.3	750.9	52.41	15.327
10,100.0	10,072.9	10,198.8	10,072.9	83.66	21.5	31.4	307.0	1,176.5	803.3	750.8	52.50	15.301

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #802H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1											Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		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)				
10,200.0	10,172.9	10,298.8	10,172.9	21.5	31.5	83.66	307.0	1,176.5	803.3	750.8	52.59	15.276
10,300.0	10,272.9	10,398.8	10,272.9	21.6	31.5	83.66	307.0	1,176.5	803.3	750.7	52.68	15.250
10,400.0	10,372.9	10,498.8	10,372.9	21.6	31.6	83.66	307.0	1,176.5	803.3	750.6	52.77	15.225
10,500.0	10,472.9	10,598.8	10,472.9	21.7	31.6	83.66	307.0	1,176.5	803.3	750.5	52.85	15.199
10,600.0	10,572.9	10,698.8	10,572.9	21.8	31.6	83.66	307.0	1,176.5	803.3	750.4	52.94	15.174
10,700.0	10,672.9	10,798.8	10,672.9	21.8	31.7	83.66	307.0	1,176.5	803.3	750.3	53.03	15.148
10,800.0	10,772.9	10,898.8	10,772.9	21.9	31.7	83.66	307.0	1,176.5	803.3	750.2	53.12	15.123
10,900.0	10,872.9	10,998.8	10,872.9	21.9	31.7	83.66	307.0	1,176.5	803.3	750.1	53.21	15.097
11,000.0	10,972.9	11,098.8	10,972.9	22.0	31.8	83.66	307.0	1,176.5	803.3	750.0	53.30	15.071
11,100.0	11,072.9	11,198.8	11,072.9	22.1	31.8	83.66	307.0	1,176.5	803.3	750.0	53.39	15.046
11,200.0	11,172.9	11,298.8	11,172.9	22.1	31.8	83.66	307.0	1,176.5	803.3	749.9	53.48	15.020
11,300.0	11,272.9	11,398.8	11,272.9	22.2	31.9	83.66	307.0	1,176.5	803.3	749.8	53.58	14.995
11,400.0	11,372.9	11,498.8	11,372.9	22.2	31.9	83.66	307.0	1,176.5	803.3	749.7	53.67	14.969
11,500.0	11,472.9	11,598.8	11,472.9	22.3	32.0	83.66	307.0	1,176.5	803.3	749.6	53.76	14.943
11,600.0	11,572.9	11,698.8	11,572.9	22.4	32.0	83.66	307.0	1,176.5	803.3	749.5	53.85	14.918
11,700.0	11,672.9	11,798.8	11,672.9	22.4	32.0	83.66	307.0	1,176.5	803.3	749.4	53.94	14.892
11,800.0	11,772.9	11,898.8	11,772.9	22.5	32.1	83.66	307.0	1,176.5	803.3	749.3	54.04	14.866
11,900.0	11,872.5	11,998.4	11,872.5	22.4	32.1	-96.28	307.0	1,176.5	804.2	750.1	54.13	14.856
12,000.0	11,969.1	12,095.0	11,969.1	22.2	32.1	-97.68	307.0	1,176.5	807.4	753.1	54.31	14.865
12,100.0	12,060.0	12,185.8	12,060.0	22.1	32.2	-99.63	307.0	1,176.5	814.3	759.8	54.53	14.933
12,200.0	12,142.2	12,268.1	12,142.2	21.9	32.2	-101.59	307.0	1,176.5	827.0	772.4	54.68	15.126
12,300.0	12,213.3	12,339.2	12,213.3	21.8	32.2	-102.92	307.0	1,176.5	847.8	793.1	54.67	15.508
12,400.0	12,271.2	12,397.0	12,271.2	21.7	32.3	-102.99	307.0	1,176.5	878.3	823.9	54.43	16.135
12,500.0	12,314.0	12,439.9	12,314.0	21.6	32.3	-101.21	307.0	1,176.5	919.4	865.4	53.98	17.032
12,600.0	12,340.5	12,466.4	12,340.5	21.6	32.3	-97.09	307.0	1,176.5	970.6	917.2	53.35	18.192
12,700.0	12,349.9	12,475.8	12,349.9	21.7	32.3	-90.33	307.0	1,176.5	1,030.3	977.6	52.64	19.573
12,800.0	12,350.0	12,475.8	12,350.0	21.8	32.3	-90.00	307.0	1,176.5	1,096.1	1,044.2	51.90	21.120
12,844.4	12,350.0	13,774.4	13,100.0	21.9	32.4	-133.18	-487.5	1,184.0	1,096.1	1,045.4	50.62	21.655
12,900.0	12,350.0	13,830.0	13,100.0	21.9	32.5	-133.18	-543.1	1,184.5	1,096.1	1,045.5	50.54	21.689
13,000.0	12,350.0	13,930.0	13,100.0	22.1	32.7	-133.18	-643.0	1,185.5	1,096.1	1,045.6	50.44	21.729
13,100.0	12,350.0	14,030.0	13,100.0	22.3	33.0	-133.18	-743.0	1,186.4	1,096.1	1,045.7	50.40	21.747
13,200.0	12,350.0	14,130.0	13,100.0	22.5	33.3	-133.18	-843.0	1,187.4	1,096.1	1,045.7	50.41	21.742
13,300.0	12,350.0	14,230.0	13,100.0	22.7	33.6	-133.18	-943.0	1,188.3	1,096.1	1,045.6	50.48	21.713
13,400.0	12,350.0	14,330.0	13,100.0	22.9	33.9	-133.18	-1,043.0	1,189.2	1,096.1	1,045.5	50.60	21.662
13,500.0	12,350.0	14,430.0	13,100.0	23.2	34.2	-133.18	-1,143.0	1,190.2	1,096.1	1,045.3	50.77	21.588
13,600.0	12,350.0	14,530.0	13,100.0	23.5	34.6	-133.18	-1,243.0	1,191.1	1,096.1	1,045.1	51.00	21.492
13,700.0	12,350.0	14,630.0	13,100.0	23.8	35.0	-133.18	-1,343.0	1,192.1	1,096.1	1,044.8	51.28	21.376
13,800.0	12,350.0	14,730.0	13,100.0	24.1	35.4	-133.18	-1,443.0	1,193.0	1,096.1	1,044.5	51.60	21.240
13,900.0	12,350.0	14,830.0	13,100.0	24.4	35.8	-133.18	-1,543.0	1,193.9	1,096.1	1,044.1	51.98	21.086
14,000.0	12,350.0	14,930.0	13,100.0	24.8	36.3	-133.18	-1,643.0	1,194.9	1,096.1	1,043.7	52.41	20.914
14,100.0	12,350.0	15,030.0	13,100.0	25.2	36.8	-133.18	-1,743.0	1,195.8	1,096.1	1,043.2	52.89	20.726
14,200.0	12,350.0	15,130.0	13,100.0	25.5	37.2	-133.18	-1,843.0	1,196.8	1,096.1	1,042.7	53.41	20.524
14,300.0	12,350.0	15,230.0	13,100.0	26.0	37.8	-133.18	-1,943.0	1,197.7	1,096.1	1,042.1	53.97	20.308
14,400.0	12,350.0	15,330.0	13,100.0	26.4	38.3	-133.18	-2,043.0	1,198.7	1,096.1	1,041.5	54.58	20.081
14,500.0	12,350.0	15,430.0	13,100.0	26.8	38.8	-133.18	-2,143.0	1,199.6	1,096.1	1,040.9	55.24	19.844
14,600.0	12,350.0	15,530.0	13,100.0	27.3	39.4	-133.18	-2,243.0	1,200.5	1,096.1	1,040.2	55.93	19.598
14,700.0	12,350.0	15,630.0	13,100.0	27.7	39.9	-133.18	-2,343.0	1,201.5	1,096.1	1,039.5	56.66	19.345
14,800.0	12,350.0	15,730.0	13,100.0	28.2	40.5	-133.18	-2,443.0	1,202.4	1,096.1	1,038.7	57.43	19.086
14,900.0	12,350.0	15,830.0	13,100.0	28.7	41.1	-133.17	-2,543.0	1,203.4	1,096.1	1,037.9	58.24	18.821
15,000.0	12,350.0	15,930.0	13,100.0	29.2	41.7	-133.17	-2,643.0	1,204.3	1,096.1	1,037.1	59.08	18.554
15,100.0	12,350.0	16,030.0	13,100.0	29.7	42.4	-133.17	-2,743.0	1,205.2	1,096.1	1,036.2	59.95	18.283

