

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. 30-015-55217
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish
		13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 06/07/2024

Additional Operator Remarks

Location of Well

0. SHL: NESW / 2210 FSL / 1492 FWL / TWSP: 23S / RANGE: 30E / SECTION: 23 / LAT: 32.2892802 / LONG: -103.8554778 (TVD: 0 feet, MD: 0 feet)

PPP: NWNW / 2540 FNL / 330 FWL / TWSP: 23S / RANGE: 30E / SECTION: 23 / LAT: 32.290767 / LONG: -103.859248 (TVD: 11349 feet, MD: 11775 feet)

PPP: SWSW / 1 FSL / 330 FWL / TWSP: 23S / RANGE: 30E / SECTION: 14 / LAT: 32.2977488 / LONG: -103.8592888 (TVD: 11350 feet, MD: 14316 feet)

BHL: NWNW / 50 FNL / 330 FWL / TWSP: 23S / RANGE: 30E / SECTION: 11 / LAT: 32.3267049 / LONG: -103.8592204 (TVD: 11350 feet, MD: 24848 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- 55217	² Pool Code 98358	³ Pool Name WC23S30E; Wolfcamp (Gas)
⁴ Property Code 336009	⁵ Property Name THUNDERDOME FED COM	⁶ Well Number 702H
⁷ OGRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 3,250.52'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	23	23-S	30-E		2,210'	SOUTH	1,522'	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	23-S	30-E		50'	NORTH	843'	WEST	EDDY

¹² Dedicated Acres 1600	¹³ Joint or Infill	¹⁴ Consolidation Code Com	¹⁵ Order No.
---------------------------------------	-------------------------------	---	-------------------------

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 SECTION 11 SECTION 14 SECTION 23	SURFACE HOLE LOCATION / KICK OFF POINT 2,210' FSL & 1,522' FWL NEW MEXICO EAST-NAD 83 NORTH:469,302.44' EAST:689,030.70' LAT:32.28928164 LONG:-103.85538099 FIRST TAKE POINT / PENETRATION POINT 1 2,540' FNL & 843' FWL NEW MEXICO EAST-NAD 83 NORTH:469,838.91' EAST:688,346.32' LAT:32.29076465 LONG:-103.85758795 PENETRATION POINT 2 1' FSL & 843' FWL NEW MEXICO EAST-NAD 83 NORTH:472,378.67' EAST:688,322.50' LAT:32.29774618 LONG:-103.85762859 LAST TAKE POINT 100' FNL & 843' FWL NEW MEXICO EAST-NAD 83 NORTH:482,861.01' EAST:688,297.68' LAT:32.32656006 LONG:-103.85755833 BOTTOM HOLE LOCATION 50' FNL & 843' FWL NEW MEXICO EAST-NAD 83 NORTH:482,911.01' EAST:688,297.07' LAT:32.32669751 LONG:-103.85755959	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:472,375.50' E:687,475.50' 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
---	---	---	--

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: ConocoPhillips Company

OGRID: 217817

Date: 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

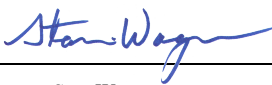
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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 #701H**1. Geologic Formations**

TVD of target	11,259' EOL	Pilot hole depth	NA
MD at TD:	24,848'	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	486	Salt	
Base of Salt	3550	Salt	
Lamar	3771	Salt Water	
Bell Canyon	3785	Salt Water	
Brushy Canyon	5273	Oil/Gas	
Bone Spring Lime	7681	Oil/Gas	
1st Bone Spring Sand	8674	Oil/Gas	
2nd Bone Spring Sand	9334	Oil/Gas	
3rd Bone Spring Sand	10606	Oil/Gas	
Wolfcamp A	11169	Target	
Wolfcamp B	11485	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	1.18	3.30	3.34
8.750"	7400	10750	7.625"	29.7	P110 ICY	W513	1.29	1.53	2.94	1.75
6.75"	0	10250	5.5"	23	P110 CY	BTC	2.18	2.58	3.09	3.07
6.75"	10250	24,848	5.5"	23	P110 CY	W441	1.99	2.35	2.82	2.73
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 #701H

	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 #701H

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	9,750'	35% OH in Lateral (KOP to EOL)

COG Operating, LLC - Thunderdome Fed Com #701H

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
---	---

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 #701H

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 #701H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7320 psi at 11259' 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

701H

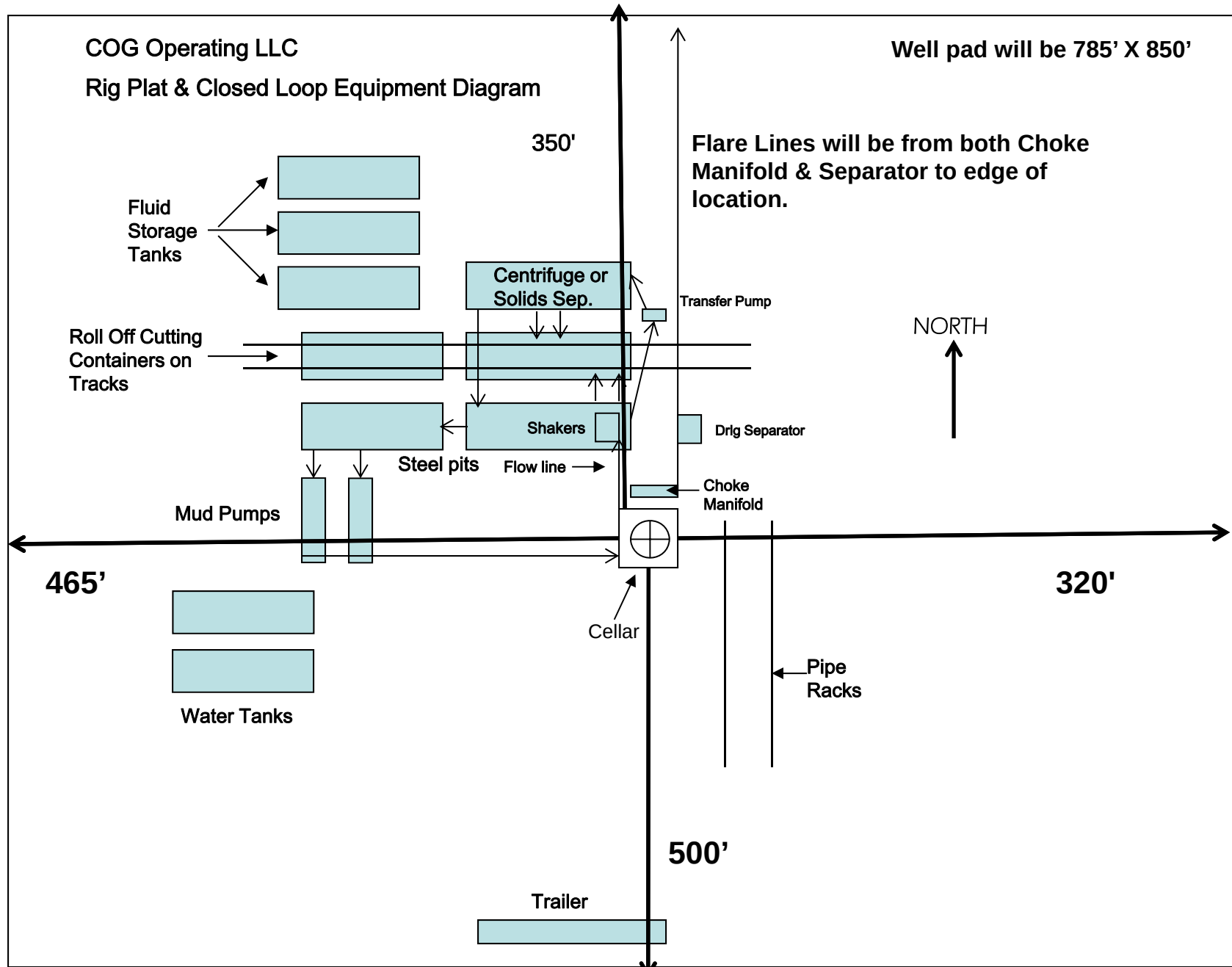


Exhibit 1

"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 #701H**

OWB

PWP0

Anticollision Report

07 July, 2023

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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	7/7/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	24,848.0	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	7,785.1	7,790.9	113.4	83.6	3.798	CC
*THUNDERDOME FED COM #521H - OWB - PWP0	7,900.0	7,903.7	115.5	82.5	3.500	ES
*THUNDERDOME FED COM #521H - OWB - PWP0	8,300.0	8,298.9	140.5	94.4	3.048	SF
*THUNDERDOME FED COM #522H - OWB - PWP0	1,500.0	1,500.0	1,466.9	1,455.2	125.008	CC
*THUNDERDOME FED COM #522H - OWB - PWP0	2,800.0	2,989.9	1,467.8	1,450.6	85.390	ES
*THUNDERDOME FED COM #522H - OWB - PWP0	6,500.0	6,445.0	1,994.8	1,955.5	50.712	SF
*THUNDERDOME FED COM #523H - OWB - PWP0	1,500.0	1,500.0	1,585.6	1,573.9	135.126	CC, ES
*THUNDERDOME FED COM #523H - OWB - PWP0	3,300.0	2,817.2	1,959.6	1,941.4	107.867	SF
*THUNDERDOME FED COM #702H - OWB - PWP0	1,500.0	1,500.0	30.1	18.4	2.565	CC, ES, SF
*THUNDERDOME FED COM #703H - OWB - PWP0	1,500.0	1,500.0	60.0	48.3	5.117	CC, ES
*THUNDERDOME FED COM #703H - OWB - PWP0	24,848.5	24,725.4	1,026.0	814.1	4.841	SF
*THUNDERDOME FED COM #704H - OWB - PWP0	1,500.0	1,500.0	90.0	78.3	7.670	CC, ES
*THUNDERDOME FED COM #704H - OWB - PWP0	24,848.5	24,574.2	1,548.4	1,338.3	7.370	SF
*THUNDERDOME FED COM #705H - OWB - PWP0	1,500.0	1,500.0	120.0	108.3	10.227	CC, ES
*THUNDERDOME FED COM #705H - OWB - PWP0	1,600.0	1,600.0	121.1	109.1	10.065	SF
*THUNDERDOME FED COM #706H - OWB - PWP0	1,500.0	1,500.0	1,451.8	1,440.1	123.723	CC, ES
*THUNDERDOME FED COM #706H - OWB - PWP0	5,100.0	5,053.3	1,982.3	1,953.8	69.515	SF
*THUNDERDOME FED COM #707H - OWB - PWP0	1,500.0	1,500.0	1,481.8	1,470.1	126.277	CC, ES
*THUNDERDOME FED COM #707H - OWB - PWP0	3,900.0	3,632.4	1,975.9	1,953.5	87.968	SF
*THUNDERDOME FED COM #708H - OWB - PWP0	1,500.0	1,500.0	1,511.8	1,500.0	128.830	CC, ES
*THUNDERDOME FED COM #708H - OWB - PWP0	4,000.0	3,592.6	1,988.6	1,966.7	90.749	SF
*THUNDERDOME FED COM #709H - OWB - PWP0	1,500.0	1,500.0	1,541.7	1,530.0	131.384	CC, ES
*THUNDERDOME FED COM #709H - OWB - PWP0	3,700.0	3,208.5	1,996.8	1,976.6	99.128	SF
*THUNDERDOME FED COM #710H - OWB - PWP0	1,500.0	1,500.0	1,571.7	1,560.0	133.938	CC, ES
*THUNDERDOME FED COM #710H - OWB - PWP0	3,400.0	2,959.6	1,989.2	1,970.1	104.167	SF
*THUNDERDOME FED COM 501H - OWB - PWP0	8,198.1	8,217.8	44.6	13.0	1.414	Shut in Produces, CC
*THUNDERDOME FED COM 501H - OWB - PWP0	8,400.0	8,418.2	50.5	6.7	1.152	Shut in Produces, ES
*THUNDERDOME FED COM 501H - OWB - PWP0	8,500.0	8,517.8	55.5	6.9	1.143	Shut in Produces, SF
*THUNDERDOME FED COM 502H - OWB - PWP0	1,500.0	1,500.0	161.7	149.9	13.778	CC, ES
*THUNDERDOME FED COM 502H - OWB - PWP0	24,848.5	23,110.8	1,993.7	1,791.4	9.857	SF
*THUNDERDOME FED COM 503H - OWB - PWP0	1,500.0	1,500.0	1,496.6	1,484.8	127.536	CC, ES
*THUNDERDOME FED COM 503H - OWB - PWP0	6,800.0	6,747.7	1,999.6	1,957.5	47.447	SF
*THUNDERDOME FED COM 504H - OWB - PWP0	1,500.0	1,500.0	1,526.2	1,514.5	130.065	CC, ES
*THUNDERDOME FED COM 504H - OWB - PWP0	3,600.0	3,250.7	1,994.9	1,973.9	95.112	SF
*THUNDERDOME FED COM 505H - OWB - PWP0	1,500.0	1,500.0	1,555.9	1,544.2	132.595	CC, ES
*THUNDERDOME FED COM 505H - OWB - PWP0	3,400.0	2,888.1	1,986.2	1,967.2	104.632	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 #701H
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 #701H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Central Planning Prod
Reference Design:	PWP0	Offset TVD Reference:	Reference Datum

TD Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
THUNDERDOME PROJECT						
*THUNDERDOME FED COM #521H - OWB - PWP0	24,848.5	23,546.4	1,200.0	976.0	5.356	
*THUNDERDOME FED COM #522H - OWB - PWP0	24,848.5	23,466.8				Out of Range @TD
*THUNDERDOME FED COM #523H - OWB - PWP0	24,848.5	23,558.2				Out of Range @TD
*THUNDERDOME FED COM #702H - OWB - PWP0	24,848.5	24,631.4	540.4	340.4	2.702	
*THUNDERDOME FED COM #703H - OWB - PWP0	24,848.5	24,725.4	1,026.0	814.1	4.841	SF
*THUNDERDOME FED COM #704H - OWB - PWP0	24,848.5	24,574.2	1,548.4	1,338.3	7.370	SF
*THUNDERDOME FED COM #705H - OWB - PWP0	24,848.5	24,799.9				Out of Range @TD
*THUNDERDOME FED COM #706H - OWB - PWP0	24,848.5	24,469.4				Out of Range @TD
*THUNDERDOME FED COM #707H - OWB - PWP0	24,848.5	24,750.1				Out of Range @TD
*THUNDERDOME FED COM #708H - OWB - PWP0	24,848.5	24,486.5				Out of Range @TD
*THUNDERDOME FED COM #709H - OWB - PWP0	24,848.5	24,802.4				Out of Range @TD
*THUNDERDOME FED COM #710H - OWB - PWP0	24,848.5	24,734.5				Out of Range @TD
*THUNDERDOME FED COM 501H - OWB - PWP0	24,848.5	23,200.4	1,625.0	1,400.1	7.226	
*THUNDERDOME FED COM 502H - OWB - PWP0	24,848.5	23,110.8	1,993.7	1,791.4	9.857	SF
*THUNDERDOME FED COM 503H - OWB - PWP0	24,848.5	23,140.7				Out of Range @TD
*THUNDERDOME FED COM 504H - OWB - PWP0	24,848.5	22,854.8				Out of Range @TD
*THUNDERDOME FED COM 505H - OWB - PWP0	24,848.5	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
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
0.0	0.0	0.0	0.0	3.0	3.0	0.00	150.1	0.0	150.1	143.7	6.43	23.353		
100.0	100.0	100.0	100.0	3.2	3.2	0.00	150.1	0.0	150.1	143.2	6.89	21.782		
200.0	200.0	200.0	200.0	3.5	3.5	0.00	150.1	0.0	150.1	142.8	7.33	20.487		
300.0	300.0	300.0	300.0	3.7	3.7	0.00	150.1	0.0	150.1	142.4	7.74	19.393		
400.0	400.0	400.0	400.0	3.9	3.9	0.00	150.1	0.0	150.1	142.0	8.14	18.454		
500.0	500.0	500.0	500.0	4.1	4.1	0.00	150.1	0.0	150.1	141.6	8.51	17.634		
600.0	600.0	600.0	600.0	4.2	4.2	0.00	150.1	0.0	150.1	141.3	8.88	16.911		
700.0	700.0	700.0	700.0	4.4	4.4	0.00	150.1	0.0	150.1	140.9	9.23	16.267		
800.0	800.0	800.0	800.0	4.6	4.6	0.00	150.1	0.0	150.1	140.6	9.57	15.687		
900.0	900.0	900.0	900.0	4.8	4.8	0.00	150.1	0.0	150.1	140.2	9.90	15.162		
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	0.00	150.1	0.0	150.1	139.9	10.22	14.683		
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	0.00	150.1	0.0	150.1	139.6	10.54	14.244		
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	0.00	150.1	0.0	150.1	139.3	10.85	13.840		

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 #701H
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 #701H	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)			
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	0.00	150.1	0.0	150.1	139.0	11.15	13.466	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	0.00	150.1	0.0	150.1	138.7	11.44	13.118	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	0.00	150.1	0.0	150.1	138.4	11.73	12.794	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	125.40	150.1	0.0	150.9	138.9	12.02	12.555	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	126.57	150.1	0.0	153.2	140.9	12.29	12.465	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	128.44	150.1	0.0	157.2	144.6	12.57	12.504	
1,900.0	1,899.3	1,900.0	1,900.0	6.4	6.3	130.45	150.0	-1.3	162.8	150.0	12.85	12.667	
2,000.0	1,998.7	2,000.5	2,000.4	6.6	6.4	131.84	149.8	-5.2	169.0	155.9	13.13	12.877	
2,100.0	2,098.2	2,101.2	2,100.9	6.8	6.6	132.29	149.3	-11.8	174.8	161.4	13.40	13.039	
2,200.0	2,197.6	2,202.0	2,201.2	7.0	6.8	131.88	148.7	-21.1	180.0	166.3	13.68	13.154	
2,300.0	2,297.1	2,302.7	2,301.2	7.3	7.0	130.68	147.8	-32.9	184.8	170.8	13.96	13.234	
2,400.0	2,396.5	2,403.1	2,400.6	7.5	7.3	128.75	146.8	-47.4	189.3	175.0	14.23	13.298	
2,500.0	2,496.0	2,503.2	2,499.3	7.8	7.5	126.15	145.6	-64.4	193.7	179.2	14.49	13.370	
2,600.0	2,595.4	2,602.8	2,596.9	8.1	7.8	122.94	144.3	-83.8	198.4	183.6	14.73	13.466	
2,700.0	2,694.8	2,702.1	2,694.1	8.4	8.1	108.46	142.8	-104.4	202.9	188.0	14.96	13.562	
2,800.0	2,794.0	2,801.7	2,791.4	8.7	8.4	96.70	141.4	-125.1	206.4	191.2	15.19	13.587	
2,900.0	2,893.0	2,901.4	2,889.0	9.0	8.7	87.77	139.9	-145.8	208.6	193.1	15.42	13.528	
3,000.0	2,991.7	3,001.3	2,986.7	9.3	9.0	81.07	138.5	-166.5	209.1	193.4	15.64	13.367	
3,100.0	3,090.0	3,101.3	3,084.5	9.6	9.4	76.77	137.0	-187.2	207.9	192.1	15.85	13.124	
3,200.0	3,188.2	3,201.2	3,182.3	10.0	9.7	76.19	135.6	-208.0	206.2	190.1	16.11	12.800	
3,300.0	3,286.3	3,301.2	3,280.0	10.3	10.1	75.60	134.1	-228.7	204.5	188.1	16.36	12.499	
3,400.0	3,384.5	3,401.2	3,377.8	10.7	10.4	75.00	132.7	-249.4	202.8	186.2	16.62	12.202	
3,500.0	3,482.7	3,501.1	3,475.6	11.0	10.8	74.39	131.2	-270.2	201.1	184.3	16.89	11.908	
3,600.0	3,580.8	3,601.1	3,573.4	11.4	11.2	73.77	129.8	-290.9	199.5	182.3	17.17	11.618	
3,700.0	3,679.0	3,701.1	3,671.2	11.8	11.6	73.14	128.3	-311.6	197.9	180.4	17.47	11.330	
3,800.0	3,777.1	3,801.0	3,768.9	12.1	12.0	72.50	126.9	-332.4	196.3	178.5	17.77	11.046	
3,900.0	3,875.3	3,901.0	3,866.7	12.5	12.4	71.85	125.4	-353.1	194.7	176.6	18.09	10.765	
4,000.0	3,973.5	4,000.9	3,964.5	12.9	12.8	71.19	124.0	-373.8	193.2	174.8	18.42	10.487	
4,100.0	4,071.6	4,100.9	4,062.3	13.3	13.2	70.52	122.5	-394.6	191.7	172.9	18.77	10.211	
4,200.0	4,169.8	4,200.9	4,160.0	13.7	13.6	69.84	121.1	-415.3	190.2	171.0	19.13	9.939	
4,300.0	4,268.0	4,300.8	4,257.8	14.1	14.0	69.14	119.6	-436.0	188.7	169.2	19.51	9.670	
4,400.0	4,366.1	4,400.8	4,355.6	14.5	14.5	68.44	118.2	-456.8	187.3	167.4	19.91	9.404	
4,500.0	4,464.3	4,500.8	4,453.4	14.9	14.9	67.73	116.7	-477.5	185.9	165.5	20.33	9.142	
4,600.0	4,562.4	4,600.7	4,551.2	15.4	15.3	67.00	115.3	-498.2	184.5	163.7	20.77	8.883	
4,700.0	4,660.6	4,700.7	4,648.9	15.8	15.8	66.26	113.8	-518.9	183.1	161.9	21.23	8.627	
4,800.0	4,758.8	4,800.6	4,746.7	16.2	16.2	65.52	112.4	-539.7	181.8	160.1	21.71	8.376	
4,900.0	4,856.9	4,900.6	4,844.5	16.6	16.6	64.76	110.9	-560.4	180.5	158.3	22.21	8.129	
5,000.0	4,955.1	5,000.6	4,942.3	17.0	17.1	63.99	109.5	-581.1	179.3	156.5	22.74	7.886	
5,100.0	5,053.3	5,100.5	5,040.1	17.5	17.5	63.21	108.0	-601.9	178.1	154.8	23.28	7.647	
5,200.0	5,151.4	5,200.5	5,137.8	17.9	17.9	62.42	106.6	-622.6	176.9	153.0	23.86	7.414	
5,300.0	5,249.6	5,300.5	5,235.6	18.3	18.4	61.62	105.1	-643.3	175.7	151.3	24.46	7.185	
5,400.0	5,347.7	5,400.4	5,333.4	18.8	18.8	60.81	103.7	-664.1	174.6	149.5	25.08	6.962	
5,500.0	5,445.9	5,500.4	5,431.2	19.2	19.3	59.99	102.2	-684.8	173.5	147.8	25.73	6.744	
5,600.0	5,544.1	5,600.3	5,528.9	19.6	19.7	59.16	100.8	-705.5	172.5	146.1	26.41	6.532	
5,700.0	5,642.2	5,700.3	5,626.7	20.1	20.2	58.32	99.3	-726.3	171.5	144.4	27.11	6.325	
5,800.0	5,740.4	5,800.3	5,724.5	20.5	20.6	57.47	97.9	-747.0	170.5	142.7	27.84	6.124	
5,900.0	5,838.6	5,900.2	5,822.3	21.0	21.1	56.61	96.4	-767.7	169.6	141.0	28.60	5.929	
6,000.0	5,936.7	6,000.2	5,920.1	21.4	21.5	55.74	95.0	-788.5	168.7	139.3	29.38	5.741	
6,100.0	6,034.9	6,100.2	6,017.8	21.8	22.0	54.86	93.5	-809.2	167.8	137.6	30.19	5.558	
6,200.0	6,133.1	6,200.1	6,115.6	22.3	22.4	53.98	92.1	-829.9	167.0	136.0	31.03	5.382	
6,300.0	6,231.2	6,300.1	6,213.4	22.7	22.9	53.08	90.6	-850.7	166.2	134.3	31.89	5.211	
6,400.0	6,329.4	6,400.1	6,311.2	23.2	23.4	52.18	89.2	-871.4	165.5	132.7	32.78	5.047	

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 #701H
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 #701H	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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
6,500.0	6,427.5	6,500.0	6,409.0	23.6	23.8	51.26	87.7	-892.1	164.8	131.1	33.70	4.889		
6,600.0	6,525.7	6,600.1	6,506.8	24.1	24.3	50.35	86.3	-912.9	164.1	129.5	34.64	4.738		
6,700.0	6,623.9	6,701.7	6,606.4	24.5	24.8	49.70	84.9	-933.0	162.9	127.4	35.53	4.586		
6,800.0	6,722.0	6,803.3	6,706.4	25.0	25.2	49.57	83.6	-951.3	160.8	124.6	36.18	4.444		
6,900.0	6,820.2	6,904.8	6,806.5	25.4	25.7	49.98	82.5	-967.8	157.6	121.0	36.58	4.308		
7,000.0	6,918.4	7,006.2	6,906.9	25.9	26.1	50.96	81.4	-982.5	153.5	116.7	36.72	4.179		
7,100.0	7,016.5	7,107.5	7,007.2	26.3	26.5	52.58	80.5	-995.5	148.4	111.9	36.55	4.061		
7,200.0	7,114.7	7,208.4	7,107.6	26.8	26.9	54.93	79.7	-1,006.6	142.7	106.6	36.02	3.961		
7,300.0	7,212.8	7,309.1	7,207.8	27.2	27.3	58.13	79.1	-1,016.0	136.4	101.3	35.08	3.888		
7,400.0	7,311.0	7,409.3	7,307.8	27.7	27.7	62.33	78.6	-1,023.5	129.9	96.1	33.71	3.852		
7,500.0	7,409.2	7,509.2	7,407.4	28.1	28.0	67.69	78.2	-1,029.3	123.6	91.6	32.00	3.862		
7,600.0	7,507.3	7,608.5	7,506.7	28.6	28.3	74.35	77.9	-1,033.4	118.2	87.9	30.29	3.903		
7,700.0	7,605.5	7,707.3	7,605.4	29.0	28.6	82.32	77.7	-1,035.7	114.5	85.2	29.33	3.906		
7,785.1	7,689.0	7,790.9	7,689.0	29.4	28.7	90.01	77.7	-1,036.3	113.4	83.6	29.86	3.798 CC		
7,800.0	7,703.7	7,805.5	7,703.7	29.5	28.7	91.42	77.7	-1,036.3	113.5	83.3	30.12	3.766		
7,900.0	7,801.8	7,903.7	7,801.8	29.9	28.8	100.74	77.7	-1,036.3	115.5	82.5	33.00	3.500 ES		
8,000.0	7,900.2	8,002.1	7,900.2	30.4	28.8	109.05	77.7	-1,036.3	120.2	83.4	36.78	3.267		
8,100.0	7,998.9	8,100.8	7,998.9	30.8	28.9	115.96	77.7	-1,036.3	126.4	86.0	40.43	3.127		
8,200.0	8,097.9	8,199.7	8,097.9	31.3	28.9	121.54	77.7	-1,036.3	133.4	89.9	43.55	3.063		
8,300.0	8,197.1	8,298.9	8,197.1	31.7	28.9	125.98	77.7	-1,036.3	140.5	94.4	46.11	3.048 SF		
8,400.0	8,296.5	8,398.3	8,296.5	32.1	28.9	129.47	77.7	-1,036.3	147.2	99.1	48.15	3.058		
8,500.0	8,396.0	8,497.9	8,396.0	32.5	29.0	132.16	77.7	-1,036.3	153.3	103.5	49.76	3.080		
8,600.0	8,495.8	8,597.6	8,495.8	32.8	29.0	134.20	77.7	-1,036.3	158.4	107.3	51.04	3.103		
8,700.0	8,595.6	8,697.4	8,595.6	33.2	29.0	135.67	77.7	-1,036.3	162.4	110.4	52.02	3.122		
8,800.0	8,695.5	8,797.4	8,695.5	33.5	29.1	136.65	77.7	-1,036.3	165.3	112.5	52.76	3.133		
8,900.0	8,795.5	8,897.3	8,795.5	33.8	29.1	137.19	77.7	-1,036.3	166.9	113.7	53.25	3.134		
9,000.0	8,895.5	8,997.3	8,895.5	33.9	29.1	49.32	77.7	-1,036.3	167.3	113.9	53.43	3.131		
9,100.0	8,995.5	9,097.3	8,995.5	33.9	29.2	49.32	77.7	-1,036.3	167.3	113.8	53.50	3.127		
9,200.0	9,095.5	9,197.3	9,095.5	33.9	29.2	49.32	77.7	-1,036.3	167.3	113.7	53.56	3.123		
9,300.0	9,195.5	9,297.3	9,195.5	34.0	29.2	49.32	77.7	-1,036.3	167.3	113.7	53.63	3.120		
9,400.0	9,295.5	9,397.3	9,295.5	34.0	29.2	49.32	77.7	-1,036.3	167.3	113.6	53.69	3.116		
9,500.0	9,395.5	9,497.3	9,395.5	34.0	29.3	49.32	77.7	-1,036.3	167.3	113.5	53.75	3.112		
9,600.0	9,495.5	9,597.3	9,495.5	34.0	29.3	49.32	77.7	-1,036.3	167.3	113.5	53.82	3.108		
9,681.5	9,577.0	9,678.8	9,577.0	34.0	29.3	49.32	77.7	-1,036.3	167.3	113.4	53.87	3.106		
9,700.0	9,595.5	9,694.9	9,593.0	34.0	29.3	49.25	77.9	-1,036.4	167.4	113.7	53.72	3.117		
9,800.0	9,695.5	9,780.6	9,678.2	34.1	29.4	46.75	86.6	-1,037.8	173.0	121.3	51.74	3.344		
9,900.0	9,795.5	9,882.0	9,757.0	34.1	29.4	41.58	106.3	-1,041.0	188.1	140.0	48.06	3.913		
10,000.0	9,895.5	9,936.4	9,826.0	34.1	29.5	35.45	133.8	-1,045.5	214.4	170.7	43.77	4.899		
10,100.0	9,995.5	10,000.0	9,881.6	34.1	29.6	29.95	164.2	-1,050.5	252.8	212.6	40.22	6.285		
10,200.0	10,095.5	10,060.3	9,930.9	34.2	29.6	24.98	198.4	-1,056.1	302.3	264.2	38.06	7.942		
10,300.0	10,195.5	10,110.2	9,968.8	34.2	29.7	21.25	230.5	-1,061.4	361.0	323.9	37.17	9.713		
10,400.0	10,295.5	10,150.0	9,996.8	34.2	29.7	18.56	258.3	-1,065.9	427.3	390.2	37.14	11.506		
10,500.0	10,395.5	10,200.0	10,029.2	34.3	29.7	15.56	295.9	-1,072.1	499.6	462.2	37.39	13.362		
10,600.0	10,495.5	10,221.8	10,042.3	34.3	29.8	14.38	313.1	-1,074.9	576.1	538.0	38.07	15.134		
10,700.0	10,595.5	10,250.0	10,058.1	34.3	29.8	12.96	336.1	-1,078.7	656.4	617.7	38.73	16.951		
10,800.0	10,695.5	10,273.4	10,070.4	34.3	29.8	11.86	355.7	-1,081.9	739.7	700.3	39.41	18.770		
10,900.0	10,795.5	10,300.0	10,083.4	34.3	29.8	10.38	378.6	-1,085.6	825.2	785.1	40.05	20.602		
11,000.0	10,894.6	10,317.0	10,091.1	34.3	29.8	7.69	393.6	-1,088.1	906.4	865.6	40.79	22.221		
11,100.0	10,990.2	10,350.0	10,104.9	34.4	29.9	5.77	423.2	-1,092.9	979.7	938.1	41.53	23.587		
11,200.0	11,079.3	10,369.4	10,112.1	34.4	29.9	4.72	441.0	-1,095.8	1,043.6	1,001.3	42.33	24.656		
11,300.0	11,159.3	10,400.0	10,122.3	34.4	29.9	3.87	469.4	-1,100.5	1,097.8	1,054.7	43.11	25.463		
11,400.0	11,227.6	10,428.3	10,130.3	34.4	29.9	3.28	496.3	-1,104.9	1,141.4	1,097.5	43.89	26.008		

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 #701H
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 #701H	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)			
11,500.0	11,282.2	10,450.0	10,135.5	34.4	30.0	2.90	517.0	-1,108.3	1,174.0	1,129.4	44.61	26.315	
11,600.0	11,321.4	10,500.0	10,144.5	34.5	30.0	2.39	565.5	-1,116.2	1,195.2	1,149.8	45.38	26.339	
11,700.0	11,344.2	10,522.4	10,147.2	34.6	30.0	2.18	587.5	-1,119.8	1,204.6	1,158.6	46.02	26.178	
11,800.0	11,350.0	10,550.0	10,149.2	34.6	30.0	1.98	614.6	-1,124.3	1,202.7	1,156.1	46.57	25.825	
11,900.0	11,350.0	10,601.3	10,150.0	34.7	30.1	1.60	665.2	-1,132.5	1,200.5	1,153.3	47.15	25.462	
12,000.0	11,350.0	10,699.5	10,150.0	34.8	30.2	0.98	762.5	-1,145.9	1,200.2	1,152.2	47.98	25.013	
12,100.0	11,350.0	10,798.4	10,150.0	35.0	30.4	0.51	861.0	-1,156.1	1,200.0	1,151.2	48.83	24.575	
12,200.0	11,350.0	10,898.0	10,150.0	35.1	30.5	0.20	960.3	-1,162.9	1,200.0	1,150.3	49.68	24.156	
12,300.0	11,350.0	10,997.9	10,150.0	35.3	30.7	0.06	1,060.1	-1,166.2	1,200.0	1,149.5	50.50	23.763	
12,350.0	11,350.0	11,047.8	10,150.0	35.4	30.8	0.05	1,110.0	-1,166.6	1,200.0	1,149.1	50.90	23.577	
12,400.0	11,350.0	11,097.8	10,150.0	35.5	30.9	0.05	1,160.0	-1,166.8	1,200.0	1,148.7	51.30	23.394	
12,500.0	11,350.0	11,197.8	10,150.0	35.7	31.1	0.05	1,260.0	-1,167.2	1,200.0	1,147.9	52.13	23.021	
12,600.0	11,350.0	11,297.8	10,150.0	35.9	31.3	0.05	1,360.0	-1,167.6	1,200.0	1,147.0	52.99	22.645	
12,700.0	11,350.0	11,397.8	10,150.0	36.1	31.5	0.05	1,460.0	-1,168.0	1,200.0	1,146.1	53.89	22.269	
12,800.0	11,350.0	11,497.8	10,150.0	36.3	31.8	0.05	1,560.0	-1,168.4	1,200.0	1,145.2	54.81	21.893	
12,900.0	11,350.0	11,597.8	10,150.0	36.6	32.0	0.05	1,660.0	-1,168.9	1,200.0	1,144.2	55.76	21.519	
13,000.0	11,350.0	11,697.8	10,150.0	36.9	32.3	0.05	1,760.0	-1,169.3	1,200.0	1,143.3	56.74	21.148	
13,100.0	11,350.0	11,797.8	10,150.0	37.2	32.6	0.05	1,860.0	-1,169.7	1,200.0	1,142.3	57.75	20.780	
13,200.0	11,350.0	11,897.8	10,150.0	37.5	33.0	0.05	1,960.0	-1,170.1	1,200.0	1,141.2	58.78	20.417	
13,300.0	11,350.0	11,997.8	10,150.0	37.8	33.3	0.05	2,060.0	-1,170.5	1,200.0	1,140.2	59.83	20.058	
13,400.0	11,350.0	12,097.8	10,150.0	38.1	33.6	0.05	2,160.0	-1,170.9	1,200.0	1,139.1	60.90	19.705	
13,500.0	11,350.0	12,197.8	10,150.0	38.4	34.0	0.05	2,260.0	-1,171.3	1,200.0	1,138.0	61.99	19.358	
13,600.0	11,350.0	12,297.8	10,150.0	38.8	34.4	0.05	2,360.0	-1,171.7	1,200.0	1,136.9	63.10	19.016	
13,700.0	11,350.0	12,397.8	10,150.0	39.2	34.8	0.05	2,460.0	-1,172.1	1,200.0	1,135.8	64.23	18.682	
13,800.0	11,350.0	12,497.8	10,150.0	39.5	35.2	0.05	2,560.0	-1,172.5	1,200.0	1,134.6	65.38	18.354	
13,900.0	11,350.0	12,597.8	10,150.0	39.9	35.6	0.05	2,660.0	-1,172.9	1,200.0	1,133.5	66.54	18.033	
14,000.0	11,350.0	12,697.8	10,150.0	40.3	36.0	0.04	2,760.0	-1,173.3	1,200.0	1,132.3	67.72	17.719	
14,100.0	11,350.0	12,797.8	10,150.0	40.7	36.4	0.04	2,860.0	-1,173.7	1,200.0	1,131.1	68.92	17.412	
14,200.0	11,350.0	12,897.8	10,150.0	41.1	36.9	0.04	2,960.0	-1,174.1	1,200.0	1,129.9	70.13	17.112	
14,300.0	11,350.0	12,997.8	10,150.0	41.6	37.3	0.04	3,060.0	-1,174.5	1,200.0	1,128.7	71.35	16.819	
14,400.0	11,350.0	13,097.8	10,150.0	42.0	37.8	0.04	3,160.0	-1,174.9	1,200.0	1,127.4	72.58	16.533	
14,500.0	11,350.0	13,197.8	10,150.0	42.5	38.3	0.04	3,260.0	-1,175.3	1,200.0	1,126.2	73.83	16.254	
14,600.0	11,350.0	13,297.8	10,150.0	42.9	38.8	0.04	3,360.0	-1,175.7	1,200.0	1,124.9	75.08	15.982	
14,700.0	11,350.0	13,397.8	10,150.0	43.4	39.3	0.04	3,460.0	-1,176.1	1,200.0	1,123.7	76.35	15.717	
14,800.0	11,350.0	13,497.8	10,150.0	43.9	39.8	0.04	3,560.0	-1,176.5	1,200.0	1,122.4	77.63	15.458	
14,900.0	11,350.0	13,597.8	10,150.0	44.3	40.3	0.04	3,660.0	-1,176.9	1,200.0	1,121.1	78.92	15.206	
15,000.0	11,350.0	13,697.8	10,150.0	44.8	40.8	0.04	3,760.0	-1,177.3	1,200.0	1,119.8	80.21	14.960	
15,100.0	11,350.0	13,797.8	10,150.0	45.3	41.3	0.04	3,860.0	-1,177.7	1,200.0	1,118.5	81.52	14.720	
15,200.0	11,350.0	13,897.8	10,150.0	45.8	41.9	0.04	3,960.0	-1,178.1	1,200.0	1,117.2	82.83	14.487	
15,300.0	11,350.0	13,997.8	10,150.0	46.3	42.4	0.04	4,060.0	-1,178.5	1,200.0	1,115.8	84.16	14.259	
15,400.0	11,350.0	14,097.8	10,150.0	46.9	43.0	0.04	4,160.0	-1,178.9	1,200.0	1,114.5	85.49	14.037	
15,500.0	11,350.0	14,197.8	10,150.0	47.4	43.5	0.04	4,260.0	-1,179.4	1,200.0	1,113.2	86.82	13.821	
15,600.0	11,350.0	14,297.8	10,150.0	47.9	44.1	0.04	4,360.0	-1,179.8	1,200.0	1,111.8	88.17	13.610	
15,700.0	11,350.0	14,397.8	10,150.0	48.5	44.7	0.04	4,460.0	-1,180.2	1,200.0	1,110.5	89.52	13.405	
15,800.0	11,350.0	14,497.8	10,150.0	49.0	45.2	0.04	4,560.0	-1,180.6	1,200.0	1,109.1	90.88	13.205	
15,900.0	11,350.0	14,597.8	10,150.0	49.6	45.8	0.04	4,660.0	-1,181.0	1,200.0	1,107.8	92.24	13.009	
16,000.0	11,350.0	14,697.8	10,150.0	50.1	46.4	0.04	4,760.0	-1,181.4	1,200.0	1,106.4	93.61	12.819	
16,100.0	11,350.0	14,797.8	10,150.0	50.7	47.0	0.04	4,860.0	-1,181.8	1,200.0	1,105.0	94.98	12.634	
16,200.0	11,350.0	14,897.8	10,150.0	51.2	47.6	0.04	4,960.0	-1,182.2	1,200.0	1,103.6	96.36	12.453	
16,300.0	11,350.0	14,997.8	10,150.0	51.8	48.2	0.04	5,060.0	-1,182.6	1,200.0	1,102.3	97.75	12.276	
16,400.0	11,350.0	15,097.8	10,150.0	52.4	48.8	0.03	5,160.0	-1,183.0	1,200.0	1,100.9	99.14	12.104	
16,500.0	11,350.0	15,197.8	10,150.0	53.0	49.4	0.03	5,260.0	-1,183.4	1,200.0	1,099.5	100.53	11.936	

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 #701H
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 #701H	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		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
16,600.0	11,350.0	15,297.8	10,150.0	53.6	50.0	0.03	5,360.0	-1,183.8	1,200.0	1,098.1	101.93	11.772	
16,700.0	11,350.0	15,397.8	10,150.0	54.2	50.6	0.03	5,460.0	-1,184.2	1,200.0	1,096.7	103.34	11.613	
16,800.0	11,350.0	15,497.8	10,150.0	54.8	51.2	0.03	5,560.0	-1,184.6	1,200.0	1,095.3	104.74	11.457	
16,900.0	11,350.0	15,597.8	10,150.0	55.3	51.9	0.03	5,660.0	-1,185.0	1,200.0	1,093.8	106.16	11.304	
17,000.0	11,350.0	15,697.8	10,150.0	56.0	52.5	0.03	5,760.0	-1,185.4	1,200.0	1,092.4	107.57	11.155	
17,100.0	11,350.0	15,797.8	10,150.0	56.6	53.1	0.03	5,860.0	-1,185.8	1,200.0	1,091.0	108.99	11.010	
17,200.0	11,350.0	15,897.8	10,150.0	57.2	53.8	0.03	5,960.0	-1,186.2	1,200.0	1,089.6	110.41	10.868	
17,300.0	11,350.0	15,997.8	10,150.0	57.8	54.4	0.03	6,060.0	-1,186.6	1,200.0	1,088.2	111.84	10.730	
17,400.0	11,350.0	16,097.8	10,150.0	58.4	55.0	0.03	6,160.0	-1,187.0	1,200.0	1,086.7	113.27	10.594	
17,500.0	11,350.0	16,197.8	10,150.0	59.0	55.7	0.03	6,260.0	-1,187.4	1,200.0	1,085.3	114.70	10.462	
17,600.0	11,350.0	16,297.8	10,150.0	59.7	56.3	0.03	6,360.0	-1,187.8	1,200.0	1,083.9	116.13	10.333	
17,700.0	11,350.0	16,397.8	10,150.0	60.3	57.0	0.03	6,460.0	-1,188.2	1,200.0	1,082.4	117.57	10.207	
17,800.0	11,350.0	16,497.8	10,150.0	60.9	57.6	0.03	6,560.0	-1,188.6	1,200.0	1,081.0	119.01	10.083	
17,900.0	11,350.0	16,597.8	10,150.0	61.5	58.3	0.03	6,660.0	-1,189.0	1,200.0	1,079.5	120.46	9.962	
18,000.0	11,350.0	16,697.8	10,150.0	62.2	58.9	0.03	6,760.0	-1,189.4	1,200.0	1,078.1	121.90	9.844	
18,100.0	11,350.0	16,797.8	10,150.0	62.8	59.6	0.03	6,860.0	-1,189.9	1,200.0	1,076.6	123.35	9.728	
18,200.0	11,350.0	16,897.8	10,150.0	63.5	60.3	0.03	6,960.0	-1,190.3	1,200.0	1,075.2	124.80	9.615	
18,300.0	11,350.0	16,997.8	10,150.0	64.1	60.9	0.03	7,060.0	-1,190.7	1,200.0	1,073.7	126.26	9.505	
18,400.0	11,350.0	17,097.8	10,150.0	64.8	61.6	0.03	7,160.0	-1,191.1	1,200.0	1,072.3	127.71	9.396	
18,500.0	11,350.0	17,197.8	10,150.0	65.4	62.3	0.03	7,260.0	-1,191.5	1,200.0	1,070.8	129.17	9.290	
18,600.0	11,350.0	17,297.8	10,150.0	66.1	62.9	0.03	7,360.0	-1,191.9	1,200.0	1,069.4	130.63	9.186	
18,700.0	11,350.0	17,397.8	10,150.0	66.7	63.6	0.03	7,460.0	-1,192.3	1,200.0	1,067.9	132.09	9.085	
18,800.0	11,350.0	17,497.8	10,150.0	67.4	64.3	0.03	7,560.0	-1,192.7	1,200.0	1,066.4	133.55	8.985	
18,900.0	11,350.0	17,597.8	10,150.0	68.0	65.0	0.02	7,660.0	-1,193.1	1,200.0	1,065.0	135.02	8.888	
19,000.0	11,350.0	17,697.8	10,150.0	68.7	65.7	0.02	7,760.0	-1,193.5	1,200.0	1,063.5	136.49	8.792	
19,100.0	11,350.0	17,797.8	10,150.0	69.4	66.3	0.02	7,860.0	-1,193.9	1,200.0	1,062.0	137.96	8.698	
19,200.0	11,350.0	17,897.8	10,150.0	70.0	67.0	0.02	7,960.0	-1,194.3	1,200.0	1,060.6	139.43	8.607	
19,300.0	11,350.0	17,997.8	10,150.0	70.7	67.7	0.02	8,060.0	-1,194.7	1,200.0	1,059.1	140.90	8.517	
19,400.0	11,350.0	18,097.8	10,150.0	71.4	68.4	0.02	8,160.0	-1,195.1	1,200.0	1,057.6	142.37	8.428	
19,500.0	11,350.0	18,197.8	10,150.0	72.0	69.1	0.02	8,260.0	-1,195.5	1,200.0	1,056.1	143.85	8.342	
19,600.0	11,350.0	18,297.8	10,150.0	72.7	69.8	0.02	8,360.0	-1,195.9	1,200.0	1,054.7	145.33	8.257	
19,700.0	11,350.0	18,397.8	10,150.0	73.4	70.5	0.02	8,460.0	-1,196.3	1,200.0	1,053.2	146.81	8.174	
19,800.0	11,350.0	18,497.8	10,150.0	74.1	71.2	0.02	8,560.0	-1,196.7	1,200.0	1,051.7	148.29	8.092	
19,900.0	11,350.0	18,597.8	10,150.0	74.8	71.9	0.02	8,660.0	-1,197.1	1,200.0	1,050.2	149.77	8.012	
20,000.0	11,350.0	18,697.8	10,150.0	75.4	72.6	0.02	8,760.0	-1,197.5	1,200.0	1,048.7	151.25	7.934	
20,100.0	11,350.0	18,797.8	10,150.0	76.1	73.3	0.02	8,860.0	-1,197.9	1,200.0	1,047.3	152.74	7.857	
20,200.0	11,350.0	18,897.8	10,150.0	76.8	74.0	0.02	8,960.0	-1,198.3	1,200.0	1,045.8	154.22	7.781	
20,300.0	11,350.0	18,997.8	10,150.0	77.5	74.7	0.02	9,060.0	-1,198.7	1,200.0	1,044.3	155.71	7.707	
20,400.0	11,350.0	19,097.8	10,150.0	78.2	75.4	0.02	9,160.0	-1,199.1	1,200.0	1,042.8	157.20	7.634	
20,500.0	11,350.0	19,197.8	10,150.0	78.9	76.1	0.02	9,260.0	-1,199.5	1,200.0	1,041.3	158.69	7.562	
20,600.0	11,350.0	19,297.8	10,150.0	79.6	76.8	0.02	9,360.0	-1,199.9	1,200.0	1,039.8	160.18	7.492	
20,700.0	11,350.0	19,397.8	10,150.0	80.2	77.5	0.02	9,460.0	-1,200.3	1,200.0	1,038.3	161.67	7.423	
20,800.0	11,350.0	19,497.8	10,150.0	80.9	78.2	0.02	9,560.0	-1,200.8	1,200.0	1,036.8	163.16	7.355	
20,900.0	11,350.0	19,597.8	10,150.0	81.6	78.9	0.02	9,660.0	-1,201.2	1,200.0	1,035.3	164.65	7.288	
21,000.0	11,350.0	19,697.8	10,150.0	82.3	79.6	0.02	9,760.0	-1,201.6	1,200.0	1,033.9	166.15	7.222	
21,100.0	11,350.0	19,797.8	10,150.0	83.0	80.3	0.02	9,860.0	-1,202.0	1,200.0	1,032.4	167.64	7.158	
21,200.0	11,350.0	19,897.8	10,150.0	83.7	81.0	0.02	9,960.0	-1,202.4	1,200.0	1,030.9	169.14	7.095	
21,300.0	11,350.0	19,997.8	10,150.0	84.4	81.7	0.01	10,060.0	-1,202.8	1,200.0	1,029.4	170.64	7.032	
21,400.0	11,350.0	20,097.8	10,150.0	85.1	82.4	0.01	10,160.0	-1,203.2	1,200.0	1,027.9	172.14	6.971	
21,500.0	11,350.0	20,197.8	10,150.0	85.8	83.2	0.01	10,260.0	-1,203.6	1,200.0	1,026.4	173.64	6.911	
21,600.0	11,350.0	20,297.8	10,150.0	86.5	83.9	0.01	10,360.0	-1,204.0	1,200.0	1,024.9	175.14	6.852	
21,700.0	11,350.0	20,397.8	10,150.0	87.2	84.6	0.01	10,460.0	-1,204.4	1,200.0	1,023.4	176.64	6.794	

