

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No. NMNM118113
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator
COG OPERATING LLC

3a. Address 600 West Illinois Ave, Midland, TX 79701 3b. Phone No. (include area code) (432) 683-7443

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)
SEC 31/T25S/R29E/NMP

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.
PUDGE FEDERAL COM/902H

9. API Well No.

10. Field and Pool or Exploratory Area
Purple Sage/(WOLFCAMP) GAS

11. Country or Parish, State
EDDY/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

COG Operating LLC, respectfully requests approval for the following changes to the original approved APD.

APD ID# 10400101480
APD API# 30-015-56664

Drilling Changes:
C102, Drilling Program, Directional Plan, AC Report and Specs Attached.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) MAYTE REYES / Ph: (281) 293-1000	Title Regulatory Analyst
Signature (Electronic Submission)	Date 09/12/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 09/15/2025
Conditions of approval, if any, are attached. Approval of this notice 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.	Office CARLSBAD	

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: SESW / 469 FSL / 2444 FWL / TWSP: 25S / RANGE: 29E / SECTION: 31 / LAT: 32.080234 / LONG: -104.024234 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 330 FNL / 997 FEL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.078037 / LONG: -104.018257 (TVD: 10640 feet, MD: 11241 feet)

BHL: SESE / 200 FSL / 997 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.050408 / LONG: -104.018148 (TVD: 10640 feet, MD: 21291 feet)

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.080234 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 902H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM118113	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: COG OPERATING LLC	

Notice of Intent

Sundry ID: 2867515

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 08/08/2025	Time Sundry Submitted: 10:01
Date proposed operation will begin: 08/08/2025	

Procedure Description: COG Operating LLC, respectfully requests approval for the following changes to the original approved APD. APD ID# 10400101480 APD API# 30-015-56664 Drilling Changes: C102, Drilling Program, Directional Plan, AC Report and Specs Attached.

NOI Attachments

Procedure Description

- Tenaris_Data_Sheets___3_String___WCA___State_Line___20___P110_ICY_Prod_20250808100055.pdf
- COG_PUDGE_FEDERAL_COM_902H_C102_20250808100053.pdf
- COG_Pudge_902H_Directional_Plan_20250808100055.pdf
- COG_Pudge_902H_Drilling_Program_20250808100054.pdf
- COG_Pudge_902H_AC_RPT_20250808100054.pdf

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.080234 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 902H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM118113	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: COG OPERATING LLC	

Conditions of Approval

Additional

SEC31_T25S_R29E_PUDGE_FEDERAL_COM_Eddy__CONOCOPHILLIPS_COMPANY_45749_JS_20250915083035.pdf
PUDGE_FED_COM_902H_COAs_20250915083035.pdf

Authorized

Tenaris_Data_Sheets__3_String__WCA__State_Line__20__P110_ICY_Prod_20250915121416.pdf
Tenaris_Data_Sheets__3_String__WCA__State_Line__20__P110_ICY_Prod_20250915121259.pdf
PUDGE_FEDERAL_COM_902H_WPlot_20250915121255.pdf
COG_PUDGE_FEDERAL_COM_902H_C102_20250915121250.pdf
COG_Pudge_902H_Drilling_Program_20250915121243.pdf
COG_Pudge_902H_Directional_Plan_20250915121235.pdf
COG_Pudge_902H_AC_RPT_20250915121231.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: MAYTE REYES	Signed on: SEP 12, 2025 09:55 AM
Name: COG OPERATING LLC	
Title: Regulatory Analyst	
Street Address: 925 N ELDRIDGE PARKWAY	
City: HOUSTON	State: TX
Phone: (281) 293-1000	
Email address: MAYTE.X.REYES@CONOCOPHILLIPS.COM	

Field

Representative Name: Robyn Russell	
Street Address: 600 W. Illinois Ave.	
City: Midland	State: TX
Phone: (432)685-4385	Zip: 79701
Email address: robyn.m.russell@cop.com	

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.080234 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 902H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM118113	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: COG OPERATING LLC	

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: CWALLS@BLM.GOV
Disposition: Approved	Disposition Date: 09/15/2025
Signature: Chris Walls	

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

WELL LOCATION INFORMATION

API Number 30-015-56664	Pool Code 98220	Pool Name Purple Sage; Wolfcamp (Gas)
Property Code 337302	Property Name PUDGE FED COM	Well Number 902H
OGRID No. 229137	Operator Name COG OPERATING LLC	Ground Level Elevation 2,926'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☒ Fee ☐ Tribal ☒ Federal

Surface Location

UL N	Section 31	Township 25S	Range 29E	Lot	Ft. from N/S 469' FSL	Ft. from E/W 2,444' FWL	Latitude 32.080237°	Longitude -104.024228°	County EDDY
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Bottom Hole Location

UL P	Section 7	Township 26S	Range 29E	Lot	Ft. from N/S 200' FSL	Ft. from E/W 997' FEL	Latitude 32.050408°	Longitude -104.018148°	County EDDY
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Dedicated Acres 640	Infill or Defining Well Infill	Defining Well API 30-015-56662	Overlapping Spacing Unit (Y/N) N	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL P	Section 31	Township 25S	Range 29E	Lot	Ft. from N/S 214' FSL	Ft. from E/W 993' FEL	Latitude 32.079533°	Longitude -104.018243°	County EDDY
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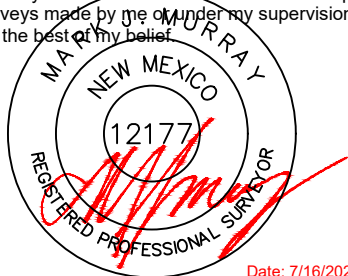
First Take Point (FTP)

UL A	Section 6	Township 26S	Range 29E	Lot	Ft. from N/S 330' FNL	Ft. from E/W 997' FEL	Latitude 32.078037°	Longitude -104.018257°	County EDDY
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Last Take Point (LTP)

UL P	Section 7	Township 26S	Range 29E	Lot	Ft. from N/S 330' FSL	Ft. from E/W 997' FEL	Latitude 32.050765°	Longitude -104.018156°	County EDDY
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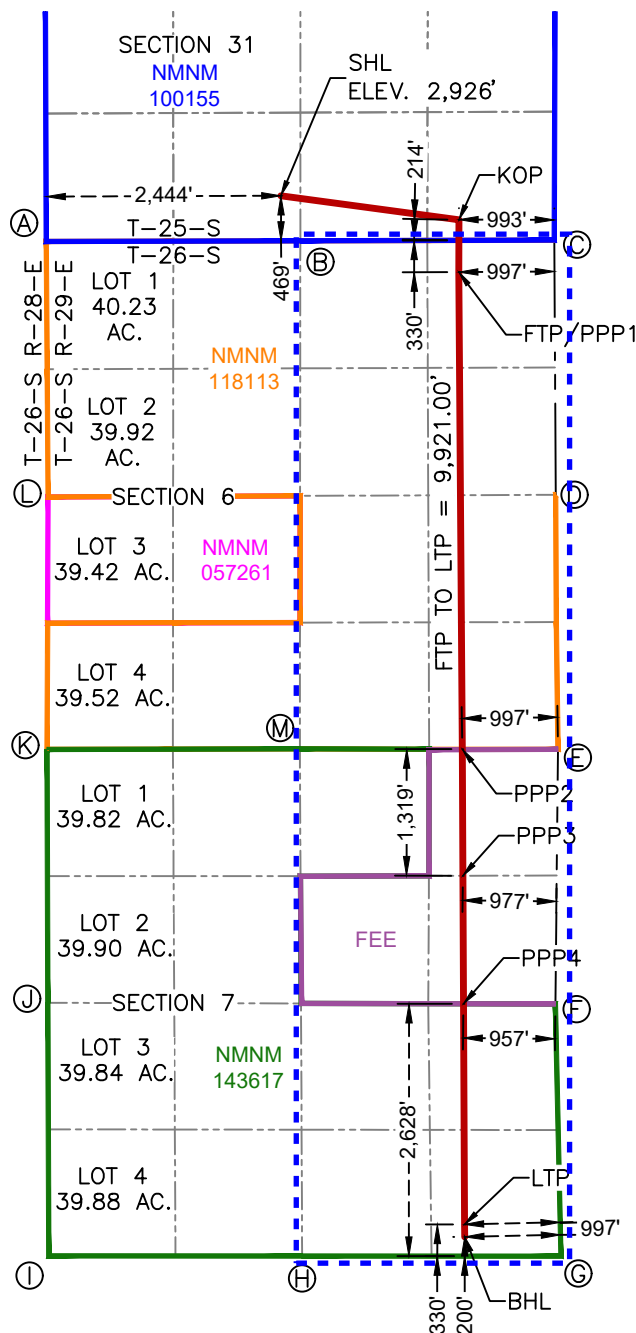
Unitized Area or Area of Uniform Interest COM	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 2926'
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OPERATOR CERTIFICATIONS I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.		SURVEYOR CERTIFICATIONS 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: 7/16/2025	
Signature Mayte Reyes Date 7/28/2025		Signature and Seal of Professional Surveyor	
Printed Name Mayte Reyes		Certificate Number 12177	Date of Survey 7/16/2025
Email Address mayte.x.reyes@cop.com			

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

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

PUDGE FED COM 902H



NAD 83 LONG = -104.018148°

CORNER COORDINATES NEW MEXICO EAST - NAD 83					
A	IRON PIPE W/ BRASS CAP N:392,587.40' E:634,628.88'	F	IRON PIPE W/ BRASS CAP N:384,644.57' E:639,931.43'	K	IRON PIPE W/ BRASS CAP N:387,296.87' E:634,636.57'
B	IRON PIPE W/ BRASS CAP N:392,595.01' E:637,274.88'	G	IRON PIPE W/ BRASS CAP N:382,018.12' E:639,989.46'	L	IRON PIPE W/ BRASS CAP N:389,926.78' E:634,647.65'
C	IRON PIPE W/ BRASS CAP N:392,602.51' E:639,919.75'	H	IRON PIPE W/ BRASS CAP N:382,020.16' E:637,293.83'	M	IRON PIPE W/ BRASS CAP N:387,302.85' E:637,270.53'
D	IRON PIPE W/ BRASS CAP N:389,949.16' E:639,935.13'	I	IRON PIPE W/ BRASS CAP N:382,021.49' E:634,655.20'		
E	ALUM CAP "EPNG NE COR" N:387,298.24' E:639,958.45'	J	IRON PIPE W/ BRASS CAP N:384,657.31' E:634,644.78'		

DELAWARE BASIN WEST

ATLAS PROSPECT_NME

PUDGE FED COM PROJECT

PUDGE FEDERAL COM 902H

OWB

PWP1

Anticollision Report

04 August, 2025

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
WILD THING FED COM PROJECT						
_WILD THING FED COM 702H - OWB - PWP0	9,489.8	9,358.6	258.7	203.1	4.652 CC, ES	
_WILD THING FED COM 702H - OWB - PWP0	9,500.0	9,367.2	258.7	203.1	4.651 SF	
_WILD THING FED COM 703H - OWB - PWP0	7,462.0	7,292.3	275.7	238.3	7.384 CC	
_WILD THING FED COM 703H - OWB - PWP0	7,500.0	7,329.0	275.8	238.1	7.319 ES	
_WILD THING FED COM 703H - OWB - PWP0	8,000.0	7,815.6	302.0	258.8	6.994 SF	
_WILD THING FED COM 704H - OWB - PWP0	5,922.8	5,822.7	82.5	53.4	2.839 Normal Operations, CC, ES	
_WILD THING FED COM 704H - OWB - PWP0	6,000.0	5,895.7	86.2	54.3	2.702 Normal Operations, SF	
_WILD THING FED COM 705H - OWB - PWP0	4,900.0	4,859.5	191.1	164.8	7.278 SF	
_WILD THING FED COM 705H - OWB - PWP0	4,942.5	4,898.5	190.4	164.3	7.301 CC, ES	
_WILD THING FED COM 706H - OWB - PWP0	1,818.8	1,838.1	306.2	294.7	26.727 CC, ES	
_WILD THING FED COM 706H - OWB - PWP0	2,200.0	2,214.9	333.2	319.7	24.692 SF	
_WILD THING FED COM 707H - OWB - PWP0	1,500.0	1,482.0	377.6	367.7	38.186 CC, ES	
_WILD THING FED COM 707H - OWB - PWP0	2,000.0	1,979.5	419.1	407.2	35.287 SF	
_WILD THING FED COM 708H - OWB - PWP0	1,000.0	982.0	403.4	395.4	50.248 CC	
_WILD THING FED COM 708H - OWB - PWP0	1,100.0	1,078.4	403.8	395.4	47.943 ES	
_WILD THING FED COM 708H - OWB - PWP0	1,700.0	1,645.4	438.8	428.1	41.015 SF	
_WILD THING FED COM 709H - OWB - PWP0	1,000.0	982.0	429.7	421.7	53.527 CC, ES	
_WILD THING FED COM 709H - OWB - PWP0	1,700.0	1,630.8	473.8	463.0	43.728 SF	
_WILD THING FED COM 710H - OWB - PWP0	1,000.0	982.0	456.5	448.5	56.863 CC, ES	
_WILD THING FED COM 710H - OWB - PWP0	1,700.0	1,617.5	507.7	496.7	46.466 SF	
_WILD THING FED COM 902H - OWB - PWP0	10,730.5	10,583.8	228.8	168.2	3.773 CC, ES, SF	
_WILD THING FED COM 903H - OWB - PWP0	7,677.5	7,541.7	154.6	121.5	4.669 CC	
_WILD THING FED COM 903H - OWB - PWP0	7,693.8	7,557.5	154.7	121.5	4.661 ES	
_WILD THING FED COM 903H - OWB - PWP0	8,043.8	7,900.2	171.4	133.7	4.549 SF	
_WILD THING FED COM 904H - OWB - PWP0	6,272.0	6,147.5	80.6	46.0	2.334 Caution - Monitor Closely, CC, ES, SF	
_WILD THING FED COM 905H - OWB - PWP0	5,100.0	5,042.4	50.1	20.3	1.681 Caution - Monitor Closely, SF	
_WILD THING FED COM 905H - OWB - PWP0	5,150.9	5,089.1	45.7	18.9	1.705 Caution - Monitor Closely, CC, ES	
_WILD THING FED COM 906H - OWB - PWP0	1,673.8	1,673.4	273.0	262.5	26.074 CC, ES	
_WILD THING FED COM 906H - OWB - PWP0	2,000.0	1,996.8	292.6	281.1	25.289 SF	
_WILD THING FED COM 907H - OWB - PWP0	1,500.0	1,482.0	320.6	310.7	32.421 CC, ES	
_WILD THING FED COM 907H - OWB - PWP0	1,900.0	1,880.7	347.1	335.7	30.422 SF	
_WILD THING FED COM 908H - OWB - PWP0	1,000.0	982.0	350.6	342.6	43.671 CC, ES	
_WILD THING FED COM 908H - OWB - PWP0	1,600.0	1,535.0	388.5	378.0	37.040 SF	
_WILD THING FED COM 909H - OWB - PWP0	1,000.0	982.0	380.6	372.6	47.408 CC, ES	
_WILD THING FED COM 909H - OWB - PWP0	1,700.0	1,616.9	439.6	428.6	39.901 SF	
_WILD THING FED COM 910H - OWB - PWP0	1,000.0	982.0	410.6	402.6	51.145 CC, ES	
_WILD THING FED COM 910H - OWB - PWP0	1,600.0	1,523.7	451.0	440.7	43.745 SF	
COOPER 31 FEDERAL 2H_P&A - OWB - AWP	7,332.1	7,786.5	373.5	323.8	7.510 CC, ES, SF	
WILD THING FED COM 504H - OWB - PWP1	800.0	795.0	456.8	450.6	73.635 CC, ES	
WILD THING FED COM 504H - OWB - PWP1	1,500.0	1,391.2	528.5	519.4	57.936 SF	
WILD THING FEDERAL COM 501H - OWB - PWP1	8,662.1	9,048.9	144.4	83.5	2.371 Caution - Monitor Closely, CC, ES, SF	
WILD THING FEDERAL COM 502H - OWB - PWP1	4,384.0	4,437.3	51.6	23.8	1.854 Caution - Monitor Closely, CC	
WILD THING FEDERAL COM 502H - OWB - PWP1	4,400.0	4,451.6	52.0	23.6	1.829 Caution - Monitor Closely, ES, SF	
WILD THING FEDERAL COM 503H - OWB - PWP1	1,000.0	996.0	430.0	422.1	54.167 CC, ES	
WILD THING FEDERAL COM 503H - OWB - PWP1	1,700.0	1,616.2	501.7	490.7	45.321 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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 500H - OWB - PWP1														Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8198-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:												
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Distance	Between Centres	Between Ellipses	No-Go Distance	Separation Factor	Warning		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)				
0.0	0.0	2.0	0.0	0.0	0.0	-16.65	199.8	-59.8	208.6						
100.0	100.0	102.0	100.0	0.8	0.8	-16.65	199.8	-59.8	208.6	206.6	2.00	104.056			
200.0	200.0	202.0	200.0	1.4	1.4	-16.65	199.8	-59.8	208.6	205.3	3.32	62.818			
300.0	300.0	302.0	300.0	1.9	1.9	-16.65	199.8	-59.8	208.6	204.4	4.20	49.632			
400.0	400.0	402.0	400.0	2.2	2.3	-16.65	199.8	-59.8	208.6	203.7	4.92	42.410			
500.0	500.0	502.0	500.0	2.6	2.6	-16.65	199.8	-59.8	208.6	203.0	5.54	37.660			
600.0	600.0	602.0	600.0	2.8	2.8	-16.65	199.8	-59.8	208.6	202.5	6.10	34.219			
700.0	700.0	702.0	700.0	3.1	3.1	-16.65	199.8	-59.8	208.6	202.0	6.61	31.575			
800.0	800.0	802.0	800.0	3.3	3.3	-16.65	199.8	-59.8	208.6	201.5	7.08	29.456			
900.0	900.0	902.0	900.0	3.6	3.6	-16.65	199.8	-59.8	208.6	201.1	7.53	27.708			
1,000.0	1,000.0	1,002.1	1,000.1	3.8	3.8	-16.65	199.8	-59.8	208.6	200.6	7.95	26.230			
1,100.0	1,100.0	1,106.9	1,104.9	4.0	4.1	-16.23	199.0	-57.9	207.4	199.0	8.41	24.670			
1,200.0	1,200.0	1,211.5	1,209.3	4.2	4.5	-14.97	196.8	-52.6	203.9	195.0	8.83	23.093			
1,300.0	1,300.0	1,315.5	1,312.9	4.4	4.8	-12.80	193.0	-43.8	198.3	189.1	9.23	21.479			
1,400.0	1,400.0	1,418.7	1,415.2	4.6	5.1	-9.59	187.8	-31.7	191.0	181.4	9.61	19.871			
1,500.0	1,500.0	1,520.8	1,515.9	4.7	5.5	-5.17	181.2	-16.4	182.6	172.7	9.97	18.326			
1,600.0	1,600.0	1,621.9	1,615.0	5.0	5.9	-110.03	173.3	2.0	174.5	164.3	10.29	16.967			
1,700.0	1,699.8	1,722.4	1,712.8	5.3	6.3	-104.47	164.1	23.5	167.8	157.3	10.57	15.874			
1,750.0	1,749.7	1,772.4	1,761.1	5.3	6.5	-101.54	159.0	35.3	165.0	154.4	10.67	15.468			
1,800.0	1,799.5	1,822.2	1,809.0	5.4	6.7	-95.48	153.6	47.9	162.5	151.8	10.76	15.104			
1,900.0	1,898.7	1,921.1	1,903.4	5.7	7.0	-85.50	142.0	74.8	158.0	147.0	11.03	14.329			
2,000.0	1,997.5	2,019.9	1,997.6	6.0	7.4	-77.75	130.3	102.1	154.1	142.7	11.40	13.516			
2,100.0	2,095.7	2,119.0	2,092.2	6.3	7.8	-71.70	118.5	129.5	150.2	138.4	11.84	12.689			
2,200.0	2,193.2	2,218.5	2,187.0	6.7	8.2	-67.04	106.7	157.0	145.6	133.3	12.34	11.802			
2,258.8	2,250.1	2,277.0	2,242.8	6.8	8.4	-64.90	99.8	173.2	142.3	129.7	12.61	11.285			
2,300.0	2,290.0	2,318.1	2,282.0	6.9	8.6	-63.81	94.9	184.6	139.9	127.1	12.80	10.923			
2,400.0	2,386.6	2,417.7	2,377.0	7.3	9.0	-61.01	83.1	212.1	134.1	120.7	13.39	10.016			
2,500.0	2,483.1	2,517.3	2,472.0	7.6	9.4	-57.97	71.2	239.7	128.7	114.7	14.04	9.166			
2,600.0	2,579.7	2,616.9	2,567.0	8.0	9.9	-54.68	59.4	267.2	123.7	109.0	14.77	8.375			
2,700.0	2,676.3	2,716.5	2,661.9	8.3	10.3	-51.12	47.6	294.8	119.2	103.6	15.59	7.645			
2,800.0	2,772.9	2,816.1	2,756.9	8.7	10.7	-47.30	35.8	322.3	115.1	98.6	16.49	6.980			
2,900.0	2,869.5	2,915.7	2,851.9	9.1	11.2	-43.22	23.9	349.9	111.6	94.1	17.49	6.382			
3,000.0	2,966.1	3,015.3	2,946.9	9.5	11.7	-38.90	12.1	377.4	108.7	90.1	18.57	5.854			
3,100.0	3,062.7	3,114.9	3,041.9	9.9	12.1	-34.37	0.3	404.9	106.5	86.7	19.73	5.397			
3,200.0	3,159.3	3,214.6	3,136.9	10.4	12.6	-29.69	-11.6	432.5	104.9	84.0	20.95	5.009			
3,300.0	3,255.9	3,314.2	3,231.9	10.8	13.1	-24.89	-23.4	460.0	104.1	81.9	22.20	4.689			
3,361.0	3,314.8	3,375.0	3,289.9	11.1	13.4	-21.94	-30.6	476.9	104.0	81.0	22.97	4.525 CC			
3,400.0	3,352.5	3,413.8	3,326.9	11.2	13.5	-20.05	-35.2	487.6	104.0	80.5	23.46	4.433			
3,500.0	3,449.1	3,513.4	3,421.9	11.7	14.0	-15.24	-47.0	515.1	104.7	80.0	24.72	4.235 ES			
3,600.0	3,545.7	3,613.0	3,516.9	12.1	14.5	-10.52	-58.9	542.7	106.1	80.1	25.94	4.089			
3,700.0	3,642.3	3,712.6	3,611.9	12.6	15.0	-5.96	-70.7	570.2	108.2	81.1	27.11	3.990			
3,800.0	3,738.8	3,812.2	3,706.9	13.0	15.5	-1.59	-82.5	597.8	110.9	82.7	28.23	3.930			
3,900.0	3,835.4	3,911.8	3,801.9	13.5	15.9	2.54	-94.4	625.3	114.3	85.0	29.28	3.904 SF			
4,000.0	3,932.0	4,011.4	3,896.9	13.9	16.4	6.42	-106.2	652.9	118.2	88.0	30.27	3.906			
4,100.0	4,028.6	4,111.1	3,991.8	14.4	16.9	10.04	-118.0	680.4	122.7	91.5	31.20	3.932			
4,200.0	4,125.2	4,210.7	4,086.8	14.9	17.4	13.39	-129.8	708.0	127.6	95.5	32.08	3.977			
4,300.0	4,221.8	4,310.3	4,181.8	15.3	17.9	16.49	-141.7	735.5	132.9	100.0	32.91	4.038			
4,400.0	4,318.4	4,409.9	4,276.8	15.8	18.4	19.34	-153.5	763.0	138.6	104.8	33.71	4.110			
4,500.0	4,415.0	4,509.5	4,371.8	16.3	18.9	21.96	-165.3	790.6	144.5	110.1	34.47	4.193			
4,600.0	4,511.6	4,609.1	4,466.8	16.7	19.4	24.37	-177.2	818.1	150.8	115.6	35.21	4.283			
4,700.0	4,608.2	4,708.7	4,561.8	17.2	19.9	26.59	-189.0	845.7	157.3	121.4	35.93	4.378			

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 500H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8198-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		No-Go		Separation	
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)	Distance (usft)	Factor	Warning
4,800.0	4,704.8	4,808.3	4,656.8	17.7	20.4	28.62	-200.8	873.2	164.0	127.4	36.63	4.478	
4,900.0	4,801.4	4,907.9	4,751.8	18.2	20.9	30.50	-212.6	900.8	170.9	133.6	37.32	4.581	
5,000.0	4,898.0	5,007.5	4,846.8	18.6	21.3	32.23	-224.5	928.3	178.0	140.0	37.99	4.685	
5,100.0	4,994.6	5,107.2	4,941.8	19.1	21.8	33.82	-236.3	955.9	185.2	146.6	38.67	4.791	
5,200.0	5,091.1	5,206.8	5,036.8	19.6	22.3	35.30	-248.1	983.4	192.6	153.3	39.33	4.897	
5,300.0	5,187.7	5,306.4	5,131.8	20.1	22.8	36.66	-260.0	1,011.0	200.1	160.1	39.99	5.003	
5,400.0	5,284.3	5,406.0	5,226.7	20.6	23.3	37.93	-271.8	1,038.5	207.7	167.0	40.65	5.108	
5,500.0	5,380.9	5,505.6	5,321.7	21.0	23.8	39.10	-283.6	1,066.1	215.4	174.0	41.31	5.213	
5,600.0	5,477.5	5,605.2	5,416.7	21.5	24.3	40.20	-295.4	1,093.6	223.1	181.1	41.97	5.316	
5,700.0	5,574.1	5,704.8	5,511.7	22.0	24.8	41.22	-307.3	1,121.1	231.0	188.3	42.63	5.418	
5,800.0	5,670.7	5,804.4	5,606.7	22.5	25.3	42.18	-319.1	1,148.7	238.9	195.6	43.28	5.518	
5,900.0	5,767.3	5,904.0	5,701.7	23.0	25.8	43.07	-330.9	1,176.2	246.8	202.9	43.94	5.617	
6,000.0	5,863.9	6,003.7	5,796.7	23.5	26.4	43.91	-342.8	1,203.8	254.8	210.2	44.60	5.714	
6,100.0	5,960.5	6,103.3	5,891.7	23.9	26.9	44.69	-354.6	1,231.3	262.9	217.7	45.26	5.809	
6,200.0	6,057.1	6,202.9	5,986.7	24.4	27.4	45.43	-366.4	1,258.9	271.0	225.1	45.92	5.902	
6,300.0	6,153.7	6,302.5	6,081.7	24.9	27.9	46.13	-378.2	1,286.4	279.2	232.6	46.59	5.993	
6,400.0	6,250.3	6,402.1	6,176.7	25.4	28.4	46.78	-390.1	1,314.0	287.4	240.2	47.25	6.083	
6,500.0	6,346.8	6,504.2	6,274.1	25.9	28.9	47.45	-402.1	1,342.0	295.4	247.5	47.92	6.165	
6,600.0	6,443.4	6,608.5	6,374.2	26.4	29.4	48.27	-413.7	1,369.0	302.1	253.5	48.55	6.222	
6,700.0	6,540.0	6,712.8	6,474.8	26.9	29.9	49.24	-424.6	1,394.5	307.3	258.2	49.11	6.258	
6,800.0	6,636.6	6,817.2	6,575.9	27.4	30.4	50.39	-434.8	1,418.2	311.1	261.5	49.58	6.275	
6,900.0	6,733.2	6,921.6	6,677.5	27.9	30.9	51.71	-444.3	1,440.2	313.6	263.6	49.95	6.278	
7,000.0	6,829.8	7,025.8	6,779.3	28.3	31.4	53.22	-453.0	1,460.5	314.8	264.5	50.22	6.268	
7,100.0	6,926.4	7,129.9	6,881.4	28.8	31.9	54.93	-461.0	1,479.1	314.7	264.4	50.36	6.249	
7,200.0	7,023.0	7,233.7	6,983.6	29.3	32.4	56.86	-468.2	1,496.0	313.6	263.2	50.38	6.225	
7,300.0	7,119.6	7,337.2	7,085.8	29.8	32.8	59.04	-474.7	1,511.0	311.5	261.3	50.26	6.199	
7,400.0	7,216.2	7,440.3	7,187.8	30.3	33.3	61.47	-480.4	1,524.4	308.6	258.6	49.97	6.175	
7,500.0	7,312.8	7,542.9	7,289.7	30.8	33.7	64.20	-485.4	1,536.0	305.0	255.5	49.52	6.159	
7,600.0	7,409.4	7,645.1	7,391.3	31.3	34.1	67.24	-489.6	1,545.9	301.0	252.1	48.91	6.155	
7,693.8	7,500.0	7,740.4	7,486.3	31.8	34.5	70.39	-493.0	1,553.6	297.1	248.9	48.18	6.166	
7,700.0	7,506.0	7,746.7	7,492.5	31.8	34.5	70.61	-493.2	1,554.0	296.8	248.7	48.13	6.168	
7,800.0	7,603.0	7,848.0	7,593.6	32.3	34.9	73.92	-495.9	1,560.5	293.3	245.9	47.36	6.192	
7,900.0	7,700.9	7,949.4	7,694.8	32.8	35.2	76.95	-498.0	1,565.4	290.7	244.0	46.67	6.229	
8,000.0	7,799.4	8,050.8	7,796.1	33.3	35.6	79.67	-499.4	1,568.6	288.8	242.7	46.08	6.267	
8,043.8	7,842.8	8,095.2	7,840.6	33.4	35.7	80.76	-499.8	1,569.5	288.1	242.2	45.86	6.282	
8,100.0	7,898.4	8,152.1	7,897.5	33.7	35.8	82.19	-500.1	1,570.2	287.2	241.7	45.56	6.304	
8,160.1	7,957.9	8,207.1	7,952.5	33.9	35.8	83.67	-500.3	1,570.4	286.4	241.0	45.36	6.314	
8,200.0	7,997.4	8,231.8	7,977.2	34.1	35.8	84.35	-501.4	1,570.4	287.6	242.2	45.39	6.337	
8,300.0	8,096.4	8,292.8	8,037.6	34.5	35.8	85.91	-509.5	1,570.5	300.0	254.8	45.12	6.648	
8,400.0	8,195.5	8,350.0	8,092.8	35.0	35.8	87.16	-524.1	1,570.6	324.9	280.4	44.50	7.303	
8,500.0	8,294.5	8,405.4	8,144.3	35.4	35.9	88.09	-544.5	1,570.8	361.3	317.6	43.70	8.268	
8,600.0	8,393.5	8,450.0	8,183.8	35.8	35.9	88.64	-565.1	1,570.9	407.6	364.9	42.69	9.546	
8,700.0	8,492.5	8,500.0	8,225.6	36.3	35.9	89.05	-592.4	1,571.2	462.1	420.2	41.94	11.018	
8,800.0	8,591.6	8,538.0	8,255.4	36.7	35.9	89.24	-616.1	1,571.4	523.7	482.6	41.09	12.746	
8,900.0	8,690.6	8,575.0	8,282.4	37.1	35.9	89.32	-641.3	1,571.6	591.1	550.7	40.41	14.628	
9,000.0	8,789.6	8,600.0	8,299.6	37.6	35.9	89.34	-659.5	1,571.8	663.3	623.6	39.66	16.726	
9,100.0	8,888.6	8,625.0	8,315.7	38.0	35.9	89.32	-678.6	1,571.9	739.4	700.3	39.09	18.913	
9,101.4	8,890.0	8,625.0	8,315.7	38.0	35.9	89.32	-678.6	1,571.9	740.4	701.3	39.08	18.947	
9,200.0	8,987.8	8,650.0	8,330.9	38.4	35.9	91.16	-698.5	1,572.1	818.6	779.9	38.71	21.146	
9,300.0	9,087.3	8,675.0	8,344.9	38.8	35.9	93.05	-719.1	1,572.3	900.6	862.1	38.51	23.387	
9,400.0	9,187.1	8,691.5	8,353.6	39.2	35.9	95.12	-733.1	1,572.4	984.7	946.4	38.31	25.702	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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	2.0	0.0	0.0	0.0	-24.20	199.7	-89.8	219.0				
100.0	100.0	102.0	100.0	0.8	0.8	-24.20	199.7	-89.8	219.0	217.0	2.00	109.250	
200.0	200.0	202.0	200.0	1.4	1.4	-24.20	199.7	-89.8	219.0	215.7	3.32	65.953	
300.0	300.0	302.0	300.0	1.9	1.9	-24.20	199.7	-89.8	219.0	214.8	4.20	52.109	
400.0	400.0	402.0	400.0	2.2	2.3	-24.20	199.7	-89.8	219.0	214.1	4.92	44.527	
500.0	500.0	502.0	500.0	2.6	2.6	-24.20	199.7	-89.8	219.0	213.5	5.54	39.539	
600.0	600.0	602.0	600.0	2.8	2.8	-24.20	199.7	-89.8	219.0	212.9	6.10	35.927	
700.0	700.0	702.0	700.0	3.1	3.1	-24.20	199.7	-89.8	219.0	212.4	6.61	33.150	
800.0	800.0	802.0	800.0	3.3	3.3	-24.20	199.7	-89.8	219.0	211.9	7.08	30.926	
900.0	900.0	902.0	900.0	3.6	3.6	-24.20	199.7	-89.8	219.0	211.5	7.53	29.090	
1,000.0	1,000.0	1,002.2	1,000.2	3.8	3.8	-24.20	199.7	-89.8	219.0	211.0	7.95	27.535	
1,100.0	1,100.0	1,110.0	1,108.0	4.0	4.1	-24.04	198.1	-88.4	217.1	208.6	8.48	25.610	
1,200.0	1,200.0	1,217.6	1,215.3	4.2	4.5	-23.57	193.5	-84.4	211.6	202.7	8.97	23.582	
1,300.0	1,300.0	1,324.5	1,321.8	4.4	4.8	-22.72	185.8	-77.8	202.6	193.2	9.47	21.400	
1,400.0	1,400.0	1,430.5	1,426.9	4.6	5.1	-21.41	175.3	-68.7	190.2	180.2	9.93	19.150	
1,500.0	1,500.0	1,531.8	1,526.9	4.7	5.4	-19.61	162.9	-58.0	175.0	164.7	10.31	16.976	
1,600.0	1,600.0	1,630.7	1,624.4	5.0	5.7	-128.21	150.6	-47.4	160.8	150.0	10.76	14.939	
1,700.0	1,699.8	1,729.9	1,722.3	5.3	6.0	-127.56	138.2	-36.8	148.8	137.6	11.23	13.256	
1,750.0	1,749.7	1,779.7	1,771.4	5.3	6.1	-127.58	132.0	-31.5	143.7	132.2	11.42	12.579	
1,800.0	1,799.5	1,829.4	1,820.4	5.4	6.3	-124.87	125.8	-26.1	138.9	127.3	11.63	11.946	
1,900.0	1,898.7	1,929.0	1,918.6	5.7	6.6	-122.82	113.4	-15.5	130.3	118.1	12.18	10.699	
2,000.0	1,997.5	2,028.5	2,016.8	6.0	7.0	-123.99	101.0	-4.8	123.2	110.4	12.80	9.626	
2,100.0	2,095.7	2,127.7	2,114.7	6.3	7.3	-127.76	88.7	5.9	118.3	104.8	13.50	8.759	
2,196.3	2,189.6	2,223.0	2,208.6	6.7	7.7	-133.40	76.8	16.1	116.5	102.2	14.25	8.173 CC	
2,200.0	2,193.2	2,226.6	2,212.3	6.7	7.7	-133.65	76.4	16.5	116.5	102.2	14.28	8.157 ES	
2,258.8	2,250.1	2,284.6	2,269.4	6.8	7.9	-137.85	69.2	22.7	117.3	102.6	14.71	7.977	
2,300.0	2,290.0	2,325.2	2,309.5	6.9	8.1	-141.25	64.1	27.0	118.7	103.7	15.00	7.915	
2,400.0	2,386.6	2,423.6	2,406.6	7.3	8.5	-149.09	51.8	37.6	123.8	108.1	15.73	7.872 SF	
2,500.0	2,483.1	2,522.1	2,503.7	7.6	8.9	-156.20	39.6	48.1	131.0	114.6	16.39	7.993	
2,600.0	2,579.7	2,620.5	2,600.8	8.0	9.2	-162.51	27.3	58.7	140.1	123.1	17.01	8.237	
2,700.0	2,676.3	2,719.0	2,697.9	8.3	9.6	-168.00	15.1	69.3	150.7	133.1	17.58	8.569	
2,800.0	2,772.9	2,817.4	2,795.0	8.7	10.0	-172.75	2.8	79.8	162.5	144.3	18.13	8.959	
2,900.0	2,869.5	2,915.9	2,892.1	9.1	10.4	-176.85	-9.5	90.4	175.2	156.5	18.67	9.385	
3,000.0	2,966.1	3,014.3	2,989.2	9.5	10.9	-179.62	-21.7	100.9	188.7	169.5	19.20	9.830	
3,100.0	3,062.7	3,112.8	3,086.3	9.9	11.3	-176.57	-34.0	111.5	202.9	183.1	19.73	10.282	
3,200.0	3,159.3	3,211.2	3,183.5	10.4	11.7	-173.92	-46.2	122.0	217.5	197.2	20.26	10.733	
3,300.0	3,255.9	3,309.7	3,280.6	10.8	12.1	-171.60	-58.5	132.6	232.5	211.7	20.80	11.178	
3,400.0	3,352.5	3,408.1	3,377.7	11.2	12.5	-169.56	-70.8	143.2	247.9	226.5	21.35	11.612	
3,500.0	3,449.1	3,506.6	3,474.8	11.7	12.9	-167.77	-83.0	153.7	263.5	241.6	21.90	12.034	
3,600.0	3,545.7	3,605.0	3,571.9	12.1	13.3	-166.17	-95.3	164.3	279.4	256.9	22.46	12.441	
3,700.0	3,642.3	3,703.5	3,669.0	12.6	13.8	-164.75	-107.5	174.8	295.4	272.4	23.02	12.834	
3,800.0	3,738.8	3,801.9	3,766.1	13.0	14.2	-163.47	-119.8	185.4	311.6	288.0	23.59	13.211	
3,900.0	3,835.4	3,900.4	3,863.2	13.5	14.6	-162.32	-132.1	196.0	328.0	303.8	24.17	13.572	
4,000.0	3,932.0	3,998.8	3,960.4	13.9	15.0	-161.28	-144.3	206.5	344.4	319.7	24.75	13.919	
4,100.0	4,028.6	4,097.3	4,057.5	14.4	15.5	-160.33	-156.6	217.1	361.0	335.7	25.33	14.251	
4,200.0	4,125.2	4,195.7	4,154.6	14.9	15.9	-159.46	-168.8	227.6	377.7	351.7	25.92	14.568	
4,300.0	4,221.8	4,294.2	4,251.7	15.3	16.3	-158.67	-181.1	238.2	394.4	367.9	26.52	14.872	
4,400.0	4,318.4	4,392.6	4,348.8	15.8	16.7	-157.95	-193.4	248.7	411.2	384.1	27.12	15.163	
4,500.0	4,415.0	4,491.1	4,445.9	16.3	17.2	-157.28	-205.6	259.3	428.0	400.3	27.72	15.442	
4,600.0	4,511.6	4,589.5	4,543.0	16.7	17.6	-156.66	-217.9	269.9	445.0	416.6	28.33	15.709	
4,700.0	4,608.2	4,688.0	4,640.1	17.2	18.0	-156.08	-230.1	280.4	461.9	433.0	28.93	15.964	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
4,800.0	4,704.8	4,786.4	4,737.2	17.7	18.5	155.55	-242.4	291.0	478.9	449.4	29.55	16.209	
4,900.0	4,801.4	4,884.9	4,834.4	18.2	18.9	155.05	-254.7	301.5	495.9	465.8	30.16	16.443	
5,000.0	4,898.0	4,983.3	4,931.5	18.6	19.3	154.59	-266.9	312.1	513.0	482.2	30.78	16.668	
5,100.0	4,994.6	5,081.8	5,028.6	19.1	19.8	154.16	-279.2	322.6	530.1	498.7	31.40	16.884	
5,200.0	5,091.1	5,180.2	5,125.7	19.6	20.2	153.75	-291.4	333.2	547.2	515.2	32.02	17.091	
5,300.0	5,187.7	5,278.7	5,222.8	20.1	20.6	153.37	-303.7	343.8	564.4	531.7	32.64	17.290	
5,400.0	5,284.3	5,377.1	5,319.9	20.6	21.1	153.01	-316.0	354.3	581.6	548.3	33.27	17.482	
5,500.0	5,380.9	5,475.6	5,417.0	21.0	21.5	152.67	-328.2	364.9	598.8	564.9	33.89	17.666	
5,600.0	5,477.5	5,574.0	5,514.1	21.5	21.9	152.35	-340.5	375.4	616.0	581.5	34.52	17.842	
5,700.0	5,574.1	5,672.5	5,611.3	22.0	22.4	152.05	-352.7	386.0	633.2	598.1	35.15	18.013	
5,800.0	5,670.7	5,770.9	5,708.4	22.5	22.8	151.76	-365.0	396.5	650.5	614.7	35.78	18.177	
5,900.0	5,767.3	5,869.4	5,805.5	23.0	23.2	151.49	-377.3	407.1	667.7	631.3	36.42	18.335	
6,000.0	5,863.9	5,967.8	5,902.6	23.5	23.7	151.23	-389.5	417.7	685.0	647.9	37.05	18.487	
6,100.0	5,960.5	6,066.3	5,999.7	23.9	24.1	150.98	-401.8	428.2	702.3	664.6	37.69	18.634	
6,200.0	6,057.1	6,163.1	6,095.2	24.4	24.5	150.77	-413.7	438.5	719.6	681.3	38.31	18.787	
6,300.0	6,153.7	6,257.5	6,188.5	24.9	25.0	150.66	-424.4	447.7	737.4	698.5	38.94	18.940	
6,400.0	6,250.3	6,351.7	6,281.9	25.4	25.4	150.67	-433.9	455.9	755.8	716.2	39.59	19.089	
6,500.0	6,346.8	6,445.6	6,375.2	25.9	25.7	150.79	-442.2	463.1	774.7	734.4	40.27	19.236	
6,600.0	6,443.4	6,539.3	6,468.4	26.4	26.1	151.01	-449.4	469.2	794.1	753.2	40.97	19.382	
6,700.0	6,540.0	6,632.7	6,561.5	26.9	26.5	151.32	-455.3	474.4	814.1	772.4	41.69	19.529	
6,800.0	6,636.6	6,725.7	6,654.3	27.4	26.8	151.71	-460.1	478.5	834.7	792.3	42.42	19.676	
6,900.0	6,733.2	6,818.3	6,746.7	27.9	27.1	152.18	-463.8	481.6	855.9	812.7	43.17	19.826	
7,000.0	6,829.8	6,910.5	6,838.8	28.3	27.4	152.72	-466.3	483.8	877.8	833.8	43.93	19.980	
7,100.0	6,926.4	7,002.1	6,930.4	28.8	27.7	153.33	-467.7	485.0	900.3	855.6	44.70	20.141	
7,200.0	7,023.0	7,094.7	7,023.0	29.3	27.8	153.99	-468.0	485.2	923.4	877.8	45.68	20.216	
7,300.0	7,119.6	7,191.3	7,119.6	29.8	27.8	154.67	-468.0	485.2	946.9	900.5	46.46	20.382	
7,400.0	7,216.2	7,287.8	7,216.2	30.3	27.8	155.32	-468.0	485.2	970.5	923.3	47.23	20.549	
7,500.0	7,312.8	7,384.4	7,312.8	30.8	27.8	155.94	-468.0	485.2	994.2	946.2	48.00	20.715	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 701H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	1.0	0.0	0.0	-179.94	-200.0	-0.2	200.0				
100.0	100.0	99.0	100.0	0.8	0.8	-179.94	-200.0	-0.2	200.0	198.0	1.98	100.817	
200.0	200.0	199.0	200.0	1.4	1.4	-179.94	-200.0	-0.2	200.0	196.7	3.30	60.512	
300.0	300.0	299.0	300.0	1.9	1.9	-179.94	-200.0	-0.2	200.0	195.8	4.19	47.720	
400.0	400.0	399.0	400.0	2.2	2.2	-179.94	-200.0	-0.2	200.0	195.1	4.91	40.745	
500.0	500.0	499.0	500.0	2.6	2.6	-179.94	-200.0	-0.2	200.0	194.5	5.53	36.165	
600.0	600.0	599.0	600.0	2.8	2.8	-179.94	-200.0	-0.2	200.0	193.9	6.09	32.853	
700.0	700.0	699.0	700.0	3.1	3.1	-179.94	-200.0	-0.2	200.0	193.4	6.60	30.308	
800.0	800.0	799.0	800.0	3.3	3.3	-179.94	-200.0	-0.2	200.0	192.9	7.07	28.270	
900.0	900.0	899.0	900.0	3.6	3.6	-179.94	-200.0	-0.2	200.0	192.5	7.52	26.589	
1,000.0	1,000.0	999.0	1,000.0	3.8	3.8	-179.94	-200.0	-0.2	200.0	192.0	7.95	25.171 CC	
1,004.4	1,004.4	1,003.4	1,004.4	3.8	3.8	-179.94	-200.0	-0.2	200.0	192.0	7.96	25.114	
1,100.0	1,100.0	1,098.9	1,099.9	4.0	4.1	179.57	-200.0	1.5	200.0	191.7	8.34	23.976	
1,200.0	1,200.0	1,198.6	1,199.5	4.2	4.4	178.09	-200.0	6.7	200.1	191.4	8.72	22.964 ES	
1,300.0	1,300.0	1,297.8	1,298.3	4.4	4.7	175.64	-200.1	15.2	200.6	191.6	9.08	22.103	
1,400.0	1,400.0	1,396.4	1,396.1	4.6	5.1	172.27	-200.1	27.2	202.0	192.6	9.44	21.404	
1,500.0	1,500.0	1,493.9	1,492.5	4.7	5.4	168.08	-200.2	42.3	204.7	194.9	9.80	20.888	
1,600.0	1,600.0	1,590.7	1,587.5	5.0	5.8	53.51	-200.3	60.5	208.5	198.3	10.21	20.431	
1,700.0	1,699.8	1,686.8	1,681.2	5.3	6.2	49.02	-200.4	81.7	212.6	201.9	10.64	19.971	
1,750.0	1,749.7	1,734.6	1,727.6	5.3	6.4	46.80	-200.4	93.5	214.7	203.9	10.83	19.832	
1,800.0	1,799.5	1,782.4	1,773.7	5.4	6.5	47.66	-200.5	105.9	217.0	206.0	11.02	19.689	
1,900.0	1,898.7	1,878.0	1,865.4	5.7	6.9	47.30	-200.6	133.2	222.5	211.0	11.51	19.330	
2,000.0	1,997.5	1,976.9	1,959.8	6.0	7.2	45.96	-200.8	162.5	227.8	215.7	12.10	18.826	
2,100.0	2,095.7	2,076.2	2,054.6	6.3	7.6	44.71	-200.9	191.9	231.8	219.1	12.74	18.194	
2,200.0	2,193.2	2,175.8	2,149.8	6.7	8.0	43.77	-201.0	221.4	234.1	220.7	13.40	17.464	
2,258.8	2,250.1	2,234.5	2,205.9	6.8	8.2	43.42	-201.1	238.7	234.5	220.8	13.75	17.051	
2,300.0	2,290.0	2,275.6	2,245.2	6.9	8.4	42.89	-201.2	250.9	234.6	220.6	13.99	16.761	
2,400.0	2,386.6	2,375.5	2,340.6	7.3	8.8	41.63	-201.3	280.5	234.8	220.1	14.67	16.000	
2,500.0	2,483.1	2,475.4	2,435.9	7.6	9.2	40.36	-201.4	310.0	235.1	219.7	15.38	15.280	
2,600.0	2,579.7	2,575.2	2,531.3	8.0	9.7	39.10	-201.6	339.6	235.5	219.4	16.13	14.604	
2,700.0	2,676.3	2,675.1	2,626.7	8.3	10.1	37.85	-201.7	369.1	236.0	219.1	16.89	13.971	
2,800.0	2,772.9	2,775.0	2,722.1	8.7	10.6	36.60	-201.9	398.7	236.7	219.0	17.69	13.379	
2,900.0	2,869.5	2,874.8	2,817.5	9.1	11.0	35.36	-202.0	428.2	237.5	218.9	18.51	12.828	
3,000.0	2,966.1	2,974.7	2,912.9	9.5	11.5	34.13	-202.1	457.8	238.3	219.0	19.35	12.315	
3,100.0	3,062.7	3,074.6	3,008.3	9.9	11.9	32.91	-202.3	487.3	239.3	219.1	20.22	11.838	
3,200.0	3,159.3	3,174.4	3,103.7	10.4	12.4	31.70	-202.4	516.9	240.4	219.3	21.10	11.396	
3,300.0	3,255.9	3,274.3	3,199.1	10.8	12.9	30.49	-202.5	546.4	241.6	219.6	21.99	10.985	
3,400.0	3,352.5	3,374.2	3,294.5	11.2	13.4	29.31	-202.7	576.0	242.9	220.0	22.91	10.604	
3,500.0	3,449.1	3,474.0	3,389.9	11.7	13.8	28.13	-202.8	605.6	244.3	220.5	23.84	10.250	
3,600.0	3,545.7	3,573.9	3,485.3	12.1	14.3	26.97	-203.0	635.1	245.8	221.1	24.78	9.922	
3,700.0	3,642.3	3,673.8	3,580.6	12.6	14.8	25.82	-203.1	664.7	247.5	221.7	25.73	9.618	
3,800.0	3,738.8	3,773.6	3,676.0	13.0	15.3	24.69	-203.2	694.2	249.2	222.5	26.69	9.335	
3,900.0	3,835.4	3,873.5	3,771.4	13.5	15.8	23.58	-203.4	723.8	251.0	223.3	27.66	9.073	
4,000.0	3,932.0	3,973.3	3,866.8	13.9	16.2	22.48	-203.5	753.3	252.9	224.2	28.64	8.829	
4,100.0	4,028.6	4,073.2	3,962.2	14.4	16.7	21.40	-203.7	782.9	254.9	225.2	29.63	8.602	
4,200.0	4,125.2	4,173.1	4,057.6	14.9	17.2	20.33	-203.8	812.4	256.9	226.3	30.62	8.391	
4,300.0	4,221.8	4,272.9	4,153.0	15.3	17.7	19.28	-203.9	842.0	259.1	227.5	31.62	8.195	
4,400.0	4,318.4	4,372.8	4,248.4	15.8	18.2	18.25	-204.1	871.5	261.4	228.7	32.62	8.012	
4,500.0	4,415.0	4,472.7	4,343.8	16.3	18.7	17.24	-204.2	901.1	263.7	230.1	33.62	7.842	
4,600.0	4,511.6	4,572.5	4,439.2	16.7	19.2	16.25	-204.3	930.7	266.1	231.5	34.63	7.684	
4,700.0	4,608.2	4,672.4	4,534.6	17.2	19.7	15.27	-204.5	960.2	268.6	233.0	35.64	7.536	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
4,800.0	4,704.8	4,772.3	4,629.9	17.7	20.2	14.31	-204.6	989.8	271.2	234.5	36.66	7.398	
4,900.0	4,801.4	4,872.1	4,725.3	18.2	20.7	13.37	-204.8	1,019.3	273.8	236.2	37.67	7.269	
5,000.0	4,898.0	4,972.0	4,820.7	18.6	21.2	12.45	-204.9	1,048.9	276.5	237.9	38.69	7.148	
5,100.0	4,994.6	5,071.9	4,916.1	19.1	21.7	11.55	-205.0	1,078.4	279.3	239.6	39.70	7.036	
5,200.0	5,091.1	5,171.7	5,011.5	19.6	22.2	10.66	-205.2	1,108.0	282.2	241.5	40.72	6.931	
5,300.0	5,187.7	5,271.6	5,106.9	20.1	22.7	9.80	-205.3	1,137.5	285.1	243.4	41.73	6.832	
5,400.0	5,284.3	5,371.5	5,202.3	20.6	23.2	8.95	-205.5	1,167.1	288.1	245.4	42.75	6.740	
5,500.0	5,380.9	5,471.3	5,297.7	21.0	23.7	8.12	-205.6	1,196.6	291.2	247.4	43.76	6.654	
5,600.0	5,477.5	5,571.2	5,393.1	21.5	24.2	7.30	-205.7	1,226.2	294.3	249.5	44.77	6.573	
5,700.0	5,574.1	5,671.0	5,488.5	22.0	24.7	6.50	-205.9	1,255.8	297.4	251.7	45.78	6.497	
5,800.0	5,670.7	5,770.9	5,583.9	22.5	25.2	5.72	-206.0	1,285.3	300.7	253.9	46.79	6.426	
5,900.0	5,767.3	5,870.8	5,679.3	23.0	25.7	4.96	-206.1	1,314.9	303.9	256.1	47.80	6.359	
6,000.0	5,863.9	5,970.6	5,774.6	23.5	26.2	4.21	-206.3	1,344.4	307.3	258.5	48.80	6.296	
6,100.0	5,960.5	6,070.5	5,870.0	23.9	26.7	3.48	-206.4	1,374.0	310.7	260.9	49.81	6.237	
6,200.0	6,057.1	6,170.4	5,965.4	24.4	27.2	2.77	-206.6	1,403.5	314.1	263.3	50.81	6.182	
6,300.0	6,153.7	6,270.2	6,060.8	24.9	27.7	2.07	-206.7	1,433.1	317.6	265.8	51.81	6.130	
6,400.0	6,250.3	6,370.1	6,156.2	25.4	28.2	1.38	-206.8	1,462.6	321.1	268.3	52.80	6.081	
6,500.0	6,346.8	6,470.0	6,251.6	25.9	28.7	0.71	-207.0	1,492.2	324.7	270.9	53.79	6.035	
6,600.0	6,443.4	6,569.8	6,347.0	26.4	29.2	0.06	-207.1	1,521.7	328.3	273.5	54.79	5.992	
6,700.0	6,540.0	6,669.7	6,442.4	26.9	29.7	-0.58	-207.2	1,551.3	331.9	276.2	55.77	5.952	
6,800.0	6,636.6	6,769.6	6,537.8	27.4	30.2	-1.21	-207.4	1,580.8	335.6	278.9	56.76	5.913	
6,900.0	6,733.2	6,869.4	6,633.2	27.9	30.7	-1.82	-207.5	1,610.4	339.4	281.6	57.74	5.878	
7,000.0	6,829.8	6,969.3	6,728.6	28.3	31.2	-2.42	-207.7	1,640.0	343.2	284.4	58.72	5.844	
7,100.0	6,926.4	7,069.2	6,824.0	28.8	31.7	-3.01	-207.8	1,669.5	347.0	287.3	59.70	5.812	
7,200.0	7,023.0	7,169.0	6,919.3	29.3	32.2	-3.58	-207.9	1,699.1	350.8	290.1	60.68	5.782	
7,300.0	7,119.6	7,268.9	7,014.7	29.8	32.7	-4.14	-208.1	1,728.6	354.7	293.1	61.65	5.754	
7,400.0	7,216.2	7,368.8	7,110.1	30.3	33.2	-4.69	-208.2	1,758.2	358.6	296.0	62.62	5.727	
7,500.0	7,312.8	7,468.6	7,205.5	30.8	33.7	-5.23	-208.4	1,787.7	362.6	299.0	63.59	5.702	
7,600.0	7,409.4	7,568.5	7,300.9	31.3	34.3	-5.75	-208.5	1,817.3	366.5	302.0	64.55	5.678	
7,693.8	7,500.0	7,662.2	7,390.4	31.8	34.7	-6.24	-208.6	1,845.0	370.3	304.9	65.45	5.657	
7,700.0	7,506.0	7,668.3	7,396.3	31.8	34.8	-6.27	-208.6	1,846.8	370.6	305.0	65.51	5.656	
7,800.0	7,603.0	7,768.1	7,491.6	32.3	35.3	-6.75	-208.8	1,876.4	376.5	310.1	66.49	5.663	
7,900.0	7,700.9	7,873.8	7,592.7	32.8	35.8	-7.18	-208.9	1,906.9	385.3	317.9	67.46	5.712	
8,000.0	7,799.4	7,980.5	7,695.4	33.3	36.3	-7.54	-209.0	1,935.9	395.7	327.3	68.38	5.787	
8,043.8	7,842.8	8,027.3	7,740.6	33.4	36.6	-7.67	-209.1	1,948.0	400.8	332.0	68.76	5.829	
8,100.0	7,898.4	8,087.3	7,798.7	33.7	36.9	-7.81	-209.2	1,963.0	407.2	337.9	69.26	5.879	
8,200.0	7,997.4	8,194.5	7,902.9	34.1	37.4	-8.05	-209.3	1,988.3	417.1	347.0	70.16	5.946	
8,300.0	8,096.4	8,302.1	8,007.9	34.5	37.9	-8.28	-209.4	2,011.7	425.2	354.2	71.02	5.987	
8,400.0	8,195.5	8,409.9	8,113.6	35.0	38.4	-8.51	-209.5	2,033.1	431.4	359.6	71.86	6.004	
8,500.0	8,294.5	8,518.0	8,219.9	35.4	38.9	-8.75	-209.6	2,052.7	435.8	363.1	72.68	5.996	
8,600.0	8,393.5	8,626.2	8,326.7	35.8	39.4	-8.98	-209.7	2,070.2	438.2	364.8	73.46	5.966	
8,700.0	8,492.5	8,734.5	8,433.8	36.3	39.9	-9.23	-209.7	2,085.7	438.8	364.6	74.20	5.914	
8,800.0	8,591.6	8,842.7	8,541.2	36.7	40.3	-9.48	-209.8	2,099.2	437.5	362.6	74.91	5.841	
8,900.0	8,690.6	8,950.9	8,648.8	37.1	40.8	-9.75	-209.9	2,110.6	434.3	358.8	75.58	5.747	
9,000.0	8,789.6	9,058.8	8,756.3	37.6	41.2	-10.04	-209.9	2,120.0	429.3	353.1	76.21	5.633	
9,100.0	8,888.6	9,166.6	8,863.8	38.0	41.6	-10.34	-209.9	2,127.4	422.4	345.6	76.79	5.500	
9,101.4	8,890.0	9,168.0	8,865.3	38.0	41.6	-10.35	-209.9	2,127.4	422.3	345.5	76.80	5.498	
9,200.0	8,987.8	9,274.1	8,971.2	38.4	41.9	-10.62	-210.0	2,132.7	414.8	337.6	77.28	5.368	
9,300.0	9,087.3	9,381.6	9,078.6	38.8	42.3	-10.85	-210.0	2,136.0	408.0	330.3	77.68	5.253	
9,400.0	9,187.1	9,488.9	9,186.0	39.2	42.4	-11.04	-210.0	2,137.3	401.9	322.4	79.52	5.054	
9,500.0	9,286.9	9,589.9	9,286.9	39.5	42.5	-11.16	-210.0	2,137.3	397.2	316.2	80.97	4.905	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,600.0	9,386.9	9,689.8	9,386.9	39.8	42.5	-11.22	-210.0	2,137.3	395.0	313.8	81.24	4.862	
9,634.7	9,421.6	9,724.5	9,421.6	39.9	42.5	86.25	-210.0	2,137.3	394.9	313.6	81.24	4.860	
9,700.0	9,486.9	9,790.1	9,487.1	39.9	42.5	86.25	-210.0	2,137.3	394.8	313.6	81.29	4.857	
9,800.0	9,586.9	9,893.4	9,589.5	39.9	42.5	88.01	-222.1	2,137.4	394.3	313.0	81.37	4.846	
9,843.4	9,630.3	9,935.7	9,630.3	39.9	42.5	89.65	-233.4	2,137.4	394.2	312.5	81.61	4.830	
9,900.0	9,686.9	9,987.4	9,678.5	39.9	42.5	92.36	-252.1	2,137.5	394.7	312.6	82.10	4.807	
10,000.0	9,786.9	10,067.5	9,748.4	39.9	42.5	97.94	-290.9	2,137.8	400.2	317.1	83.08	4.817	
10,100.0	9,886.9	10,132.9	9,800.1	39.9	42.6	103.54	-330.9	2,138.0	415.2	331.7	83.47	4.974	
10,200.0	9,986.9	10,185.5	9,837.4	40.0	42.6	108.51	-368.0	2,138.2	442.5	359.8	82.68	5.352	
10,300.0	10,086.9	10,225.0	9,862.5	40.0	42.6	112.37	-398.4	2,138.4	482.6	401.9	80.73	5.978	
10,400.0	10,186.9	10,262.1	9,883.8	40.0	42.6	116.02	-428.8	2,138.6	534.2	456.2	78.05	6.844	
10,500.0	10,286.9	10,290.1	9,898.3	40.0	42.6	118.75	-452.8	2,138.7	595.4	520.2	75.15	7.923	
10,538.8	10,325.7	10,300.0	9,903.1	40.0	42.6	119.70	-461.4	2,138.8	621.2	547.2	74.03	8.391	
10,550.0	10,336.9	10,300.0	9,903.1	40.0	42.6	-39.63	-461.4	2,138.8	628.9	555.3	73.53	8.553	
10,600.0	10,386.8	10,314.6	9,909.8	40.1	42.6	-35.62	-474.4	2,138.9	662.3	590.0	72.27	9.163	
10,650.0	10,436.2	10,325.0	9,914.3	40.2	42.6	-32.44	-483.8	2,138.9	694.7	623.6	71.08	9.774	
10,700.0	10,484.8	10,340.8	9,920.8	40.3	42.7	-29.35	-498.2	2,139.0	725.8	655.8	69.98	10.371	
10,750.0	10,532.2	10,350.0	9,924.4	40.5	42.7	-27.06	-506.6	2,139.1	755.5	686.6	68.90	10.966	
10,800.0	10,578.0	10,375.0	9,933.3	40.6	42.7	-24.30	-530.0	2,139.2	783.7	715.7	67.99	11.526	
10,850.0	10,621.8	10,383.1	9,935.9	40.7	42.7	-22.70	-537.7	2,139.3	810.0	743.0	67.00	12.090	
10,900.0	10,663.5	10,400.0	9,940.9	40.9	42.7	-20.96	-553.8	2,139.4	834.6	768.5	66.12	12.623	
10,950.0	10,702.5	10,412.6	9,944.3	41.0	42.7	-19.61	-566.0	2,139.4	857.2	792.0	65.24	13.140	
10,988.8	10,730.8	10,425.0	9,947.2	41.1	42.7	-18.60	-578.0	2,139.5	873.4	808.8	64.59	13.523	
11,000.0	10,738.7	10,425.0	9,947.2	41.1	42.7	-18.77	-578.0	2,139.5	877.9	813.5	64.37	13.638	
11,025.0	10,755.6	10,435.3	9,949.5	41.2	42.7	-18.77	-588.1	2,139.6	887.5	823.5	64.02	13.863	
11,050.0	10,771.5	10,450.0	9,952.3	41.3	42.7	-18.59	-602.5	2,139.7	896.7	833.0	63.74	14.068	
11,075.0	10,786.6	10,450.0	9,952.3	41.3	42.7	-18.76	-602.5	2,139.7	905.3	842.0	63.35	14.292	
11,100.0	10,800.6	10,459.0	9,953.9	41.4	42.7	-18.65	-611.3	2,139.7	913.5	850.4	63.07	14.483	
11,125.0	10,813.7	10,475.0	9,956.1	41.4	42.8	-18.39	-627.2	2,139.8	921.3	858.4	62.91	14.645	
11,150.0	10,825.7	10,475.0	9,956.1	41.4	42.8	-18.42	-627.2	2,139.8	928.3	865.7	62.60	14.828	
11,175.0	10,836.6	10,483.3	9,957.1	41.5	42.8	-18.29	-635.4	2,139.8	934.9	872.5	62.42	14.977	
11,200.0	10,846.4	10,491.6	9,958.0	41.5	42.8	-18.15	-643.7	2,139.9	940.9	878.6	62.27	15.111	
11,225.0	10,855.0	10,500.0	9,958.6	41.6	42.8	-18.01	-652.0	2,139.9	946.3	884.2	62.14	15.228	
11,250.0	10,862.5	10,508.3	9,959.2	41.6	42.8	-17.88	-660.3	2,140.0	951.2	889.1	62.05	15.329	
11,275.0	10,868.8	10,516.7	9,959.6	41.6	42.8	-17.75	-668.7	2,140.1	955.4	893.4	61.99	15.413	
11,300.0	10,873.9	10,525.0	9,959.9	41.6	42.8	-17.63	-677.0	2,140.1	959.0	897.1	61.95	15.480	
11,325.0	10,877.7	10,534.2	9,960.0	41.7	42.8	-17.52	-686.2	2,140.2	962.0	900.1	61.96	15.528	
11,350.0	10,880.4	10,557.3	9,960.0	41.7	42.8	-17.37	-709.3	2,140.3	964.2	902.1	62.14	15.516	
11,375.0	10,881.8	10,582.3	9,960.1	41.7	42.9	-17.30	-734.3	2,140.4	965.3	903.0	62.39	15.473	
11,390.6	10,882.0	10,597.9	9,960.1	41.7	42.9	-17.29	-749.9	2,140.5	965.5	903.0	62.56	15.434	
11,400.0	10,882.1	10,607.3	9,960.2	41.8	42.9	-17.29	-759.3	2,140.6	965.5	902.8	62.66	15.408	
11,500.0	10,882.1	10,707.3	9,960.4	41.9	43.0	-17.29	-859.3	2,141.2	965.3	901.5	63.80	15.131	
11,600.0	10,882.2	10,807.3	9,960.7	42.0	43.2	-17.29	-959.3	2,141.8	965.1	900.2	64.94	14.862	
11,700.0	10,882.2	10,907.3	9,961.0	42.2	43.3	-17.30	-1,059.3	2,142.4	964.9	898.8	66.09	14.601	
11,800.0	10,882.3	11,007.3	9,961.2	42.4	43.5	-17.30	-1,159.3	2,143.0	964.7	897.5	67.25	14.346	
11,900.0	10,882.3	11,107.3	9,961.5	42.6	43.8	-17.30	-1,259.3	2,143.6	964.5	896.1	68.41	14.099	
12,000.0	10,882.4	11,207.3	9,961.8	42.9	44.0	-17.31	-1,359.3	2,144.2	964.3	894.7	69.58	13.858	
12,100.0	10,882.5	11,307.3	9,962.0	43.1	44.3	-17.31	-1,459.3	2,144.8	964.1	893.4	70.76	13.625	
12,200.0	10,882.5	11,407.3	9,962.3	43.4	44.6	-17.31	-1,559.3	2,145.4	963.9	892.0	71.94	13.398	
12,300.0	10,882.6	11,507.3	9,962.6	43.7	44.9	-17.32	-1,659.3	2,146.0	963.7	890.6	73.13	13.178	
12,400.0	10,882.6	11,607.3	9,962.8	44.1	45.2	-17.32	-1,759.2	2,146.6	963.5	889.2	74.33	12.963	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 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)			
12,500.0	10,882.7	11,707.3	9,963.1	44.4	45.6	-17.32	-1,859.2	2,147.2	963.3	887.8	75.52	12.755	
12,600.0	10,882.8	11,807.3	9,963.4	44.8	45.9	-17.33	-1,959.2	2,147.8	963.1	886.4	76.72	12.553	
12,700.0	10,882.8	11,907.3	9,963.6	45.2	46.3	-17.33	-2,059.2	2,148.4	962.9	885.0	77.93	12.356	
12,800.0	10,882.9	12,007.3	9,963.9	45.6	46.7	-17.33	-2,159.2	2,149.1	962.7	883.6	79.14	12.165	
12,900.0	10,882.9	12,107.3	9,964.1	46.0	47.1	-17.34	-2,259.2	2,149.7	962.5	882.2	80.35	11.979	
13,000.0	10,883.0	12,207.3	9,964.4	46.5	47.6	-17.34	-2,359.2	2,150.3	962.3	880.8	81.57	11.797	
13,100.0	10,883.1	12,307.3	9,964.7	46.9	48.0	-17.34	-2,459.2	2,150.9	962.1	879.3	82.79	11.621	
13,200.0	10,883.1	12,407.3	9,964.9	47.4	48.5	-17.35	-2,559.2	2,151.5	961.9	877.9	84.02	11.449	
13,300.0	10,883.2	12,507.3	9,965.2	47.9	49.0	-17.35	-2,659.2	2,152.1	961.7	876.5	85.24	11.282	
13,400.0	10,883.2	12,607.3	9,965.5	48.4	49.5	-17.35	-2,759.2	2,152.7	961.5	875.0	86.48	11.119	
13,500.0	10,883.3	12,707.3	9,965.7	49.0	50.0	-17.36	-2,859.2	2,153.3	961.3	873.6	87.71	10.960	
13,600.0	10,883.3	12,807.3	9,966.0	49.5	50.5	-17.36	-2,959.2	2,153.9	961.1	872.2	88.95	10.805	
13,700.0	10,883.4	12,907.3	9,966.3	50.1	51.0	-17.37	-3,059.2	2,154.5	960.9	870.7	90.19	10.654	
13,800.0	10,883.5	13,007.3	9,966.5	50.6	51.6	-17.37	-3,159.2	2,155.1	960.7	869.3	91.44	10.507	
13,900.0	10,883.5	13,107.3	9,966.8	51.2	52.2	-17.37	-3,259.2	2,155.7	960.5	867.8	92.69	10.363	
14,000.0	10,883.6	13,207.3	9,967.1	51.8	52.7	-17.38	-3,359.2	2,156.3	960.3	866.4	93.94	10.223	
14,100.0	10,883.6	13,307.3	9,967.3	52.4	53.3	-17.38	-3,459.2	2,156.9	960.1	864.9	95.20	10.085	
14,200.0	10,883.7	13,407.3	9,967.6	53.0	53.9	-17.38	-3,559.2	2,157.5	959.9	863.5	96.46	9.952	
14,300.0	10,883.8	13,507.3	9,967.9	53.7	54.5	-17.39	-3,659.2	2,158.1	959.7	862.0	97.73	9.821	
14,400.0	10,883.8	13,607.3	9,968.1	54.3	55.1	-17.39	-3,759.2	2,158.7	959.5	860.5	98.99	9.693	
14,500.0	10,883.9	13,707.3	9,968.4	55.0	55.8	-17.39	-3,859.2	2,159.3	959.3	859.1	100.26	9.568	
14,600.0	10,883.9	13,807.3	9,968.7	55.6	56.4	-17.40	-3,959.2	2,159.9	959.1	857.6	101.54	9.446	
14,700.0	10,884.0	13,907.3	9,968.9	56.3	57.0	-17.40	-4,059.2	2,160.5	958.9	856.1	102.82	9.327	
14,800.0	10,884.1	14,007.3	9,969.2	57.0	57.7	-17.40	-4,159.2	2,161.1	958.7	854.6	104.10	9.210	
14,900.0	10,884.1	14,107.3	9,969.5	57.7	58.4	-17.41	-4,259.2	2,161.7	958.5	853.2	105.39	9.096	
15,000.0	10,884.2	14,207.3	9,969.7	58.4	59.0	-17.41	-4,359.2	2,162.3	958.3	851.7	106.67	8.984	
15,100.0	10,884.2	14,307.3	9,970.0	59.1	59.7	-17.41	-4,459.2	2,162.9	958.1	850.2	107.97	8.874	
15,200.0	10,884.3	14,407.3	9,970.3	59.8	60.4	-17.42	-4,559.2	2,163.5	957.9	848.7	109.26	8.767	
15,300.0	10,884.4	14,507.3	9,970.5	60.5	61.1	-17.42	-4,659.2	2,164.2	957.7	847.2	110.56	8.662	
15,400.0	10,884.4	14,607.3	9,970.8	61.2	61.8	-17.42	-4,759.2	2,164.8	957.5	845.7	111.87	8.560	
15,500.0	10,884.5	14,707.3	9,971.1	61.9	62.5	-17.43	-4,859.2	2,165.4	957.3	844.2	113.17	8.459	
15,600.0	10,884.5	14,807.3	9,971.3	62.7	63.2	-17.43	-4,959.2	2,166.0	957.2	842.7	114.48	8.361	
15,700.0	10,884.6	14,907.3	9,971.6	63.4	63.9	-17.43	-5,059.2	2,166.6	957.0	841.2	115.80	8.264	
15,800.0	10,884.6	15,007.3	9,971.9	64.2	64.7	-17.44	-5,159.2	2,167.2	956.8	839.6	117.11	8.169	
15,900.0	10,884.7	15,107.3	9,972.1	64.9	65.4	-17.44	-5,259.2	2,167.8	956.6	838.1	118.43	8.077	
16,000.0	10,884.8	15,207.3	9,972.4	65.7	66.1	-17.44	-5,359.2	2,168.4	956.4	836.6	119.76	7.986	
16,100.0	10,884.8	15,307.3	9,972.7	66.4	66.9	-17.45	-5,459.2	2,169.0	956.2	835.1	121.08	7.897	
16,200.0	10,884.9	15,407.3	9,972.9	67.2	67.6	-17.45	-5,559.2	2,169.6	956.0	833.5	122.41	7.809	
16,300.0	10,884.9	15,507.3	9,973.2	68.0	68.4	-17.46	-5,659.2	2,170.2	955.8	832.0	123.75	7.723	
16,400.0	10,885.0	15,607.3	9,973.5	68.8	69.2	-17.46	-5,759.2	2,170.8	955.6	830.5	125.08	7.639	
16,500.0	10,885.1	15,707.3	9,973.7	69.5	69.9	-17.46	-5,859.2	2,171.4	955.4	828.9	126.42	7.557	
16,600.0	10,885.1	15,807.3	9,974.0	70.3	70.7	-17.47	-5,959.1	2,172.0	955.2	827.4	127.77	7.476	
16,700.0	10,885.2	15,907.3	9,974.3	71.1	71.5	-17.47	-6,059.1	2,172.6	955.0	825.9	129.11	7.396	
16,800.0	10,885.2	16,007.3	9,974.5	71.9	72.2	-17.47	-6,159.1	2,173.2	954.8	824.3	130.46	7.318	
16,900.0	10,885.3	16,107.3	9,974.8	72.7	73.0	-17.48	-6,259.1	2,173.8	954.6	822.7	131.82	7.242	
17,000.0	10,885.4	16,207.3	9,975.1	73.5	73.8	-17.48	-6,359.1	2,174.4	954.4	821.2	133.17	7.166	
17,100.0	10,885.4	16,307.3	9,975.3	74.3	74.6	-17.48	-6,459.1	2,175.0	954.2	819.6	134.53	7.093	
17,200.0	10,885.5	16,407.3	9,975.6	75.2	75.4	-17.49	-6,559.1	2,175.6	954.0	818.1	135.89	7.020	
17,300.0	10,885.5	16,507.3	9,975.9	76.0	76.2	-17.49	-6,659.1	2,176.2	953.8	816.5	137.26	6.949	
17,400.0	10,885.6	16,607.3	9,976.1	76.8	77.0	-17.49	-6,759.1	2,176.8	953.6	814.9	138.63	6.879	
17,500.0	10,885.6	16,707.3	9,976.4	77.6	77.8	-17.50	-6,859.1	2,177.4	953.4	813.4	140.00	6.810	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
17,600.0	10,885.7	16,807.3	9,976.7	78.4	78.6	-17.50	-6,959.1	2,178.0	953.2	811.8	141.37	6.742	
17,700.0	10,885.8	16,907.3	9,976.9	79.3	79.4	-17.50	-7,059.1	2,178.6	953.0	810.2	142.75	6.676	
17,800.0	10,885.8	17,007.3	9,977.2	80.1	80.3	-17.51	-7,159.1	2,179.3	952.8	808.6	144.13	6.610	
17,900.0	10,885.9	17,107.3	9,977.5	80.9	81.1	-17.51	-7,259.1	2,179.9	952.6	807.1	145.52	6.546	
18,000.0	10,885.9	17,207.3	9,977.7	81.8	81.9	-17.52	-7,359.1	2,180.5	952.4	805.5	146.90	6.483	
18,100.0	10,886.0	17,307.3	9,978.0	82.6	82.7	-17.52	-7,459.1	2,181.1	952.2	803.9	148.29	6.421	
18,200.0	10,886.1	17,407.3	9,978.3	83.5	83.6	-17.52	-7,559.1	2,181.7	952.0	802.3	149.69	6.360	
18,300.0	10,886.1	17,507.3	9,978.5	84.3	84.4	-17.53	-7,659.1	2,182.3	951.8	800.7	151.08	6.300	
18,400.0	10,886.2	17,607.3	9,978.8	85.2	85.2	-17.53	-7,759.1	2,182.9	951.6	799.1	152.48	6.241	
18,500.0	10,886.2	17,707.3	9,979.1	86.0	86.1	-17.53	-7,859.1	2,183.5	951.4	797.5	153.88	6.183	
18,600.0	10,886.3	17,807.3	9,979.3	86.9	86.9	-17.54	-7,959.1	2,184.1	951.2	795.9	155.28	6.125	
18,700.0	10,886.4	17,907.3	9,979.6	87.7	87.8	-17.54	-8,059.1	2,184.7	951.0	794.3	156.69	6.069	
18,800.0	10,886.4	18,007.3	9,979.9	88.6	88.6	-17.54	-8,159.1	2,185.3	950.8	792.7	158.10	6.014	
18,900.0	10,886.5	18,107.3	9,980.1	89.4	89.4	-17.55	-8,259.1	2,185.9	950.6	791.1	159.51	5.959	
19,000.0	10,886.5	18,207.3	9,980.4	90.3	90.3	-17.55	-8,359.1	2,186.5	950.4	789.5	160.93	5.906	
19,100.0	10,886.6	18,307.3	9,980.6	91.2	91.1	-17.55	-8,459.1	2,187.1	950.2	787.8	162.35	5.853	
19,200.0	10,886.7	18,407.3	9,980.9	92.0	92.0	-17.56	-8,559.1	2,187.7	950.0	786.2	163.77	5.801	
19,300.0	10,886.7	18,507.3	9,981.2	92.9	92.9	-17.56	-8,659.1	2,188.3	949.8	784.6	165.19	5.750	
19,400.0	10,886.8	18,607.3	9,981.4	93.8	93.7	-17.56	-8,759.1	2,188.9	949.6	783.0	166.61	5.699	
19,500.0	10,886.8	18,707.3	9,981.7	94.6	94.6	-17.57	-8,859.1	2,189.5	949.4	781.4	168.04	5.650	
19,600.0	10,886.9	18,807.3	9,982.0	95.5	95.4	-17.57	-8,959.1	2,190.1	949.2	779.7	169.47	5.601	
19,700.0	10,886.9	18,907.3	9,982.2	96.4	96.3	-17.58	-9,059.1	2,190.7	949.0	778.1	170.91	5.553	
19,800.0	10,887.0	19,007.3	9,982.5	97.3	97.2	-17.58	-9,159.1	2,191.3	948.8	776.5	172.34	5.505	
19,900.0	10,887.1	19,107.3	9,982.8	98.2	98.0	-17.58	-9,259.1	2,191.9	948.6	774.8	173.78	5.459	
20,000.0	10,887.1	19,207.3	9,983.0	99.0	98.9	-17.59	-9,359.1	2,192.5	948.4	773.2	175.22	5.413	
20,100.0	10,887.2	19,307.3	9,983.3	99.9	99.8	-17.59	-9,459.1	2,193.1	948.2	771.5	176.67	5.367	
20,200.0	10,887.2	19,407.3	9,983.6	100.8	100.7	-17.59	-9,559.1	2,193.7	948.0	769.9	178.11	5.323	
20,300.0	10,887.3	19,507.3	9,983.8	101.7	101.5	-17.60	-9,659.1	2,194.4	947.8	768.2	179.56	5.279	
20,400.0	10,887.4	19,607.3	9,984.1	102.6	102.4	-17.60	-9,759.1	2,195.0	947.6	766.6	181.01	5.235	
20,500.0	10,887.4	19,707.3	9,984.4	103.5	103.3	-17.60	-9,859.1	2,195.6	947.4	764.9	182.46	5.192	
20,600.0	10,887.5	19,807.3	9,984.6	104.4	104.2	-17.61	-9,959.1	2,196.2	947.2	763.3	183.92	5.150	
20,700.0	10,887.5	19,907.3	9,984.9	105.2	105.1	-17.61	-10,059.1	2,196.8	947.0	761.6	185.38	5.109	
20,800.0	10,887.6	20,007.3	9,985.2	106.1	105.9	-17.61	-10,159.0	2,197.4	946.8	760.0	186.84	5.068	
20,900.0	10,887.7	20,107.3	9,985.4	107.0	106.8	-17.62	-10,259.0	2,198.0	946.6	758.3	188.30	5.027	
21,000.0	10,887.7	20,207.3	9,985.7	107.9	107.7	-17.62	-10,359.0	2,198.6	946.4	756.7	189.76	4.987	
21,100.0	10,887.8	20,307.3	9,986.0	108.8	108.6	-17.62	-10,459.0	2,199.2	946.2	755.0	191.23	4.948	
21,200.0	10,887.8	20,407.3	9,986.2	109.7	109.5	-17.63	-10,559.0	2,199.8	946.0	753.3	192.70	4.909	
21,300.0	10,887.9	20,507.2	9,986.5	110.6	110.4	-17.63	-10,659.0	2,200.4	945.8	751.7	194.17	4.871	
21,400.0	10,887.9	20,607.2	9,986.8	111.5	111.3	-17.64	-10,759.0	2,201.0	945.6	750.0	195.65	4.833	
21,485.7	10,888.0	20,693.0	9,987.0	112.3	112.0	-17.64	-10,844.7	2,201.5	945.5	748.5	196.91	4.801 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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1													Offset Site Error: 0.0 usft	
Survey Program:		0-r.5 MWD+IFR1						Rule Assigned:					Offset Well Error: 0.0 usft	
Measured Depth	Reference	Offset		Semi Major Axis			Offset Wellbore Centre		Distance					
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
0.0	0.0	0.0	1.0	0.0	0.0	-171.41	-200.1	-30.2	202.4					
100.0	100.0	99.0	100.0	0.8	0.8	-171.41	-200.1	-30.2	202.3	200.4	1.98	102.007		
200.0	200.0	199.0	200.0	1.4	1.4	-171.41	-200.1	-30.2	202.3	199.0	3.30	61.226		
300.0	300.0	299.0	300.0	1.9	1.9	-171.41	-200.1	-30.2	202.3	198.2	4.19	48.282		
400.0	400.0	399.0	400.0	2.2	2.2	-171.41	-200.1	-30.2	202.3	197.4	4.91	41.225		
500.0	500.0	499.0	500.0	2.6	2.6	-171.41	-200.1	-30.2	202.3	196.8	5.53	36.592		
600.0	600.0	599.0	600.0	2.8	2.8	-171.41	-200.1	-30.2	202.3	196.3	6.09	33.240		
700.0	700.0	699.0	700.0	3.1	3.1	-171.41	-200.1	-30.2	202.3	195.8	6.60	30.665		
800.0	800.0	799.0	800.0	3.3	3.3	-171.41	-200.1	-30.2	202.3	195.3	7.07	28.604		
900.0	900.0	899.0	900.0	3.6	3.6	-171.41	-200.1	-30.2	202.3	194.8	7.52	26.903		
1,000.0	1,000.0	999.0	1,000.0	3.8	3.8	-171.41	-200.1	-30.2	202.3	194.4	7.95	25.468	CC, ES	
1,100.0	1,100.0	1,096.5	1,097.5	4.0	4.1	-171.84	-200.9	-28.8	203.0	194.6	8.35	24.308		
1,200.0	1,200.0	1,193.7	1,194.6	4.2	4.4	-173.12	-203.4	-24.6	204.9	196.2	8.73	23.466		
1,300.0	1,300.0	1,291.8	1,292.3	4.4	4.5	-175.22	-207.4	-17.3	208.2	199.2	9.01	23.113		
1,400.0	1,400.0	1,391.0	1,390.8	4.6	4.8	-178.19	-211.9	-6.7	212.2	202.8	9.38	22.615		
1,500.0	1,500.0	1,489.3	1,488.0	4.7	5.2	-178.10	-216.7	7.2	217.1	207.3	9.78	22.206		
1,600.0	1,600.0	1,587.3	1,584.4	5.0	5.4	64.08	-221.6	24.1	222.7	212.6	10.11	22.030		
1,700.0	1,699.8	1,686.4	1,681.7	5.3	5.7	60.82	-226.6	41.9	227.8	217.2	10.52	21.659		
1,750.0	1,749.7	1,736.1	1,730.6	5.3	5.9	59.52	-229.2	50.9	229.9	219.2	10.68	21.524		
1,800.0	1,799.5	1,785.9	1,779.5	5.4	6.1	61.49	-231.7	59.8	231.8	220.9	10.85	21.364		
1,900.0	1,898.7	1,885.6	1,877.5	5.7	6.4	63.86	-236.8	77.8	235.1	223.9	11.29	20.832		
2,000.0	1,997.5	1,985.6	1,975.7	6.0	6.8	65.56	-241.9	95.7	237.7	226.0	11.72	20.277		
2,100.0	2,095.7	2,085.6	2,073.9	6.3	7.1	67.32	-247.0	113.7	239.4	227.2	12.15	19.710		
2,200.0	2,193.2	2,185.4	2,172.0	6.7	7.5	69.45	-252.0	131.6	240.2	227.7	12.54	19.152		
2,258.8	2,250.1	2,244.1	2,229.6	6.8	7.8	70.94	-255.0	142.2	240.4	227.6	12.72	18.892		
2,300.0	2,290.0	2,285.2	2,270.0	6.9	7.9	71.73	-257.1	149.6	240.4	227.6	12.84	18.729		
2,400.0	2,386.6	2,384.8	2,367.9	7.3	8.3	73.64	-262.2	167.5	240.8	227.6	13.18	18.260		
2,500.0	2,483.1	2,484.5	2,465.8	7.6	8.7	75.54	-267.3	185.4	241.4	227.8	13.53	17.841		
2,600.0	2,579.7	2,584.2	2,563.8	8.0	9.1	77.43	-272.3	203.3	242.2	228.4	13.87	17.469		
2,700.0	2,676.3	2,683.9	2,661.7	8.3	9.6	79.30	-277.4	221.2	243.3	229.1	14.20	17.136		
2,800.0	2,772.9	2,783.5	2,759.6	8.7	10.0	81.15	-282.5	239.1	244.7	230.2	14.53	16.839		
2,900.0	2,869.5	2,883.2	2,857.5	9.1	10.4	82.99	-287.5	257.0	246.4	231.5	14.87	16.572		
3,000.0	2,966.1	2,982.9	2,955.4	9.5	10.8	84.79	-292.6	275.0	248.3	233.1	15.20	16.329		
3,100.0	3,062.7	3,082.6	3,053.4	9.9	11.3	86.57	-297.7	292.9	250.4	234.9	15.55	16.107		
3,200.0	3,159.3	3,182.2	3,151.3	10.4	11.7	88.32	-302.8	310.8	252.8	236.9	15.90	15.900		
3,300.0	3,255.9	3,281.9	3,249.2	10.8	12.1	90.03	-307.8	328.7	255.4	239.1	16.26	15.705		
3,400.0	3,352.5	3,381.6	3,347.1	11.2	12.6	91.70	-312.9	346.6	258.2	241.6	16.64	15.518		
3,500.0	3,449.1	3,481.3	3,445.0	11.7	13.0	93.34	-318.0	364.5	261.3	244.2	17.03	15.338		
3,600.0	3,545.7	3,581.0	3,543.0	12.1	13.4	94.94	-323.0	382.4	264.5	247.1	17.45	15.161		
3,700.0	3,642.3	3,680.6	3,640.9	12.6	13.9	96.50	-328.1	400.4	268.0	250.1	17.88	14.986		
3,800.0	3,738.8	3,780.3	3,738.8	13.0	14.3	98.02	-333.2	418.3	271.6	253.3	18.34	14.812		
3,900.0	3,835.4	3,880.0	3,836.7	13.5	14.8	99.50	-338.3	436.2	275.5	256.7	18.82	14.638		
4,000.0	3,932.0	3,979.7	3,934.7	13.9	15.2	100.93	-343.3	454.1	279.5	260.2	19.32	14.464		
4,100.0	4,028.6	4,079.3	4,032.6	14.4	15.6	102.33	-348.4	472.0	283.7	263.8	19.85	14.291		
4,200.0	4,125.2	4,179.0	4,130.5	14.9	16.1	103.68	-353.5	489.9	288.0	267.6	20.40	14.117		
4,300.0	4,221.8	4,278.7	4,228.4	15.3	16.5	105.00	-358.5	507.8	292.6	271.6	20.98	13.944		
4,400.0	4,318.4	4,378.4	4,326.3	15.8	17.0	106.27	-363.6	525.8	297.2	275.6	21.58	13.773		
4,500.0	4,415.0	4,478.0	4,424.3	16.3	17.4	107.50	-368.7	543.7	302.0	279.8	22.20	13.603		
4,600.0	4,511.6	4,577.7	4,522.2	16.7	17.9	108.70	-373.8	561.6	307.0	284.1	22.84	13.436		
4,700.0	4,608.2	4,677.4	4,620.1	17.2	18.3	109.85	-378.8	579.5	312.0	288.5	23.51	13.272		
4,800.0	4,704.8	4,777.1	4,718.0	17.7	18.8	110.97	-383.9	597.4	317.2	293.0	24.19	13.112		

