

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. 30-015-55223
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)

- | | |
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| 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)



Approval Date: 06/07/2024

Additional Operator Remarks

Location of Well

0. SHL: NESW / 2210 FSL / 1612 FWL / TWSP: 23S / RANGE: 30E / SECTION: 23 / LAT: 32.2892806 / LONG: -103.8550898 (TVD: 0 feet, MD: 0 feet)
PPP: SESW / 2540 FNL / 2382 FWL / TWSP: 23S / RANGE: 30E / SECTION: 23 / LAT: 32.2907568 / LONG: -103.8526074 (TVD: 11349 feet, MD: 11733 feet)
PPP: SESW / 1 FSL / 2382 FWL / TWSP: 23S / RANGE: 30E / SECTION: 11 / LAT: 32.3122746 / LONG: -103.8525854 (TVD: 11350 feet, MD: 19170 feet)
PPP: SESW / 1 FSL / 2382 FWL / TWSP: 23S / RANGE: 30E / SECTION: 14 / LAT: 32.2977382 / LONG: -103.8526478 (TVD: 11350 feet, MD: 13890 feet)
BHL: NENW / 50 FNL / 2382 FWL / TWSP: 23S / RANGE: 30E / SECTION: 11 / LAT: 32.326675 / LONG: -103.8525769 (TVD: 11350 feet, MD: 24800 feet)

BLM Point of Contact

Name: JANET D ESTES
Title: ADJUDICATOR
Phone: (575) 234-6233
Email: JESTES@BLM.GOV

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazon Road, Artec, NM 87410
District IV
1220 S. St Francis Dr., NM 87505
Phone: (505) 476-3460 Fax (505) 476-3462

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

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015- 55223	² Pool Code 98358 96597	³ Pool Name Los Medanos WC23S30E; Wolfcamp (Gas)
⁴ Property Code 336009	⁵ Property Name THUNDERDOME FED COM	⁶ Well Number 705H
⁷ OGRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 3,251.20'

¹⁰ Surface Location

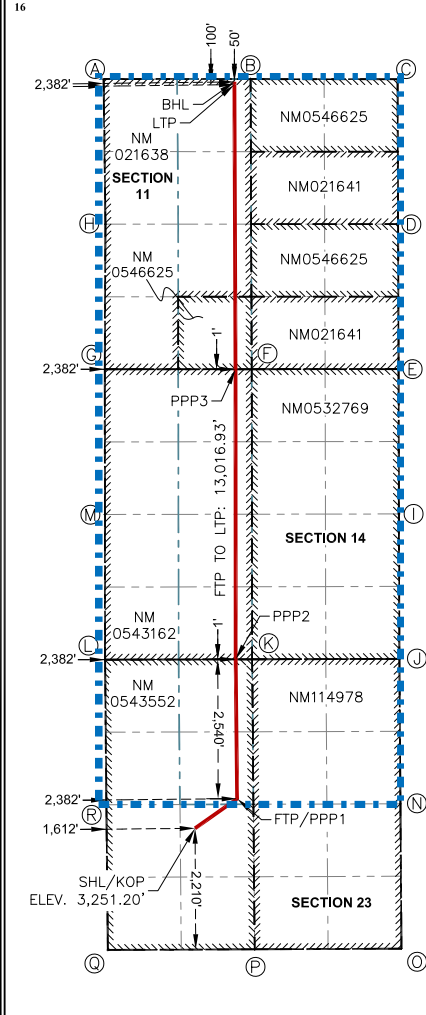
UL or lot no. K	Section 23	Township 23-S	Range 30-E	Lot Idn	Feet from the 2,210'	North/South line SOUTH	Feet from the 1,612'	East/West line WEST	County EDDY
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. C	Section 11	Township 23-S	Range 30-E	Lot Idn	Feet from the 50'	North/South line NORTH	Feet from the 2,382'	East/West line WEST	County EDDY
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¹² Dedicated Acres 1600	¹³ Joint or Infill	¹⁴ Consolidation Code Com	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

16 	SURFACE HOLE LOCATION / KICK OFF POINT 2,210' FSL & 1,612' FWL NEW MEXICO EAST-NAD 83 NORTH:469,302.48' EAST:689,120.67' LAT:32.28928067 LONG:-103.85508983 FIRST TAKE POINT / PENETRATION POINT 1 2,540' FNL & 2,382' FWL NEW MEXICO EAST-NAD 83 NORTH:469,842.92' EAST:689,885.35' LAT:32.29075680 LONG:-103.85260748 PENETRATION POINT 2 1' FSL & 2,382' FWL NEW MEXICO EAST-NAD 83 NORTH:472,382.63' EAST:689,861.49' LAT:32.29773820 LONG:-103.85264785 PENETRATION POINT 3 1' FSL & 2,382' FWL NEW MEXICO EAST-NAD 83 NORTH:477,670.95' EAST:689,857.07' LAT:32.31227466 LONG:-103.85258543 LAST TAKE POINT 100' FNL & 2,382' FWL NEW MEXICO EAST-NAD 83 NORTH:482,859.70' EAST:689,836.81' LAT:32.32653757 LONG:-103.85257565 BOTTOM HOLE LOCATION 50' FNL & 2,382' FWL NEW MEXICO EAST-NAD 83 NORTH:482,909.70' EAST:689,836.20' LAT:32.32667502 LONG:-103.85257691	CORNER COORDINATES NEW MEXICO EAST- NAD 83 A-CALCULATED CORNER N:482,961.73' E:687,453.38' B-FOUND IRON ROD W/ CAP N:482,959.45' E:690,132.18' C-FOUND IRON ROD W/ CAP N:482,957.17' E:692,810.98' D-FOUND 1" MONUMENT N:480,315.20' E:692,820.19' E-FOUND 1" MONUMENT N:477,674.32' E:692,829.39' F-FOUND BENT IRON ROD W/ CAP N:477,671.15' E:690,152.19' G-FOUND BENT IRON ROD W/ CAP N:477,669.34' E:687,475.07' H-CALCULATED CORNER N:480,315.52' E:687,485.82' I-FOUND 1" MONUMENT N:475,033.03' E:692,835.76' J-FOUND IRON ROD W/ CAP N:472,390.77' E:692,844.23' K-FOUND BENT IRON ROD W/ CAP N:472,383.40' E:690,160.90' L-FOUND IRON ROD W/ CAP N:472,376.50' E:687,479.50' M-CALCULATED CORNER N:475,022.92' E:687,477.28' N-FOUND IRON ROD W/ CAP N:469,750.12' E:692,862.25' O-CALCULATED CORNER N:467,108.30' E:692,881.70' P-FOUND IRON ROD W/ CAP N:467,097.40' E:690,206.20' Q-FOUND IRON ROD W/ CAP N:467,084.70' E:687,530.34' R-FOUND BENT IRON ROD W/ CAP N:469,732.12' E:687,504.28'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Stan Wagner</i> 10/10/2023 Signature Date Stan Wagner Printed Name Date Email Address Date	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date: 9/29/23  MARK J. MURRAY P.L.S. NO. 12177
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State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Electronically
Via E-permitting

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: ConocoPhillips Company

OGRID: 217817

Date: 10/10/2023

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
Thunderdome Federal Com 701H	30-015-	K-23-23S-30E	2210 FSL & 1492 FWL	± 1135	± 3485	± 4339
Thunderdome Federal Com 702H	30-015-	K-23-23S-30E	2210 FSL & 1522 FWL	± 1091	± 3230	± 4172
Thunderdome Federal Com 703H	30-015-	K-23-23S-30E	2210 FSL & 1552 FWL	± 1091	± 3230	± 4172
Thunderdome Federal Com 704H	30-015-	K-23-23S-30E	2210 FSL & 1582 FWL	± 1091	± 3230	± 4172
Thunderdome Federal Com 705H	30-015-	K-23-23S-30E	2210 FSL & 1612 FWL	± 1091	± 3230	± 4172

IV. Central Delivery Point Name: TBD CTB NENW 23-23S-30E [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
Thunderdome Federal Com	Pending	± 10/1/2024	± 25 days from spud	TBD	TBD	TBD
701H, 702H, 703H, 704H, 705H						

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

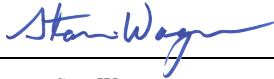
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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: 10/10/2023
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

COG Operating, LLC - Thunderdome Fed Com #705H

1. Geologic Formations

TVD of target	11,350' EOL	Pilot hole depth	NA
MD at TD:	24,799'	Deepest expected fresh water:	103'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	375	Water	
Top of Salt	482	Salt	
Base of Salt	3577	Salt	
Lamar	3800	Salt Water	
Bell Canyon	3816	Salt Water	
Brushy Canyon	5155	Oil/Gas	
Bone Spring Lime	7698	Oil/Gas	
1st Bone Spring Sand	8704	Oil/Gas	
2nd Bone Spring Sand	9364	Oil/Gas	
3rd Bone Spring Sand	10647	Oil/Gas	
Wolfcamp A	11206	Target	
Wolfcamp B	11524	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
17.50"	0	400	13.375"	54.5	J55	BTC	6.17	19.09	39.13	41.70
12.25"	0	3795	10.75"	45.5	J55	BTC	1.25	1.84	6.35	6.02
9.875"	0	7400	7.625"	29.7	L80-ICY	BTC	1.74	1.17	3.30	3.34
8.750"	7400	10700	7.625"	29.7	P110 ICY	W513	1.29	1.52	2.96	1.76
6.75"	0	10200	5.5"	23	P110 CY	BTC	2.19	2.59	3.11	3.09
6.75"	10200	24,799	5.5"	23	P110 CY	W441	1.97	2.33	2.79	2.71
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" wedge 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.

COG Operating, LLC - Thunderdome Fed Com #705H

	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?	Y
If yes, are the first three strings cemented to surface?	N
Is 2 nd string set 100' to 600' below the base of salt?	Y
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?	

COG Operating, LLC - Thunderdome Fed Com #705H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf	238	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl ₂
Inter 1	474	12.4	2.26	12.84	12	Lead: Class C + 5% Gel + 1% CaCl ₂
	250	14.8	1.2	5.35	8	50:50 Class H Premium
Inter 2						
	528	14.8	1.35	6.6	8	Tail: Class H - Single Slurry
Prod						
	1373	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend Single Slurry

Intermediate #1 Salt string cemented to surface. Drill out to wait for 500PSI compressive strength.

Intermediate #2 long string cemented Tail single slurry leaving Brushy Canyon Delaware Mountain group open as a relieve zone. Section to be monitored during completions, and then Bradenhead cemented after completion is complete. Drill out of intermediate to wait for 500psi compressive strength.

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%
1st Intermediate	0'	50%
2nd Intermediate	7,100'	0%
Production	9,700'	35% OH in Lateral (KOP to EOL)

COG Operating, LLC - Thunderdome Fed Com #705H

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:
12 1/4"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
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.

COG Operating, LLC - Thunderdome Fed Com #705H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	9.8 - 10	28-34	N/C
Surf csg	10 3/4" Int 1 shoe	Saturated Brine	10	28-34	N/C
10 3/4" Int1 shoe	7-5/8" Int 2 shoe	Cut Brine	8.4 - 9.3	28-34	N/C
7-5/8" Int 2 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
---	-----------------------------

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	

COG Operating, LLC - Thunderdome Fed Com #705H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7380 psi at 11350' TVD
Abnormal Temperature	NO 170 Deg. F.

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

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

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

N H₂S is present

Y H₂S Plan attached

8. Other Facets of Operation

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

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

705H

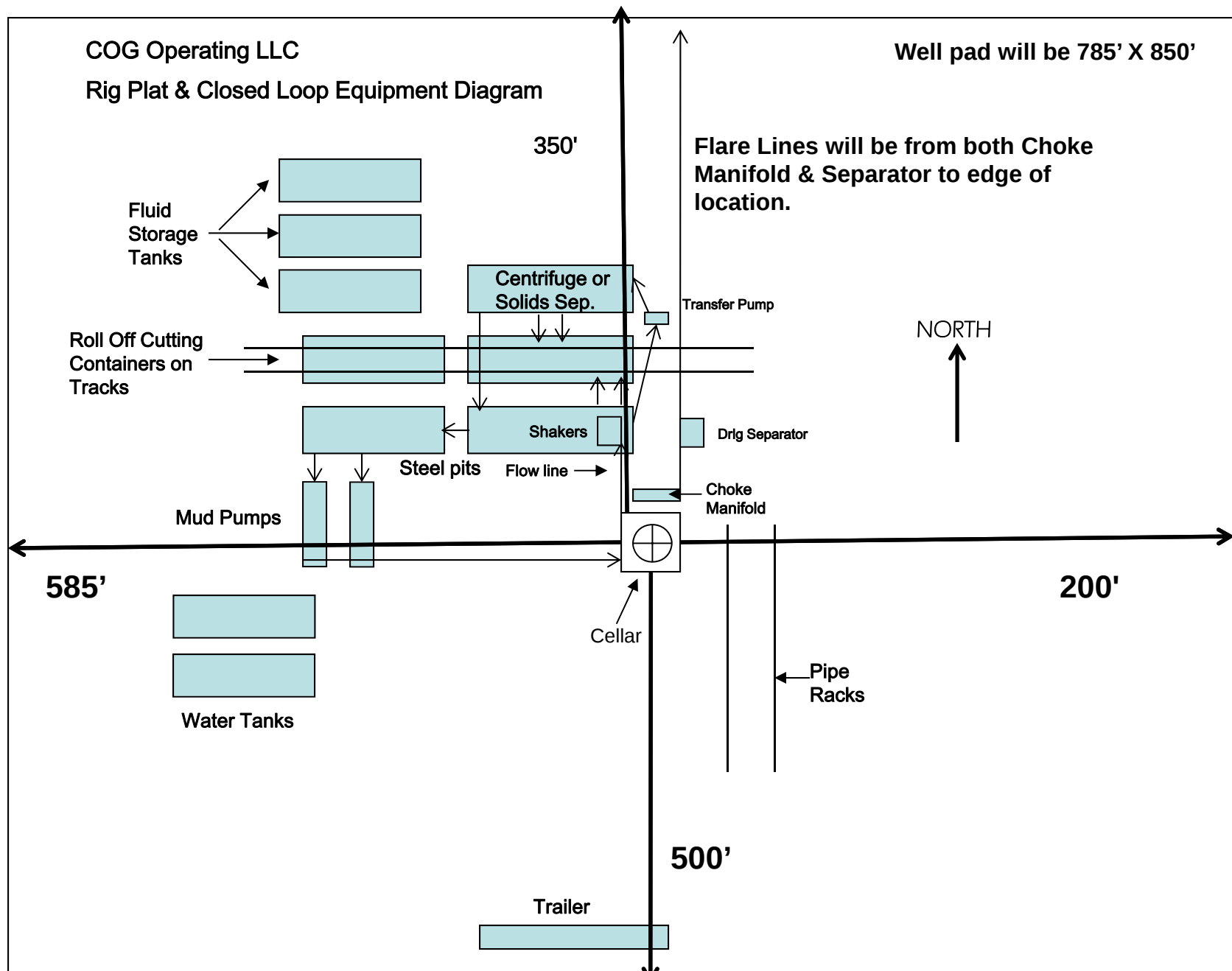


Exhibit 1

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

DELAWARE BASIN WEST

ATLAS PROSPECT (NM-W)

THUNDERDOME PROJECT

***THUNDERDOME FED COM #705H**

OWB

PWP0

Anticollision Report

10 July, 2023

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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	7/10/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	24,799.9	PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction rev.5	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
THUNDERDOME PROJECT						
*THUNDERDOME FED COM #521H - OWB - PWP0	1,800.0	1,800.0	192.1	179.5	15.275	CC, ES
*THUNDERDOME FED COM #521H - OWB - PWP0	1,900.0	1,897.2	194.1	181.3	15.095	SF
*THUNDERDOME FED COM #522H - OWB - PWP0	7,494.6	7,449.0	319.5	278.6	7.807	CC
*THUNDERDOME FED COM #522H - OWB - PWP0	9,600.0	9,554.3	319.7	276.9	7.474	ES
*THUNDERDOME FED COM #522H - OWB - PWP0	24,799.9	23,466.8	1,227.4	1,006.5	5.557	SF
*THUNDERDOME FED COM #523H - OWB - PWP0	1,800.0	1,800.0	1,466.9	1,454.3	116.645	CC
*THUNDERDOME FED COM #523H - OWB - PWP0	1,900.0	1,874.8	1,467.0	1,454.1	114.458	ES
*THUNDERDOME FED COM #523H - OWB - PWP0	7,400.0	6,984.6	1,964.7	1,912.7	37.766	SF
*THUNDERDOME FED COM #701H - OWB - PWP0	1,500.0	1,500.0	120.0	108.3	10.227	CC, ES
*THUNDERDOME FED COM #701H - OWB - PWP0	1,600.0	1,597.5	121.1	109.0	10.068	SF
*THUNDERDOME FED COM #702H - OWB - PWP0	1,800.0	1,800.0	89.9	77.3	7.150	CC, ES
*THUNDERDOME FED COM #702H - OWB - PWP0	1,900.0	1,900.0	90.8	78.0	7.071	SF
*THUNDERDOME FED COM #703H - OWB - PWP0	1,800.0	1,800.0	60.0	47.4	4.769	CC, ES
*THUNDERDOME FED COM #703H - OWB - PWP0	1,900.0	1,900.0	60.9	48.1	4.740	SF
*THUNDERDOME FED COM #704H - OWB - PWP0	1,800.0	1,800.0	30.0	17.4	2.386	CC, ES, SF
*THUNDERDOME FED COM #706H - OWB - PWP0	7,494.6	7,431.5	568.7	529.6	14.541	CC
*THUNDERDOME FED COM #706H - OWB - PWP0	24,799.9	24,469.4	615.1	400.1	2.861	ES, SF
*THUNDERDOME FED COM #707H - OWB - PWP0	7,494.6	7,466.2	1,103.8	1,057.9	24.015	CC
*THUNDERDOME FED COM #707H - OWB - PWP0	24,799.9	24,750.1	1,104.1	893.6	5.245	ES, SF
*THUNDERDOME FED COM #708H - OWB - PWP0	3,694.8	3,458.8	1,304.2	1,285.0	67.849	CC
*THUNDERDOME FED COM #708H - OWB - PWP0	3,700.0	3,462.7	1,304.2	1,285.0	67.752	ES
*THUNDERDOME FED COM #708H - OWB - PWP0	24,799.9	24,486.5	1,626.0	1,409.5	7.509	SF
*THUNDERDOME FED COM #709H - OWB - PWP0	2,557.6	2,460.4	1,395.5	1,381.0	96.169	CC, ES
*THUNDERDOME FED COM #709H - OWB - PWP0	7,400.0	7,036.2	1,763.3	1,712.7	34.825	SF
*THUNDERDOME FED COM #710H - OWB - PWP0	1,800.0	1,800.0	1,451.8	1,439.2	115.447	CC
*THUNDERDOME FED COM #710H - OWB - PWP0	2,000.0	1,945.5	1,452.0	1,439.0	111.250	ES
*THUNDERDOME FED COM #710H - OWB - PWP0	7,400.0	6,985.0	1,917.0	1,864.7	36.670	SF
*THUNDERDOME FED COM 501H - OWB - PWP0	1,800.0	1,800.0	174.9	162.4	13.910	CC, ES
*THUNDERDOME FED COM 501H - OWB - PWP0	1,900.0	1,900.3	176.1	163.3	13.708	SF
*THUNDERDOME FED COM 502H - OWB - PWP0	1,800.0	1,800.0	161.6	149.0	12.847	CC, ES
*THUNDERDOME FED COM 502H - OWB - PWP0	24,799.9	23,106.5	1,856.1	1,647.5	8.897	SF
*THUNDERDOME FED COM 503H - OWB - PWP0	7,494.6	7,457.2	257.3	214.7	6.032	CC
*THUNDERDOME FED COM 503H - OWB - PWP0	9,300.0	9,262.6	257.5	213.4	5.835	ES
*THUNDERDOME FED COM 503H - OWB - PWP0	9,400.0	9,357.8	258.7	214.3	5.829	SF
*THUNDERDOME FED COM 504H - OWB - PWP0	1,800.0	1,800.0	1,407.6	1,395.0	111.931	CC
*THUNDERDOME FED COM 504H - OWB - PWP0	1,900.0	1,873.8	1,407.8	1,394.9	109.788	ES
*THUNDERDOME FED COM 504H - OWB - PWP0	9,400.0	9,350.0	1,530.8	1,477.4	28.691	SF

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
THUNDERDOME PROJECT						
*THUNDERDOME FED COM 505H - OWB - PWP0	1,800.0	1,800.0	1,437.2	1,424.7	114.287	CC
*THUNDERDOME FED COM 505H - OWB - PWP0	1,900.0	1,872.8	1,437.4	1,424.6	112.118	ES
*THUNDERDOME FED COM 505H - OWB - PWP0	7,400.0	6,989.1	1,952.3	1,900.1	37.377	SF

TD Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
THUNDERDOME PROJECT						
*THUNDERDOME FED COM #521H - OWB - PWP0	24,799.9	23,536.5				Out of Range @TD
*THUNDERDOME FED COM #522H - OWB - PWP0	24,799.9	23,466.8	1,227.4	1,006.5	5.557	SF
*THUNDERDOME FED COM #523H - OWB - PWP0	24,799.9	23,558.2				Out of Range @TD
*THUNDERDOME FED COM #701H - OWB - PWP0	24,799.9	24,838.9				Out of Range @TD
*THUNDERDOME FED COM #702H - OWB - PWP0	24,799.9	24,623.9	1,548.4	1,337.0	7.324	
*THUNDERDOME FED COM #703H - OWB - PWP0	24,799.9	24,720.5	1,026.0	816.5	4.898	
*THUNDERDOME FED COM #704H - OWB - PWP0	24,799.9	24,571.8	540.4	339.2	2.685	
*THUNDERDOME FED COM #706H - OWB - PWP0	24,799.9	24,469.4	615.1	400.1	2.861	ES, SF
*THUNDERDOME FED COM #707H - OWB - PWP0	24,799.9	24,750.1	1,104.1	893.6	5.245	ES, SF
*THUNDERDOME FED COM #708H - OWB - PWP0	24,799.9	24,486.5	1,626.0	1,409.5	7.509	SF
*THUNDERDOME FED COM #709H - OWB - PWP0	24,799.9	24,802.4				Out of Range @TD
*THUNDERDOME FED COM #710H - OWB - PWP0	24,799.9	24,734.5				Out of Range @TD
*THUNDERDOME FED COM 501H - OWB - PWP0	24,799.9	23,190.7				Out of Range @TD
*THUNDERDOME FED COM 502H - OWB - PWP0	24,799.9	23,106.5	1,856.1	1,647.5	8.897	SF
*THUNDERDOME FED COM 503H - OWB - PWP0	24,799.9	23,140.7	1,645.4	1,423.3	7.410	
*THUNDERDOME FED COM 504H - OWB - PWP0	24,799.9	22,854.8				Out of Range @TD
*THUNDERDOME FED COM 505H - OWB - PWP0	24,799.9	23,061.6				Out of Range @TD

Offset Design: THUNDERDOME PROJECT - *THUNDERDOME FED COM #521H - 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)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	-38.66	150.0	+N/-S (usft) -120.0	192.1	185.7	6.43	29.880	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #521H - 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)			
100.0	100.0	100.0	100.0	3.2	3.2	-38.66	150.0	-120.0	192.1	185.2	6.89	27.871	
200.0	200.0	200.0	200.0	3.5	3.5	-38.66	150.0	-120.0	192.1	184.8	7.33	26.213	
300.0	300.0	300.0	300.0	3.7	3.7	-38.66	150.0	-120.0	192.1	184.4	7.74	24.814	
400.0	400.0	400.0	400.0	3.9	3.9	-38.66	150.0	-120.0	192.1	184.0	8.14	23.612	
500.0	500.0	500.0	500.0	4.1	4.1	-38.66	150.0	-120.0	192.1	183.6	8.51	22.563	
600.0	600.0	600.0	600.0	4.2	4.2	-38.66	150.0	-120.0	192.1	183.2	8.88	21.638	
700.0	700.0	700.0	700.0	4.4	4.4	-38.66	150.0	-120.0	192.1	182.9	9.23	20.813	
800.0	800.0	800.0	800.0	4.6	4.6	-38.66	150.0	-120.0	192.1	182.5	9.57	20.071	
900.0	900.0	900.0	900.0	4.8	4.8	-38.66	150.0	-120.0	192.1	182.2	9.90	19.400	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-38.66	150.0	-120.0	192.1	181.9	10.22	18.787	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-38.66	150.0	-120.0	192.1	181.6	10.54	18.226	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-38.66	150.0	-120.0	192.1	181.2	10.85	17.708	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	-38.66	150.0	-120.0	192.1	180.9	11.15	17.230	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-38.66	150.0	-120.0	192.1	180.6	11.44	16.785	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	-38.66	150.0	-120.0	192.1	180.4	11.73	16.370	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	-38.66	150.0	-120.0	192.1	180.1	12.02	15.982	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	-38.66	150.0	-120.0	192.1	179.8	12.30	15.618	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	-38.66	150.0	-120.0	192.1	179.5	12.58	15.275 CC, ES	
1,900.0	1,900.0	1,897.2	1,897.2	6.3	6.3	-174.00	149.9	-121.2	194.1	181.3	12.86	15.095 SF	
2,000.0	1,999.9	1,994.0	1,993.9	6.4	6.4	-174.97	149.7	-124.9	200.2	187.1	13.13	15.250	
2,100.0	2,099.7	2,090.2	2,089.9	6.6	6.6	-176.46	149.2	-131.0	210.5	197.1	13.42	15.687	
2,200.0	2,199.3	2,185.5	2,184.8	6.8	6.8	-178.31	148.6	-139.4	225.2	211.4	13.74	16.387	
2,300.0	2,298.7	2,279.8	2,278.5	6.9	7.0	179.64	147.9	-150.0	242.9	228.8	14.06	17.280	
2,400.0	2,398.2	2,373.2	2,371.0	7.1	7.2	177.51	147.0	-162.8	262.6	248.2	14.40	18.236	
2,500.0	2,497.6	2,465.5	2,462.2	7.4	7.4	175.35	146.0	-177.7	284.3	269.5	14.77	19.251	
2,600.0	2,597.1	2,556.8	2,551.9	7.6	7.7	173.23	144.8	-194.5	308.1	292.9	15.16	20.322	
2,700.0	2,696.5	2,650.1	2,643.1	7.8	8.0	171.14	143.5	-213.7	333.8	318.2	15.59	21.402	
2,800.0	2,795.9	2,745.6	2,736.6	8.1	8.2	-173.25	142.1	-233.5	360.5	344.4	16.07	22.433	
2,900.0	2,895.2	2,840.4	2,829.3	8.4	8.5	-160.76	140.7	-253.1	388.6	372.0	16.59	23.432	
3,000.0	2,994.2	2,934.4	2,921.3	8.6	8.8	-152.22	139.3	-272.6	418.4	401.3	17.14	24.415	
3,100.0	3,092.8	3,027.4	3,012.2	8.9	9.1	-148.30	138.0	-291.9	450.1	432.4	17.67	25.464	
3,200.0	3,191.3	3,120.1	3,102.9	9.1	9.4	-150.62	136.6	-311.1	482.8	464.5	18.26	26.434	
3,300.0	3,289.8	3,212.9	3,193.6	9.4	9.8	-152.65	135.3	-330.4	516.2	497.3	18.87	27.354	
3,400.0	3,388.3	3,305.6	3,284.3	9.7	10.1	-154.45	133.9	-349.6	550.1	530.6	19.50	28.212	
3,500.0	3,486.8	3,398.3	3,375.0	10.0	10.4	-156.04	132.6	-368.8	584.4	564.3	20.15	29.010	
3,600.0	3,585.2	3,491.0	3,465.7	10.4	10.8	-157.45	131.3	-388.1	619.1	598.3	20.81	29.750	
3,700.0	3,683.7	3,583.7	3,556.4	10.7	11.1	-158.72	129.9	-407.3	654.2	632.7	21.49	30.437	
3,800.0	3,782.2	3,676.5	3,647.1	11.0	11.5	-159.86	128.6	-426.5	689.4	667.2	22.19	31.073	
3,900.0	3,880.7	3,769.2	3,737.8	11.4	11.9	-160.89	127.2	-445.8	724.9	702.0	22.89	31.663	
4,000.0	3,979.2	3,861.9	3,828.5	11.8	12.2	-161.83	125.9	-465.0	760.6	737.0	23.61	32.210	
4,100.0	4,077.6	3,954.6	3,919.2	12.1	12.6	-162.68	124.5	-484.2	796.4	772.1	24.34	32.718	
4,200.0	4,176.1	4,047.3	4,009.9	12.5	13.0	-163.46	123.2	-503.4	832.4	807.3	25.08	33.189	
4,300.0	4,274.6	4,140.0	4,100.6	12.9	13.4	-164.18	121.8	-522.7	868.5	842.7	25.83	33.627	
4,400.0	4,373.1	4,232.8	4,191.2	13.3	13.8	-164.84	120.5	-541.9	904.7	878.1	26.58	34.034	
4,500.0	4,471.6	4,325.5	4,281.9	13.6	14.1	-165.45	119.2	-561.1	941.0	913.7	27.35	34.413	
4,600.0	4,570.0	4,418.2	4,372.6	14.0	14.5	-166.01	117.8	-580.4	977.4	949.3	28.11	34.767	
4,700.0	4,668.5	4,510.9	4,463.3	14.4	14.9	-166.54	116.5	-599.6	1,013.9	985.0	28.89	35.097	
4,800.0	4,767.0	4,603.6	4,554.0	14.8	15.3	-167.03	115.1	-618.8	1,050.5	1,020.8	29.67	35.405	
4,900.0	4,865.5	4,696.4	4,644.7	15.2	15.7	-167.48	113.8	-638.1	1,087.1	1,056.6	30.46	35.694	
5,000.0	4,964.0	4,789.1	4,735.4	15.6	16.1	-167.91	112.4	-657.3	1,123.7	1,092.5	31.25	35.964	
5,100.0	5,062.4	4,881.8	4,826.1	16.0	16.5	-168.31	111.1	-676.5	1,160.5	1,128.4	32.04	36.218	
5,200.0	5,160.9	4,974.5	4,916.8	16.4	17.0	-168.68	109.7	-695.8	1,197.2	1,164.4	32.84	36.456	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #521H - 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		
5,300.0	5,259.4	5,067.2	5,007.5	16.9	17.4	-169.04	108.4	-715.0	1,234.0	1,200.4	33.64	36.680			
5,400.0	5,357.9	5,160.0	5,098.2	17.3	17.8	-169.37	107.0	-734.2	1,270.9	1,236.4	34.45	36.891			
5,500.0	5,456.4	5,252.7	5,188.9	17.7	18.2	-169.68	105.7	-753.4	1,307.7	1,272.5	35.26	37.090			
5,600.0	5,554.8	5,345.4	5,279.6	18.1	18.6	-169.98	104.4	-772.7	1,344.7	1,308.6	36.07	37.278			
5,700.0	5,653.3	5,438.1	5,370.3	18.5	19.0	-170.26	103.0	-791.9	1,381.6	1,344.7	36.89	37.455			
5,800.0	5,751.8	5,530.8	5,460.9	18.9	19.4	-170.53	101.7	-811.1	1,418.6	1,380.9	37.71	37.622			
5,900.0	5,850.3	5,623.5	5,551.6	19.4	19.8	-170.78	100.3	-830.4	1,455.6	1,417.0	38.53	37.781			
6,000.0	5,948.8	5,716.3	5,642.3	19.8	20.3	-171.02	99.0	-849.6	1,492.6	1,453.2	39.35	37.931			
6,100.0	6,047.3	5,809.0	5,733.0	20.2	20.7	-171.25	97.6	-868.8	1,529.6	1,489.4	40.18	38.074			
6,200.0	6,145.7	5,901.7	5,823.7	20.7	21.1	-171.46	96.3	-888.1	1,566.7	1,525.7	41.00	38.209			
6,300.0	6,244.2	5,994.4	5,914.4	21.1	21.5	-171.67	94.9	-907.3	1,603.7	1,561.9	41.83	38.337			
6,400.0	6,342.7	6,087.1	6,005.1	21.5	21.9	-171.87	93.6	-926.5	1,640.8	1,598.2	42.66	38.459			
6,500.0	6,441.2	6,179.9	6,095.9	21.9	22.4	-172.09	92.3	-945.8	1,677.7	1,634.2	43.48	38.586			
6,600.0	6,540.0	6,273.3	6,187.2	22.3	22.8	-172.31	90.9	-965.1	1,713.2	1,668.9	44.31	38.664			
6,700.0	6,639.0	6,367.3	6,279.1	22.8	23.2	-172.52	89.5	-984.6	1,747.1	1,701.9	45.14	38.707			
6,800.0	6,738.3	6,461.9	6,371.6	23.2	23.6	-172.71	88.2	-1,004.2	1,779.3	1,733.4	45.96	38.717			
6,900.0	6,837.7	6,557.0	6,464.7	23.6	24.1	-172.88	86.8	-1,024.0	1,809.9	1,763.2	46.77	38.699			
7,000.0	6,937.4	6,680.4	6,585.5	23.9	24.7	-173.07	85.0	-1,048.9	1,838.5	1,790.6	47.82	38.445			
7,100.0	7,037.1	6,822.9	6,725.7	24.3	25.3	-173.24	83.2	-1,074.6	1,863.1	1,814.2	48.96	38.054			
7,200.0	7,137.0	6,967.7	6,868.7	24.6	25.9	-173.39	81.7	-1,097.2	1,883.7	1,833.7	50.04	37.641			
7,300.0	7,236.9	7,114.4	7,014.1	24.9	26.5	-173.50	80.3	-1,116.3	1,900.1	1,849.0	51.06	37.213			
7,400.0	7,336.9	7,262.5	7,161.4	25.2	27.1	-173.58	79.2	-1,131.9	1,912.2	1,860.2	51.98	36.788			
7,500.0	7,436.9	7,411.7	7,310.1	25.2	27.7	-86.88	78.4	-1,143.7	1,920.3	1,867.6	52.66	36.466			
7,600.0	7,536.9	7,561.4	7,459.7	25.3	28.2	-86.91	77.9	-1,151.7	1,925.6	1,872.4	53.23	36.175			
7,700.0	7,636.9	7,711.5	7,609.6	25.3	28.6	-86.92	77.6	-1,155.8	1,928.3	1,874.6	53.69	35.917			
7,800.0	7,736.9	7,838.7	7,736.9	25.3	28.8	-86.93	77.5	-1,156.4	1,928.7	1,874.9	53.84	35.820			
7,900.0	7,836.9	7,938.7	7,836.9	25.4	28.8	-86.93	77.5	-1,156.4	1,928.7	1,874.8	53.92	35.769			
8,000.0	7,936.9	8,038.7	7,936.9	25.4	28.8	-86.93	77.5	-1,156.4	1,928.7	1,874.7	53.98	35.728			
8,100.0	8,036.9	8,138.7	8,036.9	25.4	28.9	-86.93	77.5	-1,156.4	1,928.7	1,874.7	54.05	35.687			
8,200.0	8,136.9	8,238.7	8,136.9	25.5	28.9	-86.93	77.5	-1,156.4	1,928.7	1,874.6	54.11	35.646			
8,300.0	8,236.9	8,338.7	8,236.9	25.5	28.9	-86.93	77.5	-1,156.4	1,928.7	1,874.5	54.17	35.604			
8,400.0	8,336.9	8,438.7	8,336.9	25.5	29.0	-86.93	77.5	-1,156.4	1,928.7	1,874.5	54.23	35.563			
8,500.0	8,436.9	8,538.7	8,436.9	25.6	29.0	-86.93	77.5	-1,156.4	1,928.7	1,874.4	54.30	35.521			
8,600.0	8,536.9	8,638.7	8,536.9	25.6	29.0	-86.93	77.5	-1,156.4	1,928.7	1,874.3	54.36	35.479			
8,700.0	8,636.9	8,738.7	8,636.9	25.7	29.0	-86.93	77.5	-1,156.4	1,928.7	1,874.3	54.43	35.437			
8,800.0	8,736.9	8,838.7	8,736.9	25.7	29.1	-86.93	77.5	-1,156.4	1,928.7	1,874.2	54.49	35.395			
8,900.0	8,836.9	8,938.7	8,836.9	25.7	29.1	-86.93	77.5	-1,156.4	1,928.7	1,874.2	54.56	35.353			
9,000.0	8,936.9	9,038.7	8,936.9	25.8	29.1	-86.93	77.5	-1,156.4	1,928.7	1,874.1	54.62	35.310			
9,100.0	9,036.9	9,138.7	9,036.9	25.8	29.2	-86.93	77.5	-1,156.4	1,928.7	1,874.0	54.69	35.268			
9,200.0	9,136.9	9,238.7	9,136.9	25.8	29.2	-86.93	77.5	-1,156.4	1,928.7	1,874.0	54.75	35.225			
9,300.0	9,236.9	9,338.7	9,236.9	25.9	29.2	-86.93	77.5	-1,156.4	1,928.7	1,873.9	54.82	35.182			
9,400.0	9,336.9	9,438.7	9,336.9	25.9	29.3	-86.93	77.5	-1,156.4	1,928.7	1,873.8	54.89	35.139			
9,500.0	9,436.9	9,538.7	9,436.9	25.9	29.3	-86.93	77.5	-1,156.4	1,928.7	1,873.8	54.96	35.096			
9,600.0	9,536.9	9,638.7	9,536.9	26.0	29.3	-86.93	77.5	-1,156.4	1,928.7	1,873.7	55.02	35.054			
9,610.0	9,546.9	9,648.7	9,546.9	26.0	29.3	-86.93	77.5	-1,156.4	1,928.7	1,873.7	55.03	35.050			
9,700.0	9,636.9	9,713.6	9,611.7	26.0	29.3	-86.90	78.6	-1,156.5	1,929.1	1,874.0	55.10	35.008			
9,800.0	9,736.9	9,770.9	9,668.7	26.1	29.4	-86.71	84.8	-1,157.5	1,931.5	1,876.3	55.21	34.985			
9,900.0	9,836.9	9,826.5	9,723.0	26.1	29.4	-86.38	96.2	-1,159.4	1,936.2	1,880.9	55.30	35.011			
10,000.0	9,936.9	9,879.3	9,773.4	26.1	29.5	-85.92	111.8	-1,162.0	1,943.3	1,888.0	55.38	35.089			
10,100.0	10,036.9	9,928.8	9,819.1	26.2	29.5	-85.38	130.5	-1,165.0	1,953.1	1,897.7	55.44	35.226			
10,200.0	10,136.9	9,974.7	9,859.9	26.2	29.5	-84.78	151.2	-1,168.4	1,965.7	1,910.2	55.49	35.425			
10,300.0	10,236.9	10,016.7	9,895.6	26.2	29.6	-84.15	173.0	-1,172.0	1,981.3	1,925.8	55.50	35.701			

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #522H - 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)			
0.0	0.0	0.0	0.0	3.0	3.0	80.54	221.6	1,330.0	1,348.4	1,341.9	6.43	209.736	
100.0	100.0	100.0	100.0	3.2	3.2	80.54	221.6	1,330.0	1,348.4	1,341.5	6.89	195.633	
200.0	200.0	200.0	200.0	3.5	3.5	80.54	221.6	1,330.0	1,348.4	1,341.0	7.33	183.998	
300.0	300.0	300.0	300.0	3.7	3.7	80.54	221.6	1,330.0	1,348.4	1,340.6	7.74	174.178	
400.0	400.0	400.0	400.0	3.9	3.9	80.54	221.6	1,330.0	1,348.4	1,340.2	8.14	165.739	
500.0	500.0	500.0	500.0	4.1	4.1	80.54	221.6	1,330.0	1,348.4	1,339.9	8.51	158.379	
600.0	600.0	600.0	600.0	4.2	4.2	80.54	221.6	1,330.0	1,348.4	1,339.5	8.88	151.884	
700.0	700.0	700.0	700.0	4.4	4.4	80.54	221.6	1,330.0	1,348.4	1,339.1	9.23	146.094	
800.0	800.0	800.0	800.0	4.6	4.6	80.54	221.6	1,330.0	1,348.4	1,338.8	9.57	140.888	
900.0	900.0	900.0	900.0	4.8	4.8	80.54	221.6	1,330.0	1,348.4	1,338.5	9.90	136.173	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	80.54	221.6	1,330.0	1,348.4	1,338.1	10.22	131.874	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	80.54	221.6	1,330.0	1,348.4	1,337.8	10.54	127.933	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	80.54	221.6	1,330.0	1,348.4	1,337.5	10.85	124.302	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	80.54	221.6	1,330.0	1,348.4	1,337.2	11.15	120.941	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	80.54	221.6	1,330.0	1,348.4	1,336.9	11.44	117.819	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	80.54	221.6	1,330.0	1,348.4	1,336.6	11.73	114.907	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	80.54	221.6	1,330.0	1,348.4	1,336.4	12.02	112.183	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	80.54	221.6	1,330.0	1,348.4	1,336.1	12.30	109.627	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	80.54	221.6	1,330.0	1,348.4	1,335.8	12.58	107.221	
1,900.0	1,900.0	1,948.3	1,948.2	6.3	6.3	-54.51	220.1	1,327.6	1,345.8	1,332.9	12.92	104.180	
2,000.0	1,999.9	2,095.9	2,095.6	6.4	6.6	-54.67	215.5	1,320.3	1,338.2	1,324.9	13.24	101.049	
2,100.0	2,099.7	2,242.2	2,241.2	6.6	6.9	-54.93	208.0	1,308.4	1,325.5	1,311.9	13.60	97.466	
2,200.0	2,199.3	2,369.8	2,367.7	6.8	7.1	-55.28	199.2	1,294.2	1,308.1	1,294.2	13.91	94.047	
2,300.0	2,298.7	2,467.9	2,464.9	6.9	7.3	-55.43	192.0	1,282.6	1,289.3	1,275.0	14.22	90.647	
2,400.0	2,398.2	2,566.1	2,562.1	7.1	7.5	-55.59	184.7	1,271.0	1,270.4	1,255.9	14.57	87.181	
2,500.0	2,497.6	2,664.3	2,659.3	7.4	7.8	-55.74	177.5	1,259.5	1,251.6	1,236.7	14.94	83.756	
2,600.0	2,597.1	2,762.4	2,756.5	7.6	8.0	-55.91	170.2	1,247.9	1,232.8	1,217.5	15.34	80.393	
2,700.0	2,696.5	2,860.6	2,853.7	7.8	8.3	-56.07	163.0	1,236.3	1,214.1	1,198.3	15.75	77.083	
2,800.0	2,795.9	2,958.5	2,950.6	8.1	8.6	-38.80	155.8	1,224.7	1,193.9	1,177.7	16.21	73.668	
2,900.0	2,895.2	3,055.7	3,047.0	8.4	8.9	-24.37	148.6	1,213.3	1,170.7	1,154.0	16.69	70.127	
3,000.0	2,994.2	3,152.3	3,142.6	8.6	9.2	-13.67	141.5	1,201.9	1,144.6	1,127.4	17.22	66.460	
3,100.0	3,092.8	3,247.9	3,237.3	8.9	9.5	-7.35	134.4	1,190.6	1,115.6	1,097.9	17.74	62.878	
3,200.0	3,191.3	3,343.3	3,331.8	9.1	9.8	-7.20	127.4	1,179.3	1,085.8	1,067.5	18.31	59.297	
3,300.0	3,289.8	3,436.7	3,424.2	9.4	10.1	-7.04	120.5	1,168.3	1,056.0	1,037.1	18.88	55.924	
3,400.0	3,388.3	3,524.8	3,511.5	9.7	10.5	-6.89	114.3	1,158.4	1,026.7	1,007.2	19.48	52.718	
3,500.0	3,486.8	3,613.3	3,599.4	10.0	10.8	-6.75	108.4	1,148.9	998.1	978.0	20.07	49.732	
3,600.0	3,585.2	3,700.0	3,685.4	10.4	11.1	-6.62	103.0	1,140.3	970.2	949.5	20.67	46.934	
3,700.0	3,683.7	3,791.6	3,776.4	10.7	11.4	-6.50	97.6	1,131.7	943.0	921.7	21.29	44.286	
3,800.0	3,782.2	3,881.2	3,865.6	11.0	11.7	-6.39	92.8	1,123.9	916.5	894.6	21.92	41.813	
3,900.0	3,880.7	3,971.3	3,955.3	11.4	12.0	-6.28	88.3	1,116.7	890.7	868.1	22.55	39.495	
4,000.0	3,979.2	4,061.7	4,045.3	11.8	12.3	-6.20	84.1	1,110.0	865.6	842.4	23.19	37.324	
4,100.0	4,077.6	4,152.4	4,135.8	12.1	12.6	-6.12	80.3	1,103.9	841.2	817.3	23.83	35.293	
4,200.0	4,176.1	4,243.5	4,226.6	12.5	12.9	-6.06	76.9	1,098.5	817.5	793.0	24.48	33.393	
4,300.0	4,274.6	4,334.9	4,317.9	12.9	13.2	-6.02	73.8	1,093.6	794.5	769.4	25.13	31.617	
4,400.0	4,373.1	4,426.6	4,409.4	13.3	13.5	-6.00	71.1	1,089.3	772.3	746.5	25.78	29.957	
4,500.0	4,471.6	4,518.6	4,501.3	13.6	13.8	-6.00	68.8	1,085.6	750.7	724.3	26.43	28.407	
4,600.0	4,570.0	4,610.9	4,593.6	14.0	14.1	-6.02	66.9	1,082.6	729.9	702.9	27.07	26.961	
4,700.0	4,668.5	4,703.5	4,686.1	14.4	14.3	-6.07	65.4	1,080.1	709.9	682.1	27.71	25.613	
4,800.0	4,767.0	4,796.4	4,779.0	14.8	14.6	-6.14	64.3	1,078.3	690.5	662.2	28.35	24.359	
4,900.0	4,865.5	4,889.5	4,872.1	15.2	14.8	-6.25	63.6	1,077.2	671.9	642.9	28.97	23.196	
5,000.0	4,964.0	4,982.9	4,965.5	15.6	15.0	-6.38	63.2	1,076.6	654.0	624.5	29.55	22.132	
5,100.0	5,062.4	5,079.9	5,062.4	16.0	15.1	-6.55	63.2	1,076.6	636.7	606.7	30.05	21.191	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #522H - 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)			
5,200.0	5,160.9	5,178.3	5,160.9	16.4	15.1	-6.73	63.2	1,076.6	619.5	589.0	30.52	20.297	
5,300.0	5,259.4	5,276.8	5,259.4	16.9	15.2	-6.93	63.2	1,076.6	602.2	571.2	31.00	19.429	
5,400.0	5,357.9	5,375.3	5,357.9	17.3	15.2	-7.13	63.2	1,076.6	585.0	553.5	31.48	18.585	
5,500.0	5,456.4	5,473.8	5,456.4	17.7	15.3	-7.35	63.2	1,076.6	567.8	535.8	31.96	17.763	
5,600.0	5,554.8	5,572.3	5,554.8	18.1	15.3	-7.58	63.2	1,076.6	550.6	518.1	32.45	16.965	
5,700.0	5,653.3	5,670.8	5,653.3	18.5	15.4	-7.83	63.2	1,076.6	533.3	500.4	32.95	16.189	
5,800.0	5,751.8	5,769.2	5,751.8	18.9	15.4	-8.09	63.2	1,076.6	516.1	482.7	33.44	15.434	
5,900.0	5,850.3	5,867.7	5,850.3	19.4	15.5	-8.37	63.2	1,076.6	498.9	465.0	33.94	14.701	
6,000.0	5,948.8	5,966.2	5,948.8	19.8	15.5	-8.67	63.2	1,076.6	481.8	447.3	34.44	13.989	
6,100.0	6,047.3	6,064.7	6,047.3	20.2	15.6	-8.99	63.2	1,076.6	464.6	429.7	34.94	13.296	
6,200.0	6,145.7	6,163.2	6,145.7	20.7	15.6	-9.34	63.2	1,076.6	447.5	412.0	35.45	12.624	
6,300.0	6,244.2	6,261.6	6,244.2	21.1	15.7	-9.72	63.2	1,076.6	430.3	394.4	35.95	11.970	
6,400.0	6,342.7	6,360.1	6,342.7	21.5	15.7	-10.12	63.2	1,076.6	413.2	376.8	36.45	11.335	
6,500.0	6,441.2	6,458.6	6,441.2	21.9	15.8	-10.54	63.2	1,076.6	396.3	359.4	36.93	10.732	
6,600.0	6,540.0	6,557.4	6,540.0	22.3	15.8	-10.94	63.2	1,076.6	381.0	343.6	37.42	10.181	
6,700.0	6,639.0	6,656.4	6,639.0	22.8	15.9	-11.32	63.2	1,076.6	367.4	329.5	37.91	9.692	
6,800.0	6,738.3	6,755.7	6,738.3	23.2	15.9	-11.68	63.2	1,076.6	355.5	317.1	38.37	9.263	
6,900.0	6,837.7	6,855.2	6,837.7	23.6	16.0	-12.01	63.2	1,076.6	345.3	306.4	38.83	8.891	
7,000.0	6,937.4	6,954.8	6,937.4	23.9	16.0	-12.30	63.2	1,076.6	336.8	297.5	39.27	8.575	
7,100.0	7,037.1	7,054.5	7,037.1	24.3	16.1	-12.54	63.2	1,076.6	330.0	290.3	39.70	8.312	
7,200.0	7,137.0	7,154.4	7,137.0	24.6	16.1	-12.73	63.2	1,076.6	324.9	284.8	40.10	8.102	
7,300.0	7,236.9	7,254.3	7,236.9	24.9	16.2	-12.86	63.2	1,076.6	321.6	281.1	40.48	7.943	
7,400.0	7,336.9	7,354.3	7,336.9	25.2	16.3	-12.93	63.2	1,076.6	319.9	279.1	40.81	7.838	
7,494.6	7,431.5	7,449.0	7,431.5	25.2	16.3	-12.94	63.2	1,076.6	319.5	278.6	40.92	7.807 CC	
7,500.0	7,436.9	7,454.3	7,436.9	25.2	16.3	73.82	63.2	1,076.6	319.7	278.8	40.93	7.811	
7,600.0	7,536.9	7,554.3	7,536.9	25.3	16.4	73.82	63.2	1,076.6	319.7	278.7	41.01	7.795	
7,700.0	7,636.9	7,654.3	7,636.9	25.3	16.4	73.82	63.2	1,076.6	319.7	278.6	41.10	7.779	
7,800.0	7,736.9	7,754.3	7,736.9	25.3	16.5	73.82	63.2	1,076.6	319.7	278.5	41.18	7.763	
7,900.0	7,836.9	7,854.3	7,836.9	25.4	16.5	73.82	63.2	1,076.6	319.7	278.4	41.26	7.747	
8,000.0	7,936.9	7,954.3	7,936.9	25.4	16.6	73.82	63.2	1,076.6	319.7	278.3	41.35	7.731	
8,100.0	8,036.9	8,054.3	8,036.9	25.4	16.7	73.82	63.2	1,076.6	319.7	278.3	41.44	7.715	
8,200.0	8,136.9	8,154.3	8,136.9	25.5	16.7	73.82	63.2	1,076.6	319.7	278.2	41.52	7.699	
8,300.0	8,236.9	8,254.3	8,236.9	25.5	16.8	73.82	63.2	1,076.6	319.7	278.1	41.61	7.683	
8,400.0	8,336.9	8,354.3	8,336.9	25.5	16.8	73.82	63.2	1,076.6	319.7	278.0	41.70	7.667	
8,500.0	8,436.9	8,454.3	8,436.9	25.6	16.9	73.82	63.2	1,076.6	319.7	277.9	41.78	7.651	
8,600.0	8,536.9	8,554.3	8,536.9	25.6	16.9	73.82	63.2	1,076.6	319.7	277.8	41.87	7.635	
8,700.0	8,636.9	8,654.3	8,636.9	25.7	17.0	73.82	63.2	1,076.6	319.7	277.7	41.96	7.619	
8,800.0	8,736.9	8,754.3	8,736.9	25.7	17.1	73.82	63.2	1,076.6	319.7	277.6	42.05	7.603	
8,900.0	8,836.9	8,854.3	8,836.9	25.7	17.1	73.82	63.2	1,076.6	319.7	277.6	42.14	7.587	
9,000.0	8,936.9	8,954.3	8,936.9	25.8	17.2	73.82	63.2	1,076.6	319.7	277.5	42.23	7.571	
9,100.0	9,036.9	9,054.3	9,036.9	25.8	17.2	73.82	63.2	1,076.6	319.7	277.4	42.32	7.555	
9,200.0	9,136.9	9,154.3	9,136.9	25.8	17.3	73.82	63.2	1,076.6	319.7	277.3	42.41	7.539	
9,300.0	9,236.9	9,254.3	9,236.9	25.9	17.3	73.82	63.2	1,076.6	319.7	277.2	42.50	7.522	
9,400.0	9,336.9	9,354.3	9,336.9	25.9	17.4	73.82	63.2	1,076.6	319.7	277.1	42.59	7.506	
9,500.0	9,436.9	9,454.3	9,436.9	25.9	17.5	73.82	63.2	1,076.6	319.7	277.0	42.68	7.490	
9,600.0	9,536.9	9,554.3	9,536.9	26.0	17.5	73.82	63.2	1,076.6	319.7	276.9	42.77	7.474 ES	
9,700.0	9,636.9	9,650.0	9,632.5	26.0	17.5	73.35	65.9	1,076.4	320.3	277.4	42.83	7.477	
9,800.0	9,736.9	9,735.1	9,716.2	26.1	17.5	70.84	80.3	1,075.3	324.3	281.6	42.69	7.596	
9,900.0	9,836.9	9,816.0	9,793.1	26.1	17.4	66.63	105.4	1,073.4	333.8	291.6	42.24	7.903	
10,000.0	9,936.9	9,888.6	9,858.4	26.1	17.3	61.63	136.9	1,070.9	351.4	309.9	41.51	8.464	
10,100.0	10,036.9	9,950.0	9,910.2	26.2	17.3	56.79	169.7	1,068.4	379.0	338.3	40.69	9.315	
10,200.0	10,136.9	10,000.0	9,949.5	26.2	17.2	52.64	200.5	1,066.0	417.4	377.4	39.98	10.440	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #522H - 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)			
10,300.0	10,236.9	10,050.0	9,986.1	26.2	17.2	48.46	234.5	1,063.4	465.9	426.5	39.37	11.834	
10,400.0	10,336.9	10,100.0	10,019.5	26.3	17.1	44.37	271.6	1,060.6	523.4	484.4	38.92	13.448	
10,500.0	10,436.9	10,128.6	10,037.1	26.3	17.1	42.12	294.0	1,058.8	588.1	549.1	38.98	15.088	
10,600.0	10,536.9	10,150.0	10,049.5	26.4	17.1	40.49	311.4	1,057.5	658.9	619.7	39.24	16.794	
10,700.0	10,636.9	10,183.9	10,067.8	26.4	17.1	38.00	339.8	1,055.3	734.3	694.9	39.39	18.641	
10,800.0	10,736.9	10,200.0	10,076.0	26.4	17.1	36.87	353.7	1,054.3	813.6	773.8	39.81	20.438	
10,900.0	10,836.8	10,226.9	10,088.6	26.5	17.1	30.93	377.3	1,052.4	894.3	854.1	40.19	22.250	
11,000.0	10,934.8	10,250.0	10,098.6	26.5	17.1	24.69	398.1	1,050.8	969.5	928.7	40.82	23.752	
11,100.0	11,028.1	10,276.4	10,109.0	26.5	17.1	20.49	422.3	1,049.0	1,036.9	995.4	41.52	24.973	
11,200.0	11,113.7	10,300.0	10,117.3	26.5	17.1	17.69	444.3	1,047.3	1,095.6	1,053.3	42.30	25.899	
11,300.0	11,189.1	10,350.0	10,131.9	26.5	17.1	15.47	492.0	1,043.6	1,144.9	1,101.9	42.98	26.637	
11,400.0	11,251.9	10,350.0	10,131.9	26.5	17.1	14.39	492.0	1,043.6	1,183.5	1,139.6	43.88	26.973	
11,500.0	11,300.4	10,400.0	10,142.2	26.6	17.2	13.33	540.8	1,039.9	1,211.0	1,166.5	44.57	27.170	
11,600.0	11,332.9	10,427.8	10,146.1	26.7	17.2	12.81	568.2	1,037.7	1,227.6	1,182.3	45.30	27.098	
11,700.0	11,348.6	10,450.0	10,148.2	26.7	17.2	12.60	590.2	1,036.1	1,232.8	1,186.8	45.98	26.814	
11,800.0	11,350.0	10,494.4	10,150.0	26.8	17.3	12.49	634.5	1,032.6	1,229.4	1,182.8	46.52	26.425	
11,900.0	11,350.0	10,579.4	10,150.0	27.0	17.4	12.26	719.3	1,027.4	1,228.1	1,181.0	47.04	26.105	
12,000.0	11,350.0	10,671.0	10,150.0	27.1	17.6	12.15	810.9	1,024.5	1,227.5	1,179.9	47.61	25.781	
12,051.2	11,350.0	10,719.3	10,150.0	27.2	17.7	12.14	859.2	1,024.2	1,227.4	1,179.5	47.92	25.612	
12,100.0	11,350.0	10,768.2	10,150.0	27.3	17.8	12.14	908.0	1,024.0	1,227.4	1,179.2	48.23	25.449	
12,200.0	11,350.0	10,868.2	10,150.0	27.5	18.1	12.14	1,008.0	1,023.6	1,227.4	1,178.6	48.89	25.105	
12,300.0	11,350.0	10,968.2	10,150.0	27.7	18.3	12.14	1,108.0	1,023.2	1,227.4	1,177.9	49.59	24.750	
12,400.0	11,350.0	11,068.2	10,150.0	27.9	18.6	12.14	1,208.0	1,022.8	1,227.4	1,177.1	50.33	24.386	
12,500.0	11,350.0	11,168.2	10,150.0	28.2	18.9	12.14	1,308.0	1,022.4	1,227.4	1,176.3	51.11	24.015	
12,600.0	11,350.0	11,268.2	10,150.0	28.4	19.3	12.14	1,408.0	1,022.0	1,227.4	1,175.5	51.92	23.640	
12,700.0	11,350.0	11,368.2	10,150.0	28.7	19.6	12.14	1,508.0	1,021.6	1,227.4	1,174.7	52.77	23.262	
12,800.0	11,350.0	11,468.2	10,150.0	29.0	20.0	12.14	1,608.0	1,021.2	1,227.4	1,173.8	53.64	22.882	
12,900.0	11,350.0	11,568.2	10,150.0	29.4	20.4	12.14	1,708.0	1,020.7	1,227.4	1,172.9	54.55	22.502	
13,000.0	11,350.0	11,668.2	10,150.0	29.7	20.9	12.14	1,808.0	1,020.3	1,227.4	1,172.0	55.48	22.123	
13,100.0	11,350.0	11,768.2	10,150.0	30.1	21.3	12.14	1,908.0	1,019.9	1,227.4	1,171.0	56.45	21.745	
13,200.0	11,350.0	11,868.2	10,150.0	30.4	21.8	12.14	2,008.0	1,019.5	1,227.4	1,170.0	57.43	21.371	
13,300.0	11,350.0	11,968.2	10,150.0	30.8	22.3	12.14	2,108.0	1,019.1	1,227.4	1,169.0	58.45	21.001	
13,400.0	11,350.0	12,068.2	10,150.0	31.2	22.8	12.14	2,208.0	1,018.7	1,227.4	1,168.0	59.48	20.636	
13,500.0	11,350.0	12,168.2	10,150.0	31.6	23.3	12.14	2,308.0	1,018.3	1,227.4	1,166.9	60.54	20.275	
13,600.0	11,350.0	12,268.2	10,150.0	32.1	23.8	12.14	2,408.0	1,017.9	1,227.4	1,165.8	61.62	19.920	
13,700.0	11,350.0	12,368.2	10,150.0	32.5	24.3	12.14	2,508.0	1,017.5	1,227.4	1,164.7	62.72	19.571	
13,800.0	11,350.0	12,468.2	10,150.0	33.0	24.9	12.14	2,608.0	1,017.1	1,227.4	1,163.6	63.83	19.229	
13,900.0	11,350.0	12,568.2	10,150.0	33.4	25.5	12.14	2,708.0	1,016.7	1,227.4	1,162.5	64.97	18.893	
14,000.0	11,350.0	12,668.2	10,150.0	33.9	26.0	12.14	2,808.0	1,016.3	1,227.4	1,161.3	66.12	18.564	
14,100.0	11,350.0	12,768.2	10,150.0	34.4	26.6	12.14	2,908.0	1,015.9	1,227.4	1,160.2	67.29	18.242	
14,200.0	11,350.0	12,868.2	10,150.0	34.9	27.2	12.14	3,008.0	1,015.5	1,227.4	1,159.0	68.47	17.927	
14,300.0	11,350.0	12,968.2	10,150.0	35.4	27.8	12.14	3,108.0	1,015.1	1,227.4	1,157.8	69.67	17.619	
14,400.0	11,350.0	13,068.2	10,150.0	35.9	28.4	12.14	3,208.0	1,014.7	1,227.4	1,156.6	70.88	17.318	
14,500.0	11,350.0	13,168.2	10,150.0	36.4	29.0	12.14	3,308.0	1,014.3	1,227.4	1,155.3	72.10	17.024	
14,600.0	11,350.0	13,268.2	10,150.0	36.9	29.7	12.14	3,408.0	1,013.9	1,227.4	1,154.1	73.34	16.737	
14,700.0	11,350.0	13,368.2	10,150.0	37.5	30.3	12.14	3,508.0	1,013.5	1,227.4	1,152.9	74.59	16.457	
14,800.0	11,350.0	13,468.2	10,150.0	38.0	30.9	12.14	3,608.0	1,013.1	1,227.4	1,151.6	75.85	16.183	
14,900.0	11,350.0	13,568.2	10,150.0	38.6	31.6	12.14	3,708.0	1,012.7	1,227.4	1,150.3	77.12	15.917	
15,000.0	11,350.0	13,668.2	10,150.0	39.2	32.2	12.14	3,808.0	1,012.3	1,227.4	1,149.0	78.39	15.657	
15,100.0	11,350.0	13,768.2	10,150.0	39.7	32.9	12.14	3,908.0	1,011.9	1,227.4	1,147.8	79.68	15.404	
15,200.0	11,350.0	13,868.2	10,150.0	40.3	33.5	12.14	4,008.0	1,011.5	1,227.4	1,146.5	80.98	15.157	
15,300.0	11,350.0	13,968.2	10,150.0	40.9	34.2	12.14	4,108.0	1,011.1	1,227.4	1,145.2	82.29	14.916	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #522H - 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)			
15,400.0	11,350.0	14,068.2	10,150.0	41.5	34.9	12.14	4,208.0	1,010.7	1,227.4	1,143.8	83.60	14.682	
15,500.0	11,350.0	14,168.2	10,150.0	42.1	35.5	12.14	4,308.0	1,010.3	1,227.4	1,142.5	84.93	14.453	
15,600.0	11,350.0	14,268.2	10,150.0	42.7	36.2	12.14	4,408.0	1,009.9	1,227.4	1,141.2	86.26	14.230	
15,700.0	11,350.0	14,368.2	10,150.0	43.3	36.9	12.14	4,508.0	1,009.5	1,227.4	1,139.8	87.60	14.013	
15,800.0	11,350.0	14,468.2	10,150.0	43.9	37.6	12.14	4,608.0	1,009.1	1,227.4	1,138.5	88.94	13.801	
15,900.0	11,350.0	14,568.2	10,150.0	44.5	38.3	12.14	4,708.0	1,008.7	1,227.4	1,137.1	90.29	13.594	
16,000.0	11,350.0	14,668.2	10,150.0	45.1	39.0	12.14	4,808.0	1,008.3	1,227.4	1,135.8	91.65	13.393	
16,100.0	11,350.0	14,768.2	10,150.0	45.7	39.6	12.14	4,908.0	1,007.9	1,227.4	1,134.4	93.01	13.197	
16,200.0	11,350.0	14,868.2	10,150.0	46.4	40.3	12.14	5,008.0	1,007.5	1,227.4	1,133.1	94.38	13.005	
16,300.0	11,350.0	14,968.2	10,150.0	47.0	41.0	12.14	5,108.0	1,007.1	1,227.4	1,131.7	95.76	12.818	
16,400.0	11,350.0	15,068.2	10,150.0	47.6	41.7	12.14	5,208.0	1,006.7	1,227.4	1,130.3	97.14	12.636	
16,500.0	11,350.0	15,168.2	10,150.0	48.3	42.4	12.14	5,308.0	1,006.3	1,227.4	1,128.9	98.52	12.459	
16,600.0	11,350.0	15,268.2	10,150.0	48.9	43.1	12.14	5,408.0	1,005.9	1,227.4	1,127.5	99.91	12.286	
16,700.0	11,350.0	15,368.2	10,150.0	49.6	43.9	12.14	5,508.0	1,005.5	1,227.4	1,126.1	101.30	12.116	
16,800.0	11,350.0	15,468.2	10,150.0	50.2	44.6	12.14	5,608.0	1,005.1	1,227.4	1,124.7	102.70	11.951	
16,900.0	11,350.0	15,568.2	10,150.0	50.9	45.3	12.14	5,708.0	1,004.7	1,227.4	1,123.3	104.10	11.790	
17,000.0	11,350.0	15,668.2	10,150.0	51.5	46.0	12.14	5,808.0	1,004.3	1,227.4	1,121.9	105.51	11.633	
17,100.0	11,350.0	15,768.2	10,150.0	52.2	46.7	12.14	5,908.0	1,003.9	1,227.4	1,120.5	106.92	11.480	
17,200.0	11,350.0	15,868.2	10,150.0	52.8	47.4	12.14	6,008.0	1,003.5	1,227.4	1,119.1	108.34	11.330	
17,300.0	11,350.0	15,968.2	10,150.0	53.5	48.1	12.14	6,108.0	1,003.1	1,227.4	1,117.7	109.75	11.183	
17,400.0	11,350.0	16,068.2	10,150.0	54.2	48.8	12.14	6,208.0	1,002.7	1,227.4	1,116.3	111.18	11.040	
17,500.0	11,350.0	16,168.2	10,150.0	54.8	49.6	12.14	6,308.0	1,002.3	1,227.4	1,114.8	112.60	10.901	
17,600.0	11,350.0	16,268.2	10,150.0	55.5	50.3	12.14	6,408.0	1,001.9	1,227.4	1,113.4	114.03	10.764	
17,700.0	11,350.0	16,368.2	10,150.0	56.2	51.0	12.14	6,508.0	1,001.5	1,227.4	1,112.0	115.46	10.631	
17,800.0	11,350.0	16,468.2	10,150.0	56.9	51.7	12.14	6,608.0	1,001.1	1,227.4	1,110.5	116.89	10.500	
17,900.0	11,350.0	16,568.2	10,150.0	57.5	52.5	12.14	6,708.0	1,000.7	1,227.4	1,109.1	118.33	10.373	
18,000.0	11,350.0	16,668.2	10,150.0	58.2	53.2	12.14	6,808.0	1,000.3	1,227.4	1,107.7	119.77	10.248	
18,100.0	11,350.0	16,768.2	10,150.0	58.9	53.9	12.14	6,908.0	999.9	1,227.4	1,106.2	121.21	10.126	
18,200.0	11,350.0	16,868.2	10,150.0	59.6	54.6	12.14	7,008.0	999.4	1,227.4	1,104.8	122.66	10.007	
18,300.0	11,350.0	16,968.2	10,150.0	60.3	55.4	12.14	7,108.0	999.0	1,227.4	1,103.3	124.11	9.890	
18,400.0	11,350.0	17,068.2	10,150.0	61.0	56.1	12.14	7,208.0	998.6	1,227.4	1,101.9	125.56	9.776	
18,500.0	11,350.0	17,168.2	10,150.0	61.7	56.8	12.14	7,308.0	998.2	1,227.4	1,100.4	127.01	9.664	
18,600.0	11,350.0	17,268.2	10,150.0	62.3	57.6	12.14	7,408.0	997.8	1,227.4	1,099.0	128.46	9.555	
18,700.0	11,350.0	17,368.2	10,150.0	63.0	58.3	12.14	7,508.0	997.4	1,227.4	1,097.5	129.92	9.448	
18,800.0	11,350.0	17,468.2	10,150.0	63.7	59.0	12.14	7,607.9	997.0	1,227.4	1,096.1	131.38	9.343	
18,900.0	11,350.0	17,568.2	10,150.0	64.4	59.8	12.14	7,707.9	996.6	1,227.4	1,094.6	132.84	9.240	
19,000.0	11,350.0	17,668.2	10,150.0	65.1	60.5	12.14	7,807.9	996.2	1,227.4	1,093.1	134.30	9.139	
19,100.0	11,350.0	17,768.2	10,150.0	65.8	61.2	12.14	7,907.9	995.8	1,227.4	1,091.7	135.77	9.041	
19,200.0	11,350.0	17,868.2	10,150.0	66.5	62.0	12.14	8,007.9	995.4	1,227.4	1,090.2	137.23	8.944	
19,300.0	11,350.0	17,968.2	10,150.0	67.2	62.7	12.14	8,107.9	995.0	1,227.4	1,088.7	138.70	8.850	
19,400.0	11,350.0	18,068.2	10,150.0	67.9	63.4	12.14	8,207.9	994.6	1,227.4	1,087.3	140.17	8.757	
19,500.0	11,350.0	18,168.2	10,150.0	68.6	64.2	12.14	8,307.9	994.2	1,227.4	1,085.8	141.64	8.666	
19,600.0	11,350.0	18,268.2	10,150.0	69.4	64.9	12.14	8,407.9	993.8	1,227.4	1,084.3	143.11	8.577	
19,700.0	11,350.0	18,368.2	10,150.0	70.1	65.7	12.14	8,507.9	993.4	1,227.4	1,082.8	144.59	8.489	
19,800.0	11,350.0	18,468.2	10,150.0	70.8	66.4	12.14	8,607.9	993.0	1,227.4	1,081.4	146.07	8.403	
19,900.0	11,350.0	18,568.2	10,150.0	71.5	67.2	12.14	8,707.9	992.6	1,227.4	1,079.9	147.54	8.319	
20,000.0	11,350.0	18,668.2	10,150.0	72.2	67.9	12.14	8,807.9	992.2	1,227.4	1,078.4	149.02	8.237	
20,100.0	11,350.0	18,768.2	10,150.0	72.9	68.6	12.14	8,907.9	991.8	1,227.4	1,076.9	150.50	8.156	
20,200.0	11,350.0	18,868.2	10,150.0	73.6	69.4	12.14	9,007.9	991.4	1,227.4	1,075.4	151.98	8.076	
20,300.0	11,350.0	18,968.2	10,150.0	74.3	70.1	12.14	9,107.9	991.0	1,227.4	1,074.0	153.47	7.998	
20,400.0	11,350.0	19,068.2	10,150.0	75.1	70.9	12.14	9,207.9	990.6	1,227.4	1,072.5	154.95	7.921	
20,500.0	11,350.0	19,168.2	10,150.0	75.8	71.6	12.14	9,307.9	990.2	1,227.4	1,071.0	156.44	7.846	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #522H - 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		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)			
20,600.0	11,350.0	19,268.2	10,150.0	76.5	72.4	12.14	9,407.9	989.8	1,227.4	1,069.5	157.92	7.772	
20,700.0	11,350.0	19,368.2	10,150.0	77.2	73.1	12.14	9,507.9	989.4	1,227.4	1,068.0	159.41	7.700	
20,800.0	11,350.0	19,468.2	10,150.0	77.9	73.8	12.14	9,607.9	989.0	1,227.4	1,066.5	160.90	7.629	
20,900.0	11,350.0	19,568.2	10,150.0	78.7	74.6	12.14	9,707.9	988.6	1,227.4	1,065.0	162.39	7.559	
21,000.0	11,350.0	19,668.2	10,150.0	79.4	75.3	12.14	9,807.9	988.2	1,227.4	1,063.5	163.88	7.490	
21,100.0	11,350.0	19,768.2	10,150.0	80.1	76.1	12.14	9,907.9	987.8	1,227.4	1,062.1	165.37	7.422	
21,200.0	11,350.0	19,868.2	10,150.0	80.8	76.8	12.14	10,007.9	987.4	1,227.4	1,060.6	166.87	7.356	
21,300.0	11,350.0	19,968.2	10,150.0	81.5	77.6	12.14	10,107.9	987.0	1,227.4	1,059.1	168.36	7.290	
21,400.0	11,350.0	20,068.2	10,150.0	82.3	78.3	12.14	10,207.9	986.6	1,227.4	1,057.6	169.86	7.226	
21,500.0	11,350.0	20,168.2	10,150.0	83.0	79.1	12.14	10,307.9	986.2	1,227.4	1,056.1	171.35	7.163	
21,600.0	11,350.0	20,268.2	10,150.0	83.7	79.8	12.14	10,407.9	985.8	1,227.4	1,054.6	172.85	7.101	
21,700.0	11,350.0	20,368.2	10,150.0	84.4	80.6	12.14	10,507.9	985.4	1,227.4	1,053.1	174.35	7.040	
21,800.0	11,350.0	20,468.2	10,150.0	85.2	81.3	12.14	10,607.9	985.0	1,227.4	1,051.6	175.85	6.980	
21,900.0	11,350.0	20,568.2	10,150.0	85.9	82.1	12.14	10,707.9	984.6	1,227.4	1,050.1	177.35	6.921	
22,000.0	11,350.0	20,668.2	10,150.0	86.6	82.8	12.14	10,807.9	984.2	1,227.4	1,048.6	178.85	6.863	
22,100.0	11,350.0	20,768.2	10,150.0	87.4	83.6	12.13	10,907.9	983.8	1,227.4	1,047.1	180.35	6.806	
22,200.0	11,350.0	20,868.2	10,150.0	88.1	84.3	12.13	11,007.9	983.4	1,227.4	1,045.6	181.85	6.750	
22,300.0	11,350.0	20,968.2	10,150.0	88.8	85.1	12.13	11,107.9	983.0	1,227.4	1,044.1	183.35	6.694	
22,400.0	11,350.0	21,068.2	10,150.0	89.6	85.8	12.13	11,207.9	982.6	1,227.4	1,042.6	184.85	6.640	
22,500.0	11,350.0	21,168.2	10,150.0	90.3	86.6	12.13	11,307.9	982.2	1,227.4	1,041.1	186.36	6.586	
22,600.0	11,350.0	21,268.2	10,150.0	91.0	87.3	12.13	11,407.9	981.8	1,227.4	1,039.6	187.86	6.534	
22,700.0	11,350.0	21,368.2	10,150.0	91.8	88.1	12.13	11,507.9	981.4	1,227.4	1,038.1	189.37	6.482	
22,800.0	11,350.0	21,468.2	10,150.0	92.5	88.8	12.13	11,607.9	981.0	1,227.4	1,036.5	190.88	6.431	
22,900.0	11,350.0	21,568.2	10,150.0	93.2	89.6	12.13	11,707.9	980.6	1,227.4	1,035.0	192.38	6.380	
23,000.0	11,350.0	21,668.2	10,150.0	94.0	90.3	12.13	11,807.9	980.2	1,227.4	1,033.5	193.89	6.331	
23,100.0	11,350.0	21,768.2	10,150.0	94.7	91.1	12.13	11,907.9	979.8	1,227.4	1,032.0	195.40	6.282	
23,200.0	11,350.0	21,868.2	10,150.0	95.4	91.8	12.13	12,007.9	979.4	1,227.4	1,030.5	196.91	6.234	
23,300.0	11,350.0	21,968.2	10,150.0	96.2	92.6	12.13	12,107.9	979.0	1,227.4	1,029.0	198.42	6.186	
23,400.0	11,350.0	22,068.2	10,150.0	96.9	93.4	12.13	12,207.9	978.6	1,227.4	1,027.5	199.93	6.139	
23,500.0	11,350.0	22,168.2	10,150.0	97.6	94.1	12.13	12,307.9	978.1	1,227.4	1,026.0	201.44	6.093	
23,600.0	11,350.0	22,268.2	10,150.0	98.4	94.9	12.13	12,407.9	977.7	1,227.4	1,024.5	202.95	6.048	
23,700.0	11,350.0	22,368.2	10,150.0	99.1	95.6	12.13	12,507.9	977.3	1,227.4	1,023.0	204.46	6.003	
23,800.0	11,350.0	22,468.2	10,150.0	99.9	96.4	12.13	12,607.9	976.9	1,227.4	1,021.5	205.97	5.959	
23,900.0	11,350.0	22,568.2	10,150.0	100.6	97.1	12.13	12,707.9	976.5	1,227.4	1,019.9	207.48	5.916	
24,000.0	11,350.0	22,668.2	10,150.0	101.3	97.9	12.13	12,807.9	976.1	1,227.4	1,018.4	209.00	5.873	
24,100.0	11,350.0	22,768.2	10,150.0	102.1	98.6	12.13	12,907.9	975.7	1,227.4	1,016.9	210.51	5.831	
24,200.0	11,350.0	22,868.2	10,150.0	102.8	99.4	12.13	13,007.9	975.3	1,227.4	1,015.4	212.02	5.789	
24,300.0	11,350.0	22,968.2	10,150.0	103.5	100.1	12.13	13,107.9	974.9	1,227.4	1,013.9	213.54	5.748	
24,400.0	11,350.0	23,068.2	10,150.0	104.3	100.9	12.13	13,207.9	974.5	1,227.4	1,012.4	215.05	5.707	
24,500.0	11,350.0	23,168.2	10,150.0	105.0	101.7	12.13	13,307.9	974.1	1,227.4	1,010.9	216.57	5.668	
24,600.0	11,350.0	23,268.2	10,150.0	105.8	102.4	12.13	13,407.9	973.7	1,227.4	1,009.3	218.09	5.628	
24,700.0	11,350.0	23,368.2	10,150.0	106.5	103.2	12.13	13,507.9	973.3	1,227.4	1,007.8	219.60	5.589	
24,796.3	11,350.0	23,464.4	10,150.0	107.2	103.8	12.13	13,604.2	972.9	1,227.4	1,006.6	220.83	5.558	
24,799.9	11,350.0	23,466.8	10,150.0	107.3	103.8	12.13	13,606.6	972.9	1,227.4	1,006.5	220.88	5.557 SF	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #523H - 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)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	3.0	3.0	81.31	221.6	1,450.0	1,466.9	1,460.4	6.43	228.168		
100.0	100.0	100.0	100.0	3.2	3.2	81.31	221.6	1,450.0	1,466.9	1,460.0	6.89	212.826		
200.0	200.0	200.0	200.0	3.5	3.5	81.31	221.6	1,450.0	1,466.9	1,459.5	7.33	200.169		
300.0	300.0	300.0	300.0	3.7	3.7	81.31	221.6	1,450.0	1,466.9	1,459.1	7.74	189.486		
400.0	400.0	400.0	400.0	3.9	3.9	81.31	221.6	1,450.0	1,466.9	1,458.7	8.14	180.304		
500.0	500.0	500.0	500.0	4.1	4.1	81.31	221.6	1,450.0	1,466.9	1,458.4	8.51	172.298		
600.0	600.0	600.0	600.0	4.2	4.2	81.31	221.6	1,450.0	1,466.9	1,458.0	8.88	165.233		
700.0	700.0	700.0	700.0	4.4	4.4	81.31	221.6	1,450.0	1,466.9	1,457.6	9.23	158.934		
800.0	800.0	800.0	800.0	4.6	4.6	81.31	221.6	1,450.0	1,466.9	1,457.3	9.57	153.270		
900.0	900.0	900.0	900.0	4.8	4.8	81.31	221.6	1,450.0	1,466.9	1,457.0	9.90	148.140		
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	81.31	221.6	1,450.0	1,466.9	1,456.6	10.22	143.464		
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	81.31	221.6	1,450.0	1,466.9	1,456.3	10.54	139.176		
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	81.31	221.6	1,450.0	1,466.9	1,456.0	10.85	135.226		
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	81.31	221.6	1,450.0	1,466.9	1,455.7	11.15	131.570		
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	81.31	221.6	1,450.0	1,466.9	1,455.4	11.44	128.173		
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	81.31	221.6	1,450.0	1,466.9	1,455.1	11.73	125.006		
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	81.31	221.6	1,450.0	1,466.9	1,454.9	12.02	122.042		
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	81.31	221.6	1,450.0	1,466.9	1,454.6	12.30	119.261		
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	81.31	221.6	1,450.0	1,466.9	1,454.3	12.58	116.645 CC		
1,900.0	1,900.0	1,874.8	1,874.8	6.3	6.2	-53.70	221.3	1,450.7	1,467.0	1,454.1	12.82	114.458 ES		
2,000.0	1,999.9	1,949.6	1,949.6	6.4	6.4	-53.75	220.6	1,452.8	1,467.2	1,454.2	13.04	112.542		
2,100.0	2,099.7	2,024.4	2,024.3	6.6	6.5	-53.83	219.3	1,456.2	1,467.6	1,454.4	13.26	110.665		
2,200.0	2,199.3	2,100.0	2,099.7	6.8	6.6	-53.95	217.6	1,461.1	1,468.2	1,454.7	13.50	108.766		
2,300.0	2,298.7	2,173.9	2,173.3	6.9	6.7	-54.07	215.3	1,467.2	1,469.8	1,456.0	13.74	106.982		
2,400.0	2,398.2	2,248.7	2,247.7	7.1	6.9	-54.16	212.6	1,474.8	1,473.1	1,459.1	13.99	105.275		
2,500.0	2,497.6	2,323.4	2,321.8	7.4	7.0	-54.23	209.3	1,483.7	1,478.0	1,463.8	14.24	103.822		
2,600.0	2,597.1	2,400.0	2,397.6	7.6	7.2	-54.28	205.9	1,494.2	1,484.8	1,470.3	14.47	102.576		
2,700.0	2,696.5	2,467.9	2,464.6	7.8	7.3	-54.34	203.3	1,504.8	1,493.4	1,478.6	14.76	101.206		
2,800.0	2,795.9	2,539.8	2,535.3	8.1	7.5	-37.25	200.9	1,517.2	1,502.4	1,487.3	15.09	99.576		
2,900.0	2,895.2	2,600.0	2,594.5	8.4	7.7	-23.08	199.4	1,528.5	1,510.3	1,494.9	15.41	98.018		
3,000.0	2,994.2	2,683.3	2,676.0	8.6	7.9	-12.71	197.7	1,545.7	1,517.0	1,501.1	15.88	95.531		
3,100.0	3,092.8	2,755.1	2,745.9	8.9	8.1	-6.70	196.8	1,561.7	1,522.6	1,506.3	16.30	93.411		
3,200.0	3,191.3	2,826.7	2,815.4	9.1	8.4	-6.62	196.3	1,579.0	1,529.2	1,512.4	16.77	91.165		
3,300.0	3,289.8	2,911.7	2,897.5	9.4	8.6	-6.55	196.2	1,600.9	1,537.4	1,520.1	17.30	88.879		
3,400.0	3,388.3	3,011.3	2,993.7	9.7	8.9	-6.45	196.2	1,626.6	1,545.9	1,527.9	17.96	86.089		
3,500.0	3,486.8	3,110.9	3,090.0	10.0	9.3	-6.36	196.2	1,652.4	1,554.3	1,535.7	18.64	83.375		
3,600.0	3,585.2	3,210.5	3,186.2	10.4	9.6	-6.28	196.2	1,678.2	1,562.8	1,543.4	19.35	80.752		
3,700.0	3,683.7	3,310.1	3,282.4	10.7	10.0	-6.19	196.2	1,704.0	1,571.3	1,551.2	20.08	78.232		
3,800.0	3,782.2	3,409.7	3,378.6	11.0	10.4	-6.10	196.2	1,729.8	1,579.7	1,558.9	20.84	75.818		
3,900.0	3,880.7	3,509.3	3,474.8	11.4	10.8	-6.02	196.2	1,755.6	1,588.2	1,566.6	21.60	73.514		
4,000.0	3,979.2	3,609.0	3,571.0	11.8	11.2	-5.93	196.2	1,781.3	1,596.7	1,574.3	22.39	71.319		
4,100.0	4,077.6	3,708.6	3,667.3	12.1	11.6	-5.85	196.2	1,807.1	1,605.2	1,582.0	23.19	69.231		
4,200.0	4,176.1	3,808.2	3,763.5	12.5	12.0	-5.76	196.2	1,832.9	1,613.6	1,589.6	24.00	67.248		
4,300.0	4,274.6	3,907.8	3,859.7	12.9	12.4	-5.68	196.2	1,858.7	1,622.1	1,597.3	24.82	65.364		
4,400.0	4,373.1	4,007.4	3,955.9	13.3	12.8	-5.60	196.2	1,884.5	1,630.6	1,605.0	25.65	63.576		
4,500.0	4,471.6	4,107.0	4,052.1	13.6	13.3	-5.52	196.2	1,910.2	1,639.1	1,612.6	26.49	61.879		
4,600.0	4,570.0	4,206.6	4,148.4	14.0	13.7	-5.44	196.2	1,936.0	1,647.6	1,620.3	27.34	60.268		
4,700.0	4,668.5	4,306.2	4,244.6	14.4	14.2	-5.36	196.2	1,961.8	1,656.1	1,627.9	28.19	58.739		
4,800.0	4,767.0	4,405.9	4,340.8	14.8	14.6	-5.28	196.2	1,987.6	1,664.6	1,635.6	29.06	57.286		
4,900.0	4,865.5	4,505.5	4,437.0	15.2	15.0	-5.21	196.2	2,013.4	1,673.1	1,643.2	29.93	55.905		
5,000.0	4,964.0	4,605.1	4,533.2	15.6	15.5	-5.13	196.2	2,039.2	1,681.6	1,650.8	30.80	54.592		
5,100.0	5,062.4	4,704.7	4,629.4	16.0	15.9	-5.05	196.2	2,064.9	1,690.1	1,658.5	31.68	53.343		