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 #701H
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 #701H	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		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)			
21,800.0	11,350.0	20,497.8	10,150.0	87.9	85.3	0.01	10,560.0	-1,204.8	1,200.0	1,021.9	178.14	6.736	
21,900.0	11,350.0	20,597.8	10,150.0	88.6	86.0	0.01	10,660.0	-1,205.2	1,200.0	1,020.4	179.64	6.680	
22,000.0	11,350.0	20,697.8	10,150.0	89.3	86.7	0.01	10,760.0	-1,205.6	1,200.0	1,018.9	181.14	6.625	
22,100.0	11,350.0	20,797.8	10,150.0	90.1	87.5	0.01	10,860.0	-1,206.0	1,200.0	1,017.4	182.65	6.570	
22,200.0	11,350.0	20,897.8	10,150.0	90.8	88.2	0.01	10,960.0	-1,206.4	1,200.0	1,015.8	184.15	6.516	
22,300.0	11,350.0	20,997.8	10,150.0	91.5	88.9	0.01	11,060.0	-1,206.8	1,200.0	1,014.3	185.66	6.463	
22,400.0	11,350.0	21,097.8	10,150.0	92.2	89.6	0.01	11,160.0	-1,207.2	1,200.0	1,012.8	187.17	6.411	
22,500.0	11,350.0	21,197.8	10,150.0	92.9	90.3	0.01	11,260.0	-1,207.6	1,200.0	1,011.3	188.67	6.360	
22,600.0	11,350.0	21,297.8	10,150.0	93.6	91.1	0.01	11,360.0	-1,208.0	1,200.0	1,009.8	190.18	6.310	
22,700.0	11,350.0	21,397.8	10,150.0	94.3	91.8	0.01	11,460.0	-1,208.4	1,200.0	1,008.3	191.69	6.260	
22,800.0	11,350.0	21,497.8	10,150.0	95.0	92.5	0.01	11,560.0	-1,208.8	1,200.0	1,006.8	193.20	6.211	
22,900.0	11,350.0	21,597.8	10,150.0	95.7	93.2	0.01	11,660.0	-1,209.2	1,200.0	1,005.3	194.71	6.163	
23,000.0	11,350.0	21,697.8	10,150.0	96.5	94.0	0.01	11,760.0	-1,209.6	1,200.0	1,003.8	196.22	6.116	
23,100.0	11,350.0	21,797.8	10,150.0	97.2	94.7	0.01	11,860.0	-1,210.0	1,200.0	1,002.3	197.73	6.069	
23,200.0	11,350.0	21,897.8	10,150.0	97.9	95.4	0.01	11,960.0	-1,210.4	1,200.0	1,000.8	199.24	6.023	
23,300.0	11,350.0	21,997.8	10,150.0	98.6	96.1	0.01	12,060.0	-1,210.8	1,200.0	999.2	200.75	5.978	
23,400.0	11,350.0	22,097.8	10,150.0	99.3	96.9	0.01	12,160.0	-1,211.3	1,200.0	997.7	202.26	5.933	
23,500.0	11,350.0	22,197.8	10,150.0	100.0	97.6	0.01	12,260.0	-1,211.7	1,200.0	996.2	203.78	5.889	
23,600.0	11,350.0	22,297.8	10,150.0	100.8	98.3	0.01	12,360.0	-1,212.1	1,200.0	994.7	205.29	5.845	
23,700.0	11,350.0	22,397.8	10,150.0	101.5	99.1	0.00	12,459.9	-1,212.5	1,200.0	993.2	206.80	5.803	
23,800.0	11,350.0	22,497.8	10,150.0	102.2	99.8	0.00	12,559.9	-1,212.9	1,200.0	991.7	208.32	5.760	
23,900.0	11,350.0	22,597.8	10,150.0	102.9	100.5	0.00	12,659.9	-1,213.3	1,200.0	990.2	209.83	5.719	
24,000.0	11,350.0	22,697.8	10,150.0	103.7	101.2	0.00	12,759.9	-1,213.7	1,200.0	988.7	211.35	5.678	
24,100.0	11,350.0	22,797.8	10,150.0	104.4	102.0	0.00	12,859.9	-1,214.1	1,200.0	987.1	212.87	5.637	
24,200.0	11,350.0	22,897.8	10,150.0	105.1	102.7	0.00	12,959.9	-1,214.5	1,200.0	985.6	214.38	5.597	
24,300.0	11,350.0	22,997.8	10,150.0	105.8	103.4	0.00	13,059.9	-1,214.9	1,200.0	984.1	215.90	5.558	
24,400.0	11,350.0	23,097.8	10,150.0	106.5	104.2	0.00	13,159.9	-1,215.3	1,200.0	982.6	217.42	5.519	
24,500.0	11,350.0	23,197.8	10,150.0	107.3	104.9	0.00	13,259.9	-1,215.7	1,200.0	981.1	218.93	5.481	
24,600.0	11,350.0	23,297.8	10,150.0	108.0	105.6	0.00	13,359.9	-1,216.1	1,200.0	979.5	220.45	5.443	
24,700.0	11,350.0	23,397.8	10,150.0	108.7	106.4	0.00	13,459.9	-1,216.5	1,200.0	978.0	221.97	5.406	
24,800.0	11,350.0	23,497.8	10,150.0	109.5	107.1	0.00	13,559.9	-1,216.9	1,200.0	976.5	223.49	5.369	
24,832.9	11,350.0	23,530.8	10,150.0	109.7	107.4	0.00	13,592.9	-1,217.0	1,200.0	976.1	223.86	5.360	
24,848.5	11,350.0	23,546.4	10,150.0	109.7	107.5	0.00	13,608.5	-1,217.1	1,200.0	976.0	224.04	5.356	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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)			
0.0	0.0	0.0	0.0	3.0	3.0	81.31	221.7	1,450.0	1,466.9	1,460.5	6.43	228.173	
100.0	100.0	100.0	100.0	3.2	3.2	81.31	221.7	1,450.0	1,466.9	1,460.0	6.89	212.830	
200.0	200.0	200.0	200.0	3.5	3.5	81.31	221.7	1,450.0	1,466.9	1,459.6	7.33	200.173	
300.0	300.0	300.0	300.0	3.7	3.7	81.31	221.7	1,450.0	1,466.9	1,459.2	7.74	189.490	
400.0	400.0	400.0	400.0	3.9	3.9	81.31	221.7	1,450.0	1,466.9	1,458.8	8.14	180.308	
500.0	500.0	500.0	500.0	4.1	4.1	81.31	221.7	1,450.0	1,466.9	1,458.4	8.51	172.302	
600.0	600.0	600.0	600.0	4.2	4.2	81.31	221.7	1,450.0	1,466.9	1,458.0	8.88	165.236	
700.0	700.0	700.0	700.0	4.4	4.4	81.31	221.7	1,450.0	1,466.9	1,457.7	9.23	158.937	
800.0	800.0	800.0	800.0	4.6	4.6	81.31	221.7	1,450.0	1,466.9	1,457.3	9.57	153.273	
900.0	900.0	900.0	900.0	4.8	4.8	81.31	221.7	1,450.0	1,466.9	1,457.0	9.90	148.143	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	81.31	221.7	1,450.0	1,466.9	1,456.7	10.22	143.467	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	81.31	221.7	1,450.0	1,466.9	1,456.4	10.54	139.179	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	81.31	221.7	1,450.0	1,466.9	1,456.1	10.85	135.229	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	81.31	221.7	1,450.0	1,466.9	1,455.8	11.15	131.573	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	81.31	221.7	1,450.0	1,466.9	1,455.5	11.44	128.176	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	81.31	221.7	1,450.0	1,466.9	1,455.2	11.73	125.008 CC	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-153.71	221.7	1,450.0	1,468.1	1,456.0	12.03	121.991	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-153.75	221.7	1,450.0	1,471.6	1,459.3	12.33	119.388	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-153.83	221.7	1,450.0	1,477.5	1,464.8	12.63	116.985	
1,900.0	1,899.3	1,954.6	1,954.5	6.4	6.4	-153.98	220.1	1,447.4	1,483.8	1,470.8	13.03	113.861	
2,000.0	1,998.7	2,110.3	2,109.9	6.6	6.6	-154.11	215.0	1,439.4	1,487.7	1,474.2	13.43	110.803	
2,100.0	2,098.2	2,266.2	2,265.1	6.8	6.9	-154.15	206.7	1,426.0	1,487.7	1,473.8	13.87	107.285	
2,200.0	2,197.6	2,390.2	2,388.0	7.0	7.1	-154.12	197.8	1,411.8	1,484.6	1,470.4	14.24	104.250	
2,300.0	2,297.1	2,490.2	2,486.9	7.3	7.3	-154.08	190.4	1,400.0	1,481.2	1,466.5	14.66	101.025	
2,400.0	2,396.5	2,590.1	2,585.9	7.5	7.6	-154.05	183.1	1,388.2	1,477.7	1,462.6	15.11	97.772	
2,500.0	2,496.0	2,690.1	2,684.9	7.8	7.8	-154.02	175.7	1,376.4	1,474.3	1,458.7	15.59	94.555	
2,600.0	2,595.4	2,790.0	2,783.8	8.1	8.1	-153.98	168.3	1,364.6	1,470.9	1,454.8	16.10	91.362	
2,700.0	2,694.8	2,889.9	2,882.8	8.4	8.4	-165.20	161.0	1,352.8	1,468.3	1,451.7	16.62	88.324	
2,777.8	2,772.0	2,967.7	2,959.8	8.6	8.6	-172.52	155.2	1,343.7	1,467.7	1,450.7	17.06	86.016	
2,800.0	2,794.0	2,989.9	2,981.8	8.7	8.7	-174.34	153.6	1,341.0	1,467.8	1,450.6	17.19	85.390 ES	
2,900.0	2,893.0	3,089.7	3,080.7	9.0	9.0	178.76	146.2	1,329.2	1,469.2	1,451.4	17.78	82.612	
3,000.0	2,991.7	3,189.5	3,179.4	9.3	9.3	173.56	138.9	1,317.5	1,472.7	1,454.3	18.41	80.009	
3,100.0	3,090.0	3,289.0	3,277.9	9.6	9.7	170.28	131.5	1,305.7	1,478.1	1,459.1	19.02	77.722	
3,200.0	3,188.2	3,388.4	3,376.4	10.0	10.0	170.63	124.2	1,294.0	1,484.3	1,464.6	19.68	75.406	
3,300.0	3,286.3	3,479.8	3,466.9	10.3	10.3	170.94	117.6	1,283.4	1,490.8	1,470.5	20.33	73.336	
3,400.0	3,384.5	3,568.7	3,555.0	10.7	10.6	171.23	111.5	1,273.6	1,498.0	1,477.0	20.97	71.428	
3,500.0	3,482.7	3,657.5	3,643.2	11.0	10.9	171.50	105.7	1,264.4	1,505.9	1,484.3	21.62	69.663	
3,600.0	3,580.8	3,746.2	3,731.4	11.4	11.2	171.76	100.4	1,255.9	1,514.6	1,492.3	22.27	68.020	
3,700.0	3,679.0	3,834.9	3,819.6	11.8	11.5	172.01	95.4	1,247.9	1,524.0	1,501.0	22.92	66.494	
3,800.0	3,777.1	3,923.6	3,907.8	12.1	11.8	172.24	90.7	1,240.4	1,534.1	1,510.5	23.57	65.078	
3,900.0	3,875.3	4,012.1	3,995.9	12.5	12.1	172.46	86.5	1,233.6	1,544.9	1,520.7	24.23	63.765	
4,000.0	3,973.5	4,100.0	4,083.5	12.9	12.4	172.66	82.6	1,227.4	1,556.5	1,531.6	24.88	62.553	
4,100.0	4,071.6	4,188.8	4,172.1	13.3	12.7	172.85	79.0	1,221.7	1,568.7	1,543.2	25.54	61.426	
4,200.0	4,169.8	4,277.0	4,260.1	13.7	13.0	173.03	75.8	1,216.6	1,581.7	1,555.5	26.19	60.390	
4,300.0	4,268.0	4,365.1	4,348.0	14.1	13.3	173.19	73.0	1,212.1	1,595.3	1,568.5	26.84	59.437	
4,400.0	4,366.1	4,453.0	4,435.8	14.5	13.6	173.34	70.6	1,208.2	1,609.7	1,582.2	27.49	58.560	
4,500.0	4,464.3	4,540.8	4,523.5	14.9	13.8	173.47	68.5	1,204.8	1,624.7	1,596.6	28.13	57.758	
4,600.0	4,562.4	4,628.5	4,611.1	15.4	14.1	173.59	66.8	1,202.1	1,640.4	1,611.6	28.77	57.026	
4,700.0	4,660.6	4,715.9	4,698.5	15.8	14.3	173.70	65.4	1,199.9	1,656.8	1,627.4	29.40	56.362	
4,800.0	4,758.8	4,800.0	4,782.6	16.2	14.6	173.79	64.4	1,198.3	1,673.8	1,643.8	30.00	55.786	
4,900.0	4,856.9	4,890.3	4,872.8	16.6	14.8	173.88	63.7	1,197.2	1,691.6	1,660.9	30.62	55.239	
5,000.0	4,955.1	4,977.1	4,959.7	17.0	15.0	173.95	63.4	1,196.7	1,709.9	1,678.7	31.20	54.805	

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 #701H
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 #701H	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		Rule Assigned:		Offset Well Error:		3.0 usft						
Reference		Offset		Semi Major Axis		Distance		Rule Assigned:						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,100.0	5,053.3	5,070.7	5,053.3	17.5	15.1	174.01	63.3	1,196.6	1,728.9	1,697.1	31.73	54.486		
5,200.0	5,151.4	5,168.8	5,151.4	17.9	15.1	174.08	63.3	1,196.6	1,747.9	1,715.6	32.25	54.201		
5,300.0	5,249.6	5,267.0	5,249.6	18.3	15.2	174.14	63.3	1,196.6	1,766.8	1,734.1	32.77	53.921		
5,400.0	5,347.7	5,365.2	5,347.7	18.8	15.2	174.20	63.3	1,196.6	1,785.8	1,752.5	33.29	53.642		
5,500.0	5,445.9	5,463.3	5,445.9	19.2	15.3	174.27	63.3	1,196.6	1,804.8	1,771.0	33.82	53.364		
5,600.0	5,544.1	5,561.5	5,544.1	19.6	15.3	174.33	63.3	1,196.6	1,823.8	1,789.4	34.35	53.088		
5,700.0	5,642.2	5,659.7	5,642.2	20.1	15.4	174.38	63.3	1,196.6	1,842.8	1,807.9	34.89	52.813		
5,800.0	5,740.4	5,757.8	5,740.4	20.5	15.4	174.44	63.3	1,196.6	1,861.8	1,826.4	35.44	52.541		
5,900.0	5,838.6	5,856.0	5,838.6	21.0	15.5	174.50	63.3	1,196.6	1,880.8	1,844.8	35.98	52.271		
6,000.0	5,936.7	5,954.2	5,936.7	21.4	15.5	174.55	63.3	1,196.6	1,899.8	1,863.2	36.53	52.003		
6,100.0	6,034.9	6,052.3	6,034.9	21.8	15.6	174.61	63.3	1,196.6	1,918.8	1,881.7	37.09	51.739		
6,200.0	6,133.1	6,150.5	6,133.1	22.3	15.6	174.66	63.3	1,196.6	1,937.8	1,900.1	37.64	51.477		
6,300.0	6,231.2	6,248.6	6,231.2	22.7	15.7	174.71	63.3	1,196.6	1,956.8	1,918.6	38.20	51.219		
6,400.0	6,329.4	6,346.8	6,329.4	23.2	15.7	174.76	63.3	1,196.6	1,975.8	1,937.0	38.77	50.964		
6,500.0	6,427.5	6,445.0	6,427.5	23.6	15.8	174.81	63.3	1,196.6	1,994.8	1,955.5	39.34	50.712 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 #701H
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 #701H	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		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	81.96	221.7	1,570.0	1,585.6	1,579.2	6.43	246.640	
100.0	100.0	100.0	100.0	3.2	3.2	81.96	221.7	1,570.0	1,585.6	1,578.7	6.89	230.056	
200.0	200.0	200.0	200.0	3.5	3.5	81.96	221.7	1,570.0	1,585.6	1,578.3	7.33	216.374	
300.0	300.0	300.0	300.0	3.7	3.7	81.96	221.7	1,570.0	1,585.6	1,577.9	7.74	204.826	
400.0	400.0	400.0	400.0	3.9	3.9	81.96	221.7	1,570.0	1,585.6	1,577.5	8.14	194.902	
500.0	500.0	500.0	500.0	4.1	4.1	81.96	221.7	1,570.0	1,585.6	1,577.1	8.51	186.247	
600.0	600.0	600.0	600.0	4.2	4.2	81.96	221.7	1,570.0	1,585.6	1,576.7	8.88	178.610	
700.0	700.0	700.0	700.0	4.4	4.4	81.96	221.7	1,570.0	1,585.6	1,576.4	9.23	171.801	
800.0	800.0	800.0	800.0	4.6	4.6	81.96	221.7	1,570.0	1,585.6	1,576.1	9.57	165.679	
900.0	900.0	900.0	900.0	4.8	4.8	81.96	221.7	1,570.0	1,585.6	1,575.7	9.90	160.133	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	81.96	221.7	1,570.0	1,585.6	1,575.4	10.22	155.078	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	81.96	221.7	1,570.0	1,585.6	1,575.1	10.54	150.444	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	81.96	221.7	1,570.0	1,585.6	1,574.8	10.85	146.174	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	81.96	221.7	1,570.0	1,585.6	1,574.5	11.15	142.222	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	81.96	221.7	1,570.0	1,585.6	1,574.2	11.44	138.550	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	81.96	221.7	1,570.0	1,585.6	1,573.9	11.73	135.126 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-153.05	221.7	1,570.0	1,586.8	1,574.8	12.03	131.859	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-153.09	221.7	1,570.0	1,590.3	1,578.0	12.33	129.026	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-153.16	221.7	1,570.0	1,596.1	1,583.5	12.63	126.394	
1,900.0	1,899.3	1,872.5	1,872.5	6.4	6.2	-153.19	221.5	1,570.7	1,605.1	1,592.2	12.92	124.258	
2,000.0	1,998.7	1,944.9	1,944.8	6.6	6.3	-153.28	220.8	1,572.6	1,617.0	1,603.8	13.19	122.573	
2,100.0	2,098.2	2,017.0	2,016.9	6.8	6.5	-153.34	219.6	1,575.8	1,630.5	1,617.0	13.48	120.974	
2,200.0	2,197.6	2,100.0	2,099.7	7.0	6.6	-153.39	217.7	1,581.1	1,645.6	1,631.8	13.80	119.226	
2,300.0	2,297.1	2,160.2	2,159.7	7.3	6.7	-153.40	215.9	1,586.0	1,662.3	1,648.2	14.10	117.877	
2,400.0	2,396.5	2,231.2	2,230.3	7.5	6.9	-153.39	213.4	1,592.9	1,680.7	1,666.3	14.44	116.410	
2,500.0	2,496.0	2,300.0	2,298.6	7.8	7.0	-153.36	210.5	1,600.8	1,700.7	1,685.9	14.78	115.049	
2,600.0	2,595.4	2,370.6	2,368.5	8.1	7.1	-153.32	207.3	1,610.0	1,722.2	1,707.1	15.10	114.025	
2,700.0	2,694.8	2,437.8	2,434.9	8.4	7.3	-164.80	204.5	1,620.0	1,746.4	1,730.9	15.46	112.934	
2,800.0	2,794.0	2,500.0	2,496.2	8.7	7.4	-174.28	202.3	1,630.2	1,774.1	1,758.2	15.86	111.883	
2,900.0	2,893.0	2,568.9	2,564.0	9.0	7.6	178.43	200.3	1,642.6	1,805.3	1,789.0	16.31	110.693	
3,000.0	2,991.7	2,632.7	2,626.5	9.3	7.8	172.78	198.8	1,655.0	1,839.9	1,823.2	16.77	109.739	
3,100.0	3,090.0	2,700.0	2,692.3	9.6	8.0	169.07	197.6	1,669.3	1,878.0	1,860.7	17.23	108.991	
3,200.0	3,188.2	2,756.6	2,747.4	10.0	8.2	169.22	196.9	1,682.1	1,918.1	1,900.4	17.70	108.373	
3,300.0	3,286.3	2,817.2	2,806.2	10.3	8.3	169.37	196.5	1,696.7	1,959.6	1,941.4	18.17	107.867 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 #701H
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 #701H	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 (°)	+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	89.85	0.1	30.1	30.1	23.7	6.43	4.682		
100.0	100.0	100.0	100.0	3.2	3.2	89.85	0.1	30.1	30.1	23.2	6.89	4.367		
200.0	200.0	200.0	200.0	3.5	3.5	89.85	0.1	30.1	30.1	22.8	7.33	4.107		
300.0	300.0	300.0	300.0	3.7	3.7	89.85	0.1	30.1	30.1	22.4	7.74	3.888		
400.0	400.0	400.0	400.0	3.9	3.9	89.85	0.1	30.1	30.1	22.0	8.14	3.700		
500.0	500.0	500.0	500.0	4.1	4.1	89.85	0.1	30.1	30.1	21.6	8.51	3.536		
600.0	600.0	600.0	600.0	4.2	4.2	89.85	0.1	30.1	30.1	21.2	8.88	3.391		
700.0	700.0	700.0	700.0	4.4	4.4	89.85	0.1	30.1	30.1	20.9	9.23	3.261		
800.0	800.0	800.0	800.0	4.6	4.6	89.85	0.1	30.1	30.1	20.5	9.57	3.145		
900.0	900.0	900.0	900.0	4.8	4.8	89.85	0.1	30.1	30.1	20.2	9.90	3.040		
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	89.85	0.1	30.1	30.1	19.9	10.22	2.944		
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	89.85	0.1	30.1	30.1	19.6	10.54	2.856		
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	89.85	0.1	30.1	30.1	19.3	10.85	2.775		
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	89.85	0.1	30.1	30.1	19.0	11.15	2.700		
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	89.85	0.1	30.1	30.1	18.7	11.44	2.630		
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	89.85	0.1	30.1	30.1	18.4	11.73	2.565 CC, ES, SF		
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-146.52	0.1	30.1	31.2	19.2	12.03	2.592		
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-150.09	0.1	30.1	34.5	22.2	12.32	2.802		
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-154.69	0.1	30.1	40.3	27.7	12.63	3.193		
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	-159.24	0.1	30.1	48.8	35.8	12.96	3.761		
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	-162.86	0.1	30.1	58.7	45.4	13.29	4.414		
2,100.0	2,098.2	2,098.2	2,098.2	6.8	6.5	-165.43	0.1	30.1	68.7	55.1	13.63	5.043		
2,200.0	2,197.6	2,197.6	2,197.6	7.0	6.7	-167.34	0.1	30.1	78.9	64.9	13.98	5.641		
2,300.0	2,297.1	2,297.1	2,297.1	7.3	6.8	-168.81	0.1	30.1	89.1	74.8	14.35	6.209		
2,400.0	2,396.5	2,396.5	2,396.5	7.5	6.9	-169.98	0.1	30.1	99.4	84.7	14.74	6.744		
2,500.0	2,496.0	2,496.0	2,496.0	7.8	7.0	-170.93	0.1	30.1	109.7	94.6	15.13	7.249		
2,600.0	2,595.4	2,598.2	2,598.2	8.1	7.2	-171.98	0.0	28.8	118.9	103.3	15.57	7.639		
2,700.0	2,694.8	2,700.9	2,700.9	8.4	7.3	175.68	-0.2	24.8	126.3	110.3	16.00	7.898		
2,800.0	2,794.0	2,803.9	2,803.6	8.7	7.5	165.97	-0.6	18.0	132.6	116.2	16.45	8.064		
2,900.0	2,893.0	2,904.7	2,904.0	9.0	7.6	159.10	-1.0	9.4	138.4	121.6	16.87	8.205		
3,000.0	2,991.7	3,004.4	3,003.3	9.3	7.8	154.71	-1.5	0.7	145.4	128.1	17.36	8.377		
3,100.0	3,090.0	3,103.9	3,102.4	9.6	7.9	152.92	-1.9	-8.0	153.9	136.0	17.85	8.621		
3,200.0	3,188.2	3,203.3	3,201.5	10.0	8.1	154.83	-2.4	-16.6	163.0	144.6	18.40	8.856		
3,300.0	3,286.3	3,302.8	3,300.6	10.3	8.3	156.54	-2.8	-25.3	172.2	153.3	18.96	9.084		
3,400.0	3,384.5	3,402.2	3,399.6	10.7	8.6	158.08	-3.3	-33.9	181.6	162.1	19.54	9.294		
3,500.0	3,482.7	3,501.7	3,498.7	11.0	8.8	159.46	-3.7	-42.6	191.1	171.0	20.14	9.489		
3,600.0	3,580.8	3,601.1	3,597.8	11.4	9.0	160.71	-4.2	-51.2	200.8	180.0	20.76	9.669		
3,700.0	3,679.0	3,700.6	3,696.8	11.8	9.3	161.85	-4.6	-59.9	210.4	189.0	21.40	9.834		
3,800.0	3,777.1	3,800.0	3,795.9	12.1	9.5	162.89	-5.1	-68.6	220.2	198.2	22.05	9.985		
3,900.0	3,875.3	3,907.6	3,902.9	12.5	9.9	163.82	-5.7	-79.8	228.4	205.6	22.77	10.028		
4,000.0	3,973.5	4,016.0	4,010.2	12.9	10.3	164.51	-6.5	-95.1	232.9	209.4	23.51	9.906		
4,100.0	4,071.6	4,121.0	4,113.6	13.3	10.6	165.00	-7.4	-113.6	234.0	209.8	24.21	9.663		
4,200.0	4,169.8	4,221.0	4,211.9	13.7	10.9	165.43	-8.4	-131.8	234.5	209.5	24.96	9.393		
4,300.0	4,268.0	4,321.0	4,310.2	14.1	11.3	165.86	-9.4	-149.9	235.0	209.3	25.72	9.136		
4,400.0	4,366.1	4,421.0	4,408.5	14.5	11.6	166.29	-10.3	-168.1	235.5	209.0	26.49	8.891		
4,500.0	4,464.3	4,521.0	4,506.8	14.9	12.0	166.72	-11.3	-186.3	236.1	208.8	27.27	8.657		
4,600.0	4,562.4	4,621.0	4,605.2	15.4	12.3	167.15	-12.2	-204.5	236.6	208.6	28.06	8.434		
4,700.0	4,660.6	4,720.9	4,703.5	15.8	12.7	167.57	-13.2	-222.7	237.2	208.3	28.86	8.220		
4,800.0	4,758.8	4,820.9	4,801.8	16.2	13.1	168.00	-14.1	-240.9	237.8	208.1	29.66	8.017		
4,900.0	4,856.9	4,920.9	4,900.1	16.6	13.5	168.42	-15.1	-259.1	238.4	207.9	30.48	7.822		
5,000.0	4,955.1	5,020.9	4,998.4	17.0	13.9	168.84	-16.0	-277.3	239.0	207.7	31.30	7.637		
5,100.0	5,053.3	5,120.9	5,096.7	17.5	14.3	169.25	-17.0	-295.5	239.6	207.5	32.12	7.459		

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 #701H
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 #701H	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	5,151.4	5,220.9	5,195.0	17.9	14.7	169.67	-17.9	-313.7	240.2	207.3	32.96	7.290	
5,300.0	5,249.6	5,320.8	5,293.3	18.3	15.1	170.08	-18.9	-331.9	240.9	207.1	33.79	7.128	
5,400.0	5,347.7	5,420.8	5,391.6	18.8	15.5	170.49	-19.8	-350.1	241.6	206.9	34.64	6.974	
5,500.0	5,445.9	5,520.8	5,489.9	19.2	15.9	170.89	-20.8	-368.3	242.2	206.7	35.48	6.826	
5,600.0	5,544.1	5,620.8	5,588.2	19.6	16.3	171.30	-21.8	-386.5	242.9	206.6	36.34	6.685	
5,700.0	5,642.2	5,720.8	5,686.6	20.1	16.7	171.70	-22.7	-404.7	243.6	206.4	37.19	6.550	
5,800.0	5,740.4	5,820.8	5,784.9	20.5	17.1	172.10	-23.7	-422.9	244.3	206.3	38.05	6.421	
5,900.0	5,838.6	5,920.7	5,883.2	21.0	17.5	172.50	-24.6	-441.1	245.0	206.1	38.91	6.297	
6,000.0	5,936.7	6,020.7	5,981.5	21.4	17.9	172.90	-25.6	-459.3	245.8	206.0	39.78	6.178	
6,100.0	6,034.9	6,120.7	6,079.8	21.8	18.4	173.29	-26.5	-477.5	246.5	205.9	40.65	6.065	
6,200.0	6,133.1	6,220.7	6,178.1	22.3	18.8	173.68	-27.5	-495.7	247.3	205.7	41.51	5.956	
6,300.0	6,231.2	6,320.7	6,276.4	22.7	19.2	174.07	-28.4	-513.9	248.0	205.6	42.39	5.852	
6,400.0	6,329.4	6,420.7	6,374.7	23.2	19.6	174.45	-29.4	-532.1	248.8	205.5	43.26	5.752	
6,500.0	6,427.5	6,520.6	6,473.0	23.6	20.1	174.84	-30.3	-550.3	249.6	205.5	44.13	5.656	
6,600.0	6,525.7	6,616.9	6,567.8	24.1	20.4	175.21	-31.2	-567.2	251.0	206.1	44.98	5.581	
6,700.0	6,623.9	6,712.7	6,662.3	24.5	20.8	175.56	-32.0	-582.4	254.2	208.3	45.83	5.545	
6,800.0	6,722.0	6,808.3	6,756.9	25.0	21.2	175.91	-32.7	-596.1	258.9	212.3	46.66	5.549	
6,900.0	6,820.2	6,903.7	6,851.6	25.4	21.6	176.23	-33.4	-608.1	265.4	217.9	47.47	5.591	
7,000.0	6,918.4	7,000.0	6,947.3	25.9	22.0	176.53	-33.9	-618.7	273.5	225.3	48.27	5.667	
7,100.0	7,016.5	7,093.8	7,040.7	26.3	22.4	176.80	-34.4	-627.4	283.3	234.3	49.02	5.780	
7,200.0	7,114.7	7,188.3	7,134.9	26.8	22.7	177.04	-34.8	-634.7	294.8	245.0	49.76	5.924	
7,300.0	7,212.8	7,282.5	7,229.0	27.2	23.0	177.26	-35.1	-640.4	307.9	257.4	50.47	6.100	
7,400.0	7,311.0	7,376.3	7,322.6	27.7	23.3	177.44	-35.3	-644.6	322.6	271.4	51.14	6.307	
7,500.0	7,409.2	7,469.5	7,415.9	28.1	23.6	177.60	-35.4	-647.2	338.9	287.1	51.78	6.545	
7,600.0	7,507.3	7,562.3	7,508.6	28.6	23.8	177.73	-35.5	-648.2	356.8	304.5	52.31	6.820	
7,700.0	7,605.5	7,659.2	7,605.5	29.0	23.8	177.84	-35.5	-648.3	375.8	323.0	52.83	7.114	
7,800.0	7,703.7	7,757.3	7,703.7	29.5	23.9	177.95	-35.5	-648.3	394.9	341.5	53.35	7.402	
7,900.0	7,801.8	7,855.5	7,801.8	29.9	23.9	178.04	-35.5	-648.3	413.9	360.1	53.87	7.684	
8,000.0	7,900.2	7,953.9	7,900.2	30.4	23.9	178.13	-35.5	-648.3	431.8	377.4	54.39	7.938	
8,100.0	7,998.9	8,052.6	7,998.9	30.8	24.0	178.20	-35.5	-648.3	447.9	393.0	54.91	8.157	
8,200.0	8,097.9	8,151.6	8,097.9	31.3	24.0	178.26	-35.5	-648.3	462.3	406.8	55.41	8.342	
8,300.0	8,197.1	8,250.7	8,197.1	31.7	24.0	178.31	-35.5	-648.3	474.9	419.0	55.91	8.495	
8,400.0	8,296.5	8,350.1	8,296.5	32.1	24.1	178.35	-35.5	-648.3	485.8	429.5	56.39	8.616	
8,500.0	8,396.0	8,449.7	8,396.0	32.5	24.1	178.39	-35.5	-648.3	495.0	438.2	56.85	8.707	
8,600.0	8,495.8	8,549.4	8,495.8	32.8	24.2	178.41	-35.5	-648.3	502.5	445.2	57.30	8.770	
8,700.0	8,595.6	8,649.3	8,595.6	33.2	24.2	178.43	-35.5	-648.3	508.2	450.5	57.72	8.804	
8,800.0	8,695.5	8,749.2	8,695.5	33.5	24.2	178.44	-35.5	-648.3	512.2	454.1	58.12	8.813	
8,900.0	8,795.5	8,849.2	8,795.5	33.8	24.3	178.45	-35.5	-648.3	514.4	456.0	58.47	8.799	
9,000.0	8,895.5	8,949.2	8,895.5	33.9	24.3	90.45	-35.5	-648.3	514.9	456.3	58.62	8.785	
9,100.0	8,995.5	9,049.2	8,995.5	33.9	24.4	90.45	-35.5	-648.3	514.9	456.3	58.68	8.776	
9,200.0	9,095.5	9,149.2	9,095.5	33.9	24.4	90.45	-35.5	-648.3	514.9	456.2	58.74	8.767	
9,300.0	9,195.5	9,249.2	9,195.5	34.0	24.4	90.45	-35.5	-648.3	514.9	456.1	58.80	8.758	
9,400.0	9,295.5	9,349.2	9,295.5	34.0	24.5	90.45	-35.5	-648.3	514.9	456.1	58.86	8.749	
9,500.0	9,395.5	9,449.2	9,395.5	34.0	24.5	90.45	-35.5	-648.3	514.9	456.0	58.92	8.740	
9,600.0	9,495.5	9,549.2	9,495.5	34.0	24.6	90.45	-35.5	-648.3	514.9	456.0	58.98	8.730	
9,700.0	9,595.5	9,649.2	9,595.5	34.0	24.6	90.45	-35.5	-648.3	514.9	455.9	59.04	8.721	
9,800.0	9,695.5	9,749.2	9,695.5	34.1	24.6	90.45	-35.5	-648.3	514.9	455.8	59.11	8.712	
9,900.0	9,795.5	9,849.2	9,795.5	34.1	24.7	90.45	-35.5	-648.3	514.9	455.8	59.17	8.703	
10,000.0	9,895.5	9,949.2	9,895.5	34.1	24.7	90.45	-35.5	-648.3	514.9	455.7	59.23	8.694	
10,100.0	9,995.5	10,049.2	9,995.5	34.1	24.8	90.45	-35.5	-648.3	514.9	455.6	59.30	8.684	
10,200.0	10,095.5	10,149.2	10,095.5	34.2	24.8	90.45	-35.5	-648.3	514.9	455.6	59.36	8.675	
10,300.0	10,195.5	10,249.2	10,195.5	34.2	24.9	90.45	-35.5	-648.3	514.9	455.5	59.42	8.666	

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 #701H
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 #701H	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		Distance		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,400.0	10,295.5	10,349.2	10,295.5	34.2	24.9	90.45	-35.5	-648.3	514.9	455.5	59.49	8.656		
10,500.0	10,395.5	10,449.2	10,395.5	34.3	24.9	90.45	-35.5	-648.3	514.9	455.4	59.55	8.647		
10,600.0	10,495.5	10,549.2	10,495.5	34.3	25.0	90.45	-35.5	-648.3	514.9	455.3	59.62	8.637		
10,700.0	10,595.5	10,649.2	10,595.5	34.3	25.0	90.45	-35.5	-648.3	514.9	455.3	59.68	8.629		
10,795.4	10,690.9	10,744.9	10,690.9	34.3	25.0	89.77	-29.3	-648.3	514.9	455.2	59.75	8.618		
10,800.0	10,695.5	10,749.4	10,695.4	34.3	25.0	89.69	-28.6	-648.3	514.9	455.2	59.75	8.617		
10,900.0	10,795.5	10,844.7	10,787.9	34.3	25.0	87.43	-6.2	-648.4	515.5	455.8	59.71	8.633		
11,000.0	10,894.6	10,934.8	10,870.8	34.3	25.1	84.46	28.9	-648.5	517.5	458.1	59.38	8.715		
11,100.0	10,990.2	11,021.6	10,944.5	34.4	25.1	81.69	74.5	-648.7	520.7	461.9	58.83	8.850		
11,200.0	11,079.3	11,105.8	11,008.6	34.4	25.1	79.18	128.9	-649.0	524.7	466.5	58.16	9.021		
11,300.0	11,159.3	11,187.7	11,062.8	34.4	25.2	76.97	190.3	-649.2	529.0	471.5	57.46	9.205		
11,400.0	11,227.6	11,268.0	11,106.8	34.4	25.2	75.12	257.4	-649.5	533.2	476.3	56.81	9.385		
11,500.0	11,282.2	11,350.0	11,141.7	34.4	25.2	73.62	331.5	-649.8	536.9	480.6	56.24	9.545		
11,600.0	11,321.4	11,425.1	11,164.0	34.5	25.3	72.59	403.1	-650.1	539.7	483.9	55.82	9.668		
11,700.0	11,344.2	11,500.0	11,176.7	34.6	25.4	71.95	476.9	-650.4	541.6	486.0	55.55	9.748		
11,800.0	11,350.0	11,585.4	11,180.0	34.6	25.4	71.73	562.1	-650.7	542.2	486.8	55.39	9.788		
11,900.0	11,350.0	11,685.4	11,180.0	34.7	25.5	71.73	662.1	-651.1	542.2	486.9	55.25	9.813		
12,000.0	11,350.0	11,785.4	11,180.0	34.8	25.7	71.73	762.1	-651.5	542.1	487.0	55.15	9.830		
12,100.0	11,350.0	11,885.4	11,180.0	35.0	25.8	71.72	862.1	-651.9	542.1	487.0	55.10	9.840		
12,200.0	11,350.0	11,985.4	11,180.0	35.1	26.0	71.72	962.1	-652.4	542.1	487.0	55.08	9.842		
12,300.0	11,350.0	12,085.4	11,180.0	35.3	26.2	71.72	1,062.1	-652.8	542.1	487.0	55.11	9.837		
12,400.0	11,350.0	12,185.4	11,180.0	35.5	26.5	71.72	1,162.1	-653.2	542.1	486.9	55.18	9.824		
12,500.0	11,350.0	12,285.4	11,180.0	35.7	26.7	71.72	1,262.1	-653.6	542.1	486.8	55.29	9.804		
12,600.0	11,350.0	12,385.4	11,180.0	35.9	27.0	71.72	1,362.1	-654.0	542.1	486.6	55.44	9.777		
12,700.0	11,350.0	12,485.4	11,180.0	36.1	27.3	71.72	1,462.1	-654.4	542.0	486.4	55.64	9.742		
12,800.0	11,350.0	12,585.4	11,180.0	36.3	27.6	71.72	1,562.1	-654.8	542.0	486.2	55.87	9.701		
12,900.0	11,350.0	12,685.4	11,180.0	36.6	27.9	71.72	1,662.1	-655.2	542.0	485.9	56.15	9.653		
13,000.0	11,350.0	12,785.4	11,180.0	36.9	28.2	71.72	1,762.1	-655.6	542.0	485.5	56.47	9.599		
13,100.0	11,350.0	12,885.4	11,180.0	37.2	28.6	71.72	1,862.1	-656.0	542.0	485.2	56.82	9.539		
13,200.0	11,350.0	12,985.4	11,180.0	37.5	29.0	71.72	1,962.1	-656.4	542.0	484.8	57.21	9.473		
13,300.0	11,350.0	13,085.4	11,180.0	37.8	29.4	71.72	2,062.1	-656.9	542.0	484.3	57.65	9.402		
13,400.0	11,350.0	13,185.4	11,180.0	38.1	29.8	71.72	2,162.1	-657.3	542.0	483.8	58.11	9.326		
13,500.0	11,350.0	13,285.4	11,180.0	38.4	30.2	71.72	2,262.1	-657.7	541.9	483.3	58.62	9.246		
13,600.0	11,350.0	13,385.4	11,180.0	38.8	30.6	71.72	2,362.1	-658.1	541.9	482.8	59.15	9.161		
13,700.0	11,350.0	13,485.4	11,180.0	39.2	31.1	71.72	2,462.1	-658.5	541.9	482.2	59.73	9.073		
13,800.0	11,350.0	13,585.4	11,180.0	39.5	31.5	71.72	2,562.1	-658.9	541.9	481.6	60.33	8.982		
13,900.0	11,350.0	13,685.4	11,180.0	39.9	32.0	71.72	2,662.1	-659.3	541.9	480.9	60.97	8.888		
14,000.0	11,350.0	13,785.4	11,180.0	40.3	32.5	71.72	2,762.1	-659.7	541.9	480.2	61.64	8.792		
14,100.0	11,350.0	13,885.4	11,180.0	40.7	33.0	71.72	2,862.1	-660.1	541.9	479.5	62.33	8.693		
14,200.0	11,350.0	13,985.4	11,180.0	41.1	33.5	71.72	2,962.1	-660.5	541.8	478.8	63.06	8.593		
14,300.0	11,350.0	14,085.4	11,180.0	41.6	34.0	71.71	3,062.1	-660.9	541.8	478.0	63.82	8.491		
14,400.0	11,350.0	14,185.4	11,180.0	42.0	34.5	71.71	3,162.1	-661.4	541.8	477.2	64.60	8.388		
14,500.0	11,350.0	14,285.4	11,180.0	42.5	35.1	71.71	3,262.1	-661.8	541.8	476.4	65.40	8.284		
14,600.0	11,350.0	14,385.4	11,180.0	42.9	35.6	71.71	3,362.1	-662.2	541.8	475.6	66.24	8.180		
14,700.0	11,350.0	14,485.4	11,180.0	43.4	36.1	71.71	3,462.1	-662.6	541.8	474.7	67.09	8.075		
14,800.0	11,350.0	14,585.4	11,180.0	43.9	36.7	71.71	3,562.1	-663.0	541.8	473.8	67.97	7.970		
14,900.0	11,350.0	14,685.4	11,180.0	44.3	37.3	71.71	3,662.1	-663.4	541.8	472.9	68.88	7.866		
15,000.0	11,350.0	14,785.4	11,180.0	44.8	37.8	71.71	3,762.1	-663.8	541.7	471.9	69.80	7.761		
15,100.0	11,350.0	14,885.4	11,180.0	45.3	38.4	71.71	3,862.1	-664.2	541.7	471.0	70.75	7.657		
15,200.0	11,350.0	14,985.4	11,180.0	45.8	39.0	71.71	3,962.1	-664.6	541.7	470.0	71.71	7.554		
15,300.0	11,350.0	15,085.4	11,180.0	46.3	39.6	71.71	4,062.1	-665.0	541.7	469.0	72.69	7.452		
15,400.0	11,350.0	15,185.4	11,180.0	46.9	40.2	71.71	4,162.1	-665.4	541.7	468.0	73.69	7.350		