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
4,900.0	4,801.4	4,876.7	4,816.0	18.2	19.2	112.05	-389.0	615.3	322.5	297.6	24.89	12.955	
5,000.0	4,898.0	4,976.4	4,913.9	18.6	19.7	113.10	-394.0	633.2	327.9	302.3	25.61	12.803	
5,100.0	4,994.6	5,076.1	5,011.8	19.1	20.1	114.11	-399.1	651.2	333.5	307.1	26.35	12.656	
5,200.0	5,091.1	5,175.8	5,109.7	19.6	20.6	115.09	-404.2	669.1	339.1	312.0	27.10	12.513	
5,300.0	5,187.7	5,275.4	5,207.6	20.1	21.1	116.04	-409.3	687.0	344.8	316.9	27.86	12.376	
5,400.0	5,284.3	5,375.1	5,305.6	20.6	21.5	116.96	-414.3	704.9	350.6	322.0	28.64	12.243	
5,500.0	5,380.9	5,474.8	5,403.5	21.0	22.0	117.84	-419.4	722.8	356.5	327.1	29.43	12.116	
5,600.0	5,477.5	5,574.5	5,501.4	21.5	22.4	118.70	-424.5	740.7	362.5	332.3	30.22	11.994	
5,700.0	5,574.1	5,674.1	5,599.3	22.0	22.9	119.53	-429.5	758.6	368.6	337.5	31.03	11.877	
5,800.0	5,670.7	5,773.8	5,697.2	22.5	23.3	120.33	-434.6	776.6	374.7	342.8	31.85	11.765	
5,900.0	5,767.3	5,873.5	5,795.2	23.0	23.8	121.11	-439.7	794.5	380.9	348.2	32.67	11.657	
6,000.0	5,863.9	5,973.2	5,893.1	23.5	24.2	121.86	-444.8	812.4	387.2	353.7	33.51	11.555	
6,100.0	5,960.5	6,072.9	5,991.0	23.9	24.7	122.59	-449.8	830.3	393.5	359.2	34.35	11.457	
6,200.0	6,057.1	6,172.5	6,088.9	24.4	25.2	123.29	-454.9	848.2	399.9	364.7	35.19	11.363	
6,300.0	6,153.7	6,272.2	6,186.9	24.9	25.6	123.98	-460.0	866.1	406.4	370.3	36.05	11.274	
6,400.0	6,250.3	6,371.9	6,284.8	25.4	26.1	124.64	-465.0	884.0	412.9	376.0	36.90	11.189	
6,500.0	6,346.8	6,471.6	6,382.7	25.9	26.5	125.28	-470.1	902.0	419.5	381.7	37.76	11.107	
6,600.0	6,443.4	6,569.5	6,479.0	26.4	27.0	125.91	-475.0	919.4	426.2	387.6	38.62	11.035	
6,700.0	6,540.0	6,665.7	6,573.7	26.9	27.4	126.68	-479.5	935.1	433.6	394.1	39.53	10.971	
6,800.0	6,636.6	6,761.5	6,668.4	27.4	27.8	127.61	-483.5	949.3	442.0	401.5	40.50	10.915	
6,900.0	6,733.2	6,856.9	6,762.9	27.9	28.2	128.67	-487.1	961.8	451.4	409.8	41.52	10.870	
7,000.0	6,829.8	6,952.0	6,857.3	28.3	28.6	129.85	-490.2	972.9	461.7	419.1	42.60	10.839	
7,100.0	6,926.4	7,046.5	6,951.3	28.8	29.0	131.14	-492.9	982.4	473.2	429.5	43.72	10.823 SF	
7,200.0	7,023.0	7,140.6	7,045.0	29.3	29.4	132.51	-495.1	990.3	485.9	441.0	44.88	10.827	
7,300.0	7,119.6	7,234.1	7,138.3	29.8	29.7	133.95	-496.9	996.7	499.7	453.7	46.06	10.850	
7,400.0	7,216.2	7,327.0	7,231.1	30.3	30.0	135.44	-498.3	1,001.7	514.9	467.7	47.25	10.898	
7,500.0	7,312.8	7,419.3	7,323.2	30.8	30.3	136.97	-499.3	1,005.1	531.5	483.0	48.45	10.971	
7,600.0	7,409.4	7,510.8	7,414.8	31.3	30.6	138.52	-499.9	1,007.2	549.4	499.8	49.65	11.066	
7,693.8	7,500.0	7,597.0	7,501.0	31.8	30.7	139.99	-500.1	1,007.8	567.6	516.3	51.35	11.054	
7,700.0	7,506.0	7,602.0	7,506.0	31.8	30.7	140.09	-500.1	1,007.8	568.9	517.5	51.40	11.067	
7,800.0	7,603.0	7,699.1	7,603.0	32.3	30.8	141.81	-500.1	1,007.8	587.7	535.1	52.62	11.170	
7,900.0	7,700.9	7,796.9	7,700.9	32.8	30.8	143.21	-500.1	1,007.8	604.2	550.6	53.59	11.275	
8,000.0	7,799.4	7,895.4	7,799.4	33.3	30.8	144.32	-500.1	1,007.8	618.1	563.7	54.43	11.355	
8,043.8	7,842.8	7,938.8	7,842.8	33.4	30.9	144.73	-500.1	1,007.8	623.3	568.6	54.76	11.384	
8,100.0	7,898.4	7,994.4	7,898.4	33.7	30.9	145.14	-500.1	1,007.8	629.8	574.6	55.15	11.418	
8,200.0	7,997.4	8,093.4	7,997.4	34.1	30.9	145.84	-500.1	1,007.8	641.3	585.4	55.87	11.477	
8,300.0	8,096.4	8,192.5	8,096.4	34.5	30.9	146.53	-500.1	1,007.8	652.9	596.3	56.58	11.538	
8,400.0	8,195.5	8,291.5	8,195.5	35.0	30.9	147.19	-500.1	1,007.8	664.6	607.3	57.28	11.601	
8,500.0	8,294.5	8,390.5	8,294.5	35.4	31.0	147.82	-500.1	1,007.8	676.3	618.3	57.98	11.665	
8,600.0	8,393.5	8,489.6	8,393.5	35.8	31.0	148.44	-500.1	1,007.8	688.2	629.5	58.67	11.729	
8,700.0	8,492.5	8,588.6	8,492.5	36.3	31.0	149.03	-500.1	1,007.8	700.1	640.7	59.35	11.795	
8,800.0	8,591.6	8,687.6	8,591.6	36.7	31.0	149.61	-500.1	1,007.8	712.1	652.1	60.03	11.862	
8,900.0	8,690.6	8,786.6	8,690.6	37.1	31.1	150.17	-500.1	1,007.8	724.2	663.5	60.70	11.930	
9,000.0	8,789.6	8,885.7	8,789.6	37.6	31.1	150.70	-500.1	1,007.8	736.3	674.9	61.37	11.998	
9,100.0	8,888.6	8,984.7	8,888.6	38.0	31.1	151.22	-500.1	1,007.8	748.5	686.5	62.03	12.066	
9,101.4	8,890.0	8,986.0	8,890.0	38.0	31.1	151.23	-500.1	1,007.8	748.7	686.6	62.04	12.067	
9,200.0	8,987.8	9,083.9	8,987.8	38.4	31.1	151.76	-500.1	1,007.8	759.6	697.0	62.67	12.122	
9,300.0	9,087.3	9,183.4	9,087.3	38.8	31.2	152.18	-500.1	1,007.8	768.5	705.3	63.24	12.153	
9,400.0	9,187.1	9,283.1	9,187.1	39.2	31.2	152.48	-500.1	1,007.8	775.1	711.4	63.74	12.161	
9,500.0	9,286.9	9,383.0	9,286.9	39.5	31.2	152.67	-500.1	1,007.8	779.4	715.2	64.17	12.146	
9,600.0	9,386.9	9,477.7	9,386.9	39.8	31.2	152.75	-500.2	1,007.8	781.4	717.1	64.37	12.140	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 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)		No-Go Distance (usft)	Separation Factor
9,634.7	9,421.6	9,500.0	9,403.9	39.9	31.2	-109.83	-501.1	1,007.8	782.1	717.8		64.25	12.172
9,700.0	9,486.9	9,550.0	9,453.7	39.9	31.3	-110.19	-506.2	1,007.8	784.3	720.5		63.83	12.287
9,800.0	9,586.9	9,612.0	9,514.4	39.9	31.4	-111.03	-518.6	1,007.9	791.2	728.4		62.76	12.606
9,900.0	9,686.9	9,674.4	9,573.8	39.9	31.5	-112.31	-537.5	1,008.0	802.8	741.4		61.41	13.073
10,000.0	9,786.9	9,732.0	9,626.5	39.9	31.6	-113.84	-560.7	1,008.2	819.6	759.8		59.75	13.717
10,100.0	9,886.9	9,784.3	9,672.2	39.9	31.7	-115.49	-586.2	1,008.3	842.1	784.2		57.85	14.555
10,200.0	9,986.9	9,831.4	9,711.1	40.0	31.7	-117.15	-612.7	1,008.5	870.6	814.8		55.82	15.599
10,300.0	10,086.9	9,873.3	9,743.8	40.0	31.8	-118.75	-638.8	1,008.6	905.4	851.7		53.74	16.850
10,400.0	10,186.9	9,900.0	9,763.6	40.0	31.9	-119.81	-656.7	1,008.7	946.5	894.8		51.69	18.310
10,500.0	10,286.9	9,950.0	9,798.4	40.0	32.0	-121.88	-692.6	1,009.0	993.2	943.4		49.85	19.925

