

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.079684 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 701H	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: 2867509

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 08/08/2025	Time Sundry Submitted: 09:53
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. BHL Change: From: 200' FSL & 530' FEL Section 7. T26S. R29E. To: 200' FSL & 710' FEL Section 7. T26S. R29E. C102 Attached. Drilling Changes: Drilling Program, Directional Plan, AC Report and Specs Attached.

NOI Attachments

Procedure Description

- COG_Pudge_701H_AC_RPT_20250808095227.pdf
- Tenaris_Data_Sheets___3_String___WCA___State_Line___20___P110_ICY_Prod_20250808095228.pdf
- COG_PUDGE_FEDERAL_COM_701H_C102_20250808095229.pdf
- COG_Pudge_701H_Directional_Plan_20250808095229.pdf
- COG_Pudge_701H_Drilling_Program_20250808095228.pdf

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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_20250915084833.pdf
PUDGE_FED_COM_701H_COAs_20250915084833.pdf

Authorized

Tenaris_Data_Sheets__3_String__WCA__State_Line__20__P110_ICY_Prod_20250915122911.pdf
COG_PUDGE_FEDERAL_COM_701H_C102_20250915122901.pdf
COG_Pudge_701H_Drilling_Program_20250915122048.pdf
COG_Pudge_701H_Directional_Plan_20250915122043.pdf
COG_Pudge_701H_AC_RPT_20250915122038.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: AUG 08, 2025 09:52 AM
Name: COG OPERATING LLC	
Title: Regulatory Analyst	
Street Address: 925 N ELDRIDGE PARKWAY	
City: HOUSTON	State: TX
Phone: (281) 293-1000	
Email address: MAYTE.X.REYES@CONOCOPHILLIPS.COM	

Field

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

BLM Point of Contact

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

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 <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No. NMNM118113
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No. PUDGE FEDERAL COM/701H
2. Name of Operator COG OPERATING LLC		9. API Well No.
3a. Address 600 West Illinois Ave, Midland, TX 79701	3b. Phone No. (include area code) (432) 683-7443	10. Field and Pool or Exploratory Area PURPLE SAGE/WOLFCAMP, Gas
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 31/T25S/R29E/NMP		11. Country or Parish, State EDDY/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA					
TYPE OF SUBMISSION		TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
	☒ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

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

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

BHL Change:
From: 200' FSL & 530' FEL Section 7. T26S. R29E.
To: 200' FSL & 710' FEL Section 7. T26S. R29E.
C102 Attached.

Drilling Changes:
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 08/08/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 09/15/2025
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office CARLSBAD	

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Location of Well

0. SHL: SESW / 269 FSL / 2444 FWL / TWSP: 25S / RANGE: 29E / SECTION: 31 / LAT: 32.079684 / LONG: -104.024234 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 330 FNL / 530 FEL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.078037 / LONG: -104.01675 (TVD: 9748 feet, MD: 10286 feet)

BHL: SESE / 200 FSL / 530 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.050403 / LONG: -104.01664 (TVD: 9780 feet, MD: 20329 feet)

CONFIDENTIAL

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		10024	ft from	surface or a	200			overlap.	
Size	Volume	1 Stage		1 Stage		10024	Drilling	Calc	200			Min Dist	
6 3/4	0.0835	Cmt Sx		CuFt Cmt		% Excess	Mud Wt	MASP	Req'd			Hole-Cplg	
		1649		2223		132	13.50		BOPE			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	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.														

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	PUDGE FED COM 701H
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



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.

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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

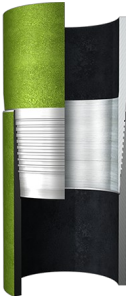
This connection is fully interchangeable with:
TXP[®] BTC - 7.625 in. - 0.328 (26.40) / 0.43 (33.70) / 0.5 (39.00) / 0.562 (42.80) / 0.595 (45.30) / 0.625 (47.10) in. (lb/ft)
Connections with Dopeless[®] Technology are fully compatible with the same connection in its doped version
Datasheet is also valid 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.

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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.

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TenarisHydril Wedge 441®



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

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

Pipe Body Data

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

Connection Data

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

Notes

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

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

WELL LOCATION INFORMATION

API Number 30-015-56661	Pool Code 98220	Pool Name Purple Sage; Wolfcamp (Gas)
Property Code 337302	Property Name PUDGE FED COM	Well Number 701H
OGRID No. 229137	Operator Name COG OPERATING LLC	Ground Level Elevation 2,925'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☒ Fee ☐ Tribal ☒ Federal

Surface Location

UL N	Section 31	Township 25S	Range 29E	Lot	Ft. from N/S 269' FSL	Ft. from E/W 2,444' FWL	Latitude 32.079687°	Longitude -104.024231°	County EDDY
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Bottom Hole Location

UL P	Section 7	Township 26S	Range 29E	Lot	Ft. from N/S 200' FSL	Ft. from E/W 710' FEL	Latitude 32.050405°	Longitude -104.017222°	County EDDY
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Dedicated Acres 640	Infill or Defining Well Infill	Defining Well API 30-015-56662	Overlapping Spacing Unit (Y/N) N	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL P	Section 31	Township 25S	Range 29E	Lot	Ft. from N/S 263' FSL	Ft. from E/W 709' FEL	Latitude 32.079667°	Longitude -104.017326°	County EDDY
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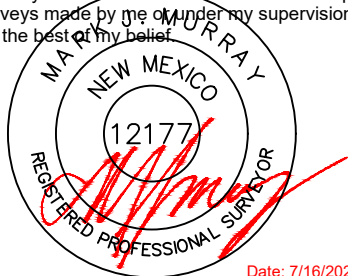
First Take Point (FTP)

UL A	Section 6	Township 26S	Range 29E	Lot	Ft. from N/S 330' FNL	Ft. from E/W 710' FEL	Latitude 32.078037°	Longitude -104.017331°	County EDDY
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Last Take Point (LTP)

UL P	Section 7	Township 26S	Range 29E	Lot	Ft. from N/S 330' FSL	Ft. from E/W 710' FEL	Latitude 32.050762°	Longitude -104.017230°	County EDDY
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Unitized Area or Area of Uniform Interest COM	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 2925'
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OPERATOR CERTIFICATIONS I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.		SURVEYOR CERTIFICATIONS I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  Date: 7/16/2025	
Signature Mayte Reyes Date 7/28/2025		Signature and Seal of Professional Surveyor	
Printed Name Mayte Reyes		Certificate Number 12177	Date of Survey 7/16/2025
Email Address mayte.x.reyes@cop.com			

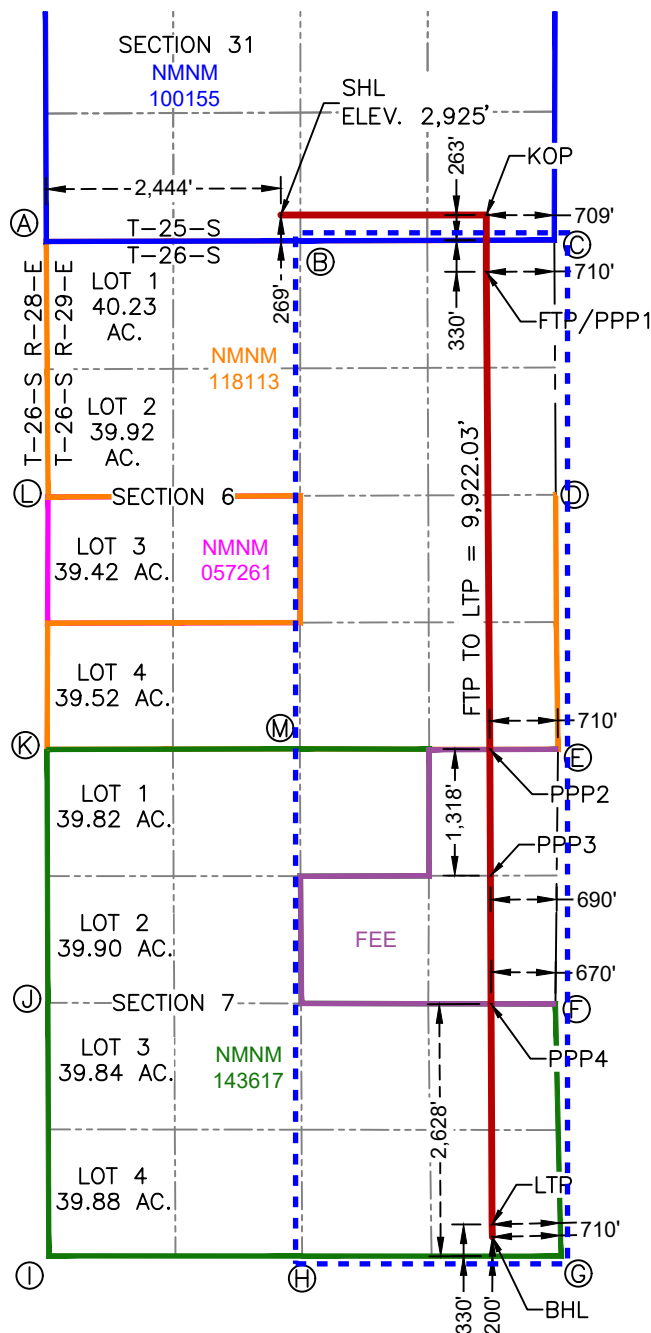
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

ACREAGE DEDICATION PLATS

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

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

PUDGE FED COM 701H



SURFACE HOLE LOCATION
269' FSL & 2,444' FWL
ELEV.=2,925'

NAD 83 X = 637,072.81'
NAD 83 Y = 392,864.43'
NAD 83 LAT = 32.079687°
NAD 83 LONG = -104.024231°

KICK-OFF POINT
263' FSL & 709' FEL

NAD 83 X = 639,211.56'
NAD 83 Y = 392,863.50'
NAD 83 LAT = 32.079667°
NAD 83 LONG = -104.017326°

FIRST TAKE POINT & PENETRATION POINT 1
330' FNL & 710' FEL

NAD 83 X = 639,211.66'
NAD 83 Y = 392,270.50'
NAD 83 LAT = 32.078037°
NAD 83 LONG = -104.017331°

PENETRATION POINT 2
0' FSL & 710' FEL

NAD 83 X = 639,248.45'
NAD 83 Y = 387,299.25'
NAD 83 LAT = 32.064371°
NAD 83 LONG = -104.017259°

PENETRATION POINT 3
1,318' FNL & 690' FEL

NAD 83 X = 639,254.72'
NAD 83 Y = 385,981.57'
NAD 83 LAT = 32.060749°
NAD 83 LONG = -104.017251°

PENETRATION POINT 4
2,628' FSL & 670' FEL

NAD 83 X = 639,261.07'
NAD 83 Y = 384,646.18'
NAD 83 LAT = 32.057078°
NAD 83 LONG = -104.017243°

LAST TAKE POINT
330' FSL & 710' FEL

NAD 83 X = 639,271.99'
NAD 83 Y = 382,348.66'
NAD 83 LAT = 32.050762°
NAD 83 LONG = -104.017230°

BOTTOM HOLE LOCATION
200' FSL & 710' FEL

NAD 83 X = 639,274.86'
NAD 83 Y = 382,218.66'
NAD 83 LAT = 32.050405°
NAD 83 LONG = -104.017222°

CORNER COORDINATES
NEW MEXICO EAST - NAD 83

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

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1. Geologic Formations

TVD of Target:	9,995' EOL	Pilot hole depth:	N/A
MD at TD:	20,693'	Deepest expected fresh water:	0'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	339	Water	
Top of Salt	1063	Salt	
Base of Salt	2576	Salt	
Lamar	2772	Salt Water	
Bell Canyon	2817	Salt Water	
Cherry Canyon	3650	Oil/Gas	
Brushy Canyon	4931	Oil/Gas	
Bone Spring	6496	Oil/Gas	
1st Bone Spring Sand	7431	Oil/Gas	
2nd Bone Spring Sand	8283	Oil/Gas	
3rd Bone Spring Sand	9325	Oil/Gas	
Wolfcamp A	9823	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	3.03	1.22	3.26	3.29
8.750"	7500	9612	7.625"	29.7	P110-ICY	W513	3.57	1.84	3.74	2.25
6.75"	0	9412	5.5"	20	P110-ICY	BTC	3.27	2.39	3.87	3.87
6.75"	9412	20,693	5.5"	20	P110-ICY	W441	3.16	2.39	3.65	2.97
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.

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

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3. Cementing Program

Casing	# 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	1004	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	520	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	9,112'	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	404	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	520	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	6,496'	50% in OH
BH Stg 2	0'	263%
Production	9,112'	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 701H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7020 psi at 9995' TVD
Abnormal Temperature	NO 155 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

DELAWARE BASIN WEST

**ATLAS PROSPECT_NME
PUDGE FED COM PROJECT
PUDGE FEDERAL COM 701H
3001556661
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 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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 701H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
Grid Convergence:	0.16 °		
		Latitude:	32° 4' 46.426 N
		Longitude:	104° 1' 25.483 W
		Ground Level:	2,925.0 usft

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2022	12/31/2023	6.55
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,336.01416875

Design	PWP1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			168.31

Plan Survey Tool Program	Date	8/4/2025		
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks
(usft)	(usft)			
1	0.0	20,693.8 PWP1 (OWB)	r.5 MWD+IFR1	
			OWSG MWD + IFR1 rev.5	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,860.7	17.21	90.27	1,847.8	-0.6	128.3	2.00	2.00	0.00	90.27	
7,782.5	17.21	90.27	7,504.4	-8.8	1,880.8	0.00	0.00	0.00	0.00	
9,503.9	0.00	0.00	9,200.0	-10.0	2,137.5	1.00	-1.00	0.00	180.00	
9,785.4	0.00	0.00	9,481.5	-10.0	2,137.5	0.00	0.00	0.00	0.00	
10,534.2	89.85	179.65	9,959.0	-486.2	2,140.4	12.00	12.00	23.99	179.65	
20,693.8	89.85	179.65	9,986.0	-10,645.6	2,201.7	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

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Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,100.0	2.00	90.27	1,100.0	0.0	1.7	0.4	2.00	2.00	0.00
1,200.0	4.00	90.27	1,199.8	0.0	7.0	1.4	2.00	2.00	0.00
1,300.0	6.00	90.27	1,299.5	-0.1	15.7	3.3	2.00	2.00	0.00
1,400.0	8.00	90.27	1,398.7	-0.1	27.9	5.8	2.00	2.00	0.00
1,500.0	10.00	90.27	1,497.5	-0.2	43.5	9.0	2.00	2.00	0.00
1,600.0	12.00	90.27	1,595.6	-0.3	62.6	13.0	2.00	2.00	0.00
1,700.0	14.00	90.27	1,693.1	-0.4	85.1	17.6	2.00	2.00	0.00
1,800.0	16.00	90.27	1,789.6	-0.5	111.0	23.0	2.00	2.00	0.00
1,860.7	17.21	90.27	1,847.8	-0.6	128.3	26.6	2.00	2.00	0.00
Start 5921.8 hold at 1860.7 MD									
1,900.0	17.21	90.27	1,885.3	-0.7	140.0	29.0	0.00	0.00	0.00
2,000.0	17.21	90.27	1,980.9	-0.8	169.5	35.1	0.00	0.00	0.00
2,100.0	17.21	90.27	2,076.4	-0.9	199.1	41.2	0.00	0.00	0.00
2,200.0	17.21	90.27	2,171.9	-1.1	228.7	47.4	0.00	0.00	0.00
2,300.0	17.21	90.27	2,267.4	-1.2	258.3	53.5	0.00	0.00	0.00
2,400.0	17.21	90.27	2,363.0	-1.3	287.9	59.6	0.00	0.00	0.00
2,500.0	17.21	90.27	2,458.5	-1.5	317.5	65.8	0.00	0.00	0.00
2,600.0	17.21	90.27	2,554.0	-1.6	347.1	71.9	0.00	0.00	0.00
2,700.0	17.21	90.27	2,649.5	-1.8	376.7	78.0	0.00	0.00	0.00
2,800.0	17.21	90.27	2,745.0	-1.9	406.3	84.2	0.00	0.00	0.00
2,900.0	17.21	90.27	2,840.6	-2.0	435.9	90.3	0.00	0.00	0.00
3,000.0	17.21	90.27	2,936.1	-2.2	465.5	96.4	0.00	0.00	0.00
3,100.0	17.21	90.27	3,031.6	-2.3	495.1	102.5	0.00	0.00	0.00
3,200.0	17.21	90.27	3,127.1	-2.5	524.7	108.7	0.00	0.00	0.00
3,300.0	17.21	90.27	3,222.6	-2.6	554.3	114.8	0.00	0.00	0.00
3,400.0	17.21	90.27	3,318.2	-2.7	583.9	120.9	0.00	0.00	0.00
3,500.0	17.21	90.27	3,413.7	-2.9	613.5	127.1	0.00	0.00	0.00
3,600.0	17.21	90.27	3,509.2	-3.0	643.1	133.2	0.00	0.00	0.00
3,700.0	17.21	90.27	3,604.7	-3.1	672.7	139.3	0.00	0.00	0.00
3,800.0	17.21	90.27	3,700.2	-3.3	702.2	145.4	0.00	0.00	0.00
3,900.0	17.21	90.27	3,795.8	-3.4	731.8	151.6	0.00	0.00	0.00
4,000.0	17.21	90.27	3,891.3	-3.6	761.4	157.7	0.00	0.00	0.00
4,100.0	17.21	90.27	3,986.8	-3.7	791.0	163.8	0.00	0.00	0.00
4,200.0	17.21	90.27	4,082.3	-3.8	820.6	170.0	0.00	0.00	0.00
4,300.0	17.21	90.27	4,177.8	-4.0	850.2	176.1	0.00	0.00	0.00
4,400.0	17.21	90.27	4,273.4	-4.1	879.8	182.2	0.00	0.00	0.00
4,500.0	17.21	90.27	4,368.9	-4.3	909.4	188.4	0.00	0.00	0.00
4,600.0	17.21	90.27	4,464.4	-4.4	939.0	194.5	0.00	0.00	0.00
4,700.0	17.21	90.27	4,559.9	-4.5	968.6	200.6	0.00	0.00	0.00
4,800.0	17.21	90.27	4,655.4	-4.7	998.2	206.7	0.00	0.00	0.00
4,900.0	17.21	90.27	4,751.0	-4.8	1,027.8	212.9	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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	17.21	90.27	4,846.5	-4.9	1,057.4	219.0	0.00	0.00	0.00
5,100.0	17.21	90.27	4,942.0	-5.1	1,087.0	225.1	0.00	0.00	0.00
5,200.0	17.21	90.27	5,037.5	-5.2	1,116.6	231.3	0.00	0.00	0.00
5,300.0	17.21	90.27	5,133.0	-5.4	1,146.2	237.4	0.00	0.00	0.00
5,400.0	17.21	90.27	5,228.6	-5.5	1,175.8	243.5	0.00	0.00	0.00
5,500.0	17.21	90.27	5,324.1	-5.6	1,205.3	249.6	0.00	0.00	0.00
5,600.0	17.21	90.27	5,419.6	-5.8	1,234.9	255.8	0.00	0.00	0.00
5,700.0	17.21	90.27	5,515.1	-5.9	1,264.5	261.9	0.00	0.00	0.00
5,800.0	17.21	90.27	5,610.6	-6.1	1,294.1	268.0	0.00	0.00	0.00
5,900.0	17.21	90.27	5,706.2	-6.2	1,323.7	274.2	0.00	0.00	0.00
6,000.0	17.21	90.27	5,801.7	-6.3	1,353.3	280.3	0.00	0.00	0.00
6,100.0	17.21	90.27	5,897.2	-6.5	1,382.9	286.4	0.00	0.00	0.00
6,200.0	17.21	90.27	5,992.7	-6.6	1,412.5	292.6	0.00	0.00	0.00
6,300.0	17.21	90.27	6,088.2	-6.7	1,442.1	298.7	0.00	0.00	0.00
6,400.0	17.21	90.27	6,183.8	-6.9	1,471.7	304.8	0.00	0.00	0.00
6,500.0	17.21	90.27	6,279.3	-7.0	1,501.3	310.9	0.00	0.00	0.00
6,600.0	17.21	90.27	6,374.8	-7.2	1,530.9	317.1	0.00	0.00	0.00
6,700.0	17.21	90.27	6,470.3	-7.3	1,560.5	323.2	0.00	0.00	0.00
6,800.0	17.21	90.27	6,565.9	-7.4	1,590.1	329.3	0.00	0.00	0.00
6,900.0	17.21	90.27	6,661.4	-7.6	1,619.7	335.5	0.00	0.00	0.00
7,000.0	17.21	90.27	6,756.9	-7.7	1,649.3	341.6	0.00	0.00	0.00
7,100.0	17.21	90.27	6,852.4	-7.9	1,678.9	347.7	0.00	0.00	0.00
7,200.0	17.21	90.27	6,947.9	-8.0	1,708.5	353.8	0.00	0.00	0.00
7,300.0	17.21	90.27	7,043.5	-8.1	1,738.0	360.0	0.00	0.00	0.00
7,400.0	17.21	90.27	7,139.0	-8.3	1,767.6	366.1	0.00	0.00	0.00
7,500.0	17.21	90.27	7,234.5	-8.4	1,797.2	372.2	0.00	0.00	0.00
7,600.0	17.21	90.27	7,330.0	-8.5	1,826.8	378.4	0.00	0.00	0.00
7,700.0	17.21	90.27	7,425.5	-8.7	1,856.4	384.5	0.00	0.00	0.00
7,782.5	17.21	90.27	7,504.4	-8.8	1,880.8	389.6	0.00	0.00	0.00
Start Drop -1.00									
7,800.0	17.04	90.27	7,521.1	-8.8	1,886.0	390.6	1.00	-1.00	0.00
7,900.0	16.04	90.27	7,616.9	-9.0	1,914.5	396.5	1.00	-1.00	0.00
8,000.0	15.04	90.27	7,713.3	-9.1	1,941.2	402.1	1.00	-1.00	0.00
8,100.0	14.04	90.27	7,810.1	-9.2	1,966.4	407.3	1.00	-1.00	0.00
8,200.0	13.04	90.27	7,907.3	-9.3	1,989.8	412.1	1.00	-1.00	0.00
8,300.0	12.04	90.27	8,004.9	-9.4	2,011.5	416.6	1.00	-1.00	0.00
8,400.0	11.04	90.27	8,102.9	-9.5	2,031.5	420.8	1.00	-1.00	0.00
8,500.0	10.04	90.27	8,201.2	-9.6	2,049.8	424.5	1.00	-1.00	0.00
8,600.0	9.04	90.27	8,299.8	-9.7	2,066.3	428.0	1.00	-1.00	0.00
8,700.0	8.04	90.27	8,398.7	-9.7	2,081.2	431.0	1.00	-1.00	0.00
8,800.0	7.04	90.27	8,497.8	-9.8	2,094.3	433.8	1.00	-1.00	0.00
8,900.0	6.04	90.27	8,597.2	-9.9	2,105.7	436.1	1.00	-1.00	0.00
9,000.0	5.04	90.27	8,696.7	-9.9	2,115.4	438.1	1.00	-1.00	0.00
9,100.0	4.04	90.27	8,796.4	-9.9	2,123.3	439.8	1.00	-1.00	0.00
9,200.0	3.04	90.27	8,896.2	-10.0	2,129.4	441.0	1.00	-1.00	0.00
9,300.0	2.04	90.27	8,996.1	-10.0	2,133.9	442.0	1.00	-1.00	0.00
9,400.0	1.04	90.27	9,096.1	-10.0	2,136.6	442.5	1.00	-1.00	0.00
9,503.9	0.00	0.00	9,200.0	-10.0	2,137.5	442.7	1.00	-1.00	0.00
Start 281.5 hold at 9503.9 MD									
9,600.0	0.00	0.00	9,296.1	-10.0	2,137.5	442.7	0.00	0.00	0.00
9,700.0	0.00	0.00	9,396.1	-10.0	2,137.5	442.7	0.00	0.00	0.00
9,785.4	0.00	0.00	9,481.5	-10.0	2,137.5	442.7	0.00	0.00	0.00
Start DLS 12.00 TFO 179.65									

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,800.0	1.75	179.65	9,496.1	-10.2	2,137.5	442.9	12.00	12.00	0.00
9,825.0	4.75	179.65	9,521.0	-11.6	2,137.5	444.3	12.00	12.00	0.00
9,850.0	7.75	179.65	9,545.9	-14.4	2,137.5	447.0	12.00	12.00	0.00
9,875.0	10.75	179.65	9,570.5	-18.4	2,137.6	450.9	12.00	12.00	0.00
9,900.0	13.75	179.65	9,595.0	-23.7	2,137.6	456.1	12.00	12.00	0.00
9,925.0	16.75	179.65	9,619.1	-30.3	2,137.6	462.6	12.00	12.00	0.00
9,950.0	19.75	179.65	9,642.8	-38.1	2,137.7	470.2	12.00	12.00	0.00
9,975.0	22.75	179.65	9,666.1	-47.1	2,137.7	479.1	12.00	12.00	0.00
10,000.0	25.75	179.65	9,688.9	-57.4	2,137.8	489.2	12.00	12.00	0.00
10,025.0	28.75	179.65	9,711.1	-68.8	2,137.9	500.4	12.00	12.00	0.00
10,050.0	31.75	179.65	9,732.7	-81.4	2,137.9	512.8	12.00	12.00	0.00
10,075.0	34.75	179.65	9,753.6	-95.1	2,138.0	526.2	12.00	12.00	0.00
10,100.0	37.75	179.65	9,773.8	-109.9	2,138.1	540.7	12.00	12.00	0.00
10,125.0	40.75	179.65	9,793.2	-125.7	2,138.2	556.2	12.00	12.00	0.00
10,150.0	43.75	179.65	9,811.7	-142.5	2,138.3	572.7	12.00	12.00	0.00
10,175.0	46.75	179.65	9,829.3	-160.3	2,138.4	590.1	12.00	12.00	0.00
10,200.0	49.75	179.65	9,845.9	-178.9	2,138.5	608.4	12.00	12.00	0.00
10,225.0	52.75	179.65	9,861.5	-198.4	2,138.6	627.5	12.00	12.00	0.00
10,250.0	55.75	179.65	9,876.2	-218.7	2,138.8	647.4	12.00	12.00	0.00
10,275.0	58.75	179.65	9,889.7	-239.7	2,138.9	668.0	12.00	12.00	0.00
10,300.0	61.75	179.65	9,902.1	-261.4	2,139.0	689.3	12.00	12.00	0.00
10,325.0	64.75	179.65	9,913.3	-283.8	2,139.2	711.1	12.00	12.00	0.00
10,350.0	67.75	179.65	9,923.4	-306.6	2,139.3	733.6	12.00	12.00	0.00
10,375.0	70.75	179.65	9,932.3	-330.0	2,139.4	756.5	12.00	12.00	0.00
10,400.0	73.75	179.65	9,939.9	-353.8	2,139.6	779.8	12.00	12.00	0.00
10,425.0	76.75	179.65	9,946.2	-378.0	2,139.7	803.5	12.00	12.00	0.00
10,450.0	79.75	179.65	9,951.3	-402.5	2,139.9	827.5	12.00	12.00	0.00
10,475.0	82.75	179.65	9,955.1	-427.2	2,140.0	851.8	12.00	12.00	0.00
10,500.0	85.75	179.65	9,957.6	-452.0	2,140.2	876.1	12.00	12.00	0.00
10,525.0	88.75	179.65	9,958.9	-477.0	2,140.3	900.6	12.00	12.00	0.00
10,534.2	89.85	179.65	9,959.0	-486.2	2,140.4	909.6	12.00	12.00	0.00
Start 10159.6 hold at 10534.2 MD									
10,600.0	89.85	179.65	9,959.1	-552.0	2,140.8	974.2	0.00	0.00	0.00
10,700.0	89.85	179.65	9,959.4	-652.0	2,141.4	1,072.2	0.00	0.00	0.00
10,800.0	89.85	179.65	9,959.7	-752.0	2,142.0	1,170.2	0.00	0.00	0.00
10,900.0	89.85	179.65	9,959.9	-852.0	2,142.6	1,268.3	0.00	0.00	0.00
11,000.0	89.85	179.65	9,960.2	-952.0	2,143.2	1,366.3	0.00	0.00	0.00
11,100.0	89.85	179.65	9,960.5	-1,052.0	2,143.8	1,464.4	0.00	0.00	0.00
11,200.0	89.85	179.65	9,960.7	-1,152.0	2,144.4	1,562.4	0.00	0.00	0.00
11,300.0	89.85	179.65	9,961.0	-1,252.0	2,145.0	1,660.5	0.00	0.00	0.00
11,400.0	89.85	179.65	9,961.3	-1,352.0	2,145.6	1,758.5	0.00	0.00	0.00
11,500.0	89.85	179.65	9,961.5	-1,452.0	2,146.2	1,856.6	0.00	0.00	0.00
11,600.0	89.85	179.65	9,961.8	-1,552.0	2,146.8	1,954.6	0.00	0.00	0.00
11,700.0	89.85	179.65	9,962.1	-1,652.0	2,147.4	2,052.7	0.00	0.00	0.00
11,800.0	89.85	179.65	9,962.3	-1,752.0	2,148.0	2,150.7	0.00	0.00	0.00
11,900.0	89.85	179.65	9,962.6	-1,852.0	2,148.6	2,248.8	0.00	0.00	0.00
12,000.0	89.85	179.65	9,962.9	-1,952.0	2,149.2	2,346.8	0.00	0.00	0.00
12,100.0	89.85	179.65	9,963.1	-2,052.0	2,149.8	2,444.9	0.00	0.00	0.00
12,200.0	89.85	179.65	9,963.4	-2,152.0	2,150.4	2,542.9	0.00	0.00	0.00
12,300.0	89.85	179.65	9,963.7	-2,252.0	2,151.0	2,641.0	0.00	0.00	0.00
12,400.0	89.85	179.65	9,963.9	-2,352.0	2,151.6	2,739.0	0.00	0.00	0.00
12,500.0	89.85	179.65	9,964.2	-2,452.0	2,152.2	2,837.1	0.00	0.00	0.00
12,600.0	89.85	179.65	9,964.5	-2,552.0	2,152.9	2,935.1	0.00	0.00	0.00
12,700.0	89.85	179.65	9,964.7	-2,652.0	2,153.5	3,033.2	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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)
12,800.0	89.85	179.65	9,965.0	-2,752.0	2,154.1	3,131.2	0.00	0.00	0.00
12,900.0	89.85	179.65	9,965.3	-2,852.0	2,154.7	3,229.3	0.00	0.00	0.00
13,000.0	89.85	179.65	9,965.5	-2,952.0	2,155.3	3,327.3	0.00	0.00	0.00
13,100.0	89.85	179.65	9,965.8	-3,052.0	2,155.9	3,425.3	0.00	0.00	0.00
13,200.0	89.85	179.65	9,966.1	-3,152.0	2,156.5	3,523.4	0.00	0.00	0.00
13,300.0	89.85	179.65	9,966.3	-3,252.0	2,157.1	3,621.4	0.00	0.00	0.00
13,400.0	89.85	179.65	9,966.6	-3,352.0	2,157.7	3,719.5	0.00	0.00	0.00
13,500.0	89.85	179.65	9,966.9	-3,451.9	2,158.3	3,817.5	0.00	0.00	0.00
13,600.0	89.85	179.65	9,967.1	-3,551.9	2,158.9	3,915.6	0.00	0.00	0.00
13,700.0	89.85	179.65	9,967.4	-3,651.9	2,159.5	4,013.6	0.00	0.00	0.00
13,800.0	89.85	179.65	9,967.7	-3,751.9	2,160.1	4,111.7	0.00	0.00	0.00
13,900.0	89.85	179.65	9,967.9	-3,851.9	2,160.7	4,209.7	0.00	0.00	0.00
14,000.0	89.85	179.65	9,968.2	-3,951.9	2,161.3	4,307.8	0.00	0.00	0.00
14,100.0	89.85	179.65	9,968.5	-4,051.9	2,161.9	4,405.8	0.00	0.00	0.00
14,200.0	89.85	179.65	9,968.7	-4,151.9	2,162.5	4,503.9	0.00	0.00	0.00
14,300.0	89.85	179.65	9,969.0	-4,251.9	2,163.1	4,601.9	0.00	0.00	0.00
14,400.0	89.85	179.65	9,969.3	-4,351.9	2,163.7	4,700.0	0.00	0.00	0.00
14,500.0	89.85	179.65	9,969.5	-4,451.9	2,164.3	4,798.0	0.00	0.00	0.00
14,600.0	89.85	179.65	9,969.8	-4,551.9	2,164.9	4,896.1	0.00	0.00	0.00
14,700.0	89.85	179.65	9,970.0	-4,651.9	2,165.5	4,994.1	0.00	0.00	0.00
14,800.0	89.85	179.65	9,970.3	-4,751.9	2,166.1	5,092.2	0.00	0.00	0.00
14,900.0	89.85	179.65	9,970.6	-4,851.9	2,166.7	5,190.2	0.00	0.00	0.00
15,000.0	89.85	179.65	9,970.8	-4,951.9	2,167.3	5,288.3	0.00	0.00	0.00
15,100.0	89.85	179.65	9,971.1	-5,051.9	2,168.0	5,386.3	0.00	0.00	0.00
15,200.0	89.85	179.65	9,971.4	-5,151.9	2,168.6	5,484.3	0.00	0.00	0.00
15,300.0	89.85	179.65	9,971.6	-5,251.9	2,169.2	5,582.4	0.00	0.00	0.00
15,400.0	89.85	179.65	9,971.9	-5,351.9	2,169.8	5,680.4	0.00	0.00	0.00
15,500.0	89.85	179.65	9,972.2	-5,451.9	2,170.4	5,778.5	0.00	0.00	0.00
15,600.0	89.85	179.65	9,972.4	-5,551.9	2,171.0	5,876.5	0.00	0.00	0.00
15,700.0	89.85	179.65	9,972.7	-5,651.9	2,171.6	5,974.6	0.00	0.00	0.00
15,800.0	89.85	179.65	9,973.0	-5,751.9	2,172.2	6,072.6	0.00	0.00	0.00
15,900.0	89.85	179.65	9,973.2	-5,851.9	2,172.8	6,170.7	0.00	0.00	0.00
16,000.0	89.85	179.65	9,973.5	-5,951.9	2,173.4	6,268.7	0.00	0.00	0.00
16,100.0	89.85	179.65	9,973.8	-6,051.9	2,174.0	6,366.8	0.00	0.00	0.00
16,200.0	89.85	179.65	9,974.0	-6,151.9	2,174.6	6,464.8	0.00	0.00	0.00
16,300.0	89.85	179.65	9,974.3	-6,251.9	2,175.2	6,562.9	0.00	0.00	0.00
16,400.0	89.85	179.65	9,974.6	-6,351.9	2,175.8	6,660.9	0.00	0.00	0.00
16,500.0	89.85	179.65	9,974.8	-6,451.9	2,176.4	6,759.0	0.00	0.00	0.00
16,600.0	89.85	179.65	9,975.1	-6,551.9	2,177.0	6,857.0	0.00	0.00	0.00
16,700.0	89.85	179.65	9,975.4	-6,651.9	2,177.6	6,955.1	0.00	0.00	0.00
16,800.0	89.85	179.65	9,975.6	-6,751.9	2,178.2	7,053.1	0.00	0.00	0.00
16,900.0	89.85	179.65	9,975.9	-6,851.9	2,178.8	7,151.2	0.00	0.00	0.00
17,000.0	89.85	179.65	9,976.2	-6,951.9	2,179.4	7,249.2	0.00	0.00	0.00
17,100.0	89.85	179.65	9,976.4	-7,051.9	2,180.0	7,347.3	0.00	0.00	0.00
17,200.0	89.85	179.65	9,976.7	-7,151.9	2,180.6	7,445.3	0.00	0.00	0.00
17,300.0	89.85	179.65	9,977.0	-7,251.9	2,181.2	7,543.3	0.00	0.00	0.00
17,400.0	89.85	179.65	9,977.2	-7,351.9	2,181.8	7,641.4	0.00	0.00	0.00
17,500.0	89.85	179.65	9,977.5	-7,451.9	2,182.4	7,739.4	0.00	0.00	0.00
17,600.0	89.85	179.65	9,977.8	-7,551.9	2,183.1	7,837.5	0.00	0.00	0.00
17,700.0	89.85	179.65	9,978.0	-7,651.9	2,183.7	7,935.5	0.00	0.00	0.00
17,800.0	89.85	179.65	9,978.3	-7,751.9	2,184.3	8,033.6	0.00	0.00	0.00
17,900.0	89.85	179.65	9,978.6	-7,851.9	2,184.9	8,131.6	0.00	0.00	0.00
18,000.0	89.85	179.65	9,978.8	-7,951.9	2,185.5	8,229.7	0.00	0.00	0.00
18,100.0	89.85	179.65	9,979.1	-8,051.8	2,186.1	8,327.7	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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)
18,200.0	89.85	179.65	9,979.4	-8,151.8	2,186.7	8,425.8	0.00	0.00	0.00
18,300.0	89.85	179.65	9,979.6	-8,251.8	2,187.3	8,523.8	0.00	0.00	0.00
18,400.0	89.85	179.65	9,979.9	-8,351.8	2,187.9	8,621.9	0.00	0.00	0.00
18,500.0	89.85	179.65	9,980.2	-8,451.8	2,188.5	8,719.9	0.00	0.00	0.00
18,600.0	89.85	179.65	9,980.4	-8,551.8	2,189.1	8,818.0	0.00	0.00	0.00
18,700.0	89.85	179.65	9,980.7	-8,651.8	2,189.7	8,916.0	0.00	0.00	0.00
18,800.0	89.85	179.65	9,981.0	-8,751.8	2,190.3	9,014.1	0.00	0.00	0.00
18,900.0	89.85	179.65	9,981.2	-8,851.8	2,190.9	9,112.1	0.00	0.00	0.00
19,000.0	89.85	179.65	9,981.5	-8,951.8	2,191.5	9,210.2	0.00	0.00	0.00
19,100.0	89.85	179.65	9,981.8	-9,051.8	2,192.1	9,308.2	0.00	0.00	0.00
19,200.0	89.85	179.65	9,982.0	-9,151.8	2,192.7	9,406.3	0.00	0.00	0.00
19,300.0	89.85	179.65	9,982.3	-9,251.8	2,193.3	9,504.3	0.00	0.00	0.00
19,400.0	89.85	179.65	9,982.6	-9,351.8	2,193.9	9,602.4	0.00	0.00	0.00
19,500.0	89.85	179.65	9,982.8	-9,451.8	2,194.5	9,700.4	0.00	0.00	0.00
19,600.0	89.85	179.65	9,983.1	-9,551.8	2,195.1	9,798.4	0.00	0.00	0.00
19,700.0	89.85	179.65	9,983.4	-9,651.8	2,195.7	9,896.5	0.00	0.00	0.00
19,800.0	89.85	179.65	9,983.6	-9,751.8	2,196.3	9,994.5	0.00	0.00	0.00
19,900.0	89.85	179.65	9,983.9	-9,851.8	2,196.9	10,092.6	0.00	0.00	0.00
20,000.0	89.85	179.65	9,984.2	-9,951.8	2,197.5	10,190.6	0.00	0.00	0.00
20,100.0	89.85	179.65	9,984.4	-10,051.8	2,198.2	10,288.7	0.00	0.00	0.00
20,200.0	89.85	179.65	9,984.7	-10,151.8	2,198.8	10,386.7	0.00	0.00	0.00
20,300.0	89.85	179.65	9,985.0	-10,251.8	2,199.4	10,484.8	0.00	0.00	0.00
20,400.0	89.85	179.65	9,985.2	-10,351.8	2,200.0	10,582.8	0.00	0.00	0.00
20,500.0	89.85	179.65	9,985.5	-10,451.8	2,200.6	10,680.9	0.00	0.00	0.00
20,600.0	89.85	179.65	9,985.8	-10,551.8	2,201.2	10,778.9	0.00	0.00	0.00
20,693.8	89.85	179.65	9,986.0	-10,645.6	2,201.7	10,870.9	0.00	0.00	0.00
TD at 20693.8									

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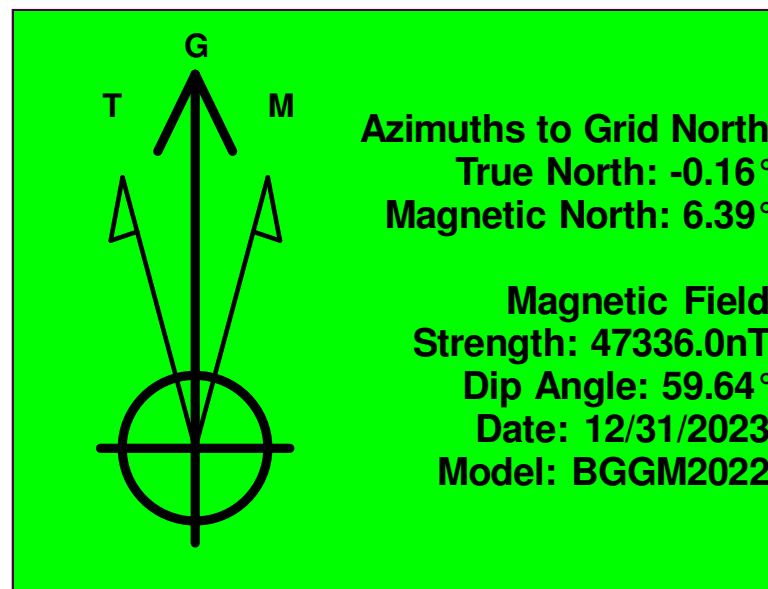
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

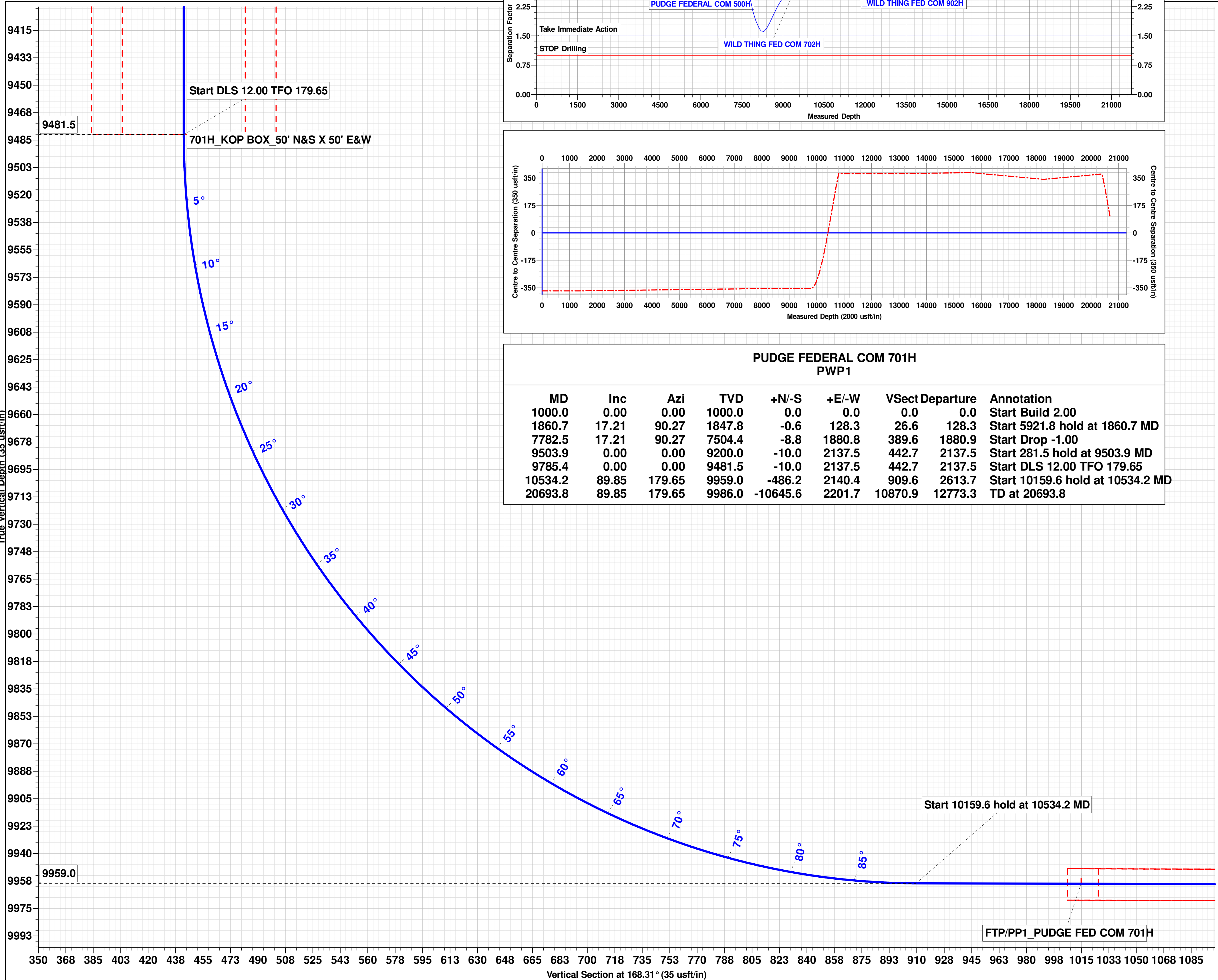
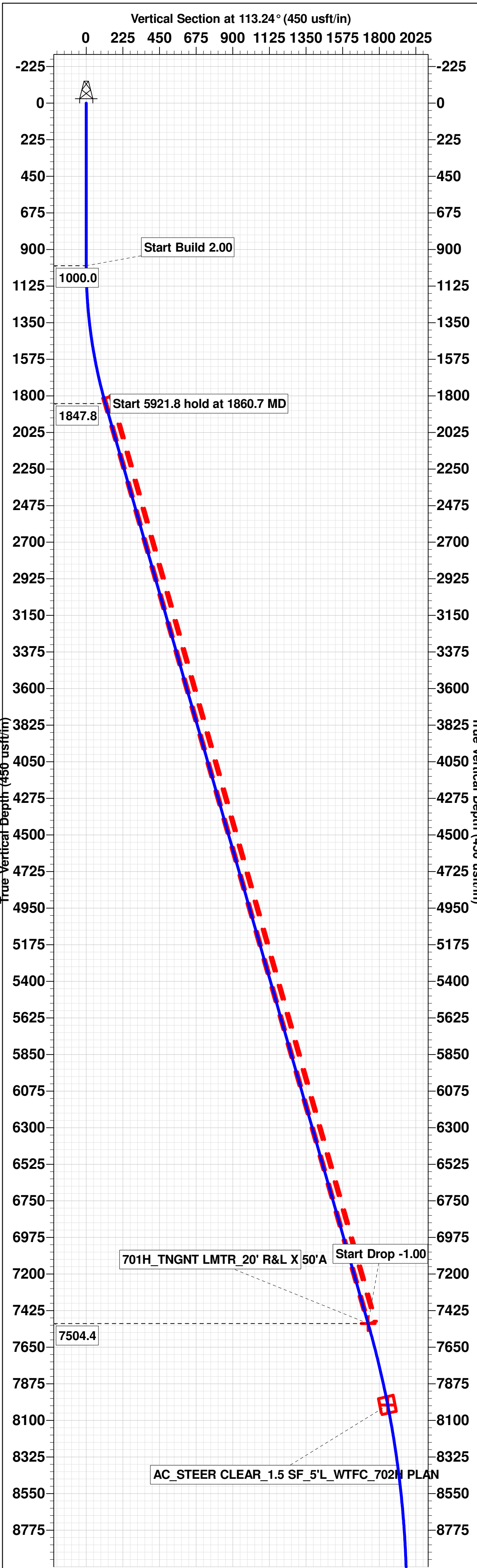
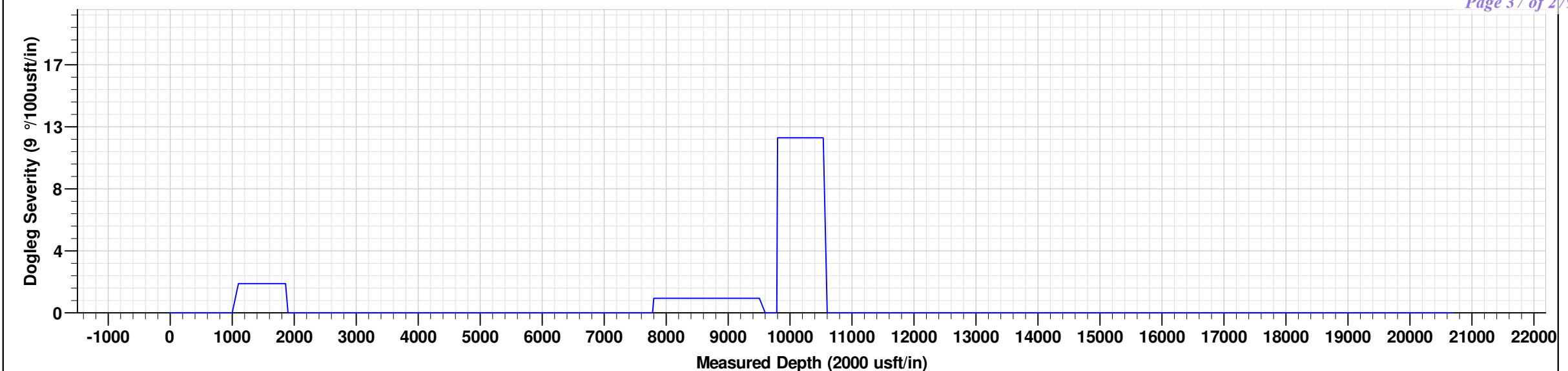
Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
701H_TNGNT LMTR_2C - plan misses target center by 0.1usft at 7782.5usft MD (7504.4 TVD, -8.8 N, 1880.9 E) - Rectangle (sides W40.0 H50.0 D5,956.6)	17.21	270.27	7,504.4	-8.8	1,880.8	392,797.83	597,768.66	32° 4' 46.285 N	104° 1' 3.623 W
AC_STEER CLEAR_1.5 - plan hits target center - Rectangle (sides W1.0 H100.0 D100.0)	12.04	270.27	8,004.9	-9.4	2,011.5	392,797.22	597,899.34	32° 4' 46.275 N	104° 1' 2.104 W
701H_KOP BOX_50' N8 - plan hits target center - Rectangle (sides W100.0 H100.0 D281.5)	0.00	359.75	9,481.5	-10.0	2,137.5	392,796.63	598,025.36	32° 4' 46.266 N	104° 1' 0.640 W
PP3_PUDGE FED COM - plan misses target center by 17.2usft at 16930.9usft MD (9976.0 TVD, -6882.7 N, 2179.0 E) - Circle (radius 50.0)	0.00	0.00	9,959.0	-6,882.8	2,181.7	385,923.87	598,069.55	32° 3' 38.249 N	104° 1' 0.360 W
FTP/PP1_PUDGE FED - plan misses target center by 2.3usft at 10641.9usft MD (9959.2 TVD, -593.9 N, 2141.0 E) - Circle (radius 50.0)	0.00	0.01	9,959.0	-593.9	2,138.8	392,212.68	598,026.64	32° 4' 40.487 N	104° 1' 0.645 W
PP2_PUDGE FED COM - plan misses target center by 14.2usft at 15613.2usft MD (9972.5 TVD, -5565.1 N, 2171.1 E) - Circle (radius 50.0)	0.00	0.00	9,959.0	-5,565.1	2,175.4	387,241.53	598,063.31	32° 3' 51.289 N	104° 1' 0.388 W
PP4_PUDGE FED COM - plan misses target center by 20.6usft at 18266.2usft MD (9979.5 TVD, -8218.1 N, 2187.1 E) - Circle (radius 50.0)	0.00	0.00	9,959.0	-8,218.1	2,188.0	384,588.52	598,075.86	32° 3' 25.033 N	104° 1' 0.333 W
PBHL_PUDGE FED CO - plan hits target center - Rectangle (sides W100.0 H10,051.1 D20.0)	-0.15	359.65	9,986.0	-10,645.6	2,201.7	382,161.04	598,089.60	32° 3' 1.009 N	104° 1' 0.256 W
LTP_PUDGE FED COM - plan misses target center by 2.1usft at 20563.8usft MD (9985.7 TVD, -10515.6 N, 2201.0 E) - Circle (radius 50.0)	90.00	0.00	9,986.0	-10,515.6	2,198.9	382,291.04	598,086.73	32° 3' 2.296 N	104° 1' 0.285 W

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,693.8	9,986.0	5-1/2" Production Casing	5-1/2	6

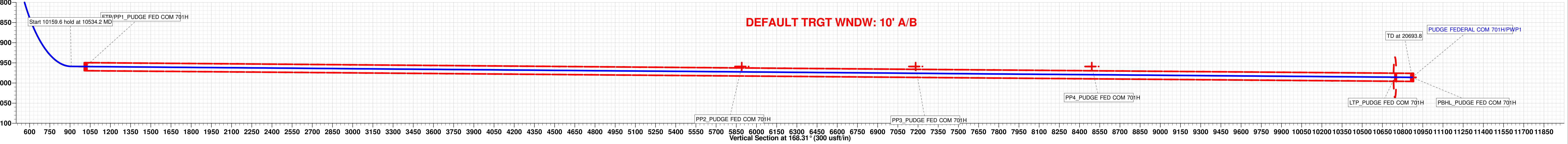
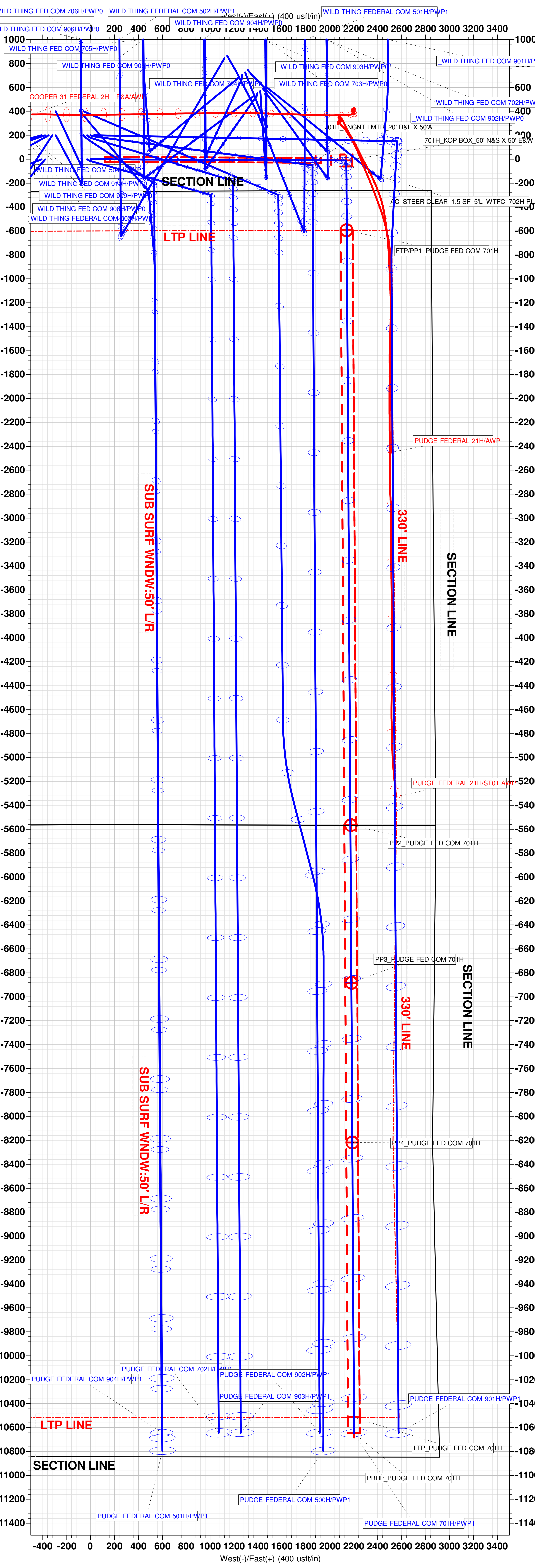
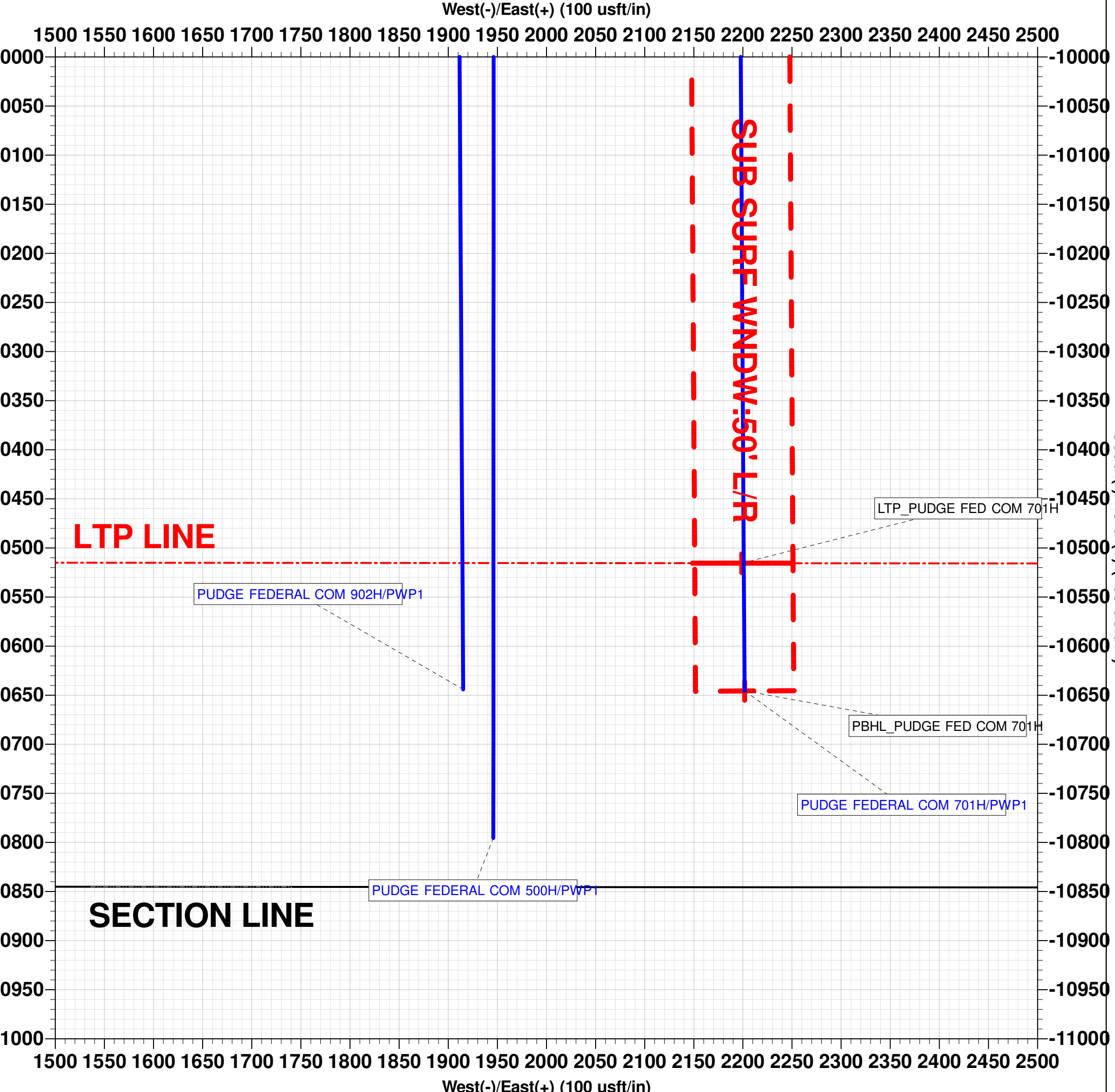
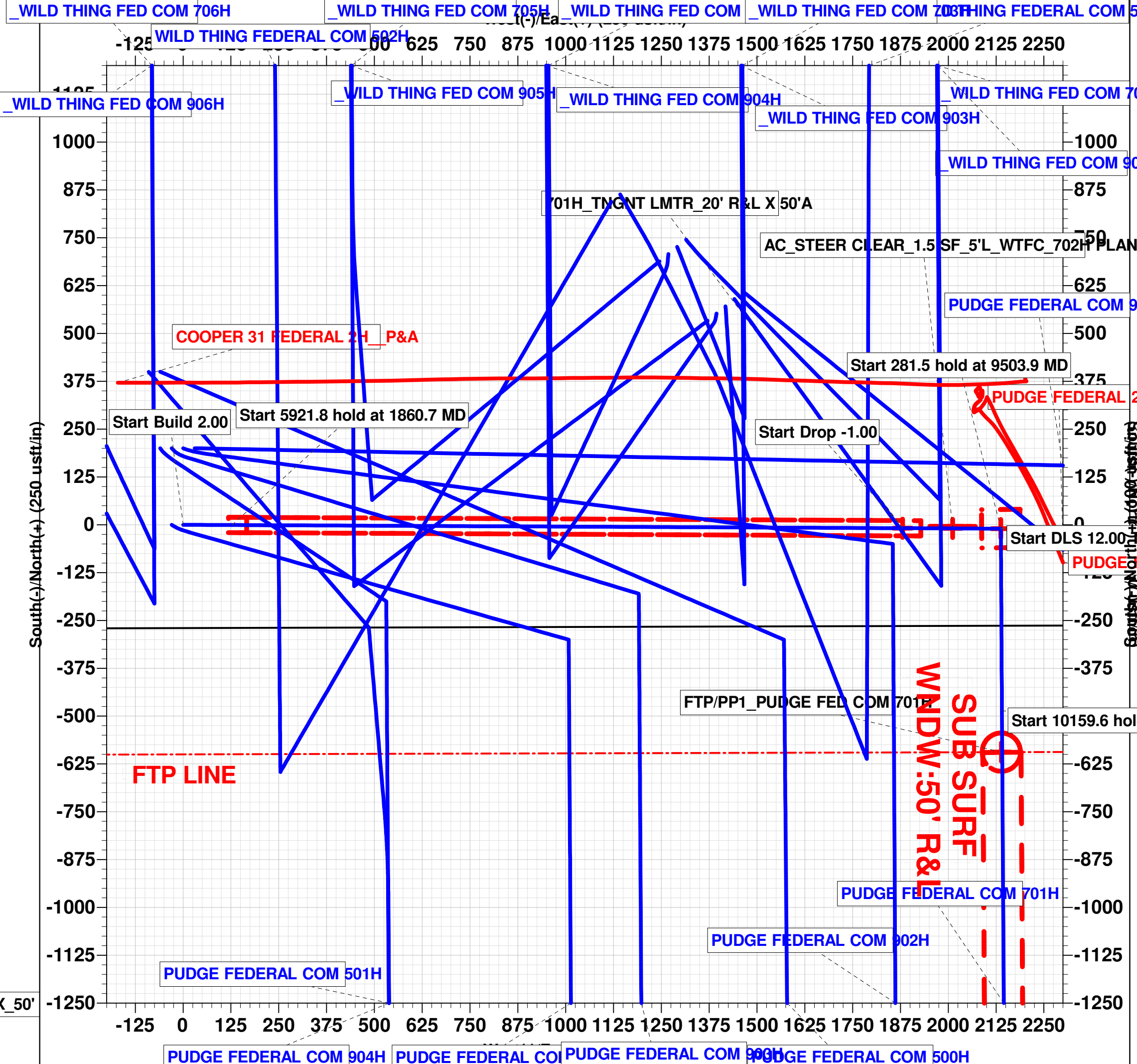
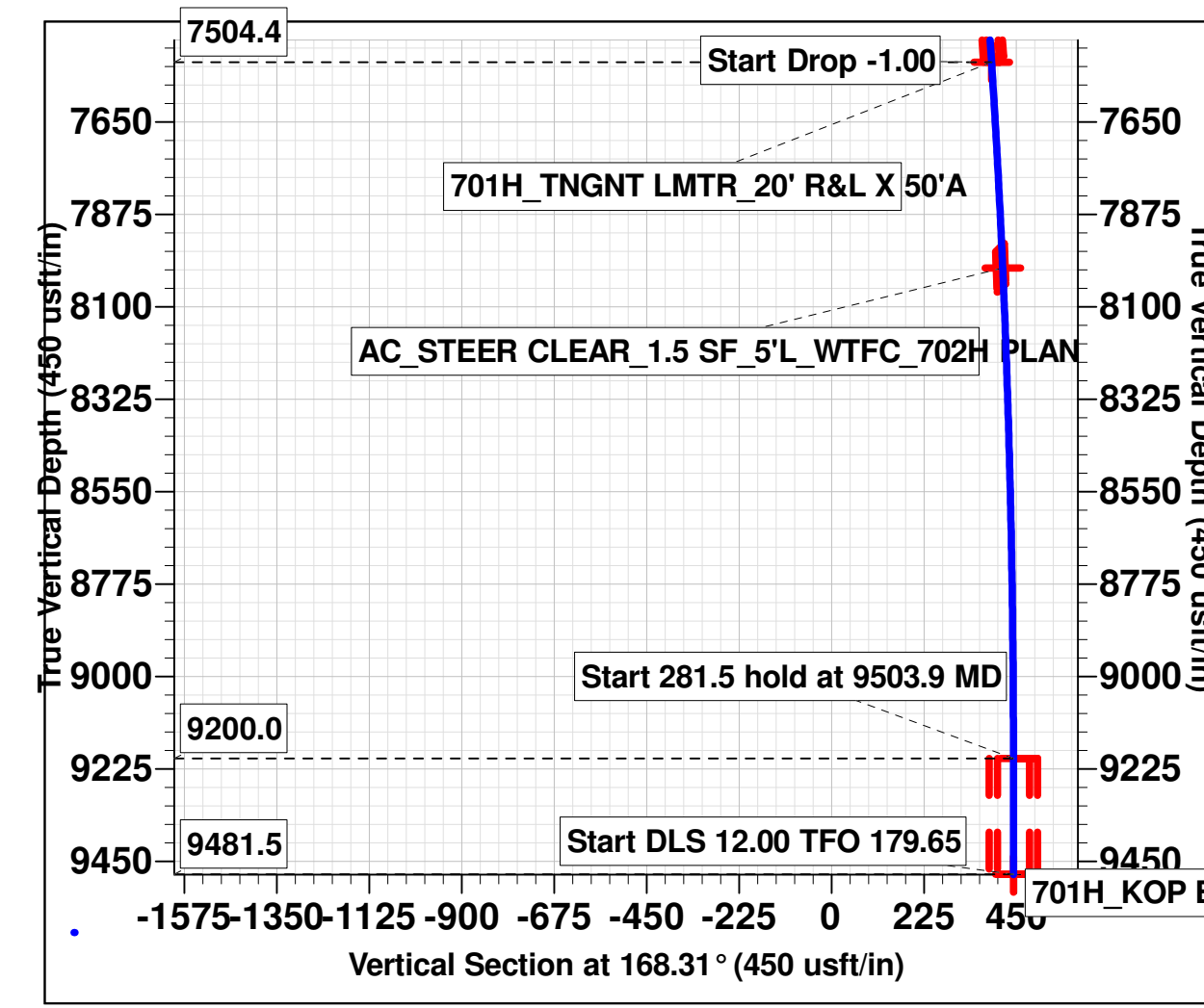
Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,000.0	1,000.0	0.0	0.0	Start Build 2.00
1,860.7	1,847.8	-0.6	128.3	Start 5921.8 hold at 1860.7 MD
7,782.5	7,504.4	-8.8	1,880.8	Start Drop -1.00
9,503.9	9,200.0	-10.0	2,137.5	Start 281.5 hold at 9503.9 MD
9,785.4	9,481.5	-10.0	2,137.5	Start DLS 12.00 TFO 179.65
10,534.2	9,959.0	-486.2	2,140.4	Start 10159.6 hold at 10534.2 MD
20,693.8	9,986.0	-10,645.6	2,201.7	TD at 20693.8



Project: ATLAS PROSPECT NME Site: PUDGE FED COM PROJECT Well: PUDGE FEDERAL COM 701H Wellbore: OWB Design: PWP1 GL: 2925.0 KB @ 2957.0ustf (NABORS X09)						
WELL DETAILS: PUDGE FEDERAL COM 701H						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	392806.63	595887.86	32° 4' 46.426 N	104° 1' 25.483 W	
TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
701H_TNGNT LMTR_20' R&L X 50'A	7504.4	-8.8	1880.8	392797.83	597768.66	
AC_STEER CLEAR_1.5 SF_5'L_WTFC_702H PLAN	8004.9	-9.4	2011.5	392797.22	597899.34	
701H_KOP BOX_50' N&S X 50' E&W	9481.5	-10.0	2137.5	392796.83	598025.36	
FTP/PP1_PUDGE FED COM 701H	9959.0	-593.9	2138.8	392212.68	598026.64	
PP2_PUDGE FED COM 701H	9959.0	-5565.1	2175.5	387241.53	598063.31	
PP3_PUDGE FED COM 701H	9959.0	-6882.8	2181.7	385923.87	598069.55	
PP4_PUDGE FED COM 701H	9959.0	-8218.1	2188.0	384588.52	598075.86	
LTP_PUDGE FED COM 701H	9986.0	-10515.6	2198.9	382291.04	598086.73	
PBHL_PUDGE FED COM 701H	9986.0	-10645.6	2201.7	382161.04	598089.60	



PUDGE FEDERAL COM 701H PWP1							
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect Departure	Annotation
1000.0	0.00	0.00	1000.0	0.0	0.0	0.0	Start Build 2.00
1860.7	17.21	90.27	1847.8	-0.6	128.3	26.6	Start 5921.8 hold at 1860.7 MD
7782.5	17.21	90.27	7504.4	-8.8	1880.8	389.6	Start Drop -1.00
9503.9	0.00	0.00	9200.0	-10.0	2137.5	442.7	Start 281.5 hold at 9503.9 MD
9785.4	0.00	0.00	9481.5	-10.0	2137.5	442.7	Start DLS 12.00 TFO 179.65
10534.2	89.85	179.65	9959.0	-486.2	2140.4	909.6	Start 10159.6 hold at 10534.2 MD
20693.8	89.85	179.65	9986.0	-10645.6	2201.7	12773.3	TD at 20693.8



DELAWARE BASIN WEST

ATLAS PROSPECT_NME

PUDGE FED COM PROJECT

PUDGE FEDERAL COM 701H

3001556661

OWB

PWP1

Anticollision Report

04 August, 2025

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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	20,693.8	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	4,643.0	4,687.1	118.4	79.6	3.052 CC	
PUDGE FEDERAL COM 500H - OWB - PWP1	4,700.0	4,743.7	118.6	79.3	3.019 ES	
PUDGE FEDERAL COM 500H - OWB - PWP1	4,800.0	4,842.9	119.9	79.9	2.995	Normal Operations, SF
PUDGE FEDERAL COM 501H - OWB - PWP1	2,052.0	2,101.0	349.3	335.5	25.291 CC	
PUDGE FEDERAL COM 501H - OWB - PWP1	2,100.0	2,147.7	349.5	335.3	24.637 ES	
PUDGE FEDERAL COM 501H - OWB - PWP1	3,400.0	3,414.1	463.5	438.6	18.606 SF	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,000.0	1,000.0	30.0	22.1	3.775 CC	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,100.0	1,100.9	30.2	21.7	3.538 ES	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,200.0	1,201.8	31.1	22.0	3.419 SF	
PUDGE FEDERAL COM 901H - OWB - PWP1	1,960.4	1,952.7	200.1	187.7	16.102 CC	
PUDGE FEDERAL COM 901H - OWB - PWP1	2,000.0	1,991.9	200.2	187.6	15.875 ES	
PUDGE FEDERAL COM 901H - OWB - PWP1	20,693.8	21,729.8	795.0	627.2	4.737 SF	
PUDGE FEDERAL COM 902H - OWB - PWP1	1,000.0	1,001.0	200.0	192.0	25.158 CC	
PUDGE FEDERAL COM 902H - OWB - PWP1	1,200.0	1,200.8	200.1	191.4	22.954 ES	
PUDGE FEDERAL COM 902H - OWB - PWP1	10,030.6	9,952.0	290.1	205.8	3.440 SF	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,843.7	1,859.5	172.1	160.4	14.790 CC	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,860.7	1,876.4	172.1	160.4	14.667 ES	
PUDGE FEDERAL COM 903H - OWB - PWP1	3,100.0	3,103.3	248.4	225.7	10.912 SF	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,000.0	1,002.0	208.6	200.6	26.239 CC, ES	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,600.0	1,597.6	234.6	224.2	22.560 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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						
WTF COM PROJECT						
_WILD THING FED COM 702H - OWB - PWP0	8,146.9	7,946.8	74.8	30.3	1.679	Caution - Monitor Closely, CC
_WILD THING FED COM 702H - OWB - PWP0	8,200.0	7,998.5	75.8	29.3	1.629	Caution - Monitor Closely, ES
_WILD THING FED COM 702H - OWB - PWP0	8,300.0	8,096.1	82.2	31.2	1.612	Caution - Monitor Closely, SF
_WILD THING FED COM 703H - OWB - PWP0	6,449.6	6,254.8	289.0	251.1	7.640	CC
_WILD THING FED COM 703H - OWB - PWP0	6,500.0	6,301.9	289.4	251.0	7.540	ES
_WILD THING FED COM 703H - OWB - PWP0	6,700.0	6,488.5	300.3	259.6	7.372	SF
_WILD THING FED COM 705H - OWB - PWP0	5,255.1	5,133.6	242.0	214.3	8.731	CC
_WILD THING FED COM 704H - OWB - PWP0	5,300.0	5,175.3	242.6	214.2	8.553	ES
_WILD THING FED COM 704H - OWB - PWP0	5,500.0	5,361.0	258.5	226.8	8.151	SF
_WILD THING FED COM 705H - OWB - PWP0	4,479.1	4,408.6	349.0	324.2	14.088	CC, ES
_WILD THING FED COM 705H - OWB - PWP0	4,800.0	4,696.8	376.5	349.3	13.871	SF
_WILD THING FED COM 706H - OWB - PWP0	1,560.4	1,607.0	486.9	476.1	44.874	CC, ES
_WILD THING FED COM 706H - OWB - PWP0	3,900.0	3,864.4	874.9	848.1	32.677	SF
_WILD THING FED COM 901H - OWB - PWP0	10,150.0	9,930.2	286.8	215.6	4.027	SF
_WILD THING FED COM 901H - OWB - PWP0	10,175.0	9,947.8	285.8	215.1	4.043	ES
_WILD THING FED COM 901H - OWB - PWP0	10,184.5	9,954.2	285.7	215.3	4.057	CC
_WILD THING FED COM 902H - OWB - PWP0	8,168.1	7,939.2	150.4	109.8	3.708	CC
_WILD THING FED COM 902H - OWB - PWP0	10,175.0	9,892.2	156.6	92.8	2.453	Caution - Monitor Closely, ES, SF
_WILD THING FED COM 903H - OWB - PWP0	6,387.4	6,230.2	148.7	116.8	4.661	CC
_WILD THING FED COM 903H - OWB - PWP0	6,400.0	6,242.2	148.7	116.8	4.651	ES
_WILD THING FED COM 903H - OWB - PWP0	6,500.0	6,337.8	152.4	119.3	4.602	SF
_WILD THING FED COM 904H - OWB - PWP0	5,640.3	5,485.3	236.1	203.9	7.343	CC, ES
_WILD THING FED COM 904H - OWB - PWP0	5,700.0	5,539.7	237.3	204.9	7.313	SF
_WILD THING FED COM 905H - OWB - PWP0	4,600.0	4,515.2	196.6	171.0	7.684	SF
_WILD THING FED COM 905H - OWB - PWP0	4,646.6	4,557.0	195.5	170.1	7.688	CC, ES
_WILD THING FED COM 906H - OWB - PWP0	1,000.0	983.0	352.3	344.3	43.869	CC, ES
_WILD THING FED COM 906H - OWB - PWP0	2,200.0	2,213.8	454.5	439.6	30.520	SF
_WILD THING FED COM 907H - OWB - PWP0	1,000.0	983.0	377.4	369.3	46.991	CC, ES
_WILD THING FED COM 907H - OWB - PWP0	1,700.0	1,676.1	452.0	440.5	39.321	SF
_WILD THING FED COM 908H - OWB - PWP0	1,000.0	983.0	403.1	395.1	50.200	CC, ES
_WILD THING FED COM 908H - OWB - PWP0	1,500.0	1,449.1	458.0	447.6	43.755	SF
_WILD THING FED COM 909H - OWB - PWP0	1,000.0	983.0	429.5	421.4	53.480	CC, ES
_WILD THING FED COM 909H - OWB - PWP0	1,500.0	1,439.7	488.8	478.2	46.438	SF
_WILD THING FED COM 910H - OWB - PWP0	1,000.0	983.0	456.2	448.2	56.815	CC, ES
_WILD THING FED COM 910H - OWB - PWP0	1,500.0	1,434.4	517.5	507.0	49.463	SF
COOPER 31 FEDERAL 2H_P&A - OWB - AWP	7,433.7	7,401.6	380.1	332.5	7.991	CC, ES, SF
PUDGE FEDERAL 21H - OWB - AWP	8,494.5	8,281.5	201.3	146.6	3.676	CC
PUDGE FEDERAL 21H - OWB - AWP	8,500.0	8,284.1	201.4	146.3	3.658	ES, SF
PUDGE FEDERAL 21H - ST01 - ST01 AWP	8,670.9	8,465.3	185.4	129.5	3.318	CC, ES
PUDGE FEDERAL 21H - ST01 - ST01 AWP	8,700.0	8,479.0	187.1	129.9	3.271	SF
WILD THING FED COM 504H - OWB - PWP1	800.0	796.0	409.9	403.7	66.318	CC, ES
WILD THING FED COM 504H - OWB - PWP1	1,400.0	1,314.8	488.2	478.9	52.518	SF
WILD THING FEDERAL COM 501H - OWB - PWP1	8,693.9	9,063.6	294.1	228.4	4.471	CC, ES, SF
WILD THING FEDERAL COM 502H - OWB - PWP1	4,086.0	4,128.6	163.4	136.6	6.090	CC, ES, SF
WILD THING FEDERAL COM 503H - OWB - PWP1	1,000.0	997.0	379.9	372.0	47.840	CC, ES
WILD THING FEDERAL COM 503H - OWB - PWP1	1,400.0	1,360.2	424.4	414.4	42.143	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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 500H - OWB - PWP1														Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8198-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:												
Measured Depth (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		
0.0	0.0	3.0	0.0	0.0	0.0	-8.47	399.8	-59.6	404.2						
100.0	100.0	103.0	100.0	0.8	0.8	-8.47	399.8	-59.6	404.2	402.2	2.01	200.994			
200.0	200.0	203.0	200.0	1.4	1.4	-8.47	399.8	-59.6	404.2	400.9	3.32	121.580			
300.0	300.0	303.0	300.0	1.9	1.9	-8.47	399.8	-59.6	404.2	400.0	4.21	96.105			
400.0	400.0	403.0	400.0	2.2	2.3	-8.47	399.8	-59.6	404.2	399.3	4.92	82.139			
500.0	500.0	503.0	500.0	2.6	2.6	-8.47	399.8	-59.6	404.2	398.7	5.54	72.948			
600.0	600.0	603.0	600.0	2.8	2.9	-8.47	399.8	-59.6	404.2	398.1	6.10	66.290			
700.0	700.0	703.0	700.0	3.1	3.1	-8.47	399.8	-59.6	404.2	397.6	6.61	61.170			
800.0	800.0	803.0	800.0	3.3	3.4	-8.47	399.8	-59.6	404.2	397.1	7.08	57.068			
900.0	900.0	903.0	900.0	3.6	3.6	-8.47	399.8	-59.6	404.2	396.7	7.53	53.683			
1,000.0	1,000.0	1,003.2	1,000.2	3.8	3.8	-8.47	399.8	-59.6	404.2	396.3	7.95	50.819			
1,100.0	1,100.0	1,111.2	1,108.2	4.1	4.1	-98.76	399.0	-57.6	403.4	395.1	8.39	48.071			
1,200.0	1,199.8	1,219.2	1,216.0	4.4	4.5	-98.85	396.5	-51.9	401.2	392.4	8.80	45.589			
1,300.0	1,299.5	1,327.0	1,323.3	4.7	4.8	-99.00	392.5	-42.4	397.5	388.3	9.21	43.186			
1,400.0	1,398.7	1,434.8	1,430.1	5.1	5.2	-99.22	386.8	-29.3	392.4	382.8	9.61	40.821			
1,500.0	1,497.5	1,542.3	1,536.0	5.4	5.6	-99.52	379.6	-12.5	385.9	375.9	10.03	38.472			
1,600.0	1,595.6	1,649.6	1,641.0	5.8	6.0	-99.90	370.9	7.8	377.9	367.5	10.46	36.121			
1,700.0	1,693.1	1,756.6	1,744.8	6.2	6.4	-100.36	360.6	31.7	368.6	357.7	10.92	33.758			
1,800.0	1,789.6	1,863.3	1,847.3	6.6	6.8	-100.92	348.9	59.1	357.9	346.5	11.37	31.477			
1,860.7	1,847.8	1,924.5	1,905.6	6.8	7.0	-101.35	341.6	76.0	351.0	339.4	11.61	30.226			
1,900.0	1,885.3	1,963.5	1,942.8	6.9	7.2	-101.61	337.0	86.7	346.6	334.8	11.79	29.398			
2,000.0	1,980.9	2,062.8	2,037.5	7.3	7.5	-102.31	325.2	114.2	335.5	323.1	12.34	27.184			
2,100.0	2,076.4	2,162.1	2,132.2	7.7	7.9	-103.06	313.4	141.7	324.4	311.5	12.92	25.113			
2,200.0	2,171.9	2,261.3	2,226.9	8.1	8.3	-103.85	301.6	169.1	313.4	299.9	13.52	23.174			
2,300.0	2,267.4	2,360.6	2,321.6	8.5	8.7	-104.71	289.8	196.6	302.4	288.3	14.15	21.365			
2,400.0	2,363.0	2,459.9	2,416.3	8.9	9.2	-105.63	278.0	224.0	291.5	276.7	14.81	19.679			
2,500.0	2,458.5	2,559.2	2,511.0	9.4	9.6	-106.62	266.3	251.5	280.7	265.2	15.50	18.109			
2,600.0	2,554.0	2,658.5	2,605.6	9.8	10.0	-107.68	254.5	278.9	270.0	253.8	16.22	16.649			
2,700.0	2,649.5	2,757.8	2,700.3	10.2	10.5	-108.84	242.7	306.4	259.4	242.4	16.96	15.291			
2,800.0	2,745.0	2,857.1	2,795.0	10.7	10.9	-110.09	230.9	333.9	248.9	231.1	17.74	14.030			
2,900.0	2,840.6	2,956.4	2,889.7	11.1	11.4	-111.46	219.1	361.3	238.5	219.9	18.55	12.858			
3,000.0	2,936.1	3,055.7	2,984.4	11.6	11.8	-112.94	207.3	388.8	228.3	208.9	19.39	11.769			
3,100.0	3,031.6	3,155.0	3,079.1	12.1	12.3	-114.57	195.5	416.2	218.2	197.9	20.28	10.759			
3,200.0	3,127.1	3,254.3	3,173.8	12.5	12.8	-116.34	183.7	443.7	208.3	187.1	21.21	9.822			
3,300.0	3,222.6	3,353.6	3,268.5	13.0	13.2	-118.30	171.9	471.2	198.7	176.5	22.18	8.955			
3,400.0	3,318.2	3,452.9	3,363.2	13.5	13.7	-120.44	160.1	498.6	189.3	166.1	23.21	8.154			
3,500.0	3,413.7	3,552.1	3,457.8	14.0	14.2	-122.81	148.3	526.1	180.2	155.9	24.29	7.415			
3,600.0	3,509.2	3,651.4	3,552.5	14.4	14.7	-125.42	136.6	553.5	171.4	145.9	25.44	6.738			
3,700.0	3,604.7	3,750.7	3,647.2	14.9	15.2	-128.31	124.8	581.0	163.0	136.4	26.64	6.119			
3,800.0	3,700.2	3,850.0	3,741.9	15.4	15.6	-131.50	113.0	608.4	155.1	127.2	27.90	5.559			
3,900.0	3,795.8	3,949.3	3,836.6	15.9	16.1	-135.01	101.2	635.9	147.7	118.5	29.22	5.055			
4,000.0	3,891.3	4,048.6	3,931.3	16.4	16.6	-138.88	89.4	663.4	140.9	110.3	30.59	4.608			
4,100.0	3,986.8	4,147.9	4,026.0	16.9	17.1	-143.11	77.6	690.8	134.9	102.9	31.98	4.217			
4,200.0	4,082.3	4,247.2	4,120.7	17.4	17.6	-147.70	65.8	718.3	129.6	96.2	33.39	3.881			
4,300.0	4,177.8	4,346.5	4,215.4	17.8	18.1	-152.65	54.0	745.7	125.3	90.5	34.77	3.602			
4,400.0	4,273.4	4,445.8	4,310.0	18.3	18.6	-157.90	42.2	773.2	121.9	85.8	36.09	3.378			
4,500.0	4,368.9	4,545.1	4,404.7	18.8	19.0	-163.40	30.4	800.7	119.7	82.3	37.31	3.207			
4,600.0	4,464.4	4,644.4	4,499.4	19.3	19.5	-169.05	18.6	828.1	118.6	80.2	38.39	3.088			
4,643.0	4,505.5	4,687.1	4,540.2	19.5	19.8	-171.50	13.6	839.9	118.4	79.6	38.80	3.052 CC			
4,700.0	4,559.9	4,743.7	4,594.1	19.8	20.0	-174.75	6.9	855.6	118.6	79.3	39.30	3.019 ES			
4,800.0	4,655.4	4,842.9	4,688.8	20.3	20.5	-179.62	-4.9	883.0	119.9	79.9	40.03	2.995 Normal Operations, 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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												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		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.0	4,751.0	4,942.2	4,783.5	20.8	21.0	174.15	-16.7	910.5	122.3	81.7	40.59	3.013	
5,000.0	4,846.5	5,041.5	4,878.2	21.3	21.5	168.93	-28.5	937.9	125.8	84.8	41.00	3.069	
5,100.0	4,942.0	5,140.8	4,972.9	21.8	22.0	164.04	-40.3	965.4	130.3	89.0	41.28	3.156	
5,200.0	5,037.5	5,240.1	5,067.6	22.3	22.5	159.49	-52.1	992.9	135.7	94.2	41.47	3.271	
5,300.0	5,133.0	5,339.4	5,162.3	22.8	23.0	155.31	-63.9	1,020.3	141.8	100.2	41.60	3.409	
5,400.0	5,228.6	5,438.7	5,256.9	23.3	23.5	151.50	-75.7	1,047.8	148.7	107.0	41.71	3.565	
5,500.0	5,324.1	5,538.0	5,351.6	23.8	24.0	148.03	-87.5	1,075.2	156.2	114.4	41.81	3.735	
5,600.0	5,419.6	5,637.3	5,446.3	24.3	24.5	144.88	-99.3	1,102.7	164.1	122.2	41.92	3.916	
5,700.0	5,515.1	5,736.6	5,541.0	24.8	25.0	142.04	-111.1	1,130.1	172.6	130.5	42.04	4.105	
5,800.0	5,610.6	5,835.9	5,635.7	25.3	25.5	139.46	-122.8	1,157.6	181.4	139.2	42.20	4.299	
5,900.0	5,706.2	5,935.2	5,730.4	25.8	26.0	137.13	-134.6	1,185.1	190.6	148.2	42.38	4.496	
6,000.0	5,801.7	6,034.5	5,825.1	26.3	26.5	135.01	-146.4	1,212.5	200.0	157.4	42.60	4.695	
6,100.0	5,897.2	6,133.7	5,919.8	26.8	27.0	133.08	-158.2	1,240.0	209.7	166.8	42.85	4.894	
6,200.0	5,992.7	6,233.0	6,014.5	27.3	27.5	131.33	-170.0	1,267.4	219.6	176.5	43.13	5.091	
6,300.0	6,088.2	6,332.3	6,109.1	27.8	28.0	129.72	-181.8	1,294.9	229.7	186.2	43.44	5.287	
6,400.0	6,183.8	6,431.6	6,203.8	28.3	28.5	128.25	-193.6	1,322.4	239.9	196.2	43.77	5.481	
6,500.0	6,279.3	6,530.0	6,297.8	28.8	29.0	127.05	-205.0	1,349.0	250.5	206.3	44.15	5.673	
6,600.0	6,374.8	6,628.2	6,392.1	29.3	29.5	126.31	-215.8	1,374.2	261.5	216.9	44.65	5.858	
6,700.0	6,470.3	6,726.4	6,486.9	29.8	30.0	125.97	-226.0	1,397.9	273.0	227.8	45.24	6.035	
6,800.0	6,565.9	6,824.6	6,582.0	30.4	30.5	125.99	-235.5	1,420.0	285.0	239.0	45.92	6.205	
6,900.0	6,661.4	6,922.6	6,677.5	30.9	30.9	126.32	-244.4	1,440.7	297.3	250.6	46.68	6.368	
7,000.0	6,756.9	7,020.4	6,773.1	31.4	31.4	126.93	-252.6	1,459.8	310.1	262.5	47.51	6.526	
7,100.0	6,852.4	7,118.0	6,868.8	31.9	31.8	127.77	-260.1	1,477.3	323.3	274.9	48.41	6.678	
7,200.0	6,947.9	7,215.3	6,964.5	32.4	32.3	128.82	-267.0	1,493.3	337.1	287.7	49.38	6.827	
7,300.0	7,043.5	7,312.2	7,060.1	32.9	32.7	130.05	-273.2	1,507.8	351.5	301.1	50.40	6.975	
7,400.0	7,139.0	7,408.8	7,155.6	33.4	33.1	131.41	-278.8	1,520.7	366.6	315.2	51.47	7.123	
7,500.0	7,234.5	7,504.9	7,250.9	33.9	33.6	132.90	-283.7	1,532.1	382.5	329.9	52.59	7.274	
7,600.0	7,330.0	7,600.0	7,345.4	34.4	33.9	134.46	-287.9	1,541.9	399.3	345.6	53.73	7.432	
7,700.0	7,425.5	7,695.5	7,440.5	34.9	34.3	136.12	-291.5	1,550.3	417.0	362.1	54.91	7.594	
7,782.5	7,504.4	7,773.4	7,518.2	35.3	34.6	137.51	-294.0	1,556.1	432.4	376.5	55.89	7.736	
7,800.0	7,521.1	7,789.9	7,534.6	35.4	34.7	137.83	-294.4	1,557.2	435.7	379.6	56.10	7.767	
7,900.0	7,616.9	7,883.9	7,628.4	35.9	35.0	139.59	-296.8	1,562.7	454.7	397.4	57.26	7.941	
8,000.0	7,713.3	7,977.7	7,722.1	36.4	35.3	141.24	-298.5	1,566.7	473.4	415.1	58.36	8.113	
8,100.0	7,810.1	8,071.2	7,815.6	36.9	35.6	142.81	-299.6	1,569.3	492.0	432.6	59.40	8.283	
8,200.0	7,907.3	8,164.5	7,908.9	37.4	35.8	144.30	-300.1	1,570.5	510.3	449.7	60.57	8.424	
8,300.0	8,004.9	8,237.0	7,981.3	37.9	35.8	145.28	-301.8	1,570.6	529.5	468.2	61.33	8.633	
8,400.0	8,102.9	8,300.0	8,043.6	38.4	35.8	145.36	-311.0	1,570.7	553.8	493.1	60.75	9.117	
8,500.0	8,201.2	8,350.0	8,091.8	38.8	35.8	144.92	-324.1	1,570.8	583.4	524.0	59.36	9.827	
8,600.0	8,299.8	8,407.1	8,144.8	39.3	35.9	143.90	-345.2	1,571.0	618.0	560.2	57.88	10.678	
8,700.0	8,398.7	8,450.0	8,182.8	39.7	35.9	142.91	-365.1	1,571.2	658.0	602.2	55.80	11.793	
8,800.0	8,497.8	8,500.0	8,224.6	40.1	35.9	141.48	-392.5	1,571.4	703.2	649.4	53.84	13.062	
8,900.0	8,597.2	8,536.7	8,253.4	40.6	35.9	140.40	-415.3	1,571.6	753.5	702.0	51.57	14.612	
9,000.0	8,696.7	8,575.0	8,281.4	41.0	35.9	139.21	-441.3	1,571.8	808.7	759.2	49.47	16.346	
9,100.0	8,796.4	8,600.0	8,298.6	41.3	35.9	138.59	-459.5	1,572.0	868.3	821.0	47.28	18.366	
9,200.0	8,896.2	8,625.0	8,314.7	41.7	35.9	138.01	-478.6	1,572.1	931.8	886.5	45.33	20.556	
9,300.0	8,996.1	8,650.0	8,329.9	42.0	35.9	137.46	-498.5	1,572.3	998.9	955.3	43.65	22.883	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	3.0	0.0	0.0	0.0	-12.63	399.7	-89.6	409.6				
100.0	100.0	103.0	100.0	0.8	0.8	-12.63	399.7	-89.6	409.6	407.6	2.01	203.683	
200.0	200.0	203.0	200.0	1.4	1.4	-12.63	399.7	-89.6	409.6	406.3	3.32	123.206	
300.0	300.0	303.0	300.0	1.9	1.9	-12.63	399.7	-89.6	409.6	405.4	4.21	97.391	
400.0	400.0	403.0	400.0	2.2	2.3	-12.63	399.7	-89.6	409.6	404.7	4.92	83.238	
500.0	500.0	503.0	500.0	2.6	2.6	-12.63	399.7	-89.6	409.6	404.1	5.54	73.924	
600.0	600.0	603.0	600.0	2.8	2.9	-12.63	399.7	-89.6	409.6	403.5	6.10	67.177	
700.0	700.0	703.0	700.0	3.1	3.1	-12.63	399.7	-89.6	409.6	403.0	6.61	61.988	
800.0	800.0	803.0	800.0	3.3	3.4	-12.63	399.7	-89.6	409.6	402.6	7.08	57.832	
900.0	900.0	903.0	900.0	3.6	3.6	-12.63	399.7	-89.6	409.6	402.1	7.53	54.401	
1,000.0	1,000.0	1,003.4	1,000.4	3.8	3.8	-12.63	399.7	-89.6	409.6	401.7	7.96	51.486	
1,100.0	1,100.0	1,117.8	1,114.8	4.1	4.2	-103.04	397.9	-88.0	408.2	399.7	8.48	48.141	
1,200.0	1,199.8	1,232.0	1,228.8	4.4	4.5	-103.48	392.6	-83.4	404.0	395.0	8.97	45.024	
1,300.0	1,299.5	1,345.8	1,342.0	4.7	4.9	-104.25	383.9	-76.0	397.1	387.6	9.47	41.910	
1,400.0	1,398.7	1,459.1	1,454.1	5.1	5.2	-105.35	371.9	-65.6	387.6	377.7	9.94	39.007	
1,500.0	1,497.5	1,559.9	1,553.6	5.4	5.5	-106.77	359.4	-54.8	377.0	366.6	10.37	36.353	
1,600.0	1,595.6	1,658.8	1,651.1	5.8	5.7	-108.73	347.1	-44.2	367.6	356.7	10.88	33.788	
1,700.0	1,693.1	1,757.3	1,748.3	6.2	6.1	-111.24	334.8	-33.6	359.9	348.4	11.44	31.452	
1,800.0	1,789.6	1,855.4	1,845.0	6.6	6.4	-114.30	322.6	-23.1	354.2	342.1	12.07	29.352	
1,860.7	1,847.8	1,914.6	1,903.5	6.8	6.6	-116.41	315.2	-16.8	352.0	339.5	12.44	28.297	
1,900.0	1,885.3	1,952.9	1,941.2	6.9	6.7	-117.81	310.4	-12.7	351.0	338.3	12.68	27.673	
2,000.0	1,980.9	2,050.3	2,037.3	7.3	7.1	-121.40	298.3	-2.2	349.5	336.1	13.42	26.054	
2,052.0	2,030.6	2,101.0	2,087.3	7.5	7.2	-123.28	292.0	3.2	349.3	335.5	13.81	25.291 CC	
2,100.0	2,076.4	2,147.7	2,133.4	7.7	7.4	-125.01	286.2	8.2	349.5	335.3	14.19	24.637 ES	
2,200.0	2,171.9	2,245.1	2,229.5	8.1	7.8	-128.61	274.1	18.7	350.9	335.9	14.99	23.414	
2,300.0	2,267.4	2,342.5	2,325.6	8.5	8.2	-132.17	261.9	29.1	353.8	338.0	15.81	22.374	
2,400.0	2,363.0	2,440.0	2,421.7	8.9	8.5	-135.65	249.8	39.6	358.1	341.4	16.65	21.500	
2,500.0	2,458.5	2,537.4	2,517.7	9.4	8.9	-139.05	237.7	50.0	363.7	346.2	17.50	20.778	
2,600.0	2,554.0	2,634.8	2,613.8	9.8	9.3	-142.34	225.5	60.5	370.6	352.3	18.36	20.189	
2,700.0	2,649.5	2,732.2	2,709.9	10.2	9.7	-145.50	213.4	70.9	378.8	359.6	19.21	19.719	
2,800.0	2,745.0	2,829.6	2,806.0	10.7	10.1	-148.52	201.3	81.3	388.1	368.0	20.05	19.351	
2,900.0	2,840.6	2,927.0	2,902.1	11.1	10.5	-151.40	189.1	91.8	398.4	377.5	20.89	19.072	
3,000.0	2,936.1	3,024.4	2,998.2	11.6	10.9	-154.14	177.0	102.2	409.8	388.1	21.72	18.869	
3,100.0	3,031.6	3,121.8	3,094.3	12.1	11.3	-156.73	164.9	112.7	422.0	399.5	22.53	18.730	
3,200.0	3,127.1	3,219.3	3,190.4	12.5	11.7	-159.17	152.8	123.1	435.1	411.8	23.34	18.645	
3,300.0	3,222.6	3,316.7	3,286.5	13.0	12.1	-161.47	140.6	133.6	449.0	424.8	24.13	18.607	
3,400.0	3,318.2	3,414.1	3,382.5	13.5	12.5	-163.63	128.5	144.0	463.5	438.6	24.91	18.606 SF	
3,500.0	3,413.7	3,511.5	3,478.6	14.0	12.9	-165.67	116.4	154.5	478.7	453.0	25.68	18.638	
3,600.0	3,509.2	3,608.9	3,574.7	14.4	13.4	-167.58	104.2	164.9	494.4	467.9	26.44	18.696	
3,700.0	3,604.7	3,706.3	3,670.8	14.9	13.8	-169.37	92.1	175.4	510.6	483.4	27.20	18.775	
3,800.0	3,700.2	3,803.7	3,766.9	15.4	14.2	-171.05	80.0	185.8	527.3	499.4	27.94	18.872	
3,900.0	3,795.8	3,901.1	3,863.0	15.9	14.6	-172.63	67.8	196.3	544.5	515.8	28.68	18.984	
4,000.0	3,891.3	3,998.6	3,959.1	16.4	15.0	-174.12	55.7	206.7	562.0	532.6	29.41	19.107	
4,100.0	3,986.8	4,096.0	4,055.2	16.9	15.5	-175.52	43.6	217.1	579.9	549.7	30.14	19.239	
4,200.0	4,082.3	4,193.4	4,151.2	17.4	15.9	-176.83	31.4	227.6	598.1	567.2	30.86	19.378	
4,300.0	4,177.8	4,290.8	4,247.3	17.8	16.3	-178.07	19.3	238.0	616.6	585.0	31.58	19.522	
4,400.0	4,273.4	4,388.2	4,343.4	18.3	16.7	-179.23	7.2	248.5	635.3	603.0	32.30	19.670	
4,500.0	4,368.9	4,485.6	4,439.5	18.8	17.2	-179.67	-4.9	258.9	654.3	621.3	33.01	19.822	
4,600.0	4,464.4	4,583.0	4,535.6	19.3	17.6	-178.63	-17.1	269.4	673.5	639.8	33.72	19.974	
4,700.0	4,559.9	4,680.4	4,631.7	19.8	18.0	-177.65	-29.2	279.8	692.9	658.5	34.43	20.128	
4,800.0	4,655.4	4,777.9	4,727.8	20.3	18.4	-176.72	-41.3	290.3	712.5	677.4	35.13	20.283	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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	4,751.0	4,875.3	4,823.9	20.8	18.9	175.84	-53.5	300.7	732.3	696.5	35.83	20.436	
5,000.0	4,846.5	4,972.7	4,920.0	21.3	19.3	175.01	-65.6	311.2	752.3	715.7	36.54	20.589	
5,100.0	4,942.0	5,070.1	5,016.0	21.8	19.7	174.22	-77.7	321.6	772.4	735.1	37.24	20.741	
5,200.0	5,037.5	5,167.5	5,112.1	22.3	20.1	173.47	-89.9	332.1	792.6	754.6	37.94	20.891	
5,300.0	5,133.0	5,264.9	5,208.2	22.8	20.6	172.75	-102.0	342.5	812.9	774.3	38.64	21.040	
5,400.0	5,228.6	5,362.3	5,304.3	23.3	21.0	172.07	-114.1	352.9	833.4	794.1	39.34	21.187	
5,500.0	5,324.1	5,459.7	5,400.4	23.8	21.4	171.43	-126.3	363.4	854.0	813.9	40.03	21.331	
5,600.0	5,419.6	5,557.2	5,496.5	24.3	21.9	170.81	-138.4	373.8	874.6	833.9	40.73	21.473	
5,700.0	5,515.1	5,654.6	5,592.6	24.8	22.3	170.22	-150.5	384.3	895.4	854.0	41.43	21.613	
5,800.0	5,610.6	5,752.0	5,688.7	25.3	22.7	169.66	-162.6	394.7	916.3	874.1	42.13	21.751	
5,900.0	5,706.2	5,849.4	5,784.7	25.8	23.2	169.13	-174.8	405.2	937.2	894.4	42.82	21.885	
6,000.0	5,801.7	5,946.8	5,880.8	26.3	23.6	168.61	-186.9	415.6	958.2	914.7	43.52	22.018	
6,100.0	5,897.2	6,044.2	5,976.9	26.8	24.0	168.12	-199.0	426.1	979.3	935.1	44.22	22.148	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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	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
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	
1,000.0	1,000.0	1,000.0	1,000.0	3.8	3.8	-90.17	-0.1	-30.0	30.0	22.1	7.95	3.775 CC	
1,100.0	1,100.0	1,100.9	1,100.9	4.1	4.1	177.89	-1.0	-28.5	30.2	21.7	8.55	3.538 ES	
1,200.0	1,199.8	1,201.8	1,201.6	4.4	4.4	173.07	-3.6	-23.8	31.1	22.0	9.09	3.419 SF	
1,300.0	1,299.5	1,302.7	1,302.1	4.7	4.6	166.00	-7.9	-16.1	32.8	23.4	9.47	3.470	
1,400.0	1,398.7	1,403.7	1,402.4	5.1	4.9	159.11	-12.5	-4.9	35.2	25.2	9.97	3.530	
1,500.0	1,497.5	1,504.7	1,502.2	5.4	5.2	152.82	-17.4	9.9	38.1	27.6	10.45	3.643	
1,600.0	1,595.6	1,605.1	1,600.9	5.8	5.5	147.60	-22.5	27.5	41.8	31.0	10.82	3.866	
1,700.0	1,693.1	1,704.9	1,698.9	6.2	5.8	145.43	-27.6	45.5	48.4	37.1	11.35	4.265	
1,800.0	1,789.6	1,804.4	1,796.7	6.6	6.1	145.77	-32.7	63.4	57.9	45.9	11.97	4.834	
1,860.7	1,847.8	1,864.7	1,855.9	6.8	6.3	146.74	-35.7	74.2	65.0	52.7	12.34	5.272	
1,900.0	1,885.3	1,903.6	1,894.2	6.9	6.5	147.49	-37.7	81.2	70.0	57.4	12.57	5.571	
2,000.0	1,980.9	2,002.8	1,991.6	7.3	6.8	148.99	-42.8	99.0	82.8	69.5	13.25	6.245	
2,100.0	2,076.4	2,102.0	2,089.0	7.7	7.2	150.09	-47.8	116.9	95.5	81.6	13.95	6.849	
2,200.0	2,171.9	2,201.1	2,186.4	8.1	7.6	150.93	-52.8	134.7	108.4	93.7	14.66	7.390	
2,300.0	2,267.4	2,300.3	2,283.9	8.5	8.0	151.59	-57.9	152.5	121.2	105.8	15.39	7.874	
2,400.0	2,363.0	2,399.5	2,381.3	8.9	8.4	152.13	-62.9	170.3	134.0	117.9	16.13	8.309	
2,500.0	2,458.5	2,498.6	2,478.7	9.4	8.8	152.57	-68.0	188.1	146.9	130.0	16.88	8.700	
2,600.0	2,554.0	2,597.8	2,576.1	9.8	9.2	152.94	-73.0	206.0	159.7	142.1	17.64	9.053	
2,700.0	2,649.5	2,697.0	2,673.5	10.2	9.6	153.25	-78.1	223.8	172.6	154.2	18.41	9.373	
2,800.0	2,745.0	2,796.1	2,771.0	10.7	10.0	153.53	-83.1	241.6	185.5	166.3	19.19	9.663	
2,900.0	2,840.6	2,895.3	2,868.4	11.1	10.4	153.76	-88.2	259.4	198.3	178.3	19.98	9.927	
3,000.0	2,936.1	2,994.5	2,965.8	11.6	10.9	153.97	-93.2	277.3	211.2	190.4	20.77	10.168	
3,100.0	3,031.6	3,093.6	3,063.2	12.1	11.3	154.15	-98.3	295.1	224.1	202.5	21.57	10.389	
3,200.0	3,127.1	3,192.8	3,160.6	12.5	11.7	154.32	-103.3	312.9	237.0	214.6	22.37	10.592	
3,300.0	3,222.6	3,292.0	3,258.1	13.0	12.2	154.46	-108.3	330.7	249.8	226.7	23.18	10.778	
3,400.0	3,318.2	3,391.1	3,355.5	13.5	12.6	154.60	-113.4	348.5	262.7	238.7	23.99	10.951	
3,500.0	3,413.7	3,490.3	3,452.9	14.0	13.0	154.72	-118.4	366.4	275.6	250.8	24.81	11.110	
3,600.0	3,509.2	3,589.4	3,550.3	14.4	13.5	154.83	-123.5	384.2	288.5	262.9	25.63	11.258	
3,700.0	3,604.7	3,688.6	3,647.7	14.9	13.9	154.93	-128.5	402.0	301.4	274.9	26.45	11.395	
3,800.0	3,700.2	3,787.8	3,745.2	15.4	14.3	155.02	-133.6	419.8	314.2	287.0	27.27	11.523	
3,900.0	3,795.8	3,886.9	3,842.6	15.9	14.8	155.10	-138.6	437.7	327.1	299.0	28.10	11.642	
4,000.0	3,891.3	3,986.1	3,940.0	16.4	15.2	155.18	-143.7	455.5	340.0	311.1	28.93	11.754	
4,100.0	3,986.8	4,085.3	4,037.4	16.9	15.7	155.25	-148.7	473.3	352.9	323.1	29.76	11.858	
4,200.0	4,082.3	4,184.4	4,134.8	17.4	16.1	155.32	-153.8	491.1	365.8	335.2	30.59	11.956	
4,300.0	4,177.8	4,283.6	4,232.3	17.8	16.6	155.38	-158.8	508.9	378.7	347.3	31.43	12.049	
4,400.0	4,273.4	4,382.8	4,329.7	18.3	17.0	155.44	-163.9	526.8	391.6	359.3	32.27	12.135	
4,500.0	4,368.9	4,481.9	4,427.1	18.8	17.5	155.50	-168.9	544.6	404.5	371.4	33.11	12.217	
4,600.0	4,464.4	4,581.1	4,524.5	19.3	17.9	155.55	-173.9	562.4	417.3	383.4	33.95	12.295	
4,700.0	4,559.9	4,680.3	4,621.9	19.8	18.4	155.60	-179.0	580.2	430.2	395.4	34.79	12.368	
4,800.0	4,655.4	4,779.4	4,719.4	20.3	18.8	155.64	-184.0	598.1	443.1	407.5	35.63	12.437	
4,900.0	4,751.0	4,878.6	4,816.8	20.8	19.3	155.69	-189.1	615.9	456.0	419.5	36.47	12.503	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,846.5	4,977.8	4,914.2	21.3	19.7	155.73	-194.1	633.7	468.9	431.6	37.32	12.565	
5,100.0	4,942.0	5,076.9	5,011.6	21.8	20.2	155.76	-199.2	651.5	481.8	443.6	38.16	12.624	
5,200.0	5,037.5	5,176.1	5,109.0	22.3	20.6	155.80	-204.2	669.3	494.7	455.7	39.01	12.680	
5,300.0	5,133.0	5,275.3	5,206.5	22.8	21.1	155.84	-209.3	687.2	507.6	467.7	39.86	12.734	
5,400.0	5,228.6	5,374.4	5,303.9	23.3	21.5	155.87	-214.3	705.0	520.5	479.8	40.71	12.785	
5,500.0	5,324.1	5,473.6	5,401.3	23.8	22.0	155.90	-219.4	722.8	533.4	491.8	41.56	12.834	
5,600.0	5,419.6	5,572.8	5,498.7	24.3	22.4	155.93	-224.4	740.6	546.3	503.8	42.41	12.881	
5,700.0	5,515.1	5,671.9	5,596.1	24.8	22.9	155.96	-229.4	758.5	559.1	515.9	43.26	12.925	
5,800.0	5,610.6	5,771.1	5,693.6	25.3	23.3	155.99	-234.5	776.3	572.0	527.9	44.11	12.968	
5,900.0	5,706.2	5,870.2	5,791.0	25.8	23.8	156.01	-239.5	794.1	584.9	540.0	44.96	13.009	
6,000.0	5,801.7	5,969.4	5,888.4	26.3	24.2	156.04	-244.6	811.9	597.8	552.0	45.82	13.048	
6,100.0	5,897.2	6,068.6	5,985.8	26.8	24.7	156.06	-249.6	829.8	610.7	564.0	46.67	13.086	
6,200.0	5,992.7	6,167.7	6,083.2	27.3	25.1	156.08	-254.7	847.6	623.6	576.1	47.52	13.122	
6,300.0	6,088.2	6,266.9	6,180.7	27.8	25.6	156.11	-259.7	865.4	636.5	588.1	48.38	13.157	
6,400.0	6,183.8	6,366.1	6,278.1	28.3	26.0	156.13	-264.8	883.2	649.4	600.2	49.23	13.190	
6,500.0	6,279.3	6,465.2	6,375.5	28.8	26.5	156.15	-269.8	901.0	662.3	612.2	50.09	13.223	
6,600.0	6,374.8	6,560.7	6,469.3	29.3	26.9	156.17	-274.6	918.1	675.3	624.4	50.91	13.265	
6,700.0	6,470.3	6,651.3	6,558.6	29.8	27.3	156.26	-278.9	933.1	689.3	637.6	51.71	13.331	
6,800.0	6,565.9	6,741.6	6,647.7	30.4	27.7	156.42	-282.7	946.7	704.6	652.1	52.51	13.418	
6,900.0	6,661.4	6,831.4	6,736.6	30.9	28.1	156.64	-286.2	958.9	721.1	667.8	53.32	13.524	
7,000.0	6,756.9	6,920.8	6,825.3	31.4	28.5	156.92	-289.2	969.6	738.8	684.7	54.13	13.650	
7,100.0	6,852.4	7,009.7	6,913.7	31.9	28.9	157.25	-291.9	979.1	757.7	702.8	54.93	13.795	
7,200.0	6,947.9	7,100.0	7,003.6	32.4	29.2	157.64	-294.2	987.3	777.9	722.1	55.75	13.953	
7,300.0	7,043.5	7,186.0	7,089.3	32.9	29.5	158.05	-296.1	993.8	799.3	742.8	56.52	14.143	
7,400.0	7,139.0	7,273.2	7,176.3	33.4	29.9	158.50	-297.6	999.2	822.0	764.7	57.29	14.346	
7,500.0	7,234.5	7,359.8	7,262.9	33.9	30.2	158.99	-298.8	1,003.3	845.9	787.8	58.06	14.570	
7,600.0	7,330.0	7,445.8	7,348.8	34.4	30.4	159.49	-299.5	1,006.1	871.0	812.2	58.79	14.815	
7,700.0	7,425.5	7,531.1	7,434.0	34.9	30.6	160.02	-300.0	1,007.6	897.4	837.8	59.63	15.050	
7,782.5	7,504.4	7,601.4	7,504.4	35.3	30.7	160.46	-300.1	1,008.0	920.2	858.7	61.43	14.980	
7,800.0	7,521.1	7,618.1	7,521.1	35.4	30.7	160.59	-300.1	1,008.0	925.0	863.5	61.56	15.026	
7,900.0	7,616.9	7,714.0	7,616.9	35.9	30.8	161.24	-300.1	1,008.0	952.1	889.7	62.33	15.273	
8,000.0	7,713.3	7,810.3	7,713.3	36.4	30.8	161.83	-300.1	1,008.0	977.6	914.5	63.03	15.509	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1														Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.0	0.0	1.0	0.0	0.0	0.0	8.59	200.1	30.2	202.3						
100.0	100.0	101.0	100.0	0.8	0.8	8.59	200.1	30.2	202.3	200.4	2.00	101.284			
200.0	200.0	201.0	200.0	1.4	1.4	8.59	200.1	30.2	202.3	199.0	3.32	61.023			
300.0	300.0	301.0	300.0	1.9	1.9	8.59	200.1	30.2	202.3	198.2	4.20	48.190			
400.0	400.0	401.0	400.0	2.2	2.3	8.59	200.1	30.2	202.3	197.4	4.92	41.169			
500.0	500.0	501.0	500.0	2.6	2.6	8.59	200.1	30.2	202.3	196.8	5.54	36.553			
600.0	600.0	601.0	600.0	2.8	2.8	8.59	200.1	30.2	202.3	196.3	6.09	33.211			
700.0	700.0	701.0	700.0	3.1	3.1	8.59	200.1	30.2	202.3	195.7	6.60	30.642			
800.0	800.0	801.0	800.0	3.3	3.3	8.59	200.1	30.2	202.3	195.3	7.08	28.585			
900.0	900.0	901.0	900.0	3.6	3.6	8.59	200.1	30.2	202.3	194.8	7.53	26.888			
966.0	966.0	967.0	966.0	3.7	3.7	8.59	200.1	30.2	202.3	194.5	7.80	25.930			
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	8.59	200.1	30.2	202.3	194.4	7.96	25.434			
1,100.0	1,100.0	1,100.0	1,099.0	4.1	5.2	-81.66	200.0	32.0	202.3	192.8	9.53	21.239			
1,200.0	1,199.8	1,199.2	1,198.0	4.4	5.5	-81.66	199.9	37.2	202.3	192.4	9.84	20.546			
1,300.0	1,299.5	1,298.3	1,296.7	4.7	5.7	-81.66	199.8	45.8	202.1	192.0	10.16	19.898			
1,400.0	1,398.7	1,397.3	1,395.1	5.1	6.0	-81.66	199.5	57.9	201.9	191.5	10.47	19.284			
1,500.0	1,497.5	1,496.4	1,492.9	5.4	6.3	-81.68	199.2	73.3	201.7	190.9	10.79	18.693			
1,600.0	1,595.6	1,595.5	1,590.2	5.8	6.7	-81.71	198.9	92.1	201.4	190.3	11.12	18.116			
1,700.0	1,693.1	1,694.6	1,686.8	6.2	7.0	-81.74	198.4	114.2	201.0	189.6	11.46	17.542			
1,800.0	1,789.6	1,793.7	1,782.6	6.6	7.4	-81.78	197.9	139.7	200.6	188.8	11.83	16.963			
1,860.7	1,847.8	1,853.9	1,840.3	6.8	7.6	-81.81	197.6	156.8	200.4	188.3	12.03	16.653			
1,900.0	1,885.3	1,892.8	1,877.4	6.9	7.7	-81.75	197.3	168.5	200.2	188.0	12.16	16.464			
1,960.4	1,943.1	1,952.7	1,934.2	7.2	8.0	-81.36	197.0	187.5	200.1	187.7	12.43	16.102 CC			
2,000.0	1,980.9	1,991.9	1,971.1	7.3	8.1	-80.92	196.7	200.5	200.2	187.6	12.61	15.875 ES			
2,100.0	2,076.4	2,090.6	2,063.4	7.7	8.5	-79.13	196.0	235.6	200.7	187.6	13.10	15.327			
2,200.0	2,171.9	2,190.3	2,156.0	8.1	8.9	-76.91	195.3	272.6	201.8	188.1	13.70	14.731			
2,300.0	2,267.4	2,290.0	2,248.6	8.5	9.3	-74.71	194.6	309.5	203.2	188.9	14.33	14.182			
2,400.0	2,363.0	2,389.7	2,341.2	8.9	9.7	-72.55	193.8	346.4	204.9	189.9	15.00	13.660			
2,500.0	2,458.5	2,489.4	2,433.8	9.4	10.1	-70.42	193.1	383.3	206.9	191.2	15.72	13.164			
2,600.0	2,554.0	2,589.0	2,526.3	9.8	10.5	-68.34	192.4	420.3	209.2	192.7	16.48	12.696			
2,700.0	2,649.5	2,688.7	2,618.9	10.2	10.9	-66.30	191.6	457.2	211.7	194.4	17.27	12.257			
2,800.0	2,745.0	2,788.4	2,711.5	10.7	11.4	-64.31	190.9	494.1	214.5	196.4	18.10	11.849			
2,900.0	2,840.6	2,888.1	2,804.1	11.1	11.8	-62.38	190.2	531.0	217.6	198.6	18.97	11.469			
3,000.0	2,936.1	2,987.8	2,896.7	11.6	12.3	-60.50	189.5	568.0	220.9	201.0	19.86	11.119			
3,100.0	3,031.6	3,087.5	2,989.3	12.1	12.7	-58.68	188.7	604.9	224.4	203.6	20.78	10.796			
3,200.0	3,127.1	3,187.2	3,081.9	12.5	13.2	-56.92	188.0	641.8	228.1	206.4	21.73	10.500			
3,300.0	3,222.6	3,286.8	3,174.5	13.0	13.6	-55.21	187.3	678.7	232.1	209.4	22.69	10.228			
3,400.0	3,318.2	3,386.5	3,267.1	13.5	14.1	-53.57	186.5	715.7	236.2	212.6	23.67	9.980			
3,500.0	3,413.7	3,486.2	3,359.7	14.0	14.6	-51.98	185.8	752.6	240.6	215.9	24.66	9.754			
3,600.0	3,509.2	3,585.9	3,452.3	14.4	15.1	-50.45	185.1	789.5	245.1	219.4	25.67	9.547			
3,700.0	3,604.7	3,685.6	3,544.9	14.9	15.5	-48.97	184.4	826.4	249.8	223.1	26.69	9.359			
3,800.0	3,700.2	3,785.3	3,637.5	15.4	16.0	-47.55	183.6	863.4	254.6	226.9	27.72	9.187			
3,900.0	3,795.8	3,885.0	3,730.0	15.9	16.5	-46.19	182.9	900.3	259.6	230.9	28.75	9.030			
4,000.0	3,891.3	3,984.6	3,822.6	16.4	17.0	-44.87	182.2	937.2	264.8	235.0	29.79	8.887			
4,100.0	3,986.8	4,084.3	3,915.2	16.9	17.5	-43.61	181.4	974.1	270.1	239.2	30.84	8.757			
4,200.0	4,082.3	4,184.0	4,007.8	17.4	18.0	-42.39	180.7	1,011.1	275.5	243.6	31.89	8.638			
4,300.0	4,177.8	4,283.7	4,100.4	17.8	18.5	-41.22	180.0	1,048.0	281.0	248.0	32.94	8.530			
4,400.0	4,273.4	4,383.4	4,193.0	18.3	19.0	-40.10	179.3	1,084.9	286.6	252.6	33.99	8.431			
4,500.0	4,368.9	4,483.1	4,285.6	18.8	19.5	-39.02	178.5	1,121.8	292.4	257.3	35.05	8.341			
4,600.0	4,464.4	4,582.8	4,378.2	19.3	20.0	-37.99	177.8	1,158.8	298.2	262.1	36.11	8.258			
4,700.0	4,559.9	4,682.4	4,470.8	19.8	20.5	-36.99	177.1	1,195.7	304.1	267.0	37.17	8.183			

