

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.
NMNM82926

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.
ORE DIGGER FEDERAL/501H

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
Teas/Bone Spring

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)
SEC 35/T20S/R33E/NMP

11. Country or Parish, State
LEA/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 respects approval for the following chances to the original approved APD.

Drilling Changes: Drilling program, Directional plan and AC report 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 06/22/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved	Title Petroleum Engineer	Date 09/24/2025
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	

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(Instructions on page 2)

GENERAL INSTRUCTIONS

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SPECIFIC INSTRUCTIONS

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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.

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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.

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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.

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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 / 405 FSL / 1800 FWL / TWSP: 20S / RANGE: 33E / SECTION: 35 / LAT: 32.523457 / LONG: -103.636655 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 100 FSL / 1000 FWL / TWSP: 20S / RANGE: 33E / SECTION: 35 / LAT: 32.522619 / LONG: -103.63925 (TVD: 10438 feet, MD: 10525 feet)

BHL: NWNW / 50 FNL / 1000 FWL / TWSP: 20S / RANGE: 33E / SECTION: 26 / LAT: 32.551248 / LONG: -103.639236 (TVD: 10600 feet, MD: 20811 feet)

Well Name: ORE DIGGER FEDERAL	Well Location: T20S / R33E / SEC 35 / SESW / 32.523457 / -103.636655	County or Parish/State: LEA / NM
Well Number: 501H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM82926	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: COG OPERATING LLC	

Notice of Intent

Sundry ID: 2859383

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 06/22/2025	Time Sundry Submitted: 08:31
Date proposed operation will begin: 06/22/2025	

Procedure Description: COG Operating LLC, respectfully respects approval for the following changes to the original approved APD. Drilling Changes: Drilling program, Directional plan and AC report attached.

NOI Attachments

- Procedure Description
- Ore_Digger_Fed_Com_501H___Potash_Reef_APD_Drilling_Program_20250622082849.pdf
 - ORE_DIGGER_FEDERAL_501H_AC_Report_20250622082851.pdf
 - ORE_DIGGER_FEDERAL_501H_Planning_Report_20250622082851.pdf
 - ORE_DIGGER_FEDERAL_501H_PPlot_20250622082851.pdf

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Conditions of Approval

Additional

ORE_DIGGER_FEDERAL_501H_AC_Report_20250923084725.pdf
ORE_DIGGER_FEDERAL_501H_PPlot_20250923084725.pdf
Ore_Digger_Fed_Com_501H___Potash_Reef_APD_Drilling_Program_20250923084724.pdf
ORE_DIGGER_FEDERAL_501H_Planning_Report_20250923084724.pdf
ORE_DIGGER_FED_501H_COAs_20250923084710.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: JUN 22, 2025 08:30 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: 09/24/2025
Signature: Chris Walls	

ConocoPhillips Company - Ore Digger Federal #501H

1. Geologic Formations

TVD of target	10,519' EOL	Pilot hole depth	N/A
MD at TD:	20,812'	Deepest expected fresh water:	325'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1484	Water	
Top of Salt	1872	Salt	
USGS Marker Bed 126	2680	Salt	
Base of Salt	3103	Salt Water	
Capitan Reef	3472	Salt Water	
Lamar	5434	Oil/Gas	
Brushy Canyon	6993	Oil/Gas	
Bone Spring	8661	Oil/Gas	
BS1S	9688	Oil/Gas	
BS1SH	9959	Oil/Gas	
BS2S	10205	Target	
BS3C	10719	Not Penetrated	

Potash well archetype: 4-String Design - Uncemented Annulus between 2nd Intermediate and Production Casing Strings (Figure E). Sundry aims to comply with R-111-Q as passed on 5/10/2024.

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
17.50"	0	1730	13.375"	54.5	J55	BTC	1.43	1.97	9.05	9.64
12.25"	0	3300	10.750"	45.5	J55	BTC	2.24	2.52	4.76	5.30
9.875"	0	5390	8.625"	32	P110-ICY	W441	2.26	1.96	6.63	5.39
7.875"	0	20,812'	5.5"	23	P110-CY	TXP-BTC	2.53	3.10	3.01	3.01
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse. Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and
All casing strings will be tested in accordance with 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 Company - Ore Digger Federal #501H

	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?	Y
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary?	Y
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	Y
If yes, are the first three strings cemented to surface?	Y
Is 2 nd string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

ConocoPhillips Company - Ore Digger Federal #501H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft ³ / sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	860	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	240	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl ₂
Int. #1	710	12.9	1.78	9.21	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	100	14.8	1.42	6.6	8	Tail: Class C + 2% CaCl ₂
Inter. #2	680	12.9	1.78	9.21	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	100	14.8	1.42	6.6	8	Tail: Class C + 2% CaCl ₂
Prod	120	10.5	3.08	19.55	72	Lead: NeoCem
	1390	13.2	1.34	5.7	19	Tail: 50:50:2 Class H Blend

Intermediate #1 Salt/Potash string cemented to surface. Zone of critical cement - 300' above shoe. Minimum 50% OH excess will be pumped. Drill out to wait for 500 PSI compressive strength on lead and tail.

Intermediate #2 Reef string cemented to surface. Zone of critical cement - 500' above shoe. Drill out wait for 500 PSI compressive strength on lead and tail.

Production cement TOC at 7,993' (1,000' below top of Brushy Canyon) leaving uncemented annulus between 2nd intermediate and production casing, leaving DMG/Brushy Canyon open as a relief valve. Post

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%
1 st Intermediate	0'	50%
2 nd Intermediate	0'	50%
Production	7,993'	0% OH in Lateral (KOP to EOL)

ConocoPhillips Company - Ore Digger Federal #501H

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:
12 1/4"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
9-7/8"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
7-7/8"	13-5/8"	10M	5M Annular	x	5000psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 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 Onshore Order #2.
Y	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 Company - Ore Digger Federal #501H

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	10-3/4" Int shoe	Saturated Brine	10	28-34	N/C
10-3/4" Int shoe	8-5/8" Int shoe	Saturated Brine	10	28-34	N/C
8-5/8" Int 2 shoe	Lateral TD	WBM	9.5-10.5	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
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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 (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	Pilot Hole TD to ICP

ConocoPhillips Company - Ore Digger Federal #501H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	5575 psi at 10205' TVD
Abnormal Temperature	NO 65 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	H2S is present
Y	H2S Plan attached

8. Other Facets of Operation

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

x	H2S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

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0. SHL: SESW / 405 FSL / 1800 FWL / TWSP: 20S / RANGE: 33E / SECTION: 35 / LAT: 32.523457 / LONG: -103.636655 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 100 FSL / 1000 FWL / TWSP: 20S / RANGE: 33E / SECTION: 35 / LAT: 32.522619 / LONG: -103.63925 (TVD: 10438 feet, MD: 10525 feet)

BHL: NWNW / 50 FNL / 1000 FWL / TWSP: 20S / RANGE: 33E / SECTION: 26 / LAT: 32.551248 / LONG: -103.639236 (TVD: 10600 feet, MD: 20811 feet)

DELAWARE BASIN WEST

ZEUS WEST__NM_E

ORE DIGGER PROJECT

_ORE DIGGER FEDERAL 501H

OWB

PWP0

Anticollision Report

18 July, 2024

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Reference	PWP0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Max. Cent. Dist. of 1,000.0usft or Max. SF of 2	Error Surface:	Combined Pedal Curve
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Added to Error Values

Survey Tool Program		Date	7/18/2024		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	20,811.3	PWP0 (OWB)	r.5 MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correc	

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						
GRIZZOUGAR FEDERAL PROJECT						
_GRIZZOUGAR FED COM 501H - OWB - PWP0A	6,753.0	6,901.0	361.6	334.9	13.513 CC, ES	
_GRIZZOUGAR FED COM 501H - OWB - PWP0A	10,172.6	10,315.2	482.9	435.3	10.157 SF	
_GRIZZOUGAR FED COM 502H - OWB - PWP0	10,107.3	10,134.4	590.2	537.7	11.239 CC, ES, SF	
_GRIZZOUGAR FED COM 701H - OWB - PWP0A	6,652.2	6,797.5	275.7	249.1	10.367 CC, ES	
_GRIZZOUGAR FED COM 701H - OWB - PWP0A	10,175.0	10,332.1	440.8	388.8	8.477 SF	
_GRIZZOUGAR FED COM 702H - OWB - PWP0	10,172.6	10,196.8	567.6	515.7	10.922 CC, ES	
_GRIZZOUGAR FED COM 702H - OWB - PWP0	10,175.0	10,199.3	567.6	515.7	10.922 SF	
ORE DIGGER PROJECT						
_ORE DIGGER FEDERAL 502H - OWB - PWP0	1,500.0	1,500.0	90.3	80.2	8.984 CC, ES	
_ORE DIGGER FEDERAL 502H - OWB - PWP0	1,600.0	1,597.3	93.4	82.9	8.888 SF	
_ORE DIGGER FEDERAL 503H - OWB - PWP0					Out of range	
_ORE DIGGER FEDERAL 504H - OWB - PWP0					Out of range	
_ORE DIGGER FEDERAL 601H - OWB - PWP0	397.6	398.8	11.8	4.7	1.671 Caution - Monitor Closely, CC	
_ORE DIGGER FEDERAL 601H - OWB - PWP0	400.0	401.3	11.8	4.7	1.669 Caution - Monitor Closely, ES, SF	
_ORE DIGGER FEDERAL 602H - OWB - PWP0	1,500.0	1,500.0	60.0	50.0	5.972 CC, ES, SF	
_ORE DIGGER FEDERAL 603H - OWB - PWP0					Out of range	
_ORE DIGGER FEDERAL 604H - OWB - PWP0					Out of range	
HALFWAY 35 FEDERAL 1 - OWB - AWP					Out of range	
MINIS 1 FED COM 2BS 11H - OWB - AWP					Out of range	
MINIS 1 FED HKY COM 8H - OWB - PLANNED					Out of range	
MINIS 1 FED HKY COM 9H - OWB - PLANNED SURVE					Out of range	
MINIS 1 FEDERAL COM 3BS 4H - OWB - AWP					Out of range	
MINIS 1 FEDERAL COM 3BS 5H - OWB - AWP					Out of range	
MINIS 1 FEDERAL COM 3BS 6H - OWB - AWP					Out of range	
MINIS 1 FEDERAL COM 3BS 7H - OWB - AWP					Out of range	
MINIS 1 FEDERAL COM WCA 10H - OWB - AWP					Out of range	
MINIS 1 FEDERAL COM WCA 16H - OWB - AWP					Out of range	
TOP HAT 26 FEDERAL #1_PA - OWB - AWP	16,230.2	10,564.2	964.0	617.9	2.785 Normal Operations, CC, ES, SF	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR FED COM 501H - OWB - PWP0A													Offset Site Error: 0.0 usft	
Survey Program: 0-r.5 MWD+IFR1+MS									Rule Assigned:				Offset Well Error: 0.0 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
4,400.0	4,375.0	4,732.4	4,656.3	14.7	15.5	-17.92	-665.0	-1,132.4	981.6	952.9	28.73	34.171		
4,500.0	4,474.1	4,824.5	4,745.3	15.1	15.9	-18.84	-660.8	-1,108.9	945.6	916.2	29.39	32.171		
4,600.0	4,573.1	4,916.7	4,834.3	15.5	16.3	-19.82	-656.7	-1,085.4	909.9	879.8	30.04	30.284		
4,700.0	4,672.2	5,008.8	4,923.3	15.9	16.7	-20.89	-652.5	-1,061.9	874.4	843.7	30.68	28.504		
4,800.0	4,771.2	5,101.0	5,012.4	16.3	17.2	-22.04	-648.4	-1,038.4	839.2	807.9	31.28	26.826		
4,900.0	4,870.3	5,193.2	5,101.4	16.7	17.6	-23.29	-644.2	-1,014.9	804.3	772.5	31.86	25.244		
5,000.0	4,969.3	5,285.3	5,190.4	17.1	18.0	-24.65	-640.1	-991.4	769.9	737.5	32.41	23.757		
5,100.0	5,068.4	5,377.5	5,279.4	17.5	18.5	-26.13	-636.0	-967.9	735.8	702.9	32.91	22.360		
5,200.0	5,167.4	5,469.6	5,368.4	17.9	18.9	-27.75	-631.8	-944.4	702.3	668.9	33.36	21.052		
5,300.0	5,266.5	5,561.8	5,457.4	18.3	19.3	-29.52	-627.7	-921.0	669.3	635.5	33.75	19.831		
5,400.0	5,365.5	5,654.0	5,546.5	18.8	19.8	-31.46	-623.5	-897.5	637.0	602.9	34.07	18.698		
5,500.0	5,464.6	5,746.1	5,635.5	19.2	20.2	-33.60	-619.4	-874.0	605.4	571.1	34.30	17.653		
5,600.0	5,563.7	5,838.3	5,724.5	19.6	20.6	-35.95	-615.3	-850.5	574.8	540.3	34.42	16.699		
5,700.0	5,662.7	5,930.4	5,813.5	20.0	21.1	-38.54	-611.1	-827.0	545.1	510.7	34.42	15.839		
5,800.0	5,761.8	6,022.6	5,902.5	20.4	21.5	-41.41	-607.0	-803.5	516.7	482.5	34.27	15.079		
5,900.0	5,860.8	6,114.7	5,991.6	20.8	22.0	-44.57	-602.8	-780.0	489.8	455.8	33.95	14.427		
6,000.0	5,959.9	6,206.9	6,080.6	21.3	22.4	-48.05	-598.7	-756.5	464.5	431.0	33.43	13.893		
6,100.0	6,058.9	6,299.1	6,169.6	21.7	22.8	-51.88	-594.5	-733.0	441.1	408.4	32.71	13.486		
6,200.0	6,158.0	6,391.2	6,258.6	22.1	23.3	-56.07	-590.4	-709.5	420.1	388.3	31.78	13.219		
6,300.0	6,257.0	6,483.4	6,347.6	22.5	23.7	-60.62	-586.3	-686.1	401.8	371.1	30.67	13.099		
6,400.0	6,356.1	6,575.5	6,436.6	22.9	24.2	-65.51	-582.1	-662.6	386.4	357.0	29.45	13.120		
6,500.0	6,455.1	6,667.7	6,525.7	23.4	24.6	-70.72	-578.0	-639.1	374.5	346.3	28.27	13.250		
6,600.0	6,554.2	6,759.9	6,614.7	23.8	25.1	-76.17	-573.8	-615.6	366.3	339.0	27.30	13.418		
6,700.0	6,653.2	6,852.0	6,703.7	24.2	25.5	-81.77	-569.7	-592.1	362.2	335.4	26.78	13.523		
6,753.0	6,705.7	6,901.0	6,751.1	24.4	25.7	-84.73	-567.5	-579.9	361.6	334.9	26.76	13.513 CC, ES		
6,800.0	6,752.3	6,944.8	6,793.6	24.6	25.9	-87.33	-565.7	-569.4	362.0	335.1	26.92	13.451		
6,900.0	6,851.3	7,038.9	6,885.1	25.0	26.4	-92.70	-561.9	-547.8	365.5	337.8	27.74	13.178		
7,000.0	6,950.4	7,134.1	6,978.1	25.5	26.8	-97.78	-558.3	-527.5	372.1	343.0	29.12	12.779		
7,100.0	7,049.4	7,230.6	7,072.5	25.9	27.3	-102.50	-555.0	-508.5	381.2	350.3	30.88	12.344		
7,200.0	7,148.5	7,328.1	7,168.4	26.3	27.7	-106.84	-551.8	-490.8	392.2	359.3	32.85	11.939		
7,300.0	7,247.5	7,426.7	7,265.6	26.7	28.2	-110.78	-549.0	-474.6	404.5	369.6	34.88	11.597		
7,400.0	7,346.6	7,526.3	7,364.1	27.2	28.6	-114.33	-546.4	-459.9	417.7	380.8	36.89	11.323		
7,416.8	7,363.2	7,543.2	7,380.8	27.2	28.7	-114.88	-546.0	-457.6	420.0	382.8	37.22	11.285		
7,500.0	7,445.7	7,627.2	7,464.1	27.6	29.0	-117.53	-544.1	-446.8	431.1	392.3	38.78	11.116		
7,600.0	7,545.1	7,729.3	7,565.5	28.0	29.4	-120.21	-542.0	-435.2	443.7	403.2	40.47	10.962		
7,700.0	7,644.6	7,832.6	7,668.4	28.4	29.8	-122.39	-540.3	-425.4	454.9	413.0	41.95	10.844		
7,800.0	7,744.3	7,936.9	7,772.4	28.8	30.2	-124.11	-538.9	-417.2	464.6	421.4	43.22	10.749		
7,900.0	7,844.1	8,042.1	7,877.3	29.1	30.6	-125.40	-537.8	-411.0	472.3	428.0	44.27	10.667		
8,000.0	7,944.0	8,147.8	7,982.9	29.4	30.9	-126.30	-537.0	-406.5	477.8	432.7	45.11	10.592		
8,100.0	8,044.0	8,253.9	8,089.0	29.7	31.2	-126.82	-536.5	-404.0	481.1	435.4	45.72	10.523		
8,206.1	8,150.0	8,364.9	8,200.0	29.9	31.4	124.98	-536.4	-403.4	482.1	436.1	46.00	10.481		
8,300.0	8,243.9	8,458.8	8,293.9	29.9	31.4	124.98	-536.4	-403.4	482.1	436.1	46.06	10.467		
8,400.0	8,343.9	8,558.8	8,393.9	29.9	31.5	124.98	-536.4	-403.4	482.1	436.0	46.13	10.451		
8,500.0	8,443.9	8,658.8	8,493.9	30.0	31.5	124.98	-536.4	-403.4	482.1	435.9	46.21	10.434		
8,600.0	8,543.9	8,758.8	8,593.9	30.0	31.5	124.98	-536.4	-403.4	482.1	435.8	46.28	10.418		
8,700.0	8,643.9	8,858.8	8,693.9	30.0	31.5	124.98	-536.4	-403.4	482.1	435.8	46.35	10.401		
8,800.0	8,743.9	8,958.8	8,793.9	30.0	31.6	124.98	-536.4	-403.4	482.1	435.7	46.43	10.384		
8,900.0	8,843.9	9,058.8	8,893.9	30.1	31.6	124.98	-536.4	-403.4	482.1	435.6	46.50	10.367		
9,000.0	8,943.9	9,158.8	8,993.9	30.1	31.6	124.98	-536.4	-403.4	482.1	435.5	46.58	10.350		
9,100.0	9,043.9	9,258.8	9,093.9	30.1	31.7	124.98	-536.4	-403.4	482.1	435.5	46.66	10.334		
9,200.0	9,143.9	9,358.8	9,193.9	30.1	31.7	124.98	-536.4	-403.4	482.1	435.4	46.73	10.317		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR FED COM 501H - OWB - PWP0A												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
9,300.0	9,243.9	9,458.8	9,293.9	30.2	31.7	124.98	-536.4	-403.4	482.1	435.3	46.81	10.300	
9,400.0	9,343.9	9,558.8	9,393.9	30.2	31.8	124.98	-536.4	-403.4	482.1	435.2	46.89	10.283	
9,500.0	9,443.9	9,658.8	9,493.9	30.2	31.8	124.98	-536.4	-403.4	482.1	435.2	46.97	10.266	
9,600.0	9,543.9	9,758.8	9,593.9	30.2	31.8	124.98	-536.4	-403.4	482.1	435.1	47.04	10.249	
9,700.0	9,643.9	9,858.8	9,693.9	30.3	31.9	124.98	-536.4	-403.4	482.1	435.0	47.12	10.231	
9,800.0	9,743.9	9,958.8	9,793.9	30.3	31.9	124.98	-536.4	-403.4	482.1	434.9	47.20	10.214	
9,900.0	9,843.9	10,058.8	9,893.9	30.3	31.9	124.98	-536.4	-403.4	482.1	434.8	47.28	10.197	
10,000.0	9,943.9	10,158.8	9,993.9	30.3	32.0	124.98	-536.4	-403.4	482.1	434.8	47.36	10.180	
10,100.0	10,043.9	10,258.8	10,093.9	30.4	32.0	124.98	-536.4	-403.4	482.1	434.7	47.44	10.163	
10,107.3	10,051.2	10,266.1	10,101.2	30.4	32.0	124.98	-536.4	-403.4	482.1	434.7	47.44	10.162	
10,172.6	10,116.5	10,315.2	10,150.2	30.4	32.0	125.06	-537.2	-403.4	482.9	435.3	47.54	10.157 SF	
10,175.0	10,118.9	10,316.7	10,151.8	30.4	32.0	125.44	-537.3	-403.4	483.0	435.4	47.54	10.158	
10,200.0	10,143.9	10,332.3	10,167.4	30.4	32.0	125.45	-538.5	-403.4	484.5	437.0	47.55	10.191	
10,225.0	10,168.8	10,350.0	10,184.9	30.3	32.0	125.51	-540.5	-403.4	487.4	439.9	47.45	10.272	
10,250.0	10,193.6	10,362.6	10,197.4	30.3	32.0	125.45	-542.3	-403.4	491.4	444.1	47.31	10.388	
10,275.0	10,218.2	10,375.0	10,209.6	30.3	31.9	125.33	-544.4	-403.4	496.8	449.7	47.10	10.549	
10,300.0	10,242.4	10,390.7	10,225.0	30.3	31.9	125.30	-547.6	-403.4	503.4	456.6	46.78	10.760	
10,325.0	10,266.4	10,400.0	10,234.1	30.2	31.9	124.93	-549.6	-403.4	511.3	464.9	46.47	11.004	
10,350.0	10,289.9	10,415.8	10,249.4	30.2	31.9	124.82	-553.6	-403.3	520.5	474.4	46.03	11.307	
10,375.0	10,312.9	10,425.0	10,258.2	30.2	31.9	124.25	-556.1	-403.3	530.9	485.3	45.62	11.638	
10,400.0	10,335.4	10,437.4	10,270.0	30.1	31.9	123.78	-559.8	-403.3	542.5	497.4	45.13	12.021	
10,425.0	10,357.3	10,450.0	10,282.0	30.1	31.9	123.24	-563.8	-403.3	555.3	510.7	44.61	12.450	
10,450.0	10,378.6	10,450.0	10,282.0	30.1	31.9	121.53	-563.8	-403.3	569.3	525.1	44.21	12.878	
10,475.0	10,399.1	10,462.8	10,294.0	30.1	31.9	120.69	-568.3	-403.3	584.4	540.7	43.66	13.386	
10,500.0	10,418.9	10,475.0	10,305.3	30.0	31.9	119.68	-572.8	-403.2	600.5	557.4	43.10	13.932	
10,525.0	10,437.8	10,475.0	10,305.3	30.0	31.9	117.24	-572.8	-403.2	617.4	574.7	42.68	14.466	
10,550.0	10,455.8	10,475.0	10,305.3	30.0	31.9	114.47	-572.8	-403.2	635.3	593.1	42.26	15.033	
10,575.0	10,473.0	10,484.2	10,313.8	30.0	31.9	112.44	-576.4	-403.2	653.9	612.2	41.75	15.662	
10,600.0	10,489.1	10,487.5	10,316.8	29.9	31.9	109.44	-577.8	-403.2	673.2	631.9	41.31	16.296	
10,625.0	10,504.2	10,490.1	10,319.2	29.9	31.9	106.00	-578.8	-403.2	693.1	652.2	40.89	16.951	
10,650.0	10,518.3	10,492.0	10,320.9	29.9	31.8	102.14	-579.6	-403.2	713.6	673.1	40.49	17.624	
10,675.0	10,531.2	10,500.0	10,328.1	29.9	31.8	98.80	-583.0	-403.2	734.5	694.4	40.04	18.345	
10,700.0	10,543.0	10,500.0	10,328.1	29.9	31.8	94.05	-583.0	-403.2	755.7	716.0	39.68	19.045	
10,725.0	10,553.7	10,500.0	10,328.1	29.9	31.8	89.04	-583.0	-403.2	777.1	737.8	39.33	19.758	
10,750.0	10,563.1	10,500.0	10,328.1	29.9	31.8	83.86	-583.0	-403.2	798.8	759.8	39.00	20.483	
10,775.0	10,571.3	10,500.0	10,328.1	29.9	31.8	78.60	-583.0	-403.2	820.5	781.9	38.67	21.218	
10,800.0	10,578.3	10,491.2	10,320.1	29.9	31.8	72.24	-579.2	-403.2	842.2	803.8	38.43	21.915	
10,825.0	10,584.0	10,489.3	10,318.4	29.9	31.9	67.02	-578.5	-403.2	864.0	825.9	38.14	22.652	
10,850.0	10,588.5	10,487.0	10,316.3	29.9	31.9	62.05	-577.6	-403.2	885.7	847.8	37.87	23.390	
10,875.0	10,591.6	10,484.4	10,313.9	29.9	31.9	57.38	-576.5	-403.2	907.2	869.6	37.60	24.128	
10,900.0	10,593.4	10,475.0	10,305.3	29.9	31.9	52.53	-572.8	-403.2	928.6	891.2	37.39	24.835	
10,925.0	10,594.0	10,475.0	10,305.3	29.9	31.9	48.92	-572.8	-403.2	949.6	912.5	37.12	25.581	
10,928.0	10,593.9	10,475.0	10,305.3	29.9	31.9	48.51	-572.8	-403.2	952.1	915.1	37.09	25.672	