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 #701H
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 #701H	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				Rule Assigned:									Offset Well Error: 3.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
15,500.0	11,350.0	15,285.4	11,180.0	47.4	40.8	71.71	4,262.1	-665.9	541.7	467.0	74.71	7.250		
15,600.0	11,350.0	15,385.4	11,180.0	47.9	41.4	71.71	4,362.1	-666.3	541.7	465.9	75.75	7.151		
15,700.0	11,350.0	15,485.4	11,180.0	48.5	42.0	71.71	4,462.1	-666.7	541.6	464.8	76.80	7.053		
15,800.0	11,350.0	15,585.4	11,180.0	49.0	42.6	71.71	4,562.1	-667.1	541.6	463.8	77.87	6.956		
15,900.0	11,350.0	15,685.4	11,180.0	49.6	43.3	71.71	4,662.1	-667.5	541.6	462.7	78.95	6.860		
16,000.0	11,350.0	15,785.4	11,180.0	50.1	43.9	71.71	4,762.1	-667.9	541.6	461.6	80.05	6.766		
16,100.0	11,350.0	15,885.4	11,180.0	50.7	44.5	71.71	4,862.1	-668.3	541.6	460.4	81.16	6.674		
16,200.0	11,350.0	15,985.4	11,180.0	51.2	45.1	71.71	4,962.1	-668.7	541.6	459.3	82.28	6.582		
16,300.0	11,350.0	16,085.4	11,180.0	51.8	45.8	71.71	5,062.1	-669.1	541.6	458.2	83.41	6.493		
16,400.0	11,350.0	16,185.4	11,180.0	52.4	46.4	71.70	5,162.1	-669.5	541.6	457.0	84.56	6.404		
16,500.0	11,350.0	16,285.4	11,180.0	53.0	47.1	71.70	5,262.1	-669.9	541.5	455.8	85.72	6.318		
16,600.0	11,350.0	16,385.4	11,180.0	53.6	47.7	71.70	5,362.1	-670.4	541.5	454.6	86.89	6.232		
16,700.0	11,350.0	16,485.4	11,180.0	54.2	48.4	71.70	5,462.1	-670.8	541.5	453.4	88.07	6.149		
16,800.0	11,350.0	16,585.4	11,180.0	54.8	49.0	71.70	5,562.1	-671.2	541.5	452.2	89.26	6.067		
16,900.0	11,350.0	16,685.4	11,180.0	55.3	49.7	71.70	5,662.1	-671.6	541.5	451.0	90.46	5.986		
17,000.0	11,350.0	16,785.4	11,180.0	56.0	50.4	71.70	5,762.1	-672.0	541.5	449.8	91.67	5.907		
17,100.0	11,350.0	16,885.4	11,180.0	56.6	51.0	71.70	5,862.1	-672.4	541.5	448.6	92.89	5.829		
17,200.0	11,350.0	16,985.4	11,180.0	57.2	51.7	71.70	5,962.1	-672.8	541.5	447.3	94.12	5.753		
17,300.0	11,350.0	17,085.4	11,180.0	57.8	52.4	71.70	6,062.1	-673.2	541.4	446.1	95.35	5.678		
17,400.0	11,350.0	17,185.4	11,180.0	58.4	53.0	71.70	6,162.1	-673.6	541.4	444.8	96.60	5.605		
17,500.0	11,350.0	17,285.4	11,180.0	59.0	53.7	71.70	6,262.1	-674.0	541.4	443.6	97.85	5.533		
17,600.0	11,350.0	17,385.4	11,180.0	59.7	54.4	71.70	6,362.1	-674.4	541.4	442.3	99.11	5.463		
17,700.0	11,350.0	17,485.4	11,180.0	60.3	55.1	71.70	6,462.1	-674.9	541.4	441.0	100.37	5.394		
17,800.0	11,350.0	17,585.4	11,180.0	60.9	55.8	71.70	6,562.1	-675.3	541.4	439.7	101.65	5.326		
17,900.0	11,350.0	17,685.4	11,180.0	61.5	56.5	71.70	6,662.1	-675.7	541.4	438.4	102.93	5.260		
18,000.0	11,350.0	17,785.4	11,180.0	62.2	57.1	71.70	6,762.1	-676.1	541.3	437.1	104.21	5.195		
18,100.0	11,350.0	17,885.4	11,180.0	62.8	57.8	71.70	6,862.1	-676.5	541.3	435.8	105.51	5.131		
18,200.0	11,350.0	17,985.4	11,180.0	63.5	58.5	71.70	6,962.1	-676.9	541.3	434.5	106.80	5.068		
18,300.0	11,350.0	18,085.4	11,180.0	64.1	59.2	71.70	7,062.1	-677.3	541.3	433.2	108.11	5.007		
18,400.0	11,350.0	18,185.4	11,180.0	64.8	59.9	71.70	7,162.1	-677.7	541.3	431.9	109.42	4.947		
18,500.0	11,350.0	18,285.4	11,180.0	65.4	60.6	71.70	7,262.1	-678.1	541.3	430.5	110.73	4.888		
18,600.0	11,350.0	18,385.4	11,180.0	66.1	61.3	71.69	7,362.1	-678.5	541.3	429.2	112.05	4.831		
18,700.0	11,350.0	18,485.4	11,180.0	66.7	62.0	71.69	7,462.1	-678.9	541.3	427.9	113.38	4.774		
18,800.0	11,350.0	18,585.4	11,180.0	67.4	62.7	71.69	7,562.1	-679.4	541.2	426.5	114.71	4.719		
18,900.0	11,350.0	18,685.4	11,180.0	68.0	63.4	71.69	7,662.1	-679.8	541.2	425.2	116.04	4.664		
19,000.0	11,350.0	18,785.4	11,180.0	68.7	64.1	71.69	7,762.1	-680.2	541.2	423.8	117.38	4.611		
19,100.0	11,350.0	18,885.4	11,180.0	69.4	64.8	71.69	7,862.1	-680.6	541.2	422.5	118.72	4.559		
19,200.0	11,350.0	18,985.4	11,180.0	70.0	65.5	71.69	7,962.1	-681.0	541.2	421.1	120.07	4.507		
19,300.0	11,350.0	19,085.4	11,180.0	70.7	66.2	71.69	8,062.1	-681.4	541.2	419.8	121.42	4.457		
19,400.0	11,350.0	19,185.4	11,180.0	71.4	66.9	71.69	8,162.1	-681.8	541.2	418.4	122.77	4.408		
19,500.0	11,350.0	19,285.4	11,180.0	72.0	67.7	71.69	8,262.1	-682.2	541.1	417.0	124.13	4.359		
19,600.0	11,350.0	19,385.4	11,180.0	72.7	68.4	71.69	8,362.1	-682.6	541.1	415.6	125.49	4.312		
19,700.0	11,350.0	19,485.4	11,180.0	73.4	69.1	71.69	8,462.1	-683.0	541.1	414.3	126.86	4.265		
19,800.0	11,350.0	19,585.4	11,180.0	74.1	69.8	71.69	8,562.1	-683.4	541.1	412.9	128.23	4.220		
19,900.0	11,350.0	19,685.4	11,180.0	74.8	70.5	71.69	8,662.1	-683.9	541.1	411.5	129.60	4.175		
20,000.0	11,350.0	19,785.4	11,180.0	75.4	71.2	71.69	8,762.1	-684.3	541.1	410.1	130.98	4.131		
20,100.0	11,350.0	19,885.4	11,180.0	76.1	71.9	71.69	8,862.1	-684.7	541.1	408.7	132.36	4.088		
20,200.0	11,350.0	19,985.4	11,180.0	76.8	72.7	71.69	8,962.1	-685.1	541.1	407.3	133.74	4.046		
20,300.0	11,350.0	20,085.4	11,180.0	77.5	73.4	71.69	9,062.1	-685.5	541.0	405.9	135.12	4.004		
20,400.0	11,350.0	20,185.4	11,180.0	78.2	74.1	71.69	9,162.1	-685.9	541.0	404.5	136.51	3.963		
20,500.0	11,350.0	20,285.4	11,180.0	78.9	74.8	71.69	9,262.1	-686.3	541.0	403.1	137.90	3.923		
20,600.0	11,350.0	20,385.4	11,180.0	79.6	75.6	71.69	9,362.1	-686.7	541.0	401.7	139.29	3.884		

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 #701H
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 #701H	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		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	20,485.4	11,180.0	80.2	76.3	71.69	9,462.1	-687.1	541.0	400.3	140.69	3.845	
20,800.0	11,350.0	20,585.4	11,180.0	80.9	77.0	71.68	9,562.1	-687.5	541.0	398.9	142.08	3.807	
20,900.0	11,350.0	20,685.4	11,180.0	81.6	77.7	71.68	9,662.1	-687.9	541.0	397.5	143.48	3.770	
21,000.0	11,350.0	20,785.4	11,180.0	82.3	78.4	71.68	9,762.1	-688.4	540.9	396.1	144.89	3.734	
21,100.0	11,350.0	20,885.4	11,180.0	83.0	79.2	71.68	9,862.1	-688.8	540.9	394.6	146.29	3.698	
21,200.0	11,350.0	20,985.4	11,180.0	83.7	79.9	71.68	9,962.1	-689.2	540.9	393.2	147.70	3.662	
21,300.0	11,350.0	21,085.4	11,180.0	84.4	80.6	71.68	10,062.1	-689.6	540.9	391.8	149.11	3.628	
21,400.0	11,350.0	21,185.4	11,180.0	85.1	81.4	71.68	10,162.1	-690.0	540.9	390.4	150.52	3.594	
21,500.0	11,350.0	21,285.4	11,180.0	85.8	82.1	71.68	10,262.1	-690.4	540.9	388.9	151.93	3.560	
21,600.0	11,350.0	21,385.4	11,180.0	86.5	82.8	71.68	10,362.1	-690.8	540.9	387.5	153.35	3.527	
21,700.0	11,350.0	21,485.4	11,180.0	87.2	83.5	71.68	10,462.1	-691.2	540.9	386.1	154.77	3.495	
21,800.0	11,350.0	21,585.4	11,180.0	87.9	84.3	71.68	10,562.1	-691.6	540.8	384.7	156.18	3.463	
21,900.0	11,350.0	21,685.4	11,180.0	88.6	85.0	71.68	10,662.1	-692.0	540.8	383.2	157.60	3.432	
22,000.0	11,350.0	21,785.4	11,180.0	89.3	85.7	71.68	10,762.1	-692.4	540.8	381.8	159.03	3.401	
22,100.0	11,350.0	21,885.4	11,180.0	90.1	86.5	71.68	10,862.1	-692.9	540.8	380.4	160.45	3.370	
22,200.0	11,350.0	21,985.4	11,180.0	90.8	87.2	71.68	10,962.1	-693.3	540.8	378.9	161.88	3.341	
22,300.0	11,350.0	22,085.4	11,180.0	91.5	87.9	71.68	11,062.1	-693.7	540.8	377.5	163.31	3.311	
22,400.0	11,350.0	22,185.4	11,180.0	92.2	88.7	71.68	11,162.1	-694.1	540.8	376.0	164.73	3.283	
22,500.0	11,350.0	22,285.4	11,180.0	92.9	89.4	71.68	11,262.1	-694.5	540.7	374.6	166.17	3.254	
22,600.0	11,350.0	22,385.4	11,180.0	93.6	90.1	71.68	11,362.1	-694.9	540.7	373.1	167.60	3.226	
22,700.0	11,350.0	22,485.4	11,180.0	94.3	90.9	71.68	11,462.1	-695.3	540.7	371.7	169.03	3.199	
22,800.0	11,350.0	22,585.4	11,180.0	95.0	91.6	71.68	11,562.1	-695.7	540.7	370.2	170.47	3.172	
22,900.0	11,350.0	22,685.4	11,180.0	95.7	92.4	71.67	11,662.1	-696.1	540.7	368.8	171.90	3.145	
23,000.0	11,350.0	22,785.4	11,180.0	96.5	93.1	71.67	11,762.1	-696.5	540.7	367.3	173.34	3.119	
23,100.0	11,350.0	22,885.4	11,180.0	97.2	93.8	71.67	11,862.0	-696.9	540.7	365.9	174.78	3.093	
23,200.0	11,350.0	22,985.4	11,180.0	97.9	94.6	71.67	11,962.0	-697.4	540.7	364.4	176.22	3.068	
23,300.0	11,350.0	23,085.4	11,180.0	98.6	95.3	71.67	12,062.0	-697.8	540.6	363.0	177.66	3.043	
23,400.0	11,350.0	23,185.4	11,180.0	99.3	96.1	71.67	12,162.0	-698.2	540.6	361.5	179.11	3.019	
23,500.0	11,350.0	23,285.4	11,180.0	100.0	96.8	71.67	12,262.0	-698.6	540.6	360.1	180.55	2.994	
23,600.0	11,350.0	23,385.4	11,180.0	100.8	97.5	71.67	12,362.0	-699.0	540.6	358.6	182.00	2.970	
23,700.0	11,350.0	23,485.4	11,180.0	101.5	98.3	71.67	12,462.0	-699.4	540.6	357.1	183.44	2.947	
23,800.0	11,350.0	23,585.4	11,180.0	102.2	99.0	71.67	12,562.0	-699.8	540.6	355.7	184.89	2.924	
23,900.0	11,350.0	23,685.4	11,180.0	102.9	99.8	71.67	12,662.0	-700.2	540.6	354.2	186.34	2.901	
24,000.0	11,350.0	23,785.4	11,180.0	103.7	100.5	71.67	12,762.0	-700.6	540.6	352.8	187.79	2.879	
24,100.0	11,350.0	23,885.4	11,180.0	104.4	101.2	71.67	12,862.0	-701.0	540.5	351.3	189.24	2.856	
24,200.0	11,350.0	23,985.4	11,180.0	105.1	102.0	71.67	12,962.0	-701.4	540.5	349.8	190.69	2.835	
24,300.0	11,350.0	24,085.4	11,180.0	105.8	102.7	71.67	13,062.0	-701.9	540.5	348.4	192.14	2.813	
24,400.0	11,350.0	24,185.4	11,180.0	106.5	103.5	71.67	13,162.0	-702.3	540.5	346.9	193.60	2.792	
24,500.0	11,350.0	24,285.4	11,180.0	107.3	104.2	71.67	13,262.0	-702.7	540.5	345.4	195.05	2.771	
24,600.0	11,350.0	24,385.4	11,180.0	108.0	105.0	71.67	13,362.0	-703.1	540.5	344.0	196.51	2.750	
24,700.0	11,350.0	24,485.4	11,180.0	108.7	105.7	71.67	13,462.0	-703.5	540.5	342.5	197.96	2.730	
24,800.0	11,350.0	24,585.4	11,180.0	109.5	106.4	71.67	13,562.0	-703.9	540.4	341.0	199.42	2.710	
24,846.5	11,350.0	24,631.4	11,180.0	109.7	106.8	71.67	13,608.1	-704.1	540.4	340.4	200.01	2.702	
24,848.5	11,350.0	24,631.4	11,180.0	109.7	106.8	71.67	13,608.1	-704.1	540.4	340.4	200.00	2.702	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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)			
0.0	0.0	0.0	0.0	3.0	3.0	89.93	0.1	60.0	60.0	53.6	6.43	9.339	
100.0	100.0	100.0	100.0	3.2	3.2	89.93	0.1	60.0	60.0	53.1	6.89	8.711	
200.0	200.0	200.0	200.0	3.5	3.5	89.93	0.1	60.0	60.0	52.7	7.33	8.193	
300.0	300.0	300.0	300.0	3.7	3.7	89.93	0.1	60.0	60.0	52.3	7.74	7.756	
400.0	400.0	400.0	400.0	3.9	3.9	89.93	0.1	60.0	60.0	51.9	8.14	7.380	
500.0	500.0	500.0	500.0	4.1	4.1	89.93	0.1	60.0	60.0	51.5	8.51	7.052	
600.0	600.0	600.0	600.0	4.2	4.2	89.93	0.1	60.0	60.0	51.2	8.88	6.763	
700.0	700.0	700.0	700.0	4.4	4.4	89.93	0.1	60.0	60.0	50.8	9.23	6.505	
800.0	800.0	800.0	800.0	4.6	4.6	89.93	0.1	60.0	60.0	50.5	9.57	6.273	
900.0	900.0	900.0	900.0	4.8	4.8	89.93	0.1	60.0	60.0	50.1	9.90	6.063	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	89.93	0.1	60.0	60.0	49.8	10.22	5.872	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	89.93	0.1	60.0	60.0	49.5	10.54	5.697	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	89.93	0.1	60.0	60.0	49.2	10.85	5.535	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	89.93	0.1	60.0	60.0	48.9	11.15	5.385	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	89.93	0.1	60.0	60.0	48.6	11.44	5.246	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	89.93	0.1	60.0	60.0	48.3	11.73	5.117 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-145.76	0.1	60.0	61.1	49.1	12.03	5.080	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-147.70	0.1	60.0	64.4	52.1	12.32	5.228	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-150.52	0.1	60.0	70.0	57.4	12.62	5.547	
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	-153.77	0.1	60.0	78.1	65.2	12.95	6.034	
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	-156.79	0.1	60.0	87.6	74.4	13.27	6.605	
2,100.0	2,098.2	2,098.2	2,098.2	6.8	6.5	-159.21	0.1	60.0	97.3	83.7	13.60	7.155	
2,200.0	2,197.6	2,197.6	2,197.6	7.0	6.7	-161.19	0.1	60.0	107.2	93.2	13.95	7.680	
2,300.0	2,297.1	2,297.1	2,297.1	7.3	6.8	-162.84	0.1	60.0	117.1	102.8	14.32	8.178	
2,400.0	2,396.5	2,396.5	2,396.5	7.5	6.9	-164.23	0.1	60.0	127.1	112.4	14.70	8.648	
2,500.0	2,496.0	2,496.0	2,496.0	7.8	7.0	-165.42	0.1	60.0	137.2	122.1	15.10	9.090	
2,600.0	2,595.4	2,595.4	2,595.4	8.1	7.2	-166.44	0.1	60.0	147.4	131.9	15.51	9.502	
2,700.0	2,694.8	2,694.8	2,694.8	8.4	7.3	-178.41	0.1	60.0	158.3	142.3	15.93	9.937	
2,800.0	2,794.0	2,794.0	2,794.0	8.7	7.4	172.41	0.1	60.0	170.7	154.3	16.36	10.432	
2,900.0	2,893.0	2,893.0	2,893.0	9.0	7.5	166.03	0.1	60.0	184.6	167.8	16.81	10.987	
3,000.0	2,991.7	2,991.7	2,991.7	9.3	7.7	161.77	0.1	60.0	200.2	183.0	17.26	11.600	
3,100.0	3,090.0	3,095.2	3,095.2	9.6	7.8	159.73	0.1	58.9	216.4	198.7	17.72	12.216	
3,200.0	3,188.2	3,199.9	3,199.8	10.0	7.9	161.17	0.0	54.8	230.8	212.6	18.23	12.664	
3,300.0	3,286.3	3,305.4	3,305.1	10.3	8.1	162.26	-0.1	47.8	242.6	223.9	18.74	12.950	
3,400.0	3,384.5	3,411.6	3,410.8	10.7	8.3	163.10	-0.3	37.9	251.9	232.6	19.27	13.069	
3,500.0	3,482.7	3,518.3	3,516.7	11.0	8.4	163.73	-0.5	24.9	258.4	238.6	19.81	13.043	
3,600.0	3,580.8	3,619.1	3,616.6	11.4	8.6	164.21	-0.8	10.9	263.3	242.9	20.36	12.931	
3,700.0	3,679.0	3,719.0	3,715.4	11.8	8.8	164.66	-1.0	-3.0	268.2	247.2	20.96	12.794	
3,800.0	3,777.1	3,818.8	3,814.3	12.1	9.0	165.10	-1.3	-16.9	273.0	251.5	21.58	12.655	
3,900.0	3,875.3	3,917.7	3,912.2	12.5	9.2	165.52	-1.5	-30.5	278.0	255.8	22.19	12.528	
4,000.0	3,973.5	4,015.2	4,008.9	12.9	9.4	165.95	-1.7	-43.3	283.7	260.9	22.85	12.416	
4,100.0	4,071.6	4,112.5	4,105.5	13.3	9.7	166.40	-1.9	-55.3	290.3	266.7	23.52	12.343	
4,200.0	4,169.8	4,209.8	4,202.1	13.7	9.9	166.85	-2.1	-66.4	297.7	273.5	24.19	12.305	
4,300.0	4,268.0	4,306.9	4,298.6	14.1	10.2	167.30	-2.3	-76.7	305.9	281.0	24.87	12.300	
4,400.0	4,366.1	4,403.8	4,395.1	14.5	10.5	167.76	-2.5	-86.2	315.0	289.4	25.56	12.326	
4,500.0	4,464.3	4,500.0	4,490.9	14.9	10.7	168.21	-2.6	-94.7	324.9	298.7	26.24	12.382	
4,600.0	4,562.4	4,597.3	4,587.9	15.4	11.0	168.66	-2.8	-102.6	335.7	308.8	26.94	12.464	
4,700.0	4,660.6	4,693.7	4,684.1	15.8	11.3	169.09	-2.9	-109.6	347.4	319.8	27.63	12.574	
4,800.0	4,758.8	4,789.9	4,780.1	16.2	11.5	169.52	-3.0	-115.7	359.9	331.6	28.32	12.708	
4,900.0	4,856.9	4,886.0	4,876.0	16.6	11.8	169.93	-3.1	-121.0	373.2	344.2	29.01	12.867	
5,000.0	4,955.1	4,981.8	4,971.7	17.0	12.0	170.32	-3.2	-125.6	387.4	357.7	29.69	13.048	
5,100.0	5,053.3	5,077.3	5,067.1	17.5	12.3	170.70	-3.2	-129.3	402.4	372.1	30.37	13.252	

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 #701H
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 #701H	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	5,151.4	5,172.6	5,162.4	17.9	12.5	171.07	-3.3	-132.2	418.3	387.2	31.04	13.477	
5,300.0	5,249.6	5,267.7	5,257.4	18.3	12.8	171.42	-3.3	-134.3	435.0	403.3	31.69	13.724	
5,400.0	5,347.7	5,362.4	5,352.2	18.8	13.0	171.75	-3.3	-135.6	452.5	420.1	32.34	13.993	
5,500.0	5,445.9	5,456.9	5,446.7	19.2	13.1	172.06	-3.4	-136.2	470.8	437.9	32.93	14.299	
5,600.0	5,544.1	5,554.3	5,544.1	19.6	13.2	172.37	-3.4	-136.2	489.7	456.2	33.48	14.626	
5,700.0	5,642.2	5,652.5	5,642.2	20.1	13.3	172.65	-3.4	-136.2	508.6	474.6	34.05	14.939	
5,800.0	5,740.4	5,750.7	5,740.4	20.5	13.3	172.92	-3.4	-136.2	527.6	493.0	34.61	15.241	
5,900.0	5,838.6	5,848.8	5,838.6	21.0	13.4	173.16	-3.4	-136.2	546.5	511.3	35.18	15.533	
6,000.0	5,936.7	5,947.0	5,936.7	21.4	13.5	173.39	-3.4	-136.2	565.5	529.7	35.76	15.814	
6,100.0	6,034.9	6,045.1	6,034.9	21.8	13.5	173.61	-3.4	-136.2	584.4	548.1	36.34	16.085	
6,200.0	6,133.1	6,143.3	6,133.1	22.3	13.6	173.81	-3.4	-136.2	603.4	566.5	36.91	16.346	
6,300.0	6,231.2	6,241.5	6,231.2	22.7	13.7	174.00	-3.4	-136.2	622.4	584.9	37.50	16.598	
6,400.0	6,329.4	6,339.6	6,329.4	23.2	13.7	174.18	-3.4	-136.2	641.4	603.3	38.08	16.842	
6,500.0	6,427.5	6,437.8	6,427.5	23.6	13.8	174.35	-3.4	-136.2	660.4	621.7	38.67	17.077	
6,600.0	6,525.7	6,536.0	6,525.7	24.1	13.9	174.51	-3.4	-136.2	679.3	640.1	39.26	17.305	
6,700.0	6,623.9	6,634.1	6,623.9	24.5	14.0	174.65	-3.4	-136.2	698.3	658.5	39.85	17.524	
6,800.0	6,722.0	6,732.3	6,722.0	25.0	14.0	174.80	-3.4	-136.2	717.4	676.9	40.44	17.737	
6,900.0	6,820.2	6,830.4	6,820.2	25.4	14.1	174.93	-3.4	-136.2	736.4	695.3	41.04	17.942	
7,000.0	6,918.4	6,928.6	6,918.4	25.9	14.2	175.06	-3.4	-136.2	755.4	713.7	41.64	18.141	
7,100.0	7,016.5	7,026.8	7,016.5	26.3	14.2	175.18	-3.4	-136.2	774.4	732.1	42.24	18.333	
7,200.0	7,114.7	7,124.9	7,114.7	26.8	14.3	175.30	-3.4	-136.2	793.4	750.6	42.84	18.520	
7,300.0	7,212.8	7,223.1	7,212.8	27.2	14.4	175.41	-3.4	-136.2	812.4	769.0	43.44	18.700	
7,400.0	7,311.0	7,321.3	7,311.0	27.7	14.5	175.51	-3.4	-136.2	831.4	787.4	44.05	18.875	
7,500.0	7,409.2	7,419.4	7,409.2	28.1	14.5	175.61	-3.4	-136.2	850.5	805.8	44.66	19.044	
7,600.0	7,507.3	7,517.6	7,507.3	28.6	14.6	175.71	-3.4	-136.2	869.5	824.2	45.27	19.209	
7,700.0	7,605.5	7,615.7	7,605.5	29.0	14.7	175.80	-3.4	-136.2	888.5	842.7	45.88	19.368	
7,800.0	7,703.7	7,713.9	7,703.7	29.5	14.7	175.89	-3.4	-136.2	907.6	861.1	46.49	19.522	
7,900.0	7,801.8	7,812.1	7,801.8	29.9	14.8	175.98	-3.4	-136.2	926.6	879.5	47.09	19.677	
8,000.0	7,900.2	7,910.5	7,900.2	30.4	14.9	176.07	-3.4	-136.2	944.4	896.7	47.70	19.798	
8,100.0	7,998.9	8,009.2	7,998.9	30.8	15.0	176.14	-3.4	-136.2	960.4	912.1	48.29	19.887	
8,200.0	8,097.9	8,108.1	8,097.9	31.3	15.0	176.21	-3.4	-136.2	974.8	925.9	48.88	19.944	
8,300.0	8,197.1	8,207.3	8,197.1	31.7	15.1	176.27	-3.4	-136.2	987.4	938.0	49.45	19.970	
8,400.0	8,296.5	8,306.7	8,296.5	32.1	15.2	176.31	-3.4	-136.2	998.4	948.4	50.00	19.967	
8,500.0	8,396.0	8,406.3	8,396.0	32.5	15.3	176.35	-3.4	-136.2	1,007.5	957.0	50.53	19.938	
8,600.0	8,495.8	8,506.0	8,495.8	32.8	15.3	176.38	-3.4	-136.2	1,015.0	963.9	51.04	19.884	
8,700.0	8,595.6	8,605.8	8,595.6	33.2	15.4	176.41	-3.4	-136.2	1,020.7	969.2	51.53	19.808	
8,800.0	8,695.5	8,705.8	8,695.5	33.5	15.5	176.42	-3.4	-136.2	1,024.7	972.7	51.98	19.714	
8,900.0	8,795.5	8,805.7	8,795.5	33.8	15.5	176.43	-3.4	-136.2	1,026.9	974.5	52.37	19.607	
9,000.0	8,895.5	8,905.7	8,895.5	33.9	15.6	88.44	-3.4	-136.2	1,027.4	974.9	52.55	19.552	
9,100.0	8,995.5	9,005.7	8,995.5	33.9	15.7	88.44	-3.4	-136.2	1,027.4	974.8	52.62	19.524	
9,200.0	9,095.5	9,105.7	9,095.5	33.9	15.8	88.44	-3.4	-136.2	1,027.4	974.7	52.70	19.496	
9,300.0	9,195.5	9,205.7	9,195.5	34.0	15.8	88.44	-3.4	-136.2	1,027.4	974.6	52.77	19.469	
9,400.0	9,295.5	9,305.7	9,295.5	34.0	15.9	88.44	-3.4	-136.2	1,027.4	974.6	52.85	19.442	
9,500.0	9,395.5	9,405.7	9,395.5	34.0	16.0	88.44	-3.4	-136.2	1,027.4	974.5	52.92	19.414	
9,600.0	9,495.5	9,505.7	9,495.5	34.0	16.1	88.44	-3.4	-136.2	1,027.4	974.4	53.00	19.387	
9,700.0	9,595.5	9,605.7	9,595.5	34.0	16.1	88.44	-3.4	-136.2	1,027.4	974.3	53.07	19.359	
9,800.0	9,695.5	9,705.7	9,695.5	34.1	16.2	88.44	-3.4	-136.2	1,027.4	974.3	53.15	19.331	
9,900.0	9,795.5	9,805.7	9,795.5	34.1	16.3	88.44	-3.4	-136.2	1,027.4	974.2	53.22	19.304	
10,000.0	9,895.5	9,905.7	9,895.5	34.1	16.4	88.44	-3.4	-136.2	1,027.4	974.1	53.30	19.276	
10,100.0	9,995.5	10,005.7	9,995.5	34.1	16.4	88.44	-3.4	-136.2	1,027.4	974.0	53.38	19.248	
10,200.0	10,095.5	10,105.7	10,095.5	34.2	16.5	88.44	-3.4	-136.2	1,027.4	974.0	53.45	19.220	
10,300.0	10,195.5	10,205.7	10,195.5	34.2	16.6	88.44	-3.4	-136.2	1,027.4	973.9	53.53	19.192	

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 #701H
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 #701H	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)			
10,400.0	10,295.5	10,305.7	10,295.5	34.2	16.7	88.44	-3.4	-136.2	1,027.4	973.8	53.61	19.164	
10,500.0	10,395.5	10,405.7	10,395.5	34.3	16.7	88.44	-3.4	-136.2	1,027.4	973.7	53.69	19.136	
10,600.0	10,495.5	10,505.7	10,495.5	34.3	16.8	88.44	-3.4	-136.2	1,027.4	973.6	53.77	19.108	
10,700.0	10,595.5	10,605.7	10,595.5	34.3	16.9	88.44	-3.4	-136.2	1,027.4	973.6	53.85	19.080	
10,800.0	10,695.5	10,705.7	10,695.5	34.3	17.0	88.44	-3.4	-136.2	1,027.4	973.5	53.93	19.052	
10,900.0	10,795.5	10,805.0	10,794.7	34.3	17.0	88.66	-3.1	-136.2	1,027.4	973.4	53.98	19.031	
11,000.0	10,894.6	10,901.0	10,890.0	34.3	17.1	88.69	7.9	-136.2	1,027.4	973.4	54.00	19.027	
11,100.0	10,990.2	10,997.2	10,982.3	34.4	17.1	88.75	34.7	-136.3	1,027.4	973.4	54.00	19.026	
11,200.0	11,079.3	11,093.6	11,068.9	34.4	17.2	88.86	76.6	-136.5	1,027.3	973.3	54.00	19.024	
11,300.0	11,159.3	11,190.3	11,147.6	34.4	17.3	88.99	132.6	-136.7	1,027.3	973.3	54.01	19.019	
11,400.0	11,227.6	11,287.4	11,216.0	34.4	17.4	89.16	201.4	-137.0	1,027.2	973.2	54.05	19.005	
11,500.0	11,282.2	11,385.1	11,272.1	34.4	17.5	89.35	281.2	-137.3	1,027.2	973.0	54.12	18.979	
11,600.0	11,321.4	11,483.3	11,314.0	34.5	17.6	89.56	370.0	-137.7	1,027.1	972.9	54.24	18.938	
11,700.0	11,344.2	11,582.2	11,340.4	34.6	17.7	89.78	465.2	-138.1	1,027.1	972.7	54.40	18.881	
11,800.0	11,350.0	11,681.8	11,349.9	34.6	17.8	90.00	564.2	-138.5	1,027.1	972.5	54.60	18.809	
11,900.0	11,350.0	11,781.8	11,350.0	34.7	17.9	90.00	664.2	-138.9	1,027.1	972.2	54.83	18.731	
12,000.0	11,350.0	11,881.8	11,350.0	34.8	18.1	90.00	764.2	-139.3	1,027.1	972.0	55.10	18.639	
12,100.0	11,350.0	11,981.8	11,350.0	35.0	18.3	90.00	864.2	-139.7	1,027.1	971.6	55.41	18.535	
12,200.0	11,350.0	12,081.8	11,350.0	35.1	18.5	90.00	964.2	-140.1	1,027.0	971.3	55.76	18.419	
12,300.0	11,350.0	12,181.8	11,350.0	35.3	18.8	90.00	1,064.2	-140.5	1,027.0	970.9	56.15	18.292	
12,400.0	11,350.0	12,281.8	11,350.0	35.5	19.0	90.00	1,164.2	-140.9	1,027.0	970.5	56.57	18.154	
12,500.0	11,350.0	12,381.8	11,350.0	35.7	19.4	90.00	1,264.2	-141.3	1,027.0	970.0	57.04	18.006	
12,600.0	11,350.0	12,481.8	11,350.0	35.9	19.7	90.00	1,364.2	-141.7	1,027.0	969.5	57.54	17.850	
12,700.0	11,350.0	12,581.8	11,350.0	36.1	20.1	90.00	1,464.2	-142.1	1,027.0	968.9	58.07	17.685	
12,800.0	11,350.0	12,681.8	11,350.0	36.3	20.4	90.00	1,564.2	-142.5	1,027.0	968.4	58.64	17.513	
12,900.0	11,350.0	12,781.8	11,350.0	36.6	20.9	90.00	1,664.2	-142.9	1,027.0	967.7	59.24	17.335	
13,000.0	11,350.0	12,881.8	11,350.0	36.9	21.3	90.00	1,764.2	-143.3	1,027.0	967.1	59.88	17.151	
13,100.0	11,350.0	12,981.8	11,350.0	37.2	21.8	90.00	1,864.2	-143.7	1,027.0	966.4	60.55	16.962	
13,200.0	11,350.0	13,081.8	11,350.0	37.5	22.2	90.00	1,964.2	-144.1	1,027.0	965.7	61.24	16.769	
13,300.0	11,350.0	13,181.8	11,350.0	37.8	22.7	90.00	2,064.2	-144.5	1,027.0	965.0	61.97	16.572	
13,400.0	11,350.0	13,281.8	11,350.0	38.1	23.2	90.00	2,164.2	-144.9	1,026.9	964.2	62.72	16.373	
13,500.0	11,350.0	13,381.8	11,350.0	38.4	23.7	90.00	2,264.2	-145.3	1,026.9	963.4	63.50	16.171	
13,600.0	11,350.0	13,481.8	11,350.0	38.8	24.3	90.00	2,364.2	-145.7	1,026.9	962.6	64.31	15.968	
13,700.0	11,350.0	13,581.8	11,350.0	39.2	24.8	90.00	2,464.2	-146.1	1,026.9	961.8	65.15	15.764	
13,800.0	11,350.0	13,681.8	11,350.0	39.5	25.4	90.00	2,564.2	-146.5	1,026.9	960.9	66.00	15.559	
13,900.0	11,350.0	13,781.8	11,350.0	39.9	25.9	90.00	2,664.2	-146.9	1,026.9	960.0	66.88	15.354	
14,000.0	11,350.0	13,881.8	11,350.0	40.3	26.5	90.00	2,764.2	-147.3	1,026.9	959.1	67.79	15.149	
14,100.0	11,350.0	13,981.8	11,350.0	40.7	27.1	90.00	2,864.2	-147.7	1,026.9	958.2	68.71	14.945	
14,200.0	11,350.0	14,081.8	11,350.0	41.1	27.7	90.00	2,964.2	-148.2	1,026.9	957.2	69.66	14.742	
14,300.0	11,350.0	14,181.8	11,350.0	41.6	28.3	90.00	3,064.2	-148.6	1,026.9	956.3	70.62	14.540	
14,400.0	11,350.0	14,281.8	11,350.0	42.0	28.9	90.00	3,164.2	-149.0	1,026.9	955.3	71.61	14.340	
14,500.0	11,350.0	14,381.8	11,350.0	42.5	29.5	90.00	3,264.2	-149.4	1,026.9	954.2	72.61	14.142	
14,600.0	11,350.0	14,481.8	11,350.0	42.9	30.2	90.00	3,364.2	-149.8	1,026.9	953.2	73.63	13.946	
14,700.0	11,350.0	14,581.8	11,350.0	43.4	30.8	90.00	3,464.2	-150.2	1,026.8	952.2	74.67	13.752	
14,800.0	11,350.0	14,681.8	11,350.0	43.9	31.4	90.00	3,564.2	-150.6	1,026.8	951.1	75.72	13.561	
14,900.0	11,350.0	14,781.8	11,350.0	44.3	32.1	90.00	3,664.2	-151.0	1,026.8	950.0	76.79	13.372	
15,000.0	11,350.0	14,881.8	11,350.0	44.8	32.7	90.00	3,764.2	-151.4	1,026.8	948.9	77.87	13.186	
15,100.0	11,350.0	14,981.8	11,350.0	45.3	33.4	90.00	3,864.2	-151.8	1,026.8	947.8	78.97	13.003	
15,200.0	11,350.0	15,081.8	11,350.0	45.8	34.0	90.00	3,964.2	-152.2	1,026.8	946.7	80.08	12.822	
15,300.0	11,350.0	15,181.8	11,350.0	46.3	34.7	90.00	4,064.2	-152.6	1,026.8	945.6	81.20	12.645	
15,400.0	11,350.0	15,281.8	11,350.0	46.9	35.4	90.00	4,164.2	-153.0	1,026.8	944.4	82.34	12.470	
15,500.0	11,350.0	15,381.8	11,350.0	47.4	36.0	90.00	4,264.2	-153.4	1,026.8	943.3	83.49	12.298	

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 #701H
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 #701H	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)			
15,600.0	11,350.0	15,481.8	11,350.0	47.9	36.7	90.00	4,364.1	-153.8	1,026.8	942.1	84.65	12.130	
15,700.0	11,350.0	15,581.8	11,350.0	48.5	37.4	90.00	4,464.1	-154.2	1,026.8	940.9	85.82	11.964	
15,800.0	11,350.0	15,681.8	11,350.0	49.0	38.1	90.00	4,564.1	-154.6	1,026.8	939.8	87.00	11.802	
15,900.0	11,350.0	15,781.8	11,350.0	49.6	38.8	90.00	4,664.1	-155.0	1,026.7	938.6	88.19	11.642	
16,000.0	11,350.0	15,881.8	11,350.0	50.1	39.4	90.00	4,764.1	-155.4	1,026.7	937.3	89.39	11.486	
16,100.0	11,350.0	15,981.8	11,350.0	50.7	40.1	90.00	4,864.1	-155.8	1,026.7	936.1	90.60	11.332	
16,200.0	11,350.0	16,081.8	11,350.0	51.2	40.8	90.00	4,964.1	-156.2	1,026.7	934.9	91.82	11.181	
16,300.0	11,350.0	16,181.8	11,350.0	51.8	41.5	90.00	5,064.1	-156.6	1,026.7	933.7	93.05	11.034	
16,400.0	11,350.0	16,281.8	11,350.0	52.4	42.2	90.00	5,164.1	-157.0	1,026.7	932.4	94.29	10.889	
16,500.0	11,350.0	16,381.8	11,350.0	53.0	42.9	90.00	5,264.1	-157.4	1,026.7	931.2	95.53	10.747	
16,600.0	11,350.0	16,481.8	11,350.0	53.6	43.6	90.00	5,364.1	-157.8	1,026.7	929.9	96.79	10.608	
16,700.0	11,350.0	16,581.8	11,350.0	54.2	44.3	90.00	5,464.1	-158.2	1,026.7	928.6	98.05	10.471	
16,800.0	11,350.0	16,681.8	11,350.0	54.8	45.0	90.00	5,564.1	-158.6	1,026.7	927.4	99.31	10.338	
16,900.0	11,350.0	16,781.8	11,350.0	55.3	45.7	90.00	5,664.1	-159.0	1,026.7	926.1	100.59	10.207	
17,000.0	11,350.0	16,881.8	11,350.0	56.0	46.5	90.00	5,764.1	-159.4	1,026.7	924.8	101.87	10.079	
17,100.0	11,350.0	16,981.8	11,350.0	56.6	47.2	90.00	5,864.1	-159.8	1,026.6	923.5	103.15	9.953	
17,200.0	11,350.0	17,081.8	11,350.0	57.2	47.9	90.00	5,964.1	-160.3	1,026.6	922.2	104.44	9.830	
17,300.0	11,350.0	17,181.8	11,350.0	57.8	48.6	90.00	6,064.1	-160.7	1,026.6	920.9	105.74	9.709	
17,400.0	11,350.0	17,281.8	11,350.0	58.4	49.3	90.00	6,164.1	-161.1	1,026.6	919.6	107.05	9.590	
17,500.0	11,350.0	17,381.8	11,350.0	59.0	50.0	90.00	6,264.1	-161.5	1,026.6	918.3	108.36	9.474	
17,600.0	11,350.0	17,481.8	11,350.0	59.7	50.8	90.00	6,364.1	-161.9	1,026.6	916.9	109.67	9.361	
17,700.0	11,350.0	17,581.8	11,350.0	60.3	51.5	90.00	6,464.1	-162.3	1,026.6	915.6	110.99	9.249	
17,800.0	11,350.0	17,681.8	11,350.0	60.9	52.2	90.00	6,564.1	-162.7	1,026.6	914.3	112.31	9.140	
17,900.0	11,350.0	17,781.8	11,350.0	61.5	52.9	90.00	6,664.1	-163.1	1,026.6	912.9	113.64	9.033	
18,000.0	11,350.0	17,881.8	11,350.0	62.2	53.7	90.00	6,764.1	-163.5	1,026.6	911.6	114.98	8.929	
18,100.0	11,350.0	17,981.8	11,350.0	62.8	54.4	90.00	6,864.1	-163.9	1,026.6	910.2	116.31	8.826	
18,200.0	11,350.0	18,081.8	11,350.0	63.5	55.1	90.00	6,964.1	-164.3	1,026.6	908.9	117.66	8.725	
18,300.0	11,350.0	18,181.8	11,350.0	64.1	55.8	90.00	7,064.1	-164.7	1,026.5	907.5	119.00	8.626	
18,400.0	11,350.0	18,281.8	11,350.0	64.8	56.6	90.00	7,164.1	-165.1	1,026.5	906.2	120.35	8.529	
18,500.0	11,350.0	18,381.8	11,350.0	65.4	57.3	90.00	7,264.1	-165.5	1,026.5	904.8	121.71	8.434	
18,600.0	11,350.0	18,481.8	11,350.0	66.1	58.0	90.00	7,364.1	-165.9	1,026.5	903.5	123.07	8.341	
18,700.0	11,350.0	18,581.8	11,350.0	66.7	58.8	90.00	7,464.1	-166.3	1,026.5	902.1	124.43	8.250	
18,800.0	11,350.0	18,681.8	11,350.0	67.4	59.5	90.00	7,564.1	-166.7	1,026.5	900.7	125.79	8.160	
18,900.0	11,350.0	18,781.8	11,350.0	68.0	60.2	90.00	7,664.1	-167.1	1,026.5	899.3	127.16	8.073	
19,000.0	11,350.0	18,881.8	11,350.0	68.7	61.0	90.00	7,764.1	-167.5	1,026.5	898.0	128.53	7.986	
19,100.0	11,350.0	18,981.8	11,350.0	69.4	61.7	90.00	7,864.1	-167.9	1,026.5	896.6	129.91	7.902	
19,200.0	11,350.0	19,081.8	11,350.0	70.0	62.4	90.00	7,964.1	-168.3	1,026.5	895.2	131.28	7.819	
19,300.0	11,350.0	19,181.8	11,350.0	70.7	63.2	90.00	8,064.1	-168.7	1,026.5	893.8	132.66	7.737	
19,400.0	11,350.0	19,281.8	11,350.0	71.4	63.9	90.00	8,164.1	-169.1	1,026.5	892.4	134.05	7.657	
19,500.0	11,350.0	19,381.8	11,350.0	72.0	64.6	90.00	8,264.1	-169.5	1,026.4	891.0	135.43	7.579	
19,600.0	11,350.0	19,481.8	11,350.0	72.7	65.4	90.00	8,364.1	-169.9	1,026.4	889.6	136.82	7.502	
19,700.0	11,350.0	19,581.8	11,350.0	73.4	66.1	90.00	8,464.1	-170.3	1,026.4	888.2	138.21	7.426	
19,800.0	11,350.0	19,681.8	11,350.0	74.1	66.9	90.00	8,564.1	-170.7	1,026.4	886.8	139.61	7.352	
19,900.0	11,350.0	19,781.8	11,350.0	74.8	67.6	90.00	8,664.1	-171.1	1,026.4	885.4	141.00	7.279	
20,000.0	11,350.0	19,881.8	11,350.0	75.4	68.3	90.00	8,764.1	-171.5	1,026.4	884.0	142.40	7.208	
20,100.0	11,350.0	19,981.8	11,350.0	76.1	69.1	90.00	8,864.1	-171.9	1,026.4	882.6	143.80	7.138	
20,200.0	11,350.0	20,081.8	11,350.0	76.8	69.8	90.00	8,964.1	-172.4	1,026.4	881.2	145.21	7.069	
20,300.0	11,350.0	20,181.8	11,350.0	77.5	70.6	90.00	9,064.1	-172.8	1,026.4	879.8	146.61	7.001	
20,400.0	11,350.0	20,281.8	11,350.0	78.2	71.3	90.00	9,164.1	-173.2	1,026.4	878.4	148.02	6.934	
20,500.0	11,350.0	20,381.8	11,350.0	78.9	72.1	90.00	9,264.1	-173.6	1,026.4	876.9	149.43	6.869	
20,600.0	11,350.0	20,481.8	11,350.0	79.6	72.8	90.00	9,364.1	-174.0	1,026.4	875.5	150.84	6.804	
20,700.0	11,350.0	20,581.8	11,350.0	80.2	73.6	90.00	9,464.1	-174.4	1,026.3	874.1	152.25	6.741	