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,800.0	4,655.4	4,782.1	4,563.4	20.3	21.0	-36.03	176.3	1,232.6	310.2	271.9	38.23	8.114	
4,900.0	4,751.0	4,881.8	4,656.0	20.8	21.5	-35.11	175.6	1,269.5	316.3	277.0	39.29	8.050	
5,000.0	4,846.5	4,981.5	4,748.6	21.3	22.0	-34.22	174.9	1,306.5	322.4	282.1	40.34	7.992	
5,100.0	4,942.0	5,081.2	4,841.2	21.8	22.5	-33.37	174.1	1,343.4	328.7	287.3	41.40	7.939	
5,200.0	5,037.5	5,180.9	4,933.8	22.3	23.0	-32.55	173.4	1,380.3	335.0	292.6	42.46	7.890	
5,300.0	5,133.0	5,280.6	5,026.3	22.8	23.5	-31.76	172.7	1,417.2	341.4	297.9	43.52	7.845	
5,400.0	5,228.6	5,380.3	5,118.9	23.3	24.1	-30.99	172.0	1,454.2	347.9	303.3	44.58	7.804	
5,500.0	5,324.1	5,479.9	5,211.5	23.8	24.6	-30.26	171.2	1,491.1	354.4	308.8	45.63	7.767	
5,600.0	5,419.6	5,579.6	5,304.1	24.3	25.1	-29.55	170.5	1,528.0	361.0	314.3	46.69	7.732	
5,700.0	5,515.1	5,679.3	5,396.7	24.8	25.6	-28.87	169.8	1,564.9	367.6	319.9	47.74	7.700	
5,800.0	5,610.6	5,779.0	5,489.3	25.3	26.1	-28.21	169.0	1,601.9	374.3	325.5	48.79	7.670	
5,900.0	5,706.2	5,878.7	5,581.9	25.8	26.6	-27.58	168.3	1,638.8	381.0	331.2	49.85	7.643	
6,000.0	5,801.7	5,978.4	5,674.5	26.3	27.1	-26.96	167.6	1,675.7	387.8	336.9	50.90	7.619	
6,100.0	5,897.2	6,078.1	5,767.1	26.8	27.7	-26.37	166.9	1,712.6	394.6	342.6	51.95	7.596	
6,200.0	5,992.7	6,177.7	5,859.7	27.3	28.2	-25.80	166.1	1,749.6	401.4	348.4	53.00	7.574	
6,300.0	6,088.2	6,277.4	5,952.3	27.8	28.7	-25.25	165.4	1,786.5	408.3	354.3	54.05	7.555	
6,400.0	6,183.8	6,377.1	6,044.9	28.3	29.2	-24.72	164.7	1,823.4	415.2	360.2	55.09	7.537	
6,500.0	6,279.3	6,476.8	6,137.5	28.8	29.7	-24.20	163.9	1,860.3	422.2	366.1	56.14	7.521	
6,600.0	6,374.8	6,576.5	6,230.0	29.3	30.2	-23.70	163.2	1,897.3	429.2	372.0	57.19	7.505	
6,700.0	6,470.3	6,676.2	6,322.6	29.8	30.8	-23.22	162.5	1,934.2	436.2	378.0	58.23	7.491	
6,800.0	6,565.9	6,775.9	6,415.2	30.4	31.3	-22.75	161.8	1,971.1	443.3	384.0	59.27	7.479	
6,900.0	6,661.4	6,875.5	6,507.8	30.9	31.8	-22.29	161.0	2,008.0	450.4	390.1	60.32	7.467	
7,000.0	6,756.9	6,975.2	6,600.4	31.4	32.3	-21.85	160.3	2,045.0	457.5	396.1	61.36	7.456	
7,100.0	6,852.4	7,074.9	6,693.0	31.9	32.8	-21.43	159.6	2,081.9	464.6	402.2	62.40	7.446	
7,200.0	6,947.9	7,174.6	6,785.6	32.4	33.4	-21.01	158.8	2,118.8	471.8	408.3	63.44	7.437	
7,300.0	7,043.5	7,274.6	6,878.4	32.9	33.9	-20.61	158.1	2,155.8	479.0	414.5	64.48	7.428	
7,400.0	7,139.0	7,382.8	6,979.4	33.4	34.5	-20.24	157.3	2,194.9	485.2	419.7	65.58	7.399	
7,500.0	7,234.5	7,491.3	7,081.3	33.9	35.0	-19.96	156.6	2,232.2	489.8	423.1	66.67	7.347	
7,600.0	7,330.0	7,600.0	7,184.0	34.4	35.6	-19.76	155.9	2,267.5	492.5	424.8	67.72	7.274	
7,700.0	7,425.5	7,708.7	7,287.5	34.9	36.1	-19.66	155.2	2,301.0	493.5	424.8	68.73	7.180	
7,782.5	7,504.4	7,798.5	7,373.4	35.3	36.6	-19.63	154.7	2,327.1	493.0	423.5	69.54	7.089	
7,800.0	7,521.1	7,817.5	7,391.6	35.4	36.7	-19.63	154.6	2,332.5	492.8	423.1	69.71	7.069	
7,900.0	7,616.9	7,926.2	7,496.3	35.9	37.2	-19.64	154.0	2,362.0	491.3	420.7	70.65	6.954	
8,000.0	7,713.3	8,034.9	7,601.5	36.4	37.8	-19.65	153.5	2,389.4	489.7	418.2	71.55	6.844	
8,100.0	7,810.1	8,143.6	7,707.1	36.9	38.3	-19.68	153.0	2,414.9	488.0	415.6	72.41	6.739	
8,200.0	7,907.3	8,252.2	7,813.2	37.4	38.8	-19.71	152.5	2,438.4	486.1	412.9	73.23	6.639	
8,300.0	8,004.9	8,360.8	7,919.6	37.9	39.3	-19.76	152.1	2,459.8	484.1	410.1	74.00	6.542	
8,400.0	8,102.9	8,469.4	8,026.4	38.4	39.8	-19.81	151.7	2,479.3	482.0	407.3	74.73	6.450	
8,500.0	8,201.2	8,577.9	8,133.5	38.8	40.3	-19.87	151.4	2,496.6	479.8	404.4	75.41	6.362	
8,600.0	8,299.8	8,686.3	8,240.8	39.3	40.8	-19.95	151.1	2,512.0	477.4	401.3	76.05	6.277	
8,700.0	8,398.7	8,794.7	8,348.4	39.7	41.2	-20.03	150.8	2,525.3	474.9	398.3	76.64	6.197	
8,800.0	8,497.8	8,903.0	8,456.1	40.1	41.7	-20.13	150.6	2,536.5	472.3	395.1	77.17	6.120	
8,900.0	8,597.2	9,011.3	8,564.0	40.6	42.1	-20.23	150.4	2,545.8	469.5	391.9	77.64	6.047	
9,000.0	8,696.7	9,119.5	8,672.0	41.0	42.5	-20.35	150.3	2,552.9	466.6	388.6	78.05	5.978	
9,100.0	8,796.4	9,227.6	8,780.0	41.3	42.8	-20.48	150.2	2,558.1	463.6	385.2	78.40	5.914	
9,200.0	8,896.2	9,335.7	8,888.0	41.7	43.1	-20.62	150.1	2,561.2	460.5	381.9	78.66	5.855	
9,300.0	8,996.1	9,443.7	8,995.9	42.0	43.3	-20.77	150.1	2,562.2	457.3	376.6	80.72	5.665	
9,400.0	9,096.1	9,543.8	9,096.1	42.3	43.4	-20.88	150.1	2,562.2	454.8	372.4	82.33	5.523	
9,500.0	9,196.1	9,643.8	9,196.1	42.5	43.4	-20.92	150.1	2,562.2	453.9	371.4	82.48	5.503	
9,503.9	9,200.0	9,647.7	9,200.0	42.5	43.4	69.35	150.1	2,562.2	453.9	371.4	82.48	5.503	
9,600.0	9,296.1	9,743.8	9,296.1	42.5	43.4	69.35	150.1	2,562.2	453.9	371.4	82.52	5.500	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,700.0	9,396.1	9,843.8	9,396.1	42.5	43.4	69.35	150.1	2,562.2	453.9	371.3	82.56	5.498	
9,785.4	9,481.5	9,929.2	9,481.5	42.5	43.4	69.35	150.1	2,562.2	453.9	371.3	82.59	5.496	
9,800.0	9,496.1	9,943.8	9,496.1	42.5	43.4	-110.32	150.1	2,562.2	454.0	371.4	82.58	5.497	
9,825.0	9,521.0	9,968.7	9,521.0	42.5	43.4	-110.43	150.1	2,562.2	454.5	371.9	82.52	5.507	
9,850.0	9,545.9	9,993.6	9,545.9	42.5	43.4	-110.65	150.1	2,562.2	455.4	373.0	82.41	5.526	
9,875.0	9,570.5	10,018.2	9,570.5	42.5	43.4	-110.95	150.1	2,562.2	456.9	374.6	82.25	5.554	
9,900.0	9,595.0	10,042.7	9,595.0	42.5	43.4	-111.34	150.1	2,562.2	458.8	376.8	82.05	5.592	
9,925.0	9,619.1	10,066.8	9,619.1	42.5	43.5	-111.80	150.1	2,562.2	461.3	379.5	81.80	5.639	
9,950.0	9,642.8	10,090.5	9,642.8	42.5	43.5	-112.31	150.1	2,562.2	464.4	382.9	81.50	5.698	
9,975.0	9,666.1	10,113.8	9,666.1	42.5	43.5	-112.87	150.1	2,562.2	468.1	386.9	81.15	5.768	
10,000.0	9,688.9	10,136.6	9,688.9	42.5	43.5	-113.44	150.1	2,562.2	472.4	391.7	80.75	5.850	
10,025.0	9,711.1	10,158.8	9,711.1	42.5	43.5	-114.02	150.1	2,562.2	477.5	397.2	80.30	5.946	
10,050.0	9,732.7	10,180.4	9,732.7	42.5	43.5	-114.58	150.1	2,562.2	483.3	403.5	79.80	6.057	
10,075.0	9,753.6	10,201.3	9,753.6	42.5	43.5	-115.10	150.1	2,562.2	490.0	410.7	79.25	6.182	
10,100.0	9,773.8	10,221.5	9,773.8	42.5	43.5	-115.56	150.1	2,562.2	497.5	418.8	78.66	6.324	
10,125.0	9,793.2	10,240.9	9,793.2	42.6	43.5	-115.93	150.1	2,562.2	505.8	427.8	78.03	6.483	
10,150.0	9,811.7	10,259.4	9,811.7	42.6	43.5	-116.21	150.1	2,562.2	515.1	437.7	77.37	6.658	
10,175.0	9,829.3	10,277.0	9,829.3	42.6	43.5	-116.36	150.1	2,562.2	525.3	448.6	76.67	6.851	
10,200.0	9,845.9	10,293.6	9,845.9	42.6	43.5	-116.36	150.1	2,562.2	536.4	460.5	75.96	7.062	
10,225.0	9,861.5	10,309.3	9,861.5	42.6	43.5	-116.20	150.1	2,562.2	548.5	473.3	75.24	7.291	
10,250.0	9,876.2	10,323.9	9,876.2	42.6	43.5	-115.84	150.1	2,562.2	561.5	487.0	74.51	7.537	
10,275.0	9,889.7	10,337.4	9,889.7	42.6	43.5	-115.27	150.1	2,562.2	575.5	501.7	73.78	7.800	
10,300.0	9,902.1	10,349.8	9,902.1	42.6	43.5	-114.45	150.1	2,562.2	590.3	517.2	73.06	8.079	
10,325.0	9,913.3	10,361.0	9,913.3	42.6	43.5	-113.38	150.1	2,562.2	606.0	533.6	72.36	8.374	
10,350.0	9,923.4	10,371.1	9,923.4	42.7	43.5	-112.00	150.1	2,562.2	622.5	550.8	71.68	8.684	
10,375.0	9,932.3	10,380.0	9,932.3	42.7	43.5	-110.30	150.1	2,562.2	639.7	568.7	71.02	9.007	
10,400.0	9,939.9	10,387.6	9,939.9	42.7	43.5	-108.24	150.1	2,562.2	657.7	587.3	70.40	9.342	
10,425.0	9,946.2	10,394.0	9,946.2	42.7	43.5	-105.80	150.1	2,562.2	676.3	606.5	69.80	9.689	
10,450.0	9,951.3	10,399.0	9,951.3	42.7	43.5	-102.95	150.1	2,562.2	695.5	626.2	69.24	10.044	
10,475.0	9,955.1	10,402.8	9,955.1	42.8	43.5	-99.67	150.1	2,562.2	715.2	646.5	68.71	10.408	
10,500.0	9,957.6	10,405.4	9,957.6	42.8	43.5	-95.96	150.1	2,562.2	735.3	667.1	68.22	10.778	
10,525.0	9,958.9	10,406.6	9,958.9	42.8	43.5	-91.84	150.1	2,562.2	755.8	688.0	67.76	11.154	
10,534.2	9,959.0	10,406.7	9,959.0	42.8	43.5	-90.23	150.1	2,562.2	763.4	695.8	67.60	11.293	
10,600.0	9,959.1	10,406.8	9,959.1	42.9	43.5	-90.25	150.1	2,562.2	818.9	752.3	66.57	12.301	
10,700.0	9,959.4	11,757.4	10,691.8	43.0	44.2	-152.72	-671.4	2,519.2	824.4	783.1	41.27	19.973	
10,800.0	9,959.7	11,846.3	10,691.8	43.2	44.3	-152.95	-760.3	2,515.9	822.1	780.9	41.26	19.927	
10,900.0	9,959.9	11,936.0	10,691.8	43.3	44.5	-153.01	-850.0	2,515.4	821.3	780.0	41.34	19.866	
11,000.0	9,960.2	12,036.0	10,691.7	43.5	44.7	-153.00	-950.0	2,516.0	821.0	779.5	41.51	19.782	
11,100.0	9,960.5	12,136.0	10,691.7	43.8	45.0	-152.99	-1,050.0	2,516.6	820.8	779.0	41.73	19.668	
11,200.0	9,960.7	12,236.0	10,691.7	44.0	45.3	-152.98	-1,150.0	2,517.2	820.5	778.5	42.02	19.527	
11,300.0	9,961.0	12,336.0	10,691.6	44.3	45.6	-152.97	-1,250.0	2,517.8	820.2	777.9	42.37	19.360	
11,400.0	9,961.3	12,436.0	10,691.6	44.5	45.9	-152.96	-1,350.0	2,518.4	820.0	777.2	42.77	19.170	
11,500.0	9,961.5	12,536.0	10,691.5	44.9	46.2	-152.95	-1,450.0	2,519.0	819.7	776.5	43.24	18.957	
11,600.0	9,961.8	12,636.0	10,691.5	45.2	46.6	-152.94	-1,550.0	2,519.6	819.4	775.7	43.76	18.726	
11,700.0	9,962.1	12,736.0	10,691.5	45.5	46.9	-152.93	-1,650.0	2,520.2	819.2	774.8	44.33	18.477	
11,800.0	9,962.3	12,836.0	10,691.4	45.9	47.3	-152.92	-1,750.0	2,520.8	818.9	773.9	44.96	18.214	
11,900.0	9,962.6	12,936.0	10,691.4	46.3	47.8	-152.91	-1,850.0	2,521.4	818.6	773.0	45.63	17.939	
12,000.0	9,962.9	13,036.0	10,691.4	46.7	48.2	-152.90	-1,950.0	2,522.0	818.3	772.0	46.36	17.654	
12,100.0	9,963.1	13,136.0	10,691.3	47.1	48.6	-152.89	-2,050.0	2,522.6	818.1	771.0	47.12	17.360	
12,200.0	9,963.4	13,236.0	10,691.3	47.5	49.1	-152.88	-2,150.0	2,523.3	817.8	769.9	47.93	17.061	
12,300.0	9,963.7	13,336.0	10,691.2	48.0	49.6	-152.87	-2,250.0	2,523.9	817.5	768.8	48.78	16.758	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,400.0	9,963.9	13,436.0	10,691.2	48.4	50.1	-152.86	-2,350.0	2,524.5	817.3	767.6	49.67	16.453	
12,500.0	9,964.2	13,536.0	10,691.2	48.9	50.6	-152.85	-2,450.0	2,525.1	817.0	766.4	50.60	16.147	
12,600.0	9,964.5	13,636.0	10,691.1	49.4	51.1	-152.84	-2,550.0	2,525.7	816.7	765.2	51.56	15.841	
12,700.0	9,964.7	13,736.0	10,691.1	49.9	51.6	-152.83	-2,650.0	2,526.3	816.5	763.9	52.55	15.536	
12,800.0	9,965.0	13,836.0	10,691.0	50.5	52.2	-152.82	-2,750.0	2,526.9	816.2	762.6	53.58	15.234	
12,900.0	9,965.3	13,936.0	10,691.0	51.0	52.7	-152.81	-2,850.0	2,527.5	815.9	761.3	54.63	14.936	
13,000.0	9,965.5	14,036.0	10,691.0	51.6	53.3	-152.80	-2,950.0	2,528.1	815.6	759.9	55.71	14.641	
13,100.0	9,965.8	14,136.0	10,690.9	52.1	53.9	-152.79	-3,050.0	2,528.7	815.4	758.6	56.82	14.351	
13,200.0	9,966.1	14,236.0	10,690.9	52.7	54.4	-152.78	-3,150.0	2,529.3	815.1	757.2	57.95	14.067	
13,300.0	9,966.3	14,336.0	10,690.9	53.3	55.0	-152.77	-3,250.0	2,529.9	814.8	755.7	59.10	13.787	
13,400.0	9,966.6	14,436.0	10,690.8	53.9	55.7	-152.76	-3,350.0	2,530.5	814.6	754.3	60.28	13.514	
13,500.0	9,966.9	14,536.0	10,690.8	54.5	56.3	-152.75	-3,450.0	2,531.1	814.3	752.8	61.47	13.247	
13,600.0	9,967.1	14,636.0	10,690.7	55.1	56.9	-152.74	-3,550.0	2,531.8	814.0	751.3	62.69	12.986	
13,700.0	9,967.4	14,736.0	10,690.7	55.7	57.5	-152.73	-3,650.0	2,532.4	813.8	749.8	63.92	12.731	
13,800.0	9,967.7	14,836.0	10,690.7	56.4	58.2	-152.72	-3,750.0	2,533.0	813.5	748.3	65.17	12.483	
13,900.0	9,967.9	14,936.0	10,690.6	57.0	58.8	-152.71	-3,850.0	2,533.6	813.2	746.8	66.44	12.241	
14,000.0	9,968.2	15,036.0	10,690.6	57.7	59.5	-152.70	-3,950.0	2,534.2	813.0	745.2	67.72	12.005	
14,100.0	9,968.5	15,136.0	10,690.5	58.3	60.2	-152.69	-4,050.0	2,534.8	812.7	743.7	69.02	11.775	
14,200.0	9,968.7	15,236.0	10,690.5	59.0	60.9	-152.68	-4,149.9	2,535.4	812.4	742.1	70.33	11.552	
14,300.0	9,969.0	15,336.0	10,690.5	59.7	61.5	-152.67	-4,249.9	2,536.0	812.1	740.5	71.65	11.335	
14,400.0	9,969.3	15,436.0	10,690.4	60.4	62.2	-152.66	-4,349.9	2,536.6	811.9	738.9	72.98	11.124	
14,500.0	9,969.5	15,536.0	10,690.4	61.0	62.9	-152.65	-4,449.9	2,537.2	811.6	737.3	74.33	10.919	
14,600.0	9,969.8	15,636.0	10,690.4	61.7	63.6	-152.64	-4,549.9	2,537.8	811.3	735.6	75.69	10.719	
14,700.0	9,970.0	15,736.0	10,690.3	62.5	64.4	-152.63	-4,649.9	2,538.4	811.1	734.0	77.06	10.526	
14,800.0	9,970.3	15,836.0	10,690.3	63.2	65.1	-152.62	-4,749.9	2,539.0	810.8	732.4	78.43	10.337	
14,900.0	9,970.6	15,936.0	10,690.2	63.9	65.8	-152.61	-4,849.9	2,539.6	810.5	730.7	79.82	10.154	
15,000.0	9,970.8	16,036.0	10,690.2	64.6	66.5	-152.60	-4,949.9	2,540.3	810.3	729.0	81.22	9.976	
15,100.0	9,971.1	16,136.0	10,690.2	65.4	67.3	-152.59	-5,049.9	2,540.9	810.0	727.4	82.62	9.803	
15,200.0	9,971.4	16,236.0	10,690.1	66.1	68.0	-152.58	-5,149.9	2,541.5	809.7	725.7	84.04	9.635	
15,300.0	9,971.6	16,336.0	10,690.1	66.8	68.8	-152.57	-5,249.9	2,542.1	809.5	724.0	85.46	9.472	
15,400.0	9,971.9	16,436.0	10,690.0	67.6	69.5	-152.56	-5,349.9	2,542.7	809.2	722.3	86.88	9.313	
15,500.0	9,972.2	16,536.0	10,690.0	68.3	70.3	-152.55	-5,449.9	2,543.3	808.9	720.6	88.32	9.159	
15,600.0	9,972.4	16,636.0	10,690.0	69.1	71.0	-152.54	-5,549.9	2,543.9	808.6	718.9	89.76	9.009	
15,700.0	9,972.7	16,736.0	10,689.9	69.9	71.8	-152.53	-5,649.9	2,544.5	808.4	717.2	91.21	8.863	
15,800.0	9,973.0	16,836.0	10,689.9	70.6	72.6	-152.52	-5,749.9	2,545.1	808.1	715.4	92.66	8.721	
15,900.0	9,973.2	16,936.0	10,689.8	71.4	73.3	-152.51	-5,849.9	2,545.7	807.8	713.7	94.12	8.583	
16,000.0	9,973.5	17,036.0	10,689.8	72.2	74.1	-152.50	-5,949.9	2,546.3	807.6	712.0	95.58	8.449	
16,100.0	9,973.8	17,136.0	10,689.8	73.0	74.9	-152.49	-6,049.9	2,546.9	807.3	710.2	97.05	8.318	
16,200.0	9,974.0	17,236.0	10,689.7	73.8	75.7	-152.48	-6,149.9	2,547.5	807.0	708.5	98.53	8.191	
16,300.0	9,974.3	17,336.0	10,689.7	74.6	76.5	-152.47	-6,249.9	2,548.1	806.8	706.8	100.01	8.067	
16,400.0	9,974.6	17,436.0	10,689.7	75.4	77.3	-152.46	-6,349.9	2,548.8	806.5	705.0	101.49	7.946	
16,500.0	9,974.8	17,536.0	10,689.6	76.1	78.1	-152.45	-6,449.9	2,549.4	806.2	703.2	102.98	7.829	
16,600.0	9,975.1	17,636.0	10,689.6	77.0	78.9	-152.44	-6,549.9	2,550.0	806.0	701.5	104.47	7.714	
16,700.0	9,975.4	17,736.0	10,689.5	77.8	79.7	-152.43	-6,649.9	2,550.6	805.7	699.7	105.97	7.603	
16,800.0	9,975.6	17,836.0	10,689.5	78.6	80.5	-152.41	-6,749.9	2,551.2	805.4	697.9	107.47	7.494	
16,900.0	9,975.9	17,936.0	10,689.5	79.4	81.3	-152.40	-6,849.9	2,551.8	805.2	696.2	108.98	7.388	
17,000.0	9,976.2	18,036.0	10,689.4	80.2	82.1	-152.39	-6,949.9	2,552.4	804.9	694.4	110.48	7.285	
17,100.0	9,976.4	18,136.0	10,689.4	81.0	83.0	-152.38	-7,049.9	2,553.0	804.6	692.6	112.00	7.184	
17,200.0	9,976.7	18,236.0	10,689.3	81.8	83.8	-152.37	-7,149.9	2,553.6	804.3	690.8	113.51	7.086	
17,300.0	9,977.0	18,336.0	10,689.3	82.7	84.6	-152.36	-7,249.9	2,554.2	804.1	689.0	115.03	6.990	
17,400.0	9,977.2	18,436.0	10,689.3	83.5	85.4	-152.35	-7,349.9	2,554.8	803.8	687.3	116.55	6.897	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
17,500.0	9,977.5	18,536.0	10,689.2	84.3	86.3	-152.34	-7,449.9	2,555.4	803.5	685.5	118.07	6.805
17,600.0	9,977.8	18,636.0	10,689.2	85.2	87.1	-152.33	-7,549.9	2,556.0	803.3	683.7	119.60	6.716
17,700.0	9,978.0	18,736.0	10,689.2	86.0	87.9	-152.32	-7,649.9	2,556.6	803.0	681.9	121.13	6.629
17,800.0	9,978.3	18,836.0	10,689.1	86.8	88.8	-152.31	-7,749.9	2,557.2	802.7	680.1	122.66	6.544
17,900.0	9,978.6	18,936.0	10,689.1	87.7	89.6	-152.30	-7,849.9	2,557.9	802.5	678.3	124.20	6.461
18,000.0	9,978.8	19,036.0	10,689.0	88.5	90.5	-152.29	-7,949.9	2,558.5	802.2	676.5	125.73	6.380
18,100.0	9,979.1	19,136.0	10,689.0	89.4	91.3	-152.28	-8,049.9	2,559.1	801.9	674.7	127.27	6.301
18,200.0	9,979.4	19,236.0	10,689.0	90.2	92.2	-152.27	-8,149.9	2,559.7	801.7	672.8	128.81	6.223
18,300.0	9,979.6	19,336.0	10,688.9	91.1	93.0	-152.26	-8,249.9	2,560.3	801.4	671.0	130.36	6.148
18,400.0	9,979.9	19,436.0	10,688.9	91.9	93.9	-152.25	-8,349.9	2,560.9	801.1	669.2	131.90	6.074
18,500.0	9,980.2	19,536.0	10,688.8	92.8	94.7	-152.24	-8,449.8	2,561.5	800.9	667.4	133.45	6.001
18,600.0	9,980.4	19,636.0	10,688.8	93.7	95.6	-152.23	-8,549.8	2,562.1	800.6	665.6	135.00	5.930
18,700.0	9,980.7	19,736.0	10,688.8	94.5	96.4	-152.22	-8,649.8	2,562.7	800.3	663.8	136.55	5.861
18,800.0	9,981.0	19,836.0	10,688.7	95.4	97.3	-152.21	-8,749.8	2,563.3	800.1	661.9	138.11	5.793
18,900.0	9,981.2	19,936.0	10,688.7	96.2	98.2	-152.20	-8,849.8	2,563.9	799.8	660.1	139.66	5.727
19,000.0	9,981.5	20,036.0	10,688.7	97.1	99.0	-152.19	-8,949.8	2,564.5	799.5	658.3	141.22	5.662
19,100.0	9,981.8	20,136.0	10,688.6	98.0	99.9	-152.18	-9,049.8	2,565.1	799.2	656.5	142.78	5.598
19,200.0	9,982.0	20,236.0	10,688.6	98.9	100.8	-152.17	-9,149.8	2,565.7	799.0	654.6	144.34	5.535
19,300.0	9,982.3	20,336.0	10,688.5	99.7	101.6	-152.16	-9,249.8	2,566.4	798.7	652.8	145.90	5.474
19,400.0	9,982.6	20,436.0	10,688.5	100.6	102.5	-152.15	-9,349.8	2,567.0	798.4	651.0	147.46	5.414
19,500.0	9,982.8	20,536.0	10,688.5	101.5	103.4	-152.14	-9,449.8	2,567.6	798.2	649.1	149.03	5.356
19,600.0	9,983.1	20,636.0	10,688.4	102.4	104.2	-152.13	-9,549.8	2,568.2	797.9	647.3	150.60	5.298
19,700.0	9,983.4	20,736.0	10,688.4	103.2	105.1	-152.12	-9,649.8	2,568.8	797.6	645.5	152.16	5.242
19,800.0	9,983.6	20,836.0	10,688.3	104.1	106.0	-152.10	-9,749.8	2,569.4	797.4	643.6	153.73	5.187
19,900.0	9,983.9	20,936.0	10,688.3	105.0	106.9	-152.09	-9,849.8	2,570.0	797.1	641.8	155.30	5.133
20,000.0	9,984.2	21,036.0	10,688.3	105.9	107.8	-152.08	-9,949.8	2,570.6	796.8	640.0	156.88	5.079
20,100.0	9,984.4	21,136.0	10,688.2	106.8	108.6	-152.07	-10,049.8	2,571.2	796.6	638.1	158.45	5.027
20,200.0	9,984.7	21,236.0	10,688.2	107.6	109.5	-152.06	-10,149.8	2,571.8	796.3	636.3	160.02	4.976
20,300.0	9,985.0	21,336.0	10,688.2	108.5	110.4	-152.05	-10,249.8	2,572.4	796.0	634.4	161.60	4.926
20,400.0	9,985.2	21,436.0	10,688.1	109.4	111.3	-152.04	-10,349.8	2,573.0	795.8	632.6	163.18	4.877
20,500.0	9,985.5	21,536.0	10,688.1	110.3	112.2	-152.03	-10,449.8	2,573.6	795.5	630.7	164.75	4.828
20,600.0	9,985.8	21,636.0	10,688.0	111.2	113.1	-152.02	-10,549.8	2,574.2	795.2	628.9	166.33	4.781
20,693.8	9,986.0	21,729.8	10,688.0	112.0	113.9	-152.01	-10,643.6	2,574.8	795.0	627.2	167.81	4.737 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	1.0	0.0	0.0	0.0	0.06	200.0	0.2	200.0				
100.0	100.0	101.0	100.0	0.8	0.8	0.06	200.0	0.2	200.0	198.0	2.00	100.103	
200.0	200.0	201.0	200.0	1.4	1.4	0.06	200.0	0.2	200.0	196.7	3.32	60.311	
300.0	300.0	301.0	300.0	1.9	1.9	0.06	200.0	0.2	200.0	195.8	4.20	47.629	
400.0	400.0	401.0	400.0	2.2	2.3	0.06	200.0	0.2	200.0	195.1	4.92	40.689	
500.0	500.0	501.0	500.0	2.6	2.6	0.06	200.0	0.2	200.0	194.5	5.54	36.127	
600.0	600.0	601.0	600.0	2.8	2.8	0.06	200.0	0.2	200.0	193.9	6.09	32.824	
700.0	700.0	701.0	700.0	3.1	3.1	0.06	200.0	0.2	200.0	193.4	6.60	30.285	
800.0	800.0	801.0	800.0	3.3	3.3	0.06	200.0	0.2	200.0	192.9	7.08	28.252	
900.0	900.0	901.0	900.0	3.6	3.6	0.06	200.0	0.2	200.0	192.5	7.53	26.574	
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	0.06	200.0	0.2	200.0	192.0	7.95	25.158 CC	
1,004.4	1,004.4	1,005.4	1,004.4	3.8	3.8	-90.21	200.0	0.2	200.0	192.0	7.97	25.102	
1,100.0	1,100.0	1,101.0	1,100.0	4.1	4.0	-90.70	200.0	0.2	200.0	191.7	8.35	23.965	
1,200.0	1,199.8	1,200.8	1,199.8	4.4	4.2	-92.20	200.0	0.2	200.1	191.4	8.72	22.954 ES	
1,300.0	1,299.5	1,300.5	1,299.5	4.7	4.4	-94.67	200.0	0.2	200.7	191.6	9.08	22.092	
1,400.0	1,398.7	1,399.7	1,398.7	5.1	4.6	-98.06	200.0	0.2	202.0	192.6	9.44	21.391	
1,500.0	1,497.5	1,498.5	1,497.5	5.4	4.7	-102.29	200.0	0.2	204.8	195.0	9.82	20.868	
1,600.0	1,595.6	1,601.1	1,600.0	5.8	5.0	-107.07	199.4	1.9	208.7	198.5	10.24	20.384	
1,700.0	1,693.1	1,704.3	1,703.1	6.2	5.3	-111.81	197.5	7.1	213.0	202.3	10.70	19.896	
1,800.0	1,789.6	1,806.9	1,805.3	6.6	5.4	-116.44	194.6	15.7	217.7	206.5	11.13	19.560	
1,860.7	1,847.8	1,868.9	1,866.9	6.8	5.6	-119.13	192.7	22.7	221.1	209.7	11.44	19.328	
1,900.0	1,885.3	1,909.2	1,906.8	6.9	5.7	-120.81	191.5	27.9	223.4	211.8	11.64	19.194	
2,000.0	1,980.9	2,012.5	2,008.9	7.3	6.0	-124.42	188.3	43.9	228.7	216.5	12.26	18.653	
2,100.0	2,076.4	2,116.9	2,111.2	7.7	6.4	-127.15	185.0	63.8	232.6	219.7	12.91	18.022	
2,200.0	2,171.9	2,221.6	2,213.2	8.1	6.7	-129.09	181.7	87.5	234.6	221.1	13.54	17.325	
2,300.0	2,267.4	2,321.4	2,310.0	8.5	7.0	-130.60	178.5	111.7	235.8	221.6	14.21	16.602	
2,400.0	2,363.0	2,421.2	2,406.7	8.9	7.4	-132.09	175.4	135.9	237.2	222.3	14.90	15.919	
2,500.0	2,458.5	2,521.0	2,503.5	9.4	7.7	-133.57	172.2	160.0	238.7	223.1	15.63	15.274	
2,600.0	2,554.0	2,620.8	2,600.3	9.8	8.1	-135.03	169.0	184.2	240.4	224.0	16.39	14.670	
2,700.0	2,649.5	2,720.6	2,697.1	10.2	8.4	-136.46	165.9	208.4	242.3	225.1	17.18	14.105	
2,800.0	2,745.0	2,820.4	2,793.8	10.7	8.8	-137.88	162.7	232.6	244.2	226.2	17.99	13.578	
2,900.0	2,840.6	2,920.2	2,890.6	11.1	9.2	-139.27	159.5	256.8	246.4	227.5	18.82	13.089	
3,000.0	2,936.1	3,020.0	2,987.4	11.6	9.6	-140.63	156.4	280.9	248.6	229.0	19.68	12.634	
3,100.0	3,031.6	3,119.8	3,084.2	12.1	10.0	-141.97	153.2	305.1	251.1	230.5	20.56	12.214	
3,200.0	3,127.1	3,219.6	3,180.9	12.5	10.4	-143.29	150.0	329.3	253.6	232.2	21.45	11.824	
3,300.0	3,222.6	3,319.4	3,277.7	13.0	10.9	-144.58	146.8	353.5	256.3	233.9	22.36	11.464	
3,400.0	3,318.2	3,419.2	3,374.5	13.5	11.3	-145.84	143.7	377.7	259.1	235.8	23.28	11.130	
3,500.0	3,413.7	3,519.0	3,471.2	14.0	11.7	-147.07	140.5	401.8	262.0	237.8	24.21	10.822	
3,600.0	3,509.2	3,618.8	3,568.0	14.4	12.2	-148.27	137.3	426.0	265.1	239.9	25.16	10.537	
3,700.0	3,604.7	3,718.6	3,664.8	14.9	12.6	-149.45	134.2	450.2	268.2	242.1	26.11	10.273	
3,800.0	3,700.2	3,818.4	3,761.6	15.4	13.1	-150.60	131.0	474.4	271.5	244.4	27.07	10.028	
3,900.0	3,795.8	3,918.2	3,858.3	15.9	13.5	-151.72	127.8	498.6	274.9	246.9	28.04	9.802	
4,000.0	3,891.3	4,018.0	3,955.1	16.4	14.0	-152.82	124.7	522.7	278.4	249.4	29.02	9.593	
4,100.0	3,986.8	4,117.8	4,051.9	16.9	14.4	-153.88	121.5	546.9	282.0	252.0	30.00	9.399	
4,200.0	4,082.3	4,217.6	4,148.7	17.4	14.9	-154.92	118.3	571.1	285.6	254.7	30.99	9.219	
4,300.0	4,177.8	4,317.4	4,245.4	17.8	15.3	-155.93	115.1	595.3	289.4	257.4	31.97	9.051	
4,400.0	4,273.4	4,417.2	4,342.2	18.3	15.8	-156.92	112.0	619.4	293.3	260.3	32.97	8.896	
4,500.0	4,368.9	4,517.0	4,439.0	18.8	16.3	-157.88	108.8	643.6	297.2	263.3	33.96	8.752	
4,600.0	4,464.4	4,616.8	4,535.8	19.3	16.7	-158.82	105.6	667.8	301.2	266.3	34.96	8.618	
4,700.0	4,559.9	4,716.6	4,632.5	19.8	17.2	-159.73	102.5	692.0	305.3	269.4	35.95	8.493	
4,800.0	4,655.4	4,816.4	4,729.3	20.3	17.7	-160.61	99.3	716.2	309.5	272.6	36.95	8.376	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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			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)			
4,900.0	4,751.0	4,916.2	4,826.1	20.8	18.1	-161.48	96.1	740.3	313.8	275.8	37.95	8.268	
5,000.0	4,846.5	5,016.0	4,922.9	21.3	18.6	-162.32	93.0	764.5	318.1	279.1	38.95	8.167	
5,100.0	4,942.0	5,115.8	5,019.6	21.8	19.1	-163.13	89.8	788.7	322.5	282.5	39.95	8.072	
5,200.0	5,037.5	5,215.6	5,116.4	22.3	19.5	-163.93	86.6	812.9	326.9	286.0	40.95	7.984	
5,300.0	5,133.0	5,315.4	5,213.2	22.8	20.0	-164.70	83.5	837.1	331.4	289.5	41.94	7.902	
5,400.0	5,228.6	5,415.2	5,310.0	23.3	20.5	-165.45	80.3	861.2	336.0	293.1	42.94	7.825	
5,500.0	5,324.1	5,515.0	5,406.7	23.8	21.0	-166.18	77.1	885.4	340.6	296.7	43.94	7.753	
5,600.0	5,419.6	5,614.8	5,503.5	24.3	21.4	-166.90	73.9	909.6	345.3	300.4	44.93	7.685	
5,700.0	5,515.1	5,714.6	5,600.3	24.8	21.9	-167.59	70.8	933.8	350.0	304.1	45.93	7.622	
5,800.0	5,610.6	5,814.4	5,697.1	25.3	22.4	-168.26	67.6	958.0	354.8	307.9	46.92	7.563	
5,900.0	5,706.2	5,914.2	5,793.8	25.8	22.9	-168.92	64.4	982.1	359.7	311.8	47.91	7.507	
6,000.0	5,801.7	6,014.0	5,890.6	26.3	23.3	-169.56	61.3	1,006.3	364.5	315.6	48.90	7.455	
6,100.0	5,897.2	6,113.8	5,987.4	26.8	23.8	-170.18	58.1	1,030.5	369.5	319.6	49.89	7.406	
6,200.0	5,992.7	6,213.6	6,084.2	27.3	24.3	-170.79	54.9	1,054.7	374.4	323.5	50.87	7.360	
6,300.0	6,088.2	6,313.4	6,180.9	27.8	24.8	-171.38	51.8	1,078.9	379.4	327.6	51.86	7.317	
6,400.0	6,183.8	6,413.2	6,277.7	28.3	25.3	-171.95	48.6	1,103.0	384.5	331.6	52.84	7.276	
6,500.0	6,279.3	6,513.0	6,374.5	28.8	25.7	-172.51	45.4	1,127.2	389.5	335.7	53.82	7.237	
6,600.0	6,374.8	6,612.8	6,471.2	29.3	26.2	-173.06	42.2	1,151.4	394.7	339.9	54.80	7.201	
6,700.0	6,470.3	6,712.6	6,568.0	29.8	26.7	-173.59	39.1	1,175.6	399.8	344.0	55.78	7.167	
6,800.0	6,565.9	6,812.4	6,664.8	30.4	27.2	-174.11	35.9	1,199.8	405.0	348.2	56.76	7.135	
6,900.0	6,661.4	6,912.2	6,761.6	30.9	27.7	-174.61	32.7	1,223.9	410.2	352.5	57.73	7.105	
7,000.0	6,756.9	7,012.0	6,858.3	31.4	28.2	-175.10	29.6	1,248.1	415.5	356.8	58.71	7.077	
7,100.0	6,852.4	7,111.8	6,955.1	31.9	28.6	-175.58	26.4	1,272.3	420.7	361.1	59.68	7.050	
7,200.0	6,947.9	7,211.6	7,051.9	32.4	29.1	-176.05	23.2	1,296.5	426.0	365.4	60.65	7.025	
7,300.0	7,043.5	7,311.4	7,148.7	32.9	29.6	-176.51	20.1	1,320.6	431.4	369.8	61.62	7.001	
7,400.0	7,139.0	7,411.2	7,245.4	33.4	30.1	-176.95	16.9	1,344.8	436.7	374.2	62.58	6.978	
7,500.0	7,234.5	7,511.0	7,342.2	33.9	30.6	-177.39	13.7	1,369.0	442.1	378.6	63.55	6.957	
7,600.0	7,330.0	7,610.8	7,439.0	34.4	31.1	-177.81	10.6	1,393.2	447.5	383.0	64.51	6.937	
7,700.0	7,425.5	7,710.6	7,535.8	34.9	31.6	-178.22	7.4	1,417.4	453.0	387.5	65.48	6.918	
7,782.5	7,504.4	7,792.9	7,615.6	35.3	32.0	-178.56	4.8	1,437.3	457.5	391.2	66.26	6.904	
7,800.0	7,521.1	7,810.4	7,632.5	35.4	32.0	-178.63	4.2	1,441.5	458.4	392.0	66.43	6.900	
7,900.0	7,616.9	7,910.2	7,729.4	35.9	32.5	-179.02	1.0	1,465.7	462.7	395.3	67.40	6.865	
8,000.0	7,713.3	8,010.1	7,826.3	36.4	33.0	-179.40	-2.1	1,489.9	465.3	396.9	68.35	6.808	
8,100.0	7,810.1	8,110.1	7,923.2	36.9	33.5	-179.78	-5.3	1,514.2	466.1	396.9	69.29	6.728	
8,200.0	7,907.3	8,210.0	8,020.1	37.4	34.0	-179.84	-8.5	1,538.4	465.3	395.1	70.21	6.626	
8,300.0	8,004.9	8,310.0	8,117.0	37.9	34.5	-179.46	-11.7	1,562.6	462.7	391.5	71.13	6.505	
8,400.0	8,102.9	8,409.8	8,213.8	38.4	35.0	-179.07	-14.8	1,586.8	458.4	386.3	72.03	6.364	
8,500.0	8,201.2	8,509.6	8,310.6	38.8	35.5	-178.67	-18.0	1,610.9	452.3	379.4	72.91	6.204	
8,600.0	8,299.8	8,609.2	8,407.2	39.3	35.9	-178.25	-21.2	1,635.1	444.6	370.8	73.78	6.026	
8,700.0	8,398.7	8,708.7	8,503.7	39.7	36.4	-177.81	-24.3	1,659.2	435.1	360.5	74.62	5.830	
8,800.0	8,497.8	8,807.0	8,599.0	40.1	36.9	-177.34	-27.4	1,683.0	423.9	348.5	75.44	5.619	
8,900.0	8,597.2	8,900.0	8,689.3	40.6	37.4	-176.87	-30.3	1,704.8	411.8	335.7	76.19	5.405	
9,000.0	8,696.7	8,993.2	8,780.3	41.0	37.8	-176.40	-33.0	1,725.2	399.7	322.8	76.90	5.197	
9,100.0	8,796.4	9,086.2	8,871.2	41.3	38.2	-175.93	-35.4	1,744.1	387.3	309.8	77.56	4.994	
9,200.0	8,896.2	9,179.3	8,962.6	41.7	38.7	-175.45	-37.7	1,761.5	374.9	296.7	78.17	4.796	
9,300.0	8,996.1	9,272.5	9,054.5	42.0	39.1	-174.97	-39.8	1,777.5	362.4	283.6	78.73	4.603	
9,400.0	9,096.1	9,366.0	9,146.8	42.3	39.5	-174.48	-41.7	1,792.0	349.7	270.5	79.21	4.414	
9,500.0	9,196.1	9,459.7	9,239.6	42.5	39.9	-173.99	-43.4	1,805.1	336.9	255.5	81.40	4.139	
9,503.9	9,200.0	9,463.4	9,243.2	42.5	39.9	-95.76	-43.5	1,805.6	336.4	253.6	82.77	4.064	
9,600.0	9,296.1	9,553.6	9,332.8	42.5	40.3	-96.22	-45.0	1,816.7	324.8	241.9	82.93	3.916	
9,700.0	9,396.1	9,647.9	9,426.5	42.5	40.7	-96.66	-46.3	1,826.8	314.3	231.2	83.07	3.783	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
9,785.4	9,481.5	9,728.8	9,507.0	42.5	41.0	-97.00	-47.3	1,834.2	306.6	223.4	83.17	3.686	
9,800.0	9,496.1	9,742.5	9,520.7	42.5	41.1	83.47	-47.4	1,835.4	305.4	222.2	83.14	3.673	
9,825.0	9,521.0	9,766.2	9,544.3	42.5	41.2	83.89	-47.7	1,837.3	303.3	220.1	83.20	3.645	
9,850.0	9,545.9	9,789.8	9,567.9	42.5	41.3	84.55	-47.9	1,839.1	301.1	217.8	83.29	3.615	
9,875.0	9,570.5	9,813.3	9,591.2	42.5	41.3	85.46	-48.1	1,840.8	298.9	215.5	83.43	3.583	
9,900.0	9,595.0	9,836.5	9,614.4	42.5	41.4	86.59	-48.3	1,842.4	296.8	213.3	83.58	3.551	
9,925.0	9,619.1	9,859.5	9,637.3	42.5	41.5	87.95	-48.5	1,843.9	294.9	211.1	83.76	3.520	
9,950.0	9,642.8	9,882.1	9,659.9	42.5	41.6	89.50	-48.7	1,845.3	293.1	209.1	83.95	3.491	
9,975.0	9,666.1	9,904.3	9,682.1	42.5	41.7	91.22	-48.9	1,846.5	291.6	207.5	84.12	3.467	
10,000.0	9,688.9	9,926.0	9,703.8	42.5	41.7	93.08	-49.0	1,847.7	290.6	206.4	84.26	3.449	
10,025.0	9,711.1	9,947.2	9,725.0	42.5	41.8	95.03	-49.2	1,848.7	290.1	205.8	84.34	3.440	
10,030.6	9,716.1	9,952.0	9,729.7	42.5	41.8	95.48	-49.2	1,848.9	290.1	205.8	84.34	3.440 SF	
10,050.0	9,732.7	9,967.8	9,745.6	42.5	41.9	97.04	-49.3	1,849.7	290.3	206.0	84.33	3.443	
10,075.0	9,753.6	9,987.8	9,765.5	42.5	41.9	99.06	-49.4	1,850.5	291.4	207.2	84.21	3.460	
10,100.0	9,773.8	10,007.0	9,784.7	42.5	42.0	101.03	-49.5	1,851.2	293.4	209.4	83.96	3.494	
10,125.0	9,793.2	10,025.5	9,803.2	42.6	42.1	102.92	-49.6	1,851.9	296.4	212.9	83.56	3.548	
10,150.0	9,811.7	10,043.2	9,820.8	42.6	42.1	104.68	-49.6	1,852.5	300.7	217.7	82.99	3.623	
10,175.0	9,829.3	10,060.0	9,837.6	42.6	42.2	106.26	-49.7	1,853.0	306.2	224.0	82.26	3.723	
10,200.0	9,845.9	10,075.9	9,853.5	42.6	42.2	107.63	-49.8	1,853.4	313.1	231.7	81.37	3.848	
10,225.0	9,861.5	10,090.8	9,868.4	42.6	42.3	108.76	-49.8	1,853.7	321.4	241.1	80.35	4.000	
10,250.0	9,876.2	10,104.7	9,882.3	42.6	42.3	109.62	-49.9	1,854.0	331.1	251.9	79.20	4.180	
10,275.0	9,889.7	10,117.6	9,895.2	42.6	42.3	110.17	-49.9	1,854.3	342.2	264.2	77.96	4.389	
10,300.0	9,902.1	10,129.4	9,907.1	42.6	42.4	110.40	-49.9	1,854.5	354.6	277.9	76.66	4.625	
10,325.0	9,913.3	10,140.1	9,917.8	42.6	42.4	110.26	-49.9	1,854.6	368.3	293.0	75.33	4.889	
10,350.0	9,923.4	10,149.7	9,927.3	42.7	42.4	109.73	-50.0	1,854.8	383.2	309.2	74.00	5.179	
10,375.0	9,932.3	10,158.1	9,935.8	42.7	42.4	108.79	-50.0	1,854.9	399.3	326.6	72.68	5.493	
10,400.0	9,939.9	10,165.4	9,943.0	42.7	42.4	107.39	-50.0	1,854.9	416.4	344.9	71.40	5.831	
10,425.0	9,946.2	10,171.4	9,949.1	42.7	42.5	105.49	-50.0	1,855.0	434.4	364.2	70.17	6.190	
10,450.0	9,951.3	10,176.3	9,953.9	42.7	42.5	103.06	-50.0	1,855.0	453.2	384.2	69.00	6.568	
10,475.0	9,955.1	10,179.9	9,957.5	42.8	42.5	100.07	-50.0	1,855.1	472.7	404.8	67.90	6.962	
10,500.0	9,957.6	10,182.3	9,959.9	42.8	42.5	96.50	-50.0	1,855.1	492.9	426.0	66.86	7.372	
10,525.0	9,958.9	10,183.5	9,961.1	42.8	42.5	92.35	-50.0	1,855.1	513.5	447.6	65.88	7.794	
10,534.2	9,959.0	10,183.6	9,961.2	42.8	42.5	90.69	-50.0	1,855.1	521.2	455.7	65.54	7.952	
10,600.0	9,959.1	10,183.8	9,961.4	42.9	42.5	90.74	-50.0	1,855.1	577.6	514.2	63.37	9.116	
10,700.0	9,959.4	10,184.1	9,961.8	43.0	42.5	90.80	-50.0	1,855.1	666.6	605.8	60.81	10.962	
10,800.0	9,959.7	10,184.5	9,962.1	43.2	42.5	90.87	-50.0	1,855.1	758.4	699.5	58.92	12.871	
10,900.0	9,959.9	10,184.8	9,962.4	43.3	42.5	90.94	-50.0	1,855.1	852.0	794.5	57.50	14.816	
11,000.0	9,960.2	10,185.1	9,962.8	43.5	42.5	91.00	-50.0	1,855.1	946.9	890.5	56.42	16.784	
11,100.0	9,960.5	11,901.5	10,881.3	43.8	44.1	162.92	-1,053.1	1,860.9	963.3	894.6	68.71	14.019	
11,200.0	9,960.7	12,001.5	10,881.3	44.0	44.3	162.92	-1,153.1	1,861.5	963.1	893.2	69.89	13.780	
11,300.0	9,961.0	12,101.5	10,881.4	44.3	44.6	162.91	-1,253.1	1,862.0	962.9	891.8	71.08	13.547	
11,400.0	9,961.3	12,201.5	10,881.5	44.5	44.8	162.90	-1,353.0	1,862.6	962.7	890.5	72.27	13.321	
11,500.0	9,961.5	12,301.5	10,881.5	44.9	45.1	162.90	-1,453.0	1,863.2	962.5	889.1	73.47	13.102	
11,600.0	9,961.8	12,401.5	10,881.6	45.2	45.4	162.89	-1,553.0	1,863.7	962.4	887.7	74.67	12.888	
11,700.0	9,962.1	12,501.5	10,881.6	45.5	45.8	162.89	-1,653.0	1,864.3	962.2	886.3	75.87	12.681	
11,800.0	9,962.3	12,601.5	10,881.7	45.9	46.1	162.88	-1,753.0	1,864.9	962.0	884.9	77.08	12.480	
11,900.0	9,962.6	12,701.5	10,881.8	46.3	46.5	162.88	-1,853.0	1,865.4	961.8	883.5	78.30	12.284	
12,000.0	9,962.9	12,801.5	10,881.8	46.7	46.9	162.87	-1,953.0	1,866.0	961.6	882.1	79.51	12.094	
12,100.0	9,963.1	12,901.5	10,881.9	47.1	47.3	162.86	-2,053.0	1,866.6	961.4	880.7	80.73	11.909	
12,200.0	9,963.4	13,001.5	10,881.9	47.5	47.7	162.86	-2,153.0	1,867.1	961.2	879.3	81.96	11.729	
12,300.0	9,963.7	13,101.5	10,882.0	48.0	48.2	162.85	-2,253.0	1,867.7	961.0	877.9	83.18	11.553	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
12,400.0	9,963.9	13,201.5	10,882.1	48.4	48.6	162.85	-2,353.0	1,868.3	960.9	876.4	84.42	11.383	
12,500.0	9,964.2	13,301.5	10,882.1	48.9	49.1	162.84	-2,453.0	1,868.8	960.7	875.0	85.65	11.216	
12,600.0	9,964.5	13,401.5	10,882.2	49.4	49.6	162.84	-2,553.0	1,869.4	960.5	873.6	86.89	11.054	
12,700.0	9,964.7	13,501.5	10,882.2	49.9	50.1	162.83	-2,653.0	1,870.0	960.3	872.2	88.13	10.897	
12,800.0	9,965.0	13,601.5	10,882.3	50.5	50.6	162.82	-2,753.0	1,870.5	960.1	870.7	89.37	10.743	
12,900.0	9,965.3	13,701.5	10,882.4	51.0	51.2	162.82	-2,853.0	1,871.1	959.9	869.3	90.62	10.593	
13,000.0	9,965.5	13,801.5	10,882.4	51.6	51.7	162.81	-2,953.0	1,871.7	959.7	867.9	91.87	10.446	
13,100.0	9,965.8	13,901.5	10,882.5	52.1	52.3	162.81	-3,053.0	1,872.2	959.6	866.4	93.13	10.304	
13,200.0	9,966.1	14,001.5	10,882.5	52.7	52.9	162.80	-3,153.0	1,872.8	959.4	865.0	94.39	10.164	
13,300.0	9,966.3	14,101.5	10,882.6	53.3	53.5	162.80	-3,253.0	1,873.4	959.2	863.5	95.65	10.028	
13,400.0	9,966.6	14,201.5	10,882.7	53.9	54.1	162.79	-3,353.0	1,873.9	959.0	862.1	96.91	9.895	
13,500.0	9,966.9	14,301.5	10,882.7	54.5	54.7	162.78	-3,453.0	1,874.5	958.8	860.6	98.18	9.766	
13,600.0	9,967.1	14,401.5	10,882.8	55.1	55.3	162.78	-3,553.0	1,875.1	958.6	859.2	99.46	9.639	
13,700.0	9,967.4	14,501.5	10,882.8	55.7	55.9	162.77	-3,653.0	1,875.6	958.4	857.7	100.73	9.515	
13,800.0	9,967.7	14,601.5	10,882.9	56.4	56.6	162.77	-3,753.0	1,876.2	958.3	856.2	102.01	9.394	
13,900.0	9,967.9	14,701.5	10,882.9	57.0	57.2	162.76	-3,853.0	1,876.8	958.1	854.8	103.29	9.275	
14,000.0	9,968.2	14,801.5	10,883.0	57.7	57.9	162.75	-3,953.0	1,877.3	957.9	853.3	104.58	9.160	
14,100.0	9,968.5	14,901.5	10,883.1	58.3	58.5	162.75	-4,053.0	1,877.9	957.7	851.8	105.87	9.046	
14,200.0	9,968.7	15,001.5	10,883.1	59.0	59.2	162.74	-4,153.0	1,878.5	957.5	850.4	107.16	8.935	
14,300.0	9,969.0	15,101.5	10,883.2	59.7	59.9	162.74	-4,253.0	1,879.0	957.3	848.9	108.46	8.827	
14,400.0	9,969.3	15,201.5	10,883.2	60.4	60.6	162.73	-4,353.0	1,879.6	957.1	847.4	109.75	8.721	
14,500.0	9,969.5	15,301.5	10,883.3	61.0	61.3	162.73	-4,453.0	1,880.2	957.0	845.9	111.06	8.617	
14,600.0	9,969.8	15,401.5	10,883.4	61.7	62.0	162.72	-4,553.0	1,880.7	956.8	844.4	112.36	8.515	
14,700.0	9,970.0	15,501.5	10,883.4	62.5	62.7	162.71	-4,653.0	1,881.3	956.6	842.9	113.67	8.415	
14,800.0	9,970.3	15,601.5	10,883.5	63.2	63.4	162.71	-4,753.0	1,881.9	956.4	841.4	114.98	8.318	
14,900.0	9,970.6	15,701.5	10,883.5	63.9	64.2	162.70	-4,853.0	1,882.4	956.2	839.9	116.30	8.222	
15,000.0	9,970.8	15,801.5	10,883.6	64.6	64.9	162.70	-4,953.0	1,883.0	956.0	838.4	117.62	8.128	
15,100.0	9,971.1	15,901.5	10,883.7	65.4	65.7	162.69	-5,053.0	1,883.6	955.8	836.9	118.94	8.036	
15,200.0	9,971.4	16,001.5	10,883.7	66.1	66.4	162.68	-5,153.0	1,884.1	955.7	835.4	120.27	7.946	
15,300.0	9,971.6	16,101.5	10,883.8	66.8	67.2	162.68	-5,253.0	1,884.7	955.5	833.9	121.59	7.858	
15,400.0	9,971.9	16,201.5	10,883.8	67.6	67.9	162.67	-5,353.0	1,885.3	955.3	832.4	122.93	7.771	
15,500.0	9,972.2	16,301.5	10,883.9	68.3	68.7	162.67	-5,453.0	1,885.8	955.1	830.8	124.26	7.686	
15,600.0	9,972.4	16,401.5	10,884.0	69.1	69.4	162.66	-5,553.0	1,886.4	954.9	829.3	125.60	7.603	
15,700.0	9,972.7	16,501.5	10,884.0	69.9	70.2	162.66	-5,653.0	1,887.0	954.7	827.8	126.94	7.521	
15,800.0	9,973.0	16,601.5	10,884.1	70.6	71.0	162.65	-5,753.0	1,887.5	954.5	826.3	128.28	7.441	
15,900.0	9,973.2	16,701.5	10,884.1	71.4	71.8	162.64	-5,853.0	1,888.1	954.4	824.7	129.63	7.362	
16,000.0	9,973.5	16,801.5	10,884.2	72.2	72.6	162.64	-5,953.0	1,888.7	954.2	823.2	130.98	7.285	
16,100.0	9,973.8	16,901.5	10,884.3	73.0	73.4	162.63	-6,053.0	1,889.2	954.0	821.6	132.34	7.209	
16,200.0	9,974.0	17,001.5	10,884.3	73.8	74.1	162.63	-6,153.0	1,889.8	953.8	820.1	133.69	7.134	
16,300.0	9,974.3	17,101.5	10,884.4	74.6	74.9	162.62	-6,253.0	1,890.4	953.6	818.6	135.05	7.061	
16,400.0	9,974.6	17,201.4	10,884.4	75.4	75.7	162.61	-6,353.0	1,890.9	953.4	817.0	136.41	6.989	
16,500.0	9,974.8	17,301.4	10,884.5	76.1	76.6	162.61	-6,453.0	1,891.5	953.2	815.5	137.78	6.919	
16,600.0	9,975.1	17,401.4	10,884.6	77.0	77.4	162.60	-6,553.0	1,892.1	953.1	813.9	139.15	6.849	
16,700.0	9,975.4	17,501.4	10,884.6	77.8	78.2	162.60	-6,653.0	1,892.6	952.9	812.3	140.52	6.781	
16,800.0	9,975.6	17,601.4	10,884.7	78.6	79.0	162.59	-6,752.9	1,893.2	952.7	810.8	141.90	6.714	
16,900.0	9,975.9	17,701.4	10,884.7	79.4	79.8	162.59	-6,852.9	1,893.8	952.5	809.2	143.27	6.648	
17,000.0	9,976.2	17,801.4	10,884.8	80.2	80.6	162.58	-6,952.9	1,894.3	952.3	807.7	144.65	6.583	
17,100.0	9,976.4	17,901.4	10,884.9	81.0	81.5	162.57	-7,052.9	1,894.9	952.1	806.1	146.04	6.520	
17,200.0	9,976.7	18,001.4	10,884.9	81.8	82.3	162.57	-7,152.9	1,895.5	951.9	804.5	147.42	6.457	
17,300.0	9,977.0	18,101.4	10,885.0	82.7	83.1	162.56	-7,252.9	1,896.0	951.7	802.9	148.81	6.396	
17,400.0	9,977.2	18,201.4	10,885.0	83.5	84.0	162.56	-7,352.9	1,896.6	951.6	801.4	150.20	6.335	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
17,500.0	9,977.5	18,301.4	10,885.1	84.3	84.8	162.55	-7,452.9	1,897.2	951.4	799.8	151.60	6.276	
17,600.0	9,977.8	18,401.4	10,885.2	85.2	85.6	162.54	-7,552.9	1,897.7	951.2	798.2	153.00	6.217	
17,700.0	9,978.0	18,501.4	10,885.2	86.0	86.5	162.54	-7,652.9	1,898.3	951.0	796.6	154.40	6.160	
17,800.0	9,978.3	18,601.4	10,885.3	86.8	87.3	162.53	-7,752.9	1,898.9	950.8	795.0	155.80	6.103	
17,900.0	9,978.6	18,701.4	10,885.3	87.7	88.2	162.53	-7,852.9	1,899.4	950.6	793.4	157.20	6.047	
18,000.0	9,978.8	18,801.4	10,885.4	88.5	89.0	162.52	-7,952.9	1,900.0	950.4	791.8	158.61	5.992	
18,100.0	9,979.1	18,901.4	10,885.5	89.4	89.9	162.51	-8,052.9	1,900.6	950.3	790.2	160.02	5.938	
18,200.0	9,979.4	19,001.4	10,885.5	90.2	90.7	162.51	-8,152.9	1,901.1	950.1	788.6	161.44	5.885	
18,300.0	9,979.6	19,101.4	10,885.6	91.1	91.6	162.50	-8,252.9	1,901.7	949.9	787.0	162.85	5.833	
18,400.0	9,979.9	19,201.4	10,885.6	91.9	92.5	162.50	-8,352.9	1,902.3	949.7	785.4	164.27	5.781	
18,500.0	9,980.2	19,301.4	10,885.7	92.8	93.3	162.49	-8,452.9	1,902.8	949.5	783.8	165.69	5.731	
18,600.0	9,980.4	19,401.4	10,885.8	93.7	94.2	162.49	-8,552.9	1,903.4	949.3	782.2	167.12	5.681	
18,700.0	9,980.7	19,501.4	10,885.8	94.5	95.1	162.48	-8,652.9	1,904.0	949.2	780.6	168.55	5.631	
18,800.0	9,981.0	19,601.4	10,885.9	95.4	95.9	162.47	-8,752.9	1,904.5	949.0	779.0	169.97	5.583	
18,900.0	9,981.2	19,701.4	10,885.9	96.2	96.8	162.47	-8,852.9	1,905.1	948.8	777.4	171.41	5.535	
19,000.0	9,981.5	19,801.4	10,886.0	97.1	97.7	162.46	-8,952.9	1,905.7	948.6	775.8	172.84	5.488	
19,100.0	9,981.8	19,901.4	10,886.1	98.0	98.5	162.46	-9,052.9	1,906.2	948.4	774.1	174.28	5.442	
19,200.0	9,982.0	20,001.4	10,886.1	98.9	99.4	162.45	-9,152.9	1,906.8	948.2	772.5	175.72	5.396	
19,300.0	9,982.3	20,101.4	10,886.2	99.7	100.3	162.44	-9,252.9	1,907.4	948.0	770.9	177.16	5.351	
19,400.0	9,982.6	20,201.4	10,886.2	100.6	101.2	162.44	-9,352.9	1,907.9	947.9	769.2	178.60	5.307	
19,500.0	9,982.8	20,301.4	10,886.3	101.5	102.0	162.43	-9,452.9	1,908.5	947.7	767.6	180.05	5.263	
19,600.0	9,983.1	20,401.4	10,886.3	102.4	102.9	162.43	-9,552.9	1,909.1	947.5	766.0	181.50	5.220	
19,700.0	9,983.4	20,501.4	10,886.4	103.2	103.8	162.42	-9,652.9	1,909.6	947.3	764.3	182.95	5.178	
19,800.0	9,983.6	20,601.4	10,886.5	104.1	104.7	162.41	-9,752.9	1,910.2	947.1	762.7	184.40	5.136	
19,900.0	9,983.9	20,701.4	10,886.5	105.0	105.6	162.41	-9,852.9	1,910.8	946.9	761.1	185.86	5.095	
20,000.0	9,984.2	20,801.4	10,886.6	105.9	106.5	162.40	-9,952.9	1,911.3	946.7	759.4	187.32	5.054	
20,100.0	9,984.4	20,901.4	10,886.6	106.8	107.3	162.40	-10,052.9	1,911.9	946.6	757.8	188.78	5.014	
20,200.0	9,984.7	21,001.4	10,886.7	107.6	108.2	162.39	-10,152.9	1,912.5	946.4	756.1	190.24	4.975	
20,300.0	9,985.0	21,101.4	10,886.8	108.5	109.1	162.38	-10,252.9	1,913.0	946.2	754.5	191.70	4.936	
20,400.0	9,985.2	21,201.4	10,886.8	109.4	110.0	162.38	-10,352.9	1,913.6	946.0	752.8	193.17	4.897	
20,500.0	9,985.5	21,301.4	10,886.9	110.3	110.9	162.37	-10,452.9	1,914.2	945.8	751.2	194.64	4.859	
20,600.0	9,985.8	21,401.4	10,886.9	111.2	111.8	162.37	-10,552.9	1,914.7	945.6	749.5	196.11	4.822	
20,685.5	9,986.0	21,486.9	10,887.0	112.0	112.6	162.36	-10,638.4	1,915.2	945.5	748.1	197.37	4.790	
20,693.8	9,986.0	21,492.6	10,887.0	112.0	112.6	162.36	-10,644.1	1,915.2	945.5	748.0	197.47	4.788	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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			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	2.0	0.0	0.0	0.0	-8.47	199.9	-29.8	202.1				
100.0	100.0	102.0	100.0	0.8	0.8	-8.47	199.9	-29.8	202.1	200.1	1.99	101.464	
200.0	200.0	202.0	200.0	1.4	1.4	-8.47	199.9	-29.8	202.1	198.8	3.31	60.994	
300.0	300.0	302.0	300.0	1.9	1.9	-8.47	199.9	-29.8	202.1	197.9	4.20	48.153	
400.0	400.0	402.0	400.0	2.2	2.2	-8.47	199.9	-29.8	202.1	197.2	4.91	41.132	
500.0	500.0	502.0	500.0	2.6	2.6	-8.47	199.9	-29.8	202.1	196.6	5.53	36.518	
600.0	600.0	602.0	600.0	2.8	2.8	-8.47	199.9	-29.8	202.1	196.0	6.09	33.178	
700.0	700.0	702.0	700.0	3.1	3.1	-8.47	199.9	-29.8	202.1	195.5	6.60	30.611	
800.0	800.0	802.0	800.0	3.3	3.3	-8.47	199.9	-29.8	202.1	195.0	7.08	28.555	
900.0	900.0	902.0	900.0	3.6	3.6	-8.47	199.9	-29.8	202.1	194.6	7.53	26.859	
1,000.0	1,000.0	1,002.1	1,000.1	3.8	3.8	-8.47	199.9	-29.8	202.1	194.2	7.95	25.423	
1,100.0	1,100.0	1,108.1	1,106.1	4.1	4.1	-98.94	198.5	-28.3	200.8	192.4	8.43	23.824	
1,200.0	1,199.8	1,214.0	1,211.8	4.4	4.4	-99.58	194.3	-24.1	197.1	188.3	8.86	22.255	
1,300.0	1,299.5	1,316.1	1,313.5	4.7	4.6	-100.57	188.2	-17.2	191.7	182.5	9.17	20.905	
1,400.0	1,398.7	1,416.4	1,413.1	5.1	4.9	-101.59	182.4	-7.0	186.4	176.8	9.60	19.426	
1,500.0	1,497.5	1,516.9	1,512.5	5.4	5.2	-102.64	177.0	6.7	181.7	171.7	10.01	18.155	
1,600.0	1,595.6	1,617.0	1,611.1	5.8	5.4	-103.90	172.0	23.2	177.4	167.0	10.36	17.124	
1,700.0	1,693.1	1,716.7	1,709.3	6.2	5.7	-106.22	167.0	39.8	174.1	163.3	10.84	16.070	
1,800.0	1,789.6	1,816.2	1,807.2	6.6	6.1	-109.67	161.9	56.4	172.3	160.9	11.39	15.127	
1,843.7	1,831.6	1,859.5	1,849.9	6.8	6.2	-111.53	159.8	63.7	172.1	160.4	11.63	14.790 CC	
1,860.7	1,847.8	1,876.4	1,866.5	6.8	6.3	-112.30	158.9	66.5	172.1	160.4	11.73	14.667 ES	
1,900.0	1,885.3	1,915.2	1,904.8	6.9	6.4	-114.11	157.0	73.0	172.3	160.4	11.97	14.402	
2,000.0	1,980.9	2,014.3	2,002.3	7.3	6.8	-118.70	152.0	89.5	173.8	161.1	12.69	13.693	
2,100.0	2,076.4	2,113.3	2,099.7	7.7	7.1	-123.19	147.0	106.1	176.3	162.8	13.48	13.081	
2,200.0	2,171.9	2,212.3	2,197.2	8.1	7.5	-127.52	142.0	122.6	179.9	165.6	14.32	12.565	
2,300.0	2,267.4	2,311.3	2,294.7	8.5	7.9	-131.67	137.0	139.2	184.5	169.3	15.20	12.138	
2,400.0	2,363.0	2,410.3	2,392.2	8.9	8.3	-135.60	132.0	155.7	190.1	173.9	16.12	11.792	
2,500.0	2,458.5	2,509.3	2,489.7	9.4	8.7	-139.29	127.0	172.3	196.5	179.4	17.05	11.520	
2,600.0	2,554.0	2,608.3	2,587.2	9.8	9.1	-142.74	122.1	188.8	203.6	185.6	18.00	11.311	
2,700.0	2,649.5	2,707.3	2,684.7	10.2	9.5	-145.95	117.1	205.3	211.5	192.5	18.96	11.155	
2,800.0	2,745.0	2,806.3	2,782.2	10.7	9.9	-148.92	112.1	221.9	220.0	200.0	19.91	11.045	
2,900.0	2,840.6	2,905.3	2,879.6	11.1	10.3	-151.67	107.1	238.4	229.0	208.1	20.87	10.972	
3,000.0	2,936.1	3,004.3	2,977.1	11.6	10.7	-154.20	102.1	255.0	238.5	216.7	21.82	10.930	
3,100.0	3,031.6	3,103.3	3,074.6	12.1	11.1	-156.54	97.1	271.5	248.4	225.7	22.77	10.912 SF	
3,200.0	3,127.1	3,202.3	3,172.1	12.5	11.6	-158.70	92.1	288.1	258.8	235.1	23.71	10.915	
3,300.0	3,222.6	3,301.3	3,269.6	13.0	12.0	-160.69	87.1	304.6	269.4	244.8	24.64	10.934	
3,400.0	3,318.2	3,400.3	3,367.1	13.5	12.4	-162.53	82.2	321.2	280.4	254.8	25.57	10.966	
3,500.0	3,413.7	3,499.4	3,464.6	14.0	12.8	-164.23	77.2	337.7	291.6	265.1	26.49	11.008	
3,600.0	3,509.2	3,598.4	3,562.1	14.4	13.3	-165.80	72.2	354.2	303.1	275.7	27.41	11.058	
3,700.0	3,604.7	3,697.4	3,659.5	14.9	13.7	-167.26	67.2	370.8	314.8	286.4	28.32	11.114	
3,800.0	3,700.2	3,796.4	3,757.0	15.4	14.1	-168.61	62.2	387.3	326.6	297.4	29.23	11.175	
3,900.0	3,795.8	3,895.4	3,854.5	15.9	14.6	-169.87	57.2	403.9	338.7	308.5	30.13	11.240	
4,000.0	3,891.3	3,994.4	3,952.0	16.4	15.0	-171.04	52.2	420.4	350.9	319.8	31.03	11.306	
4,100.0	3,986.8	4,093.4	4,049.5	16.9	15.4	-172.14	47.3	437.0	363.2	331.2	31.93	11.375	
4,200.0	4,082.3	4,192.4	4,147.0	17.4	15.9	-173.16	42.3	453.5	375.6	342.8	32.82	11.444	
4,300.0	4,177.8	4,291.4	4,244.5	17.8	16.3	-174.12	37.3	470.0	388.2	354.5	33.71	11.514	
4,400.0	4,273.4	4,390.4	4,342.0	18.3	16.8	-175.01	32.3	486.6	400.8	366.2	34.60	11.584	
4,500.0	4,368.9	4,489.4	4,439.4	18.8	17.2	-175.85	27.3	503.1	413.6	378.1	35.49	11.654	
4,600.0	4,464.4	4,588.4	4,536.9	19.3	17.6	-176.64	22.3	519.7	426.4	390.0	36.37	11.724	
4,700.0	4,559.9	4,687.4	4,634.4	19.8	18.1	-177.39	17.3	536.2	439.3	402.0	37.25	11.792	
4,800.0	4,655.4	4,786.4	4,731.9	20.3	18.5	-178.09	12.4	552.8	452.3	414.1	38.13	11.860	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.0	4,751.0	4,885.4	4,829.4	20.8	19.0	-178.75	7.4	569.3	465.3	426.3	39.01	11.927	
5,000.0	4,846.5	4,984.5	4,926.9	21.3	19.4	-179.38	2.4	585.8	478.4	438.5	39.89	11.993	
5,100.0	4,942.0	5,083.5	5,024.4	21.8	19.8	-179.98	-2.6	602.4	491.5	450.8	40.77	12.057	
5,200.0	5,037.5	5,182.5	5,121.9	22.3	20.3	179.46	-7.6	618.9	504.7	463.1	41.64	12.120	
5,300.0	5,133.0	5,281.5	5,219.3	22.8	20.7	178.93	-12.6	635.5	518.0	475.5	42.52	12.182	
5,400.0	5,228.6	5,380.5	5,316.8	23.3	21.2	178.42	-17.6	652.0	531.3	487.9	43.39	12.243	
5,500.0	5,324.1	5,479.5	5,414.3	23.8	21.6	177.94	-22.6	668.6	544.6	500.3	44.27	12.302	
5,600.0	5,419.6	5,578.5	5,511.8	24.3	22.1	177.48	-27.5	685.1	557.9	512.8	45.14	12.360	
5,700.0	5,515.1	5,677.5	5,609.3	24.8	22.5	177.04	-32.5	701.7	571.3	525.3	46.01	12.417	
5,800.0	5,610.6	5,776.5	5,706.8	25.3	23.0	176.62	-37.5	718.2	584.7	537.9	46.88	12.473	
5,900.0	5,706.2	5,875.5	5,804.3	25.8	23.4	176.22	-42.5	734.7	598.2	550.4	47.75	12.527	
6,000.0	5,801.7	5,974.5	5,901.7	26.3	23.9	175.84	-47.5	751.3	611.7	563.1	48.62	12.580	
6,100.0	5,897.2	6,073.5	5,999.2	26.8	24.3	175.47	-52.5	767.8	625.2	575.7	49.49	12.631	
6,200.0	5,992.7	6,172.5	6,096.7	27.3	24.7	175.12	-57.5	784.4	638.7	588.4	50.36	12.682	
6,300.0	6,088.2	6,271.5	6,194.2	27.8	25.2	174.79	-62.4	800.9	652.3	601.0	51.23	12.731	
6,400.0	6,183.8	6,370.5	6,291.7	28.3	25.6	174.47	-67.4	817.5	665.8	613.7	52.10	12.779	
6,500.0	6,279.3	6,469.6	6,389.2	28.8	26.1	174.16	-72.4	834.0	679.4	626.5	52.97	12.826	
6,600.0	6,374.8	6,568.6	6,486.7	29.3	26.5	173.86	-77.4	850.5	693.0	639.2	53.84	12.872	
6,700.0	6,470.3	6,667.6	6,584.2	29.8	27.0	173.58	-82.4	867.1	706.7	652.0	54.71	12.917	
6,800.0	6,565.9	6,766.6	6,681.6	30.4	27.4	173.30	-87.4	883.6	720.3	664.7	55.58	12.960	
6,900.0	6,661.4	6,865.6	6,779.1	30.9	27.9	173.04	-92.4	900.2	734.0	677.5	56.45	13.003	
7,000.0	6,756.9	6,964.6	6,876.6	31.4	28.3	172.78	-97.4	916.7	747.7	690.3	57.32	13.044	
7,100.0	6,852.4	7,063.6	6,974.1	31.9	28.8	172.54	-102.3	933.3	761.3	703.2	58.18	13.085	
7,200.0	6,947.9	7,162.6	7,071.6	32.4	29.2	172.30	-107.3	949.8	775.0	716.0	59.05	13.125	
7,300.0	7,043.5	7,261.6	7,169.1	32.9	29.7	172.07	-112.3	966.4	788.8	728.8	59.92	13.164	
7,400.0	7,139.0	7,360.6	7,266.6	33.4	30.1	171.85	-117.3	982.9	802.5	741.7	60.79	13.202	
7,500.0	7,234.5	7,459.6	7,364.1	33.9	30.6	171.64	-122.3	999.4	816.2	754.6	61.65	13.239	
7,600.0	7,330.0	7,558.6	7,461.5	34.4	31.0	171.43	-127.3	1,016.0	830.0	767.5	62.52	13.275	
7,700.0	7,425.5	7,657.6	7,559.0	34.9	31.5	171.23	-132.3	1,032.5	843.7	780.4	63.39	13.310	
7,782.5	7,504.4	7,739.3	7,639.5	35.3	31.8	171.07	-136.4	1,046.2	855.1	791.0	64.10	13.340	
7,800.0	7,521.1	7,756.6	7,656.5	35.4	31.9	171.04	-137.2	1,049.1	857.5	793.2	64.25	13.346	
7,900.0	7,616.9	7,855.8	7,754.2	35.9	32.4	170.86	-142.2	1,065.6	870.1	805.0	65.12	13.361	
8,000.0	7,713.3	7,955.1	7,852.0	36.4	32.8	170.67	-147.2	1,082.2	881.0	815.1	65.98	13.353	
8,100.0	7,810.1	8,054.7	7,950.0	36.9	33.3	170.45	-152.3	1,098.9	890.3	823.4	66.83	13.322	
8,200.0	7,907.3	8,148.0	8,041.9	37.4	33.7	170.25	-156.9	1,114.3	898.0	830.4	67.60	13.283	
8,300.0	8,004.9	8,235.4	8,128.2	37.9	34.1	170.07	-160.9	1,127.6	905.2	836.9	68.31	13.251	
8,400.0	8,102.9	8,322.7	8,214.6	38.4	34.5	169.92	-164.6	1,139.7	912.0	843.0	68.99	13.219	
8,500.0	8,201.2	8,410.0	8,301.1	38.8	34.8	169.79	-167.8	1,150.5	918.5	848.9	69.65	13.188	
8,600.0	8,299.8	8,500.0	8,390.6	39.3	35.2	169.68	-170.8	1,160.3	924.7	854.4	70.31	13.152	
8,700.0	8,398.7	8,584.4	8,474.6	39.7	35.5	169.60	-173.2	1,168.3	930.5	859.7	70.87	13.130	
8,800.0	8,497.8	8,671.6	8,561.4	40.1	35.9	169.53	-175.3	1,175.3	936.0	864.5	71.44	13.102	
8,900.0	8,597.2	8,758.7	8,648.4	40.6	36.2	169.49	-177.0	1,181.0	941.1	869.1	71.97	13.077	
9,000.0	8,696.7	8,845.8	8,735.3	41.0	36.5	169.46	-178.4	1,185.5	945.8	873.4	72.46	13.053	
9,100.0	8,796.4	8,932.9	8,822.3	41.3	36.8	169.45	-179.3	1,188.6	950.2	877.3	72.90	13.033	
9,200.0	8,896.2	9,019.9	8,909.4	41.7	37.0	169.47	-179.9	1,190.6	954.2	880.8	73.41	12.998	
9,300.0	8,996.1	9,108.6	8,998.0	42.0	37.1	169.50	-180.1	1,191.2	957.9	882.3	75.55	12.678	
9,400.0	9,096.1	9,206.7	9,096.1	42.3	37.2	169.53	-180.1	1,191.2	960.5	884.7	75.86	12.662	
9,500.0	9,196.1	9,306.6	9,196.1	42.5	37.2	169.54	-180.1	1,191.2	961.4	885.4	76.03	12.645	
9,503.9	9,200.0	9,310.6	9,200.0	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.5	75.99	12.653	
9,600.0	9,296.1	9,406.6	9,296.1	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.02	12.647	
9,700.0	9,396.1	9,506.6	9,396.1	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.06	12.640	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,785.4	9,481.5	9,592.1	9,481.5	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.09	12.636	
9,800.0	9,496.1	9,606.6	9,496.1	42.5	37.2	80.17	-180.1	1,191.2	961.4	885.2	76.19	12.618	
9,825.0	9,521.0	9,631.6	9,521.0	42.5	37.2	80.29	-180.1	1,191.2	961.2	885.0	76.21	12.612	
9,850.0	9,545.9	9,656.5	9,545.9	42.5	37.2	80.50	-180.1	1,191.2	960.7	884.5	76.24	12.601	
9,875.0	9,570.5	9,681.1	9,570.5	42.5	37.2	80.81	-180.1	1,191.2	960.0	883.8	76.29	12.584	
9,900.0	9,595.0	9,705.6	9,595.0	42.5	37.2	81.22	-180.1	1,191.2	959.2	882.8	76.36	12.561	
9,925.0	9,619.1	9,729.7	9,619.1	42.5	37.2	81.71	-180.1	1,191.2	958.2	881.7	76.46	12.533	
9,950.0	9,642.8	9,753.4	9,642.8	42.5	37.3	82.29	-180.1	1,191.2	957.0	880.5	76.57	12.499	
9,975.0	9,666.1	9,776.7	9,666.1	42.5	37.3	82.94	-180.1	1,191.2	955.8	879.1	76.70	12.462	
10,000.0	9,688.9	9,799.5	9,688.9	42.5	37.3	83.65	-180.1	1,191.2	954.5	877.6	76.84	12.422	
10,025.0	9,711.1	9,821.7	9,711.1	42.5	37.3	84.42	-180.1	1,191.2	953.1	876.1	77.00	12.379	
10,050.0	9,732.7	9,843.3	9,732.7	42.5	37.3	85.23	-180.1	1,191.2	951.8	874.7	77.17	12.334	
10,075.0	9,753.6	9,864.2	9,753.6	42.5	37.3	86.07	-180.1	1,191.2	950.6	873.2	77.36	12.289	
10,100.0	9,773.8	9,884.4	9,773.8	42.5	37.3	86.92	-180.1	1,191.2	949.5	871.9	77.55	12.244	
10,125.0	9,793.2	9,903.7	9,793.2	42.6	37.3	87.77	-180.1	1,191.2	948.5	870.8	77.74	12.201	
10,150.0	9,811.7	9,922.2	9,811.7	42.6	37.3	88.61	-180.1	1,191.2	947.8	869.9	77.94	12.161	
10,175.0	9,829.3	9,939.8	9,829.3	42.6	37.3	89.42	-180.1	1,191.2	947.4	869.3	78.14	12.125	
10,194.0	9,842.0	9,952.6	9,842.0	42.6	37.3	90.00	-180.1	1,191.2	947.3	869.0	78.28	12.101	
10,200.0	9,845.9	9,956.5	9,845.9	42.6	37.3	90.18	-180.1	1,191.2	947.3	869.0	78.33	12.094	
10,225.0	9,861.5	9,972.1	9,861.5	42.6	37.3	90.88	-180.1	1,191.2	947.6	869.1	78.51	12.070	
10,250.0	9,876.2	9,986.7	9,876.2	42.6	37.3	91.51	-180.1	1,191.2	948.3	869.6	78.68	12.053	
10,275.0	9,889.7	10,000.3	9,889.7	42.6	37.3	92.05	-180.1	1,191.2	949.5	870.7	78.83	12.045	
10,300.0	9,902.1	10,012.7	9,902.1	42.6	37.3	92.49	-180.1	1,191.2	951.3	872.3	78.97	12.047	
10,325.0	9,913.3	10,023.9	9,913.3	42.6	37.3	92.82	-180.1	1,191.2	953.6	874.5	79.08	12.059	
10,350.0	9,923.4	10,034.0	9,923.4	42.7	37.3	93.03	-180.1	1,191.2	956.5	877.3	79.16	12.083	
10,375.0	9,932.3	10,042.9	9,932.3	42.7	37.3	93.10	-180.1	1,191.2	960.0	880.8	79.22	12.118	
10,400.0	9,939.9	10,050.5	9,939.9	42.7	37.3	93.04	-180.1	1,191.2	964.1	884.9	79.25	12.166	
10,425.0	9,946.2	10,056.8	9,946.2	42.7	37.3	92.82	-180.1	1,191.2	968.9	889.7	79.24	12.228	
10,450.0	9,951.3	10,061.9	9,951.3	42.7	37.3	92.45	-180.1	1,191.2	974.4	895.2	79.20	12.302	
10,475.0	9,955.1	10,065.7	9,955.1	42.8	37.3	91.93	-180.1	1,191.2	980.4	901.3	79.13	12.390	
10,500.0	9,957.6	10,068.2	9,957.6	42.8	37.3	91.25	-180.1	1,191.2	987.2	908.1	79.03	12.491	
10,525.0	9,958.9	10,069.4	9,958.9	42.8	37.3	90.40	-180.1	1,191.2	994.5	915.6	78.89	12.605	
10,534.2	9,959.0	10,069.6	9,959.0	42.8	37.3	90.05	-180.1	1,191.2	997.3	918.5	78.83	12.651	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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	2.0	0.0	0.0	0.0	-16.66	199.8	-59.8	208.6				
100.0	100.0	102.0	100.0	0.8	0.8	-16.66	199.8	-59.8	208.6	206.6	1.99	104.704	
200.0	200.0	202.0	200.0	1.4	1.4	-16.66	199.8	-59.8	208.6	205.3	3.31	62.942	
300.0	300.0	302.0	300.0	1.9	1.9	-16.66	199.8	-59.8	208.6	204.4	4.20	49.690	
400.0	400.0	402.0	400.0	2.2	2.2	-16.66	199.8	-59.8	208.6	203.7	4.91	42.445	
500.0	500.0	502.0	500.0	2.6	2.6	-16.66	199.8	-59.8	208.6	203.0	5.53	37.684	
600.0	600.0	602.0	600.0	2.8	2.8	-16.66	199.8	-59.8	208.6	202.5	6.09	34.237	
700.0	700.0	702.0	700.0	3.1	3.1	-16.66	199.8	-59.8	208.6	202.0	6.60	31.588	
800.0	800.0	802.0	800.0	3.3	3.3	-16.66	199.8	-59.8	208.6	201.5	7.08	29.467	
900.0	900.0	902.0	900.0	3.6	3.6	-16.66	199.8	-59.8	208.6	201.0	7.53	27.717	
1,000.0	1,000.0	1,002.0	1,000.0	3.8	3.8	-16.66	199.8	-59.8	208.6	200.6	7.95	26.239 CC, ES	
1,100.0	1,100.0	1,102.0	1,100.0	4.1	4.0	-107.37	199.8	-59.8	209.1	200.7	8.36	25.021	
1,200.0	1,199.8	1,201.8	1,199.8	4.4	4.2	-108.70	199.8	-59.8	210.7	202.0	8.75	24.094	
1,300.0	1,299.5	1,301.5	1,299.5	4.7	4.4	-110.85	199.8	-59.8	213.7	204.5	9.13	23.396	
1,400.0	1,398.7	1,400.7	1,398.7	5.1	4.6	-113.73	199.8	-59.8	218.3	208.8	9.53	22.912	
1,500.0	1,497.5	1,499.5	1,497.5	5.4	4.7	-117.22	199.8	-59.8	225.1	215.2	9.95	22.634	
1,600.0	1,595.6	1,597.6	1,595.6	5.8	4.9	-121.15	199.8	-59.8	234.6	224.2	10.40	22.560 SF	
1,700.0	1,693.1	1,695.1	1,693.1	6.2	5.1	-125.34	199.8	-59.8	247.1	236.2	10.89	22.687	
1,800.0	1,789.6	1,791.6	1,789.6	6.6	5.2	-129.59	199.8	-59.8	263.2	251.8	11.44	23.012	
1,860.7	1,847.8	1,849.8	1,847.8	6.8	5.3	-132.14	199.8	-59.8	274.9	263.1	11.74	23.406	
1,900.0	1,885.3	1,887.3	1,885.3	6.9	5.4	-133.85	199.8	-59.8	283.0	271.1	11.94	23.710	
2,000.0	1,980.9	1,982.9	1,980.9	7.3	5.5	-137.79	199.8	-59.8	304.7	292.2	12.51	24.350	
2,100.0	2,076.4	2,078.4	2,076.4	7.7	5.7	-141.20	199.8	-59.8	327.6	314.5	13.10	25.001	
2,200.0	2,171.9	2,173.9	2,171.9	8.1	5.8	-144.18	199.8	-59.8	351.6	337.9	13.71	25.644	
2,300.0	2,267.4	2,269.4	2,267.4	8.5	6.0	-146.79	199.8	-59.8	376.3	362.0	14.32	26.270	
2,400.0	2,363.0	2,365.0	2,363.0	8.9	6.1	-149.07	199.8	-59.8	401.7	386.8	14.95	26.872	
2,500.0	2,458.5	2,460.5	2,458.5	9.4	6.2	-151.09	199.8	-59.8	427.6	412.1	15.58	27.446	
2,600.0	2,554.0	2,556.0	2,554.0	9.8	6.4	-152.88	199.8	-59.8	454.0	437.8	16.22	27.991	
2,700.0	2,649.5	2,651.5	2,649.5	10.2	6.5	-154.47	199.8	-59.8	480.8	463.9	16.87	28.506	
2,800.0	2,745.0	2,747.0	2,745.0	10.7	6.6	-155.90	199.8	-59.8	507.9	490.3	17.52	28.992	
2,900.0	2,840.6	2,842.6	2,840.6	11.1	6.8	-157.19	199.8	-59.8	535.2	517.0	18.17	29.450	
3,000.0	2,936.1	2,938.1	2,936.1	11.6	6.9	-158.35	199.8	-59.8	562.8	543.9	18.83	29.880	
3,100.0	3,031.6	3,033.6	3,031.6	12.1	7.0	-159.40	199.8	-59.8	590.5	571.0	19.50	30.285	
3,200.0	3,127.1	3,129.1	3,127.1	12.5	7.1	-160.36	199.8	-59.8	618.5	598.3	20.17	30.666	
3,300.0	3,222.6	3,224.6	3,222.6	13.0	7.3	-161.24	199.8	-59.8	646.6	625.7	20.84	31.025	
3,400.0	3,318.2	3,320.2	3,318.2	13.5	7.4	-162.04	199.8	-59.8	674.8	653.3	21.51	31.363	
3,500.0	3,413.7	3,415.7	3,413.7	14.0	7.5	-162.78	199.8	-59.8	703.1	680.9	22.19	31.681	
3,600.0	3,509.2	3,514.2	3,512.2	14.4	7.6	-163.49	199.8	-59.8	731.5	708.8	22.71	32.214	
3,700.0	3,604.7	3,636.5	3,634.4	14.9	7.8	-164.43	197.3	-57.7	757.9	734.4	23.53	32.208	
3,800.0	3,700.2	3,761.0	3,758.7	15.4	8.0	-165.54	190.7	-52.1	781.1	756.8	24.31	32.137	
3,900.0	3,795.8	3,895.1	3,891.9	15.9	8.2	-166.78	180.5	-41.2	800.4	775.4	25.04	31.962	
4,000.0	3,891.3	4,031.3	4,026.4	16.4	8.4	-168.03	167.8	-24.2	815.4	789.5	25.84	31.559	
4,100.0	3,986.8	4,140.6	4,133.8	16.9	8.6	-169.03	156.4	-7.0	827.1	800.5	26.57	31.131	
4,200.0	4,082.3	4,239.1	4,230.4	17.4	8.8	-169.90	146.0	8.7	838.8	811.5	27.31	30.711	
4,300.0	4,177.8	4,337.6	4,327.1	17.8	9.0	-170.76	135.6	24.5	850.7	822.6	28.07	30.309	
4,400.0	4,273.4	4,436.1	4,423.8	18.3	9.3	-171.58	125.1	40.2	862.7	833.9	28.83	29.927	
4,500.0	4,368.9	4,534.6	4,520.4	18.8	9.5	-172.39	114.7	55.9	875.0	845.4	29.60	29.563	
4,600.0	4,464.4	4,633.1	4,617.1	19.3	9.8	-173.17	104.3	71.6	887.4	857.0	30.37	29.216	
4,700.0	4,559.9	4,731.6	4,713.8	19.8	10.1	-173.94	93.9	87.3	900.0	868.9	31.16	28.888	
4,800.0	4,655.4	4,830.1	4,810.4	20.3	10.3	-174.68	83.5	103.0	912.7	880.8	31.94	28.576	
4,900.0	4,751.0	4,928.5	4,907.1	20.8	10.7	-175.40	73.1	118.7	925.6	892.9	32.73	28.280	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 904H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 10451-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
5,000.0	4,846.5	5,027.0	5,003.8	21.3	11.0	-176.10	62.7	134.5	938.7	905.1	33.52	28.000		
5,100.0	4,942.0	5,125.5	5,100.5	21.8	11.3	-176.78	52.3	150.2	951.8	917.5	34.32	27.735		
5,200.0	5,037.5	5,224.0	5,197.1	22.3	11.6	-177.45	41.9	165.9	965.1	930.0	35.12	27.483		
5,300.0	5,133.0	5,322.5	5,293.8	22.8	12.0	-178.09	31.4	181.6	978.6	942.6	35.92	27.245		
5,400.0	5,228.6	5,421.0	5,390.5	23.3	12.3	-178.72	21.0	197.3	992.1	955.4	36.72	27.020		

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 702H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,100.0	3,986.8	3,936.2	3,881.1	16.9	15.3	-19.36	317.4	1,729.8	997.8	969.8	27.95	35.702	
4,200.0	4,082.3	4,033.9	3,976.0	17.4	15.8	-18.67	300.8	1,746.2	980.2	951.4	28.81	34.023	
4,300.0	4,177.8	4,131.7	4,070.9	17.8	16.3	-17.96	284.2	1,762.6	962.7	933.0	29.68	32.433	
4,400.0	4,273.4	4,229.4	4,165.8	18.3	16.7	-17.23	267.5	1,778.9	945.4	914.8	30.57	30.927	
4,500.0	4,368.9	4,327.2	4,260.7	18.8	17.2	-16.47	250.9	1,795.3	928.2	896.8	31.47	29.499	
4,600.0	4,464.4	4,424.9	4,355.6	19.3	17.7	-15.68	234.3	1,811.7	911.2	878.9	32.38	28.145	
4,700.0	4,559.9	4,522.6	4,450.6	19.8	18.1	-14.86	217.7	1,828.1	894.4	861.1	33.30	26.860	
4,800.0	4,655.4	4,620.4	4,545.5	20.3	18.6	-14.02	201.1	1,844.4	877.8	843.6	34.23	25.641	
4,900.0	4,751.0	4,718.1	4,640.4	20.8	19.0	-13.14	184.4	1,860.8	861.4	826.2	35.18	24.487	
5,000.0	4,846.5	4,824.1	4,743.5	21.3	19.5	-12.20	167.0	1,877.9	844.7	808.6	36.12	23.388	
5,100.0	4,942.0	4,930.5	4,847.4	21.8	20.0	-11.32	150.9	1,893.8	827.2	790.2	37.05	22.328	
5,200.0	5,037.5	5,036.8	4,951.8	22.3	20.5	-10.53	136.2	1,908.3	808.8	770.9	37.96	21.307	
5,300.0	5,133.0	5,143.1	5,056.4	22.8	21.0	-9.81	122.9	1,921.5	789.6	750.7	38.85	20.323	
5,400.0	5,228.6	5,249.2	5,161.1	23.3	21.5	-9.17	110.9	1,933.2	769.3	729.6	39.72	19.369	
5,500.0	5,324.1	5,355.0	5,265.9	23.8	21.9	-8.63	100.4	1,943.6	748.1	707.5	40.56	18.444	
5,600.0	5,419.6	5,460.4	5,370.6	24.3	22.4	-8.17	91.3	1,952.5	725.8	684.4	41.37	17.544	
5,700.0	5,515.1	5,565.5	5,475.1	24.8	22.8	-7.82	83.6	1,960.1	702.5	660.3	42.15	16.667	
5,800.0	5,610.6	5,670.1	5,579.3	25.3	23.2	-7.57	77.3	1,966.4	678.1	635.2	42.89	15.809	
5,900.0	5,706.2	5,774.2	5,683.2	25.8	23.6	-7.44	72.3	1,971.2	652.7	609.1	43.60	14.969	
6,000.0	5,801.7	5,877.7	5,786.6	26.3	23.9	-7.44	68.8	1,974.8	626.1	581.9	44.26	14.146	
6,100.0	5,897.2	5,980.5	5,889.3	26.8	24.2	-7.58	66.5	1,977.0	598.6	553.7	44.88	13.338	
6,200.0	5,992.7	6,082.6	5,991.4	27.3	24.4	-7.89	65.6	1,977.9	570.0	524.5	45.46	12.538	
6,300.0	6,088.2	6,179.5	6,088.2	27.8	24.4	-8.32	65.6	1,977.9	540.7	494.2	46.41	11.650	
6,400.0	6,183.8	6,275.0	6,183.8	28.3	24.5	-8.80	65.6	1,977.9	511.4	464.4	46.93	10.896	
6,500.0	6,279.3	6,370.5	6,279.3	28.8	24.5	-9.34	65.6	1,977.9	482.1	434.7	47.45	10.161	
6,600.0	6,374.8	6,466.0	6,374.8	29.3	24.5	-9.95	65.6	1,977.9	452.9	404.9	47.96	9.444	
6,700.0	6,470.3	6,561.5	6,470.3	29.8	24.5	-10.64	65.6	1,977.9	423.7	375.3	48.45	8.746	
6,800.0	6,565.9	6,657.1	6,565.9	30.4	24.6	-11.43	65.6	1,977.9	394.6	345.7	48.92	8.066	
6,900.0	6,661.4	6,752.6	6,661.4	30.9	24.6	-12.35	65.6	1,977.9	365.6	316.2	49.38	7.405	
7,000.0	6,756.9	6,848.1	6,756.9	31.4	24.6	-13.42	65.6	1,977.9	336.7	286.9	49.79	6.762	
7,100.0	6,852.4	6,943.6	6,852.4	31.9	24.6	-14.70	65.6	1,977.9	307.9	257.8	50.17	6.138	
7,200.0	6,947.9	7,039.1	6,947.9	32.4	24.7	-16.23	65.6	1,977.9	279.3	228.8	50.49	5.533	
7,300.0	7,043.5	7,134.7	7,043.5	32.9	24.7	-18.11	65.6	1,977.9	250.9	200.2	50.72	4.948	
7,400.0	7,139.0	7,230.2	7,139.0	33.4	24.7	-20.47	65.6	1,977.9	222.9	172.0	50.82	4.385	
7,500.0	7,234.5	7,325.7	7,234.5	33.9	24.7	-23.48	65.6	1,977.9	195.2	144.5	50.75	3.847	
7,600.0	7,330.0	7,421.2	7,330.0	34.4	24.8	-27.46	65.6	1,977.9	168.3	117.9	50.39	3.339	
7,700.0	7,425.5	7,516.8	7,425.5	34.9	24.8	-32.89	65.6	1,977.9	142.4	92.8	49.60	2.871 Normal Operations	
7,782.5	7,504.4	7,595.6	7,504.4	35.3	24.8	-39.01	65.6	1,977.9	122.3	73.8	48.44	2.524 Normal Operations	
7,800.0	7,521.1	7,612.3	7,521.1	35.4	24.8	-40.53	65.6	1,977.9	118.2	70.1	48.13	2.457 Caution - Monitor Closely	
7,900.0	7,616.9	7,708.1	7,616.9	35.9	24.8	-50.98	65.6	1,977.9	97.9	51.9	45.95	2.130 Caution - Monitor Closely	
8,000.0	7,713.3	7,804.5	7,713.3	36.4	24.9	-64.90	65.6	1,977.9	83.2	39.5	43.71	1.903 Caution - Monitor Closely	
8,100.0	7,810.1	7,901.3	7,810.1	36.9	24.9	-81.74	65.6	1,977.9	75.7	32.2	43.48	1.740 Caution - Monitor Closely	
8,146.9	7,855.6	7,946.8	7,855.6	37.2	24.9	-90.00	65.6	1,977.9	74.8	30.3	44.57	1.679 Caution - Monitor Closely, CC	
8,200.0	7,907.3	7,998.5	7,907.3	37.4	24.9	-99.04	65.6	1,977.9	75.8	29.3	46.56	1.629 Caution - Monitor Closely, ES	
8,300.0	8,004.9	8,096.1	8,004.9	37.9	24.9	-113.91	65.6	1,977.9	82.2	31.2	50.96	1.612 Caution - Monitor Closely, SF	
8,400.0	8,102.9	8,194.1	8,102.9	38.4	25.0	-125.27	65.6	1,977.9	92.2	37.6	54.66	1.687 Caution - Monitor Closely	
8,500.0	8,201.2	8,292.4	8,201.2	38.8	25.0	-133.54	65.6	1,977.9	104.0	46.7	57.32	1.814 Caution - Monitor Closely	
8,600.0	8,299.8	8,391.0	8,299.8	39.3	25.0	-139.52	65.6	1,977.9	116.1	56.9	59.19	1.962 Caution - Monitor Closely	
8,700.0	8,398.7	8,489.9	8,398.7	39.7	25.1	-143.90	65.6	1,977.9	127.8	67.3	60.57	2.111 Caution - Monitor Closely	
8,800.0	8,497.8	8,589.0	8,497.8	40.1	25.1	-147.15	65.6	1,977.9	138.7	77.0	61.64	2.250 Caution - Monitor Closely	
8,900.0	8,597.2	8,688.4	8,597.2	40.6	25.1	-149.58	65.6	1,977.9	148.4	85.9	62.51	2.374 Caution - Monitor Closely	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 702H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		No-Go		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Separation Factor	
9,000.0	8,696.7	8,787.9	8,696.7	41.0	25.1	-151.40	65.6	1,977.9	156.8	93.6	63.24	2.480	Caution - Monitor Closely
9,100.0	8,796.4	8,887.6	8,796.4	41.3	25.2	-152.76	65.6	1,977.9	163.8	99.9	63.87	2.565	Normal Operations
9,200.0	8,896.2	8,987.4	8,896.2	41.7	25.2	-153.74	65.6	1,977.9	169.3	104.9	64.41	2.629	Normal Operations
9,300.0	8,996.1	9,087.3	8,996.1	42.0	25.2	-154.41	65.6	1,977.9	173.3	108.4	64.88	2.671	Normal Operations
9,400.0	9,096.1	9,187.3	9,096.1	42.3	25.3	-154.79	65.6	1,977.9	175.7	110.5	65.27	2.692	Normal Operations
9,500.0	9,196.1	9,287.3	9,196.1	42.5	25.3	-154.93	65.6	1,977.9	176.6	111.1	65.47	2.697	Normal Operations
9,503.9	9,200.0	9,291.2	9,200.0	42.5	25.3	-64.66	65.6	1,977.9	176.6	111.3	65.28	2.705	Normal Operations
9,600.0	9,296.1	9,378.0	9,286.6	42.5	25.2	-63.53	69.5	1,977.9	178.6	114.2	64.31	2.776	Normal Operations
9,700.0	9,396.1	9,462.9	9,369.9	42.5	25.0	-59.12	85.5	1,977.8	187.9	126.0	61.94	3.034	
9,785.4	9,481.5	9,530.5	9,434.0	42.5	24.8	-53.79	107.0	1,977.6	203.7	145.0	58.77	3.467	
9,800.0	9,496.1	9,541.4	9,444.0	42.5	24.8	127.19	111.2	1,977.6	207.4	149.1	58.29	3.558	
9,825.0	9,521.0	9,559.3	9,460.4	42.5	24.8	128.28	118.5	1,977.6	214.9	157.8	57.10	3.763	
9,850.0	9,545.9	9,576.1	9,475.6	42.5	24.7	129.30	125.7	1,977.5	224.0	168.2	55.83	4.012	
9,875.0	9,570.5	9,591.7	9,489.4	42.5	24.7	130.18	132.9	1,977.5	234.7	180.2	54.53	4.304	
9,900.0	9,595.0	9,600.0	9,496.7	42.5	24.7	129.99	136.8	1,977.4	247.1	194.3	52.81	4.679	
9,925.0	9,619.1	9,619.1	9,513.3	42.5	24.6	131.24	146.3	1,977.4	260.9	208.9	51.96	5.020	
9,950.0	9,642.8	9,630.8	9,523.3	42.5	24.6	131.30	152.4	1,977.4	276.2	225.4	50.77	5.440	
9,975.0	9,666.1	9,641.3	9,532.1	42.5	24.5	130.99	158.1	1,977.3	292.9	243.2	49.68	5.896	
10,000.0	9,688.9	9,650.0	9,539.4	42.5	24.5	130.16	162.9	1,977.3	310.9	262.2	48.67	6.387	
10,025.0	9,711.1	9,658.6	9,546.5	42.5	24.5	129.03	167.7	1,977.3	329.9	282.1	47.83	6.898	
10,050.0	9,732.7	9,665.4	9,552.1	42.5	24.5	127.23	171.6	1,977.2	350.0	302.9	47.07	7.436	
10,075.0	9,753.6	9,671.1	9,556.7	42.5	24.5	124.77	175.0	1,977.2	370.9	324.5	46.42	7.991	
10,100.0	9,773.8	9,675.8	9,560.5	42.5	24.4	121.53	177.7	1,977.2	392.6	346.7	45.86	8.560	
10,125.0	9,793.2	9,679.5	9,563.5	42.6	24.4	117.37	179.9	1,977.2	414.9	369.5	45.40	9.139	
10,150.0	9,811.7	9,682.3	9,565.7	42.6	24.4	112.14	181.6	1,977.2	437.7	392.6	45.01	9.723	
10,175.0	9,829.3	9,684.2	9,567.2	42.6	24.4	105.73	182.7	1,977.2	460.8	416.1	44.69	10.311	
10,200.0	9,845.9	9,685.3	9,568.0	42.6	24.4	98.12	183.4	1,977.2	484.3	439.9	44.44	10.898	
10,225.0	9,861.5	9,685.6	9,568.3	42.6	24.4	89.43	183.6	1,977.2	508.0	463.7	44.23	11.483	
10,250.0	9,876.2	9,685.2	9,568.0	42.6	24.4	80.07	183.4	1,977.2	531.7	487.7	44.08	12.064	
10,275.0	9,889.7	9,684.1	9,567.2	42.6	24.4	70.61	182.7	1,977.2	555.6	511.6	43.96	12.638	
10,300.0	9,902.1	9,682.5	9,565.8	42.6	24.4	61.63	181.7	1,977.2	579.4	535.5	43.88	13.204	
10,325.0	9,913.3	9,680.3	9,564.0	42.6	24.4	53.57	180.4	1,977.2	603.0	559.2	43.82	13.761	
10,350.0	9,923.4	9,677.5	9,561.8	42.7	24.4	46.61	178.7	1,977.2	626.6	582.8	43.79	14.308	
10,375.0	9,932.3	9,674.2	9,559.2	42.7	24.4	40.75	176.8	1,977.2	649.9	606.1	43.79	14.842	
10,400.0	9,939.9	9,670.5	9,556.2	42.7	24.5	35.86	174.6	1,977.2	672.9	629.1	43.80	15.364	
10,425.0	9,946.2	9,666.4	9,552.9	42.7	24.5	31.81	172.2	1,977.2	695.6	651.8	43.83	15.871	
10,450.0	9,951.3	9,650.0	9,539.4	42.7	24.5	27.59	162.9	1,977.3	718.1	674.4	43.70	16.435	
10,475.0	9,955.1	9,650.0	9,539.4	42.8	24.5	25.23	162.9	1,977.3	739.9	696.1	43.83	16.882	
10,500.0	9,957.6	9,650.0	9,539.4	42.8	24.5	23.20	162.9	1,977.3	761.3	717.3	43.97	17.314	
10,525.0	9,958.9	9,650.0	9,539.4	42.8	24.5	21.44	162.9	1,977.3	782.3	738.2	44.12	17.733	
10,534.2	9,959.0	9,650.0	9,539.4	42.8	24.5	20.85	162.9	1,977.3	789.9	745.7	44.17	17.884	
10,600.0	9,959.1	9,629.3	9,522.0	42.9	24.6	20.09	151.6	1,977.4	844.3	800.0	44.32	19.053	
10,700.0	9,959.4	9,600.0	9,496.7	43.0	24.7	19.06	136.8	1,977.4	929.1	884.5	44.56	20.851	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 703H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,300.0	3,222.6	3,256.4	3,260.6	13.0	8.5	-39.30	598.1	1,341.9	991.3	971.8	19.54	50.744	
3,400.0	3,318.2	3,352.5	3,355.8	13.5	8.8	-39.62	585.7	1,346.8	964.2	944.1	20.10	47.963	
3,500.0	3,413.7	3,448.6	3,451.0	14.0	9.1	-39.96	573.2	1,351.7	937.2	916.5	20.67	45.331	
3,600.0	3,509.2	3,544.7	3,546.2	14.4	9.5	-40.33	560.8	1,356.6	910.2	888.9	21.25	42.838	
3,700.0	3,604.7	3,640.9	3,641.3	14.9	9.8	-40.71	548.4	1,361.5	883.2	861.4	21.82	40.475	
3,800.0	3,700.2	3,737.0	3,736.5	15.4	10.1	-41.12	535.9	1,366.4	856.3	833.9	22.40	38.234	
3,900.0	3,795.8	3,833.1	3,831.7	15.9	10.5	-41.55	523.5	1,371.4	829.4	806.4	22.97	36.107	
4,000.0	3,891.3	3,929.2	3,926.9	16.4	10.8	-42.01	511.0	1,376.3	802.5	779.0	23.54	34.086	
4,100.0	3,986.8	4,025.3	4,022.1	16.9	11.2	-42.51	498.6	1,381.2	775.7	751.6	24.12	32.165	
4,200.0	4,082.3	4,121.4	4,117.3	17.4	11.5	-43.04	486.1	1,386.1	749.0	724.3	24.69	30.337	
4,300.0	4,177.8	4,217.6	4,212.4	17.8	11.9	-43.61	473.7	1,391.0	722.3	697.1	25.26	28.597	
4,400.0	4,273.4	4,313.7	4,307.6	18.3	12.3	-44.22	461.2	1,395.9	695.7	669.9	25.82	26.940	
4,500.0	4,368.9	4,409.8	4,402.8	18.8	12.6	-44.88	448.8	1,400.8	669.2	642.8	26.39	25.360	
4,600.0	4,464.4	4,505.9	4,498.0	19.3	13.0	-45.59	436.3	1,405.7	642.8	615.8	26.95	23.854	
4,700.0	4,559.9	4,602.0	4,593.2	19.8	13.4	-46.37	423.9	1,410.6	616.4	588.9	27.50	22.416	
4,800.0	4,655.4	4,698.2	4,688.4	20.3	13.8	-47.21	411.4	1,415.5	590.2	562.2	28.05	21.043	
4,900.0	4,751.0	4,794.3	4,783.5	20.8	14.1	-48.13	399.0	1,420.4	564.1	535.5	28.59	19.732	
5,000.0	4,846.5	4,890.4	4,878.7	21.3	14.5	-49.14	386.5	1,425.3	538.2	509.1	29.12	18.480	
5,100.0	4,942.0	4,985.3	4,972.7	21.8	14.9	-50.25	374.4	1,430.1	512.5	482.9	29.64	17.290	
5,200.0	5,037.5	5,079.6	5,066.2	22.3	15.3	-51.55	363.0	1,434.6	487.4	457.2	30.17	16.156	
5,300.0	5,133.0	5,173.8	5,159.8	22.8	15.6	-53.06	352.3	1,438.8	462.9	432.2	30.68	15.089	
5,400.0	5,228.6	5,268.1	5,253.4	23.3	16.0	-54.83	342.4	1,442.7	439.2	408.0	31.17	14.089	
5,500.0	5,324.1	5,362.4	5,347.2	23.8	16.3	-56.87	333.1	1,446.3	416.4	384.7	31.65	13.154	
5,600.0	5,419.6	5,456.6	5,441.0	24.3	16.7	-59.23	324.6	1,449.7	394.6	362.5	32.12	12.285	
5,700.0	5,515.1	5,550.9	5,534.8	24.8	17.1	-61.94	316.8	1,452.8	374.1	341.5	32.59	11.480	
5,800.0	5,610.6	5,645.0	5,628.7	25.3	17.4	-65.03	309.7	1,455.5	355.1	322.0	33.06	10.740	
5,900.0	5,706.2	5,739.2	5,722.6	25.8	17.7	-68.52	303.4	1,458.0	337.8	304.3	33.56	10.066	
6,000.0	5,801.7	5,833.2	5,816.4	26.3	18.1	-72.43	297.7	1,460.3	322.7	288.5	34.11	9.459	
6,100.0	5,897.2	5,927.2	5,910.2	26.8	18.4	-76.75	292.8	1,462.2	309.9	275.1	34.73	8.922	
6,200.0	5,992.7	6,021.0	6,004.0	27.3	18.7	-81.45	288.6	1,463.9	299.9	264.4	35.46	8.456	
6,300.0	6,088.2	6,114.8	6,097.7	27.8	19.0	-86.47	285.1	1,465.2	293.0	256.6	36.31	8.068	
6,400.0	6,183.8	6,208.4	6,191.3	28.3	19.3	-91.71	282.4	1,466.3	289.4	252.1	37.29	7.760	
6,449.6	6,231.1	6,254.8	6,237.6	28.6	19.4	-94.36	281.3	1,466.8	289.0	251.1	37.82	7.640 CC	
6,500.0	6,279.3	6,301.9	6,284.7	28.8	19.5	-97.05	280.3	1,467.1	289.4	251.0	38.39	7.540 ES	
6,600.0	6,374.8	6,395.3	6,378.1	29.3	19.8	-102.36	279.0	1,467.6	293.1	253.5	39.55	7.409	
6,700.0	6,470.3	6,488.5	6,471.3	29.8	20.0	-107.51	278.4	1,467.9	300.3	259.6	40.73	7.372 SF	
6,800.0	6,565.9	6,583.1	6,565.9	30.4	20.0	-112.47	278.3	1,467.9	310.8	268.9	41.85	7.425	
6,900.0	6,661.4	6,678.6	6,661.4	30.9	20.0	-117.15	278.3	1,467.9	323.7	280.7	42.94	7.537	
7,000.0	6,756.9	6,774.1	6,756.9	31.4	20.1	-121.46	278.3	1,467.9	338.7	294.6	44.02	7.693	
7,100.0	6,852.4	6,869.6	6,852.4	31.9	20.1	-125.41	278.3	1,467.9	355.5	310.4	45.07	7.887	
7,200.0	6,947.9	6,965.1	6,947.9	32.4	20.1	-129.01	278.3	1,467.9	373.9	327.8	46.09	8.113	
7,300.0	7,043.5	7,060.7	7,043.5	32.9	20.2	-132.28	278.3	1,467.9	393.7	346.7	47.07	8.364	
7,400.0	7,139.0	7,156.2	7,139.0	33.4	20.2	-135.24	278.3	1,467.9	414.7	366.7	48.02	8.636	
7,500.0	7,234.5	7,251.7	7,234.5	33.9	20.2	-137.92	278.3	1,467.9	436.6	387.7	48.93	8.924	
7,600.0	7,330.0	7,347.2	7,330.0	34.4	20.2	-140.35	278.3	1,467.9	459.5	409.6	49.81	9.224	
7,700.0	7,425.5	7,442.7	7,425.5	34.9	20.3	-142.55	278.3	1,467.9	483.0	432.3	50.67	9.532	
7,782.5	7,504.4	7,521.6	7,504.4	35.3	20.3	-144.22	278.3	1,467.9	502.9	451.6	51.36	9.792	
7,800.0	7,521.1	7,538.3	7,521.1	35.4	20.3	-144.58	278.3	1,467.9	507.2	455.7	51.50	9.848	
7,900.0	7,616.9	7,634.1	7,616.9	35.9	20.3	-146.48	278.3	1,467.9	531.0	478.7	52.31	10.150	
8,000.0	7,713.3	7,730.5	7,713.3	36.4	20.4	-148.11	278.3	1,467.9	553.7	500.7	53.08	10.433	
8,100.0	7,810.1	7,827.3	7,810.1	36.9	20.4	-149.54	278.3	1,467.9	575.4	521.6	53.82	10.692	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
8,200.0	7,907.3	7,924.5	7,907.3	37.4	20.4	-150.77	278.3	1,467.9	595.9	541.3	54.53	10.928	
8,300.0	8,004.9	8,022.1	8,004.9	37.9	20.5	-151.85	278.3	1,467.9	615.0	559.8	55.22	11.138	
8,400.0	8,102.9	8,120.1	8,102.9	38.4	20.5	-152.78	278.3	1,467.9	632.8	576.9	55.88	11.324	
8,500.0	8,201.2	8,218.4	8,201.2	38.8	20.5	-153.59	278.3	1,467.9	649.2	592.7	56.53	11.485	
8,600.0	8,299.8	8,317.0	8,299.8	39.3	20.6	-154.29	278.3	1,467.9	664.1	607.0	57.15	11.621	
8,700.0	8,398.7	8,415.9	8,398.7	39.7	20.6	-154.89	278.3	1,467.9	677.5	619.8	57.75	11.733	
8,800.0	8,497.8	8,515.0	8,497.8	40.1	20.6	-155.40	278.3	1,467.9	689.5	631.1	58.33	11.821	
8,900.0	8,597.2	8,614.4	8,597.2	40.6	20.7	-155.84	278.3	1,467.9	699.9	641.0	58.88	11.886	
9,000.0	8,696.7	8,713.9	8,696.7	41.0	20.7	-156.19	278.3	1,467.9	708.7	649.3	59.41	11.928	
9,100.0	8,796.4	8,813.6	8,796.4	41.3	20.7	-156.47	278.3	1,467.9	715.9	656.0	59.91	11.950	
9,200.0	8,896.2	8,913.4	8,896.2	41.7	20.8	-156.69	278.3	1,467.9	721.6	661.2	60.38	11.951	
9,300.0	8,996.1	9,013.3	8,996.1	42.0	20.8	-156.85	278.3	1,467.9	725.7	664.9	60.81	11.934	
9,400.0	9,096.1	9,113.3	9,096.1	42.3	20.8	-156.94	278.3	1,467.9	728.1	667.0	61.18	11.901	
9,500.0	9,196.1	9,213.3	9,196.1	42.5	20.9	-156.97	278.3	1,467.9	729.0	667.6	61.38	11.877	
9,503.9	9,200.0	9,217.2	9,200.0	42.5	20.9	-66.70	278.3	1,467.9	729.0	667.7	61.30	11.892	
9,600.0	9,296.1	9,313.3	9,296.1	42.5	20.9	-66.70	278.3	1,467.9	729.0	667.7	61.35	11.883	
9,700.0	9,396.1	9,413.3	9,396.1	42.5	21.0	-66.70	278.3	1,467.9	729.0	667.6	61.40	11.873	
9,707.4	9,403.5	9,420.7	9,403.5	42.5	21.0	-66.70	278.3	1,467.9	729.0	667.6	61.40	11.873	
9,785.4	9,481.5	9,493.1	9,475.9	42.5	21.0	-66.70	278.4	1,467.9	729.1	667.7	61.33	11.888	
9,800.0	9,496.1	9,500.0	9,482.8	42.5	21.0	113.64	278.6	1,467.9	729.3	668.0	61.37	11.885	
9,825.0	9,521.0	9,519.2	9,501.9	42.5	20.9	113.66	279.5	1,467.9	730.4	669.1	61.26	11.922	
9,850.0	9,545.9	9,535.3	9,518.0	42.5	20.9	113.67	280.8	1,467.9	732.3	671.2	61.09	11.987	
9,875.0	9,570.5	9,550.0	9,532.6	42.5	20.9	113.64	282.3	1,467.9	735.0	674.2	60.88	12.074	
9,900.0	9,595.0	9,566.3	9,548.8	42.5	20.8	113.64	284.5	1,467.9	738.6	678.0	60.67	12.174	
9,925.0	9,619.1	9,580.9	9,563.2	42.5	20.8	113.57	286.8	1,467.9	743.1	682.7	60.43	12.298	
9,950.0	9,642.8	9,600.0	9,582.0	42.5	20.8	113.64	290.4	1,467.8	748.5	688.3	60.25	12.424	
9,975.0	9,666.1	9,600.0	9,582.0	42.5	20.8	112.93	290.4	1,467.8	754.8	695.1	59.71	12.642	
10,000.0	9,688.9	9,620.0	9,601.5	42.5	20.7	112.96	294.8	1,467.8	761.9	702.4	59.53	12.800	
10,025.0	9,711.1	9,631.3	9,612.4	42.5	20.7	112.55	297.6	1,467.8	770.1	710.9	59.18	13.013	
10,050.0	9,732.7	9,650.0	9,630.4	42.5	20.6	112.47	302.7	1,467.8	779.2	720.2	58.96	13.216	
10,075.0	9,753.6	9,650.0	9,630.4	42.5	20.6	111.27	302.7	1,467.8	789.1	730.7	58.41	13.511	
10,100.0	9,773.8	9,650.0	9,630.4	42.5	20.6	109.90	302.7	1,467.8	800.1	742.3	57.85	13.831	
10,125.0	9,793.2	9,667.1	9,646.7	42.6	20.6	109.46	307.9	1,467.7	811.8	754.2	57.62	14.090	
10,150.0	9,811.7	9,673.7	9,653.0	42.6	20.6	108.24	310.0	1,467.7	824.4	767.2	57.20	14.413	
10,175.0	9,829.3	9,679.5	9,658.4	42.6	20.6	106.82	311.9	1,467.7	837.9	781.1	56.78	14.757	
10,200.0	9,845.9	9,684.3	9,663.0	42.6	20.5	105.18	313.6	1,467.7	852.1	795.7	56.36	15.118	
10,225.0	9,861.5	9,700.0	9,677.6	42.6	20.5	104.23	319.2	1,467.7	867.2	811.0	56.14	15.447	
10,250.0	9,876.2	9,700.0	9,677.6	42.6	20.5	101.92	319.2	1,467.7	882.7	827.0	55.68	15.853	
10,275.0	9,889.7	9,700.0	9,677.6	42.6	20.5	99.42	319.2	1,467.7	898.9	843.6	55.24	16.272	
10,300.0	9,902.1	9,700.0	9,677.6	42.6	20.5	96.75	319.2	1,467.7	915.6	860.8	54.83	16.700	
10,325.0	9,913.3	9,700.0	9,677.6	42.6	20.5	93.92	319.2	1,467.7	932.8	878.3	54.44	17.134	
10,350.0	9,923.4	9,700.0	9,677.6	42.7	20.5	90.95	319.2	1,467.7	950.4	896.3	54.08	17.575	
10,375.0	9,932.3	9,700.0	9,677.6	42.7	20.5	87.85	319.2	1,467.7	968.3	914.6	53.74	18.018	
10,400.0	9,939.9	9,700.0	9,677.6	42.7	20.5	84.67	319.2	1,467.7	986.5	933.1	53.43	18.464	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	Offset Wellbore Centre		Distance		No-Go	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Factor	
2,700.0	2,649.5	2,760.7	2,764.8	10.2	6.9	-35.30	521.9	1,194.7	978.1	961.6	16.50	59.267	
2,800.0	2,745.0	2,853.6	2,856.8	10.7	7.1	-35.90	510.2	1,189.2	942.2	925.1	17.06	55.239	
2,900.0	2,840.6	2,946.4	2,948.7	11.1	7.2	-36.54	498.5	1,183.8	906.4	888.8	17.61	51.467	
3,000.0	2,936.1	3,039.3	3,040.7	11.6	7.4	-37.23	486.8	1,178.3	870.7	852.5	18.17	47.932	
3,100.0	3,031.6	3,132.2	3,132.7	12.1	7.6	-37.99	475.0	1,172.9	835.1	816.4	18.72	44.617	
3,200.0	3,127.1	3,225.0	3,224.6	12.5	7.8	-38.80	463.3	1,167.4	799.7	780.5	19.27	41.508	
3,300.0	3,222.6	3,317.9	3,316.6	13.0	7.9	-39.70	451.6	1,161.9	764.5	744.6	19.81	38.589	
3,400.0	3,318.2	3,410.8	3,408.5	13.5	8.1	-40.67	439.9	1,156.5	729.4	709.0	20.35	35.848	
3,500.0	3,413.7	3,503.6	3,500.5	14.0	8.3	-41.75	428.2	1,151.0	694.5	673.6	20.87	33.273	
3,600.0	3,509.2	3,596.5	3,592.5	14.4	8.4	-42.93	416.5	1,145.5	659.8	638.5	21.39	30.854	
3,700.0	3,604.7	3,689.4	3,684.4	14.9	8.6	-44.24	404.8	1,140.1	625.5	603.6	21.88	28.581	
3,800.0	3,700.2	3,782.2	3,776.4	15.4	8.8	-45.70	393.1	1,134.6	591.5	569.1	22.36	26.447	
3,900.0	3,795.8	3,875.1	3,868.4	15.9	9.0	-47.34	381.3	1,129.2	557.8	535.0	22.82	24.444	
4,000.0	3,891.3	3,968.0	3,960.3	16.4	9.1	-49.17	369.6	1,123.7	524.7	501.4	23.25	22.567	
4,100.0	3,986.8	4,060.8	4,052.3	16.9	9.3	-51.24	357.9	1,118.2	492.1	468.4	23.64	20.811	
4,200.0	4,082.3	4,153.7	4,144.3	17.4	9.5	-53.59	346.2	1,112.8	460.1	436.1	24.00	19.173	
4,300.0	4,177.8	4,246.6	4,236.2	17.8	9.7	-56.27	334.5	1,107.3	429.0	404.7	24.31	17.651	
4,400.0	4,273.4	4,339.5	4,328.2	18.3	9.8	-59.34	322.8	1,101.8	398.9	374.4	24.56	16.244	
4,500.0	4,368.9	4,432.3	4,420.1	18.8	10.0	-62.87	311.1	1,096.4	370.1	345.4	24.76	14.952	
4,600.0	4,464.4	4,525.2	4,512.1	19.3	10.2	-66.93	299.3	1,090.9	342.9	318.1	24.89	13.776	
4,700.0	4,559.9	4,618.1	4,604.1	19.8	10.4	-71.62	287.6	1,085.5	317.7	292.8	24.99	12.715	
4,800.0	4,655.4	4,710.9	4,696.0	20.3	10.5	-77.00	275.9	1,080.0	295.1	270.0	25.07	11.769	
4,900.0	4,751.0	4,803.8	4,788.0	20.8	10.7	-83.12	264.2	1,074.5	275.5	250.3	25.21	10.930	
5,000.0	4,846.5	4,896.7	4,880.0	21.3	10.9	-89.97	252.5	1,069.1	259.9	234.4	25.50	10.189	
5,100.0	4,942.0	4,989.5	4,971.9	21.8	11.1	-97.48	240.8	1,063.6	248.8	222.7	26.08	9.540	
5,200.0	5,037.5	5,082.4	5,063.9	22.3	11.2	-105.44	229.1	1,058.2	242.9	215.9	27.03	8.987	
5,255.1	5,090.2	5,133.6	5,114.6	22.6	11.3	-109.93	222.6	1,055.1	242.0	214.3	27.72	8.731 CC	
5,300.0	5,133.0	5,175.3	5,155.9	22.8	11.4	-113.58	217.3	1,052.7	242.6	214.2	28.36	8.553 ES	
5,400.0	5,228.6	5,268.1	5,247.8	23.3	11.6	-121.58	205.6	1,047.2	247.9	217.9	29.98	8.270	
5,500.0	5,324.1	5,361.0	5,339.8	23.8	11.8	-129.14	193.9	1,041.8	258.5	226.8	31.72	8.151 SF	
5,600.0	5,419.6	5,453.9	5,431.8	24.3	12.0	-136.07	182.2	1,036.3	273.8	240.3	33.42	8.191	
5,700.0	5,515.1	5,546.7	5,523.7	24.8	12.1	-142.27	170.5	1,030.8	292.9	257.9	35.01	8.367	
5,800.0	5,610.6	5,639.6	5,615.7	25.3	12.3	-147.72	158.8	1,025.4	315.3	278.9	36.45	8.652	
5,900.0	5,706.2	5,732.5	5,707.6	25.8	12.5	-152.47	147.1	1,019.9	340.3	302.5	37.73	9.018	
6,000.0	5,801.7	5,825.3	5,799.6	26.3	12.7	-156.60	135.3	1,014.5	367.3	328.4	38.89	9.445	
6,100.0	5,897.2	5,918.2	5,891.6	26.8	12.8	-160.18	123.6	1,009.0	396.0	356.0	39.94	9.912	
6,200.0	5,992.7	6,011.1	5,983.5	27.3	13.0	-163.29	111.9	1,003.5	425.9	385.0	40.92	10.409	
6,300.0	6,088.2	6,103.9	6,075.5	27.8	13.2	-166.01	100.2	998.1	456.9	415.1	41.83	10.923	
6,400.0	6,183.8	6,196.8	6,167.5	28.3	13.4	-168.39	88.5	992.6	488.8	446.1	42.69	11.449	
6,500.0	6,279.3	6,289.7	6,259.4	28.8	13.6	-170.48	76.8	987.1	521.3	477.8	43.52	11.979	
6,600.0	6,374.8	6,385.1	6,354.0	29.3	13.9	-172.32	65.3	981.8	554.2	509.8	44.44	12.471	
6,700.0	6,470.3	6,481.6	6,449.8	29.8	14.1	-173.81	55.2	977.1	587.1	541.8	45.29	12.962	
6,800.0	6,565.9	6,578.8	6,546.6	30.4	14.2	-175.00	46.5	973.0	619.7	573.6	46.12	13.437	
6,900.0	6,661.4	6,676.8	6,644.3	30.9	14.4	-175.93	39.3	969.6	651.9	605.0	46.94	13.889	
7,000.0	6,756.9	6,775.5	6,742.8	31.4	14.6	-176.64	33.5	966.9	683.7	636.0	47.75	14.318	
7,100.0	6,852.4	6,874.9	6,842.0	31.9	14.7	-177.16	29.2	965.0	714.9	666.4	48.56	14.724	
7,200.0	6,947.9	6,974.8	6,941.9	32.4	14.9	-177.50	26.5	963.7	745.6	696.2	49.36	15.106	
7,300.0	7,043.5	7,075.2	7,042.3	32.9	15.0	-177.69	25.3	963.1	775.6	725.5	50.13	15.472	
7,400.0	7,139.0	7,171.9	7,139.0	33.4	15.1	-177.78	25.3	963.1	805.2	754.6	50.57	15.922	
7,500.0	7,234.5	7,267.4	7,234.5	33.9	15.2	-177.86	25.3	963.1	834.8	783.5	51.27	16.283	
7,600.0	7,330.0	7,362.9	7,330.0	34.4	15.2	-177.93	25.3	963.1	864.4	812.4	51.94	16.640	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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:	WTF 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		Offset Wellbore Centre		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
7,700.0	7,425.5	7,458.5	7,425.5	34.9	15.2	-178.00	25.3	963.1	893.9	841.3	52.62	16.988	
7,782.5	7,504.4	7,537.3	7,504.4	35.3	15.3	-178.05	25.3	963.1	918.3	865.2	53.18	17.270	
7,800.0	7,521.1	7,554.0	7,521.1	35.4	15.3	-178.07	25.3	963.1	923.5	870.2	53.29	17.329	
7,900.0	7,616.9	7,649.8	7,616.9	35.9	15.3	-178.13	25.3	963.1	951.9	898.0	53.97	17.638	
8,000.0	7,713.3	7,746.2	7,713.3	36.4	15.3	-178.19	25.3	963.1	978.7	924.1	54.64	17.912	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)				
2,400.0	2,363.0	2,541.9	2,540.9	8.9	8.9	-38.43	549.9	1,077.9	979.6	962.3	17.30	56.613		
2,500.0	2,458.5	2,631.7	2,629.1	9.4	9.3	-39.46	539.4	1,065.3	938.6	920.6	18.01	52.118		
2,600.0	2,554.0	2,721.4	2,717.4	9.8	9.6	-40.58	529.0	1,052.7	897.9	879.1	18.72	47.972		
2,700.0	2,649.5	2,811.2	2,805.7	10.2	10.0	-41.81	518.5	1,040.1	857.5	838.0	19.42	44.148		
2,800.0	2,745.0	2,901.0	2,894.0	10.7	10.4	-43.15	508.1	1,027.6	817.4	797.3	20.12	40.622		
2,900.0	2,840.6	2,990.8	2,982.3	11.1	10.8	-44.63	497.6	1,015.0	777.9	757.0	20.82	37.370		
3,000.0	2,936.1	3,080.6	3,070.6	11.6	11.2	-46.25	487.2	1,002.4	738.8	717.3	21.49	34.373		
3,100.0	3,031.6	3,170.4	3,158.9	12.1	11.5	-48.04	476.7	989.8	700.3	678.1	22.15	31.615		
3,200.0	3,127.1	3,260.2	3,247.1	12.5	11.9	-50.03	466.3	977.2	662.5	639.7	22.78	29.080		
3,300.0	3,222.6	3,350.0	3,335.4	13.0	12.3	-52.24	455.8	964.6	625.5	602.1	23.38	26.758		
3,400.0	3,318.2	3,439.7	3,423.7	13.5	12.7	-54.71	445.4	952.0	589.5	565.5	23.92	24.639		
3,500.0	3,413.7	3,529.5	3,512.0	14.0	13.1	-57.46	434.9	939.4	554.6	530.2	24.41	22.718		
3,600.0	3,509.2	3,619.3	3,600.3	14.4	13.5	-60.54	424.5	926.8	521.1	496.3	24.83	20.990		
3,700.0	3,604.7	3,709.1	3,688.6	14.9	13.9	-63.99	414.0	914.2	489.3	464.2	25.15	19.456		
3,800.0	3,700.2	3,798.9	3,776.8	15.4	14.3	-67.85	403.6	901.7	459.5	434.1	25.36	18.117		
3,900.0	3,795.8	3,888.7	3,865.1	15.9	14.7	-72.16	393.1	889.1	432.2	406.7	25.45	16.978		
4,000.0	3,891.3	3,978.5	3,953.4	16.4	15.1	-76.93	382.7	876.5	407.7	382.3	25.42	16.043		
4,100.0	3,986.8	4,068.3	4,041.7	16.9	15.5	-82.18	372.2	863.9	386.8	361.6	25.26	15.313		
4,200.0	4,082.3	4,158.0	4,130.0	17.4	15.9	-87.88	361.7	851.3	370.0	344.9	25.03	14.781		
4,300.0	4,177.8	4,247.8	4,218.3	17.8	16.2	-93.95	351.3	838.7	357.7	332.9	24.80	14.423		
4,400.0	4,273.4	4,337.6	4,306.5	18.3	16.6	-100.30	340.8	826.1	350.7	326.0	24.69	14.201		
4,479.1	4,348.9	4,408.6	4,376.4	18.7	17.0	-105.42	332.6	816.2	349.0	324.2	24.77	14.088 CC, ES		
4,500.0	4,368.9	4,427.4	4,394.8	18.8	17.0	-106.78	330.4	813.5	349.1	324.3	24.82	14.064		
4,600.0	4,464.4	4,517.2	4,483.1	19.3	17.5	-113.22	319.9	800.9	353.0	327.7	25.27	13.970		
4,700.0	4,559.9	4,607.0	4,571.4	19.8	17.9	-119.47	309.5	788.4	362.3	336.2	26.06	13.903		
4,800.0	4,655.4	4,696.8	4,659.7	20.3	18.3	-125.40	299.0	775.8	376.5	349.3	27.14	13.871 SF		
4,900.0	4,751.0	4,786.6	4,748.0	20.8	18.7	-130.91	288.6	763.2	395.1	366.7	28.44	13.891		
5,000.0	4,846.5	4,876.3	4,836.2	21.3	19.1	-135.96	278.1	750.6	417.6	387.7	29.87	13.980		
5,100.0	4,942.0	4,966.1	4,924.5	21.8	19.5	-140.54	267.7	738.0	443.3	411.9	31.35	14.141		
5,200.0	5,037.5	5,055.9	5,012.8	22.3	19.9	-144.66	257.2	725.4	471.7	438.9	32.83	14.370		
5,300.0	5,133.0	5,145.7	5,101.1	22.8	20.3	-148.34	246.8	712.8	502.4	468.1	34.27	14.657		
5,400.0	5,228.6	5,235.5	5,189.4	23.3	20.7	-151.63	236.3	700.2	534.9	499.2	35.68	14.993		
5,500.0	5,324.1	5,325.3	5,277.7	23.8	21.1	-154.57	225.9	687.6	569.0	532.0	37.03	15.367		
5,600.0	5,419.6	5,415.1	5,366.0	24.3	21.5	-157.20	215.4	675.1	604.4	566.1	38.33	15.768		
5,700.0	5,515.1	5,504.9	5,454.2	24.8	21.9	-159.55	205.0	662.5	640.8	601.3	39.58	16.190		
5,800.0	5,610.6	5,594.6	5,542.5	25.3	22.3	-161.66	194.5	649.9	678.2	637.4	40.79	16.626		
5,900.0	5,706.2	5,684.4	5,630.8	25.8	22.7	-163.57	184.1	637.3	716.3	674.3	41.96	17.071		
6,000.0	5,801.7	5,774.2	5,719.1	26.3	23.1	-165.29	173.6	624.7	755.0	712.0	43.10	17.520		
6,100.0	5,897.2	5,864.0	5,807.4	26.8	23.5	-166.85	163.2	612.1	794.4	750.1	44.20	17.970		
6,200.0	5,992.7	5,953.8	5,895.7	27.3	23.9	-168.26	152.7	599.5	834.1	788.8	45.29	18.419		
6,300.0	6,088.2	6,043.6	5,983.9	27.8	24.3	-169.56	142.3	586.9	874.3	828.0	46.34	18.865		
6,400.0	6,183.8	6,133.4	6,072.2	28.3	24.7	-170.74	131.8	574.3	914.8	867.5	47.38	19.308		
6,500.0	6,279.3	6,228.8	6,166.1	28.8	25.2	-171.88	120.8	561.1	955.6	907.1	48.49	19.707		
6,600.0	6,374.8	6,331.3	6,267.2	29.3	25.6	-172.93	110.0	548.1	995.6	945.9	49.67	20.042		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 706H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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	17.0	0.0	0.0	-36.02	399.4	-290.5	494.2				
100.0	100.0	83.0	100.0	0.8	1.0	-36.02	399.4	-290.5	493.9	491.6	2.24	220.301	
200.0	200.0	183.0	200.0	1.4	1.6	-36.02	399.4	-290.5	493.9	490.4	3.51	140.752	
300.0	300.0	283.0	300.0	1.9	2.0	-36.02	399.4	-290.5	493.9	489.5	4.35	113.482	
400.0	400.0	383.0	400.0	2.2	2.4	-36.02	399.4	-290.5	493.9	488.8	5.05	97.879	
500.0	500.0	483.0	500.0	2.6	2.7	-36.02	399.4	-290.5	493.9	488.2	5.65	87.384	
600.0	600.0	583.0	600.0	2.8	3.0	-36.02	399.4	-290.5	493.9	487.7	6.20	79.681	
700.0	700.0	683.0	700.0	3.1	3.2	-36.02	399.4	-290.5	493.9	487.2	6.70	73.704	
800.0	800.0	783.0	800.0	3.3	3.4	-36.02	399.4	-290.5	493.9	486.7	7.17	68.885	
900.0	900.0	883.0	900.0	3.6	3.7	-36.02	399.4	-290.5	493.9	486.3	7.61	64.888	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-36.02	399.4	-290.5	493.9	485.8	8.03	61.501	
1,100.0	1,100.0	1,095.0	1,112.0	4.1	4.1	-126.50	398.4	-290.0	493.9	485.4	8.52	57.972	
1,200.0	1,199.8	1,209.4	1,226.3	4.4	4.4	-127.18	394.2	-288.0	493.1	484.1	9.00	54.808	
1,300.0	1,299.5	1,323.4	1,340.0	4.7	4.7	-128.31	387.0	-284.7	491.6	482.1	9.50	51.763	
1,400.0	1,398.7	1,436.8	1,452.9	5.1	5.0	-129.91	376.8	-279.9	489.7	479.6	10.03	48.812	
1,500.0	1,497.5	1,547.6	1,562.7	5.4	5.3	-131.92	363.9	-273.9	487.5	476.9	10.54	46.234	
1,560.4	1,556.8	1,607.0	1,621.6	5.7	5.4	-133.16	356.4	-270.4	486.9	476.1	10.85	44.874 CC, ES	
1,600.0	1,595.6	1,645.9	1,660.1	5.8	5.5	-134.02	351.5	-268.1	487.2	476.1	11.08	43.969	
1,700.0	1,693.1	1,743.7	1,756.9	6.2	5.8	-136.34	339.2	-262.4	490.0	478.4	11.69	41.935	
1,800.0	1,789.6	1,840.9	1,853.2	6.6	6.1	-138.82	326.9	-256.7	496.4	484.1	12.33	40.264	
1,860.7	1,847.8	1,899.6	1,911.3	6.8	6.3	-140.39	319.5	-253.2	502.1	489.4	12.68	39.595	
1,900.0	1,885.3	1,937.4	1,948.7	6.9	6.4	-141.45	314.8	-251.0	506.3	493.4	12.90	39.239	
2,000.0	1,980.9	2,033.8	2,044.2	7.3	6.8	-144.09	302.6	-245.3	517.9	504.3	13.55	38.206	
2,100.0	2,076.4	2,130.1	2,139.6	7.7	7.1	-146.62	290.5	-239.7	530.5	516.3	14.22	37.305	
2,200.0	2,171.9	2,226.5	2,235.0	8.1	7.4	-149.03	278.3	-234.0	544.2	529.3	14.90	36.526	
2,300.0	2,267.4	2,322.8	2,330.4	8.5	7.8	-151.32	266.2	-228.3	558.8	543.2	15.59	35.855	
2,400.0	2,363.0	2,419.2	2,425.8	8.9	8.2	-153.50	254.0	-222.6	574.3	558.0	16.28	35.282	
2,500.0	2,458.5	2,515.5	2,521.2	9.4	8.5	-155.57	241.9	-217.0	590.6	573.7	16.97	34.795	
2,600.0	2,554.0	2,611.9	2,616.6	9.8	8.9	-157.53	229.7	-211.3	607.7	590.0	17.67	34.382	
2,700.0	2,649.5	2,708.2	2,712.0	10.2	9.3	-159.38	217.5	-205.6	625.4	607.0	18.38	34.035	
2,800.0	2,745.0	2,804.6	2,807.4	10.7	9.6	-161.14	205.4	-200.0	643.8	624.7	19.08	33.745	
2,900.0	2,840.6	2,900.9	2,902.9	11.1	10.0	-162.80	193.2	-194.3	662.7	642.9	19.78	33.503	
3,000.0	2,936.1	2,997.2	2,998.3	11.6	10.4	-164.37	181.1	-188.6	682.2	661.7	20.48	33.305	
3,100.0	3,031.6	3,093.6	3,093.7	12.1	10.8	-165.85	168.9	-183.0	702.1	680.9	21.18	33.142	
3,200.0	3,127.1	3,189.9	3,189.1	12.5	11.2	-167.26	156.8	-177.3	722.5	700.6	21.89	33.012	
3,300.0	3,222.6	3,286.3	3,284.5	13.0	11.6	-168.59	144.6	-171.6	743.3	720.7	22.59	32.908	
3,400.0	3,318.2	3,382.6	3,379.9	13.5	12.0	-169.84	132.5	-166.0	764.4	741.2	23.29	32.828	
3,500.0	3,413.7	3,479.0	3,475.3	14.0	12.4	-171.03	120.3	-160.3	785.9	762.0	23.99	32.768	
3,600.0	3,509.2	3,575.3	3,570.7	14.4	12.8	-172.16	108.2	-154.6	807.8	783.1	24.68	32.725	
3,700.0	3,604.7	3,671.7	3,666.1	14.9	13.2	-173.23	96.0	-149.0	829.9	804.5	25.38	32.697	
3,800.0	3,700.2	3,768.0	3,761.6	15.4	13.6	-174.25	83.9	-143.3	852.2	826.2	26.08	32.681	
3,900.0	3,795.8	3,864.4	3,857.0	15.9	14.0	-175.21	71.7	-137.6	874.9	848.1	26.77	32.677 SF	
4,000.0	3,891.3	3,960.7	3,952.4	16.4	14.4	-176.13	59.6	-132.0	897.7	870.3	27.47	32.681	
4,100.0	3,986.8	4,057.1	4,047.8	16.9	14.8	-177.00	47.4	-126.3	920.8	892.6	28.16	32.694	
4,200.0	4,082.3	4,153.4	4,143.2	17.4	15.2	-177.83	35.3	-120.6	944.0	915.2	28.86	32.713	
4,300.0	4,177.8	4,249.8	4,238.6	17.8	15.6	-178.62	23.1	-115.0	967.5	937.9	29.55	32.738	
4,400.0	4,273.4	4,346.1	4,334.0	18.3	16.0	-179.38	11.0	-109.3	991.1	960.8	30.25	32.768	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,300.0	5,133.0	5,042.9	4,964.7	22.8	20.6	-5.37	81.9	2,117.4	989.6	949.3	40.31	24.552	
5,400.0	5,228.6	5,141.1	5,060.3	23.3	21.0	-4.59	67.5	2,135.3	976.9	935.6	41.29	23.662	
5,500.0	5,324.1	5,239.4	5,155.9	23.8	21.5	-3.78	53.1	2,153.2	964.4	922.1	42.27	22.813	
5,600.0	5,419.6	5,337.7	5,251.4	24.3	22.0	-2.96	38.7	2,171.0	952.1	908.8	43.27	22.005	
5,700.0	5,515.1	5,436.0	5,347.0	24.8	22.4	-2.12	24.3	2,188.9	940.0	895.7	44.27	21.235	
5,800.0	5,610.6	5,534.3	5,442.5	25.3	22.9	-1.26	9.9	2,206.7	928.1	882.8	45.27	20.501	
5,900.0	5,706.2	5,632.5	5,538.1	25.8	23.4	-0.37	-4.5	2,224.6	916.4	870.1	46.28	19.801	
6,000.0	5,801.7	5,730.8	5,633.7	26.3	23.8	0.54	-18.9	2,242.4	904.9	857.6	47.29	19.135	
6,100.0	5,897.2	5,829.1	5,729.2	26.8	24.3	1.47	-33.3	2,260.3	893.7	845.4	48.31	18.500	
6,200.0	5,992.7	5,927.4	5,824.8	27.3	24.8	2.42	-47.8	2,278.1	882.7	833.4	49.33	17.895	
6,300.0	6,088.2	6,025.7	5,920.4	27.8	25.2	3.40	-62.2	2,296.0	872.0	821.7	50.35	17.320	
6,400.0	6,183.8	6,134.1	6,025.9	28.3	25.7	4.48	-77.7	2,315.3	861.1	809.8	51.36	16.765	
6,500.0	6,279.3	6,246.4	6,135.7	28.8	26.3	5.56	-92.5	2,333.6	848.9	796.6	52.37	16.210	
6,600.0	6,374.8	6,358.6	6,245.8	29.3	26.8	6.60	-106.0	2,350.3	835.4	782.0	53.35	15.658	
6,700.0	6,470.3	6,470.5	6,356.1	29.8	27.3	7.59	-118.0	2,365.2	820.3	766.0	54.30	15.109	
6,800.0	6,565.9	6,582.0	6,466.3	30.4	27.8	8.54	-128.7	2,378.5	803.9	748.6	55.21	14.560	
6,900.0	6,661.4	6,693.2	6,576.5	30.9	28.3	9.46	-138.0	2,390.0	785.9	729.8	56.09	14.011	
7,000.0	6,756.9	6,803.9	6,666.5	31.4	28.7	10.34	-145.9	2,399.8	766.4	709.5	56.93	13.462	
7,100.0	6,852.4	6,914.0	6,796.1	31.9	29.2	11.19	-152.5	2,407.9	745.4	687.7	57.73	12.911	
7,200.0	6,947.9	7,023.5	6,905.2	32.4	29.6	12.02	-157.7	2,414.4	722.9	664.4	58.50	12.358	
7,300.0	7,043.5	7,132.2	7,013.8	32.9	29.9	12.82	-161.6	2,419.2	698.8	639.6	59.21	11.803	
7,400.0	7,139.0	7,240.2	7,121.7	33.4	30.3	13.61	-164.1	2,422.4	673.3	613.4	59.87	11.245	
7,500.0	7,234.5	7,347.3	7,228.8	33.9	30.5	14.38	-165.4	2,424.0	646.1	585.6	60.56	10.669	
7,600.0	7,330.0	7,448.5	7,330.0	34.4	30.6	15.11	-165.6	2,424.2	617.6	555.4	62.21	9.929	
7,700.0	7,425.5	7,544.0	7,425.5	34.9	30.6	15.86	-165.6	2,424.2	589.0	526.3	62.78	9.383	
7,782.5	7,504.4	7,622.9	7,504.4	35.3	30.7	16.53	-165.6	2,424.2	565.5	502.3	63.24	8.941	
7,800.0	7,521.1	7,639.6	7,521.1	35.4	30.7	16.67	-165.6	2,424.2	560.5	497.2	63.34	8.850	
7,900.0	7,616.9	7,735.4	7,616.9	35.9	30.7	17.45	-165.6	2,424.2	533.2	469.3	63.90	8.345	
8,000.0	7,713.3	7,831.8	7,713.3	36.4	30.7	18.28	-165.6	2,424.2	507.7	443.2	64.44	7.878	
8,100.0	7,810.1	7,928.6	7,810.1	36.9	30.7	19.12	-165.6	2,424.2	483.8	418.8	64.96	7.447	
8,200.0	7,907.3	8,025.8	7,907.3	37.4	30.7	19.99	-165.6	2,424.2	461.7	396.2	65.46	7.052	
8,300.0	8,004.9	8,123.4	8,004.9	37.9	30.7	20.88	-165.6	2,424.2	441.3	375.3	65.94	6.692	
8,400.0	8,102.9	8,221.4	8,102.9	38.4	30.8	21.77	-165.6	2,424.2	422.6	356.2	66.39	6.365	
8,500.0	8,201.2	8,319.7	8,201.2	38.8	30.8	22.66	-165.6	2,424.2	405.6	338.8	66.82	6.071	
8,600.0	8,299.8	8,418.3	8,299.8	39.3	30.8	23.54	-165.6	2,424.2	390.3	323.1	67.22	5.807	
8,700.0	8,398.7	8,517.2	8,398.7	39.7	30.8	24.38	-165.6	2,424.2	376.7	309.1	67.59	5.574	
8,800.0	8,497.8	8,616.3	8,497.8	40.1	30.8	25.18	-165.6	2,424.2	364.8	296.9	67.95	5.369	
8,900.0	8,597.2	8,715.7	8,597.2	40.6	30.9	25.92	-165.6	2,424.2	354.5	286.2	68.28	5.192	
9,000.0	8,696.7	8,815.2	8,696.7	41.0	30.9	26.58	-165.6	2,424.2	345.8	277.3	68.59	5.042	
9,100.0	8,796.4	8,914.9	8,796.4	41.3	30.9	27.14	-165.6	2,424.2	338.8	269.9	68.89	4.918	
9,200.0	8,896.2	9,014.7	8,896.2	41.7	30.9	27.60	-165.6	2,424.2	333.3	264.1	69.18	4.818	
9,300.0	8,996.1	9,114.6	8,996.1	42.0	31.0	27.94	-165.6	2,424.2	329.4	259.9	69.46	4.742	
9,400.0	9,096.1	9,214.6	9,096.1	42.3	31.0	28.15	-165.6	2,424.2	327.0	257.3	69.71	4.691	
9,500.0	9,196.1	9,314.6	9,196.1	42.5	31.0	28.22	-165.6	2,424.2	326.2	256.3	69.86	4.669	
9,503.9	9,200.0	9,318.5	9,200.0	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.6	69.62	4.685	
9,600.0	9,296.1	9,414.6	9,296.1	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.5	69.66	4.682	
9,700.0	9,396.1	9,514.6	9,396.1	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.5	69.71	4.679	
9,785.4	9,481.5	9,600.0	9,481.5	42.5	31.1	118.49	-165.6	2,424.2	326.2	256.4	69.74	4.677	
9,800.0	9,496.1	9,614.6	9,496.1	42.5	31.1	-61.21	-165.6	2,424.2	326.1	255.8	70.24	4.642	
9,825.0	9,521.0	9,639.5	9,521.0	42.5	31.1	-61.50	-165.6	2,424.2	325.4	255.1	70.32	4.627	
9,850.0	9,545.9	9,664.4	9,545.9	42.5	31.1	-62.06	-165.6	2,424.2	324.1	253.7	70.44	4.601	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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)			
9,875.0	9,570.5	9,689.0	9,570.5	42.5	31.1	-62.88	-165.6	2,424.2	322.2	251.6	70.59	4.565	
9,900.0	9,595.0	9,713.5	9,595.0	42.5	31.1	-63.97	-165.6	2,424.2	319.8	249.0	70.76	4.519	
9,925.0	9,619.1	9,737.6	9,619.1	42.5	31.1	-65.33	-165.6	2,424.2	316.9	245.9	70.96	4.466	
9,950.0	9,642.8	9,761.3	9,642.8	42.5	31.1	-66.94	-165.6	2,424.2	313.6	242.4	71.17	4.406	
9,975.0	9,666.1	9,784.6	9,666.1	42.5	31.1	-68.80	-165.6	2,424.2	310.0	238.6	71.38	4.343	
10,000.0	9,688.9	9,807.4	9,688.9	42.5	31.1	-70.89	-165.6	2,424.2	306.1	234.6	71.57	4.277	
10,025.0	9,711.1	9,829.6	9,711.1	42.5	31.1	-73.19	-165.6	2,424.2	302.2	230.5	71.73	4.213	
10,050.0	9,732.7	9,851.2	9,732.7	42.5	31.1	-75.66	-165.6	2,424.2	298.4	226.5	71.84	4.153	
10,075.0	9,753.6	9,872.1	9,753.6	42.5	31.1	-78.27	-165.6	2,424.2	294.7	222.8	71.87	4.101	
10,100.0	9,773.8	9,892.3	9,773.8	42.5	31.1	-80.97	-165.6	2,424.2	291.4	219.6	71.79	4.059	
10,125.0	9,793.2	9,911.7	9,793.2	42.6	31.1	-83.71	-165.6	2,424.2	288.7	217.1	71.59	4.033	
10,150.0	9,811.7	9,930.2	9,811.7	42.6	31.1	-86.42	-165.6	2,424.2	286.8	215.6	71.23	4.027 SF	
10,175.0	9,829.3	9,947.8	9,829.3	42.6	31.1	-89.03	-165.6	2,424.2	285.8	215.1	70.69	4.043 ES	
10,184.5	9,835.7	9,954.2	9,835.7	42.6	31.1	-90.00	-165.6	2,424.2	285.7	215.3	70.43	4.057 CC	
10,200.0	9,845.9	9,964.4	9,845.9	42.6	31.1	-91.51	-165.6	2,424.2	286.0	216.0	69.95	4.088	
10,225.0	9,861.5	9,980.1	9,861.5	42.6	31.1	-93.77	-165.6	2,424.2	287.4	218.4	69.02	4.165	
10,250.0	9,876.2	9,994.7	9,876.2	42.6	31.1	-95.78	-165.6	2,424.2	290.3	222.4	67.89	4.276	
10,275.0	9,889.7	10,008.2	9,889.7	42.6	31.2	-97.49	-165.6	2,424.2	294.8	228.2	66.61	4.426	
10,300.0	9,902.1	10,020.6	9,902.1	42.6	31.2	-98.86	-165.6	2,424.2	300.8	235.6	65.19	4.615	
10,325.0	9,913.3	10,031.8	9,913.3	42.6	31.2	-99.86	-165.6	2,424.2	308.5	244.9	63.69	4.844	
10,350.0	9,923.4	10,041.9	9,923.4	42.7	31.2	-100.46	-165.6	2,424.2	317.9	255.7	62.16	5.114	
10,375.0	9,932.3	10,050.8	9,932.3	42.7	31.2	-100.63	-165.6	2,424.2	328.8	268.2	60.64	5.422	
10,400.0	9,939.9	10,058.4	9,939.9	42.7	31.2	-100.35	-165.6	2,424.2	341.2	282.0	59.18	5.766	
10,425.0	9,946.2	10,064.8	9,946.2	42.7	31.2	-99.59	-165.6	2,424.2	355.0	297.2	57.81	6.141	
10,450.0	9,951.3	10,069.9	9,951.3	42.7	31.2	-98.33	-165.6	2,424.2	370.1	313.5	56.54	6.545	
10,475.0	9,955.1	10,073.7	9,955.1	42.8	31.2	-96.55	-165.6	2,424.2	386.2	330.8	55.40	6.971	
10,500.0	9,957.6	10,076.2	9,957.6	42.8	31.2	-94.23	-165.6	2,424.2	403.4	349.0	54.39	7.416	
10,525.0	9,958.9	10,077.4	9,958.9	42.8	31.2	-91.36	-165.6	2,424.2	421.4	367.9	53.51	7.874	
10,534.2	9,959.0	10,077.5	9,959.0	42.8	31.2	-90.17	-165.6	2,424.2	428.2	374.9	53.22	8.045	
10,600.0	9,959.1	10,077.6	9,959.1	42.9	31.2	-90.21	-165.6	2,424.2	479.2	427.7	51.52	9.301	
10,700.0	9,959.4	10,077.9	9,959.4	43.0	31.2	-90.26	-165.6	2,424.2	562.7	512.7	49.99	11.256	
10,800.0	9,959.7	10,078.2	9,959.7	43.2	31.2	-90.31	-165.6	2,424.2	650.8	601.6	49.21	13.225	
10,900.0	9,959.9	10,078.4	9,959.9	43.3	31.2	-90.37	-165.6	2,424.2	741.9	693.1	48.84	15.190	
11,000.0	9,960.2	10,078.7	9,960.2	43.5	31.2	-90.42	-165.6	2,424.2	835.1	786.4	48.71	17.145	
11,100.0	9,960.5	10,079.0	9,960.5	43.8	31.2	-90.47	-165.6	2,424.2	929.7	881.0	48.70	19.092	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	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
4,000.0	3,891.3	3,842.0	3,815.7	16.4	9.3	-12.94	206.8	1,717.5	981.8	955.7	26.18	37.508	
4,100.0	3,986.8	3,939.1	3,911.0	16.9	9.5	-12.30	191.8	1,728.3	960.5	933.5	26.92	35.681	
4,200.0	4,082.3	4,036.2	4,006.3	17.4	9.7	-11.62	176.7	1,739.2	939.2	911.5	27.66	33.951	
4,300.0	4,177.8	4,133.2	4,101.7	17.8	9.8	-10.91	161.7	1,750.0	918.1	889.7	28.41	32.312	
4,400.0	4,273.4	4,230.3	4,197.0	18.3	10.0	-10.17	146.7	1,760.8	897.1	867.9	29.17	30.757	
4,500.0	4,368.9	4,327.4	4,292.3	18.8	10.2	-9.40	131.7	1,771.7	876.3	846.3	29.92	29.283	
4,600.0	4,464.4	4,424.5	4,387.6	19.3	10.4	-8.58	116.6	1,782.5	855.6	824.9	30.69	27.883	
4,700.0	4,559.9	4,521.6	4,482.9	19.8	10.6	-7.73	101.6	1,793.4	835.1	803.7	31.45	26.554	
4,800.0	4,655.4	4,618.7	4,578.2	20.3	10.8	-6.84	86.6	1,804.2	814.8	782.6	32.22	25.292	
4,900.0	4,751.0	4,715.8	4,673.5	20.8	11.0	-5.90	71.6	1,815.0	794.7	761.7	32.98	24.094	
5,000.0	4,846.5	4,812.9	4,768.8	21.3	11.2	-4.91	56.5	1,825.9	774.8	741.1	33.75	22.955	
5,100.0	4,942.0	4,910.0	4,864.1	21.8	11.4	-3.88	41.5	1,836.7	755.2	720.7	34.52	21.874	
5,200.0	5,037.5	5,007.1	4,959.4	22.3	11.6	-2.79	26.5	1,847.5	735.8	700.5	35.29	20.848	
5,300.0	5,133.0	5,104.1	5,054.7	22.8	11.8	-1.64	11.5	1,858.4	716.7	680.6	36.07	19.871	
5,400.0	5,228.6	5,204.8	5,153.6	23.3	12.0	-0.42	-3.8	1,869.4	697.7	660.8	36.81	18.952	
5,500.0	5,324.1	5,305.5	5,252.7	23.8	12.2	0.82	-18.3	1,879.8	678.4	640.8	37.55	18.066	
5,600.0	5,419.6	5,406.2	5,351.9	24.3	12.4	2.07	-32.2	1,889.8	658.9	620.6	38.28	17.212	
5,700.0	5,515.1	5,506.8	5,451.3	24.8	12.6	3.33	-45.3	1,899.3	639.2	600.2	39.00	16.389	
5,800.0	5,610.6	5,607.5	5,550.7	25.3	12.8	4.61	-57.7	1,908.2	619.2	579.5	39.71	15.594	
5,900.0	5,706.2	5,708.1	5,650.3	25.8	13.0	5.92	-69.4	1,916.7	598.9	558.5	40.40	14.824	
6,000.0	5,801.7	5,808.6	5,749.9	26.3	13.2	7.25	-80.4	1,924.6	578.4	537.3	41.08	14.078	
6,100.0	5,897.2	5,909.0	5,849.5	26.8	13.4	8.61	-90.6	1,932.0	557.5	515.8	41.75	13.355	
6,200.0	5,992.7	6,009.3	5,949.1	27.3	13.6	10.01	-100.2	1,938.9	536.4	494.0	42.40	12.652	
6,300.0	6,088.2	6,109.5	6,048.7	27.8	13.8	11.46	-109.0	1,945.3	515.0	471.9	43.03	11.968	
6,400.0	6,183.8	6,209.5	6,148.3	28.3	14.0	12.97	-117.1	1,951.1	493.2	449.6	43.64	11.302	
6,500.0	6,279.3	6,309.5	6,247.8	28.8	14.1	14.55	-124.5	1,956.4	471.1	426.9	44.22	10.654	
6,600.0	6,374.8	6,409.2	6,347.2	29.3	14.3	16.21	-131.2	1,961.2	448.7	404.0	44.78	10.022	
6,700.0	6,470.3	6,508.8	6,446.5	29.8	14.5	17.97	-137.2	1,965.6	426.0	380.7	45.30	9.405	
6,800.0	6,565.9	6,608.2	6,545.6	30.4	14.6	19.86	-142.4	1,969.3	403.1	357.3	45.78	8.804	
6,900.0	6,661.4	6,707.3	6,644.7	30.9	14.8	21.90	-147.0	1,972.6	379.9	333.6	46.22	8.219	
7,000.0	6,756.9	6,806.3	6,743.5	31.4	15.0	24.12	-150.8	1,975.4	356.4	309.8	46.60	7.649	
7,100.0	6,852.4	6,905.0	6,842.1	31.9	15.1	26.59	-154.0	1,977.7	332.8	285.9	46.90	7.095	
7,200.0	6,947.9	7,003.5	6,940.6	32.4	15.3	29.35	-156.4	1,979.4	309.1	262.0	47.11	6.560	
7,300.0	7,043.5	7,101.7	7,038.7	32.9	15.4	32.49	-158.2	1,980.7	285.4	238.1	47.21	6.045	
7,400.0	7,139.0	7,199.6	7,136.7	33.4	15.5	36.11	-159.3	1,981.5	261.8	214.7	47.14	5.554	
7,500.0	7,234.5	7,297.3	7,234.3	33.9	15.6	40.35	-159.7	1,981.8	238.6	191.8	46.86	5.092	
7,600.0	7,330.0	7,393.0	7,330.0	34.4	15.7	45.33	-159.7	1,981.8	216.4	169.9	46.56	4.649	
7,700.0	7,425.5	7,488.5	7,425.5	34.9	15.7	51.32	-159.7	1,981.8	196.2	150.6	45.60	4.304	
7,782.5	7,504.4	7,567.3	7,504.4	35.3	15.7	57.15	-159.7	1,981.8	181.5	137.0	44.51	4.078	
7,800.0	7,521.1	7,584.0	7,521.1	35.4	15.7	58.47	-159.7	1,981.8	178.7	134.4	44.25	4.038	
7,900.0	7,616.9	7,679.9	7,616.9	35.9	15.7	66.50	-159.7	1,981.8	165.1	122.3	42.73	3.863	
8,000.0	7,713.3	7,776.2	7,713.3	36.4	15.8	75.17	-159.7	1,981.8	155.9	114.6	41.37	3.769	
8,100.0	7,810.1	7,873.0	7,810.1	36.9	15.8	84.06	-159.7	1,981.8	151.3	110.7	40.60	3.725	
8,168.1	7,876.3	7,939.2	7,876.3	37.3	15.8	90.00	-159.7	1,981.8	150.4	109.8	40.56	3.708 CC	
8,200.0	7,907.3	7,970.2	7,907.3	37.4	15.8	92.70	-159.7	1,981.8	150.6	109.9	40.69	3.700	
8,300.0	8,004.9	8,067.9	8,004.9	37.9	15.9	100.67	-159.7	1,981.8	153.2	111.6	41.59	3.683	
8,400.0	8,102.9	8,165.8	8,102.9	38.4	15.9	107.73	-159.7	1,981.8	158.2	115.2	43.01	3.677	
8,500.0	8,201.2	8,264.1	8,201.2	38.8	15.9	113.77	-159.7	1,981.8	164.8	120.1	44.66	3.689	
8,600.0	8,299.8	8,362.8	8,299.8	39.3	16.0	118.84	-159.7	1,981.8	172.2	125.9	46.32	3.718	
8,700.0	8,398.7	8,461.7	8,398.7	39.7	16.0	123.02	-159.7	1,981.8	179.9	132.0	47.86	3.759	
8,800.0	8,497.8	8,560.8	8,497.8	40.1	16.0	126.42	-159.7	1,981.8	187.4	138.2	49.25	3.806	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		Offset Wellbore Centre		Distance		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
8,900.0	8,597.2	8,660.1	8,597.2	40.6	16.1	129.17	-159.7	1,981.8	194.4	144.0	50.46	3.853	
9,000.0	8,696.7	8,759.7	8,696.7	41.0	16.1	131.35	-159.7	1,981.8	200.7	149.2	51.51	3.896	
9,100.0	8,796.4	8,859.4	8,796.4	41.3	16.1	133.04	-159.7	1,981.8	206.0	153.6	52.40	3.931	
9,200.0	8,896.2	8,959.2	8,896.2	41.7	16.2	134.30	-159.7	1,981.8	210.3	157.1	53.15	3.956	
9,300.0	8,996.1	9,059.1	8,996.1	42.0	16.2	135.17	-159.7	1,981.8	213.4	159.6	53.75	3.970	
9,400.0	9,096.1	9,159.0	9,096.1	42.3	16.2	135.69	-159.7	1,981.8	215.3	161.1	54.21	3.972	
9,500.0	9,196.1	9,259.0	9,196.1	42.5	16.3	135.87	-159.7	1,981.8	216.0	161.5	54.43	3.968	
9,503.9	9,200.0	9,263.0	9,200.0	42.5	16.3	-133.87	-159.7	1,981.8	216.0	161.6	54.34	3.975	
9,600.0	9,296.1	9,359.0	9,296.1	42.5	16.3	-133.87	-159.7	1,981.8	216.0	161.6	54.39	3.971	
9,700.0	9,396.1	9,459.0	9,396.1	42.5	16.4	-133.87	-159.7	1,981.8	216.0	161.5	54.44	3.967	
9,785.4	9,481.5	9,544.5	9,481.5	42.5	16.4	-133.87	-159.7	1,981.8	216.0	161.5	54.48	3.964	
9,800.0	9,496.1	9,559.0	9,496.1	42.5	16.4	46.54	-159.7	1,981.8	215.8	161.1	54.69	3.946	
9,825.0	9,521.0	9,584.0	9,521.0	42.5	16.4	46.89	-159.7	1,981.8	214.9	160.1	54.74	3.925	
9,850.0	9,545.9	9,608.8	9,545.9	42.5	16.4	47.59	-159.7	1,981.8	213.0	158.1	54.86	3.882	
9,875.0	9,570.5	9,633.5	9,570.5	42.5	16.4	48.64	-159.7	1,981.8	210.3	155.2	55.08	3.818	
9,900.0	9,595.0	9,657.9	9,595.0	42.5	16.4	50.05	-159.7	1,981.8	206.8	151.4	55.39	3.734	
9,925.0	9,619.1	9,682.0	9,619.1	42.5	16.4	51.85	-159.7	1,981.8	202.6	146.8	55.80	3.630	
9,950.0	9,642.8	9,705.8	9,642.8	42.5	16.5	54.06	-159.7	1,981.8	197.7	141.4	56.32	3.510	
9,975.0	9,666.1	9,729.1	9,666.1	42.5	16.5	56.69	-159.7	1,981.8	192.3	135.3	56.96	3.376	
10,000.0	9,688.9	9,751.9	9,688.9	42.5	16.5	59.77	-159.7	1,981.8	186.5	128.8	57.72	3.231	
10,025.0	9,711.1	9,774.1	9,711.1	42.5	16.5	63.29	-159.7	1,981.8	180.6	122.0	58.60	3.081	
10,050.0	9,732.7	9,795.7	9,732.7	42.5	16.5	67.23	-159.7	1,981.8	174.6	115.1	59.57	2.932 Normal Operations	
10,075.0	9,753.6	9,816.6	9,753.6	42.5	16.5	71.55	-159.7	1,981.8	169.0	108.4	60.62	2.789 Normal Operations	
10,100.0	9,773.8	9,836.8	9,773.8	42.5	16.5	76.16	-159.7	1,981.8	164.0	102.4	61.67	2.660 Normal Operations	
10,125.0	9,793.2	9,856.1	9,793.2	42.6	16.5	80.93	-159.7	1,981.8	160.1	97.4	62.63	2.555 Normal Operations	
10,150.0	9,811.7	9,874.6	9,811.7	42.6	16.5	85.73	-159.7	1,981.8	157.4	94.0	63.40	2.483 Caution - Monitor Closely	
10,172.8	9,827.8	9,890.7	9,827.8	42.6	16.5	90.00	-159.7	1,981.8	156.6	92.8	63.83	2.454 Caution - Monitor Closely	
10,175.0	9,829.3	9,892.2	9,829.3	42.6	16.5	90.39	-159.7	1,981.8	156.6	92.8	63.85	2.453 Caution - Monitor Closely, ES, SF	
10,200.0	9,845.9	9,908.9	9,845.9	42.6	16.5	94.77	-159.7	1,981.8	157.9	94.0	63.87	2.472 Caution - Monitor Closely	
10,225.0	9,861.5	9,924.5	9,861.5	42.6	16.5	98.73	-159.7	1,981.8	161.6	98.1	63.43	2.547 Normal Operations	
10,250.0	9,876.2	9,939.1	9,876.2	42.6	16.5	102.17	-159.7	1,981.8	167.7	105.2	62.55	2.681 Normal Operations	
10,275.0	9,889.7	9,952.6	9,889.7	42.6	16.5	105.02	-159.7	1,981.8	176.3	115.0	61.33	2.875 Normal Operations	
10,300.0	9,902.1	9,965.0	9,902.1	42.6	16.6	107.25	-159.7	1,981.8	187.3	127.4	59.90	3.127	
10,325.0	9,913.3	9,976.3	9,913.3	42.6	16.6	108.81	-159.7	1,981.8	200.4	142.0	58.40	3.432	
10,350.0	9,923.4	9,986.4	9,923.4	42.7	16.6	109.68	-159.7	1,981.8	215.4	158.5	56.93	3.784	
10,375.0	9,932.3	9,995.2	9,932.3	42.7	16.6	109.83	-159.7	1,981.8	232.1	176.6	55.54	4.179	
10,400.0	9,939.9	10,002.8	9,939.9	42.7	16.6	109.22	-159.7	1,981.8	250.2	195.9	54.27	4.610	
10,425.0	9,946.2	10,009.2	9,946.2	42.7	16.6	107.80	-159.7	1,981.8	269.5	216.3	53.14	5.071	
10,450.0	9,951.3	10,014.3	9,951.3	42.7	16.6	105.48	-159.7	1,981.8	289.7	237.6	52.14	5.556	
10,475.0	9,955.1	10,018.1	9,955.1	42.8	16.6	102.21	-159.7	1,981.8	310.8	259.5	51.27	6.062	
10,500.0	9,957.6	10,020.6	9,957.6	42.8	16.6	97.91	-159.7	1,981.8	332.5	282.0	50.50	6.584	
10,525.0	9,958.9	10,021.8	9,958.9	42.8	16.6	92.54	-159.7	1,981.8	354.7	304.9	49.84	7.118	
10,534.2	9,959.0	10,021.9	9,959.0	42.8	16.6	90.32	-159.7	1,981.8	363.0	313.4	49.61	7.317	
10,600.0	9,959.1	10,022.1	9,959.1	42.9	16.6	90.38	-159.7	1,981.8	423.3	375.0	48.30	8.765	
10,700.0	9,959.4	10,022.4	9,959.4	43.0	16.6	90.48	-159.7	1,981.8	517.6	470.6	47.00	11.011	
10,800.0	9,959.7	10,022.6	9,959.7	43.2	16.6	90.58	-159.7	1,981.8	613.6	567.4	46.19	13.284	
10,900.0	9,959.9	10,022.9	9,959.9	43.3	16.6	90.67	-159.7	1,981.8	710.8	665.1	45.66	15.568	
11,000.0	9,960.2	10,023.2	9,960.2	43.5	16.6	90.77	-159.7	1,981.8	808.6	763.3	45.28	17.856	
11,100.0	9,960.5	10,023.4	9,960.5	43.8	16.6	90.87	-159.7	1,981.8	906.9	861.9	45.02	20.146	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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)			
3,200.0	3,127.1	3,203.4	3,200.2	12.5	7.5	-24.19	371.8	1,431.4	983.6	963.9	19.74	49.838	
3,300.0	3,222.6	3,296.9	3,291.3	13.0	7.6	-23.61	350.5	1,432.8	949.3	928.9	20.39	46.560	
3,400.0	3,318.2	3,390.4	3,382.3	13.5	7.8	-22.99	329.2	1,434.3	915.1	894.1	21.05	43.465	
3,500.0	3,413.7	3,483.9	3,473.3	14.0	7.9	-22.32	307.9	1,435.7	881.0	859.3	21.73	40.542	
3,600.0	3,509.2	3,577.4	3,564.3	14.4	8.1	-21.60	286.6	1,437.2	847.1	824.6	22.42	37.781	
3,700.0	3,604.7	3,670.9	3,655.3	14.9	8.2	-20.82	265.3	1,438.6	813.2	790.1	23.12	35.171	
3,800.0	3,700.2	3,764.4	3,746.4	15.4	8.4	-19.97	244.0	1,440.1	779.5	755.7	23.83	32.706	
3,900.0	3,795.8	3,857.8	3,837.4	15.9	8.5	-19.05	222.7	1,441.5	746.0	721.4	24.56	30.375	
4,000.0	3,891.3	3,951.3	3,928.4	16.4	8.7	-18.04	201.5	1,443.0	712.7	687.4	25.30	28.172	
4,100.0	3,986.8	4,044.8	4,019.4	16.9	8.8	-16.94	180.2	1,444.4	679.5	653.5	26.05	26.089	
4,200.0	4,082.3	4,138.3	4,110.4	17.4	9.0	-15.73	158.9	1,445.9	646.7	619.9	26.81	24.121	
4,300.0	4,177.8	4,231.8	4,201.4	17.8	9.1	-14.39	137.6	1,447.3	614.1	586.5	27.58	22.262	
4,400.0	4,273.4	4,325.3	4,292.5	18.3	9.3	-12.90	116.3	1,448.8	581.9	553.5	28.37	20.508	
4,500.0	4,368.9	4,418.8	4,383.5	18.8	9.5	-11.24	95.0	1,450.2	550.0	520.9	29.17	18.855	
4,600.0	4,464.4	4,512.3	4,474.5	19.3	9.6	-9.39	73.7	1,451.7	518.7	488.7	29.98	17.301	
4,700.0	4,559.9	4,605.7	4,565.5	19.8	9.8	-7.32	52.4	1,453.1	487.9	457.1	30.80	15.842	
4,800.0	4,655.4	4,699.2	4,656.5	20.3	10.0	-4.97	31.1	1,454.6	457.8	426.2	31.62	14.479	
4,900.0	4,751.0	4,792.7	4,747.5	20.8	10.1	-2.32	9.8	1,456.0	428.5	396.1	32.43	13.212	
5,000.0	4,846.5	4,886.4	4,838.8	21.3	10.3	0.70	-11.5	1,457.5	400.2	367.0	33.21	12.052	
5,100.0	4,942.0	4,980.9	4,931.0	21.8	10.4	3.98	-31.8	1,458.8	373.0	339.0	33.95	10.986	
5,200.0	5,037.5	5,075.9	5,024.2	22.3	10.6	7.51	-50.6	1,460.1	346.8	312.2	34.64	10.012	
5,300.0	5,133.0	5,171.5	5,118.2	22.8	10.8	11.32	-68.0	1,461.3	321.7	286.4	35.24	9.128	
5,400.0	5,228.6	5,267.6	5,212.9	23.3	10.9	15.46	-83.9	1,462.4	297.6	261.9	35.74	8.327	
5,500.0	5,324.1	5,364.2	5,308.4	23.8	11.1	19.99	-98.3	1,463.4	274.6	238.5	36.10	7.607	
5,600.0	5,419.6	5,461.1	5,404.5	24.3	11.3	24.98	-111.2	1,464.3	252.8	216.5	36.30	6.966	
5,700.0	5,515.1	5,558.4	5,501.1	24.8	11.5	30.50	-122.4	1,465.0	232.3	196.0	36.29	6.402	
5,800.0	5,610.6	5,655.9	5,598.2	25.3	11.6	36.68	-132.1	1,465.7	213.2	177.2	36.03	5.919	
5,900.0	5,706.2	5,753.7	5,695.6	25.8	11.8	43.61	-140.1	1,466.2	195.8	160.3	35.48	5.519	
6,000.0	5,801.7	5,851.6	5,793.3	26.3	11.9	51.42	-146.4	1,466.7	180.4	145.7	34.65	5.206	
6,100.0	5,897.2	5,949.7	5,891.3	26.8	12.1	60.18	-151.1	1,467.0	167.4	133.8	33.60	4.983	
6,200.0	5,992.7	6,047.8	5,989.4	27.3	12.2	69.91	-154.1	1,467.2	157.4	124.8	32.54	4.836	
6,300.0	6,088.2	6,145.9	6,087.5	27.8	12.3	80.48	-155.5	1,467.3	150.8	119.0	31.85	4.736	
6,387.4	6,171.7	6,230.2	6,171.7	28.3	12.3	90.00	-155.6	1,467.3	148.7	116.8	31.90	4.661 CC	
6,400.0	6,183.8	6,242.2	6,183.8	28.3	12.3	91.37	-155.6	1,467.3	148.7	116.8	31.98	4.651 ES	
6,500.0	6,279.3	6,337.8	6,279.3	28.8	12.4	102.08	-155.6	1,467.3	152.4	119.3	33.11	4.602 SF	
6,600.0	6,374.8	6,433.3	6,374.8	29.3	12.4	112.01	-155.6	1,467.3	161.5	126.5	34.98	4.615	
6,700.0	6,470.3	6,528.8	6,470.3	29.8	12.5	120.72	-155.6	1,467.3	175.1	138.0	37.13	4.717	
6,800.0	6,565.9	6,624.3	6,565.9	30.4	12.5	128.11	-155.6	1,467.3	192.4	153.2	39.21	4.907	
6,900.0	6,661.4	6,719.8	6,661.4	30.9	12.6	134.26	-155.6	1,467.3	212.4	171.3	41.09	5.170	
7,000.0	6,756.9	6,815.4	6,756.9	31.4	12.6	139.35	-155.6	1,467.3	234.5	191.7	42.73	5.487	
7,100.0	6,852.4	6,910.9	6,852.4	31.9	12.7	143.57	-155.6	1,467.3	258.0	213.9	44.18	5.841	
7,200.0	6,947.9	7,006.4	6,947.9	32.4	12.7	147.09	-155.6	1,467.3	282.7	237.3	45.46	6.219	
7,300.0	7,043.5	7,101.9	7,043.5	32.9	12.8	150.04	-155.6	1,467.3	308.3	261.7	46.62	6.613	
7,400.0	7,139.0	7,197.4	7,139.0	33.4	12.8	152.55	-155.6	1,467.3	334.5	286.8	47.69	7.015	
7,500.0	7,234.5	7,293.0	7,234.5	33.9	12.9	154.70	-155.6	1,467.3	361.3	312.6	48.68	7.422	
7,600.0	7,330.0	7,388.5	7,330.0	34.4	12.9	156.55	-155.6	1,467.3	388.4	338.8	49.62	7.829	
7,700.0	7,425.5	7,484.0	7,425.5	34.9	13.0	158.16	-155.6	1,467.3	415.9	365.4	50.51	8.235	
7,782.5	7,504.4	7,562.8	7,504.4	35.3	13.0	159.34	-155.6	1,467.3	438.8	387.6	51.22	8.568	
7,800.0	7,521.1	7,579.5	7,521.1	35.4	13.0	159.59	-155.6	1,467.3	443.7	392.3	51.36	8.638	
7,900.0	7,616.9	7,675.4	7,616.9	35.9	13.1	160.89	-155.6	1,467.3	470.6	418.4	52.19	9.017	
8,000.0	7,713.3	7,771.7	7,713.3	36.4	13.1	161.98	-155.6	1,467.3	496.1	443.1	52.98	9.364	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 903H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10342-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
8,100.0	7,810.1	7,868.5	7,810.1	36.9	13.2	162.91	-155.6	1,467.3	520.1	466.4	53.74	9.678	
8,200.0	7,907.3	7,965.8	7,907.3	37.4	13.2	163.70	-155.6	1,467.3	542.6	488.1	54.47	9.960	
8,300.0	8,004.9	8,063.4	8,004.9	37.9	13.3	164.37	-155.6	1,467.3	563.5	508.3	55.19	10.211	
8,400.0	8,102.9	8,161.3	8,102.9	38.4	13.4	164.95	-155.6	1,467.3	582.8	526.9	55.88	10.430	
8,500.0	8,201.2	8,259.7	8,201.2	38.8	13.4	165.45	-155.6	1,467.3	600.5	544.0	56.55	10.619	
8,600.0	8,299.8	8,358.3	8,299.8	39.3	13.5	165.88	-155.6	1,467.3	616.6	559.4	57.20	10.780	
8,700.0	8,398.7	8,457.2	8,398.7	39.7	13.5	166.24	-155.6	1,467.3	631.0	573.2	57.83	10.912	
8,800.0	8,497.8	8,556.3	8,497.8	40.1	13.6	166.55	-155.6	1,467.3	643.8	585.3	58.44	11.016	
8,900.0	8,597.2	8,655.6	8,597.2	40.6	13.6	166.81	-155.6	1,467.3	654.8	595.8	59.02	11.095	
9,000.0	8,696.7	8,755.2	8,696.7	41.0	13.7	167.02	-155.6	1,467.3	664.2	604.7	59.58	11.148	
9,100.0	8,796.4	8,854.9	8,796.4	41.3	13.7	167.19	-155.6	1,467.3	672.0	611.8	60.11	11.178	
9,200.0	8,896.2	8,954.7	8,896.2	41.7	13.8	167.31	-155.6	1,467.3	678.0	617.4	60.61	11.185	
9,300.0	8,996.1	9,054.6	8,996.1	42.0	13.9	167.41	-155.6	1,467.3	682.3	621.2	61.08	11.171	
9,400.0	9,096.1	9,154.5	9,096.1	42.3	13.9	167.46	-155.6	1,467.3	684.9	623.4	61.48	11.140	
9,500.0	9,196.1	9,254.5	9,196.1	42.5	14.0	167.48	-155.6	1,467.3	685.8	624.1	61.70	11.116	
9,503.9	9,200.0	9,258.5	9,200.0	42.5	14.0	-102.25	-155.6	1,467.3	685.8	624.4	61.45	11.160	
9,600.0	9,296.1	9,354.5	9,296.1	42.5	14.0	-102.25	-155.6	1,467.3	685.8	624.3	61.50	11.152	
9,700.0	9,396.1	9,454.5	9,396.1	42.5	14.1	-102.25	-155.6	1,467.3	685.8	624.3	61.55	11.143	
9,785.4	9,481.5	9,540.0	9,481.5	42.5	14.1	-102.25	-155.6	1,467.3	685.8	624.3	61.59	11.136	
9,800.0	9,496.1	9,554.5	9,496.1	42.5	14.2	78.12	-155.6	1,467.3	685.8	623.7	62.09	11.045	
9,825.0	9,521.0	9,579.5	9,521.0	42.5	14.2	78.27	-155.6	1,467.3	685.5	623.4	62.09	11.040	
9,850.0	9,545.9	9,604.3	9,545.9	42.5	14.2	78.55	-155.6	1,467.3	685.0	622.9	62.10	11.030	
9,875.0	9,570.5	9,629.0	9,570.5	42.5	14.2	78.97	-155.6	1,467.3	684.2	622.0	62.12	11.013	
9,900.0	9,595.0	9,653.4	9,595.0	42.5	14.2	79.52	-155.6	1,467.3	683.2	621.0	62.15	10.992	
9,925.0	9,619.1	9,677.5	9,619.1	42.5	14.2	80.18	-155.6	1,467.3	682.0	619.8	62.19	10.965	
9,950.0	9,642.8	9,701.3	9,642.8	42.5	14.2	80.96	-155.6	1,467.3	680.6	618.4	62.25	10.934	
9,975.0	9,666.1	9,724.6	9,666.1	42.5	14.3	81.84	-155.6	1,467.3	679.2	616.8	62.31	10.900	
10,000.0	9,688.9	9,747.4	9,688.9	42.5	14.3	82.80	-155.6	1,467.3	677.7	615.3	62.38	10.863	
10,025.0	9,711.1	9,769.6	9,711.1	42.5	14.3	83.84	-155.6	1,467.3	676.2	613.7	62.46	10.826	
10,050.0	9,732.7	9,791.2	9,732.7	42.5	14.3	84.93	-155.6	1,467.3	674.7	612.2	62.54	10.789	
10,075.0	9,753.6	9,812.1	9,753.6	42.5	14.3	86.05	-155.6	1,467.3	673.5	610.8	62.62	10.754	
10,100.0	9,773.8	9,832.3	9,773.8	42.5	14.3	87.20	-155.6	1,467.3	672.4	609.7	62.70	10.723	
10,125.0	9,793.2	9,851.6	9,793.2	42.6	14.3	88.33	-155.6	1,467.3	671.6	608.8	62.78	10.698	
10,150.0	9,811.7	9,870.1	9,811.7	42.6	14.3	89.45	-155.6	1,467.3	671.2	608.3	62.84	10.680	
10,162.8	9,820.8	9,879.2	9,820.8	42.6	14.3	90.00	-155.6	1,467.3	671.1	608.2	62.87	10.674	
10,175.0	9,829.3	9,887.7	9,829.3	42.6	14.3	90.51	-155.6	1,467.3	671.1	608.3	62.90	10.671	
10,200.0	9,845.9	9,904.4	9,845.9	42.6	14.4	91.51	-155.6	1,467.3	671.7	608.7	62.93	10.673	
10,225.0	9,861.5	9,920.0	9,861.5	42.6	14.4	92.42	-155.6	1,467.3	672.7	609.8	62.95	10.687	
10,250.0	9,876.2	9,934.6	9,876.2	42.6	14.4	93.23	-155.6	1,467.3	674.4	611.5	62.93	10.717	
10,275.0	9,889.7	9,948.1	9,889.7	42.6	14.4	93.90	-155.6	1,467.3	676.9	614.0	62.89	10.762	
10,300.0	9,902.1	9,960.6	9,902.1	42.6	14.4	94.43	-155.6	1,467.3	680.0	617.2	62.82	10.825	
10,325.0	9,913.3	9,971.8	9,913.3	42.6	14.4	94.81	-155.6	1,467.3	684.0	621.3	62.72	10.906	
10,350.0	9,923.4	9,981.9	9,923.4	42.7	14.4	95.00	-155.6	1,467.3	688.8	626.2	62.58	11.007	
10,375.0	9,932.3	9,990.7	9,932.3	42.7	14.4	95.01	-155.6	1,467.3	694.4	632.0	62.40	11.129	
10,400.0	9,939.9	9,998.4	9,939.9	42.7	14.4	94.82	-155.6	1,467.3	700.9	638.7	62.18	11.272	
10,425.0	9,946.2	10,004.7	9,946.2	42.7	14.4	94.42	-155.6	1,467.3	708.3	646.4	61.93	11.437	
10,450.0	9,951.3	10,009.8	9,951.3	42.7	14.4	93.81	-155.6	1,467.3	716.5	654.8	61.65	11.623	
10,475.0	9,955.1	10,013.6	9,955.1	42.8	14.4	92.97	-155.6	1,467.3	725.5	664.2	61.33	11.830	
10,500.0	9,957.6	10,016.1	9,957.6	42.8	14.4	91.90	-155.6	1,467.3	735.3	674.3	60.98	12.058	
10,525.0	9,958.9	10,017.3	9,958.9	42.8	14.4	90.61	-155.6	1,467.3	745.9	685.3	60.61	12.307	
10,534.2	9,959.0	10,017.4	9,959.0	42.8	14.4	90.08	-155.6	1,467.3	749.9	689.5	60.46	12.403	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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:		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	
10,600.0	9,959.1	10,017.6	9,959.1	42.9	14.4	90.09	-155.6	1,467.3	781.5	722.1	59.38	13.161	
10,700.0	9,959.4	10,017.9	9,959.4	43.0	14.4	90.11	-155.6	1,467.3	837.2	779.5	57.66	14.519	
10,800.0	9,959.7	10,018.1	9,959.7	43.2	14.4	90.14	-155.6	1,467.3	900.5	844.6	55.96	16.091	
10,900.0	9,959.9	10,018.4	9,959.9	43.3	14.4	90.16	-155.6	1,467.3	970.1	915.7	54.38	17.838	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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													
Offset Wellbore Centre													
Distance													
No-Go													
Separation													
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
2,900.0	2,840.6	2,904.7	2,915.3	11.1	9.4	-27.82	424.7	1,315.9	980.9	961.3	19.55	50.161	
3,000.0	2,936.1	2,998.4	3,008.6	11.6	9.8	-28.40	418.0	1,311.2	947.1	926.9	20.28	46.711	
3,100.0	3,031.6	3,092.1	3,102.0	12.1	10.1	-29.02	411.3	1,306.5	913.5	892.5	21.00	43.492	
3,200.0	3,127.1	3,185.7	3,195.3	12.5	10.4	-29.69	404.7	1,301.9	880.0	858.3	21.74	40.485	
3,300.0	3,222.6	3,279.4	3,288.6	13.0	10.8	-30.41	398.0	1,297.2	846.6	824.1	22.47	37.674	
3,400.0	3,318.2	3,373.1	3,382.0	13.5	11.1	-31.19	391.3	1,292.5	813.3	790.1	23.21	35.044	
3,500.0	3,413.7	3,466.8	3,475.3	14.0	11.5	-32.04	384.6	1,287.8	780.2	756.2	23.95	32.580	
3,600.0	3,509.2	3,560.5	3,568.6	14.4	11.8	-32.96	377.9	1,283.1	747.2	722.5	24.68	30.270	
3,700.0	3,604.7	3,654.2	3,661.9	14.9	12.2	-33.96	371.2	1,278.4	714.4	689.0	25.42	28.104	
3,800.0	3,700.2	3,747.9	3,755.3	15.4	12.5	-35.06	364.5	1,273.7	681.9	655.7	26.15	26.071	
3,900.0	3,795.8	3,841.6	3,848.6	15.9	12.8	-36.26	357.8	1,269.1	649.5	622.7	26.88	24.164	
4,000.0	3,891.3	3,935.2	3,941.9	16.4	13.2	-37.59	351.1	1,264.4	617.5	589.9	27.60	22.373	
4,100.0	3,986.8	4,028.9	4,035.3	16.9	13.5	-39.06	344.5	1,259.7	585.8	557.5	28.31	20.694	
4,200.0	4,082.3	4,122.6	4,128.6	17.4	13.9	-40.69	337.8	1,255.0	554.6	525.6	29.00	19.120	
4,300.0	4,177.8	4,216.3	4,221.9	17.8	14.2	-42.50	331.1	1,250.3	523.7	494.1	29.68	17.647	
4,400.0	4,273.4	4,310.0	4,315.3	18.3	14.6	-44.54	324.4	1,245.6	493.5	463.1	30.33	16.272	
4,500.0	4,368.9	4,403.7	4,408.6	18.8	14.9	-46.83	317.7	1,241.0	463.9	432.9	30.94	14.993	
4,600.0	4,464.4	4,497.4	4,501.9	19.3	15.3	-49.41	311.0	1,236.3	435.0	403.5	31.50	13.809	
4,700.0	4,559.9	4,591.1	4,595.3	19.8	15.6	-52.33	304.3	1,231.6	407.2	375.2	32.01	12.721	
4,800.0	4,655.4	4,684.7	4,688.6	20.3	16.0	-55.65	297.6	1,226.9	380.5	348.1	32.44	11.731	
4,900.0	4,751.0	4,778.4	4,781.9	20.8	16.4	-59.43	290.9	1,222.2	355.3	322.5	32.77	10.843	
5,000.0	4,846.5	4,872.1	4,875.2	21.3	16.7	-63.72	284.3	1,217.5	331.8	298.9	32.98	10.062	
5,100.0	4,942.0	4,965.8	4,968.6	21.8	17.1	-68.58	277.6	1,212.9	310.6	277.5	33.05	9.396	
5,200.0	5,037.5	5,064.4	5,066.7	22.3	17.4	-74.37	270.2	1,207.7	291.5	258.6	32.94	8.851	
5,300.0	5,133.0	5,166.6	5,168.2	22.8	17.9	-81.36	259.9	1,200.5	273.1	240.4	32.68	8.357	
5,400.0	5,228.6	5,266.5	5,266.8	23.3	18.3	-89.41	247.1	1,191.5	255.9	223.6	32.32	7.920	
5,500.0	5,324.1	5,357.4	5,356.4	23.8	18.7	-97.72	234.1	1,182.5	243.0	211.0	32.06	7.580	
5,600.0	5,419.6	5,448.6	5,446.2	24.3	19.1	-106.62	221.2	1,173.4	236.7	204.6	32.04	7.386	
5,640.3	5,458.1	5,485.3	5,482.3	24.5	19.3	-110.29	216.0	1,169.7	236.1	203.9	32.15	7.343 CC, ES	
5,700.0	5,515.1	5,539.7	5,535.9	24.8	19.5	-115.71	208.2	1,164.3	237.3	204.9	32.45	7.313 SF	
5,800.0	5,610.6	5,630.9	5,625.7	25.3	19.9	-124.52	195.3	1,155.2	245.0	211.7	33.36	7.345	
5,900.0	5,706.2	5,722.0	5,715.4	25.8	20.3	-132.71	182.3	1,146.1	259.1	224.5	34.67	7.474	
6,000.0	5,801.7	5,813.2	5,805.2	26.3	20.7	-140.03	169.3	1,137.1	278.6	242.4	36.19	7.698	
6,100.0	5,897.2	5,904.3	5,894.9	26.8	21.1	-146.43	156.4	1,128.0	302.5	264.7	37.77	8.008	
6,200.0	5,992.7	5,995.4	5,984.7	27.3	21.5	-151.93	143.4	1,118.9	329.8	290.5	39.31	8.389	
6,300.0	6,088.2	6,086.6	6,074.5	27.8	21.9	-156.63	130.4	1,109.8	359.7	319.0	40.77	8.823	
6,400.0	6,183.8	6,177.7	6,164.2	28.3	22.3	-160.65	117.5	1,100.8	391.7	349.6	42.14	9.296	
6,500.0	6,279.3	6,268.9	6,254.0	28.8	22.7	-164.08	104.5	1,091.7	425.3	381.9	43.42	9.794	
6,600.0	6,374.8	6,360.0	6,343.7	29.3	23.1	-167.03	91.5	1,082.6	460.1	415.4	44.63	10.308	
6,700.0	6,470.3	6,451.1	6,433.5	29.8	23.5	-169.58	78.6	1,073.5	495.8	450.1	45.78	10.832	
6,800.0	6,565.9	6,542.3	6,523.2	30.4	24.0	-171.80	65.6	1,064.4	532.4	485.5	46.87	11.358	
6,900.0	6,661.4	6,633.4	6,613.0	30.9	24.4	-173.74	52.6	1,055.4	569.6	521.6	47.93	11.884	
7,000.0	6,756.9	6,724.6	6,702.8	31.4	24.8	-175.45	39.7	1,046.3	607.3	558.3	48.95	12.406	
7,100.0	6,852.4	6,815.7	6,792.5	31.9	25.2	-176.96	26.7	1,037.2	645.4	595.4	49.94	12.922	
7,200.0	6,947.9	6,906.9	6,882.3	32.4	25.6	-178.31	13.7	1,028.1	683.8	632.9	50.92	13.431	
7,300.0	7,043.5	6,998.0	6,972.0	32.9	26.0	-179.52	0.8	1,019.1	722.6	670.7	51.87	13.931	
7,400.0	7,139.0	7,089.1	7,061.8	33.4	26.4	-179.39	-12.2	1,010.0	761.6	708.8	52.81	14.422	
7,500.0	7,234.5	7,186.2	7,157.5	33.9	26.8	-178.37	-25.6	1,000.6	800.6	746.7	53.85	14.866	
7,600.0	7,330.0	7,286.7	7,256.8	34.4	27.3	-177.52	-38.2	991.8	838.8	783.9	54.93	15.270	
7,700.0	7,425.5	7,388.4	7,357.5	34.9	27.7	-176.84	-49.5	983.9	876.1	820.2	55.99	15.649	
7,782.5	7,504.4	7,473.1	7,441.6	35.3	28.0	-176.39	-57.7	978.1	906.3	849.4	56.84	15.944	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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:	WTF 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		Offset Wellbore Centre		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	
7,800.0	7,521.1	7,491.1	7,459.6	35.4	28.1	176.32	-59.4	976.9	912.5	855.5	57.02	16.005	
7,900.0	7,616.9	7,595.5	7,563.4	35.9	28.5	175.94	-67.9	971.0	946.8	888.8	58.03	16.316	
8,000.0	7,713.3	7,701.4	7,668.9	36.4	28.9	175.67	-74.9	966.1	978.4	919.4	59.01	16.580	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			Offset Wellbore Centre		Distance			Separation	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)	Factor		
2,500.0	2,458.5	2,631.7	2,629.4	9.4	9.3	-27.22	393.9	1,185.6	969.1	950.7	18.36	52.794		
2,600.0	2,554.0	2,721.4	2,717.7	9.8	9.7	-27.83	384.2	1,172.6	925.8	906.7	19.11	48.455		
2,700.0	2,649.5	2,811.1	2,805.9	10.2	10.1	-28.49	374.5	1,159.7	882.6	862.8	19.87	44.432		
2,800.0	2,745.0	2,900.7	2,894.1	10.7	10.4	-29.23	364.8	1,146.7	839.6	818.9	20.63	40.698		
2,900.0	2,840.6	2,990.4	2,982.3	11.1	10.8	-30.04	355.1	1,133.8	796.6	775.2	21.40	37.230		
3,000.0	2,936.1	3,080.1	3,070.6	11.6	11.2	-30.95	345.3	1,120.8	753.9	731.7	22.17	34.007		
3,100.0	3,031.6	3,169.8	3,158.8	12.1	11.6	-31.96	335.6	1,107.9	711.2	688.3	22.94	31.009		
3,200.0	3,127.1	3,259.5	3,247.0	12.5	12.0	-33.10	325.9	1,094.9	668.8	645.1	23.70	28.219		
3,300.0	3,222.6	3,349.2	3,335.2	13.0	12.3	-34.39	316.2	1,082.0	626.7	602.2	24.46	25.621		
3,400.0	3,318.2	3,438.9	3,423.4	13.5	12.7	-35.86	306.5	1,069.0	584.9	559.6	25.21	23.203		
3,500.0	3,413.7	3,528.6	3,511.7	14.0	13.1	-37.55	296.7	1,056.1	543.4	517.5	25.93	20.954		
3,600.0	3,509.2	3,618.3	3,599.9	14.4	13.5	-39.51	287.0	1,043.1	502.4	475.8	26.63	18.865		
3,700.0	3,604.7	3,708.0	3,688.1	14.9	13.9	-41.79	277.3	1,030.2	462.0	434.7	27.29	16.930		
3,800.0	3,700.2	3,797.7	3,776.3	15.4	14.3	-44.50	267.6	1,017.2	422.3	394.4	27.88	15.146		
3,900.0	3,795.8	3,887.4	3,864.5	15.9	14.7	-47.72	257.8	1,004.3	383.7	355.3	28.39	13.514		
4,000.0	3,891.3	3,977.1	3,952.8	16.4	15.1	-51.61	248.1	991.3	346.4	317.6	28.77	12.039		
4,100.0	3,986.8	4,066.8	4,041.0	16.9	15.5	-56.33	238.4	978.4	310.9	281.9	28.96	10.735		
4,200.0	4,082.3	4,156.5	4,129.2	17.4	15.9	-62.11	228.7	965.4	277.9	249.0	28.88	9.622		
4,300.0	4,177.8	4,246.2	4,217.4	17.8	16.3	-69.17	219.0	952.5	248.4	220.0	28.44	8.735		
4,400.0	4,273.4	4,335.9	4,305.6	18.3	16.7	-77.71	209.2	939.5	223.9	196.3	27.60	8.112		
4,500.0	4,368.9	4,425.5	4,393.9	18.8	17.1	-87.72	199.5	926.6	206.0	179.5	26.49	7.776		
4,600.0	4,464.4	4,515.2	4,482.1	19.3	17.5	-98.88	189.8	913.6	196.6	171.0	25.59	7.684 SF		
4,646.6	4,508.9	4,557.0	4,523.2	19.6	17.6	-104.28	185.3	907.6	195.5	170.1	25.44	7.688 CC, ES		
4,700.0	4,559.9	4,604.9	4,570.3	19.8	17.9	-110.46	180.1	900.7	197.0	171.4	25.56	7.705		
4,800.0	4,655.4	4,694.6	4,658.5	20.3	18.3	-121.56	170.3	887.7	207.0	180.3	26.69	7.754		
4,900.0	4,751.0	4,784.3	4,746.7	20.8	18.7	-131.48	160.6	874.8	225.4	196.7	28.62	7.875		
5,000.0	4,846.5	4,874.0	4,835.0	21.3	19.1	-139.91	150.9	861.9	250.3	219.5	30.80	8.126		
5,100.0	4,942.0	4,963.7	4,923.2	21.8	19.5	-146.88	141.2	848.9	280.0	247.1	32.91	8.510		
5,200.0	5,037.5	5,053.4	5,011.4	22.3	19.9	-152.58	131.5	836.0	313.2	278.4	34.82	8.996		
5,300.0	5,133.0	5,143.1	5,099.6	22.8	20.3	-157.24	121.7	823.0	348.9	312.3	36.53	9.551		
5,400.0	5,228.6	5,232.8	5,187.8	23.3	20.7	-161.08	112.0	810.1	386.3	348.2	38.06	10.149		
5,500.0	5,324.1	5,322.5	5,276.1	23.8	21.1	-164.26	102.3	797.1	425.0	385.5	39.46	10.771		
5,600.0	5,419.6	5,412.2	5,364.3	24.3	21.5	-166.93	92.6	784.2	464.7	423.9	40.75	11.404		
5,700.0	5,515.1	5,501.9	5,452.5	24.8	21.9	-169.20	82.9	771.2	505.1	463.2	41.96	12.039		
5,800.0	5,610.6	5,591.6	5,540.7	25.3	22.3	-171.13	73.1	758.3	546.2	503.1	43.11	12.670		
5,900.0	5,706.2	5,681.3	5,628.9	25.8	22.7	-172.81	63.4	745.3	587.7	543.5	44.21	13.293		
6,000.0	5,801.7	5,771.0	5,717.2	26.3	23.1	-174.26	53.7	732.4	629.5	584.3	45.27	13.905		
6,100.0	5,897.2	5,860.6	5,805.4	26.8	23.5	-175.54	44.0	719.4	671.7	625.4	46.31	14.505		
6,200.0	5,992.7	5,950.3	5,893.6	27.3	23.9	-176.67	34.2	706.5	714.1	666.8	47.32	15.092		
6,300.0	6,088.2	6,040.0	5,981.8	27.8	24.3	-177.67	24.5	693.5	756.7	708.4	48.31	15.665		
6,400.0	6,183.8	6,129.7	6,070.0	28.3	24.7	-178.57	14.8	680.6	799.5	750.3	49.28	16.223		
6,500.0	6,279.3	6,219.4	6,158.3	28.8	25.1	-179.38	5.1	667.6	842.5	792.2	50.25	16.767		
6,600.0	6,374.8	6,309.1	6,246.5	29.3	25.5	-179.89	-4.6	654.7	885.6	834.4	51.20	17.296		
6,700.0	6,470.3	6,398.8	6,334.7	29.8	25.9	-179.22	-14.4	641.7	928.7	876.6	52.14	17.811		
6,800.0	6,565.9	6,488.5	6,422.9	30.4	26.3	-178.62	-24.1	628.8	972.0	918.9	53.08	18.312		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			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	17.0	0.0	0.0	-55.52	199.4	-290.4	352.7				
100.0	100.0	83.0	100.0	0.8	1.0	-55.52	199.4	-290.4	352.3	350.0	2.24	157.142	
200.0	200.0	183.0	200.0	1.4	1.6	-55.52	199.4	-290.4	352.3	348.8	3.51	100.399	
300.0	300.0	283.0	300.0	1.9	2.0	-55.52	199.4	-290.4	352.3	347.9	4.35	80.948	
400.0	400.0	383.0	400.0	2.2	2.4	-55.52	199.4	-290.4	352.3	347.2	5.05	69.817	
500.0	500.0	483.0	500.0	2.6	2.7	-55.52	199.4	-290.4	352.3	346.6	5.65	62.332	
600.0	600.0	583.0	600.0	2.8	3.0	-55.52	199.4	-290.4	352.3	346.1	6.20	56.837	
700.0	700.0	683.0	700.0	3.1	3.2	-55.52	199.4	-290.4	352.3	345.6	6.70	52.573	
800.0	800.0	783.0	800.0	3.3	3.4	-55.52	199.4	-290.4	352.3	345.1	7.17	49.136	
900.0	900.0	883.0	900.0	3.6	3.7	-55.52	199.4	-290.4	352.3	344.7	7.61	46.285	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-55.52	199.4	-290.4	352.3	344.3	8.03	43.869 CC, ES	
1,100.0	1,100.0	1,090.4	1,107.4	4.1	4.1	-146.03	198.5	-289.9	352.9	344.3	8.54	41.312	
1,200.0	1,199.8	1,199.1	1,216.0	4.4	4.4	-146.85	194.9	-287.9	353.9	344.8	9.04	39.150	
1,300.0	1,299.5	1,307.6	1,324.3	4.7	4.6	-148.22	188.5	-284.6	355.4	345.9	9.56	37.194	
1,400.0	1,398.7	1,415.6	1,431.8	5.1	4.9	-150.12	179.5	-279.8	357.8	347.7	10.10	35.408	
1,500.0	1,497.5	1,523.1	1,538.4	5.4	5.2	-152.51	167.9	-273.6	361.2	350.6	10.69	33.799	
1,600.0	1,595.6	1,629.8	1,643.9	5.8	5.6	-155.35	153.7	-266.1	366.2	354.9	11.28	32.451	
1,700.0	1,693.1	1,730.4	1,743.1	6.2	5.8	-158.34	138.4	-257.9	373.4	361.6	11.86	31.488	
1,800.0	1,789.6	1,827.7	1,838.8	6.6	6.1	-161.28	123.5	-250.0	384.9	372.4	12.51	30.774	
1,860.7	1,847.8	1,886.4	1,896.7	6.8	6.3	-163.04	114.5	-245.2	393.9	381.1	12.84	30.673	
1,900.0	1,885.3	1,924.3	1,934.0	6.9	6.5	-164.19	108.7	-242.1	400.4	387.4	13.05	30.680	
2,000.0	1,980.9	2,020.8	2,029.0	7.3	6.8	-166.95	93.9	-234.3	417.6	403.9	13.66	30.577	
2,100.0	2,076.4	2,117.3	2,124.1	7.7	7.2	-169.49	79.1	-226.4	435.6	421.4	14.27	30.527	
2,200.0	2,171.9	2,213.8	2,219.1	8.1	7.5	-171.84	64.3	-218.5	454.5	439.6	14.89	30.520 SF	
2,300.0	2,267.4	2,310.3	2,314.2	8.5	7.9	-174.00	49.5	-210.7	474.0	458.5	15.52	30.549	
2,400.0	2,363.0	2,406.8	2,409.2	8.9	8.3	-176.00	34.7	-202.8	494.2	478.1	16.15	30.607	
2,500.0	2,458.5	2,503.3	2,504.2	9.4	8.6	-177.83	19.9	-194.9	514.9	498.2	16.78	30.686	
2,600.0	2,554.0	2,599.8	2,599.3	9.8	9.0	-179.53	5.1	-187.1	536.1	518.7	17.42	30.782	
2,700.0	2,649.5	2,696.3	2,694.3	10.2	9.4	-178.90	-9.7	-179.2	557.8	539.7	18.06	30.891	
2,800.0	2,745.0	2,792.8	2,789.3	10.7	9.8	-177.44	-24.5	-171.3	579.8	561.1	18.70	31.010	
2,900.0	2,840.6	2,889.3	2,884.4	11.1	10.2	-176.09	-39.3	-163.5	602.1	582.8	19.34	31.135	
3,000.0	2,936.1	2,985.6	2,979.1	11.6	10.6	-174.84	-54.0	-155.6	624.8	604.8	19.96	31.307	
3,100.0	3,031.6	3,080.0	3,072.3	12.1	11.0	-173.73	-68.1	-148.1	647.9	627.3	20.59	31.466	
3,200.0	3,127.1	3,174.5	3,165.5	12.5	11.4	-172.77	-81.4	-141.0	671.5	650.3	21.23	31.625	
3,300.0	3,222.6	3,269.0	3,259.0	13.0	11.8	-171.93	-94.1	-134.3	695.6	673.7	21.88	31.793	
3,400.0	3,318.2	3,363.6	3,352.5	13.5	12.2	-171.20	-106.2	-127.9	720.0	697.5	22.53	31.963	
3,500.0	3,413.7	3,458.1	3,446.1	14.0	12.6	-170.58	-117.5	-121.9	744.9	721.7	23.18	32.135	
3,600.0	3,509.2	3,552.6	3,539.8	14.4	12.9	-170.05	-128.2	-116.2	770.1	746.3	23.84	32.306	
3,700.0	3,604.7	3,647.0	3,633.6	14.9	13.3	-169.61	-138.1	-110.9	795.6	771.1	24.50	32.476	
3,800.0	3,700.2	3,741.4	3,727.4	15.4	13.7	-169.25	-147.4	-105.9	821.4	796.2	25.16	32.643	
3,900.0	3,795.8	3,835.8	3,821.3	15.9	14.1	-168.97	-156.0	-101.4	847.5	821.6	25.83	32.807	
4,000.0	3,891.3	3,930.1	3,915.1	16.4	14.4	-168.75	-163.9	-97.2	873.8	847.3	26.50	32.968	
4,100.0	3,986.8	4,024.3	4,009.0	16.9	14.8	-168.59	-171.2	-93.3	900.3	873.2	27.18	33.126	
4,200.0	4,082.3	4,118.4	4,102.8	17.4	15.1	-168.49	-177.7	-89.9	927.2	899.3	27.86	33.281	
4,300.0	4,177.8	4,212.4	4,196.5	17.8	15.5	-168.45	-183.5	-86.8	954.2	925.7	28.54	33.434	
4,400.0	4,273.4	4,306.2	4,290.2	18.3	15.8	-168.44	-188.7	-84.0	981.5	952.3	29.22	33.584	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	17.0	0.0	0.0	-58.11	199.4	-320.4	377.7				
100.0	100.0	83.0	100.0	0.8	1.0	-58.11	199.4	-320.4	377.4	375.1	2.24	168.325	
200.0	200.0	183.0	200.0	1.4	1.6	-58.11	199.4	-320.4	377.4	373.8	3.51	107.544	
300.0	300.0	283.0	300.0	1.9	2.0	-58.11	199.4	-320.4	377.4	373.0	4.35	86.708	
400.0	400.0	383.0	400.0	2.2	2.4	-58.11	199.4	-320.4	377.4	372.3	5.05	74.786	
500.0	500.0	483.0	500.0	2.6	2.7	-58.11	199.4	-320.4	377.4	371.7	5.65	66.767	
600.0	600.0	583.0	600.0	2.8	3.0	-58.11	199.4	-320.4	377.4	371.2	6.20	60.882	
700.0	700.0	683.0	700.0	3.1	3.2	-58.11	199.4	-320.4	377.4	370.7	6.70	56.315	
800.0	800.0	783.0	800.0	3.3	3.4	-58.11	199.4	-320.4	377.4	370.2	7.17	52.633	
900.0	900.0	883.0	900.0	3.6	3.7	-58.11	199.4	-320.4	377.4	369.7	7.61	49.579	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-58.11	199.4	-320.4	377.4	369.3	8.03	46.991 CC, ES	
1,100.0	1,100.0	1,083.0	1,100.0	4.1	4.1	-148.50	199.4	-320.4	378.8	370.3	8.51	44.502	
1,200.0	1,199.8	1,182.8	1,199.8	4.4	4.3	-148.86	199.4	-320.4	383.3	374.3	8.98	42.681	
1,300.0	1,299.5	1,282.5	1,299.5	4.7	4.4	-149.44	199.4	-320.4	390.8	381.3	9.45	41.339	
1,400.0	1,398.7	1,381.7	1,398.7	5.1	4.6	-150.22	199.4	-320.4	401.4	391.4	9.94	40.388	
1,500.0	1,497.5	1,480.5	1,497.5	5.4	4.8	-151.16	199.4	-320.4	415.0	404.6	10.44	39.765	
1,600.0	1,595.6	1,578.6	1,595.6	5.8	5.0	-152.21	199.4	-320.4	431.9	421.0	10.96	39.422	
1,700.0	1,693.1	1,676.1	1,693.1	6.2	5.1	-153.35	199.4	-320.4	452.0	440.5	11.50	39.321 SF	
1,800.0	1,789.6	1,772.6	1,789.6	6.6	5.3	-154.54	199.4	-320.4	475.4	463.4	12.06	39.434	
1,860.7	1,847.8	1,830.8	1,847.8	6.8	5.4	-155.26	199.4	-320.4	491.3	478.9	12.35	39.784	
1,900.0	1,885.3	1,868.3	1,885.3	6.9	5.4	-155.82	199.4	-320.4	501.9	489.4	12.53	40.067	
2,000.0	1,980.9	1,963.9	1,980.9	7.3	5.6	-157.12	199.4	-320.4	529.2	516.2	13.06	40.516	
2,100.0	2,076.4	2,059.4	2,076.4	7.7	5.7	-158.30	199.4	-320.4	556.8	543.2	13.62	40.896	
2,200.0	2,171.9	2,154.9	2,171.9	8.1	5.9	-159.36	199.4	-320.4	584.6	570.4	14.18	41.216	
2,300.0	2,267.4	2,250.4	2,267.4	8.5	6.0	-160.33	199.4	-320.4	612.5	597.7	14.76	41.484	
2,400.0	2,363.0	2,346.0	2,363.0	8.9	6.2	-161.22	199.4	-320.4	640.6	625.2	15.36	41.710	
2,500.0	2,458.5	2,441.5	2,458.5	9.4	6.3	-162.03	199.4	-320.4	668.8	652.8	15.96	41.898	
2,600.0	2,554.0	2,535.2	2,552.2	9.8	6.4	-162.78	199.2	-320.5	697.2	680.5	16.62	41.938	
2,700.0	2,649.5	2,625.5	2,642.5	10.2	6.6	-163.58	197.6	-321.5	726.2	709.0	17.22	42.181	
2,800.0	2,745.0	2,715.0	2,731.9	10.7	6.7	-164.48	194.3	-323.7	756.0	738.2	17.81	42.459	
2,900.0	2,840.6	2,803.6	2,820.2	11.1	6.8	-165.45	189.3	-327.0	786.7	768.3	18.40	42.750	
3,000.0	2,936.1	2,891.1	2,907.4	11.6	7.0	-166.49	182.6	-331.3	818.4	799.4	19.01	43.059	
3,100.0	3,031.6	2,977.5	2,993.3	12.1	7.1	-167.57	174.4	-336.6	851.1	831.5	19.61	43.393	
3,200.0	3,127.1	3,062.8	3,077.8	12.5	7.3	-168.68	164.7	-342.9	884.9	864.7	20.22	43.756	
3,300.0	3,222.6	3,146.9	3,160.8	13.0	7.5	-169.82	153.5	-350.1	919.9	899.1	20.82	44.184	
3,400.0	3,318.2	3,236.3	3,248.8	13.5	7.6	-171.03	140.6	-358.6	955.8	934.3	21.44	44.570	
3,500.0	3,413.7	3,327.6	3,338.7	14.0	7.9	-172.19	127.3	-367.2	992.1	970.0	22.11	44.868	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	17.0	0.0	0.0	-60.36	199.4	-350.4	403.5				
100.0	100.0	83.0	100.0	0.8	1.0	-60.36	199.4	-350.4	403.1	400.9	2.24	179.822	
200.0	200.0	183.0	200.0	1.4	1.6	-60.36	199.4	-350.4	403.1	399.6	3.51	114.890	
300.0	300.0	283.0	300.0	1.9	2.0	-60.36	199.4	-350.4	403.1	398.8	4.35	92.631	
400.0	400.0	383.0	400.0	2.2	2.4	-60.36	199.4	-350.4	403.1	398.1	5.05	79.894	
500.0	500.0	483.0	500.0	2.6	2.7	-60.36	199.4	-350.4	403.1	397.5	5.65	71.328	
600.0	600.0	583.0	600.0	2.8	3.0	-60.36	199.4	-350.4	403.1	396.9	6.20	65.040	
700.0	700.0	683.0	700.0	3.1	3.2	-60.36	199.4	-350.4	403.1	396.4	6.70	60.161	
800.0	800.0	783.0	800.0	3.3	3.4	-60.36	199.4	-350.4	403.1	396.0	7.17	56.228	
900.0	900.0	883.0	900.0	3.6	3.7	-60.36	199.4	-350.4	403.1	395.5	7.61	52.965	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-60.36	199.4	-350.4	403.1	395.1	8.03	50.200 CC, ES	
1,100.0	1,100.0	1,078.6	1,095.6	4.1	4.1	-150.82	199.0	-351.1	405.1	396.6	8.51	47.588	
1,200.0	1,199.8	1,172.9	1,189.9	4.4	4.3	-151.47	197.5	-353.8	411.4	402.5	8.97	45.864	
1,300.0	1,299.5	1,266.4	1,283.2	4.7	4.5	-152.52	194.9	-358.5	422.2	412.8	9.44	44.712	
1,400.0	1,398.7	1,358.6	1,375.1	5.1	4.8	-153.90	191.2	-365.1	437.7	427.8	9.94	44.030	
1,500.0	1,497.5	1,449.1	1,465.1	5.4	5.0	-155.52	186.6	-373.5	458.0	447.6	10.47	43.755 SF	
1,600.0	1,595.6	1,537.6	1,552.8	5.8	5.3	-157.28	181.0	-383.4	483.4	472.3	11.03	43.834	
1,700.0	1,693.1	1,625.8	1,640.0	6.2	5.6	-159.16	174.6	-395.0	513.8	502.2	11.62	44.207	
1,800.0	1,789.6	1,717.6	1,730.7	6.6	5.9	-161.06	167.6	-407.6	548.3	536.1	12.26	44.713	
1,860.7	1,847.8	1,772.7	1,785.1	6.8	6.0	-162.14	163.5	-415.1	571.1	558.5	12.61	45.277	
1,900.0	1,885.3	1,808.2	1,820.2	6.9	6.2	-162.90	160.8	-420.0	586.4	573.6	12.83	45.696	
2,000.0	1,980.9	1,898.5	1,909.4	7.3	6.4	-164.68	153.9	-432.4	625.6	612.1	13.47	46.458	
2,100.0	2,076.4	1,988.8	1,998.6	7.7	6.8	-166.25	147.1	-444.7	665.2	651.1	14.13	47.093	
2,200.0	2,171.9	2,079.1	2,087.8	8.1	7.1	-167.65	140.2	-457.1	705.2	690.4	14.81	47.623	
2,300.0	2,267.4	2,169.4	2,177.0	8.5	7.4	-168.91	133.4	-469.4	745.6	730.1	15.51	48.062	
2,400.0	2,363.0	2,259.7	2,266.1	8.9	7.7	-170.03	126.5	-481.8	786.2	770.0	16.24	48.427	
2,500.0	2,458.5	2,350.0	2,355.3	9.4	8.1	-171.05	119.7	-494.1	827.1	810.1	16.97	48.729	
2,600.0	2,554.0	2,440.3	2,444.5	9.8	8.4	-171.98	112.8	-506.5	868.2	850.4	17.73	48.978	
2,700.0	2,649.5	2,530.6	2,533.7	10.2	8.8	-172.82	106.0	-518.8	909.4	890.9	18.49	49.184	
2,800.0	2,745.0	2,621.0	2,622.9	10.7	9.1	-173.59	99.1	-531.2	950.8	931.5	19.27	49.353	
2,900.0	2,840.6	2,711.3	2,712.1	11.1	9.5	-174.29	92.3	-543.6	992.3	972.3	20.05	49.492	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 909H - OWB - PWP0													Offset Site Error:	0.0 usft	
Survey Program:		0-r.5 MWD+IFR1+MS				Semi Major Axis		Offset Wellbore Centre		Rule Assigned:		Distance		Offset Well Error:	0.0 usft
Reference	Vertical	Measured	Vertical	Reference	Offset	Highside			Between	Between	No-Go	Separation			
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Distance	Factor	Warning		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)				
0.0	0.0	0.0	17.0	0.0	0.0	-62.34	199.4	-380.4	429.8						
100.0	100.0	83.0	100.0	0.8	1.0	-62.34	199.4	-380.4	429.5	427.2	2.24	191.571			
200.0	200.0	183.0	200.0	1.4	1.6	-62.34	199.4	-380.4	429.5	426.0	3.51	122.396			
300.0	300.0	283.0	300.0	1.9	2.0	-62.34	199.4	-380.4	429.5	425.1	4.35	98.683			
400.0	400.0	383.0	400.0	2.2	2.4	-62.34	199.4	-380.4	429.5	424.4	5.05	85.114			
500.0	500.0	483.0	500.0	2.6	2.7	-62.34	199.4	-380.4	429.5	423.8	5.65	75.988			
600.0	600.0	583.0	600.0	2.8	3.0	-62.34	199.4	-380.4	429.5	423.3	6.20	69.289			
700.0	700.0	683.0	700.0	3.1	3.2	-62.34	199.4	-380.4	429.5	422.8	6.70	64.092			
800.0	800.0	783.0	800.0	3.3	3.4	-62.34	199.4	-380.4	429.5	422.3	7.17	59.901			
900.0	900.0	883.0	900.0	3.6	3.7	-62.34	199.4	-380.4	429.5	421.9	7.61	56.426			
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-62.34	199.4	-380.4	429.5	421.4	8.03	53.480 CC, ES			
1,100.0	1,100.0	1,077.0	1,094.0	4.1	4.1	-152.76	199.1	-381.1	431.6	423.1	8.52	50.652			
1,200.0	1,199.8	1,169.4	1,186.3	4.4	4.3	-153.27	198.1	-383.9	438.5	429.5	8.99	48.768			
1,300.0	1,299.5	1,260.9	1,277.7	4.7	4.5	-154.10	196.5	-388.8	450.2	440.8	9.48	47.508			
1,400.0	1,398.7	1,351.1	1,367.6	5.1	4.8	-155.19	194.1	-395.6	467.0	457.0	9.99	46.755			
1,500.0	1,497.5	1,439.7	1,455.7	5.4	5.0	-156.47	191.1	-404.3	488.8	478.2	10.53	46.438 SF			
1,600.0	1,595.6	1,526.2	1,541.5	5.8	5.3	-157.86	187.6	-414.6	515.7	504.6	11.09	46.489			
1,700.0	1,693.1	1,610.4	1,624.8	6.2	5.6	-159.31	183.5	-426.4	547.8	536.1	11.69	46.873			
1,800.0	1,789.6	1,691.8	1,705.0	6.6	5.8	-160.74	179.0	-439.5	585.1	572.8	12.31	47.547			
1,860.7	1,847.8	1,739.9	1,752.2	6.8	6.0	-161.59	176.1	-447.9	610.3	597.6	12.64	48.276			
1,900.0	1,885.3	1,770.4	1,782.2	6.9	6.1	-162.24	174.2	-453.6	627.3	614.5	12.85	48.829			
2,000.0	1,980.9	1,854.1	1,864.1	7.3	6.4	-163.92	168.5	-469.9	671.8	658.3	13.47	49.872			
2,100.0	2,076.4	1,941.7	1,949.8	7.7	6.7	-165.48	162.6	-487.2	716.8	702.7	14.14	50.691			
2,200.0	2,171.9	2,029.3	2,035.5	8.1	7.0	-166.85	156.7	-504.4	762.2	747.4	14.84	51.374			
2,300.0	2,267.4	2,117.0	2,121.2	8.5	7.4	-168.08	150.7	-521.6	808.0	792.4	15.56	51.941			
2,400.0	2,363.0	2,204.6	2,206.9	8.9	7.7	-169.18	144.8	-538.8	854.0	837.7	16.29	52.413			
2,500.0	2,458.5	2,292.2	2,292.6	9.4	8.0	-170.16	138.9	-556.1	900.2	883.2	17.05	52.802			
2,600.0	2,554.0	2,379.8	2,378.3	9.8	8.4	-171.06	132.9	-573.3	946.6	928.8	17.82	53.125			
2,700.0	2,649.5	2,467.5	2,464.0	10.2	8.7	-171.87	127.0	-590.5	993.2	974.6	18.60	53.393			