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 WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #523H - 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		Rule Assigned:	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,200.0	5,160.9	4,804.3	4,725.7	16.4	16.4	-4.98	196.2	2,090.7	1,698.7	1,666.1	32.57	52.154	
5,300.0	5,259.4	4,903.9	4,821.9	16.9	16.8	-4.90	196.2	2,116.5	1,707.2	1,673.7	33.46	51.021	
5,400.0	5,357.9	5,003.5	4,918.1	17.3	17.3	-4.83	196.2	2,142.3	1,715.7	1,681.3	34.35	49.941	
5,500.0	5,456.4	5,103.1	5,014.3	17.7	17.8	-4.76	196.2	2,168.1	1,724.2	1,689.0	35.25	48.910	
5,600.0	5,554.8	5,202.8	5,110.5	18.1	18.2	-4.68	196.2	2,193.8	1,732.7	1,696.6	36.15	47.926	
5,700.0	5,653.3	5,302.4	5,206.8	18.5	18.7	-4.61	196.2	2,219.6	1,741.3	1,704.2	37.06	46.986	
5,800.0	5,751.8	5,402.0	5,303.0	18.9	19.2	-4.54	196.2	2,245.4	1,749.8	1,711.8	37.97	46.087	
5,900.0	5,850.3	5,501.6	5,399.2	19.4	19.6	-4.47	196.2	2,271.2	1,758.3	1,719.5	38.88	45.227	
6,000.0	5,948.8	5,601.2	5,495.4	19.8	20.1	-4.40	196.2	2,297.0	1,766.9	1,727.1	39.79	44.403	
6,100.0	6,047.3	5,700.8	5,591.6	20.2	20.6	-4.33	196.2	2,322.7	1,775.4	1,734.7	40.71	43.614	
6,200.0	6,145.7	5,800.4	5,687.8	20.7	21.0	-4.27	196.2	2,348.5	1,784.0	1,742.3	41.63	42.857	
6,300.0	6,244.2	5,900.0	5,784.1	21.1	21.5	-4.20	196.2	2,374.3	1,792.5	1,750.0	42.55	42.131	
6,400.0	6,342.7	5,999.6	5,880.3	21.5	22.0	-4.13	196.2	2,400.1	1,801.1	1,757.6	43.47	41.434	
6,500.0	6,441.2	6,099.2	5,976.5	21.9	22.5	-4.07	196.2	2,425.9	1,809.8	1,765.5	44.37	40.787	
6,600.0	6,540.0	6,198.7	6,072.5	22.3	22.9	-4.01	196.2	2,451.6	1,820.2	1,774.9	45.29	40.191	
6,700.0	6,639.0	6,297.9	6,168.4	22.8	23.4	-3.94	196.2	2,477.3	1,832.2	1,786.0	46.19	39.665	
6,800.0	6,738.3	6,396.9	6,264.0	23.2	23.9	-3.88	196.2	2,502.9	1,846.0	1,798.9	47.08	39.206	
6,900.0	6,837.7	6,495.7	6,359.4	23.6	24.4	-3.81	196.2	2,528.5	1,861.5	1,813.5	47.96	38.812	
7,000.0	6,937.4	6,594.2	6,454.5	23.9	24.8	-3.74	196.2	2,554.0	1,878.7	1,829.9	48.82	38.479	
7,100.0	7,037.1	6,692.3	6,549.4	24.3	25.3	-3.67	196.2	2,579.4	1,897.7	1,848.0	49.67	38.208	
7,200.0	7,137.0	6,790.1	6,643.8	24.6	25.8	-3.60	196.2	2,604.7	1,918.3	1,867.8	50.49	37.996	
7,300.0	7,236.9	6,887.6	6,737.9	24.9	26.3	-3.53	196.2	2,629.9	1,940.7	1,889.4	51.28	37.846	
7,400.0	7,336.9	6,984.6	6,831.6	25.2	26.7	-3.46	196.2	2,655.0	1,964.7	1,912.7	52.02	37.766 SF	
7,500.0	7,436.9	7,081.2	6,925.0	25.2	27.2	83.37	196.2	2,680.0	1,990.3	1,937.7	52.59	37.845	

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Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #701H - 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		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	3.0	3.0	-90.06	-0.1	-120.0	120.0	113.6	6.43	18.667	
100.0	100.0	100.0	100.0	3.2	3.2	-90.06	-0.1	-120.0	120.0	113.1	6.89	17.412	
200.0	200.0	200.0	200.0	3.5	3.5	-90.06	-0.1	-120.0	120.0	112.7	7.33	16.377	
300.0	300.0	300.0	300.0	3.7	3.7	-90.06	-0.1	-120.0	120.0	112.3	7.74	15.503	
400.0	400.0	400.0	400.0	3.9	3.9	-90.06	-0.1	-120.0	120.0	111.9	8.14	14.751	
500.0	500.0	500.0	500.0	4.1	4.1	-90.06	-0.1	-120.0	120.0	111.5	8.51	14.096	
600.0	600.0	600.0	600.0	4.2	4.2	-90.06	-0.1	-120.0	120.0	111.1	8.88	13.518	
700.0	700.0	700.0	700.0	4.4	4.4	-90.06	-0.1	-120.0	120.0	110.8	9.23	13.003	
800.0	800.0	800.0	800.0	4.6	4.6	-90.06	-0.1	-120.0	120.0	110.4	9.57	12.540	
900.0	900.0	900.0	900.0	4.8	4.8	-90.06	-0.1	-120.0	120.0	110.1	9.90	12.120	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-90.06	-0.1	-120.0	120.0	109.8	10.22	11.737	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-90.06	-0.1	-120.0	120.0	109.5	10.54	11.387	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-90.06	-0.1	-120.0	120.0	109.2	10.85	11.063	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	-90.06	-0.1	-120.0	120.0	108.9	11.15	10.764	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-90.06	-0.1	-120.0	120.0	108.6	11.44	10.486	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	-90.06	-0.1	-120.0	120.0	108.3	11.73	10.227 CC, ES	
1,600.0	1,600.0	1,597.5	1,597.5	5.8	5.9	-90.40	-0.8	-121.0	121.1	109.0	12.02	10.068 SF	
1,700.0	1,700.0	1,694.8	1,694.7	6.0	6.0	-91.38	-3.0	-124.1	124.2	111.9	12.30	10.099	
1,800.0	1,800.0	1,791.9	1,791.6	6.1	6.2	-92.89	-6.5	-129.1	129.6	117.0	12.58	10.297	
1,900.0	1,900.0	1,888.6	1,887.9	6.3	6.4	130.50	-11.5	-136.2	138.0	125.2	12.87	10.723	
2,000.0	1,999.9	1,987.5	1,986.3	6.4	6.6	129.48	-17.4	-144.6	149.6	136.4	13.16	11.364	
2,100.0	2,099.7	2,086.6	2,084.9	6.6	6.8	129.29	-23.3	-153.1	162.8	149.4	13.47	12.086	
2,200.0	2,199.3	2,185.5	2,183.2	6.8	7.0	129.74	-29.3	-161.6	177.7	163.9	13.80	12.877	
2,300.0	2,298.7	2,284.2	2,281.4	6.9	7.2	130.57	-35.2	-170.0	193.5	179.3	14.14	13.686	
2,400.0	2,398.2	2,382.9	2,379.6	7.1	7.5	131.27	-41.1	-178.5	209.2	194.7	14.49	14.441	
2,500.0	2,497.6	2,481.7	2,477.7	7.4	7.7	131.88	-47.0	-187.0	225.0	210.2	14.86	15.144	
2,600.0	2,597.1	2,580.4	2,575.9	7.6	8.0	132.41	-52.9	-195.4	240.9	225.6	15.25	15.791	
2,700.0	2,696.5	2,675.1	2,670.1	7.8	8.3	132.93	-58.3	-204.1	257.3	241.6	15.64	16.446	
2,800.0	2,795.9	2,767.7	2,762.1	8.1	8.6	150.90	-62.3	-214.4	276.9	260.8	16.07	17.233	
2,900.0	2,895.2	2,858.9	2,852.4	8.4	8.9	165.74	-65.1	-226.4	301.2	284.7	16.54	18.212	
3,000.0	2,994.2	2,948.5	2,940.9	8.6	9.1	176.59	-66.8	-240.0	330.0	313.0	17.06	19.348	
3,100.0	3,092.8	3,036.1	3,027.2	8.9	9.4	-177.18	-67.3	-255.0	363.2	345.6	17.56	20.684	
3,200.0	3,191.3	3,125.8	3,115.3	9.1	9.7	-177.21	-66.8	-271.8	398.7	380.6	18.12	22.002	
3,300.0	3,289.8	3,219.1	3,207.0	9.4	10.0	-177.21	-66.2	-289.6	434.5	415.8	18.76	23.159	
3,400.0	3,388.3	3,312.5	3,298.6	9.7	10.3	-177.21	-65.6	-307.4	470.3	450.9	19.41	24.235	
3,500.0	3,486.8	3,405.9	3,390.3	10.0	10.7	-177.21	-65.0	-325.3	506.1	486.1	20.07	25.220	
3,600.0	3,585.2	3,499.3	3,481.9	10.4	11.0	-177.21	-64.4	-343.1	541.9	521.2	20.75	26.123	
3,700.0	3,683.7	3,592.6	3,573.6	10.7	11.4	-177.21	-63.7	-360.9	577.7	556.3	21.44	26.950	
3,800.0	3,782.2	3,686.0	3,665.2	11.0	11.7	-177.21	-63.1	-378.7	613.5	591.4	22.14	27.711	
3,900.0	3,880.7	3,779.4	3,756.9	11.4	12.1	-177.21	-62.5	-396.5	649.3	626.5	22.86	28.410	
4,000.0	3,979.2	3,872.7	3,848.6	11.8	12.4	-177.21	-61.9	-414.3	685.1	661.6	23.58	29.055	
4,100.0	4,077.6	3,966.1	3,940.2	12.1	12.8	-177.21	-61.2	-432.1	720.9	696.6	24.32	29.649	
4,200.0	4,176.1	4,059.5	4,031.9	12.5	13.2	-177.21	-60.6	-449.9	756.7	731.7	25.06	30.198	
4,300.0	4,274.6	4,152.9	4,123.5	12.9	13.5	-177.21	-60.0	-467.7	792.5	766.7	25.81	30.707	
4,400.0	4,373.1	4,246.2	4,215.2	13.3	13.9	-177.21	-59.4	-485.5	828.3	801.8	26.57	31.178	
4,500.0	4,471.6	4,339.6	4,306.8	13.6	14.3	-177.21	-58.8	-503.3	864.1	836.8	27.33	31.615	
4,600.0	4,570.0	4,433.0	4,398.5	14.0	14.7	-177.21	-58.1	-521.1	899.9	871.8	28.10	32.022	
4,700.0	4,668.5	4,526.3	4,490.1	14.4	15.1	-177.21	-57.5	-538.9	935.7	906.9	28.88	32.401	
4,800.0	4,767.0	4,619.7	4,581.8	14.8	15.4	-177.21	-56.9	-556.7	971.5	941.9	29.66	32.754	
4,900.0	4,865.5	4,713.1	4,673.5	15.2	15.8	-177.21	-56.3	-574.5	1,007.3	976.9	30.45	33.084	
5,000.0	4,964.0	4,806.5	4,765.1	15.6	16.2	-177.21	-55.7	-592.3	1,043.1	1,011.9	31.24	33.393	
5,100.0	5,062.4	4,899.8	4,856.8	16.0	16.6	-177.21	-55.0	-610.1	1,078.9	1,046.9	32.03	33.682	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #701H - 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		Rule Assigned:	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,200.0	5,160.9	4,993.2	4,948.4	16.4	17.0	-177.21	-54.4	-627.9	1,114.7	1,081.9	32.83	33.953	
5,300.0	5,259.4	5,086.6	5,040.1	16.9	17.4	-177.21	-53.8	-645.8	1,150.5	1,116.9	33.63	34.208	
5,400.0	5,357.9	5,180.0	5,131.7	17.3	17.8	-177.21	-53.2	-663.6	1,186.4	1,151.9	34.44	34.447	
5,500.0	5,456.4	5,273.3	5,223.4	17.7	18.2	-177.21	-52.5	-681.4	1,222.2	1,186.9	35.25	34.673	
5,600.0	5,554.8	5,366.7	5,315.1	18.1	18.6	-177.21	-51.9	-699.2	1,258.0	1,221.9	36.06	34.886	
5,700.0	5,653.3	5,460.1	5,406.7	18.5	19.0	-177.21	-51.3	-717.0	1,293.8	1,256.9	36.87	35.087	
5,800.0	5,751.8	5,553.4	5,498.4	18.9	19.4	-177.21	-50.7	-734.8	1,329.6	1,291.9	37.69	35.277	
5,900.0	5,850.3	5,646.8	5,590.0	19.4	19.8	-177.21	-50.1	-752.6	1,365.4	1,326.8	38.51	35.456	
6,000.0	5,948.8	5,740.2	5,681.7	19.8	20.3	-177.21	-49.4	-770.4	1,401.2	1,361.8	39.33	35.626	
6,100.0	6,047.3	5,833.6	5,773.3	20.2	20.7	-177.21	-48.8	-788.2	1,437.0	1,396.8	40.15	35.788	
6,200.0	6,145.7	5,926.9	5,865.0	20.7	21.1	-177.21	-48.2	-806.0	1,472.8	1,431.8	40.98	35.941	
6,300.0	6,244.2	6,020.3	5,956.7	21.1	21.5	-177.21	-47.6	-823.8	1,508.6	1,466.8	41.80	36.086	
6,400.0	6,342.7	6,113.7	6,048.3	21.5	21.9	-177.21	-46.9	-841.6	1,544.4	1,501.7	42.63	36.225	
6,500.0	6,441.2	6,207.1	6,140.0	21.9	22.3	-177.21	-46.3	-859.4	1,579.9	1,536.5	43.45	36.366	
6,600.0	6,540.0	6,301.1	6,232.3	22.3	22.7	-177.23	-45.7	-877.4	1,614.1	1,569.8	44.27	36.458	
6,700.0	6,639.0	6,395.7	6,325.1	22.8	23.2	-177.24	-45.1	-895.4	1,646.6	1,601.5	45.09	36.514	
6,800.0	6,738.3	6,490.8	6,418.5	23.2	23.6	-177.25	-44.4	-913.5	1,677.4	1,631.5	45.91	36.536	
6,900.0	6,837.7	6,586.5	6,512.4	23.6	24.0	-177.25	-43.8	-931.8	1,706.6	1,659.9	46.72	36.527	
7,000.0	6,937.4	6,682.6	6,606.8	23.9	24.4	-177.25	-43.2	-950.1	1,734.1	1,686.6	47.52	36.492	
7,100.0	7,037.1	6,779.2	6,701.6	24.3	24.9	-177.24	-42.5	-968.5	1,759.9	1,711.6	48.31	36.432	
7,200.0	7,137.0	6,876.3	6,796.9	24.6	25.3	-177.24	-41.9	-987.0	1,784.0	1,735.0	49.08	36.352	
7,300.0	7,236.9	6,973.7	6,892.5	24.9	25.7	-177.23	-41.2	-1,005.6	1,806.5	1,756.7	49.82	36.258	
7,400.0	7,336.9	7,071.5	6,988.6	25.2	26.2	-177.21	-40.6	-1,024.3	1,827.2	1,776.7	50.53	36.161	
7,500.0	7,436.9	7,169.6	7,084.9	25.2	26.6	-90.44	-39.9	-1,043.0	1,846.5	1,795.4	51.06	36.163	
7,600.0	7,536.9	7,267.8	7,181.2	25.3	27.1	-90.42	-39.3	-1,061.7	1,865.5	1,814.0	51.57	36.177	
7,700.0	7,636.9	7,366.0	7,277.6	25.3	27.5	-90.39	-38.6	-1,080.4	1,884.6	1,832.5	52.08	36.188	
7,800.0	7,736.9	7,464.1	7,374.0	25.3	28.0	-90.37	-38.0	-1,099.1	1,903.7	1,851.1	52.59	36.196	
7,900.0	7,836.9	7,562.3	7,470.3	25.4	28.4	-90.35	-37.3	-1,117.9	1,922.7	1,869.6	53.11	36.202	
8,000.0	7,936.9	7,660.5	7,566.7	25.4	28.9	-90.32	-36.6	-1,136.6	1,941.8	1,888.2	53.63	36.206	
8,100.0	8,036.9	7,758.6	7,663.0	25.4	29.3	-90.30	-36.0	-1,155.3	1,960.9	1,906.7	54.16	36.207	
8,200.0	8,136.9	7,856.8	7,759.4	25.5	29.7	-90.28	-35.3	-1,174.0	1,979.9	1,925.3	54.68	36.210	
8,300.0	8,236.9	7,956.2	7,856.5	25.5	30.4	-90.25	-34.5	-1,199.4	1,998.2	1,942.7	55.52	35.993	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME 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)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	3.0	3.0	-90.03	0.0	-89.9	89.9	83.5	6.43	13.985		
100.0	100.0	100.0	100.0	3.2	3.2	-90.03	0.0	-89.9	89.9	83.0	6.89	13.045		
200.0	200.0	200.0	200.0	3.5	3.5	-90.03	0.0	-89.9	89.9	82.6	7.33	12.269		
300.0	300.0	300.0	300.0	3.7	3.7	-90.03	0.0	-89.9	89.9	82.2	7.74	11.614		
400.0	400.0	400.0	400.0	3.9	3.9	-90.03	0.0	-89.9	89.9	81.8	8.14	11.052		
500.0	500.0	500.0	500.0	4.1	4.1	-90.03	0.0	-89.9	89.9	81.4	8.51	10.561		
600.0	600.0	600.0	600.0	4.2	4.2	-90.03	0.0	-89.9	89.9	81.0	8.88	10.128		
700.0	700.0	700.0	700.0	4.4	4.4	-90.03	0.0	-89.9	89.9	80.7	9.23	9.742		
800.0	800.0	800.0	800.0	4.6	4.6	-90.03	0.0	-89.9	89.9	80.3	9.57	9.394		
900.0	900.0	900.0	900.0	4.8	4.8	-90.03	0.0	-89.9	89.9	80.0	9.90	9.080		
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-90.03	0.0	-89.9	89.9	79.7	10.22	8.793		
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-90.03	0.0	-89.9	89.9	79.4	10.54	8.531		
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-90.03	0.0	-89.9	89.9	79.1	10.85	8.289		
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	-90.03	0.0	-89.9	89.9	78.8	11.15	8.064		
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-90.03	0.0	-89.9	89.9	78.5	11.44	7.856		
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	-90.03	0.0	-89.9	89.9	78.2	11.73	7.662		
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	-90.03	0.0	-89.9	89.9	77.9	12.02	7.480		
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	-90.03	0.0	-89.9	89.9	77.6	12.30	7.310		
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	-90.03	0.0	-89.9	89.9	77.3	12.58	7.150 CC, ES		
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	135.54	0.0	-89.9	90.8	78.0	12.85	7.071 SF		
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	137.19	0.0	-89.9	93.7	80.6	13.11	7.147		
2,100.0	2,099.7	2,099.7	2,099.7	6.6	6.5	139.73	0.0	-89.9	98.6	85.2	13.38	7.368		
2,200.0	2,199.3	2,199.3	2,199.3	6.8	6.7	142.87	0.0	-89.9	105.7	92.1	13.67	7.734		
2,300.0	2,298.7	2,298.7	2,298.7	6.9	6.8	146.03	0.0	-89.9	114.3	100.3	13.96	8.183		
2,400.0	2,398.2	2,398.2	2,398.2	7.1	6.9	148.74	0.0	-89.9	123.1	108.8	14.27	8.625		
2,500.0	2,497.6	2,497.6	2,497.6	7.4	7.0	151.09	0.0	-89.9	132.1	117.5	14.60	9.054		
2,600.0	2,597.1	2,593.8	2,593.8	7.6	7.2	152.91	-0.1	-91.1	142.5	127.6	14.94	9.540		
2,700.0	2,696.5	2,689.5	2,689.4	7.8	7.3	154.13	-0.3	-94.6	155.3	140.0	15.28	10.161		
2,800.0	2,795.9	2,784.4	2,784.2	8.1	7.5	171.87	-0.6	-100.5	171.2	155.6	15.64	10.950		
2,900.0	2,895.2	2,880.4	2,879.8	8.4	7.6	-174.46	-1.0	-108.5	191.0	175.0	15.97	11.954		
3,000.0	2,994.2	2,977.8	2,976.8	8.6	7.7	-165.29	-1.5	-117.0	212.8	196.5	16.39	12.984		
3,100.0	3,092.8	3,074.6	3,073.2	8.9	7.9	-161.01	-1.9	-125.4	236.7	219.9	16.80	14.093		
3,200.0	3,191.3	3,171.2	3,169.4	9.1	8.1	-162.84	-2.4	-133.8	261.4	244.2	17.26	15.146		
3,300.0	3,289.8	3,267.7	3,265.7	9.4	8.3	-164.36	-2.8	-142.2	286.3	268.6	17.74	16.139		
3,400.0	3,388.3	3,364.3	3,361.9	9.7	8.5	-165.63	-3.2	-150.6	311.4	293.1	18.25	17.064		
3,500.0	3,486.8	3,460.9	3,458.1	10.0	8.7	-166.72	-3.7	-159.0	336.6	317.8	18.78	17.924		
3,600.0	3,585.2	3,557.5	3,554.3	10.4	8.9	-167.65	-4.1	-167.5	361.9	342.5	19.33	18.722		
3,700.0	3,683.7	3,654.1	3,650.6	10.7	9.2	-168.47	-4.6	-175.9	387.2	367.3	19.90	19.461		
3,800.0	3,782.2	3,750.7	3,746.8	11.0	9.4	-169.18	-5.0	-184.3	412.7	392.2	20.49	20.142		
3,900.0	3,880.7	3,841.6	3,837.4	11.4	9.7	-169.78	-5.4	-192.4	438.4	417.4	21.07	20.810		
4,000.0	3,979.2	3,924.6	3,919.7	11.8	9.9	-170.31	-5.9	-201.9	466.6	445.0	21.62	21.583		
4,100.0	4,077.6	4,006.0	4,000.3	12.1	10.2	-170.83	-6.5	-213.5	497.5	475.3	22.17	22.442		
4,200.0	4,176.1	4,087.1	4,080.3	12.5	10.5	-171.33	-7.3	-227.4	531.1	508.4	22.69	23.403		
4,300.0	4,274.6	4,180.8	4,172.4	12.9	10.8	-171.85	-8.1	-244.4	565.8	542.4	23.36	24.216		
4,400.0	4,373.1	4,274.5	4,264.5	13.3	11.1	-172.32	-9.0	-261.5	600.5	576.4	24.05	24.973		
4,500.0	4,471.6	4,368.1	4,356.6	13.6	11.4	-172.73	-9.9	-278.5	635.3	610.5	24.74	25.678		
4,600.0	4,570.0	4,461.8	4,448.6	14.0	11.8	-173.10	-10.8	-295.6	670.1	644.6	25.44	26.334		
4,700.0	4,668.5	4,555.5	4,540.7	14.4	12.1	-173.44	-11.7	-312.6	704.9	678.7	26.16	26.946		
4,800.0	4,767.0	4,649.1	4,632.8	14.8	12.5	-173.74	-12.6	-329.7	739.7	712.8	26.88	27.516		
4,900.0	4,865.5	4,742.8	4,724.9	15.2	12.8	-174.02	-13.5	-346.7	774.6	746.9	27.61	28.049		
5,000.0	4,964.0	4,836.5	4,817.0	15.6	13.2	-174.27	-14.4	-363.8	809.4	781.1	28.35	28.546		
5,100.0	5,062.4	4,930.1	4,909.1	16.0	13.5	-174.50	-15.3	-380.8	844.3	815.2	29.10	29.012		

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME 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)			
5,200.0	5,160.9	5,023.8	5,001.2	16.4	13.9	-174.72	-16.2	-397.9	879.2	849.3	29.86	29.448	
5,300.0	5,259.4	5,117.5	5,093.3	16.9	14.2	-174.91	-17.1	-414.9	914.1	883.5	30.62	29.857	
5,400.0	5,357.9	5,211.1	5,185.4	17.3	14.6	-175.10	-18.0	-431.9	949.0	917.6	31.38	30.241	
5,500.0	5,456.4	5,304.8	5,277.5	17.7	15.0	-175.27	-18.9	-449.0	983.9	951.8	32.15	30.602	
5,600.0	5,554.8	5,398.5	5,369.6	18.1	15.4	-175.42	-19.8	-466.0	1,018.9	985.9	32.93	30.941	
5,700.0	5,653.3	5,492.1	5,461.7	18.5	15.7	-175.57	-20.7	-483.1	1,053.8	1,020.1	33.71	31.261	
5,800.0	5,751.8	5,585.8	5,553.8	18.9	16.1	-175.71	-21.5	-500.1	1,088.7	1,054.2	34.49	31.563	
5,900.0	5,850.3	5,679.5	5,645.9	19.4	16.5	-175.84	-22.4	-517.2	1,123.7	1,088.4	35.28	31.847	
6,000.0	5,948.8	5,773.1	5,738.0	19.8	16.9	-175.96	-23.3	-534.2	1,158.6	1,122.5	36.08	32.117	
6,100.0	6,047.3	5,866.8	5,830.1	20.2	17.3	-176.08	-24.2	-551.3	1,193.6	1,156.7	36.87	32.371	
6,200.0	6,145.7	5,960.5	5,922.2	20.7	17.7	-176.18	-25.1	-568.3	1,228.5	1,190.8	37.67	32.612	
6,300.0	6,244.2	6,054.1	6,014.3	21.1	18.1	-176.29	-26.0	-585.4	1,263.5	1,225.0	38.47	32.841	
6,400.0	6,342.7	6,147.8	6,106.4	21.5	18.5	-176.38	-26.9	-602.4	1,298.4	1,259.2	39.28	33.058	
6,500.0	6,441.2	6,241.6	6,198.6	21.9	18.9	-176.49	-27.8	-619.5	1,333.2	1,293.1	40.07	33.274	
6,600.0	6,540.0	6,335.8	6,291.3	22.3	19.3	-176.59	-28.7	-636.6	1,366.5	1,325.6	40.87	33.434	
6,700.0	6,639.0	6,430.7	6,384.6	22.8	19.7	-176.68	-29.6	-653.9	1,398.1	1,356.5	41.67	33.552	
6,800.0	6,738.3	6,526.0	6,478.3	23.2	20.1	-176.77	-30.5	-671.2	1,428.1	1,385.7	42.46	33.637	
6,900.0	6,837.7	6,622.2	6,602.6	23.6	20.6	-176.86	-31.7	-693.0	1,455.5	1,412.0	43.49	33.469	
7,000.0	6,937.4	6,782.8	6,731.7	23.9	21.1	-176.93	-32.7	-712.6	1,479.1	1,434.6	44.52	33.222	
7,100.0	7,037.1	6,915.3	6,863.1	24.3	21.7	-177.00	-33.6	-729.5	1,498.7	1,453.2	45.51	32.929	
7,200.0	7,137.0	7,049.2	6,996.3	24.6	22.2	-177.04	-34.3	-743.5	1,514.3	1,467.8	46.45	32.600	
7,300.0	7,236.9	7,184.4	7,131.0	24.9	22.7	-177.08	-34.9	-754.5	1,525.8	1,478.5	47.32	32.245	
7,400.0	7,336.9	7,320.4	7,266.8	25.2	23.1	-177.10	-35.3	-762.3	1,533.3	1,485.2	48.09	31.884	
7,500.0	7,436.9	7,456.8	7,403.1	25.2	23.5	-90.36	-35.5	-766.9	1,536.9	1,488.3	48.59	31.631	
7,600.0	7,536.9	7,593.4	7,539.7	25.3	23.8	-90.36	-35.6	-768.3	1,537.9	1,489.0	48.88	31.460	
7,630.9	7,567.8	7,621.5	7,567.8	25.3	23.8	-90.36	-35.6	-768.3	1,537.9	1,489.0	48.89	31.456	
7,700.0	7,636.9	7,690.6	7,636.9	25.3	23.8	-90.36	-35.6	-768.3	1,537.9	1,489.0	48.94	31.422	
7,800.0	7,736.9	7,790.6	7,736.9	25.3	23.9	-90.36	-35.6	-768.3	1,537.9	1,488.9	49.01	31.377	
7,900.0	7,836.9	7,890.6	7,836.9	25.4	23.9	-90.36	-35.6	-768.3	1,537.9	1,488.8	49.08	31.332	
8,000.0	7,936.9	7,990.6	7,936.9	25.4	23.9	-90.36	-35.6	-768.3	1,537.9	1,488.7	49.15	31.287	
8,100.0	8,036.9	8,090.6	8,036.9	25.4	24.0	-90.36	-35.6	-768.3	1,537.9	1,488.7	49.22	31.242	
8,200.0	8,136.9	8,190.6	8,136.9	25.5	24.0	-90.36	-35.6	-768.3	1,537.9	1,488.6	49.30	31.197	
8,300.0	8,236.9	8,290.6	8,236.9	25.5	24.1	-90.36	-35.6	-768.3	1,537.9	1,488.5	49.37	31.152	
8,400.0	8,336.9	8,390.6	8,336.9	25.5	24.1	-90.36	-35.6	-768.3	1,537.9	1,488.5	49.44	31.106	
8,500.0	8,436.9	8,490.6	8,436.9	25.6	24.1	-90.36	-35.6	-768.3	1,537.9	1,488.4	49.51	31.061	
8,600.0	8,536.9	8,590.6	8,536.9	25.6	24.2	-90.36	-35.6	-768.3	1,537.9	1,488.3	49.59	31.015	
8,700.0	8,636.9	8,690.6	8,636.9	25.7	24.2	-90.36	-35.6	-768.3	1,537.9	1,488.2	49.66	30.969	
8,800.0	8,736.9	8,790.6	8,736.9	25.7	24.3	-90.36	-35.6	-768.3	1,537.9	1,488.2	49.73	30.923	
8,900.0	8,836.9	8,890.6	8,836.9	25.7	24.3	-90.36	-35.6	-768.3	1,537.9	1,488.1	49.81	30.877	
9,000.0	8,936.9	8,990.6	8,936.9	25.8	24.3	-90.36	-35.6	-768.3	1,537.9	1,488.0	49.88	30.831	
9,100.0	9,036.9	9,090.6	9,036.9	25.8	24.4	-90.36	-35.6	-768.3	1,537.9	1,487.9	49.96	30.785	
9,200.0	9,136.9	9,190.6	9,136.9	25.8	24.4	-90.36	-35.6	-768.3	1,537.9	1,487.9	50.03	30.738	
9,300.0	9,236.9	9,290.6	9,236.9	25.9	24.5	-90.36	-35.6	-768.3	1,537.9	1,487.8	50.11	30.692	
9,400.0	9,336.9	9,390.6	9,336.9	25.9	24.5	-90.36	-35.6	-768.3	1,537.9	1,487.7	50.18	30.645	
9,500.0	9,436.9	9,490.6	9,436.9	25.9	24.5	-90.36	-35.6	-768.3	1,537.9	1,487.6	50.26	30.598	
9,600.0	9,536.9	9,590.6	9,536.9	26.0	24.6	-90.36	-35.6	-768.3	1,537.9	1,487.6	50.34	30.551	
9,700.0	9,636.9	9,690.6	9,636.9	26.0	24.6	-90.36	-35.6	-768.3	1,537.9	1,487.5	50.42	30.505	
9,800.0	9,736.9	9,790.6	9,736.9	26.1	24.7	-90.36	-35.6	-768.3	1,537.9	1,487.4	50.49	30.457	
9,900.0	9,836.9	9,890.6	9,836.9	26.1	24.7	-90.36	-35.6	-768.3	1,537.9	1,487.3	50.57	30.410	
10,000.0	9,936.9	9,990.6	9,936.9	26.1	24.7	-90.36	-35.6	-768.3	1,537.9	1,487.2	50.65	30.363	
10,100.0	10,036.9	10,090.6	10,036.9	26.2	24.8	-90.36	-35.6	-768.3	1,537.9	1,487.2	50.73	30.316	
10,200.0	10,136.9	10,190.6	10,136.9	26.2	24.8	-90.36	-35.6	-768.3	1,537.9	1,487.1	50.81	30.268	

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 WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #702H - 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	
10,300.0	10,236.9	10,290.6	10,236.9	26.2	24.9	-90.36	-35.6	-768.3	1,537.9	1,487.0	50.89	30.221		
10,400.0	10,336.9	10,390.6	10,336.9	26.3	24.9	-90.36	-35.6	-768.3	1,537.9	1,486.9	50.97	30.173		
10,500.0	10,436.9	10,490.6	10,436.9	26.3	25.0	-90.36	-35.6	-768.3	1,537.9	1,486.8	51.05	30.126		
10,600.0	10,536.9	10,590.6	10,536.9	26.4	25.0	-90.36	-35.6	-768.3	1,537.9	1,486.8	51.13	30.078		
10,700.0	10,636.9	10,690.7	10,637.0	26.4	25.0	-90.33	-34.8	-768.3	1,537.9	1,486.7	51.20	30.038		
10,732.7	10,669.6	10,723.4	10,669.6	26.4	25.0	-90.23	-32.2	-768.3	1,537.9	1,486.7	51.22	30.026		
10,800.0	10,736.9	10,789.2	10,734.4	26.4	25.0	-89.83	-21.3	-768.3	1,537.9	1,486.7	51.26	30.000		
10,900.0	10,836.8	10,881.5	10,822.4	26.5	25.1	-88.63	6.4	-768.5	1,538.4	1,487.1	51.31	29.981		
11,000.0	10,934.8	10,969.9	10,901.4	26.5	25.1	-87.66	45.8	-768.6	1,539.3	1,487.9	51.34	29.982		
11,100.0	11,028.1	11,055.3	10,971.1	26.5	25.1	-86.76	95.0	-768.8	1,540.5	1,489.2	51.35	29.997		
11,200.0	11,113.7	11,138.2	11,031.1	26.5	25.1	-85.94	152.2	-769.1	1,541.9	1,490.6	51.37	30.017		
11,300.0	11,189.1	11,219.3	11,081.2	26.5	25.2	-85.23	215.8	-769.3	1,543.4	1,492.0	51.39	30.032		
11,400.0	11,251.9	11,300.0	11,121.7	26.5	25.2	-84.64	285.6	-769.6	1,544.8	1,493.4	51.44	30.034		
11,500.0	11,300.4	11,377.4	11,150.9	26.6	25.3	-84.18	357.2	-769.9	1,546.0	1,494.5	51.50	30.018		
11,600.0	11,332.9	11,450.0	11,169.3	26.7	25.3	-83.88	427.4	-770.2	1,546.8	1,495.2	51.59	29.984		
11,700.0	11,348.6	11,532.4	11,179.3	26.7	25.4	-83.71	509.1	-770.5	1,547.3	1,495.5	51.72	29.914		
11,800.0	11,350.0	11,624.0	11,180.0	26.8	25.5	-83.69	600.7	-770.9	1,547.3	1,495.4	51.91	29.806		
11,900.0	11,350.0	11,724.0	11,180.0	27.0	25.6	-83.69	700.7	-771.3	1,547.3	1,495.1	52.17	29.657		
12,000.0	11,350.0	11,824.0	11,180.0	27.1	25.7	-83.69	800.7	-771.7	1,547.3	1,494.9	52.48	29.485		
12,100.0	11,350.0	11,924.0	11,180.0	27.3	25.9	-83.69	900.7	-772.1	1,547.3	1,494.5	52.83	29.291		
12,200.0	11,350.0	12,024.0	11,180.0	27.5	26.1	-83.69	1,000.7	-772.5	1,547.3	1,494.1	53.21	29.078		
12,300.0	11,350.0	12,124.0	11,180.0	27.7	26.3	-83.69	1,100.7	-772.9	1,547.4	1,493.7	53.64	28.846		
12,400.0	11,350.0	12,224.0	11,180.0	27.9	26.6	-83.69	1,200.7	-773.3	1,547.4	1,493.3	54.11	28.598		
12,500.0	11,350.0	12,324.0	11,180.0	28.2	26.8	-83.69	1,300.7	-773.8	1,547.4	1,492.8	54.61	28.333		
12,600.0	11,350.0	12,424.0	11,180.0	28.4	27.1	-83.69	1,400.7	-774.2	1,547.4	1,492.2	55.16	28.055		
12,700.0	11,350.0	12,524.0	11,180.0	28.7	27.4	-83.69	1,500.7	-774.6	1,547.4	1,491.7	55.73	27.763		
12,800.0	11,350.0	12,624.0	11,180.0	29.0	27.7	-83.69	1,600.7	-775.0	1,547.4	1,491.0	56.35	27.461		
12,900.0	11,350.0	12,724.0	11,180.0	29.4	28.0	-83.69	1,700.7	-775.4	1,547.4	1,490.4	57.00	27.150		
13,000.0	11,350.0	12,824.0	11,180.0	29.7	28.4	-83.69	1,800.7	-775.8	1,547.4	1,489.7	57.68	26.830		
13,100.0	11,350.0	12,924.0	11,180.0	30.1	28.7	-83.69	1,900.7	-776.2	1,547.4	1,489.0	58.39	26.503		
13,200.0	11,350.0	13,024.0	11,180.0	30.4	29.1	-83.69	2,000.7	-776.6	1,547.4	1,488.3	59.13	26.171		
13,300.0	11,350.0	13,124.0	11,180.0	30.8	29.5	-83.69	2,100.7	-777.0	1,547.4	1,487.5	59.90	25.834		
13,400.0	11,350.0	13,224.0	11,180.0	31.2	29.9	-83.69	2,200.7	-777.4	1,547.4	1,486.7	60.70	25.494		
13,500.0	11,350.0	13,324.0	11,180.0	31.6	30.4	-83.69	2,300.7	-777.8	1,547.5	1,485.9	61.53	25.152		
13,600.0	11,350.0	13,424.0	11,180.0	32.1	30.8	-83.69	2,400.7	-778.3	1,547.5	1,485.1	62.38	24.808		
13,700.0	11,350.0	13,524.0	11,180.0	32.5	31.3	-83.69	2,500.7	-778.7	1,547.5	1,484.2	63.25	24.464		
13,800.0	11,350.0	13,624.0	11,180.0	33.0	31.7	-83.69	2,600.7	-779.1	1,547.5	1,483.3	64.15	24.121		
13,900.0	11,350.0	13,724.0	11,180.0	33.4	32.2	-83.69	2,700.7	-779.5	1,547.5	1,482.4	65.08	23.779		
14,000.0	11,350.0	13,824.0	11,180.0	33.9	32.7	-83.69	2,800.7	-779.9	1,547.5	1,481.5	66.02	23.438		
14,100.0	11,350.0	13,924.0	11,180.0	34.4	33.2	-83.69	2,900.7	-780.3	1,547.5	1,480.5	66.99	23.100		
14,200.0	11,350.0	14,024.0	11,180.0	34.9	33.7	-83.69	3,000.7	-780.7	1,547.5	1,479.5	67.98	22.765		
14,300.0	11,350.0	14,124.0	11,180.0	35.4	34.2	-83.69	3,100.7	-781.1	1,547.5	1,478.5	68.98	22.434		
14,400.0	11,350.0	14,224.0	11,180.0	35.9	34.7	-83.69	3,200.7	-781.5	1,547.5	1,477.5	70.01	22.106		
14,500.0	11,350.0	14,324.0	11,180.0	36.4	35.3	-83.69	3,300.7	-781.9	1,547.5	1,476.5	71.05	21.782		
14,600.0	11,350.0	14,424.0	11,180.0	36.9	35.8	-83.69	3,400.7	-782.3	1,547.5	1,475.4	72.11	21.462		
14,700.0	11,350.0	14,524.0	11,180.0	37.5	36.4	-83.69	3,500.6	-782.8	1,547.6	1,474.4	73.18	21.147		
14,800.0	11,350.0	14,624.0	11,180.0	38.0	36.9	-83.69	3,600.6	-783.2	1,547.6	1,473.3	74.27	20.837		
14,900.0	11,350.0	14,724.0	11,180.0	38.6	37.5	-83.69	3,700.6	-783.6	1,547.6	1,472.2	75.37	20.532		
15,000.0	11,350.0	14,824.0	11,180.0	39.2	38.1	-83.69	3,800.6	-784.0	1,547.6	1,471.1	76.49	20.232		
15,100.0	11,350.0	14,924.0	11,180.0	39.7	38.6	-83.69	3,900.6	-784.4	1,547.6	1,470.0	77.62	19.937		
15,200.0	11,350.0	15,024.0	11,180.0	40.3	39.2	-83.69	4,000.6	-784.8	1,547.6	1,468.8	78.77	19.647		
15,300.0	11,350.0	15,124.0	11,180.0	40.9	39.8	-83.69	4,100.6	-785.2	1,547.6	1,467.7	79.93	19.363		

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME 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)			
15,400.0	11,350.0	15,224.0	11,180.0	41.5	40.4	-83.69	4,200.6	-785.6	1,547.6	1,466.5	81.09	19.084	
15,500.0	11,350.0	15,324.0	11,180.0	42.1	41.0	-83.69	4,300.6	-786.0	1,547.6	1,465.3	82.27	18.810	
15,600.0	11,350.0	15,424.0	11,180.0	42.7	41.6	-83.69	4,400.6	-786.4	1,547.6	1,464.2	83.46	18.542	
15,700.0	11,350.0	15,524.0	11,180.0	43.3	42.3	-83.69	4,500.6	-786.8	1,547.6	1,463.0	84.67	18.279	
15,800.0	11,350.0	15,624.0	11,180.0	43.9	42.9	-83.69	4,600.6	-787.3	1,547.6	1,461.8	85.88	18.022	
15,900.0	11,350.0	15,724.0	11,180.0	44.5	43.5	-83.69	4,700.6	-787.7	1,547.6	1,460.6	87.10	17.769	
16,000.0	11,350.0	15,824.0	11,180.0	45.1	44.1	-83.69	4,800.6	-788.1	1,547.7	1,459.3	88.33	17.522	
16,100.0	11,350.0	15,924.0	11,180.0	45.7	44.8	-83.69	4,900.6	-788.5	1,547.7	1,458.1	89.56	17.280	
16,200.0	11,350.0	16,024.0	11,180.0	46.4	45.4	-83.69	5,000.6	-788.9	1,547.7	1,456.9	90.81	17.043	
16,300.0	11,350.0	16,124.0	11,180.0	47.0	46.0	-83.69	5,100.6	-789.3	1,547.7	1,455.6	92.07	16.811	
16,400.0	11,350.0	16,224.0	11,180.0	47.6	46.7	-83.69	5,200.6	-789.7	1,547.7	1,454.4	93.33	16.583	
16,500.0	11,350.0	16,324.0	11,180.0	48.3	47.3	-83.69	5,300.6	-790.1	1,547.7	1,453.1	94.60	16.361	
16,600.0	11,350.0	16,424.0	11,180.0	48.9	48.0	-83.69	5,400.6	-790.5	1,547.7	1,451.8	95.87	16.143	
16,700.0	11,350.0	16,524.0	11,180.0	49.6	48.6	-83.69	5,500.6	-790.9	1,547.7	1,450.6	97.16	15.930	
16,800.0	11,350.0	16,624.0	11,180.0	50.2	49.3	-83.69	5,600.6	-791.3	1,547.7	1,449.3	98.45	15.722	
16,900.0	11,350.0	16,724.0	11,180.0	50.9	50.0	-83.69	5,700.6	-791.8	1,547.7	1,448.0	99.74	15.517	
17,000.0	11,350.0	16,824.0	11,180.0	51.5	50.6	-83.69	5,800.6	-792.2	1,547.7	1,446.7	101.04	15.317	
17,100.0	11,350.0	16,924.0	11,180.0	52.2	51.3	-83.69	5,900.6	-792.6	1,547.7	1,445.4	102.35	15.122	
17,200.0	11,350.0	17,024.0	11,180.0	52.8	52.0	-83.69	6,000.6	-793.0	1,547.8	1,444.1	103.67	14.930	
17,300.0	11,350.0	17,124.0	11,180.0	53.5	52.6	-83.69	6,100.6	-793.4	1,547.8	1,442.8	104.98	14.743	
17,400.0	11,350.0	17,224.0	11,180.0	54.2	53.3	-83.69	6,200.6	-793.8	1,547.8	1,441.5	106.31	14.559	
17,500.0	11,350.0	17,324.0	11,180.0	54.8	54.0	-83.69	6,300.6	-794.2	1,547.8	1,440.1	107.64	14.380	
17,600.0	11,350.0	17,424.0	11,180.0	55.5	54.7	-83.69	6,400.6	-794.6	1,547.8	1,438.8	108.97	14.204	
17,700.0	11,350.0	17,524.0	11,180.0	56.2	55.3	-83.69	6,500.6	-795.0	1,547.8	1,437.5	110.31	14.031	
17,800.0	11,350.0	17,624.0	11,180.0	56.9	56.0	-83.69	6,600.6	-795.4	1,547.8	1,436.2	111.65	13.863	
17,900.0	11,350.0	17,724.0	11,180.0	57.5	56.7	-83.69	6,700.6	-795.8	1,547.8	1,434.8	113.00	13.698	
18,000.0	11,350.0	17,824.0	11,180.0	58.2	57.4	-83.69	6,800.6	-796.3	1,547.8	1,433.5	114.35	13.536	
18,100.0	11,350.0	17,924.0	11,180.0	58.9	58.1	-83.69	6,900.6	-796.7	1,547.8	1,432.1	115.71	13.377	
18,200.0	11,350.0	18,024.0	11,180.0	59.6	58.8	-83.69	7,000.6	-797.1	1,547.8	1,430.8	117.06	13.222	
18,300.0	11,350.0	18,124.0	11,180.0	60.3	59.5	-83.69	7,100.6	-797.5	1,547.8	1,429.4	118.43	13.070	
18,400.0	11,350.0	18,224.0	11,180.0	61.0	60.2	-83.69	7,200.6	-797.9	1,547.9	1,428.1	119.79	12.921	
18,500.0	11,350.0	18,324.0	11,180.0	61.7	60.9	-83.69	7,300.6	-798.3	1,547.9	1,426.7	121.16	12.775	
18,600.0	11,350.0	18,424.0	11,180.0	62.3	61.6	-83.69	7,400.6	-798.7	1,547.9	1,425.3	122.54	12.632	
18,700.0	11,350.0	18,524.0	11,180.0	63.0	62.3	-83.69	7,500.6	-799.1	1,547.9	1,424.0	123.91	12.492	
18,800.0	11,350.0	18,624.0	11,180.0	63.7	63.0	-83.69	7,600.6	-799.5	1,547.9	1,422.6	125.29	12.354	
18,900.0	11,350.0	18,724.0	11,180.0	64.4	63.7	-83.69	7,700.6	-799.9	1,547.9	1,421.2	126.68	12.219	
19,000.0	11,350.0	18,824.0	11,180.0	65.1	64.4	-83.69	7,800.6	-800.3	1,547.9	1,419.8	128.06	12.087	
19,100.0	11,350.0	18,924.0	11,180.0	65.8	65.1	-83.69	7,900.6	-800.8	1,547.9	1,418.5	129.45	11.958	
19,200.0	11,350.0	19,024.0	11,180.0	66.5	65.8	-83.69	8,000.6	-801.2	1,547.9	1,417.1	130.84	11.831	
19,300.0	11,350.0	19,124.0	11,180.0	67.2	66.5	-83.69	8,100.6	-801.6	1,547.9	1,415.7	132.23	11.706	
19,400.0	11,350.0	19,224.0	11,180.0	67.9	67.2	-83.69	8,200.6	-802.0	1,547.9	1,414.3	133.63	11.584	
19,500.0	11,350.0	19,324.0	11,180.0	68.6	67.9	-83.69	8,300.6	-802.4	1,547.9	1,412.9	135.03	11.464	
19,600.0	11,350.0	19,424.0	11,180.0	69.4	68.6	-83.69	8,400.6	-802.8	1,547.9	1,411.5	136.43	11.346	
19,700.0	11,350.0	19,524.0	11,180.0	70.1	69.4	-83.69	8,500.6	-803.2	1,548.0	1,410.1	137.83	11.231	
19,800.0	11,350.0	19,624.0	11,180.0	70.8	70.1	-83.69	8,600.6	-803.6	1,548.0	1,408.7	139.24	11.117	
19,900.0	11,350.0	19,724.0	11,180.0	71.5	70.8	-83.70	8,700.6	-804.0	1,548.0	1,407.3	140.65	11.006	
20,000.0	11,350.0	19,824.0	11,180.0	72.2	71.5	-83.70	8,800.6	-804.4	1,548.0	1,405.9	142.06	10.897	
20,100.0	11,350.0	19,924.0	11,180.0	72.9	72.2	-83.70	8,900.6	-804.8	1,548.0	1,404.5	143.47	10.790	
20,200.0	11,350.0	20,024.0	11,180.0	73.6	72.9	-83.70	9,000.6	-805.3	1,548.0	1,403.1	144.89	10.684	
20,300.0	11,350.0	20,124.0	11,180.0	74.3	73.7	-83.70	9,100.6	-805.7	1,548.0	1,401.7	146.30	10.581	
20,400.0	11,350.0	20,224.0	11,180.0	75.1	74.4	-83.70	9,200.6	-806.1	1,548.0	1,400.3	147.72	10.479	
20,500.0	11,350.0	20,324.0	11,180.0	75.8	75.1	-83.70	9,300.6	-806.5	1,548.0	1,398.9	149.14	10.380	