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 #701H
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 #701H	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)			
20,800.0	11,350.0	20,681.8	11,350.0	80.9	74.3	90.00	9,564.1	-174.8	1,026.3	872.7	153.67	6.679	
20,900.0	11,350.0	20,781.8	11,350.0	81.6	75.0	90.00	9,664.1	-175.2	1,026.3	871.2	155.08	6.618	
21,000.0	11,350.0	20,881.8	11,350.0	82.3	75.8	90.00	9,764.1	-175.6	1,026.3	869.8	156.50	6.558	
21,100.0	11,350.0	20,981.8	11,350.0	83.0	76.5	90.00	9,864.1	-176.0	1,026.3	868.4	157.92	6.499	
21,200.0	11,350.0	21,081.8	11,350.0	83.7	77.3	90.00	9,964.1	-176.4	1,026.3	867.0	159.35	6.441	
21,300.0	11,350.0	21,181.8	11,350.0	84.4	78.0	90.00	10,064.1	-176.8	1,026.3	865.5	160.77	6.384	
21,400.0	11,350.0	21,281.8	11,350.0	85.1	78.8	90.00	10,164.1	-177.2	1,026.3	864.1	162.20	6.327	
21,500.0	11,350.0	21,381.8	11,350.0	85.8	79.5	90.00	10,264.1	-177.6	1,026.3	862.7	163.62	6.272	
21,600.0	11,350.0	21,481.8	11,350.0	86.5	80.3	90.00	10,364.1	-178.0	1,026.3	861.2	165.05	6.218	
21,700.0	11,350.0	21,581.8	11,350.0	87.2	81.0	90.00	10,464.1	-178.4	1,026.3	859.8	166.48	6.164	
21,800.0	11,350.0	21,681.8	11,350.0	87.9	81.8	90.00	10,564.1	-178.8	1,026.3	858.3	167.91	6.112	
21,900.0	11,350.0	21,781.8	11,350.0	88.6	82.5	90.00	10,664.1	-179.2	1,026.3	856.9	169.35	6.060	
22,000.0	11,350.0	21,881.8	11,350.0	89.3	83.3	90.00	10,764.1	-179.6	1,026.2	855.5	170.78	6.009	
22,100.0	11,350.0	21,981.8	11,350.0	90.1	84.0	90.00	10,864.1	-180.0	1,026.2	854.0	172.22	5.959	
22,200.0	11,350.0	22,081.8	11,350.0	90.8	84.8	90.00	10,964.1	-180.4	1,026.2	852.6	173.65	5.910	
22,300.0	11,350.0	22,181.8	11,350.0	91.5	85.5	90.00	11,064.1	-180.8	1,026.2	851.1	175.09	5.861	
22,400.0	11,350.0	22,281.8	11,350.0	92.2	86.3	90.00	11,164.1	-181.2	1,026.2	849.7	176.53	5.813	
22,500.0	11,350.0	22,381.8	11,350.0	92.9	87.0	90.00	11,264.1	-181.6	1,026.2	848.2	177.97	5.766	
22,600.0	11,350.0	22,481.8	11,350.0	93.6	87.8	90.00	11,364.1	-182.0	1,026.2	846.8	179.41	5.720	
22,700.0	11,350.0	22,581.8	11,350.0	94.3	88.5	90.00	11,464.1	-182.4	1,026.2	845.3	180.85	5.674	
22,800.0	11,350.0	22,681.8	11,350.0	95.0	89.3	90.00	11,564.1	-182.8	1,026.2	843.9	182.30	5.629	
22,900.0	11,350.0	22,781.8	11,350.0	95.7	90.0	90.00	11,664.1	-183.2	1,026.2	842.4	183.74	5.585	
23,000.0	11,350.0	22,881.8	11,350.0	96.5	90.8	90.00	11,764.1	-183.6	1,026.2	841.0	185.19	5.541	
23,100.0	11,350.0	22,981.8	11,350.0	97.2	91.5	90.00	11,864.1	-184.0	1,026.2	839.5	186.64	5.498	
23,200.0	11,350.0	23,081.8	11,350.0	97.9	92.3	90.00	11,964.1	-184.5	1,026.1	838.1	188.09	5.456	
23,300.0	11,350.0	23,181.8	11,350.0	98.6	93.0	90.00	12,064.1	-184.9	1,026.1	836.6	189.53	5.414	
23,400.0	11,350.0	23,281.8	11,350.0	99.3	93.8	90.00	12,164.1	-185.3	1,026.1	835.1	190.98	5.373	
23,500.0	11,350.0	23,381.8	11,350.0	100.0	94.5	90.00	12,264.1	-185.7	1,026.1	833.7	192.44	5.332	
23,600.0	11,350.0	23,481.8	11,350.0	100.8	95.3	90.00	12,364.1	-186.1	1,026.1	832.2	193.89	5.292	
23,700.0	11,350.0	23,581.8	11,350.0	101.5	96.1	90.00	12,464.1	-186.5	1,026.1	830.8	195.34	5.253	
23,800.0	11,350.0	23,681.8	11,350.0	102.2	96.8	90.00	12,564.1	-186.9	1,026.1	829.3	196.79	5.214	
23,900.0	11,350.0	23,781.8	11,350.0	102.9	97.6	90.00	12,664.1	-187.3	1,026.1	827.8	198.25	5.176	
24,000.0	11,350.0	23,881.8	11,350.0	103.7	98.3	90.00	12,764.1	-187.7	1,026.1	826.4	199.70	5.138	
24,100.0	11,350.0	23,981.8	11,350.0	104.4	99.1	90.00	12,864.1	-188.1	1,026.1	824.9	201.16	5.101	
24,200.0	11,350.0	24,081.8	11,350.0	105.1	99.8	90.00	12,964.1	-188.5	1,026.1	823.4	202.62	5.064	
24,300.0	11,350.0	24,181.8	11,350.0	105.8	100.6	90.00	13,064.1	-188.9	1,026.1	822.0	204.08	5.028	
24,400.0	11,350.0	24,281.8	11,350.0	106.5	101.3	90.00	13,164.1	-189.3	1,026.0	820.5	205.54	4.992	
24,500.0	11,350.0	24,381.8	11,350.0	107.3	102.1	90.00	13,264.1	-189.7	1,026.0	819.0	206.99	4.957	
24,600.0	11,350.0	24,481.8	11,350.0	108.0	102.8	90.00	13,364.1	-190.1	1,026.0	817.6	208.46	4.922	
24,700.0	11,350.0	24,581.8	11,350.0	108.7	103.6	90.00	13,464.1	-190.5	1,026.0	816.1	209.92	4.888	
24,800.0	11,350.0	24,681.8	11,350.0	109.5	104.4	90.00	13,564.1	-190.9	1,026.0	814.6	211.38	4.854	
24,842.7	11,350.0	24,724.5	11,350.0	109.7	104.7	90.00	13,606.7	-191.1	1,026.0	814.1	211.93	4.841	
24,848.5	11,350.0	24,725.4	11,350.0	109.7	104.7	90.00	13,607.7	-191.1	1,026.0	814.1	211.94	4.841 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 #701H
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 #701H	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	89.92	0.1	90.0	90.0	83.6	6.43	13.999	
100.0	100.0	100.0	100.0	3.2	3.2	89.92	0.1	90.0	90.0	83.1	6.89	13.058	
200.0	200.0	200.0	200.0	3.5	3.5	89.92	0.1	90.0	90.0	82.7	7.33	12.281	
300.0	300.0	300.0	300.0	3.7	3.7	89.92	0.1	90.0	90.0	82.3	7.74	11.626	
400.0	400.0	400.0	400.0	3.9	3.9	89.92	0.1	90.0	90.0	81.9	8.14	11.063	
500.0	500.0	500.0	500.0	4.1	4.1	89.92	0.1	90.0	90.0	81.5	8.51	10.571	
600.0	600.0	600.0	600.0	4.2	4.2	89.92	0.1	90.0	90.0	81.1	8.88	10.138	
700.0	700.0	700.0	700.0	4.4	4.4	89.92	0.1	90.0	90.0	80.8	9.23	9.751	
800.0	800.0	800.0	800.0	4.6	4.6	89.92	0.1	90.0	90.0	80.4	9.57	9.404	
900.0	900.0	900.0	900.0	4.8	4.8	89.92	0.1	90.0	90.0	80.1	9.90	9.089	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	89.92	0.1	90.0	90.0	79.8	10.22	8.802	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	89.92	0.1	90.0	90.0	79.5	10.54	8.539	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	89.92	0.1	90.0	90.0	79.2	10.85	8.297	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	89.92	0.1	90.0	90.0	78.9	11.15	8.072	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	89.92	0.1	90.0	90.0	78.6	11.44	7.864	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	89.92	0.1	90.0	90.0	78.3	11.73	7.670 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-145.54	0.1	90.0	91.1	79.0	12.03	7.571	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-146.86	0.1	90.0	94.3	82.0	12.32	7.659	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-148.87	0.1	90.0	99.9	87.3	12.62	7.915	
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	-151.32	0.1	90.0	107.8	94.9	12.94	8.333	
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	-153.78	0.1	90.0	117.1	103.9	13.25	8.836	
2,100.0	2,098.2	2,098.2	2,098.2	6.8	6.5	-155.86	0.1	90.0	126.6	113.0	13.59	9.317	
2,200.0	2,197.6	2,197.6	2,197.6	7.0	6.7	-157.66	0.1	90.0	136.2	122.3	13.93	9.775	
2,300.0	2,297.1	2,297.1	2,297.1	7.3	6.8	-159.22	0.1	90.0	145.9	131.6	14.30	10.207	
2,400.0	2,396.5	2,396.5	2,396.5	7.5	6.9	-160.58	0.1	90.0	155.8	141.1	14.67	10.614	
2,500.0	2,496.0	2,496.0	2,496.0	7.8	7.0	-161.79	0.1	90.0	165.7	150.6	15.07	10.995	
2,600.0	2,595.4	2,591.5	2,591.5	8.1	7.2	-162.68	0.1	91.1	176.7	161.2	15.47	11.419	
2,700.0	2,694.8	2,686.2	2,686.2	8.4	7.3	-174.40	-0.1	94.5	190.8	174.9	15.87	12.024	
2,800.0	2,794.0	2,780.0	2,779.7	8.7	7.5	176.65	-0.4	100.2	208.9	192.6	16.28	12.827	
2,900.0	2,893.0	2,872.4	2,871.8	9.0	7.6	170.44	-0.8	108.1	230.9	214.2	16.71	13.814	
3,000.0	2,991.7	2,963.2	2,962.1	9.3	7.8	166.22	-1.3	118.0	256.9	239.8	17.16	14.974	
3,100.0	3,090.0	3,053.6	3,051.6	9.6	7.9	164.12	-2.0	129.9	286.9	269.4	17.56	16.343	
3,200.0	3,188.2	3,148.1	3,145.3	10.0	8.1	165.76	-2.7	143.1	318.4	300.4	18.07	17.625	
3,300.0	3,286.3	3,242.7	3,238.9	10.3	8.3	167.11	-3.3	156.2	350.1	331.5	18.60	18.823	
3,400.0	3,384.5	3,337.2	3,332.5	10.7	8.5	168.23	-4.0	169.4	382.0	362.8	19.16	19.935	
3,500.0	3,482.7	3,431.8	3,426.2	11.0	8.8	169.18	-4.7	182.5	413.9	394.2	19.74	20.966	
3,600.0	3,580.8	3,526.3	3,519.8	11.4	9.0	169.99	-5.4	195.6	445.9	425.6	20.34	21.920	
3,700.0	3,679.0	3,620.9	3,613.4	11.8	9.3	170.70	-6.1	208.8	478.0	457.1	20.96	22.803	
3,800.0	3,777.1	3,715.4	3,707.1	12.1	9.5	171.32	-6.8	221.9	510.2	488.6	21.60	23.619	
3,900.0	3,875.3	3,810.0	3,800.7	12.5	9.8	171.86	-7.5	235.1	542.4	520.2	22.25	24.373	
4,000.0	3,973.5	3,904.5	3,894.3	12.9	10.1	172.34	-8.2	248.2	574.7	551.7	22.92	25.071	
4,100.0	4,071.6	3,999.1	3,988.0	13.3	10.4	172.78	-8.9	261.3	606.9	583.3	23.60	25.718	
4,200.0	4,169.8	4,093.6	4,081.6	13.7	10.7	173.16	-9.5	274.5	639.3	615.0	24.29	26.316	
4,300.0	4,268.0	4,188.2	4,175.2	14.1	11.0	173.51	-10.2	287.6	671.6	646.6	24.99	26.871	
4,400.0	4,366.1	4,282.7	4,268.8	14.5	11.3	173.83	-10.9	300.8	703.9	678.2	25.70	27.386	
4,500.0	4,464.3	4,377.3	4,362.5	14.9	11.6	174.12	-11.6	313.9	736.3	709.9	26.42	27.865	
4,600.0	4,562.4	4,479.0	4,463.2	15.4	12.0	174.41	-12.3	327.8	768.5	741.3	27.19	28.261	
4,700.0	4,660.6	4,589.1	4,572.6	15.8	12.3	174.67	-13.0	341.0	799.1	771.1	28.04	28.499	
4,800.0	4,758.8	4,700.6	4,683.5	16.2	12.7	174.90	-13.6	352.3	827.9	799.0	28.89	28.658	
4,900.0	4,856.9	4,813.4	4,795.8	16.6	13.1	175.10	-14.1	361.5	854.8	825.1	29.73	28.753	
5,000.0	4,955.1	4,927.3	4,909.6	17.0	13.4	175.27	-14.5	368.5	879.8	849.3	30.56	28.794	
5,100.0	5,053.3	5,042.4	5,024.6	17.5	13.8	175.42	-14.7	373.3	902.9	871.6	31.36	28.791	

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 #701H
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 #701H	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)			
5,200.0	5,151.4	5,158.6	5,140.7	17.9	14.0	175.55	-14.9	375.9	924.1	892.0	32.13	28.762	
5,300.0	5,249.6	5,267.5	5,249.6	18.3	14.2	175.65	-14.9	376.3	943.4	910.7	32.75	28.811	
5,400.0	5,347.7	5,365.6	5,347.7	18.8	14.2	175.74	-14.9	376.3	962.5	929.2	33.28	28.922	
5,500.0	5,445.9	5,463.8	5,445.9	19.2	14.3	175.82	-14.9	376.3	981.5	947.7	33.82	29.022	
5,600.0	5,544.1	5,561.9	5,544.1	19.6	14.4	175.90	-14.9	376.3	1,000.5	966.2	34.36	29.116	
5,700.0	5,642.2	5,660.1	5,642.2	20.1	14.4	175.98	-14.9	376.3	1,019.6	984.7	34.91	29.203	
5,800.0	5,740.4	5,758.3	5,740.4	20.5	14.5	176.05	-14.9	376.3	1,038.6	1,003.1	35.47	29.284	
5,900.0	5,838.6	5,856.4	5,838.6	21.0	14.6	176.12	-14.9	376.3	1,057.6	1,021.6	36.02	29.360	
6,000.0	5,936.7	5,954.6	5,936.7	21.4	14.6	176.19	-14.9	376.3	1,076.7	1,040.1	36.58	29.431	
6,100.0	6,034.9	6,052.8	6,034.9	21.8	14.7	176.26	-14.9	376.3	1,095.7	1,058.6	37.15	29.497	
6,200.0	6,133.1	6,150.9	6,133.1	22.3	14.7	176.32	-14.9	376.3	1,114.8	1,077.1	37.71	29.559	
6,300.0	6,231.2	6,249.1	6,231.2	22.7	14.8	176.38	-14.9	376.3	1,133.8	1,095.5	38.28	29.617	
6,400.0	6,329.4	6,347.3	6,329.4	23.2	14.9	176.44	-14.9	376.3	1,152.9	1,114.0	38.86	29.670	
6,500.0	6,427.5	6,445.4	6,427.5	23.6	14.9	176.50	-14.9	376.3	1,171.9	1,132.5	39.43	29.720	
6,600.0	6,525.7	6,543.6	6,525.7	24.1	15.0	176.56	-14.9	376.3	1,190.9	1,150.9	40.01	29.767	
6,700.0	6,623.9	6,641.7	6,623.9	24.5	15.1	176.61	-14.9	376.3	1,210.0	1,169.4	40.59	29.810	
6,800.0	6,722.0	6,739.9	6,722.0	25.0	15.1	176.66	-14.9	376.3	1,229.0	1,187.9	41.17	29.851	
6,900.0	6,820.2	6,838.1	6,820.2	25.4	15.2	176.71	-14.9	376.3	1,248.1	1,206.3	41.76	29.889	
7,000.0	6,918.4	6,936.2	6,918.4	25.9	15.3	176.76	-14.9	376.3	1,267.1	1,224.8	42.35	29.924	
7,100.0	7,016.5	7,034.4	7,016.5	26.3	15.3	176.81	-14.9	376.3	1,286.2	1,243.3	42.94	29.956	
7,200.0	7,114.7	7,132.6	7,114.7	26.8	15.4	176.86	-14.9	376.3	1,305.2	1,261.7	43.53	29.986	
7,300.0	7,212.8	7,230.7	7,212.8	27.2	15.5	176.90	-14.9	376.3	1,324.3	1,280.2	44.12	30.014	
7,400.0	7,311.0	7,328.9	7,311.0	27.7	15.5	176.95	-14.9	376.3	1,343.4	1,298.6	44.72	30.041	
7,500.0	7,409.2	7,427.0	7,409.2	28.1	15.6	176.99	-14.9	376.3	1,362.4	1,317.1	45.32	30.065	
7,600.0	7,507.3	7,525.2	7,507.3	28.6	15.6	177.03	-14.9	376.3	1,381.5	1,335.6	45.92	30.087	
7,700.0	7,605.5	7,623.4	7,605.5	29.0	15.7	177.07	-14.9	376.3	1,400.5	1,354.0	46.52	30.108	
7,800.0	7,703.7	7,721.5	7,703.7	29.5	15.8	177.11	-14.9	376.3	1,419.6	1,372.5	47.12	30.127	
7,900.0	7,801.8	7,819.7	7,801.8	29.9	15.8	177.15	-14.9	376.3	1,438.6	1,390.9	47.71	30.151	
8,000.0	7,900.2	7,918.1	7,900.2	30.4	15.9	177.20	-14.9	376.3	1,456.4	1,408.1	48.31	30.145	
8,100.0	7,998.9	8,016.8	7,998.9	30.8	16.0	177.23	-14.9	376.3	1,472.5	1,423.6	48.90	30.112	
8,200.0	8,097.9	8,115.7	8,097.9	31.3	16.0	177.27	-14.9	376.3	1,486.9	1,437.4	49.48	30.052	
8,300.0	8,197.1	8,214.9	8,197.1	31.7	16.1	177.30	-14.9	376.3	1,499.6	1,449.5	50.04	29.968	
8,400.0	8,296.5	8,314.3	8,296.5	32.1	16.2	177.32	-14.9	376.3	1,510.5	1,459.9	50.58	29.861	
8,500.0	8,396.0	8,413.9	8,396.0	32.5	16.2	177.34	-14.9	376.3	1,519.7	1,468.6	51.11	29.733	
8,600.0	8,495.8	8,513.6	8,495.8	32.8	16.3	177.36	-14.9	376.3	1,527.1	1,475.5	51.62	29.586	
8,700.0	8,595.6	8,613.5	8,595.6	33.2	16.4	177.37	-14.9	376.3	1,532.8	1,480.7	52.09	29.424	
8,800.0	8,695.5	8,713.4	8,695.5	33.5	16.4	177.38	-14.9	376.3	1,536.8	1,484.3	52.54	29.252	
8,900.0	8,795.5	8,813.4	8,795.5	33.8	16.5	177.38	-14.9	376.3	1,539.0	1,486.1	52.93	29.078	
9,000.0	8,895.5	8,913.4	8,895.5	33.9	16.6	89.39	-14.9	376.3	1,539.6	1,486.5	53.10	28.994	
9,100.0	8,995.5	9,013.4	8,995.5	33.9	16.7	89.39	-14.9	376.3	1,539.6	1,486.4	53.17	28.953	
9,200.0	9,095.5	9,113.4	9,095.5	33.9	16.7	89.39	-14.9	376.3	1,539.6	1,486.3	53.25	28.913	
9,300.0	9,195.5	9,213.4	9,195.5	34.0	16.8	89.39	-14.9	376.3	1,539.6	1,486.2	53.32	28.874	
9,400.0	9,295.5	9,313.4	9,295.5	34.0	16.9	89.39	-14.9	376.3	1,539.6	1,486.2	53.39	28.835	
9,500.0	9,395.5	9,413.4	9,395.5	34.0	16.9	89.39	-14.9	376.3	1,539.6	1,486.1	53.47	28.795	
9,600.0	9,495.5	9,513.4	9,495.5	34.0	17.0	89.39	-14.9	376.3	1,539.6	1,486.0	53.54	28.756	
9,700.0	9,595.5	9,613.4	9,595.5	34.0	17.1	89.39	-14.9	376.3	1,539.6	1,485.9	53.61	28.716	
9,800.0	9,695.5	9,713.4	9,695.5	34.1	17.1	89.39	-14.9	376.3	1,539.6	1,485.9	53.69	28.676	
9,900.0	9,795.5	9,813.4	9,795.5	34.1	17.2	89.39	-14.9	376.3	1,539.6	1,485.8	53.76	28.636	
10,000.0	9,895.5	9,913.4	9,895.5	34.1	17.3	89.39	-14.9	376.3	1,539.6	1,485.7	53.84	28.596	
10,100.0	9,995.5	10,013.4	9,995.5	34.1	17.3	89.39	-14.9	376.3	1,539.6	1,485.6	53.91	28.556	
10,200.0	10,095.5	10,113.4	10,095.5	34.2	17.4	89.39	-14.9	376.3	1,539.6	1,485.6	53.99	28.516	
10,300.0	10,195.5	10,213.4	10,195.5	34.2	17.5	89.39	-14.9	376.3	1,539.6	1,485.5	54.07	28.476	

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 #701H
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 #701H	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		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	
10,400.0	10,295.5	10,313.4	10,295.5	34.2	17.6	89.39	-14.9	376.3	1,539.6	1,485.4	54.14	28.436		
10,500.0	10,395.5	10,413.4	10,395.5	34.3	17.6	89.39	-14.9	376.3	1,539.6	1,485.3	54.22	28.395		
10,600.0	10,495.5	10,513.4	10,495.5	34.3	17.7	89.39	-14.9	376.3	1,539.6	1,485.3	54.30	28.355		
10,700.0	10,595.5	10,613.4	10,595.5	34.3	17.8	89.39	-14.9	376.3	1,539.6	1,485.2	54.37	28.316		
10,800.0	10,695.5	10,711.1	10,692.9	34.3	17.8	89.14	-8.4	376.2	1,539.6	1,485.2	54.43	28.288		
10,900.0	10,795.5	10,804.0	10,783.2	34.3	17.8	88.58	12.9	376.2	1,540.0	1,485.6	54.45	28.282		
11,000.0	10,894.6	10,892.2	10,864.7	34.3	17.9	87.61	46.4	376.0	1,541.0	1,486.5	54.42	28.315		
11,100.0	10,990.2	10,977.4	10,937.7	34.4	17.9	86.71	90.2	375.8	1,542.2	1,487.9	54.35	28.375		
11,200.0	11,079.3	11,060.3	11,001.7	34.4	18.0	85.90	142.7	375.6	1,543.6	1,489.4	54.26	28.451		
11,300.0	11,159.3	11,141.2	11,056.2	34.4	18.0	85.19	202.4	375.4	1,545.1	1,491.0	54.16	28.529		
11,400.0	11,227.6	11,220.7	11,101.1	34.4	18.1	84.61	268.0	375.1	1,546.5	1,492.4	54.08	28.598		
11,500.0	11,282.2	11,300.0	11,136.4	34.4	18.2	84.15	338.9	374.9	1,547.6	1,493.6	54.02	28.647		
11,600.0	11,321.4	11,376.8	11,160.9	34.5	18.3	83.85	411.6	374.6	1,548.4	1,494.4	54.01	28.668		
11,700.0	11,344.2	11,450.0	11,175.1	34.6	18.3	83.71	483.4	374.3	1,548.9	1,494.8	54.05	28.655		
11,800.0	11,350.0	11,533.0	11,180.0	34.6	18.4	83.70	566.2	373.9	1,548.9	1,494.7	54.16	28.599		
11,900.0	11,350.0	11,633.0	11,180.0	34.7	18.6	83.70	666.2	373.5	1,548.9	1,494.5	54.33	28.508		
12,000.0	11,350.0	11,733.0	11,180.0	34.8	18.7	83.70	766.2	373.1	1,548.8	1,494.3	54.55	28.395		
12,100.0	11,350.0	11,833.0	11,180.0	35.0	18.9	83.70	866.2	372.7	1,548.8	1,494.0	54.81	28.261		
12,200.0	11,350.0	11,933.0	11,180.0	35.1	19.2	83.70	966.2	372.3	1,548.8	1,493.7	55.10	28.108		
12,300.0	11,350.0	12,033.0	11,180.0	35.3	19.4	83.70	1,066.2	371.9	1,548.8	1,493.4	55.44	27.936		
12,400.0	11,350.0	12,133.0	11,180.0	35.5	19.7	83.70	1,166.2	371.6	1,548.8	1,493.0	55.82	27.747		
12,500.0	11,350.0	12,233.0	11,180.0	35.7	20.0	83.70	1,266.2	371.2	1,548.8	1,492.6	56.24	27.541		
12,600.0	11,350.0	12,333.0	11,180.0	35.9	20.3	83.70	1,366.2	370.8	1,548.8	1,492.1	56.69	27.320		
12,700.0	11,350.0	12,433.0	11,180.0	36.1	20.7	83.70	1,466.2	370.4	1,548.8	1,491.6	57.18	27.086		
12,800.0	11,350.0	12,533.0	11,180.0	36.3	21.1	83.70	1,566.2	370.0	1,548.8	1,491.1	57.71	26.838		
12,900.0	11,350.0	12,633.0	11,180.0	36.6	21.5	83.70	1,666.2	369.6	1,548.8	1,490.5	58.27	26.580		
13,000.0	11,350.0	12,733.0	11,180.0	36.9	21.9	83.70	1,766.2	369.2	1,548.8	1,489.9	58.87	26.311		
13,100.0	11,350.0	12,833.0	11,180.0	37.2	22.4	83.70	1,866.2	368.8	1,548.8	1,489.3	59.49	26.033		
13,200.0	11,350.0	12,933.0	11,180.0	37.5	22.8	83.70	1,966.2	368.4	1,548.8	1,488.7	60.15	25.747		
13,300.0	11,350.0	13,033.0	11,180.0	37.8	23.3	83.70	2,066.2	368.0	1,548.8	1,488.0	60.84	25.455		
13,400.0	11,350.0	13,133.0	11,180.0	38.1	23.8	83.70	2,166.2	367.6	1,548.8	1,487.2	61.56	25.157		
13,500.0	11,350.0	13,233.0	11,180.0	38.4	24.3	83.70	2,266.2	367.2	1,548.8	1,486.5	62.31	24.855		
13,600.0	11,350.0	13,333.0	11,180.0	38.8	24.9	83.70	2,366.2	366.8	1,548.8	1,485.7	63.09	24.549		
13,700.0	11,350.0	13,433.0	11,180.0	39.2	25.4	83.70	2,466.2	366.4	1,548.8	1,484.9	63.89	24.240		
13,800.0	11,350.0	13,533.0	11,180.0	39.5	25.9	83.70	2,566.2	366.0	1,548.8	1,484.1	64.72	23.930		
13,900.0	11,350.0	13,633.0	11,180.0	39.9	26.5	83.70	2,666.2	365.6	1,548.8	1,483.2	65.57	23.618		
14,000.0	11,350.0	13,733.0	11,180.0	40.3	27.1	83.70	2,766.2	365.2	1,548.8	1,482.3	66.45	23.307		
14,100.0	11,350.0	13,833.0	11,180.0	40.7	27.6	83.70	2,866.2	364.8	1,548.8	1,481.4	67.35	22.995		
14,200.0	11,350.0	13,933.0	11,180.0	41.1	28.2	83.70	2,966.2	364.4	1,548.8	1,480.5	68.27	22.685		
14,300.0	11,350.0	14,033.0	11,180.0	41.6	28.8	83.70	3,066.2	364.0	1,548.8	1,479.5	69.22	22.376		
14,400.0	11,350.0	14,133.0	11,180.0	42.0	29.4	83.70	3,166.2	363.6	1,548.8	1,478.6	70.18	22.069		
14,500.0	11,350.0	14,233.0	11,180.0	42.5	30.0	83.70	3,266.2	363.2	1,548.8	1,477.6	71.16	21.765		
14,600.0	11,350.0	14,333.0	11,180.0	42.9	30.7	83.70	3,366.2	362.8	1,548.8	1,476.6	72.16	21.463		
14,700.0	11,350.0	14,433.0	11,180.0	43.4	31.3	83.70	3,466.2	362.4	1,548.7	1,475.6	73.18	21.164		
14,800.0	11,350.0	14,533.0	11,180.0	43.9	31.9	83.70	3,566.2	362.0	1,548.7	1,474.5	74.21	20.869		
14,900.0	11,350.0	14,633.0	11,180.0	44.3	32.6	83.70	3,666.2	361.6	1,548.7	1,473.5	75.26	20.577		
15,000.0	11,350.0	14,733.0	11,180.0	44.8	33.2	83.70	3,766.2	361.2	1,548.7	1,472.4	76.33	20.290		
15,100.0	11,350.0	14,833.0	11,180.0	45.3	33.8	83.70	3,866.2	360.8	1,548.7	1,471.3	77.41	20.006		
15,200.0	11,350.0	14,933.0	11,180.0	45.8	34.5	83.70	3,966.2	360.4	1,548.7	1,470.2	78.51	19.727		
15,300.0	11,350.0	15,033.0	11,180.0	46.3	35.2	83.70	4,066.2	360.0	1,548.7	1,469.1	79.62	19.452		
15,400.0	11,350.0	15,133.0	11,180.0	46.9	35.8	83.70	4,166.1	359.6	1,548.7	1,468.0	80.74	19.181		
15,500.0	11,350.0	15,233.0	11,180.0	47.4	36.5	83.70	4,266.1	359.2	1,548.7	1,466.8	81.88	18.915		

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 #701H
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 #701H	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		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	
15,600.0	11,350.0	15,333.0	11,180.0	47.9	37.2	83.70	4,366.1	358.8	1,548.7	1,465.7	83.02	18.654		
15,700.0	11,350.0	15,433.0	11,180.0	48.5	37.8	83.70	4,466.1	358.4	1,548.7	1,464.5	84.18	18.397		
15,800.0	11,350.0	15,533.0	11,180.0	49.0	38.5	83.70	4,566.1	358.0	1,548.7	1,463.4	85.35	18.144		
15,900.0	11,350.0	15,633.0	11,180.0	49.6	39.2	83.70	4,666.1	357.6	1,548.7	1,462.2	86.54	17.897		
16,000.0	11,350.0	15,733.0	11,180.0	50.1	39.9	83.70	4,766.1	357.2	1,548.7	1,461.0	87.73	17.654		
16,100.0	11,350.0	15,833.0	11,180.0	50.7	40.6	83.70	4,866.1	356.8	1,548.7	1,459.8	88.93	17.415		
16,200.0	11,350.0	15,933.0	11,180.0	51.2	41.2	83.70	4,966.1	356.4	1,548.7	1,458.6	90.14	17.181		
16,300.0	11,350.0	16,033.0	11,180.0	51.8	41.9	83.70	5,066.1	356.0	1,548.7	1,457.3	91.36	16.952		
16,400.0	11,350.0	16,133.0	11,180.0	52.4	42.6	83.70	5,166.1	355.6	1,548.7	1,456.1	92.59	16.727		
16,500.0	11,350.0	16,233.0	11,180.0	53.0	43.3	83.70	5,266.1	355.2	1,548.7	1,454.9	93.82	16.506		
16,600.0	11,350.0	16,333.0	11,180.0	53.6	44.0	83.70	5,366.1	354.8	1,548.7	1,453.6	95.07	16.290		
16,700.0	11,350.0	16,433.0	11,180.0	54.2	44.7	83.70	5,466.1	354.4	1,548.7	1,452.4	96.32	16.078		
16,800.0	11,350.0	16,533.0	11,180.0	54.8	45.4	83.70	5,566.1	354.0	1,548.7	1,451.1	97.58	15.871		
16,900.0	11,350.0	16,633.0	11,180.0	55.3	46.1	83.70	5,666.1	353.6	1,548.7	1,449.8	98.85	15.667		
17,000.0	11,350.0	16,733.0	11,180.0	56.0	46.8	83.70	5,766.1	353.2	1,548.7	1,448.5	100.12	15.468		
17,100.0	11,350.0	16,833.0	11,180.0	56.6	47.5	83.70	5,866.1	352.8	1,548.7	1,447.3	101.40	15.273		
17,200.0	11,350.0	16,933.0	11,180.0	57.2	48.3	83.70	5,966.1	352.4	1,548.7	1,446.0	102.69	15.081		
17,300.0	11,350.0	17,033.0	11,180.0	57.8	49.0	83.70	6,066.1	352.0	1,548.7	1,444.7	103.98	14.894		
17,400.0	11,350.0	17,133.0	11,180.0	58.4	49.7	83.70	6,166.1	351.6	1,548.6	1,443.4	105.28	14.710		
17,500.0	11,350.0	17,233.0	11,180.0	59.0	50.4	83.70	6,266.1	351.2	1,548.6	1,442.1	106.58	14.530		
17,600.0	11,350.0	17,333.0	11,180.0	59.7	51.1	83.70	6,366.1	350.8	1,548.6	1,440.7	107.89	14.353		
17,700.0	11,350.0	17,433.0	11,180.0	60.3	51.8	83.70	6,466.1	350.4	1,548.6	1,439.4	109.21	14.181		
17,800.0	11,350.0	17,533.0	11,180.0	60.9	52.6	83.70	6,566.1	350.0	1,548.6	1,438.1	110.53	14.011		
17,900.0	11,350.0	17,633.0	11,180.0	61.5	53.3	83.70	6,666.1	349.6	1,548.6	1,436.8	111.85	13.845		
18,000.0	11,350.0	17,733.0	11,180.0	62.2	54.0	83.70	6,766.1	349.2	1,548.6	1,435.4	113.18	13.682		
18,100.0	11,350.0	17,833.0	11,180.0	62.8	54.7	83.70	6,866.1	348.8	1,548.6	1,434.1	114.52	13.523		
18,200.0	11,350.0	17,933.0	11,180.0	63.5	55.4	83.70	6,966.1	348.4	1,548.6	1,432.8	115.86	13.367		
18,300.0	11,350.0	18,033.0	11,180.0	64.1	56.2	83.70	7,066.1	348.0	1,548.6	1,431.4	117.20	13.213		
18,400.0	11,350.0	18,133.0	11,180.0	64.8	56.9	83.70	7,166.1	347.6	1,548.6	1,430.1	118.55	13.063		
18,500.0	11,350.0	18,233.0	11,180.0	65.4	57.6	83.70	7,266.1	347.2	1,548.6	1,428.7	119.90	12.916		
18,600.0	11,350.0	18,333.0	11,180.0	66.1	58.4	83.70	7,366.1	346.8	1,548.6	1,427.4	121.25	12.772		
18,700.0	11,350.0	18,433.0	11,180.0	66.7	59.1	83.70	7,466.1	346.4	1,548.6	1,426.0	122.61	12.630		
18,800.0	11,350.0	18,533.0	11,180.0	67.4	59.8	83.70	7,566.1	346.0	1,548.6	1,424.6	123.97	12.491		
18,900.0	11,350.0	18,633.0	11,180.0	68.0	60.6	83.70	7,666.1	345.6	1,548.6	1,423.3	125.34	12.355		
19,000.0	11,350.0	18,733.0	11,180.0	68.7	61.3	83.70	7,766.1	345.2	1,548.6	1,421.9	126.71	12.222		
19,100.0	11,350.0	18,833.0	11,180.0	69.4	62.0	83.70	7,866.1	344.8	1,548.6	1,420.5	128.08	12.091		
19,200.0	11,350.0	18,933.0	11,180.0	70.0	62.8	83.70	7,966.1	344.4	1,548.6	1,419.1	129.46	11.962		
19,300.0	11,350.0	19,033.0	11,180.0	70.7	63.5	83.70	8,066.1	344.0	1,548.6	1,417.7	130.83	11.836		
19,400.0	11,350.0	19,133.0	11,180.0	71.4	64.2	83.70	8,166.1	343.6	1,548.6	1,416.4	132.22	11.712		
19,500.0	11,350.0	19,233.0	11,180.0	72.0	65.0	83.70	8,266.1	343.2	1,548.6	1,415.0	133.60	11.591		
19,600.0	11,350.0	19,333.0	11,180.0	72.7	65.7	83.70	8,366.1	342.8	1,548.6	1,413.6	134.99	11.472		
19,700.0	11,350.0	19,433.0	11,180.0	73.4	66.4	83.70	8,466.1	342.4	1,548.6	1,412.2	136.38	11.355		
19,800.0	11,350.0	19,533.0	11,180.0	74.1	67.2	83.70	8,566.1	342.0	1,548.6	1,410.8	137.77	11.240		
19,900.0	11,350.0	19,633.0	11,180.0	74.8	67.9	83.70	8,666.1	341.6	1,548.6	1,409.4	139.16	11.128		
20,000.0	11,350.0	19,733.0	11,180.0	75.4	68.6	83.70	8,766.1	341.2	1,548.6	1,408.0	140.56	11.017		
20,100.0	11,350.0	19,833.0	11,180.0	76.1	69.4	83.70	8,866.1	340.8	1,548.5	1,406.6	141.96	10.908		
20,200.0	11,350.0	19,933.0	11,180.0	76.8	70.1	83.70	8,966.1	340.4	1,548.5	1,405.2	143.36	10.802		
20,300.0	11,350.0	20,033.0	11,180.0	77.5	70.9	83.70	9,066.1	340.0	1,548.5	1,403.8	144.77	10.697		
20,400.0	11,350.0	20,133.0	11,180.0	78.2	71.6	83.70	9,166.1	339.6	1,548.5	1,402.4	146.17	10.594		
20,500.0	11,350.0	20,233.0	11,180.0	78.9	72.4	83.70	9,266.1	339.2	1,548.5	1,401.0	147.58	10.493		
20,600.0	11,350.0	20,333.0	11,180.0	79.6	73.1	83.70	9,366.1	338.8	1,548.5	1,399.5	148.99	10.393		
20,700.0	11,350.0	20,433.0	11,180.0	80.2	73.8	83.70	9,466.1	338.4	1,548.5	1,398.1	150.40	10.296		