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #802H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
15,200.0	12,350.0	16,130.0	13,100.0	30.3	43.0	-133.17	-2,842.9	1,206.2	1,096.1	1,035.3	60.86	18.011	
15,300.0	12,350.0	16,230.0	13,100.0	30.8	43.7	-133.17	-2,942.9	1,207.1	1,096.1	1,034.3	61.80	17.738	
15,400.0	12,350.0	16,330.0	13,100.0	31.3	44.3	-133.17	-3,042.9	1,208.1	1,096.1	1,033.4	62.76	17.465	
15,500.0	12,350.0	16,430.0	13,100.0	31.9	45.0	-133.17	-3,142.9	1,209.0	1,096.1	1,032.4	63.75	17.193	
15,600.0	12,350.0	16,530.0	13,100.0	32.5	45.7	-133.17	-3,242.9	1,210.0	1,096.2	1,031.4	64.77	16.923	
15,700.0	12,350.0	16,630.0	13,100.0	33.0	46.4	-133.17	-3,342.9	1,210.9	1,096.2	1,030.3	65.82	16.654	
15,800.0	12,350.0	16,730.0	13,100.0	33.6	47.1	-133.17	-3,442.9	1,211.8	1,096.2	1,029.3	66.89	16.388	
15,900.0	12,350.0	16,830.0	13,100.0	34.2	47.8	-133.17	-3,542.9	1,212.8	1,096.2	1,028.2	67.98	16.125	
16,000.0	12,350.0	16,930.0	13,100.0	34.8	48.5	-133.17	-3,642.9	1,213.7	1,096.2	1,027.1	69.09	15.866	
16,100.0	12,350.0	17,030.0	13,100.0	35.4	49.2	-133.17	-3,742.9	1,214.7	1,096.2	1,025.9	70.22	15.610	
16,200.0	12,350.0	17,130.0	13,100.0	36.0	50.0	-133.17	-3,842.9	1,215.6	1,096.2	1,024.8	71.38	15.357	
16,300.0	12,350.0	17,230.0	13,100.0	36.6	50.7	-133.17	-3,942.9	1,216.5	1,096.2	1,023.6	72.55	15.109	
16,400.0	12,350.0	17,330.0	13,100.0	37.2	51.4	-133.17	-4,042.9	1,217.5	1,096.2	1,022.4	73.74	14.865	
16,500.0	12,350.0	17,430.0	13,100.0	37.9	52.2	-133.17	-4,142.9	1,218.4	1,096.2	1,021.2	74.95	14.626	
16,600.0	12,350.0	17,530.0	13,100.0	38.5	53.0	-133.17	-4,242.9	1,219.4	1,096.2	1,020.0	76.17	14.391	
16,700.0	12,350.0	17,630.0	13,100.0	39.1	53.7	-133.17	-4,342.9	1,220.3	1,096.2	1,018.8	77.41	14.161	
16,800.0	12,350.0	17,730.0	13,100.0	39.8	54.5	-133.17	-4,442.9	1,221.3	1,096.2	1,017.5	78.66	13.935	
16,900.0	12,350.0	17,830.0	13,100.0	40.4	55.3	-133.17	-4,542.9	1,222.2	1,096.2	1,016.3	79.93	13.715	
17,000.0	12,350.0	17,930.0	13,100.0	41.1	56.1	-133.17	-4,642.9	1,223.1	1,096.2	1,015.0	81.21	13.498	
17,100.0	12,350.0	18,030.0	13,100.0	41.7	56.9	-133.17	-4,742.9	1,224.1	1,096.2	1,013.7	82.50	13.287	
17,200.0	12,350.0	18,130.0	13,100.0	42.4	57.7	-133.17	-4,842.9	1,225.0	1,096.2	1,012.4	83.81	13.080	
17,300.0	12,350.0	18,230.0	13,100.0	43.0	58.5	-133.17	-4,942.9	1,226.0	1,096.2	1,011.1	85.13	12.878	
17,400.0	12,350.0	18,330.0	13,100.0	43.7	59.3	-133.17	-5,042.9	1,226.9	1,096.2	1,009.8	86.45	12.680	
17,500.0	12,350.0	18,430.0	13,100.0	44.4	60.1	-133.17	-5,142.8	1,227.8	1,096.2	1,008.4	87.79	12.486	
17,600.0	12,350.0	18,530.0	13,100.0	45.0	60.9	-133.17	-5,242.8	1,228.8	1,096.2	1,007.1	89.14	12.298	
17,700.0	12,350.0	18,630.0	13,100.0	45.7	61.7	-133.17	-5,342.8	1,229.7	1,096.2	1,005.7	90.50	12.113	
17,800.0	12,350.0	18,730.0	13,100.0	46.4	62.6	-133.17	-5,442.8	1,230.7	1,096.2	1,004.4	91.87	11.933	
17,900.0	12,350.0	18,830.0	13,100.0	47.1	63.4	-133.17	-5,542.8	1,231.6	1,096.2	1,003.0	93.24	11.757	
18,000.0	12,350.0	18,930.0	13,100.0	47.7	64.2	-133.17	-5,642.8	1,232.6	1,096.2	1,001.6	94.63	11.585	
18,100.0	12,350.0	19,030.0	13,100.0	48.4	65.1	-133.17	-5,742.8	1,233.5	1,096.2	1,000.2	96.02	11.417	
18,200.0	12,350.0	19,130.0	13,100.0	49.1	65.9	-133.17	-5,842.8	1,234.4	1,096.2	998.8	97.42	11.253	
18,300.0	12,350.0	19,230.0	13,100.0	49.8	66.7	-133.17	-5,942.8	1,235.4	1,096.2	997.4	98.83	11.093	
18,400.0	12,350.0	19,330.0	13,100.0	50.5	67.6	-133.17	-6,042.8	1,236.3	1,096.3	996.0	100.24	10.936	
18,500.0	12,350.0	19,430.0	13,100.0	51.2	68.4	-133.17	-6,142.8	1,237.3	1,096.3	994.6	101.66	10.783	
18,600.0	12,350.0	19,530.0	13,100.0	51.9	69.3	-133.17	-6,242.8	1,238.2	1,096.3	993.2	103.09	10.634	
18,700.0	12,350.0	19,630.0	13,100.0	52.6	70.1	-133.17	-6,342.8	1,239.1	1,096.3	991.7	104.52	10.488	
18,800.0	12,350.0	19,730.0	13,100.0	53.3	71.0	-133.17	-6,442.8	1,240.1	1,096.3	990.3	105.96	10.346	
18,900.0	12,350.0	19,830.0	13,100.0	54.0	71.9	-133.17	-6,542.8	1,241.0	1,096.3	988.9	107.41	10.206	
19,000.0	12,350.0	19,930.0	13,100.0	54.7	72.7	-133.17	-6,642.8	1,242.0	1,096.3	987.4	108.86	10.070	
19,100.0	12,350.0	20,030.0	13,100.0	55.4	73.6	-133.17	-6,742.8	1,242.9	1,096.3	986.0	110.32	9.938	
19,200.0	12,350.0	20,130.0	13,100.0	56.1	74.5	-133.17	-6,842.8	1,243.9	1,096.3	984.5	111.78	9.808	
19,300.0	12,350.0	20,230.0	13,100.0	56.8	75.3	-133.17	-6,942.8	1,244.8	1,096.3	983.0	113.24	9.681	
19,400.0	12,350.0	20,330.0	13,100.0	57.5	76.2	-133.17	-7,042.8	1,245.7	1,096.3	981.6	114.71	9.557	
19,500.0	12,350.0	20,430.0	13,100.0	58.2	77.1	-133.17	-7,142.8	1,246.7	1,096.3	980.1	116.19	9.435	
19,600.0	12,350.0	20,530.0	13,100.0	58.9	78.0	-133.17	-7,242.8	1,247.6	1,096.3	978.6	117.67	9.317	
19,700.0	12,350.0	20,630.0	13,100.0	59.6	78.8	-133.17	-7,342.7	1,248.6	1,096.3	977.1	119.15	9.201	
19,800.0	12,350.0	20,730.0	13,100.0	60.4	79.7	-133.17	-7,442.7	1,249.5	1,096.3	975.7	120.64	9.087	
19,900.0	12,350.0	20,830.0	13,100.0	61.1	80.6	-133.17	-7,542.7	1,250.4	1,096.3	974.2	122.13	8.976	
20,000.0	12,350.0	20,930.0	13,100.0	61.8	81.5	-133.17	-7,642.7	1,251.4	1,096.3	972.7	123.63	8.868	
20,100.0	12,350.0	21,030.0	13,100.0	62.5	82.4	-133.17	-7,742.7	1,252.3	1,096.3	971.2	125.13	8.762	
20,200.0	12,350.0	21,130.0	13,100.0	63.2	83.3	-133.17	-7,842.7	1,253.3	1,096.3	969.7	126.63	8.658	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #802H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		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)			
20,300.0	12,350.0	21,230.0	13,100.0	63.9	84.1	-133.17	-7,942.7	1,254.2	1,096.3	968.2	128.13	8.556	
20,400.0	12,350.0	21,330.0	13,100.0	64.7	85.0	-133.17	-8,042.7	1,255.2	1,096.3	966.7	129.64	8.457	
20,500.0	12,350.0	21,430.0	13,100.0	65.4	85.9	-133.17	-8,142.7	1,256.1	1,096.3	965.2	131.15	8.359	
20,600.0	12,350.0	21,530.0	13,100.0	66.1	86.8	-133.16	-8,242.7	1,257.0	1,096.3	963.7	132.67	8.264	
20,700.0	12,350.0	21,630.0	13,100.0	66.8	87.7	-133.16	-8,342.7	1,258.0	1,096.3	962.1	134.19	8.170	
20,800.0	12,350.0	21,730.0	13,100.0	67.6	88.6	-133.16	-8,442.7	1,258.9	1,096.3	960.6	135.71	8.079	
20,900.0	12,350.0	21,830.0	13,100.0	68.3	89.5	-133.16	-8,542.7	1,259.9	1,096.3	959.1	137.23	7.989	
21,000.0	12,350.0	21,930.0	13,100.0	69.0	90.4	-133.16	-8,642.7	1,260.8	1,096.3	957.6	138.76	7.901	
21,100.0	12,350.0	22,030.0	13,100.0	69.7	91.3	-133.16	-8,742.7	1,261.7	1,096.3	956.1	140.28	7.815	
21,200.0	12,350.0	22,130.0	13,100.0	70.5	92.2	-133.16	-8,842.7	1,262.7	1,096.3	954.5	141.82	7.731	
21,300.0	12,350.0	22,230.0	13,100.0	71.2	93.1	-133.16	-8,942.7	1,263.6	1,096.4	953.0	143.35	7.648	
21,400.0	12,350.0	22,330.0	13,100.0	71.9	94.0	-133.16	-9,042.7	1,264.6	1,096.4	951.5	144.88	7.567	
21,500.0	12,350.0	22,430.0	13,100.0	72.6	94.9	-133.16	-9,142.7	1,265.5	1,096.4	949.9	146.42	7.488	
21,600.0	12,350.0	22,530.0	13,100.0	73.4	95.8	-133.16	-9,242.7	1,266.5	1,096.4	948.4	147.96	7.410	
21,700.0	12,350.0	22,630.0	13,100.0	74.1	96.7	-133.16	-9,342.7	1,267.4	1,096.4	946.9	149.50	7.333	
21,800.0	12,350.0	22,730.0	13,100.0	74.8	97.7	-133.16	-9,442.7	1,268.3	1,096.4	945.3	151.05	7.258	
21,900.0	12,350.0	22,830.0	13,100.0	75.6	98.6	-133.16	-9,542.7	1,269.3	1,096.4	943.8	152.59	7.185	
22,000.0	12,350.0	22,930.0	13,100.0	76.3	99.5	-133.16	-9,642.6	1,270.2	1,096.4	942.2	154.14	7.113	
22,100.0	12,350.0	23,030.0	13,100.0	77.0	100.4	-133.16	-9,742.6	1,271.2	1,096.4	940.7	155.69	7.042	
22,200.0	12,350.0	23,130.0	13,100.0	77.8	101.3	-133.16	-9,842.6	1,272.1	1,096.4	939.1	157.24	6.973	
22,300.0	12,350.0	23,230.0	13,100.0	78.5	102.2	-133.16	-9,942.6	1,273.0	1,096.4	937.6	158.80	6.904	
22,400.0	12,350.0	23,330.0	13,100.0	79.2	103.1	-133.16	-10,042.6	1,274.0	1,096.4	936.0	160.35	6.837	
22,500.0	12,350.0	23,430.0	13,100.0	80.0	104.0	-133.16	-10,142.6	1,274.9	1,096.4	934.5	161.91	6.772	
22,600.0	12,350.0	23,530.0	13,100.0	80.7	105.0	-133.16	-10,242.6	1,275.9	1,096.4	932.9	163.46	6.707	
22,700.0	12,350.0	23,630.0	13,100.0	81.5	105.9	-133.16	-10,342.6	1,276.8	1,096.4	931.4	165.02	6.644	
22,800.0	12,350.0	23,730.0	13,100.0	82.2	106.8	-133.16	-10,442.6	1,277.8	1,096.4	929.8	166.59	6.582	
22,900.0	12,350.0	23,830.0	13,100.0	82.9	107.7	-133.16	-10,542.6	1,278.7	1,096.4	928.3	168.15	6.521	
23,000.0	12,350.0	23,930.0	13,100.0	83.7	108.6	-133.16	-10,642.6	1,279.6	1,096.4	926.7	169.71	6.460	
23,100.0	12,350.0	24,030.0	13,100.0	84.4	109.6	-133.16	-10,742.6	1,280.6	1,096.4	925.1	171.28	6.401	
23,200.0	12,350.0	24,130.0	13,100.0	85.2	110.5	-133.16	-10,842.6	1,281.5	1,096.4	923.6	172.84	6.343	
23,300.0	12,350.0	24,230.0	13,100.0	85.9	111.4	-133.16	-10,942.6	1,282.5	1,096.4	922.0	174.41	6.286	
23,400.0	12,350.0	24,330.0	13,100.0	86.6	112.3	-133.16	-11,042.6	1,283.4	1,096.4	920.4	175.98	6.230	
23,500.0	12,350.0	24,430.0	13,100.0	87.4	113.3	-133.16	-11,142.6	1,284.3	1,096.4	918.9	177.55	6.175	
23,600.0	12,350.0	24,530.0	13,100.0	88.1	114.2	-133.16	-11,242.6	1,285.3	1,096.4	917.3	179.12	6.121	
23,700.0	12,350.0	24,630.0	13,100.0	88.9	115.1	-133.16	-11,342.6	1,286.2	1,096.4	915.7	180.70	6.068	
23,800.0	12,350.0	24,730.0	13,100.0	89.6	116.0	-133.16	-11,442.6	1,287.2	1,096.4	914.2	182.27	6.015	
23,900.0	12,350.0	24,830.0	13,100.0	90.3	117.0	-133.16	-11,542.6	1,288.1	1,096.4	912.6	183.85	5.964	
24,000.0	12,350.0	24,930.0	13,100.0	91.1	117.9	-133.16	-11,642.6	1,289.1	1,096.4	911.0	185.42	5.913	
24,100.0	12,350.0	25,030.0	13,100.0	91.8	118.8	-133.16	-11,742.6	1,290.0	1,096.5	909.5	187.00	5.863	
24,200.0	12,350.0	25,130.0	13,100.0	92.6	119.7	-133.16	-11,842.6	1,290.9	1,096.5	907.9	188.58	5.814	
24,300.0	12,350.0	25,230.0	13,100.0	93.3	120.7	-133.16	-11,942.5	1,291.9	1,096.5	906.3	190.16	5.766	
24,400.0	12,350.0	25,330.0	13,100.0	94.1	121.6	-133.16	-12,042.5	1,292.8	1,096.5	904.7	191.74	5.719	
24,500.0	12,350.0	25,430.0	13,100.0	94.8	122.5	-133.16	-12,142.5	1,293.8	1,096.5	903.1	193.32	5.672	
24,600.0	12,350.0	25,530.0	13,100.0	95.5	123.5	-133.16	-12,242.5	1,294.7	1,096.5	901.6	194.90	5.626	
24,700.0	12,350.0	25,630.0	13,100.0	96.3	124.4	-133.16	-12,342.5	1,295.6	1,096.5	900.0	196.48	5.580	
24,800.0	12,350.0	25,730.0	13,100.0	97.0	125.3	-133.16	-12,442.5	1,296.6	1,096.5	898.4	198.07	5.536	
24,900.0	12,350.0	25,830.0	13,100.0	97.8	126.2	-133.16	-12,542.5	1,297.5	1,096.5	896.8	199.65	5.492	
25,000.0	12,350.0	25,930.0	13,100.0	98.5	127.2	-133.16	-12,642.5	1,298.5	1,096.5	895.2	201.24	5.449	
25,100.0	12,350.0	26,030.0	13,100.0	99.3	128.1	-133.16	-12,742.5	1,299.4	1,096.5	893.7	202.83	5.406	
25,200.0	12,350.0	26,130.0	13,100.0	100.0	129.0	-133.16	-12,842.5	1,300.4	1,096.5	892.1	204.41	5.364	
25,300.0	12,350.0	26,230.0	13,100.0	100.8	130.0	-133.16	-12,942.5	1,301.3	1,096.5	890.5	206.00	5.323	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - *HENNIN FED COM #802H - OWB - PWP0												Offset Site Error: 0.0 usft	
Survey Program: 0-r.5 MWD+IFR1				Rule Assigned:								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)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
25,400.0	12,350.0	26,330.0	13,100.0	101.5	130.9	-133.16	-13,042.5	1,302.2	1,096.5	888.9	207.59	5.282	
25,500.0	12,350.0	26,430.0	13,100.0	102.3	131.8	-133.16	-13,142.5	1,303.2	1,096.5	887.3	209.18	5.242	
25,600.0	12,350.0	26,530.0	13,100.0	103.0	132.8	-133.16	-13,242.5	1,304.1	1,096.5	885.7	210.77	5.202	
25,700.0	12,350.0	26,630.0	13,100.0	103.8	133.7	-133.16	-13,342.5	1,305.1	1,096.5	884.1	212.36	5.163	
25,800.0	12,350.0	26,730.0	13,100.0	104.5	134.6	-133.16	-13,442.5	1,306.0	1,096.5	882.6	213.95	5.125	
25,900.0	12,350.0	26,830.0	13,100.0	105.2	135.6	-133.16	-13,542.5	1,306.9	1,096.5	881.0	215.54	5.087	
26,000.0	12,350.0	26,930.0	13,100.0	106.0	136.5	-133.16	-13,642.5	1,307.9	1,096.5	879.4	217.14	5.050	
26,100.0	12,350.0	27,030.0	13,100.0	106.7	137.5	-133.16	-13,742.5	1,308.8	1,096.5	877.8	218.73	5.013	
26,200.0	12,350.0	27,130.0	13,100.0	107.5	138.4	-133.16	-13,842.5	1,309.8	1,096.5	876.2	220.33	4.977	
26,300.0	12,350.0	27,230.0	13,100.0	108.2	139.3	-133.16	-13,942.5	1,310.7	1,096.5	874.6	221.92	4.941	
26,400.0	12,350.0	27,330.0	13,100.0	109.0	140.3	-133.15	-14,042.5	1,311.7	1,096.5	873.0	223.52	4.906	
26,500.0	12,350.0	27,430.0	13,100.0	109.7	141.2	-133.15	-14,142.4	1,312.6	1,096.5	871.4	225.11	4.871	
26,600.0	12,350.0	27,530.0	13,100.0	110.5	142.1	-133.15	-14,242.4	1,313.5	1,096.5	869.8	226.71	4.837	
26,700.0	12,350.0	27,630.0	13,100.0	111.2	143.1	-133.15	-14,342.4	1,314.5	1,096.5	868.2	228.31	4.803	
26,800.0	12,350.0	27,730.0	13,100.0	112.0	144.0	-133.15	-14,442.4	1,315.4	1,096.5	866.6	229.91	4.770	
26,900.0	12,350.0	27,830.0	13,100.0	112.7	145.0	-133.15	-14,542.4	1,316.4	1,096.6	865.0	231.50	4.737	
27,000.0	12,350.0	27,930.0	13,100.0	113.5	145.9	-133.15	-14,642.4	1,317.3	1,096.6	863.5	233.10	4.704	
27,100.0	12,350.0	28,030.0	13,100.0	114.2	146.8	-133.15	-14,742.4	1,318.2	1,096.6	861.9	234.70	4.672	
27,200.0	12,350.0	28,130.0	13,100.0	115.0	147.8	-133.15	-14,842.4	1,319.2	1,096.6	860.3	236.30	4.640	
27,300.0	12,350.0	28,230.0	13,100.0	115.7	148.7	-133.15	-14,942.4	1,320.1	1,096.6	858.7	237.90	4.609	
27,400.0	12,350.0	28,330.0	13,100.0	116.5	149.7	-133.15	-15,042.4	1,321.1	1,096.6	857.1	239.51	4.578	
27,500.0	12,350.0	28,430.0	13,100.0	117.2	150.6	-133.15	-15,142.4	1,322.0	1,096.6	855.5	241.11	4.548	
27,600.0	12,350.0	28,530.0	13,100.0	118.0	151.5	-133.15	-15,242.4	1,323.0	1,096.6	853.9	242.71	4.518	
27,700.0	12,350.0	28,630.0	13,100.0	118.7	152.5	-133.15	-15,342.4	1,323.9	1,096.6	852.3	244.31	4.488	
27,800.0	12,350.0	28,730.0	13,100.0	119.5	153.4	-133.15	-15,442.4	1,324.8	1,096.6	850.7	245.92	4.459	
27,900.0	12,350.0	28,830.0	13,100.0	120.2	154.4	-133.15	-15,542.4	1,325.8	1,096.6	849.1	247.52	4.430	
28,000.0	12,350.0	28,930.0	13,100.0	121.0	155.3	-133.15	-15,642.4	1,326.7	1,096.6	847.5	249.12	4.402	
28,100.0	12,350.0	29,030.0	13,100.0	121.8	156.3	-133.15	-15,742.4	1,327.7	1,096.6	845.9	250.73	4.374	
28,200.0	12,350.0	29,130.0	13,100.0	122.5	157.2	-133.15	-15,842.4	1,328.6	1,096.6	844.3	252.33	4.346	
28,300.0	12,350.0	29,230.0	13,100.0	123.3	158.1	-133.15	-15,942.4	1,329.5	1,096.6	842.7	253.94	4.318	
28,400.0	12,350.0	29,330.0	13,100.0	124.0	159.1	-133.15	-16,042.4	1,330.5	1,096.6	841.1	255.54	4.291	
28,406.5	12,350.0	29,336.5	13,100.0	124.1	159.1	-133.15	-16,048.9	1,330.6	1,096.6	841.0	255.65	4.290	
28,471.7	12,350.0	29,398.9	13,100.0	124.5	159.7	-133.15	-16,111.3	1,331.1	1,096.6	840.0	256.65	4.273	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - HENNIN FED #12H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 96-Standard Keeper 104, 11735-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Rule Assigned:		Distance		Minimum		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
21,600.0	12,350.0	11,944.0	11,957.0	73.4	10.4	66.33	-10,925.3	-413.9	1,932.9	1,873.0	59.89	32.273		
21,700.0	12,350.0	11,944.0	11,957.0	74.1	10.4	66.33	-10,925.3	-413.9	1,847.3	1,785.3	62.01	29.790		
21,800.0	12,350.0	11,955.8	11,968.5	74.8	10.4	66.95	-10,928.0	-414.1	1,763.2	1,698.8	64.31	27.414		
21,900.0	12,350.0	11,961.7	11,974.2	75.6	10.4	67.27	-10,929.4	-414.3	1,680.7	1,613.8	66.85	25.142		
22,000.0	12,350.0	11,975.0	11,987.1	76.3	10.4	67.97	-10,932.9	-414.6	1,600.2	1,530.6	69.60	22.992		
22,100.0	12,350.0	11,975.0	11,987.1	77.0	10.4	67.97	-10,932.9	-414.6	1,521.7	1,449.1	72.65	20.947		
22,200.0	12,350.0	11,975.0	11,987.1	77.8	10.4	67.97	-10,932.9	-414.6	1,446.0	1,370.0	75.98	19.031		
22,300.0	12,350.0	11,989.2	12,000.7	78.5	10.4	68.74	-10,937.0	-415.1	1,373.0	1,293.5	79.52	17.267		
22,400.0	12,350.0	12,007.0	12,017.4	79.2	10.4	69.69	-10,942.8	-415.7	1,303.7	1,220.4	83.29	15.651		
22,500.0	12,350.0	12,007.0	12,017.4	80.0	10.4	69.69	-10,942.8	-415.7	1,238.0	1,150.6	87.44	14.158		
22,600.0	12,350.0	12,019.0	12,028.6	80.7	10.5	70.32	-10,947.2	-416.2	1,177.0	1,085.3	91.72	12.833		
22,700.0	12,350.0	12,038.0	12,046.0	81.5	10.5	71.33	-10,954.9	-416.8	1,121.3	1,025.2	96.06	11.672		
22,800.0	12,350.0	12,049.9	12,056.7	82.2	10.5	71.95	-10,960.2	-417.2	1,071.3	970.8	100.50	10.659		
22,900.0	12,350.0	12,069.0	12,073.4	82.9	10.5	72.93	-10,969.3	-417.8	1,027.8	923.0	104.77	9.810		
23,000.0	12,350.0	12,100.0	12,099.8	83.7	10.6	74.49	-10,985.5	-418.7	991.2	882.5	108.70	9.119		
23,100.0	12,350.0	12,146.7	12,138.0	84.4	10.6	76.79	-11,012.3	-419.5	961.4	849.2	112.20	8.569		
23,200.0	12,350.0	12,195.0	12,175.0	85.2	10.7	79.03	-11,043.3	-419.6	938.3	823.0	115.27	8.140		
23,300.0	12,350.0	12,252.1	12,215.6	85.9	10.7	81.54	-11,083.4	-419.5	921.8	803.9	117.90	7.819		
23,400.0	12,350.0	12,305.0	12,250.7	86.6	10.8	83.73	-11,123.0	-419.4	911.4	791.3	120.08	7.590		
23,500.0	12,350.0	12,363.9	12,284.4	87.4	10.8	85.85	-11,171.2	-420.3	907.6	785.7	121.82	7.450		
23,600.0	12,350.0	12,485.7	12,329.9	88.1	11.0	88.73	-11,283.9	-419.3	905.6	781.8	123.79	7.316		
23,700.0	12,350.0	12,581.2	12,347.8	88.9	11.1	89.86	-11,377.4	-415.9	902.8	777.5	125.23	7.209		
23,800.0	12,350.0	12,716.2	12,351.7	89.6	11.3	90.11	-11,512.3	-411.8	901.4	775.0	126.43	7.130		
23,900.0	12,350.0	12,843.0	12,356.8	90.3	11.7	90.44	-11,638.5	-400.6	893.4	765.8	127.55	7.004		
24,000.0	12,350.0	12,943.3	12,361.4	91.1	12.0	90.74	-11,738.2	-390.7	884.4	755.6	128.75	6.869		
24,100.0	12,350.0	13,052.3	12,366.3	91.8	12.5	91.07	-11,846.5	-379.4	875.1	745.2	129.92	6.736		
24,200.0	12,350.0	13,168.4	12,372.7	92.6	13.0	91.52	-11,961.6	-365.3	864.0	732.9	131.06	6.592		
24,300.0	12,350.0	13,261.1	12,377.4	93.3	13.5	91.86	-12,053.3	-353.3	852.1	719.8	132.37	6.438		
24,400.0	12,350.0	13,341.8	12,380.2	94.1	13.9	92.06	-12,133.5	-344.2	841.9	708.2	133.71	6.297		
24,500.0	12,350.0	13,421.3	12,381.0	94.8	14.4	92.13	-12,212.7	-337.3	834.2	699.2	134.95	6.181		
24,600.0	12,350.0	13,504.5	12,382.4	95.5	14.8	92.24	-12,295.7	-331.9	828.7	692.5	136.15	6.086		
24,700.0	12,350.0	13,587.1	12,383.4	96.3	15.3	92.32	-12,378.1	-328.0	825.0	687.7	137.30	6.009		
24,767.3	12,350.0	13,634.0	12,383.7	96.8	15.6	92.34	-12,425.1	-327.0	824.1	686.2	137.98	5.973 CC		
24,800.0	12,350.0	13,662.0	12,383.7	97.0	15.8	92.34	-12,453.1	-326.9	824.4	686.0	138.32	5.960		
24,900.0	12,350.0	13,759.9	12,383.6	97.8	16.4	92.33	-12,551.0	-327.1	825.5	686.0	139.47	5.919		
25,000.0	12,350.0	13,860.3	12,382.9	98.5	17.0	92.28	-12,651.3	-327.0	826.3	685.7	140.62	5.876		
25,100.0	12,350.0	13,959.5	12,381.7	99.3	17.6	92.20	-12,750.6	-326.7	826.9	685.2	141.76	5.833		
25,200.0	12,350.0	14,038.5	12,380.3	100.0	18.1	92.10	-12,829.5	-327.7	829.1	686.4	142.69	5.810		
25,300.0	12,350.0	14,151.8	12,380.2	100.8	18.9	92.08	-12,942.8	-329.4	831.5	687.4	144.02	5.773		
25,400.0	12,350.0	14,251.0	12,381.3	101.5	19.5	92.15	-13,042.0	-330.5	833.5	688.3	145.23	5.739		
25,500.0	12,350.0	14,372.1	12,383.4	102.3	20.3	92.30	-13,163.0	-330.3	834.4	687.7	146.66	5.689		
25,600.0	12,350.0	14,472.3	12,385.4	103.0	21.0	92.43	-13,263.2	-328.0	833.1	685.2	147.92	5.632		
25,700.0	12,350.0	14,568.5	12,386.5	103.8	21.6	92.51	-13,359.5	-326.9	833.0	683.9	149.13	5.586		
25,767.3	12,350.0	14,634.2	12,389.7	104.3	22.1	92.73	-13,425.1	-326.0	832.8	682.8	150.02	5.552		
25,800.0	12,350.0	14,663.9	12,391.5	104.5	22.3	92.86	-13,454.7	-325.7	832.9	682.5	150.43	5.537		
25,900.0	12,350.0	14,758.2	12,398.1	105.2	22.9	93.31	-13,548.8	-325.2	833.7	682.0	151.75	5.494		
26,000.0	12,350.0	14,854.8	12,405.8	106.0	23.6	93.83	-13,645.1	-325.1	835.0	681.9	153.12	5.453		
26,100.0	12,350.0	14,951.6	12,413.9	106.7	24.3	94.38	-13,741.5	-325.3	836.8	682.2	154.51	5.416		
26,200.0	12,350.0	15,052.4	12,423.1	107.5	25.0	95.00	-13,841.8	-325.6	838.7	682.8	155.97	5.378		
26,300.0	12,350.0	15,159.4	12,432.4	108.2	25.7	95.63	-13,948.5	-325.4	840.3	682.8	157.51	5.335		
26,400.0	12,350.0	15,268.2	12,441.1	109.0	26.5	96.22	-14,056.9	-324.1	840.9	681.8	159.06	5.287		

