

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	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No. PUDGE FEDERAL COM/901H	
9. API Well No.	
1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	10. Field and Pool or Exploratory Area Purple Sage/(WOLFCAMP) GAS
2. Name of Operator COG OPERATING LLC	11. Country or Parish, State LEA/NM
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	

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 recomplete 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 # 10400101476.
API #: 30-015-56663.

Drilling Changes:
KOP:
From: 469' FSL and 2474' FWL Section 31. T25S. R29E.
To: 412' FSL and 286' FEL Section 31. T25S. R29E.

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 10/24/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 10/27/2025
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 / 2474 FWL / TWSP: 25S / RANGE: 29E / SECTION: 31 / LAT: 32.080234 / LONG: -104.024137 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 1 FNL / 337 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.064367 / LONG: -104.016055 (TVD: 10880 feet, MD: 16255 feet)

PPP: NENE / 330 FNL / 337 FEL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.078037 / LONG: -104.016127 (TVD: 10880 feet, MD: 11867 feet)

BHL: SESE / 200 FSL / 337 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.0504 / LONG: -104.016017 (TVD: 10880 feet, MD: 21919 feet)

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.080234 / -104.024137	County or Parish/State: LEA / NM
Well Number: 901H	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: 2867513

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 08/08/2025	Time Sundry Submitted: 09:59
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 # 10400101476. API #: 30-015-56663. Drilling Changes: KOP: From: 469' FSL and 2474' FWL Section 31. T25S. R29E. To: 412' FSL and 286' FEL Section 31. T25S. R29E. C102, Drilling Program, Directional Plan, AC Report and Specs Attached.

NOI Attachments

Procedure Description

- COG_Pudge_901H_AC_RPT_20250808095900.pdf
- COG_PUDGE_FEDERAL_COM_901H_C102_20250808095859.pdf
- COG_Pudge_901H_Directional_Plan_20250808095901.pdf
- COG_Pudge_901H_Drilling_Program_20250808095900.pdf
- Tenaris_Data_Sheets___3_String___WCA___State_Line___20___P110_ICY_Prod_20250808095900.pdf

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.080234 / -104.024137	County or Parish/State: LEA / NM
Well Number: 901H	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_20250915084229.pdf

PUDGE_FED_COM_901H_COAs_20250915084229.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: OCT 24, 2025 02:55 PM

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

Zip: 79701

Phone: (432)685-4385

Email address: robyn.m.russell@cop.com

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: 10/27/2025
Signature: Chris Walls	

DELAWARE BASIN WEST

ATLAS PROSPECT_NME

PUDGE FED COM PROJECT

PUDGE FEDERAL COM 901H

3001556663

OWB

PWP1

Anticollision Report

04 August, 2025

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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	PWP1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,000.0usft	Error Surface:	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Added to Error Values

Survey Tool Program		Date	8/4/2025		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	21,732.1	PWP1 (OWB)	r.5 MWD+IFR1	OWSG MWD + IFR1 rev.5	

Summary						
	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Site Name Offset Well - Wellbore - Design						
PUDGE FED COM PROJECT						
PUDGE FEDERAL COM 500H - OWB - PWP1	2,221.0	2,265.3	162.2	145.8	9.857 CC	
PUDGE FEDERAL COM 500H - OWB - PWP1	2,300.0	2,343.5	162.7	145.4	9.430 ES	
PUDGE FEDERAL COM 500H - OWB - PWP1	2,900.0	2,936.9	190.6	167.6	8.277 SF	
PUDGE FEDERAL COM 501H - OWB - PWP1	1,648.4	1,684.0	208.1	195.6	16.686 CC, ES	
PUDGE FEDERAL COM 501H - OWB - PWP1	1,900.0	1,930.4	221.8	207.5	15.604 SF	
PUDGE FEDERAL COM 701H - OWB - PWP1	1,952.7	1,960.4	200.1	187.7	16.102 CC	
PUDGE FEDERAL COM 701H - OWB - PWP1	2,000.0	2,007.7	200.2	187.5	15.828 ES	
PUDGE FEDERAL COM 701H - OWB - PWP1	21,729.9	20,693.8	795.0	627.2	4.737 SF	
PUDGE FEDERAL COM 702H - OWB - PWP1	999.0	998.0	209.0	201.1	26.332 CC	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,100.0	1,097.4	209.9	200.4	22.028 ES	
PUDGE FEDERAL COM 702H - OWB - PWP1	2,000.0	1,996.7	261.4	248.7	20.673 SF	
PUDGE FEDERAL COM 902H - OWB - PWP1	999.0	999.0	30.0	22.1	3.778 CC	
PUDGE FEDERAL COM 902H - OWB - PWP1	1,000.0	1,000.0	30.0	22.1	3.777 ES	
PUDGE FEDERAL COM 902H - OWB - PWP1	21,732.1	21,492.6	689.0	479.9	3.295 SF	
PUDGE FEDERAL COM 903H - OWB - PWP1	999.0	1,000.0	60.0	52.1	7.557 CC	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,100.0	1,102.5	60.5	50.8	6.252 ES	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,200.0	1,203.9	62.2	52.1	6.135 SF	
PUDGE FEDERAL COM 904H - OWB - PWP1	999.0	1,000.0	90.0	82.1	11.335 CC	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,000.0	1,001.0	90.0	82.1	11.332 ES	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,100.0	1,101.0	91.8	82.1	9.522 SF	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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 701H - OWB - PWP0	8,481.3	8,158.5	239.4	190.1	4.851 CC	
_WILD THING FED COM 701H - OWB - PWP0	8,600.0	8,275.7	240.2	189.9	4.777 ES	
_WILD THING FED COM 701H - OWB - PWP0	9,600.0	9,272.7	252.7	197.2	4.553 SF	
_WILD THING FED COM 702H - OWB - PWP0	6,700.0	6,436.0	102.8	54.7	2.138 Caution - Monitor Closely, SF	
_WILD THING FED COM 702H - OWB - PWP0	6,799.3	6,528.2	96.0	51.3	2.148 Caution - Monitor Closely, CC, ES	
_WILD THING FED COM 703H - OWB - PWP0	5,473.5	5,240.2	181.4	145.3	5.030 CC	
_WILD THING FED COM 703H - OWB - PWP0	5,500.0	5,264.7	181.6	145.1	4.976 ES	
_WILD THING FED COM 703H - OWB - PWP0	5,600.0	5,357.1	187.1	149.0	4.907 SF	
_WILD THING FED COM 704H - OWB - PWP0	4,527.3	4,354.0	148.4	122.0	5.624 CC, ES	
_WILD THING FED COM 704H - OWB - PWP0	4,600.0	4,419.4	151.7	124.2	5.508 SF	
_WILD THING FED COM 705H - OWB - PWP0	3,982.4	3,862.8	219.2	195.0	9.062 CC, ES, SF	
_WILD THING FED COM 706H - OWB - PWP0	999.0	981.0	377.6	369.6	47.073 CC	
_WILD THING FED COM 706H - OWB - PWP0	1,100.0	1,089.4	378.3	368.6	38.990 ES	
_WILD THING FED COM 706H - OWB - PWP0	1,900.0	1,913.1	441.8	428.0	31.875 SF	
_WILD THING FED COM 707H - OWB - PWP0	999.0	981.0	403.4	395.3	50.285 CC	
_WILD THING FED COM 707H - OWB - PWP0	1,100.0	1,082.0	404.9	395.2	41.825 ES	
_WILD THING FED COM 707H - OWB - PWP0	1,600.0	1,577.6	459.5	447.6	38.556 SF	
_WILD THING FED COM 708H - OWB - PWP0	999.0	981.0	429.7	421.7	53.569 CC	
_WILD THING FED COM 708H - OWB - PWP0	1,000.0	982.0	429.7	421.7	53.553 ES	
_WILD THING FED COM 708H - OWB - PWP0	1,500.0	1,449.3	484.1	472.7	42.335 SF	
_WILD THING FED COM 709H - OWB - PWP0	999.0	981.0	456.5	448.5	56.908 CC	
_WILD THING FED COM 709H - OWB - PWP0	1,000.0	982.0	456.5	448.5	56.891 ES	
_WILD THING FED COM 709H - OWB - PWP0	1,500.0	1,439.0	515.4	504.0	44.889 SF	
_WILD THING FED COM 710H - OWB - PWP0	999.0	981.0	483.6	475.6	60.294 CC	
_WILD THING FED COM 710H - OWB - PWP0	1,000.0	982.0	483.6	475.6	60.277 ES	
_WILD THING FED COM 710H - OWB - PWP0	1,500.0	1,429.4	546.3	534.8	47.385 SF	
_WILD THING FED COM 901H - OWB - PWP0	11,142.7	10,759.2	117.8	45.3	1.624 Caution - Monitor Closely, CC, ES, SF	
_WILD THING FED COM 902H - OWB - PWP0	6,586.8	6,277.5	291.3	251.7	7.348 CC, ES	
_WILD THING FED COM 902H - OWB - PWP0	6,600.0	6,290.3	291.4	251.7	7.345 SF	
_WILD THING FED COM 903H - OWB - PWP0	5,100.0	4,862.0	213.8	182.4	6.814 ES, SF	
_WILD THING FED COM 903H - OWB - PWP0	5,104.4	4,866.2	213.8	182.4	6.820 CC	
_WILD THING FED COM 904H - OWB - PWP0	4,800.0	4,584.6	129.1	98.5	4.219 SF	
_WILD THING FED COM 904H - OWB - PWP0	4,825.8	4,608.0	128.6	98.2	4.225 CC, ES	
_WILD THING FED COM 905H - OWB - PWP0	4,151.2	4,007.5	65.2	40.1	2.599 Normal Operations, CC, ES, SF	
_WILD THING FED COM 906H - OWB - PWP0	999.0	981.0	320.6	312.6	39.969 CC	
_WILD THING FED COM 906H - OWB - PWP0	1,100.0	1,085.3	322.0	312.2	33.166 ES	
_WILD THING FED COM 906H - OWB - PWP0	1,600.0	1,601.2	364.2	352.1	30.235 SF	
_WILD THING FED COM 907H - OWB - PWP0	999.0	981.0	350.6	342.6	43.709 CC	
_WILD THING FED COM 907H - OWB - PWP0	1,000.0	982.0	350.6	342.6	43.696 ES	
_WILD THING FED COM 907H - OWB - PWP0	1,500.0	1,479.5	394.3	382.7	34.084 SF	
_WILD THING FED COM 908H - OWB - PWP0	999.0	981.0	380.6	372.6	47.449 CC	
_WILD THING FED COM 908H - OWB - PWP0	1,000.0	982.0	380.6	372.6	47.435 ES	
_WILD THING FED COM 908H - OWB - PWP0	1,300.0	1,257.6	404.7	394.1	38.089 SF	
_WILD THING FED COM 909H - OWB - PWP0	999.0	981.0	410.6	402.6	51.189 CC	
_WILD THING FED COM 909H - OWB - PWP0	1,000.0	982.0	410.6	402.6	51.174 ES	
_WILD THING FED COM 909H - OWB - PWP0	1,400.0	1,342.5	454.8	443.7	40.845 SF	
_WILD THING FED COM 910H - OWB - PWP0	999.0	981.0	440.6	432.6	54.929 CC	
_WILD THING FED COM 910H - OWB - PWP0	1,000.0	982.0	440.6	432.6	54.913 ES	
_WILD THING FED COM 910H - OWB - PWP0	1,400.0	1,339.5	485.0	473.9	43.810 SF	
COOPER 31 FEDERAL 2H_P&A - OWB - AWP	7,318.0	6,924.6	213.9	163.0	4.202 CC, ES, SF	
PUDGE FEDERAL 21H - OWB - AWP	7,054.7	6,686.9	139.3	101.3	3.667 CC, ES	
PUDGE FEDERAL 21H - OWB - AWP	7,100.0	6,729.4	140.1	101.6	3.637 SF	
PUDGE FEDERAL 21H - ST01 - ST01 AWP	7,054.7	6,686.9	139.3	101.3	3.667 CC, ES	

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 901H
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 901H	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						
PUDGE FEDERAL 21H - ST01 - ST01 AWP	7,100.0	6,729.4	140.1	101.6	3.637 SF	
WILD THING FED COM 504H - OWB - PWP1	800.0	795.0	484.0	477.8	78.045 CC, ES	
WILD THING FED COM 504H - OWB - PWP1	1,300.0	1,218.3	534.4	524.5	54.384 SF	
WILD THING FEDERAL COM 501H - OWB - PWP1	5,181.0	5,011.6	243.8	202.0	5.825 CC	
WILD THING FEDERAL COM 501H - OWB - PWP1	5,200.0	5,029.3	243.9	201.9	5.811 ES, SF	
WILD THING FEDERAL COM 502H - OWB - PWP1	3,645.2	3,632.2	81.3	56.1	3.221 CC, ES, SF	
WILD THING FEDERAL COM 503H - OWB - PWP1	999.0	995.0	456.8	448.9	57.590 CC	
WILD THING FEDERAL COM 503H - OWB - PWP1	1,000.0	996.0	456.8	448.9	57.573 ES	
WILD THING FEDERAL COM 503H - OWB - PWP1	1,400.0	1,340.8	503.3	492.2	45.503 SF	

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 Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
				(usft)	(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	
999.0	999.0	1,001.1	999.1	3.8	3.8	-24.20	199.7	-89.8	219.0	211.0	7.94	27.563	
1,000.0	1,000.0	1,002.1	1,000.1	3.8	3.8	-115.33	199.7	-89.8	219.0	211.0	7.95	27.554	
1,100.0	1,100.0	1,108.1	1,106.1	5.2	4.1	-115.43	198.9	-87.9	218.3	208.7	9.61	22.710	
1,200.0	1,199.8	1,214.0	1,211.8	5.5	4.5	-115.74	196.6	-82.4	216.5	206.4	10.02	21.607	
1,300.0	1,299.4	1,319.8	1,317.2	5.7	4.8	-116.26	192.7	-73.4	213.4	202.9	10.43	20.454	
1,400.0	1,398.7	1,425.6	1,422.0	6.0	5.2	-117.01	187.3	-60.8	209.1	198.2	10.86	19.246	
1,500.0	1,497.5	1,531.1	1,526.1	6.3	5.5	-118.02	180.4	-44.7	203.6	192.3	11.32	17.986	
1,600.0	1,595.6	1,636.5	1,629.3	6.7	5.9	-119.32	172.0	-25.1	197.1	185.3	11.82	16.679	
1,700.0	1,693.0	1,741.7	1,731.4	7.0	6.4	-120.96	162.1	-2.1	189.5	177.2	12.36	15.334	
1,800.0	1,789.6	1,846.6	1,832.3	7.4	6.8	-123.00	150.7	24.3	181.0	168.1	12.93	13.998	
1,900.0	1,885.2	1,947.4	1,928.5	7.8	7.1	-125.60	138.8	52.1	172.5	158.9	13.57	12.704	
2,000.0	1,979.8	2,046.6	2,023.1	8.2	7.5	-129.28	127.0	79.5	166.3	151.9	14.37	11.570	
2,086.3	2,060.4	2,132.1	2,104.6	8.5	7.8	-133.31	116.9	103.1	163.5	148.3	15.13	10.801	
2,100.0	2,073.1	2,145.6	2,117.6	8.5	7.9	-134.01	115.3	106.9	163.2	148.0	15.25	10.701	
2,200.0	2,166.0	2,244.6	2,211.9	8.9	8.3	-139.14	103.5	134.2	162.3	146.0	16.25	9.985	
2,221.0	2,185.5	2,265.3	2,231.7	9.0	8.3	-140.22	101.1	140.0	162.2	145.8	16.46	9.857 CC	
2,300.0	2,258.9	2,343.5	2,306.2	9.3	8.7	-144.28	91.8	161.6	162.7	145.4	17.25	9.430 ES	
2,400.0	2,351.8	2,442.4	2,400.5	9.7	9.1	-149.35	80.0	189.0	164.4	146.1	18.26	9.002	
2,500.0	2,444.6	2,541.3	2,494.8	10.1	9.5	-154.29	68.3	216.3	167.4	148.1	19.26	8.689	
2,600.0	2,537.5	2,640.2	2,589.2	10.5	10.0	-159.02	56.6	243.7	171.6	151.3	20.25	8.475	
2,700.0	2,630.4	2,739.1	2,683.5	11.0	10.4	-163.50	44.8	271.0	176.9	155.7	21.20	8.344	
2,800.0	2,723.3	2,838.0	2,777.8	11.4	10.8	-167.70	33.1	298.4	183.3	161.2	22.13	8.283	
2,900.0	2,816.2	2,936.9	2,872.1	11.9	11.3	-171.60	21.3	325.7	190.6	167.6	23.03	8.277 SF	
3,000.0	2,909.1	3,035.8	2,966.5	12.3	11.8	-175.21	9.6	353.1	198.8	174.9	23.90	8.316	

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 901H
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 901H	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		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)	Separation Factor		
3,100.0	3,001.9	3,134.7	3,060.8	12.8	12.2	-178.52	-2.2	380.4	207.6	182.9	24.75	8.389	
3,200.0	3,094.8	3,233.6	3,155.1	13.2	12.7	178.45	-13.9	407.8	217.1	191.6	25.58	8.489	
3,300.0	3,187.7	3,332.5	3,249.4	13.7	13.1	175.67	-25.7	435.1	227.2	200.8	26.39	8.609	
3,400.0	3,280.6	3,431.4	3,343.7	14.2	13.6	173.13	-37.4	462.5	237.7	210.6	27.19	8.743	
3,500.0	3,373.5	3,530.4	3,438.1	14.7	14.1	170.81	-49.1	489.8	248.7	220.7	27.98	8.888	
3,600.0	3,466.4	3,629.3	3,532.4	15.1	14.6	168.69	-60.9	517.2	260.1	231.3	28.77	9.040	
3,700.0	3,559.3	3,728.2	3,626.7	15.6	15.0	166.74	-72.6	544.5	271.7	242.2	29.55	9.196	
3,800.0	3,652.1	3,827.1	3,721.0	16.1	15.5	164.96	-84.4	571.9	283.7	253.4	30.33	9.355	
3,900.0	3,745.0	3,926.0	3,815.4	16.6	16.0	163.32	-96.1	599.2	295.9	264.8	31.10	9.514	
4,000.0	3,837.9	4,024.9	3,909.7	17.1	16.5	161.81	-107.9	626.6	308.4	276.5	31.88	9.672	
4,100.0	3,930.8	4,123.8	4,004.0	17.6	17.0	160.42	-119.6	653.9	321.0	288.3	32.66	9.829	
4,200.0	4,023.7	4,222.7	4,098.3	18.1	17.5	159.14	-131.4	681.3	333.8	300.3	33.43	9.983	
4,300.0	4,116.6	4,321.6	4,192.6	18.6	17.9	157.95	-143.1	708.6	346.7	312.5	34.21	10.135	
4,400.0	4,209.4	4,420.5	4,287.0	19.1	18.4	156.84	-154.9	736.0	359.8	324.8	34.99	10.283	
4,500.0	4,302.3	4,519.4	4,381.3	19.6	18.9	155.81	-166.6	763.3	373.0	337.3	35.77	10.428	
4,600.0	4,395.2	4,618.3	4,475.6	20.1	19.4	154.85	-178.3	790.7	386.4	349.8	36.56	10.569	
4,700.0	4,488.1	4,717.2	4,569.9	20.6	19.9	153.96	-190.1	818.0	399.8	362.5	37.34	10.706	
4,800.0	4,581.0	4,816.2	4,664.3	21.1	20.4	153.13	-201.8	845.4	413.3	375.2	38.13	10.840	
4,900.0	4,673.9	4,915.1	4,758.6	21.6	20.9	152.34	-213.6	872.7	426.9	388.0	38.92	10.969	
5,000.0	4,766.7	5,014.0	4,852.9	22.1	21.4	151.61	-225.3	900.1	440.6	400.9	39.71	11.095	
5,100.0	4,859.6	5,112.9	4,947.2	22.6	21.9	150.92	-237.1	927.5	454.3	413.8	40.50	11.216	
5,200.0	4,952.5	5,211.8	5,041.5	23.1	22.4	150.27	-248.8	954.8	468.1	426.8	41.30	11.334	
5,300.0	5,045.4	5,310.7	5,135.9	23.6	22.9	149.66	-260.6	982.2	482.0	439.9	42.10	11.449	
5,400.0	5,138.3	5,409.6	5,230.2	24.2	23.4	149.08	-272.3	1,009.5	495.9	453.0	42.90	11.560	
5,500.0	5,231.2	5,508.5	5,324.5	24.7	23.9	148.53	-284.0	1,036.9	509.8	466.1	43.70	11.667	
5,600.0	5,324.0	5,607.4	5,418.8	25.2	24.4	148.01	-295.8	1,064.2	523.8	479.3	44.50	11.771	
5,700.0	5,416.9	5,706.3	5,513.2	25.7	24.9	147.52	-307.5	1,091.6	537.8	492.5	45.30	11.872	
5,800.0	5,509.8	5,805.2	5,607.5	26.2	25.4	147.06	-319.3	1,118.9	551.9	505.8	46.11	11.969	
5,900.0	5,602.7	5,904.1	5,701.8	26.7	25.8	146.62	-331.0	1,146.3	566.0	519.1	46.92	12.064	
6,000.0	5,695.6	6,003.1	5,796.1	27.2	26.3	146.19	-342.8	1,173.6	580.2	532.4	47.73	12.156	
6,100.0	5,788.5	6,102.0	5,890.4	27.8	26.8	145.79	-354.5	1,201.0	594.3	545.8	48.54	12.244	
6,200.0	5,881.3	6,200.9	5,984.8	28.3	27.3	145.41	-366.3	1,228.3	608.5	559.2	49.35	12.331	
6,300.0	5,974.2	6,299.8	6,079.1	28.8	27.8	145.05	-378.0	1,255.7	622.7	572.6	50.16	12.414	
6,400.0	6,067.1	6,398.7	6,173.4	29.3	28.3	144.70	-389.8	1,283.0	637.0	586.0	50.98	12.495	
6,500.0	6,160.0	6,494.6	6,264.9	29.8	28.8	144.39	-401.1	1,309.4	651.4	599.6	51.76	12.584	
6,600.0	6,252.9	6,587.5	6,354.0	30.4	29.3	144.20	-411.5	1,333.7	666.5	614.0	52.55	12.684	
6,700.0	6,345.8	6,680.3	6,443.3	30.9	29.7	144.13	-421.4	1,356.7	682.6	629.2	53.35	12.794	
6,800.0	6,438.7	6,772.7	6,532.8	31.4	30.2	144.16	-430.7	1,378.3	699.5	645.3	54.16	12.915	
6,900.0	6,531.5	6,864.9	6,622.3	31.9	30.6	144.29	-439.3	1,398.5	717.3	662.3	54.99	13.045	
7,000.0	6,624.4	6,956.7	6,711.7	32.5	31.1	144.52	-447.4	1,417.3	736.0	680.1	55.82	13.185	
7,100.0	6,717.3	7,048.1	6,801.1	33.0	31.5	144.82	-454.9	1,434.7	755.5	698.9	56.66	13.334	
7,200.0	6,810.2	7,139.0	6,890.4	33.5	31.9	145.21	-461.7	1,450.7	776.0	718.5	57.50	13.494	
7,271.2	6,876.3	7,200.0	6,950.4	33.9	32.2	145.50	-466.0	1,460.7	791.1	733.0	58.06	13.625	
7,300.0	6,903.1	7,229.5	6,979.4	34.0	32.4	145.69	-468.0	1,465.3	797.3	738.9	58.34	13.665	
7,400.0	6,996.5	7,319.7	7,068.5	34.5	32.8	146.26	-473.7	1,478.6	818.5	759.3	59.18	13.830	
7,500.0	7,090.5	7,409.7	7,157.6	35.1	33.2	146.83	-478.9	1,490.6	839.2	779.2	59.98	13.990	
7,600.0	7,185.1	7,500.0	7,247.1	35.6	33.5	147.40	-483.5	1,501.3	859.4	798.6	60.77	14.142	
7,700.0	7,280.2	7,589.3	7,335.8	36.1	33.9	147.95	-487.5	1,510.7	879.1	817.6	61.52	14.291	
7,800.0	7,375.8	7,678.8	7,424.9	36.6	34.3	148.50	-491.0	1,518.8	898.4	836.2	62.24	14.434	
7,900.0	7,472.0	7,768.1	7,513.9	37.1	34.6	149.04	-493.9	1,525.6	917.2	854.3	62.94	14.573	
8,000.0	7,568.6	7,857.3	7,602.9	37.6	34.9	149.58	-496.3	1,531.1	935.5	871.9	63.60	14.708	

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 901H
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 901H	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											Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance			Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
8,100.0	7,665.6	7,946.3	7,691.7	38.1	35.2	150.11	-498.1	1,535.3	953.4	889.1	64.24	14.840	
8,200.0	7,763.1	8,035.1	7,780.5	38.6	35.5	150.64	-499.3	1,538.2	970.7	905.9	64.85	14.970	
8,300.0	7,860.9	8,123.7	7,869.1	39.0	35.7	151.17	-500.1	1,539.9	987.6	922.1	65.51	15.075	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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						Rule Assigned:					Offset Well Error:	0.0 usft
Measured Depth	Reference	Offset	Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Distance			Separation Factor	Warning		
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)		Offset (usft)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			No-Go Distance (usft)	
0.0	0.0	2.0	0.0	0.0	0.0	-30.96	199.6	-119.8	232.8					
100.0	100.0	102.0	100.0	0.8	0.8	-30.96	199.6	-119.8	232.8	230.8	2.00	116.152		
200.0	200.0	202.0	200.0	1.4	1.4	-30.96	199.6	-119.8	232.8	229.5	3.32	70.120		
300.0	300.0	302.0	300.0	1.9	1.9	-30.96	199.6	-119.8	232.8	228.6	4.20	55.401		
400.0	400.0	402.0	400.0	2.2	2.3	-30.96	199.6	-119.8	232.8	227.9	4.92	47.340		
500.0	500.0	502.0	500.0	2.6	2.6	-30.96	199.6	-119.8	232.8	227.3	5.54	42.037		
600.0	600.0	602.0	600.0	2.8	2.8	-30.96	199.6	-119.8	232.8	226.7	6.10	38.197		
700.0	700.0	702.0	700.0	3.1	3.1	-30.96	199.6	-119.8	232.8	226.2	6.61	35.245		
800.0	800.0	802.0	800.0	3.3	3.3	-30.96	199.6	-119.8	232.8	225.7	7.08	32.880		
900.0	900.0	902.0	900.0	3.6	3.6	-30.96	199.6	-119.8	232.8	225.3	7.53	30.928		
999.0	999.0	1,001.1	999.1	3.8	3.8	-30.96	199.6	-119.8	232.8	224.9	7.95	29.303		
1,000.0	1,000.0	1,002.2	1,000.2	3.8	3.8	-122.09	199.6	-119.8	232.8	224.9	7.95	29.292		
1,100.0	1,100.0	1,110.9	1,108.8	5.2	4.1	-122.42	198.0	-118.4	231.8	222.2	9.68	23.956		
1,200.0	1,199.8	1,219.4	1,217.2	5.5	4.5	-123.42	193.3	-114.3	229.0	218.9	10.15	22.570		
1,300.0	1,299.4	1,327.6	1,324.9	5.7	4.8	-125.13	185.5	-107.6	224.5	213.8	10.64	21.104		
1,400.0	1,398.7	1,435.3	1,431.6	6.0	5.1	-127.61	174.6	-98.2	218.4	207.3	11.13	19.633		
1,500.0	1,497.5	1,537.3	1,532.3	6.3	5.4	-130.79	162.1	-87.5	212.1	200.5	11.60	18.289		
1,600.0	1,595.6	1,636.2	1,629.9	6.7	5.7	-134.68	149.8	-76.9	208.5	196.4	12.17	17.135		
1,648.4	1,642.9	1,684.0	1,677.0	6.8	5.8	-136.81	143.9	-71.7	208.1	195.6	12.47	16.686 CC, ES		
1,700.0	1,693.0	1,734.8	1,727.1	7.0	6.0	-139.24	137.5	-66.3	208.6	195.8	12.80	16.293		
1,800.0	1,789.6	1,832.9	1,823.9	7.4	6.3	-144.23	125.3	-55.8	212.9	199.4	13.49	15.779		
1,900.0	1,885.2	1,930.4	1,920.1	7.8	6.6	-149.37	113.2	-45.3	221.8	207.5	14.21	15.604 SF		
2,000.0	1,979.8	2,027.2	2,015.6	8.2	7.0	-154.40	101.1	-34.9	235.5	220.6	14.94	15.760		
2,086.3	2,060.4	2,110.1	2,097.3	8.5	7.3	-158.48	90.8	-26.0	251.4	235.8	15.54	16.173		
2,100.0	2,073.1	2,123.3	2,110.3	8.5	7.3	-159.12	89.2	-24.6	254.2	238.6	15.63	16.266		
2,200.0	2,166.0	2,218.9	2,204.7	8.9	7.7	-163.37	77.2	-14.4	275.7	259.3	16.33	16.884		
2,300.0	2,258.9	2,314.6	2,299.0	9.3	8.0	-167.01	65.3	-4.1	298.4	281.4	16.99	17.563		
2,400.0	2,351.8	2,410.3	2,393.4	9.7	8.4	-170.14	53.4	6.2	322.2	304.6	17.65	18.251		
2,500.0	2,444.6	2,506.0	2,487.8	10.1	8.8	-172.85	41.5	16.4	346.8	328.5	18.32	18.930		
2,600.0	2,537.5	2,601.7	2,582.2	10.5	9.2	-175.20	29.6	26.7	372.0	353.0	18.99	19.593		
2,700.0	2,630.4	2,697.4	2,676.6	11.0	9.6	-177.26	17.7	36.9	397.8	378.1	19.66	20.232		
2,800.0	2,723.3	2,793.1	2,771.0	11.4	9.9	-179.06	5.7	47.2	423.9	403.6	20.34	20.845		
2,900.0	2,816.2	2,888.7	2,865.3	11.9	10.3	-179.34	-6.2	57.5	450.5	429.5	21.02	21.429		
3,000.0	2,909.1	2,984.4	2,959.7	12.3	10.7	-177.91	-18.1	67.7	477.3	455.6	21.71	21.984		
3,100.0	3,001.9	3,080.1	3,054.1	12.8	11.1	-176.64	-30.0	78.0	504.4	482.0	22.41	22.510		
3,200.0	3,094.8	3,175.8	3,148.5	13.2	11.5	-175.49	-41.9	88.2	531.7	508.6	23.11	23.009		
3,300.0	3,187.7	3,271.5	3,242.9	13.7	11.9	-174.46	-53.8	98.5	559.1	535.3	23.81	23.481		
3,400.0	3,280.6	3,367.2	3,337.3	14.2	12.3	-173.52	-65.7	108.8	586.7	562.2	24.52	23.927		
3,500.0	3,373.5	3,462.8	3,431.6	14.7	12.7	-172.67	-77.7	119.0	614.5	589.3	25.24	24.348		
3,600.0	3,466.4	3,558.5	3,526.0	15.1	13.1	-171.89	-89.6	129.3	642.4	616.4	25.96	24.747		
3,700.0	3,559.3	3,654.2	3,620.4	15.6	13.6	-171.18	-101.5	139.6	670.3	643.6	26.68	25.125		
3,800.0	3,652.1	3,749.9	3,714.8	16.1	14.0	-170.52	-113.4	149.8	698.4	671.0	27.41	25.482		
3,900.0	3,745.0	3,845.6	3,809.2	16.6	14.4	-169.91	-125.3	160.1	726.5	698.4	28.14	25.821		
4,000.0	3,837.9	3,941.3	3,903.6	17.1	14.8	-169.35	-137.2	170.3	754.7	725.9	28.87	26.141		
4,100.0	3,930.8	4,036.9	3,997.9	17.6	15.2	-168.82	-149.2	180.6	783.0	753.4	29.61	26.445		
4,200.0	4,023.7	4,132.6	4,092.3	18.1	15.6	-168.34	-161.1	190.9	811.3	781.0	30.35	26.734		
4,300.0	4,116.6	4,228.3	4,186.7	18.6	16.0	-167.88	-173.0	201.1	839.7	808.6	31.09	27.008		
4,400.0	4,209.4	4,324.0	4,281.1	19.1	16.4	-167.46	-184.9	211.4	868.1	836.3	31.83	27.269		
4,500.0	4,302.3	4,419.7	4,375.5	19.6	16.9	-167.06	-196.8	221.6	896.6	864.0	32.58	27.517		
4,600.0	4,395.2	4,515.4	4,469.9	20.1	17.3	-166.69	-208.7	231.9	925.1	891.7	33.33	27.753		
4,700.0	4,488.1	4,611.1	4,564.2	20.6	17.7	-166.34	-220.6	242.2	953.6	919.5	34.08	27.978		

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 901H
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 901H	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		Offset Wellbore Centre		Distance		Rule Assigned:				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
4,800.0	4,581.0	4,706.7	4,658.6	21.1	18.1	166.01	-232.6	252.4	982.2	947.3	34.84	28.193	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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						Rule Assigned:					Offset Well Error:	0.0 usft
Measured Depth	Reference	Offset	Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Distance		No-Go Distance	Separation Factor	Warning		
(usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
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		
999.0	999.0	998.0	999.0	3.8	3.8	-171.41	-200.1	-30.2	202.3	194.4	7.94	25.490		
1,000.0	1,000.0	999.0	1,000.0	3.8	3.8	97.46	-200.1	-30.2	202.3	194.4	7.94	25.483		
1,100.0	1,100.0	1,100.0	1,101.0	5.2	4.1	97.47	-200.1	-28.5	202.3	192.8	9.53	21.239		
1,200.0	1,199.8	1,201.1	1,201.9	5.5	4.4	97.48	-200.1	-23.2	202.3	192.4	9.85	20.540		
1,300.0	1,299.4	1,302.1	1,302.5	5.7	4.8	97.49	-200.2	-14.3	202.1	192.0	10.16	19.886		
1,400.0	1,398.7	1,403.1	1,402.8	6.0	5.1	97.48	-200.2	-1.9	201.9	191.4	10.48	19.267		
1,500.0	1,497.5	1,504.2	1,502.6	6.3	5.5	97.47	-200.3	14.0	201.7	190.9	10.80	18.671		
1,600.0	1,595.6	1,605.2	1,601.7	6.7	5.8	97.45	-200.4	33.5	201.4	190.2	11.13	18.089		
1,700.0	1,693.0	1,706.2	1,700.1	7.0	6.2	97.42	-200.5	56.4	201.0	189.5	11.48	17.511		
1,800.0	1,789.6	1,807.2	1,797.6	7.4	6.6	97.39	-200.6	82.8	200.6	188.8	11.85	16.932		
1,900.0	1,885.2	1,907.7	1,893.8	7.8	7.0	97.46	-200.7	112.0	200.2	188.0	12.19	16.422		
1,952.7	1,935.2	1,960.4	1,944.1	8.0	7.2	97.82	-200.8	127.6	200.1	187.7	12.43	16.102 CC		
2,000.0	1,979.8	2,007.7	1,989.2	8.2	7.3	98.37	-200.9	141.6	200.2	187.5	12.65	15.828 ES		
2,086.3	2,060.4	2,093.8	2,071.5	8.5	7.7	99.93	-201.0	167.1	200.7	187.6	13.08	15.345		
2,100.0	2,073.1	2,107.5	2,084.5	8.5	7.7	100.24	-201.0	171.1	200.8	187.7	13.14	15.280		
2,200.0	2,166.0	2,207.2	2,179.7	8.9	8.1	102.46	-201.2	200.6	201.9	188.2	13.77	14.670		
2,300.0	2,258.9	2,306.8	2,275.0	9.3	8.5	104.66	-201.3	230.1	203.4	189.0	14.40	14.124		
2,400.0	2,351.8	2,406.5	2,370.2	9.7	8.9	106.82	-201.4	259.6	205.1	190.0	15.08	13.601		
2,500.0	2,444.6	2,506.2	2,465.4	10.1	9.4	108.94	-201.6	289.1	207.1	191.3	15.80	13.105		
2,600.0	2,537.5	2,605.9	2,560.6	10.5	9.8	111.02	-201.7	318.6	209.4	192.8	16.57	12.638		
2,700.0	2,630.4	2,705.6	2,655.8	11.0	10.3	113.06	-201.9	348.1	211.9	194.6	17.37	12.200		
2,800.0	2,723.3	2,805.3	2,751.1	11.4	10.7	115.04	-202.0	377.6	214.8	196.5	18.21	11.793		
2,900.0	2,816.2	2,905.0	2,846.3	11.9	11.2	116.97	-202.1	407.1	217.8	198.7	19.08	11.416		
3,000.0	2,909.1	3,004.6	2,941.5	12.3	11.6	118.84	-202.3	436.6	221.1	201.2	19.98	11.068		
3,100.0	3,001.9	3,104.3	3,036.7	12.8	12.1	120.65	-202.4	466.1	224.7	203.8	20.91	10.747		
3,200.0	3,094.8	3,204.0	3,132.0	13.2	12.6	122.41	-202.5	495.6	228.4	206.6	21.85	10.454		
3,300.0	3,187.7	3,303.7	3,227.2	13.7	13.0	124.11	-202.7	525.2	232.4	209.6	22.82	10.185		
3,400.0	3,280.6	3,403.4	3,322.4	14.2	13.5	125.75	-202.8	554.7	236.6	212.8	23.80	9.939		
3,500.0	3,373.5	3,503.1	3,417.6	14.7	14.0	127.34	-203.0	584.2	240.9	216.1	24.80	9.715		
3,600.0	3,466.4	3,602.8	3,512.8	15.1	14.5	128.86	-203.1	613.7	245.5	219.7	25.81	9.511		
3,700.0	3,559.3	3,702.4	3,608.1	15.6	14.9	130.34	-203.2	643.2	250.2	223.4	26.83	9.325		
3,800.0	3,652.1	3,802.1	3,703.3	16.1	15.4	131.75	-203.4	672.7	255.1	227.2	27.86	9.155		
3,900.0	3,745.0	3,901.8	3,798.5	16.6	15.9	133.11	-203.5	702.2	260.1	231.2	28.89	9.000		
4,000.0	3,837.9	4,001.5	3,893.7	17.1	16.4	134.42	-203.6	731.7	265.2	235.3	29.94	8.860		
4,100.0	3,930.8	4,101.2	3,988.9	17.6	16.9	135.68	-203.8	761.2	270.5	239.5	30.98	8.731		
4,200.0	4,023.7	4,200.9	4,084.2	18.1	17.4	136.89	-203.9	790.7	275.9	243.9	32.03	8.614		
4,300.0	4,116.6	4,300.6	4,179.4	18.6	17.8	138.06	-204.1	820.2	281.5	248.4	33.08	8.507		
4,400.0	4,209.4	4,400.3	4,274.6	19.1	18.3	139.18	-204.2	849.7	287.1	253.0	34.14	8.410		
4,500.0	4,302.3	4,499.9	4,369.8	19.6	18.8	140.25	-204.3	879.2	292.8	257.6	35.20	8.321		
4,600.0	4,395.2	4,599.6	4,465.0	20.1	19.3	141.28	-204.5	908.7	298.7	262.4	36.25	8.239		
4,700.0	4,488.1	4,699.3	4,560.3	20.6	19.8	142.28	-204.6	938.2	304.6	267.3	37.31	8.165		

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 901H
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 901H	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)			
4,800.0	4,581.0	4,799.0	4,655.5	21.1	20.3	143.23	-204.7	967.7	310.7	272.3	38.37	8.097	
4,900.0	4,673.9	4,898.7	4,750.7	21.6	20.8	144.15	-204.9	997.2	316.8	277.3	39.43	8.034	
5,000.0	4,766.7	4,998.4	4,845.9	22.1	21.3	145.04	-205.0	1,026.7	323.0	282.5	40.49	7.977	
5,100.0	4,859.6	5,098.1	4,941.1	22.6	21.8	145.89	-205.2	1,056.2	329.2	287.7	41.55	7.925	
5,200.0	4,952.5	5,197.7	5,036.4	23.1	22.3	146.71	-205.3	1,085.7	335.6	293.0	42.60	7.877	
5,300.0	5,045.4	5,297.4	5,131.6	23.6	22.8	147.50	-205.4	1,115.2	342.0	298.3	43.66	7.833	
5,400.0	5,138.3	5,397.1	5,226.8	24.2	23.3	148.26	-205.6	1,144.7	348.4	303.7	44.72	7.792	
5,500.0	5,231.2	5,496.8	5,322.0	24.7	23.8	148.99	-205.7	1,174.2	355.0	309.2	45.77	7.755	
5,600.0	5,324.0	5,596.5	5,417.3	25.2	24.3	149.69	-205.9	1,203.7	361.5	314.7	46.83	7.721	
5,700.0	5,416.9	5,696.2	5,512.5	25.7	24.8	150.37	-206.0	1,233.2	368.2	320.3	47.88	7.689	
5,800.0	5,509.8	5,795.9	5,607.7	26.2	25.3	151.03	-206.1	1,262.7	374.8	325.9	48.93	7.660	
5,900.0	5,602.7	5,895.5	5,702.9	26.7	25.8	151.66	-206.3	1,292.2	381.6	331.6	49.98	7.634	
6,000.0	5,695.6	5,995.2	5,798.1	27.2	26.3	152.27	-206.4	1,321.7	388.3	337.3	51.03	7.609	
6,100.0	5,788.5	6,094.9	5,893.4	27.8	26.8	152.86	-206.5	1,351.2	395.2	343.1	52.08	7.587	
6,200.0	5,881.3	6,194.6	5,988.6	28.3	27.3	153.43	-206.7	1,380.7	402.0	348.9	53.13	7.566	
6,300.0	5,974.2	6,294.3	6,083.8	28.8	27.8	153.98	-206.8	1,410.2	408.9	354.7	54.18	7.547	
6,400.0	6,067.1	6,394.0	6,179.0	29.3	28.3	154.51	-207.0	1,439.7	415.8	360.6	55.23	7.529	
6,500.0	6,160.0	6,493.7	6,274.2	29.8	28.8	155.03	-207.1	1,469.2	422.8	366.5	56.27	7.513	
6,600.0	6,252.9	6,593.3	6,369.5	30.4	29.3	155.53	-207.2	1,498.7	429.8	372.5	57.32	7.498	
6,700.0	6,345.8	6,693.0	6,464.7	30.9	29.8	156.01	-207.4	1,528.2	436.8	378.5	58.36	7.485	
6,800.0	6,438.7	6,792.7	6,559.9	31.4	30.3	156.48	-207.5	1,557.7	443.9	384.5	59.41	7.472	
6,900.0	6,531.5	6,892.4	6,655.1	31.9	30.8	156.93	-207.6	1,587.2	451.0	390.5	60.45	7.460	
7,000.0	6,624.4	6,992.1	6,750.3	32.5	31.3	157.37	-207.8	1,616.7	458.1	396.6	61.49	7.450	
7,100.0	6,717.3	7,091.8	6,845.6	33.0	31.8	157.79	-207.9	1,646.2	465.2	402.7	62.53	7.440	
7,200.0	6,810.2	7,191.5	6,940.8	33.5	32.3	158.21	-208.1	1,675.7	472.4	408.8	63.57	7.431	
7,271.2	6,876.3	7,262.4	7,008.5	33.9	32.7	158.49	-208.2	1,696.7	477.5	413.2	64.31	7.426	
7,300.0	6,903.1	7,291.2	7,036.0	34.0	32.8	158.61	-208.2	1,705.2	479.5	414.9	64.61	7.422	
7,400.0	6,996.5	7,390.9	7,131.3	34.5	33.3	158.96	-208.3	1,734.7	485.4	419.8	65.65	7.395	
7,500.0	7,090.5	7,490.8	7,226.7	35.1	33.9	159.23	-208.5	1,764.3	489.8	423.1	66.67	7.346	
7,600.0	7,185.1	7,590.8	7,322.2	35.6	34.4	159.41	-208.6	1,793.9	492.4	424.8	67.67	7.277	
7,700.0	7,280.2	7,690.8	7,417.7	36.1	34.9	159.51	-208.8	1,823.5	493.5	424.9	68.65	7.189	
7,800.0	7,375.8	7,790.1	7,512.6	36.6	35.4	159.54	-208.9	1,852.9	492.9	423.3	69.59	7.083	
7,900.0	7,472.0	7,882.7	7,601.3	37.1	35.8	159.54	-209.0	1,879.4	491.6	421.1	70.47	6.976	
8,000.0	7,568.6	7,975.2	7,690.3	37.6	36.3	159.52	-209.1	1,904.5	490.2	418.9	71.32	6.873	
8,100.0	7,665.6	8,067.7	7,779.8	38.1	36.8	159.50	-209.2	1,928.2	488.6	416.5	72.14	6.774	
8,200.0	7,763.1	8,160.3	7,869.6	38.6	37.2	159.46	-209.3	1,950.4	487.0	414.0	72.92	6.678	
8,300.0	7,860.9	8,252.9	7,959.8	39.0	37.7	159.42	-209.4	1,971.2	485.2	411.5	73.66	6.586	
8,400.0	7,959.1	8,345.5	8,050.4	39.5	38.1	159.38	-209.5	1,990.6	483.3	408.9	74.38	6.498	
8,500.0	8,057.6	8,438.1	8,141.3	39.9	38.5	159.32	-209.6	2,008.4	481.3	406.2	75.05	6.413	
8,600.0	8,156.4	8,530.8	8,232.5	40.4	39.0	159.26	-209.7	2,024.8	479.2	403.5	75.69	6.331	
8,700.0	8,255.4	8,623.5	8,324.0	40.8	39.4	159.18	-209.8	2,039.8	477.0	400.7	76.28	6.252	
8,800.0	8,354.7	8,716.2	8,415.8	41.2	39.8	159.10	-209.8	2,053.2	474.6	397.8	76.84	6.177	
8,900.0	8,454.1	8,809.0	8,507.8	41.6	40.2	159.01	-209.9	2,065.2	472.2	394.8	77.35	6.105	
9,000.0	8,553.7	8,900.0	8,598.2	42.0	40.6	158.91	-209.9	2,075.5	469.6	391.9	77.76	6.039	
9,100.0	8,653.5	8,994.6	8,692.4	42.4	40.9	158.80	-210.0	2,084.7	467.0	388.7	78.22	5.970	
9,200.0	8,753.4	9,087.5	8,785.0	42.7	41.3	158.69	-210.0	2,092.2	464.2	385.6	78.58	5.908	
9,300.0	8,853.3	9,180.5	8,877.7	43.0	41.6	158.56	-210.0	2,098.2	461.3	382.5	78.87	5.850	
9,400.0	8,953.3	9,273.4	8,970.5	43.3	41.9	158.42	-210.1	2,102.6	458.4	379.3	79.07	5.797	
9,445.7	8,999.0	9,315.9	9,013.0	43.3	42.1	-110.51	-210.1	2,104.2	457.0	374.2	82.75	5.523	
9,500.0	9,053.3	9,366.4	9,063.5	43.3	42.2	-110.58	-210.1	2,105.6	455.5	372.8	82.71	5.508	
9,600.0	9,153.3	9,459.5	9,156.6	43.4	42.4	-110.64	-210.1	2,107.1	454.1	371.5	82.57	5.499	

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 901H
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 901H	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)			
9,663.7	9,217.0	9,520.0	9,217.0	43.4	42.5	-110.65	-210.1	2,107.3	453.9	371.4	82.49	5.503	
9,700.0	9,253.3	9,556.2	9,253.3	43.4	42.5	-110.65	-210.1	2,107.3	453.9	371.4	82.50	5.502	
9,800.0	9,353.3	9,656.2	9,353.3	43.4	42.5	-110.65	-210.1	2,107.3	453.9	371.3	82.54	5.499	
9,900.0	9,453.3	9,756.2	9,453.3	43.4	42.5	-110.65	-210.1	2,107.3	453.9	371.3	82.58	5.496	
10,000.0	9,553.3	9,838.5	9,535.4	43.4	42.5	-111.00	-213.0	2,107.3	455.3	373.7	81.59	5.580	
10,100.0	9,653.3	9,910.9	9,606.5	43.5	42.5	-112.57	-226.5	2,107.4	462.2	382.7	79.52	5.812	
10,200.0	9,753.3	9,975.0	9,667.1	43.5	42.5	-114.92	-247.2	2,107.5	475.9	399.5	76.41	6.229	
10,300.0	9,853.3	10,037.8	9,723.3	43.5	42.5	-117.96	-275.2	2,107.7	497.7	425.0	72.69	6.847	
10,400.0	9,953.3	10,090.1	9,766.9	43.5	42.5	-120.91	-304.0	2,107.8	528.4	460.2	68.21	7.746	
10,500.0	10,053.3	10,135.1	9,801.7	43.5	42.6	-123.67	-332.5	2,108.0	568.2	504.6	63.55	8.941	
10,600.0	10,153.3	10,175.0	9,830.3	43.6	42.6	-126.22	-360.4	2,108.2	616.7	557.5	59.17	10.422	
10,662.2	10,215.5	10,200.0	9,846.9	43.6	42.6	-127.83	-379.0	2,108.3	650.9	594.1	56.79	11.461	
10,675.0	10,228.3	10,200.0	9,846.9	43.6	42.6	48.38	-379.0	2,108.3	658.1	601.9	56.17	11.717	
10,700.0	10,253.3	10,207.0	9,851.4	43.6	42.6	46.47	-384.4	2,108.3	672.1	616.9	55.19	12.178	
10,725.0	10,278.1	10,215.3	9,856.6	43.6	42.6	44.62	-390.9	2,108.4	685.8	631.5	54.29	12.632	
10,750.0	10,302.8	10,225.0	9,862.5	43.5	42.6	42.84	-398.5	2,108.4	699.2	645.7	53.47	13.076	
10,775.0	10,327.2	10,232.5	9,867.0	43.5	42.6	41.29	-404.5	2,108.5	712.1	659.5	52.62	13.533	
10,800.0	10,351.4	10,241.3	9,872.2	43.5	42.6	39.80	-411.6	2,108.5	724.6	672.8	51.84	13.977	
10,825.0	10,375.2	10,250.0	9,877.2	43.5	42.6	38.43	-418.8	2,108.5	736.6	685.5	51.10	14.417	
10,850.0	10,398.5	10,259.1	9,882.2	43.5	42.6	37.16	-426.4	2,108.6	748.2	697.8	50.39	14.847	
10,875.0	10,421.3	10,275.0	9,890.7	43.5	42.6	35.80	-439.8	2,108.7	759.3	709.4	49.88	15.221	
10,900.0	10,443.6	10,275.0	9,890.7	43.5	42.6	35.00	-439.8	2,108.7	769.8	720.7	49.03	15.698	
10,925.0	10,465.2	10,286.5	9,896.5	43.5	42.6	33.97	-449.7	2,108.7	779.7	731.2	48.48	16.083	
10,950.0	10,486.2	10,300.0	9,903.1	43.5	42.6	32.98	-461.5	2,108.8	789.1	741.1	47.99	16.441	
10,975.0	10,506.4	10,300.0	9,903.1	43.5	42.6	32.37	-461.5	2,108.8	797.9	750.6	47.26	16.883	
11,000.0	10,525.8	10,314.5	9,909.7	43.5	42.6	31.54	-474.4	2,108.9	806.0	759.1	46.84	17.206	
11,025.0	10,544.4	10,325.0	9,914.3	43.5	42.6	30.87	-483.8	2,108.9	813.5	767.1	46.38	17.542	
11,050.0	10,562.0	10,333.4	9,917.8	43.5	42.6	30.29	-491.5	2,109.0	820.4	774.5	45.90	17.875	
11,075.0	10,578.8	10,350.0	9,924.4	43.5	42.7	29.67	-506.7	2,109.1	826.7	781.1	45.58	18.137	
11,100.0	10,594.5	10,350.0	9,924.4	43.5	42.7	29.34	-506.7	2,109.1	832.2	787.2	45.02	18.487	
11,125.0	10,609.2	10,362.1	9,928.8	43.5	42.7	28.90	-518.0	2,109.1	837.1	792.4	44.67	18.738	
11,150.0	10,622.8	10,375.0	9,933.3	43.6	42.7	28.52	-530.1	2,109.2	841.3	796.9	44.36	18.964	
11,175.0	10,635.2	10,375.0	9,933.3	43.6	42.7	28.31	-530.1	2,109.2	844.9	801.0	43.90	19.245	
11,200.0	10,646.6	10,391.0	9,938.3	43.6	42.7	28.02	-545.3	2,109.3	847.6	803.9	43.68	19.406	
11,225.0	10,656.7	10,400.0	9,940.9	43.6	42.7	27.83	-553.9	2,109.4	849.7	806.4	43.39	19.586	
11,250.0	10,665.7	10,410.4	9,943.7	43.6	42.7	27.69	-563.9	2,109.4	851.2	808.0	43.13	19.733	
11,275.0	10,673.4	10,425.0	9,947.2	43.6	42.7	27.57	-578.1	2,109.5	851.9	808.9	42.94	19.837	
11,300.0	10,679.8	10,425.0	9,947.2	43.6	42.7	27.57	-578.1	2,109.5	851.9	809.2	42.64	19.979	
11,325.0	10,685.0	10,439.5	9,950.4	43.6	42.7	27.56	-592.3	2,109.6	851.1	808.6	42.49	20.031	
11,350.0	10,688.9	10,450.0	9,952.3	43.7	42.7	27.62	-602.6	2,109.7	849.7	807.4	42.32	20.076	
11,375.0	10,691.5	10,458.9	9,953.8	43.7	42.7	27.72	-611.3	2,109.7	847.6	805.4	42.17	20.098	
11,400.0	10,692.8	10,475.0	9,956.1	43.7	42.8	27.88	-627.3	2,109.8	844.8	802.7	42.08	20.077	
11,412.4	10,693.0	10,475.0	9,956.1	43.7	42.8	27.98	-627.3	2,109.8	843.0	801.1	41.99	20.075	
11,500.0	10,692.9	10,507.6	9,959.2	43.8	42.8	27.96	-659.7	2,110.0	833.4	791.7	41.67	19.998	
11,600.0	10,692.9	10,566.5	9,960.0	43.9	42.8	27.78	-718.6	2,110.4	828.7	787.2	41.46	19.988	
11,700.0	10,692.9	10,666.4	9,960.3	44.1	43.0	27.43	-818.5	2,111.0	825.7	784.4	41.31	19.989	
11,757.4	10,692.8	10,723.6	9,960.5	44.2	43.0	27.23	-875.7	2,111.3	824.0	782.8	41.26	19.972	
11,800.0	10,692.8	10,766.2	9,960.6	44.2	43.1	27.12	-918.3	2,111.6	822.9	781.7	41.25	19.951	
11,900.0	10,692.8	10,866.2	9,960.8	44.4	43.3	26.99	-1,018.3	2,112.2	821.5	780.1	41.31	19.885	
11,924.8	10,692.8	10,890.9	9,960.9	44.5	43.3	26.99	-1,043.0	2,112.3	821.3	780.0	41.33	19.871	
12,000.0	10,692.8	10,966.2	9,961.1	44.6	43.5	27.00	-1,118.3	2,112.8	821.1	779.7	41.44	19.813	