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 WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME 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			Offset Wellbore Centre		Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
20,600.0	11,350.0	20,424.0	11,180.0	76.5	75.8	-83.70	9,400.6	-806.9	1,548.0	1,397.5	150.56	10.282	
20,700.0	11,350.0	20,524.0	11,180.0	77.2	76.6	-83.70	9,500.6	-807.3	1,548.0	1,396.1	151.99	10.185	
20,800.0	11,350.0	20,624.0	11,180.0	77.9	77.3	-83.70	9,600.6	-807.7	1,548.0	1,394.6	153.41	10.091	
20,900.0	11,350.0	20,724.0	11,180.0	78.7	78.0	-83.70	9,700.6	-808.1	1,548.1	1,393.2	154.84	9.998	
21,000.0	11,350.0	20,824.0	11,180.0	79.4	78.7	-83.70	9,800.6	-808.5	1,548.1	1,391.8	156.27	9.907	
21,100.0	11,350.0	20,924.0	11,180.0	80.1	79.5	-83.70	9,900.6	-808.9	1,548.1	1,390.4	157.70	9.817	
21,200.0	11,350.0	21,024.0	11,180.0	80.8	80.2	-83.70	10,000.6	-809.3	1,548.1	1,389.0	159.13	9.729	
21,300.0	11,350.0	21,124.0	11,180.0	81.5	80.9	-83.70	10,100.6	-809.8	1,548.1	1,387.5	160.56	9.642	
21,400.0	11,350.0	21,224.0	11,180.0	82.3	81.6	-83.70	10,200.6	-810.2	1,548.1	1,386.1	162.00	9.556	
21,500.0	11,350.0	21,324.0	11,180.0	83.0	82.4	-83.70	10,300.6	-810.6	1,548.1	1,384.7	163.43	9.473	
21,600.0	11,350.0	21,424.0	11,180.0	83.7	83.1	-83.70	10,400.6	-811.0	1,548.1	1,383.2	164.87	9.390	
21,700.0	11,350.0	21,524.0	11,180.0	84.4	83.8	-83.70	10,500.6	-811.4	1,548.1	1,381.8	166.31	9.309	
21,800.0	11,350.0	21,624.0	11,180.0	85.2	84.6	-83.70	10,600.6	-811.8	1,548.1	1,380.4	167.75	9.229	
21,900.0	11,350.0	21,724.0	11,180.0	85.9	85.3	-83.70	10,700.6	-812.2	1,548.1	1,378.9	169.19	9.150	
22,000.0	11,350.0	21,824.0	11,180.0	86.6	86.0	-83.70	10,800.6	-812.6	1,548.1	1,377.5	170.63	9.073	
22,100.0	11,350.0	21,924.0	11,180.0	87.4	86.8	-83.70	10,900.6	-813.0	1,548.2	1,376.1	172.07	8.997	
22,200.0	11,350.0	22,024.0	11,180.0	88.1	87.5	-83.70	11,000.6	-813.4	1,548.2	1,374.6	173.52	8.922	
22,300.0	11,350.0	22,124.0	11,180.0	88.8	88.2	-83.70	11,100.6	-813.8	1,548.2	1,373.2	174.96	8.848	
22,400.0	11,350.0	22,224.0	11,180.0	89.6	89.0	-83.70	11,200.6	-814.3	1,548.2	1,371.8	176.41	8.776	
22,500.0	11,350.0	22,324.0	11,180.0	90.3	89.7	-83.70	11,300.6	-814.7	1,548.2	1,370.3	177.86	8.705	
22,600.0	11,350.0	22,424.0	11,180.0	91.0	90.4	-83.70	11,400.6	-815.1	1,548.2	1,368.9	179.31	8.634	
22,700.0	11,350.0	22,524.0	11,180.0	91.8	91.2	-83.70	11,500.6	-815.5	1,548.2	1,367.4	180.76	8.565	
22,800.0	11,350.0	22,624.0	11,180.0	92.5	91.9	-83.70	11,600.6	-815.9	1,548.2	1,366.0	182.21	8.497	
22,900.0	11,350.0	22,724.0	11,180.0	93.2	92.6	-83.70	11,700.6	-816.3	1,548.2	1,364.6	183.66	8.430	
23,000.0	11,350.0	22,824.0	11,180.0	94.0	93.4	-83.70	11,800.6	-816.7	1,548.2	1,363.1	185.11	8.364	
23,100.0	11,350.0	22,924.0	11,180.0	94.7	94.1	-83.70	11,900.6	-817.1	1,548.2	1,361.7	186.57	8.298	
23,200.0	11,350.0	23,024.0	11,180.0	95.4	94.9	-83.70	12,000.6	-817.5	1,548.2	1,360.2	188.02	8.234	
23,300.0	11,350.0	23,124.0	11,180.0	96.2	95.6	-83.70	12,100.6	-817.9	1,548.3	1,358.8	189.48	8.171	
23,400.0	11,350.0	23,224.0	11,180.0	96.9	96.3	-83.70	12,200.6	-818.3	1,548.3	1,357.3	190.94	8.109	
23,500.0	11,350.0	23,324.0	11,180.0	97.6	97.1	-83.70	12,300.6	-818.8	1,548.3	1,355.9	192.39	8.047	
23,600.0	11,350.0	23,424.0	11,180.0	98.4	97.8	-83.70	12,400.6	-819.2	1,548.3	1,354.4	193.85	7.987	
23,700.0	11,350.0	23,524.0	11,180.0	99.1	98.6	-83.70	12,500.6	-819.6	1,548.3	1,353.0	195.31	7.927	
23,800.0	11,350.0	23,624.0	11,180.0	99.9	99.3	-83.70	12,600.6	-820.0	1,548.3	1,351.5	196.77	7.868	
23,900.0	11,350.0	23,724.0	11,180.0	100.6	100.0	-83.70	12,700.6	-820.4	1,548.3	1,350.1	198.23	7.811	
24,000.0	11,350.0	23,824.0	11,180.0	101.3	100.8	-83.70	12,800.6	-820.8	1,548.3	1,348.6	199.69	7.753	
24,100.0	11,350.0	23,924.0	11,180.0	102.1	101.5	-83.70	12,900.6	-821.2	1,548.3	1,347.2	201.16	7.697	
24,200.0	11,350.0	24,024.0	11,180.0	102.8	102.3	-83.70	13,000.6	-821.6	1,548.3	1,345.7	202.62	7.642	
24,300.0	11,350.0	24,124.0	11,180.0	103.5	103.0	-83.70	13,100.6	-822.0	1,548.3	1,344.3	204.08	7.587	
24,400.0	11,350.0	24,224.0	11,180.0	104.3	103.8	-83.70	13,200.6	-822.4	1,548.3	1,342.8	205.55	7.533	
24,500.0	11,350.0	24,324.0	11,180.0	105.0	104.5	-83.70	13,300.6	-822.8	1,548.3	1,341.3	207.01	7.480	
24,600.0	11,350.0	24,424.0	11,180.0	105.8	105.2	-83.70	13,400.6	-823.3	1,548.4	1,339.9	208.48	7.427	
24,700.0	11,350.0	24,524.0	11,180.0	106.5	106.0	-83.70	13,500.6	-823.7	1,548.4	1,338.4	209.94	7.375	
24,799.9	11,350.0	24,623.9	11,180.0	107.3	106.7	-83.70	13,600.5	-824.1	1,548.4	1,337.0	211.41	7.324	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #703H - 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		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	3.0	3.0	-90.06	-0.1	-60.0	60.0	53.5	6.43	9.328	
100.0	100.0	100.0	100.0	3.2	3.2	-90.06	-0.1	-60.0	60.0	53.1	6.89	8.701	
200.0	200.0	200.0	200.0	3.5	3.5	-90.06	-0.1	-60.0	60.0	52.6	7.33	8.183	
300.0	300.0	300.0	300.0	3.7	3.7	-90.06	-0.1	-60.0	60.0	52.2	7.74	7.747	
400.0	400.0	400.0	400.0	3.9	3.9	-90.06	-0.1	-60.0	60.0	51.8	8.14	7.371	
500.0	500.0	500.0	500.0	4.1	4.1	-90.06	-0.1	-60.0	60.0	51.5	8.51	7.044	
600.0	600.0	600.0	600.0	4.2	4.2	-90.06	-0.1	-60.0	60.0	51.1	8.88	6.755	
700.0	700.0	700.0	700.0	4.4	4.4	-90.06	-0.1	-60.0	60.0	50.7	9.23	6.498	
800.0	800.0	800.0	800.0	4.6	4.6	-90.06	-0.1	-60.0	60.0	50.4	9.57	6.266	
900.0	900.0	900.0	900.0	4.8	4.8	-90.06	-0.1	-60.0	60.0	50.1	9.90	6.056	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-90.06	-0.1	-60.0	60.0	49.7	10.22	5.865	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-90.06	-0.1	-60.0	60.0	49.4	10.54	5.690	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-90.06	-0.1	-60.0	60.0	49.1	10.85	5.528	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	-90.06	-0.1	-60.0	60.0	48.8	11.15	5.379	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-90.06	-0.1	-60.0	60.0	48.5	11.44	5.240	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	-90.06	-0.1	-60.0	60.0	48.2	11.73	5.111	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	-90.06	-0.1	-60.0	60.0	48.0	12.02	4.989	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	-90.06	-0.1	-60.0	60.0	47.7	12.30	4.876	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	-90.06	-0.1	-60.0	60.0	47.4	12.58	4.769 CC, ES	
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	135.80	-0.1	-60.0	60.9	48.1	12.85	4.740 SF	
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	138.23	-0.1	-60.0	63.8	50.7	13.11	4.865	
2,100.0	2,099.7	2,099.7	2,099.7	6.6	6.5	141.82	-0.1	-60.0	68.8	55.4	13.39	5.139	
2,200.0	2,199.3	2,199.3	2,199.3	6.8	6.7	146.00	-0.1	-60.0	76.2	62.5	13.68	5.569	
2,300.0	2,298.7	2,298.7	2,298.7	6.9	6.8	149.94	-0.1	-60.0	85.1	71.1	13.98	6.086	
2,400.0	2,398.2	2,398.2	2,398.2	7.1	6.9	153.12	-0.1	-60.0	94.3	80.0	14.30	6.595	
2,500.0	2,497.6	2,497.6	2,497.6	7.4	7.0	155.73	-0.1	-60.0	103.7	89.1	14.63	7.092	
2,600.0	2,597.1	2,597.1	2,597.1	7.6	7.2	157.90	-0.1	-60.0	113.3	98.4	14.97	7.570	
2,700.0	2,696.5	2,696.5	2,696.5	7.8	7.3	159.73	-0.1	-60.0	123.1	107.8	15.34	8.024	
2,800.0	2,795.9	2,795.9	2,795.9	8.1	7.4	178.05	-0.1	-60.0	133.6	117.9	15.71	8.504	
2,900.0	2,895.2	2,895.2	2,895.2	8.4	7.5	-167.95	-0.1	-60.0	145.6	129.5	16.10	9.042	
3,000.0	2,994.2	2,994.2	2,994.2	8.6	7.7	-158.85	-0.1	-60.0	159.1	142.6	16.51	9.637	
3,100.0	3,092.8	3,089.1	3,089.0	8.9	7.8	-155.01	-0.1	-61.0	175.3	158.4	16.86	10.392	
3,200.0	3,191.3	3,182.6	3,182.6	9.1	7.9	-157.45	-0.1	-64.3	194.5	177.2	17.25	11.274	
3,300.0	3,289.8	3,275.2	3,274.9	9.4	8.0	-159.64	-0.2	-69.9	216.3	198.6	17.64	12.260	
3,400.0	3,388.3	3,366.6	3,366.1	9.7	8.2	-161.58	-0.4	-77.5	240.6	222.5	18.04	13.333	
3,500.0	3,486.8	3,456.9	3,455.8	10.0	8.3	-163.27	-0.5	-87.3	267.3	248.9	18.46	14.481	
3,600.0	3,585.2	3,546.8	3,544.9	10.4	8.5	-164.76	-0.7	-99.0	296.5	277.6	18.87	15.713	
3,700.0	3,683.7	3,641.9	3,639.1	10.7	8.6	-166.09	-1.0	-112.2	326.6	307.2	19.35	16.874	
3,800.0	3,782.2	3,737.0	3,733.3	11.0	8.8	-167.19	-1.2	-125.5	356.8	337.0	19.88	17.947	
3,900.0	3,880.7	3,832.1	3,827.5	11.4	9.0	-168.13	-1.4	-138.7	387.2	366.8	20.43	18.956	
4,000.0	3,979.2	3,929.2	3,923.6	11.8	9.2	-168.94	-1.7	-152.1	417.5	396.5	20.99	19.887	
4,100.0	4,077.6	4,028.2	4,021.8	12.1	9.5	-169.63	-1.9	-165.0	447.1	425.5	21.62	20.680	
4,200.0	4,176.1	4,127.9	4,120.7	12.5	9.7	-170.23	-2.1	-177.1	476.0	453.8	22.27	21.380	
4,300.0	4,274.6	4,228.0	4,220.2	12.9	10.0	-170.75	-2.3	-188.4	504.1	481.2	22.92	21.991	
4,400.0	4,373.1	4,328.7	4,320.3	13.3	10.3	-171.20	-2.5	-198.9	531.4	507.8	23.59	22.522	
4,500.0	4,471.6	4,429.8	4,421.0	13.6	10.5	-171.60	-2.7	-208.6	557.8	533.5	24.28	22.979	
4,600.0	4,570.0	4,531.5	4,522.3	14.0	10.8	-171.96	-2.8	-217.4	583.5	558.5	24.97	23.370	
4,700.0	4,668.5	4,633.6	4,624.1	14.4	11.1	-172.27	-2.9	-225.3	608.2	582.6	25.66	23.701	
4,800.0	4,767.0	4,736.2	4,726.4	14.8	11.4	-172.56	-3.1	-232.4	632.2	605.8	26.37	23.977	
4,900.0	4,865.5	4,839.2	4,829.3	15.2	11.7	-172.82	-3.2	-238.6	655.3	628.2	27.07	24.205	
5,000.0	4,964.0	4,942.7	4,932.6	15.6	11.9	-173.05	-3.3	-243.8	677.5	649.7	27.78	24.389	
5,100.0	5,062.4	5,046.5	5,036.4	16.0	12.2	-173.26	-3.3	-248.2	698.8	670.3	28.48	24.535	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #703H - 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)			
5,200.0	5,160.9	5,150.8	5,140.6	16.4	12.5	-173.45	-3.4	-251.6	719.3	690.1	29.18	24.647	
5,300.0	5,259.4	5,255.5	5,245.3	16.9	12.7	-173.63	-3.4	-254.1	738.9	709.0	29.88	24.731	
5,400.0	5,357.9	5,360.6	5,350.3	17.3	13.0	-173.80	-3.5	-255.6	757.6	727.0	30.56	24.794	
5,500.0	5,456.4	5,466.0	5,455.8	17.7	13.1	-173.95	-3.5	-256.2	775.4	744.2	31.17	24.872	
5,600.0	5,554.8	5,565.1	5,554.8	18.1	13.2	-174.08	-3.5	-256.2	792.6	760.9	31.70	25.001	
5,700.0	5,653.3	5,663.6	5,653.3	18.5	13.3	-174.21	-3.5	-256.2	809.9	777.7	32.24	25.121	
5,800.0	5,751.8	5,762.1	5,751.8	18.9	13.3	-174.33	-3.5	-256.2	827.2	794.4	32.78	25.234	
5,900.0	5,850.3	5,860.5	5,850.3	19.4	13.4	-174.45	-3.5	-256.2	844.5	811.2	33.32	25.341	
6,000.0	5,948.8	5,959.0	5,948.8	19.8	13.5	-174.56	-3.5	-256.2	861.8	827.9	33.87	25.442	
6,100.0	6,047.3	6,057.5	6,047.3	20.2	13.5	-174.66	-3.5	-256.2	879.1	844.6	34.42	25.538	
6,200.0	6,145.7	6,156.0	6,145.7	20.7	13.6	-174.77	-3.5	-256.2	896.4	861.4	34.98	25.628	
6,300.0	6,244.2	6,254.5	6,244.2	21.1	13.7	-174.87	-3.5	-256.2	913.7	878.1	35.53	25.713	
6,400.0	6,342.7	6,352.9	6,342.7	21.5	13.8	-174.96	-3.5	-256.2	931.0	894.9	36.09	25.793	
6,500.0	6,441.2	6,451.5	6,441.2	21.9	13.8	-175.06	-3.5	-256.2	948.0	911.4	36.63	25.879	
6,600.0	6,540.0	6,550.2	6,540.0	22.3	13.9	-175.15	-3.5	-256.2	963.6	926.4	37.19	25.911	
6,700.0	6,639.0	6,649.3	6,639.0	22.8	14.0	-175.23	-3.5	-256.2	977.4	939.7	37.73	25.904	
6,800.0	6,738.3	6,748.5	6,738.3	23.2	14.0	-175.30	-3.5	-256.2	989.5	951.3	38.27	25.860	
6,900.0	6,837.7	6,848.0	6,837.7	23.6	14.1	-175.36	-3.5	-256.2	999.9	961.1	38.78	25.781	
7,000.0	6,937.4	6,947.6	6,937.4	23.9	14.2	-175.41	-3.5	-256.2	1,008.6	969.3	39.29	25.672	
7,100.0	7,037.1	7,047.4	7,037.1	24.3	14.3	-175.44	-3.5	-256.2	1,015.5	975.7	39.77	25.535	
7,200.0	7,137.0	7,147.2	7,137.0	24.6	14.3	-175.47	-3.5	-256.2	1,020.7	980.4	40.22	25.375	
7,300.0	7,236.9	7,247.2	7,236.9	24.9	14.4	-175.49	-3.5	-256.2	1,024.1	983.5	40.64	25.197	
7,400.0	7,336.9	7,347.1	7,336.9	25.2	14.5	-175.50	-3.5	-256.2	1,025.8	984.8	41.01	25.015	
7,500.0	7,436.9	7,447.1	7,436.9	25.2	14.5	-88.75	-3.5	-256.2	1,026.0	984.9	41.13	24.943	
7,600.0	7,536.9	7,547.1	7,536.9	25.3	14.6	-88.75	-3.5	-256.2	1,026.0	984.8	41.22	24.888	
7,700.0	7,636.9	7,647.1	7,636.9	25.3	14.7	-88.75	-3.5	-256.2	1,026.0	984.7	41.32	24.834	
7,800.0	7,736.9	7,747.1	7,736.9	25.3	14.8	-88.75	-3.5	-256.2	1,026.0	984.6	41.41	24.779	
7,900.0	7,836.9	7,847.1	7,836.9	25.4	14.8	-88.75	-3.5	-256.2	1,026.0	984.5	41.50	24.724	
8,000.0	7,936.9	7,947.1	7,936.9	25.4	14.9	-88.75	-3.5	-256.2	1,026.0	984.4	41.59	24.669	
8,100.0	8,036.9	8,047.1	8,036.9	25.4	15.0	-88.75	-3.5	-256.2	1,026.0	984.3	41.68	24.614	
8,200.0	8,136.9	8,147.1	8,136.9	25.5	15.1	-88.75	-3.5	-256.2	1,026.0	984.2	41.78	24.559	
8,300.0	8,236.9	8,247.1	8,236.9	25.5	15.1	-88.75	-3.5	-256.2	1,026.0	984.1	41.87	24.505	
8,400.0	8,336.9	8,347.1	8,336.9	25.5	15.2	-88.75	-3.5	-256.2	1,026.0	984.1	41.96	24.450	
8,500.0	8,436.9	8,447.1	8,436.9	25.6	15.3	-88.75	-3.5	-256.2	1,026.0	984.0	42.06	24.395	
8,600.0	8,536.9	8,547.1	8,536.9	25.6	15.4	-88.75	-3.5	-256.2	1,026.0	983.9	42.15	24.340	
8,700.0	8,636.9	8,647.1	8,636.9	25.7	15.4	-88.75	-3.5	-256.2	1,026.0	983.8	42.25	24.285	
8,800.0	8,736.9	8,747.1	8,736.9	25.7	15.5	-88.75	-3.5	-256.2	1,026.0	983.7	42.34	24.231	
8,900.0	8,836.9	8,847.1	8,836.9	25.7	15.6	-88.75	-3.5	-256.2	1,026.0	983.6	42.44	24.176	
9,000.0	8,936.9	8,947.1	8,936.9	25.8	15.7	-88.75	-3.5	-256.2	1,026.0	983.5	42.54	24.121	
9,100.0	9,036.9	9,047.1	9,036.9	25.8	15.7	-88.75	-3.5	-256.2	1,026.0	983.4	42.63	24.066	
9,200.0	9,136.9	9,147.1	9,136.9	25.8	15.8	-88.75	-3.5	-256.2	1,026.0	983.3	42.73	24.012	
9,300.0	9,236.9	9,247.1	9,236.9	25.9	15.9	-88.75	-3.5	-256.2	1,026.0	983.2	42.83	23.957	
9,400.0	9,336.9	9,347.1	9,336.9	25.9	16.0	-88.75	-3.5	-256.2	1,026.0	983.1	42.93	23.903	
9,500.0	9,436.9	9,447.1	9,436.9	25.9	16.0	-88.75	-3.5	-256.2	1,026.0	983.0	43.02	23.848	
9,600.0	9,536.9	9,547.1	9,536.9	26.0	16.1	-88.75	-3.5	-256.2	1,026.0	982.9	43.12	23.793	
9,700.0	9,636.9	9,647.1	9,636.9	26.0	16.2	-88.75	-3.5	-256.2	1,026.0	982.8	43.22	23.739	
9,800.0	9,736.9	9,747.1	9,736.9	26.1	16.3	-88.75	-3.5	-256.2	1,026.0	982.7	43.32	23.684	
9,900.0	9,836.9	9,847.1	9,836.9	26.1	16.3	-88.75	-3.5	-256.2	1,026.0	982.6	43.42	23.630	
10,000.0	9,936.9	9,947.1	9,936.9	26.1	16.4	-88.75	-3.5	-256.2	1,026.0	982.5	43.52	23.576	
10,100.0	10,036.9	10,047.1	10,036.9	26.2	16.5	-88.75	-3.5	-256.2	1,026.0	982.4	43.62	23.521	
10,200.0	10,136.9	10,147.1	10,136.9	26.2	16.6	-88.75	-3.5	-256.2	1,026.0	982.3	43.72	23.467	
10,300.0	10,236.9	10,247.1	10,236.9	26.2	16.6	-88.75	-3.5	-256.2	1,026.0	982.2	43.82	23.413	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #703H - 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)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
10,400.0	10,336.9	10,347.1	10,336.9	26.3	16.7	-88.75	-3.5	-256.2	1,026.0	982.1	43.92	23.359		
10,500.0	10,436.9	10,447.1	10,436.9	26.3	16.8	-88.75	-3.5	-256.2	1,026.0	982.0	44.03	23.305		
10,600.0	10,536.9	10,547.1	10,536.9	26.4	16.9	-88.75	-3.5	-256.2	1,026.0	981.9	44.13	23.251		
10,700.0	10,636.9	10,647.1	10,636.9	26.4	16.9	-88.75	-3.5	-256.2	1,026.0	981.8	44.23	23.197		
10,800.0	10,736.9	10,747.1	10,736.9	26.4	17.0	-88.75	-3.5	-256.2	1,026.0	981.7	44.33	23.144		
10,900.0	10,836.8	10,844.5	10,834.2	26.5	17.1	-88.53	-0.6	-256.2	1,026.0	981.6	44.39	23.111		
11,000.0	10,934.8	10,940.1	10,928.1	26.5	17.1	-88.57	16.8	-256.3	1,026.0	981.6	44.43	23.094		
11,100.0	11,028.1	11,036.0	11,018.0	26.5	17.2	-88.66	49.7	-256.4	1,026.0	981.5	44.45	23.080		
11,200.0	11,113.7	11,132.1	11,101.4	26.5	17.2	-88.79	97.2	-256.6	1,025.9	981.4	44.48	23.066		
11,300.0	11,189.1	11,228.7	11,176.0	26.5	17.3	-88.95	158.3	-256.8	1,025.8	981.3	44.51	23.046		
11,400.0	11,251.9	11,325.7	11,239.6	26.5	17.4	-89.15	231.5	-257.1	1,025.8	981.2	44.57	23.014		
11,500.0	11,300.4	11,423.4	11,290.3	26.6	17.5	-89.37	314.8	-257.5	1,025.7	981.1	44.67	22.965		
11,600.0	11,332.9	11,521.7	11,326.2	26.7	17.6	-89.61	406.2	-257.8	1,025.7	980.9	44.81	22.893		
11,700.0	11,348.6	11,620.8	11,346.1	26.7	17.7	-89.86	503.1	-258.2	1,025.7	980.7	44.99	22.796		
11,728.9	11,350.3	11,649.5	11,348.7	26.8	17.8	-89.91	531.8	-258.4	1,025.7	980.6	45.06	22.763		
11,800.0	11,350.0	11,720.6	11,350.0	26.8	17.8	-90.00	602.8	-258.6	1,025.7	980.5	45.23	22.678		
11,900.0	11,350.0	11,820.6	11,350.0	27.0	18.0	-90.00	702.8	-259.0	1,025.7	980.2	45.52	22.535		
12,000.0	11,350.0	11,920.6	11,350.0	27.1	18.2	-90.00	802.8	-259.4	1,025.7	979.8	45.85	22.369		
12,100.0	11,350.0	12,020.6	11,350.0	27.3	18.4	-90.00	902.8	-259.8	1,025.7	979.5	46.24	22.184		
12,200.0	11,350.0	12,120.6	11,350.0	27.5	18.6	-90.00	1,002.8	-260.3	1,025.7	979.0	46.67	21.979		
12,300.0	11,350.0	12,220.6	11,350.0	27.7	18.9	-90.00	1,102.8	-260.7	1,025.7	978.6	47.14	21.757		
12,400.0	11,350.0	12,320.6	11,350.0	27.9	19.2	-90.00	1,202.8	-261.1	1,025.7	978.0	47.66	21.520		
12,500.0	11,350.0	12,420.6	11,350.0	28.2	19.5	-90.00	1,302.8	-261.5	1,025.7	977.5	48.22	21.270		
12,600.0	11,350.0	12,520.6	11,350.0	28.4	19.8	-90.00	1,402.8	-261.9	1,025.7	976.9	48.83	21.008		
12,700.0	11,350.0	12,620.6	11,350.0	28.7	20.2	-90.00	1,502.8	-262.3	1,025.7	976.2	49.47	20.735		
12,800.0	11,350.0	12,720.6	11,350.0	29.0	20.6	-90.00	1,602.8	-262.7	1,025.7	975.6	50.15	20.454		
12,900.0	11,350.0	12,820.6	11,350.0	29.4	21.0	-90.00	1,702.8	-263.1	1,025.7	974.9	50.86	20.167		
13,000.0	11,350.0	12,920.6	11,350.0	29.7	21.5	-90.00	1,802.8	-263.5	1,025.7	974.1	51.61	19.874		
13,100.0	11,350.0	13,020.6	11,350.0	30.1	21.9	-90.00	1,902.8	-263.9	1,025.7	973.3	52.40	19.576		
13,200.0	11,350.0	13,120.6	11,350.0	30.4	22.4	-90.00	2,002.8	-264.3	1,025.7	972.5	53.21	19.277		
13,300.0	11,350.0	13,220.6	11,350.0	30.8	22.9	-90.00	2,102.8	-264.7	1,025.7	971.7	54.06	18.975		
13,400.0	11,350.0	13,320.6	11,350.0	31.2	23.4	-90.00	2,202.8	-265.1	1,025.7	970.8	54.93	18.673		
13,500.0	11,350.0	13,420.6	11,350.0	31.6	23.9	-90.00	2,302.8	-265.5	1,025.7	969.9	55.83	18.372		
13,600.0	11,350.0	13,520.6	11,350.0	32.1	24.5	-90.00	2,402.8	-265.9	1,025.7	969.0	56.76	18.071		
13,700.0	11,350.0	13,620.6	11,350.0	32.5	25.0	-90.00	2,502.8	-266.3	1,025.7	968.0	57.71	17.773		
13,800.0	11,350.0	13,720.6	11,350.0	33.0	25.6	-90.00	2,602.8	-266.7	1,025.7	967.0	58.69	17.477		
13,900.0	11,350.0	13,820.6	11,350.0	33.4	26.2	-90.00	2,702.8	-267.1	1,025.7	966.1	59.69	17.185		
14,000.0	11,350.0	13,920.6	11,350.0	33.9	26.7	-90.00	2,802.8	-267.5	1,025.7	965.0	60.71	16.896		
14,100.0	11,350.0	14,020.6	11,350.0	34.4	27.3	-90.00	2,902.8	-267.9	1,025.7	964.0	61.75	16.611		
14,200.0	11,350.0	14,120.6	11,350.0	34.9	27.9	-90.00	3,002.8	-268.3	1,025.7	962.9	62.81	16.331		
14,300.0	11,350.0	14,220.6	11,350.0	35.4	28.5	-90.00	3,102.8	-268.7	1,025.8	961.9	63.89	16.055		
14,400.0	11,350.0	14,320.6	11,350.0	35.9	29.1	-90.00	3,202.8	-269.1	1,025.8	960.8	64.98	15.784		
14,500.0	11,350.0	14,420.6	11,350.0	36.4	29.8	-90.00	3,302.8	-269.5	1,025.8	959.7	66.10	15.519		
14,600.0	11,350.0	14,520.6	11,350.0	36.9	30.4	-90.00	3,402.8	-269.9	1,025.8	958.5	67.23	15.258		
14,700.0	11,350.0	14,620.6	11,350.0	37.5	31.0	-90.00	3,502.8	-270.3	1,025.8	957.4	68.37	15.003		
14,800.0	11,350.0	14,720.6	11,350.0	38.0	31.7	-90.00	3,602.8	-270.7	1,025.8	956.2	69.53	14.754		
14,900.0	11,350.0	14,820.6	11,350.0	38.6	32.3	-90.00	3,702.8	-271.1	1,025.8	955.1	70.70	14.509		
15,000.0	11,350.0	14,920.6	11,350.0	39.2	33.0	-90.00	3,802.8	-271.5	1,025.8	953.9	71.88	14.271		
15,100.0	11,350.0	15,020.6	11,350.0	39.7	33.6	-90.00	3,902.8	-271.9	1,025.8	952.7	73.08	14.037		
15,200.0	11,350.0	15,120.6	11,350.0	40.3	34.3	-90.00	4,002.8	-272.4	1,025.8	951.5	74.28	13.809		
15,300.0	11,350.0	15,220.6	11,350.0	40.9	35.0	-90.00	4,102.8	-272.8	1,025.8	950.3	75.50	13.586		
15,400.0	11,350.0	15,320.6	11,350.0	41.5	35.6	-90.00	4,202.8	-273.2	1,025.8	949.0	76.73	13.369		