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_ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR FED COM 502H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1+MS													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major 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)				
5,600.0	5,563.7	5,777.9	5,748.6	19.6	16.9	-6.01	-556.8	-1,392.8	975.1	939.1	36.08	27.026		
5,700.0	5,662.7	5,874.1	5,843.9	20.0	17.3	-6.01	-550.1	-1,381.2	947.9	911.0	36.86	25.715		
5,800.0	5,761.8	5,962.1	5,931.0	20.4	17.7	-6.00	-544.1	-1,370.8	920.9	883.3	37.66	24.456		
5,900.0	5,860.8	6,045.6	6,013.9	20.8	18.0	-6.01	-539.0	-1,361.9	895.3	856.8	38.45	23.281		
6,000.0	5,959.9	6,129.7	6,097.5	21.3	18.3	-6.03	-534.4	-1,354.0	871.0	831.8	39.24	22.197		
6,100.0	6,058.9	6,214.4	6,181.9	21.7	18.6	-6.06	-530.4	-1,347.1	848.1	808.1	40.02	21.195		
6,200.0	6,158.0	6,300.0	6,267.2	22.1	18.9	-6.09	-527.0	-1,341.2	826.7	786.0	40.78	20.273		
6,300.0	6,257.0	6,385.5	6,352.5	22.5	19.2	-6.14	-524.3	-1,336.5	806.8	765.3	41.53	19.427		
6,400.0	6,356.1	6,471.9	6,438.7	22.9	19.5	-6.20	-522.2	-1,332.8	788.3	746.0	42.26	18.654		
6,500.0	6,455.1	6,558.7	6,525.5	23.4	19.8	-6.28	-520.7	-1,330.2	771.3	728.3	42.97	17.951		
6,600.0	6,554.2	6,645.9	6,612.7	23.8	20.0	-6.37	-519.9	-1,328.8	755.8	712.2	43.64	17.321		
6,700.0	6,653.2	6,736.4	6,703.2	24.2	20.1	-6.47	-519.7	-1,328.5	741.7	697.5	44.23	16.771		
6,800.0	6,752.3	6,835.5	6,802.3	24.6	20.2	-6.59	-519.7	-1,328.5	728.1	683.4	44.73	16.278		
6,900.0	6,851.3	6,934.5	6,901.3	25.0	20.3	-6.72	-519.7	-1,328.5	714.4	669.2	45.22	15.798		
7,000.0	6,950.4	7,033.6	7,000.4	25.5	20.3	-6.85	-519.7	-1,328.5	700.8	655.1	45.72	15.327		
7,100.0	7,049.4	7,132.6	7,099.4	25.9	20.4	-6.99	-519.7	-1,328.5	687.2	641.0	46.22	14.866		
7,200.0	7,148.5	7,231.7	7,198.5	26.3	20.4	-7.13	-519.7	-1,328.5	673.5	626.8	46.73	14.415		
7,300.0	7,247.5	7,330.7	7,297.5	26.7	20.5	-7.28	-519.7	-1,328.5	659.9	612.7	47.23	13.973		
7,400.0	7,346.6	7,429.8	7,396.6	27.2	20.5	-7.43	-519.7	-1,328.5	646.3	598.6	47.73	13.540		
7,416.8	7,363.2	7,446.4	7,413.2	27.2	20.5	-7.46	-519.7	-1,328.5	644.0	596.2	47.81	13.469		
7,500.0	7,445.7	7,528.9	7,495.7	27.6	20.6	-7.57	-519.7	-1,328.5	633.3	585.0	48.23	13.130		
7,600.0	7,545.1	7,628.3	7,595.1	28.0	20.6	-7.69	-519.7	-1,328.5	621.9	573.2	48.72	12.765		
7,700.0	7,644.6	7,727.8	7,694.6	28.4	20.7	-7.80	-519.7	-1,328.5	612.3	563.1	49.20	12.447		
7,800.0	7,744.3	7,827.5	7,794.3	28.8	20.7	-7.89	-519.7	-1,328.5	604.5	554.8	49.66	12.173		
7,900.0	7,844.1	7,927.3	7,894.1	29.1	20.8	-7.97	-519.7	-1,328.5	598.3	548.2	50.09	11.944		
8,000.0	7,944.0	8,027.2	7,994.0	29.4	20.8	-8.02	-519.7	-1,328.5	593.9	543.4	50.50	11.759		
8,100.0	8,044.0	8,127.1	8,094.0	29.7	20.9	-8.05	-519.7	-1,328.5	591.2	540.3	50.88	11.620		
8,206.1	8,150.0	8,233.2	8,200.0	29.9	20.9	-116.10	-519.7	-1,328.5	590.2	539.1	51.10	11.550		
8,300.0	8,243.9	8,327.1	8,293.9	29.9	21.0	-116.10	-519.7	-1,328.5	590.2	539.1	51.17	11.535		
8,400.0	8,343.9	8,427.1	8,393.9	29.9	21.1	-116.10	-519.7	-1,328.5	590.2	539.0	51.24	11.519		
8,500.0	8,443.9	8,527.1	8,493.9	30.0	21.1	-116.10	-519.7	-1,328.5	590.2	538.9	51.31	11.503		
8,600.0	8,543.9	8,627.1	8,593.9	30.0	21.2	-116.10	-519.7	-1,328.5	590.2	538.8	51.38	11.487		
8,700.0	8,643.9	8,727.1	8,693.9	30.0	21.2	-116.10	-519.7	-1,328.5	590.2	538.8	51.46	11.471		
8,800.0	8,743.9	8,827.1	8,793.9	30.0	21.3	-116.10	-519.7	-1,328.5	590.2	538.7	51.53	11.454		
8,900.0	8,843.9	8,927.1	8,893.9	30.1	21.3	-116.10	-519.7	-1,328.5	590.2	538.6	51.60	11.438		
9,000.0	8,943.9	9,027.1	8,993.9	30.1	21.4	-116.10	-519.7	-1,328.5	590.2	538.5	51.68	11.422		
9,100.0	9,043.9	9,127.1	9,093.9	30.1	21.4	-116.10	-519.7	-1,328.5	590.2	538.5	51.75	11.405		
9,200.0	9,143.9	9,227.1	9,193.9	30.1	21.5	-116.10	-519.7	-1,328.5	590.2	538.4	51.83	11.389		
9,300.0	9,243.9	9,327.1	9,293.9	30.2	21.6	-116.10	-519.7	-1,328.5	590.2	538.3	51.90	11.372		
9,400.0	9,343.9	9,427.1	9,393.9	30.2	21.6	-116.10	-519.7	-1,328.5	590.2	538.2	51.98	11.356		
9,500.0	9,443.9	9,527.1	9,493.9	30.2	21.7	-116.10	-519.7	-1,328.5	590.2	538.2	52.05	11.339		
9,600.0	9,543.9	9,627.1	9,593.9	30.2	21.7	-116.10	-519.7	-1,328.5	590.2	538.1	52.13	11.322		
9,700.0	9,643.9	9,727.1	9,693.9	30.3	21.8	-116.10	-519.7	-1,328.5	590.2	538.0	52.21	11.306		
9,800.0	9,743.9	9,827.1	9,793.9	30.3	21.8	-116.10	-519.7	-1,328.5	590.2	537.9	52.28	11.289		
9,900.0	9,843.9	9,927.1	9,893.9	30.3	21.9	-116.10	-519.7	-1,328.5	590.2	537.9	52.36	11.272		
10,000.0	9,943.9	10,027.1	9,993.9	30.3	22.0	-116.10	-519.7	-1,328.5	590.2	537.8	52.44	11.256		
10,100.0	10,043.9	10,127.1	10,093.9	30.4	22.0	-116.10	-519.7	-1,328.5	590.2	537.7	52.51	11.240		
10,107.3	10,051.2	10,134.4	10,101.2	30.4	22.0	-116.10	-519.7	-1,328.5	590.2	537.7	52.52	11.239 CC, ES, SF		
10,172.6	10,116.5	10,184.3	10,151.1	30.4	22.0	-116.18	-520.5	-1,328.5	590.8	538.2	52.56	11.240		
10,175.0	10,118.9	10,185.9	10,152.7	30.4	22.0	-115.80	-520.6	-1,328.5	590.9	538.3	52.56	11.242		
10,200.0	10,143.9	10,200.0	10,166.7	30.4	22.0	-115.80	-521.7	-1,328.5	592.1	539.6	52.54	11.270		