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 901H
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 901H	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)			
12,100.0	10,692.7	11,066.2	9,961.4	44.9	43.7	27.01	-1,218.3	2,113.4	820.9	779.2	41.65	19.709	
12,200.0	10,692.7	11,166.2	9,961.6	45.2	43.9	27.02	-1,318.3	2,114.0	820.6	778.7	41.92	19.577	
12,300.0	10,692.6	11,266.2	9,961.9	45.4	44.2	27.03	-1,418.3	2,114.6	820.3	778.1	42.24	19.419	
12,400.0	10,692.6	11,366.2	9,962.2	45.8	44.4	27.04	-1,518.3	2,115.2	820.1	777.4	42.63	19.236	
12,500.0	10,692.6	11,466.2	9,962.4	46.1	44.7	27.05	-1,618.2	2,115.8	819.8	776.7	43.08	19.030	
12,600.0	10,692.5	11,566.2	9,962.7	46.4	45.1	27.06	-1,718.2	2,116.4	819.5	775.9	43.58	18.805	
12,700.0	10,692.5	11,666.2	9,963.0	46.8	45.4	27.07	-1,818.2	2,117.0	819.2	775.1	44.14	18.562	
12,800.0	10,692.4	11,766.2	9,963.2	47.2	45.8	27.08	-1,918.2	2,117.6	819.0	774.2	44.74	18.303	
12,900.0	10,692.4	11,866.2	9,963.5	47.6	46.1	27.09	-2,018.2	2,118.2	818.7	773.3	45.40	18.032	
13,000.0	10,692.4	11,966.2	9,963.8	48.0	46.5	27.10	-2,118.2	2,118.8	818.4	772.3	46.11	17.750	
13,100.0	10,692.3	12,066.2	9,964.0	48.5	47.0	27.11	-2,218.2	2,119.4	818.2	771.3	46.86	17.459	
13,200.0	10,692.3	12,166.2	9,964.3	48.9	47.4	27.12	-2,318.2	2,120.0	817.9	770.2	47.66	17.162	
13,300.0	10,692.3	12,266.2	9,964.6	49.4	47.8	27.13	-2,418.2	2,120.6	817.6	769.1	48.50	16.860	
13,400.0	10,692.2	12,366.2	9,964.8	49.9	48.3	27.14	-2,518.2	2,121.2	817.4	768.0	49.37	16.555	
13,500.0	10,692.2	12,466.2	9,965.1	50.4	48.8	27.15	-2,618.2	2,121.8	817.1	766.8	50.29	16.249	
13,600.0	10,692.1	12,566.2	9,965.4	50.9	49.3	27.16	-2,718.2	2,122.4	816.8	765.6	51.24	15.942	
13,700.0	10,692.1	12,666.2	9,965.6	51.4	49.8	27.17	-2,818.2	2,123.0	816.6	764.3	52.22	15.637	
13,800.0	10,692.1	12,766.2	9,965.9	52.0	50.3	27.18	-2,918.2	2,123.6	816.3	763.0	53.23	15.335	
13,900.0	10,692.0	12,866.2	9,966.2	52.5	50.8	27.19	-3,018.2	2,124.2	816.0	761.7	54.28	15.035	
14,000.0	10,692.0	12,966.2	9,966.4	53.1	51.4	27.20	-3,118.2	2,124.8	815.7	760.4	55.35	14.739	
14,100.0	10,691.9	13,066.2	9,966.7	53.6	51.9	27.21	-3,218.2	2,125.4	815.5	759.0	56.44	14.447	
14,200.0	10,691.9	13,166.2	9,967.0	54.2	52.5	27.22	-3,318.2	2,126.1	815.2	757.6	57.57	14.161	
14,300.0	10,691.9	13,266.2	9,967.2	54.8	53.1	27.23	-3,418.2	2,126.7	814.9	756.2	58.71	13.880	
14,400.0	10,691.8	13,366.2	9,967.5	55.4	53.7	27.24	-3,518.2	2,127.3	814.7	754.8	59.88	13.605	
14,500.0	10,691.8	13,466.2	9,967.8	56.0	54.3	27.25	-3,618.2	2,127.9	814.4	753.3	61.07	13.335	
14,600.0	10,691.8	13,566.2	9,968.0	56.7	54.9	27.26	-3,718.2	2,128.5	814.1	751.8	62.28	13.072	
14,700.0	10,691.7	13,666.2	9,968.3	57.3	55.5	27.27	-3,818.2	2,129.1	813.9	750.3	63.51	12.815	
14,800.0	10,691.7	13,766.2	9,968.6	58.0	56.1	27.28	-3,918.2	2,129.7	813.6	748.8	64.75	12.565	
14,900.0	10,691.6	13,866.2	9,968.8	58.6	56.8	27.29	-4,018.2	2,130.3	813.3	747.3	66.01	12.321	
15,000.0	10,691.6	13,966.2	9,969.1	59.3	57.4	27.30	-4,118.2	2,130.9	813.0	745.8	67.29	12.083	
15,100.0	10,691.6	14,066.2	9,969.4	59.9	58.1	27.31	-4,218.2	2,131.5	812.8	744.2	68.58	11.851	
15,200.0	10,691.5	14,166.2	9,969.6	60.6	58.8	27.32	-4,318.2	2,132.1	812.5	742.6	69.89	11.626	
15,300.0	10,691.5	14,266.2	9,969.9	61.3	59.4	27.33	-4,418.2	2,132.7	812.2	741.0	71.21	11.407	
15,400.0	10,691.4	14,366.2	9,970.2	62.0	60.1	27.34	-4,518.2	2,133.3	812.0	739.4	72.54	11.194	
15,500.0	10,691.4	14,466.2	9,970.4	62.7	60.8	27.35	-4,618.2	2,133.9	811.7	737.8	73.88	10.987	
15,600.0	10,691.4	14,566.2	9,970.7	63.4	61.5	27.36	-4,718.2	2,134.5	811.4	736.2	75.23	10.785	
15,700.0	10,691.3	14,666.2	9,971.0	64.1	62.2	27.37	-4,818.2	2,135.1	811.2	734.6	76.60	10.590	
15,800.0	10,691.3	14,766.2	9,971.2	64.8	62.9	27.38	-4,918.2	2,135.7	810.9	732.9	77.97	10.400	
15,900.0	10,691.2	14,866.2	9,971.5	65.5	63.6	27.39	-5,018.2	2,136.3	810.6	731.3	79.36	10.215	
16,000.0	10,691.2	14,966.2	9,971.8	66.3	64.4	27.40	-5,118.2	2,136.9	810.4	729.6	80.75	10.035	
16,100.0	10,691.2	15,066.2	9,972.0	67.0	65.1	27.41	-5,218.2	2,137.5	810.1	727.9	82.15	9.861	
16,200.0	10,691.1	15,166.2	9,972.3	67.7	65.8	27.42	-5,318.2	2,138.1	809.8	726.3	83.56	9.691	
16,300.0	10,691.1	15,266.2	9,972.6	68.5	66.6	27.43	-5,418.1	2,138.7	809.5	724.6	84.98	9.526	
16,400.0	10,691.1	15,366.2	9,972.8	69.2	67.3	27.44	-5,518.1	2,139.3	809.3	722.9	86.41	9.366	
16,500.0	10,691.0	15,466.2	9,973.1	70.0	68.1	27.45	-5,618.1	2,139.9	809.0	721.2	87.84	9.210	
16,600.0	10,691.0	15,566.2	9,973.4	70.8	68.8	27.46	-5,718.1	2,140.5	808.7	719.5	89.28	9.059	
16,700.0	10,690.9	15,666.2	9,973.6	71.5	69.6	27.47	-5,818.1	2,141.2	808.5	717.7	90.72	8.911	
16,800.0	10,690.9	15,766.2	9,973.9	72.3	70.4	27.48	-5,918.1	2,141.8	808.2	716.0	92.17	8.768	
16,900.0	10,690.9	15,866.2	9,974.2	73.1	71.1	27.49	-6,018.1	2,142.4	807.9	714.3	93.63	8.629	
17,000.0	10,690.8	15,966.2	9,974.4	73.8	71.9	27.50	-6,118.1	2,143.0	807.7	712.6	95.10	8.493	
17,100.0	10,690.8	16,066.2	9,974.7	74.6	72.7	27.51	-6,218.1	2,143.6	807.4	710.8	96.56	8.361	

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 901H
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 901H	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
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
17,200.0	10,690.7	16,166.2	9,975.0	75.4	73.5	27.52	-6,318.1	2,144.2	807.1	709.1	98.04	8.233	
17,300.0	10,690.7	16,266.2	9,975.2	76.2	74.3	27.53	-6,418.1	2,144.8	806.9	707.3	99.51	8.108	
17,400.0	10,690.7	16,366.2	9,975.5	77.0	75.1	27.54	-6,518.1	2,145.4	806.6	705.6	101.00	7.986	
17,500.0	10,690.6	16,466.2	9,975.7	77.8	75.9	27.55	-6,618.1	2,146.0	806.3	703.8	102.48	7.868	
17,600.0	10,690.6	16,566.2	9,976.0	78.6	76.7	27.56	-6,718.1	2,146.6	806.1	702.1	103.98	7.752	
17,700.0	10,690.6	16,666.2	9,976.3	79.4	77.5	27.57	-6,818.1	2,147.2	805.8	700.3	105.47	7.640	
17,800.0	10,690.5	16,766.2	9,976.5	80.2	78.3	27.58	-6,918.1	2,147.8	805.5	698.5	106.97	7.530	
17,900.0	10,690.5	16,866.1	9,976.8	81.0	79.1	27.59	-7,018.1	2,148.4	805.2	696.8	108.47	7.423	
18,000.0	10,690.4	16,966.1	9,977.1	81.8	79.9	27.60	-7,118.1	2,149.0	805.0	695.0	109.98	7.319	
18,100.0	10,690.4	17,066.1	9,977.3	82.7	80.7	27.61	-7,218.1	2,149.6	804.7	693.2	111.49	7.218	
18,200.0	10,690.4	17,166.1	9,977.6	83.5	81.6	27.62	-7,318.1	2,150.2	804.4	691.4	113.01	7.119	
18,300.0	10,690.3	17,266.1	9,977.9	84.3	82.4	27.63	-7,418.1	2,150.8	804.2	689.7	114.52	7.022	
18,400.0	10,690.3	17,366.1	9,978.1	85.1	83.2	27.64	-7,518.1	2,151.4	803.9	687.9	116.04	6.928	
18,500.0	10,690.2	17,466.1	9,978.4	86.0	84.1	27.65	-7,618.1	2,152.0	803.6	686.1	117.57	6.836	
18,600.0	10,690.2	17,566.1	9,978.7	86.8	84.9	27.66	-7,718.1	2,152.6	803.4	684.3	119.09	6.746	
18,700.0	10,690.2	17,666.1	9,978.9	87.6	85.7	27.67	-7,818.1	2,153.2	803.1	682.5	120.62	6.658	
18,800.0	10,690.1	17,766.1	9,979.2	88.5	86.6	27.68	-7,918.1	2,153.8	802.8	680.7	122.15	6.572	
18,900.0	10,690.1	17,866.1	9,979.5	89.3	87.4	27.69	-8,018.1	2,154.4	802.6	678.9	123.68	6.489	
19,000.0	10,690.1	17,966.1	9,979.7	90.2	88.3	27.70	-8,118.1	2,155.0	802.3	677.1	125.22	6.407	
19,100.0	10,690.0	18,066.1	9,980.0	91.0	89.1	27.72	-8,218.1	2,155.6	802.0	675.3	126.76	6.327	
19,200.0	10,690.0	18,166.1	9,980.3	91.8	89.9	27.73	-8,318.1	2,156.3	801.8	673.5	128.30	6.249	
19,300.0	10,689.9	18,266.1	9,980.5	92.7	90.8	27.74	-8,418.1	2,156.9	801.5	671.6	129.84	6.173	
19,400.0	10,689.9	18,366.1	9,980.8	93.6	91.7	27.75	-8,518.1	2,157.5	801.2	669.8	131.39	6.098	
19,500.0	10,689.9	18,466.1	9,981.1	94.4	92.5	27.76	-8,618.1	2,158.1	801.0	668.0	132.94	6.025	
19,600.0	10,689.8	18,566.1	9,981.3	95.3	93.4	27.77	-8,718.1	2,158.7	800.7	666.2	134.48	5.954	
19,700.0	10,689.8	18,666.1	9,981.6	96.1	94.2	27.78	-8,818.1	2,159.3	800.4	664.4	136.04	5.884	
19,800.0	10,689.7	18,766.1	9,981.9	97.0	95.1	27.79	-8,918.1	2,159.9	800.1	662.6	137.59	5.815	
19,900.0	10,689.7	18,866.1	9,982.1	97.8	96.0	27.80	-9,018.1	2,160.5	799.9	660.7	139.14	5.749	
20,000.0	10,689.7	18,966.1	9,982.4	98.7	96.8	27.81	-9,118.1	2,161.1	799.6	658.9	140.70	5.683	
20,100.0	10,689.6	19,066.1	9,982.7	99.6	97.7	27.82	-9,218.0	2,161.7	799.3	657.1	142.26	5.619	
20,200.0	10,689.6	19,166.1	9,982.9	100.4	98.6	27.83	-9,318.0	2,162.3	799.1	655.3	143.82	5.556	
20,300.0	10,689.6	19,266.1	9,983.2	101.3	99.4	27.84	-9,418.0	2,162.9	798.8	653.4	145.38	5.495	
20,400.0	10,689.5	19,366.1	9,983.5	102.2	100.3	27.85	-9,518.0	2,163.5	798.5	651.6	146.94	5.434	
20,500.0	10,689.5	19,466.1	9,983.7	103.1	101.2	27.86	-9,618.0	2,164.1	798.3	649.8	148.51	5.375	
20,600.0	10,689.4	19,566.1	9,984.0	103.9	102.1	27.87	-9,718.0	2,164.7	798.0	647.9	150.07	5.317	
20,700.0	10,689.4	19,666.1	9,984.3	104.8	102.9	27.88	-9,818.0	2,165.3	797.7	646.1	151.64	5.261	
20,800.0	10,689.4	19,766.1	9,984.5	105.7	103.8	27.89	-9,918.0	2,165.9	797.5	644.3	153.21	5.205	
20,900.0	10,689.3	19,866.1	9,984.8	106.6	104.7	27.90	-10,018.0	2,166.5	797.2	642.4	154.78	5.151	
21,000.0	10,689.3	19,966.1	9,985.1	107.4	105.6	27.91	-10,118.0	2,167.1	796.9	640.6	156.35	5.097	
21,100.0	10,689.2	20,066.1	9,985.3	108.3	106.5	27.92	-10,218.0	2,167.7	796.7	638.7	157.93	5.045	
21,200.0	10,689.2	20,166.1	9,985.6	109.2	107.3	27.93	-10,318.0	2,168.3	796.4	636.9	159.50	4.993	
21,300.0	10,689.2	20,266.1	9,985.9	110.1	108.2	27.94	-10,418.0	2,168.9	796.1	635.1	161.07	4.943	
21,400.0	10,689.1	20,366.1	9,986.1	111.0	109.1	27.95	-10,518.0	2,169.5	795.9	633.2	162.65	4.893	
21,500.0	10,689.1	20,466.1	9,986.4	111.9	110.0	27.96	-10,618.0	2,170.1	795.6	631.4	164.23	4.844	
21,600.0	10,689.1	20,566.1	9,986.7	112.8	110.9	27.98	-10,718.0	2,170.7	795.3	629.5	165.81	4.797	
21,700.0	10,689.0	20,666.1	9,986.9	113.7	111.8	27.99	-10,818.0	2,171.4	795.1	627.7	167.39	4.750	
21,729.9	10,689.0	20,693.8	9,987.0	113.9	112.0	27.99	-10,845.7	2,171.5	795.0	627.2	167.81	4.737 SF	
21,732.1	10,689.0	20,693.8	9,987.0	113.9	112.0	27.99	-10,845.7	2,171.5	795.0	627.2	167.80	4.738	

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 901H
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 901H	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 (usft)	Reference Depth (usft)	Measured Depth (usft)	Offset Vertical Depth (usft)	Reference (usft)	Semi Major Axis 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)				
0.0	0.0	0.0	1.0	0.0	0.0	-163.26	-200.2	-60.2	209.0					
100.0	100.0	99.0	100.0	0.8	0.8	-163.26	-200.2	-60.2	209.0	207.0	1.98	105.375		
200.0	200.0	199.0	200.0	1.4	1.4	-163.26	-200.2	-60.2	209.0	205.7	3.30	63.248		
300.0	300.0	299.0	300.0	1.9	1.9	-163.26	-200.2	-60.2	209.0	204.8	4.19	49.877		
400.0	400.0	399.0	400.0	2.2	2.2	-163.26	-200.2	-60.2	209.0	204.1	4.91	42.587		
500.0	500.0	499.0	500.0	2.6	2.6	-163.26	-200.2	-60.2	209.0	203.5	5.53	37.800		
600.0	600.0	599.0	600.0	2.8	2.8	-163.26	-200.2	-60.2	209.0	202.9	6.09	34.338		
700.0	700.0	699.0	700.0	3.1	3.1	-163.26	-200.2	-60.2	209.0	202.4	6.60	31.678		
800.0	800.0	799.0	800.0	3.3	3.3	-163.26	-200.2	-60.2	209.0	202.0	7.07	29.548		
900.0	900.0	899.0	900.0	3.6	3.6	-163.26	-200.2	-60.2	209.0	201.5	7.52	27.792		
999.0	999.0	998.0	999.0	3.8	3.8	-163.26	-200.2	-60.2	209.0	201.1	7.94	26.332 CC		
1,000.0	1,000.0	999.0	1,000.0	3.8	3.8	105.61	-200.2	-60.2	209.0	201.1	7.94	26.324		
1,100.0	1,100.0	1,097.4	1,098.3	5.2	4.1	105.62	-201.0	-58.8	209.9	200.4	9.53	22.028 ES		
1,200.0	1,199.8	1,195.7	1,196.5	5.5	4.4	105.59	-203.5	-54.4	212.5	202.6	9.85	21.577		
1,300.0	1,299.4	1,295.4	1,295.9	5.7	4.5	105.54	-207.6	-47.0	216.6	206.6	10.08	21.489		
1,400.0	1,398.7	1,397.0	1,396.8	6.0	4.9	105.46	-212.3	-35.9	221.2	210.8	10.40	21.266		
1,500.0	1,497.5	1,498.6	1,497.2	6.3	5.2	105.35	-217.2	-21.3	225.9	215.2	10.73	21.055		
1,600.0	1,595.6	1,599.4	1,596.3	6.7	5.5	105.32	-222.3	-3.7	230.9	219.9	10.99	21.009		
1,700.0	1,693.0	1,699.2	1,694.3	7.0	5.8	105.96	-227.4	14.2	236.6	225.3	11.34	20.861		
1,800.0	1,789.6	1,798.8	1,792.1	7.4	6.1	107.33	-232.5	32.1	243.5	231.7	11.73	20.760		
1,900.0	1,885.2	1,898.0	1,889.6	7.8	6.5	109.35	-237.5	50.0	251.6	239.5	12.16	20.700		
2,000.0	1,979.8	1,996.7	1,986.6	8.2	6.8	111.89	-242.5	67.7	261.4	248.7	12.64	20.673 SF		
2,086.3	2,060.4	2,081.5	2,069.9	8.5	7.1	114.42	-246.8	82.9	271.4	258.3	13.11	20.707		
2,100.0	2,073.1	2,094.9	2,083.1	8.5	7.2	114.88	-247.5	85.4	273.1	260.0	13.18	20.730		
2,200.0	2,166.0	2,192.9	2,179.3	8.9	7.6	118.00	-252.5	103.0	286.3	272.4	13.83	20.700		
2,300.0	2,258.9	2,290.8	2,275.5	9.3	7.9	120.86	-257.5	120.6	300.2	285.7	14.49	20.717		
2,400.0	2,351.8	2,388.8	2,371.8	9.7	8.3	123.46	-262.5	138.2	314.8	299.6	15.19	20.724		
2,500.0	2,444.6	2,486.7	2,468.0	10.1	8.7	125.82	-267.5	155.8	330.0	314.0	15.92	20.724		
2,600.0	2,537.5	2,584.6	2,564.2	10.5	9.1	127.98	-272.4	173.4	345.7	329.0	16.68	20.721		
2,700.0	2,630.4	2,682.6	2,660.4	11.0	9.5	129.96	-277.4	191.0	361.8	344.3	17.46	20.716		
2,800.0	2,723.3	2,780.5	2,756.6	11.4	10.0	131.76	-282.4	208.6	378.3	360.1	18.27	20.711		
2,900.0	2,816.2	2,878.5	2,852.9	11.9	10.4	133.42	-287.4	226.2	395.2	376.1	19.09	20.706		
3,000.0	2,909.1	2,976.4	2,949.1	12.3	10.8	134.93	-292.4	243.8	412.3	392.4	19.92	20.702		
3,100.0	3,001.9	3,074.4	3,045.3	12.8	11.2	136.33	-297.4	261.4	429.8	409.0	20.76	20.700		
3,200.0	3,094.8	3,172.3	3,141.5	13.2	11.6	137.62	-302.3	279.0	447.4	425.8	21.61	20.700		
3,300.0	3,187.7	3,270.3	3,237.7	13.7	12.1	138.81	-307.3	296.6	465.3	442.8	22.48	20.701		
3,400.0	3,280.6	3,368.2	3,334.0	14.2	12.5	139.92	-312.3	314.2	483.3	460.0	23.34	20.704		
3,500.0	3,373.5	3,466.1	3,430.2	14.7	12.9	140.94	-317.3	331.8	501.5	477.3	24.22	20.708		
3,600.0	3,466.4	3,564.1	3,526.4	15.1	13.4	141.90	-322.3	349.4	519.9	494.8	25.10	20.713		
3,700.0	3,559.3	3,662.0	3,622.6	15.6	13.8	142.79	-327.3	367.0	538.4	512.4	25.98	20.720		
3,800.0	3,652.1	3,760.0	3,718.8	16.1	14.2	143.62	-332.2	384.6	557.0	530.1	26.87	20.727		
3,900.0	3,745.0	3,857.9	3,815.1	16.6	14.7	144.39	-337.2	402.2	575.7	547.9	27.76	20.736		
4,000.0	3,837.9	3,955.9	3,911.3	17.1	15.1	145.12	-342.2	419.8	594.5	565.8	28.66	20.745		
4,100.0	3,930.8	4,053.8	4,007.5	17.6	15.5	145.80	-347.2	437.4	613.4	583.8	29.55	20.754		
4,200.0	4,023.7	4,151.7	4,103.7	18.1	16.0	146.45	-352.2	455.0	632.3	601.9	30.45	20.764		
4,300.0	4,116.6	4,249.7	4,199.9	18.6	16.4	147.05	-357.2	472.6	651.4	620.0	31.35	20.774		
4,400.0	4,209.4	4,347.6	4,296.2	19.1	16.9	147.62	-362.1	490.2	670.5	638.2	32.26	20.785		
4,500.0	4,302.3	4,445.6	4,392.4	19.6	17.3	148.16	-367.1	507.8	689.6	656.5	33.16	20.795		
4,600.0	4,395.2	4,543.5	4,488.6	20.1	17.7	148.67	-372.1	525.4	708.9	674.8	34.07	20.806		
4,700.0	4,488.1	4,641.5	4,584.8	20.6	18.2	149.16	-377.1	543.0	728.1	693.2	34.98	20.817		
4,800.0	4,581.0	4,739.4	4,681.0	21.1	18.6	149.61	-382.1	560.6	747.5	711.6	35.89	20.828		

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 901H
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 901H	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		Separation Factor	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)	Warning
4,900.0	4,673.9	4,837.4	4,777.3	21.6	19.1	150.05	-387.1	578.2	766.8	730.0	36.80	20.839	
5,000.0	4,766.7	4,935.3	4,873.5	22.1	19.5	150.46	-392.0	595.9	786.2	748.5	37.71	20.850	
5,100.0	4,859.6	5,033.2	4,969.7	22.6	20.0	150.86	-397.0	613.5	805.7	767.1	38.62	20.861	
5,200.0	4,952.5	5,131.2	5,065.9	23.1	20.4	151.23	-402.0	631.1	825.2	785.6	39.53	20.872	
5,300.0	5,045.4	5,229.1	5,162.1	23.6	20.8	151.59	-407.0	648.7	844.7	804.2	40.45	20.882	
5,400.0	5,138.3	5,327.1	5,258.4	24.2	21.3	151.93	-412.0	666.3	864.2	822.9	41.36	20.893	
5,500.0	5,231.2	5,425.0	5,354.6	24.7	21.7	152.26	-417.0	683.9	883.8	841.5	42.28	20.903	
5,600.0	5,324.0	5,523.0	5,450.8	25.2	22.2	152.57	-421.9	701.5	903.4	860.2	43.20	20.914	
5,700.0	5,416.9	5,620.9	5,547.0	25.7	22.6	152.87	-426.9	719.1	923.0	878.9	44.11	20.924	
5,800.0	5,509.8	5,718.8	5,643.2	26.2	23.1	153.16	-431.9	736.7	942.7	897.6	45.03	20.934	
5,900.0	5,602.7	5,816.8	5,739.5	26.7	23.5	153.44	-436.9	754.3	962.3	916.4	45.95	20.944	
6,000.0	5,695.6	5,914.7	5,835.7	27.2	24.0	153.70	-441.9	771.9	982.0	935.1	46.87	20.953	

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 901H
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 901H	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 902H - 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	0.0	0.0	0.0	0.0	-90.17	-0.1	-30.0	30.0					
100.0	100.0	100.0	100.0	0.8	0.8	-90.17	-0.1	-30.0	30.0	28.0	1.99	15.066		
200.0	200.0	200.0	200.0	1.4	1.4	-90.17	-0.1	-30.0	30.0	26.7	3.31	9.059		
300.0	300.0	300.0	300.0	1.9	1.9	-90.17	-0.1	-30.0	30.0	25.8	4.20	7.151		
400.0	400.0	400.0	400.0	2.2	2.2	-90.17	-0.1	-30.0	30.0	25.1	4.91	6.108		
500.0	500.0	500.0	500.0	2.6	2.6	-90.17	-0.1	-30.0	30.0	24.5	5.53	5.422		
600.0	600.0	600.0	600.0	2.8	2.8	-90.17	-0.1	-30.0	30.0	23.9	6.09	4.926		
700.0	700.0	700.0	700.0	3.1	3.1	-90.17	-0.1	-30.0	30.0	23.4	6.60	4.545		
800.0	800.0	800.0	800.0	3.3	3.3	-90.17	-0.1	-30.0	30.0	22.9	7.08	4.239		
900.0	900.0	900.0	900.0	3.6	3.6	-90.17	-0.1	-30.0	30.0	22.5	7.52	3.987		
999.0	999.0	999.0	999.0	3.8	3.8	-90.17	-0.1	-30.0	30.0	22.1	7.94	3.778 CC		
1,000.0	1,000.0	1,000.0	1,000.0	3.8	3.8	178.70	-0.1	-30.0	30.0	22.1	7.94	3.777 ES		
1,100.0	1,100.0	1,100.0	1,100.0	5.2	4.0	178.77	-0.1	-30.0	31.8	22.1	9.64	3.297		
1,200.0	1,199.8	1,199.8	1,199.8	5.5	4.2	178.94	-0.1	-30.0	37.0	27.0	10.09	3.672		
1,300.0	1,299.4	1,299.4	1,299.4	5.7	4.4	179.14	-0.1	-30.0	45.8	35.2	10.55	4.342		
1,400.0	1,398.7	1,398.7	1,398.7	6.0	4.6	179.32	-0.1	-30.0	58.0	47.0	11.02	5.264		
1,500.0	1,497.5	1,497.5	1,497.5	6.3	4.7	179.46	-0.1	-30.0	73.7	62.2	11.51	6.401		
1,600.0	1,595.6	1,598.6	1,598.6	6.7	5.0	179.21	-0.7	-28.4	91.3	79.2	12.08	7.556		
1,700.0	1,693.0	1,700.3	1,700.2	7.0	5.3	178.43	-2.5	-23.4	109.0	96.3	12.66	8.610		
1,800.0	1,789.6	1,802.8	1,802.2	7.4	5.4	177.39	-5.4	-14.9	126.8	113.7	13.14	9.656		
1,900.0	1,885.2	1,906.1	1,904.7	7.8	5.7	176.54	-8.5	-2.7	144.7	130.9	13.77	10.504		
2,000.0	1,979.8	2,010.0	2,007.4	8.2	6.0	175.89	-11.7	13.3	162.4	148.0	14.44	11.244		
2,086.3	2,060.4	2,100.3	2,096.0	8.5	6.3	175.43	-14.5	30.2	177.6	162.6	15.01	11.832		
2,100.0	2,073.1	2,114.7	2,110.1	8.5	6.4	175.36	-15.0	33.1	180.0	164.9	15.09	11.924		
2,200.0	2,166.0	2,220.2	2,212.8	8.9	6.7	174.90	-18.3	56.9	195.2	179.4	15.78	12.370		
2,300.0	2,258.9	2,319.2	2,308.8	9.3	7.0	174.49	-21.5	80.9	208.7	192.3	16.47	12.678		
2,400.0	2,351.8	2,418.3	2,404.9	9.7	7.3	174.13	-24.6	104.9	222.3	205.1	17.18	12.940		
2,500.0	2,444.6	2,517.3	2,501.0	10.1	7.7	173.81	-27.8	128.9	235.9	218.0	17.92	13.162		
2,600.0	2,537.5	2,616.4	2,597.0	10.5	8.0	173.52	-30.9	152.9	249.5	230.8	18.69	13.351		
2,700.0	2,630.4	2,715.5	2,693.1	11.0	8.4	173.27	-34.1	176.9	263.1	243.6	19.47	13.510		
2,800.0	2,723.3	2,814.5	2,789.2	11.4	8.8	173.04	-37.2	200.9	276.7	256.4	20.27	13.646		
2,900.0	2,816.2	2,913.6	2,885.2	11.9	9.2	172.83	-40.4	224.9	290.3	269.2	21.09	13.761		
3,000.0	2,909.1	3,012.7	2,981.3	12.3	9.6	172.64	-43.5	248.9	303.9	281.9	21.92	13.859		
3,100.0	3,001.9	3,111.7	3,077.3	12.8	10.0	172.46	-46.6	272.9	317.5	294.7	22.77	13.943		
3,200.0	3,094.8	3,210.8	3,173.4	13.2	10.4	172.31	-49.8	296.9	331.1	307.5	23.62	14.014		
3,300.0	3,187.7	3,309.9	3,269.5	13.7	10.8	172.16	-52.9	320.9	344.7	320.2	24.49	14.075		
3,400.0	3,280.6	3,408.9	3,365.5	14.2	11.3	172.02	-56.1	345.0	358.3	332.9	25.36	14.126		
3,500.0	3,373.5	3,508.0	3,461.6	14.7	11.7	171.90	-59.2	369.0	371.9	345.7	26.25	14.171		
3,600.0	3,466.4	3,607.1	3,557.7	15.1	12.1	171.78	-62.4	393.0	385.5	358.4	27.13	14.208		
3,700.0	3,559.3	3,706.1	3,653.7	15.6	12.6	171.67	-65.5	417.0	399.1	371.1	28.03	14.241		
3,800.0	3,652.1	3,805.2	3,749.8	16.1	13.0	171.57	-68.7	441.0	412.8	383.8	28.93	14.268		
3,900.0	3,745.0	3,904.3	3,845.8	16.6	13.4	171.47	-71.8	465.0	426.4	396.5	29.84	14.291		
4,000.0	3,837.9	4,003.3	3,941.9	17.1	13.9	171.39	-75.0	489.0	440.0	409.3	30.75	14.311		
4,100.0	3,930.8	4,102.4	4,038.0	17.6	14.3	171.30	-78.1	513.0	453.6	422.0	31.66	14.328		
4,200.0	4,023.7	4,201.5	4,134.0	18.1	14.8	171.22	-81.3	537.0	467.2	434.7	32.58	14.342		
4,300.0	4,116.6	4,300.5	4,230.1	18.6	15.3	171.15	-84.4	561.0	480.9	447.4	33.50	14.354		
4,400.0	4,209.4	4,399.6	4,326.2	19.1	15.7	171.08	-87.5	585.0	494.5	460.1	34.43	14.364		
4,500.0	4,302.3	4,498.7	4,422.2	19.6	16.2	171.01	-90.7	609.0	508.1	472.8	35.36	14.372		
4,600.0	4,395.2	4,597.7	4,518.3	20.1	16.6	170.95	-93.8	633.0	521.7	485.5	36.29	14.378		
4,700.0	4,488.1	4,696.8	4,614.3	20.6	17.1	170.89	-97.0	657.0	535.4	498.1	37.22	14.384		
4,800.0	4,581.0	4,795.9	4,710.4	21.1	17.6	170.83	-100.1	681.0	549.0	510.8	38.16	14.388		

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 901H
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 901H	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 902H - 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)			
4,900.0	4,673.9	4,894.9	4,806.5	21.6	18.0	170.78	-103.3	705.0	562.6	523.5	39.10	14.391	
5,000.0	4,766.7	4,994.0	4,902.5	22.1	18.5	170.73	-106.4	729.0	576.2	536.2	40.04	14.393	
5,100.0	4,859.6	5,093.1	4,998.6	22.6	19.0	170.68	-109.6	753.0	589.9	548.9	40.98	14.395	
5,200.0	4,952.5	5,192.1	5,094.7	23.1	19.4	170.63	-112.7	777.0	603.5	561.6	41.92	14.395	
5,300.0	5,045.4	5,291.2	5,190.7	23.6	19.9	170.58	-115.9	801.0	617.1	574.3	42.87	14.396	
5,400.0	5,138.3	5,390.3	5,286.8	24.2	20.4	170.54	-119.0	825.0	630.8	586.9	43.82	14.395	
5,500.0	5,231.2	5,489.3	5,382.8	24.7	20.8	170.50	-122.2	849.0	644.4	599.6	44.77	14.395	
5,600.0	5,324.0	5,588.4	5,478.9	25.2	21.3	170.46	-125.3	873.0	658.0	612.3	45.72	14.394	
5,700.0	5,416.9	5,687.5	5,575.0	25.7	21.8	170.42	-128.4	897.0	671.7	625.0	46.67	14.392	
5,800.0	5,509.8	5,786.5	5,671.0	26.2	22.3	170.39	-131.6	921.0	685.3	637.7	47.62	14.390	
5,900.0	5,602.7	5,885.6	5,767.1	26.7	22.7	170.35	-134.7	945.0	698.9	650.3	48.57	14.388	
6,000.0	5,695.6	5,984.7	5,863.2	27.2	23.2	170.32	-137.9	969.0	712.5	663.0	49.53	14.386	
6,100.0	5,788.5	6,083.7	5,959.2	27.8	23.7	170.29	-141.0	993.0	726.2	675.7	50.49	14.384	
6,200.0	5,881.3	6,182.8	6,055.3	28.3	24.2	170.25	-144.2	1,017.0	739.8	688.4	51.44	14.381	
6,300.0	5,974.2	6,281.9	6,151.4	28.8	24.6	170.22	-147.3	1,041.0	753.4	701.0	52.40	14.378	
6,400.0	6,067.1	6,380.9	6,247.4	29.3	25.1	170.19	-150.5	1,065.0	767.1	713.7	53.36	14.375	
6,500.0	6,160.0	6,480.0	6,343.5	29.8	25.6	170.17	-153.6	1,089.0	780.7	726.4	54.32	14.372	
6,600.0	6,252.9	6,579.0	6,439.5	30.4	26.1	170.14	-156.8	1,113.0	794.3	739.1	55.28	14.369	
6,700.0	6,345.8	6,678.1	6,535.6	30.9	26.5	170.11	-159.9	1,137.0	808.0	751.7	56.24	14.366	
6,800.0	6,438.7	6,777.2	6,631.7	31.4	27.0	170.09	-163.1	1,161.0	821.6	764.4	57.20	14.363	
6,900.0	6,531.5	6,876.2	6,727.7	31.9	27.5	170.06	-166.2	1,185.0	835.2	777.1	58.16	14.360	
7,000.0	6,624.4	6,975.3	6,823.8	32.5	28.0	170.04	-169.3	1,209.0	848.9	789.7	59.13	14.356	
7,100.0	6,717.3	7,074.4	6,919.9	33.0	28.5	170.02	-172.5	1,233.0	862.5	802.4	60.09	14.353	
7,200.0	6,810.2	7,173.4	7,015.9	33.5	28.9	170.00	-175.6	1,257.0	876.1	815.1	61.06	14.350	
7,271.2	6,876.3	7,243.9	7,084.3	33.9	29.3	169.98	-177.9	1,274.1	885.8	824.1	61.74	14.348	
7,300.0	6,903.1	7,272.5	7,112.0	34.0	29.4	169.98	-178.8	1,281.0	889.7	827.7	62.02	14.346	
7,400.0	6,996.5	7,371.8	7,208.2	34.5	29.9	169.97	-181.9	1,305.1	902.0	839.0	63.00	14.318	
7,500.0	7,090.5	7,471.2	7,304.6	35.1	30.4	169.93	-185.1	1,329.1	912.6	848.6	63.97	14.266	
7,600.0	7,185.1	7,570.8	7,401.2	35.6	30.9	169.87	-188.3	1,353.3	921.4	856.5	64.93	14.192	
7,700.0	7,280.2	7,670.5	7,497.9	36.1	31.4	169.80	-191.4	1,377.4	928.6	862.7	65.87	14.097	
7,800.0	7,375.8	7,770.4	7,594.7	36.6	31.8	169.70	-194.6	1,401.6	934.0	867.2	66.81	13.981	
7,900.0	7,472.0	7,870.3	7,691.6	37.1	32.3	169.58	-197.8	1,425.8	937.8	870.1	67.73	13.846	
8,000.0	7,568.6	7,970.2	7,788.5	37.6	32.8	169.44	-200.9	1,450.1	939.8	871.2	68.64	13.692	
8,100.0	7,665.6	8,070.2	7,885.5	38.1	33.3	169.27	-204.1	1,474.3	940.1	870.6	69.53	13.521	
8,200.0	7,763.1	8,170.1	7,982.4	38.6	33.8	169.09	-207.3	1,498.5	938.8	868.3	70.41	13.332	
8,300.0	7,860.9	8,270.0	8,079.2	39.0	34.3	168.88	-210.5	1,522.7	935.7	864.4	71.27	13.128	
8,400.0	7,959.1	8,369.8	8,176.0	39.5	34.8	168.64	-213.6	1,546.9	930.9	858.8	72.11	12.909	
8,500.0	8,057.6	8,469.5	8,272.7	39.9	35.3	168.38	-216.8	1,571.0	924.4	851.5	72.93	12.675	
8,600.0	8,156.4	8,569.1	8,369.3	40.4	35.7	168.08	-220.0	1,595.1	916.2	842.5	73.73	12.427	
8,700.0	8,255.4	8,668.5	8,465.7	40.8	36.2	167.76	-223.1	1,619.2	906.4	831.9	74.51	12.165	
8,800.0	8,354.7	8,767.7	8,561.8	41.2	36.7	167.40	-226.3	1,643.3	894.9	819.6	75.26	11.891	
8,900.0	8,454.1	8,859.1	8,650.5	41.6	37.2	167.03	-229.1	1,665.2	882.0	806.1	75.92	11.618	
9,000.0	8,553.7	8,945.6	8,734.7	42.0	37.6	166.68	-231.7	1,684.7	868.7	792.2	76.50	11.356	
9,100.0	8,653.5	9,032.2	8,819.4	42.4	38.0	166.32	-234.1	1,703.1	855.2	778.2	77.04	11.101	
9,200.0	8,753.4	9,119.0	8,904.4	42.7	38.4	165.95	-236.3	1,720.2	841.5	764.0	77.53	10.853	
9,300.0	8,853.3	9,206.0	8,989.9	43.0	38.8	165.57	-238.4	1,736.0	827.5	749.6	77.97	10.614	
9,400.0	8,953.3	9,293.2	9,075.8	43.3	39.2	165.19	-240.3	1,750.6	813.3	735.0	78.33	10.384	
9,445.7	8,999.0	9,333.1	9,115.2	43.3	39.4	-103.85	-241.2	1,756.9	806.8	724.6	82.22	9.813	
9,500.0	9,053.3	9,380.5	9,162.2	43.3	39.6	-104.04	-242.1	1,763.9	799.2	716.9	82.28	9.713	
9,600.0	9,153.3	9,468.3	9,249.1	43.4	40.0	-104.37	-243.7	1,776.0	786.3	703.9	82.38	9.544	
9,700.0	9,253.3	9,556.4	9,336.5	43.4	40.3	-104.67	-245.1	1,786.8	774.8	692.3	82.47	9.395	

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 901H
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 901H	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 902H - 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)			
9,800.0	9,353.3	9,644.8	9,424.4	43.4	40.7	-104.94	-246.3	1,796.3	764.8	682.3	82.54	9.266	
9,900.0	9,453.3	9,733.5	9,512.7	43.4	41.0	-105.18	-247.4	1,804.4	756.2	673.6	82.60	9.156	
10,000.0	9,553.3	9,822.4	9,601.3	43.4	41.4	-105.38	-248.3	1,811.2	749.1	666.5	82.64	9.065	
10,100.0	9,653.3	9,911.5	9,690.3	43.5	41.7	-105.55	-249.0	1,816.7	743.4	660.7	82.66	8.993	
10,200.0	9,753.3	10,000.0	9,778.7	43.5	42.0	-105.67	-249.5	1,820.8	739.1	656.5	82.64	8.944	
10,300.0	9,853.3	10,090.1	9,868.8	43.5	42.3	-105.76	-249.9	1,823.5	736.3	653.7	82.64	8.910	
10,400.0	9,953.3	10,179.6	9,958.2	43.5	42.5	-105.80	-250.1	1,824.8	734.9	652.4	82.57	8.900	
10,462.5	10,015.8	10,237.2	10,015.8	43.5	42.5	-105.80	-250.1	1,825.0	734.8	652.3	82.48	8.908	
10,500.0	10,053.3	10,274.7	10,053.3	43.5	42.5	-105.80	-250.1	1,825.0	734.8	652.3	82.49	8.907	
10,600.0	10,153.3	10,374.7	10,153.3	43.6	42.6	-105.80	-250.1	1,825.0	734.8	652.2	82.53	8.903	
10,662.2	10,215.5	10,436.9	10,215.5	43.6	42.6	-105.80	-250.1	1,825.0	734.8	652.2	82.55	8.901	
10,675.0	10,228.3	10,449.7	10,228.3	43.6	42.6	71.22	-250.1	1,825.0	734.7	652.1	82.59	8.895	
10,700.0	10,253.3	10,474.6	10,253.3	43.6	42.6	71.36	-250.1	1,825.0	734.3	651.7	82.60	8.889	
10,725.0	10,278.1	10,499.5	10,278.1	43.6	42.6	71.65	-250.1	1,825.0	733.5	650.8	82.63	8.876	
10,750.0	10,302.8	10,524.2	10,302.8	43.5	42.6	72.08	-250.1	1,825.0	732.2	649.5	82.69	8.855	
10,775.0	10,327.2	10,548.6	10,327.2	43.5	42.6	72.65	-250.1	1,825.0	730.6	647.8	82.77	8.827	
10,800.0	10,351.4	10,572.8	10,351.4	43.5	42.6	73.34	-250.1	1,825.0	728.6	645.8	82.87	8.793	
10,825.0	10,375.2	10,596.5	10,375.2	43.5	42.6	74.17	-250.1	1,825.0	726.4	643.4	83.00	8.752	
10,850.0	10,398.5	10,619.9	10,398.5	43.5	42.6	75.10	-250.1	1,825.0	723.8	640.7	83.14	8.706	
10,875.0	10,421.3	10,638.7	10,417.3	43.5	42.6	75.99	-250.3	1,825.0	721.1	638.0	83.15	8.673	
10,900.0	10,443.6	10,656.1	10,434.8	43.5	42.6	76.88	-251.0	1,825.0	718.4	635.2	83.18	8.637	
10,925.0	10,465.2	10,675.0	10,453.5	43.5	42.6	77.83	-252.6	1,825.0	715.7	632.5	83.26	8.596	
10,950.0	10,486.2	10,691.6	10,470.0	43.5	42.6	78.72	-254.6	1,825.0	713.0	629.7	83.29	8.560	
10,975.0	10,506.4	10,709.6	10,487.8	43.5	42.6	79.68	-257.4	1,825.0	710.4	627.0	83.39	8.519	
11,000.0	10,525.8	10,727.9	10,505.7	43.5	42.7	80.67	-260.9	1,825.1	707.8	624.3	83.51	8.476	
11,025.0	10,544.4	10,746.4	10,523.7	43.5	42.7	81.68	-265.2	1,825.1	705.4	621.7	83.65	8.432	
11,050.0	10,562.0	10,765.1	10,541.8	43.5	42.7	82.70	-270.3	1,825.1	703.0	619.2	83.82	8.387	
11,075.0	10,578.8	10,784.2	10,559.9	43.5	42.7	83.74	-276.1	1,825.1	700.8	616.8	84.02	8.341	
11,100.0	10,594.5	10,803.5	10,578.1	43.5	42.7	84.80	-282.8	1,825.2	698.7	614.5	84.24	8.294	
11,125.0	10,609.2	10,823.2	10,596.3	43.5	42.7	85.87	-290.3	1,825.2	696.8	612.4	84.49	8.248	
11,150.0	10,622.8	10,843.3	10,614.5	43.6	42.7	86.95	-298.7	1,825.3	695.1	610.4	84.76	8.201	
11,175.0	10,635.2	10,863.8	10,632.7	43.6	42.8	88.04	-308.2	1,825.3	693.7	608.6	85.06	8.155	
11,200.0	10,646.6	10,884.8	10,650.9	43.6	42.8	89.15	-318.6	1,825.4	692.4	607.0	85.38	8.110	
11,225.0	10,656.7	10,906.2	10,669.0	43.6	42.8	90.26	-330.1	1,825.5	691.4	605.7	85.72	8.066	
11,250.0	10,665.7	10,928.3	10,687.1	43.6	42.8	91.37	-342.7	1,825.5	690.6	604.5	86.07	8.023	
11,275.0	10,673.4	10,950.9	10,705.0	43.6	42.8	92.50	-356.5	1,825.6	690.1	603.7	86.45	7.983	
11,300.0	10,679.8	10,974.3	10,722.8	43.6	42.9	93.63	-371.7	1,825.7	689.9	603.1	86.83	7.945	
11,306.7	10,681.4	10,980.7	10,727.6	43.6	42.9	93.93	-376.0	1,825.7	689.9	602.9	86.93	7.936	
11,325.0	10,685.0	10,998.4	10,740.4	43.6	42.9	94.77	-388.2	1,825.8	690.0	602.7	87.22	7.910	
11,350.0	10,688.9	11,023.4	10,757.6	43.7	42.9	95.91	-406.2	1,825.9	690.3	602.7	87.62	7.878	
11,375.0	10,691.5	11,049.3	10,774.6	43.7	42.9	97.07	-425.9	1,826.0	690.9	602.9	88.02	7.850	
11,400.0	10,692.8	11,076.3	10,791.0	43.7	43.0	98.23	-447.3	1,826.1	691.9	603.4	88.42	7.825	
11,412.4	10,693.0	11,090.1	10,799.0	43.7	43.0	98.82	-458.5	1,826.2	692.4	603.8	88.61	7.814	
11,500.0	10,692.9	11,203.0	10,851.0	43.8	43.1	103.13	-558.4	1,826.7	696.2	606.4	89.81	7.751	
11,600.0	10,692.9	11,360.3	10,881.7	43.9	43.2	105.77	-712.0	1,827.6	695.7	605.1	90.54	7.684	
11,700.0	10,692.9	11,466.2	10,882.0	44.1	43.4	105.93	-817.9	1,828.2	690.2	599.1	91.09	7.577	
11,757.4	10,692.8	11,523.5	10,882.1	44.2	43.4	106.01	-875.1	1,828.5	687.0	595.6	91.43	7.514	
11,800.0	10,692.8	11,566.0	10,882.1	44.2	43.5	106.05	-917.7	1,828.8	684.9	593.3	91.66	7.472	
11,900.0	10,692.8	11,666.0	10,882.1	44.4	43.6	106.11	-1,017.7	1,829.3	682.5	590.3	92.23	7.400	
11,922.8	10,692.8	11,688.8	10,882.2	44.5	43.7	106.11	-1,040.5	1,829.5	682.4	590.0	92.36	7.389	
11,924.8	10,692.8	11,690.8	10,882.2	44.5	43.7	106.11	-1,042.4	1,829.5	682.4	590.0	92.37	7.388	