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #703H - 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)			
15,500.0	11,350.0	15,420.6	11,350.0	42.1	36.3	-90.00	4,302.8	-273.6	1,025.8	947.8	77.97	13.156	
15,600.0	11,350.0	15,520.6	11,350.0	42.7	37.0	-90.00	4,402.8	-274.0	1,025.8	946.6	79.22	12.949	
15,700.0	11,350.0	15,620.6	11,350.0	43.3	37.7	-90.00	4,502.8	-274.4	1,025.8	945.3	80.47	12.747	
15,800.0	11,350.0	15,720.6	11,350.0	43.9	38.3	-90.00	4,602.8	-274.8	1,025.8	944.0	81.74	12.549	
15,900.0	11,350.0	15,820.6	11,350.0	44.5	39.0	-90.00	4,702.8	-275.2	1,025.8	942.8	83.02	12.357	
16,000.0	11,350.0	15,920.6	11,350.0	45.1	39.7	-90.00	4,802.8	-275.6	1,025.8	941.5	84.30	12.169	
16,100.0	11,350.0	16,020.6	11,350.0	45.7	40.4	-90.00	4,902.8	-276.0	1,025.8	940.2	85.59	11.985	
16,200.0	11,350.0	16,120.6	11,350.0	46.4	41.1	-90.00	5,002.8	-276.4	1,025.8	938.9	86.88	11.806	
16,300.0	11,350.0	16,220.6	11,350.0	47.0	41.8	-90.00	5,102.8	-276.8	1,025.8	937.6	88.19	11.632	
16,400.0	11,350.0	16,320.6	11,350.0	47.6	42.5	-90.00	5,202.8	-277.2	1,025.8	936.3	89.50	11.462	
16,500.0	11,350.0	16,420.6	11,350.0	48.3	43.2	-90.00	5,302.8	-277.6	1,025.8	935.0	90.82	11.295	
16,600.0	11,350.0	16,520.6	11,350.0	48.9	43.9	-90.00	5,402.8	-278.0	1,025.8	933.7	92.14	11.133	
16,700.0	11,350.0	16,620.6	11,350.0	49.6	44.6	-90.00	5,502.8	-278.4	1,025.8	932.3	93.47	10.975	
16,800.0	11,350.0	16,720.6	11,350.0	50.2	45.3	-90.00	5,602.8	-278.8	1,025.8	931.0	94.80	10.821	
16,900.0	11,350.0	16,820.6	11,350.0	50.9	46.0	-90.00	5,702.8	-279.2	1,025.8	929.7	96.14	10.670	
17,000.0	11,350.0	16,920.6	11,350.0	51.5	46.7	-90.00	5,802.8	-279.6	1,025.8	928.3	97.48	10.523	
17,100.0	11,350.0	17,020.6	11,350.0	52.2	47.4	-90.00	5,902.8	-280.0	1,025.8	927.0	98.83	10.379	
17,200.0	11,350.0	17,120.6	11,350.0	52.8	48.2	-90.00	6,002.8	-280.4	1,025.8	925.6	100.19	10.239	
17,300.0	11,350.0	17,220.6	11,350.0	53.5	48.9	-90.00	6,102.8	-280.8	1,025.8	924.3	101.55	10.102	
17,400.0	11,350.0	17,320.6	11,350.0	54.2	49.6	-90.00	6,202.8	-281.2	1,025.8	922.9	102.91	9.968	
17,500.0	11,350.0	17,420.6	11,350.0	54.8	50.3	-90.00	6,302.8	-281.6	1,025.8	921.6	104.28	9.838	
17,600.0	11,350.0	17,520.6	11,350.0	55.5	51.0	-90.00	6,402.8	-282.0	1,025.8	920.2	105.65	9.710	
17,700.0	11,350.0	17,620.6	11,350.0	56.2	51.8	-90.00	6,502.8	-282.4	1,025.8	918.8	107.02	9.585	
17,800.0	11,350.0	17,720.6	11,350.0	56.9	52.5	-90.00	6,602.8	-282.8	1,025.8	917.4	108.40	9.463	
17,900.0	11,350.0	17,820.6	11,350.0	57.5	53.2	-90.00	6,702.8	-283.2	1,025.8	916.1	109.78	9.344	
18,000.0	11,350.0	17,920.6	11,350.0	58.2	53.9	-90.00	6,802.8	-283.6	1,025.8	914.7	111.17	9.228	
18,100.0	11,350.0	18,020.6	11,350.0	58.9	54.7	-90.00	6,902.8	-284.0	1,025.8	913.3	112.55	9.114	
18,200.0	11,350.0	18,120.6	11,350.0	59.6	55.4	-90.00	7,002.8	-284.5	1,025.8	911.9	113.95	9.003	
18,300.0	11,350.0	18,220.6	11,350.0	60.3	56.1	-90.00	7,102.8	-284.9	1,025.8	910.5	115.34	8.894	
18,400.0	11,350.0	18,320.6	11,350.0	61.0	56.9	-90.00	7,202.8	-285.3	1,025.9	909.1	116.74	8.788	
18,500.0	11,350.0	18,420.6	11,350.0	61.7	57.6	-90.00	7,302.8	-285.7	1,025.9	907.7	118.14	8.683	
18,600.0	11,350.0	18,520.6	11,350.0	62.3	58.3	-90.00	7,402.8	-286.1	1,025.9	906.3	119.54	8.582	
18,700.0	11,350.0	18,620.6	11,350.0	63.0	59.0	-90.00	7,502.8	-286.5	1,025.9	904.9	120.95	8.482	
18,800.0	11,350.0	18,720.6	11,350.0	63.7	59.8	-90.00	7,602.8	-286.9	1,025.9	903.5	122.36	8.384	
18,900.0	11,350.0	18,820.6	11,350.0	64.4	60.5	-90.00	7,702.8	-287.3	1,025.9	902.1	123.77	8.289	
19,000.0	11,350.0	18,920.6	11,350.0	65.1	61.2	-90.00	7,802.8	-287.7	1,025.9	900.7	125.18	8.195	
19,100.0	11,350.0	19,020.6	11,350.0	65.8	62.0	-90.00	7,902.8	-288.1	1,025.9	899.3	126.60	8.104	
19,200.0	11,350.0	19,120.6	11,350.0	66.5	62.7	-90.00	8,002.8	-288.5	1,025.9	897.9	128.01	8.014	
19,300.0	11,350.0	19,220.6	11,350.0	67.2	63.5	-90.00	8,102.8	-288.9	1,025.9	896.4	129.43	7.926	
19,400.0	11,350.0	19,320.6	11,350.0	67.9	64.2	-90.00	8,202.8	-289.3	1,025.9	895.0	130.85	7.840	
19,500.0	11,350.0	19,420.6	11,350.0	68.6	64.9	-90.00	8,302.8	-289.7	1,025.9	893.6	132.28	7.755	
19,600.0	11,350.0	19,520.6	11,350.0	69.4	65.7	-90.00	8,402.8	-290.1	1,025.9	892.2	133.70	7.673	
19,700.0	11,350.0	19,620.6	11,350.0	70.1	66.4	-90.00	8,502.8	-290.5	1,025.9	890.8	135.13	7.592	
19,800.0	11,350.0	19,720.6	11,350.0	70.8	67.2	-90.00	8,602.8	-290.9	1,025.9	889.3	136.56	7.512	
19,900.0	11,350.0	19,820.6	11,350.0	71.5	67.9	-90.00	8,702.8	-291.3	1,025.9	887.9	137.99	7.434	
20,000.0	11,350.0	19,920.6	11,350.0	72.2	68.6	-90.00	8,802.8	-291.7	1,025.9	886.5	139.43	7.358	
20,100.0	11,350.0	20,020.6	11,350.0	72.9	69.4	-90.00	8,902.8	-292.1	1,025.9	885.0	140.86	7.283	
20,200.0	11,350.0	20,120.6	11,350.0	73.6	70.1	-90.00	9,002.8	-292.5	1,025.9	883.6	142.30	7.210	
20,300.0	11,350.0	20,220.6	11,350.0	74.3	70.9	-90.00	9,102.8	-292.9	1,025.9	882.2	143.73	7.137	
20,400.0	11,350.0	20,320.6	11,350.0	75.1	71.6	-90.00	9,202.8	-293.3	1,025.9	880.7	145.17	7.067	
20,500.0	11,350.0	20,420.6	11,350.0	75.8	72.4	-90.00	9,302.8	-293.7	1,025.9	879.3	146.61	6.997	
20,600.0	11,350.0	20,520.6	11,350.0	76.5	73.1	-90.00	9,402.8	-294.1	1,025.9	877.8	148.06	6.929	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #703H - 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		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)			
20,700.0	11,350.0	20,620.6	11,350.0	77.2	73.8	-90.00	9,502.8	-294.5	1,025.9	876.4	149.50	6.862	
20,800.0	11,350.0	20,720.6	11,350.0	77.9	74.6	-90.00	9,602.8	-294.9	1,025.9	875.0	150.94	6.797	
20,900.0	11,350.0	20,820.6	11,350.0	78.7	75.3	-90.00	9,702.8	-295.3	1,025.9	873.5	152.39	6.732	
21,000.0	11,350.0	20,920.6	11,350.0	79.4	76.1	-90.00	9,802.8	-295.7	1,025.9	872.1	153.84	6.669	
21,100.0	11,350.0	21,020.6	11,350.0	80.1	76.8	-90.00	9,902.8	-296.1	1,025.9	870.6	155.29	6.607	
21,200.0	11,350.0	21,120.6	11,350.0	80.8	77.6	-90.00	10,002.8	-296.6	1,025.9	869.2	156.74	6.546	
21,300.0	11,350.0	21,220.6	11,350.0	81.5	78.3	-90.00	10,102.8	-297.0	1,025.9	867.7	158.19	6.485	
21,400.0	11,350.0	21,320.6	11,350.0	82.3	79.1	-90.00	10,202.7	-297.4	1,025.9	866.3	159.64	6.427	
21,500.0	11,350.0	21,420.6	11,350.0	83.0	79.8	-90.00	10,302.7	-297.8	1,025.9	864.8	161.09	6.369	
21,600.0	11,350.0	21,520.6	11,350.0	83.7	80.6	-90.00	10,402.7	-298.2	1,025.9	863.4	162.55	6.312	
21,700.0	11,350.0	21,620.6	11,350.0	84.4	81.3	-90.00	10,502.7	-298.6	1,025.9	861.9	164.00	6.256	
21,800.0	11,350.0	21,720.6	11,350.0	85.2	82.1	-90.00	10,602.7	-299.0	1,025.9	860.5	165.46	6.201	
21,900.0	11,350.0	21,820.6	11,350.0	85.9	82.8	-90.00	10,702.7	-299.4	1,025.9	859.0	166.92	6.146	
22,000.0	11,350.0	21,920.6	11,350.0	86.6	83.6	-90.00	10,802.7	-299.8	1,025.9	857.6	168.37	6.093	
22,100.0	11,350.0	22,020.6	11,350.0	87.4	84.3	-90.00	10,902.7	-300.2	1,025.9	856.1	169.83	6.041	
22,200.0	11,350.0	22,120.6	11,350.0	88.1	85.1	-90.00	11,002.7	-300.6	1,025.9	854.7	171.29	5.989	
22,300.0	11,350.0	22,220.6	11,350.0	88.8	85.8	-90.00	11,102.7	-301.0	1,025.9	853.2	172.75	5.939	
22,400.0	11,350.0	22,320.6	11,350.0	89.6	86.6	-90.00	11,202.7	-301.4	1,025.9	851.7	174.22	5.889	
22,500.0	11,350.0	22,420.6	11,350.0	90.3	87.3	-90.00	11,302.7	-301.8	1,026.0	850.3	175.68	5.840	
22,600.0	11,350.0	22,520.6	11,350.0	91.0	88.1	-90.00	11,402.7	-302.2	1,026.0	848.8	177.14	5.792	
22,700.0	11,350.0	22,620.6	11,350.0	91.8	88.8	-90.00	11,502.7	-302.6	1,026.0	847.3	178.61	5.744	
22,800.0	11,350.0	22,720.6	11,350.0	92.5	89.6	-90.00	11,602.7	-303.0	1,026.0	845.9	180.07	5.697	
22,900.0	11,350.0	22,820.6	11,350.0	93.2	90.3	-90.00	11,702.7	-303.4	1,026.0	844.4	181.54	5.651	
23,000.0	11,350.0	22,920.6	11,350.0	94.0	91.1	-90.00	11,802.7	-303.8	1,026.0	843.0	183.00	5.606	
23,100.0	11,350.0	23,020.6	11,350.0	94.7	91.8	-90.00	11,902.7	-304.2	1,026.0	841.5	184.47	5.562	
23,200.0	11,350.0	23,120.6	11,350.0	95.4	92.6	-90.00	12,002.7	-304.6	1,026.0	840.0	185.94	5.518	
23,300.0	11,350.0	23,220.6	11,350.0	96.2	93.3	-90.00	12,102.7	-305.0	1,026.0	838.6	187.41	5.474	
23,400.0	11,350.0	23,320.6	11,350.0	96.9	94.1	-90.00	12,202.7	-305.4	1,026.0	837.1	188.88	5.432	
23,500.0	11,350.0	23,420.6	11,350.0	97.6	94.8	-90.00	12,302.7	-305.8	1,026.0	835.6	190.35	5.390	
23,600.0	11,350.0	23,520.6	11,350.0	98.4	95.6	-90.00	12,402.7	-306.2	1,026.0	834.2	191.82	5.349	
23,700.0	11,350.0	23,620.6	11,350.0	99.1	96.3	-90.00	12,502.7	-306.6	1,026.0	832.7	193.29	5.308	
23,800.0	11,350.0	23,720.6	11,350.0	99.9	97.1	-90.00	12,602.7	-307.0	1,026.0	831.2	194.76	5.268	
23,900.0	11,350.0	23,820.6	11,350.0	100.6	97.9	-90.00	12,702.7	-307.4	1,026.0	829.8	196.24	5.228	
24,000.0	11,350.0	23,920.6	11,350.0	101.3	98.6	-90.00	12,802.7	-307.8	1,026.0	828.3	197.71	5.189	
24,100.0	11,350.0	24,020.6	11,350.0	102.1	99.4	-90.00	12,902.7	-308.2	1,026.0	826.8	199.18	5.151	
24,200.0	11,350.0	24,120.6	11,350.0	102.8	100.1	-90.00	13,002.7	-308.7	1,026.0	825.3	200.66	5.113	
24,300.0	11,350.0	24,220.6	11,350.0	103.5	100.9	-90.00	13,102.7	-309.1	1,026.0	823.9	202.13	5.076	
24,400.0	11,350.0	24,320.6	11,350.0	104.3	101.6	-90.00	13,202.7	-309.5	1,026.0	822.4	203.61	5.039	
24,500.0	11,350.0	24,420.6	11,350.0	105.0	102.4	-90.00	13,302.7	-309.9	1,026.0	820.9	205.08	5.003	
24,600.0	11,350.0	24,520.6	11,350.0	105.8	103.1	-90.00	13,402.7	-310.3	1,026.0	819.4	206.56	4.967	
24,700.0	11,350.0	24,620.6	11,350.0	106.5	103.9	-90.00	13,502.7	-310.7	1,026.0	818.0	208.04	4.932	
24,799.9	11,350.0	24,720.5	11,350.0	107.3	104.6	-90.00	13,602.6	-311.1	1,026.0	816.5	209.48	4.898	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #704H - 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		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	3.0	3.0	-90.02	0.0	-30.0	30.0	23.6	6.43	4.668	
100.0	100.0	100.0	100.0	3.2	3.2	-90.02	0.0	-30.0	30.0	23.1	6.89	4.354	
200.0	200.0	200.0	200.0	3.5	3.5	-90.02	0.0	-30.0	30.0	22.7	7.33	4.095	
300.0	300.0	300.0	300.0	3.7	3.7	-90.02	0.0	-30.0	30.0	22.3	7.74	3.877	
400.0	400.0	400.0	400.0	3.9	3.9	-90.02	0.0	-30.0	30.0	21.9	8.14	3.689	
500.0	500.0	500.0	500.0	4.1	4.1	-90.02	0.0	-30.0	30.0	21.5	8.51	3.525	
600.0	600.0	600.0	600.0	4.2	4.2	-90.02	0.0	-30.0	30.0	21.1	8.88	3.380	
700.0	700.0	700.0	700.0	4.4	4.4	-90.02	0.0	-30.0	30.0	20.8	9.23	3.252	
800.0	800.0	800.0	800.0	4.6	4.6	-90.02	0.0	-30.0	30.0	20.4	9.57	3.136	
900.0	900.0	900.0	900.0	4.8	4.8	-90.02	0.0	-30.0	30.0	20.1	9.90	3.031	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-90.02	0.0	-30.0	30.0	19.8	10.22	2.935	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-90.02	0.0	-30.0	30.0	19.5	10.54	2.847	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-90.02	0.0	-30.0	30.0	19.2	10.85	2.767	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	-90.02	0.0	-30.0	30.0	18.9	11.15	2.692	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-90.02	0.0	-30.0	30.0	18.6	11.44	2.622	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	-90.02	0.0	-30.0	30.0	18.3	11.73	2.557	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	-90.02	0.0	-30.0	30.0	18.0	12.02	2.497	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	-90.02	0.0	-30.0	30.0	17.7	12.30	2.440	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	-90.02	0.0	-30.0	30.0	17.4	12.58	2.386	CC, ES, SF
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	136.69	0.0	-30.0	30.9	18.1	12.85	2.409	
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	141.21	0.0	-30.0	33.9	20.8	13.11	2.586	
2,100.0	2,099.7	2,099.7	2,099.7	6.6	6.5	147.16	0.0	-30.0	39.2	25.8	13.40	2.928	
2,200.0	2,199.3	2,199.3	2,199.3	6.8	6.7	153.14	0.0	-30.0	47.2	33.5	13.71	3.442	
2,300.0	2,298.7	2,298.7	2,298.7	6.9	6.8	157.91	0.0	-30.0	56.7	42.7	14.01	4.047	
2,400.0	2,398.2	2,398.2	2,398.2	7.1	6.9	161.30	0.0	-30.0	66.5	52.2	14.34	4.640	
2,500.0	2,497.6	2,497.6	2,497.6	7.4	7.0	163.81	0.0	-30.0	76.5	61.8	14.67	5.214	
2,600.0	2,597.1	2,599.0	2,599.0	7.6	7.2	166.17	-0.1	-28.7	85.5	70.4	15.04	5.684	
2,700.0	2,696.5	2,700.8	2,700.7	7.8	7.3	168.93	-0.3	-24.7	92.3	76.9	15.42	5.986	
2,800.0	2,795.9	2,802.7	2,802.4	8.1	7.5	-171.46	-0.6	-18.0	97.4	81.6	15.81	6.163	
2,900.0	2,895.2	2,904.8	2,904.1	8.4	7.7	-156.15	-1.1	-8.6	101.3	85.1	16.23	6.240	
3,000.0	2,994.2	3,007.1	3,005.6	8.6	7.9	-145.85	-1.8	3.6	103.7	87.1	16.67	6.222	
3,100.0	3,092.8	3,107.6	3,105.2	8.9	8.0	-141.21	-2.5	17.4	105.3	88.3	17.04	6.183	
3,200.0	3,191.3	3,207.6	3,204.1	9.1	8.2	-143.03	-3.2	31.3	107.2	89.7	17.52	6.121	
3,300.0	3,289.8	3,307.5	3,303.1	9.4	8.4	-144.79	-4.0	45.2	109.2	91.2	18.02	6.061	
3,400.0	3,388.3	3,407.4	3,402.0	9.7	8.7	-146.49	-4.7	59.1	111.3	92.8	18.55	6.000	
3,500.0	3,486.8	3,507.3	3,501.0	10.0	8.9	-148.12	-5.4	73.0	113.5	94.4	19.12	5.938	
3,600.0	3,585.2	3,607.3	3,599.9	10.4	9.2	-149.69	-6.1	86.9	115.8	96.1	19.70	5.877	
3,700.0	3,683.7	3,707.2	3,698.9	10.7	9.5	-151.20	-6.9	100.8	118.2	97.8	20.32	5.815	
3,800.0	3,782.2	3,807.1	3,797.8	11.0	9.8	-152.65	-7.6	114.7	120.6	99.6	20.95	5.755	
3,900.0	3,880.7	3,907.0	3,896.8	11.4	10.1	-154.04	-8.3	128.5	123.1	101.5	21.61	5.696	
4,000.0	3,979.2	4,007.0	3,995.7	11.8	10.4	-155.37	-9.0	142.4	125.7	103.4	22.29	5.639	
4,100.0	4,077.6	4,106.9	4,094.7	12.1	10.7	-156.65	-9.8	156.3	128.3	105.4	22.98	5.584	
4,200.0	4,176.1	4,206.8	4,193.7	12.5	11.1	-157.87	-10.5	170.2	131.0	107.4	23.69	5.531	
4,300.0	4,274.6	4,306.7	4,292.6	12.9	11.4	-159.05	-11.2	184.1	133.8	109.4	24.42	5.481	
4,400.0	4,373.1	4,406.7	4,391.6	13.3	11.7	-160.18	-12.0	198.0	136.6	111.5	25.15	5.433	
4,500.0	4,471.6	4,504.7	4,488.7	13.6	12.0	-161.29	-12.6	211.1	140.1	114.2	25.88	5.413	
4,600.0	4,570.0	4,602.1	4,585.5	14.0	12.4	-162.47	-13.2	222.4	145.2	118.5	26.62	5.453	
4,700.0	4,668.5	4,700.0	4,682.9	14.4	12.7	-163.69	-13.8	232.2	152.0	124.6	27.36	5.556	
4,800.0	4,767.0	4,796.3	4,778.9	14.8	13.0	-164.88	-14.2	240.2	160.6	132.5	28.08	5.719	
4,900.0	4,865.5	4,893.0	4,875.3	15.2	13.3	-166.03	-14.5	246.6	170.9	142.1	28.78	5.937	
5,000.0	4,964.0	4,989.3	4,971.4	15.6	13.6	-167.10	-14.8	251.4	182.9	153.5	29.46	6.209	
5,100.0	5,062.4	5,085.1	5,067.2	16.0	13.9	-168.09	-14.9	254.5	196.7	166.5	30.11	6.531	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #704H - 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)			
5,200.0	5,160.9	5,180.5	5,162.6	16.4	14.1	-168.99	-15.0	256.1	212.1	181.4	30.72	6.905	
5,300.0	5,259.4	5,277.3	5,259.4	16.9	14.2	-169.80	-15.0	256.3	229.0	197.8	31.22	7.334	
5,400.0	5,357.9	5,375.8	5,357.9	17.3	14.2	-170.52	-15.0	256.3	246.1	214.4	31.72	7.758	
5,500.0	5,456.4	5,474.2	5,456.4	17.7	14.3	-171.14	-15.0	256.3	263.3	231.0	32.23	8.168	
5,600.0	5,554.8	5,572.7	5,554.8	18.1	14.4	-171.68	-15.0	256.3	280.4	247.7	32.74	8.566	
5,700.0	5,653.3	5,671.2	5,653.3	18.5	14.4	-172.17	-15.0	256.3	297.6	264.4	33.26	8.950	
5,800.0	5,751.8	5,769.7	5,751.8	18.9	14.5	-172.60	-15.0	256.3	314.9	281.1	33.78	9.322	
5,900.0	5,850.3	5,868.2	5,850.3	19.4	14.6	-172.98	-15.0	256.3	332.1	297.8	34.30	9.682	
6,000.0	5,948.8	5,966.6	5,948.8	19.8	14.6	-173.33	-15.0	256.3	349.3	314.5	34.83	10.031	
6,100.0	6,047.3	6,065.1	6,047.3	20.2	14.7	-173.65	-15.0	256.3	366.6	331.2	35.36	10.368	
6,200.0	6,145.7	6,163.6	6,145.7	20.7	14.8	-173.93	-15.0	256.3	383.9	348.0	35.89	10.694	
6,300.0	6,244.2	6,262.1	6,244.2	21.1	14.8	-174.20	-15.0	256.3	401.1	364.7	36.43	11.010	
6,400.0	6,342.7	6,360.6	6,342.7	21.5	14.9	-174.44	-15.0	256.3	418.4	381.4	36.98	11.316	
6,500.0	6,441.2	6,459.1	6,441.2	21.9	14.9	-174.66	-15.0	256.3	435.5	398.0	37.50	11.613	
6,600.0	6,540.0	6,557.9	6,540.0	22.3	15.0	-174.86	-15.0	256.3	451.0	413.0	38.04	11.857	
6,700.0	6,639.0	6,656.9	6,639.0	22.8	15.1	-175.03	-15.0	256.3	464.8	426.3	38.57	12.053	
6,800.0	6,738.3	6,756.2	6,738.3	23.2	15.1	-175.16	-15.0	256.3	477.0	437.9	39.09	12.203	
6,900.0	6,837.7	6,855.6	6,837.7	23.6	15.2	-175.28	-15.0	256.3	487.3	447.7	39.59	12.309	
7,000.0	6,937.4	6,955.2	6,937.4	23.9	15.3	-175.37	-15.0	256.3	496.0	455.9	40.08	12.375	
7,100.0	7,037.1	7,055.0	7,037.1	24.3	15.3	-175.43	-15.0	256.3	502.9	462.4	40.55	12.402	
7,200.0	7,137.0	7,154.8	7,137.0	24.6	15.4	-175.49	-15.0	256.3	508.1	467.1	41.00	12.394	
7,300.0	7,236.9	7,254.8	7,236.9	24.9	15.5	-175.52	-15.0	256.3	511.5	470.1	41.41	12.354	
7,400.0	7,336.9	7,354.8	7,336.9	25.2	15.5	-175.53	-15.0	256.3	513.2	471.5	41.76	12.290	
7,500.0	7,436.9	7,454.8	7,436.9	25.2	15.6	-88.79	-15.0	256.3	513.4	471.6	41.89	12.258	
7,600.0	7,536.9	7,554.8	7,536.9	25.3	15.7	-88.79	-15.0	256.3	513.4	471.5	41.97	12.233	
7,700.0	7,636.9	7,654.8	7,636.9	25.3	15.7	-88.79	-15.0	256.3	513.4	471.4	42.06	12.207	
7,800.0	7,736.9	7,754.8	7,736.9	25.3	15.8	-88.79	-15.0	256.3	513.4	471.3	42.15	12.181	
7,900.0	7,836.9	7,854.8	7,836.9	25.4	15.9	-88.79	-15.0	256.3	513.4	471.2	42.24	12.156	
8,000.0	7,936.9	7,954.8	7,936.9	25.4	15.9	-88.79	-15.0	256.3	513.4	471.1	42.33	12.130	
8,100.0	8,036.9	8,054.8	8,036.9	25.4	16.0	-88.79	-15.0	256.3	513.4	471.0	42.42	12.104	
8,200.0	8,136.9	8,154.8	8,136.9	25.5	16.1	-88.79	-15.0	256.3	513.4	470.9	42.51	12.079	
8,300.0	8,236.9	8,254.8	8,236.9	25.5	16.1	-88.79	-15.0	256.3	513.4	470.8	42.60	12.053	
8,400.0	8,336.9	8,354.8	8,336.9	25.5	16.2	-88.79	-15.0	256.3	513.4	470.8	42.69	12.027	
8,500.0	8,436.9	8,454.8	8,436.9	25.6	16.3	-88.79	-15.0	256.3	513.4	470.7	42.78	12.001	
8,600.0	8,536.9	8,554.8	8,536.9	25.6	16.3	-88.79	-15.0	256.3	513.4	470.6	42.87	11.976	
8,700.0	8,636.9	8,654.8	8,636.9	25.7	16.4	-88.79	-15.0	256.3	513.4	470.5	42.97	11.950	
8,800.0	8,736.9	8,754.8	8,736.9	25.7	16.5	-88.79	-15.0	256.3	513.4	470.4	43.06	11.924	
8,900.0	8,836.9	8,854.8	8,836.9	25.7	16.5	-88.79	-15.0	256.3	513.4	470.3	43.15	11.898	
9,000.0	8,936.9	8,954.8	8,936.9	25.8	16.6	-88.79	-15.0	256.3	513.4	470.2	43.25	11.873	
9,100.0	9,036.9	9,054.8	9,036.9	25.8	16.7	-88.79	-15.0	256.3	513.4	470.1	43.34	11.847	
9,200.0	9,136.9	9,154.8	9,136.9	25.8	16.8	-88.79	-15.0	256.3	513.4	470.0	43.43	11.821	
9,300.0	9,236.9	9,254.8	9,236.9	25.9	16.8	-88.79	-15.0	256.3	513.4	469.9	43.53	11.795	
9,400.0	9,336.9	9,354.8	9,336.9	25.9	16.9	-88.79	-15.0	256.3	513.4	469.8	43.62	11.770	
9,500.0	9,436.9	9,454.8	9,436.9	25.9	17.0	-88.79	-15.0	256.3	513.4	469.7	43.72	11.744	
9,600.0	9,536.9	9,554.8	9,536.9	26.0	17.0	-88.79	-15.0	256.3	513.4	469.6	43.82	11.718	
9,700.0	9,636.9	9,654.8	9,636.9	26.0	17.1	-88.79	-15.0	256.3	513.4	469.5	43.91	11.693	
9,800.0	9,736.9	9,754.8	9,736.9	26.1	17.2	-88.79	-15.0	256.3	513.4	469.4	44.01	11.667	
9,900.0	9,836.9	9,854.8	9,836.9	26.1	17.2	-88.79	-15.0	256.3	513.4	469.3	44.11	11.641	
10,000.0	9,936.9	9,954.8	9,936.9	26.1	17.3	-88.79	-15.0	256.3	513.4	469.2	44.20	11.615	
10,100.0	10,036.9	10,054.8	10,036.9	26.2	17.4	-88.79	-15.0	256.3	513.4	469.1	44.30	11.590	
10,200.0	10,136.9	10,154.8	10,136.9	26.2	17.4	-88.79	-15.0	256.3	513.4	469.0	44.40	11.564	
10,300.0	10,236.9	10,254.8	10,236.9	26.2	17.5	-88.79	-15.0	256.3	513.4	468.9	44.50	11.539	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #704H - 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)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
10,400.0	10,336.9	10,354.8	10,336.9	26.3	17.6	-88.79	-15.0	256.3	513.4	468.8	44.60	11.513		
10,500.0	10,436.9	10,454.8	10,436.9	26.3	17.7	-88.79	-15.0	256.3	513.4	468.7	44.70	11.487		
10,600.0	10,536.9	10,554.8	10,536.9	26.4	17.7	-88.79	-15.0	256.3	513.4	468.6	44.80	11.462		
10,603.0	10,539.9	10,557.8	10,539.9	26.4	17.7	-88.79	-15.0	256.3	513.4	468.6	44.80	11.461		
10,700.0	10,636.9	10,654.1	10,636.2	26.4	17.8	-88.70	-14.3	256.2	513.5	468.6	44.88	11.441		
10,800.0	10,736.9	10,750.0	10,731.1	26.4	17.8	-87.27	-1.4	256.2	514.0	469.1	44.93	11.440		
10,900.0	10,836.8	10,840.1	10,817.2	26.5	17.8	-84.27	24.9	256.1	516.1	471.2	44.85	11.507		
11,000.0	10,934.8	10,926.7	10,895.0	26.5	17.9	-81.50	62.7	255.9	519.3	474.7	44.61	11.641		
11,100.0	11,028.1	11,010.6	10,964.3	26.5	17.9	-78.99	110.0	255.8	523.4	479.1	44.31	11.812		
11,200.0	11,113.7	11,092.5	11,024.4	26.5	18.0	-76.79	165.4	255.5	527.7	483.7	44.00	11.993		
11,300.0	11,189.1	11,172.6	11,075.0	26.5	18.1	-74.95	227.5	255.3	531.9	488.2	43.73	12.163		
11,400.0	11,251.9	11,250.0	11,115.3	26.5	18.1	-73.52	293.5	255.0	535.6	492.1	43.54	12.302		
11,500.0	11,300.4	11,329.5	11,147.0	26.6	18.2	-72.45	366.3	254.7	538.5	495.1	43.40	12.406		
11,600.0	11,332.9	11,406.9	11,167.9	26.7	18.3	-71.83	440.8	254.4	540.3	496.9	43.35	12.464		
11,700.0	11,348.6	11,484.0	11,178.5	26.7	18.4	-71.63	517.1	254.1	540.8	497.5	43.35	12.477		
11,800.0	11,350.0	11,571.9	11,180.0	26.8	18.5	-71.67	604.9	253.8	540.7	497.3	43.34	12.475		
11,900.0	11,350.0	11,671.9	11,180.0	27.0	18.6	-71.67	704.9	253.4	540.7	497.3	43.34	12.475		
12,000.0	11,350.0	11,771.9	11,180.0	27.1	18.8	-71.67	804.9	253.0	540.7	497.3	43.40	12.459		
12,100.0	11,350.0	11,871.9	11,180.0	27.3	19.0	-71.67	904.9	252.6	540.7	497.2	43.51	12.428		
12,200.0	11,350.0	11,971.9	11,180.0	27.5	19.2	-71.67	1,004.9	252.2	540.7	497.0	43.67	12.382		
12,300.0	11,350.0	12,071.9	11,180.0	27.7	19.5	-71.67	1,104.9	251.8	540.7	496.8	43.88	12.322		
12,400.0	11,350.0	12,171.9	11,180.0	27.9	19.8	-71.67	1,204.9	251.4	540.7	496.5	44.14	12.248		
12,500.0	11,350.0	12,271.9	11,180.0	28.2	20.1	-71.67	1,304.9	251.0	540.7	496.2	44.46	12.161		
12,600.0	11,350.0	12,371.9	11,180.0	28.4	20.5	-71.67	1,404.9	250.6	540.7	495.8	44.82	12.062		
12,700.0	11,350.0	12,471.9	11,180.0	28.7	20.9	-71.67	1,504.9	250.2	540.7	495.4	45.24	11.952		
12,800.0	11,350.0	12,571.9	11,180.0	29.0	21.3	-71.67	1,604.9	249.8	540.7	495.0	45.70	11.831		
12,900.0	11,350.0	12,671.9	11,180.0	29.4	21.7	-71.67	1,704.9	249.4	540.7	494.5	46.20	11.702		
13,000.0	11,350.0	12,771.9	11,180.0	29.7	22.1	-71.67	1,804.9	249.0	540.7	493.9	46.75	11.564		
13,100.0	11,350.0	12,871.9	11,180.0	30.1	22.6	-71.67	1,904.9	248.6	540.7	493.3	47.35	11.419		
13,200.0	11,350.0	12,971.9	11,180.0	30.4	23.0	-71.67	2,004.9	248.2	540.7	492.7	47.98	11.269		
13,300.0	11,350.0	13,071.9	11,180.0	30.8	23.5	-71.67	2,104.9	247.8	540.7	492.0	48.65	11.113		
13,400.0	11,350.0	13,171.9	11,180.0	31.2	24.0	-71.67	2,204.9	247.4	540.7	491.3	49.36	10.953		
13,500.0	11,350.0	13,271.9	11,180.0	31.6	24.5	-71.67	2,304.9	247.0	540.7	490.5	50.11	10.790		
13,600.0	11,350.0	13,371.9	11,180.0	32.1	25.1	-71.67	2,404.9	246.6	540.7	489.8	50.89	10.624		
13,700.0	11,350.0	13,471.9	11,180.0	32.5	25.6	-71.67	2,504.9	246.2	540.7	488.9	51.70	10.457		
13,800.0	11,350.0	13,571.9	11,180.0	33.0	26.2	-71.67	2,604.9	245.8	540.7	488.1	52.55	10.288		
13,900.0	11,350.0	13,671.9	11,180.0	33.4	26.7	-71.67	2,704.9	245.4	540.6	487.2	53.42	10.120		
14,000.0	11,350.0	13,771.9	11,180.0	33.9	27.3	-71.67	2,804.9	245.0	540.6	486.3	54.33	9.952		
14,100.0	11,350.0	13,871.9	11,180.0	34.4	27.9	-71.67	2,904.9	244.6	540.6	485.4	55.26	9.784		
14,200.0	11,350.0	13,971.9	11,180.0	34.9	28.5	-71.67	3,004.9	244.2	540.6	484.4	56.21	9.618		
14,300.0	11,350.0	14,071.9	11,180.0	35.4	29.1	-71.67	3,104.9	243.8	540.6	483.4	57.19	9.453		
14,400.0	11,350.0	14,171.9	11,180.0	35.9	29.7	-71.67	3,204.9	243.4	540.6	482.4	58.20	9.290		
14,500.0	11,350.0	14,271.9	11,180.0	36.4	30.3	-71.67	3,304.9	243.0	540.6	481.4	59.22	9.129		
14,600.0	11,350.0	14,371.9	11,180.0	36.9	30.9	-71.67	3,404.9	242.6	540.6	480.4	60.27	8.970		
14,700.0	11,350.0	14,471.9	11,180.0	37.5	31.5	-71.67	3,504.9	242.2	540.6	479.3	61.33	8.814		
14,800.0	11,350.0	14,571.9	11,180.0	38.0	32.2	-71.67	3,604.9	241.8	540.6	478.2	62.42	8.661		
14,900.0	11,350.0	14,671.9	11,180.0	38.6	32.8	-71.67	3,704.9	241.4	540.6	477.1	63.52	8.511		
15,000.0	11,350.0	14,771.9	11,180.0	39.2	33.4	-71.67	3,804.9	241.0	540.6	476.0	64.64	8.364		
15,100.0	11,350.0	14,871.9	11,180.0	39.7	34.1	-71.67	3,904.9	240.6	540.6	474.8	65.78	8.219		
15,200.0	11,350.0	14,971.9	11,180.0	40.3	34.8	-71.67	4,004.9	240.2	540.6	473.7	66.93	8.078		
15,300.0	11,350.0	15,071.9	11,180.0	40.9	35.4	-71.67	4,104.9	239.8	540.6	472.5	68.09	7.940		
15,400.0	11,350.0	15,171.9	11,180.0	41.5	36.1	-71.67	4,204.9	239.4	540.6	471.4	69.27	7.805		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #704H - 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)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
15,500.0	11,350.0	15,271.9	11,180.0	42.1	36.7	-71.67	4,304.9	239.0	540.6	470.2	70.46	7.673		
15,600.0	11,350.0	15,371.9	11,180.0	42.7	37.4	-71.67	4,404.9	238.6	540.6	469.0	71.66	7.544		
15,700.0	11,350.0	15,471.9	11,180.0	43.3	38.1	-71.67	4,504.9	238.2	540.6	467.7	72.88	7.418		
15,800.0	11,350.0	15,571.9	11,180.0	43.9	38.8	-71.67	4,604.9	237.8	540.6	466.5	74.10	7.295		
15,900.0	11,350.0	15,671.9	11,180.0	44.5	39.4	-71.67	4,704.9	237.4	540.6	465.3	75.34	7.176		
16,000.0	11,350.0	15,771.9	11,180.0	45.1	40.1	-71.67	4,804.9	237.0	540.6	464.0	76.59	7.059		
16,100.0	11,350.0	15,871.9	11,180.0	45.7	40.8	-71.67	4,904.9	236.6	540.6	462.8	77.84	6.945		
16,200.0	11,350.0	15,971.9	11,180.0	46.4	41.5	-71.67	5,004.9	236.2	540.6	461.5	79.11	6.834		
16,300.0	11,350.0	16,071.9	11,180.0	47.0	42.2	-71.67	5,104.9	235.8	540.6	460.2	80.38	6.725		
16,400.0	11,350.0	16,171.9	11,180.0	47.6	42.9	-71.67	5,204.9	235.4	540.6	458.9	81.67	6.620		
16,500.0	11,350.0	16,271.9	11,180.0	48.3	43.6	-71.67	5,304.9	235.0	540.6	457.6	82.96	6.517		
16,600.0	11,350.0	16,371.9	11,180.0	48.9	44.3	-71.67	5,404.9	234.6	540.6	456.3	84.25	6.416		
16,700.0	11,350.0	16,471.9	11,180.0	49.6	45.0	-71.67	5,504.9	234.2	540.6	455.0	85.56	6.318		
16,800.0	11,350.0	16,571.9	11,180.0	50.2	45.7	-71.67	5,604.9	233.8	540.6	453.7	86.87	6.223		
16,900.0	11,350.0	16,671.9	11,180.0	50.9	46.4	-71.67	5,704.9	233.4	540.6	452.4	88.19	6.130		
17,000.0	11,350.0	16,771.9	11,180.0	51.5	47.1	-71.67	5,804.9	233.0	540.6	451.1	89.51	6.039		
17,100.0	11,350.0	16,871.9	11,180.0	52.2	47.8	-71.67	5,904.9	232.6	540.6	449.7	90.84	5.951		
17,200.0	11,350.0	16,971.9	11,180.0	52.8	48.5	-71.67	6,004.9	232.2	540.6	448.4	92.18	5.864		
17,300.0	11,350.0	17,071.9	11,180.0	53.5	49.3	-71.67	6,104.9	231.8	540.6	447.1	93.52	5.780		
17,400.0	11,350.0	17,171.9	11,180.0	54.2	50.0	-71.67	6,204.9	231.4	540.6	445.7	94.87	5.698		
17,500.0	11,350.0	17,271.9	11,180.0	54.8	50.7	-71.67	6,304.9	231.0	540.6	444.4	96.22	5.618		
17,600.0	11,350.0	17,371.9	11,180.0	55.5	51.4	-71.67	6,404.9	230.6	540.6	443.0	97.58	5.540		
17,700.0	11,350.0	17,471.9	11,180.0	56.2	52.1	-71.67	6,504.9	230.2	540.6	441.6	98.94	5.464		
17,800.0	11,350.0	17,571.9	11,180.0	56.9	52.8	-71.67	6,604.9	229.8	540.6	440.3	100.30	5.389		
17,900.0	11,350.0	17,671.9	11,180.0	57.5	53.6	-71.67	6,704.9	229.4	540.6	438.9	101.67	5.317		
18,000.0	11,350.0	17,771.9	11,180.0	58.2	54.3	-71.67	6,804.9	229.1	540.6	437.5	103.05	5.246		
18,100.0	11,350.0	17,871.9	11,180.0	58.9	55.0	-71.67	6,904.9	228.7	540.6	436.1	104.42	5.177		
18,200.0	11,350.0	17,971.9	11,180.0	59.6	55.7	-71.67	7,004.9	228.3	540.6	434.8	105.81	5.109		
18,300.0	11,350.0	18,071.9	11,180.0	60.3	56.5	-71.67	7,104.9	227.9	540.6	433.4	107.19	5.043		
18,400.0	11,350.0	18,171.9	11,180.0	61.0	57.2	-71.67	7,204.9	227.5	540.6	432.0	108.58	4.978		
18,500.0	11,350.0	18,271.9	11,180.0	61.7	57.9	-71.67	7,304.9	227.1	540.6	430.6	109.97	4.915		
18,600.0	11,350.0	18,371.9	11,180.0	62.3	58.6	-71.67	7,404.9	226.7	540.6	429.2	111.37	4.854		
18,700.0	11,350.0	18,471.9	11,180.0	63.0	59.4	-71.67	7,504.9	226.3	540.6	427.8	112.77	4.794		
18,800.0	11,350.0	18,571.9	11,180.0	63.7	60.1	-71.67	7,604.9	225.9	540.6	426.4	114.17	4.735		
18,900.0	11,350.0	18,671.9	11,180.0	64.4	60.8	-71.67	7,704.9	225.5	540.6	425.0	115.57	4.677		
19,000.0	11,350.0	18,771.9	11,180.0	65.1	61.6	-71.67	7,804.9	225.1	540.6	423.6	116.98	4.621		
19,100.0	11,350.0	18,871.9	11,180.0	65.8	62.3	-71.67	7,904.9	224.7	540.5	422.2	118.39	4.566		
19,200.0	11,350.0	18,971.9	11,180.0	66.5	63.0	-71.67	8,004.9	224.3	540.5	420.7	119.80	4.512		
19,300.0	11,350.0	19,071.9	11,180.0	67.2	63.8	-71.67	8,104.9	223.9	540.5	419.3	121.21	4.459		
19,400.0	11,350.0	19,171.9	11,180.0	67.9	64.5	-71.67	8,204.9	223.5	540.5	417.9	122.63	4.408		
19,500.0	11,350.0	19,271.9	11,180.0	68.6	65.2	-71.67	8,304.9	223.1	540.5	416.5	124.05	4.357		
19,600.0	11,350.0	19,371.9	11,180.0	69.4	66.0	-71.67	8,404.9	222.7	540.5	415.1	125.47	4.308		
19,700.0	11,350.0	19,471.9	11,180.0	70.1	66.7	-71.67	8,504.9	222.3	540.5	413.6	126.90	4.260		
19,800.0	11,350.0	19,571.9	11,180.0	70.8	67.5	-71.67	8,604.9	221.9	540.5	412.2	128.32	4.212		
19,900.0	11,350.0	19,671.9	11,180.0	71.5	68.2	-71.67	8,704.9	221.5	540.5	410.8	129.75	4.166		
20,000.0	11,350.0	19,771.9	11,180.0	72.2	68.9	-71.67	8,804.9	221.1	540.5	409.4	131.18	4.121		
20,100.0	11,350.0	19,871.9	11,180.0	72.9	69.7	-71.67	8,904.9	220.7	540.5	407.9	132.61	4.076		
20,200.0	11,350.0	19,971.9	11,180.0	73.6	70.4	-71.67	9,004.9	220.3	540.5	406.5	134.04	4.032		
20,300.0	11,350.0	20,071.9	11,180.0	74.3	71.2	-71.67	9,104.9	219.9	540.5	405.0	135.48	3.990		
20,400.0	11,350.0	20,171.9	11,180.0	75.1	71.9	-71.67	9,204.8	219.5	540.5	403.6	136.92	3.948		
20,500.0	11,350.0	20,271.9	11,180.0	75.8	72.6	-71.67	9,304.8	219.1	540.5	402.2	138.35	3.907		
20,600.0	11,350.0	20,371.9	11,180.0	76.5	73.4	-71.67	9,404.8	218.7	540.5	400.7	139.79	3.867		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #704H - 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		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)			
20,700.0	11,350.0	20,471.9	11,180.0	77.2	74.1	-71.67	9,504.8	218.3	540.5	399.3	141.24	3.827	
20,800.0	11,350.0	20,571.9	11,180.0	77.9	74.9	-71.67	9,604.8	217.9	540.5	397.8	142.68	3.788	
20,900.0	11,350.0	20,671.9	11,180.0	78.7	75.6	-71.67	9,704.8	217.5	540.5	396.4	144.12	3.750	
21,000.0	11,350.0	20,771.9	11,180.0	79.4	76.4	-71.67	9,804.8	217.1	540.5	394.9	145.57	3.713	
21,100.0	11,350.0	20,871.9	11,180.0	80.1	77.1	-71.67	9,904.8	216.7	540.5	393.5	147.02	3.676	
21,200.0	11,350.0	20,971.9	11,180.0	80.8	77.9	-71.67	10,004.8	216.3	540.5	392.0	148.47	3.641	
21,300.0	11,350.0	21,071.9	11,180.0	81.5	78.6	-71.67	10,104.8	215.9	540.5	390.6	149.92	3.605	
21,400.0	11,350.0	21,171.9	11,180.0	82.3	79.3	-71.67	10,204.8	215.5	540.5	389.1	151.37	3.571	
21,500.0	11,350.0	21,271.9	11,180.0	83.0	80.1	-71.67	10,304.8	215.1	540.5	387.7	152.82	3.537	
21,600.0	11,350.0	21,371.9	11,180.0	83.7	80.8	-71.67	10,404.8	214.7	540.5	386.2	154.27	3.503	
21,700.0	11,350.0	21,471.9	11,180.0	84.4	81.6	-71.67	10,504.8	214.3	540.5	384.8	155.73	3.471	
21,800.0	11,350.0	21,571.9	11,180.0	85.2	82.3	-71.67	10,604.8	213.9	540.5	383.3	157.19	3.439	
21,900.0	11,350.0	21,671.9	11,180.0	85.9	83.1	-71.67	10,704.8	213.5	540.5	381.9	158.64	3.407	
22,000.0	11,350.0	21,771.9	11,180.0	86.6	83.8	-71.67	10,804.8	213.1	540.5	380.4	160.10	3.376	
22,100.0	11,350.0	21,871.9	11,180.0	87.4	84.6	-71.67	10,904.8	212.7	540.5	378.9	161.56	3.345	
22,200.0	11,350.0	21,971.9	11,180.0	88.1	85.3	-71.67	11,004.8	212.3	540.5	377.5	163.02	3.315	
22,300.0	11,350.0	22,071.9	11,180.0	88.8	86.1	-71.67	11,104.8	211.9	540.5	376.0	164.48	3.286	
22,400.0	11,350.0	22,171.9	11,180.0	89.6	86.8	-71.67	11,204.8	211.5	540.5	374.5	165.94	3.257	
22,500.0	11,350.0	22,271.9	11,180.0	90.3	87.6	-71.67	11,304.8	211.1	540.5	373.1	167.41	3.229	
22,600.0	11,350.0	22,371.9	11,180.0	91.0	88.3	-71.67	11,404.8	210.7	540.5	371.6	168.87	3.201	
22,700.0	11,350.0	22,471.9	11,180.0	91.8	89.1	-71.67	11,504.8	210.3	540.5	370.1	170.34	3.173	
22,800.0	11,350.0	22,571.9	11,180.0	92.5	89.8	-71.67	11,604.8	209.9	540.5	368.7	171.80	3.146	
22,900.0	11,350.0	22,671.9	11,180.0	93.2	90.6	-71.67	11,704.8	209.5	540.5	367.2	173.27	3.119	
23,000.0	11,350.0	22,771.9	11,180.0	94.0	91.3	-71.67	11,804.8	209.1	540.5	365.7	174.74	3.093	
23,100.0	11,350.0	22,871.9	11,180.0	94.7	92.1	-71.67	11,904.8	208.7	540.5	364.3	176.20	3.067	
23,200.0	11,350.0	22,971.9	11,180.0	95.4	92.8	-71.67	12,004.8	208.3	540.5	362.8	177.67	3.042	
23,300.0	11,350.0	23,071.9	11,180.0	96.2	93.6	-71.67	12,104.8	207.9	540.5	361.3	179.14	3.017	
23,400.0	11,350.0	23,171.9	11,180.0	96.9	94.3	-71.67	12,204.8	207.5	540.5	359.9	180.61	2.992	
23,500.0	11,350.0	23,271.9	11,180.0	97.6	95.1	-71.67	12,304.8	207.1	540.5	358.4	182.08	2.968	
23,600.0	11,350.0	23,371.9	11,180.0	98.4	95.8	-71.67	12,404.8	206.7	540.5	356.9	183.56	2.944	
23,700.0	11,350.0	23,471.9	11,180.0	99.1	96.6	-71.67	12,504.8	206.3	540.5	355.4	185.03	2.921	
23,800.0	11,350.0	23,571.9	11,180.0	99.9	97.3	-71.67	12,604.8	205.9	540.5	354.0	186.50	2.898	
23,900.0	11,350.0	23,671.9	11,180.0	100.6	98.1	-71.67	12,704.8	205.5	540.5	352.5	187.98	2.875	
24,000.0	11,350.0	23,771.9	11,180.0	101.3	98.9	-71.67	12,804.8	205.1	540.5	351.0	189.45	2.853	
24,100.0	11,350.0	23,871.9	11,180.0	102.1	99.6	-71.67	12,904.8	204.7	540.5	349.5	190.93	2.831	
24,200.0	11,350.0	23,971.9	11,180.0	102.8	100.4	-71.67	13,004.8	204.3	540.4	348.0	192.40	2.809	
24,300.0	11,350.0	24,071.9	11,180.0	103.5	101.1	-71.67	13,104.8	203.9	540.4	346.6	193.88	2.788	
24,400.0	11,350.0	24,171.9	11,180.0	104.3	101.9	-71.67	13,204.8	203.5	540.4	345.1	195.36	2.766	
24,500.0	11,350.0	24,271.9	11,180.0	105.0	102.6	-71.67	13,304.8	203.1	540.4	343.6	196.83	2.746	
24,600.0	11,350.0	24,371.9	11,180.0	105.8	103.4	-71.67	13,404.8	202.7	540.4	342.1	198.31	2.725	
24,700.0	11,350.0	24,471.9	11,180.0	106.5	104.1	-71.67	13,504.8	202.3	540.4	340.7	199.79	2.705	
24,799.9	11,350.0	24,571.8	11,180.0	107.3	104.9	-71.67	13,604.7	201.9	540.4	339.2	201.27	2.685	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #706H - 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)			
0.0	0.0	0.0	0.0	3.0	3.0	86.92	71.6	1,330.0	1,332.0	1,325.5	6.43	207.184	
100.0	100.0	100.0	100.0	3.2	3.2	86.92	71.6	1,330.0	1,332.0	1,325.1	6.89	193.253	
200.0	200.0	200.0	200.0	3.5	3.5	86.92	71.6	1,330.0	1,332.0	1,324.6	7.33	181.760	
300.0	300.0	300.0	300.0	3.7	3.7	86.92	71.6	1,330.0	1,332.0	1,324.2	7.74	172.059	
400.0	400.0	400.0	400.0	3.9	3.9	86.92	71.6	1,330.0	1,332.0	1,323.8	8.14	163.722	
500.0	500.0	500.0	500.0	4.1	4.1	86.92	71.6	1,330.0	1,332.0	1,323.5	8.51	156.452	
600.0	600.0	600.0	600.0	4.2	4.2	86.92	71.6	1,330.0	1,332.0	1,323.1	8.88	150.036	
700.0	700.0	700.0	700.0	4.4	4.4	86.92	71.6	1,330.0	1,332.0	1,322.7	9.23	144.317	
800.0	800.0	800.0	800.0	4.6	4.6	86.92	71.6	1,330.0	1,332.0	1,322.4	9.57	139.174	
900.0	900.0	900.0	900.0	4.8	4.8	86.92	71.6	1,330.0	1,332.0	1,322.1	9.90	134.516	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	86.92	71.6	1,330.0	1,332.0	1,321.7	10.22	130.270	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	86.92	71.6	1,330.0	1,332.0	1,321.4	10.54	126.376	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	86.92	71.6	1,330.0	1,332.0	1,321.1	10.85	122.789	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	86.92	71.6	1,330.0	1,332.0	1,320.8	11.15	119.470	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	86.92	71.6	1,330.0	1,332.0	1,320.5	11.44	116.385	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	86.92	71.6	1,330.0	1,332.0	1,320.2	11.73	113.509	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	86.92	71.6	1,330.0	1,332.0	1,319.9	12.02	110.818	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	86.92	71.6	1,330.0	1,332.0	1,319.7	12.30	108.293	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	86.92	71.6	1,330.0	1,332.0	1,319.4	12.58	105.917	
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	-48.13	71.6	1,330.0	1,331.1	1,318.2	12.85	103.623	
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	-48.29	71.6	1,330.0	1,328.5	1,315.4	13.10	101.405	
2,100.0	2,099.7	2,099.7	2,099.7	6.6	6.5	-48.55	71.6	1,330.0	1,324.1	1,310.8	13.36	99.107	
2,200.0	2,199.3	2,199.3	2,199.3	6.8	6.7	-48.91	71.6	1,330.0	1,318.1	1,304.5	13.63	96.726	
2,300.0	2,298.7	2,298.7	2,298.7	6.9	6.8	-49.26	71.6	1,330.0	1,311.2	1,297.3	13.89	94.422	
2,400.0	2,398.2	2,398.2	2,398.2	7.1	6.9	-49.60	71.6	1,330.0	1,304.4	1,290.2	14.15	92.168	
2,500.0	2,497.6	2,497.6	2,497.6	7.4	7.0	-49.96	71.6	1,330.0	1,297.6	1,283.2	14.42	89.965	
2,600.0	2,597.1	2,597.1	2,597.1	7.6	7.2	-50.31	71.6	1,330.0	1,290.9	1,276.2	14.70	87.817	
2,700.0	2,696.5	2,696.5	2,696.5	7.8	7.3	-50.67	71.6	1,330.0	1,284.2	1,269.2	14.99	85.699	
2,800.0	2,795.9	2,795.9	2,795.9	8.1	7.4	-33.69	71.6	1,330.0	1,276.3	1,261.0	15.30	83.429	
2,900.0	2,895.2	2,895.2	2,895.2	8.4	7.5	-19.55	71.6	1,330.0	1,265.4	1,249.8	15.64	80.927	
3,000.0	2,994.2	2,994.2	2,994.2	8.6	7.7	-9.14	71.6	1,330.0	1,251.7	1,235.7	16.02	78.154	
3,100.0	3,092.8	3,092.8	3,092.8	8.9	7.8	-3.09	71.6	1,330.0	1,235.3	1,218.9	16.38	75.409	
3,200.0	3,191.3	3,191.3	3,191.3	9.1	7.9	-3.13	71.6	1,330.0	1,217.9	1,201.1	16.80	72.511	
3,300.0	3,289.8	3,289.8	3,289.8	9.4	8.0	-3.18	71.6	1,330.0	1,200.6	1,183.4	17.22	69.733	
3,400.0	3,388.3	3,388.3	3,388.3	9.7	8.1	-3.23	71.6	1,330.0	1,183.2	1,165.6	17.65	67.035	
3,500.0	3,486.8	3,486.8	3,486.8	10.0	8.2	-3.27	71.6	1,330.0	1,165.9	1,147.8	18.10	64.421	
3,600.0	3,585.2	3,585.2	3,585.2	10.4	8.4	-3.32	71.6	1,330.0	1,148.6	1,130.0	18.56	61.895	
3,700.0	3,683.7	3,683.7	3,683.7	10.7	8.5	-3.37	71.6	1,330.0	1,131.2	1,112.2	19.03	59.456	
3,800.0	3,782.2	3,782.2	3,782.2	11.0	8.6	-3.43	71.6	1,330.0	1,113.9	1,094.4	19.51	57.105	
3,900.0	3,880.7	3,880.7	3,880.7	11.4	8.7	-3.48	71.6	1,330.0	1,096.6	1,076.6	19.99	54.842	
4,000.0	3,979.2	3,979.2	3,979.2	11.8	8.8	-3.54	71.6	1,330.0	1,079.2	1,058.7	20.49	52.665	
4,100.0	4,077.6	4,077.6	4,077.6	12.1	8.9	-3.59	71.6	1,330.0	1,061.9	1,040.9	21.00	50.572	
4,200.0	4,176.1	4,176.1	4,176.1	12.5	9.0	-3.65	71.6	1,330.0	1,044.6	1,023.0	21.51	48.560	
4,300.0	4,274.6	4,274.6	4,274.6	12.9	9.1	-3.72	71.6	1,330.0	1,027.2	1,005.2	22.03	46.629	
4,400.0	4,373.1	4,373.1	4,373.1	13.3	9.2	-3.78	71.6	1,330.0	1,009.9	987.3	22.56	44.773	
4,500.0	4,471.6	4,471.6	4,471.6	13.6	9.4	-3.85	71.6	1,330.0	992.6	969.5	23.09	42.992	
4,600.0	4,570.0	4,570.0	4,570.0	14.0	9.5	-3.91	71.6	1,330.0	975.2	951.6	23.62	41.281	
4,700.0	4,668.5	4,668.5	4,668.5	14.4	9.6	-3.98	71.6	1,330.0	957.9	933.8	24.17	39.638	
4,800.0	4,767.0	4,767.0	4,767.0	14.8	9.7	-4.06	71.6	1,330.0	940.6	915.9	24.71	38.060	
4,900.0	4,865.5	4,865.5	4,865.5	15.2	9.8	-4.13	71.6	1,330.0	923.3	898.0	25.26	36.545	
5,000.0	4,964.0	4,964.0	4,964.0	15.6	9.9	-4.21	71.6	1,330.0	906.0	880.1	25.82	35.088	
5,100.0	5,062.4	5,062.4	5,062.4	16.0	10.0	-4.30	71.6	1,330.0	888.6	862.3	26.38	33.689	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #706H - 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)			
5,200.0	5,160.9	5,160.9	5,160.9	16.4	10.1	-4.38	71.6	1,330.0	871.3	844.4	26.94	32.343	
5,300.0	5,259.4	5,259.4	5,259.4	16.9	10.2	-4.47	71.6	1,330.0	854.0	826.5	27.51	31.049	
5,400.0	5,357.9	5,357.9	5,357.9	17.3	10.3	-4.56	71.6	1,330.0	836.7	808.6	28.07	29.804	
5,500.0	5,456.4	5,456.4	5,456.4	17.7	10.4	-4.66	71.6	1,330.0	819.4	790.7	28.64	28.606	
5,600.0	5,554.8	5,554.8	5,554.8	18.1	10.5	-4.76	71.6	1,330.0	802.1	772.9	29.22	27.452	
5,700.0	5,653.3	5,653.3	5,653.3	18.5	10.6	-4.87	71.6	1,330.0	784.8	755.0	29.79	26.341	
5,800.0	5,751.8	5,751.8	5,751.8	18.9	10.7	-4.98	71.6	1,330.0	767.5	737.1	30.37	25.270	
5,900.0	5,850.3	5,850.3	5,850.3	19.4	10.8	-5.09	71.6	1,330.0	750.2	719.2	30.95	24.238	
6,000.0	5,948.8	5,948.8	5,948.8	19.8	10.9	-5.21	71.6	1,330.0	732.9	701.3	31.53	23.243	
6,100.0	6,047.3	6,047.3	6,047.3	20.2	11.0	-5.34	71.6	1,330.0	715.6	683.5	32.11	22.283	
6,200.0	6,145.7	6,145.7	6,145.7	20.7	11.1	-5.47	71.6	1,330.0	698.3	665.6	32.70	21.356	
6,300.0	6,244.2	6,244.2	6,244.2	21.1	11.2	-5.61	71.6	1,330.0	681.0	647.7	33.28	20.462	
6,400.0	6,342.7	6,342.7	6,342.7	21.5	11.3	-5.76	71.6	1,330.0	663.7	629.9	33.87	19.597	
6,500.0	6,441.2	6,441.2	6,441.2	21.9	11.4	-5.90	71.6	1,330.0	646.7	612.2	34.43	18.783	
6,600.0	6,540.0	6,540.0	6,540.0	22.3	11.5	-6.03	71.6	1,330.0	631.1	596.1	35.01	18.030	
6,700.0	6,639.0	6,639.0	6,639.0	22.8	11.6	-6.15	71.6	1,330.0	617.3	581.8	35.57	17.355	
6,800.0	6,738.3	6,738.3	6,738.3	23.2	11.7	-6.26	71.6	1,330.0	605.3	569.1	36.12	16.755	
6,900.0	6,837.7	6,837.7	6,837.7	23.6	11.8	-6.36	71.6	1,330.0	594.9	558.2	36.66	16.227	
7,000.0	6,937.4	6,937.4	6,937.4	23.9	11.9	-6.44	71.6	1,330.0	586.3	549.1	37.18	15.767	
7,100.0	7,037.1	7,037.1	7,037.1	24.3	12.0	-6.51	71.6	1,330.0	579.4	541.7	37.68	15.375	
7,200.0	7,137.0	7,137.0	7,137.0	24.6	12.1	-6.56	71.6	1,330.0	574.2	536.1	38.16	15.049	
7,300.0	7,236.9	7,236.9	7,236.9	24.9	12.2	-6.60	71.6	1,330.0	570.8	532.2	38.60	14.789	
7,400.0	7,336.9	7,336.9	7,336.9	25.2	12.3	-6.62	71.6	1,330.0	569.1	530.1	38.98	14.600	
7,494.6	7,431.5	7,431.5	7,431.5	25.2	12.4	-6.62	71.6	1,330.0	568.7	529.6	39.11	14.541 CC	
7,500.0	7,436.9	7,436.9	7,436.9	25.2	12.4	80.13	71.6	1,330.0	568.9	529.8	39.12	14.543	
7,600.0	7,536.9	7,536.9	7,536.9	25.3	12.5	80.13	71.6	1,330.0	568.9	529.7	39.22	14.505	
7,700.0	7,636.9	7,636.9	7,636.9	25.3	12.6	80.13	71.6	1,330.0	568.9	529.6	39.32	14.467	
7,800.0	7,736.9	7,736.9	7,736.9	25.3	12.7	80.13	71.6	1,330.0	568.9	529.4	39.43	14.428	
7,900.0	7,836.9	7,836.9	7,836.9	25.4	12.8	80.13	71.6	1,330.0	568.9	529.3	39.53	14.390	
8,000.0	7,936.9	7,936.9	7,936.9	25.4	12.9	80.13	71.6	1,330.0	568.9	529.2	39.64	14.352	
8,100.0	8,036.9	8,036.9	8,036.9	25.4	13.0	80.13	71.6	1,330.0	568.9	529.1	39.74	14.314	
8,200.0	8,136.9	8,136.9	8,136.9	25.5	13.1	80.13	71.6	1,330.0	568.9	529.0	39.85	14.276	
8,300.0	8,236.9	8,236.9	8,236.9	25.5	13.2	80.13	71.6	1,330.0	568.9	528.9	39.95	14.238	
8,400.0	8,336.9	8,336.9	8,336.9	25.5	13.3	80.13	71.6	1,330.0	568.9	528.8	40.06	14.200	
8,500.0	8,436.9	8,436.9	8,436.9	25.6	13.4	80.13	71.6	1,330.0	568.9	528.7	40.17	14.162	
8,600.0	8,536.9	8,536.9	8,536.9	25.6	13.5	80.13	71.6	1,330.0	568.9	528.6	40.28	14.125	
8,700.0	8,636.9	8,636.9	8,636.9	25.7	13.6	80.13	71.6	1,330.0	568.9	528.5	40.38	14.087	
8,800.0	8,736.9	8,736.9	8,736.9	25.7	13.7	80.13	71.6	1,330.0	568.9	528.4	40.49	14.049	
8,900.0	8,836.9	8,836.9	8,836.9	25.7	13.8	80.13	71.6	1,330.0	568.9	528.3	40.60	14.012	
9,000.0	8,936.9	8,936.9	8,936.9	25.8	13.9	80.13	71.6	1,330.0	568.9	528.2	40.71	13.974	
9,100.0	9,036.9	9,036.9	9,036.9	25.8	14.0	80.13	71.6	1,330.0	568.9	528.1	40.82	13.937	
9,200.0	9,136.9	9,136.9	9,136.9	25.8	14.1	80.13	71.6	1,330.0	568.9	527.9	40.93	13.900	
9,300.0	9,236.9	9,236.9	9,236.9	25.9	14.2	80.13	71.6	1,330.0	568.9	527.8	41.04	13.863	
9,400.0	9,336.9	9,336.9	9,336.9	25.9	14.3	80.13	71.6	1,330.0	568.9	527.7	41.15	13.826	
9,500.0	9,436.9	9,436.9	9,436.9	25.9	14.3	80.13	71.6	1,330.0	568.9	527.6	41.26	13.789	
9,600.0	9,536.9	9,536.9	9,536.9	26.0	14.4	80.13	71.6	1,330.0	568.9	527.5	41.37	13.752	
9,700.0	9,636.9	9,636.9	9,636.9	26.0	14.5	80.13	71.6	1,330.0	568.9	527.4	41.48	13.715	
9,800.0	9,736.9	9,736.9	9,736.9	26.1	14.6	80.13	71.6	1,330.0	568.9	527.3	41.59	13.678	
9,900.0	9,836.9	9,836.9	9,836.9	26.1	14.7	80.13	71.6	1,330.0	568.9	527.2	41.70	13.642	
10,000.0	9,936.9	9,936.9	9,936.9	26.1	14.8	80.13	71.6	1,330.0	568.9	527.1	41.81	13.605	
10,100.0	10,036.9	10,036.9	10,036.9	26.2	14.9	80.13	71.6	1,330.0	568.9	526.9	41.93	13.568	
10,200.0	10,136.9	10,136.9	10,136.9	26.2	15.0	80.13	71.6	1,330.0	568.9	526.8	42.04	13.532	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #706H - 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		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)			
10,300.0	10,236.9	10,236.9	10,236.9	26.2	15.1	80.13	71.6	1,330.0	568.9	526.7	42.15	13.496	
10,400.0	10,336.9	10,336.9	10,336.9	26.3	15.2	80.13	71.6	1,330.0	568.9	526.6	42.27	13.460	
10,500.0	10,436.9	10,436.9	10,436.9	26.3	15.3	80.13	71.6	1,330.0	568.9	526.5	42.38	13.424	
10,600.0	10,536.9	10,536.9	10,536.9	26.4	15.4	80.13	71.6	1,330.0	568.9	526.4	42.49	13.387	
10,602.5	10,539.4	10,539.4	10,539.4	26.4	15.4	80.13	71.6	1,330.0	568.9	526.4	42.50	13.386	
10,700.0	10,636.9	10,631.7	10,631.7	26.4	15.5	80.08	72.1	1,330.1	569.0	526.4	42.62	13.350	
10,800.0	10,736.9	10,713.0	10,712.4	26.4	15.6	79.17	81.4	1,330.4	571.6	528.8	42.72	13.378	
10,900.0	10,836.8	10,791.0	10,787.9	26.5	15.8	77.38	100.9	1,331.3	577.2	534.4	42.80	13.488	
11,000.0	10,934.8	10,867.2	10,858.3	26.5	16.0	75.37	129.6	1,332.5	583.6	540.6	43.01	13.568	
11,100.0	11,028.1	10,942.1	10,923.3	26.5	16.1	73.73	166.8	1,334.0	589.9	546.5	43.35	13.608	
11,200.0	11,113.7	11,016.2	10,982.3	26.5	16.3	72.49	211.5	1,335.9	595.7	551.9	43.78	13.606	
11,300.0	11,189.1	11,089.7	11,034.6	26.5	16.4	71.67	263.0	1,338.1	600.7	556.4	44.28	13.567	
11,400.0	11,251.9	11,163.0	11,079.7	26.5	16.5	71.27	320.6	1,340.5	604.6	559.8	44.78	13.502	
11,500.0	11,300.4	11,236.3	11,117.2	26.6	16.6	71.30	383.5	1,343.1	607.4	562.1	45.25	13.422	
11,600.0	11,332.9	11,309.9	11,146.4	26.7	16.7	71.75	451.0	1,345.9	608.9	563.3	45.65	13.338	
11,700.0	11,348.6	11,384.1	11,166.8	26.7	16.8	72.61	522.2	1,348.9	609.4	563.5	45.96	13.261	
11,704.4	11,348.9	11,387.5	11,167.5	26.8	16.8	72.65	525.5	1,349.1	609.4	563.4	45.97	13.258	
11,800.0	11,350.0	11,459.6	11,178.0	26.8	16.8	73.62	596.7	1,352.0	609.8	563.7	46.17	13.208	
11,900.0	11,350.0	11,555.2	11,180.0	27.0	16.8	73.90	692.2	1,355.6	613.2	566.6	46.58	13.165	
12,000.0	11,350.0	11,672.3	11,180.0	27.1	16.9	73.93	809.3	1,356.4	614.1	567.0	47.12	13.033	
12,100.0	11,350.0	11,772.3	11,180.0	27.3	16.9	73.93	909.3	1,356.0	614.2	566.5	47.66	12.886	
12,200.0	11,350.0	11,872.3	11,180.0	27.5	16.9	73.93	1,009.3	1,355.6	614.2	565.9	48.25	12.730	
12,300.0	11,350.0	11,972.3	11,180.0	27.7	17.0	73.93	1,109.3	1,355.2	614.2	565.3	48.87	12.567	
12,400.0	11,350.0	12,072.3	11,180.0	27.9	17.3	73.93	1,209.3	1,354.8	614.2	564.6	49.53	12.399	
12,500.0	11,350.0	12,172.3	11,180.0	28.2	17.6	73.93	1,309.3	1,354.4	614.2	564.0	50.23	12.226	
12,600.0	11,350.0	12,272.3	11,180.0	28.4	18.0	73.93	1,409.3	1,354.0	614.2	563.2	50.97	12.050	
12,700.0	11,350.0	12,372.3	11,180.0	28.7	18.4	73.93	1,509.3	1,353.6	614.2	562.5	51.74	11.870	
12,800.0	11,350.0	12,472.3	11,180.0	29.0	18.8	73.93	1,609.3	1,353.2	614.2	561.7	52.55	11.689	
12,900.0	11,350.0	12,572.3	11,180.0	29.4	19.2	73.93	1,709.3	1,352.8	614.2	560.8	53.38	11.506	
13,000.0	11,350.0	12,672.3	11,180.0	29.7	19.7	73.93	1,809.3	1,352.5	614.2	560.0	54.24	11.323	
13,100.0	11,350.0	12,772.3	11,180.0	30.1	20.2	73.93	1,909.3	1,352.1	614.2	559.1	55.14	11.140	
13,200.0	11,350.0	12,872.3	11,180.0	30.4	20.7	73.93	2,009.3	1,351.7	614.2	558.2	56.06	10.957	
13,300.0	11,350.0	12,972.3	11,180.0	30.8	21.2	73.93	2,109.3	1,351.3	614.2	557.2	57.00	10.776	
13,400.0	11,350.0	13,072.3	11,180.0	31.2	21.7	73.93	2,209.3	1,350.9	614.2	556.3	57.97	10.595	
13,500.0	11,350.0	13,172.3	11,180.0	31.6	22.2	73.93	2,309.3	1,350.5	614.3	555.3	58.97	10.417	
13,600.0	11,350.0	13,272.3	11,180.0	32.1	22.8	73.93	2,409.3	1,350.1	614.3	554.3	59.98	10.241	
13,700.0	11,350.0	13,372.3	11,180.0	32.5	23.3	73.93	2,509.3	1,349.7	614.3	553.3	61.02	10.067	
13,800.0	11,350.0	13,472.3	11,180.0	33.0	23.9	73.93	2,609.3	1,349.3	614.3	552.2	62.07	9.896	
13,900.0	11,350.0	13,572.3	11,180.0	33.4	24.5	73.93	2,709.3	1,348.9	614.3	551.1	63.15	9.728	
14,000.0	11,350.0	13,672.3	11,180.0	33.9	25.1	73.93	2,809.3	1,348.5	614.3	550.1	64.24	9.562	
14,100.0	11,350.0	13,772.3	11,180.0	34.4	25.7	73.93	2,909.3	1,348.1	614.3	548.9	65.35	9.400	
14,200.0	11,350.0	13,872.3	11,180.0	34.9	26.3	73.93	3,009.3	1,347.7	614.3	547.8	66.48	9.241	
14,300.0	11,350.0	13,972.3	11,180.0	35.4	26.9	73.93	3,109.3	1,347.3	614.3	546.7	67.62	9.085	
14,400.0	11,350.0	14,072.3	11,180.0	35.9	27.6	73.93	3,209.3	1,346.9	614.3	545.5	68.77	8.932	
14,500.0	11,350.0	14,172.3	11,180.0	36.4	28.2	73.94	3,309.3	1,346.6	614.3	544.4	69.94	8.783	
14,600.0	11,350.0	14,272.3	11,180.0	36.9	28.8	73.94	3,409.3	1,346.2	614.3	543.2	71.13	8.637	
14,700.0	11,350.0	14,372.3	11,180.0	37.5	29.5	73.94	3,509.3	1,345.8	614.3	542.0	72.32	8.495	
14,800.0	11,350.0	14,472.3	11,180.0	38.0	30.1	73.94	3,609.3	1,345.4	614.3	540.8	73.53	8.355	
14,900.0	11,350.0	14,572.3	11,180.0	38.6	30.8	73.94	3,709.3	1,345.0	614.4	539.6	74.75	8.219	
15,000.0	11,350.0	14,672.3	11,180.0	39.2	31.4	73.94	3,809.3	1,344.6	614.4	538.4	75.98	8.086	
15,100.0	11,350.0	14,772.3	11,180.0	39.7	32.1	73.94	3,909.3	1,344.2	614.4	537.2	77.22	7.957	
15,200.0	11,350.0	14,872.3	11,180.0	40.3	32.8	73.94	4,009.3	1,343.8	614.4	535.9	78.46	7.830	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #706H - 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		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)			
15,300.0	11,350.0	14,972.3	11,180.0	40.9	33.5	73.94	4,109.3	1,343.4	614.4	534.7	79.72	7.706	
15,400.0	11,350.0	15,072.3	11,180.0	41.5	34.1	73.94	4,209.3	1,343.0	614.4	533.4	80.99	7.586	
15,500.0	11,350.0	15,172.3	11,180.0	42.1	34.8	73.94	4,309.3	1,342.6	614.4	532.1	82.27	7.468	
15,600.0	11,350.0	15,272.3	11,180.0	42.7	35.5	73.94	4,409.3	1,342.2	614.4	530.9	83.55	7.354	
15,700.0	11,350.0	15,372.3	11,180.0	43.3	36.2	73.94	4,509.3	1,341.8	614.4	529.6	84.84	7.242	
15,800.0	11,350.0	15,472.3	11,180.0	43.9	36.9	73.94	4,609.3	1,341.4	614.4	528.3	86.14	7.133	
15,900.0	11,350.0	15,572.3	11,180.0	44.5	37.6	73.94	4,709.3	1,341.0	614.4	527.0	87.45	7.026	
16,000.0	11,350.0	15,672.3	11,180.0	45.1	38.3	73.94	4,809.3	1,340.6	614.4	525.7	88.76	6.922	
16,100.0	11,350.0	15,772.3	11,180.0	45.7	39.0	73.94	4,909.3	1,340.3	614.4	524.4	90.08	6.821	
16,200.0	11,350.0	15,872.3	11,180.0	46.4	39.7	73.94	5,009.3	1,339.9	614.4	523.0	91.40	6.722	
16,300.0	11,350.0	15,972.3	11,180.0	47.0	40.4	73.94	5,109.3	1,339.5	614.5	521.7	92.73	6.626	
16,400.0	11,350.0	16,072.3	11,180.0	47.6	41.1	73.94	5,209.3	1,339.1	614.5	520.4	94.07	6.532	
16,500.0	11,350.0	16,172.3	11,180.0	48.3	41.8	73.94	5,309.3	1,338.7	614.5	519.1	95.41	6.440	
16,600.0	11,350.0	16,272.3	11,180.0	48.9	42.5	73.94	5,409.3	1,338.3	614.5	517.7	96.76	6.351	
16,700.0	11,350.0	16,372.3	11,180.0	49.6	43.2	73.94	5,509.2	1,337.9	614.5	516.4	98.11	6.263	
16,800.0	11,350.0	16,472.3	11,180.0	50.2	43.9	73.94	5,609.2	1,337.5	614.5	515.0	99.47	6.178	
16,900.0	11,350.0	16,572.3	11,180.0	50.9	44.7	73.94	5,709.2	1,337.1	614.5	513.7	100.83	6.094	
17,000.0	11,350.0	16,672.3	11,180.0	51.5	45.4	73.94	5,809.2	1,336.7	614.5	512.3	102.20	6.013	
17,100.0	11,350.0	16,772.3	11,180.0	52.2	46.1	73.94	5,909.2	1,336.3	614.5	510.9	103.57	5.934	
17,200.0	11,350.0	16,872.3	11,180.0	52.8	46.8	73.94	6,009.2	1,335.9	614.5	509.6	104.94	5.856	
17,300.0	11,350.0	16,972.3	11,180.0	53.5	47.5	73.94	6,109.2	1,335.5	614.5	508.2	106.32	5.780	
17,400.0	11,350.0	17,072.3	11,180.0	54.2	48.3	73.94	6,209.2	1,335.1	614.5	506.8	107.70	5.706	
17,500.0	11,350.0	17,172.3	11,180.0	54.8	49.0	73.94	6,309.2	1,334.7	614.5	505.5	109.08	5.634	
17,600.0	11,350.0	17,272.3	11,180.0	55.5	49.7	73.94	6,409.2	1,334.4	614.5	504.1	110.47	5.563	
17,700.0	11,350.0	17,372.3	11,180.0	56.2	50.5	73.94	6,509.2	1,334.0	614.6	502.7	111.86	5.494	
17,800.0	11,350.0	17,472.3	11,180.0	56.9	51.2	73.94	6,609.2	1,333.6	614.6	501.3	113.26	5.426	
17,900.0	11,350.0	17,572.3	11,180.0	57.5	51.9	73.94	6,709.2	1,333.2	614.6	499.9	114.66	5.360	
18,000.0	11,350.0	17,672.3	11,180.0	58.2	52.6	73.94	6,809.2	1,332.8	614.6	498.5	116.06	5.295	
18,100.0	11,350.0	17,772.3	11,180.0	58.9	53.4	73.94	6,909.2	1,332.4	614.6	497.1	117.46	5.232	
18,200.0	11,350.0	17,872.3	11,180.0	59.6	54.1	73.94	7,009.2	1,332.0	614.6	495.7	118.87	5.170	
18,300.0	11,350.0	17,972.3	11,180.0	60.3	54.8	73.94	7,109.2	1,331.6	614.6	494.3	120.28	5.110	
18,400.0	11,350.0	18,072.3	11,180.0	61.0	55.6	73.94	7,209.2	1,331.2	614.6	492.9	121.69	5.051	
18,500.0	11,350.0	18,172.3	11,180.0	61.7	56.3	73.94	7,309.2	1,330.8	614.6	491.5	123.10	4.993	
18,600.0	11,350.0	18,272.3	11,180.0	62.3	57.0	73.94	7,409.2	1,330.4	614.6	490.1	124.52	4.936	
18,700.0	11,350.0	18,372.3	11,180.0	63.0	57.8	73.94	7,509.2	1,330.0	614.6	488.7	125.94	4.880	
18,800.0	11,350.0	18,472.3	11,180.0	63.7	58.5	73.94	7,609.2	1,329.6	614.6	487.3	127.36	4.826	
18,900.0	11,350.0	18,572.3	11,180.0	64.4	59.3	73.94	7,709.2	1,329.2	614.6	485.9	128.78	4.773	
19,000.0	11,350.0	18,672.3	11,180.0	65.1	60.0	73.94	7,809.2	1,328.8	614.6	484.4	130.21	4.720	
19,100.0	11,350.0	18,772.3	11,180.0	65.8	60.7	73.94	7,909.2	1,328.4	614.7	483.0	131.64	4.669	
19,200.0	11,350.0	18,872.3	11,180.0	66.5	61.5	73.94	8,009.2	1,328.1	614.7	481.6	133.07	4.619	
19,300.0	11,350.0	18,972.3	11,180.0	67.2	62.2	73.94	8,109.2	1,327.7	614.7	480.2	134.50	4.570	
19,400.0	11,350.0	19,072.3	11,180.0	67.9	63.0	73.94	8,209.2	1,327.3	614.7	478.7	135.93	4.522	
19,500.0	11,350.0	19,172.3	11,180.0	68.6	63.7	73.94	8,309.2	1,326.9	614.7	477.3	137.36	4.475	
19,600.0	11,350.0	19,272.3	11,180.0	69.4	64.4	73.94	8,409.2	1,326.5	614.7	475.9	138.80	4.429	
19,700.0	11,350.0	19,372.3	11,180.0	70.1	65.2	73.94	8,509.2	1,326.1	614.7	474.5	140.24	4.383	
19,800.0	11,350.0	19,472.3	11,180.0	70.8	65.9	73.95	8,609.2	1,325.7	614.7	473.0	141.68	4.339	
19,900.0	11,350.0	19,572.3	11,180.0	71.5	66.7	73.95	8,709.2	1,325.3	614.7	471.6	143.12	4.295	
20,000.0	11,350.0	19,672.3	11,180.0	72.2	67.4	73.95	8,809.2	1,324.9	614.7	470.2	144.56	4.252	
20,100.0	11,350.0	19,772.3	11,180.0	72.9	68.2	73.95	8,909.2	1,324.5	614.7	468.7	146.01	4.210	
20,200.0	11,350.0	19,872.3	11,180.0	73.6	68.9	73.95	9,009.2	1,324.1	614.7	467.3	147.45	4.169	
20,300.0	11,350.0	19,972.3	11,180.0	74.3	69.7	73.95	9,109.2	1,323.7	614.7	465.8	148.90	4.128	
20,400.0	11,350.0	20,072.3	11,180.0	75.1	70.4	73.95	9,209.2	1,323.3	614.7	464.4	150.35	4.089	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #706H - 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		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)			
20,500.0	11,350.0	20,172.3	11,180.0	75.8	71.2	73.95	9,309.2	1,322.9	614.8	463.0	151.80	4.050	
20,600.0	11,350.0	20,272.3	11,180.0	76.5	71.9	73.95	9,409.2	1,322.5	614.8	461.5	153.25	4.011	
20,700.0	11,350.0	20,372.3	11,180.0	77.2	72.7	73.95	9,509.2	1,322.2	614.8	460.1	154.70	3.974	
20,800.0	11,350.0	20,472.3	11,180.0	77.9	73.4	73.95	9,609.2	1,321.8	614.8	458.6	156.16	3.937	
20,900.0	11,350.0	20,572.3	11,180.0	78.7	74.1	73.95	9,709.2	1,321.4	614.8	457.2	157.61	3.901	
21,000.0	11,350.0	20,672.3	11,180.0	79.4	74.9	73.95	9,809.2	1,321.0	614.8	455.7	159.07	3.865	
21,100.0	11,350.0	20,772.3	11,180.0	80.1	75.6	73.95	9,909.2	1,320.6	614.8	454.3	160.52	3.830	
21,200.0	11,350.0	20,872.3	11,180.0	80.8	76.4	73.95	10,009.2	1,320.2	614.8	452.8	161.98	3.795	
21,300.0	11,350.0	20,972.3	11,180.0	81.5	77.1	73.95	10,109.2	1,319.8	614.8	451.4	163.44	3.762	
21,400.0	11,350.0	21,072.3	11,180.0	82.3	77.9	73.95	10,209.2	1,319.4	614.8	449.9	164.90	3.728	
21,500.0	11,350.0	21,172.3	11,180.0	83.0	78.6	73.95	10,309.2	1,319.0	614.8	448.5	166.36	3.696	
21,600.0	11,350.0	21,272.3	11,180.0	83.7	79.4	73.95	10,409.2	1,318.6	614.8	447.0	167.82	3.664	
21,700.0	11,350.0	21,372.3	11,180.0	84.4	80.2	73.95	10,509.2	1,318.2	614.8	445.5	169.29	3.632	
21,800.0	11,350.0	21,472.3	11,180.0	85.2	80.9	73.95	10,609.2	1,317.8	614.8	444.1	170.75	3.601	
21,900.0	11,350.0	21,572.3	11,180.0	85.9	81.7	73.95	10,709.2	1,317.4	614.8	442.6	172.22	3.570	
22,000.0	11,350.0	21,672.3	11,180.0	86.6	82.4	73.95	10,809.2	1,317.0	614.9	441.2	173.68	3.540	
22,100.0	11,350.0	21,772.3	11,180.0	87.4	83.2	73.95	10,909.2	1,316.6	614.9	439.7	175.15	3.511	
22,200.0	11,350.0	21,872.3	11,180.0	88.1	83.9	73.95	11,009.2	1,316.3	614.9	438.3	176.62	3.481	
22,300.0	11,350.0	21,972.3	11,180.0	88.8	84.7	73.95	11,109.2	1,315.9	614.9	436.8	178.08	3.453	
22,400.0	11,350.0	22,072.3	11,180.0	89.6	85.4	73.95	11,209.2	1,315.5	614.9	435.3	179.55	3.425	
22,500.0	11,350.0	22,172.3	11,180.0	90.3	86.2	73.95	11,309.2	1,315.1	614.9	433.9	181.02	3.397	
22,600.0	11,350.0	22,272.3	11,180.0	91.0	86.9	73.95	11,409.2	1,314.7	614.9	432.4	182.49	3.369	
22,700.0	11,350.0	22,372.3	11,180.0	91.8	87.7	73.95	11,509.2	1,314.3	614.9	430.9	183.96	3.343	
22,800.0	11,350.0	22,472.3	11,180.0	92.5	88.4	73.95	11,609.2	1,313.9	614.9	429.5	185.44	3.316	
22,900.0	11,350.0	22,572.3	11,180.0	93.2	89.2	73.95	11,709.2	1,313.5	614.9	428.0	186.91	3.290	
23,000.0	11,350.0	22,672.3	11,180.0	94.0	89.9	73.95	11,809.2	1,313.1	614.9	426.5	188.38	3.264	
23,100.0	11,350.0	22,772.3	11,180.0	94.7	90.7	73.95	11,909.2	1,312.7	614.9	425.1	189.86	3.239	
23,200.0	11,350.0	22,872.3	11,180.0	95.4	91.5	73.95	12,009.2	1,312.3	614.9	423.6	191.33	3.214	
23,300.0	11,350.0	22,972.3	11,180.0	96.2	92.2	73.95	12,109.2	1,311.9	614.9	422.1	192.81	3.189	
23,400.0	11,350.0	23,072.3	11,180.0	96.9	93.0	73.95	12,209.2	1,311.5	615.0	420.7	194.28	3.165	
23,500.0	11,350.0	23,172.3	11,180.0	97.6	93.7	73.95	12,309.2	1,311.1	615.0	419.2	195.76	3.141	
23,600.0	11,350.0	23,272.3	11,180.0	98.4	94.5	73.95	12,409.2	1,310.7	615.0	417.7	197.24	3.118	
23,700.0	11,350.0	23,372.3	11,180.0	99.1	95.2	73.95	12,509.2	1,310.3	615.0	416.3	198.71	3.095	
23,800.0	11,350.0	23,472.3	11,180.0	99.9	96.0	73.95	12,609.2	1,310.0	615.0	414.8	200.19	3.072	
23,900.0	11,350.0	23,572.3	11,180.0	100.6	96.7	73.95	12,709.2	1,309.6	615.0	413.3	201.67	3.049	
24,000.0	11,350.0	23,672.3	11,180.0	101.3	97.5	73.95	12,809.2	1,309.2	615.0	411.8	203.15	3.027	
24,100.0	11,350.0	23,772.3	11,180.0	102.1	98.3	73.95	12,909.2	1,308.8	615.0	410.4	204.63	3.005	
24,200.0	11,350.0	23,872.3	11,180.0	102.8	99.0	73.95	13,009.2	1,308.4	615.0	408.9	206.11	2.984	
24,300.0	11,350.0	23,972.3	11,180.0	103.5	99.8	73.95	13,109.2	1,308.0	615.0	407.4	207.59	2.963	
24,400.0	11,350.0	24,072.3	11,180.0	104.3	100.5	73.95	13,209.2	1,307.6	615.0	406.0	209.07	2.942	
24,500.0	11,350.0	24,172.3	11,180.0	105.0	101.3	73.95	13,309.2	1,307.2	615.0	404.5	210.55	2.921	
24,600.0	11,350.0	24,272.3	11,180.0	105.8	102.0	73.95	13,409.2	1,306.8	615.0	403.0	212.04	2.901	
24,700.0	11,350.0	24,372.3	11,180.0	106.5	102.8	73.95	13,509.2	1,306.4	615.0	401.5	213.52	2.881	
24,709.4	11,350.0	24,381.6	11,180.0	106.6	102.9	73.95	13,518.6	1,306.4	615.0	401.4	213.66	2.879	
24,799.9	11,350.0	24,469.4	11,180.0	107.3	103.5	73.95	13,606.3	1,306.0	615.1	400.1	215.00	2.861 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 WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #707H - 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)			
0.0	0.0	0.0	0.0	3.0	3.0	86.99	71.6	1,360.0	1,361.9	1,355.5	6.43	211.844	
100.0	100.0	100.0	100.0	3.2	3.2	86.99	71.6	1,360.0	1,361.9	1,355.0	6.89	197.599	
200.0	200.0	200.0	200.0	3.5	3.5	86.99	71.6	1,360.0	1,361.9	1,354.6	7.33	185.848	
300.0	300.0	300.0	300.0	3.7	3.7	86.99	71.6	1,360.0	1,361.9	1,354.2	7.74	175.929	
400.0	400.0	400.0	400.0	3.9	3.9	86.99	71.6	1,360.0	1,361.9	1,353.8	8.14	167.405	
500.0	500.0	500.0	500.0	4.1	4.1	86.99	71.6	1,360.0	1,361.9	1,353.4	8.51	159.971	
600.0	600.0	600.0	600.0	4.2	4.2	86.99	71.6	1,360.0	1,361.9	1,353.0	8.88	153.411	
700.0	700.0	700.0	700.0	4.4	4.4	86.99	71.6	1,360.0	1,361.9	1,352.7	9.23	147.563	
800.0	800.0	800.0	800.0	4.6	4.6	86.99	71.6	1,360.0	1,361.9	1,352.4	9.57	142.304	
900.0	900.0	900.0	900.0	4.8	4.8	86.99	71.6	1,360.0	1,361.9	1,352.0	9.90	137.542	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	86.99	71.6	1,360.0	1,361.9	1,351.7	10.22	133.199	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	86.99	71.6	1,360.0	1,361.9	1,351.4	10.54	129.219	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	86.99	71.6	1,360.0	1,361.9	1,351.1	10.85	125.551	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	86.99	71.6	1,360.0	1,361.9	1,350.8	11.15	122.157	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	86.99	71.6	1,360.0	1,361.9	1,350.5	11.44	119.003	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	86.99	71.6	1,360.0	1,361.9	1,350.2	11.73	116.062	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	86.99	71.6	1,360.0	1,361.9	1,349.9	12.02	113.310	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	86.99	71.6	1,360.0	1,361.9	1,349.6	12.30	110.728	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	86.99	71.6	1,360.0	1,361.9	1,349.3	12.58	108.299	
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	-48.06	71.6	1,360.0	1,361.0	1,348.2	12.85	105.955	
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	-48.22	71.6	1,360.0	1,358.4	1,345.3	13.10	103.691	
2,100.0	2,099.7	2,075.2	2,075.2	6.6	6.5	-48.40	71.4	1,360.7	1,355.0	1,341.6	13.34	101.598	
2,200.0	2,199.3	2,150.5	2,150.5	6.8	6.6	-48.62	70.6	1,362.8	1,351.6	1,338.0	13.57	99.568	
2,300.0	2,298.7	2,225.9	2,225.8	6.9	6.7	-48.81	69.3	1,366.3	1,349.2	1,335.4	13.81	97.713	
2,381.5	2,379.7	2,287.4	2,287.2	7.1	6.8	-48.94	67.9	1,370.2	1,348.6	1,334.6	14.01	96.274	
2,400.0	2,398.2	2,300.0	2,299.7	7.1	6.9	-48.97	67.6	1,371.1	1,348.6	1,334.6	14.05	95.985	
2,500.0	2,497.6	2,377.0	2,376.4	7.4	7.0	-49.11	65.3	1,377.5	1,349.9	1,335.6	14.32	94.287	
2,600.0	2,597.1	2,452.5	2,451.5	7.6	7.1	-49.22	62.5	1,385.2	1,352.9	1,338.4	14.59	92.708	
2,700.0	2,696.5	2,528.0	2,526.3	7.8	7.3	-49.30	59.1	1,394.3	1,357.8	1,342.9	14.86	91.359	
2,800.0	2,795.9	2,626.1	2,623.5	8.1	7.5	-32.19	54.5	1,407.1	1,362.4	1,347.2	15.21	89.546	
2,900.0	2,895.2	2,726.1	2,722.5	8.4	7.7	-17.92	49.7	1,420.2	1,364.1	1,348.4	15.65	87.177	
3,000.0	2,994.2	2,826.1	2,821.5	8.6	7.9	-7.38	45.0	1,433.3	1,363.0	1,346.8	16.14	84.446	
3,100.0	3,092.8	2,925.9	2,920.3	8.9	8.2	-1.17	40.2	1,446.3	1,359.1	1,342.5	16.63	81.708	
3,200.0	3,191.3	3,025.6	3,019.1	9.1	8.4	-0.94	35.5	1,459.4	1,354.4	1,337.2	17.20	78.764	
3,300.0	3,289.8	3,125.4	3,117.9	9.4	8.7	-0.71	30.7	1,472.4	1,349.7	1,331.9	17.77	75.935	
3,400.0	3,388.3	3,225.1	3,216.6	9.7	9.0	-0.48	26.0	1,485.4	1,345.0	1,326.6	18.38	73.188	
3,500.0	3,486.8	3,324.8	3,315.4	10.0	9.3	-0.24	21.2	1,498.5	1,340.4	1,321.4	19.00	70.534	
3,600.0	3,585.2	3,424.6	3,414.2	10.4	9.6	-0.01	16.5	1,511.5	1,335.8	1,316.1	19.65	67.980	
3,700.0	3,683.7	3,524.3	3,513.0	10.7	10.0	0.23	11.7	1,524.6	1,331.2	1,310.8	20.31	65.530	
3,800.0	3,782.2	3,624.1	3,611.7	11.0	10.3	0.46	7.0	1,537.6	1,326.6	1,305.6	20.99	63.186	
3,900.0	3,880.7	3,723.8	3,710.5	11.4	10.6	0.70	2.2	1,550.7	1,322.0	1,300.3	21.69	60.948	
4,000.0	3,979.2	3,822.7	3,808.4	11.8	11.0	0.94	-2.5	1,563.6	1,317.5	1,295.1	22.39	58.839	
4,100.0	4,077.6	3,913.8	3,898.7	12.1	11.3	1.09	-5.1	1,575.8	1,313.4	1,290.3	23.09	56.886	
4,200.0	4,176.1	4,010.0	3,993.9	12.5	11.6	1.14	-5.4	1,589.2	1,309.8	1,286.0	23.78	55.071	
4,300.0	4,274.6	4,110.0	4,092.9	12.9	12.0	1.18	-5.4	1,603.1	1,306.3	1,281.8	24.54	53.239	
4,400.0	4,373.1	4,209.9	4,191.9	13.3	12.3	1.21	-5.4	1,617.0	1,302.8	1,277.5	25.30	51.498	
4,500.0	4,471.6	4,309.8	4,290.8	13.6	12.7	1.25	-5.4	1,630.9	1,299.3	1,273.3	26.07	49.842	
4,600.0	4,570.0	4,409.8	4,389.8	14.0	13.0	1.29	-5.4	1,644.8	1,295.8	1,269.0	26.85	48.268	
4,700.0	4,668.5	4,509.7	4,488.8	14.4	13.4	1.33	-5.4	1,658.7	1,292.4	1,264.7	27.63	46.771	
4,800.0	4,767.0	4,609.6	4,587.7	14.8	13.8	1.37	-5.4	1,672.6	1,288.9	1,260.4	28.42	45.347	
4,900.0	4,865.5	4,709.6	4,686.7	15.2	14.2	1.41	-5.4	1,686.5	1,285.4	1,256.1	29.22	43.990	
5,000.0	4,964.0	4,809.5	4,785.6	15.6	14.5	1.44	-5.4	1,700.4	1,281.9	1,251.9	30.02	42.699	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #707H - 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)			
5,100.0	5,062.4	4,909.4	4,884.6	16.0	14.9	1.48	-5.4	1,714.3	1,278.4	1,247.6	30.83	41.468	
5,200.0	5,160.9	5,009.4	4,983.6	16.4	15.3	1.52	-5.4	1,728.2	1,274.9	1,243.3	31.64	40.294	
5,300.0	5,259.4	5,109.3	5,082.5	16.9	15.7	1.56	-5.4	1,742.1	1,271.4	1,239.0	32.46	39.173	
5,400.0	5,357.9	5,209.2	5,181.5	17.3	16.1	1.60	-5.4	1,756.1	1,267.9	1,234.6	33.28	38.103	
5,500.0	5,456.4	5,309.2	5,280.5	17.7	16.5	1.64	-5.4	1,770.0	1,264.4	1,230.3	34.10	37.081	
5,600.0	5,554.8	5,409.1	5,379.4	18.1	16.9	1.68	-5.4	1,783.9	1,260.9	1,226.0	34.93	36.104	
5,700.0	5,653.3	5,509.0	5,478.4	18.5	17.3	1.72	-5.4	1,797.8	1,257.5	1,221.7	35.76	35.168	
5,800.0	5,751.8	5,609.0	5,577.3	18.9	17.7	1.77	-5.4	1,811.7	1,254.0	1,217.4	36.59	34.275	
5,900.0	5,850.3	5,724.8	5,692.1	19.4	18.1	1.81	-5.4	1,827.4	1,250.1	1,212.7	37.46	33.376	
6,000.0	5,948.8	5,852.4	5,818.8	19.8	18.6	1.86	-5.4	1,842.1	1,244.3	1,205.9	38.36	32.432	
6,100.0	6,047.3	5,979.6	5,945.5	20.2	19.1	1.91	-5.4	1,854.0	1,236.2	1,196.9	39.24	31.506	
6,200.0	6,145.7	6,106.3	6,071.8	20.7	19.5	1.95	-5.4	1,863.0	1,225.9	1,185.8	40.07	30.596	
6,300.0	6,244.2	6,232.3	6,197.7	21.1	19.9	2.00	-5.4	1,869.2	1,213.4	1,172.6	40.84	29.711	
6,400.0	6,342.7	6,357.6	6,322.9	21.5	20.3	2.04	-5.4	1,872.7	1,198.8	1,157.2	41.55	28.854	
6,500.0	6,441.2	6,475.9	6,441.2	21.9	20.4	2.07	-5.4	1,873.4	1,182.3	1,140.2	42.07	28.104	
6,600.0	6,540.0	6,574.6	6,540.0	22.3	20.5	2.09	-5.4	1,873.4	1,166.7	1,124.1	42.54	27.425	
6,700.0	6,639.0	6,673.7	6,639.0	22.8	20.5	2.11	-5.4	1,873.4	1,152.8	1,109.8	43.01	26.802	
6,800.0	6,738.3	6,772.9	6,738.3	23.2	20.6	2.13	-5.4	1,873.4	1,140.6	1,097.2	43.47	26.238	
6,900.0	6,837.7	6,872.4	6,837.7	23.6	20.6	2.14	-5.4	1,873.4	1,130.2	1,086.3	43.92	25.731	
7,000.0	6,937.4	6,972.0	6,937.4	23.9	20.6	2.16	-5.4	1,873.4	1,121.6	1,077.2	44.36	25.282	
7,100.0	7,037.1	7,071.8	7,037.1	24.3	20.7	2.17	-5.4	1,873.4	1,114.6	1,069.8	44.78	24.890	
7,200.0	7,137.0	7,171.6	7,137.0	24.6	20.7	2.18	-5.4	1,873.4	1,109.4	1,064.2	45.18	24.555	
7,300.0	7,236.9	7,271.6	7,236.9	24.9	20.8	2.18	-5.4	1,873.4	1,106.0	1,060.4	45.55	24.281	
7,400.0	7,336.9	7,371.5	7,336.9	25.2	20.8	2.19	-5.4	1,873.4	1,104.3	1,058.4	45.87	24.076	
7,494.6	7,431.5	7,466.2	7,431.5	25.2	20.9	2.19	-5.4	1,873.4	1,103.8	1,057.9	45.97	24.015 CC	
7,500.0	7,436.9	7,471.5	7,436.9	25.2	20.9	88.94	-5.4	1,873.4	1,104.1	1,058.1	45.97	24.016	
7,600.0	7,536.9	7,571.5	7,536.9	25.3	20.9	88.94	-5.4	1,873.4	1,104.1	1,058.0	46.04	23.978	
7,700.0	7,636.9	7,671.5	7,636.9	25.3	20.9	88.94	-5.4	1,873.4	1,104.1	1,057.9	46.12	23.940	
7,800.0	7,736.9	7,771.5	7,736.9	25.3	21.0	88.94	-5.4	1,873.4	1,104.1	1,057.9	46.19	23.901	
7,900.0	7,836.9	7,871.5	7,836.9	25.4	21.0	88.94	-5.4	1,873.4	1,104.1	1,057.8	46.27	23.862	
8,000.0	7,936.9	7,971.5	7,936.9	25.4	21.1	88.94	-5.4	1,873.4	1,104.1	1,057.7	46.34	23.824	
8,100.0	8,036.9	8,071.5	8,036.9	25.4	21.1	88.94	-5.4	1,873.4	1,104.1	1,057.6	46.42	23.785	
8,200.0	8,136.9	8,171.5	8,136.9	25.5	21.2	88.94	-5.4	1,873.4	1,104.1	1,057.6	46.50	23.746	
8,300.0	8,236.9	8,271.5	8,236.9	25.5	21.2	88.94	-5.4	1,873.4	1,104.1	1,057.5	46.57	23.707	
8,400.0	8,336.9	8,371.5	8,336.9	25.5	21.3	88.94	-5.4	1,873.4	1,104.1	1,057.4	46.65	23.667	
8,500.0	8,436.9	8,471.5	8,436.9	25.6	21.3	88.94	-5.4	1,873.4	1,104.1	1,057.3	46.73	23.628	
8,600.0	8,536.9	8,571.5	8,536.9	25.6	21.3	88.94	-5.4	1,873.4	1,104.1	1,057.3	46.80	23.589	
8,700.0	8,636.9	8,671.5	8,636.9	25.7	21.4	88.94	-5.4	1,873.4	1,104.1	1,057.2	46.88	23.549	
8,800.0	8,736.9	8,771.5	8,736.9	25.7	21.4	88.94	-5.4	1,873.4	1,104.1	1,057.1	46.96	23.510	
8,900.0	8,836.9	8,871.5	8,836.9	25.7	21.5	88.94	-5.4	1,873.4	1,104.1	1,057.0	47.04	23.470	
9,000.0	8,936.9	8,971.5	8,936.9	25.8	21.5	88.94	-5.4	1,873.4	1,104.1	1,056.9	47.12	23.431	
9,100.0	9,036.9	9,071.5	9,036.9	25.8	21.6	88.94	-5.4	1,873.4	1,104.1	1,056.9	47.20	23.391	
9,200.0	9,136.9	9,171.5	9,136.9	25.8	21.6	88.94	-5.4	1,873.4	1,104.1	1,056.8	47.28	23.351	
9,300.0	9,236.9	9,271.5	9,236.9	25.9	21.7	88.94	-5.4	1,873.4	1,104.1	1,056.7	47.36	23.311	
9,400.0	9,336.9	9,371.5	9,336.9	25.9	21.7	88.94	-5.4	1,873.4	1,104.1	1,056.6	47.44	23.271	
9,500.0	9,436.9	9,471.5	9,436.9	25.9	21.8	88.94	-5.4	1,873.4	1,104.1	1,056.5	47.52	23.231	
9,600.0	9,536.9	9,571.5	9,536.9	26.0	21.8	88.94	-5.4	1,873.4	1,104.1	1,056.4	47.61	23.191	
9,700.0	9,636.9	9,671.5	9,636.9	26.0	21.9	88.94	-5.4	1,873.4	1,104.1	1,056.4	47.69	23.151	
9,800.0	9,736.9	9,771.5	9,736.9	26.1	21.9	88.94	-5.4	1,873.4	1,104.1	1,056.3	47.77	23.111	
9,900.0	9,836.9	9,871.5	9,836.9	26.1	21.9	88.94	-5.4	1,873.4	1,104.1	1,056.2	47.86	23.070	
10,000.0	9,936.9	9,971.5	9,936.9	26.1	22.0	88.94	-5.4	1,873.4	1,104.1	1,056.1	47.94	23.030	
10,100.0	10,036.9	10,071.5	10,036.9	26.2	22.0	88.94	-5.4	1,873.4	1,104.1	1,056.0	48.02	22.990	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #707H - 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)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
10,200.0	10,136.9	10,171.5	10,136.9	26.2	22.1	88.94	-5.4	1,873.4	1,104.1	1,055.9	48.11	22.949		
10,300.0	10,236.9	10,271.5	10,236.9	26.2	22.1	88.94	-5.4	1,873.4	1,104.1	1,055.9	48.19	22.909		
10,400.0	10,336.9	10,371.5	10,336.9	26.3	22.2	88.94	-5.4	1,873.4	1,104.1	1,055.8	48.28	22.868		
10,500.0	10,436.9	10,471.5	10,436.9	26.3	22.2	88.94	-5.4	1,873.4	1,104.1	1,055.7	48.36	22.828		
10,600.0	10,536.9	10,571.5	10,536.9	26.4	22.3	88.94	-5.4	1,873.4	1,104.1	1,055.6	48.45	22.787		
10,700.0	10,636.9	10,671.5	10,636.9	26.4	22.3	88.94	-5.4	1,873.4	1,104.1	1,055.5	48.54	22.747		
10,800.0	10,736.9	10,771.5	10,736.9	26.4	22.4	88.94	-5.4	1,873.4	1,104.1	1,055.4	48.62	22.706		
10,900.0	10,836.8	10,869.9	10,835.2	26.5	22.4	89.17	-2.4	1,873.4	1,104.1	1,055.4	48.69	22.675		
11,000.0	10,934.8	10,967.2	10,930.7	26.5	22.4	89.20	15.6	1,873.4	1,104.0	1,055.3	48.75	22.646		
11,100.0	11,028.1	11,064.7	11,021.9	26.5	22.4	89.25	49.6	1,873.2	1,104.0	1,055.2	48.81	22.620		
11,200.0	11,113.7	11,162.3	11,106.2	26.5	22.4	89.32	98.6	1,873.0	1,104.0	1,055.2	48.86	22.597		
11,300.0	11,189.1	11,260.2	11,181.1	26.5	22.4	89.41	161.4	1,872.8	1,104.0	1,055.1	48.91	22.573		
11,400.0	11,251.9	11,358.4	11,244.5	26.5	22.4	89.53	236.3	1,872.5	1,104.0	1,055.0	48.97	22.544		
11,500.0	11,300.4	11,457.0	11,294.3	26.6	22.4	89.65	321.2	1,872.1	1,104.0	1,054.9	49.05	22.507		
11,600.0	11,332.9	11,556.0	11,329.0	26.7	22.5	89.79	413.9	1,871.8	1,104.0	1,054.8	49.16	22.459		
11,700.0	11,348.6	11,655.5	11,347.2	26.7	22.6	89.93	511.5	1,871.4	1,103.9	1,054.7	49.29	22.395		
11,715.0	11,349.5	11,670.5	11,348.5	26.8	22.6	89.95	526.5	1,871.3	1,103.9	1,054.6	49.32	22.383		
11,800.0	11,350.0	11,755.4	11,350.0	26.8	22.7	90.00	611.4	1,871.0	1,103.9	1,054.5	49.49	22.307		
11,900.0	11,350.0	11,855.4	11,350.0	27.0	22.8	90.00	711.4	1,870.6	1,103.9	1,054.2	49.75	22.188		
12,000.0	11,350.0	11,955.4	11,350.0	27.1	23.0	90.00	811.4	1,870.2	1,103.9	1,053.9	50.06	22.051		
12,100.0	11,350.0	12,055.4	11,350.0	27.3	23.1	90.00	911.4	1,869.8	1,103.9	1,053.5	50.42	21.896		
12,200.0	11,350.0	12,155.4	11,350.0	27.5	23.4	90.00	1,011.4	1,869.4	1,104.0	1,053.1	50.81	21.725		
12,300.0	11,350.0	12,255.4	11,350.0	27.7	23.6	90.00	1,111.4	1,869.0	1,104.0	1,052.7	51.25	21.539		
12,400.0	11,350.0	12,355.4	11,350.0	27.9	23.8	90.00	1,211.4	1,868.6	1,104.0	1,052.2	51.73	21.340		
12,500.0	11,350.0	12,455.4	11,350.0	28.2	24.1	90.00	1,311.4	1,868.2	1,104.0	1,051.7	52.25	21.128		
12,600.0	11,350.0	12,555.4	11,350.0	28.4	24.4	90.00	1,411.4	1,867.8	1,104.0	1,051.1	52.81	20.905		
12,700.0	11,350.0	12,655.4	11,350.0	28.7	24.7	90.00	1,511.4	1,867.4	1,104.0	1,050.6	53.40	20.672		
12,800.0	11,350.0	12,755.4	11,350.0	29.0	25.1	90.00	1,611.4	1,867.0	1,104.0	1,049.9	54.04	20.430		
12,900.0	11,350.0	12,855.4	11,350.0	29.4	25.4	90.00	1,711.4	1,866.6	1,104.0	1,049.3	54.70	20.182		
13,000.0	11,350.0	12,955.4	11,350.0	29.7	25.8	90.00	1,811.4	1,866.2	1,104.0	1,048.6	55.40	19.927		
13,100.0	11,350.0	13,055.4	11,350.0	30.1	26.2	90.00	1,911.4	1,865.8	1,104.0	1,047.8	56.13	19.667		
13,200.0	11,350.0	13,155.4	11,350.0	30.4	26.6	90.00	2,011.4	1,865.4	1,104.0	1,047.1	56.90	19.403		
13,300.0	11,350.0	13,255.4	11,350.0	30.8	27.0	90.00	2,111.4	1,865.0	1,104.0	1,046.3	57.69	19.137		
13,400.0	11,350.0	13,355.4	11,350.0	31.2	27.5	90.00	2,211.4	1,864.6	1,104.0	1,045.5	58.51	18.868		
13,500.0	11,350.0	13,455.4	11,350.0	31.6	27.9	90.00	2,311.4	1,864.2	1,104.0	1,044.6	59.36	18.598		
13,600.0	11,350.0	13,555.4	11,350.0	32.1	28.4	90.00	2,411.4	1,863.8	1,104.0	1,043.7	60.23	18.328		
13,700.0	11,350.0	13,655.4	11,350.0	32.5	28.9	90.00	2,511.4	1,863.4	1,104.0	1,042.8	61.13	18.058		
13,800.0	11,350.0	13,755.4	11,350.0	33.0	29.4	90.00	2,611.4	1,863.0	1,104.0	1,041.9	62.06	17.790		
13,900.0	11,350.0	13,855.4	11,350.0	33.4	29.9	90.00	2,711.4	1,862.6	1,104.0	1,041.0	63.00	17.522		
14,000.0	11,350.0	13,955.4	11,350.0	33.9	30.4	90.00	2,811.4	1,862.2	1,104.0	1,040.0	63.97	17.257		
14,100.0	11,350.0	14,055.4	11,350.0	34.4	30.9	90.00	2,911.4	1,861.8	1,104.0	1,039.0	64.96	16.994		
14,200.0	11,350.0	14,155.4	11,350.0	34.9	31.4	90.00	3,011.4	1,861.4	1,104.0	1,038.0	65.97	16.734		
14,300.0	11,350.0	14,255.4	11,350.0	35.4	32.0	90.00	3,111.4	1,861.0	1,104.0	1,037.0	67.00	16.477		
14,400.0	11,350.0	14,355.4	11,350.0	35.9	32.5	90.00	3,211.4	1,860.6	1,104.0	1,035.9	68.05	16.224		
14,500.0	11,350.0	14,455.4	11,350.0	36.4	33.1	90.00	3,311.4	1,860.2	1,104.0	1,034.9	69.11	15.974		
14,600.0	11,350.0	14,555.4	11,350.0	36.9	33.7	90.00	3,411.4	1,859.8	1,104.0	1,033.8	70.19	15.728		
14,700.0	11,350.0	14,655.4	11,350.0	37.5	34.2	90.00	3,511.4	1,859.4	1,104.0	1,032.7	71.29	15.486		
14,800.0	11,350.0	14,755.4	11,350.0	38.0	34.8	90.00	3,611.4	1,859.0	1,104.0	1,031.6	72.40	15.248		
14,900.0	11,350.0	14,855.4	11,350.0	38.6	35.4	90.00	3,711.4	1,858.6	1,104.0	1,030.5	73.53	15.015		
15,000.0	11,350.0	14,955.4	11,350.0	39.2	36.0	90.00	3,811.4	1,858.2	1,104.0	1,029.3	74.67	14.786		
15,100.0	11,350.0	15,055.4	11,350.0	39.7	36.6	90.00	3,911.4	1,857.8	1,104.0	1,028.2	75.82	14.561		
15,200.0	11,350.0	15,155.4	11,350.0	40.3	37.2	90.00	4,011.3	1,857.4	1,104.0	1,027.0	76.98	14.341		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #707H - 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)			
15,300.0	11,350.0	15,255.4	11,350.0	40.9	37.8	90.00	4,111.3	1,857.0	1,104.0	1,025.8	78.16	14.125	
15,400.0	11,350.0	15,355.4	11,350.0	41.5	38.5	90.00	4,211.3	1,856.6	1,104.0	1,024.6	79.35	13.913	
15,500.0	11,350.0	15,455.4	11,350.0	42.1	39.1	90.00	4,311.3	1,856.2	1,104.0	1,023.4	80.55	13.706	
15,600.0	11,350.0	15,555.4	11,350.0	42.7	39.7	90.00	4,411.3	1,855.8	1,104.0	1,022.2	81.76	13.503	
15,700.0	11,350.0	15,655.4	11,350.0	43.3	40.4	90.00	4,511.3	1,855.4	1,104.0	1,021.0	82.98	13.305	
15,800.0	11,350.0	15,755.4	11,350.0	43.9	41.0	90.00	4,611.3	1,855.0	1,104.0	1,019.8	84.21	13.110	
15,900.0	11,350.0	15,855.4	11,350.0	44.5	41.6	90.00	4,711.3	1,854.6	1,104.0	1,018.5	85.45	12.920	
16,000.0	11,350.0	15,955.4	11,350.0	45.1	42.3	90.00	4,811.3	1,854.2	1,104.0	1,017.3	86.69	12.734	
16,100.0	11,350.0	16,055.4	11,350.0	45.7	42.9	90.00	4,911.3	1,853.8	1,104.0	1,016.0	87.95	12.553	
16,200.0	11,350.0	16,155.4	11,350.0	46.4	43.6	90.00	5,011.3	1,853.4	1,104.0	1,014.8	89.21	12.375	
16,300.0	11,350.0	16,255.4	11,350.0	47.0	44.3	90.00	5,111.3	1,853.0	1,104.0	1,013.5	90.48	12.201	
16,400.0	11,350.0	16,355.4	11,350.0	47.6	44.9	90.00	5,211.3	1,852.6	1,104.0	1,012.2	91.76	12.031	
16,500.0	11,350.0	16,455.4	11,350.0	48.3	45.6	90.00	5,311.3	1,852.2	1,104.0	1,011.0	93.05	11.865	
16,600.0	11,350.0	16,555.4	11,350.0	48.9	46.3	90.00	5,411.3	1,851.8	1,104.0	1,009.7	94.34	11.702	
16,700.0	11,350.0	16,655.4	11,350.0	49.6	46.9	90.00	5,511.3	1,851.4	1,104.0	1,008.4	95.64	11.543	
16,800.0	11,350.0	16,755.4	11,350.0	50.2	47.6	90.00	5,611.3	1,851.0	1,104.0	1,007.1	96.94	11.388	
16,900.0	11,350.0	16,855.4	11,350.0	50.9	48.3	90.00	5,711.3	1,850.6	1,104.0	1,005.7	98.26	11.236	
17,000.0	11,350.0	16,955.4	11,350.0	51.5	49.0	90.00	5,811.3	1,850.2	1,104.0	1,004.4	99.57	11.088	
17,100.0	11,350.0	17,055.4	11,350.0	52.2	49.6	90.00	5,911.3	1,849.8	1,104.0	1,003.1	100.89	10.942	
17,200.0	11,350.0	17,155.4	11,350.0	52.8	50.3	90.00	6,011.3	1,849.4	1,104.0	1,001.8	102.22	10.800	
17,300.0	11,350.0	17,255.4	11,350.0	53.5	51.0	90.00	6,111.3	1,849.0	1,104.0	1,000.5	103.55	10.661	
17,400.0	11,350.0	17,355.4	11,350.0	54.2	51.7	90.00	6,211.3	1,848.6	1,104.0	999.1	104.89	10.525	
17,500.0	11,350.0	17,455.4	11,350.0	54.8	52.4	90.00	6,311.3	1,848.2	1,104.0	997.8	106.23	10.392	
17,600.0	11,350.0	17,555.4	11,350.0	55.5	53.1	90.00	6,411.3	1,847.8	1,104.0	996.4	107.58	10.262	
17,700.0	11,350.0	17,655.4	11,350.0	56.2	53.8	90.00	6,511.3	1,847.4	1,104.0	995.1	108.93	10.135	
17,800.0	11,350.0	17,755.4	11,350.0	56.9	54.5	90.00	6,611.3	1,847.0	1,104.0	993.7	110.29	10.010	
17,900.0	11,350.0	17,855.4	11,350.0	57.5	55.2	90.00	6,711.3	1,846.6	1,104.0	992.4	111.65	9.889	
18,000.0	11,350.0	17,955.4	11,350.0	58.2	55.9	90.00	6,811.3	1,846.2	1,104.0	991.0	113.01	9.769	
18,100.0	11,350.0	18,055.4	11,350.0	58.9	56.6	90.00	6,911.3	1,845.8	1,104.0	989.6	114.38	9.653	
18,200.0	11,350.0	18,155.4	11,350.0	59.6	57.3	90.00	7,011.3	1,845.4	1,104.0	988.3	115.75	9.538	
18,300.0	11,350.0	18,255.4	11,350.0	60.3	58.0	90.00	7,111.3	1,845.0	1,104.0	986.9	117.12	9.426	
18,400.0	11,350.0	18,355.4	11,350.0	61.0	58.7	90.00	7,211.3	1,844.6	1,104.0	985.5	118.50	9.317	
18,500.0	11,350.0	18,455.4	11,350.0	61.7	59.4	90.00	7,311.3	1,844.2	1,104.0	984.1	119.88	9.210	
18,600.0	11,350.0	18,555.4	11,350.0	62.3	60.1	90.00	7,411.3	1,843.8	1,104.0	982.8	121.26	9.105	
18,700.0	11,350.0	18,655.4	11,350.0	63.0	60.8	90.00	7,511.3	1,843.4	1,104.0	981.4	122.65	9.002	
18,800.0	11,350.0	18,755.4	11,350.0	63.7	61.6	90.00	7,611.3	1,843.0	1,104.0	980.0	124.04	8.901	
18,900.0	11,350.0	18,855.4	11,350.0	64.4	62.3	90.00	7,711.3	1,842.6	1,104.0	978.6	125.43	8.802	
19,000.0	11,350.0	18,955.4	11,350.0	65.1	63.0	90.00	7,811.3	1,842.2	1,104.0	977.2	126.83	8.705	
19,100.0	11,350.0	19,055.4	11,350.0	65.8	63.7	90.00	7,911.3	1,841.8	1,104.0	975.8	128.22	8.610	
19,200.0	11,350.0	19,155.4	11,350.0	66.5	64.4	90.00	8,011.3	1,841.4	1,104.0	974.4	129.62	8.517	
19,300.0	11,350.0	19,255.4	11,350.0	67.2	65.1	90.00	8,111.3	1,841.0	1,104.0	973.0	131.03	8.426	
19,400.0	11,350.0	19,355.4	11,350.0	67.9	65.9	90.00	8,211.3	1,840.6	1,104.0	971.6	132.43	8.337	
19,500.0	11,350.0	19,455.4	11,350.0	68.6	66.6	90.00	8,311.3	1,840.2	1,104.0	970.2	133.84	8.249	
19,600.0	11,350.0	19,555.4	11,350.0	69.4	67.3	90.00	8,411.3	1,839.8	1,104.0	968.8	135.25	8.163	
19,700.0	11,350.0	19,655.4	11,350.0	70.1	68.0	90.00	8,511.3	1,839.4	1,104.0	967.4	136.66	8.079	
19,800.0	11,350.0	19,755.4	11,350.0	70.8	68.7	90.00	8,611.3	1,839.0	1,104.0	966.0	138.08	7.996	
19,900.0	11,350.0	19,855.4	11,350.0	71.5	69.5	90.00	8,711.3	1,838.6	1,104.0	964.5	139.49	7.915	
20,000.0	11,350.0	19,955.4	11,350.0	72.2	70.2	90.00	8,811.3	1,838.2	1,104.0	963.1	140.91	7.835	
20,100.0	11,350.0	20,055.4	11,350.0	72.9	70.9	90.00	8,911.3	1,837.8	1,104.0	961.7	142.33	7.757	
20,200.0	11,350.0	20,155.4	11,350.0	73.6	71.7	90.00	9,011.3	1,837.4	1,104.0	960.3	143.75	7.680	
20,300.0	11,350.0	20,255.4	11,350.0	74.3	72.4	90.00	9,111.3	1,837.0	1,104.0	958.9	145.18	7.605	
20,400.0	11,350.0	20,355.4	11,350.0	75.1	73.1	90.00	9,211.3	1,836.6	1,104.0	957.4	146.60	7.531	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #707H - 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		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)			
20,500.0	11,350.0	20,455.4	11,350.0	75.8	73.8	90.00	9,311.3	1,836.2	1,104.0	956.0	148.03	7.458	
20,600.0	11,350.0	20,555.4	11,350.0	76.5	74.6	90.00	9,411.3	1,835.8	1,104.0	954.6	149.46	7.387	
20,700.0	11,350.0	20,655.4	11,350.0	77.2	75.3	90.00	9,511.3	1,835.4	1,104.0	953.2	150.89	7.317	
20,800.0	11,350.0	20,755.4	11,350.0	77.9	76.0	90.00	9,611.3	1,835.0	1,104.1	951.7	152.32	7.248	
20,900.0	11,350.0	20,855.4	11,350.0	78.7	76.8	90.00	9,711.3	1,834.6	1,104.1	950.3	153.76	7.181	
21,000.0	11,350.0	20,955.4	11,350.0	79.4	77.5	90.00	9,811.3	1,834.2	1,104.1	948.9	155.19	7.114	
21,100.0	11,350.0	21,055.4	11,350.0	80.1	78.2	90.00	9,911.3	1,833.8	1,104.1	947.4	156.63	7.049	
21,200.0	11,350.0	21,155.4	11,350.0	80.8	79.0	90.00	10,011.3	1,833.4	1,104.1	946.0	158.07	6.985	
21,300.0	11,350.0	21,255.4	11,350.0	81.5	79.7	90.00	10,111.3	1,833.0	1,104.1	944.6	159.50	6.922	
21,400.0	11,350.0	21,355.4	11,350.0	82.3	80.4	90.00	10,211.3	1,832.6	1,104.1	943.1	160.95	6.860	
21,500.0	11,350.0	21,455.4	11,350.0	83.0	81.2	90.00	10,311.3	1,832.2	1,104.1	941.7	162.39	6.799	
21,600.0	11,350.0	21,555.4	11,350.0	83.7	81.9	90.00	10,411.3	1,831.8	1,104.1	940.2	163.83	6.739	
21,700.0	11,350.0	21,655.4	11,350.0	84.4	82.6	90.00	10,511.3	1,831.4	1,104.1	938.8	165.28	6.680	
21,800.0	11,350.0	21,755.4	11,350.0	85.2	83.4	90.00	10,611.3	1,831.0	1,104.1	937.3	166.72	6.622	
21,900.0	11,350.0	21,855.4	11,350.0	85.9	84.1	90.00	10,711.3	1,830.6	1,104.1	935.9	168.17	6.565	
22,000.0	11,350.0	21,955.4	11,350.0	86.6	84.9	90.00	10,811.3	1,830.2	1,104.1	934.4	169.62	6.509	
22,100.0	11,350.0	22,055.4	11,350.0	87.4	85.6	90.00	10,911.3	1,829.8	1,104.1	933.0	171.07	6.454	
22,200.0	11,350.0	22,155.4	11,350.0	88.1	86.3	90.00	11,011.3	1,829.4	1,104.1	931.6	172.52	6.400	
22,300.0	11,350.0	22,255.4	11,350.0	88.8	87.1	90.00	11,111.3	1,829.0	1,104.1	930.1	173.97	6.346	
22,400.0	11,350.0	22,355.4	11,350.0	89.6	87.8	90.00	11,211.3	1,828.6	1,104.1	928.7	175.42	6.294	
22,500.0	11,350.0	22,455.4	11,350.0	90.3	88.6	90.00	11,311.3	1,828.2	1,104.1	927.2	176.87	6.242	
22,600.0	11,350.0	22,555.4	11,350.0	91.0	89.3	90.00	11,411.3	1,827.8	1,104.1	925.7	178.33	6.191	
22,700.0	11,350.0	22,655.4	11,350.0	91.8	90.0	90.00	11,511.3	1,827.4	1,104.1	924.3	179.78	6.141	
22,800.0	11,350.0	22,755.4	11,350.0	92.5	90.8	90.00	11,611.3	1,827.0	1,104.1	922.8	181.24	6.092	
22,900.0	11,350.0	22,855.4	11,350.0	93.2	91.5	90.00	11,711.3	1,826.6	1,104.1	921.4	182.69	6.043	
23,000.0	11,350.0	22,955.4	11,350.0	94.0	92.3	90.00	11,811.3	1,826.2	1,104.1	919.9	184.15	5.995	
23,100.0	11,350.0	23,055.4	11,350.0	94.7	93.0	90.00	11,911.3	1,825.8	1,104.1	918.5	185.61	5.948	
23,200.0	11,350.0	23,155.4	11,350.0	95.4	93.8	90.00	12,011.3	1,825.4	1,104.1	917.0	187.07	5.902	
23,300.0	11,350.0	23,255.4	11,350.0	96.2	94.5	90.00	12,111.3	1,825.0	1,104.1	915.5	188.53	5.856	
23,400.0	11,350.0	23,355.4	11,350.0	96.9	95.2	90.00	12,211.3	1,824.6	1,104.1	914.1	189.99	5.811	
23,500.0	11,350.0	23,455.4	11,350.0	97.6	96.0	90.00	12,311.3	1,824.2	1,104.1	912.6	191.46	5.767	
23,600.0	11,350.0	23,555.4	11,350.0	98.4	96.7	90.00	12,411.3	1,823.8	1,104.1	911.2	192.92	5.723	
23,700.0	11,350.0	23,655.4	11,350.0	99.1	97.5	90.00	12,511.3	1,823.4	1,104.1	909.7	194.38	5.680	
23,800.0	11,350.0	23,755.4	11,350.0	99.9	98.2	90.00	12,611.3	1,823.0	1,104.1	908.2	195.85	5.638	
23,900.0	11,350.0	23,855.4	11,350.0	100.6	99.0	90.00	12,711.3	1,822.6	1,104.1	906.8	197.31	5.596	
24,000.0	11,350.0	23,955.4	11,350.0	101.3	99.7	90.00	12,811.3	1,822.2	1,104.1	905.3	198.78	5.554	
24,100.0	11,350.0	24,055.4	11,350.0	102.1	100.5	90.00	12,911.3	1,821.8	1,104.1	903.8	200.24	5.514	
24,200.0	11,350.0	24,155.4	11,350.0	102.8	101.2	90.00	13,011.3	1,821.4	1,104.1	902.4	201.71	5.474	
24,300.0	11,350.0	24,255.4	11,350.0	103.5	102.0	90.00	13,111.3	1,821.0	1,104.1	900.9	203.18	5.434	
24,400.0	11,350.0	24,355.4	11,350.0	104.3	102.7	90.00	13,211.3	1,820.6	1,104.1	899.4	204.65	5.395	
24,500.0	11,350.0	24,455.4	11,350.0	105.0	103.5	90.00	13,311.3	1,820.2	1,104.1	898.0	206.11	5.357	
24,600.0	11,350.0	24,555.4	11,350.0	105.8	104.2	90.00	13,411.3	1,819.8	1,104.1	896.5	207.58	5.319	
24,700.0	11,350.0	24,655.4	11,350.0	106.5	105.0	90.00	13,511.3	1,819.4	1,104.1	895.0	209.05	5.281	
24,709.2	11,350.0	24,664.6	11,350.0	106.6	105.0	90.00	13,520.4	1,819.4	1,104.1	894.9	209.19	5.278	
24,799.9	11,350.0	24,750.1	11,350.0	107.3	105.7	90.00	13,605.9	1,819.0	1,104.1	893.6	210.50	5.245 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 WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #708H - 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		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	3.0	3.0	87.05	71.6	1,390.0	1,391.9	1,385.5	6.43	216.504	
100.0	100.0	100.0	100.0	3.2	3.2	87.05	71.6	1,390.0	1,391.9	1,385.0	6.89	201.946	
200.0	200.0	200.0	200.0	3.5	3.5	87.05	71.6	1,390.0	1,391.9	1,384.6	7.33	189.936	
300.0	300.0	300.0	300.0	3.7	3.7	87.05	71.6	1,390.0	1,391.9	1,384.1	7.74	179.799	
400.0	400.0	400.0	400.0	3.9	3.9	87.05	71.6	1,390.0	1,391.9	1,383.7	8.14	171.087	
500.0	500.0	500.0	500.0	4.1	4.1	87.05	71.6	1,390.0	1,391.9	1,383.4	8.51	163.490	
600.0	600.0	600.0	600.0	4.2	4.2	87.05	71.6	1,390.0	1,391.9	1,383.0	8.88	156.786	
700.0	700.0	700.0	700.0	4.4	4.4	87.05	71.6	1,390.0	1,391.9	1,382.7	9.23	150.809	
800.0	800.0	800.0	800.0	4.6	4.6	87.05	71.6	1,390.0	1,391.9	1,382.3	9.57	145.435	
900.0	900.0	900.0	900.0	4.8	4.8	87.05	71.6	1,390.0	1,391.9	1,382.0	9.90	140.567	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.05	71.6	1,390.0	1,391.9	1,381.7	10.22	136.130	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.05	71.6	1,390.0	1,391.9	1,381.3	10.54	132.061	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.05	71.6	1,390.0	1,391.9	1,381.0	10.85	128.313	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.05	71.6	1,390.0	1,391.9	1,380.7	11.15	124.844	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.05	71.6	1,390.0	1,391.9	1,380.4	11.44	121.621	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.05	71.6	1,390.0	1,391.9	1,380.1	11.73	118.615	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	87.05	71.6	1,390.0	1,391.9	1,379.9	12.02	115.803	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	87.05	71.6	1,390.0	1,391.9	1,379.6	12.30	113.164	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	87.05	71.6	1,390.0	1,391.9	1,379.3	12.58	110.682	
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	-48.00	71.6	1,390.0	1,391.0	1,378.2	12.85	108.287	
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	-48.15	71.6	1,390.0	1,388.4	1,375.3	13.10	105.977	
2,100.0	2,099.7	2,099.7	2,099.7	6.6	6.5	-48.40	71.6	1,390.0	1,384.0	1,370.7	13.36	103.587	
2,200.0	2,199.3	2,199.3	2,199.3	6.8	6.7	-48.75	71.6	1,390.0	1,378.0	1,364.3	13.63	101.116	
2,300.0	2,298.7	2,298.7	2,298.7	6.9	6.8	-49.08	71.6	1,390.0	1,371.1	1,357.2	13.89	98.726	
2,400.0	2,398.2	2,398.2	2,398.2	7.1	6.9	-49.41	71.6	1,390.0	1,364.2	1,350.1	14.15	96.386	
2,500.0	2,497.6	2,497.6	2,497.6	7.4	7.0	-49.74	71.6	1,390.0	1,357.4	1,343.0	14.43	94.099	
2,600.0	2,597.1	2,573.5	2,573.5	7.6	7.2	-50.01	72.0	1,390.7	1,351.5	1,336.8	14.69	92.032	
2,700.0	2,696.5	2,648.9	2,648.8	7.8	7.3	-50.31	73.1	1,392.6	1,347.4	1,332.5	14.95	90.104	
2,800.0	2,795.9	2,724.2	2,724.1	8.1	7.4	-33.35	74.9	1,395.7	1,343.9	1,328.6	15.25	88.119	
2,900.0	2,895.2	2,800.0	2,799.7	8.4	7.5	-19.30	77.5	1,400.2	1,339.3	1,323.7	15.58	85.964	
3,000.0	2,994.2	2,875.0	2,874.4	8.6	7.7	-9.05	80.8	1,406.0	1,333.6	1,317.7	15.96	83.579	
3,100.0	3,092.8	2,950.5	2,949.5	8.9	7.8	-3.21	84.9	1,413.0	1,327.0	1,310.6	16.32	81.288	
3,200.0	3,191.3	3,026.1	3,024.5	9.1	7.9	-3.41	89.7	1,421.4	1,321.3	1,304.6	16.73	78.975	
3,300.0	3,289.8	3,123.5	3,120.9	9.4	8.1	-3.69	96.5	1,433.1	1,316.7	1,299.5	17.19	76.604	
3,400.0	3,388.3	3,223.2	3,219.6	9.7	8.3	-3.97	103.4	1,445.1	1,312.2	1,294.5	17.70	74.118	
3,500.0	3,486.8	3,312.9	3,308.5	10.0	8.5	-4.23	109.6	1,456.1	1,307.8	1,289.6	18.20	71.848	
3,600.0	3,585.2	3,400.0	3,394.5	10.4	8.8	-4.41	114.3	1,468.4	1,305.1	1,286.4	18.76	69.569	
3,694.8	3,678.6	3,458.8	3,452.5	10.7	8.9	-4.49	116.7	1,477.9	1,304.2	1,285.0	19.22	67.849 CC	
3,700.0	3,683.7	3,462.7	3,456.3	10.7	8.9	-4.50	116.8	1,478.6	1,304.2	1,285.0	19.25	67.752 ES	
3,800.0	3,782.2	3,537.7	3,530.1	11.0	9.1	-4.55	118.8	1,492.2	1,305.3	1,285.5	19.79	65.941	
3,900.0	3,880.7	3,619.4	3,610.1	11.4	9.4	-4.54	119.7	1,508.7	1,308.2	1,287.8	20.39	64.168	
4,000.0	3,979.2	3,719.3	3,707.8	11.8	9.7	-4.51	120.4	1,529.5	1,311.7	1,290.5	21.11	62.125	
4,100.0	4,077.6	3,819.3	3,805.6	12.1	10.0	-4.47	121.1	1,550.3	1,315.1	1,293.3	21.81	60.310	
4,200.0	4,176.1	3,919.2	3,903.3	12.5	10.3	-4.44	121.9	1,571.0	1,318.5	1,296.0	22.52	58.561	
4,300.0	4,274.6	4,019.1	4,001.1	12.9	10.6	-4.41	122.6	1,591.8	1,322.0	1,298.7	23.24	56.879	
4,400.0	4,373.1	4,119.1	4,098.8	13.3	11.0	-4.38	123.3	1,612.6	1,325.4	1,301.4	23.98	55.265	
4,500.0	4,471.6	4,219.0	4,196.6	13.6	11.3	-4.35	124.0	1,633.3	1,328.9	1,304.1	24.74	53.720	
4,600.0	4,570.0	4,319.0	4,294.3	14.0	11.7	-4.32	124.8	1,654.1	1,332.3	1,306.8	25.50	52.241	
4,700.0	4,668.5	4,418.9	4,392.1	14.4	12.0	-4.29	125.5	1,674.9	1,335.7	1,309.5	26.28	50.826	
4,800.0	4,767.0	4,518.8	4,489.8	14.8	12.4	-4.26	126.2	1,695.6	1,339.2	1,312.1	27.07	49.475	
4,900.0	4,865.5	4,618.8	4,587.6	15.2	12.8	-4.23	126.9	1,716.4	1,342.6	1,314.8	27.86	48.184	
5,000.0	4,964.0	4,718.7	4,685.4	15.6	13.2	-4.20	127.7	1,737.2	1,346.1	1,317.4	28.67	46.951	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #708H - 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)			
5,100.0	5,062.4	4,818.6	4,783.1	16.0	13.5	-4.17	128.4	1,757.9	1,349.5	1,320.0	29.48	45.774	
5,200.0	5,160.9	4,918.6	4,880.9	16.4	13.9	-4.14	129.1	1,778.7	1,353.0	1,322.6	30.30	44.649	
5,300.0	5,259.4	5,018.5	4,978.6	16.9	14.3	-4.11	129.8	1,799.5	1,356.4	1,325.3	31.13	43.574	
5,400.0	5,357.9	5,118.5	5,076.4	17.3	14.7	-4.08	130.6	1,820.2	1,359.8	1,327.9	31.96	42.547	
5,500.0	5,456.4	5,218.4	5,174.1	17.7	15.1	-4.05	131.3	1,841.0	1,363.3	1,330.5	32.80	41.565	
5,600.0	5,554.8	5,318.3	5,271.9	18.1	15.6	-4.02	132.0	1,861.8	1,366.7	1,333.1	33.64	40.626	
5,700.0	5,653.3	5,418.3	5,369.6	18.5	16.0	-3.99	132.7	1,882.5	1,370.2	1,335.7	34.49	39.727	
5,800.0	5,751.8	5,518.2	5,467.4	18.9	16.4	-3.96	133.5	1,903.3	1,373.6	1,338.3	35.34	38.867	
5,900.0	5,850.3	5,618.2	5,565.1	19.4	16.8	-3.93	134.2	1,924.1	1,377.1	1,340.9	36.20	38.042	
6,000.0	5,948.8	5,718.1	5,662.9	19.8	17.2	-3.90	134.9	1,944.8	1,380.5	1,343.5	37.06	37.252	
6,100.0	6,047.3	5,818.0	5,760.6	20.2	17.7	-3.87	135.6	1,965.6	1,384.0	1,346.0	37.92	36.495	
6,200.0	6,145.7	5,918.0	5,858.4	20.7	18.1	-3.85	136.4	1,986.4	1,387.4	1,348.6	38.79	35.768	
6,300.0	6,244.2	6,017.9	5,956.2	21.1	18.5	-3.82	137.1	2,007.1	1,390.8	1,351.2	39.66	35.070	
6,400.0	6,342.7	6,117.8	6,053.9	21.5	19.0	-3.79	137.8	2,027.9	1,394.3	1,353.8	40.53	34.399	
6,500.0	6,441.2	6,217.8	6,151.7	21.9	19.4	-3.76	138.5	2,048.7	1,398.0	1,356.6	41.39	33.778	
6,600.0	6,540.0	6,317.6	6,249.3	22.3	19.8	-3.73	139.3	2,069.4	1,403.2	1,360.9	42.25	33.209	
6,700.0	6,639.0	6,417.4	6,346.9	22.8	20.3	-3.70	140.0	2,090.1	1,410.2	1,367.1	43.11	32.710	
6,800.0	6,738.3	6,517.0	6,444.3	23.2	20.7	-3.67	140.7	2,110.8	1,418.9	1,374.9	43.96	32.279	
6,900.0	6,837.7	6,616.4	6,541.6	23.6	21.1	-3.63	141.4	2,131.5	1,429.3	1,384.5	44.79	31.913	
7,000.0	6,937.4	6,715.7	6,638.7	23.9	21.6	-3.59	142.2	2,152.1	1,441.5	1,395.9	45.60	31.609	
7,100.0	7,037.1	6,814.7	6,735.6	24.3	22.0	-3.54	142.9	2,172.7	1,455.3	1,409.0	46.40	31.366	
7,200.0	7,137.0	6,913.5	6,832.2	24.6	22.5	-3.50	143.6	2,193.2	1,471.0	1,423.8	47.17	31.183	
7,300.0	7,236.9	7,012.0	6,928.5	24.9	22.9	-3.45	144.3	2,213.7	1,488.3	1,440.4	47.92	31.061	
7,400.0	7,336.9	7,110.1	7,024.5	25.2	23.3	-3.40	145.0	2,234.1	1,507.4	1,458.7	48.61	31.009	
7,500.0	7,436.9	7,208.0	7,120.2	25.2	23.8	83.41	145.7	2,254.4	1,527.9	1,478.8	49.11	31.112	
7,600.0	7,536.9	7,306.6	7,240.3	25.3	24.3	83.48	146.6	2,279.2	1,548.1	1,498.4	49.69	31.152	
7,700.0	7,636.9	7,465.5	7,373.0	25.3	24.9	83.55	147.4	2,303.5	1,566.1	1,515.7	50.33	31.116	
7,800.0	7,736.9	7,601.5	7,507.3	25.3	25.5	83.61	148.2	2,324.9	1,581.8	1,530.8	50.94	31.053	
7,900.0	7,836.9	7,738.5	7,643.1	25.4	26.1	83.66	148.8	2,343.2	1,595.1	1,543.6	51.51	30.969	
8,000.0	7,936.9	7,876.3	7,780.0	25.4	26.6	83.71	149.4	2,358.3	1,606.1	1,554.0	52.04	30.864	
8,100.0	8,036.9	8,014.7	7,917.9	25.4	27.1	83.74	149.8	2,370.2	1,614.6	1,562.1	52.52	30.743	
8,200.0	8,136.9	8,153.7	8,056.6	25.5	27.6	83.76	150.1	2,378.8	1,620.8	1,567.8	52.94	30.613	
8,300.0	8,236.9	8,292.9	8,195.8	25.5	28.0	83.77	150.2	2,384.0	1,624.5	1,571.2	53.30	30.480	
8,400.0	8,336.9	8,432.4	8,335.2	25.5	28.3	83.78	150.3	2,385.9	1,625.8	1,572.3	53.50	30.390	
8,500.0	8,436.9	8,534.1	8,436.9	25.6	28.4	83.78	150.3	2,385.9	1,625.9	1,572.3	53.56	30.357	
8,600.0	8,536.9	8,634.1	8,536.9	25.6	28.4	83.78	150.3	2,385.9	1,625.9	1,572.2	53.62	30.319	
8,700.0	8,636.9	8,734.1	8,636.9	25.7	28.4	83.78	150.3	2,385.9	1,625.9	1,572.2	53.69	30.281	
8,800.0	8,736.9	8,834.1	8,736.9	25.7	28.5	83.78	150.3	2,385.9	1,625.9	1,572.1	53.76	30.242	
8,900.0	8,836.9	8,934.1	8,836.9	25.7	28.5	83.78	150.3	2,385.9	1,625.9	1,572.0	53.83	30.204	
9,000.0	8,936.9	9,034.1	8,936.9	25.8	28.5	83.78	150.3	2,385.9	1,625.9	1,572.0	53.90	30.165	
9,100.0	9,036.9	9,134.1	9,036.9	25.8	28.6	83.78	150.3	2,385.9	1,625.9	1,571.9	53.97	30.126	
9,200.0	9,136.9	9,234.1	9,136.9	25.8	28.6	83.78	150.3	2,385.9	1,625.9	1,571.8	54.04	30.087	
9,300.0	9,236.9	9,334.1	9,236.9	25.9	28.7	83.78	150.3	2,385.9	1,625.9	1,571.7	54.11	30.048	
9,400.0	9,336.9	9,434.1	9,336.9	25.9	28.7	83.78	150.3	2,385.9	1,625.9	1,571.7	54.18	30.009	
9,500.0	9,436.9	9,534.1	9,436.9	25.9	28.7	83.78	150.3	2,385.9	1,625.9	1,571.6	54.25	29.970	
9,600.0	9,536.9	9,634.1	9,536.9	26.0	28.8	83.78	150.3	2,385.9	1,625.9	1,571.5	54.32	29.930	
9,700.0	9,636.9	9,734.1	9,636.9	26.0	28.8	83.78	150.3	2,385.9	1,625.9	1,571.5	54.39	29.891	
9,800.0	9,736.9	9,834.1	9,736.9	26.1	28.8	83.78	150.3	2,385.9	1,625.9	1,571.4	54.47	29.851	
9,900.0	9,836.9	9,934.1	9,836.9	26.1	28.9	83.78	150.3	2,385.9	1,625.9	1,571.3	54.54	29.811	
10,000.0	9,936.9	10,034.1	9,936.9	26.1	28.9	83.78	150.3	2,385.9	1,625.9	1,571.2	54.61	29.771	
10,100.0	10,036.9	10,134.1	10,036.9	26.2	28.9	83.78	150.3	2,385.9	1,625.9	1,571.2	54.68	29.731	
10,200.0	10,136.9	10,234.1	10,136.9	26.2	29.0	83.78	150.3	2,385.9	1,625.9	1,571.1	54.76	29.691	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #708H - 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		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)			
10,300.0	10,236.9	10,334.1	10,236.9	26.2	29.0	83.78	150.3	2,385.9	1,625.9	1,571.0	54.83	29.651	
10,400.0	10,336.9	10,434.1	10,336.9	26.3	29.0	83.78	150.3	2,385.9	1,625.9	1,570.9	54.91	29.611	
10,500.0	10,436.9	10,534.1	10,436.9	26.3	29.1	83.78	150.3	2,385.9	1,625.9	1,570.9	54.98	29.571	
10,600.0	10,536.9	10,634.1	10,536.9	26.4	29.1	83.78	150.3	2,385.9	1,625.9	1,570.8	55.06	29.530	