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	89.83	0.1	30.0	30.0				
100.0	100.0	100.0	100.0	0.8	0.8	89.83	0.1	30.0	30.0	28.0	1.99	15.066	
200.0	200.0	200.0	200.0	1.4	1.4	89.83	0.1	30.0	30.0	26.7	3.31	9.059	
300.0	300.0	300.0	300.0	1.9	1.9	89.83	0.1	30.0	30.0	25.8	4.20	7.151	
400.0	400.0	400.0	400.0	2.2	2.2	89.83	0.1	30.0	30.0	25.1	4.91	6.108	
500.0	500.0	500.0	500.0	2.6	2.6	89.83	0.1	30.0	30.0	24.5	5.53	5.422	
600.0	600.0	600.0	600.0	2.8	2.8	89.83	0.1	30.0	30.0	23.9	6.09	4.926	
700.0	700.0	700.0	700.0	3.1	3.1	89.83	0.1	30.0	30.0	23.4	6.60	4.545	
800.0	800.0	800.0	800.0	3.3	3.3	89.83	0.1	30.0	30.0	22.9	7.08	4.239	
900.0	900.0	900.0	900.0	3.6	3.6	89.83	0.1	30.0	30.0	22.5	7.52	3.987	
966.3	966.3	966.3	966.3	3.7	3.7	89.83	0.1	30.0	30.0	22.2	7.80	3.845 CC	
1,000.0	1,000.0	1,000.0	1,000.0	3.8	3.8	89.83	0.1	30.0	30.0	22.1	7.94	3.777 ES	
1,100.0	1,100.0	1,098.9	1,098.9	4.0	5.2	89.90	0.1	31.7	31.8	22.1	9.62	3.302 SF	
1,200.0	1,200.0	1,197.6	1,197.4	4.2	5.5	90.07	0.0	36.9	37.0	26.9	10.07	3.673	
1,300.0	1,300.0	1,295.8	1,295.3	4.4	5.7	90.27	-0.2	45.4	45.6	35.1	10.50	4.344	
1,400.0	1,400.0	1,393.3	1,392.1	4.6	6.0	90.45	-0.4	57.1	57.6	46.7	10.94	5.270	
1,500.0	1,500.0	1,489.9	1,487.5	4.7	6.3	90.59	-0.7	72.0	73.0	61.6	11.38	6.417	
1,600.0	1,600.0	1,585.7	1,581.7	5.0	6.6	-19.55	-1.1	89.9	90.1	78.2	11.89	7.579	
1,700.0	1,699.8	1,681.0	1,674.6	5.3	6.9	-20.20	-1.5	110.8	107.2	94.8	12.40	8.647	
1,750.0	1,749.7	1,728.4	1,720.5	5.3	7.1	-20.63	-1.7	122.3	115.8	103.2	12.60	9.191	
1,800.0	1,799.5	1,775.6	1,766.2	5.4	7.3	-18.07	-2.0	134.6	124.4	111.6	12.81	9.712	
1,900.0	1,898.7	1,869.8	1,856.5	5.7	7.6	-15.01	-2.5	161.3	141.5	128.1	13.38	10.575	
2,000.0	1,997.5	1,963.5	1,945.4	6.0	8.0	-13.30	-3.1	190.8	158.3	144.3	13.97	11.332	
2,100.0	2,095.7	2,056.7	2,032.8	6.3	8.4	-12.26	-3.7	223.0	175.0	160.4	14.57	12.011	
2,200.0	2,193.2	2,153.6	2,122.9	6.7	8.7	-11.61	-4.4	258.8	190.6	175.4	15.25	12.498	
2,258.8	2,250.1	2,211.8	2,177.0	6.8	9.0	-11.37	-4.9	280.3	198.3	182.7	15.65	12.676	
2,300.0	2,290.0	2,252.7	2,215.0	6.9	9.1	-11.57	-5.2	295.5	203.3	187.4	15.91	12.777	
2,400.0	2,386.6	2,352.0	2,307.2	7.3	9.5	-12.02	-5.9	332.2	215.5	198.8	16.64	12.948	
2,500.0	2,483.1	2,451.2	2,399.4	7.6	9.9	-12.43	-6.6	369.0	227.6	210.2	17.39	13.085	
2,600.0	2,579.7	2,550.5	2,491.5	8.0	10.3	-12.79	-7.3	405.8	239.7	221.6	18.17	13.195	
2,700.0	2,676.3	2,649.7	2,583.7	8.3	10.8	-13.12	-8.1	442.5	251.9	232.9	18.96	13.282	
2,800.0	2,772.9	2,749.0	2,675.9	8.7	11.2	-13.41	-8.8	479.3	264.0	244.3	19.78	13.351	
2,900.0	2,869.5	2,848.2	2,768.1	9.1	11.6	-13.68	-9.5	516.1	276.2	255.6	20.61	13.405	
3,000.0	2,966.1	2,947.5	2,860.3	9.5	12.1	-13.93	-10.2	552.8	288.4	266.9	21.45	13.446	
3,100.0	3,062.7	3,046.7	2,952.5	9.9	12.5	-14.16	-11.0	589.6	300.6	278.3	22.30	13.477	
3,200.0	3,159.3	3,146.0	3,044.7	10.4	13.0	-14.37	-11.7	626.4	312.7	289.6	23.16	13.501	
3,300.0	3,255.9	3,245.2	3,136.9	10.8	13.4	-14.56	-12.4	663.1	324.9	300.9	24.04	13.517	
3,400.0	3,352.5	3,344.5	3,229.0	11.2	13.9	-14.74	-13.1	699.9	337.1	312.2	24.92	13.527	
3,500.0	3,449.1	3,443.7	3,321.2	11.7	14.4	-14.91	-13.9	736.6	349.3	323.5	25.81	13.534	
3,600.0	3,545.7	3,543.0	3,413.4	12.1	14.9	-15.07	-14.6	773.4	361.5	334.8	26.71	13.536	
3,700.0	3,642.3	3,642.2	3,505.6	12.6	15.3	-15.21	-15.3	810.2	373.7	346.1	27.61	13.535	
3,800.0	3,738.8	3,741.5	3,597.8	13.0	15.8	-15.35	-16.0	846.9	385.9	357.4	28.52	13.532	
3,900.0	3,835.4	3,840.7	3,690.0	13.5	16.3	-15.48	-16.8	883.7	398.1	368.7	29.43	13.527	
4,000.0	3,932.0	3,940.0	3,782.2	13.9	16.8	-15.60	-17.5	920.5	410.3	379.9	30.35	13.520	
4,100.0	4,028.6	4,039.2	3,874.3	14.4	17.3	-15.71	-18.2	957.2	422.5	391.2	31.27	13.512	
4,200.0	4,125.2	4,138.5	3,966.5	14.9	17.8	-15.82	-18.9	994.0	434.7	402.5	32.19	13.503	
4,300.0	4,221.8	4,237.7	4,058.7	15.3	18.3	-15.92	-19.7	1,030.7	446.9	413.8	33.12	13.493	
4,400.0	4,318.4	4,337.0	4,150.9	15.8	18.8	-16.02	-20.4	1,067.5	459.1	425.1	34.05	13.482	
4,500.0	4,415.0	4,436.2	4,243.1	16.3	19.3	-16.11	-21.1	1,104.3	471.3	436.3	34.99	13.471	
4,600.0	4,511.6	4,535.5	4,335.3	16.7	19.8	-16.20	-21.8	1,141.0	483.5	447.6	35.93	13.459	
4,700.0	4,608.2	4,634.7	4,427.5	17.2	20.3	-16.28	-22.6	1,177.8	495.7	458.9	36.87	13.447	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
4,800.0	4,704.8	4,734.0	4,519.6	17.7	20.8	-16.36	-23.3	1,214.6	508.0	470.1	37.81	13.435	
4,900.0	4,801.4	4,833.2	4,611.8	18.2	21.3	-16.43	-24.0	1,251.3	520.2	481.4	38.75	13.423	
5,000.0	4,898.0	4,932.5	4,704.0	18.6	21.8	-16.50	-24.8	1,288.1	532.4	492.7	39.70	13.410	
5,100.0	4,994.6	5,031.7	4,796.2	19.1	22.3	-16.57	-25.5	1,324.8	544.6	503.9	40.65	13.398	
5,200.0	5,091.1	5,131.0	4,888.4	19.6	22.8	-16.64	-26.2	1,361.6	556.8	515.2	41.60	13.386	
5,300.0	5,187.7	5,230.2	4,980.6	20.1	23.3	-16.70	-26.9	1,398.4	569.0	526.5	42.55	13.373	
5,400.0	5,284.3	5,329.5	5,072.8	20.6	23.8	-16.76	-27.7	1,435.1	581.2	537.7	43.50	13.361	
5,500.0	5,380.9	5,428.7	5,165.0	21.0	24.3	-16.82	-28.4	1,471.9	593.5	549.0	44.46	13.349	
5,600.0	5,477.5	5,528.0	5,257.1	21.5	24.8	-16.87	-29.1	1,508.7	605.7	560.3	45.41	13.337	
5,700.0	5,574.1	5,627.2	5,349.3	22.0	25.3	-16.92	-29.8	1,545.4	617.9	571.5	46.37	13.325	
5,800.0	5,670.7	5,726.5	5,441.5	22.5	25.8	-16.97	-30.6	1,582.2	630.1	582.8	47.33	13.314	
5,900.0	5,767.3	5,825.7	5,533.7	23.0	26.3	-17.02	-31.3	1,619.0	642.3	594.0	48.29	13.302	
6,000.0	5,863.9	5,925.0	5,625.9	23.5	26.9	-17.07	-32.0	1,655.7	654.6	605.3	49.25	13.291	
6,100.0	5,960.5	6,024.2	5,718.1	23.9	27.4	-17.12	-32.7	1,692.5	666.8	616.6	50.21	13.280	
6,200.0	6,057.1	6,123.5	5,810.3	24.4	27.9	-17.16	-33.5	1,729.2	679.0	627.8	51.17	13.269	
6,300.0	6,153.7	6,222.7	5,902.4	24.9	28.4	-17.20	-34.2	1,766.0	691.2	639.1	52.13	13.259	
6,400.0	6,250.3	6,322.0	5,994.6	25.4	28.9	-17.24	-34.9	1,802.8	703.4	650.3	53.10	13.248	
6,500.0	6,346.8	6,421.2	6,086.8	25.9	29.4	-17.28	-35.6	1,839.5	715.7	661.6	54.06	13.238	
6,600.0	6,443.4	6,520.5	6,179.0	26.4	30.0	-17.32	-36.4	1,876.3	727.9	672.9	55.03	13.228	
6,700.0	6,540.0	6,619.7	6,271.2	26.9	30.5	-17.36	-37.1	1,913.1	740.1	684.1	55.99	13.218	
6,800.0	6,636.6	6,719.0	6,363.4	27.4	31.0	-17.39	-37.8	1,949.8	752.3	695.4	56.96	13.208	
6,900.0	6,733.2	6,818.2	6,455.6	27.9	31.5	-17.43	-38.5	1,986.6	764.6	706.6	57.93	13.199	
7,000.0	6,829.8	6,917.5	6,547.8	28.3	32.0	-17.46	-39.3	2,023.3	776.8	717.9	58.89	13.189	
7,100.0	6,926.4	7,016.7	6,639.9	28.8	32.5	-17.49	-40.0	2,060.1	789.0	729.1	59.86	13.180	
7,200.0	7,023.0	7,116.0	6,732.1	29.3	33.1	-17.52	-40.7	2,096.9	801.2	740.4	60.83	13.171	
7,300.0	7,119.6	7,215.2	6,824.3	29.8	33.6	-17.55	-41.5	2,133.6	813.4	751.6	61.80	13.162	
7,400.0	7,216.2	7,321.6	6,923.2	30.3	34.1	-17.59	-42.2	2,172.8	825.5	762.7	62.82	13.140	
7,500.0	7,312.8	7,437.5	7,031.7	30.8	34.7	-17.65	-43.0	2,213.7	835.9	771.9	63.92	13.077	
7,600.0	7,409.4	7,553.8	7,141.3	31.3	35.3	-17.74	-43.8	2,252.5	844.3	779.3	64.99	12.990	
7,693.8	7,500.0	7,663.3	7,245.2	31.8	35.9	-17.86	-44.5	2,287.0	850.4	784.4	65.98	12.889	
7,700.0	7,506.0	7,670.5	7,252.1	31.8	35.9	-17.87	-44.5	2,289.2	850.7	784.7	66.04	12.882	
7,800.0	7,603.0	7,787.3	7,363.7	32.3	36.5	-18.02	-45.2	2,323.7	857.0	790.0	67.05	12.782	
7,900.0	7,700.9	7,904.2	7,476.1	32.8	37.1	-18.12	-45.8	2,355.9	864.6	796.7	67.97	12.720	
8,000.0	7,799.4	8,021.2	7,589.1	33.3	37.7	-18.18	-46.4	2,385.9	873.6	804.7	68.84	12.690	
8,043.8	7,842.8	8,072.5	7,638.9	33.4	37.9	-18.19	-46.7	2,398.3	877.9	808.7	69.18	12.689	
8,100.0	7,898.4	8,138.3	7,702.9	33.7	38.3	-18.17	-47.0	2,413.5	883.3	813.6	69.68	12.676	
8,200.0	7,997.4	8,255.7	7,817.6	34.1	38.8	-18.16	-47.5	2,438.9	891.4	820.8	70.55	12.634	
8,300.0	8,096.4	8,373.6	7,933.1	34.5	39.4	-18.19	-47.9	2,462.0	897.4	826.0	71.39	12.570	
8,400.0	8,195.5	8,491.6	8,049.3	35.0	39.9	-18.24	-48.3	2,482.8	901.4	829.2	72.19	12.487	
8,500.0	8,294.5	8,609.8	8,166.0	35.4	40.4	-18.33	-48.7	2,501.1	903.5	830.5	72.95	12.384	
8,600.0	8,393.5	8,728.0	8,283.2	35.8	40.9	-18.44	-49.0	2,517.1	903.5	829.8	73.67	12.264	
8,700.0	8,492.5	8,846.1	8,400.5	36.3	41.4	-18.59	-49.3	2,530.7	901.5	827.1	74.34	12.127	
8,800.0	8,591.6	8,964.1	8,518.0	36.7	41.9	-18.78	-49.5	2,541.8	897.5	822.5	74.96	11.973	
8,900.0	8,690.6	9,081.9	8,635.4	37.1	42.3	-19.00	-49.7	2,550.5	891.5	815.9	75.52	11.805	
9,000.0	8,789.6	9,199.2	8,752.6	37.6	42.7	-19.26	-49.8	2,556.7	883.5	807.4	76.02	11.622	
9,100.0	8,888.6	9,316.1	8,869.4	38.0	43.1	-19.56	-49.9	2,560.5	873.5	797.1	76.43	11.428	
9,101.4	8,890.0	9,317.7	8,871.0	38.0	43.1	-19.56	-49.9	2,560.6	873.3	796.9	76.44	11.426	
9,200.0	8,987.8	9,432.6	8,985.9	38.4	43.3	-19.81	-49.9	2,562.0	862.8	784.3	78.47	10.995	
9,300.0	9,087.3	9,534.0	9,087.3	38.8	43.4	-19.99	-49.9	2,562.0	853.3	773.5	79.86	10.685	
9,400.0	9,187.1	9,633.8	9,187.1	39.2	43.4	-20.13	-49.9	2,562.0	846.3	766.2	80.17	10.557	
9,500.0	9,286.9	9,733.6	9,286.9	39.5	43.4	-20.22	-49.9	2,562.0	841.8	761.3	80.46	10.462	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,600.0	9,386.9	9,833.6	9,386.9	39.8	43.4	-20.26	-49.9	2,562.0	839.7	759.0	80.71	10.404	
9,634.7	9,421.6	9,868.3	9,421.6	39.9	43.4	77.21	-49.9	2,562.0	839.6	758.9	80.71	10.402	
9,700.0	9,486.9	9,933.6	9,486.9	39.9	43.4	77.21	-49.9	2,562.0	839.6	758.8	80.73	10.399	
9,800.0	9,586.9	10,033.6	9,586.9	39.9	43.4	77.21	-49.9	2,562.0	839.6	758.8	80.77	10.394	
9,900.0	9,686.9	10,133.6	9,686.9	39.9	43.5	77.21	-49.9	2,562.0	839.6	758.8	80.81	10.389	
10,000.0	9,786.9	10,233.6	9,786.9	39.9	43.5	77.21	-49.9	2,562.0	839.6	758.7	80.85	10.384	
10,100.0	9,886.9	10,333.6	9,886.9	39.9	43.5	77.21	-49.9	2,562.0	839.6	758.7	80.89	10.379	
10,200.0	9,986.9	10,433.6	9,986.9	40.0	43.5	77.21	-49.9	2,562.0	839.6	758.6	80.93	10.374	
10,300.0	10,086.9	10,533.6	10,086.9	40.0	43.5	77.21	-49.9	2,562.0	839.6	758.6	80.97	10.368	
10,400.0	10,186.9	10,633.6	10,186.9	40.0	43.6	77.21	-49.9	2,562.0	839.6	758.6	81.01	10.364	
10,500.0	10,286.9	10,795.6	10,347.1	40.0	43.5	78.43	-68.4	2,561.0	836.9	757.2	79.70	10.501	
10,538.8	10,325.7	10,861.2	10,408.8	40.0	43.5	79.92	-90.7	2,559.9	833.5	754.3	79.26	10.516	
10,550.0	10,336.9	10,878.9	10,424.9	40.0	43.5	-79.70	-98.2	2,559.5	832.4	753.3	79.01	10.535	
10,600.0	10,386.8	10,952.7	10,488.4	40.1	43.5	-78.06	-135.5	2,557.5	825.9	747.0	78.94	10.462	
10,650.0	10,436.2	11,018.2	10,539.4	40.2	43.5	-76.56	-176.4	2,555.4	817.9	738.7	79.22	10.325	
10,700.0	10,484.8	11,076.5	10,579.8	40.3	43.5	-75.22	-218.4	2,553.2	808.7	728.9	79.76	10.139	
10,750.0	10,532.2	11,128.9	10,611.4	40.5	43.5	-74.05	-260.1	2,551.0	798.6	718.1	80.50	9.920	
10,800.0	10,578.0	11,176.4	10,635.9	40.6	43.6	-73.04	-300.7	2,548.9	787.8	706.4	81.37	9.681	
10,850.0	10,621.8	11,220.0	10,654.8	40.7	43.6	-72.17	-339.9	2,546.8	776.5	694.2	82.31	9.434	
10,900.0	10,663.5	11,260.3	10,669.0	40.9	43.6	-71.43	-377.5	2,544.8	764.9	681.6	83.27	9.185	
10,950.0	10,702.5	11,297.9	10,679.4	41.0	43.6	-70.79	-413.7	2,542.9	753.0	668.8	84.21	8.942	
10,988.8	10,730.8	11,325.0	10,685.0	41.1	43.6	-70.38	-440.1	2,541.5	743.8	658.8	84.92	8.759	
11,000.0	10,738.7	11,333.4	10,686.5	41.1	43.6	-70.88	-448.4	2,541.1	741.1	656.0	85.12	8.707	
11,025.0	10,755.6	11,350.0	10,688.9	41.2	43.7	-71.95	-464.8	2,540.3	735.6	650.0	85.56	8.598	
11,050.0	10,771.5	11,367.9	10,690.9	41.3	43.7	-72.75	-482.5	2,539.3	730.6	644.6	85.97	8.498	
11,075.0	10,786.6	11,384.8	10,692.2	41.3	43.7	-73.41	-499.4	2,538.4	726.1	639.7	86.36	8.408	
11,100.0	10,800.6	11,401.6	10,692.8	41.4	43.7	-73.92	-516.1	2,537.6	722.1	635.4	86.72	8.327	
11,125.0	10,813.7	11,419.8	10,693.0	41.4	43.7	-74.22	-534.3	2,536.6	718.6	631.6	87.06	8.254	
11,150.0	10,825.7	11,441.0	10,693.0	41.4	43.7	-74.31	-555.5	2,535.5	715.6	628.2	87.40	8.188	
11,175.0	10,836.6	11,463.0	10,692.9	41.5	43.8	-74.33	-577.4	2,534.4	712.8	625.1	87.70	8.128	
11,200.0	10,846.4	11,485.5	10,692.9	41.5	43.8	-74.29	-599.9	2,533.2	710.3	622.4	87.98	8.074	
11,225.0	10,855.0	11,508.6	10,692.9	41.6	43.8	-74.23	-622.9	2,532.0	708.1	619.9	88.24	8.025	
11,250.0	10,862.5	11,532.1	10,692.9	41.6	43.8	-74.16	-646.4	2,530.7	706.1	617.6	88.48	7.980	
11,275.0	10,868.8	11,556.0	10,692.9	41.6	43.9	-74.10	-670.3	2,529.5	704.2	615.5	88.71	7.939	
11,300.0	10,873.9	11,580.3	10,692.9	41.6	43.9	-74.06	-694.6	2,528.2	702.5	613.6	88.91	7.901	
11,325.0	10,877.7	11,604.8	10,692.9	41.7	43.9	-74.04	-719.1	2,526.9	700.9	611.7	89.11	7.865	
11,350.0	10,880.4	11,629.6	10,692.9	41.7	44.0	-74.07	-743.8	2,525.6	699.3	610.0	89.29	7.832	
11,375.0	10,881.8	11,654.5	10,692.9	41.7	44.0	-74.15	-768.6	2,524.3	697.8	608.4	89.46	7.800	
11,390.6	10,882.0	11,670.0	10,692.9	41.7	44.0	-74.22	-784.2	2,523.5	697.0	607.4	89.56	7.782	
11,400.0	10,882.1	11,679.4	10,692.9	41.8	44.0	-74.21	-793.6	2,523.0	696.4	606.8	89.61	7.772	
11,500.0	10,882.1	11,775.1	10,692.8	41.9	44.2	-74.08	-889.1	2,518.1	690.9	600.8	90.14	7.664	
11,600.0	10,882.2	11,856.3	10,692.8	42.0	44.3	-74.00	-970.3	2,515.5	687.3	596.7	90.57	7.588	
11,684.1	10,882.2	11,924.8	10,692.8	42.2	44.5	-73.98	-1,038.7	2,515.1	686.3	595.4	90.92	7.548	
11,700.0	10,882.2	11,940.5	10,692.8	42.2	44.5	-73.98	-1,054.5	2,515.2	686.3	595.3	91.02	7.540	
11,800.0	10,882.3	12,040.5	10,692.7	42.4	44.7	-73.97	-1,154.5	2,515.8	686.3	594.7	91.66	7.488	
11,900.0	10,882.3	12,140.5	10,692.7	42.6	45.0	-73.96	-1,254.5	2,516.4	686.4	594.1	92.32	7.435	
12,000.0	10,882.4	12,240.5	10,692.7	42.9	45.3	-73.95	-1,354.5	2,517.0	686.4	593.4	93.01	7.380	
12,100.0	10,882.5	12,340.5	10,692.6	43.1	45.6	-73.94	-1,454.5	2,517.6	686.4	592.7	93.71	7.325	
12,200.0	10,882.5	12,440.5	10,692.6	43.4	45.9	-73.94	-1,554.5	2,518.2	686.5	592.0	94.45	7.268	
12,300.0	10,882.6	12,540.5	10,692.5	43.7	46.2	-73.93	-1,654.5	2,518.8	686.5	591.3	95.20	7.211	
12,400.0	10,882.6	12,640.5	10,692.5	44.1	46.6	-73.92	-1,754.5	2,519.4	686.5	590.5	95.97	7.153	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 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)			
12,500.0	10,882.7	12,740.5	10,692.5	44.4	47.0	-73.91	-1,854.5	2,520.0	686.5	589.8	96.77	7.095	
12,600.0	10,882.8	12,840.5	10,692.4	44.8	47.4	-73.91	-1,954.5	2,520.6	686.6	589.0	97.58	7.036	
12,700.0	10,882.8	12,940.5	10,692.4	45.2	47.8	-73.90	-2,054.5	2,521.2	686.6	588.2	98.42	6.976	
12,800.0	10,882.9	13,040.5	10,692.4	45.6	48.2	-73.89	-2,154.4	2,521.8	686.6	587.3	99.27	6.916	
12,900.0	10,882.9	13,140.5	10,692.3	46.0	48.6	-73.88	-2,254.4	2,522.5	686.6	586.5	100.15	6.856	
13,000.0	10,883.0	13,240.5	10,692.3	46.5	49.1	-73.87	-2,354.4	2,523.1	686.7	585.6	101.04	6.796	
13,100.0	10,883.1	13,340.5	10,692.2	46.9	49.6	-73.87	-2,454.4	2,523.7	686.7	584.7	101.95	6.735	
13,200.0	10,883.1	13,440.5	10,692.2	47.4	50.1	-73.86	-2,554.4	2,524.3	686.7	583.8	102.88	6.675	
13,300.0	10,883.2	13,540.5	10,692.2	47.9	50.6	-73.85	-2,654.4	2,524.9	686.7	582.9	103.83	6.614	
13,400.0	10,883.2	13,640.5	10,692.1	48.4	51.1	-73.84	-2,754.4	2,525.5	686.8	582.0	104.79	6.554	
13,500.0	10,883.3	13,740.5	10,692.1	49.0	51.6	-73.83	-2,854.4	2,526.1	686.8	581.0	105.77	6.493	
13,600.0	10,883.3	13,840.5	10,692.0	49.5	52.2	-73.83	-2,954.4	2,526.7	686.8	580.1	106.77	6.433	
13,700.0	10,883.4	13,940.5	10,692.0	50.1	52.7	-73.82	-3,054.4	2,527.3	686.8	579.1	107.78	6.373	
13,800.0	10,883.5	14,040.5	10,692.0	50.6	53.3	-73.81	-3,154.4	2,527.9	686.9	578.1	108.80	6.313	
13,900.0	10,883.5	14,140.5	10,691.9	51.2	53.9	-73.80	-3,254.4	2,528.5	686.9	577.1	109.84	6.253	
14,000.0	10,883.6	14,240.5	10,691.9	51.8	54.5	-73.80	-3,354.4	2,529.1	686.9	576.0	110.90	6.194	
14,100.0	10,883.6	14,340.5	10,691.9	52.4	55.1	-73.79	-3,454.4	2,529.7	687.0	575.0	111.96	6.136	
14,200.0	10,883.7	14,440.5	10,691.8	53.0	55.7	-73.78	-3,554.4	2,530.3	687.0	573.9	113.04	6.077	
14,300.0	10,883.8	14,540.5	10,691.8	53.7	56.3	-73.77	-3,654.4	2,531.0	687.0	572.9	114.13	6.019	
14,400.0	10,883.8	14,640.5	10,691.7	54.3	56.9	-73.76	-3,754.4	2,531.6	687.0	571.8	115.24	5.962	
14,500.0	10,883.9	14,740.5	10,691.7	55.0	57.6	-73.76	-3,854.4	2,532.2	687.1	570.7	116.36	5.905	
14,600.0	10,883.9	14,840.5	10,691.7	55.6	58.2	-73.75	-3,954.4	2,532.8	687.1	569.6	117.48	5.848	
14,700.0	10,884.0	14,940.5	10,691.6	56.3	58.9	-73.74	-4,054.4	2,533.4	687.1	568.5	118.62	5.793	
14,800.0	10,884.1	15,040.5	10,691.6	57.0	59.5	-73.73	-4,154.4	2,534.0	687.1	567.4	119.77	5.737	
14,900.0	10,884.1	15,140.5	10,691.5	57.7	60.2	-73.73	-4,254.4	2,534.6	687.2	566.2	120.93	5.682	
15,000.0	10,884.2	15,240.5	10,691.5	58.4	60.9	-73.72	-4,354.4	2,535.2	687.2	565.1	122.10	5.628	
15,100.0	10,884.2	15,340.5	10,691.5	59.1	61.6	-73.71	-4,454.4	2,535.8	687.2	563.9	123.27	5.575	
15,200.0	10,884.3	15,440.5	10,691.4	59.8	62.3	-73.70	-4,554.4	2,536.4	687.2	562.8	124.46	5.522	
15,300.0	10,884.4	15,540.5	10,691.4	60.5	63.0	-73.69	-4,654.4	2,537.0	687.3	561.6	125.66	5.469	
15,400.0	10,884.4	15,640.5	10,691.3	61.2	63.7	-73.69	-4,754.4	2,537.6	687.3	560.4	126.86	5.418	
15,500.0	10,884.5	15,740.5	10,691.3	61.9	64.4	-73.68	-4,854.4	2,538.2	687.3	559.2	128.08	5.367	
15,600.0	10,884.5	15,840.5	10,691.3	62.7	65.1	-73.67	-4,954.4	2,538.8	687.3	558.1	129.30	5.316	
15,700.0	10,884.6	15,940.5	10,691.2	63.4	65.8	-73.66	-5,054.4	2,539.5	687.4	556.9	130.52	5.266	
15,800.0	10,884.6	16,040.5	10,691.2	64.2	66.6	-73.65	-5,154.4	2,540.1	687.4	555.6	131.76	5.217	
15,900.0	10,884.7	16,140.5	10,691.2	64.9	67.3	-73.65	-5,254.4	2,540.7	687.4	554.4	133.00	5.169	
16,000.0	10,884.8	16,240.5	10,691.1	65.7	68.0	-73.64	-5,354.4	2,541.3	687.5	553.2	134.25	5.121	
16,100.0	10,884.8	16,340.5	10,691.1	66.4	68.8	-73.63	-5,454.4	2,541.9	687.5	552.0	135.51	5.073	
16,200.0	10,884.9	16,440.5	10,691.0	67.2	69.5	-73.62	-5,554.4	2,542.5	687.5	550.7	136.77	5.027	
16,300.0	10,884.9	16,540.5	10,691.0	68.0	70.3	-73.62	-5,654.4	2,543.1	687.5	549.5	138.04	4.981	
16,400.0	10,885.0	16,640.5	10,691.0	68.8	71.1	-73.61	-5,754.4	2,543.7	687.6	548.3	139.31	4.936	
16,500.0	10,885.1	16,740.5	10,690.9	69.5	71.8	-73.60	-5,854.4	2,544.3	687.6	547.0	140.59	4.891	
16,600.0	10,885.1	16,840.5	10,690.9	70.3	72.6	-73.59	-5,954.4	2,544.9	687.6	545.7	141.87	4.847	
16,700.0	10,885.2	16,940.5	10,690.8	71.1	73.4	-73.58	-6,054.4	2,545.5	687.6	544.5	143.16	4.803	
16,800.0	10,885.2	17,040.5	10,690.8	71.9	74.2	-73.58	-6,154.4	2,546.1	687.7	543.2	144.46	4.760	
16,900.0	10,885.3	17,140.5	10,690.8	72.7	74.9	-73.57	-6,254.4	2,546.7	687.7	541.9	145.76	4.718	
17,000.0	10,885.4	17,240.5	10,690.7	73.5	75.7	-73.56	-6,354.4	2,547.3	687.7	540.7	147.06	4.677	
17,100.0	10,885.4	17,340.5	10,690.7	74.3	76.5	-73.55	-6,454.4	2,548.0	687.7	539.4	148.37	4.635	
17,200.0	10,885.5	17,440.5	10,690.7	75.2	77.3	-73.55	-6,554.4	2,548.6	687.8	538.1	149.68	4.595	
17,300.0	10,885.5	17,540.5	10,690.6	76.0	78.1	-73.54	-6,654.4	2,549.2	687.8	536.8	151.00	4.555	
17,400.0	10,885.6	17,640.5	10,690.6	76.8	78.9	-73.53	-6,754.4	2,549.8	687.8	535.5	152.32	4.516	
17,500.0	10,885.6	17,740.5	10,690.5	77.6	79.7	-73.52	-6,854.4	2,550.4	687.9	534.2	153.64	4.477	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 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)			
17,600.0	10,885.7	17,840.5	10,690.5	78.4	80.5	-73.51	-6,954.4	2,551.0	687.9	532.9	154.97	4.439	
17,700.0	10,885.8	17,940.5	10,690.5	79.3	81.4	-73.51	-7,054.4	2,551.6	687.9	531.6	156.30	4.401	
17,800.0	10,885.8	18,040.5	10,690.4	80.1	82.2	-73.50	-7,154.4	2,552.2	687.9	530.3	157.63	4.364	
17,900.0	10,885.9	18,140.5	10,690.4	80.9	83.0	-73.49	-7,254.4	2,552.8	688.0	529.0	158.97	4.328	
18,000.0	10,885.9	18,240.5	10,690.3	81.8	83.8	-73.48	-7,354.4	2,553.4	688.0	527.7	160.31	4.292	
18,100.0	10,886.0	18,340.5	10,690.3	82.6	84.6	-73.48	-7,454.3	2,554.0	688.0	526.4	161.65	4.256	
18,200.0	10,886.1	18,440.5	10,690.3	83.5	85.5	-73.47	-7,554.3	2,554.6	688.0	525.0	163.00	4.221	
18,300.0	10,886.1	18,540.5	10,690.2	84.3	86.3	-73.46	-7,654.3	2,555.2	688.1	523.7	164.34	4.187	
18,400.0	10,886.2	18,640.5	10,690.2	85.2	87.1	-73.45	-7,754.3	2,555.8	688.1	522.4	165.70	4.153	
18,500.0	10,886.2	18,740.5	10,690.2	86.0	88.0	-73.44	-7,854.3	2,556.4	688.1	521.1	167.05	4.119	
18,600.0	10,886.3	18,840.5	10,690.1	86.9	88.8	-73.44	-7,954.3	2,557.1	688.2	519.7	168.40	4.086	
18,700.0	10,886.4	18,940.5	10,690.1	87.7	89.7	-73.43	-8,054.3	2,557.7	688.2	518.4	169.76	4.054	
18,800.0	10,886.4	19,040.5	10,690.0	88.6	90.5	-73.42	-8,154.3	2,558.3	688.2	517.1	171.12	4.022	
18,900.0	10,886.5	19,140.5	10,690.0	89.4	91.3	-73.41	-8,254.3	2,558.9	688.2	515.7	172.48	3.990	
19,000.0	10,886.5	19,240.5	10,690.0	90.3	92.2	-73.40	-8,354.3	2,559.5	688.3	514.4	173.85	3.959	
19,100.0	10,886.6	19,340.5	10,689.9	91.2	93.0	-73.40	-8,454.3	2,560.1	688.3	513.1	175.21	3.928	
19,200.0	10,886.7	19,440.5	10,689.9	92.0	93.9	-73.39	-8,554.3	2,560.7	688.3	511.7	176.58	3.898	
19,300.0	10,886.7	19,540.5	10,689.8	92.9	94.8	-73.38	-8,654.3	2,561.3	688.3	510.4	177.95	3.868	
19,400.0	10,886.8	19,640.5	10,689.8	93.8	95.6	-73.37	-8,754.3	2,561.9	688.4	509.0	179.32	3.839	
19,500.0	10,886.8	19,740.5	10,689.8	94.6	96.5	-73.37	-8,854.3	2,562.5	688.4	507.7	180.69	3.810	
19,600.0	10,886.9	19,840.5	10,689.7	95.5	97.3	-73.36	-8,954.3	2,563.1	688.4	506.4	182.07	3.781	
19,700.0	10,886.9	19,940.5	10,689.7	96.4	98.2	-73.35	-9,054.3	2,563.7	688.4	505.0	183.44	3.753	
19,800.0	10,887.0	20,040.5	10,689.7	97.3	99.1	-73.34	-9,154.3	2,564.3	688.5	503.7	184.82	3.725	
19,900.0	10,887.1	20,140.5	10,689.6	98.2	99.9	-73.33	-9,254.3	2,564.9	688.5	502.3	186.20	3.698	
20,000.0	10,887.1	20,240.5	10,689.6	99.0	100.8	-73.33	-9,354.3	2,565.6	688.5	501.0	187.58	3.671	
20,100.0	10,887.2	20,340.5	10,689.5	99.9	101.7	-73.32	-9,454.3	2,566.2	688.6	499.6	188.96	3.644	
20,200.0	10,887.2	20,440.5	10,689.5	100.8	102.5	-73.31	-9,554.3	2,566.8	688.6	498.2	190.34	3.618	
20,300.0	10,887.3	20,540.5	10,689.5	101.7	103.4	-73.30	-9,654.3	2,567.4	688.6	496.9	191.72	3.592	
20,400.0	10,887.4	20,640.5	10,689.4	102.6	104.3	-73.30	-9,754.3	2,568.0	688.6	495.5	193.11	3.566	
20,500.0	10,887.4	20,740.5	10,689.4	103.5	105.2	-73.29	-9,854.3	2,568.6	688.7	494.2	194.49	3.541	
20,600.0	10,887.5	20,840.5	10,689.3	104.4	106.0	-73.28	-9,954.3	2,569.2	688.7	492.8	195.88	3.516	
20,700.0	10,887.5	20,940.5	10,689.3	105.2	106.9	-73.27	-10,054.3	2,569.8	688.7	491.5	197.26	3.491	
20,800.0	10,887.6	21,040.5	10,689.3	106.1	107.8	-73.26	-10,154.3	2,570.4	688.7	490.1	198.65	3.467	
20,900.0	10,887.7	21,140.5	10,689.2	107.0	108.7	-73.26	-10,254.3	2,571.0	688.8	488.7	200.04	3.443	
21,000.0	10,887.7	21,240.5	10,689.2	107.9	109.6	-73.25	-10,354.3	2,571.6	688.8	487.4	201.43	3.420	
21,100.0	10,887.8	21,340.5	10,689.2	108.8	110.5	-73.24	-10,454.3	2,572.2	688.8	486.0	202.82	3.396	
21,200.0	10,887.8	21,440.5	10,689.1	109.7	111.3	-73.23	-10,554.3	2,572.8	688.9	484.6	204.21	3.373	
21,300.0	10,887.9	21,540.5	10,689.1	110.6	112.2	-73.23	-10,654.3	2,573.4	688.9	483.3	205.60	3.351	
21,400.0	10,887.9	21,640.5	10,689.0	111.5	113.1	-73.22	-10,754.3	2,574.1	688.9	481.9	206.99	3.328	
21,485.7	10,888.0	21,726.2	10,689.0	112.3	113.9	-73.21	-10,840.0	2,574.6	688.9	480.7	208.19	3.309	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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	1.0	0.0	0.0	0.0	-90.15	-0.1	-30.0	30.0				
100.0	100.0	101.0	100.0	0.8	0.8	-90.15	-0.1	-30.0	30.0	28.0	1.99	15.111	
200.0	200.0	201.0	200.0	1.4	1.4	-90.15	-0.1	-30.0	30.0	26.7	3.31	9.065	
300.0	300.0	301.0	300.0	1.9	1.9	-90.15	-0.1	-30.0	30.0	25.8	4.19	7.153	
400.0	400.0	401.0	400.0	2.2	2.2	-90.15	-0.1	-30.0	30.0	25.1	4.91	6.109	
500.0	500.0	501.0	500.0	2.6	2.6	-90.15	-0.1	-30.0	30.0	24.5	5.53	5.423	
600.0	600.0	601.0	600.0	2.8	2.8	-90.15	-0.1	-30.0	30.0	23.9	6.09	4.927	
700.0	700.0	701.0	700.0	3.1	3.1	-90.15	-0.1	-30.0	30.0	23.4	6.60	4.545	
800.0	800.0	801.0	800.0	3.3	3.3	-90.15	-0.1	-30.0	30.0	22.9	7.08	4.240	
900.0	900.0	901.0	900.0	3.6	3.6	-90.15	-0.1	-30.0	30.0	22.5	7.52	3.988	
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	-90.15	-0.1	-30.0	30.0	22.1	7.95	3.775	
1,100.0	1,100.0	1,101.7	1,100.7	4.0	4.1	-92.70	-1.4	-28.7	28.8	20.4	8.39	3.427	
1,200.0	1,200.0	1,202.2	1,201.0	4.2	4.4	-101.60	-5.1	-25.0	25.5	16.7	8.77	2.906	Normal Operations
1,300.0	1,300.0	1,302.4	1,300.8	4.4	4.5	-120.54	-11.0	-18.6	21.6	12.6	8.97	2.407	Caution - Monitor Closely
1,400.0	1,400.0	1,402.3	1,400.1	4.6	4.8	-152.04	-16.8	-8.9	19.0	9.6	9.36	2.026	Caution - Monitor Closely
1,406.0	1,406.0	1,408.2	1,406.0	4.6	4.8	-154.35	-17.1	-8.2	19.0	9.6	9.39	2.018	Caution - Monitor Closely, CC, ES, SF
1,500.0	1,500.0	1,501.4	1,498.2	4.7	5.1	169.43	-22.1	4.1	22.6	12.6	9.98	2.263	Caution - Monitor Closely
1,600.0	1,600.0	1,600.1	1,595.5	5.0	5.4	35.03	-27.2	20.1	32.7	22.1	10.53	3.101	
1,700.0	1,699.8	1,699.4	1,693.2	5.3	5.7	24.44	-32.2	36.7	42.9	31.8	11.12	3.858	
1,750.0	1,749.7	1,749.1	1,742.2	5.3	5.8	21.44	-34.7	45.0	47.1	35.8	11.34	4.157	
1,800.0	1,799.5	1,799.0	1,791.3	5.4	6.0	22.43	-37.2	53.3	50.7	39.2	11.57	4.386	
1,900.0	1,898.7	1,898.8	1,889.6	5.7	6.3	24.49	-42.2	70.0	56.0	43.8	12.18	4.596	
2,000.0	1,997.5	1,998.8	1,988.0	6.0	6.7	27.30	-47.2	86.7	58.4	45.6	12.80	4.564	
2,100.0	2,095.7	2,098.7	2,086.4	6.3	7.1	31.39	-52.3	103.4	58.1	44.7	13.40	4.336	
2,200.0	2,193.2	2,198.6	2,184.7	6.7	7.4	37.49	-57.3	120.1	55.4	41.4	13.93	3.975	
2,258.8	2,250.1	2,257.2	2,242.4	6.8	7.7	42.46	-60.3	129.9	52.9	38.8	14.11	3.748	
2,300.0	2,290.0	2,298.2	2,282.8	6.9	7.8	46.17	-62.3	136.8	51.1	36.9	14.18	3.602	
2,400.0	2,386.6	2,397.8	2,380.9	7.3	8.2	56.20	-67.3	153.4	47.7	33.5	14.26	3.347	
2,500.0	2,483.1	2,497.3	2,478.9	7.6	8.6	67.34	-72.3	170.0	46.0	31.9	14.12	3.257	
2,543.1	2,524.8	2,540.3	2,521.2	7.8	8.8	72.32	-74.5	177.2	45.8	31.8	14.03	3.266	
2,600.0	2,579.7	2,596.9	2,577.0	8.0	9.0	78.86	-77.4	186.7	46.1	32.2	13.91	3.316	
2,700.0	2,676.3	2,696.5	2,675.0	8.3	9.4	89.88	-82.4	203.3	48.1	34.2	13.83	3.476	
2,800.0	2,772.9	2,796.0	2,773.0	8.7	9.8	99.72	-87.4	220.0	51.7	37.6	14.06	3.675	
2,900.0	2,869.5	2,895.6	2,871.1	9.1	10.3	108.08	-92.4	236.6	56.5	42.0	14.60	3.874	
3,000.0	2,966.1	2,995.2	2,969.1	9.5	10.7	114.99	-97.4	253.2	62.4	47.1	15.37	4.064	
3,100.0	3,062.7	3,094.7	3,067.2	9.9	11.1	120.65	-102.4	269.9	69.1	52.8	16.26	4.249	
3,200.0	3,159.3	3,194.3	3,165.2	10.4	11.5	125.29	-107.5	286.5	76.3	59.1	17.22	4.432	
3,300.0	3,255.9	3,293.9	3,263.2	10.8	12.0	129.11	-112.5	303.1	83.9	65.7	18.19	4.613	
3,400.0	3,352.5	3,393.4	3,361.3	11.2	12.4	132.28	-117.5	319.8	91.8	72.7	19.17	4.791	
3,500.0	3,449.1	3,493.0	3,459.3	11.7	12.8	134.94	-122.5	336.4	100.0	79.9	20.13	4.966	
3,600.0	3,545.7	3,592.6	3,557.4	12.1	13.2	137.20	-127.5	353.1	108.3	87.2	21.09	5.136	
3,700.0	3,642.3	3,692.1	3,655.4	12.6	13.7	139.13	-132.5	369.7	116.8	94.8	22.04	5.300	
3,800.0	3,738.8	3,791.7	3,753.4	13.0	14.1	140.80	-137.5	386.3	125.4	102.4	22.98	5.457	
3,900.0	3,835.4	3,891.3	3,851.5	13.5	14.6	142.26	-142.6	403.0	134.1	110.2	23.91	5.608	
4,000.0	3,932.0	3,990.8	3,949.5	13.9	15.0	143.53	-147.6	419.6	142.9	118.0	24.83	5.753	
4,100.0	4,028.6	4,090.4	4,047.6	14.4	15.4	144.66	-152.6	436.2	151.7	125.9	25.75	5.891	
4,200.0	4,125.2	4,190.0	4,145.6	14.9	15.9	145.67	-157.6	452.9	160.6	133.9	26.66	6.023	
4,300.0	4,221.8	4,289.5	4,243.6	15.3	16.3	146.57	-162.6	469.5	169.5	141.9	27.56	6.149	
4,400.0	4,318.4	4,389.1	4,341.7	15.8	16.8	147.38	-167.6	486.1	178.4	150.0	28.46	6.269	
4,500.0	4,415.0	4,488.7	4,439.7	16.3	17.2	148.11	-172.6	502.8	187.4	158.1	29.36	6.383	
4,600.0	4,511.6	4,588.2	4,537.8	16.7	17.6	148.77	-177.7	519.4	196.5	166.2	30.26	6.492	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
4,700.0	4,608.2	4,687.8	4,635.8	17.2	18.1	149.38	-182.7	536.1	205.5	174.3	31.15	6.597	
4,800.0	4,704.8	4,787.4	4,733.8	17.7	18.5	149.93	-187.7	552.7	214.6	182.5	32.04	6.696	
4,900.0	4,801.4	4,886.9	4,831.9	18.2	19.0	150.44	-192.7	569.3	223.6	190.7	32.93	6.791	
5,000.0	4,898.0	4,986.5	4,929.9	18.6	19.4	150.91	-197.7	586.0	232.7	198.9	33.82	6.881	
5,100.0	4,994.6	5,086.1	5,027.9	19.1	19.9	151.35	-202.7	602.6	241.9	207.1	34.71	6.968	
5,200.0	5,091.1	5,185.7	5,126.0	19.6	20.3	151.75	-207.7	619.2	251.0	215.4	35.60	7.051	
5,300.0	5,187.7	5,285.2	5,224.0	20.1	20.8	152.13	-212.8	635.9	260.1	223.6	36.48	7.130	
5,400.0	5,284.3	5,384.8	5,322.1	20.6	21.2	152.48	-217.8	652.5	269.3	231.9	37.37	7.206	
5,500.0	5,380.9	5,484.4	5,420.1	21.0	21.6	152.80	-222.8	669.2	278.4	240.2	38.25	7.279	
5,600.0	5,477.5	5,583.9	5,518.1	21.5	22.1	153.11	-227.8	685.8	287.6	248.5	39.13	7.349	
5,700.0	5,574.1	5,683.5	5,616.2	22.0	22.5	153.40	-232.8	702.4	296.8	256.7	40.02	7.416	
5,800.0	5,670.7	5,783.1	5,714.2	22.5	23.0	153.67	-237.8	719.1	305.9	265.0	40.90	7.481	
5,900.0	5,767.3	5,882.6	5,812.3	23.0	23.4	153.92	-242.8	735.7	315.1	273.3	41.78	7.543	
6,000.0	5,863.9	5,982.2	5,910.3	23.5	23.9	154.16	-247.9	752.3	324.3	281.7	42.66	7.602	
6,100.0	5,960.5	6,081.8	6,008.3	23.9	24.3	154.39	-252.9	769.0	333.5	290.0	43.54	7.659	
6,200.0	6,057.1	6,181.3	6,106.4	24.4	24.8	154.60	-257.9	785.6	342.7	298.3	44.42	7.715	
6,300.0	6,153.7	6,280.9	6,204.4	24.9	25.2	154.80	-262.9	802.3	351.9	306.6	45.31	7.768	
6,400.0	6,250.3	6,380.5	6,302.5	25.4	25.7	155.00	-267.9	818.9	361.1	314.9	46.19	7.819	
6,500.0	6,346.8	6,480.0	6,400.5	25.9	26.1	155.18	-272.9	835.5	370.4	323.3	47.07	7.868	
6,600.0	6,443.4	6,579.6	6,498.5	26.4	26.6	155.35	-278.0	852.2	379.6	331.6	47.95	7.916	
6,700.0	6,540.0	6,679.2	6,596.6	26.9	27.0	155.52	-283.0	868.8	388.8	340.0	48.83	7.962	
6,800.0	6,636.6	6,778.7	6,694.6	27.4	27.5	155.68	-288.0	885.4	398.0	348.3	49.71	8.007	
6,900.0	6,733.2	6,878.3	6,792.7	27.9	27.9	155.83	-293.0	902.1	407.2	356.7	50.59	8.050	
7,000.0	6,829.8	6,977.9	6,890.7	28.3	28.4	155.97	-298.0	918.7	416.5	365.0	51.47	8.091	
7,100.0	6,926.4	7,077.4	6,988.7	28.8	28.8	156.11	-303.0	935.4	425.7	373.4	52.35	8.131	
7,200.0	7,023.0	7,177.0	7,086.8	29.3	29.3	156.24	-308.0	952.0	434.9	381.7	53.23	8.170	
7,300.0	7,119.6	7,276.6	7,184.8	29.8	29.7	156.37	-313.1	968.6	444.2	390.1	54.11	8.208	
7,400.0	7,216.2	7,376.1	7,282.9	30.3	30.2	156.49	-318.1	985.3	453.4	398.4	54.99	8.245	
7,500.0	7,312.8	7,475.7	7,380.9	30.8	30.6	156.61	-323.1	1,001.9	462.7	406.8	55.88	8.280	
7,600.0	7,409.4	7,575.3	7,478.9	31.3	31.1	156.72	-328.1	1,018.5	471.9	415.1	56.76	8.315	
7,693.8	7,500.0	7,668.7	7,570.9	31.8	31.5	156.82	-332.8	1,034.2	480.6	423.0	57.58	8.346	
7,700.0	7,506.0	7,674.8	7,577.0	31.8	31.5	156.83	-333.1	1,035.2	481.1	423.5	57.63	8.348	
7,800.0	7,603.0	7,774.6	7,675.2	32.3	32.0	156.90	-338.1	1,051.8	488.6	430.1	58.52	8.349	
7,900.0	7,700.9	7,874.5	7,773.5	32.8	32.5	156.79	-343.2	1,068.5	492.8	433.5	59.31	8.309	
8,000.0	7,799.4	7,974.4	7,872.0	33.3	32.9	156.50	-348.2	1,085.2	493.9	433.9	60.02	8.229	
8,043.8	7,842.8	8,018.2	7,915.1	33.4	33.1	156.31	-350.4	1,092.6	493.3	433.0	60.29	8.183	
8,100.0	7,898.4	8,074.3	7,970.3	33.7	33.4	156.05	-353.2	1,101.9	492.3	431.6	60.63	8.118	
8,200.0	7,997.4	8,169.5	8,064.1	34.1	33.8	155.64	-357.9	1,117.5	490.7	429.5	61.22	8.016	
8,267.7	8,064.4	8,232.7	8,126.5	34.4	34.1	155.41	-360.8	1,127.0	490.4	428.8	61.61	7.960	
8,300.0	8,096.4	8,262.8	8,156.3	34.5	34.2	155.32	-362.1	1,131.3	490.4	428.7	61.80	7.937	
8,400.0	8,195.5	8,356.2	8,248.8	35.0	34.6	155.11	-365.8	1,143.8	491.6	429.2	62.39	7.879	
8,500.0	8,294.5	8,449.5	8,341.4	35.4	35.0	155.00	-369.2	1,154.7	494.0	431.0	63.00	7.842	
8,600.0	8,393.5	8,542.8	8,434.1	35.8	35.4	154.98	-372.0	1,164.3	497.9	434.2	63.63	7.824	
8,700.0	8,492.5	8,635.9	8,526.8	36.3	35.7	155.07	-374.5	1,172.3	503.0	438.8	64.27	7.826	
8,800.0	8,591.6	8,728.9	8,619.6	36.7	36.1	155.25	-376.5	1,179.0	509.5	444.6	64.93	7.847	
8,900.0	8,690.6	8,821.6	8,712.2	37.1	36.4	155.51	-378.0	1,184.1	517.4	451.8	65.60	7.887	
9,000.0	8,789.6	8,914.1	8,804.6	37.6	36.7	155.86	-379.1	1,187.8	526.6	460.3	66.28	7.946	
9,100.0	8,888.6	9,006.3	8,896.7	38.0	37.0	156.28	-379.8	1,190.1	537.2	470.2	66.98	8.020	
9,101.4	8,890.0	9,007.5	8,898.0	38.0	37.0	156.29	-379.8	1,190.1	537.4	470.4	66.99	8.021	
9,200.0	8,987.8	9,098.3	8,988.7	38.4	37.1	156.79	-380.1	1,191.0	548.0	480.1	67.90	8.071	
9,300.0	9,087.3	9,196.9	9,087.3	38.8	37.2	157.25	-380.1	1,191.0	557.3	487.8	69.41	8.029	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 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)			
9,400.0	9,187.1	9,296.6	9,187.1	39.2	37.2	157.58	-380.1	1,191.0	564.1	494.2	69.91	8.069	
9,500.0	9,286.9	9,396.5	9,286.9	39.5	37.2	157.79	-380.1	1,191.0	568.6	498.3	70.33	8.084	
9,600.0	9,386.9	9,496.5	9,386.9	39.8	37.2	157.88	-380.1	1,191.0	570.7	500.0	70.66	8.076	
9,634.7	9,421.6	9,531.2	9,421.6	39.9	37.2	-104.64	-380.1	1,191.0	570.8	500.2	70.62	8.082	
9,700.0	9,486.9	9,596.5	9,486.9	39.9	37.2	-104.64	-380.1	1,191.0	570.8	500.2	70.64	8.080	
9,800.0	9,586.9	9,696.5	9,586.9	39.9	37.2	-104.64	-380.1	1,191.0	570.8	500.1	70.68	8.075	
9,900.0	9,686.9	9,796.5	9,686.9	39.9	37.3	-104.64	-380.1	1,191.0	570.8	500.1	70.73	8.071	
10,000.0	9,786.9	9,896.5	9,786.9	39.9	37.3	-104.64	-380.1	1,191.0	570.8	500.0	70.77	8.066	
10,100.0	9,886.9	9,996.5	9,886.9	39.9	37.3	-104.64	-380.1	1,191.0	570.8	500.0	70.81	8.061	
10,200.0	9,986.9	10,096.5	9,986.9	40.0	37.3	-104.64	-380.1	1,191.0	570.8	500.0	70.85	8.056	
10,300.0	10,086.9	10,196.5	10,086.9	40.0	37.3	-104.64	-380.1	1,191.0	570.8	499.9	70.89	8.052	
10,400.0	10,186.9	10,296.5	10,186.9	40.0	37.4	-104.64	-380.1	1,191.0	570.8	499.9	70.94	8.047	
10,500.0	10,286.9	10,375.0	10,265.1	40.0	37.4	-105.18	-385.6	1,191.0	572.6	502.3	70.35	8.140	
10,538.8	10,325.7	10,403.4	10,293.0	40.0	37.5	-105.67	-390.8	1,191.1	574.5	504.6	69.86	8.223	
10,550.0	10,336.9	10,411.6	10,301.1	40.0	37.5	94.09	-392.6	1,191.1	575.1	505.7	69.44	8.282	
10,600.0	10,386.8	10,450.0	10,338.1	40.1	37.5	92.96	-402.8	1,191.1	579.1	510.2	68.84	8.412	
10,650.0	10,436.2	10,484.1	10,370.1	40.2	37.6	91.83	-414.3	1,191.2	584.5	516.2	68.22	8.567	
10,700.0	10,484.8	10,519.4	10,402.4	40.3	37.7	90.59	-428.7	1,191.3	591.2	523.5	67.69	8.734	
10,750.0	10,532.2	10,554.3	10,433.1	40.5	37.7	89.30	-445.2	1,191.4	599.2	532.0	67.22	8.914	
10,800.0	10,578.0	10,588.6	10,462.2	40.6	37.8	87.97	-463.5	1,191.5	608.4	541.6	66.84	9.102	
10,850.0	10,621.8	10,625.0	10,491.4	40.7	37.8	86.60	-485.2	1,191.6	618.7	552.1	66.55	9.297	
10,900.0	10,663.5	10,655.9	10,514.8	40.9	37.9	85.24	-505.3	1,191.8	629.9	563.6	66.34	9.495	
10,950.0	10,702.5	10,689.0	10,538.4	41.0	37.9	83.86	-528.4	1,191.9	642.0	575.7	66.23	9.693	
10,988.8	10,730.8	10,714.3	10,555.4	41.1	38.0	82.79	-547.3	1,192.0	651.8	585.6	66.21	9.845	
11,000.0	10,738.7	10,725.0	10,562.2	41.1	38.0	81.90	-555.4	1,192.1	654.7	588.5	66.21	9.889	
11,025.0	10,755.6	10,737.9	10,570.3	41.2	38.0	80.09	-565.6	1,192.1	660.8	594.5	66.26	9.973	
11,050.0	10,771.5	10,754.2	10,580.0	41.3	38.1	78.50	-578.6	1,192.2	666.4	600.1	66.31	10.050	
11,075.0	10,786.6	10,770.6	10,589.4	41.3	38.1	77.11	-592.1	1,192.3	671.6	605.2	66.38	10.118	
11,100.0	10,800.6	10,787.0	10,598.2	41.4	38.1	75.90	-605.8	1,192.4	676.4	609.9	66.47	10.176	
11,125.0	10,813.7	10,800.0	10,604.9	41.4	38.1	74.84	-617.0	1,192.4	680.7	614.1	66.60	10.221	
11,150.0	10,825.7	10,819.8	10,614.6	41.4	38.2	73.97	-634.3	1,192.6	684.5	617.8	66.69	10.263	
11,175.0	10,836.6	10,836.3	10,622.0	41.5	38.2	73.22	-649.0	1,192.6	687.8	621.0	66.83	10.292	
11,200.0	10,846.4	10,850.0	10,627.8	41.5	38.2	72.58	-661.4	1,192.7	690.6	623.6	67.00	10.307	
11,225.0	10,855.0	10,869.4	10,635.4	41.6	38.2	72.11	-679.3	1,192.8	693.0	625.8	67.14	10.321	
11,250.0	10,862.5	10,886.0	10,641.4	41.6	38.3	71.75	-694.8	1,192.9	694.8	627.5	67.32	10.321	
11,275.0	10,868.8	10,900.0	10,645.9	41.6	38.3	71.47	-708.0	1,193.0	696.2	628.7	67.55	10.306	
11,300.0	10,873.9	10,919.4	10,651.6	41.6	38.3	71.36	-726.5	1,193.1	697.1	629.3	67.73	10.292	
11,325.0	10,877.7	10,936.2	10,656.0	41.7	38.3	71.33	-742.7	1,193.2	697.4	629.5	67.95	10.263	
11,350.0	10,880.4	10,950.0	10,659.1	41.7	38.3	71.38	-756.2	1,193.3	697.3	629.1	68.23	10.219	
11,375.0	10,881.8	10,969.8	10,662.9	41.7	38.4	71.60	-775.7	1,193.4	696.7	628.2	68.45	10.178	
11,390.6	10,882.0	10,980.4	10,664.6	41.7	38.4	71.77	-786.1	1,193.5	696.0	627.4	68.61	10.145	
11,400.0	10,882.1	10,986.8	10,665.5	41.8	38.4	71.84	-792.4	1,193.5	695.6	626.9	68.71	10.125	
11,494.6	10,882.1	11,051.9	10,670.0	41.9	38.5	72.19	-857.3	1,193.9	693.6	624.2	69.41	9.993	
11,500.0	10,882.1	11,056.9	10,670.0	41.9	38.5	72.19	-862.3	1,193.9	693.6	624.2	69.41	9.993	
11,600.0	10,882.2	11,156.9	10,669.8	42.0	38.6	72.17	-962.3	1,194.6	693.7	624.3	69.34	10.003	
11,700.0	10,882.2	11,256.9	10,669.7	42.2	38.7	72.16	-1,062.3	1,195.2	693.7	624.4	69.33	10.007	
11,800.0	10,882.3	11,356.9	10,669.6	42.4	38.9	72.15	-1,162.3	1,195.8	693.8	624.4	69.36	10.003	
11,900.0	10,882.3	11,456.9	10,669.4	42.6	39.1	72.13	-1,262.3	1,196.4	693.8	624.4	69.44	9.992	
12,000.0	10,882.4	11,556.9	10,669.3	42.9	39.3	72.12	-1,362.3	1,197.0	693.9	624.3	69.56	9.975	
12,100.0	10,882.5	11,656.9	10,669.2	43.1	39.5	72.10	-1,462.3	1,197.6	693.9	624.2	69.74	9.951	
12,200.0	10,882.5	11,756.9	10,669.1	43.4	39.8	72.09	-1,562.3	1,198.2	694.0	624.0	69.96	9.920	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 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)			
12,300.0	10,882.6	11,856.9	10,668.9	43.7	40.0	72.07	-1,662.3	1,198.8	694.0	623.8	70.23	9.883	
12,400.0	10,882.6	11,956.9	10,668.8	44.1	40.3	72.06	-1,762.3	1,199.5	694.1	623.6	70.54	9.839	
12,500.0	10,882.7	12,056.9	10,668.7	44.4	40.7	72.04	-1,862.3	1,200.1	694.2	623.3	70.90	9.790	
12,600.0	10,882.8	12,156.9	10,668.5	44.8	41.0	72.03	-1,962.3	1,200.7	694.2	622.9	71.31	9.735	
12,700.0	10,882.8	12,256.9	10,668.4	45.2	41.4	72.01	-2,062.3	1,201.3	694.3	622.5	71.76	9.674	
12,800.0	10,882.9	12,356.9	10,668.3	45.6	41.8	72.00	-2,162.3	1,201.9	694.3	622.1	72.26	9.609	
12,900.0	10,882.9	12,456.9	10,668.1	46.0	42.2	71.98	-2,262.3	1,202.5	694.4	621.6	72.80	9.538	
13,000.0	10,883.0	12,556.9	10,668.0	46.5	42.6	71.97	-2,362.3	1,203.1	694.4	621.1	73.38	9.464	
13,100.0	10,883.1	12,656.9	10,667.9	46.9	43.1	71.95	-2,462.3	1,203.7	694.5	620.5	74.00	9.385	
13,200.0	10,883.1	12,756.9	10,667.8	47.4	43.6	71.94	-2,562.3	1,204.3	694.5	619.9	74.66	9.303	
13,300.0	10,883.2	12,856.9	10,667.6	47.9	44.0	71.92	-2,662.3	1,205.0	694.6	619.2	75.36	9.217	
13,400.0	10,883.2	12,956.9	10,667.5	48.4	44.6	71.91	-2,762.3	1,205.6	694.7	618.6	76.09	9.129	
13,500.0	10,883.3	13,056.9	10,667.4	49.0	45.1	71.89	-2,862.3	1,206.2	694.7	617.8	76.87	9.038	
13,600.0	10,883.3	13,156.9	10,667.2	49.5	45.6	71.88	-2,962.3	1,206.8	694.8	617.1	77.68	8.944	
13,700.0	10,883.4	13,256.9	10,667.1	50.1	46.2	71.86	-3,062.3	1,207.4	694.8	616.3	78.52	8.849	
13,800.0	10,883.5	13,356.9	10,667.0	50.6	46.8	71.85	-3,162.3	1,208.0	694.9	615.5	79.39	8.752	
13,900.0	10,883.5	13,456.9	10,666.8	51.2	47.4	71.83	-3,262.3	1,208.6	694.9	614.6	80.30	8.654	
14,000.0	10,883.6	13,556.9	10,666.7	51.8	48.0	71.82	-3,362.3	1,209.2	695.0	613.7	81.23	8.555	
14,100.0	10,883.6	13,656.9	10,666.6	52.4	48.6	71.80	-3,462.3	1,209.9	695.0	612.8	82.20	8.455	
14,200.0	10,883.7	13,756.9	10,666.5	53.0	49.2	71.79	-3,562.3	1,210.5	695.1	611.9	83.19	8.355	
14,300.0	10,883.8	13,856.9	10,666.3	53.7	49.9	71.77	-3,662.3	1,211.1	695.1	610.9	84.22	8.254	
14,400.0	10,883.8	13,956.9	10,666.2	54.3	50.5	71.76	-3,762.3	1,211.7	695.2	609.9	85.26	8.154	
14,500.0	10,883.9	14,056.9	10,666.1	55.0	51.2	71.74	-3,862.3	1,212.3	695.3	608.9	86.34	8.053	
14,600.0	10,883.9	14,156.9	10,665.9	55.6	51.9	71.73	-3,962.2	1,212.9	695.3	607.9	87.43	7.952	
14,700.0	10,884.0	14,256.9	10,665.8	56.3	52.6	71.71	-4,062.2	1,213.5	695.4	606.8	88.55	7.852	
14,800.0	10,884.1	14,356.9	10,665.7	57.0	53.3	71.70	-4,162.2	1,214.1	695.4	605.7	89.70	7.753	
14,900.0	10,884.1	14,456.9	10,665.5	57.7	54.0	71.68	-4,262.2	1,214.7	695.5	604.6	90.86	7.654	
15,000.0	10,884.2	14,556.9	10,665.4	58.4	54.7	71.67	-4,362.2	1,215.4	695.5	603.5	92.04	7.557	
15,100.0	10,884.2	14,656.9	10,665.3	59.1	55.4	71.65	-4,462.2	1,216.0	695.6	602.3	93.25	7.460	
15,200.0	10,884.3	14,756.9	10,665.2	59.8	56.1	71.64	-4,562.2	1,216.6	695.7	601.2	94.47	7.364	
15,300.0	10,884.4	14,856.9	10,665.0	60.5	56.9	71.62	-4,662.2	1,217.2	695.7	600.0	95.71	7.269	
15,400.0	10,884.4	14,956.9	10,664.9	61.2	57.6	71.61	-4,762.2	1,217.8	695.8	598.8	96.97	7.175	
15,500.0	10,884.5	15,056.9	10,664.8	61.9	58.4	71.59	-4,862.2	1,218.4	695.8	597.6	98.24	7.083	
15,600.0	10,884.5	15,156.9	10,664.6	62.7	59.1	71.58	-4,962.2	1,219.0	695.9	596.3	99.53	6.992	
15,700.0	10,884.6	15,256.9	10,664.5	63.4	59.9	71.56	-5,062.2	1,219.6	695.9	595.1	100.84	6.902	
15,800.0	10,884.6	15,356.9	10,664.4	64.2	60.7	71.55	-5,162.2	1,220.2	696.0	593.8	102.15	6.813	
15,900.0	10,884.7	15,456.9	10,664.2	64.9	61.5	71.53	-5,262.2	1,220.9	696.0	592.6	103.49	6.726	
16,000.0	10,884.8	15,556.9	10,664.1	65.7	62.2	71.52	-5,362.2	1,221.5	696.1	591.3	104.83	6.640	
16,100.0	10,884.8	15,656.9	10,664.0	66.4	63.0	71.51	-5,462.2	1,222.1	696.2	590.0	106.19	6.556	
16,200.0	10,884.9	15,756.9	10,663.9	67.2	63.8	71.49	-5,562.2	1,222.7	696.2	588.7	107.56	6.473	
16,300.0	10,884.9	15,856.9	10,663.7	68.0	64.6	71.48	-5,662.2	1,223.3	696.3	587.3	108.94	6.391	
16,400.0	10,885.0	15,956.9	10,663.6	68.8	65.4	71.46	-5,762.2	1,223.9	696.3	586.0	110.33	6.311	
16,500.0	10,885.1	16,056.9	10,663.5	69.5	66.2	71.45	-5,862.2	1,224.5	696.4	584.6	111.74	6.232	
16,600.0	10,885.1	16,156.9	10,663.3	70.3	67.1	71.43	-5,962.2	1,225.1	696.4	583.3	113.15	6.155	
16,700.0	10,885.2	16,256.9	10,663.2	71.1	67.9	71.42	-6,062.2	1,225.8	696.5	581.9	114.57	6.079	
16,800.0	10,885.2	16,356.9	10,663.1	71.9	68.7	71.40	-6,162.2	1,226.4	696.6	580.5	116.00	6.005	
16,900.0	10,885.3	16,456.9	10,662.9	72.7	69.5	71.39	-6,262.2	1,227.0	696.6	579.2	117.45	5.931	
17,000.0	10,885.4	16,556.9	10,662.8	73.5	70.4	71.37	-6,362.2	1,227.6	696.7	577.8	118.89	5.860	
17,100.0	10,885.4	16,656.9	10,662.7	74.3	71.2	71.36	-6,462.2	1,228.2	696.7	576.4	120.35	5.789	
17,200.0	10,885.5	16,756.9	10,662.6	75.2	72.0	71.34	-6,562.2	1,228.8	696.8	575.0	121.82	5.720	
17,300.0	10,885.5	16,856.9	10,662.4	76.0	72.9	71.33	-6,662.2	1,229.4	696.8	573.6	123.29	5.652	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 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)			
17,400.0	10,885.6	16,956.9	10,662.3	76.8	73.7	71.31	-6,762.2	1,230.0	696.9	572.1	124.77	5.586	
17,500.0	10,885.6	17,056.9	10,662.2	77.6	74.6	71.30	-6,862.2	1,230.6	697.0	570.7	126.25	5.520	
17,600.0	10,885.7	17,156.9	10,662.0	78.4	75.4	71.28	-6,962.2	1,231.3	697.0	569.3	127.75	5.456	
17,700.0	10,885.8	17,256.9	10,661.9	79.3	76.3	71.27	-7,062.2	1,231.9	697.1	567.8	129.24	5.393	
17,800.0	10,885.8	17,356.9	10,661.8	80.1	77.1	71.25	-7,162.2	1,232.5	697.1	566.4	130.75	5.332	
17,900.0	10,885.9	17,456.9	10,661.6	80.9	78.0	71.24	-7,262.2	1,233.1	697.2	564.9	132.26	5.271	
18,000.0	10,885.9	17,556.9	10,661.5	81.8	78.8	71.22	-7,362.2	1,233.7	697.2	563.5	133.77	5.212	
18,100.0	10,886.0	17,656.9	10,661.4	82.6	79.7	71.21	-7,462.2	1,234.3	697.3	562.0	135.29	5.154	
18,200.0	10,886.1	17,756.9	10,661.3	83.5	80.6	71.19	-7,562.2	1,234.9	697.4	560.5	136.82	5.097	
18,300.0	10,886.1	17,856.9	10,661.1	84.3	81.4	71.18	-7,662.2	1,235.5	697.4	559.1	138.35	5.041	
18,400.0	10,886.2	17,956.9	10,661.0	85.2	82.3	71.16	-7,762.2	1,236.2	697.5	557.6	139.88	4.986	
18,500.0	10,886.2	18,056.9	10,660.9	86.0	83.2	71.15	-7,862.2	1,236.8	697.5	556.1	141.42	4.932	
18,600.0	10,886.3	18,156.9	10,660.7	86.9	84.0	71.13	-7,962.2	1,237.4	697.6	554.6	142.97	4.879	
18,700.0	10,886.4	18,256.9	10,660.6	87.7	84.9	71.12	-8,062.2	1,238.0	697.6	553.1	144.51	4.828	
18,800.0	10,886.4	18,356.9	10,660.5	88.6	85.8	71.11	-8,162.2	1,238.6	697.7	551.6	146.06	4.777	
18,900.0	10,886.5	18,456.9	10,660.4	89.4	86.7	71.09	-8,262.2	1,239.2	697.8	550.1	147.62	4.727	
19,000.0	10,886.5	18,556.9	10,660.2	90.3	87.6	71.08	-8,362.2	1,239.8	697.8	548.6	149.17	4.678	
19,100.0	10,886.6	18,656.9	10,660.1	91.2	88.5	71.06	-8,462.2	1,240.4	697.9	547.1	150.74	4.630	
19,200.0	10,886.7	18,756.9	10,660.0	92.0	89.3	71.05	-8,562.2	1,241.0	697.9	545.6	152.30	4.583	
19,300.0	10,886.7	18,856.9	10,659.8	92.9	90.2	71.03	-8,662.1	1,241.7	698.0	544.1	153.87	4.536	
19,400.0	10,886.8	18,956.9	10,659.7	93.8	91.1	71.02	-8,762.1	1,242.3	698.0	542.6	155.44	4.491	
19,500.0	10,886.8	19,056.9	10,659.6	94.6	92.0	71.00	-8,862.1	1,242.9	698.1	541.1	157.01	4.446	
19,600.0	10,886.9	19,156.9	10,659.4	95.5	92.9	70.99	-8,962.1	1,243.5	698.2	539.6	158.58	4.402	
19,700.0	10,886.9	19,256.9	10,659.3	96.4	93.8	70.97	-9,062.1	1,244.1	698.2	538.1	160.16	4.359	
19,800.0	10,887.0	19,356.9	10,659.2	97.3	94.7	70.96	-9,162.1	1,244.7	698.3	536.5	161.74	4.317	
19,900.0	10,887.1	19,456.9	10,659.1	98.2	95.6	70.94	-9,262.1	1,245.3	698.3	535.0	163.32	4.276	
20,000.0	10,887.1	19,556.9	10,658.9	99.0	96.5	70.93	-9,362.1	1,245.9	698.4	533.5	164.91	4.235	
20,100.0	10,887.2	19,656.9	10,658.8	99.9	97.4	70.91	-9,462.1	1,246.5	698.5	532.0	166.50	4.195	
20,200.0	10,887.2	19,756.9	10,658.7	100.8	98.3	70.90	-9,562.1	1,247.2	698.5	530.4	168.08	4.156	
20,300.0	10,887.3	19,856.9	10,658.5	101.7	99.2	70.88	-9,662.1	1,247.8	698.6	528.9	169.67	4.117	
20,400.0	10,887.4	19,956.9	10,658.4	102.6	100.1	70.87	-9,762.1	1,248.4	698.6	527.4	171.27	4.079	
20,500.0	10,887.4	20,056.9	10,658.3	103.5	101.0	70.85	-9,862.1	1,249.0	698.7	525.8	172.86	4.042	
20,600.0	10,887.5	20,156.9	10,658.1	104.4	101.9	70.84	-9,962.1	1,249.6	698.7	524.3	174.46	4.005	
20,700.0	10,887.5	20,256.9	10,658.0	105.2	102.8	70.83	-10,062.1	1,250.2	698.8	522.8	176.05	3.969	
20,800.0	10,887.6	20,356.9	10,657.9	106.1	103.7	70.81	-10,162.1	1,250.8	698.9	521.2	177.65	3.934	
20,900.0	10,887.7	20,456.9	10,657.8	107.0	104.6	70.80	-10,262.1	1,251.4	698.9	519.7	179.25	3.899	
21,000.0	10,887.7	20,556.9	10,657.6	107.9	105.5	70.78	-10,362.1	1,252.1	699.0	518.1	180.85	3.865	
21,100.0	10,887.8	20,656.9	10,657.5	108.8	106.4	70.77	-10,462.1	1,252.7	699.0	516.6	182.45	3.831	
21,200.0	10,887.8	20,756.9	10,657.4	109.7	107.3	70.75	-10,562.1	1,253.3	699.1	515.0	184.06	3.798	
21,300.0	10,887.9	20,856.9	10,657.2	110.6	108.3	70.74	-10,662.1	1,253.9	699.2	513.5	185.66	3.766	
21,400.0	10,887.9	20,956.9	10,657.1	111.5	109.2	70.72	-10,762.1	1,254.5	699.2	511.9	187.27	3.734	
21,402.9	10,888.0	20,959.7	10,657.1	111.5	109.2	70.72	-10,765.0	1,254.5	699.2	511.9	187.31	3.733	
21,485.7	10,888.0	21,038.6	10,657.0	112.3	109.9	70.71	-10,843.9	1,255.0	699.3	510.7	188.57	3.708	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 904H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 10451-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	1.0	0.0	0.0	0.0	-90.16	-0.2	-60.0	60.0				
100.0	100.0	101.0	100.0	0.8	0.8	-90.16	-0.2	-60.0	60.0	58.0	1.99	30.221	
200.0	200.0	201.0	200.0	1.4	1.4	-90.16	-0.2	-60.0	60.0	56.7	3.31	18.131	
300.0	300.0	301.0	300.0	1.9	1.9	-90.16	-0.2	-60.0	60.0	55.8	4.19	14.307	
400.0	400.0	401.0	400.0	2.2	2.2	-90.16	-0.2	-60.0	60.0	55.1	4.91	12.218	
500.0	500.0	501.0	500.0	2.6	2.6	-90.16	-0.2	-60.0	60.0	54.5	5.53	10.846	
600.0	600.0	601.0	600.0	2.8	2.8	-90.16	-0.2	-60.0	60.0	53.9	6.09	9.853	
700.0	700.0	701.0	700.0	3.1	3.1	-90.16	-0.2	-60.0	60.0	53.4	6.60	9.090	
800.0	800.0	801.0	800.0	3.3	3.3	-90.16	-0.2	-60.0	60.0	52.9	7.08	8.480	
900.0	900.0	901.0	900.0	3.6	3.6	-90.16	-0.2	-60.0	60.0	52.5	7.52	7.976	
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	-90.16	-0.2	-60.0	60.0	52.1	7.95	7.550	
1,100.0	1,100.0	1,101.0	1,100.0	4.0	4.0	-90.16	-0.2	-60.0	60.0	51.6	8.35	7.185	
1,200.0	1,200.0	1,201.0	1,200.0	4.2	4.2	-90.16	-0.2	-60.0	60.0	51.3	8.74	6.866	
1,300.0	1,300.0	1,301.0	1,300.0	4.4	4.4	-90.16	-0.2	-60.0	60.0	50.9	9.11	6.585	
1,400.0	1,400.0	1,401.0	1,400.0	4.6	4.6	-90.16	-0.2	-60.0	60.0	50.5	9.47	6.334	
1,500.0	1,500.0	1,501.0	1,500.0	4.7	4.7	-90.16	-0.2	-60.0	60.0	50.2	9.82	6.109 CC, ES	
1,600.0	1,600.0	1,601.0	1,600.0	5.0	4.9	160.39	-0.2	-60.0	61.6	51.4	10.24	6.020 SF	
1,700.0	1,699.8	1,700.8	1,699.8	5.3	5.1	161.87	-0.2	-60.0	66.6	55.9	10.65	6.254	
1,750.0	1,749.7	1,750.7	1,749.7	5.3	5.2	162.84	-0.2	-60.0	70.3	59.6	10.78	6.524	
1,800.0	1,799.5	1,800.5	1,799.5	5.4	5.2	166.87	-0.2	-60.0	74.9	64.0	10.92	6.863	
1,900.0	1,898.7	1,899.7	1,898.7	5.7	5.4	172.25	-0.2	-60.0	86.8	75.4	11.37	7.638	
2,000.0	1,997.5	1,998.5	1,997.5	6.0	5.6	175.57	-0.2	-60.0	102.2	90.3	11.84	8.632	
2,100.0	2,095.7	2,096.7	2,095.7	6.3	5.7	177.70	-0.2	-60.0	121.0	108.7	12.33	9.814	
2,200.0	2,193.2	2,194.2	2,193.2	6.7	5.8	179.11	-0.2	-60.0	143.2	130.4	12.84	11.155	
2,258.8	2,250.1	2,251.1	2,250.1	6.8	5.9	179.71	-0.2	-60.0	157.8	144.7	13.08	12.064	
2,300.0	2,290.0	2,291.0	2,290.0	6.9	6.0	179.73	-0.2	-60.0	168.5	155.2	13.25	12.720	
2,400.0	2,386.6	2,387.6	2,386.6	7.3	6.1	179.76	-0.2	-60.0	194.4	180.7	13.72	14.166	
2,500.0	2,483.1	2,484.1	2,483.1	7.6	6.3	179.79	-0.2	-60.0	220.3	206.0	14.22	15.493	
2,600.0	2,579.7	2,580.7	2,579.7	8.0	6.4	179.81	-0.2	-60.0	246.1	231.4	14.73	16.712	
2,700.0	2,676.3	2,677.3	2,676.3	8.3	6.5	179.83	-0.2	-60.0	272.0	256.8	15.26	17.830	
2,800.0	2,772.9	2,773.9	2,772.9	8.7	6.7	179.84	-0.2	-60.0	297.9	282.1	15.80	18.857	
2,900.0	2,869.5	2,870.5	2,869.5	9.1	6.8	179.86	-0.2	-60.0	323.8	307.4	16.35	19.800	
3,000.0	2,966.1	2,967.1	2,966.1	9.5	6.9	179.87	-0.2	-60.0	349.7	332.7	16.92	20.668	
3,100.0	3,062.7	3,063.7	3,062.7	9.9	7.1	179.88	-0.2	-60.0	375.5	358.1	17.49	21.466	
3,200.0	3,159.3	3,160.3	3,159.3	10.4	7.2	179.88	-0.2	-60.0	401.4	383.4	18.08	22.203	
3,300.0	3,255.9	3,256.9	3,255.9	10.8	7.3	179.89	-0.2	-60.0	427.3	408.6	18.67	22.883	
3,400.0	3,352.5	3,353.5	3,352.5	11.2	7.4	179.90	-0.2	-60.0	453.2	433.9	19.27	23.512	
3,500.0	3,449.1	3,450.1	3,449.1	11.7	7.6	179.90	-0.2	-60.0	479.1	459.2	19.88	24.095	
3,600.0	3,545.7	3,553.6	3,552.6	12.1	7.7	179.87	-0.6	-59.7	504.6	484.3	20.37	24.770	
3,700.0	3,642.3	3,665.7	3,664.6	12.6	7.9	179.55	-3.8	-56.9	527.8	506.8	21.05	25.076	
3,800.0	3,738.8	3,780.6	3,779.2	13.0	8.0	178.94	-10.6	-51.1	548.1	526.5	21.66	25.312	
3,900.0	3,835.4	3,901.8	3,899.6	13.5	8.2	178.15	-20.1	-40.7	564.9	542.6	22.30	25.336	
4,000.0	3,932.0	4,024.3	4,020.6	13.9	8.4	177.28	-31.4	-25.4	577.6	554.6	22.97	25.147	
4,100.0	4,028.6	4,132.4	4,126.7	14.4	8.6	176.44	-42.7	-8.5	587.2	563.6	23.60	24.875	
4,200.0	4,125.2	4,231.7	4,224.1	14.9	8.8	175.69	-53.2	7.3	596.5	572.3	24.27	24.581	
4,300.0	4,221.8	4,330.9	4,321.6	15.3	9.0	174.96	-63.7	23.2	606.0	581.1	24.94	24.296	
4,400.0	4,318.4	4,430.2	4,419.0	15.8	9.2	174.26	-74.2	39.0	615.6	590.0	25.63	24.020	
4,500.0	4,415.0	4,529.5	4,516.4	16.3	9.5	173.57	-84.7	54.9	625.3	598.9	26.32	23.755	
4,600.0	4,511.6	4,628.7	4,613.8	16.7	9.8	172.91	-95.2	70.7	635.0	608.0	27.02	23.500	
4,700.0	4,608.2	4,728.0	4,711.3	17.2	10.0	172.27	-105.7	86.5	644.8	617.1	27.73	23.256	
4,800.0	4,704.8	4,827.2	4,808.7	17.7	10.3	171.64	-116.2	102.4	654.7	626.3	28.44	23.023	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 904H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 10451-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
4,900.0	4,801.4	4,926.5	4,906.1	18.2	10.6	171.04	-126.7	118.2	664.7	635.6	29.16	22.800	
5,000.0	4,898.0	5,025.7	5,003.5	18.6	11.0	170.45	-137.2	134.0	674.8	644.9	29.88	22.587	
5,100.0	4,994.6	5,125.0	5,100.9	19.1	11.3	169.88	-147.7	149.9	684.9	654.3	30.60	22.383	
5,200.0	5,091.1	5,224.3	5,198.4	19.6	11.6	169.33	-158.2	165.7	695.1	663.8	31.33	22.189	
5,300.0	5,187.7	5,323.5	5,295.8	20.1	12.0	168.79	-168.6	181.5	705.4	673.3	32.06	22.005	
5,400.0	5,284.3	5,422.8	5,393.2	20.6	12.3	168.27	-179.1	197.4	715.7	682.9	32.79	21.829	
5,500.0	5,380.9	5,522.0	5,490.6	21.0	12.7	167.76	-189.6	213.2	726.0	692.5	33.52	21.661	
5,600.0	5,477.5	5,621.3	5,588.1	21.5	13.1	167.27	-200.1	229.1	736.5	702.2	34.25	21.501	
5,700.0	5,574.1	5,720.5	5,685.5	22.0	13.4	166.79	-210.6	244.9	747.0	712.0	34.99	21.349	
5,800.0	5,670.7	5,819.8	5,782.9	22.5	13.8	166.32	-221.1	260.7	757.5	721.8	35.72	21.204	
5,900.0	5,767.3	5,919.1	5,880.3	23.0	14.2	165.87	-231.6	276.6	768.1	731.6	36.46	21.066	
6,000.0	5,863.9	6,018.3	5,977.7	23.5	14.6	165.43	-242.1	292.4	778.7	741.5	37.20	20.934	
6,100.0	5,960.5	6,117.6	6,075.2	23.9	15.0	165.00	-252.6	308.2	789.4	751.4	37.93	20.809	
6,200.0	6,057.1	6,216.8	6,172.6	24.4	15.4	164.58	-263.1	324.1	800.1	761.4	38.67	20.689	
6,300.0	6,153.7	6,316.1	6,270.0	24.9	15.8	164.17	-273.6	339.9	810.8	771.4	39.41	20.575	
6,400.0	6,250.3	6,415.3	6,367.4	25.4	16.2	163.78	-284.1	355.7	821.6	781.5	40.14	20.466	
6,500.0	6,346.8	6,514.6	6,464.9	25.9	16.6	163.39	-294.6	371.6	832.4	791.6	40.88	20.362	
6,600.0	6,443.4	6,613.9	6,562.3	26.4	17.0	163.01	-305.0	387.4	843.3	801.7	41.62	20.263	
6,700.0	6,540.0	6,713.1	6,659.7	26.9	17.4	162.65	-315.5	403.2	854.2	811.9	42.35	20.168	
6,800.0	6,636.6	6,812.4	6,757.1	27.4	17.8	162.29	-326.0	419.1	865.1	822.1	43.09	20.078	
6,900.0	6,733.2	6,911.6	6,854.5	27.9	18.2	161.94	-336.5	434.9	876.1	832.3	43.82	19.992	
7,000.0	6,829.8	7,005.8	6,947.0	28.3	18.6	161.63	-346.4	449.8	887.3	842.7	44.52	19.930	
7,100.0	6,926.4	7,100.0	7,039.7	28.8	19.0	161.38	-355.5	463.6	899.4	854.2	45.24	19.883	
7,200.0	7,023.0	7,184.0	7,122.7	29.3	19.4	161.22	-362.9	474.8	912.7	866.8	45.90	19.883	
7,300.0	7,119.6	7,272.8	7,210.5	29.8	19.7	161.12	-370.1	485.6	927.0	880.4	46.59	19.896	
7,400.0	7,216.2	7,361.3	7,298.3	30.3	20.1	161.08	-376.4	495.1	942.5	895.2	47.29	19.931	
7,500.0	7,312.8	7,449.5	7,385.9	30.8	20.4	161.10	-382.0	503.6	959.0	911.0	47.98	19.987	
7,600.0	7,409.4	7,537.4	7,473.3	31.3	20.7	161.17	-386.8	510.9	976.7	928.0	48.68	20.063	
7,693.8	7,500.0	7,619.4	7,555.1	31.8	21.0	161.29	-390.7	516.6	994.2	944.8	49.33	20.154	
7,700.0	7,506.0	7,624.8	7,560.4	31.8	21.1	161.31	-390.9	517.0	995.3	946.0	49.37	20.162	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 702H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
5,700.0	5,574.1	5,604.4	5,514.8	22.0	22.9	-8.61	-118.9	1,962.4	984.6	944.7	39.92	24.664	
5,800.0	5,670.7	5,715.4	5,625.4	22.5	23.3	-8.49	-125.0	1,968.4	964.2	923.6	40.65	23.721	
5,900.0	5,767.3	5,825.7	5,735.6	23.0	23.7	-8.46	-129.6	1,972.9	942.5	901.2	41.34	22.802	
6,000.0	5,863.9	5,935.3	5,845.1	23.5	24.1	-8.53	-132.6	1,975.9	919.6	877.6	41.97	21.908	
6,100.0	5,960.5	6,044.2	5,954.0	23.9	24.3	-8.70	-134.2	1,977.5	895.3	852.7	42.58	21.027	
6,200.0	6,057.1	6,147.3	6,057.1	24.4	24.4	-8.96	-134.4	1,977.7	869.9	826.3	43.55	19.975	
6,300.0	6,153.7	6,243.9	6,153.7	24.9	24.5	-9.24	-134.4	1,977.7	844.3	800.3	44.05	19.168	
6,400.0	6,250.3	6,340.5	6,250.3	25.4	24.5	-9.53	-134.4	1,977.7	818.7	774.2	44.55	18.379	
6,500.0	6,346.8	6,437.1	6,346.8	25.9	24.5	-9.84	-134.4	1,977.7	793.2	748.2	45.05	17.608	
6,600.0	6,443.4	6,533.7	6,443.4	26.4	24.5	-10.17	-134.4	1,977.7	767.7	722.1	45.55	16.855	
6,700.0	6,540.0	6,630.2	6,540.0	26.9	24.6	-10.52	-134.4	1,977.7	742.2	696.2	46.04	16.119	
6,800.0	6,636.6	6,726.8	6,636.6	27.4	24.6	-10.90	-134.4	1,977.7	716.7	670.2	46.54	15.400	
6,900.0	6,733.2	6,823.4	6,733.2	27.9	24.6	-11.30	-134.4	1,977.7	691.3	644.3	47.03	14.698	
7,000.0	6,829.8	6,920.0	6,829.8	28.3	24.6	-11.74	-134.4	1,977.7	665.9	618.4	47.52	14.012	
7,100.0	6,926.4	7,016.6	6,926.4	28.8	24.7	-12.21	-134.4	1,977.7	640.6	592.6	48.01	13.343	
7,200.0	7,023.0	7,113.2	7,023.0	29.3	24.7	-12.72	-134.4	1,977.7	615.2	566.8	48.49	12.689	
7,300.0	7,119.6	7,209.8	7,119.6	29.8	24.7	-13.27	-134.4	1,977.7	590.0	541.0	48.96	12.052	
7,400.0	7,216.2	7,306.4	7,216.2	30.3	24.7	-13.87	-134.4	1,977.7	564.8	515.4	49.41	11.429	
7,500.0	7,312.8	7,403.0	7,312.8	30.8	24.8	-14.53	-134.4	1,977.7	539.6	489.8	49.86	10.823	
7,600.0	7,409.4	7,499.6	7,409.4	31.3	24.8	-15.25	-134.4	1,977.7	514.6	464.3	50.29	10.231	
7,693.8	7,500.0	7,590.2	7,500.0	31.8	24.8	-15.99	-134.4	1,977.7	491.1	440.4	50.68	9.691	
7,700.0	7,506.0	7,596.2	7,506.0	31.8	24.8	-16.03	-134.4	1,977.7	489.6	438.9	50.70	9.656	
7,800.0	7,603.0	7,693.3	7,603.0	32.3	24.8	-16.71	-134.4	1,977.7	466.5	415.4	51.14	9.122	
7,900.0	7,700.9	7,791.1	7,700.9	32.8	24.9	-17.35	-134.4	1,977.7	446.8	395.3	51.54	8.668	
8,000.0	7,799.4	7,889.6	7,799.4	33.3	24.9	-17.92	-134.4	1,977.7	430.4	378.5	51.94	8.287	
8,043.8	7,842.8	7,933.0	7,842.8	33.4	24.9	-18.15	-134.4	1,977.7	424.3	372.2	52.10	8.145	
8,100.0	7,898.4	7,988.6	7,898.4	33.7	24.9	-18.49	-134.4	1,977.7	416.9	364.6	52.30	7.972	
8,200.0	7,997.4	8,087.6	7,997.4	34.1	24.9	-19.11	-134.4	1,977.7	403.7	351.0	52.66	7.667	
8,300.0	8,096.4	8,186.7	8,096.4	34.5	25.0	-19.78	-134.4	1,977.7	390.6	337.6	53.00	7.369	
8,400.0	8,195.5	8,285.7	8,195.5	35.0	25.0	-20.49	-134.4	1,977.7	377.5	324.2	53.33	7.078	
8,500.0	8,294.5	8,384.7	8,294.5	35.4	25.0	-21.26	-134.4	1,977.7	364.5	310.8	53.64	6.795	
8,600.0	8,393.5	8,483.7	8,393.5	35.8	25.1	-22.08	-134.4	1,977.7	351.5	297.6	53.93	6.518	
8,700.0	8,492.5	8,582.8	8,492.5	36.3	25.1	-22.96	-134.4	1,977.7	338.6	284.5	54.19	6.249	
8,800.0	8,591.6	8,681.8	8,591.6	36.7	25.1	-23.92	-134.4	1,977.7	325.9	271.4	54.42	5.988	
8,900.0	8,690.6	8,780.8	8,690.6	37.1	25.1	-24.95	-134.4	1,977.7	313.2	258.5	54.62	5.734	
9,000.0	8,789.6	8,879.8	8,789.6	37.6	25.2	-26.07	-134.4	1,977.7	300.6	245.8	54.77	5.488	
9,100.0	8,888.6	8,978.9	8,888.6	38.0	25.2	-27.28	-134.4	1,977.7	288.1	233.2	54.89	5.249	
9,101.4	8,890.0	8,980.2	8,890.0	38.0	25.2	-27.30	-134.4	1,977.7	287.9	233.1	54.89	5.246	
9,200.0	8,987.8	9,078.1	8,987.8	38.4	25.2	-28.40	-134.4	1,977.7	276.9	221.9	54.98	5.036	
9,300.0	9,087.3	9,177.5	9,087.3	38.8	25.3	-29.35	-134.4	1,977.7	268.1	213.0	55.10	4.866	
9,400.0	9,187.1	9,277.3	9,187.1	39.2	25.3	-30.10	-134.4	1,977.7	261.6	206.4	55.25	4.735	
9,489.8	9,276.7	9,358.6	9,268.3	39.5	25.3	-30.94	-132.5	1,977.7	258.7	203.1	55.60	4.652 CC, ES	
9,500.0	9,286.9	9,367.2	9,276.9	39.5	25.2	-31.13	-131.7	1,977.7	258.7	203.1	55.63	4.651 SF	
9,600.0	9,386.9	9,450.0	9,358.4	39.8	25.1	-34.18	-117.7	1,977.6	264.1	208.7	55.33	4.773	
9,634.7	9,421.6	9,477.2	9,384.7	39.9	25.0	61.86	-110.5	1,977.5	268.2	213.3	54.89	4.886	
9,700.0	9,486.9	9,526.8	9,431.6	39.9	24.9	58.85	-94.3	1,977.4	279.1	225.1	54.02	5.167	
9,800.0	9,586.9	9,600.0	9,497.7	39.9	24.7	53.57	-63.2	1,977.2	304.1	251.9	52.19	5.827	
9,900.0	9,686.9	9,658.2	9,547.2	39.9	24.5	48.99	-32.5	1,977.0	339.9	289.4	50.44	6.738	
10,000.0	9,786.9	9,711.9	9,589.8	39.9	24.3	44.72	0.0	1,976.8	386.1	337.4	48.68	7.930	
10,100.0	9,886.9	9,750.0	9,618.1	39.9	24.2	41.76	25.5	1,976.7	441.6	394.3	47.36	9.325	
10,200.0	9,986.9	9,800.0	9,652.6	40.0	24.1	38.08	61.7	1,976.4	504.6	458.6	46.05	10.958	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 702H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 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)	No-Go Distance (usft)		
10,300.0	10,086.9	9,832.7	9,673.4	40.0	24.1	35.82	87.0	1,976.3	574.0	528.7	45.26	12.683	
10,400.0	10,186.9	9,850.0	9,683.8	40.0	24.0	34.68	100.8	1,976.2	648.6	603.8	44.82	14.471	
10,500.0	10,286.9	9,900.0	9,711.5	40.0	23.9	31.60	142.4	1,975.9	726.8	682.6	44.23	16.434	
10,538.8	10,325.7	9,900.0	9,711.5	40.0	23.9	31.60	142.4	1,975.9	757.9	713.7	44.21	17.142	
10,550.0	10,336.9	9,900.0	9,711.5	40.0	23.9	-127.15	142.4	1,975.9	767.1	722.8	44.22	17.346	
10,600.0	10,386.8	9,900.0	9,711.5	40.1	23.9	-120.57	142.4	1,975.9	809.3	765.2	44.13	18.339	
10,650.0	10,436.2	9,917.8	9,720.5	40.2	23.9	-114.02	157.8	1,975.8	853.0	809.2	43.87	19.446	
10,700.0	10,484.8	9,923.4	9,723.2	40.3	23.9	-104.77	162.7	1,975.8	898.2	854.5	43.67	20.565	
10,750.0	10,532.2	9,927.1	9,725.0	40.5	23.9	-93.71	166.0	1,975.8	944.2	900.7	43.48	21.713	
10,800.0	10,578.0	9,929.1	9,725.9	40.6	23.9	-81.46	167.7	1,975.8	990.6	947.3	43.30	22.876	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 703H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
3,700.0	3,642.3	3,649.1	3,650.5	12.6	9.8	-33.35	347.3	1,361.7	987.1	967.5	19.60	50.374	
3,800.0	3,738.8	3,746.5	3,746.9	13.0	10.2	-33.37	334.7	1,366.7	964.5	944.3	20.16	47.848	
3,900.0	3,835.4	3,843.9	3,843.4	13.5	10.5	-33.39	322.1	1,371.7	941.8	921.1	20.72	45.447	
4,000.0	3,932.0	3,941.3	3,939.8	13.9	10.9	-33.41	309.5	1,376.6	919.2	897.9	21.29	43.164	
4,100.0	4,028.6	4,038.7	4,036.3	14.4	11.2	-33.44	296.8	1,381.6	896.5	874.6	21.87	40.991	
4,200.0	4,125.2	4,136.1	4,132.7	14.9	11.6	-33.46	284.2	1,386.6	873.8	851.4	22.45	38.923	
4,300.0	4,221.8	4,233.5	4,229.2	15.3	12.0	-33.49	271.6	1,391.6	851.2	828.1	23.03	36.952	
4,400.0	4,318.4	4,330.9	4,325.6	15.8	12.3	-33.52	259.0	1,396.5	828.5	804.9	23.62	35.074	
4,500.0	4,415.0	4,428.3	4,422.1	16.3	12.7	-33.54	246.4	1,401.5	805.8	781.6	24.21	33.283	
4,600.0	4,511.6	4,525.7	4,518.5	16.7	13.1	-33.57	233.8	1,406.5	783.2	758.4	24.80	31.573	
4,700.0	4,608.2	4,623.1	4,615.0	17.2	13.5	-33.61	221.2	1,411.4	760.5	735.1	25.40	29.940	
4,800.0	4,704.8	4,720.5	4,711.4	17.7	13.9	-33.64	208.6	1,416.4	737.8	711.8	26.00	28.380	
4,900.0	4,801.4	4,817.9	4,807.9	18.2	14.2	-33.68	196.0	1,421.4	715.2	688.6	26.60	26.887	
5,000.0	4,898.0	4,915.3	4,904.3	18.6	14.6	-33.72	183.3	1,426.3	692.5	665.3	27.20	25.464	
5,100.0	4,994.6	5,012.3	5,000.5	19.1	15.0	-33.79	171.1	1,431.2	669.9	642.1	27.78	24.111	
5,200.0	5,091.1	5,109.3	5,096.7	19.6	15.4	-33.94	159.6	1,435.7	647.3	618.9	28.38	22.811	
5,300.0	5,187.7	5,206.3	5,193.0	20.1	15.7	-34.17	148.8	1,439.9	624.8	595.8	28.96	21.574	
5,400.0	5,284.3	5,303.3	5,289.4	20.6	16.1	-34.51	138.9	1,443.9	602.3	572.8	29.53	20.396	
5,500.0	5,380.9	5,400.3	5,385.9	21.0	16.5	-34.95	129.6	1,447.5	580.0	549.9	30.09	19.277	
5,600.0	5,477.5	5,497.2	5,482.4	21.5	16.9	-35.51	121.2	1,450.8	557.8	527.1	30.63	18.211	
5,700.0	5,574.1	5,594.0	5,578.8	22.0	17.2	-36.21	113.5	1,453.8	535.7	504.5	31.15	17.198	
5,800.0	5,670.7	5,690.8	5,675.3	22.5	17.6	-37.06	106.6	1,456.6	513.8	482.1	31.64	16.236	
5,900.0	5,767.3	5,787.4	5,771.7	23.0	17.9	-38.08	100.4	1,459.0	492.1	460.0	32.11	15.324	
6,000.0	5,863.9	5,884.0	5,868.1	23.5	18.2	-39.29	95.0	1,461.1	470.7	438.2	32.55	14.460	
6,100.0	5,960.5	5,980.4	5,964.4	23.9	18.5	-40.72	90.4	1,463.0	449.7	416.8	32.96	13.644	
6,200.0	6,057.1	6,076.7	6,060.7	24.4	18.9	-42.38	86.5	1,464.5	429.2	395.9	33.34	12.875	
6,300.0	6,153.7	6,172.9	6,156.8	24.9	19.2	-44.31	83.4	1,465.7	409.3	375.6	33.67	12.156	
6,400.0	6,250.3	6,268.9	6,252.7	25.4	19.4	-46.55	81.0	1,466.6	390.1	356.1	33.96	11.486	
6,500.0	6,346.8	6,364.7	6,348.5	25.9	19.7	-49.11	79.4	1,467.3	371.8	337.6	34.22	10.866	
6,600.0	6,443.4	6,460.4	6,444.2	26.4	19.9	-52.03	78.5	1,467.6	354.7	320.3	34.44	10.300	
6,700.0	6,540.0	6,556.2	6,540.0	26.9	20.0	-55.35	78.3	1,467.7	338.9	304.4	34.59	9.799	
6,800.0	6,636.6	6,652.8	6,636.6	27.4	20.0	-59.02	78.3	1,467.7	324.6	289.9	34.70	9.353	
6,900.0	6,733.2	6,749.4	6,733.2	27.9	20.1	-62.99	78.3	1,467.7	311.7	276.9	34.83	8.949	
7,000.0	6,829.8	6,846.0	6,829.8	28.3	20.1	-67.26	78.3	1,467.7	300.5	265.5	35.00	8.585	
7,100.0	6,926.4	6,942.6	6,926.4	28.8	20.1	-71.82	78.3	1,467.7	291.1	255.9	35.24	8.261	
7,200.0	7,023.0	7,039.2	7,023.0	29.3	20.1	-76.63	78.3	1,467.7	283.9	248.3	35.61	7.973	
7,300.0	7,119.6	7,135.8	7,119.6	29.8	20.2	-81.64	78.3	1,467.7	278.8	242.7	36.12	7.719	
7,400.0	7,216.2	7,232.4	7,216.2	30.3	20.2	-86.78	78.3	1,467.7	276.1	239.3	36.81	7.501	
7,462.0	7,276.1	7,292.3	7,276.1	30.6	20.2	-90.00	78.3	1,467.7	275.7	238.3	37.33	7.384 CC	
7,500.0	7,312.8	7,329.0	7,312.8	30.8	20.2	-91.97	78.3	1,467.7	275.8	238.1	37.69	7.319 ES	
7,600.0	7,409.4	7,425.6	7,409.4	31.3	20.3	-97.13	78.3	1,467.7	278.0	239.2	38.73	7.176	
7,693.8	7,500.0	7,516.2	7,500.0	31.8	20.3	-101.87	78.3	1,467.7	282.1	242.3	39.84	7.081	
7,700.0	7,506.0	7,522.2	7,506.0	31.8	20.3	-102.18	78.3	1,467.7	282.4	242.5	39.91	7.076	
7,800.0	7,603.0	7,619.2	7,603.0	32.3	20.3	-106.84	78.3	1,467.7	288.6	247.5	41.15	7.015	
7,900.0	7,700.9	7,717.1	7,700.9	32.8	20.4	-110.71	78.3	1,467.7	295.4	253.2	42.23	6.995	
8,000.0	7,799.4	7,815.6	7,799.4	33.3	20.4	-113.84	78.3	1,467.7	302.0	258.8	43.18	6.994 SF	
8,043.8	7,842.8	7,859.0	7,842.8	33.4	20.4	-114.99	78.3	1,467.7	304.7	261.1	43.54	6.998	
8,100.0	7,898.4	7,914.6	7,898.4	33.7	20.4	-116.29	78.3	1,467.7	308.1	264.1	43.98	7.004	
8,200.0	7,997.4	8,013.6	7,997.4	34.1	20.5	-118.55	78.3	1,467.7	314.5	269.7	44.80	7.021	
8,300.0	8,096.4	8,112.6	8,096.4	34.5	20.5	-120.72	78.3	1,467.7	321.5	275.8	45.62	7.047	
8,400.0	8,195.5	8,211.7	8,195.5	35.0	20.5	-122.79	78.3	1,467.7	328.8	282.4	46.44	7.080	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 703H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
8,500.0	8,294.5	8,310.7	8,294.5	35.4	20.6	-124.76	78.3	1,467.7	336.6	289.4	47.27	7.122	
8,600.0	8,393.5	8,409.7	8,393.5	35.8	20.6	-126.65	78.3	1,467.7	344.8	296.7	48.09	7.170	
8,700.0	8,492.5	8,508.7	8,492.5	36.3	20.6	-128.45	78.3	1,467.7	353.3	304.4	48.90	7.225	
8,800.0	8,591.6	8,607.8	8,591.6	36.7	20.7	-130.17	78.3	1,467.7	362.2	312.5	49.71	7.286	
8,900.0	8,690.6	8,706.8	8,690.6	37.1	20.7	-131.80	78.3	1,467.7	371.4	320.9	50.51	7.352	
9,000.0	8,789.6	8,805.8	8,789.6	37.6	20.7	-133.35	78.3	1,467.7	380.9	329.5	51.31	7.423	
9,100.0	8,888.6	8,904.9	8,888.6	38.0	20.8	-134.83	78.3	1,467.7	390.6	338.5	52.10	7.497	
9,101.4	8,890.0	8,906.2	8,890.0	38.0	20.8	-134.85	78.3	1,467.7	390.7	338.6	52.11	7.498	
9,200.0	8,987.8	9,004.0	8,987.8	38.4	20.8	-136.21	78.3	1,467.7	399.6	346.8	52.84	7.564	
9,300.0	9,087.3	9,103.5	9,087.3	38.8	20.8	-137.26	78.3	1,467.7	407.0	353.5	53.48	7.610	
9,400.0	9,187.1	9,203.3	9,187.1	39.2	20.9	-138.01	78.3	1,467.7	412.5	358.5	54.03	7.635	
9,500.0	9,286.9	9,303.1	9,286.9	39.5	20.9	-138.49	78.3	1,467.7	416.1	361.6	54.47	7.639	
9,600.0	9,386.9	9,403.1	9,386.9	39.8	21.0	-138.71	78.3	1,467.7	417.8	363.0	54.80	7.623	
9,634.7	9,421.6	9,437.8	9,421.6	39.9	21.0	-41.26	78.3	1,467.7	417.9	363.1	54.75	7.632	
9,635.3	9,422.2	9,438.4	9,422.2	39.9	21.0	-41.26	78.3	1,467.7	417.9	363.1	54.75	7.632	
9,700.0	9,486.9	9,495.7	9,479.5	39.9	21.0	-41.24	78.5	1,467.7	418.1	363.5	54.60	7.657	
9,800.0	9,586.9	9,559.7	9,543.2	39.9	20.9	-40.79	83.5	1,467.7	424.1	370.6	53.55	7.920	
9,900.0	9,686.9	9,621.8	9,604.2	39.9	20.7	-39.79	95.2	1,467.6	438.7	386.6	52.13	8.416	
10,000.0	9,786.9	9,680.7	9,660.6	39.9	20.5	-38.38	112.4	1,467.5	461.8	411.4	50.45	9.154	
10,100.0	9,886.9	9,735.6	9,711.2	39.9	20.4	-36.77	133.4	1,467.3	493.3	444.7	48.65	10.140	
10,200.0	9,986.9	9,785.9	9,755.7	40.0	20.2	-35.10	156.9	1,467.2	532.9	486.0	46.88	11.366	
10,300.0	10,086.9	9,831.6	9,794.1	40.0	20.1	-33.50	181.6	1,467.0	579.9	534.6	45.27	12.809	
10,400.0	10,186.9	9,872.6	9,826.9	40.0	20.0	-32.01	206.3	1,466.9	633.6	589.7	43.90	14.432	
10,500.0	10,286.9	9,900.0	9,847.7	40.0	19.9	-31.02	224.0	1,466.8	693.4	650.7	42.71	16.234	
10,538.8	10,325.7	9,922.6	9,864.3	40.0	19.9	-30.20	239.4	1,466.7	717.8	675.4	42.45	16.908	
10,550.0	10,336.9	9,926.3	9,867.0	40.0	19.8	169.76	242.0	1,466.6	725.1	682.8	42.37	17.114	
10,600.0	10,386.8	9,950.0	9,883.5	40.1	19.8	169.82	258.9	1,466.5	760.4	718.3	42.16	18.037	
10,650.0	10,436.2	9,950.0	9,883.5	40.2	19.8	168.66	258.9	1,466.5	799.3	757.5	41.87	19.090	
10,700.0	10,484.8	9,950.0	9,883.5	40.3	19.8	166.96	258.9	1,466.5	841.8	800.1	41.69	20.193	
10,750.0	10,532.2	9,972.7	9,898.8	40.5	19.7	166.11	275.8	1,466.4	886.2	844.5	41.72	21.243	
10,800.0	10,578.0	9,978.9	9,902.8	40.6	19.7	163.14	280.5	1,466.4	932.9	891.2	41.70	22.373	
10,850.0	10,621.8	9,983.2	9,905.5	40.7	19.7	157.52	283.7	1,466.4	981.1	939.4	41.72	23.518	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 9257-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
2,900.0	2,869.5	2,964.1	2,967.3	9.1	7.3	-29.16	296.3	1,182.5	986.2	970.4	15.82	62.346	
3,000.0	2,966.1	3,058.7	3,060.9	9.5	7.5	-29.34	284.3	1,177.0	953.8	937.4	16.35	58.349	
3,100.0	3,062.7	3,153.3	3,154.6	9.9	7.6	-29.52	272.4	1,171.4	921.4	904.5	16.88	54.575	
3,200.0	3,159.3	3,247.8	3,248.2	10.4	7.8	-29.72	260.5	1,165.8	889.0	871.6	17.43	51.012	
3,300.0	3,255.9	3,342.4	3,341.8	10.8	8.0	-29.93	248.5	1,160.3	856.7	838.7	17.98	47.648	
3,400.0	3,352.5	3,437.0	3,435.5	11.2	8.1	-30.16	236.6	1,154.7	824.3	805.8	18.54	44.471	
3,500.0	3,449.1	3,531.5	3,529.1	11.7	8.3	-30.41	224.7	1,149.1	792.0	772.9	19.10	41.470	
3,600.0	3,545.7	3,626.1	3,622.8	12.1	8.5	-30.68	212.8	1,143.6	759.6	740.0	19.66	38.634	
3,700.0	3,642.3	3,720.7	3,716.4	12.6	8.7	-30.97	200.8	1,138.0	727.3	707.1	20.23	35.953	
3,800.0	3,738.8	3,815.2	3,810.1	13.0	8.9	-31.30	188.9	1,132.5	695.0	674.2	20.80	33.415	
3,900.0	3,835.4	3,909.8	3,903.7	13.5	9.0	-31.65	177.0	1,126.9	662.8	641.4	21.37	31.013	
4,000.0	3,932.0	4,004.4	3,997.4	13.9	9.2	-32.04	165.0	1,121.3	630.5	608.6	21.94	28.736	
4,100.0	4,028.6	4,099.0	4,091.0	14.4	9.4	-32.47	153.1	1,115.8	598.3	575.8	22.51	26.578	
4,200.0	4,125.2	4,193.5	4,184.7	14.9	9.6	-32.94	141.2	1,110.2	566.1	543.1	23.08	24.531	
4,300.0	4,221.8	4,288.1	4,278.3	15.3	9.7	-33.48	129.3	1,104.6	534.0	510.3	23.64	22.587	
4,400.0	4,318.4	4,382.7	4,372.0	15.8	9.9	-34.08	117.3	1,099.1	501.9	477.7	24.20	20.741	
4,500.0	4,415.0	4,477.2	4,466.6	16.3	10.1	-34.77	105.4	1,093.5	469.9	445.1	24.75	18.986	
4,600.0	4,511.6	4,571.8	4,559.3	16.7	10.3	-35.56	93.5	1,088.0	437.9	412.6	25.29	17.318	
4,700.0	4,608.2	4,666.4	4,652.9	17.2	10.5	-36.47	81.5	1,082.4	406.0	380.2	25.81	15.731	
4,800.0	4,704.8	4,760.9	4,746.6	17.7	10.6	-37.53	69.6	1,076.8	374.2	347.9	26.31	14.222	
4,900.0	4,801.4	4,855.5	4,840.2	18.2	10.8	-38.79	57.7	1,071.3	342.6	315.8	26.79	12.787	
5,000.0	4,898.0	4,950.1	4,933.9	18.6	11.0	-40.30	45.8	1,065.7	311.1	283.9	27.24	11.424	
5,100.0	4,994.6	5,044.6	5,027.5	19.1	11.2	-42.15	33.8	1,060.2	279.9	252.3	27.63	10.131	
5,200.0	5,091.1	5,139.2	5,121.1	19.6	11.4	-44.46	21.9	1,054.6	249.0	221.1	27.96	8.908	
5,300.0	5,187.7	5,233.8	5,214.8	20.1	11.5	-47.40	10.0	1,049.0	218.6	190.4	28.19	7.756	
5,400.0	5,284.3	5,328.3	5,308.4	20.6	11.7	-51.26	-2.0	1,043.5	188.9	160.6	28.28	6.681	
5,500.0	5,380.9	5,422.9	5,402.1	21.0	11.9	-56.49	-13.9	1,037.9	160.3	132.1	28.17	5.691	
5,600.0	5,477.5	5,517.5	5,495.7	21.5	12.1	-63.83	-25.8	1,032.3	133.5	105.7	27.78	4.804	
5,700.0	5,574.1	5,612.0	5,589.4	22.0	12.3	-74.39	-37.7	1,026.8	109.8	82.6	27.16	4.042	
5,800.0	5,670.7	5,706.6	5,683.0	22.5	12.4	-89.51	-49.7	1,021.2	91.6	64.8	26.85	3.413	
5,900.0	5,767.3	5,801.2	5,776.7	23.0	12.6	-109.24	-61.6	1,015.7	82.8	54.5	26.36	2.920 Normal Operations	
5,922.8	5,789.3	5,822.7	5,798.0	23.1	12.7	-114.09	-64.3	1,014.4	82.5	53.4	29.06	2.839 Normal Operations, CC, ES	
6,000.0	5,863.9	5,895.7	5,870.3	23.5	12.8	-130.15	-73.5	1,010.1	86.2	54.3	31.91	2.702 Normal Operations, SF	
6,100.0	5,960.5	5,990.3	5,964.0	23.9	13.0	-147.54	-85.4	1,004.5	100.6	65.5	35.16	2.862 Normal Operations	
6,200.0	6,057.1	6,084.9	6,057.6	24.4	13.2	-160.03	-97.4	999.0	122.2	85.0	37.21	3.283	
6,300.0	6,153.7	6,179.4	6,151.3	24.9	13.3	-168.67	-109.3	993.4	147.8	109.3	38.48	3.841	
6,400.0	6,250.3	6,274.0	6,244.9	25.4	13.5	-174.75	-121.2	987.8	175.7	136.3	39.38	4.463	
6,500.0	6,346.8	6,369.3	6,339.4	25.9	13.8	-179.07	-132.8	982.4	204.9	164.7	40.20	5.096	
6,600.0	6,443.4	6,465.5	6,434.8	26.4	14.0	-178.04	-143.2	977.6	234.3	193.3	40.95	5.721	
6,700.0	6,540.0	6,562.2	6,531.1	26.9	14.2	-176.12	-152.1	973.5	263.6	221.9	41.66	6.326	
6,800.0	6,636.6	6,659.6	6,628.1	27.4	14.4	-174.90	-159.6	970.0	292.4	250.0	42.38	6.900	
6,900.0	6,733.2	6,757.5	6,725.7	27.9	14.5	-174.18	-165.6	967.2	320.7	277.6	43.10	7.441	
7,000.0	6,829.8	6,855.8	6,824.0	28.3	14.7	-173.83	-170.1	965.1	348.4	304.6	43.84	7.948	
7,100.0	6,926.4	6,954.6	6,922.7	28.8	14.8	-173.79	-173.1	963.7	375.4	330.9	44.58	8.422	
7,200.0	7,023.0	7,053.7	7,021.8	29.3	14.9	-173.98	-174.6	963.0	401.8	356.5	45.30	8.869	
7,300.0	7,119.6	7,151.5	7,119.6	29.8	15.1	-174.33	-174.7	962.9	427.6	381.7	45.92	9.312	
7,400.0	7,216.2	7,248.1	7,216.2	30.3	15.2	-174.65	-174.7	962.9	453.4	406.8	46.61	9.727	
7,500.0	7,312.8	7,344.7	7,312.8	30.8	15.2	-174.94	-174.7	962.9	479.2	431.9	47.26	10.139	
7,600.0	7,409.4	7,441.3	7,409.4	31.3	15.2	-175.20	-174.7	962.9	505.0	457.1	47.91	10.539	
7,693.8	7,500.0	7,531.9	7,500.0	31.8	15.2	-175.42	-174.7	962.9	529.2	480.7	48.52	10.906	
7,700.0	7,506.0	7,537.9	7,506.0	31.8	15.3	-175.43	-174.7	962.9	530.8	482.2	48.56	10.930	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 9257-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
7,800.0	7,603.0	7,635.0	7,603.0	32.3	15.3	175.67	-174.7	962.9	554.7	505.4	49.25	11.262	
7,900.0	7,700.9	7,732.8	7,700.9	32.8	15.3	175.85	-174.7	962.9	575.2	525.3	49.89	11.529	
8,000.0	7,799.4	7,831.3	7,799.4	33.3	15.3	176.00	-174.7	962.9	592.3	541.8	50.51	11.726	
8,043.8	7,842.8	7,874.7	7,842.8	33.4	15.4	176.05	-174.7	962.9	598.7	548.0	50.76	11.796	
8,100.0	7,898.4	7,930.3	7,898.4	33.7	15.4	176.10	-174.7	962.9	606.5	555.5	51.07	11.876	
8,200.0	7,997.4	8,029.3	7,997.4	34.1	15.4	176.19	-174.7	962.9	620.4	568.8	51.65	12.012	
8,300.0	8,096.4	8,128.4	8,096.4	34.5	15.4	176.27	-174.7	962.9	634.3	582.1	52.23	12.145	
8,400.0	8,195.5	8,227.4	8,195.5	35.0	15.5	176.35	-174.7	962.9	648.2	595.4	52.80	12.276	
8,500.0	8,294.5	8,326.4	8,294.5	35.4	15.5	176.43	-174.7	962.9	662.1	608.7	53.38	12.403	
8,600.0	8,393.5	8,425.4	8,393.5	35.8	15.5	176.50	-174.7	962.9	676.0	622.0	53.96	12.527	
8,700.0	8,492.5	8,524.5	8,492.5	36.3	15.6	176.57	-174.7	962.9	689.9	635.3	54.54	12.648	
8,800.0	8,591.6	8,623.5	8,591.6	36.7	15.6	176.64	-174.7	962.9	703.8	648.6	55.12	12.767	
8,900.0	8,690.6	8,722.5	8,690.6	37.1	15.6	176.70	-174.7	962.9	717.7	662.0	55.71	12.883	
9,000.0	8,789.6	8,821.5	8,789.6	37.6	15.7	176.77	-174.7	962.9	731.6	675.3	56.29	12.996	
9,100.0	8,888.6	8,920.6	8,888.6	38.0	15.7	176.83	-174.7	962.9	745.4	688.6	56.87	13.107	
9,101.4	8,890.0	8,921.9	8,890.0	38.0	15.7	176.83	-174.7	962.9	745.6	688.8	56.88	13.109	
9,200.0	8,987.8	9,019.8	8,987.8	38.4	15.8	176.89	-174.7	962.9	758.1	700.6	57.45	13.195	
9,300.0	9,087.3	9,119.2	9,087.3	38.8	15.8	176.94	-174.7	962.9	768.1	710.1	58.00	13.244	
9,400.0	9,187.1	9,219.0	9,187.1	39.2	15.8	176.97	-174.7	962.9	775.6	717.0	58.51	13.255	
9,500.0	9,286.9	9,312.3	9,280.3	39.5	15.9	177.19	-172.0	962.9	780.6	721.8	58.89	13.257	
9,600.0	9,386.9	9,400.0	9,366.6	39.8	16.0	178.30	-156.9	962.8	784.6	725.5	59.08	13.280	
9,634.7	9,421.6	9,427.9	9,393.4	39.9	16.0	-83.68	-149.4	962.7	785.8	727.1	58.74	13.379	
9,700.0	9,486.9	9,479.7	9,442.2	39.9	16.1	-82.42	-131.9	962.6	788.8	730.3	58.51	13.482	
9,800.0	9,586.9	9,550.0	9,505.5	39.9	16.2	-80.23	-101.4	962.4	796.5	738.6	57.92	13.752	
9,900.0	9,686.9	9,615.4	9,560.5	39.9	16.3	-77.75	-66.2	962.2	809.2	752.2	57.08	14.177	
10,000.0	9,786.9	9,670.0	9,603.2	39.9	16.3	-75.39	-32.1	961.9	828.1	772.2	55.91	14.811	
10,100.0	9,886.9	9,716.9	9,637.1	39.9	16.4	-73.20	0.2	961.7	853.8	799.3	54.48	15.671	
10,200.0	9,986.9	9,750.0	9,659.4	40.0	16.4	-71.57	24.7	961.6	886.7	833.8	52.82	16.785	
10,300.0	10,086.9	9,800.0	9,690.3	40.0	16.5	-69.02	64.0	961.3	926.6	875.3	51.33	18.052	
10,400.0	10,186.9	9,820.8	9,702.2	40.0	16.5	-67.94	81.1	961.2	973.2	923.5	49.66	19.598	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 705H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
2,500.0	2,483.1	2,657.0	2,655.1	7.6	9.4	-31.72	336.5	1,061.5	988.9	972.2	16.74	59.072	
2,600.0	2,579.7	2,748.8	2,745.3	8.0	9.8	-32.22	325.8	1,048.7	950.0	932.5	17.42	54.520	
2,700.0	2,676.3	2,840.5	2,835.5	8.3	10.1	-32.76	315.1	1,035.8	911.1	892.9	18.12	50.274	
2,800.0	2,772.9	2,932.3	2,925.8	8.7	10.5	-33.35	304.4	1,022.9	872.3	853.4	18.83	46.317	
2,900.0	2,869.5	3,024.1	3,016.0	9.1	10.9	-34.00	293.8	1,010.1	833.5	814.0	19.55	42.628	
3,000.0	2,966.1	3,115.9	3,106.2	9.5	11.3	-34.70	283.1	997.2	794.9	774.6	20.28	39.190	
3,100.0	3,062.7	3,207.6	3,196.5	9.9	11.7	-35.48	272.4	984.3	756.4	735.4	21.02	35.984	
3,200.0	3,159.3	3,299.4	3,286.7	10.4	12.1	-36.34	261.7	971.5	718.0	696.2	21.76	32.993	
3,300.0	3,255.9	3,391.2	3,376.9	10.8	12.5	-37.29	251.0	958.6	679.8	657.3	22.51	30.202	
3,400.0	3,352.5	3,482.9	3,467.2	11.2	12.9	-38.36	240.3	945.7	641.7	618.5	23.25	27.597	
3,500.0	3,449.1	3,574.7	3,557.4	11.7	13.3	-39.55	229.7	932.9	603.9	579.9	24.00	25.166	
3,600.0	3,545.7	3,666.5	3,647.6	12.1	13.7	-40.91	219.0	920.0	566.3	541.6	24.74	22.896	
3,700.0	3,642.3	3,758.2	3,737.9	12.6	14.1	-42.45	208.3	907.1	529.1	503.6	25.46	20.779	
3,800.0	3,738.8	3,850.0	3,828.1	13.0	14.5	-44.22	197.6	894.3	492.2	466.0	26.17	18.806	
3,900.0	3,835.4	3,941.8	3,918.3	13.5	14.9	-46.26	186.9	881.4	455.8	429.0	26.86	16.972	
4,000.0	3,932.0	4,033.5	4,008.6	13.9	15.3	-48.64	176.3	868.5	420.1	392.6	27.51	15.272	
4,100.0	4,028.6	4,125.3	4,098.8	14.4	15.7	-51.44	165.6	855.7	385.1	357.0	28.10	13.706	
4,200.0	4,125.2	4,217.1	4,189.0	14.9	16.1	-54.77	154.9	842.8	351.1	322.5	28.60	12.275	
4,300.0	4,221.8	4,308.8	4,279.2	15.3	16.5	-58.75	144.2	829.9	318.4	289.4	28.99	10.986	
4,400.0	4,318.4	4,400.6	4,369.5	15.8	16.9	-63.56	133.5	817.1	287.6	258.4	29.19	9.851	
4,500.0	4,415.0	4,492.4	4,459.7	16.3	17.3	-69.37	122.8	804.2	259.1	230.0	29.15	8.889	
4,600.0	4,511.6	4,584.2	4,549.9	16.7	17.8	-76.39	112.2	791.3	234.0	205.2	28.78	8.129	
4,700.0	4,608.2	4,675.9	4,640.2	17.2	18.2	-84.74	101.5	778.5	213.4	185.3	28.06	7.603	
4,800.0	4,704.8	4,767.7	4,730.4	17.7	18.6	-94.39	90.8	765.6	198.6	171.5	27.10	7.329	
4,900.0	4,801.4	4,859.5	4,820.6	18.2	19.0	-105.00	80.1	752.7	191.1	164.8	26.26	7.278 SF	
4,942.5	4,842.4	4,898.5	4,859.0	18.4	19.2	-109.66	75.6	747.3	190.4	164.3	26.07	7.301 CC, ES	
5,000.0	4,898.0	4,951.2	4,910.9	18.6	19.4	-115.94	69.4	739.9	191.7	165.7	26.06	7.356	
5,100.0	4,994.6	5,043.0	5,001.1	19.1	19.8	-126.44	58.7	727.0	200.4	173.6	26.79	7.481	
5,200.0	5,091.1	5,134.8	5,091.3	19.6	20.2	-135.91	48.1	714.1	216.1	187.9	28.25	7.650	
5,300.0	5,187.7	5,226.5	5,181.6	20.1	20.6	-144.06	37.4	701.3	237.5	207.4	30.06	7.900	
5,400.0	5,284.3	5,318.3	5,271.8	20.6	21.1	-150.88	26.7	688.4	263.2	231.3	31.93	8.244	
5,500.0	5,380.9	5,410.1	5,362.0	21.0	21.5	-156.53	16.0	675.5	292.1	258.4	33.69	8.668	
5,600.0	5,477.5	5,501.8	5,452.3	21.5	21.9	-161.20	5.3	662.7	323.2	287.9	35.32	9.152	
5,700.0	5,574.1	5,593.6	5,542.5	22.0	22.3	-165.08	-5.4	649.8	356.1	319.3	36.81	9.675	
5,800.0	5,670.7	5,685.4	5,632.7	22.5	22.7	-168.32	-16.0	636.9	390.3	352.1	38.18	10.222	
5,900.0	5,767.3	5,777.1	5,723.0	23.0	23.1	-171.05	-26.7	624.1	425.4	385.9	39.46	10.781	
6,000.0	5,863.9	5,868.9	5,813.2	23.5	23.5	-173.38	-37.4	611.2	461.3	420.6	40.66	11.345	
6,100.0	5,960.5	5,960.7	5,903.4	23.9	24.0	-175.38	-48.1	598.3	497.7	455.9	41.80	11.908	
6,200.0	6,057.1	6,052.5	5,993.7	24.4	24.4	-177.11	-58.8	585.5	534.6	491.8	42.89	12.466	
6,300.0	6,153.7	6,144.2	6,083.9	24.9	24.8	-178.62	-69.4	572.6	571.9	528.0	43.94	13.017	
6,400.0	6,250.3	6,240.5	6,178.6	25.4	25.2	-179.99	-80.4	559.4	609.3	564.3	45.03	13.532	
6,500.0	6,346.8	6,340.5	6,277.3	25.9	25.7	178.88	-90.9	546.8	646.0	599.8	46.14	14.000	
6,600.0	6,443.4	6,441.7	6,377.4	26.4	26.1	177.97	-100.3	535.5	681.6	634.4	47.20	14.439	
6,700.0	6,540.0	6,544.2	6,479.0	26.9	26.5	177.26	-108.7	525.4	716.1	667.9	48.23	14.847	
6,800.0	6,636.6	6,647.7	6,581.9	27.4	27.0	176.71	-116.0	516.6	749.5	700.3	49.23	15.226	
6,900.0	6,733.2	6,752.4	6,686.2	27.9	27.4	176.31	-122.1	509.2	781.8	731.6	50.19	15.577	
7,000.0	6,829.8	6,858.1	6,791.6	28.3	27.8	176.04	-127.1	503.1	812.7	761.6	51.11	15.901	
7,100.0	6,926.4	6,964.8	6,898.1	28.8	28.1	175.89	-130.9	498.6	842.4	790.4	52.00	16.200	
7,200.0	7,023.0	7,072.4	7,005.6	29.3	28.5	175.84	-133.4	495.6	870.8	818.0	52.85	16.478	
7,300.0	7,119.6	7,180.9	7,114.1	29.8	28.8	175.89	-134.6	494.1	897.9	844.3	53.64	16.739	
7,400.0	7,216.2	7,283.0	7,216.2	30.3	28.8	176.00	-134.8	493.9	923.9	870.3	53.60	17.237	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design:		WILD THING FED COM PROJECT - _WILD THING FED COM 705H - OWB - PWP0											Offset Site Error:		0.0 usft		
Survey Program:		0-r.5 MWD+IFR1+MS						Rule Assigned:						Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:				Offset Well Error:		0.0 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)	No-Go Distance (usft)	Separation Factor	Warning				
7,500.0	7,312.8	7,379.6	7,312.8	30.8	28.9	176.11	-134.8	493.9	949.7	895.5	54.14	17.541					
7,600.0	7,409.4	7,476.1	7,409.4	31.3	28.9	176.21	-134.8	493.9	975.5	920.8	54.69	17.836					
7,693.8	7,500.0	7,566.8	7,500.0	31.8	28.9	176.31	-134.8	493.9	999.7	944.5	55.21	18.108					