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - HENNIN FED #12H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 96-Standard Keeper 104, 11735-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Rule Assigned:													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
26,500.0	12,350.0	15,370.6	12,449.7	109.7	27.2	96.81	-14,159.0	-322.1	840.8	680.2	160.54	5.237	
26,522.9	12,350.0	15,392.5	12,451.4	109.9	27.4	96.93	-14,180.7	-321.7	840.8	679.9	160.86	5.227	
26,600.0	12,350.0	15,467.5	12,456.7	110.5	27.9	97.29	-14,255.5	-320.5	840.9	679.0	161.94	5.193	
26,700.0	12,350.0	15,570.8	12,463.3	111.2	28.6	97.74	-14,358.7	-318.8	841.0	677.6	163.40	5.147	
26,800.0	12,350.0	15,675.3	12,469.8	112.0	29.4	98.19	-14,462.9	-316.5	840.7	675.8	164.87	5.099	
26,891.3	12,350.0	15,761.6	12,475.5	112.7	30.0	98.59	-14,549.0	-314.3	840.1	674.0	166.13	5.057	
26,900.0	12,350.0	15,769.0	12,476.0	112.7	30.1	98.63	-14,556.3	-314.2	840.1	673.9	166.24	5.054	
27,000.0	12,350.0	15,850.9	12,481.4	113.5	30.7	98.99	-14,638.1	-313.5	841.3	673.9	167.42	5.025	
27,100.0	12,350.0	15,934.5	12,484.8	114.2	31.3	99.19	-14,721.6	-315.3	844.9	676.4	168.50	5.014	
27,200.0	12,350.0	16,047.2	12,487.4	115.0	32.1	99.32	-14,834.3	-318.1	848.7	678.7	170.04	4.991	
27,300.0	12,350.0	16,154.7	12,491.3	115.7	32.9	99.57	-14,941.6	-318.4	850.5	678.9	171.52	4.958	
27,400.0	12,350.0	16,235.2	12,493.9	116.5	33.5	99.72	-15,022.1	-319.4	853.3	680.7	172.55	4.945	
27,500.0	12,350.0	16,353.2	12,497.3	117.2	34.4	99.90	-15,140.0	-322.1	857.0	682.8	174.23	4.919	
27,600.0	12,350.0	16,514.4	12,504.0	118.0	35.7	100.40	-15,300.8	-315.8	854.3	678.1	176.23	4.848	
27,700.0	12,350.0	16,629.9	12,514.7	118.7	36.5	101.23	-15,415.3	-304.7	847.4	669.5	177.87	4.764	
27,800.0	12,350.0	16,709.2	12,519.3	119.5	37.1	101.62	-15,494.1	-298.3	841.6	662.3	179.31	4.694	
27,900.0	12,350.0	16,783.3	12,521.8	120.2	37.7	101.82	-15,568.2	-295.1	838.9	658.3	180.53	4.647	
27,949.2	12,350.0	16,822.0	12,522.4	120.6	38.0	101.86	-15,606.8	-294.3	838.6	657.5	181.09	4.631	
28,000.0	12,350.0	16,863.1	12,522.5	121.0	38.3	101.87	-15,648.0	-294.2	838.9	657.3	181.63	4.619	
28,100.0	12,350.0	16,970.5	12,522.7	121.8	39.1	101.87	-15,755.3	-293.7	839.4	656.3	183.04	4.586	
28,200.0	12,350.0	17,059.3	12,523.0	122.5	39.7	101.88	-15,844.2	-293.7	840.3	656.1	184.20	4.562 ES	
28,300.0	12,350.0	17,150.2	12,521.9	123.3	40.4	101.78	-15,935.0	-295.1	842.5	657.2	185.32	4.546 SF	
28,400.0	12,350.0	17,199.0	12,521.0	124.0	40.8	101.69	-15,983.8	-296.2	846.8	661.3	185.43	4.566	
28,471.7	12,350.0	17,199.0	12,521.0	124.5	40.8	101.69	-15,983.8	-296.2	856.0	672.3	183.74	4.659	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - HENNIN FED #24H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 11883-r.5 MWD+IFR1+MS													Offset Well Error:	3.0 usft
Reference	Vertical	Offset	Vertical	Semi Major Axis	Offset	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)				
21,700.0	12,350.0	12,175.6	12,190.3	74.1	11.9	82.17	-10,955.8	-677.7	1,978.7	1,908.1	70.62	28.020		
21,800.0	12,350.0	12,179.7	12,194.4	74.8	11.9	82.36	-10,956.1	-677.8	1,899.1	1,825.9	73.16	25.959		
21,900.0	12,350.0	12,184.0	12,198.7	75.6	11.9	82.57	-10,956.5	-677.9	1,821.4	1,745.5	75.88	24.003		
22,000.0	12,350.0	12,188.7	12,203.4	76.3	11.9	82.80	-10,956.9	-678.0	1,745.9	1,667.1	78.81	22.155		
22,100.0	12,350.0	12,197.0	12,211.6	77.0	11.9	83.20	-10,957.7	-678.2	1,673.0	1,591.1	81.97	20.410		
22,200.0	12,350.0	12,197.0	12,211.6	77.8	11.9	83.20	-10,957.7	-678.2	1,603.0	1,517.8	85.22	18.810		
22,300.0	12,350.0	12,197.0	12,211.6	78.5	11.9	83.20	-10,957.7	-678.2	1,536.3	1,447.7	88.65	17.330		
22,400.0	12,350.0	12,206.5	12,221.1	79.2	11.9	83.66	-10,958.7	-678.4	1,473.4	1,381.0	92.36	15.953		
22,500.0	12,350.0	12,211.8	12,226.3	80.0	11.9	83.92	-10,959.4	-678.5	1,414.6	1,318.5	96.12	14.717		
22,600.0	12,350.0	12,218.1	12,232.6	80.7	11.9	84.23	-10,960.2	-678.6	1,360.7	1,260.7	99.96	13.612		
22,700.0	12,350.0	12,229.0	12,243.3	81.5	11.9	84.75	-10,961.9	-678.7	1,312.1	1,208.2	103.83	12.636		
22,800.0	12,350.0	12,229.0	12,243.3	82.2	11.9	84.75	-10,961.9	-678.7	1,269.4	1,161.9	107.45	11.813		
22,900.0	12,350.0	12,245.3	12,259.3	82.9	12.0	85.54	-10,965.0	-678.8	1,233.2	1,122.1	111.04	11.105		
23,000.0	12,350.0	12,261.0	12,274.6	83.7	12.0	86.29	-10,968.7	-678.7	1,204.0	1,089.7	114.26	10.537		
23,100.0	12,350.0	12,278.0	12,290.9	84.4	12.0	87.09	-10,973.5	-678.6	1,182.2	1,065.2	117.01	10.103		
23,200.0	12,350.0	12,306.8	12,317.8	85.2	12.0	88.41	-10,983.7	-678.1	1,168.0	1,048.7	119.34	9.787		
23,300.0	12,350.0	12,338.4	12,346.3	85.9	12.0	89.82	-10,997.2	-677.5	1,161.2	1,040.1	121.10	9.588		
23,343.1	12,350.0	12,353.0	12,359.2	86.2	12.1	90.46	-11,004.1	-677.3	1,160.5	1,038.8	121.69	9.537 CC		
23,400.0	12,350.0	12,374.0	12,377.4	86.6	12.1	91.35	-11,014.6	-677.1	1,161.7	1,039.3	122.32	9.497		
23,500.0	12,350.0	12,521.0	12,489.3	87.4	12.2	96.86	-11,108.5	-673.9	1,167.6	1,042.4	125.24	9.323		
23,600.0	12,350.0	12,600.0	12,533.4	88.1	12.3	99.02	-11,173.9	-671.2	1,173.6	1,046.9	126.71	9.262		
23,700.0	12,350.0	12,796.0	12,597.1	88.9	12.4	102.07	-11,358.4	-668.8	1,181.4	1,051.7	129.75	9.106		
23,800.0	12,350.0	12,947.7	12,608.7	89.6	12.6	102.69	-11,509.1	-661.1	1,178.7	1,047.4	131.30	8.978		
23,900.0	12,350.0	13,050.6	12,607.8	90.3	12.7	102.69	-11,611.9	-655.9	1,174.6	1,042.2	132.39	8.872		
24,000.0	12,350.0	13,139.0	12,607.8	91.1	12.8	102.73	-11,700.1	-651.2	1,170.3	1,036.9	133.47	8.769		
24,099.3	12,350.0	13,199.0	12,608.4	91.8	13.0	102.78	-11,760.1	-649.1	1,168.3	1,034.0	134.38	8.695		
24,100.0	12,350.0	13,199.0	12,608.4	91.8	13.0	102.78	-11,760.1	-649.1	1,168.3	1,034.0	134.38	8.694		
24,200.0	12,350.0	13,245.8	12,609.3	92.6	13.2	102.81	-11,806.9	-649.4	1,170.4	1,035.4	135.04	8.667		
24,300.0	12,350.0	13,335.0	12,612.3	93.3	13.8	102.90	-11,895.8	-653.8	1,176.7	1,040.6	136.12	8.645		
24,400.0	12,350.0	13,508.4	12,621.7	94.1	14.6	103.34	-12,069.0	-652.8	1,177.8	1,039.6	138.15	8.526		
24,500.0	12,350.0	13,614.0	12,627.7	94.8	15.1	103.65	-12,174.3	-649.4	1,176.8	1,037.4	139.43	8.440		
24,600.0	12,350.0	13,703.7	12,631.6	95.5	15.5	103.86	-12,263.9	-646.6	1,175.8	1,035.2	140.58	8.364		
24,612.7	12,350.0	13,713.3	12,632.0	95.6	15.6	103.88	-12,273.5	-646.4	1,175.8	1,035.1	140.71	8.356		
24,700.0	12,350.0	13,785.4	12,635.5	96.3	15.9	104.05	-12,345.5	-645.5	1,176.6	1,034.9	141.65	8.306		
24,800.0	12,350.0	13,890.3	12,640.2	97.0	16.5	104.27	-12,450.3	-644.6	1,177.7	1,034.8	142.93	8.240		
24,900.0	12,350.0	13,997.3	12,643.3	97.8	17.1	104.42	-12,557.2	-643.4	1,178.3	1,034.1	144.20	8.171		
25,000.0	12,350.0	14,088.7	12,644.4	98.5	17.6	104.47	-12,648.6	-642.6	1,178.7	1,033.4	145.30	8.112		
25,100.0	12,350.0	14,170.8	12,645.7	99.3	18.1	104.51	-12,730.7	-643.1	1,180.5	1,034.2	146.31	8.068		
25,200.0	12,350.0	14,262.0	12,648.8	100.0	18.6	104.63	-12,821.8	-644.4	1,183.6	1,036.1	147.43	8.028		
25,300.0	12,350.0	14,370.0	12,651.9	100.8	19.2	104.75	-12,929.8	-645.9	1,186.6	1,037.9	148.74	7.978		
25,400.0	12,350.0	14,478.5	12,655.7	101.5	19.9	104.90	-13,038.2	-646.3	1,188.8	1,038.7	150.08	7.921		
25,500.0	12,350.0	14,580.8	12,660.2	102.3	20.6	105.10	-13,140.3	-646.1	1,190.5	1,039.2	151.37	7.865		
25,600.0	12,350.0	14,652.4	12,662.7	103.0	21.0	105.21	-13,211.9	-646.5	1,193.1	1,040.8	152.28	7.835		
25,700.0	12,350.0	14,702.0	12,664.4	103.8	21.4	105.26	-13,261.5	-648.4	1,198.9	1,046.2	152.74	7.850		
25,800.0	12,350.0	14,779.7	12,666.7	104.5	21.9	105.29	-13,338.9	-653.8	1,207.5	1,054.0	153.54	7.865		
25,900.0	12,350.0	14,894.9	12,670.7	105.2	22.7	105.33	-13,453.7	-663.5	1,217.6	1,062.5	155.06	7.852		
26,000.0	12,350.0	15,111.5	12,681.5	106.0	24.2	105.76	-13,669.9	-666.6	1,220.7	1,062.7	157.97	7.727		
26,100.0	12,350.0	15,246.0	12,687.2	106.7	25.1	106.07	-13,804.1	-660.8	1,218.6	1,059.0	159.53	7.638		
26,200.0	12,350.0	15,353.1	12,690.5	107.5	25.8	106.30	-13,911.0	-654.4	1,214.6	1,053.7	160.88	7.550		
26,300.0	12,350.0	15,424.0	12,691.4	108.2	26.3	106.37	-13,981.8	-651.3	1,211.6	1,049.6	161.99	7.479		
26,400.0	12,350.0	15,521.5	12,692.2	109.0	27.0	106.42	-14,079.2	-648.9	1,210.4	1,047.2	163.24	7.415		