10,602.5	10,539.4	10,636.6	10,539.4	26.4	29.1	83.78	150.3	2,385.9	1,625.9	1,570.8	55.06	29.529	
10,700.0	10,636.9	10,727.2	10,630.0	26.4	29.2	83.76	150.8	2,385.9	1,625.9	1,570.8	55.15	29.479	
10,800.0	10,736.9	10,800.0	10,702.4	26.4	29.2	83.50	158.3	2,385.8	1,627.1	1,571.8	55.31	29.417	
10,900.0	10,836.8	10,876.8	10,777.0	26.5	29.3	83.03	176.1	2,385.8	1,629.5	1,574.0	55.46	29.381	
11,000.0	10,934.8	10,950.0	10,845.4	26.5	29.3	82.38	202.2	2,385.6	1,631.7	1,576.0	55.66	29.314	
11,100.0	11,028.1	11,020.1	10,907.1	26.5	29.4	81.91	235.2	2,385.5	1,633.4	1,577.5	55.89	29.224	
11,200.0	11,113.7	11,090.8	10,964.9	26.5	29.4	81.63	275.9	2,385.4	1,634.4	1,578.3	56.13	29.119	
11,300.0	11,189.1	11,161.3	11,017.1	26.5	29.5	81.55	323.2	2,385.2	1,634.7	1,578.3	56.37	29.002	
11,400.0	11,251.9	11,231.8	11,063.1	26.5	29.6	81.67	376.6	2,385.0	1,634.3	1,577.7	56.59	28.878	
11,500.0	11,300.4	11,300.0	11,101.1	26.6	29.7	81.98	433.2	2,384.7	1,633.1	1,576.3	56.79	28.755	
11,600.0	11,332.9	11,374.0	11,134.3	26.7	29.7	82.49	499.2	2,384.5	1,631.3	1,574.3	56.97	28.635	
11,700.0	11,348.6	11,450.0	11,159.3	26.7	29.8	83.20	570.9	2,384.2	1,629.0	1,571.9	57.11	28.522	
11,800.0	11,350.0	11,520.1	11,173.8	26.8	29.9	83.78	639.5	2,383.9	1,626.7	1,569.5	57.22	28.429	
11,900.0	11,350.0	11,596.6	11,179.9	27.0	29.9	84.00	715.7	2,383.6	1,625.9	1,568.5	57.42	28.317	
11,909.8	11,350.0	11,604.2	11,180.0	27.0	29.9	84.00	723.3	2,383.6	1,625.9	1,568.4	57.44	28.304	
12,000.0	11,350.0	11,694.3	11,180.0	27.1	30.0	84.00	813.4	2,383.2	1,625.9	1,568.1	57.79	28.132	
12,100.0	11,350.0	11,794.3	11,180.0	27.3	30.1	84.00	913.4	2,382.8	1,625.9	1,567.7	58.22	27.926	
12,200.0	11,350.0	11,894.3	11,180.0	27.5	30.2	84.00	1,013.4	2,382.4	1,625.9	1,567.2	58.68	27.706	
12,300.0	11,350.0	11,994.3	11,180.0	27.7	30.4	84.00	1,113.4	2,382.0	1,625.9	1,566.7	59.18	27.473	
12,400.0	11,350.0	12,094.3	11,180.0	27.9	30.5	84.00	1,213.4	2,381.6	1,625.9	1,566.2	59.71	27.228	
12,500.0	11,350.0	12,194.3	11,180.0	28.2	30.7	84.00	1,313.4	2,381.2	1,625.9	1,565.6	60.28	26.972	
12,600.0	11,350.0	12,294.3	11,180.0	28.4	30.9	84.00	1,413.4	2,380.8	1,625.9	1,565.0	60.88	26.707	
12,700.0	11,350.0	12,394.3	11,180.0	28.7	31.2	84.00	1,513.4	2,380.4	1,625.9	1,564.4	61.51	26.433	
12,800.0	11,350.0	12,494.3	11,180.0	29.0	31.4	84.00	1,613.4	2,380.0	1,625.9	1,563.7	62.17	26.152	
12,900.0	11,350.0	12,594.3	11,180.0	29.4	31.7	84.00	1,713.4	2,379.6	1,625.9	1,563.0	62.86	25.865	
13,000.0	11,350.0	12,694.3	11,180.0	29.7	31.9	84.00	1,813.4	2,379.2	1,625.9	1,562.3	63.58	25.572	
13,100.0	11,350.0	12,794.3	11,180.0	30.1	32.2	84.00	1,913.4	2,378.8	1,625.9	1,561.6	64.33	25.275	
13,200.0	11,350.0	12,894.3	11,180.0	30.4	32.5	84.00	2,013.4	2,378.4	1,625.9	1,560.8	65.10	24.975	
13,300.0	11,350.0	12,994.3	11,180.0	30.8	32.9	84.00	2,113.4	2,378.0	1,625.9	1,560.0	65.90	24.672	
13,400.0	11,350.0	13,094.3	11,180.0	31.2	33.2	84.00	2,213.4	2,377.6	1,625.9	1,559.2	66.73	24.367	
13,500.0	11,350.0	13,194.3	11,180.0	31.6	33.6	84.00	2,313.4	2,377.2	1,625.9	1,558.3	67.57	24.061	
13,600.0	11,350.0	13,294.3	11,180.0	32.1	33.9	84.00	2,413.4	2,376.8	1,625.9	1,557.5	68.45	23.755	
13,700.0	11,350.0	13,394.3	11,180.0	32.5	34.3	84.00	2,513.4	2,376.4	1,625.9	1,556.6	69.34	23.449	
13,800.0	11,350.0	13,494.3	11,180.0	33.0	34.7	84.00	2,613.4	2,376.0	1,625.9	1,555.6	70.25	23.143	
13,900.0	11,350.0	13,594.3	11,180.0	33.4	35.1	84.00	2,713.4	2,375.6	1,625.9	1,554.7	71.19	22.839	
14,000.0	11,350.0	13,694.3	11,180.0	33.9	35.5	84.00	2,813.4	2,375.2	1,625.9	1,553.8	72.15	22.537	
14,100.0	11,350.0	13,794.3	11,180.0	34.4	36.0	84.00	2,913.4	2,374.8	1,625.9	1,552.8	73.12	22.236	
14,200.0	11,350.0	13,894.3	11,180.0	34.9	36.4	84.00	3,013.4	2,374.4	1,625.9	1,551.8	74.11	21.938	
14,300.0	11,350.0	13,994.3	11,180.0	35.4	36.9	84.00	3,113.4	2,374.0	1,625.9	1,550.8	75.12	21.644	
14,400.0	11,350.0	14,094.3	11,180.0	35.9	37.4	84.00	3,213.4	2,373.6	1,625.9	1,549.8	76.15	21.352	
14,500.0	11,350.0	14,194.3	11,180.0	36.4	37.8	84.00	3,313.4	2,373.2	1,625.9	1,548.7	77.19	21.063	
14,600.0	11,350.0	14,294.3	11,180.0	36.9	38.3	84.00	3,413.4	2,372.8	1,625.9	1,547.7	78.25	20.778	
14,700.0	11,350.0	14,394.3	11,180.0	37.5	38.8	84.00	3,513.4	2,372.4	1,625.9	1,546.6	79.32	20.497	
14,800.0	11,350.0	14,494.3	11,180.0	38.0	39.3	84.00	3,613.4	2,372.0	1,625.9	1,545.5	80.41	20.220	
14,900.0	11,350.0	14,594.3	11,180.0	38.6	39.9	84.00	3,713.4	2,371.6	1,625.9	1,544.4	81.51	19.947	
15,000.0	11,350.0	14,694.3	11,180.0	39.2	40.4	84.00	3,813.4	2,371.2	1,625.9	1,543.3	82.63	19.678	
15,100.0	11,350.0	14,794.3	11,180.0	39.7	40.9	84.00	3,913.4	2,370.8	1,625.9	1,542.2	83.75	19.414	
15,200.0	11,350.0	14,894.3	11,180.0	40.3	41.5	84.00	4,013.4	2,370.4	1,625.9	1,541.0	84.89	19.153	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #708H - 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)			
15,300.0	11,350.0	14,994.3	11,180.0	40.9	42.0	84.00	4,113.4	2,370.0	1,625.9	1,539.9	86.04	18.897	
15,400.0	11,350.0	15,094.3	11,180.0	41.5	42.6	84.00	4,213.4	2,369.6	1,625.9	1,538.7	87.20	18.645	
15,500.0	11,350.0	15,194.3	11,180.0	42.1	43.1	84.00	4,313.4	2,369.2	1,625.9	1,537.5	88.37	18.398	
15,600.0	11,350.0	15,294.3	11,180.0	42.7	43.7	84.00	4,413.4	2,368.8	1,625.9	1,536.4	89.56	18.155	
15,700.0	11,350.0	15,394.3	11,180.0	43.3	44.3	84.00	4,513.4	2,368.4	1,625.9	1,535.2	90.75	17.917	
15,800.0	11,350.0	15,494.3	11,180.0	43.9	44.8	84.00	4,613.4	2,368.0	1,625.9	1,534.0	91.95	17.683	
15,900.0	11,350.0	15,594.3	11,180.0	44.5	45.4	84.00	4,713.4	2,367.6	1,625.9	1,532.8	93.16	17.453	
16,000.0	11,350.0	15,694.3	11,180.0	45.1	46.0	84.00	4,813.4	2,367.2	1,625.9	1,531.5	94.38	17.227	
16,100.0	11,350.0	15,794.3	11,180.0	45.7	46.6	84.00	4,913.4	2,366.8	1,625.9	1,530.3	95.61	17.006	
16,200.0	11,350.0	15,894.3	11,180.0	46.4	47.2	84.00	5,013.4	2,366.4	1,625.9	1,529.1	96.84	16.789	
16,300.0	11,350.0	15,994.3	11,180.0	47.0	47.8	84.00	5,113.4	2,366.0	1,625.9	1,527.8	98.09	16.576	
16,400.0	11,350.0	16,094.3	11,180.0	47.6	48.4	84.00	5,213.4	2,365.6	1,625.9	1,526.6	99.34	16.367	
16,500.0	11,350.0	16,194.3	11,180.0	48.3	49.1	84.00	5,313.4	2,365.2	1,625.9	1,525.3	100.60	16.163	
16,600.0	11,350.0	16,294.3	11,180.0	48.9	49.7	84.00	5,413.4	2,364.8	1,625.9	1,524.1	101.86	15.962	
16,700.0	11,350.0	16,394.3	11,180.0	49.6	50.3	84.00	5,513.4	2,364.4	1,625.9	1,522.8	103.14	15.765	
16,800.0	11,350.0	16,494.3	11,180.0	50.2	50.9	84.00	5,613.4	2,364.0	1,625.9	1,521.5	104.41	15.572	
16,900.0	11,350.0	16,594.3	11,180.0	50.9	51.6	84.00	5,713.4	2,363.6	1,625.9	1,520.2	105.70	15.383	
17,000.0	11,350.0	16,694.3	11,180.0	51.5	52.2	84.00	5,813.4	2,363.2	1,625.9	1,518.9	106.99	15.197	
17,100.0	11,350.0	16,794.3	11,180.0	52.2	52.8	84.00	5,913.4	2,362.8	1,625.9	1,517.6	108.29	15.015	
17,200.0	11,350.0	16,894.3	11,180.0	52.8	53.5	84.00	6,013.4	2,362.4	1,625.9	1,516.3	109.59	14.837	
17,300.0	11,350.0	16,994.3	11,180.0	53.5	54.1	84.00	6,113.4	2,362.0	1,625.9	1,515.0	110.90	14.662	
17,400.0	11,350.0	17,094.3	11,180.0	54.2	54.8	84.00	6,213.4	2,361.6	1,625.9	1,513.7	112.21	14.490	
17,500.0	11,350.0	17,194.3	11,180.0	54.8	55.4	84.00	6,313.4	2,361.2	1,625.9	1,512.4	113.53	14.322	
17,600.0	11,350.0	17,294.3	11,180.0	55.5	56.1	84.00	6,413.4	2,360.8	1,625.9	1,511.1	114.85	14.157	
17,700.0	11,350.0	17,394.3	11,180.0	56.2	56.7	84.00	6,513.4	2,360.4	1,625.9	1,509.8	116.18	13.996	
17,800.0	11,350.0	17,494.3	11,180.0	56.9	57.4	84.00	6,613.4	2,360.0	1,625.9	1,508.4	117.51	13.837	
17,900.0	11,350.0	17,594.3	11,180.0	57.5	58.0	84.00	6,713.4	2,359.6	1,625.9	1,507.1	118.84	13.681	
18,000.0	11,350.0	17,694.3	11,180.0	58.2	58.7	84.00	6,813.4	2,359.2	1,625.9	1,505.8	120.18	13.529	
18,100.0	11,350.0	17,794.3	11,180.0	58.9	59.4	84.00	6,913.4	2,358.8	1,625.9	1,504.4	121.53	13.379	
18,200.0	11,350.0	17,894.3	11,180.0	59.6	60.1	84.00	7,013.4	2,358.4	1,625.9	1,503.1	122.88	13.232	
18,300.0	11,350.0	17,994.3	11,180.0	60.3	60.7	84.00	7,113.4	2,358.0	1,625.9	1,501.7	124.23	13.088	
18,400.0	11,350.0	18,094.3	11,180.0	61.0	61.4	84.00	7,213.4	2,357.6	1,625.9	1,500.4	125.58	12.947	
18,500.0	11,350.0	18,194.3	11,180.0	61.7	62.1	84.00	7,313.4	2,357.2	1,625.9	1,499.0	126.94	12.809	
18,600.0	11,350.0	18,294.3	11,180.0	62.3	62.8	84.00	7,413.4	2,356.8	1,625.9	1,497.6	128.30	12.673	
18,700.0	11,350.0	18,394.3	11,180.0	63.0	63.4	84.00	7,513.4	2,356.4	1,625.9	1,496.3	129.67	12.539	
18,800.0	11,350.0	18,494.3	11,180.0	63.7	64.1	84.00	7,613.4	2,356.0	1,625.9	1,494.9	131.04	12.408	
18,900.0	11,350.0	18,594.3	11,180.0	64.4	64.8	84.00	7,713.4	2,355.6	1,625.9	1,493.5	132.41	12.279	
19,000.0	11,350.0	18,694.3	11,180.0	65.1	65.5	84.00	7,813.4	2,355.2	1,626.0	1,492.2	133.79	12.153	
19,100.0	11,350.0	18,794.3	11,180.0	65.8	66.2	84.00	7,913.4	2,354.8	1,626.0	1,490.8	135.17	12.029	
19,200.0	11,350.0	18,894.3	11,180.0	66.5	66.9	84.00	8,013.4	2,354.4	1,626.0	1,489.4	136.55	11.908	
19,300.0	11,350.0	18,994.3	11,180.0	67.2	67.6	84.00	8,113.4	2,354.0	1,626.0	1,488.0	137.93	11.788	
19,400.0	11,350.0	19,094.3	11,180.0	67.9	68.2	84.00	8,213.4	2,353.6	1,626.0	1,486.6	139.32	11.671	
19,500.0	11,350.0	19,194.3	11,180.0	68.6	68.9	84.00	8,313.4	2,353.2	1,626.0	1,485.2	140.71	11.556	
19,600.0	11,350.0	19,294.3	11,180.0	69.4	69.6	84.00	8,413.4	2,352.8	1,626.0	1,483.9	142.10	11.442	
19,700.0	11,350.0	19,394.3	11,180.0	70.1	70.3	84.00	8,513.4	2,352.4	1,626.0	1,482.5	143.49	11.331	
19,800.0	11,350.0	19,494.3	11,180.0	70.8	71.0	84.00	8,613.4	2,352.0	1,626.0	1,481.1	144.89	11.222	
19,900.0	11,350.0	19,594.3	11,180.0	71.5	71.7	84.00	8,713.4	2,351.6	1,626.0	1,479.7	146.29	11.115	
20,000.0	11,350.0	19,694.3	11,180.0	72.2	72.4	84.00	8,813.4	2,351.2	1,626.0	1,478.3	147.69	11.009	
20,100.0	11,350.0	19,794.3	11,180.0	72.9	73.1	84.00	8,913.4	2,350.8	1,626.0	1,476.9	149.09	10.906	
20,200.0	11,350.0	19,894.3	11,180.0	73.6	73.8	84.00	9,013.4	2,350.4	1,626.0	1,475.5	150.50	10.804	
20,300.0	11,350.0	19,994.3	11,180.0	74.3	74.5	84.00	9,113.4	2,350.0	1,626.0	1,474.1	151.91	10.704	
20,400.0	11,350.0	20,094.3	11,180.0	75.1	75.3	84.00	9,213.4	2,349.6	1,626.0	1,472.6	153.31	10.605	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #708H - 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		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)			
20,500.0	11,350.0	20,194.3	11,180.0	75.8	76.0	84.00	9,313.4	2,349.2	1,626.0	1,471.2	154.73	10.509	
20,600.0	11,350.0	20,294.3	11,180.0	76.5	76.7	84.00	9,413.4	2,348.8	1,626.0	1,469.8	156.14	10.414	
20,700.0	11,350.0	20,394.3	11,180.0	77.2	77.4	84.00	9,513.4	2,348.4	1,626.0	1,468.4	157.55	10.320	
20,800.0	11,350.0	20,494.3	11,180.0	77.9	78.1	84.00	9,613.4	2,348.0	1,626.0	1,467.0	158.97	10.228	
20,900.0	11,350.0	20,594.3	11,180.0	78.7	78.8	84.00	9,713.4	2,347.6	1,626.0	1,465.6	160.39	10.138	
21,000.0	11,350.0	20,694.3	11,180.0	79.4	79.5	84.00	9,813.4	2,347.2	1,626.0	1,464.2	161.81	10.049	
21,100.0	11,350.0	20,794.3	11,180.0	80.1	80.2	84.00	9,913.4	2,346.8	1,626.0	1,462.7	163.23	9.961	
21,200.0	11,350.0	20,894.3	11,180.0	80.8	80.9	84.00	10,013.4	2,346.4	1,626.0	1,461.3	164.66	9.875	
21,300.0	11,350.0	20,994.3	11,180.0	81.5	81.7	84.00	10,113.4	2,346.0	1,626.0	1,459.9	166.08	9.790	
21,400.0	11,350.0	21,094.3	11,180.0	82.3	82.4	84.00	10,213.4	2,345.6	1,626.0	1,458.5	167.51	9.707	
21,500.0	11,350.0	21,194.3	11,180.0	83.0	83.1	84.00	10,313.4	2,345.2	1,626.0	1,457.0	168.94	9.625	
21,600.0	11,350.0	21,294.3	11,180.0	83.7	83.8	84.00	10,413.4	2,344.8	1,626.0	1,455.6	170.37	9.544	
21,700.0	11,350.0	21,394.3	11,180.0	84.4	84.5	84.00	10,513.4	2,344.4	1,626.0	1,454.2	171.80	9.464	
21,800.0	11,350.0	21,494.3	11,180.0	85.2	85.3	84.00	10,613.4	2,344.0	1,626.0	1,452.7	173.23	9.386	
21,900.0	11,350.0	21,594.3	11,180.0	85.9	86.0	84.00	10,713.4	2,343.6	1,626.0	1,451.3	174.66	9.309	
22,000.0	11,350.0	21,694.3	11,180.0	86.6	86.7	84.00	10,813.4	2,343.2	1,626.0	1,449.9	176.10	9.233	
22,100.0	11,350.0	21,794.3	11,180.0	87.4	87.4	84.00	10,913.3	2,342.8	1,626.0	1,448.4	177.54	9.159	
22,200.0	11,350.0	21,894.3	11,180.0	88.1	88.1	84.00	11,013.3	2,342.4	1,626.0	1,447.0	178.97	9.085	
22,300.0	11,350.0	21,994.3	11,180.0	88.8	88.9	84.00	11,113.3	2,342.0	1,626.0	1,445.6	180.41	9.013	
22,400.0	11,350.0	22,094.3	11,180.0	89.6	89.6	84.00	11,213.3	2,341.6	1,626.0	1,444.1	181.85	8.941	
22,500.0	11,350.0	22,194.3	11,180.0	90.3	90.3	84.00	11,313.3	2,341.2	1,626.0	1,442.7	183.29	8.871	
22,600.0	11,350.0	22,294.3	11,180.0	91.0	91.0	84.00	11,413.3	2,340.8	1,626.0	1,441.2	184.74	8.802	
22,700.0	11,350.0	22,394.3	11,180.0	91.8	91.8	84.00	11,513.3	2,340.4	1,626.0	1,439.8	186.18	8.733	
22,800.0	11,350.0	22,494.3	11,180.0	92.5	92.5	84.00	11,613.3	2,340.0	1,626.0	1,438.4	187.62	8.666	
22,900.0	11,350.0	22,594.3	11,180.0	93.2	93.2	84.00	11,713.3	2,339.6	1,626.0	1,436.9	189.07	8.600	
23,000.0	11,350.0	22,694.3	11,180.0	94.0	93.9	84.00	11,813.3	2,339.2	1,626.0	1,435.5	190.52	8.535	
23,100.0	11,350.0	22,794.3	11,180.0	94.7	94.7	84.00	11,913.3	2,338.8	1,626.0	1,434.0	191.97	8.470	
23,200.0	11,350.0	22,894.3	11,180.0	95.4	95.4	84.00	12,013.3	2,338.4	1,626.0	1,432.6	193.41	8.407	
23,300.0	11,350.0	22,994.3	11,180.0	96.2	96.1	84.00	12,113.3	2,338.0	1,626.0	1,431.1	194.86	8.344	
23,400.0	11,350.0	23,094.3	11,180.0	96.9	96.9	84.00	12,213.3	2,337.6	1,626.0	1,429.7	196.31	8.283	
23,500.0	11,350.0	23,194.3	11,180.0	97.6	97.6	84.00	12,313.3	2,337.2	1,626.0	1,428.2	197.77	8.222	
23,600.0	11,350.0	23,294.3	11,180.0	98.4	98.3	84.00	12,413.3	2,336.8	1,626.0	1,426.8	199.22	8.162	
23,700.0	11,350.0	23,394.3	11,180.0	99.1	99.1	84.00	12,513.3	2,336.4	1,626.0	1,425.3	200.67	8.103	
23,800.0	11,350.0	23,494.3	11,180.0	99.9	99.8	84.00	12,613.3	2,336.0	1,626.0	1,423.9	202.13	8.044	
23,900.0	11,350.0	23,594.3	11,180.0	100.6	100.5	84.00	12,713.3	2,335.6	1,626.0	1,422.4	203.58	7.987	
24,000.0	11,350.0	23,694.3	11,180.0	101.3	101.3	84.00	12,813.3	2,335.2	1,626.0	1,421.0	205.04	7.930	
24,100.0	11,350.0	23,794.3	11,180.0	102.1	102.0	84.00	12,913.3	2,334.8	1,626.0	1,419.5	206.49	7.874	
24,200.0	11,350.0	23,894.3	11,180.0	102.8	102.7	84.00	13,013.3	2,334.4	1,626.0	1,418.0	207.95	7.819	
24,300.0	11,350.0	23,994.3	11,180.0	103.5	103.5	84.00	13,113.3	2,334.0	1,626.0	1,416.6	209.41	7.765	
24,400.0	11,350.0	24,094.3	11,180.0	104.3	104.2	84.00	13,213.3	2,333.6	1,626.0	1,415.1	210.87	7.711	
24,500.0	11,350.0	24,194.3	11,180.0	105.0	104.9	84.00	13,313.3	2,333.2	1,626.0	1,413.7	212.33	7.658	
24,600.0	11,350.0	24,294.3	11,180.0	105.8	105.7	84.00	13,413.3	2,332.8	1,626.0	1,412.2	213.79	7.606	
24,700.0	11,350.0	24,394.3	11,180.0	106.5	106.4	84.00	13,513.3	2,332.4	1,626.0	1,410.8	215.25	7.554	
24,708.2	11,350.0	24,402.6	11,180.0	106.6	106.5	84.00	13,521.6	2,332.4	1,626.0	1,410.6	215.37	7.550	
24,799.9	11,350.0	24,486.5	11,180.0	107.3	107.0	84.00	13,605.5	2,332.0	1,626.0	1,409.5	216.54	7.509 SF	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #709H - 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)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	87.11	71.6	1,420.0	1,421.8	1,415.4	6.43	221.165	
100.0	100.0	100.0	100.0	3.2	3.2	87.11	71.6	1,420.0	1,421.8	1,415.0	6.89	206.293	
200.0	200.0	200.0	200.0	3.5	3.5	87.11	71.6	1,420.0	1,421.8	1,414.5	7.33	194.024	
300.0	300.0	300.0	300.0	3.7	3.7	87.11	71.6	1,420.0	1,421.8	1,414.1	7.74	183.669	
400.0	400.0	400.0	400.0	3.9	3.9	87.11	71.6	1,420.0	1,421.8	1,413.7	8.14	174.770	
500.0	500.0	500.0	500.0	4.1	4.1	87.11	71.6	1,420.0	1,421.8	1,413.3	8.51	167.009	
600.0	600.0	600.0	600.0	4.2	4.2	87.11	71.6	1,420.0	1,421.8	1,413.0	8.88	160.161	
700.0	700.0	700.0	700.0	4.4	4.4	87.11	71.6	1,420.0	1,421.8	1,412.6	9.23	154.055	
800.0	800.0	800.0	800.0	4.6	4.6	87.11	71.6	1,420.0	1,421.8	1,412.3	9.57	148.565	
900.0	900.0	900.0	900.0	4.8	4.8	87.11	71.6	1,420.0	1,421.8	1,411.9	9.90	143.593	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.11	71.6	1,420.0	1,421.8	1,411.6	10.22	139.060	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.11	71.6	1,420.0	1,421.8	1,411.3	10.54	134.904	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.11	71.6	1,420.0	1,421.8	1,411.0	10.85	131.075	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.11	71.6	1,420.0	1,421.8	1,410.7	11.15	127.531	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.11	71.6	1,420.0	1,421.8	1,410.4	11.44	124.239	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.11	71.6	1,420.0	1,421.8	1,410.1	11.73	121.168	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	87.11	71.6	1,420.0	1,421.8	1,409.8	12.02	118.296	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	87.11	71.6	1,420.0	1,421.8	1,409.5	12.30	115.600	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	87.11	71.6	1,420.0	1,421.8	1,409.3	12.58	113.064	
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	-47.94	71.6	1,420.0	1,421.0	1,408.1	12.85	110.619	
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	-48.08	71.6	1,420.0	1,418.3	1,405.2	13.10	108.263	
2,100.0	2,099.7	2,099.7	2,099.7	6.6	6.5	-48.33	71.6	1,420.0	1,414.0	1,400.6	13.36	105.827	
2,200.0	2,199.3	2,199.3	2,199.3	6.8	6.7	-48.67	71.6	1,420.0	1,407.9	1,394.3	13.63	103.311	
2,300.0	2,298.7	2,272.3	2,272.3	6.9	6.8	-48.91	71.6	1,420.7	1,401.9	1,388.1	13.87	101.101	
2,400.0	2,398.2	2,345.2	2,345.2	7.1	6.9	-49.14	71.6	1,422.8	1,397.9	1,383.8	14.11	99.075	
2,500.0	2,497.6	2,418.3	2,418.2	7.4	7.0	-49.36	71.6	1,426.3	1,395.8	1,381.4	14.36	97.206	
2,557.6	2,554.9	2,460.4	2,460.2	7.5	7.1	-49.49	71.6	1,428.9	1,395.5	1,381.0	14.51	96.169 CC, ES	
2,600.0	2,597.1	2,500.0	2,499.7	7.6	7.1	-49.61	71.6	1,431.8	1,395.7	1,381.1	14.64	95.338	
2,700.0	2,696.5	2,564.5	2,563.9	7.8	7.2	-49.81	71.6	1,437.4	1,397.4	1,382.5	14.90	93.766	
2,800.0	2,795.9	2,637.6	2,636.6	8.1	7.4	-32.80	71.6	1,445.1	1,399.8	1,384.6	15.22	91.981	
2,900.0	2,895.2	2,700.0	2,698.6	8.4	7.5	-18.67	71.6	1,452.7	1,401.3	1,385.8	15.54	90.199	
3,000.0	2,994.2	2,784.0	2,781.7	8.6	7.7	-8.33	71.6	1,464.6	1,401.8	1,385.8	15.97	87.752	
3,100.0	3,092.8	2,857.2	2,854.0	8.9	7.9	-2.34	71.6	1,476.4	1,401.4	1,385.0	16.37	85.586	
3,116.4	3,109.0	2,869.3	2,865.8	8.9	7.9	-2.34	71.6	1,478.5	1,401.3	1,384.9	16.45	85.194	
3,200.0	3,191.3	2,930.5	2,926.0	9.1	8.1	-2.31	71.6	1,489.7	1,402.0	1,385.2	16.84	83.264	
3,300.0	3,289.8	3,000.0	2,994.2	9.4	8.3	-2.28	71.6	1,503.5	1,404.6	1,387.3	17.30	81.191	
3,400.0	3,388.3	3,076.8	3,069.1	9.7	8.5	-2.23	71.6	1,520.2	1,409.0	1,391.2	17.82	79.081	
3,500.0	3,486.8	3,155.8	3,145.8	10.0	8.7	-2.18	71.6	1,538.9	1,415.3	1,397.0	18.33	77.221	
3,600.0	3,585.2	3,255.5	3,242.6	10.4	9.0	-2.11	71.6	1,563.1	1,422.2	1,403.2	18.97	74.983	
3,700.0	3,683.7	3,355.3	3,339.4	10.7	9.3	-2.05	71.6	1,587.2	1,429.1	1,409.4	19.64	72.746	
3,800.0	3,782.2	3,455.0	3,436.2	11.0	9.6	-1.98	71.6	1,611.3	1,436.0	1,415.6	20.35	70.579	
3,900.0	3,880.7	3,554.8	3,533.0	11.4	9.9	-1.92	71.6	1,635.5	1,442.9	1,421.8	21.07	68.490	
4,000.0	3,979.2	3,654.5	3,629.8	11.8	10.3	-1.86	71.6	1,659.6	1,449.8	1,427.9	21.81	66.483	
4,100.0	4,077.6	3,754.3	3,726.6	12.1	10.7	-1.79	71.6	1,683.7	1,456.6	1,434.1	22.56	64.560	
4,200.0	4,176.1	3,854.0	3,823.3	12.5	11.0	-1.73	71.6	1,707.8	1,463.5	1,440.2	23.33	62.722	
4,300.0	4,274.6	3,953.8	3,920.1	12.9	11.4	-1.67	71.6	1,732.0	1,470.4	1,446.3	24.12	60.968	
4,400.0	4,373.1	4,053.5	4,016.9	13.3	11.8	-1.61	71.6	1,756.1	1,477.3	1,452.4	24.91	59.295	
4,500.0	4,471.6	4,153.3	4,113.7	13.6	12.2	-1.55	71.6	1,780.2	1,484.2	1,458.5	25.72	57.701	
4,600.0	4,570.0	4,253.0	4,210.5	14.0	12.6	-1.49	71.6	1,804.4	1,491.1	1,464.6	26.54	56.183	
4,700.0	4,668.5	4,352.8	4,307.3	14.4	13.0	-1.43	71.6	1,828.5	1,498.0	1,470.7	27.37	54.738	
4,800.0	4,767.0	4,452.5	4,404.1	14.8	13.4	-1.37	71.6	1,852.6	1,504.9	1,476.7	28.20	53.362	
4,900.0	4,865.5	4,552.3	4,500.8	15.2	13.8	-1.31	71.6	1,876.8	1,511.8	1,482.8	29.04	52.052	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #709H - 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)			
5,000.0	4,964.0	4,652.0	4,597.6	15.6	14.3	-1.26	71.6	1,900.9	1,518.7	1,488.8	29.89	50.804	
5,100.0	5,062.4	4,751.8	4,694.4	16.0	14.7	-1.20	71.6	1,925.0	1,525.6	1,494.9	30.75	49.614	
5,200.0	5,160.9	4,851.5	4,791.2	16.4	15.1	-1.14	71.6	1,949.2	1,532.6	1,500.9	31.61	48.481	
5,300.0	5,259.4	4,951.3	4,888.0	16.9	15.6	-1.09	71.6	1,973.3	1,539.5	1,507.0	32.48	47.399	
5,400.0	5,357.9	5,051.0	4,984.8	17.3	16.0	-1.03	71.6	1,997.4	1,546.4	1,513.0	33.35	46.368	
5,500.0	5,456.4	5,150.8	5,081.6	17.7	16.4	-0.97	71.6	2,021.6	1,553.3	1,519.1	34.23	45.382	
5,600.0	5,554.8	5,250.5	5,178.4	18.1	16.9	-0.92	71.6	2,045.7	1,560.2	1,525.1	35.11	44.441	
5,700.0	5,653.3	5,350.3	5,275.1	18.5	17.3	-0.87	71.6	2,069.8	1,567.1	1,531.1	35.99	43.541	
5,800.0	5,751.8	5,450.0	5,371.9	18.9	17.8	-0.81	71.6	2,094.0	1,574.0	1,537.2	36.88	42.681	
5,900.0	5,850.3	5,549.8	5,468.7	19.4	18.2	-0.76	71.6	2,118.1	1,581.0	1,543.2	37.77	41.857	
6,000.0	5,948.8	5,649.5	5,565.5	19.8	18.7	-0.71	71.6	2,142.2	1,587.9	1,549.2	38.67	41.067	
6,100.0	6,047.3	5,749.2	5,662.3	20.2	19.1	-0.65	71.6	2,166.3	1,594.8	1,555.2	39.56	40.311	
6,200.0	6,145.7	5,849.0	5,759.1	20.7	19.6	-0.60	71.6	2,190.5	1,601.7	1,561.3	40.46	39.586	
6,300.0	6,244.2	5,948.7	5,855.9	21.1	20.1	-0.55	71.6	2,214.6	1,608.6	1,567.3	41.36	38.889	
6,400.0	6,342.7	6,048.5	5,952.6	21.5	20.5	-0.50	71.6	2,238.7	1,615.6	1,573.3	42.27	38.221	
6,500.0	6,441.2	6,148.2	6,049.4	21.9	21.0	-0.45	71.6	2,262.9	1,622.7	1,579.6	43.16	37.602	
6,600.0	6,540.0	6,247.8	6,146.1	22.3	21.4	-0.40	71.6	2,287.0	1,631.4	1,587.4	44.05	37.033	
6,700.0	6,639.0	6,347.3	6,242.6	22.8	21.9	-0.35	71.6	2,311.0	1,641.9	1,596.9	44.94	36.535	
6,800.0	6,738.3	6,446.5	6,338.9	23.2	22.4	-0.30	71.6	2,335.0	1,654.0	1,608.2	45.81	36.104	
6,900.0	6,837.7	6,545.5	6,434.9	23.6	22.8	-0.25	71.6	2,359.0	1,668.0	1,621.3	46.67	35.737	
7,000.0	6,937.4	6,644.3	6,530.8	23.9	23.3	-0.20	71.6	2,382.9	1,683.6	1,636.1	47.52	35.432	
7,100.0	7,037.1	6,742.8	6,626.3	24.3	23.8	-0.15	71.6	2,406.7	1,700.9	1,652.6	48.34	35.187	
7,200.0	7,137.0	6,840.9	6,721.5	24.6	24.2	-0.11	71.6	2,430.4	1,720.0	1,670.9	49.14	35.002	
7,300.0	7,236.9	6,938.7	6,816.4	24.9	24.7	-0.06	71.6	2,454.1	1,740.8	1,690.9	49.91	34.878	
7,400.0	7,336.9	7,036.2	6,911.0	25.2	25.1	-0.02	71.6	2,477.7	1,763.3	1,712.7	50.63	34.825 SF	
7,500.0	7,436.9	7,133.2	7,005.2	25.2	25.6	86.78	71.6	2,501.2	1,787.3	1,736.1	51.17	34.928	
7,600.0	7,536.9	7,230.3	7,099.3	25.3	26.1	86.82	71.6	2,524.6	1,811.4	1,759.7	51.68	35.050	
7,700.0	7,636.9	7,327.3	7,193.5	25.3	26.5	86.86	71.6	2,548.1	1,835.6	1,783.4	52.20	35.167	
7,800.0	7,736.9	7,424.3	7,287.6	25.3	27.0	86.90	71.6	2,571.6	1,859.7	1,807.0	52.71	35.279	
7,900.0	7,836.9	7,521.4	7,381.8	25.4	27.4	86.94	71.6	2,595.1	1,883.9	1,830.7	53.24	35.387	
8,000.0	7,936.9	7,618.4	7,475.9	25.4	27.9	86.98	71.6	2,618.5	1,908.0	1,854.3	53.76	35.489	
8,100.0	8,036.9	7,715.4	7,570.0	25.4	28.4	87.02	71.6	2,642.0	1,932.2	1,877.9	54.30	35.587	
8,200.0	8,136.9	7,812.4	7,664.2	25.5	28.8	87.06	71.6	2,665.5	1,956.4	1,901.5	54.83	35.682	
8,300.0	8,236.9	7,909.3	7,767.3	25.5	29.5	87.11	71.6	2,689.5	1,979.8	1,924.2	55.58	35.617	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #710H - 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	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)		
0.0	0.0	0.0	0.0	3.0	3.0	87.17	71.6	1,450.0	1,451.8	1,445.4	6.43	225.825	
100.0	100.0	100.0	100.0	3.2	3.2	87.17	71.6	1,450.0	1,451.8	1,444.9	6.89	210.640	
200.0	200.0	200.0	200.0	3.5	3.5	87.17	71.6	1,450.0	1,451.8	1,444.5	7.33	198.113	
300.0	300.0	300.0	300.0	3.7	3.7	87.17	71.6	1,450.0	1,451.8	1,444.1	7.74	187.540	
400.0	400.0	400.0	400.0	3.9	3.9	87.17	71.6	1,450.0	1,451.8	1,443.7	8.14	178.453	
500.0	500.0	500.0	500.0	4.1	4.1	87.17	71.6	1,450.0	1,451.8	1,443.3	8.51	170.529	
600.0	600.0	600.0	600.0	4.2	4.2	87.17	71.6	1,450.0	1,451.8	1,442.9	8.88	163.536	
700.0	700.0	700.0	700.0	4.4	4.4	87.17	71.6	1,450.0	1,451.8	1,442.6	9.23	157.301	
800.0	800.0	800.0	800.0	4.6	4.6	87.17	71.6	1,450.0	1,451.8	1,442.2	9.57	151.696	
900.0	900.0	900.0	900.0	4.8	4.8	87.17	71.6	1,450.0	1,451.8	1,441.9	9.90	146.619	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.17	71.6	1,450.0	1,451.8	1,441.6	10.22	141.990	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.17	71.6	1,450.0	1,451.8	1,441.3	10.54	137.747	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.17	71.6	1,450.0	1,451.8	1,441.0	10.85	133.837	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.17	71.6	1,450.0	1,451.8	1,440.7	11.15	130.219	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.17	71.6	1,450.0	1,451.8	1,440.4	11.44	126.857	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.17	71.6	1,450.0	1,451.8	1,440.1	11.73	123.722	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	87.17	71.6	1,450.0	1,451.8	1,439.8	12.02	120.788	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	87.17	71.6	1,450.0	1,451.8	1,439.5	12.30	118.036	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	87.17	71.6	1,450.0	1,451.8	1,439.2	12.58	115.447	CC
1,900.0	1,900.0	1,872.8	1,872.8	6.3	6.2	-47.85	71.5	1,450.7	1,451.9	1,439.0	12.82	113.229	
2,000.0	1,999.9	1,945.5	1,945.5	6.4	6.3	-47.92	71.2	1,452.8	1,452.0	1,439.0	13.05	111.250	ES
2,100.0	2,099.7	2,018.3	2,018.2	6.6	6.5	-48.03	70.8	1,456.2	1,452.3	1,439.1	13.29	109.298	
2,200.0	2,199.3	2,100.0	2,099.7	6.8	6.6	-48.20	70.1	1,461.7	1,452.8	1,439.3	13.56	107.159	
2,204.4	2,203.7	2,100.0	2,099.7	6.8	6.6	-48.20	70.1	1,461.7	1,452.8	1,439.3	13.56	107.129	
2,300.0	2,298.7	2,163.6	2,163.1	6.9	6.7	-48.36	69.3	1,467.2	1,454.2	1,440.4	13.79	105.438	
2,400.0	2,398.2	2,236.2	2,235.3	7.1	6.9	-48.53	68.3	1,474.7	1,457.6	1,443.5	14.06	103.659	
2,500.0	2,497.6	2,300.0	2,298.6	7.4	7.0	-48.66	67.3	1,482.4	1,462.8	1,448.5	14.32	102.171	
2,600.0	2,597.1	2,381.2	2,378.9	7.6	7.2	-48.82	65.8	1,493.8	1,469.9	1,455.2	14.65	100.352	
2,700.0	2,696.5	2,453.4	2,450.2	7.8	7.4	-48.96	64.3	1,505.3	1,478.8	1,463.9	14.97	98.788	
2,800.0	2,795.9	2,525.5	2,521.1	8.1	7.6	-31.94	62.6	1,518.1	1,488.3	1,473.0	15.33	97.114	
2,900.0	2,895.2	2,600.0	2,594.2	8.4	7.8	-17.81	60.7	1,532.8	1,496.8	1,481.1	15.73	95.170	
3,000.0	2,994.2	2,670.7	2,663.2	8.6	8.0	-7.44	58.7	1,548.0	1,504.3	1,488.2	16.13	93.268	
3,100.0	3,092.8	2,770.5	2,760.4	8.9	8.3	-1.37	55.8	1,570.3	1,509.9	1,493.3	16.66	90.624	
3,200.0	3,191.3	2,870.3	2,857.6	9.1	8.6	-1.21	52.8	1,592.5	1,514.7	1,497.4	17.29	87.624	
3,300.0	3,289.8	2,970.1	2,954.9	9.4	8.9	-1.05	49.9	1,614.8	1,519.5	1,501.5	17.93	84.739	
3,400.0	3,388.3	3,069.9	3,052.1	9.7	9.2	-0.89	47.0	1,637.0	1,524.2	1,505.6	18.60	81.939	
3,500.0	3,486.8	3,169.7	3,149.4	10.0	9.6	-0.73	44.0	1,659.3	1,529.0	1,509.7	19.30	79.236	
3,600.0	3,585.2	3,269.5	3,246.6	10.4	9.9	-0.57	41.1	1,681.5	1,533.8	1,513.8	20.01	76.639	
3,700.0	3,683.7	3,369.3	3,343.8	10.7	10.3	-0.41	38.2	1,703.8	1,538.6	1,517.9	20.75	74.155	
3,800.0	3,782.2	3,469.0	3,441.1	11.0	10.7	-0.25	35.3	1,726.1	1,543.5	1,522.0	21.50	71.784	
3,900.0	3,880.7	3,568.8	3,538.3	11.4	11.1	-0.10	32.3	1,748.3	1,548.3	1,526.0	22.27	69.526	
4,000.0	3,979.2	3,668.6	3,635.5	11.8	11.5	0.06	29.4	1,770.6	1,553.1	1,530.1	23.05	67.378	
4,100.0	4,077.6	3,768.4	3,732.8	12.1	11.9	0.21	26.5	1,792.8	1,558.0	1,534.2	23.85	65.338	
4,200.0	4,176.1	3,858.8	3,820.8	12.5	12.2	0.35	23.9	1,813.0	1,563.0	1,538.4	24.58	63.586	
4,300.0	4,274.6	3,927.9	3,887.9	12.9	12.5	0.43	22.7	1,829.5	1,569.4	1,544.2	25.22	62.237	
4,400.0	4,373.1	4,007.8	3,965.2	13.3	12.8	0.47	22.5	1,849.9	1,577.7	1,551.8	25.92	60.875	
4,500.0	4,471.6	4,107.4	4,061.4	13.6	13.3	0.52	22.5	1,875.7	1,586.4	1,559.6	26.76	59.276	
4,600.0	4,570.0	4,207.0	4,157.6	14.0	13.7	0.57	22.5	1,901.5	1,595.1	1,567.5	27.62	57.761	
4,700.0	4,668.5	4,306.7	4,253.8	14.4	14.1	0.62	22.5	1,927.3	1,603.8	1,575.3	28.47	56.323	
4,800.0	4,767.0	4,406.3	4,350.1	14.8	14.6	0.67	22.5	1,953.0	1,612.5	1,583.1	29.34	54.957	
4,900.0	4,865.5	4,505.9	4,446.3	15.2	15.0	0.72	22.5	1,978.8	1,621.2	1,590.9	30.21	53.658	
5,000.0	4,964.0	4,605.5	4,542.5	15.6	15.5	0.77	22.5	2,004.6	1,629.9	1,598.8	31.09	52.423	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM #710H - 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		Rule Assigned:	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,100.0	5,062.4	4,705.1	4,638.7	16.0	15.9	0.81	22.5	2,030.4	1,638.5	1,606.6	31.97	51.248	
5,200.0	5,160.9	4,804.7	4,734.9	16.4	16.4	0.86	22.5	2,056.2	1,647.2	1,614.4	32.86	50.129	
5,300.0	5,259.4	4,904.3	4,831.1	16.9	16.8	0.91	22.5	2,081.9	1,655.9	1,622.2	33.75	49.063	
5,400.0	5,357.9	5,003.9	4,927.4	17.3	17.3	0.95	22.5	2,107.7	1,664.6	1,630.0	34.65	48.047	
5,500.0	5,456.4	5,103.6	5,023.6	17.7	17.7	1.00	22.5	2,133.5	1,673.3	1,637.8	35.55	47.076	
5,600.0	5,554.8	5,203.2	5,119.8	18.1	18.2	1.04	22.5	2,159.3	1,682.0	1,645.6	36.45	46.150	
5,700.0	5,653.3	5,302.8	5,216.0	18.5	18.7	1.09	22.5	2,185.1	1,690.7	1,653.4	37.35	45.264	
5,800.0	5,751.8	5,402.4	5,312.2	18.9	19.1	1.13	22.5	2,210.8	1,699.4	1,661.2	38.26	44.418	
5,900.0	5,850.3	5,502.0	5,408.5	19.4	19.6	1.18	22.5	2,236.6	1,708.1	1,669.0	39.17	43.607	
6,000.0	5,948.8	5,601.6	5,504.7	19.8	20.1	1.22	22.5	2,262.4	1,716.8	1,676.8	40.08	42.831	
6,100.0	6,047.3	5,701.2	5,600.9	20.2	20.5	1.26	22.5	2,288.2	1,725.6	1,684.6	41.00	42.087	
6,200.0	6,145.7	5,800.8	5,697.1	20.7	21.0	1.30	22.5	2,314.0	1,734.3	1,692.3	41.92	41.373	
6,300.0	6,244.2	5,900.4	5,793.3	21.1	21.5	1.34	22.5	2,339.8	1,743.0	1,700.1	42.84	40.688	
6,400.0	6,342.7	6,000.1	5,889.5	21.5	21.9	1.39	22.5	2,365.5	1,751.7	1,707.9	43.76	40.031	
6,500.0	6,441.2	6,099.7	5,985.7	21.9	22.4	1.43	22.5	2,391.3	1,760.6	1,716.0	44.66	39.421	
6,600.0	6,540.0	6,199.1	6,081.8	22.3	22.9	1.47	22.5	2,417.0	1,771.1	1,725.5	45.57	38.861	
6,700.0	6,639.0	6,298.3	6,177.7	22.8	23.4	1.51	22.5	2,442.7	1,783.3	1,736.8	46.48	38.370	
6,800.0	6,738.3	6,397.4	6,273.3	23.2	23.8	1.55	22.5	2,468.4	1,797.3	1,749.9	47.37	37.944	
6,900.0	6,837.7	6,496.1	6,368.7	23.6	24.3	1.59	22.5	2,493.9	1,812.9	1,764.7	48.24	37.581	
7,000.0	6,937.4	6,594.6	6,463.8	23.9	24.8	1.62	22.5	2,519.4	1,830.3	1,781.2	49.10	37.278	
7,100.0	7,037.1	6,692.7	6,558.6	24.3	25.3	1.66	22.5	2,544.8	1,849.4	1,799.5	49.94	37.035	
7,200.0	7,137.0	6,790.5	6,653.1	24.6	25.7	1.69	22.5	2,570.1	1,870.2	1,819.5	50.75	36.850	
7,300.0	7,236.9	6,888.0	6,747.2	24.9	26.2	1.72	22.5	2,595.3	1,892.8	1,841.2	51.54	36.726	
7,400.0	7,336.9	6,985.0	6,840.9	25.2	26.7	1.75	22.5	2,620.5	1,917.0	1,864.7	52.28	36.670 SF	
7,500.0	7,436.9	7,081.6	6,934.3	25.2	27.1	88.52	22.5	2,645.5	1,942.7	1,889.8	52.84	36.768	
7,600.0	7,536.9	7,178.2	7,027.6	25.3	27.6	88.54	22.5	2,670.5	1,968.5	1,915.2	53.37	36.885	
7,700.0	7,636.9	7,274.8	7,120.9	25.3	28.1	88.56	22.5	2,695.5	1,994.4	1,940.5	53.91	36.998	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 501H - 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)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	-30.96	150.0	-90.0	174.9	168.5	6.43	27.210		
100.0	100.0	100.0	100.0	3.2	3.2	-30.96	150.0	-90.0	174.9	168.0	6.89	25.380		
200.0	200.0	200.0	200.0	3.5	3.5	-30.96	150.0	-90.0	174.9	167.6	7.33	23.871		
300.0	300.0	300.0	300.0	3.7	3.7	-30.96	150.0	-90.0	174.9	167.2	7.74	22.597		
400.0	400.0	400.0	400.0	3.9	3.9	-30.96	150.0	-90.0	174.9	166.8	8.14	21.502		
500.0	500.0	500.0	500.0	4.1	4.1	-30.96	150.0	-90.0	174.9	166.4	8.51	20.547		
600.0	600.0	600.0	600.0	4.2	4.2	-30.96	150.0	-90.0	174.9	166.1	8.88	19.704		
700.0	700.0	700.0	700.0	4.4	4.4	-30.96	150.0	-90.0	174.9	165.7	9.23	18.953		
800.0	800.0	800.0	800.0	4.6	4.6	-30.96	150.0	-90.0	174.9	165.4	9.57	18.278		
900.0	900.0	900.0	900.0	4.8	4.8	-30.96	150.0	-90.0	174.9	165.0	9.90	17.666		
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-30.96	150.0	-90.0	174.9	164.7	10.22	17.108		
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-30.96	150.0	-90.0	174.9	164.4	10.54	16.597		
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-30.96	150.0	-90.0	174.9	164.1	10.85	16.126		
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	-30.96	150.0	-90.0	174.9	163.8	11.15	15.690		
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-30.96	150.0	-90.0	174.9	163.5	11.44	15.285		
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	-30.96	150.0	-90.0	174.9	163.2	11.73	14.907		
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	-30.96	150.0	-90.0	174.9	162.9	12.02	14.554		
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	-30.96	150.0	-90.0	174.9	162.6	12.30	14.222		
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	-30.96	150.0	-90.0	174.9	162.4	12.58	13.910	CC, ES	
1,900.0	1,900.0	1,900.3	1,900.3	6.3	6.3	-166.49	149.2	-91.1	176.1	163.3	12.85	13.708	SF	
2,000.0	1,999.9	2,000.3	2,000.2	6.4	6.4	-168.02	147.0	-94.3	179.8	166.7	13.10	13.724		
2,100.0	2,099.7	2,099.9	2,099.6	6.6	6.6	-170.43	143.3	-99.6	186.1	172.7	13.37	13.923		
2,200.0	2,199.3	2,198.7	2,198.0	6.8	6.8	-173.51	138.1	-107.0	195.5	181.8	13.66	14.315		
2,300.0	2,298.7	2,296.8	2,295.4	6.9	7.0	-177.03	131.5	-116.4	207.0	193.0	13.94	14.850		
2,400.0	2,398.2	2,394.1	2,391.7	7.1	7.2	179.21	123.6	-127.8	219.7	205.4	14.24	15.423		
2,500.0	2,497.6	2,489.6	2,485.8	7.4	7.4	175.37	114.5	-140.8	233.9	219.3	14.52	16.108		
2,600.0	2,597.1	2,581.2	2,576.0	7.6	7.6	172.00	106.5	-155.0	250.9	236.1	14.86	16.891		
2,700.0	2,696.5	2,672.0	2,665.2	7.8	7.9	169.14	100.1	-170.7	271.1	255.9	15.22	17.812		
2,800.0	2,795.9	2,761.7	2,753.2	8.1	8.1	-175.84	95.3	-187.6	294.7	279.1	15.60	18.891		
2,900.0	2,895.2	2,849.8	2,839.3	8.4	8.4	-163.74	92.0	-205.6	322.3	306.2	16.02	20.117		
3,000.0	2,994.2	2,938.1	2,925.5	8.6	8.6	-155.44	90.1	-225.1	353.7	337.2	16.49	21.449		
3,100.0	3,092.8	3,030.5	3,015.5	8.9	8.9	-151.80	88.5	-245.8	387.7	370.7	17.02	22.779		
3,200.0	3,191.3	3,122.5	3,105.2	9.1	9.2	-154.32	86.9	-266.5	422.9	405.3	17.60	24.033		
3,300.0	3,289.8	3,214.6	3,194.9	9.4	9.5	-156.46	85.3	-287.1	458.7	440.5	18.20	25.210		
3,400.0	3,388.3	3,306.6	3,284.6	9.7	9.9	-158.30	83.6	-307.8	495.0	476.2	18.82	26.303		
3,500.0	3,486.8	3,398.7	3,374.2	10.0	10.2	-159.89	82.0	-328.4	531.7	512.3	19.47	27.313		
3,600.0	3,585.2	3,490.8	3,463.9	10.4	10.5	-161.28	80.4	-349.0	568.8	548.6	20.14	28.246		
3,700.0	3,683.7	3,582.8	3,553.6	10.7	10.9	-162.50	78.8	-369.7	606.0	585.2	20.82	29.108		
3,800.0	3,782.2	3,674.9	3,643.3	11.0	11.2	-163.58	77.1	-390.3	643.5	622.0	21.52	29.904		
3,900.0	3,880.7	3,766.9	3,733.0	11.4	11.6	-164.54	75.5	-411.0	681.2	659.0	22.23	30.639		
4,000.0	3,979.2	3,859.0	3,822.7	11.8	12.0	-165.40	73.9	-431.6	719.0	696.1	22.96	31.318		
4,100.0	4,077.6	3,951.0	3,912.4	12.1	12.3	-166.18	72.3	-452.3	757.0	733.3	23.69	31.947		
4,200.0	4,176.1	4,043.1	4,002.1	12.5	12.7	-166.88	70.6	-472.9	795.0	770.6	24.44	32.530		
4,300.0	4,274.6	4,135.1	4,091.8	12.9	13.1	-167.52	69.0	-493.5	833.2	808.0	25.19	33.070		
4,400.0	4,373.1	4,227.2	4,181.5	13.3	13.5	-168.11	67.4	-514.2	871.4	845.4	25.96	33.572		
4,500.0	4,471.6	4,319.2	4,271.2	13.6	13.9	-168.64	65.8	-534.8	909.7	883.0	26.73	34.038		
4,600.0	4,570.0	4,411.3	4,360.9	14.0	14.3	-169.14	64.1	-555.5	948.1	920.6	27.50	34.473		
4,700.0	4,668.5	4,503.3	4,450.6	14.4	14.7	-169.59	62.5	-576.1	986.5	958.2	28.28	34.878		
4,800.0	4,767.0	4,595.4	4,540.2	14.8	15.1	-170.01	60.9	-596.8	1,025.0	995.9	29.07	35.256		
4,900.0	4,865.5	4,687.4	4,629.9	15.2	15.5	-170.40	59.3	-617.4	1,063.5	1,033.6	29.87	35.609		
5,000.0	4,964.0	4,779.5	4,719.6	15.6	15.9	-170.76	57.6	-638.0	1,102.0	1,071.4	30.66	35.940		
5,100.0	5,062.4	4,871.5	4,809.3	16.0	16.3	-171.10	56.0	-658.7	1,140.6	1,109.1	31.46	36.250		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 501H - 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)			
5,200.0	5,160.9	4,963.6	4,899.0	16.4	16.7	-171.42	54.4	-679.3	1,179.2	1,147.0	32.27	36.542	
5,300.0	5,259.4	5,055.6	4,988.7	16.9	17.1	-171.72	52.8	-700.0	1,217.9	1,184.8	33.08	36.815	
5,400.0	5,357.9	5,147.7	5,078.4	17.3	17.5	-171.99	51.1	-720.6	1,256.6	1,222.7	33.89	37.073	
5,500.0	5,456.4	5,239.7	5,168.1	17.7	17.9	-172.26	49.5	-741.3	1,295.3	1,260.5	34.71	37.316	
5,600.0	5,554.8	5,331.8	5,257.8	18.1	18.3	-172.50	47.9	-761.9	1,334.0	1,298.4	35.53	37.545	
5,700.0	5,653.3	5,423.8	5,347.5	18.5	18.7	-172.74	46.3	-782.6	1,372.7	1,336.4	36.35	37.761	
5,800.0	5,751.8	5,515.9	5,437.2	18.9	19.2	-172.96	44.6	-803.2	1,411.5	1,374.3	37.18	37.966	
5,900.0	5,850.3	5,607.9	5,526.9	19.4	19.6	-173.16	43.0	-823.8	1,450.2	1,412.2	38.00	38.160	
6,000.0	5,948.8	5,700.0	5,616.6	19.8	20.0	-173.36	41.4	-844.5	1,489.0	1,450.2	38.83	38.343	
6,100.0	6,047.3	5,792.0	5,706.2	20.2	20.4	-173.55	39.8	-865.1	1,527.8	1,488.2	39.67	38.517	
6,200.0	6,145.7	5,884.1	5,795.9	20.7	20.8	-173.73	38.1	-885.8	1,566.7	1,526.2	40.50	38.682	
6,300.0	6,244.2	5,976.1	5,885.6	21.1	21.3	-173.90	36.5	-906.4	1,605.5	1,564.2	41.34	38.839	
6,400.0	6,342.7	6,068.2	5,975.3	21.5	21.7	-174.06	34.9	-927.1	1,644.3	1,602.2	42.17	38.989	
6,500.0	6,441.2	6,160.3	6,065.1	21.9	22.1	-174.23	33.3	-947.7	1,683.0	1,640.0	43.00	39.142	
6,600.0	6,540.0	6,253.1	6,155.5	22.3	22.5	-174.41	31.6	-968.5	1,720.2	1,676.4	43.83	39.244	
6,700.0	6,639.0	6,346.4	6,246.4	22.8	23.0	-174.58	30.0	-989.5	1,755.8	1,711.1	44.67	39.310	
6,800.0	6,738.3	6,440.4	6,338.0	23.2	23.4	-174.73	28.3	-1,010.5	1,789.8	1,744.3	45.49	39.341	
6,900.0	6,837.7	6,535.0	6,430.1	23.6	23.8	-174.87	26.7	-1,031.7	1,822.2	1,775.8	46.32	39.343	
7,000.0	6,937.4	6,630.1	6,522.8	23.9	24.3	-175.00	25.0	-1,053.1	1,852.9	1,805.7	47.13	39.316	
7,100.0	7,037.1	6,725.7	6,616.0	24.3	24.7	-175.12	23.3	-1,074.5	1,881.9	1,834.0	47.92	39.269	
7,200.0	7,137.0	6,852.2	6,739.4	24.6	25.3	-175.25	21.1	-1,102.2	1,908.8	1,859.9	48.95	38.997	
7,300.0	7,236.9	6,998.2	6,882.6	24.9	26.0	-175.37	18.9	-1,130.8	1,931.8	1,881.7	50.09	38.570	
7,400.0	7,336.9	7,146.4	7,028.5	25.2	26.6	-175.47	16.9	-1,156.2	1,950.6	1,899.4	51.14	38.139	
7,500.0	7,436.9	7,296.2	7,176.8	25.2	27.3	-88.79	15.1	-1,178.0	1,965.3	1,913.3	51.98	37.809	
7,600.0	7,536.9	7,447.2	7,326.6	25.3	27.9	-88.85	13.7	-1,196.0	1,977.2	1,924.5	52.73	37.495	
7,700.0	7,636.9	7,599.0	7,477.8	25.3	28.5	-88.89	12.6	-1,210.2	1,986.5	1,933.1	53.43	37.180	
7,800.0	7,736.9	7,751.5	7,629.9	25.3	29.0	-88.92	11.8	-1,220.4	1,993.2	1,939.2	54.05	36.879	
7,900.0	7,836.9	7,904.4	7,782.7	25.4	29.5	-88.93	11.3	-1,226.6	1,997.3	1,942.7	54.58	36.593	
8,000.0	7,936.9	8,057.6	7,935.8	25.4	29.8	-88.94	11.1	-1,228.7	1,998.7	1,943.7	54.90	36.402	
8,100.0	8,036.9	8,158.6	8,036.9	25.4	29.9	-88.94	11.1	-1,228.7	1,998.7	1,943.7	54.96	36.367	
8,200.0	8,136.9	8,258.6	8,136.9	25.5	29.9	-88.94	11.1	-1,228.7	1,998.7	1,943.6	55.02	36.327	
8,300.0	8,236.9	8,358.6	8,236.9	25.5	29.9	-88.94	11.1	-1,228.7	1,998.7	1,943.6	55.08	36.288	
8,400.0	8,336.9	8,458.6	8,336.9	25.5	29.9	-88.94	11.1	-1,228.7	1,998.7	1,943.5	55.14	36.248	
8,500.0	8,436.9	8,558.6	8,436.9	25.6	30.0	-88.94	11.1	-1,228.7	1,998.7	1,943.5	55.20	36.208	
8,600.0	8,536.9	8,658.6	8,536.9	25.6	30.0	-88.94	11.1	-1,228.7	1,998.7	1,943.4	55.26	36.168	
8,700.0	8,636.9	8,758.6	8,636.9	25.7	30.0	-88.94	11.1	-1,228.7	1,998.7	1,943.3	55.32	36.128	
8,800.0	8,736.9	8,858.6	8,736.9	25.7	30.1	-88.94	11.1	-1,228.7	1,998.7	1,943.3	55.38	36.088	
8,900.0	8,836.9	8,958.6	8,836.9	25.7	30.1	-88.94	11.1	-1,228.7	1,998.7	1,943.2	55.45	36.047	
9,000.0	8,936.9	9,058.6	8,936.9	25.8	30.1	-88.94	11.1	-1,228.7	1,998.7	1,943.1	55.51	36.007	
9,100.0	9,036.9	9,158.6	9,036.9	25.8	30.1	-88.94	11.1	-1,228.7	1,998.7	1,943.1	55.57	35.966	
9,200.0	9,136.9	9,258.6	9,136.9	25.8	30.2	-88.94	11.1	-1,228.7	1,998.7	1,943.0	55.63	35.928	
9,300.0	9,236.9	9,358.6	9,214.2	25.9	30.2	-88.84	14.5	-1,229.0	1,999.1	1,943.4	55.71	35.884	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 502H - 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		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	3.0	3.0	-21.80	150.0	-60.0	161.6	155.1	6.43	25.129	
100.0	100.0	100.0	100.0	3.2	3.2	-21.80	150.0	-60.0	161.6	154.7	6.89	23.440	
200.0	200.0	200.0	200.0	3.5	3.5	-21.80	150.0	-60.0	161.6	154.2	7.33	22.046	
300.0	300.0	300.0	300.0	3.7	3.7	-21.80	150.0	-60.0	161.6	153.8	7.74	20.869	
400.0	400.0	400.0	400.0	3.9	3.9	-21.80	150.0	-60.0	161.6	153.4	8.14	19.858	
500.0	500.0	500.0	500.0	4.1	4.1	-21.80	150.0	-60.0	161.6	153.0	8.51	18.976	
600.0	600.0	600.0	600.0	4.2	4.2	-21.80	150.0	-60.0	161.6	152.7	8.88	18.198	
700.0	700.0	700.0	700.0	4.4	4.4	-21.80	150.0	-60.0	161.6	152.3	9.23	17.504	
800.0	800.0	800.0	800.0	4.6	4.6	-21.80	150.0	-60.0	161.6	152.0	9.57	16.881	
900.0	900.0	900.0	900.0	4.8	4.8	-21.80	150.0	-60.0	161.6	151.7	9.90	16.316	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	-21.80	150.0	-60.0	161.6	151.3	10.22	15.800	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	-21.80	150.0	-60.0	161.6	151.0	10.54	15.328	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	-21.80	150.0	-60.0	161.6	150.7	10.85	14.893	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	-21.80	150.0	-60.0	161.6	150.4	11.15	14.491	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	-21.80	150.0	-60.0	161.6	150.1	11.44	14.116	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	-21.80	150.0	-60.0	161.6	149.8	11.73	13.768	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	-21.80	150.0	-60.0	161.6	149.5	12.02	13.441	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	-21.80	150.0	-60.0	161.6	149.3	12.30	13.135	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	-21.80	150.0	-60.0	161.6	149.0	12.58	12.847	CC, ES
1,900.0	1,900.0	1,900.0	1,900.0	6.3	6.3	-156.98	150.0	-60.0	162.8	149.9	12.86	12.657	
2,000.0	1,999.9	1,999.9	1,999.9	6.4	6.4	-157.48	150.0	-60.0	166.4	153.2	13.13	12.668	
2,100.0	2,099.7	2,099.7	2,099.7	6.6	6.5	-158.28	150.0	-60.0	172.4	159.0	13.42	12.847	
2,200.0	2,199.3	2,199.3	2,199.3	6.8	6.7	-159.31	150.0	-60.0	181.0	167.2	13.73	13.182	
2,300.0	2,298.7	2,298.7	2,298.7	6.9	6.8	-160.42	150.0	-60.0	190.8	176.8	14.03	13.602	
2,400.0	2,398.2	2,398.2	2,398.2	7.1	6.9	-161.42	150.0	-60.0	200.7	186.3	14.34	13.993	
2,500.0	2,497.6	2,497.6	2,497.6	7.4	7.0	-162.32	150.0	-60.0	210.6	195.9	14.67	14.356	
2,600.0	2,597.1	2,600.8	2,600.8	7.6	7.2	-163.44	148.8	-60.5	219.8	204.8	15.01	14.641	
2,700.0	2,696.5	2,704.1	2,704.0	7.8	7.3	-165.02	144.9	-62.0	227.4	212.0	15.35	14.808	
2,800.0	2,795.9	2,807.2	2,806.9	8.1	7.4	-150.12	138.6	-64.6	233.3	217.6	15.72	14.842	
2,900.0	2,895.2	2,909.5	2,908.7	8.4	7.6	-139.46	129.7	-68.2	237.9	221.8	16.10	14.775	
3,000.0	2,994.2	3,010.5	3,009.0	8.6	7.8	-133.82	118.4	-72.8	242.1	225.7	16.47	14.700	
3,100.0	3,092.8	3,107.9	3,105.5	8.9	7.9	-133.38	105.9	-77.8	247.7	231.0	16.76	14.785	
3,200.0	3,191.3	3,204.4	3,201.0	9.1	8.1	-138.90	93.5	-82.8	255.9	238.8	17.13	14.942	
3,300.0	3,289.8	3,300.9	3,296.6	9.4	8.3	-144.05	81.0	-87.9	266.4	248.9	17.50	15.224	
3,400.0	3,388.3	3,397.4	3,392.1	9.7	8.5	-148.80	68.6	-92.9	279.0	261.1	17.88	15.600	
3,500.0	3,486.8	3,493.9	3,487.7	10.0	8.8	-153.13	56.1	-97.9	293.4	275.1	18.29	16.040	
3,600.0	3,585.2	3,590.5	3,583.4	10.4	9.0	-156.98	44.1	-102.8	309.3	290.6	18.70	16.540	
3,700.0	3,683.7	3,687.7	3,679.9	10.7	9.3	-160.25	33.1	-107.2	326.4	307.3	19.14	17.058	
3,800.0	3,782.2	3,785.3	3,776.9	11.0	9.5	-163.01	23.2	-111.2	344.3	324.7	19.59	17.574	
3,900.0	3,880.7	3,883.4	3,874.5	11.4	9.8	-165.31	14.4	-114.8	362.6	342.6	20.06	18.074	
4,000.0	3,979.2	3,981.9	3,972.7	11.8	10.0	-167.21	6.8	-117.9	381.2	360.7	20.55	18.547	
4,100.0	4,077.6	4,080.8	4,071.3	12.1	10.3	-168.76	0.3	-120.5	399.8	378.8	21.06	18.987	
4,200.0	4,176.1	4,180.0	4,170.4	12.5	10.6	-170.00	-5.1	-122.7	418.4	396.8	21.57	19.392	
4,300.0	4,274.6	4,279.6	4,269.9	12.9	10.8	-170.98	-9.2	-124.3	436.7	414.6	22.10	19.759	
4,400.0	4,373.1	4,379.5	4,369.7	13.3	11.1	-171.72	-12.2	-125.5	454.8	432.2	22.64	20.090	
4,500.0	4,471.6	4,479.6	4,469.8	13.6	11.3	-172.25	-13.9	-126.2	472.6	449.4	23.18	20.386	
4,600.0	4,570.0	4,579.8	4,570.0	14.0	11.4	-172.59	-14.4	-126.4	489.9	466.2	23.70	20.670	
4,700.0	4,668.5	4,678.3	4,668.5	14.4	11.5	-172.84	-14.4	-126.4	507.2	482.9	24.23	20.931	
4,800.0	4,767.0	4,776.8	4,767.0	14.8	11.6	-173.08	-14.4	-126.4	524.4	499.6	24.77	21.169	
4,900.0	4,865.5	4,875.3	4,865.5	15.2	11.6	-173.30	-14.4	-126.4	541.7	516.3	25.32	21.394	
5,000.0	4,964.0	4,973.8	4,964.0	15.6	11.7	-173.51	-14.4	-126.4	558.9	533.0	25.87	21.606	
5,100.0	5,062.4	5,072.2	5,062.4	16.0	11.8	-173.70	-14.4	-126.4	576.2	549.7	26.42	21.806	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 502H - 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)			
5,200.0	5,160.9	5,170.7	5,160.9	16.4	11.8	-173.89	-14.4	-126.4	593.4	566.5	26.98	21.995	
5,300.0	5,259.4	5,269.2	5,259.4	16.9	11.9	-174.06	-14.4	-126.4	610.7	583.2	27.54	22.173	
5,400.0	5,357.9	5,367.7	5,357.9	17.3	12.0	-174.23	-14.4	-126.4	628.0	599.9	28.11	22.342	
5,500.0	5,456.4	5,466.2	5,456.4	17.7	12.0	-174.38	-14.4	-126.4	645.3	616.6	28.68	22.501	
5,600.0	5,554.8	5,564.6	5,554.8	18.1	12.1	-174.53	-14.4	-126.4	662.6	633.3	29.25	22.652	
5,700.0	5,653.3	5,663.1	5,653.3	18.5	12.2	-174.67	-14.4	-126.4	679.8	650.0	29.82	22.795	
5,800.0	5,751.8	5,761.6	5,751.8	18.9	12.2	-174.80	-14.4	-126.4	697.1	666.7	30.40	22.931	
5,900.0	5,850.3	5,860.1	5,850.3	19.4	12.3	-174.93	-14.4	-126.4	714.4	683.4	30.98	23.059	
6,000.0	5,948.8	5,958.6	5,948.8	19.8	12.4	-175.05	-14.4	-126.4	731.7	700.2	31.57	23.181	
6,100.0	6,047.3	6,057.0	6,047.3	20.2	12.4	-175.16	-14.4	-126.4	749.0	716.9	32.15	23.297	
6,200.0	6,145.7	6,155.5	6,145.7	20.7	12.5	-175.27	-14.4	-126.4	766.3	733.6	32.74	23.408	
6,300.0	6,244.2	6,254.0	6,244.2	21.1	12.6	-175.38	-14.4	-126.4	783.6	750.3	33.33	23.513	
6,400.0	6,342.7	6,352.5	6,342.7	21.5	12.7	-175.48	-14.4	-126.4	801.0	767.0	33.92	23.613	
6,500.0	6,441.2	6,451.0	6,441.2	21.9	12.7	-175.58	-14.4	-126.4	818.0	783.6	34.49	23.718	
6,600.0	6,540.0	6,549.8	6,540.0	22.3	12.8	-175.67	-14.4	-126.4	833.6	798.5	35.07	23.767	
6,700.0	6,639.0	6,648.8	6,639.0	22.8	12.9	-175.75	-14.4	-126.4	847.5	811.8	35.65	23.774	
6,800.0	6,738.3	6,748.1	6,738.3	23.2	12.9	-175.82	-14.4	-126.4	859.6	823.4	36.20	23.742	
6,900.0	6,837.7	6,847.5	6,837.7	23.6	13.0	-175.88	-14.4	-126.4	870.0	833.2	36.75	23.674	
7,000.0	6,937.4	6,947.1	6,937.4	23.9	13.1	-175.93	-14.4	-126.4	878.6	841.4	37.27	23.573	
7,100.0	7,037.1	7,046.9	7,037.1	24.3	13.2	-175.96	-14.4	-126.4	885.5	847.8	37.78	23.443	
7,200.0	7,137.0	7,146.8	7,137.0	24.6	13.2	-175.99	-14.4	-126.4	890.7	852.5	38.25	23.287	
7,300.0	7,236.9	7,246.7	7,236.9	24.9	13.3	-176.01	-14.4	-126.4	894.2	855.5	38.69	23.114	
7,400.0	7,336.9	7,346.7	7,336.9	25.2	13.4	-176.02	-14.4	-126.4	895.9	856.8	39.06	22.934	
7,500.0	7,436.9	7,446.7	7,436.9	25.2	13.4	-89.27	-14.4	-126.4	896.1	856.9	39.19	22.865	
7,600.0	7,536.9	7,546.7	7,536.9	25.3	13.5	-89.27	-14.4	-126.4	896.1	856.8	39.28	22.813	
7,700.0	7,636.9	7,646.7	7,636.9	25.3	13.6	-89.27	-14.4	-126.4	896.1	856.7	39.37	22.761	
7,800.0	7,736.9	7,746.7	7,736.9	25.3	13.7	-89.27	-14.4	-126.4	896.1	856.6	39.46	22.709	
7,900.0	7,836.9	7,846.7	7,836.9	25.4	13.7	-89.27	-14.4	-126.4	896.1	856.5	39.55	22.657	
8,000.0	7,936.9	7,946.7	7,936.9	25.4	13.8	-89.27	-14.4	-126.4	896.1	856.4	39.64	22.604	
8,100.0	8,036.9	8,046.7	8,036.9	25.4	13.9	-89.27	-14.4	-126.4	896.1	856.4	39.73	22.552	
8,200.0	8,136.9	8,146.7	8,136.9	25.5	14.0	-89.27	-14.4	-126.4	896.1	856.3	39.83	22.500	
8,300.0	8,236.9	8,246.7	8,236.9	25.5	14.0	-89.27	-14.4	-126.4	896.1	856.2	39.92	22.448	
8,400.0	8,336.9	8,346.7	8,336.9	25.5	14.1	-89.27	-14.4	-126.4	896.1	856.1	40.01	22.396	
8,500.0	8,436.9	8,446.7	8,436.9	25.6	14.2	-89.27	-14.4	-126.4	896.1	856.0	40.11	22.343	
8,600.0	8,536.9	8,546.7	8,536.9	25.6	14.2	-89.27	-14.4	-126.4	896.1	855.9	40.20	22.291	
8,700.0	8,636.9	8,646.7	8,636.9	25.7	14.3	-89.27	-14.4	-126.4	896.1	855.8	40.29	22.239	
8,800.0	8,736.9	8,746.7	8,736.9	25.7	14.4	-89.27	-14.4	-126.4	896.1	855.7	40.39	22.187	
8,900.0	8,836.9	8,846.7	8,836.9	25.7	14.5	-89.27	-14.4	-126.4	896.1	855.6	40.48	22.135	
9,000.0	8,936.9	8,946.7	8,936.9	25.8	14.5	-89.27	-14.4	-126.4	896.1	855.5	40.58	22.083	
9,100.0	9,036.9	9,046.7	9,036.9	25.8	14.6	-89.27	-14.4	-126.4	896.1	855.4	40.68	22.030	
9,200.0	9,136.9	9,146.7	9,136.9	25.8	14.7	-89.27	-14.4	-126.4	896.1	855.3	40.76	21.982	
9,300.0	9,236.9	9,243.9	9,233.9	25.9	14.7	-88.89	-8.6	-126.5	896.2	855.4	40.83	21.952	
9,400.0	9,336.9	9,336.3	9,323.9	25.9	14.6	-87.58	11.9	-126.5	897.0	856.2	40.85	21.957	
9,500.0	9,436.9	9,420.3	9,401.8	25.9	14.6	-85.61	42.9	-126.7	899.6	858.8	40.81	22.044	
9,600.0	9,536.9	9,493.8	9,465.8	26.0	14.6	-83.32	79.1	-126.8	905.3	864.7	40.67	22.261	
9,700.0	9,636.9	9,556.9	9,516.5	26.0	14.5	-80.98	116.5	-127.0	915.7	875.3	40.43	22.647	
9,800.0	9,736.9	9,610.2	9,556.0	26.1	14.5	-78.76	152.3	-127.1	931.9	891.8	40.12	23.226	
9,900.0	9,836.9	9,650.0	9,583.2	26.1	14.5	-76.99	181.3	-127.2	954.7	915.0	39.77	24.008	
10,000.0	9,936.9	9,700.0	9,614.5	26.1	14.5	-74.65	220.3	-127.4	984.4	945.0	39.42	24.973	
10,100.0	10,036.9	9,725.7	9,629.2	26.2	14.5	-73.41	241.4	-127.5	1,021.0	981.9	39.10	26.112	
10,200.0	10,136.9	9,750.0	9,642.2	26.2	14.4	-72.22	261.9	-127.6	1,064.1	1,025.3	38.84	27.396	
10,300.0	10,236.9	9,777.2	9,655.7	26.2	14.4	-70.86	285.5	-127.7	1,113.4	1,074.8	38.66	28.798	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 502H - 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)			
10,400.0	10,336.9	9,800.0	9,666.2	26.3	14.4	-69.72	305.7	-127.7	1,168.3	1,129.8	38.57	30.292	
10,500.0	10,436.9	9,815.9	9,673.0	26.3	14.4	-68.92	320.1	-127.8	1,228.2	1,189.7	38.56	31.850	
10,600.0	10,536.9	9,831.7	9,679.4	26.4	14.4	-68.12	334.6	-127.9	1,292.5	1,253.9	38.63	33.457	
10,700.0	10,636.9	9,850.0	9,686.3	26.4	14.4	-67.19	351.5	-127.9	1,360.8	1,322.0	38.77	35.102	
10,800.0	10,736.9	9,850.0	9,686.3	26.4	14.4	-67.19	351.5	-127.9	1,432.4	1,393.4	38.98	36.750	
10,900.0	10,836.8	9,870.3	9,693.3	26.5	14.4	-60.15	370.6	-128.0	1,506.0	1,466.8	39.19	38.432	
11,000.0	10,934.8	9,900.0	9,702.3	26.5	14.4	-50.83	398.9	-128.1	1,577.0	1,537.6	39.40	40.030	
11,100.0	11,028.1	9,900.0	9,702.3	26.5	14.4	-44.43	398.9	-128.1	1,642.5	1,602.8	39.66	41.411	
11,200.0	11,113.7	9,924.7	9,708.6	26.5	14.4	-39.09	422.7	-128.2	1,701.3	1,661.4	39.92	42.616	
11,300.0	11,189.1	9,950.0	9,714.1	26.5	14.4	-35.19	447.4	-128.3	1,752.0	1,711.9	40.19	43.599	
11,400.0	11,251.9	9,971.0	9,717.8	26.5	14.4	-32.46	468.1	-128.4	1,793.5	1,753.0	40.44	44.347	
11,500.0	11,300.4	10,000.0	9,721.6	26.6	14.4	-30.55	496.8	-128.5	1,824.8	1,784.2	40.68	44.857	
11,600.0	11,332.9	10,021.5	9,723.5	26.7	14.4	-29.42	518.2	-128.6	1,845.5	1,804.6	40.89	45.130	
11,700.0	11,348.6	10,050.0	9,724.8	26.7	14.4	-28.91	546.7	-128.7	1,855.0	1,814.0	41.08	45.161	
11,800.0	11,350.0	10,106.6	9,725.0	26.8	14.5	-28.87	603.3	-129.0	1,855.7	1,814.5	41.18	45.062	
11,900.0	11,350.0	10,206.6	9,725.0	27.0	14.5	-28.87	703.3	-129.4	1,855.7	1,814.3	41.37	44.859	
12,000.0	11,350.0	10,306.6	9,725.0	27.1	14.6	-28.87	803.3	-129.8	1,855.7	1,814.1	41.61	44.597	
12,100.0	11,350.0	10,406.6	9,725.0	27.3	14.7	-28.87	903.3	-130.2	1,855.7	1,813.8	41.91	44.279	
12,200.0	11,350.0	10,506.6	9,725.0	27.5	14.9	-28.87	1,003.3	-130.6	1,855.7	1,813.4	42.26	43.908	
12,300.0	11,350.0	10,606.6	9,725.0	27.7	15.1	-28.87	1,103.3	-131.0	1,855.7	1,813.0	42.67	43.490	
12,400.0	11,350.0	10,706.6	9,725.0	27.9	15.5	-28.87	1,203.3	-131.4	1,855.7	1,812.6	43.13	43.028	
12,500.0	11,350.0	10,806.6	9,725.0	28.2	15.8	-28.87	1,303.3	-131.8	1,855.7	1,812.0	43.64	42.526	
12,600.0	11,350.0	10,906.6	9,725.0	28.4	16.3	-28.87	1,403.3	-132.2	1,855.7	1,811.5	44.19	41.991	
12,700.0	11,350.0	11,006.6	9,725.0	28.7	16.7	-28.87	1,503.3	-132.6	1,855.7	1,810.9	44.80	41.425	
12,800.0	11,350.0	11,106.6	9,725.0	29.0	17.2	-28.87	1,603.3	-133.0	1,855.7	1,810.2	45.44	40.835	
12,900.0	11,350.0	11,206.6	9,725.0	29.4	17.7	-28.87	1,703.3	-133.5	1,855.7	1,809.6	46.13	40.224	
13,000.0	11,350.0	11,306.6	9,725.0	29.7	18.2	-28.87	1,803.3	-133.9	1,855.7	1,808.8	46.87	39.596	
13,100.0	11,350.0	11,406.6	9,725.0	30.1	18.7	-28.87	1,903.3	-134.3	1,855.7	1,808.1	47.64	38.956	
13,200.0	11,350.0	11,506.6	9,725.0	30.4	19.3	-28.87	2,003.3	-134.7	1,855.7	1,807.3	48.44	38.307	
13,300.0	11,350.0	11,606.6	9,725.0	30.8	19.9	-28.88	2,103.3	-135.1	1,855.7	1,806.4	49.29	37.652	
13,400.0	11,350.0	11,706.6	9,725.0	31.2	20.4	-28.88	2,203.3	-135.5	1,855.7	1,805.6	50.16	36.995	
13,500.0	11,350.0	11,806.6	9,725.0	31.6	21.0	-28.88	2,303.3	-135.9	1,855.7	1,804.7	51.07	36.338	
13,600.0	11,350.0	11,906.6	9,725.0	32.1	21.6	-28.88	2,403.3	-136.3	1,855.7	1,803.7	52.01	35.683	
13,700.0	11,350.0	12,006.6	9,725.0	32.5	22.3	-28.88	2,503.3	-136.7	1,855.7	1,802.8	52.97	35.032	
13,800.0	11,350.0	12,106.6	9,725.0	33.0	22.9	-28.88	2,603.3	-137.1	1,855.7	1,801.8	53.96	34.388	
13,900.0	11,350.0	12,206.6	9,725.0	33.4	23.5	-28.88	2,703.3	-137.5	1,855.7	1,800.8	54.98	33.751	
14,000.0	11,350.0	12,306.6	9,725.0	33.9	24.2	-28.88	2,803.3	-137.9	1,855.7	1,799.7	56.02	33.124	
14,100.0	11,350.0	12,406.6	9,725.0	34.4	24.8	-28.88	2,903.3	-138.4	1,855.7	1,798.7	57.09	32.506	
14,200.0	11,350.0	12,506.6	9,725.0	34.9	25.5	-28.88	3,003.3	-138.8	1,855.7	1,797.6	58.17	31.900	
14,300.0	11,350.0	12,606.6	9,725.0	35.4	26.1	-28.88	3,103.3	-139.2	1,855.7	1,796.5	59.28	31.304	
14,400.0	11,350.0	12,706.6	9,725.0	35.9	26.8	-28.88	3,203.3	-139.6	1,855.8	1,795.3	60.41	30.721	
14,500.0	11,350.0	12,806.6	9,725.0	36.4	27.5	-28.88	3,303.3	-140.0	1,855.8	1,794.2	61.55	30.151	
14,600.0	11,350.0	12,906.6	9,725.0	36.9	28.1	-28.88	3,403.3	-140.4	1,855.8	1,793.1	62.71	29.593	
14,700.0	11,350.0	13,006.6	9,725.0	37.5	28.8	-28.88	3,503.3	-140.8	1,855.8	1,791.9	63.89	29.048	
14,800.0	11,350.0	13,106.6	9,725.0	38.0	29.5	-28.88	3,603.3	-141.2	1,855.8	1,790.7	65.08	28.516	
14,900.0	11,350.0	13,206.6	9,725.0	38.6	30.2	-28.88	3,703.3	-141.6	1,855.8	1,789.5	66.28	27.997	
15,000.0	11,350.0	13,306.6	9,725.0	39.2	30.9	-28.88	3,803.3	-142.0	1,855.8	1,788.3	67.50	27.492	
15,100.0	11,350.0	13,406.6	9,725.0	39.7	31.6	-28.88	3,903.3	-142.4	1,855.8	1,787.0	68.74	26.999	
15,200.0	11,350.0	13,506.6	9,725.0	40.3	32.3	-28.88	4,003.3	-142.9	1,855.8	1,785.8	69.98	26.519	
15,300.0	11,350.0	13,606.6	9,725.0	40.9	33.0	-28.88	4,103.3	-143.3	1,855.8	1,784.5	71.24	26.051	
15,400.0	11,350.0	13,706.6	9,725.0	41.5	33.7	-28.88	4,203.3	-143.7	1,855.8	1,783.3	72.50	25.596	
15,500.0	11,350.0	13,806.6	9,725.0	42.1	34.4	-28.88	4,303.3	-144.1	1,855.8	1,782.0	73.78	25.153	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 502H - 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)			
15,600.0	11,350.0	13,906.6	9,725.0	42.7	35.1	-28.88	4,403.3	-144.5	1,855.8	1,780.7	75.07	24.721	
15,700.0	11,350.0	14,006.6	9,725.0	43.3	35.8	-28.88	4,503.3	-144.9	1,855.8	1,779.4	76.37	24.302	
15,800.0	11,350.0	14,106.6	9,725.0	43.9	36.5	-28.88	4,603.3	-145.3	1,855.8	1,778.1	77.67	23.893	
15,900.0	11,350.0	14,206.6	9,725.0	44.5	37.2	-28.88	4,703.3	-145.7	1,855.8	1,776.8	78.99	23.496	
16,000.0	11,350.0	14,306.6	9,725.0	45.1	38.0	-28.88	4,803.3	-146.1	1,855.8	1,775.5	80.31	23.109	
16,100.0	11,350.0	14,406.6	9,725.0	45.7	38.7	-28.88	4,903.3	-146.5	1,855.8	1,774.2	81.64	22.733	
16,200.0	11,350.0	14,506.6	9,725.0	46.4	39.4	-28.88	5,003.3	-146.9	1,855.8	1,772.8	82.97	22.366	
16,300.0	11,350.0	14,606.6	9,725.0	47.0	40.1	-28.88	5,103.3	-147.3	1,855.8	1,771.5	84.32	22.010	
16,400.0	11,350.0	14,706.6	9,725.0	47.6	40.9	-28.88	5,203.3	-147.8	1,855.8	1,770.2	85.67	21.663	
16,500.0	11,350.0	14,806.6	9,725.0	48.3	41.6	-28.88	5,303.3	-148.2	1,855.8	1,768.8	87.03	21.325	
16,600.0	11,350.0	14,906.6	9,725.0	48.9	42.3	-28.88	5,403.3	-148.6	1,855.8	1,767.4	88.39	20.996	
16,700.0	11,350.0	15,006.6	9,725.0	49.6	43.0	-28.88	5,503.3	-149.0	1,855.8	1,766.1	89.76	20.676	
16,800.0	11,350.0	15,106.6	9,725.0	50.2	43.8	-28.88	5,603.3	-149.4	1,855.8	1,764.7	91.13	20.365	
16,900.0	11,350.0	15,206.6	9,725.0	50.9	44.5	-28.88	5,703.3	-149.8	1,855.8	1,763.3	92.51	20.061	
17,000.0	11,350.0	15,306.6	9,725.0	51.5	45.2	-28.88	5,803.3	-150.2	1,855.8	1,762.0	93.89	19.766	
17,100.0	11,350.0	15,406.6	9,725.0	52.2	46.0	-28.88	5,903.3	-150.6	1,855.9	1,760.6	95.28	19.477	
17,200.0	11,350.0	15,506.6	9,725.0	52.8	46.7	-28.88	6,003.3	-151.0	1,855.9	1,759.2	96.68	19.197	
17,300.0	11,350.0	15,606.6	9,725.0	53.5	47.4	-28.88	6,103.3	-151.4	1,855.9	1,757.8	98.07	18.923	
17,400.0	11,350.0	15,706.6	9,725.0	54.2	48.2	-28.88	6,203.3	-151.8	1,855.9	1,756.4	99.48	18.657	
17,500.0	11,350.0	15,806.6	9,725.0	54.8	48.9	-28.88	6,303.3	-152.2	1,855.9	1,755.0	100.88	18.397	
17,600.0	11,350.0	15,906.6	9,725.0	55.5	49.7	-28.88	6,403.3	-152.7	1,855.9	1,753.6	102.29	18.143	
17,700.0	11,350.0	16,006.6	9,725.0	56.2	50.4	-28.88	6,503.3	-153.1	1,855.9	1,752.2	103.70	17.896	
17,800.0	11,350.0	16,106.6	9,725.0	56.9	51.1	-28.88	6,603.3	-153.5	1,855.9	1,750.8	105.12	17.655	
17,900.0	11,350.0	16,206.6	9,725.0	57.5	51.9	-28.88	6,703.3	-153.9	1,855.9	1,749.3	106.54	17.419	
18,000.0	11,350.0	16,306.6	9,725.0	58.2	52.6	-28.88	6,803.3	-154.3	1,855.9	1,747.9	107.96	17.190	
18,100.0	11,350.0	16,406.6	9,725.0	58.9	53.4	-28.89	6,903.3	-154.7	1,855.9	1,746.5	109.39	16.966	
18,200.0	11,350.0	16,506.6	9,725.0	59.6	54.1	-28.89	7,003.3	-155.1	1,855.9	1,745.1	110.82	16.747	
18,300.0	11,350.0	16,606.6	9,725.0	60.3	54.8	-28.89	7,103.3	-155.5	1,855.9	1,743.6	112.25	16.533	
18,400.0	11,350.0	16,706.6	9,725.0	61.0	55.6	-28.89	7,203.3	-155.9	1,855.9	1,742.2	113.69	16.324	
18,500.0	11,350.0	16,806.6	9,725.0	61.7	56.3	-28.89	7,303.3	-156.3	1,855.9	1,740.8	115.13	16.120	
18,600.0	11,350.0	16,906.6	9,725.0	62.3	57.1	-28.89	7,403.3	-156.7	1,855.9	1,739.3	116.57	15.921	
18,700.0	11,350.0	17,006.6	9,725.0	63.0	57.8	-28.89	7,503.3	-157.2	1,855.9	1,737.9	118.01	15.727	
18,800.0	11,350.0	17,106.6	9,725.0	63.7	58.6	-28.89	7,603.3	-157.6	1,855.9	1,736.5	119.46	15.536	
18,900.0	11,350.0	17,206.6	9,725.0	64.4	59.3	-28.89	7,703.2	-158.0	1,855.9	1,735.0	120.90	15.350	
19,000.0	11,350.0	17,306.6	9,725.0	65.1	60.1	-28.89	7,803.2	-158.4	1,855.9	1,733.6	122.35	15.168	
19,100.0	11,350.0	17,406.6	9,725.0	65.8	60.8	-28.89	7,903.2	-158.8	1,855.9	1,732.1	123.81	14.991	
19,200.0	11,350.0	17,506.6	9,725.0	66.5	61.6	-28.89	8,003.2	-159.2	1,855.9	1,730.7	125.26	14.817	
19,300.0	11,350.0	17,606.6	9,725.0	67.2	62.3	-28.89	8,103.2	-159.6	1,855.9	1,729.2	126.72	14.646	
19,400.0	11,350.0	17,706.6	9,725.0	67.9	63.1	-28.89	8,203.2	-160.0	1,855.9	1,727.8	128.17	14.480	
19,500.0	11,350.0	17,806.6	9,725.0	68.6	63.8	-28.89	8,303.2	-160.4	1,855.9	1,726.3	129.63	14.317	
19,600.0	11,350.0	17,906.6	9,725.0	69.4	64.6	-28.89	8,403.2	-160.8	1,855.9	1,724.8	131.10	14.157	
19,700.0	11,350.0	18,006.6	9,725.0	70.1	65.3	-28.89	8,503.2	-161.2	1,855.9	1,723.4	132.56	14.001	
19,800.0	11,350.0	18,106.6	9,725.0	70.8	66.1	-28.89	8,603.2	-161.6	1,856.0	1,721.9	134.02	13.848	
19,900.0	11,350.0	18,206.6	9,725.0	71.5	66.8	-28.89	8,703.2	-162.1	1,856.0	1,720.5	135.49	13.698	
20,000.0	11,350.0	18,306.6	9,725.0	72.2	67.6	-28.89	8,803.2	-162.5	1,856.0	1,719.0	136.96	13.551	
20,100.0	11,350.0	18,406.6	9,725.0	72.9	68.3	-28.89	8,903.2	-162.9	1,856.0	1,717.5	138.43	13.407	
20,200.0	11,350.0	18,506.6	9,725.0	73.6	69.1	-28.89	9,003.2	-163.3	1,856.0	1,716.1	139.90	13.266	
20,300.0	11,350.0	18,606.6	9,725.0	74.3	69.8	-28.89	9,103.2	-163.7	1,856.0	1,714.6	141.37	13.128	
20,400.0	11,350.0	18,706.6	9,725.0	75.1	70.6	-28.89	9,203.2	-164.1	1,856.0	1,713.1	142.85	12.993	
20,500.0	11,350.0	18,806.6	9,725.0	75.8	71.3	-28.89	9,303.2	-164.5	1,856.0	1,711.7	144.32	12.860	
20,600.0	11,350.0	18,906.6	9,725.0	76.5	72.1	-28.89	9,403.2	-164.9	1,856.0	1,710.2	145.80	12.730	
20,700.0	11,350.0	19,006.6	9,725.0	77.2	72.8	-28.89	9,503.2	-165.3	1,856.0	1,708.7	147.28	12.602	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 502H - 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)				
20,800.0	11,350.0	19,106.6	9,725.0	77.9	73.6	-28.89	9,603.2	-165.7	1,856.0	1,707.2	148.76	12.477		
20,900.0	11,350.0	19,206.6	9,725.0	78.7	74.3	-28.89	9,703.2	-166.1	1,856.0	1,705.8	150.24	12.354		
21,000.0	11,350.0	19,306.6	9,725.0	79.4	75.1	-28.89	9,803.2	-166.5	1,856.0	1,704.3	151.72	12.233		
21,100.0	11,350.0	19,406.6	9,725.0	80.1	75.9	-28.89	9,903.2	-167.0	1,856.0	1,702.8	153.20	12.115		
21,200.0	11,350.0	19,506.6	9,725.0	80.8	76.6	-28.89	10,003.2	-167.4	1,856.0	1,701.3	154.69	11.998		
21,300.0	11,350.0	19,606.6	9,725.0	81.5	77.4	-28.89	10,103.2	-167.8	1,856.0	1,699.8	156.17	11.884		
21,400.0	11,350.0	19,706.6	9,725.0	82.3	78.1	-28.89	10,203.2	-168.2	1,856.0	1,698.4	157.66	11.772		
21,500.0	11,350.0	19,806.6	9,725.0	83.0	78.9	-28.89	10,303.2	-168.6	1,856.0	1,696.9	159.14	11.662		
21,600.0	11,350.0	19,906.6	9,725.0	83.7	79.6	-28.89	10,403.2	-169.0	1,856.0	1,695.4	160.63	11.554		
21,700.0	11,350.0	20,006.6	9,725.0	84.4	80.4	-28.89	10,503.2	-169.4	1,856.0	1,693.9	162.12	11.448		
21,800.0	11,350.0	20,106.6	9,725.0	85.2	81.1	-28.89	10,603.2	-169.8	1,856.0	1,692.4	163.61	11.344		
21,900.0	11,350.0	20,206.6	9,725.0	85.9	81.9	-28.89	10,703.2	-170.2	1,856.0	1,690.9	165.10	11.242		
22,000.0	11,350.0	20,306.6	9,725.0	86.6	82.7	-28.89	10,803.2	-170.6	1,856.0	1,689.4	166.59	11.141		
22,100.0	11,350.0	20,406.6	9,725.0	87.4	83.4	-28.89	10,903.2	-171.0	1,856.0	1,688.0	168.09	11.042		
22,200.0	11,350.0	20,506.6	9,725.0	88.1	84.2	-28.89	11,003.2	-171.5	1,856.0	1,686.5	169.58	10.945		
22,300.0	11,350.0	20,606.6	9,725.0	88.8	84.9	-28.89	11,103.2	-171.9	1,856.0	1,685.0	171.07	10.849		
22,400.0	11,350.0	20,706.6	9,725.0	89.6	85.7	-28.89	11,203.2	-172.3	1,856.0	1,683.5	172.57	10.755		
22,500.0	11,350.0	20,806.6	9,725.0	90.3	86.4	-28.89	11,303.2	-172.7	1,856.1	1,682.0	174.06	10.663		
22,600.0	11,350.0	20,906.6	9,725.0	91.0	87.2	-28.89	11,403.2	-173.1	1,856.1	1,680.5	175.56	10.572		
22,700.0	11,350.0	21,006.6	9,725.0	91.8	88.0	-28.89	11,503.2	-173.5	1,856.1	1,679.0	177.06	10.483		
22,800.0	11,350.0	21,106.6	9,725.0	92.5	88.7	-28.89	11,603.2	-173.9	1,856.1	1,677.5	178.55	10.395		
22,900.0	11,350.0	21,206.6	9,725.0	93.2	89.5	-28.90	11,703.2	-174.3	1,856.1	1,676.0	180.05	10.308		
23,000.0	11,350.0	21,306.6	9,725.0	94.0	90.2	-28.90	11,803.2	-174.7	1,856.1	1,674.5	181.55	10.223		
23,100.0	11,350.0	21,406.6	9,725.0	94.7	91.0	-28.90	11,903.2	-175.1	1,856.1	1,673.0	183.05	10.140		
23,200.0	11,350.0	21,506.6	9,725.0	95.4	91.8	-28.90	12,003.2	-175.5	1,856.1	1,671.5	184.55	10.057		
23,300.0	11,350.0	21,606.6	9,725.0	96.2	92.5	-28.90	12,103.2	-175.9	1,856.1	1,670.0	186.05	9.976		
23,400.0	11,350.0	21,706.6	9,725.0	96.9	93.3	-28.90	12,203.2	-176.4	1,856.1	1,668.5	187.55	9.896		
23,500.0	11,350.0	21,806.6	9,725.0	97.6	94.0	-28.90	12,303.2	-176.8	1,856.1	1,667.0	189.06	9.818		
23,600.0	11,350.0	21,906.6	9,725.0	98.4	94.8	-28.90	12,403.2	-177.2	1,856.1	1,665.5	190.56	9.740		
23,700.0	11,350.0	22,006.6	9,725.0	99.1	95.5	-28.90	12,503.2	-177.6	1,856.1	1,664.0	192.06	9.664		
23,800.0	11,350.0	22,106.6	9,725.0	99.9	96.3	-28.90	12,603.2	-178.0	1,856.1	1,662.5	193.57	9.589		
23,900.0	11,350.0	22,206.6	9,725.0	100.6	97.1	-28.90	12,703.2	-178.4	1,856.1	1,661.0	195.07	9.515		
24,000.0	11,350.0	22,306.6	9,725.0	101.3	97.8	-28.90	12,803.2	-178.8	1,856.1	1,659.5	196.58	9.442		
24,100.0	11,350.0	22,406.6	9,725.0	102.1	98.6	-28.90	12,903.2	-179.2	1,856.1	1,658.0	198.08	9.370		
24,200.0	11,350.0	22,506.6	9,725.0	102.8	99.3	-28.90	13,003.2	-179.6	1,856.1	1,656.5	199.59	9.300		
24,300.0	11,350.0	22,606.6	9,725.0	103.5	100.1	-28.90	13,103.2	-180.0	1,856.1	1,655.0	201.09	9.230		
24,400.0	11,350.0	22,706.6	9,725.0	104.3	100.9	-28.90	13,203.2	-180.4	1,856.1	1,653.5	202.60	9.161		
24,500.0	11,350.0	22,806.6	9,725.0	105.0	101.6	-28.90	13,303.2	-180.8	1,856.1	1,652.0	204.11	9.094		
24,600.0	11,350.0	22,906.6	9,725.0	105.8	102.4	-28.90	13,403.2	-181.3	1,856.1	1,650.5	205.62	9.027		
24,700.0	11,350.0	23,006.6	9,725.0	106.5	103.1	-28.90	13,503.2	-181.7	1,856.1	1,649.0	207.12	8.961		
24,799.9	11,350.0	23,106.5	9,725.0	107.3	103.9	-28.90	13,603.1	-182.1	1,856.1	1,647.5	208.63	8.897 SF		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 503H - 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)			
0.0	0.0	0.0	0.0	3.0	3.0	80.75	221.6	1,360.0	1,378.0	1,371.5	6.43	214.340	
100.0	100.0	100.0	100.0	3.2	3.2	80.75	221.6	1,360.0	1,378.0	1,371.1	6.89	199.927	
200.0	200.0	200.0	200.0	3.5	3.5	80.75	221.6	1,360.0	1,378.0	1,370.6	7.33	188.038	
300.0	300.0	300.0	300.0	3.7	3.7	80.75	221.6	1,360.0	1,378.0	1,370.2	7.74	178.002	
400.0	400.0	400.0	400.0	3.9	3.9	80.75	221.6	1,360.0	1,378.0	1,369.8	8.14	169.377	
500.0	500.0	500.0	500.0	4.1	4.1	80.75	221.6	1,360.0	1,378.0	1,369.5	8.51	161.856	
600.0	600.0	600.0	600.0	4.2	4.2	80.75	221.6	1,360.0	1,378.0	1,369.1	8.88	155.219	
700.0	700.0	700.0	700.0	4.4	4.4	80.75	221.6	1,360.0	1,378.0	1,368.7	9.23	149.302	
800.0	800.0	800.0	800.0	4.6	4.6	80.75	221.6	1,360.0	1,378.0	1,368.4	9.57	143.981	
900.0	900.0	900.0	900.0	4.8	4.8	80.75	221.6	1,360.0	1,378.0	1,368.1	9.90	139.162	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	80.75	221.6	1,360.0	1,378.0	1,367.7	10.22	134.769	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	80.75	221.6	1,360.0	1,378.0	1,367.4	10.54	130.741	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	80.75	221.6	1,360.0	1,378.0	1,367.1	10.85	127.031	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	80.75	221.6	1,360.0	1,378.0	1,366.8	11.15	123.596	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	80.75	221.6	1,360.0	1,378.0	1,366.5	11.44	120.405	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	80.75	221.6	1,360.0	1,378.0	1,366.2	11.73	117.430	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	80.75	221.6	1,360.0	1,378.0	1,366.0	12.02	114.646	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	80.75	221.6	1,360.0	1,378.0	1,365.7	12.30	112.033	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	80.75	221.6	1,360.0	1,378.0	1,365.4	12.58	109.575	
1,900.0	1,900.0	1,946.8	1,946.8	6.3	6.3	-54.29	219.9	1,357.8	1,375.5	1,362.6	12.91	106.532	
2,000.0	1,999.9	2,093.0	2,092.7	6.4	6.6	-54.42	214.8	1,351.1	1,368.1	1,354.9	13.23	103.427	
2,100.0	2,099.7	2,238.0	2,237.1	6.6	6.9	-54.62	206.5	1,340.0	1,355.9	1,342.3	13.57	99.891	
2,200.0	2,199.3	2,366.4	2,364.4	6.8	7.1	-54.91	196.4	1,326.7	1,339.0	1,325.1	13.88	96.492	
2,300.0	2,298.7	2,464.7	2,461.7	6.9	7.3	-55.00	188.2	1,315.7	1,320.7	1,306.5	14.18	93.129	
2,400.0	2,398.2	2,563.0	2,559.0	7.1	7.5	-55.09	180.0	1,304.8	1,302.3	1,287.8	14.52	89.682	
2,500.0	2,497.6	2,661.3	2,656.4	7.4	7.8	-55.19	171.7	1,293.9	1,284.0	1,269.1	14.88	86.272	
2,600.0	2,597.1	2,759.6	2,753.7	7.6	8.0	-55.29	163.5	1,283.0	1,265.7	1,250.4	15.26	82.917	
2,700.0	2,696.5	2,857.8	2,851.0	7.8	8.3	-55.39	155.3	1,272.1	1,247.3	1,231.7	15.67	79.609	
2,800.0	2,795.9	2,955.9	2,948.1	8.1	8.6	-38.06	147.1	1,261.2	1,227.6	1,211.5	16.11	76.188	
2,900.0	2,895.2	3,053.3	3,044.5	8.4	8.9	-23.56	138.9	1,250.3	1,205.0	1,188.4	16.59	72.633	
3,000.0	2,994.2	3,149.9	3,140.2	8.6	9.2	-12.79	130.8	1,239.6	1,179.3	1,162.2	17.11	68.941	
3,100.0	3,092.8	3,245.7	3,235.1	8.9	9.5	-6.39	122.8	1,228.9	1,150.9	1,133.3	17.61	65.336	
3,200.0	3,191.3	3,341.2	3,329.7	9.1	9.8	-6.16	114.8	1,218.3	1,121.6	1,103.4	18.17	61.723	
3,300.0	3,289.8	3,436.7	3,424.2	9.4	10.1	-5.91	106.8	1,207.7	1,092.3	1,073.6	18.74	58.293	
3,400.0	3,388.3	3,532.2	3,518.8	9.7	10.5	-5.66	98.8	1,197.1	1,063.0	1,043.7	19.32	55.015	
3,500.0	3,486.8	3,627.7	3,613.4	10.0	10.8	-5.39	90.8	1,186.5	1,033.8	1,013.9	19.92	51.889	
3,600.0	3,585.2	3,723.2	3,708.0	10.4	11.1	-5.10	82.8	1,175.9	1,004.6	984.1	20.54	48.914	
3,700.0	3,683.7	3,818.8	3,802.6	10.7	11.5	-4.80	74.8	1,165.2	975.4	954.2	21.16	46.086	
3,800.0	3,782.2	3,914.3	3,897.2	11.0	11.8	-4.48	66.8	1,154.6	946.2	924.4	21.80	43.399	
3,900.0	3,880.7	4,009.8	3,991.7	11.4	12.2	-4.14	58.8	1,144.0	917.1	894.6	22.45	40.848	
4,000.0	3,979.2	4,105.3	4,086.3	11.8	12.6	-3.77	50.8	1,133.4	888.0	864.9	23.11	38.427	
4,100.0	4,077.6	4,200.8	4,180.9	12.1	12.9	-3.39	42.8	1,122.8	858.9	835.1	23.77	36.131	
4,200.0	4,176.1	4,294.2	4,273.4	12.5	13.2	-2.98	35.0	1,112.4	829.9	805.5	24.41	33.998	
4,300.0	4,274.6	4,384.4	4,362.8	12.9	13.6	-2.59	27.8	1,102.9	801.5	776.4	25.08	31.958	
4,400.0	4,373.1	4,475.0	4,452.7	13.3	13.9	-2.19	21.0	1,093.9	773.8	748.0	25.75	30.044	
4,500.0	4,471.6	4,566.0	4,543.1	13.6	14.3	-1.80	14.6	1,085.4	746.7	720.3	26.43	28.252	
4,600.0	4,570.0	4,657.4	4,633.9	14.0	14.6	-1.40	8.7	1,077.5	720.4	693.2	27.11	26.573	
4,700.0	4,668.5	4,749.1	4,725.2	14.4	15.0	-1.01	3.1	1,070.1	694.7	666.9	27.79	25.001	
4,800.0	4,767.0	4,841.2	4,816.9	14.8	15.3	-0.63	-2.1	1,063.3	669.7	641.2	28.46	23.529	
4,900.0	4,865.5	4,933.7	4,909.0	15.2	15.6	-0.25	-6.8	1,057.0	645.4	616.2	29.14	22.149	
5,000.0	4,964.0	5,026.5	5,001.5	15.6	15.9	0.11	-11.1	1,051.3	621.8	591.9	29.81	20.856	
5,100.0	5,062.4	5,119.6	5,094.5	16.0	16.3	0.46	-14.9	1,046.2	598.8	568.3	30.48	19.644	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 503H - 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)			
5,200.0	5,160.9	5,213.1	5,187.8	16.4	16.6	0.80	-18.3	1,041.7	576.5	545.4	31.15	18.508	
5,300.0	5,259.4	5,306.9	5,281.4	16.9	16.9	1.12	-21.3	1,037.8	555.0	523.1	31.81	17.444	
5,400.0	5,357.9	5,400.0	5,374.4	17.3	17.2	1.41	-23.7	1,034.5	534.0	501.6	32.47	16.446	
5,500.0	5,456.4	5,495.3	5,469.7	17.7	17.5	1.68	-25.8	1,031.7	513.8	480.7	33.13	15.511	
5,600.0	5,554.8	5,590.0	5,564.3	18.1	17.7	1.92	-27.4	1,029.6	494.2	460.4	33.77	14.635	
5,700.0	5,653.3	5,684.9	5,659.2	18.5	18.0	2.12	-28.5	1,028.2	475.3	440.9	34.41	13.815	
5,800.0	5,751.8	5,780.1	5,754.4	18.9	18.2	2.28	-29.1	1,027.3	457.1	422.0	35.03	13.049	
5,900.0	5,850.3	5,876.0	5,850.3	19.4	18.3	2.39	-29.3	1,027.1	439.5	403.9	35.57	12.357	
6,000.0	5,948.8	5,974.5	5,948.8	19.8	18.4	2.49	-29.3	1,027.1	422.1	386.1	36.05	11.709	
6,100.0	6,047.3	6,072.9	6,047.3	20.2	18.4	2.59	-29.3	1,027.1	404.8	368.2	36.55	11.075	
6,200.0	6,145.7	6,171.4	6,145.7	20.7	18.4	2.71	-29.3	1,027.1	387.4	350.4	37.05	10.458	
6,300.0	6,244.2	6,269.9	6,244.2	21.1	18.5	2.83	-29.3	1,027.1	370.1	332.5	37.55	9.855	
6,400.0	6,342.7	6,368.4	6,342.7	21.5	18.5	2.97	-29.3	1,027.1	352.7	314.7	38.06	9.268	
6,500.0	6,441.2	6,466.9	6,441.2	21.9	18.5	3.12	-29.3	1,027.1	335.6	297.1	38.55	8.707	
6,600.0	6,540.0	6,565.7	6,540.0	22.3	18.6	3.26	-29.3	1,027.1	320.1	281.0	39.05	8.195	
6,700.0	6,639.0	6,664.7	6,639.0	22.8	18.6	3.40	-29.3	1,027.1	306.2	266.6	39.55	7.742	
6,800.0	6,738.3	6,764.0	6,738.3	23.2	18.7	3.54	-29.3	1,027.1	294.1	254.0	40.04	7.345	
6,900.0	6,837.7	6,863.4	6,837.7	23.6	18.7	3.66	-29.3	1,027.1	283.7	243.1	40.51	7.002	
7,000.0	6,937.4	6,963.0	6,937.4	23.9	18.7	3.77	-29.3	1,027.1	275.0	234.0	40.97	6.712	
7,100.0	7,037.1	7,062.8	7,037.1	24.3	18.8	3.86	-29.3	1,027.1	268.1	226.7	41.42	6.473	
7,200.0	7,137.0	7,162.7	7,137.0	24.6	18.8	3.94	-29.3	1,027.1	262.9	221.1	41.84	6.284	
7,300.0	7,236.9	7,262.6	7,236.9	24.9	18.9	3.99	-29.3	1,027.1	259.4	217.2	42.22	6.144	
7,400.0	7,336.9	7,362.6	7,336.9	25.2	18.9	4.01	-29.3	1,027.1	257.7	215.2	42.56	6.056	
7,494.6	7,431.5	7,457.2	7,431.5	25.2	19.0	4.02	-29.3	1,027.1	257.3	214.7	42.66	6.032 CC	
7,500.0	7,436.9	7,462.6	7,436.9	25.2	19.0	90.76	-29.3	1,027.1	257.5	214.9	42.67	6.036	
7,600.0	7,536.9	7,562.6	7,536.9	25.3	19.0	90.76	-29.3	1,027.1	257.5	214.8	42.74	6.025	
7,700.0	7,636.9	7,662.6	7,636.9	25.3	19.0	90.76	-29.3	1,027.1	257.5	214.7	42.82	6.015	
7,800.0	7,736.9	7,762.6	7,736.9	25.3	19.1	90.76	-29.3	1,027.1	257.5	214.6	42.89	6.004	
7,900.0	7,836.9	7,862.6	7,836.9	25.4	19.1	90.76	-29.3	1,027.1	257.5	214.6	42.97	5.994	
8,000.0	7,936.9	7,962.6	7,936.9	25.4	19.2	90.76	-29.3	1,027.1	257.5	214.5	43.04	5.983	
8,100.0	8,036.9	8,062.6	8,036.9	25.4	19.2	90.76	-29.3	1,027.1	257.5	214.4	43.12	5.972	
8,200.0	8,136.9	8,162.6	8,136.9	25.5	19.3	90.76	-29.3	1,027.1	257.5	214.3	43.20	5.962	
8,300.0	8,236.9	8,262.6	8,236.9	25.5	19.3	90.76	-29.3	1,027.1	257.5	214.3	43.28	5.951	
8,400.0	8,336.9	8,362.6	8,336.9	25.5	19.4	90.76	-29.3	1,027.1	257.5	214.2	43.35	5.940	
8,500.0	8,436.9	8,462.6	8,436.9	25.6	19.4	90.76	-29.3	1,027.1	257.5	214.1	43.43	5.930	
8,600.0	8,536.9	8,562.6	8,536.9	25.6	19.4	90.76	-29.3	1,027.1	257.5	214.0	43.51	5.919	
8,700.0	8,636.9	8,662.6	8,636.9	25.7	19.5	90.76	-29.3	1,027.1	257.5	213.9	43.59	5.908	
8,800.0	8,736.9	8,762.6	8,736.9	25.7	19.5	90.76	-29.3	1,027.1	257.5	213.9	43.67	5.897	
8,900.0	8,836.9	8,862.6	8,836.9	25.7	19.6	90.76	-29.3	1,027.1	257.5	213.8	43.75	5.886	
9,000.0	8,936.9	8,962.6	8,936.9	25.8	19.6	90.76	-29.3	1,027.1	257.5	213.7	43.83	5.876	
9,100.0	9,036.9	9,062.6	9,036.9	25.8	19.7	90.76	-29.3	1,027.1	257.5	213.6	43.91	5.865	
9,200.0	9,136.9	9,162.6	9,136.9	25.8	19.7	90.76	-29.3	1,027.1	257.5	213.5	43.99	5.855	
9,286.4	9,223.3	9,249.2	9,223.3	25.9	19.6	89.77	-24.9	1,027.1	257.5	213.4	44.10	5.839	
9,300.0	9,236.9	9,262.6	9,236.9	25.9	19.6	89.37	-23.0	1,027.1	257.5	213.4	44.13	5.835 ES	
9,400.0	9,336.9	9,357.8	9,329.2	25.9	19.5	84.53	-1.2	1,027.0	258.7	214.3	44.38	5.829 SF	
9,500.0	9,436.9	9,443.8	9,408.7	25.9	19.3	77.45	31.4	1,026.8	265.1	220.7	44.33	5.979	
9,600.0	9,536.9	9,518.7	9,473.2	26.0	19.2	69.71	69.2	1,026.7	281.4	237.8	43.62	6.451	
9,700.0	9,636.9	9,582.3	9,523.8	26.0	19.1	62.53	107.7	1,026.5	310.9	268.6	42.34	7.343	
9,800.0	9,736.9	9,635.8	9,562.9	26.1	19.0	56.47	144.3	1,026.4	353.8	312.9	40.91	8.648	
9,900.0	9,836.9	9,680.7	9,592.9	26.1	19.0	51.58	177.7	1,026.3	408.5	368.8	39.74	10.280	
10,000.0	9,936.9	9,718.5	9,616.0	26.1	18.9	47.70	207.5	1,026.1	472.5	433.6	38.95	12.131	
10,100.0	10,036.9	9,750.0	9,633.8	26.2	18.9	44.67	233.5	1,026.0	543.7	505.1	38.52	14.114	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 503H - 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)			
10,200.0	10,136.9	9,777.7	9,648.2	26.2	18.9	42.16	257.2	1,026.0	620.2	581.9	38.35	16.173	
10,300.0	10,236.9	9,800.0	9,659.0	26.2	18.9	40.26	276.7	1,025.9	700.9	662.5	38.38	18.263	
10,400.0	10,336.9	9,821.4	9,668.6	26.3	18.9	38.54	295.8	1,025.8	784.7	746.2	38.51	20.375	
10,500.0	10,436.9	9,850.0	9,680.3	26.3	18.9	36.37	321.9	1,025.7	871.2	832.5	38.67	22.530	
10,600.0	10,536.9	9,850.0	9,680.3	26.4	18.9	36.37	321.9	1,025.7	959.3	920.3	39.06	24.562	
10,700.0	10,636.9	9,868.2	9,687.1	26.4	18.9	35.07	338.8	1,025.6	1,049.1	1,009.8	39.36	26.658	
10,800.0	10,736.9	9,880.4	9,691.3	26.4	18.9	34.24	350.2	1,025.6	1,140.3	1,100.6	39.71	28.717	
10,900.0	10,836.8	9,900.0	9,697.6	26.5	18.9	26.91	368.8	1,025.5	1,231.5	1,191.4	40.08	30.727	
11,000.0	10,934.8	9,900.0	9,697.6	26.5	18.9	20.25	368.8	1,025.5	1,317.2	1,276.5	40.64	32.414	
11,100.0	11,028.1	9,925.4	9,704.9	26.5	18.9	15.91	393.2	1,025.4	1,395.3	1,354.1	41.18	33.882	
11,200.0	11,113.7	9,950.0	9,710.8	26.5	18.9	13.25	417.0	1,025.3	1,464.6	1,422.8	41.78	35.052	
11,300.0	11,189.1	9,968.3	9,714.6	26.5	18.9	11.56	434.9	1,025.2	1,523.7	1,481.3	42.42	35.918	
11,400.0	11,251.9	10,000.0	9,719.7	26.5	19.0	10.40	466.2	1,025.1	1,571.9	1,528.9	43.05	36.511	
11,500.0	11,300.4	10,000.0	9,719.7	26.6	19.0	9.71	466.2	1,025.1	1,608.6	1,565.0	43.69	36.820	
11,600.0	11,332.9	10,050.0	9,724.3	26.7	19.1	9.22	516.0	1,024.9	1,632.6	1,588.3	44.31	36.844	
11,700.0	11,348.6	10,077.7	9,725.0	26.7	19.1	9.02	543.6	1,024.8	1,644.3	1,599.4	44.89	36.631	
11,800.0	11,350.0	10,142.0	9,725.0	26.8	19.2	9.00	608.0	1,024.6	1,645.3	1,599.9	45.40	36.238	
11,900.0	11,350.0	10,242.0	9,725.0	27.0	19.5	9.00	708.0	1,024.2	1,645.3	1,599.3	45.96	35.795	
12,000.0	11,350.0	10,342.0	9,725.0	27.1	19.8	9.01	808.0	1,023.8	1,645.3	1,598.7	46.57	35.329	
12,100.0	11,350.0	10,442.0	9,725.0	27.3	20.1	9.01	908.0	1,023.4	1,645.3	1,598.1	47.22	34.842	
12,200.0	11,350.0	10,542.0	9,725.0	27.5	20.5	9.01	1,008.0	1,023.0	1,645.3	1,597.4	47.91	34.338	
12,300.0	11,350.0	10,642.0	9,725.0	27.7	20.9	9.01	1,108.0	1,022.6	1,645.3	1,596.6	48.65	33.821	
12,400.0	11,350.0	10,742.0	9,725.0	27.9	21.3	9.01	1,208.0	1,022.2	1,645.3	1,595.9	49.42	33.293	
12,500.0	11,350.0	10,842.0	9,725.0	28.2	21.8	9.01	1,308.0	1,021.8	1,645.3	1,595.1	50.23	32.757	
12,600.0	11,350.0	10,942.0	9,725.0	28.4	22.3	9.01	1,408.0	1,021.4	1,645.3	1,594.2	51.07	32.216	
12,700.0	11,350.0	11,042.0	9,725.0	28.7	22.9	9.01	1,508.0	1,021.0	1,645.3	1,593.3	51.95	31.673	
12,800.0	11,350.0	11,142.0	9,725.0	29.0	23.4	9.01	1,608.0	1,020.6	1,645.3	1,592.4	52.85	31.129	
12,900.0	11,350.0	11,242.0	9,725.0	29.4	24.0	9.01	1,708.0	1,020.2	1,645.3	1,591.5	53.79	30.587	
13,000.0	11,350.0	11,342.0	9,725.0	29.7	24.7	9.01	1,808.0	1,019.8	1,645.3	1,590.5	54.76	30.048	
13,100.0	11,350.0	11,442.0	9,725.0	30.1	25.3	9.01	1,908.0	1,019.4	1,645.3	1,589.5	55.75	29.513	
13,200.0	11,350.0	11,542.0	9,725.0	30.4	26.0	9.01	2,008.0	1,019.0	1,645.3	1,588.5	56.77	28.984	
13,300.0	11,350.0	11,642.0	9,725.0	30.8	26.7	9.01	2,108.0	1,018.6	1,645.3	1,587.5	57.81	28.461	
13,400.0	11,350.0	11,742.0	9,725.0	31.2	27.4	9.01	2,208.0	1,018.2	1,645.3	1,586.4	58.87	27.947	
13,500.0	11,350.0	11,842.0	9,725.0	31.6	28.2	9.01	2,308.0	1,017.8	1,645.3	1,585.3	59.96	27.441	
13,600.0	11,350.0	11,942.0	9,725.0	32.1	28.9	9.01	2,408.0	1,017.4	1,645.3	1,584.2	61.06	26.943	
13,700.0	11,350.0	12,042.0	9,725.0	32.5	29.7	9.01	2,508.0	1,017.0	1,645.3	1,583.1	62.19	26.456	
13,800.0	11,350.0	12,142.0	9,725.0	33.0	30.4	9.01	2,608.0	1,016.6	1,645.3	1,582.0	63.33	25.978	
13,900.0	11,350.0	12,242.0	9,725.0	33.4	31.2	9.01	2,708.0	1,016.2	1,645.3	1,580.8	64.50	25.510	
14,000.0	11,350.0	12,342.0	9,725.0	33.9	32.0	9.01	2,808.0	1,015.8	1,645.3	1,579.6	65.67	25.053	
14,100.0	11,350.0	12,442.0	9,725.0	34.4	32.8	9.01	2,908.0	1,015.4	1,645.3	1,578.4	66.87	24.606	
14,200.0	11,350.0	12,542.0	9,725.0	34.9	33.6	9.01	3,008.0	1,015.0	1,645.3	1,577.2	68.07	24.169	
14,300.0	11,350.0	12,642.0	9,725.0	35.4	34.5	9.01	3,108.0	1,014.6	1,645.3	1,576.0	69.30	23.743	
14,400.0	11,350.0	12,742.0	9,725.0	35.9	35.3	9.01	3,208.0	1,014.2	1,645.3	1,574.8	70.53	23.327	
14,500.0	11,350.0	12,842.0	9,725.0	36.4	36.1	9.01	3,308.0	1,013.8	1,645.3	1,573.5	71.78	22.922	
14,600.0	11,350.0	12,942.0	9,725.0	36.9	37.0	9.01	3,408.0	1,013.4	1,645.3	1,572.3	73.04	22.527	
14,700.0	11,350.0	13,042.0	9,725.0	37.5	37.8	9.01	3,508.0	1,013.0	1,645.3	1,571.0	74.31	22.142	
14,800.0	11,350.0	13,142.0	9,725.0	38.0	38.7	9.01	3,608.0	1,012.6	1,645.3	1,569.7	75.59	21.767	
14,900.0	11,350.0	13,242.0	9,725.0	38.6	39.5	9.01	3,708.0	1,012.2	1,645.3	1,568.4	76.88	21.401	
15,000.0	11,350.0	13,342.0	9,725.0	39.2	40.4	9.01	3,808.0	1,011.8	1,645.3	1,567.1	78.18	21.045	
15,100.0	11,350.0	13,442.0	9,725.0	39.7	41.3	9.01	3,908.0	1,011.5	1,645.3	1,565.8	79.49	20.698	
15,200.0	11,350.0	13,542.0	9,725.0	40.3	42.1	9.01	4,008.0	1,011.1	1,645.3	1,564.5	80.81	20.361	
15,300.0	11,350.0	13,642.0	9,725.0	40.9	43.0	9.01	4,108.0	1,010.7	1,645.3	1,563.2	82.13	20.032	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 503H - 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		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)			
15,400.0	11,350.0	13,742.0	9,725.0	41.5	43.9	9.01	4,208.0	1,010.3	1,645.3	1,561.8	83.47	19.712	
15,500.0	11,350.0	13,842.0	9,725.0	42.1	44.8	9.01	4,308.0	1,009.9	1,645.3	1,560.5	84.81	19.400	
15,600.0	11,350.0	13,942.0	9,725.0	42.7	45.7	9.01	4,408.0	1,009.5	1,645.3	1,559.1	86.16	19.096	
15,700.0	11,350.0	14,042.0	9,725.0	43.3	46.6	9.01	4,508.0	1,009.1	1,645.3	1,557.8	87.52	18.800	
15,800.0	11,350.0	14,142.0	9,725.0	43.9	47.5	9.01	4,608.0	1,008.7	1,645.3	1,556.4	88.88	18.512	
15,900.0	11,350.0	14,242.0	9,725.0	44.5	48.4	9.01	4,708.0	1,008.3	1,645.3	1,555.1	90.25	18.231	
16,000.0	11,350.0	14,342.0	9,725.0	45.1	49.3	9.01	4,808.0	1,007.9	1,645.3	1,553.7	91.62	17.958	
16,100.0	11,350.0	14,442.0	9,725.0	45.7	50.2	9.01	4,908.0	1,007.5	1,645.3	1,552.3	93.00	17.691	
16,200.0	11,350.0	14,542.0	9,725.0	46.4	51.1	9.01	5,008.0	1,007.1	1,645.3	1,550.9	94.39	17.431	
16,300.0	11,350.0	14,642.0	9,725.0	47.0	52.0	9.01	5,108.0	1,006.7	1,645.3	1,549.5	95.78	17.178	
16,400.0	11,350.0	14,742.0	9,725.0	47.6	52.9	9.01	5,208.0	1,006.3	1,645.3	1,548.1	97.17	16.931	
16,500.0	11,350.0	14,842.0	9,725.0	48.3	53.8	9.01	5,308.0	1,005.9	1,645.3	1,546.7	98.58	16.691	
16,600.0	11,350.0	14,942.0	9,725.0	48.9	54.8	9.01	5,408.0	1,005.5	1,645.3	1,545.3	99.98	16.456	
16,700.0	11,350.0	15,042.0	9,725.0	49.6	55.7	9.01	5,508.0	1,005.1	1,645.3	1,543.9	101.39	16.228	
16,800.0	11,350.0	15,142.0	9,725.0	50.2	56.6	9.01	5,608.0	1,004.7	1,645.3	1,542.5	102.80	16.004	
16,900.0	11,350.0	15,242.0	9,725.0	50.9	57.5	9.01	5,708.0	1,004.3	1,645.3	1,541.1	104.22	15.787	
17,000.0	11,350.0	15,342.0	9,725.0	51.5	58.4	9.01	5,808.0	1,003.9	1,645.3	1,539.7	105.64	15.574	
17,100.0	11,350.0	15,442.0	9,725.0	52.2	59.4	9.01	5,908.0	1,003.5	1,645.3	1,538.2	107.07	15.367	
17,200.0	11,350.0	15,542.0	9,725.0	52.8	60.3	9.01	6,007.9	1,003.1	1,645.3	1,536.8	108.50	15.165	
17,300.0	11,350.0	15,642.0	9,725.0	53.5	61.2	9.01	6,107.9	1,002.7	1,645.3	1,535.4	109.93	14.967	
17,400.0	11,350.0	15,742.0	9,725.0	54.2	62.2	9.01	6,207.9	1,002.3	1,645.3	1,533.9	111.36	14.774	
17,500.0	11,350.0	15,842.0	9,725.0	54.8	63.1	9.01	6,307.9	1,001.9	1,645.3	1,532.5	112.80	14.586	
17,600.0	11,350.0	15,942.0	9,725.0	55.5	64.0	9.01	6,407.9	1,001.5	1,645.3	1,531.1	114.24	14.402	
17,700.0	11,350.0	16,042.0	9,725.0	56.2	64.9	9.01	6,507.9	1,001.1	1,645.3	1,529.6	115.69	14.222	
17,800.0	11,350.0	16,142.0	9,725.0	56.9	65.9	9.01	6,607.9	1,000.7	1,645.3	1,528.2	117.14	14.046	
17,900.0	11,350.0	16,242.0	9,725.0	57.5	66.8	9.01	6,707.9	1,000.3	1,645.3	1,526.7	118.59	13.875	
18,000.0	11,350.0	16,342.0	9,725.0	58.2	67.8	9.01	6,807.9	999.9	1,645.3	1,525.3	120.04	13.707	
18,100.0	11,350.0	16,442.0	9,725.0	58.9	68.7	9.01	6,907.9	999.5	1,645.3	1,523.8	121.49	13.542	
18,200.0	11,350.0	16,542.0	9,725.0	59.6	69.6	9.01	7,007.9	999.1	1,645.3	1,522.4	122.95	13.382	
18,300.0	11,350.0	16,642.0	9,725.0	60.3	70.6	9.01	7,107.9	998.7	1,645.3	1,520.9	124.41	13.225	
18,400.0	11,350.0	16,742.0	9,725.0	61.0	71.5	9.01	7,207.9	998.3	1,645.3	1,519.4	125.87	13.071	
18,500.0	11,350.0	16,842.0	9,725.0	61.7	72.4	9.01	7,307.9	997.9	1,645.3	1,518.0	127.34	12.921	
18,600.0	11,350.0	16,942.0	9,725.0	62.3	73.4	9.01	7,407.9	997.5	1,645.3	1,516.5	128.80	12.774	
18,700.0	11,350.0	17,042.0	9,725.0	63.0	74.3	9.01	7,507.9	997.2	1,645.3	1,515.0	130.27	12.630	
18,800.0	11,350.0	17,142.0	9,725.0	63.7	75.3	9.01	7,607.9	996.8	1,645.3	1,513.6	131.74	12.489	
18,900.0	11,350.0	17,242.0	9,725.0	64.4	76.2	9.01	7,707.9	996.4	1,645.3	1,512.1	133.21	12.351	
19,000.0	11,350.0	17,342.0	9,725.0	65.1	77.2	9.01	7,807.9	996.0	1,645.3	1,510.6	134.69	12.216	
19,100.0	11,350.0	17,442.0	9,725.0	65.8	78.1	9.01	7,907.9	995.6	1,645.3	1,509.2	136.16	12.083	
19,200.0	11,350.0	17,542.0	9,725.0	66.5	79.1	9.01	8,007.9	995.2	1,645.3	1,507.7	137.64	11.954	
19,300.0	11,350.0	17,642.0	9,725.0	67.2	80.0	9.01	8,107.9	994.8	1,645.3	1,506.2	139.12	11.827	
19,400.0	11,350.0	17,742.0	9,725.0	67.9	80.9	9.01	8,207.9	994.4	1,645.3	1,504.7	140.60	11.702	
19,500.0	11,350.0	17,842.0	9,725.0	68.6	81.9	9.01	8,307.9	994.0	1,645.3	1,503.2	142.08	11.580	
19,600.0	11,350.0	17,942.0	9,725.0	69.4	82.8	9.01	8,407.9	993.6	1,645.3	1,501.8	143.57	11.460	
19,700.0	11,350.0	18,042.0	9,725.0	70.1	83.8	9.01	8,507.9	993.2	1,645.3	1,500.3	145.05	11.343	
19,800.0	11,350.0	18,142.0	9,725.0	70.8	84.7	9.02	8,607.9	992.8	1,645.3	1,498.8	146.54	11.228	
19,900.0	11,350.0	18,242.0	9,725.0	71.5	85.7	9.02	8,707.9	992.4	1,645.3	1,497.3	148.03	11.115	
20,000.0	11,350.0	18,342.0	9,725.0	72.2	86.6	9.02	8,807.9	992.0	1,645.3	1,495.8	149.52	11.004	
20,100.0	11,350.0	18,442.0	9,725.0	72.9	87.6	9.02	8,907.9	991.6	1,645.3	1,494.3	151.01	10.896	
20,200.0	11,350.0	18,542.0	9,725.0	73.6	88.5	9.02	9,007.9	991.2	1,645.3	1,492.8	152.50	10.789	
20,300.0	11,350.0	18,642.0	9,725.0	74.3	89.5	9.02	9,107.9	990.8	1,645.3	1,491.3	153.99	10.685	
20,400.0	11,350.0	18,742.0	9,725.0	75.1	90.4	9.02	9,207.9	990.4	1,645.3	1,489.8	155.49	10.582	
20,500.0	11,350.0	18,842.0	9,725.0	75.8	91.4	9.02	9,307.9	990.0	1,645.3	1,488.3	156.98	10.481	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 503H - 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		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)			
20,600.0	11,350.0	18,942.0	9,725.0	76.5	92.3	9.02	9,407.9	989.6	1,645.3	1,486.9	158.48	10.382	
20,700.0	11,350.0	19,042.0	9,725.0	77.2	93.3	9.02	9,507.9	989.2	1,645.3	1,485.4	159.98	10.285	
20,800.0	11,350.0	19,142.0	9,725.0	77.9	94.2	9.02	9,607.9	988.8	1,645.3	1,483.9	161.47	10.189	
20,900.0	11,350.0	19,242.0	9,725.0	78.7	95.2	9.02	9,707.9	988.4	1,645.3	1,482.4	162.97	10.096	
21,000.0	11,350.0	19,342.0	9,725.0	79.4	96.2	9.02	9,807.9	988.0	1,645.3	1,480.9	164.48	10.004	
21,100.0	11,350.0	19,442.0	9,725.0	80.1	97.1	9.02	9,907.9	987.6	1,645.3	1,479.4	165.98	9.913	
21,200.0	11,350.0	19,542.0	9,725.0	80.8	98.1	9.02	10,007.9	987.2	1,645.3	1,477.9	167.48	9.824	
21,300.0	11,350.0	19,642.0	9,725.0	81.5	99.0	9.02	10,107.9	986.8	1,645.3	1,476.3	168.98	9.737	
21,400.0	11,350.0	19,742.0	9,725.0	82.3	100.0	9.02	10,207.9	986.4	1,645.3	1,474.8	170.49	9.651	
21,500.0	11,350.0	19,842.0	9,725.0	83.0	100.9	9.02	10,307.9	986.0	1,645.3	1,473.3	171.99	9.566	
21,600.0	11,350.0	19,942.0	9,725.0	83.7	101.9	9.02	10,407.9	985.6	1,645.3	1,471.8	173.50	9.483	
21,700.0	11,350.0	20,042.0	9,725.0	84.4	102.8	9.02	10,507.9	985.2	1,645.3	1,470.3	175.01	9.402	
21,800.0	11,350.0	20,142.0	9,725.0	85.2	103.8	9.02	10,607.9	984.8	1,645.3	1,468.8	176.51	9.321	
21,900.0	11,350.0	20,242.0	9,725.0	85.9	104.8	9.02	10,707.9	984.4	1,645.3	1,467.3	178.02	9.242	
22,000.0	11,350.0	20,342.0	9,725.0	86.6	105.7	9.02	10,807.9	984.0	1,645.3	1,465.8	179.53	9.165	
22,100.0	11,350.0	20,442.0	9,725.0	87.4	106.7	9.02	10,907.9	983.6	1,645.3	1,464.3	181.04	9.088	
22,200.0	11,350.0	20,542.0	9,725.0	88.1	107.6	9.02	11,007.9	983.3	1,645.3	1,462.8	182.55	9.013	
22,300.0	11,350.0	20,642.0	9,725.0	88.8	108.6	9.02	11,107.9	982.9	1,645.3	1,461.3	184.07	8.939	
22,400.0	11,350.0	20,742.0	9,725.0	89.6	109.5	9.02	11,207.9	982.5	1,645.3	1,459.8	185.58	8.866	
22,500.0	11,350.0	20,842.0	9,725.0	90.3	110.5	9.02	11,307.9	982.1	1,645.3	1,458.2	187.09	8.794	
22,600.0	11,350.0	20,942.0	9,725.0	91.0	111.5	9.02	11,407.9	981.7	1,645.3	1,456.7	188.60	8.724	
22,700.0	11,350.0	21,042.0	9,725.0	91.8	112.4	9.02	11,507.9	981.3	1,645.3	1,455.2	190.12	8.654	
22,800.0	11,350.0	21,142.0	9,725.0	92.5	113.4	9.02	11,607.9	980.9	1,645.3	1,453.7	191.63	8.586	
22,900.0	11,350.0	21,242.0	9,725.0	93.2	114.3	9.02	11,707.9	980.5	1,645.3	1,452.2	193.15	8.519	
23,000.0	11,350.0	21,342.0	9,725.0	94.0	115.3	9.02	11,807.9	980.1	1,645.3	1,450.7	194.67	8.452	
23,100.0	11,350.0	21,442.0	9,725.0	94.7	116.2	9.02	11,907.9	979.7	1,645.3	1,449.2	196.18	8.387	
23,200.0	11,350.0	21,542.0	9,725.0	95.4	117.2	9.02	12,007.9	979.3	1,645.3	1,447.6	197.70	8.322	
23,300.0	11,350.0	21,642.0	9,725.0	96.2	118.2	9.02	12,107.9	978.9	1,645.3	1,446.1	199.22	8.259	
23,400.0	11,350.0	21,742.0	9,725.0	96.9	119.1	9.02	12,207.9	978.5	1,645.3	1,444.6	200.74	8.197	
23,500.0	11,350.0	21,842.0	9,725.0	97.6	120.1	9.02	12,307.9	978.1	1,645.3	1,443.1	202.25	8.135	
23,600.0	11,350.0	21,942.0	9,725.0	98.4	121.0	9.02	12,407.9	977.7	1,645.3	1,441.6	203.77	8.074	
23,700.0	11,350.0	22,042.0	9,725.0	99.1	122.0	9.02	12,507.9	977.3	1,645.3	1,440.1	205.29	8.015	
23,800.0	11,350.0	22,142.0	9,725.0	99.9	123.0	9.02	12,607.9	976.9	1,645.3	1,438.5	206.81	7.956	
23,900.0	11,350.0	22,242.0	9,725.0	100.6	123.9	9.02	12,707.9	976.5	1,645.3	1,437.0	208.33	7.898	
24,000.0	11,350.0	22,342.0	9,725.0	101.3	124.9	9.02	12,807.9	976.1	1,645.3	1,435.5	209.86	7.840	
24,100.0	11,350.0	22,442.0	9,725.0	102.1	125.8	9.02	12,907.9	975.7	1,645.3	1,434.0	211.38	7.784	
24,200.0	11,350.0	22,542.0	9,725.0	102.8	126.8	9.02	13,007.9	975.3	1,645.3	1,432.4	212.90	7.728	
24,300.0	11,350.0	22,642.0	9,725.0	103.5	127.8	9.02	13,107.9	974.9	1,645.4	1,430.9	214.42	7.673	
24,400.0	11,350.0	22,742.0	9,725.0	104.3	128.7	9.02	13,207.9	974.5	1,645.4	1,429.4	215.95	7.619	
24,500.0	11,350.0	22,842.0	9,725.0	105.0	129.7	9.02	13,307.9	974.1	1,645.4	1,427.9	217.47	7.566	
24,600.0	11,350.0	22,942.0	9,725.0	105.8	130.7	9.02	13,407.9	973.7	1,645.4	1,426.4	218.99	7.513	
24,700.0	11,350.0	23,042.0	9,725.0	106.5	131.6	9.02	13,507.9	973.3	1,645.4	1,424.8	220.52	7.461	
24,710.3	11,350.0	23,052.4	9,725.0	106.6	131.7	9.02	13,518.2	973.3	1,645.4	1,424.7	220.68	7.456	
24,799.9	11,350.0	23,140.7	9,725.0	107.3	132.6	9.02	13,606.6	972.9	1,645.4	1,423.3	222.04	7.410	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 504H - 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)			
0.0	0.0	0.0	0.0	3.0	3.0	80.94	221.6	1,390.0	1,407.6	1,401.2	6.43	218.948	
100.0	100.0	100.0	100.0	3.2	3.2	80.94	221.6	1,390.0	1,407.6	1,400.7	6.89	204.225	
200.0	200.0	200.0	200.0	3.5	3.5	80.94	221.6	1,390.0	1,407.6	1,400.3	7.33	192.080	
300.0	300.0	300.0	300.0	3.7	3.7	80.94	221.6	1,390.0	1,407.6	1,399.9	7.74	181.828	
400.0	400.0	400.0	400.0	3.9	3.9	80.94	221.6	1,390.0	1,407.6	1,399.5	8.14	173.018	
500.0	500.0	500.0	500.0	4.1	4.1	80.94	221.6	1,390.0	1,407.6	1,399.1	8.51	165.336	
600.0	600.0	600.0	600.0	4.2	4.2	80.94	221.6	1,390.0	1,407.6	1,398.7	8.88	158.555	
700.0	700.0	700.0	700.0	4.4	4.4	80.94	221.6	1,390.0	1,407.6	1,398.4	9.23	152.511	
800.0	800.0	800.0	800.0	4.6	4.6	80.94	221.6	1,390.0	1,407.6	1,398.0	9.57	147.076	
900.0	900.0	900.0	900.0	4.8	4.8	80.94	221.6	1,390.0	1,407.6	1,397.7	9.90	142.154	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	80.94	221.6	1,390.0	1,407.6	1,397.4	10.22	137.666	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	80.94	221.6	1,390.0	1,407.6	1,397.1	10.54	133.552	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	80.94	221.6	1,390.0	1,407.6	1,396.7	10.85	129.761	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	80.94	221.6	1,390.0	1,407.6	1,396.4	11.15	126.253	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	80.94	221.6	1,390.0	1,407.6	1,396.2	11.44	122.994	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	80.94	221.6	1,390.0	1,407.6	1,395.9	11.73	119.954	
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	80.94	221.6	1,390.0	1,407.6	1,395.6	12.02	117.110	
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	80.94	221.6	1,390.0	1,407.6	1,395.3	12.30	114.442	
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	80.94	221.6	1,390.0	1,407.6	1,395.0	12.58	111.931	CC
1,900.0	1,900.0	1,873.8	1,873.8	6.3	6.2	-54.10	221.9	1,390.7	1,407.8	1,394.9	12.82	109.788	ES
2,000.0	1,999.9	1,947.6	1,947.5	6.4	6.4	-54.21	222.8	1,392.6	1,408.2	1,395.2	13.05	107.874	
2,100.0	2,099.7	2,021.2	2,021.1	6.6	6.5	-54.40	224.3	1,395.8	1,409.1	1,395.8	13.29	106.012	
2,200.0	2,199.3	2,100.0	2,099.7	6.8	6.6	-54.68	226.6	1,400.7	1,410.3	1,396.7	13.55	104.068	
2,300.0	2,298.7	2,167.9	2,167.3	6.9	6.8	-54.98	229.1	1,406.1	1,412.6	1,398.9	13.79	102.424	
2,400.0	2,398.2	2,240.9	2,240.0	7.1	6.9	-55.31	232.4	1,413.1	1,416.9	1,402.9	14.06	100.801	
2,500.0	2,497.6	2,313.8	2,312.2	7.4	7.1	-55.66	236.2	1,421.3	1,423.2	1,408.8	14.32	99.385	
2,600.0	2,597.1	2,393.2	2,390.8	7.6	7.2	-56.02	240.5	1,431.6	1,431.1	1,416.6	14.57	98.199	
2,700.0	2,696.5	2,475.1	2,471.9	7.8	7.4	-56.35	243.8	1,443.5	1,440.4	1,425.5	14.90	96.685	
2,800.0	2,795.9	2,557.4	2,553.0	8.1	7.6	-39.45	245.9	1,456.6	1,449.5	1,434.2	15.26	94.992	
2,900.0	2,895.2	2,650.7	2,645.0	8.4	7.9	-25.40	247.1	1,472.7	1,456.4	1,440.7	15.72	92.676	
3,000.0	2,994.2	2,750.6	2,743.3	8.6	8.1	-15.12	248.3	1,490.0	1,460.4	1,444.1	16.27	89.786	
3,100.0	3,092.8	2,850.6	2,841.8	8.9	8.4	-9.18	249.5	1,507.4	1,461.4	1,444.6	16.79	87.014	
3,200.0	3,191.3	2,950.6	2,940.3	9.1	8.7	-9.19	250.7	1,524.7	1,461.4	1,444.0	17.39	84.019	
3,300.0	3,289.8	3,050.6	3,038.8	9.4	9.1	-9.20	251.9	1,542.0	1,461.4	1,443.4	18.01	81.146	
3,400.0	3,388.3	3,150.6	3,137.3	9.7	9.4	-9.21	253.2	1,559.3	1,461.5	1,442.8	18.65	78.362	
3,500.0	3,486.8	3,250.6	3,235.7	10.0	9.7	-9.22	254.4	1,576.7	1,461.5	1,442.2	19.31	75.678	
3,600.0	3,585.2	3,350.6	3,334.2	10.4	10.1	-9.22	255.6	1,594.0	1,461.5	1,441.5	19.99	73.101	
3,700.0	3,683.7	3,450.6	3,432.7	10.7	10.4	-9.23	256.8	1,611.3	1,461.6	1,440.9	20.69	70.634	
3,800.0	3,782.2	3,550.6	3,531.2	11.0	10.8	-9.24	258.0	1,628.6	1,461.6	1,440.2	21.41	68.278	
3,900.0	3,880.7	3,650.6	3,629.7	11.4	11.2	-9.25	259.2	1,645.9	1,461.6	1,439.5	22.14	66.032	
4,000.0	3,979.2	3,750.6	3,728.1	11.8	11.5	-9.26	260.4	1,663.3	1,461.7	1,438.8	22.88	63.894	
4,100.0	4,077.6	3,850.6	3,826.6	12.1	11.9	-9.27	261.6	1,680.6	1,461.7	1,438.1	23.63	61.859	
4,200.0	4,176.1	3,950.6	3,925.1	12.5	12.3	-9.28	262.9	1,697.9	1,461.7	1,437.4	24.39	59.925	
4,300.0	4,274.6	4,050.6	4,023.6	12.9	12.7	-9.29	264.1	1,715.2	1,461.8	1,436.6	25.17	58.086	
4,400.0	4,373.1	4,150.6	4,122.1	13.3	13.1	-9.29	265.3	1,732.6	1,461.8	1,435.9	25.95	56.338	
4,500.0	4,471.6	4,250.6	4,220.5	13.6	13.5	-9.30	266.5	1,749.9	1,461.9	1,435.1	26.74	54.677	
4,600.0	4,570.0	4,350.6	4,319.0	14.0	13.9	-9.31	267.7	1,767.2	1,461.9	1,434.4	27.53	53.097	
4,700.0	4,668.5	4,450.6	4,417.5	14.4	14.3	-9.32	268.9	1,784.5	1,461.9	1,433.6	28.34	51.594	
4,800.0	4,767.0	4,550.6	4,516.0	14.8	14.7	-9.33	270.1	1,801.8	1,462.0	1,432.8	29.14	50.163	
4,900.0	4,865.5	4,650.6	4,614.5	15.2	15.1	-9.34	271.3	1,819.2	1,462.0	1,432.0	29.96	48.801	
5,000.0	4,964.0	4,750.6	4,712.9	15.6	15.5	-9.35	272.5	1,836.5	1,462.0	1,431.2	30.78	47.503	
5,100.0	5,062.4	4,850.6	4,811.4	16.0	16.0	-9.36	273.8	1,853.8	1,462.1	1,430.5	31.60	46.266	