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 706H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)		
0.0	0.0	0.0	18.0	0.0	0.0	-55.55	199.4	-290.7	353.0				
100.0	100.0	82.0	100.0	0.8	1.0	-55.55	199.4	-290.7	352.5	350.3	2.23	158.193	
200.0	200.0	182.0	200.0	1.4	1.6	-55.55	199.4	-290.7	352.5	349.0	3.50	100.619	
300.0	300.0	282.0	300.0	1.9	2.0	-55.55	199.4	-290.7	352.5	348.2	4.35	81.077	
400.0	400.0	382.0	400.0	2.2	2.4	-55.55	199.4	-290.7	352.5	347.5	5.04	69.911	
500.0	500.0	482.0	500.0	2.6	2.7	-55.55	199.4	-290.7	352.5	346.9	5.65	62.407	
600.0	600.0	582.0	600.0	2.8	2.9	-55.55	199.4	-290.7	352.5	346.3	6.20	56.900	
700.0	700.0	682.0	700.0	3.1	3.2	-55.55	199.4	-290.7	352.5	345.8	6.70	52.629	
800.0	800.0	782.0	800.0	3.3	3.4	-55.55	199.4	-290.7	352.5	345.4	7.17	49.185	
900.0	900.0	882.0	900.0	3.6	3.7	-55.55	199.4	-290.7	352.5	344.9	7.61	46.330	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-55.55	199.4	-290.7	352.5	344.5	8.03	43.910	
1,100.0	1,100.0	1,089.1	1,107.1	4.0	4.1	-55.63	198.5	-290.2	351.7	343.2	8.46	41.575	
1,200.0	1,200.0	1,197.5	1,215.5	4.2	4.4	-55.97	194.8	-288.5	348.5	339.6	8.88	39.261	
1,300.0	1,300.0	1,305.7	1,323.4	4.4	4.6	-56.59	188.4	-285.5	342.8	333.6	9.29	36.902	
1,400.0	1,400.0	1,413.4	1,430.6	4.6	4.9	-57.50	179.2	-281.2	334.9	325.2	9.71	34.487	
1,500.0	1,500.0	1,520.4	1,536.8	4.7	5.2	-58.74	167.4	-275.7	324.6	314.5	10.11	32.123	
1,600.0	1,600.0	1,620.5	1,635.9	5.0	5.4	-170.25	154.8	-269.8	314.8	304.3	10.53	29.898	
1,700.0	1,699.8	1,719.9	1,734.3	5.3	5.7	-171.92	142.2	-264.0	308.7	297.7	11.01	28.035	
1,750.0	1,749.7	1,769.6	1,783.6	5.3	5.9	-172.80	135.9	-261.1	307.0	295.9	11.18	27.459	
1,800.0	1,799.5	1,819.4	1,832.8	5.4	6.0	-170.69	129.7	-258.1	306.3	294.9	11.36	26.963	
1,818.8	1,818.1	1,838.1	1,851.4	5.4	6.1	-170.15	127.3	-257.0	306.2	294.7	11.46	26.727 CC, ES	
1,900.0	1,898.7	1,918.7	1,931.3	5.7	6.4	-168.88	117.1	-252.3	307.4	295.5	11.87	25.889	
2,000.0	1,997.5	2,017.9	2,029.4	6.0	6.7	-168.78	104.6	-246.5	312.2	299.8	12.40	25.170	
2,100.0	2,095.7	2,116.6	2,127.2	6.3	7.1	-169.56	92.2	-240.7	320.7	307.8	12.94	24.780	
2,200.0	2,193.2	2,214.9	2,224.5	6.7	7.4	-170.80	79.8	-234.9	333.2	319.7	13.49	24.692 SF	
2,258.8	2,250.1	2,272.3	2,281.4	6.8	7.6	-171.65	72.5	-231.5	342.3	328.5	13.76	24.876	
2,300.0	2,290.0	2,312.6	2,321.2	6.9	7.8	-172.61	67.5	-229.1	349.2	335.3	13.94	25.056	
2,400.0	2,386.6	2,410.1	2,417.9	7.3	8.1	-174.78	55.2	-223.4	366.4	352.0	14.44	25.370	
2,500.0	2,483.1	2,507.7	2,514.5	7.6	8.5	-176.76	42.8	-217.7	384.1	369.1	14.96	25.673	
2,600.0	2,579.7	2,605.3	2,611.1	8.0	8.9	-178.56	30.5	-211.9	402.1	386.6	15.49	25.962	
2,700.0	2,676.3	2,702.9	2,707.8	8.3	9.3	-179.79	18.2	-206.2	420.5	404.5	16.03	26.237	
2,800.0	2,772.9	2,800.5	2,804.4	8.7	9.6	-178.27	5.9	-200.4	439.3	422.7	16.58	26.498	
2,900.0	2,869.5	2,898.1	2,901.1	9.1	10.0	-176.88	-6.4	-194.7	458.3	441.1	17.13	26.745	
3,000.0	2,966.1	2,995.7	2,997.7	9.5	10.4	-175.60	-18.7	-189.0	477.5	459.8	17.70	26.978	
3,100.0	3,062.7	3,093.2	3,094.3	9.9	10.8	-174.42	-31.0	-183.2	497.0	478.7	18.27	27.199	
3,200.0	3,159.3	3,190.8	3,191.0	10.4	11.2	-173.33	-43.3	-177.5	516.6	497.8	18.85	27.407	
3,300.0	3,255.9	3,288.4	3,287.6	10.8	11.6	-172.32	-55.6	-171.7	536.5	517.0	19.43	27.603	
3,400.0	3,352.5	3,386.0	3,384.2	11.2	12.0	-171.38	-67.9	-166.0	556.4	536.4	20.02	27.789	
3,500.0	3,449.1	3,483.6	3,480.9	11.7	12.4	-170.50	-80.2	-160.3	576.6	555.9	20.62	27.964	
3,600.0	3,545.7	3,581.2	3,577.5	12.1	12.8	-169.68	-92.6	-154.5	596.8	575.6	21.22	28.129	
3,700.0	3,642.3	3,678.8	3,674.2	12.6	13.2	-168.92	-104.9	-148.8	617.1	595.3	21.82	28.285	
3,800.0	3,738.8	3,776.3	3,770.8	13.0	13.6	-168.20	-117.2	-143.0	637.6	615.1	22.42	28.433	
3,900.0	3,835.4	3,873.9	3,867.4	13.5	14.0	-167.53	-129.5	-137.3	658.1	635.1	23.03	28.573	
4,000.0	3,932.0	3,971.5	3,964.1	13.9	14.4	-166.90	-141.8	-131.6	678.7	655.1	23.64	28.706	
4,100.0	4,028.6	4,069.1	4,060.7	14.4	14.8	-166.31	-154.1	-125.8	699.4	675.1	24.26	28.832	
4,200.0	4,125.2	4,166.7	4,157.3	14.9	15.2	-165.75	-166.4	-120.1	720.1	695.3	24.87	28.951	
4,300.0	4,221.8	4,264.3	4,254.0	15.3	15.6	-165.22	-178.7	-114.3	741.0	715.5	25.49	29.064	
4,400.0	4,318.4	4,361.9	4,350.6	15.8	16.0	-164.72	-191.0	-108.6	761.8	735.7	26.11	29.172	
4,500.0	4,415.0	4,459.5	4,447.2	16.3	16.4	-164.25	-203.3	-102.9	782.8	756.0	26.74	29.275	
4,600.0	4,511.6	4,556.0	4,542.9	16.7	16.8	-163.81	-215.5	-97.2	803.7	776.4	27.34	29.397	
4,700.0	4,608.2	4,649.8	4,635.9	17.2	17.2	-163.48	-226.2	-92.2	825.1	797.2	27.95	29.523	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 706H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
4,800.0	4,704.8	4,743.5	4,729.0	17.7	17.6	163.27	-235.6	-87.8	847.0	818.4	28.58	29.639		
4,900.0	4,801.4	4,837.0	4,822.2	18.2	18.0	163.17	-243.6	-84.1	869.2	840.0	29.21	29.756		
5,000.0	4,898.0	4,930.4	4,915.3	18.6	18.3	163.17	-250.2	-81.0	892.0	862.1	29.86	29.874		
5,100.0	4,994.6	5,023.6	5,008.3	19.1	18.6	163.26	-255.4	-78.6	915.1	884.6	30.51	29.992		
5,200.0	5,091.1	5,116.5	5,101.1	19.6	18.9	163.44	-259.2	-76.8	938.8	907.6	31.18	30.113		
5,300.0	5,187.7	5,209.1	5,193.6	20.1	19.2	163.70	-261.7	-75.6	962.8	931.0	31.84	30.237		
5,400.0	5,284.3	5,301.3	5,285.8	20.6	19.4	164.03	-262.8	-75.1	987.4	954.9	32.51	30.369		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 707H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	18.0	0.0	0.0	-58.13	199.4	-320.7	378.0				
100.0	100.0	82.0	100.0	0.8	1.0	-58.13	199.4	-320.7	377.6	375.4	2.23	169.453	
200.0	200.0	182.0	200.0	1.4	1.6	-58.13	199.4	-320.7	377.6	374.1	3.50	107.781	
300.0	300.0	282.0	300.0	1.9	2.0	-58.13	199.4	-320.7	377.6	373.3	4.35	86.848	
400.0	400.0	382.0	400.0	2.2	2.4	-58.13	199.4	-320.7	377.6	372.6	5.04	74.888	
500.0	500.0	482.0	500.0	2.6	2.7	-58.13	199.4	-320.7	377.6	372.0	5.65	66.849	
600.0	600.0	582.0	600.0	2.8	2.9	-58.13	199.4	-320.7	377.6	371.4	6.20	60.950	
700.0	700.0	682.0	700.0	3.1	3.2	-58.13	199.4	-320.7	377.6	370.9	6.70	56.375	
800.0	800.0	782.0	800.0	3.3	3.4	-58.13	199.4	-320.7	377.6	370.4	7.17	52.686	
900.0	900.0	882.0	900.0	3.6	3.7	-58.13	199.4	-320.7	377.6	370.0	7.61	49.627	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-58.13	199.4	-320.7	377.6	369.6	8.03	47.035	
1,100.0	1,100.0	1,082.0	1,100.0	4.0	4.1	-58.13	199.4	-320.7	377.6	369.2	8.43	44.801	
1,200.0	1,200.0	1,182.0	1,200.0	4.2	4.3	-58.13	199.4	-320.7	377.6	368.8	8.81	42.847	
1,300.0	1,300.0	1,282.0	1,300.0	4.4	4.4	-58.13	199.4	-320.7	377.6	368.4	9.18	41.119	
1,400.0	1,400.0	1,382.0	1,400.0	4.6	4.6	-58.13	199.4	-320.7	377.6	368.1	9.54	39.576	
1,500.0	1,500.0	1,482.0	1,500.0	4.7	4.8	-58.13	199.4	-320.7	377.6	367.7	9.89	38.186 CC, ES	
1,600.0	1,600.0	1,582.0	1,600.0	5.0	5.0	-168.18	199.4	-320.7	379.3	369.0	10.31	36.792	
1,700.0	1,699.8	1,681.8	1,699.8	5.3	5.1	-168.31	199.4	-320.7	384.4	373.7	10.72	35.858	
1,750.0	1,749.7	1,731.7	1,749.7	5.3	5.2	-168.42	199.4	-320.7	388.3	377.4	10.85	35.777	
1,800.0	1,799.5	1,781.5	1,799.5	5.4	5.3	-165.48	199.4	-320.7	392.9	381.9	10.99	35.753	
1,900.0	1,898.7	1,880.7	1,898.7	5.7	5.5	-162.00	199.4	-320.7	404.5	393.1	11.42	35.408	
2,000.0	1,997.5	1,979.5	1,997.5	6.0	5.6	-160.23	199.4	-320.7	419.1	407.2	11.88	35.287 SF	
2,100.0	2,095.7	2,077.6	2,095.6	6.3	5.8	-159.49	198.7	-321.1	436.8	424.5	12.34	35.406	
2,200.0	2,193.2	2,174.5	2,192.4	6.7	5.9	-159.59	195.9	-322.7	457.8	445.0	12.80	35.770	
2,258.8	2,250.1	2,230.7	2,248.6	6.8	6.0	-159.94	193.4	-324.2	471.7	458.7	13.02	36.227	
2,300.0	2,290.0	2,269.9	2,287.7	6.9	6.1	-160.68	191.1	-325.4	482.0	468.8	13.17	36.595	
2,400.0	2,386.6	2,364.3	2,381.8	7.3	6.3	-162.53	184.4	-329.4	507.3	493.7	13.61	37.267	
2,500.0	2,483.1	2,457.8	2,474.7	7.6	6.5	-164.45	175.7	-334.4	533.4	519.3	14.08	37.891	
2,600.0	2,579.7	2,550.7	2,566.8	8.0	6.6	-166.41	165.1	-340.5	560.4	545.8	14.53	38.568	
2,700.0	2,676.3	2,645.0	2,660.1	8.3	6.8	-168.30	153.7	-347.0	588.1	573.1	15.02	39.156	
2,800.0	2,772.9	2,739.2	2,753.5	8.7	7.0	-170.02	142.4	-353.6	616.4	600.9	15.55	39.641	
2,900.0	2,869.5	2,833.5	2,846.9	9.1	7.3	-171.59	131.0	-360.2	645.2	629.1	16.10	40.082	
3,000.0	2,966.1	2,927.8	2,940.2	9.5	7.5	-173.04	119.7	-366.7	674.4	657.7	16.66	40.479	
3,100.0	3,062.7	3,022.0	3,033.6	9.9	7.8	-174.36	108.3	-373.3	704.0	686.7	17.24	40.837	
3,200.0	3,159.3	3,116.3	3,126.9	10.4	8.1	-175.58	96.9	-379.8	733.9	716.0	17.83	41.158	
3,300.0	3,255.9	3,210.6	3,220.3	10.8	8.4	-176.71	85.6	-386.4	764.1	745.6	18.44	41.446	
3,400.0	3,352.5	3,304.9	3,313.6	11.2	8.7	-177.75	74.2	-393.0	794.5	775.4	19.05	41.703	
3,500.0	3,449.1	3,399.1	3,407.0	11.7	9.0	-178.72	62.8	-399.5	825.2	805.5	19.68	41.933	
3,600.0	3,545.7	3,493.4	3,500.3	12.1	9.3	-179.62	51.5	-406.1	856.0	835.7	20.31	42.138	
3,700.0	3,642.3	3,587.7	3,593.7	12.6	9.6	-179.55	40.1	-412.6	887.1	866.1	20.96	42.321	
3,800.0	3,738.8	3,682.0	3,687.0	13.0	9.9	-178.76	28.8	-419.2	918.3	896.7	21.61	42.484	
3,900.0	3,835.4	3,776.2	3,780.4	13.5	10.3	-178.03	17.4	-425.8	949.6	927.4	22.28	42.629	
4,000.0	3,932.0	3,870.5	3,873.8	13.9	10.6	-177.35	6.0	-432.3	981.1	958.2	22.95	42.759	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 708H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)		
0.0	0.0	0.0	18.0	0.0	0.0	-60.38	199.4	-350.7	403.8				
100.0	100.0	82.0	100.0	0.8	1.0	-60.38	199.4	-350.7	403.4	401.2	2.23	181.026	
200.0	200.0	182.0	200.0	1.4	1.6	-60.38	199.4	-350.7	403.4	399.9	3.50	115.142	
300.0	300.0	282.0	300.0	1.9	2.0	-60.38	199.4	-350.7	403.4	399.1	4.35	92.779	
400.0	400.0	382.0	400.0	2.2	2.4	-60.38	199.4	-350.7	403.4	398.4	5.04	80.002	
500.0	500.0	482.0	500.0	2.6	2.7	-60.38	199.4	-350.7	403.4	397.8	5.65	71.414	
600.0	600.0	582.0	600.0	2.8	2.9	-60.38	199.4	-350.7	403.4	397.2	6.20	65.113	
700.0	700.0	682.0	700.0	3.1	3.2	-60.38	199.4	-350.7	403.4	396.7	6.70	60.225	
800.0	800.0	782.0	800.0	3.3	3.4	-60.38	199.4	-350.7	403.4	396.2	7.17	56.284	
900.0	900.0	882.0	900.0	3.6	3.7	-60.38	199.4	-350.7	403.4	395.8	7.61	53.017	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-60.38	199.4	-350.7	403.4	395.4	8.03	50.248 CC	
1,100.0	1,100.0	1,078.4	1,096.3	4.0	4.1	-60.48	198.9	-351.4	403.8	395.4	8.42	47.943 ES	
1,200.0	1,200.0	1,173.8	1,191.7	4.2	4.3	-60.88	197.2	-354.0	405.2	396.5	8.79	46.125	
1,300.0	1,300.0	1,269.0	1,286.8	4.4	4.5	-61.58	194.0	-358.5	407.9	398.7	9.14	44.617	
1,400.0	1,400.0	1,363.9	1,381.4	4.6	4.8	-62.55	189.6	-365.0	411.7	402.2	9.49	43.366	
1,500.0	1,500.0	1,458.4	1,475.3	4.7	5.1	-63.78	183.9	-373.4	416.9	407.1	9.85	42.342	
1,600.0	1,600.0	1,552.1	1,568.2	5.0	5.4	-175.24	176.9	-383.6	425.4	415.1	10.29	41.328	
1,700.0	1,699.8	1,645.4	1,660.4	5.3	5.6	-176.92	168.7	-395.6	438.8	428.1	10.70	41.015 SF	
1,750.0	1,749.7	1,694.2	1,708.5	5.3	5.7	-177.82	164.2	-402.3	447.3	436.4	10.84	41.277	
1,800.0	1,799.5	1,742.8	1,756.4	5.4	5.9	-175.60	159.7	-408.9	456.7	445.7	11.01	41.484	
1,900.0	1,898.7	1,839.4	1,851.7	5.7	6.2	-173.38	150.7	-422.1	478.2	466.6	11.53	41.465	
2,000.0	1,997.5	1,935.1	1,946.1	6.0	6.5	-172.64	141.8	-435.1	503.3	491.2	12.09	41.622	
2,100.0	2,095.7	2,029.7	2,039.4	6.3	6.9	-172.60	133.0	-448.0	532.1	519.4	12.69	41.943	
2,200.0	2,193.2	2,123.2	2,131.6	6.7	7.2	-172.92	124.3	-460.8	564.5	551.2	13.31	42.410	
2,258.8	2,250.1	2,177.6	2,185.2	6.8	7.4	-173.20	119.2	-468.2	585.3	571.6	13.64	42.914	
2,300.0	2,290.0	2,215.5	2,222.6	6.9	7.5	-173.80	115.7	-473.3	600.2	586.4	13.86	43.310	
2,400.0	2,386.6	2,307.6	2,313.4	7.3	7.9	-175.13	107.2	-485.9	636.8	622.3	14.47	44.013	
2,500.0	2,483.1	2,399.7	2,404.3	7.6	8.2	-176.32	98.6	-498.4	673.7	658.6	15.10	44.600	
2,600.0	2,579.7	2,491.8	2,495.1	8.0	8.6	-177.39	90.0	-511.0	710.7	695.0	15.76	45.090	
2,700.0	2,676.3	2,583.8	2,585.9	8.3	9.0	-178.36	81.5	-523.6	748.0	731.6	16.44	45.497	
2,800.0	2,772.9	2,675.9	2,676.7	8.7	9.3	-179.23	72.9	-536.1	785.4	768.3	17.14	45.835	
2,900.0	2,869.5	2,768.0	2,767.5	9.1	9.7	179.97	64.3	-548.7	823.0	805.2	17.85	46.116	
3,000.0	2,966.1	2,860.1	2,858.4	9.5	10.1	179.25	55.8	-561.2	860.7	842.2	18.57	46.349	
3,100.0	3,062.7	2,952.2	2,949.2	9.9	10.5	178.58	47.2	-573.8	898.6	879.3	19.31	46.541	
3,200.0	3,159.3	3,044.2	3,040.0	10.4	10.9	177.97	38.6	-586.3	936.5	916.4	20.05	46.699	
3,300.0	3,255.9	3,136.3	3,130.8	10.8	11.2	177.40	30.1	-598.9	974.5	953.7	20.81	46.830	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 709H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)		
0.0	0.0	0.0	18.0	0.0	0.0	-62.36	199.4	-380.7	430.1				
100.0	100.0	82.0	100.0	0.8	1.0	-62.36	199.4	-380.7	429.7	427.5	2.23	192.841	
200.0	200.0	182.0	200.0	1.4	1.6	-62.36	199.4	-380.7	429.7	426.2	3.50	122.657	
300.0	300.0	282.0	300.0	1.9	2.0	-62.36	199.4	-380.7	429.7	425.4	4.35	98.835	
400.0	400.0	382.0	400.0	2.2	2.4	-62.36	199.4	-380.7	429.7	424.7	5.04	85.224	
500.0	500.0	482.0	500.0	2.6	2.7	-62.36	199.4	-380.7	429.7	424.1	5.65	76.075	
600.0	600.0	582.0	600.0	2.8	2.9	-62.36	199.4	-380.7	429.7	423.5	6.20	69.362	
700.0	700.0	682.0	700.0	3.1	3.2	-62.36	199.4	-380.7	429.7	423.0	6.70	64.155	
800.0	800.0	782.0	800.0	3.3	3.4	-62.36	199.4	-380.7	429.7	422.6	7.17	59.958	
900.0	900.0	882.0	900.0	3.6	3.7	-62.36	199.4	-380.7	429.7	422.1	7.61	56.477	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-62.36	199.4	-380.7	429.7	421.7	8.03	53.527 CC, ES	
1,100.0	1,100.0	1,076.6	1,094.6	4.0	4.1	-62.44	199.1	-381.4	430.2	421.8	8.43	51.059	
1,200.0	1,200.0	1,170.0	1,188.0	4.2	4.3	-62.75	197.8	-384.1	432.3	423.5	8.80	49.123	
1,300.0	1,300.0	1,263.2	1,281.0	4.4	4.5	-63.29	195.7	-389.0	435.8	426.7	9.17	47.545	
1,400.0	1,400.0	1,356.0	1,373.5	4.6	4.8	-64.05	192.6	-395.8	441.0	431.5	9.53	46.258	
1,500.0	1,500.0	1,448.5	1,465.4	4.7	5.0	-65.00	188.7	-404.7	447.9	438.0	9.90	45.226	
1,600.0	1,600.0	1,540.2	1,556.4	5.0	5.3	-176.13	183.9	-415.5	458.2	447.8	10.37	44.202	
1,700.0	1,699.8	1,630.8	1,645.9	5.3	5.6	-177.41	178.2	-428.2	473.8	463.0	10.84	43.728 SF	
1,750.0	1,749.7	1,675.5	1,690.0	5.3	5.8	-178.09	175.1	-435.1	483.6	472.6	11.01	43.945	
1,800.0	1,799.5	1,719.8	1,733.5	5.4	5.9	-175.68	171.9	-442.5	494.7	483.6	11.18	44.234	
1,900.0	1,898.7	1,806.9	1,818.9	5.7	6.2	-173.18	164.8	-458.2	520.8	509.1	11.70	44.498	
2,000.0	1,997.5	1,894.3	1,904.2	6.0	6.5	-172.33	157.0	-475.8	552.0	539.8	12.21	45.209	
2,100.0	2,095.7	1,986.5	1,994.0	6.3	6.8	-172.29	148.6	-494.7	587.2	574.4	12.83	45.759	
2,200.0	2,193.2	2,077.3	2,082.5	6.7	7.2	-172.58	140.3	-513.4	626.0	612.5	13.49	46.400	
2,258.8	2,250.1	2,130.0	2,133.8	6.8	7.4	-172.84	135.5	-524.2	650.5	636.6	13.84	46.989	
2,300.0	2,290.0	2,166.7	2,169.6	6.9	7.5	-173.44	132.1	-531.8	668.0	653.9	14.08	47.443	
2,400.0	2,386.6	2,255.9	2,256.5	7.3	7.9	-174.76	123.9	-550.1	710.9	696.2	14.73	48.275	
2,500.0	2,483.1	2,345.0	2,343.3	7.6	8.2	-175.94	115.8	-568.4	754.1	738.7	15.40	48.972	
2,600.0	2,579.7	2,434.2	2,430.2	8.0	8.6	-177.00	107.6	-586.7	797.5	781.4	16.09	49.555	
2,700.0	2,676.3	2,523.3	2,517.1	8.3	9.0	-177.94	99.5	-605.1	841.1	824.3	16.81	50.042	
2,800.0	2,772.9	2,612.5	2,603.9	8.7	9.3	-178.80	91.3	-623.4	884.8	867.3	17.54	50.448	
2,900.0	2,869.5	2,701.6	2,690.8	9.1	9.7	-179.57	83.2	-641.7	928.8	910.5	18.29	50.787	
3,000.0	2,966.1	2,790.8	2,777.7	9.5	10.1	179.72	75.0	-660.0	972.8	953.8	19.05	51.070	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 710H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)			
0.0	0.0	0.0	18.0	0.0	0.0	-64.09	199.5	-410.6	456.9					
100.0	100.0	82.0	100.0	0.8	1.0	-64.09	199.5	-410.6	456.5	454.3	2.23	204.861		
200.0	200.0	182.0	200.0	1.4	1.6	-64.09	199.5	-410.6	456.5	453.0	3.50	130.302		
300.0	300.0	282.0	300.0	1.9	2.0	-64.09	199.5	-410.6	456.5	452.2	4.35	104.995		
400.0	400.0	382.0	400.0	2.2	2.4	-64.09	199.5	-410.6	456.5	451.5	5.04	90.535		
500.0	500.0	482.0	500.0	2.6	2.7	-64.09	199.5	-410.6	456.5	450.9	5.65	80.817		
600.0	600.0	582.0	600.0	2.8	2.9	-64.09	199.5	-410.6	456.5	450.3	6.20	73.686		
700.0	700.0	682.0	700.0	3.1	3.2	-64.09	199.5	-410.6	456.5	449.8	6.70	68.154		
800.0	800.0	782.0	800.0	3.3	3.4	-64.09	199.5	-410.6	456.5	449.3	7.17	63.695		
900.0	900.0	882.0	900.0	3.6	3.7	-64.09	199.5	-410.6	456.5	448.9	7.61	59.997		
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-64.09	199.5	-410.6	456.5	448.5	8.03	56.863 CC, ES		
1,100.0	1,100.0	1,075.0	1,093.0	4.0	4.1	-64.15	199.3	-411.4	457.1	448.7	8.43	54.219		
1,200.0	1,200.0	1,166.4	1,184.4	4.2	4.3	-64.38	198.6	-414.2	459.6	450.8	8.82	52.138		
1,300.0	1,300.0	1,257.6	1,275.4	4.4	4.5	-64.77	197.5	-419.1	464.0	454.8	9.19	50.460		
1,400.0	1,400.0	1,348.5	1,366.0	4.6	4.8	-65.31	195.9	-426.1	470.2	460.6	9.58	49.105		
1,500.0	1,500.0	1,439.0	1,456.1	4.7	5.0	-66.00	193.8	-435.2	478.4	468.5	9.96	48.031		
1,600.0	1,600.0	1,528.9	1,545.2	5.0	5.3	-176.80	191.2	-446.3	490.3	479.9	10.44	46.963		
1,700.0	1,699.8	1,617.5	1,632.8	5.3	5.6	-177.71	188.3	-459.2	507.7	496.7	10.93	46.466 SF		
1,750.0	1,749.7	1,661.3	1,676.0	5.3	5.7	-178.20	186.6	-466.3	518.4	507.3	11.11	46.679		
1,800.0	1,799.5	1,700.0	1,714.1	5.4	5.9	-175.52	185.1	-473.0	530.5	519.2	11.27	47.080		
1,900.0	1,898.7	1,789.7	1,802.1	5.7	6.2	-172.66	181.2	-489.9	558.4	546.6	11.83	47.210		
2,000.0	1,997.5	1,872.6	1,883.0	6.0	6.5	-171.32	177.1	-507.3	591.6	579.2	12.39	47.728		
2,100.0	2,095.7	1,952.9	1,961.0	6.3	6.8	-170.77	172.9	-525.8	629.8	616.9	12.95	48.645		
2,200.0	2,193.2	2,040.1	2,045.5	6.7	7.1	-170.78	168.0	-547.1	672.5	658.9	13.57	49.555		
2,258.8	2,250.1	2,091.8	2,095.5	6.8	7.3	-170.89	165.0	-559.7	699.2	685.2	13.93	50.190		
2,300.0	2,290.0	2,127.8	2,130.4	6.9	7.4	-171.42	163.0	-568.5	718.3	704.1	14.18	50.670		
2,400.0	2,386.6	2,215.3	2,215.1	7.3	7.8	-172.59	158.1	-589.8	764.9	750.0	14.84	51.559		
2,500.0	2,483.1	2,302.7	2,299.7	7.6	8.1	-173.62	153.2	-611.2	811.7	796.2	15.52	52.296		
2,600.0	2,579.7	2,390.2	2,384.4	8.0	8.5	-174.55	148.2	-632.5	858.7	842.5	16.23	52.905		
2,700.0	2,676.3	2,477.6	2,469.1	8.3	8.8	-175.38	143.3	-653.8	905.9	888.9	16.96	53.409		
2,800.0	2,772.9	2,565.1	2,553.7	8.7	9.2	-176.13	138.4	-675.2	953.1	935.4	17.71	53.825		