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 901H
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 901H	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 902H - 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)		
12,000.0	10,692.8	11,766.0	10,882.2	44.6	43.8	106.12	-1,117.7	1,829.9	682.4	589.6	92.84	7.351
12,100.0	10,692.7	11,866.0	10,882.3	44.9	44.0	106.12	-1,217.7	1,830.5	682.5	589.0	93.48	7.301
12,200.0	10,692.7	11,966.0	10,882.3	45.2	44.2	106.13	-1,317.7	1,831.0	682.6	588.4	94.15	7.250
12,300.0	10,692.6	12,066.0	10,882.4	45.4	44.5	106.14	-1,417.7	1,831.6	682.6	587.8	94.85	7.197
12,400.0	10,692.6	12,166.0	10,882.4	45.8	44.7	106.14	-1,517.7	1,832.2	682.7	587.1	95.56	7.144
12,500.0	10,692.6	12,266.0	10,882.5	46.1	45.0	106.15	-1,617.7	1,832.7	682.8	586.5	96.30	7.090
12,600.0	10,692.5	12,366.0	10,882.6	46.4	45.3	106.16	-1,717.7	1,833.3	682.8	585.8	97.06	7.036
12,700.0	10,692.5	12,466.0	10,882.6	46.8	45.7	106.17	-1,817.7	1,833.9	682.9	585.1	97.84	6.980
12,800.0	10,692.4	12,566.0	10,882.7	47.2	46.0	106.17	-1,917.7	1,834.4	683.0	584.3	98.64	6.924
12,900.0	10,692.4	12,666.0	10,882.7	47.6	46.4	106.18	-2,017.6	1,835.0	683.0	583.6	99.46	6.868
13,000.0	10,692.4	12,766.0	10,882.8	48.0	46.8	106.19	-2,117.6	1,835.6	683.1	582.8	100.29	6.811
13,100.0	10,692.3	12,866.0	10,882.9	48.5	47.2	106.19	-2,217.6	1,836.1	683.2	582.0	101.15	6.754
13,200.0	10,692.3	12,966.0	10,882.9	48.9	47.6	106.20	-2,317.6	1,836.7	683.2	581.2	102.03	6.696
13,300.0	10,692.3	13,066.0	10,883.0	49.4	48.0	106.21	-2,417.6	1,837.3	683.3	580.4	102.93	6.639
13,400.0	10,692.2	13,166.0	10,883.0	49.9	48.5	106.21	-2,517.6	1,837.8	683.4	579.5	103.84	6.581
13,500.0	10,692.2	13,266.0	10,883.1	50.4	48.9	106.22	-2,617.6	1,838.4	683.4	578.7	104.77	6.523
13,600.0	10,692.1	13,366.0	10,883.2	50.9	49.4	106.23	-2,717.6	1,839.0	683.5	577.8	105.72	6.465
13,700.0	10,692.1	13,466.0	10,883.2	51.4	49.9	106.24	-2,817.6	1,839.5	683.6	576.9	106.68	6.408
13,800.0	10,692.1	13,566.0	10,883.3	52.0	50.5	106.24	-2,917.6	1,840.1	683.6	576.0	107.66	6.350
13,900.0	10,692.0	13,666.0	10,883.3	52.5	51.0	106.25	-3,017.6	1,840.7	683.7	575.1	108.65	6.292
14,000.0	10,692.0	13,766.0	10,883.4	53.1	51.5	106.26	-3,117.6	1,841.2	683.8	574.1	109.66	6.235
14,100.0	10,691.9	13,866.0	10,883.5	53.6	52.1	106.26	-3,217.6	1,841.8	683.8	573.1	110.69	6.178
14,200.0	10,691.9	13,966.0	10,883.5	54.2	52.7	106.27	-3,317.6	1,842.4	683.9	572.2	111.73	6.121
14,300.0	10,691.9	14,066.0	10,883.6	54.8	53.3	106.28	-3,417.6	1,842.9	684.0	571.2	112.78	6.065
14,400.0	10,691.8	14,166.0	10,883.6	55.4	53.8	106.28	-3,517.6	1,843.5	684.0	570.2	113.84	6.009
14,500.0	10,691.8	14,266.0	10,883.7	56.0	54.5	106.29	-3,617.6	1,844.1	684.1	569.2	114.92	5.953
14,600.0	10,691.8	14,366.0	10,883.7	56.7	55.1	106.30	-3,717.6	1,844.6	684.2	568.2	116.01	5.897
14,700.0	10,691.7	14,466.0	10,883.8	57.3	55.7	106.30	-3,817.6	1,845.2	684.2	567.1	117.11	5.842
14,800.0	10,691.7	14,566.0	10,883.9	58.0	56.3	106.31	-3,917.6	1,845.8	684.3	566.1	118.23	5.788
14,900.0	10,691.6	14,666.0	10,883.9	58.6	57.0	106.32	-4,017.6	1,846.3	684.4	565.0	119.35	5.734
15,000.0	10,691.6	14,766.0	10,884.0	59.3	57.6	106.33	-4,117.6	1,846.9	684.4	563.9	120.49	5.680
15,100.0	10,691.6	14,866.0	10,884.0	59.9	58.3	106.33	-4,217.6	1,847.5	684.5	562.9	121.64	5.628
15,200.0	10,691.5	14,966.0	10,884.1	60.6	59.0	106.34	-4,317.6	1,848.0	684.6	561.8	122.79	5.575
15,300.0	10,691.5	15,066.0	10,884.2	61.3	59.7	106.35	-4,417.6	1,848.6	684.6	560.7	123.96	5.523
15,400.0	10,691.4	15,166.0	10,884.2	62.0	60.4	106.35	-4,517.6	1,849.2	684.7	559.6	125.13	5.472
15,500.0	10,691.4	15,266.0	10,884.3	62.7	61.1	106.36	-4,617.6	1,849.7	684.8	558.5	126.32	5.421
15,600.0	10,691.4	15,366.0	10,884.3	63.4	61.8	106.37	-4,717.6	1,850.3	684.8	557.3	127.51	5.371
15,700.0	10,691.3	15,466.0	10,884.4	64.1	62.5	106.37	-4,817.6	1,850.9	684.9	556.2	128.71	5.321
15,800.0	10,691.3	15,566.0	10,884.5	64.8	63.2	106.38	-4,917.6	1,851.4	685.0	555.0	129.92	5.272
15,900.0	10,691.2	15,666.0	10,884.5	65.5	63.9	106.39	-5,017.6	1,852.0	685.0	553.9	131.14	5.224
16,000.0	10,691.2	15,766.0	10,884.6	66.3	64.7	106.39	-5,117.6	1,852.6	685.1	552.7	132.36	5.176
16,100.0	10,691.2	15,866.0	10,884.6	67.0	65.4	106.40	-5,217.6	1,853.1	685.2	551.6	133.60	5.129
16,200.0	10,691.1	15,966.0	10,884.7	67.7	66.1	106.41	-5,317.6	1,853.7	685.2	550.4	134.83	5.082
16,300.0	10,691.1	16,066.0	10,884.8	68.5	66.9	106.42	-5,417.6	1,854.3	685.3	549.2	136.08	5.036
16,400.0	10,691.1	16,166.0	10,884.8	69.2	67.6	106.42	-5,517.6	1,854.8	685.4	548.0	137.33	4.991
16,500.0	10,691.0	16,266.0	10,884.9	70.0	68.4	106.43	-5,617.6	1,855.4	685.4	546.8	138.59	4.946
16,600.0	10,691.0	16,366.0	10,884.9	70.8	69.2	106.44	-5,717.6	1,856.0	685.5	545.6	139.86	4.901
16,700.0	10,690.9	16,466.0	10,885.0	71.5	69.9	106.44	-5,817.6	1,856.5	685.6	544.4	141.13	4.858
16,800.0	10,690.9	16,566.0	10,885.1	72.3	70.7	106.45	-5,917.6	1,857.1	685.6	543.2	142.40	4.815
16,900.0	10,690.9	16,666.0	10,885.1	73.1	71.5	106.46	-6,017.6	1,857.7	685.7	542.0	143.68	4.772
17,000.0	10,690.8	16,766.0	10,885.2	73.8	72.3	106.46	-6,117.6	1,858.2	685.8	540.8	144.97	4.730

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 901H
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 901H	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 902H - 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)			
17,100.0	10,690.8	16,866.0	10,885.2	74.6	73.1	106.47	-6,217.6	1,858.8	685.8	539.6	146.26	4.689	
17,200.0	10,690.7	16,966.0	10,885.3	75.4	73.9	106.48	-6,317.6	1,859.4	685.9	538.3	147.56	4.648	
17,300.0	10,690.7	17,066.0	10,885.4	76.2	74.7	106.48	-6,417.6	1,859.9	686.0	537.1	148.86	4.608	
17,400.0	10,690.7	17,166.0	10,885.4	77.0	75.5	106.49	-6,517.6	1,860.5	686.0	535.9	150.16	4.569	
17,500.0	10,690.6	17,266.0	10,885.5	77.8	76.3	106.50	-6,617.6	1,861.1	686.1	534.6	151.47	4.530	
17,600.0	10,690.6	17,366.0	10,885.5	78.6	77.1	106.51	-6,717.6	1,861.6	686.2	533.4	152.79	4.491	
17,700.0	10,690.6	17,466.0	10,885.6	79.4	77.9	106.51	-6,817.6	1,862.2	686.2	532.1	154.10	4.453	
17,800.0	10,690.5	17,566.0	10,885.7	80.2	78.7	106.52	-6,917.6	1,862.8	686.3	530.9	155.42	4.416	
17,900.0	10,690.5	17,666.0	10,885.7	81.0	79.5	106.53	-7,017.6	1,863.3	686.4	529.6	156.75	4.379	
18,000.0	10,690.4	17,766.0	10,885.8	81.8	80.3	106.53	-7,117.6	1,863.9	686.4	528.4	158.08	4.342	
18,100.0	10,690.4	17,866.0	10,885.8	82.7	81.2	106.54	-7,217.6	1,864.5	686.5	527.1	159.41	4.307	
18,200.0	10,690.4	17,966.0	10,885.9	83.5	82.0	106.55	-7,317.6	1,865.0	686.6	525.8	160.74	4.271	
18,300.0	10,690.3	18,066.0	10,886.0	84.3	82.8	106.55	-7,417.6	1,865.6	686.6	524.6	162.08	4.236	
18,400.0	10,690.3	18,166.0	10,886.0	85.1	83.7	106.56	-7,517.6	1,866.2	686.7	523.3	163.42	4.202	
18,500.0	10,690.2	18,266.0	10,886.1	86.0	84.5	106.57	-7,617.6	1,866.7	686.8	522.0	164.76	4.168	
18,600.0	10,690.2	18,366.0	10,886.1	86.8	85.3	106.57	-7,717.6	1,867.3	686.8	520.7	166.11	4.135	
18,700.0	10,690.2	18,466.0	10,886.2	87.6	86.2	106.58	-7,817.6	1,867.9	686.9	519.4	167.46	4.102	
18,800.0	10,690.1	18,566.0	10,886.3	88.5	87.0	106.59	-7,917.6	1,868.4	687.0	518.2	168.81	4.069	
18,900.0	10,690.1	18,666.0	10,886.3	89.3	87.9	106.59	-8,017.5	1,869.0	687.0	516.9	170.16	4.038	
19,000.0	10,690.1	18,766.0	10,886.4	90.2	88.7	106.60	-8,117.5	1,869.6	687.1	515.6	171.52	4.006	
19,100.0	10,690.0	18,866.0	10,886.4	91.0	89.6	106.61	-8,217.5	1,870.1	687.2	514.3	172.88	3.975	
19,200.0	10,690.0	18,966.0	10,886.5	91.8	90.4	106.62	-8,317.5	1,870.7	687.2	513.0	174.24	3.944	
19,300.0	10,689.9	19,066.0	10,886.6	92.7	91.3	106.62	-8,417.5	1,871.3	687.3	511.7	175.60	3.914	
19,400.0	10,689.9	19,166.0	10,886.6	93.6	92.2	106.63	-8,517.5	1,871.8	687.4	510.4	176.96	3.884	
19,500.0	10,689.9	19,266.0	10,886.7	94.4	93.0	106.64	-8,617.5	1,872.4	687.4	509.1	178.33	3.855	
19,600.0	10,689.8	19,366.0	10,886.7	95.3	93.9	106.64	-8,717.5	1,873.0	687.5	507.8	179.70	3.826	
19,700.0	10,689.8	19,466.0	10,886.8	96.1	94.7	106.65	-8,817.5	1,873.5	687.6	506.5	181.07	3.797	
19,800.0	10,689.7	19,566.0	10,886.9	97.0	95.6	106.66	-8,917.5	1,874.1	687.6	505.2	182.44	3.769	
19,900.0	10,689.7	19,666.0	10,886.9	97.8	96.5	106.66	-9,017.5	1,874.7	687.7	503.9	183.81	3.741	
20,000.0	10,689.7	19,766.0	10,887.0	98.7	97.4	106.67	-9,117.5	1,875.2	687.8	502.6	185.18	3.714	
20,100.0	10,689.6	19,866.0	10,887.0	99.6	98.2	106.68	-9,217.5	1,875.8	687.8	501.3	186.56	3.687	
20,200.0	10,689.6	19,966.0	10,887.1	100.4	99.1	106.68	-9,317.5	1,876.4	687.9	500.0	187.94	3.660	
20,300.0	10,689.6	20,066.0	10,887.1	101.3	100.0	106.69	-9,417.5	1,876.9	688.0	498.7	189.31	3.634	
20,400.0	10,689.5	20,166.0	10,887.2	102.2	100.9	106.70	-9,517.5	1,877.5	688.0	497.3	190.69	3.608	
20,500.0	10,689.5	20,266.0	10,887.3	103.1	101.7	106.70	-9,617.5	1,878.1	688.1	496.0	192.07	3.583	
20,600.0	10,689.4	20,366.0	10,887.3	103.9	102.6	106.71	-9,717.5	1,878.6	688.2	494.7	193.46	3.557	
20,700.0	10,689.4	20,466.0	10,887.4	104.8	103.5	106.72	-9,817.5	1,879.2	688.2	493.4	194.84	3.532	
20,800.0	10,689.4	20,566.0	10,887.4	105.7	104.4	106.73	-9,917.5	1,879.8	688.3	492.1	196.22	3.508	
20,900.0	10,689.3	20,666.0	10,887.5	106.6	105.3	106.73	-10,017.5	1,880.3	688.4	490.8	197.61	3.484	
21,000.0	10,689.3	20,766.0	10,887.6	107.4	106.1	106.74	-10,117.5	1,880.9	688.4	489.5	198.99	3.460	
21,100.0	10,689.2	20,866.0	10,887.6	108.3	107.0	106.75	-10,217.5	1,881.5	688.5	488.1	200.38	3.436	
21,200.0	10,689.2	20,966.0	10,887.7	109.2	107.9	106.75	-10,317.5	1,882.0	688.6	486.8	201.77	3.413	
21,300.0	10,689.2	21,066.0	10,887.7	110.1	108.8	106.76	-10,417.5	1,882.6	688.6	485.5	203.16	3.390	
21,400.0	10,689.1	21,166.0	10,887.8	111.0	109.7	106.77	-10,517.5	1,883.2	688.7	484.2	204.55	3.367	
21,500.0	10,689.1	21,266.0	10,887.9	111.9	110.6	106.77	-10,617.5	1,883.7	688.8	482.8	205.94	3.345	
21,600.0	10,689.1	21,366.0	10,887.9	112.8	111.5	106.78	-10,717.5	1,884.3	688.8	481.5	207.33	3.323	
21,700.0	10,689.0	21,466.0	10,888.0	113.7	112.4	106.79	-10,817.5	1,884.9	688.9	480.2	208.72	3.301	
21,700.2	10,689.0	21,466.1	10,888.0	113.7	112.4	106.79	-10,817.7	1,884.9	688.9	480.2	208.72	3.301	
21,732.1	10,689.0	21,492.6	10,888.0	113.9	112.6	106.79	-10,844.2	1,885.0	689.0	479.9	209.09	3.295 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 901H
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 901H	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			Distance		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)	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		
999.0	999.0	1,000.0	999.0	3.8	3.8	-90.16	-0.2	-60.0	60.0	52.1	7.94	7.557 CC		
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	178.71	-0.2	-60.0	60.0	52.1	7.94	7.554		
1,100.0	1,100.0	1,102.5	1,101.5	5.2	4.1	177.51	-1.5	-58.7	60.5	50.8	9.68	6.252 ES		
1,200.0	1,199.8	1,203.9	1,202.7	5.5	4.4	174.11	-5.3	-54.9	62.2	52.1	10.14	6.135 SF		
1,300.0	1,299.4	1,305.6	1,304.0	5.7	4.5	169.21	-11.2	-48.3	65.2	54.7	10.48	6.221		
1,400.0	1,398.7	1,407.8	1,405.5	6.0	4.8	164.88	-17.2	-38.3	68.7	57.7	10.96	6.264		
1,500.0	1,497.5	1,510.1	1,506.8	6.3	5.2	161.30	-22.7	-24.6	72.3	60.8	11.45	6.312		
1,600.0	1,595.6	1,611.1	1,606.3	6.7	5.4	158.51	-27.8	-8.1	76.4	64.5	11.89	6.429		
1,700.0	1,693.0	1,710.8	1,704.5	7.0	5.7	156.91	-32.8	8.6	83.6	71.1	12.44	6.719		
1,800.0	1,789.6	1,810.2	1,802.4	7.4	6.0	156.41	-37.8	25.2	94.0	80.9	13.04	7.206		
1,900.0	1,885.2	1,909.3	1,899.9	7.8	6.4	156.73	-42.8	41.8	107.5	93.8	13.69	7.855		
2,000.0	1,979.8	2,007.9	1,997.0	8.2	6.7	157.57	-47.8	58.3	124.3	109.9	14.39	8.638		
2,086.3	2,060.4	2,092.4	2,080.2	8.5	7.0	158.51	-52.0	72.4	141.3	126.3	14.99	9.428		
2,100.0	2,073.1	2,105.8	2,093.4	8.5	7.1	158.69	-52.7	74.6	144.2	129.2	15.08	9.565		
2,200.0	2,166.0	2,203.5	2,189.6	8.9	7.5	159.80	-57.6	90.9	165.4	149.6	15.82	10.455		
2,300.0	2,258.9	2,301.2	2,285.8	9.3	7.8	160.65	-62.6	107.3	186.7	170.1	16.55	11.277		
2,400.0	2,351.8	2,398.9	2,382.0	9.7	8.2	161.33	-67.5	123.6	207.9	190.6	17.30	12.020		
2,500.0	2,444.6	2,496.5	2,478.2	10.1	8.6	161.89	-72.4	139.9	229.2	211.2	18.06	12.692		
2,600.0	2,537.5	2,594.2	2,574.3	10.5	9.0	162.35	-77.3	156.2	250.6	231.7	18.84	13.301		
2,700.0	2,630.4	2,691.9	2,670.5	11.0	9.4	162.74	-82.2	172.6	271.9	252.3	19.62	13.854		
2,800.0	2,723.3	2,789.6	2,766.7	11.4	9.8	163.07	-87.2	188.9	293.2	272.8	20.42	14.357		
2,900.0	2,816.2	2,887.3	2,862.9	11.9	10.2	163.36	-92.1	205.2	314.6	293.3	21.23	14.816		
3,000.0	2,909.1	2,985.0	2,959.1	12.3	10.6	163.61	-97.0	221.5	335.9	313.9	22.05	15.235		
3,100.0	3,001.9	3,082.7	3,055.3	12.8	11.1	163.83	-101.9	237.8	357.3	334.4	22.87	15.619		
3,200.0	3,094.8	3,180.3	3,151.5	13.2	11.5	164.02	-106.8	254.2	378.6	354.9	23.70	15.972		
3,300.0	3,187.7	3,278.0	3,247.6	13.7	11.9	164.20	-111.8	270.5	400.0	375.4	24.54	16.297		
3,400.0	3,280.6	3,375.7	3,343.8	14.2	12.3	164.36	-116.7	286.8	421.3	396.0	25.39	16.597		
3,500.0	3,373.5	3,473.4	3,440.0	14.7	12.7	164.50	-121.6	303.1	442.7	416.5	26.24	16.874		
3,600.0	3,466.4	3,571.1	3,536.2	15.1	13.2	164.63	-126.5	319.5	464.1	437.0	27.09	17.131		
3,700.0	3,559.3	3,668.8	3,632.4	15.6	13.6	164.74	-131.4	335.8	485.5	457.5	27.95	17.370		
3,800.0	3,652.1	3,766.5	3,728.6	16.1	14.0	164.85	-136.4	352.1	506.8	478.0	28.81	17.592		
3,900.0	3,745.0	3,864.1	3,824.8	16.6	14.4	164.95	-141.3	368.4	528.2	498.5	29.68	17.799		
4,000.0	3,837.9	3,961.8	3,920.9	17.1	14.9	165.04	-146.2	384.8	549.6	519.0	30.54	17.993		
4,100.0	3,930.8	4,059.5	4,017.1	17.6	15.3	165.13	-151.1	401.1	571.0	539.5	31.42	18.174		
4,200.0	4,023.7	4,157.2	4,113.3	18.1	15.7	165.20	-156.0	417.4	592.3	560.0	32.29	18.344		
4,300.0	4,116.6	4,254.9	4,209.5	18.6	16.2	165.28	-161.0	433.7	613.7	580.6	33.17	18.503		
4,400.0	4,209.4	4,352.6	4,305.7	19.1	16.6	165.35	-165.9	450.0	635.1	601.1	34.05	18.653		
4,500.0	4,302.3	4,450.2	4,401.9	19.6	17.0	165.41	-170.8	466.4	656.5	621.6	34.93	18.795		
4,600.0	4,395.2	4,547.9	4,498.1	20.1	17.5	165.47	-175.7	482.7	677.9	642.1	35.81	18.928		
4,700.0	4,488.1	4,645.6	4,594.2	20.6	17.9	165.52	-180.6	499.0	699.3	662.6	36.70	19.054		
4,800.0	4,581.0	4,743.3	4,690.4	21.1	18.3	165.58	-185.6	515.3	720.6	683.0	37.59	19.173		

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 901H
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 901H	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		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
4,900.0	4,673.9	4,841.0	4,786.6	21.6	18.8	165.63	-190.5	531.7	742.0	703.5		38.47	19.286
5,000.0	4,766.7	4,938.7	4,882.8	22.1	19.2	165.67	-195.4	548.0	763.4	724.0		39.36	19.393
5,100.0	4,859.6	5,036.4	4,979.0	22.6	19.6	165.72	-200.3	564.3	784.8	744.5		40.26	19.495
5,200.0	4,952.5	5,134.0	5,075.2	23.1	20.1	165.76	-205.2	580.6	806.2	765.0		41.15	19.592
5,300.0	5,045.4	5,231.7	5,171.4	23.6	20.5	165.80	-210.2	596.9	827.6	785.5		42.04	19.684
5,400.0	5,138.3	5,329.4	5,267.5	24.2	21.0	165.84	-215.1	613.3	848.9	806.0		42.94	19.771
5,500.0	5,231.2	5,427.1	5,363.7	24.7	21.4	165.87	-220.0	629.6	870.3	826.5		43.84	19.855
5,600.0	5,324.0	5,524.8	5,459.9	25.2	21.8	165.91	-224.9	645.9	891.7	847.0		44.73	19.934
5,700.0	5,416.9	5,622.5	5,556.1	25.7	22.3	165.94	-229.8	662.2	913.1	867.5		45.63	20.011
5,800.0	5,509.8	5,720.1	5,652.3	26.2	22.7	165.97	-234.8	678.6	934.5	888.0		46.53	20.083
5,900.0	5,602.7	5,817.8	5,748.5	26.7	23.1	166.00	-239.7	694.9	955.9	908.5		47.43	20.153
6,000.0	5,695.6	5,915.5	5,844.7	27.2	23.6	166.03	-244.6	711.2	977.3	928.9		48.33	20.220
6,100.0	5,788.5	6,013.2	5,940.8	27.8	24.0	166.05	-249.5	727.5	998.7	949.4		49.23	20.284

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 901H
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 901H	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	-90.17	-0.3	-90.0	90.0				
100.0	100.0	101.0	100.0	0.8	0.8	-90.17	-0.3	-90.0	90.0	88.0	1.99	45.332	
200.0	200.0	201.0	200.0	1.4	1.4	-90.17	-0.3	-90.0	90.0	86.7	3.31	27.196	
300.0	300.0	301.0	300.0	1.9	1.9	-90.17	-0.3	-90.0	90.0	85.8	4.19	21.460	
400.0	400.0	401.0	400.0	2.2	2.2	-90.17	-0.3	-90.0	90.0	85.1	4.91	18.327	
500.0	500.0	501.0	500.0	2.6	2.6	-90.17	-0.3	-90.0	90.0	84.5	5.53	16.269	
600.0	600.0	601.0	600.0	2.8	2.8	-90.17	-0.3	-90.0	90.0	83.9	6.09	14.780	
700.0	700.0	701.0	700.0	3.1	3.1	-90.17	-0.3	-90.0	90.0	83.4	6.60	13.636	
800.0	800.0	801.0	800.0	3.3	3.3	-90.17	-0.3	-90.0	90.0	82.9	7.08	12.719	
900.0	900.0	901.0	900.0	3.6	3.6	-90.17	-0.3	-90.0	90.0	82.5	7.52	11.963	
999.0	999.0	1,000.0	999.0	3.8	3.8	-90.17	-0.3	-90.0	90.0	82.1	7.94	11.335 CC	
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	178.70	-0.3	-90.0	90.0	82.1	7.94	11.332 ES	
1,100.0	1,100.0	1,101.0	1,100.0	5.2	4.0	178.73	-0.3	-90.0	91.8	82.1	9.64	9.522 SF	
1,200.0	1,199.8	1,200.8	1,199.8	5.5	4.2	178.79	-0.3	-90.0	97.0	87.0	10.09	9.620	
1,300.0	1,299.4	1,300.4	1,299.4	5.7	4.4	178.89	-0.3	-90.0	105.8	95.2	10.55	10.031	
1,400.0	1,398.7	1,399.7	1,398.7	6.0	4.6	179.00	-0.3	-90.0	118.0	107.0	11.02	10.708	
1,500.0	1,497.5	1,498.5	1,497.5	6.3	4.7	179.11	-0.3	-90.0	133.7	122.2	11.51	11.613	
1,600.0	1,595.6	1,596.6	1,595.6	6.7	4.9	179.22	-0.3	-90.0	152.8	140.8	12.02	12.711	
1,700.0	1,693.0	1,694.0	1,693.0	7.0	5.1	179.31	-0.3	-90.0	175.3	162.8	12.55	13.973	
1,800.0	1,789.6	1,790.6	1,789.6	7.4	5.2	179.40	-0.3	-90.0	201.2	188.1	13.09	15.372	
1,900.0	1,885.2	1,886.2	1,885.2	7.8	5.4	179.47	-0.3	-90.0	230.5	216.9	13.65	16.886	
2,000.0	1,979.8	1,980.8	1,979.8	8.2	5.5	179.53	-0.3	-90.0	263.1	248.9	14.22	18.495	
2,086.3	2,060.4	2,061.4	2,060.4	8.5	5.6	179.57	-0.3	-90.0	293.8	279.1	14.70	19.989	
2,100.0	2,073.1	2,074.1	2,073.1	8.5	5.7	179.58	-0.3	-90.0	298.9	284.2	14.77	20.243	
2,200.0	2,166.0	2,167.0	2,166.0	8.9	5.8	179.63	-0.3	-90.0	336.0	320.6	15.33	21.909	
2,300.0	2,258.9	2,259.9	2,258.9	9.3	5.9	179.66	-0.3	-90.0	373.0	357.1	15.89	23.475	
2,400.0	2,351.8	2,352.8	2,351.8	9.7	6.1	179.69	-0.3	-90.0	410.1	393.6	16.46	24.912	
2,500.0	2,444.6	2,445.6	2,444.6	10.1	6.2	179.72	-0.3	-90.0	447.1	430.1	17.05	26.231	
2,600.0	2,537.5	2,538.5	2,537.5	10.5	6.3	179.74	-0.3	-90.0	484.2	466.5	17.64	27.443	
2,700.0	2,630.4	2,631.4	2,630.4	11.0	6.5	179.76	-0.3	-90.0	521.2	503.0	18.25	28.558	
2,800.0	2,723.3	2,724.3	2,723.3	11.4	6.6	179.77	-0.3	-90.0	558.3	539.4	18.87	29.585	
2,900.0	2,816.2	2,817.2	2,816.2	11.9	6.7	179.79	-0.3	-90.0	595.3	575.8	19.50	30.532	
3,000.0	2,909.1	2,910.1	2,909.1	12.3	6.9	179.80	-0.3	-90.0	632.4	612.2	20.13	31.408	
3,100.0	3,001.9	3,002.9	3,001.9	12.8	7.0	179.81	-0.3	-90.0	669.4	648.6	20.78	32.218	
3,200.0	3,094.8	3,095.8	3,094.8	13.2	7.1	179.82	-0.3	-90.0	706.5	685.0	21.43	32.968	
3,300.0	3,187.7	3,188.7	3,187.7	13.7	7.2	179.83	-0.3	-90.0	743.5	721.4	22.09	33.665	
3,400.0	3,280.6	3,281.6	3,280.6	14.2	7.3	179.84	-0.3	-90.0	780.6	757.8	22.75	34.313	
3,500.0	3,373.5	3,374.5	3,373.5	14.7	7.5	179.85	-0.3	-90.0	817.6	794.2	23.42	34.917	
3,600.0	3,466.4	3,467.4	3,466.4	15.1	7.6	179.85	-0.3	-90.0	854.7	830.6	24.09	35.480	
3,700.0	3,559.3	3,575.7	3,574.7	15.6	7.7	179.81	-1.0	-89.4	891.2	866.6	24.56	36.280	
3,800.0	3,652.1	3,694.2	3,693.1	16.1	7.9	179.54	-5.3	-85.8	925.3	900.0	25.35	36.496	
3,900.0	3,745.0	3,823.7	3,822.0	16.6	8.0	179.03	-13.9	-78.0	956.7	930.7	26.05	36.730	
4,000.0	3,837.9	3,964.2	3,961.2	17.1	8.3	178.38	-25.7	-63.5	984.0	957.2	26.81	36.703	

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 901H
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 901H	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 701H - 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)			
4,100.0	3,930.8	3,808.0	3,760.0	17.6	14.8	-26.16	393.7	1,831.9	988.7	958.6	30.07	32.884	
4,200.0	4,023.7	3,906.6	3,855.8	18.1	15.2	-26.20	386.6	1,853.8	972.0	941.1	30.91	31.445	
4,300.0	4,116.6	4,005.2	3,951.7	18.6	15.7	-26.24	379.5	1,875.7	955.3	923.5	31.76	30.081	
4,400.0	4,209.4	4,103.8	4,047.6	19.1	16.2	-26.28	372.4	1,897.5	938.6	906.0	32.61	28.786	
4,500.0	4,302.3	4,202.4	4,143.4	19.6	16.6	-26.32	365.2	1,919.4	921.9	888.4	33.46	27.554	
4,600.0	4,395.2	4,301.0	4,239.3	20.1	17.1	-26.37	358.1	1,941.3	905.2	870.9	34.31	26.383	
4,700.0	4,488.1	4,399.6	4,335.2	20.6	17.5	-26.41	351.0	1,963.2	888.5	853.3	35.16	25.267	
4,800.0	4,581.0	4,498.1	4,431.1	21.1	18.0	-26.46	343.9	1,985.1	871.8	835.8	36.02	24.203	
4,900.0	4,673.9	4,596.7	4,526.9	21.6	18.5	-26.51	336.8	2,007.0	855.1	818.2	36.88	23.188	
5,000.0	4,766.7	4,695.3	4,622.8	22.1	18.9	-26.56	329.7	2,028.9	838.4	800.7	37.74	22.218	
5,100.0	4,859.6	4,793.9	4,718.7	22.6	19.4	-26.62	322.6	2,050.8	821.7	783.1	38.59	21.291	
5,200.0	4,952.5	4,892.5	4,814.5	23.1	19.9	-26.67	315.5	2,072.7	805.0	765.6	39.45	20.404	
5,300.0	5,045.4	4,991.1	4,910.4	23.6	20.3	-26.73	308.3	2,094.6	788.4	748.0	40.31	19.555	
5,400.0	5,138.3	5,089.7	5,006.3	24.2	20.8	-26.79	301.2	2,116.4	771.7	730.5	41.18	18.741	
5,500.0	5,231.2	5,188.3	5,102.1	24.7	21.3	-26.86	294.1	2,138.3	755.0	712.9	42.04	17.960	
5,600.0	5,324.0	5,286.9	5,198.0	25.2	21.8	-26.92	287.0	2,160.2	738.3	695.4	42.90	17.211	
5,700.0	5,416.9	5,385.5	5,293.9	25.7	22.2	-26.99	279.9	2,182.1	721.6	677.8	43.76	16.491	
5,800.0	5,509.8	5,484.1	5,389.8	26.2	22.7	-27.07	272.8	2,204.0	704.9	660.3	44.62	15.799	
5,900.0	5,602.7	5,582.7	5,485.6	26.7	23.2	-27.14	265.7	2,225.9	688.2	642.8	45.48	15.133	
6,000.0	5,695.6	5,681.3	5,581.5	27.2	23.6	-27.22	258.6	2,247.8	671.6	625.2	46.34	14.492	
6,100.0	5,788.5	5,779.9	5,677.4	27.8	24.1	-27.31	251.4	2,269.7	654.9	607.7	47.20	13.875	
6,200.0	5,881.3	5,878.5	5,773.2	28.3	24.6	-27.39	244.3	2,291.6	638.2	590.1	48.06	13.280	
6,300.0	5,974.2	5,980.2	5,872.2	28.8	25.1	-27.50	237.0	2,314.0	621.4	572.5	48.89	12.710	
6,400.0	6,067.1	6,086.8	5,976.3	29.3	25.6	-27.72	229.9	2,336.1	603.6	553.9	49.69	12.147	
6,500.0	6,160.0	6,192.8	6,080.2	29.8	26.1	-28.10	223.3	2,356.2	584.4	534.0	50.44	11.588	
6,600.0	6,252.9	6,298.2	6,183.7	30.4	26.5	-28.64	217.4	2,374.3	564.0	512.9	51.12	11.033	
6,700.0	6,345.8	6,402.7	6,286.9	30.9	27.0	-29.36	212.2	2,390.6	542.4	490.7	51.74	10.482	
6,800.0	6,438.7	6,506.5	6,389.6	31.4	27.5	-30.30	207.5	2,404.9	519.6	467.3	52.29	9.938	
6,900.0	6,531.5	6,609.4	6,491.6	31.9	27.9	-31.48	203.5	2,417.4	495.8	443.1	52.74	9.400	
7,000.0	6,624.4	6,711.4	6,593.0	32.5	28.3	-32.95	200.0	2,428.0	471.0	417.9	53.10	8.871	
7,100.0	6,717.3	6,812.4	6,693.6	33.0	28.7	-34.75	197.1	2,436.9	445.4	392.1	53.33	8.353	
7,200.0	6,810.2	6,912.4	6,793.3	33.5	29.1	-36.94	194.8	2,443.9	419.3	365.8	53.41	7.850	
7,271.2	6,876.3	6,982.9	6,863.7	33.9	29.3	-38.79	193.5	2,447.9	400.4	347.0	53.36	7.504	
7,300.0	6,903.1	7,011.4	6,892.1	34.0	29.4	-39.56	193.1	2,449.3	392.8	339.5	53.31	7.368	
7,400.0	6,996.5	7,109.7	6,990.3	34.5	29.7	-42.49	191.9	2,453.1	367.2	314.2	53.04	6.923	
7,500.0	7,090.5	7,207.5	7,088.1	35.1	30.0	-45.87	191.2	2,455.2	343.2	290.6	52.58	6.526	
7,600.0	7,185.1	7,304.4	7,185.1	35.6	30.1	-49.74	191.0	2,455.8	321.0	268.8	52.20	6.148	
7,700.0	7,280.2	7,399.6	7,280.2	36.1	30.2	-53.92	191.0	2,455.8	301.3	249.9	51.35	5.867	
7,800.0	7,375.8	7,495.2	7,375.8	36.6	30.2	-58.37	191.0	2,455.8	284.5	234.1	50.46	5.639	
7,900.0	7,472.0	7,591.4	7,472.0	37.1	30.2	-63.06	191.0	2,455.8	270.7	221.1	49.62	5.455	
8,000.0	7,568.6	7,688.0	7,568.6	37.6	30.2	-67.89	191.0	2,455.8	259.6	210.7	48.93	5.306	
8,100.0	7,665.6	7,785.0	7,665.6	38.1	30.3	-72.77	191.0	2,455.8	251.3	202.8	48.47	5.185	
8,200.0	7,763.1	7,882.5	7,763.1	38.6	30.3	-77.60	191.0	2,455.8	245.4	197.1	48.30	5.082	
8,300.0	7,860.9	7,980.3	7,860.9	39.0	30.3	-82.26	191.0	2,455.8	241.7	193.3	48.43	4.991	
8,400.0	7,959.1	8,078.5	7,959.1	39.5	30.3	-86.67	191.0	2,455.8	239.8	191.0	48.85	4.910	
8,481.3	8,039.1	8,158.5	8,039.1	39.9	30.3	-90.00	191.0	2,455.8	239.4	190.1	49.36	4.851 CC	
8,500.0	8,057.6	8,177.0	8,057.6	39.9	30.3	-90.73	191.0	2,455.8	239.4	190.0	49.49	4.838	
8,600.0	8,156.4	8,275.7	8,156.4	40.4	30.4	-94.41	191.0	2,455.8	240.2	189.9	50.28	4.777 ES	
8,700.0	8,255.4	8,374.8	8,255.4	40.8	30.4	-97.67	191.0	2,455.8	241.6	190.5	51.14	4.725	
8,800.0	8,354.7	8,474.0	8,354.7	41.2	30.4	-100.49	191.0	2,455.8	243.5	191.5	52.00	4.683	
8,900.0	8,454.1	8,573.5	8,454.1	41.6	30.4	-102.88	191.0	2,455.8	245.7	192.8	52.83	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 901H
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 901H	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 701H - 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)			
9,000.0	8,553.7	8,673.1	8,553.7	42.0	30.5	-104.84	191.0	2,455.8	247.7	194.2	53.57	4.624	
9,100.0	8,653.5	8,772.9	8,653.5	42.4	30.5	-106.39	191.0	2,455.8	249.6	195.4	54.21	4.604	
9,200.0	8,753.4	8,872.8	8,753.4	42.7	30.5	-107.53	191.0	2,455.8	251.1	196.4	54.74	4.588	
9,300.0	8,853.3	8,972.7	8,853.3	43.0	30.5	-108.28	191.0	2,455.8	252.2	197.0	55.12	4.575	
9,400.0	8,953.3	9,072.7	8,953.3	43.3	30.6	-108.65	191.0	2,455.8	252.7	197.3	55.37	4.564	
9,445.7	8,999.0	9,118.4	8,999.0	43.3	30.6	-17.55	191.0	2,455.8	252.7	197.3	55.41	4.561	
9,500.0	9,053.3	9,172.7	9,053.3	43.3	30.6	-17.55	191.0	2,455.8	252.7	197.3	55.44	4.559	
9,600.0	9,153.3	9,272.7	9,153.3	43.4	30.6	-17.55	191.0	2,455.8	252.7	197.2	55.51	4.553	
9,600.0	9,153.3	9,272.7	9,153.3	43.4	30.6	-17.55	191.0	2,455.8	252.7	197.2	55.51	4.553 SF	
9,700.0	9,253.3	9,362.8	9,243.4	43.4	30.6	-17.52	191.5	2,455.8	253.4	198.2	55.17	4.593	
9,800.0	9,353.3	9,432.3	9,312.5	43.4	30.6	-17.07	198.5	2,455.7	263.1	209.4	53.72	4.898	
9,900.0	9,453.3	9,500.0	9,378.5	43.4	30.5	-16.18	213.3	2,455.6	284.2	232.2	52.00	5.466	
10,000.0	9,553.3	9,561.9	9,437.0	43.4	30.4	-15.11	233.7	2,455.4	316.0	265.8	50.19	6.296	
10,100.0	9,653.3	9,619.5	9,489.1	43.5	30.4	-13.99	258.1	2,455.2	357.5	308.9	48.60	7.355	
10,200.0	9,753.3	9,671.5	9,533.8	43.5	30.3	-12.96	284.6	2,455.0	407.5	360.2	47.30	8.615	
10,300.0	9,853.3	9,718.0	9,571.7	43.5	30.2	-12.05	311.6	2,454.8	464.8	418.5	46.29	10.040	
10,400.0	9,953.3	9,750.0	9,596.4	43.5	30.2	-11.45	331.9	2,454.6	528.4	483.1	45.35	11.652	
10,500.0	10,053.3	9,800.0	9,632.6	43.5	30.2	-10.56	366.4	2,454.3	597.0	551.8	45.16	13.219	
10,600.0	10,153.3	9,828.3	9,651.7	43.6	30.1	-10.09	387.2	2,454.2	669.9	625.1	44.79	14.959	
10,662.2	10,215.5	9,850.0	9,665.7	43.6	30.1	-9.75	403.8	2,454.0	717.2	672.5	44.73	16.035	
10,675.0	10,228.3	9,850.0	9,665.7	43.6	30.1	166.83	403.8	2,454.0	727.2	682.5	44.66	16.283	
10,700.0	10,253.3	9,850.0	9,665.7	43.6	30.1	165.84	403.8	2,454.0	747.4	702.9	44.55	16.779	
10,725.0	10,278.1	9,850.0	9,665.7	43.6	30.1	164.61	403.8	2,454.0	768.7	724.2	44.47	17.287	
10,750.0	10,302.8	9,867.2	9,676.2	43.5	30.1	163.61	417.3	2,453.9	790.3	745.7	44.62	17.710	
10,775.0	10,327.2	9,871.6	9,678.9	43.5	30.1	161.92	420.9	2,453.9	812.8	768.2	44.64	18.208	
10,800.0	10,351.4	9,875.3	9,681.1	43.5	30.1	159.70	423.9	2,453.9	836.0	791.3	44.67	18.712	
10,825.0	10,375.2	9,878.5	9,683.0	43.5	30.1	156.69	426.4	2,453.9	859.6	814.8	44.72	19.222	
10,850.0	10,398.5	9,881.1	9,684.5	43.5	30.1	152.45	428.5	2,453.8	883.6	838.8	44.77	19.735	
10,875.0	10,421.3	9,883.1	9,685.7	43.5	30.1	146.16	430.1	2,453.8	907.9	863.1	44.84	20.250	
10,900.0	10,443.6	9,884.5	9,686.5	43.5	30.1	136.27	431.3	2,453.8	932.5	887.6	44.91	20.764	
10,925.0	10,465.2	9,900.0	9,695.3	43.5	30.1	125.59	444.0	2,453.7	957.5	912.4	45.12	21.221	
10,950.0	10,486.2	9,900.0	9,695.3	43.5	30.1	103.00	444.0	2,453.7	982.4	937.2	45.20	21.732	

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 901H
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 901H	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				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	3,094.8	3,012.3	2,984.8	13.2	11.1	-18.76	274.4	1,544.8	977.9	955.8	22.11	44.217		
3,300.0	3,187.7	3,108.8	3,078.6	13.7	11.5	-18.20	258.0	1,561.0	953.4	930.5	22.91	41.608		
3,400.0	3,280.6	3,205.3	3,172.3	14.2	12.0	-17.61	241.6	1,577.1	929.0	905.3	23.73	39.156		
3,500.0	3,373.5	3,301.8	3,266.1	14.7	12.4	-17.00	225.2	1,593.3	904.8	880.2	24.55	36.851		
3,600.0	3,466.4	3,398.4	3,359.8	15.1	12.9	-16.35	208.8	1,609.5	880.6	855.2	25.39	34.681		
3,700.0	3,559.3	3,494.9	3,453.5	15.6	13.3	-15.66	192.4	1,625.7	856.5	830.3	26.24	32.638		
3,800.0	3,652.1	3,591.4	3,547.3	16.1	13.7	-14.93	175.9	1,641.8	832.6	805.5	27.11	30.713		
3,900.0	3,745.0	3,688.0	3,641.0	16.6	14.2	-14.16	159.5	1,658.0	808.8	780.8	27.99	28.898		
4,000.0	3,837.9	3,784.5	3,734.7	17.1	14.6	-13.35	143.1	1,674.2	785.1	756.3	28.88	27.185		
4,100.0	3,930.8	3,881.0	3,828.5	17.6	15.1	-12.48	126.7	1,690.3	761.7	731.9	29.79	25.569		
4,200.0	4,023.7	3,977.5	3,922.2	18.1	15.5	-11.56	110.3	1,706.5	738.4	707.6	30.71	24.043		
4,300.0	4,116.6	4,074.1	4,016.0	18.6	16.0	-10.59	93.9	1,722.7	715.2	683.6	31.65	22.600		
4,400.0	4,209.4	4,170.6	4,109.7	19.1	16.4	-9.54	77.5	1,738.9	692.3	659.7	32.60	21.238		
4,500.0	4,302.3	4,267.1	4,203.4	19.6	16.9	-8.43	61.0	1,755.0	669.7	636.1	33.57	19.950		
4,600.0	4,395.2	4,363.7	4,297.2	20.1	17.4	-7.25	44.6	1,771.2	647.3	612.7	34.55	18.733		
4,700.0	4,488.1	4,460.2	4,390.9	20.6	17.8	-5.98	28.2	1,787.4	625.1	589.6	35.55	17.584		
4,800.0	4,581.0	4,556.7	4,484.7	21.1	18.3	-4.62	11.8	1,803.5	603.3	566.8	36.57	16.499		
4,900.0	4,673.9	4,653.2	4,578.4	21.6	18.7	-3.16	-4.6	1,819.7	581.9	544.3	37.60	15.475		
5,000.0	4,766.7	4,751.8	4,674.1	22.1	19.2	-1.56	-21.3	1,836.2	560.8	522.2	38.64	14.514		
5,100.0	4,859.6	4,855.3	4,775.0	22.6	19.7	0.15	-37.9	1,852.5	539.2	499.5	39.66	13.594		
5,200.0	4,952.5	4,958.7	4,876.1	23.1	20.2	1.86	-53.2	1,867.6	516.8	476.1	40.68	12.703		
5,300.0	5,045.4	5,061.8	4,977.3	23.6	20.6	3.59	-67.1	1,881.3	493.4	451.7	41.68	11.838		
5,400.0	5,138.3	5,164.5	5,078.5	24.2	21.1	5.34	-79.7	1,893.7	469.1	426.5	42.66	10.996		
5,500.0	5,231.2	5,266.8	5,179.6	24.7	21.5	7.15	-91.0	1,904.8	443.9	400.3	43.63	10.175		
5,600.0	5,324.0	5,368.6	5,280.4	25.2	22.0	9.02	-100.9	1,914.6	417.7	373.1	44.57	9.371		
5,700.0	5,416.9	5,469.9	5,381.0	25.7	22.4	10.99	-109.5	1,923.1	390.5	345.0	45.49	8.584		
5,800.0	5,509.8	5,570.6	5,481.1	26.2	22.8	13.10	-116.8	1,930.3	362.3	315.9	46.38	7.810		
5,900.0	5,602.7	5,670.6	5,580.8	26.7	23.2	15.42	-122.8	1,936.2	333.1	285.8	47.25	7.050		
6,000.0	5,695.6	5,769.9	5,679.9	27.2	23.5	18.01	-127.6	1,940.8	303.0	254.9	48.08	6.302		
6,100.0	5,788.5	5,868.4	5,778.3	27.8	23.9	21.01	-131.0	1,944.3	272.1	223.2	48.86	5.568		
6,200.0	5,881.3	5,966.1	5,875.9	28.3	24.2	24.61	-133.3	1,946.5	240.4	190.8	49.57	4.850		
6,300.0	5,974.2	6,063.0	5,972.8	28.8	24.4	29.11	-134.4	1,947.6	208.3	158.1	50.19	4.150		
6,400.0	6,067.1	6,157.3	6,067.1	29.3	24.4	34.95	-134.5	1,947.7	176.4	124.9	51.44	3.428		
6,500.0	6,160.0	6,250.2	6,160.0	29.8	24.5	42.99	-134.5	1,947.7	146.7	95.2	51.44	2.852 Normal Operations		
6,600.0	6,252.9	6,343.1	6,252.9	30.4	24.5	54.46	-134.5	1,947.7	121.1	70.6	50.54	2.397 Caution - Monitor Closely		
6,700.0	6,345.8	6,436.0	6,345.8	30.9	24.5	70.41	-134.5	1,947.7	102.8	54.7	48.11	2.138 Caution - Monitor Closely, SF		
6,799.3	6,438.0	6,528.2	6,438.0	31.4	24.5	90.00	-134.5	1,947.7	96.0	51.3	44.71	2.148 Caution - Monitor Closely, CC, ES		
6,800.0	6,438.7	6,528.9	6,438.7	31.4	24.5	90.14	-134.5	1,947.7	96.0	51.3	44.68	2.149 Caution - Monitor Closely		
6,900.0	6,531.5	6,621.8	6,531.5	31.9	24.6	109.84	-134.5	1,947.7	103.0	59.8	43.24	2.382 Caution - Monitor Closely		
7,000.0	6,624.4	6,714.6	6,624.4	32.5	24.6	125.73	-134.5	1,947.7	121.4	76.8	44.60	2.723 Normal Operations		
7,100.0	6,717.3	6,807.5	6,717.3	33.0	24.6	137.14	-134.5	1,947.7	147.1	100.2	46.83	3.140		
7,200.0	6,810.2	6,900.4	6,810.2	33.5	24.6	145.15	-134.5	1,947.7	176.8	127.9	48.91	3.615		
7,271.2	6,876.3	6,966.5	6,876.3	33.9	24.6	149.40	-134.5	1,947.7	199.5	149.3	50.18	3.975		
7,300.0	6,903.1	6,993.3	6,903.1	34.0	24.6	150.91	-134.5	1,947.7	208.8	158.2	50.64	4.123		
7,400.0	6,996.5	7,086.7	6,996.5	34.5	24.7	155.14	-134.5	1,947.7	241.1	189.1	52.08	4.630		
7,500.0	7,090.5	7,180.7	7,090.5	35.1	24.7	158.26	-134.5	1,947.7	272.8	219.5	53.30	5.118		
7,600.0	7,185.1	7,275.3	7,185.1	35.6	24.7	160.62	-134.5	1,947.7	303.4	249.0	54.37	5.581		
7,700.0	7,280.2	7,370.4	7,280.2	36.1	24.7	162.47	-134.5	1,947.7	332.8	277.5	55.34	6.014		
7,800.0	7,375.8	7,466.0	7,375.8	36.6	24.8	163.94	-134.5	1,947.7	360.8	304.6	56.23	6.417		
7,900.0	7,472.0	7,562.2	7,472.0	37.1	24.8	165.13	-134.5	1,947.7	387.4	330.3	57.07	6.788		
8,000.0	7,568.6	7,658.8	7,568.6	37.6	24.8	166.11	-134.5	1,947.7	412.4	354.6	57.86	7.128		