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design:	GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR FED COM 502H - 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		Rule Assigned:		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	
10,225.0	10,168.8	10,217.8	10,184.4	30.3	21.9	-115.86	-523.7	-1,328.5	594.3	541.8	52.47	11.326	
10,250.0	10,193.6	10,233.1	10,199.6	30.3	21.9	-115.89	-526.0	-1,328.4	597.4	545.0	52.38	11.405	
10,275.0	10,218.2	10,250.0	10,216.2	30.3	21.9	-115.97	-529.0	-1,328.4	601.5	549.3	52.27	11.509	
10,300.0	10,242.4	10,262.0	10,227.9	30.3	21.9	-115.86	-531.5	-1,328.4	606.7	554.5	52.14	11.636	
10,325.0	10,266.4	10,275.0	10,240.6	30.2	21.8	-115.75	-534.5	-1,328.4	612.9	560.9	51.98	11.790	
10,350.0	10,289.9	10,287.6	10,252.8	30.2	21.8	-115.56	-537.8	-1,328.4	620.1	568.3	51.80	11.971	
10,375.0	10,312.9	10,300.0	10,264.6	30.2	21.8	-115.30	-541.3	-1,328.3	628.4	576.8	51.59	12.181	
10,400.0	10,335.4	10,309.6	10,273.8	30.1	21.8	-114.79	-544.3	-1,328.3	637.8	586.4	51.36	12.417	
10,425.0	10,357.3	10,319.2	10,282.8	30.1	21.7	-114.17	-547.4	-1,328.3	648.2	597.1	51.11	12.682	
10,450.0	10,378.6	10,325.0	10,288.3	30.1	21.7	-113.16	-549.4	-1,328.3	659.6	608.8	50.85	12.972	
10,475.0	10,399.1	10,335.4	10,298.0	30.1	21.7	-112.35	-553.1	-1,328.3	672.1	621.5	50.56	13.294	
10,500.0	10,418.9	10,342.1	10,304.2	30.0	21.7	-111.11	-555.6	-1,328.3	685.5	635.3	50.26	13.639	
10,525.0	10,437.8	10,350.0	10,311.5	30.0	21.7	-109.82	-558.7	-1,328.2	699.9	649.9	49.94	14.013	
10,550.0	10,455.8	10,350.0	10,311.5	30.0	21.7	-107.64	-558.7	-1,328.2	715.0	665.4	49.66	14.400	
10,575.0	10,473.0	10,356.8	10,317.7	30.0	21.7	-105.88	-561.4	-1,328.2	731.0	681.7	49.33	14.818	
10,600.0	10,489.1	10,360.1	10,320.7	29.9	21.7	-103.60	-562.8	-1,328.2	747.7	698.7	49.02	15.253	
10,625.0	10,504.2	10,362.7	10,323.0	29.9	21.7	-101.03	-563.8	-1,328.2	765.1	716.4	48.72	15.705	
10,650.0	10,518.3	10,364.5	10,324.7	29.9	21.7	-98.17	-564.6	-1,328.2	783.0	734.6	48.42	16.173	
10,675.0	10,531.2	10,365.7	10,325.8	29.9	21.6	-95.05	-565.1	-1,328.2	801.4	753.3	48.12	16.653	
10,700.0	10,543.0	10,366.3	10,326.3	29.9	21.6	-91.67	-565.4	-1,328.2	820.3	772.4	47.84	17.145	
10,725.0	10,553.7	10,366.3	10,326.3	29.9	21.6	-88.08	-565.4	-1,328.2	839.5	791.9	47.57	17.646	
10,750.0	10,563.1	10,365.7	10,325.8	29.9	21.6	-84.31	-565.1	-1,328.2	858.9	811.6	47.31	18.155	
10,775.0	10,571.3	10,364.6	10,324.8	29.9	21.7	-80.41	-564.7	-1,328.2	878.6	831.5	47.06	18.668	
10,800.0	10,578.3	10,363.1	10,323.5	29.9	21.7	-76.45	-564.0	-1,328.2	898.4	851.5	46.83	19.184	
10,825.0	10,584.0	10,361.1	10,321.7	29.9	21.7	-72.48	-563.2	-1,328.2	918.2	871.6	46.60	19.702	
10,850.0	10,588.5	10,358.8	10,319.5	29.9	21.7	-68.57	-562.2	-1,328.2	938.1	891.7	46.39	20.220	
10,875.0	10,591.6	10,350.0	10,311.5	29.9	21.7	-64.26	-558.7	-1,328.2	957.9	911.7	46.24	20.714	
10,900.0	10,593.4	10,350.0	10,311.5	29.9	21.7	-60.88	-558.7	-1,328.2	977.5	931.5	46.03	21.237	
10,925.0	10,594.0	10,350.0	10,311.5	29.9	21.7	-57.68	-558.7	-1,328.2	997.0	951.2	45.82	21.758	
10,928.0	10,593.9	10,350.0	10,311.5	29.9	21.7	-57.30	-558.7	-1,328.2	999.4	953.6	45.80	21.821	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR FED COM 701H - OWB - PWP0A													Offset Site Error:	0.0 usft
Survey Program:		0-r.5 MWD+IFR1+MS				Rule Assigned:				Offset Well Error:		0.0 usft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		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	
4,200.0	4,176.9	4,536.8	4,467.4	13.9	14.6	-10.12	-552.8	-1,176.2	989.2	961.6	27.59	35.851		
4,300.0	4,276.0	4,629.0	4,556.4	14.3	15.0	-10.82	-549.8	-1,152.5	952.0	923.7	28.32	33.620		
4,400.0	4,375.0	4,721.2	4,645.5	14.7	15.4	-11.57	-546.9	-1,128.8	915.0	886.0	29.04	31.511		
4,500.0	4,474.1	4,813.4	4,734.5	15.1	15.8	-12.38	-544.0	-1,105.2	878.2	848.4	29.75	29.517		
4,600.0	4,573.1	4,905.6	4,823.6	15.5	16.3	-13.27	-541.1	-1,081.5	841.5	811.0	30.45	27.633		
4,700.0	4,672.2	4,997.8	4,912.6	15.9	16.7	-14.23	-538.2	-1,057.8	805.0	773.8	31.14	25.851		
4,800.0	4,771.2	5,089.9	5,001.7	16.3	17.1	-15.28	-535.3	-1,034.1	768.7	736.9	31.81	24.167		
4,900.0	4,870.3	5,182.1	5,090.7	16.7	17.5	-16.43	-532.4	-1,010.4	732.6	700.2	32.45	22.575		
5,000.0	4,969.3	5,274.3	5,179.8	17.1	18.0	-17.69	-529.5	-986.7	696.9	663.8	33.07	21.072		
5,100.0	5,068.4	5,366.5	5,268.8	17.5	18.4	-19.09	-526.6	-963.1	661.5	627.8	33.65	19.655		
5,200.0	5,167.4	5,458.7	5,357.9	17.9	18.8	-20.65	-523.7	-939.4	626.5	592.3	34.19	18.322		
5,300.0	5,266.5	5,550.9	5,446.9	18.3	19.3	-22.37	-520.8	-915.7	591.9	557.2	34.67	17.071		
5,400.0	5,365.5	5,643.1	5,536.0	18.8	19.7	-24.31	-517.9	-892.0	557.9	522.8	35.09	15.901		
5,500.0	5,464.6	5,735.3	5,625.0	19.2	20.1	-26.47	-515.0	-868.3	524.6	489.2	35.41	14.814		
5,600.0	5,563.7	5,827.5	5,714.1	19.6	20.6	-28.92	-512.0	-844.6	492.0	456.4	35.62	13.812		
5,700.0	5,662.7	5,919.6	5,803.1	20.0	21.0	-31.69	-509.1	-821.0	460.5	424.8	35.70	12.899		
5,800.0	5,761.8	6,011.8	5,892.1	20.4	21.5	-34.83	-506.2	-797.3	430.1	394.5	35.59	12.083		
5,900.0	5,860.8	6,104.0	5,981.2	20.8	21.9	-38.40	-503.3	-773.6	401.1	365.8	35.27	11.373		
6,000.0	5,959.9	6,196.2	6,070.2	21.3	22.3	-42.46	-500.4	-749.9	373.9	339.2	34.68	10.782		
6,100.0	6,058.9	6,288.4	6,159.3	21.7	22.8	-47.08	-497.5	-726.2	348.9	315.1	33.77	10.330		
6,200.0	6,158.0	6,380.6	6,248.3	22.1	23.2	-52.30	-494.6	-702.6	326.6	294.0	32.54	10.038		
6,300.0	6,257.0	6,472.8	6,337.4	22.5	23.7	-58.14	-491.7	-678.9	307.6	276.6	30.99	9.923		
6,400.0	6,356.1	6,565.0	6,426.4	22.9	24.1	-64.57	-488.8	-655.2	292.4	263.2	29.29	9.986		
6,500.0	6,455.1	6,657.2	6,515.5	23.4	24.5	-71.52	-485.9	-631.5	281.9	254.2	27.71	10.172		
6,600.0	6,554.2	6,749.3	6,604.5	23.8	25.0	-78.80	-483.0	-607.8	276.4	249.7	26.72	10.343		
6,652.2	6,605.9	6,797.5	6,651.1	24.0	25.2	-82.67	-481.5	-595.5	275.7	249.1	26.59	10.367 CC, ES		
6,700.0	6,653.2	6,841.9	6,694.0	24.2	25.4	-86.19	-480.1	-584.3	276.3	249.5	26.77	10.321		
6,800.0	6,752.3	6,935.7	6,785.0	24.6	25.9	-93.31	-477.3	-561.8	281.1	253.1	27.95	10.055		
6,900.0	6,851.3	7,030.7	6,877.5	25.0	26.3	-99.93	-474.7	-540.6	290.0	260.0	29.97	9.675		
7,000.0	6,950.4	7,126.8	6,971.6	25.5	26.8	-105.93	-472.3	-520.6	302.1	269.6	32.43	9.315		
7,100.0	7,049.4	7,224.1	7,067.1	25.9	27.2	-111.28	-470.0	-502.0	316.5	281.5	35.01	9.041		
7,200.0	7,148.5	7,322.6	7,164.0	26.3	27.7	-115.98	-467.9	-484.8	332.4	294.9	37.51	8.863		
7,300.0	7,247.5	7,422.1	7,262.2	26.7	28.1	-120.08	-465.9	-469.2	349.3	309.4	39.85	8.765		
7,400.0	7,346.6	7,522.6	7,361.7	27.2	28.5	-123.64	-464.2	-455.0	366.4	324.4	41.99	8.725		
7,416.8	7,363.2	7,539.5	7,378.5	27.2	28.6	-124.19	-463.9	-452.8	369.3	327.0	42.33	8.724		
7,500.0	7,445.7	7,624.2	7,462.6	27.6	29.0	-126.77	-462.7	-442.5	383.1	339.2	43.91	8.726		
7,600.0	7,545.1	7,727.2	7,564.9	28.0	29.4	-129.32	-461.3	-431.6	398.3	352.8	45.56	8.744		
7,700.0	7,644.6	7,831.3	7,668.6	28.4	29.8	-131.33	-460.2	-422.5	411.6	364.6	46.97	8.763		
7,800.0	7,744.3	7,936.3	7,773.4	28.8	30.2	-132.87	-459.3	-415.2	422.5	374.4	48.16	8.774		
7,900.0	7,844.1	8,042.1	7,879.0	29.1	30.5	-134.00	-458.7	-409.8	431.0	381.9	49.14	8.771		
8,000.0	7,944.0	8,148.4	7,985.3	29.4	30.8	-134.76	-458.2	-406.3	436.9	387.0	49.92	8.751		
8,100.0	8,044.0	8,255.1	8,092.0	29.7	31.1	-135.17	-458.0	-404.7	440.1	389.6	50.45	8.723		
8,206.1	8,150.0	8,363.1	8,200.0	29.9	31.1	116.69	-458.0	-404.6	440.8	390.2	50.66	8.701		
8,300.0	8,243.9	8,457.1	8,293.9	29.9	31.2	116.69	-458.0	-404.6	440.8	390.1	50.73	8.690		
8,400.0	8,343.9	8,557.1	8,393.9	29.9	31.2	116.69	-458.0	-404.6	440.8	390.0	50.79	8.679		
8,500.0	8,443.9	8,657.1	8,493.9	30.0	31.2	116.69	-458.0	-404.6	440.8	390.0	50.85	8.668		
8,600.0	8,543.9	8,757.1	8,593.9	30.0	31.3	116.69	-458.0	-404.6	440.8	389.9	50.92	8.657		
8,700.0	8,643.9	8,857.1	8,693.9	30.0	31.3	116.69	-458.0	-404.6	440.8	389.8	50.99	8.646		
8,800.0	8,743.9	8,957.1	8,793.9	30.0	31.3	116.69	-458.0	-404.6	440.8	389.8	51.05	8.635		
8,900.0	8,843.9	9,057.1	8,893.9	30.1	31.3	116.69	-458.0	-404.6	440.8	389.7	51.12	8.623		
9,000.0	8,943.9	9,157.1	8,993.9	30.1	31.4	116.69	-458.0	-404.6	440.8	389.6	51.19	8.612		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well_ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR FED COM 701H - OWB - PWP0A													Offset Site Error:	0.0 usft
Survey Program:		0-r.5 MWD+IFR1+MS						Rule Assigned:					Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
9,100.0	9,043.9	9,257.1	9,093.9	30.1	31.4	116.69	-458.0	-404.6	440.8	389.6	51.25	8.601		
9,200.0	9,143.9	9,357.1	9,193.9	30.1	31.4	116.69	-458.0	-404.6	440.8	389.5	51.32	8.589		
9,300.0	9,243.9	9,457.1	9,293.9	30.2	31.5	116.69	-458.0	-404.6	440.8	389.4	51.39	8.578		
9,400.0	9,343.9	9,557.1	9,393.9	30.2	31.5	116.69	-458.0	-404.6	440.8	389.4	51.46	8.566		
9,500.0	9,443.9	9,657.1	9,493.9	30.2	31.5	116.69	-458.0	-404.6	440.8	389.3	51.53	8.555		
9,600.0	9,543.9	9,757.1	9,593.9	30.2	31.6	116.69	-458.0	-404.6	440.8	389.2	51.60	8.543		
9,700.0	9,643.9	9,857.1	9,693.9	30.3	31.6	116.69	-458.0	-404.6	440.8	389.1	51.67	8.532		
9,800.0	9,743.9	9,957.1	9,793.9	30.3	31.6	116.69	-458.0	-404.6	440.8	389.1	51.74	8.520		
9,900.0	9,843.9	10,057.1	9,893.9	30.3	31.7	116.69	-458.0	-404.6	440.8	389.0	51.81	8.508		
10,000.0	9,943.9	10,157.1	9,993.9	30.3	31.7	116.69	-458.0	-404.6	440.8	388.9	51.88	8.497		
10,100.0	10,043.9	10,257.1	10,093.9	30.4	31.7	116.69	-458.0	-404.6	440.8	388.9	51.95	8.485		
10,172.6	10,116.5	10,329.6	10,166.5	30.4	31.8	116.69	-458.0	-404.6	440.8	388.8	52.00	8.478		
10,175.0	10,118.9	10,332.1	10,168.9	30.4	31.8	117.07	-458.0	-404.6	440.8	388.8	52.00	8.477 SF		
10,200.0	10,143.9	10,357.1	10,193.9	30.4	31.8	117.12	-458.0	-404.6	441.2	389.2	52.00	8.484		
10,225.0	10,168.8	10,382.0	10,218.8	30.3	31.8	117.26	-458.0	-404.6	442.1	390.2	51.93	8.513		
10,250.0	10,193.6	10,406.7	10,243.6	30.3	31.8	117.48	-458.0	-404.6	443.7	391.9	51.81	8.565		
10,275.0	10,218.2	10,431.3	10,268.2	30.3	31.8	117.77	-458.0	-404.6	445.9	394.3	51.62	8.639		
10,300.0	10,242.4	10,455.6	10,292.4	30.3	31.8	118.13	-458.0	-404.6	448.8	397.4	51.36	8.737		
10,325.0	10,266.4	10,479.5	10,316.4	30.2	31.8	118.53	-458.0	-404.6	452.3	401.3	51.05	8.860		
10,350.0	10,289.9	10,503.0	10,339.9	30.2	31.8	118.97	-458.0	-404.6	456.6	405.9	50.68	9.009		
10,375.0	10,312.9	10,526.1	10,362.9	30.2	31.8	119.42	-458.0	-404.6	461.6	411.3	50.26	9.185		
10,400.0	10,335.4	10,548.6	10,385.4	30.1	31.8	119.88	-458.0	-404.6	467.4	417.6	49.78	9.389		
10,425.0	10,357.3	10,570.5	10,407.3	30.1	31.8	120.32	-458.0	-404.6	474.1	424.8	49.26	9.624		
10,450.0	10,378.6	10,591.7	10,428.6	30.1	31.8	120.71	-458.0	-404.6	481.6	432.9	48.69	9.890		
10,475.0	10,399.1	10,612.3	10,449.1	30.1	31.8	121.05	-458.0	-404.6	490.0	441.9	48.09	10.188		
10,500.0	10,418.9	10,632.0	10,468.9	30.0	31.9	121.32	-458.0	-404.6	499.3	451.8	47.46	10.520		
10,525.0	10,437.8	10,650.9	10,487.8	30.0	31.9	121.48	-458.0	-404.6	509.5	462.7	46.81	10.886		
10,550.0	10,455.8	10,669.0	10,505.8	30.0	31.9	121.52	-458.0	-404.6	520.7	474.6	46.14	11.286		
10,575.0	10,473.0	10,686.1	10,523.0	30.0	31.9	121.42	-458.0	-404.6	532.9	487.4	45.46	11.721		
10,600.0	10,489.1	10,702.2	10,539.1	29.9	31.9	121.16	-458.0	-404.6	546.0	501.2	44.78	12.192		
10,625.0	10,504.2	10,717.3	10,554.2	29.9	31.9	120.71	-458.0	-404.6	560.0	515.9	44.11	12.696		
10,650.0	10,518.3	10,731.4	10,568.3	29.9	31.9	120.04	-458.0	-404.6	574.9	531.5	43.44	13.234		
10,675.0	10,531.2	10,744.4	10,581.2	29.9	31.9	119.13	-458.0	-404.6	590.7	547.9	42.79	13.804		
10,700.0	10,543.0	10,756.2	10,593.0	29.9	31.9	117.95	-458.0	-404.6	607.4	565.2	42.16	14.405		
10,725.0	10,553.7	10,766.8	10,603.7	29.9	31.9	116.47	-458.0	-404.6	624.8	583.2	41.56	15.035		
10,750.0	10,563.1	10,776.3	10,613.1	29.9	31.9	114.64	-458.0	-404.6	643.0	602.0	40.97	15.693		
10,775.0	10,571.3	10,784.5	10,621.3	29.9	31.9	112.43	-458.0	-404.6	661.8	621.4	40.42	16.375		
10,800.0	10,578.3	10,791.5	10,628.3	29.9	31.9	109.81	-458.0	-404.6	681.3	641.4	39.89	17.079		
10,825.0	10,584.0	10,797.2	10,634.0	29.9	31.9	106.72	-458.0	-404.6	701.3	661.9	39.39	17.803		
10,850.0	10,588.5	10,801.6	10,638.5	29.9	31.9	103.15	-458.0	-404.6	721.9	682.9	38.92	18.545		
10,875.0	10,591.6	10,804.7	10,641.6	29.9	31.9	99.08	-458.0	-404.6	742.8	704.3	38.48	19.301		
10,900.0	10,593.4	10,806.6	10,643.4	29.9	31.9	94.51	-458.0	-404.6	764.1	726.0	38.07	20.068		
10,925.0	10,594.0	10,807.1	10,644.0	29.9	31.9	89.49	-458.0	-404.6	785.6	747.9	37.69	20.845		
10,928.0	10,593.9	10,807.1	10,643.9	29.9	31.9	88.86	-458.0	-404.6	788.2	750.6	37.64	20.939		
11,000.0	10,593.1	10,806.3	10,643.1	30.0	31.9	88.74	-458.0	-404.6	851.4	814.7	36.70	23.199		
11,100.0	10,592.0	10,805.1	10,642.0	30.1	31.9	88.57	-458.0	-404.6	941.3	905.5	35.71	26.356		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design:	GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR 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		Rule Assigned:		Distance		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		
5,300.0	5,266.5	5,481.6	5,455.2	18.3	15.7	-1.89	-488.6	-1,398.3	996.3	962.5	33.81	29.469		
5,400.0	5,365.5	5,577.8	5,550.4	18.8	16.1	-1.92	-484.0	-1,385.7	968.9	934.3	34.58	28.016		
5,500.0	5,464.6	5,665.6	5,637.4	19.2	16.4	-1.94	-479.9	-1,374.4	941.8	906.4	35.37	26.630		
5,600.0	5,563.7	5,748.7	5,719.9	19.6	16.7	-1.97	-476.4	-1,364.8	916.0	879.8	36.15	25.335		
5,700.0	5,662.7	5,832.5	5,803.2	20.0	17.1	-1.99	-473.3	-1,356.3	891.6	854.6	36.93	24.139		
5,800.0	5,761.8	5,916.8	5,887.1	20.4	17.4	-2.02	-470.6	-1,348.8	868.6	830.9	37.71	23.035		
5,900.0	5,860.8	6,000.0	5,970.0	20.8	17.7	-2.05	-468.3	-1,342.6	847.0	808.6	38.47	22.018		
6,000.0	5,959.9	6,087.2	6,057.1	21.3	18.0	-2.08	-466.4	-1,337.3	826.9	787.7	39.22	21.087		
6,100.0	6,058.9	6,173.2	6,143.0	21.7	18.2	-2.11	-464.9	-1,333.3	808.3	768.4	39.95	20.235		
6,200.0	6,158.0	6,259.7	6,229.4	22.1	18.5	-2.14	-463.9	-1,330.4	791.2	750.5	40.65	19.461		
6,300.0	6,257.0	6,346.6	6,316.2	22.5	18.7	-2.17	-463.3	-1,328.9	775.5	734.2	41.33	18.766		
6,400.0	6,356.1	6,436.4	6,406.1	22.9	18.9	-2.21	-463.2	-1,328.5	761.3	719.4	41.92	18.160		
6,500.0	6,455.1	6,535.4	6,505.1	23.4	18.9	-2.25	-463.2	-1,328.5	747.6	705.2	42.43	17.622		
6,600.0	6,554.2	6,634.5	6,604.2	23.8	19.0	-2.29	-463.2	-1,328.5	733.9	691.0	42.93	17.096		
6,700.0	6,653.2	6,733.5	6,703.2	24.2	19.0	-2.34	-463.2	-1,328.5	720.2	676.8	43.43	16.581		
6,800.0	6,752.3	6,832.6	6,802.3	24.6	19.1	-2.38	-463.2	-1,328.5	706.5	662.5	43.94	16.077		
6,900.0	6,851.3	6,931.7	6,901.3	25.0	19.1	-2.43	-463.2	-1,328.5	692.7	648.3	44.45	15.584		
7,000.0	6,950.4	7,030.7	7,000.4	25.5	19.2	-2.48	-463.2	-1,328.5	679.0	634.1	44.97	15.101		
7,100.0	7,049.4	7,129.8	7,099.4	25.9	19.2	-2.53	-463.2	-1,328.5	665.3	619.8	45.48	14.628		
7,200.0	7,148.5	7,228.8	7,198.5	26.3	19.3	-2.58	-463.2	-1,328.5	651.6	605.6	46.00	14.165		
7,300.0	7,247.5	7,327.9	7,297.5	26.7	19.4	-2.64	-463.2	-1,328.5	637.9	591.3	46.52	13.712		
7,400.0	7,346.6	7,426.9	7,396.6	27.2	19.4	-2.70	-463.2	-1,328.5	624.2	577.1	47.04	13.268		
7,416.8	7,363.2	7,443.5	7,413.2	27.2	19.4	-2.71	-463.2	-1,328.5	621.9	574.7	47.13	13.196		
7,500.0	7,445.7	7,526.0	7,495.7	27.6	19.5	-2.75	-463.2	-1,328.5	611.0	563.5	47.56	12.848		
7,600.0	7,545.1	7,625.4	7,595.1	28.0	19.5	-2.80	-463.2	-1,328.5	599.6	551.6	48.06	12.476		
7,700.0	7,644.6	7,724.9	7,694.6	28.4	19.6	-2.84	-463.2	-1,328.5	589.9	541.4	48.56	12.150		
7,800.0	7,744.3	7,824.6	7,794.3	28.8	19.6	-2.87	-463.2	-1,328.5	582.0	533.0	49.03	11.870		
7,900.0	7,844.1	7,924.4	7,894.1	29.1	19.7	-2.90	-463.2	-1,328.5	575.8	526.3	49.48	11.637		
8,000.0	7,944.0	8,024.3	7,994.0	29.4	19.7	-2.92	-463.2	-1,328.5	571.3	521.4	49.90	11.449		
8,100.0	8,044.0	8,124.3	8,094.0	29.7	19.8	-2.93	-463.2	-1,328.5	568.6	518.3	50.29	11.308		
8,206.1	8,150.0	8,230.3	8,200.0	29.9	19.8	-110.97	-463.2	-1,328.5	567.6	517.1	50.52	11.237		
8,300.0	8,243.9	8,324.3	8,293.9	29.9	19.9	-110.97	-463.2	-1,328.5	567.6	517.1	50.58	11.222		
8,400.0	8,343.9	8,424.3	8,393.9	29.9	20.0	-110.97	-463.2	-1,328.5	567.6	517.0	50.65	11.207		
8,500.0	8,443.9	8,524.3	8,493.9	30.0	20.0	-110.97	-463.2	-1,328.5	567.6	516.9	50.72	11.191		
8,600.0	8,543.9	8,624.3	8,593.9	30.0	20.1	-110.97	-463.2	-1,328.5	567.6	516.8	50.80	11.175		
8,700.0	8,643.9	8,724.3	8,693.9	30.0	20.1	-110.97	-463.2	-1,328.5	567.6	516.8	50.87	11.159		
8,800.0	8,743.9	8,824.3	8,793.9	30.0	20.2	-110.97	-463.2	-1,328.5	567.6	516.7	50.94	11.143		
8,900.0	8,843.9	8,924.3	8,893.9	30.1	20.2	-110.97	-463.2	-1,328.5	567.6	516.6	51.01	11.127		
9,000.0	8,943.9	9,024.3	8,993.9	30.1	20.3	-110.97	-463.2	-1,328.5	567.6	516.5	51.09	11.111		
9,100.0	9,043.9	9,124.3	9,093.9	30.1	20.4	-110.97	-463.2	-1,328.5	567.6	516.5	51.16	11.095		
9,200.0	9,143.9	9,224.3	9,193.9	30.1	20.4	-110.97	-463.2	-1,328.5	567.6	516.4	51.24	11.079		
9,300.0	9,243.9	9,324.3	9,293.9	30.2	20.5	-110.97	-463.2	-1,328.5	567.6	516.3	51.31	11.063		
9,400.0	9,343.9	9,424.3	9,393.9	30.2	20.5	-110.97	-463.2	-1,328.5	567.6	516.3	51.39	11.047		
9,500.0	9,443.9	9,524.3	9,493.9	30.2	20.6	-110.97	-463.2	-1,328.5	567.6	516.2	51.46	11.030		
9,600.0	9,543.9	9,624.3	9,593.9	30.2	20.6	-110.97	-463.2	-1,328.5	567.6	516.1	51.54	11.014		
9,700.0	9,643.9	9,724.3	9,693.9	30.3	20.7	-110.97	-463.2	-1,328.5	567.6	516.0	51.61	10.998		
9,800.0	9,743.9	9,824.3	9,793.9	30.3	20.8	-110.97	-463.2	-1,328.5	567.6	515.9	51.69	10.981		
9,900.0	9,843.9	9,924.3	9,893.9	30.3	20.8	-110.97	-463.2	-1,328.5	567.6	515.9	51.77	10.965		
10,000.0	9,943.9	10,024.3	9,993.9	30.3	20.9	-110.97	-463.2	-1,328.5	567.6	515.8	51.85	10.949		
10,100.0	10,043.9	10,124.3	10,093.9	30.4	20.9	-110.97	-463.2	-1,328.5	567.6	515.7	51.92	10.932		
10,172.6	10,116.5	10,196.8	10,166.5	30.4	21.0	-110.97	-463.2	-1,328.5	567.6	515.7	51.97	10.922 CC, ES		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design:	GRIZZOUGAR FEDERAL PROJECT - _GRIZZOUGAR 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		Rule Assigned:		Distance		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	
10,175.0	10,118.9	10,199.3	10,168.9	30.4	21.0	-110.60	-463.2	-1,328.5	567.6	515.7	51.97	10.922 SF	
10,200.0	10,143.9	10,224.2	10,193.9	30.4	21.0	-110.64	-463.2	-1,328.5	567.9	515.9	51.97	10.928	
10,225.0	10,168.8	10,249.2	10,218.8	30.3	21.0	-110.75	-463.2	-1,328.5	568.7	516.7	51.94	10.948	
10,250.0	10,193.6	10,273.9	10,243.6	30.3	21.0	-110.93	-463.2	-1,328.5	569.9	518.0	51.91	10.979	
10,275.0	10,218.2	10,298.5	10,268.2	30.3	21.0	-111.17	-463.2	-1,328.5	571.6	519.7	51.86	11.021	
10,300.0	10,242.4	10,322.8	10,292.4	30.3	21.1	-111.46	-463.2	-1,328.5	573.8	522.0	51.80	11.076	
10,325.0	10,266.4	10,346.7	10,316.4	30.2	21.1	-111.80	-463.2	-1,328.5	576.6	524.8	51.73	11.145	
10,350.0	10,289.9	10,370.2	10,339.9	30.2	21.1	-112.16	-463.2	-1,328.5	579.9	528.3	51.65	11.228	
10,375.0	10,312.9	10,393.2	10,362.9	30.2	21.1	-112.54	-463.2	-1,328.5	583.9	532.3	51.54	11.327	
10,400.0	10,335.4	10,415.8	10,385.4	30.1	21.1	-112.92	-463.2	-1,328.5	588.4	537.0	51.42	11.444	
10,425.0	10,357.3	10,437.7	10,407.3	30.1	21.1	-113.29	-463.2	-1,328.5	593.7	542.4	51.27	11.579	
10,450.0	10,378.6	10,458.9	10,428.6	30.1	21.1	-113.62	-463.2	-1,328.5	599.7	548.6	51.10	11.735	
10,475.0	10,399.1	10,479.4	10,449.1	30.1	21.1	-113.91	-463.2	-1,328.5	606.5	555.5	50.91	11.912	
10,500.0	10,418.9	10,499.2	10,468.9	30.0	21.2	-114.14	-463.2	-1,328.5	614.0	563.3	50.69	12.111	
10,525.0	10,437.8	10,518.1	10,487.8	30.0	21.2	-114.28	-463.2	-1,328.5	622.3	571.9	50.45	12.335	
10,550.0	10,455.8	10,536.2	10,505.8	30.0	21.2	-114.31	-463.2	-1,328.5	631.5	581.3	50.19	12.583	
10,575.0	10,473.0	10,553.3	10,523.0	30.0	21.2	-114.23	-463.2	-1,328.5	641.5	591.6	49.90	12.857	
10,600.0	10,489.1	10,569.4	10,539.1	29.9	21.2	-114.01	-463.2	-1,328.5	652.4	602.8	49.59	13.157	
10,625.0	10,504.2	10,584.5	10,554.2	29.9	21.2	-113.64	-463.2	-1,328.5	664.2	614.9	49.26	13.483	
10,650.0	10,518.3	10,598.6	10,568.3	29.9	21.2	-113.09	-463.2	-1,328.5	676.8	627.9	48.91	13.836	
10,675.0	10,531.2	10,611.5	10,581.2	29.9	21.2	-112.34	-463.2	-1,328.5	690.2	641.7	48.56	14.215	
10,700.0	10,543.0	10,623.3	10,593.0	29.9	21.2	-111.37	-463.2	-1,328.5	704.5	656.3	48.19	14.619	
10,725.0	10,553.7	10,634.0	10,603.7	29.9	21.2	-110.16	-463.2	-1,328.5	719.5	671.7	47.82	15.048	
10,750.0	10,563.1	10,643.4	10,613.1	29.9	21.2	-108.69	-463.2	-1,328.5	735.3	687.9	47.44	15.500	
10,775.0	10,571.3	10,651.7	10,621.3	29.9	21.2	-106.93	-463.2	-1,328.5	751.9	704.8	47.07	15.974	
10,800.0	10,578.3	10,658.6	10,628.3	29.9	21.3	-104.87	-463.2	-1,328.5	769.0	722.3	46.69	16.469	
10,825.0	10,584.0	10,664.3	10,634.0	29.9	21.3	-102.49	-463.2	-1,328.5	786.8	740.5	46.33	16.983	
10,850.0	10,588.5	10,668.8	10,638.5	29.9	21.3	-99.78	-463.2	-1,328.5	805.1	759.1	45.97	17.514	
10,875.0	10,591.6	10,671.9	10,641.6	29.9	21.3	-96.72	-463.2	-1,328.5	823.9	778.3	45.62	18.059	
10,900.0	10,593.4	10,673.7	10,643.4	29.9	21.3	-93.33	-463.2	-1,328.5	843.1	797.8	45.29	18.616	
10,925.0	10,594.0	10,674.3	10,644.0	29.9	21.3	-89.62	-463.2	-1,328.5	862.7	817.7	44.97	19.184	
10,928.0	10,593.9	10,674.2	10,643.9	29.9	21.3	-89.16	-463.2	-1,328.5	865.0	820.1	44.93	19.252	
11,000.0	10,593.1	10,673.4	10,643.1	30.0	21.3	-89.07	-463.2	-1,328.5	922.9	878.8	44.08	20.938	