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 902H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10207-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		No-Go		Separation	
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)	Distance (usft)	Factor	Warning
5,300.0	5,187.7	5,114.4	5,065.8	20.1	11.8	-3.52	-190.1	1,859.3	992.1	959.6	32.53	30.496	
5,400.0	5,284.3	5,218.4	5,168.0	20.6	12.0	-2.74	-205.8	1,870.6	978.2	944.9	33.26	29.413	
5,500.0	5,380.9	5,322.5	5,270.4	21.0	12.2	-1.98	-220.7	1,881.4	963.8	929.8	33.98	28.363	
5,600.0	5,477.5	5,426.5	5,373.0	21.5	12.5	-1.24	-234.9	1,891.6	948.9	914.2	34.70	27.348	
5,700.0	5,574.1	5,530.5	5,475.6	22.0	12.7	-0.51	-248.3	1,901.2	933.6	898.2	35.41	26.365	
5,800.0	5,670.7	5,634.4	5,578.4	22.5	12.9	0.20	-260.9	1,910.3	917.8	881.7	36.12	25.410	
5,900.0	5,767.3	5,738.3	5,681.2	23.0	13.1	0.89	-272.8	1,918.9	901.5	864.7	36.82	24.483	
6,000.0	5,863.9	5,842.1	5,784.1	23.5	13.3	1.56	-283.9	1,926.9	884.7	847.2	37.52	23.580	
6,100.0	5,960.5	5,945.7	5,887.0	23.9	13.5	2.22	-294.2	1,934.4	867.4	829.2	38.21	22.699	
6,200.0	6,057.1	6,049.3	5,989.9	24.4	13.7	2.86	-303.8	1,941.3	849.6	810.7	38.90	21.840	
6,300.0	6,153.7	6,152.7	6,092.7	24.9	13.8	3.48	-312.6	1,947.6	831.1	791.6	39.58	20.999	
6,400.0	6,250.3	6,256.0	6,195.5	25.4	14.0	4.08	-320.6	1,953.4	812.2	771.9	40.25	20.176	
6,500.0	6,346.8	6,359.1	6,298.2	25.9	14.2	4.67	-327.9	1,958.7	792.6	751.7	40.92	19.369	
6,600.0	6,443.4	6,462.0	6,400.8	26.4	14.4	5.25	-334.4	1,963.4	772.5	730.9	41.59	18.577	
6,700.0	6,540.0	6,564.8	6,503.3	26.9	14.6	5.80	-340.2	1,967.5	751.8	709.6	42.24	17.798	
6,800.0	6,636.6	6,667.3	6,605.6	27.4	14.7	6.34	-345.2	1,971.1	730.5	687.6	42.89	17.032	
6,900.0	6,733.2	6,769.6	6,707.8	27.9	14.9	6.87	-349.5	1,974.2	708.6	665.1	43.53	16.278	
7,000.0	6,829.8	6,871.6	6,809.7	28.3	15.1	7.38	-353.0	1,976.7	686.1	641.9	44.17	15.534	
7,100.0	6,926.4	6,973.4	6,911.4	28.8	15.2	7.87	-355.7	1,978.7	662.9	618.1	44.79	14.799	
7,200.0	7,023.0	7,074.8	7,012.9	29.3	15.4	8.35	-357.8	1,980.2	639.1	593.7	45.41	14.074	
7,300.0	7,119.6	7,176.0	7,114.1	29.8	15.5	8.81	-359.1	1,981.1	614.7	568.7	46.02	13.357	
7,400.0	7,216.2	7,276.9	7,215.0	30.3	15.6	9.26	-359.6	1,981.5	589.7	543.0	46.67	12.636	
7,500.0	7,312.8	7,374.7	7,312.8	30.8	15.6	9.69	-359.7	1,981.6	564.1	516.1	48.00	11.752	
7,600.0	7,409.4	7,471.3	7,409.4	31.3	15.7	10.15	-359.7	1,981.6	538.6	490.0	48.61	11.081	
7,693.8	7,500.0	7,562.0	7,500.0	31.8	15.7	10.63	-359.7	1,981.6	514.7	465.5	49.17	10.469	
7,700.0	7,506.0	7,567.9	7,506.0	31.8	15.7	10.65	-359.7	1,981.6	513.1	463.9	49.20	10.429	
7,800.0	7,603.0	7,665.0	7,603.0	32.3	15.7	11.08	-359.7	1,981.6	489.6	439.7	49.84	9.824	
7,900.0	7,700.9	7,762.9	7,700.9	32.8	15.8	11.48	-359.7	1,981.6	469.4	419.0	50.42	9.309	
8,000.0	7,799.4	7,861.4	7,799.4	33.3	15.8	11.84	-359.7	1,981.6	452.6	401.6	50.98	8.877	
8,043.8	7,842.8	7,904.7	7,842.8	33.4	15.8	11.98	-359.7	1,981.6	446.3	395.1	51.21	8.715	
8,100.0	7,898.4	7,960.3	7,898.4	33.7	15.8	12.20	-359.7	1,981.6	438.6	387.1	51.49	8.518	
8,200.0	7,997.4	8,059.4	7,997.4	34.1	15.9	12.59	-359.7	1,981.6	425.0	373.0	52.01	8.172	
8,300.0	8,096.4	8,158.4	8,096.4	34.5	15.9	13.01	-359.7	1,981.6	411.4	358.9	52.52	7.834	
8,400.0	8,195.5	8,257.4	8,195.5	35.0	15.9	13.47	-359.7	1,981.6	397.9	344.9	53.03	7.503	
8,500.0	8,294.5	8,356.4	8,294.5	35.4	16.0	13.95	-359.7	1,981.6	384.4	330.8	53.53	7.180	
8,600.0	8,393.5	8,455.5	8,393.5	35.8	16.0	14.47	-359.7	1,981.6	370.9	316.8	54.03	6.864	
8,700.0	8,492.5	8,554.5	8,492.5	36.3	16.0	15.02	-359.7	1,981.6	357.4	302.9	54.52	6.556	
8,800.0	8,591.6	8,653.5	8,591.6	36.7	16.1	15.62	-359.7	1,981.6	344.0	289.0	54.99	6.255	
8,900.0	8,690.6	8,752.6	8,690.6	37.1	16.1	16.27	-359.7	1,981.6	330.6	275.1	55.46	5.961	
9,000.0	8,789.6	8,851.6	8,789.6	37.6	16.1	16.98	-359.7	1,981.6	317.2	261.3	55.91	5.674	
9,100.0	8,888.6	8,950.6	8,888.6	38.0	16.2	17.74	-359.7	1,981.6	303.9	247.6	56.34	5.394	
9,101.4	8,890.0	8,952.0	8,890.0	38.0	16.2	17.75	-359.7	1,981.6	303.7	247.4	56.35	5.391	
9,200.0	8,987.8	9,049.8	8,987.8	38.4	16.2	18.44	-359.7	1,981.6	291.9	235.1	56.76	5.142	
9,300.0	9,087.3	9,149.3	9,087.3	38.8	16.2	19.04	-359.7	1,981.6	282.4	225.2	57.16	4.940	
9,400.0	9,187.1	9,249.0	9,187.1	39.2	16.3	19.51	-359.7	1,981.6	275.3	217.8	57.55	4.785	
9,500.0	9,286.9	9,348.9	9,286.9	39.5	16.3	19.83	-359.7	1,981.6	270.8	212.9	57.91	4.676	
9,600.0	9,386.9	9,448.9	9,386.9	39.8	16.4	19.98	-359.7	1,981.6	268.7	210.5	58.23	4.614	
9,634.7	9,421.6	9,483.6	9,421.6	39.9	16.4	117.46	-359.7	1,981.6	268.5	210.6	57.98	4.632	
9,700.0	9,486.9	9,548.9	9,486.9	39.9	16.4	117.46	-359.7	1,981.6	268.5	210.5	58.00	4.630	
9,800.0	9,586.9	9,648.9	9,586.9	39.9	16.4	117.46	-359.7	1,981.6	268.5	210.5	58.05	4.626	
9,900.0	9,686.9	9,748.9	9,686.9	39.9	16.5	117.46	-359.7	1,981.6	268.5	210.5	58.09	4.623	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 902H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10207-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		No-Go		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)	Distance (usft)	Separation Factor	
10,000.0	9,786.9	9,848.9	9,786.9	39.9	16.5	117.46	-359.7	1,981.6	268.5	210.4	58.14	4.619	
10,100.0	9,886.9	9,948.9	9,886.9	39.9	16.5	117.46	-359.7	1,981.6	268.5	210.4	58.19	4.615	
10,200.0	9,986.9	10,048.9	9,986.9	40.0	16.6	117.46	-359.7	1,981.6	268.5	210.3	58.24	4.611	
10,300.0	10,086.9	10,148.9	10,086.9	40.0	16.6	117.46	-359.7	1,981.6	268.5	210.3	58.29	4.607	
10,400.0	10,186.9	10,260.4	10,186.9	40.0	16.7	116.99	-357.2	1,981.6	267.6	209.6	57.99	4.615	
10,500.0	10,286.9	10,382.9	10,318.2	40.0	16.9	112.17	-332.9	1,981.4	259.0	201.1	57.88	4.475	
10,538.8	10,325.7	10,426.8	10,359.5	40.0	16.9	109.05	-318.0	1,981.3	254.1	196.0	58.10	4.373	
10,550.0	10,336.9	10,439.0	10,370.7	40.0	16.9	-52.11	-313.3	1,981.3	252.5	193.6	58.89	4.287	
10,600.0	10,386.8	10,489.1	10,415.9	40.1	17.0	-58.23	-291.6	1,981.1	244.3	184.7	59.58	4.100	
10,650.0	10,436.2	10,531.6	10,452.6	40.2	17.0	-65.23	-270.1	1,981.0	235.8	175.5	60.34	3.909	
10,700.0	10,484.8	10,566.3	10,481.2	40.3	17.0	-72.03	-250.6	1,980.9	230.0	169.2	60.76	3.785	
10,730.5	10,513.8	10,583.8	10,495.3	40.4	17.1	-75.67	-240.1	1,980.8	228.8	168.2	60.65	3.773 CC, ES, SF	
10,750.0	10,532.2	10,593.6	10,503.0	40.5	17.1	-77.69	-234.1	1,980.7	229.4	169.0	60.38	3.798	
10,800.0	10,578.0	10,614.3	10,518.9	40.6	17.1	-81.60	-220.8	1,980.7	235.9	176.9	58.97	4.000	
10,850.0	10,621.8	10,629.3	10,530.1	40.7	17.1	-83.53	-210.9	1,980.6	250.2	193.5	56.71	4.413	
10,900.0	10,663.5	10,639.4	10,537.5	40.9	17.1	-83.48	-204.1	1,980.6	272.0	217.9	54.08	5.030	
10,950.0	10,702.5	10,650.0	10,545.2	41.0	17.1	-82.66	-196.7	1,980.5	300.0	248.6	51.36	5.841	
10,988.8	10,730.8	10,650.0	10,545.2	41.1	17.1	-79.45	-196.7	1,980.5	324.9	275.1	49.73	6.533	
11,000.0	10,738.7	10,650.0	10,545.2	41.1	17.1	-78.82	-196.7	1,980.5	332.5	283.2	49.29	6.747	
11,025.0	10,755.6	10,650.0	10,545.2	41.2	17.1	-77.00	-196.7	1,980.5	350.5	302.1	48.38	7.244	
11,050.0	10,771.5	10,650.0	10,545.2	41.3	17.1	-74.60	-196.7	1,980.5	369.4	321.9	47.57	7.765	
11,075.0	10,786.6	10,650.0	10,545.2	41.3	17.1	-71.66	-196.7	1,980.5	389.2	342.3	46.87	8.303	
11,100.0	10,800.6	10,650.0	10,545.2	41.4	17.1	-68.22	-196.7	1,980.5	409.6	363.3	46.26	8.854	
11,125.0	10,813.7	10,650.0	10,545.2	41.4	17.1	-64.36	-196.7	1,980.5	430.4	384.7	45.73	9.412	
11,150.0	10,825.7	10,636.5	10,535.4	41.4	17.1	-57.27	-206.0	1,980.6	451.3	405.8	45.53	9.914	
11,175.0	10,836.6	10,632.5	10,532.5	41.5	17.1	-52.27	-208.8	1,980.6	472.6	427.4	45.19	10.460	
11,200.0	10,846.4	10,628.0	10,529.2	41.5	17.1	-47.26	-211.8	1,980.6	494.0	449.1	44.90	11.003	
11,225.0	10,855.0	10,623.1	10,525.5	41.6	17.1	-42.40	-215.1	1,980.6	515.4	470.7	44.65	11.542	
11,250.0	10,862.5	10,617.8	10,521.5	41.6	17.1	-37.80	-218.6	1,980.6	536.7	492.2	44.45	12.075	
11,275.0	10,868.8	10,600.0	10,507.9	41.6	17.1	-32.35	-230.1	1,980.7	558.1	513.7	44.42	12.565	
11,300.0	10,873.9	10,600.0	10,507.9	41.6	17.1	-29.16	-230.1	1,980.7	578.8	534.6	44.19	13.098	
11,325.0	10,877.7	10,600.0	10,507.9	41.7	17.1	-26.16	-230.1	1,980.7	599.4	555.4	43.99	13.626	
11,350.0	10,880.4	10,600.0	10,507.9	41.7	17.1	-23.36	-230.1	1,980.7	619.7	575.9	43.81	14.146	
11,375.0	10,881.8	10,586.1	10,497.1	41.7	17.1	-20.16	-238.7	1,980.8	639.6	595.8	43.78	14.608	
11,390.6	10,882.0	10,581.7	10,493.6	41.7	17.1	-18.55	-241.4	1,980.8	651.8	608.1	43.73	14.906	
11,400.0	10,882.1	10,579.0	10,491.4	41.8	17.1	-18.45	-243.1	1,980.8	659.1	615.4	43.70	15.084	
11,500.0	10,882.1	10,550.0	10,467.9	41.9	17.0	-17.47	-260.0	1,980.9	738.8	695.4	43.46	17.001	
11,600.0	10,882.2	10,528.9	10,450.2	42.0	17.0	-16.80	-271.6	1,981.0	821.2	777.9	43.26	18.983	
11,700.0	10,882.2	10,500.0	10,425.4	42.2	17.0	-15.93	-286.3	1,981.1	905.9	862.8	43.18	20.981	
11,800.0	10,882.3	10,500.0	10,425.4	42.4	17.0	-15.93	-286.3	1,981.1	992.5	949.5	43.01	23.078	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 903H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10342-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
3,700.0	3,642.3	3,672.5	3,658.0	12.6	8.2	-15.86	65.0	1,438.4	981.2	960.6	20.63	47.564	
3,800.0	3,738.8	3,767.8	3,750.7	13.0	8.4	-14.93	43.3	1,439.9	954.8	933.5	21.30	44.826	
3,900.0	3,835.4	3,863.0	3,843.4	13.5	8.5	-13.94	21.6	1,441.4	928.7	906.7	21.98	42.245	
4,000.0	3,932.0	3,958.2	3,936.0	13.9	8.7	-12.89	-0.1	1,442.8	902.8	880.2	22.68	39.812	
4,100.0	4,028.6	4,053.4	4,028.7	14.4	8.8	-11.79	-21.8	1,444.3	877.3	853.9	23.38	37.520	
4,200.0	4,125.2	4,148.6	4,121.4	14.9	9.0	-10.62	-43.5	1,445.8	852.1	828.0	24.10	35.361	
4,300.0	4,221.8	4,243.8	4,214.1	15.3	9.2	-9.39	-65.2	1,447.3	827.2	802.4	24.82	33.330	
4,400.0	4,318.4	4,339.0	4,306.8	15.8	9.3	-8.08	-86.9	1,448.8	802.8	777.2	25.55	31.421	
4,500.0	4,415.0	4,434.2	4,399.5	16.3	9.5	-6.69	-108.5	1,450.2	778.8	752.5	26.29	29.627	
4,600.0	4,511.6	4,529.4	4,492.2	16.7	9.7	-5.22	-130.2	1,451.7	755.2	728.2	27.03	27.943	
4,700.0	4,608.2	4,624.6	4,584.9	17.2	9.8	-3.66	-151.9	1,453.2	732.2	704.4	27.77	26.366	
4,800.0	4,704.8	4,719.8	4,677.6	17.7	10.0	-2.00	-173.6	1,454.7	709.7	681.2	28.51	24.891	
4,900.0	4,801.4	4,815.0	4,770.3	18.2	10.2	-0.24	-195.3	1,456.1	687.9	658.7	29.25	23.517	
5,000.0	4,898.0	4,911.7	4,864.5	18.6	10.3	1.63	-217.1	1,457.6	666.7	636.8	29.96	22.256	
5,100.0	4,994.6	5,010.0	4,960.5	19.1	10.5	3.52	-237.7	1,459.0	645.9	615.2	30.66	21.063	
5,200.0	5,091.1	5,108.8	5,057.4	19.6	10.7	5.40	-256.8	1,460.3	625.3	593.9	31.35	19.944	
5,300.0	5,187.7	5,208.0	5,155.1	20.1	10.8	7.25	-274.2	1,461.5	604.8	572.8	32.02	18.890	
5,400.0	5,284.3	5,307.6	5,253.5	20.6	11.0	9.08	-290.1	1,462.6	584.4	551.7	32.66	17.893	
5,500.0	5,380.9	5,407.6	5,352.4	21.0	11.2	10.89	-304.3	1,463.6	563.9	530.6	33.28	16.946	
5,600.0	5,477.5	5,507.9	5,451.9	21.5	11.4	12.66	-316.8	1,464.4	543.3	509.4	33.87	16.041	
5,700.0	5,574.1	5,608.4	5,551.8	22.0	11.5	14.41	-327.6	1,465.2	522.5	488.0	34.44	15.172	
5,800.0	5,670.7	5,709.0	5,652.1	22.5	11.7	16.12	-336.6	1,465.8	501.4	466.4	34.98	14.333	
5,900.0	5,767.3	5,809.8	5,752.6	23.0	11.9	17.80	-343.9	1,466.3	479.9	444.4	35.50	13.518	
6,000.0	5,863.9	5,910.6	5,853.2	23.5	12.0	19.44	-349.4	1,466.6	457.9	421.9	35.99	12.724	
6,100.0	5,960.5	6,011.3	5,953.9	23.9	12.2	21.06	-353.2	1,466.9	435.4	398.9	36.45	11.945	
6,200.0	6,057.1	6,112.0	6,054.6	24.4	12.3	22.64	-355.2	1,467.0	412.3	375.4	36.88	11.178	
6,300.0	6,153.7	6,211.1	6,153.7	24.9	12.3	24.18	-355.5	1,467.1	388.6	351.3	37.34	10.408	
6,400.0	6,250.3	6,307.7	6,250.3	25.4	12.4	25.83	-355.5	1,467.1	365.0	327.3	37.74	9.671	
6,500.0	6,346.8	6,404.3	6,346.8	25.9	12.4	27.71	-355.5	1,467.1	341.7	303.6	38.10	8.970	
6,600.0	6,443.4	6,500.9	6,443.4	26.4	12.5	29.85	-355.5	1,467.1	318.9	280.5	38.38	8.308	
6,700.0	6,540.0	6,597.5	6,540.0	26.9	12.5	32.32	-355.5	1,467.1	296.5	257.9	38.58	7.685	
6,800.0	6,636.6	6,694.1	6,636.6	27.4	12.6	35.17	-355.5	1,467.1	274.7	236.1	38.67	7.105	
6,900.0	6,733.2	6,790.7	6,733.2	27.9	12.6	38.50	-355.5	1,467.1	253.8	215.2	38.62	6.572	
7,000.0	6,829.8	6,887.3	6,829.8	28.3	12.7	42.39	-355.5	1,467.1	233.8	195.4	38.38	6.091	
7,100.0	6,926.4	6,983.9	6,926.4	28.8	12.7	46.96	-355.5	1,467.1	215.1	177.1	37.92	5.671	
7,200.0	7,023.0	7,080.5	7,023.0	29.3	12.8	52.33	-355.5	1,467.1	197.9	160.7	37.20	5.321	
7,300.0	7,119.6	7,177.1	7,119.6	29.8	12.8	58.60	-355.5	1,467.1	182.9	146.7	36.21	5.051	
7,400.0	7,216.2	7,273.6	7,216.2	30.3	12.9	65.83	-355.5	1,467.1	170.5	135.4	35.04	4.866	
7,500.0	7,312.8	7,370.2	7,312.8	30.8	12.9	73.98	-355.5	1,467.1	161.3	127.4	33.89	4.759	
7,600.0	7,409.4	7,466.8	7,409.4	31.3	13.0	82.86	-355.5	1,467.1	155.9	122.8	33.15	4.703	
7,677.5	7,484.2	7,541.7	7,484.2	31.7	13.0	90.00	-355.5	1,467.1	154.6	121.5	33.11	4.669 CC	
7,693.8	7,500.0	7,557.5	7,500.0	31.8	13.0	91.51	-355.5	1,467.1	154.7	121.5	33.18	4.661 ES	
7,700.0	7,506.0	7,563.4	7,506.0	31.8	13.0	92.08	-355.5	1,467.1	154.7	121.5	33.21	4.658	
7,800.0	7,603.0	7,660.5	7,603.0	32.3	13.1	100.64	-355.5	1,467.1	157.5	123.2	34.21	4.603	
7,900.0	7,700.9	7,758.4	7,700.9	32.8	13.1	107.74	-355.5	1,467.1	162.6	127.0	35.61	4.566	
8,000.0	7,799.4	7,856.9	7,799.4	33.3	13.2	113.34	-355.5	1,467.1	168.7	131.6	37.09	4.549	
8,043.8	7,842.8	7,900.2	7,842.8	33.4	13.2	115.35	-355.5	1,467.1	171.4	133.7	37.68	4.549 SF	
8,100.0	7,898.4	7,955.9	7,898.4	33.7	13.2	117.64	-355.5	1,467.1	174.9	136.5	38.43	4.552	
8,200.0	7,997.4	8,054.9	7,997.4	34.1	13.3	121.50	-355.5	1,467.1	181.8	142.0	39.81	4.568	
8,300.0	8,096.4	8,153.9	8,096.4	34.5	13.4	125.07	-355.5	1,467.1	189.5	148.3	41.19	4.601	
8,400.0	8,195.5	8,252.9	8,195.5	35.0	13.4	128.35	-355.5	1,467.1	197.9	155.3	42.56	4.650	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 903H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10342-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
8,500.0	8,294.5	8,352.0	8,294.5	35.4	13.5	131.36	-355.5	1,467.1	206.9	163.0	43.89	4.714	
8,600.0	8,393.5	8,451.0	8,393.5	35.8	13.5	134.11	-355.5	1,467.1	216.4	171.2	45.16	4.791	
8,700.0	8,492.5	8,550.0	8,492.5	36.3	13.6	136.63	-355.5	1,467.1	226.3	179.9	46.39	4.879	
8,800.0	8,591.6	8,649.0	8,591.6	36.7	13.6	138.93	-355.5	1,467.1	236.7	189.1	47.56	4.976	
8,900.0	8,690.6	8,748.1	8,690.6	37.1	13.7	141.04	-355.5	1,467.1	247.4	198.7	48.68	5.082	
9,000.0	8,789.6	8,847.1	8,789.6	37.6	13.7	142.98	-355.5	1,467.1	258.4	208.6	49.75	5.193	
9,100.0	8,888.6	8,946.1	8,888.6	38.0	13.8	144.75	-355.5	1,467.1	269.7	218.9	50.78	5.310	
9,101.4	8,890.0	8,947.5	8,890.0	38.0	13.8	144.78	-355.5	1,467.1	269.8	219.0	50.80	5.312	
9,200.0	8,987.8	9,045.3	8,987.8	38.4	13.9	146.33	-355.5	1,467.1	280.1	228.4	51.72	5.417	
9,300.0	9,087.3	9,144.8	9,087.3	38.8	13.9	147.50	-355.5	1,467.1	288.6	236.1	52.52	5.495	
9,400.0	9,187.1	9,244.5	9,187.1	39.2	14.0	148.33	-355.5	1,467.1	294.9	241.7	53.19	5.544	
9,500.0	9,286.9	9,344.4	9,286.9	39.5	14.0	148.85	-355.5	1,467.1	299.0	245.3	53.74	5.564	
9,600.0	9,386.9	9,444.4	9,386.9	39.8	14.1	149.08	-355.5	1,467.1	300.9	246.8	54.15	5.557	
9,634.7	9,421.6	9,479.1	9,421.6	39.9	14.1	-113.43	-355.5	1,467.1	301.0	247.1	53.98	5.577	
9,700.0	9,486.9	9,544.4	9,486.9	39.9	14.1	-113.43	-355.5	1,467.1	301.0	247.0	54.01	5.574	
9,800.0	9,586.9	9,644.4	9,586.9	39.9	14.2	-113.43	-355.5	1,467.1	301.0	247.0	54.06	5.569	
9,900.0	9,686.9	9,744.4	9,686.9	39.9	14.3	-113.43	-355.5	1,467.1	301.0	246.9	54.12	5.563	
10,000.0	9,786.9	9,844.4	9,786.9	39.9	14.3	-113.43	-355.5	1,467.1	301.0	246.9	54.18	5.557	
10,100.0	9,886.9	9,944.4	9,886.9	39.9	14.4	-113.43	-355.5	1,467.1	301.0	246.8	54.24	5.551	
10,200.0	9,986.9	10,044.4	9,986.9	40.0	14.4	-113.43	-355.5	1,467.1	301.0	246.8	54.29	5.545	
10,300.0	10,086.9	10,144.4	10,086.9	40.0	14.5	-113.43	-355.5	1,467.1	301.0	246.7	54.35	5.539	
10,400.0	10,186.9	10,244.4	10,186.9	40.0	14.6	-113.43	-355.5	1,467.1	301.0	246.6	54.41	5.533	
10,500.0	10,286.9	10,344.4	10,286.9	40.0	14.6	-113.43	-355.5	1,467.1	301.0	246.6	54.46	5.527	
10,538.8	10,325.7	10,391.1	10,333.6	40.0	14.7	-113.20	-354.2	1,467.0	300.6	245.9	54.76	5.490	
10,550.0	10,336.9	10,405.1	10,347.5	40.0	14.7	87.05	-353.1	1,467.0	300.3	244.8	55.49	5.411	
10,600.0	10,386.8	10,465.8	10,407.6	40.1	14.8	89.61	-344.4	1,467.0	297.5	241.1	56.40	5.275	
10,650.0	10,436.2	10,521.4	10,461.5	40.2	14.9	94.03	-330.8	1,466.9	293.7	236.1	57.60	5.100	
10,700.0	10,484.8	10,569.8	10,507.1	40.3	15.0	99.38	-314.8	1,466.8	290.9	232.0	58.83	4.944	
10,722.0	10,505.8	10,588.6	10,524.5	40.4	15.0	101.76	-307.6	1,466.8	290.5	231.2	59.29	4.899	
10,750.0	10,532.2	10,610.2	10,544.1	40.5	15.0	104.63	-298.6	1,466.7	291.2	231.4	59.76	4.873	
10,800.0	10,578.0	10,642.7	10,572.9	40.6	15.1	108.97	-283.6	1,466.6	296.8	236.7	60.11	4.938	
10,850.0	10,621.8	10,667.8	10,594.7	40.7	15.1	111.90	-270.9	1,466.5	309.1	249.3	59.77	5.171	
10,900.0	10,663.5	10,686.5	10,610.4	40.9	15.1	113.20	-260.9	1,466.5	328.4	269.6	58.82	5.584	
10,950.0	10,702.5	10,700.0	10,621.6	41.0	15.1	112.86	-253.3	1,466.4	354.4	296.9	57.51	6.162	
10,988.8	10,730.8	10,706.6	10,627.0	41.1	15.2	111.27	-249.5	1,466.4	378.5	322.1	56.39	6.712	
11,000.0	10,738.7	10,708.1	10,628.2	41.1	15.2	109.77	-248.7	1,466.4	386.0	329.9	56.06	6.885	
11,025.0	10,755.6	10,710.7	10,630.3	41.2	15.2	106.27	-247.2	1,466.4	403.2	347.8	55.32	7.288	
11,050.0	10,771.5	10,712.2	10,631.5	41.3	15.2	102.53	-246.3	1,466.4	421.0	366.4	54.59	7.711	
11,075.0	10,786.6	10,712.8	10,632.0	41.3	15.2	98.57	-246.0	1,466.4	439.4	385.5	53.89	8.153	
11,100.0	10,800.6	10,712.4	10,631.8	41.4	15.2	94.45	-246.1	1,466.4	458.1	404.9	53.21	8.610	
11,125.0	10,813.7	10,711.3	10,630.9	41.4	15.2	90.21	-246.8	1,466.4	477.2	424.7	52.56	9.079	
11,150.0	10,825.7	10,709.5	10,629.4	41.4	15.2	85.92	-247.9	1,466.4	496.5	444.6	51.95	9.558	
11,175.0	10,836.6	10,700.0	10,621.6	41.5	15.1	80.48	-253.3	1,466.4	516.1	464.8	51.23	10.074	
11,200.0	10,846.4	10,700.0	10,621.6	41.5	15.1	76.87	-253.3	1,466.4	535.5	484.8	50.75	10.553	
11,225.0	10,855.0	10,700.0	10,621.6	41.6	15.1	73.44	-253.3	1,466.4	555.0	504.7	50.30	11.034	
11,250.0	10,862.5	10,700.0	10,621.6	41.6	15.1	70.20	-253.3	1,466.4	574.4	524.5	49.88	11.515	
11,275.0	10,868.8	10,700.0	10,621.6	41.6	15.1	67.16	-253.3	1,466.4	593.7	544.2	49.49	11.996	
11,300.0	10,873.9	10,686.2	10,610.2	41.6	15.1	62.74	-261.1	1,466.5	612.7	563.7	48.92	12.524	
11,325.0	10,877.7	10,680.7	10,605.5	41.7	15.1	59.68	-264.1	1,466.5	631.4	582.9	48.51	13.018	
11,350.0	10,880.4	10,674.8	10,600.6	41.7	15.1	56.91	-267.2	1,466.5	649.9	601.8	48.12	13.507	
11,375.0	10,881.8	10,668.6	10,595.3	41.7	15.1	54.40	-270.5	1,466.5	668.0	620.2	47.75	13.990	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design:	WILD THING FED COM PROJECT - _WILD THING FED COM 903H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program:	0-r.5 MWD+IFR1+SAG+FDIR, 10342-r.5 MWD+IFR1+SAG+FDIR											Offset Well Error:	0.0 usft
Reference	Offset		Semi Major Axis		Offset Wellbore Centre		Distance			Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
11,390.6	10,882.0	10,664.6	10,591.9	41.7	15.1	52.97	-272.6	1,466.5	679.0	631.5	47.52	14.289	
11,400.0	10,882.1	10,650.0	10,579.3	41.8	15.1	51.79	-280.0	1,466.6	685.9	638.7	47.22	14.525	
11,500.0	10,882.1	10,650.0	10,579.3	41.9	15.1	51.79	-280.0	1,466.6	759.4	713.1	46.32	16.394	
11,600.0	10,882.2	10,617.3	10,550.5	42.0	15.0	49.23	-295.4	1,466.7	836.9	791.7	45.20	18.517	
11,700.0	10,882.2	10,600.0	10,534.9	42.2	15.0	47.92	-302.9	1,466.7	918.0	873.6	44.42	20.669	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 904H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program:		0-r.5 MWD+IFR1, 10177-r.5 MWD+IFR1+SAG+FDIR						Rule Assigned:				Offset Well Error:	0.0 usft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Warning						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
3,200.0	3,159.3	3,215.3	3,225.8	10.4	10.5	-23.38	202.6	1,300.2	997.2	978.1	19.19	51.978		
3,300.0	3,255.9	3,310.5	3,320.6	10.8	10.9	-23.65	195.8	1,295.4	966.9	947.1	19.86	48.681		
3,400.0	3,352.5	3,405.7	3,415.4	11.2	11.2	-23.95	189.0	1,290.6	936.6	916.1	20.55	45.584		
3,500.0	3,449.1	3,500.9	3,510.2	11.7	11.6	-24.26	182.2	1,285.9	906.3	885.1	21.24	42.673		
3,600.0	3,545.7	3,596.1	3,605.1	12.1	11.9	-24.60	175.4	1,281.1	876.1	854.1	21.94	39.935		
3,700.0	3,642.3	3,691.3	3,699.9	12.6	12.3	-24.96	168.6	1,276.4	845.8	823.2	22.64	37.356		
3,800.0	3,738.8	3,786.4	3,794.7	13.0	12.6	-25.35	161.8	1,271.6	815.7	792.3	23.35	34.927		
3,900.0	3,835.4	3,881.6	3,889.5	13.5	13.0	-25.76	155.0	1,266.8	785.5	761.4	24.07	32.635		
4,000.0	3,932.0	3,976.8	3,984.3	13.9	13.3	-26.21	148.2	1,262.1	755.4	730.6	24.79	30.472		
4,100.0	4,028.6	4,072.0	4,079.2	14.4	13.7	-26.70	141.4	1,257.3	725.3	699.8	25.51	28.428		
4,200.0	4,125.2	4,167.2	4,174.0	14.9	14.1	-27.23	134.6	1,252.6	695.3	669.0	26.24	26.494		
4,300.0	4,221.8	4,262.4	4,268.8	15.3	14.4	-27.80	127.8	1,247.8	665.3	638.4	26.98	24.665		
4,400.0	4,318.4	4,357.5	4,363.6	15.8	14.8	-28.43	121.0	1,243.1	635.4	607.7	27.71	22.931		
4,500.0	4,415.0	4,452.7	4,458.4	16.3	15.1	-29.13	114.2	1,238.3	605.6	577.2	28.45	21.289		
4,600.0	4,511.6	4,547.9	4,553.3	16.7	15.5	-29.89	107.4	1,233.5	575.9	546.7	29.19	19.731		
4,700.0	4,608.2	4,643.1	4,648.1	17.2	15.8	-30.73	100.6	1,228.8	546.3	516.4	29.93	18.253		
4,800.0	4,704.8	4,738.3	4,742.9	17.7	16.2	-31.68	93.8	1,224.0	516.8	486.1	30.67	16.850		
4,900.0	4,801.4	4,833.4	4,837.7	18.2	16.6	-32.73	87.0	1,219.3	487.4	456.0	31.41	15.518		
5,000.0	4,898.0	4,928.6	4,932.5	18.6	16.9	-33.92	80.2	1,214.5	458.2	426.1	32.15	14.254		
5,100.0	4,994.6	5,025.2	5,028.8	19.1	17.3	-35.28	73.3	1,209.7	429.2	396.4	32.87	13.060		
5,200.0	5,091.1	5,133.8	5,136.7	19.6	17.7	-36.89	63.6	1,202.8	398.6	365.1	33.50	11.899		
5,300.0	5,187.7	5,240.2	5,242.0	20.1	18.2	-38.47	50.7	1,193.9	365.0	330.9	34.09	10.707		
5,400.0	5,284.3	5,336.1	5,336.3	20.6	18.6	-40.02	37.2	1,184.4	329.5	294.7	34.79	9.471		
5,500.0	5,380.9	5,429.1	5,428.0	21.0	19.0	-41.88	24.0	1,175.1	294.1	258.6	35.52	8.279		
5,600.0	5,477.5	5,522.1	5,519.6	21.5	19.4	-44.23	10.7	1,165.8	259.0	222.8	36.23	7.150		
5,700.0	5,574.1	5,615.2	5,611.2	22.0	19.8	-47.30	-2.5	1,156.6	224.5	187.6	36.89	6.087		
5,800.0	5,670.7	5,708.2	5,702.9	22.5	20.3	-51.45	-15.7	1,147.3	190.8	153.3	37.45	5.094		
5,900.0	5,767.3	5,801.3	5,794.5	23.0	20.7	-57.28	-29.0	1,138.0	158.3	120.5	37.83	4.186		
6,000.0	5,863.9	5,894.3	5,886.1	23.5	21.1	-65.84	-42.2	1,128.8	128.1	90.3	37.82	3.389		
6,100.0	5,960.5	5,987.4	5,977.8	23.9	21.5	-78.80	-55.5	1,119.5	102.3	65.2	37.07	2.759 Normal Operations		
6,200.0	6,057.1	6,080.4	6,069.4	24.4	21.9	-97.90	-68.7	1,110.2	84.8	49.4	35.40	2.394 Caution - Monitor Closely		
6,272.0	6,126.7	6,147.5	6,135.4	24.8	22.2	-114.86	-78.2	1,103.6	80.6	46.0	34.52	2.334 Caution - Monitor Closely, CC, ES, SF		
6,300.0	6,153.7	6,173.5	6,161.0	24.9	22.3	-121.60	-81.9	1,101.0	81.2	46.7	34.55	2.351 Caution - Monitor Closely		
6,400.0	6,250.3	6,266.5	6,252.7	25.4	22.7	-143.29	-95.2	1,091.7	93.2	56.9	36.30	2.568 Normal Operations		
6,500.0	6,346.8	6,359.6	6,344.3	25.9	23.1	-158.82	-108.4	1,082.4	116.0	77.2	38.83	2.988 Normal Operations		
6,600.0	6,443.4	6,452.6	6,435.9	26.4	23.6	-169.08	-121.6	1,073.2	144.7	103.8	40.90	3.537		
6,700.0	6,540.0	6,545.7	6,527.6	26.9	24.0	-175.95	-134.9	1,063.9	176.3	133.8	42.52	4.146		
6,800.0	6,636.6	6,638.7	6,619.2	27.4	24.4	-179.26	-148.1	1,054.6	209.5	165.7	43.84	4.780		
6,900.0	6,733.2	6,731.8	6,710.8	27.9	24.8	-175.77	-161.3	1,045.4	243.8	198.8	44.99	5.418		
7,000.0	6,829.8	6,824.8	6,802.5	28.3	25.2	-173.13	-174.6	1,036.1	278.6	232.6	46.03	6.052		
7,100.0	6,926.4	6,917.9	6,894.1	28.8	25.6	-171.08	-187.8	1,026.8	313.8	266.8	47.01	6.676		
7,200.0	7,023.0	7,010.9	6,985.7	29.3	26.0	-169.43	-201.0	1,017.6	349.4	301.4	47.94	7.288		
7,300.0	7,119.6	7,104.0	7,077.4	29.8	26.5	-168.09	-214.3	1,008.3	385.1	336.3	48.84	7.885		
7,400.0	7,216.2	7,201.1	7,173.2	30.3	26.9	-167.01	-227.6	999.0	420.6	370.8	49.83	8.441		
7,500.0	7,312.8	7,299.7	7,270.6	30.8	27.3	-166.25	-239.7	990.5	455.2	404.4	50.81	8.959		
7,600.0	7,409.4	7,399.2	7,369.2	31.3	27.7	-165.76	-250.6	982.9	488.7	437.0	51.75	9.443		
7,693.8	7,500.0	7,493.4	7,462.8	31.8	28.1	-165.50	-259.5	976.6	519.2	466.6	52.62	9.867		
7,700.0	7,506.0	7,499.6	7,469.0	31.8	28.2	-165.50	-260.1	976.2	521.2	468.5	52.67	9.894		
7,800.0	7,603.0	7,601.4	7,570.3	32.3	28.6	-165.50	-268.3	970.5	550.7	497.1	53.61	10.274		
7,900.0	7,700.9	7,705.0	7,673.5	32.8	29.0	-165.53	-275.1	965.7	575.9	521.4	54.48	10.571		
8,000.0	7,799.4	7,810.0	7,778.3	33.3	29.3	-165.60	-280.5	961.9	596.6	541.3	55.32	10.785		