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 910H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10273-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	17.0	0.0	0.0	-64.09	199.4	-410.4	456.6				
100.0	100.0	83.0	100.0	0.8	1.0	-64.09	199.4	-410.4	456.2	454.0	2.24	203.516	
200.0	200.0	183.0	200.0	1.4	1.6	-64.09	199.4	-410.4	456.2	452.7	3.51	130.028	
300.0	300.0	283.0	300.0	1.9	2.0	-64.09	199.4	-410.4	456.2	451.9	4.35	104.836	
400.0	400.0	383.0	400.0	2.2	2.4	-64.09	199.4	-410.4	456.2	451.2	5.05	90.421	
500.0	500.0	483.0	500.0	2.6	2.7	-64.09	199.4	-410.4	456.2	450.6	5.65	80.726	
600.0	600.0	583.0	600.0	2.8	3.0	-64.09	199.4	-410.4	456.2	450.0	6.20	73.610	
700.0	700.0	683.0	700.0	3.1	3.2	-64.09	199.4	-410.4	456.2	449.5	6.70	68.088	
800.0	800.0	783.0	800.0	3.3	3.4	-64.09	199.4	-410.4	456.2	449.1	7.17	63.637	
900.0	900.0	883.0	900.0	3.6	3.7	-64.09	199.4	-410.4	456.2	448.6	7.61	59.944	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-64.09	199.4	-410.4	456.2	448.2	8.03	56.815 CC, ES	
1,100.0	1,100.0	1,076.1	1,093.1	4.1	4.1	-154.49	199.2	-411.1	458.4	449.9	8.52	53.779	
1,200.0	1,199.8	1,167.3	1,184.3	4.4	4.3	-154.92	198.4	-413.9	465.6	456.6	8.99	51.762	
1,300.0	1,299.5	1,257.7	1,274.5	4.7	4.5	-155.61	197.1	-418.8	477.8	468.3	9.47	50.449	
1,400.0	1,398.7	1,346.9	1,363.4	5.1	4.7	-156.52	195.3	-425.6	495.0	485.1	9.96	49.711	
1,500.0	1,497.5	1,434.4	1,450.5	5.4	4.9	-157.60	193.0	-434.2	517.5	507.0	10.46	49.463 SF	
1,600.0	1,595.6	1,519.9	1,535.3	5.8	5.0	-158.77	190.2	-444.5	545.1	534.1	10.98	49.647	
1,700.0	1,693.1	1,600.0	1,614.5	6.2	5.2	-159.94	187.2	-455.8	577.9	566.4	11.50	50.260	
1,800.0	1,789.6	1,683.5	1,696.9	6.6	5.4	-161.21	183.6	-469.3	615.8	603.8	12.05	51.088	
1,860.7	1,847.8	1,731.0	1,743.5	6.8	5.5	-161.93	181.3	-477.7	641.3	629.0	12.33	51.992	
1,900.0	1,885.3	1,761.2	1,773.2	6.9	5.5	-162.50	179.8	-483.4	658.6	646.1	12.50	52.668	
2,000.0	1,980.9	1,837.0	1,847.3	7.3	5.7	-163.87	175.7	-498.6	703.9	690.9	12.99	54.176	
2,100.0	2,076.4	1,911.1	1,919.5	7.7	5.8	-165.13	171.4	-514.9	751.1	737.6	13.48	55.720	
2,200.0	2,171.9	1,984.3	1,990.5	8.1	6.0	-166.30	166.7	-532.2	800.1	786.1	13.94	57.381	
2,300.0	2,267.4	2,069.5	2,072.8	8.5	6.1	-167.55	161.1	-553.1	850.1	835.6	14.51	58.583	
2,400.0	2,363.0	2,154.6	2,155.2	8.9	6.3	-168.66	155.5	-574.0	900.3	885.2	15.10	59.637	
2,500.0	2,458.5	2,239.8	2,237.6	9.4	6.4	-169.66	149.9	-594.8	950.8	935.2	15.69	60.603	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
5,800.0	5,610.6	5,613.7	5,619.2	25.3	20.1	-25.18	394.6	2,200.2	990.7	946.3	44.38	22.326	
5,900.0	5,706.2	5,708.4	5,713.8	25.8	20.5	-25.84	393.1	2,200.0	963.0	917.9	45.12	21.343	
6,000.0	5,801.7	5,802.9	5,808.3	26.3	20.8	-26.53	391.6	2,199.9	935.5	889.6	45.86	20.399	
6,100.0	5,897.2	5,898.9	5,904.4	26.8	21.1	-27.26	389.8	2,200.0	908.1	861.5	46.58	19.495	
6,200.0	5,992.7	5,993.3	5,998.7	27.3	21.5	-28.01	388.0	2,200.1	880.9	833.6	47.31	18.622	
6,300.0	6,088.2	6,088.4	6,093.8	27.8	21.8	-28.81	386.2	2,200.3	854.0	806.0	48.02	17.785	
6,400.0	6,183.8	6,182.8	6,188.2	28.3	22.1	-29.66	384.4	2,200.6	827.3	778.6	48.72	16.981	
6,500.0	6,279.3	6,278.5	6,283.9	28.8	22.4	-30.57	382.6	2,201.0	800.9	751.5	49.40	16.211	
6,600.0	6,374.8	6,373.7	6,379.0	29.3	22.8	-31.51	380.6	2,201.5	774.7	724.6	50.08	15.469	
6,700.0	6,470.3	6,466.4	6,471.7	29.8	23.1	-32.48	378.5	2,202.3	748.9	698.1	50.75	14.755	
6,800.0	6,565.9	7,609.3	7,163.7	30.4	27.5	-116.01	377.9	1,580.3	711.4	677.3	34.04	20.895	
6,900.0	6,661.4	7,577.4	7,165.0	30.9	27.2	-112.33	376.8	1,612.2	633.6	597.8	35.78	17.709	
7,000.0	6,756.9	7,544.6	7,166.2	31.4	26.8	-108.32	375.8	1,645.0	561.0	523.1	37.90	14.803	
7,100.0	6,852.4	7,511.4	7,167.5	31.9	26.4	-104.05	374.8	1,678.0	495.7	455.3	40.43	12.262	
7,200.0	6,947.9	7,476.8	7,168.9	32.4	26.1	-99.39	373.8	1,712.6	441.1	397.9	43.20	10.211	
7,300.0	7,043.5	7,441.0	7,169.7	32.9	25.7	-94.37	372.7	1,748.5	401.3	355.5	45.78	8.767	
7,400.0	7,139.0	7,410.3	7,169.0	33.4	25.5	-89.95	371.9	1,779.1	381.5	334.1	47.41	8.047	
7,433.7	7,171.1	7,401.6	7,168.5	33.6	25.4	-88.67	371.6	1,787.8	380.1	332.5	47.57	7.991 CC, ES, SF	
7,500.0	7,234.5	7,386.9	7,167.5	33.9	25.3	-86.52	371.2	1,802.4	385.5	338.4	47.19	8.170	
7,600.0	7,330.0	7,367.0	7,165.7	34.4	25.1	-83.60	370.7	1,822.2	413.3	368.2	45.17	9.151	
7,700.0	7,425.5	7,351.2	7,164.0	34.9	25.0	-81.28	370.2	1,838.0	460.8	418.5	42.28	10.898	
7,782.5	7,504.4	7,338.4	7,162.6	35.3	24.9	-79.43	369.9	1,850.7	511.0	471.1	39.90	12.807	
7,800.0	7,521.1	7,335.0	7,162.2	35.4	24.9	-79.09	369.8	1,854.0	522.7	483.2	39.43	13.255	
7,900.0	7,616.9	7,325.5	7,160.9	35.9	24.8	-78.74	369.5	1,863.5	594.8	557.8	37.00	16.073	
8,000.0	7,713.3	7,318.0	7,159.9	36.4	24.8	-78.93	369.3	1,870.9	674.1	639.0	35.10	19.205	
8,100.0	7,810.1	7,312.5	7,159.0	36.9	24.7	-79.68	369.1	1,876.3	758.3	724.7	33.66	22.528	
8,200.0	7,907.3	7,304.0	7,157.6	37.4	24.7	-80.23	368.8	1,884.7	846.1	813.5	32.63	25.935	
8,300.0	8,004.9	7,304.0	7,157.6	37.9	24.7	-82.31	368.8	1,884.7	936.5	904.6	31.85	29.399	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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												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		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,300.0	5,133.0	5,151.3	5,143.6	22.8	4.9	-20.68	326.7	2,084.2	995.2	963.1	32.04	31.060	
5,400.0	5,228.6	5,250.6	5,243.0	23.3	5.0	-21.29	325.8	2,083.3	966.2	933.6	32.64	29.606	
5,500.0	5,324.1	5,344.7	5,337.0	23.8	5.1	-21.89	324.7	2,082.2	937.1	903.9	33.27	28.170	
5,600.0	5,419.6	5,442.7	5,435.1	24.3	5.2	-22.56	323.4	2,080.9	907.8	874.0	33.86	26.814	
5,700.0	5,515.1	5,538.7	5,531.1	24.8	5.3	-23.26	322.3	2,079.7	878.9	844.4	34.46	25.508	
5,800.0	5,610.6	5,632.8	5,625.1	25.3	5.4	-23.98	321.0	2,078.3	849.8	814.7	35.06	24.234	
5,900.0	5,706.2	5,733.0	5,725.2	25.8	5.5	-24.82	319.6	2,076.6	820.6	785.0	35.60	23.053	
6,000.0	5,801.7	5,828.2	5,820.5	26.3	5.6	-25.67	318.1	2,074.8	791.3	755.2	36.17	21.880	
6,100.0	5,897.2	5,923.9	5,916.1	26.8	5.7	-26.56	316.4	2,073.1	762.2	725.5	36.72	20.758	
6,200.0	5,992.7	6,016.9	6,009.1	27.3	5.7	-27.49	314.5	2,071.4	733.2	695.9	37.29	19.663	
6,300.0	6,088.2	6,112.1	6,104.2	27.8	5.8	-28.49	312.5	2,070.0	704.6	666.8	37.81	18.633	
6,400.0	6,183.8	6,205.2	6,197.3	28.3	5.9	-29.54	310.5	2,068.9	676.4	638.1	38.35	17.639	
6,500.0	6,279.3	6,298.5	6,290.6	28.8	6.0	-30.64	308.2	2,068.1	648.7	609.8	38.86	16.691	
6,600.0	6,374.8	6,393.2	6,385.3	29.3	6.1	-31.85	306.0	2,067.5	621.4	582.1	39.33	15.800	
6,700.0	6,470.3	6,488.7	6,480.8	29.8	6.2	-33.17	303.7	2,067.0	594.5	554.7	39.75	14.955	
6,800.0	6,565.9	6,586.3	6,578.4	30.4	6.3	-34.65	301.3	2,066.3	567.7	527.6	40.10	14.158	
6,900.0	6,661.4	6,677.5	6,669.5	30.9	6.4	-36.17	298.9	2,065.5	541.1	500.6	40.51	13.357	
7,000.0	6,756.9	6,770.8	6,762.7	31.4	6.5	-37.69	295.8	2,066.4	515.9	475.0	40.87	12.622	
7,100.0	6,852.4	6,854.0	6,845.9	31.9	6.6	-39.30	294.4	2,067.2	492.1	450.8	41.34	11.905	
7,200.0	6,947.9	6,944.8	6,936.6	32.4	6.6	-41.31	294.9	2,069.3	471.3	429.7	41.56	11.339	
7,300.0	7,043.5	7,042.0	7,033.9	32.9	6.6	-43.82	296.6	2,070.6	451.2	409.7	41.53	10.864	
7,400.0	7,139.0	7,136.7	7,128.5	33.4	6.6	-46.29	297.3	2,073.1	432.2	390.6	41.51	10.410	
7,500.0	7,234.5	7,232.6	7,224.3	33.9	6.6	-49.14	298.8	2,074.8	414.1	372.8	41.33	10.020	
7,600.0	7,330.0	7,330.4	7,322.2	34.4	6.6	-52.62	301.5	2,074.8	397.1	356.2	40.92	9.704	
7,700.0	7,425.5	7,428.7	7,420.4	34.9	6.6	-55.89	301.7	2,077.1	380.9	340.4	40.52	9.401	
7,782.5	7,504.4	7,511.0	7,502.7	35.3	6.7	-58.73	301.1	2,079.4	368.0	327.9	40.11	9.175	
7,800.0	7,521.1	7,527.9	7,519.5	35.4	6.7	-59.31	300.9	2,079.8	365.4	325.3	40.03	9.127	
7,900.0	7,616.9	7,626.1	7,617.7	35.9	6.8	-62.74	299.8	2,082.1	351.3	311.9	39.41	8.913	
8,000.0	7,713.3	7,738.6	7,730.1	36.4	6.9	-66.32	295.6	2,085.9	337.7	298.9	38.80	8.705	
8,100.0	7,810.1	7,845.1	7,835.0	36.9	7.0	-67.68	282.4	2,097.6	320.7	282.0	38.73	8.280	
8,200.0	7,907.3	7,990.5	7,971.9	37.4	7.3	-64.90	246.6	2,129.3	298.6	259.8	38.79	7.699	
8,300.0	8,004.9	8,133.3	8,085.6	37.9	7.7	-52.50	174.4	2,174.4	258.5	217.6	40.90	6.320	
8,400.0	8,102.9	8,228.3	8,141.4	38.4	8.0	-34.91	107.5	2,211.5	218.1	170.5	47.64	4.579	
8,494.5	8,195.8	8,281.5	8,163.0	38.8	8.1	-21.70	64.0	2,233.3	201.3	146.6	54.77	3.676 CC	
8,500.0	8,201.2	8,284.1	8,163.9	38.8	8.1	-21.03	61.8	2,234.3	201.4	146.3	55.05	3.658 ES, SF	
8,600.0	8,299.8	8,322.0	8,175.3	39.3	8.2	-11.12	28.7	2,248.8	224.2	168.4	55.78	4.020	
8,700.0	8,398.7	8,341.0	8,179.6	39.7	8.2	-6.21	11.6	2,255.7	280.9	229.6	51.29	5.477	
8,800.0	8,497.8	8,354.0	8,182.0	40.1	8.2	-2.87	-0.4	2,260.4	357.0	310.1	46.89	7.613	
8,900.0	8,597.2	8,354.0	8,182.0	40.6	8.2	-2.96	-0.4	2,260.4	443.2	399.7	43.52	10.184	
9,000.0	8,696.7	8,372.0	8,184.5	41.0	8.2	1.85	-16.9	2,267.0	534.2	492.4	41.78	12.786	
9,100.0	8,796.4	8,378.2	8,185.2	41.3	8.2	3.64	-22.6	2,269.2	628.5	588.0	40.46	15.533	
9,200.0	8,896.2	8,383.1	8,185.7	41.7	8.2	5.27	-27.1	2,271.0	724.7	685.1	39.61	18.294	
9,300.0	8,996.1	8,386.9	8,186.1	42.0	8.2	6.85	-30.7	2,272.5	822.1	783.0	39.08	21.036	
9,400.0	9,096.1	8,405.0	8,187.3	42.3	8.3	13.01	-47.5	2,279.1	920.7	881.7	38.98	23.617	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	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
5,300.0	5,133.0	5,151.3	5,143.6	22.8	4.9	-20.68	326.7	2,084.2	995.2	963.1	32.04	31.060	
5,400.0	5,228.6	5,250.6	5,243.0	23.3	5.0	-21.29	325.8	2,083.3	966.2	933.6	32.64	29.606	
5,500.0	5,324.1	5,344.7	5,337.0	23.8	5.1	-21.89	324.7	2,082.2	937.1	903.9	33.27	28.170	
5,600.0	5,419.6	5,442.7	5,435.1	24.3	5.2	-22.56	323.4	2,080.9	907.8	874.0	33.86	26.814	
5,700.0	5,515.1	5,538.7	5,531.1	24.8	5.3	-23.26	322.3	2,079.7	878.9	844.4	34.46	25.508	
5,800.0	5,610.6	5,632.8	5,625.1	25.3	5.4	-23.98	321.0	2,078.3	849.8	814.7	35.06	24.234	
5,900.0	5,706.2	5,733.0	5,725.2	25.8	5.5	-24.82	319.6	2,076.6	820.6	785.0	35.60	23.053	
6,000.0	5,801.7	5,828.2	5,820.5	26.3	5.6	-25.67	318.1	2,074.8	791.3	755.2	36.17	21.880	
6,100.0	5,897.2	5,923.9	5,916.1	26.8	5.7	-26.56	316.4	2,073.1	762.2	725.5	36.72	20.758	
6,200.0	5,992.7	6,016.9	6,009.1	27.3	5.7	-27.49	314.5	2,071.4	733.2	695.9	37.29	19.663	
6,300.0	6,088.2	6,112.1	6,104.2	27.8	5.8	-28.49	312.5	2,070.0	704.6	666.8	37.81	18.633	
6,400.0	6,183.8	6,205.2	6,197.3	28.3	5.9	-29.54	310.5	2,068.9	676.4	638.1	38.35	17.639	
6,500.0	6,279.3	6,298.5	6,290.6	28.8	6.0	-30.64	308.2	2,068.1	648.7	609.8	38.86	16.691	
6,600.0	6,374.8	6,393.2	6,385.3	29.3	6.1	-31.85	306.0	2,067.5	621.4	582.1	39.33	15.800	
6,700.0	6,470.3	6,488.7	6,480.8	29.8	6.2	-33.17	303.7	2,067.0	594.5	554.7	39.75	14.955	
6,800.0	6,565.9	6,586.3	6,578.4	30.4	6.3	-34.65	301.3	2,066.3	567.7	527.6	40.10	14.158	
6,900.0	6,661.4	6,677.5	6,669.5	30.9	6.4	-36.17	298.9	2,065.5	541.1	500.6	40.51	13.357	
7,000.0	6,756.9	6,770.8	6,762.7	31.4	6.5	-37.69	295.8	2,066.4	515.9	475.0	40.87	12.622	
7,100.0	6,852.4	6,854.0	6,845.9	31.9	6.6	-39.30	294.4	2,067.2	492.1	450.8	41.34	11.905	
7,200.0	6,947.9	6,944.8	6,936.6	32.4	6.6	-41.31	294.9	2,069.3	471.3	429.7	41.56	11.339	
7,300.0	7,043.5	7,042.0	7,033.9	32.9	6.6	-43.82	296.6	2,070.6	451.2	409.7	41.53	10.864	
7,400.0	7,139.0	7,111.7	7,103.5	33.4	6.6	-45.60	297.9	2,073.4	434.1	392.8	41.39	10.488	
7,500.0	7,234.5	7,206.9	7,198.2	33.9	6.8	-48.01	302.6	2,081.7	423.0	381.5	41.56	10.180	
7,600.0	7,330.0	7,307.2	7,298.2	34.4	6.9	-51.09	308.0	2,087.0	411.0	369.5	41.47	9.910	
7,700.0	7,425.5	7,403.9	7,394.6	34.9	7.1	-54.34	314.2	2,091.7	400.7	359.5	41.21	9.724	
7,782.5	7,504.4	7,487.1	7,477.6	35.3	7.2	-57.32	319.2	2,095.0	392.7	351.9	40.83	9.618	
7,800.0	7,521.1	7,504.8	7,495.2	35.4	7.3	-57.96	320.3	2,095.6	391.0	350.3	40.74	9.599	
7,900.0	7,616.9	7,606.0	7,596.3	35.9	7.4	-61.61	325.5	2,098.7	382.4	342.2	40.23	9.505	
8,000.0	7,713.3	7,709.2	7,699.3	36.4	7.6	-65.34	329.9	2,100.6	374.8	335.1	39.69	9.444	
8,100.0	7,810.1	7,809.5	7,799.5	36.9	7.7	-68.99	333.3	2,101.2	368.2	329.1	39.17	9.402	
8,200.0	7,907.3	7,996.4	7,983.3	37.4	7.8	-72.10	308.2	2,114.3	349.4	311.9	37.58	9.299	
8,300.0	8,004.9	8,139.6	8,112.6	37.9	7.7	-68.78	253.9	2,140.5	312.3	275.0	37.30	8.373	
8,400.0	8,102.9	8,244.4	8,197.7	38.4	7.8	-60.95	200.4	2,170.1	268.8	229.8	39.02	6.890	
8,500.0	8,201.2	8,332.4	8,262.0	38.8	7.9	-49.29	148.2	2,199.8	226.0	182.7	43.32	5.217	
8,600.0	8,299.8	8,419.5	8,319.0	39.3	8.0	-32.34	90.6	2,231.5	194.2	143.6	50.64	3.836	
8,670.9	8,369.9	8,465.3	8,344.9	39.6	8.1	-21.30	56.9	2,248.3	185.4	129.5	55.89	3.318 CC, ES	
8,700.0	8,398.7	8,479.0	8,352.0	39.7	8.1	-17.83	46.3	2,253.5	187.1	129.9	57.19	3.271 SF	
8,800.0	8,497.8	8,527.0	8,374.4	40.1	8.3	-5.63	8.3	2,272.2	217.2	160.0	57.19	3.798	
8,900.0	8,597.2	8,566.3	8,391.3	40.6	8.4	3.54	-23.3	2,288.5	275.6	222.1	53.56	5.147	
9,000.0	8,696.7	8,598.8	8,404.8	41.0	8.5	10.26	-49.2	2,302.6	349.0	298.8	50.14	6.960	
9,100.0	8,796.4	8,623.0	8,413.8	41.3	8.6	15.01	-69.0	2,313.3	431.3	383.8	47.51	9.078	
9,200.0	8,896.2	8,642.0	8,420.1	41.7	8.7	18.76	-84.8	2,321.8	518.9	473.3	45.63	11.373	
9,300.0	8,996.1	8,657.4	8,424.6	42.0	8.7	21.97	-97.8	2,328.6	610.1	565.8	44.31	13.770	
9,400.0	9,096.1	8,670.0	8,428.0	42.3	8.8	24.92	-108.6	2,334.2	703.6	660.2	43.39	16.215	
9,500.0	9,196.1	8,670.0	8,428.0	42.5	8.8	26.29	-108.6	2,334.2	798.9	756.4	42.56	18.774	
9,503.9	9,200.0	8,682.6	8,431.2	42.5	8.8	118.44	-119.5	2,339.7	802.5	759.7	42.77	18.764	
9,600.0	9,296.1	8,692.8	8,433.5	42.5	8.9	119.81	-128.4	2,344.1	894.8	852.5	42.33	21.139	
9,700.0	9,396.1	8,702.1	8,435.5	42.5	8.9	120.99	-136.5	2,348.1	991.5	949.5	42.00	23.606	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	4.0	0.0	0.0	-90.16	-1.2	-409.9	409.9					
100.0	100.0	96.0	100.0	0.8	0.5	-90.16	-1.2	-409.9	409.9	408.2	1.75	234.538		
200.0	200.0	196.0	200.0	1.4	1.0	-90.16	-1.2	-409.9	409.9	407.0	2.91	140.839		
300.0	300.0	296.0	300.0	1.9	1.4	-90.16	-1.2	-409.9	409.9	406.2	3.69	111.188		
400.0	400.0	396.0	400.0	2.2	1.6	-90.16	-1.2	-409.9	409.9	405.6	4.31	95.087		
500.0	500.0	496.0	500.0	2.6	1.9	-90.16	-1.2	-409.9	409.9	405.1	4.85	84.524		
600.0	600.0	596.0	600.0	2.8	2.1	-90.16	-1.2	-409.9	409.9	404.6	5.33	76.884		
700.0	700.0	696.0	700.0	3.1	2.3	-90.16	-1.2	-409.9	409.9	404.1	5.77	71.016		
800.0	800.0	796.0	800.0	3.3	2.5	-90.16	-1.2	-409.9	409.9	403.7	6.18	66.318 CC, ES		
900.0	900.0	884.6	888.6	3.6	2.7	-90.23	-1.6	-411.1	411.2	404.6	6.67	61.692		
1,000.0	1,000.0	972.7	976.6	3.8	2.9	-90.42	-3.0	-414.8	415.4	408.3	7.13	58.303		
1,100.0	1,100.0	1,060.2	1,063.9	4.1	3.2	179.00	-5.4	-420.9	424.2	416.6	7.69	55.174		
1,200.0	1,199.8	1,146.7	1,149.9	4.4	3.4	178.58	-8.7	-429.5	439.4	431.2	8.23	53.391		
1,300.0	1,299.5	1,231.7	1,234.1	4.7	3.7	178.09	-12.8	-440.2	460.8	452.0	8.76	52.570		
1,400.0	1,398.7	1,314.8	1,316.0	5.1	3.9	177.56	-17.7	-453.0	488.2	478.9	9.30	52.518 SF		
1,500.0	1,497.5	1,400.0	1,399.6	5.4	4.1	176.97	-23.6	-468.4	521.7	511.8	9.84	52.996		
1,600.0	1,595.6	1,473.2	1,471.1	5.8	4.3	176.44	-29.3	-483.4	560.8	550.5	10.35	54.207		
1,700.0	1,693.1	1,548.0	1,543.5	6.2	4.4	175.89	-35.9	-500.6	605.5	594.6	10.86	55.757		
1,800.0	1,789.6	1,619.4	1,612.3	6.6	4.6	175.35	-42.8	-518.6	655.4	644.1	11.34	57.816		
1,860.7	1,847.8	1,668.6	1,659.5	6.8	4.6	174.99	-47.8	-531.7	688.0	676.4	11.57	59.447		
1,900.0	1,885.3	1,701.5	1,691.0	6.9	4.7	174.82	-51.2	-540.4	709.4	697.7	11.72	60.516		
2,000.0	1,980.9	1,785.2	1,771.2	7.3	4.8	174.41	-59.7	-562.7	764.0	751.8	12.19	62.674		
2,100.0	2,076.4	1,868.9	1,851.4	7.7	4.9	174.06	-68.3	-585.0	818.6	805.9	12.68	64.572		
2,200.0	2,171.9	1,952.6	1,931.6	8.1	5.1	173.75	-76.8	-607.3	873.2	860.0	13.18	66.242		
2,300.0	2,267.4	2,036.3	2,011.8	8.5	5.2	173.48	-85.3	-629.6	927.8	914.1	13.70	67.712		
2,400.0	2,363.0	2,119.9	2,092.0	8.9	5.3	173.24	-93.9	-651.8	982.4	968.2	14.24	69.008		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
3,100.0	3,031.6	3,115.7	3,050.3	12.1	11.7	-32.72	504.0	1,334.8	980.7	961.1	19.56	50.146	
3,200.0	3,127.1	3,211.5	3,142.8	12.5	12.2	-32.12	481.9	1,346.0	953.7	933.4	20.26	47.064	
3,300.0	3,222.6	3,307.3	3,235.4	13.0	12.6	-31.48	459.8	1,357.3	926.7	905.7	20.98	44.170	
3,400.0	3,318.2	3,403.1	3,327.9	13.5	13.1	-30.81	437.7	1,368.5	899.9	878.2	21.71	41.450	
3,500.0	3,413.7	3,498.8	3,420.4	14.0	13.5	-30.10	415.7	1,379.8	873.2	850.7	22.45	38.892	
3,600.0	3,509.2	3,602.4	3,520.3	14.4	14.0	-29.27	391.5	1,391.9	846.5	823.3	23.17	36.538	
3,700.0	3,604.7	3,713.8	3,627.1	14.9	14.5	-28.11	362.3	1,404.2	818.0	794.1	23.94	34.169	
3,800.0	3,700.2	3,808.3	3,717.4	15.4	15.0	-26.98	336.3	1,414.4	789.2	764.4	24.80	31.816	
3,900.0	3,795.8	3,902.8	3,807.7	15.9	15.4	-25.76	310.3	1,424.6	760.6	735.0	25.64	29.668	
4,000.0	3,891.3	3,997.3	3,897.9	16.4	15.9	-24.46	284.4	1,434.8	732.4	705.9	26.49	27.646	
4,100.0	3,986.8	4,091.8	3,988.2	16.9	16.3	-23.05	258.4	1,445.0	704.6	677.2	27.37	25.744	
4,200.0	4,082.3	4,186.3	4,078.5	17.4	16.8	-21.54	232.5	1,455.2	677.2	648.9	28.27	23.954	
4,300.0	4,177.8	4,280.8	4,168.8	17.8	17.3	-19.90	206.5	1,465.4	650.3	621.1	29.20	22.271	
4,400.0	4,273.4	4,375.3	4,259.1	18.3	17.7	-18.13	180.6	1,475.6	624.0	593.8	30.16	20.691	
4,500.0	4,368.9	4,469.8	4,349.4	18.8	18.2	-16.21	154.6	1,485.8	598.3	567.1	31.15	19.208	
4,600.0	4,464.4	4,564.3	4,439.7	19.3	18.6	-14.13	128.7	1,496.1	573.3	541.1	32.17	17.820	
4,700.0	4,559.9	4,658.8	4,530.0	19.8	19.1	-11.87	102.7	1,506.3	549.1	515.8	33.23	16.524	
4,800.0	4,655.4	4,753.3	4,620.3	20.3	19.6	-9.43	76.8	1,516.5	525.8	491.5	34.33	15.318	
4,900.0	4,751.0	4,847.8	4,710.6	20.8	20.0	-6.77	50.8	1,526.7	503.6	468.1	35.46	14.202	
5,000.0	4,846.5	4,942.3	4,800.9	21.3	20.5	-3.89	24.8	1,536.9	482.6	445.9	36.63	13.174	
5,100.0	4,942.0	5,036.8	4,891.1	21.8	21.0	-0.77	-1.1	1,547.1	462.9	425.1	37.84	12.235	
5,200.0	5,037.5	5,131.3	4,981.4	22.3	21.4	2.59	-27.1	1,557.3	444.8	405.7	39.07	11.385	
5,300.0	5,133.0	5,225.8	5,071.7	22.8	21.9	6.20	-53.0	1,567.5	428.4	388.1	40.32	10.626	
5,400.0	5,228.6	5,320.3	5,162.0	23.3	22.4	10.05	-79.0	1,577.7	414.0	372.4	41.57	9.959	
5,500.0	5,324.1	5,414.8	5,252.3	23.8	22.8	14.14	-104.9	1,587.9	401.7	358.9	42.80	9.385	
5,600.0	5,419.6	5,509.3	5,342.6	24.3	23.3	18.44	-130.9	1,598.1	391.7	347.7	44.00	8.904	
5,700.0	5,515.1	5,603.8	5,432.9	24.8	23.8	22.91	-156.8	1,608.3	384.3	339.2	45.13	8.517	
5,800.0	5,610.6	5,698.3	5,523.2	25.3	24.2	27.51	-182.8	1,618.5	379.6	333.4	46.17	8.222	
5,900.0	5,706.2	5,792.8	5,613.5	25.8	24.7	32.18	-208.8	1,628.7	377.7	330.6	47.11	8.017	
5,918.6	5,724.0	5,810.4	5,630.3	25.9	24.8	33.05	-213.6	1,630.6	377.6	330.4	47.27	7.988	
6,000.0	5,801.7	5,887.2	5,703.8	26.3	25.2	36.86	-234.7	1,638.9	378.6	330.6	47.93	7.898	
6,100.0	5,897.2	5,981.7	5,794.1	26.8	25.7	41.50	-260.7	1,649.1	382.3	333.6	48.63	7.860	
6,200.0	5,992.7	6,076.2	5,884.3	27.3	26.1	46.02	-286.6	1,659.3	388.7	339.5	49.22	7.897	
6,300.0	6,088.2	6,170.7	5,974.6	27.8	26.6	50.39	-312.6	1,669.5	397.7	348.0	49.71	8.001	
6,400.0	6,183.8	6,265.2	6,064.9	28.3	27.1	54.56	-338.5	1,679.7	409.1	359.0	50.12	8.164	
6,500.0	6,279.3	6,359.7	6,155.2	28.8	27.6	58.50	-364.5	1,689.9	422.8	372.3	50.46	8.378	
6,600.0	6,374.8	6,459.1	6,250.3	29.3	28.1	62.38	-391.5	1,700.5	438.2	387.3	50.84	8.619	
6,700.0	6,470.3	6,562.0	6,349.1	29.8	28.6	66.13	-417.9	1,710.9	453.7	402.5	51.20	8.862	
6,800.0	6,565.9	6,665.4	6,449.0	30.4	29.1	69.64	-442.7	1,720.7	469.3	417.7	51.53	9.106	
6,900.0	6,661.4	6,769.3	6,549.9	30.9	29.6	72.97	-466.1	1,729.9	484.5	432.7	51.85	9.345	
7,000.0	6,756.9	6,873.7	6,651.7	31.4	30.1	76.13	-487.7	1,738.4	499.4	447.3	52.15	9.576	
7,100.0	6,852.4	6,978.5	6,754.2	31.9	30.6	79.16	-507.8	1,746.3	513.9	461.5	52.44	9.799	
7,200.0	6,947.9	7,083.7	6,857.5	32.4	31.1	82.07	-526.1	1,753.5	527.9	475.2	52.72	10.013	
7,300.0	7,043.5	7,189.0	6,961.3	32.9	31.6	84.90	-542.7	1,760.0	541.3	488.3	52.99	10.216	
7,400.0	7,139.0	7,294.6	7,065.7	33.4	32.0	87.66	-557.6	1,765.9	554.2	500.9	53.24	10.409	
7,500.0	7,234.5	7,400.2	7,170.4	33.9	32.5	90.36	-570.7	1,771.0	566.5	513.0	53.49	10.591	
7,600.0	7,330.0	7,505.9	7,275.4	34.4	32.9	93.03	-581.9	1,775.4	578.3	524.6	53.72	10.765	
7,700.0	7,425.5	7,611.6	7,380.6	34.9	33.3	95.67	-591.4	1,779.2	589.6	535.6	53.95	10.928	
7,782.5	7,504.4	7,698.7	7,467.4	35.3	33.7	97.84	-597.9	1,781.7	598.5	544.4	54.13	11.057	
7,800.0	7,521.1	7,717.2	7,485.8	35.4	33.7	98.31	-599.1	1,782.2	600.4	546.2	54.16	11.085	
7,900.0	7,616.9	7,822.9	7,591.3	35.9	34.1	100.93	-604.9	1,784.5	610.5	556.1	54.39	11.225	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8188-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,000.0	7,713.3	7,928.9	7,697.3	36.4	34.4	103.39	-609.0	1,786.1	619.9	565.3	54.62	11.349	
8,100.0	7,810.1	8,035.1	7,803.5	36.9	34.7	105.72	-611.2	1,787.0	628.2	573.4	54.83	11.458	
8,200.0	7,907.3	9,063.2	8,434.1	37.4	35.0	179.85	-9.2	1,789.1	563.7	517.8	45.94	12.270	
8,300.0	8,004.9	9,063.3	8,434.1	37.9	35.0	179.86	-9.1	1,789.1	483.4	433.3	50.12	9.645	
8,400.0	8,102.9	9,063.4	8,434.1	38.4	35.0	179.87	-9.0	1,789.1	410.4	355.2	55.24	7.430	
8,500.0	8,201.2	9,063.5	8,434.1	38.8	35.0	179.88	-9.0	1,789.1	349.5	288.6	60.90	5.739	
8,600.0	8,299.8	9,063.5	8,434.1	39.3	35.0	179.90	-8.9	1,789.1	308.0	242.6	65.39	4.711	
8,693.9	8,392.6	9,063.6	8,434.1	39.7	35.0	179.91	-8.8	1,789.1	294.1	228.4	65.78	4.471 CC, ES, SF	
8,700.0	8,398.7	9,063.6	8,434.1	39.7	35.0	179.92	-8.8	1,789.1	294.2	228.6	65.63	4.483	
8,800.0	8,497.8	9,063.7	8,434.1	40.1	35.0	179.93	-8.7	1,789.1	311.8	251.2	60.51	5.152	
8,900.0	8,597.2	9,063.8	8,434.1	40.6	35.0	179.95	-8.6	1,789.1	356.1	303.1	53.00	6.719	
9,000.0	8,696.7	9,063.9	8,434.1	41.0	35.0	179.97	-8.5	1,789.1	418.8	372.5	46.26	9.053	
9,100.0	8,796.4	9,064.0	8,434.1	41.3	35.0	179.99	-8.4	1,789.1	492.8	451.5	41.32	11.927	
9,200.0	8,896.2	9,064.1	8,434.1	41.7	35.0	-180.00	-8.3	1,789.1	573.9	535.9	38.03	15.089	
9,300.0	8,996.1	9,064.2	8,434.1	42.0	35.0	-179.98	-8.3	1,789.1	659.3	623.3	35.96	18.334	
9,400.0	9,096.1	9,064.3	8,434.1	42.3	35.0	-179.96	-8.2	1,789.1	747.6	712.9	34.72	21.529	
9,500.0	9,196.1	9,064.4	8,434.1	42.5	35.0	-179.95	-8.0	1,789.1	837.8	803.8	34.04	24.616	
9,503.9	9,200.0	9,064.4	8,434.1	42.5	35.0	-89.68	-8.0	1,789.1	841.4	807.4	34.02	24.734	
9,600.0	9,296.1	9,064.5	8,434.1	42.5	35.0	-89.66	-7.9	1,789.1	929.7	896.0	33.74	27.554	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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	
2,100.0	2,076.4	2,388.7	2,327.0	7.7	9.5	-41.16	558.1	953.1	971.4	954.9	16.57	58.638		
2,200.0	2,171.9	2,476.3	2,411.1	8.1	9.9	-41.73	536.9	940.8	923.9	906.7	17.28	53.478		
2,300.0	2,267.4	2,563.9	2,495.2	8.5	10.3	-42.36	515.8	928.5	876.5	858.5	18.00	48.695		
2,400.0	2,363.0	2,651.5	2,579.4	8.9	10.7	-43.06	494.6	916.2	829.2	810.5	18.73	44.259		
2,500.0	2,458.5	2,739.1	2,663.5	9.4	11.1	-43.84	473.5	903.9	782.0	762.5	19.48	40.144		
2,600.0	2,554.0	2,826.7	2,747.6	9.8	11.5	-44.73	452.3	891.7	734.9	714.7	20.23	36.325		
2,700.0	2,649.5	2,914.3	2,831.7	10.2	11.9	-45.73	431.1	879.4	688.0	667.0	20.99	32.776		
2,800.0	2,745.0	3,002.0	2,915.9	10.7	12.3	-46.88	410.0	867.1	641.2	619.5	21.75	29.479		
2,900.0	2,840.6	3,089.6	3,000.0	11.1	12.7	-48.20	388.8	854.8	594.7	572.2	22.52	26.413		
3,000.0	2,936.1	3,177.2	3,084.1	11.6	13.1	-49.74	367.7	842.6	548.5	525.3	23.28	23.561		
3,100.0	3,031.6	3,264.8	3,168.2	12.1	13.6	-51.56	346.5	830.3	502.7	478.7	24.04	20.912		
3,200.0	3,127.1	3,352.4	3,252.4	12.5	14.0	-53.72	325.4	818.0	457.4	432.6	24.79	18.452		
3,300.0	3,222.6	3,440.0	3,336.5	13.0	14.4	-56.34	304.2	805.7	412.7	387.2	25.51	16.175		
3,400.0	3,318.2	3,527.6	3,420.6	13.5	14.8	-59.55	283.1	793.4	368.9	342.7	26.21	14.078		
3,500.0	3,413.7	3,615.2	3,504.7	14.0	15.2	-63.56	261.9	781.2	326.4	299.6	26.84	12.163		
3,600.0	3,509.2	3,702.8	3,588.9	14.4	15.7	-68.65	240.8	768.9	285.7	258.3	27.36	10.441		
3,700.0	3,604.7	3,790.4	3,673.0	14.9	16.1	-75.20	219.6	756.6	247.7	219.9	27.72	8.936		
3,800.0	3,700.2	3,878.0	3,757.1	15.4	16.5	-83.66	198.5	744.3	213.8	186.0	27.80	7.691		
3,900.0	3,795.8	3,965.6	3,841.2	15.9	16.9	-94.45	177.3	732.0	186.4	158.8	27.53	6.769		
4,000.0	3,891.3	4,053.2	3,925.4	16.4	17.4	-107.60	156.2	719.8	168.6	141.5	27.04	6.234		
4,086.0	3,973.4	4,128.6	3,997.7	16.8	17.7	-120.14	138.0	709.2	163.4	136.6	26.83	6.090 CC, ES, SF		
4,100.0	3,986.8	4,140.9	4,009.5	16.9	17.8	-122.21	135.0	707.5	163.5	136.7	26.84	6.092		
4,200.0	4,082.3	4,228.5	4,093.6	17.4	18.2	-136.56	113.9	695.2	172.4	144.9	27.48	6.274		
4,300.0	4,177.8	4,316.1	4,177.7	17.8	18.6	-149.09	92.7	682.9	193.2	164.4	28.81	6.708		
4,400.0	4,273.4	4,403.7	4,261.9	18.3	19.1	-159.21	71.6	670.6	222.7	192.4	30.37	7.334		
4,500.0	4,368.9	4,491.3	4,346.0	18.8	19.5	-167.08	50.4	658.4	257.9	226.1	31.88	8.091		
4,600.0	4,464.4	4,578.9	4,430.1	19.3	19.9	-173.18	29.3	646.1	296.8	263.6	33.26	8.925		
4,700.0	4,559.9	4,666.5	4,514.2	19.8	20.4	-177.93	8.1	633.8	338.1	303.6	34.51	9.797		
4,800.0	4,655.4	4,754.1	4,598.4	20.3	20.8	178.31	-13.0	621.5	381.1	345.4	35.67	10.683		
4,900.0	4,751.0	4,841.7	4,682.5	20.8	21.2	175.28	-34.2	609.2	425.1	388.4	36.75	11.567		
5,000.0	4,846.5	4,929.3	4,766.6	21.3	21.7	172.80	-55.3	597.0	470.0	432.2	37.78	12.440		
5,100.0	4,942.0	5,016.9	4,850.7	21.8	22.1	170.74	-76.5	584.7	515.5	476.7	38.77	13.295		
5,200.0	5,037.5	5,104.5	4,934.9	22.3	22.5	169.01	-97.6	572.4	561.4	521.7	39.73	14.130		
5,300.0	5,133.0	5,192.2	5,019.0	22.8	23.0	167.53	-118.8	560.1	607.7	567.0	40.67	14.942		
5,400.0	5,228.6	5,279.8	5,103.1	23.3	23.4	166.26	-140.0	547.8	654.3	612.7	41.60	15.730		
5,500.0	5,324.1	5,367.4	5,187.2	23.8	23.8	165.16	-161.1	535.6	701.1	658.6	42.50	16.494		
5,600.0	5,419.6	5,455.0	5,271.4	24.3	24.3	164.19	-182.3	523.3	748.1	704.6	43.40	17.235		
5,700.0	5,515.1	5,542.6	5,355.5	24.8	24.7	163.34	-203.4	511.0	795.2	750.9	44.30	17.952		
5,800.0	5,610.6	5,630.2	5,439.6	25.3	25.1	162.58	-224.6	498.7	842.4	797.2	45.18	18.646		
5,900.0	5,706.2	5,717.8	5,523.7	25.8	25.6	161.90	-245.7	486.4	889.8	843.7	46.06	19.318		
6,000.0	5,801.7	5,805.4	5,607.9	26.3	26.0	161.29	-266.9	474.2	937.2	890.3	46.93	19.968		
6,100.0	5,897.2	5,893.0	5,692.0	26.8	26.4	160.73	-288.0	461.9	984.7	936.9	47.81	20.598		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 503H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8006-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	3.0	0.0	0.0	-90.16	-1.1	-379.9	379.9				
100.0	100.0	97.0	100.0	0.8	0.7	-90.16	-1.1	-379.9	379.9	377.9	1.97	192.969	
200.0	200.0	197.0	200.0	1.4	1.4	-90.16	-1.1	-379.9	379.9	376.6	3.29	115.408	
300.0	300.0	297.0	300.0	1.9	1.9	-90.16	-1.1	-379.9	379.9	375.7	4.18	90.839	
400.0	400.0	397.0	400.0	2.2	2.2	-90.16	-1.1	-379.9	379.9	375.0	4.90	77.511	
500.0	500.0	497.0	500.0	2.6	2.6	-90.16	-1.1	-379.9	379.9	374.4	5.52	68.777	
600.0	600.0	597.0	600.0	2.8	2.8	-90.16	-1.1	-379.9	379.9	373.8	6.08	62.464	
700.0	700.0	697.0	700.0	3.1	3.1	-90.16	-1.1	-379.9	379.9	373.3	6.59	57.617	
800.0	800.0	797.0	800.0	3.3	3.3	-90.16	-1.1	-379.9	379.9	372.8	7.07	53.738	
900.0	900.0	897.0	900.0	3.6	3.6	-90.16	-1.1	-379.9	379.9	372.4	7.52	50.539	
1,000.0	1,000.0	997.0	1,000.0	3.8	3.8	-90.16	-1.1	-379.9	379.9	372.0	7.94	47.840 CC, ES	
1,100.0	1,100.0	1,089.2	1,092.2	4.1	4.1	179.41	-2.1	-380.8	382.6	374.2	8.48	45.121	
1,200.0	1,199.8	1,180.7	1,183.6	4.4	4.3	178.94	-5.4	-383.6	391.0	382.0	9.00	43.452	
1,300.0	1,299.5	1,271.2	1,273.8	4.7	4.6	178.18	-10.8	-388.2	404.9	395.4	9.53	42.505	
1,400.0	1,398.7	1,360.2	1,362.3	5.1	4.9	177.21	-18.3	-394.6	424.4	414.4	10.07	42.143 SF	
1,500.0	1,497.5	1,447.4	1,448.6	5.4	5.2	176.09	-27.6	-402.6	449.6	438.9	10.64	42.272	
1,600.0	1,595.6	1,534.8	1,534.8	5.8	5.5	174.84	-38.9	-412.2	480.2	469.0	11.21	42.830	
1,700.0	1,693.1	1,628.2	1,626.6	6.2	5.8	173.61	-51.4	-422.9	514.9	503.0	11.85	43.441	
1,800.0	1,789.6	1,720.2	1,717.2	6.6	6.1	172.54	-63.8	-433.5	553.0	540.5	12.49	44.288	
1,860.7	1,847.8	1,775.5	1,771.6	6.8	6.3	171.97	-71.3	-439.9	577.7	564.8	12.83	45.037	
1,900.0	1,885.3	1,811.1	1,806.7	6.9	6.4	171.68	-76.1	-444.0	594.1	581.0	13.04	45.566	
2,000.0	1,980.9	1,901.7	1,895.8	7.3	6.7	170.99	-88.3	-454.5	635.8	622.2	13.65	46.592	
2,100.0	2,076.4	1,992.3	1,985.0	7.7	7.0	170.40	-100.5	-464.9	677.7	663.4	14.28	47.450	
2,200.0	2,171.9	2,083.0	2,074.2	8.1	7.3	169.87	-112.7	-475.3	719.5	704.6	14.94	48.169	
2,300.0	2,267.4	2,173.6	2,163.4	8.5	7.6	169.40	-124.9	-485.8	761.5	745.9	15.61	48.770	
2,400.0	2,363.0	2,264.2	2,252.6	8.9	8.0	168.97	-137.1	-496.2	803.4	787.1	16.31	49.274	
2,500.0	2,458.5	2,354.8	2,341.7	9.4	8.3	168.59	-149.4	-506.7	845.4	828.4	17.01	49.695	
2,600.0	2,554.0	2,445.4	2,430.9	9.8	8.7	168.25	-161.6	-517.1	887.5	869.7	17.73	50.049	
2,700.0	2,649.5	2,536.0	2,520.1	10.2	9.1	167.94	-173.8	-527.5	929.5	911.1	18.46	50.345	
2,800.0	2,745.0	2,626.7	2,609.3	10.7	9.4	167.65	-186.0	-538.0	971.6	952.4	19.20	50.592	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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 @ 2957.0usft (NABORS X09)

Offset Depths are relative to Offset Datum

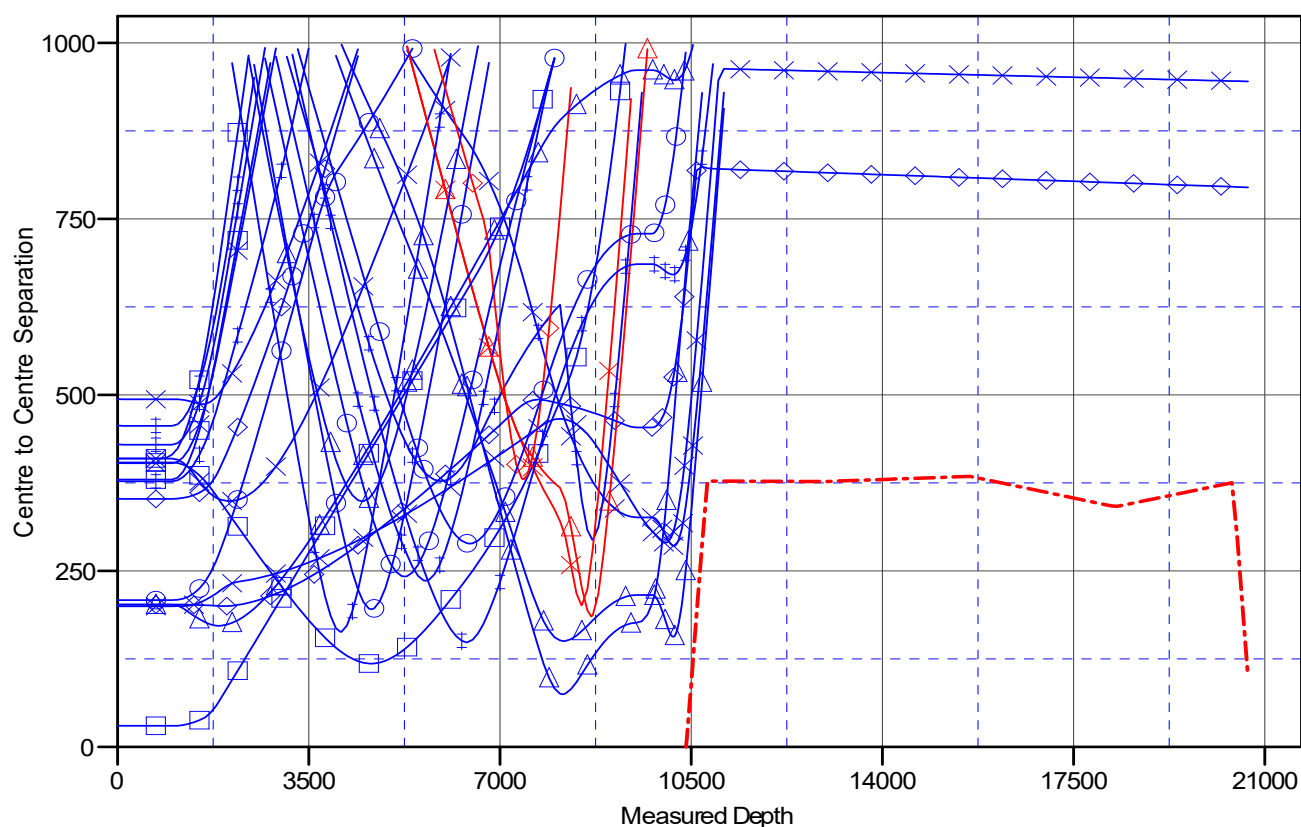
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 701H

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

Grid Convergence at Surface is: 0.16°

Ladder Plot



LEGEND

- PUDGE FEDERAL COM 501H OWB, PWP1 V0 - PUDGE FEDERAL COM 500H OWB, PWP1 V0 _WILD THING FED COM 901H OWB, PWP0 V0 _WILD THING FED COM 702H OWB, PWP0 V0 - WILD THING FEDERAL COM 501H OWB, PWP1 V0 _WILD THING FED COM 907H OWB, PWP0 V0 _WILD THING FED COM 904H OWB, PWP0 V0 - WILD THING FEDERAL COM 503H OWB, PWP1 V0 _WILD THING FED COM 909H OWB, PWP0 V0 _WILD THING FED COM 906H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0 - PUDGE FEDERAL 21H, OWB, AWP V0 - PUDGE FEDERAL 21H, ST01 ST01 AWP V0 - WILD THING FEDERAL COM 502H OWB, PWP1 V0 _WILD THING FED COM 902H OWB, PWP0 V0 - COOPER 31 FEDERAL 2H, _P.A. OWB, AWP V0 _WILD THING FED COM 705H OWB, PWP0 V0 _WILD THING FED COM 910H OWB, PWP0 V0 _WILD THING FED COM 903H OWB, PWP0 V0 _WILD THING FED COM 706H OWB, PWP0 V0	_WILD THING FED COM 909H OWB, PWP0 V0 _WILD THING FED COM 704H OWB, PWP0 V0 - WILD THING FED COM 504H OWB, PWP1 V0 _WILD THING FED COM 703H OWB, PWP0 V0 - PUDGE FEDERAL COM 702H OWB, PWP1 V0 - PUDGE FEDERAL COM 902H OWB, PWP1 V0 - PUDGE FEDERAL COM 902H OWB, PWP1 V0 - PUDGE FEDERAL COM 903H OWB, PWP1 V0 - PUDGE FEDERAL COM 904H 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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 @ 2957.0usft (NABORS X09)

Offset Depths are relative to Offset Datum

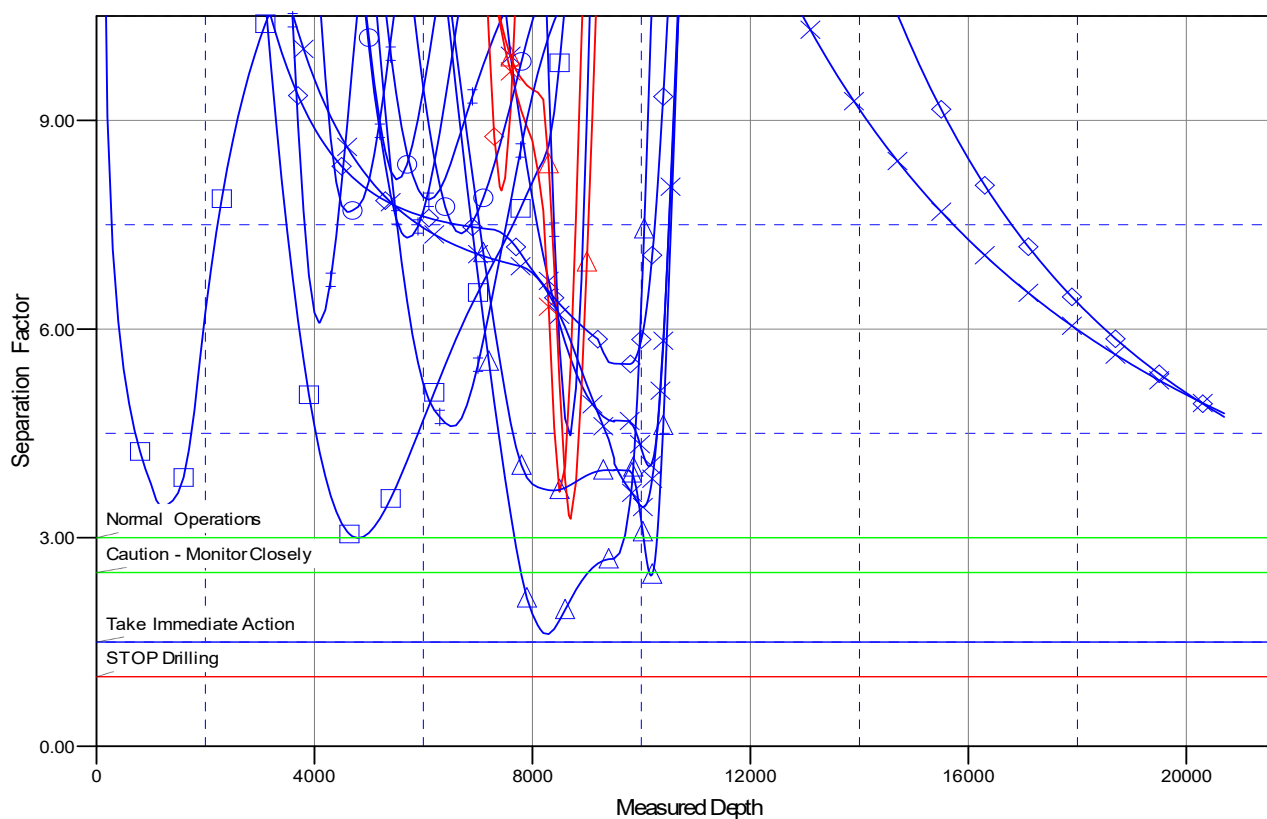
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 701H

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

Grid Convergence at Surface is: 0.16°

Separation Factor Plot



LEGEND

PUDGE FEDERAL COM 501H OWB, PWP1 V0	_WILD THING FED COM 908H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0
PUDGE FEDERAL COM 908H OWB, PWP1 V0	PUDGE FEDERAL 21H, OWB AWP V0	_WILD THING FED COM 704H OWB, PWP0 V0
_WILD THING FED COM 901H OWB, PWP0 V0	PUDGE FEDERAL 21H, ST01 ST01 AWP V0	_WILD THING FED COM 504H OWB, PWP1 V0
_WILD THING FED COM 702H OWB, PWP0 V0	_WILD THING FED COM 502H OWB, PWP1 V0	_WILD THING FED COM 703H OWB, PWP0 V0
WILD THING FEDERAL COM 501H, OWB, PWP1 V0	_WILD THING FED COM 902H OWB, PWP0 V0	PUDGE FEDERAL COM 702H OWB, PWP1 V0
_WILD THING FED COM 907H OWB, PWP0 V0	COOPER 31 FEDERAL 2H, _P&A, OWB, AWP V0	PUDGE FEDERAL COM 901H OWB, PWP1 V0
_WILD THING FED COM 904H OWB, PWP0 V0	_WILD THING FED COM 705H OWB, PWP0 V0	PUDGE FEDERAL COM 902H OWB, PWP1 V0
WILD THING FEDERAL COM 503H, OWB, PWP1 V0	_WILD THING FED COM 910H OWB, PWP0 V0	PUDGE FEDERAL COM 903H OWB, PWP1 V0
_WILD THING FED COM 905H OWB, PWP0 V0	_WILD THING FED COM 903H OWB, PWP0 V0	PUDGE FEDERAL COM 904H OWB, PWP1 V0
_WILD THING FED COM 906H OWB, PWP0 V0	_WILD THING FED COM 706H OWB, PWP0 V0	

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

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.079684 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 701H	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: 2867509

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 08/08/2025	Time Sundry Submitted: 09:53
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. BHL Change: From: 200' FSL & 530' FEL Section 7. T26S. R29E. To: 200' FSL & 710' FEL Section 7. T26S. R29E. C102 Attached. Drilling Changes: Drilling Program, Directional Plan, AC Report and Specs Attached.

NOI Attachments

Procedure Description

- COG_Pudge_701H_AC_RPT_20250808095227.pdf
- Tenaris_Data_Sheets___3_String___WCA___State_Line___20___P110_ICY_Prod_20250808095228.pdf
- COG_PUDGE_FEDERAL_COM_701H_C102_20250808095229.pdf
- COG_Pudge_701H_Directional_Plan_20250808095229.pdf
- COG_Pudge_701H_Drilling_Program_20250808095228.pdf

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.079684 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 701H	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_20250915084833.pdf

PUDGE_FED_COM_701H_COAs_20250915084833.pdf

Authorized

Tenaris_Data_Sheets__3_String__WCA__State_Line__20__P110_ICY_Prod_20250915122911.pdf

COG_PUDGE_FEDERAL_COM_701H_C102_20250915122901.pdf

COG_Pudge_701H_Drilling_Program_20250915122048.pdf

COG_Pudge_701H_Directional_Plan_20250915122043.pdf

COG_Pudge_701H_AC_RPT_20250915122038.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: AUG 08, 2025 09:52 AM
Name: COG OPERATING LLC	
Title: Regulatory Analyst	
Street Address: 925 N ELDRIDGE PARKWAY	
City: HOUSTON	State: TX
Phone: (281) 293-1000	
Email address: MAYTE.X.REYES@CONOCOPHILLIPS.COM	

Field

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

BLM Point of Contact

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

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

WELL LOCATION INFORMATION

API Number 30-015-56661	Pool Code 98220	Pool Name Purple Sage; Wolfcamp (Gas)
Property Code 337302	Property Name PUDGE FED COM	Well Number 701H
OGRID No. 229137	Operator Name COG OPERATING LLC	Ground Level Elevation 2,925'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☒ Fee ☐ Tribal ☒ Federal

Surface Location

UL N	Section 31	Township 25S	Range 29E	Lot	Ft. from N/S 269' FSL	Ft. from E/W 2,444' FWL	Latitude 32.079687°	Longitude -104.024231°	County EDDY
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Bottom Hole Location

UL P	Section 7	Township 26S	Range 29E	Lot	Ft. from N/S 200' FSL	Ft. from E/W 710' FEL	Latitude 32.050405°	Longitude -104.017222°	County EDDY
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Dedicated Acres 640	Infill or Defining Well Infill	Defining Well API 30-015-56662	Overlapping Spacing Unit (Y/N) N	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL P	Section 31	Township 25S	Range 29E	Lot	Ft. from N/S 263' FSL	Ft. from E/W 709' FEL	Latitude 32.079667°	Longitude -104.017326°	County EDDY
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First Take Point (FTP)

UL A	Section 6	Township 26S	Range 29E	Lot	Ft. from N/S 330' FNL	Ft. from E/W 710' FEL	Latitude 32.078037°	Longitude -104.017331°	County EDDY
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Last Take Point (LTP)

UL P	Section 7	Township 26S	Range 29E	Lot	Ft. from N/S 330' FSL	Ft. from E/W 710' FEL	Latitude 32.050762°	Longitude -104.017230°	County EDDY
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Unitized Area or Area of Uniform Interest COM	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 2925'
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OPERATOR CERTIFICATIONS I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.		SURVEYOR CERTIFICATIONS I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  Date: 7/16/2025	
Signature Mayte Reyes Date 7/28/2025		Signature and Seal of Professional Surveyor	
Printed Name Mayte Reyes		Certificate Number 12177	Date of Survey 7/16/2025
Email Address mayte.x.reyes@cop.com			

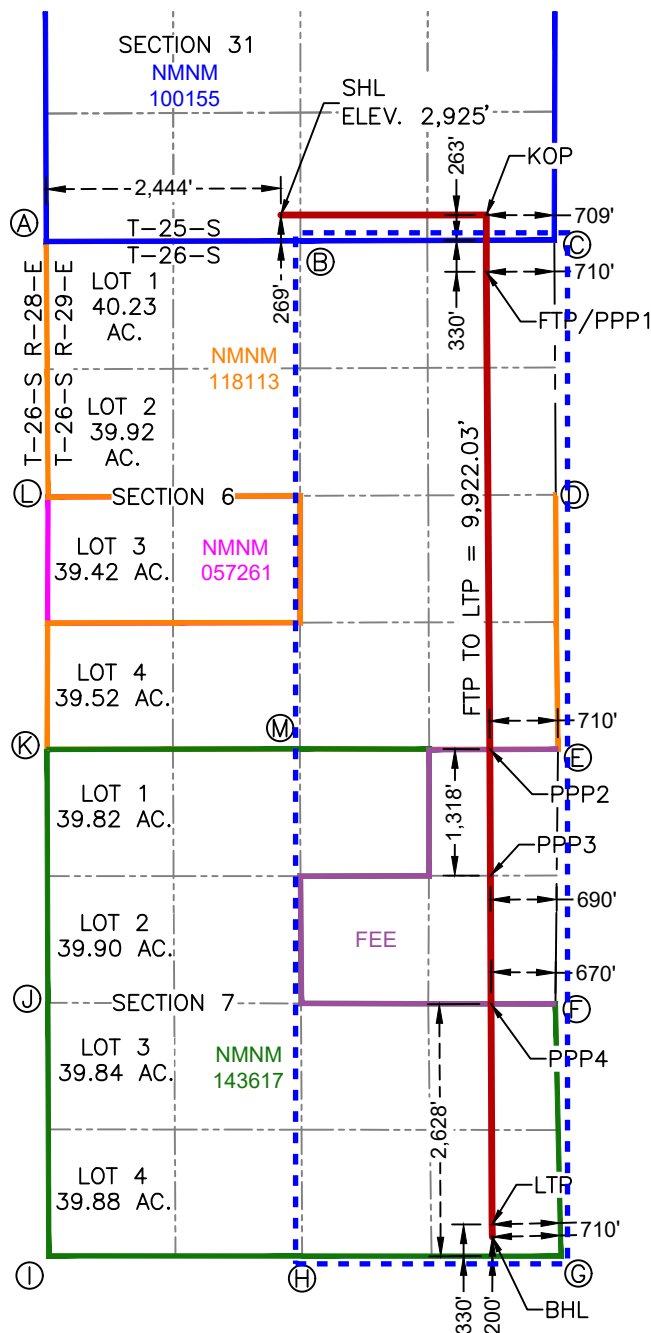
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

ACREAGE DEDICATION PLATS

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

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

PUDGE FED COM 701H



SURFACE HOLE LOCATION
269' FSL & 2,444' FWL
ELEV.=2,925'

NAD 83 X = 637,072.81'
NAD 83 Y = 392,864.43'
NAD 83 LAT = 32.079687°
NAD 83 LONG = -104.024231°

KICK-OFF POINT
263' FSL & 709' FEL

NAD 83 X = 639,211.56'
NAD 83 Y = 392,863.50'
NAD 83 LAT = 32.079667°
NAD 83 LONG = -104.017326°

FIRST TAKE POINT & PENETRATION POINT 1
330' FNL & 710' FEL

NAD 83 X = 639,211.66'
NAD 83 Y = 392,270.50'
NAD 83 LAT = 32.078037°
NAD 83 LONG = -104.017331°

PENETRATION POINT 2
0' FSL & 710' FEL

NAD 83 X = 639,248.45'
NAD 83 Y = 387,299.25'
NAD 83 LAT = 32.064371°
NAD 83 LONG = -104.017259°

PENETRATION POINT 3
1,318' FNL & 690' FEL

NAD 83 X = 639,254.72'
NAD 83 Y = 385,981.57'
NAD 83 LAT = 32.060749°
NAD 83 LONG = -104.017251°

PENETRATION POINT 4
2,628' FSL & 670' FEL

NAD 83 X = 639,261.07'
NAD 83 Y = 384,646.18'
NAD 83 LAT = 32.057078°
NAD 83 LONG = -104.017243°

LAST TAKE POINT
330' FSL & 710' FEL

NAD 83 X = 639,271.99'
NAD 83 Y = 382,348.66'
NAD 83 LAT = 32.050762°
NAD 83 LONG = -104.017230°

BOTTOM HOLE LOCATION
200' FSL & 710' FEL

NAD 83 X = 639,274.86'
NAD 83 Y = 382,218.66'
NAD 83 LAT = 32.050405°
NAD 83 LONG = -104.017222°

CORNER COORDINATES
NEW MEXICO EAST - NAD 83

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

DELAWARE BASIN WEST

ATLAS PROSPECT_NME

PUDGE FED COM PROJECT

PUDGE FEDERAL COM 701H

3001556661

OWB

PWP1

Anticollision Report

04 August, 2025

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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	20,693.8	PWP1 (OWB)	r.5 MWD+IFR1	OWSG MWD + IFR1 rev.5	

Summary						
	Reference	Offset	Distance			Warning
Site Name	Measured	Measured	Between	Between	Separation	
Offset Well - Wellbore - Design	Depth	Depth	Centres	Ellipses	Factor	
PUDGE FED COM PROJECT						
PUDGE FEDERAL COM 500H - OWB - PWP1	4,643.0	4,687.1	118.4	79.6	3.052 CC	Normal Operations, SF
PUDGE FEDERAL COM 500H - OWB - PWP1	4,700.0	4,743.7	118.6	79.3	3.019 ES	
PUDGE FEDERAL COM 500H - OWB - PWP1	4,800.0	4,842.9	119.9	79.9	2.995	
PUDGE FEDERAL COM 501H - OWB - PWP1	2,052.0	2,101.0	349.3	335.5	25.291 CC	
PUDGE FEDERAL COM 501H - OWB - PWP1	2,100.0	2,147.7	349.5	335.3	24.637 ES	
PUDGE FEDERAL COM 501H - OWB - PWP1	3,400.0	3,414.1	463.5	438.6	18.606 SF	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,000.0	1,000.0	30.0	22.1	3.775 CC	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,100.0	1,100.9	30.2	21.7	3.538 ES	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,200.0	1,201.8	31.1	22.0	3.419 SF	
PUDGE FEDERAL COM 901H - OWB - PWP1	1,960.4	1,952.7	200.1	187.7	16.102 CC	
PUDGE FEDERAL COM 901H - OWB - PWP1	2,000.0	1,991.9	200.2	187.6	15.875 ES	
PUDGE FEDERAL COM 901H - OWB - PWP1	20,693.8	21,729.8	795.0	627.2	4.737 SF	
PUDGE FEDERAL COM 902H - OWB - PWP1	1,000.0	1,001.0	200.0	192.0	25.158 CC	
PUDGE FEDERAL COM 902H - OWB - PWP1	1,200.0	1,200.8	200.1	191.4	22.954 ES	
PUDGE FEDERAL COM 902H - OWB - PWP1	10,030.6	9,952.0	290.1	205.8	3.440 SF	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,843.7	1,859.5	172.1	160.4	14.790 CC	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,860.7	1,876.4	172.1	160.4	14.667 ES	
PUDGE FEDERAL COM 903H - OWB - PWP1	3,100.0	3,103.3	248.4	225.7	10.912 SF	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,000.0	1,002.0	208.6	200.6	26.239 CC, ES	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,600.0	1,597.6	234.6	224.2	22.560 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
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Reference Well:	PUDGE FEDERAL COM 701H	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						
WTF COM PROJECT						
_WILD THING FED COM 702H - OWB - PWP0	8,146.9	7,946.8	74.8	30.3	1.679	Caution - Monitor Closely, CC
_WILD THING FED COM 702H - OWB - PWP0	8,200.0	7,998.5	75.8	29.3	1.629	Caution - Monitor Closely, ES
_WILD THING FED COM 702H - OWB - PWP0	8,300.0	8,096.1	82.2	31.2	1.612	Caution - Monitor Closely, SF
_WILD THING FED COM 703H - OWB - PWP0	6,449.6	6,254.8	289.0	251.1	7.640	CC
_WILD THING FED COM 703H - OWB - PWP0	6,500.0	6,301.9	289.4	251.0	7.540	ES
_WILD THING FED COM 703H - OWB - PWP0	6,700.0	6,488.5	300.3	259.6	7.372	SF
_WILD THING FED COM 705H - OWB - PWP0	5,255.1	5,133.6	242.0	214.3	8.731	CC
_WILD THING FED COM 704H - OWB - PWP0	5,300.0	5,175.3	242.6	214.2	8.553	ES
_WILD THING FED COM 704H - OWB - PWP0	5,500.0	5,361.0	258.5	226.8	8.151	SF
_WILD THING FED COM 705H - OWB - PWP0	4,479.1	4,408.6	349.0	324.2	14.088	CC, ES
_WILD THING FED COM 705H - OWB - PWP0	4,800.0	4,696.8	376.5	349.3	13.871	SF
_WILD THING FED COM 706H - OWB - PWP0	1,560.4	1,607.0	486.9	476.1	44.874	CC, ES
_WILD THING FED COM 706H - OWB - PWP0	3,900.0	3,864.4	874.9	848.1	32.677	SF
_WILD THING FED COM 901H - OWB - PWP0	10,150.0	9,930.2	286.8	215.6	4.027	SF
_WILD THING FED COM 901H - OWB - PWP0	10,175.0	9,947.8	285.8	215.1	4.043	ES
_WILD THING FED COM 901H - OWB - PWP0	10,184.5	9,954.2	285.7	215.3	4.057	CC
_WILD THING FED COM 902H - OWB - PWP0	8,168.1	7,939.2	150.4	109.8	3.708	CC
_WILD THING FED COM 902H - OWB - PWP0	10,175.0	9,892.2	156.6	92.8	2.453	Caution - Monitor Closely, ES, SF
_WILD THING FED COM 903H - OWB - PWP0	6,387.4	6,230.2	148.7	116.8	4.661	CC
_WILD THING FED COM 903H - OWB - PWP0	6,400.0	6,242.2	148.7	116.8	4.651	ES
_WILD THING FED COM 903H - OWB - PWP0	6,500.0	6,337.8	152.4	119.3	4.602	SF
_WILD THING FED COM 904H - OWB - PWP0	5,640.3	5,485.3	236.1	203.9	7.343	CC, ES
_WILD THING FED COM 904H - OWB - PWP0	5,700.0	5,539.7	237.3	204.9	7.313	SF
_WILD THING FED COM 905H - OWB - PWP0	4,600.0	4,515.2	196.6	171.0	7.684	SF
_WILD THING FED COM 905H - OWB - PWP0	4,646.6	4,557.0	195.5	170.1	7.688	CC, ES
_WILD THING FED COM 906H - OWB - PWP0	1,000.0	983.0	352.3	344.3	43.869	CC, ES
_WILD THING FED COM 906H - OWB - PWP0	2,200.0	2,213.8	454.5	439.6	30.520	SF
_WILD THING FED COM 907H - OWB - PWP0	1,000.0	983.0	377.4	369.3	46.991	CC, ES
_WILD THING FED COM 907H - OWB - PWP0	1,700.0	1,676.1	452.0	440.5	39.321	SF
_WILD THING FED COM 908H - OWB - PWP0	1,000.0	983.0	403.1	395.1	50.200	CC, ES
_WILD THING FED COM 908H - OWB - PWP0	1,500.0	1,449.1	458.0	447.6	43.755	SF
_WILD THING FED COM 909H - OWB - PWP0	1,000.0	983.0	429.5	421.4	53.480	CC, ES
_WILD THING FED COM 909H - OWB - PWP0	1,500.0	1,439.7	488.8	478.2	46.438	SF
_WILD THING FED COM 910H - OWB - PWP0	1,000.0	983.0	456.2	448.2	56.815	CC, ES
_WILD THING FED COM 910H - OWB - PWP0	1,500.0	1,434.4	517.5	507.0	49.463	SF
COOPER 31 FEDERAL 2H_P&A - OWB - AWP	7,433.7	7,401.6	380.1	332.5	7.991	CC, ES, SF
PUDGE FEDERAL 21H - OWB - AWP	8,494.5	8,281.5	201.3	146.6	3.676	CC
PUDGE FEDERAL 21H - OWB - AWP	8,500.0	8,284.1	201.4	146.3	3.658	ES, SF
PUDGE FEDERAL 21H - ST01 - ST01 AWP	8,670.9	8,465.3	185.4	129.5	3.318	CC, ES
PUDGE FEDERAL 21H - ST01 - ST01 AWP	8,700.0	8,479.0	187.1	129.9	3.271	SF
WILD THING FED COM 504H - OWB - PWP1	800.0	796.0	409.9	403.7	66.318	CC, ES
WILD THING FED COM 504H - OWB - PWP1	1,400.0	1,314.8	488.2	478.9	52.518	SF
WILD THING FEDERAL COM 501H - OWB - PWP1	8,693.9	9,063.6	294.1	228.4	4.471	CC, ES, SF
WILD THING FEDERAL COM 502H - OWB - PWP1	4,086.0	4,128.6	163.4	136.6	6.090	CC, ES, SF
WILD THING FEDERAL COM 503H - OWB - PWP1	1,000.0	997.0	379.9	372.0	47.840	CC, ES
WILD THING FEDERAL COM 503H - OWB - PWP1	1,400.0	1,360.2	424.4	414.4	42.143	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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 500H - OWB - PWP1														Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8198-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:												
Measured Depth (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	3.0	0.0	0.0	0.0	-8.47	399.8	-59.6	404.2						
100.0	100.0	103.0	100.0	0.8	0.8	-8.47	399.8	-59.6	404.2	402.2	2.01	200.994			
200.0	200.0	203.0	200.0	1.4	1.4	-8.47	399.8	-59.6	404.2	400.9	3.32	121.580			
300.0	300.0	303.0	300.0	1.9	1.9	-8.47	399.8	-59.6	404.2	400.0	4.21	96.105			
400.0	400.0	403.0	400.0	2.2	2.3	-8.47	399.8	-59.6	404.2	399.3	4.92	82.139			
500.0	500.0	503.0	500.0	2.6	2.6	-8.47	399.8	-59.6	404.2	398.7	5.54	72.948			
600.0	600.0	603.0	600.0	2.8	2.9	-8.47	399.8	-59.6	404.2	398.1	6.10	66.290			
700.0	700.0	703.0	700.0	3.1	3.1	-8.47	399.8	-59.6	404.2	397.6	6.61	61.170			
800.0	800.0	803.0	800.0	3.3	3.4	-8.47	399.8	-59.6	404.2	397.1	7.08	57.068			
900.0	900.0	903.0	900.0	3.6	3.6	-8.47	399.8	-59.6	404.2	396.7	7.53	53.683			
1,000.0	1,000.0	1,003.2	1,000.2	3.8	3.8	-8.47	399.8	-59.6	404.2	396.3	7.95	50.819			
1,100.0	1,100.0	1,111.2	1,108.2	4.1	4.1	-98.76	399.0	-57.6	403.4	395.1	8.39	48.071			
1,200.0	1,199.8	1,219.2	1,216.0	4.4	4.5	-98.85	396.5	-51.9	401.2	392.4	8.80	45.589			
1,300.0	1,299.5	1,327.0	1,323.3	4.7	4.8	-99.00	392.5	-42.4	397.5	388.3	9.21	43.186			
1,400.0	1,398.7	1,434.8	1,430.1	5.1	5.2	-99.22	386.8	-29.3	392.4	382.8	9.61	40.821			
1,500.0	1,497.5	1,542.3	1,536.0	5.4	5.6	-99.52	379.6	-12.5	385.9	375.9	10.03	38.472			
1,600.0	1,595.6	1,649.6	1,641.0	5.8	6.0	-99.90	370.9	7.8	377.9	367.5	10.46	36.121			
1,700.0	1,693.1	1,756.6	1,744.8	6.2	6.4	-100.36	360.6	31.7	368.6	357.7	10.92	33.758			
1,800.0	1,789.6	1,863.3	1,847.3	6.6	6.8	-100.92	348.9	59.1	357.9	346.5	11.37	31.477			
1,860.7	1,847.8	1,924.5	1,905.6	6.8	7.0	-101.35	341.6	76.0	351.0	339.4	11.61	30.226			
1,900.0	1,885.3	1,963.5	1,942.8	6.9	7.2	-101.61	337.0	86.7	346.6	334.8	11.79	29.398			
2,000.0	1,980.9	2,062.8	2,037.5	7.3	7.5	-102.31	325.2	114.2	335.5	323.1	12.34	27.184			
2,100.0	2,076.4	2,162.1	2,132.2	7.7	7.9	-103.06	313.4	141.7	324.4	311.5	12.92	25.113			
2,200.0	2,171.9	2,261.3	2,226.9	8.1	8.3	-103.85	301.6	169.1	313.4	299.9	13.52	23.174			
2,300.0	2,267.4	2,360.6	2,321.6	8.5	8.7	-104.71	289.8	196.6	302.4	288.3	14.15	21.365			
2,400.0	2,363.0	2,459.9	2,416.3	8.9	9.2	-105.63	278.0	224.0	291.5	276.7	14.81	19.679			
2,500.0	2,458.5	2,559.2	2,511.0	9.4	9.6	-106.62	266.3	251.5	280.7	265.2	15.50	18.109			
2,600.0	2,554.0	2,658.5	2,605.6	9.8	10.0	-107.68	254.5	278.9	270.0	253.8	16.22	16.649			
2,700.0	2,649.5	2,757.8	2,700.3	10.2	10.5	-108.84	242.7	306.4	259.4	242.4	16.96	15.291			
2,800.0	2,745.0	2,857.1	2,795.0	10.7	10.9	-110.09	230.9	333.9	248.9	231.1	17.74	14.030			
2,900.0	2,840.6	2,956.4	2,889.7	11.1	11.4	-111.46	219.1	361.3	238.5	219.9	18.55	12.858			
3,000.0	2,936.1	3,055.7	2,984.4	11.6	11.8	-112.94	207.3	388.8	228.3	208.9	19.39	11.769			
3,100.0	3,031.6	3,155.0	3,079.1	12.1	12.3	-114.57	195.5	416.2	218.2	197.9	20.28	10.759			
3,200.0	3,127.1	3,254.3	3,173.8	12.5	12.8	-116.34	183.7	443.7	208.3	187.1	21.21	9.822			
3,300.0	3,222.6	3,353.6	3,268.5	13.0	13.2	-118.30	171.9	471.2	198.7	176.5	22.18	8.955			
3,400.0	3,318.2	3,452.9	3,363.2	13.5	13.7	-120.44	160.1	498.6	189.3	166.1	23.21	8.154			
3,500.0	3,413.7	3,552.1	3,457.8	14.0	14.2	-122.81	148.3	526.1	180.2	155.9	24.29	7.415			
3,600.0	3,509.2	3,651.4	3,552.5	14.4	14.7	-125.42	136.6	553.5	171.4	145.9	25.44	6.738			
3,700.0	3,604.7	3,750.7	3,647.2	14.9	15.2	-128.31	124.8	581.0	163.0	136.4	26.64	6.119			
3,800.0	3,700.2	3,850.0	3,741.9	15.4	15.6	-131.50	113.0	608.4	155.1	127.2	27.90	5.559			
3,900.0	3,795.8	3,949.3	3,836.6	15.9	16.1	-135.01	101.2	635.9	147.7	118.5	29.22	5.055			
4,000.0	3,891.3	4,048.6	3,931.3	16.4	16.6	-138.88	89.4	663.4	140.9	110.3	30.59	4.608			
4,100.0	3,986.8	4,147.9	4,026.0	16.9	17.1	-143.11	77.6	690.8	134.9	102.9	31.98	4.217			
4,200.0	4,082.3	4,247.2	4,120.7	17.4	17.6	-147.70	65.8	718.3	129.6	96.2	33.39	3.881			
4,300.0	4,177.8	4,346.5	4,215.4	17.8	18.1	-152.65	54.0	745.7	125.3	90.5	34.77	3.602			
4,400.0	4,273.4	4,445.8	4,310.0	18.3	18.6	-157.90	42.2	773.2	121.9	85.8	36.09	3.378			
4,500.0	4,368.9	4,545.1	4,404.7	18.8	19.0	-163.40	30.4	800.7	119.7	82.3	37.31	3.207			
4,600.0	4,464.4	4,644.4	4,499.4	19.3	19.5	-169.05	18.6	828.1	118.6	80.2	38.39	3.088			
4,643.0	4,505.5	4,687.1	4,540.2	19.5	19.8	-171.50	13.6	839.9	118.4	79.6	38.80	3.052 CC			
4,700.0	4,559.9	4,743.7	4,594.1	19.8	20.0	-174.75	6.9	855.6	118.6	79.3	39.30	3.019 ES			
4,800.0	4,655.4	4,842.9	4,688.8	20.3	20.5	-179.62	-4.9	883.0	119.9	79.9	40.03	2.995 Normal Operations, 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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:												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		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.0	4,751.0	4,942.2	4,783.5	20.8	21.0	174.15	-16.7	910.5	122.3	81.7	40.59	3.013	
5,000.0	4,846.5	5,041.5	4,878.2	21.3	21.5	168.93	-28.5	937.9	125.8	84.8	41.00	3.069	
5,100.0	4,942.0	5,140.8	4,972.9	21.8	22.0	164.04	-40.3	965.4	130.3	89.0	41.28	3.156	
5,200.0	5,037.5	5,240.1	5,067.6	22.3	22.5	159.49	-52.1	992.9	135.7	94.2	41.47	3.271	
5,300.0	5,133.0	5,339.4	5,162.3	22.8	23.0	155.31	-63.9	1,020.3	141.8	100.2	41.60	3.409	
5,400.0	5,228.6	5,438.7	5,256.9	23.3	23.5	151.50	-75.7	1,047.8	148.7	107.0	41.71	3.565	
5,500.0	5,324.1	5,538.0	5,351.6	23.8	24.0	148.03	-87.5	1,075.2	156.2	114.4	41.81	3.735	
5,600.0	5,419.6	5,637.3	5,446.3	24.3	24.5	144.88	-99.3	1,102.7	164.1	122.2	41.92	3.916	
5,700.0	5,515.1	5,736.6	5,541.0	24.8	25.0	142.04	-111.1	1,130.1	172.6	130.5	42.04	4.105	
5,800.0	5,610.6	5,835.9	5,635.7	25.3	25.5	139.46	-122.8	1,157.6	181.4	139.2	42.20	4.299	
5,900.0	5,706.2	5,935.2	5,730.4	25.8	26.0	137.13	-134.6	1,185.1	190.6	148.2	42.38	4.496	
6,000.0	5,801.7	6,034.5	5,825.1	26.3	26.5	135.01	-146.4	1,212.5	200.0	157.4	42.60	4.695	
6,100.0	5,897.2	6,133.7	5,919.8	26.8	27.0	133.08	-158.2	1,240.0	209.7	166.8	42.85	4.894	
6,200.0	5,992.7	6,233.0	6,014.5	27.3	27.5	131.33	-170.0	1,267.4	219.6	176.5	43.13	5.091	
6,300.0	6,088.2	6,332.3	6,109.1	27.8	28.0	129.72	-181.8	1,294.9	229.7	186.2	43.44	5.287	
6,400.0	6,183.8	6,431.6	6,203.8	28.3	28.5	128.25	-193.6	1,322.4	239.9	196.2	43.77	5.481	
6,500.0	6,279.3	6,530.0	6,297.8	28.8	29.0	127.05	-205.0	1,349.0	250.5	206.3	44.15	5.673	
6,600.0	6,374.8	6,628.2	6,392.1	29.3	29.5	126.31	-215.8	1,374.2	261.5	216.9	44.65	5.858	
6,700.0	6,470.3	6,726.4	6,486.9	29.8	30.0	125.97	-226.0	1,397.9	273.0	227.8	45.24	6.035	
6,800.0	6,565.9	6,824.6	6,582.0	30.4	30.5	125.99	-235.5	1,420.0	285.0	239.0	45.92	6.205	
6,900.0	6,661.4	6,922.6	6,677.5	30.9	30.9	126.32	-244.4	1,440.7	297.3	250.6	46.68	6.368	
7,000.0	6,756.9	7,020.4	6,773.1	31.4	31.4	126.93	-252.6	1,459.8	310.1	262.5	47.51	6.526	
7,100.0	6,852.4	7,118.0	6,868.8	31.9	31.8	127.77	-260.1	1,477.3	323.3	274.9	48.41	6.678	
7,200.0	6,947.9	7,215.3	6,964.5	32.4	32.3	128.82	-267.0	1,493.3	337.1	287.7	49.38	6.827	
7,300.0	7,043.5	7,312.2	7,060.1	32.9	32.7	130.05	-273.2	1,507.8	351.5	301.1	50.40	6.975	
7,400.0	7,139.0	7,408.8	7,155.6	33.4	33.1	131.41	-278.8	1,520.7	366.6	315.2	51.47	7.123	
7,500.0	7,234.5	7,504.9	7,250.9	33.9	33.6	132.90	-283.7	1,532.1	382.5	329.9	52.59	7.274	
7,600.0	7,330.0	7,600.0	7,345.4	34.4	33.9	134.46	-287.9	1,541.9	399.3	345.6	53.73	7.432	
7,700.0	7,425.5	7,695.5	7,440.5	34.9	34.3	136.12	-291.5	1,550.3	417.0	362.1	54.91	7.594	
7,782.5	7,504.4	7,773.4	7,518.2	35.3	34.6	137.51	-294.0	1,556.1	432.4	376.5	55.89	7.736	
7,800.0	7,521.1	7,789.9	7,534.6	35.4	34.7	137.83	-294.4	1,557.2	435.7	379.6	56.10	7.767	
7,900.0	7,616.9	7,883.9	7,628.4	35.9	35.0	139.59	-296.8	1,562.7	454.7	397.4	57.26	7.941	
8,000.0	7,713.3	7,977.7	7,722.1	36.4	35.3	141.24	-298.5	1,566.7	473.4	415.1	58.36	8.113	
8,100.0	7,810.1	8,071.2	7,815.6	36.9	35.6	142.81	-299.6	1,569.3	492.0	432.6	59.40	8.283	
8,200.0	7,907.3	8,164.5	7,908.9	37.4	35.8	144.30	-300.1	1,570.5	510.3	449.7	60.57	8.424	
8,300.0	8,004.9	8,237.0	7,981.3	37.9	35.8	145.28	-301.8	1,570.6	529.5	468.2	61.33	8.633	
8,400.0	8,102.9	8,300.0	8,043.6	38.4	35.8	145.36	-311.0	1,570.7	553.8	493.1	60.75	9.117	
8,500.0	8,201.2	8,350.0	8,091.8	38.8	35.8	144.92	-324.1	1,570.8	583.4	524.0	59.36	9.827	
8,600.0	8,299.8	8,407.1	8,144.8	39.3	35.9	143.90	-345.2	1,571.0	618.0	560.2	57.88	10.678	
8,700.0	8,398.7	8,450.0	8,182.8	39.7	35.9	142.91	-365.1	1,571.2	658.0	602.2	55.80	11.793	
8,800.0	8,497.8	8,500.0	8,224.6	40.1	35.9	141.48	-392.5	1,571.4	703.2	649.4	53.84	13.062	
8,900.0	8,597.2	8,536.7	8,253.4	40.6	35.9	140.40	-415.3	1,571.6	753.5	702.0	51.57	14.612	
9,000.0	8,696.7	8,575.0	8,281.4	41.0	35.9	139.21	-441.3	1,571.8	808.7	759.2	49.47	16.346	
9,100.0	8,796.4	8,600.0	8,298.6	41.3	35.9	138.59	-459.5	1,572.0	868.3	821.0	47.28	18.366	
9,200.0	8,896.2	8,625.0	8,314.7	41.7	35.9	138.01	-478.6	1,572.1	931.8	886.5	45.33	20.556	
9,300.0	8,996.1	8,650.0	8,329.9	42.0	35.9	137.46	-498.5	1,572.3	998.9	955.3	43.65	22.883	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	3.0	0.0	0.0	0.0	-12.63	399.7	-89.6	409.6				
100.0	100.0	103.0	100.0	0.8	0.8	-12.63	399.7	-89.6	409.6	407.6	2.01	203.683	
200.0	200.0	203.0	200.0	1.4	1.4	-12.63	399.7	-89.6	409.6	406.3	3.32	123.206	
300.0	300.0	303.0	300.0	1.9	1.9	-12.63	399.7	-89.6	409.6	405.4	4.21	97.391	
400.0	400.0	403.0	400.0	2.2	2.3	-12.63	399.7	-89.6	409.6	404.7	4.92	83.238	
500.0	500.0	503.0	500.0	2.6	2.6	-12.63	399.7	-89.6	409.6	404.1	5.54	73.924	
600.0	600.0	603.0	600.0	2.8	2.9	-12.63	399.7	-89.6	409.6	403.5	6.10	67.177	
700.0	700.0	703.0	700.0	3.1	3.1	-12.63	399.7	-89.6	409.6	403.0	6.61	61.988	
800.0	800.0	803.0	800.0	3.3	3.4	-12.63	399.7	-89.6	409.6	402.6	7.08	57.832	
900.0	900.0	903.0	900.0	3.6	3.6	-12.63	399.7	-89.6	409.6	402.1	7.53	54.401	
1,000.0	1,000.0	1,003.4	1,000.4	3.8	3.8	-12.63	399.7	-89.6	409.6	401.7	7.96	51.486	
1,100.0	1,100.0	1,117.8	1,114.8	4.1	4.2	-103.04	397.9	-88.0	408.2	399.7	8.48	48.141	
1,200.0	1,199.8	1,232.0	1,228.8	4.4	4.5	-103.48	392.6	-83.4	404.0	395.0	8.97	45.024	
1,300.0	1,299.5	1,345.8	1,342.0	4.7	4.9	-104.25	383.9	-76.0	397.1	387.6	9.47	41.910	
1,400.0	1,398.7	1,459.1	1,454.1	5.1	5.2	-105.35	371.9	-65.6	387.6	377.7	9.94	39.007	
1,500.0	1,497.5	1,559.9	1,553.6	5.4	5.5	-106.77	359.4	-54.8	377.0	366.6	10.37	36.353	
1,600.0	1,595.6	1,658.8	1,651.1	5.8	5.7	-108.73	347.1	-44.2	367.6	356.7	10.88	33.788	
1,700.0	1,693.1	1,757.3	1,748.3	6.2	6.1	-111.24	334.8	-33.6	359.9	348.4	11.44	31.452	
1,800.0	1,789.6	1,855.4	1,845.0	6.6	6.4	-114.30	322.6	-23.1	354.2	342.1	12.07	29.352	
1,860.7	1,847.8	1,914.6	1,903.5	6.8	6.6	-116.41	315.2	-16.8	352.0	339.5	12.44	28.297	
1,900.0	1,885.3	1,952.9	1,941.2	6.9	6.7	-117.81	310.4	-12.7	351.0	338.3	12.68	27.673	
2,000.0	1,980.9	2,050.3	2,037.3	7.3	7.1	-121.40	298.3	-2.2	349.5	336.1	13.42	26.054	
2,052.0	2,030.6	2,101.0	2,087.3	7.5	7.2	-123.28	292.0	3.2	349.3	335.5	13.81	25.291 CC	
2,100.0	2,076.4	2,147.7	2,133.4	7.7	7.4	-125.01	286.2	8.2	349.5	335.3	14.19	24.637 ES	
2,200.0	2,171.9	2,245.1	2,229.5	8.1	7.8	-128.61	274.1	18.7	350.9	335.9	14.99	23.414	
2,300.0	2,267.4	2,342.5	2,325.6	8.5	8.2	-132.17	261.9	29.1	353.8	338.0	15.81	22.374	
2,400.0	2,363.0	2,440.0	2,421.7	8.9	8.5	-135.65	249.8	39.6	358.1	341.4	16.65	21.500	
2,500.0	2,458.5	2,537.4	2,517.7	9.4	8.9	-139.05	237.7	50.0	363.7	346.2	17.50	20.778	
2,600.0	2,554.0	2,634.8	2,613.8	9.8	9.3	-142.34	225.5	60.5	370.6	352.3	18.36	20.189	
2,700.0	2,649.5	2,732.2	2,709.9	10.2	9.7	-145.50	213.4	70.9	378.8	359.6	19.21	19.719	
2,800.0	2,745.0	2,829.6	2,806.0	10.7	10.1	-148.52	201.3	81.3	388.1	368.0	20.05	19.351	
2,900.0	2,840.6	2,927.0	2,902.1	11.1	10.5	-151.40	189.1	91.8	398.4	377.5	20.89	19.072	
3,000.0	2,936.1	3,024.4	2,998.2	11.6	10.9	-154.14	177.0	102.2	409.8	388.1	21.72	18.869	
3,100.0	3,031.6	3,121.8	3,094.3	12.1	11.3	-156.73	164.9	112.7	422.0	399.5	22.53	18.730	
3,200.0	3,127.1	3,219.3	3,190.4	12.5	11.7	-159.17	152.8	123.1	435.1	411.8	23.34	18.645	
3,300.0	3,222.6	3,316.7	3,286.5	13.0	12.1	-161.47	140.6	133.6	449.0	424.8	24.13	18.607	
3,400.0	3,318.2	3,414.1	3,382.5	13.5	12.5	-163.63	128.5	144.0	463.5	438.6	24.91	18.606 SF	
3,500.0	3,413.7	3,511.5	3,478.6	14.0	12.9	-165.67	116.4	154.5	478.7	453.0	25.68	18.638	
3,600.0	3,509.2	3,608.9	3,574.7	14.4	13.4	-167.58	104.2	164.9	494.4	467.9	26.44	18.696	
3,700.0	3,604.7	3,706.3	3,670.8	14.9	13.8	-169.37	92.1	175.4	510.6	483.4	27.20	18.775	
3,800.0	3,700.2	3,803.7	3,766.9	15.4	14.2	-171.05	80.0	185.8	527.3	499.4	27.94	18.872	
3,900.0	3,795.8	3,901.1	3,863.0	15.9	14.6	-172.63	67.8	196.3	544.5	515.8	28.68	18.984	
4,000.0	3,891.3	3,998.6	3,959.1	16.4	15.0	-174.12	55.7	206.7	562.0	532.6	29.41	19.107	
4,100.0	3,986.8	4,096.0	4,055.2	16.9	15.5	-175.52	43.6	217.1	579.9	549.7	30.14	19.239	
4,200.0	4,082.3	4,193.4	4,151.2	17.4	15.9	-176.83	31.4	227.6	598.1	567.2	30.86	19.378	
4,300.0	4,177.8	4,290.8	4,247.3	17.8	16.3	-178.07	19.3	238.0	616.6	585.0	31.58	19.522	
4,400.0	4,273.4	4,388.2	4,343.4	18.3	16.7	-179.23	7.2	248.5	635.3	603.0	32.30	19.670	
4,500.0	4,368.9	4,485.6	4,439.5	18.8	17.2	-179.67	-4.9	258.9	654.3	621.3	33.01	19.822	
4,600.0	4,464.4	4,583.0	4,535.6	19.3	17.6	-178.63	-17.1	269.4	673.5	639.8	33.72	19.974	
4,700.0	4,559.9	4,680.4	4,631.7	19.8	18.0	-177.65	-29.2	279.8	692.9	658.5	34.43	20.128	
4,800.0	4,655.4	4,777.9	4,727.8	20.3	18.4	-176.72	-41.3	290.3	712.5	677.4	35.13	20.283	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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	4,751.0	4,875.3	4,823.9	20.8	18.9	175.84	-53.5	300.7	732.3	696.5	35.83	20.436	
5,000.0	4,846.5	4,972.7	4,920.0	21.3	19.3	175.01	-65.6	311.2	752.3	715.7	36.54	20.589	
5,100.0	4,942.0	5,070.1	5,016.0	21.8	19.7	174.22	-77.7	321.6	772.4	735.1	37.24	20.741	
5,200.0	5,037.5	5,167.5	5,112.1	22.3	20.1	173.47	-89.9	332.1	792.6	754.6	37.94	20.891	
5,300.0	5,133.0	5,264.9	5,208.2	22.8	20.6	172.75	-102.0	342.5	812.9	774.3	38.64	21.040	
5,400.0	5,228.6	5,362.3	5,304.3	23.3	21.0	172.07	-114.1	352.9	833.4	794.1	39.34	21.187	
5,500.0	5,324.1	5,459.7	5,400.4	23.8	21.4	171.43	-126.3	363.4	854.0	813.9	40.03	21.331	
5,600.0	5,419.6	5,557.2	5,496.5	24.3	21.9	170.81	-138.4	373.8	874.6	833.9	40.73	21.473	
5,700.0	5,515.1	5,654.6	5,592.6	24.8	22.3	170.22	-150.5	384.3	895.4	854.0	41.43	21.613	
5,800.0	5,610.6	5,752.0	5,688.7	25.3	22.7	169.66	-162.6	394.7	916.3	874.1	42.13	21.751	
5,900.0	5,706.2	5,849.4	5,784.7	25.8	23.2	169.13	-174.8	405.2	937.2	894.4	42.82	21.885	
6,000.0	5,801.7	5,946.8	5,880.8	26.3	23.6	168.61	-186.9	415.6	958.2	914.7	43.52	22.018	
6,100.0	5,897.2	6,044.2	5,976.9	26.8	24.0	168.12	-199.0	426.1	979.3	935.1	44.22	22.148	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
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	
1,000.0	1,000.0	1,000.0	1,000.0	3.8	3.8	-90.17	-0.1	-30.0	30.0	22.1	7.95	3.775 CC	
1,100.0	1,100.0	1,100.9	1,100.9	4.1	4.1	177.89	-1.0	-28.5	30.2	21.7	8.55	3.538 ES	
1,200.0	1,199.8	1,201.8	1,201.6	4.4	4.4	173.07	-3.6	-23.8	31.1	22.0	9.09	3.419 SF	
1,300.0	1,299.5	1,302.7	1,302.1	4.7	4.6	166.00	-7.9	-16.1	32.8	23.4	9.47	3.470	
1,400.0	1,398.7	1,403.7	1,402.4	5.1	4.9	159.11	-12.5	-4.9	35.2	25.2	9.97	3.530	
1,500.0	1,497.5	1,504.7	1,502.2	5.4	5.2	152.82	-17.4	9.9	38.1	27.6	10.45	3.643	
1,600.0	1,595.6	1,605.1	1,600.9	5.8	5.5	147.60	-22.5	27.5	41.8	31.0	10.82	3.866	
1,700.0	1,693.1	1,704.9	1,698.9	6.2	5.8	145.43	-27.6	45.5	48.4	37.1	11.35	4.265	
1,800.0	1,789.6	1,804.4	1,796.7	6.6	6.1	145.77	-32.7	63.4	57.9	45.9	11.97	4.834	
1,860.7	1,847.8	1,864.7	1,855.9	6.8	6.3	146.74	-35.7	74.2	65.0	52.7	12.34	5.272	
1,900.0	1,885.3	1,903.6	1,894.2	6.9	6.5	147.49	-37.7	81.2	70.0	57.4	12.57	5.571	
2,000.0	1,980.9	2,002.8	1,991.6	7.3	6.8	148.99	-42.8	99.0	82.8	69.5	13.25	6.245	
2,100.0	2,076.4	2,102.0	2,089.0	7.7	7.2	150.09	-47.8	116.9	95.5	81.6	13.95	6.849	
2,200.0	2,171.9	2,201.1	2,186.4	8.1	7.6	150.93	-52.8	134.7	108.4	93.7	14.66	7.390	
2,300.0	2,267.4	2,300.3	2,283.9	8.5	8.0	151.59	-57.9	152.5	121.2	105.8	15.39	7.874	
2,400.0	2,363.0	2,399.5	2,381.3	8.9	8.4	152.13	-62.9	170.3	134.0	117.9	16.13	8.309	
2,500.0	2,458.5	2,498.6	2,478.7	9.4	8.8	152.57	-68.0	188.1	146.9	130.0	16.88	8.700	
2,600.0	2,554.0	2,597.8	2,576.1	9.8	9.2	152.94	-73.0	206.0	159.7	142.1	17.64	9.053	
2,700.0	2,649.5	2,697.0	2,673.5	10.2	9.6	153.25	-78.1	223.8	172.6	154.2	18.41	9.373	
2,800.0	2,745.0	2,796.1	2,771.0	10.7	10.0	153.53	-83.1	241.6	185.5	166.3	19.19	9.663	
2,900.0	2,840.6	2,895.3	2,868.4	11.1	10.4	153.76	-88.2	259.4	198.3	178.3	19.98	9.927	
3,000.0	2,936.1	2,994.5	2,965.8	11.6	10.9	153.97	-93.2	277.3	211.2	190.4	20.77	10.168	
3,100.0	3,031.6	3,093.6	3,063.2	12.1	11.3	154.15	-98.3	295.1	224.1	202.5	21.57	10.389	
3,200.0	3,127.1	3,192.8	3,160.6	12.5	11.7	154.32	-103.3	312.9	237.0	214.6	22.37	10.592	
3,300.0	3,222.6	3,292.0	3,258.1	13.0	12.2	154.46	-108.3	330.7	249.8	226.7	23.18	10.778	
3,400.0	3,318.2	3,391.1	3,355.5	13.5	12.6	154.60	-113.4	348.5	262.7	238.7	23.99	10.951	
3,500.0	3,413.7	3,490.3	3,452.9	14.0	13.0	154.72	-118.4	366.4	275.6	250.8	24.81	11.110	
3,600.0	3,509.2	3,589.4	3,550.3	14.4	13.5	154.83	-123.5	384.2	288.5	262.9	25.63	11.258	
3,700.0	3,604.7	3,688.6	3,647.7	14.9	13.9	154.93	-128.5	402.0	301.4	274.9	26.45	11.395	
3,800.0	3,700.2	3,787.8	3,745.2	15.4	14.3	155.02	-133.6	419.8	314.2	287.0	27.27	11.523	
3,900.0	3,795.8	3,886.9	3,842.6	15.9	14.8	155.10	-138.6	437.7	327.1	299.0	28.10	11.642	
4,000.0	3,891.3	3,986.1	3,940.0	16.4	15.2	155.18	-143.7	455.5	340.0	311.1	28.93	11.754	
4,100.0	3,986.8	4,085.3	4,037.4	16.9	15.7	155.25	-148.7	473.3	352.9	323.1	29.76	11.858	
4,200.0	4,082.3	4,184.4	4,134.8	17.4	16.1	155.32	-153.8	491.1	365.8	335.2	30.59	11.956	
4,300.0	4,177.8	4,283.6	4,232.3	17.8	16.6	155.38	-158.8	508.9	378.7	347.3	31.43	12.049	
4,400.0	4,273.4	4,382.8	4,329.7	18.3	17.0	155.44	-163.9	526.8	391.6	359.3	32.27	12.135	
4,500.0	4,368.9	4,481.9	4,427.1	18.8	17.5	155.50	-168.9	544.6	404.5	371.4	33.11	12.217	
4,600.0	4,464.4	4,581.1	4,524.5	19.3	17.9	155.55	-173.9	562.4	417.3	383.4	33.95	12.295	
4,700.0	4,559.9	4,680.3	4,621.9	19.8	18.4	155.60	-179.0	580.2	430.2	395.4	34.79	12.368	
4,800.0	4,655.4	4,779.4	4,719.4	20.3	18.8	155.64	-184.0	598.1	443.1	407.5	35.63	12.437	
4,900.0	4,751.0	4,878.6	4,816.8	20.8	19.3	155.69	-189.1	615.9	456.0	419.5	36.47	12.503	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,846.5	4,977.8	4,914.2	21.3	19.7	155.73	-194.1	633.7	468.9	431.6	37.32	12.565	
5,100.0	4,942.0	5,076.9	5,011.6	21.8	20.2	155.76	-199.2	651.5	481.8	443.6	38.16	12.624	
5,200.0	5,037.5	5,176.1	5,109.0	22.3	20.6	155.80	-204.2	669.3	494.7	455.7	39.01	12.680	
5,300.0	5,133.0	5,275.3	5,206.5	22.8	21.1	155.84	-209.3	687.2	507.6	467.7	39.86	12.734	
5,400.0	5,228.6	5,374.4	5,303.9	23.3	21.5	155.87	-214.3	705.0	520.5	479.8	40.71	12.785	
5,500.0	5,324.1	5,473.6	5,401.3	23.8	22.0	155.90	-219.4	722.8	533.4	491.8	41.56	12.834	
5,600.0	5,419.6	5,572.8	5,498.7	24.3	22.4	155.93	-224.4	740.6	546.3	503.8	42.41	12.881	
5,700.0	5,515.1	5,671.9	5,596.1	24.8	22.9	155.96	-229.4	758.5	559.1	515.9	43.26	12.925	
5,800.0	5,610.6	5,771.1	5,693.6	25.3	23.3	155.99	-234.5	776.3	572.0	527.9	44.11	12.968	
5,900.0	5,706.2	5,870.2	5,791.0	25.8	23.8	156.01	-239.5	794.1	584.9	540.0	44.96	13.009	
6,000.0	5,801.7	5,969.4	5,888.4	26.3	24.2	156.04	-244.6	811.9	597.8	552.0	45.82	13.048	
6,100.0	5,897.2	6,068.6	5,985.8	26.8	24.7	156.06	-249.6	829.8	610.7	564.0	46.67	13.086	
6,200.0	5,992.7	6,167.7	6,083.2	27.3	25.1	156.08	-254.7	847.6	623.6	576.1	47.52	13.122	
6,300.0	6,088.2	6,266.9	6,180.7	27.8	25.6	156.11	-259.7	865.4	636.5	588.1	48.38	13.157	
6,400.0	6,183.8	6,366.1	6,278.1	28.3	26.0	156.13	-264.8	883.2	649.4	600.2	49.23	13.190	
6,500.0	6,279.3	6,465.2	6,375.5	28.8	26.5	156.15	-269.8	901.0	662.3	612.2	50.09	13.223	
6,600.0	6,374.8	6,560.7	6,469.3	29.3	26.9	156.17	-274.6	918.1	675.3	624.4	50.91	13.265	
6,700.0	6,470.3	6,651.3	6,558.6	29.8	27.3	156.26	-278.9	933.1	689.3	637.6	51.71	13.331	
6,800.0	6,565.9	6,741.6	6,647.7	30.4	27.7	156.42	-282.7	946.7	704.6	652.1	52.51	13.418	
6,900.0	6,661.4	6,831.4	6,736.6	30.9	28.1	156.64	-286.2	958.9	721.1	667.8	53.32	13.524	
7,000.0	6,756.9	6,920.8	6,825.3	31.4	28.5	156.92	-289.2	969.6	738.8	684.7	54.13	13.650	
7,100.0	6,852.4	7,009.7	6,913.7	31.9	28.9	157.25	-291.9	979.1	757.7	702.8	54.93	13.795	
7,200.0	6,947.9	7,100.0	7,003.6	32.4	29.2	157.64	-294.2	987.3	777.9	722.1	55.75	13.953	
7,300.0	7,043.5	7,186.0	7,089.3	32.9	29.5	158.05	-296.1	993.8	799.3	742.8	56.52	14.143	
7,400.0	7,139.0	7,273.2	7,176.3	33.4	29.9	158.50	-297.6	999.2	822.0	764.7	57.29	14.346	
7,500.0	7,234.5	7,359.8	7,262.9	33.9	30.2	158.99	-298.8	1,003.3	845.9	787.8	58.06	14.570	
7,600.0	7,330.0	7,445.8	7,348.8	34.4	30.4	159.49	-299.5	1,006.1	871.0	812.2	58.79	14.815	
7,700.0	7,425.5	7,531.1	7,434.0	34.9	30.6	160.02	-300.0	1,007.6	897.4	837.8	59.63	15.050	
7,782.5	7,504.4	7,601.4	7,504.4	35.3	30.7	160.46	-300.1	1,008.0	920.2	858.7	61.43	14.980	
7,800.0	7,521.1	7,618.1	7,521.1	35.4	30.7	160.59	-300.1	1,008.0	925.0	863.5	61.56	15.026	
7,900.0	7,616.9	7,714.0	7,616.9	35.9	30.8	161.24	-300.1	1,008.0	952.1	889.7	62.33	15.273	
8,000.0	7,713.3	7,810.3	7,713.3	36.4	30.8	161.83	-300.1	1,008.0	977.6	914.5	63.03	15.509	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1														Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1														Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.0	0.0	1.0	0.0	0.0	0.0	8.59	200.1	30.2	202.3						
100.0	100.0	101.0	100.0	0.8	0.8	8.59	200.1	30.2	202.3	200.4	2.00	101.284			
200.0	200.0	201.0	200.0	1.4	1.4	8.59	200.1	30.2	202.3	199.0	3.32	61.023			
300.0	300.0	301.0	300.0	1.9	1.9	8.59	200.1	30.2	202.3	198.2	4.20	48.190			
400.0	400.0	401.0	400.0	2.2	2.3	8.59	200.1	30.2	202.3	197.4	4.92	41.169			
500.0	500.0	501.0	500.0	2.6	2.6	8.59	200.1	30.2	202.3	196.8	5.54	36.553			
600.0	600.0	601.0	600.0	2.8	2.8	8.59	200.1	30.2	202.3	196.3	6.09	33.211			
700.0	700.0	701.0	700.0	3.1	3.1	8.59	200.1	30.2	202.3	195.7	6.60	30.642			
800.0	800.0	801.0	800.0	3.3	3.3	8.59	200.1	30.2	202.3	195.3	7.08	28.585			
900.0	900.0	901.0	900.0	3.6	3.6	8.59	200.1	30.2	202.3	194.8	7.53	26.888			
966.0	966.0	967.0	966.0	3.7	3.7	8.59	200.1	30.2	202.3	194.5	7.80	25.930			
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	8.59	200.1	30.2	202.3	194.4	7.96	25.434			
1,100.0	1,100.0	1,100.0	1,099.0	4.1	5.2	-81.66	200.0	32.0	202.3	192.8	9.53	21.239			
1,200.0	1,199.8	1,199.2	1,198.0	4.4	5.5	-81.66	199.9	37.2	202.3	192.4	9.84	20.546			
1,300.0	1,299.5	1,298.3	1,296.7	4.7	5.7	-81.66	199.8	45.8	202.1	192.0	10.16	19.898			
1,400.0	1,398.7	1,397.3	1,395.1	5.1	6.0	-81.66	199.5	57.9	201.9	191.5	10.47	19.284			
1,500.0	1,497.5	1,496.4	1,492.9	5.4	6.3	-81.68	199.2	73.3	201.7	190.9	10.79	18.693			
1,600.0	1,595.6	1,595.5	1,590.2	5.8	6.7	-81.71	198.9	92.1	201.4	190.3	11.12	18.116			
1,700.0	1,693.1	1,694.6	1,686.8	6.2	7.0	-81.74	198.4	114.2	201.0	189.6	11.46	17.542			
1,800.0	1,789.6	1,793.7	1,782.6	6.6	7.4	-81.78	197.9	139.7	200.6	188.8	11.83	16.963			
1,860.7	1,847.8	1,853.9	1,840.3	6.8	7.6	-81.81	197.6	156.8	200.4	188.3	12.03	16.653			
1,900.0	1,885.3	1,892.8	1,877.4	6.9	7.7	-81.75	197.3	168.5	200.2	188.0	12.16	16.464			
1,960.4	1,943.1	1,952.7	1,934.2	7.2	8.0	-81.36	197.0	187.5	200.1	187.7	12.43	16.102 CC			
2,000.0	1,980.9	1,991.9	1,971.1	7.3	8.1	-80.92	196.7	200.5	200.2	187.6	12.61	15.875 ES			
2,100.0	2,076.4	2,090.6	2,063.4	7.7	8.5	-79.13	196.0	235.6	200.7	187.6	13.10	15.327			
2,200.0	2,171.9	2,190.3	2,156.0	8.1	8.9	-76.91	195.3	272.6	201.8	188.1	13.70	14.731			
2,300.0	2,267.4	2,290.0	2,248.6	8.5	9.3	-74.71	194.6	309.5	203.2	188.9	14.33	14.182			
2,400.0	2,363.0	2,389.7	2,341.2	8.9	9.7	-72.55	193.8	346.4	204.9	189.9	15.00	13.660			
2,500.0	2,458.5	2,489.4	2,433.8	9.4	10.1	-70.42	193.1	383.3	206.9	191.2	15.72	13.164			
2,600.0	2,554.0	2,589.0	2,526.3	9.8	10.5	-68.34	192.4	420.3	209.2	192.7	16.48	12.696			
2,700.0	2,649.5	2,688.7	2,618.9	10.2	10.9	-66.30	191.6	457.2	211.7	194.4	17.27	12.257			
2,800.0	2,745.0	2,788.4	2,711.5	10.7	11.4	-64.31	190.9	494.1	214.5	196.4	18.10	11.849			
2,900.0	2,840.6	2,888.1	2,804.1	11.1	11.8	-62.38	190.2	531.0	217.6	198.6	18.97	11.469			
3,000.0	2,936.1	2,987.8	2,896.7	11.6	12.3	-60.50	189.5	568.0	220.9	201.0	19.86	11.119			
3,100.0	3,031.6	3,087.5	2,989.3	12.1	12.7	-58.68	188.7	604.9	224.4	203.6	20.78	10.796			
3,200.0	3,127.1	3,187.2	3,081.9	12.5	13.2	-56.92	188.0	641.8	228.1	206.4	21.73	10.500			
3,300.0	3,222.6	3,286.8	3,174.5	13.0	13.6	-55.21	187.3	678.7	232.1	209.4	22.69	10.228			
3,400.0	3,318.2	3,386.5	3,267.1	13.5	14.1	-53.57	186.5	715.7	236.2	212.6	23.67	9.980			
3,500.0	3,413.7	3,486.2	3,359.7	14.0	14.6	-51.98	185.8	752.6	240.6	215.9	24.66	9.754			
3,600.0	3,509.2	3,585.9	3,452.3	14.4	15.1	-50.45	185.1	789.5	245.1	219.4	25.67	9.547			
3,700.0	3,604.7	3,685.6	3,544.9	14.9	15.5	-48.97	184.4	826.4	249.8	223.1	26.69	9.359			
3,800.0	3,700.2	3,785.3	3,637.5	15.4	16.0	-47.55	183.6	863.4	254.6	226.9	27.72	9.187			
3,900.0	3,795.8	3,885.0	3,730.0	15.9	16.5	-46.19	182.9	900.3	259.6	230.9	28.75	9.030			
4,000.0	3,891.3	3,984.6	3,822.6	16.4	17.0	-44.87	182.2	937.2	264.8	235.0	29.79	8.887			
4,100.0	3,986.8	4,084.3	3,915.2	16.9	17.5	-43.61	181.4	974.1	270.1	239.2	30.84	8.757			
4,200.0	4,082.3	4,184.0	4,007.8	17.4	18.0	-42.39	180.7	1,011.1	275.5	243.6	31.89	8.638			
4,300.0	4,177.8	4,283.7	4,100.4	17.8	18.5	-41.22	180.0	1,048.0	281.0	248.0	32.94	8.530			
4,400.0	4,273.4	4,383.4	4,193.0	18.3	19.0	-40.10	179.3	1,084.9	286.6	252.6	33.99	8.431			
4,500.0	4,368.9	4,483.1	4,285.6	18.8	19.5	-39.02	178.5	1,121.8	292.4	257.3	35.05	8.341			
4,600.0	4,464.4	4,582.8	4,378.2	19.3	20.0	-37.99	177.8	1,158.8	298.2	262.1	36.11	8.258			
4,700.0	4,559.9	4,682.4	4,470.8	19.8	20.5	-36.99	177.1	1,195.7	304.1	267.0	37.17	8.183			