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 #701H
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 #701H	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		Rule Assigned:								Warning	Offset Well Error:	3.0 usft
Reference	Offset	Reference	Offset	Reference	Offset	Reference	Offset	Reference	Offset	Reference	Offset			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis (usft)	Semi Minor Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,800.0	11,350.0	20,533.0	11,180.0	80.9	74.6	83.70	9,566.1	338.0	1,548.5	1,396.7	151.82	10.200		
20,900.0	11,350.0	20,633.0	11,180.0	81.6	75.3	83.70	9,666.1	337.6	1,548.5	1,395.3	153.23	10.106		
21,000.0	11,350.0	20,733.0	11,180.0	82.3	76.1	83.70	9,766.1	337.3	1,548.5	1,393.9	154.65	10.013		
21,100.0	11,350.0	20,833.0	11,180.0	83.0	76.8	83.70	9,866.1	336.9	1,548.5	1,392.4	156.07	9.922		
21,200.0	11,350.0	20,933.0	11,180.0	83.7	77.6	83.70	9,966.1	336.5	1,548.5	1,391.0	157.49	9.832		
21,300.0	11,350.0	21,033.0	11,180.0	84.4	78.3	83.70	10,066.1	336.1	1,548.5	1,389.6	158.92	9.744		
21,400.0	11,350.0	21,133.0	11,180.0	85.1	79.1	83.70	10,166.1	335.7	1,548.5	1,388.2	160.34	9.657		
21,500.0	11,350.0	21,233.0	11,180.0	85.8	79.8	83.70	10,266.1	335.3	1,548.5	1,386.7	161.77	9.572		
21,600.0	11,350.0	21,333.0	11,180.0	86.5	80.5	83.70	10,366.1	334.9	1,548.5	1,385.3	163.20	9.489		
21,700.0	11,350.0	21,433.0	11,180.0	87.2	81.3	83.70	10,466.1	334.5	1,548.5	1,383.9	164.63	9.406		
21,800.0	11,350.0	21,533.0	11,180.0	87.9	82.0	83.70	10,566.1	334.1	1,548.5	1,382.4	166.06	9.325		
21,900.0	11,350.0	21,633.0	11,180.0	88.6	82.8	83.70	10,666.1	333.7	1,548.5	1,381.0	167.49	9.245		
22,000.0	11,350.0	21,733.0	11,180.0	89.3	83.5	83.70	10,766.1	333.3	1,548.5	1,379.6	168.92	9.167		
22,100.0	11,350.0	21,833.0	11,180.0	90.1	84.3	83.70	10,866.1	332.9	1,548.5	1,378.1	170.36	9.090		
22,200.0	11,350.0	21,933.0	11,180.0	90.8	85.0	83.70	10,966.1	332.5	1,548.5	1,376.7	171.80	9.013		
22,300.0	11,350.0	22,033.0	11,180.0	91.5	85.8	83.70	11,066.1	332.1	1,548.5	1,375.2	173.23	8.939		
22,400.0	11,350.0	22,133.0	11,180.0	92.2	86.5	83.70	11,166.1	331.7	1,548.5	1,373.8	174.67	8.865		
22,500.0	11,350.0	22,233.0	11,180.0	92.9	87.3	83.70	11,266.1	331.3	1,548.5	1,372.3	176.11	8.792		
22,600.0	11,350.0	22,333.0	11,180.0	93.6	88.0	83.70	11,366.1	330.9	1,548.5	1,370.9	177.55	8.721		
22,700.0	11,350.0	22,433.0	11,180.0	94.3	88.8	83.70	11,466.1	330.5	1,548.5	1,369.5	179.00	8.651		
22,800.0	11,350.0	22,533.0	11,180.0	95.0	89.5	83.70	11,566.1	330.1	1,548.4	1,368.0	180.44	8.581		
22,900.0	11,350.0	22,633.0	11,180.0	95.7	90.3	83.70	11,666.1	329.7	1,548.4	1,366.6	181.89	8.513		
23,000.0	11,350.0	22,733.0	11,180.0	96.5	91.0	83.70	11,766.1	329.3	1,548.4	1,365.1	183.33	8.446		
23,100.0	11,350.0	22,833.0	11,180.0	97.2	91.8	83.70	11,866.1	328.9	1,548.4	1,363.7	184.78	8.380		
23,200.0	11,350.0	22,933.0	11,180.0	97.9	92.5	83.70	11,966.1	328.5	1,548.4	1,362.2	186.23	8.315		
23,300.0	11,350.0	23,033.0	11,180.0	98.6	93.3	83.70	12,066.1	328.1	1,548.4	1,360.8	187.68	8.251		
23,400.0	11,350.0	23,133.0	11,180.0	99.3	94.0	83.70	12,166.1	327.7	1,548.4	1,359.3	189.13	8.187		
23,500.0	11,350.0	23,233.0	11,180.0	100.0	94.8	83.70	12,266.1	327.3	1,548.4	1,357.8	190.58	8.125		
23,600.0	11,350.0	23,333.0	11,180.0	100.8	95.6	83.70	12,366.1	326.9	1,548.4	1,356.4	192.03	8.063		
23,700.0	11,350.0	23,433.0	11,180.0	101.5	96.3	83.70	12,466.1	326.5	1,548.4	1,354.9	193.48	8.003		
23,800.0	11,350.0	23,533.0	11,180.0	102.2	97.1	83.70	12,566.1	326.1	1,548.4	1,353.5	194.94	7.943		
23,900.0	11,350.0	23,633.0	11,180.0	102.9	97.8	83.70	12,666.1	325.7	1,548.4	1,352.0	196.39	7.884		
24,000.0	11,350.0	23,733.0	11,180.0	103.7	98.6	83.70	12,766.1	325.3	1,548.4	1,350.6	197.85	7.826		
24,100.0	11,350.0	23,833.0	11,180.0	104.4	99.3	83.70	12,866.1	324.9	1,548.4	1,349.1	199.30	7.769		
24,200.0	11,350.0	23,933.0	11,180.0	105.1	100.1	83.70	12,966.1	324.5	1,548.4	1,347.6	200.76	7.713		
24,300.0	11,350.0	24,033.0	11,180.0	105.8	100.8	83.70	13,066.1	324.1	1,548.4	1,346.2	202.22	7.657		
24,400.0	11,350.0	24,133.0	11,180.0	106.5	101.6	83.70	13,166.1	323.7	1,548.4	1,344.7	203.68	7.602		
24,500.0	11,350.0	24,233.0	11,180.0	107.3	102.3	83.70	13,266.1	323.3	1,548.4	1,343.2	205.14	7.548		
24,600.0	11,350.0	24,333.0	11,180.0	108.0	103.1	83.70	13,366.1	322.9	1,548.4	1,341.8	206.60	7.495		
24,700.0	11,350.0	24,433.0	11,180.0	108.7	103.8	83.70	13,466.1	322.5	1,548.4	1,340.3	208.06	7.442		
24,800.0	11,350.0	24,533.0	11,180.0	109.5	104.6	83.70	13,566.1	322.1	1,548.4	1,338.9	209.52	7.390		
24,841.4	11,350.0	24,574.2	11,180.0	109.7	104.9	83.70	13,607.3	321.9	1,548.4	1,338.3	210.06	7.371		
24,848.5	11,350.0	24,574.2	11,180.0	109.7	104.9	83.70	13,607.3	321.9	1,548.4	1,338.3	210.08	7.370 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 #701H
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 #701H	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 #705H - 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	89.94	0.1	120.0	120.0	113.6	6.43	18.667	
100.0	100.0	100.0	100.0	3.2	3.2	89.94	0.1	120.0	120.0	113.1	6.89	17.412	
200.0	200.0	200.0	200.0	3.5	3.5	89.94	0.1	120.0	120.0	112.7	7.33	16.377	
300.0	300.0	300.0	300.0	3.7	3.7	89.94	0.1	120.0	120.0	112.3	7.74	15.503	
400.0	400.0	400.0	400.0	3.9	3.9	89.94	0.1	120.0	120.0	111.9	8.14	14.751	
500.0	500.0	500.0	500.0	4.1	4.1	89.94	0.1	120.0	120.0	111.5	8.51	14.096	
600.0	600.0	600.0	600.0	4.2	4.2	89.94	0.1	120.0	120.0	111.1	8.88	13.518	
700.0	700.0	700.0	700.0	4.4	4.4	89.94	0.1	120.0	120.0	110.8	9.23	13.003	
800.0	800.0	800.0	800.0	4.6	4.6	89.94	0.1	120.0	120.0	110.4	9.57	12.540	
900.0	900.0	900.0	900.0	4.8	4.8	89.94	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	89.94	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	89.94	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	89.94	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	89.94	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	89.94	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	89.94	0.1	120.0	120.0	108.3	11.73	10.227 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-145.41	0.1	120.0	121.1	109.1	12.03	10.065 SF	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-146.41	0.1	120.0	124.3	112.0	12.32	10.095	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-147.96	0.1	120.0	129.8	117.2	12.62	10.291	
1,900.0	1,899.3	1,897.0	1,897.0	6.4	6.3	-149.48	-0.7	120.9	138.5	125.6	12.93	10.715	
2,000.0	1,998.7	1,994.0	1,993.9	6.6	6.4	-150.38	-3.4	123.5	150.0	136.8	13.21	11.354	
2,100.0	2,098.2	2,090.6	2,090.3	6.8	6.6	-150.47	-7.7	127.8	163.1	149.6	13.51	12.073	
2,200.0	2,197.6	2,186.8	2,186.1	7.0	6.7	-149.94	-13.7	133.8	177.8	164.0	13.82	12.864	
2,300.0	2,297.1	2,285.1	2,283.9	7.3	6.9	-149.12	-21.0	141.1	193.5	179.4	14.15	13.674	
2,400.0	2,396.5	2,383.8	2,382.1	7.5	7.1	-148.41	-28.3	148.4	209.3	194.8	14.50	14.429	
2,500.0	2,496.0	2,482.5	2,480.2	7.8	7.3	-147.81	-35.5	155.7	225.1	210.2	14.87	15.133	
2,600.0	2,595.4	2,581.2	2,578.4	8.1	7.5	-147.28	-42.8	163.0	240.9	225.7	15.27	15.779	
2,700.0	2,694.8	2,679.8	2,676.4	8.4	7.8	-158.11	-50.1	170.3	257.7	242.1	15.68	16.436	
2,800.0	2,794.0	2,772.6	2,768.8	8.7	8.0	-166.87	-56.5	177.8	277.4	261.3	16.12	17.215	
2,900.0	2,893.0	2,862.5	2,858.1	9.0	8.3	-173.67	-60.8	187.2	301.7	285.1	16.58	18.192	
3,000.0	2,991.7	2,950.8	2,945.5	9.3	8.5	-179.00	-63.3	198.5	330.3	313.2	17.09	19.334	
3,100.0	3,090.0	3,037.1	3,030.9	9.6	8.7	177.42	-64.1	211.6	363.3	345.7	17.58	20.668	
3,200.0	3,188.2	3,126.6	3,119.0	10.0	8.9	177.45	-63.4	226.8	398.9	380.7	18.14	21.984	
3,300.0	3,286.3	3,219.9	3,210.9	10.3	9.2	177.45	-62.5	243.0	434.7	415.9	18.78	23.152	
3,400.0	3,384.5	3,313.3	3,302.9	10.7	9.5	177.45	-61.5	259.2	470.5	451.1	19.42	24.229	
3,500.0	3,482.7	3,406.7	3,394.8	11.0	9.8	177.45	-60.6	275.4	506.3	486.2	20.08	25.215	
3,600.0	3,580.8	3,500.0	3,486.8	11.4	10.0	177.45	-59.7	291.6	542.1	521.3	20.75	26.119	
3,700.0	3,679.0	3,593.4	3,578.8	11.8	10.4	177.45	-58.8	307.8	577.9	556.4	21.44	26.948	
3,800.0	3,777.1	3,686.8	3,670.7	12.1	10.7	177.46	-57.9	324.0	613.7	591.5	22.15	27.710	
3,900.0	3,875.3	3,780.2	3,762.7	12.5	11.0	177.46	-57.0	340.2	649.5	626.6	22.86	28.410	
4,000.0	3,973.5	3,873.5	3,854.6	12.9	11.3	177.46	-56.0	356.3	685.3	661.7	23.59	29.056	
4,100.0	4,071.6	3,966.9	3,946.6	13.3	11.6	177.46	-55.1	372.5	721.1	696.8	24.32	29.651	
4,200.0	4,169.8	4,060.3	4,038.5	13.7	12.0	177.46	-54.2	388.7	756.9	731.8	25.06	30.201	
4,300.0	4,268.0	4,153.7	4,130.5	14.1	12.3	177.46	-53.3	404.9	792.7	766.9	25.81	30.710	
4,400.0	4,366.1	4,247.0	4,222.4	14.5	12.7	177.46	-52.4	421.1	828.5	801.9	26.57	31.182	
4,500.0	4,464.3	4,340.4	4,314.4	14.9	13.0	177.46	-51.4	437.3	864.3	837.0	27.33	31.620	
4,600.0	4,562.4	4,433.8	4,406.3	15.4	13.4	177.46	-50.5	453.5	900.1	872.0	28.10	32.027	
4,700.0	4,660.6	4,527.1	4,498.3	15.8	13.7	177.46	-49.6	469.7	935.9	907.0	28.88	32.406	
4,800.0	4,758.8	4,620.5	4,590.2	16.2	14.1	177.46	-48.7	485.8	971.7	942.0	29.66	32.760	
4,900.0	4,856.9	4,713.9	4,682.2	16.6	14.5	177.46	-47.8	502.0	1,007.5	977.0	30.45	33.091	
5,000.0	4,955.1	4,807.3	4,774.1	17.0	14.8	177.46	-46.8	518.2	1,043.3	1,012.1	31.24	33.400	
5,100.0	5,053.3	4,900.6	4,866.1	17.5	15.2	177.46	-45.9	534.4	1,079.1	1,047.1	32.03	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 #701H
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 #701H	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 #705H - 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	5,151.4	4,994.0	4,958.1	17.9	15.6	177.46	-45.0	550.6	1,114.9	1,082.1	32.83	33.961	
5,300.0	5,249.6	5,087.4	5,050.0	18.3	16.0	177.46	-44.1	566.8	1,150.7	1,117.1	33.63	34.216	
5,400.0	5,347.7	5,180.7	5,142.0	18.8	16.4	177.46	-43.2	583.0	1,186.5	1,152.1	34.44	34.456	
5,500.0	5,445.9	5,274.1	5,233.9	19.2	16.7	177.46	-42.2	599.2	1,222.3	1,187.1	35.24	34.682	
5,600.0	5,544.1	5,367.5	5,325.9	19.6	17.1	177.46	-41.3	615.4	1,258.1	1,222.0	36.05	34.895	
5,700.0	5,642.2	5,460.9	5,417.8	20.1	17.5	177.46	-40.4	631.5	1,293.9	1,257.0	36.87	35.096	
5,800.0	5,740.4	5,554.2	5,509.8	20.5	17.9	177.46	-39.5	647.7	1,329.7	1,292.0	37.68	35.286	
5,900.0	5,838.6	5,647.6	5,601.7	21.0	18.3	177.46	-38.6	663.9	1,365.5	1,327.0	38.50	35.465	
6,000.0	5,936.7	5,741.0	5,693.7	21.4	18.7	177.46	-37.6	680.1	1,401.3	1,362.0	39.32	35.636	
6,100.0	6,034.9	5,834.3	5,785.6	21.8	19.1	177.46	-36.7	696.3	1,437.1	1,397.0	40.15	35.797	
6,200.0	6,133.1	5,927.7	5,877.6	22.3	19.5	177.46	-35.8	712.5	1,472.9	1,431.9	40.97	35.950	
6,300.0	6,231.2	6,021.1	5,969.5	22.7	19.9	177.46	-34.9	728.7	1,508.7	1,466.9	41.80	36.096	
6,400.0	6,329.4	6,114.5	6,061.5	23.2	20.3	177.46	-34.0	744.9	1,544.5	1,501.9	42.63	36.234	
6,500.0	6,427.5	6,207.8	6,153.4	23.6	20.7	177.46	-33.1	761.0	1,580.3	1,536.8	43.46	36.366	
6,600.0	6,525.7	6,301.2	6,245.4	24.1	21.1	177.46	-32.1	777.2	1,616.1	1,571.8	44.29	36.492	
6,700.0	6,623.9	6,394.6	6,337.4	24.5	21.5	177.46	-31.2	793.4	1,651.9	1,606.8	45.12	36.611	
6,800.0	6,722.0	6,504.6	6,445.7	25.0	21.9	177.46	-30.1	812.2	1,687.5	1,641.4	46.08	36.625	
6,900.0	6,820.2	6,638.5	6,578.1	25.4	22.5	177.46	-29.0	832.6	1,721.3	1,674.1	47.22	36.451	
7,000.0	6,918.4	6,774.6	6,713.1	25.9	23.1	177.47	-28.0	850.1	1,752.9	1,704.5	48.35	36.256	
7,100.0	7,016.5	6,912.8	6,850.5	26.3	23.6	177.49	-27.2	864.6	1,782.1	1,732.7	49.44	36.044	
7,200.0	7,114.7	7,053.0	6,990.2	26.8	24.1	177.51	-26.5	876.0	1,809.1	1,758.6	50.50	35.826	
7,300.0	7,212.8	7,195.0	7,132.0	27.2	24.6	177.53	-26.1	884.0	1,833.7	1,782.2	51.50	35.602	
7,400.0	7,311.0	7,338.8	7,275.7	27.7	25.0	177.56	-25.8	888.6	1,855.8	1,803.4	52.43	35.395	
7,500.0	7,409.2	7,472.3	7,409.2	28.1	25.2	177.59	-25.8	889.6	1,875.6	1,822.5	53.14	35.297	
7,600.0	7,507.3	7,570.4	7,507.3	28.6	25.3	177.62	-25.8	889.6	1,894.7	1,841.0	53.64	35.323	
7,700.0	7,605.5	7,668.6	7,605.5	29.0	25.3	177.64	-25.8	889.6	1,913.7	1,859.6	54.15	35.344	
7,800.0	7,703.7	7,766.8	7,703.7	29.5	25.3	177.67	-25.8	889.6	1,932.8	1,878.1	54.66	35.363	
7,900.0	7,801.8	7,864.9	7,801.8	29.9	25.4	177.69	-25.8	889.6	1,951.8	1,896.6	55.16	35.384	
8,000.0	7,900.2	7,963.3	7,900.2	30.4	25.4	177.72	-25.8	889.6	1,969.6	1,914.0	55.67	35.378	
8,100.0	7,998.9	8,062.0	7,998.9	30.8	25.4	177.74	-25.8	889.6	1,985.7	1,929.6	56.18	35.348	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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	87.17	71.7	1,450.0	1,451.8	1,445.4	6.43	225.828	
100.0	100.0	100.0	100.0	3.2	3.2	87.17	71.7	1,450.0	1,451.8	1,444.9	6.89	210.642	
200.0	200.0	200.0	200.0	3.5	3.5	87.17	71.7	1,450.0	1,451.8	1,444.5	7.33	198.115	
300.0	300.0	300.0	300.0	3.7	3.7	87.17	71.7	1,450.0	1,451.8	1,444.1	7.74	187.542	
400.0	400.0	400.0	400.0	3.9	3.9	87.17	71.7	1,450.0	1,451.8	1,443.7	8.14	178.455	
500.0	500.0	500.0	500.0	4.1	4.1	87.17	71.7	1,450.0	1,451.8	1,443.3	8.51	170.531	
600.0	600.0	600.0	600.0	4.2	4.2	87.17	71.7	1,450.0	1,451.8	1,442.9	8.88	163.538	
700.0	700.0	700.0	700.0	4.4	4.4	87.17	71.7	1,450.0	1,451.8	1,442.6	9.23	157.303	
800.0	800.0	800.0	800.0	4.6	4.6	87.17	71.7	1,450.0	1,451.8	1,442.3	9.57	151.698	
900.0	900.0	900.0	900.0	4.8	4.8	87.17	71.7	1,450.0	1,451.8	1,441.9	9.90	146.621	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.17	71.7	1,450.0	1,451.8	1,441.6	10.22	141.992	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.17	71.7	1,450.0	1,451.8	1,441.3	10.54	137.748	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.17	71.7	1,450.0	1,451.8	1,441.0	10.85	133.839	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.17	71.7	1,450.0	1,451.8	1,440.7	11.15	130.220	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.17	71.7	1,450.0	1,451.8	1,440.4	11.44	126.858	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.17	71.7	1,450.0	1,451.8	1,440.1	11.73	123.723 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-147.85	71.7	1,450.0	1,452.9	1,440.9	12.03	120.764	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-147.91	71.7	1,450.0	1,456.3	1,443.9	12.32	118.214	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-148.00	71.7	1,450.0	1,461.8	1,449.2	12.62	115.863	
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	-148.13	71.7	1,450.0	1,469.6	1,456.7	12.93	113.678	
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	-148.34	71.7	1,450.0	1,478.5	1,465.2	13.23	111.757	
2,100.0	2,098.2	2,098.2	2,098.2	6.8	6.5	-148.55	71.7	1,450.0	1,487.4	1,473.9	13.54	109.824	
2,200.0	2,197.6	2,197.6	2,197.6	7.0	6.7	-148.76	71.7	1,450.0	1,496.3	1,482.5	13.87	107.883	
2,300.0	2,297.1	2,297.1	2,297.1	7.3	6.8	-148.96	71.7	1,450.0	1,505.3	1,491.1	14.21	105.946	
2,400.0	2,396.5	2,396.5	2,396.5	7.5	6.9	-149.17	71.7	1,450.0	1,514.3	1,499.7	14.56	104.021	
2,500.0	2,496.0	2,496.0	2,496.0	7.8	7.0	-149.37	71.7	1,450.0	1,523.3	1,508.4	14.92	102.116	
2,600.0	2,595.4	2,595.4	2,595.4	8.1	7.2	-149.57	71.7	1,450.0	1,532.3	1,517.0	15.29	100.194	
2,700.0	2,694.8	2,694.8	2,694.8	8.4	7.3	-161.13	71.7	1,450.0	1,542.3	1,526.6	15.68	98.371	
2,800.0	2,794.0	2,794.0	2,794.0	8.7	7.4	-170.63	71.7	1,450.0	1,554.4	1,538.3	16.10	96.566	
2,900.0	2,893.0	2,893.0	2,893.0	9.0	7.5	-177.89	71.7	1,450.0	1,568.5	1,552.0	16.54	94.831	
3,000.0	2,991.7	2,991.7	2,991.7	9.3	7.7	176.54	71.7	1,450.0	1,584.7	1,567.7	17.01	93.183	
3,100.0	3,090.0	3,090.0	3,090.0	9.6	7.8	172.91	71.7	1,450.0	1,603.0	1,585.5	17.46	91.811	
3,200.0	3,188.2	3,188.2	3,188.2	10.0	7.9	172.99	71.7	1,450.0	1,621.9	1,603.9	17.96	90.289	
3,300.0	3,286.3	3,286.3	3,286.3	10.3	8.0	173.07	71.7	1,450.0	1,640.9	1,622.4	18.46	88.894	
3,400.0	3,384.5	3,384.5	3,384.5	10.7	8.1	173.15	71.7	1,450.0	1,659.8	1,640.8	18.96	87.527	
3,500.0	3,482.7	3,482.7	3,482.7	11.0	8.2	173.23	71.7	1,450.0	1,678.8	1,659.3	19.48	86.190	
3,600.0	3,580.8	3,580.8	3,580.8	11.4	8.4	173.31	71.7	1,450.0	1,697.7	1,677.7	20.00	84.887	
3,700.0	3,679.0	3,679.0	3,679.0	11.8	8.5	173.38	71.7	1,450.0	1,716.7	1,696.1	20.53	83.618	
3,800.0	3,777.1	3,777.1	3,777.1	12.1	8.6	173.45	71.7	1,450.0	1,735.6	1,714.6	21.07	82.385	
3,900.0	3,875.3	3,875.3	3,875.3	12.5	8.7	173.52	71.7	1,450.0	1,754.6	1,733.0	21.61	81.189	
4,000.0	3,973.5	3,973.5	3,973.5	12.9	8.8	173.59	71.7	1,450.0	1,773.6	1,751.4	22.16	80.029	
4,100.0	4,071.6	4,071.6	4,071.6	13.3	8.9	173.66	71.7	1,450.0	1,792.5	1,769.8	22.72	78.906	
4,200.0	4,169.8	4,169.8	4,169.8	13.7	9.0	173.73	71.7	1,450.0	1,811.5	1,788.2	23.28	77.819	
4,300.0	4,268.0	4,268.0	4,268.0	14.1	9.1	173.79	71.7	1,450.0	1,830.5	1,806.6	23.84	76.767	
4,400.0	4,366.1	4,366.1	4,366.1	14.5	9.2	173.86	71.7	1,450.0	1,849.4	1,825.0	24.42	75.750	
4,500.0	4,464.3	4,464.3	4,464.3	14.9	9.3	173.92	71.7	1,450.0	1,868.4	1,843.4	24.99	74.766	
4,600.0	4,562.4	4,562.4	4,562.4	15.4	9.5	173.98	71.7	1,450.0	1,887.4	1,861.8	25.57	73.815	
4,700.0	4,660.6	4,660.6	4,660.6	15.8	9.6	174.04	71.7	1,450.0	1,906.4	1,880.2	26.15	72.896	
4,800.0	4,758.8	4,758.8	4,758.8	16.2	9.7	174.10	71.7	1,450.0	1,925.4	1,898.6	26.74	72.007	
4,900.0	4,856.9	4,856.9	4,856.9	16.6	9.8	174.16	71.7	1,450.0	1,944.3	1,917.0	27.33	71.148	
5,000.0	4,955.1	4,955.1	4,955.1	17.0	9.9	174.22	71.7	1,450.0	1,963.3	1,935.4	27.92	70.318	
5,100.0	5,053.3	5,053.3	5,053.3	17.5	10.0	174.27	71.7	1,450.0	1,982.3	1,953.8	28.52	69.515 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 #701H
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 #701H	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 #701H
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 #701H	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)			
0.0	0.0	0.0	0.0	3.0	3.0	87.22	71.7	1,480.0	1,481.8	1,475.4	6.43	230.489	
100.0	100.0	100.0	100.0	3.2	3.2	87.22	71.7	1,480.0	1,481.8	1,474.9	6.89	214.990	
200.0	200.0	200.0	200.0	3.5	3.5	87.22	71.7	1,480.0	1,481.8	1,474.5	7.33	202.204	
300.0	300.0	300.0	300.0	3.7	3.7	87.22	71.7	1,480.0	1,481.8	1,474.0	7.74	191.412	
400.0	400.0	400.0	400.0	3.9	3.9	87.22	71.7	1,480.0	1,481.8	1,473.7	8.14	182.138	
500.0	500.0	500.0	500.0	4.1	4.1	87.22	71.7	1,480.0	1,481.8	1,473.3	8.51	174.050	
600.0	600.0	600.0	600.0	4.2	4.2	87.22	71.7	1,480.0	1,481.8	1,472.9	8.88	166.913	
700.0	700.0	700.0	700.0	4.4	4.4	87.22	71.7	1,480.0	1,481.8	1,472.6	9.23	160.550	
800.0	800.0	800.0	800.0	4.6	4.6	87.22	71.7	1,480.0	1,481.8	1,472.2	9.57	154.829	
900.0	900.0	900.0	900.0	4.8	4.8	87.22	71.7	1,480.0	1,481.8	1,471.9	9.90	149.647	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.22	71.7	1,480.0	1,481.8	1,471.6	10.22	144.922	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.22	71.7	1,480.0	1,481.8	1,471.2	10.54	140.591	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.22	71.7	1,480.0	1,481.8	1,470.9	10.85	136.601	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.22	71.7	1,480.0	1,481.8	1,470.6	11.15	132.908	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.22	71.7	1,480.0	1,481.8	1,470.3	11.44	129.477	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.22	71.7	1,480.0	1,481.8	1,470.1	11.73	126.277	CC, ES
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-147.79	71.7	1,480.0	1,482.9	1,470.9	12.03	123.255	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-147.85	71.7	1,480.0	1,486.2	1,473.9	12.32	120.646	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-147.94	71.7	1,480.0	1,491.8	1,479.1	12.62	118.239	
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	-148.06	71.7	1,480.0	1,499.5	1,486.6	12.93	115.997	
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	-148.27	71.7	1,480.0	1,508.4	1,495.2	13.23	114.024	
2,100.0	2,098.2	2,072.0	2,072.0	6.8	6.5	-148.41	71.5	1,480.7	1,518.2	1,504.7	13.52	112.326	
2,200.0	2,197.6	2,144.7	2,144.6	7.0	6.6	-148.53	70.8	1,482.6	1,529.7	1,515.9	13.81	110.776	
2,300.0	2,297.1	2,217.1	2,217.0	7.3	6.7	-148.63	69.6	1,485.8	1,542.9	1,528.8	14.11	109.344	
2,400.0	2,396.5	2,300.0	2,299.7	7.5	6.9	-148.71	67.7	1,491.1	1,558.0	1,543.5	14.45	107.823	
2,500.0	2,496.0	2,360.9	2,360.4	7.8	7.0	-148.76	65.9	1,496.1	1,574.6	1,559.8	14.76	106.681	
2,600.0	2,595.4	2,432.2	2,431.3	8.1	7.1	-148.79	63.4	1,503.0	1,592.9	1,577.8	15.11	105.421	
2,700.0	2,694.8	2,500.0	2,498.6	8.4	7.2	-160.26	60.6	1,510.8	1,613.9	1,598.4	15.46	104.367	
2,800.0	2,794.0	2,588.0	2,585.8	8.7	7.4	-169.69	56.4	1,522.1	1,638.3	1,622.4	15.86	103.320	
2,900.0	2,893.0	2,684.4	2,681.2	9.0	7.6	-176.87	51.8	1,534.7	1,664.9	1,648.5	16.35	101.821	
3,000.0	2,991.7	2,780.0	2,775.9	9.3	7.8	177.63	47.3	1,547.2	1,693.5	1,676.7	16.88	100.304	
3,100.0	3,090.0	2,875.0	2,869.9	9.6	8.0	174.07	42.8	1,559.7	1,724.2	1,706.8	17.42	99.004	
3,200.0	3,188.2	2,969.6	2,963.7	10.0	8.3	174.32	38.3	1,572.0	1,755.6	1,737.6	18.00	97.514	
3,300.0	3,286.3	3,064.3	3,057.4	10.3	8.6	174.55	33.8	1,584.4	1,787.0	1,768.4	18.59	96.113	
3,400.0	3,384.5	3,159.0	3,151.2	10.7	8.8	174.78	29.2	1,596.8	1,818.4	1,799.2	19.20	94.708	
3,500.0	3,482.7	3,253.7	3,244.9	11.0	9.1	175.01	24.7	1,609.2	1,849.9	1,830.1	19.82	93.312	
3,600.0	3,580.8	3,348.4	3,338.7	11.4	9.4	175.22	20.2	1,621.6	1,881.4	1,860.9	20.46	91.934	
3,700.0	3,679.0	3,443.0	3,432.5	11.8	9.7	175.43	15.7	1,634.0	1,912.9	1,891.7	21.12	90.581	
3,800.0	3,777.1	3,537.7	3,526.2	12.1	10.0	175.63	11.2	1,646.3	1,944.4	1,922.6	21.78	89.258	
3,900.0	3,875.3	3,632.4	3,620.0	12.5	10.3	175.82	6.7	1,658.7	1,975.9	1,953.5	22.46	87.968	SF

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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)			
0.0	0.0	0.0	0.0	3.0	3.0	87.28	71.7	1,510.0	1,511.8	1,505.3	6.43	235.150	
100.0	100.0	100.0	100.0	3.2	3.2	87.28	71.7	1,510.0	1,511.8	1,504.9	6.89	219.338	
200.0	200.0	200.0	200.0	3.5	3.5	87.28	71.7	1,510.0	1,511.8	1,504.4	7.33	206.293	
300.0	300.0	300.0	300.0	3.7	3.7	87.28	71.7	1,510.0	1,511.8	1,504.0	7.74	195.283	
400.0	400.0	400.0	400.0	3.9	3.9	87.28	71.7	1,510.0	1,511.8	1,503.6	8.14	185.821	
500.0	500.0	500.0	500.0	4.1	4.1	87.28	71.7	1,510.0	1,511.8	1,503.2	8.51	177.570	
600.0	600.0	600.0	600.0	4.2	4.2	87.28	71.7	1,510.0	1,511.8	1,502.9	8.88	170.288	
700.0	700.0	700.0	700.0	4.4	4.4	87.28	71.7	1,510.0	1,511.8	1,502.5	9.23	163.797	
800.0	800.0	800.0	800.0	4.6	4.6	87.28	71.7	1,510.0	1,511.8	1,502.2	9.57	157.960	
900.0	900.0	900.0	900.0	4.8	4.8	87.28	71.7	1,510.0	1,511.8	1,501.9	9.90	152.673	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.28	71.7	1,510.0	1,511.8	1,501.5	10.22	147.853	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.28	71.7	1,510.0	1,511.8	1,501.2	10.54	143.435	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.28	71.7	1,510.0	1,511.8	1,500.9	10.85	139.363	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.28	71.7	1,510.0	1,511.8	1,500.6	11.15	135.596	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.28	71.7	1,510.0	1,511.8	1,500.3	11.44	132.095	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.28	71.7	1,510.0	1,511.8	1,500.0	11.73	128.830 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-147.74	71.7	1,510.0	1,512.9	1,500.8	12.03	125.746	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-147.79	71.7	1,510.0	1,516.2	1,503.9	12.32	123.080	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-147.88	71.7	1,510.0	1,521.7	1,509.1	12.62	120.615	
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	-148.00	71.7	1,510.0	1,529.5	1,516.6	12.93	118.316	
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	-148.20	71.7	1,510.0	1,538.4	1,525.1	13.23	116.290	
2,100.0	2,098.2	2,098.2	2,098.2	6.8	6.5	-148.41	71.7	1,510.0	1,547.3	1,533.7	13.54	114.253	
2,200.0	2,197.6	2,197.6	2,197.6	7.0	6.7	-148.61	71.7	1,510.0	1,556.2	1,542.3	13.87	112.209	
2,300.0	2,297.1	2,297.1	2,297.1	7.3	6.8	-148.81	71.7	1,510.0	1,565.2	1,550.9	14.21	110.170	
2,400.0	2,396.5	2,396.5	2,396.5	7.5	6.9	-149.00	71.7	1,510.0	1,574.1	1,559.6	14.56	108.146	
2,500.0	2,496.0	2,496.0	2,496.0	7.8	7.0	-149.20	71.7	1,510.0	1,583.1	1,568.2	14.91	106.144	
2,600.0	2,595.4	2,569.3	2,569.3	8.1	7.1	-149.35	72.1	1,510.6	1,592.9	1,577.6	15.27	104.346	
2,700.0	2,694.8	2,641.2	2,641.2	8.4	7.3	-160.91	73.0	1,512.3	1,605.3	1,589.7	15.62	102.763	
2,800.0	2,794.0	2,700.0	2,699.9	8.7	7.3	-170.45	74.4	1,514.6	1,621.6	1,605.6	15.98	101.454	
2,900.0	2,893.0	2,783.1	2,782.8	9.0	7.5	-177.84	77.0	1,519.1	1,641.5	1,625.1	16.42	99.943	
3,000.0	2,991.7	2,852.8	2,852.3	9.3	7.6	176.43	79.9	1,524.2	1,665.1	1,648.2	16.86	98.742	
3,100.0	3,090.0	2,921.6	2,920.7	9.6	7.7	172.60	83.4	1,530.2	1,692.3	1,675.0	17.29	97.887	
3,200.0	3,188.2	3,000.0	2,998.6	10.0	7.9	172.53	88.1	1,538.4	1,721.8	1,704.0	17.79	96.775	
3,300.0	3,286.3	3,066.6	3,064.5	10.3	8.0	172.46	92.6	1,546.2	1,752.6	1,734.4	18.21	96.224	
3,400.0	3,384.5	3,161.5	3,158.5	10.7	8.2	172.35	99.2	1,557.7	1,783.8	1,765.1	18.76	95.093	
3,500.0	3,482.7	3,256.5	3,252.6	11.0	8.4	172.25	105.9	1,569.1	1,815.0	1,795.7	19.32	93.926	
3,600.0	3,580.8	3,329.1	3,324.4	11.4	8.6	172.18	110.7	1,578.2	1,846.7	1,826.8	19.83	93.115	
3,700.0	3,679.0	3,400.0	3,394.5	11.8	8.8	172.15	114.5	1,588.4	1,879.8	1,859.5	20.37	92.298	
3,800.0	3,777.1	3,454.7	3,448.4	12.1	8.9	172.15	116.7	1,597.2	1,914.5	1,893.7	20.84	91.872	
3,900.0	3,875.3	3,516.3	3,509.1	12.5	9.1	172.18	118.5	1,608.2	1,950.8	1,929.4	21.34	91.414	
4,000.0	3,973.5	3,592.6	3,583.9	12.9	9.3	172.25	119.6	1,623.2	1,988.6	1,966.7	21.91	90.749 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 #701H
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 #701H	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)			
0.0	0.0	0.0	0.0	3.0	3.0	87.33	71.7	1,540.0	1,541.7	1,535.3	6.43	239.811	
100.0	100.0	100.0	100.0	3.2	3.2	87.33	71.7	1,540.0	1,541.7	1,534.8	6.89	223.685	
200.0	200.0	200.0	200.0	3.5	3.5	87.33	71.7	1,540.0	1,541.7	1,534.4	7.33	210.383	
300.0	300.0	300.0	300.0	3.7	3.7	87.33	71.7	1,540.0	1,541.7	1,534.0	7.74	199.154	
400.0	400.0	400.0	400.0	3.9	3.9	87.33	71.7	1,540.0	1,541.7	1,533.6	8.14	189.505	
500.0	500.0	500.0	500.0	4.1	4.1	87.33	71.7	1,540.0	1,541.7	1,533.2	8.51	181.090	
600.0	600.0	600.0	600.0	4.2	4.2	87.33	71.7	1,540.0	1,541.7	1,532.8	8.88	173.664	
700.0	700.0	700.0	700.0	4.4	4.4	87.33	71.7	1,540.0	1,541.7	1,532.5	9.23	167.043	
800.0	800.0	800.0	800.0	4.6	4.6	87.33	71.7	1,540.0	1,541.7	1,532.1	9.57	161.091	
900.0	900.0	900.0	900.0	4.8	4.8	87.33	71.7	1,540.0	1,541.7	1,531.8	9.90	155.699	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.33	71.7	1,540.0	1,541.7	1,531.5	10.22	150.784	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.33	71.7	1,540.0	1,541.7	1,531.2	10.54	146.278	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.33	71.7	1,540.0	1,541.7	1,530.9	10.85	142.126	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.33	71.7	1,540.0	1,541.7	1,530.6	11.15	138.284	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.33	71.7	1,540.0	1,541.7	1,530.3	11.44	134.713	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.33	71.7	1,540.0	1,541.7	1,530.0	11.73	131.384 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-147.68	71.7	1,540.0	1,542.8	1,530.8	12.03	128.237	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-147.74	71.7	1,540.0	1,546.1	1,533.8	12.32	125.513	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-147.82	71.7	1,540.0	1,551.7	1,539.1	12.62	122.991	
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	-147.94	71.7	1,540.0	1,559.4	1,546.5	12.93	120.635	
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	-148.14	71.7	1,540.0	1,568.3	1,555.1	13.23	118.557	
2,100.0	2,098.2	2,098.2	2,098.2	6.8	6.5	-148.34	71.7	1,540.0	1,577.2	1,563.7	13.54	116.467	
2,200.0	2,197.6	2,197.6	2,197.6	7.0	6.7	-148.54	71.7	1,540.0	1,586.1	1,572.3	13.87	114.372	
2,300.0	2,297.1	2,268.5	2,268.5	7.3	6.8	-148.68	71.7	1,540.7	1,596.0	1,581.8	14.18	112.555	
2,400.0	2,396.5	2,338.5	2,338.4	7.5	6.9	-148.81	71.7	1,542.6	1,607.6	1,593.1	14.50	110.895	
2,500.0	2,496.0	2,400.0	2,399.9	7.8	7.0	-148.92	71.7	1,545.3	1,621.1	1,606.3	14.80	109.502	
2,600.0	2,595.4	2,477.3	2,477.1	8.1	7.1	-149.06	71.7	1,550.1	1,636.3	1,621.2	15.17	107.894	
2,700.0	2,694.8	2,546.1	2,545.6	8.4	7.2	-160.61	71.7	1,555.7	1,654.3	1,638.8	15.52	106.569	
2,800.0	2,794.0	2,600.0	2,599.3	8.7	7.3	-170.14	71.7	1,561.0	1,676.2	1,660.4	15.88	105.588	
2,900.0	2,893.0	2,681.2	2,679.9	9.0	7.5	-177.48	71.7	1,570.3	1,701.7	1,685.4	16.34	104.177	
3,000.0	2,991.7	2,747.2	2,745.4	9.3	7.6	176.85	71.7	1,579.2	1,731.0	1,714.2	16.78	103.167	
3,100.0	3,090.0	2,800.0	2,797.5	9.6	7.7	173.08	71.7	1,587.1	1,763.9	1,746.8	17.16	102.771	
3,200.0	3,188.2	2,875.9	2,872.4	10.0	7.9	173.18	71.7	1,599.7	1,799.0	1,781.3	17.68	101.734	
3,300.0	3,286.3	2,939.0	2,934.4	10.3	8.1	173.26	71.7	1,611.3	1,835.7	1,817.5	18.15	101.145	
3,400.0	3,384.5	3,000.0	2,994.2	10.7	8.3	173.33	71.7	1,623.5	1,873.8	1,855.2	18.61	100.669	
3,500.0	3,482.7	3,062.6	3,055.3	11.0	8.4	173.41	71.7	1,637.0	1,913.5	1,894.4	19.10	100.185	
3,600.0	3,580.8	3,123.1	3,114.1	11.4	8.6	173.49	71.7	1,651.1	1,954.7	1,935.1	19.56	99.907	
3,700.0	3,679.0	3,208.5	3,197.0	11.8	8.8	173.60	71.7	1,671.7	1,996.8	1,976.6	20.14	99.128 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 #701H
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 #701H	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		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	87.38	71.7	1,570.0	1,571.7	1,565.3	6.43	244.472	
100.0	100.0	100.0	100.0	3.2	3.2	87.38	71.7	1,570.0	1,571.7	1,564.8	6.89	228.033	
200.0	200.0	200.0	200.0	3.5	3.5	87.38	71.7	1,570.0	1,571.7	1,564.4	7.33	214.472	
300.0	300.0	300.0	300.0	3.7	3.7	87.38	71.7	1,570.0	1,571.7	1,563.9	7.74	203.025	
400.0	400.0	400.0	400.0	3.9	3.9	87.38	71.7	1,570.0	1,571.7	1,563.6	8.14	193.188	
500.0	500.0	500.0	500.0	4.1	4.1	87.38	71.7	1,570.0	1,571.7	1,563.2	8.51	184.610	
600.0	600.0	600.0	600.0	4.2	4.2	87.38	71.7	1,570.0	1,571.7	1,562.8	8.88	177.039	
700.0	700.0	700.0	700.0	4.4	4.4	87.38	71.7	1,570.0	1,571.7	1,562.5	9.23	170.290	
800.0	800.0	800.0	800.0	4.6	4.6	87.38	71.7	1,570.0	1,571.7	1,562.1	9.57	164.222	
900.0	900.0	900.0	900.0	4.8	4.8	87.38	71.7	1,570.0	1,571.7	1,561.8	9.90	158.726	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	87.38	71.7	1,570.0	1,571.7	1,561.5	10.22	153.715	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	87.38	71.7	1,570.0	1,571.7	1,561.1	10.54	149.121	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	87.38	71.7	1,570.0	1,571.7	1,560.8	10.85	144.889	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	87.38	71.7	1,570.0	1,571.7	1,560.5	11.15	140.971	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	87.38	71.7	1,570.0	1,571.7	1,560.2	11.44	137.332	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	87.38	71.7	1,570.0	1,571.7	1,560.0	11.73	133.938 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-147.63	71.7	1,570.0	1,572.8	1,560.8	12.03	130.728	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-147.68	71.7	1,570.0	1,576.1	1,563.8	12.32	127.946	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-147.76	71.7	1,570.0	1,581.6	1,569.0	12.62	125.367	
1,900.0	1,899.3	1,870.4	1,870.4	6.4	6.2	-147.82	71.6	1,570.7	1,590.3	1,577.4	12.90	123.268	
2,000.0	1,998.7	1,940.8	1,940.7	6.6	6.3	-147.94	71.4	1,572.6	1,601.9	1,588.7	13.17	121.595	
2,100.0	2,098.2	2,000.0	1,999.9	6.8	6.4	-148.04	71.0	1,575.2	1,615.3	1,601.9	13.43	120.235	
2,200.0	2,197.6	2,080.5	2,080.2	7.0	6.6	-148.17	70.4	1,580.3	1,630.4	1,616.7	13.76	118.511	
2,300.0	2,297.1	2,149.8	2,149.3	7.3	6.7	-148.27	69.6	1,585.9	1,647.4	1,633.3	14.07	117.041	
2,400.0	2,396.5	2,218.6	2,217.8	7.5	6.8	-148.35	68.7	1,592.8	1,666.0	1,651.6	14.41	115.650	
2,500.0	2,496.0	2,300.0	2,298.6	7.8	7.0	-148.44	67.5	1,602.4	1,686.5	1,671.7	14.79	114.032	
2,600.0	2,595.4	2,355.0	2,353.0	8.1	7.2	-148.49	66.5	1,609.9	1,708.6	1,693.5	15.12	112.998	
2,700.0	2,694.8	2,422.2	2,419.4	8.4	7.3	-160.05	65.1	1,620.2	1,733.4	1,717.9	15.50	111.832	
2,800.0	2,794.0	2,500.0	2,496.1	8.7	7.5	-169.58	63.4	1,633.5	1,761.9	1,745.9	15.96	110.412	
2,900.0	2,893.0	2,553.4	2,548.5	9.0	7.7	-176.92	62.1	1,643.5	1,793.9	1,777.6	16.36	109.687	
3,000.0	2,991.7	2,617.1	2,610.9	9.3	7.9	177.40	60.4	1,656.4	1,829.6	1,812.8	16.80	108.874	
3,100.0	3,090.0	2,685.5	2,677.6	9.6	8.0	173.67	58.4	1,671.3	1,868.6	1,851.4	17.24	108.405	
3,200.0	3,188.2	2,776.9	2,766.6	10.0	8.3	173.87	55.7	1,691.7	1,908.8	1,891.0	17.84	106.986	
3,300.0	3,286.3	2,868.3	2,855.7	10.3	8.6	174.06	53.0	1,712.1	1,949.0	1,930.5	18.46	105.586	
3,400.0	3,384.5	2,959.6	2,944.7	10.7	8.9	174.24	50.3	1,732.4	1,989.2	1,970.1	19.10	104.167 SF	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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				Rule Assigned:				Offset Well Error:		3.0 usft			
Measured Depth	Reference	Measured Depth	Offset	Semi Major Axis	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	11.30	150.1	30.0	153.1	146.7	6.43	23.814			
100.0	100.0	100.0	100.0	3.2	3.2	11.30	150.1	30.0	153.1	146.2	6.89	22.213			
200.0	200.0	200.0	200.0	3.5	3.5	11.30	150.1	30.0	153.1	145.8	7.33	20.892			
300.0	300.0	300.0	300.0	3.7	3.7	11.30	150.1	30.0	153.1	145.4	7.74	19.777			
400.0	400.0	400.0	400.0	3.9	3.9	11.30	150.1	30.0	153.1	145.0	8.14	18.819			
500.0	500.0	500.0	500.0	4.1	4.1	11.30	150.1	30.0	153.1	144.6	8.51	17.983			
600.0	600.0	600.0	600.0	4.2	4.2	11.30	150.1	30.0	153.1	144.2	8.88	17.246			
700.0	700.0	700.0	700.0	4.4	4.4	11.30	150.1	30.0	153.1	143.9	9.23	16.588			
800.0	800.0	800.0	800.0	4.6	4.6	11.30	150.1	30.0	153.1	143.5	9.57	15.997			
900.0	900.0	900.0	900.0	4.8	4.8	11.30	150.1	30.0	153.1	143.2	9.90	15.462			
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	11.30	150.1	30.0	153.1	142.9	10.22	14.974			
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	11.30	150.1	30.0	153.1	142.6	10.54	14.526			
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	11.30	150.1	30.0	153.1	142.3	10.85	14.114			
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	11.30	150.1	30.0	153.1	142.0	11.15	13.732			
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	11.30	150.1	30.0	153.1	141.7	11.44	13.378			
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	11.30	150.1	30.0	153.1	141.4	11.73	13.047			
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	136.63	150.1	30.0	154.1	142.0	12.02	12.811			
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	137.59	150.1	30.0	156.9	144.6	12.31	12.752			
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	139.10	150.1	30.0	161.8	149.2	12.60	12.845			
1,900.0	1,899.3	1,902.8	1,902.8	6.4	6.3	140.84	149.3	28.9	167.8	154.9	12.91	12.997			
2,000.0	1,998.7	2,006.2	2,006.1	6.6	6.4	142.24	146.9	25.5	172.8	159.6	13.21	13.084			
2,100.0	2,098.2	2,109.9	2,109.6	6.8	6.6	143.01	142.9	19.7	175.8	162.3	13.53	12.992			
2,200.0	2,197.6	2,213.7	2,212.9	7.0	6.8	143.21	137.3	11.7	176.6	162.7	13.87	12.732			
2,300.0	2,297.1	2,317.5	2,315.9	7.3	7.0	142.86	130.1	1.3	175.2	161.0	14.23	12.317			
2,400.0	2,396.5	2,421.2	2,418.4	7.5	7.3	141.93	121.2	-11.3	171.7	157.1	14.58	11.778			
2,500.0	2,496.0	2,521.4	2,517.2	7.8	7.5	140.39	111.7	-25.6	166.7	151.8	14.91	11.182			
2,600.0	2,595.4	2,619.0	2,613.1	8.1	7.7	138.04	103.8	-41.4	162.7	147.5	15.28	10.651			
2,700.0	2,694.8	2,716.4	2,708.8	8.4	8.0	123.97	97.7	-58.8	160.1	144.5	15.60	10.261			
2,800.0	2,794.0	2,813.7	2,804.1	8.7	8.3	111.95	93.3	-78.1	158.3	142.4	15.87	9.972			
2,900.0	2,893.0	2,910.9	2,899.0	9.0	8.5	102.20	90.7	-99.0	157.3	141.2	16.07	9.788			
3,000.0	2,991.7	3,010.7	2,996.2	9.3	8.9	94.48	89.0	-121.4	156.3	140.0	16.27	9.609			
3,100.0	3,090.0	3,110.6	3,093.5	9.6	9.2	89.43	87.2	-143.8	154.2	137.8	16.42	9.389			
3,200.0	3,188.2	3,210.5	3,190.9	10.0	9.5	88.16	85.5	-166.2	151.7	135.1	16.63	9.120			
3,300.0	3,286.3	3,310.4	3,288.2	10.3	9.9	86.84	83.7	-188.6	149.3	132.5	16.82	8.877			
3,400.0	3,384.5	3,410.3	3,385.6	10.7	10.2	85.49	81.9	-211.0	147.0	130.0	17.00	8.646			
3,500.0	3,482.7	3,510.2	3,482.9	11.0	10.6	84.09	80.2	-233.4	144.8	127.6	17.18	8.425			
3,600.0	3,580.8	3,610.1	3,580.3	11.4	11.0	82.64	78.4	-255.8	142.6	125.2	17.36	8.212			
3,700.0	3,679.0	3,710.1	3,677.6	11.8	11.4	81.16	76.6	-278.2	140.6	123.0	17.55	8.007			
3,800.0	3,777.1	3,810.0	3,775.0	12.1	11.8	79.63	74.9	-300.6	138.6	120.8	17.75	7.807			
3,900.0	3,875.3	3,909.9	3,872.3	12.5	12.2	78.06	73.1	-323.0	136.8	118.8	17.97	7.611			
4,000.0	3,973.5	4,009.8	3,969.7	12.9	12.6	76.44	71.4	-345.4	135.0	116.8	18.20	7.416			
4,100.0	4,071.6	4,109.7	4,067.0	13.3	13.0	74.79	69.6	-367.8	133.4	114.9	18.47	7.222			
4,200.0	4,169.8	4,209.6	4,164.4	13.7	13.4	73.10	67.8	-390.2	131.8	113.1	18.76	7.027			
4,300.0	4,268.0	4,309.5	4,261.7	14.1	13.8	71.37	66.1	-412.6	130.4	111.3	19.10	6.830			
4,400.0	4,366.1	4,409.4	4,359.1	14.5	14.3	69.60	64.3	-435.1	129.2	109.7	19.48	6.631			
4,500.0	4,464.3	4,509.3	4,456.4	14.9	14.7	67.80	62.5	-457.5	128.0	108.1	19.91	6.428			
4,600.0	4,562.4	4,609.3	4,553.8	15.4	15.1	65.97	60.8	-479.9	127.0	106.6	20.40	6.223			
4,700.0	4,660.6	4,709.2	4,651.1	15.8	15.6	64.11	59.0	-502.3	126.1	105.1	20.96	6.016			
4,800.0	4,758.8	4,809.1	4,748.5	16.2	16.0	62.22	57.2	-524.7	125.3	103.7	21.57	5.808			
4,900.0	4,856.9	4,909.0	4,845.8	16.6	16.4	60.32	55.5	-547.1	124.7	102.4	22.26	5.601			
5,000.0	4,955.1	5,008.9	4,943.2	17.0	16.9	58.40	53.7	-569.5	124.2	101.2	23.02	5.395			
5,100.0	5,053.3	5,108.8	5,040.5	17.5	17.3	56.46	52.0	-591.9	123.9	100.0	23.85	5.194			