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 901H
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 901H	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		Semi Major Axis		Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error:	0.0 usft
Measured Depth Depth (usft)	Vertical Depth (usft)	Measured Depth 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		
8,100.0	7,665.6	7,755.8	7,665.6	38.1	24.8	166.93	-134.5	1,947.7	435.9	377.3	58.62	7.436			
8,200.0	7,763.1	7,853.3	7,763.1	38.6	24.9	167.61	-134.5	1,947.7	457.8	398.5	59.35	7.714			
8,300.0	7,860.9	7,951.1	7,860.9	39.0	24.9	168.19	-134.5	1,947.7	478.1	418.1	60.05	7.962			
8,400.0	7,959.1	8,049.3	7,959.1	39.5	24.9	168.67	-134.5	1,947.7	496.7	436.0	60.73	8.180			
8,500.0	8,057.6	8,147.8	8,057.6	39.9	25.0	169.08	-134.5	1,947.7	513.7	452.3	61.38	8.370			
8,600.0	8,156.4	8,246.6	8,156.4	40.4	25.0	169.43	-134.5	1,947.7	529.0	467.0	62.01	8.532			
8,700.0	8,255.4	8,345.6	8,255.4	40.8	25.0	169.72	-134.5	1,947.7	542.6	480.0	62.61	8.667			
8,800.0	8,354.7	8,444.9	8,354.7	41.2	25.0	169.97	-134.5	1,947.7	554.6	491.4	63.19	8.776			
8,900.0	8,454.1	8,544.3	8,454.1	41.6	25.1	170.17	-134.5	1,947.7	564.8	501.0	63.75	8.860			
9,000.0	8,553.7	8,644.0	8,553.7	42.0	25.1	170.33	-134.5	1,947.7	573.3	509.0	64.28	8.919			
9,100.0	8,653.5	8,743.7	8,653.5	42.4	25.1	170.46	-134.5	1,947.7	580.1	515.3	64.78	8.955			
9,200.0	8,753.4	8,843.6	8,753.4	42.7	25.2	170.55	-134.5	1,947.7	585.2	520.0	65.24	8.970			
9,300.0	8,853.3	8,943.5	8,853.3	43.0	25.2	170.61	-134.5	1,947.7	588.6	522.9	65.66	8.964			
9,400.0	8,953.3	9,043.5	8,953.3	43.3	25.2	170.64	-134.5	1,947.7	590.2	524.2	66.01	8.942			
9,445.7	8,999.0	9,089.2	8,999.0	43.3	25.2	-98.23	-134.5	1,947.7	590.4	524.5	65.90	8.958			
9,500.0	9,053.3	9,143.5	9,053.3	43.3	25.3	-98.23	-134.5	1,947.7	590.4	524.5	65.92	8.956			
9,600.0	9,153.3	9,243.5	9,153.3	43.4	25.3	-98.23	-134.5	1,947.7	590.4	524.4	65.97	8.950			
9,700.0	9,253.3	9,348.8	9,258.5	43.4	25.3	-98.11	-133.3	1,947.7	590.3	524.1	66.18	8.919			
9,800.0	9,353.3	9,461.7	9,369.7	43.4	25.0	-96.33	-114.9	1,947.6	588.3	521.4	66.81	8.805			
9,900.0	9,453.3	9,563.9	9,465.6	43.4	24.8	-92.91	-79.7	1,947.3	585.5	518.3	67.20	8.714			
9,961.1	9,514.4	9,619.2	9,514.4	43.4	24.6	-90.36	-53.7	1,947.2	584.8	517.7	67.14	8.711			
10,000.0	9,553.3	9,651.5	9,541.6	43.4	24.5	-88.67	-36.4	1,947.1	585.2	518.3	66.95	8.741			
10,100.0	9,653.3	9,724.2	9,599.1	43.5	24.3	-84.34	8.0	1,946.8	590.6	524.8	65.81	8.975			
10,200.0	9,753.3	9,783.7	9,641.7	43.5	24.2	-80.36	49.5	1,946.5	604.3	540.6	63.72	9.483			
10,300.0	9,853.3	9,832.3	9,673.1	43.5	24.1	-76.88	86.5	1,946.3	627.8	567.0	60.86	10.316			
10,400.0	9,953.3	9,872.2	9,696.5	43.5	24.0	-73.92	118.9	1,946.1	661.6	604.0	57.57	11.492			
10,500.0	10,053.3	9,900.0	9,711.5	43.5	23.9	-71.83	142.3	1,945.9	705.2	651.1	54.10	13.035			
10,600.0	10,153.3	9,932.9	9,727.7	43.6	23.9	-69.35	171.0	1,945.7	757.4	706.3	51.11	14.818			
10,662.2	10,215.5	9,950.0	9,735.4	43.6	23.8	-68.06	186.2	1,945.7	793.8	744.3	49.43	16.059			
10,675.0	10,228.3	9,950.0	9,735.4	43.6	23.8	107.81	186.2	1,945.7	801.6	752.6	49.05	16.343			
10,700.0	10,253.3	9,950.0	9,735.4	43.6	23.8	105.43	186.2	1,945.7	817.5	769.2	48.35	16.907			
10,725.0	10,278.1	9,950.0	9,735.4	43.6	23.8	102.84	186.2	1,945.7	834.1	786.4	47.71	17.484			
10,750.0	10,302.8	9,963.1	9,741.1	43.5	23.8	101.20	198.0	1,945.6	851.2	803.8	47.33	17.984			
10,775.0	10,327.2	9,965.7	9,742.1	43.5	23.8	98.47	200.4	1,945.6	868.9	822.0	46.82	18.556			
10,800.0	10,351.4	9,967.6	9,742.9	43.5	23.8	95.50	202.1	1,945.6	887.0	840.7	46.35	19.136			
10,825.0	10,375.2	9,968.8	9,743.5	43.5	23.8	92.30	203.2	1,945.5	905.6	859.7	45.92	19.719			
10,850.0	10,398.5	9,969.5	9,743.7	43.5	23.8	88.90	203.8	1,945.5	924.5	879.0	45.53	20.305			
10,875.0	10,421.3	9,969.5	9,743.7	43.5	23.8	85.33	203.8	1,945.5	943.6	898.5	45.17	20.889			
10,900.0	10,443.6	9,969.0	9,743.5	43.5	23.8	81.63	203.4	1,945.5	963.0	918.2	44.85	21.470			
10,925.0	10,465.2	9,967.9	9,743.1	43.5	23.8	77.85	202.4	1,945.5	982.5	937.9	44.57	22.044			

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 901H
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 901H	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		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	2,630.4	2,639.1	2,650.3	11.0	6.8	-33.09	478.0	1,280.2	978.8	961.4	17.39	56.300	
2,800.0	2,723.3	2,733.0	2,743.3	11.4	7.0	-33.48	465.8	1,285.0	945.1	927.2	17.94	52.691	
2,900.0	2,816.2	2,827.0	2,836.4	11.9	7.2	-33.91	453.7	1,289.8	911.6	893.1	18.50	49.274	
3,000.0	2,909.1	2,920.9	2,929.4	12.3	7.5	-34.37	441.5	1,294.6	878.0	858.9	19.07	46.042	
3,100.0	3,001.9	3,014.9	3,022.5	12.8	7.8	-34.86	429.3	1,299.4	844.5	824.9	19.65	42.986	
3,200.0	3,094.8	3,108.9	3,115.5	13.2	8.0	-35.40	417.2	1,304.2	811.1	790.9	20.23	40.095	
3,300.0	3,187.7	3,202.8	3,208.6	13.7	8.3	-35.98	405.0	1,309.0	777.7	756.9	20.82	37.362	
3,400.0	3,280.6	3,296.8	3,301.6	14.2	8.6	-36.61	392.8	1,313.8	744.4	723.0	21.41	34.776	
3,500.0	3,373.5	3,390.8	3,394.7	14.7	8.9	-37.30	380.7	1,318.6	711.3	689.3	22.00	32.330	
3,600.0	3,466.4	3,484.7	3,487.7	15.1	9.3	-38.05	368.5	1,323.4	678.2	655.6	22.59	30.016	
3,700.0	3,559.3	3,578.7	3,580.8	15.6	9.6	-38.89	356.3	1,328.2	645.2	622.0	23.19	27.826	
3,800.0	3,652.1	3,672.7	3,673.8	16.1	9.9	-39.81	344.2	1,332.9	612.3	588.6	23.78	25.753	
3,900.0	3,745.0	3,766.6	3,766.9	16.6	10.2	-40.83	332.0	1,337.7	579.7	555.3	24.37	23.789	
4,000.0	3,837.9	3,860.6	3,859.9	17.1	10.6	-41.98	319.8	1,342.5	547.2	522.2	24.95	21.930	
4,100.0	3,930.8	3,954.6	3,953.0	17.6	10.9	-43.27	307.7	1,347.3	514.9	489.4	25.53	20.169	
4,200.0	4,023.7	4,048.5	4,046.0	18.1	11.3	-44.73	295.5	1,352.1	482.9	456.8	26.10	18.501	
4,300.0	4,116.6	4,142.5	4,139.1	18.6	11.6	-46.38	283.3	1,356.9	451.2	424.6	26.66	16.922	
4,400.0	4,209.4	4,236.4	4,232.1	19.1	12.0	-48.29	271.1	1,361.7	419.9	392.7	27.22	15.429	
4,500.0	4,302.3	4,330.4	4,325.2	19.6	12.3	-50.48	259.0	1,366.5	389.2	361.4	27.76	14.018	
4,600.0	4,395.2	4,424.4	4,418.2	20.1	12.7	-53.04	246.8	1,371.3	359.0	330.7	28.29	12.688	
4,700.0	4,488.1	4,518.3	4,511.3	20.6	13.1	-56.05	234.6	1,376.1	329.6	300.8	28.82	11.436	
4,800.0	4,581.0	4,612.3	4,604.3	21.1	13.4	-59.61	222.5	1,380.9	301.3	271.9	29.36	10.263	
4,900.0	4,673.9	4,706.3	4,697.4	21.6	13.8	-63.86	210.3	1,385.7	274.3	244.4	29.91	9.170	
5,000.0	4,766.7	4,800.2	4,790.4	22.1	14.2	-68.95	198.1	1,390.5	249.1	218.5	30.52	8.161	
5,100.0	4,859.6	4,894.2	4,883.5	22.6	14.5	-75.04	186.0	1,395.3	226.2	195.0	31.24	7.241	
5,200.0	4,952.5	4,987.2	4,975.6	23.1	14.9	-82.25	174.1	1,399.9	206.7	174.5	32.15	6.428	
5,300.0	5,045.4	5,079.8	5,067.4	23.6	15.3	-90.67	162.9	1,404.3	192.0	158.6	33.36	5.755	
5,400.0	5,138.3	5,172.3	5,159.2	24.2	15.6	-100.14	152.4	1,408.5	183.3	148.5	34.84	5.261	
5,473.5	5,206.5	5,240.2	5,226.7	24.5	15.9	-107.47	145.2	1,411.3	181.4	145.3	36.06	5.030 CC	
5,500.0	5,231.2	5,264.7	5,251.1	24.7	16.0	-110.13	142.6	1,412.3	181.6	145.1	36.50	4.976 ES	
5,600.0	5,324.0	5,357.1	5,342.9	25.2	16.3	-119.95	133.6	1,415.9	187.1	149.0	38.13	4.907 SF	
5,700.0	5,416.9	5,449.4	5,434.8	25.7	16.7	-128.96	125.2	1,419.2	199.3	159.7	39.57	5.036	
5,800.0	5,509.8	5,541.7	5,526.7	26.2	17.0	-136.80	117.5	1,422.2	217.0	176.2	40.76	5.323	
5,900.0	5,602.7	5,633.8	5,618.5	26.7	17.4	-143.35	110.5	1,425.0	239.1	197.4	41.75	5.727	
6,000.0	5,695.6	5,725.8	5,710.3	27.2	17.7	-148.73	104.1	1,427.5	264.6	222.0	42.60	6.211	
6,100.0	5,788.5	5,817.7	5,802.0	27.8	18.0	-153.09	98.5	1,429.7	292.6	249.3	43.36	6.748	
6,200.0	5,881.3	5,909.5	5,893.6	28.3	18.3	-156.61	93.6	1,431.6	322.6	278.5	44.07	7.319	
6,300.0	5,974.2	6,001.1	5,985.1	28.8	18.6	-159.46	89.4	1,433.3	354.0	309.3	44.75	7.910	
6,400.0	6,067.1	6,092.6	6,076.5	29.3	18.9	-161.77	85.8	1,434.7	386.6	341.2	45.42	8.513	
6,500.0	6,160.0	6,183.9	6,167.7	29.8	19.2	-163.64	83.0	1,435.8	420.2	374.2	46.08	9.120	
6,600.0	6,252.9	6,275.0	6,258.8	30.4	19.4	-165.17	80.8	1,436.7	454.6	407.9	46.73	9.729	
6,700.0	6,345.8	6,365.9	6,349.7	30.9	19.7	-166.41	79.3	1,437.3	489.7	442.3	47.38	10.336	
6,800.0	6,438.7	6,456.6	6,440.4	31.4	19.9	-167.42	78.4	1,437.6	525.4	477.4	48.02	10.940	
6,900.0	6,531.5	6,547.7	6,531.5	31.9	20.0	-168.24	78.2	1,437.7	561.6	512.8	48.83	11.501	
7,000.0	6,624.4	6,640.6	6,624.4	32.5	20.0	-168.96	78.2	1,437.7	598.0	548.5	49.49	12.084	
7,100.0	6,717.3	6,733.5	6,717.3	33.0	20.0	-169.60	78.2	1,437.7	634.5	584.4	50.15	12.652	
7,200.0	6,810.2	6,826.4	6,810.2	33.5	20.1	-170.17	78.2	1,437.7	671.1	620.2	50.82	13.204	
7,271.2	6,876.3	6,892.5	6,876.3	33.9	20.1	-170.54	78.2	1,437.7	697.1	645.8	51.29	13.590	
7,300.0	6,903.1	6,919.3	6,903.1	34.0	20.1	-170.70	78.2	1,437.7	707.6	656.1	51.48	13.744	
7,400.0	6,996.5	7,012.7	6,996.5	34.5	20.1	-171.20	78.2	1,437.7	743.0	690.8	52.16	14.244	
7,500.0	7,090.5	7,106.7	7,090.5	35.1	20.2	-171.64	78.2	1,437.7	776.8	723.9	52.84	14.701	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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		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)		
7,600.0	7,185.1	7,201.3	7,185.1	35.6	20.2	-172.02	78.2	1,437.7	809.0	755.4	53.51	15.117	
7,700.0	7,280.2	7,296.4	7,280.2	36.1	20.2	-172.36	78.2	1,437.7	839.5	785.3	54.18	15.494	
7,800.0	7,375.8	7,392.0	7,375.8	36.6	20.3	-172.65	78.2	1,437.7	868.5	813.6	54.85	15.833	
7,900.0	7,472.0	7,488.2	7,472.0	37.1	20.3	-172.91	78.2	1,437.7	895.7	840.2	55.52	16.135	
8,000.0	7,568.6	7,584.8	7,568.6	37.6	20.3	-173.14	78.2	1,437.7	921.4	865.2	56.17	16.402	
8,100.0	7,665.6	7,681.8	7,665.6	38.1	20.3	-173.34	78.2	1,437.7	945.3	888.5	56.83	16.636	
8,200.0	7,763.1	7,779.3	7,763.1	38.6	20.4	-173.52	78.2	1,437.7	967.6	910.2	57.47	16.837	
8,300.0	7,860.9	7,877.1	7,860.9	39.0	20.4	-173.68	78.2	1,437.7	988.2	930.1	58.10	17.008	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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		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)			
2,300.0	2,258.9	2,351.9	2,360.9	9.3	6.2	-26.49	373.4	1,188.5	986.9	971.5	15.41	64.049	
2,400.0	2,351.8	2,441.7	2,450.0	9.7	6.3	-26.93	362.1	1,183.2	943.7	927.7	15.94	59.193	
2,500.0	2,444.6	2,531.6	2,539.0	10.1	6.5	-27.42	350.7	1,178.0	900.4	883.9	16.49	54.613	
2,600.0	2,537.5	2,621.5	2,628.0	10.5	6.7	-27.95	339.4	1,172.7	857.2	840.2	17.04	50.299	
2,700.0	2,630.4	2,711.4	2,717.0	11.0	6.8	-28.54	328.0	1,167.4	814.1	796.5	17.61	46.239	
2,800.0	2,723.3	2,801.3	2,806.0	11.4	7.0	-29.19	316.7	1,162.1	771.1	752.9	18.18	42.419	
2,900.0	2,816.2	2,891.2	2,895.0	11.9	7.1	-29.92	305.4	1,156.8	728.2	709.4	18.75	38.826	
3,000.0	2,909.1	2,981.1	2,984.1	12.3	7.3	-30.75	294.0	1,151.5	685.3	666.0	19.33	35.448	
3,100.0	3,001.9	3,071.0	3,073.1	12.8	7.5	-31.68	282.7	1,146.2	642.6	622.7	19.91	32.272	
3,200.0	3,094.8	3,160.9	3,162.1	13.2	7.6	-32.74	271.3	1,140.9	600.1	579.6	20.49	29.285	
3,300.0	3,187.7	3,250.8	3,251.1	13.7	7.8	-33.95	260.0	1,135.7	557.7	536.7	21.06	26.478	
3,400.0	3,280.6	3,340.7	3,340.1	14.2	8.0	-35.37	248.7	1,130.4	515.6	494.0	21.63	23.839	
3,500.0	3,373.5	3,430.6	3,429.2	14.7	8.1	-37.03	237.3	1,125.1	473.9	451.7	22.18	21.361	
3,600.0	3,466.4	3,520.5	3,518.2	15.1	8.3	-39.00	226.0	1,119.8	432.5	409.8	22.72	19.037	
3,700.0	3,559.3	3,610.4	3,607.2	15.6	8.5	-41.37	214.7	1,114.5	391.6	368.4	23.22	16.862	
3,800.0	3,652.1	3,700.3	3,696.2	16.1	8.6	-44.27	203.3	1,109.2	351.5	327.8	23.69	14.834	
3,900.0	3,745.0	3,790.2	3,785.2	16.6	8.8	-47.88	192.0	1,103.9	312.3	288.2	24.11	12.954	
4,000.0	3,837.9	3,880.0	3,874.3	17.1	9.0	-52.44	180.6	1,098.6	274.5	250.1	24.45	11.229	
4,100.0	3,930.8	3,969.9	3,963.3	17.6	9.1	-58.29	169.3	1,093.4	238.9	214.2	24.70	9.672	
4,200.0	4,023.7	4,059.8	4,052.3	18.1	9.3	-65.91	158.0	1,088.1	206.3	181.5	24.84	8.307	
4,300.0	4,116.6	4,149.7	4,141.3	18.6	9.5	-75.79	146.6	1,082.8	178.7	153.7	24.93	7.166	
4,400.0	4,209.4	4,239.6	4,230.3	19.1	9.6	-88.22	135.3	1,077.5	158.5	133.3	25.20	6.290	
4,500.0	4,302.3	4,329.5	4,319.3	19.6	9.8	-102.75	123.9	1,072.2	148.8	122.8	26.02	5.720	
4,527.3	4,327.7	4,354.0	4,343.6	19.7	9.9	-106.89	120.8	1,070.8	148.4	122.0	26.38	5.624 CC, ES	
4,600.0	4,395.2	4,419.4	4,408.4	20.1	10.0	-117.81	112.6	1,066.9	151.7	124.2	27.55	5.508 SF	
4,700.0	4,488.1	4,509.3	4,497.4	20.6	10.2	-131.52	101.3	1,061.6	166.5	137.2	29.34	5.676	
4,800.0	4,581.0	4,599.2	4,586.4	21.1	10.3	-142.79	89.9	1,056.4	190.5	159.5	30.95	6.155	
4,900.0	4,673.9	4,689.1	4,675.4	21.6	10.5	-151.58	78.6	1,051.1	220.6	188.4	32.26	6.840	
5,000.0	4,766.7	4,779.0	4,764.4	22.1	10.7	-158.33	67.2	1,045.8	254.8	221.4	33.33	7.643	
5,100.0	4,859.6	4,868.9	4,853.5	22.6	10.8	-163.55	55.9	1,040.5	291.5	257.2	34.26	8.509	
5,200.0	4,952.5	4,958.8	4,942.5	23.1	11.0	-167.64	44.6	1,035.2	329.9	294.8	35.10	9.401	
5,300.0	5,045.4	5,048.7	5,031.5	23.6	11.2	-170.90	33.2	1,029.9	369.6	333.7	35.89	10.299	
5,400.0	5,138.3	5,138.6	5,120.5	24.2	11.3	-173.54	21.9	1,024.6	410.1	373.5	36.64	11.191	
5,500.0	5,231.2	5,228.5	5,209.5	24.7	11.5	-175.72	10.6	1,019.3	451.2	413.8	37.39	12.069	
5,600.0	5,324.0	5,318.3	5,298.6	25.2	11.7	-177.54	-0.8	1,014.1	492.8	454.7	38.11	12.929	
5,700.0	5,416.9	5,408.2	5,387.6	25.7	11.9	-179.08	-12.1	1,008.8	534.7	495.9	38.84	13.768	
5,800.0	5,509.8	5,498.1	5,476.6	26.2	12.0	-179.60	-23.5	1,003.5	577.0	537.4	39.56	14.585	
5,900.0	5,602.7	5,588.0	5,565.6	26.7	12.2	-178.46	-34.8	998.2	619.4	579.1	40.28	15.379	
6,000.0	5,695.6	5,677.9	5,654.6	27.2	12.4	-177.46	-46.1	992.9	662.0	621.0	40.99	16.149	
6,100.0	5,788.5	5,767.8	5,743.6	27.8	12.6	-176.58	-57.5	987.6	704.8	663.1	41.71	16.897	
6,200.0	5,881.3	5,857.7	5,832.7	28.3	12.7	-175.80	-68.8	982.3	747.7	705.2	42.43	17.622	
6,300.0	5,974.2	5,947.6	5,921.7	28.8	12.9	-175.11	-80.2	977.0	790.6	747.5	43.14	18.325	
6,400.0	6,067.1	6,037.5	6,010.7	29.3	13.1	-174.49	-91.5	971.8	833.7	789.8	43.86	19.007	
6,500.0	6,160.0	6,127.4	6,099.7	29.8	13.2	-173.92	-102.8	966.5	876.9	832.3	44.58	19.668	
6,600.0	6,252.9	6,217.3	6,188.7	30.4	13.4	-173.41	-114.2	961.2	920.1	874.8	45.30	20.309	
6,700.0	6,345.8	6,308.1	6,278.7	30.9	13.6	-172.94	-125.6	955.8	963.3	917.3	46.05	20.921	

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 901H
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 901H	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)			
2,086.3	2,060.4	2,227.9	2,233.2	8.5	7.7	-28.43	386.3	1,091.7	985.2	969.3	15.93	61.841	
2,100.0	2,073.1	2,239.8	2,244.8	8.5	7.7	-28.53	385.0	1,090.0	978.4	962.4	16.02	61.087	
2,200.0	2,166.0	2,326.0	2,329.6	8.9	8.1	-29.33	374.9	1,078.0	929.1	912.4	16.70	55.652	
2,300.0	2,258.9	2,412.2	2,414.4	9.3	8.4	-30.21	364.9	1,065.9	880.0	862.6	17.37	50.663	
2,400.0	2,351.8	2,498.4	2,499.2	9.7	8.7	-31.20	354.9	1,053.8	831.0	812.9	18.06	46.016	
2,500.0	2,444.6	2,584.7	2,583.9	10.1	9.1	-32.31	344.8	1,041.7	782.3	763.5	18.76	41.693	
2,600.0	2,537.5	2,670.9	2,668.7	10.5	9.4	-33.56	334.8	1,029.6	733.8	714.3	19.47	37.677	
2,700.0	2,630.4	2,757.1	2,753.5	11.0	9.8	-34.98	324.7	1,017.5	685.6	665.4	20.19	33.950	
2,800.0	2,723.3	2,843.3	2,838.3	11.4	10.2	-36.60	314.7	1,005.4	637.8	616.9	20.92	30.494	
2,900.0	2,816.2	2,929.5	2,923.0	11.9	10.5	-38.48	304.7	993.3	590.5	568.8	21.63	27.295	
3,000.0	2,909.1	3,015.8	3,007.8	12.3	10.9	-40.66	294.6	981.2	543.8	521.4	22.34	24.339	
3,100.0	3,001.9	3,102.0	3,092.6	12.8	11.2	-43.23	284.6	969.2	497.8	474.8	23.03	21.617	
3,200.0	3,094.8	3,188.2	3,177.4	13.2	11.6	-46.28	274.6	957.1	452.9	429.2	23.68	19.124	
3,300.0	3,187.7	3,274.4	3,262.1	13.7	12.0	-49.94	264.5	945.0	409.3	385.0	24.28	16.860	
3,400.0	3,280.6	3,360.6	3,346.9	14.2	12.4	-54.36	254.5	932.9	367.5	342.7	24.78	14.830	
3,500.0	3,373.5	3,446.9	3,431.7	14.7	12.7	-59.74	244.5	920.8	328.3	303.1	25.15	13.053	
3,600.0	3,466.4	3,533.1	3,516.5	15.1	13.1	-66.30	234.4	908.7	292.5	267.2	25.31	11.558	
3,700.0	3,559.3	3,619.3	3,601.2	15.6	13.5	-74.24	224.4	896.6	261.7	236.5	25.20	10.385	
3,800.0	3,652.1	3,705.5	3,686.0	16.1	13.9	-83.63	214.3	884.5	237.9	213.0	24.83	9.578	
3,900.0	3,745.0	3,791.7	3,770.8	16.6	14.2	-94.28	204.3	872.4	223.1	198.7	24.37	9.156	
3,982.4	3,821.5	3,862.8	3,840.6	17.0	14.5	-103.60	196.0	862.5	219.2	195.0	24.19	9.062 CC, ES, SF	
4,000.0	3,837.9	3,878.0	3,855.6	17.1	14.6	-105.62	194.3	860.4	219.4	195.2	24.19	9.067	
4,100.0	3,930.8	3,964.2	3,940.4	17.6	15.0	-116.80	184.2	848.3	227.1	202.5	24.64	9.219	
4,200.0	4,023.7	4,050.4	4,025.1	18.1	15.4	-127.05	174.2	836.2	245.3	219.7	25.69	9.550	
4,300.0	4,116.6	4,136.6	4,109.9	18.6	15.8	-135.94	164.2	824.1	271.9	244.8	27.09	10.036	
4,400.0	4,209.4	4,222.8	4,194.7	19.1	16.1	-143.37	154.1	812.0	304.6	276.0	28.59	10.655	
4,500.0	4,302.3	4,309.1	4,279.5	19.6	16.5	-149.49	144.1	799.9	341.8	311.7	30.05	11.374	
4,600.0	4,395.2	4,395.3	4,364.2	20.1	16.9	-154.51	134.1	787.8	382.0	350.6	31.42	12.159	
4,700.0	4,488.1	4,481.5	4,449.0	20.6	17.3	-158.64	124.0	775.7	424.5	391.8	32.70	12.983	
4,800.0	4,581.0	4,567.7	4,533.8	21.1	17.7	-162.06	114.0	763.6	468.6	434.7	33.90	13.824	
4,900.0	4,673.9	4,653.9	4,618.6	21.6	18.1	-164.93	103.9	751.6	513.9	478.9	35.03	14.669	
5,000.0	4,766.7	4,740.2	4,703.3	22.1	18.4	-167.35	93.9	739.5	560.2	524.0	36.12	15.508	
5,100.0	4,859.6	4,826.4	4,788.1	22.6	18.8	-169.42	83.9	727.4	607.1	569.9	37.17	16.335	
5,200.0	4,952.5	4,912.6	4,872.9	23.1	19.2	-171.21	73.8	715.3	654.6	616.4	38.18	17.144	
5,300.0	5,045.4	4,998.8	4,957.7	23.6	19.6	-172.75	63.8	703.2	702.5	663.4	39.17	17.935	
5,400.0	5,138.3	5,085.0	5,042.4	24.2	20.0	-174.11	53.8	691.1	750.8	710.7	40.14	18.705	
5,500.0	5,231.2	5,171.3	5,127.2	24.7	20.4	-175.31	43.7	679.0	799.4	758.3	41.10	19.453	
5,600.0	5,324.0	5,257.5	5,212.0	25.2	20.8	-176.37	33.7	666.9	848.2	806.2	42.04	20.179	
5,700.0	5,416.9	5,343.7	5,296.8	25.7	21.2	-177.32	23.6	654.8	897.3	854.3	42.97	20.882	
5,800.0	5,509.8	5,429.9	5,381.5	26.2	21.6	-178.17	13.6	642.8	946.5	902.6	43.89	21.565	
5,900.0	5,602.7	5,516.1	5,466.3	26.7	21.9	-178.94	3.6	630.7	995.8	951.0	44.81	22.225	

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 901H
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 901H	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	-58.13	199.3	-320.7	378.0				
100.0	100.0	82.0	100.0	0.8	1.0	-58.13	199.3	-320.7	377.6	375.4	2.23	169.444	
200.0	200.0	182.0	200.0	1.4	1.6	-58.13	199.3	-320.7	377.6	374.1	3.50	107.775	
300.0	300.0	282.0	300.0	1.9	2.0	-58.13	199.3	-320.7	377.6	373.2	4.35	86.843	
400.0	400.0	382.0	400.0	2.2	2.4	-58.13	199.3	-320.7	377.6	372.6	5.04	74.883	
500.0	500.0	482.0	500.0	2.6	2.7	-58.13	199.3	-320.7	377.6	371.9	5.65	66.845	
600.0	600.0	582.0	600.0	2.8	2.9	-58.13	199.3	-320.7	377.6	371.4	6.20	60.947	
700.0	700.0	682.0	700.0	3.1	3.2	-58.13	199.3	-320.7	377.6	370.9	6.70	56.371	
800.0	800.0	782.0	800.0	3.3	3.4	-58.13	199.3	-320.7	377.6	370.4	7.17	52.683	
900.0	900.0	882.0	900.0	3.6	3.7	-58.13	199.3	-320.7	377.6	370.0	7.61	49.625	
999.0	999.0	981.0	999.0	3.8	3.9	-58.13	199.3	-320.7	377.6	369.6	8.02	47.073 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-149.26	199.3	-320.7	377.6	369.6	8.02	47.060	
1,100.0	1,100.0	1,089.4	1,107.4	5.2	4.1	-149.49	198.4	-320.2	378.3	368.6	9.70	38.990 ES	
1,200.0	1,199.8	1,198.2	1,216.2	5.5	4.4	-150.26	194.7	-318.5	379.7	369.6	10.14	37.436	
1,300.0	1,299.4	1,306.8	1,324.5	5.7	4.6	-151.55	188.2	-315.5	382.0	371.4	10.61	36.016	
1,400.0	1,398.7	1,414.9	1,432.1	6.0	4.9	-153.33	178.9	-311.2	385.2	374.1	11.10	34.709	
1,500.0	1,497.5	1,522.3	1,538.7	6.3	5.2	-155.57	167.0	-305.6	389.7	378.1	11.60	33.603	
1,600.0	1,595.6	1,621.6	1,637.0	6.7	5.4	-157.92	154.5	-299.8	396.8	384.7	12.09	32.812	
1,700.0	1,693.0	1,719.4	1,733.9	7.0	5.7	-160.29	142.2	-294.0	407.8	395.1	12.66	32.207	
1,800.0	1,789.6	1,816.7	1,830.2	7.4	6.0	-162.65	129.9	-288.3	422.8	409.5	13.25	31.902	
1,900.0	1,885.2	1,913.1	1,925.7	7.8	6.4	-164.95	117.8	-282.6	441.8	428.0	13.86	31.875 SF	
2,000.0	1,979.8	2,008.7	2,020.4	8.2	6.7	-167.13	105.7	-277.0	464.9	450.4	14.48	32.100	
2,086.3	2,060.4	2,090.4	2,101.3	8.5	7.0	-168.91	95.4	-272.2	488.0	473.0	15.00	32.544	
2,100.0	2,073.1	2,103.4	2,114.1	8.5	7.0	-169.19	93.8	-271.4	491.9	476.9	15.07	32.648	
2,200.0	2,166.0	2,197.6	2,207.4	8.9	7.3	-171.16	81.9	-265.9	520.8	505.1	15.68	33.209	
2,300.0	2,258.9	2,291.9	2,300.8	9.3	7.7	-172.91	70.0	-260.4	550.2	533.9	16.28	33.798	
2,400.0	2,351.8	2,386.1	2,394.1	9.7	8.0	-174.50	58.1	-254.8	580.0	563.1	16.89	34.346	
2,500.0	2,444.6	2,480.4	2,487.4	10.1	8.4	-175.93	46.2	-249.3	610.2	592.7	17.51	34.857	
2,600.0	2,537.5	2,574.6	2,580.8	10.5	8.8	-177.23	34.3	-243.7	640.7	622.6	18.13	35.331	
2,700.0	2,630.4	2,668.9	2,674.1	11.0	9.1	-178.41	22.4	-238.2	671.5	652.7	18.77	35.771	
2,800.0	2,723.3	2,763.1	2,767.4	11.4	9.5	-179.49	10.5	-232.6	702.5	683.1	19.42	36.180	
2,900.0	2,816.2	2,857.4	2,860.8	11.9	9.9	179.52	-1.3	-227.1	733.7	713.7	20.07	36.560	
3,000.0	2,909.1	2,951.6	2,954.1	12.3	10.2	178.61	-13.2	-221.6	765.2	744.4	20.73	36.912	
3,100.0	3,001.9	3,045.9	3,047.4	12.8	10.6	177.77	-25.1	-216.0	796.7	775.3	21.39	37.240	
3,200.0	3,094.8	3,140.1	3,140.8	13.2	11.0	177.00	-37.0	-210.5	828.5	806.4	22.07	37.545	
3,300.0	3,187.7	3,234.4	3,234.1	13.7	11.4	176.28	-48.9	-204.9	860.3	837.6	22.74	37.829	
3,400.0	3,280.6	3,328.6	3,327.4	14.2	11.8	175.61	-60.8	-199.4	892.3	868.9	23.42	38.094	
3,500.0	3,373.5	3,422.9	3,420.8	14.7	12.1	174.99	-72.7	-193.8	924.4	900.3	24.11	38.341	
3,600.0	3,466.4	3,517.1	3,514.1	15.1	12.5	174.41	-84.6	-188.3	956.5	931.7	24.80	38.571	
3,700.0	3,559.3	3,611.4	3,607.4	15.6	12.9	173.86	-96.5	-182.7	988.8	963.3	25.49	38.787	

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 901H
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 901H	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			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	-60.39	199.3	-350.7	403.8				
100.0	100.0	82.0	100.0	0.8	1.0	-60.39	199.3	-350.7	403.4	401.1	2.23	181.006	
200.0	200.0	182.0	200.0	1.4	1.6	-60.39	199.3	-350.7	403.4	399.9	3.50	115.129	
300.0	300.0	282.0	300.0	1.9	2.0	-60.39	199.3	-350.7	403.4	399.0	4.35	92.769	
400.0	400.0	382.0	400.0	2.2	2.4	-60.39	199.3	-350.7	403.4	398.3	5.04	79.993	
500.0	500.0	482.0	500.0	2.6	2.7	-60.39	199.3	-350.7	403.4	397.7	5.65	71.406	
600.0	600.0	582.0	600.0	2.8	2.9	-60.39	199.3	-350.7	403.4	397.2	6.20	65.105	
700.0	700.0	682.0	700.0	3.1	3.2	-60.39	199.3	-350.7	403.4	396.7	6.70	60.218	
800.0	800.0	782.0	800.0	3.3	3.4	-60.39	199.3	-350.7	403.4	396.2	7.17	56.278	
900.0	900.0	882.0	900.0	3.6	3.7	-60.39	199.3	-350.7	403.4	395.7	7.61	53.011	
999.0	999.0	981.0	999.0	3.8	3.9	-60.39	199.3	-350.7	403.4	395.3	8.02	50.285 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-151.52	199.3	-350.7	403.4	395.3	8.02	50.271	
1,100.0	1,100.0	1,082.0	1,100.0	5.2	4.1	-151.63	199.3	-350.7	404.9	395.2	9.68	41.825 ES	
1,200.0	1,199.8	1,181.8	1,199.8	5.5	4.3	-151.93	199.3	-350.7	409.6	399.5	10.10	40.547	
1,300.0	1,299.4	1,281.4	1,299.4	5.7	4.4	-152.43	199.3	-350.7	417.3	406.8	10.53	39.630	
1,400.0	1,398.7	1,380.7	1,398.7	6.0	4.6	-153.08	199.3	-350.7	428.2	417.2	10.97	39.018	
1,500.0	1,497.5	1,479.5	1,497.5	6.3	4.8	-153.87	199.3	-350.7	442.3	430.8	11.44	38.671	
1,600.0	1,595.6	1,577.6	1,595.6	6.7	5.0	-154.77	199.3	-350.7	459.5	447.6	11.92	38.556 SF	
1,700.0	1,693.0	1,675.0	1,693.0	7.0	5.1	-155.74	199.3	-350.7	480.1	467.7	12.42	38.646	
1,800.0	1,789.6	1,771.6	1,789.6	7.4	5.3	-156.75	199.3	-350.7	503.9	491.0	12.95	38.917	
1,900.0	1,885.2	1,867.2	1,885.2	7.8	5.4	-157.78	199.3	-350.7	531.1	517.6	13.50	39.351	
2,000.0	1,979.8	1,961.8	1,979.8	8.2	5.6	-158.80	199.3	-350.7	561.6	547.6	14.06	39.931	
2,086.3	2,060.4	2,041.3	2,059.3	8.5	5.7	-159.66	199.1	-350.8	590.6	576.1	14.56	40.565	
2,100.0	2,073.1	2,053.6	2,071.6	8.5	5.7	-159.84	199.0	-350.9	595.5	580.9	14.63	40.714	
2,200.0	2,166.0	2,143.4	2,161.3	8.9	5.9	-161.18	197.0	-352.0	631.1	616.0	15.18	41.582	
2,300.0	2,258.9	2,232.1	2,250.0	9.3	6.0	-162.55	193.2	-354.2	667.5	651.8	15.71	42.490	
2,400.0	2,351.8	2,319.8	2,337.4	9.7	6.2	-163.94	187.7	-357.4	704.8	688.5	16.26	43.351	
2,500.0	2,444.6	2,406.4	2,423.6	10.1	6.3	-165.34	180.6	-361.5	742.9	726.1	16.82	44.179	
2,600.0	2,537.5	2,491.8	2,508.4	10.5	6.5	-166.74	171.9	-366.5	782.1	764.7	17.38	44.986	
2,700.0	2,630.4	2,578.8	2,594.7	11.0	6.7	-168.17	161.6	-372.4	822.2	804.2	17.94	45.837	
2,800.0	2,723.3	2,668.3	2,683.3	11.4	6.9	-169.52	150.8	-378.7	862.8	844.2	18.54	46.530	
2,900.0	2,816.2	2,757.8	2,771.9	11.9	7.1	-170.75	140.1	-384.9	903.8	884.6	19.17	47.153	
3,000.0	2,909.1	2,847.3	2,860.5	12.3	7.3	-171.88	129.3	-391.1	945.1	925.3	19.80	47.728	
3,100.0	3,001.9	2,936.8	2,949.1	12.8	7.6	-172.91	118.5	-397.3	986.7	966.2	20.45	48.257	

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 901H
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 901H	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		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	-62.37	199.3	-380.7	430.1					
100.0	100.0	82.0	100.0	0.8	1.0	-62.37	199.3	-380.7	429.7	427.5	2.23	192.826		
200.0	200.0	182.0	200.0	1.4	1.6	-62.37	199.3	-380.7	429.7	426.2	3.50	122.647		
300.0	300.0	282.0	300.0	1.9	2.0	-62.37	199.3	-380.7	429.7	425.3	4.35	98.827		
400.0	400.0	382.0	400.0	2.2	2.4	-62.37	199.3	-380.7	429.7	424.7	5.04	85.217		
500.0	500.0	482.0	500.0	2.6	2.7	-62.37	199.3	-380.7	429.7	424.0	5.65	76.069		
600.0	600.0	582.0	600.0	2.8	2.9	-62.37	199.3	-380.7	429.7	423.5	6.20	69.357		
700.0	700.0	682.0	700.0	3.1	3.2	-62.37	199.3	-380.7	429.7	423.0	6.70	64.150		
800.0	800.0	782.0	800.0	3.3	3.4	-62.37	199.3	-380.7	429.7	422.5	7.17	59.953		
900.0	900.0	882.0	900.0	3.6	3.7	-62.37	199.3	-380.7	429.7	422.1	7.61	56.473		
999.0	999.0	981.0	999.0	3.8	3.9	-62.37	199.3	-380.7	429.7	421.7	8.02	53.569 CC		
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-153.50	199.3	-380.7	429.7	421.7	8.02	53.553 ES		
1,100.0	1,100.0	1,077.8	1,095.8	5.2	4.1	-153.67	198.8	-381.3	431.7	422.0	9.68	44.602		
1,200.0	1,199.8	1,172.3	1,190.3	5.5	4.3	-154.27	197.1	-383.9	438.0	427.9	10.09	43.429		
1,300.0	1,299.4	1,266.0	1,283.8	5.7	4.5	-155.24	194.1	-388.3	448.7	438.2	10.51	42.700		
1,400.0	1,398.7	1,358.5	1,375.9	6.0	4.8	-156.52	189.8	-394.6	464.0	453.1	10.96	42.349		
1,500.0	1,497.5	1,449.3	1,466.2	6.3	5.0	-158.03	184.4	-402.5	484.1	472.7	11.44	42.335 SF		
1,600.0	1,595.6	1,538.1	1,554.3	6.7	5.3	-159.70	178.0	-411.9	509.1	497.2	11.95	42.621		
1,700.0	1,693.0	1,624.6	1,639.8	7.0	5.6	-161.45	170.6	-422.8	539.1	526.7	12.46	43.268		
1,800.0	1,789.6	1,715.6	1,729.6	7.4	5.8	-163.30	162.1	-435.2	573.7	560.7	13.01	44.093		
1,900.0	1,885.2	1,806.0	1,818.7	7.8	6.1	-165.02	153.7	-447.5	612.1	598.4	13.64	44.879		
2,000.0	1,979.8	1,894.8	1,906.3	8.2	6.4	-166.59	145.5	-459.6	654.1	639.8	14.29	45.763		
2,086.3	2,060.4	1,970.2	1,980.7	8.5	6.6	-167.83	138.4	-469.9	693.2	678.4	14.85	46.674		
2,100.0	2,073.1	1,982.1	1,992.4	8.5	6.7	-168.05	137.3	-471.5	699.6	684.7	14.93	46.848		
2,200.0	2,166.0	2,068.7	2,077.8	8.9	7.0	-169.52	129.3	-483.3	746.7	731.1	15.59	47.885		
2,300.0	2,258.9	2,155.3	2,163.3	9.3	7.3	-170.82	121.2	-495.1	794.2	777.9	16.25	48.871		
2,400.0	2,351.8	2,242.0	2,248.7	9.7	7.6	-171.98	113.2	-506.9	841.9	825.0	16.93	49.739		
2,500.0	2,444.6	2,328.6	2,334.1	10.1	8.0	-173.02	105.1	-518.8	889.9	872.2	17.62	50.505		
2,600.0	2,537.5	2,415.2	2,419.6	10.5	8.3	-173.95	97.1	-530.6	938.0	919.7	18.33	51.181		
2,700.0	2,630.4	2,501.8	2,505.0	11.0	8.6	-174.80	89.0	-542.4	986.4	967.4	19.05	51.777		

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 901H
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 901H	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		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	-64.11	199.3	-410.7	456.8				
100.0	100.0	82.0	100.0	0.8	1.0	-64.11	199.3	-410.7	456.5	454.3	2.23	204.845	
200.0	200.0	182.0	200.0	1.4	1.6	-64.11	199.3	-410.7	456.5	453.0	3.50	130.292	
300.0	300.0	282.0	300.0	1.9	2.0	-64.11	199.3	-410.7	456.5	452.1	4.35	104.987	
400.0	400.0	382.0	400.0	2.2	2.4	-64.11	199.3	-410.7	456.5	451.4	5.04	90.528	
500.0	500.0	482.0	500.0	2.6	2.7	-64.11	199.3	-410.7	456.5	450.8	5.65	80.810	
600.0	600.0	582.0	600.0	2.8	2.9	-64.11	199.3	-410.7	456.5	450.3	6.20	73.680	
700.0	700.0	682.0	700.0	3.1	3.2	-64.11	199.3	-410.7	456.5	449.8	6.70	68.149	
800.0	800.0	782.0	800.0	3.3	3.4	-64.11	199.3	-410.7	456.5	449.3	7.17	63.690	
900.0	900.0	882.0	900.0	3.6	3.7	-64.11	199.3	-410.7	456.5	448.9	7.61	59.992	
999.0	999.0	981.0	999.0	3.8	3.9	-64.11	199.3	-410.7	456.5	448.5	8.02	56.908 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-155.25	199.3	-410.7	456.5	448.5	8.02	56.891 ES	
1,100.0	1,100.0	1,076.1	1,094.1	5.2	4.1	-155.39	199.0	-411.4	458.6	448.9	9.68	47.355	
1,200.0	1,199.8	1,168.5	1,186.4	5.5	4.3	-155.86	197.8	-414.1	465.5	455.4	10.10	46.083	
1,300.0	1,299.4	1,260.0	1,277.8	5.7	4.5	-156.63	195.7	-418.8	477.2	466.7	10.54	45.295	
1,400.0	1,398.7	1,350.3	1,367.8	6.0	4.8	-157.65	192.8	-425.3	493.8	482.8	11.00	44.913	
1,500.0	1,497.5	1,439.0	1,456.0	6.3	5.0	-158.85	189.0	-433.7	515.4	504.0	11.48	44.889 SF	
1,600.0	1,595.6	1,525.6	1,542.0	6.7	5.3	-160.18	184.6	-443.7	542.1	530.1	12.00	45.176	
1,700.0	1,693.0	1,610.0	1,625.4	7.0	5.5	-161.56	179.5	-455.1	574.0	561.4	12.55	45.747	
1,800.0	1,789.6	1,691.7	1,705.9	7.4	5.8	-162.95	173.9	-467.7	610.9	597.8	13.12	46.569	
1,900.0	1,885.2	1,770.4	1,783.2	7.8	6.1	-164.30	167.8	-481.4	652.9	639.2	13.71	47.616	
2,000.0	1,979.8	1,846.1	1,857.2	8.2	6.4	-165.59	161.3	-495.9	699.8	685.5	14.29	48.967	
2,086.3	2,060.4	1,915.4	1,924.7	8.5	6.6	-166.76	155.0	-510.1	743.9	729.1	14.80	50.259	
2,100.0	2,073.1	1,926.8	1,935.8	8.5	6.6	-166.98	154.0	-512.5	751.1	736.3	14.89	50.459	
2,200.0	2,166.0	2,009.7	2,016.6	8.9	6.9	-168.49	146.4	-529.5	804.1	788.5	15.55	51.703	
2,300.0	2,258.9	2,092.7	2,097.5	9.3	7.2	-169.83	138.8	-546.6	857.4	841.1	16.22	52.867	
2,400.0	2,351.8	2,175.6	2,178.3	9.7	7.5	-171.01	131.2	-563.6	910.9	894.0	16.90	53.888	
2,500.0	2,444.6	2,258.6	2,259.1	10.1	7.9	-172.07	123.6	-580.7	964.8	947.2	17.61	54.787	