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design:		HENNIN PROJECT - HENNIN FED #24H - OWB - AWP											Offset Site Error:		0.0 usft
Survey Program:		100-Standard Keeper 104, 11883-r.5 MWD+IFR1+MS						Rule Assigned:				Offset Well Error:		3.0 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				Warning		
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	Minimum	Separation			
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)				
26,500.0	12,350.0	15,653.9	12,696.0	109.7	27.9	106.66	-14,211.5	-642.8	1,207.7	1,043.0	164.76	7.330			
26,600.0	12,350.0	15,733.0	12,696.7	110.5	28.5	106.72	-14,290.5	-639.8	1,205.1	1,039.2	165.93	7.263			
26,700.0	12,350.0	15,841.7	12,699.4	111.2	29.3	106.90	-14,399.0	-635.1	1,202.6	1,035.3	167.31	7.188			
26,800.0	12,350.0	15,929.8	12,703.1	112.0	29.9	107.12	-14,486.9	-630.7	1,199.9	1,031.3	168.58	7.118			
26,900.0	12,350.0	16,024.8	12,706.5	112.7	30.6	107.32	-14,581.8	-626.8	1,198.0	1,028.1	169.89	7.052			
27,000.0	12,350.0	16,125.3	12,709.3	113.5	31.3	107.48	-14,682.2	-623.0	1,196.1	1,024.9	171.22	6.986			
27,098.2	12,350.0	16,202.0	12,712.0	114.2	31.8	107.64	-14,758.8	-620.2	1,194.8	1,022.4	172.34	6.932			
27,100.0	12,350.0	16,202.0	12,712.0	114.2	31.8	107.64	-14,758.8	-620.2	1,194.8	1,022.4	172.35	6.932			
27,200.0	12,350.0	16,278.2	12,713.4	115.0	32.4	107.70	-14,835.0	-619.4	1,195.4	1,022.0	173.40	6.894			
27,300.0	12,350.0	16,380.0	12,711.3	115.7	33.1	107.56	-14,936.7	-621.8	1,197.9	1,023.2	174.64	6.859			
27,400.0	12,350.0	16,463.5	12,708.1	116.5	33.7	107.37	-15,020.2	-624.2	1,200.4	1,024.8	175.62	6.835			
27,500.0	12,350.0	16,553.9	12,704.8	117.2	34.4	107.15	-15,110.3	-628.1	1,204.3	1,027.6	176.68	6.817			
27,600.0	12,350.0	16,654.8	12,704.2	118.0	35.1	107.06	-15,211.2	-631.8	1,208.5	1,030.6	177.94	6.792			
27,700.0	12,350.0	16,732.7	12,705.2	118.7	35.7	107.05	-15,289.0	-634.7	1,213.3	1,034.5	178.87	6.783			
27,800.0	12,350.0	16,939.6	12,707.6	119.5	37.3	107.12	-15,495.7	-635.8	1,215.4	1,033.9	181.48	6.697			
27,900.0	12,350.0	17,053.0	12,708.7	120.2	38.2	107.24	-15,608.9	-629.3	1,211.0	1,028.1	182.90	6.621			
28,000.0	12,350.0	17,129.7	12,706.9	121.0	38.7	107.19	-15,685.5	-627.1	1,208.3	1,024.3	184.05	6.565			
28,100.0	12,350.0	17,205.3	12,704.7	121.8	39.3	107.09	-15,761.1	-626.2	1,207.2	1,022.1	185.11	6.521			
28,104.4	12,350.0	17,208.5	12,704.6	121.8	39.3	107.08	-15,764.3	-626.1	1,207.2	1,022.0	185.15	6.520			
28,200.0	12,350.0	17,287.4	12,704.7	122.5	39.9	107.08	-15,843.2	-626.2	1,208.1	1,021.9	186.22	6.488	ES		
28,300.0	12,350.0	17,376.6	12,707.1	123.3	40.5	107.17	-15,932.3	-626.3	1,209.9	1,022.5	187.42	6.456			
28,400.0	12,350.0	17,431.0	12,708.2	124.0	40.9	107.21	-15,986.7	-626.8	1,213.1	1,025.1	188.03	6.452	SF		
28,471.7	12,350.0	17,431.0	12,708.2	124.5	40.9	107.21	-15,986.7	-626.8	1,219.6	1,032.3	187.36	6.509			