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 #701H
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 #701H	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								Rule Assigned:				Offset Well Error:		3.0 usft
Measured Depth (usft)	Reference Vertical Depth (usft)	Measured Depth (usft)	Offset Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
5,200.0	5,151.4	5,208.7	5,137.9	17.9	17.8	54.52	50.2	-614.3	123.7	98.9	24.74	4.998				
5,291.1	5,240.8	5,299.7	5,226.6	18.3	18.2	52.74	48.6	-634.7	123.6	98.0	25.62	4.825				
5,300.0	5,249.6	5,308.6	5,235.2	18.3	18.2	52.57	48.4	-636.7	123.6	97.9	25.70	4.809				
5,400.0	5,347.7	5,408.6	5,332.6	18.8	18.7	50.62	46.7	-659.1	123.7	97.0	26.73	4.628				
5,500.0	5,445.9	5,508.5	5,429.9	19.2	19.1	48.68	44.9	-681.5	123.9	96.1	27.81	4.456				
5,600.0	5,544.1	5,608.4	5,527.3	19.6	19.6	46.75	43.1	-703.9	124.3	95.3	28.94	4.295				
5,700.0	5,642.2	5,708.3	5,624.6	20.1	20.0	44.83	41.4	-726.3	124.8	94.7	30.12	4.144				
5,800.0	5,740.4	5,808.2	5,722.0	20.5	20.5	42.93	39.6	-748.7	125.4	94.1	31.34	4.003				
5,900.0	5,838.6	5,908.1	5,819.3	21.0	20.9	41.05	37.8	-771.1	126.2	93.6	32.59	3.873				
6,000.0	5,936.7	6,008.0	5,916.7	21.4	21.4	39.19	36.1	-793.5	127.1	93.3	33.87	3.754				
6,100.0	6,034.9	6,107.9	6,014.0	21.8	21.9	37.36	34.3	-816.0	128.2	93.0	35.18	3.644				
6,200.0	6,133.1	6,207.8	6,111.4	22.3	22.3	35.57	32.6	-838.4	129.4	92.9	36.50	3.544				
6,300.0	6,231.2	6,307.8	6,208.7	22.7	22.8	33.81	30.8	-860.8	130.7	92.8	37.84	3.454				
6,400.0	6,329.4	6,407.7	6,306.1	23.2	23.3	32.08	29.0	-883.2	132.1	92.9	39.19	3.371				
6,500.0	6,427.5	6,507.6	6,403.4	23.6	23.7	30.40	27.3	-905.6	133.7	93.1	40.53	3.297				
6,600.0	6,525.7	6,607.5	6,500.8	24.1	24.2	28.75	25.5	-928.0	135.3	93.4	41.88	3.231				
6,700.0	6,623.9	6,707.4	6,598.1	24.5	24.6	27.15	23.7	-950.4	137.1	93.8	43.23	3.171				
6,800.0	6,722.0	6,808.3	6,696.5	25.0	25.1	25.61	22.0	-972.8	138.8	94.2	44.55	3.115				
6,900.0	6,820.2	6,910.4	6,796.3	25.4	25.6	24.42	20.3	-994.0	139.3	93.5	45.78	3.042				
7,000.0	6,918.4	7,012.5	6,896.6	25.9	26.0	23.61	18.8	-1,013.4	138.3	91.4	46.87	2.950				
7,100.0	7,016.5	7,114.6	6,997.1	26.3	26.5	23.17	17.4	-1,031.0	135.7	87.9	47.82	2.838				
7,200.0	7,114.7	7,216.6	7,097.9	26.8	26.9	23.09	16.1	-1,046.9	131.7	83.0	48.64	2.707				
7,300.0	7,212.8	7,318.4	7,198.7	27.2	27.4	23.41	15.0	-1,060.9	126.1	76.8	49.29	2.557				
7,400.0	7,311.0	7,420.0	7,299.6	27.7	27.8	24.20	14.1	-1,073.1	118.9	69.2	49.76	2.390				
7,500.0	7,409.2	7,521.3	7,400.4	28.1	28.2	25.58	13.3	-1,083.4	110.3	60.3	49.96	2.208				
7,600.0	7,507.3	7,622.3	7,501.0	28.6	28.6	27.76	12.6	-1,092.0	100.3	50.5	49.80	2.014				
7,700.0	7,605.5	7,722.9	7,601.3	29.0	28.9	31.10	12.1	-1,098.8	89.1	40.0	49.05	1.816 Advise and Monitor				
7,800.0	7,703.7	7,823.0	7,701.3	29.5	29.3	36.23	11.7	-1,103.8	76.9	29.6	47.33	1.625 Advise and Monitor				
7,900.0	7,801.8	7,922.6	7,800.8	29.9	29.6	44.32	11.4	-1,107.1	64.5	20.6	43.88	1.470 Shut in Produces				
8,000.0	7,900.2	8,021.8	7,900.1	30.4	29.8	56.30	11.3	-1,108.6	53.8	15.6	38.19	1.409 Shut in Produces				
8,100.0	7,998.9	8,120.7	7,998.9	30.8	29.9	72.58	11.3	-1,108.7	46.7	14.8	31.95	1.463 Shut in Produces				
8,198.1	8,096.0	8,217.8	8,096.0	31.2	29.9	90.00	11.3	-1,108.7	44.6	13.0	31.51	1.414 Shut in Produces, CC				
8,200.0	8,097.9	8,219.6	8,097.9	31.3	29.9	90.32	11.3	-1,108.7	44.6	13.0	31.58	1.411 Shut in Produces				
8,300.0	8,197.1	8,318.8	8,197.1	31.7	29.9	106.07	11.3	-1,108.7	46.4	8.9	37.46	1.238 Shut in Produces				
8,400.0	8,296.5	8,418.2	8,296.5	32.1	29.9	118.05	11.3	-1,108.7	50.5	6.7	43.85	1.152 Shut in Produces, ES				
8,500.0	8,396.0	8,517.8	8,396.0	32.5	30.0	126.48	11.3	-1,108.7	55.5	6.9	48.55	1.143 Shut in Produces, SF				
8,600.0	8,495.8	8,617.5	8,495.8	32.8	30.0	132.22	11.3	-1,108.7	60.2	8.5	51.70	1.165 Shut in Produces				
8,700.0	8,595.6	8,717.3	8,595.6	33.2	30.0	136.03	11.3	-1,108.7	64.2	10.4	53.77	1.194 Shut in Produces				
8,800.0	8,695.5	8,817.3	8,695.5	33.5	30.0	138.40	11.3	-1,108.7	67.1	12.0	55.11	1.218 Shut in Produces				
8,900.0	8,795.5	8,917.2	8,795.5	33.8	30.1	139.64	11.3	-1,108.7	68.8	12.9	55.90	1.231 Shut in Produces				
9,000.0	8,895.5	9,017.2	8,895.5	33.9	30.1	51.93	11.3	-1,108.7	69.2	13.1	56.14	1.233 Shut in Produces				
9,100.0	8,995.5	9,117.2	8,995.5	33.9	30.1	51.93	11.3	-1,108.7	69.2	13.0	56.20	1.231 Shut in Produces				
9,200.0	9,095.5	9,217.2	9,095.5	33.9	30.2	51.93	11.3	-1,108.7	69.2	13.0	56.26	1.230 Shut in Produces				
9,254.0	9,149.5	9,271.2	9,149.5	33.9	30.2	51.93	11.3	-1,108.7	69.2	12.9	56.28	1.230 Shut in Produces				
9,300.0	9,195.5	9,314.5	9,192.7	34.0	30.2	50.94	12.7	-1,108.8	70.1	14.6	55.47	1.263 Shut in Produces				
9,400.0	9,295.5	9,405.9	9,283.0	34.0	30.2	42.64	26.4	-1,110.0	79.6	29.4	50.19	1.585 Advise and Monitor				
9,500.0	9,395.5	9,491.0	9,364.1	34.0	30.2	31.53	51.8	-1,112.1	102.6	59.8	42.76	2.399				
9,600.0	9,495.5	9,567.2	9,432.8	34.0	30.2	22.63	84.5	-1,114.9	140.4	102.9	37.52	3.742				
9,700.0	9,595.5	9,633.5	9,488.6	34.0	30.2	16.65	120.2	-1,117.9	190.9	155.7	35.27	5.414				
9,800.0	9,695.5	9,690.3	9,532.8	34.1	30.2	12.76	155.6	-1,120.8	251.5	216.7	34.79	7.228				
9,900.0	9,795.5	9,738.6	9,567.5	34.1	30.2	10.17	189.1	-1,123.7	319.6	284.5	35.09	9.110				
10,000.0	9,895.5	9,779.6	9,594.7	34.1	30.2	8.38	219.8	-1,126.2	393.6	357.9	35.67	11.034				

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 #701H
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 #701H	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)			
10,100.0	9,995.5	9,814.6	9,616.0	34.1	30.2	7.09	247.3	-1,128.5	472.1	435.7	36.34	12.990	
10,200.0	10,095.5	9,850.0	9,635.9	34.2	30.2	5.97	276.5	-1,131.0	554.1	517.1	36.99	14.980	
10,300.0	10,195.5	9,870.3	9,646.4	34.2	30.3	5.40	293.8	-1,132.4	638.8	601.2	37.67	16.958	
10,400.0	10,295.5	9,900.0	9,660.8	34.2	30.3	4.65	319.7	-1,134.6	725.9	687.6	38.27	18.968	
10,500.0	10,395.5	9,900.0	9,660.8	34.3	30.3	4.65	319.7	-1,134.6	814.8	775.9	38.90	20.943	
10,600.0	10,495.5	9,929.2	9,673.6	34.3	30.3	4.00	345.9	-1,136.8	904.8	865.3	39.44	22.941	
10,700.0	10,595.5	9,950.0	9,681.8	34.3	30.3	3.58	364.9	-1,138.4	996.2	956.2	39.97	24.925	
10,800.0	10,695.5	9,950.0	9,681.8	34.3	30.3	3.58	364.9	-1,138.4	1,088.7	1,048.2	40.49	26.886	
10,900.0	10,795.5	9,969.9	9,689.1	34.3	30.3	3.17	383.4	-1,140.0	1,181.7	1,140.7	40.98	28.833	
11,000.0	10,894.6	10,000.0	9,698.8	34.3	30.3	1.94	411.7	-1,142.3	1,271.3	1,229.7	41.55	30.600	
11,100.0	10,990.2	10,000.0	9,698.8	34.4	30.3	1.52	411.7	-1,142.3	1,352.7	1,310.5	42.14	32.100	
11,200.0	11,079.3	10,021.4	9,704.8	34.4	30.3	1.15	432.2	-1,144.1	1,425.5	1,382.7	42.77	33.328	
11,300.0	11,159.3	10,050.0	9,711.6	34.4	30.4	0.88	459.9	-1,146.4	1,488.3	1,444.8	43.43	34.268	
11,400.0	11,227.6	10,050.0	9,711.6	34.4	30.4	0.79	459.9	-1,146.4	1,540.3	1,496.2	44.02	34.986	
11,500.0	11,282.2	10,100.0	9,720.2	34.4	30.4	0.57	508.9	-1,150.5	1,580.0	1,535.3	44.73	35.323	
11,600.0	11,321.4	10,100.0	9,720.2	34.5	30.4	0.54	508.9	-1,150.5	1,607.9	1,562.7	45.27	35.521	
11,700.0	11,344.2	10,150.0	9,724.5	34.6	30.4	0.38	558.6	-1,154.7	1,622.7	1,576.8	45.95	35.316	
11,800.0	11,350.0	10,173.7	9,725.0	34.6	30.5	0.32	582.2	-1,156.7	1,625.2	1,578.7	46.45	34.990	
11,844.3	11,350.0	10,196.5	9,725.0	34.7	30.5	0.26	604.9	-1,158.5	1,625.0	1,578.3	46.69	34.805	
11,900.0	11,350.0	10,252.0	9,725.0	34.7	30.5	0.13	660.3	-1,162.1	1,625.0	1,577.9	47.10	34.503	
12,000.0	11,350.0	10,351.8	9,725.0	34.8	30.7	0.01	760.0	-1,166.0	1,625.0	1,577.2	47.83	33.971	
12,015.2	11,350.0	10,367.0	9,725.0	34.9	30.7	0.00	775.2	-1,166.3	1,625.0	1,577.1	47.95	33.891	
12,100.0	11,350.0	10,451.8	9,725.0	35.0	30.8	-0.01	860.0	-1,166.9	1,625.0	1,576.4	48.57	33.457	
12,200.0	11,350.0	10,551.8	9,725.0	35.1	31.0	-0.01	960.0	-1,167.3	1,625.0	1,575.7	49.34	32.937	
12,300.0	11,350.0	10,651.8	9,725.0	35.3	31.2	-0.01	1,060.0	-1,167.7	1,625.0	1,574.9	50.14	32.410	
12,400.0	11,350.0	10,751.8	9,725.0	35.5	31.4	-0.01	1,160.0	-1,168.1	1,625.0	1,574.0	50.98	31.877	
12,500.0	11,350.0	10,851.8	9,725.0	35.7	31.6	-0.01	1,260.0	-1,168.5	1,625.0	1,573.2	51.85	31.342	
12,600.0	11,350.0	10,951.8	9,725.0	35.9	31.8	-0.01	1,360.0	-1,168.9	1,625.0	1,572.3	52.75	30.805	
12,700.0	11,350.0	11,051.8	9,725.0	36.1	32.0	-0.01	1,460.0	-1,169.2	1,625.0	1,571.3	53.68	30.271	
12,800.0	11,350.0	11,151.8	9,725.0	36.3	32.3	-0.01	1,560.0	-1,169.6	1,625.0	1,570.4	54.64	29.739	
12,900.0	11,350.0	11,251.8	9,725.0	36.6	32.6	-0.01	1,660.0	-1,170.0	1,625.0	1,569.4	55.63	29.211	
13,000.0	11,350.0	11,351.8	9,725.0	36.9	32.9	-0.01	1,760.0	-1,170.4	1,625.0	1,568.4	56.64	28.689	
13,100.0	11,350.0	11,451.8	9,725.0	37.2	33.2	-0.01	1,860.0	-1,170.8	1,625.0	1,567.3	57.68	28.173	
13,200.0	11,350.0	11,551.8	9,725.0	37.5	33.5	-0.01	1,960.0	-1,171.2	1,625.0	1,566.3	58.74	27.665	
13,300.0	11,350.0	11,651.8	9,725.0	37.8	33.9	-0.01	2,060.0	-1,171.6	1,625.0	1,565.2	59.82	27.166	
13,400.0	11,350.0	11,751.8	9,725.0	38.1	34.2	0.00	2,160.0	-1,172.0	1,625.0	1,564.1	60.92	26.675	
13,500.0	11,350.0	11,851.8	9,725.0	38.4	34.6	0.00	2,260.0	-1,172.4	1,625.0	1,563.0	62.04	26.193	
13,600.0	11,350.0	11,951.8	9,725.0	38.8	35.0	0.00	2,360.0	-1,172.8	1,625.0	1,561.8	63.18	25.721	
13,700.0	11,350.0	12,051.8	9,725.0	39.2	35.3	0.00	2,460.0	-1,173.2	1,625.0	1,560.7	64.33	25.259	
13,800.0	11,350.0	12,151.8	9,725.0	39.5	35.7	0.00	2,560.0	-1,173.6	1,625.0	1,559.5	65.51	24.807	
13,900.0	11,350.0	12,251.8	9,725.0	39.9	36.2	0.00	2,660.0	-1,174.0	1,625.0	1,558.3	66.69	24.365	
14,000.0	11,350.0	12,351.8	9,725.0	40.3	36.6	0.00	2,760.0	-1,174.4	1,625.0	1,557.1	67.90	23.934	
14,100.0	11,350.0	12,451.8	9,725.0	40.7	37.0	0.00	2,860.0	-1,174.8	1,625.0	1,555.9	69.11	23.513	
14,200.0	11,350.0	12,551.8	9,725.0	41.1	37.5	0.00	2,960.0	-1,175.2	1,625.0	1,554.7	70.34	23.102	
14,300.0	11,350.0	12,651.8	9,725.0	41.6	37.9	0.00	3,060.0	-1,175.6	1,625.0	1,553.4	71.58	22.701	
14,400.0	11,350.0	12,751.8	9,725.0	42.0	38.4	0.00	3,160.0	-1,175.9	1,625.0	1,552.2	72.84	22.310	
14,500.0	11,350.0	12,851.8	9,725.0	42.5	38.9	0.00	3,260.0	-1,176.3	1,625.0	1,550.9	74.10	21.930	
14,600.0	11,350.0	12,951.8	9,725.0	42.9	39.4	0.00	3,360.0	-1,176.7	1,625.0	1,549.6	75.38	21.559	
14,700.0	11,350.0	13,051.8	9,725.0	43.4	39.9	0.00	3,460.0	-1,177.1	1,625.0	1,548.3	76.66	21.197	
14,800.0	11,350.0	13,151.8	9,725.0	43.9	40.4	0.00	3,560.0	-1,177.5	1,625.0	1,547.0	77.96	20.845	
14,900.0	11,350.0	13,251.8	9,725.0	44.3	40.9	0.00	3,660.0	-1,177.9	1,625.0	1,545.7	79.26	20.502	
15,000.0	11,350.0	13,351.8	9,725.0	44.8	41.4	0.00	3,760.0	-1,178.3	1,625.0	1,544.4	80.57	20.168	

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 #701H
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 #701H	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		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)			
15,100.0	11,350.0	13,451.8	9,725.0	45.3	41.9	0.00	3,860.0	-1,178.7	1,625.0	1,543.1	81.90	19.842	
15,200.0	11,350.0	13,551.8	9,725.0	45.8	42.4	0.00	3,960.0	-1,179.1	1,625.0	1,541.8	83.22	19.526	
15,300.0	11,350.0	13,651.8	9,725.0	46.3	43.0	0.00	4,060.0	-1,179.5	1,625.0	1,540.4	84.56	19.217	
15,400.0	11,350.0	13,751.8	9,725.0	46.9	43.5	0.00	4,160.0	-1,179.9	1,625.0	1,539.1	85.90	18.916	
15,500.0	11,350.0	13,851.8	9,725.0	47.4	44.1	0.00	4,260.0	-1,180.3	1,625.0	1,537.7	87.25	18.624	
15,600.0	11,350.0	13,951.8	9,725.0	47.9	44.6	0.00	4,360.0	-1,180.7	1,625.0	1,536.4	88.61	18.338	
15,700.0	11,350.0	14,051.8	9,725.0	48.5	45.2	0.00	4,460.0	-1,181.1	1,625.0	1,535.0	89.98	18.061	
15,800.0	11,350.0	14,151.8	9,725.0	49.0	45.8	0.00	4,560.0	-1,181.5	1,625.0	1,533.7	91.34	17.790	
15,900.0	11,350.0	14,251.8	9,725.0	49.6	46.4	0.00	4,660.0	-1,181.9	1,625.0	1,532.3	92.72	17.526	
16,000.0	11,350.0	14,351.8	9,725.0	50.1	46.9	0.00	4,760.0	-1,182.2	1,625.0	1,530.9	94.10	17.269	
16,100.0	11,350.0	14,451.8	9,725.0	50.7	47.5	0.00	4,860.0	-1,182.6	1,625.0	1,529.5	95.49	17.018	
16,200.0	11,350.0	14,551.8	9,725.0	51.2	48.1	0.00	4,960.0	-1,183.0	1,625.0	1,528.1	96.88	16.774	
16,300.0	11,350.0	14,651.8	9,725.0	51.8	48.7	0.00	5,060.0	-1,183.4	1,625.0	1,526.7	98.27	16.536	
16,400.0	11,350.0	14,751.8	9,725.0	52.4	49.3	0.00	5,160.0	-1,183.8	1,625.0	1,525.3	99.67	16.304	
16,500.0	11,350.0	14,851.8	9,725.0	53.0	49.9	0.00	5,260.0	-1,184.2	1,625.0	1,523.9	101.07	16.077	
16,600.0	11,350.0	14,951.8	9,725.0	53.6	50.5	0.00	5,360.0	-1,184.6	1,625.0	1,522.5	102.48	15.856	
16,700.0	11,350.0	15,051.8	9,725.0	54.2	51.1	0.00	5,460.0	-1,185.0	1,625.0	1,521.1	103.89	15.641	
16,800.0	11,350.0	15,151.8	9,725.0	54.8	51.8	0.00	5,560.0	-1,185.4	1,625.0	1,519.7	105.31	15.431	
16,900.0	11,350.0	15,251.8	9,725.0	55.3	52.4	0.00	5,660.0	-1,185.8	1,625.0	1,518.3	106.73	15.225	
17,000.0	11,350.0	15,351.8	9,725.0	56.0	53.0	0.00	5,760.0	-1,186.2	1,625.0	1,516.8	108.15	15.025	
17,100.0	11,350.0	15,451.8	9,725.0	56.6	53.6	0.00	5,860.0	-1,186.6	1,625.0	1,515.4	109.58	14.829	
17,200.0	11,350.0	15,551.8	9,725.0	57.2	54.3	0.00	5,960.0	-1,187.0	1,625.0	1,514.0	111.01	14.638	
17,300.0	11,350.0	15,651.8	9,725.0	57.8	54.9	0.00	6,060.0	-1,187.4	1,625.0	1,512.6	112.44	14.452	
17,400.0	11,350.0	15,751.8	9,725.0	58.4	55.5	0.00	6,160.0	-1,187.8	1,625.0	1,511.1	113.88	14.269	
17,500.0	11,350.0	15,851.8	9,725.0	59.0	56.2	0.00	6,260.0	-1,188.2	1,625.0	1,509.7	115.32	14.091	
17,600.0	11,350.0	15,951.8	9,725.0	59.7	56.8	0.00	6,360.0	-1,188.5	1,625.0	1,508.2	116.76	13.917	
17,700.0	11,350.0	16,051.8	9,725.0	60.3	57.5	0.00	6,460.0	-1,188.9	1,625.0	1,506.8	118.21	13.747	
17,800.0	11,350.0	16,151.8	9,725.0	60.9	58.1	0.00	6,560.0	-1,189.3	1,625.0	1,505.3	119.65	13.581	
17,900.0	11,350.0	16,251.8	9,725.0	61.5	58.8	0.00	6,660.0	-1,189.7	1,625.0	1,503.9	121.10	13.418	
18,000.0	11,350.0	16,351.8	9,725.0	62.2	59.4	0.00	6,760.0	-1,190.1	1,625.0	1,502.4	122.55	13.259	
18,100.0	11,350.0	16,451.8	9,725.0	62.8	60.1	0.00	6,860.0	-1,190.5	1,625.0	1,501.0	124.01	13.104	
18,200.0	11,350.0	16,551.8	9,725.0	63.5	60.8	0.00	6,960.0	-1,190.9	1,625.0	1,499.5	125.47	12.952	
18,300.0	11,350.0	16,651.8	9,725.0	64.1	61.4	0.00	7,060.0	-1,191.3	1,625.0	1,498.1	126.92	12.803	
18,400.0	11,350.0	16,751.8	9,725.0	64.8	62.1	0.00	7,160.0	-1,191.7	1,625.0	1,496.6	128.39	12.657	
18,500.0	11,350.0	16,851.8	9,725.0	65.4	62.8	0.00	7,260.0	-1,192.1	1,625.0	1,495.2	129.85	12.515	
18,600.0	11,350.0	16,951.8	9,725.0	66.1	63.4	0.00	7,360.0	-1,192.5	1,625.0	1,493.7	131.31	12.375	
18,700.0	11,350.0	17,051.8	9,725.0	66.7	64.1	0.00	7,460.0	-1,192.9	1,625.0	1,492.2	132.78	12.238	
18,800.0	11,350.0	17,151.8	9,725.0	67.4	64.8	0.00	7,560.0	-1,193.3	1,625.0	1,490.8	134.25	12.104	
18,900.0	11,350.0	17,251.8	9,725.0	68.0	65.5	0.00	7,660.0	-1,193.7	1,625.0	1,489.3	135.72	11.973	
19,000.0	11,350.0	17,351.8	9,725.0	68.7	66.1	0.00	7,760.0	-1,194.1	1,625.0	1,487.8	137.19	11.845	
19,100.0	11,350.0	17,451.8	9,725.0	69.4	66.8	0.00	7,860.0	-1,194.5	1,625.0	1,486.3	138.67	11.719	
19,200.0	11,350.0	17,551.8	9,725.0	70.0	67.5	0.00	7,960.0	-1,194.9	1,625.0	1,484.9	140.14	11.595	
19,300.0	11,350.0	17,651.8	9,725.0	70.7	68.2	0.00	8,060.0	-1,195.2	1,625.0	1,483.4	141.62	11.475	
19,400.0	11,350.0	17,751.8	9,725.0	71.4	68.9	0.00	8,160.0	-1,195.6	1,625.0	1,481.9	143.10	11.356	
19,500.0	11,350.0	17,851.8	9,725.0	72.0	69.6	0.00	8,260.0	-1,196.0	1,625.0	1,480.4	144.58	11.240	
19,600.0	11,350.0	17,951.8	9,725.0	72.7	70.2	0.00	8,360.0	-1,196.4	1,625.0	1,478.9	146.06	11.126	
19,700.0	11,350.0	18,051.8	9,725.0	73.4	70.9	0.00	8,460.0	-1,196.8	1,625.0	1,477.5	147.54	11.014	
19,800.0	11,350.0	18,151.8	9,725.0	74.1	71.6	0.00	8,560.0	-1,197.2	1,625.0	1,476.0	149.02	10.904	
19,900.0	11,350.0	18,251.8	9,725.0	74.8	72.3	0.00	8,660.0	-1,197.6	1,625.0	1,474.5	150.51	10.797	
20,000.0	11,350.0	18,351.8	9,725.0	75.4	73.0	0.00	8,760.0	-1,198.0	1,625.0	1,473.0	152.00	10.691	
20,100.0	11,350.0	18,451.8	9,725.0	76.1	73.7	0.00	8,860.0	-1,198.4	1,625.0	1,471.5	153.48	10.587	
20,200.0	11,350.0	18,551.8	9,725.0	76.8	74.4	0.00	8,960.0	-1,198.8	1,625.0	1,470.0	154.97	10.486	

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 #701H
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 #701H	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		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,300.0	11,350.0	18,651.8	9,725.0	77.5	75.1	0.00	9,060.0	-1,199.2	1,625.0	1,468.5	156.46	10.386	
20,400.0	11,350.0	18,751.8	9,725.0	78.2	75.8	0.00	9,160.0	-1,199.6	1,625.0	1,467.0	157.96	10.288	
20,500.0	11,350.0	18,851.8	9,725.0	78.9	76.5	0.00	9,260.0	-1,200.0	1,625.0	1,465.6	159.45	10.191	
20,600.0	11,350.0	18,951.8	9,725.0	79.6	77.2	0.00	9,360.0	-1,200.4	1,625.0	1,464.1	160.94	10.097	
20,700.0	11,350.0	19,051.8	9,725.0	80.2	77.9	0.00	9,460.0	-1,200.8	1,625.0	1,462.6	162.44	10.004	
20,800.0	11,350.0	19,151.8	9,725.0	80.9	78.6	0.00	9,560.0	-1,201.2	1,625.0	1,461.1	163.93	9.913	
20,900.0	11,350.0	19,251.8	9,725.0	81.6	79.3	0.00	9,660.0	-1,201.5	1,625.0	1,459.6	165.43	9.823	
21,000.0	11,350.0	19,351.8	9,725.0	82.3	80.0	0.00	9,760.0	-1,201.9	1,625.0	1,458.1	166.92	9.735	
21,100.0	11,350.0	19,451.8	9,725.0	83.0	80.7	0.00	9,860.0	-1,202.3	1,625.0	1,456.6	168.42	9.648	
21,200.0	11,350.0	19,551.8	9,725.0	83.7	81.5	0.00	9,960.0	-1,202.7	1,625.0	1,455.1	169.92	9.563	
21,300.0	11,350.0	19,651.8	9,725.0	84.4	82.2	0.00	10,060.0	-1,203.1	1,625.0	1,453.6	171.42	9.479	
21,400.0	11,350.0	19,751.8	9,725.0	85.1	82.9	0.00	10,160.0	-1,203.5	1,625.0	1,452.1	172.92	9.397	
21,500.0	11,350.0	19,851.8	9,725.0	85.8	83.6	0.00	10,260.0	-1,203.9	1,625.0	1,450.6	174.43	9.316	
21,600.0	11,350.0	19,951.8	9,725.0	86.5	84.3	0.00	10,360.0	-1,204.3	1,625.0	1,449.1	175.93	9.237	
21,700.0	11,350.0	20,051.8	9,725.0	87.2	85.0	0.00	10,460.0	-1,204.7	1,625.0	1,447.6	177.43	9.158	
21,800.0	11,350.0	20,151.8	9,725.0	87.9	85.7	0.00	10,560.0	-1,205.1	1,625.0	1,446.1	178.94	9.081	
21,900.0	11,350.0	20,251.8	9,725.0	88.6	86.4	0.00	10,660.0	-1,205.5	1,625.0	1,444.6	180.44	9.006	
22,000.0	11,350.0	20,351.8	9,725.0	89.3	87.2	0.00	10,760.0	-1,205.9	1,625.0	1,443.1	181.95	8.931	
22,100.0	11,350.0	20,451.8	9,725.0	90.1	87.9	0.00	10,860.0	-1,206.3	1,625.0	1,441.5	183.45	8.858	
22,200.0	11,350.0	20,551.8	9,725.0	90.8	88.6	0.00	10,960.0	-1,206.7	1,625.0	1,440.0	184.96	8.786	
22,300.0	11,350.0	20,651.8	9,725.0	91.5	89.3	0.00	11,060.0	-1,207.1	1,625.0	1,438.5	186.47	8.715	
22,400.0	11,350.0	20,751.8	9,725.0	92.2	90.0	0.00	11,160.0	-1,207.5	1,625.0	1,437.0	187.98	8.645	
22,500.0	11,350.0	20,851.8	9,725.0	92.9	90.8	0.00	11,260.0	-1,207.8	1,625.0	1,435.5	189.48	8.576	
22,600.0	11,350.0	20,951.8	9,725.0	93.6	91.5	0.00	11,360.0	-1,208.2	1,625.0	1,434.0	190.99	8.508	
22,700.0	11,350.0	21,051.8	9,725.0	94.3	92.2	0.00	11,460.0	-1,208.6	1,625.0	1,432.5	192.50	8.441	
22,800.0	11,350.0	21,151.8	9,725.0	95.0	92.9	0.00	11,560.0	-1,209.0	1,625.0	1,431.0	194.02	8.376	
22,900.0	11,350.0	21,251.8	9,725.0	95.7	93.6	0.00	11,660.0	-1,209.4	1,625.0	1,429.5	195.53	8.311	
23,000.0	11,350.0	21,351.8	9,725.0	96.5	94.4	0.00	11,760.0	-1,209.8	1,625.0	1,428.0	197.04	8.247	
23,100.0	11,350.0	21,451.8	9,725.0	97.2	95.1	0.00	11,860.0	-1,210.2	1,625.0	1,426.4	198.55	8.184	
23,200.0	11,350.0	21,551.8	9,725.0	97.9	95.8	0.00	11,960.0	-1,210.6	1,625.0	1,424.9	200.06	8.122	
23,300.0	11,350.0	21,651.8	9,725.0	98.6	96.6	0.00	12,060.0	-1,211.0	1,625.0	1,423.4	201.58	8.061	
23,400.0	11,350.0	21,751.8	9,725.0	99.3	97.3	0.00	12,160.0	-1,211.4	1,625.0	1,421.9	203.09	8.001	
23,500.0	11,350.0	21,851.8	9,725.0	100.0	98.0	0.00	12,260.0	-1,211.8	1,625.0	1,420.4	204.61	7.942	
23,600.0	11,350.0	21,951.8	9,725.0	100.8	98.7	0.00	12,360.0	-1,212.2	1,625.0	1,418.9	206.12	7.884	
23,700.0	11,350.0	22,051.8	9,725.0	101.5	99.5	0.00	12,460.0	-1,212.6	1,625.0	1,417.4	207.64	7.826	
23,800.0	11,350.0	22,151.8	9,725.0	102.2	100.2	0.00	12,559.9	-1,213.0	1,625.0	1,415.8	209.15	7.769	
23,900.0	11,350.0	22,251.8	9,725.0	102.9	100.9	0.00	12,659.9	-1,213.4	1,625.0	1,414.3	210.67	7.713	
24,000.0	11,350.0	22,351.8	9,725.0	103.7	101.7	0.00	12,759.9	-1,213.8	1,625.0	1,412.8	212.19	7.658	
24,100.0	11,350.0	22,451.8	9,725.0	104.4	102.4	0.00	12,859.9	-1,214.2	1,625.0	1,411.3	213.71	7.604	
24,200.0	11,350.0	22,551.8	9,725.0	105.1	103.1	0.00	12,959.9	-1,214.5	1,625.0	1,409.8	215.22	7.550	
24,300.0	11,350.0	22,651.8	9,725.0	105.8	103.8	0.00	13,059.9	-1,214.9	1,625.0	1,408.3	216.74	7.497	
24,400.0	11,350.0	22,751.8	9,725.0	106.5	104.6	0.00	13,159.9	-1,215.3	1,625.0	1,406.7	218.26	7.445	
24,500.0	11,350.0	22,851.8	9,725.0	107.3	105.3	0.00	13,259.9	-1,215.7	1,625.0	1,405.2	219.78	7.394	
24,600.0	11,350.0	22,951.8	9,725.0	108.0	106.0	0.00	13,359.9	-1,216.1	1,625.0	1,403.7	221.30	7.343	
24,700.0	11,350.0	23,051.8	9,725.0	108.7	106.8	0.00	13,459.9	-1,216.5	1,625.0	1,402.2	222.82	7.293	
24,800.0	11,350.0	23,151.8	9,725.0	109.5	107.5	0.00	13,559.9	-1,216.9	1,625.0	1,400.7	224.34	7.243	
24,832.6	11,350.0	23,184.5	9,725.0	109.6	107.7	0.00	13,592.6	-1,217.0	1,625.0	1,400.3	224.71	7.231	
24,848.5	11,350.0	23,200.4	9,725.0	109.7	107.9	0.00	13,608.5	-1,217.1	1,625.0	1,400.1	224.89	7.226	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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	21.79	150.1	60.0	161.7	155.3	6.43	25.149	
100.0	100.0	100.0	100.0	3.2	3.2	21.79	150.1	60.0	161.7	154.8	6.89	23.458	
200.0	200.0	200.0	200.0	3.5	3.5	21.79	150.1	60.0	161.7	154.4	7.33	22.063	
300.0	300.0	300.0	300.0	3.7	3.7	21.79	150.1	60.0	161.7	153.9	7.74	20.885	
400.0	400.0	400.0	400.0	3.9	3.9	21.79	150.1	60.0	161.7	153.5	8.14	19.873	
500.0	500.0	500.0	500.0	4.1	4.1	21.79	150.1	60.0	161.7	153.2	8.51	18.991	
600.0	600.0	600.0	600.0	4.2	4.2	21.79	150.1	60.0	161.7	152.8	8.88	18.212	
700.0	700.0	700.0	700.0	4.4	4.4	21.79	150.1	60.0	161.7	152.5	9.23	17.518	
800.0	800.0	800.0	800.0	4.6	4.6	21.79	150.1	60.0	161.7	152.1	9.57	16.894	
900.0	900.0	900.0	900.0	4.8	4.8	21.79	150.1	60.0	161.7	151.8	9.90	16.328	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	21.79	150.1	60.0	161.7	151.5	10.22	15.813	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	21.79	150.1	60.0	161.7	151.1	10.54	15.340	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	21.79	150.1	60.0	161.7	150.8	10.85	14.905	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	21.79	150.1	60.0	161.7	150.5	11.15	14.502	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	21.79	150.1	60.0	161.7	150.2	11.44	14.127	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	21.79	150.1	60.0	161.7	149.9	11.73	13.778 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	147.03	150.1	60.0	162.8	150.7	12.03	13.530	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	147.74	150.1	60.0	166.1	153.8	12.32	13.481	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	148.86	150.1	60.0	171.7	159.0	12.62	13.600	
1,900.0	1,899.3	1,899.3	1,899.3	6.4	6.3	150.31	150.1	60.0	179.6	166.6	12.94	13.876	
2,000.0	1,998.7	1,998.7	1,998.7	6.6	6.4	151.88	150.1	60.0	188.7	175.5	13.25	14.241	
2,100.0	2,098.2	2,098.2	2,098.2	6.8	6.5	153.31	150.1	60.0	198.0	184.4	13.58	14.583	
2,200.0	2,197.6	2,197.6	2,197.6	7.0	6.7	154.60	150.1	60.0	207.4	193.5	13.92	14.900	
2,300.0	2,297.1	2,297.1	2,297.1	7.3	6.8	155.79	150.1	60.0	216.9	202.6	14.28	15.192	
2,400.0	2,396.5	2,396.5	2,396.5	7.5	6.9	156.87	150.1	60.0	226.5	211.8	14.65	15.462	
2,500.0	2,496.0	2,496.0	2,496.0	7.8	7.0	157.86	150.1	60.0	236.1	221.1	15.03	15.709	
2,600.0	2,595.4	2,601.8	2,601.8	8.1	7.2	158.90	148.9	59.5	244.6	229.2	15.45	15.831	
2,700.0	2,694.8	2,708.2	2,708.1	8.4	7.3	148.93	144.9	57.9	250.5	234.7	15.86	15.798	
2,800.0	2,794.0	2,814.6	2,814.2	8.7	7.5	141.73	138.1	55.2	254.1	237.8	16.29	15.598	
2,900.0	2,893.0	2,920.6	2,919.8	9.0	7.6	137.49	128.7	51.3	255.7	239.0	16.75	15.268	
3,000.0	2,991.7	3,026.1	3,024.4	9.3	7.8	135.70	116.6	46.5	255.8	238.6	17.21	14.864	
3,035.3	3,026.5	3,061.3	3,059.3	9.4	7.8	135.75	112.1	44.6	255.7	238.4	17.36	14.728	
3,100.0	3,090.0	3,124.8	3,122.2	9.6	7.9	136.22	103.9	41.3	256.2	238.5	17.67	14.501	
3,200.0	3,188.2	3,222.9	3,219.3	10.0	8.1	140.43	91.2	36.2	258.1	239.9	18.21	14.173	
3,300.0	3,286.3	3,321.0	3,316.5	10.3	8.3	144.55	78.5	31.1	261.5	242.8	18.75	13.947	
3,400.0	3,384.5	3,419.1	3,413.6	10.7	8.6	148.55	65.9	26.0	266.3	247.0	19.29	13.802	
3,500.0	3,482.7	3,517.0	3,510.5	11.0	8.8	152.38	53.3	20.9	272.3	252.5	19.83	13.728	
3,600.0	3,580.8	3,612.6	3,605.4	11.4	9.1	155.86	41.6	16.2	280.1	259.7	20.36	13.757	
3,700.0	3,679.0	3,708.5	3,700.5	11.8	9.3	158.97	31.0	11.9	289.7	268.8	20.88	13.876	
3,800.0	3,777.1	3,804.4	3,795.9	12.1	9.6	161.71	21.5	8.0	300.9	279.6	21.39	14.070	
3,900.0	3,875.3	3,900.0	3,891.1	12.5	9.8	164.07	13.2	4.7	313.6	291.7	21.90	14.321	
4,000.0	3,973.5	3,996.5	3,987.2	12.9	10.1	166.09	5.9	1.7	327.4	305.0	22.41	14.612	
4,100.0	4,071.6	4,092.6	4,083.1	13.3	10.3	167.77	-0.3	-0.8	342.3	319.4	22.92	14.934	
4,200.0	4,169.8	4,188.6	4,179.0	13.7	10.6	169.15	-5.3	-2.8	358.1	334.7	23.44	15.277	
4,300.0	4,268.0	4,284.7	4,275.0	14.1	10.9	170.25	-9.3	-4.4	374.7	350.8	23.97	15.634	
4,400.0	4,366.1	4,380.6	4,370.9	14.5	11.1	171.10	-12.1	-5.5	392.1	367.6	24.50	16.000	
4,500.0	4,464.3	4,476.5	4,466.7	14.9	11.3	171.72	-13.7	-6.2	410.0	385.0	25.04	16.373	
4,600.0	4,562.4	4,573.0	4,563.2	15.4	11.4	172.16	-14.3	-6.4	428.6	403.1	25.57	16.762	
4,700.0	4,660.6	4,670.4	4,660.6	15.8	11.5	172.49	-14.3	-6.4	447.6	421.5	26.11	17.145	
4,800.0	4,758.8	4,768.6	4,758.8	16.2	11.6	172.79	-14.3	-6.4	466.5	439.8	26.66	17.498	
4,900.0	4,856.9	4,866.7	4,856.9	16.6	11.6	173.08	-14.3	-6.4	485.4	458.2	27.22	17.834	
5,000.0	4,955.1	4,964.9	4,955.1	17.0	11.7	173.34	-14.3	-6.4	504.4	476.6	27.79	18.153	