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 901H
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 901H	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			Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	18.0	0.0	0.0	-65.65	199.4	-440.6	484.0				
100.0	100.0	82.0	100.0	0.8	1.0	-65.65	199.4	-440.6	483.6	481.4	2.23	217.033	
200.0	200.0	182.0	200.0	1.4	1.6	-65.65	199.4	-440.6	483.6	480.1	3.50	138.044	
300.0	300.0	282.0	300.0	1.9	2.0	-65.65	199.4	-440.6	483.6	479.3	4.35	111.234	
400.0	400.0	382.0	400.0	2.2	2.4	-65.65	199.4	-440.6	483.6	478.6	5.04	95.915	
500.0	500.0	482.0	500.0	2.6	2.7	-65.65	199.4	-440.6	483.6	478.0	5.65	85.619	
600.0	600.0	582.0	600.0	2.8	2.9	-65.65	199.4	-440.6	483.6	477.4	6.20	78.064	
700.0	700.0	682.0	700.0	3.1	3.2	-65.65	199.4	-440.6	483.6	476.9	6.70	72.204	
800.0	800.0	782.0	800.0	3.3	3.4	-65.65	199.4	-440.6	483.6	476.5	7.17	67.480	
900.0	900.0	882.0	900.0	3.6	3.7	-65.65	199.4	-440.6	483.6	476.0	7.61	63.562	
999.0	999.0	981.0	999.0	3.8	3.9	-65.65	199.4	-440.6	483.6	475.6	8.02	60.294 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	-156.79	199.4	-440.6	483.6	475.6	8.02	60.277 ES	
1,100.0	1,100.0	1,074.4	1,092.4	5.2	4.1	-156.90	199.2	-441.3	485.9	476.2	9.69	50.141	
1,200.0	1,199.8	1,164.8	1,182.8	5.5	4.3	-157.26	198.6	-444.1	493.3	483.1	10.12	48.751	
1,300.0	1,299.4	1,254.4	1,272.2	5.7	4.5	-157.84	197.5	-448.9	505.8	495.2	10.56	47.882	
1,400.0	1,398.7	1,342.7	1,360.3	6.0	4.8	-158.62	195.9	-455.6	523.4	512.4	11.03	47.444	
1,500.0	1,497.5	1,429.4	1,446.5	6.3	5.0	-159.53	193.9	-464.1	546.3	534.8	11.53	47.385 SF	
1,600.0	1,595.6	1,514.2	1,530.6	6.7	5.3	-160.53	191.6	-474.3	574.4	562.3	12.05	47.650	
1,700.0	1,693.0	1,600.0	1,615.5	7.0	5.5	-161.63	188.8	-486.5	607.6	595.0	12.62	48.141	
1,800.0	1,789.6	1,676.3	1,690.8	7.4	5.8	-162.62	185.9	-498.8	646.0	632.8	13.18	49.013	
1,900.0	1,885.2	1,753.3	1,766.4	7.8	6.1	-163.64	182.7	-512.8	689.4	675.6	13.77	50.055	
2,000.0	1,979.8	1,827.1	1,838.6	8.2	6.3	-164.60	179.3	-527.5	737.7	723.3	14.38	51.307	
2,086.3	2,060.4	1,888.1	1,898.2	8.5	6.6	-165.38	176.3	-540.8	783.1	768.2	14.88	52.619	
2,100.0	2,073.1	1,900.0	1,909.7	8.5	6.6	-165.59	175.6	-543.5	790.6	775.7	14.97	52.800	
2,200.0	2,166.0	1,966.7	1,974.4	8.9	6.8	-166.68	172.0	-559.2	846.3	830.8	15.50	54.595	
2,300.0	2,258.9	2,046.6	2,051.8	9.3	7.1	-167.88	167.5	-578.7	903.0	886.8	16.14	55.956	
2,400.0	2,351.8	2,127.6	2,130.2	9.7	7.4	-168.95	162.9	-598.4	959.9	943.0	16.82	57.052	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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 901H - OWB - PWP0													Offset Site Error: 0.0 usft	
Survey Program: 0-r.5 MWD+IFR1+MS		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance			Offset Well Error: 0.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
3,800.0	3,652.1	3,523.8	3,488.7	16.1	13.4	-8.30	104.5	1,811.2	993.7	965.7	28.00	35.492		
3,900.0	3,745.0	3,621.0	3,583.1	16.6	13.9	-7.63	90.3	1,828.9	972.9	944.0	28.90	33.667		
4,000.0	3,837.9	3,718.1	3,677.6	17.1	14.3	-6.93	76.0	1,846.6	952.2	922.4	29.81	31.946		
4,100.0	3,930.8	3,815.3	3,772.1	17.6	14.8	-6.21	61.8	1,864.2	931.6	900.9	30.73	30.321		
4,200.0	4,023.7	3,912.4	3,866.5	18.1	15.2	-5.45	47.5	1,881.9	911.2	879.6	31.65	28.788		
4,300.0	4,116.6	4,009.6	3,961.0	18.6	15.7	-4.65	33.3	1,899.5	891.0	858.4	32.59	27.339		
4,400.0	4,209.4	4,106.8	4,055.5	19.1	16.1	-3.82	19.1	1,917.2	871.0	837.4	33.54	25.969		
4,500.0	4,302.3	4,203.9	4,149.9	19.6	16.6	-2.96	4.8	1,934.8	851.1	816.6	34.49	24.674		
4,600.0	4,395.2	4,301.1	4,244.4	20.1	17.0	-2.05	-9.4	1,952.5	831.4	796.0	35.46	23.448		
4,700.0	4,488.1	4,398.2	4,338.9	20.6	17.5	-1.10	-23.7	1,970.1	812.0	775.5	36.43	22.288		
4,800.0	4,581.0	4,495.4	4,433.4	21.1	18.0	-0.10	-37.9	1,987.8	792.7	755.3	37.41	21.190		
4,900.0	4,673.9	4,592.5	4,527.8	21.6	18.4	0.95	-52.2	2,005.4	773.8	735.4	38.40	20.150		
5,000.0	4,766.7	4,689.7	4,622.3	22.1	18.9	2.04	-66.4	2,023.1	755.0	715.7	39.39	19.166		
5,100.0	4,859.6	4,786.8	4,716.8	22.6	19.3	3.19	-80.6	2,040.7	736.6	696.2	40.40	18.235		
5,200.0	4,952.5	4,884.0	4,811.2	23.1	19.8	4.40	-94.9	2,058.4	718.5	677.1	41.40	17.354		
5,300.0	5,045.4	4,981.1	4,905.7	23.6	20.3	5.67	-109.1	2,076.0	700.7	658.3	42.42	16.520		
5,400.0	5,138.3	5,078.3	5,000.2	24.2	20.7	7.00	-123.4	2,093.7	683.3	639.9	43.43	15.733		
5,500.0	5,231.2	5,175.5	5,094.6	24.7	21.2	8.40	-137.6	2,111.3	666.3	621.8	44.45	14.989		
5,600.0	5,324.0	5,272.6	5,189.1	25.2	21.6	9.86	-151.9	2,129.0	649.6	604.2	45.47	14.288		
5,700.0	5,416.9	5,369.8	5,283.6	25.7	22.1	11.41	-166.1	2,146.6	633.5	587.0	46.48	13.627		
5,800.0	5,509.8	5,466.9	5,378.1	26.2	22.6	13.03	-180.3	2,164.3	617.8	570.3	47.50	13.007		
5,900.0	5,602.7	5,564.1	5,472.5	26.7	23.0	14.72	-194.6	2,181.9	602.6	554.1	48.50	12.424		
6,000.0	5,695.6	5,661.2	5,567.0	27.2	23.5	16.51	-208.8	2,199.6	588.0	538.5	49.50	11.879		
6,100.0	5,788.5	5,758.4	5,661.5	27.8	24.0	18.37	-223.1	2,217.2	574.0	523.5	50.48	11.371		
6,200.0	5,881.3	5,855.5	5,755.9	28.3	24.4	20.33	-237.3	2,234.9	560.7	509.2	51.44	10.899		
6,300.0	5,974.2	5,952.7	5,850.4	28.8	24.9	22.37	-251.5	2,252.5	548.0	495.6	52.38	10.462		
6,400.0	6,067.1	6,049.8	5,944.9	29.3	25.4	24.51	-265.8	2,270.2	536.1	482.8	53.29	10.061		
6,500.0	6,160.0	6,156.3	6,048.6	29.8	25.9	26.93	-280.8	2,288.8	524.2	470.0	54.15	9.681		
6,600.0	6,252.9	6,262.7	6,152.7	30.4	26.4	29.44	-294.6	2,305.9	511.3	456.4	54.96	9.304		
6,700.0	6,345.8	6,368.7	6,256.8	30.9	26.8	32.05	-307.2	2,321.5	497.5	441.8	55.70	8.933		
6,800.0	6,438.7	6,474.3	6,360.8	31.4	27.3	34.78	-318.5	2,335.5	482.9	426.5	56.36	8.567		
6,900.0	6,531.5	6,579.2	6,464.5	31.9	27.8	37.67	-328.5	2,347.9	467.5	410.6	56.94	8.210		
7,000.0	6,624.4	6,683.6	6,567.9	32.5	28.2	40.75	-337.3	2,358.8	451.4	394.0	57.42	7.862		
7,100.0	6,717.3	6,787.2	6,670.9	33.0	28.7	44.05	-344.9	2,368.2	434.9	377.1	57.78	7.526		
7,200.0	6,810.2	6,890.1	6,773.3	33.5	29.1	47.62	-351.3	2,376.1	418.0	360.0	58.00	7.206		
7,271.2	6,876.3	6,962.9	6,845.8	33.9	29.3	50.36	-355.1	2,380.8	405.9	347.8	58.05	6.992		
7,300.0	6,903.1	6,992.2	6,875.1	34.0	29.5	51.47	-356.4	2,382.5	401.0	343.0	58.05	6.909		
7,400.0	6,996.5	7,094.0	6,976.6	34.5	29.8	55.43	-360.4	2,387.5	385.0	327.1	57.93	6.645		
7,500.0	7,090.5	7,195.4	7,077.9	35.1	30.2	59.57	-363.3	2,391.0	370.2	312.6	57.64	6.423		
7,600.0	7,185.1	7,296.6	7,179.1	35.6	30.5	63.89	-365.1	2,393.2	356.8	299.6	57.16	6.241		
7,700.0	7,280.2	7,397.4	7,279.9	36.1	30.6	68.39	-365.7	2,394.0	344.7	288.2	56.49	6.101		
7,800.0	7,375.8	7,493.3	7,375.8	36.6	30.6	72.77	-365.7	2,394.0	334.6	278.6	55.97	5.978		
7,900.0	7,472.0	7,589.5	7,472.0	37.1	30.6	77.13	-365.7	2,394.0	327.2	272.1	55.03	5.945		
8,000.0	7,568.6	7,686.1	7,568.6	37.6	30.7	81.41	-365.7	2,394.0	322.2	268.0	54.15	5.950		
8,100.0	7,665.6	7,783.1	7,665.6	38.1	30.7	85.54	-365.7	2,394.0	319.4	266.0	53.38	5.983		
8,200.0	7,763.1	7,880.6	7,763.1	38.6	30.7	89.46	-365.7	2,394.0	318.4	265.6	52.75	6.035		
8,214.0	7,776.8	7,894.3	7,776.8	38.6	30.7	89.98	-365.7	2,394.0	318.3	265.7	52.67	6.044		
8,300.0	7,860.9	7,978.4	7,860.9	39.0	30.7	93.10	-365.7	2,394.0	318.8	266.5	52.29	6.097		
8,400.0	7,959.1	8,076.6	7,959.1	39.5	30.7	96.46	-365.7	2,394.0	320.4	268.4	52.00	6.162		
8,500.0	8,057.6	8,175.1	8,057.6	39.9	30.8	99.48	-365.7	2,394.0	322.9	271.0	51.87	6.225		
8,600.0	8,156.4	8,273.9	8,156.4	40.4	30.8	102.18	-365.7	2,394.0	325.8	274.0	51.87	6.282		

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 901H
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 901H	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 901H - 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)			
8,700.0	8,255.4	8,372.9	8,255.4	40.8	30.8	104.55	-365.7	2,394.0	329.1	277.1	51.97	6.332	
8,800.0	8,354.7	8,472.2	8,354.7	41.2	30.8	106.59	-365.7	2,394.0	332.3	280.2	52.14	6.373	
8,900.0	8,454.1	8,571.6	8,454.1	41.6	30.8	108.31	-365.7	2,394.0	335.5	283.1	52.37	6.406	
9,000.0	8,553.7	8,671.3	8,553.7	42.0	30.9	109.72	-365.7	2,394.0	338.3	285.7	52.61	6.430	
9,100.0	8,653.5	8,771.0	8,653.5	42.4	30.9	110.83	-365.7	2,394.0	340.7	287.8	52.86	6.445	
9,200.0	8,753.4	8,870.9	8,753.4	42.7	30.9	111.66	-365.7	2,394.0	342.6	289.5	53.09	6.452	
9,300.0	8,853.3	8,970.8	8,853.3	43.0	30.9	112.20	-365.7	2,394.0	343.8	290.5	53.30	6.451	
9,400.0	8,953.3	9,070.8	8,953.3	43.3	30.9	112.46	-365.7	2,394.0	344.5	291.0	53.46	6.444	
9,445.7	8,999.0	9,116.5	8,999.0	43.3	31.0	-156.38	-365.7	2,394.0	344.5	291.0	53.50	6.440	
9,500.0	9,053.3	9,170.8	9,053.3	43.3	31.0	-156.38	-365.7	2,394.0	344.5	291.0	53.52	6.437	
9,600.0	9,153.3	9,270.8	9,153.3	43.4	31.0	-156.38	-365.7	2,394.0	344.5	290.9	53.59	6.429	
9,700.0	9,253.3	9,370.8	9,253.3	43.4	31.0	-156.38	-365.7	2,394.0	344.5	290.9	53.65	6.421	
9,800.0	9,353.3	9,470.8	9,353.3	43.4	31.0	-156.38	-365.7	2,394.0	344.5	290.8	53.72	6.414	
9,900.0	9,453.3	9,570.8	9,453.3	43.4	31.1	-156.38	-365.7	2,394.0	344.5	290.8	53.79	6.406	
10,000.0	9,553.3	9,670.8	9,553.3	43.4	31.1	-156.38	-365.7	2,394.0	344.5	290.7	53.85	6.398	
10,100.0	9,653.3	9,770.8	9,653.3	43.5	31.1	-156.38	-365.7	2,394.0	344.5	290.6	53.92	6.390	
10,200.0	9,753.3	9,870.8	9,753.3	43.5	31.1	-156.38	-365.7	2,394.0	344.5	290.6	53.98	6.382	
10,300.0	9,853.3	9,970.8	9,853.3	43.5	31.1	-156.38	-365.7	2,394.0	344.5	290.5	54.05	6.374	
10,400.0	9,953.3	10,070.8	9,953.3	43.5	31.2	-156.38	-365.7	2,394.0	344.5	290.4	54.12	6.366	
10,500.0	10,053.3	10,170.8	10,053.3	43.5	31.2	-156.38	-365.7	2,394.0	344.5	290.3	54.19	6.358	
10,600.0	10,153.3	10,270.8	10,153.3	43.6	31.2	-156.38	-365.7	2,394.0	344.5	290.3	54.26	6.350	
10,662.2	10,215.5	10,333.0	10,215.5	43.6	31.2	-156.38	-365.7	2,394.0	344.5	290.2	54.29	6.346	
10,675.0	10,228.3	10,345.8	10,228.3	43.6	31.2	20.64	-365.7	2,394.0	344.4	290.1	54.29	6.344	
10,700.0	10,253.3	10,370.8	10,253.3	43.6	31.2	20.77	-365.7	2,394.0	343.1	288.9	54.26	6.324	
10,725.0	10,278.1	10,395.6	10,278.1	43.6	31.2	21.03	-365.7	2,394.0	340.7	286.4	54.24	6.281	
10,750.0	10,302.8	10,430.1	10,312.6	43.5	31.2	21.56	-365.4	2,394.0	336.9	282.5	54.39	6.194	
10,775.0	10,327.2	10,483.3	10,365.6	43.5	31.2	22.86	-361.3	2,394.3	330.3	275.4	54.88	6.018	
10,800.0	10,351.4	10,532.1	10,413.7	43.5	31.1	24.89	-353.3	2,395.0	320.6	265.3	55.30	5.797	
10,825.0	10,375.2	10,575.6	10,455.9	43.5	31.0	27.73	-342.7	2,396.0	308.2	252.5	55.73	5.530	
10,850.0	10,398.5	10,613.5	10,491.8	43.5	30.9	31.48	-330.9	2,397.0	293.6	237.4	56.22	5.223	
10,875.0	10,421.3	10,645.7	10,521.8	43.5	30.8	36.23	-319.1	2,398.0	277.3	220.5	56.81	4.881	
10,900.0	10,443.6	10,672.7	10,546.3	43.5	30.8	42.05	-307.8	2,399.0	259.6	202.1	57.54	4.512	
10,925.0	10,465.2	10,694.9	10,566.1	43.5	30.7	48.87	-297.7	2,399.9	241.1	182.6	58.45	4.124	
10,950.0	10,486.2	10,713.0	10,581.9	43.5	30.7	56.44	-289.0	2,400.7	222.0	162.4	59.59	3.725	
10,975.0	10,506.4	10,727.3	10,594.2	43.5	30.6	64.29	-281.7	2,401.3	202.8	141.8	60.99	3.326	
11,000.0	10,525.8	10,738.5	10,603.7	43.5	30.6	71.80	-275.8	2,401.8	184.1	121.3	62.71	2.935 Normal Operations	
11,025.0	10,544.4	10,746.9	10,610.7	43.5	30.6	78.42	-271.2	2,402.2	166.2	101.4	64.76	2.566 Normal Operations	
11,050.0	10,562.0	10,752.9	10,615.7	43.5	30.6	83.76	-267.9	2,402.5	149.9	82.8	67.10	2.234 Caution - Monitor Closely	
11,075.0	10,578.8	10,756.8	10,618.9	43.5	30.6	87.65	-265.7	2,402.7	135.9	66.4	69.52	1.955 Caution - Monitor Closely	
11,100.0	10,594.5	10,759.0	10,620.7	43.5	30.6	90.11	-264.5	2,402.8	125.3	53.7	71.61	1.751 Caution - Monitor Closely	
11,125.0	10,609.2	10,759.6	10,621.2	43.5	30.6	91.17	-264.1	2,402.8	119.1	46.4	72.69	1.639 Caution - Monitor Closely	
11,142.7	10,618.9	10,759.2	10,620.9	43.6	30.6	91.14	-264.3	2,402.8	117.8	45.3	72.55	1.624 Caution - Monitor Closely, CC, ES, SF	
11,150.0	10,622.8	10,758.8	10,620.6	43.6	30.6	90.94	-264.5	2,402.8	118.0	45.8	72.25	1.634 Caution - Monitor Closely	
11,175.0	10,635.2	10,756.9	10,619.0	43.6	30.6	89.50	-265.6	2,402.7	122.1	51.8	70.31	1.737 Caution - Monitor Closely	
11,200.0	10,646.6	10,753.9	10,616.6	43.6	30.6	86.95	-267.3	2,402.6	130.9	63.4	67.52	1.939 Caution - Monitor Closely	
11,225.0	10,656.7	10,750.0	10,613.3	43.6	30.6	83.36	-269.5	2,402.4	143.4	78.8	64.61	2.220 Caution - Monitor Closely	
11,250.0	10,665.7	10,745.4	10,609.4	43.6	30.6	78.93	-272.0	2,402.1	158.6	96.6	62.07	2.556 Normal Operations	
11,275.0	10,673.4	10,740.0	10,604.9	43.6	30.6	73.81	-275.0	2,401.9	175.8	115.8	60.02	2.929 Normal Operations	
11,300.0	10,679.8	10,733.9	10,599.8	43.6	30.6	68.25	-278.2	2,401.6	194.2	135.7	58.47	3.321	
11,325.0	10,685.0	10,727.3	10,594.2	43.6	30.6	62.51	-281.7	2,401.3	213.4	156.1	57.32	3.723	
11,350.0	10,688.9	10,720.2	10,588.1	43.7	30.6	56.85	-285.3	2,401.0	233.1	176.6	56.49	4.127	

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 901H
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 901H	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 901H - 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)			
11,375.0	10,691.5	10,712.6	10,581.6	43.7	30.7	51.48	-289.1	2,400.6	253.1	197.2	55.89	4.528	
11,400.0	10,692.8	10,700.0	10,570.6	43.7	30.7	45.52	-295.3	2,400.1	273.1	217.9	55.19	4.949	
11,412.4	10,693.0	10,700.0	10,570.6	43.7	30.7	44.15	-295.3	2,400.1	283.0	227.7	55.29	5.118	
11,500.0	10,692.9	10,673.8	10,547.3	43.8	30.8	39.30	-307.4	2,399.1	355.3	300.5	54.73	6.492	
11,600.0	10,692.9	10,650.0	10,525.7	43.9	30.8	35.57	-317.3	2,398.2	442.0	387.4	54.59	8.096	
11,700.0	10,692.9	10,627.3	10,504.8	44.1	30.9	32.50	-326.0	2,397.4	531.6	477.1	54.56	9.743	
11,757.4	10,692.8	10,616.7	10,494.9	44.2	30.9	31.22	-329.8	2,397.1	584.0	529.4	54.61	10.694	
11,800.0	10,692.8	10,600.0	10,479.2	44.2	30.9	27.65	-335.4	2,396.6	623.5	569.0	54.52	11.435	
11,900.0	10,692.8	10,600.0	10,479.2	44.4	30.9	22.86	-335.4	2,396.6	717.0	662.1	54.87	13.066	
11,924.8	10,692.8	10,600.0	10,479.2	44.5	30.9	21.49	-335.4	2,396.6	740.5	685.5	54.95	13.476	
12,000.0	10,692.8	10,581.3	10,461.4	44.6	31.0	20.09	-341.1	2,396.1	811.8	756.8	54.97	14.767	
12,100.0	10,692.7	10,570.0	10,450.5	44.9	31.0	19.32	-344.2	2,395.8	907.4	852.3	55.12	16.463	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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		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)			
3,200.0	3,094.8	3,016.7	3,006.6	13.2	7.7	-10.02	134.4	1,595.2	993.6	972.1	21.52	46.180	
3,300.0	3,187.7	3,112.1	3,100.3	13.7	7.8	-9.40	119.6	1,605.8	965.6	943.3	22.22	43.447	
3,400.0	3,280.6	3,207.6	3,194.0	14.2	8.0	-8.74	104.9	1,616.5	937.6	914.6	22.94	40.874	
3,500.0	3,373.5	3,303.0	3,287.7	14.7	8.2	-8.04	90.1	1,627.1	909.7	886.1	23.66	38.449	
3,600.0	3,466.4	3,398.4	3,381.3	15.1	8.4	-7.30	75.3	1,637.8	882.0	857.6	24.39	36.164	
3,700.0	3,559.3	3,493.8	3,475.0	15.6	8.6	-6.51	60.6	1,648.4	854.5	829.3	25.12	34.010	
3,800.0	3,652.1	3,589.3	3,568.7	16.1	8.8	-5.67	45.8	1,659.1	827.1	801.2	25.86	31.977	
3,900.0	3,745.0	3,684.7	3,662.3	16.6	9.0	-4.77	31.0	1,669.7	799.8	773.2	26.61	30.058	
4,000.0	3,837.9	3,780.1	3,756.0	17.1	9.1	-3.81	16.3	1,680.4	772.8	745.4	27.36	28.247	
4,100.0	3,930.8	3,875.5	3,849.7	17.6	9.3	-2.78	1.5	1,691.0	746.0	717.9	28.11	26.536	
4,200.0	4,023.7	3,971.0	3,943.4	18.1	9.5	-1.68	-13.3	1,701.7	719.4	690.6	28.87	24.921	
4,300.0	4,116.6	4,066.4	4,037.0	18.6	9.7	-0.50	-28.0	1,712.3	693.1	663.5	29.63	23.395	
4,400.0	4,209.4	4,161.8	4,130.7	19.1	9.9	0.78	-42.8	1,723.0	667.1	636.8	30.39	21.955	
4,500.0	4,302.3	4,257.2	4,224.4	19.6	10.1	2.15	-57.6	1,733.6	641.5	610.4	31.15	20.596	
4,600.0	4,395.2	4,352.7	4,318.1	20.1	10.3	3.64	-72.3	1,744.3	616.2	584.3	31.90	19.315	
4,700.0	4,488.1	4,448.1	4,411.7	20.6	10.5	5.25	-87.1	1,754.9	591.4	558.7	32.66	18.108	
4,800.0	4,581.0	4,543.5	4,505.4	21.1	10.7	6.99	-101.9	1,765.6	567.1	533.7	33.41	16.974	
4,900.0	4,673.9	4,638.9	4,599.1	21.6	10.9	8.88	-116.6	1,776.2	543.3	509.1	34.15	15.909	
5,000.0	4,766.7	4,734.4	4,692.7	22.1	11.1	10.94	-131.4	1,786.9	520.1	485.2	34.88	14.914	
5,100.0	4,859.6	4,829.8	4,786.4	22.6	11.2	13.18	-146.2	1,797.5	497.7	462.1	35.59	13.985	
5,200.0	4,952.5	4,925.2	4,880.1	23.1	11.4	15.61	-160.9	1,808.2	476.1	439.8	36.27	13.124	
5,300.0	5,045.4	5,020.6	4,973.8	23.6	11.6	18.26	-175.7	1,818.8	455.4	418.5	36.93	12.330	
5,400.0	5,138.3	5,116.4	5,067.7	24.2	11.8	21.15	-190.5	1,829.5	435.8	398.2	37.55	11.604	
5,500.0	5,231.2	5,215.0	5,164.6	24.7	12.0	24.36	-205.4	1,840.2	417.0	378.9	38.10	10.945	
5,600.0	5,324.0	5,313.5	5,261.5	25.2	12.2	27.79	-219.5	1,850.4	398.8	360.2	38.59	10.334	
5,700.0	5,416.9	5,411.8	5,358.5	25.7	12.4	31.48	-233.0	1,860.2	381.3	342.3	39.01	9.775	
5,800.0	5,509.8	5,510.1	5,455.5	26.2	12.6	35.45	-245.8	1,869.4	364.8	325.4	39.36	9.268	
5,900.0	5,602.7	5,608.2	5,552.5	26.7	12.8	39.72	-257.9	1,878.1	349.3	309.7	39.62	8.816	
6,000.0	5,695.6	5,706.2	5,649.5	27.2	13.0	44.31	-269.3	1,886.3	335.1	295.3	39.79	8.422	
6,100.0	5,788.5	5,804.1	5,746.4	27.8	13.2	49.24	-280.0	1,894.0	322.5	282.6	39.87	8.089	
6,200.0	5,881.3	5,901.7	5,843.3	28.3	13.4	54.49	-290.0	1,901.3	311.6	271.7	39.86	7.818	
6,300.0	5,974.2	5,999.2	5,940.0	28.8	13.6	60.06	-299.3	1,908.0	302.8	263.0	39.78	7.611	
6,400.0	6,067.1	6,096.4	6,036.7	29.3	13.7	65.91	-308.0	1,914.2	296.3	256.6	39.68	7.467	
6,500.0	6,160.0	6,193.5	6,133.3	29.8	13.9	71.97	-315.9	1,920.0	292.4	252.8	39.62	7.381	
6,586.8	6,240.6	6,277.5	6,216.9	30.3	14.1	77.33	-322.3	1,924.6	291.3	251.7	39.65	7.348 CC, ES	
6,600.0	6,252.9	6,290.3	6,229.7	30.4	14.1	78.16	-323.2	1,925.2	291.4	251.7	39.67	7.345 SF	
6,700.0	6,345.8	6,386.9	6,325.9	30.9	14.3	84.38	-329.8	1,930.0	293.2	253.4	39.89	7.352	
6,800.0	6,438.7	6,483.2	6,422.0	31.4	14.4	90.54	-335.8	1,934.3	298.1	257.8	40.34	7.392	
6,900.0	6,531.5	6,579.3	6,517.8	31.9	14.6	96.54	-341.0	1,938.1	306.0	265.0	41.02	7.461	
7,000.0	6,624.4	6,675.1	6,613.4	32.5	14.8	102.29	-345.6	1,941.4	316.8	274.9	41.92	7.558	
7,100.0	6,717.3	6,770.5	6,708.8	33.0	14.9	107.75	-349.6	1,944.2	330.3	287.3	42.98	7.685	
7,200.0	6,810.2	6,865.7	6,803.9	33.5	15.1	112.86	-352.9	1,946.6	346.3	302.2	44.15	7.844	
7,271.2	6,876.3	6,933.3	6,871.4	33.9	15.2	116.28	-354.8	1,948.0	359.2	314.2	45.02	7.978	
7,300.0	6,903.1	6,960.6	6,898.7	34.0	15.2	117.66	-355.5	1,948.5	364.7	319.3	45.37	8.038	
7,400.0	6,996.5	7,055.7	6,993.7	34.5	15.3	122.09	-357.5	1,950.0	384.4	337.8	46.58	8.252	
7,500.0	7,090.5	7,151.0	7,089.0	35.1	15.5	126.03	-358.9	1,950.9	404.9	357.1	47.74	8.481	
7,600.0	7,185.1	7,246.5	7,184.6	35.6	15.6	129.54	-359.6	1,951.5	425.7	376.9	48.84	8.716	
7,700.0	7,280.2	7,342.1	7,280.2	36.1	15.6	132.67	-359.7	1,951.6	446.6	396.5	50.06	8.922	
7,800.0	7,375.8	7,437.8	7,375.8	36.6	15.7	135.39	-359.7	1,951.6	467.3	416.3	51.04	9.156	
7,900.0	7,472.0	7,533.9	7,472.0	37.1	15.7	137.76	-359.7	1,951.6	487.6	435.7	51.97	9.383	
8,000.0	7,568.6	7,630.5	7,568.6	37.6	15.7	139.82	-359.7	1,951.6	507.4	454.5	52.85	9.600	

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 901H
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 901H	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
8,100.0	7,665.6	7,727.6	7,665.6	38.1	15.8	141.62	-359.7	1,951.6	526.3	472.6	53.69	9.802	
8,200.0	7,763.1	7,825.0	7,763.1	38.6	15.8	143.18	-359.7	1,951.6	544.2	489.7	54.48	9.989	
8,300.0	7,860.9	7,922.9	7,860.9	39.0	15.8	144.54	-359.7	1,951.6	561.0	505.8	55.24	10.157	
8,400.0	7,959.1	8,021.1	7,959.1	39.5	15.9	145.72	-359.7	1,951.6	576.7	520.8	55.96	10.307	
8,500.0	8,057.6	8,119.5	8,057.6	39.9	15.9	146.74	-359.7	1,951.6	591.2	534.5	56.64	10.437	
8,600.0	8,156.4	8,218.3	8,156.4	40.4	15.9	147.61	-359.7	1,951.6	604.3	547.0	57.30	10.546	
8,700.0	8,255.4	8,317.4	8,255.4	40.8	16.0	148.36	-359.7	1,951.6	616.1	558.2	57.92	10.636	
8,800.0	8,354.7	8,416.6	8,354.7	41.2	16.0	149.00	-359.7	1,951.6	626.4	567.9	58.51	10.706	
8,900.0	8,454.1	8,516.1	8,454.1	41.6	16.0	149.53	-359.7	1,951.6	635.4	576.3	59.07	10.757	
9,000.0	8,553.7	8,615.7	8,553.7	42.0	16.1	149.95	-359.7	1,951.6	642.8	583.3	59.59	10.788	
9,100.0	8,653.5	8,715.5	8,653.5	42.4	16.1	150.29	-359.7	1,951.6	648.8	588.8	60.07	10.801	
9,200.0	8,753.4	8,815.3	8,753.4	42.7	16.1	150.53	-359.7	1,951.6	653.3	592.8	60.51	10.796	
9,300.0	8,853.3	8,915.3	8,853.3	43.0	16.2	150.70	-359.7	1,951.6	656.3	595.4	60.90	10.776	
9,400.0	8,953.3	9,015.3	8,953.3	43.3	16.2	150.77	-359.7	1,951.6	657.8	596.5	61.22	10.744	
9,445.7	8,999.0	9,061.0	8,999.0	43.3	16.2	-118.09	-359.7	1,951.6	657.9	596.8	61.11	10.767	
9,500.0	9,053.3	9,115.3	9,053.3	43.3	16.2	-118.09	-359.7	1,951.6	657.9	596.8	61.12	10.763	
9,600.0	9,153.3	9,215.3	9,153.3	43.4	16.3	-118.09	-359.7	1,951.6	657.9	596.7	61.17	10.755	
9,700.0	9,253.3	9,315.3	9,253.3	43.4	16.3	-118.09	-359.7	1,951.6	657.9	596.7	61.22	10.747	
9,800.0	9,353.3	9,415.3	9,353.3	43.4	16.3	-118.09	-359.7	1,951.6	657.9	596.6	61.26	10.739	
9,900.0	9,453.3	9,515.3	9,453.3	43.4	16.4	-118.09	-359.7	1,951.6	657.9	596.6	61.31	10.731	
10,000.0	9,553.3	9,615.3	9,553.3	43.4	16.4	-118.09	-359.7	1,951.6	657.9	596.6	61.36	10.723	
10,100.0	9,653.3	9,715.3	9,653.3	43.5	16.5	-118.09	-359.7	1,951.6	657.9	596.5	61.40	10.715	
10,200.0	9,753.3	9,815.3	9,753.3	43.5	16.5	-118.09	-359.7	1,951.6	657.9	596.5	61.45	10.706	
10,300.0	9,853.3	9,915.3	9,853.3	43.5	16.5	-118.09	-359.7	1,951.6	657.9	596.4	61.50	10.698	
10,400.0	9,953.3	10,015.3	9,953.3	43.5	16.6	-118.09	-359.7	1,951.6	657.9	596.4	61.55	10.690	
10,500.0	10,053.3	10,115.3	10,053.3	43.5	16.6	-118.09	-359.7	1,951.6	657.9	596.3	61.60	10.681	
10,600.0	10,153.3	10,224.8	10,162.8	43.6	16.7	-118.07	-359.5	1,951.6	657.9	596.0	61.86	10.635	
10,662.2	10,215.5	10,354.9	10,291.3	43.6	16.8	-116.60	-340.8	1,951.4	653.7	590.3	63.41	10.309	
10,675.0	10,228.3	10,380.1	10,315.5	43.6	16.9	61.16	-333.8	1,951.4	652.0	587.9	64.15	10.165	
10,700.0	10,253.3	10,426.6	10,359.3	43.6	16.9	63.07	-318.2	1,951.3	647.7	583.0	64.67	10.016	
10,725.0	10,278.1	10,468.5	10,397.5	43.6	16.9	65.45	-301.1	1,951.2	642.1	577.0	65.12	9.861	
10,750.0	10,302.8	10,505.4	10,430.1	43.5	17.0	68.11	-283.8	1,951.1	635.7	570.2	65.51	9.704	
10,775.0	10,327.2	10,537.3	10,457.4	43.5	17.0	70.90	-267.1	1,951.0	628.7	562.9	65.83	9.551	
10,800.0	10,351.4	10,564.4	10,479.7	43.5	17.0	73.68	-251.8	1,950.9	621.4	555.3	66.08	9.404	
10,825.0	10,375.2	10,587.1	10,497.9	43.5	17.1	76.32	-238.2	1,950.8	614.0	547.8	66.26	9.267	
10,850.0	10,398.5	10,605.8	10,512.4	43.5	17.1	78.76	-226.5	1,950.7	606.9	540.5	66.38	9.143	
10,875.0	10,421.3	10,620.8	10,523.8	43.5	17.1	80.92	-216.7	1,950.6	600.1	533.6	66.42	9.035	
10,900.0	10,443.6	10,632.8	10,532.7	43.5	17.1	82.79	-208.7	1,950.6	593.8	527.4	66.38	8.945	
10,925.0	10,465.2	10,642.0	10,539.4	43.5	17.1	84.34	-202.4	1,950.5	588.3	522.0	66.28	8.876	
10,950.0	10,486.2	10,648.8	10,544.4	43.5	17.1	85.59	-197.6	1,950.5	583.5	517.4	66.09	8.828	
10,975.0	10,506.4	10,653.6	10,547.8	43.5	17.1	86.52	-194.3	1,950.5	579.6	513.8	65.83	8.804	
11,000.0	10,525.8	10,656.5	10,549.8	43.5	17.1	87.17	-192.2	1,950.5	576.7	511.2	65.50	8.805	
11,025.0	10,544.4	10,657.9	10,550.8	43.5	17.1	87.53	-191.3	1,950.5	574.8	509.7	65.10	8.829	
11,050.0	10,562.0	10,657.8	10,550.8	43.5	17.1	87.63	-191.3	1,950.5	573.9	509.3	64.64	8.879	
11,059.1	10,568.2	10,657.5	10,550.5	43.5	17.1	87.61	-191.5	1,950.5	573.8	509.4	64.45	8.903	
11,075.0	10,578.8	10,656.6	10,549.9	43.5	17.1	87.49	-192.2	1,950.5	574.0	509.9	64.12	8.953	
11,100.0	10,594.5	10,654.3	10,548.2	43.5	17.1	87.12	-193.8	1,950.5	575.2	511.6	63.55	9.051	
11,125.0	10,609.2	10,650.0	10,545.2	43.5	17.1	86.44	-196.8	1,950.5	577.4	514.4	62.92	9.176	
11,150.0	10,622.8	10,650.0	10,545.2	43.6	17.1	86.06	-196.8	1,950.5	580.5	518.1	62.40	9.303	
11,175.0	10,635.2	10,642.0	10,539.5	43.6	17.1	84.80	-202.3	1,950.5	584.5	522.9	61.67	9.479	
11,200.0	10,646.6	10,636.5	10,535.4	43.6	17.1	83.68	-206.1	1,950.6	589.4	528.4	61.01	9.661	

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 901H
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 901H	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		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)			
11,225.0	10,656.7	10,630.4	10,530.9	43.6	17.1	82.40	-210.3	1,950.6	595.1	534.8	60.35	9.861	
11,250.0	10,665.7	10,623.8	10,526.0	43.6	17.1	81.00	-214.7	1,950.6	601.6	541.9	59.71	10.075	
11,275.0	10,673.4	10,616.6	10,520.6	43.6	17.1	79.49	-219.4	1,950.7	608.7	549.6	59.08	10.302	
11,300.0	10,679.8	10,609.1	10,514.9	43.6	17.1	77.88	-224.3	1,950.7	616.3	557.9	58.48	10.540	
11,325.0	10,685.0	10,600.0	10,507.9	43.6	17.1	76.09	-230.1	1,950.7	624.5	566.6	57.87	10.792	
11,350.0	10,688.9	10,600.0	10,507.9	43.7	17.1	75.02	-230.1	1,950.7	633.2	575.6	57.56	11.000	
11,375.0	10,691.5	10,584.2	10,495.6	43.7	17.1	72.65	-240.0	1,950.8	642.1	585.3	56.85	11.296	
11,400.0	10,692.8	10,575.3	10,488.5	43.7	17.1	70.84	-245.4	1,950.8	651.4	595.0	56.37	11.555	
11,412.4	10,693.0	10,570.8	10,484.8	43.7	17.1	69.93	-248.1	1,950.8	656.1	599.9	56.15	11.683	
11,500.0	10,692.9	10,550.0	10,467.9	43.8	17.0	68.42	-260.1	1,950.9	693.1	638.1	54.98	12.607	
11,600.0	10,692.9	10,500.0	10,425.4	43.9	17.0	64.76	-286.4	1,951.1	743.6	690.5	53.03	14.022	
11,700.0	10,692.9	10,486.8	10,413.9	44.1	17.0	63.80	-292.7	1,951.1	801.4	749.2	52.23	15.343	
11,757.4	10,692.8	10,474.2	10,402.6	44.2	17.0	62.88	-298.6	1,951.2	837.7	786.0	51.72	16.198	
11,800.0	10,692.8	10,465.4	10,394.8	44.2	16.9	61.89	-302.4	1,951.2	866.1	814.7	51.39	16.853	
11,900.0	10,692.8	10,450.0	10,380.8	44.4	16.9	59.76	-309.0	1,951.2	937.8	886.9	50.86	18.437	
11,924.8	10,692.8	10,450.0	10,380.8	44.5	16.9	59.47	-309.0	1,951.2	956.6	905.7	50.82	18.821	

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 901H
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 901H	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			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	
2,800.0	2,723.3	2,764.9	2,774.3	11.4	6.9	-19.69	271.7	1,394.3	969.1	950.8	18.36	52.791	
2,900.0	2,816.2	2,856.0	2,863.0	11.9	7.1	-19.08	250.9	1,395.7	929.1	910.1	18.97	48.967	
3,000.0	2,909.1	2,947.2	2,951.8	12.3	7.2	-18.42	230.1	1,397.2	889.2	869.6	19.61	45.352	
3,100.0	3,001.9	3,038.4	3,040.6	12.8	7.3	-17.70	209.4	1,398.6	849.4	829.1	20.25	41.936	
3,200.0	3,094.8	3,129.5	3,129.3	13.2	7.4	-16.91	188.6	1,400.0	809.7	788.8	20.92	38.711	
3,300.0	3,187.7	3,220.7	3,218.1	13.7	7.5	-16.03	167.8	1,401.4	770.1	748.5	21.59	35.666	
3,400.0	3,280.6	3,311.9	3,306.8	14.2	7.7	-15.07	147.0	1,402.8	730.7	708.5	22.28	32.794	
3,500.0	3,373.5	3,403.1	3,395.6	14.7	7.8	-14.00	126.3	1,404.2	691.6	668.6	22.99	30.085	
3,600.0	3,466.4	3,494.2	3,484.4	15.1	7.9	-12.80	105.5	1,405.6	652.6	628.9	23.71	27.530	
3,700.0	3,559.3	3,585.4	3,573.1	15.6	8.1	-11.45	84.7	1,407.1	613.9	589.5	24.44	25.124	
3,800.0	3,652.1	3,676.6	3,661.9	16.1	8.2	-9.93	64.0	1,408.5	575.6	550.4	25.18	22.858	
3,900.0	3,745.0	3,767.7	3,750.7	16.6	8.4	-8.20	43.2	1,409.9	537.7	511.7	25.94	20.729	
4,000.0	3,837.9	3,858.9	3,839.4	17.1	8.5	-6.21	22.4	1,411.3	500.3	473.6	26.71	18.730	
4,100.0	3,930.8	3,950.1	3,928.2	17.6	8.7	-3.93	1.7	1,412.7	463.4	436.0	27.49	16.860	
4,200.0	4,023.7	4,041.3	4,016.9	18.1	8.8	-1.26	-19.1	1,414.1	427.4	399.1	28.27	15.118	
4,300.0	4,116.6	4,132.4	4,105.7	18.6	9.0	1.86	-39.9	1,415.5	392.4	363.3	29.06	13.505	
4,400.0	4,209.4	4,223.6	4,194.5	19.1	9.1	5.54	-60.7	1,417.0	358.6	328.8	29.83	12.024	
4,500.0	4,302.3	4,314.8	4,283.2	19.6	9.3	9.91	-81.4	1,418.4	326.6	296.0	30.56	10.686	
4,600.0	4,395.2	4,405.9	4,372.0	20.1	9.4	15.11	-102.2	1,419.8	296.7	265.5	31.22	9.504	
4,700.0	4,488.1	4,497.1	4,460.8	20.6	9.6	21.30	-123.0	1,421.2	269.9	238.1	31.76	8.497	
4,800.0	4,581.0	4,588.3	4,549.5	21.1	9.8	28.58	-143.7	1,422.6	247.0	214.9	32.09	7.695	
4,900.0	4,673.9	4,679.5	4,638.3	21.6	9.9	36.99	-164.5	1,424.0	229.2	197.0	32.14	7.130	
5,000.0	4,766.7	4,770.6	4,727.0	22.1	10.1	46.35	-185.3	1,425.5	217.8	185.9	31.88	6.831	
5,100.0	4,859.6	4,862.0	4,816.0	22.6	10.2	56.31	-206.1	1,426.9	213.8	182.4	31.37	6.814 ES, SF	
5,104.4	4,863.8	4,866.2	4,820.1	22.6	10.2	56.77	-207.0	1,426.9	213.8	182.4	31.35	6.820 CC	
5,200.0	4,952.5	4,956.7	4,908.4	23.1	10.4	66.57	-226.8	1,428.3	216.8	185.9	30.87	7.022	
5,300.0	5,045.4	5,051.9	5,001.6	23.6	10.6	76.30	-246.1	1,429.6	225.7	195.0	30.68	7.357	
5,400.0	5,138.3	5,147.6	5,095.7	24.2	10.7	85.22	-263.9	1,430.8	239.5	208.6	30.88	7.755	
5,500.0	5,231.2	5,243.8	5,190.4	24.7	10.9	93.20	-280.2	1,431.9	257.1	225.7	31.45	8.175	
5,600.0	5,324.0	5,340.4	5,285.9	25.2	11.1	100.26	-295.0	1,432.9	277.6	245.3	32.30	8.595	
5,700.0	5,416.9	5,437.4	5,382.0	25.7	11.2	106.47	-308.3	1,433.8	300.3	267.0	33.33	9.010	
5,800.0	5,509.8	5,534.7	5,478.6	26.2	11.4	111.97	-319.9	1,434.6	324.5	290.1	34.46	9.417	
5,900.0	5,602.7	5,632.2	5,575.6	26.7	11.6	116.86	-330.0	1,435.3	349.8	314.2	35.64	9.817	
6,000.0	5,695.6	5,730.0	5,673.0	27.2	11.7	121.25	-338.4	1,435.9	375.9	339.1	36.83	10.209	
6,100.0	5,788.5	5,827.9	5,770.6	27.8	11.9	125.24	-345.1	1,436.3	402.6	364.6	38.01	10.592	
6,200.0	5,881.3	5,925.9	5,868.5	28.3	12.0	128.89	-350.2	1,436.7	429.8	390.6	39.18	10.968	
6,300.0	5,974.2	6,023.9	5,966.4	28.8	12.2	132.27	-353.6	1,436.9	457.3	416.9	40.33	11.337	
6,400.0	6,067.1	6,121.8	6,064.4	29.3	12.3	135.42	-355.4	1,437.0	485.0	443.6	41.46	11.700	
6,500.0	6,160.0	6,217.5	6,160.0	29.8	12.3	138.29	-355.6	1,437.1	513.1	470.6	42.49	12.077	
6,600.0	6,252.9	6,310.4	6,252.9	30.4	12.4	140.83	-355.6	1,437.1	542.2	498.7	43.44	12.481	
6,700.0	6,345.8	6,403.2	6,345.8	30.9	12.4	143.11	-355.6	1,437.1	572.2	527.8	44.36	12.898	
6,800.0	6,438.7	6,496.1	6,438.7	31.4	12.5	145.18	-355.6	1,437.1	602.9	557.7	45.26	13.322	
6,900.0	6,531.5	6,589.0	6,531.5	31.9	12.5	147.05	-355.6	1,437.1	634.4	588.2	46.13	13.750	
7,000.0	6,624.4	6,681.9	6,624.4	32.5	12.6	148.75	-355.6	1,437.1	666.4	619.4	46.99	14.180	
7,100.0	6,717.3	6,774.8	6,717.3	33.0	12.6	150.30	-355.6	1,437.1	698.9	651.0	47.83	14.611	
7,200.0	6,810.2	6,867.7	6,810.2	33.5	12.7	151.71	-355.6	1,437.1	731.8	683.2	48.66	15.039	
7,271.2	6,876.3	6,933.8	6,876.3	33.9	12.7	152.65	-355.6	1,437.1	755.5	706.3	49.24	15.344	
7,300.0	6,903.1	6,960.6	6,903.1	34.0	12.7	153.05	-355.6	1,437.1	765.1	715.6	49.47	15.467	
7,400.0	6,996.5	7,054.0	6,996.5	34.5	12.8	154.35	-355.6	1,437.1	797.6	747.3	50.26	15.868	
7,500.0	7,090.5	7,147.9	7,090.5	35.1	12.8	155.50	-355.6	1,437.1	828.8	777.8	51.04	16.239	
7,600.0	7,185.1	7,242.5	7,185.1	35.6	12.9	156.52	-355.6	1,437.1	858.7	807.0	51.80	16.579	

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 901H
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 901H	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		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
7,700.0	7,280.2	7,337.6	7,280.2	36.1	12.9	157.42	-355.6	1,437.1	887.3	834.8		52.54	16.888
7,800.0	7,375.8	7,433.3	7,375.8	36.6	13.0	158.22	-355.6	1,437.1	914.5	861.2		53.27	17.167
7,900.0	7,472.0	7,529.4	7,472.0	37.1	13.0	158.94	-355.6	1,437.1	940.2	886.2		53.99	17.416
8,000.0	7,568.6	7,626.1	7,568.6	37.6	13.1	159.57	-355.6	1,437.1	964.5	909.8		54.69	17.636
8,100.0	7,665.6	7,723.1	7,665.6	38.1	13.1	160.14	-355.6	1,437.1	987.2	931.8		55.37	17.828

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 901H
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 901H	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		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
2,500.0	2,444.6	2,497.8	2,511.0	10.1	8.0	-18.16	253.7	1,306.0	986.4	968.8	17.50	56.353	
2,600.0	2,537.5	2,588.5	2,601.3	10.5	8.3	-18.52	247.2	1,301.5	944.7	926.5	18.17	51.995	
2,700.0	2,630.4	2,679.2	2,691.7	11.0	8.6	-18.92	240.7	1,297.0	903.0	884.2	18.85	47.912	
2,800.0	2,723.3	2,770.0	2,782.1	11.4	9.0	-19.36	234.3	1,292.4	861.4	841.9	19.54	44.086	
2,900.0	2,816.2	2,860.7	2,872.5	11.9	9.3	-19.84	227.8	1,287.9	819.9	799.7	20.24	40.501	
3,000.0	2,909.1	2,951.4	2,962.9	12.3	9.6	-20.37	221.3	1,283.3	778.4	757.4	20.96	37.141	
3,100.0	3,001.9	3,042.2	3,053.3	12.8	9.9	-20.97	214.8	1,278.8	737.0	715.3	21.68	33.989	
3,200.0	3,094.8	3,132.9	3,143.7	13.2	10.2	-21.63	208.3	1,274.3	695.6	673.2	22.42	31.032	
3,300.0	3,187.7	3,223.6	3,234.0	13.7	10.6	-22.37	201.9	1,269.7	654.3	631.2	23.16	28.255	
3,400.0	3,280.6	3,314.4	3,324.4	14.2	10.9	-23.22	195.4	1,265.2	613.2	589.2	23.91	25.646	
3,500.0	3,373.5	3,405.1	3,414.8	14.7	11.2	-24.18	188.9	1,260.7	572.1	547.4	24.67	23.194	
3,600.0	3,466.4	3,495.8	3,505.2	15.1	11.6	-25.29	182.4	1,256.1	531.2	505.8	25.43	20.889	
3,700.0	3,559.3	3,586.6	3,595.6	15.6	11.9	-26.58	176.0	1,251.6	490.5	464.3	26.20	18.722	
3,800.0	3,652.1	3,677.3	3,686.0	16.1	12.2	-28.11	169.5	1,247.1	450.1	423.1	26.98	16.685	
3,900.0	3,745.0	3,768.0	3,776.4	16.6	12.6	-29.92	163.0	1,242.5	410.0	382.2	27.75	14.772	
4,000.0	3,837.9	3,858.8	3,866.7	17.1	12.9	-32.12	156.5	1,238.0	370.3	341.8	28.53	12.979	
4,100.0	3,930.8	3,949.5	3,957.1	17.6	13.2	-34.83	150.0	1,233.5	331.2	301.9	29.30	11.304	
4,200.0	4,023.7	4,040.2	4,047.5	18.1	13.6	-38.23	143.6	1,228.9	292.9	262.9	30.05	9.749	
4,300.0	4,116.6	4,130.9	4,137.9	18.6	13.9	-42.58	137.1	1,224.4	255.8	225.0	30.74	8.320	
4,400.0	4,209.4	4,221.7	4,228.3	19.1	14.3	-48.28	130.6	1,219.8	220.5	189.1	31.34	7.034	
4,500.0	4,302.3	4,312.4	4,318.7	19.6	14.6	-55.89	124.1	1,215.3	187.9	156.2	31.75	5.919	
4,600.0	4,395.2	4,403.1	4,409.1	20.1	14.9	-66.10	117.7	1,210.8	159.9	128.1	31.80	5.027	
4,700.0	4,488.1	4,493.9	4,499.4	20.6	15.3	-79.44	111.2	1,206.2	139.1	107.7	31.35	4.437	
4,800.0	4,581.0	4,584.6	4,589.8	21.1	15.6	-95.53	104.7	1,201.7	129.1	98.5	30.60	4.219 SF	
4,825.8	4,605.0	4,608.0	4,613.2	21.2	15.7	-99.91	103.0	1,200.5	128.6	98.2	30.45	4.225 CC, ES	
4,900.0	4,673.9	4,675.3	4,680.2	21.6	16.0	-112.31	98.2	1,197.2	132.4	102.0	30.34	4.362	
5,000.0	4,766.7	4,766.1	4,770.6	22.1	16.3	-127.23	91.7	1,192.6	148.0	117.0	31.03	4.770	
5,100.0	4,859.6	4,856.8	4,861.0	22.6	16.7	-139.02	85.3	1,188.1	172.7	140.4	32.28	5.351	
5,200.0	4,952.5	4,947.5	4,951.4	23.1	17.0	-147.89	78.8	1,183.6	203.2	169.6	33.65	6.040	
5,300.0	5,045.4	5,037.9	5,041.4	23.6	17.3	-154.50	72.3	1,179.0	237.3	202.3	34.93	6.793	
5,400.0	5,138.3	5,126.2	5,129.1	24.2	17.7	-159.82	64.3	1,173.4	274.1	238.0	36.08	7.597	
5,500.0	5,231.2	5,212.5	5,214.6	24.7	18.1	-164.34	54.3	1,166.4	313.6	276.5	37.13	8.447	
5,600.0	5,324.0	5,298.5	5,299.4	25.2	18.5	-168.27	42.4	1,158.1	355.5	317.4	38.12	9.327	
5,700.0	5,416.9	5,386.4	5,385.9	25.7	18.8	-171.56	29.9	1,149.4	398.9	359.7	39.15	10.188	
5,800.0	5,509.8	5,474.3	5,472.5	26.2	19.2	-174.22	17.4	1,140.6	443.1	403.0	40.13	11.041	
5,900.0	5,602.7	5,562.2	5,559.0	26.7	19.6	-176.41	4.9	1,131.8	488.0	446.9	41.08	11.878	
6,000.0	5,695.6	5,650.1	5,645.6	27.2	20.0	-178.24	-7.6	1,123.1	533.4	491.3	42.01	12.696	
6,100.0	5,788.5	5,737.9	5,732.1	27.8	20.4	-179.78	-20.1	1,114.3	579.1	536.2	42.92	13.494	
6,200.0	5,881.3	5,825.8	5,818.7	28.3	20.8	-178.89	-32.6	1,105.6	625.2	581.3	43.81	14.270	
6,300.0	5,974.2	5,913.7	5,905.2	28.8	21.2	-177.75	-45.1	1,096.8	671.4	626.7	44.69	15.024	
6,400.0	6,067.1	6,001.6	5,991.8	29.3	21.5	-176.75	-57.6	1,088.1	717.9	672.3	45.56	15.756	
6,500.0	6,160.0	6,089.5	6,078.3	29.8	21.9	-175.87	-70.1	1,079.3	764.5	718.1	46.43	16.465	
6,600.0	6,252.9	6,177.4	6,164.9	30.4	22.3	-175.09	-82.6	1,070.6	811.3	764.0	47.29	17.154	
6,700.0	6,345.8	6,265.3	6,251.4	30.9	22.7	-174.39	-95.1	1,061.8	858.1	810.0	48.15	17.821	
6,800.0	6,438.7	6,353.2	6,338.0	31.4	23.1	-173.77	-107.6	1,053.1	905.0	856.0	49.01	18.468	
6,900.0	6,531.5	6,441.0	6,424.5	31.9	23.5	-173.20	-120.1	1,044.3	952.1	902.2	49.86	19.095	
7,000.0	6,624.4	6,528.9	6,511.1	32.5	23.9	-172.69	-132.6	1,035.6	999.1	948.4	50.71	19.704	