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 904H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 10177-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
8,043.8	7,842.8	7,856.4	7,824.6	33.4	29.5	165.64	-282.3	960.6	604.3	548.6	55.66	10.857	
8,100.0	7,898.4	7,916.0	7,884.2	33.7	29.7	165.66	-284.3	959.3	613.3	557.2	56.08	10.936	
8,200.0	7,997.4	8,022.5	7,990.7	34.1	30.0	165.81	-286.5	957.7	628.5	571.7	56.81	11.062	
8,300.0	8,096.4	8,128.2	8,096.4	34.5	30.2	166.09	-287.1	957.3	642.4	585.3	57.17	11.237	
8,400.0	8,195.5	8,227.3	8,195.5	35.0	30.2	166.38	-287.1	957.3	656.0	598.3	57.65	11.378	
8,500.0	8,294.5	8,326.3	8,294.5	35.4	30.2	166.66	-287.1	957.3	669.5	611.4	58.13	11.518	
8,600.0	8,393.5	8,425.3	8,393.5	35.8	30.2	166.93	-287.1	957.3	683.1	624.5	58.61	11.654	
8,700.0	8,492.5	8,524.4	8,492.5	36.3	30.2	167.19	-287.1	957.3	696.6	637.5	59.10	11.787	
8,800.0	8,591.6	8,623.4	8,591.6	36.7	30.2	167.44	-287.1	957.3	710.2	650.6	59.59	11.918	
8,900.0	8,690.6	8,722.4	8,690.6	37.1	30.3	167.68	-287.1	957.3	723.8	663.7	60.09	12.045	
9,000.0	8,789.6	8,821.4	8,789.6	37.6	30.3	167.91	-287.1	957.3	737.4	676.8	60.59	12.170	
9,100.0	8,888.6	8,920.5	8,888.6	38.0	30.3	168.13	-287.1	957.3	751.0	690.0	61.10	12.293	
9,101.4	8,890.0	8,921.8	8,890.0	38.0	30.3	168.13	-287.1	957.3	751.2	690.1	61.10	12.295	
9,200.0	8,987.8	9,019.7	8,987.8	38.4	30.3	168.36	-287.1	957.3	763.4	701.8	61.60	12.394	
9,300.0	9,087.3	9,119.1	9,087.3	38.8	30.3	168.54	-287.1	957.3	773.3	711.2	62.08	12.456	
9,400.0	9,187.1	9,218.9	9,187.1	39.2	30.3	168.67	-287.1	957.3	780.6	718.1	62.53	12.483	
9,500.0	9,286.9	9,318.7	9,286.9	39.5	30.3	168.76	-287.1	957.3	785.3	722.4	62.95	12.476	
9,600.0	9,386.9	9,418.7	9,386.9	39.8	30.4	168.79	-287.1	957.3	787.5	724.2	63.29	12.443	
9,634.7	9,421.6	9,453.4	9,421.6	39.9	30.4	-93.73	-287.1	957.3	787.7	724.6	63.09	12.484	
9,700.0	9,486.9	9,518.7	9,486.9	39.9	30.4	-93.73	-287.1	957.3	787.7	724.6	63.11	12.481	
9,800.0	9,586.9	9,618.7	9,586.9	39.9	30.4	-93.73	-287.1	957.3	787.7	724.5	63.15	12.473	
9,900.0	9,686.9	9,718.7	9,686.9	39.9	30.4	-93.73	-287.1	957.3	787.7	724.5	63.19	12.466	
10,000.0	9,786.9	9,818.7	9,786.9	39.9	30.4	-93.73	-287.1	957.3	787.7	724.4	63.23	12.458	
10,100.0	9,886.9	9,918.7	9,886.9	39.9	30.5	-93.73	-287.1	957.3	787.7	724.4	63.26	12.450	
10,200.0	9,986.9	10,018.7	9,986.9	40.0	30.5	-93.73	-287.1	957.3	787.7	724.4	63.30	12.443	
10,300.0	10,086.9	10,118.7	10,086.9	40.0	30.5	-93.73	-287.1	957.3	787.7	724.3	63.34	12.435	
10,400.0	10,186.9	10,222.3	10,190.5	40.0	30.5	-93.60	-285.3	957.3	787.6	724.2	63.40	12.422	
10,500.0	10,286.9	10,327.6	10,294.1	40.0	30.6	-92.30	-267.4	957.2	786.8	723.4	63.36	12.417	
10,538.8	10,325.7	10,366.2	10,331.0	40.0	30.6	-91.48	-256.1	957.1	786.5	723.2	63.28	12.428	
10,548.7	10,335.6	10,375.8	10,340.0	40.0	30.6	108.76	-252.9	957.1	786.4	722.6	63.83	12.321	
10,550.0	10,336.9	10,377.0	10,341.2	40.0	30.6	108.80	-252.5	957.1	786.4	722.6	63.86	12.314	
10,600.0	10,386.8	10,422.2	10,382.9	40.1	30.6	110.12	-235.4	957.0	787.4	723.8	63.69	12.363	
10,650.0	10,436.2	10,461.6	10,418.2	40.2	30.6	111.43	-217.8	956.9	790.8	727.4	63.43	12.468	
10,700.0	10,484.8	10,494.9	10,447.0	40.3	30.7	112.48	-201.1	956.7	797.1	734.0	63.06	12.641	
10,750.0	10,532.2	10,522.0	10,469.7	40.5	30.7	113.09	-186.2	956.7	806.8	744.2	62.58	12.892	
10,800.0	10,578.0	10,543.4	10,487.1	40.6	30.7	113.11	-173.8	956.6	820.2	758.2	62.02	13.226	
10,850.0	10,621.8	10,559.6	10,499.9	40.7	30.7	112.48	-163.9	956.5	837.5	776.1	61.37	13.646	
10,900.0	10,663.5	10,571.2	10,509.0	40.9	30.7	111.14	-156.7	956.5	858.5	797.8	60.66	14.151	
10,950.0	10,702.5	10,578.8	10,514.8	41.0	30.7	109.04	-151.8	956.4	883.0	823.1	59.93	14.735	
10,988.8	10,730.8	10,582.4	10,517.5	41.1	30.7	106.89	-149.5	956.4	904.3	845.0	59.35	15.238	
11,000.0	10,738.7	10,583.0	10,518.0	41.1	30.7	105.42	-149.1	956.4	910.8	851.6	59.18	15.391	
11,025.0	10,755.6	10,583.9	10,518.7	41.2	30.7	102.20	-148.5	956.4	925.3	866.5	58.79	15.740	
11,050.0	10,771.5	10,583.9	10,518.7	41.3	30.7	99.04	-148.5	956.4	940.0	881.7	58.39	16.098	
11,075.0	10,786.6	10,583.2	10,518.2	41.3	30.7	95.95	-148.9	956.4	954.9	896.9	58.00	16.465	
11,100.0	10,800.6	10,581.8	10,517.1	41.4	30.7	92.92	-149.8	956.4	970.0	912.4	57.61	16.838	
11,125.0	10,813.7	10,579.8	10,515.6	41.4	30.7	89.96	-151.1	956.4	985.0	927.8	57.21	17.216	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 905H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
2,700.0	2,676.3	2,842.4	2,837.7	8.3	10.2	-21.33	171.1	1,154.9	980.6	962.5	18.15	54.044	
2,800.0	2,772.9	2,934.1	2,927.9	8.7	10.6	-21.45	161.2	1,141.7	940.7	921.9	18.85	49.894	
2,900.0	2,869.5	3,025.7	3,018.0	9.1	11.0	-21.59	151.2	1,128.4	900.8	881.2	19.58	46.015	
3,000.0	2,966.1	3,117.4	3,108.2	9.5	11.4	-21.73	141.3	1,115.2	860.9	840.6	20.31	42.388	
3,100.0	3,062.7	3,209.1	3,198.4	9.9	11.7	-21.89	131.4	1,102.0	821.0	799.9	21.05	38.995	
3,200.0	3,159.3	3,300.7	3,288.5	10.4	12.1	-22.07	121.4	1,088.7	781.1	759.3	21.81	35.818	
3,300.0	3,255.9	3,392.4	3,378.7	10.8	12.5	-22.27	111.5	1,075.5	741.2	718.6	22.57	32.841	
3,400.0	3,352.5	3,484.1	3,468.8	11.2	12.9	-22.49	101.6	1,062.3	701.3	678.0	23.34	30.049	
3,500.0	3,449.1	3,575.7	3,559.0	11.7	13.3	-22.74	91.6	1,049.1	661.4	637.3	24.12	27.427	
3,600.0	3,545.7	3,667.4	3,649.2	12.1	13.7	-23.01	81.7	1,035.8	621.6	596.7	24.90	24.963	
3,700.0	3,642.3	3,759.1	3,739.3	12.6	14.1	-23.33	71.8	1,022.6	581.7	556.0	25.69	22.644	
3,800.0	3,738.8	3,850.7	3,829.5	13.0	14.5	-23.69	61.8	1,009.4	541.9	515.4	26.48	20.460	
3,900.0	3,835.4	3,942.4	3,919.6	13.5	14.9	-24.11	51.9	996.1	502.1	474.8	27.29	18.400	
4,000.0	3,932.0	4,034.1	4,009.8	13.9	15.3	-24.60	42.0	982.9	462.3	434.2	28.09	16.456	
4,100.0	4,028.6	4,125.7	4,100.0	14.4	15.7	-25.19	32.0	969.7	422.5	393.6	28.90	14.619	
4,200.0	4,125.2	4,217.4	4,190.1	14.9	16.1	-25.89	22.1	956.4	382.8	353.1	29.72	12.882	
4,300.0	4,221.8	4,309.1	4,280.3	15.3	16.5	-26.76	12.2	943.2	343.2	312.6	30.53	11.239	
4,400.0	4,318.4	4,400.7	4,370.4	15.8	16.9	-27.85	2.2	930.0	303.6	272.2	31.35	9.684	
4,500.0	4,415.0	4,492.4	4,460.6	16.3	17.4	-29.27	-7.7	916.7	264.2	232.0	32.17	8.212	
4,600.0	4,511.6	4,584.1	4,550.8	16.7	17.8	-31.18	-17.7	903.5	224.9	191.9	32.97	6.821	
4,700.0	4,608.2	4,675.7	4,640.9	17.2	18.2	-33.88	-27.6	890.3	185.9	152.2	33.74	5.511	
4,800.0	4,704.8	4,767.4	4,731.1	17.7	18.6	-37.99	-37.5	877.0	147.5	113.1	34.42	4.286	
4,900.0	4,801.4	4,859.1	4,821.2	18.2	19.0	-44.86	-47.5	863.8	110.2	75.4	34.81	3.166	
5,000.0	4,898.0	4,950.7	4,911.4	18.6	19.4	-58.00	-57.4	850.6	75.7	41.5	34.16	2.216 Caution - Monitor Closely	
5,100.0	4,994.6	5,042.4	5,001.6	19.1	19.8	-86.21	-67.3	837.3	50.1	20.3	29.79	1.681 Caution - Monitor Closely, SF	
5,150.9	5,043.7	5,089.1	5,047.5	19.4	20.0	-108.41	-72.4	830.6	45.7	18.9	26.82	1.705 Caution - Monitor Closely, CC, ES	
5,200.0	5,091.1	5,134.1	5,091.7	19.6	20.2	-129.87	-77.3	824.1	49.8	22.2	27.51	1.809 Caution - Monitor Closely	
5,300.0	5,187.7	5,225.7	5,181.9	20.1	20.6	-158.47	-87.2	810.9	75.1	42.0	33.08	2.271 Caution - Monitor Closely	
5,400.0	5,284.3	5,317.4	5,272.0	20.6	21.1	-171.79	-97.1	797.6	109.5	73.3	36.28	3.020	
5,500.0	5,380.9	5,409.1	5,362.2	21.0	21.5	-178.73	-107.1	784.4	146.8	108.7	38.15	3.848	
5,600.0	5,477.5	5,500.7	5,452.4	21.5	21.9	-177.12	-117.0	771.2	185.2	145.7	39.53	4.686	
5,700.0	5,574.1	5,592.4	5,542.5	22.0	22.3	-174.40	-126.9	757.9	224.2	183.5	40.68	5.510	
5,800.0	5,670.7	5,684.0	5,632.7	22.5	22.7	-172.47	-136.9	744.7	263.4	221.7	41.72	6.314	
5,900.0	5,767.3	5,775.7	5,722.8	23.0	23.1	-171.05	-146.8	731.5	302.9	260.2	42.70	7.093	
6,000.0	5,863.9	5,867.4	5,813.0	23.5	23.5	-169.95	-156.8	718.2	342.4	298.8	43.64	7.847	
6,100.0	5,960.5	5,959.0	5,903.2	23.9	23.9	-169.08	-166.7	705.0	382.1	337.5	44.55	8.575	
6,200.0	6,057.1	6,050.7	5,993.3	24.4	24.4	-168.37	-176.6	691.8	421.8	376.3	45.45	9.279	
6,300.0	6,153.7	6,142.4	6,083.5	24.9	24.8	-167.79	-186.6	678.5	461.5	415.2	46.34	9.959	
6,400.0	6,250.3	6,234.0	6,173.6	25.4	25.2	-167.29	-196.5	665.3	501.3	454.1	47.22	10.616	
6,500.0	6,346.8	6,325.7	6,263.8	25.9	25.6	-166.87	-206.4	652.1	541.1	493.0	48.09	11.251	
6,600.0	6,443.4	6,417.4	6,354.0	26.4	26.0	-166.51	-216.4	638.8	581.0	532.0	48.96	11.865	
6,700.0	6,540.0	6,509.0	6,444.1	26.9	26.4	-166.20	-226.3	625.6	620.8	571.0	49.83	12.459	
6,800.0	6,636.6	6,600.7	6,534.3	27.4	26.9	-165.92	-236.2	612.4	660.7	610.0	50.69	13.033	
6,900.0	6,733.2	6,692.4	6,624.4	27.9	27.3	-165.67	-246.2	599.1	700.5	649.0	51.55	13.588	
7,000.0	6,829.8	6,784.0	6,714.6	28.3	27.7	-165.45	-256.1	585.9	740.4	688.0	52.41	14.126	
7,100.0	6,926.4	6,875.7	6,804.8	28.8	28.1	-165.25	-266.0	572.7	780.3	727.1	53.27	14.647	
7,200.0	7,023.0	6,967.4	6,894.9	29.3	28.5	-165.07	-276.0	559.4	820.2	766.1	54.13	15.152	
7,300.0	7,119.6	7,059.0	6,985.1	29.8	28.9	-164.91	-285.9	546.2	860.1	805.1	54.99	15.642	
7,400.0	7,216.2	7,150.7	7,075.2	30.3	29.4	-164.76	-295.8	533.0	900.0	844.2	55.85	16.116	
7,500.0	7,312.8	7,245.3	7,168.3	30.8	29.8	-164.63	-306.1	519.3	939.9	883.2	56.74	16.565	
7,600.0	7,409.4	7,353.1	7,274.6	31.3	30.3	-164.53	-316.9	504.9	978.8	921.0	57.82	16.928	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 906H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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	18.0	0.0	0.0	-90.11	-0.5	-290.6	291.2				
100.0	100.0	82.0	100.0	0.8	1.0	-90.11	-0.5	-290.6	290.6	288.4	2.23	130.408	
200.0	200.0	182.0	200.0	1.4	1.6	-90.11	-0.5	-290.6	290.6	287.1	3.50	82.946	
300.0	300.0	282.0	300.0	1.9	2.0	-90.11	-0.5	-290.6	290.6	286.3	4.35	66.837	
400.0	400.0	382.0	400.0	2.2	2.4	-90.11	-0.5	-290.6	290.6	285.6	5.04	57.632	
500.0	500.0	482.0	500.0	2.6	2.7	-90.11	-0.5	-290.6	290.6	285.0	5.65	51.446	
600.0	600.0	582.0	600.0	2.8	2.9	-90.11	-0.5	-290.6	290.6	284.4	6.20	46.906	
700.0	700.0	682.0	700.0	3.1	3.2	-90.11	-0.5	-290.6	290.6	283.9	6.70	43.385	
800.0	800.0	782.0	800.0	3.3	3.4	-90.11	-0.5	-290.6	290.6	283.4	7.17	40.546	
900.0	900.0	882.0	900.0	3.6	3.7	-90.11	-0.5	-290.6	290.6	283.0	7.61	38.192	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-90.11	-0.5	-290.6	290.6	282.6	8.03	36.198	
1,100.0	1,100.0	1,085.0	1,103.0	4.0	4.1	-90.27	-1.4	-290.2	290.2	281.7	8.43	34.422	
1,200.0	1,200.0	1,188.6	1,206.5	4.2	4.3	-90.92	-4.6	-288.4	288.5	279.7	8.80	32.773	
1,300.0	1,300.0	1,291.8	1,309.6	4.4	4.6	-92.08	-10.4	-285.4	285.7	276.6	9.16	31.178	
1,400.0	1,400.0	1,394.7	1,412.0	4.6	4.9	-93.77	-18.5	-281.0	281.9	272.4	9.51	29.630	
1,500.0	1,500.0	1,497.0	1,513.6	4.7	5.2	-96.02	-29.0	-275.4	277.3	267.5	9.85	28.146	
1,600.0	1,600.0	1,598.7	1,614.3	5.0	5.5	151.35	-41.9	-268.6	273.8	263.5	10.24	26.727	
1,673.8	1,673.7	1,673.4	1,687.9	5.2	5.7	149.26	-52.8	-262.8	273.0	262.5	10.47	26.074 CC, ES	
1,700.0	1,699.8	1,699.4	1,713.5	5.3	5.7	148.54	-56.8	-260.7	273.1	262.5	10.54	25.918	
1,750.0	1,749.7	1,749.0	1,762.3	5.3	5.9	147.22	-64.4	-256.7	274.0	263.3	10.65	25.728	
1,800.0	1,799.5	1,798.6	1,811.2	5.4	6.0	149.04	-72.0	-252.6	275.8	265.1	10.77	25.615	
1,900.0	1,898.7	1,897.8	1,908.9	5.7	6.4	150.62	-87.2	-244.5	282.4	271.2	11.16	25.302	
2,000.0	1,997.5	1,996.8	2,006.4	6.0	6.7	150.97	-102.4	-236.5	292.6	281.1	11.57	25.289 SF	
2,100.0	2,095.7	2,095.5	2,103.6	6.3	7.1	150.88	-117.5	-228.4	306.4	294.4	12.00	25.528	
2,200.0	2,193.2	2,193.8	2,200.4	6.7	7.4	150.68	-132.6	-220.4	323.6	311.1	12.45	25.979	
2,258.8	2,250.1	2,251.3	2,257.1	6.8	7.7	150.58	-141.4	-215.7	335.2	322.5	12.67	26.445	
2,300.0	2,290.0	2,291.6	2,296.8	6.9	7.8	150.26	-147.6	-212.4	343.7	330.9	12.82	26.808	
2,400.0	2,386.6	2,389.4	2,393.0	7.3	8.2	149.56	-162.6	-204.4	364.4	351.2	13.26	27.488	
2,500.0	2,483.1	2,487.1	2,489.2	7.6	8.6	148.94	-177.6	-196.5	385.2	371.5	13.71	28.093	
2,600.0	2,579.7	2,584.8	2,585.5	8.0	9.0	148.38	-192.6	-188.5	406.1	391.9	14.18	28.630	
2,700.0	2,676.3	2,682.6	2,681.7	8.3	9.4	147.87	-207.5	-180.5	426.9	412.3	14.67	29.109	
2,800.0	2,772.9	2,780.3	2,778.0	8.7	9.8	147.41	-222.5	-172.6	447.8	432.6	15.16	29.535	
2,900.0	2,869.5	2,878.0	2,874.2	9.1	10.2	146.99	-237.5	-164.6	468.7	453.1	15.67	29.915	
3,000.0	2,966.1	2,975.8	2,970.5	9.5	10.6	146.61	-252.5	-156.6	489.7	473.5	16.16	30.301	
3,100.0	3,062.7	3,073.3	3,066.6	9.9	11.0	146.31	-267.1	-148.9	510.6	494.0	16.67	30.627	
3,200.0	3,159.3	3,170.8	3,162.9	10.4	11.4	146.12	-280.9	-141.5	531.7	514.5	17.21	30.888	
3,300.0	3,255.9	3,268.4	3,259.3	10.8	11.8	146.04	-294.0	-134.5	552.7	535.0	17.76	31.120	
3,400.0	3,352.5	3,365.9	3,355.8	11.2	12.2	146.04	-306.5	-127.9	573.8	555.5	18.32	31.322	
3,500.0	3,449.1	3,463.5	3,452.5	11.7	12.6	146.13	-318.1	-121.7	595.0	576.1	18.89	31.497	
3,600.0	3,545.7	3,561.0	3,549.2	12.1	13.0	146.29	-329.1	-115.9	616.1	596.7	19.47	31.648	
3,700.0	3,642.3	3,658.4	3,645.9	12.6	13.4	146.52	-339.3	-110.5	637.4	617.3	20.06	31.778	
3,800.0	3,738.8	3,755.8	3,742.7	13.0	13.7	146.80	-348.8	-105.5	658.6	638.0	20.65	31.889	
3,900.0	3,835.4	3,853.1	3,839.5	13.5	14.1	147.14	-357.5	-100.8	680.0	658.7	21.26	31.982	
4,000.0	3,932.0	3,950.3	3,936.2	13.9	14.5	147.53	-365.5	-96.5	701.4	679.5	21.88	32.060	
4,100.0	4,028.6	4,047.3	4,033.0	14.4	14.9	147.96	-372.8	-92.7	722.9	700.4	22.50	32.125	
4,200.0	4,125.2	4,144.3	4,129.7	14.9	15.2	148.43	-379.4	-89.2	744.5	721.4	23.14	32.179	
4,300.0	4,221.8	4,241.1	4,226.3	15.3	15.6	148.93	-385.2	-86.1	766.2	742.5	23.78	32.223	
4,400.0	4,318.4	4,337.8	4,322.8	15.8	15.9	149.47	-390.3	-83.4	788.1	763.7	24.43	32.258	
4,500.0	4,415.0	4,434.4	4,419.2	16.3	16.2	150.03	-394.6	-81.1	810.1	785.0	25.09	32.288	
4,600.0	4,511.6	4,530.7	4,515.5	16.7	16.6	150.63	-398.3	-79.1	832.3	806.6	25.76	32.312	
4,700.0	4,608.2	4,626.9	4,611.6	17.2	16.9	151.24	-401.2	-77.6	854.7	828.3	26.43	32.333	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 906H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
4,800.0	4,704.8	4,722.8	4,707.5	17.7	17.1	151.88	-403.4	-76.4	877.3	850.2	27.12	32.351		
4,900.0	4,801.4	4,818.6	4,803.2	18.2	17.4	152.53	-404.9	-75.6	900.1	872.3	27.81	32.370		
5,000.0	4,898.0	4,914.1	4,898.7	18.6	17.6	153.20	-405.7	-75.2	923.1	894.6	28.50	32.395		
5,100.0	4,994.6	5,009.9	4,994.6	19.1	17.7	153.89	-405.8	-75.1	946.4	917.2	29.20	32.415		
5,200.0	5,091.1	5,106.5	5,091.1	19.6	17.7	154.56	-405.8	-75.1	969.9	940.0	29.88	32.458		
5,300.0	5,187.7	5,203.1	5,187.7	20.1	17.7	155.20	-405.8	-75.1	993.5	962.9	30.57	32.502		

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 907H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 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)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	18.0	0.0	0.0	-90.11	-0.6	-320.6	321.1				
100.0	100.0	82.0	100.0	0.8	1.0	-90.11	-0.6	-320.6	320.6	318.4	2.23	143.871	
200.0	200.0	182.0	200.0	1.4	1.6	-90.11	-0.6	-320.6	320.6	317.1	3.50	91.509	
300.0	300.0	282.0	300.0	1.9	2.0	-90.11	-0.6	-320.6	320.6	316.3	4.35	73.736	
400.0	400.0	382.0	400.0	2.2	2.4	-90.11	-0.6	-320.6	320.6	315.6	5.04	63.582	
500.0	500.0	482.0	500.0	2.6	2.7	-90.11	-0.6	-320.6	320.6	315.0	5.65	56.756	
600.0	600.0	582.0	600.0	2.8	2.9	-90.11	-0.6	-320.6	320.6	314.4	6.20	51.748	
700.0	700.0	682.0	700.0	3.1	3.2	-90.11	-0.6	-320.6	320.6	313.9	6.70	47.864	
800.0	800.0	782.0	800.0	3.3	3.4	-90.11	-0.6	-320.6	320.6	313.4	7.17	44.732	
900.0	900.0	882.0	900.0	3.6	3.7	-90.11	-0.6	-320.6	320.6	313.0	7.61	42.135	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-90.11	-0.6	-320.6	320.6	312.6	8.03	39.934	
1,100.0	1,100.0	1,082.0	1,100.0	4.0	4.1	-90.11	-0.6	-320.6	320.6	312.2	8.43	38.037	
1,200.0	1,200.0	1,182.0	1,200.0	4.2	4.3	-90.11	-0.6	-320.6	320.6	311.8	8.81	36.378	
1,300.0	1,300.0	1,282.0	1,300.0	4.4	4.4	-90.11	-0.6	-320.6	320.6	311.4	9.18	34.911	
1,400.0	1,400.0	1,382.0	1,400.0	4.6	4.6	-90.11	-0.6	-320.6	320.6	311.1	9.54	33.601	
1,500.0	1,500.0	1,482.0	1,500.0	4.7	4.8	-90.11	-0.6	-320.6	320.6	310.7	9.89	32.421 CC, ES	
1,600.0	1,600.0	1,582.0	1,600.0	5.0	5.0	159.98	-0.6	-320.6	322.2	311.9	10.30	31.279	
1,700.0	1,699.8	1,681.8	1,699.8	5.3	5.1	160.27	-0.6	-320.6	327.2	316.5	10.71	30.561	
1,750.0	1,749.7	1,731.7	1,749.7	5.3	5.2	160.47	-0.6	-320.6	330.9	320.0	10.84	30.534	
1,800.0	1,799.5	1,781.5	1,799.5	5.4	5.3	163.77	-0.6	-320.6	335.4	324.4	10.97	30.570	
1,900.0	1,898.7	1,880.7	1,898.7	5.7	5.5	168.11	-0.6	-320.6	347.1	335.7	11.41	30.422 SF	
2,000.0	1,997.5	1,979.5	1,997.5	6.0	5.6	170.88	-0.6	-320.6	362.3	350.4	11.87	30.515	
2,100.0	2,095.7	2,077.7	2,095.7	6.3	5.8	172.84	-0.6	-320.6	381.0	368.6	12.36	30.827	
2,200.0	2,193.2	2,175.2	2,193.2	6.7	5.9	174.30	-0.6	-320.6	403.1	390.2	12.86	31.332	
2,258.8	2,250.1	2,232.1	2,250.1	6.8	6.0	175.01	-0.6	-320.6	417.6	404.5	13.11	31.857	
2,300.0	2,290.0	2,272.0	2,290.0	6.9	6.0	175.13	-0.6	-320.6	428.3	415.0	13.27	32.266	
2,400.0	2,386.6	2,368.6	2,386.6	7.3	6.2	175.41	-0.6	-320.6	454.1	440.3	13.75	33.031	
2,500.0	2,483.1	2,465.1	2,483.1	7.6	6.3	175.66	-0.6	-320.6	479.9	465.6	14.24	33.698	
2,600.0	2,579.7	2,558.0	2,575.9	8.0	6.5	175.83	-1.0	-320.8	505.9	491.2	14.75	34.301	
2,700.0	2,676.3	2,648.2	2,666.1	8.3	6.6	175.78	-3.0	-322.2	533.0	517.8	15.24	34.986	
2,800.0	2,772.9	2,737.7	2,755.5	8.7	6.7	175.54	-6.8	-324.6	561.3	545.5	15.72	35.694	
2,900.0	2,869.5	2,826.5	2,844.1	9.1	6.9	175.15	-12.3	-328.2	590.6	574.4	16.22	36.406	
3,000.0	2,966.1	2,914.5	2,931.7	9.5	7.0	174.62	-19.5	-332.8	621.1	604.4	16.73	37.125	
3,100.0	3,062.7	3,000.0	3,016.6	9.9	7.2	173.99	-28.0	-338.4	652.8	635.6	17.24	37.871	
3,200.0	3,159.3	3,087.6	3,103.3	10.4	7.4	173.26	-38.5	-345.2	685.7	667.9	17.77	38.596	
3,300.0	3,255.9	3,173.2	3,187.8	10.8	7.5	172.47	-50.2	-352.8	719.9	701.6	18.27	39.411	
3,400.0	3,352.5	3,266.4	3,279.5	11.2	7.7	171.62	-63.8	-361.6	754.6	735.8	18.83	40.082	
3,500.0	3,449.1	3,359.6	3,371.3	11.7	8.0	170.84	-77.4	-370.5	789.6	770.1	19.42	40.660	
3,600.0	3,545.7	3,452.8	3,463.1	12.1	8.2	170.13	-91.0	-379.3	824.6	804.6	20.02	41.183	
3,700.0	3,642.3	3,546.0	3,554.8	12.6	8.5	169.48	-104.5	-388.1	859.7	839.1	20.64	41.655	
3,800.0	3,738.8	3,639.2	3,646.6	13.0	8.7	168.88	-118.1	-396.9	895.0	873.7	21.27	42.082	
3,900.0	3,835.4	3,732.4	3,738.4	13.5	9.0	168.32	-131.7	-405.7	930.3	908.4	21.91	42.468	
4,000.0	3,932.0	3,825.6	3,830.2	13.9	9.3	167.81	-145.2	-414.5	965.7	943.1	22.55	42.816	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 908H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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	18.0	0.0	0.0	-90.10	-0.6	-350.6	351.1				
100.0	100.0	82.0	100.0	0.8	1.0	-90.10	-0.6	-350.6	350.6	348.4	2.23	157.333	
200.0	200.0	182.0	200.0	1.4	1.6	-90.10	-0.6	-350.6	350.6	347.1	3.50	100.072	
300.0	300.0	282.0	300.0	1.9	2.0	-90.10	-0.6	-350.6	350.6	346.3	4.35	80.636	
400.0	400.0	382.0	400.0	2.2	2.4	-90.10	-0.6	-350.6	350.6	345.6	5.04	69.531	
500.0	500.0	482.0	500.0	2.6	2.7	-90.10	-0.6	-350.6	350.6	345.0	5.65	62.067	
600.0	600.0	582.0	600.0	2.8	2.9	-90.10	-0.6	-350.6	350.6	344.4	6.20	56.591	
700.0	700.0	682.0	700.0	3.1	3.2	-90.10	-0.6	-350.6	350.6	343.9	6.70	52.342	
800.0	800.0	782.0	800.0	3.3	3.4	-90.10	-0.6	-350.6	350.6	343.4	7.17	48.918	
900.0	900.0	882.0	900.0	3.6	3.7	-90.10	-0.6	-350.6	350.6	343.0	7.61	46.078	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-90.10	-0.6	-350.6	350.6	342.6	8.03	43.671 CC, ES	
1,100.0	1,100.0	1,075.9	1,093.9	4.0	4.1	-90.16	-1.0	-351.3	351.3	342.9	8.44	41.645	
1,200.0	1,200.0	1,168.4	1,186.3	4.2	4.3	-90.39	-2.4	-353.8	354.1	345.3	8.83	40.114	
1,300.0	1,300.0	1,260.6	1,278.4	4.4	4.5	-90.79	-4.9	-358.4	359.1	349.8	9.22	38.961	
1,400.0	1,400.0	1,352.6	1,370.1	4.6	4.8	-91.34	-8.5	-364.8	366.2	356.5	9.61	38.107	
1,500.0	1,500.0	1,444.1	1,461.1	4.7	5.0	-92.02	-13.1	-373.2	375.4	365.4	10.01	37.515	
1,600.0	1,600.0	1,535.0	1,551.3	5.0	5.3	157.19	-18.8	-383.3	388.5	378.0	10.49	37.040 SF	
1,700.0	1,699.8	1,627.2	1,642.4	5.3	5.6	156.43	-25.5	-395.5	406.8	395.8	10.97	37.064	
1,750.0	1,749.7	1,676.0	1,690.6	5.3	5.7	156.10	-29.2	-402.1	417.4	406.2	11.17	37.381	
1,800.0	1,799.5	1,724.7	1,738.7	5.4	5.9	158.92	-32.9	-408.8	428.8	417.4	11.37	37.728	
1,900.0	1,898.7	1,821.3	1,834.1	5.7	6.2	162.38	-40.2	-422.0	454.2	442.3	11.93	38.086	
2,000.0	1,997.5	1,917.1	1,928.7	6.0	6.5	164.38	-47.5	-435.1	483.0	470.4	12.52	38.573	
2,100.0	2,095.7	2,011.8	2,022.3	6.3	6.8	165.66	-54.7	-448.1	515.0	501.9	13.14	39.184	
2,200.0	2,193.2	2,105.3	2,114.6	6.7	7.2	166.55	-61.8	-460.9	550.4	536.6	13.79	39.904	
2,258.8	2,250.1	2,159.7	2,168.4	6.8	7.4	166.96	-65.9	-468.3	572.6	558.5	14.14	40.509	
2,300.0	2,290.0	2,197.7	2,205.9	6.9	7.5	166.94	-68.8	-473.5	588.7	574.3	14.37	40.973	
2,400.0	2,386.6	2,289.8	2,296.9	7.3	7.9	166.89	-75.8	-486.1	627.5	612.5	15.00	41.842	
2,500.0	2,483.1	2,382.0	2,387.9	7.6	8.2	166.85	-82.7	-498.7	666.3	650.7	15.65	42.579	
2,600.0	2,579.7	2,474.1	2,478.9	8.0	8.6	166.81	-89.7	-511.3	705.2	688.9	16.32	43.203	
2,700.0	2,676.3	2,566.3	2,569.9	8.3	8.9	166.78	-96.7	-523.9	744.0	727.0	17.01	43.731	
2,800.0	2,772.9	2,658.4	2,660.9	8.7	9.3	166.75	-103.7	-536.6	782.9	765.1	17.72	44.179	
2,900.0	2,869.5	2,750.6	2,752.0	9.1	9.6	166.72	-110.7	-549.2	821.7	803.3	18.44	44.559	
3,000.0	2,966.1	2,842.7	2,843.0	9.5	10.0	166.69	-117.7	-561.8	860.5	841.4	19.17	44.882	
3,100.0	3,062.7	2,934.9	2,934.0	9.9	10.4	166.67	-124.7	-574.4	899.4	879.5	19.92	45.156	
3,200.0	3,159.3	3,027.0	3,025.0	10.4	10.8	166.65	-131.7	-587.0	938.2	917.6	20.67	45.389	
3,300.0	3,255.9	3,119.2	3,116.0	10.8	11.1	166.63	-138.6	-599.6	977.1	955.6	21.43	45.586	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 909H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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	18.0	0.0	0.0	-90.09	-0.6	-380.6	381.0				
100.0	100.0	82.0	100.0	0.8	1.0	-90.09	-0.6	-380.6	380.6	378.4	2.23	170.796	
200.0	200.0	182.0	200.0	1.4	1.6	-90.09	-0.6	-380.6	380.6	377.1	3.50	108.635	
300.0	300.0	282.0	300.0	1.9	2.0	-90.09	-0.6	-380.6	380.6	376.3	4.35	87.536	
400.0	400.0	382.0	400.0	2.2	2.4	-90.09	-0.6	-380.6	380.6	375.6	5.04	75.481	
500.0	500.0	482.0	500.0	2.6	2.7	-90.09	-0.6	-380.6	380.6	375.0	5.65	67.378	
600.0	600.0	582.0	600.0	2.8	2.9	-90.09	-0.6	-380.6	380.6	374.4	6.20	61.433	
700.0	700.0	682.0	700.0	3.1	3.2	-90.09	-0.6	-380.6	380.6	373.9	6.70	56.821	
800.0	800.0	782.0	800.0	3.3	3.4	-90.09	-0.6	-380.6	380.6	373.4	7.17	53.103	
900.0	900.0	882.0	900.0	3.6	3.7	-90.09	-0.6	-380.6	380.6	373.0	7.61	50.021	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-90.09	-0.6	-380.6	380.6	372.6	8.03	47.408 CC, ES	
1,100.0	1,100.0	1,074.9	1,092.9	4.0	4.1	-90.13	-0.9	-381.3	381.4	372.9	8.44	45.187	
1,200.0	1,200.0	1,166.2	1,184.2	4.2	4.3	-90.27	-1.8	-384.0	384.4	375.5	8.84	43.491	
1,300.0	1,300.0	1,257.3	1,275.1	4.4	4.5	-90.51	-3.4	-388.8	389.6	380.4	9.23	42.200	
1,400.0	1,400.0	1,348.1	1,365.6	4.6	4.8	-90.84	-5.8	-395.6	397.1	387.5	9.63	41.228	
1,500.0	1,500.0	1,438.5	1,455.6	4.7	5.0	-91.25	-8.8	-404.4	406.9	396.9	10.04	40.537	
1,600.0	1,600.0	1,528.3	1,544.6	5.0	5.3	158.25	-12.5	-415.1	420.6	410.0	10.53	39.950	
1,700.0	1,699.8	1,616.9	1,632.2	5.3	5.6	157.81	-16.8	-427.6	439.6	428.6	11.02	39.901 SF	
1,750.0	1,749.7	1,660.6	1,675.3	5.3	5.7	157.62	-19.2	-434.5	451.2	440.0	11.21	40.263	
1,800.0	1,799.5	1,700.0	1,714.1	5.4	5.9	160.56	-21.4	-441.1	464.1	452.7	11.37	40.803	
1,900.0	1,898.7	1,789.2	1,801.6	5.7	6.2	164.15	-27.1	-457.4	493.9	481.9	11.94	41.362	
2,000.0	1,997.5	1,881.7	1,892.1	6.0	6.5	166.20	-33.3	-475.6	528.2	515.7	12.55	42.098	
2,100.0	2,095.7	1,974.3	1,982.7	6.3	6.8	167.52	-39.6	-493.8	565.9	552.7	13.19	42.896	
2,200.0	2,193.2	2,065.6	2,071.9	6.7	7.2	168.43	-45.8	-511.7	606.7	592.9	13.86	43.766	
2,258.8	2,250.1	2,118.6	2,123.8	6.8	7.4	168.85	-49.4	-522.2	632.2	618.0	14.22	44.450	
2,300.0	2,290.0	2,155.5	2,159.9	6.9	7.5	168.82	-51.9	-529.4	650.4	636.0	14.47	44.962	
2,400.0	2,386.6	2,245.2	2,247.6	7.3	7.8	168.77	-57.9	-547.0	694.7	679.6	15.12	45.943	
2,500.0	2,483.1	2,334.8	2,335.3	7.6	8.2	168.71	-64.0	-564.7	739.0	723.2	15.80	46.771	
2,600.0	2,579.7	2,424.5	2,423.0	8.0	8.6	168.67	-70.1	-582.3	783.3	766.8	16.50	47.469	
2,700.0	2,676.3	2,514.2	2,510.7	8.3	8.9	168.63	-76.1	-599.9	827.5	810.3	17.22	48.058	
2,800.0	2,772.9	2,603.8	2,598.4	8.7	9.3	168.59	-82.2	-617.5	871.8	853.8	17.95	48.555	
2,900.0	2,869.5	2,693.5	2,686.1	9.1	9.7	168.56	-88.3	-635.2	916.1	897.4	18.71	48.974	
3,000.0	2,966.1	2,783.2	2,773.8	9.5	10.1	168.53	-94.3	-652.8	960.3	940.9	19.47	49.329	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - _WILD THING FED COM 910H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10273-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	18.0	0.0	0.0	-90.09	-0.6	-410.6	411.0				
100.0	100.0	82.0	100.0	0.8	1.0	-90.09	-0.6	-410.6	410.6	408.4	2.23	184.258	
200.0	200.0	182.0	200.0	1.4	1.6	-90.09	-0.6	-410.6	410.6	407.1	3.50	117.197	
300.0	300.0	282.0	300.0	1.9	2.0	-90.09	-0.6	-410.6	410.6	406.3	4.35	94.436	
400.0	400.0	382.0	400.0	2.2	2.4	-90.09	-0.6	-410.6	410.6	405.6	5.04	81.430	
500.0	500.0	482.0	500.0	2.6	2.7	-90.09	-0.6	-410.6	410.6	405.0	5.65	72.689	
600.0	600.0	582.0	600.0	2.8	2.9	-90.09	-0.6	-410.6	410.6	404.4	6.20	66.275	
700.0	700.0	682.0	700.0	3.1	3.2	-90.09	-0.6	-410.6	410.6	403.9	6.70	61.300	
800.0	800.0	782.0	800.0	3.3	3.4	-90.09	-0.6	-410.6	410.6	403.4	7.17	57.289	
900.0	900.0	882.0	900.0	3.6	3.7	-90.09	-0.6	-410.6	410.6	403.0	7.61	53.963	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-90.09	-0.6	-410.6	410.6	402.6	8.03	51.145 CC, ES	
1,100.0	1,100.0	1,074.3	1,092.3	4.0	4.1	-90.11	-0.8	-411.3	411.4	402.9	8.44	48.749	
1,200.0	1,200.0	1,164.8	1,182.7	4.2	4.3	-90.21	-1.5	-414.0	414.4	405.6	8.83	46.949	
1,300.0	1,300.0	1,255.1	1,272.9	4.4	4.5	-90.39	-2.8	-418.8	419.7	410.5	9.20	45.638	
1,400.0	1,400.0	1,345.1	1,362.6	4.6	4.7	-90.63	-4.7	-425.7	427.3	417.8	9.55	44.728	
1,500.0	1,500.0	1,434.8	1,451.8	4.7	4.9	-90.93	-7.0	-434.5	437.2	427.3	9.90	44.164	
1,600.0	1,600.0	1,523.7	1,540.1	5.0	5.1	158.70	-9.9	-445.2	451.0	440.7	10.31	43.745 SF	
1,700.0	1,699.8	1,611.6	1,627.0	5.3	5.2	158.38	-13.3	-457.8	470.2	459.5	10.71	43.918	
1,750.0	1,749.7	1,654.9	1,669.7	5.3	5.3	158.24	-15.1	-464.7	481.8	470.9	10.84	44.459	
1,800.0	1,799.5	1,700.0	1,714.1	5.4	5.4	161.23	-17.2	-472.4	494.7	483.7	10.98	45.052	
1,900.0	1,898.7	1,782.3	1,794.9	5.7	5.6	164.95	-21.3	-487.7	524.7	513.3	11.39	46.066	
2,000.0	1,997.5	1,864.5	1,875.2	6.0	5.8	167.11	-25.8	-504.7	560.0	548.2	11.83	47.355	
2,100.0	2,095.7	1,944.2	1,952.6	6.3	5.9	168.48	-30.7	-522.8	600.4	588.1	12.25	49.014	
2,200.0	2,193.2	2,027.8	2,033.6	6.7	6.0	169.39	-36.1	-543.1	645.5	632.8	12.70	50.835	
2,258.8	2,250.1	2,079.5	2,083.5	6.8	6.1	169.80	-39.5	-555.8	673.6	660.6	12.96	51.954	
2,300.0	2,290.0	2,115.5	2,118.3	6.9	6.2	169.76	-41.9	-564.6	693.6	680.5	13.14	52.799	
2,400.0	2,386.6	2,202.8	2,202.8	7.3	6.4	169.68	-47.6	-586.0	742.3	728.7	13.60	54.560	
2,500.0	2,483.1	2,290.2	2,287.3	7.6	6.5	169.60	-53.4	-607.4	790.9	776.8	14.09	56.121	
2,600.0	2,579.7	2,377.6	2,371.8	8.0	6.7	169.54	-59.1	-628.8	839.6	825.0	14.60	57.505	
2,700.0	2,676.3	2,464.9	2,456.3	8.3	6.8	169.48	-64.8	-650.2	888.2	873.1	15.12	58.730	
2,800.0	2,772.9	2,552.3	2,540.8	8.7	7.0	169.43	-70.6	-671.6	936.9	921.2	15.66	59.816	
2,900.0	2,869.5	2,639.7	2,625.3	9.1	7.2	169.39	-76.3	-693.1	985.6	969.3	16.22	60.778	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - COOPER 31 FEDERAL 2H_P&A - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 100-r.5 GYRO-NS, 6679-r.5 MWD												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
6,400.0	6,250.3	8,065.9	7,158.3	25.4	34.4	-132.88	184.6	1,123.7	971.6	940.3	31.37	30.973	
6,500.0	6,346.8	8,011.3	7,159.3	25.9	33.5	-127.12	185.2	1,178.3	883.8	851.9	31.87	27.733	
6,600.0	6,443.4	7,983.1	7,159.5	26.4	33.0	-123.88	185.2	1,206.4	797.5	764.4	33.09	24.099	
6,700.0	6,540.0	7,958.0	7,159.7	26.9	32.6	-120.84	185.1	1,231.5	713.9	679.2	34.69	20.577	
6,800.0	6,636.6	7,933.8	7,160.1	27.4	32.2	-117.79	184.8	1,255.7	634.0	597.2	36.72	17.266	
6,900.0	6,733.2	7,905.3	7,160.8	27.9	31.7	-114.04	184.3	1,284.2	559.2	520.1	39.10	14.302	
7,000.0	6,829.8	7,877.6	7,161.4	28.3	31.3	-110.24	183.9	1,311.9	491.9	449.9	41.99	11.713	
7,100.0	6,926.4	7,849.3	7,162.0	28.8	30.9	-106.24	183.5	1,340.2	435.5	390.3	45.17	9.640	
7,200.0	7,023.0	7,821.4	7,162.3	29.3	30.4	-102.18	183.1	1,368.1	394.7	346.6	48.07	8.210	
7,300.0	7,119.6	7,794.8	7,162.4	29.8	30.0	-98.25	182.8	1,394.7	374.8	325.1	49.66	7.547	
7,332.1	7,150.6	7,786.5	7,162.4	30.0	29.9	-97.02	182.7	1,403.0	373.5	323.8	49.73	7.510 CC, ES, SF	
7,400.0	7,216.2	7,768.7	7,162.5	30.3	29.7	-94.38	182.5	1,420.8	379.2	330.2	49.06	7.729	
7,500.0	7,312.8	7,741.5	7,162.6	30.8	29.3	-90.39	182.1	1,448.0	407.1	360.5	46.56	8.744	
7,600.0	7,409.4	7,710.2	7,162.8	31.3	28.8	-85.86	181.4	1,479.3	454.0	410.7	43.27	10.493	
7,693.8	7,500.0	7,681.7	7,163.1	31.8	28.5	-81.84	180.5	1,507.7	510.6	470.3	40.36	12.652	
7,700.0	7,506.0	7,679.9	7,163.1	31.8	28.4	-81.71	180.5	1,509.5	514.7	474.5	40.18	12.808	
7,800.0	7,603.0	7,648.6	7,163.5	32.3	28.0	-79.35	179.3	1,540.8	585.1	547.4	37.70	15.518	
7,900.0	7,700.9	7,619.9	7,164.3	32.8	27.7	-77.88	178.3	1,569.5	662.4	626.5	35.83	18.488	
8,000.0	7,799.4	7,598.1	7,165.2	33.3	27.4	-77.80	177.5	1,591.2	744.7	710.3	34.45	21.618	
8,043.8	7,842.8	7,590.0	7,165.5	33.4	27.3	-78.10	177.3	1,599.4	782.1	748.1	33.97	23.025	
8,100.0	7,898.4	7,580.0	7,165.9	33.7	27.2	-76.77	176.9	1,609.3	830.8	797.4	33.45	24.840	
8,200.0	7,997.4	7,562.6	7,166.5	34.1	27.0	-74.50	176.4	1,626.7	919.4	886.6	32.74	28.077	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - WILD THING FED COM 504H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 8214-r.5 MWD+IFR1+MS													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
0.0	0.0	0.0	5.0	0.0	0.0	-116.13	-201.2	-410.1	456.8					
100.0	100.0	95.0	100.0	0.8	0.5	-116.13	-201.2	-410.1	456.8	455.1	1.74	261.828		
200.0	200.0	195.0	200.0	1.4	1.0	-116.13	-201.2	-410.1	456.8	453.9	2.91	157.026		
300.0	300.0	295.0	300.0	1.9	1.3	-116.13	-201.2	-410.1	456.8	453.1	3.69	123.826		
400.0	400.0	395.0	400.0	2.2	1.6	-116.13	-201.2	-410.1	456.8	452.5	4.32	105.818		
500.0	500.0	495.0	500.0	2.6	1.9	-116.13	-201.2	-410.1	456.8	451.9	4.86	94.005		
600.0	600.0	595.0	600.0	2.8	2.1	-116.13	-201.2	-410.1	456.8	451.5	5.35	85.460		
700.0	700.0	695.0	700.0	3.1	2.3	-116.13	-201.2	-410.1	456.8	451.0	5.79	78.893		
800.0	800.0	795.0	800.0	3.3	2.5	-116.13	-201.2	-410.1	456.8	450.6	6.20	73.635 CC, ES		
900.0	900.0	882.0	886.9	3.6	2.7	-116.12	-201.6	-411.2	458.2	451.5	6.69	68.503		
1,000.0	1,000.0	968.1	973.0	3.8	2.9	-116.07	-202.9	-414.7	462.5	455.4	7.15	64.679		
1,100.0	1,100.0	1,053.9	1,058.6	4.0	3.2	-116.00	-205.2	-420.6	469.8	462.2	7.58	61.961		
1,200.0	1,200.0	1,139.3	1,143.5	4.2	3.4	-115.91	-208.3	-428.9	480.1	472.1	7.99	60.063		
1,300.0	1,300.0	1,224.0	1,227.5	4.4	3.6	-115.80	-212.4	-439.4	493.4	485.0	8.39	58.831		
1,400.0	1,400.0	1,308.1	1,310.4	4.6	3.9	-115.67	-217.2	-452.1	509.5	500.7	8.76	58.149		
1,500.0	1,500.0	1,391.2	1,392.0	4.7	4.1	-115.52	-222.9	-466.9	528.5	519.4	9.12	57.936 SF		
1,600.0	1,600.0	1,473.1	1,471.9	5.0	4.3	134.40	-229.3	-483.6	551.5	542.0	9.51	58.011		
1,700.0	1,699.8	1,553.1	1,549.5	5.3	4.5	134.46	-236.4	-502.0	579.7	569.8	9.87	58.709		
1,750.0	1,749.7	1,600.0	1,594.6	5.3	4.6	134.58	-240.9	-513.8	595.7	585.7	10.03	59.374		
1,800.0	1,799.5	1,631.5	1,624.9	5.4	4.6	137.74	-244.0	-522.0	612.9	602.8	10.08	60.800		
1,900.0	1,898.7	1,723.9	1,713.4	5.7	4.7	142.08	-253.5	-546.6	650.2	639.8	10.43	62.359		
2,000.0	1,997.5	1,814.9	1,800.7	6.0	4.9	144.90	-262.7	-570.8	690.6	679.8	10.82	63.806		
2,100.0	2,095.7	1,904.4	1,886.4	6.3	5.0	146.95	-271.9	-594.7	734.0	722.7	11.24	65.282		
2,200.0	2,193.2	1,992.3	1,970.7	6.7	5.1	148.53	-280.8	-618.1	780.3	768.6	11.68	66.782		
2,258.8	2,250.1	2,043.2	2,019.5	6.8	5.2	149.32	-286.0	-631.6	808.9	797.0	11.91	67.933		
2,300.0	2,290.0	2,078.7	2,053.5	6.9	5.3	149.70	-289.7	-641.1	829.3	817.3	12.06	68.791		
2,400.0	2,386.6	2,164.8	2,136.1	7.3	5.4	150.54	-298.4	-664.0	879.0	866.5	12.48	70.411		
2,500.0	2,483.1	2,250.9	2,218.6	7.6	5.6	151.29	-307.2	-686.9	928.8	915.9	12.93	71.821		
2,600.0	2,579.7	2,337.0	2,301.1	8.0	5.7	151.97	-316.0	-709.9	978.7	965.3	13.40	73.044		