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 _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 502H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Rule Assigned:		Distance		Warning						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.76	0.4	90.3	90.3	89.8	0.51	176.756		
100.0	100.0	100.0	100.0	1.2	1.2	89.76	0.4	90.3	90.3	87.4	2.90	31.148		
200.0	200.0	200.0	200.0	1.7	1.7	89.76	0.4	90.3	90.3	86.4	3.89	23.177		
300.0	300.0	300.0	300.0	2.1	2.1	89.76	0.4	90.3	90.3	85.6	4.66	19.352		
400.0	400.0	400.0	400.0	2.4	2.4	89.76	0.4	90.3	90.3	85.0	5.32	16.974		
500.0	500.0	500.0	500.0	2.7	2.7	89.76	0.4	90.3	90.3	84.4	5.90	15.306		
600.0	600.0	600.0	600.0	3.0	3.0	89.76	0.4	90.3	90.3	83.8	6.42	14.050		
700.0	700.0	700.0	700.0	3.2	3.2	89.76	0.4	90.3	90.3	83.4	6.91	13.058		
800.0	800.0	800.0	800.0	3.5	3.5	89.76	0.4	90.3	90.3	82.9	7.37	12.248		
900.0	900.0	900.0	900.0	3.7	3.7	89.76	0.4	90.3	90.3	82.5	7.80	11.569		
1,000.0	1,000.0	1,000.0	1,000.0	3.9	3.9	89.76	0.4	90.3	90.3	82.1	8.21	10.990		
1,100.0	1,100.0	1,100.0	1,100.0	4.1	4.1	89.76	0.4	90.3	90.3	81.7	8.61	10.488		
1,200.0	1,200.0	1,200.0	1,200.0	4.3	4.3	89.76	0.4	90.3	90.3	81.3	8.99	10.046		
1,300.0	1,300.0	1,300.0	1,300.0	4.5	4.5	89.76	0.4	90.3	90.3	80.9	9.35	9.654		
1,400.0	1,400.0	1,400.0	1,400.0	4.7	4.7	89.76	0.4	90.3	90.3	80.6	9.70	9.302		
1,500.0	1,500.0	1,500.0	1,500.0	4.8	4.8	89.76	0.4	90.3	90.3	80.2	10.05	8.984 CC, ES		
1,600.0	1,600.0	1,597.3	1,597.2	5.1	5.1	-161.99	-0.5	91.7	93.4	82.9	10.51	8.888 SF		
1,700.0	1,699.8	1,694.0	1,693.8	5.3	5.3	-161.41	-2.9	95.9	102.7	91.8	10.95	9.387		
1,800.0	1,799.5	1,789.5	1,789.0	5.6	5.6	-160.65	-7.0	102.9	118.3	106.9	11.40	10.377		
1,894.6	1,893.4	1,879.3	1,878.2	5.9	5.7	-159.89	-12.2	111.9	138.6	126.8	11.73	11.807		
1,900.0	1,898.7	1,884.5	1,883.3	5.9	5.7	-159.87	-12.6	112.4	139.8	128.1	11.75	11.902		
2,000.0	1,997.8	1,981.6	1,979.7	6.2	5.9	-159.43	-18.7	122.9	163.6	151.3	12.29	13.311		
2,100.0	2,096.8	2,078.7	2,076.1	6.5	6.2	-159.10	-24.8	133.4	187.3	174.6	12.72	14.730		
2,200.0	2,195.9	2,175.9	2,172.4	6.7	6.4	-158.85	-31.0	143.9	211.1	197.9	13.18	16.018		
2,300.0	2,294.9	2,273.0	2,268.8	7.0	6.7	-158.64	-37.1	154.4	234.9	221.2	13.67	17.183		
2,400.0	2,394.0	2,370.1	2,365.2	7.3	6.9	-158.48	-43.2	164.9	258.6	244.5	14.18	18.236		
2,500.0	2,493.0	2,467.3	2,461.5	7.6	7.2	-158.34	-49.4	175.4	282.4	267.7	14.72	19.186		
2,600.0	2,592.1	2,564.4	2,557.9	7.9	7.5	-158.23	-55.5	185.9	306.2	290.9	15.28	20.042		
2,700.0	2,691.1	2,661.5	2,654.3	8.2	7.9	-158.13	-61.6	196.4	330.0	314.1	15.85	20.815		
2,800.0	2,790.2	2,758.6	2,750.6	8.6	8.2	-158.04	-67.8	206.9	353.7	337.3	16.44	21.513		
2,900.0	2,889.2	2,855.8	2,847.0	8.9	8.5	-157.97	-73.9	217.4	377.5	360.5	17.05	22.144		
3,000.0	2,988.3	2,952.9	2,943.4	9.3	8.8	-157.90	-80.0	227.9	401.3	383.6	17.67	22.715		
3,100.0	3,087.3	3,050.0	3,039.7	9.6	9.2	-157.84	-86.2	238.4	425.1	406.8	18.29	23.233		
3,200.0	3,186.4	3,147.2	3,136.1	10.0	9.5	-157.79	-92.3	248.9	448.8	429.9	18.93	23.704		
3,300.0	3,285.4	3,244.3	3,232.5	10.4	9.9	-157.74	-98.4	259.3	472.6	453.0	19.58	24.133		
3,400.0	3,384.5	3,341.4	3,328.8	10.7	10.2	-157.70	-104.6	269.8	496.4	476.1	20.24	24.524		
3,500.0	3,483.5	3,438.6	3,425.2	11.1	10.6	-157.66	-110.7	280.3	520.2	499.3	20.91	24.882		
3,600.0	3,582.6	3,535.7	3,521.6	11.5	11.0	-157.62	-116.8	290.8	543.9	522.4	21.58	25.209		
3,700.0	3,681.7	3,632.8	3,617.9	11.9	11.3	-157.59	-122.9	301.3	567.7	545.5	22.25	25.510		
3,800.0	3,780.7	3,730.0	3,714.3	12.3	11.7	-157.56	-129.1	311.8	591.5	568.6	22.94	25.786		
3,900.0	3,879.8	3,827.1	3,810.7	12.7	12.1	-157.53	-135.2	322.3	615.3	591.6	23.63	26.041		
4,000.0	3,978.8	3,924.2	3,907.1	13.1	12.5	-157.51	-141.3	332.8	639.0	614.7	24.32	26.277		
4,100.0	4,077.9	4,021.4	4,003.4	13.5	12.8	-157.49	-147.5	343.3	662.8	637.8	25.02	26.494		
4,200.0	4,176.9	4,118.5	4,099.8	13.9	13.2	-157.46	-153.6	353.8	686.6	660.9	25.72	26.696		
4,300.0	4,276.0	4,215.6	4,196.2	14.3	13.6	-157.44	-159.7	364.3	710.4	684.0	26.42	26.884		
4,400.0	4,375.0	4,312.8	4,292.5	14.7	14.0	-157.42	-165.9	374.8	734.2	707.0	27.13	27.058		
4,500.0	4,474.1	4,409.9	4,388.9	15.1	14.4	-157.41	-172.0	385.3	757.9	730.1	27.84	27.221		
4,600.0	4,573.1	4,507.0	4,485.3	15.5	14.7	-157.39	-178.1	395.8	781.7	753.2	28.56	27.372		
4,700.0	4,672.2	4,604.1	4,581.6	15.9	15.1	-157.37	-184.3	406.3	805.5	776.2	29.28	27.514		
4,800.0	4,771.2	4,701.3	4,678.0	16.3	15.5	-157.36	-190.4	416.8	829.3	799.3	30.00	27.647		
4,900.0	4,870.3	4,798.4	4,774.4	16.7	15.9	-157.34	-196.5	427.3	853.0	822.3	30.72	27.771		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design:		ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 502H - OWB - PWP0											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		Rule Assigned:				Warning			
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Distance							
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Between	Between	No-Go	Separation				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	Centres	Ellipses	Distance	Factor				
									(usft)	(usft)	(usft)					
5,000.0	4,969.3	4,895.5	4,870.7	17.1	16.3	-157.33	-202.7	437.8	876.8	845.4	31.44	27.888				
5,100.0	5,068.4	4,992.7	4,967.1	17.5	16.7	-157.32	-208.8	448.3	900.6	868.4	32.17	27.997				
5,200.0	5,167.4	5,089.8	5,063.5	17.9	17.1	-157.31	-214.9	458.8	924.4	891.5	32.90	28.101				
5,300.0	5,266.5	5,186.9	5,159.8	18.3	17.5	-157.29	-221.1	469.2	948.2	914.5	33.62	28.198				
5,400.0	5,365.5	5,284.1	5,256.2	18.8	17.9	-157.28	-227.2	479.7	971.9	937.6	34.36	28.290				
5,500.0	5,464.6	5,394.2	5,365.5	19.2	18.3	-157.29	-233.8	491.1	995.3	960.1	35.18	28.289				

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 601H - OWB - PWP0													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1													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		Distance		No-Go Distance (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.0	0.0	0.0	0.0	0.0	0.0	89.64	0.2	30.0	30.0	29.5	0.51	58.743		
100.0	100.0	100.9	100.9	1.2	3.6	91.02	-0.5	28.4	28.4	22.7	5.71	4.973		
200.0	200.0	201.6	201.4	1.7	3.9	96.33	-2.6	23.6	23.7	17.4	6.38	3.723		
300.0	300.0	301.8	301.2	2.1	4.3	111.46	-6.1	15.5	16.7	9.9	6.88	2.431	Caution - Monitor Closely	
397.6	397.6	398.8	397.6	2.4	4.6	156.47	-10.8	4.7	11.8	4.7	7.06	1.671	Caution - Monitor Closely, CC	
400.0	400.0	401.3	400.0	2.4	4.7	158.10	-10.9	4.4	11.8	4.7	7.07	1.669	Caution - Monitor Closely, ES, SF	
500.0	500.0	499.8	497.2	2.7	5.1	-150.37	-17.1	-9.7	19.8	11.7	8.15	2.434	Caution - Monitor Closely	
600.0	600.0	598.2	594.2	3.0	5.4	-133.21	-23.9	-25.5	35.4	26.5	8.91	3.977		
700.0	700.0	696.7	691.1	3.2	5.7	-126.74	-30.8	-41.3	52.2	42.7	9.53	5.481		
800.0	800.0	795.1	788.1	3.5	6.0	-123.43	-37.6	-57.0	69.4	59.2	10.13	6.849		
900.0	900.0	893.6	885.0	3.7	6.4	-121.44	-44.5	-72.8	86.6	75.9	10.72	8.079		
1,000.0	1,000.0	992.0	982.0	3.9	6.7	-120.11	-51.4	-88.6	104.0	92.6	11.32	9.184		
1,100.0	1,100.0	1,090.5	1,078.9	4.1	7.1	-119.16	-58.2	-104.3	121.3	109.4	11.92	10.177		
1,200.0	1,200.0	1,189.0	1,175.9	4.3	7.5	-118.45	-65.1	-120.1	138.7	126.2	12.53	11.074		
1,300.0	1,300.0	1,287.4	1,272.8	4.5	7.9	-117.90	-71.9	-135.9	156.1	143.0	13.14	11.887		
1,400.0	1,400.0	1,385.9	1,369.8	4.7	8.3	-117.45	-78.8	-151.7	173.6	159.8	13.75	12.625		
1,500.0	1,500.0	1,484.4	1,466.7	4.8	8.7	-117.09	-85.6	-167.4	191.0	176.6	14.36	13.298		
1,600.0	1,600.0	1,583.1	1,563.9	5.1	9.1	-8.78	-92.5	-183.2	206.7	191.7	15.04	13.748		
1,700.0	1,699.8	1,682.3	1,661.6	5.3	9.5	-8.69	-99.4	-199.1	219.0	203.3	15.71	13.940		
1,800.0	1,799.5	1,781.9	1,759.7	5.6	9.9	-8.74	-106.4	-215.1	227.9	211.5	16.41	13.892		
1,894.6	1,893.4	1,876.4	1,852.7	5.9	10.3	-8.92	-113.0	-230.2	233.2	216.1	17.07	13.662		
1,900.0	1,898.7	1,881.8	1,858.0	5.9	10.3	-8.93	-113.3	-231.1	233.4	216.3	17.10	13.650		
2,000.0	1,997.8	1,981.7	1,956.4	6.2	10.7	-9.19	-120.3	-247.1	237.3	219.4	17.88	13.268		
2,100.0	2,096.8	2,081.6	2,054.8	6.5	11.2	-9.44	-127.2	-263.1	241.2	222.6	18.57	12.987		
2,200.0	2,195.9	2,181.5	2,153.2	6.7	11.6	-9.68	-134.2	-279.1	245.1	225.9	19.28	12.717		
2,300.0	2,294.9	2,281.4	2,251.5	7.0	12.0	-9.91	-141.2	-295.1	249.1	229.1	19.99	12.457		
2,400.0	2,394.0	2,381.4	2,349.9	7.3	12.5	-10.14	-148.1	-311.1	253.0	232.3	20.72	12.209		
2,500.0	2,493.0	2,481.3	2,448.3	7.6	12.9	-10.36	-155.1	-327.1	256.9	235.5	21.46	11.972		
2,600.0	2,592.1	2,581.2	2,546.7	7.9	13.3	-10.57	-162.0	-343.1	260.9	238.7	22.21	11.745		
2,700.0	2,691.1	2,681.1	2,645.1	8.2	13.8	-10.78	-169.0	-359.1	264.8	241.9	22.97	11.530		
2,800.0	2,790.2	2,781.0	2,743.5	8.6	14.2	-10.98	-176.0	-375.1	268.8	245.0	23.73	11.325		
2,900.0	2,889.2	2,881.0	2,841.8	8.9	14.6	-11.18	-182.9	-391.1	272.7	248.2	24.51	11.129		
3,000.0	2,988.3	2,980.9	2,940.2	9.3	15.1	-11.36	-189.9	-407.1	276.7	251.4	25.28	10.944		
3,100.0	3,087.3	3,080.8	3,038.6	9.6	15.5	-11.55	-196.8	-423.1	280.6	254.6	26.07	10.767		
3,200.0	3,186.4	3,180.7	3,137.0	10.0	16.0	-11.73	-203.8	-439.1	284.6	257.8	26.85	10.598		
3,300.0	3,285.4	3,280.6	3,235.4	10.4	16.4	-11.90	-210.7	-455.1	288.6	260.9	27.65	10.438		
3,400.0	3,384.5	3,380.5	3,333.7	10.7	16.9	-12.07	-217.7	-471.1	292.5	264.1	28.44	10.286		
3,500.0	3,483.5	3,480.5	3,432.1	11.1	17.3	-12.24	-224.7	-487.1	296.5	267.3	29.24	10.140		
3,600.0	3,582.6	3,580.4	3,530.5	11.5	17.7	-12.40	-231.6	-503.2	300.5	270.4	30.04	10.001		
3,700.0	3,681.7	3,680.3	3,628.9	11.9	18.2	-12.55	-238.6	-519.2	304.4	273.6	30.85	9.869		
3,800.0	3,780.7	3,780.2	3,727.3	12.3	18.6	-12.70	-245.5	-535.2	308.4	276.8	31.66	9.743		
3,900.0	3,879.8	3,880.1	3,825.7	12.7	19.1	-12.85	-252.5	-551.2	312.4	279.9	32.47	9.622		
4,000.0	3,978.8	3,980.0	3,924.0	13.1	19.5	-13.00	-259.5	-567.2	316.4	283.1	33.28	9.506		
4,100.0	4,077.9	4,080.0	4,022.4	13.5	20.0	-13.14	-266.4	-583.2	320.4	286.3	34.10	9.396		
4,200.0	4,176.9	4,179.9	4,120.8	13.9	20.4	-13.27	-273.4	-599.2	324.3	289.4	34.91	9.290		
4,300.0	4,276.0	4,279.8	4,219.2	14.3	20.9	-13.41	-280.3	-615.2	328.3	292.6	35.73	9.189		
4,400.0	4,375.0	4,379.7	4,317.6	14.7	21.3	-13.54	-287.3	-631.2	332.3	295.8	36.55	9.092		
4,500.0	4,474.1	4,479.6	4,415.9	15.1	21.8	-13.67	-294.2	-647.2	336.3	298.9	37.37	8.999		
4,600.0	4,573.1	4,579.6	4,514.3	15.5	22.2	-13.79	-301.2	-663.2	340.3	302.1	38.19	8.910		
4,700.0	4,672.2	4,679.5	4,612.7	15.9	22.7	-13.91	-308.2	-679.2	344.3	305.3	39.02	8.824		
4,800.0	4,771.2	4,779.4	4,711.1	16.3	23.1	-14.03	-315.1	-695.2	348.3	308.4	39.84	8.742		