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 WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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: THUNDERDOME PROJECT - *THUNDERDOME FED COM 504H - 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)			
5,200.0	5,160.9	4,950.6	4,909.9	16.4	16.4	-9.36	275.0	1,871.1	1,462.1	1,429.7	32.43	45.085	
5,300.0	5,259.4	5,050.6	5,008.4	16.9	16.8	-9.37	276.2	1,888.5	1,462.1	1,428.9	33.26	43.958	
5,400.0	5,357.9	5,150.6	5,106.9	17.3	17.2	-9.38	277.4	1,905.8	1,462.2	1,428.1	34.10	42.882	
5,500.0	5,456.4	5,250.6	5,205.3	17.7	17.6	-9.39	278.6	1,923.1	1,462.2	1,427.3	34.94	41.853	
5,600.0	5,554.8	5,350.6	5,303.8	18.1	18.1	-9.40	279.8	1,940.4	1,462.2	1,426.5	35.78	40.869	
5,700.0	5,653.3	5,450.6	5,402.3	18.5	18.5	-9.41	281.0	1,957.7	1,462.3	1,425.7	36.62	39.927	
5,800.0	5,751.8	5,550.6	5,500.8	18.9	18.9	-9.42	282.2	1,975.1	1,462.3	1,424.8	37.47	39.024	
5,900.0	5,850.3	5,650.6	5,599.3	19.4	19.4	-9.43	283.4	1,992.4	1,462.3	1,424.0	38.32	38.159	
6,000.0	5,948.8	5,750.6	5,697.8	19.8	19.8	-9.44	284.7	2,009.7	1,462.4	1,423.2	39.17	37.330	
6,100.0	6,047.3	5,850.6	5,796.2	20.2	20.2	-9.44	285.9	2,027.0	1,462.4	1,422.4	40.03	36.533	
6,200.0	6,145.7	5,950.6	5,894.7	20.7	20.7	-9.45	287.1	2,044.4	1,462.5	1,421.6	40.89	35.769	
6,300.0	6,244.2	6,050.6	5,993.2	21.1	21.1	-9.46	288.3	2,061.7	1,462.5	1,420.7	41.75	35.034	
6,400.0	6,342.7	6,150.6	6,091.7	21.5	21.5	-9.47	289.5	2,079.0	1,462.5	1,419.9	42.61	34.327	
6,500.0	6,441.2	6,250.6	6,190.2	21.9	22.0	-9.48	290.7	2,096.3	1,462.8	1,419.3	43.45	33.668	
6,600.0	6,540.0	6,350.6	6,288.6	22.3	22.4	-9.48	291.9	2,113.6	1,464.6	1,420.3	44.30	33.058	
6,700.0	6,639.0	6,450.5	6,387.0	22.8	22.8	-9.47	293.1	2,131.0	1,468.1	1,422.9	45.15	32.517	
6,800.0	6,738.3	6,550.4	6,485.4	23.2	23.3	-9.45	294.3	2,148.3	1,473.3	1,427.3	45.98	32.040	
6,900.0	6,837.7	6,650.1	6,583.6	23.6	23.7	-9.43	295.6	2,165.5	1,480.3	1,433.5	46.81	31.625	
7,000.0	6,937.4	6,767.9	6,699.7	23.9	24.3	-9.39	296.9	2,185.5	1,488.6	1,440.9	47.75	31.175	
7,100.0	7,037.1	6,902.2	6,832.4	24.3	24.9	-9.35	298.4	2,205.6	1,496.6	1,448.0	48.69	30.735	
7,200.0	7,137.0	7,036.7	6,965.9	24.6	25.4	-9.30	299.5	2,222.6	1,504.1	1,454.5	49.55	30.356	
7,300.0	7,236.9	7,171.6	7,100.0	24.9	26.0	-9.26	300.5	2,236.5	1,510.9	1,460.6	50.33	30.020	
7,400.0	7,336.9	7,306.7	7,234.7	25.2	26.5	-9.23	301.3	2,247.3	1,517.1	1,466.1	51.02	29.738	
7,500.0	7,436.9	7,442.1	7,369.8	25.2	26.9	77.56	301.8	2,254.9	1,522.5	1,471.0	51.45	29.589	
7,600.0	7,536.9	7,577.7	7,505.4	25.3	27.3	77.58	302.1	2,259.3	1,525.7	1,473.9	51.79	29.459	
7,700.0	7,636.9	7,709.2	7,636.9	25.3	27.6	77.59	302.2	2,260.5	1,526.6	1,474.7	51.93	29.400	
7,800.0	7,736.9	7,809.2	7,736.9	25.3	27.7	77.59	302.2	2,260.5	1,526.6	1,474.6	52.06	29.325	
7,900.0	7,836.9	7,909.2	7,836.9	25.4	27.7	77.59	302.2	2,260.5	1,526.6	1,474.5	52.13	29.287	
8,000.0	7,936.9	8,009.2	7,936.9	25.4	27.7	77.59	302.2	2,260.5	1,526.6	1,474.4	52.19	29.250	
8,100.0	8,036.9	8,109.2	8,036.9	25.4	27.8	77.59	302.2	2,260.5	1,526.6	1,474.4	52.26	29.212	
8,200.0	8,136.9	8,209.2	8,136.9	25.5	27.8	77.59	302.2	2,260.5	1,526.6	1,474.3	52.33	29.174	
8,300.0	8,236.9	8,309.2	8,236.9	25.5	27.8	77.59	302.2	2,260.5	1,526.6	1,474.2	52.40	29.136	
8,400.0	8,336.9	8,409.2	8,336.9	25.5	27.9	77.59	302.2	2,260.5	1,526.6	1,474.2	52.46	29.098	
8,500.0	8,436.9	8,509.2	8,436.9	25.6	27.9	77.59	302.2	2,260.5	1,526.6	1,474.1	52.53	29.060	
8,600.0	8,536.9	8,609.2	8,536.9	25.6	27.9	77.59	302.2	2,260.5	1,526.6	1,474.0	52.60	29.022	
8,700.0	8,636.9	8,709.2	8,636.9	25.7	28.0	77.59	302.2	2,260.5	1,526.6	1,473.9	52.67	28.983	
8,800.0	8,736.9	8,809.2	8,736.9	25.7	28.0	77.59	302.2	2,260.5	1,526.6	1,473.9	52.74	28.945	
8,900.0	8,836.9	8,909.2	8,836.9	25.7	28.0	77.59	302.2	2,260.5	1,526.6	1,473.8	52.81	28.906	
9,000.0	8,936.9	9,009.2	8,936.9	25.8	28.1	77.59	302.2	2,260.5	1,526.6	1,473.7	52.88	28.868	
9,100.0	9,036.9	9,109.2	9,036.9	25.8	28.1	77.59	302.2	2,260.5	1,526.6	1,473.7	52.95	28.829	
9,200.0	9,136.9	9,209.2	9,136.9	25.8	28.1	77.59	302.2	2,260.5	1,526.6	1,473.6	53.02	28.791	
9,300.0	9,236.9	9,278.5	9,206.1	25.9	28.2	77.50	304.8	2,260.5	1,527.5	1,474.3	53.20	28.713	
9,400.0	9,336.9	9,350.0	9,276.7	25.9	28.2	77.09	315.9	2,260.5	1,530.8	1,477.4	53.35	28.691 SF	
9,500.0	9,436.9	9,400.0	9,324.9	25.9	28.2	76.61	328.9	2,260.4	1,536.6	1,483.0	53.53	28.704	
9,600.0	9,536.9	9,450.0	9,371.9	26.0	28.3	75.99	346.1	2,260.4	1,545.3	1,491.6	53.67	28.794	
9,700.0	9,636.9	9,500.0	9,417.2	26.0	28.3	75.23	367.2	2,260.3	1,557.2	1,503.5	53.77	28.963	
9,800.0	9,736.9	9,550.0	9,460.4	26.1	28.4	74.33	392.3	2,260.2	1,572.6	1,518.8	53.83	29.215	
9,900.0	9,836.9	9,600.0	9,501.3	26.1	28.4	73.31	421.0	2,260.0	1,591.8	1,537.9	53.86	29.555	
10,000.0	9,936.9	9,636.8	9,529.8	26.1	28.5	72.49	444.4	2,259.9	1,615.0	1,561.1	53.86	29.986	
10,100.0	10,036.9	9,671.1	9,554.9	26.2	28.5	71.67	467.7	2,259.9	1,642.2	1,588.4	53.82	30.514	
10,200.0	10,136.9	9,700.0	9,574.9	26.2	28.5	70.95	488.6	2,259.8	1,673.7	1,619.9	53.75	31.141	
10,300.0	10,236.9	9,729.1	9,594.0	26.2	28.6	70.20	510.6	2,259.7	1,709.2	1,655.6	53.64	31.863	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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:		THUNDERDOME PROJECT - *THUNDERDOME FED COM 504H - OWB - PWP0											Offset Site Error:		0.0 usft	
Survey Program:		0-r.5 MWD+IFR1+MS						Rule Assigned:				Offset Well Error:		3.0 usft		
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance			Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
10,400.0	10,336.9	9,750.0	9,607.0	26.3	28.6	69.65	526.9	2,259.6	1,748.9	1,695.4	53.51	32.685				
10,500.0	10,436.9	9,775.7	9,622.2	26.3	28.6	68.95	547.7	2,259.5	1,792.4	1,739.0	53.36	33.589				
10,600.0	10,536.9	9,800.0	9,635.6	26.4	28.6	68.27	567.9	2,259.4	1,839.7	1,786.5	53.21	34.575				
10,700.0	10,636.9	9,800.0	9,635.6	26.4	28.6	68.27	567.9	2,259.4	1,890.7	1,837.7	53.00	35.677				
10,800.0	10,736.9	9,829.8	9,650.9	26.4	28.7	67.43	593.4	2,259.3	1,944.8	1,891.9	52.86	36.790				