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - JAZZBASS 34 FEDERAL 003H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 100-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
16,700.0	12,350.0	16,226.0	12,277.5	39.1	36.8	86.33	-5,948.6	-695.7	1,951.0	1,892.9	58.05	33.607	
16,800.0	12,350.0	16,226.0	12,277.5	39.8	36.8	86.33	-5,948.6	-695.7	1,870.5	1,811.0	59.44	31.467	
16,900.0	12,350.0	16,226.0	12,277.5	40.4	36.8	86.33	-5,948.6	-695.7	1,792.0	1,731.0	60.95	29.401	
17,000.0	12,350.0	16,226.0	12,277.5	41.1	36.8	86.33	-5,948.6	-695.7	1,715.7	1,653.1	62.58	27.417	
17,100.0	12,350.0	16,226.0	12,277.5	41.7	36.8	86.33	-5,948.6	-695.7	1,642.0	1,577.7	64.33	25.524	
17,200.0	12,350.0	16,226.0	12,277.5	42.4	36.8	86.33	-5,948.6	-695.7	1,571.2	1,505.0	66.21	23.731	
17,300.0	12,350.0	16,226.0	12,277.5	43.0	36.8	86.33	-5,948.6	-695.7	1,503.7	1,435.5	68.20	22.047	
17,400.0	12,350.0	16,226.0	12,277.5	43.7	36.8	86.33	-5,948.6	-695.7	1,440.0	1,369.7	70.30	20.484	
17,500.0	12,350.0	16,226.0	12,277.5	44.4	36.8	86.33	-5,948.6	-695.7	1,380.6	1,308.1	72.47	19.050	
17,600.0	12,350.0	16,226.0	12,277.5	45.0	36.8	86.33	-5,948.6	-695.7	1,326.1	1,251.4	74.69	17.755	
17,700.0	12,350.0	16,226.0	12,277.5	45.7	36.8	86.33	-5,948.6	-695.7	1,277.1	1,200.2	76.89	16.609	
17,800.0	12,350.0	16,226.0	12,277.5	46.4	36.8	86.33	-5,948.6	-695.7	1,234.3	1,155.3	79.02	15.620	
17,900.0	12,350.0	16,226.0	12,277.5	47.1	36.8	86.33	-5,948.6	-695.7	1,198.3	1,117.3	80.98	14.796	
18,000.0	12,350.0	16,226.0	12,277.5	47.7	36.8	86.33	-5,948.6	-695.7	1,169.8	1,087.1	82.71	14.144	
18,100.0	12,350.0	16,226.0	12,277.5	48.4	36.8	86.33	-5,948.6	-695.7	1,149.3	1,065.2	84.09	13.667	
18,200.0	12,350.0	16,226.0	12,277.5	49.1	36.8	86.33	-5,948.6	-695.7	1,137.2	1,052.2	85.07	13.369	
18,300.0	12,350.0	16,169.0	12,279.0	49.8	36.4	86.40	-6,005.5	-693.0	1,132.5	1,047.0	85.48	13.249	
18,400.0	12,350.0	16,075.2	12,282.4	50.5	35.8	86.57	-6,099.2	-689.1	1,129.0	1,043.2	85.76	13.164	
18,500.0	12,350.0	15,974.5	12,286.0	51.2	35.1	86.74	-6,199.7	-684.9	1,125.6	1,039.5	86.05	13.080	
18,600.0	12,350.0	15,874.7	12,289.6	51.9	34.4	86.91	-6,299.4	-680.7	1,122.1	1,035.8	86.37	12.992	
18,700.0	12,350.0	15,767.6	12,292.7	52.6	33.7	87.06	-6,406.2	-676.0	1,118.5	1,031.8	86.69	12.902	
18,800.0	12,350.0	15,677.1	12,294.0	53.3	33.1	87.12	-6,496.7	-671.8	1,114.7	1,027.6	87.06	12.804	
18,900.0	12,350.0	15,576.8	12,295.1	54.0	32.4	87.17	-6,596.9	-667.8	1,111.6	1,024.2	87.42	12.716	
19,000.0	12,350.0	15,478.3	12,296.1	54.7	31.8	87.21	-6,695.3	-663.7	1,108.4	1,020.6	87.81	12.623	
19,100.0	12,350.0	15,375.3	12,296.3	55.4	31.1	87.21	-6,798.2	-659.4	1,105.1	1,016.9	88.20	12.530	
19,200.0	12,350.0	15,261.2	12,297.1	56.1	30.4	87.24	-6,912.2	-653.7	1,101.1	1,012.5	88.60	12.428	
19,300.0	12,350.0	15,149.2	12,299.9	56.8	29.7	87.38	-7,023.9	-647.0	1,095.9	1,006.9	89.05	12.307	
19,400.0	12,350.0	15,034.2	12,303.8	57.5	28.9	87.57	-7,138.5	-638.6	1,089.4	999.9	89.52	12.169	
19,500.0	12,350.0	14,924.5	12,307.3	58.2	28.2	87.73	-7,247.8	-629.3	1,081.7	991.7	90.02	12.016	
19,600.0	12,350.0	14,824.2	12,309.3	58.9	27.6	87.82	-7,347.7	-620.3	1,073.5	983.0	90.56	11.854	
19,700.0	12,350.0	14,746.0	12,308.7	59.6	27.1	87.77	-7,425.6	-613.5	1,066.0	974.8	91.17	11.691	
19,800.0	12,350.0	14,683.0	12,305.7	60.4	26.8	87.61	-7,488.4	-609.8	1,061.4	969.6	91.76	11.567	
19,900.0	12,350.0	14,598.8	12,299.7	61.1	26.3	87.28	-7,572.3	-607.5	1,059.8	967.6	92.25	11.489	
20,000.0	12,350.0	14,438.4	12,296.1	61.8	25.3	87.07	-7,732.4	-599.2	1,055.6	962.9	92.67	11.390	
20,100.0	12,350.0	14,333.4	12,298.3	62.5	24.7	87.17	-7,837.0	-590.8	1,048.4	955.1	93.31	11.236	
20,200.0	12,350.0	14,227.0	12,299.1	63.2	24.1	87.19	-7,943.0	-581.6	1,040.7	946.7	93.93	11.079	
20,300.0	12,350.0	14,126.4	12,300.9	63.9	23.5	87.27	-8,043.2	-572.7	1,032.6	938.0	94.62	10.914	
20,400.0	12,350.0	14,026.0	12,304.0	64.7	23.0	87.42	-8,143.2	-563.7	1,024.5	929.2	95.35	10.746	
20,500.0	12,350.0	13,930.8	12,306.4	65.4	22.5	87.54	-8,237.9	-555.2	1,016.4	920.3	96.10	10.576	
20,600.0	12,350.0	13,842.6	12,309.2	66.1	22.1	87.68	-8,325.8	-548.4	1,009.5	912.6	96.91	10.417	
20,700.0	12,350.0	13,745.2	12,311.7	66.8	21.6	87.81	-8,423.0	-541.2	1,002.9	905.2	97.70	10.265	
20,800.0	12,350.0	13,656.0	12,314.5	67.6	21.2	87.96	-8,511.9	-535.3	997.1	898.6	98.52	10.121	
20,900.0	12,350.0	13,565.4	12,317.6	68.3	20.8	88.13	-8,602.3	-530.2	992.4	893.0	99.34	9.989	
21,000.0	12,350.0	13,473.4	12,320.5	69.0	20.4	88.29	-8,694.2	-525.9	988.5	888.3	100.17	9.868	
21,100.0	12,350.0	13,375.1	12,322.9	69.7	20.1	88.43	-8,792.4	-521.6	985.0	884.0	101.02	9.751	
21,200.0	12,350.0	13,280.1	12,325.5	70.5	19.9	88.57	-8,887.2	-517.9	982.0	880.1	101.88	9.639	
21,300.0	12,350.0	13,178.6	12,327.8	71.2	19.7	88.70	-8,988.7	-514.1	979.1	876.3	102.74	9.530	
21,400.0	12,350.0	13,078.2	12,329.0	71.9	19.5	88.77	-9,088.9	-510.1	976.0	872.4	103.60	9.421	
21,500.0	12,350.0	12,977.8	12,329.6	72.6	19.4	88.80	-9,189.3	-506.2	973.1	868.6	104.48	9.313	
21,600.0	12,350.0	12,868.8	12,333.0	73.4	19.3	89.00	-9,298.1	-501.5	969.6	864.2	105.43	9.197	
21,700.0	12,350.0	12,763.9	12,334.3	74.1	19.2	89.07	-9,402.8	-495.9	965.2	858.9	106.36	9.075	

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 *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Offset Design: HENNIN PROJECT - JAZZBASS 34 FEDERAL 003H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program:		100-r.5 MWD+IFR1+MS						Rule Assigned:				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)	Between Centres (usft)	Between Ellipses (usft)					
21,800.0	12,350.0	12,657.8	12,327.8	74.8	19.1	88.68	-9,508.5	-489.5	960.2	853.1	107.14	8.962	
21,900.0	12,350.0	12,579.0	12,313.5	75.6	19.1	87.81	-9,585.8	-485.2	956.2	848.4	107.80	8.870	
22,000.0	12,350.0	12,481.2	12,283.8	76.3	18.9	86.02	-9,678.8	-480.7	954.0	845.8	108.18	8.818	
22,100.0	12,350.0	12,384.6	12,243.8	77.0	18.7	83.60	-9,766.5	-474.7	952.2	843.8	108.44	8.781	
22,121.5	12,350.0	12,368.6	12,236.2	77.2	18.7	83.13	-9,780.5	-473.6	952.1	843.6	108.51	8.775 CC, ES	
22,200.0	12,350.0	12,315.2	12,208.3	77.8	18.5	81.45	-9,825.9	-470.0	953.4	844.6	108.72	8.768 SF	
22,300.0	12,350.0	12,251.5	12,170.8	78.5	18.4	79.20	-9,877.2	-466.5	959.5	850.7	108.88	8.813	
22,400.0	12,350.0	12,189.7	12,131.0	79.2	18.2	76.83	-9,924.4	-462.9	970.6	861.7	108.88	8.915	
22,500.0	12,350.0	12,139.0	12,095.8	80.0	18.1	74.77	-9,960.7	-460.0	987.5	878.8	108.63	9.090	
22,600.0	12,350.0	12,085.8	12,056.4	80.7	18.0	72.49	-9,996.3	-456.8	1,010.5	902.3	108.20	9.339	
22,700.0	12,350.0	12,009.4	11,996.6	81.5	17.8	69.08	-10,043.3	-450.4	1,038.9	930.9	107.99	9.620	
22,800.0	12,350.0	11,958.7	11,955.1	82.2	17.6	66.74	-10,071.8	-444.1	1,072.1	964.8	107.30	9.991	
22,900.0	12,350.0	11,918.0	11,920.8	82.9	17.5	64.82	-10,092.9	-438.4	1,111.2	1,004.9	106.28	10.455	
23,000.0	12,350.0	11,881.2	11,889.0	83.7	17.5	63.07	-10,110.4	-432.5	1,156.0	1,050.9	105.04	11.005	
23,100.0	12,350.0	11,856.0	11,866.7	84.4	17.4	61.84	-10,121.4	-427.9	1,206.1	1,102.7	103.40	11.664	
23,200.0	12,350.0	11,836.1	11,848.9	85.2	17.4	60.87	-10,129.5	-424.2	1,261.4	1,159.9	101.55	12.422	
23,300.0	12,350.0	11,824.0	11,838.0	85.9	17.3	60.28	-10,134.1	-422.0	1,321.5	1,222.1	99.46	13.287	
23,400.0	12,350.0	11,807.9	11,823.3	86.6	17.3	59.50	-10,140.0	-419.0	1,385.8	1,288.3	97.51	14.212	
23,500.0	12,350.0	11,793.0	11,809.6	87.4	17.3	58.78	-10,145.1	-416.4	1,453.9	1,358.3	95.60	15.208	
23,600.0	12,350.0	11,793.0	11,809.6	88.1	17.3	58.78	-10,145.1	-416.4	1,525.3	1,432.0	93.34	16.341	
23,700.0	12,350.0	11,773.7	11,791.5	88.9	17.2	57.84	-10,151.4	-413.1	1,599.4	1,507.6	91.79	17.425	
23,800.0	12,350.0	11,762.0	11,780.6	89.6	17.2	57.29	-10,154.9	-411.2	1,676.1	1,586.0	90.12	18.598	
23,900.0	12,350.0	11,762.0	11,780.6	90.3	17.2	57.29	-10,154.9	-411.2	1,755.0	1,666.8	88.23	19.891	
24,000.0	12,350.0	11,746.4	11,765.9	91.1	17.2	56.54	-10,159.4	-408.7	1,835.7	1,748.8	86.94	21.115	
24,100.0	12,350.0	11,730.0	11,750.3	91.8	17.2	55.77	-10,163.7	-406.1	1,918.3	1,832.5	85.79	22.361	

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

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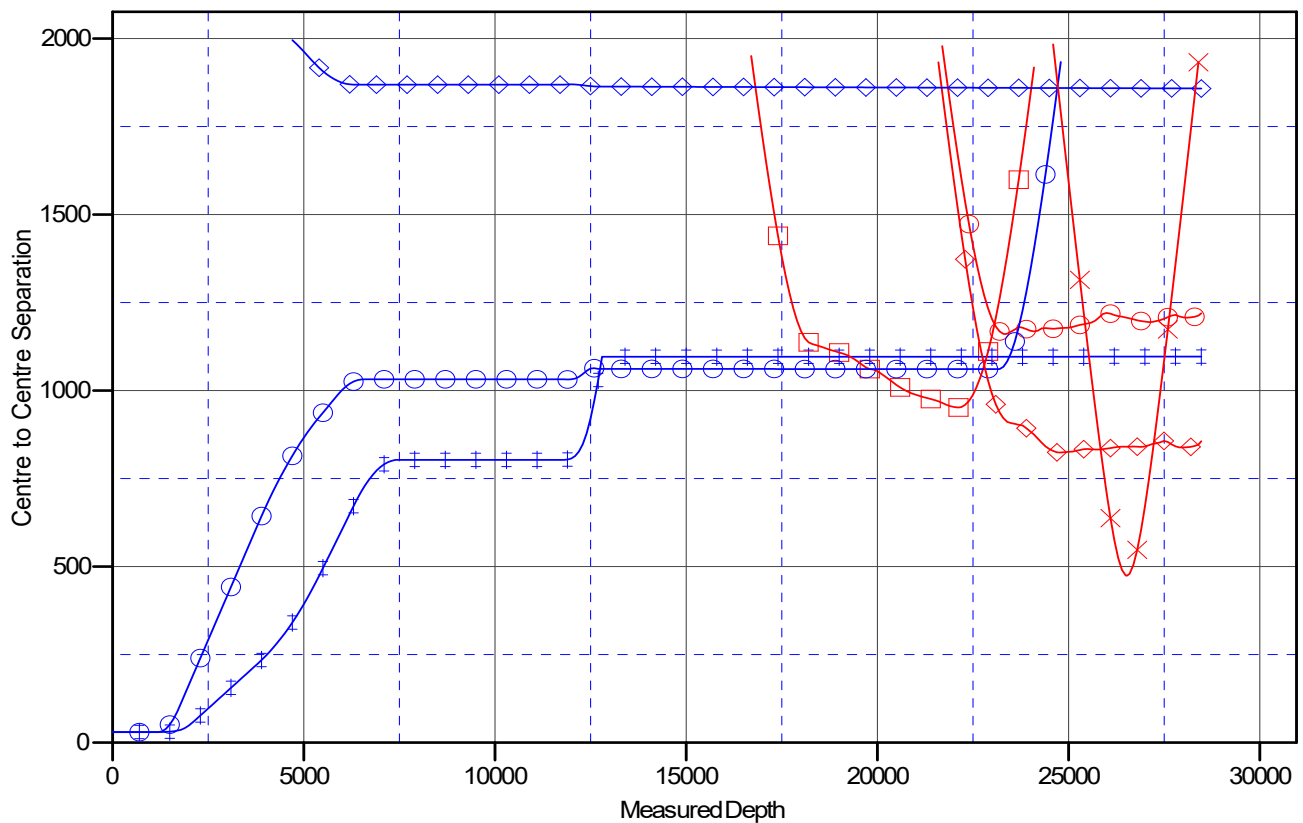
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to WELL @ 3220.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: *HENNIN FED COM #703H - Slot HENNIN FED COM
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.52°

Ladder Plot



LEGEND

*HENNIN FED COM #602H, OWB, PWP0 V0	*HENNIN FED COM #703H, OWB, PWP0 V0	JAVELINA FEDERAL #1 (P&A) OWB, AWP V0
HENNIN FED #264, OWB, AWP V0	HENNIN FED #12H, OWB, AWP V0	
JAZZBASS34 FEDERAL 003H, OWB, AWP V0	*HENNIN FED COM #602H, OWB, PWP0 V0	