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

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 601H - OWB - PWP0													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	4,870.3	4,879.3	4,809.5	16.7	23.6	-14.15	-322.1	-711.2	352.3	311.6	40.67	8.662		
5,000.0	4,969.3	4,983.1	4,911.7	17.1	24.0	-14.28	-329.2	-727.5	355.9	314.4	41.51	8.575		
5,100.0	5,068.4	5,089.6	5,017.0	17.5	24.5	-14.45	-335.7	-742.6	357.9	315.6	42.35	8.452		
5,200.0	5,167.4	5,196.2	5,122.6	17.9	25.0	-14.67	-341.5	-755.9	358.1	314.9	43.16	8.297		
5,300.0	5,266.5	5,302.7	5,228.4	18.3	25.4	-14.94	-346.5	-767.4	356.4	312.5	43.93	8.113		
5,400.0	5,365.5	5,409.2	5,334.2	18.8	25.8	-15.27	-350.7	-777.1	352.9	308.3	44.66	7.902		
5,500.0	5,464.6	5,515.4	5,440.1	19.2	26.2	-15.67	-354.2	-785.0	347.6	302.3	45.34	7.666		
5,600.0	5,563.7	5,621.4	5,545.9	19.6	26.6	-16.14	-356.8	-791.0	340.5	294.5	45.97	7.406		
5,700.0	5,662.7	5,727.0	5,651.4	20.0	27.0	-16.69	-358.6	-795.3	331.6	285.1	46.54	7.125		
5,800.0	5,761.8	5,832.2	5,756.6	20.4	27.3	-17.34	-359.7	-797.8	320.9	273.9	47.03	6.825		
5,900.0	5,860.8	5,936.4	5,860.8	20.8	27.4	-18.11	-360.0	-798.5	308.5	261.2	47.36	6.514		
6,000.0	5,959.9	6,035.5	5,959.9	21.3	27.5	-18.94	-360.0	-798.5	295.5	247.9	47.58	6.210		
6,100.0	6,058.9	6,134.5	6,058.9	21.7	27.5	-19.84	-360.0	-798.5	282.5	234.8	47.79	5.912		
6,200.0	6,158.0	6,233.6	6,158.0	22.1	27.5	-20.83	-360.0	-798.5	269.7	221.7	47.98	5.621		
6,300.0	6,257.0	6,332.6	6,257.0	22.5	27.5	-21.92	-360.0	-798.5	256.9	208.7	48.13	5.337		
6,400.0	6,356.1	6,431.7	6,356.1	22.9	27.5	-23.12	-360.0	-798.5	244.2	195.9	48.25	5.060		
6,500.0	6,455.1	6,530.7	6,455.1	23.4	27.6	-24.45	-360.0	-798.5	231.6	183.2	48.32	4.792		
6,600.0	6,554.2	6,629.8	6,554.2	23.8	27.6	-25.94	-360.0	-798.5	219.1	170.8	48.33	4.533		
6,700.0	6,653.2	6,728.8	6,653.2	24.2	27.6	-27.60	-360.0	-798.5	206.8	158.6	48.28	4.284		
6,800.0	6,752.3	6,827.9	6,752.3	24.6	27.6	-29.46	-360.0	-798.5	194.7	146.6	48.13	4.046		
6,900.0	6,851.3	6,927.0	6,851.3	25.0	27.7	-31.58	-360.0	-798.5	182.9	135.0	47.86	3.821		
7,000.0	6,950.4	7,026.0	6,950.4	25.5	27.7	-33.97	-360.0	-798.5	171.3	123.8	47.46	3.610		
7,100.0	7,049.4	7,125.1	7,049.4	25.9	27.7	-36.71	-360.0	-798.5	160.1	113.2	46.86	3.415		
7,200.0	7,148.5	7,224.1	7,148.5	26.3	27.7	-39.85	-360.0	-798.5	149.2	103.2	46.04	3.242		
7,300.0	7,247.5	7,323.2	7,247.5	26.7	27.8	-43.47	-360.0	-798.5	138.9	94.0	44.93	3.092		
7,400.0	7,346.6	7,422.2	7,346.6	27.2	27.8	-47.64	-360.0	-798.5	129.3	85.8	43.46	2.974 Normal Operations		
7,416.8	7,363.2	7,438.8	7,363.2	27.2	27.8	-48.40	-360.0	-798.5	127.7	84.5	43.18	2.958 Normal Operations		
7,500.0	7,445.7	7,521.3	7,445.7	27.6	27.8	-52.17	-360.0	-798.5	120.8	79.1	41.69	2.896 Normal Operations		
7,600.0	7,545.1	7,620.7	7,545.1	28.0	27.8	-56.63	-360.0	-798.5	114.1	74.2	39.85	2.862 Normal Operations		
7,700.0	7,644.6	7,720.2	7,644.6	28.4	27.9	-60.83	-360.0	-798.5	109.0	70.9	38.09	2.862 Normal Operations		
7,800.0	7,744.3	7,819.9	7,744.3	28.8	27.9	-64.56	-360.0	-798.5	105.4	68.8	36.56	2.882 Normal Operations		
7,900.0	7,844.1	7,919.7	7,844.1	29.1	27.9	-67.66	-360.0	-798.5	102.8	67.5	35.35	2.909 Normal Operations		
8,000.0	7,944.0	8,019.6	7,944.0	29.4	27.9	-69.98	-360.0	-798.5	101.2	66.7	34.51	2.933 Normal Operations		
8,100.0	8,044.0	8,119.6	8,044.0	29.7	28.0	-71.43	-360.0	-798.5	100.3	66.3	34.07	2.945 Normal Operations		
8,206.1	8,150.0	8,225.6	8,150.0	29.9	28.0	180.00	-360.0	-798.5	100.0	66.0	33.99	2.943 Normal Operations		
8,300.0	8,243.9	8,319.6	8,243.9	29.9	28.0	180.00	-360.0	-798.5	100.0	65.9	34.07	2.935 Normal Operations		
8,400.0	8,343.9	8,419.6	8,343.9	29.9	28.0	180.00	-360.0	-798.5	100.0	65.8	34.16	2.927 Normal Operations		
8,500.0	8,443.9	8,519.6	8,443.9	30.0	28.1	180.00	-360.0	-798.5	100.0	65.8	34.26	2.919 Normal Operations		
8,600.0	8,543.9	8,619.6	8,543.9	30.0	28.1	180.00	-360.0	-798.5	100.0	65.7	34.35	2.911 Normal Operations		
8,700.0	8,643.9	8,719.6	8,643.9	30.0	28.1	180.00	-360.0	-798.5	100.0	65.6	34.45	2.903 Normal Operations		
8,800.0	8,743.9	8,819.6	8,743.9	30.0	28.1	180.00	-360.0	-798.5	100.0	65.5	34.55	2.895 Normal Operations		
8,900.0	8,843.9	8,919.6	8,843.9	30.1	28.2	180.00	-360.0	-798.5	100.0	65.4	34.64	2.887 Normal Operations		
9,000.0	8,943.9	9,019.6	8,943.9	30.1	28.2	180.00	-360.0	-798.5	100.0	65.3	34.74	2.879 Normal Operations		
9,100.0	9,043.9	9,119.6	9,043.9	30.1	28.2	180.00	-360.0	-798.5	100.0	65.2	34.84	2.871 Normal Operations		
9,200.0	9,143.9	9,219.6	9,143.9	30.1	28.3	180.00	-360.0	-798.5	100.0	65.1	34.93	2.863 Normal Operations		
9,300.0	9,243.9	9,319.6	9,243.9	30.2	28.3	180.00	-360.0	-798.5	100.0	65.0	35.03	2.855 Normal Operations		
9,400.0	9,343.9	9,419.6	9,343.9	30.2	28.3	180.00	-360.0	-798.5	100.0	64.9	35.13	2.847 Normal Operations		
9,500.0	9,443.9	9,519.6	9,443.9	30.2	28.3	180.00	-360.0	-798.5	100.0	64.8	35.23	2.839 Normal Operations		
9,600.0	9,543.9	9,619.6	9,543.9	30.2	28.4	180.00	-360.0	-798.5	100.0	64.7	35.33	2.831 Normal Operations		
9,700.0	9,643.9	9,719.6	9,643.9	30.3	28.4	180.00	-360.0	-798.5	100.0	64.6	35.43	2.823 Normal Operations		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 601H - OWB - PWP0													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	Highside	Offset Wellbore Centre	Distance	Between	Between	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)	Centres (usft)	Ellipses (usft)	Distance (usft)	Factor		
9,800.0	9,743.9	9,819.6	9,743.9	30.3	28.4	180.00	-360.0	-798.5	100.0	64.5	35.53	2.815	Normal Operations	
9,900.0	9,843.9	9,919.6	9,843.9	30.3	28.5	180.00	-360.0	-798.5	100.0	64.4	35.63	2.807	Normal Operations	
10,000.0	9,943.9	10,019.6	9,943.9	30.3	28.5	180.00	-360.0	-798.5	100.0	64.3	35.73	2.799	Normal Operations	
10,100.0	10,043.9	10,119.6	10,043.9	30.4	28.5	180.00	-360.0	-798.5	100.0	64.2	35.84	2.791	Normal Operations	
10,172.6	10,116.5	10,192.1	10,116.5	30.4	28.5	180.00	-360.0	-798.5	100.0	64.1	35.90	2.786	Normal Operations	
10,175.0	10,118.9	10,194.6	10,118.9	30.4	28.5	-179.62	-360.0	-798.5	100.0	64.1	35.90	2.786	Normal Operations	
10,200.0	10,143.9	10,219.5	10,143.9	30.4	28.5	-179.62	-360.0	-798.5	100.8	64.9	35.90	2.808	Normal Operations	
10,225.0	10,168.8	10,244.5	10,168.8	30.3	28.6	-179.63	-360.0	-798.5	102.9	67.0	35.88	2.868	Normal Operations	
10,250.0	10,193.6	10,269.2	10,193.6	30.3	28.6	-179.64	-360.0	-798.5	106.3	70.4	35.85	2.964	Normal Operations	
10,275.0	10,218.2	10,293.8	10,218.2	30.3	28.6	-179.65	-360.0	-798.5	111.0	75.1	35.82	3.098		
10,300.0	10,242.4	10,318.1	10,242.4	30.3	28.6	-179.66	-360.0	-798.5	116.9	81.1	35.79	3.267		
10,325.0	10,266.4	10,342.0	10,266.4	30.2	28.6	-179.68	-360.0	-798.5	124.1	88.4	35.75	3.472		
10,350.0	10,289.9	10,365.5	10,289.9	30.2	28.6	-179.69	-360.0	-798.5	132.6	96.9	35.72	3.713		
10,375.0	10,312.9	10,388.5	10,312.9	30.2	28.6	-179.71	-360.0	-798.5	142.3	106.6	35.68	3.988		
10,400.0	10,335.4	10,411.1	10,335.4	30.1	28.6	-179.72	-360.0	-798.5	153.2	117.5	35.64	4.297		
10,425.0	10,357.3	10,433.0	10,357.3	30.1	28.6	-179.73	-360.0	-798.5	165.2	129.6	35.61	4.639		
10,450.0	10,378.6	10,454.2	10,378.6	30.1	28.6	-179.75	-360.0	-798.5	178.4	142.8	35.58	5.014		
10,475.0	10,399.1	10,474.7	10,399.1	30.1	28.6	-179.76	-360.0	-798.5	192.6	157.1	35.55	5.419		
10,500.0	10,418.9	10,494.5	10,418.9	30.0	28.6	-179.77	-360.0	-798.5	208.0	172.4	35.52	5.855		
10,525.0	10,437.8	10,513.4	10,437.8	30.0	28.6	-179.77	-360.0	-798.5	224.3	188.8	35.49	6.320		
10,550.0	10,455.8	10,531.5	10,455.8	30.0	28.6	-179.78	-360.0	-798.5	241.6	206.1	35.47	6.812		
10,575.0	10,473.0	10,548.6	10,473.0	30.0	28.6	-179.78	-360.0	-798.5	259.8	224.4	35.44	7.330		
10,600.0	10,489.1	10,564.7	10,489.1	29.9	28.7	-179.78	-360.0	-798.5	278.9	243.5	35.42	7.874		
10,625.0	10,504.2	10,579.8	10,504.2	29.9	28.7	-179.78	-360.0	-798.5	298.8	263.4	35.40	8.440		
10,650.0	10,518.3	10,593.9	10,518.3	29.9	28.7	-179.78	-360.0	-798.5	319.5	284.1	35.39	9.029		
10,675.0	10,531.2	10,606.8	10,531.2	29.9	28.7	-179.78	-360.0	-798.5	340.9	305.5	35.37	9.637		
10,700.0	10,543.0	10,618.6	10,543.0	29.9	28.7	-179.77	-360.0	-798.5	362.9	327.5	35.36	10.264		
10,725.0	10,553.7	10,629.3	10,553.7	29.9	28.7	-179.76	-360.0	-798.5	385.5	350.2	35.35	10.907		
10,750.0	10,563.1	10,638.7	10,563.1	29.9	28.7	-179.74	-360.0	-798.5	408.7	373.3	35.34	11.565		
10,775.0	10,571.3	10,647.0	10,571.3	29.9	28.7	-179.71	-360.0	-798.5	432.3	396.9	35.33	12.236		
10,800.0	10,578.3	10,653.9	10,578.3	29.9	28.7	-179.67	-360.0	-798.5	456.3	420.9	35.32	12.918		
10,825.0	10,584.0	10,659.6	10,584.0	29.9	28.7	-179.61	-360.0	-798.5	480.6	445.3	35.32	13.609		
10,850.0	10,588.5	10,664.1	10,588.5	29.9	28.7	-179.51	-360.0	-798.5	505.2	469.9	35.31	14.307		
10,875.0	10,591.6	10,667.2	10,591.6	29.9	28.7	-179.28	-360.0	-798.5	530.0	494.7	35.31	15.010		
10,900.0	10,593.4	10,669.0	10,593.4	29.9	28.7	-178.56	-360.0	-798.5	554.9	519.6	35.31	15.716		
10,925.0	10,594.0	10,669.6	10,594.0	29.9	28.7	-12.52	-360.0	-798.5	579.9	544.6	35.31	16.423		
10,928.0	10,593.9	10,669.5	10,593.9	29.9	28.7	-5.66	-360.0	-798.5	582.9	547.6	35.31	16.508		
11,000.0	10,593.1	11,718.8	11,195.5	30.0	28.4	-179.95	293.1	-802.7	602.4	555.8	46.55	12.941		
11,100.0	10,592.0	11,818.8	11,195.8	30.1	28.6	-179.95	393.1	-803.3	603.8	556.7	47.11	12.817		
11,200.0	10,590.8	11,918.8	11,196.1	30.2	28.8	-179.95	493.1	-804.0	605.3	557.5	47.71	12.685		
11,300.0	10,589.7	12,018.8	11,196.4	30.3	29.1	-179.95	593.1	-804.6	606.7	558.3	48.36	12.545		
11,400.0	10,588.5	12,118.7	11,196.7	30.5	29.3	-179.95	693.1	-805.3	608.1	559.1	49.05	12.399		
11,500.0	10,587.4	12,218.7	11,197.0	30.6	29.6	-179.95	793.0	-805.9	609.6	559.8	49.77	12.247		
11,600.0	10,586.3	12,318.7	11,197.3	30.8	30.0	-179.95	893.0	-806.6	611.0	560.5	50.54	12.090		
11,700.0	10,585.1	12,418.7	11,197.6	31.0	30.3	-179.95	993.0	-807.2	612.4	561.1	51.34	11.930		
11,800.0	10,584.0	12,518.7	11,197.8	31.3	30.7	-179.96	1,093.0	-807.9	613.9	561.7	52.17	11.767		
11,900.0	10,582.8	12,618.7	11,198.1	31.5	31.1	-179.96	1,193.0	-808.5	615.3	562.3	53.04	11.602		
12,000.0	10,581.7	12,718.7	11,198.4	31.7	31.5	-179.96	1,293.0	-809.2	616.8	562.8	53.93	11.436		
12,100.0	10,580.5	12,818.7	11,198.7	32.0	32.0	-179.96	1,393.0	-809.8	618.2	563.3	54.86	11.269		
12,200.0	10,579.4	12,918.7	11,199.0	32.3	32.4	-179.96	1,493.0	-810.4	619.6	563.8	55.81	11.102		
12,300.0	10,578.2	13,018.7	11,199.3	32.6	32.9	-179.96	1,592.9	-811.1	621.1	564.3	56.80	10.935		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 601H - OWB - PWP0													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:		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		
12,400.0	10,577.1	13,118.6	11,199.6	32.9	33.5	-179.96	1,692.9	-811.7	622.5	564.7	57.80	10.770		
12,500.0	10,576.0	13,218.6	11,199.9	33.2	34.0	-179.96	1,792.9	-812.4	624.0	565.1	58.83	10.606		
12,600.0	10,574.8	13,318.6	11,200.2	33.6	34.5	-179.97	1,892.9	-813.0	625.4	565.5	59.88	10.444		
12,700.0	10,573.7	13,418.6	11,200.5	33.9	35.1	-179.97	1,992.9	-813.7	626.8	565.9	60.96	10.283		
12,800.0	10,572.5	13,518.6	11,200.8	34.3	35.7	-179.97	2,092.9	-814.3	628.3	566.2	62.05	10.125		
12,900.0	10,571.4	13,618.6	11,201.1	34.7	36.3	-179.97	2,192.9	-815.0	629.7	566.5	63.16	9.969		
13,000.0	10,570.2	13,718.6	11,201.4	35.1	36.9	-179.97	2,292.9	-815.6	631.1	566.9	64.29	9.816		
13,100.0	10,569.1	13,818.6	11,201.7	35.5	37.6	-179.97	2,392.8	-816.3	632.6	567.1	65.44	9.666		
13,200.0	10,568.0	13,918.6	11,202.0	35.9	38.2	-179.97	2,492.8	-816.9	634.0	567.4	66.61	9.519		
13,300.0	10,566.8	14,018.6	11,202.3	36.3	38.9	-179.97	2,592.8	-817.6	635.5	567.7	67.79	9.374		
13,400.0	10,565.7	14,118.5	11,202.6	36.8	39.6	-179.98	2,692.8	-818.2	636.9	567.9	68.98	9.233		
13,500.0	10,564.5	14,218.5	11,202.9	37.2	40.3	-179.98	2,792.8	-818.9	638.3	568.1	70.19	9.094		
13,600.0	10,563.4	14,318.5	11,203.2	37.7	41.0	-179.98	2,892.8	-819.5	639.8	568.4	71.41	8.959		
13,700.0	10,562.2	14,418.5	11,203.5	38.2	41.7	-179.98	2,992.8	-820.2	641.2	568.6	72.65	8.826		
13,800.0	10,561.1	14,518.5	11,203.7	38.6	42.4	-179.98	3,092.8	-820.8	642.7	568.8	73.90	8.697		
13,900.0	10,560.0	14,618.5	11,204.0	39.1	43.2	-179.98	3,192.7	-821.5	644.1	568.9	75.15	8.570		
14,000.0	10,558.8	14,718.5	11,204.3	39.6	43.9	-179.98	3,292.7	-822.1	645.5	569.1	76.42	8.447		
14,100.0	10,557.7	14,818.5	11,204.6	40.1	44.6	-179.98	3,392.7	-822.7	647.0	569.3	77.70	8.326		
14,200.0	10,556.5	14,918.5	11,204.9	40.6	45.4	-179.98	3,492.7	-823.4	648.4	569.4	78.99	8.209		
14,300.0	10,555.4	15,018.4	11,205.2	41.2	46.2	-179.99	3,592.7	-824.0	649.8	569.6	80.29	8.094		
14,400.0	10,554.2	15,118.4	11,205.5	41.7	47.0	-179.99	3,692.7	-824.7	651.3	569.7	81.60	7.982		
14,500.0	10,553.1	15,218.4	11,205.8	42.2	47.7	-179.99	3,792.7	-825.3	652.7	569.8	82.91	7.873		
14,600.0	10,552.0	15,318.4	11,206.1	42.8	48.5	-179.99	3,892.6	-826.0	654.2	569.9	84.23	7.766		
14,700.0	10,550.8	15,418.4	11,206.4	43.3	49.3	-179.99	3,992.6	-826.6	655.6	570.0	85.56	7.662		
14,800.0	10,549.7	15,518.4	11,206.7	43.9	50.1	-179.99	4,092.6	-827.3	657.0	570.1	86.90	7.561		
14,900.0	10,548.5	15,618.4	11,207.0	44.4	51.0	-179.99	4,192.6	-827.9	658.5	570.2	88.25	7.462		