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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:		THUNDERDOME PROJECT - *THUNDERDOME FED COM 505H - OWB - PWP0												Offset Site Error:		0.0 usft
Survey Program:		0-r.5 MWD+IFR1+MS								Rule Assigned:				Offset Well Error:		3.0 usft
Measured Depth	Reference	Measured Depth	Offset	Semi Major Axis	Offset	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor				
0.0	0.0	0.0	0.0	3.0	3.0	81.13	221.6	1,420.0	1,437.2	1,430.8	6.43	223.557				
100.0	100.0	100.0	100.0	3.2	3.2	81.13	221.6	1,420.0	1,437.2	1,430.3	6.89	208.525				
200.0	200.0	200.0	200.0	3.5	3.5	81.13	221.6	1,420.0	1,437.2	1,429.9	7.33	196.124				
300.0	300.0	300.0	300.0	3.7	3.7	81.13	221.6	1,420.0	1,437.2	1,429.5	7.74	185.656				
400.0	400.0	400.0	400.0	3.9	3.9	81.13	221.6	1,420.0	1,437.2	1,429.1	8.14	176.661				
500.0	500.0	500.0	500.0	4.1	4.1	81.13	221.6	1,420.0	1,437.2	1,428.7	8.51	168.816				
600.0	600.0	600.0	600.0	4.2	4.2	81.13	221.6	1,420.0	1,437.2	1,428.4	8.88	161.893				
700.0	700.0	700.0	700.0	4.4	4.4	81.13	221.6	1,420.0	1,437.2	1,428.0	9.23	155.722				
800.0	800.0	800.0	800.0	4.6	4.6	81.13	221.6	1,420.0	1,437.2	1,427.7	9.57	150.173				
900.0	900.0	900.0	900.0	4.8	4.8	81.13	221.6	1,420.0	1,437.2	1,427.3	9.90	145.147				
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	81.13	221.6	1,420.0	1,437.2	1,427.0	10.22	140.564				
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	81.13	221.6	1,420.0	1,437.2	1,426.7	10.54	136.364				
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	81.13	221.6	1,420.0	1,437.2	1,426.4	10.85	132.493				
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	81.13	221.6	1,420.0	1,437.2	1,426.1	11.15	128.911				
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	81.13	221.6	1,420.0	1,437.2	1,425.8	11.44	125.583				
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	81.13	221.6	1,420.0	1,437.2	1,425.5	11.73	122.479				
1,600.0	1,600.0	1,600.0	1,600.0	5.8	5.8	81.13	221.6	1,420.0	1,437.2	1,425.2	12.02	119.576				
1,700.0	1,700.0	1,700.0	1,700.0	6.0	6.0	81.13	221.6	1,420.0	1,437.2	1,424.9	12.30	116.851				
1,800.0	1,800.0	1,800.0	1,800.0	6.1	6.1	81.13	221.6	1,420.0	1,437.2	1,424.7	12.58	114.287	CC			
1,900.0	1,900.0	1,872.8	1,872.8	6.3	6.2	-53.90	221.6	1,420.7	1,437.4	1,424.6	12.82	112.118	ES			
2,000.0	1,999.9	1,945.6	1,945.5	6.4	6.4	-53.97	221.7	1,422.8	1,437.9	1,424.9	13.05	110.203				
2,100.0	2,099.7	2,018.3	2,018.2	6.6	6.5	-54.10	221.8	1,426.3	1,438.8	1,425.5	13.28	108.344				
2,200.0	2,199.3	2,100.0	2,099.7	6.8	6.6	-54.30	222.0	1,431.8	1,440.1	1,426.6	13.54	106.325				
2,300.0	2,298.7	2,163.5	2,162.9	6.9	6.7	-54.48	222.2	1,437.3	1,442.5	1,428.7	13.77	104.728				
2,400.0	2,398.2	2,236.0	2,235.0	7.1	6.9	-54.69	222.5	1,444.9	1,446.8	1,432.8	14.04	103.082				
2,500.0	2,497.6	2,300.0	2,298.6	7.4	7.0	-54.86	222.8	1,452.7	1,453.1	1,438.8	14.28	101.730				
2,600.0	2,597.1	2,380.6	2,378.3	7.6	7.2	-55.07	223.1	1,464.0	1,461.1	1,446.5	14.60	100.067				
2,700.0	2,696.5	2,452.5	2,449.4	7.8	7.4	-55.25	223.6	1,475.6	1,471.1	1,456.2	14.91	98.659				
2,800.0	2,795.9	2,524.4	2,520.1	8.1	7.6	-38.28	224.0	1,488.5	1,481.6	1,466.3	15.26	97.102				
2,900.0	2,895.2	2,600.0	2,594.2	8.4	7.8	-24.20	224.5	1,503.5	1,490.9	1,475.2	15.65	95.246				
3,000.0	2,994.2	2,668.2	2,660.7	8.6	8.0	-13.90	225.0	1,518.2	1,499.0	1,482.9	16.07	93.287				
3,100.0	3,092.8	2,740.0	2,730.6	8.9	8.3	-7.95	225.6	1,535.1	1,506.0	1,489.5	16.49	91.315				
3,200.0	3,191.3	2,816.3	2,804.4	9.1	8.5	-7.90	226.3	1,554.3	1,513.9	1,496.9	17.00	89.044				
3,300.0	3,289.8	2,916.0	2,900.6	9.4	8.8	-7.83	227.2	1,580.1	1,522.4	1,504.8	17.63	86.346				
3,400.0	3,388.3	3,015.6	2,996.8	9.7	9.2	-7.77	228.1	1,605.9	1,531.0	1,512.7	18.29	83.698				
3,500.0	3,486.8	3,115.2	3,093.1	10.0	9.5	-7.70	229.0	1,631.6	1,539.5	1,520.6	18.98	81.123				
3,600.0	3,585.2	3,214.8	3,189.3	10.4	9.9	-7.64	229.9	1,657.4	1,548.1	1,528.4	19.69	78.635				
3,700.0	3,683.7	3,314.4	3,285.5	10.7	10.2	-7.58	230.8	1,683.2	1,556.7	1,536.2	20.42	76.241				
3,800.0	3,782.2	3,414.0	3,381.7	11.0	10.6	-7.51	231.7	1,708.9	1,565.2	1,544.1	21.17	73.947				
3,900.0	3,880.7	3,513.7	3,478.0	11.4	11.0	-7.45	232.6	1,734.7	1,573.8	1,551.9	21.93	71.755				
4,000.0	3,979.2	3,613.3	3,574.2	11.8	11.4	-7.39	233.5	1,760.5	1,582.4	1,559.6	22.71	69.664				
4,100.0	4,077.6	3,712.9	3,670.4	12.1	11.8	-7.33	234.4	1,786.2	1,590.9	1,567.4	23.51	67.674				
4,200.0	4,176.1	3,812.5	3,766.6	12.5	12.2	-7.27	235.3	1,812.0	1,599.5	1,575.2	24.32	65.780				
4,300.0	4,274.6	3,912.1	3,862.9	12.9	12.7	-7.21	236.2	1,837.8	1,608.1	1,582.9	25.13	63.981				
4,400.0	4,373.1	4,011.8	3,959.1	13.3	13.1	-7.15	237.1	1,863.5	1,616.6	1,590.7	25.96	62.271				
4,500.0	4,471.6	4,111.4	4,055.3	13.6	13.5	-7.09	238.0	1,889.3	1,625.2	1,598.4	26.80	60.646				
4,600.0	4,570.0	4,211.0	4,151.5	14.0	14.0	-7.04	238.9	1,915.1	1,633.8	1,606.1	27.64	59.102				
4,700.0	4,668.5	4,310.6	4,247.8	14.4	14.4	-6.98	239.8	1,940.9	1,642.4	1,613.9	28.50	57.634				
4,800.0	4,767.0	4,410.2	4,344.0	14.8	14.8	-6.92	240.7	1,966.6	1,650.9	1,621.6	29.36	56.239				
4,900.0	4,865.5	4,509.8	4,440.2	15.2	15.3	-6.87	241.6	1,992.4	1,659.5	1,629.3	30.22	54.912				
5,000.0	4,964.0	4,609.5	4,536.4	15.6	15.7	-6.81	242.5	2,018.2	1,668.1	1,637.0	31.09	53.649				
5,100.0	5,062.4	4,709.1	4,632.6	16.0	16.2	-6.76	243.4	2,043.9	1,676.7	1,644.7	31.97	52.446				