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 #701H
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 #701H	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)			
5,100.0	5,053.3	5,063.1	5,053.3	17.5	11.8	173.58	-14.3	-6.4	523.3	495.0	28.36	18.457	
5,200.0	5,151.4	5,161.2	5,151.4	17.9	11.8	173.81	-14.3	-6.4	542.3	513.4	28.93	18.746	
5,300.0	5,249.6	5,259.4	5,249.6	18.3	11.9	174.02	-14.3	-6.4	561.3	531.8	29.51	19.021	
5,400.0	5,347.7	5,357.5	5,347.7	18.8	12.0	174.21	-14.3	-6.4	580.3	550.2	30.09	19.284	
5,500.0	5,445.9	5,455.7	5,445.9	19.2	12.0	174.40	-14.3	-6.4	599.3	568.6	30.68	19.535	
5,600.0	5,544.1	5,553.9	5,544.1	19.6	12.1	174.57	-14.3	-6.4	618.3	587.0	31.27	19.774	
5,700.0	5,642.2	5,652.0	5,642.2	20.1	12.2	174.73	-14.3	-6.4	637.3	605.4	31.86	20.003	
5,800.0	5,740.4	5,750.2	5,740.4	20.5	12.2	174.88	-14.3	-6.4	656.3	623.8	32.45	20.221	
5,900.0	5,838.6	5,848.4	5,838.6	21.0	12.3	175.03	-14.3	-6.4	675.3	642.2	33.05	20.430	
6,000.0	5,936.7	5,946.5	5,936.7	21.4	12.4	175.16	-14.3	-6.4	694.3	660.6	33.65	20.631	
6,100.0	6,034.9	6,044.7	6,034.9	21.8	12.4	175.29	-14.3	-6.4	713.3	679.1	34.26	20.822	
6,200.0	6,133.1	6,142.8	6,133.1	22.3	12.5	175.42	-14.3	-6.4	732.3	697.5	34.86	21.006	
6,300.0	6,231.2	6,241.0	6,231.2	22.7	12.6	175.53	-14.3	-6.4	751.4	715.9	35.47	21.183	
6,400.0	6,329.4	6,339.2	6,329.4	23.2	12.6	175.64	-14.3	-6.4	770.4	734.3	36.08	21.352	
6,500.0	6,427.5	6,437.3	6,427.5	23.6	12.7	175.75	-14.3	-6.4	789.4	752.7	36.69	21.514	
6,600.0	6,525.7	6,535.5	6,525.7	24.1	12.8	175.85	-14.3	-6.4	808.4	771.1	37.31	21.671	
6,700.0	6,623.9	6,633.7	6,623.9	24.5	12.9	175.94	-14.3	-6.4	827.5	789.6	37.92	21.821	
6,800.0	6,722.0	6,731.8	6,722.0	25.0	12.9	176.04	-14.3	-6.4	846.5	808.0	38.54	21.965	
6,900.0	6,820.2	6,830.0	6,820.2	25.4	13.0	176.12	-14.3	-6.4	865.6	826.4	39.16	22.105	
7,000.0	6,918.4	6,928.1	6,918.4	25.9	13.1	176.21	-14.3	-6.4	884.6	844.8	39.78	22.239	
7,100.0	7,016.5	7,026.3	7,016.5	26.3	13.1	176.29	-14.3	-6.4	903.6	863.2	40.40	22.368	
7,200.0	7,114.7	7,124.5	7,114.7	26.8	13.2	176.36	-14.3	-6.4	922.7	881.7	41.02	22.492	
7,300.0	7,212.8	7,222.6	7,212.8	27.2	13.3	176.44	-14.3	-6.4	941.7	900.1	41.65	22.612	
7,400.0	7,311.0	7,320.8	7,311.0	27.7	13.4	176.51	-14.3	-6.4	960.8	918.5	42.27	22.728	
7,500.0	7,409.2	7,419.0	7,409.2	28.1	13.4	176.58	-14.3	-6.4	979.8	936.9	42.90	22.840	
7,600.0	7,507.3	7,517.1	7,507.3	28.6	13.5	176.64	-14.3	-6.4	998.9	955.3	43.53	22.948	
7,700.0	7,605.5	7,615.3	7,605.5	29.0	13.6	176.70	-14.3	-6.4	1,017.9	973.8	44.16	23.053	
7,800.0	7,703.7	7,713.5	7,703.7	29.5	13.6	176.76	-14.3	-6.4	1,037.0	992.2	44.79	23.154	
7,900.0	7,801.8	7,811.6	7,801.8	29.9	13.7	176.83	-14.3	-6.4	1,056.0	1,010.6	45.40	23.257	
8,000.0	7,900.2	7,910.0	7,900.2	30.4	13.8	176.89	-14.3	-6.4	1,073.8	1,027.8	46.03	23.328	
8,100.0	7,998.9	8,008.7	7,998.9	30.8	13.8	176.94	-14.3	-6.4	1,089.9	1,043.2	46.64	23.367	
8,200.0	8,097.9	8,107.7	8,097.9	31.3	13.9	176.99	-14.3	-6.4	1,104.3	1,057.0	47.24	23.375	
8,300.0	8,197.1	8,206.9	8,197.1	31.7	14.0	177.03	-14.3	-6.4	1,116.9	1,069.1	47.83	23.354	
8,400.0	8,296.5	8,306.3	8,296.5	32.1	14.1	177.07	-14.3	-6.4	1,127.8	1,079.4	48.39	23.306	
8,500.0	8,396.0	8,405.8	8,396.0	32.5	14.1	177.09	-14.3	-6.4	1,137.0	1,088.1	48.94	23.234	
8,600.0	8,495.8	8,505.6	8,495.8	32.8	14.2	177.12	-14.3	-6.4	1,144.5	1,095.0	49.46	23.138	
8,700.0	8,595.6	8,605.4	8,595.6	33.2	14.3	177.13	-14.3	-6.4	1,150.2	1,100.2	49.96	23.023	
8,800.0	8,695.5	8,705.3	8,695.5	33.5	14.4	177.15	-14.3	-6.4	1,154.2	1,103.7	50.42	22.893	
8,900.0	8,795.5	8,805.3	8,795.5	33.8	14.4	177.15	-14.3	-6.4	1,156.4	1,105.6	50.82	22.755	
9,000.0	8,895.5	8,905.3	8,895.5	33.9	14.5	89.15	-14.3	-6.4	1,156.9	1,105.9	51.00	22.687	
9,100.0	8,995.5	9,005.3	8,995.5	33.9	14.6	89.15	-14.3	-6.4	1,156.9	1,105.8	51.07	22.653	
9,200.0	9,095.5	9,105.3	9,095.5	33.9	14.7	89.15	-14.3	-6.4	1,156.9	1,105.8	51.14	22.622	
9,254.0	9,149.5	9,159.3	9,149.5	33.9	14.7	89.15	-14.3	-6.4	1,156.9	1,105.7	51.17	22.608	
9,300.0	9,195.5	9,204.3	9,194.4	34.0	14.7	89.08	-12.7	-6.4	1,156.9	1,105.7	51.19	22.599	
9,400.0	9,295.5	9,300.0	9,288.9	34.0	14.7	88.33	2.3	-6.5	1,157.2	1,106.0	51.23	22.587	
9,500.0	9,395.5	9,387.7	9,372.1	34.0	14.6	86.98	29.6	-6.6	1,158.4	1,107.2	51.21	22.624	
9,600.0	9,495.5	9,485.9	9,442.0	34.0	14.6	85.26	64.5	-6.7	1,161.7	1,110.6	51.07	22.747	
9,700.0	9,595.5	9,533.3	9,498.0	34.0	14.5	83.42	102.0	-6.9	1,168.0	1,117.3	50.79	22.999	
9,800.0	9,695.5	9,590.6	9,541.9	34.1	14.5	81.63	138.8	-7.1	1,178.7	1,128.3	50.36	23.407	
9,900.0	9,795.5	9,638.9	9,575.8	34.1	14.5	79.97	173.1	-7.2	1,194.3	1,144.5	49.79	23.989	
10,000.0	9,895.5	9,679.7	9,602.2	34.1	14.5	78.48	204.2	-7.3	1,215.6	1,166.5	49.11	24.752	
10,100.0	9,995.5	9,714.2	9,622.7	34.1	14.5	77.16	232.0	-7.4	1,242.6	1,194.3	48.36	25.697	

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 #701H
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 #701H	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								Rule Assigned:				Offset Well Error:		3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
10,200.0	10,095.5	9,750.0	9,642.2	34.2	14.4	75.75	262.0	-7.6	1,275.6	1,228.0	47.58	26.809				
10,300.0	10,195.5	9,768.9	9,651.7	34.2	14.4	75.00	278.3	-7.6	1,314.2	1,267.4	46.78	28.092				
10,400.0	10,295.5	9,800.0	9,666.2	34.2	14.4	73.73	305.9	-7.7	1,358.3	1,312.2	46.04	29.505				
10,500.0	10,395.5	9,800.0	9,666.2	34.3	14.4	73.73	305.9	-7.7	1,407.4	1,362.1	45.32	31.055				
10,600.0	10,495.5	9,826.4	9,677.3	34.3	14.4	72.64	329.8	-7.8	1,461.1	1,416.4	44.71	32.680				
10,700.0	10,595.5	9,850.0	9,686.3	34.3	14.4	71.66	351.6	-7.9	1,519.2	1,475.1	44.18	34.388				
10,800.0	10,695.5	9,850.0	9,686.3	34.3	14.4	71.66	351.6	-7.9	1,581.1	1,537.4	43.74	36.151				
10,900.0	10,795.5	9,850.0	9,686.3	34.3	14.4	70.32	351.6	-7.9	1,646.7	1,603.3	43.37	37.964				
11,000.0	10,894.6	9,879.7	9,696.3	34.3	14.4	61.35	379.6	-8.0	1,711.6	1,668.6	43.04	39.769				
11,100.0	10,990.2	9,900.0	9,702.3	34.4	14.4	54.13	399.0	-8.1	1,773.4	1,730.6	42.76	41.476				
11,200.0	11,079.3	9,900.0	9,702.3	34.4	14.4	48.73	399.0	-8.1	1,830.2	1,787.7	42.54	43.023				
11,300.0	11,159.3	9,950.0	9,714.1	34.4	14.4	43.74	447.6	-8.3	1,880.0	1,837.6	42.36	44.383				
11,400.0	11,227.6	9,950.0	9,714.1	34.4	14.4	40.64	447.6	-8.3	1,922.0	1,879.7	42.23	45.510				
11,500.0	11,282.2	10,000.0	9,721.6	34.4	14.4	38.01	497.0	-8.5	1,955.1	1,913.0	42.12	46.414				
11,600.0	11,321.4	10,000.0	9,721.6	34.5	14.4	36.55	497.0	-8.5	1,978.4	1,936.4	42.04	47.064				
11,700.0	11,344.2	10,050.0	9,724.8	34.6	14.4	35.62	546.9	-8.7	1,991.7	1,949.8	41.97	47.451				
11,800.0	11,350.0	10,067.9	9,725.0	34.6	14.4	35.45	564.8	-8.8	1,994.7	1,952.8	41.87	47.640				
11,900.0	11,350.0	10,167.9	9,725.0	34.7	14.5	35.44	664.8	-9.2	1,994.7	1,952.9	41.79	47.735				
12,000.0	11,350.0	10,267.9	9,725.0	34.8	14.6	35.44	764.8	-9.6	1,994.7	1,952.9	41.76	47.765				
12,100.0	11,350.0	10,367.9	9,725.0	35.0	14.6	35.44	864.8	-10.0	1,994.6	1,952.9	41.79	47.729				
12,200.0	11,350.0	10,467.9	9,725.0	35.1	14.8	35.44	964.8	-10.4	1,994.6	1,952.8	41.88	47.628				
12,300.0	11,350.0	10,567.9	9,725.0	35.3	15.0	35.44	1,064.8	-10.8	1,994.6	1,952.6	42.03	47.463				
12,400.0	11,350.0	10,667.9	9,725.0	35.5	15.3	35.44	1,164.8	-11.2	1,994.6	1,952.4	42.23	47.236				
12,500.0	11,350.0	10,767.9	9,725.0	35.7	15.7	35.44	1,264.8	-11.7	1,994.6	1,952.1	42.48	46.950				
12,600.0	11,350.0	10,867.9	9,725.0	35.9	16.1	35.44	1,364.8	-12.1	1,994.6	1,951.8	42.79	46.609				
12,700.0	11,350.0	10,967.9	9,725.0	36.1	16.5	35.44	1,464.8	-12.5	1,994.6	1,951.4	43.16	46.215				
12,800.0	11,350.0	11,067.9	9,725.0	36.3	17.0	35.44	1,564.8	-12.9	1,994.6	1,951.0	43.58	45.773				
12,900.0	11,350.0	11,167.9	9,725.0	36.6	17.5	35.44	1,664.8	-13.3	1,994.6	1,950.5	44.04	45.288				
13,000.0	11,350.0	11,267.9	9,725.0	36.9	18.0	35.44	1,764.8	-13.7	1,994.6	1,950.0	44.56	44.764				
13,100.0	11,350.0	11,367.9	9,725.0	37.2	18.5	35.44	1,864.8	-14.1	1,994.6	1,949.5	45.12	44.205				
13,200.0	11,350.0	11,467.9	9,725.0	37.5	19.1	35.44	1,964.8	-14.5	1,994.6	1,948.8	45.73	43.618				
13,300.0	11,350.0	11,567.9	9,725.0	37.8	19.6	35.44	2,064.8	-14.9	1,994.6	1,948.2	46.38	43.005				
13,400.0	11,350.0	11,667.9	9,725.0	38.1	20.2	35.44	2,164.8	-15.3	1,994.5	1,947.5	47.07	42.371				
13,500.0	11,350.0	11,767.9	9,725.0	38.4	20.8	35.44	2,264.8	-15.7	1,994.5	1,946.7	47.81	41.722				
13,600.0	11,350.0	11,867.9	9,725.0	38.8	21.4	35.44	2,364.8	-16.1	1,994.5	1,946.0	48.58	41.059				
13,700.0	11,350.0	11,967.9	9,725.0	39.2	22.0	35.44	2,464.8	-16.6	1,994.5	1,945.1	49.38	40.388				
13,800.0	11,350.0	12,067.9	9,725.0	39.5	22.6	35.44	2,564.8	-17.0	1,994.5	1,944.3	50.23	39.711				
13,900.0	11,350.0	12,167.9	9,725.0	39.9	23.3	35.44	2,664.8	-17.4	1,994.5	1,943.4	51.10	39.031				
14,000.0	11,350.0	12,267.9	9,725.0	40.3	23.9	35.44	2,764.8	-17.8	1,994.5	1,942.5	52.01	38.351				
14,100.0	11,350.0	12,367.9	9,725.0	40.7	24.5	35.44	2,864.7	-18.2	1,994.5	1,941.6	52.94	37.674				
14,200.0	11,350.0	12,467.9	9,725.0	41.1	25.2	35.44	2,964.7	-18.6	1,994.5	1,940.6	53.90	37.001				
14,300.0	11,350.0	12,567.9	9,725.0	41.6	25.9	35.44	3,064.7	-19.0	1,994.5	1,939.6	54.89	36.334				
14,400.0	11,350.0	12,667.9	9,725.0	42.0	26.5	35.44	3,164.7	-19.4	1,994.5	1,938.6	55.91	35.674				
14,500.0	11,350.0	12,767.9	9,725.0	42.5	27.2	35.44	3,264.7	-19.8	1,994.5	1,937.5	56.95	35.024				
14,600.0	11,350.0	12,867.9	9,725.0	42.9	27.9	35.44	3,364.7	-20.2	1,994.5	1,936.4	58.01	34.383				
14,700.0	11,350.0	12,967.9	9,725.0	43.4	28.5	35.44	3,464.7	-20.6	1,994.4	1,935.4	59.09	33.754				
14,800.0	11,350.0	13,067.9	9,725.0	43.9	29.2	35.44	3,564.7	-21.0	1,994.4	1,934.2	60.19	33.136				
14,900.0	11,350.0	13,167.9	9,725.0	44.3	29.9	35.44	3,664.7	-21.5	1,994.4	1,933.1	61.31	32.530				
15,000.0	11,350.0	13,267.9	9,725.0	44.8	30.6	35.44	3,764.7	-21.9	1,994.4	1,932.0	62.45	31.937				
15,100.0	11,350.0	13,367.9	9,725.0	45.3	31.3	35.43	3,864.7	-22.3	1,994.4	1,930.8	63.60	31.357				
15,200.0	11,350.0	13,467.9	9,725.0	45.8	32.0	35.43	3,964.7	-22.7	1,994.4	1,929.6	64.78	30.789				
15,300.0	11,350.0	13,567.9	9,725.0	46.3	32.7	35.43	4,064.7	-23.1	1,994.4	1,928.4	65.96	30.235				

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 #701H
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 #701H	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)			
15,400.0	11,350.0	13,667.9	9,725.0	46.9	33.4	35.43	4,164.7	-23.5	1,994.4	1,927.2	67.16	29.695	
15,500.0	11,350.0	13,767.9	9,725.0	47.4	34.1	35.43	4,264.7	-23.9	1,994.4	1,926.0	68.38	29.167	
15,600.0	11,350.0	13,867.9	9,725.0	47.9	34.8	35.43	4,364.7	-24.3	1,994.4	1,924.8	69.61	28.652	
15,700.0	11,350.0	13,967.9	9,725.0	48.5	35.5	35.43	4,464.7	-24.7	1,994.4	1,923.5	70.85	28.151	
15,800.0	11,350.0	14,067.9	9,725.0	49.0	36.2	35.43	4,564.7	-25.1	1,994.4	1,922.3	72.10	27.662	
15,900.0	11,350.0	14,167.9	9,725.0	49.6	37.0	35.43	4,664.7	-25.5	1,994.4	1,921.0	73.36	27.186	
16,000.0	11,350.0	14,267.9	9,725.0	50.1	37.7	35.43	4,764.7	-26.0	1,994.3	1,919.7	74.63	26.723	
16,100.0	11,350.0	14,367.9	9,725.0	50.7	38.4	35.43	4,864.7	-26.4	1,994.3	1,918.4	75.91	26.271	
16,200.0	11,350.0	14,467.9	9,725.0	51.2	39.1	35.43	4,964.7	-26.8	1,994.3	1,917.1	77.21	25.831	
16,300.0	11,350.0	14,567.9	9,725.0	51.8	39.8	35.43	5,064.7	-27.2	1,994.3	1,915.8	78.51	25.403	
16,400.0	11,350.0	14,667.9	9,725.0	52.4	40.6	35.43	5,164.7	-27.6	1,994.3	1,914.5	79.82	24.986	
16,500.0	11,350.0	14,767.9	9,725.0	53.0	41.3	35.43	5,264.7	-28.0	1,994.3	1,913.2	81.13	24.581	
16,600.0	11,350.0	14,867.9	9,725.0	53.6	42.0	35.43	5,364.7	-28.4	1,994.3	1,911.8	82.46	24.185	
16,700.0	11,350.0	14,967.9	9,725.0	54.2	42.8	35.43	5,464.7	-28.8	1,994.3	1,910.5	83.79	23.801	
16,800.0	11,350.0	15,067.9	9,725.0	54.8	43.5	35.43	5,564.7	-29.2	1,994.3	1,909.2	85.13	23.426	
16,900.0	11,350.0	15,167.9	9,725.0	55.3	44.2	35.43	5,664.7	-29.6	1,994.3	1,907.8	86.48	23.062	
17,000.0	11,350.0	15,267.9	9,725.0	56.0	44.9	35.43	5,764.7	-30.0	1,994.3	1,906.4	87.83	22.706	
17,100.0	11,350.0	15,367.9	9,725.0	56.6	45.7	35.43	5,864.7	-30.4	1,994.3	1,905.1	89.19	22.360	
17,200.0	11,350.0	15,467.9	9,725.0	57.2	46.4	35.43	5,964.7	-30.9	1,994.3	1,903.7	90.55	22.024	
17,300.0	11,350.0	15,567.9	9,725.0	57.8	47.2	35.43	6,064.7	-31.3	1,994.2	1,902.3	91.92	21.695	
17,400.0	11,350.0	15,667.9	9,725.0	58.4	47.9	35.43	6,164.7	-31.7	1,994.2	1,900.9	93.30	21.375	
17,500.0	11,350.0	15,767.9	9,725.0	59.0	48.6	35.43	6,264.7	-32.1	1,994.2	1,899.6	94.68	21.064	
17,600.0	11,350.0	15,867.9	9,725.0	59.7	49.4	35.43	6,364.7	-32.5	1,994.2	1,898.2	96.06	20.760	
17,700.0	11,350.0	15,967.9	9,725.0	60.3	50.1	35.43	6,464.7	-32.9	1,994.2	1,896.8	97.45	20.464	
17,800.0	11,350.0	16,067.9	9,725.0	60.9	50.8	35.43	6,564.7	-33.3	1,994.2	1,895.4	98.84	20.175	
17,900.0	11,350.0	16,167.9	9,725.0	61.5	51.6	35.43	6,664.7	-33.7	1,994.2	1,894.0	100.24	19.894	
18,000.0	11,350.0	16,267.9	9,725.0	62.2	52.3	35.43	6,764.7	-34.1	1,994.2	1,892.5	101.64	19.619	
18,100.0	11,350.0	16,367.9	9,725.0	62.8	53.1	35.43	6,864.7	-34.5	1,994.2	1,891.1	103.05	19.352	
18,200.0	11,350.0	16,467.9	9,725.0	63.5	53.8	35.43	6,964.7	-34.9	1,994.2	1,889.7	104.46	19.090	
18,300.0	11,350.0	16,567.9	9,725.0	64.1	54.6	35.42	7,064.7	-35.3	1,994.2	1,888.3	105.87	18.836	
18,400.0	11,350.0	16,667.9	9,725.0	64.8	55.3	35.42	7,164.7	-35.8	1,994.2	1,886.9	107.29	18.587	
18,500.0	11,350.0	16,767.9	9,725.0	65.4	56.0	35.42	7,264.7	-36.2	1,994.2	1,885.4	108.71	18.344	
18,600.0	11,350.0	16,867.9	9,725.0	66.1	56.8	35.42	7,364.7	-36.6	1,994.1	1,884.0	110.13	18.107	
18,700.0	11,350.0	16,967.9	9,725.0	66.7	57.5	35.42	7,464.7	-37.0	1,994.1	1,882.6	111.56	17.875	
18,800.0	11,350.0	17,067.9	9,725.0	67.4	58.3	35.42	7,564.7	-37.4	1,994.1	1,881.1	112.99	17.649	
18,900.0	11,350.0	17,167.9	9,725.0	68.0	59.0	35.42	7,664.7	-37.8	1,994.1	1,879.7	114.42	17.428	
19,000.0	11,350.0	17,267.9	9,725.0	68.7	59.8	35.42	7,764.7	-38.2	1,994.1	1,878.3	115.85	17.212	
19,100.0	11,350.0	17,367.9	9,725.0	69.4	60.5	35.42	7,864.7	-38.6	1,994.1	1,876.8	117.29	17.001	
19,200.0	11,350.0	17,467.9	9,725.0	70.0	61.3	35.42	7,964.7	-39.0	1,994.1	1,875.4	118.73	16.795	
19,300.0	11,350.0	17,567.9	9,725.0	70.7	62.0	35.42	8,064.7	-39.4	1,994.1	1,873.9	120.17	16.593	
19,400.0	11,350.0	17,667.9	9,725.0	71.4	62.8	35.42	8,164.7	-39.8	1,994.1	1,872.5	121.62	16.396	
19,500.0	11,350.0	17,767.9	9,725.0	72.0	63.5	35.42	8,264.7	-40.3	1,994.1	1,871.0	123.07	16.203	
19,600.0	11,350.0	17,867.9	9,725.0	72.7	64.3	35.42	8,364.7	-40.7	1,994.1	1,869.5	124.52	16.015	
19,700.0	11,350.0	17,967.9	9,725.0	73.4	65.0	35.42	8,464.7	-41.1	1,994.1	1,868.1	125.97	15.830	
19,800.0	11,350.0	18,067.9	9,725.0	74.1	65.8	35.42	8,564.7	-41.5	1,994.0	1,866.6	127.42	15.649	
19,900.0	11,350.0	18,167.9	9,725.0	74.8	66.5	35.42	8,664.7	-41.9	1,994.0	1,865.2	128.87	15.473	
20,000.0	11,350.0	18,267.9	9,725.0	75.4	67.3	35.42	8,764.7	-42.3	1,994.0	1,863.7	130.33	15.300	
20,100.0	11,350.0	18,367.9	9,725.0	76.1	68.0	35.42	8,864.7	-42.7	1,994.0	1,862.2	131.79	15.130	
20,200.0	11,350.0	18,467.9	9,725.0	76.8	68.8	35.42	8,964.7	-43.1	1,994.0	1,860.8	133.25	14.964	
20,300.0	11,350.0	18,567.9	9,725.0	77.5	69.5	35.42	9,064.7	-43.5	1,994.0	1,859.3	134.71	14.802	
20,400.0	11,350.0	18,667.9	9,725.0	78.2	70.3	35.42	9,164.7	-43.9	1,994.0	1,857.8	136.18	14.643	
20,500.0	11,350.0	18,767.9	9,725.0	78.9	71.0	35.42	9,264.7	-44.3	1,994.0	1,856.4	137.64	14.487	

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 #701H
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 #701H	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)				
20,600.0	11,350.0	18,867.9	9,725.0	79.6	71.8	35.42	9,364.7	-44.7	1,994.0	1,854.9	139.11	14.334		
20,700.0	11,350.0	18,967.9	9,725.0	80.2	72.5	35.42	9,464.7	-45.2	1,994.0	1,853.4	140.58	14.184		
20,800.0	11,350.0	19,067.9	9,725.0	80.9	73.3	35.42	9,564.7	-45.6	1,994.0	1,851.9	142.05	14.037		
20,900.0	11,350.0	19,167.9	9,725.0	81.6	74.1	35.42	9,664.7	-46.0	1,994.0	1,850.4	143.52	13.893		
21,000.0	11,350.0	19,267.9	9,725.0	82.3	74.8	35.42	9,764.7	-46.4	1,994.0	1,849.0	145.00	13.752		
21,100.0	11,350.0	19,367.9	9,725.0	83.0	75.6	35.42	9,864.7	-46.8	1,993.9	1,847.5	146.47	13.613		
21,200.0	11,350.0	19,467.9	9,725.0	83.7	76.3	35.42	9,964.7	-47.2	1,993.9	1,846.0	147.95	13.477		
21,300.0	11,350.0	19,567.9	9,725.0	84.4	77.1	35.42	10,064.7	-47.6	1,993.9	1,844.5	149.42	13.344		
21,400.0	11,350.0	19,667.9	9,725.0	85.1	77.8	35.42	10,164.7	-48.0	1,993.9	1,843.0	150.90	13.213		
21,500.0	11,350.0	19,767.9	9,725.0	85.8	78.6	35.41	10,264.7	-48.4	1,993.9	1,841.5	152.38	13.085		
21,600.0	11,350.0	19,867.9	9,725.0	86.5	79.3	35.41	10,364.7	-48.8	1,993.9	1,840.0	153.86	12.959		
21,700.0	11,350.0	19,967.9	9,725.0	87.2	80.1	35.41	10,464.7	-49.2	1,993.9	1,838.6	155.34	12.835		
21,800.0	11,350.0	20,067.9	9,725.0	87.9	80.9	35.41	10,564.7	-49.6	1,993.9	1,837.1	156.83	12.714		
21,900.0	11,350.0	20,167.9	9,725.0	88.6	81.6	35.41	10,664.7	-50.1	1,993.9	1,835.6	158.31	12.595		
22,000.0	11,350.0	20,267.9	9,725.0	89.3	82.4	35.41	10,764.7	-50.5	1,993.9	1,834.1	159.79	12.478		
22,100.0	11,350.0	20,367.9	9,725.0	90.1	83.1	35.41	10,864.7	-50.9	1,993.9	1,832.6	161.28	12.363		
22,200.0	11,350.0	20,467.9	9,725.0	90.8	83.9	35.41	10,964.7	-51.3	1,993.9	1,831.1	162.77	12.250		
22,300.0	11,350.0	20,567.9	9,725.0	91.5	84.6	35.41	11,064.7	-51.7	1,993.9	1,829.6	164.25	12.139		
22,400.0	11,350.0	20,667.9	9,725.0	92.2	85.4	35.41	11,164.7	-52.1	1,993.8	1,828.1	165.74	12.030		
22,500.0	11,350.0	20,767.9	9,725.0	92.9	86.2	35.41	11,264.7	-52.5	1,993.8	1,826.6	167.23	11.923		
22,600.0	11,350.0	20,867.9	9,725.0	93.6	86.9	35.41	11,364.7	-52.9	1,993.8	1,825.1	168.72	11.817		
22,700.0	11,350.0	20,967.9	9,725.0	94.3	87.7	35.41	11,464.7	-53.3	1,993.8	1,823.6	170.21	11.714		
22,800.0	11,350.0	21,067.9	9,725.0	95.0	88.4	35.41	11,564.7	-53.7	1,993.8	1,822.1	171.71	11.612		
22,900.0	11,350.0	21,167.9	9,725.0	95.7	89.2	35.41	11,664.7	-54.1	1,993.8	1,820.6	173.20	11.512		
23,000.0	11,350.0	21,267.9	9,725.0	96.5	89.9	35.41	11,764.7	-54.6	1,993.8	1,819.1	174.69	11.413		
23,100.0	11,350.0	21,367.9	9,725.0	97.2	90.7	35.41	11,864.7	-55.0	1,993.8	1,817.6	176.19	11.316		
23,200.0	11,350.0	21,467.9	9,725.0	97.9	91.5	35.41	11,964.7	-55.4	1,993.8	1,816.1	177.68	11.221		
23,300.0	11,350.0	21,567.9	9,725.0	98.6	92.2	35.41	12,064.7	-55.8	1,993.8	1,814.6	179.18	11.127		
23,400.0	11,350.0	21,667.9	9,725.0	99.3	93.0	35.41	12,164.7	-56.2	1,993.8	1,813.1	180.68	11.035		
23,500.0	11,350.0	21,767.9	9,725.0	100.0	93.7	35.41	12,264.7	-56.6	1,993.8	1,811.6	182.17	10.944		
23,600.0	11,350.0	21,867.9	9,725.0	100.8	94.5	35.41	12,364.7	-57.0	1,993.8	1,810.1	183.67	10.855		
23,700.0	11,350.0	21,967.9	9,725.0	101.5	95.3	35.41	12,464.7	-57.4	1,993.7	1,808.6	185.17	10.767		
23,800.0	11,350.0	22,067.9	9,725.0	102.2	96.0	35.41	12,564.7	-57.8	1,993.7	1,807.1	186.67	10.681		
23,900.0	11,350.0	22,167.9	9,725.0	102.9	96.8	35.41	12,664.7	-58.2	1,993.7	1,805.6	188.17	10.595		
24,000.0	11,350.0	22,267.9	9,725.0	103.7	97.5	35.41	12,764.7	-58.6	1,993.7	1,804.1	189.67	10.512		
24,100.0	11,350.0	22,367.9	9,725.0	104.4	98.3	35.41	12,864.7	-59.0	1,993.7	1,802.5	191.17	10.429		
24,200.0	11,350.0	22,467.9	9,725.0	105.1	99.1	35.41	12,964.7	-59.5	1,993.7	1,801.0	192.67	10.348		
24,300.0	11,350.0	22,567.9	9,725.0	105.8	99.8	35.41	13,064.7	-59.9	1,993.7	1,799.5	194.17	10.268		
24,400.0	11,350.0	22,667.9	9,725.0	106.5	100.6	35.41	13,164.7	-60.3	1,993.7	1,798.0	195.68	10.189		
24,500.0	11,350.0	22,767.9	9,725.0	107.3	101.3	35.41	13,264.7	-60.7	1,993.7	1,796.5	197.18	10.111		
24,600.0	11,350.0	22,867.9	9,725.0	108.0	102.1	35.40	13,364.7	-61.1	1,993.7	1,795.0	198.68	10.034		
24,700.0	11,350.0	22,967.9	9,725.0	108.7	102.8	35.40	13,464.7	-61.5	1,993.7	1,793.5	200.19	9.959		
24,800.0	11,350.0	23,067.9	9,725.0	109.5	103.6	35.40	13,564.7	-61.9	1,993.7	1,792.0	201.69	9.885		
24,842.7	11,350.0	23,110.6	9,725.0	109.7	103.9	35.40	13,607.3	-62.1	1,993.7	1,791.4	202.21	9.859		
24,848.5	11,350.0	23,110.8	9,725.0	109.7	103.9	35.40	13,607.6	-62.1	1,993.7	1,791.4	202.25	9.857 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 #701H
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 #701H	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
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	81.48	221.7	1,480.0	1,496.6	1,490.1	6.43	232.787	
100.0	100.0	100.0	100.0	3.2	3.2	81.48	221.7	1,480.0	1,496.6	1,489.7	6.89	217.134	
200.0	200.0	200.0	200.0	3.5	3.5	81.48	221.7	1,480.0	1,496.6	1,489.2	7.33	204.221	
300.0	300.0	300.0	300.0	3.7	3.7	81.48	221.7	1,480.0	1,496.6	1,488.8	7.74	193.321	
400.0	400.0	400.0	400.0	3.9	3.9	81.48	221.7	1,480.0	1,496.6	1,488.4	8.14	183.954	
500.0	500.0	500.0	500.0	4.1	4.1	81.48	221.7	1,480.0	1,496.6	1,488.1	8.51	175.786	
600.0	600.0	600.0	600.0	4.2	4.2	81.48	221.7	1,480.0	1,496.6	1,487.7	8.88	168.577	
700.0	700.0	700.0	700.0	4.4	4.4	81.48	221.7	1,480.0	1,496.6	1,487.3	9.23	162.151	
800.0	800.0	800.0	800.0	4.6	4.6	81.48	221.7	1,480.0	1,496.6	1,487.0	9.57	156.373	
900.0	900.0	900.0	900.0	4.8	4.8	81.48	221.7	1,480.0	1,496.6	1,486.7	9.90	151.139	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	81.48	221.7	1,480.0	1,496.6	1,486.3	10.22	146.368	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	81.48	221.7	1,480.0	1,496.6	1,486.0	10.54	141.993	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	81.48	221.7	1,480.0	1,496.6	1,485.7	10.85	137.963	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	81.48	221.7	1,480.0	1,496.6	1,485.4	11.15	134.233	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	81.48	221.7	1,480.0	1,496.6	1,485.1	11.44	130.768	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	81.48	221.7	1,480.0	1,496.6	1,484.8	11.73	127.536 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-153.53	221.7	1,480.0	1,497.7	1,485.7	12.03	124.456	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-153.58	221.7	1,480.0	1,501.3	1,488.9	12.33	121.796	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-153.65	221.7	1,480.0	1,507.1	1,494.5	12.63	119.336	
1,900.0	1,899.3	1,952.6	1,952.6	6.4	6.3	-153.79	219.9	1,477.6	1,513.6	1,500.5	13.02	116.215	
2,000.0	1,998.7	2,106.3	2,106.0	6.6	6.6	-153.89	214.3	1,470.2	1,517.7	1,504.3	13.41	113.197	
2,100.0	2,098.2	2,260.3	2,259.2	6.8	6.9	-153.88	205.0	1,457.9	1,518.2	1,504.4	13.83	109.740	
2,200.0	2,197.6	2,385.8	2,383.6	7.0	7.1	-153.80	194.9	1,444.5	1,515.7	1,501.5	14.20	106.720	
2,300.0	2,297.1	2,485.8	2,482.6	7.3	7.3	-153.73	186.6	1,433.4	1,512.8	1,498.2	14.61	103.539	
2,400.0	2,396.5	2,585.7	2,581.5	7.5	7.6	-153.65	178.2	1,422.3	1,509.9	1,494.9	15.05	100.312	
2,500.0	2,496.0	2,685.6	2,680.5	7.8	7.8	-153.58	169.8	1,411.2	1,507.0	1,491.5	15.52	97.118	
2,600.0	2,595.4	2,785.6	2,779.5	8.1	8.1	-153.50	161.5	1,400.1	1,504.1	1,488.1	16.01	93.943	
2,700.0	2,694.8	2,885.5	2,878.4	8.4	8.4	-164.68	153.1	1,389.0	1,502.1	1,485.6	16.52	90.919	
2,749.4	2,743.9	2,934.9	2,927.3	8.5	8.5	-169.50	149.0	1,383.5	1,501.9	1,485.1	16.79	89.438	
2,800.0	2,794.0	2,985.4	2,977.3	8.7	8.7	-173.79	144.7	1,377.9	1,502.1	1,485.1	17.07	87.993	
2,900.0	2,893.0	3,085.2	3,076.2	9.0	9.0	179.34	136.4	1,366.8	1,504.2	1,486.5	17.65	85.218	
3,000.0	2,991.7	3,184.8	3,174.8	9.3	9.3	174.17	128.0	1,355.7	1,508.2	1,490.0	18.26	82.615	
3,100.0	3,090.0	3,284.2	3,273.2	9.6	9.6	170.92	119.7	1,344.7	1,514.3	1,495.5	18.85	80.330	
3,200.0	3,188.2	3,383.5	3,371.5	10.0	10.0	171.29	111.4	1,333.6	1,521.2	1,501.7	19.50	78.009	
3,300.0	3,286.3	3,482.7	3,469.8	10.3	10.3	171.66	103.1	1,322.6	1,528.1	1,508.0	20.14	75.863	
3,400.0	3,384.5	3,582.0	3,568.1	10.7	10.6	172.03	94.8	1,311.6	1,535.1	1,514.3	20.80	73.812	
3,500.0	3,482.7	3,681.3	3,666.4	11.0	11.0	172.39	86.4	1,300.5	1,542.2	1,520.7	21.46	71.855	
3,600.0	3,580.8	3,780.5	3,764.7	11.4	11.4	172.75	78.1	1,289.5	1,549.3	1,527.1	22.14	69.990	
3,700.0	3,679.0	3,879.8	3,863.0	11.8	11.7	173.11	69.8	1,278.5	1,556.4	1,533.6	22.82	68.213	
3,800.0	3,777.1	3,979.1	3,961.3	12.1	12.1	173.46	61.5	1,267.4	1,563.7	1,540.2	23.51	66.522	
3,900.0	3,875.3	4,078.4	4,059.6	12.5	12.5	173.81	53.2	1,256.4	1,571.0	1,546.8	24.20	64.913	
4,000.0	3,973.5	4,177.6	4,158.0	12.9	12.8	174.16	44.9	1,245.4	1,578.3	1,553.4	24.90	63.381	
4,100.0	4,071.6	4,275.2	4,254.6	13.3	13.2	174.49	36.7	1,234.5	1,585.7	1,560.1	25.58	61.991	
4,200.0	4,169.8	4,364.2	4,342.7	13.7	13.5	174.79	29.5	1,225.0	1,593.6	1,567.4	26.25	60.713	
4,300.0	4,268.0	4,453.1	4,430.9	14.1	13.8	175.07	22.8	1,216.0	1,602.2	1,575.3	26.93	59.502	
4,400.0	4,366.1	4,542.0	4,519.2	14.5	14.2	175.33	16.4	1,207.6	1,611.5	1,583.8	27.60	58.378	
4,500.0	4,464.3	4,630.8	4,607.5	14.9	14.5	175.58	10.5	1,199.7	1,621.4	1,593.1	28.28	57.333	
4,600.0	4,562.4	4,719.6	4,695.8	15.4	14.8	175.81	5.0	1,192.4	1,632.0	1,603.1	28.95	56.364	
4,700.0	4,660.6	4,808.3	4,784.1	15.8	15.2	176.02	-0.1	1,185.6	1,643.3	1,613.7	29.63	55.465	
4,800.0	4,758.8	4,900.0	4,875.4	16.2	15.5	176.23	-5.0	1,179.2	1,655.2	1,624.9	30.31	54.612	
4,900.0	4,856.9	4,985.5	4,960.7	16.6	15.8	176.40	-9.1	1,173.8	1,667.8	1,636.8	30.96	53.860	
5,000.0	4,955.1	5,074.0	5,048.9	17.0	16.1	176.56	-12.9	1,168.6	1,681.0	1,649.4	31.63	53.148	

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 #701H
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 #701H	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)				
5,100.0	5,053.3	5,162.3	5,137.1	17.5	16.4	176.71	-16.4	1,164.1	1,694.9	1,662.6	32.29	52.490		
5,200.0	5,151.4	5,250.5	5,225.1	17.9	16.7	176.84	-19.4	1,160.1	1,709.3	1,676.4	32.94	51.885		
5,300.0	5,249.6	5,338.6	5,313.1	18.3	17.0	176.96	-22.0	1,156.6	1,724.5	1,690.9	33.60	51.329		
5,400.0	5,347.7	5,426.6	5,401.0	18.8	17.3	177.06	-24.2	1,153.7	1,740.2	1,706.0	34.24	50.821		
5,500.0	5,445.9	5,514.4	5,488.7	19.2	17.5	177.15	-26.0	1,151.3	1,756.5	1,721.7	34.88	50.359		
5,600.0	5,544.1	5,600.0	5,574.3	19.6	17.8	177.22	-27.4	1,149.5	1,773.5	1,738.0	35.50	49.952		
5,700.0	5,642.2	5,689.4	5,663.8	20.1	18.0	177.28	-28.4	1,148.1	1,791.1	1,755.0	36.13	49.570		
5,800.0	5,740.4	5,776.7	5,751.0	20.5	18.2	177.32	-29.0	1,147.3	1,809.3	1,772.5	36.74	49.251		
5,900.0	5,838.6	5,864.2	5,838.6	21.0	18.3	177.35	-29.2	1,147.1	1,828.1	1,790.8	37.28	49.035		
6,000.0	5,936.7	5,962.4	5,936.7	21.4	18.4	177.38	-29.2	1,147.1	1,847.1	1,809.3	37.80	48.870		
6,100.0	6,034.9	6,060.6	6,034.9	21.8	18.4	177.41	-29.2	1,147.1	1,866.2	1,827.8	38.33	48.691		
6,200.0	6,133.1	6,158.7	6,133.1	22.3	18.4	177.43	-29.2	1,147.1	1,885.2	1,846.4	38.86	48.512		
6,300.0	6,231.2	6,256.9	6,231.2	22.7	18.5	177.46	-29.2	1,147.1	1,904.3	1,864.9	39.40	48.333		
6,400.0	6,329.4	6,355.1	6,329.4	23.2	18.5	177.49	-29.2	1,147.1	1,923.4	1,883.4	39.94	48.155		
6,500.0	6,427.5	6,453.2	6,427.5	23.6	18.5	177.51	-29.2	1,147.1	1,942.4	1,901.9	40.49	47.977		
6,600.0	6,525.7	6,551.4	6,525.7	24.1	18.6	177.53	-29.2	1,147.1	1,961.5	1,920.5	41.04	47.799		
6,700.0	6,623.9	6,649.5	6,623.9	24.5	18.6	177.56	-29.2	1,147.1	1,980.6	1,939.0	41.59	47.623		
6,800.0	6,722.0	6,747.7	6,722.0	25.0	18.7	177.58	-29.2	1,147.1	1,999.6	1,957.5	42.14	47.447 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 #701H
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 #701H	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		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	81.65	221.7	1,510.0	1,526.2	1,519.8	6.43	237.404	
100.0	100.0	100.0	100.0	3.2	3.2	81.65	221.7	1,510.0	1,526.2	1,519.4	6.89	221.440	
200.0	200.0	200.0	200.0	3.5	3.5	81.65	221.7	1,510.0	1,526.2	1,518.9	7.33	208.271	
300.0	300.0	300.0	300.0	3.7	3.7	81.65	221.7	1,510.0	1,526.2	1,518.5	7.74	197.155	
400.0	400.0	400.0	400.0	3.9	3.9	81.65	221.7	1,510.0	1,526.2	1,518.1	8.14	187.602	
500.0	500.0	500.0	500.0	4.1	4.1	81.65	221.7	1,510.0	1,526.2	1,517.7	8.51	179.272	
600.0	600.0	600.0	600.0	4.2	4.2	81.65	221.7	1,510.0	1,526.2	1,517.4	8.88	171.920	
700.0	700.0	700.0	700.0	4.4	4.4	81.65	221.7	1,510.0	1,526.2	1,517.0	9.23	165.367	
800.0	800.0	800.0	800.0	4.6	4.6	81.65	221.7	1,510.0	1,526.2	1,516.7	9.57	159.474	
900.0	900.0	900.0	900.0	4.8	4.8	81.65	221.7	1,510.0	1,526.2	1,516.3	9.90	154.136	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	81.65	221.7	1,510.0	1,526.2	1,516.0	10.22	149.270	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	81.65	221.7	1,510.0	1,526.2	1,515.7	10.54	144.809	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	81.65	221.7	1,510.0	1,526.2	1,515.4	10.85	140.699	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	81.65	221.7	1,510.0	1,526.2	1,515.1	11.15	136.895	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	81.65	221.7	1,510.0	1,526.2	1,514.8	11.44	133.361	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	81.65	221.7	1,510.0	1,526.2	1,514.5	11.73	130.065 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-153.37	221.7	1,510.0	1,527.4	1,515.4	12.03	126.923	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-153.41	221.7	1,510.0	1,530.9	1,518.6	12.33	124.206	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-153.48	221.7	1,510.0	1,536.8	1,524.1	12.63	121.688	
1,900.0	1,899.3	1,871.5	1,871.5	6.4	6.2	-153.54	222.0	1,510.7	1,545.9	1,532.9	12.92	119.607	
2,000.0	1,998.7	1,942.8	1,942.8	6.6	6.4	-153.68	222.9	1,512.5	1,557.9	1,544.7	13.21	117.933	
2,100.0	2,098.2	2,000.0	1,999.9	6.8	6.5	-153.80	224.0	1,514.8	1,571.9	1,558.4	13.48	116.613	
2,200.0	2,197.6	2,084.2	2,084.0	7.0	6.6	-154.00	226.2	1,519.6	1,587.4	1,573.6	13.82	114.821	
2,300.0	2,297.1	2,154.3	2,153.8	7.3	6.7	-154.17	228.7	1,524.9	1,604.8	1,590.6	14.16	113.338	
2,400.0	2,396.5	2,223.8	2,223.0	7.5	6.9	-154.36	231.7	1,531.3	1,624.0	1,609.4	14.51	111.931	
2,500.0	2,496.0	2,300.0	2,298.6	7.8	7.1	-154.57	235.6	1,539.7	1,644.9	1,630.0	14.89	110.432	
2,600.0	2,595.4	2,365.0	2,363.0	8.1	7.2	-154.75	239.2	1,547.8	1,667.4	1,652.2	15.22	109.550	
2,700.0	2,694.8	2,442.2	2,439.3	8.4	7.3	-166.45	242.8	1,558.6	1,692.1	1,676.5	15.62	108.315	
2,800.0	2,794.0	2,518.6	2,514.8	8.7	7.5	-176.08	245.2	1,570.3	1,719.8	1,703.8	16.07	107.013	
2,900.0	2,893.0	2,595.9	2,590.9	9.0	7.7	176.55	246.6	1,583.2	1,750.5	1,733.9	16.54	105.843	
3,000.0	2,991.7	2,690.2	2,683.8	9.3	8.0	170.89	247.7	1,599.6	1,783.4	1,766.2	17.15	103.981	
3,100.0	3,090.0	2,783.9	2,776.1	9.6	8.2	167.19	248.8	1,615.8	1,818.1	1,800.4	17.73	102.544	
3,200.0	3,188.2	2,877.2	2,868.0	10.0	8.5	167.38	250.0	1,632.0	1,853.4	1,835.1	18.36	100.962	
3,300.0	3,286.3	2,970.6	2,960.0	10.3	8.8	167.56	251.1	1,648.2	1,888.8	1,869.8	18.99	99.476	
3,400.0	3,384.5	3,064.0	3,051.9	10.7	9.1	167.74	252.2	1,664.3	1,924.1	1,904.5	19.63	97.999	
3,500.0	3,482.7	3,157.4	3,143.9	11.0	9.4	167.91	253.4	1,680.5	1,959.5	1,939.2	20.30	96.542	
3,600.0	3,580.8	3,250.7	3,235.9	11.4	9.7	168.07	254.5	1,696.7	1,994.9	1,973.9	20.97	95.112 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 #701H
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 #701H	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		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	81.81	221.7	1,540.0	1,555.9	1,549.5	6.43	242.021	
100.0	100.0	100.0	100.0	3.2	3.2	81.81	221.7	1,540.0	1,555.9	1,549.0	6.89	225.747	
200.0	200.0	200.0	200.0	3.5	3.5	81.81	221.7	1,540.0	1,555.9	1,548.6	7.33	212.322	
300.0	300.0	300.0	300.0	3.7	3.7	81.81	221.7	1,540.0	1,555.9	1,548.2	7.74	200.990	
400.0	400.0	400.0	400.0	3.9	3.9	81.81	221.7	1,540.0	1,555.9	1,547.8	8.14	191.251	
500.0	500.0	500.0	500.0	4.1	4.1	81.81	221.7	1,540.0	1,555.9	1,547.4	8.51	182.759	
600.0	600.0	600.0	600.0	4.2	4.2	81.81	221.7	1,540.0	1,555.9	1,547.1	8.88	175.265	
700.0	700.0	700.0	700.0	4.4	4.4	81.81	221.7	1,540.0	1,555.9	1,546.7	9.23	168.583	
800.0	800.0	800.0	800.0	4.6	4.6	81.81	221.7	1,540.0	1,555.9	1,546.4	9.57	162.576	
900.0	900.0	900.0	900.0	4.8	4.8	81.81	221.7	1,540.0	1,555.9	1,546.0	9.90	157.134	
1,000.0	1,000.0	1,000.0	1,000.0	4.9	4.9	81.81	221.7	1,540.0	1,555.9	1,545.7	10.22	152.174	
1,100.0	1,100.0	1,100.0	1,100.0	5.1	5.1	81.81	221.7	1,540.0	1,555.9	1,545.4	10.54	147.626	
1,200.0	1,200.0	1,200.0	1,200.0	5.2	5.2	81.81	221.7	1,540.0	1,555.9	1,545.1	10.85	143.436	
1,300.0	1,300.0	1,300.0	1,300.0	5.4	5.4	81.81	221.7	1,540.0	1,555.9	1,544.8	11.15	139.558	
1,400.0	1,400.0	1,400.0	1,400.0	5.5	5.5	81.81	221.7	1,540.0	1,555.9	1,544.5	11.44	135.955	
1,500.0	1,500.0	1,500.0	1,500.0	5.7	5.7	81.81	221.7	1,540.0	1,555.9	1,544.2	11.73	132.595 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	5.9	5.8	-153.21	221.7	1,540.0	1,557.1	1,545.1	12.03	129.391	
1,700.0	1,699.9	1,699.9	1,699.9	6.0	6.0	-153.25	221.7	1,540.0	1,560.6	1,548.3	12.33	126.616	
1,800.0	1,799.7	1,799.7	1,799.7	6.2	6.1	-153.32	221.7	1,540.0	1,566.5	1,553.8	12.63	124.041	
1,900.0	1,899.3	1,870.4	1,870.4	6.4	6.2	-153.36	221.8	1,540.7	1,575.5	1,562.6	12.92	121.929	
2,000.0	1,998.7	1,940.7	1,940.7	6.6	6.3	-153.47	221.8	1,542.6	1,587.6	1,574.4	13.20	120.250	
2,100.0	2,098.2	2,000.0	1,999.9	6.8	6.4	-153.56	221.9	1,545.3	1,601.6	1,588.1	13.47	118.875	
2,200.0	2,197.6	2,080.2	2,080.0	7.0	6.6	-153.67	222.1	1,550.3	1,617.3	1,603.4	13.81	117.134	
2,300.0	2,297.1	2,149.4	2,148.9	7.3	6.7	-153.76	222.3	1,556.0	1,634.7	1,620.6	14.14	115.644	
2,400.0	2,396.5	2,218.1	2,217.3	7.5	6.9	-153.85	222.5	1,562.9	1,654.0	1,639.5	14.48	114.231	
2,500.0	2,496.0	2,300.0	2,298.6	7.8	7.0	-153.93	222.9	1,572.7	1,675.1	1,660.2	14.88	112.575	
2,600.0	2,595.4	2,354.0	2,352.1	8.1	7.2	-153.99	223.1	1,580.1	1,697.8	1,682.5	15.22	111.541	
2,700.0	2,694.8	2,421.0	2,418.3	8.4	7.3	-165.58	223.5	1,590.4	1,723.1	1,707.4	15.61	110.368	
2,800.0	2,794.0	2,500.0	2,496.1	8.7	7.5	-175.15	224.0	1,604.0	1,752.0	1,735.9	16.09	108.915	
2,900.0	2,893.0	2,551.8	2,547.0	9.0	7.7	177.47	224.3	1,613.8	1,784.3	1,767.8	16.48	108.238	
3,000.0	2,991.7	2,600.0	2,594.2	9.3	7.8	171.72	224.7	1,623.5	1,820.1	1,803.2	16.88	107.838	
3,100.0	3,090.0	2,677.6	2,669.9	9.6	8.1	167.97	225.2	1,640.4	1,859.1	1,841.7	17.40	106.865	
3,200.0	3,188.2	2,738.7	2,729.2	10.0	8.3	168.12	225.7	1,654.7	1,900.2	1,882.3	17.88	106.254	
3,300.0	3,286.3	2,800.0	2,788.6	10.3	8.5	168.26	226.3	1,670.1	1,942.8	1,924.5	18.36	105.797	
3,400.0	3,384.5	2,888.1	2,873.8	10.7	8.7	168.46	227.1	1,692.9	1,986.2	1,967.2	18.98	104.632 SF	