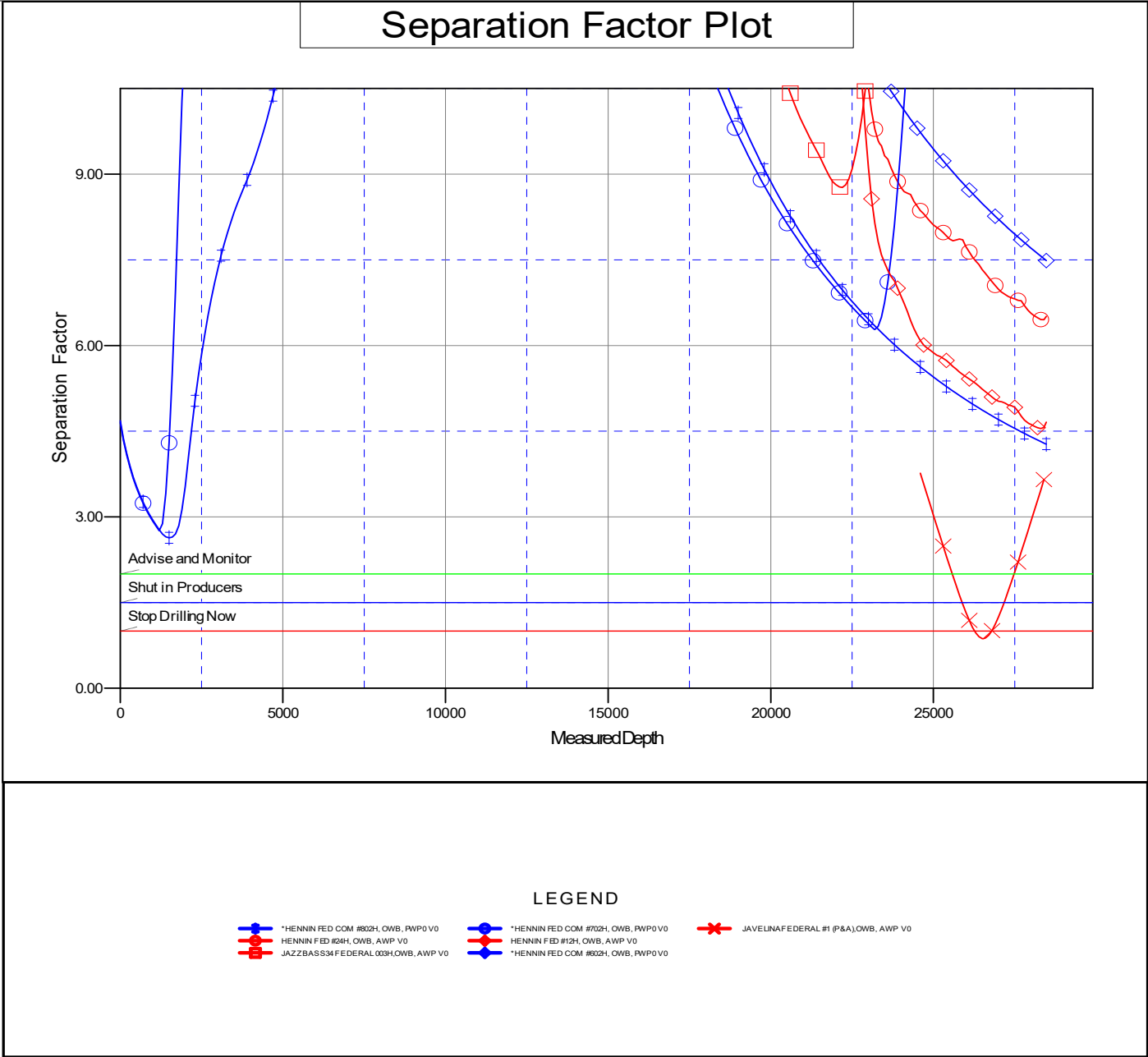
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Reference Site:	HENNIN PROJECT	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

Reference Depths are relative to WELL @ 3220.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: *HENNIN FED COM #703H - Slot HENNIN FED COM
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.52°



DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

HENNIN PROJECT

***HENNIN FED COM #703H - Slot HENNIN FED COM #703H**

OWB

Plan: PWP0

Standard Planning Report

29 June, 2023

ConocoPhillips
Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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

Site	HENNIN PROJECT		
Site Position:		Northing:	397,009.03 usft
From:	Map	Easting:	803,170.42 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 15.761 N
		Longitude:	103° 21' 15.967 W

Well	*HENNIN FED COM #703H - Slot HENNIN FED COM #703H					
Well Position	+N/-S	0.0 usft	Northing:	404,899.33 usft	Latitude:	32° 6' 33.755 N
	+E/-W	0.0 usft	Easting:	804,075.62 usft	Longitude:	103° 21' 4.611 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,220.0 usft
Grid Convergence:		0.52 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	4/14/2023	6.18	59.66	47,393.12847638

Design	PWP0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	178.11

Plan Survey Tool Program	Date	6/29/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	28,471.7 PWP0 (OWB)	r.5 MWD+IFR1+MS	
			OWSG MWD + IFR1 + Multi-Sl	

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Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,733.3	8.00	60.00	1,731.6	18.6	32.2	1.50	1.50	0.00	60.00	
3,801.9	8.00	60.00	3,780.0	162.5	281.5	0.00	0.00	0.00	0.00	
5,401.9	0.00	0.00	5,374.8	218.3	378.1	0.50	-0.50	0.00	180.00	
11,804.1	0.00	0.00	11,777.0	218.3	378.1	0.00	0.00	0.00	0.00	
12,704.1	90.00	179.46	12,350.0	-354.6	383.5	10.00	10.00	19.94	179.46	
28,471.8	90.00	179.46	12,350.0	-16,121.7	531.2	0.00	0.00	0.00	0.00	PBHL (HENNIN FED)

ConocoPhillips

Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	1.50	60.00	1,300.0	0.7	1.1	-0.6	1.50	1.50	0.00	
1,400.0	3.00	60.00	1,399.9	2.6	4.5	-2.5	1.50	1.50	0.00	
1,500.0	4.50	60.00	1,499.7	5.9	10.2	-5.5	1.50	1.50	0.00	
1,600.0	6.00	60.00	1,599.3	10.5	18.1	-9.9	1.50	1.50	0.00	
1,700.0	7.50	60.00	1,698.6	16.3	28.3	-15.4	1.50	1.50	0.00	
1,733.3	8.00	60.00	1,731.6	18.6	32.2	-17.5	1.50	1.50	0.00	
1,800.0	8.00	60.00	1,797.6	23.2	40.2	-21.9	0.00	0.00	0.00	
1,900.0	8.00	60.00	1,896.6	30.2	52.3	-28.4	0.00	0.00	0.00	
2,000.0	8.00	60.00	1,995.7	37.1	64.3	-35.0	0.00	0.00	0.00	
2,100.0	8.00	60.00	2,094.7	44.1	76.4	-41.6	0.00	0.00	0.00	
2,200.0	8.00	60.00	2,193.7	51.1	88.4	-48.1	0.00	0.00	0.00	
2,300.0	8.00	60.00	2,292.8	58.0	100.5	-54.7	0.00	0.00	0.00	
2,400.0	8.00	60.00	2,391.8	65.0	112.5	-61.2	0.00	0.00	0.00	
2,500.0	8.00	60.00	2,490.8	71.9	124.6	-67.8	0.00	0.00	0.00	
2,600.0	8.00	60.00	2,589.8	78.9	136.7	-74.4	0.00	0.00	0.00	
2,700.0	8.00	60.00	2,688.9	85.9	148.7	-80.9	0.00	0.00	0.00	
2,800.0	8.00	60.00	2,787.9	92.8	160.8	-87.5	0.00	0.00	0.00	
2,900.0	8.00	60.00	2,886.9	99.8	172.8	-94.0	0.00	0.00	0.00	
3,000.0	8.00	60.00	2,985.9	106.7	184.9	-100.6	0.00	0.00	0.00	
3,100.0	8.00	60.00	3,085.0	113.7	196.9	-107.1	0.00	0.00	0.00	
3,200.0	8.00	60.00	3,184.0	120.6	209.0	-113.7	0.00	0.00	0.00	
3,300.0	8.00	60.00	3,283.0	127.6	221.0	-120.3	0.00	0.00	0.00	
3,400.0	8.00	60.00	3,382.0	134.6	233.1	-126.8	0.00	0.00	0.00	
3,500.0	8.00	60.00	3,481.1	141.5	245.1	-133.4	0.00	0.00	0.00	
3,600.0	8.00	60.00	3,580.1	148.5	257.2	-139.9	0.00	0.00	0.00	
3,700.0	8.00	60.00	3,679.1	155.4	269.2	-146.5	0.00	0.00	0.00	
3,801.9	8.00	60.00	3,780.0	162.5	281.5	-153.2	0.00	0.00	0.00	
3,900.0	7.51	60.00	3,877.2	169.1	293.0	-159.4	0.50	-0.50	0.00	
4,000.0	7.01	60.00	3,976.4	175.5	303.9	-165.4	0.50	-0.50	0.00	
4,100.0	6.51	60.00	4,075.7	181.4	314.1	-170.9	0.50	-0.50	0.00	
4,200.0	6.01	60.00	4,175.1	186.8	323.6	-176.0	0.50	-0.50	0.00	
4,300.0	5.51	60.00	4,274.6	191.8	332.2	-180.8	0.50	-0.50	0.00	
4,400.0	5.01	60.00	4,374.2	196.4	340.2	-185.1	0.50	-0.50	0.00	
4,500.0	4.51	60.00	4,473.9	200.6	347.4	-189.0	0.50	-0.50	0.00	
4,600.0	4.01	60.00	4,573.6	204.3	353.8	-192.5	0.50	-0.50	0.00	
4,700.0	3.51	60.00	4,673.4	207.5	359.5	-195.6	0.50	-0.50	0.00	
4,800.0	3.01	60.00	4,773.2	210.4	364.4	-198.3	0.50	-0.50	0.00	
4,900.0	2.51	60.00	4,873.1	212.8	368.6	-200.5	0.50	-0.50	0.00	
5,000.0	2.01	60.00	4,973.0	214.8	372.0	-202.4	0.50	-0.50	0.00	
5,100.0	1.51	60.00	5,073.0	216.3	374.6	-203.8	0.50	-0.50	0.00	

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Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,200.0	1.01	60.00	5,173.0	217.4	376.5	-204.9	0.50	-0.50	0.00	
5,300.0	0.51	60.00	5,272.9	218.1	377.7	-205.5	0.50	-0.50	0.00	
5,401.9	0.00	0.00	5,374.8	218.3	378.1	-205.7	0.50	-0.50	0.00	
5,500.0	0.00	0.00	5,472.9	218.3	378.1	-205.7	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,572.9	218.3	378.1	-205.7	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,672.9	218.3	378.1	-205.7	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,772.9	218.3	378.1	-205.7	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,872.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,972.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,072.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,172.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,272.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,372.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,472.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,572.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,672.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,772.9	218.3	378.1	-205.7	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,872.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,972.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,072.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,172.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,272.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,372.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,472.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,572.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,672.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,772.9	218.3	378.1	-205.7	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,872.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,972.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,072.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,172.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,272.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,372.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,472.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,572.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,672.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,772.9	218.3	378.1	-205.7	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,872.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,972.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,072.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,172.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,272.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,372.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,472.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,572.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,672.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,772.9	218.3	378.1	-205.7	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,872.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,972.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,072.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,172.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,272.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,372.9	218.3	378.1	-205.7	0.00	0.00	0.00	