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,800.0	4,655.4	4,782.1	4,563.4	20.3	21.0	-36.03	176.3	1,232.6	310.2	271.9	38.23	8.114	
4,900.0	4,751.0	4,881.8	4,656.0	20.8	21.5	-35.11	175.6	1,269.5	316.3	277.0	39.29	8.050	
5,000.0	4,846.5	4,981.5	4,748.6	21.3	22.0	-34.22	174.9	1,306.5	322.4	282.1	40.34	7.992	
5,100.0	4,942.0	5,081.2	4,841.2	21.8	22.5	-33.37	174.1	1,343.4	328.7	287.3	41.40	7.939	
5,200.0	5,037.5	5,180.9	4,933.8	22.3	23.0	-32.55	173.4	1,380.3	335.0	292.6	42.46	7.890	
5,300.0	5,133.0	5,280.6	5,026.3	22.8	23.5	-31.76	172.7	1,417.2	341.4	297.9	43.52	7.845	
5,400.0	5,228.6	5,380.3	5,118.9	23.3	24.1	-30.99	172.0	1,454.2	347.9	303.3	44.58	7.804	
5,500.0	5,324.1	5,479.9	5,211.5	23.8	24.6	-30.26	171.2	1,491.1	354.4	308.8	45.63	7.767	
5,600.0	5,419.6	5,579.6	5,304.1	24.3	25.1	-29.55	170.5	1,528.0	361.0	314.3	46.69	7.732	
5,700.0	5,515.1	5,679.3	5,396.7	24.8	25.6	-28.87	169.8	1,564.9	367.6	319.9	47.74	7.700	
5,800.0	5,610.6	5,779.0	5,489.3	25.3	26.1	-28.21	169.0	1,601.9	374.3	325.5	48.79	7.670	
5,900.0	5,706.2	5,878.7	5,581.9	25.8	26.6	-27.58	168.3	1,638.8	381.0	331.2	49.85	7.643	
6,000.0	5,801.7	5,978.4	5,674.5	26.3	27.1	-26.96	167.6	1,675.7	387.8	336.9	50.90	7.619	
6,100.0	5,897.2	6,078.1	5,767.1	26.8	27.7	-26.37	166.9	1,712.6	394.6	342.6	51.95	7.596	
6,200.0	5,992.7	6,177.7	5,859.7	27.3	28.2	-25.80	166.1	1,749.6	401.4	348.4	53.00	7.574	
6,300.0	6,088.2	6,277.4	5,952.3	27.8	28.7	-25.25	165.4	1,786.5	408.3	354.3	54.05	7.555	
6,400.0	6,183.8	6,377.1	6,044.9	28.3	29.2	-24.72	164.7	1,823.4	415.2	360.2	55.09	7.537	
6,500.0	6,279.3	6,476.8	6,137.5	28.8	29.7	-24.20	163.9	1,860.3	422.2	366.1	56.14	7.521	
6,600.0	6,374.8	6,576.5	6,230.0	29.3	30.2	-23.70	163.2	1,897.3	429.2	372.0	57.19	7.505	
6,700.0	6,470.3	6,676.2	6,322.6	29.8	30.8	-23.22	162.5	1,934.2	436.2	378.0	58.23	7.491	
6,800.0	6,565.9	6,775.9	6,415.2	30.4	31.3	-22.75	161.8	1,971.1	443.3	384.0	59.27	7.479	
6,900.0	6,661.4	6,875.5	6,507.8	30.9	31.8	-22.29	161.0	2,008.0	450.4	390.1	60.32	7.467	
7,000.0	6,756.9	6,975.2	6,600.4	31.4	32.3	-21.85	160.3	2,045.0	457.5	396.1	61.36	7.456	
7,100.0	6,852.4	7,074.9	6,693.0	31.9	32.8	-21.43	159.6	2,081.9	464.6	402.2	62.40	7.446	
7,200.0	6,947.9	7,174.6	6,785.6	32.4	33.4	-21.01	158.8	2,118.8	471.8	408.3	63.44	7.437	
7,300.0	7,043.5	7,274.6	6,878.4	32.9	33.9	-20.61	158.1	2,155.8	479.0	414.5	64.48	7.428	
7,400.0	7,139.0	7,382.8	6,979.4	33.4	34.5	-20.24	157.3	2,194.9	485.2	419.7	65.58	7.399	
7,500.0	7,234.5	7,491.3	7,081.3	33.9	35.0	-19.96	156.6	2,232.2	489.8	423.1	66.67	7.347	
7,600.0	7,330.0	7,600.0	7,184.0	34.4	35.6	-19.76	155.9	2,267.5	492.5	424.8	67.72	7.274	
7,700.0	7,425.5	7,708.7	7,287.5	34.9	36.1	-19.66	155.2	2,301.0	493.5	424.8	68.73	7.180	
7,782.5	7,504.4	7,798.5	7,373.4	35.3	36.6	-19.63	154.7	2,327.1	493.0	423.5	69.54	7.089	
7,800.0	7,521.1	7,817.5	7,391.6	35.4	36.7	-19.63	154.6	2,332.5	492.8	423.1	69.71	7.069	
7,900.0	7,616.9	7,926.2	7,496.3	35.9	37.2	-19.64	154.0	2,362.0	491.3	420.7	70.65	6.954	
8,000.0	7,713.3	8,034.9	7,601.5	36.4	37.8	-19.65	153.5	2,389.4	489.7	418.2	71.55	6.844	
8,100.0	7,810.1	8,143.6	7,707.1	36.9	38.3	-19.68	153.0	2,414.9	488.0	415.6	72.41	6.739	
8,200.0	7,907.3	8,252.2	7,813.2	37.4	38.8	-19.71	152.5	2,438.4	486.1	412.9	73.23	6.639	
8,300.0	8,004.9	8,360.8	7,919.6	37.9	39.3	-19.76	152.1	2,459.8	484.1	410.1	74.00	6.542	
8,400.0	8,102.9	8,469.4	8,026.4	38.4	39.8	-19.81	151.7	2,479.3	482.0	407.3	74.73	6.450	
8,500.0	8,201.2	8,577.9	8,133.5	38.8	40.3	-19.87	151.4	2,496.6	479.8	404.4	75.41	6.362	
8,600.0	8,299.8	8,686.3	8,240.8	39.3	40.8	-19.95	151.1	2,512.0	477.4	401.3	76.05	6.277	
8,700.0	8,398.7	8,794.7	8,348.4	39.7	41.2	-20.03	150.8	2,525.3	474.9	398.3	76.64	6.197	
8,800.0	8,497.8	8,903.0	8,456.1	40.1	41.7	-20.13	150.6	2,536.5	472.3	395.1	77.17	6.120	
8,900.0	8,597.2	9,011.3	8,564.0	40.6	42.1	-20.23	150.4	2,545.8	469.5	391.9	77.64	6.047	
9,000.0	8,696.7	9,119.5	8,672.0	41.0	42.5	-20.35	150.3	2,552.9	466.6	388.6	78.05	5.978	
9,100.0	8,796.4	9,227.6	8,780.0	41.3	42.8	-20.48	150.2	2,558.1	463.6	385.2	78.40	5.914	
9,200.0	8,896.2	9,335.7	8,888.0	41.7	43.1	-20.62	150.1	2,561.2	460.5	381.9	78.66	5.855	
9,300.0	8,996.1	9,443.7	8,995.9	42.0	43.3	-20.77	150.1	2,562.2	457.3	376.6	80.72	5.665	
9,400.0	9,096.1	9,543.8	9,096.1	42.3	43.4	-20.88	150.1	2,562.2	454.8	372.4	82.33	5.523	
9,500.0	9,196.1	9,643.8	9,196.1	42.5	43.4	-20.92	150.1	2,562.2	453.9	371.4	82.48	5.503	
9,503.9	9,200.0	9,647.7	9,200.0	42.5	43.4	69.35	150.1	2,562.2	453.9	371.4	82.48	5.503	
9,600.0	9,296.1	9,743.8	9,296.1	42.5	43.4	69.35	150.1	2,562.2	453.9	371.4	82.52	5.500	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,700.0	9,396.1	9,843.8	9,396.1	42.5	43.4	69.35	150.1	2,562.2	453.9	371.3	82.56	5.498	
9,785.4	9,481.5	9,929.2	9,481.5	42.5	43.4	69.35	150.1	2,562.2	453.9	371.3	82.59	5.496	
9,800.0	9,496.1	9,943.8	9,496.1	42.5	43.4	-110.32	150.1	2,562.2	454.0	371.4	82.58	5.497	
9,825.0	9,521.0	9,968.7	9,521.0	42.5	43.4	-110.43	150.1	2,562.2	454.5	371.9	82.52	5.507	
9,850.0	9,545.9	9,993.6	9,545.9	42.5	43.4	-110.65	150.1	2,562.2	455.4	373.0	82.41	5.526	
9,875.0	9,570.5	10,018.2	9,570.5	42.5	43.4	-110.95	150.1	2,562.2	456.9	374.6	82.25	5.554	
9,900.0	9,595.0	10,042.7	9,595.0	42.5	43.4	-111.34	150.1	2,562.2	458.8	376.8	82.05	5.592	
9,925.0	9,619.1	10,066.8	9,619.1	42.5	43.5	-111.80	150.1	2,562.2	461.3	379.5	81.80	5.639	
9,950.0	9,642.8	10,090.5	9,642.8	42.5	43.5	-112.31	150.1	2,562.2	464.4	382.9	81.50	5.698	
9,975.0	9,666.1	10,113.8	9,666.1	42.5	43.5	-112.87	150.1	2,562.2	468.1	386.9	81.15	5.768	
10,000.0	9,688.9	10,136.6	9,688.9	42.5	43.5	-113.44	150.1	2,562.2	472.4	391.7	80.75	5.850	
10,025.0	9,711.1	10,158.8	9,711.1	42.5	43.5	-114.02	150.1	2,562.2	477.5	397.2	80.30	5.946	
10,050.0	9,732.7	10,180.4	9,732.7	42.5	43.5	-114.58	150.1	2,562.2	483.3	403.5	79.80	6.057	
10,075.0	9,753.6	10,201.3	9,753.6	42.5	43.5	-115.10	150.1	2,562.2	490.0	410.7	79.25	6.182	
10,100.0	9,773.8	10,221.5	9,773.8	42.5	43.5	-115.56	150.1	2,562.2	497.5	418.8	78.66	6.324	
10,125.0	9,793.2	10,240.9	9,793.2	42.6	43.5	-115.93	150.1	2,562.2	505.8	427.8	78.03	6.483	
10,150.0	9,811.7	10,259.4	9,811.7	42.6	43.5	-116.21	150.1	2,562.2	515.1	437.7	77.37	6.658	
10,175.0	9,829.3	10,277.0	9,829.3	42.6	43.5	-116.36	150.1	2,562.2	525.3	448.6	76.67	6.851	
10,200.0	9,845.9	10,293.6	9,845.9	42.6	43.5	-116.36	150.1	2,562.2	536.4	460.5	75.96	7.062	
10,225.0	9,861.5	10,309.3	9,861.5	42.6	43.5	-116.20	150.1	2,562.2	548.5	473.3	75.24	7.291	
10,250.0	9,876.2	10,323.9	9,876.2	42.6	43.5	-115.84	150.1	2,562.2	561.5	487.0	74.51	7.537	
10,275.0	9,889.7	10,337.4	9,889.7	42.6	43.5	-115.27	150.1	2,562.2	575.5	501.7	73.78	7.800	
10,300.0	9,902.1	10,349.8	9,902.1	42.6	43.5	-114.45	150.1	2,562.2	590.3	517.2	73.06	8.079	
10,325.0	9,913.3	10,361.0	9,913.3	42.6	43.5	-113.38	150.1	2,562.2	606.0	533.6	72.36	8.374	
10,350.0	9,923.4	10,371.1	9,923.4	42.7	43.5	-112.00	150.1	2,562.2	622.5	550.8	71.68	8.684	
10,375.0	9,932.3	10,380.0	9,932.3	42.7	43.5	-110.30	150.1	2,562.2	639.7	568.7	71.02	9.007	
10,400.0	9,939.9	10,387.6	9,939.9	42.7	43.5	-108.24	150.1	2,562.2	657.7	587.3	70.40	9.342	
10,425.0	9,946.2	10,394.0	9,946.2	42.7	43.5	-105.80	150.1	2,562.2	676.3	606.5	69.80	9.689	
10,450.0	9,951.3	10,399.0	9,951.3	42.7	43.5	-102.95	150.1	2,562.2	695.5	626.2	69.24	10.044	
10,475.0	9,955.1	10,402.8	9,955.1	42.8	43.5	-99.67	150.1	2,562.2	715.2	646.5	68.71	10.408	
10,500.0	9,957.6	10,405.4	9,957.6	42.8	43.5	-95.96	150.1	2,562.2	735.3	667.1	68.22	10.778	
10,525.0	9,958.9	10,406.6	9,958.9	42.8	43.5	-91.84	150.1	2,562.2	755.8	688.0	67.76	11.154	
10,534.2	9,959.0	10,406.7	9,959.0	42.8	43.5	-90.23	150.1	2,562.2	763.4	695.8	67.60	11.293	
10,600.0	9,959.1	10,406.8	9,959.1	42.9	43.5	-90.25	150.1	2,562.2	818.9	752.3	66.57	12.301	
10,700.0	9,959.4	11,757.4	10,691.8	43.0	44.2	-152.72	-671.4	2,519.2	824.4	783.1	41.27	19.973	
10,800.0	9,959.7	11,846.3	10,691.8	43.2	44.3	-152.95	-760.3	2,515.9	822.1	780.9	41.26	19.927	
10,900.0	9,959.9	11,936.0	10,691.8	43.3	44.5	-153.01	-850.0	2,515.4	821.3	780.0	41.34	19.866	
11,000.0	9,960.2	12,036.0	10,691.7	43.5	44.7	-153.00	-950.0	2,516.0	821.0	779.5	41.51	19.782	
11,100.0	9,960.5	12,136.0	10,691.7	43.8	45.0	-152.99	-1,050.0	2,516.6	820.8	779.0	41.73	19.668	
11,200.0	9,960.7	12,236.0	10,691.7	44.0	45.3	-152.98	-1,150.0	2,517.2	820.5	778.5	42.02	19.527	
11,300.0	9,961.0	12,336.0	10,691.6	44.3	45.6	-152.97	-1,250.0	2,517.8	820.2	777.9	42.37	19.360	
11,400.0	9,961.3	12,436.0	10,691.6	44.5	45.9	-152.96	-1,350.0	2,518.4	820.0	777.2	42.77	19.170	
11,500.0	9,961.5	12,536.0	10,691.5	44.9	46.2	-152.95	-1,450.0	2,519.0	819.7	776.5	43.24	18.957	
11,600.0	9,961.8	12,636.0	10,691.5	45.2	46.6	-152.94	-1,550.0	2,519.6	819.4	775.7	43.76	18.726	
11,700.0	9,962.1	12,736.0	10,691.5	45.5	46.9	-152.93	-1,650.0	2,520.2	819.2	774.8	44.33	18.477	
11,800.0	9,962.3	12,836.0	10,691.4	45.9	47.3	-152.92	-1,750.0	2,520.8	818.9	773.9	44.96	18.214	
11,900.0	9,962.6	12,936.0	10,691.4	46.3	47.8	-152.91	-1,850.0	2,521.4	818.6	773.0	45.63	17.939	
12,000.0	9,962.9	13,036.0	10,691.4	46.7	48.2	-152.90	-1,950.0	2,522.0	818.3	772.0	46.36	17.654	
12,100.0	9,963.1	13,136.0	10,691.3	47.1	48.6	-152.89	-2,050.0	2,522.6	818.1	771.0	47.12	17.360	
12,200.0	9,963.4	13,236.0	10,691.3	47.5	49.1	-152.88	-2,150.0	2,523.3	817.8	769.9	47.93	17.061	
12,300.0	9,963.7	13,336.0	10,691.2	48.0	49.6	-152.87	-2,250.0	2,523.9	817.5	768.8	48.78	16.758	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,400.0	9,963.9	13,436.0	10,691.2	48.4	50.1	-152.86	-2,350.0	2,524.5	817.3	767.6	49.67	16.453	
12,500.0	9,964.2	13,536.0	10,691.2	48.9	50.6	-152.85	-2,450.0	2,525.1	817.0	766.4	50.60	16.147	
12,600.0	9,964.5	13,636.0	10,691.1	49.4	51.1	-152.84	-2,550.0	2,525.7	816.7	765.2	51.56	15.841	
12,700.0	9,964.7	13,736.0	10,691.1	49.9	51.6	-152.83	-2,650.0	2,526.3	816.5	763.9	52.55	15.536	
12,800.0	9,965.0	13,836.0	10,691.0	50.5	52.2	-152.82	-2,750.0	2,526.9	816.2	762.6	53.58	15.234	
12,900.0	9,965.3	13,936.0	10,691.0	51.0	52.7	-152.81	-2,850.0	2,527.5	815.9	761.3	54.63	14.936	
13,000.0	9,965.5	14,036.0	10,691.0	51.6	53.3	-152.80	-2,950.0	2,528.1	815.6	759.9	55.71	14.641	
13,100.0	9,965.8	14,136.0	10,690.9	52.1	53.9	-152.79	-3,050.0	2,528.7	815.4	758.6	56.82	14.351	
13,200.0	9,966.1	14,236.0	10,690.9	52.7	54.4	-152.78	-3,150.0	2,529.3	815.1	757.2	57.95	14.067	
13,300.0	9,966.3	14,336.0	10,690.9	53.3	55.0	-152.77	-3,250.0	2,529.9	814.8	755.7	59.10	13.787	
13,400.0	9,966.6	14,436.0	10,690.8	53.9	55.7	-152.76	-3,350.0	2,530.5	814.6	754.3	60.28	13.514	
13,500.0	9,966.9	14,536.0	10,690.8	54.5	56.3	-152.75	-3,450.0	2,531.1	814.3	752.8	61.47	13.247	
13,600.0	9,967.1	14,636.0	10,690.7	55.1	56.9	-152.74	-3,550.0	2,531.8	814.0	751.3	62.69	12.986	
13,700.0	9,967.4	14,736.0	10,690.7	55.7	57.5	-152.73	-3,650.0	2,532.4	813.8	749.8	63.92	12.731	
13,800.0	9,967.7	14,836.0	10,690.7	56.4	58.2	-152.72	-3,750.0	2,533.0	813.5	748.3	65.17	12.483	
13,900.0	9,967.9	14,936.0	10,690.6	57.0	58.8	-152.71	-3,850.0	2,533.6	813.2	746.8	66.44	12.241	
14,000.0	9,968.2	15,036.0	10,690.6	57.7	59.5	-152.70	-3,950.0	2,534.2	813.0	745.2	67.72	12.005	
14,100.0	9,968.5	15,136.0	10,690.5	58.3	60.2	-152.69	-4,050.0	2,534.8	812.7	743.7	69.02	11.775	
14,200.0	9,968.7	15,236.0	10,690.5	59.0	60.9	-152.68	-4,149.9	2,535.4	812.4	742.1	70.33	11.552	
14,300.0	9,969.0	15,336.0	10,690.5	59.7	61.5	-152.67	-4,249.9	2,536.0	812.1	740.5	71.65	11.335	
14,400.0	9,969.3	15,436.0	10,690.4	60.4	62.2	-152.66	-4,349.9	2,536.6	811.9	738.9	72.98	11.124	
14,500.0	9,969.5	15,536.0	10,690.4	61.0	62.9	-152.65	-4,449.9	2,537.2	811.6	737.3	74.33	10.919	
14,600.0	9,969.8	15,636.0	10,690.4	61.7	63.6	-152.64	-4,549.9	2,537.8	811.3	735.6	75.69	10.719	
14,700.0	9,970.0	15,736.0	10,690.3	62.5	64.4	-152.63	-4,649.9	2,538.4	811.1	734.0	77.06	10.526	
14,800.0	9,970.3	15,836.0	10,690.3	63.2	65.1	-152.62	-4,749.9	2,539.0	810.8	732.4	78.43	10.337	
14,900.0	9,970.6	15,936.0	10,690.2	63.9	65.8	-152.61	-4,849.9	2,539.6	810.5	730.7	79.82	10.154	
15,000.0	9,970.8	16,036.0	10,690.2	64.6	66.5	-152.60	-4,949.9	2,540.3	810.3	729.0	81.22	9.976	
15,100.0	9,971.1	16,136.0	10,690.2	65.4	67.3	-152.59	-5,049.9	2,540.9	810.0	727.4	82.62	9.803	
15,200.0	9,971.4	16,236.0	10,690.1	66.1	68.0	-152.58	-5,149.9	2,541.5	809.7	725.7	84.04	9.635	
15,300.0	9,971.6	16,336.0	10,690.1	66.8	68.8	-152.57	-5,249.9	2,542.1	809.5	724.0	85.46	9.472	
15,400.0	9,971.9	16,436.0	10,690.0	67.6	69.5	-152.56	-5,349.9	2,542.7	809.2	722.3	86.88	9.313	
15,500.0	9,972.2	16,536.0	10,690.0	68.3	70.3	-152.55	-5,449.9	2,543.3	808.9	720.6	88.32	9.159	
15,600.0	9,972.4	16,636.0	10,690.0	69.1	71.0	-152.54	-5,549.9	2,543.9	808.6	718.9	89.76	9.009	
15,700.0	9,972.7	16,736.0	10,689.9	69.9	71.8	-152.53	-5,649.9	2,544.5	808.4	717.2	91.21	8.863	
15,800.0	9,973.0	16,836.0	10,689.9	70.6	72.6	-152.52	-5,749.9	2,545.1	808.1	715.4	92.66	8.721	
15,900.0	9,973.2	16,936.0	10,689.8	71.4	73.3	-152.51	-5,849.9	2,545.7	807.8	713.7	94.12	8.583	
16,000.0	9,973.5	17,036.0	10,689.8	72.2	74.1	-152.50	-5,949.9	2,546.3	807.6	712.0	95.58	8.449	
16,100.0	9,973.8	17,136.0	10,689.8	73.0	74.9	-152.49	-6,049.9	2,546.9	807.3	710.2	97.05	8.318	
16,200.0	9,974.0	17,236.0	10,689.7	73.8	75.7	-152.48	-6,149.9	2,547.5	807.0	708.5	98.53	8.191	
16,300.0	9,974.3	17,336.0	10,689.7	74.6	76.5	-152.47	-6,249.9	2,548.1	806.8	706.8	100.01	8.067	
16,400.0	9,974.6	17,436.0	10,689.7	75.4	77.3	-152.46	-6,349.9	2,548.8	806.5	705.0	101.49	7.946	
16,500.0	9,974.8	17,536.0	10,689.6	76.1	78.1	-152.45	-6,449.9	2,549.4	806.2	703.2	102.98	7.829	
16,600.0	9,975.1	17,636.0	10,689.6	77.0	78.9	-152.44	-6,549.9	2,550.0	806.0	701.5	104.47	7.714	
16,700.0	9,975.4	17,736.0	10,689.5	77.8	79.7	-152.43	-6,649.9	2,550.6	805.7	699.7	105.97	7.603	
16,800.0	9,975.6	17,836.0	10,689.5	78.6	80.5	-152.41	-6,749.9	2,551.2	805.4	697.9	107.47	7.494	
16,900.0	9,975.9	17,936.0	10,689.5	79.4	81.3	-152.40	-6,849.9	2,551.8	805.2	696.2	108.98	7.388	
17,000.0	9,976.2	18,036.0	10,689.4	80.2	82.1	-152.39	-6,949.9	2,552.4	804.9	694.4	110.48	7.285	
17,100.0	9,976.4	18,136.0	10,689.4	81.0	83.0	-152.38	-7,049.9	2,553.0	804.6	692.6	112.00	7.184	
17,200.0	9,976.7	18,236.0	10,689.3	81.8	83.8	-152.37	-7,149.9	2,553.6	804.3	690.8	113.51	7.086	
17,300.0	9,977.0	18,336.0	10,689.3	82.7	84.6	-152.36	-7,249.9	2,554.2	804.1	689.0	115.03	6.990	
17,400.0	9,977.2	18,436.0	10,689.3	83.5	85.4	-152.35	-7,349.9	2,554.8	803.8	687.3	116.55	6.897	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
17,500.0	9,977.5	18,536.0	10,689.2	84.3	86.3	-152.34	-7,449.9	2,555.4	803.5	685.5	118.07	6.805
17,600.0	9,977.8	18,636.0	10,689.2	85.2	87.1	-152.33	-7,549.9	2,556.0	803.3	683.7	119.60	6.716
17,700.0	9,978.0	18,736.0	10,689.2	86.0	87.9	-152.32	-7,649.9	2,556.6	803.0	681.9	121.13	6.629
17,800.0	9,978.3	18,836.0	10,689.1	86.8	88.8	-152.31	-7,749.9	2,557.2	802.7	680.1	122.66	6.544
17,900.0	9,978.6	18,936.0	10,689.1	87.7	89.6	-152.30	-7,849.9	2,557.9	802.5	678.3	124.20	6.461
18,000.0	9,978.8	19,036.0	10,689.0	88.5	90.5	-152.29	-7,949.9	2,558.5	802.2	676.5	125.73	6.380
18,100.0	9,979.1	19,136.0	10,689.0	89.4	91.3	-152.28	-8,049.9	2,559.1	801.9	674.7	127.27	6.301
18,200.0	9,979.4	19,236.0	10,689.0	90.2	92.2	-152.27	-8,149.9	2,559.7	801.7	672.8	128.81	6.223
18,300.0	9,979.6	19,336.0	10,688.9	91.1	93.0	-152.26	-8,249.9	2,560.3	801.4	671.0	130.36	6.148
18,400.0	9,979.9	19,436.0	10,688.9	91.9	93.9	-152.25	-8,349.9	2,560.9	801.1	669.2	131.90	6.074
18,500.0	9,980.2	19,536.0	10,688.8	92.8	94.7	-152.24	-8,449.8	2,561.5	800.9	667.4	133.45	6.001
18,600.0	9,980.4	19,636.0	10,688.8	93.7	95.6	-152.23	-8,549.8	2,562.1	800.6	665.6	135.00	5.930
18,700.0	9,980.7	19,736.0	10,688.8	94.5	96.4	-152.22	-8,649.8	2,562.7	800.3	663.8	136.55	5.861
18,800.0	9,981.0	19,836.0	10,688.7	95.4	97.3	-152.21	-8,749.8	2,563.3	800.1	661.9	138.11	5.793
18,900.0	9,981.2	19,936.0	10,688.7	96.2	98.2	-152.20	-8,849.8	2,563.9	799.8	660.1	139.66	5.727
19,000.0	9,981.5	20,036.0	10,688.7	97.1	99.0	-152.19	-8,949.8	2,564.5	799.5	658.3	141.22	5.662
19,100.0	9,981.8	20,136.0	10,688.6	98.0	99.9	-152.18	-9,049.8	2,565.1	799.2	656.5	142.78	5.598
19,200.0	9,982.0	20,236.0	10,688.6	98.9	100.8	-152.17	-9,149.8	2,565.7	799.0	654.6	144.34	5.535
19,300.0	9,982.3	20,336.0	10,688.5	99.7	101.6	-152.16	-9,249.8	2,566.4	798.7	652.8	145.90	5.474
19,400.0	9,982.6	20,436.0	10,688.5	100.6	102.5	-152.15	-9,349.8	2,567.0	798.4	651.0	147.46	5.414
19,500.0	9,982.8	20,536.0	10,688.5	101.5	103.4	-152.14	-9,449.8	2,567.6	798.2	649.1	149.03	5.356
19,600.0	9,983.1	20,636.0	10,688.4	102.4	104.2	-152.13	-9,549.8	2,568.2	797.9	647.3	150.60	5.298
19,700.0	9,983.4	20,736.0	10,688.4	103.2	105.1	-152.12	-9,649.8	2,568.8	797.6	645.5	152.16	5.242
19,800.0	9,983.6	20,836.0	10,688.3	104.1	106.0	-152.10	-9,749.8	2,569.4	797.4	643.6	153.73	5.187
19,900.0	9,983.9	20,936.0	10,688.3	105.0	106.9	-152.09	-9,849.8	2,570.0	797.1	641.8	155.30	5.133
20,000.0	9,984.2	21,036.0	10,688.3	105.9	107.8	-152.08	-9,949.8	2,570.6	796.8	640.0	156.88	5.079
20,100.0	9,984.4	21,136.0	10,688.2	106.8	108.6	-152.07	-10,049.8	2,571.2	796.6	638.1	158.45	5.027
20,200.0	9,984.7	21,236.0	10,688.2	107.6	109.5	-152.06	-10,149.8	2,571.8	796.3	636.3	160.02	4.976
20,300.0	9,985.0	21,336.0	10,688.2	108.5	110.4	-152.05	-10,249.8	2,572.4	796.0	634.4	161.60	4.926
20,400.0	9,985.2	21,436.0	10,688.1	109.4	111.3	-152.04	-10,349.8	2,573.0	795.8	632.6	163.18	4.877
20,500.0	9,985.5	21,536.0	10,688.1	110.3	112.2	-152.03	-10,449.8	2,573.6	795.5	630.7	164.75	4.828
20,600.0	9,985.8	21,636.0	10,688.0	111.2	113.1	-152.02	-10,549.8	2,574.2	795.2	628.9	166.33	4.781
20,693.8	9,986.0	21,729.8	10,688.0	112.0	113.9	-152.01	-10,643.6	2,574.8	795.0	627.2	167.81	4.737 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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	1.0	0.0	0.0	0.0	0.06	200.0	0.2	200.0				
100.0	100.0	101.0	100.0	0.8	0.8	0.06	200.0	0.2	200.0	198.0	2.00	100.103	
200.0	200.0	201.0	200.0	1.4	1.4	0.06	200.0	0.2	200.0	196.7	3.32	60.311	
300.0	300.0	301.0	300.0	1.9	1.9	0.06	200.0	0.2	200.0	195.8	4.20	47.629	
400.0	400.0	401.0	400.0	2.2	2.3	0.06	200.0	0.2	200.0	195.1	4.92	40.689	
500.0	500.0	501.0	500.0	2.6	2.6	0.06	200.0	0.2	200.0	194.5	5.54	36.127	
600.0	600.0	601.0	600.0	2.8	2.8	0.06	200.0	0.2	200.0	193.9	6.09	32.824	
700.0	700.0	701.0	700.0	3.1	3.1	0.06	200.0	0.2	200.0	193.4	6.60	30.285	
800.0	800.0	801.0	800.0	3.3	3.3	0.06	200.0	0.2	200.0	192.9	7.08	28.252	
900.0	900.0	901.0	900.0	3.6	3.6	0.06	200.0	0.2	200.0	192.5	7.53	26.574	
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	0.06	200.0	0.2	200.0	192.0	7.95	25.158 CC	
1,004.4	1,004.4	1,005.4	1,004.4	3.8	3.8	-90.21	200.0	0.2	200.0	192.0	7.97	25.102	
1,100.0	1,100.0	1,101.0	1,100.0	4.1	4.0	-90.70	200.0	0.2	200.0	191.7	8.35	23.965	
1,200.0	1,199.8	1,200.8	1,199.8	4.4	4.2	-92.20	200.0	0.2	200.1	191.4	8.72	22.954 ES	
1,300.0	1,299.5	1,300.5	1,299.5	4.7	4.4	-94.67	200.0	0.2	200.7	191.6	9.08	22.092	
1,400.0	1,398.7	1,399.7	1,398.7	5.1	4.6	-98.06	200.0	0.2	202.0	192.6	9.44	21.391	
1,500.0	1,497.5	1,498.5	1,497.5	5.4	4.7	-102.29	200.0	0.2	204.8	195.0	9.82	20.868	
1,600.0	1,595.6	1,601.1	1,600.0	5.8	5.0	-107.07	199.4	1.9	208.7	198.5	10.24	20.384	
1,700.0	1,693.1	1,704.3	1,703.1	6.2	5.3	-111.81	197.5	7.1	213.0	202.3	10.70	19.896	
1,800.0	1,789.6	1,806.9	1,805.3	6.6	5.4	-116.44	194.6	15.7	217.7	206.5	11.13	19.560	
1,860.7	1,847.8	1,868.9	1,866.9	6.8	5.6	-119.13	192.7	22.7	221.1	209.7	11.44	19.328	
1,900.0	1,885.3	1,909.2	1,906.8	6.9	5.7	-120.81	191.5	27.9	223.4	211.8	11.64	19.194	
2,000.0	1,980.9	2,012.5	2,008.9	7.3	6.0	-124.42	188.3	43.9	228.7	216.5	12.26	18.653	
2,100.0	2,076.4	2,116.9	2,111.2	7.7	6.4	-127.15	185.0	63.8	232.6	219.7	12.91	18.022	
2,200.0	2,171.9	2,221.6	2,213.2	8.1	6.7	-129.09	181.7	87.5	234.6	221.1	13.54	17.325	
2,300.0	2,267.4	2,321.4	2,310.0	8.5	7.0	-130.60	178.5	111.7	235.8	221.6	14.21	16.602	
2,400.0	2,363.0	2,421.2	2,406.7	8.9	7.4	-132.09	175.4	135.9	237.2	222.3	14.90	15.919	
2,500.0	2,458.5	2,521.0	2,503.5	9.4	7.7	-133.57	172.2	160.0	238.7	223.1	15.63	15.274	
2,600.0	2,554.0	2,620.8	2,600.3	9.8	8.1	-135.03	169.0	184.2	240.4	224.0	16.39	14.670	
2,700.0	2,649.5	2,720.6	2,697.1	10.2	8.4	-136.46	165.9	208.4	242.3	225.1	17.18	14.105	
2,800.0	2,745.0	2,820.4	2,793.8	10.7	8.8	-137.88	162.7	232.6	244.2	226.2	17.99	13.578	
2,900.0	2,840.6	2,920.2	2,890.6	11.1	9.2	-139.27	159.5	256.8	246.4	227.5	18.82	13.089	
3,000.0	2,936.1	3,020.0	2,987.4	11.6	9.6	-140.63	156.4	280.9	248.6	229.0	19.68	12.634	
3,100.0	3,031.6	3,119.8	3,084.2	12.1	10.0	-141.97	153.2	305.1	251.1	230.5	20.56	12.214	
3,200.0	3,127.1	3,219.6	3,180.9	12.5	10.4	-143.29	150.0	329.3	253.6	232.2	21.45	11.824	
3,300.0	3,222.6	3,319.4	3,277.7	13.0	10.9	-144.58	146.8	353.5	256.3	233.9	22.36	11.464	
3,400.0	3,318.2	3,419.2	3,374.5	13.5	11.3	-145.84	143.7	377.7	259.1	235.8	23.28	11.130	
3,500.0	3,413.7	3,519.0	3,471.2	14.0	11.7	-147.07	140.5	401.8	262.0	237.8	24.21	10.822	
3,600.0	3,509.2	3,618.8	3,568.0	14.4	12.2	-148.27	137.3	426.0	265.1	239.9	25.16	10.537	
3,700.0	3,604.7	3,718.6	3,664.8	14.9	12.6	-149.45	134.2	450.2	268.2	242.1	26.11	10.273	
3,800.0	3,700.2	3,818.4	3,761.6	15.4	13.1	-150.60	131.0	474.4	271.5	244.4	27.07	10.028	
3,900.0	3,795.8	3,918.2	3,858.3	15.9	13.5	-151.72	127.8	498.6	274.9	246.9	28.04	9.802	
4,000.0	3,891.3	4,018.0	3,955.1	16.4	14.0	-152.82	124.7	522.7	278.4	249.4	29.02	9.593	
4,100.0	3,986.8	4,117.8	4,051.9	16.9	14.4	-153.88	121.5	546.9	282.0	252.0	30.00	9.399	
4,200.0	4,082.3	4,217.6	4,148.7	17.4	14.9	-154.92	118.3	571.1	285.6	254.7	30.99	9.219	
4,300.0	4,177.8	4,317.4	4,245.4	17.8	15.3	-155.93	115.1	595.3	289.4	257.4	31.97	9.051	
4,400.0	4,273.4	4,417.2	4,342.2	18.3	15.8	-156.92	112.0	619.4	293.3	260.3	32.97	8.896	
4,500.0	4,368.9	4,517.0	4,439.0	18.8	16.3	-157.88	108.8	643.6	297.2	263.3	33.96	8.752	
4,600.0	4,464.4	4,616.8	4,535.8	19.3	16.7	-158.82	105.6	667.8	301.2	266.3	34.96	8.618	
4,700.0	4,559.9	4,716.6	4,632.5	19.8	17.2	-159.73	102.5	692.0	305.3	269.4	35.95	8.493	
4,800.0	4,655.4	4,816.4	4,729.3	20.3	17.7	-160.61	99.3	716.2	309.5	272.6	36.95	8.376	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
4,900.0	4,751.0	4,916.2	4,826.1	20.8	18.1	-161.48	96.1	740.3	313.8	275.8	37.95	8.268	
5,000.0	4,846.5	5,016.0	4,922.9	21.3	18.6	-162.32	93.0	764.5	318.1	279.1	38.95	8.167	
5,100.0	4,942.0	5,115.8	5,019.6	21.8	19.1	-163.13	89.8	788.7	322.5	282.5	39.95	8.072	
5,200.0	5,037.5	5,215.6	5,116.4	22.3	19.5	-163.93	86.6	812.9	326.9	286.0	40.95	7.984	
5,300.0	5,133.0	5,315.4	5,213.2	22.8	20.0	-164.70	83.5	837.1	331.4	289.5	41.94	7.902	
5,400.0	5,228.6	5,415.2	5,310.0	23.3	20.5	-165.45	80.3	861.2	336.0	293.1	42.94	7.825	
5,500.0	5,324.1	5,515.0	5,406.7	23.8	21.0	-166.18	77.1	885.4	340.6	296.7	43.94	7.753	
5,600.0	5,419.6	5,614.8	5,503.5	24.3	21.4	-166.90	73.9	909.6	345.3	300.4	44.93	7.685	
5,700.0	5,515.1	5,714.6	5,600.3	24.8	21.9	-167.59	70.8	933.8	350.0	304.1	45.93	7.622	
5,800.0	5,610.6	5,814.4	5,697.1	25.3	22.4	-168.26	67.6	958.0	354.8	307.9	46.92	7.563	
5,900.0	5,706.2	5,914.2	5,793.8	25.8	22.9	-168.92	64.4	982.1	359.7	311.8	47.91	7.507	
6,000.0	5,801.7	6,014.0	5,890.6	26.3	23.3	-169.56	61.3	1,006.3	364.5	315.6	48.90	7.455	
6,100.0	5,897.2	6,113.8	5,987.4	26.8	23.8	-170.18	58.1	1,030.5	369.5	319.6	49.89	7.406	
6,200.0	5,992.7	6,213.6	6,084.2	27.3	24.3	-170.79	54.9	1,054.7	374.4	323.5	50.87	7.360	
6,300.0	6,088.2	6,313.4	6,180.9	27.8	24.8	-171.38	51.8	1,078.9	379.4	327.6	51.86	7.317	
6,400.0	6,183.8	6,413.2	6,277.7	28.3	25.3	-171.95	48.6	1,103.0	384.5	331.6	52.84	7.276	
6,500.0	6,279.3	6,513.0	6,374.5	28.8	25.7	-172.51	45.4	1,127.2	389.5	335.7	53.82	7.237	
6,600.0	6,374.8	6,612.8	6,471.2	29.3	26.2	-173.06	42.2	1,151.4	394.7	339.9	54.80	7.201	
6,700.0	6,470.3	6,712.6	6,568.0	29.8	26.7	-173.59	39.1	1,175.6	399.8	344.0	55.78	7.167	
6,800.0	6,565.9	6,812.4	6,664.8	30.4	27.2	-174.11	35.9	1,199.8	405.0	348.2	56.76	7.135	
6,900.0	6,661.4	6,912.2	6,761.6	30.9	27.7	-174.61	32.7	1,223.9	410.2	352.5	57.73	7.105	
7,000.0	6,756.9	7,012.0	6,858.3	31.4	28.2	-175.10	29.6	1,248.1	415.5	356.8	58.71	7.077	
7,100.0	6,852.4	7,111.8	6,955.1	31.9	28.6	-175.58	26.4	1,272.3	420.7	361.1	59.68	7.050	
7,200.0	6,947.9	7,211.6	7,051.9	32.4	29.1	-176.05	23.2	1,296.5	426.0	365.4	60.65	7.025	
7,300.0	7,043.5	7,311.4	7,148.7	32.9	29.6	-176.51	20.1	1,320.6	431.4	369.8	61.62	7.001	
7,400.0	7,139.0	7,411.2	7,245.4	33.4	30.1	-176.95	16.9	1,344.8	436.7	374.2	62.58	6.978	
7,500.0	7,234.5	7,511.0	7,342.2	33.9	30.6	-177.39	13.7	1,369.0	442.1	378.6	63.55	6.957	
7,600.0	7,330.0	7,610.8	7,439.0	34.4	31.1	-177.81	10.6	1,393.2	447.5	383.0	64.51	6.937	
7,700.0	7,425.5	7,710.6	7,535.8	34.9	31.6	-178.22	7.4	1,417.4	453.0	387.5	65.48	6.918	
7,782.5	7,504.4	7,792.9	7,615.6	35.3	32.0	-178.56	4.8	1,437.3	457.5	391.2	66.26	6.904	
7,800.0	7,521.1	7,810.4	7,632.5	35.4	32.0	-178.63	4.2	1,441.5	458.4	392.0	66.43	6.900	
7,900.0	7,616.9	7,910.2	7,729.4	35.9	32.5	-179.02	1.0	1,465.7	462.7	395.3	67.40	6.865	
8,000.0	7,713.3	8,010.1	7,826.3	36.4	33.0	-179.40	-2.1	1,489.9	465.3	396.9	68.35	6.808	
8,100.0	7,810.1	8,110.1	7,923.2	36.9	33.5	-179.78	-5.3	1,514.2	466.1	396.9	69.29	6.728	
8,200.0	7,907.3	8,210.0	8,020.1	37.4	34.0	-179.84	-8.5	1,538.4	465.3	395.1	70.21	6.626	
8,300.0	8,004.9	8,310.0	8,117.0	37.9	34.5	-179.46	-11.7	1,562.6	462.7	391.5	71.13	6.505	
8,400.0	8,102.9	8,409.8	8,213.8	38.4	35.0	-179.07	-14.8	1,586.8	458.4	386.3	72.03	6.364	
8,500.0	8,201.2	8,509.6	8,310.6	38.8	35.5	-178.67	-18.0	1,610.9	452.3	379.4	72.91	6.204	
8,600.0	8,299.8	8,609.2	8,407.2	39.3	35.9	-178.25	-21.2	1,635.1	444.6	370.8	73.78	6.026	
8,700.0	8,398.7	8,708.7	8,503.7	39.7	36.4	-177.81	-24.3	1,659.2	435.1	360.5	74.62	5.830	
8,800.0	8,497.8	8,807.0	8,599.0	40.1	36.9	-177.34	-27.4	1,683.0	423.9	348.5	75.44	5.619	
8,900.0	8,597.2	8,900.0	8,689.3	40.6	37.4	-176.87	-30.3	1,704.8	411.8	335.7	76.19	5.405	
9,000.0	8,696.7	8,993.2	8,780.3	41.0	37.8	-176.40	-33.0	1,725.2	399.7	322.8	76.90	5.197	
9,100.0	8,796.4	9,086.2	8,871.2	41.3	38.2	-175.93	-35.4	1,744.1	387.3	309.8	77.56	4.994	
9,200.0	8,896.2	9,179.3	8,962.6	41.7	38.7	-175.45	-37.7	1,761.5	374.9	296.7	78.17	4.796	
9,300.0	8,996.1	9,272.5	9,054.5	42.0	39.1	-174.97	-39.8	1,777.5	362.4	283.6	78.73	4.603	
9,400.0	9,096.1	9,366.0	9,146.8	42.3	39.5	-174.48	-41.7	1,792.0	349.7	270.5	79.21	4.414	
9,500.0	9,196.1	9,459.7	9,239.6	42.5	39.9	-173.99	-43.4	1,805.1	336.9	255.5	81.40	4.139	
9,503.9	9,200.0	9,463.4	9,243.2	42.5	39.9	-95.76	-43.5	1,805.6	336.4	253.6	82.77	4.064	
9,600.0	9,296.1	9,553.6	9,332.8	42.5	40.3	-96.22	-45.0	1,816.7	324.8	241.9	82.93	3.916	
9,700.0	9,396.1	9,647.9	9,426.5	42.5	40.7	-96.66	-46.3	1,826.8	314.3	231.2	83.07	3.783	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
9,785.4	9,481.5	9,728.8	9,507.0	42.5	41.0	-97.00	-47.3	1,834.2	306.6	223.4	83.17	3.686	
9,800.0	9,496.1	9,742.5	9,520.7	42.5	41.1	83.47	-47.4	1,835.4	305.4	222.2	83.14	3.673	
9,825.0	9,521.0	9,766.2	9,544.3	42.5	41.2	83.89	-47.7	1,837.3	303.3	220.1	83.20	3.645	
9,850.0	9,545.9	9,789.8	9,567.9	42.5	41.3	84.55	-47.9	1,839.1	301.1	217.8	83.29	3.615	
9,875.0	9,570.5	9,813.3	9,591.2	42.5	41.3	85.46	-48.1	1,840.8	298.9	215.5	83.43	3.583	
9,900.0	9,595.0	9,836.5	9,614.4	42.5	41.4	86.59	-48.3	1,842.4	296.8	213.3	83.58	3.551	
9,925.0	9,619.1	9,859.5	9,637.3	42.5	41.5	87.95	-48.5	1,843.9	294.9	211.1	83.76	3.520	
9,950.0	9,642.8	9,882.1	9,659.9	42.5	41.6	89.50	-48.7	1,845.3	293.1	209.1	83.95	3.491	
9,975.0	9,666.1	9,904.3	9,682.1	42.5	41.7	91.22	-48.9	1,846.5	291.6	207.5	84.12	3.467	
10,000.0	9,688.9	9,926.0	9,703.8	42.5	41.7	93.08	-49.0	1,847.7	290.6	206.4	84.26	3.449	
10,025.0	9,711.1	9,947.2	9,725.0	42.5	41.8	95.03	-49.2	1,848.7	290.1	205.8	84.34	3.440	
10,030.6	9,716.1	9,952.0	9,729.7	42.5	41.8	95.48	-49.2	1,848.9	290.1	205.8	84.34	3.440 SF	
10,050.0	9,732.7	9,967.8	9,745.6	42.5	41.9	97.04	-49.3	1,849.7	290.3	206.0	84.33	3.443	
10,075.0	9,753.6	9,987.8	9,765.5	42.5	41.9	99.06	-49.4	1,850.5	291.4	207.2	84.21	3.460	
10,100.0	9,773.8	10,007.0	9,784.7	42.5	42.0	101.03	-49.5	1,851.2	293.4	209.4	83.96	3.494	
10,125.0	9,793.2	10,025.5	9,803.2	42.6	42.1	102.92	-49.6	1,851.9	296.4	212.9	83.56	3.548	
10,150.0	9,811.7	10,043.2	9,820.8	42.6	42.1	104.68	-49.6	1,852.5	300.7	217.7	82.99	3.623	
10,175.0	9,829.3	10,060.0	9,837.6	42.6	42.2	106.26	-49.7	1,853.0	306.2	224.0	82.26	3.723	
10,200.0	9,845.9	10,075.9	9,853.5	42.6	42.2	107.63	-49.8	1,853.4	313.1	231.7	81.37	3.848	
10,225.0	9,861.5	10,090.8	9,868.4	42.6	42.3	108.76	-49.8	1,853.7	321.4	241.1	80.35	4.000	
10,250.0	9,876.2	10,104.7	9,882.3	42.6	42.3	109.62	-49.9	1,854.0	331.1	251.9	79.20	4.180	
10,275.0	9,889.7	10,117.6	9,895.2	42.6	42.3	110.17	-49.9	1,854.3	342.2	264.2	77.96	4.389	
10,300.0	9,902.1	10,129.4	9,907.1	42.6	42.4	110.40	-49.9	1,854.5	354.6	277.9	76.66	4.625	
10,325.0	9,913.3	10,140.1	9,917.8	42.6	42.4	110.26	-49.9	1,854.6	368.3	293.0	75.33	4.889	
10,350.0	9,923.4	10,149.7	9,927.3	42.7	42.4	109.73	-50.0	1,854.8	383.2	309.2	74.00	5.179	
10,375.0	9,932.3	10,158.1	9,935.8	42.7	42.4	108.79	-50.0	1,854.9	399.3	326.6	72.68	5.493	
10,400.0	9,939.9	10,165.4	9,943.0	42.7	42.4	107.39	-50.0	1,854.9	416.4	344.9	71.40	5.831	
10,425.0	9,946.2	10,171.4	9,949.1	42.7	42.5	105.49	-50.0	1,855.0	434.4	364.2	70.17	6.190	
10,450.0	9,951.3	10,176.3	9,953.9	42.7	42.5	103.06	-50.0	1,855.0	453.2	384.2	69.00	6.568	
10,475.0	9,955.1	10,179.9	9,957.5	42.8	42.5	100.07	-50.0	1,855.1	472.7	404.8	67.90	6.962	
10,500.0	9,957.6	10,182.3	9,959.9	42.8	42.5	96.50	-50.0	1,855.1	492.9	426.0	66.86	7.372	
10,525.0	9,958.9	10,183.5	9,961.1	42.8	42.5	92.35	-50.0	1,855.1	513.5	447.6	65.88	7.794	
10,534.2	9,959.0	10,183.6	9,961.2	42.8	42.5	90.69	-50.0	1,855.1	521.2	455.7	65.54	7.952	
10,600.0	9,959.1	10,183.8	9,961.4	42.9	42.5	90.74	-50.0	1,855.1	577.6	514.2	63.37	9.116	
10,700.0	9,959.4	10,184.1	9,961.8	43.0	42.5	90.80	-50.0	1,855.1	666.6	605.8	60.81	10.962	
10,800.0	9,959.7	10,184.5	9,962.1	43.2	42.5	90.87	-50.0	1,855.1	758.4	699.5	58.92	12.871	
10,900.0	9,959.9	10,184.8	9,962.4	43.3	42.5	90.94	-50.0	1,855.1	852.0	794.5	57.50	14.816	
11,000.0	9,960.2	10,185.1	9,962.8	43.5	42.5	91.00	-50.0	1,855.1	946.9	890.5	56.42	16.784	
11,100.0	9,960.5	11,901.5	10,881.3	43.8	44.1	162.92	-1,053.1	1,860.9	963.3	894.6	68.71	14.019	
11,200.0	9,960.7	12,001.5	10,881.3	44.0	44.3	162.92	-1,153.1	1,861.5	963.1	893.2	69.89	13.780	
11,300.0	9,961.0	12,101.5	10,881.4	44.3	44.6	162.91	-1,253.1	1,862.0	962.9	891.8	71.08	13.547	
11,400.0	9,961.3	12,201.5	10,881.5	44.5	44.8	162.90	-1,353.0	1,862.6	962.7	890.5	72.27	13.321	
11,500.0	9,961.5	12,301.5	10,881.5	44.9	45.1	162.90	-1,453.0	1,863.2	962.5	889.1	73.47	13.102	
11,600.0	9,961.8	12,401.5	10,881.6	45.2	45.4	162.89	-1,553.0	1,863.7	962.4	887.7	74.67	12.888	
11,700.0	9,962.1	12,501.5	10,881.6	45.5	45.8	162.89	-1,653.0	1,864.3	962.2	886.3	75.87	12.681	
11,800.0	9,962.3	12,601.5	10,881.7	45.9	46.1	162.88	-1,753.0	1,864.9	962.0	884.9	77.08	12.480	
11,900.0	9,962.6	12,701.5	10,881.8	46.3	46.5	162.88	-1,853.0	1,865.4	961.8	883.5	78.30	12.284	
12,000.0	9,962.9	12,801.5	10,881.8	46.7	46.9	162.87	-1,953.0	1,866.0	961.6	882.1	79.51	12.094	
12,100.0	9,963.1	12,901.5	10,881.9	47.1	47.3	162.86	-2,053.0	1,866.6	961.4	880.7	80.73	11.909	
12,200.0	9,963.4	13,001.5	10,881.9	47.5	47.7	162.86	-2,153.0	1,867.1	961.2	879.3	81.96	11.729	
12,300.0	9,963.7	13,101.5	10,882.0	48.0	48.2	162.85	-2,253.0	1,867.7	961.0	877.9	83.18	11.553	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
12,400.0	9,963.9	13,201.5	10,882.1	48.4	48.6	162.85	-2,353.0	1,868.3	960.9	876.4	84.42	11.383	
12,500.0	9,964.2	13,301.5	10,882.1	48.9	49.1	162.84	-2,453.0	1,868.8	960.7	875.0	85.65	11.216	
12,600.0	9,964.5	13,401.5	10,882.2	49.4	49.6	162.84	-2,553.0	1,869.4	960.5	873.6	86.89	11.054	
12,700.0	9,964.7	13,501.5	10,882.2	49.9	50.1	162.83	-2,653.0	1,870.0	960.3	872.2	88.13	10.897	
12,800.0	9,965.0	13,601.5	10,882.3	50.5	50.6	162.82	-2,753.0	1,870.5	960.1	870.7	89.37	10.743	
12,900.0	9,965.3	13,701.5	10,882.4	51.0	51.2	162.82	-2,853.0	1,871.1	959.9	869.3	90.62	10.593	
13,000.0	9,965.5	13,801.5	10,882.4	51.6	51.7	162.81	-2,953.0	1,871.7	959.7	867.9	91.87	10.446	
13,100.0	9,965.8	13,901.5	10,882.5	52.1	52.3	162.81	-3,053.0	1,872.2	959.6	866.4	93.13	10.304	
13,200.0	9,966.1	14,001.5	10,882.5	52.7	52.9	162.80	-3,153.0	1,872.8	959.4	865.0	94.39	10.164	
13,300.0	9,966.3	14,101.5	10,882.6	53.3	53.5	162.80	-3,253.0	1,873.4	959.2	863.5	95.65	10.028	
13,400.0	9,966.6	14,201.5	10,882.7	53.9	54.1	162.79	-3,353.0	1,873.9	959.0	862.1	96.91	9.895	
13,500.0	9,966.9	14,301.5	10,882.7	54.5	54.7	162.78	-3,453.0	1,874.5	958.8	860.6	98.18	9.766	
13,600.0	9,967.1	14,401.5	10,882.8	55.1	55.3	162.78	-3,553.0	1,875.1	958.6	859.2	99.46	9.639	
13,700.0	9,967.4	14,501.5	10,882.8	55.7	55.9	162.77	-3,653.0	1,875.6	958.4	857.7	100.73	9.515	
13,800.0	9,967.7	14,601.5	10,882.9	56.4	56.6	162.77	-3,753.0	1,876.2	958.3	856.2	102.01	9.394	
13,900.0	9,967.9	14,701.5	10,882.9	57.0	57.2	162.76	-3,853.0	1,876.8	958.1	854.8	103.29	9.275	
14,000.0	9,968.2	14,801.5	10,883.0	57.7	57.9	162.75	-3,953.0	1,877.3	957.9	853.3	104.58	9.160	
14,100.0	9,968.5	14,901.5	10,883.1	58.3	58.5	162.75	-4,053.0	1,877.9	957.7	851.8	105.87	9.046	
14,200.0	9,968.7	15,001.5	10,883.1	59.0	59.2	162.74	-4,153.0	1,878.5	957.5	850.4	107.16	8.935	
14,300.0	9,969.0	15,101.5	10,883.2	59.7	59.9	162.74	-4,253.0	1,879.0	957.3	848.9	108.46	8.827	
14,400.0	9,969.3	15,201.5	10,883.2	60.4	60.6	162.73	-4,353.0	1,879.6	957.1	847.4	109.75	8.721	
14,500.0	9,969.5	15,301.5	10,883.3	61.0	61.3	162.73	-4,453.0	1,880.2	957.0	845.9	111.06	8.617	
14,600.0	9,969.8	15,401.5	10,883.4	61.7	62.0	162.72	-4,553.0	1,880.7	956.8	844.4	112.36	8.515	
14,700.0	9,970.0	15,501.5	10,883.4	62.5	62.7	162.71	-4,653.0	1,881.3	956.6	842.9	113.67	8.415	
14,800.0	9,970.3	15,601.5	10,883.5	63.2	63.4	162.71	-4,753.0	1,881.9	956.4	841.4	114.98	8.318	
14,900.0	9,970.6	15,701.5	10,883.5	63.9	64.2	162.70	-4,853.0	1,882.4	956.2	839.9	116.30	8.222	
15,000.0	9,970.8	15,801.5	10,883.6	64.6	64.9	162.70	-4,953.0	1,883.0	956.0	838.4	117.62	8.128	
15,100.0	9,971.1	15,901.5	10,883.7	65.4	65.7	162.69	-5,053.0	1,883.6	955.8	836.9	118.94	8.036	
15,200.0	9,971.4	16,001.5	10,883.7	66.1	66.4	162.68	-5,153.0	1,884.1	955.7	835.4	120.27	7.946	
15,300.0	9,971.6	16,101.5	10,883.8	66.8	67.2	162.68	-5,253.0	1,884.7	955.5	833.9	121.59	7.858	
15,400.0	9,971.9	16,201.5	10,883.8	67.6	67.9	162.67	-5,353.0	1,885.3	955.3	832.4	122.93	7.771	
15,500.0	9,972.2	16,301.5	10,883.9	68.3	68.7	162.67	-5,453.0	1,885.8	955.1	830.8	124.26	7.686	
15,600.0	9,972.4	16,401.5	10,884.0	69.1	69.4	162.66	-5,553.0	1,886.4	954.9	829.3	125.60	7.603	
15,700.0	9,972.7	16,501.5	10,884.0	69.9	70.2	162.66	-5,653.0	1,887.0	954.7	827.8	126.94	7.521	
15,800.0	9,973.0	16,601.5	10,884.1	70.6	71.0	162.65	-5,753.0	1,887.5	954.5	826.3	128.28	7.441	
15,900.0	9,973.2	16,701.5	10,884.1	71.4	71.8	162.64	-5,853.0	1,888.1	954.4	824.7	129.63	7.362	
16,000.0	9,973.5	16,801.5	10,884.2	72.2	72.6	162.64	-5,953.0	1,888.7	954.2	823.2	130.98	7.285	
16,100.0	9,973.8	16,901.5	10,884.3	73.0	73.4	162.63	-6,053.0	1,889.2	954.0	821.6	132.34	7.209	
16,200.0	9,974.0	17,001.5	10,884.3	73.8	74.1	162.63	-6,153.0	1,889.8	953.8	820.1	133.69	7.134	
16,300.0	9,974.3	17,101.5	10,884.4	74.6	74.9	162.62	-6,253.0	1,890.4	953.6	818.6	135.05	7.061	
16,400.0	9,974.6	17,201.4	10,884.4	75.4	75.7	162.61	-6,353.0	1,890.9	953.4	817.0	136.41	6.989	
16,500.0	9,974.8	17,301.4	10,884.5	76.1	76.6	162.61	-6,453.0	1,891.5	953.2	815.5	137.78	6.919	
16,600.0	9,975.1	17,401.4	10,884.6	77.0	77.4	162.60	-6,553.0	1,892.1	953.1	813.9	139.15	6.849	
16,700.0	9,975.4	17,501.4	10,884.6	77.8	78.2	162.60	-6,653.0	1,892.6	952.9	812.3	140.52	6.781	
16,800.0	9,975.6	17,601.4	10,884.7	78.6	79.0	162.59	-6,752.9	1,893.2	952.7	810.8	141.90	6.714	
16,900.0	9,975.9	17,701.4	10,884.7	79.4	79.8	162.59	-6,852.9	1,893.8	952.5	809.2	143.27	6.648	
17,000.0	9,976.2	17,801.4	10,884.8	80.2	80.6	162.58	-6,952.9	1,894.3	952.3	807.7	144.65	6.583	
17,100.0	9,976.4	17,901.4	10,884.9	81.0	81.5	162.57	-7,052.9	1,894.9	952.1	806.1	146.04	6.520	
17,200.0	9,976.7	18,001.4	10,884.9	81.8	82.3	162.57	-7,152.9	1,895.5	951.9	804.5	147.42	6.457	
17,300.0	9,977.0	18,101.4	10,885.0	82.7	83.1	162.56	-7,252.9	1,896.0	951.7	802.9	148.81	6.396	
17,400.0	9,977.2	18,201.4	10,885.0	83.5	84.0	162.56	-7,352.9	1,896.6	951.6	801.4	150.20	6.335	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
17,500.0	9,977.5	18,301.4	10,885.1	84.3	84.8	162.55	-7,452.9	1,897.2	951.4	799.8	151.60	6.276	
17,600.0	9,977.8	18,401.4	10,885.2	85.2	85.6	162.54	-7,552.9	1,897.7	951.2	798.2	153.00	6.217	
17,700.0	9,978.0	18,501.4	10,885.2	86.0	86.5	162.54	-7,652.9	1,898.3	951.0	796.6	154.40	6.160	
17,800.0	9,978.3	18,601.4	10,885.3	86.8	87.3	162.53	-7,752.9	1,898.9	950.8	795.0	155.80	6.103	
17,900.0	9,978.6	18,701.4	10,885.3	87.7	88.2	162.53	-7,852.9	1,899.4	950.6	793.4	157.20	6.047	
18,000.0	9,978.8	18,801.4	10,885.4	88.5	89.0	162.52	-7,952.9	1,900.0	950.4	791.8	158.61	5.992	
18,100.0	9,979.1	18,901.4	10,885.5	89.4	89.9	162.51	-8,052.9	1,900.6	950.3	790.2	160.02	5.938	
18,200.0	9,979.4	19,001.4	10,885.5	90.2	90.7	162.51	-8,152.9	1,901.1	950.1	788.6	161.44	5.885	
18,300.0	9,979.6	19,101.4	10,885.6	91.1	91.6	162.50	-8,252.9	1,901.7	949.9	787.0	162.85	5.833	
18,400.0	9,979.9	19,201.4	10,885.6	91.9	92.5	162.50	-8,352.9	1,902.3	949.7	785.4	164.27	5.781	
18,500.0	9,980.2	19,301.4	10,885.7	92.8	93.3	162.49	-8,452.9	1,902.8	949.5	783.8	165.69	5.731	
18,600.0	9,980.4	19,401.4	10,885.8	93.7	94.2	162.49	-8,552.9	1,903.4	949.3	782.2	167.12	5.681	
18,700.0	9,980.7	19,501.4	10,885.8	94.5	95.1	162.48	-8,652.9	1,904.0	949.2	780.6	168.55	5.631	
18,800.0	9,981.0	19,601.4	10,885.9	95.4	95.9	162.47	-8,752.9	1,904.5	949.0	779.0	169.97	5.583	
18,900.0	9,981.2	19,701.4	10,885.9	96.2	96.8	162.47	-8,852.9	1,905.1	948.8	777.4	171.41	5.535	
19,000.0	9,981.5	19,801.4	10,886.0	97.1	97.7	162.46	-8,952.9	1,905.7	948.6	775.8	172.84	5.488	
19,100.0	9,981.8	19,901.4	10,886.1	98.0	98.5	162.46	-9,052.9	1,906.2	948.4	774.1	174.28	5.442	
19,200.0	9,982.0	20,001.4	10,886.1	98.9	99.4	162.45	-9,152.9	1,906.8	948.2	772.5	175.72	5.396	
19,300.0	9,982.3	20,101.4	10,886.2	99.7	100.3	162.44	-9,252.9	1,907.4	948.0	770.9	177.16	5.351	
19,400.0	9,982.6	20,201.4	10,886.2	100.6	101.2	162.44	-9,352.9	1,907.9	947.9	769.2	178.60	5.307	
19,500.0	9,982.8	20,301.4	10,886.3	101.5	102.0	162.43	-9,452.9	1,908.5	947.7	767.6	180.05	5.263	
19,600.0	9,983.1	20,401.4	10,886.3	102.4	102.9	162.43	-9,552.9	1,909.1	947.5	766.0	181.50	5.220	
19,700.0	9,983.4	20,501.4	10,886.4	103.2	103.8	162.42	-9,652.9	1,909.6	947.3	764.3	182.95	5.178	
19,800.0	9,983.6	20,601.4	10,886.5	104.1	104.7	162.41	-9,752.9	1,910.2	947.1	762.7	184.40	5.136	
19,900.0	9,983.9	20,701.4	10,886.5	105.0	105.6	162.41	-9,852.9	1,910.8	946.9	761.1	185.86	5.095	
20,000.0	9,984.2	20,801.4	10,886.6	105.9	106.5	162.40	-9,952.9	1,911.3	946.7	759.4	187.32	5.054	
20,100.0	9,984.4	20,901.4	10,886.6	106.8	107.3	162.40	-10,052.9	1,911.9	946.6	757.8	188.78	5.014	
20,200.0	9,984.7	21,001.4	10,886.7	107.6	108.2	162.39	-10,152.9	1,912.5	946.4	756.1	190.24	4.975	
20,300.0	9,985.0	21,101.4	10,886.8	108.5	109.1	162.38	-10,252.9	1,913.0	946.2	754.5	191.70	4.936	
20,400.0	9,985.2	21,201.4	10,886.8	109.4	110.0	162.38	-10,352.9	1,913.6	946.0	752.8	193.17	4.897	
20,500.0	9,985.5	21,301.4	10,886.9	110.3	110.9	162.37	-10,452.9	1,914.2	945.8	751.2	194.64	4.859	
20,600.0	9,985.8	21,401.4	10,886.9	111.2	111.8	162.37	-10,552.9	1,914.7	945.6	749.5	196.11	4.822	
20,685.5	9,986.0	21,486.9	10,887.0	112.0	112.6	162.36	-10,638.4	1,915.2	945.5	748.1	197.37	4.790	
20,693.8	9,986.0	21,492.6	10,887.0	112.0	112.6	162.36	-10,644.1	1,915.2	945.5	748.0	197.47	4.788	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	2.0	0.0	0.0	0.0	-8.47	199.9	-29.8	202.1				
100.0	100.0	102.0	100.0	0.8	0.8	-8.47	199.9	-29.8	202.1	200.1	1.99	101.464	
200.0	200.0	202.0	200.0	1.4	1.4	-8.47	199.9	-29.8	202.1	198.8	3.31	60.994	
300.0	300.0	302.0	300.0	1.9	1.9	-8.47	199.9	-29.8	202.1	197.9	4.20	48.153	
400.0	400.0	402.0	400.0	2.2	2.2	-8.47	199.9	-29.8	202.1	197.2	4.91	41.132	
500.0	500.0	502.0	500.0	2.6	2.6	-8.47	199.9	-29.8	202.1	196.6	5.53	36.518	
600.0	600.0	602.0	600.0	2.8	2.8	-8.47	199.9	-29.8	202.1	196.0	6.09	33.178	
700.0	700.0	702.0	700.0	3.1	3.1	-8.47	199.9	-29.8	202.1	195.5	6.60	30.611	
800.0	800.0	802.0	800.0	3.3	3.3	-8.47	199.9	-29.8	202.1	195.0	7.08	28.555	
900.0	900.0	902.0	900.0	3.6	3.6	-8.47	199.9	-29.8	202.1	194.6	7.53	26.859	
1,000.0	1,000.0	1,002.1	1,000.1	3.8	3.8	-8.47	199.9	-29.8	202.1	194.2	7.95	25.423	
1,100.0	1,100.0	1,108.1	1,106.1	4.1	4.1	-98.94	198.5	-28.3	200.8	192.4	8.43	23.824	
1,200.0	1,199.8	1,214.0	1,211.8	4.4	4.4	-99.58	194.3	-24.1	197.1	188.3	8.86	22.255	
1,300.0	1,299.5	1,316.1	1,313.5	4.7	4.6	-100.57	188.2	-17.2	191.7	182.5	9.17	20.905	
1,400.0	1,398.7	1,416.4	1,413.1	5.1	4.9	-101.59	182.4	-7.0	186.4	176.8	9.60	19.426	
1,500.0	1,497.5	1,516.9	1,512.5	5.4	5.2	-102.64	177.0	6.7	181.7	171.7	10.01	18.155	
1,600.0	1,595.6	1,617.0	1,611.1	5.8	5.4	-103.90	172.0	23.2	177.4	167.0	10.36	17.124	
1,700.0	1,693.1	1,716.7	1,709.3	6.2	5.7	-106.22	167.0	39.8	174.1	163.3	10.84	16.070	
1,800.0	1,789.6	1,816.2	1,807.2	6.6	6.1	-109.67	161.9	56.4	172.3	160.9	11.39	15.127	
1,843.7	1,831.6	1,859.5	1,849.9	6.8	6.2	-111.53	159.8	63.7	172.1	160.4	11.63	14.790 CC	
1,860.7	1,847.8	1,876.4	1,866.5	6.8	6.3	-112.30	158.9	66.5	172.1	160.4	11.73	14.667 ES	
1,900.0	1,885.3	1,915.2	1,904.8	6.9	6.4	-114.11	157.0	73.0	172.3	160.4	11.97	14.402	
2,000.0	1,980.9	2,014.3	2,002.3	7.3	6.8	-118.70	152.0	89.5	173.8	161.1	12.69	13.693	
2,100.0	2,076.4	2,113.3	2,099.7	7.7	7.1	-123.19	147.0	106.1	176.3	162.8	13.48	13.081	
2,200.0	2,171.9	2,212.3	2,197.2	8.1	7.5	-127.52	142.0	122.6	179.9	165.6	14.32	12.565	
2,300.0	2,267.4	2,311.3	2,294.7	8.5	7.9	-131.67	137.0	139.2	184.5	169.3	15.20	12.138	
2,400.0	2,363.0	2,410.3	2,392.2	8.9	8.3	-135.60	132.0	155.7	190.1	173.9	16.12	11.792	
2,500.0	2,458.5	2,509.3	2,489.7	9.4	8.7	-139.29	127.0	172.3	196.5	179.4	17.05	11.520	
2,600.0	2,554.0	2,608.3	2,587.2	9.8	9.1	-142.74	122.1	188.8	203.6	185.6	18.00	11.311	
2,700.0	2,649.5	2,707.3	2,684.7	10.2	9.5	-145.95	117.1	205.3	211.5	192.5	18.96	11.155	
2,800.0	2,745.0	2,806.3	2,782.2	10.7	9.9	-148.92	112.1	221.9	220.0	200.0	19.91	11.045	
2,900.0	2,840.6	2,905.3	2,879.6	11.1	10.3	-151.67	107.1	238.4	229.0	208.1	20.87	10.972	
3,000.0	2,936.1	3,004.3	2,977.1	11.6	10.7	-154.20	102.1	255.0	238.5	216.7	21.82	10.930	
3,100.0	3,031.6	3,103.3	3,074.6	12.1	11.1	-156.54	97.1	271.5	248.4	225.7	22.77	10.912 SF	
3,200.0	3,127.1	3,202.3	3,172.1	12.5	11.6	-158.70	92.1	288.1	258.8	235.1	23.71	10.915	
3,300.0	3,222.6	3,301.3	3,269.6	13.0	12.0	-160.69	87.1	304.6	269.4	244.8	24.64	10.934	
3,400.0	3,318.2	3,400.3	3,367.1	13.5	12.4	-162.53	82.2	321.2	280.4	254.8	25.57	10.966	
3,500.0	3,413.7	3,499.4	3,464.6	14.0	12.8	-164.23	77.2	337.7	291.6	265.1	26.49	11.008	
3,600.0	3,509.2	3,598.4	3,562.1	14.4	13.3	-165.80	72.2	354.2	303.1	275.7	27.41	11.058	
3,700.0	3,604.7	3,697.4	3,659.5	14.9	13.7	-167.26	67.2	370.8	314.8	286.4	28.32	11.114	
3,800.0	3,700.2	3,796.4	3,757.0	15.4	14.1	-168.61	62.2	387.3	326.6	297.4	29.23	11.175	
3,900.0	3,795.8	3,895.4	3,854.5	15.9	14.6	-169.87	57.2	403.9	338.7	308.5	30.13	11.240	
4,000.0	3,891.3	3,994.4	3,952.0	16.4	15.0	-171.04	52.2	420.4	350.9	319.8	31.03	11.306	
4,100.0	3,986.8	4,093.4	4,049.5	16.9	15.4	-172.14	47.3	437.0	363.2	331.2	31.93	11.375	
4,200.0	4,082.3	4,192.4	4,147.0	17.4	15.9	-173.16	42.3	453.5	375.6	342.8	32.82	11.444	
4,300.0	4,177.8	4,291.4	4,244.5	17.8	16.3	-174.12	37.3	470.0	388.2	354.5	33.71	11.514	
4,400.0	4,273.4	4,390.4	4,342.0	18.3	16.8	-175.01	32.3	486.6	400.8	366.2	34.60	11.584	
4,500.0	4,368.9	4,489.4	4,439.4	18.8	17.2	-175.85	27.3	503.1	413.6	378.1	35.49	11.654	
4,600.0	4,464.4	4,588.4	4,536.9	19.3	17.6	-176.64	22.3	519.7	426.4	390.0	36.37	11.724	
4,700.0	4,559.9	4,687.4	4,634.4	19.8	18.1	-177.39	17.3	536.2	439.3	402.0	37.25	11.792	
4,800.0	4,655.4	4,786.4	4,731.9	20.3	18.5	-178.09	12.4	552.8	452.3	414.1	38.13	11.860	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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						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	
4,900.0	4,751.0	4,885.4	4,829.4	20.8	19.0	-178.75	7.4	569.3	465.3	426.3	39.01	11.927		
5,000.0	4,846.5	4,984.5	4,926.9	21.3	19.4	-179.38	2.4	585.8	478.4	438.5	39.89	11.993		
5,100.0	4,942.0	5,083.5	5,024.4	21.8	19.8	-179.98	-2.6	602.4	491.5	450.8	40.77	12.057		
5,200.0	5,037.5	5,182.5	5,121.9	22.3	20.3	179.46	-7.6	618.9	504.7	463.1	41.64	12.120		
5,300.0	5,133.0	5,281.5	5,219.3	22.8	20.7	178.93	-12.6	635.5	518.0	475.5	42.52	12.182		
5,400.0	5,228.6	5,380.5	5,316.8	23.3	21.2	178.42	-17.6	652.0	531.3	487.9	43.39	12.243		
5,500.0	5,324.1	5,479.5	5,414.3	23.8	21.6	177.94	-22.6	668.6	544.6	500.3	44.27	12.302		
5,600.0	5,419.6	5,578.5	5,511.8	24.3	22.1	177.48	-27.5	685.1	557.9	512.8	45.14	12.360		
5,700.0	5,515.1	5,677.5	5,609.3	24.8	22.5	177.04	-32.5	701.7	571.3	525.3	46.01	12.417		
5,800.0	5,610.6	5,776.5	5,706.8	25.3	23.0	176.62	-37.5	718.2	584.7	537.9	46.88	12.473		
5,900.0	5,706.2	5,875.5	5,804.3	25.8	23.4	176.22	-42.5	734.7	598.2	550.4	47.75	12.527		
6,000.0	5,801.7	5,974.5	5,901.7	26.3	23.9	175.84	-47.5	751.3	611.7	563.1	48.62	12.580		
6,100.0	5,897.2	6,073.5	5,999.2	26.8	24.3	175.47	-52.5	767.8	625.2	575.7	49.49	12.631		
6,200.0	5,992.7	6,172.5	6,096.7	27.3	24.7	175.12	-57.5	784.4	638.7	588.4	50.36	12.682		
6,300.0	6,088.2	6,271.5	6,194.2	27.8	25.2	174.79	-62.4	800.9	652.3	601.0	51.23	12.731		
6,400.0	6,183.8	6,370.5	6,291.7	28.3	25.6	174.47	-67.4	817.5	665.8	613.7	52.10	12.779		
6,500.0	6,279.3	6,469.6	6,389.2	28.8	26.1	174.16	-72.4	834.0	679.4	626.5	52.97	12.826		
6,600.0	6,374.8	6,568.6	6,486.7	29.3	26.5	173.86	-77.4	850.5	693.0	639.2	53.84	12.872		
6,700.0	6,470.3	6,667.6	6,584.2	29.8	27.0	173.58	-82.4	867.1	706.7	652.0	54.71	12.917		
6,800.0	6,565.9	6,766.6	6,681.6	30.4	27.4	173.30	-87.4	883.6	720.3	664.7	55.58	12.960		
6,900.0	6,661.4	6,865.6	6,779.1	30.9	27.9	173.04	-92.4	900.2	734.0	677.5	56.45	13.003		
7,000.0	6,756.9	6,964.6	6,876.6	31.4	28.3	172.78	-97.4	916.7	747.7	690.3	57.32	13.044		
7,100.0	6,852.4	7,063.6	6,974.1	31.9	28.8	172.54	-102.3	933.3	761.3	703.2	58.18	13.085		
7,200.0	6,947.9	7,162.6	7,071.6	32.4	29.2	172.30	-107.3	949.8	775.0	716.0	59.05	13.125		
7,300.0	7,043.5	7,261.6	7,169.1	32.9	29.7	172.07	-112.3	966.4	788.8	728.8	59.92	13.164		
7,400.0	7,139.0	7,360.6	7,266.6	33.4	30.1	171.85	-117.3	982.9	802.5	741.7	60.79	13.202		
7,500.0	7,234.5	7,459.6	7,364.1	33.9	30.6	171.64	-122.3	999.4	816.2	754.6	61.65	13.239		
7,600.0	7,330.0	7,558.6	7,461.5	34.4	31.0	171.43	-127.3	1,016.0	830.0	767.5	62.52	13.275		
7,700.0	7,425.5	7,657.6	7,559.0	34.9	31.5	171.23	-132.3	1,032.5	843.7	780.4	63.39	13.310		
7,782.5	7,504.4	7,739.3	7,639.5	35.3	31.8	171.07	-136.4	1,046.2	855.1	791.0	64.10	13.340		
7,800.0	7,521.1	7,756.6	7,656.5	35.4	31.9	171.04	-137.2	1,049.1	857.5	793.2	64.25	13.346		
7,900.0	7,616.9	7,855.8	7,754.2	35.9	32.4	170.86	-142.2	1,065.6	870.1	805.0	65.12	13.361		
8,000.0	7,713.3	7,955.1	7,852.0	36.4	32.8	170.67	-147.2	1,082.2	881.0	815.1	65.98	13.353		
8,100.0	7,810.1	8,054.7	7,950.0	36.9	33.3	170.45	-152.3	1,098.9	890.3	823.4	66.83	13.322		
8,200.0	7,907.3	8,148.0	8,041.9	37.4	33.7	170.25	-156.9	1,114.3	898.0	830.4	67.60	13.283		
8,300.0	8,004.9	8,235.4	8,128.2	37.9	34.1	170.07	-160.9	1,127.6	905.2	836.9	68.31	13.251		
8,400.0	8,102.9	8,322.7	8,214.6	38.4	34.5	169.92	-164.6	1,139.7	912.0	843.0	68.99	13.219		
8,500.0	8,201.2	8,410.0	8,301.1	38.8	34.8	169.79	-167.8	1,150.5	918.5	848.9	69.65	13.188		
8,600.0	8,299.8	8,500.0	8,390.6	39.3	35.2	169.68	-170.8	1,160.3	924.7	854.4	70.31	13.152		
8,700.0	8,398.7	8,584.4	8,474.6	39.7	35.5	169.60	-173.2	1,168.3	930.5	859.7	70.87	13.130		
8,800.0	8,497.8	8,671.6	8,561.4	40.1	35.9	169.53	-175.3	1,175.3	936.0	864.5	71.44	13.102		
8,900.0	8,597.2	8,758.7	8,648.4	40.6	36.2	169.49	-177.0	1,181.0	941.1	869.1	71.97	13.077		
9,000.0	8,696.7	8,845.8	8,735.3	41.0	36.5	169.46	-178.4	1,185.5	945.8	873.4	72.46	13.053		
9,100.0	8,796.4	8,932.9	8,822.3	41.3	36.8	169.45	-179.3	1,188.6	950.2	877.3	72.90	13.033		
9,200.0	8,896.2	9,019.9	8,909.4	41.7	37.0	169.47	-179.9	1,190.6	954.2	880.8	73.41	12.998		
9,300.0	8,996.1	9,108.6	8,998.0	42.0	37.1	169.50	-180.1	1,191.2	957.9	882.3	75.55	12.678		
9,400.0	9,096.1	9,206.7	9,096.1	42.3	37.2	169.53	-180.1	1,191.2	960.5	884.7	75.86	12.662		
9,500.0	9,196.1	9,306.6	9,196.1	42.5	37.2	169.54	-180.1	1,191.2	961.4	885.4	76.03	12.645		
9,503.9	9,200.0	9,310.6	9,200.0	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.5	75.99	12.653		
9,600.0	9,296.1	9,406.6	9,296.1	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.02	12.647		
9,700.0	9,396.1	9,506.6	9,396.1	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.06	12.640		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,785.4	9,481.5	9,592.1	9,481.5	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.09	12.636	
9,800.0	9,496.1	9,606.6	9,496.1	42.5	37.2	80.17	-180.1	1,191.2	961.4	885.2	76.19	12.618	
9,825.0	9,521.0	9,631.6	9,521.0	42.5	37.2	80.29	-180.1	1,191.2	961.2	885.0	76.21	12.612	
9,850.0	9,545.9	9,656.5	9,545.9	42.5	37.2	80.50	-180.1	1,191.2	960.7	884.5	76.24	12.601	
9,875.0	9,570.5	9,681.1	9,570.5	42.5	37.2	80.81	-180.1	1,191.2	960.0	883.8	76.29	12.584	
9,900.0	9,595.0	9,705.6	9,595.0	42.5	37.2	81.22	-180.1	1,191.2	959.2	882.8	76.36	12.561	
9,925.0	9,619.1	9,729.7	9,619.1	42.5	37.2	81.71	-180.1	1,191.2	958.2	881.7	76.46	12.533	
9,950.0	9,642.8	9,753.4	9,642.8	42.5	37.3	82.29	-180.1	1,191.2	957.0	880.5	76.57	12.499	
9,975.0	9,666.1	9,776.7	9,666.1	42.5	37.3	82.94	-180.1	1,191.2	955.8	879.1	76.70	12.462	
10,000.0	9,688.9	9,799.5	9,688.9	42.5	37.3	83.65	-180.1	1,191.2	954.5	877.6	76.84	12.422	
10,025.0	9,711.1	9,821.7	9,711.1	42.5	37.3	84.42	-180.1	1,191.2	953.1	876.1	77.00	12.379	
10,050.0	9,732.7	9,843.3	9,732.7	42.5	37.3	85.23	-180.1	1,191.2	951.8	874.7	77.17	12.334	
10,075.0	9,753.6	9,864.2	9,753.6	42.5	37.3	86.07	-180.1	1,191.2	950.6	873.2	77.36	12.289	
10,100.0	9,773.8	9,884.4	9,773.8	42.5	37.3	86.92	-180.1	1,191.2	949.5	871.9	77.55	12.244	
10,125.0	9,793.2	9,903.7	9,793.2	42.6	37.3	87.77	-180.1	1,191.2	948.5	870.8	77.74	12.201	
10,150.0	9,811.7	9,922.2	9,811.7	42.6	37.3	88.61	-180.1	1,191.2	947.8	869.9	77.94	12.161	
10,175.0	9,829.3	9,939.8	9,829.3	42.6	37.3	89.42	-180.1	1,191.2	947.4	869.3	78.14	12.125	
10,194.0	9,842.0	9,952.6	9,842.0	42.6	37.3	90.00	-180.1	1,191.2	947.3	869.0	78.28	12.101	
10,200.0	9,845.9	9,956.5	9,845.9	42.6	37.3	90.18	-180.1	1,191.2	947.3	869.0	78.33	12.094	
10,225.0	9,861.5	9,972.1	9,861.5	42.6	37.3	90.88	-180.1	1,191.2	947.6	869.1	78.51	12.070	
10,250.0	9,876.2	9,986.7	9,876.2	42.6	37.3	91.51	-180.1	1,191.2	948.3	869.6	78.68	12.053	
10,275.0	9,889.7	10,000.3	9,889.7	42.6	37.3	92.05	-180.1	1,191.2	949.5	870.7	78.83	12.045	
10,300.0	9,902.1	10,012.7	9,902.1	42.6	37.3	92.49	-180.1	1,191.2	951.3	872.3	78.97	12.047	
10,325.0	9,913.3	10,023.9	9,913.3	42.6	37.3	92.82	-180.1	1,191.2	953.6	874.5	79.08	12.059	
10,350.0	9,923.4	10,034.0	9,923.4	42.7	37.3	93.03	-180.1	1,191.2	956.5	877.3	79.16	12.083	
10,375.0	9,932.3	10,042.9	9,932.3	42.7	37.3	93.10	-180.1	1,191.2	960.0	880.8	79.22	12.118	
10,400.0	9,939.9	10,050.5	9,939.9	42.7	37.3	93.04	-180.1	1,191.2	964.1	884.9	79.25	12.166	
10,425.0	9,946.2	10,056.8	9,946.2	42.7	37.3	92.82	-180.1	1,191.2	968.9	889.7	79.24	12.228	
10,450.0	9,951.3	10,061.9	9,951.3	42.7	37.3	92.45	-180.1	1,191.2	974.4	895.2	79.20	12.302	
10,475.0	9,955.1	10,065.7	9,955.1	42.8	37.3	91.93	-180.1	1,191.2	980.4	901.3	79.13	12.390	
10,500.0	9,957.6	10,068.2	9,957.6	42.8	37.3	91.25	-180.1	1,191.2	987.2	908.1	79.03	12.491	
10,525.0	9,958.9	10,069.4	9,958.9	42.8	37.3	90.40	-180.1	1,191.2	994.5	915.6	78.89	12.605	
10,534.2	9,959.0	10,069.6	9,959.0	42.8	37.3	90.05	-180.1	1,191.2	997.3	918.5	78.83	12.651	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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	2.0	0.0	0.0	0.0	-16.66	199.8	-59.8	208.6				
100.0	100.0	102.0	100.0	0.8	0.8	-16.66	199.8	-59.8	208.6	206.6	1.99	104.704	
200.0	200.0	202.0	200.0	1.4	1.4	-16.66	199.8	-59.8	208.6	205.3	3.31	62.942	
300.0	300.0	302.0	300.0	1.9	1.9	-16.66	199.8	-59.8	208.6	204.4	4.20	49.690	
400.0	400.0	402.0	400.0	2.2	2.2	-16.66	199.8	-59.8	208.6	203.7	4.91	42.445	
500.0	500.0	502.0	500.0	2.6	2.6	-16.66	199.8	-59.8	208.6	203.0	5.53	37.684	
600.0	600.0	602.0	600.0	2.8	2.8	-16.66	199.8	-59.8	208.6	202.5	6.09	34.237	
700.0	700.0	702.0	700.0	3.1	3.1	-16.66	199.8	-59.8	208.6	202.0	6.60	31.588	
800.0	800.0	802.0	800.0	3.3	3.3	-16.66	199.8	-59.8	208.6	201.5	7.08	29.467	
900.0	900.0	902.0	900.0	3.6	3.6	-16.66	199.8	-59.8	208.6	201.0	7.53	27.717	
1,000.0	1,000.0	1,002.0	1,000.0	3.8	3.8	-16.66	199.8	-59.8	208.6	200.6	7.95	26.239 CC, ES	
1,100.0	1,100.0	1,102.0	1,100.0	4.1	4.0	-107.37	199.8	-59.8	209.1	200.7	8.36	25.021	
1,200.0	1,199.8	1,201.8	1,199.8	4.4	4.2	-108.70	199.8	-59.8	210.7	202.0	8.75	24.094	
1,300.0	1,299.5	1,301.5	1,299.5	4.7	4.4	-110.85	199.8	-59.8	213.7	204.5	9.13	23.396	
1,400.0	1,398.7	1,400.7	1,398.7	5.1	4.6	-113.73	199.8	-59.8	218.3	208.8	9.53	22.912	
1,500.0	1,497.5	1,499.5	1,497.5	5.4	4.7	-117.22	199.8	-59.8	225.1	215.2	9.95	22.634	
1,600.0	1,595.6	1,597.6	1,595.6	5.8	4.9	-121.15	199.8	-59.8	234.6	224.2	10.40	22.560 SF	
1,700.0	1,693.1	1,695.1	1,693.1	6.2	5.1	-125.34	199.8	-59.8	247.1	236.2	10.89	22.687	
1,800.0	1,789.6	1,791.6	1,789.6	6.6	5.2	-129.59	199.8	-59.8	263.2	251.8	11.44	23.012	
1,860.7	1,847.8	1,849.8	1,847.8	6.8	5.3	-132.14	199.8	-59.8	274.9	263.1	11.74	23.406	
1,900.0	1,885.3	1,887.3	1,885.3	6.9	5.4	-133.85	199.8	-59.8	283.0	271.1	11.94	23.710	
2,000.0	1,980.9	1,982.9	1,980.9	7.3	5.5	-137.79	199.8	-59.8	304.7	292.2	12.51	24.350	
2,100.0	2,076.4	2,078.4	2,076.4	7.7	5.7	-141.20	199.8	-59.8	327.6	314.5	13.10	25.001	
2,200.0	2,171.9	2,173.9	2,171.9	8.1	5.8	-144.18	199.8	-59.8	351.6	337.9	13.71	25.644	
2,300.0	2,267.4	2,269.4	2,267.4	8.5	6.0	-146.79	199.8	-59.8	376.3	362.0	14.32	26.270	
2,400.0	2,363.0	2,365.0	2,363.0	8.9	6.1	-149.07	199.8	-59.8	401.7	386.8	14.95	26.872	
2,500.0	2,458.5	2,460.5	2,458.5	9.4	6.2	-151.09	199.8	-59.8	427.6	412.1	15.58	27.446	
2,600.0	2,554.0	2,556.0	2,554.0	9.8	6.4	-152.88	199.8	-59.8	454.0	437.8	16.22	27.991	
2,700.0	2,649.5	2,651.5	2,649.5	10.2	6.5	-154.47	199.8	-59.8	480.8	463.9	16.87	28.506	
2,800.0	2,745.0	2,747.0	2,745.0	10.7	6.6	-155.90	199.8	-59.8	507.9	490.3	17.52	28.992	
2,900.0	2,840.6	2,842.6	2,840.6	11.1	6.8	-157.19	199.8	-59.8	535.2	517.0	18.17	29.450	
3,000.0	2,936.1	2,938.1	2,936.1	11.6	6.9	-158.35	199.8	-59.8	562.8	543.9	18.83	29.880	
3,100.0	3,031.6	3,033.6	3,031.6	12.1	7.0	-159.40	199.8	-59.8	590.5	571.0	19.50	30.285	
3,200.0	3,127.1	3,129.1	3,127.1	12.5	7.1	-160.36	199.8	-59.8	618.5	598.3	20.17	30.666	
3,300.0	3,222.6	3,224.6	3,222.6	13.0	7.3	-161.24	199.8	-59.8	646.6	625.7	20.84	31.025	
3,400.0	3,318.2	3,320.2	3,318.2	13.5	7.4	-162.04	199.8	-59.8	674.8	653.3	21.51	31.363	
3,500.0	3,413.7	3,415.7	3,413.7	14.0	7.5	-162.78	199.8	-59.8	703.1	680.9	22.19	31.681	
3,600.0	3,509.2	3,511.2	3,509.2	14.4	7.6	-163.49	199.8	-59.8	731.5	708.8	22.71	32.214	
3,700.0	3,604.7	3,606.7	3,604.7	14.9	7.8	-164.43	197.3	-57.7	757.9	734.4	23.53	32.208	
3,800.0	3,700.2	3,702.2	3,700.2	15.4	8.0	-165.54	190.7	-52.1	781.1	756.8	24.31	32.137	
3,900.0	3,795.8	3,797.8	3,795.8	15.9	8.2	-166.78	180.5	-41.2	800.4	775.4	25.04	31.962	
4,000.0	3,891.3	3,893.3	3,891.3	16.4	8.4	-168.03	167.8	-24.2	815.4	789.5	25.84	31.559	
4,100.0	3,986.8	3,988.8	3,986.8	16.9	8.6	-169.03	156.4	-7.0	827.1	800.5	26.57	31.131	
4,200.0	4,082.3	4,084.3	4,082.3	17.4	8.8	-169.90	146.0	8.7	838.8	811.5	27.31	30.711	
4,300.0	4,177.8	4,179.8	4,177.8	17.8	9.0	-170.76	135.6	24.5	850.7	822.6	28.07	30.309	
4,400.0	4,273.4	4,275.4	4,273.4	18.3	9.3	-171.58	125.1	40.2	862.7	833.9	28.83	29.927	
4,500.0	4,368.9	4,370.9	4,368.9	18.8	9.5	-172.39	114.7	55.9	875.0	845.4	29.60	29.563	
4,600.0	4,464.4	4,466.4	4,464.4	19.3	9.8	-173.17	104.3	71.6	887.4	857.0	30.37	29.216	
4,700.0	4,559.9	4,561.9	4,559.9	19.8	10.1	-173.94	93.9	87.3	900.0	868.9	31.16	28.888	
4,800.0	4,655.4	4,657.4	4,655.4	20.3	10.3	-174.68	83.5	103.0	912.7	880.8	31.94	28.576	
4,900.0	4,751.0	4,753.0	4,751.0	20.8	10.7	-175.40	73.1	118.7	925.6	892.9	32.73	28.280	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 904H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 10451-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
5,000.0	4,846.5	5,027.0	5,003.8	21.3	11.0	-176.10	62.7	134.5	938.7	905.1	33.52	28.000		
5,100.0	4,942.0	5,125.5	5,100.5	21.8	11.3	-176.78	52.3	150.2	951.8	917.5	34.32	27.735		
5,200.0	5,037.5	5,224.0	5,197.1	22.3	11.6	-177.45	41.9	165.9	965.1	930.0	35.12	27.483		
5,300.0	5,133.0	5,322.5	5,293.8	22.8	12.0	-178.09	31.4	181.6	978.6	942.6	35.92	27.245		
5,400.0	5,228.6	5,421.0	5,390.5	23.3	12.3	-178.72	21.0	197.3	992.1	955.4	36.72	27.020		

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		Offset		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	
4,100.0	3,986.8	3,936.2	3,881.1	16.9	15.3	-19.36	317.4	1,729.8	997.8	969.8	27.95	35.702		
4,200.0	4,082.3	4,033.9	3,976.0	17.4	15.8	-18.67	300.8	1,746.2	980.2	951.4	28.81	34.023		
4,300.0	4,177.8	4,131.7	4,070.9	17.8	16.3	-17.96	284.2	1,762.6	962.7	933.0	29.68	32.433		
4,400.0	4,273.4	4,229.4	4,165.8	18.3	16.7	-17.23	267.5	1,778.9	945.4	914.8	30.57	30.927		
4,500.0	4,368.9	4,327.2	4,260.7	18.8	17.2	-16.47	250.9	1,795.3	928.2	896.8	31.47	29.499		
4,600.0	4,464.4	4,424.9	4,355.6	19.3	17.7	-15.68	234.3	1,811.7	911.2	878.9	32.38	28.145		
4,700.0	4,559.9	4,522.6	4,450.6	19.8	18.1	-14.86	217.7	1,828.1	894.4	861.1	33.30	26.860		
4,800.0	4,655.4	4,620.4	4,545.5	20.3	18.6	-14.02	201.1	1,844.4	877.8	843.6	34.23	25.641		
4,900.0	4,751.0	4,718.1	4,640.4	20.8	19.0	-13.14	184.4	1,860.8	861.4	826.2	35.18	24.487		
5,000.0	4,846.5	4,824.1	4,743.5	21.3	19.5	-12.20	167.0	1,877.9	844.7	808.6	36.12	23.388		
5,100.0	4,942.0	4,930.5	4,847.4	21.8	20.0	-11.32	150.9	1,893.8	827.2	790.2	37.05	22.328		
5,200.0	5,037.5	5,036.8	4,951.8	22.3	20.5	-10.53	136.2	1,908.3	808.8	770.9	37.96	21.307		
5,300.0	5,133.0	5,143.1	5,056.4	22.8	21.0	-9.81	122.9	1,921.5	789.6	750.7	38.85	20.323		
5,400.0	5,228.6	5,249.2	5,161.1	23.3	21.5	-9.17	110.9	1,933.2	769.3	729.6	39.72	19.369		
5,500.0	5,324.1	5,355.0	5,265.9	23.8	21.9	-8.63	100.4	1,943.6	748.1	707.5	40.56	18.444		
5,600.0	5,419.6	5,460.4	5,370.6	24.3	22.4	-8.17	91.3	1,952.5	725.8	684.4	41.37	17.544		
5,700.0	5,515.1	5,565.5	5,475.1	24.8	22.8	-7.82	83.6	1,960.1	702.5	660.3	42.15	16.667		
5,800.0	5,610.6	5,670.1	5,579.3	25.3	23.2	-7.57	77.3	1,966.4	678.1	635.2	42.89	15.809		
5,900.0	5,706.2	5,774.2	5,683.2	25.8	23.6	-7.44	72.3	1,971.2	652.7	609.1	43.60	14.969		
6,000.0	5,801.7	5,877.7	5,786.6	26.3	23.9	-7.44	68.8	1,974.8	626.1	581.9	44.26	14.146		
6,100.0	5,897.2	5,980.5	5,889.3	26.8	24.2	-7.58	66.5	1,977.0	598.6	553.7	44.88	13.338		
6,200.0	5,992.7	6,082.6	5,991.4	27.3	24.4	-7.89	65.6	1,977.9	570.0	524.5	45.46	12.538		
6,300.0	6,088.2	6,179.5	6,088.2	27.8	24.4	-8.32	65.6	1,977.9	540.7	494.2	46.41	11.650		
6,400.0	6,183.8	6,275.0	6,183.8	28.3	24.5	-8.80	65.6	1,977.9	511.4	464.4	46.93	10.896		
6,500.0	6,279.3	6,370.5	6,279.3	28.8	24.5	-9.34	65.6	1,977.9	482.1	434.7	47.45	10.161		
6,600.0	6,374.8	6,466.0	6,374.8	29.3	24.5	-9.95	65.6	1,977.9	452.9	404.9	47.96	9.444		
6,700.0	6,470.3	6,561.5	6,470.3	29.8	24.5	-10.64	65.6	1,977.9	423.7	375.3	48.45	8.746		
6,800.0	6,565.9	6,657.1	6,565.9	30.4	24.6	-11.43	65.6	1,977.9	394.6	345.7	48.92	8.066		
6,900.0	6,661.4	6,752.6	6,661.4	30.9	24.6	-12.35	65.6	1,977.9	365.6	316.2	49.38	7.405		
7,000.0	6,756.9	6,848.1	6,756.9	31.4	24.6	-13.42	65.6	1,977.9	336.7	286.9	49.79	6.762		
7,100.0	6,852.4	6,943.6	6,852.4	31.9	24.6	-14.70	65.6	1,977.9	307.9	257.8	50.17	6.138		
7,200.0	6,947.9	7,039.1	6,947.9	32.4	24.7	-16.23	65.6	1,977.9	279.3	228.8	50.49	5.533		
7,300.0	7,043.5	7,134.7	7,043.5	32.9	24.7	-18.11	65.6	1,977.9	250.9	200.2	50.72	4.948		
7,400.0	7,139.0	7,230.2	7,139.0	33.4	24.7	-20.47	65.6	1,977.9	222.9	172.0	50.82	4.385		
7,500.0	7,234.5	7,325.7	7,234.5	33.9	24.7	-23.48	65.6	1,977.9	195.2	144.5	50.75	3.847		
7,600.0	7,330.0	7,421.2	7,330.0	34.4	24.8	-27.46	65.6	1,977.9	168.3	117.9	50.39	3.339		
7,700.0	7,425.5	7,516.8	7,425.5	34.9	24.8	-32.89	65.6	1,977.9	142.4	92.8	49.60	2.871 Normal Operations		
7,782.5	7,504.4	7,595.6	7,504.4	35.3	24.8	-39.01	65.6	1,977.9	122.3	73.8	48.44	2.524 Normal Operations		
7,800.0	7,521.1	7,612.3	7,521.1	35.4	24.8	-40.53	65.6	1,977.9	118.2	70.1	48.13	2.457 Caution - Monitor Closely		
7,900.0	7,616.9	7,708.1	7,616.9	35.9	24.8	-50.98	65.6	1,977.9	97.9	51.9	45.95	2.130 Caution - Monitor Closely		
8,000.0	7,713.3	7,804.5	7,713.3	36.4	24.9	-64.90	65.6	1,977.9	83.2	39.5	43.71	1.903 Caution - Monitor Closely		
8,100.0	7,810.1	7,901.3	7,810.1	36.9	24.9	-81.74	65.6	1,977.9	75.7	32.2	43.48	1.740 Caution - Monitor Closely		
8,146.9	7,855.6	7,946.8	7,855.6	37.2	24.9	-90.00	65.6	1,977.9	74.8	30.3	44.57	1.679 Caution - Monitor Closely, CC		
8,200.0	7,907.3	7,998.5	7,907.3	37.4	24.9	-99.04	65.6	1,977.9	75.8	29.3	46.56	1.629 Caution - Monitor Closely, ES		
8,300.0	8,004.9	8,096.1	8,004.9	37.9	24.9	-113.91	65.6	1,977.9	82.2	31.2	50.96	1.612 Caution - Monitor Closely, SF		
8,400.0	8,102.9	8,194.1	8,102.9	38.4	25.0	-125.27	65.6	1,977.9	92.2	37.6	54.66	1.687 Caution - Monitor Closely		
8,500.0	8,201.2	8,292.4	8,201.2	38.8	25.0	-133.54	65.6	1,977.9	104.0	46.7	57.32	1.814 Caution - Monitor Closely		
8,600.0	8,299.8	8,391.0	8,299.8	39.3	25.0	-139.52	65.6	1,977.9	116.1	56.9	59.19	1.962 Caution - Monitor Closely		
8,700.0	8,398.7	8,489.9	8,398.7	39.7	25.1	-143.90	65.6	1,977.9	127.8	67.3	60.57	2.111 Caution - Monitor Closely		
8,800.0	8,497.8	8,589.0	8,497.8	40.1	25.1	-147.15	65.6	1,977.9	138.7	77.0	61.64	2.250 Caution - Monitor Closely		
8,900.0	8,597.2	8,688.4	8,597.2	40.6	25.1	-149.58	65.6	1,977.9	148.4	85.9	62.51	2.374 Caution - Monitor Closely		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 702H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		No-Go		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Separation Factor	
9,000.0	8,696.7	8,787.9	8,696.7	41.0	25.1	-151.40	65.6	1,977.9	156.8	93.6	63.24	2.480	Caution - Monitor Closely
9,100.0	8,796.4	8,887.6	8,796.4	41.3	25.2	-152.76	65.6	1,977.9	163.8	99.9	63.87	2.565	Normal Operations
9,200.0	8,896.2	8,987.4	8,896.2	41.7	25.2	-153.74	65.6	1,977.9	169.3	104.9	64.41	2.629	Normal Operations
9,300.0	8,996.1	9,087.3	8,996.1	42.0	25.2	-154.41	65.6	1,977.9	173.3	108.4	64.88	2.671	Normal Operations
9,400.0	9,096.1	9,187.3	9,096.1	42.3	25.3	-154.79	65.6	1,977.9	175.7	110.5	65.27	2.692	Normal Operations
9,500.0	9,196.1	9,287.3	9,196.1	42.5	25.3	-154.93	65.6	1,977.9	176.6	111.1	65.47	2.697	Normal Operations
9,503.9	9,200.0	9,291.2	9,200.0	42.5	25.3	-64.66	65.6	1,977.9	176.6	111.3	65.28	2.705	Normal Operations
9,600.0	9,296.1	9,378.0	9,286.6	42.5	25.2	-63.53	69.5	1,977.9	178.6	114.2	64.31	2.776	Normal Operations
9,700.0	9,396.1	9,462.9	9,369.9	42.5	25.0	-59.12	85.5	1,977.8	187.9	126.0	61.94	3.034	
9,785.4	9,481.5	9,530.5	9,434.0	42.5	24.8	-53.79	107.0	1,977.6	203.7	145.0	58.77	3.467	
9,800.0	9,496.1	9,541.4	9,444.0	42.5	24.8	127.19	111.2	1,977.6	207.4	149.1	58.29	3.558	
9,825.0	9,521.0	9,559.3	9,460.4	42.5	24.8	128.28	118.5	1,977.6	214.9	157.8	57.10	3.763	
9,850.0	9,545.9	9,576.1	9,475.6	42.5	24.7	129.30	125.7	1,977.5	224.0	168.2	55.83	4.012	
9,875.0	9,570.5	9,591.7	9,489.4	42.5	24.7	130.18	132.9	1,977.5	234.7	180.2	54.53	4.304	
9,900.0	9,595.0	9,600.0	9,496.7	42.5	24.7	129.99	136.8	1,977.4	247.1	194.3	52.81	4.679	
9,925.0	9,619.1	9,619.1	9,513.3	42.5	24.6	131.24	146.3	1,977.4	260.9	208.9	51.96	5.020	
9,950.0	9,642.8	9,630.8	9,523.3	42.5	24.6	131.30	152.4	1,977.4	276.2	225.4	50.77	5.440	
9,975.0	9,666.1	9,641.3	9,532.1	42.5	24.5	130.99	158.1	1,977.3	292.9	243.2	49.68	5.896	
10,000.0	9,688.9	9,650.0	9,539.4	42.5	24.5	130.16	162.9	1,977.3	310.9	262.2	48.67	6.387	
10,025.0	9,711.1	9,658.6	9,546.5	42.5	24.5	129.03	167.7	1,977.3	329.9	282.1	47.83	6.898	
10,050.0	9,732.7	9,665.4	9,552.1	42.5	24.5	127.23	171.6	1,977.2	350.0	302.9	47.07	7.436	
10,075.0	9,753.6	9,671.1	9,556.7	42.5	24.5	124.77	175.0	1,977.2	370.9	324.5	46.42	7.991	
10,100.0	9,773.8	9,675.8	9,560.5	42.5	24.4	121.53	177.7	1,977.2	392.6	346.7	45.86	8.560	
10,125.0	9,793.2	9,679.5	9,563.5	42.6	24.4	117.37	179.9	1,977.2	414.9	369.5	45.40	9.139	
10,150.0	9,811.7	9,682.3	9,565.7	42.6	24.4	112.14	181.6	1,977.2	437.7	392.6	45.01	9.723	
10,175.0	9,829.3	9,684.2	9,567.2	42.6	24.4	105.73	182.7	1,977.2	460.8	416.1	44.69	10.311	
10,200.0	9,845.9	9,685.3	9,568.0	42.6	24.4	98.12	183.4	1,977.2	484.3	439.9	44.44	10.898	
10,225.0	9,861.5	9,685.6	9,568.3	42.6	24.4	89.43	183.6	1,977.2	508.0	463.7	44.23	11.483	
10,250.0	9,876.2	9,685.2	9,568.0	42.6	24.4	80.07	183.4	1,977.2	531.7	487.7	44.08	12.064	
10,275.0	9,889.7	9,684.1	9,567.2	42.6	24.4	70.61	182.7	1,977.2	555.6	511.6	43.96	12.638	
10,300.0	9,902.1	9,682.5	9,565.8	42.6	24.4	61.63	181.7	1,977.2	579.4	535.5	43.88	13.204	
10,325.0	9,913.3	9,680.3	9,564.0	42.6	24.4	53.57	180.4	1,977.2	603.0	559.2	43.82	13.761	
10,350.0	9,923.4	9,677.5	9,561.8	42.7	24.4	46.61	178.7	1,977.2	626.6	582.8	43.79	14.308	
10,375.0	9,932.3	9,674.2	9,559.2	42.7	24.4	40.75	176.8	1,977.2	649.9	606.1	43.79	14.842	
10,400.0	9,939.9	9,670.5	9,556.2	42.7	24.5	35.86	174.6	1,977.2	672.9	629.1	43.80	15.364	
10,425.0	9,946.2	9,666.4	9,552.9	42.7	24.5	31.81	172.2	1,977.2	695.6	651.8	43.83	15.871	
10,450.0	9,951.3	9,650.0	9,539.4	42.7	24.5	27.59	162.9	1,977.3	718.1	674.4	43.70	16.435	
10,475.0	9,955.1	9,650.0	9,539.4	42.8	24.5	25.23	162.9	1,977.3	739.9	696.1	43.83	16.882	
10,500.0	9,957.6	9,650.0	9,539.4	42.8	24.5	23.20	162.9	1,977.3	761.3	717.3	43.97	17.314	
10,525.0	9,958.9	9,650.0	9,539.4	42.8	24.5	21.44	162.9	1,977.3	782.3	738.2	44.12	17.733	
10,534.2	9,959.0	9,650.0	9,539.4	42.8	24.5	20.85	162.9	1,977.3	789.9	745.7	44.17	17.884	
10,600.0	9,959.1	9,629.3	9,522.0	42.9	24.6	20.09	151.6	1,977.4	844.3	800.0	44.32	19.053	
10,700.0	9,959.4	9,600.0	9,496.7	43.0	24.7	19.06	136.8	1,977.4	929.1	884.5	44.56	20.851	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 703H - OWB - PWP0													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,300.0	3,222.6	3,256.4	3,260.6	13.0	8.5	-39.30	598.1	1,341.9	991.3	971.8	19.54	50.744	
3,400.0	3,318.2	3,352.5	3,355.8	13.5	8.8	-39.62	585.7	1,346.8	964.2	944.1	20.10	47.963	
3,500.0	3,413.7	3,448.6	3,451.0	14.0	9.1	-39.96	573.2	1,351.7	937.2	916.5	20.67	45.331	
3,600.0	3,509.2	3,544.7	3,546.2	14.4	9.5	-40.33	560.8	1,356.6	910.2	888.9	21.25	42.838	
3,700.0	3,604.7	3,640.9	3,641.3	14.9	9.8	-40.71	548.4	1,361.5	883.2	861.4	21.82	40.475	
3,800.0	3,700.2	3,737.0	3,736.5	15.4	10.1	-41.12	535.9	1,366.4	856.3	833.9	22.40	38.234	
3,900.0	3,795.8	3,833.1	3,831.7	15.9	10.5	-41.55	523.5	1,371.4	829.4	806.4	22.97	36.107	
4,000.0	3,891.3	3,929.2	3,926.9	16.4	10.8	-42.01	511.0	1,376.3	802.5	779.0	23.54	34.086	
4,100.0	3,986.8	4,025.3	4,022.1	16.9	11.2	-42.51	498.6	1,381.2	775.7	751.6	24.12	32.165	
4,200.0	4,082.3	4,121.4	4,117.3	17.4	11.5	-43.04	486.1	1,386.1	749.0	724.3	24.69	30.337	
4,300.0	4,177.8	4,217.6	4,212.4	17.8	11.9	-43.61	473.7	1,391.0	722.3	697.1	25.26	28.597	
4,400.0	4,273.4	4,313.7	4,307.6	18.3	12.3	-44.22	461.2	1,395.9	695.7	669.9	25.82	26.940	
4,500.0	4,368.9	4,409.8	4,402.8	18.8	12.6	-44.88	448.8	1,400.8	669.2	642.8	26.39	25.360	
4,600.0	4,464.4	4,505.9	4,498.0	19.3	13.0	-45.59	436.3	1,405.7	642.8	615.8	26.95	23.854	
4,700.0	4,559.9	4,602.0	4,593.2	19.8	13.4	-46.37	423.9	1,410.6	616.4	588.9	27.50	22.416	
4,800.0	4,655.4	4,698.2	4,688.4	20.3	13.8	-47.21	411.4	1,415.5	590.2	562.2	28.05	21.043	
4,900.0	4,751.0	4,794.3	4,783.5	20.8	14.1	-48.13	399.0	1,420.4	564.1	535.5	28.59	19.732	
5,000.0	4,846.5	4,890.4	4,878.7	21.3	14.5	-49.14	386.5	1,425.3	538.2	509.1	29.12	18.480	
5,100.0	4,942.0	4,985.3	4,972.7	21.8	14.9	-50.25	374.4	1,430.1	512.5	482.9	29.64	17.290	
5,200.0	5,037.5	5,079.6	5,066.2	22.3	15.3	-51.55	363.0	1,434.6	487.4	457.2	30.17	16.156	
5,300.0	5,133.0	5,173.8	5,159.8	22.8	15.6	-53.06	352.3	1,438.8	462.9	432.2	30.68	15.089	
5,400.0	5,228.6	5,268.1	5,253.4	23.3	16.0	-54.83	342.4	1,442.7	439.2	408.0	31.17	14.089	
5,500.0	5,324.1	5,362.4	5,347.2	23.8	16.3	-56.87	333.1	1,446.3	416.4	384.7	31.65	13.154	
5,600.0	5,419.6	5,456.6	5,441.0	24.3	16.7	-59.23	324.6	1,449.7	394.6	362.5	32.12	12.285	
5,700.0	5,515.1	5,550.9	5,534.8	24.8	17.1	-61.94	316.8	1,452.8	374.1	341.5	32.59	11.480	
5,800.0	5,610.6	5,645.0	5,628.7	25.3	17.4	-65.03	309.7	1,455.5	355.1	322.0	33.06	10.740	
5,900.0	5,706.2	5,739.2	5,722.6	25.8	17.7	-68.52	303.4	1,458.0	337.8	304.3	33.56	10.066	
6,000.0	5,801.7	5,833.2	5,816.4	26.3	18.1	-72.43	297.7	1,460.3	322.7	288.5	34.11	9.459	
6,100.0	5,897.2	5,927.2	5,910.2	26.8	18.4	-76.75	292.8	1,462.2	309.9	275.1	34.73	8.922	
6,200.0	5,992.7	6,021.0	6,004.0	27.3	18.7	-81.45	288.6	1,463.9	299.9	264.4	35.46	8.456	
6,300.0	6,088.2	6,114.8	6,097.7	27.8	19.0	-86.47	285.1	1,465.2	293.0	256.6	36.31	8.068	
6,400.0	6,183.8	6,208.4	6,191.3	28.3	19.3	-91.71	282.4	1,466.3	289.4	252.1	37.29	7.760	
6,449.6	6,231.1	6,254.8	6,237.6	28.6	19.4	-94.36	281.3	1,466.8	289.0	251.1	37.82	7.640 CC	
6,500.0	6,279.3	6,301.9	6,284.7	28.8	19.5	-97.05	280.3	1,467.1	289.4	251.0	38.39	7.540 ES	
6,600.0	6,374.8	6,395.3	6,378.1	29.3	19.8	-102.36	279.0	1,467.6	293.1	253.5	39.55	7.409	
6,700.0	6,470.3	6,488.5	6,471.3	29.8	20.0	-107.51	278.4	1,467.9	300.3	259.6	40.73	7.372 SF	
6,800.0	6,565.9	6,583.1	6,565.9	30.4	20.0	-112.47	278.3	1,467.9	310.8	268.9	41.85	7.425	
6,900.0	6,661.4	6,678.6	6,661.4	30.9	20.0	-117.15	278.3	1,467.9	323.7	280.7	42.94	7.537	
7,000.0	6,756.9	6,774.1	6,756.9	31.4	20.1	-121.46	278.3	1,467.9	338.7	294.6	44.02	7.693	
7,100.0	6,852.4	6,869.6	6,852.4	31.9	20.1	-125.41	278.3	1,467.9	355.5	310.4	45.07	7.887	
7,200.0	6,947.9	6,965.1	6,947.9	32.4	20.1	-129.01	278.3	1,467.9	373.9	327.8	46.09	8.113	
7,300.0	7,043.5	7,060.7	7,043.5	32.9	20.2	-132.28	278.3	1,467.9	393.7	346.7	47.07	8.364	
7,400.0	7,139.0	7,156.2	7,139.0	33.4	20.2	-135.24	278.3	1,467.9	414.7	366.7	48.02	8.636	
7,500.0	7,234.5	7,251.7	7,234.5	33.9	20.2	-137.92	278.3	1,467.9	436.6	387.7	48.93	8.924	
7,600.0	7,330.0	7,347.2	7,330.0	34.4	20.2	-140.35	278.3	1,467.9	459.5	409.6	49.81	9.224	
7,700.0	7,425.5	7,442.7	7,425.5	34.9	20.3	-142.55	278.3	1,467.9	483.0	432.3	50.67	9.532	
7,782.5	7,504.4	7,521.6	7,504.4	35.3	20.3	-144.22	278.3	1,467.9	502.9	451.6	51.36	9.792	
7,800.0	7,521.1	7,538.3	7,521.1	35.4	20.3	-144.58	278.3	1,467.9	507.2	455.7	51.50	9.848	
7,900.0	7,616.9	7,634.1	7,616.9	35.9	20.3	-146.48	278.3	1,467.9	531.0	478.7	52.31	10.150	
8,000.0	7,713.3	7,730.5	7,713.3	36.4	20.4	-148.11	278.3	1,467.9	553.7	500.7	53.08	10.433	
8,100.0	7,810.1	7,827.3	7,810.1	36.9	20.4	-149.54	278.3	1,467.9	575.4	521.6	53.82	10.692	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
8,200.0	7,907.3	7,924.5	7,907.3	37.4	20.4	-150.77	278.3	1,467.9	595.9	541.3	54.53	10.928	
8,300.0	8,004.9	8,022.1	8,004.9	37.9	20.5	-151.85	278.3	1,467.9	615.0	559.8	55.22	11.138	
8,400.0	8,102.9	8,120.1	8,102.9	38.4	20.5	-152.78	278.3	1,467.9	632.8	576.9	55.88	11.324	
8,500.0	8,201.2	8,218.4	8,201.2	38.8	20.5	-153.59	278.3	1,467.9	649.2	592.7	56.53	11.485	
8,600.0	8,299.8	8,317.0	8,299.8	39.3	20.6	-154.29	278.3	1,467.9	664.1	607.0	57.15	11.621	
8,700.0	8,398.7	8,415.9	8,398.7	39.7	20.6	-154.89	278.3	1,467.9	677.5	619.8	57.75	11.733	
8,800.0	8,497.8	8,515.0	8,497.8	40.1	20.6	-155.40	278.3	1,467.9	689.5	631.1	58.33	11.821	
8,900.0	8,597.2	8,614.4	8,597.2	40.6	20.7	-155.84	278.3	1,467.9	699.9	641.0	58.88	11.886	
9,000.0	8,696.7	8,713.9	8,696.7	41.0	20.7	-156.19	278.3	1,467.9	708.7	649.3	59.41	11.928	
9,100.0	8,796.4	8,813.6	8,796.4	41.3	20.7	-156.47	278.3	1,467.9	715.9	656.0	59.91	11.950	
9,200.0	8,896.2	8,913.4	8,896.2	41.7	20.8	-156.69	278.3	1,467.9	721.6	661.2	60.38	11.951	
9,300.0	8,996.1	9,013.3	8,996.1	42.0	20.8	-156.85	278.3	1,467.9	725.7	664.9	60.81	11.934	
9,400.0	9,096.1	9,113.3	9,096.1	42.3	20.8	-156.94	278.3	1,467.9	728.1	667.0	61.18	11.901	
9,500.0	9,196.1	9,213.3	9,196.1	42.5	20.9	-156.97	278.3	1,467.9	729.0	667.6	61.38	11.877	
9,503.9	9,200.0	9,217.2	9,200.0	42.5	20.9	-66.70	278.3	1,467.9	729.0	667.7	61.30	11.892	
9,600.0	9,296.1	9,313.3	9,296.1	42.5	20.9	-66.70	278.3	1,467.9	729.0	667.7	61.35	11.883	
9,700.0	9,396.1	9,413.3	9,396.1	42.5	21.0	-66.70	278.3	1,467.9	729.0	667.6	61.40	11.873	
9,707.4	9,403.5	9,420.7	9,403.5	42.5	21.0	-66.70	278.3	1,467.9	729.0	667.6	61.40	11.873	
9,785.4	9,481.5	9,493.1	9,475.9	42.5	21.0	-66.70	278.4	1,467.9	729.1	667.7	61.33	11.888	
9,800.0	9,496.1	9,500.0	9,482.8	42.5	21.0	113.64	278.6	1,467.9	729.3	668.0	61.37	11.885	
9,825.0	9,521.0	9,519.2	9,501.9	42.5	20.9	113.66	279.5	1,467.9	730.4	669.1	61.26	11.922	
9,850.0	9,545.9	9,535.3	9,518.0	42.5	20.9	113.67	280.8	1,467.9	732.3	671.2	61.09	11.987	
9,875.0	9,570.5	9,550.0	9,532.6	42.5	20.9	113.64	282.3	1,467.9	735.0	674.2	60.88	12.074	
9,900.0	9,595.0	9,566.3	9,548.8	42.5	20.8	113.64	284.5	1,467.9	738.6	678.0	60.67	12.174	
9,925.0	9,619.1	9,580.9	9,563.2	42.5	20.8	113.57	286.8	1,467.9	743.1	682.7	60.43	12.298	
9,950.0	9,642.8	9,600.0	9,582.0	42.5	20.8	113.64	290.4	1,467.8	748.5	688.3	60.25	12.424	
9,975.0	9,666.1	9,600.0	9,582.0	42.5	20.8	112.93	290.4	1,467.8	754.8	695.1	59.71	12.642	
10,000.0	9,688.9	9,620.0	9,601.5	42.5	20.7	112.96	294.8	1,467.8	761.9	702.4	59.53	12.800	
10,025.0	9,711.1	9,631.3	9,612.4	42.5	20.7	112.55	297.6	1,467.8	770.1	710.9	59.18	13.013	
10,050.0	9,732.7	9,650.0	9,630.4	42.5	20.6	112.47	302.7	1,467.8	779.2	720.2	58.96	13.216	
10,075.0	9,753.6	9,650.0	9,630.4	42.5	20.6	111.27	302.7	1,467.8	789.1	730.7	58.41	13.511	
10,100.0	9,773.8	9,650.0	9,630.4	42.5	20.6	109.90	302.7	1,467.8	800.1	742.3	57.85	13.831	
10,125.0	9,793.2	9,667.1	9,646.7	42.6	20.6	109.46	307.9	1,467.7	811.8	754.2	57.62	14.090	
10,150.0	9,811.7	9,673.7	9,653.0	42.6	20.6	108.24	310.0	1,467.7	824.4	767.2	57.20	14.413	
10,175.0	9,829.3	9,679.5	9,658.4	42.6	20.6	106.82	311.9	1,467.7	837.9	781.1	56.78	14.757	
10,200.0	9,845.9	9,684.3	9,663.0	42.6	20.5	105.18	313.6	1,467.7	852.1	795.7	56.36	15.118	
10,225.0	9,861.5	9,700.0	9,677.6	42.6	20.5	104.23	319.2	1,467.7	867.2	811.0	56.14	15.447	
10,250.0	9,876.2	9,700.0	9,677.6	42.6	20.5	101.92	319.2	1,467.7	882.7	827.0	55.68	15.853	
10,275.0	9,889.7	9,700.0	9,677.6	42.6	20.5	99.42	319.2	1,467.7	898.9	843.6	55.24	16.272	
10,300.0	9,902.1	9,700.0	9,677.6	42.6	20.5	96.75	319.2	1,467.7	915.6	860.8	54.83	16.700	
10,325.0	9,913.3	9,700.0	9,677.6	42.6	20.5	93.92	319.2	1,467.7	932.8	878.3	54.44	17.134	
10,350.0	9,923.4	9,700.0	9,677.6	42.7	20.5	90.95	319.2	1,467.7	950.4	896.3	54.08	17.575	
10,375.0	9,932.3	9,700.0	9,677.6	42.7	20.5	87.85	319.2	1,467.7	968.3	914.6	53.74	18.018	
10,400.0	9,939.9	9,700.0	9,677.6	42.7	20.5	84.67	319.2	1,467.7	986.5	933.1	53.43	18.464	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 9257-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
2,700.0	2,649.5	2,760.7	2,764.8	10.2	6.9	-35.30	521.9	1,194.7	978.1	961.6	16.50	59.267	
2,800.0	2,745.0	2,853.6	2,856.8	10.7	7.1	-35.90	510.2	1,189.2	942.2	925.1	17.06	55.239	
2,900.0	2,840.6	2,946.4	2,948.7	11.1	7.2	-36.54	498.5	1,183.8	906.4	888.8	17.61	51.467	
3,000.0	2,936.1	3,039.3	3,040.7	11.6	7.4	-37.23	486.8	1,178.3	870.7	852.5	18.17	47.932	
3,100.0	3,031.6	3,132.2	3,132.7	12.1	7.6	-37.99	475.0	1,172.9	835.1	816.4	18.72	44.617	
3,200.0	3,127.1	3,225.0	3,224.6	12.5	7.8	-38.80	463.3	1,167.4	799.7	780.5	19.27	41.508	
3,300.0	3,222.6	3,317.9	3,316.6	13.0	7.9	-39.70	451.6	1,161.9	764.5	744.6	19.81	38.589	
3,400.0	3,318.2	3,410.8	3,408.5	13.5	8.1	-40.67	439.9	1,156.5	729.4	709.0	20.35	35.848	
3,500.0	3,413.7	3,503.6	3,500.5	14.0	8.3	-41.75	428.2	1,151.0	694.5	673.6	20.87	33.273	
3,600.0	3,509.2	3,596.5	3,592.5	14.4	8.4	-42.93	416.5	1,145.5	659.8	638.5	21.39	30.854	
3,700.0	3,604.7	3,689.4	3,684.4	14.9	8.6	-44.24	404.8	1,140.1	625.5	603.6	21.88	28.581	
3,800.0	3,700.2	3,782.2	3,776.4	15.4	8.8	-45.70	393.1	1,134.6	591.5	569.1	22.36	26.447	
3,900.0	3,795.8	3,875.1	3,868.4	15.9	9.0	-47.34	381.3	1,129.2	557.8	535.0	22.82	24.444	
4,000.0	3,891.3	3,968.0	3,960.3	16.4	9.1	-49.17	369.6	1,123.7	524.7	501.4	23.25	22.567	
4,100.0	3,986.8	4,060.8	4,052.3	16.9	9.3	-51.24	357.9	1,118.2	492.1	468.4	23.64	20.811	
4,200.0	4,082.3	4,153.7	4,144.3	17.4	9.5	-53.59	346.2	1,112.8	460.1	436.1	24.00	19.173	
4,300.0	4,177.8	4,246.6	4,236.2	17.8	9.7	-56.27	334.5	1,107.3	429.0	404.7	24.31	17.651	
4,400.0	4,273.4	4,339.5	4,328.2	18.3	9.8	-59.34	322.8	1,101.8	398.9	374.4	24.56	16.244	
4,500.0	4,368.9	4,432.3	4,420.1	18.8	10.0	-62.87	311.1	1,096.4	370.1	345.4	24.76	14.952	
4,600.0	4,464.4	4,525.2	4,512.1	19.3	10.2	-66.93	299.3	1,090.9	342.9	318.1	24.89	13.776	
4,700.0	4,559.9	4,618.1	4,604.1	19.8	10.4	-71.62	287.6	1,085.5	317.7	292.8	24.99	12.715	
4,800.0	4,655.4	4,710.9	4,696.0	20.3	10.5	-77.00	275.9	1,080.0	295.1	270.0	25.07	11.769	
4,900.0	4,751.0	4,803.8	4,788.0	20.8	10.7	-83.12	264.2	1,074.5	275.5	250.3	25.21	10.930	
5,000.0	4,846.5	4,896.7	4,880.0	21.3	10.9	-89.97	252.5	1,069.1	259.9	234.4	25.50	10.189	
5,100.0	4,942.0	4,989.5	4,971.9	21.8	11.1	-97.48	240.8	1,063.6	248.8	222.7	26.08	9.540	
5,200.0	5,037.5	5,082.4	5,063.9	22.3	11.2	-105.44	229.1	1,058.2	242.9	215.9	27.03	8.987	
5,255.1	5,090.2	5,133.6	5,114.6	22.6	11.3	-109.93	222.6	1,055.1	242.0	214.3	27.72	8.731 CC	
5,300.0	5,133.0	5,175.3	5,155.9	22.8	11.4	-113.58	217.3	1,052.7	242.6	214.2	28.36	8.553 ES	
5,400.0	5,228.6	5,268.1	5,247.8	23.3	11.6	-121.58	205.6	1,047.2	247.9	217.9	29.98	8.270	
5,500.0	5,324.1	5,361.0	5,339.8	23.8	11.8	-129.14	193.9	1,041.8	258.5	226.8	31.72	8.151 SF	
5,600.0	5,419.6	5,453.9	5,431.8	24.3	12.0	-136.07	182.2	1,036.3	273.8	240.3	33.42	8.191	
5,700.0	5,515.1	5,546.7	5,523.7	24.8	12.1	-142.27	170.5	1,030.8	292.9	257.9	35.01	8.367	
5,800.0	5,610.6	5,639.6	5,615.7	25.3	12.3	-147.72	158.8	1,025.4	315.3	278.9	36.45	8.652	
5,900.0	5,706.2	5,732.5	5,707.6	25.8	12.5	-152.47	147.1	1,019.9	340.3	302.5	37.73	9.018	
6,000.0	5,801.7	5,825.3	5,799.6	26.3	12.7	-156.60	135.3	1,014.5	367.3	328.4	38.89	9.445	
6,100.0	5,897.2	5,918.2	5,891.6	26.8	12.8	-160.18	123.6	1,009.0	396.0	356.0	39.94	9.912	
6,200.0	5,992.7	6,011.1	5,983.5	27.3	13.0	-163.29	111.9	1,003.5	425.9	385.0	40.92	10.409	
6,300.0	6,088.2	6,103.9	6,075.5	27.8	13.2	-166.01	100.2	998.1	456.9	415.1	41.83	10.923	
6,400.0	6,183.8	6,196.8	6,167.5	28.3	13.4	-168.39	88.5	992.6	488.8	446.1	42.69	11.449	
6,500.0	6,279.3	6,289.7	6,259.4	28.8	13.6	-170.48	76.8	987.1	521.3	477.8	43.52	11.979	
6,600.0	6,374.8	6,385.1	6,354.0	29.3	13.9	-172.32	65.3	981.8	554.2	509.8	44.44	12.471	
6,700.0	6,470.3	6,481.6	6,449.8	29.8	14.1	-173.81	55.2	977.1	587.1	541.8	45.29	12.962	
6,800.0	6,565.9	6,578.8	6,546.6	30.4	14.2	-175.00	46.5	973.0	619.7	573.6	46.12	13.437	
6,900.0	6,661.4	6,676.8	6,644.3	30.9	14.4	-175.93	39.3	969.6	651.9	605.0	46.94	13.889	
7,000.0	6,756.9	6,775.5	6,742.8	31.4	14.6	-176.64	33.5	966.9	683.7	636.0	47.75	14.318	
7,100.0	6,852.4	6,874.9	6,842.0	31.9	14.7	-177.16	29.2	965.0	714.9	666.4	48.56	14.724	
7,200.0	6,947.9	6,974.8	6,941.9	32.4	14.9	-177.50	26.5	963.7	745.6	696.2	49.36	15.106	
7,300.0	7,043.5	7,075.2	7,042.3	32.9	15.0	-177.69	25.3	963.1	775.6	725.5	50.13	15.472	
7,400.0	7,139.0	7,171.9	7,139.0	33.4	15.1	-177.78	25.3	963.1	805.2	754.6	50.57	15.922	
7,500.0	7,234.5	7,267.4	7,234.5	33.9	15.2	-177.86	25.3	963.1	834.8	783.5	51.27	16.283	
7,600.0	7,330.0	7,362.9	7,330.0	34.4	15.2	-177.93	25.3	963.1	864.4	812.4	51.94	16.640	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
7,700.0	7,425.5	7,458.5	7,425.5	34.9	15.2	-178.00	25.3	963.1	893.9	841.3	52.62	16.988		
7,782.5	7,504.4	7,537.3	7,504.4	35.3	15.3	-178.05	25.3	963.1	918.3	865.2	53.18	17.270		
7,800.0	7,521.1	7,554.0	7,521.1	35.4	15.3	-178.07	25.3	963.1	923.5	870.2	53.29	17.329		
7,900.0	7,616.9	7,649.8	7,616.9	35.9	15.3	-178.13	25.3	963.1	951.9	898.0	53.97	17.638		
8,000.0	7,713.3	7,746.2	7,713.3	36.4	15.3	-178.19	25.3	963.1	978.7	924.1	54.64	17.912		