15,000.0	10,547.4	15,718.4	11,207.3	45.0	51.8	-179.99	4,292.6	-828.6	659.9	570.3	89.60	7.365		
15,100.0	10,546.2	15,818.4	11,207.6	45.6	52.6	-179.99	4,392.6	-829.2	661.4	570.4	90.96	7.271		
15,200.0	10,545.1	15,918.4	11,207.9	46.2	53.4	-180.00	4,492.6	-829.9	662.8	570.5	92.32	7.179		
15,300.0	10,543.9	16,018.3	11,208.2	46.8	54.3	-180.00	4,592.6	-830.5	664.2	570.5	93.69	7.090		
15,400.0	10,542.8	16,118.3	11,208.5	47.3	55.1	-180.00	4,692.5	-831.2	665.7	570.6	95.07	7.002		
15,500.0	10,541.7	16,218.3	11,208.8	47.9	55.9	-180.00	4,792.5	-831.8	667.1	570.7	96.45	6.917		
15,578.1	10,540.8	16,296.4	11,209.0	48.4	56.6	-180.00	4,870.6	-832.3	668.2	570.7	97.53	6.852		
15,582.1	10,540.7	16,300.0	11,209.0	48.4	56.6	180.00	4,874.2	-832.3	668.3	570.7	97.57	6.850		
15,600.0	10,540.5	16,314.5	11,209.1	48.5	56.8	-180.00	4,888.8	-832.4	668.6	570.9	97.69	6.844		
15,700.0	10,539.4	16,406.6	11,210.8	49.1	57.5	-180.00	4,980.8	-832.9	671.5	572.8	98.78	6.798		
15,800.0	10,538.2	16,506.6	11,212.8	49.8	58.4	-180.00	5,080.8	-833.4	674.7	574.5	100.17	6.736		
15,900.0	10,537.1	16,606.5	11,214.8	50.4	59.2	-180.00	5,180.7	-834.0	677.9	576.3	101.57	6.674		
16,000.0	10,536.0	16,706.5	11,216.9	51.0	60.1	-180.00	5,280.6	-834.5	681.1	578.1	102.97	6.614		
16,100.0	10,534.8	16,806.4	11,218.9	51.6	61.0	-180.00	5,380.5	-835.0	684.2	579.9	104.38	6.555		
16,200.0	10,533.7	16,906.4	11,220.9	52.2	61.8	-180.00	5,480.5	-835.5	687.4	581.6	105.79	6.498		
16,300.0	10,532.5	17,006.3	11,223.0	52.9	62.7	-180.00	5,580.4	-836.0	690.6	583.4	107.20	6.442		
16,400.0	10,531.4	17,106.3	11,225.0	53.5	63.6	-180.00	5,680.3	-836.6	693.8	585.1	108.62	6.387		
16,500.0	10,530.2	17,206.2	11,227.0	54.1	64.5	-180.00	5,780.3	-837.1	696.9	586.9	110.04	6.333		
16,600.0	10,529.1	17,306.2	11,229.1	54.8	65.3	-180.00	5,880.2	-837.6	700.1	588.6	111.47	6.281		
16,700.0	10,528.0	17,406.1	11,231.1	55.4	66.2	-180.00	5,980.1	-838.1	703.3	590.4	112.90	6.229		
16,800.0	10,526.8	17,506.1	11,233.1	56.1	67.1	-180.00	6,080.0	-838.6	706.5	592.1	114.33	6.179		
16,900.0	10,525.7	17,606.0	11,235.2	56.7	68.0	-180.00	6,180.0	-839.1	709.6	593.9	115.76	6.130		
17,000.0	10,524.5	17,706.0	11,237.2	57.4	68.9	-180.00	6,279.9	-839.7	712.8	595.6	117.20	6.082		
17,100.0	10,523.4	17,805.9	11,239.2	58.0	69.8	-180.00	6,379.8	-840.2	716.0	597.3	118.64	6.035		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 601H - OWB - PWP0													Offset Site Error: 0.0 usft	
Survey Program: 0-r.5 MWD+IFR1		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance			Offset Well Error: 0.0 usft		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
17,200.0	10,522.2	17,905.9	11,241.3	58.7	70.7	-180.00	6,479.7	-840.7	719.2	599.1	120.08	5.989		
17,300.0	10,521.1	18,005.8	11,243.3	59.4	71.5	-180.00	6,579.7	-841.2	722.3	600.8	121.53	5.944		
17,400.0	10,520.0	18,105.8	11,245.3	60.0	72.4	-180.00	6,679.6	-841.7	725.5	602.5	122.98	5.900		
17,500.0	10,518.8	18,205.7	11,247.4	60.7	73.3	-180.00	6,779.5	-842.3	728.7	604.3	124.43	5.856		
17,600.0	10,517.7	18,305.7	11,249.4	61.4	74.2	-180.00	6,879.5	-842.8	731.9	606.0	125.88	5.814		
17,700.0	10,516.5	18,405.6	11,251.4	62.0	75.1	-180.00	6,979.4	-843.3	735.0	607.7	127.33	5.773		
17,800.0	10,515.4	18,505.6	11,253.4	62.7	76.1	-180.00	7,079.3	-843.8	738.2	609.4	128.79	5.732		
17,900.0	10,514.3	18,605.5	11,255.5	63.4	77.0	-180.00	7,179.2	-844.3	741.4	611.1	130.25	5.692		
18,000.0	10,513.1	18,705.5	11,257.5	64.1	77.9	-180.00	7,279.2	-844.9	744.6	612.8	131.71	5.653		
18,100.0	10,512.0	18,805.4	11,259.5	64.7	78.8	-180.00	7,379.1	-845.4	747.7	614.6	133.17	5.615		
18,200.0	10,510.8	18,905.4	11,261.6	65.4	79.7	-180.00	7,479.0	-845.9	750.9	616.3	134.64	5.577		
18,300.0	10,509.7	19,005.3	11,263.6	66.1	80.6	-180.00	7,578.9	-846.4	754.1	618.0	136.11	5.540		
18,400.0	10,508.5	19,105.3	11,265.6	66.8	81.5	-180.00	7,678.9	-846.9	757.3	619.7	137.57	5.504		
18,500.0	10,507.4	19,205.2	11,267.7	67.5	82.4	-180.00	7,778.8	-847.4	760.4	621.4	139.04	5.469		
18,600.0	10,506.3	19,305.2	11,269.7	68.2	83.3	-180.00	7,878.7	-848.0	763.6	623.1	140.52	5.434		
18,700.0	10,505.1	19,405.1	11,271.7	68.9	84.3	-180.00	7,978.7	-848.5	766.8	624.8	141.99	5.400		
18,800.0	10,504.0	19,505.1	11,273.8	69.5	85.2	-180.00	8,078.6	-849.0	770.0	626.5	143.46	5.367		
18,900.0	10,502.8	19,605.0	11,275.8	70.2	86.1	-180.00	8,178.5	-849.5	773.1	628.2	144.94	5.334		
19,000.0	10,501.7	19,705.0	11,277.8	70.9	87.0	-180.00	8,278.4	-850.0	776.3	629.9	146.42	5.302		
19,100.0	10,500.5	19,804.9	11,279.9	71.6	87.9	-180.00	8,378.4	-850.6	779.5	631.6	147.90	5.270		
19,200.0	10,499.4	19,904.9	11,281.9	72.3	88.9	-180.00	8,478.3	-851.1	782.7	633.3	149.38	5.239		
19,300.0	10,498.3	20,004.8	11,283.9	73.0	89.8	-180.00	8,578.2	-851.6	785.8	635.0	150.86	5.209		
19,400.0	10,497.1	20,104.8	11,286.0	73.7	90.7	-180.00	8,678.1	-852.1	789.0	636.7	152.35	5.179		
19,500.0	10,496.0	20,204.7	11,288.0	74.4	91.6	-180.00	8,778.1	-852.6	792.2	638.4	153.83	5.150		
19,600.0	10,494.8	20,304.7	11,290.0	75.1	92.6	-180.00	8,878.0	-853.2	795.4	640.0	155.32	5.121		
19,700.0	10,493.7	20,404.6	11,292.1	75.8	93.5	-180.00	8,977.9	-853.7	798.5	641.7	156.80	5.093		
19,800.0	10,492.6	20,504.6	11,294.1	76.6	94.4	-180.00	9,077.9	-854.2	801.7	643.4	158.29	5.065		
19,900.0	10,491.4	20,604.5	11,296.1	77.3	95.4	-180.00	9,177.8	-854.7	804.9	645.1	159.78	5.037		
20,000.0	10,490.3	20,704.5	11,298.2	78.0	96.3	-180.00	9,277.7	-855.2	808.1	646.8	161.27	5.011		
20,100.0	10,489.1	20,804.4	11,300.2	78.7	97.2	-180.00	9,377.6	-855.8	811.2	648.5	162.76	4.984		
20,200.0	10,488.0	20,904.4	11,302.2	79.4	98.2	-180.00	9,477.6	-856.3	814.4	650.2	164.26	4.958		
20,300.0	10,486.8	21,004.3	11,304.3	80.1	99.1	-180.00	9,577.5	-856.8	817.6	651.8	165.75	4.933		
20,400.0	10,485.7	21,104.3	11,306.3	80.8	100.0	-180.00	9,677.4	-857.3	820.8	653.5	167.24	4.908		
20,500.0	10,484.6	21,204.2	11,308.3	81.5	101.0	-180.00	9,777.4	-857.8	823.9	655.2	168.74	4.883		
20,600.0	10,483.4	21,304.2	11,310.4	82.3	101.9	-180.00	9,877.3	-858.3	827.1	656.9	170.24	4.859		
20,700.0	10,482.3	21,404.1	11,312.4	83.0	102.8	-180.00	9,977.2	-858.9	830.3	658.6	171.73	4.835		
20,800.0	10,481.1	21,504.1	11,314.4	83.7	103.8	-180.00	10,077.1	-859.4	833.5	660.2	173.23	4.811		
20,811.3	10,481.0	21,515.4	11,314.7	83.8	103.9	-180.00	10,088.5	-859.4	833.8	660.4	173.40	4.809		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 602H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-r.5 MWD+IFR1												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		Distance Between Centres (usft)		No-Go Distance (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)					
0.0	0.0	0.0	0.0	0.0	0.0	89.64	0.4	60.0	60.0	59.5	0.51	117.487	
100.0	100.0	100.0	100.0	1.2	1.2	89.64	0.4	60.0	60.0	57.1	2.90	20.704	
200.0	200.0	200.0	200.0	1.7	1.7	89.64	0.4	60.0	60.0	56.1	3.89	15.406	
300.0	300.0	300.0	300.0	2.1	2.1	89.64	0.4	60.0	60.0	55.3	4.66	12.863	
400.0	400.0	400.0	400.0	2.4	2.4	89.64	0.4	60.0	60.0	54.7	5.32	11.282	
500.0	500.0	500.0	500.0	2.7	2.7	89.64	0.4	60.0	60.0	54.1	5.90	10.174	
600.0	600.0	600.0	600.0	3.0	3.0	89.64	0.4	60.0	60.0	53.6	6.42	9.339	
700.0	700.0	700.0	700.0	3.2	3.2	89.64	0.4	60.0	60.0	53.1	6.91	8.679	
800.0	800.0	800.0	800.0	3.5	3.5	89.64	0.4	60.0	60.0	52.6	7.37	8.141	
900.0	900.0	900.0	900.0	3.7	3.7	89.64	0.4	60.0	60.0	52.2	7.80	7.690	
1,000.0	1,000.0	1,000.0	1,000.0	3.9	3.9	89.64	0.4	60.0	60.0	51.8	8.21	7.305	
1,100.0	1,100.0	1,100.0	1,100.0	4.1	4.1	89.64	0.4	60.0	60.0	51.4	8.61	6.971	
1,200.0	1,200.0	1,200.0	1,200.0	4.3	4.3	89.64	0.4	60.0	60.0	51.0	8.99	6.677	
1,300.0	1,300.0	1,300.0	1,300.0	4.5	4.5	89.64	0.4	60.0	60.0	50.6	9.35	6.417	
1,400.0	1,400.0	1,400.0	1,400.0	4.7	4.7	89.64	0.4	60.0	60.0	50.3	9.70	6.183	
1,500.0	1,500.0	1,500.0	1,500.0	4.8	4.8	89.64	0.4	60.0	60.0	50.0	10.05	5.972 CC, ES, SF	
1,600.0	1,600.0	1,598.3	1,598.3	5.1	5.1	-161.84	-0.6	61.3	63.0	52.5	10.50	6.003	
1,700.0	1,699.8	1,696.0	1,695.9	5.3	5.3	-160.63	-3.7	65.3	72.1	61.2	10.93	6.597	
1,800.0	1,799.5	1,792.6	1,792.1	5.6	5.6	-159.16	-8.7	71.9	87.2	75.8	11.37	7.668	
1,894.6	1,893.4	1,882.6	1,881.5	5.9	5.8	-157.83	-15.1	80.3	107.0	95.2	11.79	9.073	
1,900.0	1,898.7	1,887.7	1,886.5	5.9	5.8	-157.77	-15.5	80.8	108.2	96.4	11.81	9.167	
2,000.0	1,997.8	1,981.1	1,978.9	6.2	6.1	-156.46	-24.1	92.0	133.4	121.1	12.37	10.787	
2,100.0	2,096.8	2,075.1	2,071.3	6.5	6.3	-155.02	-34.3	105.5	161.0	148.3	12.73	12.650	
2,200.0	2,195.9	2,171.1	2,165.6	6.7	6.6	-153.92	-45.0	119.5	189.1	175.9	13.17	14.354	
2,300.0	2,294.9	2,267.0	2,259.9	7.0	6.8	-153.10	-55.7	133.5	217.2	203.5	13.66	15.903	
2,400.0	2,394.0	2,362.9	2,354.2	7.3	7.1	-152.47	-66.4	147.5	245.3	231.2	14.17	17.315	
2,500.0	2,493.0	2,458.8	2,448.5	7.6	7.4	-151.97	-77.1	161.6	273.5	258.8	14.70	18.599	
2,600.0	2,592.1	2,554.8	2,542.8	7.9	7.7	-151.56	-87.8	175.6	301.7	286.4	15.26	19.767	
2,700.0	2,691.1	2,650.7	2,637.1	8.2	8.1	-151.22	-98.5	189.6	329.9	314.0	15.84	20.828	
2,800.0	2,790.2	2,746.6	2,731.4	8.6	8.4	-150.94	-109.2	203.6	358.1	341.6	16.43	21.792	
2,900.0	2,889.2	2,842.6	2,825.7	8.9	8.8	-150.70	-119.9	217.7	386.3	369.2	17.04	22.669	
3,000.0	2,988.3	2,938.5	2,920.0	9.3	9.1	-150.49	-130.6	231.7	414.5	396.8	17.66	23.468	
3,100.0	3,087.3	3,034.4	3,014.3	9.6	9.5	-150.30	-141.3	245.7	442.7	424.4	18.30	24.196	
3,200.0	3,186.4	3,130.4	3,108.6	10.0	9.9	-150.14	-152.0	259.7	470.9	452.0	18.94	24.862	
3,300.0	3,285.4	3,226.3	3,202.9	10.4	10.2	-150.00	-162.7	273.8	499.1	479.5	19.60	25.470	
3,400.0	3,384.5	3,322.2	3,297.2	10.7	10.6	-149.87	-173.4	287.8	527.3	507.1	20.26	26.029	
3,500.0	3,483.5	3,418.1	3,391.5	11.1	11.0	-149.75	-184.0	301.8	555.6	534.6	20.93	26.541	
3,600.0	3,582.6	3,514.1	3,485.7	11.5	11.4	-149.65	-194.7	315.8	583.8	562.2	21.61	27.013	
3,700.0	3,681.7	3,610.0	3,580.0	11.9	11.8	-149.56	-205.4	329.9	612.0	589.7	22.30	27.448	
3,800.0	3,780.7	3,705.9	3,674.3	12.3	12.2	-149.47	-216.1	343.9	640.2	617.2	22.99	27.850	
3,900.0	3,879.8	3,801.9	3,768.6	12.7	12.6	-149.39	-226.8	357.9	668.5	644.8	23.69	28.222	
4,000.0	3,978.8	3,897.8	3,862.9	13.1	13.0	-149.32	-237.5	371.9	696.7	672.3	24.39	28.567	
4,100.0	4,077.9	3,993.7	3,957.2	13.5	13.4	-149.25	-248.2	386.0	724.9	699.8	25.10	28.887	
4,200.0	4,176.9	4,089.6	4,051.5	13.9	13.8	-149.19	-258.9	400.0	753.2	727.4	25.81	29.185	
4,300.0	4,276.0	4,185.6	4,145.8	14.3	14.2	-149.13	-269.6	414.0	781.4	754.9	26.52	29.462	
4,400.0	4,375.0	4,281.5	4,240.1	14.7	14.6	-149.08	-280.3	428.0	809.6	782.4	27.24	29.722	
4,500.0	4,474.1	4,377.4	4,334.4	15.1	15.0	-149.03	-291.0	442.1	837.9	809.9	27.96	29.970	
4,600.0	4,573.1	4,486.6	4,441.9	15.5	15.5	-149.00	-302.7	457.4	865.5	836.7	28.80	30.053	
4,700.0	4,672.2	4,598.8	4,552.7	15.9	16.0	-149.04	-313.4	471.5	891.4	861.7	29.63	30.084	
4,800.0	4,771.2	4,712.0	4,664.8	16.3	16.5	-149.13	-322.9	483.9	915.5	885.1	30.44	30.074	
4,900.0	4,870.3	4,826.2	4,778.1	16.7	16.9	-149.27	-331.1	494.6	938.0	906.7	31.24	30.023	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design:	ORE DIGGER PROJECT - _ORE DIGGER FEDERAL 602H - OWB - PWP0											Offset Site Error:	0.0 usft
Survey Program:	0-r.5 MWD+IFR1											Offset Well Error:	0.0 usft
Reference	Rule Assigned:												
Measured	Vertical	Measured	Vertical	Semi Major Axis		Offset Wellbore Centre		Distance		No-Go	Separation	Warning	
Depth	Depth	Depth	Depth	Reference	Offset	Highside		Between	Between				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	Toolface	+N/-S	+E/-W	Centres	Ellipses	Distance	Factor	
						(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
5,000.0	4,969.3	4,941.2	4,892.6	17.1	17.4	-149.47	-338.0	503.6	958.6	926.6	32.02	29.936	
5,100.0	5,068.4	5,057.0	5,008.0	17.5	17.8	-149.72	-343.5	510.9	977.5	944.8	32.78	29.819	
5,200.0	5,167.4	5,173.5	5,124.3	17.9	18.2	-150.02	-347.6	516.3	994.7	961.1	33.51	29.679	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design:		ORE DIGGER PROJECT - TOP HAT 26 FEDERAL #1_PA - OWB - AWP											Offset Site Error:		0.0 usft	
Survey Program:		181-r.5 INC-ONLY											Offset Well Error:		3.0 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned:							
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside			Distance						Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Between	Between	No-Go	Separation				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	Centres	Ellipses	Distance	Factor				
									(usft)	(usft)	(usft)					
16,000.0	10,536.0	10,568.4	10,566.5	51.0	242.3	90.25	5,529.6	128.3	991.1	645.2	345.88	2.865	Normal Operations			
16,100.0	10,534.8	10,566.5	10,564.7	51.6	242.3	90.14	5,529.6	128.3	972.8	626.7	346.09	2.811	Normal Operations			
16,200.0	10,533.7	10,564.7	10,562.9	52.2	242.3	90.03	5,529.6	128.3	964.5	618.3	346.18	2.786	Normal Operations			
16,230.2	10,533.3	10,564.2	10,562.4	52.4	242.2	90.00	5,529.6	128.3	964.0	617.9	346.17	2.785	Normal Operations, CC, ES, SF			
16,300.0	10,532.5	10,563.0	10,561.1	52.9	242.2	89.93	5,529.6	128.3	966.5	620.4	346.12	2.793	Normal Operations			
16,400.0	10,531.4	10,561.2	10,559.4	53.5	242.2	89.82	5,529.6	128.3	978.9	632.9	345.94	2.830	Normal Operations			