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - WILD THING FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8188-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,600.0	3,545.7	3,575.6	3,495.5	12.1	13.8	-23.39	197.9	1,388.6	984.9	963.7	21.20	46.449	
3,700.0	3,642.3	3,688.8	3,604.2	12.6	14.4	-22.19	169.1	1,401.3	965.3	943.3	22.01	43.852	
3,800.0	3,738.8	3,785.4	3,696.5	13.0	14.9	-21.01	142.6	1,411.7	945.2	922.3	22.89	41.302	
3,900.0	3,835.4	3,881.4	3,788.2	13.5	15.3	-19.78	116.2	1,422.1	925.6	901.8	23.74	38.990	
4,000.0	3,932.0	3,977.4	3,880.0	13.9	15.8	-18.51	89.9	1,432.5	906.3	881.7	24.60	36.837	
4,100.0	4,028.6	4,073.4	3,971.7	14.4	16.3	-17.19	63.5	1,442.8	887.6	862.1	25.49	34.818	
4,200.0	4,125.2	4,169.3	4,063.4	14.9	16.7	-15.81	37.1	1,453.2	869.3	842.9	26.40	32.926	
4,300.0	4,221.8	4,265.3	4,155.1	15.3	17.2	-14.37	10.8	1,463.6	851.6	824.3	27.34	31.154	
4,400.0	4,318.4	4,361.3	4,246.8	15.8	17.6	-12.88	-15.6	1,473.9	834.4	806.2	28.29	29.495	
4,500.0	4,415.0	4,457.3	4,338.5	16.3	18.1	-11.33	-42.0	1,484.3	817.9	788.6	29.27	27.945	
4,600.0	4,511.6	4,553.3	4,430.2	16.7	18.6	-9.72	-68.3	1,494.6	802.0	771.7	30.27	26.497	
4,700.0	4,608.2	4,649.3	4,521.9	17.2	19.1	-8.05	-94.7	1,505.0	786.7	755.4	31.29	25.146	
4,800.0	4,704.8	4,745.3	4,613.6	17.7	19.5	-6.32	-121.0	1,515.4	772.2	739.9	32.33	23.887	
4,900.0	4,801.4	4,841.2	4,705.3	18.2	20.0	-4.53	-147.4	1,525.7	758.5	725.1	33.39	22.718	
5,000.0	4,898.0	4,937.2	4,797.1	18.6	20.5	-2.68	-173.8	1,536.1	745.5	711.0	34.46	21.632	
5,100.0	4,994.6	5,033.2	4,888.8	19.1	20.9	-0.77	-200.1	1,546.5	733.4	697.8	35.55	20.628	
5,200.0	5,091.1	5,129.2	4,980.5	19.6	21.4	1.20	-226.5	1,556.8	722.2	685.5	36.66	19.700	
5,300.0	5,187.7	5,225.2	5,072.2	20.1	21.9	3.22	-252.9	1,567.2	711.9	674.1	37.77	18.847	
5,400.0	5,284.3	5,321.2	5,163.9	20.6	22.4	5.29	-279.2	1,577.6	702.5	663.6	38.89	18.064	
5,500.0	5,380.9	5,417.2	5,255.6	21.0	22.8	7.42	-305.6	1,587.9	694.2	654.2	40.01	17.350	
5,600.0	5,477.5	5,513.1	5,347.3	21.5	23.3	9.59	-331.9	1,598.3	686.9	645.8	41.13	16.700	
5,700.0	5,574.1	5,609.1	5,439.0	22.0	23.8	11.80	-358.3	1,608.7	680.7	638.5	42.25	16.113	
5,800.0	5,670.7	5,705.1	5,530.7	22.5	24.3	14.04	-384.7	1,619.0	675.7	632.3	43.35	15.585	
5,900.0	5,767.3	5,801.1	5,622.4	23.0	24.8	16.31	-411.0	1,629.4	671.7	627.3	44.44	15.114	
6,000.0	5,863.9	5,897.1	5,714.2	23.5	25.2	18.60	-437.4	1,639.8	668.9	623.4	45.52	14.696	
6,100.0	5,960.5	5,993.1	5,805.9	23.9	25.7	20.91	-463.8	1,650.1	667.3	620.7	46.56	14.330	
6,188.4	6,045.9	6,077.9	5,887.0	24.4	26.1	22.95	-487.1	1,659.3	666.8	619.4	47.47	14.047	
6,200.0	6,057.1	6,089.1	5,897.6	24.4	26.2	23.22	-490.1	1,660.5	666.8	619.2	47.59	14.013	
6,300.0	6,153.7	6,185.0	5,989.3	24.9	26.7	25.53	-516.5	1,670.9	667.6	619.0	48.58	13.742	
6,400.0	6,250.3	6,281.0	6,081.0	25.4	27.2	27.83	-542.9	1,681.2	669.5	619.9	49.54	13.514	
6,500.0	6,346.8	6,377.0	6,172.7	25.9	27.6	30.12	-569.2	1,691.6	672.5	622.1	50.46	13.327	
6,600.0	6,443.4	6,482.2	6,273.4	26.4	28.2	32.58	-597.5	1,702.7	676.2	624.8	51.42	13.150	
6,700.0	6,540.0	6,590.1	6,377.3	26.9	28.7	35.00	-624.8	1,713.4	679.4	627.1	52.32	12.985	
6,800.0	6,636.6	6,698.6	6,482.2	27.4	29.3	37.35	-650.4	1,723.5	681.9	628.7	53.17	12.826	
6,900.0	6,733.2	6,807.6	6,588.1	27.9	29.8	39.63	-674.2	1,732.8	683.7	629.7	53.96	12.669	
7,000.0	6,829.8	6,916.9	6,694.9	28.3	30.3	41.85	-696.2	1,741.5	684.5	629.8	54.71	12.512	
7,100.0	6,926.4	7,026.6	6,802.4	28.8	30.8	44.02	-716.4	1,749.4	684.5	629.1	55.40	12.355	
7,200.0	7,023.0	7,136.6	6,910.6	29.3	31.3	46.15	-734.7	1,756.6	683.5	627.4	56.05	12.195	
7,300.0	7,119.6	7,246.7	7,019.3	29.8	31.8	48.26	-751.1	1,763.1	681.4	624.8	56.63	12.032	
7,400.0	7,216.2	7,357.0	7,128.5	30.3	32.3	50.35	-765.5	1,768.8	678.3	621.1	57.16	11.865	
7,500.0	7,312.8	7,467.2	7,237.9	30.8	32.7	52.43	-778.0	1,773.7	674.0	616.4	57.63	11.695	
7,600.0	7,409.4	7,577.4	7,347.5	31.3	33.2	54.52	-788.5	1,777.8	668.6	610.6	58.03	11.522	
7,693.8	7,500.0	7,680.6	7,450.4	31.8	33.6	56.50	-796.6	1,781.0	662.6	604.2	58.34	11.357	
7,700.0	7,506.0	7,687.4	7,457.1	31.8	33.6	56.62	-797.1	1,781.2	662.1	603.8	58.36	11.347	
7,800.0	7,603.0	7,797.7	7,567.2	32.3	34.0	58.50	-803.7	1,783.8	655.5	596.9	58.65	11.178	
7,900.0	7,700.9	7,908.5	7,677.9	32.8	34.4	60.13	-808.4	1,785.6	649.4	590.6	58.85	11.036	
8,000.0	7,799.4	8,019.7	7,789.1	33.3	34.7	61.51	-811.0	1,786.7	643.6	584.6	58.98	10.912	
8,043.8	7,842.8	9,059.2	8,435.1	33.4	35.0	-11.28	-213.2	1,788.9	634.8	605.2	29.65	21.412	
8,100.0	7,898.4	9,058.3	8,435.1	33.7	35.0	-10.91	-214.2	1,788.9	580.3	550.3	29.96	19.369	
8,200.0	7,997.4	9,056.6	8,435.1	34.1	35.0	-10.26	-215.8	1,788.9	484.1	453.3	30.78	15.726	
8,300.0	8,096.4	9,054.9	8,435.1	34.5	35.0	-9.60	-217.5	1,788.9	389.8	357.5	32.29	12.074	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - WILD THING FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8188-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (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)			
8,400.0	8,195.5	9,053.3	8,435.1	35.0	35.0	-8.94	-219.1	1,788.9	299.2	263.9	35.35	8.465	
8,500.0	8,294.5	9,051.6	8,435.1	35.4	35.0	-8.29	-220.8	1,788.9	217.1	175.1	42.05	5.163	
8,600.0	8,393.5	9,050.0	8,435.1	35.8	35.0	-7.63	-222.5	1,788.9	157.2	102.7	54.57	2.881	Normal Operations
8,662.1	8,455.0	9,048.9	8,435.1	36.1	35.0	-7.22	-223.5	1,788.9	144.4	83.5	60.92	2.371	Caution - Monitor Closely, CC, ES, SF
8,700.0	8,492.5	9,048.3	8,435.1	36.3	35.0	-6.97	-224.1	1,788.9	149.3	88.1	61.23	2.439	Caution - Monitor Closely
8,800.0	8,591.6	9,046.6	8,435.1	36.7	35.0	-6.31	-225.8	1,788.9	199.7	146.2	53.53	3.730	
8,900.0	8,690.6	9,045.0	8,435.1	37.1	35.0	-5.65	-227.4	1,788.9	278.3	231.9	46.38	6.000	
9,000.0	8,789.6	9,043.3	8,435.1	37.6	35.0	-5.00	-229.1	1,788.9	367.4	325.1	42.30	8.687	
9,100.0	8,888.6	9,041.7	8,435.1	38.0	35.0	-4.34	-230.8	1,788.8	461.0	421.0	40.01	11.524	
9,101.4	8,890.0	9,041.6	8,435.1	38.0	35.0	-4.33	-230.8	1,788.8	462.3	422.3	39.98	11.563	
9,200.0	8,987.8	9,040.2	8,435.1	38.4	35.0	-4.10	-232.3	1,788.8	557.2	518.5	38.73	14.386	
9,300.0	9,087.3	9,039.0	8,435.1	38.8	35.0	-4.08	-233.4	1,788.8	655.0	617.0	38.07	17.207	
9,400.0	9,187.1	9,038.1	8,435.1	39.2	35.0	-4.34	-234.3	1,788.8	753.8	716.1	37.76	19.963	
9,500.0	9,286.9	9,037.6	8,435.1	39.5	35.0	-5.13	-234.8	1,788.8	853.2	815.5	37.68	22.646	
9,600.0	9,386.9	9,037.5	8,435.1	39.8	35.0	-7.18	-235.0	1,788.8	952.9	915.2	37.74	25.250	
9,634.7	9,421.6	9,037.5	8,435.1	39.9	35.0	88.89	-234.9	1,788.8	987.6	949.8	37.79	26.136	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - WILD THING FEDERAL COM 502H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8212-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
2,100.0	2,095.7	2,380.8	2,320.4	6.3	9.5	-33.97	360.0	954.0	994.9	979.7	15.17	65.566	
2,200.0	2,193.2	2,472.1	2,408.1	6.7	9.9	-33.00	337.9	941.2	954.4	938.5	15.82	60.339	
2,258.8	2,250.1	2,525.2	2,459.1	6.8	10.1	-32.63	325.1	933.7	929.2	913.1	16.17	57.480	
2,300.0	2,290.0	2,562.3	2,494.7	6.9	10.3	-32.56	316.2	928.5	911.3	894.9	16.40	55.551	
2,400.0	2,386.6	2,652.3	2,581.1	7.3	10.7	-32.38	294.4	915.9	867.7	850.6	17.03	50.937	
2,500.0	2,483.1	2,742.2	2,667.5	7.6	11.1	-32.18	272.7	903.3	824.1	806.4	17.68	46.614	
2,600.0	2,579.7	2,832.2	2,753.9	8.0	11.5	-31.95	251.0	890.7	780.5	762.2	18.34	42.566	
2,700.0	2,676.3	2,922.2	2,840.3	8.3	12.0	-31.71	229.3	878.1	737.0	718.0	19.01	38.776	
2,800.0	2,772.9	3,012.1	2,926.6	8.7	12.4	-31.42	207.5	865.5	693.4	673.8	19.69	35.227	
2,900.0	2,869.5	3,102.1	3,013.0	9.1	12.8	-31.11	185.8	852.9	649.9	629.5	20.37	31.903	
3,000.0	2,966.1	3,192.1	3,099.4	9.5	13.2	-30.74	164.1	840.2	606.4	585.3	21.07	28.787	
3,100.0	3,062.7	3,282.0	3,185.8	9.9	13.6	-30.32	142.4	827.6	562.9	541.2	21.76	25.865	
3,200.0	3,159.3	3,372.0	3,272.2	10.4	14.1	-29.84	120.7	815.0	519.5	497.0	22.46	23.123	
3,300.0	3,255.9	3,462.0	3,358.6	10.8	14.5	-29.26	98.9	802.4	476.0	452.9	23.17	20.548	
3,400.0	3,352.5	3,552.0	3,445.0	11.2	14.9	-28.56	77.2	789.8	432.7	408.8	23.87	18.128	
3,500.0	3,449.1	3,641.9	3,531.4	11.7	15.4	-27.71	55.5	777.2	389.4	364.8	24.56	15.851	
3,600.0	3,545.7	3,731.9	3,617.8	12.1	15.8	-26.66	33.8	764.6	346.1	320.9	25.25	13.708	
3,700.0	3,642.3	3,821.9	3,704.2	12.6	16.2	-25.30	12.1	752.0	303.0	277.1	25.92	11.691	
3,800.0	3,738.8	3,911.8	3,790.6	13.0	16.7	-23.49	-9.7	739.4	260.1	233.6	26.56	9.794	
3,900.0	3,835.4	4,001.8	3,876.9	13.5	17.1	-20.99	-31.4	726.7	217.5	190.4	27.15	8.012	
4,000.0	3,932.0	4,091.8	3,963.3	13.9	17.5	-17.29	-53.1	714.1	175.4	147.8	27.64	6.346	
4,100.0	4,028.6	4,181.7	4,049.7	14.4	18.0	-11.35	-74.8	701.5	134.3	106.4	27.94	4.807	
4,200.0	4,125.2	4,271.7	4,136.1	14.9	18.4	-0.66	-96.6	688.9	95.5	67.7	27.82	3.432	
4,300.0	4,221.8	4,361.7	4,222.5	15.3	18.9	21.22	-118.3	676.3	63.3	36.3	27.02	2.343	Caution - Monitor Closely
4,384.0	4,303.0	4,437.3	4,295.1	15.7	19.2	53.83	-136.5	665.7	51.6	23.8	27.82	1.854	Caution - Monitor Closely, CC
4,400.0	4,318.4	4,451.6	4,308.9	15.8	19.3	60.77	-140.0	663.7	52.0	23.6	28.45	1.829	Caution - Monitor Closely, ES, SF
4,500.0	4,415.0	4,541.6	4,395.3	16.3	19.7	95.28	-161.7	651.1	72.3	40.0	32.30	2.237	Caution - Monitor Closely
4,600.0	4,511.6	4,631.6	4,481.7	16.7	20.2	112.53	-183.4	638.5	107.5	73.5	33.94	3.166	
4,700.0	4,608.2	4,721.5	4,568.1	17.2	20.6	121.27	-205.2	625.9	147.3	112.4	34.86	4.224	
4,800.0	4,704.8	4,811.5	4,654.5	17.7	21.1	126.32	-226.9	613.3	188.8	153.1	35.64	5.296	
4,900.0	4,801.4	4,901.5	4,740.9	18.2	21.5	129.56	-248.6	600.6	231.1	194.7	36.40	6.349	
5,000.0	4,898.0	4,991.4	4,827.2	18.6	22.0	131.80	-270.3	588.0	273.8	236.7	37.15	7.371	
5,100.0	4,994.6	5,081.4	4,913.6	19.1	22.4	133.44	-292.0	575.4	316.8	278.9	37.91	8.357	
5,200.0	5,091.1	5,171.4	5,000.0	19.6	22.9	134.69	-313.8	562.8	359.9	321.3	38.67	9.308	
5,300.0	5,187.7	5,261.3	5,086.4	20.1	23.3	135.68	-335.5	550.2	403.2	363.7	39.44	10.223	
5,400.0	5,284.3	5,351.3	5,172.8	20.6	23.8	136.47	-357.2	537.6	446.5	406.3	40.22	11.103	
5,500.0	5,380.9	5,441.3	5,259.2	21.0	24.2	137.13	-378.9	525.0	489.9	448.9	41.00	11.950	
5,600.0	5,477.5	5,531.2	5,345.6	21.5	24.6	137.67	-400.7	512.4	533.3	491.6	41.78	12.765	
5,700.0	5,574.1	5,621.2	5,432.0	22.0	25.1	138.14	-422.4	499.8	576.8	534.2	42.57	13.550	
5,800.0	5,670.7	5,711.2	5,518.4	22.5	25.5	138.54	-444.1	487.2	620.3	576.9	43.36	14.305	
5,900.0	5,767.3	5,801.1	5,604.8	23.0	26.0	138.89	-465.8	474.5	663.8	619.7	44.16	15.034	
6,000.0	5,863.9	5,891.1	5,691.1	23.5	26.4	139.19	-487.5	461.9	707.3	662.4	44.95	15.736	
6,100.0	5,960.5	5,981.1	5,777.5	23.9	26.9	139.46	-509.3	449.3	750.9	705.1	45.75	16.413	
6,200.0	6,057.1	6,071.0	5,863.9	24.4	27.3	139.70	-531.0	436.7	794.4	747.9	46.55	17.066	
6,300.0	6,153.7	6,161.0	5,950.3	24.9	27.8	139.92	-552.7	424.1	838.0	790.7	47.35	17.697	
6,400.0	6,250.3	6,251.0	6,036.7	25.4	28.2	140.11	-574.4	411.5	881.6	833.4	48.16	18.307	
6,500.0	6,346.8	6,340.9	6,123.1	25.9	28.7	140.29	-596.2	398.9	925.2	876.2	48.96	18.896	
6,600.0	6,443.4	6,430.9	6,209.5	26.4	29.1	140.44	-617.9	386.3	968.8	919.0	49.77	19.465	

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: WILD THING FED COM PROJECT - WILD THING FEDERAL COM 503H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8006-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
0.0	0.0	0.0	4.0	0.0	0.0	-117.88	-201.1	-380.1	430.0					
100.0	100.0	96.0	100.0	0.8	0.7	-117.88	-201.1	-380.1	430.0	428.1	1.96	219.257		
200.0	200.0	196.0	200.0	1.4	1.4	-117.88	-201.1	-380.1	430.0	426.7	3.29	130.896		
300.0	300.0	296.0	300.0	1.9	1.9	-117.88	-201.1	-380.1	430.0	425.9	4.18	102.934		
400.0	400.0	396.0	400.0	2.2	2.2	-117.88	-201.1	-380.1	430.0	425.1	4.90	87.803		
500.0	500.0	496.0	500.0	2.6	2.5	-117.88	-201.1	-380.1	430.0	424.5	5.52	77.895		
600.0	600.0	596.0	600.0	2.8	2.8	-117.88	-201.1	-380.1	430.0	423.9	6.08	70.739		
700.0	700.0	696.0	700.0	3.1	3.1	-117.88	-201.1	-380.1	430.0	423.4	6.59	65.245		
800.0	800.0	796.0	800.0	3.3	3.3	-117.88	-201.1	-380.1	430.0	423.0	7.07	60.849		
900.0	900.0	896.0	900.0	3.6	3.6	-117.88	-201.1	-380.1	430.0	422.5	7.51	57.225		
1,000.0	1,000.0	996.0	1,000.0	3.8	3.8	-117.88	-201.1	-380.1	430.0	422.1	7.94	54.167 CC, ES		
1,100.0	1,100.0	1,084.2	1,088.2	4.0	4.0	-117.94	-202.0	-380.9	431.3	423.0	8.39	51.410		
1,200.0	1,200.0	1,171.8	1,175.7	4.2	4.3	-118.13	-205.0	-383.5	435.5	426.7	8.83	49.310		
1,300.0	1,300.0	1,259.0	1,262.7	4.4	4.6	-118.44	-210.0	-387.7	442.5	433.2	9.26	47.775		
1,400.0	1,400.0	1,345.8	1,349.0	4.6	4.9	-118.86	-216.9	-393.7	452.4	442.7	9.69	46.677		
1,500.0	1,500.0	1,431.9	1,434.3	4.7	5.2	-119.37	-225.8	-401.2	465.1	454.9	10.12	45.936		
1,600.0	1,600.0	1,518.2	1,519.4	5.0	5.5	129.92	-236.6	-410.5	481.7	471.1	10.57	45.577		
1,700.0	1,699.8	1,616.2	1,615.8	5.3	5.8	129.39	-249.8	-421.8	501.7	490.7	11.07	45.321 SF		
1,750.0	1,749.7	1,665.0	1,663.8	5.3	5.9	129.24	-256.4	-427.4	512.6	501.3	11.26	45.528		
1,800.0	1,799.5	1,713.7	1,711.7	5.4	6.1	132.24	-262.9	-433.0	524.0	512.6	11.45	45.756		
1,900.0	1,898.7	1,810.4	1,807.0	5.7	6.4	136.11	-276.0	-444.2	549.1	537.1	11.97	45.868		
2,000.0	1,997.5	1,906.3	1,901.4	6.0	6.7	138.59	-288.9	-455.2	577.1	564.5	12.52	46.086		
2,100.0	2,095.7	2,001.3	1,994.8	6.3	7.0	140.39	-301.7	-466.1	607.9	594.8	13.10	46.410		
2,200.0	2,193.2	2,095.1	2,087.2	6.7	7.4	141.82	-314.4	-477.0	641.6	627.9	13.70	46.832		
2,258.8	2,250.1	2,149.8	2,140.9	6.8	7.6	142.55	-321.7	-483.3	662.7	648.7	14.02	47.262		
2,300.0	2,290.0	2,187.9	2,178.5	6.9	7.7	142.88	-326.9	-487.7	677.9	663.7	14.24	47.604		
2,400.0	2,386.6	2,280.5	2,269.6	7.3	8.1	143.61	-339.3	-498.3	714.9	700.0	14.84	48.167		
2,500.0	2,483.1	2,373.0	2,360.7	7.6	8.4	144.27	-351.8	-509.0	751.9	736.4	15.46	48.627		
2,600.0	2,579.7	2,465.6	2,451.8	8.0	8.8	144.87	-364.3	-519.6	789.0	772.9	16.10	49.000		
2,700.0	2,676.3	2,558.1	2,542.8	8.3	9.1	145.41	-376.8	-530.3	826.2	809.4	16.76	49.301		
2,800.0	2,772.9	2,650.7	2,633.9	8.7	9.5	145.91	-389.2	-541.0	863.4	846.0	17.43	49.541		
2,900.0	2,869.5	2,743.3	2,725.0	9.1	9.9	146.37	-401.7	-551.6	900.7	882.6	18.11	49.731		
3,000.0	2,966.1	2,835.8	2,816.1	9.5	10.3	146.79	-414.2	-562.3	938.0	919.2	18.81	49.879		
3,100.0	3,062.7	2,928.4	2,907.2	9.9	10.7	147.18	-426.6	-573.0	975.4	955.9	19.51	49.992		

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to KB @ 2958.0usft

Offset Depths are relative to Offset Datum

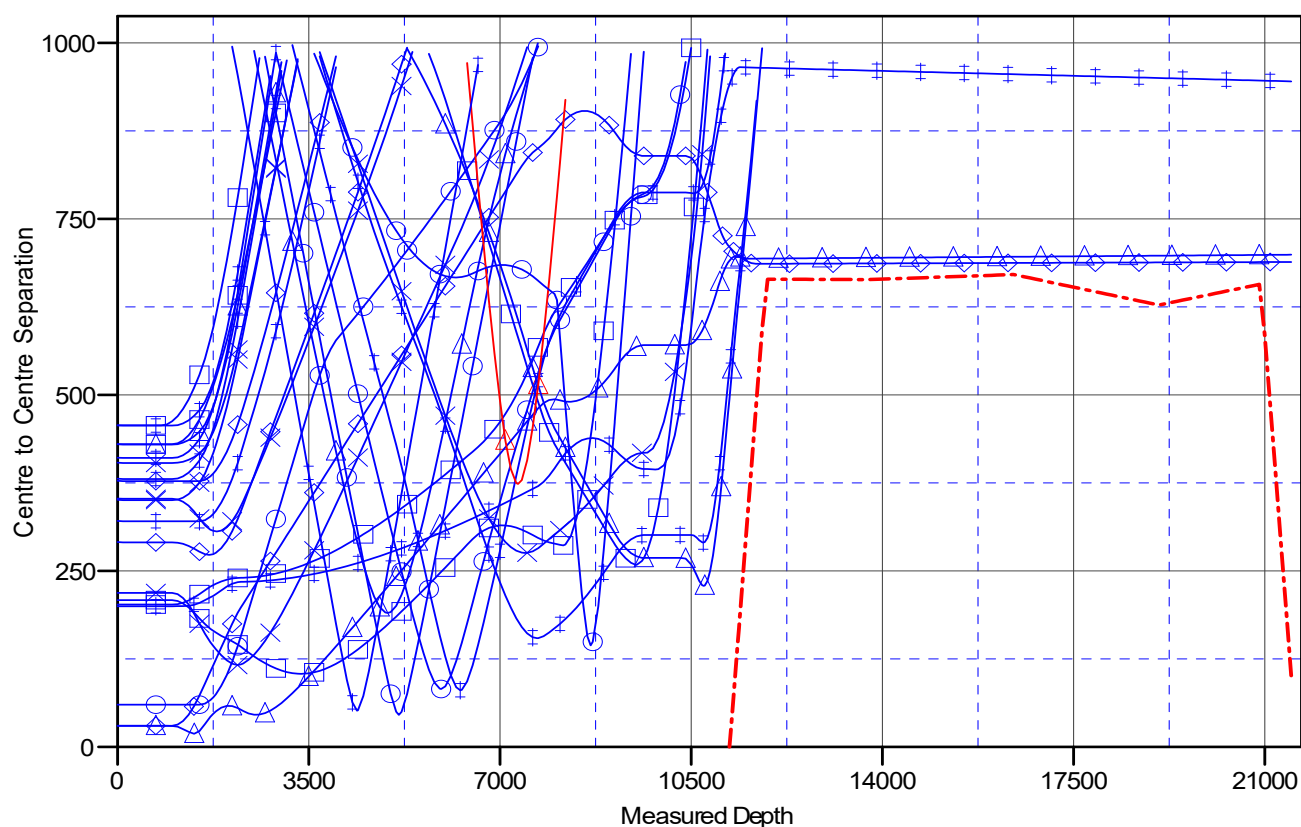
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 902H

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

Grid Convergence at Surface is: 0.16°

Ladder Plot



LEGEND

PUDGE FEDERAL COM 500H OWB, PWP1 V0	WILD THING FED COM 705H OWB, PWP0 V0	WILD THING FED COM 906H OWB, PWP0 V0
PUDGE FEDERAL COM 501H OWB, PWP1 V0	WILD THING FED COM 706H OWB, PWP0 V0	WILD THING FED COM 907H OWB, PWP0 V0
PUDGE FEDERAL COM 701H OWB, PWP1 V0	WILD THING FED COM 707H OWB, PWP0 V0	WILD THING FED COM 908H OWB, PWP0 V0
PUDGE FEDERAL COM 702H OWB, PWP1 V0	WILD THING FED COM 708H OWB, PWP0 V0	WILD THING FED COM 909H OWB, PWP0 V0
PUDGE FEDERAL COM 901H OWB, PWP1 V0	WILD THING FED COM 709H OWB, PWP0 V0	WILD THING FED COM 910H OWB, PWP0 V0
PUDGE FEDERAL COM 903H OWB, PWP1 V0	WILD THING FED COM 710H OWB, PWP0 V0	COOPER 31 FEDERAL 2H_PRA, OWB, AWP V0
PUDGE FEDERAL COM 904H OWB, PWP1 V0	WILD THING FED COM 902H OWB, PWP0 V0	WILD THING FED COM 504H, OWB, PWP1 V0
WILD THING FED COM 703H OWB, PWP0 V0	WILD THING FED COM 903H OWB, PWP0 V0	WILD THING FEDERAL COM 501H, OWB, PWP1 V0
WILD THING FED COM 704H OWB, PWP0 V0	WILD THING FED COM 904H OWB, PWP0 V0	WILD THING FEDERAL COM 502H, OWB, PWP1 V0
	WILD THING FED COM 905H OWB, PWP0 V0	WILD THING FEDERAL COM 503H, OWB, PWP1 V0

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 PUDGE FEDERAL COM 902H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2958.0usft
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2958.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to KB @ 2958.0usft

Offset Depths are relative to Offset Datum

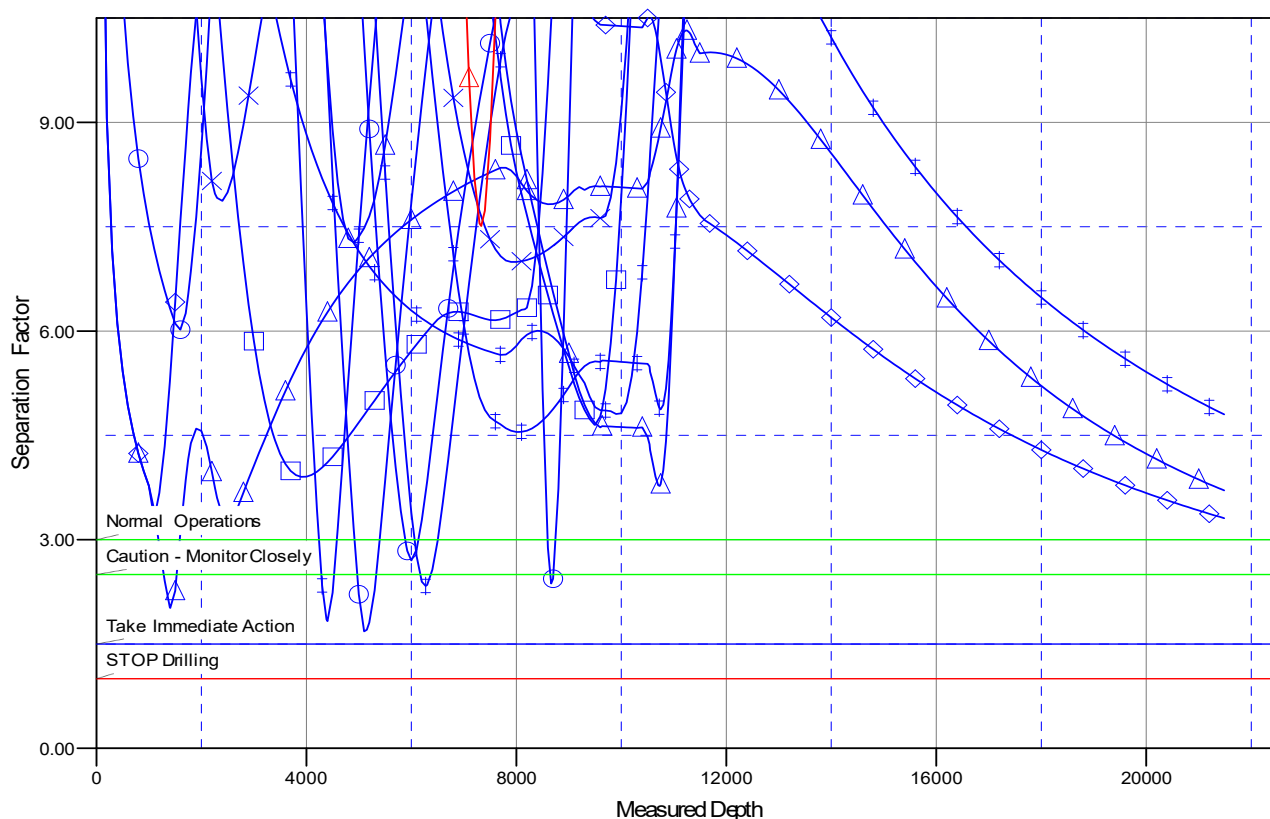
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 902H

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

Grid Convergence at Surface is: 0.16°

Separation Factor Plot



LEGEND

PUDGE FEDERAL COM 900H OWB, PWP1 V0	_WILD THING FED COM 705H OWB, PWP0 V0	_WILD THING FED COM 906H OWB, PWP0 V0
PUDGE FEDERAL COM 901H OWB, PWP1 V0	_WILD THING FED COM 706H OWB, PWP0 V0	_WILD THING FED COM 907H OWB, PWP0 V0
PUDGE FEDERAL COM 702H OWB, PWP1 V0	_WILD THING FED COM 707H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0
PUDGE FEDERAL COM 902H OWB, PWP1 V0	_WILD THING FED COM 708H OWB, PWP0 V0	_WILD THING FED COM 909H OWB, PWP0 V0
PUDGE FEDERAL COM 903H OWB, PWP1 V0	_WILD THING FED COM 709H OWB, PWP0 V0	_WILD THING FED COM 910H OWB, PWP0 V0
PUDGE FEDERAL COM 904H OWB, PWP1 V0	_WILD THING FED COM 710H OWB, PWP0 V0	COOPER 31 FEDERAL 2H _P.A. OWB, AWP V0
_WILD THING FED COM 703H OWB, PWP0 V0	_WILD THING FED COM 902H OWB, PWP0 V0	WILD THING FEDERAL COM501H, OWB, PWP1 V0
_WILD THING FED COM 704H OWB, PWP0 V0	_WILD THING FED COM 903H OWB, PWP0 V0	WILD THING FEDERAL COM502H, OWB, PWP1 V0
	_WILD THING FED COM 904H OWB, PWP0 V0	WILD THING FEDERAL COM503H, OWB, PWP1 V0
	_WILD THING FED COM 905H OWB, PWP0 V0	

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

DELAWARE BASIN WEST

**ATLAS PROSPECT_NME
PUDGE FED COM PROJECT
PUDGE FEDERAL COM 902H**

OWB

Plan: PWP1

Standard Planning Report

04 August, 2025

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Project	ATLAS PROSPECT_NME		
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		PUDGE FED COM PROJECT			
Site Position:		Northing:	387,241.34 usft	Latitude:	32° 3' 51.343 N
From:	Map	Easting:	596,126.51 usft	Longitude:	104° 1' 22.896 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	PUDGE FEDERAL COM 902H					
Well Position	+N/-S	0.0 usft	Northing:	393,006.62 usft	Latitude:	32° 4' 48.406 N
	+E/-W	0.0 usft	Easting:	595,888.08 usft	Longitude:	104° 1' 25.474 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,926.0 usft
Grid Convergence:		0.16 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	12/31/2023	6.55	59.64	47,336.32523001

Design	PWP1				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	169.99	

Plan Survey Tool Program	Date	8/4/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	21,485.7	PWP1 (OWB)	r.5 MWD+IFR1	
				OWSG MWD + IFR1 rev.5	

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,750.0	5.00	110.00	1,749.7	-3.7	10.2	2.00	2.00	0.00	110.00	
2,258.8	15.00	97.47	2,250.1	-19.9	96.6	2.00	1.97	-2.46	-18.53	
7,693.8	15.00	97.47	7,500.0	-202.8	1,491.3	0.00	0.00	0.00	0.00	
8,043.8	8.00	97.47	7,842.8	-211.9	1,560.5	2.00	-2.00	0.00	-180.00	
9,101.4	8.00	97.47	8,890.0	-231.0	1,706.4	0.00	0.00	0.00	0.00	
9,634.7	0.00	0.00	9,421.6	-235.8	1,743.3	1.50	-1.50	0.00	180.00	
10,538.8	0.00	0.00	10,325.7	-235.8	1,743.3	0.00	0.00	0.00	0.00	
10,988.8	45.00	160.00	10,730.8	-393.5	1,800.7	10.00	10.00	0.00	160.00	
11,390.6	89.97	179.65	10,882.0	-749.1	1,853.6	12.00	11.19	4.89	26.81	
21,485.7	89.97	179.65	10,888.0	-10,844.1	1,915.0	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
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
Start Build 2.00									
1,600.0	2.00	110.00	1,600.0	-0.6	1.6	0.9	2.00	2.00	0.00
1,700.0	4.00	110.00	1,699.8	-2.4	6.6	3.5	2.00	2.00	0.00
1,750.0	5.00	110.00	1,749.7	-3.7	10.2	5.5	2.00	2.00	0.00
Start DLS 2.00 TFO -18.53									
1,800.0	5.96	106.94	1,799.5	-5.2	14.8	7.7	2.00	1.91	-6.13
1,900.0	7.90	103.05	1,898.7	-8.3	26.4	12.8	2.00	1.95	-3.89
2,000.0	9.87	100.70	1,997.5	-11.4	41.6	18.5	2.00	1.97	-2.35
2,100.0	11.85	99.12	2,095.7	-14.7	60.1	24.9	2.00	1.98	-1.57
2,200.0	13.83	98.00	2,193.2	-17.9	82.1	31.9	2.00	1.98	-1.13
2,258.8	15.00	97.47	2,250.1	-19.9	96.6	36.4	2.00	1.99	-0.90
Start 5435.0 hold at 2258.8 MD									
2,300.0	15.00	97.47	2,290.0	-21.3	107.2	39.6	0.00	0.00	0.00
2,400.0	15.00	97.47	2,386.6	-24.7	132.8	47.4	0.00	0.00	0.00
2,500.0	15.00	97.47	2,483.1	-28.0	158.5	55.2	0.00	0.00	0.00
2,600.0	15.00	97.47	2,579.7	-31.4	184.2	62.9	0.00	0.00	0.00
2,700.0	15.00	97.47	2,676.3	-34.8	209.8	70.7	0.00	0.00	0.00
2,800.0	15.00	97.47	2,772.9	-38.1	235.5	78.5	0.00	0.00	0.00
2,900.0	15.00	97.47	2,869.5	-41.5	261.1	86.3	0.00	0.00	0.00
3,000.0	15.00	97.47	2,966.1	-44.9	286.8	94.0	0.00	0.00	0.00
3,100.0	15.00	97.47	3,062.7	-48.2	312.5	101.8	0.00	0.00	0.00
3,200.0	15.00	97.47	3,159.3	-51.6	338.1	109.6	0.00	0.00	0.00
3,300.0	15.00	97.47	3,255.9	-54.9	363.8	117.4	0.00	0.00	0.00
3,400.0	15.00	97.47	3,352.5	-58.3	389.4	125.2	0.00	0.00	0.00
3,500.0	15.00	97.47	3,449.1	-61.7	415.1	132.9	0.00	0.00	0.00
3,600.0	15.00	97.47	3,545.7	-65.0	440.8	140.7	0.00	0.00	0.00
3,700.0	15.00	97.47	3,642.3	-68.4	466.4	148.5	0.00	0.00	0.00
3,800.0	15.00	97.47	3,738.8	-71.8	492.1	156.3	0.00	0.00	0.00
3,900.0	15.00	97.47	3,835.4	-75.1	517.8	164.0	0.00	0.00	0.00
4,000.0	15.00	97.47	3,932.0	-78.5	543.4	171.8	0.00	0.00	0.00
4,100.0	15.00	97.47	4,028.6	-81.9	569.1	179.6	0.00	0.00	0.00
4,200.0	15.00	97.47	4,125.2	-85.2	594.7	187.4	0.00	0.00	0.00
4,300.0	15.00	97.47	4,221.8	-88.6	620.4	195.1	0.00	0.00	0.00
4,400.0	15.00	97.47	4,318.4	-92.0	646.1	202.9	0.00	0.00	0.00
4,500.0	15.00	97.47	4,415.0	-95.3	671.7	210.7	0.00	0.00	0.00
4,600.0	15.00	97.47	4,511.6	-98.7	697.4	218.5	0.00	0.00	0.00
4,700.0	15.00	97.47	4,608.2	-102.1	723.1	226.2	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	15.00	97.47	4,704.8	-105.4	748.7	234.0	0.00	0.00	0.00
4,900.0	15.00	97.47	4,801.4	-108.8	774.4	241.8	0.00	0.00	0.00
5,000.0	15.00	97.47	4,898.0	-112.2	800.0	249.6	0.00	0.00	0.00
5,100.0	15.00	97.47	4,994.6	-115.5	825.7	257.4	0.00	0.00	0.00
5,200.0	15.00	97.47	5,091.1	-118.9	851.4	265.1	0.00	0.00	0.00
5,300.0	15.00	97.47	5,187.7	-122.2	877.0	272.9	0.00	0.00	0.00
5,400.0	15.00	97.47	5,284.3	-125.6	902.7	280.7	0.00	0.00	0.00
5,500.0	15.00	97.47	5,380.9	-129.0	928.4	288.5	0.00	0.00	0.00
5,600.0	15.00	97.47	5,477.5	-132.3	954.0	296.2	0.00	0.00	0.00
5,700.0	15.00	97.47	5,574.1	-135.7	979.7	304.0	0.00	0.00	0.00
5,800.0	15.00	97.47	5,670.7	-139.1	1,005.3	311.8	0.00	0.00	0.00
5,900.0	15.00	97.47	5,767.3	-142.4	1,031.0	319.6	0.00	0.00	0.00
6,000.0	15.00	97.47	5,863.9	-145.8	1,056.7	327.3	0.00	0.00	0.00
6,100.0	15.00	97.47	5,960.5	-149.2	1,082.3	335.1	0.00	0.00	0.00
6,200.0	15.00	97.47	6,057.1	-152.5	1,108.0	342.9	0.00	0.00	0.00
6,300.0	15.00	97.47	6,153.7	-155.9	1,133.7	350.7	0.00	0.00	0.00
6,400.0	15.00	97.47	6,250.3	-159.3	1,159.3	358.4	0.00	0.00	0.00
6,500.0	15.00	97.47	6,346.8	-162.6	1,185.0	366.2	0.00	0.00	0.00
6,600.0	15.00	97.47	6,443.4	-166.0	1,210.6	374.0	0.00	0.00	0.00
6,700.0	15.00	97.47	6,540.0	-169.4	1,236.3	381.8	0.00	0.00	0.00
6,800.0	15.00	97.47	6,636.6	-172.7	1,262.0	389.5	0.00	0.00	0.00
6,900.0	15.00	97.47	6,733.2	-176.1	1,287.6	397.3	0.00	0.00	0.00
7,000.0	15.00	97.47	6,829.8	-179.4	1,313.3	405.1	0.00	0.00	0.00
7,100.0	15.00	97.47	6,926.4	-182.8	1,339.0	412.9	0.00	0.00	0.00
7,200.0	15.00	97.47	7,023.0	-186.2	1,364.6	420.7	0.00	0.00	0.00
7,300.0	15.00	97.47	7,119.6	-189.5	1,390.3	428.4	0.00	0.00	0.00
7,400.0	15.00	97.47	7,216.2	-192.9	1,415.9	436.2	0.00	0.00	0.00
7,500.0	15.00	97.47	7,312.8	-196.3	1,441.6	444.0	0.00	0.00	0.00
7,600.0	15.00	97.47	7,409.4	-199.6	1,467.3	451.8	0.00	0.00	0.00
7,693.8	15.00	97.47	7,500.0	-202.8	1,491.3	459.1	0.00	0.00	0.00
Start DLS 2.00 TFO -180.00									
7,700.0	14.88	97.47	7,506.0	-203.0	1,492.9	459.5	2.00	-2.00	0.00
7,800.0	12.88	97.47	7,603.0	-206.1	1,516.7	466.7	2.00	-2.00	0.00
7,900.0	10.88	97.47	7,700.9	-208.8	1,537.1	472.9	2.00	-2.00	0.00
8,000.0	8.88	97.47	7,799.4	-211.0	1,554.1	478.1	2.00	-2.00	0.00
8,043.8	8.00	97.47	7,842.8	-211.9	1,560.5	480.0	2.00	-2.00	0.00
Start 1057.5 hold at 8043.8 MD									
8,100.0	8.00	97.47	7,898.4	-212.9	1,568.2	482.4	0.00	0.00	0.00
8,200.0	8.00	97.47	7,997.4	-214.7	1,582.0	486.5	0.00	0.00	0.00
8,300.0	8.00	97.47	8,096.4	-216.5	1,595.8	490.7	0.00	0.00	0.00
8,400.0	8.00	97.47	8,195.5	-218.3	1,609.6	494.9	0.00	0.00	0.00
8,500.0	8.00	97.47	8,294.5	-220.1	1,623.4	499.1	0.00	0.00	0.00
8,600.0	8.00	97.47	8,393.5	-221.9	1,637.2	503.3	0.00	0.00	0.00
8,700.0	8.00	97.47	8,492.5	-223.7	1,651.0	507.4	0.00	0.00	0.00
8,800.0	8.00	97.47	8,591.6	-225.5	1,664.8	511.6	0.00	0.00	0.00
8,900.0	8.00	97.47	8,690.6	-227.4	1,678.6	515.8	0.00	0.00	0.00
9,000.0	8.00	97.47	8,789.6	-229.2	1,692.4	520.0	0.00	0.00	0.00
9,101.4	8.00	97.47	8,890.0	-231.0	1,706.4	524.2	0.00	0.00	0.00
Start Drop -1.50									
9,200.0	6.52	97.47	8,987.8	-232.6	1,718.8	528.0	1.50	-1.50	0.00
9,300.0	5.02	97.47	9,087.3	-233.9	1,728.7	531.0	1.50	-1.50	0.00
9,400.0	3.52	97.47	9,187.1	-234.9	1,736.1	533.2	1.50	-1.50	0.00
9,500.0	2.02	97.47	9,286.9	-235.5	1,740.9	534.7	1.50	-1.50	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,600.0	0.52	97.47	9,386.9	-235.8	1,743.1	535.4	1.50	-1.50	0.00
9,634.7	0.00	0.00	9,421.6	-235.8	1,743.3	535.4	1.50	-1.50	0.00
Start 904.1 hold at 9634.7 MD									
9,700.0	0.00	0.00	9,486.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
9,800.0	0.00	0.00	9,586.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,686.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
10,000.0	0.00	0.00	9,786.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
10,100.0	0.00	0.00	9,886.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
10,200.0	0.00	0.00	9,986.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
10,300.0	0.00	0.00	10,086.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
10,400.0	0.00	0.00	10,186.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
10,500.0	0.00	0.00	10,286.9	-235.8	1,743.3	535.4	0.00	0.00	0.00
10,538.8	0.00	0.00	10,325.7	-235.8	1,743.3	535.4	0.00	0.00	0.00
Start Build 10.00									
10,550.0	1.12	160.00	10,336.9	-235.9	1,743.3	535.5	10.00	10.00	0.00
10,600.0	6.12	160.00	10,386.8	-238.9	1,744.4	538.6	10.00	10.00	0.00
10,650.0	11.12	160.00	10,436.2	-245.9	1,747.0	546.0	10.00	10.00	0.00
10,700.0	16.12	160.00	10,484.8	-257.0	1,751.0	557.6	10.00	10.00	0.00
10,750.0	21.12	160.00	10,532.2	-272.0	1,756.4	573.3	10.00	10.00	0.00
10,800.0	26.12	160.00	10,578.0	-290.8	1,763.3	593.0	10.00	10.00	0.00
10,850.0	31.12	160.00	10,621.8	-313.3	1,771.5	616.6	10.00	10.00	0.00
10,900.0	36.12	160.00	10,663.5	-339.3	1,780.9	643.9	10.00	10.00	0.00
10,950.0	41.12	160.00	10,702.5	-368.6	1,791.6	674.6	10.00	10.00	0.00
10,988.8	45.00	160.00	10,730.8	-393.5	1,800.7	700.7	10.00	10.00	0.00
Start DLS 12.00 TFO 26.81									
11,000.0	46.20	160.84	10,738.7	-401.1	1,803.4	708.6	12.00	10.74	7.50
11,025.0	48.91	162.60	10,755.6	-418.6	1,809.1	726.8	12.00	10.82	7.03
11,050.0	51.64	164.22	10,771.5	-437.0	1,814.6	745.9	12.00	10.92	6.47
11,075.0	54.39	165.72	10,786.6	-456.3	1,819.8	765.8	12.00	11.00	6.00
11,100.0	57.16	167.12	10,800.6	-476.4	1,824.6	786.4	12.00	11.07	5.60
11,125.0	59.94	168.43	10,813.7	-497.2	1,829.2	807.7	12.00	11.13	5.26
11,150.0	62.73	169.68	10,825.7	-518.8	1,833.3	829.7	12.00	11.18	4.97
11,175.0	65.54	170.86	10,836.6	-540.9	1,837.1	852.2	12.00	11.22	4.73
11,200.0	68.35	171.99	10,846.4	-563.7	1,840.5	875.2	12.00	11.26	4.52
11,225.0	71.17	173.08	10,855.0	-586.9	1,843.6	898.6	12.00	11.29	4.35
11,250.0	74.00	174.13	10,862.5	-610.6	1,846.2	922.4	12.00	11.31	4.20
11,275.0	76.83	175.15	10,868.8	-634.7	1,848.5	946.5	12.00	11.33	4.09
11,300.0	79.67	176.15	10,873.9	-659.1	1,850.4	970.9	12.00	11.35	3.99
11,325.0	82.51	177.13	10,877.7	-683.8	1,851.8	995.4	12.00	11.36	3.92
11,350.0	85.35	178.09	10,880.4	-708.6	1,852.8	1,020.0	12.00	11.37	3.87
11,375.0	88.19	179.05	10,881.8	-733.6	1,853.5	1,044.7	12.00	11.37	3.84
11,390.6	89.97	179.65	10,882.0	-749.1	1,853.6	1,060.1	12.00	11.37	3.83
Start 10095.1 hold at 11390.6 MD									
11,400.0	89.97	179.65	10,882.1	-758.6	1,853.7	1,069.4	0.00	0.00	0.00
11,500.0	89.97	179.65	10,882.1	-858.6	1,854.3	1,167.9	0.00	0.00	0.00
11,600.0	89.97	179.65	10,882.2	-958.5	1,854.9	1,266.5	0.00	0.00	0.00
11,700.0	89.97	179.65	10,882.2	-1,058.5	1,855.5	1,365.1	0.00	0.00	0.00
11,800.0	89.97	179.65	10,882.3	-1,158.5	1,856.1	1,463.7	0.00	0.00	0.00
11,900.0	89.97	179.65	10,882.3	-1,258.5	1,856.7	1,562.3	0.00	0.00	0.00
12,000.0	89.97	179.65	10,882.4	-1,358.5	1,857.3	1,660.8	0.00	0.00	0.00
12,100.0	89.97	179.65	10,882.5	-1,458.5	1,858.0	1,759.4	0.00	0.00	0.00
12,200.0	89.97	179.65	10,882.5	-1,558.5	1,858.6	1,858.0	0.00	0.00	0.00
12,300.0	89.97	179.65	10,882.6	-1,658.5	1,859.2	1,956.6	0.00	0.00	0.00
12,400.0	89.97	179.65	10,882.6	-1,758.5	1,859.8	2,055.2	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,500.0	89.97	179.65	10,882.7	-1,858.5	1,860.4	2,153.7	0.00	0.00	0.00
12,600.0	89.97	179.65	10,882.8	-1,958.5	1,861.0	2,252.3	0.00	0.00	0.00
12,700.0	89.97	179.65	10,882.8	-2,058.5	1,861.6	2,350.9	0.00	0.00	0.00
12,800.0	89.97	179.65	10,882.9	-2,158.5	1,862.2	2,449.5	0.00	0.00	0.00
12,900.0	89.97	179.65	10,882.9	-2,258.5	1,862.8	2,548.1	0.00	0.00	0.00
13,000.0	89.97	179.65	10,883.0	-2,358.5	1,863.4	2,646.6	0.00	0.00	0.00
13,100.0	89.97	179.65	10,883.1	-2,458.5	1,864.0	2,745.2	0.00	0.00	0.00
13,200.0	89.97	179.65	10,883.1	-2,558.5	1,864.6	2,843.8	0.00	0.00	0.00
13,300.0	89.97	179.65	10,883.2	-2,658.5	1,865.3	2,942.4	0.00	0.00	0.00
13,400.0	89.97	179.65	10,883.2	-2,758.5	1,865.9	3,041.0	0.00	0.00	0.00
13,500.0	89.97	179.65	10,883.3	-2,858.5	1,866.5	3,139.5	0.00	0.00	0.00
13,600.0	89.97	179.65	10,883.3	-2,958.5	1,867.1	3,238.1	0.00	0.00	0.00
13,700.0	89.97	179.65	10,883.4	-3,058.5	1,867.7	3,336.7	0.00	0.00	0.00
13,800.0	89.97	179.65	10,883.5	-3,158.5	1,868.3	3,435.3	0.00	0.00	0.00
13,900.0	89.97	179.65	10,883.5	-3,258.5	1,868.9	3,533.9	0.00	0.00	0.00
14,000.0	89.97	179.65	10,883.6	-3,358.5	1,869.5	3,632.4	0.00	0.00	0.00
14,100.0	89.97	179.65	10,883.6	-3,458.5	1,870.1	3,731.0	0.00	0.00	0.00
14,200.0	89.97	179.65	10,883.7	-3,558.5	1,870.7	3,829.6	0.00	0.00	0.00
14,300.0	89.97	179.65	10,883.8	-3,658.5	1,871.3	3,928.2	0.00	0.00	0.00
14,400.0	89.97	179.65	10,883.8	-3,758.5	1,871.9	4,026.8	0.00	0.00	0.00
14,500.0	89.97	179.65	10,883.9	-3,858.5	1,872.5	4,125.3	0.00	0.00	0.00
14,600.0	89.97	179.65	10,883.9	-3,958.5	1,873.2	4,223.9	0.00	0.00	0.00
14,700.0	89.97	179.65	10,884.0	-4,058.5	1,873.8	4,322.5	0.00	0.00	0.00
14,800.0	89.97	179.65	10,884.1	-4,158.5	1,874.4	4,421.1	0.00	0.00	0.00
14,900.0	89.97	179.65	10,884.1	-4,258.5	1,875.0	4,519.7	0.00	0.00	0.00
15,000.0	89.97	179.65	10,884.2	-4,358.5	1,875.6	4,618.2	0.00	0.00	0.00
15,100.0	89.97	179.65	10,884.2	-4,458.5	1,876.2	4,716.8	0.00	0.00	0.00
15,200.0	89.97	179.65	10,884.3	-4,558.5	1,876.8	4,815.4	0.00	0.00	0.00
15,300.0	89.97	179.65	10,884.4	-4,658.5	1,877.4	4,914.0	0.00	0.00	0.00
15,400.0	89.97	179.65	10,884.4	-4,758.5	1,878.0	5,012.6	0.00	0.00	0.00
15,500.0	89.97	179.65	10,884.5	-4,858.5	1,878.6	5,111.1	0.00	0.00	0.00
15,600.0	89.97	179.65	10,884.5	-4,958.5	1,879.2	5,209.7	0.00	0.00	0.00
15,700.0	89.97	179.65	10,884.6	-5,058.5	1,879.8	5,308.3	0.00	0.00	0.00
15,800.0	89.97	179.65	10,884.6	-5,158.5	1,880.5	5,406.9	0.00	0.00	0.00
15,900.0	89.97	179.65	10,884.7	-5,258.5	1,881.1	5,505.5	0.00	0.00	0.00
16,000.0	89.97	179.65	10,884.8	-5,358.5	1,881.7	5,604.0	0.00	0.00	0.00
16,100.0	89.97	179.65	10,884.8	-5,458.5	1,882.3	5,702.6	0.00	0.00	0.00
16,200.0	89.97	179.65	10,884.9	-5,558.5	1,882.9	5,801.2	0.00	0.00	0.00
16,300.0	89.97	179.65	10,884.9	-5,658.5	1,883.5	5,899.8	0.00	0.00	0.00
16,400.0	89.97	179.65	10,885.0	-5,758.5	1,884.1	5,998.4	0.00	0.00	0.00
16,500.0	89.97	179.65	10,885.1	-5,858.5	1,884.7	6,096.9	0.00	0.00	0.00
16,600.0	89.97	179.65	10,885.1	-5,958.5	1,885.3	6,195.5	0.00	0.00	0.00
16,700.0	89.97	179.65	10,885.2	-6,058.5	1,885.9	6,294.1	0.00	0.00	0.00
16,800.0	89.97	179.65	10,885.2	-6,158.5	1,886.5	6,392.7	0.00	0.00	0.00
16,900.0	89.97	179.65	10,885.3	-6,258.5	1,887.1	6,491.3	0.00	0.00	0.00
17,000.0	89.97	179.65	10,885.4	-6,358.4	1,887.7	6,589.9	0.00	0.00	0.00
17,100.0	89.97	179.65	10,885.4	-6,458.4	1,888.4	6,688.4	0.00	0.00	0.00
17,200.0	89.97	179.65	10,885.5	-6,558.4	1,889.0	6,787.0	0.00	0.00	0.00
17,300.0	89.97	179.65	10,885.5	-6,658.4	1,889.6	6,885.6	0.00	0.00	0.00
17,400.0	89.97	179.65	10,885.6	-6,758.4	1,890.2	6,984.2	0.00	0.00	0.00
17,500.0	89.97	179.65	10,885.6	-6,858.4	1,890.8	7,082.8	0.00	0.00	0.00
17,600.0	89.97	179.65	10,885.7	-6,958.4	1,891.4	7,181.3	0.00	0.00	0.00
17,700.0	89.97	179.65	10,885.8	-7,058.4	1,892.0	7,279.9	0.00	0.00	0.00
17,800.0	89.97	179.65	10,885.8	-7,158.4	1,892.6	7,378.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,900.0	89.97	179.65	10,885.9	-7,258.4	1,893.2	7,477.1	0.00	0.00	0.00
18,000.0	89.97	179.65	10,885.9	-7,358.4	1,893.8	7,575.7	0.00	0.00	0.00
18,100.0	89.97	179.65	10,886.0	-7,458.4	1,894.4	7,674.2	0.00	0.00	0.00
18,200.0	89.97	179.65	10,886.1	-7,558.4	1,895.0	7,772.8	0.00	0.00	0.00
18,300.0	89.97	179.65	10,886.1	-7,658.4	1,895.7	7,871.4	0.00	0.00	0.00
18,400.0	89.97	179.65	10,886.2	-7,758.4	1,896.3	7,970.0	0.00	0.00	0.00
18,500.0	89.97	179.65	10,886.2	-7,858.4	1,896.9	8,068.6	0.00	0.00	0.00
18,600.0	89.97	179.65	10,886.3	-7,958.4	1,897.5	8,167.1	0.00	0.00	0.00
18,700.0	89.97	179.65	10,886.4	-8,058.4	1,898.1	8,265.7	0.00	0.00	0.00
18,800.0	89.97	179.65	10,886.4	-8,158.4	1,898.7	8,364.3	0.00	0.00	0.00
18,900.0	89.97	179.65	10,886.5	-8,258.4	1,899.3	8,462.9	0.00	0.00	0.00
19,000.0	89.97	179.65	10,886.5	-8,358.4	1,899.9	8,561.5	0.00	0.00	0.00
19,100.0	89.97	179.65	10,886.6	-8,458.4	1,900.5	8,660.0	0.00	0.00	0.00
19,200.0	89.97	179.65	10,886.7	-8,558.4	1,901.1	8,758.6	0.00	0.00	0.00
19,300.0	89.97	179.65	10,886.7	-8,658.4	1,901.7	8,857.2	0.00	0.00	0.00
19,400.0	89.97	179.65	10,886.8	-8,758.4	1,902.3	8,955.8	0.00	0.00	0.00
19,500.0	89.97	179.65	10,886.8	-8,858.4	1,902.9	9,054.4	0.00	0.00	0.00
19,600.0	89.97	179.65	10,886.9	-8,958.4	1,903.6	9,152.9	0.00	0.00	0.00
19,700.0	89.97	179.65	10,886.9	-9,058.4	1,904.2	9,251.5	0.00	0.00	0.00
19,800.0	89.97	179.65	10,887.0	-9,158.4	1,904.8	9,350.1	0.00	0.00	0.00
19,900.0	89.97	179.65	10,887.1	-9,258.4	1,905.4	9,448.7	0.00	0.00	0.00
20,000.0	89.97	179.65	10,887.1	-9,358.4	1,906.0	9,547.3	0.00	0.00	0.00
20,100.0	89.97	179.65	10,887.2	-9,458.4	1,906.6	9,645.8	0.00	0.00	0.00
20,200.0	89.97	179.65	10,887.2	-9,558.4	1,907.2	9,744.4	0.00	0.00	0.00
20,300.0	89.97	179.65	10,887.3	-9,658.4	1,907.8	9,843.0	0.00	0.00	0.00
20,400.0	89.97	179.65	10,887.4	-9,758.4	1,908.4	9,941.6	0.00	0.00	0.00
20,500.0	89.97	179.65	10,887.4	-9,858.4	1,909.0	10,040.2	0.00	0.00	0.00
20,600.0	89.97	179.65	10,887.5	-9,958.4	1,909.6	10,138.7	0.00	0.00	0.00
20,700.0	89.97	179.65	10,887.5	-10,058.4	1,910.2	10,237.3	0.00	0.00	0.00
20,800.0	89.97	179.65	10,887.6	-10,158.4	1,910.9	10,335.9	0.00	0.00	0.00
20,900.0	89.97	179.65	10,887.7	-10,258.4	1,911.5	10,434.5	0.00	0.00	0.00
21,000.0	89.97	179.65	10,887.7	-10,358.4	1,912.1	10,533.1	0.00	0.00	0.00
21,100.0	89.97	179.65	10,887.8	-10,458.4	1,912.7	10,631.6	0.00	0.00	0.00
21,200.0	89.97	179.65	10,887.8	-10,558.4	1,913.3	10,730.2	0.00	0.00	0.00
21,300.0	89.97	179.65	10,887.9	-10,658.4	1,913.9	10,828.8	0.00	0.00	0.00
21,400.0	89.97	179.65	10,887.9	-10,758.4	1,914.5	10,927.4	0.00	0.00	0.00
21,485.7	89.97	179.65	10,888.0	-10,844.1	1,915.0	11,011.9	0.00	0.00	0.00
TD at 21485.7									