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)				
2,400.0	2,363.0	2,541.9	2,540.9	8.9	8.9	-38.43	549.9	1,077.9	979.6	962.3	17.30	56.613		
2,500.0	2,458.5	2,631.7	2,629.1	9.4	9.3	-39.46	539.4	1,065.3	938.6	920.6	18.01	52.118		
2,600.0	2,554.0	2,721.4	2,717.4	9.8	9.6	-40.58	529.0	1,052.7	897.9	879.1	18.72	47.972		
2,700.0	2,649.5	2,811.2	2,805.7	10.2	10.0	-41.81	518.5	1,040.1	857.5	838.0	19.42	44.148		
2,800.0	2,745.0	2,901.0	2,894.0	10.7	10.4	-43.15	508.1	1,027.6	817.4	797.3	20.12	40.622		
2,900.0	2,840.6	2,990.8	2,982.3	11.1	10.8	-44.63	497.6	1,015.0	777.9	757.0	20.82	37.370		
3,000.0	2,936.1	3,080.6	3,070.6	11.6	11.2	-46.25	487.2	1,002.4	738.8	717.3	21.49	34.373		
3,100.0	3,031.6	3,170.4	3,158.9	12.1	11.5	-48.04	476.7	989.8	700.3	678.1	22.15	31.615		
3,200.0	3,127.1	3,260.2	3,247.1	12.5	11.9	-50.03	466.3	977.2	662.5	639.7	22.78	29.080		
3,300.0	3,222.6	3,350.0	3,335.4	13.0	12.3	-52.24	455.8	964.6	625.5	602.1	23.38	26.758		
3,400.0	3,318.2	3,439.7	3,423.7	13.5	12.7	-54.71	445.4	952.0	589.5	565.5	23.92	24.639		
3,500.0	3,413.7	3,529.5	3,512.0	14.0	13.1	-57.46	434.9	939.4	554.6	530.2	24.41	22.718		
3,600.0	3,509.2	3,619.3	3,600.3	14.4	13.5	-60.54	424.5	926.8	521.1	496.3	24.83	20.990		
3,700.0	3,604.7	3,709.1	3,688.6	14.9	13.9	-63.99	414.0	914.2	489.3	464.2	25.15	19.456		
3,800.0	3,700.2	3,798.9	3,776.8	15.4	14.3	-67.85	403.6	901.7	459.5	434.1	25.36	18.117		
3,900.0	3,795.8	3,888.7	3,865.1	15.9	14.7	-72.16	393.1	889.1	432.2	406.7	25.45	16.978		
4,000.0	3,891.3	3,978.5	3,953.4	16.4	15.1	-76.93	382.7	876.5	407.7	382.3	25.42	16.043		
4,100.0	3,986.8	4,068.3	4,041.7	16.9	15.5	-82.18	372.2	863.9	386.8	361.6	25.26	15.313		
4,200.0	4,082.3	4,158.0	4,130.0	17.4	15.9	-87.88	361.7	851.3	370.0	344.9	25.03	14.781		
4,300.0	4,177.8	4,247.8	4,218.3	17.8	16.2	-93.95	351.3	838.7	357.7	332.9	24.80	14.423		
4,400.0	4,273.4	4,337.6	4,306.5	18.3	16.6	-100.30	340.8	826.1	350.7	326.0	24.69	14.201		
4,479.1	4,348.9	4,408.6	4,376.4	18.7	17.0	-105.42	332.6	816.2	349.0	324.2	24.77	14.088 CC, ES		
4,500.0	4,368.9	4,427.4	4,394.8	18.8	17.0	-106.78	330.4	813.5	349.1	324.3	24.82	14.064		
4,600.0	4,464.4	4,517.2	4,483.1	19.3	17.5	-113.22	319.9	800.9	353.0	327.7	25.27	13.970		
4,700.0	4,559.9	4,607.0	4,571.4	19.8	17.9	-119.47	309.5	788.4	362.3	336.2	26.06	13.903		
4,800.0	4,655.4	4,696.8	4,659.7	20.3	18.3	-125.40	299.0	775.8	376.5	349.3	27.14	13.871 SF		
4,900.0	4,751.0	4,786.6	4,748.0	20.8	18.7	-130.91	288.6	763.2	395.1	366.7	28.44	13.891		
5,000.0	4,846.5	4,876.3	4,836.2	21.3	19.1	-135.96	278.1	750.6	417.6	387.7	29.87	13.980		
5,100.0	4,942.0	4,966.1	4,924.5	21.8	19.5	-140.54	267.7	738.0	443.3	411.9	31.35	14.141		
5,200.0	5,037.5	5,055.9	5,012.8	22.3	19.9	-144.66	257.2	725.4	471.7	438.9	32.83	14.370		
5,300.0	5,133.0	5,145.7	5,101.1	22.8	20.3	-148.34	246.8	712.8	502.4	468.1	34.27	14.657		
5,400.0	5,228.6	5,235.5	5,189.4	23.3	20.7	-151.63	236.3	700.2	534.9	499.2	35.68	14.993		
5,500.0	5,324.1	5,325.3	5,277.7	23.8	21.1	-154.57	225.9	687.6	569.0	532.0	37.03	15.367		
5,600.0	5,419.6	5,415.1	5,366.0	24.3	21.5	-157.20	215.4	675.1	604.4	566.1	38.33	15.768		
5,700.0	5,515.1	5,504.9	5,454.2	24.8	21.9	-159.55	205.0	662.5	640.8	601.3	39.58	16.190		
5,800.0	5,610.6	5,594.6	5,542.5	25.3	22.3	-161.66	194.5	649.9	678.2	637.4	40.79	16.626		
5,900.0	5,706.2	5,684.4	5,630.8	25.8	22.7	-163.57	184.1	637.3	716.3	674.3	41.96	17.071		
6,000.0	5,801.7	5,774.2	5,719.1	26.3	23.1	-165.29	173.6	624.7	755.0	712.0	43.10	17.520		
6,100.0	5,897.2	5,864.0	5,807.4	26.8	23.5	-166.85	163.2	612.1	794.4	750.1	44.20	17.970		
6,200.0	5,992.7	5,953.8	5,895.7	27.3	23.9	-168.26	152.7	599.5	834.1	788.8	45.29	18.419		
6,300.0	6,088.2	6,043.6	5,983.9	27.8	24.3	-169.56	142.3	586.9	874.3	828.0	46.34	18.865		
6,400.0	6,183.8	6,133.4	6,072.2	28.3	24.7	-170.74	131.8	574.3	914.8	867.5	47.38	19.308		
6,500.0	6,279.3	6,228.8	6,166.1	28.8	25.2	-171.88	120.8	561.1	955.6	907.1	48.49	19.707		
6,600.0	6,374.8	6,331.3	6,267.2	29.3	25.6	-172.93	110.0	548.1	995.6	945.9	49.67	20.042		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 706H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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	17.0	0.0	0.0	-36.02	399.4	-290.5	494.2				
100.0	100.0	83.0	100.0	0.8	1.0	-36.02	399.4	-290.5	493.9	491.6	2.24	220.301	
200.0	200.0	183.0	200.0	1.4	1.6	-36.02	399.4	-290.5	493.9	490.4	3.51	140.752	
300.0	300.0	283.0	300.0	1.9	2.0	-36.02	399.4	-290.5	493.9	489.5	4.35	113.482	
400.0	400.0	383.0	400.0	2.2	2.4	-36.02	399.4	-290.5	493.9	488.8	5.05	97.879	
500.0	500.0	483.0	500.0	2.6	2.7	-36.02	399.4	-290.5	493.9	488.2	5.65	87.384	
600.0	600.0	583.0	600.0	2.8	3.0	-36.02	399.4	-290.5	493.9	487.7	6.20	79.681	
700.0	700.0	683.0	700.0	3.1	3.2	-36.02	399.4	-290.5	493.9	487.2	6.70	73.704	
800.0	800.0	783.0	800.0	3.3	3.4	-36.02	399.4	-290.5	493.9	486.7	7.17	68.885	
900.0	900.0	883.0	900.0	3.6	3.7	-36.02	399.4	-290.5	493.9	486.3	7.61	64.888	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-36.02	399.4	-290.5	493.9	485.8	8.03	61.501	
1,100.0	1,100.0	1,095.0	1,112.0	4.1	4.1	-126.50	398.4	-290.0	493.9	485.4	8.52	57.972	
1,200.0	1,199.8	1,209.4	1,226.3	4.4	4.4	-127.18	394.2	-288.0	493.1	484.1	9.00	54.808	
1,300.0	1,299.5	1,323.4	1,340.0	4.7	4.7	-128.31	387.0	-284.7	491.6	482.1	9.50	51.763	
1,400.0	1,398.7	1,436.8	1,452.9	5.1	5.0	-129.91	376.8	-279.9	489.7	479.6	10.03	48.812	
1,500.0	1,497.5	1,547.6	1,562.7	5.4	5.3	-131.92	363.9	-273.9	487.5	476.9	10.54	46.234	
1,560.4	1,556.8	1,607.0	1,621.6	5.7	5.4	-133.16	356.4	-270.4	486.9	476.1	10.85	44.874 CC, ES	
1,600.0	1,595.6	1,645.9	1,660.1	5.8	5.5	-134.02	351.5	-268.1	487.2	476.1	11.08	43.969	
1,700.0	1,693.1	1,743.7	1,756.9	6.2	5.8	-136.34	339.2	-262.4	490.0	478.4	11.69	41.935	
1,800.0	1,789.6	1,840.9	1,853.2	6.6	6.1	-138.82	326.9	-256.7	496.4	484.1	12.33	40.264	
1,860.7	1,847.8	1,899.6	1,911.3	6.8	6.3	-140.39	319.5	-253.2	502.1	489.4	12.68	39.595	
1,900.0	1,885.3	1,937.4	1,948.7	6.9	6.4	-141.45	314.8	-251.0	506.3	493.4	12.90	39.239	
2,000.0	1,980.9	2,033.8	2,044.2	7.3	6.8	-144.09	302.6	-245.3	517.9	504.3	13.55	38.206	
2,100.0	2,076.4	2,130.1	2,139.6	7.7	7.1	-146.62	290.5	-239.7	530.5	516.3	14.22	37.305	
2,200.0	2,171.9	2,226.5	2,235.0	8.1	7.4	-149.03	278.3	-234.0	544.2	529.3	14.90	36.526	
2,300.0	2,267.4	2,322.8	2,330.4	8.5	7.8	-151.32	266.2	-228.3	558.8	543.2	15.59	35.855	
2,400.0	2,363.0	2,419.2	2,425.8	8.9	8.2	-153.50	254.0	-222.6	574.3	558.0	16.28	35.282	
2,500.0	2,458.5	2,515.5	2,521.2	9.4	8.5	-155.57	241.9	-217.0	590.6	573.7	16.97	34.795	
2,600.0	2,554.0	2,611.9	2,616.6	9.8	8.9	-157.53	229.7	-211.3	607.7	590.0	17.67	34.382	
2,700.0	2,649.5	2,708.2	2,712.0	10.2	9.3	-159.38	217.5	-205.6	625.4	607.0	18.38	34.035	
2,800.0	2,745.0	2,804.6	2,807.4	10.7	9.6	-161.14	205.4	-200.0	643.8	624.7	19.08	33.745	
2,900.0	2,840.6	2,900.9	2,902.9	11.1	10.0	-162.80	193.2	-194.3	662.7	642.9	19.78	33.503	
3,000.0	2,936.1	2,997.2	2,998.3	11.6	10.4	-164.37	181.1	-188.6	682.2	661.7	20.48	33.305	
3,100.0	3,031.6	3,093.6	3,093.7	12.1	10.8	-165.85	168.9	-183.0	702.1	680.9	21.18	33.142	
3,200.0	3,127.1	3,189.9	3,189.1	12.5	11.2	-167.26	156.8	-177.3	722.5	700.6	21.89	33.012	
3,300.0	3,222.6	3,286.3	3,284.5	13.0	11.6	-168.59	144.6	-171.6	743.3	720.7	22.59	32.908	
3,400.0	3,318.2	3,382.6	3,379.9	13.5	12.0	-169.84	132.5	-166.0	764.4	741.2	23.29	32.828	
3,500.0	3,413.7	3,479.0	3,475.3	14.0	12.4	-171.03	120.3	-160.3	785.9	762.0	23.99	32.768	
3,600.0	3,509.2	3,575.3	3,570.7	14.4	12.8	-172.16	108.2	-154.6	807.8	783.1	24.68	32.725	
3,700.0	3,604.7	3,671.7	3,666.1	14.9	13.2	-173.23	96.0	-149.0	829.9	804.5	25.38	32.697	
3,800.0	3,700.2	3,768.0	3,761.6	15.4	13.6	-174.25	83.9	-143.3	852.2	826.2	26.08	32.681	
3,900.0	3,795.8	3,864.4	3,857.0	15.9	14.0	-175.21	71.7	-137.6	874.9	848.1	26.77	32.677 SF	
4,000.0	3,891.3	3,960.7	3,952.4	16.4	14.4	-176.13	59.6	-132.0	897.7	870.3	27.47	32.681	
4,100.0	3,986.8	4,057.1	4,047.8	16.9	14.8	-177.00	47.4	-126.3	920.8	892.6	28.16	32.694	
4,200.0	4,082.3	4,153.4	4,143.2	17.4	15.2	-177.83	35.3	-120.6	944.0	915.2	28.86	32.713	
4,300.0	4,177.8	4,249.8	4,238.6	17.8	15.6	-178.62	23.1	-115.0	967.5	937.9	29.55	32.738	
4,400.0	4,273.4	4,346.1	4,334.0	18.3	16.0	-179.38	11.0	-109.3	991.1	960.8	30.25	32.768	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,300.0	5,133.0	5,042.9	4,964.7	22.8	20.6	-5.37	81.9	2,117.4	989.6	949.3	40.31	24.552	
5,400.0	5,228.6	5,141.1	5,060.3	23.3	21.0	-4.59	67.5	2,135.3	976.9	935.6	41.29	23.662	
5,500.0	5,324.1	5,239.4	5,155.9	23.8	21.5	-3.78	53.1	2,153.2	964.4	922.1	42.27	22.813	
5,600.0	5,419.6	5,337.7	5,251.4	24.3	22.0	-2.96	38.7	2,171.0	952.1	908.8	43.27	22.005	
5,700.0	5,515.1	5,436.0	5,347.0	24.8	22.4	-2.12	24.3	2,188.9	940.0	895.7	44.27	21.235	
5,800.0	5,610.6	5,534.3	5,442.5	25.3	22.9	-1.26	9.9	2,206.7	928.1	882.8	45.27	20.501	
5,900.0	5,706.2	5,632.5	5,538.1	25.8	23.4	-0.37	-4.5	2,224.6	916.4	870.1	46.28	19.801	
6,000.0	5,801.7	5,730.8	5,633.7	26.3	23.8	0.54	-18.9	2,242.4	904.9	857.6	47.29	19.135	
6,100.0	5,897.2	5,829.1	5,729.2	26.8	24.3	1.47	-33.3	2,260.3	893.7	845.4	48.31	18.500	
6,200.0	5,992.7	5,927.4	5,824.8	27.3	24.8	2.42	-47.8	2,278.1	882.7	833.4	49.33	17.895	
6,300.0	6,088.2	6,025.7	5,920.4	27.8	25.2	3.40	-62.2	2,296.0	872.0	821.7	50.35	17.320	
6,400.0	6,183.8	6,134.1	6,025.9	28.3	25.7	4.48	-77.7	2,315.3	861.1	809.8	51.36	16.765	
6,500.0	6,279.3	6,246.4	6,135.7	28.8	26.3	5.56	-92.5	2,333.6	848.9	796.6	52.37	16.210	
6,600.0	6,374.8	6,358.6	6,245.8	29.3	26.8	6.60	-106.0	2,350.3	835.4	782.0	53.35	15.658	
6,700.0	6,470.3	6,470.5	6,356.1	29.8	27.3	7.59	-118.0	2,365.2	820.3	766.0	54.30	15.109	
6,800.0	6,565.9	6,582.0	6,466.3	30.4	27.8	8.54	-128.7	2,378.5	803.9	748.6	55.21	14.560	
6,900.0	6,661.4	6,693.2	6,576.5	30.9	28.3	9.46	-138.0	2,390.0	785.9	729.8	56.09	14.011	
7,000.0	6,756.9	6,803.9	6,666.5	31.4	28.7	10.34	-145.9	2,399.8	766.4	709.5	56.93	13.462	
7,100.0	6,852.4	6,914.0	6,796.1	31.9	29.2	11.19	-152.5	2,407.9	745.4	687.7	57.73	12.911	
7,200.0	6,947.9	7,023.5	6,905.2	32.4	29.6	12.02	-157.7	2,414.4	722.9	664.4	58.50	12.358	
7,300.0	7,043.5	7,132.2	7,013.8	32.9	29.9	12.82	-161.6	2,419.2	698.8	639.6	59.21	11.803	
7,400.0	7,139.0	7,240.2	7,121.7	33.4	30.3	13.61	-164.1	2,422.4	673.3	613.4	59.87	11.245	
7,500.0	7,234.5	7,347.3	7,228.8	33.9	30.5	14.38	-165.4	2,424.0	646.1	585.6	60.56	10.669	
7,600.0	7,330.0	7,448.5	7,330.0	34.4	30.6	15.11	-165.6	2,424.2	617.6	555.4	62.21	9.929	
7,700.0	7,425.5	7,544.0	7,425.5	34.9	30.6	15.86	-165.6	2,424.2	589.0	526.3	62.78	9.383	
7,782.5	7,504.4	7,622.9	7,504.4	35.3	30.7	16.53	-165.6	2,424.2	565.5	502.3	63.24	8.941	
7,800.0	7,521.1	7,639.6	7,521.1	35.4	30.7	16.67	-165.6	2,424.2	560.5	497.2	63.34	8.850	
7,900.0	7,616.9	7,735.4	7,616.9	35.9	30.7	17.45	-165.6	2,424.2	533.2	469.3	63.90	8.345	
8,000.0	7,713.3	7,831.8	7,713.3	36.4	30.7	18.28	-165.6	2,424.2	507.7	443.2	64.44	7.878	
8,100.0	7,810.1	7,928.6	7,810.1	36.9	30.7	19.12	-165.6	2,424.2	483.8	418.8	64.96	7.447	
8,200.0	7,907.3	8,025.8	7,907.3	37.4	30.7	19.99	-165.6	2,424.2	461.7	396.2	65.46	7.052	
8,300.0	8,004.9	8,123.4	8,004.9	37.9	30.7	20.88	-165.6	2,424.2	441.3	375.3	65.94	6.692	
8,400.0	8,102.9	8,221.4	8,102.9	38.4	30.8	21.77	-165.6	2,424.2	422.6	356.2	66.39	6.365	
8,500.0	8,201.2	8,319.7	8,201.2	38.8	30.8	22.66	-165.6	2,424.2	405.6	338.8	66.82	6.071	
8,600.0	8,299.8	8,418.3	8,299.8	39.3	30.8	23.54	-165.6	2,424.2	390.3	323.1	67.22	5.807	
8,700.0	8,398.7	8,517.2	8,398.7	39.7	30.8	24.38	-165.6	2,424.2	376.7	309.1	67.59	5.574	
8,800.0	8,497.8	8,616.3	8,497.8	40.1	30.8	25.18	-165.6	2,424.2	364.8	296.9	67.95	5.369	
8,900.0	8,597.2	8,715.7	8,597.2	40.6	30.9	25.92	-165.6	2,424.2	354.5	286.2	68.28	5.192	
9,000.0	8,696.7	8,815.2	8,696.7	41.0	30.9	26.58	-165.6	2,424.2	345.8	277.3	68.59	5.042	
9,100.0	8,796.4	8,914.9	8,796.4	41.3	30.9	27.14	-165.6	2,424.2	338.8	269.9	68.89	4.918	
9,200.0	8,896.2	9,014.7	8,896.2	41.7	30.9	27.60	-165.6	2,424.2	333.3	264.1	69.18	4.818	
9,300.0	8,996.1	9,114.6	8,996.1	42.0	31.0	27.94	-165.6	2,424.2	329.4	259.9	69.46	4.742	
9,400.0	9,096.1	9,214.6	9,096.1	42.3	31.0	28.15	-165.6	2,424.2	327.0	257.3	69.71	4.691	
9,500.0	9,196.1	9,314.6	9,196.1	42.5	31.0	28.22	-165.6	2,424.2	326.2	256.3	69.86	4.669	
9,503.9	9,200.0	9,318.5	9,200.0	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.6	69.62	4.685	
9,600.0	9,296.1	9,414.6	9,296.1	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.5	69.66	4.682	
9,700.0	9,396.1	9,514.6	9,396.1	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.5	69.71	4.679	
9,785.4	9,481.5	9,600.0	9,481.5	42.5	31.1	118.49	-165.6	2,424.2	326.2	256.4	69.74	4.677	
9,800.0	9,496.1	9,614.6	9,496.1	42.5	31.1	-61.21	-165.6	2,424.2	326.1	255.8	70.24	4.642	
9,825.0	9,521.0	9,639.5	9,521.0	42.5	31.1	-61.50	-165.6	2,424.2	325.4	255.1	70.32	4.627	
9,850.0	9,545.9	9,664.4	9,545.9	42.5	31.1	-62.06	-165.6	2,424.2	324.1	253.7	70.44	4.601	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 901H - 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		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)				
9,875.0	9,570.5	9,689.0	9,570.5	42.5	31.1	-62.88	-165.6	2,424.2	322.2	251.6	70.59	4.565		
9,900.0	9,595.0	9,713.5	9,595.0	42.5	31.1	-63.97	-165.6	2,424.2	319.8	249.0	70.76	4.519		
9,925.0	9,619.1	9,737.6	9,619.1	42.5	31.1	-65.33	-165.6	2,424.2	316.9	245.9	70.96	4.466		
9,950.0	9,642.8	9,761.3	9,642.8	42.5	31.1	-66.94	-165.6	2,424.2	313.6	242.4	71.17	4.406		
9,975.0	9,666.1	9,784.6	9,666.1	42.5	31.1	-68.80	-165.6	2,424.2	310.0	238.6	71.38	4.343		
10,000.0	9,688.9	9,807.4	9,688.9	42.5	31.1	-70.89	-165.6	2,424.2	306.1	234.6	71.57	4.277		
10,025.0	9,711.1	9,829.6	9,711.1	42.5	31.1	-73.19	-165.6	2,424.2	302.2	230.5	71.73	4.213		
10,050.0	9,732.7	9,851.2	9,732.7	42.5	31.1	-75.66	-165.6	2,424.2	298.4	226.5	71.84	4.153		
10,075.0	9,753.6	9,872.1	9,753.6	42.5	31.1	-78.27	-165.6	2,424.2	294.7	222.8	71.87	4.101		
10,100.0	9,773.8	9,892.3	9,773.8	42.5	31.1	-80.97	-165.6	2,424.2	291.4	219.6	71.79	4.059		
10,125.0	9,793.2	9,911.7	9,793.2	42.6	31.1	-83.71	-165.6	2,424.2	288.7	217.1	71.59	4.033		
10,150.0	9,811.7	9,930.2	9,811.7	42.6	31.1	-86.42	-165.6	2,424.2	286.8	215.6	71.23	4.027 SF		
10,175.0	9,829.3	9,947.8	9,829.3	42.6	31.1	-89.03	-165.6	2,424.2	285.8	215.1	70.69	4.043 ES		
10,184.5	9,835.7	9,954.2	9,835.7	42.6	31.1	-90.00	-165.6	2,424.2	285.7	215.3	70.43	4.057 CC		
10,200.0	9,845.9	9,964.4	9,845.9	42.6	31.1	-91.51	-165.6	2,424.2	286.0	216.0	69.95	4.088		
10,225.0	9,861.5	9,980.1	9,861.5	42.6	31.1	-93.77	-165.6	2,424.2	287.4	218.4	69.02	4.165		
10,250.0	9,876.2	9,994.7	9,876.2	42.6	31.1	-95.78	-165.6	2,424.2	290.3	222.4	67.89	4.276		
10,275.0	9,889.7	10,008.2	9,889.7	42.6	31.2	-97.49	-165.6	2,424.2	294.8	228.2	66.61	4.426		
10,300.0	9,902.1	10,020.6	9,902.1	42.6	31.2	-98.86	-165.6	2,424.2	300.8	235.6	65.19	4.615		
10,325.0	9,913.3	10,031.8	9,913.3	42.6	31.2	-99.86	-165.6	2,424.2	308.5	244.9	63.69	4.844		
10,350.0	9,923.4	10,041.9	9,923.4	42.7	31.2	-100.46	-165.6	2,424.2	317.9	255.7	62.16	5.114		
10,375.0	9,932.3	10,050.8	9,932.3	42.7	31.2	-100.63	-165.6	2,424.2	328.8	268.2	60.64	5.422		
10,400.0	9,939.9	10,058.4	9,939.9	42.7	31.2	-100.35	-165.6	2,424.2	341.2	282.0	59.18	5.766		
10,425.0	9,946.2	10,064.8	9,946.2	42.7	31.2	-99.59	-165.6	2,424.2	355.0	297.2	57.81	6.141		
10,450.0	9,951.3	10,069.9	9,951.3	42.7	31.2	-98.33	-165.6	2,424.2	370.1	313.5	56.54	6.545		
10,475.0	9,955.1	10,073.7	9,955.1	42.8	31.2	-96.55	-165.6	2,424.2	386.2	330.8	55.40	6.971		
10,500.0	9,957.6	10,076.2	9,957.6	42.8	31.2	-94.23	-165.6	2,424.2	403.4	349.0	54.39	7.416		
10,525.0	9,958.9	10,077.4	9,958.9	42.8	31.2	-91.36	-165.6	2,424.2	421.4	367.9	53.51	7.874		
10,534.2	9,959.0	10,077.5	9,959.0	42.8	31.2	-90.17	-165.6	2,424.2	428.2	374.9	53.22	8.045		
10,600.0	9,959.1	10,077.6	9,959.1	42.9	31.2	-90.21	-165.6	2,424.2	479.2	427.7	51.52	9.301		
10,700.0	9,959.4	10,077.9	9,959.4	43.0	31.2	-90.26	-165.6	2,424.2	562.7	512.7	49.99	11.256		
10,800.0	9,959.7	10,078.2	9,959.7	43.2	31.2	-90.31	-165.6	2,424.2	650.8	601.6	49.21	13.225		
10,900.0	9,959.9	10,078.4	9,959.9	43.3	31.2	-90.37	-165.6	2,424.2	741.9	693.1	48.84	15.190		
11,000.0	9,960.2	10,078.7	9,960.2	43.5	31.2	-90.42	-165.6	2,424.2	835.1	786.4	48.71	17.145		
11,100.0	9,960.5	10,079.0	9,960.5	43.8	31.2	-90.47	-165.6	2,424.2	929.7	881.0	48.70	19.092		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			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)		
4,000.0	3,891.3	3,842.0	3,815.7	16.4	9.3	-12.94	206.8	1,717.5	981.8	955.7	26.18	37.508	
4,100.0	3,986.8	3,939.1	3,911.0	16.9	9.5	-12.30	191.8	1,728.3	960.5	933.5	26.92	35.681	
4,200.0	4,082.3	4,036.2	4,006.3	17.4	9.7	-11.62	176.7	1,739.2	939.2	911.5	27.66	33.951	
4,300.0	4,177.8	4,133.2	4,101.7	17.8	9.8	-10.91	161.7	1,750.0	918.1	889.7	28.41	32.312	
4,400.0	4,273.4	4,230.3	4,197.0	18.3	10.0	-10.17	146.7	1,760.8	897.1	867.9	29.17	30.757	
4,500.0	4,368.9	4,327.4	4,292.3	18.8	10.2	-9.40	131.7	1,771.7	876.3	846.3	29.92	29.283	
4,600.0	4,464.4	4,424.5	4,387.6	19.3	10.4	-8.58	116.6	1,782.5	855.6	824.9	30.69	27.883	
4,700.0	4,559.9	4,521.6	4,482.9	19.8	10.6	-7.73	101.6	1,793.4	835.1	803.7	31.45	26.554	
4,800.0	4,655.4	4,618.7	4,578.2	20.3	10.8	-6.84	86.6	1,804.2	814.8	782.6	32.22	25.292	
4,900.0	4,751.0	4,715.8	4,673.5	20.8	11.0	-5.90	71.6	1,815.0	794.7	761.7	32.98	24.094	
5,000.0	4,846.5	4,812.9	4,768.8	21.3	11.2	-4.91	56.5	1,825.9	774.8	741.1	33.75	22.955	
5,100.0	4,942.0	4,910.0	4,864.1	21.8	11.4	-3.88	41.5	1,836.7	755.2	720.7	34.52	21.874	
5,200.0	5,037.5	5,007.1	4,959.4	22.3	11.6	-2.79	26.5	1,847.5	735.8	700.5	35.29	20.848	
5,300.0	5,133.0	5,104.1	5,054.7	22.8	11.8	-1.64	11.5	1,858.4	716.7	680.6	36.07	19.871	
5,400.0	5,228.6	5,204.8	5,153.6	23.3	12.0	-0.42	-3.8	1,869.4	697.7	660.8	36.81	18.952	
5,500.0	5,324.1	5,305.5	5,252.7	23.8	12.2	0.82	-18.3	1,879.8	678.4	640.8	37.55	18.066	
5,600.0	5,419.6	5,406.2	5,351.9	24.3	12.4	2.07	-32.2	1,889.8	658.9	620.6	38.28	17.212	
5,700.0	5,515.1	5,506.8	5,451.3	24.8	12.6	3.33	-45.3	1,899.3	639.2	600.2	39.00	16.389	
5,800.0	5,610.6	5,607.5	5,550.7	25.3	12.8	4.61	-57.7	1,908.2	619.2	579.5	39.71	15.594	
5,900.0	5,706.2	5,708.1	5,650.3	25.8	13.0	5.92	-69.4	1,916.7	598.9	558.5	40.40	14.824	
6,000.0	5,801.7	5,808.6	5,749.9	26.3	13.2	7.25	-80.4	1,924.6	578.4	537.3	41.08	14.078	
6,100.0	5,897.2	5,909.0	5,849.5	26.8	13.4	8.61	-90.6	1,932.0	557.5	515.8	41.75	13.355	
6,200.0	5,992.7	6,009.3	5,949.1	27.3	13.6	10.01	-100.2	1,938.9	536.4	494.0	42.40	12.652	
6,300.0	6,088.2	6,109.5	6,048.7	27.8	13.8	11.46	-109.0	1,945.3	515.0	471.9	43.03	11.968	
6,400.0	6,183.8	6,209.5	6,148.3	28.3	14.0	12.97	-117.1	1,951.1	493.2	449.6	43.64	11.302	
6,500.0	6,279.3	6,309.5	6,247.8	28.8	14.1	14.55	-124.5	1,956.4	471.1	426.9	44.22	10.654	
6,600.0	6,374.8	6,409.2	6,347.2	29.3	14.3	16.21	-131.2	1,961.2	448.7	404.0	44.78	10.022	
6,700.0	6,470.3	6,508.8	6,446.5	29.8	14.5	17.97	-137.2	1,965.6	426.0	380.7	45.30	9.405	
6,800.0	6,565.9	6,608.2	6,545.6	30.4	14.6	19.86	-142.4	1,969.3	403.1	357.3	45.78	8.804	
6,900.0	6,661.4	6,707.3	6,644.7	30.9	14.8	21.90	-147.0	1,972.6	379.9	333.6	46.22	8.219	
7,000.0	6,756.9	6,806.3	6,743.5	31.4	15.0	24.12	-150.8	1,975.4	356.4	309.8	46.60	7.649	
7,100.0	6,852.4	6,905.0	6,842.1	31.9	15.1	26.59	-154.0	1,977.7	332.8	285.9	46.90	7.095	
7,200.0	6,947.9	7,003.5	6,940.6	32.4	15.3	29.35	-156.4	1,979.4	309.1	262.0	47.11	6.560	
7,300.0	7,043.5	7,101.7	7,038.7	32.9	15.4	32.49	-158.2	1,980.7	285.4	238.1	47.21	6.045	
7,400.0	7,139.0	7,199.6	7,136.7	33.4	15.5	36.11	-159.3	1,981.5	261.8	214.7	47.14	5.554	
7,500.0	7,234.5	7,297.3	7,234.3	33.9	15.6	40.35	-159.7	1,981.8	238.6	191.8	46.86	5.092	
7,600.0	7,330.0	7,393.0	7,330.0	34.4	15.7	45.33	-159.7	1,981.8	216.4	169.9	46.56	4.649	
7,700.0	7,425.5	7,488.5	7,425.5	34.9	15.7	51.32	-159.7	1,981.8	196.2	150.6	45.60	4.304	
7,782.5	7,504.4	7,567.3	7,504.4	35.3	15.7	57.15	-159.7	1,981.8	181.5	137.0	44.51	4.078	
7,800.0	7,521.1	7,584.0	7,521.1	35.4	15.7	58.47	-159.7	1,981.8	178.7	134.4	44.25	4.038	
7,900.0	7,616.9	7,679.9	7,616.9	35.9	15.7	66.50	-159.7	1,981.8	165.1	122.3	42.73	3.863	
8,000.0	7,713.3	7,776.2	7,713.3	36.4	15.8	75.17	-159.7	1,981.8	155.9	114.6	41.37	3.769	
8,100.0	7,810.1	7,873.0	7,810.1	36.9	15.8	84.06	-159.7	1,981.8	151.3	110.7	40.60	3.725	
8,168.1	7,876.3	7,939.2	7,876.3	37.3	15.8	90.00	-159.7	1,981.8	150.4	109.8	40.56	3.708 CC	
8,200.0	7,907.3	7,970.2	7,907.3	37.4	15.8	92.70	-159.7	1,981.8	150.6	109.9	40.69	3.700	
8,300.0	8,004.9	8,067.9	8,004.9	37.9	15.9	100.67	-159.7	1,981.8	153.2	111.6	41.59	3.683	
8,400.0	8,102.9	8,165.8	8,102.9	38.4	15.9	107.73	-159.7	1,981.8	158.2	115.2	43.01	3.677	
8,500.0	8,201.2	8,264.1	8,201.2	38.8	15.9	113.77	-159.7	1,981.8	164.8	120.1	44.66	3.689	
8,600.0	8,299.8	8,362.8	8,299.8	39.3	16.0	118.84	-159.7	1,981.8	172.2	125.9	46.32	3.718	
8,700.0	8,398.7	8,461.7	8,398.7	39.7	16.0	123.02	-159.7	1,981.8	179.9	132.0	47.86	3.759	
8,800.0	8,497.8	8,560.8	8,497.8	40.1	16.0	126.42	-159.7	1,981.8	187.4	138.2	49.25	3.806	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
8,900.0	8,597.2	8,660.1	8,597.2	40.6	16.1	129.17	-159.7	1,981.8	194.4	144.0	50.46	3.853	
9,000.0	8,696.7	8,759.7	8,696.7	41.0	16.1	131.35	-159.7	1,981.8	200.7	149.2	51.51	3.896	
9,100.0	8,796.4	8,859.4	8,796.4	41.3	16.1	133.04	-159.7	1,981.8	206.0	153.6	52.40	3.931	
9,200.0	8,896.2	8,959.2	8,896.2	41.7	16.2	134.30	-159.7	1,981.8	210.3	157.1	53.15	3.956	
9,300.0	8,996.1	9,059.1	8,996.1	42.0	16.2	135.17	-159.7	1,981.8	213.4	159.6	53.75	3.970	
9,400.0	9,096.1	9,159.0	9,096.1	42.3	16.2	135.69	-159.7	1,981.8	215.3	161.1	54.21	3.972	
9,500.0	9,196.1	9,259.0	9,196.1	42.5	16.3	135.87	-159.7	1,981.8	216.0	161.5	54.43	3.968	
9,503.9	9,200.0	9,263.0	9,200.0	42.5	16.3	-133.87	-159.7	1,981.8	216.0	161.6	54.34	3.975	
9,600.0	9,296.1	9,359.0	9,296.1	42.5	16.3	-133.87	-159.7	1,981.8	216.0	161.6	54.39	3.971	
9,700.0	9,396.1	9,459.0	9,396.1	42.5	16.4	-133.87	-159.7	1,981.8	216.0	161.5	54.44	3.967	
9,785.4	9,481.5	9,544.5	9,481.5	42.5	16.4	-133.87	-159.7	1,981.8	216.0	161.5	54.48	3.964	
9,800.0	9,496.1	9,559.0	9,496.1	42.5	16.4	46.54	-159.7	1,981.8	215.8	161.1	54.69	3.946	
9,825.0	9,521.0	9,584.0	9,521.0	42.5	16.4	46.89	-159.7	1,981.8	214.9	160.1	54.74	3.925	
9,850.0	9,545.9	9,608.8	9,545.9	42.5	16.4	47.59	-159.7	1,981.8	213.0	158.1	54.86	3.882	
9,875.0	9,570.5	9,633.5	9,570.5	42.5	16.4	48.64	-159.7	1,981.8	210.3	155.2	55.08	3.818	
9,900.0	9,595.0	9,657.9	9,595.0	42.5	16.4	50.05	-159.7	1,981.8	206.8	151.4	55.39	3.734	
9,925.0	9,619.1	9,682.0	9,619.1	42.5	16.4	51.85	-159.7	1,981.8	202.6	146.8	55.80	3.630	
9,950.0	9,642.8	9,705.8	9,642.8	42.5	16.5	54.06	-159.7	1,981.8	197.7	141.4	56.32	3.510	
9,975.0	9,666.1	9,729.1	9,666.1	42.5	16.5	56.69	-159.7	1,981.8	192.3	135.3	56.96	3.376	
10,000.0	9,688.9	9,751.9	9,688.9	42.5	16.5	59.77	-159.7	1,981.8	186.5	128.8	57.72	3.231	
10,025.0	9,711.1	9,774.1	9,711.1	42.5	16.5	63.29	-159.7	1,981.8	180.6	122.0	58.60	3.081	
10,050.0	9,732.7	9,795.7	9,732.7	42.5	16.5	67.23	-159.7	1,981.8	174.6	115.1	59.57	2.932 Normal Operations	
10,075.0	9,753.6	9,816.6	9,753.6	42.5	16.5	71.55	-159.7	1,981.8	169.0	108.4	60.62	2.789 Normal Operations	
10,100.0	9,773.8	9,836.8	9,773.8	42.5	16.5	76.16	-159.7	1,981.8	164.0	102.4	61.67	2.660 Normal Operations	
10,125.0	9,793.2	9,856.1	9,793.2	42.6	16.5	80.93	-159.7	1,981.8	160.1	97.4	62.63	2.555 Normal Operations	
10,150.0	9,811.7	9,874.6	9,811.7	42.6	16.5	85.73	-159.7	1,981.8	157.4	94.0	63.40	2.483 Caution - Monitor Closely	
10,172.8	9,827.8	9,890.7	9,827.8	42.6	16.5	90.00	-159.7	1,981.8	156.6	92.8	63.83	2.454 Caution - Monitor Closely	
10,175.0	9,829.3	9,892.2	9,829.3	42.6	16.5	90.39	-159.7	1,981.8	156.6	92.8	63.85	2.453 Caution - Monitor Closely, ES, SF	
10,200.0	9,845.9	9,908.9	9,845.9	42.6	16.5	94.77	-159.7	1,981.8	157.9	94.0	63.87	2.472 Caution - Monitor Closely	
10,225.0	9,861.5	9,924.5	9,861.5	42.6	16.5	98.73	-159.7	1,981.8	161.6	98.1	63.43	2.547 Normal Operations	
10,250.0	9,876.2	9,939.1	9,876.2	42.6	16.5	102.17	-159.7	1,981.8	167.7	105.2	62.55	2.681 Normal Operations	
10,275.0	9,889.7	9,952.6	9,889.7	42.6	16.5	105.02	-159.7	1,981.8	176.3	115.0	61.33	2.875 Normal Operations	
10,300.0	9,902.1	9,965.0	9,902.1	42.6	16.6	107.25	-159.7	1,981.8	187.3	127.4	59.90	3.127	
10,325.0	9,913.3	9,976.3	9,913.3	42.6	16.6	108.81	-159.7	1,981.8	200.4	142.0	58.40	3.432	
10,350.0	9,923.4	9,986.4	9,923.4	42.7	16.6	109.68	-159.7	1,981.8	215.4	158.5	56.93	3.784	
10,375.0	9,932.3	9,995.2	9,932.3	42.7	16.6	109.83	-159.7	1,981.8	232.1	176.6	55.54	4.179	
10,400.0	9,939.9	10,002.8	9,939.9	42.7	16.6	109.22	-159.7	1,981.8	250.2	195.9	54.27	4.610	
10,425.0	9,946.2	10,009.2	9,946.2	42.7	16.6	107.80	-159.7	1,981.8	269.5	216.3	53.14	5.071	
10,450.0	9,951.3	10,014.3	9,951.3	42.7	16.6	105.48	-159.7	1,981.8	289.7	237.6	52.14	5.556	
10,475.0	9,955.1	10,018.1	9,955.1	42.8	16.6	102.21	-159.7	1,981.8	310.8	259.5	51.27	6.062	
10,500.0	9,957.6	10,020.6	9,957.6	42.8	16.6	97.91	-159.7	1,981.8	332.5	282.0	50.50	6.584	
10,525.0	9,958.9	10,021.8	9,958.9	42.8	16.6	92.54	-159.7	1,981.8	354.7	304.9	49.84	7.118	
10,534.2	9,959.0	10,021.9	9,959.0	42.8	16.6	90.32	-159.7	1,981.8	363.0	313.4	49.61	7.317	
10,600.0	9,959.1	10,022.1	9,959.1	42.9	16.6	90.38	-159.7	1,981.8	423.3	375.0	48.30	8.765	
10,700.0	9,959.4	10,022.4	9,959.4	43.0	16.6	90.48	-159.7	1,981.8	517.6	470.6	47.00	11.011	
10,800.0	9,959.7	10,022.6	9,959.7	43.2	16.6	90.58	-159.7	1,981.8	613.6	567.4	46.19	13.284	
10,900.0	9,959.9	10,022.9	9,959.9	43.3	16.6	90.67	-159.7	1,981.8	710.8	665.1	45.66	15.568	
11,000.0	9,960.2	10,023.2	9,960.2	43.5	16.6	90.77	-159.7	1,981.8	808.6	763.3	45.28	17.856	
11,100.0	9,960.5	10,023.4	9,960.5	43.8	16.6	90.87	-159.7	1,981.8	906.9	861.9	45.02	20.146	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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)			
3,200.0	3,127.1	3,203.4	3,200.2	12.5	7.5	-24.19	371.8	1,431.4	983.6	963.9	19.74	49.838	
3,300.0	3,222.6	3,296.9	3,291.3	13.0	7.6	-23.61	350.5	1,432.8	949.3	928.9	20.39	46.560	
3,400.0	3,318.2	3,390.4	3,382.3	13.5	7.8	-22.99	329.2	1,434.3	915.1	894.1	21.05	43.465	
3,500.0	3,413.7	3,483.9	3,473.3	14.0	7.9	-22.32	307.9	1,435.7	881.0	859.3	21.73	40.542	
3,600.0	3,509.2	3,577.4	3,564.3	14.4	8.1	-21.60	286.6	1,437.2	847.1	824.6	22.42	37.781	
3,700.0	3,604.7	3,670.9	3,655.3	14.9	8.2	-20.82	265.3	1,438.6	813.2	790.1	23.12	35.171	
3,800.0	3,700.2	3,764.4	3,746.4	15.4	8.4	-19.97	244.0	1,440.1	779.5	755.7	23.83	32.706	
3,900.0	3,795.8	3,857.8	3,837.4	15.9	8.5	-19.05	222.7	1,441.5	746.0	721.4	24.56	30.375	
4,000.0	3,891.3	3,951.3	3,928.4	16.4	8.7	-18.04	201.5	1,443.0	712.7	687.4	25.30	28.172	
4,100.0	3,986.8	4,044.8	4,019.4	16.9	8.8	-16.94	180.2	1,444.4	679.5	653.5	26.05	26.089	
4,200.0	4,082.3	4,138.3	4,110.4	17.4	9.0	-15.73	158.9	1,445.9	646.7	619.9	26.81	24.121	
4,300.0	4,177.8	4,231.8	4,201.4	17.8	9.1	-14.39	137.6	1,447.3	614.1	586.5	27.58	22.262	
4,400.0	4,273.4	4,325.3	4,292.5	18.3	9.3	-12.90	116.3	1,448.8	581.9	553.5	28.37	20.508	
4,500.0	4,368.9	4,418.8	4,383.5	18.8	9.5	-11.24	95.0	1,450.2	550.0	520.9	29.17	18.855	
4,600.0	4,464.4	4,512.3	4,474.5	19.3	9.6	-9.39	73.7	1,451.7	518.7	488.7	29.98	17.301	
4,700.0	4,559.9	4,605.7	4,565.5	19.8	9.8	-7.32	52.4	1,453.1	487.9	457.1	30.80	15.842	
4,800.0	4,655.4	4,699.2	4,656.5	20.3	10.0	-4.97	31.1	1,454.6	457.8	426.2	31.62	14.479	
4,900.0	4,751.0	4,792.7	4,747.5	20.8	10.1	-2.32	9.8	1,456.0	428.5	396.1	32.43	13.212	
5,000.0	4,846.5	4,886.4	4,838.8	21.3	10.3	0.70	-11.5	1,457.5	400.2	367.0	33.21	12.052	
5,100.0	4,942.0	4,980.9	4,931.0	21.8	10.4	3.98	-31.8	1,458.8	373.0	339.0	33.95	10.986	
5,200.0	5,037.5	5,075.9	5,024.2	22.3	10.6	7.51	-50.6	1,460.1	346.8	312.2	34.64	10.012	
5,300.0	5,133.0	5,171.5	5,118.2	22.8	10.8	11.32	-68.0	1,461.3	321.7	286.4	35.24	9.128	
5,400.0	5,228.6	5,267.6	5,212.9	23.3	10.9	15.46	-83.9	1,462.4	297.6	261.9	35.74	8.327	
5,500.0	5,324.1	5,364.2	5,308.4	23.8	11.1	19.99	-98.3	1,463.4	274.6	238.5	36.10	7.607	
5,600.0	5,419.6	5,461.1	5,404.5	24.3	11.3	24.98	-111.2	1,464.3	252.8	216.5	36.30	6.966	
5,700.0	5,515.1	5,558.4	5,501.1	24.8	11.5	30.50	-122.4	1,465.0	232.3	196.0	36.29	6.402	
5,800.0	5,610.6	5,655.9	5,598.2	25.3	11.6	36.68	-132.1	1,465.7	213.2	177.2	36.03	5.919	
5,900.0	5,706.2	5,753.7	5,695.6	25.8	11.8	43.61	-140.1	1,466.2	195.8	160.3	35.48	5.519	
6,000.0	5,801.7	5,851.6	5,793.3	26.3	11.9	51.42	-146.4	1,466.7	180.4	145.7	34.65	5.206	
6,100.0	5,897.2	5,949.7	5,891.3	26.8	12.1	60.18	-151.1	1,467.0	167.4	133.8	33.60	4.983	
6,200.0	5,992.7	6,047.8	5,989.4	27.3	12.2	69.91	-154.1	1,467.2	157.4	124.8	32.54	4.836	
6,300.0	6,088.2	6,145.9	6,087.5	27.8	12.3	80.48	-155.5	1,467.3	150.8	119.0	31.85	4.736	
6,387.4	6,171.7	6,230.2	6,171.7	28.3	12.3	90.00	-155.6	1,467.3	148.7	116.8	31.90	4.661 CC	
6,400.0	6,183.8	6,242.2	6,183.8	28.3	12.3	91.37	-155.6	1,467.3	148.7	116.8	31.98	4.651 ES	
6,500.0	6,279.3	6,337.8	6,279.3	28.8	12.4	102.08	-155.6	1,467.3	152.4	119.3	33.11	4.602 SF	
6,600.0	6,374.8	6,433.3	6,374.8	29.3	12.4	112.01	-155.6	1,467.3	161.5	126.5	34.98	4.615	
6,700.0	6,470.3	6,528.8	6,470.3	29.8	12.5	120.72	-155.6	1,467.3	175.1	138.0	37.13	4.717	
6,800.0	6,565.9	6,624.3	6,565.9	30.4	12.5	128.11	-155.6	1,467.3	192.4	153.2	39.21	4.907	
6,900.0	6,661.4	6,719.8	6,661.4	30.9	12.6	134.26	-155.6	1,467.3	212.4	171.3	41.09	5.170	
7,000.0	6,756.9	6,815.4	6,756.9	31.4	12.6	139.35	-155.6	1,467.3	234.5	191.7	42.73	5.487	
7,100.0	6,852.4	6,910.9	6,852.4	31.9	12.7	143.57	-155.6	1,467.3	258.0	213.9	44.18	5.841	
7,200.0	6,947.9	7,006.4	6,947.9	32.4	12.7	147.09	-155.6	1,467.3	282.7	237.3	45.46	6.219	
7,300.0	7,043.5	7,101.9	7,043.5	32.9	12.8	150.04	-155.6	1,467.3	308.3	261.7	46.62	6.613	
7,400.0	7,139.0	7,197.4	7,139.0	33.4	12.8	152.55	-155.6	1,467.3	334.5	286.8	47.69	7.015	
7,500.0	7,234.5	7,293.0	7,234.5	33.9	12.9	154.70	-155.6	1,467.3	361.3	312.6	48.68	7.422	
7,600.0	7,330.0	7,388.5	7,330.0	34.4	12.9	156.55	-155.6	1,467.3	388.4	338.8	49.62	7.829	
7,700.0	7,425.5	7,484.0	7,425.5	34.9	13.0	158.16	-155.6	1,467.3	415.9	365.4	50.51	8.235	
7,782.5	7,504.4	7,562.8	7,504.4	35.3	13.0	159.34	-155.6	1,467.3	438.8	387.6	51.22	8.568	
7,800.0	7,521.1	7,579.5	7,521.1	35.4	13.0	159.59	-155.6	1,467.3	443.7	392.3	51.36	8.638	
7,900.0	7,616.9	7,675.4	7,616.9	35.9	13.1	160.89	-155.6	1,467.3	470.6	418.4	52.19	9.017	
8,000.0	7,713.3	7,771.7	7,713.3	36.4	13.1	161.98	-155.6	1,467.3	496.1	443.1	52.98	9.364	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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	7,810.1	7,868.5	7,810.1	36.9	13.2	162.91	-155.6	1,467.3	520.1	466.4	53.74	9.678	
8,200.0	7,907.3	7,965.8	7,907.3	37.4	13.2	163.70	-155.6	1,467.3	542.6	488.1	54.47	9.960	
8,300.0	8,004.9	8,063.4	8,004.9	37.9	13.3	164.37	-155.6	1,467.3	563.5	508.3	55.19	10.211	
8,400.0	8,102.9	8,161.3	8,102.9	38.4	13.4	164.95	-155.6	1,467.3	582.8	526.9	55.88	10.430	
8,500.0	8,201.2	8,259.7	8,201.2	38.8	13.4	165.45	-155.6	1,467.3	600.5	544.0	56.55	10.619	
8,600.0	8,299.8	8,358.3	8,299.8	39.3	13.5	165.88	-155.6	1,467.3	616.6	559.4	57.20	10.780	
8,700.0	8,398.7	8,457.2	8,398.7	39.7	13.5	166.24	-155.6	1,467.3	631.0	573.2	57.83	10.912	
8,800.0	8,497.8	8,556.3	8,497.8	40.1	13.6	166.55	-155.6	1,467.3	643.8	585.3	58.44	11.016	
8,900.0	8,597.2	8,655.6	8,597.2	40.6	13.6	166.81	-155.6	1,467.3	654.8	595.8	59.02	11.095	
9,000.0	8,696.7	8,755.2	8,696.7	41.0	13.7	167.02	-155.6	1,467.3	664.2	604.7	59.58	11.148	
9,100.0	8,796.4	8,854.9	8,796.4	41.3	13.7	167.19	-155.6	1,467.3	672.0	611.8	60.11	11.178	
9,200.0	8,896.2	8,954.7	8,896.2	41.7	13.8	167.31	-155.6	1,467.3	678.0	617.4	60.61	11.185	
9,300.0	8,996.1	9,054.6	8,996.1	42.0	13.9	167.41	-155.6	1,467.3	682.3	621.2	61.08	11.171	
9,400.0	9,096.1	9,154.5	9,096.1	42.3	13.9	167.46	-155.6	1,467.3	684.9	623.4	61.48	11.140	
9,500.0	9,196.1	9,254.5	9,196.1	42.5	14.0	167.48	-155.6	1,467.3	685.8	624.1	61.70	11.116	
9,503.9	9,200.0	9,258.5	9,200.0	42.5	14.0	-102.25	-155.6	1,467.3	685.8	624.4	61.45	11.160	
9,600.0	9,296.1	9,354.5	9,296.1	42.5	14.0	-102.25	-155.6	1,467.3	685.8	624.3	61.50	11.152	
9,700.0	9,396.1	9,454.5	9,396.1	42.5	14.1	-102.25	-155.6	1,467.3	685.8	624.3	61.55	11.143	
9,785.4	9,481.5	9,540.0	9,481.5	42.5	14.1	-102.25	-155.6	1,467.3	685.8	624.3	61.59	11.136	
9,800.0	9,496.1	9,554.5	9,496.1	42.5	14.2	78.12	-155.6	1,467.3	685.8	623.7	62.09	11.045	
9,825.0	9,521.0	9,579.5	9,521.0	42.5	14.2	78.27	-155.6	1,467.3	685.5	623.4	62.09	11.040	
9,850.0	9,545.9	9,604.3	9,545.9	42.5	14.2	78.55	-155.6	1,467.3	685.0	622.9	62.10	11.030	
9,875.0	9,570.5	9,629.0	9,570.5	42.5	14.2	78.97	-155.6	1,467.3	684.2	622.0	62.12	11.013	
9,900.0	9,595.0	9,653.4	9,595.0	42.5	14.2	79.52	-155.6	1,467.3	683.2	621.0	62.15	10.992	
9,925.0	9,619.1	9,677.5	9,619.1	42.5	14.2	80.18	-155.6	1,467.3	682.0	619.8	62.19	10.965	
9,950.0	9,642.8	9,701.3	9,642.8	42.5	14.2	80.96	-155.6	1,467.3	680.6	618.4	62.25	10.934	
9,975.0	9,666.1	9,724.6	9,666.1	42.5	14.3	81.84	-155.6	1,467.3	679.2	616.8	62.31	10.900	
10,000.0	9,688.9	9,747.4	9,688.9	42.5	14.3	82.80	-155.6	1,467.3	677.7	615.3	62.38	10.863	
10,025.0	9,711.1	9,769.6	9,711.1	42.5	14.3	83.84	-155.6	1,467.3	676.2	613.7	62.46	10.826	
10,050.0	9,732.7	9,791.2	9,732.7	42.5	14.3	84.93	-155.6	1,467.3	674.7	612.2	62.54	10.789	
10,075.0	9,753.6	9,812.1	9,753.6	42.5	14.3	86.05	-155.6	1,467.3	673.5	610.8	62.62	10.754	
10,100.0	9,773.8	9,832.3	9,773.8	42.5	14.3	87.20	-155.6	1,467.3	672.4	609.7	62.70	10.723	
10,125.0	9,793.2	9,851.6	9,793.2	42.6	14.3	88.33	-155.6	1,467.3	671.6	608.8	62.78	10.698	
10,150.0	9,811.7	9,870.1	9,811.7	42.6	14.3	89.45	-155.6	1,467.3	671.2	608.3	62.84	10.680	
10,162.8	9,820.8	9,879.2	9,820.8	42.6	14.3	90.00	-155.6	1,467.3	671.1	608.2	62.87	10.674	
10,175.0	9,829.3	9,887.7	9,829.3	42.6	14.3	90.51	-155.6	1,467.3	671.1	608.3	62.90	10.671	
10,200.0	9,845.9	9,904.4	9,845.9	42.6	14.4	91.51	-155.6	1,467.3	671.7	608.7	62.93	10.673	
10,225.0	9,861.5	9,920.0	9,861.5	42.6	14.4	92.42	-155.6	1,467.3	672.7	609.8	62.95	10.687	
10,250.0	9,876.2	9,934.6	9,876.2	42.6	14.4	93.23	-155.6	1,467.3	674.4	611.5	62.93	10.717	
10,275.0	9,889.7	9,948.1	9,889.7	42.6	14.4	93.90	-155.6	1,467.3	676.9	614.0	62.89	10.762	
10,300.0	9,902.1	9,960.6	9,902.1	42.6	14.4	94.43	-155.6	1,467.3	680.0	617.2	62.82	10.825	
10,325.0	9,913.3	9,971.8	9,913.3	42.6	14.4	94.81	-155.6	1,467.3	684.0	621.3	62.72	10.906	
10,350.0	9,923.4	9,981.9	9,923.4	42.7	14.4	95.00	-155.6	1,467.3	688.8	626.2	62.58	11.007	
10,375.0	9,932.3	9,990.7	9,932.3	42.7	14.4	95.01	-155.6	1,467.3	694.4	632.0	62.40	11.129	
10,400.0	9,939.9	9,998.4	9,939.9	42.7	14.4	94.82	-155.6	1,467.3	700.9	638.7	62.18	11.272	
10,425.0	9,946.2	10,004.7	9,946.2	42.7	14.4	94.42	-155.6	1,467.3	708.3	646.4	61.93	11.437	
10,450.0	9,951.3	10,009.8	9,951.3	42.7	14.4	93.81	-155.6	1,467.3	716.5	654.8	61.65	11.623	
10,475.0	9,955.1	10,013.6	9,955.1	42.8	14.4	92.97	-155.6	1,467.3	725.5	664.2	61.33	11.830	
10,500.0	9,957.6	10,016.1	9,957.6	42.8	14.4	91.90	-155.6	1,467.3	735.3	674.3	60.98	12.058	
10,525.0	9,958.9	10,017.3	9,958.9	42.8	14.4	90.61	-155.6	1,467.3	745.9	685.3	60.61	12.307	
10,534.2	9,959.0	10,017.4	9,959.0	42.8	14.4	90.08	-155.6	1,467.3	749.9	689.5	60.46	12.403	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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:	WTF COM PROJECT - _WILD THING FED COM 903H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program:	0-r.5 MWD+IFR1+SAG+FDIR, 10342-r.5 MWD+IFR1+SAG+FDIR											Offset Well Error:	0.0 usft
Reference	Offset		Semi Major Axis		Offset Wellbore Centre		Distance			Rule Assigned:			
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
10,600.0	9,959.1	10,017.6	9,959.1	42.9	14.4	90.09	-155.6	1,467.3	781.5	722.1	59.38	13.161	
10,700.0	9,959.4	10,017.9	9,959.4	43.0	14.4	90.11	-155.6	1,467.3	837.2	779.5	57.66	14.519	
10,800.0	9,959.7	10,018.1	9,959.7	43.2	14.4	90.14	-155.6	1,467.3	900.5	844.6	55.96	16.091	
10,900.0	9,959.9	10,018.4	9,959.9	43.3	14.4	90.16	-155.6	1,467.3	970.1	915.7	54.38	17.838	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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)			
2,900.0	2,840.6	2,904.7	2,915.3	11.1	9.4	-27.82	424.7	1,315.9	980.9	961.3	19.55	50.161	
3,000.0	2,936.1	2,998.4	3,008.6	11.6	9.8	-28.40	418.0	1,311.2	947.1	926.9	20.28	46.711	
3,100.0	3,031.6	3,092.1	3,102.0	12.1	10.1	-29.02	411.3	1,306.5	913.5	892.5	21.00	43.492	
3,200.0	3,127.1	3,185.7	3,195.3	12.5	10.4	-29.69	404.7	1,301.9	880.0	858.3	21.74	40.485	
3,300.0	3,222.6	3,279.4	3,288.6	13.0	10.8	-30.41	398.0	1,297.2	846.6	824.1	22.47	37.674	
3,400.0	3,318.2	3,373.1	3,382.0	13.5	11.1	-31.19	391.3	1,292.5	813.3	790.1	23.21	35.044	
3,500.0	3,413.7	3,466.8	3,475.3	14.0	11.5	-32.04	384.6	1,287.8	780.2	756.2	23.95	32.580	
3,600.0	3,509.2	3,560.5	3,568.6	14.4	11.8	-32.96	377.9	1,283.1	747.2	722.5	24.68	30.270	
3,700.0	3,604.7	3,654.2	3,661.9	14.9	12.2	-33.96	371.2	1,278.4	714.4	689.0	25.42	28.104	
3,800.0	3,700.2	3,747.9	3,755.3	15.4	12.5	-35.06	364.5	1,273.7	681.9	655.7	26.15	26.071	
3,900.0	3,795.8	3,841.6	3,848.6	15.9	12.8	-36.26	357.8	1,269.1	649.5	622.7	26.88	24.164	
4,000.0	3,891.3	3,935.2	3,941.9	16.4	13.2	-37.59	351.1	1,264.4	617.5	589.9	27.60	22.373	
4,100.0	3,986.8	4,028.9	4,035.3	16.9	13.5	-39.06	344.5	1,259.7	585.8	557.5	28.31	20.694	
4,200.0	4,082.3	4,122.6	4,128.6	17.4	13.9	-40.69	337.8	1,255.0	554.6	525.6	29.00	19.120	
4,300.0	4,177.8	4,216.3	4,221.9	17.8	14.2	-42.50	331.1	1,250.3	523.7	494.1	29.68	17.647	
4,400.0	4,273.4	4,310.0	4,315.3	18.3	14.6	-44.54	324.4	1,245.6	493.5	463.1	30.33	16.272	
4,500.0	4,368.9	4,403.7	4,408.6	18.8	14.9	-46.83	317.7	1,241.0	463.9	432.9	30.94	14.993	
4,600.0	4,464.4	4,497.4	4,501.9	19.3	15.3	-49.41	311.0	1,236.3	435.0	403.5	31.50	13.809	
4,700.0	4,559.9	4,591.1	4,595.3	19.8	15.6	-52.33	304.3	1,231.6	407.2	375.2	32.01	12.721	
4,800.0	4,655.4	4,684.7	4,688.6	20.3	16.0	-55.65	297.6	1,226.9	380.5	348.1	32.44	11.731	
4,900.0	4,751.0	4,778.4	4,781.9	20.8	16.4	-59.43	290.9	1,222.2	355.3	322.5	32.77	10.843	
5,000.0	4,846.5	4,872.1	4,875.2	21.3	16.7	-63.72	284.3	1,217.5	331.8	298.9	32.98	10.062	
5,100.0	4,942.0	4,965.8	4,968.6	21.8	17.1	-68.58	277.6	1,212.9	310.6	277.5	33.05	9.396	
5,200.0	5,037.5	5,064.4	5,066.7	22.3	17.4	-74.37	270.2	1,207.7	291.5	258.6	32.94	8.851	
5,300.0	5,133.0	5,166.6	5,168.2	22.8	17.9	-81.36	259.9	1,200.5	273.1	240.4	32.68	8.357	
5,400.0	5,228.6	5,266.5	5,266.8	23.3	18.3	-89.41	247.1	1,191.5	255.9	223.6	32.32	7.920	
5,500.0	5,324.1	5,357.4	5,356.4	23.8	18.7	-97.72	234.1	1,182.5	243.0	211.0	32.06	7.580	
5,600.0	5,419.6	5,448.6	5,446.2	24.3	19.1	-106.62	221.2	1,173.4	236.7	204.6	32.04	7.386	
5,640.3	5,458.1	5,485.3	5,482.3	24.5	19.3	-110.29	216.0	1,169.7	236.1	203.9	32.15	7.343 CC, ES	
5,700.0	5,515.1	5,539.7	5,535.9	24.8	19.5	-115.71	208.2	1,164.3	237.3	204.9	32.45	7.313 SF	
5,800.0	5,610.6	5,630.9	5,625.7	25.3	19.9	-124.52	195.3	1,155.2	245.0	211.7	33.36	7.345	
5,900.0	5,706.2	5,722.0	5,715.4	25.8	20.3	-132.71	182.3	1,146.1	259.1	224.5	34.67	7.474	
6,000.0	5,801.7	5,813.2	5,805.2	26.3	20.7	-140.03	169.3	1,137.1	278.6	242.4	36.19	7.698	
6,100.0	5,897.2	5,904.3	5,894.9	26.8	21.1	-146.43	156.4	1,128.0	302.5	264.7	37.77	8.008	
6,200.0	5,992.7	5,995.4	5,984.7	27.3	21.5	-151.93	143.4	1,118.9	329.8	290.5	39.31	8.389	
6,300.0	6,088.2	6,086.6	6,074.5	27.8	21.9	-156.63	130.4	1,109.8	359.7	319.0	40.77	8.823	
6,400.0	6,183.8	6,177.7	6,164.2	28.3	22.3	-160.65	117.5	1,100.8	391.7	349.6	42.14	9.296	
6,500.0	6,279.3	6,268.9	6,254.0	28.8	22.7	-164.08	104.5	1,091.7	425.3	381.9	43.42	9.794	
6,600.0	6,374.8	6,360.0	6,343.7	29.3	23.1	-167.03	91.5	1,082.6	460.1	415.4	44.63	10.308	
6,700.0	6,470.3	6,451.1	6,433.5	29.8	23.5	-169.58	78.6	1,073.5	495.8	450.1	45.78	10.832	
6,800.0	6,565.9	6,542.3	6,523.2	30.4	24.0	-171.80	65.6	1,064.4	532.4	485.5	46.87	11.358	
6,900.0	6,661.4	6,633.4	6,613.0	30.9	24.4	-173.74	52.6	1,055.4	569.6	521.6	47.93	11.884	
7,000.0	6,756.9	6,724.6	6,702.8	31.4	24.8	-175.45	39.7	1,046.3	607.3	558.3	48.95	12.406	
7,100.0	6,852.4	6,815.7	6,792.5	31.9	25.2	-176.96	26.7	1,037.2	645.4	595.4	49.94	12.922	
7,200.0	6,947.9	6,906.9	6,882.3	32.4	25.6	-178.31	13.7	1,028.1	683.8	632.9	50.92	13.431	
7,300.0	7,043.5	6,998.0	6,972.0	32.9	26.0	-179.52	0.8	1,019.1	722.6	670.7	51.87	13.931	
7,400.0	7,139.0	7,089.1	7,061.8	33.4	26.4	-179.39	-12.2	1,010.0	761.6	708.8	52.81	14.422	
7,500.0	7,234.5	7,186.2	7,157.5	33.9	26.8	-178.37	-25.6	1,000.6	800.6	746.7	53.85	14.866	
7,600.0	7,330.0	7,286.7	7,256.8	34.4	27.3	-177.52	-38.2	991.8	838.8	783.9	54.93	15.270	
7,700.0	7,425.5	7,388.4	7,357.5	34.9	27.7	-176.84	-49.5	983.9	876.1	820.2	55.99	15.649	
7,782.5	7,504.4	7,473.1	7,441.6	35.3	28.0	-176.39	-57.7	978.1	906.3	849.4	56.84	15.944	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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	
7,800.0	7,521.1	7,491.1	7,459.6	35.4	28.1	176.32	-59.4	976.9	912.5	855.5	57.02	16.005	
7,900.0	7,616.9	7,595.5	7,563.4	35.9	28.5	175.94	-67.9	971.0	946.8	888.8	58.03	16.316	
8,000.0	7,713.3	7,701.4	7,668.9	36.4	28.9	175.67	-74.9	966.1	978.4	919.4	59.01	16.580	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			Offset Wellbore Centre		Distance		No-Go	Separation	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Factor	
2,500.0	2,458.5	2,631.7	2,629.4	9.4	9.3	-27.22	393.9	1,185.6	969.1	950.7	18.36	52.794	
2,600.0	2,554.0	2,721.4	2,717.7	9.8	9.7	-27.83	384.2	1,172.6	925.8	906.7	19.11	48.455	
2,700.0	2,649.5	2,811.1	2,805.9	10.2	10.1	-28.49	374.5	1,159.7	882.6	862.8	19.87	44.432	
2,800.0	2,745.0	2,900.7	2,894.1	10.7	10.4	-29.23	364.8	1,146.7	839.6	818.9	20.63	40.698	
2,900.0	2,840.6	2,990.4	2,982.3	11.1	10.8	-30.04	355.1	1,133.8	796.6	775.2	21.40	37.230	
3,000.0	2,936.1	3,080.1	3,070.6	11.6	11.2	-30.95	345.3	1,120.8	753.9	731.7	22.17	34.007	
3,100.0	3,031.6	3,169.8	3,158.8	12.1	11.6	-31.96	335.6	1,107.9	711.2	688.3	22.94	31.009	
3,200.0	3,127.1	3,259.5	3,247.0	12.5	12.0	-33.10	325.9	1,094.9	668.8	645.1	23.70	28.219	
3,300.0	3,222.6	3,349.2	3,335.2	13.0	12.3	-34.39	316.2	1,082.0	626.7	602.2	24.46	25.621	
3,400.0	3,318.2	3,438.9	3,423.4	13.5	12.7	-35.86	306.5	1,069.0	584.9	559.6	25.21	23.203	
3,500.0	3,413.7	3,528.6	3,511.7	14.0	13.1	-37.55	296.7	1,056.1	543.4	517.5	25.93	20.954	
3,600.0	3,509.2	3,618.3	3,599.9	14.4	13.5	-39.51	287.0	1,043.1	502.4	475.8	26.63	18.865	
3,700.0	3,604.7	3,708.0	3,688.1	14.9	13.9	-41.79	277.3	1,030.2	462.0	434.7	27.29	16.930	
3,800.0	3,700.2	3,797.7	3,776.3	15.4	14.3	-44.50	267.6	1,017.2	422.3	394.4	27.88	15.146	
3,900.0	3,795.8	3,887.4	3,864.5	15.9	14.7	-47.72	257.8	1,004.3	383.7	355.3	28.39	13.514	
4,000.0	3,891.3	3,977.1	3,952.8	16.4	15.1	-51.61	248.1	991.3	346.4	317.6	28.77	12.039	
4,100.0	3,986.8	4,066.8	4,041.0	16.9	15.5	-56.33	238.4	978.4	310.9	281.9	28.96	10.735	
4,200.0	4,082.3	4,156.5	4,129.2	17.4	15.9	-62.11	228.7	965.4	277.9	249.0	28.88	9.622	
4,300.0	4,177.8	4,246.2	4,217.4	17.8	16.3	-69.17	219.0	952.5	248.4	220.0	28.44	8.735	
4,400.0	4,273.4	4,335.9	4,305.6	18.3	16.7	-77.71	209.2	939.5	223.9	196.3	27.60	8.112	
4,500.0	4,368.9	4,425.5	4,393.9	18.8	17.1	-87.72	199.5	926.6	206.0	179.5	26.49	7.776	
4,600.0	4,464.4	4,515.2	4,482.1	19.3	17.5	-98.88	189.8	913.6	196.6	171.0	25.59	7.684 SF	
4,646.6	4,508.9	4,557.0	4,523.2	19.6	17.6	-104.28	185.3	907.6	195.5	170.1	25.44	7.688 CC, ES	
4,700.0	4,559.9	4,604.9	4,570.3	19.8	17.9	-110.46	180.1	900.7	197.0	171.4	25.56	7.705	
4,800.0	4,655.4	4,694.6	4,658.5	20.3	18.3	-121.56	170.3	887.7	207.0	180.3	26.69	7.754	
4,900.0	4,751.0	4,784.3	4,746.7	20.8	18.7	-131.48	160.6	874.8	225.4	196.7	28.62	7.875	
5,000.0	4,846.5	4,874.0	4,835.0	21.3	19.1	-139.91	150.9	861.9	250.3	219.5	30.80	8.126	
5,100.0	4,942.0	4,963.7	4,923.2	21.8	19.5	-146.88	141.2	848.9	280.0	247.1	32.91	8.510	
5,200.0	5,037.5	5,053.4	5,011.4	22.3	19.9	-152.58	131.5	836.0	313.2	278.4	34.82	8.996	
5,300.0	5,133.0	5,143.1	5,099.6	22.8	20.3	-157.24	121.7	823.0	348.9	312.3	36.53	9.551	
5,400.0	5,228.6	5,232.8	5,187.8	23.3	20.7	-161.08	112.0	810.1	386.3	348.2	38.06	10.149	
5,500.0	5,324.1	5,322.5	5,276.1	23.8	21.1	-164.26	102.3	797.1	425.0	385.5	39.46	10.771	
5,600.0	5,419.6	5,412.2	5,364.3	24.3	21.5	-166.93	92.6	784.2	464.7	423.9	40.75	11.404	
5,700.0	5,515.1	5,501.9	5,452.5	24.8	21.9	-169.20	82.9	771.2	505.1	463.2	41.96	12.039	
5,800.0	5,610.6	5,591.6	5,540.7	25.3	22.3	-171.13	73.1	758.3	546.2	503.1	43.11	12.670	
5,900.0	5,706.2	5,681.3	5,628.9	25.8	22.7	-172.81	63.4	745.3	587.7	543.5	44.21	13.293	
6,000.0	5,801.7	5,771.0	5,717.2	26.3	23.1	-174.26	53.7	732.4	629.5	584.3	45.27	13.905	
6,100.0	5,897.2	5,860.6	5,805.4	26.8	23.5	-175.54	44.0	719.4	671.7	625.4	46.31	14.505	
6,200.0	5,992.7	5,950.3	5,893.6	27.3	23.9	-176.67	34.2	706.5	714.1	666.8	47.32	15.092	
6,300.0	6,088.2	6,040.0	5,981.8	27.8	24.3	-177.67	24.5	693.5	756.7	708.4	48.31	15.665	
6,400.0	6,183.8	6,129.7	6,070.0	28.3	24.7	-178.57	14.8	680.6	799.5	750.3	49.28	16.223	
6,500.0	6,279.3	6,219.4	6,158.3	28.8	25.1	-179.38	5.1	667.6	842.5	792.2	50.25	16.767	
6,600.0	6,374.8	6,309.1	6,246.5	29.3	25.5	-179.89	-4.6	654.7	885.6	834.4	51.20	17.296	
6,700.0	6,470.3	6,398.8	6,334.7	29.8	25.9	-179.22	-14.4	641.7	928.7	876.6	52.14	17.811	
6,800.0	6,565.9	6,488.5	6,422.9	30.4	26.3	-178.62	-24.1	628.8	972.0	918.9	53.08	18.312	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	17.0	0.0	0.0	-55.52	199.4	-290.4	352.7				
100.0	100.0	83.0	100.0	0.8	1.0	-55.52	199.4	-290.4	352.3	350.0	2.24	157.142	
200.0	200.0	183.0	200.0	1.4	1.6	-55.52	199.4	-290.4	352.3	348.8	3.51	100.399	
300.0	300.0	283.0	300.0	1.9	2.0	-55.52	199.4	-290.4	352.3	347.9	4.35	80.948	
400.0	400.0	383.0	400.0	2.2	2.4	-55.52	199.4	-290.4	352.3	347.2	5.05	69.817	
500.0	500.0	483.0	500.0	2.6	2.7	-55.52	199.4	-290.4	352.3	346.6	5.65	62.332	
600.0	600.0	583.0	600.0	2.8	3.0	-55.52	199.4	-290.4	352.3	346.1	6.20	56.837	
700.0	700.0	683.0	700.0	3.1	3.2	-55.52	199.4	-290.4	352.3	345.6	6.70	52.573	
800.0	800.0	783.0	800.0	3.3	3.4	-55.52	199.4	-290.4	352.3	345.1	7.17	49.136	
900.0	900.0	883.0	900.0	3.6	3.7	-55.52	199.4	-290.4	352.3	344.7	7.61	46.285	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-55.52	199.4	-290.4	352.3	344.3	8.03	43.869 CC, ES	
1,100.0	1,100.0	1,090.4	1,107.4	4.1	4.1	-146.03	198.5	-289.9	352.9	344.3	8.54	41.312	
1,200.0	1,199.8	1,199.1	1,216.0	4.4	4.4	-146.85	194.9	-287.9	353.9	344.8	9.04	39.150	
1,300.0	1,299.5	1,307.6	1,324.3	4.7	4.6	-148.22	188.5	-284.6	355.4	345.9	9.56	37.194	
1,400.0	1,398.7	1,415.6	1,431.8	5.1	4.9	-150.12	179.5	-279.8	357.8	347.7	10.10	35.408	
1,500.0	1,497.5	1,523.1	1,538.4	5.4	5.2	-152.51	167.9	-273.6	361.2	350.6	10.69	33.799	
1,600.0	1,595.6	1,629.8	1,643.9	5.8	5.6	-155.35	153.7	-266.1	366.2	354.9	11.28	32.451	
1,700.0	1,693.1	1,730.4	1,743.1	6.2	5.8	-158.34	138.4	-257.9	373.4	361.6	11.86	31.488	
1,800.0	1,789.6	1,827.7	1,838.8	6.6	6.1	-161.28	123.5	-250.0	384.9	372.4	12.51	30.774	
1,860.7	1,847.8	1,886.4	1,896.7	6.8	6.3	-163.04	114.5	-245.2	393.9	381.1	12.84	30.673	
1,900.0	1,885.3	1,924.3	1,934.0	6.9	6.5	-164.19	108.7	-242.1	400.4	387.4	13.05	30.680	
2,000.0	1,980.9	2,020.8	2,029.0	7.3	6.8	-166.95	93.9	-234.3	417.6	403.9	13.66	30.577	
2,100.0	2,076.4	2,117.3	2,124.1	7.7	7.2	-169.49	79.1	-226.4	435.6	421.4	14.27	30.527	
2,200.0	2,171.9	2,213.8	2,219.1	8.1	7.5	-171.84	64.3	-218.5	454.5	439.6	14.89	30.520 SF	
2,300.0	2,267.4	2,310.3	2,314.2	8.5	7.9	-174.00	49.5	-210.7	474.0	458.5	15.52	30.549	
2,400.0	2,363.0	2,406.8	2,409.2	8.9	8.3	-176.00	34.7	-202.8	494.2	478.1	16.15	30.607	
2,500.0	2,458.5	2,503.3	2,504.2	9.4	8.6	-177.83	19.9	-194.9	514.9	498.2	16.78	30.686	
2,600.0	2,554.0	2,599.8	2,599.3	9.8	9.0	-179.53	5.1	-187.1	536.1	518.7	17.42	30.782	
2,700.0	2,649.5	2,696.3	2,694.3	10.2	9.4	-178.90	-9.7	-179.2	557.8	539.7	18.06	30.891	
2,800.0	2,745.0	2,792.8	2,789.3	10.7	9.8	-177.44	-24.5	-171.3	579.8	561.1	18.70	31.010	
2,900.0	2,840.6	2,889.3	2,884.4	11.1	10.2	-176.09	-39.3	-163.5	602.1	582.8	19.34	31.135	
3,000.0	2,936.1	2,985.6	2,979.1	11.6	10.6	-174.84	-54.0	-155.6	624.8	604.8	19.96	31.307	
3,100.0	3,031.6	3,080.0	3,072.3	12.1	11.0	-173.73	-68.1	-148.1	647.9	627.3	20.59	31.466	
3,200.0	3,127.1	3,174.5	3,165.5	12.5	11.4	-172.77	-81.4	-141.0	671.5	650.3	21.23	31.625	
3,300.0	3,222.6	3,269.0	3,259.0	13.0	11.8	-171.93	-94.1	-134.3	695.6	673.7	21.88	31.793	
3,400.0	3,318.2	3,363.6	3,352.5	13.5	12.2	-171.20	-106.2	-127.9	720.0	697.5	22.53	31.963	
3,500.0	3,413.7	3,458.1	3,446.1	14.0	12.6	-170.58	-117.5	-121.9	744.9	721.7	23.18	32.135	
3,600.0	3,509.2	3,552.6	3,539.8	14.4	12.9	-170.05	-128.2	-116.2	770.1	746.3	23.84	32.306	
3,700.0	3,604.7	3,647.0	3,633.6	14.9	13.3	-169.61	-138.1	-110.9	795.6	771.1	24.50	32.476	
3,800.0	3,700.2	3,741.4	3,727.4	15.4	13.7	-169.25	-147.4	-105.9	821.4	796.2	25.16	32.643	
3,900.0	3,795.8	3,835.8	3,821.3	15.9	14.1	-168.97	-156.0	-101.4	847.5	821.6	25.83	32.807	
4,000.0	3,891.3	3,930.1	3,915.1	16.4	14.4	-168.75	-163.9	-97.2	873.8	847.3	26.50	32.968	
4,100.0	3,986.8	4,024.3	4,009.0	16.9	14.8	-168.59	-171.2	-93.3	900.3	873.2	27.18	33.126	
4,200.0	4,082.3	4,118.4	4,102.8	17.4	15.1	-168.49	-177.7	-89.9	927.2	899.3	27.86	33.281	
4,300.0	4,177.8	4,212.4	4,196.5	17.8	15.5	-168.45	-183.5	-86.8	954.2	925.7	28.54	33.434	
4,400.0	4,273.4	4,306.2	4,290.2	18.3	15.8	-168.44	-188.7	-84.0	981.5	952.3	29.22	33.584	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	17.0	0.0	0.0	-58.11	199.4	-320.4	377.7				
100.0	100.0	83.0	100.0	0.8	1.0	-58.11	199.4	-320.4	377.4	375.1	2.24	168.325	
200.0	200.0	183.0	200.0	1.4	1.6	-58.11	199.4	-320.4	377.4	373.8	3.51	107.544	
300.0	300.0	283.0	300.0	1.9	2.0	-58.11	199.4	-320.4	377.4	373.0	4.35	86.708	
400.0	400.0	383.0	400.0	2.2	2.4	-58.11	199.4	-320.4	377.4	372.3	5.05	74.786	
500.0	500.0	483.0	500.0	2.6	2.7	-58.11	199.4	-320.4	377.4	371.7	5.65	66.767	
600.0	600.0	583.0	600.0	2.8	3.0	-58.11	199.4	-320.4	377.4	371.2	6.20	60.882	
700.0	700.0	683.0	700.0	3.1	3.2	-58.11	199.4	-320.4	377.4	370.7	6.70	56.315	
800.0	800.0	783.0	800.0	3.3	3.4	-58.11	199.4	-320.4	377.4	370.2	7.17	52.633	
900.0	900.0	883.0	900.0	3.6	3.7	-58.11	199.4	-320.4	377.4	369.7	7.61	49.579	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-58.11	199.4	-320.4	377.4	369.3	8.03	46.991 CC, ES	
1,100.0	1,100.0	1,083.0	1,100.0	4.1	4.1	-148.50	199.4	-320.4	378.8	370.3	8.51	44.502	
1,200.0	1,199.8	1,182.8	1,199.8	4.4	4.3	-148.86	199.4	-320.4	383.3	374.3	8.98	42.681	
1,300.0	1,299.5	1,282.5	1,299.5	4.7	4.4	-149.44	199.4	-320.4	390.8	381.3	9.45	41.339	
1,400.0	1,398.7	1,381.7	1,398.7	5.1	4.6	-150.22	199.4	-320.4	401.4	391.4	9.94	40.388	
1,500.0	1,497.5	1,480.5	1,497.5	5.4	4.8	-151.16	199.4	-320.4	415.0	404.6	10.44	39.765	
1,600.0	1,595.6	1,578.6	1,595.6	5.8	5.0	-152.21	199.4	-320.4	431.9	421.0	10.96	39.422	
1,700.0	1,693.1	1,676.1	1,693.1	6.2	5.1	-153.35	199.4	-320.4	452.0	440.5	11.50	39.321 SF	
1,800.0	1,789.6	1,772.6	1,789.6	6.6	5.3	-154.54	199.4	-320.4	475.4	463.4	12.06	39.434	
1,860.7	1,847.8	1,830.8	1,847.8	6.8	5.4	-155.26	199.4	-320.4	491.3	478.9	12.35	39.784	
1,900.0	1,885.3	1,868.3	1,885.3	6.9	5.4	-155.82	199.4	-320.4	501.9	489.4	12.53	40.067	
2,000.0	1,980.9	1,963.9	1,980.9	7.3	5.6	-157.12	199.4	-320.4	529.2	516.2	13.06	40.516	
2,100.0	2,076.4	2,059.4	2,076.4	7.7	5.7	-158.30	199.4	-320.4	556.8	543.2	13.62	40.896	
2,200.0	2,171.9	2,154.9	2,171.9	8.1	5.9	-159.36	199.4	-320.4	584.6	570.4	14.18	41.216	
2,300.0	2,267.4	2,250.4	2,267.4	8.5	6.0	-160.33	199.4	-320.4	612.5	597.7	14.76	41.484	
2,400.0	2,363.0	2,346.0	2,363.0	8.9	6.2	-161.22	199.4	-320.4	640.6	625.2	15.36	41.710	
2,500.0	2,458.5	2,441.5	2,458.5	9.4	6.3	-162.03	199.4	-320.4	668.8	652.8	15.96	41.898	
2,600.0	2,554.0	2,535.2	2,552.2	9.8	6.4	-162.78	199.2	-320.5	697.2	680.5	16.62	41.938	
2,700.0	2,649.5	2,625.5	2,642.5	10.2	6.6	-163.58	197.6	-321.5	726.2	709.0	17.22	42.181	
2,800.0	2,745.0	2,715.0	2,731.9	10.7	6.7	-164.48	194.3	-323.7	756.0	738.2	17.81	42.459	
2,900.0	2,840.6	2,803.6	2,820.2	11.1	6.8	-165.45	189.3	-327.0	786.7	768.3	18.40	42.750	
3,000.0	2,936.1	2,891.1	2,907.4	11.6	7.0	-166.49	182.6	-331.3	818.4	799.4	19.01	43.059	
3,100.0	3,031.6	2,977.5	2,993.3	12.1	7.1	-167.57	174.4	-336.6	851.1	831.5	19.61	43.393	
3,200.0	3,127.1	3,062.8	3,077.8	12.5	7.3	-168.68	164.7	-342.9	884.9	864.7	20.22	43.756	
3,300.0	3,222.6	3,146.9	3,160.8	13.0	7.5	-169.82	153.5	-350.1	919.9	899.1	20.82	44.184	
3,400.0	3,318.2	3,236.3	3,248.8	13.5	7.6	-171.03	140.6	-358.6	955.8	934.3	21.44	44.570	
3,500.0	3,413.7	3,327.6	3,338.7	14.0	7.9	-172.19	127.3	-367.2	992.1	970.0	22.11	44.868	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	17.0	0.0	0.0	-60.36	199.4	-350.4	403.5				
100.0	100.0	83.0	100.0	0.8	1.0	-60.36	199.4	-350.4	403.1	400.9	2.24	179.822	
200.0	200.0	183.0	200.0	1.4	1.6	-60.36	199.4	-350.4	403.1	399.6	3.51	114.890	
300.0	300.0	283.0	300.0	1.9	2.0	-60.36	199.4	-350.4	403.1	398.8	4.35	92.631	
400.0	400.0	383.0	400.0	2.2	2.4	-60.36	199.4	-350.4	403.1	398.1	5.05	79.894	
500.0	500.0	483.0	500.0	2.6	2.7	-60.36	199.4	-350.4	403.1	397.5	5.65	71.328	
600.0	600.0	583.0	600.0	2.8	3.0	-60.36	199.4	-350.4	403.1	396.9	6.20	65.040	
700.0	700.0	683.0	700.0	3.1	3.2	-60.36	199.4	-350.4	403.1	396.4	6.70	60.161	
800.0	800.0	783.0	800.0	3.3	3.4	-60.36	199.4	-350.4	403.1	396.0	7.17	56.228	
900.0	900.0	883.0	900.0	3.6	3.7	-60.36	199.4	-350.4	403.1	395.5	7.61	52.965	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-60.36	199.4	-350.4	403.1	395.1	8.03	50.200 CC, ES	
1,100.0	1,100.0	1,078.6	1,095.6	4.1	4.1	-150.82	199.0	-351.1	405.1	396.6	8.51	47.588	
1,200.0	1,199.8	1,172.9	1,189.9	4.4	4.3	-151.47	197.5	-353.8	411.4	402.5	8.97	45.864	
1,300.0	1,299.5	1,266.4	1,283.2	4.7	4.5	-152.52	194.9	-358.5	422.2	412.8	9.44	44.712	
1,400.0	1,398.7	1,358.6	1,375.1	5.1	4.8	-153.90	191.2	-365.1	437.7	427.8	9.94	44.030	
1,500.0	1,497.5	1,449.1	1,465.1	5.4	5.0	-155.52	186.6	-373.5	458.0	447.6	10.47	43.755 SF	
1,600.0	1,595.6	1,537.6	1,552.8	5.8	5.3	-157.28	181.0	-383.4	483.4	472.3	11.03	43.834	
1,700.0	1,693.1	1,625.8	1,640.0	6.2	5.6	-159.16	174.6	-395.0	513.8	502.2	11.62	44.207	
1,800.0	1,789.6	1,717.6	1,730.7	6.6	5.9	-161.06	167.6	-407.6	548.3	536.1	12.26	44.713	
1,860.7	1,847.8	1,772.7	1,785.1	6.8	6.0	-162.14	163.5	-415.1	571.1	558.5	12.61	45.277	
1,900.0	1,885.3	1,808.2	1,820.2	6.9	6.2	-162.90	160.8	-420.0	586.4	573.6	12.83	45.696	
2,000.0	1,980.9	1,898.5	1,909.4	7.3	6.4	-164.68	153.9	-432.4	625.6	612.1	13.47	46.458	
2,100.0	2,076.4	1,988.8	1,998.6	7.7	6.8	-166.25	147.1	-444.7	665.2	651.1	14.13	47.093	
2,200.0	2,171.9	2,079.1	2,087.8	8.1	7.1	-167.65	140.2	-457.1	705.2	690.4	14.81	47.623	
2,300.0	2,267.4	2,169.4	2,177.0	8.5	7.4	-168.91	133.4	-469.4	745.6	730.1	15.51	48.062	
2,400.0	2,363.0	2,259.7	2,266.1	8.9	7.7	-170.03	126.5	-481.8	786.2	770.0	16.24	48.427	
2,500.0	2,458.5	2,350.0	2,355.3	9.4	8.1	-171.05	119.7	-494.1	827.1	810.1	16.97	48.729	
2,600.0	2,554.0	2,440.3	2,444.5	9.8	8.4	-171.98	112.8	-506.5	868.2	850.4	17.73	48.978	
2,700.0	2,649.5	2,530.6	2,533.7	10.2	8.8	-172.82	106.0	-518.8	909.4	890.9	18.49	49.184	
2,800.0	2,745.0	2,621.0	2,622.9	10.7	9.1	-173.59	99.1	-531.2	950.8	931.5	19.27	49.353	
2,900.0	2,840.6	2,711.3	2,712.1	11.1	9.5	-174.29	92.3	-543.6	992.3	972.3	20.05	49.492	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	17.0	0.0	0.0	-62.34	199.4	-380.4	429.8				
100.0	100.0	83.0	100.0	0.8	1.0	-62.34	199.4	-380.4	429.5	427.2	2.24	191.571	
200.0	200.0	183.0	200.0	1.4	1.6	-62.34	199.4	-380.4	429.5	426.0	3.51	122.396	
300.0	300.0	283.0	300.0	1.9	2.0	-62.34	199.4	-380.4	429.5	425.1	4.35	98.683	
400.0	400.0	383.0	400.0	2.2	2.4	-62.34	199.4	-380.4	429.5	424.4	5.05	85.114	
500.0	500.0	483.0	500.0	2.6	2.7	-62.34	199.4	-380.4	429.5	423.8	5.65	75.988	
600.0	600.0	583.0	600.0	2.8	3.0	-62.34	199.4	-380.4	429.5	423.3	6.20	69.289	
700.0	700.0	683.0	700.0	3.1	3.2	-62.34	199.4	-380.4	429.5	422.8	6.70	64.092	
800.0	800.0	783.0	800.0	3.3	3.4	-62.34	199.4	-380.4	429.5	422.3	7.17	59.901	
900.0	900.0	883.0	900.0	3.6	3.7	-62.34	199.4	-380.4	429.5	421.9	7.61	56.426	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-62.34	199.4	-380.4	429.5	421.4	8.03	53.480 CC, ES	
1,100.0	1,100.0	1,077.0	1,094.0	4.1	4.1	-152.76	199.1	-381.1	431.6	423.1	8.52	50.652	
1,200.0	1,199.8	1,169.4	1,186.3	4.4	4.3	-153.27	198.1	-383.9	438.5	429.5	8.99	48.768	
1,300.0	1,299.5	1,260.9	1,277.7	4.7	4.5	-154.10	196.5	-388.8	450.2	440.8	9.48	47.508	
1,400.0	1,398.7	1,351.1	1,367.6	5.1	4.8	-155.19	194.1	-395.6	467.0	457.0	9.99	46.755	
1,500.0	1,497.5	1,439.7	1,455.7	5.4	5.0	-156.47	191.1	-404.3	488.8	478.2	10.53	46.438 SF	
1,600.0	1,595.6	1,526.2	1,541.5	5.8	5.3	-157.86	187.6	-414.6	515.7	504.6	11.09	46.489	
1,700.0	1,693.1	1,610.4	1,624.8	6.2	5.6	-159.31	183.5	-426.4	547.8	536.1	11.69	46.873	
1,800.0	1,789.6	1,691.8	1,705.0	6.6	5.8	-160.74	179.0	-439.5	585.1	572.8	12.31	47.547	
1,860.7	1,847.8	1,739.9	1,752.2	6.8	6.0	-161.59	176.1	-447.9	610.3	597.6	12.64	48.276	
1,900.0	1,885.3	1,770.4	1,782.2	6.9	6.1	-162.24	174.2	-453.6	627.3	614.5	12.85	48.829	
2,000.0	1,980.9	1,854.1	1,864.1	7.3	6.4	-163.92	168.5	-469.9	671.8	658.3	13.47	49.872	
2,100.0	2,076.4	1,941.7	1,949.8	7.7	6.7	-165.48	162.6	-487.2	716.8	702.7	14.14	50.691	
2,200.0	2,171.9	2,029.3	2,035.5	8.1	7.0	-166.85	156.7	-504.4	762.2	747.4	14.84	51.374	
2,300.0	2,267.4	2,117.0	2,121.2	8.5	7.4	-168.08	150.7	-521.6	808.0	792.4	15.56	51.941	
2,400.0	2,363.0	2,204.6	2,206.9	8.9	7.7	-169.18	144.8	-538.8	854.0	837.7	16.29	52.413	
2,500.0	2,458.5	2,292.2	2,292.6	9.4	8.0	-170.16	138.9	-556.1	900.2	883.2	17.05	52.802	
2,600.0	2,554.0	2,379.8	2,378.3	9.8	8.4	-171.06	132.9	-573.3	946.6	928.8	17.82	53.125	
2,700.0	2,649.5	2,467.5	2,464.0	10.2	8.7	-171.87	127.0	-590.5	993.2	974.6	18.60	53.393	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	17.0	0.0	0.0	-64.09	199.4	-410.4	456.6				
100.0	100.0	83.0	100.0	0.8	1.0	-64.09	199.4	-410.4	456.2	454.0	2.24	203.516	
200.0	200.0	183.0	200.0	1.4	1.6	-64.09	199.4	-410.4	456.2	452.7	3.51	130.028	
300.0	300.0	283.0	300.0	1.9	2.0	-64.09	199.4	-410.4	456.2	451.9	4.35	104.836	
400.0	400.0	383.0	400.0	2.2	2.4	-64.09	199.4	-410.4	456.2	451.2	5.05	90.421	
500.0	500.0	483.0	500.0	2.6	2.7	-64.09	199.4	-410.4	456.2	450.6	5.65	80.726	
600.0	600.0	583.0	600.0	2.8	3.0	-64.09	199.4	-410.4	456.2	450.0	6.20	73.610	
700.0	700.0	683.0	700.0	3.1	3.2	-64.09	199.4	-410.4	456.2	449.5	6.70	68.088	
800.0	800.0	783.0	800.0	3.3	3.4	-64.09	199.4	-410.4	456.2	449.1	7.17	63.637	
900.0	900.0	883.0	900.0	3.6	3.7	-64.09	199.4	-410.4	456.2	448.6	7.61	59.944	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-64.09	199.4	-410.4	456.2	448.2	8.03	56.815 CC, ES	
1,100.0	1,100.0	1,076.1	1,093.1	4.1	4.1	-154.49	199.2	-411.1	458.4	449.9	8.52	53.779	
1,200.0	1,199.8	1,167.3	1,184.3	4.4	4.3	-154.92	198.4	-413.9	465.6	456.6	8.99	51.762	
1,300.0	1,299.5	1,257.7	1,274.5	4.7	4.5	-155.61	197.1	-418.8	477.8	468.3	9.47	50.449	
1,400.0	1,398.7	1,346.9	1,363.4	5.1	4.7	-156.52	195.3	-425.6	495.0	485.1	9.96	49.711	
1,500.0	1,497.5	1,434.4	1,450.5	5.4	4.9	-157.60	193.0	-434.2	517.5	507.0	10.46	49.463 SF	
1,600.0	1,595.6	1,519.9	1,535.3	5.8	5.0	-158.77	190.2	-444.5	545.1	534.1	10.98	49.647	
1,700.0	1,693.1	1,600.0	1,614.5	6.2	5.2	-159.94	187.2	-455.8	577.9	566.4	11.50	50.260	
1,800.0	1,789.6	1,683.5	1,696.9	6.6	5.4	-161.21	183.6	-469.3	615.8	603.8	12.05	51.088	
1,860.7	1,847.8	1,731.0	1,743.5	6.8	5.5	-161.93	181.3	-477.7	641.3	629.0	12.33	51.992	
1,900.0	1,885.3	1,761.2	1,773.2	6.9	5.5	-162.50	179.8	-483.4	658.6	646.1	12.50	52.668	
2,000.0	1,980.9	1,837.0	1,847.3	7.3	5.7	-163.87	175.7	-498.6	703.9	690.9	12.99	54.176	
2,100.0	2,076.4	1,911.1	1,919.5	7.7	5.8	-165.13	171.4	-514.9	751.1	737.6	13.48	55.720	
2,200.0	2,171.9	1,984.3	1,990.5	8.1	6.0	-166.30	166.7	-532.2	800.1	786.1	13.94	57.381	
2,300.0	2,267.4	2,069.5	2,072.8	8.5	6.1	-167.55	161.1	-553.1	850.1	835.6	14.51	58.583	
2,400.0	2,363.0	2,154.6	2,155.2	8.9	6.3	-168.66	155.5	-574.0	900.3	885.2	15.10	59.637	
2,500.0	2,458.5	2,239.8	2,237.6	9.4	6.4	-169.66	149.9	-594.8	950.8	935.2	15.69	60.603	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
5,800.0	5,610.6	5,613.7	5,619.2	25.3	20.1	-25.18	394.6	2,200.2	990.7	946.3	44.38	22.326	
5,900.0	5,706.2	5,708.4	5,713.8	25.8	20.5	-25.84	393.1	2,200.0	963.0	917.9	45.12	21.343	
6,000.0	5,801.7	5,802.9	5,808.3	26.3	20.8	-26.53	391.6	2,199.9	935.5	889.6	45.86	20.399	
6,100.0	5,897.2	5,898.9	5,904.4	26.8	21.1	-27.26	389.8	2,200.0	908.1	861.5	46.58	19.495	
6,200.0	5,992.7	5,993.3	5,998.7	27.3	21.5	-28.01	388.0	2,200.1	880.9	833.6	47.31	18.622	
6,300.0	6,088.2	6,088.4	6,093.8	27.8	21.8	-28.81	386.2	2,200.3	854.0	806.0	48.02	17.785	
6,400.0	6,183.8	6,182.8	6,188.2	28.3	22.1	-29.66	384.4	2,200.6	827.3	778.6	48.72	16.981	
6,500.0	6,279.3	6,278.5	6,283.9	28.8	22.4	-30.57	382.6	2,201.0	800.9	751.5	49.40	16.211	
6,600.0	6,374.8	6,373.7	6,379.0	29.3	22.8	-31.51	380.6	2,201.5	774.7	724.6	50.08	15.469	
6,700.0	6,470.3	6,466.4	6,471.7	29.8	23.1	-32.48	378.5	2,202.3	748.9	698.1	50.75	14.755	
6,800.0	6,565.9	7,609.3	7,163.7	30.4	27.5	-116.01	377.9	1,580.3	711.4	677.3	34.04	20.895	
6,900.0	6,661.4	7,577.4	7,165.0	30.9	27.2	-112.33	376.8	1,612.2	633.6	597.8	35.78	17.709	
7,000.0	6,756.9	7,544.6	7,166.2	31.4	26.8	-108.32	375.8	1,645.0	561.0	523.1	37.90	14.803	
7,100.0	6,852.4	7,511.4	7,167.5	31.9	26.4	-104.05	374.8	1,678.0	495.7	455.3	40.43	12.262	
7,200.0	6,947.9	7,476.8	7,168.9	32.4	26.1	-99.39	373.8	1,712.6	441.1	397.9	43.20	10.211	
7,300.0	7,043.5	7,441.0	7,169.7	32.9	25.7	-94.37	372.7	1,748.5	401.3	355.5	45.78	8.767	
7,400.0	7,139.0	7,410.3	7,169.0	33.4	25.5	-89.95	371.9	1,779.1	381.5	334.1	47.41	8.047	
7,433.7	7,171.1	7,401.6	7,168.5	33.6	25.4	-88.67	371.6	1,787.8	380.1	332.5	47.57	7.991 CC, ES, SF	
7,500.0	7,234.5	7,386.9	7,167.5	33.9	25.3	-86.52	371.2	1,802.4	385.5	338.4	47.19	8.170	
7,600.0	7,330.0	7,367.0	7,165.7	34.4	25.1	-83.60	370.7	1,822.2	413.3	368.2	45.17	9.151	
7,700.0	7,425.5	7,351.2	7,164.0	34.9	25.0	-81.28	370.2	1,838.0	460.8	418.5	42.28	10.898	
7,782.5	7,504.4	7,338.4	7,162.6	35.3	24.9	-79.43	369.9	1,850.7	511.0	471.1	39.90	12.807	
7,800.0	7,521.1	7,335.0	7,162.2	35.4	24.9	-79.09	369.8	1,854.0	522.7	483.2	39.43	13.255	
7,900.0	7,616.9	7,325.5	7,160.9	35.9	24.8	-78.74	369.5	1,863.5	594.8	557.8	37.00	16.073	
8,000.0	7,713.3	7,318.0	7,159.9	36.4	24.8	-78.93	369.3	1,870.9	674.1	639.0	35.10	19.205	
8,100.0	7,810.1	7,312.5	7,159.0	36.9	24.7	-79.68	369.1	1,876.3	758.3	724.7	33.66	22.528	
8,200.0	7,907.3	7,304.0	7,157.6	37.4	24.7	-80.23	368.8	1,884.7	846.1	813.5	32.63	25.935	
8,300.0	8,004.9	7,304.0	7,157.6	37.9	24.7	-82.31	368.8	1,884.7	936.5	904.6	31.85	29.399	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	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
5,300.0	5,133.0	5,151.3	5,143.6	22.8	4.9	-20.68	326.7	2,084.2	995.2	963.1	32.04	31.060	
5,400.0	5,228.6	5,250.6	5,243.0	23.3	5.0	-21.29	325.8	2,083.3	966.2	933.6	32.64	29.606	
5,500.0	5,324.1	5,344.7	5,337.0	23.8	5.1	-21.89	324.7	2,082.2	937.1	903.9	33.27	28.170	
5,600.0	5,419.6	5,442.7	5,435.1	24.3	5.2	-22.56	323.4	2,080.9	907.8	874.0	33.86	26.814	
5,700.0	5,515.1	5,538.7	5,531.1	24.8	5.3	-23.26	322.3	2,079.7	878.9	844.4	34.46	25.508	
5,800.0	5,610.6	5,632.8	5,625.1	25.3	5.4	-23.98	321.0	2,078.3	849.8	814.7	35.06	24.234	
5,900.0	5,706.2	5,733.0	5,725.2	25.8	5.5	-24.82	319.6	2,076.6	820.6	785.0	35.60	23.053	
6,000.0	5,801.7	5,828.2	5,820.5	26.3	5.6	-25.67	318.1	2,074.8	791.3	755.2	36.17	21.880	
6,100.0	5,897.2	5,923.9	5,916.1	26.8	5.7	-26.56	316.4	2,073.1	762.2	725.5	36.72	20.758	
6,200.0	5,992.7	6,016.9	6,009.1	27.3	5.7	-27.49	314.5	2,071.4	733.2	695.9	37.29	19.663	
6,300.0	6,088.2	6,112.1	6,104.2	27.8	5.8	-28.49	312.5	2,070.0	704.6	666.8	37.81	18.633	
6,400.0	6,183.8	6,205.2	6,197.3	28.3	5.9	-29.54	310.5	2,068.9	676.4	638.1	38.35	17.639	
6,500.0	6,279.3	6,298.5	6,290.6	28.8	6.0	-30.64	308.2	2,068.1	648.7	609.8	38.86	16.691	
6,600.0	6,374.8	6,393.2	6,385.3	29.3	6.1	-31.85	306.0	2,067.5	621.4	582.1	39.33	15.800	
6,700.0	6,470.3	6,488.7	6,480.8	29.8	6.2	-33.17	303.7	2,067.0	594.5	554.7	39.75	14.955	
6,800.0	6,565.9	6,586.3	6,578.4	30.4	6.3	-34.65	301.3	2,066.3	567.7	527.6	40.10	14.158	
6,900.0	6,661.4	6,677.5	6,669.5	30.9	6.4	-36.17	298.9	2,065.5	541.1	500.6	40.51	13.357	
7,000.0	6,756.9	6,770.8	6,762.7	31.4	6.5	-37.69	295.8	2,066.4	515.9	475.0	40.87	12.622	
7,100.0	6,852.4	6,854.0	6,845.9	31.9	6.6	-39.30	294.4	2,067.2	492.1	450.8	41.34	11.905	
7,200.0	6,947.9	6,944.8	6,936.6	32.4	6.6	-41.31	294.9	2,069.3	471.3	429.7	41.56	11.339	
7,300.0	7,043.5	7,042.0	7,033.9	32.9	6.6	-43.82	296.6	2,070.6	451.2	409.7	41.53	10.864	
7,400.0	7,139.0	7,136.7	7,128.5	33.4	6.6	-46.29	297.3	2,073.1	432.2	390.6	41.51	10.410	
7,500.0	7,234.5	7,232.6	7,224.3	33.9	6.6	-49.14	298.8	2,074.8	414.1	372.8	41.33	10.020	
7,600.0	7,330.0	7,330.4	7,322.2	34.4	6.6	-52.62	301.5	2,074.8	397.1	356.2	40.92	9.704	
7,700.0	7,425.5	7,428.7	7,420.4	34.9	6.6	-55.89	301.7	2,077.1	380.9	340.4	40.52	9.401	
7,782.5	7,504.4	7,511.0	7,502.7	35.3	6.7	-58.73	301.1	2,079.4	368.0	327.9	40.11	9.175	
7,800.0	7,521.1	7,527.9	7,519.5	35.4	6.7	-59.31	300.9	2,079.8	365.4	325.3	40.03	9.127	
7,900.0	7,616.9	7,626.1	7,617.7	35.9	6.8	-62.74	299.8	2,082.1	351.3	311.9	39.41	8.913	
8,000.0	7,713.3	7,738.6	7,730.1	36.4	6.9	-66.32	295.6	2,085.9	337.7	298.9	38.80	8.705	
8,100.0	7,810.1	7,845.1	7,835.0	36.9	7.0	-67.68	282.4	2,097.6	320.7	282.0	38.73	8.280	
8,200.0	7,907.3	7,990.5	7,971.9	37.4	7.3	-64.90	246.6	2,129.3	298.6	259.8	38.79	7.699	
8,300.0	8,004.9	8,133.3	8,085.6	37.9	7.7	-52.50	174.4	2,174.4	258.5	217.6	40.90	6.320	
8,400.0	8,102.9	8,228.3	8,141.4	38.4	8.0	-34.91	107.5	2,211.5	218.1	170.5	47.64	4.579	
8,494.5	8,195.8	8,281.5	8,163.0	38.8	8.1	-21.70	64.0	2,233.3	201.3	146.6	54.77	3.676 CC	
8,500.0	8,201.2	8,284.1	8,163.9	38.8	8.1	-21.03	61.8	2,234.3	201.4	146.3	55.05	3.658 ES, SF	
8,600.0	8,299.8	8,322.0	8,175.3	39.3	8.2	-11.12	28.7	2,248.8	224.2	168.4	55.78	4.020	
8,700.0	8,398.7	8,341.0	8,179.6	39.7	8.2	-6.21	11.6	2,255.7	280.9	229.6	51.29	5.477	
8,800.0	8,497.8	8,354.0	8,182.0	40.1	8.2	-2.87	-0.4	2,260.4	357.0	310.1	46.89	7.613	
8,900.0	8,597.2	8,354.0	8,182.0	40.6	8.2	-2.96	-0.4	2,260.4	443.2	399.7	43.52	10.184	
9,000.0	8,696.7	8,372.0	8,184.5	41.0	8.2	1.85	-16.9	2,267.0	534.2	492.4	41.78	12.786	
9,100.0	8,796.4	8,378.2	8,185.2	41.3	8.2	3.64	-22.6	2,269.2	628.5	588.0	40.46	15.533	
9,200.0	8,896.2	8,383.1	8,185.7	41.7	8.2	5.27	-27.1	2,271.0	724.7	685.1	39.61	18.294	
9,300.0	8,996.1	8,386.9	8,186.1	42.0	8.2	6.85	-30.7	2,272.5	822.1	783.0	39.08	21.036	
9,400.0	9,096.1	8,405.0	8,187.3	42.3	8.3	13.01	-47.5	2,279.1	920.7	881.7	38.98	23.617	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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												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		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,300.0	5,133.0	5,151.3	5,143.6	22.8	4.9	-20.68	326.7	2,084.2	995.2	963.1	32.04	31.060	
5,400.0	5,228.6	5,250.6	5,243.0	23.3	5.0	-21.29	325.8	2,083.3	966.2	933.6	32.64	29.606	
5,500.0	5,324.1	5,344.7	5,337.0	23.8	5.1	-21.89	324.7	2,082.2	937.1	903.9	33.27	28.170	
5,600.0	5,419.6	5,442.7	5,435.1	24.3	5.2	-22.56	323.4	2,080.9	907.8	874.0	33.86	26.814	
5,700.0	5,515.1	5,538.7	5,531.1	24.8	5.3	-23.26	322.3	2,079.7	878.9	844.4	34.46	25.508	
5,800.0	5,610.6	5,632.8	5,625.1	25.3	5.4	-23.98	321.0	2,078.3	849.8	814.7	35.06	24.234	
5,900.0	5,706.2	5,733.0	5,725.2	25.8	5.5	-24.82	319.6	2,076.6	820.6	785.0	35.60	23.053	
6,000.0	5,801.7	5,828.2	5,820.5	26.3	5.6	-25.67	318.1	2,074.8	791.3	755.2	36.17	21.880	
6,100.0	5,897.2	5,923.9	5,916.1	26.8	5.7	-26.56	316.4	2,073.1	762.2	725.5	36.72	20.758	
6,200.0	5,992.7	6,016.9	6,009.1	27.3	5.7	-27.49	314.5	2,071.4	733.2	695.9	37.29	19.663	
6,300.0	6,088.2	6,112.1	6,104.2	27.8	5.8	-28.49	312.5	2,070.0	704.6	666.8	37.81	18.633	
6,400.0	6,183.8	6,205.2	6,197.3	28.3	5.9	-29.54	310.5	2,068.9	676.4	638.1	38.35	17.639	
6,500.0	6,279.3	6,298.5	6,290.6	28.8	6.0	-30.64	308.2	2,068.1	648.7	609.8	38.86	16.691	
6,600.0	6,374.8	6,393.2	6,385.3	29.3	6.1	-31.85	306.0	2,067.5	621.4	582.1	39.33	15.800	
6,700.0	6,470.3	6,488.7	6,480.8	29.8	6.2	-33.17	303.7	2,067.0	594.5	554.7	39.75	14.955	
6,800.0	6,565.9	6,586.3	6,578.4	30.4	6.3	-34.65	301.3	2,066.3	567.7	527.6	40.10	14.158	
6,900.0	6,661.4	6,677.5	6,669.5	30.9	6.4	-36.17	298.9	2,065.5	541.1	500.6	40.51	13.357	
7,000.0	6,756.9	6,770.8	6,762.7	31.4	6.5	-37.69	295.8	2,066.4	515.9	475.0	40.87	12.622	
7,100.0	6,852.4	6,854.0	6,845.9	31.9	6.6	-39.30	294.4	2,067.2	492.1	450.8	41.34	11.905	
7,200.0	6,947.9	6,944.8	6,936.6	32.4	6.6	-41.31	294.9	2,069.3	471.3	429.7	41.56	11.339	
7,300.0	7,043.5	7,042.0	7,033.9	32.9	6.6	-43.82	296.6	2,070.6	451.2	409.7	41.53	10.864	
7,400.0	7,139.0	7,111.7	7,103.5	33.4	6.6	-45.60	297.9	2,073.4	434.1	392.8	41.39	10.488	
7,500.0	7,234.5	7,206.9	7,198.2	33.9	6.8	-48.01	302.6	2,081.7	423.0	381.5	41.56	10.180	
7,600.0	7,330.0	7,307.2	7,298.2	34.4	6.9	-51.09	308.0	2,087.0	411.0	369.5	41.47	9.910	
7,700.0	7,425.5	7,403.9	7,394.6	34.9	7.1	-54.34	314.2	2,091.7	400.7	359.5	41.21	9.724	
7,782.5	7,504.4	7,487.1	7,477.6	35.3	7.2	-57.32	319.2	2,095.0	392.7	351.9	40.83	9.618	
7,800.0	7,521.1	7,504.8	7,495.2	35.4	7.3	-57.96	320.3	2,095.6	391.0	350.3	40.74	9.599	
7,900.0	7,616.9	7,606.0	7,596.3	35.9	7.4	-61.61	325.5	2,098.7	382.4	342.2	40.23	9.505	
8,000.0	7,713.3	7,709.2	7,699.3	36.4	7.6	-65.34	329.9	2,100.6	374.8	335.1	39.69	9.444	
8,100.0	7,810.1	7,809.5	7,799.5	36.9	7.7	-68.99	333.3	2,101.2	368.2	329.1	39.17	9.402	
8,200.0	7,907.3	7,996.4	7,983.3	37.4	7.8	-72.10	308.2	2,114.3	349.4	311.9	37.58	9.299	
8,300.0	8,004.9	8,139.6	8,112.6	37.9	7.7	-68.78	253.9	2,140.5	312.3	275.0	37.30	8.373	
8,400.0	8,102.9	8,244.4	8,197.7	38.4	7.8	-60.95	200.4	2,170.1	268.8	229.8	39.02	6.890	
8,500.0	8,201.2	8,332.4	8,262.0	38.8	7.9	-49.29	148.2	2,199.8	226.0	182.7	43.32	5.217	
8,600.0	8,299.8	8,419.5	8,319.0	39.3	8.0	-32.34	90.6	2,231.5	194.2	143.6	50.64	3.836	
8,670.9	8,369.9	8,465.3	8,344.9	39.6	8.1	-21.30	56.9	2,248.3	185.4	129.5	55.89	3.318 CC, ES	
8,700.0	8,398.7	8,479.0	8,352.0	39.7	8.1	-17.83	46.3	2,253.5	187.1	129.9	57.19	3.271 SF	
8,800.0	8,497.8	8,527.0	8,374.4	40.1	8.3	-5.63	8.3	2,272.2	217.2	160.0	57.19	3.798	
8,900.0	8,597.2	8,566.3	8,391.3	40.6	8.4	3.54	-23.3	2,288.5	275.6	222.1	53.56	5.147	
9,000.0	8,696.7	8,598.8	8,404.8	41.0	8.5	10.26	-49.2	2,302.6	349.0	298.8	50.14	6.960	
9,100.0	8,796.4	8,623.0	8,413.8	41.3	8.6	15.01	-69.0	2,313.3	431.3	383.8	47.51	9.078	
9,200.0	8,896.2	8,642.0	8,420.1	41.7	8.7	18.76	-84.8	2,321.8	518.9	473.3	45.63	11.373	
9,300.0	8,996.1	8,657.4	8,424.6	42.0	8.7	21.97	-97.8	2,328.6	610.1	565.8	44.31	13.770	
9,400.0	9,096.1	8,670.0	8,428.0	42.3	8.8	24.92	-108.6	2,334.2	703.6	660.2	43.39	16.215	
9,500.0	9,196.1	8,670.0	8,428.0	42.5	8.8	26.29	-108.6	2,334.2	798.9	756.4	42.56	18.774	
9,503.9	9,200.0	8,682.6	8,431.2	42.5	8.8	118.44	-119.5	2,339.7	802.5	759.7	42.77	18.764	
9,600.0	9,296.1	8,692.8	8,433.5	42.5	8.9	119.81	-128.4	2,344.1	894.8	852.5	42.33	21.139	
9,700.0	9,396.1	8,702.1	8,435.5	42.5	8.9	120.99	-136.5	2,348.1	991.5	949.5	42.00	23.606	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	4.0	0.0	0.0	-90.16	-1.2	-409.9	409.9					
100.0	100.0	96.0	100.0	0.8	0.5	-90.16	-1.2	-409.9	409.9	408.2	1.75	234.538		
200.0	200.0	196.0	200.0	1.4	1.0	-90.16	-1.2	-409.9	409.9	407.0	2.91	140.839		
300.0	300.0	296.0	300.0	1.9	1.4	-90.16	-1.2	-409.9	409.9	406.2	3.69	111.188		
400.0	400.0	396.0	400.0	2.2	1.6	-90.16	-1.2	-409.9	409.9	405.6	4.31	95.087		
500.0	500.0	496.0	500.0	2.6	1.9	-90.16	-1.2	-409.9	409.9	405.1	4.85	84.524		
600.0	600.0	596.0	600.0	2.8	2.1	-90.16	-1.2	-409.9	409.9	404.6	5.33	76.884		
700.0	700.0	696.0	700.0	3.1	2.3	-90.16	-1.2	-409.9	409.9	404.1	5.77	71.016		
800.0	800.0	796.0	800.0	3.3	2.5	-90.16	-1.2	-409.9	409.9	403.7	6.18	66.318 CC, ES		
900.0	900.0	884.6	888.6	3.6	2.7	-90.23	-1.6	-411.1	411.2	404.6	6.67	61.692		
1,000.0	1,000.0	972.7	976.6	3.8	2.9	-90.42	-3.0	-414.8	415.4	408.3	7.13	58.303		
1,100.0	1,100.0	1,060.2	1,063.9	4.1	3.2	179.00	-5.4	-420.9	424.2	416.6	7.69	55.174		
1,200.0	1,199.8	1,146.7	1,149.9	4.4	3.4	178.58	-8.7	-429.5	439.4	431.2	8.23	53.391		
1,300.0	1,299.5	1,231.7	1,234.1	4.7	3.7	178.09	-12.8	-440.2	460.8	452.0	8.76	52.570		
1,400.0	1,398.7	1,314.8	1,316.0	5.1	3.9	177.56	-17.7	-453.0	488.2	478.9	9.30	52.518 SF		
1,500.0	1,497.5	1,400.0	1,399.6	5.4	4.1	176.97	-23.6	-468.4	521.7	511.8	9.84	52.996		
1,600.0	1,595.6	1,473.2	1,471.1	5.8	4.3	176.44	-29.3	-483.4	560.8	550.5	10.35	54.207		
1,700.0	1,693.1	1,548.0	1,543.5	6.2	4.4	175.89	-35.9	-500.6	605.5	594.6	10.86	55.757		
1,800.0	1,789.6	1,619.4	1,612.3	6.6	4.6	175.35	-42.8	-518.6	655.4	644.1	11.34	57.816		
1,860.7	1,847.8	1,668.6	1,659.5	6.8	4.6	174.99	-47.8	-531.7	688.0	676.4	11.57	59.447		
1,900.0	1,885.3	1,701.5	1,691.0	6.9	4.7	174.82	-51.2	-540.4	709.4	697.7	11.72	60.516		
2,000.0	1,980.9	1,785.2	1,771.2	7.3	4.8	174.41	-59.7	-562.7	764.0	751.8	12.19	62.674		
2,100.0	2,076.4	1,868.9	1,851.4	7.7	4.9	174.06	-68.3	-585.0	818.6	805.9	12.68	64.572		
2,200.0	2,171.9	1,952.6	1,931.6	8.1	5.1	173.75	-76.8	-607.3	873.2	860.0	13.18	66.242		
2,300.0	2,267.4	2,036.3	2,011.8	8.5	5.2	173.48	-85.3	-629.6	927.8	914.1	13.70	67.712		
2,400.0	2,363.0	2,119.9	2,092.0	8.9	5.3	173.24	-93.9	-651.8	982.4	968.2	14.24	69.008		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
3,100.0	3,031.6	3,115.7	3,050.3	12.1	11.7	-32.72	504.0	1,334.8	980.7	961.1	19.56	50.146	
3,200.0	3,127.1	3,211.5	3,142.8	12.5	12.2	-32.12	481.9	1,346.0	953.7	933.4	20.26	47.064	
3,300.0	3,222.6	3,307.3	3,235.4	13.0	12.6	-31.48	459.8	1,357.3	926.7	905.7	20.98	44.170	
3,400.0	3,318.2	3,403.1	3,327.9	13.5	13.1	-30.81	437.7	1,368.5	899.9	878.2	21.71	41.450	
3,500.0	3,413.7	3,498.8	3,420.4	14.0	13.5	-30.10	415.7	1,379.8	873.2	850.7	22.45	38.892	
3,600.0	3,509.2	3,602.4	3,520.3	14.4	14.0	-29.27	391.5	1,391.9	846.5	823.3	23.17	36.538	
3,700.0	3,604.7	3,713.8	3,627.1	14.9	14.5	-28.11	362.3	1,404.2	818.0	794.1	23.94	34.169	
3,800.0	3,700.2	3,808.3	3,717.4	15.4	15.0	-26.98	336.3	1,414.4	789.2	764.4	24.80	31.816	
3,900.0	3,795.8	3,902.8	3,807.7	15.9	15.4	-25.76	310.3	1,424.6	760.6	735.0	25.64	29.668	
4,000.0	3,891.3	3,997.3	3,897.9	16.4	15.9	-24.46	284.4	1,434.8	732.4	705.9	26.49	27.646	
4,100.0	3,986.8	4,091.8	3,988.2	16.9	16.3	-23.05	258.4	1,445.0	704.6	677.2	27.37	25.744	
4,200.0	4,082.3	4,186.3	4,078.5	17.4	16.8	-21.54	232.5	1,455.2	677.2	648.9	28.27	23.954	
4,300.0	4,177.8	4,280.8	4,168.8	17.8	17.3	-19.90	206.5	1,465.4	650.3	621.1	29.20	22.271	
4,400.0	4,273.4	4,375.3	4,259.1	18.3	17.7	-18.13	180.6	1,475.6	624.0	593.8	30.16	20.691	
4,500.0	4,368.9	4,469.8	4,349.4	18.8	18.2	-16.21	154.6	1,485.8	598.3	567.1	31.15	19.208	
4,600.0	4,464.4	4,564.3	4,439.7	19.3	18.6	-14.13	128.7	1,496.1	573.3	541.1	32.17	17.820	
4,700.0	4,559.9	4,658.8	4,530.0	19.8	19.1	-11.87	102.7	1,506.3	549.1	515.8	33.23	16.524	
4,800.0	4,655.4	4,753.3	4,620.3	20.3	19.6	-9.43	76.8	1,516.5	525.8	491.5	34.33	15.318	
4,900.0	4,751.0	4,847.8	4,710.6	20.8	20.0	-6.77	50.8	1,526.7	503.6	468.1	35.46	14.202	
5,000.0	4,846.5	4,942.3	4,800.9	21.3	20.5	-3.89	24.8	1,536.9	482.6	445.9	36.63	13.174	
5,100.0	4,942.0	5,036.8	4,891.1	21.8	21.0	-0.77	-1.1	1,547.1	462.9	425.1	37.84	12.235	
5,200.0	5,037.5	5,131.3	4,981.4	22.3	21.4	2.59	-27.1	1,557.3	444.8	405.7	39.07	11.385	
5,300.0	5,133.0	5,225.8	5,071.7	22.8	21.9	6.20	-53.0	1,567.5	428.4	388.1	40.32	10.626	
5,400.0	5,228.6	5,320.3	5,162.0	23.3	22.4	10.05	-79.0	1,577.7	414.0	372.4	41.57	9.959	
5,500.0	5,324.1	5,414.8	5,252.3	23.8	22.8	14.14	-104.9	1,587.9	401.7	358.9	42.80	9.385	
5,600.0	5,419.6	5,509.3	5,342.6	24.3	23.3	18.44	-130.9	1,598.1	391.7	347.7	44.00	8.904	
5,700.0	5,515.1	5,603.8	5,432.9	24.8	23.8	22.91	-156.8	1,608.3	384.3	339.2	45.13	8.517	
5,800.0	5,610.6	5,698.3	5,523.2	25.3	24.2	27.51	-182.8	1,618.5	379.6	333.4	46.17	8.222	
5,900.0	5,706.2	5,792.8	5,613.5	25.8	24.7	32.18	-208.8	1,628.7	377.7	330.6	47.11	8.017	
5,918.6	5,724.0	5,810.4	5,630.3	25.9	24.8	33.05	-213.6	1,630.6	377.6	330.4	47.27	7.988	
6,000.0	5,801.7	5,887.2	5,703.8	26.3	25.2	36.86	-234.7	1,638.9	378.6	330.6	47.93	7.898	
6,100.0	5,897.2	5,981.7	5,794.1	26.8	25.7	41.50	-260.7	1,649.1	382.3	333.6	48.63	7.860	
6,200.0	5,992.7	6,076.2	5,884.3	27.3	26.1	46.02	-286.6	1,659.3	388.7	339.5	49.22	7.897	
6,300.0	6,088.2	6,170.7	5,974.6	27.8	26.6	50.39	-312.6	1,669.5	397.7	348.0	49.71	8.001	
6,400.0	6,183.8	6,265.2	6,064.9	28.3	27.1	54.56	-338.5	1,679.7	409.1	359.0	50.12	8.164	
6,500.0	6,279.3	6,359.7	6,155.2	28.8	27.6	58.50	-364.5	1,689.9	422.8	372.3	50.46	8.378	
6,600.0	6,374.8	6,459.1	6,250.3	29.3	28.1	62.38	-391.5	1,700.5	438.2	387.3	50.84	8.619	
6,700.0	6,470.3	6,562.0	6,349.1	29.8	28.6	66.13	-417.9	1,710.9	453.7	402.5	51.20	8.862	
6,800.0	6,565.9	6,665.4	6,449.0	30.4	29.1	69.64	-442.7	1,720.7	469.3	417.7	51.53	9.106	
6,900.0	6,661.4	6,769.3	6,549.9	30.9	29.6	72.97	-466.1	1,729.9	484.5	432.7	51.85	9.345	
7,000.0	6,756.9	6,873.7	6,651.7	31.4	30.1	76.13	-487.7	1,738.4	499.4	447.3	52.15	9.576	
7,100.0	6,852.4	6,978.5	6,754.2	31.9	30.6	79.16	-507.8	1,746.3	513.9	461.5	52.44	9.799	
7,200.0	6,947.9	7,083.7	6,857.5	32.4	31.1	82.07	-526.1	1,753.5	527.9	475.2	52.72	10.013	
7,300.0	7,043.5	7,189.0	6,961.3	32.9	31.6	84.90	-542.7	1,760.0	541.3	488.3	52.99	10.216	
7,400.0	7,139.0	7,294.6	7,065.7	33.4	32.0	87.66	-557.6	1,765.9	554.2	500.9	53.24	10.409	
7,500.0	7,234.5	7,400.2	7,170.4	33.9	32.5	90.36	-570.7	1,771.0	566.5	513.0	53.49	10.591	
7,600.0	7,330.0	7,505.9	7,275.4	34.4	32.9	93.03	-581.9	1,775.4	578.3	524.6	53.72	10.765	
7,700.0	7,425.5	7,611.6	7,380.6	34.9	33.3	95.67	-591.4	1,779.2	589.6	535.6	53.95	10.928	
7,782.5	7,504.4	7,698.7	7,467.4	35.3	33.7	97.84	-597.9	1,781.7	598.5	544.4	54.13	11.057	
7,800.0	7,521.1	7,717.2	7,485.8	35.4	33.7	98.31	-599.1	1,782.2	600.4	546.2	54.16	11.085	
7,900.0	7,616.9	7,822.9	7,591.3	35.9	34.1	100.93	-604.9	1,784.5	610.5	556.1	54.39	11.225	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8188-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,000.0	7,713.3	7,928.9	7,697.3	36.4	34.4	103.39	-609.0	1,786.1	619.9	565.3	54.62	11.349	
8,100.0	7,810.1	8,035.1	7,803.5	36.9	34.7	105.72	-611.2	1,787.0	628.2	573.4	54.83	11.458	
8,200.0	7,907.3	9,063.2	8,434.1	37.4	35.0	179.85	-9.2	1,789.1	563.7	517.8	45.94	12.270	
8,300.0	8,004.9	9,063.3	8,434.1	37.9	35.0	179.86	-9.1	1,789.1	483.4	433.3	50.12	9.645	
8,400.0	8,102.9	9,063.4	8,434.1	38.4	35.0	179.87	-9.0	1,789.1	410.4	355.2	55.24	7.430	
8,500.0	8,201.2	9,063.5	8,434.1	38.8	35.0	179.88	-9.0	1,789.1	349.5	288.6	60.90	5.739	
8,600.0	8,299.8	9,063.5	8,434.1	39.3	35.0	179.90	-8.9	1,789.1	308.0	242.6	65.39	4.711	
8,693.9	8,392.6	9,063.6	8,434.1	39.7	35.0	179.91	-8.8	1,789.1	294.1	228.4	65.78	4.471 CC, ES, SF	
8,700.0	8,398.7	9,063.6	8,434.1	39.7	35.0	179.92	-8.8	1,789.1	294.2	228.6	65.63	4.483	
8,800.0	8,497.8	9,063.7	8,434.1	40.1	35.0	179.93	-8.7	1,789.1	311.8	251.2	60.51	5.152	
8,900.0	8,597.2	9,063.8	8,434.1	40.6	35.0	179.95	-8.6	1,789.1	356.1	303.1	53.00	6.719	
9,000.0	8,696.7	9,063.9	8,434.1	41.0	35.0	179.97	-8.5	1,789.1	418.8	372.5	46.26	9.053	
9,100.0	8,796.4	9,064.0	8,434.1	41.3	35.0	179.99	-8.4	1,789.1	492.8	451.5	41.32	11.927	
9,200.0	8,896.2	9,064.1	8,434.1	41.7	35.0	-180.00	-8.3	1,789.1	573.9	535.9	38.03	15.089	
9,300.0	8,996.1	9,064.2	8,434.1	42.0	35.0	-179.98	-8.3	1,789.1	659.3	623.3	35.96	18.334	
9,400.0	9,096.1	9,064.3	8,434.1	42.3	35.0	-179.96	-8.2	1,789.1	747.6	712.9	34.72	21.529	
9,500.0	9,196.1	9,064.4	8,434.1	42.5	35.0	-179.95	-8.0	1,789.1	837.8	803.8	34.04	24.616	
9,503.9	9,200.0	9,064.4	8,434.1	42.5	35.0	-89.68	-8.0	1,789.1	841.4	807.4	34.02	24.734	
9,600.0	9,296.1	9,064.5	8,434.1	42.5	35.0	-89.66	-7.9	1,789.1	929.7	896.0	33.74	27.554	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 502H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8212-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		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)			
2,100.0	2,076.4	2,388.7	2,327.0	7.7	9.5	-41.16	558.1	953.1	971.4	954.9	16.57	58.638	
2,200.0	2,171.9	2,476.3	2,411.1	8.1	9.9	-41.73	536.9	940.8	923.9	906.7	17.28	53.478	
2,300.0	2,267.4	2,563.9	2,495.2	8.5	10.3	-42.36	515.8	928.5	876.5	858.5	18.00	48.695	
2,400.0	2,363.0	2,651.5	2,579.4	8.9	10.7	-43.06	494.6	916.2	829.2	810.5	18.73	44.259	
2,500.0	2,458.5	2,739.1	2,663.5	9.4	11.1	-43.84	473.5	903.9	782.0	762.5	19.48	40.144	
2,600.0	2,554.0	2,826.7	2,747.6	9.8	11.5	-44.73	452.3	891.7	734.9	714.7	20.23	36.325	
2,700.0	2,649.5	2,914.3	2,831.7	10.2	11.9	-45.73	431.1	879.4	688.0	667.0	20.99	32.776	
2,800.0	2,745.0	3,002.0	2,915.9	10.7	12.3	-46.88	410.0	867.1	641.2	619.5	21.75	29.479	
2,900.0	2,840.6	3,089.6	3,000.0	11.1	12.7	-48.20	388.8	854.8	594.7	572.2	22.52	26.413	
3,000.0	2,936.1	3,177.2	3,084.1	11.6	13.1	-49.74	367.7	842.6	548.5	525.3	23.28	23.561	
3,100.0	3,031.6	3,264.8	3,168.2	12.1	13.6	-51.56	346.5	830.3	502.7	478.7	24.04	20.912	
3,200.0	3,127.1	3,352.4	3,252.4	12.5	14.0	-53.72	325.4	818.0	457.4	432.6	24.79	18.452	
3,300.0	3,222.6	3,440.0	3,336.5	13.0	14.4	-56.34	304.2	805.7	412.7	387.2	25.51	16.175	
3,400.0	3,318.2	3,527.6	3,420.6	13.5	14.8	-59.55	283.1	793.4	368.9	342.7	26.21	14.078	
3,500.0	3,413.7	3,615.2	3,504.7	14.0	15.2	-63.56	261.9	781.2	326.4	299.6	26.84	12.163	
3,600.0	3,509.2	3,702.8	3,588.9	14.4	15.7	-68.65	240.8	768.9	285.7	258.3	27.36	10.441	
3,700.0	3,604.7	3,790.4	3,673.0	14.9	16.1	-75.20	219.6	756.6	247.7	219.9	27.72	8.936	
3,800.0	3,700.2	3,878.0	3,757.1	15.4	16.5	-83.66	198.5	744.3	213.8	186.0	27.80	7.691	
3,900.0	3,795.8	3,965.6	3,841.2	15.9	16.9	-94.45	177.3	732.0	186.4	158.8	27.53	6.769	
4,000.0	3,891.3	4,053.2	3,925.4	16.4	17.4	-107.60	156.2	719.8	168.6	141.5	27.04	6.234	
4,086.0	3,973.4	4,128.6	3,997.7	16.8	17.7	-120.14	138.0	709.2	163.4	136.6	26.83	6.090 CC, ES, SF	
4,100.0	3,986.8	4,140.9	4,009.5	16.9	17.8	-122.21	135.0	707.5	163.5	136.7	26.84	6.092	
4,200.0	4,082.3	4,228.5	4,093.6	17.4	18.2	-136.56	113.9	695.2	172.4	144.9	27.48	6.274	
4,300.0	4,177.8	4,316.1	4,177.7	17.8	18.6	-149.09	92.7	682.9	193.2	164.4	28.81	6.708	
4,400.0	4,273.4	4,403.7	4,261.9	18.3	19.1	-159.21	71.6	670.6	222.7	192.4	30.37	7.334	
4,500.0	4,368.9	4,491.3	4,346.0	18.8	19.5	-167.08	50.4	658.4	257.9	226.1	31.88	8.091	
4,600.0	4,464.4	4,578.9	4,430.1	19.3	19.9	-173.18	29.3	646.1	296.8	263.6	33.26	8.925	
4,700.0	4,559.9	4,666.5	4,514.2	19.8	20.4	-177.93	8.1	633.8	338.1	303.6	34.51	9.797	
4,800.0	4,655.4	4,754.1	4,598.4	20.3	20.8	178.31	-13.0	621.5	381.1	345.4	35.67	10.683	
4,900.0	4,751.0	4,841.7	4,682.5	20.8	21.2	175.28	-34.2	609.2	425.1	388.4	36.75	11.567	
5,000.0	4,846.5	4,929.3	4,766.6	21.3	21.7	172.80	-55.3	597.0	470.0	432.2	37.78	12.440	
5,100.0	4,942.0	5,016.9	4,850.7	21.8	22.1	170.74	-76.5	584.7	515.5	476.7	38.77	13.295	
5,200.0	5,037.5	5,104.5	4,934.9	22.3	22.5	169.01	-97.6	572.4	561.4	521.7	39.73	14.130	
5,300.0	5,133.0	5,192.2	5,019.0	22.8	23.0	167.53	-118.8	560.1	607.7	567.0	40.67	14.942	
5,400.0	5,228.6	5,279.8	5,103.1	23.3	23.4	166.26	-140.0	547.8	654.3	612.7	41.60	15.730	
5,500.0	5,324.1	5,367.4	5,187.2	23.8	23.8	165.16	-161.1	535.6	701.1	658.6	42.50	16.494	
5,600.0	5,419.6	5,455.0	5,271.4	24.3	24.3	164.19	-182.3	523.3	748.1	704.6	43.40	17.235	
5,700.0	5,515.1	5,542.6	5,355.5	24.8	24.7	163.34	-203.4	511.0	795.2	750.9	44.30	17.952	
5,800.0	5,610.6	5,630.2	5,439.6	25.3	25.1	162.58	-224.6	498.7	842.4	797.2	45.18	18.646	
5,900.0	5,706.2	5,717.8	5,523.7	25.8	25.6	161.90	-245.7	486.4	889.8	843.7	46.06	19.318	
6,000.0	5,801.7	5,805.4	5,607.9	26.3	26.0	161.29	-266.9	474.2	937.2	890.3	46.93	19.968	
6,100.0	5,897.2	5,893.0	5,692.0	26.8	26.4	160.73	-288.0	461.9	984.7	936.9	47.81	20.598	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 503H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8006-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	3.0	0.0	0.0	-90.16	-1.1	-379.9	379.9				
100.0	100.0	97.0	100.0	0.8	0.7	-90.16	-1.1	-379.9	379.9	377.9	1.97	192.969	
200.0	200.0	197.0	200.0	1.4	1.4	-90.16	-1.1	-379.9	379.9	376.6	3.29	115.408	
300.0	300.0	297.0	300.0	1.9	1.9	-90.16	-1.1	-379.9	379.9	375.7	4.18	90.839	
400.0	400.0	397.0	400.0	2.2	2.2	-90.16	-1.1	-379.9	379.9	375.0	4.90	77.511	
500.0	500.0	497.0	500.0	2.6	2.6	-90.16	-1.1	-379.9	379.9	374.4	5.52	68.777	
600.0	600.0	597.0	600.0	2.8	2.8	-90.16	-1.1	-379.9	379.9	373.8	6.08	62.464	
700.0	700.0	697.0	700.0	3.1	3.1	-90.16	-1.1	-379.9	379.9	373.3	6.59	57.617	
800.0	800.0	797.0	800.0	3.3	3.3	-90.16	-1.1	-379.9	379.9	372.8	7.07	53.738	
900.0	900.0	897.0	900.0	3.6	3.6	-90.16	-1.1	-379.9	379.9	372.4	7.52	50.539	
1,000.0	1,000.0	997.0	1,000.0	3.8	3.8	-90.16	-1.1	-379.9	379.9	372.0	7.94	47.840 CC, ES	
1,100.0	1,100.0	1,089.2	1,092.2	4.1	4.1	179.41	-2.1	-380.8	382.6	374.2	8.48	45.121	
1,200.0	1,199.8	1,180.7	1,183.6	4.4	4.3	178.94	-5.4	-383.6	391.0	382.0	9.00	43.452	
1,300.0	1,299.5	1,271.2	1,273.8	4.7	4.6	178.18	-10.8	-388.2	404.9	395.4	9.53	42.505	
1,400.0	1,398.7	1,360.2	1,362.3	5.1	4.9	177.21	-18.3	-394.6	424.4	414.4	10.07	42.143 SF	
1,500.0	1,497.5	1,447.4	1,448.6	5.4	5.2	176.09	-27.6	-402.6	449.6	438.9	10.64	42.272	
1,600.0	1,595.6	1,534.8	1,534.8	5.8	5.5	174.84	-38.9	-412.2	480.2	469.0	11.21	42.830	
1,700.0	1,693.1	1,628.2	1,626.6	6.2	5.8	173.61	-51.4	-422.9	514.9	503.0	11.85	43.441	
1,800.0	1,789.6	1,720.2	1,717.2	6.6	6.1	172.54	-63.8	-433.5	553.0	540.5	12.49	44.288	
1,860.7	1,847.8	1,775.5	1,771.6	6.8	6.3	171.97	-71.3	-439.9	577.7	564.8	12.83	45.037	
1,900.0	1,885.3	1,811.1	1,806.7	6.9	6.4	171.68	-76.1	-444.0	594.1	581.0	13.04	45.566	
2,000.0	1,980.9	1,901.7	1,895.8	7.3	6.7	170.99	-88.3	-454.5	635.8	622.2	13.65	46.592	
2,100.0	2,076.4	1,992.3	1,985.0	7.7	7.0	170.40	-100.5	-464.9	677.7	663.4	14.28	47.450	
2,200.0	2,171.9	2,083.0	2,074.2	8.1	7.3	169.87	-112.7	-475.3	719.5	704.6	14.94	48.169	
2,300.0	2,267.4	2,173.6	2,163.4	8.5	7.6	169.40	-124.9	-485.8	761.5	745.9	15.61	48.770	
2,400.0	2,363.0	2,264.2	2,252.6	8.9	8.0	168.97	-137.1	-496.2	803.4	787.1	16.31	49.274	
2,500.0	2,458.5	2,354.8	2,341.7	9.4	8.3	168.59	-149.4	-506.7	845.4	828.4	17.01	49.695	
2,600.0	2,554.0	2,445.4	2,430.9	9.8	8.7	168.25	-161.6	-517.1	887.5	869.7	17.73	50.049	
2,700.0	2,649.5	2,536.0	2,520.1	10.2	9.1	167.94	-173.8	-527.5	929.5	911.1	18.46	50.345	
2,800.0	2,745.0	2,626.7	2,609.3	10.7	9.4	167.65	-186.0	-538.0	971.6	952.4	19.20	50.592	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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 @ 2957.0usft (NABORS X09)

Offset Depths are relative to Offset Datum

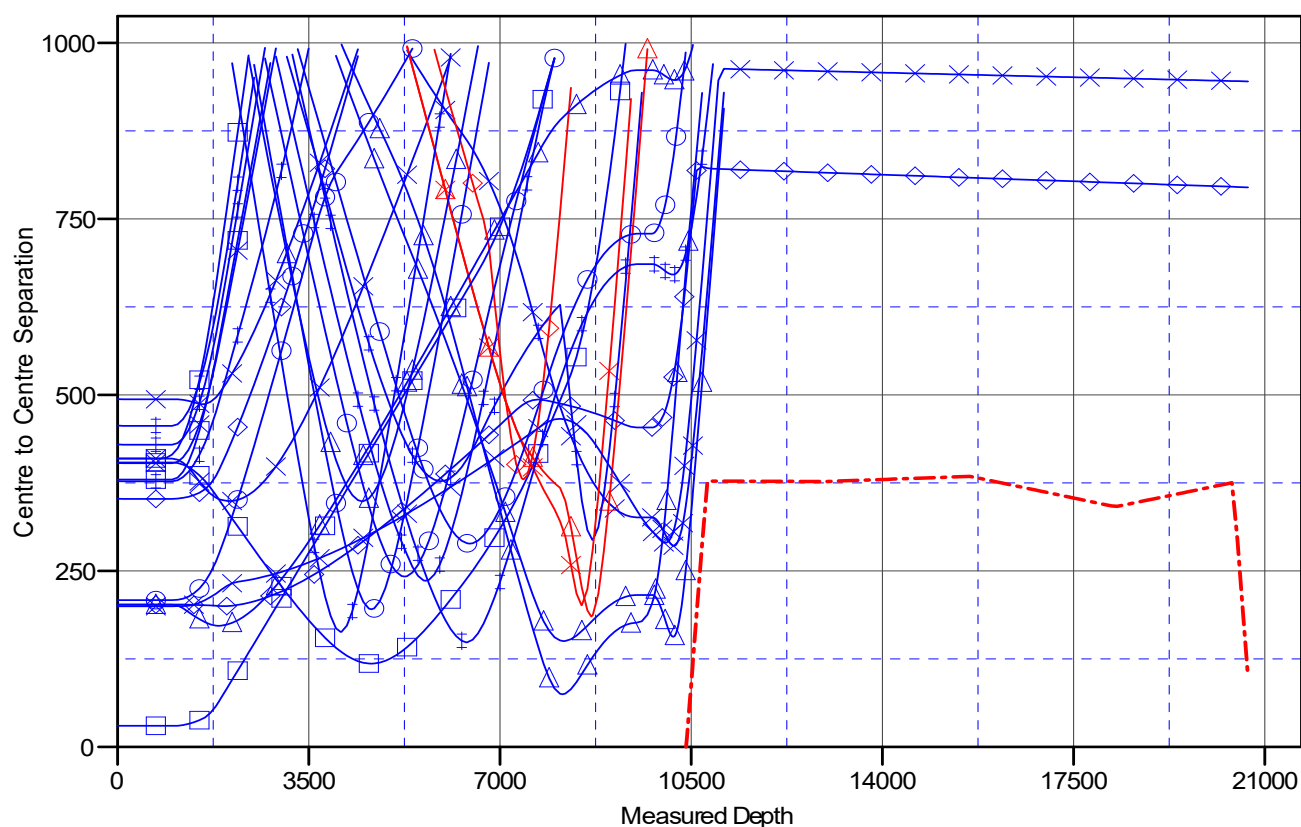
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 701H

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

Grid Convergence at Surface is: 0.16°

Ladder Plot



LEGEND

PUDGE FEDERAL COM 501H OWB, PWP1 V0	_WILD THING FED COM 908H OWB, PWP0 V0	_WILD THING FED COM 909H OWB, PWP0 V0
PUDGE FEDERAL COM 500H OWB, PWP1 V0	PUDGE FEDERAL 21H, OWB, AWP V0	_WILD THING FED COM 704H OWB, PWP0 V0
_WILD THING FED COM 901H OWB, PWP0 V0	PUDGE FEDERAL 21H, ST01 ST01 AWP V0	WILD THING FED COM 508H, OWB, PWP1 V0
_WILD THING FED COM 702H OWB, PWP0 V0	_WILD THING FED COM 502H, OWB, PWP1 V0	_WILD THING FED COM 703H OWB, PWP0 V0
WILD THING FEDERAL COM501H, OWB, PWP1 V0	_WILD THING FED COM 902H OWB, PWP0 V0	PUDGE FEDERAL COM 702H OWB, PWP1 V0
_WILD THING FED COM 907H OWB, PWP0 V0	COOPER 31 FEDERAL 2H, _P&A, OWB, AWP V0	PUDGE FEDERAL COM 901H OWB, PWP1 V0
_WILD THING FED COM 904H OWB, PWP0 V0	_WILD THING FED COM 705H OWB, PWP0 V0	PUDGE FEDERAL COM 902H OWB, PWP1 V0
WILD THING FEDERAL COM503H, OWB, PWP1 V0	_WILD THING FED COM 910H OWB, PWP0 V0	PUDGE FEDERAL COM 903H OWB, PWP1 V0
_WILD THING FED COM 909H OWB, PWP0 V0	_WILD THING FED COM 903H OWB, PWP0 V0	PUDGE FEDERAL COM 904H OWB, PWP1 V0
_WILD THING FED COM 906H OWB, PWP0 V0	_WILD THING FED COM 706H OWB, PWP0 V0	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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 @ 2957.0usft (NABORS X09)

Offset Depths are relative to Offset Datum

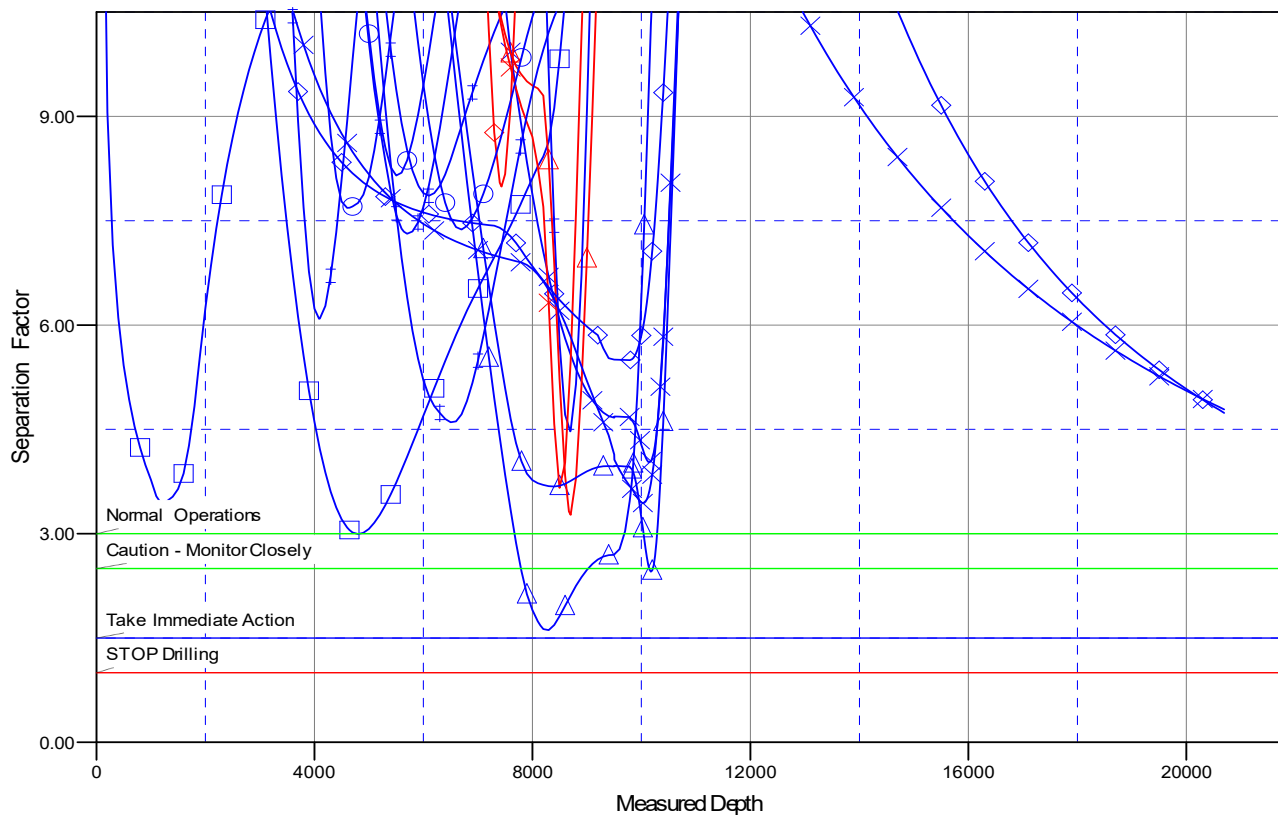
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 701H

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

Grid Convergence at Surface is: 0.16°

Separation Factor Plot



LEGEND

PUDGE FEDERAL COM 501H OWB, PWP1 V0	_WILD THING FED COM 908H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0
PUDGE FEDERAL COM 908H OWB, PWP1 V0	PUDGE FEDERAL 21H, OWB AWP V0	_WILD THING FED COM 704H OWB, PWP0 V0
_WILD THING FED COM 901H OWB, PWP0 V0	PUDGE FEDERAL 21H, ST01 ST01 AWP V0	_WILD THING FED COM 504H OWB, PWP1 V0
_WILD THING FED COM 702H OWB, PWP0 V0	_WILD THING FED COM 502H OWB, PWP1 V0	_WILD THING FED COM 703H OWB, PWP0 V0
_WILD THING FED COM 501H OWB, PWP1 V0	_WILD THING FED COM 902H OWB, PWP0 V0	PUDGE FEDERAL COM 702H OWB, PWP1 V0
_WILD THING FED COM 907H OWB, PWP0 V0	COOPER 31 FEDERAL 2H, _FLA, OWB, AWP V0	PUDGE FEDERAL COM 901H OWB, PWP1 V0
_WILD THING FED COM 904H OWB, PWP0 V0	_WILD THING FED COM 705H OWB, PWP0 V0	PUDGE FEDERAL COM 902H OWB, PWP1 V0
_WILD THING FED COM 503H OWB, PWP1 V0	_WILD THING FED COM 910H OWB, PWP0 V0	PUDGE FEDERAL COM 903H OWB, PWP1 V0
_WILD THING FED COM 905H OWB, PWP0 V0	_WILD THING FED COM 903H OWB, PWP0 V0	PUDGE FEDERAL COM 904H OWB, PWP1 V0
_WILD THING FED COM 906H OWB, PWP0 V0	_WILD THING FED COM 706H OWB, PWP0 V0	

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

DELAWARE BASIN WEST

**ATLAS PROSPECT_NME
PUDGE FED COM PROJECT
PUDGE FEDERAL COM 701H
3001556661
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 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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 701H		
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' 46.426 N
		Longitude:	104° 1' 25.483 W
		Ground Level:	2,925.0 usft

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2022	12/31/2023	6.55
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,336.01416875

Design	PWP1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			168.31

Plan Survey Tool Program	Date	8/4/2025		
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks
(usft)	(usft)			
1	0.0	20,693.8 PWP1 (OWB)	r.5 MWD+IFR1	
			OWSG MWD + IFR1 rev.5	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,860.7	17.21	90.27	1,847.8	-0.6	128.3	2.00	2.00	0.00	90.27	
7,782.5	17.21	90.27	7,504.4	-8.8	1,880.8	0.00	0.00	0.00	0.00	
9,503.9	0.00	0.00	9,200.0	-10.0	2,137.5	1.00	-1.00	0.00	180.00	
9,785.4	0.00	0.00	9,481.5	-10.0	2,137.5	0.00	0.00	0.00	0.00	
10,534.2	89.85	179.65	9,959.0	-486.2	2,140.4	12.00	12.00	23.99	179.65	
20,693.8	89.85	179.65	9,986.0	-10,645.6	2,201.7	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,100.0	2.00	90.27	1,100.0	0.0	1.7	0.4	2.00	2.00	0.00
1,200.0	4.00	90.27	1,199.8	0.0	7.0	1.4	2.00	2.00	0.00
1,300.0	6.00	90.27	1,299.5	-0.1	15.7	3.3	2.00	2.00	0.00
1,400.0	8.00	90.27	1,398.7	-0.1	27.9	5.8	2.00	2.00	0.00
1,500.0	10.00	90.27	1,497.5	-0.2	43.5	9.0	2.00	2.00	0.00
1,600.0	12.00	90.27	1,595.6	-0.3	62.6	13.0	2.00	2.00	0.00
1,700.0	14.00	90.27	1,693.1	-0.4	85.1	17.6	2.00	2.00	0.00
1,800.0	16.00	90.27	1,789.6	-0.5	111.0	23.0	2.00	2.00	0.00
1,860.7	17.21	90.27	1,847.8	-0.6	128.3	26.6	2.00	2.00	0.00
Start 5921.8 hold at 1860.7 MD									
1,900.0	17.21	90.27	1,885.3	-0.7	140.0	29.0	0.00	0.00	0.00
2,000.0	17.21	90.27	1,980.9	-0.8	169.5	35.1	0.00	0.00	0.00
2,100.0	17.21	90.27	2,076.4	-0.9	199.1	41.2	0.00	0.00	0.00
2,200.0	17.21	90.27	2,171.9	-1.1	228.7	47.4	0.00	0.00	0.00
2,300.0	17.21	90.27	2,267.4	-1.2	258.3	53.5	0.00	0.00	0.00
2,400.0	17.21	90.27	2,363.0	-1.3	287.9	59.6	0.00	0.00	0.00
2,500.0	17.21	90.27	2,458.5	-1.5	317.5	65.8	0.00	0.00	0.00
2,600.0	17.21	90.27	2,554.0	-1.6	347.1	71.9	0.00	0.00	0.00
2,700.0	17.21	90.27	2,649.5	-1.8	376.7	78.0	0.00	0.00	0.00
2,800.0	17.21	90.27	2,745.0	-1.9	406.3	84.2	0.00	0.00	0.00
2,900.0	17.21	90.27	2,840.6	-2.0	435.9	90.3	0.00	0.00	0.00
3,000.0	17.21	90.27	2,936.1	-2.2	465.5	96.4	0.00	0.00	0.00
3,100.0	17.21	90.27	3,031.6	-2.3	495.1	102.5	0.00	0.00	0.00
3,200.0	17.21	90.27	3,127.1	-2.5	524.7	108.7	0.00	0.00	0.00
3,300.0	17.21	90.27	3,222.6	-2.6	554.3	114.8	0.00	0.00	0.00
3,400.0	17.21	90.27	3,318.2	-2.7	583.9	120.9	0.00	0.00	0.00
3,500.0	17.21	90.27	3,413.7	-2.9	613.5	127.1	0.00	0.00	0.00
3,600.0	17.21	90.27	3,509.2	-3.0	643.1	133.2	0.00	0.00	0.00
3,700.0	17.21	90.27	3,604.7	-3.1	672.7	139.3	0.00	0.00	0.00
3,800.0	17.21	90.27	3,700.2	-3.3	702.2	145.4	0.00	0.00	0.00
3,900.0	17.21	90.27	3,795.8	-3.4	731.8	151.6	0.00	0.00	0.00
4,000.0	17.21	90.27	3,891.3	-3.6	761.4	157.7	0.00	0.00	0.00
4,100.0	17.21	90.27	3,986.8	-3.7	791.0	163.8	0.00	0.00	0.00
4,200.0	17.21	90.27	4,082.3	-3.8	820.6	170.0	0.00	0.00	0.00
4,300.0	17.21	90.27	4,177.8	-4.0	850.2	176.1	0.00	0.00	0.00
4,400.0	17.21	90.27	4,273.4	-4.1	879.8	182.2	0.00	0.00	0.00
4,500.0	17.21	90.27	4,368.9	-4.3	909.4	188.4	0.00	0.00	0.00
4,600.0	17.21	90.27	4,464.4	-4.4	939.0	194.5	0.00	0.00	0.00
4,700.0	17.21	90.27	4,559.9	-4.5	968.6	200.6	0.00	0.00	0.00
4,800.0	17.21	90.27	4,655.4	-4.7	998.2	206.7	0.00	0.00	0.00
4,900.0	17.21	90.27	4,751.0	-4.8	1,027.8	212.9	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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	17.21	90.27	4,846.5	-4.9	1,057.4	219.0	0.00	0.00	0.00
5,100.0	17.21	90.27	4,942.0	-5.1	1,087.0	225.1	0.00	0.00	0.00
5,200.0	17.21	90.27	5,037.5	-5.2	1,116.6	231.3	0.00	0.00	0.00
5,300.0	17.21	90.27	5,133.0	-5.4	1,146.2	237.4	0.00	0.00	0.00
5,400.0	17.21	90.27	5,228.6	-5.5	1,175.8	243.5	0.00	0.00	0.00
5,500.0	17.21	90.27	5,324.1	-5.6	1,205.3	249.6	0.00	0.00	0.00
5,600.0	17.21	90.27	5,419.6	-5.8	1,234.9	255.8	0.00	0.00	0.00
5,700.0	17.21	90.27	5,515.1	-5.9	1,264.5	261.9	0.00	0.00	0.00
5,800.0	17.21	90.27	5,610.6	-6.1	1,294.1	268.0	0.00	0.00	0.00
5,900.0	17.21	90.27	5,706.2	-6.2	1,323.7	274.2	0.00	0.00	0.00
6,000.0	17.21	90.27	5,801.7	-6.3	1,353.3	280.3	0.00	0.00	0.00
6,100.0	17.21	90.27	5,897.2	-6.5	1,382.9	286.4	0.00	0.00	0.00
6,200.0	17.21	90.27	5,992.7	-6.6	1,412.5	292.6	0.00	0.00	0.00
6,300.0	17.21	90.27	6,088.2	-6.7	1,442.1	298.7	0.00	0.00	0.00
6,400.0	17.21	90.27	6,183.8	-6.9	1,471.7	304.8	0.00	0.00	0.00
6,500.0	17.21	90.27	6,279.3	-7.0	1,501.3	310.9	0.00	0.00	0.00
6,600.0	17.21	90.27	6,374.8	-7.2	1,530.9	317.1	0.00	0.00	0.00
6,700.0	17.21	90.27	6,470.3	-7.3	1,560.5	323.2	0.00	0.00	0.00
6,800.0	17.21	90.27	6,565.9	-7.4	1,590.1	329.3	0.00	0.00	0.00
6,900.0	17.21	90.27	6,661.4	-7.6	1,619.7	335.5	0.00	0.00	0.00
7,000.0	17.21	90.27	6,756.9	-7.7	1,649.3	341.6	0.00	0.00	0.00
7,100.0	17.21	90.27	6,852.4	-7.9	1,678.9	347.7	0.00	0.00	0.00
7,200.0	17.21	90.27	6,947.9	-8.0	1,708.5	353.8	0.00	0.00	0.00
7,300.0	17.21	90.27	7,043.5	-8.1	1,738.0	360.0	0.00	0.00	0.00
7,400.0	17.21	90.27	7,139.0	-8.3	1,767.6	366.1	0.00	0.00	0.00
7,500.0	17.21	90.27	7,234.5	-8.4	1,797.2	372.2	0.00	0.00	0.00
7,600.0	17.21	90.27	7,330.0	-8.5	1,826.8	378.4	0.00	0.00	0.00
7,700.0	17.21	90.27	7,425.5	-8.7	1,856.4	384.5	0.00	0.00	0.00
7,782.5	17.21	90.27	7,504.4	-8.8	1,880.8	389.6	0.00	0.00	0.00
Start Drop -1.00									
7,800.0	17.04	90.27	7,521.1	-8.8	1,886.0	390.6	1.00	-1.00	0.00
7,900.0	16.04	90.27	7,616.9	-9.0	1,914.5	396.5	1.00	-1.00	0.00
8,000.0	15.04	90.27	7,713.3	-9.1	1,941.2	402.1	1.00	-1.00	0.00
8,100.0	14.04	90.27	7,810.1	-9.2	1,966.4	407.3	1.00	-1.00	0.00
8,200.0	13.04	90.27	7,907.3	-9.3	1,989.8	412.1	1.00	-1.00	0.00
8,300.0	12.04	90.27	8,004.9	-9.4	2,011.5	416.6	1.00	-1.00	0.00
8,400.0	11.04	90.27	8,102.9	-9.5	2,031.5	420.8	1.00	-1.00	0.00
8,500.0	10.04	90.27	8,201.2	-9.6	2,049.8	424.5	1.00	-1.00	0.00
8,600.0	9.04	90.27	8,299.8	-9.7	2,066.3	428.0	1.00	-1.00	0.00
8,700.0	8.04	90.27	8,398.7	-9.7	2,081.2	431.0	1.00	-1.00	0.00
8,800.0	7.04	90.27	8,497.8	-9.8	2,094.3	433.8	1.00	-1.00	0.00
8,900.0	6.04	90.27	8,597.2	-9.9	2,105.7	436.1	1.00	-1.00	0.00
9,000.0	5.04	90.27	8,696.7	-9.9	2,115.4	438.1	1.00	-1.00	0.00
9,100.0	4.04	90.27	8,796.4	-9.9	2,123.3	439.8	1.00	-1.00	0.00
9,200.0	3.04	90.27	8,896.2	-10.0	2,129.4	441.0	1.00	-1.00	0.00
9,300.0	2.04	90.27	8,996.1	-10.0	2,133.9	442.0	1.00	-1.00	0.00
9,400.0	1.04	90.27	9,096.1	-10.0	2,136.6	442.5	1.00	-1.00	0.00
9,503.9	0.00	0.00	9,200.0	-10.0	2,137.5	442.7	1.00	-1.00	0.00
Start 281.5 hold at 9503.9 MD									
9,600.0	0.00	0.00	9,296.1	-10.0	2,137.5	442.7	0.00	0.00	0.00
9,700.0	0.00	0.00	9,396.1	-10.0	2,137.5	442.7	0.00	0.00	0.00
9,785.4	0.00	0.00	9,481.5	-10.0	2,137.5	442.7	0.00	0.00	0.00
Start DLS 12.00 TFO 179.65									