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

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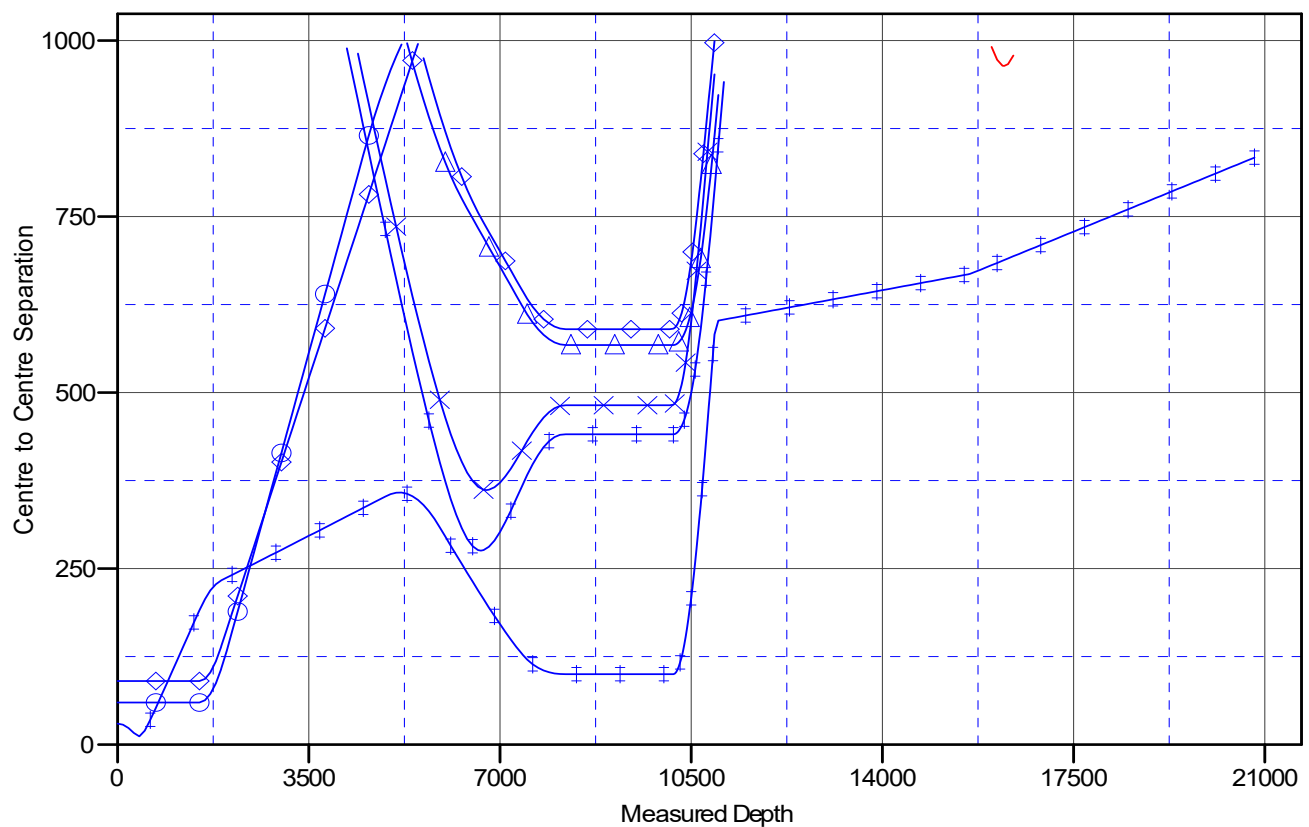
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3650.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.37°

Ladder Plot



LEGEND

- | | | |
|---|---|--|
| _GRIZZDOUGAR FED COM 50H, OWB, PWP0A V0 | _GRIZZDOUGAR FED COM 702H, OWB, PWP0 V0 | _ORE DIGGER FEDERAL 502H, OWB, PWP0 V0 |
| _GRIZZDOUGAR FED COM 502H, OWB, PWP0 V0 | _ORE DIGGER FEDERAL 502H, OWB, PWP0 V0 | TOP HAT 26 FEDERAL #1_PA OWB, AWP V0 |
| _GRIZZDOUGAR FED COM 70H, OWB, PWP0A V0 | _ORE DIGGER FEDERAL 60H, OWB, PWP0 V0 | |

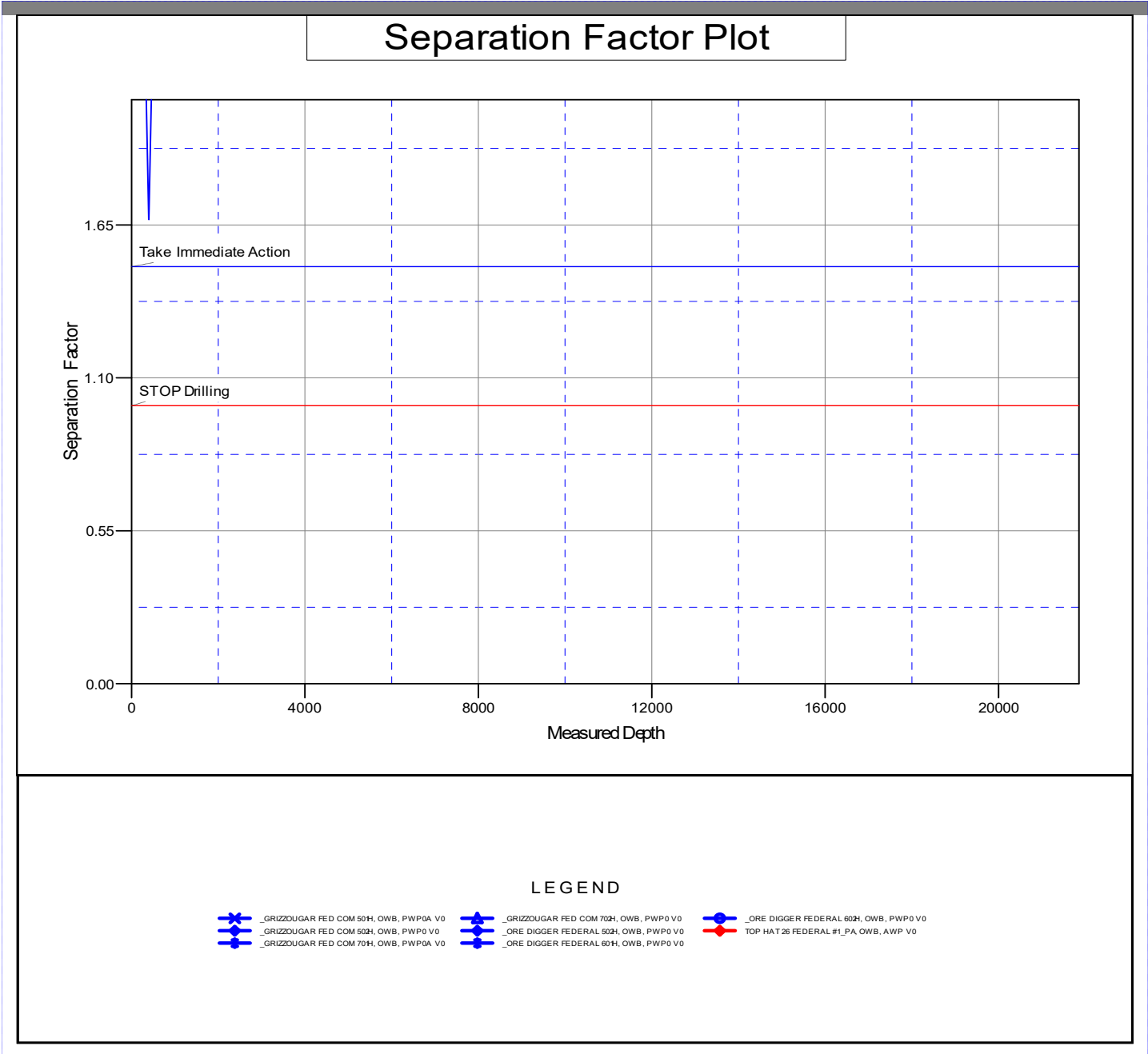
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips
Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Project:	ZEUS WEST__NM_E	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Reference Site:	ORE DIGGER PROJECT	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3650.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.37°



DELAWARE BASIN WEST

ZEUS WEST__NM_E

ORE DIGGER PROJECT

**_ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL
501H**

OWB

Plan: PWP0

Standard Planning Report

18 July, 2024

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project	ZEUS WEST__NM_E		
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		ORE DIGGER PROJECT			
Site Position:		Northing:	559,726.46 usft	Latitude:	32° 32' 12.654 N
From:	Map	Easting:	715,724.26 usft	Longitude:	103° 38' 0.006 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	_ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H					
Well Position	+N/-S	0.0 usft	Northing:	554,804.25 usft	Latitude:	32° 31' 24.002 N
	+E/-W	0.0 usft	Easting:	714,883.04 usft	Longitude:	103° 38' 10.208 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,650.0 usft
Grid Convergence:		0.37 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	10/12/2023	6.52	60.30	47,636.44744081

Design	PWP0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Survey Tool Program	Date	7/18/2024			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	20,811.3 PWP0 (OWB)	r.5 MWD+IFR1+MS		
			OWSG MWD + IFR1 + Multi-Sl		

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Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,894.6	7.89	251.96	1,893.4	-8.4	-25.8	2.00	2.00	0.00	251.96	
7,416.8	7.89	251.96	7,363.2	-243.2	-746.8	0.00	0.00	0.00	0.00	
8,206.1	0.00	0.00	8,150.0	-260.0	-798.5	1.00	-1.00	0.00	180.00	
10,172.6	0.00	0.00	10,116.5	-260.0	-798.5	0.00	0.00	0.00	0.00	
10,928.0	90.66	359.62	10,593.9	222.9	-801.6	12.00	12.00	-0.05	359.62	
15,578.1	90.66	359.62	10,540.8	4,872.6	-832.3	0.00	0.00	0.00	0.00	
15,582.1	90.65	359.70	10,540.7	4,876.6	-832.3	2.00	-0.02	2.00	90.48	
20,811.3	90.65	359.70	10,481.0	10,105.4	-859.5	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,600.0	2.00	251.96	1,600.0	-0.5	-1.7	-0.5	2.00	2.00	0.00	
1,700.0	4.00	251.96	1,699.8	-2.2	-6.6	-2.2	2.00	2.00	0.00	
1,800.0	6.00	251.96	1,799.5	-4.9	-14.9	-4.9	2.00	2.00	0.00	
1,894.6	7.89	251.96	1,893.4	-8.4	-25.8	-8.4	2.00	2.00	0.00	
1,900.0	7.89	251.96	1,898.7	-8.6	-26.5	-8.6	0.00	0.00	0.00	
2,000.0	7.89	251.96	1,997.8	-12.9	-39.6	-12.9	0.00	0.00	0.00	
2,100.0	7.89	251.96	2,096.8	-17.1	-52.6	-17.1	0.00	0.00	0.00	
2,200.0	7.89	251.96	2,195.9	-21.4	-65.7	-21.4	0.00	0.00	0.00	
2,300.0	7.89	251.96	2,294.9	-25.6	-78.7	-25.6	0.00	0.00	0.00	
2,400.0	7.89	251.96	2,394.0	-29.9	-91.8	-29.9	0.00	0.00	0.00	
2,500.0	7.89	251.96	2,493.0	-34.1	-104.8	-34.1	0.00	0.00	0.00	
2,600.0	7.89	251.96	2,592.1	-38.4	-117.9	-38.4	0.00	0.00	0.00	
2,700.0	7.89	251.96	2,691.1	-42.6	-131.0	-42.6	0.00	0.00	0.00	
2,800.0	7.89	251.96	2,790.2	-46.9	-144.0	-46.9	0.00	0.00	0.00	
2,900.0	7.89	251.96	2,889.2	-51.1	-157.1	-51.1	0.00	0.00	0.00	
3,000.0	7.89	251.96	2,988.3	-55.4	-170.1	-55.4	0.00	0.00	0.00	
3,100.0	7.89	251.96	3,087.3	-59.7	-183.2	-59.7	0.00	0.00	0.00	
3,200.0	7.89	251.96	3,186.4	-63.9	-196.2	-63.9	0.00	0.00	0.00	
3,300.0	7.89	251.96	3,285.4	-68.2	-209.3	-68.2	0.00	0.00	0.00	
3,400.0	7.89	251.96	3,384.5	-72.4	-222.4	-72.4	0.00	0.00	0.00	
3,500.0	7.89	251.96	3,483.5	-76.7	-235.4	-76.7	0.00	0.00	0.00	
3,600.0	7.89	251.96	3,582.6	-80.9	-248.5	-80.9	0.00	0.00	0.00	
3,700.0	7.89	251.96	3,681.7	-85.2	-261.5	-85.2	0.00	0.00	0.00	
3,800.0	7.89	251.96	3,780.7	-89.4	-274.6	-89.4	0.00	0.00	0.00	
3,900.0	7.89	251.96	3,879.8	-93.7	-287.6	-93.7	0.00	0.00	0.00	
4,000.0	7.89	251.96	3,978.8	-97.9	-300.7	-97.9	0.00	0.00	0.00	
4,100.0	7.89	251.96	4,077.9	-102.2	-313.8	-102.2	0.00	0.00	0.00	
4,200.0	7.89	251.96	4,176.9	-106.4	-326.8	-106.4	0.00	0.00	0.00	
4,300.0	7.89	251.96	4,276.0	-110.7	-339.9	-110.7	0.00	0.00	0.00	
4,400.0	7.89	251.96	4,375.0	-114.9	-352.9	-114.9	0.00	0.00	0.00	
4,500.0	7.89	251.96	4,474.1	-119.2	-366.0	-119.2	0.00	0.00	0.00	
4,600.0	7.89	251.96	4,573.1	-123.4	-379.0	-123.4	0.00	0.00	0.00	
4,700.0	7.89	251.96	4,672.2	-127.7	-392.1	-127.7	0.00	0.00	0.00	
4,800.0	7.89	251.96	4,771.2	-131.9	-405.2	-131.9	0.00	0.00	0.00	
4,900.0	7.89	251.96	4,870.3	-136.2	-418.2	-136.2	0.00	0.00	0.00	
5,000.0	7.89	251.96	4,969.3	-140.4	-431.3	-140.4	0.00	0.00	0.00	
5,100.0	7.89	251.96	5,068.4	-144.7	-444.3	-144.7	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,200.0	7.89	251.96	5,167.4	-148.9	-457.4	-148.9	0.00	0.00	0.00	
5,300.0	7.89	251.96	5,266.5	-153.2	-470.4	-153.2	0.00	0.00	0.00	
5,400.0	7.89	251.96	5,365.5	-157.4	-483.5	-157.4	0.00	0.00	0.00	
5,500.0	7.89	251.96	5,464.6	-161.7	-496.6	-161.7	0.00	0.00	0.00	
5,600.0	7.89	251.96	5,563.7	-165.9	-509.6	-165.9	0.00	0.00	0.00	
5,700.0	7.89	251.96	5,662.7	-170.2	-522.7	-170.2	0.00	0.00	0.00	
5,800.0	7.89	251.96	5,761.8	-174.5	-535.7	-174.5	0.00	0.00	0.00	
5,900.0	7.89	251.96	5,860.8	-178.7	-548.8	-178.7	0.00	0.00	0.00	
6,000.0	7.89	251.96	5,959.9	-183.0	-561.8	-183.0	0.00	0.00	0.00	
6,100.0	7.89	251.96	6,058.9	-187.2	-574.9	-187.2	0.00	0.00	0.00	
6,200.0	7.89	251.96	6,158.0	-191.5	-588.0	-191.5	0.00	0.00	0.00	
6,300.0	7.89	251.96	6,257.0	-195.7	-601.0	-195.7	0.00	0.00	0.00	
6,400.0	7.89	251.96	6,356.1	-200.0	-614.1	-200.0	0.00	0.00	0.00	
6,500.0	7.89	251.96	6,455.1	-204.2	-627.1	-204.2	0.00	0.00	0.00	
6,600.0	7.89	251.96	6,554.2	-208.5	-640.2	-208.5	0.00	0.00	0.00	
6,700.0	7.89	251.96	6,653.2	-212.7	-653.3	-212.7	0.00	0.00	0.00	
6,800.0	7.89	251.96	6,752.3	-217.0	-666.3	-217.0	0.00	0.00	0.00	
6,900.0	7.89	251.96	6,851.3	-221.2	-679.4	-221.2	0.00	0.00	0.00	
7,000.0	7.89	251.96	6,950.4	-225.5	-692.4	-225.5	0.00	0.00	0.00	
7,100.0	7.89	251.96	7,049.4	-229.7	-705.5	-229.7	0.00	0.00	0.00	
7,200.0	7.89	251.96	7,148.5	-234.0	-718.5	-234.0	0.00	0.00	0.00	
7,300.0	7.89	251.96	7,247.5	-238.2	-731.6	-238.2	0.00	0.00	0.00	
7,400.0	7.89	251.96	7,346.6	-242.5	-744.7	-242.5	0.00	0.00	0.00	
7,416.8	7.89	251.96	7,363.2	-243.2	-746.8	-243.2	0.00	0.00	0.00	
7,500.0	7.06	251.96	7,445.7	-246.5	-757.1	-246.5	1.00	-1.00	0.00	
7,600.0	6.06	251.96	7,545.1	-250.1	-768.0	-250.1	1.00	-1.00	0.00	
7,700.0	5.06	251.96	7,644.6	-253.1	-777.2	-253.1	1.00	-1.00	0.00	
7,800.0	4.06	251.96	7,744.3	-255.5	-784.8	-255.5	1.00	-1.00	0.00	
7,900.0	3.06	251.96	7,844.1	-257.5	-790.7	-257.5	1.00	-1.00	0.00	
8,000.0	2.06	251.96	7,944.0	-258.9	-794.9	-258.9	1.00	-1.00	0.00	
8,100.0	1.06	251.96	8,044.0	-259.7	-797.5	-259.7	1.00	-1.00	0.00	
8,206.1	0.00	0.00	8,150.0	-260.0	-798.5	-260.0	1.00	-1.00	0.00	
8,300.0	0.00	0.00	8,243.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,343.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,443.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,543.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,643.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,743.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,843.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,943.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,043.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,143.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,243.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,343.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,443.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,543.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,643.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,743.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,843.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,943.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,043.9	-260.0	-798.5	-260.0	0.00	0.00	0.00	
10,172.6	0.00	0.00	10,116.5	-260.0	-798.5	-260.0	0.00	0.00	0.00	
10,175.0	0.29	359.62	10,118.9	-260.0	-798.5	-260.0	12.00	12.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,200.0	3.29	359.62	10,143.9	-259.2	-798.5	-259.2	12.00	12.00	0.00	
10,225.0	6.29	359.62	10,168.8	-257.1	-798.5	-257.1	12.00	12.00	0.00	
10,250.0	9.29	359.62	10,193.6	-253.7	-798.5	-253.7	12.00	12.00	0.00	
10,275.0	12.29	359.62	10,218.2	-249.1	-798.5	-249.1	12.00	12.00	0.00	
10,300.0	15.29	359.62	10,242.4	-243.1	-798.6	-243.1	12.00	12.00	0.00	
10,325.0	18.29	359.62	10,266.4	-235.9	-798.6	-235.9	12.00	12.00	0.00	
10,350.0	21.29	359.62	10,289.9	-227.4	-798.7	-227.4	12.00	12.00	0.00	
10,375.0	24.29	359.62	10,312.9	-217.7	-798.7	-217.7	12.00	12.00	0.00	
10,400.0	27.29	359.62	10,335.4	-206.8	-798.8	-206.8	12.00	12.00	0.00	
10,425.0	30.29	359.62	10,357.3	-194.8	-798.9	-194.8	12.00	12.00	0.00	
10,450.0	33.29	359.62	10,378.6	-181.6	-799.0	-181.6	12.00	12.00	0.00	
10,475.0	36.29	359.62	10,399.1	-167.4	-799.1	-167.4	12.00	12.00	0.00	
10,500.0	39.29	359.62	10,418.9	-152.1	-799.2	-152.1	12.00	12.00	0.00	
10,525.0	42.29	359.62	10,437.8	-135.7	-799.3	-135.7	12.00	12.00	0.00	
10,550.0	45.29	359.62	10,455.8	-118.4	-799.4	-118.4	12.00	12.00	0.00	
10,575.0	48.29	359.62	10,473.0	-100.2	-799.5	-100.2	12.00	12.00	0.00	
10,600.0	51.29	359.62	10,489.1	-81.1	-799.6	-81.1	12.00	12.00	0.00	
10,625.0	54.29	359.62	10,504.2	-61.2	-799.8	-61.2	12.00	12.00	0.00	
10,650.0	57.29	359.62	10,518.3	-40.5	-799.9	-40.5	12.00	12.00	0.00	
10,675.0	60.29	359.62	10,531.2	-19.2	-800.0	-19.2	12.00	12.00	0.00	
10,700.0	63.29	359.62	10,543.0	2.9	-800.2	2.9	12.00	12.00	0.00	
10,725.0	66.29	359.62	10,553.7	25.5	-800.3	25.5	12.00	12.00	0.00	
10,750.0	69.29	359.62	10,563.1	48.6	-800.5	48.6	12.00	12.00	0.00	
10,775.0	72.29	359.62	10,571.3	72.2	-800.6	72.2	12.00	12.00	0.00	
10,800.0	75.29	359.62	10,578.3	96.2	-800.8	96.2	12.00	12.00	0.00	
10,825.0	78.29	359.62	10,584.0	120.6	-801.0	120.6	12.00	12.00	0.00	
10,850.0	81.29	359.62	10,588.5	145.2	-801.1	145.2	12.00	12.00	0.00	
10,875.0	84.29	359.62	10,591.6	170.0	-801.3	170.0	12.00	12.00	0.00	
10,900.0	87.29	359.62	10,593.4	194.9	-801.5	194.9	12.00	12.00	0.00	
10,925.0	90.29	359.62	10,594.0	219.9	-801.6	219.9	12.00	12.00	0.00	
10,928.0	90.66	359.62	10,593.9	222.9	-801.6	222.9	12.00	12.00	0.00	
11,000.0	90.66	359.62	10,593.1	294.9	-802.1	294.9	0.00	0.00	0.00	
11,100.0	90.66	359.62	10,592.0	394.9	-802.8	394.9	0.00	0.00	0.00	
11,200.0	90.66	359.62	10,590.8	494.9	-803.4	494.9	0.00	0.00	0.00	
11,300.0	90.66	359.62	10,589.7	594.9	-804.1	594.9	0.00	0.00	0.00	
11,400.0	90.66	359.62	10,588.5	694.9	-804.8	694.9	0.00	0.00	0.00	
11,500.0	90.66	359.62	10,587.4	794.9	-805.4	794.9	0.00	0.00	0.00	
11,600.0	90.66	359.62	10,586.3	894.8	-806.1	894.8	0.00	0.00	0.00	
11,700.0	90.66	359.62	10,585.1	994.8	-806.7	994.8	0.00	0.00	0.00	
11,800.0	90.66	359.62	10,584.0	1,094.8	-807.4	1,094.8	0.00	0.00	0.00	
11,900.0	90.66	359.62	10,582.8	1,194.8	-808.1	1,194.8	0.00	0.00	0.00	
12,000.0	90.66	359.62	10,581.7	1,294.8	-808.7	1,294.8	0.00	0.00	0.00	
12,100.0	90.66	359.62	10,580.5	1,394.8	-809.4	1,394.8	0.00	0.00	0.00	
12,200.0	90.66	359.62	10,579.4	1,494.8	-810.0	1,494.8	0.00	0.00	0.00	
12,300.0	90.66	359.62	10,578.2	1,594.8	-810.7	1,594.8	0.00	0.00	0.00	
12,400.0	90.66	359.62	10,577.1	1,694.8	-811.4	1,694.8	0.00	0.00	0.00	
12,500.0	90.66	359.62	10,576.0	1,794.8	-812.0	1,794.8	0.00	0.00	0.00	
12,600.0	90.66	359.62	10,574.8	1,894.8	-812.7	1,894.8	0.00	0.00	0.00	
12,700.0	90.66	359.62	10,573.7	1,994.7	-813.3	1,994.7	0.00	0.00	0.00	
12,800.0	90.66	359.62	10,572.5	2,094.7	-814.0	2,094.7	0.00	0.00	0.00	
12,900.0	90.66	359.62	10,571.4	2,194.7	-814.7	2,194.7	0.00	0.00	0.00	
13,000.0	90.66	359.62	10,570.2	2,294.7	-815.3	2,294.7	0.00	0.00	0.00	
13,100.0	90.66	359.62	10,569.1	2,394.7	-816.0	2,394.7	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,200.0	90.66	359.62	10,568.0	2,494.7	-816.6	2,494.7	0.00	0.00	0.00
13,300.0	90.66	359.62	10,566.8	2,594.7	-817.3	2,594.7	0.00	0.00	0.00
13,400.0	90.66	359.62	10,565.7	2,694.7	-818.0	2,694.7	0.00	0.00	0.00
13,500.0	90.66	359.62	10,564.5	2,794.7	-818.6	2,794.7	0.00	0.00	0.00
13,600.0	90.66	359.62	10,563.4	2,894.7	-819.3	2,894.7	0.00	0.00	0.00
13,700.0	90.66	359.62	10,562.2	2,994.7	-819.9	2,994.7	0.00	0.00	0.00
13,800.0	90.66	359.62	10,561.1	3,094.7	-820.6	3,094.7	0.00	0.00	0.00
13,900.0	90.66	359.62	10,560.0	3,194.6	-821.3	3,194.6	0.00	0.00	0.00
14,000.0	90.66	359.62	10,558.8	3,294.6	-821.9	3,294.6	0.00	0.00	0.00
14,100.0	90.66	359.62	10,557.7	3,394.6	-822.6	3,394.6	0.00	0.00	0.00
14,200.0	90.66	359.62	10,556.5	3,494.6	-823.2	3,494.6	0.00	0.00	0.00
14,300.0	90.66	359.62	10,555.4	3,594.6	-823.9	3,594.6	0.00	0.00	0.00
14,400.0	90.66	359.62	10,554.2	3,694.6	-824.6	3,694.6	0.00	0.00	0.00
14,500.0	90.66	359.62	10,553.1	3,794.6	-825.2	3,794.6	0.00	0.00	0.00
14,600.0	90.66	359.62	10,552.0	3,894.6	-825.9	3,894.6	0.00	0.00	0.00
14,700.0	90.66	359.62	10,550.8	3,994.6	-826.5	3,994.6	0.00	0.00	0.00
14,800.0	90.66	359.62	10,549.7	4,094.6	-827.2	4,094.6	0.00	0.00	0.00
14,900.0	90.66	359.62	10,548.5	4,194.6	-827.9	4,194.6	0.00	0.00	0.00
15,000.0	90.66	359.62	10,547.4	4,294.5	-828.5	4,294.5	0.00	0.00	0.00
15,100.0	90.66	359.62	10,546.2	4,394.5	-829.2	4,394.5	0.00	0.00	0.00
15,200.0	90.66	359.62	10,545.1	4,494.5	-829.8	4,494.5	0.00	0.00	0.00
15,300.0	90.66	359.62	10,543.9	4,594.5	-830.5	4,594.5	0.00	0.00	0.00
15,400.0	90.66	359.62	10,542.8	4,694.5	-831.2	4,694.5	0.00	0.00	0.00
15,500.0	90.66	359.62	10,541.7	4,794.5	-831.8	4,794.5	0.00	0.00	0.00
15,578.1	90.66	359.62	10,540.8	4,872.6	-832.3	4,872.6	0.00	0.00	0.00
15,582.1	90.65	359.70	10,540.7	4,876.6	-832.3	4,876.6	2.00	-0.02	2.00
15,600.0	90.65	359.70	10,540.5	4,894.5	-832.4	4,894.5	0.00	0.00	0.00
15,700.0	90.65	359.70	10,539.4	4,994.5	-833.0	4,994.5	0.00	0.00	0.00
15,800.0	90.65	359.70	10,538.2	5,094.5	-833.5	5,094.5	0.00	0.00	0.00
15,900.0	90.65	359.70	10,537.1	5,194.5	-834.0	5,194.5	0.00	0.00	0.00
16,000.0	90.65	359.70	10,536.0	5,294.5	-834.5	5,294.5	0.00	0.00	0.00
16,100.0	90.65	359.70	10,534.8	5,394.5	-835.0	5,394.5	0.00	0.00	0.00
16,200.0	90.65	359.70	10,533.7	5,494.4	-835.6	5,494.4	0.00	0.00	0.00
16,300.0	90.65	359.70	10,532.5	5,594.4	-836.1	5,594.4	0.00	0.00	0.00
16,400.0	90.65	359.70	10,531.4	5,694.4	-836.6	5,694.4	0.00	0.00	0.00
16,500.0	90.65	359.70	10,530.2	5,794.4	-837.1	5,794.4	0.00	0.00	0.00
16,600.0	90.65	359.70	10,529.1	5,894.4	-837.6	5,894.4	0.00	0.00	0.00
16,700.0	90.65	359.70	10,528.0	5,994.4	-838.2	5,994.4	0.00	0.00	0.00
16,800.0	90.65	359.70	10,526.8	6,094.4	-838.7	6,094.4	0.00	0.00	0.00
16,900.0	90.65	359.70	10,525.7	6,194.4	-839.2	6,194.4	0.00	0.00	0.00
17,000.0	90.65	359.70	10,524.5	6,294.4	-839.7	6,294.4	0.00	0.00	0.00
17,100.0	90.65	359.70	10,523.4	6,394.4	-840.2	6,394.4	0.00	0.00	0.00
17,200.0	90.65	359.70	10,522.2	6,494.4	-840.8	6,494.4	0.00	0.00	0.00
17,300.0	90.65	359.70	10,521.1	6,594.4	-841.3	6,594.4	0.00	0.00	0.00
17,400.0	90.65	359.70	10,520.0	6,694.4	-841.8	6,694.4	0.00	0.00	0.00
17,500.0	90.65	359.70	10,518.8	6,794.3	-842.3	6,794.3	0.00	0.00	0.00
17,600.0	90.65	359.70	10,517.7	6,894.3	-842.8	6,894.3	0.00	0.00	0.00
17,700.0	90.65	359.70	10,516.5	6,994.3	-843.4	6,994.3	0.00	0.00	0.00
17,800.0	90.65	359.70	10,515.4	7,094.3	-843.9	7,094.3	0.00	0.00	0.00
17,900.0	90.65	359.70	10,514.3	7,194.3	-844.4	7,194.3	0.00	0.00	0.00
18,000.0	90.65	359.70	10,513.1	7,294.3	-844.9	7,294.3	0.00	0.00	0.00
18,100.0	90.65	359.70	10,512.0	7,394.3	-845.4	7,394.3	0.00	0.00	0.00
18,200.0	90.65	359.70	10,510.8	7,494.3	-846.0	7,494.3	0.00	0.00	0.00