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 901H
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 901H	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)			
2,200.0	2,166.0	2,327.7	2,331.4	8.9	8.1	-16.99	226.8	1,199.2	994.9	978.0	16.86	59.001	
2,300.0	2,258.9	2,413.7	2,416.1	9.3	8.5	-17.22	217.5	1,186.8	944.1	926.6	17.54	53.824	
2,400.0	2,351.8	2,499.8	2,500.8	9.7	8.8	-17.49	208.2	1,174.4	893.4	875.1	18.24	48.984	
2,500.0	2,444.6	2,585.9	2,585.5	10.1	9.2	-17.78	198.8	1,161.9	842.6	823.7	18.95	44.461	
2,600.0	2,537.5	2,672.0	2,670.1	10.5	9.5	-18.11	189.5	1,149.5	791.9	772.2	19.68	40.238	
2,700.0	2,630.4	2,758.1	2,754.8	11.0	9.9	-18.48	180.2	1,137.1	741.2	720.8	20.42	36.293	
2,800.0	2,723.3	2,844.2	2,839.5	11.4	10.2	-18.91	170.8	1,124.7	690.6	669.4	21.18	32.608	
2,900.0	2,816.2	2,930.3	2,924.2	11.9	10.6	-19.41	161.5	1,112.2	639.9	618.0	21.94	29.163	
3,000.0	2,909.1	3,016.4	3,008.8	12.3	10.9	-19.99	152.2	1,099.8	589.3	566.6	22.72	25.941	
3,100.0	3,001.9	3,102.5	3,093.5	12.8	11.3	-20.69	142.8	1,087.4	538.8	515.3	23.50	22.924	
3,200.0	3,094.8	3,188.6	3,178.2	13.2	11.7	-21.52	133.5	1,074.9	488.3	464.0	24.30	20.099	
3,300.0	3,187.7	3,274.6	3,262.9	13.7	12.0	-22.55	124.2	1,062.5	438.0	412.9	25.10	17.451	
3,400.0	3,280.6	3,360.7	3,347.5	14.2	12.4	-23.84	114.8	1,050.1	387.7	361.8	25.90	14.968	
3,500.0	3,373.5	3,446.8	3,432.2	14.7	12.8	-25.50	105.5	1,037.7	337.7	311.0	26.71	12.642	
3,600.0	3,466.4	3,532.9	3,516.9	15.1	13.1	-27.74	96.2	1,025.2	287.9	260.4	27.52	10.464	
3,700.0	3,559.3	3,619.0	3,601.6	15.6	13.5	-30.88	86.9	1,012.8	238.7	210.4	28.30	8.434	
3,800.0	3,652.1	3,705.1	3,686.2	16.1	13.9	-35.60	77.5	1,000.4	190.2	161.2	29.01	6.557	
3,900.0	3,745.0	3,791.2	3,770.9	16.6	14.3	-43.28	68.2	987.9	143.5	114.0	29.50	4.863	
4,000.0	3,837.9	3,877.3	3,855.6	17.1	14.6	-57.17	58.9	975.5	100.9	71.6	29.23	3.450	
4,100.0	3,930.8	3,963.4	3,940.3	17.6	15.0	-83.63	49.5	963.1	70.2	43.5	26.67	2.633 Normal Operations	
4,151.2	3,978.4	4,007.5	3,983.7	17.8	15.2	-102.63	44.7	956.7	65.2	40.1	25.09	2.599 Normal Operations, CC, ES, SF	
4,200.0	4,023.7	4,049.5	4,024.9	18.1	15.4	-120.76	40.2	950.7	69.8	44.5	25.31	2.757 Normal Operations	
4,300.0	4,116.6	4,135.5	4,109.6	18.6	15.8	-147.61	30.9	938.2	99.9	71.3	28.65	3.487	
4,400.0	4,209.4	4,221.6	4,194.3	19.1	16.2	-161.73	21.5	925.8	142.4	111.2	31.18	4.566	
4,500.0	4,302.3	4,307.7	4,279.0	19.6	16.5	-169.51	12.2	913.4	189.0	156.2	32.85	5.754	
4,600.0	4,395.2	4,393.8	4,363.7	20.1	16.9	-174.27	2.9	901.0	237.4	203.3	34.15	6.953	
4,700.0	4,488.1	4,479.9	4,448.3	20.6	17.3	-177.45	-6.5	888.5	286.7	251.4	35.26	8.130	
4,800.0	4,581.0	4,566.0	4,533.0	21.1	17.7	-179.70	-15.8	876.1	336.5	300.2	36.29	9.272	
4,900.0	4,673.9	4,652.1	4,617.7	21.6	18.1	-178.62	-25.1	863.7	386.5	349.2	37.26	10.374	
5,000.0	4,766.7	4,738.2	4,702.4	22.1	18.5	-177.32	-34.5	851.2	436.7	398.5	38.19	11.434	
5,100.0	4,859.6	4,824.3	4,787.0	22.6	18.8	-176.29	-43.8	838.8	487.1	448.0	39.11	12.454	
5,200.0	4,952.5	4,910.4	4,871.7	23.1	19.2	-175.45	-53.1	826.4	537.6	497.5	40.01	13.434	
5,300.0	5,045.4	4,996.4	4,956.4	23.6	19.6	-174.76	-62.4	814.0	588.1	547.2	40.91	14.376	
5,400.0	5,138.3	5,082.5	5,041.1	24.2	20.0	-174.17	-71.8	801.5	638.7	596.9	41.79	15.281	
5,500.0	5,231.2	5,168.6	5,125.7	24.7	20.4	-173.67	-81.1	789.1	689.3	646.6	42.68	16.152	
5,600.0	5,324.0	5,254.7	5,210.4	25.2	20.8	-173.24	-90.4	776.7	740.0	696.4	43.55	16.990	
5,700.0	5,416.9	5,340.8	5,295.1	25.7	21.2	-172.86	-99.8	764.2	790.7	746.2	44.43	17.796	
5,800.0	5,509.8	5,426.9	5,379.8	26.2	21.5	-172.53	-109.1	751.8	841.4	796.1	45.30	18.572	
5,900.0	5,602.7	5,513.0	5,464.4	26.7	21.9	-172.24	-118.4	739.4	892.1	845.9	46.18	19.319	
6,000.0	5,695.6	5,599.1	5,549.1	27.2	22.3	-171.98	-127.8	727.0	942.9	895.8	47.05	20.040	
6,100.0	5,788.5	5,685.2	5,633.8	27.8	22.7	-171.74	-137.1	714.5	993.6	945.7	47.92	20.735	

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 901H
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 901H	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	-0.6	-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	
999.0	999.0	981.0	999.0	3.8	3.9	-90.11	-0.6	-320.6	320.6	312.6	8.02	39.969 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	178.76	-0.6	-320.6	320.6	312.6	8.02	39.957	
1,100.0	1,100.0	1,085.3	1,103.3	5.2	4.1	178.61	-1.5	-320.2	322.0	312.2	9.71	33.166 ES	
1,200.0	1,199.8	1,189.3	1,207.2	5.5	4.3	178.05	-4.8	-318.4	325.6	315.4	10.14	32.094	
1,300.0	1,299.4	1,293.0	1,310.7	5.7	4.6	177.09	-10.5	-315.3	331.5	320.9	10.59	31.293	
1,400.0	1,398.7	1,396.3	1,413.6	6.0	4.9	175.78	-18.8	-311.0	339.8	328.7	11.06	30.725	
1,500.0	1,497.5	1,499.1	1,515.7	6.3	5.2	174.16	-29.4	-305.3	350.6	339.1	11.54	30.376	
1,600.0	1,595.6	1,601.2	1,616.8	6.7	5.5	172.31	-42.3	-298.4	364.2	352.1	12.04	30.235 SF	
1,700.0	1,693.0	1,701.4	1,715.5	7.0	5.7	170.32	-57.2	-290.5	380.6	368.1	12.50	30.459	
1,800.0	1,789.6	1,798.7	1,811.3	7.4	6.0	168.54	-72.1	-282.6	400.6	387.6	13.02	30.757	
1,900.0	1,885.2	1,895.3	1,906.5	7.8	6.4	166.99	-86.9	-274.7	424.2	410.6	13.57	31.263	
2,000.0	1,979.8	1,991.2	2,000.9	8.2	6.7	165.68	-101.6	-266.9	451.3	437.2	14.13	31.942	
2,086.3	2,060.4	2,073.2	2,081.6	8.5	7.0	164.72	-114.2	-260.2	477.4	462.8	14.59	32.712	
2,100.0	2,073.1	2,086.2	2,094.4	8.5	7.0	164.61	-116.2	-259.2	481.8	467.1	14.66	32.862	
2,200.0	2,166.0	2,180.8	2,187.6	8.9	7.4	163.82	-130.7	-251.5	513.5	498.3	15.23	33.723	
2,300.0	2,258.9	2,275.4	2,280.7	9.3	7.8	163.13	-145.2	-243.7	545.4	529.6	15.78	34.553	
2,400.0	2,351.8	2,370.0	2,373.9	9.7	8.1	162.52	-159.7	-236.0	577.2	560.9	16.35	35.296	
2,500.0	2,444.6	2,464.6	2,467.1	10.1	8.5	161.97	-174.2	-228.3	609.2	592.3	16.94	35.959	
2,600.0	2,537.5	2,559.2	2,560.2	10.5	8.9	161.47	-188.7	-220.6	641.2	623.6	17.54	36.552	
2,700.0	2,630.4	2,653.8	2,653.4	11.0	9.3	161.02	-203.2	-212.9	673.2	655.1	18.15	37.084	
2,800.0	2,723.3	2,748.4	2,746.6	11.4	9.6	160.61	-217.7	-205.2	705.3	686.5	18.78	37.561	
2,900.0	2,816.2	2,843.0	2,839.7	11.9	10.0	160.24	-232.2	-197.5	737.4	718.0	19.41	37.990	
3,000.0	2,909.1	2,937.6	2,932.9	12.3	10.4	159.90	-246.7	-189.8	769.5	749.5	20.04	38.394	
3,100.0	3,001.9	3,031.5	3,025.4	12.8	10.8	159.60	-261.0	-182.2	801.7	781.0	20.67	38.790	
3,200.0	3,094.8	3,124.9	3,117.6	13.2	11.2	159.37	-274.6	-174.9	834.0	812.7	21.32	39.111	
3,300.0	3,187.7	3,218.3	3,209.8	13.7	11.6	159.22	-287.5	-168.1	866.4	844.5	21.99	39.409	
3,400.0	3,280.6	3,311.7	3,302.1	14.2	12.0	159.12	-299.7	-161.6	899.0	876.4	22.66	39.682	
3,500.0	3,373.5	3,404.9	3,394.5	14.7	12.3	159.08	-311.3	-155.4	931.7	908.4	23.33	39.935	
3,600.0	3,466.4	3,498.1	3,486.8	15.1	12.7	159.09	-322.2	-149.6	964.6	940.6	24.01	40.169	
3,700.0	3,559.3	3,591.2	3,579.2	15.6	13.1	159.15	-332.4	-144.2	997.5	972.8	24.70	40.386	

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 901H
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 901H	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		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	-90.12	-0.7	-350.6	351.1				
100.0	100.0	82.0	100.0	0.8	1.0	-90.12	-0.7	-350.6	350.6	348.4	2.23	157.333	
200.0	200.0	182.0	200.0	1.4	1.6	-90.12	-0.7	-350.6	350.6	347.1	3.50	100.072	
300.0	300.0	282.0	300.0	1.9	2.0	-90.12	-0.7	-350.6	350.6	346.3	4.35	80.636	
400.0	400.0	382.0	400.0	2.2	2.4	-90.12	-0.7	-350.6	350.6	345.6	5.04	69.531	
500.0	500.0	482.0	500.0	2.6	2.7	-90.12	-0.7	-350.6	350.6	345.0	5.65	62.067	
600.0	600.0	582.0	600.0	2.8	2.9	-90.12	-0.7	-350.6	350.6	344.4	6.20	56.591	
700.0	700.0	682.0	700.0	3.1	3.2	-90.12	-0.7	-350.6	350.6	343.9	6.70	52.342	
800.0	800.0	782.0	800.0	3.3	3.4	-90.12	-0.7	-350.6	350.6	343.4	7.17	48.918	
900.0	900.0	882.0	900.0	3.6	3.7	-90.12	-0.7	-350.6	350.6	343.0	7.61	46.078	
999.0	999.0	981.0	999.0	3.8	3.9	-90.12	-0.7	-350.6	350.6	342.6	8.02	43.709 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	178.75	-0.7	-350.6	350.6	342.6	8.02	43.696 ES	
1,100.0	1,100.0	1,082.0	1,100.0	5.2	4.1	178.76	-0.7	-350.6	352.4	342.7	9.71	36.306	
1,200.0	1,199.8	1,181.8	1,199.8	5.5	4.3	178.77	-0.7	-350.6	357.7	347.5	10.15	35.232	
1,300.0	1,299.4	1,281.4	1,299.4	5.7	4.4	178.80	-0.7	-350.6	366.4	355.8	10.61	34.540	
1,400.0	1,398.7	1,380.7	1,398.7	6.0	4.6	178.83	-0.7	-350.6	378.6	367.5	11.08	34.172	
1,500.0	1,497.5	1,479.5	1,497.5	6.3	4.8	178.87	-0.7	-350.6	394.3	382.7	11.57	34.084 SF	
1,600.0	1,595.6	1,577.6	1,595.6	6.7	5.0	178.92	-0.7	-350.6	413.4	401.3	12.07	34.237	
1,700.0	1,693.0	1,675.0	1,693.0	7.0	5.1	178.97	-0.7	-350.6	435.9	423.3	12.60	34.600	
1,800.0	1,789.6	1,771.6	1,789.6	7.4	5.3	179.02	-0.7	-350.6	461.8	448.7	13.14	35.145	
1,900.0	1,885.2	1,867.2	1,885.2	7.8	5.4	179.06	-0.7	-350.6	491.1	477.4	13.70	35.851	
2,000.0	1,979.8	1,961.8	1,979.8	8.2	5.6	179.11	-0.7	-350.6	523.7	509.4	14.27	36.696	
2,086.3	2,060.4	2,042.4	2,060.4	8.5	5.7	179.15	-0.7	-350.6	554.4	539.7	14.74	37.602	
2,100.0	2,073.1	2,055.1	2,073.1	8.5	5.7	179.16	-0.7	-350.6	559.5	544.7	14.81	37.775	
2,200.0	2,166.0	2,148.0	2,166.0	8.9	5.9	179.21	-0.7	-350.6	596.6	581.2	15.38	38.794	
2,300.0	2,258.9	2,240.9	2,258.9	9.3	6.0	179.26	-0.7	-350.6	633.6	617.7	15.93	39.771	
2,400.0	2,351.8	2,333.8	2,351.8	9.7	6.1	179.30	-0.7	-350.6	670.7	654.2	16.50	40.643	
2,500.0	2,444.6	2,426.6	2,444.6	10.1	6.3	179.33	-0.7	-350.6	707.7	690.6	17.08	41.424	
2,600.0	2,537.5	2,517.7	2,535.7	10.5	6.4	179.36	-0.7	-350.6	744.8	727.0	17.76	41.936	
2,700.0	2,630.4	2,600.0	2,618.0	11.0	6.5	179.31	-1.8	-351.3	782.6	764.3	18.32	42.720	
2,800.0	2,723.3	2,684.0	2,701.9	11.4	6.6	179.14	-4.4	-353.0	821.5	802.6	18.88	43.512	
2,900.0	2,816.2	2,765.8	2,783.6	11.9	6.8	178.87	-8.5	-355.6	861.5	842.1	19.44	44.320	
3,000.0	2,909.1	2,846.6	2,864.1	12.3	6.9	178.54	-13.9	-359.2	902.6	882.6	20.00	45.131	
3,100.0	3,001.9	2,926.4	2,943.5	12.8	7.0	178.13	-20.6	-363.6	944.7	924.2	20.56	45.950	
3,200.0	3,094.8	3,000.0	3,016.6	13.2	7.2	177.71	-28.1	-368.4	988.0	966.9	21.09	46.849	

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 901H
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 901H	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	-90.11	-0.7	-380.6	381.0				
100.0	100.0	82.0	100.0	0.8	1.0	-90.11	-0.7	-380.6	380.6	378.4	2.23	170.796	
200.0	200.0	182.0	200.0	1.4	1.6	-90.11	-0.7	-380.6	380.6	377.1	3.50	108.635	
300.0	300.0	282.0	300.0	1.9	2.0	-90.11	-0.7	-380.6	380.6	376.3	4.35	87.536	
400.0	400.0	382.0	400.0	2.2	2.4	-90.11	-0.7	-380.6	380.6	375.6	5.04	75.481	
500.0	500.0	482.0	500.0	2.6	2.7	-90.11	-0.7	-380.6	380.6	375.0	5.65	67.378	
600.0	600.0	582.0	600.0	2.8	2.9	-90.11	-0.7	-380.6	380.6	374.4	6.20	61.433	
700.0	700.0	682.0	700.0	3.1	3.2	-90.11	-0.7	-380.6	380.6	373.9	6.70	56.821	
800.0	800.0	782.0	800.0	3.3	3.4	-90.11	-0.7	-380.6	380.6	373.4	7.17	53.104	
900.0	900.0	882.0	900.0	3.6	3.7	-90.11	-0.7	-380.6	380.6	373.0	7.61	50.021	
999.0	999.0	981.0	999.0	3.8	3.9	-90.11	-0.7	-380.6	380.6	372.6	8.02	47.449 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	178.76	-0.7	-380.6	380.6	372.6	8.02	47.435 ES	
1,100.0	1,100.0	1,075.4	1,093.4	5.2	4.1	178.71	-1.1	-381.3	383.1	373.4	9.71	39.450	
1,200.0	1,199.8	1,166.9	1,184.8	5.5	4.3	178.52	-2.5	-383.8	391.1	381.0	10.16	38.497	
1,300.0	1,299.4	1,257.6	1,275.4	5.7	4.5	178.19	-4.9	-388.2	404.7	394.1	10.63	38.089 SF	
1,400.0	1,398.7	1,347.2	1,364.7	6.0	4.8	177.76	-8.4	-394.4	423.8	412.7	11.12	38.130	
1,500.0	1,497.5	1,435.1	1,452.2	6.3	5.0	177.25	-12.7	-402.3	448.4	436.8	11.63	38.559	
1,600.0	1,595.6	1,521.1	1,537.5	6.7	5.3	176.70	-17.9	-411.6	478.3	466.1	12.17	39.313	
1,700.0	1,693.0	1,605.5	1,621.0	7.0	5.5	176.11	-23.9	-422.5	513.4	500.7	12.72	40.346	
1,800.0	1,789.6	1,697.4	1,711.7	7.4	5.8	175.51	-30.9	-435.1	552.6	539.2	13.34	41.422	
1,900.0	1,885.2	1,787.9	1,801.1	7.8	6.1	175.00	-37.8	-447.4	595.0	581.0	13.98	42.545	
2,000.0	1,979.8	1,876.8	1,889.0	8.2	6.4	174.56	-44.5	-459.6	640.5	625.8	14.65	43.709	
2,086.3	2,060.4	1,952.3	1,963.5	8.5	6.6	174.23	-50.2	-469.9	682.3	667.0	15.22	44.814	
2,100.0	2,073.1	1,964.2	1,975.2	8.5	6.7	174.20	-51.1	-471.6	689.1	673.8	15.31	45.013	
2,200.0	2,166.0	2,050.9	2,060.9	8.9	7.0	173.98	-57.7	-483.4	738.8	722.8	15.98	46.241	
2,300.0	2,258.9	2,137.6	2,146.6	9.3	7.3	173.78	-64.3	-495.3	788.5	771.9	16.64	47.375	
2,400.0	2,351.8	2,224.4	2,232.2	9.7	7.6	173.61	-70.9	-507.2	838.3	820.9	17.33	48.367	
2,500.0	2,444.6	2,311.1	2,317.9	10.1	7.9	173.46	-77.5	-519.0	888.0	870.0	18.04	49.236	
2,600.0	2,537.5	2,397.8	2,403.5	10.5	8.3	173.33	-84.0	-530.9	937.8	919.0	18.76	49.998	
2,700.0	2,630.4	2,484.6	2,489.2	11.0	8.6	173.21	-90.6	-542.8	987.5	968.0	19.49	50.666	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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	-90.10	-0.7	-410.6	411.0				
100.0	100.0	82.0	100.0	0.8	1.0	-90.10	-0.7	-410.6	410.6	408.4	2.23	184.258	
200.0	200.0	182.0	200.0	1.4	1.6	-90.10	-0.7	-410.6	410.6	407.1	3.50	117.197	
300.0	300.0	282.0	300.0	1.9	2.0	-90.10	-0.7	-410.6	410.6	406.3	4.35	94.436	
400.0	400.0	382.0	400.0	2.2	2.4	-90.10	-0.7	-410.6	410.6	405.6	5.04	81.430	
500.0	500.0	482.0	500.0	2.6	2.7	-90.10	-0.7	-410.6	410.6	405.0	5.65	72.689	
600.0	600.0	582.0	600.0	2.8	2.9	-90.10	-0.7	-410.6	410.6	404.4	6.20	66.275	
700.0	700.0	682.0	700.0	3.1	3.2	-90.10	-0.7	-410.6	410.6	403.9	6.70	61.300	
800.0	800.0	782.0	800.0	3.3	3.4	-90.10	-0.7	-410.6	410.6	403.4	7.17	57.289	
900.0	900.0	882.0	900.0	3.6	3.7	-90.10	-0.7	-410.6	410.6	403.0	7.61	53.963	
999.0	999.0	981.0	999.0	3.8	3.9	-90.10	-0.7	-410.6	410.6	402.6	8.02	51.189 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	178.77	-0.7	-410.6	410.6	402.6	8.02	51.174 ES	
1,100.0	1,100.0	1,074.4	1,092.4	5.2	4.1	178.74	-0.9	-411.3	413.1	403.4	9.71	42.531	
1,200.0	1,199.8	1,164.7	1,182.6	5.5	4.3	178.63	-1.9	-414.0	421.4	411.2	10.17	41.440	
1,300.0	1,299.4	1,254.2	1,272.0	5.7	4.5	178.43	-3.5	-418.6	435.3	424.6	10.64	40.911	
1,400.0	1,398.7	1,342.5	1,360.0	6.0	4.8	178.18	-5.7	-425.1	454.8	443.7	11.13	40.845 SF	
1,500.0	1,497.5	1,429.2	1,446.3	6.3	5.0	177.87	-8.6	-433.4	479.9	468.2	11.65	41.178	
1,600.0	1,595.6	1,513.9	1,530.4	6.7	5.2	177.54	-11.9	-443.2	510.3	498.1	12.20	41.846	
1,700.0	1,693.0	1,600.0	1,615.5	7.0	5.5	177.17	-16.0	-455.1	546.1	533.3	12.78	42.736	
1,800.0	1,789.6	1,676.3	1,690.7	7.4	5.8	176.82	-20.1	-467.1	587.0	573.6	13.34	44.007	
1,900.0	1,885.2	1,753.3	1,766.4	7.8	6.0	176.45	-24.8	-480.6	632.7	618.8	13.93	45.426	
2,000.0	1,979.8	1,832.0	1,843.5	8.2	6.3	176.08	-30.1	-495.8	683.2	668.6	14.55	46.937	
2,086.3	2,060.4	1,904.9	1,914.7	8.5	6.6	175.77	-35.0	-510.1	729.3	714.2	15.13	48.218	
2,100.0	2,073.1	1,916.3	1,926.0	8.5	6.6	175.73	-35.8	-512.4	736.8	721.6	15.21	48.439	
2,200.0	2,166.0	2,000.0	2,007.7	8.9	6.9	175.51	-41.4	-528.8	791.6	775.7	15.88	49.846	
2,300.0	2,258.9	2,083.6	2,089.5	9.3	7.2	175.31	-47.1	-545.3	846.4	829.9	16.55	51.130	
2,400.0	2,351.8	2,167.2	2,171.3	9.7	7.5	175.14	-52.7	-561.7	901.2	884.0	17.25	52.250	
2,500.0	2,444.6	2,250.8	2,253.1	10.1	7.9	174.99	-58.4	-578.2	956.0	938.0	17.96	53.228	

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 901H
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 901H	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		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	-90.09	-0.7	-440.6	441.0				
100.0	100.0	82.0	100.0	0.8	1.0	-90.09	-0.7	-440.6	440.6	438.4	2.23	197.720	
200.0	200.0	182.0	200.0	1.4	1.6	-90.09	-0.7	-440.6	440.6	437.1	3.50	125.760	
300.0	300.0	282.0	300.0	1.9	2.0	-90.09	-0.7	-440.6	440.6	436.3	4.35	101.335	
400.0	400.0	382.0	400.0	2.2	2.4	-90.09	-0.7	-440.6	440.6	435.6	5.04	87.380	
500.0	500.0	482.0	500.0	2.6	2.7	-90.09	-0.7	-440.6	440.6	435.0	5.65	78.000	
600.0	600.0	582.0	600.0	2.8	2.9	-90.09	-0.7	-440.6	440.6	434.4	6.20	71.117	
700.0	700.0	682.0	700.0	3.1	3.2	-90.09	-0.7	-440.6	440.6	433.9	6.70	65.779	
800.0	800.0	782.0	800.0	3.3	3.4	-90.09	-0.7	-440.6	440.6	433.4	7.17	61.475	
900.0	900.0	882.0	900.0	3.6	3.7	-90.09	-0.7	-440.6	440.6	433.0	7.61	57.906	
999.0	999.0	981.0	999.0	3.8	3.9	-90.09	-0.7	-440.6	440.6	432.6	8.02	54.929 CC	
1,000.0	1,000.0	982.0	1,000.0	3.8	3.9	178.78	-0.7	-440.6	440.6	432.6	8.02	54.913 ES	
1,100.0	1,100.0	1,073.7	1,091.7	5.2	4.1	178.75	-0.9	-441.3	443.1	433.4	9.71	45.625	
1,200.0	1,199.8	1,163.2	1,181.2	5.5	4.3	178.67	-1.6	-444.0	451.4	441.2	10.16	44.435	
1,300.0	1,299.4	1,252.0	1,269.8	5.7	4.5	178.54	-2.9	-448.6	465.4	454.8	10.61	43.864	
1,400.0	1,398.7	1,339.5	1,357.0	6.0	4.7	178.35	-4.6	-455.2	485.0	473.9	11.07	43.810 SF	
1,500.0	1,497.5	1,425.4	1,442.5	6.3	4.8	178.13	-6.8	-463.5	510.2	498.6	11.54	44.198	
1,600.0	1,595.6	1,509.4	1,525.8	6.7	5.0	177.88	-9.5	-473.4	540.7	528.7	12.02	44.973	
1,700.0	1,693.0	1,591.1	1,606.7	7.0	5.2	177.62	-12.5	-484.7	576.6	564.1	12.51	46.076	
1,800.0	1,789.6	1,670.2	1,684.8	7.4	5.4	177.35	-15.9	-497.3	617.6	604.6	13.01	47.465	
1,900.0	1,885.2	1,746.5	1,759.8	7.8	5.5	177.08	-19.5	-510.8	663.5	650.0	13.51	49.101	
2,000.0	1,979.8	1,819.9	1,831.6	8.2	5.7	176.80	-23.4	-525.3	714.2	700.2	14.02	50.954	
2,086.3	2,060.4	1,880.5	1,890.8	8.5	5.8	176.57	-26.9	-538.2	761.5	747.1	14.43	52.790	
2,100.0	2,073.1	1,890.0	1,899.9	8.5	5.8	176.55	-27.4	-540.3	769.3	754.8	14.48	53.116	
2,200.0	2,166.0	1,957.8	1,965.8	8.9	5.9	176.36	-31.6	-556.0	827.0	812.1	14.91	55.456	
2,300.0	2,258.9	2,033.9	2,039.5	9.3	6.0	176.16	-36.6	-574.6	885.8	870.4	15.38	57.586	
2,400.0	2,351.8	2,114.7	2,117.6	9.7	6.2	175.97	-41.9	-594.4	944.6	928.7	15.92	59.324	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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)			
4,800.0	4,581.0	4,581.3	4,587.9	21.1	16.6	-16.12	213.5	2,171.4	991.3	953.6	37.64	26.338	
4,900.0	4,673.9	4,673.5	4,680.2	21.6	16.9	-16.69	212.7	2,171.0	954.9	916.4	38.45	24.838	
5,000.0	4,766.7	4,766.5	4,773.1	22.1	17.2	-17.29	211.6	2,170.6	918.6	879.4	39.25	23.405	
5,100.0	4,859.6	4,856.6	4,863.2	22.6	17.5	-17.90	210.4	2,170.4	882.5	842.4	40.07	22.025	
5,200.0	4,952.5	4,947.0	4,953.6	23.1	17.8	-18.53	208.8	2,170.6	846.9	806.0	40.89	20.712	
5,300.0	5,045.4	5,040.7	5,047.4	23.6	18.2	-19.21	206.8	2,171.1	811.4	769.7	41.68	19.466	
5,400.0	5,138.3	5,135.8	5,142.4	24.2	18.5	-19.96	204.7	2,171.3	775.9	733.4	42.47	18.269	
5,500.0	5,231.2	5,230.3	5,236.8	24.7	18.8	-20.77	202.4	2,171.4	740.2	697.0	43.25	17.116	
5,600.0	5,324.0	5,325.0	5,331.6	25.2	19.1	-21.68	200.2	2,171.2	704.5	660.5	44.02	16.006	
5,700.0	5,416.9	5,418.6	5,425.1	25.7	19.5	-22.69	198.1	2,170.8	668.8	624.0	44.78	14.933	
5,800.0	5,509.8	5,510.5	5,517.0	26.2	19.8	-23.81	196.3	2,170.3	633.2	587.7	45.56	13.900	
5,900.0	5,602.7	5,601.2	5,607.7	26.7	20.1	-25.06	194.7	2,170.0	598.2	551.8	46.33	12.910	
6,000.0	5,695.6	5,693.6	5,700.0	27.2	20.4	-26.49	193.2	2,169.8	563.6	516.5	47.07	11.972	
6,100.0	5,788.5	5,785.8	5,792.3	27.8	20.7	-28.09	191.8	2,169.7	529.4	481.6	47.80	11.077	
6,200.0	5,881.3	5,878.9	5,885.3	28.3	21.1	-29.90	190.1	2,169.7	495.8	447.3	48.48	10.225	
6,300.0	5,974.2	5,971.4	5,977.9	28.8	21.4	-31.94	188.4	2,169.8	462.6	413.5	49.15	9.413	
6,400.0	6,067.1	6,064.1	6,070.5	29.3	21.7	-34.26	186.6	2,170.0	430.2	380.4	49.77	8.643	
6,500.0	6,160.0	6,156.6	6,163.0	29.8	22.0	-36.94	184.8	2,170.3	398.6	348.2	50.34	7.917	
6,600.0	6,252.9	6,249.5	6,255.9	30.4	22.3	-40.06	183.1	2,170.7	368.0	317.2	50.84	7.239	
6,700.0	6,345.8	6,342.7	6,349.0	30.9	22.7	-43.66	181.1	2,171.1	338.6	287.4	51.25	6.607	
6,800.0	6,438.7	6,435.1	6,441.4	31.4	23.0	-47.83	179.1	2,171.8	310.8	259.3	51.58	6.026	
6,900.0	6,531.5	6,527.2	6,533.5	31.9	23.3	-52.65	177.2	2,172.8	285.3	233.5	51.81	5.508	
7,000.0	6,624.4	6,620.4	6,626.7	32.5	23.6	-58.45	175.8	2,173.6	262.6	210.8	51.84	5.066	
7,100.0	6,717.3	6,712.0	6,718.3	33.0	23.7	-65.14	174.7	2,174.2	243.3	191.7	51.65	4.711	
7,200.0	6,810.2	6,821.0	6,826.7	33.5	23.8	-76.61	174.3	2,164.4	226.3	175.5	50.77	4.458	
7,271.2	6,876.3	6,888.9	6,891.9	33.9	23.8	-87.27	172.7	2,145.9	216.3	165.7	50.62	4.274	
7,300.0	6,903.1	6,911.7	6,913.1	34.0	23.8	-91.36	171.9	2,137.7	214.3	163.5	50.78	4.220	
7,318.0	6,919.9	6,924.6	6,925.0	34.1	23.8	-93.78	171.4	2,132.6	213.9	163.0	50.91	4.202 CC, ES, SF	
7,400.0	6,996.5	6,975.4	6,970.3	34.5	23.9	-103.79	169.5	2,109.8	222.5	171.4	51.07	4.356	
7,500.0	7,090.5	7,023.0	7,010.5	35.1	23.9	-113.45	168.2	2,084.5	256.3	206.9	49.44	5.185	
7,600.0	7,185.1	7,059.9	7,039.7	35.6	23.9	-120.86	167.5	2,061.8	311.0	264.6	46.47	6.693	
7,700.0	7,280.2	7,085.0	7,058.1	36.1	23.9	-125.95	167.0	2,044.9	379.5	336.4	43.09	8.807	
7,800.0	7,375.8	7,117.0	7,079.9	36.6	24.0	-131.85	166.3	2,021.5	456.6	415.6	40.99	11.137	
7,900.0	7,472.0	7,129.5	7,087.9	37.1	24.0	-134.65	166.0	2,011.9	538.9	500.5	38.38	14.042	
8,000.0	7,568.6	7,148.0	7,099.1	37.6	24.0	-138.18	165.6	1,997.1	624.8	588.0	36.75	17.000	
8,100.0	7,665.6	7,148.0	7,099.1	38.1	24.0	-139.43	165.6	1,997.1	713.3	678.5	34.76	20.522	
8,200.0	7,763.1	7,179.0	7,116.0	38.6	24.1	-143.95	165.2	1,971.2	803.3	768.9	34.43	23.331	
8,300.0	7,860.9	7,179.0	7,116.0	39.0	24.1	-145.22	165.2	1,971.2	894.3	861.1	33.16	26.970	
8,400.0	7,959.1	7,179.0	7,116.0	39.5	24.1	-146.56	165.2	1,971.2	986.5	954.3	32.20	30.638	

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 901H
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 901H	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 - PUDGE FEDERAL 21H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 7670-r:5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,500.0	4,302.3	4,311.6	4,305.0	19.6	4.3	-11.40	138.1	2,056.3	971.6	943.3	28.29	34.339	
4,600.0	4,395.2	4,405.6	4,399.0	20.1	4.4	-11.78	137.0	2,056.2	934.9	906.0	28.97	32.269	
4,700.0	4,488.1	4,500.0	4,493.5	20.6	4.4	-12.20	135.9	2,055.9	898.1	868.5	29.65	30.293	
4,800.0	4,581.0	4,592.0	4,585.4	21.1	4.5	-12.64	134.8	2,055.6	861.3	831.0	30.34	28.385	
4,900.0	4,673.9	4,683.9	4,677.4	21.6	4.6	-13.13	133.7	2,055.3	824.6	793.5	31.04	26.563	
5,000.0	4,766.7	4,778.3	4,771.7	22.1	4.6	-13.65	132.4	2,055.0	787.9	756.2	31.71	24.843	
5,100.0	4,859.6	4,870.4	4,863.8	22.6	4.7	-14.20	130.9	2,054.7	751.2	718.8	32.41	23.178	
5,200.0	4,952.5	4,963.9	4,957.3	23.1	4.8	-14.77	129.0	2,054.4	714.4	681.3	33.09	21.592	
5,300.0	5,045.4	5,055.5	5,048.8	23.6	4.9	-15.41	127.3	2,054.6	678.3	644.5	33.79	20.075	
5,400.0	5,138.3	5,151.4	5,144.8	24.2	4.9	-16.26	126.7	2,054.0	641.7	607.3	34.42	18.647	
5,500.0	5,231.2	5,246.3	5,239.7	24.7	5.0	-17.20	125.8	2,053.1	605.0	569.9	35.05	17.262	
5,600.0	5,324.0	5,338.2	5,331.6	25.2	5.1	-18.21	124.7	2,052.1	568.2	532.4	35.72	15.905	
5,700.0	5,416.9	5,433.1	5,426.4	25.7	5.2	-19.39	123.5	2,050.8	531.3	494.9	36.33	14.625	
5,800.0	5,509.8	5,524.8	5,518.1	26.2	5.3	-20.70	122.4	2,049.7	494.7	457.8	36.98	13.380	
5,900.0	5,602.7	5,617.4	5,610.8	26.7	5.4	-22.23	121.1	2,048.3	458.2	420.6	37.59	12.190	
6,000.0	5,695.6	5,711.9	5,705.2	27.2	5.5	-24.07	119.9	2,046.8	421.9	383.8	38.12	11.069	
6,100.0	5,788.5	5,804.1	5,797.3	27.8	5.5	-26.17	118.4	2,045.1	385.8	347.1	38.67	9.975	
6,200.0	5,881.3	5,896.6	5,889.8	28.3	5.6	-28.68	116.8	2,043.4	350.1	310.9	39.16	8.941	
6,300.0	5,974.2	5,988.8	5,982.0	28.8	5.7	-31.68	115.0	2,041.7	315.1	275.5	39.58	7.960	
6,400.0	6,067.1	6,080.7	6,073.9	29.3	5.8	-35.34	113.1	2,040.3	281.2	241.3	39.91	7.047	
6,500.0	6,160.0	6,172.4	6,165.6	29.8	5.9	-39.86	111.1	2,039.1	248.8	208.7	40.09	6.206	
6,600.0	6,252.9	6,264.7	6,257.8	30.4	6.0	-45.57	109.0	2,038.1	218.4	178.4	40.04	5.455	
6,700.0	6,345.8	6,356.8	6,349.8	30.9	6.1	-52.79	106.8	2,037.5	190.9	151.3	39.70	4.810	
6,800.0	6,438.7	6,449.1	6,442.2	31.4	6.2	-61.99	104.6	2,037.0	167.6	128.6	39.01	4.296	
6,900.0	6,531.5	6,542.4	6,535.4	31.9	6.3	-73.54	102.2	2,036.5	150.0	111.9	38.12	3.935	
7,000.0	6,624.4	6,635.0	6,628.0	32.5	6.4	-87.18	100.0	2,035.6	140.5	102.8	37.70	3.728	
7,054.7	6,675.3	6,686.9	6,679.9	32.7	6.4	-95.13	98.5	2,035.4	139.3	101.3	37.97	3.667 CC, ES	
7,100.0	6,717.3	6,729.4	6,722.4	33.0	6.5	-101.45	97.1	2,035.8	140.1	101.6	38.53	3.637 SF	
7,200.0	6,810.2	6,819.7	6,812.6	33.5	6.5	-114.16	94.6	2,036.6	149.3	108.9	40.37	3.697	
7,271.2	6,876.3	6,885.2	6,878.1	33.9	6.6	-121.87	94.3	2,037.7	161.5	119.6	41.90	3.855	
7,300.0	6,903.1	6,911.4	6,904.3	34.0	6.6	-124.59	94.5	2,038.3	167.4	124.9	42.47	3.940	
7,400.0	6,996.5	7,002.4	6,995.2	34.5	6.6	-132.49	95.9	2,039.9	190.7	146.4	44.25	4.310	
7,500.0	7,090.5	7,101.7	7,094.5	35.1	6.6	-138.94	97.0	2,041.9	215.3	169.1	46.17	4.662	
7,600.0	7,185.1	7,193.3	7,186.1	35.6	6.6	-143.42	97.9	2,044.1	239.9	192.5	47.37	5.064	
7,700.0	7,280.2	7,282.2	7,275.0	36.1	6.6	-146.77	100.1	2,044.7	266.4	218.1	48.21	5.525	
7,800.0	7,375.8	7,390.9	7,383.6	36.6	6.6	-149.99	101.8	2,045.8	291.6	241.6	49.93	5.839	
7,900.0	7,472.0	7,487.5	7,480.2	37.1	6.7	-152.41	101.2	2,048.6	313.1	262.2	50.92	6.148	
8,000.0	7,568.6	7,584.5	7,577.2	37.6	6.7	-154.51	100.2	2,051.0	333.7	283.1	50.65	6.589	
8,100.0	7,665.6	7,688.0	7,680.6	38.1	6.8	-156.44	98.6	2,053.2	353.3	301.1	52.18	6.770	
8,200.0	7,763.1	7,842.9	7,833.8	38.6	7.0	-160.05	82.6	2,067.0	361.8	307.3	54.50	6.638	
8,300.0	7,860.9	8,036.1	8,012.2	39.0	7.4	-168.20	27.5	2,111.9	349.6	292.5	57.10	6.122	
8,400.0	7,959.1	8,195.2	8,125.2	39.5	7.9	175.16	-67.7	2,168.0	316.6	258.6	58.00	5.459	
8,500.0	8,057.6	8,271.2	8,160.3	39.9	8.1	162.54	-127.4	2,198.9	286.2	227.6	58.64	4.880	
8,573.4	8,130.1	8,297.0	8,169.1	40.3	8.1	157.67	-149.4	2,209.2	278.3	220.8	57.53	4.838	
8,600.0	8,156.4	8,304.4	8,171.4	40.4	8.1	156.27	-155.8	2,212.0	279.4	222.8	56.56	4.940	
8,700.0	8,255.4	8,327.2	8,177.6	40.8	8.2	151.97	-176.0	2,220.5	302.3	251.6	50.75	5.956	
8,800.0	8,354.7	8,344.7	8,181.3	41.2	8.2	148.85	-191.9	2,226.8	350.2	306.3	43.95	7.969	
8,900.0	8,454.1	8,354.0	8,183.0	41.6	8.2	147.54	-200.4	2,230.2	415.2	376.6	38.56	10.769	
9,000.0	8,553.7	8,367.4	8,184.9	42.0	8.2	145.66	-212.8	2,235.1	490.7	455.6	35.12	13.973	
9,100.0	8,653.5	8,375.2	8,185.9	42.4	8.2	145.07	-219.9	2,237.9	572.8	539.7	33.12	17.294	
9,200.0	8,753.4	8,381.1	8,186.5	42.7	8.2	144.99	-225.4	2,240.1	659.0	626.9	32.08	20.540	

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 901H
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 901H	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 - PUDGE FEDERAL 21H - OWB - AWP											Offset Site Error:	0.0 usft
Survey Program:	100-Standard Keeper 104, 7670-r.5 MWD+IFR1+MS											Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
9,300.0	8,853.3	8,385.6	8,186.9	43.0	8.2	145.32	-229.6	2,241.7	748.0	716.3	31.65	23.631	
9,400.0	8,953.3	8,405.0	8,188.3	43.3	8.3	143.34	-247.5	2,248.9	839.2	807.5	31.79	26.398	
9,445.7	8,999.0	8,405.0	8,188.3	43.3	8.3	-124.91	-247.5	2,248.9	881.2	849.3	31.83	27.686	
9,500.0	9,053.3	8,405.0	8,188.3	43.3	8.3	-124.91	-247.5	2,248.9	931.4	899.4	31.92	29.174	

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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 - PUDGE FEDERAL 21H - ST01 - ST01 AWP												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 7083-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,500.0	4,302.3	4,311.6	4,305.0	19.6	4.3	-11.40	138.1	2,056.3	971.6	943.3	28.29	34.339	
4,600.0	4,395.2	4,405.6	4,399.0	20.1	4.4	-11.78	137.0	2,056.2	934.9	906.0	28.97	32.269	
4,700.0	4,488.1	4,500.0	4,493.5	20.6	4.4	-12.20	135.9	2,055.9	898.1	868.5	29.65	30.293	
4,800.0	4,581.0	4,592.0	4,585.4	21.1	4.5	-12.64	134.8	2,055.6	861.3	831.0	30.34	28.385	
4,900.0	4,673.9	4,683.9	4,677.4	21.6	4.6	-13.13	133.7	2,055.3	824.6	793.5	31.04	26.563	
5,000.0	4,766.7	4,778.3	4,771.7	22.1	4.6	-13.65	132.4	2,055.0	787.9	756.2	31.71	24.843	
5,100.0	4,859.6	4,870.4	4,863.8	22.6	4.7	-14.20	130.9	2,054.7	751.2	718.8	32.41	23.178	
5,200.0	4,952.5	4,963.9	4,957.3	23.1	4.8	-14.77	129.0	2,054.4	714.4	681.3	33.09	21.592	
5,300.0	5,045.4	5,055.5	5,048.8	23.6	4.9	-15.41	127.3	2,054.6	678.3	644.5	33.79	20.075	
5,400.0	5,138.3	5,151.4	5,144.8	24.2	4.9	-16.26	126.7	2,054.0	641.7	607.3	34.42	18.647	
5,500.0	5,231.2	5,246.3	5,239.7	24.7	5.0	-17.20	125.8	2,053.1	605.0	569.9	35.05	17.262	
5,600.0	5,324.0	5,338.2	5,331.6	25.2	5.1	-18.21	124.7	2,052.1	568.2	532.4	35.72	15.905	
5,700.0	5,416.9	5,433.1	5,426.4	25.7	5.2	-19.39	123.5	2,050.8	531.3	494.9	36.33	14.625	
5,800.0	5,509.8	5,524.8	5,518.1	26.2	5.3	-20.70	122.4	2,049.7	494.7	457.8	36.98	13.380	
5,900.0	5,602.7	5,617.4	5,610.8	26.7	5.4	-22.23	121.1	2,048.3	458.2	420.6	37.59	12.190	
6,000.0	5,695.6	5,711.9	5,705.2	27.2	5.5	-24.07	119.9	2,046.8	421.9	383.8	38.12	11.069	
6,100.0	5,788.5	5,804.1	5,797.3	27.8	5.5	-26.17	118.4	2,045.1	385.8	347.1	38.67	9.975	
6,200.0	5,881.3	5,896.6	5,889.8	28.3	5.6	-28.68	116.8	2,043.4	350.1	310.9	39.16	8.941	
6,300.0	5,974.2	5,988.8	5,982.0	28.8	5.7	-31.68	115.0	2,041.7	315.1	275.5	39.58	7.960	
6,400.0	6,067.1	6,080.7	6,073.9	29.3	5.8	-35.34	113.1	2,040.3	281.2	241.3	39.91	7.047	
6,500.0	6,160.0	6,172.4	6,165.6	29.8	5.9	-39.86	111.1	2,039.1	248.8	208.7	40.09	6.206	
6,600.0	6,252.9	6,264.7	6,257.8	30.4	6.0	-45.57	109.0	2,038.1	218.4	178.4	40.04	5.455	
6,700.0	6,345.8	6,356.8	6,349.8	30.9	6.1	-52.79	106.8	2,037.5	190.9	151.3	39.70	4.810	
6,800.0	6,438.7	6,449.1	6,442.2	31.4	6.2	-61.99	104.6	2,037.0	167.6	128.6	39.01	4.296	
6,900.0	6,531.5	6,542.4	6,535.4	31.9	6.3	-73.54	102.2	2,036.5	150.0	111.9	38.12	3.935	
7,000.0	6,624.4	6,635.0	6,628.0	32.5	6.4	-87.18	100.0	2,035.6	140.5	102.8	37.70	3.728	
7,054.7	6,675.3	6,686.9	6,679.9	32.7	6.4	-95.13	98.5	2,035.4	139.3	101.3	37.97	3.667 CC, ES	
7,100.0	6,717.3	6,729.4	6,722.4	33.0	6.5	-101.45	97.1	2,035.8	140.1	101.6	38.53	3.637 SF	
7,200.0	6,810.2	6,819.7	6,812.6	33.5	6.5	-114.16	94.6	2,036.6	149.3	108.9	40.37	3.697	
7,271.2	6,876.3	6,885.2	6,878.1	33.9	6.6	-121.87	94.3	2,037.7	161.5	119.6	41.90	3.855	
7,300.0	6,903.1	6,911.4	6,904.3	34.0	6.6	-124.59	94.5	2,038.3	167.4	124.9	42.47	3.940	
7,400.0	6,996.5	7,002.4	6,995.2	34.5	6.6	-132.49	95.9	2,039.9	190.7	146.4	44.25	4.310	
7,500.0	7,090.5	7,104.6	7,097.4	35.1	6.6	-138.86	97.5	2,042.7	215.1	169.3	45.71	4.705	
7,600.0	7,185.1	7,198.9	7,191.2	35.6	6.8	-141.85	102.1	2,050.9	237.0	190.2	46.82	5.062	
7,700.0	7,280.2	7,289.8	7,281.8	36.1	6.9	-144.36	106.9	2,055.9	260.9	213.1	47.83	5.455	
7,800.0	7,375.8	7,385.0	7,376.8	36.6	7.1	-146.30	112.9	2,060.6	284.7	235.9	48.77	5.838	
7,900.0	7,472.0	7,480.4	7,471.8	37.1	7.2	-147.86	118.8	2,064.6	308.0	258.3	49.64	6.205	
8,000.0	7,568.6	7,576.7	7,567.9	37.6	7.4	-149.25	124.0	2,067.7	330.3	279.8	50.48	6.543	
8,100.0	7,665.6	7,672.3	7,663.5	38.1	7.5	-150.51	128.4	2,069.9	351.7	300.3	51.34	6.850	
8,200.0	7,763.1	7,767.3	7,758.4	38.6	7.7	-151.72	131.8	2,070.8	372.3	320.2	52.16	7.138	
8,300.0	7,860.9	7,945.8	7,935.6	39.0	7.8	-155.25	120.8	2,078.2	386.5	331.3	55.25	6.996	
8,400.0	7,959.1	8,132.9	8,108.0	39.5	7.7	-164.36	56.9	2,108.6	375.4	317.7	57.66	6.510	
8,500.0	8,057.6	8,270.6	8,218.5	39.9	7.8	-175.16	-14.6	2,148.3	347.2	288.3	58.94	5.891	
8,600.0	8,156.4	8,369.2	8,288.0	40.4	7.9	173.96	-75.1	2,183.0	316.6	256.7	59.89	5.286	
8,700.0	8,255.4	8,441.4	8,332.8	40.8	8.1	163.76	-125.3	2,209.3	295.0	235.2	59.87	4.928	
8,770.6	8,325.5	8,486.4	8,356.7	41.1	8.2	156.50	-159.5	2,226.1	289.9	231.6	58.24	4.977	
8,800.0	8,354.7	8,503.2	8,364.8	41.2	8.2	153.69	-172.7	2,232.5	290.8	233.7	57.12	5.092	
8,900.0	8,454.1	8,558.9	8,389.1	41.6	8.4	144.26	-217.5	2,255.1	308.9	257.1	51.78	5.965	
9,000.0	8,553.7	8,601.1	8,406.8	42.0	8.5	137.50	-251.2	2,273.4	347.0	301.1	45.91	7.560	
9,100.0	8,653.5	8,623.0	8,414.8	42.4	8.6	134.40	-289.1	2,283.1	402.4	361.5	40.87	9.847	
9,200.0	8,753.4	8,647.9	8,422.9	42.7	8.7	131.12	-289.8	2,294.2	470.0	432.4	37.60	12.499	

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 901H
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 901H	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 - PUDGE FEDERAL 21H - ST01 - ST01 AWP												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 7083-r.5 MWD+IFR1+MS												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
9,300.0	8,853.3	8,670.0	8,429.0	43.0	8.8	128.61	-308.7	2,304.0	546.0	510.2	35.79	15.255	
9,400.0	8,953.3	8,670.0	8,429.0	43.3	8.8	129.71	-308.7	2,304.0	627.4	592.9	34.56	18.152	
9,445.7	8,999.0	8,670.0	8,429.0	43.3	8.8	-138.60	-308.7	2,304.0	666.2	631.9	34.24	19.456	
9,500.0	9,053.3	8,687.4	8,433.3	43.3	8.8	-141.16	-323.8	2,311.6	712.7	678.4	34.32	20.769	
9,600.0	9,153.3	8,697.3	8,435.5	43.4	8.9	-142.56	-332.4	2,315.8	801.1	766.7	34.34	23.330	
9,700.0	9,253.3	8,718.0	8,439.6	43.4	9.0	-145.40	-350.7	2,324.6	891.9	857.1	34.76	25.660	
9,800.0	9,353.3	8,718.0	8,439.6	43.4	9.0	-145.40	-350.7	2,324.6	984.0	949.0	34.97	28.139	