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,800.0	1.75	179.65	9,496.1	-10.2	2,137.5	442.9	12.00	12.00	0.00
9,825.0	4.75	179.65	9,521.0	-11.6	2,137.5	444.3	12.00	12.00	0.00
9,850.0	7.75	179.65	9,545.9	-14.4	2,137.5	447.0	12.00	12.00	0.00
9,875.0	10.75	179.65	9,570.5	-18.4	2,137.6	450.9	12.00	12.00	0.00
9,900.0	13.75	179.65	9,595.0	-23.7	2,137.6	456.1	12.00	12.00	0.00
9,925.0	16.75	179.65	9,619.1	-30.3	2,137.6	462.6	12.00	12.00	0.00
9,950.0	19.75	179.65	9,642.8	-38.1	2,137.7	470.2	12.00	12.00	0.00
9,975.0	22.75	179.65	9,666.1	-47.1	2,137.7	479.1	12.00	12.00	0.00
10,000.0	25.75	179.65	9,688.9	-57.4	2,137.8	489.2	12.00	12.00	0.00
10,025.0	28.75	179.65	9,711.1	-68.8	2,137.9	500.4	12.00	12.00	0.00
10,050.0	31.75	179.65	9,732.7	-81.4	2,137.9	512.8	12.00	12.00	0.00
10,075.0	34.75	179.65	9,753.6	-95.1	2,138.0	526.2	12.00	12.00	0.00
10,100.0	37.75	179.65	9,773.8	-109.9	2,138.1	540.7	12.00	12.00	0.00
10,125.0	40.75	179.65	9,793.2	-125.7	2,138.2	556.2	12.00	12.00	0.00
10,150.0	43.75	179.65	9,811.7	-142.5	2,138.3	572.7	12.00	12.00	0.00
10,175.0	46.75	179.65	9,829.3	-160.3	2,138.4	590.1	12.00	12.00	0.00
10,200.0	49.75	179.65	9,845.9	-178.9	2,138.5	608.4	12.00	12.00	0.00
10,225.0	52.75	179.65	9,861.5	-198.4	2,138.6	627.5	12.00	12.00	0.00
10,250.0	55.75	179.65	9,876.2	-218.7	2,138.8	647.4	12.00	12.00	0.00
10,275.0	58.75	179.65	9,889.7	-239.7	2,138.9	668.0	12.00	12.00	0.00
10,300.0	61.75	179.65	9,902.1	-261.4	2,139.0	689.3	12.00	12.00	0.00
10,325.0	64.75	179.65	9,913.3	-283.8	2,139.2	711.1	12.00	12.00	0.00
10,350.0	67.75	179.65	9,923.4	-306.6	2,139.3	733.6	12.00	12.00	0.00
10,375.0	70.75	179.65	9,932.3	-330.0	2,139.4	756.5	12.00	12.00	0.00
10,400.0	73.75	179.65	9,939.9	-353.8	2,139.6	779.8	12.00	12.00	0.00
10,425.0	76.75	179.65	9,946.2	-378.0	2,139.7	803.5	12.00	12.00	0.00
10,450.0	79.75	179.65	9,951.3	-402.5	2,139.9	827.5	12.00	12.00	0.00
10,475.0	82.75	179.65	9,955.1	-427.2	2,140.0	851.8	12.00	12.00	0.00
10,500.0	85.75	179.65	9,957.6	-452.0	2,140.2	876.1	12.00	12.00	0.00
10,525.0	88.75	179.65	9,958.9	-477.0	2,140.3	900.6	12.00	12.00	0.00
10,534.2	89.85	179.65	9,959.0	-486.2	2,140.4	909.6	12.00	12.00	0.00
Start 10159.6 hold at 10534.2 MD									
10,600.0	89.85	179.65	9,959.1	-552.0	2,140.8	974.2	0.00	0.00	0.00
10,700.0	89.85	179.65	9,959.4	-652.0	2,141.4	1,072.2	0.00	0.00	0.00
10,800.0	89.85	179.65	9,959.7	-752.0	2,142.0	1,170.2	0.00	0.00	0.00
10,900.0	89.85	179.65	9,959.9	-852.0	2,142.6	1,268.3	0.00	0.00	0.00
11,000.0	89.85	179.65	9,960.2	-952.0	2,143.2	1,366.3	0.00	0.00	0.00
11,100.0	89.85	179.65	9,960.5	-1,052.0	2,143.8	1,464.4	0.00	0.00	0.00
11,200.0	89.85	179.65	9,960.7	-1,152.0	2,144.4	1,562.4	0.00	0.00	0.00
11,300.0	89.85	179.65	9,961.0	-1,252.0	2,145.0	1,660.5	0.00	0.00	0.00
11,400.0	89.85	179.65	9,961.3	-1,352.0	2,145.6	1,758.5	0.00	0.00	0.00
11,500.0	89.85	179.65	9,961.5	-1,452.0	2,146.2	1,856.6	0.00	0.00	0.00
11,600.0	89.85	179.65	9,961.8	-1,552.0	2,146.8	1,954.6	0.00	0.00	0.00
11,700.0	89.85	179.65	9,962.1	-1,652.0	2,147.4	2,052.7	0.00	0.00	0.00
11,800.0	89.85	179.65	9,962.3	-1,752.0	2,148.0	2,150.7	0.00	0.00	0.00
11,900.0	89.85	179.65	9,962.6	-1,852.0	2,148.6	2,248.8	0.00	0.00	0.00
12,000.0	89.85	179.65	9,962.9	-1,952.0	2,149.2	2,346.8	0.00	0.00	0.00
12,100.0	89.85	179.65	9,963.1	-2,052.0	2,149.8	2,444.9	0.00	0.00	0.00
12,200.0	89.85	179.65	9,963.4	-2,152.0	2,150.4	2,542.9	0.00	0.00	0.00
12,300.0	89.85	179.65	9,963.7	-2,252.0	2,151.0	2,641.0	0.00	0.00	0.00
12,400.0	89.85	179.65	9,963.9	-2,352.0	2,151.6	2,739.0	0.00	0.00	0.00
12,500.0	89.85	179.65	9,964.2	-2,452.0	2,152.2	2,837.1	0.00	0.00	0.00
12,600.0	89.85	179.65	9,964.5	-2,552.0	2,152.9	2,935.1	0.00	0.00	0.00
12,700.0	89.85	179.65	9,964.7	-2,652.0	2,153.5	3,033.2	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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)
12,800.0	89.85	179.65	9,965.0	-2,752.0	2,154.1	3,131.2	0.00	0.00	0.00
12,900.0	89.85	179.65	9,965.3	-2,852.0	2,154.7	3,229.3	0.00	0.00	0.00
13,000.0	89.85	179.65	9,965.5	-2,952.0	2,155.3	3,327.3	0.00	0.00	0.00
13,100.0	89.85	179.65	9,965.8	-3,052.0	2,155.9	3,425.3	0.00	0.00	0.00
13,200.0	89.85	179.65	9,966.1	-3,152.0	2,156.5	3,523.4	0.00	0.00	0.00
13,300.0	89.85	179.65	9,966.3	-3,252.0	2,157.1	3,621.4	0.00	0.00	0.00
13,400.0	89.85	179.65	9,966.6	-3,352.0	2,157.7	3,719.5	0.00	0.00	0.00
13,500.0	89.85	179.65	9,966.9	-3,451.9	2,158.3	3,817.5	0.00	0.00	0.00
13,600.0	89.85	179.65	9,967.1	-3,551.9	2,158.9	3,915.6	0.00	0.00	0.00
13,700.0	89.85	179.65	9,967.4	-3,651.9	2,159.5	4,013.6	0.00	0.00	0.00
13,800.0	89.85	179.65	9,967.7	-3,751.9	2,160.1	4,111.7	0.00	0.00	0.00
13,900.0	89.85	179.65	9,967.9	-3,851.9	2,160.7	4,209.7	0.00	0.00	0.00
14,000.0	89.85	179.65	9,968.2	-3,951.9	2,161.3	4,307.8	0.00	0.00	0.00
14,100.0	89.85	179.65	9,968.5	-4,051.9	2,161.9	4,405.8	0.00	0.00	0.00
14,200.0	89.85	179.65	9,968.7	-4,151.9	2,162.5	4,503.9	0.00	0.00	0.00
14,300.0	89.85	179.65	9,969.0	-4,251.9	2,163.1	4,601.9	0.00	0.00	0.00
14,400.0	89.85	179.65	9,969.3	-4,351.9	2,163.7	4,700.0	0.00	0.00	0.00
14,500.0	89.85	179.65	9,969.5	-4,451.9	2,164.3	4,798.0	0.00	0.00	0.00
14,600.0	89.85	179.65	9,969.8	-4,551.9	2,164.9	4,896.1	0.00	0.00	0.00
14,700.0	89.85	179.65	9,970.0	-4,651.9	2,165.5	4,994.1	0.00	0.00	0.00
14,800.0	89.85	179.65	9,970.3	-4,751.9	2,166.1	5,092.2	0.00	0.00	0.00
14,900.0	89.85	179.65	9,970.6	-4,851.9	2,166.7	5,190.2	0.00	0.00	0.00
15,000.0	89.85	179.65	9,970.8	-4,951.9	2,167.3	5,288.3	0.00	0.00	0.00
15,100.0	89.85	179.65	9,971.1	-5,051.9	2,168.0	5,386.3	0.00	0.00	0.00
15,200.0	89.85	179.65	9,971.4	-5,151.9	2,168.6	5,484.3	0.00	0.00	0.00
15,300.0	89.85	179.65	9,971.6	-5,251.9	2,169.2	5,582.4	0.00	0.00	0.00
15,400.0	89.85	179.65	9,971.9	-5,351.9	2,169.8	5,680.4	0.00	0.00	0.00
15,500.0	89.85	179.65	9,972.2	-5,451.9	2,170.4	5,778.5	0.00	0.00	0.00
15,600.0	89.85	179.65	9,972.4	-5,551.9	2,171.0	5,876.5	0.00	0.00	0.00
15,700.0	89.85	179.65	9,972.7	-5,651.9	2,171.6	5,974.6	0.00	0.00	0.00
15,800.0	89.85	179.65	9,973.0	-5,751.9	2,172.2	6,072.6	0.00	0.00	0.00
15,900.0	89.85	179.65	9,973.2	-5,851.9	2,172.8	6,170.7	0.00	0.00	0.00
16,000.0	89.85	179.65	9,973.5	-5,951.9	2,173.4	6,268.7	0.00	0.00	0.00
16,100.0	89.85	179.65	9,973.8	-6,051.9	2,174.0	6,366.8	0.00	0.00	0.00
16,200.0	89.85	179.65	9,974.0	-6,151.9	2,174.6	6,464.8	0.00	0.00	0.00
16,300.0	89.85	179.65	9,974.3	-6,251.9	2,175.2	6,562.9	0.00	0.00	0.00
16,400.0	89.85	179.65	9,974.6	-6,351.9	2,175.8	6,660.9	0.00	0.00	0.00
16,500.0	89.85	179.65	9,974.8	-6,451.9	2,176.4	6,759.0	0.00	0.00	0.00
16,600.0	89.85	179.65	9,975.1	-6,551.9	2,177.0	6,857.0	0.00	0.00	0.00
16,700.0	89.85	179.65	9,975.4	-6,651.9	2,177.6	6,955.1	0.00	0.00	0.00
16,800.0	89.85	179.65	9,975.6	-6,751.9	2,178.2	7,053.1	0.00	0.00	0.00
16,900.0	89.85	179.65	9,975.9	-6,851.9	2,178.8	7,151.2	0.00	0.00	0.00
17,000.0	89.85	179.65	9,976.2	-6,951.9	2,179.4	7,249.2	0.00	0.00	0.00
17,100.0	89.85	179.65	9,976.4	-7,051.9	2,180.0	7,347.3	0.00	0.00	0.00
17,200.0	89.85	179.65	9,976.7	-7,151.9	2,180.6	7,445.3	0.00	0.00	0.00
17,300.0	89.85	179.65	9,977.0	-7,251.9	2,181.2	7,543.3	0.00	0.00	0.00
17,400.0	89.85	179.65	9,977.2	-7,351.9	2,181.8	7,641.4	0.00	0.00	0.00
17,500.0	89.85	179.65	9,977.5	-7,451.9	2,182.4	7,739.4	0.00	0.00	0.00
17,600.0	89.85	179.65	9,977.8	-7,551.9	2,183.1	7,837.5	0.00	0.00	0.00
17,700.0	89.85	179.65	9,978.0	-7,651.9	2,183.7	7,935.5	0.00	0.00	0.00
17,800.0	89.85	179.65	9,978.3	-7,751.9	2,184.3	8,033.6	0.00	0.00	0.00
17,900.0	89.85	179.65	9,978.6	-7,851.9	2,184.9	8,131.6	0.00	0.00	0.00
18,000.0	89.85	179.65	9,978.8	-7,951.9	2,185.5	8,229.7	0.00	0.00	0.00
18,100.0	89.85	179.65	9,979.1	-8,051.8	2,186.1	8,327.7	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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)
18,200.0	89.85	179.65	9,979.4	-8,151.8	2,186.7	8,425.8	0.00	0.00	0.00
18,300.0	89.85	179.65	9,979.6	-8,251.8	2,187.3	8,523.8	0.00	0.00	0.00
18,400.0	89.85	179.65	9,979.9	-8,351.8	2,187.9	8,621.9	0.00	0.00	0.00
18,500.0	89.85	179.65	9,980.2	-8,451.8	2,188.5	8,719.9	0.00	0.00	0.00
18,600.0	89.85	179.65	9,980.4	-8,551.8	2,189.1	8,818.0	0.00	0.00	0.00
18,700.0	89.85	179.65	9,980.7	-8,651.8	2,189.7	8,916.0	0.00	0.00	0.00
18,800.0	89.85	179.65	9,981.0	-8,751.8	2,190.3	9,014.1	0.00	0.00	0.00
18,900.0	89.85	179.65	9,981.2	-8,851.8	2,190.9	9,112.1	0.00	0.00	0.00
19,000.0	89.85	179.65	9,981.5	-8,951.8	2,191.5	9,210.2	0.00	0.00	0.00
19,100.0	89.85	179.65	9,981.8	-9,051.8	2,192.1	9,308.2	0.00	0.00	0.00
19,200.0	89.85	179.65	9,982.0	-9,151.8	2,192.7	9,406.3	0.00	0.00	0.00
19,300.0	89.85	179.65	9,982.3	-9,251.8	2,193.3	9,504.3	0.00	0.00	0.00
19,400.0	89.85	179.65	9,982.6	-9,351.8	2,193.9	9,602.4	0.00	0.00	0.00
19,500.0	89.85	179.65	9,982.8	-9,451.8	2,194.5	9,700.4	0.00	0.00	0.00
19,600.0	89.85	179.65	9,983.1	-9,551.8	2,195.1	9,798.4	0.00	0.00	0.00
19,700.0	89.85	179.65	9,983.4	-9,651.8	2,195.7	9,896.5	0.00	0.00	0.00
19,800.0	89.85	179.65	9,983.6	-9,751.8	2,196.3	9,994.5	0.00	0.00	0.00
19,900.0	89.85	179.65	9,983.9	-9,851.8	2,196.9	10,092.6	0.00	0.00	0.00
20,000.0	89.85	179.65	9,984.2	-9,951.8	2,197.5	10,190.6	0.00	0.00	0.00
20,100.0	89.85	179.65	9,984.4	-10,051.8	2,198.2	10,288.7	0.00	0.00	0.00
20,200.0	89.85	179.65	9,984.7	-10,151.8	2,198.8	10,386.7	0.00	0.00	0.00
20,300.0	89.85	179.65	9,985.0	-10,251.8	2,199.4	10,484.8	0.00	0.00	0.00
20,400.0	89.85	179.65	9,985.2	-10,351.8	2,200.0	10,582.8	0.00	0.00	0.00
20,500.0	89.85	179.65	9,985.5	-10,451.8	2,200.6	10,680.9	0.00	0.00	0.00
20,600.0	89.85	179.65	9,985.8	-10,551.8	2,201.2	10,778.9	0.00	0.00	0.00
20,693.8	89.85	179.65	9,986.0	-10,645.6	2,201.7	10,870.9	0.00	0.00	0.00
TD at 20693.8									

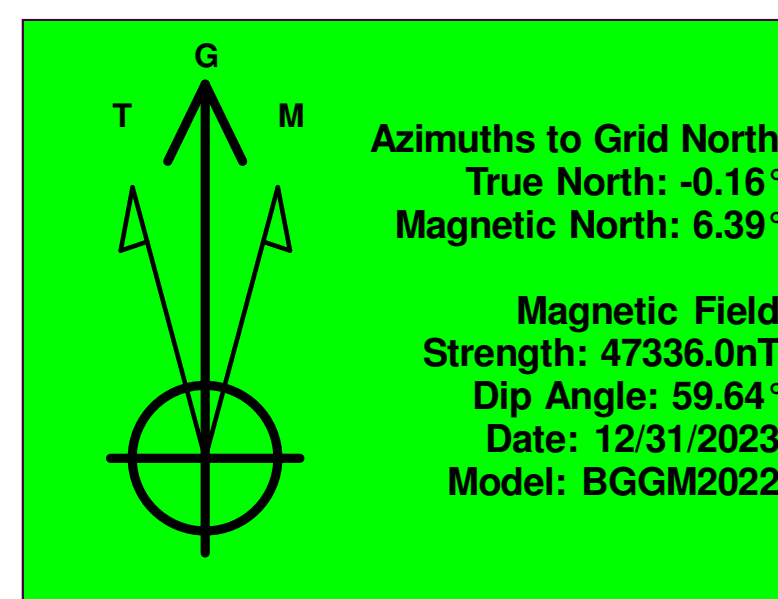
ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

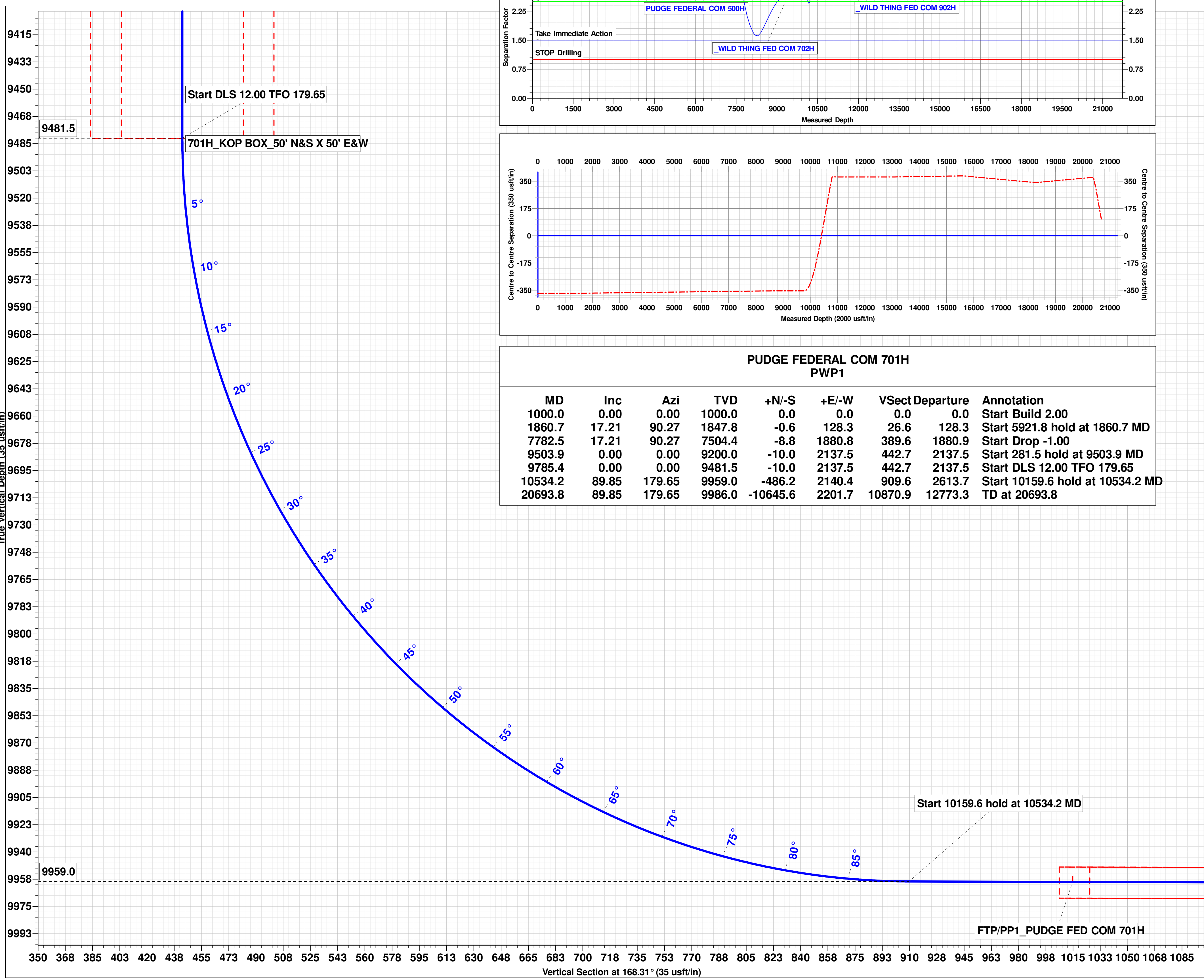
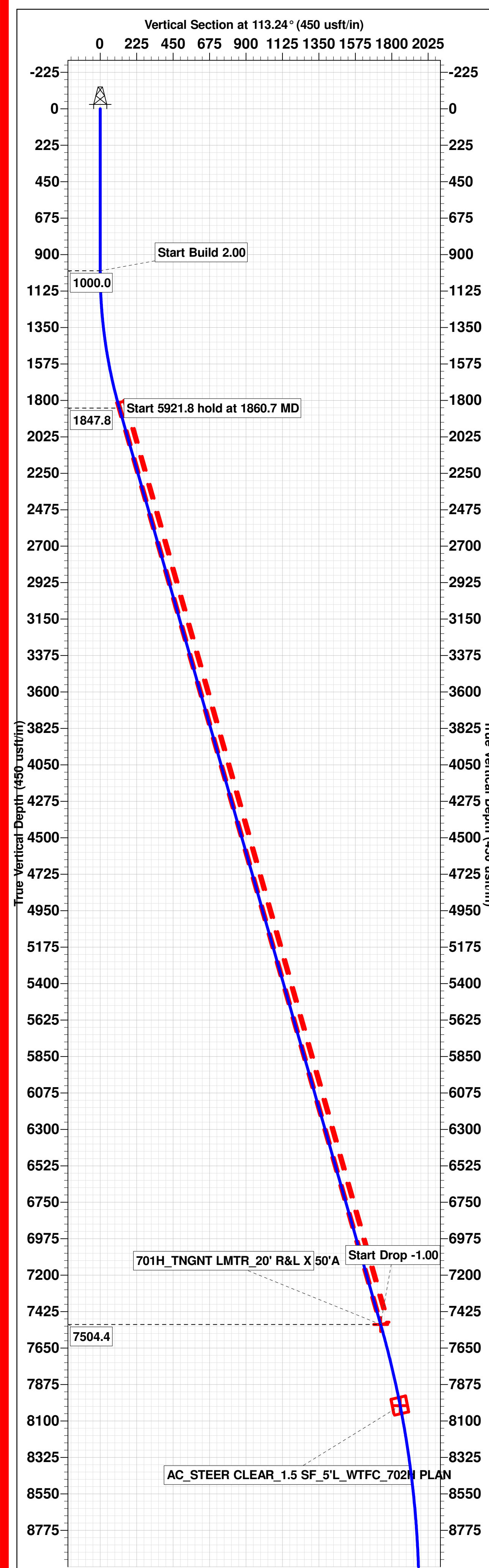
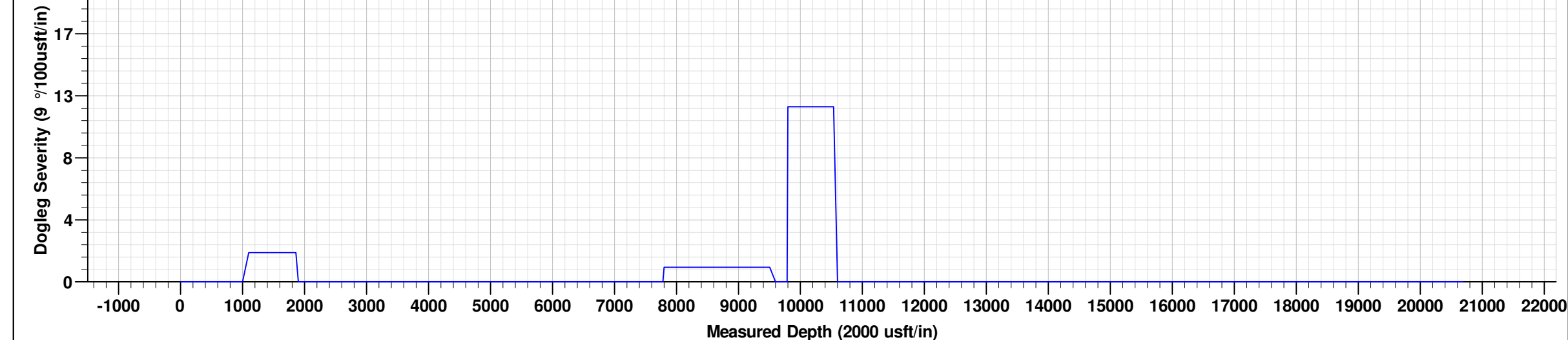
Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
701H_TNGNT LMTR_2C	17.21	270.27	7,504.4	-8.8	1,880.8	392,797.83	597,768.66	32° 4' 46.285 N	104° 1' 3.623 W
- plan misses target center by 0.1usft at 7782.5usft MD (7504.4 TVD, -8.8 N, 1880.9 E)									
- Rectangle (sides W40.0 H50.0 D5,956.6)									
AC_STEER CLEAR_1.5	12.04	270.27	8,004.9	-9.4	2,011.5	392,797.22	597,899.34	32° 4' 46.275 N	104° 1' 2.104 W
- plan hits target center									
- Rectangle (sides W1.0 H100.0 D100.0)									
701H_KOP BOX_50' N8	0.00	359.75	9,481.5	-10.0	2,137.5	392,796.63	598,025.36	32° 4' 46.266 N	104° 1' 0.640 W
- plan hits target center									
- Rectangle (sides W100.0 H100.0 D281.5)									
PP3_PUDGE FED COM	0.00	0.00	9,959.0	-6,882.8	2,181.7	385,923.87	598,069.55	32° 3' 38.249 N	104° 1' 0.360 W
- plan misses target center by 17.2usft at 16930.9usft MD (9976.0 TVD, -6882.7 N, 2179.0 E)									
- Circle (radius 50.0)									
FTP/PP1_PUDGE FED	0.00	0.01	9,959.0	-593.9	2,138.8	392,212.68	598,026.64	32° 4' 40.487 N	104° 1' 0.645 W
- plan misses target center by 2.3usft at 10641.9usft MD (9959.2 TVD, -593.9 N, 2141.0 E)									
- Circle (radius 50.0)									
PP2_PUDGE FED COM	0.00	0.00	9,959.0	-5,565.1	2,175.4	387,241.53	598,063.31	32° 3' 51.289 N	104° 1' 0.388 W
- plan misses target center by 14.2usft at 15613.2usft MD (9972.5 TVD, -5565.1 N, 2171.1 E)									
- Circle (radius 50.0)									
PP4_PUDGE FED COM	0.00	0.00	9,959.0	-8,218.1	2,188.0	384,588.52	598,075.86	32° 3' 25.033 N	104° 1' 0.333 W
- plan misses target center by 20.6usft at 18266.2usft MD (9979.5 TVD, -8218.1 N, 2187.1 E)									
- Circle (radius 50.0)									
PBHL_PUDGE FED CO	-0.15	359.65	9,986.0	-10,645.6	2,201.7	382,161.04	598,089.60	32° 3' 1.009 N	104° 1' 0.256 W
- plan hits target center									
- Rectangle (sides W100.0 H10,051.1 D20.0)									
LTP_PUDGE FED COM	90.00	0.00	9,986.0	-10,515.6	2,198.9	382,291.04	598,086.73	32° 3' 2.296 N	104° 1' 0.285 W
- plan misses target center by 2.1usft at 20563.8usft MD (9985.7 TVD, -10515.6 N, 2201.0 E)									
- Circle (radius 50.0)									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,693.8	9,986.0	5-1/2" Production Casing	5-1/2	6

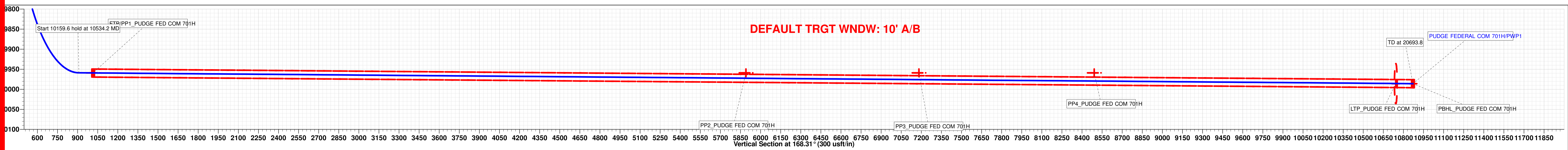
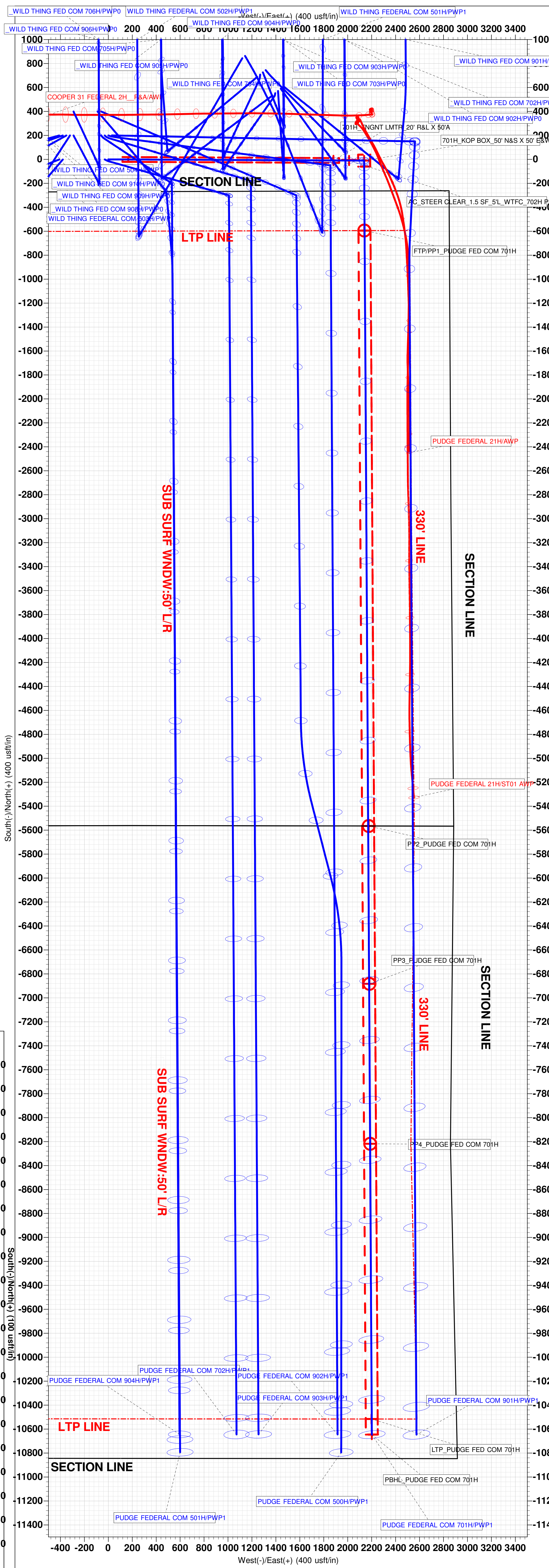
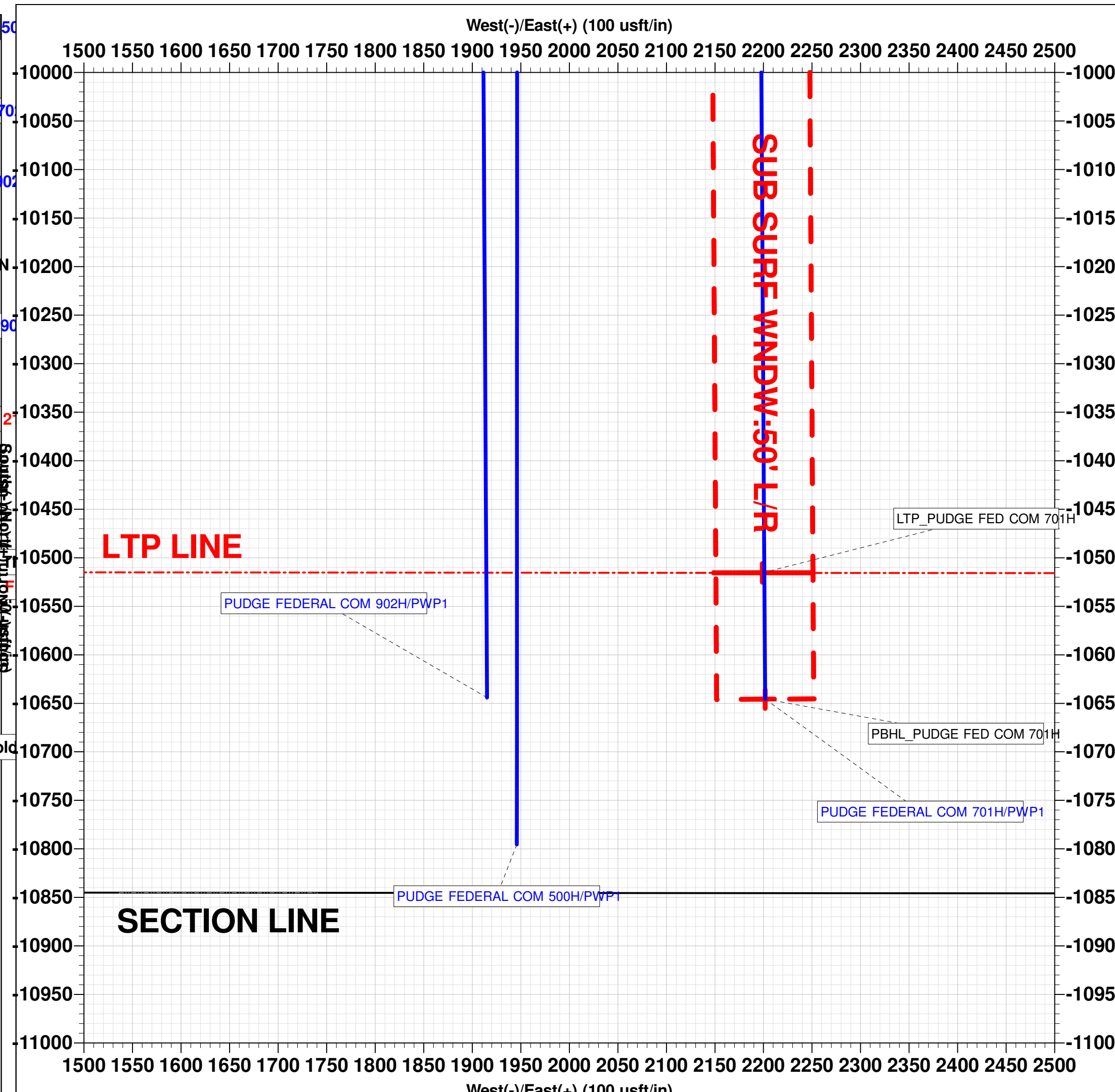
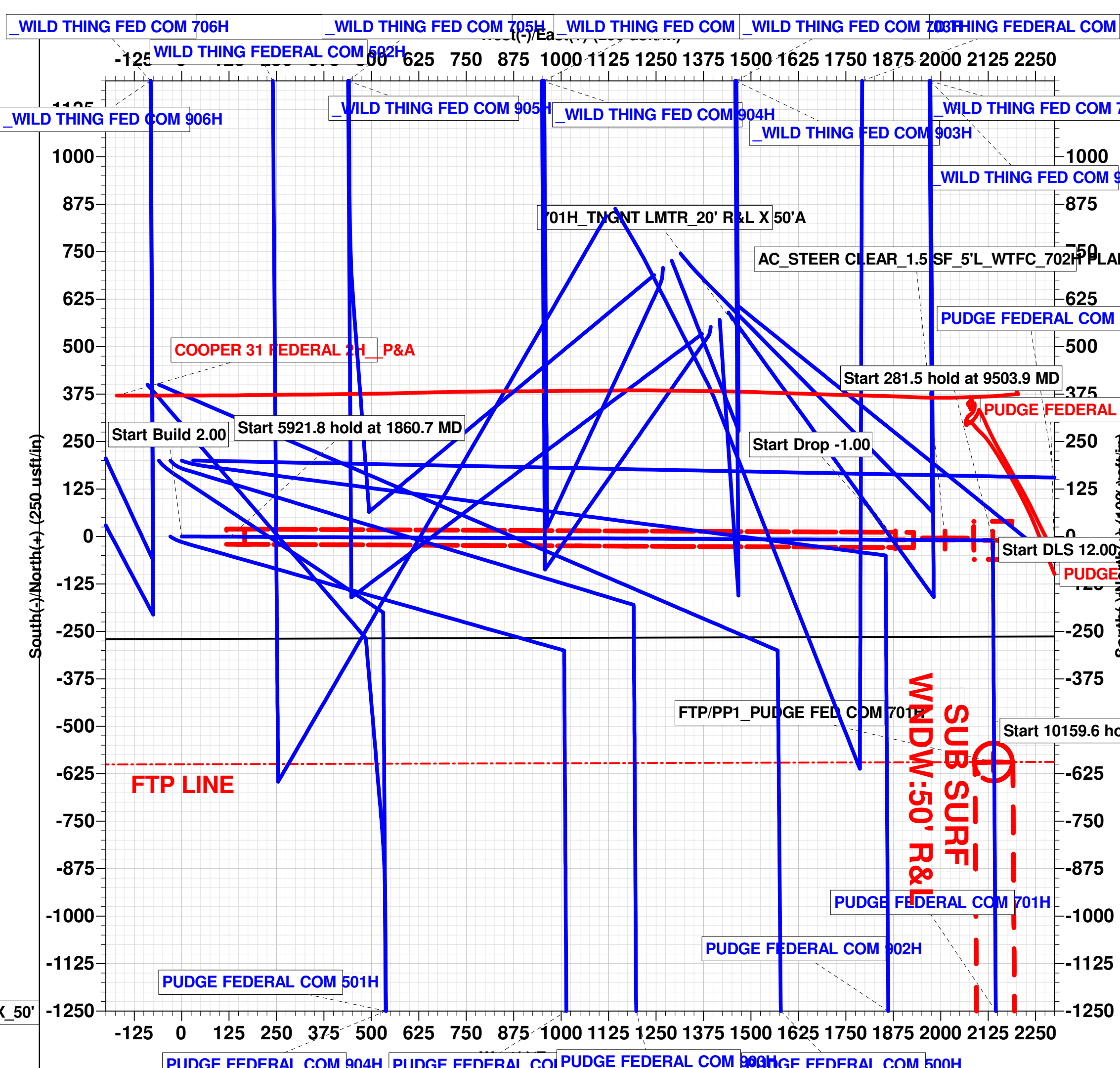
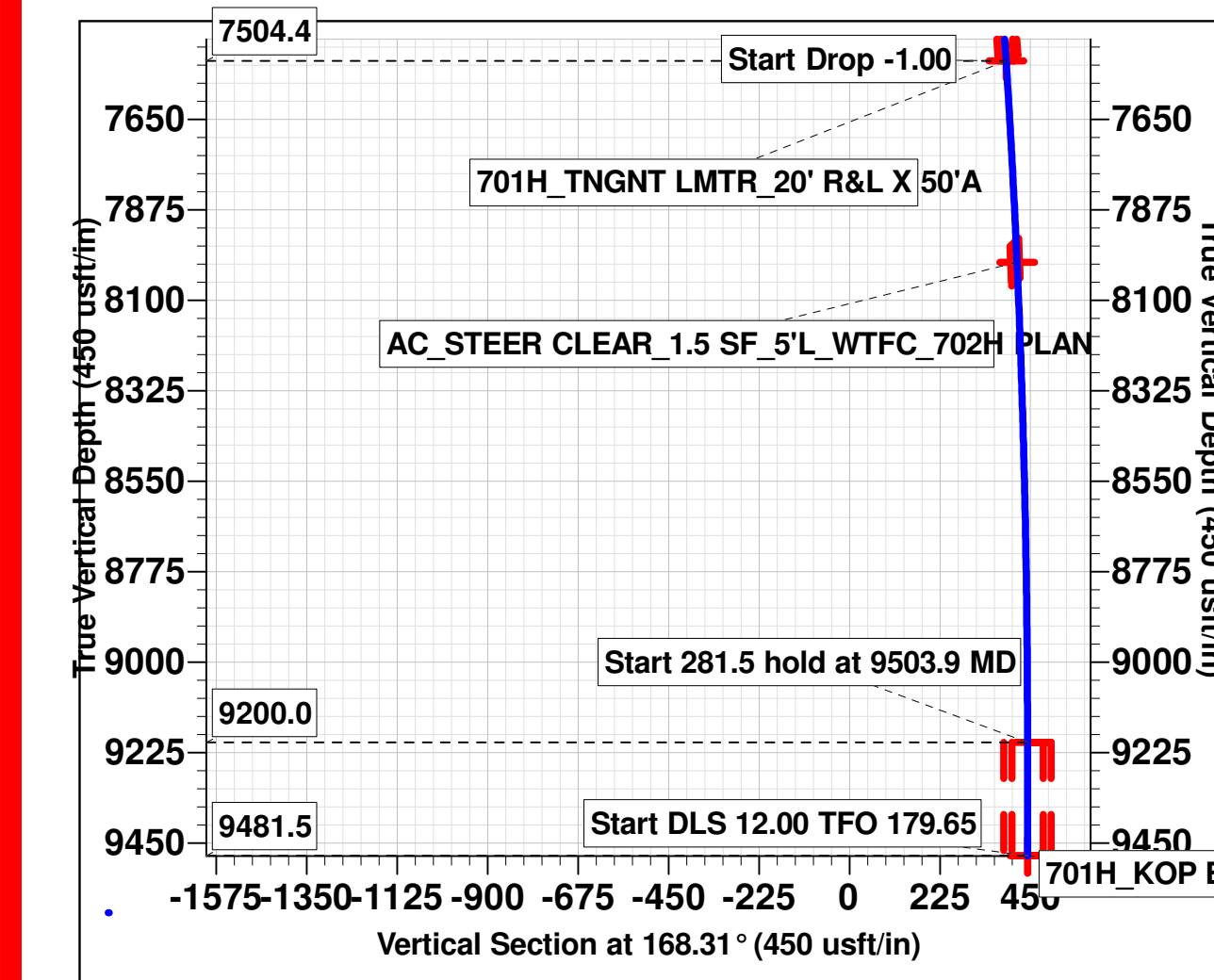
Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,000.0	1,000.0	0.0	0.0	Start Build 2.00
1,860.7	1,847.8	-0.6	128.3	Start 5921.8 hold at 1860.7 MD
7,782.5	7,504.4	-8.8	1,880.8	Start Drop -1.00
9,503.9	9,200.0	-10.0	2,137.5	Start 281.5 hold at 9503.9 MD
9,785.4	9,481.5	-10.0	2,137.5	Start DLS 12.00 TFO 179.65
10,534.2	9,959.0	-486.2	2,140.4	Start 10159.6 hold at 10534.2 MD
20,693.8	9,986.0	-10,645.6	2,201.7	TD at 20693.8



Project: ATLAS PROSPECT NME Site: PUDGE FED COM PROJECT Well: PUDGE FEDERAL COM 701H Wellbore: OWB Design: PWP1 GL: 2925.0 KB @ 2957.0ustf (NABORS X09)						
WELL DETAILS: PUDGE FEDERAL COM 701H						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	392806.63	595887.86	32° 4' 46.426 N	104° 1' 25.483 W	
TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
701H_TNGNT LMTR_20' R&L X 50'A	7504.4	-8.8	1880.8	392797.83	597768.66	
AC_STEER CLEAR_1.5 SF_5'L_WTFC_702H PLAN	8004.9	-9.4	2011.5	392797.22	597899.34	
701H_KOP BOX_50' N&S X 50' E&W	9481.5	-10.0	2137.5	392796.83	598025.36	
FTP/PP1_PUDGE FED COM 701H	9959.0	-593.9	2138.8	392212.68	598026.64	
PP2_PUDGE FED COM 701H	9959.0	-5565.1	2175.5	387241.53	598063.31	
PP3_PUDGE FED COM 701H	9959.0	-6882.8	2181.7	385923.87	598069.55	
PP4_PUDGE FED COM 701H	9959.0	-8218.1	2188.0	384588.52	598075.86	
LTP_PUDGE FED COM 701H	9986.0	-10515.6	2198.9	382291.04	598086.73	
PBHL_PUDGE FED COM 701H	9986.0	-10645.6	2201.7	382161.04	598089.60	



PUDGE FEDERAL COM 701H PWP1									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation	
1000.0	0.00	0.00	1000.0	0.0	0.0	0.0	0.0	Start Build 2.00	
1860.7	17.21	90.27	1847.8	-0.6	128.3	26.6	128.3	Start 5921.8 hold at 1860.7 MD	
7782.5	17.21	90.27	7504.4	-8.8	1880.8	389.6	1880.9	Start Drop -1.00	
9503.9	0.00	0.00	9200.0	-10.0	2137.5	442.7	2137.5	Start 281.5 hold at 9503.9 MD	
9785.4	0.00	0.00	9481.5	-10.0	2137.5	442.7	2137.5	Start DLS 12.00 TFO 179.65	
10534.2	89.85	179.65	9959.0	-486.2	2140.4	909.6	2613.7	Start 10159.6 hold at 10534.2 MD	
20693.8	89.85	179.65	9986.0	-10645.6	2201.7	10870.9	12773.3	TD at 20693.8	



DEFAULT TRGT WNDW: 10' A/B

ConocoPhillips - Pudge Federal Com 701H

1. Geologic Formations

TVD of Target:	9,995' EOL	Pilot hole depth:	N/A
MD at TD:	20,693'	Deepest expected fresh water:	0'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	339	Water	
Top of Salt	1063	Salt	
Base of Salt	2576	Salt	
Lamar	2772	Salt Water	
Bell Canyon	2817	Salt Water	
Cherry Canyon	3650	Oil/Gas	
Brushy Canyon	4931	Oil/Gas	
Bone Spring	6496	Oil/Gas	
1st Bone Spring Sand	7431	Oil/Gas	
2nd Bone Spring Sand	8283	Oil/Gas	
3rd Bone Spring Sand	9325	Oil/Gas	
Wolfcamp A	9823	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	3.03	1.22	3.26	3.29
8.750"	7500	9612	7.625"	29.7	P110-ICY	W513	3.57	1.84	3.74	2.25
6.75"	0	9412	5.5"	20	P110-ICY	BTC	3.27	2.39	3.87	3.87
6.75"	9412	20,693	5.5"	20	P110-ICY	W441	3.16	2.39	3.65	2.97
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 701H

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

ConocoPhillips - Pudge Federal Com 701H

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	1004	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	520	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	9,112'	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	404	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	520	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	6,496'	50% in OH
BH Stg 2	0'	263%
Production	9,112'	35% OH in Lateral (KOP to EOL)

ConocoPhillips - Pudge Federal Com 701H

4. Pressure Control Equipment

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8" x 8-3/4"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4"	13-5/8"	10M	5M Annular	x	2500psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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

Y	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR Part 3170 Subpart 3172.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

ConocoPhillips - Pudge Federal Com 701H

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 701H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7020 psi at 9995' TVD
Abnormal Temperature	NO 155 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

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.079684 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 701H	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: 2867509

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 08/08/2025	Time Sundry Submitted: 09:53
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. BHL Change: From: 200' FSL & 530' FEL Section 7. T26S. R29E. To: 200' FSL & 710' FEL Section 7. T26S. R29E. C102 Attached. Drilling Changes: Drilling Program, Directional Plan, AC Report and Specs Attached.

NOI Attachments

Procedure Description

- COG_Pudge_701H_AC_RPT_20250808095227.pdf
- Tenaris_Data_Sheets___3_String___WCA___State_Line___20___P110_ICY_Prod_20250808095228.pdf
- COG_PUDGE_FEDERAL_COM_701H_C102_20250808095229.pdf
- COG_Pudge_701H_Directional_Plan_20250808095229.pdf
- COG_Pudge_701H_Drilling_Program_20250808095228.pdf

Well Name: PUDGE FEDERAL COM	Well Location: T25S / R29E / SEC 31 / SESW / 32.079684 / -104.024234	County or Parish/State: EDDY / NM
Well Number: 701H	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_20250915084833.pdf

PUDGE_FED_COM_701H_COAs_20250915084833.pdf

Authorized

Tenaris_Data_Sheets__3_String__WCA__State_Line__20__P110_ICY_Prod_20250915122911.pdf

COG_PUDGE_FEDERAL_COM_701H_C102_20250915122901.pdf

COG_Pudge_701H_Drilling_Program_20250915122048.pdf

COG_Pudge_701H_Directional_Plan_20250915122043.pdf

COG_Pudge_701H_AC_RPT_20250915122038.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: AUG 08, 2025 09:52 AM
Name: COG OPERATING LLC	
Title: Regulatory Analyst	
Street Address: 925 N ELDRIDGE PARKWAY	
City: HOUSTON	State: TX
Phone: (281) 293-1000	
Email address: MAYTE.X.REYES@CONOCOPHILLIPS.COM	

Field

Representative Name: Robyn Russell

Street Address: 600 W. Illinois Ave.

City: Midland	State: TX	Zip: 79701
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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: 09/15/2025
Signature: Chris Walls	

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

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

5. Lease Serial No.
NMNM118113

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

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

8. Well Name and No.
PUDGE FEDERAL COM/701H

2. Name of Operator
COG OPERATING LLC

9. API Well No.

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

10. Field and Pool or Exploratory Area
PURPLE SAGE/WOLFCAMP, Gas

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

11. Country or Parish, State
EDDY/NM

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

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

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

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

BHL Change:
From: 200' FSL & 530' FEL Section 7. T26S. R29E.
To: 200' FSL & 710' FEL Section 7. T26S. R29E.
C102 Attached.

Drilling Changes:
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 08/08/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 09/15/2025
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office CARLSBAD	

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

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Location of Well

0. SHL: SESW / 269 FSL / 2444 FWL / TWSP: 25S / RANGE: 29E / SECTION: 31 / LAT: 32.079684 / LONG: -104.024234 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 330 FNL / 530 FEL / TWSP: 26S / RANGE: 29E / SECTION: 6 / LAT: 32.078037 / LONG: -104.01675 (TVD: 9748 feet, MD: 10286 feet)

BHL: SESE / 200 FSL / 530 FEL / TWSP: 26S / RANGE: 29E / SECTION: 7 / LAT: 32.050403 / LONG: -104.01664 (TVD: 9780 feet, MD: 20329 feet)

CONFIDENTIAL

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		10024	ft from	surface or a	200		overlap.		
Size	Volume	1 Stage		1 Stage		10024	Drilling	Calc	200		Min Dist		
6 3/4	0.0835	Cmt Sx		CuFt Cmt		Cu Ft	Mud Wt	MASP	Req'd		Hole-Cplg		
		1649		2223		959	13.50		BOPE		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 Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg	
0		#N/A	#N/A	0	#N/A								
#N/A													
Capitan Reef est top XXXX.													

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	PUDGE FED COM 701H
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



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.
Nominal Weight	45.50 lb/ft	Plain End Weight	44.26 lb/ft
Drift	9.794 in.	OD Tolerance	API
Nominal ID	9.950 in.		
		Body Yield Strength	715 x1000 lb
		Min. Internal Yield Pressure	3580 psi
		SMYS	55,000 psi
		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 %		
Threads per inch	5	Compression Strength	715 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	23 °/100 ft	Operating Torque	27,400 ft-lb
		External Pressure Capacity	2090 psi	Yield Torque	34,700 ft-lb

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

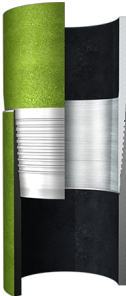
This connection is fully interchangeable with:
TXP[®] BTC - 7.625 in. - 0.328 (26.40) / 0.43 (33.70) / 0.5 (39.00) / 0.562 (42.80) / 0.595 (45.30) / 0.625 (47.10) in. (lb/ft)
Connections with Dopeless[®] Technology are fully compatible with the same connection in its doped version
Datasheet is also valid 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.

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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.

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TenarisHydril Wedge 441®



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

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

Pipe Body Data

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

Connection Data

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

Notes

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

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

WELL LOCATION INFORMATION

API Number 30-015-56661	Pool Code 98220	Pool Name Purple Sage; Wolfcamp (Gas)
Property Code 337302	Property Name PUDGE FED COM	Well Number 701H
OGRID No. 229137	Operator Name COG OPERATING LLC	Ground Level Elevation 2,925'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☒ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
N	31	25S	29E		269' FSL	2,444' FWL	32.079687°	-104.024231°	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	7	26S	29E		200' FSL	710' FEL	32.050405°	-104.017222°	EDDY

Dedicated Acres 640	Infill or Defining Well Infill	Defining Well API 30-015-56662	Overlapping Spacing Unit (Y/N) N	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	31	25S	29E		263' FSL	709' FEL	32.079667°	-104.017326°	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
A	6	26S	29E		330' FNL	710' FEL	32.078037°	-104.017331°	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	7	26S	29E		330' FSL	710' FEL	32.050762°	-104.017230°	EDDY

Unitized Area or Area of Uniform Interest COM	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 2925'
---	--	--------------------------------------

OPERATOR CERTIFICATIONS I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.		SURVEYOR CERTIFICATIONS I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.	
Signature Mayte Reyes Date 7/28/2025		Signature and Seal of Professional Surveyor  Date: 7/16/2025	
Printed Name Mayte Reyes		Certificate Number 12177	Date of Survey 7/16/2025
Email Address mayte.x.reyes@cop.com			

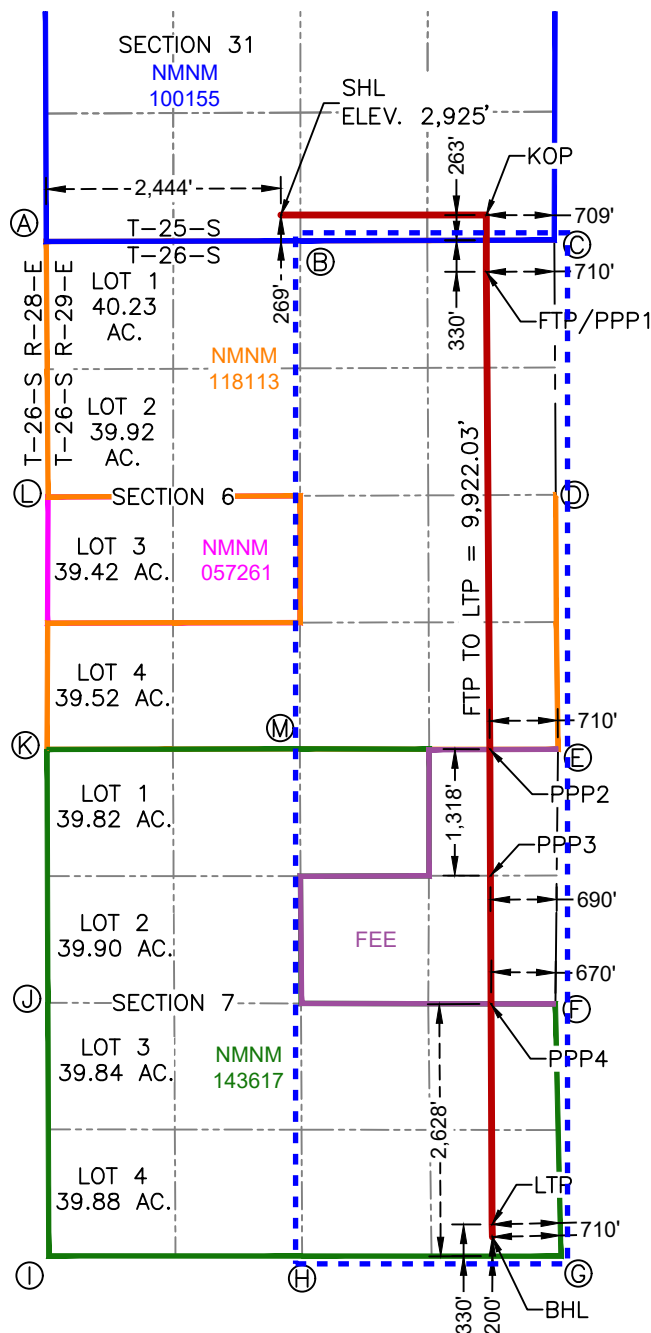
Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

ACREAGE DEDICATION PLATS

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

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

PUDGE FED COM 701H



SURFACE HOLE LOCATION
269' FSL & 2,444' FWL
ELEV.=2,925'

NAD 83 X = 637,072.81'
NAD 83 Y = 392,864.43'
NAD 83 LAT = 32.079687°
NAD 83 LONG = -104.024231°

KICK-OFF POINT
263' FSL & 709' FEL

NAD 83 X = 639,211.56'
NAD 83 Y = 392,863.50'
NAD 83 LAT = 32.079667°
NAD 83 LONG = -104.017326°

FIRST TAKE POINT & PENETRATION POINT 1
330' FNL & 710' FEL

NAD 83 X = 639,211.66'
NAD 83 Y = 392,270.50'
NAD 83 LAT = 32.078037°
NAD 83 LONG = -104.017331°

PENETRATION POINT 2
0' FSL & 710' FEL

NAD 83 X = 639,248.45'
NAD 83 Y = 387,299.25'
NAD 83 LAT = 32.064371°
NAD 83 LONG = -104.017259°

PENETRATION POINT 3
1,318' FNL & 690' FEL

NAD 83 X = 639,254.72'
NAD 83 Y = 385,981.57'
NAD 83 LAT = 32.060749°
NAD 83 LONG = -104.017251°

PENETRATION POINT 4
2,628' FSL & 670' FEL

NAD 83 X = 639,261.07'
NAD 83 Y = 384,646.18'
NAD 83 LAT = 32.057078°
NAD 83 LONG = -104.017243°

LAST TAKE POINT
330' FSL & 710' FEL

NAD 83 X = 639,271.99'
NAD 83 Y = 382,348.66'
NAD 83 LAT = 32.050762°
NAD 83 LONG = -104.017230°

BOTTOM HOLE LOCATION
200' FSL & 710' FEL

NAD 83 X = 639,274.86'
NAD 83 Y = 382,218.66'
NAD 83 LAT = 32.050405°
NAD 83 LONG = -104.017222°

CORNER COORDINATES
NEW MEXICO EAST - NAD 83

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

ConocoPhillips - Pudge Federal Com 701H

1. Geologic Formations

TVD of Target:	9,995' EOL	Pilot hole depth:	N/A
MD at TD:	20,693'	Deepest expected fresh water:	0'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	339	Water	
Top of Salt	1063	Salt	
Base of Salt	2576	Salt	
Lamar	2772	Salt Water	
Bell Canyon	2817	Salt Water	
Cherry Canyon	3650	Oil/Gas	
Brushy Canyon	4931	Oil/Gas	
Bone Spring	6496	Oil/Gas	
1st Bone Spring Sand	7431	Oil/Gas	
2nd Bone Spring Sand	8283	Oil/Gas	
3rd Bone Spring Sand	9325	Oil/Gas	
Wolfcamp A	9823	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	3.03	1.22	3.26	3.29
8.750"	7500	9612	7.625"	29.7	P110-ICY	W513	3.57	1.84	3.74	2.25
6.75"	0	9412	5.5"	20	P110-ICY	BTC	3.27	2.39	3.87	3.87
6.75"	9412	20,693	5.5"	20	P110-ICY	W441	3.16	2.39	3.65	2.97
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 701H

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

ConocoPhillips - Pudge Federal Com 701H

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	1004	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	520	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	9,112'	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	404	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	520	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	6,496'	50% in OH
BH Stg 2	0'	263%
Production	9,112'	35% OH in Lateral (KOP to EOL)

ConocoPhillips - Pudge Federal Com 701H

4. Pressure Control Equipment

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

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7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7020 psi at 9995' TVD
Abnormal Temperature	NO 155 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

DELAWARE BASIN WEST

**ATLAS PROSPECT_NME
PUDGE FED COM PROJECT
PUDGE FEDERAL COM 701H
3001556661
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 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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 701H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
Grid Convergence:	0.16 °		
		Latitude:	32° 4' 46.426 N
		Longitude:	104° 1' 25.483 W
		Ground Level:	2,925.0 usft

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2022	12/31/2023	6.55
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,336.01416875

Design	PWP1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			168.31

Plan Survey Tool Program	Date	8/4/2025		
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks
(usft)	(usft)			
1	0.0	20,693.8 PWP1 (OWB)	r.5 MWD+IFR1	
			OWSG MWD + IFR1 rev.5	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,860.7	17.21	90.27	1,847.8	-0.6	128.3	2.00	2.00	0.00	90.27	
7,782.5	17.21	90.27	7,504.4	-8.8	1,880.8	0.00	0.00	0.00	0.00	
9,503.9	0.00	0.00	9,200.0	-10.0	2,137.5	1.00	-1.00	0.00	180.00	
9,785.4	0.00	0.00	9,481.5	-10.0	2,137.5	0.00	0.00	0.00	0.00	
10,534.2	89.85	179.65	9,959.0	-486.2	2,140.4	12.00	12.00	23.99	179.65	
20,693.8	89.85	179.65	9,986.0	-10,645.6	2,201.7	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

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Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,100.0	2.00	90.27	1,100.0	0.0	1.7	0.4	2.00	2.00	0.00
1,200.0	4.00	90.27	1,199.8	0.0	7.0	1.4	2.00	2.00	0.00
1,300.0	6.00	90.27	1,299.5	-0.1	15.7	3.3	2.00	2.00	0.00
1,400.0	8.00	90.27	1,398.7	-0.1	27.9	5.8	2.00	2.00	0.00
1,500.0	10.00	90.27	1,497.5	-0.2	43.5	9.0	2.00	2.00	0.00
1,600.0	12.00	90.27	1,595.6	-0.3	62.6	13.0	2.00	2.00	0.00
1,700.0	14.00	90.27	1,693.1	-0.4	85.1	17.6	2.00	2.00	0.00
1,800.0	16.00	90.27	1,789.6	-0.5	111.0	23.0	2.00	2.00	0.00
1,860.7	17.21	90.27	1,847.8	-0.6	128.3	26.6	2.00	2.00	0.00
Start 5921.8 hold at 1860.7 MD									
1,900.0	17.21	90.27	1,885.3	-0.7	140.0	29.0	0.00	0.00	0.00
2,000.0	17.21	90.27	1,980.9	-0.8	169.5	35.1	0.00	0.00	0.00
2,100.0	17.21	90.27	2,076.4	-0.9	199.1	41.2	0.00	0.00	0.00
2,200.0	17.21	90.27	2,171.9	-1.1	228.7	47.4	0.00	0.00	0.00
2,300.0	17.21	90.27	2,267.4	-1.2	258.3	53.5	0.00	0.00	0.00
2,400.0	17.21	90.27	2,363.0	-1.3	287.9	59.6	0.00	0.00	0.00
2,500.0	17.21	90.27	2,458.5	-1.5	317.5	65.8	0.00	0.00	0.00
2,600.0	17.21	90.27	2,554.0	-1.6	347.1	71.9	0.00	0.00	0.00
2,700.0	17.21	90.27	2,649.5	-1.8	376.7	78.0	0.00	0.00	0.00
2,800.0	17.21	90.27	2,745.0	-1.9	406.3	84.2	0.00	0.00	0.00
2,900.0	17.21	90.27	2,840.6	-2.0	435.9	90.3	0.00	0.00	0.00
3,000.0	17.21	90.27	2,936.1	-2.2	465.5	96.4	0.00	0.00	0.00
3,100.0	17.21	90.27	3,031.6	-2.3	495.1	102.5	0.00	0.00	0.00
3,200.0	17.21	90.27	3,127.1	-2.5	524.7	108.7	0.00	0.00	0.00
3,300.0	17.21	90.27	3,222.6	-2.6	554.3	114.8	0.00	0.00	0.00
3,400.0	17.21	90.27	3,318.2	-2.7	583.9	120.9	0.00	0.00	0.00
3,500.0	17.21	90.27	3,413.7	-2.9	613.5	127.1	0.00	0.00	0.00
3,600.0	17.21	90.27	3,509.2	-3.0	643.1	133.2	0.00	0.00	0.00
3,700.0	17.21	90.27	3,604.7	-3.1	672.7	139.3	0.00	0.00	0.00
3,800.0	17.21	90.27	3,700.2	-3.3	702.2	145.4	0.00	0.00	0.00
3,900.0	17.21	90.27	3,795.8	-3.4	731.8	151.6	0.00	0.00	0.00
4,000.0	17.21	90.27	3,891.3	-3.6	761.4	157.7	0.00	0.00	0.00
4,100.0	17.21	90.27	3,986.8	-3.7	791.0	163.8	0.00	0.00	0.00
4,200.0	17.21	90.27	4,082.3	-3.8	820.6	170.0	0.00	0.00	0.00
4,300.0	17.21	90.27	4,177.8	-4.0	850.2	176.1	0.00	0.00	0.00
4,400.0	17.21	90.27	4,273.4	-4.1	879.8	182.2	0.00	0.00	0.00
4,500.0	17.21	90.27	4,368.9	-4.3	909.4	188.4	0.00	0.00	0.00
4,600.0	17.21	90.27	4,464.4	-4.4	939.0	194.5	0.00	0.00	0.00
4,700.0	17.21	90.27	4,559.9	-4.5	968.6	200.6	0.00	0.00	0.00
4,800.0	17.21	90.27	4,655.4	-4.7	998.2	206.7	0.00	0.00	0.00
4,900.0	17.21	90.27	4,751.0	-4.8	1,027.8	212.9	0.00	0.00	0.00

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Planning Report

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Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
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Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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	17.21	90.27	4,846.5	-4.9	1,057.4	219.0	0.00	0.00	0.00
5,100.0	17.21	90.27	4,942.0	-5.1	1,087.0	225.1	0.00	0.00	0.00
5,200.0	17.21	90.27	5,037.5	-5.2	1,116.6	231.3	0.00	0.00	0.00
5,300.0	17.21	90.27	5,133.0	-5.4	1,146.2	237.4	0.00	0.00	0.00
5,400.0	17.21	90.27	5,228.6	-5.5	1,175.8	243.5	0.00	0.00	0.00
5,500.0	17.21	90.27	5,324.1	-5.6	1,205.3	249.6	0.00	0.00	0.00
5,600.0	17.21	90.27	5,419.6	-5.8	1,234.9	255.8	0.00	0.00	0.00
5,700.0	17.21	90.27	5,515.1	-5.9	1,264.5	261.9	0.00	0.00	0.00
5,800.0	17.21	90.27	5,610.6	-6.1	1,294.1	268.0	0.00	0.00	0.00
5,900.0	17.21	90.27	5,706.2	-6.2	1,323.7	274.2	0.00	0.00	0.00
6,000.0	17.21	90.27	5,801.7	-6.3	1,353.3	280.3	0.00	0.00	0.00
6,100.0	17.21	90.27	5,897.2	-6.5	1,382.9	286.4	0.00	0.00	0.00
6,200.0	17.21	90.27	5,992.7	-6.6	1,412.5	292.6	0.00	0.00	0.00
6,300.0	17.21	90.27	6,088.2	-6.7	1,442.1	298.7	0.00	0.00	0.00
6,400.0	17.21	90.27	6,183.8	-6.9	1,471.7	304.8	0.00	0.00	0.00
6,500.0	17.21	90.27	6,279.3	-7.0	1,501.3	310.9	0.00	0.00	0.00
6,600.0	17.21	90.27	6,374.8	-7.2	1,530.9	317.1	0.00	0.00	0.00
6,700.0	17.21	90.27	6,470.3	-7.3	1,560.5	323.2	0.00	0.00	0.00
6,800.0	17.21	90.27	6,565.9	-7.4	1,590.1	329.3	0.00	0.00	0.00
6,900.0	17.21	90.27	6,661.4	-7.6	1,619.7	335.5	0.00	0.00	0.00
7,000.0	17.21	90.27	6,756.9	-7.7	1,649.3	341.6	0.00	0.00	0.00
7,100.0	17.21	90.27	6,852.4	-7.9	1,678.9	347.7	0.00	0.00	0.00
7,200.0	17.21	90.27	6,947.9	-8.0	1,708.5	353.8	0.00	0.00	0.00
7,300.0	17.21	90.27	7,043.5	-8.1	1,738.0	360.0	0.00	0.00	0.00
7,400.0	17.21	90.27	7,139.0	-8.3	1,767.6	366.1	0.00	0.00	0.00
7,500.0	17.21	90.27	7,234.5	-8.4	1,797.2	372.2	0.00	0.00	0.00
7,600.0	17.21	90.27	7,330.0	-8.5	1,826.8	378.4	0.00	0.00	0.00
7,700.0	17.21	90.27	7,425.5	-8.7	1,856.4	384.5	0.00	0.00	0.00
7,782.5	17.21	90.27	7,504.4	-8.8	1,880.8	389.6	0.00	0.00	0.00
Start Drop -1.00									
7,800.0	17.04	90.27	7,521.1	-8.8	1,886.0	390.6	1.00	-1.00	0.00
7,900.0	16.04	90.27	7,616.9	-9.0	1,914.5	396.5	1.00	-1.00	0.00
8,000.0	15.04	90.27	7,713.3	-9.1	1,941.2	402.1	1.00	-1.00	0.00
8,100.0	14.04	90.27	7,810.1	-9.2	1,966.4	407.3	1.00	-1.00	0.00
8,200.0	13.04	90.27	7,907.3	-9.3	1,989.8	412.1	1.00	-1.00	0.00
8,300.0	12.04	90.27	8,004.9	-9.4	2,011.5	416.6	1.00	-1.00	0.00
8,400.0	11.04	90.27	8,102.9	-9.5	2,031.5	420.8	1.00	-1.00	0.00
8,500.0	10.04	90.27	8,201.2	-9.6	2,049.8	424.5	1.00	-1.00	0.00
8,600.0	9.04	90.27	8,299.8	-9.7	2,066.3	428.0	1.00	-1.00	0.00
8,700.0	8.04	90.27	8,398.7	-9.7	2,081.2	431.0	1.00	-1.00	0.00
8,800.0	7.04	90.27	8,497.8	-9.8	2,094.3	433.8	1.00	-1.00	0.00
8,900.0	6.04	90.27	8,597.2	-9.9	2,105.7	436.1	1.00	-1.00	0.00
9,000.0	5.04	90.27	8,696.7	-9.9	2,115.4	438.1	1.00	-1.00	0.00
9,100.0	4.04	90.27	8,796.4	-9.9	2,123.3	439.8	1.00	-1.00	0.00
9,200.0	3.04	90.27	8,896.2	-10.0	2,129.4	441.0	1.00	-1.00	0.00
9,300.0	2.04	90.27	8,996.1	-10.0	2,133.9	442.0	1.00	-1.00	0.00
9,400.0	1.04	90.27	9,096.1	-10.0	2,136.6	442.5	1.00	-1.00	0.00
9,503.9	0.00	0.00	9,200.0	-10.0	2,137.5	442.7	1.00	-1.00	0.00
Start 281.5 hold at 9503.9 MD									
9,600.0	0.00	0.00	9,296.1	-10.0	2,137.5	442.7	0.00	0.00	0.00
9,700.0	0.00	0.00	9,396.1	-10.0	2,137.5	442.7	0.00	0.00	0.00
9,785.4	0.00	0.00	9,481.5	-10.0	2,137.5	442.7	0.00	0.00	0.00
Start DLS 12.00 TFO 179.65									

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Planning Report

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Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,800.0	1.75	179.65	9,496.1	-10.2	2,137.5	442.9	12.00	12.00	0.00
9,825.0	4.75	179.65	9,521.0	-11.6	2,137.5	444.3	12.00	12.00	0.00
9,850.0	7.75	179.65	9,545.9	-14.4	2,137.5	447.0	12.00	12.00	0.00
9,875.0	10.75	179.65	9,570.5	-18.4	2,137.6	450.9	12.00	12.00	0.00
9,900.0	13.75	179.65	9,595.0	-23.7	2,137.6	456.1	12.00	12.00	0.00
9,925.0	16.75	179.65	9,619.1	-30.3	2,137.6	462.6	12.00	12.00	0.00
9,950.0	19.75	179.65	9,642.8	-38.1	2,137.7	470.2	12.00	12.00	0.00
9,975.0	22.75	179.65	9,666.1	-47.1	2,137.7	479.1	12.00	12.00	0.00
10,000.0	25.75	179.65	9,688.9	-57.4	2,137.8	489.2	12.00	12.00	0.00
10,025.0	28.75	179.65	9,711.1	-68.8	2,137.9	500.4	12.00	12.00	0.00
10,050.0	31.75	179.65	9,732.7	-81.4	2,137.9	512.8	12.00	12.00	0.00
10,075.0	34.75	179.65	9,753.6	-95.1	2,138.0	526.2	12.00	12.00	0.00
10,100.0	37.75	179.65	9,773.8	-109.9	2,138.1	540.7	12.00	12.00	0.00
10,125.0	40.75	179.65	9,793.2	-125.7	2,138.2	556.2	12.00	12.00	0.00
10,150.0	43.75	179.65	9,811.7	-142.5	2,138.3	572.7	12.00	12.00	0.00
10,175.0	46.75	179.65	9,829.3	-160.3	2,138.4	590.1	12.00	12.00	0.00
10,200.0	49.75	179.65	9,845.9	-178.9	2,138.5	608.4	12.00	12.00	0.00
10,225.0	52.75	179.65	9,861.5	-198.4	2,138.6	627.5	12.00	12.00	0.00
10,250.0	55.75	179.65	9,876.2	-218.7	2,138.8	647.4	12.00	12.00	0.00
10,275.0	58.75	179.65	9,889.7	-239.7	2,138.9	668.0	12.00	12.00	0.00
10,300.0	61.75	179.65	9,902.1	-261.4	2,139.0	689.3	12.00	12.00	0.00
10,325.0	64.75	179.65	9,913.3	-283.8	2,139.2	711.1	12.00	12.00	0.00
10,350.0	67.75	179.65	9,923.4	-306.6	2,139.3	733.6	12.00	12.00	0.00
10,375.0	70.75	179.65	9,932.3	-330.0	2,139.4	756.5	12.00	12.00	0.00
10,400.0	73.75	179.65	9,939.9	-353.8	2,139.6	779.8	12.00	12.00	0.00
10,425.0	76.75	179.65	9,946.2	-378.0	2,139.7	803.5	12.00	12.00	0.00
10,450.0	79.75	179.65	9,951.3	-402.5	2,139.9	827.5	12.00	12.00	0.00
10,475.0	82.75	179.65	9,955.1	-427.2	2,140.0	851.8	12.00	12.00	0.00
10,500.0	85.75	179.65	9,957.6	-452.0	2,140.2	876.1	12.00	12.00	0.00
10,525.0	88.75	179.65	9,958.9	-477.0	2,140.3	900.6	12.00	12.00	0.00
10,534.2	89.85	179.65	9,959.0	-486.2	2,140.4	909.6	12.00	12.00	0.00
Start 10159.6 hold at 10534.2 MD									
10,600.0	89.85	179.65	9,959.1	-552.0	2,140.8	974.2	0.00	0.00	0.00
10,700.0	89.85	179.65	9,959.4	-652.0	2,141.4	1,072.2	0.00	0.00	0.00
10,800.0	89.85	179.65	9,959.7	-752.0	2,142.0	1,170.2	0.00	0.00	0.00
10,900.0	89.85	179.65	9,959.9	-852.0	2,142.6	1,268.3	0.00	0.00	0.00
11,000.0	89.85	179.65	9,960.2	-952.0	2,143.2	1,366.3	0.00	0.00	0.00
11,100.0	89.85	179.65	9,960.5	-1,052.0	2,143.8	1,464.4	0.00	0.00	0.00
11,200.0	89.85	179.65	9,960.7	-1,152.0	2,144.4	1,562.4	0.00	0.00	0.00
11,300.0	89.85	179.65	9,961.0	-1,252.0	2,145.0	1,660.5	0.00	0.00	0.00
11,400.0	89.85	179.65	9,961.3	-1,352.0	2,145.6	1,758.5	0.00	0.00	0.00
11,500.0	89.85	179.65	9,961.5	-1,452.0	2,146.2	1,856.6	0.00	0.00	0.00
11,600.0	89.85	179.65	9,961.8	-1,552.0	2,146.8	1,954.6	0.00	0.00	0.00
11,700.0	89.85	179.65	9,962.1	-1,652.0	2,147.4	2,052.7	0.00	0.00	0.00
11,800.0	89.85	179.65	9,962.3	-1,752.0	2,148.0	2,150.7	0.00	0.00	0.00
11,900.0	89.85	179.65	9,962.6	-1,852.0	2,148.6	2,248.8	0.00	0.00	0.00
12,000.0	89.85	179.65	9,962.9	-1,952.0	2,149.2	2,346.8	0.00	0.00	0.00
12,100.0	89.85	179.65	9,963.1	-2,052.0	2,149.8	2,444.9	0.00	0.00	0.00
12,200.0	89.85	179.65	9,963.4	-2,152.0	2,150.4	2,542.9	0.00	0.00	0.00
12,300.0	89.85	179.65	9,963.7	-2,252.0	2,151.0	2,641.0	0.00	0.00	0.00
12,400.0	89.85	179.65	9,963.9	-2,352.0	2,151.6	2,739.0	0.00	0.00	0.00
12,500.0	89.85	179.65	9,964.2	-2,452.0	2,152.2	2,837.1	0.00	0.00	0.00
12,600.0	89.85	179.65	9,964.5	-2,552.0	2,152.9	2,935.1	0.00	0.00	0.00
12,700.0	89.85	179.65	9,964.7	-2,652.0	2,153.5	3,033.2	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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)
12,800.0	89.85	179.65	9,965.0	-2,752.0	2,154.1	3,131.2	0.00	0.00	0.00
12,900.0	89.85	179.65	9,965.3	-2,852.0	2,154.7	3,229.3	0.00	0.00	0.00
13,000.0	89.85	179.65	9,965.5	-2,952.0	2,155.3	3,327.3	0.00	0.00	0.00
13,100.0	89.85	179.65	9,965.8	-3,052.0	2,155.9	3,425.3	0.00	0.00	0.00
13,200.0	89.85	179.65	9,966.1	-3,152.0	2,156.5	3,523.4	0.00	0.00	0.00
13,300.0	89.85	179.65	9,966.3	-3,252.0	2,157.1	3,621.4	0.00	0.00	0.00
13,400.0	89.85	179.65	9,966.6	-3,352.0	2,157.7	3,719.5	0.00	0.00	0.00
13,500.0	89.85	179.65	9,966.9	-3,451.9	2,158.3	3,817.5	0.00	0.00	0.00
13,600.0	89.85	179.65	9,967.1	-3,551.9	2,158.9	3,915.6	0.00	0.00	0.00
13,700.0	89.85	179.65	9,967.4	-3,651.9	2,159.5	4,013.6	0.00	0.00	0.00
13,800.0	89.85	179.65	9,967.7	-3,751.9	2,160.1	4,111.7	0.00	0.00	0.00
13,900.0	89.85	179.65	9,967.9	-3,851.9	2,160.7	4,209.7	0.00	0.00	0.00
14,000.0	89.85	179.65	9,968.2	-3,951.9	2,161.3	4,307.8	0.00	0.00	0.00
14,100.0	89.85	179.65	9,968.5	-4,051.9	2,161.9	4,405.8	0.00	0.00	0.00
14,200.0	89.85	179.65	9,968.7	-4,151.9	2,162.5	4,503.9	0.00	0.00	0.00
14,300.0	89.85	179.65	9,969.0	-4,251.9	2,163.1	4,601.9	0.00	0.00	0.00
14,400.0	89.85	179.65	9,969.3	-4,351.9	2,163.7	4,700.0	0.00	0.00	0.00
14,500.0	89.85	179.65	9,969.5	-4,451.9	2,164.3	4,798.0	0.00	0.00	0.00
14,600.0	89.85	179.65	9,969.8	-4,551.9	2,164.9	4,896.1	0.00	0.00	0.00
14,700.0	89.85	179.65	9,970.0	-4,651.9	2,165.5	4,994.1	0.00	0.00	0.00
14,800.0	89.85	179.65	9,970.3	-4,751.9	2,166.1	5,092.2	0.00	0.00	0.00
14,900.0	89.85	179.65	9,970.6	-4,851.9	2,166.7	5,190.2	0.00	0.00	0.00
15,000.0	89.85	179.65	9,970.8	-4,951.9	2,167.3	5,288.3	0.00	0.00	0.00
15,100.0	89.85	179.65	9,971.1	-5,051.9	2,168.0	5,386.3	0.00	0.00	0.00
15,200.0	89.85	179.65	9,971.4	-5,151.9	2,168.6	5,484.3	0.00	0.00	0.00
15,300.0	89.85	179.65	9,971.6	-5,251.9	2,169.2	5,582.4	0.00	0.00	0.00
15,400.0	89.85	179.65	9,971.9	-5,351.9	2,169.8	5,680.4	0.00	0.00	0.00
15,500.0	89.85	179.65	9,972.2	-5,451.9	2,170.4	5,778.5	0.00	0.00	0.00
15,600.0	89.85	179.65	9,972.4	-5,551.9	2,171.0	5,876.5	0.00	0.00	0.00
15,700.0	89.85	179.65	9,972.7	-5,651.9	2,171.6	5,974.6	0.00	0.00	0.00
15,800.0	89.85	179.65	9,973.0	-5,751.9	2,172.2	6,072.6	0.00	0.00	0.00
15,900.0	89.85	179.65	9,973.2	-5,851.9	2,172.8	6,170.7	0.00	0.00	0.00
16,000.0	89.85	179.65	9,973.5	-5,951.9	2,173.4	6,268.7	0.00	0.00	0.00
16,100.0	89.85	179.65	9,973.8	-6,051.9	2,174.0	6,366.8	0.00	0.00	0.00
16,200.0	89.85	179.65	9,974.0	-6,151.9	2,174.6	6,464.8	0.00	0.00	0.00
16,300.0	89.85	179.65	9,974.3	-6,251.9	2,175.2	6,562.9	0.00	0.00	0.00
16,400.0	89.85	179.65	9,974.6	-6,351.9	2,175.8	6,660.9	0.00	0.00	0.00
16,500.0	89.85	179.65	9,974.8	-6,451.9	2,176.4	6,759.0	0.00	0.00	0.00
16,600.0	89.85	179.65	9,975.1	-6,551.9	2,177.0	6,857.0	0.00	0.00	0.00
16,700.0	89.85	179.65	9,975.4	-6,651.9	2,177.6	6,955.1	0.00	0.00	0.00
16,800.0	89.85	179.65	9,975.6	-6,751.9	2,178.2	7,053.1	0.00	0.00	0.00
16,900.0	89.85	179.65	9,975.9	-6,851.9	2,178.8	7,151.2	0.00	0.00	0.00
17,000.0	89.85	179.65	9,976.2	-6,951.9	2,179.4	7,249.2	0.00	0.00	0.00
17,100.0	89.85	179.65	9,976.4	-7,051.9	2,180.0	7,347.3	0.00	0.00	0.00
17,200.0	89.85	179.65	9,976.7	-7,151.9	2,180.6	7,445.3	0.00	0.00	0.00
17,300.0	89.85	179.65	9,977.0	-7,251.9	2,181.2	7,543.3	0.00	0.00	0.00
17,400.0	89.85	179.65	9,977.2	-7,351.9	2,181.8	7,641.4	0.00	0.00	0.00
17,500.0	89.85	179.65	9,977.5	-7,451.9	2,182.4	7,739.4	0.00	0.00	0.00
17,600.0	89.85	179.65	9,977.8	-7,551.9	2,183.1	7,837.5	0.00	0.00	0.00
17,700.0	89.85	179.65	9,978.0	-7,651.9	2,183.7	7,935.5	0.00	0.00	0.00
17,800.0	89.85	179.65	9,978.3	-7,751.9	2,184.3	8,033.6	0.00	0.00	0.00
17,900.0	89.85	179.65	9,978.6	-7,851.9	2,184.9	8,131.6	0.00	0.00	0.00
18,000.0	89.85	179.65	9,978.8	-7,951.9	2,185.5	8,229.7	0.00	0.00	0.00
18,100.0	89.85	179.65	9,979.1	-8,051.8	2,186.1	8,327.7	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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)
18,200.0	89.85	179.65	9,979.4	-8,151.8	2,186.7	8,425.8	0.00	0.00	0.00
18,300.0	89.85	179.65	9,979.6	-8,251.8	2,187.3	8,523.8	0.00	0.00	0.00
18,400.0	89.85	179.65	9,979.9	-8,351.8	2,187.9	8,621.9	0.00	0.00	0.00
18,500.0	89.85	179.65	9,980.2	-8,451.8	2,188.5	8,719.9	0.00	0.00	0.00
18,600.0	89.85	179.65	9,980.4	-8,551.8	2,189.1	8,818.0	0.00	0.00	0.00
18,700.0	89.85	179.65	9,980.7	-8,651.8	2,189.7	8,916.0	0.00	0.00	0.00
18,800.0	89.85	179.65	9,981.0	-8,751.8	2,190.3	9,014.1	0.00	0.00	0.00
18,900.0	89.85	179.65	9,981.2	-8,851.8	2,190.9	9,112.1	0.00	0.00	0.00
19,000.0	89.85	179.65	9,981.5	-8,951.8	2,191.5	9,210.2	0.00	0.00	0.00
19,100.0	89.85	179.65	9,981.8	-9,051.8	2,192.1	9,308.2	0.00	0.00	0.00
19,200.0	89.85	179.65	9,982.0	-9,151.8	2,192.7	9,406.3	0.00	0.00	0.00
19,300.0	89.85	179.65	9,982.3	-9,251.8	2,193.3	9,504.3	0.00	0.00	0.00
19,400.0	89.85	179.65	9,982.6	-9,351.8	2,193.9	9,602.4	0.00	0.00	0.00
19,500.0	89.85	179.65	9,982.8	-9,451.8	2,194.5	9,700.4	0.00	0.00	0.00
19,600.0	89.85	179.65	9,983.1	-9,551.8	2,195.1	9,798.4	0.00	0.00	0.00
19,700.0	89.85	179.65	9,983.4	-9,651.8	2,195.7	9,896.5	0.00	0.00	0.00
19,800.0	89.85	179.65	9,983.6	-9,751.8	2,196.3	9,994.5	0.00	0.00	0.00
19,900.0	89.85	179.65	9,983.9	-9,851.8	2,196.9	10,092.6	0.00	0.00	0.00
20,000.0	89.85	179.65	9,984.2	-9,951.8	2,197.5	10,190.6	0.00	0.00	0.00
20,100.0	89.85	179.65	9,984.4	-10,051.8	2,198.2	10,288.7	0.00	0.00	0.00
20,200.0	89.85	179.65	9,984.7	-10,151.8	2,198.8	10,386.7	0.00	0.00	0.00
20,300.0	89.85	179.65	9,985.0	-10,251.8	2,199.4	10,484.8	0.00	0.00	0.00
20,400.0	89.85	179.65	9,985.2	-10,351.8	2,200.0	10,582.8	0.00	0.00	0.00
20,500.0	89.85	179.65	9,985.5	-10,451.8	2,200.6	10,680.9	0.00	0.00	0.00
20,600.0	89.85	179.65	9,985.8	-10,551.8	2,201.2	10,778.9	0.00	0.00	0.00
20,693.8	89.85	179.65	9,986.0	-10,645.6	2,201.7	10,870.9	0.00	0.00	0.00
TD at 20693.8									

ConocoPhillips

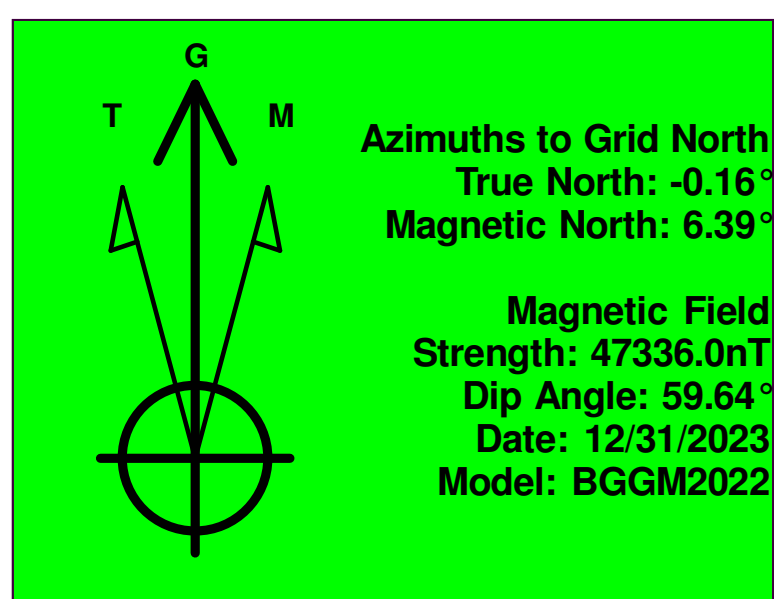
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Company:	DELAWARE BASIN WEST	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Project:	ATLAS PROSPECT_NME	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site:	PUDGE FED COM PROJECT	North Reference:	Grid
Well:	PUDGE FEDERAL COM 701H	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)		
701H_TNGNT LMTR_2C - plan misses target center by 0.1usft at 7782.5usft MD (7504.4 TVD, -8.8 N, 1880.9 E) - Rectangle (sides W40.0 H50.0 D5,956.6)	17.21	270.27	7,504.4	-8.8	1,880.8	392,797.83	597,768.66	32° 4' 46.285 N	104° 1' 3.623 W
AC_STEER CLEAR_1.5 - plan hits target center - Rectangle (sides W1.0 H100.0 D100.0)	12.04	270.27	8,004.9	-9.4	2,011.5	392,797.22	597,899.34	32° 4' 46.275 N	104° 1' 2.104 W
701H_KOP BOX_50' N8 - plan hits target center - Rectangle (sides W100.0 H100.0 D281.5)	0.00	359.75	9,481.5	-10.0	2,137.5	392,796.63	598,025.36	32° 4' 46.266 N	104° 1' 0.640 W
PP3_PUDGE FED COM - plan misses target center by 17.2usft at 16930.9usft MD (9976.0 TVD, -6882.7 N, 2179.0 E) - Circle (radius 50.0)	0.00	0.00	9,959.0	-6,882.8	2,181.7	385,923.87	598,069.55	32° 3' 38.249 N	104° 1' 0.360 W
FTP/PP1_PUDGE FED - plan misses target center by 2.3usft at 10641.9usft MD (9959.2 TVD, -593.9 N, 2141.0 E) - Circle (radius 50.0)	0.00	0.01	9,959.0	-593.9	2,138.8	392,212.68	598,026.64	32° 4' 40.487 N	104° 1' 0.645 W
PP2_PUDGE FED COM - plan misses target center by 14.2usft at 15613.2usft MD (9972.5 TVD, -5565.1 N, 2171.1 E) - Circle (radius 50.0)	0.00	0.00	9,959.0	-5,565.1	2,175.4	387,241.53	598,063.31	32° 3' 51.289 N	104° 1' 0.388 W
PP4_PUDGE FED COM - plan misses target center by 20.6usft at 18266.2usft MD (9979.5 TVD, -8218.1 N, 2187.1 E) - Circle (radius 50.0)	0.00	0.00	9,959.0	-8,218.1	2,188.0	384,588.52	598,075.86	32° 3' 25.033 N	104° 1' 0.333 W
PBHL_PUDGE FED CO - plan hits target center - Rectangle (sides W100.0 H10,051.1 D20.0)	-0.15	359.65	9,986.0	-10,645.6	2,201.7	382,161.04	598,089.60	32° 3' 1.009 N	104° 1' 0.256 W
LTP_PUDGE FED COM - plan misses target center by 2.1usft at 20563.8usft MD (9985.7 TVD, -10515.6 N, 2201.0 E) - Circle (radius 50.0)	90.00	0.00	9,986.0	-10,515.6	2,198.9	382,291.04	598,086.73	32° 3' 2.296 N	104° 1' 0.285 W

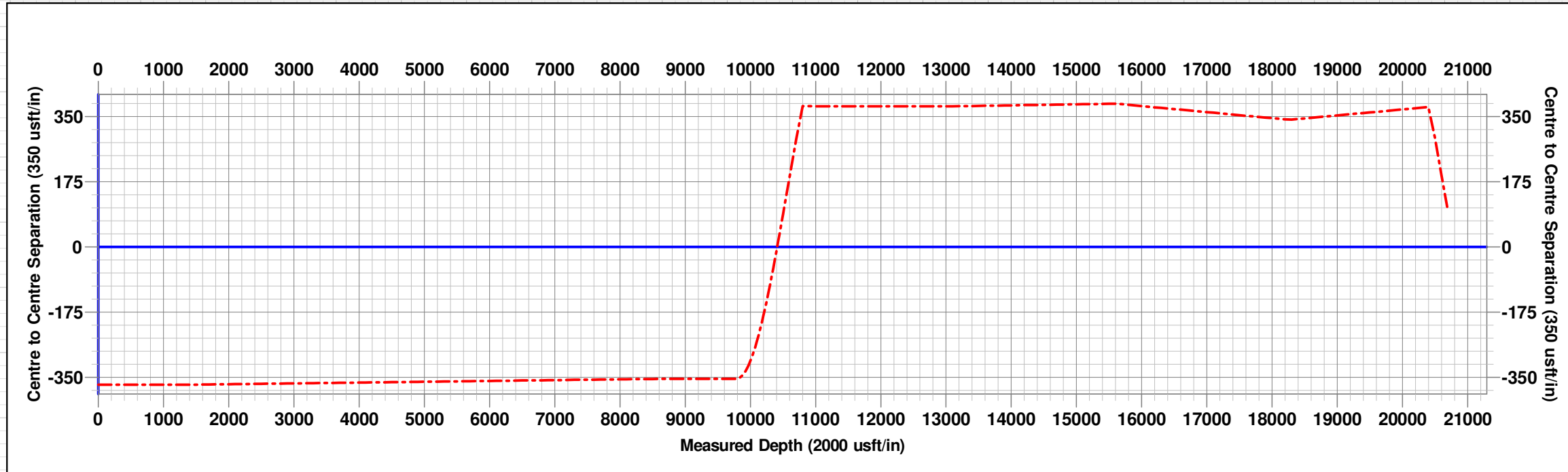
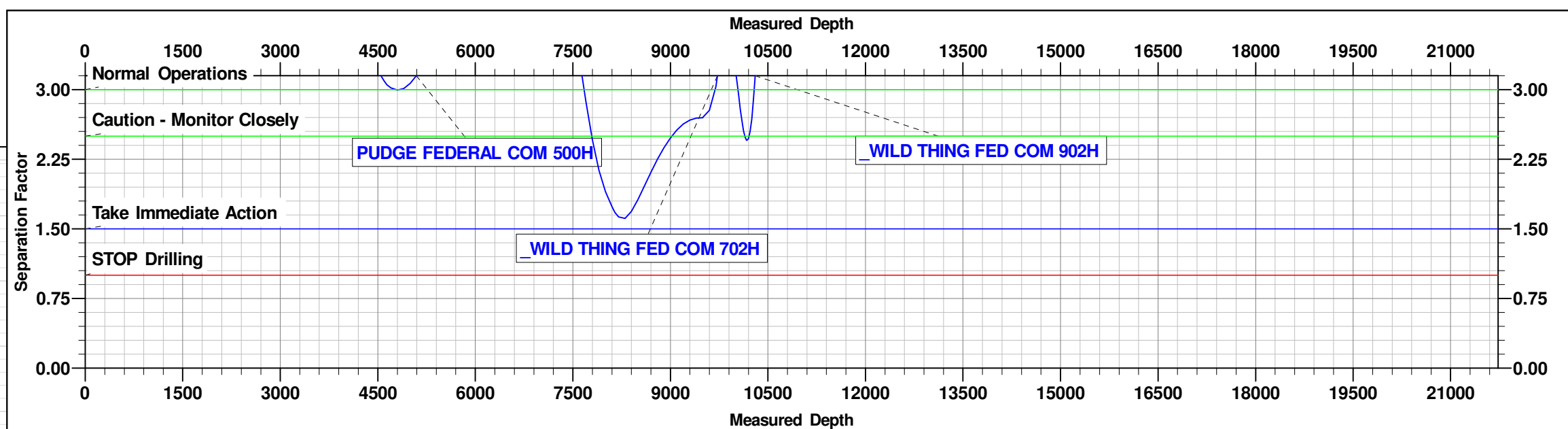
Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,693.8	9,986.0	5-1/2" Production Casing	5-1/2	6

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
1,000.0	1,000.0	0.0	0.0	Start Build 2.00
1,860.7	1,847.8	-0.6	128.3	Start 5921.8 hold at 1860.7 MD
7,782.5	7,504.4	-8.8	1,880.8	Start Drop -1.00
9,503.9	9,200.0	-10.0	2,137.5	Start 281.5 hold at 9503.9 MD
9,785.4	9,481.5	-10.0	2,137.5	Start DLS 12.00 TFO 179.65
10,534.2	9,959.0	-486.2	2,140.4	Start 10159.6 hold at 10534.2 MD
20,693.8	9,986.0	-10,645.6	2,201.7	TD at 20693.8

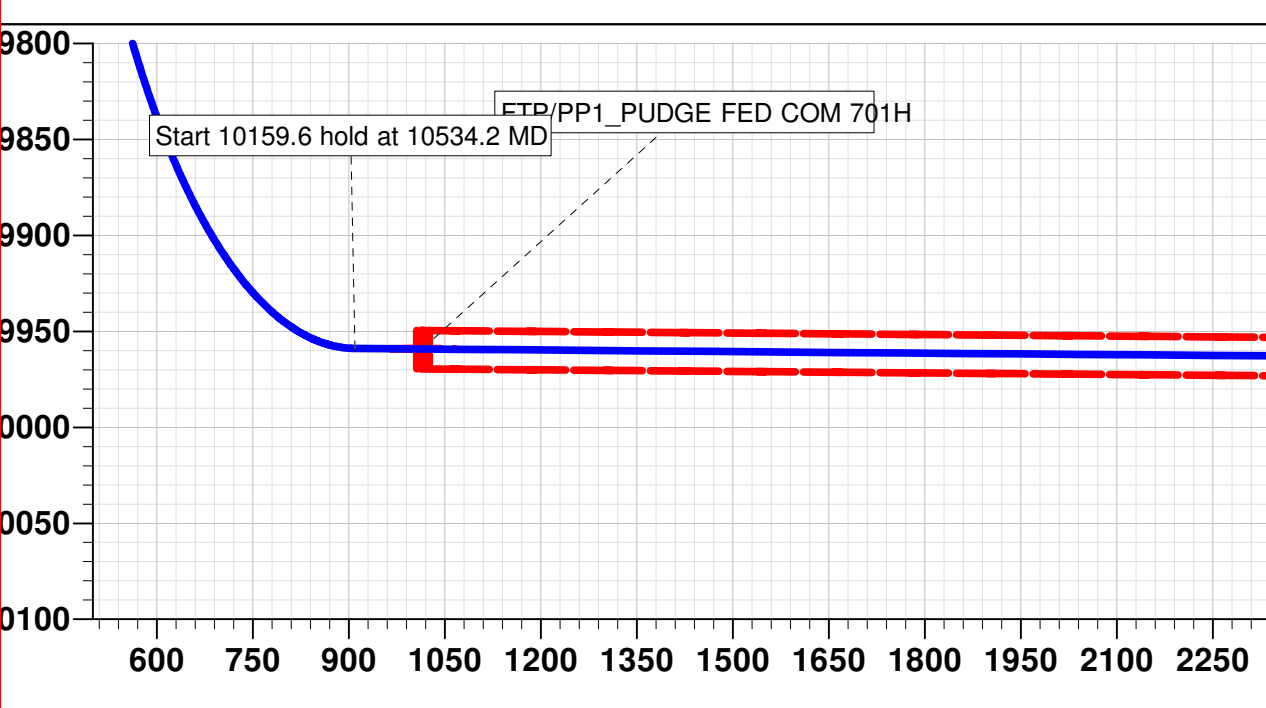
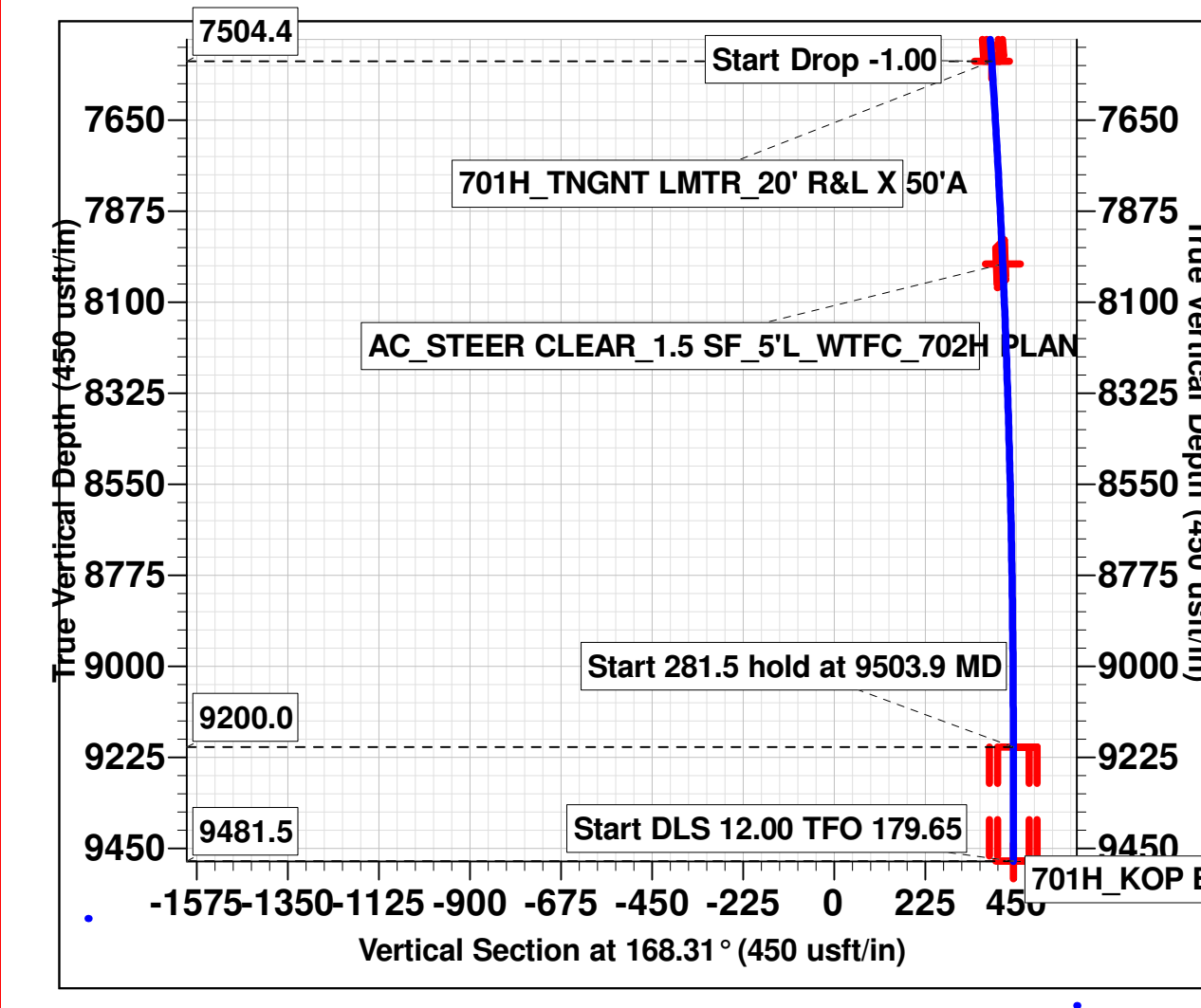
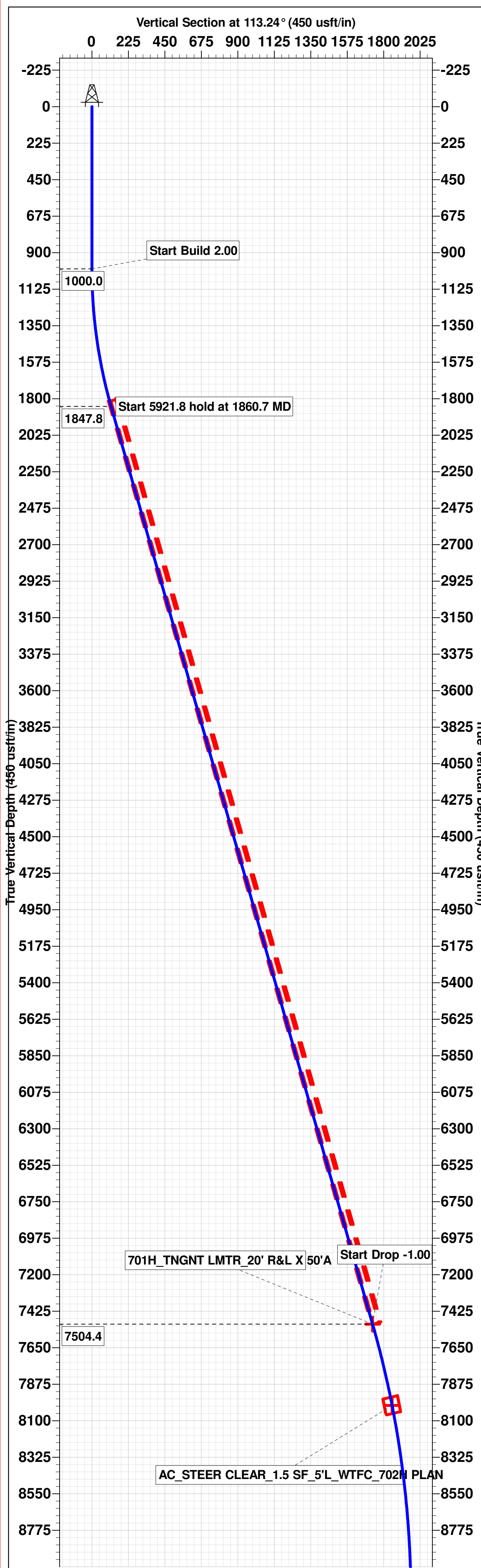
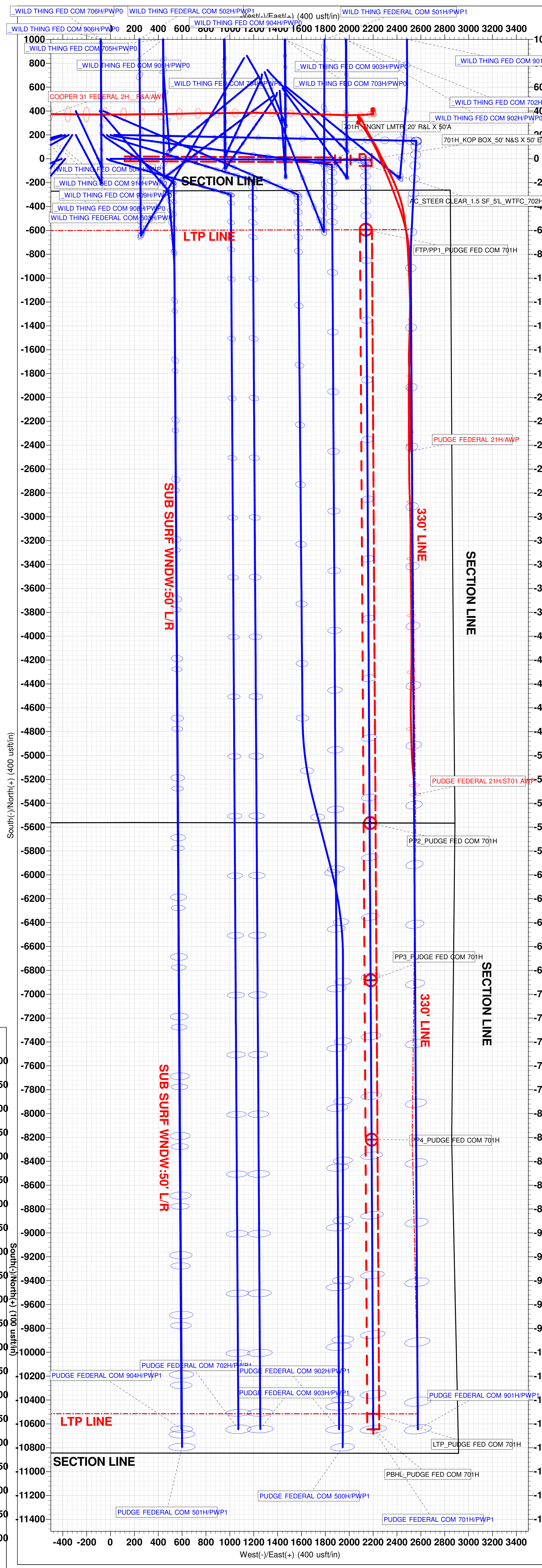
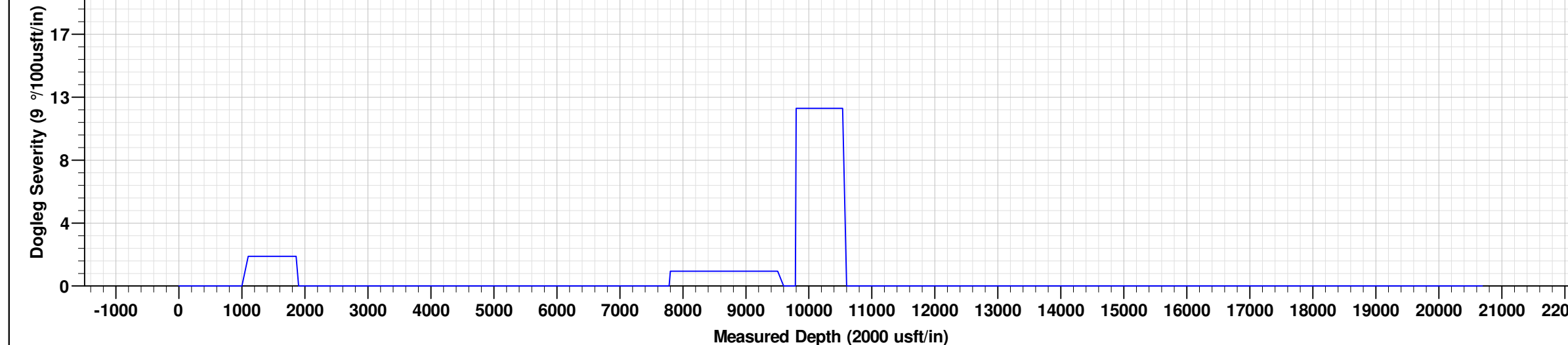
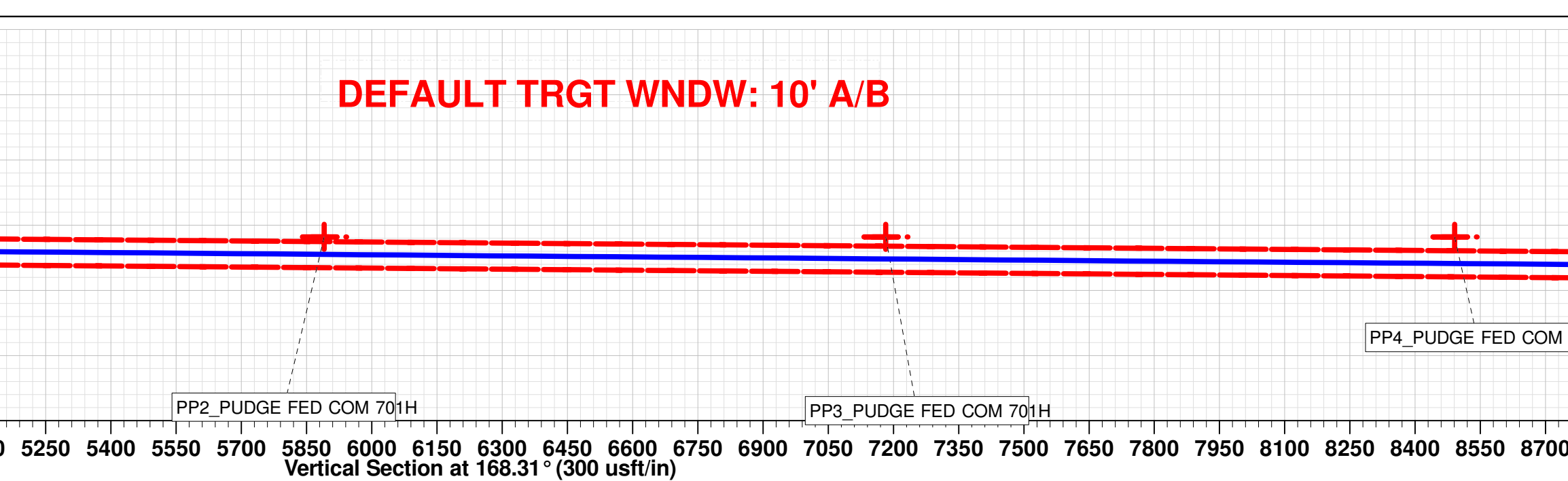
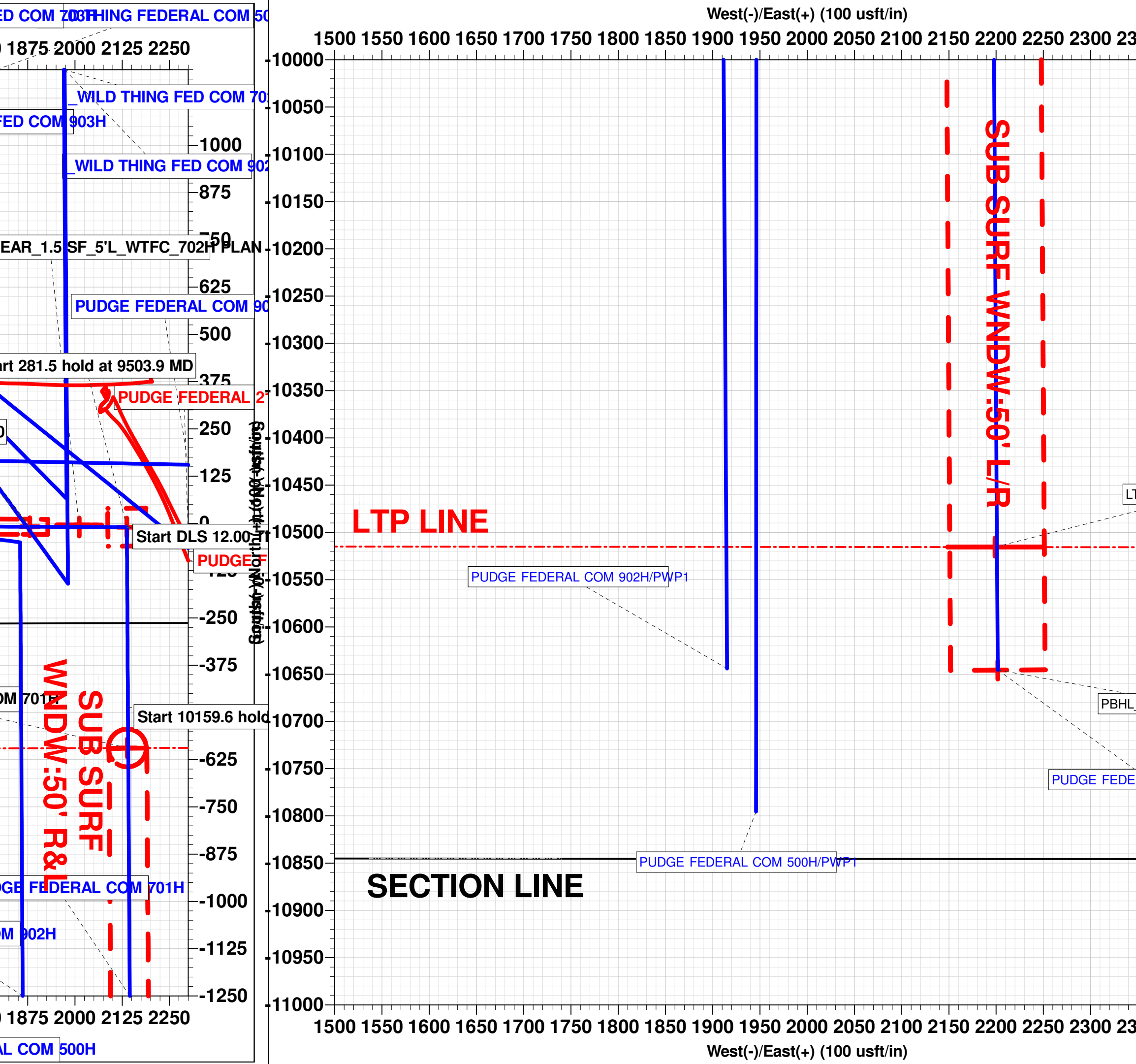
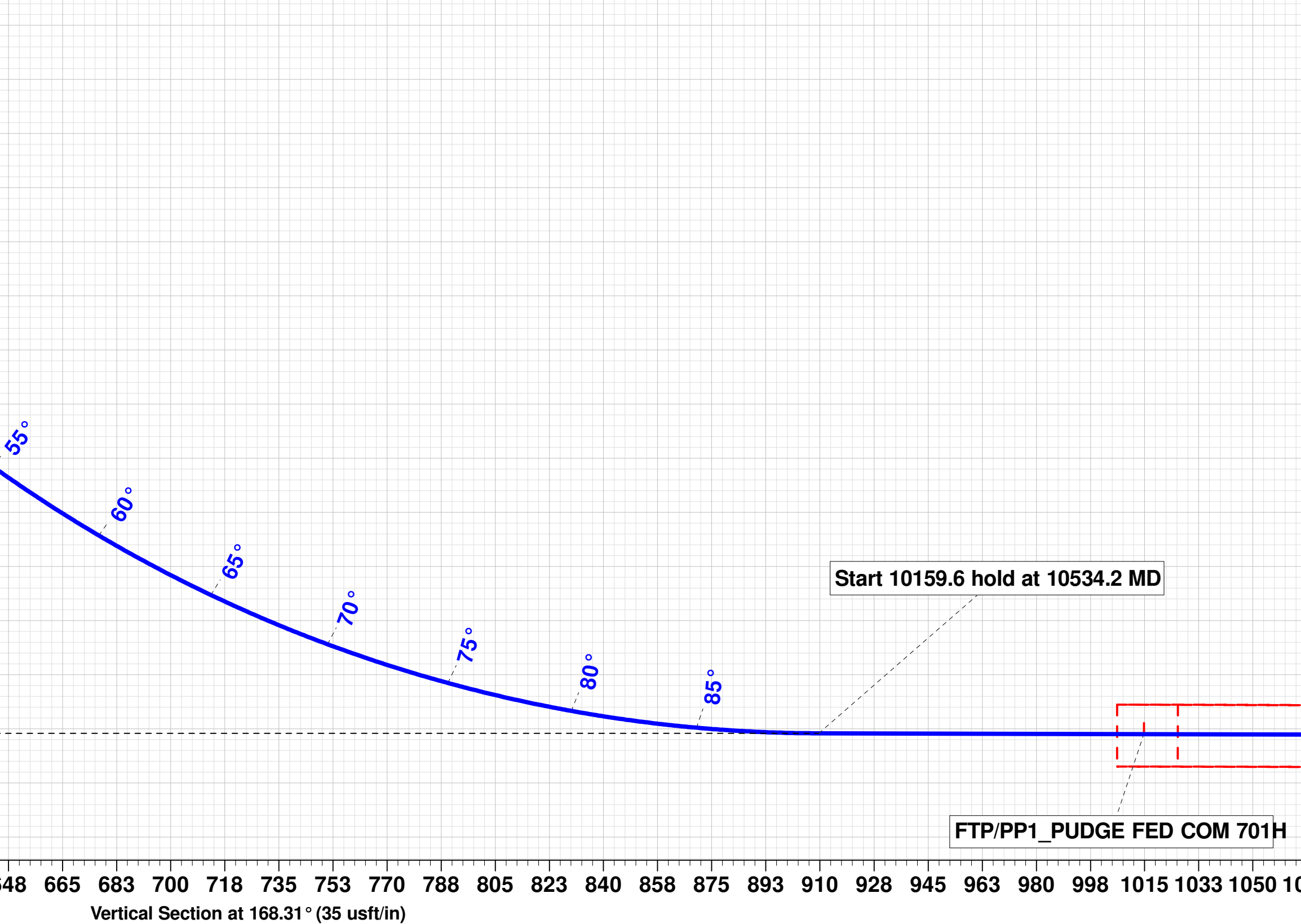


Project: ATLAS PROSPECT NME					
Site: PUDGE FED COM PROJECT					
Well: PUDGE FEDERAL COM 701H					
Wellbore: OWB					
Design: PWP1					
GL: 2925.0					
KB @ 2957.0ust (NABORS X09)					
WELL DETAILS: PUDGE FEDERAL COM 701H					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	392806.63	595887.86	32° 4' 46.426 N	104° 1' 25.483 W

TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
701H_TNGNT LMTR_20' R&L X 50'A	7504.4	-8.8	1880.8	392797.83	597768.66
AC_STEER CLEAR_1.5 SF_5'L_WTFC_702H PLAN	8004.9	-9.4	2011.5	392797.22	597899.34
701H_KOP BOX_50' N&S X 50' E&W	9481.5	-10.0	2137.5	392796.83	598025.36
FTP/PP1_PUDGE FED COM 701H	9959.0	-593.9	2138.8	392212.68	598026.64
PP2_PUDGE FED COM 701H	9959.0	-5565.1	2175.5	387241.53	598063.31
PP3_PUDGE FED COM 701H	9959.0	-6882.8	2181.7	385923.87	598069.55
PP4_PUDGE FED COM 701H	9959.0	-8218.1	2188.0	384588.52	598075.96
LTP_PUDGE FED COM 701H	9986.0	-10515.6	2198.9	382291.04	598086.73
PBHL_PUDGE FED COM 701H	9986.0	-10645.6	2201.7	382161.04	598089.60



PUDGE FEDERAL COM 701H PWP1							
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect Departure	Annotation
1000.0	0.00	0.00	1000.0	0.0	0.0	0.0	Start Build 2.00
1860.7	17.21	90.27	1847.8	-0.6	128.3	26.6	Start 5921.8 hold at 1860.7 MD
7782.5	17.21	90.27	7504.4	-8.8	1880.8	389.6	Start Drop -1.00
9503.9	0.00	0.00	9200.0	-10.0	2137.5	442.7	Start 281.5 hold at 9503.9 MD
9785.4	0.00	0.00	9481.5	-10.0	2137.5	442.7	Start DLS 12.00 TFO 179.65
10534.2	89.85	179.65	9959.0	-486.2	2140.4	909.6	Start 10159.6 hold at 10534.2 MD
20693.8	89.85	179.65	9986.0	-10645.6	2201.7	12773.3	TD at 20693.8



DELAWARE BASIN WEST

ATLAS PROSPECT_NME

PUDGE FED COM PROJECT

PUDGE FEDERAL COM 701H

3001556661

OWB

PWP1

Anticollision Report

04 August, 2025

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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	20,693.8	PWP1 (OWB)	r.5 MWD+IFR1	OWSG MWD + IFR1 rev.5	

Summary						
	Reference	Offset	Distance			Warning
Site Name	Measured	Measured	Between	Between	Separation	
Offset Well - Wellbore - Design	Depth	Depth	Centres	Ellipses	Factor	
PUDGE FED COM PROJECT						
PUDGE FEDERAL COM 500H - OWB - PWP1	4,643.0	4,687.1	118.4	79.6	3.052 CC	Normal Operations, SF
PUDGE FEDERAL COM 500H - OWB - PWP1	4,700.0	4,743.7	118.6	79.3	3.019 ES	
PUDGE FEDERAL COM 500H - OWB - PWP1	4,800.0	4,842.9	119.9	79.9	2.995	
PUDGE FEDERAL COM 501H - OWB - PWP1	2,052.0	2,101.0	349.3	335.5	25.291 CC	
PUDGE FEDERAL COM 501H - OWB - PWP1	2,100.0	2,147.7	349.5	335.3	24.637 ES	
PUDGE FEDERAL COM 501H - OWB - PWP1	3,400.0	3,414.1	463.5	438.6	18.606 SF	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,000.0	1,000.0	30.0	22.1	3.775 CC	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,100.0	1,100.9	30.2	21.7	3.538 ES	
PUDGE FEDERAL COM 702H - OWB - PWP1	1,200.0	1,201.8	31.1	22.0	3.419 SF	
PUDGE FEDERAL COM 901H - OWB - PWP1	1,960.4	1,952.7	200.1	187.7	16.102 CC	
PUDGE FEDERAL COM 901H - OWB - PWP1	2,000.0	1,991.9	200.2	187.6	15.875 ES	
PUDGE FEDERAL COM 901H - OWB - PWP1	20,693.8	21,729.8	795.0	627.2	4.737 SF	
PUDGE FEDERAL COM 902H - OWB - PWP1	1,000.0	1,001.0	200.0	192.0	25.158 CC	
PUDGE FEDERAL COM 902H - OWB - PWP1	1,200.0	1,200.8	200.1	191.4	22.954 ES	
PUDGE FEDERAL COM 902H - OWB - PWP1	10,030.6	9,952.0	290.1	205.8	3.440 SF	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,843.7	1,859.5	172.1	160.4	14.790 CC	
PUDGE FEDERAL COM 903H - OWB - PWP1	1,860.7	1,876.4	172.1	160.4	14.667 ES	
PUDGE FEDERAL COM 903H - OWB - PWP1	3,100.0	3,103.3	248.4	225.7	10.912 SF	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,000.0	1,002.0	208.6	200.6	26.239 CC, ES	
PUDGE FEDERAL COM 904H - OWB - PWP1	1,600.0	1,597.6	234.6	224.2	22.560 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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						
WTF COM PROJECT						
_WILD THING FED COM 702H - OWB - PWP0	8,146.9	7,946.8	74.8	30.3	1.679	Caution - Monitor Closely, CC
_WILD THING FED COM 702H - OWB - PWP0	8,200.0	7,998.5	75.8	29.3	1.629	Caution - Monitor Closely, ES
_WILD THING FED COM 702H - OWB - PWP0	8,300.0	8,096.1	82.2	31.2	1.612	Caution - Monitor Closely, SF
_WILD THING FED COM 703H - OWB - PWP0	6,449.6	6,254.8	289.0	251.1	7.640	CC
_WILD THING FED COM 703H - OWB - PWP0	6,500.0	6,301.9	289.4	251.0	7.540	ES
_WILD THING FED COM 703H - OWB - PWP0	6,700.0	6,488.5	300.3	259.6	7.372	SF
_WILD THING FED COM 705H - OWB - PWP0	5,255.1	5,133.6	242.0	214.3	8.731	CC
_WILD THING FED COM 704H - OWB - PWP0	5,300.0	5,175.3	242.6	214.2	8.553	ES
_WILD THING FED COM 704H - OWB - PWP0	5,500.0	5,361.0	258.5	226.8	8.151	SF
_WILD THING FED COM 705H - OWB - PWP0	4,479.1	4,408.6	349.0	324.2	14.088	CC, ES
_WILD THING FED COM 705H - OWB - PWP0	4,800.0	4,696.8	376.5	349.3	13.871	SF
_WILD THING FED COM 706H - OWB - PWP0	1,560.4	1,607.0	486.9	476.1	44.874	CC, ES
_WILD THING FED COM 706H - OWB - PWP0	3,900.0	3,864.4	874.9	848.1	32.677	SF
_WILD THING FED COM 901H - OWB - PWP0	10,150.0	9,930.2	286.8	215.6	4.027	SF
_WILD THING FED COM 901H - OWB - PWP0	10,175.0	9,947.8	285.8	215.1	4.043	ES
_WILD THING FED COM 901H - OWB - PWP0	10,184.5	9,954.2	285.7	215.3	4.057	CC
_WILD THING FED COM 902H - OWB - PWP0	8,168.1	7,939.2	150.4	109.8	3.708	CC
_WILD THING FED COM 902H - OWB - PWP0	10,175.0	9,892.2	156.6	92.8	2.453	Caution - Monitor Closely, ES, SF
_WILD THING FED COM 903H - OWB - PWP0	6,387.4	6,230.2	148.7	116.8	4.661	CC
_WILD THING FED COM 903H - OWB - PWP0	6,400.0	6,242.2	148.7	116.8	4.651	ES
_WILD THING FED COM 903H - OWB - PWP0	6,500.0	6,337.8	152.4	119.3	4.602	SF
_WILD THING FED COM 904H - OWB - PWP0	5,640.3	5,485.3	236.1	203.9	7.343	CC, ES
_WILD THING FED COM 904H - OWB - PWP0	5,700.0	5,539.7	237.3	204.9	7.313	SF
_WILD THING FED COM 905H - OWB - PWP0	4,600.0	4,515.2	196.6	171.0	7.684	SF
_WILD THING FED COM 905H - OWB - PWP0	4,646.6	4,557.0	195.5	170.1	7.688	CC, ES
_WILD THING FED COM 906H - OWB - PWP0	1,000.0	983.0	352.3	344.3	43.869	CC, ES
_WILD THING FED COM 906H - OWB - PWP0	2,200.0	2,213.8	454.5	439.6	30.520	SF
_WILD THING FED COM 907H - OWB - PWP0	1,000.0	983.0	377.4	369.3	46.991	CC, ES
_WILD THING FED COM 907H - OWB - PWP0	1,700.0	1,676.1	452.0	440.5	39.321	SF
_WILD THING FED COM 908H - OWB - PWP0	1,000.0	983.0	403.1	395.1	50.200	CC, ES
_WILD THING FED COM 908H - OWB - PWP0	1,500.0	1,449.1	458.0	447.6	43.755	SF
_WILD THING FED COM 909H - OWB - PWP0	1,000.0	983.0	429.5	421.4	53.480	CC, ES
_WILD THING FED COM 909H - OWB - PWP0	1,500.0	1,439.7	488.8	478.2	46.438	SF
_WILD THING FED COM 910H - OWB - PWP0	1,000.0	983.0	456.2	448.2	56.815	CC, ES
_WILD THING FED COM 910H - OWB - PWP0	1,500.0	1,434.4	517.5	507.0	49.463	SF
COOPER 31 FEDERAL 2H_P&A - OWB - AWP	7,433.7	7,401.6	380.1	332.5	7.991	CC, ES, SF
PUDGE FEDERAL 21H - OWB - AWP	8,494.5	8,281.5	201.3	146.6	3.676	CC
PUDGE FEDERAL 21H - OWB - AWP	8,500.0	8,284.1	201.4	146.3	3.658	ES, SF
PUDGE FEDERAL 21H - ST01 - ST01 AWP	8,670.9	8,465.3	185.4	129.5	3.318	CC, ES
PUDGE FEDERAL 21H - ST01 - ST01 AWP	8,700.0	8,479.0	187.1	129.9	3.271	SF
WILD THING FED COM 504H - OWB - PWP1	800.0	796.0	409.9	403.7	66.318	CC, ES
WILD THING FED COM 504H - OWB - PWP1	1,400.0	1,314.8	488.2	478.9	52.518	SF
WILD THING FEDERAL COM 501H - OWB - PWP1	8,693.9	9,063.6	294.1	228.4	4.471	CC, ES, SF
WILD THING FEDERAL COM 502H - OWB - PWP1	4,086.0	4,128.6	163.4	136.6	6.090	CC, ES, SF
WILD THING FEDERAL COM 503H - OWB - PWP1	1,000.0	997.0	379.9	372.0	47.840	CC, ES
WILD THING FEDERAL COM 503H - OWB - PWP1	1,400.0	1,360.2	424.4	414.4	42.143	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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 500H - OWB - PWP1														Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8198-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:												
Measured Depth (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		
0.0	0.0	3.0	0.0	0.0	0.0	-8.47	399.8	-59.6	404.2						
100.0	100.0	103.0	100.0	0.8	0.8	-8.47	399.8	-59.6	404.2	402.2	2.01	200.994			
200.0	200.0	203.0	200.0	1.4	1.4	-8.47	399.8	-59.6	404.2	400.9	3.32	121.580			
300.0	300.0	303.0	300.0	1.9	1.9	-8.47	399.8	-59.6	404.2	400.0	4.21	96.105			
400.0	400.0	403.0	400.0	2.2	2.3	-8.47	399.8	-59.6	404.2	399.3	4.92	82.139			
500.0	500.0	503.0	500.0	2.6	2.6	-8.47	399.8	-59.6	404.2	398.7	5.54	72.948			
600.0	600.0	603.0	600.0	2.8	2.9	-8.47	399.8	-59.6	404.2	398.1	6.10	66.290			
700.0	700.0	703.0	700.0	3.1	3.1	-8.47	399.8	-59.6	404.2	397.6	6.61	61.170			
800.0	800.0	803.0	800.0	3.3	3.4	-8.47	399.8	-59.6	404.2	397.1	7.08	57.068			
900.0	900.0	903.0	900.0	3.6	3.6	-8.47	399.8	-59.6	404.2	396.7	7.53	53.683			
1,000.0	1,000.0	1,003.2	1,000.2	3.8	3.8	-8.47	399.8	-59.6	404.2	396.3	7.95	50.819			
1,100.0	1,100.0	1,111.2	1,108.2	4.1	4.1	-98.76	399.0	-57.6	403.4	395.1	8.39	48.071			
1,200.0	1,199.8	1,219.2	1,216.0	4.4	4.5	-98.85	396.5	-51.9	401.2	392.4	8.80	45.589			
1,300.0	1,299.5	1,327.0	1,323.3	4.7	4.8	-99.00	392.5	-42.4	397.5	388.3	9.21	43.186			
1,400.0	1,398.7	1,434.8	1,430.1	5.1	5.2	-99.22	386.8	-29.3	392.4	382.8	9.61	40.821			
1,500.0	1,497.5	1,542.3	1,536.0	5.4	5.6	-99.52	379.6	-12.5	385.9	375.9	10.03	38.472			
1,600.0	1,595.6	1,649.6	1,641.0	5.8	6.0	-99.90	370.9	7.8	377.9	367.5	10.46	36.121			
1,700.0	1,693.1	1,756.6	1,744.8	6.2	6.4	-100.36	360.6	31.7	368.6	357.7	10.92	33.758			
1,800.0	1,789.6	1,863.3	1,847.3	6.6	6.8	-100.92	348.9	59.1	357.9	346.5	11.37	31.477			
1,860.7	1,847.8	1,924.5	1,905.6	6.8	7.0	-101.35	341.6	76.0	351.0	339.4	11.61	30.226			
1,900.0	1,885.3	1,963.5	1,942.8	6.9	7.2	-101.61	337.0	86.7	346.6	334.8	11.79	29.398			
2,000.0	1,980.9	2,062.8	2,037.5	7.3	7.5	-102.31	325.2	114.2	335.5	323.1	12.34	27.184			
2,100.0	2,076.4	2,162.1	2,132.2	7.7	7.9	-103.06	313.4	141.7	324.4	311.5	12.92	25.113			
2,200.0	2,171.9	2,261.3	2,226.9	8.1	8.3	-103.85	301.6	169.1	313.4	299.9	13.52	23.174			
2,300.0	2,267.4	2,360.6	2,321.6	8.5	8.7	-104.71	289.8	196.6	302.4	288.3	14.15	21.365			
2,400.0	2,363.0	2,459.9	2,416.3	8.9	9.2	-105.63	278.0	224.0	291.5	276.7	14.81	19.679			
2,500.0	2,458.5	2,559.2	2,511.0	9.4	9.6	-106.62	266.3	251.5	280.7	265.2	15.50	18.109			
2,600.0	2,554.0	2,658.5	2,605.6	9.8	10.0	-107.68	254.5	278.9	270.0	253.8	16.22	16.649			
2,700.0	2,649.5	2,757.8	2,700.3	10.2	10.5	-108.84	242.7	306.4	259.4	242.4	16.96	15.291			
2,800.0	2,745.0	2,857.1	2,795.0	10.7	10.9	-110.09	230.9	333.9	248.9	231.1	17.74	14.030			
2,900.0	2,840.6	2,956.4	2,889.7	11.1	11.4	-111.46	219.1	361.3	238.5	219.9	18.55	12.858			
3,000.0	2,936.1	3,055.7	2,984.4	11.6	11.8	-112.94	207.3	388.8	228.3	208.9	19.39	11.769			
3,100.0	3,031.6	3,155.0	3,079.1	12.1	12.3	-114.57	195.5	416.2	218.2	197.9	20.28	10.759			
3,200.0	3,127.1	3,254.3	3,173.8	12.5	12.8	-116.34	183.7	443.7	208.3	187.1	21.21	9.822			
3,300.0	3,222.6	3,353.6	3,268.5	13.0	13.2	-118.30	171.9	471.2	198.7	176.5	22.18	8.955			
3,400.0	3,318.2	3,452.9	3,363.2	13.5	13.7	-120.44	160.1	498.6	189.3	166.1	23.21	8.154			
3,500.0	3,413.7	3,552.1	3,457.8	14.0	14.2	-122.81	148.3	526.1	180.2	155.9	24.29	7.415			
3,600.0	3,509.2	3,651.4	3,552.5	14.4	14.7	-125.42	136.6	553.5	171.4	145.9	25.44	6.738			
3,700.0	3,604.7	3,750.7	3,647.2	14.9	15.2	-128.31	124.8	581.0	163.0	136.4	26.64	6.119			
3,800.0	3,700.2	3,850.0	3,741.9	15.4	15.6	-131.50	113.0	608.4	155.1	127.2	27.90	5.559			
3,900.0	3,795.8	3,949.3	3,836.6	15.9	16.1	-135.01	101.2	635.9	147.7	118.5	29.22	5.055			
4,000.0	3,891.3	4,048.6	3,931.3	16.4	16.6	-138.88	89.4	663.4	140.9	110.3	30.59	4.608			
4,100.0	3,986.8	4,147.9	4,026.0	16.9	17.1	-143.11	77.6	690.8	134.9	102.9	31.98	4.217			
4,200.0	4,082.3	4,247.2	4,120.7	17.4	17.6	-147.70	65.8	718.3	129.6	96.2	33.39	3.881			
4,300.0	4,177.8	4,346.5	4,215.4	17.8	18.1	-152.65	54.0	745.7	125.3	90.5	34.77	3.602			
4,400.0	4,273.4	4,445.8	4,310.0	18.3	18.6	-157.90	42.2	773.2	121.9	85.8	36.09	3.378			
4,500.0	4,368.9	4,545.1	4,404.7	18.8	19.0	-163.40	30.4	800.7	119.7	82.3	37.31	3.207			
4,600.0	4,464.4	4,644.4	4,499.4	19.3	19.5	-169.05	18.6	828.1	118.6	80.2	38.39	3.088			
4,643.0	4,505.5	4,687.1	4,540.2	19.5	19.8	-171.50	13.6	839.9	118.4	79.6	38.80	3.052 CC			
4,700.0	4,559.9	4,743.7	4,594.1	19.8	20.0	-174.75	6.9	855.6	118.6	79.3	39.30	3.019 ES			
4,800.0	4,655.4	4,842.9	4,688.8	20.3	20.5	-179.62	-4.9	883.0	119.9	79.9	40.03	2.995 Normal Operations, 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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												Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.0	4,751.0	4,942.2	4,783.5	20.8	21.0	174.15	-16.7	910.5	122.3	81.7	40.59	3.013	
5,000.0	4,846.5	5,041.5	4,878.2	21.3	21.5	168.93	-28.5	937.9	125.8	84.8	41.00	3.069	
5,100.0	4,942.0	5,140.8	4,972.9	21.8	22.0	164.04	-40.3	965.4	130.3	89.0	41.28	3.156	
5,200.0	5,037.5	5,240.1	5,067.6	22.3	22.5	159.49	-52.1	992.9	135.7	94.2	41.47	3.271	
5,300.0	5,133.0	5,339.4	5,162.3	22.8	23.0	155.31	-63.9	1,020.3	141.8	100.2	41.60	3.409	
5,400.0	5,228.6	5,438.7	5,256.9	23.3	23.5	151.50	-75.7	1,047.8	148.7	107.0	41.71	3.565	
5,500.0	5,324.1	5,538.0	5,351.6	23.8	24.0	148.03	-87.5	1,075.2	156.2	114.4	41.81	3.735	
5,600.0	5,419.6	5,637.3	5,446.3	24.3	24.5	144.88	-99.3	1,102.7	164.1	122.2	41.92	3.916	
5,700.0	5,515.1	5,736.6	5,541.0	24.8	25.0	142.04	-111.1	1,130.1	172.6	130.5	42.04	4.105	
5,800.0	5,610.6	5,835.9	5,635.7	25.3	25.5	139.46	-122.8	1,157.6	181.4	139.2	42.20	4.299	
5,900.0	5,706.2	5,935.2	5,730.4	25.8	26.0	137.13	-134.6	1,185.1	190.6	148.2	42.38	4.496	
6,000.0	5,801.7	6,034.5	5,825.1	26.3	26.5	135.01	-146.4	1,212.5	200.0	157.4	42.60	4.695	
6,100.0	5,897.2	6,133.7	5,919.8	26.8	27.0	133.08	-158.2	1,240.0	209.7	166.8	42.85	4.894	
6,200.0	5,992.7	6,233.0	6,014.5	27.3	27.5	131.33	-170.0	1,267.4	219.6	176.5	43.13	5.091	
6,300.0	6,088.2	6,332.3	6,109.1	27.8	28.0	129.72	-181.8	1,294.9	229.7	186.2	43.44	5.287	
6,400.0	6,183.8	6,431.6	6,203.8	28.3	28.5	128.25	-193.6	1,322.4	239.9	196.2	43.77	5.481	
6,500.0	6,279.3	6,530.0	6,297.8	28.8	29.0	127.05	-205.0	1,349.0	250.5	206.3	44.15	5.673	
6,600.0	6,374.8	6,628.2	6,392.1	29.3	29.5	126.31	-215.8	1,374.2	261.5	216.9	44.65	5.858	
6,700.0	6,470.3	6,726.4	6,486.9	29.8	30.0	125.97	-226.0	1,397.9	273.0	227.8	45.24	6.035	
6,800.0	6,565.9	6,824.6	6,582.0	30.4	30.5	125.99	-235.5	1,420.0	285.0	239.0	45.92	6.205	
6,900.0	6,661.4	6,922.6	6,677.5	30.9	30.9	126.32	-244.4	1,440.7	297.3	250.6	46.68	6.368	
7,000.0	6,756.9	7,020.4	6,773.1	31.4	31.4	126.93	-252.6	1,459.8	310.1	262.5	47.51	6.526	
7,100.0	6,852.4	7,118.0	6,868.8	31.9	31.8	127.77	-260.1	1,477.3	323.3	274.9	48.41	6.678	
7,200.0	6,947.9	7,215.3	6,964.5	32.4	32.3	128.82	-267.0	1,493.3	337.1	287.7	49.38	6.827	
7,300.0	7,043.5	7,312.2	7,060.1	32.9	32.7	130.05	-273.2	1,507.8	351.5	301.1	50.40	6.975	
7,400.0	7,139.0	7,408.8	7,155.6	33.4	33.1	131.41	-278.8	1,520.7	366.6	315.2	51.47	7.123	
7,500.0	7,234.5	7,504.9	7,250.9	33.9	33.6	132.90	-283.7	1,532.1	382.5	329.9	52.59	7.274	
7,600.0	7,330.0	7,600.0	7,345.4	34.4	33.9	134.46	-287.9	1,541.9	399.3	345.6	53.73	7.432	
7,700.0	7,425.5	7,695.5	7,440.5	34.9	34.3	136.12	-291.5	1,550.3	417.0	362.1	54.91	7.594	
7,782.5	7,504.4	7,773.4	7,518.2	35.3	34.6	137.51	-294.0	1,556.1	432.4	376.5	55.89	7.736	
7,800.0	7,521.1	7,789.9	7,534.6	35.4	34.7	137.83	-294.4	1,557.2	435.7	379.6	56.10	7.767	
7,900.0	7,616.9	7,883.9	7,628.4	35.9	35.0	139.59	-296.8	1,562.7	454.7	397.4	57.26	7.941	
8,000.0	7,713.3	7,977.7	7,722.1	36.4	35.3	141.24	-298.5	1,566.7	473.4	415.1	58.36	8.113	
8,100.0	7,810.1	8,071.2	7,815.6	36.9	35.6	142.81	-299.6	1,569.3	492.0	432.6	59.40	8.283	
8,200.0	7,907.3	8,164.5	7,908.9	37.4	35.8	144.30	-300.1	1,570.5	510.3	449.7	60.57	8.424	
8,300.0	8,004.9	8,237.0	7,981.3	37.9	35.8	145.28	-301.8	1,570.6	529.5	468.2	61.33	8.633	
8,400.0	8,102.9	8,300.0	8,043.6	38.4	35.8	145.36	-311.0	1,570.7	553.8	493.1	60.75	9.117	
8,500.0	8,201.2	8,350.0	8,091.8	38.8	35.8	144.92	-324.1	1,570.8	583.4	524.0	59.36	9.827	
8,600.0	8,299.8	8,407.1	8,144.8	39.3	35.9	143.90	-345.2	1,571.0	618.0	560.2	57.88	10.678	
8,700.0	8,398.7	8,450.0	8,182.8	39.7	35.9	142.91	-365.1	1,571.2	658.0	602.2	55.80	11.793	
8,800.0	8,497.8	8,500.0	8,224.6	40.1	35.9	141.48	-392.5	1,571.4	703.2	649.4	53.84	13.062	
8,900.0	8,597.2	8,536.7	8,253.4	40.6	35.9	140.40	-415.3	1,571.6	753.5	702.0	51.57	14.612	
9,000.0	8,696.7	8,575.0	8,281.4	41.0	35.9	139.21	-441.3	1,571.8	808.7	759.2	49.47	16.346	
9,100.0	8,796.4	8,600.0	8,298.6	41.3	35.9	138.59	-459.5	1,572.0	868.3	821.0	47.28	18.366	
9,200.0	8,896.2	8,625.0	8,314.7	41.7	35.9	138.01	-478.6	1,572.1	931.8	886.5	45.33	20.556	
9,300.0	8,996.1	8,650.0	8,329.9	42.0	35.9	137.46	-498.5	1,572.3	998.9	955.3	43.65	22.883	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	3.0	0.0	0.0	0.0	-12.63	399.7	-89.6	409.6				
100.0	100.0	103.0	100.0	0.8	0.8	-12.63	399.7	-89.6	409.6	407.6	2.01	203.683	
200.0	200.0	203.0	200.0	1.4	1.4	-12.63	399.7	-89.6	409.6	406.3	3.32	123.206	
300.0	300.0	303.0	300.0	1.9	1.9	-12.63	399.7	-89.6	409.6	405.4	4.21	97.391	
400.0	400.0	403.0	400.0	2.2	2.3	-12.63	399.7	-89.6	409.6	404.7	4.92	83.238	
500.0	500.0	503.0	500.0	2.6	2.6	-12.63	399.7	-89.6	409.6	404.1	5.54	73.924	
600.0	600.0	603.0	600.0	2.8	2.9	-12.63	399.7	-89.6	409.6	403.5	6.10	67.177	
700.0	700.0	703.0	700.0	3.1	3.1	-12.63	399.7	-89.6	409.6	403.0	6.61	61.988	
800.0	800.0	803.0	800.0	3.3	3.4	-12.63	399.7	-89.6	409.6	402.6	7.08	57.832	
900.0	900.0	903.0	900.0	3.6	3.6	-12.63	399.7	-89.6	409.6	402.1	7.53	54.401	
1,000.0	1,000.0	1,003.4	1,000.4	3.8	3.8	-12.63	399.7	-89.6	409.6	401.7	7.96	51.486	
1,100.0	1,100.0	1,117.8	1,114.8	4.1	4.2	-103.04	397.9	-88.0	408.2	399.7	8.48	48.141	
1,200.0	1,199.8	1,232.0	1,228.8	4.4	4.5	-103.48	392.6	-83.4	404.0	395.0	8.97	45.024	
1,300.0	1,299.5	1,345.8	1,342.0	4.7	4.9	-104.25	383.9	-76.0	397.1	387.6	9.47	41.910	
1,400.0	1,398.7	1,459.1	1,454.1	5.1	5.2	-105.35	371.9	-65.6	387.6	377.7	9.94	39.007	
1,500.0	1,497.5	1,559.9	1,553.6	5.4	5.5	-106.77	359.4	-54.8	377.0	366.6	10.37	36.353	
1,600.0	1,595.6	1,658.8	1,651.1	5.8	5.7	-108.73	347.1	-44.2	367.6	356.7	10.88	33.788	
1,700.0	1,693.1	1,757.3	1,748.3	6.2	6.1	-111.24	334.8	-33.6	359.9	348.4	11.44	31.452	
1,800.0	1,789.6	1,855.4	1,845.0	6.6	6.4	-114.30	322.6	-23.1	354.2	342.1	12.07	29.352	
1,860.7	1,847.8	1,914.6	1,903.5	6.8	6.6	-116.41	315.2	-16.8	352.0	339.5	12.44	28.297	
1,900.0	1,885.3	1,952.9	1,941.2	6.9	6.7	-117.81	310.4	-12.7	351.0	338.3	12.68	27.673	
2,000.0	1,980.9	2,050.3	2,037.3	7.3	7.1	-121.40	298.3	-2.2	349.5	336.1	13.42	26.054	
2,052.0	2,030.6	2,101.0	2,087.3	7.5	7.2	-123.28	292.0	3.2	349.3	335.5	13.81	25.291 CC	
2,100.0	2,076.4	2,147.7	2,133.4	7.7	7.4	-125.01	286.2	8.2	349.5	335.3	14.19	24.637 ES	
2,200.0	2,171.9	2,245.1	2,229.5	8.1	7.8	-128.61	274.1	18.7	350.9	335.9	14.99	23.414	
2,300.0	2,267.4	2,342.5	2,325.6	8.5	8.2	-132.17	261.9	29.1	353.8	338.0	15.81	22.374	
2,400.0	2,363.0	2,440.0	2,421.7	8.9	8.5	-135.65	249.8	39.6	358.1	341.4	16.65	21.500	
2,500.0	2,458.5	2,537.4	2,517.7	9.4	8.9	-139.05	237.7	50.0	363.7	346.2	17.50	20.778	
2,600.0	2,554.0	2,634.8	2,613.8	9.8	9.3	-142.34	225.5	60.5	370.6	352.3	18.36	20.189	
2,700.0	2,649.5	2,732.2	2,709.9	10.2	9.7	-145.50	213.4	70.9	378.8	359.6	19.21	19.719	
2,800.0	2,745.0	2,829.6	2,806.0	10.7	10.1	-148.52	201.3	81.3	388.1	368.0	20.05	19.351	
2,900.0	2,840.6	2,927.0	2,902.1	11.1	10.5	-151.40	189.1	91.8	398.4	377.5	20.89	19.072	
3,000.0	2,936.1	3,024.4	2,998.2	11.6	10.9	-154.14	177.0	102.2	409.8	388.1	21.72	18.869	
3,100.0	3,031.6	3,121.8	3,094.3	12.1	11.3	-156.73	164.9	112.7	422.0	399.5	22.53	18.730	
3,200.0	3,127.1	3,219.3	3,190.4	12.5	11.7	-159.17	152.8	123.1	435.1	411.8	23.34	18.645	
3,300.0	3,222.6	3,316.7	3,286.5	13.0	12.1	-161.47	140.6	133.6	449.0	424.8	24.13	18.607	
3,400.0	3,318.2	3,414.1	3,382.5	13.5	12.5	-163.63	128.5	144.0	463.5	438.6	24.91	18.606 SF	
3,500.0	3,413.7	3,511.5	3,478.6	14.0	12.9	-165.67	116.4	154.5	478.7	453.0	25.68	18.638	
3,600.0	3,509.2	3,608.9	3,574.7	14.4	13.4	-167.58	104.2	164.9	494.4	467.9	26.44	18.696	
3,700.0	3,604.7	3,706.3	3,670.8	14.9	13.8	-169.37	92.1	175.4	510.6	483.4	27.20	18.775	
3,800.0	3,700.2	3,803.7	3,766.9	15.4	14.2	-171.05	80.0	185.8	527.3	499.4	27.94	18.872	
3,900.0	3,795.8	3,901.1	3,863.0	15.9	14.6	-172.63	67.8	196.3	544.5	515.8	28.68	18.984	
4,000.0	3,891.3	3,998.6	3,959.1	16.4	15.0	-174.12	55.7	206.7	562.0	532.6	29.41	19.107	
4,100.0	3,986.8	4,096.0	4,055.2	16.9	15.5	-175.52	43.6	217.1	579.9	549.7	30.14	19.239	
4,200.0	4,082.3	4,193.4	4,151.2	17.4	15.9	-176.83	31.4	227.6	598.1	567.2	30.86	19.378	
4,300.0	4,177.8	4,290.8	4,247.3	17.8	16.3	-178.07	19.3	238.0	616.6	585.0	31.58	19.522	
4,400.0	4,273.4	4,388.2	4,343.4	18.3	16.7	-179.23	7.2	248.5	635.3	603.0	32.30	19.670	
4,500.0	4,368.9	4,485.6	4,439.5	18.8	17.2	-179.67	-4.9	258.9	654.3	621.3	33.01	19.822	
4,600.0	4,464.4	4,583.0	4,535.6	19.3	17.6	-178.63	-17.1	269.4	673.5	639.8	33.72	19.974	
4,700.0	4,559.9	4,680.4	4,631.7	19.8	18.0	-177.65	-29.2	279.8	692.9	658.5	34.43	20.128	
4,800.0	4,655.4	4,777.9	4,727.8	20.3	18.4	-176.72	-41.3	290.3	712.5	677.4	35.13	20.283	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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	4,751.0	4,875.3	4,823.9	20.8	18.9	175.84	-53.5	300.7	732.3	696.5	35.83	20.436	
5,000.0	4,846.5	4,972.7	4,920.0	21.3	19.3	175.01	-65.6	311.2	752.3	715.7	36.54	20.589	
5,100.0	4,942.0	5,070.1	5,016.0	21.8	19.7	174.22	-77.7	321.6	772.4	735.1	37.24	20.741	
5,200.0	5,037.5	5,167.5	5,112.1	22.3	20.1	173.47	-89.9	332.1	792.6	754.6	37.94	20.891	
5,300.0	5,133.0	5,264.9	5,208.2	22.8	20.6	172.75	-102.0	342.5	812.9	774.3	38.64	21.040	
5,400.0	5,228.6	5,362.3	5,304.3	23.3	21.0	172.07	-114.1	352.9	833.4	794.1	39.34	21.187	
5,500.0	5,324.1	5,459.7	5,400.4	23.8	21.4	171.43	-126.3	363.4	854.0	813.9	40.03	21.331	
5,600.0	5,419.6	5,557.2	5,496.5	24.3	21.9	170.81	-138.4	373.8	874.6	833.9	40.73	21.473	
5,700.0	5,515.1	5,654.6	5,592.6	24.8	22.3	170.22	-150.5	384.3	895.4	854.0	41.43	21.613	
5,800.0	5,610.6	5,752.0	5,688.7	25.3	22.7	169.66	-162.6	394.7	916.3	874.1	42.13	21.751	
5,900.0	5,706.2	5,849.4	5,784.7	25.8	23.2	169.13	-174.8	405.2	937.2	894.4	42.82	21.885	
6,000.0	5,801.7	5,946.8	5,880.8	26.3	23.6	168.61	-186.9	415.6	958.2	914.7	43.52	22.018	
6,100.0	5,897.2	6,044.2	5,976.9	26.8	24.0	168.12	-199.0	426.1	979.3	935.1	44.22	22.148	