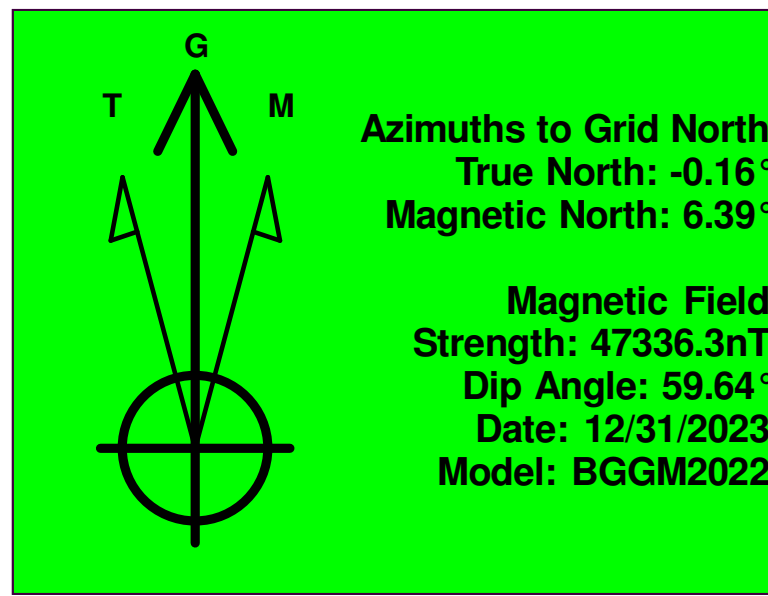
ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 902H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2958.0usft
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2958.0usft
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 902H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
902H_TNGNT LMTR1_¿ - plan hits target center - Rectangle (sides W40.0 H25.0 D5,249.9)	15.00	277.47	7,500.0	-202.8	1,491.3	392,803.82	597,379.38	32° 4' 46.356 N	104° 1' 8.148 W
902H_TNGNT LMTR2_¿ - plan hits target center - Rectangle (sides W40.0 H25.0 D1,047.2)	8.00	277.47	8,890.0	-231.0	1,706.4	392,775.62	597,594.48	32° 4' 46.071 N	104° 1' 5.648 W
FTP/PP1_PUDGE FED - plan misses target center by 2.4usft at 11436.2usft MD (10882.1 TVD, -794.7 N, 1853.9 E) - Circle (radius 50.0)	0.00	0.00	10,882.0	-794.7	1,851.6	392,211.87	597,739.65	32° 4' 40.487 N	104° 1' 3.980 W
PP2_PUDGE FED COM - plan misses target center by 4.1usft at 16406.2usft MD (10885.0 TVD, -5764.7 N, 1884.1 E) - Circle (radius 50.0)	0.00	0.00	10,885.0	-5,764.7	1,888.2	387,241.94	597,776.32	32° 3' 51.301 N	104° 1' 3.723 W
PP3_PUDGE FED COM - plan misses target center by 2.3usft at 17725.0usft MD (10885.8 TVD, -7083.4 N, 1892.2 E) - Circle (radius 50.0)	0.00	0.00	10,885.8	-7,083.4	1,894.5	385,923.20	597,782.54	32° 3' 38.250 N	104° 1' 3.696 W
PP4_PUDGE FED COM - plan misses target center by 0.5usft at 19059.0usft MD (10886.6 TVD, -8417.4 N, 1900.3 E) - Circle (radius 50.0)	0.00	0.00	10,886.6	-8,417.4	1,900.7	384,589.21	597,788.83	32° 3' 25.048 N	104° 1' 3.668 W
LTP_PUDGE FED COM - plan misses target center by 2.7usft at 21357.0usft MD (10887.9 TVD, -10715.3 N, 1914.2 E) - Circle (radius 50.0)	90.00	0.00	10,888.0	-10,715.4	1,911.6	382,291.26	597,799.66	32° 3' 2.306 N	104° 1' 3.620 W
PBHL_PUDGE FED CO - plan misses target center by 1.4usft at 21485.7usft MD (10888.0 TVD, -10844.1 N, 1915.0 E) - Rectangle (sides W100.0 H10,047.8 D20.0)	-0.03	359.65	10,888.0	-10,845.4	1,914.4	382,161.26	597,802.53	32° 3' 1.020 N	104° 1' 3.591 W

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
21,485.8	10,888.0	5-1/2" Production Casing	5-1/2	6

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.0	1,500.0	0.0	0.0	Start Build 2.00
1,750.0	1,749.7	-3.7	10.2	Start DLS 2.00 TFO -18.53
2,258.8	2,250.1	-19.9	96.6	Start 5435.0 hold at 2258.8 MD
7,693.8	7,500.0	-202.8	1,491.3	Start DLS 2.00 TFO -180.00
8,043.8	7,842.8	-211.9	1,560.5	Start 1057.5 hold at 8043.8 MD
9,101.4	8,890.0	-231.0	1,706.4	Start Drop -1.50
9,634.7	9,421.6	-235.8	1,743.3	Start 904.1 hold at 9634.7 MD
10,538.8	10,325.7	-235.8	1,743.3	Start Build 10.00
10,988.8	10,730.8	-393.5	1,800.7	Start DLS 12.00 TFO 26.81
11,390.6	10,882.0	-749.1	1,853.6	Start 10095.1 hold at 11390.6 MD
21,485.7	10,888.0	-10,844.1	1,915.0	TD at 21485.7



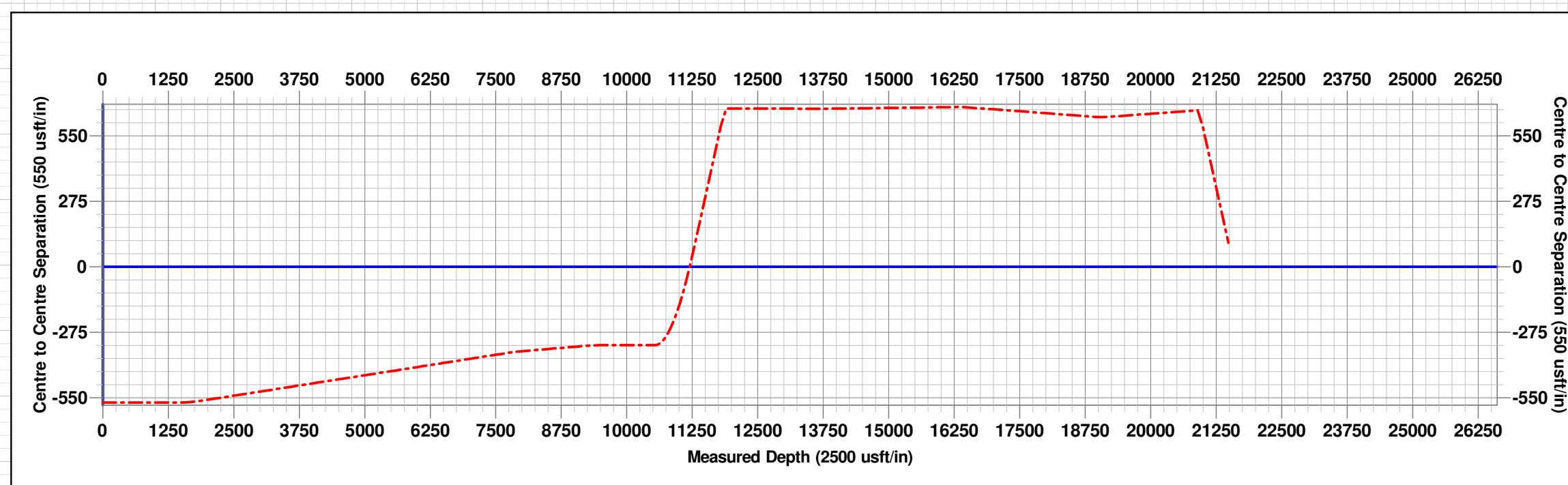
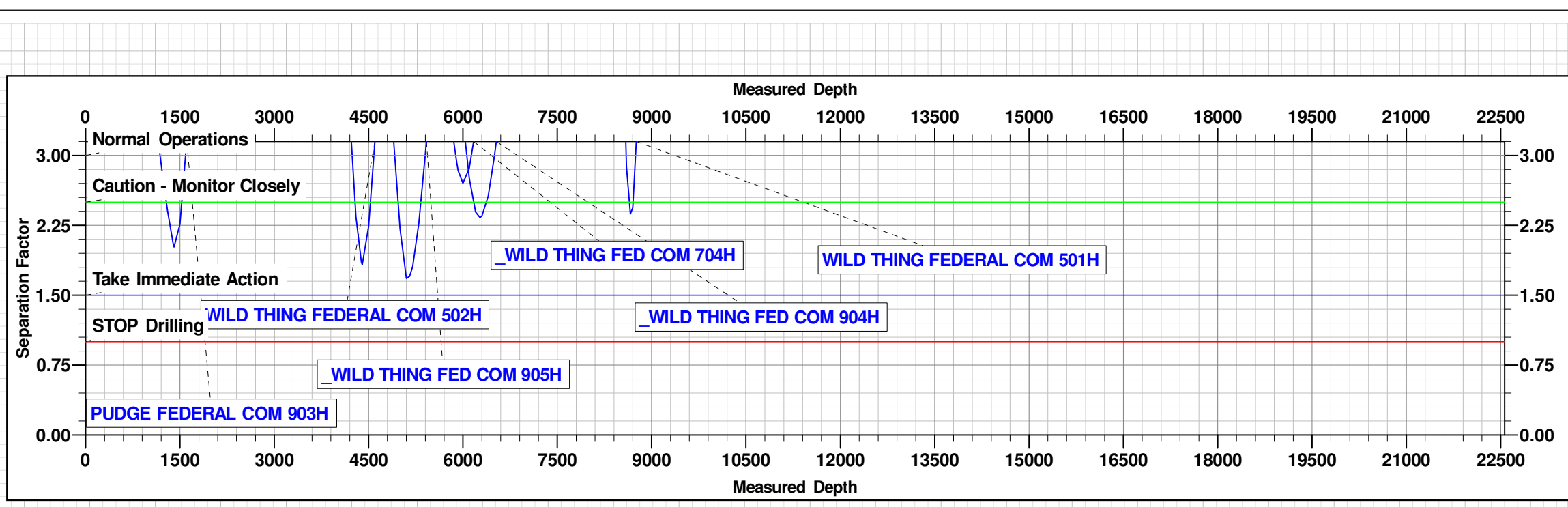
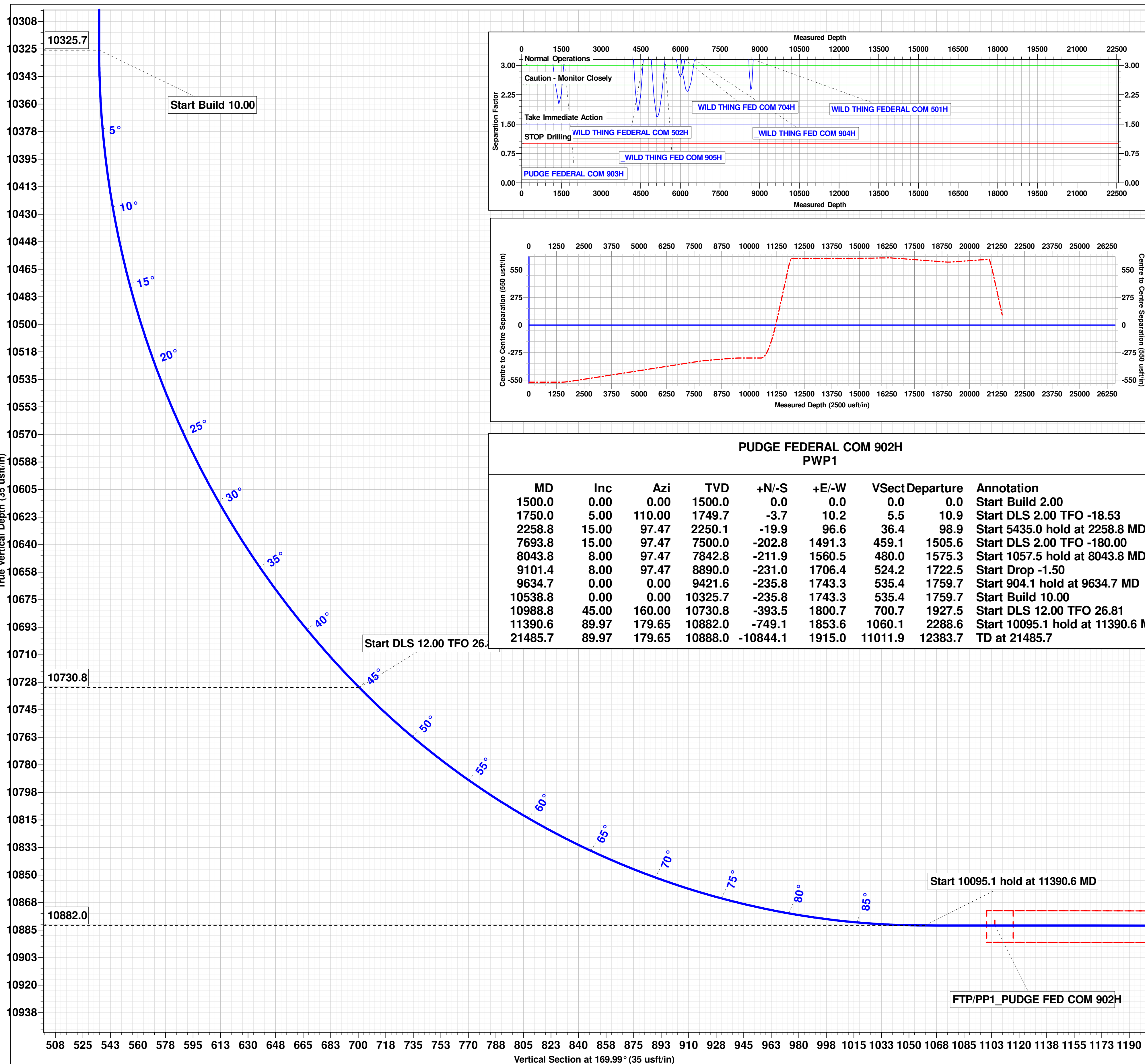
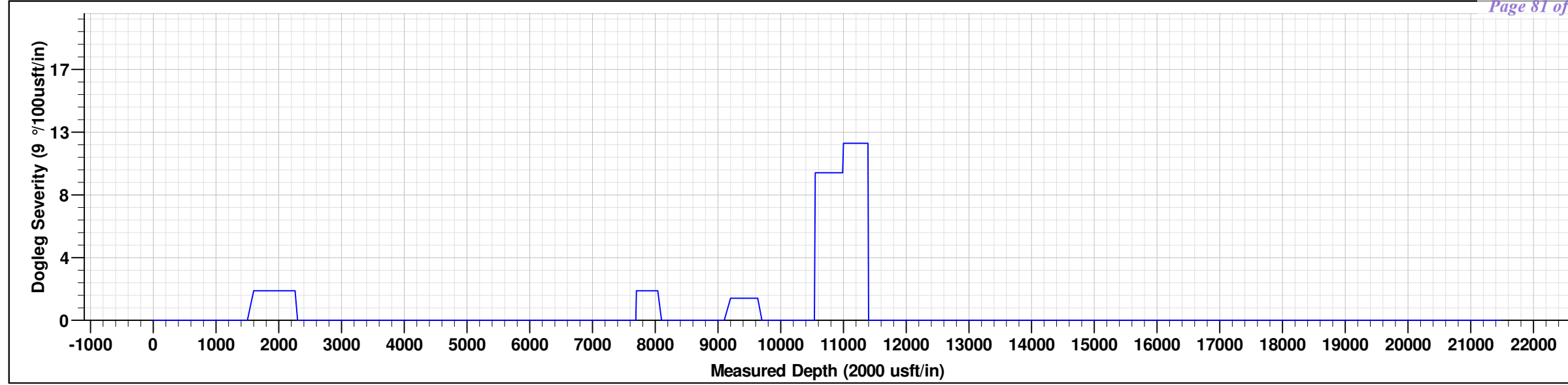
Project: ATLAS PROSPECT NME
Site: PUDGE FED COM PROJECT
Well: PUDGE FEDERAL COM 902H
Wellbore: OWB
Design: PWP1
GL: 2926.0
KB @ 2958.0usft

WELL DETAILS: PUDGE FEDERAL COM 902H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	393006.62	595888.08	32° 4' 48.406 N	104° 1' 25.474 W

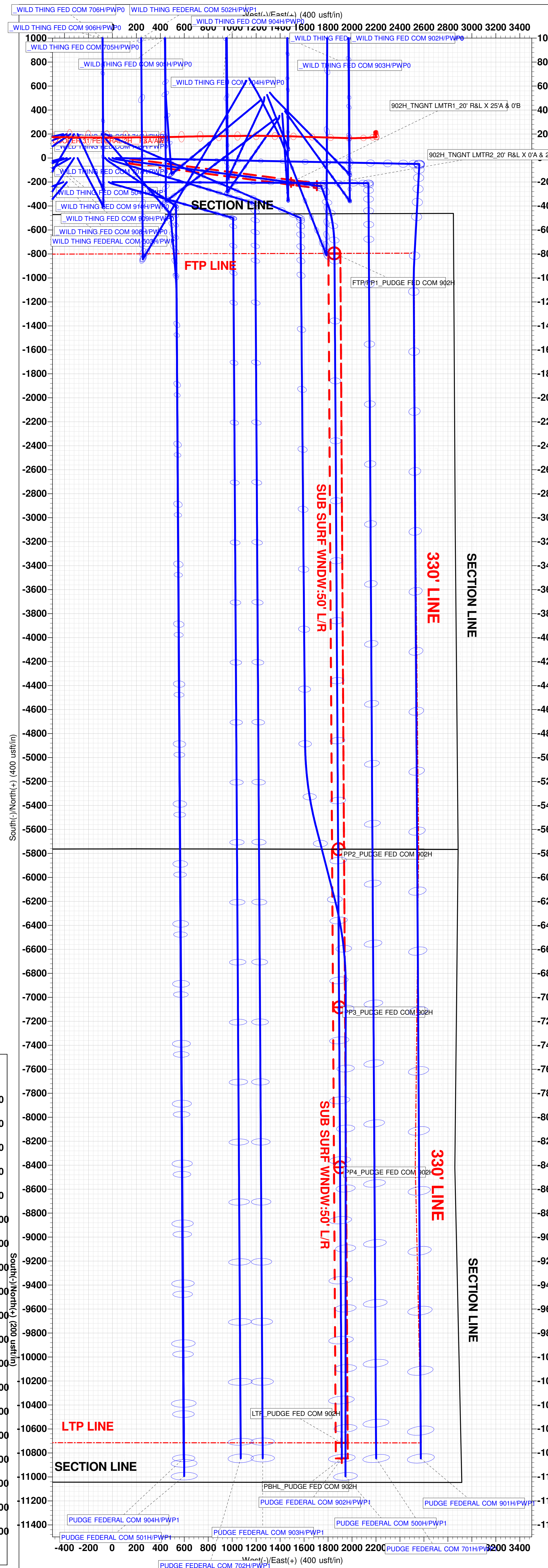
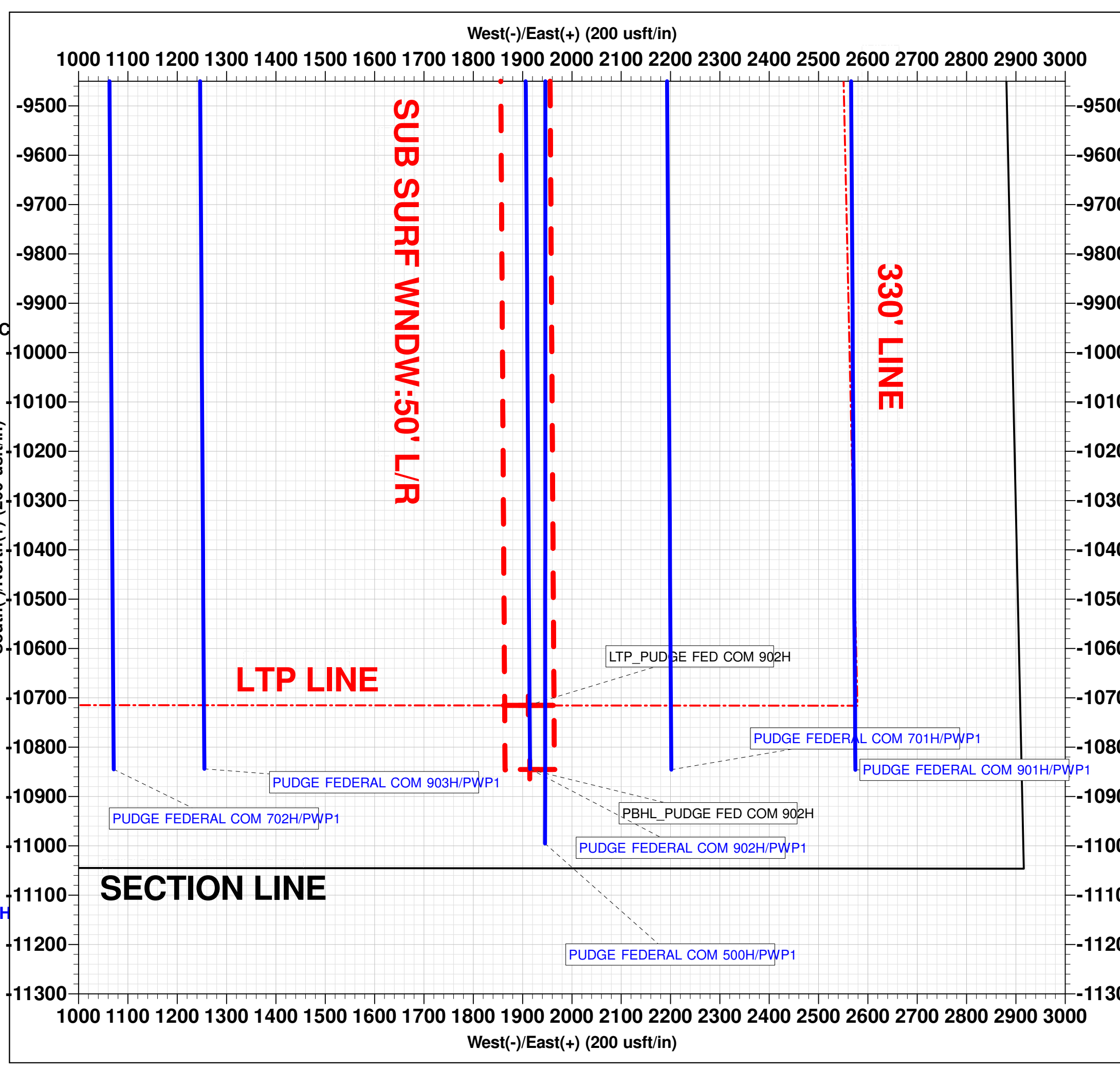
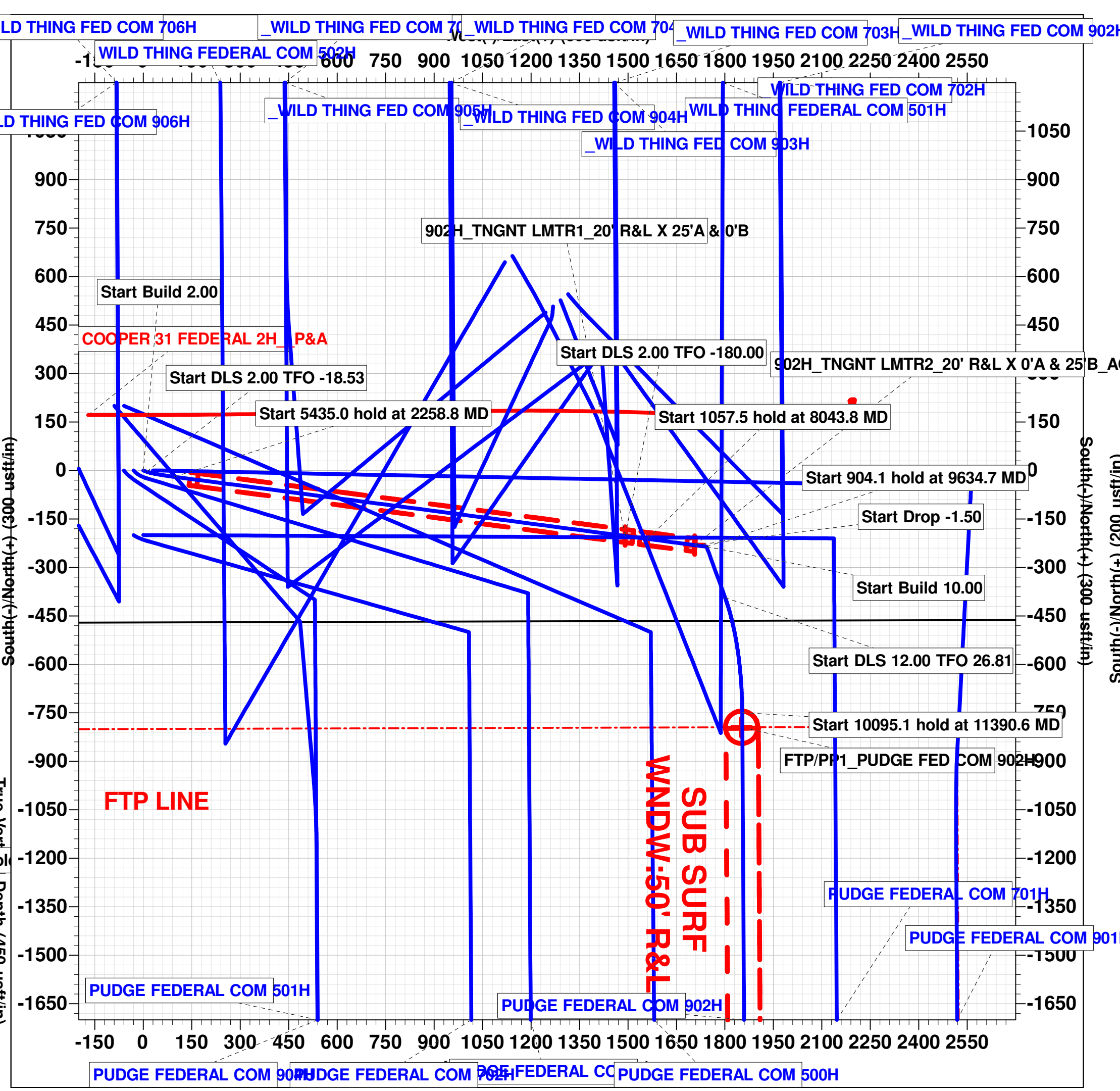
TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
902H_TNGNT LMTR1_20' R&L X 25'A & 0'B	7500.0	-202.8	1491.3	392803.82	597379.38
902H_TNGNT LMTR2_20' R&L X 0'A & 25'B_AC	8890.0	-231.0	1706.4	392775.62	597594.48
FTP/PP1_PUDGE FED COM 902H	10882.0	-794.7	1851.6	392211.87	597739.65
PP2_PUDGE FED COM 902H	10885.0	-5764.7	1888.2	387241.94	597776.32
PP3_PUDGE FED COM 902H	10885.8	-7083.4	1894.5	385923.20	597782.54
PP4_PUDGE FED COM 902H	10886.6	-8417.4	1900.7	384589.21	597788.83
LTP_PUDGE FED COM 902H	10888.0	-10715.4	1911.6	382291.26	597799.66
PBHL_PUDGE FED COM 902H	10888.0	-10845.4	1914.5	382161.26	597802.53

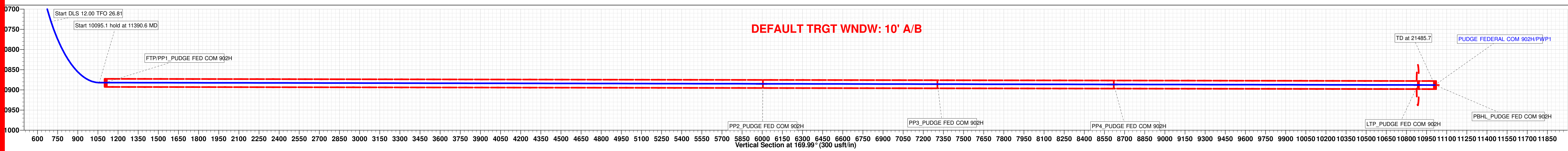


PUDGE FEDERAL COM 902H
PWP1

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
1500.0	0.00	0.00	1500.0	0.0	0.0	0.0	0.0	Start Build 2.00
1750.0	5.00	110.00	1749.7	-3.7	10.2	5.5	10.9	Start DLS 2.00 TFO -18.53
2258.8	15.00	97.47	2250.1	-19.9	96.6	36.4	98.9	Start 5435.0 hold at 2258.8 MD
7693.8	15.00	97.47	7500.0	-202.8	1491.3	459.1	1505.6	Start DLS 2.00 TFO -180.00
8043.8	8.00	97.47	7842.8	-211.9	1560.5	480.0	1575.3	Start 1057.5 hold at 8043.8 MD
9101.4	8.00	97.47	8890.0	-231.0	1706.4	524.2	1722.5	Start Drop -1.50
9634.7	0.00	0.00	9421.6	-235.8	1743.3	535.4	1759.7	Start 904.1 hold at 9634.7 MD
10538.8	0.00	0.00	10325.7	-235.8	1743.3	535.4	1759.7	Start Build 10.00
10986.8	45.00	160.00	10730.8	-393.5	1800.7	700.7	1927.5	Start DLS 12.00 TFO 26.81
11390.6	89.97	179.65	10882.0	-749.1	1853.6	1060.1	2288.6	Start 10095.1 hold at 11390.6 MD
21485.7	89.97	179.65	10888.0	-10844.1	1915.0	11011.9	12383.7	TD at 21485.7



DEFAULT TRGT WNDW: 10' A/B



ConocoPhillips - Pudge Federal Com 902H

1. Geologic Formations

TVD of Target:	10,896' EOL	Pilot hole depth:	N/A
MD at TD:	21,485'	Deepest expected fresh water:	0'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	401	Water	
Top of Salt	1029	Salt	
Base of Salt	2576	Salt	
Lamar	2772	Salt Water	
Bell Canyon	2816	Salt Water	
Cherry Canyon	3650	Oil/Gas	
Brushy Canyon	4924	Oil/Gas	
Bone Spring	6489	Oil/Gas	
1st Bone Spring Sand	7425	Oil/Gas	
2nd Bone Spring Sand	8279	Oil/Gas	
3rd Bone Spring Sand	9320	Oil/Gas	
Wolfcamp A	9818	Oil/Gas	
Wolfcamp B	10116	Oil/Gas	
Wolfcamp C	10645	Target Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	350	10.75"	45.5	J55	BTC	13.05	16.76	44.90	49.98
9.875"	0	7500	7.625"	29.7	L80-ICY	BTC	2.82	1.12	3.26	3.29
8.750"	7500	10224	7.625"	29.7	P110-ICY	W513	3.30	1.69	3.52	2.11
6.75"	0	10024	5.5"	20	P110-ICY	BTC	3.04	2.19	3.64	3.64
6.75"	10024	21,485	5.5"	20	P110-ICY	W441	2.89	2.19	3.35	2.73
COP Minimum Safety Factor							1.05	1.15	1.4	1.4

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.

All casing strings will be tested in accordance with 43 CFR Part 3170 Subpart 3172

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

ConocoPhillips - Pudge Federal Com 902H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

ConocoPhillips - Pudge Federal Com 902H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hrs)	Slurry Description
Surf.	24	13.5	1.75	9	12	Lead: Class C
	187	14.8	1.34	6.34	8	Tail: Class C
Int. Stage 1	1040	11	2.54	15.33	12	Lead: Class C
	112	14.8	1.34	6.52	8	Tail: Class C
Int. Stage 2	229	12.9	1.9	10.52	24	Lead: Class C
	192	14.8	1.34	6.52	8	Tail: Class C
Prod	554	12.7	1.68	9.09	72	Lead: Class C
	1095	14.5	1.18	5.26	19	Tail: Class H

Intermediate cement job to be performed offline.

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.

Stage tool ~50' into Lamar if required.

Casing String	TOC	% Excess
Surface	0'	50% in OH
Int Stg 1	0'	50% in OH
Int Stg 2	0'	20% in OH
Production	9,724'	35% OH in Lateral (KOP to EOL)

3b. Contingency Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hrs)	Slurry Description
Surf.	24	13.5	1.75	9	12	Lead: Class C
	187	14.8	1.34	6.34	8	Tail: Class C
Bradenhead Stage 1	482	15.6	1.216	5.28	6	Stage 1 Lead: Class H
Bradenhead Stage 2	2000	13.0	1.93	10.57	4	Bradenhead: Thixotropic Class C
	400	14.8	1.33	6.4	5	Top Out: Class C
Prod	554	12.7	1.68	9.09	72	Lead: Class C
	1095	14.2	1.18	5.26	19	Tail: Class H

If conditions dictate, an offline bradenhead cement job will be performed to ensure cement to surface.

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% in OH
BH Stg 1	6,489'	50% in OH
BH Stg 2	0'	264%
Production	9,724'	35% OH in Lateral (KOP to EOL)

ConocoPhillips - Pudge Federal Com 902H

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
Y	A variance is requested for the use of BOPE break testing on intermediate skids (in accordance with the 30 day full BOPE test requirements).

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8" x 8-3/4"	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	2500psi
			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 43 CFR part 3170 Subpart 3172 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 43 CFR part 3170 Subpart 3172. 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 43 CFR Part 3170 Subpart 3172.
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 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

ConocoPhillips - Pudge Federal Com 902H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.6 - 10	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9 - 13.5	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
N	CBL	Production casing
Y	Mud log	Intermediate shoe to TD
N	PEX	

ConocoPhillips - Pudge Federal Com 902H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7650 psi at 10896' TVD
Abnormal Temperature	NO 165 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 43 CFR Part 3170 Subpart 3176. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other Facets of Operation

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

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

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM118113

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
PUDGE FEDERAL COM/902H

2. Name of Operator
COG OPERATING LLC

9. API Well No.

3a. Address 600 West Illinois Ave, Midland, TX 79701

3b. Phone No. (include area code)
(432) 683-7443

10. Field and Pool or Exploratory Area
Purple Sage/(WOLFCAMP) GAS

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)
SEC 31/T25S/R29E/NMP

11. Country or Parish, State
EDDY/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

COG Operating LLC, respectfully requests approval for the following changes to the original approved APD.

APD ID# 10400101480

APD API# 30-015-56664

Drilling Changes:

C102, Drilling Program, Directional Plan, AC Report and Specs Attached.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
MAYTE REYES / Ph: (281) 293-1000

Title
Regulatory Analyst

Signature (Electronic Submission)

Date
09/12/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved

Conditions of approval, if any, are attached. Approval of this notice 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.

Title
Petroleum Engineer

Office
CARLSBAD

Date
09/15/2025

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: SESW / 469 FSL / 2444 FWL / TWSP: 25S / RANGE: 29E / SECTION: 31 / LAT: 32.080234 / LONG: -104.024234 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 330 FNL / 997 FEL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.078037 / LONG: -104.018257 (TVD: 10640 feet, MD: 11241 feet)

BHL: SESE / 200 FSL / 997 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.050408 / LONG: -104.018148 (TVD: 10640 feet, MD: 21291 feet)



TXP® BTC



Coupling	Pipe Body
Grade: J55 (Casing)	Grade: J55 (Casing)
Body: Bright Green	1st Band: Bright Green
1st Band: White	2nd Band: -
2nd Band: -	3rd Band: -
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	10.750 in.	Wall Thickness	0.400 in.	Grade	J55 (Casing)
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	10.750 in.	Wall Thickness	0.400 in.	Body Yield Strength	715 x1000 lb
Nominal Weight	45.50 lb/ft	Plain End Weight	44.26 lb/ft	Min. Internal Yield Pressure	3580 psi
Drift	9.794 in.	OD Tolerance	API	SMYS	55,000 psi
Nominal ID	9.950 in.			Collapse Pressure	2090 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	11.750 in.	Tension Efficiency	100 %	Minimum	19,520 ft-lb
Coupling Length	10.825 in.	Joint Yield Strength	715 x1000 lb	Optimum	21,690 ft-lb
Connection ID	9.938 in.	Internal Pressure Capacity	3580 psi	Maximum	23,860 ft-lb
Make-up Loss	4.891 in.	Compression Efficiency	100 %	Operation Limit Torques	
Threads per inch	5	Compression Strength	715 x1000 lb	Operating Torque	27,400 ft-lb
Connection OD Option	Regular	Max. Allowable Bending	23 °/100 ft	Yield Torque	34,700 ft-lb
		External Pressure Capacity	2090 psi		

Notes

This connection is fully interchangeable with:
TXP® BTC - 10.75 in. - 0.35 (40.50) / 0.45 (51.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
Standard coupling design comes with optimized 20° bevel.

For the latest performance data, always visit our website: www.tenaris.com
For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

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TXP[®] BTC



Coupling	Pipe Body
Grade: L80-ICY	Grade: L80-ICY
Body: Red	1st Band: Red
1st Band: Brown	2nd Band: Brown
2nd Band: Pale Green	3rd Band: Pale Green
3rd Band: -	4th Band: Pale Green
	5th Band: -
	6th Band: -

Outside Diameter	7.625 in.	Wall Thickness	0.375 in.	Grade	L80-ICY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	7.625 in.	Wall Thickness	0.375 in.	Body Yield Strength	726 x1000 lb
Nominal Weight	29.70 lb/ft	Plain End Weight	29.06 lb/ft	Min. Internal Yield Pressure	7320 psi
Drift	6.750 in.	OD Tolerance	API	SMYS	85,000 psi
Nominal ID	6.875 in.			Collapse Pressure	5900 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	8.500 in.	Tension Efficiency	100 %	Minimum	16,100 ft-lb
Coupling Length	10.575 in.	Joint Yield Strength	726 x1000 lb	Optimum	17,890 ft-lb
Connection ID	6.863 in.	Internal Pressure Capacity	7320 psi	Maximum	19,680 ft-lb
Make-up Loss	4.766 in.	Compression Efficiency	100 %	Operation Limit Torques	
Threads per inch	5	Compression Strength	726 x1000 lb	Operating Torque	20,600 ft-lb
Connection OD Option	Regular	Max. Allowable Bending	51 °/100 ft	Yield Torque	25,100 ft-lb
		External Pressure Capacity	5900 psi		

Notes

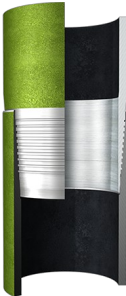
This connection is fully interchangeable with:
TXP[®] BTC - 7.625 in. - 0.328 (26.40) / 0.43 (33.70) / 0.5 (39.00) / 0.562 (42.80) / 0.595 (45.30) / 0.625 (47.10) in. (lb/ft)
Connections with Dopeless[®] Technology are fully compatible with the same connection in its doped version
Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
Standard coupling design comes with optimized 20° bevel.

For the latest performance data, always visit our website: www.tenaris.com
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Wedge 513®



Coupling	Pipe Body
Grade: P110-ICY	Grade: P110-ICY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	7.625 in.	Wall Thickness	0.375 in.	Grade	P110-ICY
Min. Wall Thickness	90.00 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	7.625 in.	Wall Thickness	0.375 in.	Body Yield Strength	1068 x1000 lb
Nominal Weight	29.70 lb/ft	Plain End Weight	29.06 lb/ft	Min. Internal Yield Pressure	11,070 psi
Drift	6.750 in.	OD Tolerance	API	SMYS	125,000 psi
Nominal ID	6.875 in.			Collapse Pressure	7360 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	7.625 in.	Tension Efficiency	60 %	Minimum	9000 ft-lb
Connection ID	6.800 in.	Joint Yield Strength	641 x1000 lb	Optimum	10,800 ft-lb
Make-up Loss	4.420 in.	Internal Pressure Capacity	11,070 psi	Maximum	15,800 ft-lb
Threads per inch	3.29	Compression Efficiency	75.20 %	Operation Limit Torques	
Connection OD Option	Regular	Compression Strength	803 x1000 lb	Operating Torque	53,000 ft-lb
		Max. Allowable Bending	45 °/100 ft	Yield Torque	79,000 ft-lb
		External Pressure Capacity	7360 psi		

Notes

This connection is fully interchangeable with:
Wedge 523® - 7.625 in. - 0.375 (29.70) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

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TXP® BTC



Coupling	Pipe Body
Grade: P110-4CY	Grade: P110-4CY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-4CY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Wall Thickness	0.361 in.
Nominal Weight	20.00 lb/ft	Plain End Weight	19.83 lb/ft
Drift	4.653 in.	OD Tolerance	API
Nominal ID	4.778 in.		
		Body Yield Strength	729 x1000 lb
		Min. Internal Yield Pressure	14,360 psi
		SMYS	125,000 psi
		Collapse Pressure	12,300 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.100 in.	Tension Efficiency	100 %	Minimum	11,540 ft-lb
Coupling Length	9.450 in.	Joint Yield Strength	729 x1000 lb	Optimum	12,820 ft-lb
Connection ID	4.766 in.	Internal Pressure Capacity	14,360 psi	Maximum	14,100 ft-lb
Make-up Loss	4.204 in.	Compression Efficiency	100 %		
Threads per inch	5	Compression Strength	729 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	104 °/100 ft	Operating Torque	22,700 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	25,250 ft-lb
		Coupling Face Load	343,000 lb		

Notes

This connection is fully interchangeable with:
TXP® BTC - 5.5 in. - 0.275 (15.50) / 0.304 (17.00) / 0.415 (23.00) / 0.476 (26.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
Standard coupling design comes with optimized 20° bevel.

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TenarisHydril Wedge 441®



Coupling	Pipe Body
Grade: P1104CY	Grade: P110-ICY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-ICY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Wall Thickness	0.361 in.
Nominal Weight	20.00 lb/ft	Plain End Weight	19.83 lb/ft
Drift	4.653 in.	OD Tolerance	API
Nominal ID	4.778 in.		
		Body Yield Strength	729 x1000 lb
		Min. Internal Yield Pressure	14,360 psi
		SMYS	125,000 psi
		Collapse Pressure	12,300 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	5.852 in.	Tension Efficiency	81.50 %	Minimum	15,000 ft-lb
Coupling Length	8.714 in.	Joint Yield Strength	594 x1000 lb	Optimum	16,000 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	14,360 psi	Maximum	19,200 ft-lb
Make-up Loss	3.780 in.	Compression Efficiency	81.50 %		
Threads per inch	3.40	Compression Strength	594 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	82.06 °/100 ft	Operating Torque	36,000 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	42,000 ft-lb
				Buck-On	
				Minimum	19,200 ft-lb
				Maximum	20,700 ft-lb

Notes

This connection is fully interchangeable with:
Wedge 441® - 5.5 in. - 0.304 (17.00) in. (lb/ft)
Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) / 0.415 (23.00) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

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PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	PUDGE FED COM 902H
LOCATION:	Section 31, T.25 S., R.29 E., NMP
COUNTY:	Eddy County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

Primary Casing Design:

1. The **10-3/4** inch surface casing shall be set at approximately **350 feet per BLM Geologist** (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature

survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. **Keep casing full during run for collapse safety factor.** The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:
- Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Contingency Squeeze:

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must top out cement after the bradenhead squeeze and verify cement to surface. Operator can also check TOC with Echo-meter. CBL must be run from TD of the 7-5/8" casing to surface if confidence is lacking on the quality of the bradenhead squeeze cement job. Submit results to BLM.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.
- **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. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **10-3/4 inch** surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 2.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.

- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system)

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Casing Clearance:

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

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

Offline Cementing:

Contact the BLM prior to the commencement of any offline cementing procedure.

GENERAL REQUIREMENTS

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

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

☒ Eddy County

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

BLM_NM_CFO_DrillingNotifications@BLM.GOV

(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,

(575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - iii. BOP/BOPE test to be conducted per **43 CFR 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#).

Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.
 - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing

can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this

depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

JS 9/15/2025

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 509371

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 509371
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	11/14/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	11/14/2025