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Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,500.0	0.00	0.00	10,472.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,600.0	0.00	0.00	10,572.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,700.0	0.00	0.00	10,672.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,800.0	0.00	0.00	10,772.9	218.3	378.1	-205.7	0.00	0.00	0.00	
10,900.0	0.00	0.00	10,872.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,000.0	0.00	0.00	10,972.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,100.0	0.00	0.00	11,072.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,200.0	0.00	0.00	11,172.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,300.0	0.00	0.00	11,272.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,400.0	0.00	0.00	11,372.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,500.0	0.00	0.00	11,472.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,600.0	0.00	0.00	11,572.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,700.0	0.00	0.00	11,672.9	218.3	378.1	-205.7	0.00	0.00	0.00	
11,804.1	0.00	0.00	11,777.0	218.3	378.1	-205.7	0.00	0.00	0.00	
11,850.0	4.59	179.46	11,822.9	216.4	378.1	-203.9	10.00	10.00	0.00	
11,900.0	9.59	179.46	11,872.5	210.3	378.2	-197.7	10.00	10.00	0.00	
11,950.0	14.59	179.46	11,921.4	199.8	378.3	-187.2	10.00	10.00	0.00	
12,000.0	19.59	179.46	11,969.1	185.1	378.4	-172.5	10.00	10.00	0.00	
12,050.0	24.59	179.46	12,015.5	166.3	378.6	-153.8	10.00	10.00	0.00	
12,100.0	29.59	179.46	12,060.0	143.5	378.8	-131.0	10.00	10.00	0.00	
12,150.0	34.59	179.46	12,102.3	117.0	379.0	-104.4	10.00	10.00	0.00	
12,200.0	39.59	179.46	12,142.2	86.8	379.3	-74.3	10.00	10.00	0.00	
12,250.0	44.59	179.46	12,179.3	53.3	379.6	-40.8	10.00	10.00	0.00	
12,300.0	49.59	179.46	12,213.3	16.7	380.0	-4.2	10.00	10.00	0.00	
12,350.0	54.59	179.46	12,244.0	-22.7	380.3	35.2	10.00	10.00	0.00	
12,400.0	59.59	179.46	12,271.2	-64.7	380.7	77.2	10.00	10.00	0.00	
12,450.0	64.59	179.46	12,294.5	-108.8	381.2	121.3	10.00	10.00	0.00	
12,500.0	69.59	179.46	12,314.0	-154.9	381.6	167.4	10.00	10.00	0.00	
12,550.0	74.59	179.46	12,329.4	-202.4	382.0	214.9	10.00	10.00	0.00	
12,600.0	79.59	179.46	12,340.5	-251.2	382.5	263.6	10.00	10.00	0.00	
12,650.0	84.59	179.46	12,347.4	-300.7	382.9	313.1	10.00	10.00	0.00	
12,704.1	90.00	179.46	12,350.0	-354.6	383.5	367.1	10.00	10.00	0.00	
12,800.0	90.00	179.46	12,350.0	-450.6	384.4	463.0	0.00	0.00	0.00	
12,900.0	90.00	179.46	12,350.0	-550.6	385.3	563.0	0.00	0.00	0.00	
13,000.0	90.00	179.46	12,350.0	-650.6	386.2	662.9	0.00	0.00	0.00	
13,100.0	90.00	179.46	12,350.0	-750.6	387.2	762.9	0.00	0.00	0.00	
13,200.0	90.00	179.46	12,350.0	-850.6	388.1	862.9	0.00	0.00	0.00	
13,300.0	90.00	179.46	12,350.0	-950.6	389.0	962.9	0.00	0.00	0.00	
13,400.0	90.00	179.46	12,350.0	-1,050.6	390.0	1,062.8	0.00	0.00	0.00	
13,500.0	90.00	179.46	12,350.0	-1,150.6	390.9	1,162.8	0.00	0.00	0.00	
13,600.0	90.00	179.46	12,350.0	-1,250.5	391.9	1,262.8	0.00	0.00	0.00	
13,700.0	90.00	179.46	12,350.0	-1,350.5	392.8	1,362.7	0.00	0.00	0.00	
13,800.0	90.00	179.46	12,350.0	-1,450.5	393.7	1,462.7	0.00	0.00	0.00	
13,900.0	90.00	179.46	12,350.0	-1,550.5	394.7	1,562.7	0.00	0.00	0.00	
14,000.0	90.00	179.46	12,350.0	-1,650.5	395.6	1,662.7	0.00	0.00	0.00	
14,100.0	90.00	179.46	12,350.0	-1,750.5	396.5	1,762.6	0.00	0.00	0.00	
14,200.0	90.00	179.46	12,350.0	-1,850.5	397.5	1,862.6	0.00	0.00	0.00	
14,300.0	90.00	179.46	12,350.0	-1,950.5	398.4	1,962.6	0.00	0.00	0.00	
14,400.0	90.00	179.46	12,350.0	-2,050.5	399.3	2,062.6	0.00	0.00	0.00	
14,500.0	90.00	179.46	12,350.0	-2,150.5	400.3	2,162.5	0.00	0.00	0.00	
14,600.0	90.00	179.46	12,350.0	-2,250.5	401.2	2,262.5	0.00	0.00	0.00	
14,700.0	90.00	179.46	12,350.0	-2,350.5	402.2	2,362.5	0.00	0.00	0.00	
14,800.0	90.00	179.46	12,350.0	-2,450.5	403.1	2,462.4	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,900.0	90.00	179.46	12,350.0	-2,550.5	404.0	2,562.4	0.00	0.00	0.00
15,000.0	90.00	179.46	12,350.0	-2,650.5	405.0	2,662.4	0.00	0.00	0.00
15,100.0	90.00	179.46	12,350.0	-2,750.5	405.9	2,762.4	0.00	0.00	0.00
15,200.0	90.00	179.46	12,350.0	-2,850.5	406.8	2,862.3	0.00	0.00	0.00
15,300.0	90.00	179.46	12,350.0	-2,950.5	407.8	2,962.3	0.00	0.00	0.00
15,400.0	90.00	179.46	12,350.0	-3,050.5	408.7	3,062.3	0.00	0.00	0.00
15,500.0	90.00	179.46	12,350.0	-3,150.5	409.7	3,162.2	0.00	0.00	0.00
15,600.0	90.00	179.46	12,350.0	-3,250.5	410.6	3,262.2	0.00	0.00	0.00
15,700.0	90.00	179.46	12,350.0	-3,350.5	411.5	3,362.2	0.00	0.00	0.00
15,800.0	90.00	179.46	12,350.0	-3,450.5	412.5	3,462.2	0.00	0.00	0.00
15,900.0	90.00	179.46	12,350.0	-3,550.4	413.4	3,562.1	0.00	0.00	0.00
16,000.0	90.00	179.46	12,350.0	-3,650.4	414.3	3,662.1	0.00	0.00	0.00
16,100.0	90.00	179.46	12,350.0	-3,750.4	415.3	3,762.1	0.00	0.00	0.00
16,200.0	90.00	179.46	12,350.0	-3,850.4	416.2	3,862.1	0.00	0.00	0.00
16,300.0	90.00	179.46	12,350.0	-3,950.4	417.1	3,962.0	0.00	0.00	0.00
16,400.0	90.00	179.46	12,350.0	-4,050.4	418.1	4,062.0	0.00	0.00	0.00
16,500.0	90.00	179.46	12,350.0	-4,150.4	419.0	4,162.0	0.00	0.00	0.00
16,600.0	90.00	179.46	12,350.0	-4,250.4	420.0	4,261.9	0.00	0.00	0.00
16,700.0	90.00	179.46	12,350.0	-4,350.4	420.9	4,361.9	0.00	0.00	0.00
16,800.0	90.00	179.46	12,350.0	-4,450.4	421.8	4,461.9	0.00	0.00	0.00
16,900.0	90.00	179.46	12,350.0	-4,550.4	422.8	4,561.9	0.00	0.00	0.00
17,000.0	90.00	179.46	12,350.0	-4,650.4	423.7	4,661.8	0.00	0.00	0.00
17,100.0	90.00	179.46	12,350.0	-4,750.4	424.6	4,761.8	0.00	0.00	0.00
17,200.0	90.00	179.46	12,350.0	-4,850.4	425.6	4,861.8	0.00	0.00	0.00
17,300.0	90.00	179.46	12,350.0	-4,950.4	426.5	4,961.7	0.00	0.00	0.00
17,400.0	90.00	179.46	12,350.0	-5,050.4	427.5	5,061.7	0.00	0.00	0.00
17,500.0	90.00	179.46	12,350.0	-5,150.4	428.4	5,161.7	0.00	0.00	0.00
17,600.0	90.00	179.46	12,350.0	-5,250.4	429.3	5,261.7	0.00	0.00	0.00
17,700.0	90.00	179.46	12,350.0	-5,350.4	430.3	5,361.6	0.00	0.00	0.00
17,800.0	90.00	179.46	12,350.0	-5,450.4	431.2	5,461.6	0.00	0.00	0.00
17,900.0	90.00	179.46	12,350.0	-5,550.4	432.1	5,561.6	0.00	0.00	0.00
18,000.0	90.00	179.46	12,350.0	-5,650.4	433.1	5,661.6	0.00	0.00	0.00
18,100.0	90.00	179.46	12,350.0	-5,750.4	434.0	5,761.5	0.00	0.00	0.00
18,200.0	90.00	179.46	12,350.0	-5,850.3	435.0	5,861.5	0.00	0.00	0.00
18,300.0	90.00	179.46	12,350.0	-5,950.3	435.9	5,961.5	0.00	0.00	0.00
18,400.0	90.00	179.46	12,350.0	-6,050.3	436.8	6,061.4	0.00	0.00	0.00
18,500.0	90.00	179.46	12,350.0	-6,150.3	437.8	6,161.4	0.00	0.00	0.00
18,600.0	90.00	179.46	12,350.0	-6,250.3	438.7	6,261.4	0.00	0.00	0.00
18,700.0	90.00	179.46	12,350.0	-6,350.3	439.6	6,361.4	0.00	0.00	0.00
18,800.0	90.00	179.46	12,350.0	-6,450.3	440.6	6,461.3	0.00	0.00	0.00
18,900.0	90.00	179.46	12,350.0	-6,550.3	441.5	6,561.3	0.00	0.00	0.00
19,000.0	90.00	179.46	12,350.0	-6,650.3	442.4	6,661.3	0.00	0.00	0.00
19,100.0	90.00	179.46	12,350.0	-6,750.3	443.4	6,761.2	0.00	0.00	0.00
19,200.0	90.00	179.46	12,350.0	-6,850.3	444.3	6,861.2	0.00	0.00	0.00
19,300.0	90.00	179.46	12,350.0	-6,950.3	445.3	6,961.2	0.00	0.00	0.00
19,400.0	90.00	179.46	12,350.0	-7,050.3	446.2	7,061.2	0.00	0.00	0.00
19,500.0	90.00	179.46	12,350.0	-7,150.3	447.1	7,161.1	0.00	0.00	0.00
19,600.0	90.00	179.46	12,350.0	-7,250.3	448.1	7,261.1	0.00	0.00	0.00
19,700.0	90.00	179.46	12,350.0	-7,350.3	449.0	7,361.1	0.00	0.00	0.00
19,800.0	90.00	179.46	12,350.0	-7,450.3	449.9	7,461.1	0.00	0.00	0.00
19,900.0	90.00	179.46	12,350.0	-7,550.3	450.9	7,561.0	0.00	0.00	0.00
20,000.0	90.00	179.46	12,350.0	-7,650.3	451.8	7,661.0	0.00	0.00	0.00
20,100.0	90.00	179.46	12,350.0	-7,750.3	452.8	7,761.0	0.00	0.00	0.00

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Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
20,200.0	90.00	179.46	12,350.0	-7,850.3	453.7	7,860.9	0.00	0.00	0.00	
20,300.0	90.00	179.46	12,350.0	-7,950.3	454.6	7,960.9	0.00	0.00	0.00	
20,400.0	90.00	179.46	12,350.0	-8,050.3	455.6	8,060.9	0.00	0.00	0.00	
20,500.0	90.00	179.46	12,350.0	-8,150.2	456.5	8,160.9	0.00	0.00	0.00	
20,600.0	90.00	179.46	12,350.0	-8,250.2	457.4	8,260.8	0.00	0.00	0.00	
20,700.0	90.00	179.46	12,350.0	-8,350.2	458.4	8,360.8	0.00	0.00	0.00	
20,800.0	90.00	179.46	12,350.0	-8,450.2	459.3	8,460.8	0.00	0.00	0.00	
20,900.0	90.00	179.46	12,350.0	-8,550.2	460.3	8,560.7	0.00	0.00	0.00	
21,000.0	90.00	179.46	12,350.0	-8,650.2	461.2	8,660.7	0.00	0.00	0.00	
21,100.0	90.00	179.46	12,350.0	-8,750.2	462.1	8,760.7	0.00	0.00	0.00	
21,200.0	90.00	179.46	12,350.0	-8,850.2	463.1	8,860.7	0.00	0.00	0.00	
21,300.0	90.00	179.46	12,350.0	-8,950.2	464.0	8,960.6	0.00	0.00	0.00	
21,400.0	90.00	179.46	12,350.0	-9,050.2	464.9	9,060.6	0.00	0.00	0.00	
21,500.0	90.00	179.46	12,350.0	-9,150.2	465.9	9,160.6	0.00	0.00	0.00	
21,600.0	90.00	179.46	12,350.0	-9,250.2	466.8	9,260.6	0.00	0.00	0.00	
21,700.0	90.00	179.46	12,350.0	-9,350.2	467.7	9,360.5	0.00	0.00	0.00	
21,800.0	90.00	179.46	12,350.0	-9,450.2	468.7	9,460.5	0.00	0.00	0.00	
21,900.0	90.00	179.46	12,350.0	-9,550.2	469.6	9,560.5	0.00	0.00	0.00	
22,000.0	90.00	179.46	12,350.0	-9,650.2	470.6	9,660.4	0.00	0.00	0.00	
22,100.0	90.00	179.46	12,350.0	-9,750.2	471.5	9,760.4	0.00	0.00	0.00	
22,200.0	90.00	179.46	12,350.0	-9,850.2	472.4	9,860.4	0.00	0.00	0.00	
22,300.0	90.00	179.46	12,350.0	-9,950.2	473.4	9,960.4	0.00	0.00	0.00	
22,400.0	90.00	179.46	12,350.0	-10,050.2	474.3	10,060.3	0.00	0.00	0.00	
22,500.0	90.00	179.46	12,350.0	-10,150.2	475.2	10,160.3	0.00	0.00	0.00	
22,600.0	90.00	179.46	12,350.0	-10,250.2	476.2	10,260.3	0.00	0.00	0.00	
22,700.0	90.00	179.46	12,350.0	-10,350.1	477.1	10,360.2	0.00	0.00	0.00	
22,800.0	90.00	179.46	12,350.0	-10,450.1	478.1	10,460.2	0.00	0.00	0.00	
22,900.0	90.00	179.46	12,350.0	-10,550.1	479.0	10,560.2	0.00	0.00	0.00	
23,000.0	90.00	179.46	12,350.0	-10,650.1	479.9	10,660.2	0.00	0.00	0.00	
23,100.0	90.00	179.46	12,350.0	-10,750.1	480.9	10,760.1	0.00	0.00	0.00	
23,200.0	90.00	179.46	12,350.0	-10,850.1	481.8	10,860.1	0.00	0.00	0.00	
23,300.0	90.00	179.46	12,350.0	-10,950.1	482.7	10,960.1	0.00	0.00	0.00	
23,400.0	90.00	179.46	12,350.0	-11,050.1	483.7	11,060.1	0.00	0.00	0.00	
23,500.0	90.00	179.46	12,350.0	-11,150.1	484.6	11,160.0	0.00	0.00	0.00	
23,600.0	90.00	179.46	12,350.0	-11,250.1	485.6	11,260.0	0.00	0.00	0.00	
23,700.0	90.00	179.46	12,350.0	-11,350.1	486.5	11,360.0	0.00	0.00	0.00	
23,800.0	90.00	179.46	12,350.0	-11,450.1	487.4	11,459.9	0.00	0.00	0.00	
23,900.0	90.00	179.46	12,350.0	-11,550.1	488.4	11,559.9	0.00	0.00	0.00	
24,000.0	90.00	179.46	12,350.0	-11,650.1	489.3	11,659.9	0.00	0.00	0.00	
24,100.0	90.00	179.46	12,350.0	-11,750.1	490.2	11,759.9	0.00	0.00	0.00	
24,200.0	90.00	179.46	12,350.0	-11,850.1	491.2	11,859.8	0.00	0.00	0.00	
24,300.0	90.00	179.46	12,350.0	-11,950.1	492.1	11,959.8	0.00	0.00	0.00	
24,400.0	90.00	179.46	12,350.0	-12,050.1	493.0	12,059.8	0.00	0.00	0.00	
24,500.0	90.00	179.46	12,350.0	-12,150.1	494.0	12,159.7	0.00	0.00	0.00	
24,600.0	90.00	179.46	12,350.0	-12,250.1	494.9	12,259.7	0.00	0.00	0.00	
24,700.0	90.00	179.46	12,350.0	-12,350.1	495.9	12,359.7	0.00	0.00	0.00	
24,800.0	90.00	179.46	12,350.0	-12,450.1	496.8	12,459.7	0.00	0.00	0.00	
24,900.0	90.00	179.46	12,350.0	-12,550.1	497.7	12,559.6	0.00	0.00	0.00	
25,000.0	90.00	179.46	12,350.0	-12,650.0	498.7	12,659.6	0.00	0.00	0.00	
25,100.0	90.00	179.46	12,350.0	-12,750.0	499.6	12,759.6	0.00	0.00	0.00	
25,200.0	90.00	179.46	12,350.0	-12,850.0	500.5	12,859.6	0.00	0.00	0.00	
25,300.0	90.00	179.46	12,350.0	-12,950.0	501.5	12,959.5	0.00	0.00	0.00	
25,400.0	90.00	179.46	12,350.0	-13,050.0	502.4	13,059.5	0.00	0.00	0.00	