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
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	
1,000.0	1,000.0	1,000.0	1,000.0	3.8	3.8	-90.17	-0.1	-30.0	30.0	22.1	7.95	3.775 CC	
1,100.0	1,100.0	1,100.9	1,100.9	4.1	4.1	177.89	-1.0	-28.5	30.2	21.7	8.55	3.538 ES	
1,200.0	1,199.8	1,201.8	1,201.6	4.4	4.4	173.07	-3.6	-23.8	31.1	22.0	9.09	3.419 SF	
1,300.0	1,299.5	1,302.7	1,302.1	4.7	4.6	166.00	-7.9	-16.1	32.8	23.4	9.47	3.470	
1,400.0	1,398.7	1,403.7	1,402.4	5.1	4.9	159.11	-12.5	-4.9	35.2	25.2	9.97	3.530	
1,500.0	1,497.5	1,504.7	1,502.2	5.4	5.2	152.82	-17.4	9.9	38.1	27.6	10.45	3.643	
1,600.0	1,595.6	1,605.1	1,600.9	5.8	5.5	147.60	-22.5	27.5	41.8	31.0	10.82	3.866	
1,700.0	1,693.1	1,704.9	1,698.9	6.2	5.8	145.43	-27.6	45.5	48.4	37.1	11.35	4.265	
1,800.0	1,789.6	1,804.4	1,796.7	6.6	6.1	145.77	-32.7	63.4	57.9	45.9	11.97	4.834	
1,860.7	1,847.8	1,864.7	1,855.9	6.8	6.3	146.74	-35.7	74.2	65.0	52.7	12.34	5.272	
1,900.0	1,885.3	1,903.6	1,894.2	6.9	6.5	147.49	-37.7	81.2	70.0	57.4	12.57	5.571	
2,000.0	1,980.9	2,002.8	1,991.6	7.3	6.8	148.99	-42.8	99.0	82.8	69.5	13.25	6.245	
2,100.0	2,076.4	2,102.0	2,089.0	7.7	7.2	150.09	-47.8	116.9	95.5	81.6	13.95	6.849	
2,200.0	2,171.9	2,201.1	2,186.4	8.1	7.6	150.93	-52.8	134.7	108.4	93.7	14.66	7.390	
2,300.0	2,267.4	2,300.3	2,283.9	8.5	8.0	151.59	-57.9	152.5	121.2	105.8	15.39	7.874	
2,400.0	2,363.0	2,399.5	2,381.3	8.9	8.4	152.13	-62.9	170.3	134.0	117.9	16.13	8.309	
2,500.0	2,458.5	2,498.6	2,478.7	9.4	8.8	152.57	-68.0	188.1	146.9	130.0	16.88	8.700	
2,600.0	2,554.0	2,597.8	2,576.1	9.8	9.2	152.94	-73.0	206.0	159.7	142.1	17.64	9.053	
2,700.0	2,649.5	2,697.0	2,673.5	10.2	9.6	153.25	-78.1	223.8	172.6	154.2	18.41	9.373	
2,800.0	2,745.0	2,796.1	2,771.0	10.7	10.0	153.53	-83.1	241.6	185.5	166.3	19.19	9.663	
2,900.0	2,840.6	2,895.3	2,868.4	11.1	10.4	153.76	-88.2	259.4	198.3	178.3	19.98	9.927	
3,000.0	2,936.1	2,994.5	2,965.8	11.6	10.9	153.97	-93.2	277.3	211.2	190.4	20.77	10.168	
3,100.0	3,031.6	3,093.6	3,063.2	12.1	11.3	154.15	-98.3	295.1	224.1	202.5	21.57	10.389	
3,200.0	3,127.1	3,192.8	3,160.6	12.5	11.7	154.32	-103.3	312.9	237.0	214.6	22.37	10.592	
3,300.0	3,222.6	3,292.0	3,258.1	13.0	12.2	154.46	-108.3	330.7	249.8	226.7	23.18	10.778	
3,400.0	3,318.2	3,391.1	3,355.5	13.5	12.6	154.60	-113.4	348.5	262.7	238.7	23.99	10.951	
3,500.0	3,413.7	3,490.3	3,452.9	14.0	13.0	154.72	-118.4	366.4	275.6	250.8	24.81	11.110	
3,600.0	3,509.2	3,589.4	3,550.3	14.4	13.5	154.83	-123.5	384.2	288.5	262.9	25.63	11.258	
3,700.0	3,604.7	3,688.6	3,647.7	14.9	13.9	154.93	-128.5	402.0	301.4	274.9	26.45	11.395	
3,800.0	3,700.2	3,787.8	3,745.2	15.4	14.3	155.02	-133.6	419.8	314.2	287.0	27.27	11.523	
3,900.0	3,795.8	3,886.9	3,842.6	15.9	14.8	155.10	-138.6	437.7	327.1	299.0	28.10	11.642	
4,000.0	3,891.3	3,986.1	3,940.0	16.4	15.2	155.18	-143.7	455.5	340.0	311.1	28.93	11.754	
4,100.0	3,986.8	4,085.3	4,037.4	16.9	15.7	155.25	-148.7	473.3	352.9	323.1	29.76	11.858	
4,200.0	4,082.3	4,184.4	4,134.8	17.4	16.1	155.32	-153.8	491.1	365.8	335.2	30.59	11.956	
4,300.0	4,177.8	4,283.6	4,232.3	17.8	16.6	155.38	-158.8	508.9	378.7	347.3	31.43	12.049	
4,400.0	4,273.4	4,382.8	4,329.7	18.3	17.0	155.44	-163.9	526.8	391.6	359.3	32.27	12.135	
4,500.0	4,368.9	4,481.9	4,427.1	18.8	17.5	155.50	-168.9	544.6	404.5	371.4	33.11	12.217	
4,600.0	4,464.4	4,581.1	4,524.5	19.3	17.9	155.55	-173.9	562.4	417.3	383.4	33.95	12.295	
4,700.0	4,559.9	4,680.3	4,621.9	19.8	18.4	155.60	-179.0	580.2	430.2	395.4	34.79	12.368	
4,800.0	4,655.4	4,779.4	4,719.4	20.3	18.8	155.64	-184.0	598.1	443.1	407.5	35.63	12.437	
4,900.0	4,751.0	4,878.6	4,816.8	20.8	19.3	155.69	-189.1	615.9	456.0	419.5	36.47	12.503	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,846.5	4,977.8	4,914.2	21.3	19.7	155.73	-194.1	633.7	468.9	431.6	37.32	12.565	
5,100.0	4,942.0	5,076.9	5,011.6	21.8	20.2	155.76	-199.2	651.5	481.8	443.6	38.16	12.624	
5,200.0	5,037.5	5,176.1	5,109.0	22.3	20.6	155.80	-204.2	669.3	494.7	455.7	39.01	12.680	
5,300.0	5,133.0	5,275.3	5,206.5	22.8	21.1	155.84	-209.3	687.2	507.6	467.7	39.86	12.734	
5,400.0	5,228.6	5,374.4	5,303.9	23.3	21.5	155.87	-214.3	705.0	520.5	479.8	40.71	12.785	
5,500.0	5,324.1	5,473.6	5,401.3	23.8	22.0	155.90	-219.4	722.8	533.4	491.8	41.56	12.834	
5,600.0	5,419.6	5,572.8	5,498.7	24.3	22.4	155.93	-224.4	740.6	546.3	503.8	42.41	12.881	
5,700.0	5,515.1	5,671.9	5,596.1	24.8	22.9	155.96	-229.4	758.5	559.1	515.9	43.26	12.925	
5,800.0	5,610.6	5,771.1	5,693.6	25.3	23.3	155.99	-234.5	776.3	572.0	527.9	44.11	12.968	
5,900.0	5,706.2	5,870.2	5,791.0	25.8	23.8	156.01	-239.5	794.1	584.9	540.0	44.96	13.009	
6,000.0	5,801.7	5,969.4	5,888.4	26.3	24.2	156.04	-244.6	811.9	597.8	552.0	45.82	13.048	
6,100.0	5,897.2	6,068.6	5,985.8	26.8	24.7	156.06	-249.6	829.8	610.7	564.0	46.67	13.086	
6,200.0	5,992.7	6,167.7	6,083.2	27.3	25.1	156.08	-254.7	847.6	623.6	576.1	47.52	13.122	
6,300.0	6,088.2	6,266.9	6,180.7	27.8	25.6	156.11	-259.7	865.4	636.5	588.1	48.38	13.157	
6,400.0	6,183.8	6,366.1	6,278.1	28.3	26.0	156.13	-264.8	883.2	649.4	600.2	49.23	13.190	
6,500.0	6,279.3	6,465.2	6,375.5	28.8	26.5	156.15	-269.8	901.0	662.3	612.2	50.09	13.223	
6,600.0	6,374.8	6,560.7	6,469.3	29.3	26.9	156.17	-274.6	918.1	675.3	624.4	50.91	13.265	
6,700.0	6,470.3	6,651.3	6,558.6	29.8	27.3	156.26	-278.9	933.1	689.3	637.6	51.71	13.331	
6,800.0	6,565.9	6,741.6	6,647.7	30.4	27.7	156.42	-282.7	946.7	704.6	652.1	52.51	13.418	
6,900.0	6,661.4	6,831.4	6,736.6	30.9	28.1	156.64	-286.2	958.9	721.1	667.8	53.32	13.524	
7,000.0	6,756.9	6,920.8	6,825.3	31.4	28.5	156.92	-289.2	969.6	738.8	684.7	54.13	13.650	
7,100.0	6,852.4	7,009.7	6,913.7	31.9	28.9	157.25	-291.9	979.1	757.7	702.8	54.93	13.795	
7,200.0	6,947.9	7,100.0	7,003.6	32.4	29.2	157.64	-294.2	987.3	777.9	722.1	55.75	13.953	
7,300.0	7,043.5	7,186.0	7,089.3	32.9	29.5	158.05	-296.1	993.8	799.3	742.8	56.52	14.143	
7,400.0	7,139.0	7,273.2	7,176.3	33.4	29.9	158.50	-297.6	999.2	822.0	764.7	57.29	14.346	
7,500.0	7,234.5	7,359.8	7,262.9	33.9	30.2	158.99	-298.8	1,003.3	845.9	787.8	58.06	14.570	
7,600.0	7,330.0	7,445.8	7,348.8	34.4	30.4	159.49	-299.5	1,006.1	871.0	812.2	58.79	14.815	
7,700.0	7,425.5	7,531.1	7,434.0	34.9	30.6	160.02	-300.0	1,007.6	897.4	837.8	59.63	15.050	
7,782.5	7,504.4	7,601.4	7,504.4	35.3	30.7	160.46	-300.1	1,008.0	920.2	858.7	61.43	14.980	
7,800.0	7,521.1	7,618.1	7,521.1	35.4	30.7	160.59	-300.1	1,008.0	925.0	863.5	61.56	15.026	
7,900.0	7,616.9	7,714.0	7,616.9	35.9	30.8	161.24	-300.1	1,008.0	952.1	889.7	62.33	15.273	
8,000.0	7,713.3	7,810.3	7,713.3	36.4	30.8	161.83	-300.1	1,008.0	977.6	914.5	63.03	15.509	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis			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	1.0	0.0	0.0	0.0	8.59	200.1	30.2	202.3					
100.0	100.0	101.0	100.0	0.8	0.8	8.59	200.1	30.2	202.3	200.4	2.00	101.284		
200.0	200.0	201.0	200.0	1.4	1.4	8.59	200.1	30.2	202.3	199.0	3.32	61.023		
300.0	300.0	301.0	300.0	1.9	1.9	8.59	200.1	30.2	202.3	198.2	4.20	48.190		
400.0	400.0	401.0	400.0	2.2	2.3	8.59	200.1	30.2	202.3	197.4	4.92	41.169		
500.0	500.0	501.0	500.0	2.6	2.6	8.59	200.1	30.2	202.3	196.8	5.54	36.553		
600.0	600.0	601.0	600.0	2.8	2.8	8.59	200.1	30.2	202.3	196.3	6.09	33.211		
700.0	700.0	701.0	700.0	3.1	3.1	8.59	200.1	30.2	202.3	195.7	6.60	30.642		
800.0	800.0	801.0	800.0	3.3	3.3	8.59	200.1	30.2	202.3	195.3	7.08	28.585		
900.0	900.0	901.0	900.0	3.6	3.6	8.59	200.1	30.2	202.3	194.8	7.53	26.888		
966.0	966.0	967.0	966.0	3.7	3.7	8.59	200.1	30.2	202.3	194.5	7.80	25.930		
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	8.59	200.1	30.2	202.3	194.4	7.96	25.434		
1,100.0	1,100.0	1,100.0	1,099.0	4.1	5.2	-81.66	200.0	32.0	202.3	192.8	9.53	21.239		
1,200.0	1,199.8	1,199.2	1,198.0	4.4	5.5	-81.66	199.9	37.2	202.3	192.4	9.84	20.546		
1,300.0	1,299.5	1,298.3	1,296.7	4.7	5.7	-81.66	199.8	45.8	202.1	192.0	10.16	19.898		
1,400.0	1,398.7	1,397.3	1,395.1	5.1	6.0	-81.66	199.5	57.9	201.9	191.5	10.47	19.284		
1,500.0	1,497.5	1,496.4	1,492.9	5.4	6.3	-81.68	199.2	73.3	201.7	190.9	10.79	18.693		
1,600.0	1,595.6	1,595.5	1,590.2	5.8	6.7	-81.71	198.9	92.1	201.4	190.3	11.12	18.116		
1,700.0	1,693.1	1,694.6	1,686.8	6.2	7.0	-81.74	198.4	114.2	201.0	189.6	11.46	17.542		
1,800.0	1,789.6	1,793.7	1,782.6	6.6	7.4	-81.78	197.9	139.7	200.6	188.8	11.83	16.963		
1,860.7	1,847.8	1,853.9	1,840.3	6.8	7.6	-81.81	197.6	156.8	200.4	188.3	12.03	16.653		
1,900.0	1,885.3	1,892.8	1,877.4	6.9	7.7	-81.75	197.3	168.5	200.2	188.0	12.16	16.464		
1,960.4	1,943.1	1,952.7	1,934.2	7.2	8.0	-81.36	197.0	187.5	200.1	187.7	12.43	16.102 CC		
2,000.0	1,980.9	1,991.9	1,971.1	7.3	8.1	-80.92	196.7	200.5	200.2	187.6	12.61	15.875 ES		
2,100.0	2,076.4	2,090.6	2,063.4	7.7	8.5	-79.13	196.0	235.6	200.7	187.6	13.10	15.327		
2,200.0	2,171.9	2,190.3	2,156.0	8.1	8.9	-76.91	195.3	272.6	201.8	188.1	13.70	14.731		
2,300.0	2,267.4	2,290.0	2,248.6	8.5	9.3	-74.71	194.6	309.5	203.2	188.9	14.33	14.182		
2,400.0	2,363.0	2,389.7	2,341.2	8.9	9.7	-72.55	193.8	346.4	204.9	189.9	15.00	13.660		
2,500.0	2,458.5	2,489.4	2,433.8	9.4	10.1	-70.42	193.1	383.3	206.9	191.2	15.72	13.164		
2,600.0	2,554.0	2,589.0	2,526.3	9.8	10.5	-68.34	192.4	420.3	209.2	192.7	16.48	12.696		
2,700.0	2,649.5	2,688.7	2,618.9	10.2	10.9	-66.30	191.6	457.2	211.7	194.4	17.27	12.257		
2,800.0	2,745.0	2,788.4	2,711.5	10.7	11.4	-64.31	190.9	494.1	214.5	196.4	18.10	11.849		
2,900.0	2,840.6	2,888.1	2,804.1	11.1	11.8	-62.38	190.2	531.0	217.6	198.6	18.97	11.469		
3,000.0	2,936.1	2,987.8	2,896.7	11.6	12.3	-60.50	189.5	568.0	220.9	201.0	19.86	11.119		
3,100.0	3,031.6	3,087.5	2,989.3	12.1	12.7	-58.68	188.7	604.9	224.4	203.6	20.78	10.796		
3,200.0	3,127.1	3,187.2	3,081.9	12.5	13.2	-56.92	188.0	641.8	228.1	206.4	21.73	10.500		
3,300.0	3,222.6	3,286.8	3,174.5	13.0	13.6	-55.21	187.3	678.7	232.1	209.4	22.69	10.228		
3,400.0	3,318.2	3,386.5	3,267.1	13.5	14.1	-53.57	186.5	715.7	236.2	212.6	23.67	9.980		
3,500.0	3,413.7	3,486.2	3,359.7	14.0	14.6	-51.98	185.8	752.6	240.6	215.9	24.66	9.754		
3,600.0	3,509.2	3,585.9	3,452.3	14.4	15.1	-50.45	185.1	789.5	245.1	219.4	25.67	9.547		
3,700.0	3,604.7	3,685.6	3,544.9	14.9	15.5	-48.97	184.4	826.4	249.8	223.1	26.69	9.359		
3,800.0	3,700.2	3,785.3	3,637.5	15.4	16.0	-47.55	183.6	863.4	254.6	226.9	27.72	9.187		
3,900.0	3,795.8	3,885.0	3,730.0	15.9	16.5	-46.19	182.9	900.3	259.6	230.9	28.75	9.030		
4,000.0	3,891.3	3,984.6	3,822.6	16.4	17.0	-44.87	182.2	937.2	264.8	235.0	29.79	8.887		
4,100.0	3,986.8	4,084.3	3,915.2	16.9	17.5	-43.61	181.4	974.1	270.1	239.2	30.84	8.757		
4,200.0	4,082.3	4,184.0	4,007.8	17.4	18.0	-42.39	180.7	1,011.1	275.5	243.6	31.89	8.638		
4,300.0	4,177.8	4,283.7	4,100.4	17.8	18.5	-41.22	180.0	1,048.0	281.0	248.0	32.94	8.530		
4,400.0	4,273.4	4,383.4	4,193.0	18.3	19.0	-40.10	179.3	1,084.9	286.6	252.6	33.99	8.431		
4,500.0	4,368.9	4,483.1	4,285.6	18.8	19.5	-39.02	178.5	1,121.8	292.4	257.3	35.05	8.341		
4,600.0	4,464.4	4,582.8	4,378.2	19.3	20.0	-37.99	177.8	1,158.8	298.2	262.1	36.11	8.258		
4,700.0	4,559.9	4,682.4	4,470.8	19.8	20.5	-36.99	177.1	1,195.7	304.1	267.0	37.17	8.183		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,800.0	4,655.4	4,782.1	4,563.4	20.3	21.0	-36.03	176.3	1,232.6	310.2	271.9	38.23	8.114	
4,900.0	4,751.0	4,881.8	4,656.0	20.8	21.5	-35.11	175.6	1,269.5	316.3	277.0	39.29	8.050	
5,000.0	4,846.5	4,981.5	4,748.6	21.3	22.0	-34.22	174.9	1,306.5	322.4	282.1	40.34	7.992	
5,100.0	4,942.0	5,081.2	4,841.2	21.8	22.5	-33.37	174.1	1,343.4	328.7	287.3	41.40	7.939	
5,200.0	5,037.5	5,180.9	4,933.8	22.3	23.0	-32.55	173.4	1,380.3	335.0	292.6	42.46	7.890	
5,300.0	5,133.0	5,280.6	5,026.3	22.8	23.5	-31.76	172.7	1,417.2	341.4	297.9	43.52	7.845	
5,400.0	5,228.6	5,380.3	5,118.9	23.3	24.1	-30.99	172.0	1,454.2	347.9	303.3	44.58	7.804	
5,500.0	5,324.1	5,479.9	5,211.5	23.8	24.6	-30.26	171.2	1,491.1	354.4	308.8	45.63	7.767	
5,600.0	5,419.6	5,579.6	5,304.1	24.3	25.1	-29.55	170.5	1,528.0	361.0	314.3	46.69	7.732	
5,700.0	5,515.1	5,679.3	5,396.7	24.8	25.6	-28.87	169.8	1,564.9	367.6	319.9	47.74	7.700	
5,800.0	5,610.6	5,779.0	5,489.3	25.3	26.1	-28.21	169.0	1,601.9	374.3	325.5	48.79	7.670	
5,900.0	5,706.2	5,878.7	5,581.9	25.8	26.6	-27.58	168.3	1,638.8	381.0	331.2	49.85	7.643	
6,000.0	5,801.7	5,978.4	5,674.5	26.3	27.1	-26.96	167.6	1,675.7	387.8	336.9	50.90	7.619	
6,100.0	5,897.2	6,078.1	5,767.1	26.8	27.7	-26.37	166.9	1,712.6	394.6	342.6	51.95	7.596	
6,200.0	5,992.7	6,177.7	5,859.7	27.3	28.2	-25.80	166.1	1,749.6	401.4	348.4	53.00	7.574	
6,300.0	6,088.2	6,277.4	5,952.3	27.8	28.7	-25.25	165.4	1,786.5	408.3	354.3	54.05	7.555	
6,400.0	6,183.8	6,377.1	6,044.9	28.3	29.2	-24.72	164.7	1,823.4	415.2	360.2	55.09	7.537	
6,500.0	6,279.3	6,476.8	6,137.5	28.8	29.7	-24.20	163.9	1,860.3	422.2	366.1	56.14	7.521	
6,600.0	6,374.8	6,576.5	6,230.0	29.3	30.2	-23.70	163.2	1,897.3	429.2	372.0	57.19	7.505	
6,700.0	6,470.3	6,676.2	6,322.6	29.8	30.8	-23.22	162.5	1,934.2	436.2	378.0	58.23	7.491	
6,800.0	6,565.9	6,775.9	6,415.2	30.4	31.3	-22.75	161.8	1,971.1	443.3	384.0	59.27	7.479	
6,900.0	6,661.4	6,875.5	6,507.8	30.9	31.8	-22.29	161.0	2,008.0	450.4	390.1	60.32	7.467	
7,000.0	6,756.9	6,975.2	6,600.4	31.4	32.3	-21.85	160.3	2,045.0	457.5	396.1	61.36	7.456	
7,100.0	6,852.4	7,074.9	6,693.0	31.9	32.8	-21.43	159.6	2,081.9	464.6	402.2	62.40	7.446	
7,200.0	6,947.9	7,174.6	6,785.6	32.4	33.4	-21.01	158.8	2,118.8	471.8	408.3	63.44	7.437	
7,300.0	7,043.5	7,274.6	6,878.4	32.9	33.9	-20.61	158.1	2,155.8	479.0	414.5	64.48	7.428	
7,400.0	7,139.0	7,382.8	6,979.4	33.4	34.5	-20.24	157.3	2,194.9	485.2	419.7	65.58	7.399	
7,500.0	7,234.5	7,491.3	7,081.3	33.9	35.0	-19.96	156.6	2,232.2	489.8	423.1	66.67	7.347	
7,600.0	7,330.0	7,600.0	7,184.0	34.4	35.6	-19.76	155.9	2,267.5	492.5	424.8	67.72	7.274	
7,700.0	7,425.5	7,708.7	7,287.5	34.9	36.1	-19.66	155.2	2,301.0	493.5	424.8	68.73	7.180	
7,782.5	7,504.4	7,798.5	7,373.4	35.3	36.6	-19.63	154.7	2,327.1	493.0	423.5	69.54	7.089	
7,800.0	7,521.1	7,817.5	7,391.6	35.4	36.7	-19.63	154.6	2,332.5	492.8	423.1	69.71	7.069	
7,900.0	7,616.9	7,926.2	7,496.3	35.9	37.2	-19.64	154.0	2,362.0	491.3	420.7	70.65	6.954	
8,000.0	7,713.3	8,034.9	7,601.5	36.4	37.8	-19.65	153.5	2,389.4	489.7	418.2	71.55	6.844	
8,100.0	7,810.1	8,143.6	7,707.1	36.9	38.3	-19.68	153.0	2,414.9	488.0	415.6	72.41	6.739	
8,200.0	7,907.3	8,252.2	7,813.2	37.4	38.8	-19.71	152.5	2,438.4	486.1	412.9	73.23	6.639	
8,300.0	8,004.9	8,360.8	7,919.6	37.9	39.3	-19.76	152.1	2,459.8	484.1	410.1	74.00	6.542	
8,400.0	8,102.9	8,469.4	8,026.4	38.4	39.8	-19.81	151.7	2,479.3	482.0	407.3	74.73	6.450	
8,500.0	8,201.2	8,577.9	8,133.5	38.8	40.3	-19.87	151.4	2,496.6	479.8	404.4	75.41	6.362	
8,600.0	8,299.8	8,686.3	8,240.8	39.3	40.8	-19.95	151.1	2,512.0	477.4	401.3	76.05	6.277	
8,700.0	8,398.7	8,794.7	8,348.4	39.7	41.2	-20.03	150.8	2,525.3	474.9	398.3	76.64	6.197	
8,800.0	8,497.8	8,903.0	8,456.1	40.1	41.7	-20.13	150.6	2,536.5	472.3	395.1	77.17	6.120	
8,900.0	8,597.2	9,011.3	8,564.0	40.6	42.1	-20.23	150.4	2,545.8	469.5	391.9	77.64	6.047	
9,000.0	8,696.7	9,119.5	8,672.0	41.0	42.5	-20.35	150.3	2,552.9	466.6	388.6	78.05	5.978	
9,100.0	8,796.4	9,227.6	8,780.0	41.3	42.8	-20.48	150.2	2,558.1	463.6	385.2	78.40	5.914	
9,200.0	8,896.2	9,335.7	8,888.0	41.7	43.1	-20.62	150.1	2,561.2	460.5	381.9	78.66	5.855	
9,300.0	8,996.1	9,443.7	8,995.9	42.0	43.3	-20.77	150.1	2,562.2	457.3	376.6	80.72	5.665	
9,400.0	9,096.1	9,543.8	9,096.1	42.3	43.4	-20.88	150.1	2,562.2	454.8	372.4	82.33	5.523	
9,500.0	9,196.1	9,643.8	9,196.1	42.5	43.4	-20.92	150.1	2,562.2	453.9	371.4	82.48	5.503	
9,503.9	9,200.0	9,647.7	9,200.0	42.5	43.4	69.35	150.1	2,562.2	453.9	371.4	82.48	5.503	
9,600.0	9,296.1	9,743.8	9,296.1	42.5	43.4	69.35	150.1	2,562.2	453.9	371.4	82.52	5.500	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,700.0	9,396.1	9,843.8	9,396.1	42.5	43.4	69.35	150.1	2,562.2	453.9	371.3	82.56	5.498	
9,785.4	9,481.5	9,929.2	9,481.5	42.5	43.4	69.35	150.1	2,562.2	453.9	371.3	82.59	5.496	
9,800.0	9,496.1	9,943.8	9,496.1	42.5	43.4	-110.32	150.1	2,562.2	454.0	371.4	82.58	5.497	
9,825.0	9,521.0	9,968.7	9,521.0	42.5	43.4	-110.43	150.1	2,562.2	454.5	371.9	82.52	5.507	
9,850.0	9,545.9	9,993.6	9,545.9	42.5	43.4	-110.65	150.1	2,562.2	455.4	373.0	82.41	5.526	
9,875.0	9,570.5	10,018.2	9,570.5	42.5	43.4	-110.95	150.1	2,562.2	456.9	374.6	82.25	5.554	
9,900.0	9,595.0	10,042.7	9,595.0	42.5	43.4	-111.34	150.1	2,562.2	458.8	376.8	82.05	5.592	
9,925.0	9,619.1	10,066.8	9,619.1	42.5	43.5	-111.80	150.1	2,562.2	461.3	379.5	81.80	5.639	
9,950.0	9,642.8	10,090.5	9,642.8	42.5	43.5	-112.31	150.1	2,562.2	464.4	382.9	81.50	5.698	
9,975.0	9,666.1	10,113.8	9,666.1	42.5	43.5	-112.87	150.1	2,562.2	468.1	386.9	81.15	5.768	
10,000.0	9,688.9	10,136.6	9,688.9	42.5	43.5	-113.44	150.1	2,562.2	472.4	391.7	80.75	5.850	
10,025.0	9,711.1	10,158.8	9,711.1	42.5	43.5	-114.02	150.1	2,562.2	477.5	397.2	80.30	5.946	
10,050.0	9,732.7	10,180.4	9,732.7	42.5	43.5	-114.58	150.1	2,562.2	483.3	403.5	79.80	6.057	
10,075.0	9,753.6	10,201.3	9,753.6	42.5	43.5	-115.10	150.1	2,562.2	490.0	410.7	79.25	6.182	
10,100.0	9,773.8	10,221.5	9,773.8	42.5	43.5	-115.56	150.1	2,562.2	497.5	418.8	78.66	6.324	
10,125.0	9,793.2	10,240.9	9,793.2	42.6	43.5	-115.93	150.1	2,562.2	505.8	427.8	78.03	6.483	
10,150.0	9,811.7	10,259.4	9,811.7	42.6	43.5	-116.21	150.1	2,562.2	515.1	437.7	77.37	6.658	
10,175.0	9,829.3	10,277.0	9,829.3	42.6	43.5	-116.36	150.1	2,562.2	525.3	448.6	76.67	6.851	
10,200.0	9,845.9	10,293.6	9,845.9	42.6	43.5	-116.36	150.1	2,562.2	536.4	460.5	75.96	7.062	
10,225.0	9,861.5	10,309.3	9,861.5	42.6	43.5	-116.20	150.1	2,562.2	548.5	473.3	75.24	7.291	
10,250.0	9,876.2	10,323.9	9,876.2	42.6	43.5	-115.84	150.1	2,562.2	561.5	487.0	74.51	7.537	
10,275.0	9,889.7	10,337.4	9,889.7	42.6	43.5	-115.27	150.1	2,562.2	575.5	501.7	73.78	7.800	
10,300.0	9,902.1	10,349.8	9,902.1	42.6	43.5	-114.45	150.1	2,562.2	590.3	517.2	73.06	8.079	
10,325.0	9,913.3	10,361.0	9,913.3	42.6	43.5	-113.38	150.1	2,562.2	606.0	533.6	72.36	8.374	
10,350.0	9,923.4	10,371.1	9,923.4	42.7	43.5	-112.00	150.1	2,562.2	622.5	550.8	71.68	8.684	
10,375.0	9,932.3	10,380.0	9,932.3	42.7	43.5	-110.30	150.1	2,562.2	639.7	568.7	71.02	9.007	
10,400.0	9,939.9	10,387.6	9,939.9	42.7	43.5	-108.24	150.1	2,562.2	657.7	587.3	70.40	9.342	
10,425.0	9,946.2	10,394.0	9,946.2	42.7	43.5	-105.80	150.1	2,562.2	676.3	606.5	69.80	9.689	
10,450.0	9,951.3	10,399.0	9,951.3	42.7	43.5	-102.95	150.1	2,562.2	695.5	626.2	69.24	10.044	
10,475.0	9,955.1	10,402.8	9,955.1	42.8	43.5	-99.67	150.1	2,562.2	715.2	646.5	68.71	10.408	
10,500.0	9,957.6	10,405.4	9,957.6	42.8	43.5	-95.96	150.1	2,562.2	735.3	667.1	68.22	10.778	
10,525.0	9,958.9	10,406.6	9,958.9	42.8	43.5	-91.84	150.1	2,562.2	755.8	688.0	67.76	11.154	
10,534.2	9,959.0	10,406.7	9,959.0	42.8	43.5	-90.23	150.1	2,562.2	763.4	695.8	67.60	11.293	
10,600.0	9,959.1	10,406.8	9,959.1	42.9	43.5	-90.25	150.1	2,562.2	818.9	752.3	66.57	12.301	
10,700.0	9,959.4	11,757.4	10,691.8	43.0	44.2	-152.72	-671.4	2,519.2	824.4	783.1	41.27	19.973	
10,800.0	9,959.7	11,846.3	10,691.8	43.2	44.3	-152.95	-760.3	2,515.9	822.1	780.9	41.26	19.927	
10,900.0	9,959.9	11,936.0	10,691.8	43.3	44.5	-153.01	-850.0	2,515.4	821.3	780.0	41.34	19.866	
11,000.0	9,960.2	12,036.0	10,691.7	43.5	44.7	-153.00	-950.0	2,516.0	821.0	779.5	41.51	19.782	
11,100.0	9,960.5	12,136.0	10,691.7	43.8	45.0	-152.99	-1,050.0	2,516.6	820.8	779.0	41.73	19.668	
11,200.0	9,960.7	12,236.0	10,691.7	44.0	45.3	-152.98	-1,150.0	2,517.2	820.5	778.5	42.02	19.527	
11,300.0	9,961.0	12,336.0	10,691.6	44.3	45.6	-152.97	-1,250.0	2,517.8	820.2	777.9	42.37	19.360	
11,400.0	9,961.3	12,436.0	10,691.6	44.5	45.9	-152.96	-1,350.0	2,518.4	820.0	777.2	42.77	19.170	
11,500.0	9,961.5	12,536.0	10,691.5	44.9	46.2	-152.95	-1,450.0	2,519.0	819.7	776.5	43.24	18.957	
11,600.0	9,961.8	12,636.0	10,691.5	45.2	46.6	-152.94	-1,550.0	2,519.6	819.4	775.7	43.76	18.726	
11,700.0	9,962.1	12,736.0	10,691.5	45.5	46.9	-152.93	-1,650.0	2,520.2	819.2	774.8	44.33	18.477	
11,800.0	9,962.3	12,836.0	10,691.4	45.9	47.3	-152.92	-1,750.0	2,520.8	818.9	773.9	44.96	18.214	
11,900.0	9,962.6	12,936.0	10,691.4	46.3	47.8	-152.91	-1,850.0	2,521.4	818.6	773.0	45.63	17.939	
12,000.0	9,962.9	13,036.0	10,691.4	46.7	48.2	-152.90	-1,950.0	2,522.0	818.3	772.0	46.36	17.654	
12,100.0	9,963.1	13,136.0	10,691.3	47.1	48.6	-152.89	-2,050.0	2,522.6	818.1	771.0	47.12	17.360	
12,200.0	9,963.4	13,236.0	10,691.3	47.5	49.1	-152.88	-2,150.0	2,523.3	817.8	769.9	47.93	17.061	
12,300.0	9,963.7	13,336.0	10,691.2	48.0	49.6	-152.87	-2,250.0	2,523.9	817.5	768.8	48.78	16.758	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,400.0	9,963.9	13,436.0	10,691.2	48.4	50.1	-152.86	-2,350.0	2,524.5	817.3	767.6	49.67	16.453	
12,500.0	9,964.2	13,536.0	10,691.2	48.9	50.6	-152.85	-2,450.0	2,525.1	817.0	766.4	50.60	16.147	
12,600.0	9,964.5	13,636.0	10,691.1	49.4	51.1	-152.84	-2,550.0	2,525.7	816.7	765.2	51.56	15.841	
12,700.0	9,964.7	13,736.0	10,691.1	49.9	51.6	-152.83	-2,650.0	2,526.3	816.5	763.9	52.55	15.536	
12,800.0	9,965.0	13,836.0	10,691.0	50.5	52.2	-152.82	-2,750.0	2,526.9	816.2	762.6	53.58	15.234	
12,900.0	9,965.3	13,936.0	10,691.0	51.0	52.7	-152.81	-2,850.0	2,527.5	815.9	761.3	54.63	14.936	
13,000.0	9,965.5	14,036.0	10,691.0	51.6	53.3	-152.80	-2,950.0	2,528.1	815.6	759.9	55.71	14.641	
13,100.0	9,965.8	14,136.0	10,690.9	52.1	53.9	-152.79	-3,050.0	2,528.7	815.4	758.6	56.82	14.351	
13,200.0	9,966.1	14,236.0	10,690.9	52.7	54.4	-152.78	-3,150.0	2,529.3	815.1	757.2	57.95	14.067	
13,300.0	9,966.3	14,336.0	10,690.9	53.3	55.0	-152.77	-3,250.0	2,529.9	814.8	755.7	59.10	13.787	
13,400.0	9,966.6	14,436.0	10,690.8	53.9	55.7	-152.76	-3,350.0	2,530.5	814.6	754.3	60.28	13.514	
13,500.0	9,966.9	14,536.0	10,690.8	54.5	56.3	-152.75	-3,450.0	2,531.1	814.3	752.8	61.47	13.247	
13,600.0	9,967.1	14,636.0	10,690.7	55.1	56.9	-152.74	-3,550.0	2,531.8	814.0	751.3	62.69	12.986	
13,700.0	9,967.4	14,736.0	10,690.7	55.7	57.5	-152.73	-3,650.0	2,532.4	813.8	749.8	63.92	12.731	
13,800.0	9,967.7	14,836.0	10,690.7	56.4	58.2	-152.72	-3,750.0	2,533.0	813.5	748.3	65.17	12.483	
13,900.0	9,967.9	14,936.0	10,690.6	57.0	58.8	-152.71	-3,850.0	2,533.6	813.2	746.8	66.44	12.241	
14,000.0	9,968.2	15,036.0	10,690.6	57.7	59.5	-152.70	-3,950.0	2,534.2	813.0	745.2	67.72	12.005	
14,100.0	9,968.5	15,136.0	10,690.5	58.3	60.2	-152.69	-4,050.0	2,534.8	812.7	743.7	69.02	11.775	
14,200.0	9,968.7	15,236.0	10,690.5	59.0	60.9	-152.68	-4,149.9	2,535.4	812.4	742.1	70.33	11.552	
14,300.0	9,969.0	15,336.0	10,690.5	59.7	61.5	-152.67	-4,249.9	2,536.0	812.1	740.5	71.65	11.335	
14,400.0	9,969.3	15,436.0	10,690.4	60.4	62.2	-152.66	-4,349.9	2,536.6	811.9	738.9	72.98	11.124	
14,500.0	9,969.5	15,536.0	10,690.4	61.0	62.9	-152.65	-4,449.9	2,537.2	811.6	737.3	74.33	10.919	
14,600.0	9,969.8	15,636.0	10,690.4	61.7	63.6	-152.64	-4,549.9	2,537.8	811.3	735.6	75.69	10.719	
14,700.0	9,970.0	15,736.0	10,690.3	62.5	64.4	-152.63	-4,649.9	2,538.4	811.1	734.0	77.06	10.526	
14,800.0	9,970.3	15,836.0	10,690.3	63.2	65.1	-152.62	-4,749.9	2,539.0	810.8	732.4	78.43	10.337	
14,900.0	9,970.6	15,936.0	10,690.2	63.9	65.8	-152.61	-4,849.9	2,539.6	810.5	730.7	79.82	10.154	
15,000.0	9,970.8	16,036.0	10,690.2	64.6	66.5	-152.60	-4,949.9	2,540.3	810.3	729.0	81.22	9.976	
15,100.0	9,971.1	16,136.0	10,690.2	65.4	67.3	-152.59	-5,049.9	2,540.9	810.0	727.4	82.62	9.803	
15,200.0	9,971.4	16,236.0	10,690.1	66.1	68.0	-152.58	-5,149.9	2,541.5	809.7	725.7	84.04	9.635	
15,300.0	9,971.6	16,336.0	10,690.1	66.8	68.8	-152.57	-5,249.9	2,542.1	809.5	724.0	85.46	9.472	
15,400.0	9,971.9	16,436.0	10,690.0	67.6	69.5	-152.56	-5,349.9	2,542.7	809.2	722.3	86.88	9.313	
15,500.0	9,972.2	16,536.0	10,690.0	68.3	70.3	-152.55	-5,449.9	2,543.3	808.9	720.6	88.32	9.159	
15,600.0	9,972.4	16,636.0	10,690.0	69.1	71.0	-152.54	-5,549.9	2,543.9	808.6	718.9	89.76	9.009	
15,700.0	9,972.7	16,736.0	10,689.9	69.9	71.8	-152.53	-5,649.9	2,544.5	808.4	717.2	91.21	8.863	
15,800.0	9,973.0	16,836.0	10,689.9	70.6	72.6	-152.52	-5,749.9	2,545.1	808.1	715.4	92.66	8.721	
15,900.0	9,973.2	16,936.0	10,689.8	71.4	73.3	-152.51	-5,849.9	2,545.7	807.8	713.7	94.12	8.583	
16,000.0	9,973.5	17,036.0	10,689.8	72.2	74.1	-152.50	-5,949.9	2,546.3	807.6	712.0	95.58	8.449	
16,100.0	9,973.8	17,136.0	10,689.8	73.0	74.9	-152.49	-6,049.9	2,546.9	807.3	710.2	97.05	8.318	
16,200.0	9,974.0	17,236.0	10,689.7	73.8	75.7	-152.48	-6,149.9	2,547.5	807.0	708.5	98.53	8.191	
16,300.0	9,974.3	17,336.0	10,689.7	74.6	76.5	-152.47	-6,249.9	2,548.1	806.8	706.8	100.01	8.067	
16,400.0	9,974.6	17,436.0	10,689.7	75.4	77.3	-152.46	-6,349.9	2,548.8	806.5	705.0	101.49	7.946	
16,500.0	9,974.8	17,536.0	10,689.6	76.1	78.1	-152.45	-6,449.9	2,549.4	806.2	703.2	102.98	7.829	
16,600.0	9,975.1	17,636.0	10,689.6	77.0	78.9	-152.44	-6,549.9	2,550.0	806.0	701.5	104.47	7.714	
16,700.0	9,975.4	17,736.0	10,689.5	77.8	79.7	-152.43	-6,649.9	2,550.6	805.7	699.7	105.97	7.603	
16,800.0	9,975.6	17,836.0	10,689.5	78.6	80.5	-152.41	-6,749.9	2,551.2	805.4	697.9	107.47	7.494	
16,900.0	9,975.9	17,936.0	10,689.5	79.4	81.3	-152.40	-6,849.9	2,551.8	805.2	696.2	108.98	7.388	
17,000.0	9,976.2	18,036.0	10,689.4	80.2	82.1	-152.39	-6,949.9	2,552.4	804.9	694.4	110.48	7.285	
17,100.0	9,976.4	18,136.0	10,689.4	81.0	83.0	-152.38	-7,049.9	2,553.0	804.6	692.6	112.00	7.184	
17,200.0	9,976.7	18,236.0	10,689.3	81.8	83.8	-152.37	-7,149.9	2,553.6	804.3	690.8	113.51	7.086	
17,300.0	9,977.0	18,336.0	10,689.3	82.7	84.6	-152.36	-7,249.9	2,554.2	804.1	689.0	115.03	6.990	
17,400.0	9,977.2	18,436.0	10,689.3	83.5	85.4	-152.35	-7,349.9	2,554.8	803.8	687.3	116.55	6.897	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 901H - OWB - PWP1											Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
17,500.0	9,977.5	18,536.0	10,689.2	84.3	86.3	-152.34	-7,449.9	2,555.4	803.5	685.5	118.07	6.805
17,600.0	9,977.8	18,636.0	10,689.2	85.2	87.1	-152.33	-7,549.9	2,556.0	803.3	683.7	119.60	6.716
17,700.0	9,978.0	18,736.0	10,689.2	86.0	87.9	-152.32	-7,649.9	2,556.6	803.0	681.9	121.13	6.629
17,800.0	9,978.3	18,836.0	10,689.1	86.8	88.8	-152.31	-7,749.9	2,557.2	802.7	680.1	122.66	6.544
17,900.0	9,978.6	18,936.0	10,689.1	87.7	89.6	-152.30	-7,849.9	2,557.9	802.5	678.3	124.20	6.461
18,000.0	9,978.8	19,036.0	10,689.0	88.5	90.5	-152.29	-7,949.9	2,558.5	802.2	676.5	125.73	6.380
18,100.0	9,979.1	19,136.0	10,689.0	89.4	91.3	-152.28	-8,049.9	2,559.1	801.9	674.7	127.27	6.301
18,200.0	9,979.4	19,236.0	10,689.0	90.2	92.2	-152.27	-8,149.9	2,559.7	801.7	672.8	128.81	6.223
18,300.0	9,979.6	19,336.0	10,688.9	91.1	93.0	-152.26	-8,249.9	2,560.3	801.4	671.0	130.36	6.148
18,400.0	9,979.9	19,436.0	10,688.9	91.9	93.9	-152.25	-8,349.9	2,560.9	801.1	669.2	131.90	6.074
18,500.0	9,980.2	19,536.0	10,688.8	92.8	94.7	-152.24	-8,449.8	2,561.5	800.9	667.4	133.45	6.001
18,600.0	9,980.4	19,636.0	10,688.8	93.7	95.6	-152.23	-8,549.8	2,562.1	800.6	665.6	135.00	5.930
18,700.0	9,980.7	19,736.0	10,688.8	94.5	96.4	-152.22	-8,649.8	2,562.7	800.3	663.8	136.55	5.861
18,800.0	9,981.0	19,836.0	10,688.7	95.4	97.3	-152.21	-8,749.8	2,563.3	800.1	661.9	138.11	5.793
18,900.0	9,981.2	19,936.0	10,688.7	96.2	98.2	-152.20	-8,849.8	2,563.9	799.8	660.1	139.66	5.727
19,000.0	9,981.5	20,036.0	10,688.7	97.1	99.0	-152.19	-8,949.8	2,564.5	799.5	658.3	141.22	5.662
19,100.0	9,981.8	20,136.0	10,688.6	98.0	99.9	-152.18	-9,049.8	2,565.1	799.2	656.5	142.78	5.598
19,200.0	9,982.0	20,236.0	10,688.6	98.9	100.8	-152.17	-9,149.8	2,565.7	799.0	654.6	144.34	5.535
19,300.0	9,982.3	20,336.0	10,688.5	99.7	101.6	-152.16	-9,249.8	2,566.4	798.7	652.8	145.90	5.474
19,400.0	9,982.6	20,436.0	10,688.5	100.6	102.5	-152.15	-9,349.8	2,567.0	798.4	651.0	147.46	5.414
19,500.0	9,982.8	20,536.0	10,688.5	101.5	103.4	-152.14	-9,449.8	2,567.6	798.2	649.1	149.03	5.356
19,600.0	9,983.1	20,636.0	10,688.4	102.4	104.2	-152.13	-9,549.8	2,568.2	797.9	647.3	150.60	5.298
19,700.0	9,983.4	20,736.0	10,688.4	103.2	105.1	-152.12	-9,649.8	2,568.8	797.6	645.5	152.16	5.242
19,800.0	9,983.6	20,836.0	10,688.3	104.1	106.0	-152.10	-9,749.8	2,569.4	797.4	643.6	153.73	5.187
19,900.0	9,983.9	20,936.0	10,688.3	105.0	106.9	-152.09	-9,849.8	2,570.0	797.1	641.8	155.30	5.133
20,000.0	9,984.2	21,036.0	10,688.3	105.9	107.8	-152.08	-9,949.8	2,570.6	796.8	640.0	156.88	5.079
20,100.0	9,984.4	21,136.0	10,688.2	106.8	108.6	-152.07	-10,049.8	2,571.2	796.6	638.1	158.45	5.027
20,200.0	9,984.7	21,236.0	10,688.2	107.6	109.5	-152.06	-10,149.8	2,571.8	796.3	636.3	160.02	4.976
20,300.0	9,985.0	21,336.0	10,688.2	108.5	110.4	-152.05	-10,249.8	2,572.4	796.0	634.4	161.60	4.926
20,400.0	9,985.2	21,436.0	10,688.1	109.4	111.3	-152.04	-10,349.8	2,573.0	795.8	632.6	163.18	4.877
20,500.0	9,985.5	21,536.0	10,688.1	110.3	112.2	-152.03	-10,449.8	2,573.6	795.5	630.7	164.75	4.828
20,600.0	9,985.8	21,636.0	10,688.0	111.2	113.1	-152.02	-10,549.8	2,574.2	795.2	628.9	166.33	4.781
20,693.8	9,986.0	21,729.8	10,688.0	112.0	113.9	-152.01	-10,643.6	2,574.8	795.0	627.2	167.81	4.737 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	1.0	0.0	0.0	0.0	0.06	200.0	0.2	200.0				
100.0	100.0	101.0	100.0	0.8	0.8	0.06	200.0	0.2	200.0	198.0	2.00	100.103	
200.0	200.0	201.0	200.0	1.4	1.4	0.06	200.0	0.2	200.0	196.7	3.32	60.311	
300.0	300.0	301.0	300.0	1.9	1.9	0.06	200.0	0.2	200.0	195.8	4.20	47.629	
400.0	400.0	401.0	400.0	2.2	2.3	0.06	200.0	0.2	200.0	195.1	4.92	40.689	
500.0	500.0	501.0	500.0	2.6	2.6	0.06	200.0	0.2	200.0	194.5	5.54	36.127	
600.0	600.0	601.0	600.0	2.8	2.8	0.06	200.0	0.2	200.0	193.9	6.09	32.824	
700.0	700.0	701.0	700.0	3.1	3.1	0.06	200.0	0.2	200.0	193.4	6.60	30.285	
800.0	800.0	801.0	800.0	3.3	3.3	0.06	200.0	0.2	200.0	192.9	7.08	28.252	
900.0	900.0	901.0	900.0	3.6	3.6	0.06	200.0	0.2	200.0	192.5	7.53	26.574	
1,000.0	1,000.0	1,001.0	1,000.0	3.8	3.8	0.06	200.0	0.2	200.0	192.0	7.95	25.158 CC	
1,004.4	1,004.4	1,005.4	1,004.4	3.8	3.8	-90.21	200.0	0.2	200.0	192.0	7.97	25.102	
1,100.0	1,100.0	1,101.0	1,100.0	4.1	4.0	-90.70	200.0	0.2	200.0	191.7	8.35	23.965	
1,200.0	1,199.8	1,200.8	1,199.8	4.4	4.2	-92.20	200.0	0.2	200.1	191.4	8.72	22.954 ES	
1,300.0	1,299.5	1,300.5	1,299.5	4.7	4.4	-94.67	200.0	0.2	200.7	191.6	9.08	22.092	
1,400.0	1,398.7	1,399.7	1,398.7	5.1	4.6	-98.06	200.0	0.2	202.0	192.6	9.44	21.391	
1,500.0	1,497.5	1,498.5	1,497.5	5.4	4.7	-102.29	200.0	0.2	204.8	195.0	9.82	20.868	
1,600.0	1,595.6	1,601.1	1,600.0	5.8	5.0	-107.07	199.4	1.9	208.7	198.5	10.24	20.384	
1,700.0	1,693.1	1,704.3	1,703.1	6.2	5.3	-111.81	197.5	7.1	213.0	202.3	10.70	19.896	
1,800.0	1,789.6	1,806.9	1,805.3	6.6	5.4	-116.44	194.6	15.7	217.7	206.5	11.13	19.560	
1,860.7	1,847.8	1,868.9	1,866.9	6.8	5.6	-119.13	192.7	22.7	221.1	209.7	11.44	19.328	
1,900.0	1,885.3	1,909.2	1,906.8	6.9	5.7	-120.81	191.5	27.9	223.4	211.8	11.64	19.194	
2,000.0	1,980.9	2,012.5	2,008.9	7.3	6.0	-124.42	188.3	43.9	228.7	216.5	12.26	18.653	
2,100.0	2,076.4	2,116.9	2,111.2	7.7	6.4	-127.15	185.0	63.8	232.6	219.7	12.91	18.022	
2,200.0	2,171.9	2,221.6	2,213.2	8.1	6.7	-129.09	181.7	87.5	234.6	221.1	13.54	17.325	
2,300.0	2,267.4	2,321.4	2,310.0	8.5	7.0	-130.60	178.5	111.7	235.8	221.6	14.21	16.602	
2,400.0	2,363.0	2,421.2	2,406.7	8.9	7.4	-132.09	175.4	135.9	237.2	222.3	14.90	15.919	
2,500.0	2,458.5	2,521.0	2,503.5	9.4	7.7	-133.57	172.2	160.0	238.7	223.1	15.63	15.274	
2,600.0	2,554.0	2,620.8	2,600.3	9.8	8.1	-135.03	169.0	184.2	240.4	224.0	16.39	14.670	
2,700.0	2,649.5	2,720.6	2,697.1	10.2	8.4	-136.46	165.9	208.4	242.3	225.1	17.18	14.105	
2,800.0	2,745.0	2,820.4	2,793.8	10.7	8.8	-137.88	162.7	232.6	244.2	226.2	17.99	13.578	
2,900.0	2,840.6	2,920.2	2,890.6	11.1	9.2	-139.27	159.5	256.8	246.4	227.5	18.82	13.089	
3,000.0	2,936.1	3,020.0	2,987.4	11.6	9.6	-140.63	156.4	280.9	248.6	229.0	19.68	12.634	
3,100.0	3,031.6	3,119.8	3,084.2	12.1	10.0	-141.97	153.2	305.1	251.1	230.5	20.56	12.214	
3,200.0	3,127.1	3,219.6	3,180.9	12.5	10.4	-143.29	150.0	329.3	253.6	232.2	21.45	11.824	
3,300.0	3,222.6	3,319.4	3,277.7	13.0	10.9	-144.58	146.8	353.5	256.3	233.9	22.36	11.464	
3,400.0	3,318.2	3,419.2	3,374.5	13.5	11.3	-145.84	143.7	377.7	259.1	235.8	23.28	11.130	
3,500.0	3,413.7	3,519.0	3,471.2	14.0	11.7	-147.07	140.5	401.8	262.0	237.8	24.21	10.822	
3,600.0	3,509.2	3,618.8	3,568.0	14.4	12.2	-148.27	137.3	426.0	265.1	239.9	25.16	10.537	
3,700.0	3,604.7	3,718.6	3,664.8	14.9	12.6	-149.45	134.2	450.2	268.2	242.1	26.11	10.273	
3,800.0	3,700.2	3,818.4	3,761.6	15.4	13.1	-150.60	131.0	474.4	271.5	244.4	27.07	10.028	
3,900.0	3,795.8	3,918.2	3,858.3	15.9	13.5	-151.72	127.8	498.6	274.9	246.9	28.04	9.802	
4,000.0	3,891.3	4,018.0	3,955.1	16.4	14.0	-152.82	124.7	522.7	278.4	249.4	29.02	9.593	
4,100.0	3,986.8	4,117.8	4,051.9	16.9	14.4	-153.88	121.5	546.9	282.0	252.0	30.00	9.399	
4,200.0	4,082.3	4,217.6	4,148.7	17.4	14.9	-154.92	118.3	571.1	285.6	254.7	30.99	9.219	
4,300.0	4,177.8	4,317.4	4,245.4	17.8	15.3	-155.93	115.1	595.3	289.4	257.4	31.97	9.051	
4,400.0	4,273.4	4,417.2	4,342.2	18.3	15.8	-156.92	112.0	619.4	293.3	260.3	32.97	8.896	
4,500.0	4,368.9	4,517.0	4,439.0	18.8	16.3	-157.88	108.8	643.6	297.2	263.3	33.96	8.752	
4,600.0	4,464.4	4,616.8	4,535.8	19.3	16.7	-158.82	105.6	667.8	301.2	266.3	34.96	8.618	
4,700.0	4,559.9	4,716.6	4,632.5	19.8	17.2	-159.73	102.5	692.0	305.3	269.4	35.95	8.493	
4,800.0	4,655.4	4,816.4	4,729.3	20.3	17.7	-160.61	99.3	716.2	309.5	272.6	36.95	8.376	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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			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)			
4,900.0	4,751.0	4,916.2	4,826.1	20.8	18.1	-161.48	96.1	740.3	313.8	275.8	37.95	8.268	
5,000.0	4,846.5	5,016.0	4,922.9	21.3	18.6	-162.32	93.0	764.5	318.1	279.1	38.95	8.167	
5,100.0	4,942.0	5,115.8	5,019.6	21.8	19.1	-163.13	89.8	788.7	322.5	282.5	39.95	8.072	
5,200.0	5,037.5	5,215.6	5,116.4	22.3	19.5	-163.93	86.6	812.9	326.9	286.0	40.95	7.984	
5,300.0	5,133.0	5,315.4	5,213.2	22.8	20.0	-164.70	83.5	837.1	331.4	289.5	41.94	7.902	
5,400.0	5,228.6	5,415.2	5,310.0	23.3	20.5	-165.45	80.3	861.2	336.0	293.1	42.94	7.825	
5,500.0	5,324.1	5,515.0	5,406.7	23.8	21.0	-166.18	77.1	885.4	340.6	296.7	43.94	7.753	
5,600.0	5,419.6	5,614.8	5,503.5	24.3	21.4	-166.90	73.9	909.6	345.3	300.4	44.93	7.685	
5,700.0	5,515.1	5,714.6	5,600.3	24.8	21.9	-167.59	70.8	933.8	350.0	304.1	45.93	7.622	
5,800.0	5,610.6	5,814.4	5,697.1	25.3	22.4	-168.26	67.6	958.0	354.8	307.9	46.92	7.563	
5,900.0	5,706.2	5,914.2	5,793.8	25.8	22.9	-168.92	64.4	982.1	359.7	311.8	47.91	7.507	
6,000.0	5,801.7	6,014.0	5,890.6	26.3	23.3	-169.56	61.3	1,006.3	364.5	315.6	48.90	7.455	
6,100.0	5,897.2	6,113.8	5,987.4	26.8	23.8	-170.18	58.1	1,030.5	369.5	319.6	49.89	7.406	
6,200.0	5,992.7	6,213.6	6,084.2	27.3	24.3	-170.79	54.9	1,054.7	374.4	323.5	50.87	7.360	
6,300.0	6,088.2	6,313.4	6,180.9	27.8	24.8	-171.38	51.8	1,078.9	379.4	327.6	51.86	7.317	
6,400.0	6,183.8	6,413.2	6,277.7	28.3	25.3	-171.95	48.6	1,103.0	384.5	331.6	52.84	7.276	
6,500.0	6,279.3	6,513.0	6,374.5	28.8	25.7	-172.51	45.4	1,127.2	389.5	335.7	53.82	7.237	
6,600.0	6,374.8	6,612.8	6,471.2	29.3	26.2	-173.06	42.2	1,151.4	394.7	339.9	54.80	7.201	
6,700.0	6,470.3	6,712.6	6,568.0	29.8	26.7	-173.59	39.1	1,175.6	399.8	344.0	55.78	7.167	
6,800.0	6,565.9	6,812.4	6,664.8	30.4	27.2	-174.11	35.9	1,199.8	405.0	348.2	56.76	7.135	
6,900.0	6,661.4	6,912.2	6,761.6	30.9	27.7	-174.61	32.7	1,223.9	410.2	352.5	57.73	7.105	
7,000.0	6,756.9	7,012.0	6,858.3	31.4	28.2	-175.10	29.6	1,248.1	415.5	356.8	58.71	7.077	
7,100.0	6,852.4	7,111.8	6,955.1	31.9	28.6	-175.58	26.4	1,272.3	420.7	361.1	59.68	7.050	
7,200.0	6,947.9	7,211.6	7,051.9	32.4	29.1	-176.05	23.2	1,296.5	426.0	365.4	60.65	7.025	
7,300.0	7,043.5	7,311.4	7,148.7	32.9	29.6	-176.51	20.1	1,320.6	431.4	369.8	61.62	7.001	
7,400.0	7,139.0	7,411.2	7,245.4	33.4	30.1	-176.95	16.9	1,344.8	436.7	374.2	62.58	6.978	
7,500.0	7,234.5	7,511.0	7,342.2	33.9	30.6	-177.39	13.7	1,369.0	442.1	378.6	63.55	6.957	
7,600.0	7,330.0	7,610.8	7,439.0	34.4	31.1	-177.81	10.6	1,393.2	447.5	383.0	64.51	6.937	
7,700.0	7,425.5	7,710.6	7,535.8	34.9	31.6	-178.22	7.4	1,417.4	453.0	387.5	65.48	6.918	
7,782.5	7,504.4	7,792.9	7,615.6	35.3	32.0	-178.56	4.8	1,437.3	457.5	391.2	66.26	6.904	
7,800.0	7,521.1	7,810.4	7,632.5	35.4	32.0	-178.63	4.2	1,441.5	458.4	392.0	66.43	6.900	
7,900.0	7,616.9	7,910.2	7,729.4	35.9	32.5	-179.02	1.0	1,465.7	462.7	395.3	67.40	6.865	
8,000.0	7,713.3	8,010.1	7,826.3	36.4	33.0	-179.40	-2.1	1,489.9	465.3	396.9	68.35	6.808	
8,100.0	7,810.1	8,110.1	7,923.2	36.9	33.5	-179.78	-5.3	1,514.2	466.1	396.9	69.29	6.728	
8,200.0	7,907.3	8,210.0	8,020.1	37.4	34.0	-179.84	-8.5	1,538.4	465.3	395.1	70.21	6.626	
8,300.0	8,004.9	8,310.0	8,117.0	37.9	34.5	-179.46	-11.7	1,562.6	462.7	391.5	71.13	6.505	
8,400.0	8,102.9	8,409.8	8,213.8	38.4	35.0	-179.07	-14.8	1,586.8	458.4	386.3	72.03	6.364	
8,500.0	8,201.2	8,509.6	8,310.6	38.8	35.5	-178.67	-18.0	1,610.9	452.3	379.4	72.91	6.204	
8,600.0	8,299.8	8,609.2	8,407.2	39.3	35.9	-178.25	-21.2	1,635.1	444.6	370.8	73.78	6.026	
8,700.0	8,398.7	8,708.7	8,503.7	39.7	36.4	-177.81	-24.3	1,659.2	435.1	360.5	74.62	5.830	
8,800.0	8,497.8	8,807.0	8,599.0	40.1	36.9	-177.34	-27.4	1,683.0	423.9	348.5	75.44	5.619	
8,900.0	8,597.2	8,900.0	8,689.3	40.6	37.4	-176.87	-30.3	1,704.8	411.8	335.7	76.19	5.405	
9,000.0	8,696.7	8,993.2	8,780.3	41.0	37.8	-176.40	-33.0	1,725.2	399.7	322.8	76.90	5.197	
9,100.0	8,796.4	9,086.2	8,871.2	41.3	38.2	-175.93	-35.4	1,744.1	387.3	309.8	77.56	4.994	
9,200.0	8,896.2	9,179.3	8,962.6	41.7	38.7	-175.45	-37.7	1,761.5	374.9	296.7	78.17	4.796	
9,300.0	8,996.1	9,272.5	9,054.5	42.0	39.1	-174.97	-39.8	1,777.5	362.4	283.6	78.73	4.603	
9,400.0	9,096.1	9,366.0	9,146.8	42.3	39.5	-174.48	-41.7	1,792.0	349.7	270.5	79.21	4.414	
9,500.0	9,196.1	9,459.7	9,239.6	42.5	39.9	-173.99	-43.4	1,805.1	336.9	255.5	81.40	4.139	
9,503.9	9,200.0	9,463.4	9,243.2	42.5	39.9	-95.76	-43.5	1,805.6	336.4	253.6	82.77	4.064	
9,600.0	9,296.1	9,553.6	9,332.8	42.5	40.3	-96.22	-45.0	1,816.7	324.8	241.9	82.93	3.916	
9,700.0	9,396.1	9,647.9	9,426.5	42.5	40.7	-96.66	-46.3	1,826.8	314.3	231.2	83.07	3.783	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
9,785.4	9,481.5	9,728.8	9,507.0	42.5	41.0	-97.00	-47.3	1,834.2	306.6	223.4	83.17	3.686	
9,800.0	9,496.1	9,742.5	9,520.7	42.5	41.1	83.47	-47.4	1,835.4	305.4	222.2	83.14	3.673	
9,825.0	9,521.0	9,766.2	9,544.3	42.5	41.2	83.89	-47.7	1,837.3	303.3	220.1	83.20	3.645	
9,850.0	9,545.9	9,789.8	9,567.9	42.5	41.3	84.55	-47.9	1,839.1	301.1	217.8	83.29	3.615	
9,875.0	9,570.5	9,813.3	9,591.2	42.5	41.3	85.46	-48.1	1,840.8	298.9	215.5	83.43	3.583	
9,900.0	9,595.0	9,836.5	9,614.4	42.5	41.4	86.59	-48.3	1,842.4	296.8	213.3	83.58	3.551	
9,925.0	9,619.1	9,859.5	9,637.3	42.5	41.5	87.95	-48.5	1,843.9	294.9	211.1	83.76	3.520	
9,950.0	9,642.8	9,882.1	9,659.9	42.5	41.6	89.50	-48.7	1,845.3	293.1	209.1	83.95	3.491	
9,975.0	9,666.1	9,904.3	9,682.1	42.5	41.7	91.22	-48.9	1,846.5	291.6	207.5	84.12	3.467	
10,000.0	9,688.9	9,926.0	9,703.8	42.5	41.7	93.08	-49.0	1,847.7	290.6	206.4	84.26	3.449	
10,025.0	9,711.1	9,947.2	9,725.0	42.5	41.8	95.03	-49.2	1,848.7	290.1	205.8	84.34	3.440	
10,030.6	9,716.1	9,952.0	9,729.7	42.5	41.8	95.48	-49.2	1,848.9	290.1	205.8	84.34	3.440 SF	
10,050.0	9,732.7	9,967.8	9,745.6	42.5	41.9	97.04	-49.3	1,849.7	290.3	206.0	84.33	3.443	
10,075.0	9,753.6	9,987.8	9,765.5	42.5	41.9	99.06	-49.4	1,850.5	291.4	207.2	84.21	3.460	
10,100.0	9,773.8	10,007.0	9,784.7	42.5	42.0	101.03	-49.5	1,851.2	293.4	209.4	83.96	3.494	
10,125.0	9,793.2	10,025.5	9,803.2	42.6	42.1	102.92	-49.6	1,851.9	296.4	212.9	83.56	3.548	
10,150.0	9,811.7	10,043.2	9,820.8	42.6	42.1	104.68	-49.6	1,852.5	300.7	217.7	82.99	3.623	
10,175.0	9,829.3	10,060.0	9,837.6	42.6	42.2	106.26	-49.7	1,853.0	306.2	224.0	82.26	3.723	
10,200.0	9,845.9	10,075.9	9,853.5	42.6	42.2	107.63	-49.8	1,853.4	313.1	231.7	81.37	3.848	
10,225.0	9,861.5	10,090.8	9,868.4	42.6	42.3	108.76	-49.8	1,853.7	321.4	241.1	80.35	4.000	
10,250.0	9,876.2	10,104.7	9,882.3	42.6	42.3	109.62	-49.9	1,854.0	331.1	251.9	79.20	4.180	
10,275.0	9,889.7	10,117.6	9,895.2	42.6	42.3	110.17	-49.9	1,854.3	342.2	264.2	77.96	4.389	
10,300.0	9,902.1	10,129.4	9,907.1	42.6	42.4	110.40	-49.9	1,854.5	354.6	277.9	76.66	4.625	
10,325.0	9,913.3	10,140.1	9,917.8	42.6	42.4	110.26	-49.9	1,854.6	368.3	293.0	75.33	4.889	
10,350.0	9,923.4	10,149.7	9,927.3	42.7	42.4	109.73	-50.0	1,854.8	383.2	309.2	74.00	5.179	
10,375.0	9,932.3	10,158.1	9,935.8	42.7	42.4	108.79	-50.0	1,854.9	399.3	326.6	72.68	5.493	
10,400.0	9,939.9	10,165.4	9,943.0	42.7	42.4	107.39	-50.0	1,854.9	416.4	344.9	71.40	5.831	
10,425.0	9,946.2	10,171.4	9,949.1	42.7	42.5	105.49	-50.0	1,855.0	434.4	364.2	70.17	6.190	
10,450.0	9,951.3	10,176.3	9,953.9	42.7	42.5	103.06	-50.0	1,855.0	453.2	384.2	69.00	6.568	
10,475.0	9,955.1	10,179.9	9,957.5	42.8	42.5	100.07	-50.0	1,855.1	472.7	404.8	67.90	6.962	
10,500.0	9,957.6	10,182.3	9,959.9	42.8	42.5	96.50	-50.0	1,855.1	492.9	426.0	66.86	7.372	
10,525.0	9,958.9	10,183.5	9,961.1	42.8	42.5	92.35	-50.0	1,855.1	513.5	447.6	65.88	7.794	
10,534.2	9,959.0	10,183.6	9,961.2	42.8	42.5	90.69	-50.0	1,855.1	521.2	455.7	65.54	7.952	
10,600.0	9,959.1	10,183.8	9,961.4	42.9	42.5	90.74	-50.0	1,855.1	577.6	514.2	63.37	9.116	
10,700.0	9,959.4	10,184.1	9,961.8	43.0	42.5	90.80	-50.0	1,855.1	666.6	605.8	60.81	10.962	
10,800.0	9,959.7	10,184.5	9,962.1	43.2	42.5	90.87	-50.0	1,855.1	758.4	699.5	58.92	12.871	
10,900.0	9,959.9	10,184.8	9,962.4	43.3	42.5	90.94	-50.0	1,855.1	852.0	794.5	57.50	14.816	
11,000.0	9,960.2	10,185.1	9,962.8	43.5	42.5	91.00	-50.0	1,855.1	946.9	890.5	56.42	16.784	
11,100.0	9,960.5	11,901.5	10,881.3	43.8	44.1	162.92	-1,053.1	1,860.9	963.3	894.6	68.71	14.019	
11,200.0	9,960.7	12,001.5	10,881.3	44.0	44.3	162.92	-1,153.1	1,861.5	963.1	893.2	69.89	13.780	
11,300.0	9,961.0	12,101.5	10,881.4	44.3	44.6	162.91	-1,253.1	1,862.0	962.9	891.8	71.08	13.547	
11,400.0	9,961.3	12,201.5	10,881.5	44.5	44.8	162.90	-1,353.0	1,862.6	962.7	890.5	72.27	13.321	
11,500.0	9,961.5	12,301.5	10,881.5	44.9	45.1	162.90	-1,453.0	1,863.2	962.5	889.1	73.47	13.102	
11,600.0	9,961.8	12,401.5	10,881.6	45.2	45.4	162.89	-1,553.0	1,863.7	962.4	887.7	74.67	12.888	
11,700.0	9,962.1	12,501.5	10,881.6	45.5	45.8	162.89	-1,653.0	1,864.3	962.2	886.3	75.87	12.681	
11,800.0	9,962.3	12,601.5	10,881.7	45.9	46.1	162.88	-1,753.0	1,864.9	962.0	884.9	77.08	12.480	
11,900.0	9,962.6	12,701.5	10,881.8	46.3	46.5	162.88	-1,853.0	1,865.4	961.8	883.5	78.30	12.284	
12,000.0	9,962.9	12,801.5	10,881.8	46.7	46.9	162.87	-1,953.0	1,866.0	961.6	882.1	79.51	12.094	
12,100.0	9,963.1	12,901.5	10,881.9	47.1	47.3	162.86	-2,053.0	1,866.6	961.4	880.7	80.73	11.909	
12,200.0	9,963.4	13,001.5	10,881.9	47.5	47.7	162.86	-2,153.0	1,867.1	961.2	879.3	81.96	11.729	
12,300.0	9,963.7	13,101.5	10,882.0	48.0	48.2	162.85	-2,253.0	1,867.7	961.0	877.9	83.18	11.553	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
12,400.0	9,963.9	13,201.5	10,882.1	48.4	48.6	162.85	-2,353.0	1,868.3	960.9	876.4	84.42	11.383	
12,500.0	9,964.2	13,301.5	10,882.1	48.9	49.1	162.84	-2,453.0	1,868.8	960.7	875.0	85.65	11.216	
12,600.0	9,964.5	13,401.5	10,882.2	49.4	49.6	162.84	-2,553.0	1,869.4	960.5	873.6	86.89	11.054	
12,700.0	9,964.7	13,501.5	10,882.2	49.9	50.1	162.83	-2,653.0	1,870.0	960.3	872.2	88.13	10.897	
12,800.0	9,965.0	13,601.5	10,882.3	50.5	50.6	162.82	-2,753.0	1,870.5	960.1	870.7	89.37	10.743	
12,900.0	9,965.3	13,701.5	10,882.4	51.0	51.2	162.82	-2,853.0	1,871.1	959.9	869.3	90.62	10.593	
13,000.0	9,965.5	13,801.5	10,882.4	51.6	51.7	162.81	-2,953.0	1,871.7	959.7	867.9	91.87	10.446	
13,100.0	9,965.8	13,901.5	10,882.5	52.1	52.3	162.81	-3,053.0	1,872.2	959.6	866.4	93.13	10.304	
13,200.0	9,966.1	14,001.5	10,882.5	52.7	52.9	162.80	-3,153.0	1,872.8	959.4	865.0	94.39	10.164	
13,300.0	9,966.3	14,101.5	10,882.6	53.3	53.5	162.80	-3,253.0	1,873.4	959.2	863.5	95.65	10.028	
13,400.0	9,966.6	14,201.5	10,882.7	53.9	54.1	162.79	-3,353.0	1,873.9	959.0	862.1	96.91	9.895	
13,500.0	9,966.9	14,301.5	10,882.7	54.5	54.7	162.78	-3,453.0	1,874.5	958.8	860.6	98.18	9.766	
13,600.0	9,967.1	14,401.5	10,882.8	55.1	55.3	162.78	-3,553.0	1,875.1	958.6	859.2	99.46	9.639	
13,700.0	9,967.4	14,501.5	10,882.8	55.7	55.9	162.77	-3,653.0	1,875.6	958.4	857.7	100.73	9.515	
13,800.0	9,967.7	14,601.5	10,882.9	56.4	56.6	162.77	-3,753.0	1,876.2	958.3	856.2	102.01	9.394	
13,900.0	9,967.9	14,701.5	10,882.9	57.0	57.2	162.76	-3,853.0	1,876.8	958.1	854.8	103.29	9.275	
14,000.0	9,968.2	14,801.5	10,883.0	57.7	57.9	162.75	-3,953.0	1,877.3	957.9	853.3	104.58	9.160	
14,100.0	9,968.5	14,901.5	10,883.1	58.3	58.5	162.75	-4,053.0	1,877.9	957.7	851.8	105.87	9.046	
14,200.0	9,968.7	15,001.5	10,883.1	59.0	59.2	162.74	-4,153.0	1,878.5	957.5	850.4	107.16	8.935	
14,300.0	9,969.0	15,101.5	10,883.2	59.7	59.9	162.74	-4,253.0	1,879.0	957.3	848.9	108.46	8.827	
14,400.0	9,969.3	15,201.5	10,883.2	60.4	60.6	162.73	-4,353.0	1,879.6	957.1	847.4	109.75	8.721	
14,500.0	9,969.5	15,301.5	10,883.3	61.0	61.3	162.73	-4,453.0	1,880.2	957.0	845.9	111.06	8.617	
14,600.0	9,969.8	15,401.5	10,883.4	61.7	62.0	162.72	-4,553.0	1,880.7	956.8	844.4	112.36	8.515	
14,700.0	9,970.0	15,501.5	10,883.4	62.5	62.7	162.71	-4,653.0	1,881.3	956.6	842.9	113.67	8.415	
14,800.0	9,970.3	15,601.5	10,883.5	63.2	63.4	162.71	-4,753.0	1,881.9	956.4	841.4	114.98	8.318	
14,900.0	9,970.6	15,701.5	10,883.5	63.9	64.2	162.70	-4,853.0	1,882.4	956.2	839.9	116.30	8.222	
15,000.0	9,970.8	15,801.5	10,883.6	64.6	64.9	162.70	-4,953.0	1,883.0	956.0	838.4	117.62	8.128	
15,100.0	9,971.1	15,901.5	10,883.7	65.4	65.7	162.69	-5,053.0	1,883.6	955.8	836.9	118.94	8.036	
15,200.0	9,971.4	16,001.5	10,883.7	66.1	66.4	162.68	-5,153.0	1,884.1	955.7	835.4	120.27	7.946	
15,300.0	9,971.6	16,101.5	10,883.8	66.8	67.2	162.68	-5,253.0	1,884.7	955.5	833.9	121.59	7.858	
15,400.0	9,971.9	16,201.5	10,883.8	67.6	67.9	162.67	-5,353.0	1,885.3	955.3	832.4	122.93	7.771	
15,500.0	9,972.2	16,301.5	10,883.9	68.3	68.7	162.67	-5,453.0	1,885.8	955.1	830.8	124.26	7.686	
15,600.0	9,972.4	16,401.5	10,884.0	69.1	69.4	162.66	-5,553.0	1,886.4	954.9	829.3	125.60	7.603	
15,700.0	9,972.7	16,501.5	10,884.0	69.9	70.2	162.66	-5,653.0	1,887.0	954.7	827.8	126.94	7.521	
15,800.0	9,973.0	16,601.5	10,884.1	70.6	71.0	162.65	-5,753.0	1,887.5	954.5	826.3	128.28	7.441	
15,900.0	9,973.2	16,701.5	10,884.1	71.4	71.8	162.64	-5,853.0	1,888.1	954.4	824.7	129.63	7.362	
16,000.0	9,973.5	16,801.5	10,884.2	72.2	72.6	162.64	-5,953.0	1,888.7	954.2	823.2	130.98	7.285	
16,100.0	9,973.8	16,901.5	10,884.3	73.0	73.4	162.63	-6,053.0	1,889.2	954.0	821.6	132.34	7.209	
16,200.0	9,974.0	17,001.5	10,884.3	73.8	74.1	162.63	-6,153.0	1,889.8	953.8	820.1	133.69	7.134	
16,300.0	9,974.3	17,101.5	10,884.4	74.6	74.9	162.62	-6,253.0	1,890.4	953.6	818.6	135.05	7.061	
16,400.0	9,974.6	17,201.4	10,884.4	75.4	75.7	162.61	-6,353.0	1,890.9	953.4	817.0	136.41	6.989	
16,500.0	9,974.8	17,301.4	10,884.5	76.1	76.6	162.61	-6,453.0	1,891.5	953.2	815.5	137.78	6.919	
16,600.0	9,975.1	17,401.4	10,884.6	77.0	77.4	162.60	-6,553.0	1,892.1	953.1	813.9	139.15	6.849	
16,700.0	9,975.4	17,501.4	10,884.6	77.8	78.2	162.60	-6,653.0	1,892.6	952.9	812.3	140.52	6.781	
16,800.0	9,975.6	17,601.4	10,884.7	78.6	79.0	162.59	-6,752.9	1,893.2	952.7	810.8	141.90	6.714	
16,900.0	9,975.9	17,701.4	10,884.7	79.4	79.8	162.59	-6,852.9	1,893.8	952.5	809.2	143.27	6.648	
17,000.0	9,976.2	17,801.4	10,884.8	80.2	80.6	162.58	-6,952.9	1,894.3	952.3	807.7	144.65	6.583	
17,100.0	9,976.4	17,901.4	10,884.9	81.0	81.5	162.57	-7,052.9	1,894.9	952.1	806.1	146.04	6.520	
17,200.0	9,976.7	18,001.4	10,884.9	81.8	82.3	162.57	-7,152.9	1,895.5	951.9	804.5	147.42	6.457	
17,300.0	9,977.0	18,101.4	10,885.0	82.7	83.1	162.56	-7,252.9	1,896.0	951.7	802.9	148.81	6.396	
17,400.0	9,977.2	18,201.4	10,885.0	83.5	84.0	162.56	-7,352.9	1,896.6	951.6	801.4	150.20	6.335	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)			
17,500.0	9,977.5	18,301.4	10,885.1	84.3	84.8	162.55	-7,452.9	1,897.2	951.4	799.8	151.60	6.276	
17,600.0	9,977.8	18,401.4	10,885.2	85.2	85.6	162.54	-7,552.9	1,897.7	951.2	798.2	153.00	6.217	
17,700.0	9,978.0	18,501.4	10,885.2	86.0	86.5	162.54	-7,652.9	1,898.3	951.0	796.6	154.40	6.160	
17,800.0	9,978.3	18,601.4	10,885.3	86.8	87.3	162.53	-7,752.9	1,898.9	950.8	795.0	155.80	6.103	
17,900.0	9,978.6	18,701.4	10,885.3	87.7	88.2	162.53	-7,852.9	1,899.4	950.6	793.4	157.20	6.047	
18,000.0	9,978.8	18,801.4	10,885.4	88.5	89.0	162.52	-7,952.9	1,900.0	950.4	791.8	158.61	5.992	
18,100.0	9,979.1	18,901.4	10,885.5	89.4	89.9	162.51	-8,052.9	1,900.6	950.3	790.2	160.02	5.938	
18,200.0	9,979.4	19,001.4	10,885.5	90.2	90.7	162.51	-8,152.9	1,901.1	950.1	788.6	161.44	5.885	
18,300.0	9,979.6	19,101.4	10,885.6	91.1	91.6	162.50	-8,252.9	1,901.7	949.9	787.0	162.85	5.833	
18,400.0	9,979.9	19,201.4	10,885.6	91.9	92.5	162.50	-8,352.9	1,902.3	949.7	785.4	164.27	5.781	
18,500.0	9,980.2	19,301.4	10,885.7	92.8	93.3	162.49	-8,452.9	1,902.8	949.5	783.8	165.69	5.731	
18,600.0	9,980.4	19,401.4	10,885.8	93.7	94.2	162.49	-8,552.9	1,903.4	949.3	782.2	167.12	5.681	
18,700.0	9,980.7	19,501.4	10,885.8	94.5	95.1	162.48	-8,652.9	1,904.0	949.2	780.6	168.55	5.631	
18,800.0	9,981.0	19,601.4	10,885.9	95.4	95.9	162.47	-8,752.9	1,904.5	949.0	779.0	169.97	5.583	
18,900.0	9,981.2	19,701.4	10,885.9	96.2	96.8	162.47	-8,852.9	1,905.1	948.8	777.4	171.41	5.535	
19,000.0	9,981.5	19,801.4	10,886.0	97.1	97.7	162.46	-8,952.9	1,905.7	948.6	775.8	172.84	5.488	
19,100.0	9,981.8	19,901.4	10,886.1	98.0	98.5	162.46	-9,052.9	1,906.2	948.4	774.1	174.28	5.442	
19,200.0	9,982.0	20,001.4	10,886.1	98.9	99.4	162.45	-9,152.9	1,906.8	948.2	772.5	175.72	5.396	
19,300.0	9,982.3	20,101.4	10,886.2	99.7	100.3	162.44	-9,252.9	1,907.4	948.0	770.9	177.16	5.351	
19,400.0	9,982.6	20,201.4	10,886.2	100.6	101.2	162.44	-9,352.9	1,907.9	947.9	769.2	178.60	5.307	
19,500.0	9,982.8	20,301.4	10,886.3	101.5	102.0	162.43	-9,452.9	1,908.5	947.7	767.6	180.05	5.263	
19,600.0	9,983.1	20,401.4	10,886.3	102.4	102.9	162.43	-9,552.9	1,909.1	947.5	766.0	181.50	5.220	
19,700.0	9,983.4	20,501.4	10,886.4	103.2	103.8	162.42	-9,652.9	1,909.6	947.3	764.3	182.95	5.178	
19,800.0	9,983.6	20,601.4	10,886.5	104.1	104.7	162.41	-9,752.9	1,910.2	947.1	762.7	184.40	5.136	
19,900.0	9,983.9	20,701.4	10,886.5	105.0	105.6	162.41	-9,852.9	1,910.8	946.9	761.1	185.86	5.095	
20,000.0	9,984.2	20,801.4	10,886.6	105.9	106.5	162.40	-9,952.9	1,911.3	946.7	759.4	187.32	5.054	
20,100.0	9,984.4	20,901.4	10,886.6	106.8	107.3	162.40	-10,052.9	1,911.9	946.6	757.8	188.78	5.014	
20,200.0	9,984.7	21,001.4	10,886.7	107.6	108.2	162.39	-10,152.9	1,912.5	946.4	756.1	190.24	4.975	
20,300.0	9,985.0	21,101.4	10,886.8	108.5	109.1	162.38	-10,252.9	1,913.0	946.2	754.5	191.70	4.936	
20,400.0	9,985.2	21,201.4	10,886.8	109.4	110.0	162.38	-10,352.9	1,913.6	946.0	752.8	193.17	4.897	
20,500.0	9,985.5	21,301.4	10,886.9	110.3	110.9	162.37	-10,452.9	1,914.2	945.8	751.2	194.64	4.859	
20,600.0	9,985.8	21,401.4	10,886.9	111.2	111.8	162.37	-10,552.9	1,914.7	945.6	749.5	196.11	4.822	
20,685.5	9,986.0	21,486.9	10,887.0	112.0	112.6	162.36	-10,638.4	1,915.2	945.5	748.1	197.37	4.790	
20,693.8	9,986.0	21,492.6	10,887.0	112.0	112.6	162.36	-10,644.1	1,915.2	945.5	748.0	197.47	4.788	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	2.0	0.0	0.0	0.0	-8.47	199.9	-29.8	202.1				
100.0	100.0	102.0	100.0	0.8	0.8	-8.47	199.9	-29.8	202.1	200.1	1.99	101.464	
200.0	200.0	202.0	200.0	1.4	1.4	-8.47	199.9	-29.8	202.1	198.8	3.31	60.994	
300.0	300.0	302.0	300.0	1.9	1.9	-8.47	199.9	-29.8	202.1	197.9	4.20	48.153	
400.0	400.0	402.0	400.0	2.2	2.2	-8.47	199.9	-29.8	202.1	197.2	4.91	41.132	
500.0	500.0	502.0	500.0	2.6	2.6	-8.47	199.9	-29.8	202.1	196.6	5.53	36.518	
600.0	600.0	602.0	600.0	2.8	2.8	-8.47	199.9	-29.8	202.1	196.0	6.09	33.178	
700.0	700.0	702.0	700.0	3.1	3.1	-8.47	199.9	-29.8	202.1	195.5	6.60	30.611	
800.0	800.0	802.0	800.0	3.3	3.3	-8.47	199.9	-29.8	202.1	195.0	7.08	28.555	
900.0	900.0	902.0	900.0	3.6	3.6	-8.47	199.9	-29.8	202.1	194.6	7.53	26.859	
1,000.0	1,000.0	1,002.1	1,000.1	3.8	3.8	-8.47	199.9	-29.8	202.1	194.2	7.95	25.423	
1,100.0	1,100.0	1,108.1	1,106.1	4.1	4.1	-98.94	198.5	-28.3	200.8	192.4	8.43	23.824	
1,200.0	1,199.8	1,214.0	1,211.8	4.4	4.4	-99.58	194.3	-24.1	197.1	188.3	8.86	22.255	
1,300.0	1,299.5	1,316.1	1,313.5	4.7	4.6	-100.57	188.2	-17.2	191.7	182.5	9.17	20.905	
1,400.0	1,398.7	1,416.4	1,413.1	5.1	4.9	-101.59	182.4	-7.0	186.4	176.8	9.60	19.426	
1,500.0	1,497.5	1,516.9	1,512.5	5.4	5.2	-102.64	177.0	6.7	181.7	171.7	10.01	18.155	
1,600.0	1,595.6	1,617.0	1,611.1	5.8	5.4	-103.90	172.0	23.2	177.4	167.0	10.36	17.124	
1,700.0	1,693.1	1,716.7	1,709.3	6.2	5.7	-106.22	167.0	39.8	174.1	163.3	10.84	16.070	
1,800.0	1,789.6	1,816.2	1,807.2	6.6	6.1	-109.67	161.9	56.4	172.3	160.9	11.39	15.127	
1,843.7	1,831.6	1,859.5	1,849.9	6.8	6.2	-111.53	159.8	63.7	172.1	160.4	11.63	14.790 CC	
1,860.7	1,847.8	1,876.4	1,866.5	6.8	6.3	-112.30	158.9	66.5	172.1	160.4	11.73	14.667 ES	
1,900.0	1,885.3	1,915.2	1,904.8	6.9	6.4	-114.11	157.0	73.0	172.3	160.4	11.97	14.402	
2,000.0	1,980.9	2,014.3	2,002.3	7.3	6.8	-118.70	152.0	89.5	173.8	161.1	12.69	13.693	
2,100.0	2,076.4	2,113.3	2,099.7	7.7	7.1	-123.19	147.0	106.1	176.3	162.8	13.48	13.081	
2,200.0	2,171.9	2,212.3	2,197.2	8.1	7.5	-127.52	142.0	122.6	179.9	165.6	14.32	12.565	
2,300.0	2,267.4	2,311.3	2,294.7	8.5	7.9	-131.67	137.0	139.2	184.5	169.3	15.20	12.138	
2,400.0	2,363.0	2,410.3	2,392.2	8.9	8.3	-135.60	132.0	155.7	190.1	173.9	16.12	11.792	
2,500.0	2,458.5	2,509.3	2,489.7	9.4	8.7	-139.29	127.0	172.3	196.5	179.4	17.05	11.520	
2,600.0	2,554.0	2,608.3	2,587.2	9.8	9.1	-142.74	122.1	188.8	203.6	185.6	18.00	11.311	
2,700.0	2,649.5	2,707.3	2,684.7	10.2	9.5	-145.95	117.1	205.3	211.5	192.5	18.96	11.155	
2,800.0	2,745.0	2,806.3	2,782.2	10.7	9.9	-148.92	112.1	221.9	220.0	200.0	19.91	11.045	
2,900.0	2,840.6	2,905.3	2,879.6	11.1	10.3	-151.67	107.1	238.4	229.0	208.1	20.87	10.972	
3,000.0	2,936.1	3,004.3	2,977.1	11.6	10.7	-154.20	102.1	255.0	238.5	216.7	21.82	10.930	
3,100.0	3,031.6	3,103.3	3,074.6	12.1	11.1	-156.54	97.1	271.5	248.4	225.7	22.77	10.912 SF	
3,200.0	3,127.1	3,202.3	3,172.1	12.5	11.6	-158.70	92.1	288.1	258.8	235.1	23.71	10.915	
3,300.0	3,222.6	3,301.3	3,269.6	13.0	12.0	-160.69	87.1	304.6	269.4	244.8	24.64	10.934	
3,400.0	3,318.2	3,400.3	3,367.1	13.5	12.4	-162.53	82.2	321.2	280.4	254.8	25.57	10.966	
3,500.0	3,413.7	3,499.4	3,464.6	14.0	12.8	-164.23	77.2	337.7	291.6	265.1	26.49	11.008	
3,600.0	3,509.2	3,598.4	3,562.1	14.4	13.3	-165.80	72.2	354.2	303.1	275.7	27.41	11.058	
3,700.0	3,604.7	3,697.4	3,659.5	14.9	13.7	-167.26	67.2	370.8	314.8	286.4	28.32	11.114	
3,800.0	3,700.2	3,796.4	3,757.0	15.4	14.1	-168.61	62.2	387.3	326.6	297.4	29.23	11.175	
3,900.0	3,795.8	3,895.4	3,854.5	15.9	14.6	-169.87	57.2	403.9	338.7	308.5	30.13	11.240	
4,000.0	3,891.3	3,994.4	3,952.0	16.4	15.0	-171.04	52.2	420.4	350.9	319.8	31.03	11.306	
4,100.0	3,986.8	4,093.4	4,049.5	16.9	15.4	-172.14	47.3	437.0	363.2	331.2	31.93	11.375	
4,200.0	4,082.3	4,192.4	4,147.0	17.4	15.9	-173.16	42.3	453.5	376.6	342.8	32.82	11.444	
4,300.0	4,177.8	4,291.4	4,244.5	17.8	16.3	-174.12	37.3	470.0	388.2	354.5	33.71	11.514	
4,400.0	4,273.4	4,390.4	4,342.0	18.3	16.8	-175.01	32.3	486.6	400.8	366.2	34.60	11.584	
4,500.0	4,368.9	4,489.4	4,439.4	18.8	17.2	-175.85	27.3	503.1	413.6	378.1	35.49	11.654	
4,600.0	4,464.4	4,588.4	4,536.9	19.3	17.6	-176.64	22.3	519.7	426.4	390.0	36.37	11.724	
4,700.0	4,559.9	4,687.4	4,634.4	19.8	18.1	-177.39	17.3	536.2	439.3	402.0	37.25	11.792	
4,800.0	4,655.4	4,786.4	4,731.9	20.3	18.5	-178.09	12.4	552.8	452.3	414.1	38.13	11.860	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.0	4,751.0	4,885.4	4,829.4	20.8	19.0	-178.75	7.4	569.3	465.3	426.3	39.01	11.927	
5,000.0	4,846.5	4,984.5	4,926.9	21.3	19.4	-179.38	2.4	585.8	478.4	438.5	39.89	11.993	
5,100.0	4,942.0	5,083.5	5,024.4	21.8	19.8	-179.98	-2.6	602.4	491.5	450.8	40.77	12.057	
5,200.0	5,037.5	5,182.5	5,121.9	22.3	20.3	179.46	-7.6	618.9	504.7	463.1	41.64	12.120	
5,300.0	5,133.0	5,281.5	5,219.3	22.8	20.7	178.93	-12.6	635.5	518.0	475.5	42.52	12.182	
5,400.0	5,228.6	5,380.5	5,316.8	23.3	21.2	178.42	-17.6	652.0	531.3	487.9	43.39	12.243	
5,500.0	5,324.1	5,479.5	5,414.3	23.8	21.6	177.94	-22.6	668.6	544.6	500.3	44.27	12.302	
5,600.0	5,419.6	5,578.5	5,511.8	24.3	22.1	177.48	-27.5	685.1	557.9	512.8	45.14	12.360	
5,700.0	5,515.1	5,677.5	5,609.3	24.8	22.5	177.04	-32.5	701.7	571.3	525.3	46.01	12.417	
5,800.0	5,610.6	5,776.5	5,706.8	25.3	23.0	176.62	-37.5	718.2	584.7	537.9	46.88	12.473	
5,900.0	5,706.2	5,875.5	5,804.3	25.8	23.4	176.22	-42.5	734.7	598.2	550.4	47.75	12.527	
6,000.0	5,801.7	5,974.5	5,901.7	26.3	23.9	175.84	-47.5	751.3	611.7	563.1	48.62	12.580	
6,100.0	5,897.2	6,073.5	5,999.2	26.8	24.3	175.47	-52.5	767.8	625.2	575.7	49.49	12.631	
6,200.0	5,992.7	6,172.5	6,096.7	27.3	24.7	175.12	-57.5	784.4	638.7	588.4	50.36	12.682	
6,300.0	6,088.2	6,271.5	6,194.2	27.8	25.2	174.79	-62.4	800.9	652.3	601.0	51.23	12.731	
6,400.0	6,183.8	6,370.5	6,291.7	28.3	25.6	174.47	-67.4	817.5	665.8	613.7	52.10	12.779	
6,500.0	6,279.3	6,469.6	6,389.2	28.8	26.1	174.16	-72.4	834.0	679.4	626.5	52.97	12.826	
6,600.0	6,374.8	6,568.6	6,486.7	29.3	26.5	173.86	-77.4	850.5	693.0	639.2	53.84	12.872	
6,700.0	6,470.3	6,667.6	6,584.2	29.8	27.0	173.58	-82.4	867.1	706.7	652.0	54.71	12.917	
6,800.0	6,565.9	6,766.6	6,681.6	30.4	27.4	173.30	-87.4	883.6	720.3	664.7	55.58	12.960	
6,900.0	6,661.4	6,865.6	6,779.1	30.9	27.9	173.04	-92.4	900.2	734.0	677.5	56.45	13.003	
7,000.0	6,756.9	6,964.6	6,876.6	31.4	28.3	172.78	-97.4	916.7	747.7	690.3	57.32	13.044	
7,100.0	6,852.4	7,063.6	6,974.1	31.9	28.8	172.54	-102.3	933.3	761.3	703.2	58.18	13.085	
7,200.0	6,947.9	7,162.6	7,071.6	32.4	29.2	172.30	-107.3	949.8	775.0	716.0	59.05	13.125	
7,300.0	7,043.5	7,261.6	7,169.1	32.9	29.7	172.07	-112.3	966.4	788.8	728.8	59.92	13.164	
7,400.0	7,139.0	7,360.6	7,266.6	33.4	30.1	171.85	-117.3	982.9	802.5	741.7	60.79	13.202	
7,500.0	7,234.5	7,459.6	7,364.1	33.9	30.6	171.64	-122.3	999.4	816.2	754.6	61.65	13.239	
7,600.0	7,330.0	7,558.6	7,461.5	34.4	31.0	171.43	-127.3	1,016.0	830.0	767.5	62.52	13.275	
7,700.0	7,425.5	7,657.6	7,559.0	34.9	31.5	171.23	-132.3	1,032.5	843.7	780.4	63.39	13.310	
7,782.5	7,504.4	7,739.3	7,639.5	35.3	31.8	171.07	-136.4	1,046.2	855.1	791.0	64.10	13.340	
7,800.0	7,521.1	7,756.6	7,656.5	35.4	31.9	171.04	-137.2	1,049.1	857.5	793.2	64.25	13.346	
7,900.0	7,616.9	7,855.8	7,754.2	35.9	32.4	170.86	-142.2	1,065.6	870.1	805.0	65.12	13.361	
8,000.0	7,713.3	7,955.1	7,852.0	36.4	32.8	170.67	-147.2	1,082.2	881.0	815.1	65.98	13.353	
8,100.0	7,810.1	8,054.7	7,950.0	36.9	33.3	170.45	-152.3	1,098.9	890.3	823.4	66.83	13.322	
8,200.0	7,907.3	8,148.0	8,041.9	37.4	33.7	170.25	-156.9	1,114.3	898.0	830.4	67.60	13.283	
8,300.0	8,004.9	8,235.4	8,128.2	37.9	34.1	170.07	-160.9	1,127.6	905.2	836.9	68.31	13.251	
8,400.0	8,102.9	8,322.7	8,214.6	38.4	34.5	169.92	-164.6	1,139.7	912.0	843.0	68.99	13.219	
8,500.0	8,201.2	8,410.0	8,301.1	38.8	34.8	169.79	-167.8	1,150.5	918.5	848.9	69.65	13.188	
8,600.0	8,299.8	8,500.0	8,390.6	39.3	35.2	169.68	-170.8	1,160.3	924.7	854.4	70.31	13.152	
8,700.0	8,398.7	8,584.4	8,474.6	39.7	35.5	169.60	-173.2	1,168.3	930.5	859.7	70.87	13.130	
8,800.0	8,497.8	8,671.6	8,561.4	40.1	35.9	169.53	-175.3	1,175.3	936.0	864.5	71.44	13.102	
8,900.0	8,597.2	8,758.7	8,648.4	40.6	36.2	169.49	-177.0	1,181.0	941.1	869.1	71.97	13.077	
9,000.0	8,696.7	8,845.8	8,735.3	41.0	36.5	169.46	-178.4	1,185.5	945.8	873.4	72.46	13.053	
9,100.0	8,796.4	8,932.9	8,822.3	41.3	36.8	169.45	-179.3	1,188.6	950.2	877.3	72.90	13.033	
9,200.0	8,896.2	9,019.9	8,909.4	41.7	37.0	169.47	-179.9	1,190.6	954.2	880.8	73.41	12.998	
9,300.0	8,996.1	9,108.6	8,998.0	42.0	37.1	169.50	-180.1	1,191.2	957.9	882.3	75.55	12.678	
9,400.0	9,096.1	9,206.7	9,096.1	42.3	37.2	169.53	-180.1	1,191.2	960.5	884.7	75.86	12.662	
9,500.0	9,196.1	9,306.6	9,196.1	42.5	37.2	169.54	-180.1	1,191.2	961.4	885.4	76.03	12.645	
9,503.9	9,200.0	9,310.6	9,200.0	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.5	75.99	12.653	
9,600.0	9,296.1	9,406.6	9,296.1	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.02	12.647	
9,700.0	9,396.1	9,506.6	9,396.1	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.06	12.640	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 903H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,785.4	9,481.5	9,592.1	9,481.5	42.5	37.2	-100.19	-180.1	1,191.2	961.4	885.4	76.09	12.636	
9,800.0	9,496.1	9,606.6	9,496.1	42.5	37.2	80.17	-180.1	1,191.2	961.4	885.2	76.19	12.618	
9,825.0	9,521.0	9,631.6	9,521.0	42.5	37.2	80.29	-180.1	1,191.2	961.2	885.0	76.21	12.612	
9,850.0	9,545.9	9,656.5	9,545.9	42.5	37.2	80.50	-180.1	1,191.2	960.7	884.5	76.24	12.601	
9,875.0	9,570.5	9,681.1	9,570.5	42.5	37.2	80.81	-180.1	1,191.2	960.0	883.8	76.29	12.584	
9,900.0	9,595.0	9,705.6	9,595.0	42.5	37.2	81.22	-180.1	1,191.2	959.2	882.8	76.36	12.561	
9,925.0	9,619.1	9,729.7	9,619.1	42.5	37.2	81.71	-180.1	1,191.2	958.2	881.7	76.46	12.533	
9,950.0	9,642.8	9,753.4	9,642.8	42.5	37.3	82.29	-180.1	1,191.2	957.0	880.5	76.57	12.499	
9,975.0	9,666.1	9,776.7	9,666.1	42.5	37.3	82.94	-180.1	1,191.2	955.8	879.1	76.70	12.462	
10,000.0	9,688.9	9,799.5	9,688.9	42.5	37.3	83.65	-180.1	1,191.2	954.5	877.6	76.84	12.422	
10,025.0	9,711.1	9,821.7	9,711.1	42.5	37.3	84.42	-180.1	1,191.2	953.1	876.1	77.00	12.379	
10,050.0	9,732.7	9,843.3	9,732.7	42.5	37.3	85.23	-180.1	1,191.2	951.8	874.7	77.17	12.334	
10,075.0	9,753.6	9,864.2	9,753.6	42.5	37.3	86.07	-180.1	1,191.2	950.6	873.2	77.36	12.289	
10,100.0	9,773.8	9,884.4	9,773.8	42.5	37.3	86.92	-180.1	1,191.2	949.5	871.9	77.55	12.244	
10,125.0	9,793.2	9,903.7	9,793.2	42.6	37.3	87.77	-180.1	1,191.2	948.5	870.8	77.74	12.201	
10,150.0	9,811.7	9,922.2	9,811.7	42.6	37.3	88.61	-180.1	1,191.2	947.8	869.9	77.94	12.161	
10,175.0	9,829.3	9,939.8	9,829.3	42.6	37.3	89.42	-180.1	1,191.2	947.4	869.3	78.14	12.125	
10,194.0	9,842.0	9,952.6	9,842.0	42.6	37.3	90.00	-180.1	1,191.2	947.3	869.0	78.28	12.101	
10,200.0	9,845.9	9,956.5	9,845.9	42.6	37.3	90.18	-180.1	1,191.2	947.3	869.0	78.33	12.094	
10,225.0	9,861.5	9,972.1	9,861.5	42.6	37.3	90.88	-180.1	1,191.2	947.6	869.1	78.51	12.070	
10,250.0	9,876.2	9,986.7	9,876.2	42.6	37.3	91.51	-180.1	1,191.2	948.3	869.6	78.68	12.053	
10,275.0	9,889.7	10,000.3	9,889.7	42.6	37.3	92.05	-180.1	1,191.2	949.5	870.7	78.83	12.045	
10,300.0	9,902.1	10,012.7	9,902.1	42.6	37.3	92.49	-180.1	1,191.2	951.3	872.3	78.97	12.047	
10,325.0	9,913.3	10,023.9	9,913.3	42.6	37.3	92.82	-180.1	1,191.2	953.6	874.5	79.08	12.059	
10,350.0	9,923.4	10,034.0	9,923.4	42.7	37.3	93.03	-180.1	1,191.2	956.5	877.3	79.16	12.083	
10,375.0	9,932.3	10,042.9	9,932.3	42.7	37.3	93.10	-180.1	1,191.2	960.0	880.8	79.22	12.118	
10,400.0	9,939.9	10,050.5	9,939.9	42.7	37.3	93.04	-180.1	1,191.2	964.1	884.9	79.25	12.166	
10,425.0	9,946.2	10,056.8	9,946.2	42.7	37.3	92.82	-180.1	1,191.2	968.9	889.7	79.24	12.228	
10,450.0	9,951.3	10,061.9	9,951.3	42.7	37.3	92.45	-180.1	1,191.2	974.4	895.2	79.20	12.302	
10,475.0	9,955.1	10,065.7	9,955.1	42.8	37.3	91.93	-180.1	1,191.2	980.4	901.3	79.13	12.390	
10,500.0	9,957.6	10,068.2	9,957.6	42.8	37.3	91.25	-180.1	1,191.2	987.2	908.1	79.03	12.491	
10,525.0	9,958.9	10,069.4	9,958.9	42.8	37.3	90.40	-180.1	1,191.2	994.5	915.6	78.89	12.605	
10,534.2	9,959.0	10,069.6	9,959.0	42.8	37.3	90.05	-180.1	1,191.2	997.3	918.5	78.83	12.651	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	2.0	0.0	0.0	0.0	-16.66	199.8	-59.8	208.6				
100.0	100.0	102.0	100.0	0.8	0.8	-16.66	199.8	-59.8	208.6	206.6	1.99	104.704	
200.0	200.0	202.0	200.0	1.4	1.4	-16.66	199.8	-59.8	208.6	205.3	3.31	62.942	
300.0	300.0	302.0	300.0	1.9	1.9	-16.66	199.8	-59.8	208.6	204.4	4.20	49.690	
400.0	400.0	402.0	400.0	2.2	2.2	-16.66	199.8	-59.8	208.6	203.7	4.91	42.445	
500.0	500.0	502.0	500.0	2.6	2.6	-16.66	199.8	-59.8	208.6	203.0	5.53	37.684	
600.0	600.0	602.0	600.0	2.8	2.8	-16.66	199.8	-59.8	208.6	202.5	6.09	34.237	
700.0	700.0	702.0	700.0	3.1	3.1	-16.66	199.8	-59.8	208.6	202.0	6.60	31.588	
800.0	800.0	802.0	800.0	3.3	3.3	-16.66	199.8	-59.8	208.6	201.5	7.08	29.467	
900.0	900.0	902.0	900.0	3.6	3.6	-16.66	199.8	-59.8	208.6	201.0	7.53	27.717	
1,000.0	1,000.0	1,002.0	1,000.0	3.8	3.8	-16.66	199.8	-59.8	208.6	200.6	7.95	26.239 CC, ES	
1,100.0	1,100.0	1,102.0	1,100.0	4.1	4.0	-107.37	199.8	-59.8	209.1	200.7	8.36	25.021	
1,200.0	1,199.8	1,201.8	1,199.8	4.4	4.2	-108.70	199.8	-59.8	210.7	202.0	8.75	24.094	
1,300.0	1,299.5	1,301.5	1,299.5	4.7	4.4	-110.85	199.8	-59.8	213.7	204.5	9.13	23.396	
1,400.0	1,398.7	1,400.7	1,398.7	5.1	4.6	-113.73	199.8	-59.8	218.3	208.8	9.53	22.912	
1,500.0	1,497.5	1,499.5	1,497.5	5.4	4.7	-117.22	199.8	-59.8	225.1	215.2	9.95	22.634	
1,600.0	1,595.6	1,597.6	1,595.6	5.8	4.9	-121.15	199.8	-59.8	234.6	224.2	10.40	22.560 SF	
1,700.0	1,693.1	1,695.1	1,693.1	6.2	5.1	-125.34	199.8	-59.8	247.1	236.2	10.89	22.687	
1,800.0	1,789.6	1,791.6	1,789.6	6.6	5.2	-129.59	199.8	-59.8	263.2	251.8	11.44	23.012	
1,860.7	1,847.8	1,849.8	1,847.8	6.8	5.3	-132.14	199.8	-59.8	274.9	263.1	11.74	23.406	
1,900.0	1,885.3	1,887.3	1,885.3	6.9	5.4	-133.85	199.8	-59.8	283.0	271.1	11.94	23.710	
2,000.0	1,980.9	1,982.9	1,980.9	7.3	5.5	-137.79	199.8	-59.8	304.7	292.2	12.51	24.350	
2,100.0	2,076.4	2,078.4	2,076.4	7.7	5.7	-141.20	199.8	-59.8	327.6	314.5	13.10	25.001	
2,200.0	2,171.9	2,173.9	2,171.9	8.1	5.8	-144.18	199.8	-59.8	351.6	337.9	13.71	25.644	
2,300.0	2,267.4	2,269.4	2,267.4	8.5	6.0	-146.79	199.8	-59.8	376.3	362.0	14.32	26.270	
2,400.0	2,363.0	2,365.0	2,363.0	8.9	6.1	-149.07	199.8	-59.8	401.7	386.8	14.95	26.872	
2,500.0	2,458.5	2,460.5	2,458.5	9.4	6.2	-151.09	199.8	-59.8	427.6	412.1	15.58	27.446	
2,600.0	2,554.0	2,556.0	2,554.0	9.8	6.4	-152.88	199.8	-59.8	454.0	437.8	16.22	27.991	
2,700.0	2,649.5	2,651.5	2,649.5	10.2	6.5	-154.47	199.8	-59.8	480.8	463.9	16.87	28.506	
2,800.0	2,745.0	2,747.0	2,745.0	10.7	6.6	-155.90	199.8	-59.8	507.9	490.3	17.52	28.992	
2,900.0	2,840.6	2,842.6	2,840.6	11.1	6.8	-157.19	199.8	-59.8	535.2	517.0	18.17	29.450	
3,000.0	2,936.1	2,938.1	2,936.1	11.6	6.9	-158.35	199.8	-59.8	562.8	543.9	18.83	29.880	
3,100.0	3,031.6	3,033.6	3,031.6	12.1	7.0	-159.40	199.8	-59.8	590.5	571.0	19.50	30.285	
3,200.0	3,127.1	3,129.1	3,127.1	12.5	7.1	-160.36	199.8	-59.8	618.5	598.3	20.17	30.666	
3,300.0	3,222.6	3,224.6	3,222.6	13.0	7.3	-161.24	199.8	-59.8	646.6	625.7	20.84	31.025	
3,400.0	3,318.2	3,320.2	3,318.2	13.5	7.4	-162.04	199.8	-59.8	674.8	653.3	21.51	31.363	
3,500.0	3,413.7	3,415.7	3,413.7	14.0	7.5	-162.78	199.8	-59.8	703.1	680.9	22.19	31.681	
3,600.0	3,509.2	3,514.2	3,512.2	14.4	7.6	-163.49	199.8	-59.8	731.5	708.8	22.71	32.214	
3,700.0	3,604.7	3,636.5	3,634.4	14.9	7.8	-164.43	197.3	-57.7	757.9	734.4	23.53	32.208	
3,800.0	3,700.2	3,761.0	3,758.7	15.4	8.0	-165.54	190.7	-52.1	781.1	756.8	24.31	32.137	
3,900.0	3,795.8	3,895.1	3,891.9	15.9	8.2	-166.78	180.5	-41.2	800.4	775.4	25.04	31.962	
4,000.0	3,891.3	4,031.3	4,026.4	16.4	8.4	-168.03	167.8	-24.2	815.4	789.5	25.84	31.559	
4,100.0	3,986.8	4,140.6	4,133.8	16.9	8.6	-169.03	156.4	-7.0	827.1	800.5	26.57	31.131	
4,200.0	4,082.3	4,239.1	4,230.4	17.4	8.8	-169.90	146.0	8.7	838.8	811.5	27.31	30.711	
4,300.0	4,177.8	4,337.6	4,327.1	17.8	9.0	-170.76	135.6	24.5	850.7	822.6	28.07	30.309	
4,400.0	4,273.4	4,436.1	4,423.8	18.3	9.3	-171.58	125.1	40.2	862.7	833.9	28.83	29.927	
4,500.0	4,368.9	4,534.6	4,520.4	18.8	9.5	-172.39	114.7	55.9	875.0	845.4	29.60	29.563	
4,600.0	4,464.4	4,633.1	4,617.1	19.3	9.8	-173.17	104.3	71.6	887.4	857.0	30.37	29.216	
4,700.0	4,559.9	4,731.6	4,713.8	19.8	10.1	-173.94	93.9	87.3	900.0	868.9	31.16	28.888	
4,800.0	4,655.4	4,830.1	4,810.4	20.3	10.3	-174.68	83.5	103.0	912.7	880.8	31.94	28.576	
4,900.0	4,751.0	4,928.5	4,907.1	20.8	10.7	-175.40	73.1	118.7	925.6	892.9	32.73	28.280	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Reference Datum

Offset Design: PUDGE FED COM PROJECT - PUDGE FEDERAL COM 904H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 10451-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
5,000.0	4,846.5	5,027.0	5,003.8	21.3	11.0	-176.10	62.7	134.5	938.7	905.1	33.52	28.000		
5,100.0	4,942.0	5,125.5	5,100.5	21.8	11.3	-176.78	52.3	150.2	951.8	917.5	34.32	27.735		
5,200.0	5,037.5	5,224.0	5,197.1	22.3	11.6	-177.45	41.9	165.9	965.1	930.0	35.12	27.483		
5,300.0	5,133.0	5,322.5	5,293.8	22.8	12.0	-178.09	31.4	181.6	978.6	942.6	35.92	27.245		
5,400.0	5,228.6	5,421.0	5,390.5	23.3	12.3	-178.72	21.0	197.3	992.1	955.4	36.72	27.020		

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	
4,100.0	3,986.8	3,936.2	3,881.1	16.9	15.3	-19.36	317.4	1,729.8	997.8	969.8	27.95	35.702		
4,200.0	4,082.3	4,033.9	3,976.0	17.4	15.8	-18.67	300.8	1,746.2	980.2	951.4	28.81	34.023		
4,300.0	4,177.8	4,131.7	4,070.9	17.8	16.3	-17.96	284.2	1,762.6	962.7	933.0	29.68	32.433		
4,400.0	4,273.4	4,229.4	4,165.8	18.3	16.7	-17.23	267.5	1,778.9	945.4	914.8	30.57	30.927		
4,500.0	4,368.9	4,327.2	4,260.7	18.8	17.2	-16.47	250.9	1,795.3	928.2	896.8	31.47	29.499		
4,600.0	4,464.4	4,424.9	4,355.6	19.3	17.7	-15.68	234.3	1,811.7	911.2	878.9	32.38	28.145		
4,700.0	4,559.9	4,522.6	4,450.6	19.8	18.1	-14.86	217.7	1,828.1	894.4	861.1	33.30	26.860		
4,800.0	4,655.4	4,620.4	4,545.5	20.3	18.6	-14.02	201.1	1,844.4	877.8	843.6	34.23	25.641		
4,900.0	4,751.0	4,718.1	4,640.4	20.8	19.0	-13.14	184.4	1,860.8	861.4	826.2	35.18	24.487		
5,000.0	4,846.5	4,824.1	4,743.5	21.3	19.5	-12.20	167.0	1,877.9	844.7	808.6	36.12	23.388		
5,100.0	4,942.0	4,930.5	4,847.4	21.8	20.0	-11.32	150.9	1,893.8	827.2	790.2	37.05	22.328		
5,200.0	5,037.5	5,036.8	4,951.8	22.3	20.5	-10.53	136.2	1,908.3	808.8	770.9	37.96	21.307		
5,300.0	5,133.0	5,143.1	5,056.4	22.8	21.0	-9.81	122.9	1,921.5	789.6	750.7	38.85	20.323		
5,400.0	5,228.6	5,249.2	5,161.1	23.3	21.5	-9.17	110.9	1,933.2	769.3	729.6	39.72	19.369		
5,500.0	5,324.1	5,355.0	5,265.9	23.8	21.9	-8.63	100.4	1,943.6	748.1	707.5	40.56	18.444		
5,600.0	5,419.6	5,460.4	5,370.6	24.3	22.4	-8.17	91.3	1,952.5	725.8	684.4	41.37	17.544		
5,700.0	5,515.1	5,565.5	5,475.1	24.8	22.8	-7.82	83.6	1,960.1	702.5	660.3	42.15	16.667		
5,800.0	5,610.6	5,670.1	5,579.3	25.3	23.2	-7.57	77.3	1,966.4	678.1	635.2	42.89	15.809		
5,900.0	5,706.2	5,774.2	5,683.2	25.8	23.6	-7.44	72.3	1,971.2	652.7	609.1	43.60	14.969		
6,000.0	5,801.7	5,877.7	5,786.6	26.3	23.9	-7.44	68.8	1,974.8	626.1	581.9	44.26	14.146		
6,100.0	5,897.2	5,980.5	5,889.3	26.8	24.2	-7.58	66.5	1,977.0	598.6	553.7	44.88	13.338		
6,200.0	5,992.7	6,082.6	5,991.4	27.3	24.4	-7.89	65.6	1,977.9	570.0	524.5	45.46	12.538		
6,300.0	6,088.2	6,179.5	6,088.2	27.8	24.4	-8.32	65.6	1,977.9	540.7	494.2	46.41	11.650		
6,400.0	6,183.8	6,275.0	6,183.8	28.3	24.5	-8.80	65.6	1,977.9	511.4	464.4	46.93	10.896		
6,500.0	6,279.3	6,370.5	6,279.3	28.8	24.5	-9.34	65.6	1,977.9	482.1	434.7	47.45	10.161		
6,600.0	6,374.8	6,466.0	6,374.8	29.3	24.5	-9.95	65.6	1,977.9	452.9	404.9	47.96	9.444		
6,700.0	6,470.3	6,561.5	6,470.3	29.8	24.5	-10.64	65.6	1,977.9	423.7	375.3	48.45	8.746		
6,800.0	6,565.9	6,657.1	6,565.9	30.4	24.6	-11.43	65.6	1,977.9	394.6	345.7	48.92	8.066		
6,900.0	6,661.4	6,752.6	6,661.4	30.9	24.6	-12.35	65.6	1,977.9	365.6	316.2	49.38	7.405		
7,000.0	6,756.9	6,848.1	6,756.9	31.4	24.6	-13.42	65.6	1,977.9	336.7	286.9	49.79	6.762		
7,100.0	6,852.4	6,943.6	6,852.4	31.9	24.6	-14.70	65.6	1,977.9	307.9	257.8	50.17	6.138		
7,200.0	6,947.9	7,039.1	6,947.9	32.4	24.7	-16.23	65.6	1,977.9	279.3	228.8	50.49	5.533		
7,300.0	7,043.5	7,134.7	7,043.5	32.9	24.7	-18.11	65.6	1,977.9	250.9	200.2	50.72	4.948		
7,400.0	7,139.0	7,230.2	7,139.0	33.4	24.7	-20.47	65.6	1,977.9	222.9	172.0	50.82	4.385		
7,500.0	7,234.5	7,325.7	7,234.5	33.9	24.7	-23.48	65.6	1,977.9	195.2	144.5	50.75	3.847		
7,600.0	7,330.0	7,421.2	7,330.0	34.4	24.8	-27.46	65.6	1,977.9	168.3	117.9	50.39	3.339		
7,700.0	7,425.5	7,516.8	7,425.5	34.9	24.8	-32.89	65.6	1,977.9	142.4	92.8	49.60	2.871 Normal Operations		
7,782.5	7,504.4	7,595.6	7,504.4	35.3	24.8	-39.01	65.6	1,977.9	122.3	73.8	48.44	2.524 Normal Operations		
7,800.0	7,521.1	7,612.3	7,521.1	35.4	24.8	-40.53	65.6	1,977.9	118.2	70.1	48.13	2.457 Caution - Monitor Closely		
7,900.0	7,616.9	7,708.1	7,616.9	35.9	24.8	-50.98	65.6	1,977.9	97.9	51.9	45.95	2.130 Caution - Monitor Closely		
8,000.0	7,713.3	7,804.5	7,713.3	36.4	24.9	-64.90	65.6	1,977.9	83.2	39.5	43.71	1.903 Caution - Monitor Closely		
8,100.0	7,810.1	7,901.3	7,810.1	36.9	24.9	-81.74	65.6	1,977.9	75.7	32.2	43.48	1.740 Caution - Monitor Closely		
8,146.9	7,855.6	7,946.8	7,855.6	37.2	24.9	-90.00	65.6	1,977.9	74.8	30.3	44.57	1.679 Caution - Monitor Closely, CC		
8,200.0	7,907.3	7,998.5	7,907.3	37.4	24.9	-99.04	65.6	1,977.9	75.8	29.3	46.56	1.629 Caution - Monitor Closely, ES		
8,300.0	8,004.9	8,096.1	8,004.9	37.9	24.9	-113.91	65.6	1,977.9	82.2	31.2	50.96	1.612 Caution - Monitor Closely, SF		
8,400.0	8,102.9	8,194.1	8,102.9	38.4	25.0	-125.27	65.6	1,977.9	92.2	37.6	54.66	1.687 Caution - Monitor Closely		
8,500.0	8,201.2	8,292.4	8,201.2	38.8	25.0	-133.54	65.6	1,977.9	104.0	46.7	57.32	1.814 Caution - Monitor Closely		
8,600.0	8,299.8	8,391.0	8,299.8	39.3	25.0	-139.52	65.6	1,977.9	116.1	56.9	59.19	1.962 Caution - Monitor Closely		
8,700.0	8,398.7	8,489.9	8,398.7	39.7	25.1	-143.90	65.6	1,977.9	127.8	67.3	60.57	2.111 Caution - Monitor Closely		
8,800.0	8,497.8	8,589.0	8,497.8	40.1	25.1	-147.15	65.6	1,977.9	138.7	77.0	61.64	2.250 Caution - Monitor Closely		
8,900.0	8,597.2	8,688.4	8,597.2	40.6	25.1	-149.58	65.6	1,977.9	148.4	85.9	62.51	2.374 Caution - Monitor Closely		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 702H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		No-Go	Separation	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)	Factor	
9,000.0	8,696.7	8,787.9	8,696.7	41.0	25.1	-151.40	65.6	1,977.9	156.8	93.6	63.24	2.480	Caution - Monitor Closely
9,100.0	8,796.4	8,887.6	8,796.4	41.3	25.2	-152.76	65.6	1,977.9	163.8	99.9	63.87	2.565	Normal Operations
9,200.0	8,896.2	8,987.4	8,896.2	41.7	25.2	-153.74	65.6	1,977.9	169.3	104.9	64.41	2.629	Normal Operations
9,300.0	8,996.1	9,087.3	8,996.1	42.0	25.2	-154.41	65.6	1,977.9	173.3	108.4	64.88	2.671	Normal Operations
9,400.0	9,096.1	9,187.3	9,096.1	42.3	25.3	-154.79	65.6	1,977.9	175.7	110.5	65.27	2.692	Normal Operations
9,500.0	9,196.1	9,287.3	9,196.1	42.5	25.3	-154.93	65.6	1,977.9	176.6	111.1	65.47	2.697	Normal Operations
9,503.9	9,200.0	9,291.2	9,200.0	42.5	25.3	-64.66	65.6	1,977.9	176.6	111.3	65.28	2.705	Normal Operations
9,600.0	9,296.1	9,378.0	9,286.6	42.5	25.2	-63.53	69.5	1,977.9	178.6	114.2	64.31	2.776	Normal Operations
9,700.0	9,396.1	9,462.9	9,369.9	42.5	25.0	-59.12	85.5	1,977.8	187.9	126.0	61.94	3.034	
9,785.4	9,481.5	9,530.5	9,434.0	42.5	24.8	-53.79	107.0	1,977.6	203.7	145.0	58.77	3.467	
9,800.0	9,496.1	9,541.4	9,444.0	42.5	24.8	127.19	111.2	1,977.6	207.4	149.1	58.29	3.558	
9,825.0	9,521.0	9,559.3	9,460.4	42.5	24.8	128.28	118.5	1,977.6	214.9	157.8	57.10	3.763	
9,850.0	9,545.9	9,576.1	9,475.6	42.5	24.7	129.30	125.7	1,977.5	224.0	168.2	55.83	4.012	
9,875.0	9,570.5	9,591.7	9,489.4	42.5	24.7	130.18	132.9	1,977.5	234.7	180.2	54.53	4.304	
9,900.0	9,595.0	9,600.0	9,496.7	42.5	24.7	129.99	136.8	1,977.4	247.1	194.3	52.81	4.679	
9,925.0	9,619.1	9,619.1	9,513.3	42.5	24.6	131.24	146.3	1,977.4	260.9	208.9	51.96	5.020	
9,950.0	9,642.8	9,630.8	9,523.3	42.5	24.6	131.30	152.4	1,977.4	276.2	225.4	50.77	5.440	
9,975.0	9,666.1	9,641.3	9,532.1	42.5	24.5	130.99	158.1	1,977.3	292.9	243.2	49.68	5.896	
10,000.0	9,688.9	9,650.0	9,539.4	42.5	24.5	130.16	162.9	1,977.3	310.9	262.2	48.67	6.387	
10,025.0	9,711.1	9,658.6	9,546.5	42.5	24.5	129.03	167.7	1,977.3	329.9	282.1	47.83	6.898	
10,050.0	9,732.7	9,665.4	9,552.1	42.5	24.5	127.23	171.6	1,977.2	350.0	302.9	47.07	7.436	
10,075.0	9,753.6	9,671.1	9,556.7	42.5	24.5	124.77	175.0	1,977.2	370.9	324.5	46.42	7.991	
10,100.0	9,773.8	9,675.8	9,560.5	42.5	24.4	121.53	177.7	1,977.2	392.6	346.7	45.86	8.560	
10,125.0	9,793.2	9,679.5	9,563.5	42.6	24.4	117.37	179.9	1,977.2	414.9	369.5	45.40	9.139	
10,150.0	9,811.7	9,682.3	9,565.7	42.6	24.4	112.14	181.6	1,977.2	437.7	392.6	45.01	9.723	
10,175.0	9,829.3	9,684.2	9,567.2	42.6	24.4	105.73	182.7	1,977.2	460.8	416.1	44.69	10.311	
10,200.0	9,845.9	9,685.3	9,568.0	42.6	24.4	98.12	183.4	1,977.2	484.3	439.9	44.44	10.898	
10,225.0	9,861.5	9,685.6	9,568.3	42.6	24.4	89.43	183.6	1,977.2	508.0	463.7	44.23	11.483	
10,250.0	9,876.2	9,685.2	9,568.0	42.6	24.4	80.07	183.4	1,977.2	531.7	487.7	44.08	12.064	
10,275.0	9,889.7	9,684.1	9,567.2	42.6	24.4	70.61	182.7	1,977.2	555.6	511.6	43.96	12.638	
10,300.0	9,902.1	9,682.5	9,565.8	42.6	24.4	61.63	181.7	1,977.2	579.4	535.5	43.88	13.204	
10,325.0	9,913.3	9,680.3	9,564.0	42.6	24.4	53.57	180.4	1,977.2	603.0	559.2	43.82	13.761	
10,350.0	9,923.4	9,677.5	9,561.8	42.7	24.4	46.61	178.7	1,977.2	626.6	582.8	43.79	14.308	
10,375.0	9,932.3	9,674.2	9,559.2	42.7	24.4	40.75	176.8	1,977.2	649.9	606.1	43.79	14.842	
10,400.0	9,939.9	9,670.5	9,556.2	42.7	24.5	35.86	174.6	1,977.2	672.9	629.1	43.80	15.364	
10,425.0	9,946.2	9,666.4	9,552.9	42.7	24.5	31.81	172.2	1,977.2	695.6	651.8	43.83	15.871	
10,450.0	9,951.3	9,650.0	9,539.4	42.7	24.5	27.59	162.9	1,977.3	718.1	674.4	43.70	16.435	
10,475.0	9,955.1	9,650.0	9,539.4	42.8	24.5	25.23	162.9	1,977.3	739.9	696.1	43.83	16.882	
10,500.0	9,957.6	9,650.0	9,539.4	42.8	24.5	23.20	162.9	1,977.3	761.3	717.3	43.97	17.314	
10,525.0	9,958.9	9,650.0	9,539.4	42.8	24.5	21.44	162.9	1,977.3	782.3	738.2	44.12	17.733	
10,534.2	9,959.0	9,650.0	9,539.4	42.8	24.5	20.85	162.9	1,977.3	789.9	745.7	44.17	17.884	
10,600.0	9,959.1	9,629.3	9,522.0	42.9	24.6	20.09	151.6	1,977.4	844.3	800.0	44.32	19.053	
10,700.0	9,959.4	9,600.0	9,496.7	43.0	24.7	19.06	136.8	1,977.4	929.1	884.5	44.56	20.851	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
3,300.0	3,222.6	3,256.4	3,260.6	13.0	8.5	-39.30	598.1	1,341.9	991.3	971.8	19.54	50.744	
3,400.0	3,318.2	3,352.5	3,355.8	13.5	8.8	-39.62	585.7	1,346.8	964.2	944.1	20.10	47.963	
3,500.0	3,413.7	3,448.6	3,451.0	14.0	9.1	-39.96	573.2	1,351.7	937.2	916.5	20.67	45.331	
3,600.0	3,509.2	3,544.7	3,546.2	14.4	9.5	-40.33	560.8	1,356.6	910.2	888.9	21.25	42.838	
3,700.0	3,604.7	3,640.9	3,641.3	14.9	9.8	-40.71	548.4	1,361.5	883.2	861.4	21.82	40.475	
3,800.0	3,700.2	3,737.0	3,736.5	15.4	10.1	-41.12	535.9	1,366.4	856.3	833.9	22.40	38.234	
3,900.0	3,795.8	3,833.1	3,831.7	15.9	10.5	-41.55	523.5	1,371.4	829.4	806.4	22.97	36.107	
4,000.0	3,891.3	3,929.2	3,926.9	16.4	10.8	-42.01	511.0	1,376.3	802.5	779.0	23.54	34.086	
4,100.0	3,986.8	4,025.3	4,022.1	16.9	11.2	-42.51	498.6	1,381.2	775.7	751.6	24.12	32.165	
4,200.0	4,082.3	4,121.4	4,117.3	17.4	11.5	-43.04	486.1	1,386.1	749.0	724.3	24.69	30.337	
4,300.0	4,177.8	4,217.6	4,212.4	17.8	11.9	-43.61	473.7	1,391.0	722.3	697.1	25.26	28.597	
4,400.0	4,273.4	4,313.7	4,307.6	18.3	12.3	-44.22	461.2	1,395.9	695.7	669.9	25.82	26.940	
4,500.0	4,368.9	4,409.8	4,402.8	18.8	12.6	-44.88	448.8	1,400.8	669.2	642.8	26.39	25.360	
4,600.0	4,464.4	4,505.9	4,498.0	19.3	13.0	-45.59	436.3	1,405.7	642.8	615.8	26.95	23.854	
4,700.0	4,559.9	4,602.0	4,593.2	19.8	13.4	-46.37	423.9	1,410.6	616.4	588.9	27.50	22.416	
4,800.0	4,655.4	4,698.2	4,688.4	20.3	13.8	-47.21	411.4	1,415.5	590.2	562.2	28.05	21.043	
4,900.0	4,751.0	4,794.3	4,783.5	20.8	14.1	-48.13	399.0	1,420.4	564.1	535.5	28.59	19.732	
5,000.0	4,846.5	4,890.4	4,878.7	21.3	14.5	-49.14	386.5	1,425.3	538.2	509.1	29.12	18.480	
5,100.0	4,942.0	4,985.3	4,972.7	21.8	14.9	-50.25	374.4	1,430.1	512.5	482.9	29.64	17.290	
5,200.0	5,037.5	5,079.6	5,066.2	22.3	15.3	-51.55	363.0	1,434.6	487.4	457.2	30.17	16.156	
5,300.0	5,133.0	5,173.8	5,159.8	22.8	15.6	-53.06	352.3	1,438.8	462.9	432.2	30.68	15.089	
5,400.0	5,228.6	5,268.1	5,253.4	23.3	16.0	-54.83	342.4	1,442.7	439.2	408.0	31.17	14.089	
5,500.0	5,324.1	5,362.4	5,347.2	23.8	16.3	-56.87	333.1	1,446.3	416.4	384.7	31.65	13.154	
5,600.0	5,419.6	5,456.6	5,441.0	24.3	16.7	-59.23	324.6	1,449.7	394.6	362.5	32.12	12.285	
5,700.0	5,515.1	5,550.9	5,534.8	24.8	17.1	-61.94	316.8	1,452.8	374.1	341.5	32.59	11.480	
5,800.0	5,610.6	5,645.0	5,628.7	25.3	17.4	-65.03	309.7	1,455.5	355.1	322.0	33.06	10.740	
5,900.0	5,706.2	5,739.2	5,722.6	25.8	17.7	-68.52	303.4	1,458.0	337.8	304.3	33.56	10.066	
6,000.0	5,801.7	5,833.2	5,816.4	26.3	18.1	-72.43	297.7	1,460.3	322.7	288.5	34.11	9.459	
6,100.0	5,897.2	5,927.2	5,910.2	26.8	18.4	-76.75	292.8	1,462.2	309.9	275.1	34.73	8.922	
6,200.0	5,992.7	6,021.0	6,004.0	27.3	18.7	-81.45	288.6	1,463.9	299.9	264.4	35.46	8.456	
6,300.0	6,088.2	6,114.8	6,097.7	27.8	19.0	-86.47	285.1	1,465.2	293.0	256.6	36.31	8.068	
6,400.0	6,183.8	6,208.4	6,191.3	28.3	19.3	-91.71	282.4	1,466.3	289.4	252.1	37.29	7.760	
6,449.6	6,231.1	6,254.8	6,237.6	28.6	19.4	-94.36	281.3	1,466.8	289.0	251.1	37.82	7.640 CC	
6,500.0	6,279.3	6,301.9	6,284.7	28.8	19.5	-97.05	280.3	1,467.1	289.4	251.0	38.39	7.540 ES	
6,600.0	6,374.8	6,395.3	6,378.1	29.3	19.8	-102.36	279.0	1,467.6	293.1	253.5	39.55	7.409	
6,700.0	6,470.3	6,488.5	6,471.3	29.8	20.0	-107.51	278.4	1,467.9	300.3	259.6	40.73	7.372 SF	
6,800.0	6,565.9	6,583.1	6,565.9	30.4	20.0	-112.47	278.3	1,467.9	310.8	268.9	41.85	7.425	
6,900.0	6,661.4	6,678.6	6,661.4	30.9	20.0	-117.15	278.3	1,467.9	323.7	280.7	42.94	7.537	
7,000.0	6,756.9	6,774.1	6,756.9	31.4	20.1	-121.46	278.3	1,467.9	338.7	294.6	44.02	7.693	
7,100.0	6,852.4	6,869.6	6,852.4	31.9	20.1	-125.41	278.3	1,467.9	355.5	310.4	45.07	7.887	
7,200.0	6,947.9	6,965.1	6,947.9	32.4	20.1	-129.01	278.3	1,467.9	373.9	327.8	46.09	8.113	
7,300.0	7,043.5	7,060.7	7,043.5	32.9	20.2	-132.28	278.3	1,467.9	393.7	346.7	47.07	8.364	
7,400.0	7,139.0	7,156.2	7,139.0	33.4	20.2	-135.24	278.3	1,467.9	414.7	366.7	48.02	8.636	
7,500.0	7,234.5	7,251.7	7,234.5	33.9	20.2	-137.92	278.3	1,467.9	436.6	387.7	48.93	8.924	
7,600.0	7,330.0	7,347.2	7,330.0	34.4	20.2	-140.35	278.3	1,467.9	459.5	409.6	49.81	9.224	
7,700.0	7,425.5	7,442.7	7,425.5	34.9	20.3	-142.55	278.3	1,467.9	483.0	432.3	50.67	9.532	
7,782.5	7,504.4	7,521.6	7,504.4	35.3	20.3	-144.22	278.3	1,467.9	502.9	451.6	51.36	9.792	
7,800.0	7,521.1	7,538.3	7,521.1	35.4	20.3	-144.58	278.3	1,467.9	507.2	455.7	51.50	9.848	
7,900.0	7,616.9	7,634.1	7,616.9	35.9	20.3	-146.48	278.3	1,467.9	531.0	478.7	52.31	10.150	
8,000.0	7,713.3	7,730.5	7,713.3	36.4	20.4	-148.11	278.3	1,467.9	553.7	500.7	53.08	10.433	
8,100.0	7,810.1	7,827.3	7,810.1	36.9	20.4	-149.54	278.3	1,467.9	575.4	521.6	53.82	10.692	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
8,200.0	7,907.3	7,924.5	7,907.3	37.4	20.4	-150.77	278.3	1,467.9	595.9	541.3	54.53	10.928	
8,300.0	8,004.9	8,022.1	8,004.9	37.9	20.5	-151.85	278.3	1,467.9	615.0	559.8	55.22	11.138	
8,400.0	8,102.9	8,120.1	8,102.9	38.4	20.5	-152.78	278.3	1,467.9	632.8	576.9	55.88	11.324	
8,500.0	8,201.2	8,218.4	8,201.2	38.8	20.5	-153.59	278.3	1,467.9	649.2	592.7	56.53	11.485	
8,600.0	8,299.8	8,317.0	8,299.8	39.3	20.6	-154.29	278.3	1,467.9	664.1	607.0	57.15	11.621	
8,700.0	8,398.7	8,415.9	8,398.7	39.7	20.6	-154.89	278.3	1,467.9	677.5	619.8	57.75	11.733	
8,800.0	8,497.8	8,515.0	8,497.8	40.1	20.6	-155.40	278.3	1,467.9	689.5	631.1	58.33	11.821	
8,900.0	8,597.2	8,614.4	8,597.2	40.6	20.7	-155.84	278.3	1,467.9	699.9	641.0	58.88	11.886	
9,000.0	8,696.7	8,713.9	8,696.7	41.0	20.7	-156.19	278.3	1,467.9	708.7	649.3	59.41	11.928	
9,100.0	8,796.4	8,813.6	8,796.4	41.3	20.7	-156.47	278.3	1,467.9	715.9	656.0	59.91	11.950	
9,200.0	8,896.2	8,913.4	8,896.2	41.7	20.8	-156.69	278.3	1,467.9	721.6	661.2	60.38	11.951	
9,300.0	8,996.1	9,013.3	8,996.1	42.0	20.8	-156.85	278.3	1,467.9	725.7	664.9	60.81	11.934	
9,400.0	9,096.1	9,113.3	9,096.1	42.3	20.8	-156.94	278.3	1,467.9	728.1	667.0	61.18	11.901	
9,500.0	9,196.1	9,213.3	9,196.1	42.5	20.9	-156.97	278.3	1,467.9	729.0	667.6	61.38	11.877	
9,503.9	9,200.0	9,217.2	9,200.0	42.5	20.9	-66.70	278.3	1,467.9	729.0	667.7	61.30	11.892	
9,600.0	9,296.1	9,313.3	9,296.1	42.5	20.9	-66.70	278.3	1,467.9	729.0	667.7	61.35	11.883	
9,700.0	9,396.1	9,413.3	9,396.1	42.5	21.0	-66.70	278.3	1,467.9	729.0	667.6	61.40	11.873	
9,707.4	9,403.5	9,420.7	9,403.5	42.5	21.0	-66.70	278.3	1,467.9	729.0	667.6	61.40	11.873	
9,785.4	9,481.5	9,493.1	9,475.9	42.5	21.0	-66.70	278.4	1,467.9	729.1	667.7	61.33	11.888	
9,800.0	9,496.1	9,500.0	9,482.8	42.5	21.0	113.64	278.6	1,467.9	729.3	668.0	61.37	11.885	
9,825.0	9,521.0	9,519.2	9,501.9	42.5	20.9	113.66	279.5	1,467.9	730.4	669.1	61.26	11.922	
9,850.0	9,545.9	9,535.3	9,518.0	42.5	20.9	113.67	280.8	1,467.9	732.3	671.2	61.09	11.987	
9,875.0	9,570.5	9,550.0	9,532.6	42.5	20.9	113.64	282.3	1,467.9	735.0	674.2	60.88	12.074	
9,900.0	9,595.0	9,566.3	9,548.8	42.5	20.8	113.64	284.5	1,467.9	738.6	678.0	60.67	12.174	
9,925.0	9,619.1	9,580.9	9,563.2	42.5	20.8	113.57	286.8	1,467.9	743.1	682.7	60.43	12.298	
9,950.0	9,642.8	9,600.0	9,582.0	42.5	20.8	113.64	290.4	1,467.8	748.5	688.3	60.25	12.424	
9,975.0	9,666.1	9,600.0	9,582.0	42.5	20.8	112.93	290.4	1,467.8	754.8	695.1	59.71	12.642	
10,000.0	9,688.9	9,620.0	9,601.5	42.5	20.7	112.96	294.8	1,467.8	761.9	702.4	59.53	12.800	
10,025.0	9,711.1	9,631.3	9,612.4	42.5	20.7	112.55	297.6	1,467.8	770.1	710.9	59.18	13.013	
10,050.0	9,732.7	9,650.0	9,630.4	42.5	20.6	112.47	302.7	1,467.8	779.2	720.2	58.96	13.216	
10,075.0	9,753.6	9,650.0	9,630.4	42.5	20.6	111.27	302.7	1,467.8	789.1	730.7	58.41	13.511	
10,100.0	9,773.8	9,650.0	9,630.4	42.5	20.6	109.90	302.7	1,467.8	800.1	742.3	57.85	13.831	
10,125.0	9,793.2	9,667.1	9,646.7	42.6	20.6	109.46	307.9	1,467.7	811.8	754.2	57.62	14.090	
10,150.0	9,811.7	9,673.7	9,653.0	42.6	20.6	108.24	310.0	1,467.7	824.4	767.2	57.20	14.413	
10,175.0	9,829.3	9,679.5	9,658.4	42.6	20.6	106.82	311.9	1,467.7	837.9	781.1	56.78	14.757	
10,200.0	9,845.9	9,684.3	9,663.0	42.6	20.5	105.18	313.6	1,467.7	852.1	795.7	56.36	15.118	
10,225.0	9,861.5	9,700.0	9,677.6	42.6	20.5	104.23	319.2	1,467.7	867.2	811.0	56.14	15.447	
10,250.0	9,876.2	9,700.0	9,677.6	42.6	20.5	101.92	319.2	1,467.7	882.7	827.0	55.68	15.853	
10,275.0	9,889.7	9,700.0	9,677.6	42.6	20.5	99.42	319.2	1,467.7	898.9	843.6	55.24	16.272	
10,300.0	9,902.1	9,700.0	9,677.6	42.6	20.5	96.75	319.2	1,467.7	915.6	860.8	54.83	16.700	
10,325.0	9,913.3	9,700.0	9,677.6	42.6	20.5	93.92	319.2	1,467.7	932.8	878.3	54.44	17.134	
10,350.0	9,923.4	9,700.0	9,677.6	42.7	20.5	90.95	319.2	1,467.7	950.4	896.3	54.08	17.575	
10,375.0	9,932.3	9,700.0	9,677.6	42.7	20.5	87.85	319.2	1,467.7	968.3	914.6	53.74	18.018	
10,400.0	9,939.9	9,700.0	9,677.6	42.7	20.5	84.67	319.2	1,467.7	986.5	933.1	53.43	18.464	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 704H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 9257-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
2,700.0	2,649.5	2,760.7	2,764.8	10.2	6.9	-35.30	521.9	1,194.7	978.1	961.6	16.50	59.267	
2,800.0	2,745.0	2,853.6	2,856.8	10.7	7.1	-35.90	510.2	1,189.2	942.2	925.1	17.06	55.239	
2,900.0	2,840.6	2,946.4	2,948.7	11.1	7.2	-36.54	498.5	1,183.8	906.4	888.8	17.61	51.467	
3,000.0	2,936.1	3,039.3	3,040.7	11.6	7.4	-37.23	486.8	1,178.3	870.7	852.5	18.17	47.932	
3,100.0	3,031.6	3,132.2	3,132.7	12.1	7.6	-37.99	475.0	1,172.9	835.1	816.4	18.72	44.617	
3,200.0	3,127.1	3,225.0	3,224.6	12.5	7.8	-38.80	463.3	1,167.4	799.7	780.5	19.27	41.508	
3,300.0	3,222.6	3,317.9	3,316.6	13.0	7.9	-39.70	451.6	1,161.9	764.5	744.6	19.81	38.589	
3,400.0	3,318.2	3,410.8	3,408.5	13.5	8.1	-40.67	439.9	1,156.5	729.4	709.0	20.35	35.848	
3,500.0	3,413.7	3,503.6	3,500.5	14.0	8.3	-41.75	428.2	1,151.0	694.5	673.6	20.87	33.273	
3,600.0	3,509.2	3,596.5	3,592.5	14.4	8.4	-42.93	416.5	1,145.5	659.8	638.5	21.39	30.854	
3,700.0	3,604.7	3,689.4	3,684.4	14.9	8.6	-44.24	404.8	1,140.1	625.5	603.6	21.88	28.581	
3,800.0	3,700.2	3,782.2	3,776.4	15.4	8.8	-45.70	393.1	1,134.6	591.5	569.1	22.36	26.447	
3,900.0	3,795.8	3,875.1	3,868.4	15.9	9.0	-47.34	381.3	1,129.2	557.8	535.0	22.82	24.444	
4,000.0	3,891.3	3,968.0	3,960.3	16.4	9.1	-49.17	369.6	1,123.7	524.7	501.4	23.25	22.567	
4,100.0	3,986.8	4,060.8	4,052.3	16.9	9.3	-51.24	357.9	1,118.2	492.1	468.4	23.64	20.811	
4,200.0	4,082.3	4,153.7	4,144.3	17.4	9.5	-53.59	346.2	1,112.8	460.1	436.1	24.00	19.173	
4,300.0	4,177.8	4,246.6	4,236.2	17.8	9.7	-56.27	334.5	1,107.3	429.0	404.7	24.31	17.651	
4,400.0	4,273.4	4,339.5	4,328.2	18.3	9.8	-59.34	322.8	1,101.8	398.9	374.4	24.56	16.244	
4,500.0	4,368.9	4,432.3	4,420.1	18.8	10.0	-62.87	311.1	1,096.4	370.1	345.4	24.76	14.952	
4,600.0	4,464.4	4,525.2	4,512.1	19.3	10.2	-66.93	299.3	1,090.9	342.9	318.1	24.89	13.776	
4,700.0	4,559.9	4,618.1	4,604.1	19.8	10.4	-71.62	287.6	1,085.5	317.7	292.8	24.99	12.715	
4,800.0	4,655.4	4,710.9	4,696.0	20.3	10.5	-77.00	275.9	1,080.0	295.1	270.0	25.07	11.769	
4,900.0	4,751.0	4,803.8	4,788.0	20.8	10.7	-83.12	264.2	1,074.5	275.5	250.3	25.21	10.930	
5,000.0	4,846.5	4,896.7	4,880.0	21.3	10.9	-89.97	252.5	1,069.1	259.9	234.4	25.50	10.189	
5,100.0	4,942.0	4,989.5	4,971.9	21.8	11.1	-97.48	240.8	1,063.6	248.8	222.7	26.08	9.540	
5,200.0	5,037.5	5,082.4	5,063.9	22.3	11.2	-105.44	229.1	1,058.2	242.9	215.9	27.03	8.987	
5,255.1	5,090.2	5,133.6	5,114.6	22.6	11.3	-109.93	222.6	1,055.1	242.0	214.3	27.72	8.731 CC	
5,300.0	5,133.0	5,175.3	5,155.9	22.8	11.4	-113.58	217.3	1,052.7	242.6	214.2	28.36	8.553 ES	
5,400.0	5,228.6	5,268.1	5,247.8	23.3	11.6	-121.58	205.6	1,047.2	247.9	217.9	29.98	8.270	
5,500.0	5,324.1	5,361.0	5,339.8	23.8	11.8	-129.14	193.9	1,041.8	258.5	226.8	31.72	8.151 SF	
5,600.0	5,419.6	5,453.9	5,431.8	24.3	12.0	-136.07	182.2	1,036.3	273.8	240.3	33.42	8.191	
5,700.0	5,515.1	5,546.7	5,523.7	24.8	12.1	-142.27	170.5	1,030.8	292.9	257.9	35.01	8.367	
5,800.0	5,610.6	5,639.6	5,615.7	25.3	12.3	-147.72	158.8	1,025.4	315.3	278.9	36.45	8.652	
5,900.0	5,706.2	5,732.5	5,707.6	25.8	12.5	-152.47	147.1	1,019.9	340.3	302.5	37.73	9.018	
6,000.0	5,801.7	5,825.3	5,799.6	26.3	12.7	-156.60	135.3	1,014.5	367.3	328.4	38.89	9.445	
6,100.0	5,897.2	5,918.2	5,891.6	26.8	12.8	-160.18	123.6	1,009.0	396.0	356.0	39.94	9.912	
6,200.0	5,992.7	6,011.1	5,983.5	27.3	13.0	-163.29	111.9	1,003.5	425.9	385.0	40.92	10.409	
6,300.0	6,088.2	6,103.9	6,075.5	27.8	13.2	-166.01	100.2	998.1	456.9	415.1	41.83	10.923	
6,400.0	6,183.8	6,196.8	6,167.5	28.3	13.4	-168.39	88.5	992.6	488.8	446.1	42.69	11.449	
6,500.0	6,279.3	6,289.7	6,259.4	28.8	13.6	-170.48	76.8	987.1	521.3	477.8	43.52	11.979	
6,600.0	6,374.8	6,385.1	6,354.0	29.3	13.9	-172.32	65.3	981.8	554.2	509.8	44.44	12.471	
6,700.0	6,470.3	6,481.6	6,449.8	29.8	14.1	-173.81	55.2	977.1	587.1	541.8	45.29	12.962	
6,800.0	6,565.9	6,578.8	6,546.6	30.4	14.2	-175.00	46.5	973.0	619.7	573.6	46.12	13.437	
6,900.0	6,661.4	6,676.8	6,644.3	30.9	14.4	-175.93	39.3	969.6	651.9	605.0	46.94	13.889	
7,000.0	6,756.9	6,775.5	6,742.8	31.4	14.6	-176.64	33.5	966.9	683.7	636.0	47.75	14.318	
7,100.0	6,852.4	6,874.9	6,842.0	31.9	14.7	-177.16	29.2	965.0	714.9	666.4	48.56	14.724	
7,200.0	6,947.9	6,974.8	6,941.9	32.4	14.9	-177.50	26.5	963.7	745.6	696.2	49.36	15.106	
7,300.0	7,043.5	7,075.2	7,042.3	32.9	15.0	-177.69	25.3	963.1	775.6	725.5	50.13	15.472	
7,400.0	7,139.0	7,171.9	7,139.0	33.4	15.1	-177.78	25.3	963.1	805.2	754.6	50.57	15.922	
7,500.0	7,234.5	7,267.4	7,234.5	33.9	15.2	-177.86	25.3	963.1	834.8	783.5	51.27	16.283	
7,600.0	7,330.0	7,362.9	7,330.0	34.4	15.2	-177.93	25.3	963.1	864.4	812.4	51.94	16.640	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
7,700.0	7,425.5	7,458.5	7,425.5	34.9	15.2	-178.00	25.3	963.1	893.9	841.3	52.62	16.988		
7,782.5	7,504.4	7,537.3	7,504.4	35.3	15.3	-178.05	25.3	963.1	918.3	865.2	53.18	17.270		
7,800.0	7,521.1	7,554.0	7,521.1	35.4	15.3	-178.07	25.3	963.1	923.5	870.2	53.29	17.329		
7,900.0	7,616.9	7,649.8	7,616.9	35.9	15.3	-178.13	25.3	963.1	951.9	898.0	53.97	17.638		
8,000.0	7,713.3	7,746.2	7,713.3	36.4	15.3	-178.19	25.3	963.1	978.7	924.1	54.64	17.912		