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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

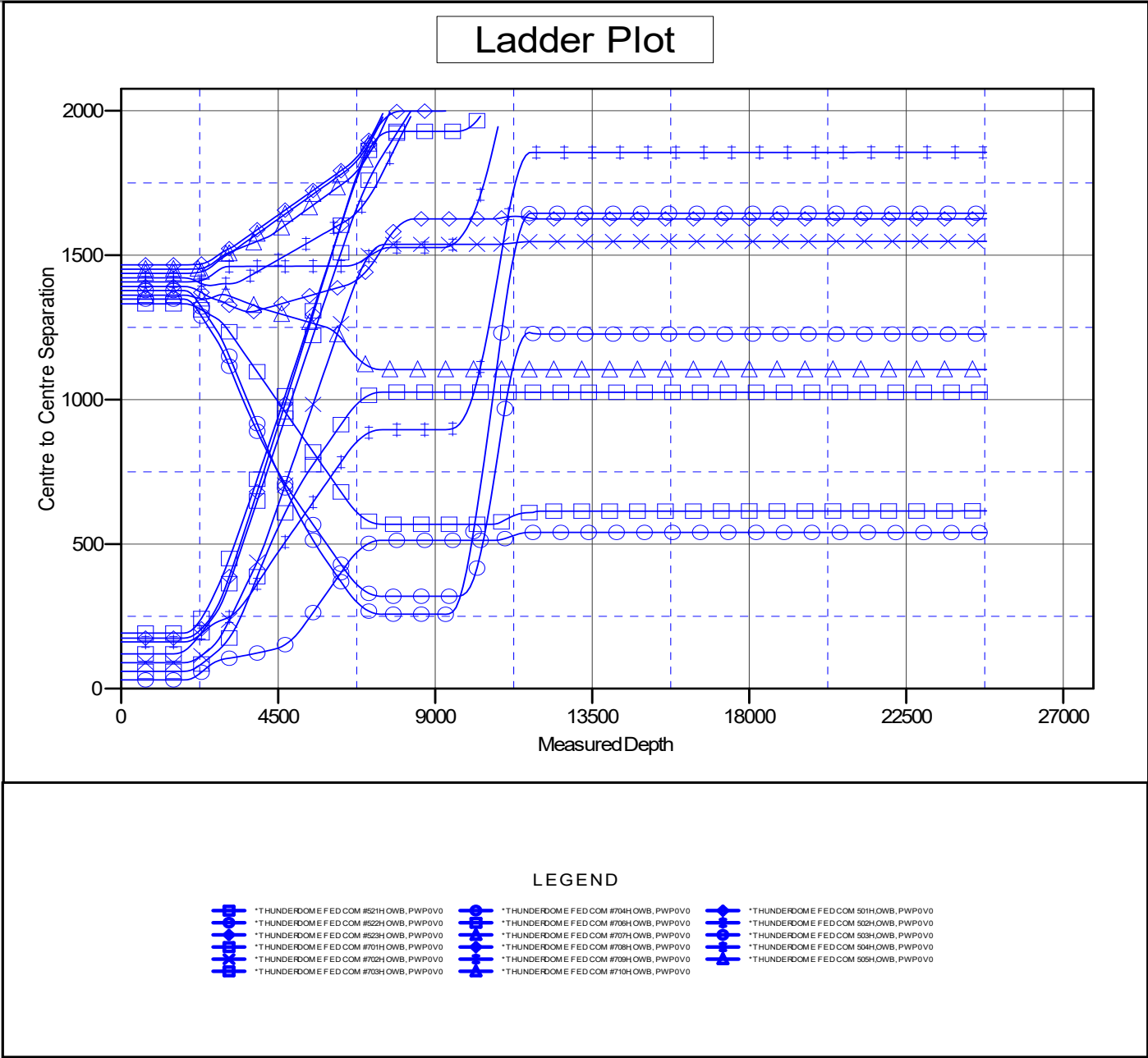
Offset Design: THUNDERDOME PROJECT - *THUNDERDOME FED COM 505H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
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)			
5,200.0	5,160.9	4,808.7	4,728.9	16.4	16.6	-6.70	244.3	2,069.7	1,685.3	1,652.4	32.85	51.300	
5,300.0	5,259.4	4,908.3	4,825.1	16.9	17.1	-6.65	245.2	2,095.5	1,693.8	1,660.1	33.74	50.207	
5,400.0	5,357.9	5,007.9	4,921.3	17.3	17.5	-6.60	246.1	2,121.2	1,702.4	1,667.8	34.63	49.164	
5,500.0	5,456.4	5,107.6	5,017.5	17.7	18.0	-6.55	247.0	2,147.0	1,711.0	1,675.5	35.52	48.169	
5,600.0	5,554.8	5,207.2	5,113.8	18.1	18.5	-6.49	247.9	2,172.8	1,719.6	1,683.2	36.42	47.218	
5,700.0	5,653.3	5,306.8	5,210.0	18.5	18.9	-6.44	248.8	2,198.5	1,728.2	1,690.9	37.32	46.308	
5,800.0	5,751.8	5,406.4	5,306.2	18.9	19.4	-6.39	249.7	2,224.3	1,736.8	1,698.6	38.22	45.438	
5,900.0	5,850.3	5,506.0	5,402.4	19.4	19.9	-6.34	250.6	2,250.1	1,745.4	1,706.3	39.13	44.605	
6,000.0	5,948.8	5,605.6	5,498.7	19.8	20.3	-6.29	251.5	2,275.8	1,754.0	1,713.9	40.04	43.806	
6,100.0	6,047.3	5,705.3	5,594.9	20.2	20.8	-6.24	252.4	2,301.6	1,762.6	1,721.6	40.95	43.041	
6,200.0	6,145.7	5,804.9	5,691.1	20.7	21.3	-6.19	253.3	2,327.4	1,771.2	1,729.3	41.87	42.307	
6,300.0	6,244.2	5,904.5	5,787.3	21.1	21.7	-6.15	254.2	2,353.1	1,779.8	1,737.0	42.78	41.601	
6,400.0	6,342.7	6,004.1	5,883.6	21.5	22.2	-6.10	255.1	2,378.9	1,788.4	1,744.7	43.70	40.924	
6,500.0	6,441.2	6,103.7	5,979.8	21.9	22.7	-6.06	256.0	2,404.7	1,797.2	1,752.6	44.60	40.296	
6,600.0	6,540.0	6,203.2	6,075.8	22.3	23.2	-6.01	256.9	2,430.4	1,807.6	1,762.1	45.51	39.717	
6,700.0	6,639.0	6,302.4	6,171.7	22.8	23.6	-5.97	257.8	2,456.1	1,819.7	1,773.3	46.41	39.206	
6,800.0	6,738.3	6,401.4	6,267.3	23.2	24.1	-5.92	258.7	2,481.7	1,833.5	1,786.2	47.30	38.761	
6,900.0	6,837.7	6,500.2	6,362.7	23.6	24.6	-5.87	259.6	2,507.2	1,849.0	1,800.8	48.18	38.379	
7,000.0	6,937.4	6,598.7	6,457.8	23.9	25.1	-5.81	260.5	2,532.7	1,866.3	1,817.2	49.04	38.058	
7,100.0	7,037.1	6,696.8	6,552.7	24.3	25.5	-5.76	261.4	2,558.1	1,885.2	1,835.4	49.88	37.796	
7,200.0	7,137.0	6,794.6	6,647.1	24.6	26.0	-5.70	262.2	2,583.4	1,905.9	1,855.2	50.70	37.593	
7,300.0	7,236.9	6,892.1	6,741.2	24.9	26.5	-5.64	263.1	2,608.6	1,928.3	1,876.8	51.49	37.451	
7,400.0	7,336.9	6,989.1	6,835.0	25.2	27.0	-5.58	264.0	2,633.7	1,952.3	1,900.1	52.23	37.377 SF	
7,500.0	7,436.9	7,085.7	6,928.3	25.2	27.4	81.25	264.9	2,658.7	1,977.8	1,925.0	52.80	37.458	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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 GL @ 3243.0usft	Coordinates are relative to: *THUNDERDOME FED COM #705H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.26°



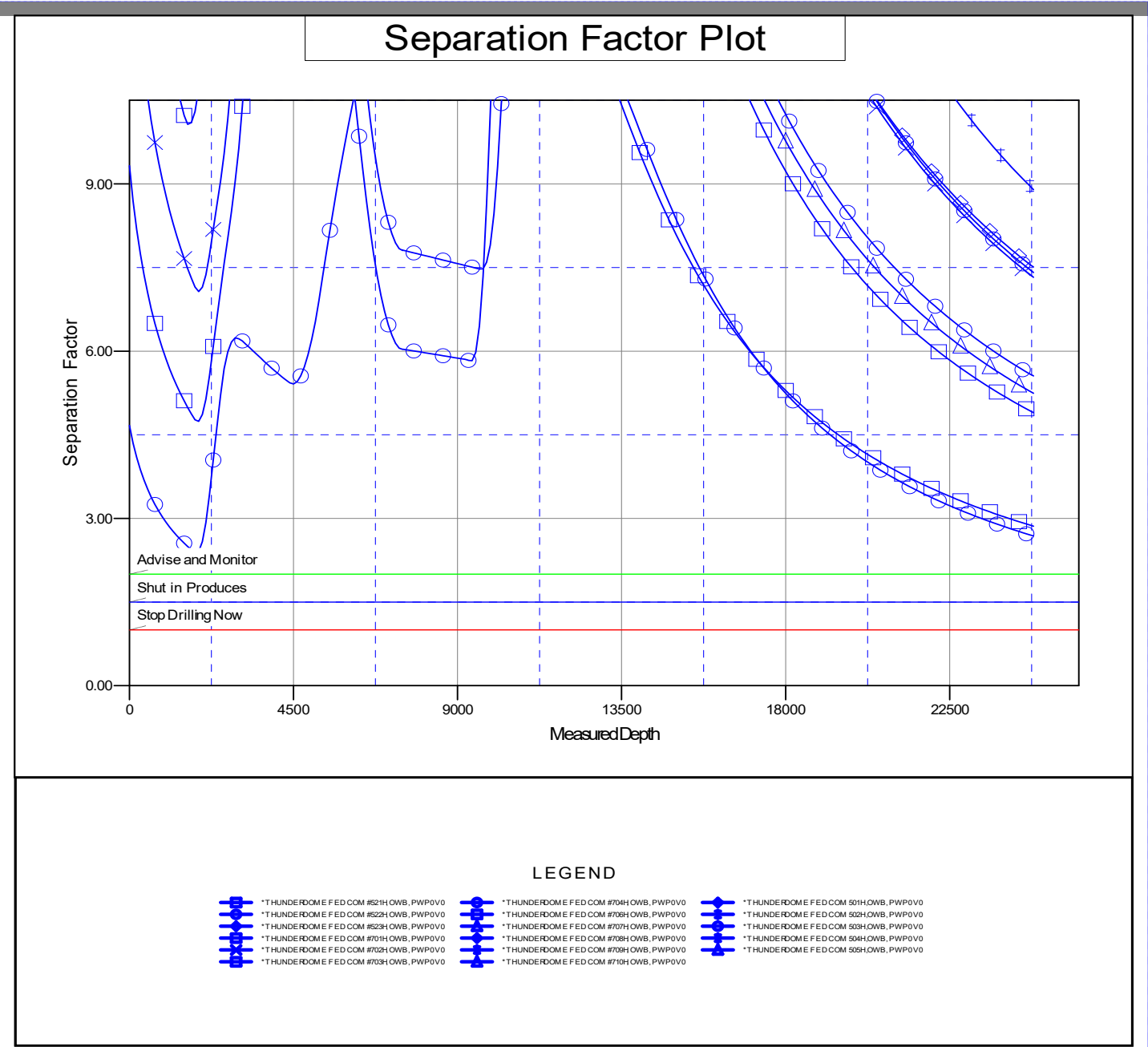
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #705H
Project:	ATLAS PROSPECT (NM-W)	TVD Reference:	GL @ 3243.0usft
Reference Site:	THUNDERDOME PROJECT	MD Reference:	GL @ 3243.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	*THUNDERDOME FED COM #705H	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 GL @ 3243.0usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: *THUNDERDOME FED COM #705H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.26°



DELAWARE BASIN WEST

ATLAS PROSPECT (DBW)

THUNDERDOME PROJECT

THUNDERDOME FED COM #705H

OWB

Plan: PWP0

Standard Planning Report

05 October, 2023

ConocoPhillips
Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project	ATLAS PROSPECT (DBW)		
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	THUNDERDOME PROJECT			
Site Position:	Northing:	469,664.63 usft	Latitude:	32° 17' 25.094 N
From: Map	Easting:	649,012.95 usft	Longitude:	103° 51' 4.015 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	

Well	THUNDERDOME FED COM #705H					
Well Position	+N/-S	0.0 usft	Northing:	469,243.00 usft	Latitude:	32° 17' 20.969 N
	+E/-W	0.0 usft	Easting:	647,937.38 usft	Longitude:	103° 51' 16.566 W
Position Uncertainty	3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,243.0 usft	
Grid Convergence:	0.26 °					

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	12/2/2022	6.70	59.95	47,539.18007017

Design	PWP0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	3.01

Plan Survey Tool Program	Date	10/5/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	24,799.9 PWP0 (OWB)	r.5 MWD+IFR1+MS	
			OWSG MWD + IFR1 + Multi-St	

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	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	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	6.00	135.00	2,199.3	-14.8	14.8	1.50	1.50	0.00	135.00	
2,703.5	6.00	135.00	2,700.0	-52.0	52.0	0.00	0.00	0.00	0.00	
3,077.3	10.00	86.75	3,070.5	-64.0	98.3	2.00	1.07	-12.91	-84.68	
6,448.0	10.00	86.75	6,390.0	-30.8	682.7	0.00	0.00	0.00	0.00	
7,448.0	0.00	0.00	7,384.9	-25.9	769.6	1.00	-1.00	0.00	180.00	
10,840.1	0.00	0.00	10,777.0	-25.9	769.6	0.00	0.00	0.00	0.00	
11,740.1	90.00	359.77	11,350.0	547.1	767.3	10.00	10.00	-0.03	359.77	
24,800.0	90.00	359.77	11,350.0	13,606.9	715.9	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	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	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	1.50	135.00	1,900.0	-0.9	0.9	-0.9	1.50	1.50	0.00
2,000.0	3.00	135.00	1,999.9	-3.7	3.7	-3.5	1.50	1.50	0.00
2,100.0	4.50	135.00	2,099.7	-8.3	8.3	-7.9	1.50	1.50	0.00
2,200.0	6.00	135.00	2,199.3	-14.8	14.8	-14.0	1.50	1.50	0.00
2,300.0	6.00	135.00	2,298.7	-22.2	22.2	-21.0	0.00	0.00	0.00
2,400.0	6.00	135.00	2,398.2	-29.6	29.6	-28.0	0.00	0.00	0.00
2,500.0	6.00	135.00	2,497.6	-37.0	37.0	-35.0	0.00	0.00	0.00
2,600.0	6.00	135.00	2,597.1	-44.4	44.4	-42.0	0.00	0.00	0.00
2,700.0	6.00	135.00	2,696.5	-51.8	51.8	-49.0	0.00	0.00	0.00
2,703.5	6.00	135.00	2,700.0	-52.0	52.0	-49.2	0.00	0.00	0.00
2,800.0	6.47	117.68	2,795.9	-58.1	60.4	-54.9	2.00	0.49	-17.94
2,900.0	7.47	103.32	2,895.2	-62.2	71.7	-58.4	2.00	1.00	-14.36
3,000.0	8.81	92.81	2,994.2	-64.1	85.7	-59.5	2.00	1.34	-10.51
3,077.3	10.00	86.75	3,070.5	-64.0	98.3	-58.7	2.00	1.54	-7.84
3,100.0	10.00	86.75	3,092.8	-63.8	102.2	-58.3	0.00	0.00	0.00
3,200.0	10.00	86.75	3,191.3	-62.8	119.6	-56.4	0.00	0.00	0.00
3,300.0	10.00	86.75	3,289.8	-61.8	136.9	-54.5	0.00	0.00	0.00
3,400.0	10.00	86.75	3,388.3	-60.8	154.2	-52.6	0.00	0.00	0.00
3,500.0	10.00	86.75	3,486.8	-59.8	171.6	-50.7	0.00	0.00	0.00
3,600.0	10.00	86.75	3,585.2	-58.9	188.9	-48.8	0.00	0.00	0.00
3,700.0	10.00	86.75	3,683.7	-57.9	206.3	-47.0	0.00	0.00	0.00
3,800.0	10.00	86.75	3,782.2	-56.9	223.6	-45.1	0.00	0.00	0.00
3,900.0	10.00	86.75	3,880.7	-55.9	240.9	-43.2	0.00	0.00	0.00
4,000.0	10.00	86.75	3,979.2	-54.9	258.3	-41.3	0.00	0.00	0.00
4,100.0	10.00	86.75	4,077.6	-53.9	275.6	-39.4	0.00	0.00	0.00
4,200.0	10.00	86.75	4,176.1	-52.9	292.9	-37.5	0.00	0.00	0.00
4,300.0	10.00	86.75	4,274.6	-52.0	310.3	-35.6	0.00	0.00	0.00
4,400.0	10.00	86.75	4,373.1	-51.0	327.6	-33.7	0.00	0.00	0.00
4,500.0	10.00	86.75	4,471.6	-50.0	344.9	-31.8	0.00	0.00	0.00
4,600.0	10.00	86.75	4,570.0	-49.0	362.3	-29.9	0.00	0.00	0.00
4,700.0	10.00	86.75	4,668.5	-48.0	379.6	-28.0	0.00	0.00	0.00
4,800.0	10.00	86.75	4,767.0	-47.0	397.0	-26.1	0.00	0.00	0.00
4,900.0	10.00	86.75	4,865.5	-46.1	414.3	-24.2	0.00	0.00	0.00
5,000.0	10.00	86.75	4,964.0	-45.1	431.6	-22.3	0.00	0.00	0.00
5,100.0	10.00	86.75	5,062.4	-44.1	449.0	-20.4	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	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	10.00	86.75	5,160.9	-43.1	466.3	-18.5	0.00	0.00	0.00
5,300.0	10.00	86.75	5,259.4	-42.1	483.6	-16.7	0.00	0.00	0.00
5,400.0	10.00	86.75	5,357.9	-41.1	501.0	-14.8	0.00	0.00	0.00
5,500.0	10.00	86.75	5,456.4	-40.2	518.3	-12.9	0.00	0.00	0.00
5,600.0	10.00	86.75	5,554.8	-39.2	535.7	-11.0	0.00	0.00	0.00
5,700.0	10.00	86.75	5,653.3	-38.2	553.0	-9.1	0.00	0.00	0.00
5,800.0	10.00	86.75	5,751.8	-37.2	570.3	-7.2	0.00	0.00	0.00
5,900.0	10.00	86.75	5,850.3	-36.2	587.7	-5.3	0.00	0.00	0.00
6,000.0	10.00	86.75	5,948.8	-35.2	605.0	-3.4	0.00	0.00	0.00
6,100.0	10.00	86.75	6,047.3	-34.2	622.3	-1.5	0.00	0.00	0.00
6,200.0	10.00	86.75	6,145.7	-33.3	639.7	0.4	0.00	0.00	0.00
6,300.0	10.00	86.75	6,244.2	-32.3	657.0	2.3	0.00	0.00	0.00
6,400.0	10.00	86.75	6,342.7	-31.3	674.3	4.2	0.00	0.00	0.00
6,448.0	10.00	86.75	6,390.0	-30.8	682.7	5.1	0.00	0.00	0.00
6,500.0	9.48	86.75	6,441.2	-30.3	691.5	6.1	1.00	-1.00	0.00
6,600.0	8.48	86.75	6,540.0	-29.4	707.0	7.8	1.00	-1.00	0.00
6,700.0	7.48	86.75	6,639.0	-28.6	720.9	9.3	1.00	-1.00	0.00
6,800.0	6.48	86.75	6,738.3	-28.0	733.0	10.6	1.00	-1.00	0.00
6,900.0	5.48	86.75	6,837.7	-27.4	743.4	11.7	1.00	-1.00	0.00
7,000.0	4.48	86.75	6,937.4	-26.9	752.1	12.7	1.00	-1.00	0.00
7,100.0	3.48	86.75	7,037.1	-26.5	759.0	13.4	1.00	-1.00	0.00
7,200.0	2.48	86.75	7,137.0	-26.2	764.2	14.0	1.00	-1.00	0.00
7,300.0	1.48	86.75	7,236.9	-26.0	767.7	14.4	1.00	-1.00	0.00
7,400.0	0.48	86.75	7,336.9	-25.9	769.4	14.6	1.00	-1.00	0.00
7,448.0	0.00	0.00	7,384.9	-25.9	769.6	14.6	1.00	-1.00	0.00
7,500.0	0.00	0.00	7,436.9	-25.9	769.6	14.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,536.9	-25.9	769.6	14.6	0.00	0.00	0.00
7,700.0	0.00	0.00	7,636.9	-25.9	769.6	14.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,736.9	-25.9	769.6	14.6	0.00	0.00	0.00
7,900.0	0.00	0.00	7,836.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,000.0	0.00	0.00	7,936.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,100.0	0.00	0.00	8,036.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,200.0	0.00	0.00	8,136.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,300.0	0.00	0.00	8,236.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,400.0	0.00	0.00	8,336.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,500.0	0.00	0.00	8,436.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,600.0	0.00	0.00	8,536.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,700.0	0.00	0.00	8,636.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,800.0	0.00	0.00	8,736.9	-25.9	769.6	14.6	0.00	0.00	0.00
8,900.0	0.00	0.00	8,836.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,000.0	0.00	0.00	8,936.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,100.0	0.00	0.00	9,036.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,200.0	0.00	0.00	9,136.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,300.0	0.00	0.00	9,236.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,400.0	0.00	0.00	9,336.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,500.0	0.00	0.00	9,436.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,600.0	0.00	0.00	9,536.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,700.0	0.00	0.00	9,636.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,800.0	0.00	0.00	9,736.9	-25.9	769.6	14.6	0.00	0.00	0.00
9,900.0	0.00	0.00	9,836.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,000.0	0.00	0.00	9,936.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,100.0	0.00	0.00	10,036.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,200.0	0.00	0.00	10,136.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,300.0	0.00	0.00	10,236.9	-25.9	769.6	14.6	0.00	0.00	0.00

ConocoPhillips
Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	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)
10,400.0	0.00	0.00	10,336.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,500.0	0.00	0.00	10,436.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,600.0	0.00	0.00	10,536.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,700.0	0.00	0.00	10,636.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,800.0	0.00	0.00	10,736.9	-25.9	769.6	14.6	0.00	0.00	0.00
10,840.1	0.00	0.00	10,777.0	-25.9	769.6	14.6	0.00	0.00	0.00
10,900.0	5.99	359.77	10,836.8	-22.8	769.6	17.7	10.00	10.00	0.00
11,000.0	15.99	359.77	10,934.8	-3.7	769.5	36.7	10.00	10.00	0.00
11,100.0	25.99	359.77	11,028.1	32.1	769.4	72.4	10.00	10.00	0.00
11,200.0	35.99	359.77	11,113.7	83.5	769.2	123.8	10.00	10.00	0.00
11,300.0	45.99	359.77	11,189.1	149.0	768.9	189.2	10.00	10.00	0.00
11,400.0	55.99	359.77	11,251.9	226.6	768.6	266.7	10.00	10.00	0.00
11,500.0	65.99	359.77	11,300.4	313.9	768.2	353.9	10.00	10.00	0.00
11,600.0	75.99	359.77	11,332.9	408.4	767.9	448.1	10.00	10.00	0.00
11,700.0	85.99	359.77	11,348.6	507.0	767.5	546.6	10.00	10.00	0.00
11,733.5	89.34	359.77	11,349.9	540.4	767.4	580.0	10.00	10.00	0.00
FTP (THUNDERDOME FED COM #705H)									
11,740.1	90.00	359.77	11,350.0	547.1	767.3	586.6	10.00	10.00	0.00
11,800.0	90.00	359.77	11,350.0	607.0	767.1	646.4	0.00	0.00	0.00
11,900.0	90.00	359.77	11,350.0	707.0	766.7	746.3	0.00	0.00	0.00
12,000.0	90.00	359.77	11,350.0	807.0	766.3	846.1	0.00	0.00	0.00
12,100.0	90.00	359.77	11,350.0	907.0	765.9	946.0	0.00	0.00	0.00
12,200.0	90.00	359.77	11,350.0	1,007.0	765.5	1,045.8	0.00	0.00	0.00
12,300.0	90.00	359.77	11,350.0	1,107.0	765.1	1,145.6	0.00	0.00	0.00
12,400.0	90.00	359.77	11,350.0	1,207.0	764.7	1,245.5	0.00	0.00	0.00
12,500.0	90.00	359.77	11,350.0	1,307.0	764.3	1,345.3	0.00	0.00	0.00
12,600.0	90.00	359.77	11,350.0	1,407.0	763.9	1,445.2	0.00	0.00	0.00
12,700.0	90.00	359.77	11,350.0	1,507.0	763.5	1,545.0	0.00	0.00	0.00
12,800.0	90.00	359.77	11,350.0	1,607.0	763.2	1,644.8	0.00	0.00	0.00
12,900.0	90.00	359.77	11,350.0	1,707.0	762.8	1,744.7	0.00	0.00	0.00
13,000.0	90.00	359.77	11,350.0	1,807.0	762.4	1,844.5	0.00	0.00	0.00
13,100.0	90.00	359.77	11,350.0	1,907.0	762.0	1,944.4	0.00	0.00	0.00
13,200.0	90.00	359.77	11,350.0	2,007.0	761.6	2,044.2	0.00	0.00	0.00
13,300.0	90.00	359.77	11,350.0	2,107.0	761.2	2,144.0	0.00	0.00	0.00
13,400.0	90.00	359.77	11,350.0	2,207.0	760.8	2,243.9	0.00	0.00	0.00
13,500.0	90.00	359.77	11,350.0	2,307.0	760.4	2,343.7	0.00	0.00	0.00
13,600.0	90.00	359.77	11,350.0	2,407.0	760.0	2,443.6	0.00	0.00	0.00
13,700.0	90.00	359.77	11,350.0	2,507.0	759.6	2,543.4	0.00	0.00	0.00
13,800.0	90.00	359.77	11,350.0	2,606.9	759.2	2,643.2	0.00	0.00	0.00
13,900.0	90.00	359.77	11,350.0	2,706.9	758.8	2,743.1	0.00	0.00	0.00
14,000.0	90.00	359.77	11,350.0	2,806.9	758.4	2,842.9	0.00	0.00	0.00
14,100.0	90.00	359.77	11,350.0	2,906.9	758.0	2,942.8	0.00	0.00	0.00
14,200.0	90.00	359.77	11,350.0	3,006.9	757.6	3,042.6	0.00	0.00	0.00
14,300.0	90.00	359.77	11,350.0	3,106.9	757.2	3,142.4	0.00	0.00	0.00
14,400.0	90.00	359.77	11,350.0	3,206.9	756.9	3,242.3	0.00	0.00	0.00
14,500.0	90.00	359.77	11,350.0	3,306.9	756.5	3,342.1	0.00	0.00	0.00
14,600.0	90.00	359.77	11,350.0	3,406.9	756.1	3,442.0	0.00	0.00	0.00
14,700.0	90.00	359.77	11,350.0	3,506.9	755.7	3,541.8	0.00	0.00	0.00
14,800.0	90.00	359.77	11,350.0	3,606.9	755.3	3,641.6	0.00	0.00	0.00
14,900.0	90.00	359.77	11,350.0	3,706.9	754.9	3,741.5	0.00	0.00	0.00
15,000.0	90.00	359.77	11,350.0	3,806.9	754.5	3,841.3	0.00	0.00	0.00
15,100.0	90.00	359.77	11,350.0	3,906.9	754.1	3,941.2	0.00	0.00	0.00
15,200.0	90.00	359.77	11,350.0	4,006.9	753.7	4,041.0	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	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)
15,300.0	90.00	359.77	11,350.0	4,106.9	753.3	4,140.8	0.00	0.00	0.00
15,400.0	90.00	359.77	11,350.0	4,206.9	752.9	4,240.7	0.00	0.00	0.00
15,500.0	90.00	359.77	11,350.0	4,306.9	752.5	4,340.5	0.00	0.00	0.00
15,600.0	90.00	359.77	11,350.0	4,406.9	752.1	4,440.4	0.00	0.00	0.00
15,700.0	90.00	359.77	11,350.0	4,506.9	751.7	4,540.2	0.00	0.00	0.00
15,800.0	90.00	359.77	11,350.0	4,606.9	751.3	4,640.0	0.00	0.00	0.00
15,900.0	90.00	359.77	11,350.0	4,706.9	750.9	4,739.9	0.00	0.00	0.00
16,000.0	90.00	359.77	11,350.0	4,806.9	750.6	4,839.7	0.00	0.00	0.00
16,100.0	90.00	359.77	11,350.0	4,906.9	750.2	4,939.6	0.00	0.00	0.00
16,200.0	90.00	359.77	11,350.0	5,006.9	749.8	5,039.4	0.00	0.00	0.00
16,300.0	90.00	359.77	11,350.0	5,106.9	749.4	5,139.2	0.00	0.00	0.00
16,400.0	90.00	359.77	11,350.0	5,206.9	749.0	5,239.1	0.00	0.00	0.00
16,500.0	90.00	359.77	11,350.0	5,306.9	748.6	5,338.9	0.00	0.00	0.00
16,600.0	90.00	359.77	11,350.0	5,406.9	748.2	5,438.8	0.00	0.00	0.00
16,700.0	90.00	359.77	11,350.0	5,506.9	747.8	5,538.6	0.00	0.00	0.00
16,800.0	90.00	359.77	11,350.0	5,606.9	747.4	5,638.5	0.00	0.00	0.00
16,900.0	90.00	359.77	11,350.0	5,706.9	747.0	5,738.3	0.00	0.00	0.00
17,000.0	90.00	359.77	11,350.0	5,806.9	746.6	5,838.1	0.00	0.00	0.00
17,100.0	90.00	359.77	11,350.0	5,906.9	746.2	5,938.0	0.00	0.00	0.00
17,200.0	90.00	359.77	11,350.0	6,006.9	745.8	6,037.8	0.00	0.00	0.00
17,300.0	90.00	359.77	11,350.0	6,106.9	745.4	6,137.7	0.00	0.00	0.00
17,400.0	90.00	359.77	11,350.0	6,206.9	745.0	6,237.5	0.00	0.00	0.00
17,500.0	90.00	359.77	11,350.0	6,306.9	744.6	6,337.3	0.00	0.00	0.00
17,600.0	90.00	359.77	11,350.0	6,406.9	744.3	6,437.2	0.00	0.00	0.00
17,700.0	90.00	359.77	11,350.0	6,506.9	743.9	6,537.0	0.00	0.00	0.00
17,800.0	90.00	359.77	11,350.0	6,606.9	743.5	6,636.9	0.00	0.00	0.00
17,900.0	90.00	359.77	11,350.0	6,706.9	743.1	6,736.7	0.00	0.00	0.00
18,000.0	90.00	359.77	11,350.0	6,806.9	742.7	6,836.5	0.00	0.00	0.00
18,100.0	90.00	359.77	11,350.0	6,906.9	742.3	6,936.4	0.00	0.00	0.00
18,200.0	90.00	359.77	11,350.0	7,006.9	741.9	7,036.2	0.00	0.00	0.00
18,300.0	90.00	359.77	11,350.0	7,106.9	741.5	7,136.1	0.00	0.00	0.00
18,400.0	90.00	359.77	11,350.0	7,206.9	741.1	7,235.9	0.00	0.00	0.00
18,500.0	90.00	359.77	11,350.0	7,306.9	740.7	7,335.7	0.00	0.00	0.00
18,600.0	90.00	359.77	11,350.0	7,406.9	740.3	7,435.6	0.00	0.00	0.00
18,700.0	90.00	359.77	11,350.0	7,506.9	739.9	7,535.4	0.00	0.00	0.00
18,800.0	90.00	359.77	11,350.0	7,606.9	739.5	7,635.3	0.00	0.00	0.00
18,900.0	90.00	359.77	11,350.0	7,706.9	739.1	7,735.1	0.00	0.00	0.00
19,000.0	90.00	359.77	11,350.0	7,806.9	738.7	7,834.9	0.00	0.00	0.00
19,100.0	90.00	359.77	11,350.0	7,906.9	738.4	7,934.8	0.00	0.00	0.00
19,200.0	90.00	359.77	11,350.0	8,006.9	738.0	8,034.6	0.00	0.00	0.00
19,300.0	90.00	359.77	11,350.0	8,106.9	737.6	8,134.5	0.00	0.00	0.00
19,400.0	90.00	359.77	11,350.0	8,206.9	737.2	8,234.3	0.00	0.00	0.00
19,500.0	90.00	359.77	11,350.0	8,306.9	736.8	8,334.1	0.00	0.00	0.00
19,600.0	90.00	359.77	11,350.0	8,406.9	736.4	8,434.0	0.00	0.00	0.00
19,700.0	90.00	359.77	11,350.0	8,506.9	736.0	8,533.8	0.00	0.00	0.00
19,800.0	90.00	359.77	11,350.0	8,606.9	735.6	8,633.7	0.00	0.00	0.00
19,900.0	90.00	359.77	11,350.0	8,706.9	735.2	8,733.5	0.00	0.00	0.00
20,000.0	90.00	359.77	11,350.0	8,806.9	734.8	8,833.3	0.00	0.00	0.00
20,100.0	90.00	359.77	11,350.0	8,906.9	734.4	8,933.2	0.00	0.00	0.00
20,200.0	90.00	359.77	11,350.0	9,006.9	734.0	9,033.0	0.00	0.00	0.00
20,300.0	90.00	359.77	11,350.0	9,106.9	733.6	9,132.9	0.00	0.00	0.00
20,400.0	90.00	359.77	11,350.0	9,206.9	733.2	9,232.7	0.00	0.00	0.00
20,500.0	90.00	359.77	11,350.0	9,306.9	732.8	9,332.5	0.00	0.00	0.00
20,600.0	90.00	359.77	11,350.0	9,406.9	732.4	9,432.4	0.00	0.00	0.00

ConocoPhillips
Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	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)	
20,700.0	90.00	359.77	11,350.0	9,506.9	732.1	9,532.2	0.00	0.00	0.00	
20,800.0	90.00	359.77	11,350.0	9,606.9	731.7	9,632.1	0.00	0.00	0.00	
20,900.0	90.00	359.77	11,350.0	9,706.9	731.3	9,731.9	0.00	0.00	0.00	
21,000.0	90.00	359.77	11,350.0	9,806.9	730.9	9,831.7	0.00	0.00	0.00	
21,100.0	90.00	359.77	11,350.0	9,906.9	730.5	9,931.6	0.00	0.00	0.00	
21,200.0	90.00	359.77	11,350.0	10,006.9	730.1	10,031.4	0.00	0.00	0.00	
21,300.0	90.00	359.77	11,350.0	10,106.9	729.7	10,131.3	0.00	0.00	0.00	
21,400.0	90.00	359.77	11,350.0	10,206.9	729.3	10,231.1	0.00	0.00	0.00	
21,500.0	90.00	359.77	11,350.0	10,306.9	728.9	10,331.0	0.00	0.00	0.00	
21,600.0	90.00	359.77	11,350.0	10,406.9	728.5	10,430.8	0.00	0.00	0.00	
21,700.0	90.00	359.77	11,350.0	10,506.9	728.1	10,530.6	0.00	0.00	0.00	
21,800.0	90.00	359.77	11,350.0	10,606.9	727.7	10,630.5	0.00	0.00	0.00	
21,900.0	90.00	359.77	11,350.0	10,706.9	727.3	10,730.3	0.00	0.00	0.00	
22,000.0	90.00	359.77	11,350.0	10,806.9	726.9	10,830.2	0.00	0.00	0.00	
22,100.0	90.00	359.77	11,350.0	10,906.9	726.5	10,930.0	0.00	0.00	0.00	
22,200.0	90.00	359.77	11,350.0	11,006.9	726.1	11,029.8	0.00	0.00	0.00	
22,300.0	90.00	359.77	11,350.0	11,106.9	725.8	11,129.7	0.00	0.00	0.00	
22,400.0	90.00	359.77	11,350.0	11,206.9	725.4	11,229.5	0.00	0.00	0.00	
22,500.0	90.00	359.77	11,350.0	11,306.9	725.0	11,329.4	0.00	0.00	0.00	
22,600.0	90.00	359.77	11,350.0	11,406.9	724.6	11,429.2	0.00	0.00	0.00	
22,700.0	90.00	359.77	11,350.0	11,506.9	724.2	11,529.0	0.00	0.00	0.00	
22,800.0	90.00	359.77	11,350.0	11,606.9	723.8	11,628.9	0.00	0.00	0.00	
22,900.0	90.00	359.77	11,350.0	11,706.9	723.4	11,728.7	0.00	0.00	0.00	
23,000.0	90.00	359.77	11,350.0	11,806.9	723.0	11,828.6	0.00	0.00	0.00	
23,100.0	90.00	359.77	11,350.0	11,906.9	722.6	11,928.4	0.00	0.00	0.00	
23,200.0	90.00	359.77	11,350.0	12,006.9	722.2	12,028.2	0.00	0.00	0.00	
23,300.0	90.00	359.77	11,350.0	12,106.9	721.8	12,128.1	0.00	0.00	0.00	
23,400.0	90.00	359.77	11,350.0	12,206.9	721.4	12,227.9	0.00	0.00	0.00	
23,500.0	90.00	359.77	11,350.0	12,306.9	721.0	12,327.8	0.00	0.00	0.00	
23,600.0	90.00	359.77	11,350.0	12,406.9	720.6	12,427.6	0.00	0.00	0.00	
23,700.0	90.00	359.77	11,350.0	12,506.9	720.2	12,527.4	0.00	0.00	0.00	
23,800.0	90.00	359.77	11,350.0	12,606.9	719.8	12,627.3	0.00	0.00	0.00	
23,900.0	90.00	359.77	11,350.0	12,706.9	719.5	12,727.1	0.00	0.00	0.00	
24,000.0	90.00	359.77	11,350.0	12,806.9	719.1	12,827.0	0.00	0.00	0.00	
24,100.0	90.00	359.77	11,350.0	12,906.9	718.7	12,926.8	0.00	0.00	0.00	
24,200.0	90.00	359.77	11,350.0	13,006.9	718.3	13,026.6	0.00	0.00	0.00	
24,300.0	90.00	359.77	11,350.0	13,106.9	717.9	13,126.5	0.00	0.00	0.00	
24,400.0	90.00	359.77	11,350.0	13,206.9	717.5	13,226.3	0.00	0.00	0.00	
24,500.0	90.00	359.77	11,350.0	13,306.9	717.1	13,326.2	0.00	0.00	0.00	
24,600.0	90.00	359.77	11,350.0	13,406.9	716.7	13,426.0	0.00	0.00	0.00	
24,700.0	90.00	359.77	11,350.0	13,506.9	716.3	13,525.8	0.00	0.00	0.00	
24,750.0	90.00	359.77	11,350.0	13,556.9	716.1	13,575.8	0.00	0.00	0.00	
LTP (THUNDERDOME FED COM #705H)										
24,800.0	90.00	359.77	11,350.0	13,606.9	715.9	13,625.7	0.00	0.00	0.00	
PBHL (THUNDERDOME FED COM #705H)										

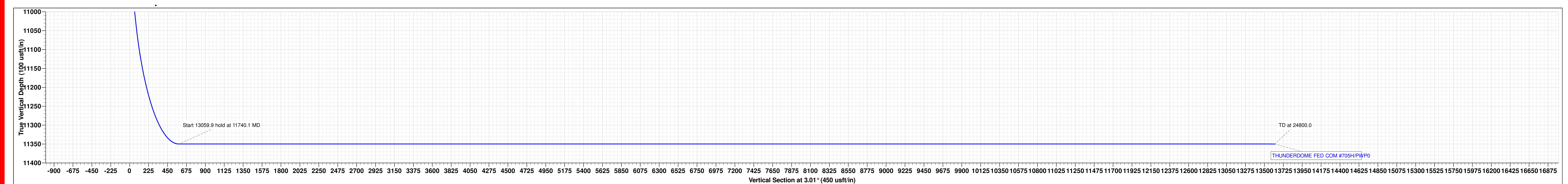
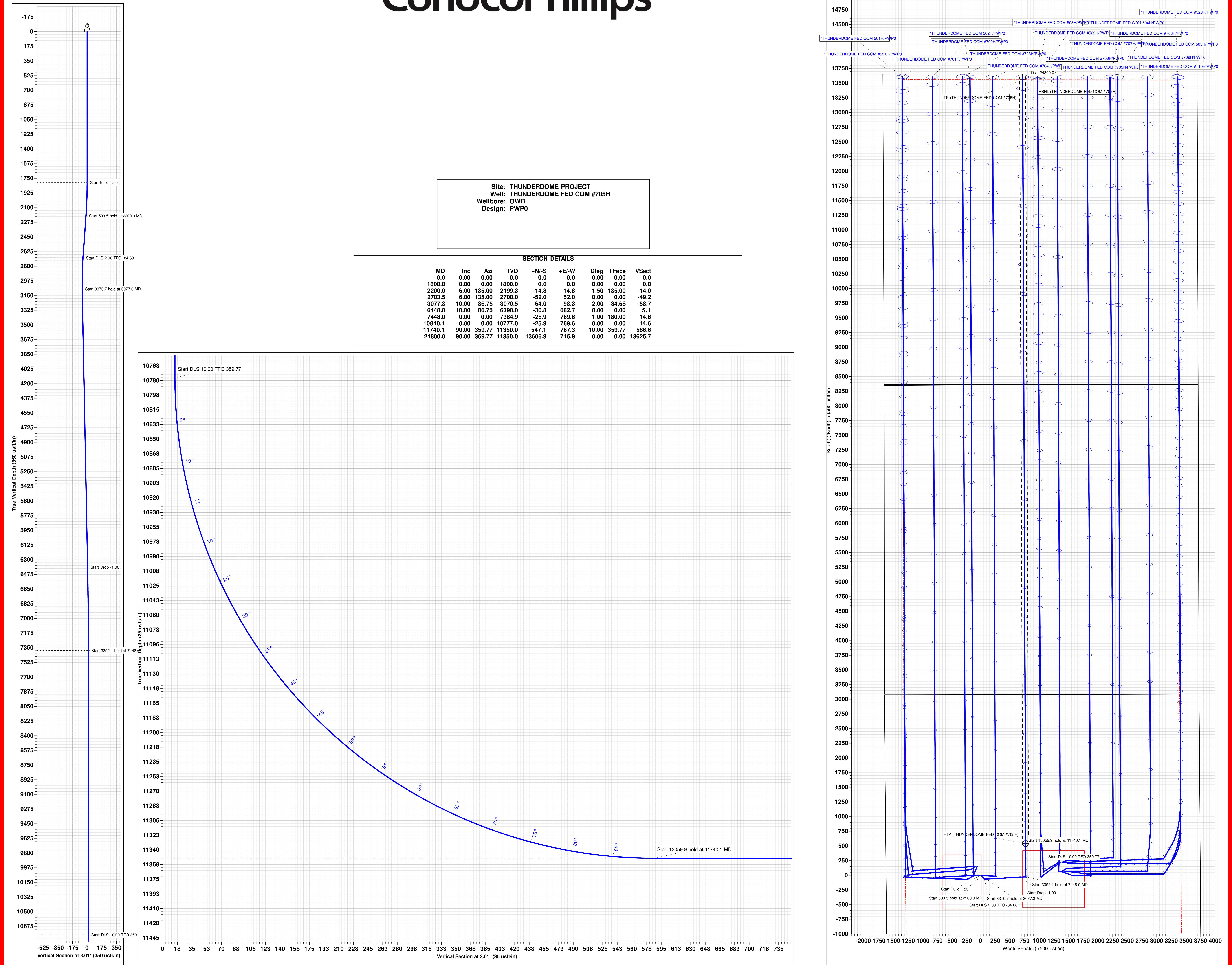
ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #705H
Company:	DELAWARE BASIN WEST	TVD Reference:	GL @ 3243.0usft
Project:	ATLAS PROSPECT (DBW)	MD Reference:	GL @ 3243.0usft
Site:	THUNDERDOME PROJECT	North Reference:	Grid
Well:	THUNDERDOME FED COM #705H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
PBHL (THUNDERDOME - plan hits target center - Rectangle (sides W100.0 H13,069.8 D20.0)	0.00	179.77	11,350.0	13,606.9	715.9	482,849.87	648,653.29	32° 19' 35.589 N	103° 51' 7.515 W
FTP (THUNDERDOME I - plan misses target center by 2.7usft at 11733.5usft MD (11349.9 TVD, 540.4 N, 767.4 E) - Circle (radius 50.0)	0.00	0.00	11,350.0	540.4	764.7	469,783.42	648,702.07	32° 17' 26.283 N	103° 51' 7.630 W
LTP (THUNDERDOME I - plan misses target center by 0.4usft at 24750.0usft MD (11350.0 TVD, 13556.9 N, 716.1 E) - Circle (radius 50.0)	90.00	359.77	11,350.0	13,556.9	716.5	482,799.87	648,653.91	32° 19' 35.095 N	103° 51' 7.510 W

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	24,800.1	11,350.0	5-1/2" Production Casing	5-1/2	6-3/4



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG OPERATING LLC
WELL NAME & NO.:	THUNDERDOME FEDERAL COM 705H
SURFACE HOLE FOOTAGE:	2210'/S & 1612'/W
BOTTOM HOLE FOOTAGE:	50'/N & 2382'/W
LOCATION:	Section 30, T.24 S., R.28 E.
COUNTY:	Eddy County, New Mexico

COA

H2S	Yes		
Potash	R-111-Q		
Cave/Karst Potential	Medium		
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	Conventional and Multibowl		
Other	☒ 4 String	Capitan Reef None	☐ WIPP
Other	Pilot Hole None	☐ Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter None	Primary Cement Squeeze Int 2
Special Requirements	☐ Water Disposal/Injection	☒ COM	☐ Unit
Special Requirements	☐ Batch Sundry	Waste Prevention Self-Cert	
Special Requirements Variance	☐ Break Testing	☐ Offline Cementing	☒ Casing Clearance

THE KPLA POTASH AREA WILL BE GOVERNED BY R111Q AS OF 5/10/2024. THE APD PACKAGE WAS SUBMITTED PRIOR TO THIS DATE, BUT THE OPERATOR HAS INCORPORATED THE UPDATED OPEN ANNULUS DESIGN. OPERATOR SHOULD REVIEW AND ADHERE TO ALL R111Q UPDATES.

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 Subpart 3176** 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

Surface set point updated to reflect 70' penetration into Rustler.

1. The **13-3/8** inch surface casing shall be set at approximately **445** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Salt protection intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The **10-3/4** inch salt protection intermediate casing shall be set at approximately **3,795** feet. **This depth is above the BLM geo-report Bell Canyon depth. Salt protection string should be set prior to entering highest oil or gas bearing zone.** The minimum required fill of cement behind the **10-3/4** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.**

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

3. The 7-5/8 inch second intermediate casing shall be set at approximately **10,700 feet**. **Too much cement excess proposed for the open annulus plan. Please review cement program for interval and adhere to R111Q requirements.** The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:

R-111-Q Figure D:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage within 180 days after well completion in accordance with the **R-111-Q** guidelines.

- a. First stage: Operator will cement intermediate casing with intent to bring cement to top of Brushy Canyon formation.
- b. Second stage: Operator will perform bradenhead squeeze **within 180 days** after completion. Cement shall be tie-back **at least 500 ft.** into intermediate casing and below the Marker Bed 126. If cement does not circulate, the appropriate BLM office shall be notified.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.

4. The 5-1/2 inch production casing shall be set at approximately **24,799 feet**. The minimum required fill of cement behind the 5-1/2 inch production casing is:

R-111-Q Figure D:

- Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126 and the engineered weak point. Operator must run a CBL from TD of the production casing to surface to verify top of cement. Submit results to the BLM.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

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.

Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi. Annular which shall be tested to 3500 (70% Working Pressure) psi.**
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **10-3/4** intermediate casing shoe shall be **5000 (5M) psi. Annular which shall be tested to 3500 (70% Working Pressure) psi.**
- c. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8** inch intermediate 2 casing shoe shall be **10,000 (10M) psi. Variance is approved to use a Choose an item. Annular which shall be tested to 3500 (70% Working Pressure) psi.**
 - Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - 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.
 - Manufacturer representative shall install the test plug for the initial BOP test.
 - 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.
 - Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) 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 **43 CFR part 3170 Subpart 3171**
- 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

Tie back for 500 feet OK.

Operator shall clean up cycles until wellbore is clear of cuttings and any large debris, ensure cutting sizes are less than 0.5 micron 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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on

which the draw works are located, this does not include the dog house or stairway area.

3. For at least one well per pad (deepest well preferred) the record of drilling rate (ROP) along with the Gamma Ray (GR) and Neutron (CNL) well logs run from TVD to surface in the vertical section of the hole shall be submitted to the BLM office as well as all other logs run on the full borehole within 30 days from completion. Only digital copies of the logs in .TIF or .LAS formats are necessary; Logs shall be emailed to blm-cfo-geology@doimspp.onmicrosoft.com. The email should have a subject line with the US Well Number / API Number, well name, and the body should include the starting depth and the TVD of the log.

The top of the Rustler, top and bottom of the salt, and the top of the Capitan Reef (if present) are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends 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 part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

- c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 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).
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - e. The results of the test shall be reported to the appropriate BLM office.

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

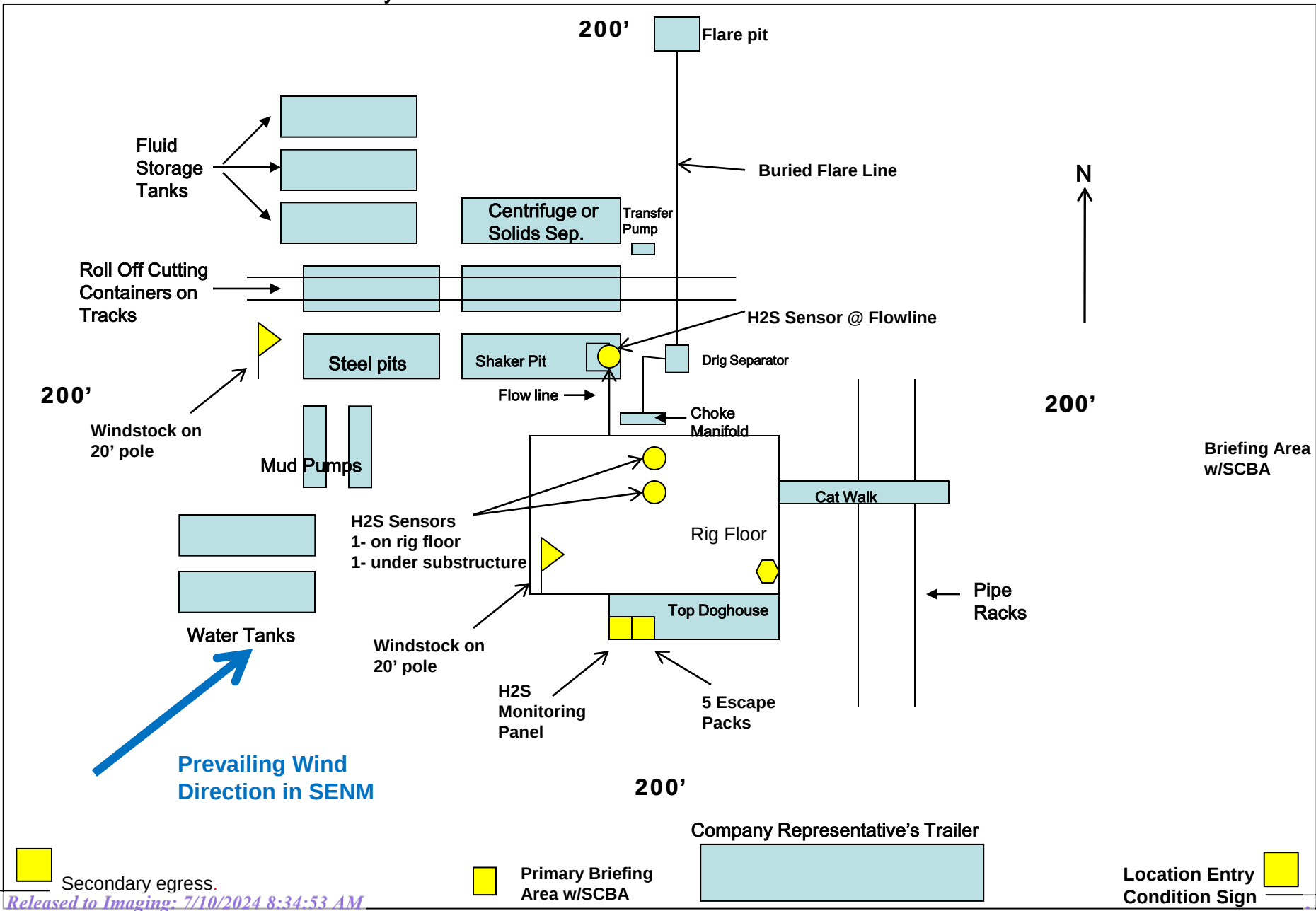
All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location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

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

Keith Immatty 6/4/2024

COG Operating LLC
H₂S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 400' x 400'
with cellar in center of pad



COG OPERATING LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

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

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

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

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

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

2. H₂S SAFETY EQUIPMENT AND SYSTEMS

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

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

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

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

W A R N I N G

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

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

COG OPERATING LLC

1-575-748-6940

EMERGENCY CALL LIST

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

EMERGENCY RESPONSE NUMBERS

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 352708

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 352708
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	7/10/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/10/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	7/10/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	7/10/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	7/10/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	7/10/2024
ward.rikala	Must comply with all R-111-Q requirements.	7/10/2024