ConocoPhillips
Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
25,500.0	90.00	179.46	12,350.0	-13,150.0	503.4	13,159.5	0.00	0.00	0.00	
25,600.0	90.00	179.46	12,350.0	-13,250.0	504.3	13,259.4	0.00	0.00	0.00	
25,700.0	90.00	179.46	12,350.0	-13,350.0	505.2	13,359.4	0.00	0.00	0.00	
25,800.0	90.00	179.46	12,350.0	-13,450.0	506.2	13,459.4	0.00	0.00	0.00	
25,900.0	90.00	179.46	12,350.0	-13,550.0	507.1	13,559.4	0.00	0.00	0.00	
26,000.0	90.00	179.46	12,350.0	-13,650.0	508.0	13,659.3	0.00	0.00	0.00	
26,100.0	90.00	179.46	12,350.0	-13,750.0	509.0	13,759.3	0.00	0.00	0.00	
26,200.0	90.00	179.46	12,350.0	-13,850.0	509.9	13,859.3	0.00	0.00	0.00	
26,300.0	90.00	179.46	12,350.0	-13,950.0	510.9	13,959.2	0.00	0.00	0.00	
26,400.0	90.00	179.46	12,350.0	-14,050.0	511.8	14,059.2	0.00	0.00	0.00	
26,500.0	90.00	179.46	12,350.0	-14,150.0	512.7	14,159.2	0.00	0.00	0.00	
26,600.0	90.00	179.46	12,350.0	-14,250.0	513.7	14,259.2	0.00	0.00	0.00	
26,700.0	90.00	179.46	12,350.0	-14,350.0	514.6	14,359.1	0.00	0.00	0.00	
26,800.0	90.00	179.46	12,350.0	-14,450.0	515.5	14,459.1	0.00	0.00	0.00	
26,900.0	90.00	179.46	12,350.0	-14,550.0	516.5	14,559.1	0.00	0.00	0.00	
27,000.0	90.00	179.46	12,350.0	-14,650.0	517.4	14,659.1	0.00	0.00	0.00	
27,100.0	90.00	179.46	12,350.0	-14,750.0	518.3	14,759.0	0.00	0.00	0.00	
27,200.0	90.00	179.46	12,350.0	-14,850.0	519.3	14,859.0	0.00	0.00	0.00	
27,300.0	90.00	179.46	12,350.0	-14,949.9	520.2	14,959.0	0.00	0.00	0.00	
27,400.0	90.00	179.46	12,350.0	-15,049.9	521.2	15,058.9	0.00	0.00	0.00	
27,500.0	90.00	179.46	12,350.0	-15,149.9	522.1	15,158.9	0.00	0.00	0.00	
27,600.0	90.00	179.46	12,350.0	-15,249.9	523.0	15,258.9	0.00	0.00	0.00	
27,700.0	90.00	179.46	12,350.0	-15,349.9	524.0	15,358.9	0.00	0.00	0.00	
27,800.0	90.00	179.46	12,350.0	-15,449.9	524.9	15,458.8	0.00	0.00	0.00	
27,900.0	90.00	179.46	12,350.0	-15,549.9	525.8	15,558.8	0.00	0.00	0.00	
28,000.0	90.00	179.46	12,350.0	-15,649.9	526.8	15,658.8	0.00	0.00	0.00	
28,100.0	90.00	179.46	12,350.0	-15,749.9	527.7	15,758.7	0.00	0.00	0.00	
28,200.0	90.00	179.46	12,350.0	-15,849.9	528.7	15,858.7	0.00	0.00	0.00	
28,300.0	90.00	179.46	12,350.0	-15,949.9	529.6	15,958.7	0.00	0.00	0.00	
28,400.0	90.00	179.46	12,350.0	-16,049.9	530.5	16,058.7	0.00	0.00	0.00	
28,471.8	90.00	179.46	12,350.0	-16,121.7	531.2	16,130.4	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
FTP (HENNIN FED COM - plan misses target center by 0.7usft at 12778.8usft MD (12350.0 TVD, -429.4 N, 384.2 E) - Circle (radius 50.0)	0.00	0.00	12,350.0	-429.4	384.8	404,469.98	804,460.46	32° 6' 29.472 N	103° 21' 0.183 W	
LTP (HENNIN FED COM - plan misses target center by 21.8usft at 28400.0usft MD (12350.0 TVD, -16049.9 N, 530.5 E) - Circle (radius 50.0)	90.00	179.45	12,350.0	-16,071.7	530.5	388,827.67	804,606.12	32° 3' 54.676 N	103° 21' 0.148 W	
PBHL (HENNIN FED CC - plan hits target center - Rectangle (sides W100.0 H15,696.1 D20.0)	0.00	359.46	12,350.0	-16,121.7	531.2	388,777.68	804,606.82	32° 3' 54.181 N	103° 21' 0.145 W	

ConocoPhillips

Planning Report

Database:	Central Planning Prod	Local Co-ordinate Reference:	Well *HENNIN FED COM #703H - Slot HENNIN FED COM #703H
Company:	DELAWARE BASIN EAST	TVD Reference:	WELL @ 3220.0usft (Original Well Elev)
Project:	BULLDOG PROSPECT (NM-E)	MD Reference:	WELL @ 3220.0usft (Original Well Elev)
Site:	HENNIN PROJECT	North Reference:	Grid
Well:	*HENNIN FED COM #703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
28,471.8	12,350.0	5-1/2" Production Casing	5-1/2	6-3/4	

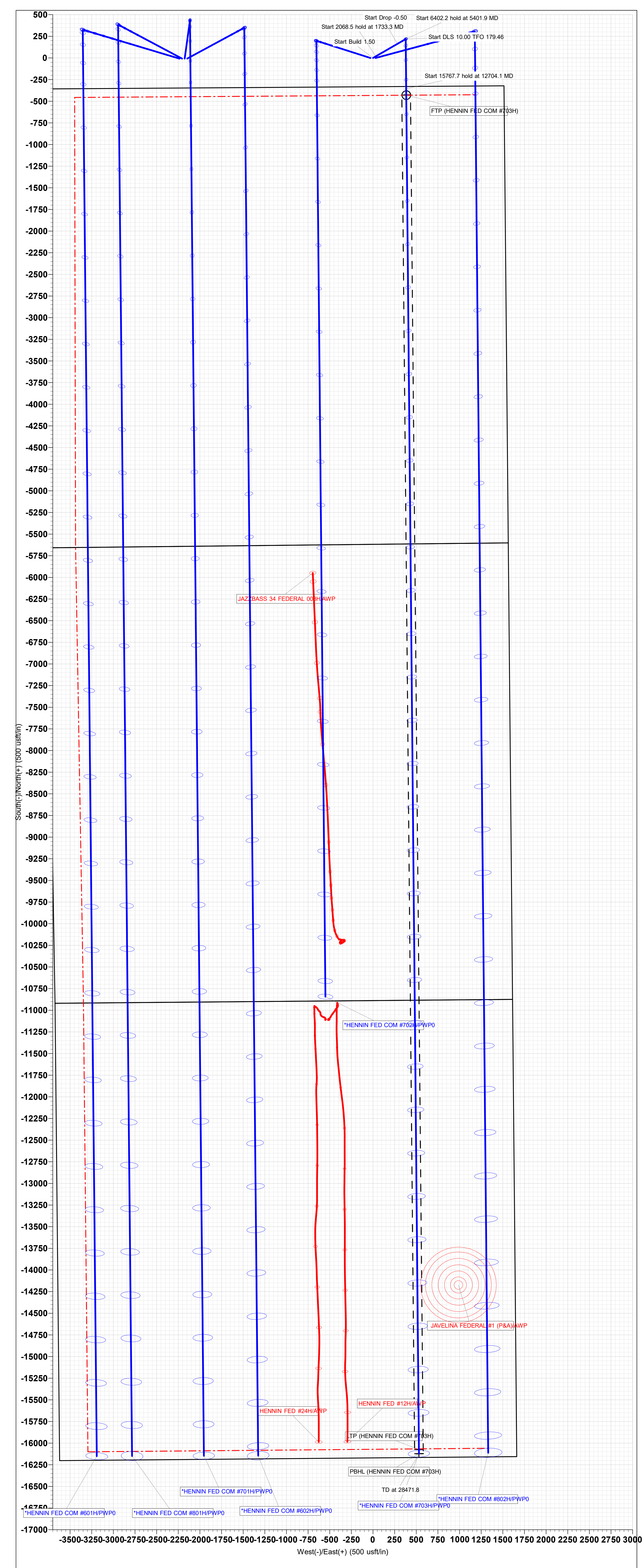
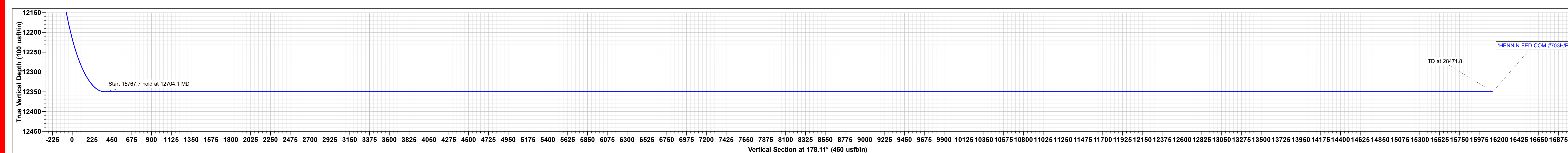
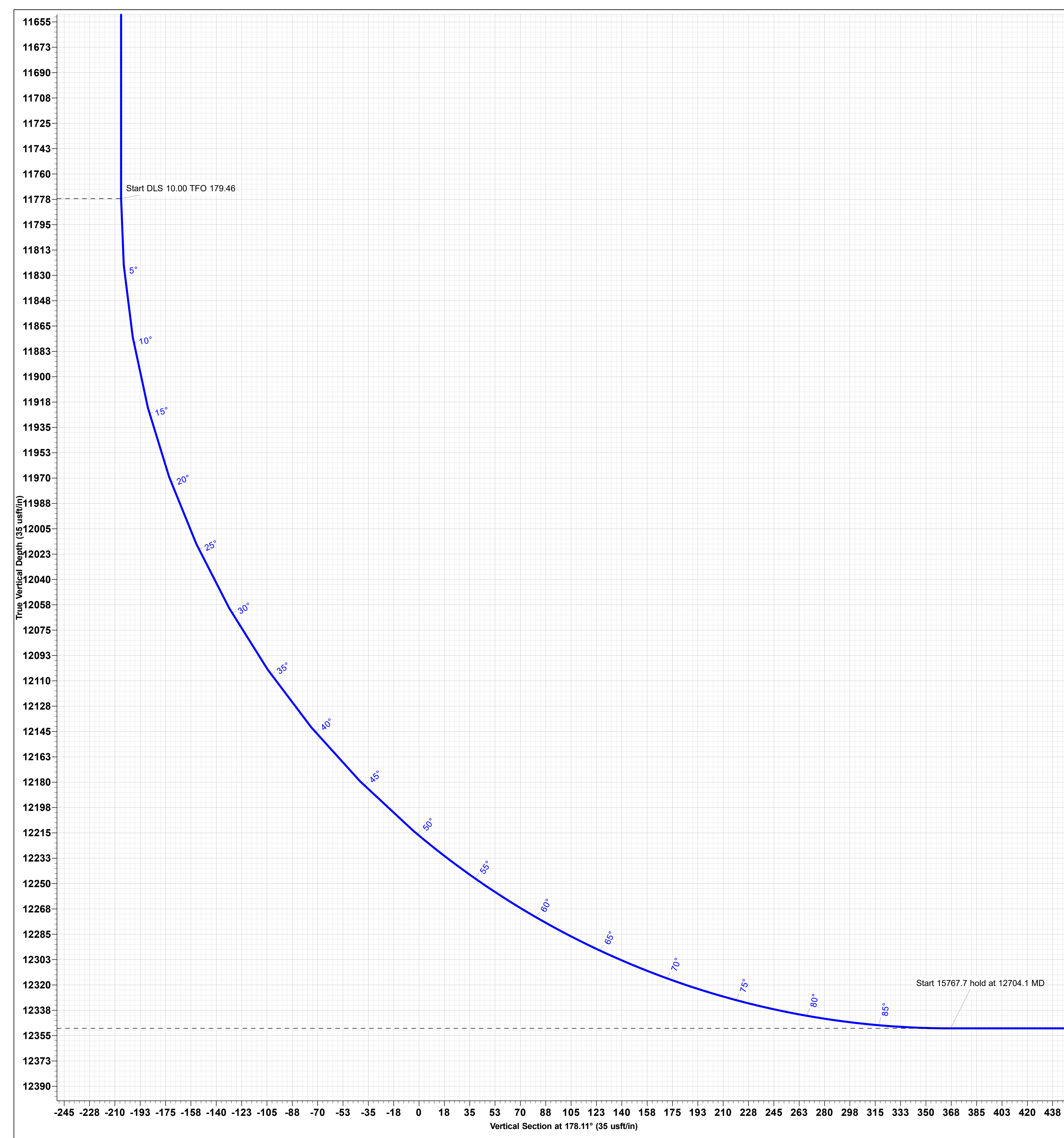
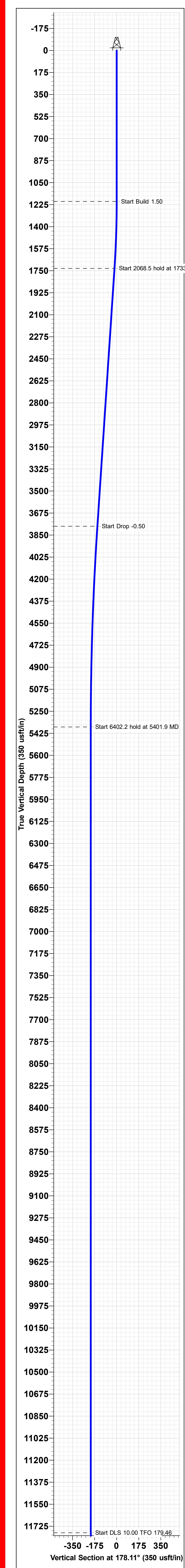


Project: BULLDOG PROSPECT (NM-E)
Site: HENNIN PROJECT
Well: *HENNIN FED COM #703H
Wellbore: OWB
Design: PWP0
GL: 3220.0
WELL @ 3220.0usft (Original Well Elev)

WELL DETAILS: *HENNIN FED COM #703H					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	404899.34	804075.62	32° 6' 33.755 N	103° 21' 4.611 W HENNIN FED COM #703H

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP (HENNING FED COM #703H)	12350.0	-429.4	384.8	404469.98	804460.46
LTP (HENNING FED COM #703H)	12350.0	-16071.7	530.5	388827.67	804606.12
PBHL (HENNING FED COM #703H)	12350.0	-16121.7	531.2	388777.68	804606.82

SECTION DETAILS									
	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSet
	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0
	1200.0	0.00	0.00	1200.0	0.0	0.0	0.0	0.00	0.0
	1733.3	8.00	60.00	1731.6	18.6	32.2	1.50	60.00	-17.5
	3801.9	8.00	60.00	3789.0	162.5	281.5	0.00	0.00	-153.2
	5401.9	0.00	0.00	5374.8	218.3	378.1	0.50	180.00	-205.7
	11804.1	0.00	0.00	11777.0	218.3	378.1	0.00	0.00	-205.7
	12704.1	90.00	179.46	12350.0	-354.6	383.5	10.00	179.46	367.1
	28471.8	90.00	179.46	12350.0	-16121.7	531.2	0.00	0.00	16130.4



COG OPERATING LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

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

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

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

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

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

2. H₂S SAFETY EQUIPMENT AND SYSTEMS

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

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

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

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

W A R N I N G

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

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

COG OPERATING LLC

1-575-748-6940

EMERGENCY CALL LIST

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

EMERGENCY RESPONSE NUMBERS

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

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR’S NAME:	COG OPERATING LLC
WELL NAME & NO.:	HENNIN FED COM 703H
SURFACE HOLE FOOTAGE:	330’/S & 1510’/E
BOTTOM HOLE FOOTAGE	50’/S & 1130’/E
LOCATION:	Section 22, T.25 S., R.35 E.
COUNTY:	Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

Primary Casing Design:

1. The 10-3/4 inch surface casing shall be set at approximately **869 feet per BLM Geologist** (a minimum of 25 feet (Lea County) into the Rustler Anhydrite, above the

salt, and below usable fresh water) and cemented to the surface. The surface hole shall be **14 3/4 inch** in diameter.

- 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

Contingency:

Operator has proposed a contingency if losses are encountered, a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

3. **The W441 connection should tie back 500'+ into the W513 intermediate casing for clearance overlap.** 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 **10-3/4 inch** surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 2.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

Casing Clearance:

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

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

GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

BLM_NM_CFO_DrillingNotifications@BLM.GOV

(575) 361-2822

☒ Lea County

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

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

- ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

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

the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.
 - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e.

against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

JS 10/29/2024

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 400734

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 400734
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
stanwagner	Cement is required to circulate on both surface and intermediate1 strings of casing.	11/8/2024
stanwagner	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	11/8/2024
pkautz	MUST SUBMIT CORRECTED C-102 BEFORE SPUDING. DATA ON PAGE 1 DOES NOT MATCH PAGE 2.	11/26/2024
pkautz	File As Drilled C-102 and a directional Survey with C-104 completion packet.	11/26/2024
pkautz	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.	11/26/2024
pkautz	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.	11/26/2024