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 901H
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 901H	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	-114.57	-201.3	-440.1	484.0					
100.0	100.0	95.0	100.0	0.8	0.5	-114.57	-201.3	-440.1	484.0	482.2	1.74	277.405		
200.0	200.0	195.0	200.0	1.4	1.0	-114.57	-201.3	-440.1	484.0	481.0	2.91	166.376		
300.0	300.0	295.0	300.0	1.9	1.3	-114.57	-201.3	-440.1	484.0	480.3	3.69	131.206		
400.0	400.0	395.0	400.0	2.2	1.6	-114.57	-201.3	-440.1	484.0	479.6	4.32	112.131		
500.0	500.0	495.0	500.0	2.6	1.9	-114.57	-201.3	-440.1	484.0	479.1	4.86	99.618		
600.0	600.0	595.0	600.0	2.8	2.1	-114.57	-201.3	-440.1	484.0	478.6	5.34	90.568		
700.0	700.0	695.0	700.0	3.1	2.3	-114.57	-201.3	-440.1	484.0	478.2	5.79	83.613		
800.0	800.0	795.0	800.0	3.3	2.5	-114.57	-201.3	-440.1	484.0	477.8	6.20	78.045 CC, ES		
900.0	900.0	881.3	886.3	3.6	2.7	-114.57	-201.7	-441.2	485.3	478.6	6.68	72.602		
999.0	999.0	965.8	970.7	3.8	2.9	-114.54	-203.0	-444.6	489.6	482.4	7.14	68.577		
1,000.0	1,000.0	966.7	971.6	3.8	2.9	154.33	-203.0	-444.6	489.6	482.5	7.14	68.562		
1,100.0	1,100.0	1,051.6	1,056.3	5.2	3.2	154.37	-205.2	-450.4	498.5	489.5	8.95	55.688		
1,200.0	1,199.8	1,135.7	1,139.9	5.5	3.4	154.52	-208.3	-458.5	513.4	504.0	9.39	54.693		
1,300.0	1,299.4	1,218.3	1,221.8	5.7	3.6	154.75	-212.2	-468.6	534.4	524.5	9.83	54.384 SF		
1,400.0	1,398.7	1,300.0	1,302.5	6.0	3.8	155.04	-216.8	-480.8	561.1	550.9	10.27	54.634		
1,500.0	1,497.5	1,377.5	1,378.6	6.3	4.0	155.34	-222.0	-494.3	593.7	583.0	10.71	55.424		
1,600.0	1,595.6	1,453.4	1,452.8	6.7	4.2	155.65	-227.8	-509.4	631.8	620.6	11.16	56.619		
1,700.0	1,693.0	1,526.4	1,523.6	7.0	4.4	155.94	-234.0	-525.7	675.3	663.7	11.61	58.184		
1,800.0	1,789.6	1,600.0	1,594.6	7.4	4.6	156.22	-241.0	-543.8	723.9	711.8	12.07	59.971		
1,900.0	1,885.2	1,672.0	1,663.7	7.8	4.6	156.47	-248.3	-562.8	777.1	764.7	12.46	62.370		
2,000.0	1,979.8	1,754.0	1,742.3	8.2	4.8	156.81	-256.6	-584.6	833.4	820.5	12.94	64.416		
2,086.3	2,060.4	1,823.2	1,808.6	8.5	4.9	157.07	-263.7	-603.0	884.2	870.9	13.34	66.260		
2,100.0	2,073.1	1,834.0	1,819.0	8.5	4.9	157.19	-264.8	-605.9	892.5	879.1	13.40	66.578		
2,200.0	2,166.0	1,913.3	1,895.0	8.9	5.0	157.99	-272.9	-627.0	952.6	938.7	13.89	68.572		

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 901H
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 901H	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		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	2,444.6	2,490.1	2,447.0	10.1	9.0	-30.49	448.2	1,231.0	985.4	968.8	16.66	59.157
2,600.0	2,537.5	2,584.4	2,538.0	10.5	9.4	-30.05	426.5	1,242.1	952.7	935.4	17.30	55.069
2,700.0	2,630.4	2,678.6	2,629.1	11.0	9.8	-29.59	404.7	1,253.2	920.1	902.1	17.96	51.225
2,800.0	2,723.3	2,772.8	2,720.1	11.4	10.2	-29.09	383.0	1,264.3	887.5	868.8	18.64	47.614
2,900.0	2,816.2	2,867.1	2,811.1	11.9	10.6	-28.55	361.3	1,275.3	854.9	835.6	19.33	44.222
3,000.0	2,909.1	2,961.3	2,902.2	12.3	11.0	-27.97	339.5	1,286.4	822.5	802.4	20.04	41.037
3,100.0	3,001.9	3,055.6	2,993.2	12.8	11.5	-27.34	317.8	1,297.5	790.1	769.3	20.77	38.045
3,200.0	3,094.8	3,149.8	3,084.2	13.2	11.9	-26.66	296.1	1,308.6	757.8	736.3	21.51	35.235
3,300.0	3,187.7	3,244.0	3,175.2	13.7	12.3	-25.92	274.3	1,319.6	725.6	703.4	22.26	32.594
3,400.0	3,280.6	3,338.3	3,266.3	14.2	12.8	-25.11	252.6	1,330.7	693.6	670.5	23.03	30.111
3,500.0	3,373.5	3,432.5	3,357.3	14.7	13.2	-24.22	230.9	1,341.8	661.6	637.8	23.82	27.775
3,600.0	3,466.4	3,526.8	3,448.3	15.1	13.6	-23.25	209.1	1,352.8	629.9	605.2	24.62	25.584
3,700.0	3,559.3	3,628.2	3,546.1	15.6	14.1	-22.02	185.0	1,364.6	597.9	572.5	25.40	23.536
3,800.0	3,652.1	3,728.0	3,641.7	16.1	14.6	-20.37	158.3	1,375.5	564.8	538.5	26.27	21.497
3,900.0	3,745.0	3,821.0	3,730.5	16.6	15.0	-18.58	132.7	1,385.6	531.7	504.5	27.23	19.530
4,000.0	3,837.9	3,913.9	3,819.3	17.1	15.5	-16.56	107.2	1,395.6	499.2	471.1	28.18	17.716
4,100.0	3,930.8	4,006.9	3,908.1	17.6	15.9	-14.28	81.7	1,405.6	467.4	438.2	29.18	16.020
4,200.0	4,023.7	4,099.8	3,996.9	18.1	16.4	-11.68	56.1	1,415.7	436.3	406.1	30.22	14.439
4,300.0	4,116.6	4,192.8	4,085.7	18.6	16.8	-8.71	30.6	1,425.7	406.3	375.0	31.32	12.972
4,400.0	4,209.4	4,285.7	4,174.6	19.1	17.3	-5.30	5.1	1,435.8	377.4	344.9	32.48	11.620
4,500.0	4,302.3	4,378.7	4,263.4	19.6	17.7	-1.38	-20.4	1,445.8	350.1	316.4	33.71	10.386
4,600.0	4,395.2	4,471.6	4,352.2	20.1	18.2	3.14	-46.0	1,455.8	324.6	289.6	34.99	9.276
4,700.0	4,488.1	4,564.6	4,441.0	20.6	18.6	8.31	-71.5	1,465.9	301.5	265.2	36.33	8.299
4,800.0	4,581.0	4,657.5	4,529.8	21.1	19.1	14.20	-97.0	1,475.9	281.4	243.7	37.69	7.466
4,900.0	4,673.9	4,750.4	4,618.6	21.6	19.6	20.82	-122.6	1,485.9	264.9	225.9	39.02	6.790
5,000.0	4,766.7	4,843.4	4,707.4	22.1	20.0	28.10	-148.1	1,496.0	252.8	212.6	40.23	6.284
5,100.0	4,859.6	4,936.3	4,796.2	22.6	20.5	35.89	-173.6	1,506.0	245.6	204.4	41.24	5.957
5,181.0	4,934.9	5,011.6	4,868.1	23.0	20.8	42.38	-194.3	1,514.1	243.8	202.0	41.86	5.825 CC
5,200.0	4,952.5	5,029.3	4,885.0	23.1	20.9	43.92	-199.1	1,516.0	243.9	201.9	41.98	5.811 ES, SF
5,300.0	5,045.4	5,122.2	4,973.8	23.6	21.4	51.88	-224.7	1,526.1	247.7	205.3	42.44	5.838
5,400.0	5,138.3	5,215.2	5,062.6	24.2	21.8	59.50	-250.2	1,536.1	256.9	214.2	42.67	6.019
5,500.0	5,231.2	5,308.1	5,151.4	24.7	22.3	66.54	-275.7	1,546.2	270.7	228.0	42.77	6.330
5,600.0	5,324.0	5,401.1	5,240.2	25.2	22.8	72.89	-301.3	1,556.2	288.7	245.9	42.82	6.741
5,700.0	5,416.9	5,494.0	5,329.1	25.7	23.2	78.51	-326.8	1,566.2	310.0	267.1	42.90	7.226
5,800.0	5,509.8	5,587.0	5,417.9	26.2	23.7	83.42	-352.3	1,576.3	334.0	291.0	43.04	7.761
5,900.0	5,602.7	5,679.9	5,506.7	26.7	24.2	87.70	-377.8	1,586.3	360.3	317.0	43.26	8.328
6,000.0	5,695.6	5,772.9	5,595.5	27.2	24.6	91.42	-403.4	1,596.3	388.2	344.7	43.56	8.912
6,100.0	5,788.5	5,865.8	5,684.3	27.8	25.1	94.65	-428.9	1,606.4	417.6	373.6	43.94	9.503
6,200.0	5,881.3	5,958.8	5,773.1	28.3	25.6	97.47	-454.4	1,616.4	448.0	403.7	44.39	10.094
6,300.0	5,974.2	6,051.7	5,861.9	28.8	26.0	99.95	-480.0	1,626.5	479.4	434.5	44.88	10.681
6,400.0	6,067.1	6,144.7	5,950.7	29.3	26.5	102.13	-505.5	1,636.5	511.5	466.1	45.43	11.260
6,500.0	6,160.0	6,237.6	6,039.5	29.8	26.9	104.05	-531.0	1,646.5	544.2	498.2	46.01	11.828
6,600.0	6,252.9	6,330.6	6,128.3	30.4	27.4	105.77	-556.5	1,656.6	577.4	530.8	46.63	12.384
6,700.0	6,345.8	6,425.8	6,219.4	30.9	27.9	107.34	-582.6	1,666.8	611.0	563.7	47.32	12.913
6,800.0	6,438.7	6,526.8	6,316.2	31.4	28.4	108.92	-609.1	1,677.2	644.1	596.0	48.13	13.382
6,900.0	6,531.5	6,628.1	6,414.0	31.9	28.9	110.45	-634.0	1,687.0	676.4	627.5	48.91	13.829
7,000.0	6,624.4	6,729.9	6,512.6	32.5	29.4	111.96	-657.5	1,696.2	708.0	658.3	49.69	14.249
7,100.0	6,717.3	6,832.0	6,611.9	33.0	29.9	113.44	-679.3	1,704.8	738.8	688.3	50.45	14.643
7,200.0	6,810.2	6,934.3	6,711.9	33.5	30.4	114.92	-699.6	1,712.8	768.9	717.7	51.21	15.014
7,271.2	6,876.3	7,007.3	6,783.4	33.9	30.7	115.96	-713.0	1,718.1	790.0	738.2	51.75	15.266
7,300.0	6,903.1	7,036.9	6,812.5	34.0	30.9	116.45	-718.3	1,720.1	798.4	746.4	51.96	15.366

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 901H
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 901H	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)			
7,400.0	6,996.5	7,140.0	6,913.9	34.5	31.3	118.09	-735.3	1,726.8	826.6	773.9	52.70	15.686	
7,500.0	7,090.5	7,243.7	7,016.4	35.1	31.8	119.61	-750.7	1,732.9	853.4	800.0	53.42	15.976	
7,600.0	7,185.1	7,348.1	7,119.7	35.6	32.3	121.02	-764.5	1,738.3	878.7	824.6	54.13	16.235	
7,700.0	7,280.2	7,452.9	7,223.7	36.1	32.7	122.35	-776.6	1,743.1	902.5	847.7	54.81	16.465	
7,800.0	7,375.8	7,558.3	7,328.5	36.6	33.1	123.61	-786.9	1,747.1	924.6	869.1	55.48	16.667	
7,900.0	7,472.0	7,664.0	7,433.8	37.1	33.5	124.81	-795.5	1,750.5	945.1	889.0	56.12	16.841	
8,000.0	7,568.6	7,770.1	7,539.6	37.6	33.9	125.95	-802.3	1,753.2	963.9	907.2	56.74	16.989	
8,100.0	7,665.6	7,876.5	7,645.9	38.1	34.3	127.05	-807.3	1,755.2	981.1	923.7	57.34	17.111	
8,200.0	7,763.1	9,226.6	8,435.3	38.6	35.1	179.17	-45.9	1,759.5	926.5	865.8	60.76	15.250	
8,300.0	7,860.9	9,226.3	8,435.3	39.0	35.1	179.14	-46.2	1,759.5	873.7	810.5	63.21	13.822	
8,400.0	7,959.1	9,226.1	8,435.3	39.5	35.1	179.11	-46.4	1,759.5	828.0	762.6	65.42	12.658	
8,500.0	8,057.6	9,226.0	8,435.3	39.9	35.1	179.09	-46.6	1,759.5	790.7	723.5	67.17	11.772	
8,600.0	8,156.4	9,225.8	8,435.3	40.4	35.1	179.08	-46.7	1,759.5	763.1	694.8	68.26	11.178	
8,700.0	8,255.4	9,225.7	8,435.3	40.8	35.1	179.07	-46.8	1,759.5	746.1	677.6	68.49	10.894	
8,796.9	8,351.6	9,225.6	8,435.3	41.2	35.1	179.06	-46.9	1,759.5	740.6	672.8	67.77	10.928	
8,800.0	8,354.7	9,225.6	8,435.3	41.2	35.1	179.06	-46.9	1,759.5	740.6	672.9	67.73	10.934	
8,900.0	8,454.1	9,225.5	8,435.3	41.6	35.1	179.05	-47.0	1,759.5	746.8	680.8	66.02	11.313	
9,000.0	8,553.7	9,225.5	8,435.3	42.0	35.1	179.05	-47.0	1,759.5	764.5	701.0	63.48	12.042	
9,100.0	8,653.5	9,225.5	8,435.3	42.4	35.1	179.06	-47.0	1,759.5	792.8	732.4	60.38	13.129	
9,200.0	8,753.4	9,225.5	8,435.3	42.7	35.1	179.07	-47.0	1,759.5	830.6	773.6	56.99	14.574	
9,300.0	8,853.3	9,225.5	8,435.3	43.0	35.1	179.08	-47.0	1,759.5	876.8	823.2	53.56	16.370	
9,400.0	8,953.3	9,225.6	8,435.3	43.3	35.1	179.09	-46.9	1,759.5	930.0	879.7	50.27	18.501	
9,445.7	8,999.0	9,225.7	8,435.3	43.3	35.1	-89.77	-46.8	1,759.5	956.4	907.6	48.80	19.596	
9,500.0	9,053.3	9,225.7	8,435.3	43.3	35.1	-89.76	-46.8	1,759.5	989.3	942.2	47.13	20.991	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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						Rule Assigned:		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)	
1,800.0	1,789.6	2,072.4	2,024.3	7.4	8.2	-31.17	434.3	967.2	989.1	974.2	14.87	66.522		
1,900.0	1,885.2	2,160.3	2,108.7	7.8	8.5	-31.77	413.1	954.9	941.3	925.8	15.53	60.618		
2,000.0	1,979.8	2,246.7	2,191.6	8.2	8.9	-32.57	392.3	942.8	891.0	874.8	16.21	54.981		
2,086.3	2,060.4	2,319.9	2,261.9	8.5	9.2	-33.44	374.6	932.5	845.5	828.8	16.78	50.381		
2,100.0	2,073.1	2,331.4	2,273.0	8.5	9.3	-33.49	371.8	930.9	838.2	821.3	16.87	49.682		
2,200.0	2,166.0	2,415.6	2,353.8	8.9	9.6	-33.95	351.5	919.1	784.4	766.9	17.56	44.684		
2,300.0	2,258.9	2,499.8	2,434.7	9.3	10.0	-34.47	331.2	907.3	730.8	712.5	18.24	40.067		
2,400.0	2,351.8	2,584.0	2,515.5	9.7	10.4	-35.07	310.8	895.5	677.2	658.2	18.94	35.753		
2,500.0	2,444.6	2,668.1	2,596.3	10.1	10.8	-35.77	290.5	883.7	623.6	603.9	19.66	31.724		
2,600.0	2,537.5	2,752.3	2,677.2	10.5	11.2	-36.60	270.2	871.9	570.1	549.7	20.39	27.962		
2,700.0	2,630.4	2,836.5	2,758.0	11.0	11.6	-37.61	249.9	860.1	516.7	495.6	21.13	24.450		
2,800.0	2,723.3	2,920.7	2,838.8	11.4	11.9	-38.84	229.5	848.3	463.5	441.6	21.89	21.170		
2,900.0	2,816.2	3,004.9	2,919.6	11.9	12.3	-40.39	209.2	836.5	410.5	387.8	22.67	18.109		
3,000.0	2,909.1	3,089.0	3,000.5	12.3	12.7	-42.39	188.9	824.7	357.7	334.3	23.45	15.253		
3,100.0	3,001.9	3,173.2	3,081.3	12.8	13.1	-45.06	168.6	812.9	305.4	281.1	24.25	12.595		
3,200.0	3,094.8	3,257.4	3,162.1	13.2	13.5	-48.79	148.2	801.1	253.7	228.7	25.04	10.132		
3,300.0	3,187.7	3,341.6	3,243.0	13.7	13.9	-54.29	127.9	789.3	203.3	177.5	25.82	7.875		
3,400.0	3,280.6	3,425.7	3,323.8	14.2	14.3	-63.01	107.6	777.5	155.4	128.9	26.49	5.865		
3,500.0	3,373.5	3,509.9	3,404.6	14.7	14.7	-77.83	87.3	765.7	113.0	86.2	26.74	4.225		
3,600.0	3,466.4	3,594.1	3,485.4	15.1	15.1	-102.70	67.0	753.9	84.9	59.1	25.83	3.287		
3,645.2	3,508.4	3,632.2	3,522.0	15.4	15.3	-116.89	57.8	748.6	81.3	56.1	25.24	3.221 CC, ES, SF		
3,700.0	3,559.3	3,678.3	3,566.3	15.6	15.5	-133.90	46.6	742.1	86.5	61.4	25.15	3.440		
3,800.0	3,652.1	3,762.4	3,647.1	16.1	15.9	-157.74	26.3	730.3	116.6	90.1	26.53	4.395		
3,900.0	3,745.0	3,846.6	3,727.9	16.6	16.4	-171.80	6.0	718.5	159.8	131.7	28.09	5.689		
4,000.0	3,837.9	3,930.8	3,808.8	17.1	16.8	-179.88	-14.3	706.7	208.1	178.7	29.37	7.084		
4,100.0	3,930.8	4,015.0	3,889.6	17.6	17.2	-174.59	-34.7	694.9	258.6	228.1	30.48	8.485		
4,200.0	4,023.7	4,099.1	3,970.4	18.1	17.6	-170.99	-55.0	683.1	310.3	278.9	31.48	9.858		
4,300.0	4,116.6	4,183.3	4,051.2	18.6	18.0	-168.40	-75.3	671.3	362.7	330.3	32.43	11.186		
4,400.0	4,209.4	4,267.5	4,132.1	19.1	18.4	-166.45	-95.6	659.5	415.5	382.2	33.33	12.465		
4,500.0	4,302.3	4,351.7	4,212.9	19.6	18.8	-164.94	-116.0	647.7	468.6	434.3	34.22	13.693		
4,600.0	4,395.2	4,435.8	4,293.7	20.1	19.2	-163.73	-136.3	635.9	521.8	486.7	35.09	14.871		
4,700.0	4,488.1	4,520.0	4,374.6	20.6	19.6	-162.74	-156.6	624.1	575.2	539.2	35.95	16.000		
4,800.0	4,581.0	4,604.2	4,455.4	21.1	20.1	-161.92	-176.9	612.3	628.7	591.9	36.80	17.082		
4,900.0	4,673.9	4,688.4	4,536.2	21.6	20.5	-161.23	-197.2	600.5	682.3	644.6	37.65	18.120		
5,000.0	4,766.7	4,772.5	4,617.1	22.1	20.9	-160.64	-217.6	588.7	735.9	697.4	38.50	19.116		
5,100.0	4,859.6	4,856.7	4,697.9	22.6	21.3	-160.12	-237.9	576.9	789.6	750.2	39.34	20.071		
5,200.0	4,952.5	4,940.9	4,778.7	23.1	21.7	-159.68	-258.2	565.1	843.3	803.1	40.18	20.988		
5,300.0	5,045.4	5,025.1	4,859.5	23.6	22.1	-159.28	-278.5	553.3	897.0	856.0	41.02	21.869		
5,400.0	5,138.3	5,109.2	4,940.4	24.2	22.6	-158.93	-298.9	541.5	950.8	908.9	41.86	22.715		

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 901H
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 901H	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							Rule Assigned:				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	4.0	0.0	0.0	-116.13	-201.2	-410.1	456.8							
100.0	100.0	96.0	100.0	0.8	0.7	-116.13	-201.2	-410.1	456.8	454.8	1.96	232.908				
200.0	200.0	196.0	200.0	1.4	1.4	-116.13	-201.2	-410.1	456.8	453.5	3.29	139.046				
300.0	300.0	296.0	300.0	1.9	1.9	-116.13	-201.2	-410.1	456.8	452.6	4.18	109.342				
400.0	400.0	396.0	400.0	2.2	2.2	-116.13	-201.2	-410.1	456.8	451.9	4.90	93.269				
500.0	500.0	496.0	500.0	2.6	2.5	-116.13	-201.2	-410.1	456.8	451.3	5.52	82.745				
600.0	600.0	596.0	600.0	2.8	2.8	-116.13	-201.2	-410.1	456.8	450.7	6.08	75.143				
700.0	700.0	696.0	700.0	3.1	3.1	-116.13	-201.2	-410.1	456.8	450.2	6.59	69.307				
800.0	800.0	796.0	800.0	3.3	3.3	-116.13	-201.2	-410.1	456.8	449.7	7.07	64.638				
900.0	900.0	896.0	900.0	3.6	3.6	-116.13	-201.2	-410.1	456.8	449.3	7.51	60.788				
999.0	999.0	995.0	999.0	3.8	3.8	-116.13	-201.2	-410.1	456.8	448.9	7.93	57.590 CC				
1,000.0	1,000.0	996.0	1,000.0	3.8	3.8	152.74	-201.2	-410.1	456.8	448.9	7.93	57.573 ES				
1,100.0	1,100.0	1,083.7	1,087.7	5.2	4.0	152.74	-202.1	-410.9	459.7	450.0	9.65	47.655				
1,200.0	1,199.8	1,170.4	1,174.3	5.5	4.3	152.73	-205.0	-413.4	468.4	458.3	10.11	46.335				
1,300.0	1,299.4	1,256.2	1,259.9	5.7	4.6	152.71	-209.9	-417.6	483.0	472.4	10.58	45.658				
1,400.0	1,398.7	1,340.8	1,344.0	6.0	4.9	152.66	-216.6	-423.3	503.3	492.2	11.06	45.503 SF				
1,500.0	1,497.5	1,423.7	1,426.2	6.3	5.1	152.59	-224.9	-430.4	529.2	517.7	11.56	45.787				
1,600.0	1,595.6	1,504.6	1,506.0	6.7	5.4	152.49	-234.9	-438.9	560.7	548.6	12.06	46.482				
1,700.0	1,693.0	1,596.8	1,596.8	7.0	5.7	152.44	-247.3	-449.5	596.4	583.7	12.64	47.190				
1,800.0	1,789.6	1,689.0	1,687.4	7.4	6.0	152.49	-259.7	-460.2	635.0	621.8	13.22	48.032				
1,900.0	1,885.2	1,779.8	1,776.8	7.8	6.3	152.60	-271.9	-470.6	676.5	662.7	13.83	48.915				
2,000.0	1,979.8	1,869.1	1,864.8	8.2	6.6	152.75	-284.0	-480.9	720.9	706.4	14.47	49.830				
2,086.3	2,060.4	1,945.0	1,939.4	8.5	6.8	152.91	-294.2	-489.7	761.4	746.4	15.01	50.721				
2,100.0	2,073.1	1,957.0	1,951.2	8.5	6.9	153.00	-295.8	-491.0	768.0	752.9	15.09	50.888				
2,200.0	2,166.0	2,044.2	2,037.1	8.9	7.2	153.64	-307.6	-501.1	816.3	800.6	15.74	51.851				
2,300.0	2,258.9	2,131.5	2,122.9	9.3	7.5	154.20	-319.3	-511.1	864.6	848.2	16.39	52.754				
2,400.0	2,351.8	2,218.7	2,208.8	9.7	7.8	154.71	-331.1	-521.2	913.0	896.0	17.05	53.534				
2,500.0	2,444.6	2,306.0	2,294.7	10.1	8.1	155.16	-342.9	-531.3	961.4	943.7	17.74	54.208				

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 901H
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 901H	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

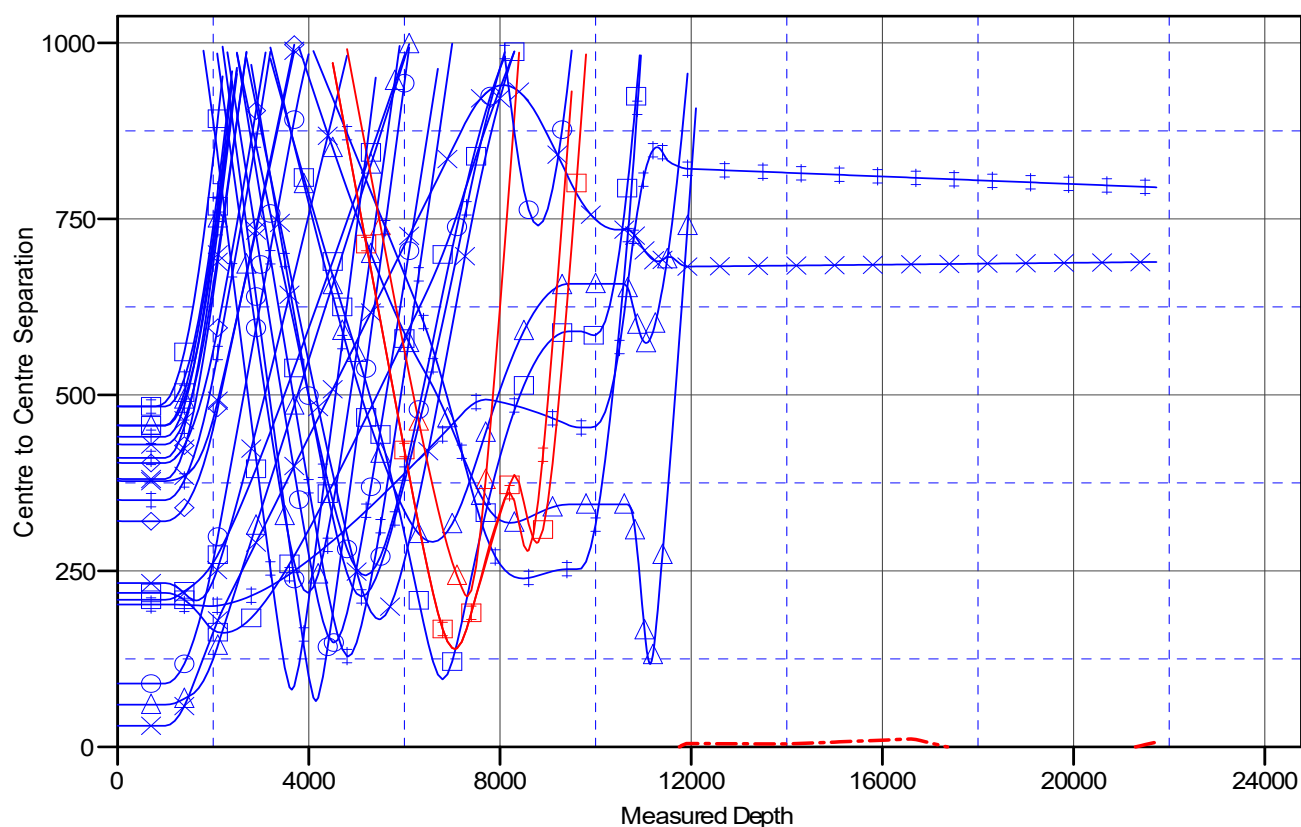
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 901H

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

Grid Convergence at Surface is: 0.16°

Ladder Plot



LEGEND

_WILD THING FED COM 901H OWB, PWP0 V0 _WILD THING FED COM 702H OWB, PWP0 V0 PUDGE FEDERAL COM 500H OWB, PWP1 V0 PUDGE FEDERAL COM 501H OWB, PWP1 V0 PUDGE FEDERAL COM 701H OWB, PWP0 V0 PUDGE FEDERAL COM 702H OWB, PWP1 V0 PUDGE FEDERAL COM 902H OWB, PWP1 V0 PUDGE FEDERAL COM 903H OWB, PWP1 V0 PUDGE FEDERAL COM 904H OWB, PWP1 V0 _WILD THING FED COM 701H OWB, PWP0 V0 _WILD THING FED COM 703H OWB, PWP0 V0 _WILD THING FED COM 704H OWB, PWP0 V0	_WILD THING FED COM 705H OWB, PWP0 V0 _WILD THING FED COM 706H OWB, PWP0 V0 _WILD THING FED COM 707H OWB, PWP0 V0 _WILD THING FED COM 708H OWB, PWP0 V0 _WILD THING FED COM 709H OWB, PWP0 V0 _WILD THING FED COM 710H OWB, PWP0 V0 _WILD THING FED COM 902H OWB, PWP1 V0 _WILD THING FED COM 903H OWB, PWP0 V0 _WILD THING FED COM 904H OWB, PWP0 V0 _WILD THING FED COM 905H OWB, PWP0 V0 _WILD THING FED COM 906H OWB, PWP0 V0 _WILD THING FED COM 907H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0 _WILD THING FED COM 909H OWB, PWP0 V0 _WILD THING FED COM 910H OWB, PWP0 V0 COOPER 31 FEDERAL 2H _R&A, OWB, AWP V0 PUDGE FEDERAL 21H, OWB, AWP V0 PUDGE FEDERAL 21H, STD1, STD1 AWP V0 WILD THING FED COM 504H, OWB, PWP1 V0 WILD THING FEDERAL COM 501H, OWB, PWP1 V0 WILD THING FEDERAL COM 502H, OWB, PWP1 V0 WILD THING FEDERAL COM 503H, OWB, PWP1 V0
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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 901H
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 901H	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

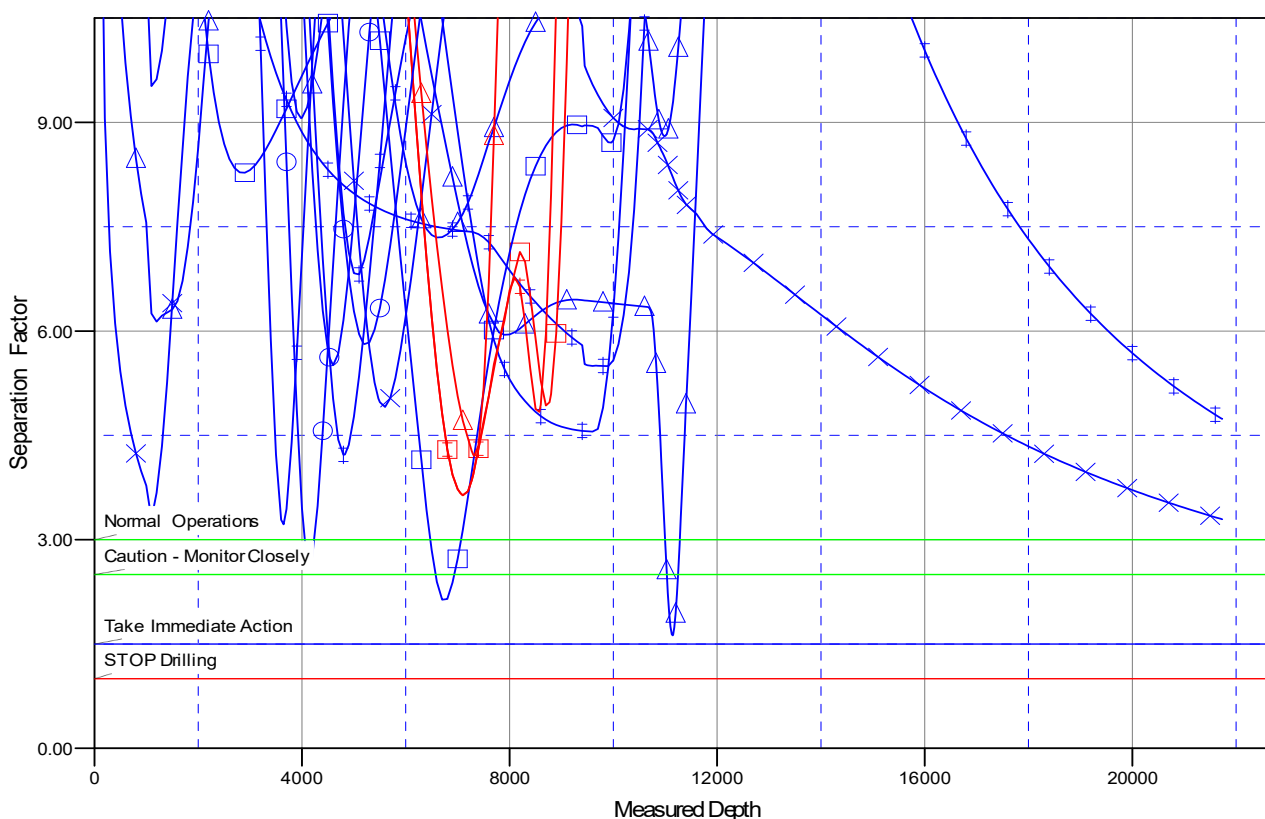
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 901H

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

Grid Convergence at Surface is: 0.16°

Separation Factor Plot



LEGEND

- WILD THING FED COM 901H OWB, PWP0 V0 - WILD THING FED COM 702H OWB, PWP0 V0 - PUDGE FEDERAL COM 902H OWB, PWP1 V0 - PUDGE FEDERAL COM 901H OWB, PWP1 V0 - PUDGE FEDERAL COM 701H OWB, PWP1 V0 - PUDGE FEDERAL COM 702H OWB, PWP1 V0 - PUDGE FEDERAL COM 902H OWB, PWP1 V0 - PUDGE FEDERAL COM 903H OWB, PWP1 V0 - PUDGE FEDERAL COM 904H OWB, PWP1 V0 - WILD THING FED COM 701H OWB, PWP0 V0 - WILD THING FED COM 703H OWB, PWP0 V0 - WILD THING FED COM 704H OWB, PWP0 V0	- WILD THING FED COM 705H OWB, PWP0 V0 - WILD THING FED COM 706H OWB, PWP0 V0 - WILD THING FED COM 707H OWB, PWP0 V0 - WILD THING FED COM 708H OWB, PWP0 V0 - WILD THING FED COM 709H OWB, PWP0 V0 - WILD THING FED COM 710H OWB, PWP0 V0 - PUDGE FEDERAL COM 902H OWB, PWP0 V0 - WILD THING FED COM 903H OWB, PWP0 V0 - WILD THING FED COM 904H OWB, PWP0 V0 - WILD THING FED COM 905H OWB, PWP0 V0 - WILD THING FED COM 906H OWB, PWP0 V0 - WILD THING FED COM 907H OWB, PWP0 V0	- WILD THING FED COM 908H OWB, PWP0 V0 - WILD THING FED COM 909H OWB, PWP0 V0 - WILD THING FED COM 910H OWB, PWP0 V0 - COOPER 31 FEDERAL 2H_JRA OWB, AWP V0 - PUDGE FEDERAL 21H OWB, AWP V0 - PUDGE FEDERAL 21H, STD1 STD1 AWP V0 - WILD THING FED COM 504H OWB, PWP1 V0 - WILD THING FEDERAL COM 501H OWB, PWP1 V0 - WILD THING FEDERAL COM 502H OWB, PWP1 V0 - WILD THING FEDERAL COM 503H OWB, PWP1 V0
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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 901H
3001556663
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 901H
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 901H	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
From:	Map	Easting:	596,126.51 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 51.343 N
		Longitude:	104° 1' 22.896 W

Well	PUDGE FEDERAL COM 901H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
Grid Convergence:	0.16 °		
		Latitude:	32° 4' 48.406 N
		Longitude:	104° 1' 25.125 W
		Ground Level:	2,926.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	12/31/2023	6.55	59.64	47,336.31616053

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	166.80	

Plan Survey Tool Program	Date	8/4/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	21,732.1 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 901H
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 901H	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	
999.0	0.00	0.00	999.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,086.3	21.75	91.13	2,060.4	-4.0	203.8	2.00	2.00	0.00	91.13	
7,271.2	21.75	91.13	6,876.3	-42.0	2,124.4	0.00	0.00	0.00	0.00	
9,445.7	0.00	0.00	8,999.0	-50.0	2,532.0	1.00	-1.00	0.00	180.00	
10,662.2	0.00	0.00	10,215.5	-50.0	2,532.0	0.00	0.00	0.00	0.00	
11,412.4	90.02	183.00	10,693.0	-527.0	2,507.0	12.00	12.00	0.00	183.00	
11,757.4	90.02	183.00	10,692.8	-871.5	2,488.9	0.00	0.00	0.00	0.00	
11,924.8	90.02	179.65	10,692.8	-1,038.8	2,485.1	2.00	0.00	-2.00	-89.96	
21,732.1	90.02	179.65	10,689.0	-10,845.9	2,544.6	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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
999.0	0.00	0.00	999.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,000.0	0.02	91.13	1,000.0	0.0	0.0	0.0	2.00	2.00	0.00
1,100.0	2.02	91.13	1,100.0	0.0	1.8	0.4	2.00	2.00	0.00
1,200.0	4.02	91.13	1,199.8	-0.1	7.0	1.7	2.00	2.00	0.00
1,300.0	6.02	91.13	1,299.4	-0.3	15.8	3.9	2.00	2.00	0.00
1,400.0	8.02	91.13	1,398.7	-0.6	28.0	6.9	2.00	2.00	0.00
1,500.0	10.02	91.13	1,497.5	-0.9	43.7	10.8	2.00	2.00	0.00
1,600.0	12.02	91.13	1,595.6	-1.2	62.8	15.6	2.00	2.00	0.00
1,700.0	14.02	91.13	1,693.0	-1.7	85.3	21.1	2.00	2.00	0.00
1,800.0	16.02	91.13	1,789.6	-2.2	111.2	27.5	2.00	2.00	0.00
1,900.0	18.02	91.13	1,885.2	-2.8	140.5	34.8	2.00	2.00	0.00
2,000.0	20.02	91.13	1,979.8	-3.4	173.1	42.9	2.00	2.00	0.00
2,086.3	21.75	91.13	2,060.4	-4.0	203.8	50.5	2.00	2.00	0.00
Start 5184.9 hold at 2086.3 MD									
2,100.0	21.75	91.13	2,073.1	-4.1	208.9	51.7	0.00	0.00	0.00
2,200.0	21.75	91.13	2,166.0	-4.9	245.9	60.9	0.00	0.00	0.00
2,300.0	21.75	91.13	2,258.9	-5.6	283.0	70.1	0.00	0.00	0.00
2,400.0	21.75	91.13	2,351.8	-6.3	320.0	79.3	0.00	0.00	0.00
2,500.0	21.75	91.13	2,444.6	-7.1	357.1	88.4	0.00	0.00	0.00
2,600.0	21.75	91.13	2,537.5	-7.8	394.1	97.6	0.00	0.00	0.00
2,700.0	21.75	91.13	2,630.4	-8.5	431.2	106.8	0.00	0.00	0.00
2,800.0	21.75	91.13	2,723.3	-9.2	468.2	115.9	0.00	0.00	0.00
2,900.0	21.75	91.13	2,816.2	-10.0	505.2	125.1	0.00	0.00	0.00
3,000.0	21.75	91.13	2,909.1	-10.7	542.3	134.3	0.00	0.00	0.00
3,100.0	21.75	91.13	3,001.9	-11.4	579.3	143.5	0.00	0.00	0.00
3,200.0	21.75	91.13	3,094.8	-12.2	616.4	152.6	0.00	0.00	0.00
3,300.0	21.75	91.13	3,187.7	-12.9	653.4	161.8	0.00	0.00	0.00
3,400.0	21.75	91.13	3,280.6	-13.6	690.4	171.0	0.00	0.00	0.00
3,500.0	21.75	91.13	3,373.5	-14.4	727.5	180.2	0.00	0.00	0.00
3,600.0	21.75	91.13	3,466.4	-15.1	764.5	189.3	0.00	0.00	0.00
3,700.0	21.75	91.13	3,559.3	-15.8	801.6	198.5	0.00	0.00	0.00
3,800.0	21.75	91.13	3,652.1	-16.6	838.6	207.7	0.00	0.00	0.00
3,900.0	21.75	91.13	3,745.0	-17.3	875.6	216.8	0.00	0.00	0.00
4,000.0	21.75	91.13	3,837.9	-18.0	912.7	226.0	0.00	0.00	0.00
4,100.0	21.75	91.13	3,930.8	-18.8	949.7	235.2	0.00	0.00	0.00
4,200.0	21.75	91.13	4,023.7	-19.5	986.8	244.4	0.00	0.00	0.00
4,300.0	21.75	91.13	4,116.6	-20.2	1,023.8	253.5	0.00	0.00	0.00
4,400.0	21.75	91.13	4,209.4	-20.9	1,060.8	262.7	0.00	0.00	0.00
4,500.0	21.75	91.13	4,302.3	-21.7	1,097.9	271.9	0.00	0.00	0.00
4,600.0	21.75	91.13	4,395.2	-22.4	1,134.9	281.1	0.00	0.00	0.00
4,700.0	21.75	91.13	4,488.1	-23.1	1,172.0	290.2	0.00	0.00	0.00
4,800.0	21.75	91.13	4,581.0	-23.9	1,209.0	299.4	0.00	0.00	0.00
4,900.0	21.75	91.13	4,673.9	-24.6	1,246.1	308.6	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,000.0	21.75	91.13	4,766.7	-25.3	1,283.1	317.7	0.00	0.00	0.00	
5,100.0	21.75	91.13	4,859.6	-26.1	1,320.1	326.9	0.00	0.00	0.00	
5,200.0	21.75	91.13	4,952.5	-26.8	1,357.2	336.1	0.00	0.00	0.00	
5,300.0	21.75	91.13	5,045.4	-27.5	1,394.2	345.3	0.00	0.00	0.00	
5,400.0	21.75	91.13	5,138.3	-28.3	1,431.3	354.4	0.00	0.00	0.00	
5,500.0	21.75	91.13	5,231.2	-29.0	1,468.3	363.6	0.00	0.00	0.00	
5,600.0	21.75	91.13	5,324.0	-29.7	1,505.3	372.8	0.00	0.00	0.00	
5,700.0	21.75	91.13	5,416.9	-30.5	1,542.4	382.0	0.00	0.00	0.00	
5,800.0	21.75	91.13	5,509.8	-31.2	1,579.4	391.1	0.00	0.00	0.00	
5,900.0	21.75	91.13	5,602.7	-31.9	1,616.5	400.3	0.00	0.00	0.00	
6,000.0	21.75	91.13	5,695.6	-32.7	1,653.5	409.5	0.00	0.00	0.00	
6,100.0	21.75	91.13	5,788.5	-33.4	1,690.5	418.6	0.00	0.00	0.00	
6,200.0	21.75	91.13	5,881.3	-34.1	1,727.6	427.8	0.00	0.00	0.00	
6,300.0	21.75	91.13	5,974.2	-34.8	1,764.6	437.0	0.00	0.00	0.00	
6,400.0	21.75	91.13	6,067.1	-35.6	1,801.7	446.2	0.00	0.00	0.00	
6,500.0	21.75	91.13	6,160.0	-36.3	1,838.7	455.3	0.00	0.00	0.00	
6,600.0	21.75	91.13	6,252.9	-37.0	1,875.8	464.5	0.00	0.00	0.00	
6,700.0	21.75	91.13	6,345.8	-37.8	1,912.8	473.7	0.00	0.00	0.00	
6,800.0	21.75	91.13	6,438.7	-38.5	1,949.8	482.9	0.00	0.00	0.00	
6,900.0	21.75	91.13	6,531.5	-39.2	1,986.9	492.0	0.00	0.00	0.00	
7,000.0	21.75	91.13	6,624.4	-40.0	2,023.9	501.2	0.00	0.00	0.00	
7,100.0	21.75	91.13	6,717.3	-40.7	2,061.0	510.4	0.00	0.00	0.00	
7,200.0	21.75	91.13	6,810.2	-41.4	2,098.0	519.5	0.00	0.00	0.00	
7,271.2	21.75	91.13	6,876.3	-42.0	2,124.4	526.1	0.00	0.00	0.00	
Start Drop -1.00										
7,300.0	21.46	91.13	6,903.1	-42.2	2,135.0	528.7	1.00	-1.00	0.00	
7,400.0	20.46	91.13	6,996.5	-42.9	2,170.7	537.6	1.00	-1.00	0.00	
7,500.0	19.46	91.13	7,090.5	-43.5	2,204.9	546.0	1.00	-1.00	0.00	
7,600.0	18.46	91.13	7,185.1	-44.2	2,237.3	554.0	1.00	-1.00	0.00	
7,700.0	17.46	91.13	7,280.2	-44.8	2,268.2	561.7	1.00	-1.00	0.00	
7,800.0	16.46	91.13	7,375.8	-45.4	2,297.3	568.9	1.00	-1.00	0.00	
7,900.0	15.46	91.13	7,472.0	-45.9	2,324.8	575.7	1.00	-1.00	0.00	
8,000.0	14.46	91.13	7,568.6	-46.4	2,350.6	582.1	1.00	-1.00	0.00	
8,100.0	13.46	91.13	7,665.6	-46.9	2,374.7	588.1	1.00	-1.00	0.00	
8,200.0	12.46	91.13	7,763.1	-47.3	2,397.1	593.6	1.00	-1.00	0.00	
8,300.0	11.46	91.13	7,860.9	-47.7	2,417.9	598.8	1.00	-1.00	0.00	
8,400.0	10.46	91.13	7,959.1	-48.1	2,436.9	603.5	1.00	-1.00	0.00	
8,500.0	9.46	91.13	8,057.6	-48.5	2,454.1	607.7	1.00	-1.00	0.00	
8,600.0	8.46	91.13	8,156.4	-48.8	2,469.7	611.6	1.00	-1.00	0.00	
8,700.0	7.46	91.13	8,255.4	-49.0	2,483.6	615.0	1.00	-1.00	0.00	
8,800.0	6.46	91.13	8,354.7	-49.3	2,495.7	618.0	1.00	-1.00	0.00	
8,900.0	5.46	91.13	8,454.1	-49.5	2,506.0	620.6	1.00	-1.00	0.00	
9,000.0	4.46	91.13	8,553.7	-49.7	2,514.7	622.7	1.00	-1.00	0.00	
9,100.0	3.46	91.13	8,653.5	-49.8	2,521.6	624.4	1.00	-1.00	0.00	
9,200.0	2.46	91.13	8,753.4	-49.9	2,526.7	625.7	1.00	-1.00	0.00	
9,300.0	1.46	91.13	8,853.3	-50.0	2,530.1	626.6	1.00	-1.00	0.00	
9,400.0	0.46	91.13	8,953.3	-50.0	2,531.8	627.0	1.00	-1.00	0.00	
9,445.7	0.00	0.00	8,999.0	-50.0	2,532.0	627.0	1.00	-1.00	0.00	
Start 1216.5 hold at 9445.7 MD										
9,500.0	0.00	0.00	9,053.3	-50.0	2,532.0	627.0	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,153.3	-50.0	2,532.0	627.0	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,253.3	-50.0	2,532.0	627.0	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,353.3	-50.0	2,532.0	627.0	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,453.3	-50.0	2,532.0	627.0	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	0.00	0.00	9,553.3	-50.0	2,532.0	627.0	0.00	0.00	0.00
10,100.0	0.00	0.00	9,653.3	-50.0	2,532.0	627.0	0.00	0.00	0.00
10,200.0	0.00	0.00	9,753.3	-50.0	2,532.0	627.0	0.00	0.00	0.00
10,300.0	0.00	0.00	9,853.3	-50.0	2,532.0	627.0	0.00	0.00	0.00
10,400.0	0.00	0.00	9,953.3	-50.0	2,532.0	627.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,053.3	-50.0	2,532.0	627.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,153.3	-50.0	2,532.0	627.0	0.00	0.00	0.00
10,662.2	0.00	0.00	10,215.5	-50.0	2,532.0	627.0	0.00	0.00	0.00
Start Build 12.00									
10,675.0	1.54	183.00	10,228.3	-50.2	2,532.0	627.2	12.00	12.00	0.00
10,700.0	4.54	183.00	10,253.3	-51.5	2,531.9	628.5	12.00	12.00	0.00
10,725.0	7.54	183.00	10,278.1	-54.1	2,531.8	631.0	12.00	12.00	0.00
10,750.0	10.54	183.00	10,302.8	-58.0	2,531.6	634.7	12.00	12.00	0.00
10,775.0	13.54	183.00	10,327.2	-63.2	2,531.3	639.8	12.00	12.00	0.00
10,800.0	16.54	183.00	10,351.4	-69.7	2,531.0	646.0	12.00	12.00	0.00
10,825.0	19.54	183.00	10,375.2	-77.4	2,530.6	653.4	12.00	12.00	0.00
10,850.0	22.54	183.00	10,398.5	-86.4	2,530.1	662.0	12.00	12.00	0.00
10,875.0	25.54	183.00	10,421.3	-96.6	2,529.6	671.8	12.00	12.00	0.00
10,900.0	28.54	183.00	10,443.6	-107.9	2,529.0	682.7	12.00	12.00	0.00
10,925.0	31.54	183.00	10,465.2	-120.4	2,528.3	694.7	12.00	12.00	0.00
10,950.0	34.54	183.00	10,486.2	-134.0	2,527.6	707.8	12.00	12.00	0.00
10,975.0	37.54	183.00	10,506.4	-148.7	2,526.8	721.9	12.00	12.00	0.00
11,000.0	40.54	183.00	10,525.8	-164.4	2,526.0	737.1	12.00	12.00	0.00
11,025.0	43.54	183.00	10,544.4	-181.1	2,525.1	753.1	12.00	12.00	0.00
11,050.0	46.54	183.00	10,562.0	-198.8	2,524.2	770.1	12.00	12.00	0.00
11,075.0	49.54	183.00	10,578.8	-217.4	2,523.2	788.0	12.00	12.00	0.00
11,100.0	52.54	183.00	10,594.5	-236.8	2,522.2	806.6	12.00	12.00	0.00
11,125.0	55.54	183.00	10,609.2	-257.0	2,521.2	826.1	12.00	12.00	0.00
11,150.0	58.54	183.00	10,622.8	-277.9	2,520.1	846.2	12.00	12.00	0.00
11,175.0	61.54	183.00	10,635.2	-299.6	2,518.9	867.0	12.00	12.00	0.00
11,200.0	64.54	183.00	10,646.6	-321.8	2,517.8	888.4	12.00	12.00	0.00
11,225.0	67.54	183.00	10,656.7	-344.6	2,516.6	910.3	12.00	12.00	0.00
11,250.0	70.54	183.00	10,665.7	-367.9	2,515.3	932.7	12.00	12.00	0.00
11,275.0	73.54	183.00	10,673.4	-391.7	2,514.1	955.6	12.00	12.00	0.00
11,300.0	76.54	183.00	10,679.8	-415.8	2,512.8	978.8	12.00	12.00	0.00
11,325.0	79.54	183.00	10,685.0	-440.2	2,511.5	1,002.2	12.00	12.00	0.00
11,350.0	82.54	183.00	10,688.9	-464.9	2,510.3	1,026.0	12.00	12.00	0.00
11,375.0	85.54	183.00	10,691.5	-489.7	2,509.0	1,049.8	12.00	12.00	0.00
11,400.0	88.54	183.00	10,692.8	-514.6	2,507.7	1,073.8	12.00	12.00	0.00
11,412.4	90.02	183.00	10,693.0	-527.0	2,507.0	1,085.7	12.00	12.00	0.00
Start 345.0 hold at 11412.4 MD									
11,500.0	90.02	183.00	10,692.9	-614.5	2,502.4	1,169.8	0.00	0.00	0.00
11,600.0	90.02	183.00	10,692.9	-714.3	2,497.2	1,265.9	0.00	0.00	0.00
11,700.0	90.02	183.00	10,692.9	-814.2	2,491.9	1,361.9	0.00	0.00	0.00
11,757.4	90.02	183.00	10,692.8	-871.5	2,488.9	1,417.0	0.00	0.00	0.00
Start DLS 2.00 TFO -89.96									
11,800.0	90.02	182.15	10,692.8	-914.1	2,487.0	1,458.0	2.00	0.00	-2.00
11,900.0	90.02	180.15	10,692.8	-1,014.1	2,485.0	1,554.9	2.00	0.00	-2.00
11,924.8	90.02	179.65	10,692.8	-1,038.8	2,485.1	1,579.0	2.00	0.00	-2.00
Start 9807.3 hold at 11924.8 MD									
12,000.0	90.02	179.65	10,692.8	-1,114.1	2,485.5	1,652.3	0.00	0.00	0.00
12,100.0	90.02	179.65	10,692.7	-1,214.1	2,486.1	1,749.8	0.00	0.00	0.00
12,200.0	90.02	179.65	10,692.7	-1,314.1	2,486.7	1,847.3	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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)
12,300.0	90.02	179.65	10,692.6	-1,414.1	2,487.4	1,944.8	0.00	0.00	0.00
12,400.0	90.02	179.65	10,692.6	-1,514.1	2,488.0	2,042.3	0.00	0.00	0.00
12,500.0	90.02	179.65	10,692.6	-1,614.1	2,488.6	2,139.8	0.00	0.00	0.00
12,600.0	90.02	179.65	10,692.5	-1,714.1	2,489.2	2,237.3	0.00	0.00	0.00
12,700.0	90.02	179.65	10,692.5	-1,814.1	2,489.8	2,334.8	0.00	0.00	0.00
12,800.0	90.02	179.65	10,692.4	-1,914.0	2,490.4	2,432.3	0.00	0.00	0.00
12,900.0	90.02	179.65	10,692.4	-2,014.0	2,491.0	2,529.8	0.00	0.00	0.00
13,000.0	90.02	179.65	10,692.4	-2,114.0	2,491.6	2,627.3	0.00	0.00	0.00
13,100.0	90.02	179.65	10,692.3	-2,214.0	2,492.2	2,724.8	0.00	0.00	0.00
13,200.0	90.02	179.65	10,692.3	-2,314.0	2,492.8	2,822.3	0.00	0.00	0.00
13,300.0	90.02	179.65	10,692.3	-2,414.0	2,493.4	2,919.7	0.00	0.00	0.00
13,400.0	90.02	179.65	10,692.2	-2,514.0	2,494.0	3,017.2	0.00	0.00	0.00
13,500.0	90.02	179.65	10,692.2	-2,614.0	2,494.6	3,114.7	0.00	0.00	0.00
13,600.0	90.02	179.65	10,692.1	-2,714.0	2,495.2	3,212.2	0.00	0.00	0.00
13,700.0	90.02	179.65	10,692.1	-2,814.0	2,495.9	3,309.7	0.00	0.00	0.00
13,800.0	90.02	179.65	10,692.1	-2,914.0	2,496.5	3,407.2	0.00	0.00	0.00
13,900.0	90.02	179.65	10,692.0	-3,014.0	2,497.1	3,504.7	0.00	0.00	0.00
14,000.0	90.02	179.65	10,692.0	-3,114.0	2,497.7	3,602.2	0.00	0.00	0.00
14,100.0	90.02	179.65	10,691.9	-3,214.0	2,498.3	3,699.7	0.00	0.00	0.00
14,200.0	90.02	179.65	10,691.9	-3,314.0	2,498.9	3,797.2	0.00	0.00	0.00
14,300.0	90.02	179.65	10,691.9	-3,414.0	2,499.5	3,894.7	0.00	0.00	0.00
14,400.0	90.02	179.65	10,691.8	-3,514.0	2,500.1	3,992.2	0.00	0.00	0.00
14,500.0	90.02	179.65	10,691.8	-3,614.0	2,500.7	4,089.7	0.00	0.00	0.00
14,600.0	90.02	179.65	10,691.8	-3,714.0	2,501.3	4,187.2	0.00	0.00	0.00
14,700.0	90.02	179.65	10,691.7	-3,814.0	2,501.9	4,284.7	0.00	0.00	0.00
14,800.0	90.02	179.65	10,691.7	-3,914.0	2,502.5	4,382.1	0.00	0.00	0.00
14,900.0	90.02	179.65	10,691.6	-4,014.0	2,503.1	4,479.6	0.00	0.00	0.00
15,000.0	90.02	179.65	10,691.6	-4,114.0	2,503.7	4,577.1	0.00	0.00	0.00
15,100.0	90.02	179.65	10,691.6	-4,214.0	2,504.3	4,674.6	0.00	0.00	0.00
15,200.0	90.02	179.65	10,691.5	-4,314.0	2,505.0	4,772.1	0.00	0.00	0.00
15,300.0	90.02	179.65	10,691.5	-4,414.0	2,505.6	4,869.6	0.00	0.00	0.00
15,400.0	90.02	179.65	10,691.4	-4,514.0	2,506.2	4,967.1	0.00	0.00	0.00
15,500.0	90.02	179.65	10,691.4	-4,614.0	2,506.8	5,064.6	0.00	0.00	0.00
15,600.0	90.02	179.65	10,691.4	-4,714.0	2,507.4	5,162.1	0.00	0.00	0.00
15,700.0	90.02	179.65	10,691.3	-4,814.0	2,508.0	5,259.6	0.00	0.00	0.00
15,800.0	90.02	179.65	10,691.3	-4,914.0	2,508.6	5,357.1	0.00	0.00	0.00
15,900.0	90.02	179.65	10,691.2	-5,014.0	2,509.2	5,454.6	0.00	0.00	0.00
16,000.0	90.02	179.65	10,691.2	-5,114.0	2,509.8	5,552.1	0.00	0.00	0.00
16,100.0	90.02	179.65	10,691.2	-5,214.0	2,510.4	5,649.6	0.00	0.00	0.00
16,200.0	90.02	179.65	10,691.1	-5,314.0	2,511.0	5,747.1	0.00	0.00	0.00
16,300.0	90.02	179.65	10,691.1	-5,414.0	2,511.6	5,844.5	0.00	0.00	0.00
16,400.0	90.02	179.65	10,691.1	-5,514.0	2,512.2	5,942.0	0.00	0.00	0.00
16,500.0	90.02	179.65	10,691.0	-5,614.0	2,512.8	6,039.5	0.00	0.00	0.00
16,600.0	90.02	179.65	10,691.0	-5,714.0	2,513.5	6,137.0	0.00	0.00	0.00
16,700.0	90.02	179.65	10,690.9	-5,814.0	2,514.1	6,234.5	0.00	0.00	0.00
16,800.0	90.02	179.65	10,690.9	-5,914.0	2,514.7	6,332.0	0.00	0.00	0.00
16,900.0	90.02	179.65	10,690.9	-6,014.0	2,515.3	6,429.5	0.00	0.00	0.00
17,000.0	90.02	179.65	10,690.8	-6,114.0	2,515.9	6,527.0	0.00	0.00	0.00
17,100.0	90.02	179.65	10,690.8	-6,214.0	2,516.5	6,624.5	0.00	0.00	0.00
17,200.0	90.02	179.65	10,690.7	-6,314.0	2,517.1	6,722.0	0.00	0.00	0.00
17,300.0	90.02	179.65	10,690.7	-6,414.0	2,517.7	6,819.5	0.00	0.00	0.00
17,400.0	90.02	179.65	10,690.7	-6,514.0	2,518.3	6,917.0	0.00	0.00	0.00
17,500.0	90.02	179.65	10,690.6	-6,614.0	2,518.9	7,014.5	0.00	0.00	0.00
17,600.0	90.02	179.65	10,690.6	-6,714.0	2,519.5	7,112.0	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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)
17,700.0	90.02	179.65	10,690.6	-6,814.0	2,520.1	7,209.5	0.00	0.00	0.00
17,800.0	90.02	179.65	10,690.5	-6,914.0	2,520.7	7,306.9	0.00	0.00	0.00
17,900.0	90.02	179.65	10,690.5	-7,014.0	2,521.3	7,404.4	0.00	0.00	0.00
18,000.0	90.02	179.65	10,690.4	-7,114.0	2,522.0	7,501.9	0.00	0.00	0.00
18,100.0	90.02	179.65	10,690.4	-7,214.0	2,522.6	7,599.4	0.00	0.00	0.00
18,200.0	90.02	179.65	10,690.4	-7,313.9	2,523.2	7,696.9	0.00	0.00	0.00
18,300.0	90.02	179.65	10,690.3	-7,413.9	2,523.8	7,794.4	0.00	0.00	0.00
18,400.0	90.02	179.65	10,690.3	-7,513.9	2,524.4	7,891.9	0.00	0.00	0.00
18,500.0	90.02	179.65	10,690.2	-7,613.9	2,525.0	7,989.4	0.00	0.00	0.00
18,600.0	90.02	179.65	10,690.2	-7,713.9	2,525.6	8,086.9	0.00	0.00	0.00
18,700.0	90.02	179.65	10,690.2	-7,813.9	2,526.2	8,184.4	0.00	0.00	0.00
18,800.0	90.02	179.65	10,690.1	-7,913.9	2,526.8	8,281.9	0.00	0.00	0.00
18,900.0	90.02	179.65	10,690.1	-8,013.9	2,527.4	8,379.4	0.00	0.00	0.00
19,000.0	90.02	179.65	10,690.1	-8,113.9	2,528.0	8,476.9	0.00	0.00	0.00
19,100.0	90.02	179.65	10,690.0	-8,213.9	2,528.6	8,574.4	0.00	0.00	0.00
19,200.0	90.02	179.65	10,690.0	-8,313.9	2,529.2	8,671.9	0.00	0.00	0.00
19,300.0	90.02	179.65	10,689.9	-8,413.9	2,529.8	8,769.3	0.00	0.00	0.00
19,400.0	90.02	179.65	10,689.9	-8,513.9	2,530.5	8,866.8	0.00	0.00	0.00
19,500.0	90.02	179.65	10,689.9	-8,613.9	2,531.1	8,964.3	0.00	0.00	0.00
19,600.0	90.02	179.65	10,689.8	-8,713.9	2,531.7	9,061.8	0.00	0.00	0.00
19,700.0	90.02	179.65	10,689.8	-8,813.9	2,532.3	9,159.3	0.00	0.00	0.00
19,800.0	90.02	179.65	10,689.7	-8,913.9	2,532.9	9,256.8	0.00	0.00	0.00
19,900.0	90.02	179.65	10,689.7	-9,013.9	2,533.5	9,354.3	0.00	0.00	0.00
20,000.0	90.02	179.65	10,689.7	-9,113.9	2,534.1	9,451.8	0.00	0.00	0.00
20,100.0	90.02	179.65	10,689.6	-9,213.9	2,534.7	9,549.3	0.00	0.00	0.00
20,200.0	90.02	179.65	10,689.6	-9,313.9	2,535.3	9,646.8	0.00	0.00	0.00
20,300.0	90.02	179.65	10,689.6	-9,413.9	2,535.9	9,744.3	0.00	0.00	0.00
20,400.0	90.02	179.65	10,689.5	-9,513.9	2,536.5	9,841.8	0.00	0.00	0.00
20,500.0	90.02	179.65	10,689.5	-9,613.9	2,537.1	9,939.3	0.00	0.00	0.00
20,600.0	90.02	179.65	10,689.4	-9,713.9	2,537.7	10,036.8	0.00	0.00	0.00
20,700.0	90.02	179.65	10,689.4	-9,813.9	2,538.3	10,134.3	0.00	0.00	0.00
20,800.0	90.02	179.65	10,689.4	-9,913.9	2,539.0	10,231.7	0.00	0.00	0.00
20,900.0	90.02	179.65	10,689.3	-10,013.9	2,539.6	10,329.2	0.00	0.00	0.00
21,000.0	90.02	179.65	10,689.3	-10,113.9	2,540.2	10,426.7	0.00	0.00	0.00
21,100.0	90.02	179.65	10,689.2	-10,213.9	2,540.8	10,524.2	0.00	0.00	0.00
21,200.0	90.02	179.65	10,689.2	-10,313.9	2,541.4	10,621.7	0.00	0.00	0.00
21,300.0	90.02	179.65	10,689.2	-10,413.9	2,542.0	10,719.2	0.00	0.00	0.00
21,400.0	90.02	179.65	10,689.1	-10,513.9	2,542.6	10,816.7	0.00	0.00	0.00
21,500.0	90.02	179.65	10,689.1	-10,613.9	2,543.2	10,914.2	0.00	0.00	0.00
21,600.0	90.02	179.65	10,689.1	-10,713.9	2,543.8	11,011.7	0.00	0.00	0.00
21,700.0	90.02	179.65	10,689.0	-10,813.9	2,544.4	11,109.2	0.00	0.00	0.00
21,732.1	90.02	179.65	10,689.0	-10,845.9	2,544.6	11,140.5	0.00	0.00	0.00
TD at 21732.1									