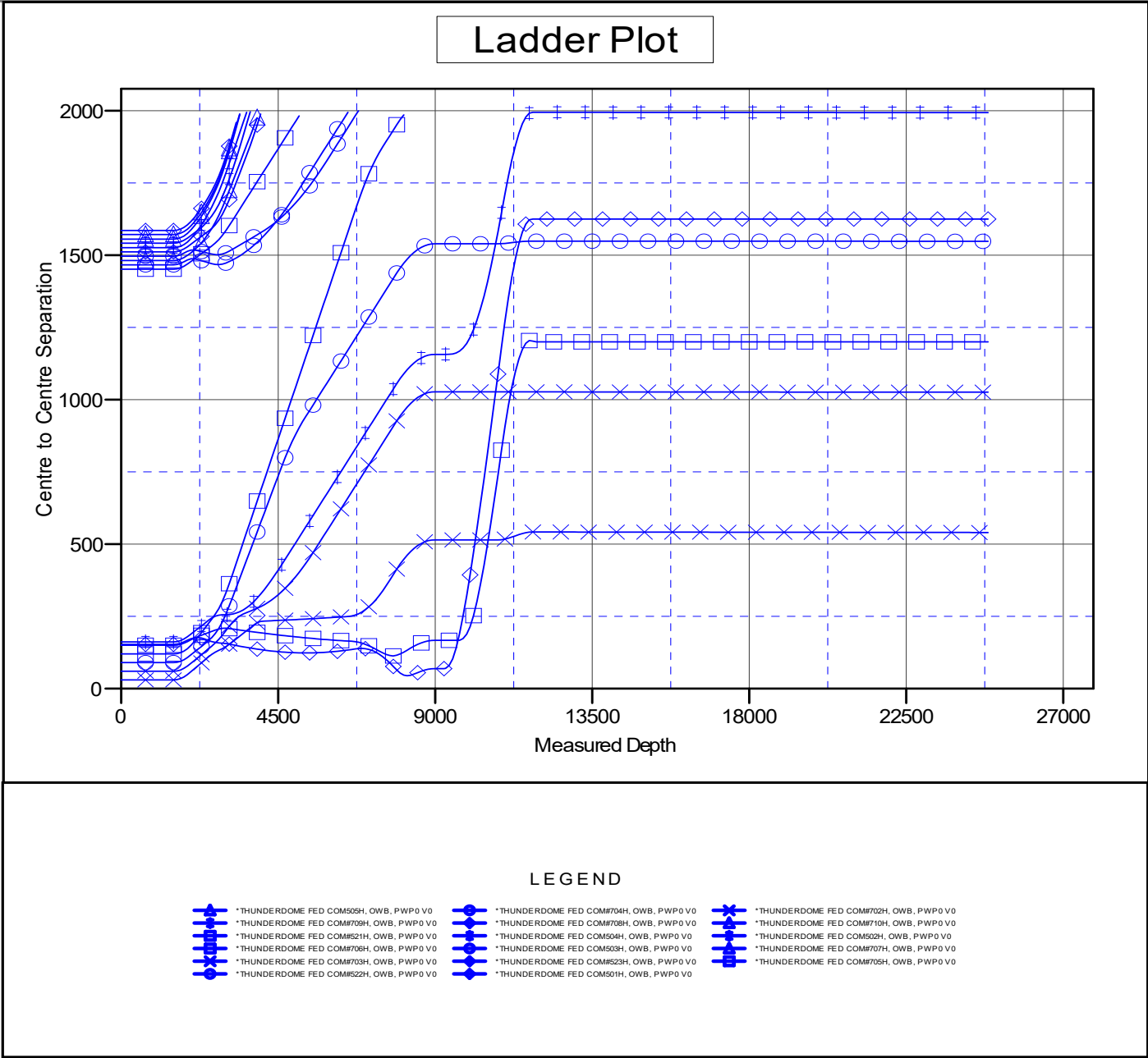
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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 #701H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.26°

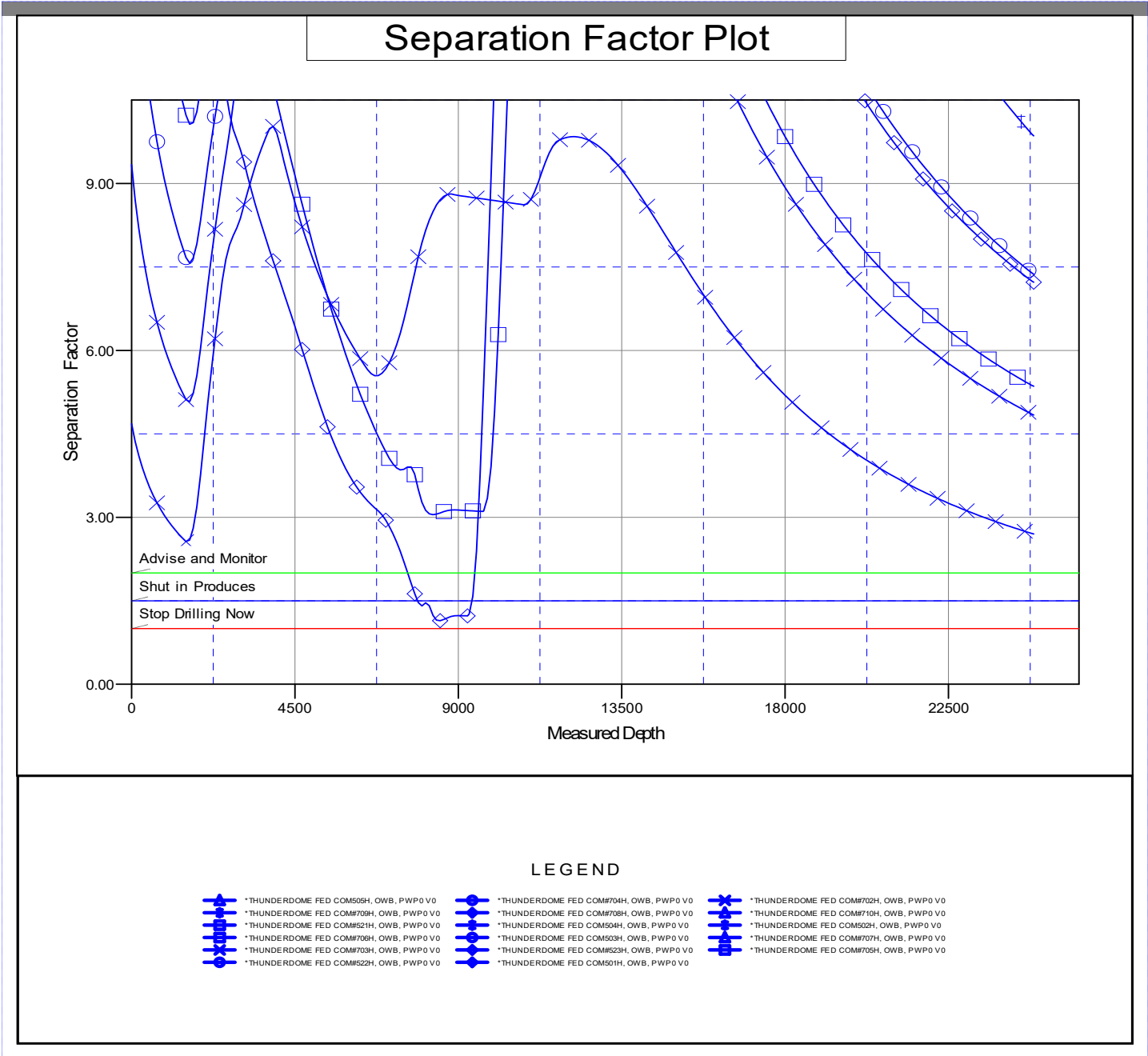


ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well *THUNDERDOME FED COM #701H
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 #701H	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 #701H
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 #701H

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 #701H
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 #701H	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 #701H					
Well Position	+N/-S	0.0 usft	Northing:	469,242.95 usft	Latitude:	32° 17' 20.974 N
	+E/-W	0.0 usft	Easting:	647,817.46 usft	Longitude:	103° 51' 17.963 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	47,538.99767786

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	354.89	

Plan Survey Tool Program	Date	10/5/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	24,848.0 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 #701H
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 #701H	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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,900.0	6.00	235.00	1,899.3	-12.0	-17.1	1.50	1.50	0.00	235.00	
2,604.6	6.00	235.00	2,600.0	-54.2	-77.5	0.00	0.00	0.00	0.00	
3,082.6	11.00	272.00	3,073.0	-67.0	-143.6	1.50	1.05	7.74	66.92	
7,877.8	11.00	272.00	7,780.0	-35.1	-1,058.0	0.00	0.00	0.00	0.00	
8,977.8	0.00	0.00	8,873.3	-31.4	-1,163.2	1.00	-1.00	8.00	180.00	
10,881.5	0.00	0.00	10,777.0	-31.4	-1,163.2	0.00	0.00	0.00	0.00	
11,781.5	90.00	359.78	11,350.0	541.6	-1,165.4	10.00	10.00	-0.02	359.78	
24,848.7	90.00	359.78	11,350.0	13,608.7	-1,216.3	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 #701H
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 #701H	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	1.50	235.00	1,600.0	-0.8	-1.1	-0.7	1.50	1.50	0.00
1,700.0	3.00	235.00	1,699.9	-3.0	-4.3	-2.6	1.50	1.50	0.00
1,800.0	4.50	235.00	1,799.7	-6.8	-9.6	-5.9	1.50	1.50	0.00
1,900.0	6.00	235.00	1,899.3	-12.0	-17.1	-10.4	1.50	1.50	0.00
2,000.0	6.00	235.00	1,998.7	-18.0	-25.7	-15.6	0.00	0.00	0.00
2,100.0	6.00	235.00	2,098.2	-24.0	-34.3	-20.8	0.00	0.00	0.00
2,200.0	6.00	235.00	2,197.6	-30.0	-42.8	-26.1	0.00	0.00	0.00
2,300.0	6.00	235.00	2,297.1	-36.0	-51.4	-31.3	0.00	0.00	0.00
2,400.0	6.00	235.00	2,396.5	-42.0	-60.0	-36.5	0.00	0.00	0.00
2,500.0	6.00	235.00	2,496.0	-48.0	-68.5	-41.7	0.00	0.00	0.00
2,600.0	6.00	235.00	2,595.4	-54.0	-77.1	-46.9	0.00	0.00	0.00
2,604.6	6.00	235.00	2,600.0	-54.2	-77.5	-47.1	0.00	0.00	0.00
2,700.0	6.69	246.37	2,694.8	-59.3	-86.6	-51.4	1.50	0.72	11.92
2,800.0	7.64	255.72	2,794.0	-63.3	-98.4	-54.3	1.50	0.95	9.35
2,900.0	8.74	262.88	2,893.0	-65.9	-112.4	-55.6	1.50	1.10	7.16
3,000.0	9.95	268.38	2,991.7	-67.1	-128.6	-55.4	1.50	1.21	5.50
3,082.6	11.00	272.00	3,073.0	-67.0	-143.6	-54.0	1.50	1.27	4.38
3,100.0	11.00	272.00	3,090.0	-66.9	-146.9	-53.5	0.00	0.00	0.00
3,200.0	11.00	272.00	3,188.2	-66.2	-166.0	-51.2	0.00	0.00	0.00
3,300.0	11.00	272.00	3,286.3	-65.6	-185.1	-48.8	0.00	0.00	0.00
3,400.0	11.00	272.00	3,384.5	-64.9	-204.1	-46.5	0.00	0.00	0.00
3,500.0	11.00	272.00	3,482.7	-64.2	-223.2	-44.1	0.00	0.00	0.00
3,600.0	11.00	272.00	3,580.8	-63.6	-242.3	-41.7	0.00	0.00	0.00
3,700.0	11.00	272.00	3,679.0	-62.9	-261.3	-39.4	0.00	0.00	0.00
3,800.0	11.00	272.00	3,777.1	-62.2	-280.4	-37.0	0.00	0.00	0.00
3,900.0	11.00	272.00	3,875.3	-61.6	-299.5	-34.7	0.00	0.00	0.00
4,000.0	11.00	272.00	3,973.5	-60.9	-318.5	-32.3	0.00	0.00	0.00
4,100.0	11.00	272.00	4,071.6	-60.2	-337.6	-29.9	0.00	0.00	0.00
4,200.0	11.00	272.00	4,169.8	-59.6	-356.7	-27.6	0.00	0.00	0.00
4,300.0	11.00	272.00	4,268.0	-58.9	-375.7	-25.2	0.00	0.00	0.00
4,400.0	11.00	272.00	4,366.1	-58.2	-394.8	-22.8	0.00	0.00	0.00
4,500.0	11.00	272.00	4,464.3	-57.6	-413.9	-20.5	0.00	0.00	0.00
4,600.0	11.00	272.00	4,562.4	-56.9	-433.0	-18.1	0.00	0.00	0.00
4,700.0	11.00	272.00	4,660.6	-56.2	-452.0	-15.8	0.00	0.00	0.00
4,800.0	11.00	272.00	4,758.8	-55.6	-471.1	-13.4	0.00	0.00	0.00
4,900.0	11.00	272.00	4,856.9	-54.9	-490.2	-11.0	0.00	0.00	0.00
5,000.0	11.00	272.00	4,955.1	-54.2	-509.2	-8.7	0.00	0.00	0.00
5,100.0	11.00	272.00	5,053.3	-53.6	-528.3	-6.3	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #701H
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 #701H	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	11.00	272.00	5,151.4	-52.9	-547.4	-4.0	0.00	0.00	0.00
5,300.0	11.00	272.00	5,249.6	-52.2	-566.4	-1.6	0.00	0.00	0.00
5,400.0	11.00	272.00	5,347.7	-51.6	-585.5	0.8	0.00	0.00	0.00
5,500.0	11.00	272.00	5,445.9	-50.9	-604.6	3.1	0.00	0.00	0.00
5,600.0	11.00	272.00	5,544.1	-50.2	-623.6	5.5	0.00	0.00	0.00
5,700.0	11.00	272.00	5,642.2	-49.6	-642.7	7.8	0.00	0.00	0.00
5,800.0	11.00	272.00	5,740.4	-48.9	-661.8	10.2	0.00	0.00	0.00
5,900.0	11.00	272.00	5,838.6	-48.2	-680.9	12.6	0.00	0.00	0.00
6,000.0	11.00	272.00	5,936.7	-47.6	-699.9	14.9	0.00	0.00	0.00
6,100.0	11.00	272.00	6,034.9	-46.9	-719.0	17.3	0.00	0.00	0.00
6,200.0	11.00	272.00	6,133.1	-46.2	-738.1	19.6	0.00	0.00	0.00
6,300.0	11.00	272.00	6,231.2	-45.6	-757.1	22.0	0.00	0.00	0.00
6,400.0	11.00	272.00	6,329.4	-44.9	-776.2	24.4	0.00	0.00	0.00
6,500.0	11.00	272.00	6,427.5	-44.2	-795.3	26.7	0.00	0.00	0.00
6,600.0	11.00	272.00	6,525.7	-43.6	-814.3	29.1	0.00	0.00	0.00
6,700.0	11.00	272.00	6,623.9	-42.9	-833.4	31.5	0.00	0.00	0.00
6,800.0	11.00	272.00	6,722.0	-42.2	-852.5	33.8	0.00	0.00	0.00
6,900.0	11.00	272.00	6,820.2	-41.6	-871.5	36.2	0.00	0.00	0.00
7,000.0	11.00	272.00	6,918.4	-40.9	-890.6	38.5	0.00	0.00	0.00
7,100.0	11.00	272.00	7,016.5	-40.2	-909.7	40.9	0.00	0.00	0.00
7,200.0	11.00	272.00	7,114.7	-39.6	-928.8	43.3	0.00	0.00	0.00
7,300.0	11.00	272.00	7,212.8	-38.9	-947.8	45.6	0.00	0.00	0.00
7,400.0	11.00	272.00	7,311.0	-38.3	-966.9	48.0	0.00	0.00	0.00
7,500.0	11.00	272.00	7,409.2	-37.6	-986.0	50.3	0.00	0.00	0.00
7,600.0	11.00	272.00	7,507.3	-36.9	-1,005.0	52.7	0.00	0.00	0.00
7,700.0	11.00	272.00	7,605.5	-36.3	-1,024.1	55.1	0.00	0.00	0.00
7,800.0	11.00	272.00	7,703.7	-35.6	-1,043.2	57.4	0.00	0.00	0.00
7,877.8	11.00	272.00	7,780.0	-35.1	-1,058.0	59.3	0.00	0.00	0.00
7,900.0	10.78	272.00	7,801.8	-34.9	-1,062.2	59.8	1.00	-1.00	0.00
8,000.0	9.78	272.00	7,900.2	-34.3	-1,080.0	62.0	1.00	-1.00	0.00
8,100.0	8.78	272.00	7,998.9	-33.7	-1,096.1	64.0	1.00	-1.00	0.00
8,200.0	7.78	272.00	8,097.9	-33.2	-1,110.5	65.8	1.00	-1.00	0.00
8,300.0	6.78	272.00	8,197.1	-32.8	-1,123.2	67.3	1.00	-1.00	0.00
8,400.0	5.78	272.00	8,296.5	-32.4	-1,134.1	68.7	1.00	-1.00	0.00
8,500.0	4.78	272.00	8,396.0	-32.1	-1,143.3	69.8	1.00	-1.00	0.00
8,600.0	3.78	272.00	8,495.8	-31.8	-1,150.8	70.7	1.00	-1.00	0.00
8,700.0	2.78	272.00	8,595.6	-31.6	-1,156.5	71.4	1.00	-1.00	0.00
8,800.0	1.78	272.00	8,695.5	-31.5	-1,160.4	71.9	1.00	-1.00	0.00
8,900.0	0.78	272.00	8,795.5	-31.4	-1,162.7	72.2	1.00	-1.00	0.00
8,977.8	0.00	0.00	8,873.3	-31.4	-1,163.2	72.3	1.00	-1.00	113.15
9,000.0	0.00	0.00	8,895.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,100.0	0.00	0.00	8,995.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,200.0	0.00	0.00	9,095.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,300.0	0.00	0.00	9,195.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,400.0	0.00	0.00	9,295.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,500.0	0.00	0.00	9,395.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,600.0	0.00	0.00	9,495.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,700.0	0.00	0.00	9,595.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,800.0	0.00	0.00	9,695.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
9,900.0	0.00	0.00	9,795.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,000.0	0.00	0.00	9,895.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,100.0	0.00	0.00	9,995.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,200.0	0.00	0.00	10,095.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,300.0	0.00	0.00	10,195.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #701H
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 #701H	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	10,295.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,500.0	0.00	0.00	10,395.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,600.0	0.00	0.00	10,495.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,700.0	0.00	0.00	10,595.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,800.0	0.00	0.00	10,695.5	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,881.5	0.00	0.00	10,777.0	-31.4	-1,163.2	72.3	0.00	0.00	0.00
10,900.0	1.85	359.78	10,795.5	-31.1	-1,163.2	72.6	10.00	10.00	-1.21
11,000.0	11.85	359.78	10,894.6	-19.2	-1,163.3	84.4	10.00	10.00	0.00
11,100.0	21.85	359.78	10,990.2	9.8	-1,163.4	113.3	10.00	10.00	0.00
11,200.0	31.85	359.78	11,079.3	54.9	-1,163.5	158.2	10.00	10.00	0.00
11,300.0	41.85	359.78	11,159.3	114.8	-1,163.8	217.9	10.00	10.00	0.00
11,400.0	51.85	359.78	11,227.6	187.6	-1,164.1	290.5	10.00	10.00	0.00
11,500.0	61.85	359.78	11,282.2	271.2	-1,164.4	373.8	10.00	10.00	0.00
11,600.0	71.85	359.78	11,321.4	363.1	-1,164.7	465.3	10.00	10.00	0.00
11,700.0	81.85	359.78	11,344.2	460.3	-1,165.1	562.2	10.00	10.00	0.00
11,775.1	89.36	359.78	11,349.9	535.1	-1,165.4	636.8	10.00	10.00	0.00
FTP (THUNDERDOME FED COM #701H)									
11,781.5	90.00	359.78	11,350.0	541.6	-1,165.4	643.2	10.00	10.00	0.00
11,800.0	90.00	359.78	11,350.0	560.0	-1,165.5	661.6	0.00	0.00	0.00
11,900.0	90.00	359.78	11,350.0	660.0	-1,165.9	761.2	0.00	0.00	0.00
12,000.0	90.00	359.78	11,350.0	760.0	-1,166.3	860.8	0.00	0.00	0.00
12,100.0	90.00	359.78	11,350.0	860.0	-1,166.7	960.5	0.00	0.00	0.00
12,200.0	90.00	359.78	11,350.0	960.0	-1,167.1	1,060.1	0.00	0.00	0.00
12,300.0	90.00	359.78	11,350.0	1,060.0	-1,167.5	1,159.8	0.00	0.00	0.00
12,400.0	90.00	359.78	11,350.0	1,160.0	-1,167.8	1,259.4	0.00	0.00	0.00
12,500.0	90.00	359.78	11,350.0	1,260.0	-1,168.2	1,359.0	0.00	0.00	0.00
12,600.0	90.00	359.78	11,350.0	1,360.0	-1,168.6	1,458.7	0.00	0.00	0.00
12,700.0	90.00	359.78	11,350.0	1,460.0	-1,169.0	1,558.3	0.00	0.00	0.00
12,800.0	90.00	359.78	11,350.0	1,560.0	-1,169.4	1,657.9	0.00	0.00	0.00
12,900.0	90.00	359.78	11,350.0	1,660.0	-1,169.8	1,757.6	0.00	0.00	0.00
13,000.0	90.00	359.78	11,350.0	1,760.0	-1,170.2	1,857.2	0.00	0.00	0.00
13,100.0	90.00	359.78	11,350.0	1,860.0	-1,170.6	1,956.9	0.00	0.00	0.00
13,200.0	90.00	359.78	11,350.0	1,960.0	-1,171.0	2,056.5	0.00	0.00	0.00
13,300.0	90.00	359.78	11,350.0	2,060.0	-1,171.4	2,156.1	0.00	0.00	0.00
13,400.0	90.00	359.78	11,350.0	2,160.0	-1,171.7	2,255.8	0.00	0.00	0.00
13,500.0	90.00	359.78	11,350.0	2,260.0	-1,172.1	2,355.4	0.00	0.00	0.00
13,600.0	90.00	359.78	11,350.0	2,360.0	-1,172.5	2,455.0	0.00	0.00	0.00
13,700.0	90.00	359.78	11,350.0	2,460.0	-1,172.9	2,554.7	0.00	0.00	0.00
13,800.0	90.00	359.78	11,350.0	2,560.0	-1,173.3	2,654.3	0.00	0.00	0.00
13,900.0	90.00	359.78	11,350.0	2,660.0	-1,173.7	2,753.9	0.00	0.00	0.00
14,000.0	90.00	359.78	11,350.0	2,760.0	-1,174.1	2,853.6	0.00	0.00	0.00
14,100.0	90.00	359.78	11,350.0	2,860.0	-1,174.5	2,953.2	0.00	0.00	0.00
14,200.0	90.00	359.78	11,350.0	2,960.0	-1,174.9	3,052.9	0.00	0.00	0.00
14,300.0	90.00	359.78	11,350.0	3,060.0	-1,175.2	3,152.5	0.00	0.00	0.00
14,400.0	90.00	359.78	11,350.0	3,160.0	-1,175.6	3,252.1	0.00	0.00	0.00
14,500.0	90.00	359.78	11,350.0	3,260.0	-1,176.0	3,351.8	0.00	0.00	0.00
14,600.0	90.00	359.78	11,350.0	3,360.0	-1,176.4	3,451.4	0.00	0.00	0.00
14,700.0	90.00	359.78	11,350.0	3,460.0	-1,176.8	3,551.0	0.00	0.00	0.00
14,800.0	90.00	359.78	11,350.0	3,560.0	-1,177.2	3,650.7	0.00	0.00	0.00
14,900.0	90.00	359.78	11,350.0	3,660.0	-1,177.6	3,750.3	0.00	0.00	0.00
15,000.0	90.00	359.78	11,350.0	3,760.0	-1,178.0	3,850.0	0.00	0.00	0.00
15,100.0	90.00	359.78	11,350.0	3,860.0	-1,178.4	3,949.6	0.00	0.00	0.00
15,200.0	90.00	359.78	11,350.0	3,960.0	-1,178.8	4,049.2	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #701H
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 #701H	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	359.78	11,350.0	4,060.0	-1,179.1	4,148.9	0.00	0.00	0.00	
15,400.0	90.00	359.78	11,350.0	4,160.0	-1,179.5	4,248.5	0.00	0.00	0.00	
15,500.0	90.00	359.78	11,350.0	4,260.0	-1,179.9	4,348.1	0.00	0.00	0.00	
15,600.0	90.00	359.78	11,350.0	4,360.0	-1,180.3	4,447.8	0.00	0.00	0.00	
15,700.0	90.00	359.78	11,350.0	4,460.0	-1,180.7	4,547.4	0.00	0.00	0.00	
15,800.0	90.00	359.78	11,350.0	4,560.0	-1,181.1	4,647.0	0.00	0.00	0.00	
15,900.0	90.00	359.78	11,350.0	4,660.0	-1,181.5	4,746.7	0.00	0.00	0.00	
16,000.0	90.00	359.78	11,350.0	4,760.0	-1,181.9	4,846.3	0.00	0.00	0.00	
16,100.0	90.00	359.78	11,350.0	4,860.0	-1,182.3	4,946.0	0.00	0.00	0.00	
16,200.0	90.00	359.78	11,350.0	4,960.0	-1,182.6	5,045.6	0.00	0.00	0.00	
16,300.0	90.00	359.78	11,350.0	5,060.0	-1,183.0	5,145.2	0.00	0.00	0.00	
16,400.0	90.00	359.78	11,350.0	5,160.0	-1,183.4	5,244.9	0.00	0.00	0.00	
16,500.0	90.00	359.78	11,350.0	5,260.0	-1,183.8	5,344.5	0.00	0.00	0.00	
16,600.0	90.00	359.78	11,350.0	5,360.0	-1,184.2	5,444.1	0.00	0.00	0.00	
16,700.0	90.00	359.78	11,350.0	5,460.0	-1,184.6	5,543.8	0.00	0.00	0.00	
16,800.0	90.00	359.78	11,350.0	5,560.0	-1,185.0	5,643.4	0.00	0.00	0.00	
16,900.0	90.00	359.78	11,350.0	5,660.0	-1,185.4	5,743.1	0.00	0.00	0.00	
17,000.0	90.00	359.78	11,350.0	5,760.0	-1,185.8	5,842.7	0.00	0.00	0.00	
17,100.0	90.00	359.78	11,350.0	5,860.0	-1,186.2	5,942.3	0.00	0.00	0.00	
17,200.0	90.00	359.78	11,350.0	5,960.0	-1,186.5	6,042.0	0.00	0.00	0.00	
17,300.0	90.00	359.78	11,350.0	6,060.0	-1,186.9	6,141.6	0.00	0.00	0.00	
17,400.0	90.00	359.78	11,350.0	6,160.0	-1,187.3	6,241.2	0.00	0.00	0.00	
17,500.0	90.00	359.78	11,350.0	6,260.0	-1,187.7	6,340.9	0.00	0.00	0.00	
17,600.0	90.00	359.78	11,350.0	6,360.0	-1,188.1	6,440.5	0.00	0.00	0.00	
17,700.0	90.00	359.78	11,350.0	6,460.0	-1,188.5	6,540.1	0.00	0.00	0.00	
17,800.0	90.00	359.78	11,350.0	6,560.0	-1,188.9	6,639.8	0.00	0.00	0.00	
17,900.0	90.00	359.78	11,350.0	6,660.0	-1,189.3	6,739.4	0.00	0.00	0.00	
18,000.0	90.00	359.78	11,350.0	6,760.0	-1,189.7	6,839.1	0.00	0.00	0.00	
18,100.0	90.00	359.78	11,350.0	6,860.0	-1,190.1	6,938.7	0.00	0.00	0.00	
18,200.0	90.00	359.78	11,350.0	6,960.0	-1,190.4	7,038.3	0.00	0.00	0.00	
18,300.0	90.00	359.78	11,350.0	7,060.0	-1,190.8	7,138.0	0.00	0.00	0.00	
18,400.0	90.00	359.78	11,350.0	7,160.0	-1,191.2	7,237.6	0.00	0.00	0.00	
18,500.0	90.00	359.78	11,350.0	7,260.0	-1,191.6	7,337.2	0.00	0.00	0.00	
18,600.0	90.00	359.78	11,350.0	7,360.0	-1,192.0	7,436.9	0.00	0.00	0.00	
18,700.0	90.00	359.78	11,350.0	7,460.0	-1,192.4	7,536.5	0.00	0.00	0.00	
18,800.0	90.00	359.78	11,350.0	7,560.0	-1,192.8	7,636.2	0.00	0.00	0.00	
18,900.0	90.00	359.78	11,350.0	7,660.0	-1,193.2	7,735.8	0.00	0.00	0.00	
19,000.0	90.00	359.78	11,350.0	7,760.0	-1,193.6	7,835.4	0.00	0.00	0.00	
19,100.0	90.00	359.78	11,350.0	7,860.0	-1,193.9	7,935.1	0.00	0.00	0.00	
19,200.0	90.00	359.78	11,350.0	7,960.0	-1,194.3	8,034.7	0.00	0.00	0.00	
19,300.0	90.00	359.78	11,350.0	8,060.0	-1,194.7	8,134.3	0.00	0.00	0.00	
19,400.0	90.00	359.78	11,350.0	8,160.0	-1,195.1	8,234.0	0.00	0.00	0.00	
19,500.0	90.00	359.78	11,350.0	8,260.0	-1,195.5	8,333.6	0.00	0.00	0.00	
19,600.0	90.00	359.78	11,350.0	8,360.0	-1,195.9	8,433.2	0.00	0.00	0.00	
19,700.0	90.00	359.78	11,350.0	8,460.0	-1,196.3	8,532.9	0.00	0.00	0.00	
19,800.0	90.00	359.78	11,350.0	8,560.0	-1,196.7	8,632.5	0.00	0.00	0.00	
19,900.0	90.00	359.78	11,350.0	8,660.0	-1,197.1	8,732.2	0.00	0.00	0.00	
20,000.0	90.00	359.78	11,350.0	8,760.0	-1,197.5	8,831.8	0.00	0.00	0.00	
20,100.0	90.00	359.78	11,350.0	8,860.0	-1,197.8	8,931.4	0.00	0.00	0.00	
20,200.0	90.00	359.78	11,350.0	8,960.0	-1,198.2	9,031.1	0.00	0.00	0.00	
20,300.0	90.00	359.78	11,350.0	9,060.0	-1,198.6	9,130.7	0.00	0.00	0.00	
20,400.0	90.00	359.78	11,350.0	9,160.0	-1,199.0	9,230.3	0.00	0.00	0.00	
20,500.0	90.00	359.78	11,350.0	9,260.0	-1,199.4	9,330.0	0.00	0.00	0.00	
20,600.0	90.00	359.78	11,350.0	9,360.0	-1,199.8	9,429.6	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #701H
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 #701H	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	359.78	11,350.0	9,460.0	-1,200.2	9,529.3	0.00	0.00	0.00	
20,800.0	90.00	359.78	11,350.0	9,560.0	-1,200.6	9,628.9	0.00	0.00	0.00	
20,900.0	90.00	359.78	11,350.0	9,660.0	-1,201.0	9,728.5	0.00	0.00	0.00	
21,000.0	90.00	359.78	11,350.0	9,760.0	-1,201.3	9,828.2	0.00	0.00	0.00	
21,100.0	90.00	359.78	11,350.0	9,860.0	-1,201.7	9,927.8	0.00	0.00	0.00	
21,200.0	90.00	359.78	11,350.0	9,960.0	-1,202.1	10,027.4	0.00	0.00	0.00	
21,300.0	90.00	359.78	11,350.0	10,060.0	-1,202.5	10,127.1	0.00	0.00	0.00	
21,400.0	90.00	359.78	11,350.0	10,160.0	-1,202.9	10,226.7	0.00	0.00	0.00	
21,500.0	90.00	359.78	11,350.0	10,260.0	-1,203.3	10,326.3	0.00	0.00	0.00	
21,600.0	90.00	359.78	11,350.0	10,360.0	-1,203.7	10,426.0	0.00	0.00	0.00	
21,700.0	90.00	359.78	11,350.0	10,460.0	-1,204.1	10,525.6	0.00	0.00	0.00	
21,800.0	90.00	359.78	11,350.0	10,560.0	-1,204.5	10,625.3	0.00	0.00	0.00	
21,900.0	90.00	359.78	11,350.0	10,660.0	-1,204.9	10,724.9	0.00	0.00	0.00	
22,000.0	90.00	359.78	11,350.0	10,760.0	-1,205.2	10,824.5	0.00	0.00	0.00	
22,100.0	90.00	359.78	11,350.0	10,860.0	-1,205.6	10,924.2	0.00	0.00	0.00	
22,200.0	90.00	359.78	11,350.0	10,960.0	-1,206.0	11,023.8	0.00	0.00	0.00	
22,300.0	90.00	359.78	11,350.0	11,060.0	-1,206.4	11,123.4	0.00	0.00	0.00	
22,400.0	90.00	359.78	11,350.0	11,160.0	-1,206.8	11,223.1	0.00	0.00	0.00	
22,500.0	90.00	359.78	11,350.0	11,260.0	-1,207.2	11,322.7	0.00	0.00	0.00	
22,600.0	90.00	359.78	11,350.0	11,360.0	-1,207.6	11,422.4	0.00	0.00	0.00	
22,700.0	90.00	359.78	11,350.0	11,460.0	-1,208.0	11,522.0	0.00	0.00	0.00	
22,800.0	90.00	359.78	11,350.0	11,560.0	-1,208.4	11,621.6	0.00	0.00	0.00	
22,900.0	90.00	359.78	11,350.0	11,660.0	-1,208.7	11,721.3	0.00	0.00	0.00	
23,000.0	90.00	359.78	11,350.0	11,760.0	-1,209.1	11,820.9	0.00	0.00	0.00	
23,100.0	90.00	359.78	11,350.0	11,860.0	-1,209.5	11,920.5	0.00	0.00	0.00	
23,200.0	90.00	359.78	11,350.0	11,960.0	-1,209.9	12,020.2	0.00	0.00	0.00	
23,300.0	90.00	359.78	11,350.0	12,060.0	-1,210.3	12,119.8	0.00	0.00	0.00	
23,400.0	90.00	359.78	11,350.0	12,159.9	-1,210.7	12,219.4	0.00	0.00	0.00	
23,500.0	90.00	359.78	11,350.0	12,259.9	-1,211.1	12,319.1	0.00	0.00	0.00	
23,600.0	90.00	359.78	11,350.0	12,359.9	-1,211.5	12,418.7	0.00	0.00	0.00	
23,700.0	90.00	359.78	11,350.0	12,459.9	-1,211.9	12,518.4	0.00	0.00	0.00	
23,800.0	90.00	359.78	11,350.0	12,559.9	-1,212.3	12,618.0	0.00	0.00	0.00	
23,900.0	90.00	359.78	11,350.0	12,659.9	-1,212.6	12,717.6	0.00	0.00	0.00	
24,000.0	90.00	359.78	11,350.0	12,759.9	-1,213.0	12,817.3	0.00	0.00	0.00	
24,100.0	90.00	359.78	11,350.0	12,859.9	-1,213.4	12,916.9	0.00	0.00	0.00	
24,200.0	90.00	359.78	11,350.0	12,959.9	-1,213.8	13,016.5	0.00	0.00	0.00	
24,300.0	90.00	359.78	11,350.0	13,059.9	-1,214.2	13,116.2	0.00	0.00	0.00	
24,400.0	90.00	359.78	11,350.0	13,159.9	-1,214.6	13,215.8	0.00	0.00	0.00	
24,500.0	90.00	359.78	11,350.0	13,259.9	-1,215.0	13,315.5	0.00	0.00	0.00	
24,600.0	90.00	359.78	11,350.0	13,359.9	-1,215.4	13,415.1	0.00	0.00	0.00	
24,700.0	90.00	359.78	11,350.0	13,459.9	-1,215.8	13,514.7	0.00	0.00	0.00	
24,798.7	90.00	359.78	11,350.0	13,558.7	-1,216.1	13,613.1	0.00	0.00	0.00	
LTP (THUNDERDOME FED COM #701H)										
24,800.0	90.00	359.78	11,350.0	13,559.9	-1,216.2	13,614.4	0.00	0.00	0.00	
24,848.7	90.00	359.78	11,350.0	13,608.7	-1,216.3	13,662.9	0.00	0.00	0.00	
PBHL (THUNDERDOME FED COM #701H)										

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	Local Co-ordinate Reference:	Well THUNDERDOME FED COM #701H
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 #701H	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	13,608.7	-1,216.3	482,851.62	646,601.12	32° 19' 35.697 N	103° 51' 31.431 W
LTP (THUNDERDOME I - plan misses target center by 0.4usft at 24798.7usft MD (11350.0 TVD, 13558.7 N, -1216.1 E) - Circle (radius 50.0)	90.00	359.77	11,350.0	13,558.7	-1,215.7	482,801.62	646,601.73	32° 19' 35.203 N	103° 51' 31.427 W
FTP (THUNDERDOME I - plan misses target center by 2.0usft at 11775.1usft MD (11349.9 TVD, 535.1 N, -1165.4 E) - Circle (radius 50.0)	0.00	0.00	11,350.0	535.1	-1,167.4	469,778.07	646,650.03	32° 17' 26.321 N	103° 51' 31.536 W

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	24,848.0	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 701H
SURFACE HOLE FOOTAGE:	2210'/S & 1492'/W
BOTTOM HOLE FOOTAGE:	50'/N & 330'/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 **10,750** 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 **24,848** 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

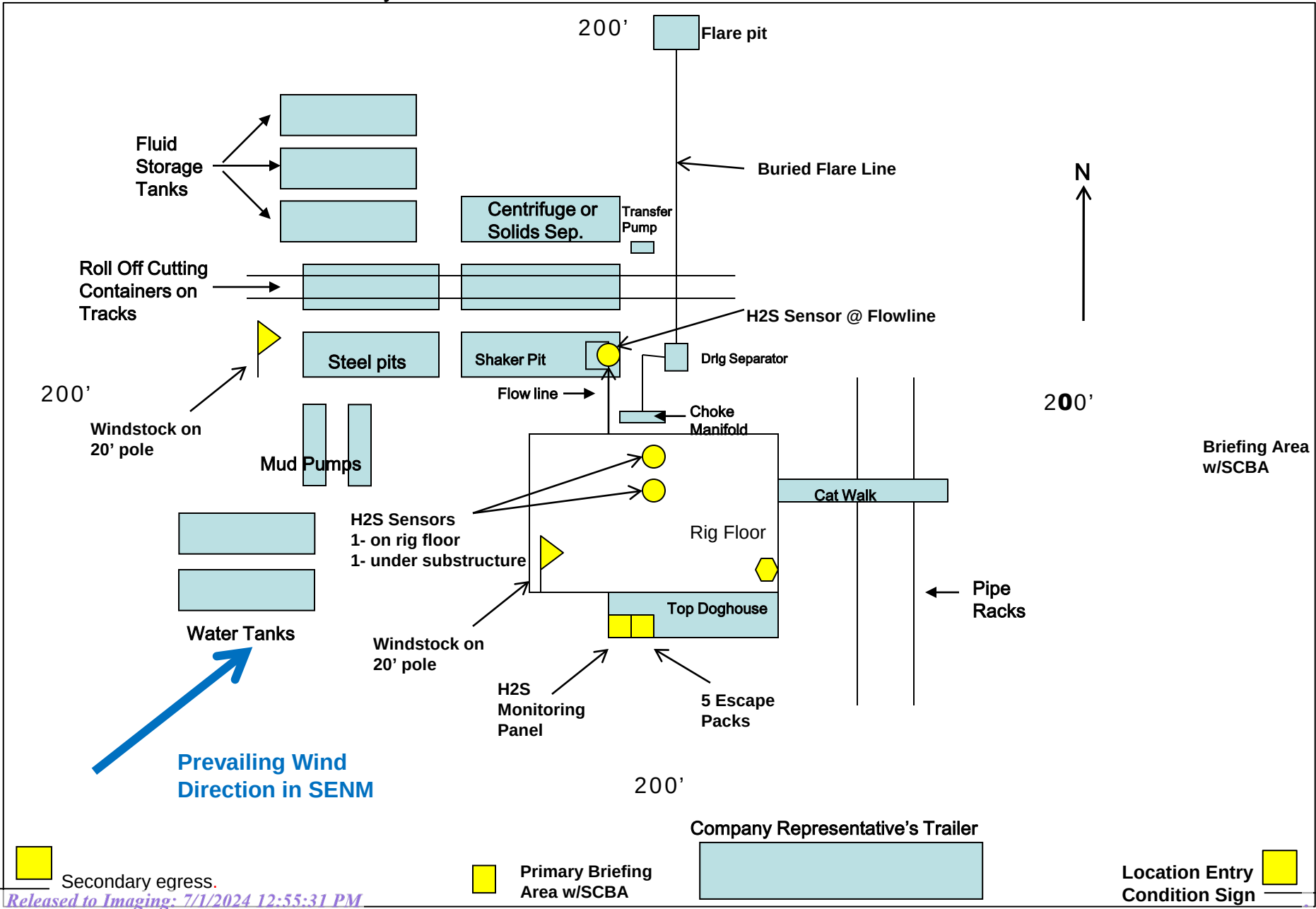
All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location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

COC 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 352697

CONDITIONS

Operator: CONOCOPHILLIPS COMPANY 600 W. Illinois Avenue Midland, TX 79701	OGRID: 217817
	Action Number: 352697
	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	7/1/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/1/2024
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	7/1/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	7/1/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	7/1/2024
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	7/1/2024