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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)			
2,400.0	2,363.0	2,541.9	2,540.9	8.9	8.9	-38.43	549.9	1,077.9	979.6	962.3	17.30	56.613	
2,500.0	2,458.5	2,631.7	2,629.1	9.4	9.3	-39.46	539.4	1,065.3	938.6	920.6	18.01	52.118	
2,600.0	2,554.0	2,721.4	2,717.4	9.8	9.6	-40.58	529.0	1,052.7	897.9	879.1	18.72	47.972	
2,700.0	2,649.5	2,811.2	2,805.7	10.2	10.0	-41.81	518.5	1,040.1	857.5	838.0	19.42	44.148	
2,800.0	2,745.0	2,901.0	2,894.0	10.7	10.4	-43.15	508.1	1,027.6	817.4	797.3	20.12	40.622	
2,900.0	2,840.6	2,990.8	2,982.3	11.1	10.8	-44.63	497.6	1,015.0	777.9	757.0	20.82	37.370	
3,000.0	2,936.1	3,080.6	3,070.6	11.6	11.2	-46.25	487.2	1,002.4	738.8	717.3	21.49	34.373	
3,100.0	3,031.6	3,170.4	3,158.9	12.1	11.5	-48.04	476.7	989.8	700.3	678.1	22.15	31.615	
3,200.0	3,127.1	3,260.2	3,247.1	12.5	11.9	-50.03	466.3	977.2	662.5	639.7	22.78	29.080	
3,300.0	3,222.6	3,350.0	3,335.4	13.0	12.3	-52.24	455.8	964.6	625.5	602.1	23.38	26.758	
3,400.0	3,318.2	3,439.7	3,423.7	13.5	12.7	-54.71	445.4	952.0	589.5	565.5	23.92	24.639	
3,500.0	3,413.7	3,529.5	3,512.0	14.0	13.1	-57.46	434.9	939.4	554.6	530.2	24.41	22.718	
3,600.0	3,509.2	3,619.3	3,600.3	14.4	13.5	-60.54	424.5	926.8	521.1	496.3	24.83	20.990	
3,700.0	3,604.7	3,709.1	3,688.6	14.9	13.9	-63.99	414.0	914.2	489.3	464.2	25.15	19.456	
3,800.0	3,700.2	3,798.9	3,776.8	15.4	14.3	-67.85	403.6	901.7	459.5	434.1	25.36	18.117	
3,900.0	3,795.8	3,888.7	3,865.1	15.9	14.7	-72.16	393.1	889.1	432.2	406.7	25.45	16.978	
4,000.0	3,891.3	3,978.5	3,953.4	16.4	15.1	-76.93	382.7	876.5	407.7	382.3	25.42	16.043	
4,100.0	3,986.8	4,068.3	4,041.7	16.9	15.5	-82.18	372.2	863.9	386.8	361.6	25.26	15.313	
4,200.0	4,082.3	4,158.0	4,130.0	17.4	15.9	-87.88	361.7	851.3	370.0	344.9	25.03	14.781	
4,300.0	4,177.8	4,247.8	4,218.3	17.8	16.2	-93.95	351.3	838.7	357.7	332.9	24.80	14.423	
4,400.0	4,273.4	4,337.6	4,306.5	18.3	16.6	-100.30	340.8	826.1	350.7	326.0	24.69	14.201	
4,479.1	4,348.9	4,408.6	4,376.4	18.7	17.0	-105.42	332.6	816.2	349.0	324.2	24.77	14.088 CC, ES	
4,500.0	4,368.9	4,427.4	4,394.8	18.8	17.0	-106.78	330.4	813.5	349.1	324.3	24.82	14.064	
4,600.0	4,464.4	4,517.2	4,483.1	19.3	17.5	-113.22	319.9	800.9	353.0	327.7	25.27	13.970	
4,700.0	4,559.9	4,607.0	4,571.4	19.8	17.9	-119.47	309.5	788.4	362.3	336.2	26.06	13.903	
4,800.0	4,655.4	4,696.8	4,659.7	20.3	18.3	-125.40	299.0	775.8	376.5	349.3	27.14	13.871 SF	
4,900.0	4,751.0	4,786.6	4,748.0	20.8	18.7	-130.91	288.6	763.2	395.1	366.7	28.44	13.891	
5,000.0	4,846.5	4,876.3	4,836.2	21.3	19.1	-135.96	278.1	750.6	417.6	387.7	29.87	13.980	
5,100.0	4,942.0	4,966.1	4,924.5	21.8	19.5	-140.54	267.7	738.0	443.3	411.9	31.35	14.141	
5,200.0	5,037.5	5,055.9	5,012.8	22.3	19.9	-144.66	257.2	725.4	471.7	438.9	32.83	14.370	
5,300.0	5,133.0	5,145.7	5,101.1	22.8	20.3	-148.34	246.8	712.8	502.4	468.1	34.27	14.657	
5,400.0	5,228.6	5,235.5	5,189.4	23.3	20.7	-151.63	236.3	700.2	534.9	499.2	35.68	14.993	
5,500.0	5,324.1	5,325.3	5,277.7	23.8	21.1	-154.57	225.9	687.6	569.0	532.0	37.03	15.367	
5,600.0	5,419.6	5,415.1	5,366.0	24.3	21.5	-157.20	215.4	675.1	604.4	566.1	38.33	15.768	
5,700.0	5,515.1	5,504.9	5,454.2	24.8	21.9	-159.55	205.0	662.5	640.8	601.3	39.58	16.190	
5,800.0	5,610.6	5,594.6	5,542.5	25.3	22.3	-161.66	194.5	649.9	678.2	637.4	40.79	16.626	
5,900.0	5,706.2	5,684.4	5,630.8	25.8	22.7	-163.57	184.1	637.3	716.3	674.3	41.96	17.071	
6,000.0	5,801.7	5,774.2	5,719.1	26.3	23.1	-165.29	173.6	624.7	755.0	712.0	43.10	17.520	
6,100.0	5,897.2	5,864.0	5,807.4	26.8	23.5	-166.85	163.2	612.1	794.4	750.1	44.20	17.970	
6,200.0	5,992.7	5,953.8	5,895.7	27.3	23.9	-168.26	152.7	599.5	834.1	788.8	45.29	18.419	
6,300.0	6,088.2	6,043.6	5,983.9	27.8	24.3	-169.56	142.3	586.9	874.3	828.0	46.34	18.865	
6,400.0	6,183.8	6,133.4	6,072.2	28.3	24.7	-170.74	131.8	574.3	914.8	867.5	47.38	19.308	
6,500.0	6,279.3	6,228.8	6,166.1	28.8	25.2	-171.88	120.8	561.1	955.6	907.1	48.49	19.707	
6,600.0	6,374.8	6,331.3	6,267.2	29.3	25.6	-172.93	110.0	548.1	995.6	945.9	49.67	20.042	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 706H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		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	17.0	0.0	0.0	-36.02	399.4	-290.5	494.2				
100.0	100.0	83.0	100.0	0.8	1.0	-36.02	399.4	-290.5	493.9	491.6	2.24	220.301	
200.0	200.0	183.0	200.0	1.4	1.6	-36.02	399.4	-290.5	493.9	490.4	3.51	140.752	
300.0	300.0	283.0	300.0	1.9	2.0	-36.02	399.4	-290.5	493.9	489.5	4.35	113.482	
400.0	400.0	383.0	400.0	2.2	2.4	-36.02	399.4	-290.5	493.9	488.8	5.05	97.879	
500.0	500.0	483.0	500.0	2.6	2.7	-36.02	399.4	-290.5	493.9	488.2	5.65	87.384	
600.0	600.0	583.0	600.0	2.8	3.0	-36.02	399.4	-290.5	493.9	487.7	6.20	79.681	
700.0	700.0	683.0	700.0	3.1	3.2	-36.02	399.4	-290.5	493.9	487.2	6.70	73.704	
800.0	800.0	783.0	800.0	3.3	3.4	-36.02	399.4	-290.5	493.9	486.7	7.17	68.885	
900.0	900.0	883.0	900.0	3.6	3.7	-36.02	399.4	-290.5	493.9	486.3	7.61	64.888	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-36.02	399.4	-290.5	493.9	485.8	8.03	61.501	
1,100.0	1,100.0	1,095.0	1,112.0	4.1	4.1	-126.50	398.4	-290.0	493.9	485.4	8.52	57.972	
1,200.0	1,199.8	1,209.4	1,226.3	4.4	4.4	-127.18	394.2	-288.0	493.1	484.1	9.00	54.808	
1,300.0	1,299.5	1,323.4	1,340.0	4.7	4.7	-128.31	387.0	-284.7	491.6	482.1	9.50	51.763	
1,400.0	1,398.7	1,436.8	1,452.9	5.1	5.0	-129.91	376.8	-279.9	489.7	479.6	10.03	48.812	
1,500.0	1,497.5	1,547.6	1,562.7	5.4	5.3	-131.92	363.9	-273.9	487.5	476.9	10.54	46.234	
1,560.4	1,556.8	1,607.0	1,621.6	5.7	5.4	-133.16	356.4	-270.4	486.9	476.1	10.85	44.874 CC, ES	
1,600.0	1,595.6	1,645.9	1,660.1	5.8	5.5	-134.02	351.5	-268.1	487.2	476.1	11.08	43.969	
1,700.0	1,693.1	1,743.7	1,756.9	6.2	5.8	-136.34	339.2	-262.4	490.0	478.4	11.69	41.935	
1,800.0	1,789.6	1,840.9	1,853.2	6.6	6.1	-138.82	326.9	-256.7	496.4	484.1	12.33	40.264	
1,860.7	1,847.8	1,899.6	1,911.3	6.8	6.3	-140.39	319.5	-253.2	502.1	489.4	12.68	39.595	
1,900.0	1,885.3	1,937.4	1,948.7	6.9	6.4	-141.45	314.8	-251.0	506.3	493.4	12.90	39.239	
2,000.0	1,980.9	2,033.8	2,044.2	7.3	6.8	-144.09	302.6	-245.3	517.9	504.3	13.55	38.206	
2,100.0	2,076.4	2,130.1	2,139.6	7.7	7.1	-146.62	290.5	-239.7	530.5	516.3	14.22	37.305	
2,200.0	2,171.9	2,226.5	2,235.0	8.1	7.4	-149.03	278.3	-234.0	544.2	529.3	14.90	36.526	
2,300.0	2,267.4	2,322.8	2,330.4	8.5	7.8	-151.32	266.2	-228.3	558.8	543.2	15.59	35.855	
2,400.0	2,363.0	2,419.2	2,425.8	8.9	8.2	-153.50	254.0	-222.6	574.3	558.0	16.28	35.282	
2,500.0	2,458.5	2,515.5	2,521.2	9.4	8.5	-155.57	241.9	-217.0	590.6	573.7	16.97	34.795	
2,600.0	2,554.0	2,611.9	2,616.6	9.8	8.9	-157.53	229.7	-211.3	607.7	590.0	17.67	34.382	
2,700.0	2,649.5	2,708.2	2,712.0	10.2	9.3	-159.38	217.5	-205.6	625.4	607.0	18.38	34.035	
2,800.0	2,745.0	2,804.6	2,807.4	10.7	9.6	-161.14	205.4	-200.0	643.8	624.7	19.08	33.745	
2,900.0	2,840.6	2,900.9	2,902.9	11.1	10.0	-162.80	193.2	-194.3	662.7	642.9	19.78	33.503	
3,000.0	2,936.1	2,997.2	2,998.3	11.6	10.4	-164.37	181.1	-188.6	682.2	661.7	20.48	33.305	
3,100.0	3,031.6	3,093.6	3,093.7	12.1	10.8	-165.85	168.9	-183.0	702.1	680.9	21.18	33.142	
3,200.0	3,127.1	3,189.9	3,189.1	12.5	11.2	-167.26	156.8	-177.3	722.5	700.6	21.89	33.012	
3,300.0	3,222.6	3,286.3	3,284.5	13.0	11.6	-168.59	144.6	-171.6	743.3	720.7	22.59	32.908	
3,400.0	3,318.2	3,382.6	3,379.9	13.5	12.0	-169.84	132.5	-166.0	764.4	741.2	23.29	32.828	
3,500.0	3,413.7	3,479.0	3,475.3	14.0	12.4	-171.03	120.3	-160.3	785.9	762.0	23.99	32.768	
3,600.0	3,509.2	3,575.3	3,570.7	14.4	12.8	-172.16	108.2	-154.6	807.8	783.1	24.68	32.725	
3,700.0	3,604.7	3,671.7	3,666.1	14.9	13.2	-173.23	96.0	-149.0	829.9	804.5	25.38	32.697	
3,800.0	3,700.2	3,768.0	3,761.6	15.4	13.6	-174.25	83.9	-143.3	852.2	826.2	26.08	32.681	
3,900.0	3,795.8	3,864.4	3,857.0	15.9	14.0	-175.21	71.7	-137.6	874.9	848.1	26.77	32.677 SF	
4,000.0	3,891.3	3,960.7	3,952.4	16.4	14.4	-176.13	59.6	-132.0	897.7	870.3	27.47	32.681	
4,100.0	3,986.8	4,057.1	4,047.8	16.9	14.8	-177.00	47.4	-126.3	920.8	892.6	28.16	32.694	
4,200.0	4,082.3	4,153.4	4,143.2	17.4	15.2	-177.83	35.3	-120.6	944.0	915.2	28.86	32.713	
4,300.0	4,177.8	4,249.8	4,238.6	17.8	15.6	-178.62	23.1	-115.0	967.5	937.9	29.55	32.738	
4,400.0	4,273.4	4,346.1	4,334.0	18.3	16.0	-179.38	11.0	-109.3	991.1	960.8	30.25	32.768	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,300.0	5,133.0	5,042.9	4,964.7	22.8	20.6	-5.37	81.9	2,117.4	989.6	949.3	40.31	24.552	
5,400.0	5,228.6	5,141.1	5,060.3	23.3	21.0	-4.59	67.5	2,135.3	976.9	935.6	41.29	23.662	
5,500.0	5,324.1	5,239.4	5,155.9	23.8	21.5	-3.78	53.1	2,153.2	964.4	922.1	42.27	22.813	
5,600.0	5,419.6	5,337.7	5,251.4	24.3	22.0	-2.96	38.7	2,171.0	952.1	908.8	43.27	22.005	
5,700.0	5,515.1	5,436.0	5,347.0	24.8	22.4	-2.12	24.3	2,188.9	940.0	895.7	44.27	21.235	
5,800.0	5,610.6	5,534.3	5,442.5	25.3	22.9	-1.26	9.9	2,206.7	928.1	882.8	45.27	20.501	
5,900.0	5,706.2	5,632.5	5,538.1	25.8	23.4	-0.37	-4.5	2,224.6	916.4	870.1	46.28	19.801	
6,000.0	5,801.7	5,730.8	5,633.7	26.3	23.8	0.54	-18.9	2,242.4	904.9	857.6	47.29	19.135	
6,100.0	5,897.2	5,829.1	5,729.2	26.8	24.3	1.47	-33.3	2,260.3	893.7	845.4	48.31	18.500	
6,200.0	5,992.7	5,927.4	5,824.8	27.3	24.8	2.42	-47.8	2,278.1	882.7	833.4	49.33	17.895	
6,300.0	6,088.2	6,025.7	5,920.4	27.8	25.2	3.40	-62.2	2,296.0	872.0	821.7	50.35	17.320	
6,400.0	6,183.8	6,134.1	6,025.9	28.3	25.7	4.48	-77.7	2,315.3	861.1	809.8	51.36	16.765	
6,500.0	6,279.3	6,246.4	6,135.7	28.8	26.3	5.56	-92.5	2,333.6	848.9	796.6	52.37	16.210	
6,600.0	6,374.8	6,358.6	6,245.8	29.3	26.8	6.60	-106.0	2,350.3	835.4	782.0	53.35	15.658	
6,700.0	6,470.3	6,470.5	6,356.1	29.8	27.3	7.59	-118.0	2,365.2	820.3	766.0	54.30	15.109	
6,800.0	6,565.9	6,582.0	6,466.3	30.4	27.8	8.54	-128.7	2,378.5	803.9	748.6	55.21	14.560	
6,900.0	6,661.4	6,693.2	6,576.5	30.9	28.3	9.46	-138.0	2,390.0	785.9	729.8	56.09	14.011	
7,000.0	6,756.9	6,803.9	6,666.5	31.4	28.7	10.34	-145.9	2,399.8	766.4	709.5	56.93	13.462	
7,100.0	6,852.4	6,914.0	6,796.1	31.9	29.2	11.19	-152.5	2,407.9	745.4	687.7	57.73	12.911	
7,200.0	6,947.9	7,023.5	6,905.2	32.4	29.6	12.02	-157.7	2,414.4	722.9	664.4	58.50	12.358	
7,300.0	7,043.5	7,132.2	7,013.8	32.9	29.9	12.82	-161.6	2,419.2	698.8	639.6	59.21	11.803	
7,400.0	7,139.0	7,240.2	7,121.7	33.4	30.3	13.61	-164.1	2,422.4	673.3	613.4	59.87	11.245	
7,500.0	7,234.5	7,347.3	7,228.8	33.9	30.5	14.38	-165.4	2,424.0	646.1	585.6	60.56	10.669	
7,600.0	7,330.0	7,448.5	7,330.0	34.4	30.6	15.11	-165.6	2,424.2	617.6	555.4	62.21	9.929	
7,700.0	7,425.5	7,544.0	7,425.5	34.9	30.6	15.86	-165.6	2,424.2	589.0	526.3	62.78	9.383	
7,782.5	7,504.4	7,622.9	7,504.4	35.3	30.7	16.53	-165.6	2,424.2	565.5	502.3	63.24	8.941	
7,800.0	7,521.1	7,639.6	7,521.1	35.4	30.7	16.67	-165.6	2,424.2	560.5	497.2	63.34	8.850	
7,900.0	7,616.9	7,735.4	7,616.9	35.9	30.7	17.45	-165.6	2,424.2	533.2	469.3	63.90	8.345	
8,000.0	7,713.3	7,831.8	7,713.3	36.4	30.7	18.28	-165.6	2,424.2	507.7	443.2	64.44	7.878	
8,100.0	7,810.1	7,928.6	7,810.1	36.9	30.7	19.12	-165.6	2,424.2	483.8	418.8	64.96	7.447	
8,200.0	7,907.3	8,025.8	7,907.3	37.4	30.7	19.99	-165.6	2,424.2	461.7	396.2	65.46	7.052	
8,300.0	8,004.9	8,123.4	8,004.9	37.9	30.7	20.88	-165.6	2,424.2	441.3	375.3	65.94	6.692	
8,400.0	8,102.9	8,221.4	8,102.9	38.4	30.8	21.77	-165.6	2,424.2	422.6	356.2	66.39	6.365	
8,500.0	8,201.2	8,319.7	8,201.2	38.8	30.8	22.66	-165.6	2,424.2	405.6	338.8	66.82	6.071	
8,600.0	8,299.8	8,418.3	8,299.8	39.3	30.8	23.54	-165.6	2,424.2	390.3	323.1	67.22	5.807	
8,700.0	8,398.7	8,517.2	8,398.7	39.7	30.8	24.38	-165.6	2,424.2	376.7	309.1	67.59	5.574	
8,800.0	8,497.8	8,616.3	8,497.8	40.1	30.8	25.18	-165.6	2,424.2	364.8	296.9	67.95	5.369	
8,900.0	8,597.2	8,715.7	8,597.2	40.6	30.9	25.92	-165.6	2,424.2	354.5	286.2	68.28	5.192	
9,000.0	8,696.7	8,815.2	8,696.7	41.0	30.9	26.58	-165.6	2,424.2	345.8	277.3	68.59	5.042	
9,100.0	8,796.4	8,914.9	8,796.4	41.3	30.9	27.14	-165.6	2,424.2	338.8	269.9	68.89	4.918	
9,200.0	8,896.2	9,014.7	8,896.2	41.7	30.9	27.60	-165.6	2,424.2	333.3	264.1	69.18	4.818	
9,300.0	8,996.1	9,114.6	8,996.1	42.0	31.0	27.94	-165.6	2,424.2	329.4	259.9	69.46	4.742	
9,400.0	9,096.1	9,214.6	9,096.1	42.3	31.0	28.15	-165.6	2,424.2	327.0	257.3	69.71	4.691	
9,500.0	9,196.1	9,314.6	9,196.1	42.5	31.0	28.22	-165.6	2,424.2	326.2	256.3	69.86	4.669	
9,503.9	9,200.0	9,318.5	9,200.0	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.6	69.62	4.685	
9,600.0	9,296.1	9,414.6	9,296.1	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.5	69.66	4.682	
9,700.0	9,396.1	9,514.6	9,396.1	42.5	31.0	118.49	-165.6	2,424.2	326.2	256.5	69.71	4.679	
9,785.4	9,481.5	9,600.0	9,481.5	42.5	31.1	118.49	-165.6	2,424.2	326.2	256.4	69.74	4.677	
9,800.0	9,496.1	9,614.6	9,496.1	42.5	31.1	-61.21	-165.6	2,424.2	326.1	255.8	70.24	4.642	
9,825.0	9,521.0	9,639.5	9,521.0	42.5	31.1	-61.50	-165.6	2,424.2	325.4	255.1	70.32	4.627	
9,850.0	9,545.9	9,664.4	9,545.9	42.5	31.1	-62.06	-165.6	2,424.2	324.1	253.7	70.44	4.601	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 901H - 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		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)				
9,875.0	9,570.5	9,689.0	9,570.5	42.5	31.1	-62.88	-165.6	2,424.2	322.2	251.6	70.59	4.565		
9,900.0	9,595.0	9,713.5	9,595.0	42.5	31.1	-63.97	-165.6	2,424.2	319.8	249.0	70.76	4.519		
9,925.0	9,619.1	9,737.6	9,619.1	42.5	31.1	-65.33	-165.6	2,424.2	316.9	245.9	70.96	4.466		
9,950.0	9,642.8	9,761.3	9,642.8	42.5	31.1	-66.94	-165.6	2,424.2	313.6	242.4	71.17	4.406		
9,975.0	9,666.1	9,784.6	9,666.1	42.5	31.1	-68.80	-165.6	2,424.2	310.0	238.6	71.38	4.343		
10,000.0	9,688.9	9,807.4	9,688.9	42.5	31.1	-70.89	-165.6	2,424.2	306.1	234.6	71.57	4.277		
10,025.0	9,711.1	9,829.6	9,711.1	42.5	31.1	-73.19	-165.6	2,424.2	302.2	230.5	71.73	4.213		
10,050.0	9,732.7	9,851.2	9,732.7	42.5	31.1	-75.66	-165.6	2,424.2	298.4	226.5	71.84	4.153		
10,075.0	9,753.6	9,872.1	9,753.6	42.5	31.1	-78.27	-165.6	2,424.2	294.7	222.8	71.87	4.101		
10,100.0	9,773.8	9,892.3	9,773.8	42.5	31.1	-80.97	-165.6	2,424.2	291.4	219.6	71.79	4.059		
10,125.0	9,793.2	9,911.7	9,793.2	42.6	31.1	-83.71	-165.6	2,424.2	288.7	217.1	71.59	4.033		
10,150.0	9,811.7	9,930.2	9,811.7	42.6	31.1	-86.42	-165.6	2,424.2	286.8	215.6	71.23	4.027 SF		
10,175.0	9,829.3	9,947.8	9,829.3	42.6	31.1	-89.03	-165.6	2,424.2	285.8	215.1	70.69	4.043 ES		
10,184.5	9,835.7	9,954.2	9,835.7	42.6	31.1	-90.00	-165.6	2,424.2	285.7	215.3	70.43	4.057 CC		
10,200.0	9,845.9	9,964.4	9,845.9	42.6	31.1	-91.51	-165.6	2,424.2	286.0	216.0	69.95	4.088		
10,225.0	9,861.5	9,980.1	9,861.5	42.6	31.1	-93.77	-165.6	2,424.2	287.4	218.4	69.02	4.165		
10,250.0	9,876.2	9,994.7	9,876.2	42.6	31.1	-95.78	-165.6	2,424.2	290.3	222.4	67.89	4.276		
10,275.0	9,889.7	10,008.2	9,889.7	42.6	31.2	-97.49	-165.6	2,424.2	294.8	228.2	66.61	4.426		
10,300.0	9,902.1	10,020.6	9,902.1	42.6	31.2	-98.86	-165.6	2,424.2	300.8	235.6	65.19	4.615		
10,325.0	9,913.3	10,031.8	9,913.3	42.6	31.2	-99.86	-165.6	2,424.2	308.5	244.9	63.69	4.844		
10,350.0	9,923.4	10,041.9	9,923.4	42.7	31.2	-100.46	-165.6	2,424.2	317.9	255.7	62.16	5.114		
10,375.0	9,932.3	10,050.8	9,932.3	42.7	31.2	-100.63	-165.6	2,424.2	328.8	268.2	60.64	5.422		
10,400.0	9,939.9	10,058.4	9,939.9	42.7	31.2	-100.35	-165.6	2,424.2	341.2	282.0	59.18	5.766		
10,425.0	9,946.2	10,064.8	9,946.2	42.7	31.2	-99.59	-165.6	2,424.2	355.0	297.2	57.81	6.141		
10,450.0	9,951.3	10,069.9	9,951.3	42.7	31.2	-98.33	-165.6	2,424.2	370.1	313.5	56.54	6.545		
10,475.0	9,955.1	10,073.7	9,955.1	42.8	31.2	-96.55	-165.6	2,424.2	386.2	330.8	55.40	6.971		
10,500.0	9,957.6	10,076.2	9,957.6	42.8	31.2	-94.23	-165.6	2,424.2	403.4	349.0	54.39	7.416		
10,525.0	9,958.9	10,077.4	9,958.9	42.8	31.2	-91.36	-165.6	2,424.2	421.4	367.9	53.51	7.874		
10,534.2	9,959.0	10,077.5	9,959.0	42.8	31.2	-90.17	-165.6	2,424.2	428.2	374.9	53.22	8.045		
10,600.0	9,959.1	10,077.6	9,959.1	42.9	31.2	-90.21	-165.6	2,424.2	479.2	427.7	51.52	9.301		
10,700.0	9,959.4	10,077.9	9,959.4	43.0	31.2	-90.26	-165.6	2,424.2	562.7	512.7	49.99	11.256		
10,800.0	9,959.7	10,078.2	9,959.7	43.2	31.2	-90.31	-165.6	2,424.2	650.8	601.6	49.21	13.225		
10,900.0	9,959.9	10,078.4	9,959.9	43.3	31.2	-90.37	-165.6	2,424.2	741.9	693.1	48.84	15.190		
11,000.0	9,960.2	10,078.7	9,960.2	43.5	31.2	-90.42	-165.6	2,424.2	835.1	786.4	48.71	17.145		
11,100.0	9,960.5	10,079.0	9,960.5	43.8	31.2	-90.47	-165.6	2,424.2	929.7	881.0	48.70	19.092		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			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)		
4,000.0	3,891.3	3,842.0	3,815.7	16.4	9.3	-12.94	206.8	1,717.5	981.8	955.7	26.18	37.508	
4,100.0	3,986.8	3,939.1	3,911.0	16.9	9.5	-12.30	191.8	1,728.3	960.5	933.5	26.92	35.681	
4,200.0	4,082.3	4,036.2	4,006.3	17.4	9.7	-11.62	176.7	1,739.2	939.2	911.5	27.66	33.951	
4,300.0	4,177.8	4,133.2	4,101.7	17.8	9.8	-10.91	161.7	1,750.0	918.1	889.7	28.41	32.312	
4,400.0	4,273.4	4,230.3	4,197.0	18.3	10.0	-10.17	146.7	1,760.8	897.1	867.9	29.17	30.757	
4,500.0	4,368.9	4,327.4	4,292.3	18.8	10.2	-9.40	131.7	1,771.7	876.3	846.3	29.92	29.283	
4,600.0	4,464.4	4,424.5	4,387.6	19.3	10.4	-8.58	116.6	1,782.5	855.6	824.9	30.69	27.883	
4,700.0	4,559.9	4,521.6	4,482.9	19.8	10.6	-7.73	101.6	1,793.4	835.1	803.7	31.45	26.554	
4,800.0	4,655.4	4,618.7	4,578.2	20.3	10.8	-6.84	86.6	1,804.2	814.8	782.6	32.22	25.292	
4,900.0	4,751.0	4,715.8	4,673.5	20.8	11.0	-5.90	71.6	1,815.0	794.7	761.7	32.98	24.094	
5,000.0	4,846.5	4,812.9	4,768.8	21.3	11.2	-4.91	56.5	1,825.9	774.8	741.1	33.75	22.955	
5,100.0	4,942.0	4,910.0	4,864.1	21.8	11.4	-3.88	41.5	1,836.7	755.2	720.7	34.52	21.874	
5,200.0	5,037.5	5,007.1	4,959.4	22.3	11.6	-2.79	26.5	1,847.5	735.8	700.5	35.29	20.848	
5,300.0	5,133.0	5,104.1	5,054.7	22.8	11.8	-1.64	11.5	1,858.4	716.7	680.6	36.07	19.871	
5,400.0	5,228.6	5,204.8	5,153.6	23.3	12.0	-0.42	-3.8	1,869.4	697.7	660.8	36.81	18.952	
5,500.0	5,324.1	5,305.5	5,252.7	23.8	12.2	0.82	-18.3	1,879.8	678.4	640.8	37.55	18.066	
5,600.0	5,419.6	5,406.2	5,351.9	24.3	12.4	2.07	-32.2	1,889.8	658.9	620.6	38.28	17.212	
5,700.0	5,515.1	5,506.8	5,451.3	24.8	12.6	3.33	-45.3	1,899.3	639.2	600.2	39.00	16.389	
5,800.0	5,610.6	5,607.5	5,550.7	25.3	12.8	4.61	-57.7	1,908.2	619.2	579.5	39.71	15.594	
5,900.0	5,706.2	5,708.1	5,650.3	25.8	13.0	5.92	-69.4	1,916.7	598.9	558.5	40.40	14.824	
6,000.0	5,801.7	5,808.6	5,749.9	26.3	13.2	7.25	-80.4	1,924.6	578.4	537.3	41.08	14.078	
6,100.0	5,897.2	5,909.0	5,849.5	26.8	13.4	8.61	-90.6	1,932.0	557.5	515.8	41.75	13.355	
6,200.0	5,992.7	6,009.3	5,949.1	27.3	13.6	10.01	-100.2	1,938.9	536.4	494.0	42.40	12.652	
6,300.0	6,088.2	6,109.5	6,048.7	27.8	13.8	11.46	-109.0	1,945.3	515.0	471.9	43.03	11.968	
6,400.0	6,183.8	6,209.5	6,148.3	28.3	14.0	12.97	-117.1	1,951.1	493.2	449.6	43.64	11.302	
6,500.0	6,279.3	6,309.5	6,247.8	28.8	14.1	14.55	-124.5	1,956.4	471.1	426.9	44.22	10.654	
6,600.0	6,374.8	6,409.2	6,347.2	29.3	14.3	16.21	-131.2	1,961.2	448.7	404.0	44.78	10.022	
6,700.0	6,470.3	6,508.8	6,446.5	29.8	14.5	17.97	-137.2	1,965.6	426.0	380.7	45.30	9.405	
6,800.0	6,565.9	6,608.2	6,545.6	30.4	14.6	19.86	-142.4	1,969.3	403.1	357.3	45.78	8.804	
6,900.0	6,661.4	6,707.3	6,644.7	30.9	14.8	21.90	-147.0	1,972.6	379.9	333.6	46.22	8.219	
7,000.0	6,756.9	6,806.3	6,743.5	31.4	15.0	24.12	-150.8	1,975.4	356.4	309.8	46.60	7.649	
7,100.0	6,852.4	6,905.0	6,842.1	31.9	15.1	26.59	-154.0	1,977.7	332.8	285.9	46.90	7.095	
7,200.0	6,947.9	7,003.5	6,940.6	32.4	15.3	29.35	-156.4	1,979.4	309.1	262.0	47.11	6.560	
7,300.0	7,043.5	7,101.7	7,038.7	32.9	15.4	32.49	-158.2	1,980.7	285.4	238.1	47.21	6.045	
7,400.0	7,139.0	7,199.6	7,136.7	33.4	15.5	36.11	-159.3	1,981.5	261.8	214.7	47.14	5.554	
7,500.0	7,234.5	7,297.3	7,234.3	33.9	15.6	40.35	-159.7	1,981.8	238.6	191.8	46.86	5.092	
7,600.0	7,330.0	7,393.0	7,330.0	34.4	15.7	45.33	-159.7	1,981.8	216.4	169.9	46.56	4.649	
7,700.0	7,425.5	7,488.5	7,425.5	34.9	15.7	51.32	-159.7	1,981.8	196.2	150.6	45.60	4.304	
7,782.5	7,504.4	7,567.3	7,504.4	35.3	15.7	57.15	-159.7	1,981.8	181.5	137.0	44.51	4.078	
7,800.0	7,521.1	7,584.0	7,521.1	35.4	15.7	58.47	-159.7	1,981.8	178.7	134.4	44.25	4.038	
7,900.0	7,616.9	7,679.9	7,616.9	35.9	15.7	66.50	-159.7	1,981.8	165.1	122.3	42.73	3.863	
8,000.0	7,713.3	7,776.2	7,713.3	36.4	15.8	75.17	-159.7	1,981.8	155.9	114.6	41.37	3.769	
8,100.0	7,810.1	7,873.0	7,810.1	36.9	15.8	84.06	-159.7	1,981.8	151.3	110.7	40.60	3.725	
8,168.1	7,876.3	7,939.2	7,876.3	37.3	15.8	90.00	-159.7	1,981.8	150.4	109.8	40.56	3.708 CC	
8,200.0	7,907.3	7,970.2	7,907.3	37.4	15.8	92.70	-159.7	1,981.8	150.6	109.9	40.69	3.700	
8,300.0	8,004.9	8,067.9	8,004.9	37.9	15.9	100.67	-159.7	1,981.8	153.2	111.6	41.59	3.683	
8,400.0	8,102.9	8,165.8	8,102.9	38.4	15.9	107.73	-159.7	1,981.8	158.2	115.2	43.01	3.677	
8,500.0	8,201.2	8,264.1	8,201.2	38.8	15.9	113.77	-159.7	1,981.8	164.8	120.1	44.66	3.689	
8,600.0	8,299.8	8,362.8	8,299.8	39.3	16.0	118.84	-159.7	1,981.8	172.2	125.9	46.32	3.718	
8,700.0	8,398.7	8,461.7	8,398.7	39.7	16.0	123.02	-159.7	1,981.8	179.9	132.0	47.86	3.759	
8,800.0	8,497.8	8,560.8	8,497.8	40.1	16.0	126.42	-159.7	1,981.8	187.4	138.2	49.25	3.806	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
8,900.0	8,597.2	8,660.1	8,597.2	40.6	16.1	129.17	-159.7	1,981.8	194.4	144.0	50.46	3.853	
9,000.0	8,696.7	8,759.7	8,696.7	41.0	16.1	131.35	-159.7	1,981.8	200.7	149.2	51.51	3.896	
9,100.0	8,796.4	8,859.4	8,796.4	41.3	16.1	133.04	-159.7	1,981.8	206.0	153.6	52.40	3.931	
9,200.0	8,896.2	8,959.2	8,896.2	41.7	16.2	134.30	-159.7	1,981.8	210.3	157.1	53.15	3.956	
9,300.0	8,996.1	9,059.1	8,996.1	42.0	16.2	135.17	-159.7	1,981.8	213.4	159.6	53.75	3.970	
9,400.0	9,096.1	9,159.0	9,096.1	42.3	16.2	135.69	-159.7	1,981.8	215.3	161.1	54.21	3.972	
9,500.0	9,196.1	9,259.0	9,196.1	42.5	16.3	135.87	-159.7	1,981.8	216.0	161.5	54.43	3.968	
9,503.9	9,200.0	9,263.0	9,200.0	42.5	16.3	-133.87	-159.7	1,981.8	216.0	161.6	54.34	3.975	
9,600.0	9,296.1	9,359.0	9,296.1	42.5	16.3	-133.87	-159.7	1,981.8	216.0	161.6	54.39	3.971	
9,700.0	9,396.1	9,459.0	9,396.1	42.5	16.4	-133.87	-159.7	1,981.8	216.0	161.5	54.44	3.967	
9,785.4	9,481.5	9,544.5	9,481.5	42.5	16.4	-133.87	-159.7	1,981.8	216.0	161.5	54.48	3.964	
9,800.0	9,496.1	9,559.0	9,496.1	42.5	16.4	46.54	-159.7	1,981.8	215.8	161.1	54.69	3.946	
9,825.0	9,521.0	9,584.0	9,521.0	42.5	16.4	46.89	-159.7	1,981.8	214.9	160.1	54.74	3.925	
9,850.0	9,545.9	9,608.8	9,545.9	42.5	16.4	47.59	-159.7	1,981.8	213.0	158.1	54.86	3.882	
9,875.0	9,570.5	9,633.5	9,570.5	42.5	16.4	48.64	-159.7	1,981.8	210.3	155.2	55.08	3.818	
9,900.0	9,595.0	9,657.9	9,595.0	42.5	16.4	50.05	-159.7	1,981.8	206.8	151.4	55.39	3.734	
9,925.0	9,619.1	9,682.0	9,619.1	42.5	16.4	51.85	-159.7	1,981.8	202.6	146.8	55.80	3.630	
9,950.0	9,642.8	9,705.8	9,642.8	42.5	16.5	54.06	-159.7	1,981.8	197.7	141.4	56.32	3.510	
9,975.0	9,666.1	9,729.1	9,666.1	42.5	16.5	56.69	-159.7	1,981.8	192.3	135.3	56.96	3.376	
10,000.0	9,688.9	9,751.9	9,688.9	42.5	16.5	59.77	-159.7	1,981.8	186.5	128.8	57.72	3.231	
10,025.0	9,711.1	9,774.1	9,711.1	42.5	16.5	63.29	-159.7	1,981.8	180.6	122.0	58.60	3.081	
10,050.0	9,732.7	9,795.7	9,732.7	42.5	16.5	67.23	-159.7	1,981.8	174.6	115.1	59.57	2.932 Normal Operations	
10,075.0	9,753.6	9,816.6	9,753.6	42.5	16.5	71.55	-159.7	1,981.8	169.0	108.4	60.62	2.789 Normal Operations	
10,100.0	9,773.8	9,836.8	9,773.8	42.5	16.5	76.16	-159.7	1,981.8	164.0	102.4	61.67	2.660 Normal Operations	
10,125.0	9,793.2	9,856.1	9,793.2	42.6	16.5	80.93	-159.7	1,981.8	160.1	97.4	62.63	2.555 Normal Operations	
10,150.0	9,811.7	9,874.6	9,811.7	42.6	16.5	85.73	-159.7	1,981.8	157.4	94.0	63.40	2.483 Caution - Monitor Closely	
10,172.8	9,827.8	9,890.7	9,827.8	42.6	16.5	90.00	-159.7	1,981.8	156.6	92.8	63.83	2.454 Caution - Monitor Closely	
10,175.0	9,829.3	9,892.2	9,829.3	42.6	16.5	90.39	-159.7	1,981.8	156.6	92.8	63.85	2.453 Caution - Monitor Closely, ES, SF	
10,200.0	9,845.9	9,908.9	9,845.9	42.6	16.5	94.77	-159.7	1,981.8	157.9	94.0	63.87	2.472 Caution - Monitor Closely	
10,225.0	9,861.5	9,924.5	9,861.5	42.6	16.5	98.73	-159.7	1,981.8	161.6	98.1	63.43	2.547 Normal Operations	
10,250.0	9,876.2	9,939.1	9,876.2	42.6	16.5	102.17	-159.7	1,981.8	167.7	105.2	62.55	2.681 Normal Operations	
10,275.0	9,889.7	9,952.6	9,889.7	42.6	16.5	105.02	-159.7	1,981.8	176.3	115.0	61.33	2.875 Normal Operations	
10,300.0	9,902.1	9,965.0	9,902.1	42.6	16.6	107.25	-159.7	1,981.8	187.3	127.4	59.90	3.127	
10,325.0	9,913.3	9,976.3	9,913.3	42.6	16.6	108.81	-159.7	1,981.8	200.4	142.0	58.40	3.432	
10,350.0	9,923.4	9,986.4	9,923.4	42.7	16.6	109.68	-159.7	1,981.8	215.4	158.5	56.93	3.784	
10,375.0	9,932.3	9,995.2	9,932.3	42.7	16.6	109.83	-159.7	1,981.8	232.1	176.6	55.54	4.179	
10,400.0	9,939.9	10,002.8	9,939.9	42.7	16.6	109.22	-159.7	1,981.8	250.2	195.9	54.27	4.610	
10,425.0	9,946.2	10,009.2	9,946.2	42.7	16.6	107.80	-159.7	1,981.8	269.5	216.3	53.14	5.071	
10,450.0	9,951.3	10,014.3	9,951.3	42.7	16.6	105.48	-159.7	1,981.8	289.7	237.6	52.14	5.556	
10,475.0	9,955.1	10,018.1	9,955.1	42.8	16.6	102.21	-159.7	1,981.8	310.8	259.5	51.27	6.062	
10,500.0	9,957.6	10,020.6	9,957.6	42.8	16.6	97.91	-159.7	1,981.8	332.5	282.0	50.50	6.584	
10,525.0	9,958.9	10,021.8	9,958.9	42.8	16.6	92.54	-159.7	1,981.8	354.7	304.9	49.84	7.118	
10,534.2	9,959.0	10,021.9	9,959.0	42.8	16.6	90.32	-159.7	1,981.8	363.0	313.4	49.61	7.317	
10,600.0	9,959.1	10,022.1	9,959.1	42.9	16.6	90.38	-159.7	1,981.8	423.3	375.0	48.30	8.765	
10,700.0	9,959.4	10,022.4	9,959.4	43.0	16.6	90.48	-159.7	1,981.8	517.6	470.6	47.00	11.011	
10,800.0	9,959.7	10,022.6	9,959.7	43.2	16.6	90.58	-159.7	1,981.8	613.6	567.4	46.19	13.284	
10,900.0	9,959.9	10,022.9	9,959.9	43.3	16.6	90.67	-159.7	1,981.8	710.8	665.1	45.66	15.568	
11,000.0	9,960.2	10,023.2	9,960.2	43.5	16.6	90.77	-159.7	1,981.8	808.6	763.3	45.28	17.856	
11,100.0	9,960.5	10,023.4	9,960.5	43.8	16.6	90.87	-159.7	1,981.8	906.9	861.9	45.02	20.146	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		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	
3,200.0	3,127.1	3,203.4	3,200.2	12.5	7.5	-24.19	371.8	1,431.4	983.6	963.9	19.74	49.838		
3,300.0	3,222.6	3,296.9	3,291.3	13.0	7.6	-23.61	350.5	1,432.8	949.3	928.9	20.39	46.560		
3,400.0	3,318.2	3,390.4	3,382.3	13.5	7.8	-22.99	329.2	1,434.3	915.1	894.1	21.05	43.465		
3,500.0	3,413.7	3,483.9	3,473.3	14.0	7.9	-22.32	307.9	1,435.7	881.0	859.3	21.73	40.542		
3,600.0	3,509.2	3,577.4	3,564.3	14.4	8.1	-21.60	286.6	1,437.2	847.1	824.6	22.42	37.781		
3,700.0	3,604.7	3,670.9	3,655.3	14.9	8.2	-20.82	265.3	1,438.6	813.2	790.1	23.12	35.171		
3,800.0	3,700.2	3,764.4	3,746.4	15.4	8.4	-19.97	244.0	1,440.1	779.5	755.7	23.83	32.706		
3,900.0	3,795.8	3,857.8	3,837.4	15.9	8.5	-19.05	222.7	1,441.5	746.0	721.4	24.56	30.375		
4,000.0	3,891.3	3,951.3	3,928.4	16.4	8.7	-18.04	201.5	1,443.0	712.7	687.4	25.30	28.172		
4,100.0	3,986.8	4,044.8	4,019.4	16.9	8.8	-16.94	180.2	1,444.4	679.5	653.5	26.05	26.089		
4,200.0	4,082.3	4,138.3	4,110.4	17.4	9.0	-15.73	158.9	1,445.9	646.7	619.9	26.81	24.121		
4,300.0	4,177.8	4,231.8	4,201.4	17.8	9.1	-14.39	137.6	1,447.3	614.1	586.5	27.58	22.262		
4,400.0	4,273.4	4,325.3	4,292.5	18.3	9.3	-12.90	116.3	1,448.8	581.9	553.5	28.37	20.508		
4,500.0	4,368.9	4,418.8	4,383.5	18.8	9.5	-11.24	95.0	1,450.2	550.0	520.9	29.17	18.855		
4,600.0	4,464.4	4,512.3	4,474.5	19.3	9.6	-9.39	73.7	1,451.7	518.7	488.7	29.98	17.301		
4,700.0	4,559.9	4,605.7	4,565.5	19.8	9.8	-7.32	52.4	1,453.1	487.9	457.1	30.80	15.842		
4,800.0	4,655.4	4,699.2	4,656.5	20.3	10.0	-4.97	31.1	1,454.6	457.8	426.2	31.62	14.479		
4,900.0	4,751.0	4,792.7	4,747.5	20.8	10.1	-2.32	9.8	1,456.0	428.5	396.1	32.43	13.212		
5,000.0	4,846.5	4,886.4	4,838.8	21.3	10.3	0.70	-11.5	1,457.5	400.2	367.0	33.21	12.052		
5,100.0	4,942.0	4,980.9	4,931.0	21.8	10.4	3.98	-31.8	1,458.8	373.0	339.0	33.95	10.986		
5,200.0	5,037.5	5,075.9	5,024.2	22.3	10.6	7.51	-50.6	1,460.1	346.8	312.2	34.64	10.012		
5,300.0	5,133.0	5,171.5	5,118.2	22.8	10.8	11.32	-68.0	1,461.3	321.7	286.4	35.24	9.128		
5,400.0	5,228.6	5,267.6	5,212.9	23.3	10.9	15.46	-83.9	1,462.4	297.6	261.9	35.74	8.327		
5,500.0	5,324.1	5,364.2	5,308.4	23.8	11.1	19.99	-98.3	1,463.4	274.6	238.5	36.10	7.607		
5,600.0	5,419.6	5,461.1	5,404.5	24.3	11.3	24.98	-111.2	1,464.3	252.8	216.5	36.30	6.966		
5,700.0	5,515.1	5,558.4	5,501.1	24.8	11.5	30.50	-122.4	1,465.0	232.3	196.0	36.29	6.402		
5,800.0	5,610.6	5,655.9	5,598.2	25.3	11.6	36.68	-132.1	1,465.7	213.2	177.2	36.03	5.919		
5,900.0	5,706.2	5,753.7	5,695.6	25.8	11.8	43.61	-140.1	1,466.2	195.8	160.3	35.48	5.519		
6,000.0	5,801.7	5,851.6	5,793.3	26.3	11.9	51.42	-146.4	1,466.7	180.4	145.7	34.65	5.206		
6,100.0	5,897.2	5,949.7	5,891.3	26.8	12.1	60.18	-151.1	1,467.0	167.4	133.8	33.60	4.983		
6,200.0	5,992.7	6,047.8	5,989.4	27.3	12.2	69.91	-154.1	1,467.2	157.4	124.8	32.54	4.836		
6,300.0	6,088.2	6,145.9	6,087.5	27.8	12.3	80.48	-155.5	1,467.3	150.8	119.0	31.85	4.736		
6,387.4	6,171.7	6,230.2	6,171.7	28.3	12.3	90.00	-155.6	1,467.3	148.7	116.8	31.90	4.661 CC		
6,400.0	6,183.8	6,242.2	6,183.8	28.3	12.3	91.37	-155.6	1,467.3	148.7	116.8	31.98	4.651 ES		
6,500.0	6,279.3	6,337.8	6,279.3	28.8	12.4	102.08	-155.6	1,467.3	152.4	119.3	33.11	4.602 SF		
6,600.0	6,374.8	6,433.3	6,374.8	29.3	12.4	112.01	-155.6	1,467.3	161.5	126.5	34.98	4.615		
6,700.0	6,470.3	6,528.8	6,470.3	29.8	12.5	120.72	-155.6	1,467.3	175.1	138.0	37.13	4.717		
6,800.0	6,565.9	6,624.3	6,565.9	30.4	12.5	128.11	-155.6	1,467.3	192.4	153.2	39.21	4.907		
6,900.0	6,661.4	6,719.8	6,661.4	30.9	12.6	134.26	-155.6	1,467.3	212.4	171.3	41.09	5.170		
7,000.0	6,756.9	6,815.4	6,756.9	31.4	12.6	139.35	-155.6	1,467.3	234.5	191.7	42.73	5.487		
7,100.0	6,852.4	6,910.9	6,852.4	31.9	12.7	143.57	-155.6	1,467.3	258.0	213.9	44.18	5.841		
7,200.0	6,947.9	7,006.4	6,947.9	32.4	12.7	147.09	-155.6	1,467.3	282.7	237.3	45.46	6.219		
7,300.0	7,043.5	7,101.9	7,043.5	32.9	12.8	150.04	-155.6	1,467.3	308.3	261.7	46.62	6.613		
7,400.0	7,139.0	7,197.4	7,139.0	33.4	12.8	152.55	-155.6	1,467.3	334.5	286.8	47.69	7.015		
7,500.0	7,234.5	7,293.0	7,234.5	33.9	12.9	154.70	-155.6	1,467.3	361.3	312.6	48.68	7.422		
7,600.0	7,330.0	7,388.5	7,330.0	34.4	12.9	156.55	-155.6	1,467.3	388.4	338.8	49.62	7.829		
7,700.0	7,425.5	7,484.0	7,425.5	34.9	13.0	158.16	-155.6	1,467.3	415.9	365.4	50.51	8.235		
7,782.5	7,504.4	7,562.8	7,504.4	35.3	13.0	159.34	-155.6	1,467.3	438.8	387.6	51.22	8.568		
7,800.0	7,521.1	7,579.5	7,521.1	35.4	13.0	159.59	-155.6	1,467.3	443.7	392.3	51.36	8.638		
7,900.0	7,616.9	7,675.4	7,616.9	35.9	13.1	160.89	-155.6	1,467.3	470.6	418.4	52.19	9.017		
8,000.0	7,713.3	7,771.7	7,713.3	36.4	13.1	161.98	-155.6	1,467.3	496.1	443.1	52.98	9.364		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - _WILD THING FED COM 903H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+SAG+FDIR, 10342-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
8,100.0	7,810.1	7,868.5	7,810.1	36.9	13.2	162.91	-155.6	1,467.3	520.1	466.4	53.74	9.678	
8,200.0	7,907.3	7,965.8	7,907.3	37.4	13.2	163.70	-155.6	1,467.3	542.6	488.1	54.47	9.960	
8,300.0	8,004.9	8,063.4	8,004.9	37.9	13.3	164.37	-155.6	1,467.3	563.5	508.3	55.19	10.211	
8,400.0	8,102.9	8,161.3	8,102.9	38.4	13.4	164.95	-155.6	1,467.3	582.8	526.9	55.88	10.430	
8,500.0	8,201.2	8,259.7	8,201.2	38.8	13.4	165.45	-155.6	1,467.3	600.5	544.0	56.55	10.619	
8,600.0	8,299.8	8,358.3	8,299.8	39.3	13.5	165.88	-155.6	1,467.3	616.6	559.4	57.20	10.780	
8,700.0	8,398.7	8,457.2	8,398.7	39.7	13.5	166.24	-155.6	1,467.3	631.0	573.2	57.83	10.912	
8,800.0	8,497.8	8,556.3	8,497.8	40.1	13.6	166.55	-155.6	1,467.3	643.8	585.3	58.44	11.016	
8,900.0	8,597.2	8,655.6	8,597.2	40.6	13.6	166.81	-155.6	1,467.3	654.8	595.8	59.02	11.095	
9,000.0	8,696.7	8,755.2	8,696.7	41.0	13.7	167.02	-155.6	1,467.3	664.2	604.7	59.58	11.148	
9,100.0	8,796.4	8,854.9	8,796.4	41.3	13.7	167.19	-155.6	1,467.3	672.0	611.8	60.11	11.178	
9,200.0	8,896.2	8,954.7	8,896.2	41.7	13.8	167.31	-155.6	1,467.3	678.0	617.4	60.61	11.185	
9,300.0	8,996.1	9,054.6	8,996.1	42.0	13.9	167.41	-155.6	1,467.3	682.3	621.2	61.08	11.171	
9,400.0	9,096.1	9,154.5	9,096.1	42.3	13.9	167.46	-155.6	1,467.3	684.9	623.4	61.48	11.140	
9,500.0	9,196.1	9,254.5	9,196.1	42.5	14.0	167.48	-155.6	1,467.3	685.8	624.1	61.70	11.116	
9,503.9	9,200.0	9,258.5	9,200.0	42.5	14.0	-102.25	-155.6	1,467.3	685.8	624.4	61.45	11.160	
9,600.0	9,296.1	9,354.5	9,296.1	42.5	14.0	-102.25	-155.6	1,467.3	685.8	624.3	61.50	11.152	
9,700.0	9,396.1	9,454.5	9,396.1	42.5	14.1	-102.25	-155.6	1,467.3	685.8	624.3	61.55	11.143	
9,785.4	9,481.5	9,540.0	9,481.5	42.5	14.1	-102.25	-155.6	1,467.3	685.8	624.3	61.59	11.136	
9,800.0	9,496.1	9,554.5	9,496.1	42.5	14.2	78.12	-155.6	1,467.3	685.8	623.7	62.09	11.045	
9,825.0	9,521.0	9,579.5	9,521.0	42.5	14.2	78.27	-155.6	1,467.3	685.5	623.4	62.09	11.040	
9,850.0	9,545.9	9,604.3	9,545.9	42.5	14.2	78.55	-155.6	1,467.3	685.0	622.9	62.10	11.030	
9,875.0	9,570.5	9,629.0	9,570.5	42.5	14.2	78.97	-155.6	1,467.3	684.2	622.0	62.12	11.013	
9,900.0	9,595.0	9,653.4	9,595.0	42.5	14.2	79.52	-155.6	1,467.3	683.2	621.0	62.15	10.992	
9,925.0	9,619.1	9,677.5	9,619.1	42.5	14.2	80.18	-155.6	1,467.3	682.0	619.8	62.19	10.965	
9,950.0	9,642.8	9,701.3	9,642.8	42.5	14.2	80.96	-155.6	1,467.3	680.6	618.4	62.25	10.934	
9,975.0	9,666.1	9,724.6	9,666.1	42.5	14.3	81.84	-155.6	1,467.3	679.2	616.8	62.31	10.900	
10,000.0	9,688.9	9,747.4	9,688.9	42.5	14.3	82.80	-155.6	1,467.3	677.7	615.3	62.38	10.863	
10,025.0	9,711.1	9,769.6	9,711.1	42.5	14.3	83.84	-155.6	1,467.3	676.2	613.7	62.46	10.826	
10,050.0	9,732.7	9,791.2	9,732.7	42.5	14.3	84.93	-155.6	1,467.3	674.7	612.2	62.54	10.789	
10,075.0	9,753.6	9,812.1	9,753.6	42.5	14.3	86.05	-155.6	1,467.3	673.5	610.8	62.62	10.754	
10,100.0	9,773.8	9,832.3	9,773.8	42.5	14.3	87.20	-155.6	1,467.3	672.4	609.7	62.70	10.723	
10,125.0	9,793.2	9,851.6	9,793.2	42.6	14.3	88.33	-155.6	1,467.3	671.6	608.8	62.78	10.698	
10,150.0	9,811.7	9,870.1	9,811.7	42.6	14.3	89.45	-155.6	1,467.3	671.2	608.3	62.84	10.680	
10,162.8	9,820.8	9,879.2	9,820.8	42.6	14.3	90.00	-155.6	1,467.3	671.1	608.2	62.87	10.674	
10,175.0	9,829.3	9,887.7	9,829.3	42.6	14.3	90.51	-155.6	1,467.3	671.1	608.3	62.90	10.671	
10,200.0	9,845.9	9,904.4	9,845.9	42.6	14.4	91.51	-155.6	1,467.3	671.7	608.7	62.93	10.673	
10,225.0	9,861.5	9,920.0	9,861.5	42.6	14.4	92.42	-155.6	1,467.3	672.7	609.8	62.95	10.687	
10,250.0	9,876.2	9,934.6	9,876.2	42.6	14.4	93.23	-155.6	1,467.3	674.4	611.5	62.93	10.717	
10,275.0	9,889.7	9,948.1	9,889.7	42.6	14.4	93.90	-155.6	1,467.3	676.9	614.0	62.89	10.762	
10,300.0	9,902.1	9,960.6	9,902.1	42.6	14.4	94.43	-155.6	1,467.3	680.0	617.2	62.82	10.825	
10,325.0	9,913.3	9,971.8	9,913.3	42.6	14.4	94.81	-155.6	1,467.3	684.0	621.3	62.72	10.906	
10,350.0	9,923.4	9,981.9	9,923.4	42.7	14.4	95.00	-155.6	1,467.3	688.8	626.2	62.58	11.007	
10,375.0	9,932.3	9,990.7	9,932.3	42.7	14.4	95.01	-155.6	1,467.3	694.4	632.0	62.40	11.129	
10,400.0	9,939.9	9,998.4	9,939.9	42.7	14.4	94.82	-155.6	1,467.3	700.9	638.7	62.18	11.272	
10,425.0	9,946.2	10,004.7	9,946.2	42.7	14.4	94.42	-155.6	1,467.3	708.3	646.4	61.93	11.437	
10,450.0	9,951.3	10,009.8	9,951.3	42.7	14.4	93.81	-155.6	1,467.3	716.5	654.8	61.65	11.623	
10,475.0	9,955.1	10,013.6	9,955.1	42.8	14.4	92.97	-155.6	1,467.3	725.5	664.2	61.33	11.830	
10,500.0	9,957.6	10,016.1	9,957.6	42.8	14.4	91.90	-155.6	1,467.3	735.3	674.3	60.98	12.058	
10,525.0	9,958.9	10,017.3	9,958.9	42.8	14.4	90.61	-155.6	1,467.3	745.9	685.3	60.61	12.307	
10,534.2	9,959.0	10,017.4	9,959.0	42.8	14.4	90.08	-155.6	1,467.3	749.9	689.5	60.46	12.403	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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:		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	
10,600.0	9,959.1	10,017.6	9,959.1	42.9	14.4	90.09	-155.6	1,467.3	781.5	722.1	59.38	13.161	
10,700.0	9,959.4	10,017.9	9,959.4	43.0	14.4	90.11	-155.6	1,467.3	837.2	779.5	57.66	14.519	
10,800.0	9,959.7	10,018.1	9,959.7	43.2	14.4	90.14	-155.6	1,467.3	900.5	844.6	55.96	16.091	
10,900.0	9,959.9	10,018.4	9,959.9	43.3	14.4	90.16	-155.6	1,467.3	970.1	915.7	54.38	17.838	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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												Rule Assigned:	
Measured Depth		Vertical Depth		Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance	
Depth	(usft)	Depth	(usft)	Depth	(usft)	Depth	(usft)	Toolface	(°)	+N/-S	+E/-W	Between Centres	Between Ellipses
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)
2,900.0	2,840.6	2,904.7	2,915.3	11.1	9.4	-27.82	424.7	1,315.9	980.9	961.3	19.55	50.161	
3,000.0	2,936.1	2,998.4	3,008.6	11.6	9.8	-28.40	418.0	1,311.2	947.1	926.9	20.28	46.711	
3,100.0	3,031.6	3,092.1	3,102.0	12.1	10.1	-29.02	411.3	1,306.5	913.5	892.5	21.00	43.492	
3,200.0	3,127.1	3,185.7	3,195.3	12.5	10.4	-29.69	404.7	1,301.9	880.0	858.3	21.74	40.485	
3,300.0	3,222.6	3,279.4	3,288.6	13.0	10.8	-30.41	398.0	1,297.2	846.6	824.1	22.47	37.674	
3,400.0	3,318.2	3,373.1	3,382.0	13.5	11.1	-31.19	391.3	1,292.5	813.3	790.1	23.21	35.044	
3,500.0	3,413.7	3,466.8	3,475.3	14.0	11.5	-32.04	384.6	1,287.8	780.2	756.2	23.95	32.580	
3,600.0	3,509.2	3,560.5	3,568.6	14.4	11.8	-32.96	377.9	1,283.1	747.2	722.5	24.68	30.270	
3,700.0	3,604.7	3,654.2	3,661.9	14.9	12.2	-33.96	371.2	1,278.4	714.4	689.0	25.42	28.104	
3,800.0	3,700.2	3,747.9	3,755.3	15.4	12.5	-35.06	364.5	1,273.7	681.9	655.7	26.15	26.071	
3,900.0	3,795.8	3,841.6	3,848.6	15.9	12.8	-36.26	357.8	1,269.1	649.5	622.7	26.88	24.164	
4,000.0	3,891.3	3,935.2	3,941.9	16.4	13.2	-37.59	351.1	1,264.4	617.5	589.9	27.60	22.373	
4,100.0	3,986.8	4,028.9	4,035.3	16.9	13.5	-39.06	344.5	1,259.7	585.8	557.5	28.31	20.694	
4,200.0	4,082.3	4,122.6	4,128.6	17.4	13.9	-40.69	337.8	1,255.0	554.6	525.6	29.00	19.120	
4,300.0	4,177.8	4,216.3	4,221.9	17.8	14.2	-42.50	331.1	1,250.3	523.7	494.1	29.68	17.647	
4,400.0	4,273.4	4,310.0	4,315.3	18.3	14.6	-44.54	324.4	1,245.6	493.5	463.1	30.33	16.272	
4,500.0	4,368.9	4,403.7	4,408.6	18.8	14.9	-46.83	317.7	1,241.0	463.9	432.9	30.94	14.993	
4,600.0	4,464.4	4,497.4	4,501.9	19.3	15.3	-49.41	311.0	1,236.3	435.0	403.5	31.50	13.809	
4,700.0	4,559.9	4,591.1	4,595.3	19.8	15.6	-52.33	304.3	1,231.6	407.2	375.2	32.01	12.721	
4,800.0	4,655.4	4,684.7	4,688.6	20.3	16.0	-55.65	297.6	1,226.9	380.5	348.1	32.44	11.731	
4,900.0	4,751.0	4,778.4	4,781.9	20.8	16.4	-59.43	290.9	1,222.2	355.3	322.5	32.77	10.843	
5,000.0	4,846.5	4,872.1	4,875.2	21.3	16.7	-63.72	284.3	1,217.5	331.8	298.9	32.98	10.062	
5,100.0	4,942.0	4,965.8	4,968.6	21.8	17.1	-68.58	277.6	1,212.9	310.6	277.5	33.05	9.396	
5,200.0	5,037.5	5,064.4	5,066.7	22.3	17.4	-74.37	270.2	1,207.7	291.5	258.6	32.94	8.851	
5,300.0	5,133.0	5,166.6	5,168.2	22.8	17.9	-81.36	259.9	1,200.5	273.1	240.4	32.68	8.357	
5,400.0	5,228.6	5,266.5	5,266.8	23.3	18.3	-89.41	247.1	1,191.5	255.9	223.6	32.32	7.920	
5,500.0	5,324.1	5,357.4	5,356.4	23.8	18.7	-97.72	234.1	1,182.5	243.0	211.0	32.06	7.580	
5,600.0	5,419.6	5,448.6	5,446.2	24.3	19.1	-106.62	221.2	1,173.4	236.7	204.6	32.04	7.386	
5,640.3	5,458.1	5,485.3	5,482.3	24.5	19.3	-110.29	216.0	1,169.7	236.1	203.9	32.15	7.343 CC, ES	
5,700.0	5,515.1	5,539.7	5,535.9	24.8	19.5	-115.71	208.2	1,164.3	237.3	204.9	32.45	7.313 SF	
5,800.0	5,610.6	5,630.9	5,625.7	25.3	19.9	-124.52	195.3	1,155.2	245.0	211.7	33.36	7.345	
5,900.0	5,706.2	5,722.0	5,715.4	25.8	20.3	-132.71	182.3	1,146.1	259.1	224.5	34.67	7.474	
6,000.0	5,801.7	5,813.2	5,805.2	26.3	20.7	-140.03	169.3	1,137.1	278.6	242.4	36.19	7.698	
6,100.0	5,897.2	5,904.3	5,894.9	26.8	21.1	-146.43	156.4	1,128.0	302.5	264.7	37.77	8.008	
6,200.0	5,992.7	5,995.4	5,984.7	27.3	21.5	-151.93	143.4	1,118.9	329.8	290.5	39.31	8.389	
6,300.0	6,088.2	6,086.6	6,074.5	27.8	21.9	-156.63	130.4	1,109.8	359.7	319.0	40.77	8.823	
6,400.0	6,183.8	6,177.7	6,164.2	28.3	22.3	-160.65	117.5	1,100.8	391.7	349.6	42.14	9.296	
6,500.0	6,279.3	6,268.9	6,254.0	28.8	22.7	-164.08	104.5	1,091.7	425.3	381.9	43.42	9.794	
6,600.0	6,374.8	6,360.0	6,343.7	29.3	23.1	-167.03	91.5	1,082.6	460.1	415.4	44.63	10.308	
6,700.0	6,470.3	6,451.1	6,433.5	29.8	23.5	-169.58	78.6	1,073.5	495.8	450.1	45.78	10.832	
6,800.0	6,565.9	6,542.3	6,523.2	30.4	24.0	-171.80	65.6	1,064.4	532.4	485.5	46.87	11.358	
6,900.0	6,661.4	6,633.4	6,613.0	30.9	24.4	-173.74	52.6	1,055.4	569.6	521.6	47.93	11.884	
7,000.0	6,756.9	6,724.6	6,702.8	31.4	24.8	-175.45	39.7	1,046.3	607.3	558.3	48.95	12.406	
7,100.0	6,852.4	6,815.7	6,792.5	31.9	25.2	-176.96	26.7	1,037.2	645.4	595.4	49.94	12.922	
7,200.0	6,947.9	6,906.9	6,882.3	32.4	25.6	-178.31	13.7	1,028.1	683.8	632.9	50.92	13.431	
7,300.0	7,043.5	6,998.0	6,972.0	32.9	26.0	-179.52	0.8	1,019.1	722.6	670.7	51.87	13.931	
7,400.0	7,139.0	7,089.1	7,061.8	33.4	26.4	-179.39	-12.2	1,010.0	761.6	708.8	52.81	14.422	
7,500.0	7,234.5	7,186.2	7,157.5	33.9	26.8	-178.37	-25.6	1,000.6	800.6	746.7	53.85	14.866	
7,600.0	7,330.0	7,286.7	7,256.8	34.4	27.3	-177.52	-38.2	991.8	838.8	783.9	54.93	15.270	
7,700.0	7,425.5	7,388.4	7,357.5	34.9	27.7	-176.84	-49.5	983.9	876.1	820.2	55.99	15.649	
7,782.5	7,504.4	7,473.1	7,441.6	35.3	28.0	-176.39	-57.7	978.1	906.3	849.4	56.84	15.944	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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:	WTF 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		Offset Wellbore Centre		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
7,800.0	7,521.1	7,491.1	7,459.6	35.4	28.1	176.32	-59.4	976.9	912.5	855.5	57.02	16.005	
7,900.0	7,616.9	7,595.5	7,563.4	35.9	28.5	175.94	-67.9	971.0	946.8	888.8	58.03	16.316	
8,000.0	7,713.3	7,701.4	7,668.9	36.4	28.9	175.67	-74.9	966.1	978.4	919.4	59.01	16.580	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			Offset Wellbore Centre		Distance			Separation	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)	Factor		
2,500.0	2,458.5	2,631.7	2,629.4	9.4	9.3	-27.22	393.9	1,185.6	969.1	950.7	18.36	52.794		
2,600.0	2,554.0	2,721.4	2,717.7	9.8	9.7	-27.83	384.2	1,172.6	925.8	906.7	19.11	48.455		
2,700.0	2,649.5	2,811.1	2,805.9	10.2	10.1	-28.49	374.5	1,159.7	882.6	862.8	19.87	44.432		
2,800.0	2,745.0	2,900.7	2,894.1	10.7	10.4	-29.23	364.8	1,146.7	839.6	818.9	20.63	40.698		
2,900.0	2,840.6	2,990.4	2,982.3	11.1	10.8	-30.04	355.1	1,133.8	796.6	775.2	21.40	37.230		
3,000.0	2,936.1	3,080.1	3,070.6	11.6	11.2	-30.95	345.3	1,120.8	753.9	731.7	22.17	34.007		
3,100.0	3,031.6	3,169.8	3,158.8	12.1	11.6	-31.96	335.6	1,107.9	711.2	688.3	22.94	31.009		
3,200.0	3,127.1	3,259.5	3,247.0	12.5	12.0	-33.10	325.9	1,094.9	668.8	645.1	23.70	28.219		
3,300.0	3,222.6	3,349.2	3,335.2	13.0	12.3	-34.39	316.2	1,082.0	626.7	602.2	24.46	25.621		
3,400.0	3,318.2	3,438.9	3,423.4	13.5	12.7	-35.86	306.5	1,069.0	584.9	559.6	25.21	23.203		
3,500.0	3,413.7	3,528.6	3,511.7	14.0	13.1	-37.55	296.7	1,056.1	543.4	517.5	25.93	20.954		
3,600.0	3,509.2	3,618.3	3,599.9	14.4	13.5	-39.51	287.0	1,043.1	502.4	475.8	26.63	18.865		
3,700.0	3,604.7	3,708.0	3,688.1	14.9	13.9	-41.79	277.3	1,030.2	462.0	434.7	27.29	16.930		
3,800.0	3,700.2	3,797.7	3,776.3	15.4	14.3	-44.50	267.6	1,017.2	422.3	394.4	27.88	15.146		
3,900.0	3,795.8	3,887.4	3,864.5	15.9	14.7	-47.72	257.8	1,004.3	383.7	355.3	28.39	13.514		
4,000.0	3,891.3	3,977.1	3,952.8	16.4	15.1	-51.61	248.1	991.3	346.4	317.6	28.77	12.039		
4,100.0	3,986.8	4,066.8	4,041.0	16.9	15.5	-56.33	238.4	978.4	310.9	281.9	28.96	10.735		
4,200.0	4,082.3	4,156.5	4,129.2	17.4	15.9	-62.11	228.7	965.4	277.9	249.0	28.88	9.622		
4,300.0	4,177.8	4,246.2	4,217.4	17.8	16.3	-69.17	219.0	952.5	248.4	220.0	28.44	8.735		
4,400.0	4,273.4	4,335.9	4,305.6	18.3	16.7	-77.71	209.2	939.5	223.9	196.3	27.60	8.112		
4,500.0	4,368.9	4,425.5	4,393.9	18.8	17.1	-87.72	199.5	926.6	206.0	179.5	26.49	7.776		
4,600.0	4,464.4	4,515.2	4,482.1	19.3	17.5	-98.88	189.8	913.6	196.6	171.0	25.59	7.684 SF		
4,646.6	4,508.9	4,557.0	4,523.2	19.6	17.6	-104.28	185.3	907.6	195.5	170.1	25.44	7.688 CC, ES		
4,700.0	4,559.9	4,604.9	4,570.3	19.8	17.9	-110.46	180.1	900.7	197.0	171.4	25.56	7.705		
4,800.0	4,655.4	4,694.6	4,658.5	20.3	18.3	-121.56	170.3	887.7	207.0	180.3	26.69	7.754		
4,900.0	4,751.0	4,784.3	4,746.7	20.8	18.7	-131.48	160.6	874.8	225.4	196.7	28.62	7.875		
5,000.0	4,846.5	4,874.0	4,835.0	21.3	19.1	-139.91	150.9	861.9	250.3	219.5	30.80	8.126		
5,100.0	4,942.0	4,963.7	4,923.2	21.8	19.5	-146.88	141.2	848.9	280.0	247.1	32.91	8.510		
5,200.0	5,037.5	5,053.4	5,011.4	22.3	19.9	-152.58	131.5	836.0	313.2	278.4	34.82	8.996		
5,300.0	5,133.0	5,143.1	5,099.6	22.8	20.3	-157.24	121.7	823.0	348.9	312.3	36.53	9.551		
5,400.0	5,228.6	5,232.8	5,187.8	23.3	20.7	-161.08	112.0	810.1	386.3	348.2	38.06	10.149		
5,500.0	5,324.1	5,322.5	5,276.1	23.8	21.1	-164.26	102.3	797.1	425.0	385.5	39.46	10.771		
5,600.0	5,419.6	5,412.2	5,364.3	24.3	21.5	-166.93	92.6	784.2	464.7	423.9	40.75	11.404		
5,700.0	5,515.1	5,501.9	5,452.5	24.8	21.9	-169.20	82.9	771.2	505.1	463.2	41.96	12.039		
5,800.0	5,610.6	5,591.6	5,540.7	25.3	22.3	-171.13	73.1	758.3	546.2	503.1	43.11	12.670		
5,900.0	5,706.2	5,681.3	5,628.9	25.8	22.7	-172.81	63.4	745.3	587.7	543.5	44.21	13.293		
6,000.0	5,801.7	5,771.0	5,717.2	26.3	23.1	-174.26	53.7	732.4	629.5	584.3	45.27	13.905		
6,100.0	5,897.2	5,860.6	5,805.4	26.8	23.5	-175.54	44.0	719.4	671.7	625.4	46.31	14.505		
6,200.0	5,992.7	5,950.3	5,893.6	27.3	23.9	-176.67	34.2	706.5	714.1	666.8	47.32	15.092		
6,300.0	6,088.2	6,040.0	5,981.8	27.8	24.3	-177.67	24.5	693.5	756.7	708.4	48.31	15.665		
6,400.0	6,183.8	6,129.7	6,070.0	28.3	24.7	-178.57	14.8	680.6	799.5	750.3	49.28	16.223		
6,500.0	6,279.3	6,219.4	6,158.3	28.8	25.1	-179.38	5.1	667.6	842.5	792.2	50.25	16.767		
6,600.0	6,374.8	6,309.1	6,246.5	29.3	25.5	-179.89	-4.6	654.7	885.6	834.4	51.20	17.296		
6,700.0	6,470.3	6,398.8	6,334.7	29.8	25.9	-179.22	-14.4	641.7	928.7	876.6	52.14	17.811		
6,800.0	6,565.9	6,488.5	6,422.9	30.4	26.3	-178.62	-24.1	628.8	972.0	918.9	53.08	18.312		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			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)			
0.0	0.0	0.0	17.0	0.0	0.0	-55.52	199.4	-290.4	352.7				
100.0	100.0	83.0	100.0	0.8	1.0	-55.52	199.4	-290.4	352.3	350.0	2.24	157.142	
200.0	200.0	183.0	200.0	1.4	1.6	-55.52	199.4	-290.4	352.3	348.8	3.51	100.399	
300.0	300.0	283.0	300.0	1.9	2.0	-55.52	199.4	-290.4	352.3	347.9	4.35	80.948	
400.0	400.0	383.0	400.0	2.2	2.4	-55.52	199.4	-290.4	352.3	347.2	5.05	69.817	
500.0	500.0	483.0	500.0	2.6	2.7	-55.52	199.4	-290.4	352.3	346.6	5.65	62.332	
600.0	600.0	583.0	600.0	2.8	3.0	-55.52	199.4	-290.4	352.3	346.1	6.20	56.837	
700.0	700.0	683.0	700.0	3.1	3.2	-55.52	199.4	-290.4	352.3	345.6	6.70	52.573	
800.0	800.0	783.0	800.0	3.3	3.4	-55.52	199.4	-290.4	352.3	345.1	7.17	49.136	
900.0	900.0	883.0	900.0	3.6	3.7	-55.52	199.4	-290.4	352.3	344.7	7.61	46.285	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-55.52	199.4	-290.4	352.3	344.3	8.03	43.869 CC, ES	
1,100.0	1,100.0	1,090.4	1,107.4	4.1	4.1	-146.03	198.5	-289.9	352.9	344.3	8.54	41.312	
1,200.0	1,199.8	1,199.1	1,216.0	4.4	4.4	-146.85	194.9	-287.9	353.9	344.8	9.04	39.150	
1,300.0	1,299.5	1,307.6	1,324.3	4.7	4.6	-148.22	188.5	-284.6	355.4	345.9	9.56	37.194	
1,400.0	1,398.7	1,415.6	1,431.8	5.1	4.9	-150.12	179.5	-279.8	357.8	347.7	10.10	35.408	
1,500.0	1,497.5	1,523.1	1,538.4	5.4	5.2	-152.51	167.9	-273.6	361.2	350.6	10.69	33.799	
1,600.0	1,595.6	1,629.8	1,643.9	5.8	5.6	-155.35	153.7	-266.1	366.2	354.9	11.28	32.451	
1,700.0	1,693.1	1,730.4	1,743.1	6.2	5.8	-158.34	138.4	-257.9	373.4	361.6	11.86	31.488	
1,800.0	1,789.6	1,827.7	1,838.8	6.6	6.1	-161.28	123.5	-250.0	384.9	372.4	12.51	30.774	
1,860.7	1,847.8	1,886.4	1,896.7	6.8	6.3	-163.04	114.5	-245.2	393.9	381.1	12.84	30.673	
1,900.0	1,885.3	1,924.3	1,934.0	6.9	6.5	-164.19	108.7	-242.1	400.4	387.4	13.05	30.680	
2,000.0	1,980.9	2,020.8	2,029.0	7.3	6.8	-166.95	93.9	-234.3	417.6	403.9	13.66	30.577	
2,100.0	2,076.4	2,117.3	2,124.1	7.7	7.2	-169.49	79.1	-226.4	435.6	421.4	14.27	30.527	
2,200.0	2,171.9	2,213.8	2,219.1	8.1	7.5	-171.84	64.3	-218.5	454.5	439.6	14.89	30.520 SF	
2,300.0	2,267.4	2,310.3	2,314.2	8.5	7.9	-174.00	49.5	-210.7	474.0	458.5	15.52	30.549	
2,400.0	2,363.0	2,406.8	2,409.2	8.9	8.3	-176.00	34.7	-202.8	494.2	478.1	16.15	30.607	
2,500.0	2,458.5	2,503.3	2,504.2	9.4	8.6	-177.83	19.9	-194.9	514.9	498.2	16.78	30.686	
2,600.0	2,554.0	2,599.8	2,599.3	9.8	9.0	-179.53	5.1	-187.1	536.1	518.7	17.42	30.782	
2,700.0	2,649.5	2,696.3	2,694.3	10.2	9.4	-178.90	-9.7	-179.2	557.8	539.7	18.06	30.891	
2,800.0	2,745.0	2,792.8	2,789.3	10.7	9.8	-177.44	-24.5	-171.3	579.8	561.1	18.70	31.010	
2,900.0	2,840.6	2,889.3	2,884.4	11.1	10.2	-176.09	-39.3	-163.5	602.1	582.8	19.34	31.135	
3,000.0	2,936.1	2,985.6	2,979.1	11.6	10.6	-174.84	-54.0	-155.6	624.8	604.8	19.96	31.307	
3,100.0	3,031.6	3,080.0	3,072.3	12.1	11.0	-173.73	-68.1	-148.1	647.9	627.3	20.59	31.466	
3,200.0	3,127.1	3,174.5	3,165.5	12.5	11.4	-172.77	-81.4	-141.0	671.5	650.3	21.23	31.625	
3,300.0	3,222.6	3,269.0	3,259.0	13.0	11.8	-171.93	-94.1	-134.3	695.6	673.7	21.88	31.793	
3,400.0	3,318.2	3,363.6	3,352.5	13.5	12.2	-171.20	-106.2	-127.9	720.0	697.5	22.53	31.963	
3,500.0	3,413.7	3,458.1	3,446.1	14.0	12.6	-170.58	-117.5	-121.9	744.9	721.7	23.18	32.135	
3,600.0	3,509.2	3,552.6	3,539.8	14.4	12.9	-170.05	-128.2	-116.2	770.1	746.3	23.84	32.306	
3,700.0	3,604.7	3,647.0	3,633.6	14.9	13.3	-169.61	-138.1	-110.9	795.6	771.1	24.50	32.476	
3,800.0	3,700.2	3,741.4	3,727.4	15.4	13.7	-169.25	-147.4	-105.9	821.4	796.2	25.16	32.643	
3,900.0	3,795.8	3,835.8	3,821.3	15.9	14.1	-168.97	-156.0	-101.4	847.5	821.6	25.83	32.807	
4,000.0	3,891.3	3,930.1	3,915.1	16.4	14.4	-168.75	-163.9	-97.2	873.8	847.3	26.50	32.968	
4,100.0	3,986.8	4,024.3	4,009.0	16.9	14.8	-168.59	-171.2	-93.3	900.3	873.2	27.18	33.126	
4,200.0	4,082.3	4,118.4	4,102.8	17.4	15.1	-168.49	-177.7	-89.9	927.2	899.3	27.86	33.281	
4,300.0	4,177.8	4,212.4	4,196.5	17.8	15.5	-168.45	-183.5	-86.8	954.2	925.7	28.54	33.434	
4,400.0	4,273.4	4,306.2	4,290.2	18.3	15.8	-168.44	-188.7	-84.0	981.5	952.3	29.22	33.584	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
0.0	0.0	0.0	17.0	0.0	0.0	-58.11	199.4	-320.4	377.7				
100.0	100.0	83.0	100.0	0.8	1.0	-58.11	199.4	-320.4	377.4	375.1	2.24	168.325	
200.0	200.0	183.0	200.0	1.4	1.6	-58.11	199.4	-320.4	377.4	373.8	3.51	107.544	
300.0	300.0	283.0	300.0	1.9	2.0	-58.11	199.4	-320.4	377.4	373.0	4.35	86.708	
400.0	400.0	383.0	400.0	2.2	2.4	-58.11	199.4	-320.4	377.4	372.3	5.05	74.786	
500.0	500.0	483.0	500.0	2.6	2.7	-58.11	199.4	-320.4	377.4	371.7	5.65	66.767	
600.0	600.0	583.0	600.0	2.8	3.0	-58.11	199.4	-320.4	377.4	371.2	6.20	60.882	
700.0	700.0	683.0	700.0	3.1	3.2	-58.11	199.4	-320.4	377.4	370.7	6.70	56.315	
800.0	800.0	783.0	800.0	3.3	3.4	-58.11	199.4	-320.4	377.4	370.2	7.17	52.633	
900.0	900.0	883.0	900.0	3.6	3.7	-58.11	199.4	-320.4	377.4	369.7	7.61	49.579	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-58.11	199.4	-320.4	377.4	369.3	8.03	46.991 CC, ES	
1,100.0	1,100.0	1,083.0	1,100.0	4.1	4.1	-148.50	199.4	-320.4	378.8	370.3	8.51	44.502	
1,200.0	1,199.8	1,182.8	1,199.8	4.4	4.3	-148.86	199.4	-320.4	383.3	374.3	8.98	42.681	
1,300.0	1,299.5	1,282.5	1,299.5	4.7	4.4	-149.44	199.4	-320.4	390.8	381.3	9.45	41.339	
1,400.0	1,398.7	1,381.7	1,398.7	5.1	4.6	-150.22	199.4	-320.4	401.4	391.4	9.94	40.388	
1,500.0	1,497.5	1,480.5	1,497.5	5.4	4.8	-151.16	199.4	-320.4	415.0	404.6	10.44	39.765	
1,600.0	1,595.6	1,578.6	1,595.6	5.8	5.0	-152.21	199.4	-320.4	431.9	421.0	10.96	39.422	
1,700.0	1,693.1	1,676.1	1,693.1	6.2	5.1	-153.35	199.4	-320.4	452.0	440.5	11.50	39.321 SF	
1,800.0	1,789.6	1,772.6	1,789.6	6.6	5.3	-154.54	199.4	-320.4	475.4	463.4	12.06	39.434	
1,860.7	1,847.8	1,830.8	1,847.8	6.8	5.4	-155.26	199.4	-320.4	491.3	478.9	12.35	39.784	
1,900.0	1,885.3	1,868.3	1,885.3	6.9	5.4	-155.82	199.4	-320.4	501.9	489.4	12.53	40.067	
2,000.0	1,980.9	1,963.9	1,980.9	7.3	5.6	-157.12	199.4	-320.4	529.2	516.2	13.06	40.516	
2,100.0	2,076.4	2,059.4	2,076.4	7.7	5.7	-158.30	199.4	-320.4	556.8	543.2	13.62	40.896	
2,200.0	2,171.9	2,154.9	2,171.9	8.1	5.9	-159.36	199.4	-320.4	584.6	570.4	14.18	41.216	
2,300.0	2,267.4	2,250.4	2,267.4	8.5	6.0	-160.33	199.4	-320.4	612.5	597.7	14.76	41.484	
2,400.0	2,363.0	2,346.0	2,363.0	8.9	6.2	-161.22	199.4	-320.4	640.6	625.2	15.36	41.710	
2,500.0	2,458.5	2,441.5	2,458.5	9.4	6.3	-162.03	199.4	-320.4	668.8	652.8	15.96	41.898	
2,600.0	2,554.0	2,535.2	2,552.2	9.8	6.4	-162.78	199.2	-320.5	697.2	680.5	16.62	41.938	
2,700.0	2,649.5	2,625.5	2,642.5	10.2	6.6	-163.58	197.6	-321.5	726.2	709.0	17.22	42.181	
2,800.0	2,745.0	2,715.0	2,731.9	10.7	6.7	-164.48	194.3	-323.7	756.0	738.2	17.81	42.459	
2,900.0	2,840.6	2,803.6	2,820.2	11.1	6.8	-165.45	189.3	-327.0	786.7	768.3	18.40	42.750	
3,000.0	2,936.1	2,891.1	2,907.4	11.6	7.0	-166.49	182.6	-331.3	818.4	799.4	19.01	43.059	
3,100.0	3,031.6	2,977.5	2,993.3	12.1	7.1	-167.57	174.4	-336.6	851.1	831.5	19.61	43.393	
3,200.0	3,127.1	3,062.8	3,077.8	12.5	7.3	-168.68	164.7	-342.9	884.9	864.7	20.22	43.756	
3,300.0	3,222.6	3,146.9	3,160.8	13.0	7.5	-169.82	153.5	-350.1	919.9	899.1	20.82	44.184	
3,400.0	3,318.2	3,236.3	3,248.8	13.5	7.6	-171.03	140.6	-358.6	955.8	934.3	21.44	44.570	
3,500.0	3,413.7	3,327.6	3,338.7	14.0	7.9	-172.19	127.3	-367.2	992.1	970.0	22.11	44.868	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	17.0	0.0	0.0	-60.36	199.4	-350.4	403.5				
100.0	100.0	83.0	100.0	0.8	1.0	-60.36	199.4	-350.4	403.1	400.9	2.24	179.822	
200.0	200.0	183.0	200.0	1.4	1.6	-60.36	199.4	-350.4	403.1	399.6	3.51	114.890	
300.0	300.0	283.0	300.0	1.9	2.0	-60.36	199.4	-350.4	403.1	398.8	4.35	92.631	
400.0	400.0	383.0	400.0	2.2	2.4	-60.36	199.4	-350.4	403.1	398.1	5.05	79.894	
500.0	500.0	483.0	500.0	2.6	2.7	-60.36	199.4	-350.4	403.1	397.5	5.65	71.328	
600.0	600.0	583.0	600.0	2.8	3.0	-60.36	199.4	-350.4	403.1	396.9	6.20	65.040	
700.0	700.0	683.0	700.0	3.1	3.2	-60.36	199.4	-350.4	403.1	396.4	6.70	60.161	
800.0	800.0	783.0	800.0	3.3	3.4	-60.36	199.4	-350.4	403.1	396.0	7.17	56.228	
900.0	900.0	883.0	900.0	3.6	3.7	-60.36	199.4	-350.4	403.1	395.5	7.61	52.965	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-60.36	199.4	-350.4	403.1	395.1	8.03	50.200 CC, ES	
1,100.0	1,100.0	1,078.6	1,095.6	4.1	4.1	-150.82	199.0	-351.1	405.1	396.6	8.51	47.588	
1,200.0	1,199.8	1,172.9	1,189.9	4.4	4.3	-151.47	197.5	-353.8	411.4	402.5	8.97	45.864	
1,300.0	1,299.5	1,266.4	1,283.2	4.7	4.5	-152.52	194.9	-358.5	422.2	412.8	9.44	44.712	
1,400.0	1,398.7	1,358.6	1,375.1	5.1	4.8	-153.90	191.2	-365.1	437.7	427.8	9.94	44.030	
1,500.0	1,497.5	1,449.1	1,465.1	5.4	5.0	-155.52	186.6	-373.5	458.0	447.6	10.47	43.755 SF	
1,600.0	1,595.6	1,537.6	1,552.8	5.8	5.3	-157.28	181.0	-383.4	483.4	472.3	11.03	43.834	
1,700.0	1,693.1	1,625.8	1,640.0	6.2	5.6	-159.16	174.6	-395.0	513.8	502.2	11.62	44.207	
1,800.0	1,789.6	1,717.6	1,730.7	6.6	5.9	-161.06	167.6	-407.6	548.3	536.1	12.26	44.713	
1,860.7	1,847.8	1,772.7	1,785.1	6.8	6.0	-162.14	163.5	-415.1	571.1	558.5	12.61	45.277	
1,900.0	1,885.3	1,808.2	1,820.2	6.9	6.2	-162.90	160.8	-420.0	586.4	573.6	12.83	45.696	
2,000.0	1,980.9	1,898.5	1,909.4	7.3	6.4	-164.68	153.9	-432.4	625.6	612.1	13.47	46.458	
2,100.0	2,076.4	1,988.8	1,998.6	7.7	6.8	-166.25	147.1	-444.7	665.2	651.1	14.13	47.093	
2,200.0	2,171.9	2,079.1	2,087.8	8.1	7.1	-167.65	140.2	-457.1	705.2	690.4	14.81	47.623	
2,300.0	2,267.4	2,169.4	2,177.0	8.5	7.4	-168.91	133.4	-469.4	745.6	730.1	15.51	48.062	
2,400.0	2,363.0	2,259.7	2,266.1	8.9	7.7	-170.03	126.5	-481.8	786.2	770.0	16.24	48.427	
2,500.0	2,458.5	2,350.0	2,355.3	9.4	8.1	-171.05	119.7	-494.1	827.1	810.1	16.97	48.729	
2,600.0	2,554.0	2,440.3	2,444.5	9.8	8.4	-171.98	112.8	-506.5	868.2	850.4	17.73	48.978	
2,700.0	2,649.5	2,530.6	2,533.7	10.2	8.8	-172.82	106.0	-518.8	909.4	890.9	18.49	49.184	
2,800.0	2,745.0	2,621.0	2,622.9	10.7	9.1	-173.59	99.1	-531.2	950.8	931.5	19.27	49.353	
2,900.0	2,840.6	2,711.3	2,712.1	11.1	9.5	-174.29	92.3	-543.6	992.3	972.3	20.05	49.492	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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			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	17.0	0.0	0.0	-62.34	199.4	-380.4	429.8					
100.0	100.0	83.0	100.0	0.8	1.0	-62.34	199.4	-380.4	429.5	427.2	2.24	191.571		
200.0	200.0	183.0	200.0	1.4	1.6	-62.34	199.4	-380.4	429.5	426.0	3.51	122.396		
300.0	300.0	283.0	300.0	1.9	2.0	-62.34	199.4	-380.4	429.5	425.1	4.35	98.683		
400.0	400.0	383.0	400.0	2.2	2.4	-62.34	199.4	-380.4	429.5	424.4	5.05	85.114		
500.0	500.0	483.0	500.0	2.6	2.7	-62.34	199.4	-380.4	429.5	423.8	5.65	75.988		
600.0	600.0	583.0	600.0	2.8	3.0	-62.34	199.4	-380.4	429.5	423.3	6.20	69.289		
700.0	700.0	683.0	700.0	3.1	3.2	-62.34	199.4	-380.4	429.5	422.8	6.70	64.092		
800.0	800.0	783.0	800.0	3.3	3.4	-62.34	199.4	-380.4	429.5	422.3	7.17	59.901		
900.0	900.0	883.0	900.0	3.6	3.7	-62.34	199.4	-380.4	429.5	421.9	7.61	56.426		
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-62.34	199.4	-380.4	429.5	421.4	8.03	53.480 CC, ES		
1,100.0	1,100.0	1,077.0	1,094.0	4.1	4.1	-152.76	199.1	-381.1	431.6	423.1	8.52	50.652		
1,200.0	1,199.8	1,169.4	1,186.3	4.4	4.3	-153.27	198.1	-383.9	438.5	429.5	8.99	48.768		
1,300.0	1,299.5	1,260.9	1,277.7	4.7	4.5	-154.10	196.5	-388.8	450.2	440.8	9.48	47.508		
1,400.0	1,398.7	1,351.1	1,367.6	5.1	4.8	-155.19	194.1	-395.6	467.0	457.0	9.99	46.755		
1,500.0	1,497.5	1,439.7	1,455.7	5.4	5.0	-156.47	191.1	-404.3	488.8	478.2	10.53	46.438 SF		
1,600.0	1,595.6	1,526.2	1,541.5	5.8	5.3	-157.86	187.6	-414.6	515.7	504.6	11.09	46.489		
1,700.0	1,693.1	1,610.4	1,624.8	6.2	5.6	-159.31	183.5	-426.4	547.8	536.1	11.69	46.873		
1,800.0	1,789.6	1,691.8	1,705.0	6.6	5.8	-160.74	179.0	-439.5	585.1	572.8	12.31	47.547		
1,860.7	1,847.8	1,739.9	1,752.2	6.8	6.0	-161.59	176.1	-447.9	610.3	597.6	12.64	48.276		
1,900.0	1,885.3	1,770.4	1,782.2	6.9	6.1	-162.24	174.2	-453.6	627.3	614.5	12.85	48.829		
2,000.0	1,980.9	1,854.1	1,864.1	7.3	6.4	-163.92	168.5	-469.9	671.8	658.3	13.47	49.872		
2,100.0	2,076.4	1,941.7	1,949.8	7.7	6.7	-165.48	162.6	-487.2	716.8	702.7	14.14	50.691		
2,200.0	2,171.9	2,029.3	2,035.5	8.1	7.0	-166.85	156.7	-504.4	762.2	747.4	14.84	51.374		
2,300.0	2,267.4	2,117.0	2,121.2	8.5	7.4	-168.08	150.7	-521.6	808.0	792.4	15.56	51.941		
2,400.0	2,363.0	2,204.6	2,206.9	8.9	7.7	-169.18	144.8	-538.8	854.0	837.7	16.29	52.413		
2,500.0	2,458.5	2,292.2	2,292.6	9.4	8.0	-170.16	138.9	-556.1	900.2	883.2	17.05	52.802		
2,600.0	2,554.0	2,379.8	2,378.3	9.8	8.4	-171.06	132.9	-573.3	946.6	928.8	17.82	53.125		
2,700.0	2,649.5	2,467.5	2,464.0	10.2	8.7	-171.87	127.0	-590.5	993.2	974.6	18.60	53.393		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	17.0	0.0	0.0	-64.09	199.4	-410.4	456.6				
100.0	100.0	83.0	100.0	0.8	1.0	-64.09	199.4	-410.4	456.2	454.0	2.24	203.516	
200.0	200.0	183.0	200.0	1.4	1.6	-64.09	199.4	-410.4	456.2	452.7	3.51	130.028	
300.0	300.0	283.0	300.0	1.9	2.0	-64.09	199.4	-410.4	456.2	451.9	4.35	104.836	
400.0	400.0	383.0	400.0	2.2	2.4	-64.09	199.4	-410.4	456.2	451.2	5.05	90.421	
500.0	500.0	483.0	500.0	2.6	2.7	-64.09	199.4	-410.4	456.2	450.6	5.65	80.726	
600.0	600.0	583.0	600.0	2.8	3.0	-64.09	199.4	-410.4	456.2	450.0	6.20	73.610	
700.0	700.0	683.0	700.0	3.1	3.2	-64.09	199.4	-410.4	456.2	449.5	6.70	68.088	
800.0	800.0	783.0	800.0	3.3	3.4	-64.09	199.4	-410.4	456.2	449.1	7.17	63.637	
900.0	900.0	883.0	900.0	3.6	3.7	-64.09	199.4	-410.4	456.2	448.6	7.61	59.944	
1,000.0	1,000.0	983.0	1,000.0	3.8	3.9	-64.09	199.4	-410.4	456.2	448.2	8.03	56.815 CC, ES	
1,100.0	1,100.0	1,076.1	1,093.1	4.1	4.1	-154.49	199.2	-411.1	458.4	449.9	8.52	53.779	
1,200.0	1,199.8	1,167.3	1,184.3	4.4	4.3	-154.92	198.4	-413.9	465.6	456.6	8.99	51.762	
1,300.0	1,299.5	1,257.7	1,274.5	4.7	4.5	-155.61	197.1	-418.8	477.8	468.3	9.47	50.449	
1,400.0	1,398.7	1,346.9	1,363.4	5.1	4.7	-156.52	195.3	-425.6	495.0	485.1	9.96	49.711	
1,500.0	1,497.5	1,434.4	1,450.5	5.4	4.9	-157.60	193.0	-434.2	517.5	507.0	10.46	49.463 SF	
1,600.0	1,595.6	1,519.9	1,535.3	5.8	5.0	-158.77	190.2	-444.5	545.1	534.1	10.98	49.647	
1,700.0	1,693.1	1,600.0	1,614.5	6.2	5.2	-159.94	187.2	-455.8	577.9	566.4	11.50	50.260	
1,800.0	1,789.6	1,683.5	1,696.9	6.6	5.4	-161.21	183.6	-469.3	615.8	603.8	12.05	51.088	
1,860.7	1,847.8	1,731.0	1,743.5	6.8	5.5	-161.93	181.3	-477.7	641.3	629.0	12.33	51.992	
1,900.0	1,885.3	1,761.2	1,773.2	6.9	5.5	-162.50	179.8	-483.4	658.6	646.1	12.50	52.668	
2,000.0	1,980.9	1,837.0	1,847.3	7.3	5.7	-163.87	175.7	-498.6	703.9	690.9	12.99	54.176	
2,100.0	2,076.4	1,911.1	1,919.5	7.7	5.8	-165.13	171.4	-514.9	751.1	737.6	13.48	55.720	
2,200.0	2,171.9	1,984.3	1,990.5	8.1	6.0	-166.30	166.7	-532.2	800.1	786.1	13.94	57.381	
2,300.0	2,267.4	2,069.5	2,072.8	8.5	6.1	-167.55	161.1	-553.1	850.1	835.6	14.51	58.583	
2,400.0	2,363.0	2,154.6	2,155.2	8.9	6.3	-168.66	155.5	-574.0	900.3	885.2	15.10	59.637	
2,500.0	2,458.5	2,239.8	2,237.6	9.4	6.4	-169.66	149.9	-594.8	950.8	935.2	15.69	60.603	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,800.0	5,610.6	5,613.7	5,619.2	25.3	20.1	-25.18	394.6	2,200.2	990.7	946.3	44.38	22.326	
5,900.0	5,706.2	5,708.4	5,713.8	25.8	20.5	-25.84	393.1	2,200.0	963.0	917.9	45.12	21.343	
6,000.0	5,801.7	5,802.9	5,808.3	26.3	20.8	-26.53	391.6	2,199.9	935.5	889.6	45.86	20.399	
6,100.0	5,897.2	5,898.9	5,904.4	26.8	21.1	-27.26	389.8	2,200.0	908.1	861.5	46.58	19.495	
6,200.0	5,992.7	5,993.3	5,998.7	27.3	21.5	-28.01	388.0	2,200.1	880.9	833.6	47.31	18.622	
6,300.0	6,088.2	6,088.4	6,093.8	27.8	21.8	-28.81	386.2	2,200.3	854.0	806.0	48.02	17.785	
6,400.0	6,183.8	6,182.8	6,188.2	28.3	22.1	-29.66	384.4	2,200.6	827.3	778.6	48.72	16.981	
6,500.0	6,279.3	6,278.5	6,283.9	28.8	22.4	-30.57	382.6	2,201.0	800.9	751.5	49.40	16.211	
6,600.0	6,374.8	6,373.7	6,379.0	29.3	22.8	-31.51	380.6	2,201.5	774.7	724.6	50.08	15.469	
6,700.0	6,470.3	6,466.4	6,471.7	29.8	23.1	-32.48	378.5	2,202.3	748.9	698.1	50.75	14.755	
6,800.0	6,565.9	7,609.3	7,163.7	30.4	27.5	-116.01	377.9	1,580.3	711.4	677.3	34.04	20.895	
6,900.0	6,661.4	7,577.4	7,165.0	30.9	27.2	-112.33	376.8	1,612.2	633.6	597.8	35.78	17.709	
7,000.0	6,756.9	7,544.6	7,166.2	31.4	26.8	-108.32	375.8	1,645.0	561.0	523.1	37.90	14.803	
7,100.0	6,852.4	7,511.4	7,167.5	31.9	26.4	-104.05	374.8	1,678.0	495.7	455.3	40.43	12.262	
7,200.0	6,947.9	7,476.8	7,168.9	32.4	26.1	-99.39	373.8	1,712.6	441.1	397.9	43.20	10.211	
7,300.0	7,043.5	7,441.0	7,169.7	32.9	25.7	-94.37	372.7	1,748.5	401.3	355.5	45.78	8.767	
7,400.0	7,139.0	7,410.3	7,169.0	33.4	25.5	-89.95	371.9	1,779.1	381.5	334.1	47.41	8.047	
7,433.7	7,171.1	7,401.6	7,168.5	33.6	25.4	-88.67	371.6	1,787.8	380.1	332.5	47.57	7.991 CC, ES, SF	
7,500.0	7,234.5	7,386.9	7,167.5	33.9	25.3	-86.52	371.2	1,802.4	385.5	338.4	47.19	8.170	
7,600.0	7,330.0	7,367.0	7,165.7	34.4	25.1	-83.60	370.7	1,822.2	413.3	368.2	45.17	9.151	
7,700.0	7,425.5	7,351.2	7,164.0	34.9	25.0	-81.28	370.2	1,838.0	460.8	418.5	42.28	10.898	
7,782.5	7,504.4	7,338.4	7,162.6	35.3	24.9	-79.43	369.9	1,850.7	511.0	471.1	39.90	12.807	
7,800.0	7,521.1	7,335.0	7,162.2	35.4	24.9	-79.09	369.8	1,854.0	522.7	483.2	39.43	13.255	
7,900.0	7,616.9	7,325.5	7,160.9	35.9	24.8	-78.74	369.5	1,863.5	594.8	557.8	37.00	16.073	
8,000.0	7,713.3	7,318.0	7,159.9	36.4	24.8	-78.93	369.3	1,870.9	674.1	639.0	35.10	19.205	
8,100.0	7,810.1	7,312.5	7,159.0	36.9	24.7	-79.68	369.1	1,876.3	758.3	724.7	33.66	22.528	
8,200.0	7,907.3	7,304.0	7,157.6	37.4	24.7	-80.23	368.8	1,884.7	846.1	813.5	32.63	25.935	
8,300.0	8,004.9	7,304.0	7,157.6	37.9	24.7	-82.31	368.8	1,884.7	936.5	904.6	31.85	29.399	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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												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		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,300.0	5,133.0	5,151.3	5,143.6	22.8	4.9	-20.68	326.7	2,084.2	995.2	963.1	32.04	31.060	
5,400.0	5,228.6	5,250.6	5,243.0	23.3	5.0	-21.29	325.8	2,083.3	966.2	933.6	32.64	29.606	
5,500.0	5,324.1	5,344.7	5,337.0	23.8	5.1	-21.89	324.7	2,082.2	937.1	903.9	33.27	28.170	
5,600.0	5,419.6	5,442.7	5,435.1	24.3	5.2	-22.56	323.4	2,080.9	907.8	874.0	33.86	26.814	
5,700.0	5,515.1	5,538.7	5,531.1	24.8	5.3	-23.26	322.3	2,079.7	878.9	844.4	34.46	25.508	
5,800.0	5,610.6	5,632.8	5,625.1	25.3	5.4	-23.98	321.0	2,078.3	849.8	814.7	35.06	24.234	
5,900.0	5,706.2	5,733.0	5,725.2	25.8	5.5	-24.82	319.6	2,076.6	820.6	785.0	35.60	23.053	
6,000.0	5,801.7	5,828.2	5,820.5	26.3	5.6	-25.67	318.1	2,074.8	791.3	755.2	36.17	21.880	
6,100.0	5,897.2	5,923.9	5,916.1	26.8	5.7	-26.56	316.4	2,073.1	762.2	725.5	36.72	20.758	
6,200.0	5,992.7	6,016.9	6,009.1	27.3	5.7	-27.49	314.5	2,071.4	733.2	695.9	37.29	19.663	
6,300.0	6,088.2	6,112.1	6,104.2	27.8	5.8	-28.49	312.5	2,070.0	704.6	666.8	37.81	18.633	
6,400.0	6,183.8	6,205.2	6,197.3	28.3	5.9	-29.54	310.5	2,068.9	676.4	638.1	38.35	17.639	
6,500.0	6,279.3	6,298.5	6,290.6	28.8	6.0	-30.64	308.2	2,068.1	648.7	609.8	38.86	16.691	
6,600.0	6,374.8	6,393.2	6,385.3	29.3	6.1	-31.85	306.0	2,067.5	621.4	582.1	39.33	15.800	
6,700.0	6,470.3	6,488.7	6,480.8	29.8	6.2	-33.17	303.7	2,067.0	594.5	554.7	39.75	14.955	
6,800.0	6,565.9	6,586.3	6,578.4	30.4	6.3	-34.65	301.3	2,066.3	567.7	527.6	40.10	14.158	
6,900.0	6,661.4	6,677.5	6,669.5	30.9	6.4	-36.17	298.9	2,065.5	541.1	500.6	40.51	13.357	
7,000.0	6,756.9	6,770.8	6,762.7	31.4	6.5	-37.69	295.8	2,066.4	515.9	475.0	40.87	12.622	
7,100.0	6,852.4	6,854.0	6,845.9	31.9	6.6	-39.30	294.4	2,067.2	492.1	450.8	41.34	11.905	
7,200.0	6,947.9	6,944.8	6,936.6	32.4	6.6	-41.31	294.9	2,069.3	471.3	429.7	41.56	11.339	
7,300.0	7,043.5	7,042.0	7,033.9	32.9	6.6	-43.82	296.6	2,070.6	451.2	409.7	41.53	10.864	
7,400.0	7,139.0	7,136.7	7,128.5	33.4	6.6	-46.29	297.3	2,073.1	432.2	390.6	41.51	10.410	
7,500.0	7,234.5	7,232.6	7,224.3	33.9	6.6	-49.14	298.8	2,074.8	414.1	372.8	41.33	10.020	
7,600.0	7,330.0	7,330.4	7,322.2	34.4	6.6	-52.62	301.5	2,074.8	397.1	356.2	40.92	9.704	
7,700.0	7,425.5	7,428.7	7,420.4	34.9	6.6	-55.89	301.7	2,077.1	380.9	340.4	40.52	9.401	
7,782.5	7,504.4	7,511.0	7,502.7	35.3	6.7	-58.73	301.1	2,079.4	368.0	327.9	40.11	9.175	
7,800.0	7,521.1	7,527.9	7,519.5	35.4	6.7	-59.31	300.9	2,079.8	365.4	325.3	40.03	9.127	
7,900.0	7,616.9	7,626.1	7,617.7	35.9	6.8	-62.74	299.8	2,082.1	351.3	311.9	39.41	8.913	
8,000.0	7,713.3	7,738.6	7,730.1	36.4	6.9	-66.32	295.6	2,085.9	337.7	298.9	38.80	8.705	
8,100.0	7,810.1	7,845.1	7,835.0	36.9	7.0	-67.68	282.4	2,097.6	320.7	282.0	38.73	8.280	
8,200.0	7,907.3	7,990.5	7,971.9	37.4	7.3	-64.90	246.6	2,129.3	298.6	259.8	38.79	7.699	
8,300.0	8,004.9	8,133.3	8,085.6	37.9	7.7	-52.50	174.4	2,174.4	258.5	217.6	40.90	6.320	
8,400.0	8,102.9	8,228.3	8,141.4	38.4	8.0	-34.91	107.5	2,211.5	218.1	170.5	47.64	4.579	
8,494.5	8,195.8	8,281.5	8,163.0	38.8	8.1	-21.70	64.0	2,233.3	201.3	146.6	54.77	3.676 CC	
8,500.0	8,201.2	8,284.1	8,163.9	38.8	8.1	-21.03	61.8	2,234.3	201.4	146.3	55.05	3.658 ES, SF	
8,600.0	8,299.8	8,322.0	8,175.3	39.3	8.2	-11.12	28.7	2,248.8	224.2	168.4	55.78	4.020	
8,700.0	8,398.7	8,341.0	8,179.6	39.7	8.2	-6.21	11.6	2,255.7	280.9	229.6	51.29	5.477	
8,800.0	8,497.8	8,354.0	8,182.0	40.1	8.2	-2.87	-0.4	2,260.4	357.0	310.1	46.89	7.613	
8,900.0	8,597.2	8,354.0	8,182.0	40.6	8.2	-2.96	-0.4	2,260.4	443.2	399.7	43.52	10.184	
9,000.0	8,696.7	8,372.0	8,184.5	41.0	8.2	1.85	-16.9	2,267.0	534.2	492.4	41.78	12.786	
9,100.0	8,796.4	8,378.2	8,185.2	41.3	8.2	3.64	-22.6	2,269.2	628.5	588.0	40.46	15.533	
9,200.0	8,896.2	8,383.1	8,185.7	41.7	8.2	5.27	-27.1	2,271.0	724.7	685.1	39.61	18.294	
9,300.0	8,996.1	8,386.9	8,186.1	42.0	8.2	6.85	-30.7	2,272.5	822.1	783.0	39.08	21.036	
9,400.0	9,096.1	8,405.0	8,187.3	42.3	8.3	13.01	-47.5	2,279.1	920.7	881.7	38.98	23.617	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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	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
5,300.0	5,133.0	5,151.3	5,143.6	22.8	4.9	-20.68	326.7	2,084.2	995.2	963.1	32.04	31.060	
5,400.0	5,228.6	5,250.6	5,243.0	23.3	5.0	-21.29	325.8	2,083.3	966.2	933.6	32.64	29.606	
5,500.0	5,324.1	5,344.7	5,337.0	23.8	5.1	-21.89	324.7	2,082.2	937.1	903.9	33.27	28.170	
5,600.0	5,419.6	5,442.7	5,435.1	24.3	5.2	-22.56	323.4	2,080.9	907.8	874.0	33.86	26.814	
5,700.0	5,515.1	5,538.7	5,531.1	24.8	5.3	-23.26	322.3	2,079.7	878.9	844.4	34.46	25.508	
5,800.0	5,610.6	5,632.8	5,625.1	25.3	5.4	-23.98	321.0	2,078.3	849.8	814.7	35.06	24.234	
5,900.0	5,706.2	5,733.0	5,725.2	25.8	5.5	-24.82	319.6	2,076.6	820.6	785.0	35.60	23.053	
6,000.0	5,801.7	5,828.2	5,820.5	26.3	5.6	-25.67	318.1	2,074.8	791.3	755.2	36.17	21.880	
6,100.0	5,897.2	5,923.9	5,916.1	26.8	5.7	-26.56	316.4	2,073.1	762.2	725.5	36.72	20.758	
6,200.0	5,992.7	6,016.9	6,009.1	27.3	5.7	-27.49	314.5	2,071.4	733.2	695.9	37.29	19.663	
6,300.0	6,088.2	6,112.1	6,104.2	27.8	5.8	-28.49	312.5	2,070.0	704.6	666.8	37.81	18.633	
6,400.0	6,183.8	6,205.2	6,197.3	28.3	5.9	-29.54	310.5	2,068.9	676.4	638.1	38.35	17.639	
6,500.0	6,279.3	6,298.5	6,290.6	28.8	6.0	-30.64	308.2	2,068.1	648.7	609.8	38.86	16.691	
6,600.0	6,374.8	6,393.2	6,385.3	29.3	6.1	-31.85	306.0	2,067.5	621.4	582.1	39.33	15.800	
6,700.0	6,470.3	6,488.7	6,480.8	29.8	6.2	-33.17	303.7	2,067.0	594.5	554.7	39.75	14.955	
6,800.0	6,565.9	6,586.3	6,578.4	30.4	6.3	-34.65	301.3	2,066.3	567.7	527.6	40.10	14.158	
6,900.0	6,661.4	6,677.5	6,669.5	30.9	6.4	-36.17	298.9	2,065.5	541.1	500.6	40.51	13.357	
7,000.0	6,756.9	6,770.8	6,762.7	31.4	6.5	-37.69	295.8	2,066.4	515.9	475.0	40.87	12.622	
7,100.0	6,852.4	6,854.0	6,845.9	31.9	6.6	-39.30	294.4	2,067.2	492.1	450.8	41.34	11.905	
7,200.0	6,947.9	6,944.8	6,936.6	32.4	6.6	-41.31	294.9	2,069.3	471.3	429.7	41.56	11.339	
7,300.0	7,043.5	7,042.0	7,033.9	32.9	6.6	-43.82	296.6	2,070.6	451.2	409.7	41.53	10.864	
7,400.0	7,139.0	7,111.7	7,103.5	33.4	6.6	-45.60	297.9	2,073.4	434.1	392.8	41.39	10.488	
7,500.0	7,234.5	7,206.9	7,198.2	33.9	6.8	-48.01	302.6	2,081.7	423.0	381.5	41.56	10.180	
7,600.0	7,330.0	7,307.2	7,298.2	34.4	6.9	-51.09	308.0	2,087.0	411.0	369.5	41.47	9.910	
7,700.0	7,425.5	7,403.9	7,394.6	34.9	7.1	-54.34	314.2	2,091.7	400.7	359.5	41.21	9.724	
7,782.5	7,504.4	7,487.1	7,477.6	35.3	7.2	-57.32	319.2	2,095.0	392.7	351.9	40.83	9.618	
7,800.0	7,521.1	7,504.8	7,495.2	35.4	7.3	-57.96	320.3	2,095.6	391.0	350.3	40.74	9.599	
7,900.0	7,616.9	7,606.0	7,596.3	35.9	7.4	-61.61	325.5	2,098.7	382.4	342.2	40.23	9.505	
8,000.0	7,713.3	7,709.2	7,699.3	36.4	7.6	-65.34	329.9	2,100.6	374.8	335.1	39.69	9.444	
8,100.0	7,810.1	7,809.5	7,799.5	36.9	7.7	-68.99	333.3	2,101.2	368.2	329.1	39.17	9.402	
8,200.0	7,907.3	7,996.4	7,983.3	37.4	7.8	-72.10	308.2	2,114.3	349.4	311.9	37.58	9.299	
8,300.0	8,004.9	8,139.6	8,112.6	37.9	7.7	-68.78	253.9	2,140.5	312.3	275.0	37.30	8.373	
8,400.0	8,102.9	8,244.4	8,197.7	38.4	7.8	-60.95	200.4	2,170.1	268.8	229.8	39.02	6.890	
8,500.0	8,201.2	8,332.4	8,262.0	38.8	7.9	-49.29	148.2	2,199.8	226.0	182.7	43.32	5.217	
8,600.0	8,299.8	8,419.5	8,319.0	39.3	8.0	-32.34	90.6	2,231.5	194.2	143.6	50.64	3.836	
8,670.9	8,369.9	8,465.3	8,344.9	39.6	8.1	-21.30	56.9	2,248.3	185.4	129.5	55.89	3.318 CC, ES	
8,700.0	8,398.7	8,479.0	8,352.0	39.7	8.1	-17.83	46.3	2,253.5	187.1	129.9	57.19	3.271 SF	
8,800.0	8,497.8	8,527.0	8,374.4	40.1	8.3	-5.63	8.3	2,272.2	217.2	160.0	57.19	3.798	
8,900.0	8,597.2	8,566.3	8,391.3	40.6	8.4	3.54	-23.3	2,288.5	275.6	222.1	53.56	5.147	
9,000.0	8,696.7	8,598.8	8,404.8	41.0	8.5	10.26	-49.2	2,302.6	349.0	298.8	50.14	6.960	
9,100.0	8,796.4	8,623.0	8,413.8	41.3	8.6	15.01	-69.0	2,313.3	431.3	383.8	47.51	9.078	
9,200.0	8,896.2	8,642.0	8,420.1	41.7	8.7	18.76	-84.8	2,321.8	518.9	473.3	45.63	11.373	
9,300.0	8,996.1	8,657.4	8,424.6	42.0	8.7	21.97	-97.8	2,328.6	610.1	565.8	44.31	13.770	
9,400.0	9,096.1	8,670.0	8,428.0	42.3	8.8	24.92	-108.6	2,334.2	703.6	660.2	43.39	16.215	
9,500.0	9,196.1	8,670.0	8,428.0	42.5	8.8	26.29	-108.6	2,334.2	798.9	756.4	42.56	18.774	
9,503.9	9,200.0	8,682.6	8,431.2	42.5	8.8	118.44	-119.5	2,339.7	802.5	759.7	42.77	18.764	
9,600.0	9,296.1	8,692.8	8,433.5	42.5	8.9	119.81	-128.4	2,344.1	894.8	852.5	42.33	21.139	
9,700.0	9,396.1	8,702.1	8,435.5	42.5	8.9	120.99	-136.5	2,348.1	991.5	949.5	42.00	23.606	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)	Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
0.0	0.0	0.0	4.0	0.0	0.0	-90.16	-1.2	-409.9	409.9					
100.0	100.0	96.0	100.0	0.8	0.5	-90.16	-1.2	-409.9	409.9	408.2	1.75	234.538		
200.0	200.0	196.0	200.0	1.4	1.0	-90.16	-1.2	-409.9	409.9	407.0	2.91	140.839		
300.0	300.0	296.0	300.0	1.9	1.4	-90.16	-1.2	-409.9	409.9	406.2	3.69	111.188		
400.0	400.0	396.0	400.0	2.2	1.6	-90.16	-1.2	-409.9	409.9	405.6	4.31	95.087		
500.0	500.0	496.0	500.0	2.6	1.9	-90.16	-1.2	-409.9	409.9	405.1	4.85	84.524		
600.0	600.0	596.0	600.0	2.8	2.1	-90.16	-1.2	-409.9	409.9	404.6	5.33	76.884		
700.0	700.0	696.0	700.0	3.1	2.3	-90.16	-1.2	-409.9	409.9	404.1	5.77	71.016		
800.0	800.0	796.0	800.0	3.3	2.5	-90.16	-1.2	-409.9	409.9	403.7	6.18	66.318 CC, ES		
900.0	900.0	884.6	888.6	3.6	2.7	-90.23	-1.6	-411.1	411.2	404.6	6.67	61.692		
1,000.0	1,000.0	972.7	976.6	3.8	2.9	-90.42	-3.0	-414.8	415.4	408.3	7.13	58.303		
1,100.0	1,100.0	1,060.2	1,063.9	4.1	3.2	179.00	-5.4	-420.9	424.2	416.6	7.69	55.174		
1,200.0	1,199.8	1,146.7	1,149.9	4.4	3.4	178.58	-8.7	-429.5	439.4	431.2	8.23	53.391		
1,300.0	1,299.5	1,231.7	1,234.1	4.7	3.7	178.09	-12.8	-440.2	460.8	452.0	8.76	52.570		
1,400.0	1,398.7	1,314.8	1,316.0	5.1	3.9	177.56	-17.7	-453.0	488.2	478.9	9.30	52.518 SF		
1,500.0	1,497.5	1,400.0	1,399.6	5.4	4.1	176.97	-23.6	-468.4	521.7	511.8	9.84	52.996		
1,600.0	1,595.6	1,473.2	1,471.1	5.8	4.3	176.44	-29.3	-483.4	560.8	550.5	10.35	54.207		
1,700.0	1,693.1	1,548.0	1,543.5	6.2	4.4	175.89	-35.9	-500.6	605.5	594.6	10.86	55.757		
1,800.0	1,789.6	1,619.4	1,612.3	6.6	4.6	175.35	-42.8	-518.6	655.4	644.1	11.34	57.816		
1,860.7	1,847.8	1,668.6	1,659.5	6.8	4.6	174.99	-47.8	-531.7	688.0	676.4	11.57	59.447		
1,900.0	1,885.3	1,701.5	1,691.0	6.9	4.7	174.82	-51.2	-540.4	709.4	697.7	11.72	60.516		
2,000.0	1,980.9	1,785.2	1,771.2	7.3	4.8	174.41	-59.7	-562.7	764.0	751.8	12.19	62.674		
2,100.0	2,076.4	1,868.9	1,851.4	7.7	4.9	174.06	-68.3	-585.0	818.6	805.9	12.68	64.572		
2,200.0	2,171.9	1,952.6	1,931.6	8.1	5.1	173.75	-76.8	-607.3	873.2	860.0	13.18	66.242		
2,300.0	2,267.4	2,036.3	2,011.8	8.5	5.2	173.48	-85.3	-629.6	927.8	914.1	13.70	67.712		
2,400.0	2,363.0	2,119.9	2,092.0	8.9	5.3	173.24	-93.9	-651.8	982.4	968.2	14.24	69.008		

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF 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)			
3,100.0	3,031.6	3,115.7	3,050.3	12.1	11.7	-32.72	504.0	1,334.8	980.7	961.1	19.56	50.146	
3,200.0	3,127.1	3,211.5	3,142.8	12.5	12.2	-32.12	481.9	1,346.0	953.7	933.4	20.26	47.064	
3,300.0	3,222.6	3,307.3	3,235.4	13.0	12.6	-31.48	459.8	1,357.3	926.7	905.7	20.98	44.170	
3,400.0	3,318.2	3,403.1	3,327.9	13.5	13.1	-30.81	437.7	1,368.5	899.9	878.2	21.71	41.450	
3,500.0	3,413.7	3,498.8	3,420.4	14.0	13.5	-30.10	415.7	1,379.8	873.2	850.7	22.45	38.892	
3,600.0	3,509.2	3,602.4	3,520.3	14.4	14.0	-29.27	391.5	1,391.9	846.5	823.3	23.17	36.538	
3,700.0	3,604.7	3,713.8	3,627.1	14.9	14.5	-28.11	362.3	1,404.2	818.0	794.1	23.94	34.169	
3,800.0	3,700.2	3,808.3	3,717.4	15.4	15.0	-26.98	336.3	1,414.4	789.2	764.4	24.80	31.816	
3,900.0	3,795.8	3,902.8	3,807.7	15.9	15.4	-25.76	310.3	1,424.6	760.6	735.0	25.64	29.668	
4,000.0	3,891.3	3,997.3	3,897.9	16.4	15.9	-24.46	284.4	1,434.8	732.4	705.9	26.49	27.646	
4,100.0	3,986.8	4,091.8	3,988.2	16.9	16.3	-23.05	258.4	1,445.0	704.6	677.2	27.37	25.744	
4,200.0	4,082.3	4,186.3	4,078.5	17.4	16.8	-21.54	232.5	1,455.2	677.2	648.9	28.27	23.954	
4,300.0	4,177.8	4,280.8	4,168.8	17.8	17.3	-19.90	206.5	1,465.4	650.3	621.1	29.20	22.271	
4,400.0	4,273.4	4,375.3	4,259.1	18.3	17.7	-18.13	180.6	1,475.6	624.0	593.8	30.16	20.691	
4,500.0	4,368.9	4,469.8	4,349.4	18.8	18.2	-16.21	154.6	1,485.8	598.3	567.1	31.15	19.208	
4,600.0	4,464.4	4,564.3	4,439.7	19.3	18.6	-14.13	128.7	1,496.1	573.3	541.1	32.17	17.820	
4,700.0	4,559.9	4,658.8	4,530.0	19.8	19.1	-11.87	102.7	1,506.3	549.1	515.8	33.23	16.524	
4,800.0	4,655.4	4,753.3	4,620.3	20.3	19.6	-9.43	76.8	1,516.5	525.8	491.5	34.33	15.318	
4,900.0	4,751.0	4,847.8	4,710.6	20.8	20.0	-6.77	50.8	1,526.7	503.6	468.1	35.46	14.202	
5,000.0	4,846.5	4,942.3	4,800.9	21.3	20.5	-3.89	24.8	1,536.9	482.6	445.9	36.63	13.174	
5,100.0	4,942.0	5,036.8	4,891.1	21.8	21.0	-0.77	-1.1	1,547.1	462.9	425.1	37.84	12.235	
5,200.0	5,037.5	5,131.3	4,981.4	22.3	21.4	2.59	-27.1	1,557.3	444.8	405.7	39.07	11.385	
5,300.0	5,133.0	5,225.8	5,071.7	22.8	21.9	6.20	-53.0	1,567.5	428.4	388.1	40.32	10.626	
5,400.0	5,228.6	5,320.3	5,162.0	23.3	22.4	10.05	-79.0	1,577.7	414.0	372.4	41.57	9.959	
5,500.0	5,324.1	5,414.8	5,252.3	23.8	22.8	14.14	-104.9	1,587.9	401.7	358.9	42.80	9.385	
5,600.0	5,419.6	5,509.3	5,342.6	24.3	23.3	18.44	-130.9	1,598.1	391.7	347.7	44.00	8.904	
5,700.0	5,515.1	5,603.8	5,432.9	24.8	23.8	22.91	-156.8	1,608.3	384.3	339.2	45.13	8.517	
5,800.0	5,610.6	5,698.3	5,523.2	25.3	24.2	27.51	-182.8	1,618.5	379.6	333.4	46.17	8.222	
5,900.0	5,706.2	5,792.8	5,613.5	25.8	24.7	32.18	-208.8	1,628.7	377.7	330.6	47.11	8.017	
5,918.6	5,724.0	5,810.4	5,630.3	25.9	24.8	33.05	-213.6	1,630.6	377.6	330.4	47.27	7.988	
6,000.0	5,801.7	5,887.2	5,703.8	26.3	25.2	36.86	-234.7	1,638.9	378.6	330.6	47.93	7.898	
6,100.0	5,897.2	5,981.7	5,794.1	26.8	25.7	41.50	-260.7	1,649.1	382.3	333.6	48.63	7.860	
6,200.0	5,992.7	6,076.2	5,884.3	27.3	26.1	46.02	-286.6	1,659.3	388.7	339.5	49.22	7.897	
6,300.0	6,088.2	6,170.7	5,974.6	27.8	26.6	50.39	-312.6	1,669.5	397.7	348.0	49.71	8.001	
6,400.0	6,183.8	6,265.2	6,064.9	28.3	27.1	54.56	-338.5	1,679.7	409.1	359.0	50.12	8.164	
6,500.0	6,279.3	6,359.7	6,155.2	28.8	27.6	58.50	-364.5	1,689.9	422.8	372.3	50.46	8.378	
6,600.0	6,374.8	6,459.1	6,250.3	29.3	28.1	62.38	-391.5	1,700.5	438.2	387.3	50.84	8.619	
6,700.0	6,470.3	6,562.0	6,349.1	29.8	28.6	66.13	-417.9	1,710.9	453.7	402.5	51.20	8.862	
6,800.0	6,565.9	6,665.4	6,449.0	30.4	29.1	69.64	-442.7	1,720.7	469.3	417.7	51.53	9.106	
6,900.0	6,661.4	6,769.3	6,549.9	30.9	29.6	72.97	-466.1	1,729.9	484.5	432.7	51.85	9.345	
7,000.0	6,756.9	6,873.7	6,651.7	31.4	30.1	76.13	-487.7	1,738.4	499.4	447.3	52.15	9.576	
7,100.0	6,852.4	6,978.5	6,754.2	31.9	30.6	79.16	-507.8	1,746.3	513.9	461.5	52.44	9.799	
7,200.0	6,947.9	7,083.7	6,857.5	32.4	31.1	82.07	-526.1	1,753.5	527.9	475.2	52.72	10.013	
7,300.0	7,043.5	7,189.0	6,961.3	32.9	31.6	84.90	-542.7	1,760.0	541.3	488.3	52.99	10.216	
7,400.0	7,139.0	7,294.6	7,065.7	33.4	32.0	87.66	-557.6	1,765.9	554.2	500.9	53.24	10.409	
7,500.0	7,234.5	7,400.2	7,170.4	33.9	32.5	90.36	-570.7	1,771.0	566.5	513.0	53.49	10.591	
7,600.0	7,330.0	7,505.9	7,275.4	34.4	32.9	93.03	-581.9	1,775.4	578.3	524.6	53.72	10.765	
7,700.0	7,425.5	7,611.6	7,380.6	34.9	33.3	95.67	-591.4	1,779.2	589.6	535.6	53.95	10.928	
7,782.5	7,504.4	7,698.7	7,467.4	35.3	33.7	97.84	-597.9	1,781.7	598.5	544.4	54.13	11.057	
7,800.0	7,521.1	7,717.2	7,485.8	35.4	33.7	98.31	-599.1	1,782.2	600.4	546.2	54.16	11.085	
7,900.0	7,616.9	7,822.9	7,591.3	35.9	34.1	100.93	-604.9	1,784.5	610.5	556.1	54.39	11.225	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 501H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8188-r.5 MWD+IFR1+SAG+FDIR												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,000.0	7,713.3	7,928.9	7,697.3	36.4	34.4	103.39	-609.0	1,786.1	619.9	565.3	54.62	11.349	
8,100.0	7,810.1	8,035.1	7,803.5	36.9	34.7	105.72	-611.2	1,787.0	628.2	573.4	54.83	11.458	
8,200.0	7,907.3	9,063.2	8,434.1	37.4	35.0	179.85	-9.2	1,789.1	563.7	517.8	45.94	12.270	
8,300.0	8,004.9	9,063.3	8,434.1	37.9	35.0	179.86	-9.1	1,789.1	483.4	433.3	50.12	9.645	
8,400.0	8,102.9	9,063.4	8,434.1	38.4	35.0	179.87	-9.0	1,789.1	410.4	355.2	55.24	7.430	
8,500.0	8,201.2	9,063.5	8,434.1	38.8	35.0	179.88	-9.0	1,789.1	349.5	288.6	60.90	5.739	
8,600.0	8,299.8	9,063.5	8,434.1	39.3	35.0	179.90	-8.9	1,789.1	308.0	242.6	65.39	4.711	
8,693.9	8,392.6	9,063.6	8,434.1	39.7	35.0	179.91	-8.8	1,789.1	294.1	228.4	65.78	4.471 CC, ES, SF	
8,700.0	8,398.7	9,063.6	8,434.1	39.7	35.0	179.92	-8.8	1,789.1	294.2	228.6	65.63	4.483	
8,800.0	8,497.8	9,063.7	8,434.1	40.1	35.0	179.93	-8.7	1,789.1	311.8	251.2	60.51	5.152	
8,900.0	8,597.2	9,063.8	8,434.1	40.6	35.0	179.95	-8.6	1,789.1	356.1	303.1	53.00	6.719	
9,000.0	8,696.7	9,063.9	8,434.1	41.0	35.0	179.97	-8.5	1,789.1	418.8	372.5	46.26	9.053	
9,100.0	8,796.4	9,064.0	8,434.1	41.3	35.0	179.99	-8.4	1,789.1	492.8	451.5	41.32	11.927	
9,200.0	8,896.2	9,064.1	8,434.1	41.7	35.0	-180.00	-8.3	1,789.1	573.9	535.9	38.03	15.089	
9,300.0	8,996.1	9,064.2	8,434.1	42.0	35.0	-179.98	-8.3	1,789.1	659.3	623.3	35.96	18.334	
9,400.0	9,096.1	9,064.3	8,434.1	42.3	35.0	-179.96	-8.2	1,789.1	747.6	712.9	34.72	21.529	
9,500.0	9,196.1	9,064.4	8,434.1	42.5	35.0	-179.95	-8.0	1,789.1	837.8	803.8	34.04	24.616	
9,503.9	9,200.0	9,064.4	8,434.1	42.5	35.0	-89.68	-8.0	1,789.1	841.4	807.4	34.02	24.734	
9,600.0	9,296.1	9,064.5	8,434.1	42.5	35.0	-89.66	-7.9	1,789.1	929.7	896.0	33.74	27.554	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 502H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8212-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		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)				
2,100.0	2,076.4	2,388.7	2,327.0	7.7	9.5	-41.16	558.1	953.1	971.4	954.9	16.57	58.638		
2,200.0	2,171.9	2,476.3	2,411.1	8.1	9.9	-41.73	536.9	940.8	923.9	906.7	17.28	53.478		
2,300.0	2,267.4	2,563.9	2,495.2	8.5	10.3	-42.36	515.8	928.5	876.5	858.5	18.00	48.695		
2,400.0	2,363.0	2,651.5	2,579.4	8.9	10.7	-43.06	494.6	916.2	829.2	810.5	18.73	44.259		
2,500.0	2,458.5	2,739.1	2,663.5	9.4	11.1	-43.84	473.5	903.9	782.0	762.5	19.48	40.144		
2,600.0	2,554.0	2,826.7	2,747.6	9.8	11.5	-44.73	452.3	891.7	734.9	714.7	20.23	36.325		
2,700.0	2,649.5	2,914.3	2,831.7	10.2	11.9	-45.73	431.1	879.4	688.0	667.0	20.99	32.776		
2,800.0	2,745.0	3,002.0	2,915.9	10.7	12.3	-46.88	410.0	867.1	641.2	619.5	21.75	29.479		
2,900.0	2,840.6	3,089.6	3,000.0	11.1	12.7	-48.20	388.8	854.8	594.7	572.2	22.52	26.413		
3,000.0	2,936.1	3,177.2	3,084.1	11.6	13.1	-49.74	367.7	842.6	548.5	525.3	23.28	23.561		
3,100.0	3,031.6	3,264.8	3,168.2	12.1	13.6	-51.56	346.5	830.3	502.7	478.7	24.04	20.912		
3,200.0	3,127.1	3,352.4	3,252.4	12.5	14.0	-53.72	325.4	818.0	457.4	432.6	24.79	18.452		
3,300.0	3,222.6	3,440.0	3,336.5	13.0	14.4	-56.34	304.2	805.7	412.7	387.2	25.51	16.175		
3,400.0	3,318.2	3,527.6	3,420.6	13.5	14.8	-59.55	283.1	793.4	368.9	342.7	26.21	14.078		
3,500.0	3,413.7	3,615.2	3,504.7	14.0	15.2	-63.56	261.9	781.2	326.4	299.6	26.84	12.163		
3,600.0	3,509.2	3,702.8	3,588.9	14.4	15.7	-68.65	240.8	768.9	285.7	258.3	27.36	10.441		
3,700.0	3,604.7	3,790.4	3,673.0	14.9	16.1	-75.20	219.6	756.6	247.7	219.9	27.72	8.936		
3,800.0	3,700.2	3,878.0	3,757.1	15.4	16.5	-83.66	198.5	744.3	213.8	186.0	27.80	7.691		
3,900.0	3,795.8	3,965.6	3,841.2	15.9	16.9	-94.45	177.3	732.0	186.4	158.8	27.53	6.769		
4,000.0	3,891.3	4,053.2	3,925.4	16.4	17.4	-107.60	156.2	719.8	168.6	141.5	27.04	6.234		
4,086.0	3,973.4	4,128.6	3,997.7	16.8	17.7	-120.14	138.0	709.2	163.4	136.6	26.83	6.090 CC, ES, SF		
4,100.0	3,986.8	4,140.9	4,009.5	16.9	17.8	-122.21	135.0	707.5	163.5	136.7	26.84	6.092		
4,200.0	4,082.3	4,228.5	4,093.6	17.4	18.2	-136.56	113.9	695.2	172.4	144.9	27.48	6.274		
4,300.0	4,177.8	4,316.1	4,177.7	17.8	18.6	-149.09	92.7	682.9	193.2	164.4	28.81	6.708		
4,400.0	4,273.4	4,403.7	4,261.9	18.3	19.1	-159.21	71.6	670.6	222.7	192.4	30.37	7.334		
4,500.0	4,368.9	4,491.3	4,346.0	18.8	19.5	-167.08	50.4	658.4	257.9	226.1	31.88	8.091		
4,600.0	4,464.4	4,578.9	4,430.1	19.3	19.9	-173.18	29.3	646.1	296.8	263.6	33.26	8.925		
4,700.0	4,559.9	4,666.5	4,514.2	19.8	20.4	-177.93	8.1	633.8	338.1	303.6	34.51	9.797		
4,800.0	4,655.4	4,754.1	4,598.4	20.3	20.8	178.31	-13.0	621.5	381.1	345.4	35.67	10.683		
4,900.0	4,751.0	4,841.7	4,682.5	20.8	21.2	175.28	-34.2	609.2	425.1	388.4	36.75	11.567		
5,000.0	4,846.5	4,929.3	4,766.6	21.3	21.7	172.80	-55.3	597.0	470.0	432.2	37.78	12.440		
5,100.0	4,942.0	5,016.9	4,850.7	21.8	22.1	170.74	-76.5	584.7	515.5	476.7	38.77	13.295		
5,200.0	5,037.5	5,104.5	4,934.9	22.3	22.5	169.01	-97.6	572.4	561.4	521.7	39.73	14.130		
5,300.0	5,133.0	5,192.2	5,019.0	22.8	23.0	167.53	-118.8	560.1	607.7	567.0	40.67	14.942		
5,400.0	5,228.6	5,279.8	5,103.1	23.3	23.4	166.26	-140.0	547.8	654.3	612.7	41.60	15.730		
5,500.0	5,324.1	5,367.4	5,187.2	23.8	23.8	165.16	-161.1	535.6	701.1	658.6	42.50	16.494		
5,600.0	5,419.6	5,455.0	5,271.4	24.3	24.3	164.19	-182.3	523.3	748.1	704.6	43.40	17.235		
5,700.0	5,515.1	5,542.6	5,355.5	24.8	24.7	163.34	-203.4	511.0	795.2	750.9	44.30	17.952		
5,800.0	5,610.6	5,630.2	5,439.6	25.3	25.1	162.58	-224.6	498.7	842.4	797.2	45.18	18.646		
5,900.0	5,706.2	5,717.8	5,523.7	25.8	25.6	161.90	-245.7	486.4	889.8	843.7	46.06	19.318		
6,000.0	5,801.7	5,805.4	5,607.9	26.3	26.0	161.29	-266.9	474.2	937.2	890.3	46.93	19.968		
6,100.0	5,897.2	5,893.0	5,692.0	26.8	26.4	160.73	-288.0	461.9	984.7	936.9	47.81	20.598		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well PUDGE FEDERAL COM 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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: WTF COM PROJECT - WILD THING FEDERAL COM 503H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 MWD+IFR1, 8006-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference	Offset	Semi Major Axis	Rule Assigned:										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
0.0	0.0	0.0	3.0	0.0	0.0	-90.16	-1.1	-379.9	379.9				
100.0	100.0	97.0	100.0	0.8	0.7	-90.16	-1.1	-379.9	379.9	377.9	1.97	192.969	
200.0	200.0	197.0	200.0	1.4	1.4	-90.16	-1.1	-379.9	379.9	376.6	3.29	115.408	
300.0	300.0	297.0	300.0	1.9	1.9	-90.16	-1.1	-379.9	379.9	375.7	4.18	90.839	
400.0	400.0	397.0	400.0	2.2	2.2	-90.16	-1.1	-379.9	379.9	375.0	4.90	77.511	
500.0	500.0	497.0	500.0	2.6	2.6	-90.16	-1.1	-379.9	379.9	374.4	5.52	68.777	
600.0	600.0	597.0	600.0	2.8	2.8	-90.16	-1.1	-379.9	379.9	373.8	6.08	62.464	
700.0	700.0	697.0	700.0	3.1	3.1	-90.16	-1.1	-379.9	379.9	373.3	6.59	57.617	
800.0	800.0	797.0	800.0	3.3	3.3	-90.16	-1.1	-379.9	379.9	372.8	7.07	53.738	
900.0	900.0	897.0	900.0	3.6	3.6	-90.16	-1.1	-379.9	379.9	372.4	7.52	50.539	
1,000.0	1,000.0	997.0	1,000.0	3.8	3.8	-90.16	-1.1	-379.9	379.9	372.0	7.94	47.840 CC, ES	
1,100.0	1,100.0	1,089.2	1,092.2	4.1	4.1	179.41	-2.1	-380.8	382.6	374.2	8.48	45.121	
1,200.0	1,199.8	1,180.7	1,183.6	4.4	4.3	178.94	-5.4	-383.6	391.0	382.0	9.00	43.452	
1,300.0	1,299.5	1,271.2	1,273.8	4.7	4.6	178.18	-10.8	-388.2	404.9	395.4	9.53	42.505	
1,400.0	1,398.7	1,360.2	1,362.3	5.1	4.9	177.21	-18.3	-394.6	424.4	414.4	10.07	42.143 SF	
1,500.0	1,497.5	1,447.4	1,448.6	5.4	5.2	176.09	-27.6	-402.6	449.6	438.9	10.64	42.272	
1,600.0	1,595.6	1,534.8	1,534.8	5.8	5.5	174.84	-38.9	-412.2	480.2	469.0	11.21	42.830	
1,700.0	1,693.1	1,628.2	1,626.6	6.2	5.8	173.61	-51.4	-422.9	514.9	503.0	11.85	43.441	
1,800.0	1,789.6	1,720.2	1,717.2	6.6	6.1	172.54	-63.8	-433.5	553.0	540.5	12.49	44.288	
1,860.7	1,847.8	1,775.5	1,771.6	6.8	6.3	171.97	-71.3	-439.9	577.7	564.8	12.83	45.037	
1,900.0	1,885.3	1,811.1	1,806.7	6.9	6.4	171.68	-76.1	-444.0	594.1	581.0	13.04	45.566	
2,000.0	1,980.9	1,901.7	1,895.8	7.3	6.7	170.99	-88.3	-454.5	635.8	622.2	13.65	46.592	
2,100.0	2,076.4	1,992.3	1,985.0	7.7	7.0	170.40	-100.5	-464.9	677.7	663.4	14.28	47.450	
2,200.0	2,171.9	2,083.0	2,074.2	8.1	7.3	169.87	-112.7	-475.3	719.5	704.6	14.94	48.169	
2,300.0	2,267.4	2,173.6	2,163.4	8.5	7.6	169.40	-124.9	-485.8	761.5	745.9	15.61	48.770	
2,400.0	2,363.0	2,264.2	2,252.6	8.9	8.0	168.97	-137.1	-496.2	803.4	787.1	16.31	49.274	
2,500.0	2,458.5	2,354.8	2,341.7	9.4	8.3	168.59	-149.4	-506.7	845.4	828.4	17.01	49.695	
2,600.0	2,554.0	2,445.4	2,430.9	9.8	8.7	168.25	-161.6	-517.1	887.5	869.7	17.73	50.049	
2,700.0	2,649.5	2,536.0	2,520.1	10.2	9.1	167.94	-173.8	-527.5	929.5	911.1	18.46	50.345	
2,800.0	2,745.0	2,626.7	2,609.3	10.7	9.4	167.65	-186.0	-538.0	971.6	952.4	19.20	50.592	

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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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 @ 2957.0usft (NABORS X09)

Offset Depths are relative to Offset Datum

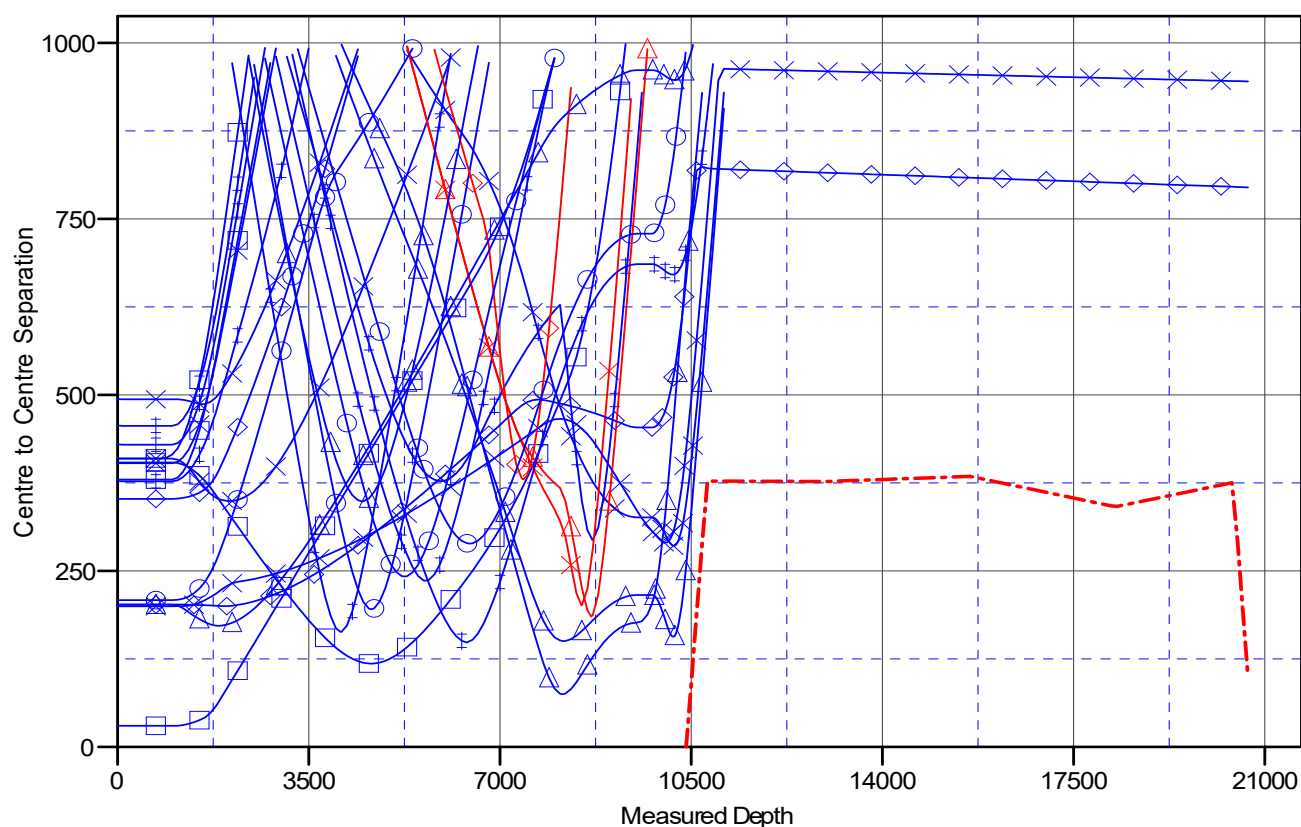
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 701H

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

Grid Convergence at Surface is: 0.16°

Ladder Plot



LEGEND

- PUDGE FEDERAL COM 501H OWB, PWP1 V0 - PUDGE FEDERAL COM 500H OWB, PWP1 V0 _WILD THING FED COM 901H OWB, PWP0 V0 _WILD THING FED COM 702H OWB, PWP0 V0 - WILD THING FEDERAL COM 501H OWB, PWP1 V0 _WILD THING FED COM 907H OWB, PWP0 V0 _WILD THING FED COM 904H OWB, PWP0 V0 - WILD THING FEDERAL COM 503H OWB, PWP1 V0 _WILD THING FED COM 909H OWB, PWP0 V0 _WILD THING FED COM 906H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0 - PUDGE FEDERAL 21H, OWB, AWP V0 - PUDGE FEDERAL 21H, ST01 ST01 AWP V0 - WILD THING FEDERAL COM 502H OWB, PWP1 V0 _WILD THING FED COM 902H OWB, PWP0 V0 - COOPER 31 FEDERAL 2H, _P&A, OWB, AWP V0 _WILD THING FED COM 705H OWB, PWP0 V0 _WILD THING FED COM 910H OWB, PWP0 V0 _WILD THING FED COM 903H OWB, PWP0 V0 _WILD THING FED COM 706H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0 _WILD THING FED COM 704H OWB, PWP0 V0 - WILD THING FED COM 504H OWB, PWP1 V0 _WILD THING FED COM 703H OWB, PWP0 V0 - PUDGE FEDERAL COM 702H OWB, PWP1 V0 - PUDGE FEDERAL COM 907H OWB, PWP1 V0 - PUDGE FEDERAL COM 902H OWB, PWP1 V0 - PUDGE FEDERAL COM 903H OWB, PWP1 V0 - PUDGE FEDERAL COM 904H 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 701H
Project:	ATLAS PROSPECT_NME	TVD Reference:	KB @ 2957.0usft (NABORS X09)
Reference Site:	PUDGE FED COM PROJECT	MD Reference:	KB @ 2957.0usft (NABORS X09)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	PUDGE FEDERAL COM 701H	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 @ 2957.0usft (NABORS X09)

Offset Depths are relative to Offset Datum

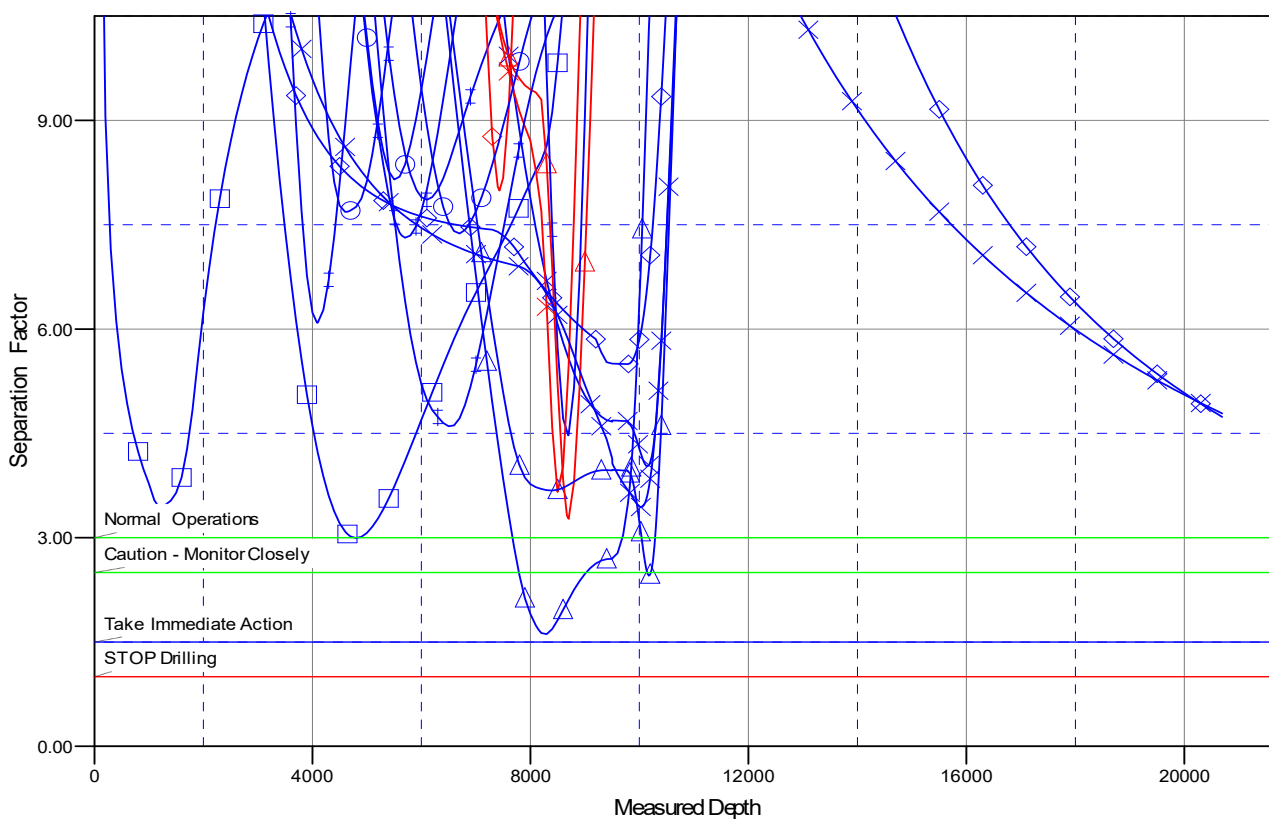
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: PUDGE FEDERAL COM 701H

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

Grid Convergence at Surface is: 0.16°

Separation Factor Plot



LEGEND

PUDGE FEDERAL COM 501H OWB, PWP1 V0	_WILD THING FED COM 908H OWB, PWP0 V0	_WILD THING FED COM 908H OWB, PWP0 V0
PUDGE FEDERAL COM 908H OWB, PWP1 V0	PUDGE FEDERAL 21H, OWB AWP V0	_WILD THING FED COM 704H OWB, PWP0 V0
_WILD THING FED COM 901H OWB, PWP0 V0	PUDGE FEDERAL 21H, ST01 ST01 AWP V0	_WILD THING FED COM 504H OWB, PWP1 V0
_WILD THING FED COM 702H OWB, PWP0 V0	_WILD THING FED COM 502H OWB, PWP1 V0	_WILD THING FED COM 703H OWB, PWP0 V0
_WILD THING FED COM 501H OWB, PWP1 V0	_WILD THING FED COM 902H OWB, PWP0 V0	PUDGE FEDERAL COM 702H OWB, PWP1 V0
_WILD THING FED COM 907H OWB, PWP0 V0	COOPER 31 FEDERAL 2H, _P&A, OWB, AWP V0	PUDGE FEDERAL COM 901H OWB, PWP1 V0
_WILD THING FED COM 904H OWB, PWP0 V0	_WILD THING FED COM 705H OWB, PWP0 V0	PUDGE FEDERAL COM 902H OWB, PWP1 V0
_WILD THING FED COM 503H OWB, PWP1 V0	_WILD THING FED COM 910H OWB, PWP0 V0	PUDGE FEDERAL COM 903H OWB, PWP1 V0
_WILD THING FED COM 905H OWB, PWP0 V0	_WILD THING FED COM 903H OWB, PWP0 V0	PUDGE FEDERAL COM 904H OWB, PWP1 V0
_WILD THING FED COM 906H OWB, PWP0 V0	_WILD THING FED COM 706H OWB, PWP0 V0	

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



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
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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

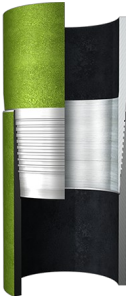
This connection is fully interchangeable with:
TXP® BTC - 7.625 in. - 0.328 (26.40) / 0.43 (33.70) / 0.5 (39.00) / 0.562 (42.80) / 0.595 (45.30) / 0.625 (47.10) in. (lb/ft)
Connections with Dopeless® Technology are fully compatible with the same connection in its doped version
Datasheet is also valid 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.

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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.

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TenarisHydril Wedge 441®



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

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

Pipe Body Data

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

Connection Data

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

Notes

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

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PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	CONOCOPHILLIPS COMPANY
WELL NAME & NO.:	PUDGE FED COM 701H
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

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

CONDITIONS

Action 509364

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 509364
	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.	11/7/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	11/7/2025