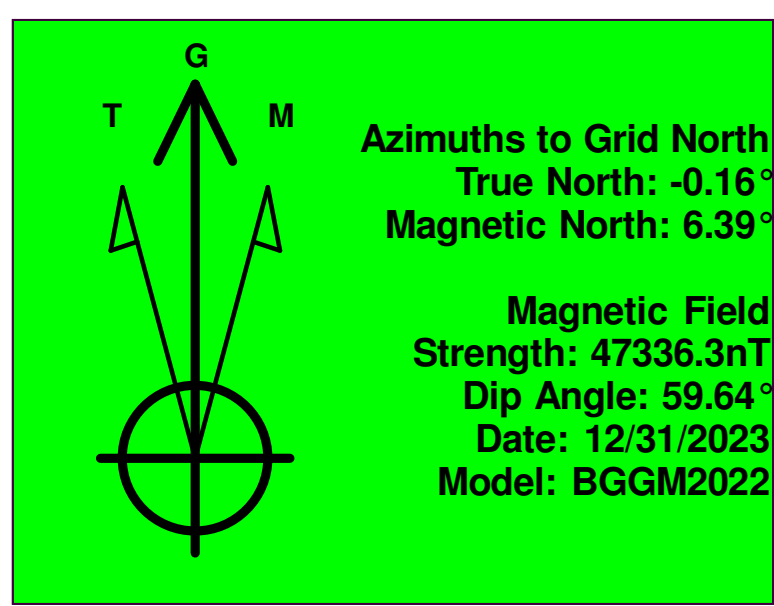
ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 901H
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 901H	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)		
AC STEER CLEAR_WT	0.00	271.13	6,344.8	-37.8	1,912.4	392,968.94	597,830.51	32° 4' 47.977 N	104° 1' 2.899 W
- plan hits target center									
- Rectangle (sides W1.0 H100.0 D100.0)									
901H_TNGNT LMTR_2(	21.75	271.13	6,876.3	-42.0	2,124.4	392,964.71	598,042.48	32° 4' 47.929 N	104° 1' 0.435 W
- plan misses target center by 0.1usft at 7271.2usft MD (6876.3 TVD, -42.0 N, 2124.4 E)									
- Rectangle (sides W40.0 H50.0 D4,845.9)									
901H_KOP BOX_25'E &	0.00	359.65	10,215.5	-50.0	2,532.0	392,956.71	598,450.08	32° 4' 47.838 N	104° 0' 55.698 W
- plan hits target center									
- Rectangle (sides W25.0 H100.0 D1,216.5)									
AC_STEER CLEAR_WT	57.66	3.00	10,618.9	-271.7	2,520.4	392,734.97	598,438.46	32° 4' 45.644 N	104° 0' 55.840 W
- plan hits target center									
- Rectangle (sides W1.0 H100.0 D100.0)									
PBHL_PUDGE FED CO	0.02	359.65	10,689.0	-10,845.9	2,544.6	382,160.76	598,462.69	32° 3' 0.996 N	104° 0' 55.921 W
- plan hits target center									
- Rectangle (sides W100.0 H10,052.2 D20.0)									
LTP_PUDGE FED COM	90.00	0.00	10,689.0	-10,715.9	2,541.7	382,290.76	598,459.82	32° 3' 2.282 N	104° 0' 55.949 W
- plan misses target center by 2.1usft at 21602.1usft MD (10689.1 TVD, -10715.9 N, 2543.8 E)									
- Circle (radius 50.0)									
PP4_PUDGE FED COM	0.00	0.00	10,689.9	-8,419.1	2,530.8	384,587.61	598,448.91	32° 3' 25.013 N	104° 0' 55.998 W
- plan misses target center by 1.0usft at 19305.2usft MD (10689.9 TVD, -8419.1 N, 2529.9 E)									
- Circle (radius 50.0)									
PP3_PUDGE FED COM	0.00	0.00	10,690.5	-7,082.0	2,524.5	385,924.75	598,442.56	32° 3' 38.246 N	104° 0' 56.026 W
- plan misses target center by 2.7usft at 17968.0usft MD (10690.5 TVD, -7082.0 N, 2521.8 E)									
- Circle (radius 50.0)									
PP2_PUDGE FED COM	0.00	0.00	10,691.0	-5,765.7	2,518.2	387,240.99	598,436.30	32° 3' 51.273 N	104° 0' 56.053 W
- plan misses target center by 4.5usft at 16651.8usft MD (10691.0 TVD, -5765.7 N, 2513.8 E)									
- Circle (radius 50.0)									
FTP/PP1_PUDGE FED	0.00	0.00	10,693.0	-793.0	2,481.5	392,213.73	598,399.63	32° 4' 40.486 N	104° 0' 56.309 W
- plan misses target center by 11.5usft at 11679.3usft MD (10692.9 TVD, -793.6 N, 2493.0 E)									
- Circle (radius 50.0)									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
21,732.1	10,689.0	5-1/2" Production Casing	5-1/2	6

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
999.0	999.0	0.0	0.0	Start Build 2.00
2,086.3	2,060.4	-4.0	203.8	Start 5184.9 hold at 2086.3 MD
7,271.2	6,876.3	-42.0	2,124.4	Start Drop -1.00
9,445.7	8,999.0	-50.0	2,532.0	Start 1216.5 hold at 9445.7 MD
10,662.2	10,215.5	-50.0	2,532.0	Start Build 12.00
11,412.4	10,693.0	-527.0	2,507.0	Start 345.0 hold at 11412.4 MD
11,757.4	10,692.8	-871.5	2,488.9	Start DLS 2.00 TFO -89.96
11,924.8	10,692.8	-1,038.8	2,485.1	Start 9807.3 hold at 11924.8 MD
21,732.1	10,689.0	-10,845.9	2,544.6	TD at 21732.1



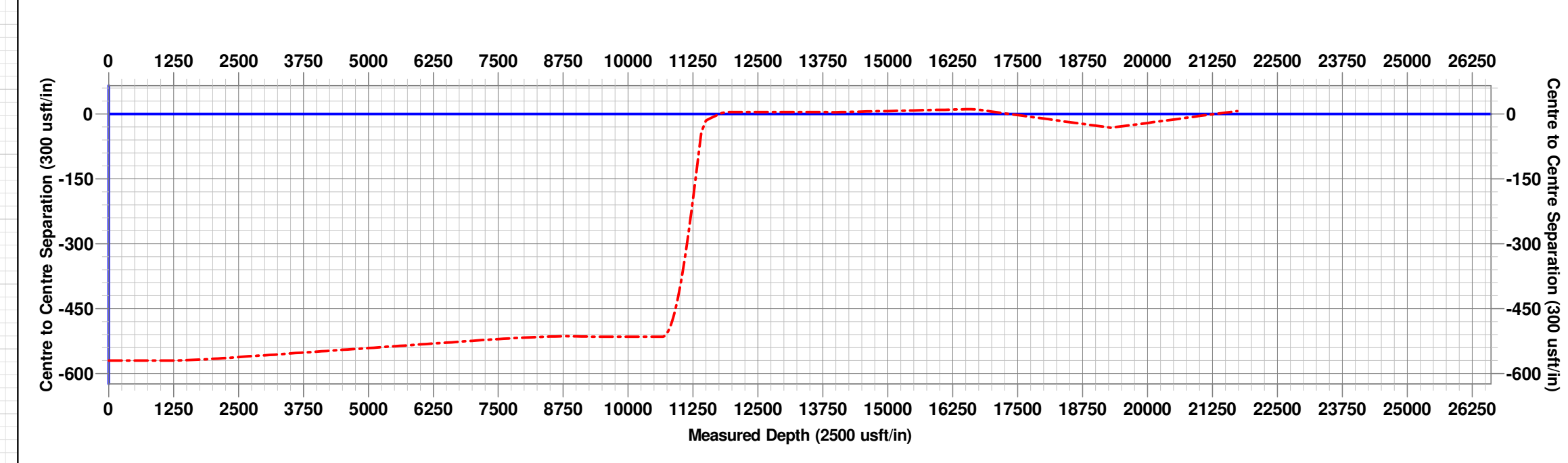
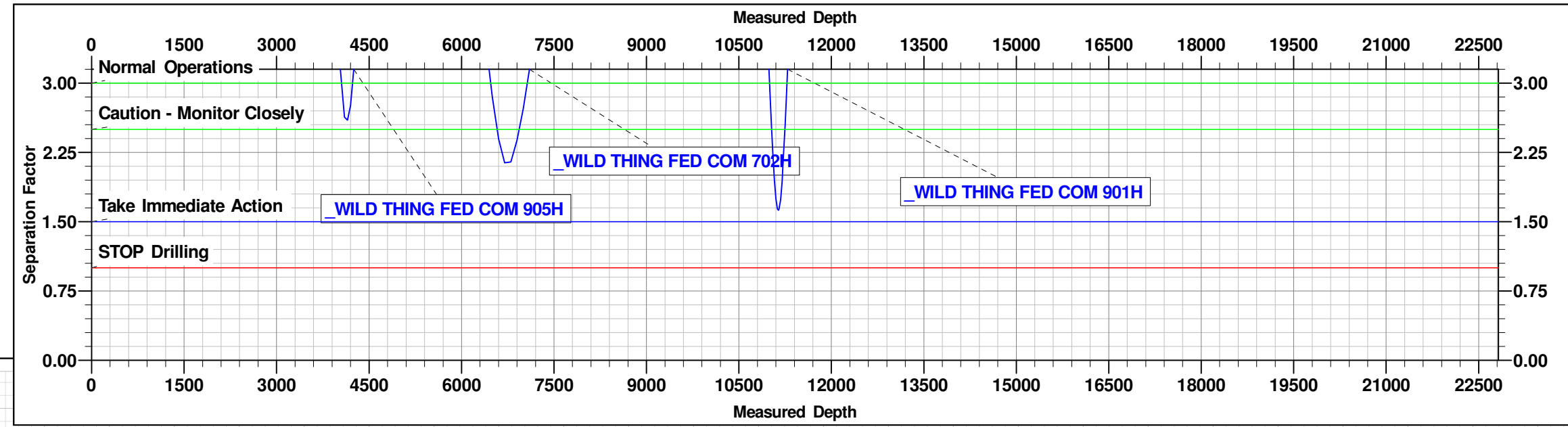
Project: ATLAS PROSPECT NME
Site: PUDGE FED COM PROJECT
Well: PUDGE FEDERAL COM 901H
Wellbore: OWB
Design: PWP1
GL: 2926.0
KB @ 2958.0usft

WELL DETAILS: PUDGE FEDERAL COM 901H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	393006.71	595918.08	32° 4' 48.406 N	104° 1' 25.125 W

TARGET DETAILS

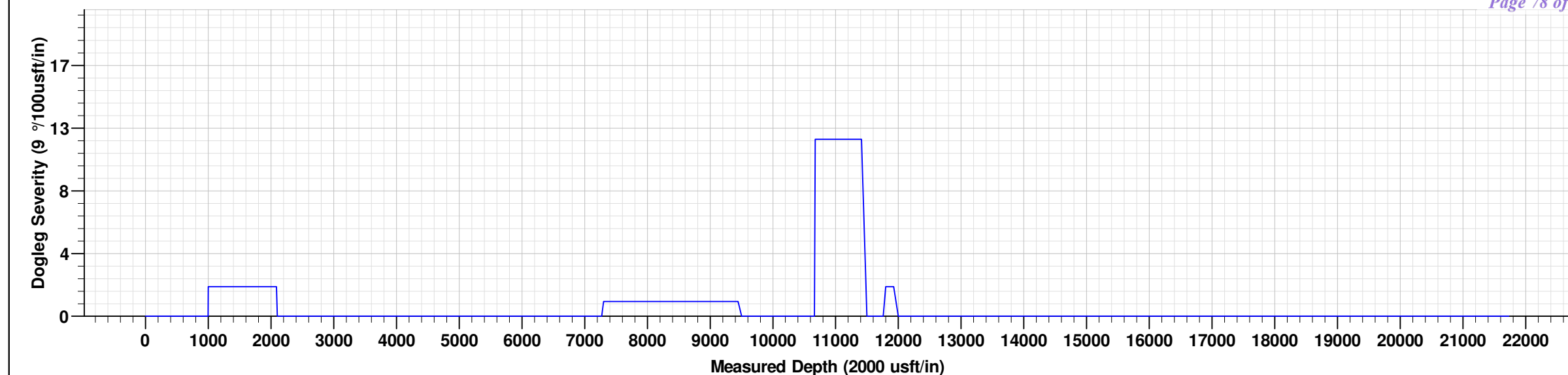
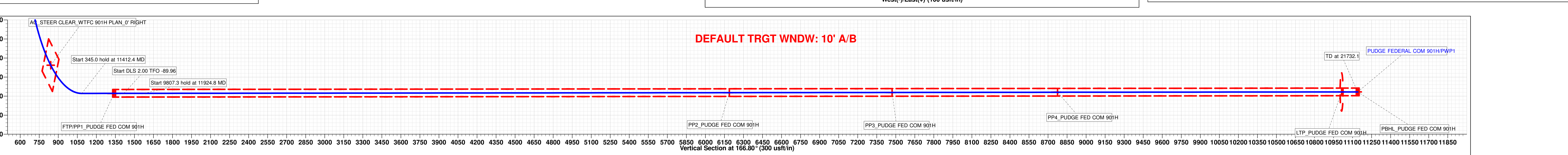
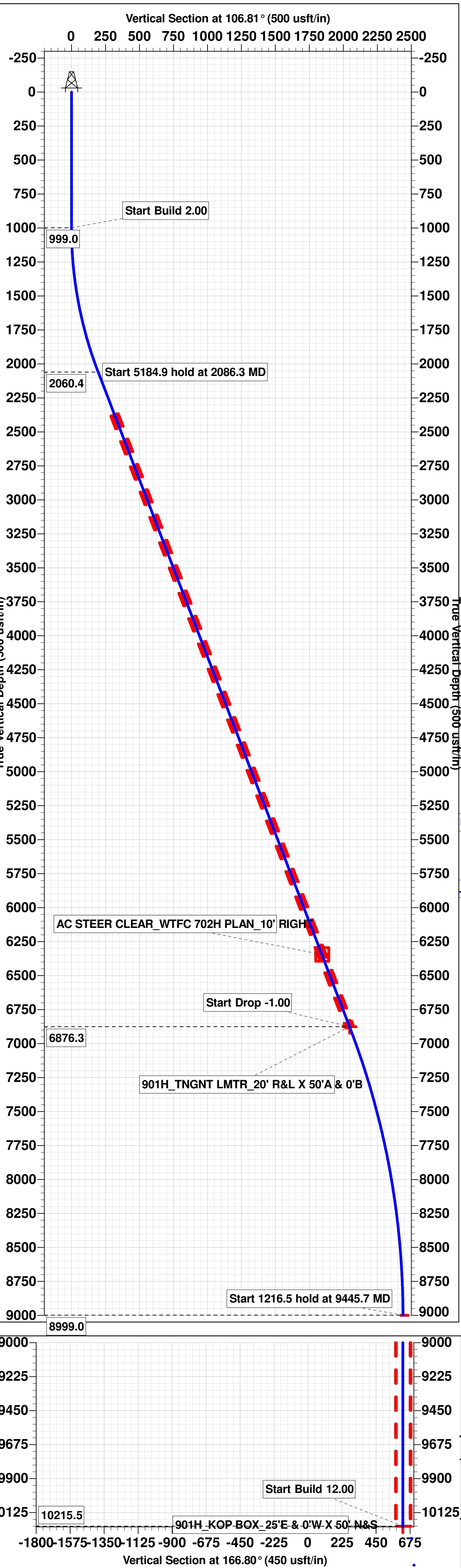
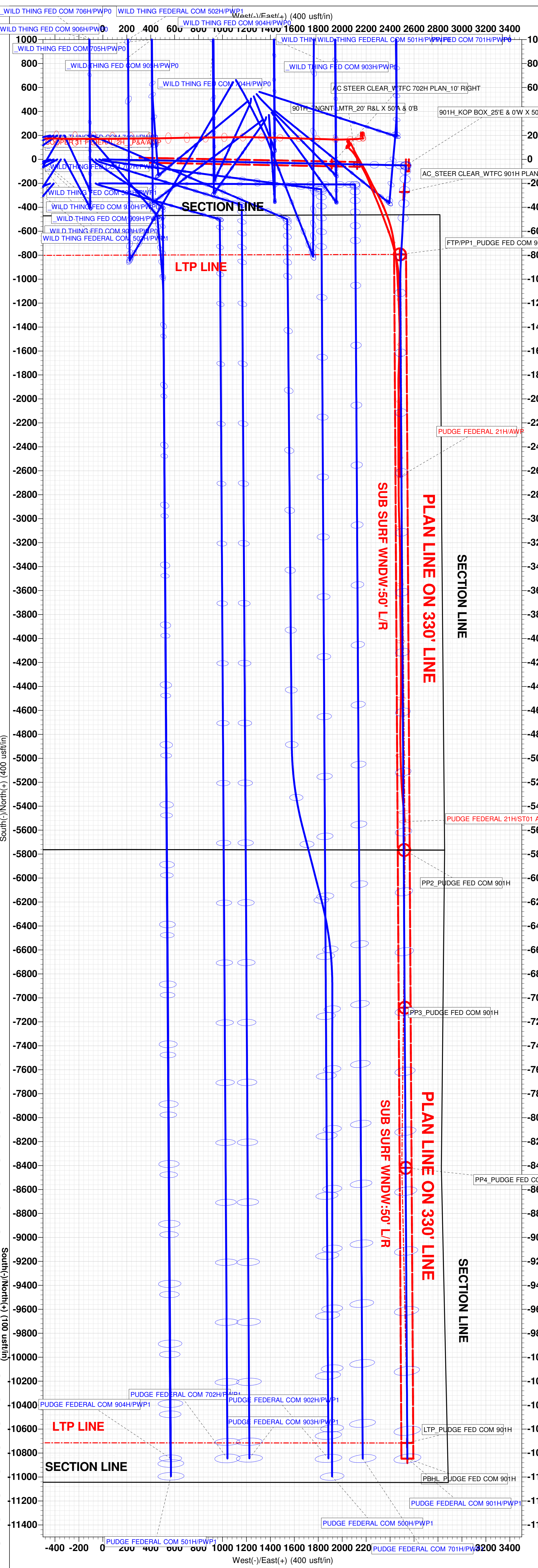
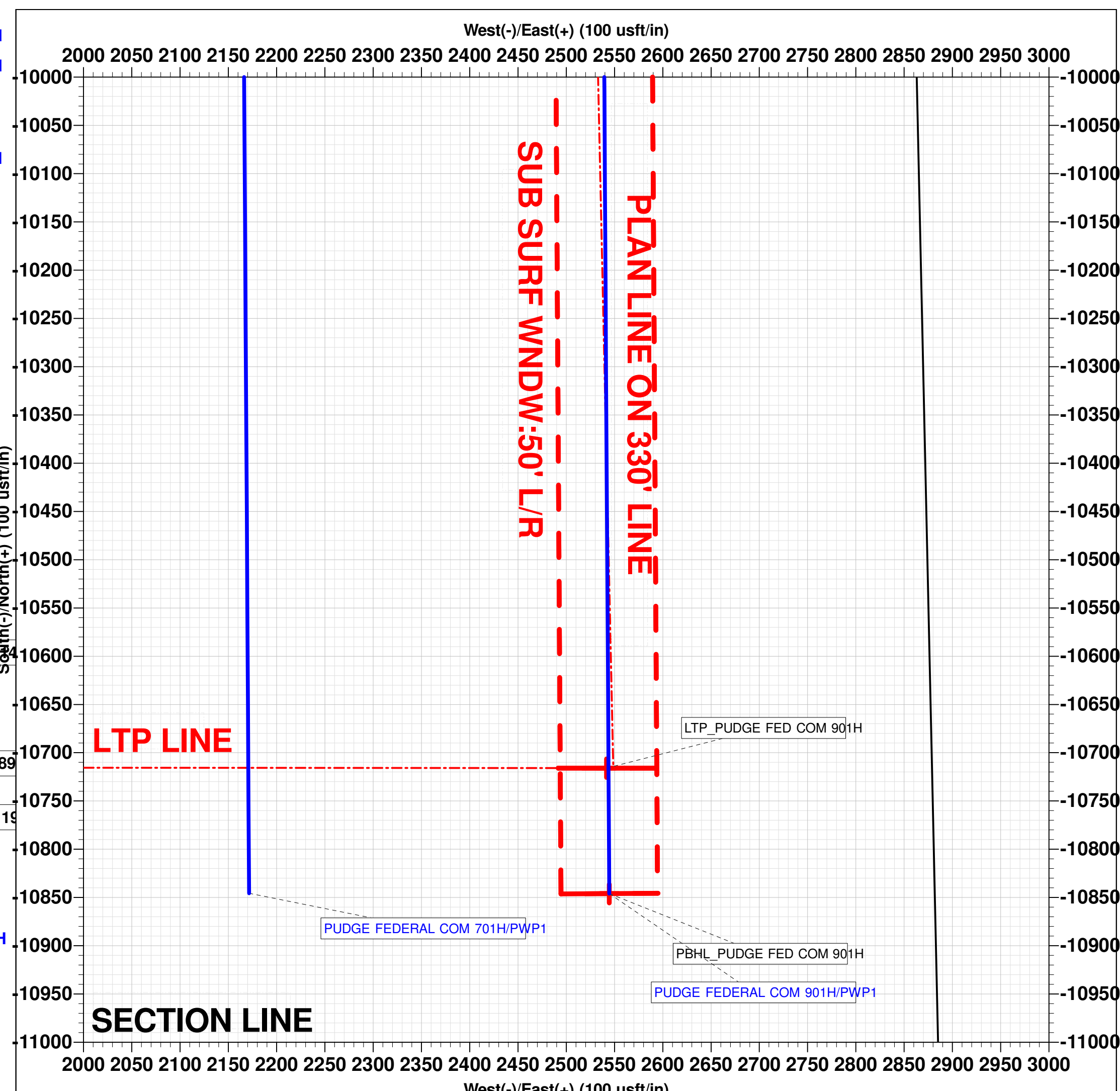
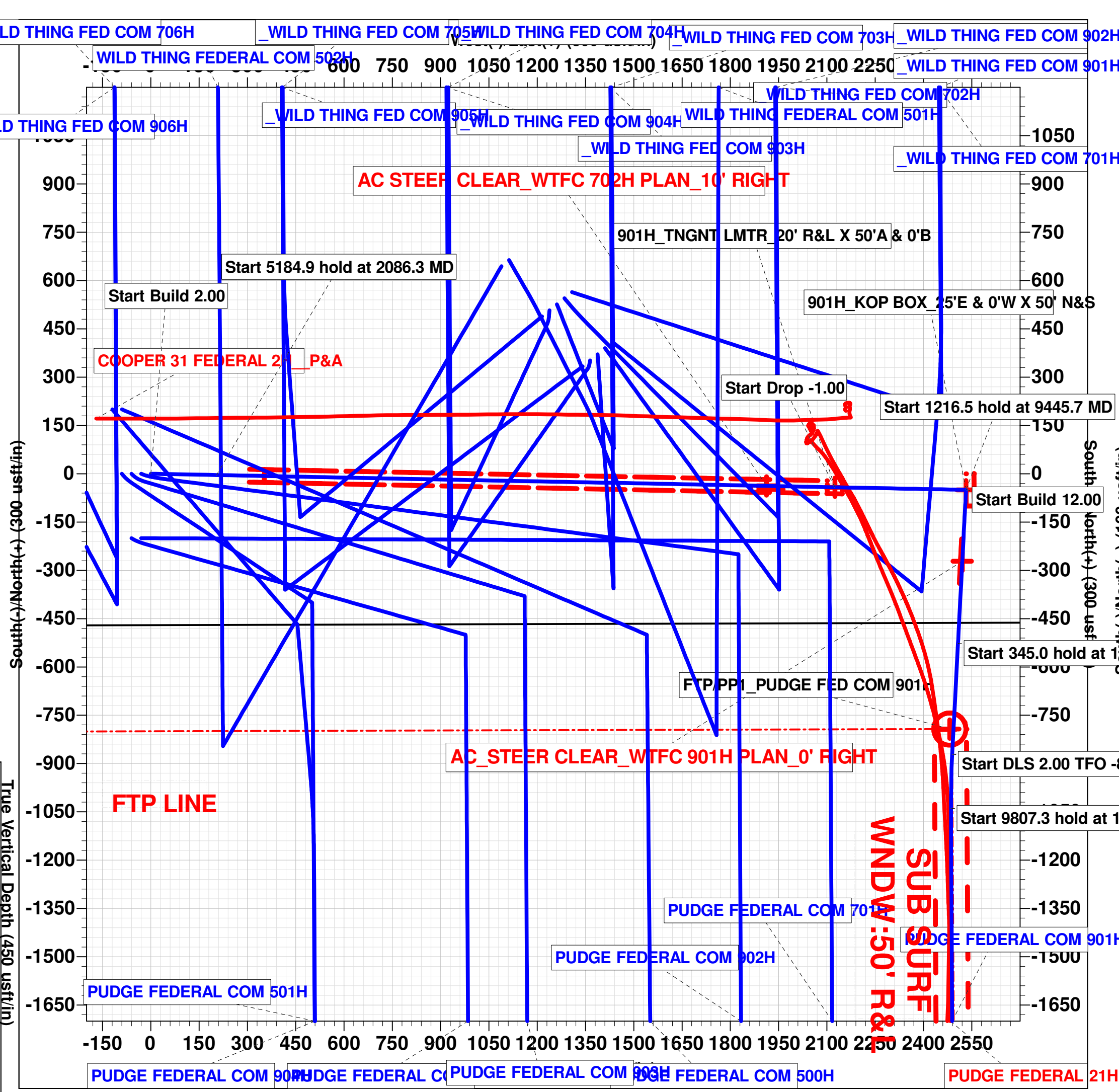
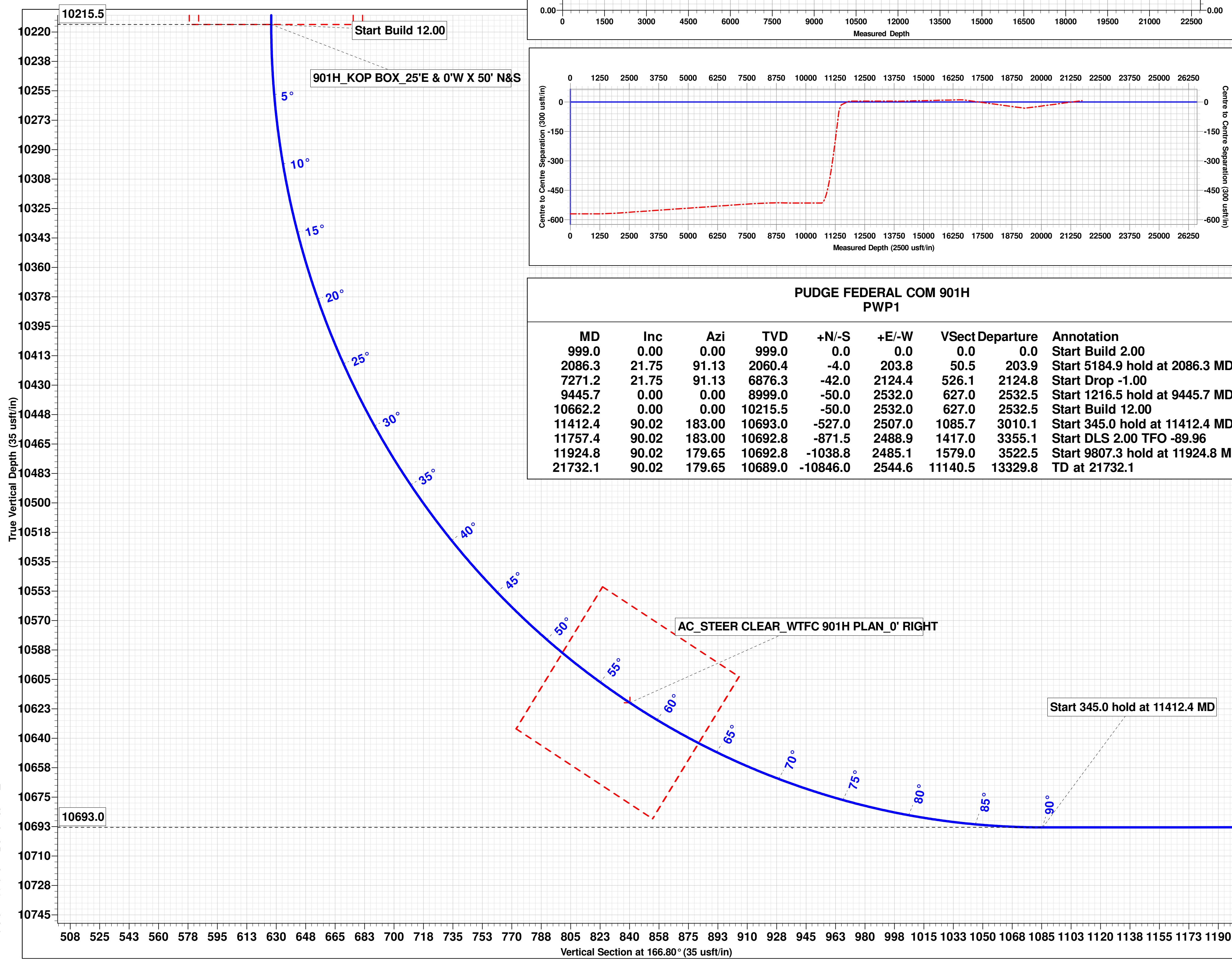
Name	TVD	+N/-S	+E/-W	Northing	Easting
AC STEER CLEAR_WTFC 702H PLAN_10' RIGHT	6344.8	-37.8	1912.4	392968.94	597830.50
901H_TNGNT LMTR_20' R&L X 50'A & 0'B	6876.3	-42.0	2124.4	392964.71	598042.48
901H_KOP BOX_25'E & 0'W X 50' N&S	10215.5	-50.0	2532.0	392956.71	598450.08
AC STEER CLEAR_WTFC 901H PLAN_0' RIGHT	10618.9	-271.7	2520.4	392734.97	598438.46
LTP_PUDGE FED COM 901H	10689.0	-10716.0	2541.7	382290.76	598459.82
PBHL_PUDGE FED COM 901H	10689.0	-10846.0	2544.6	382160.76	598462.69
PP4_PUDGE FED COM 901H	10689.9	-8419.1	2530.8	384587.61	598448.91
PP3_PUDGE FED COM 901H	10690.5	-7082.0	2524.5	385924.75	598442.56
PP2_PUDGE FED COM 901H	10691.0	-5765.7	2518.2	387240.99	598436.30
FTP/PP1_PUDGE FED COM 901H	10693.0	-793.0	2481.6	392213.73	598399.63



PUDGE FEDERAL COM 901H

PWP1

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect Departure	Annotation
999.0	0.00	0.00	999.0	0.0	0.0	0.0	Start Build 2.00
2086.3	21.75	91.13	2060.4	-4.0	203.8	50.5	Start 5184.9 hold at 2086.3 MD
7271.2	21.75	91.13	6876.3	-42.0	2124.4	526.1	Start Drop -1.00
9445.7	0.00	0.00	8999.0	-50.0	2532.0	627.0	Start 1216.5 hold at 9445.7 MD
10662.2	0.00	0.00	10215.5	-50.0	2532.0	627.0	Start Build 12.00
11412.4	90.02	183.00	10693.0	-527.0	2507.0	1085.7	Start 345.0 hold at 11412.4 MD
11757.4	90.02	183.00	10692.8	-871.5	2488.9	1417.0	Start DLS 2.00 TFO -89.96
11924.8	90.02	179.65	10692.8	-1038.8	2485.1	1579.0	Start 9807.3 hold at 11924.8 MD
21732.1	90.02	179.65	10689.0	-10846.0	2544.6	11140.5	TD at 21732.1



DEFAULT TRGT WNDW: 10' A/B

ConocoPhillips - Pudge Federal Com 901H

1. Geologic Formations

TVD of Target:	10,701' EOL	Pilot hole depth:	N/A
MD at TD:	21,732'	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	1032	Salt	
Base of Salt	2578	Salt	
Lamar	2774	Salt Water	
Bell Canyon	2818	Salt Water	
Cherry Canyon	3653	Oil/Gas	
Brushy Canyon	4937	Oil/Gas	
Bone Spring	6503	Oil/Gas	
1st Bone Spring Sand	7437	Oil/Gas	
2nd Bone Spring Sand	8288	Oil/Gas	
3rd Bone Spring Sand	9330	Oil/Gas	
Wolfcamp A	9831	Oil/Gas	
Wolfcamp B	10126	Oil/Gas	
Wolfcamp C	10654	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	2.86	1.14	3.26	3.29
8.750"	7500	10650	7.625"	29.7	P110-ICY	W513	3.31	1.72	3.38	2.03
6.75"	0	10450	5.5"	20	P110-ICY	BTC	2.99	2.23	3.49	3.49
6.75"	10450	21,732	5.5"	20	P110-ICY	W441	2.95	2.23	3.41	2.78
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 901H

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

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3. Cementing Program

Casing	# 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	1065	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	577	12.7	1.68	9.09	72	Lead: Class C
	1078	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	10,150'	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	531	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	577	12.7	1.68	9.09	72	Lead: Class C
	1078	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	6,503'	50% in OH
BH Stg 2	0'	263%
Production	10,150'	35% OH in Lateral (KOP to EOL)

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4. Pressure Control Equipment

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

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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.6 - 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 901H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7515 psi at 10701' 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	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No. PUDGE FEDERAL COM/901H	
9. API Well No.	
10. Field and Pool or Exploratory Area Purple Sage/(WOLFCAMP) GAS	11. Country or Parish, State LEA/NM

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

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 # 10400101476.
API #: 30-015-56663.

Drilling Changes:
KOP:
From: 469' FSL and 2474' FWL Section 31. T25S. R29E.
To: 412' FSL and 286' FEL Section 31. T25S. R29E.

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 10/24/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 10/27/2025
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 / 2474 FWL / TWSP: 25S / RANGE: 29E / SECTION: 31 / LAT: 32.080234 / LONG: -104.024137 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 1 FNL / 337 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.064367 / LONG: -104.016055 (TVD: 10880 feet, MD: 16255 feet)

PPP: NENE / 330 FNL / 337 FEL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.078037 / LONG: -104.016127 (TVD: 10880 feet, MD: 11867 feet)

BHL: SESE / 200 FSL / 337 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.0504 / LONG: -104.016017 (TVD: 10880 feet, MD: 21919 feet)

SEC31-T25S-R29E_PUDGE FEDERAL COM_Eddy__CONOCOPHILLIPS COMPANY_45749_JS

PUDGE FEDERAL COM

10 3/4		surface csg in a		14 3/4	inch hole.		Design Factors			Surface				
Segment	#/ft	Grade		Coupling		Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	45.50			J 55	BTC		44.92	13.06	0.64	350	23	1.11	25.18	15,925
"B"				BTC					0					0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500					Tail Cmt	does not	circ to sfc.	Totals:	350					15,925
Comparison of Proposed to Minimum Required Cement Volumes														
Hole	Annular	1 Stage		1 Stage	Min	1 Stage	Drilling	Calc					Min Dist	
Size	Volume	Cmt Sx		CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	Req'd					Hole-Cplg
14 3/4	0.5563	211		293	195	50	8.80	3219	5M					1.50
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.														
Alt burst ok														

7 5/8		casing inside the		10 3/4		Design Factors					Int 1		
Segment	#/ft	Grade		Coupling		Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70	L 80		BTC		2.25	1.23	0.9	7,500	1	1.32	2.13	222,750
"B"	29.70	P 110		W-513		6.97	1.01	1.24	2,724	2	1.81	1.75	80,903
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,650									Totals:	10,224		303,653	
The cement volume(s) are intended to achieve a top of						0	ft from surface or a		350			overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx		1 Stage CuFt Cmt		Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg		
9 7/8	0.2148	1152		2792		2199	27	10.00	5237	10M	0.69		
D V Tool(s):				2772		sum of sx				Σ CuFt		Σ%excess	
t by stage % :		74		16		1573				3484		58	
Class 'H' tail cmt yld > 1.20													
MASP is within 10% of 5000psig, need exrta equip?													
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.92, b, c, d All > 0.70, OK.													
Keep Casing Full, Alt Burst ok, Does not meet CFO 25% excess													

Tail cmt													
5 1/2		casing inside the		7 5/8		Design Factors				Prod 1			
Segment	#/ft	Grade		Coupling		Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	P 110		BTC		2.95	1.58	1.66	10,024	2	2.41	2.30	200,480
"B"	20.00	P 110		W441		7.10	1.49	1.88	11,461	2	2.74	2.35	229,220
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,205									Totals:	21,485	429,700		
The cement volume(s) are intended to achieve a top of						10024	ft from surface or a		200			overlap.	
Hole	Annular	1 Stage		1 Stage		Min	1 Stage	Drilling	Calc			Min Dist	
Size	Volume	Cmt Sx		CuFt Cmt		Cu Ft	% Excess	Mud Wt	MASP			Hole-Cplg	
6 3/4	0.0835	1649		2223		959	132	13.50				0.35	
Class 'C' tail cmt yld > 1.35													
Clearance ok must tie back 500ft													

#N/A														
0				5 1/2				Design Factors			<Choose Casing>			
Segment	#/ft	Grade		Coupling		#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"				0.00					0				0	
"B"				0.00					0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig:									Totals:	0				0
Cmt vol calc below includes this csg, TOC intended						#N/A	ft from surface or a		#N/A			overlap.		
Hole Size	Annular Volume	1 Stage	1 Stage	Min	1 Stage	ft from surface or a	Drilling	Calc	Req'd			Min Dist		
		Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg		
0		#N/A	#N/A	0	#N/A									
#N/A														
Capitan Reef est top XXXX.														



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

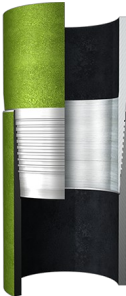
This connection is fully interchangeable with:
TXP® BTC - 7.625 in. - 0.328 (26.40) / 0.43 (33.70) / 0.5 (39.00) / 0.562 (42.80) / 0.595 (45.30) / 0.625 (47.10) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
Datasheet is also valid 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
For further information on concepts indicated in this datasheet, download the Datasheet Manual from 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-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	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.

For the latest performance data, always visit our website: www.tenaris.com
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TenarisHydril Wedge 441®



Coupling	Pipe Body
Grade: P1104CY	Grade: P1104CY
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	P1104CY
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 901H
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 10-3/4" 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 520622

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 520622
	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