ConocoPhillips
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
18,300.0	90.65	359.70	10,509.7	7,594.3	-846.5	7,594.3	0.00	0.00	0.00	
18,400.0	90.65	359.70	10,508.5	7,694.3	-847.0	7,694.3	0.00	0.00	0.00	
18,500.0	90.65	359.70	10,507.4	7,794.3	-847.5	7,794.3	0.00	0.00	0.00	
18,600.0	90.65	359.70	10,506.3	7,894.3	-848.0	7,894.3	0.00	0.00	0.00	
18,700.0	90.65	359.70	10,505.1	7,994.2	-848.6	7,994.2	0.00	0.00	0.00	
18,800.0	90.65	359.70	10,504.0	8,094.2	-849.1	8,094.2	0.00	0.00	0.00	
18,900.0	90.65	359.70	10,502.8	8,194.2	-849.6	8,194.2	0.00	0.00	0.00	
19,000.0	90.65	359.70	10,501.7	8,294.2	-850.1	8,294.2	0.00	0.00	0.00	
19,100.0	90.65	359.70	10,500.5	8,394.2	-850.6	8,394.2	0.00	0.00	0.00	
19,200.0	90.65	359.70	10,499.4	8,494.2	-851.2	8,494.2	0.00	0.00	0.00	
19,300.0	90.65	359.70	10,498.3	8,594.2	-851.7	8,594.2	0.00	0.00	0.00	
19,400.0	90.65	359.70	10,497.1	8,694.2	-852.2	8,694.2	0.00	0.00	0.00	
19,500.0	90.65	359.70	10,496.0	8,794.2	-852.7	8,794.2	0.00	0.00	0.00	
19,600.0	90.65	359.70	10,494.8	8,894.2	-853.2	8,894.2	0.00	0.00	0.00	
19,700.0	90.65	359.70	10,493.7	8,994.2	-853.8	8,994.2	0.00	0.00	0.00	
19,800.0	90.65	359.70	10,492.6	9,094.2	-854.3	9,094.2	0.00	0.00	0.00	
19,900.0	90.65	359.70	10,491.4	9,194.2	-854.8	9,194.2	0.00	0.00	0.00	
20,000.0	90.65	359.70	10,490.3	9,294.1	-855.3	9,294.1	0.00	0.00	0.00	
20,100.0	90.65	359.70	10,489.1	9,394.1	-855.8	9,394.1	0.00	0.00	0.00	
20,200.0	90.65	359.70	10,488.0	9,494.1	-856.4	9,494.1	0.00	0.00	0.00	
20,300.0	90.65	359.70	10,486.8	9,594.1	-856.9	9,594.1	0.00	0.00	0.00	
20,400.0	90.65	359.70	10,485.7	9,694.1	-857.4	9,694.1	0.00	0.00	0.00	
20,500.0	90.65	359.70	10,484.6	9,794.1	-857.9	9,794.1	0.00	0.00	0.00	
20,600.0	90.65	359.70	10,483.4	9,894.1	-858.4	9,894.1	0.00	0.00	0.00	
20,700.0	90.65	359.70	10,482.3	9,994.1	-859.0	9,994.1	0.00	0.00	0.00	
20,800.0	90.65	359.70	10,481.1	10,094.1	-859.5	10,094.1	0.00	0.00	0.00	
20,811.3	90.65	359.70	10,481.0	10,105.4	-859.5	10,105.4	0.00	0.00	0.00	

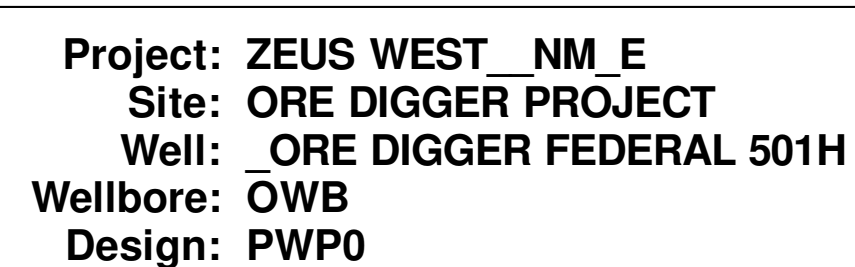
Design Targets										
Target Name										
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL (ORE DIGGER FE - plan hits target center - Rectangle (sides W100.0 H5,229.7 D20.0)	0.00	179.79	10,481.0	10,105.4	-859.5	564,909.67	714,023.51	32° 33' 4.053 N	103° 38' 19.477 W	
LTP (ORE DIGGER FE - plan misses target center by 0.6usft at 20761.3usft MD (10481.6 TVD, 10055.4 N, -859.3 E) - Circle (radius 50.0)	90.00	0.00	10,481.0	10,055.4	-859.3	564,859.67	714,023.77	32° 33' 3.558 N	103° 38' 19.478 W	
POI_ ORE DIGGER FE - plan hits target center - Rectangle (sides W100.0 H5,183.7 D20.0)	0.00	179.62	10,540.8	4,872.6	-832.3	559,676.81	714,050.72	32° 32' 12.271 N	103° 38' 19.558 W	
FTP (ORE DIGGER FE - plan misses target center by 234.0usft at 10525.0usft MD (10437.8 TVD, -135.7 N, -799.3 E) - Circle (radius 50.0)	0.00	0.00	10,594.0	-310.0	-798.5	554,494.23	714,084.59	32° 31' 20.986 N	103° 38' 19.557 W	

ConocoPhillips

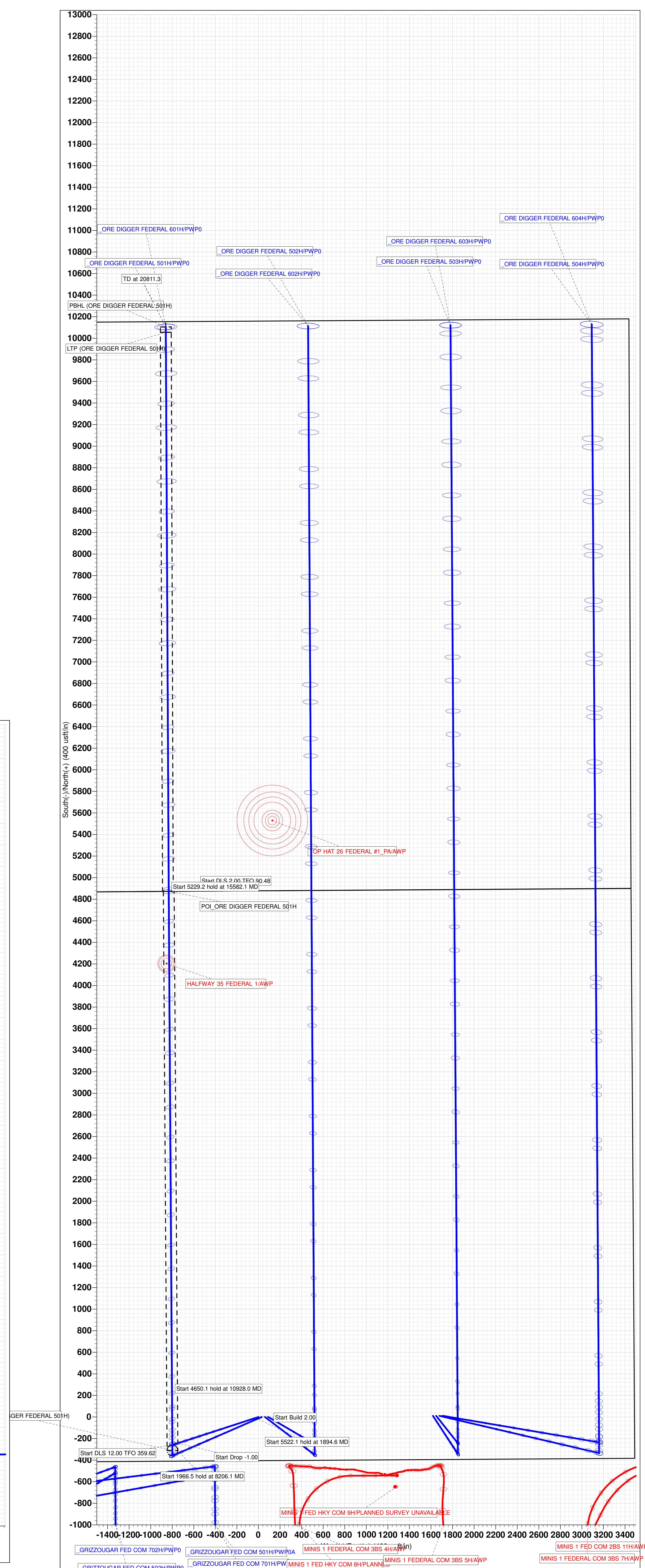
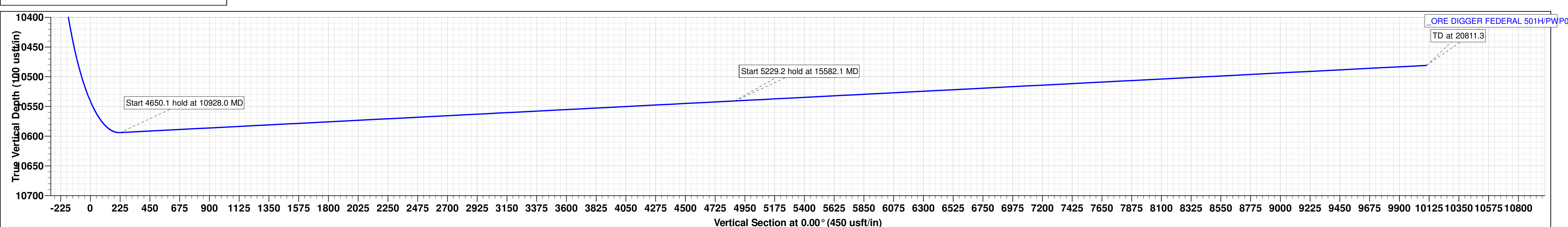
Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well _ORE DIGGER FEDERAL 501H - Slot ORE DIGGER FEDERAL 501H
Company:	DELAWARE BASIN WEST	TVD Reference:	WELL @ 3650.0usft (Original Well Elev)
Project:	ZEUS WEST__NM_E	MD Reference:	WELL @ 3650.0usft (Original Well Elev)
Site:	ORE DIGGER PROJECT	North Reference:	Grid
Well:	_ORE DIGGER FEDERAL 501H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	20,811.4	10,481.0	5-1/2" Production Casing	5-1/2	6-3/4



SECTION DETAILS									
	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect
	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0
	1894.6	7.89	251.96	1893.4	-8.4	-25.8	2.00	251.96	-8.4
	7416.8	7.89	251.96	7363.2	-243.2	-748.8	0.00	0.00	-243.2
	8208.1	0.00	0.00	8150.0	-260.0	-798.5	1.00	180.00	-260.0
	10172.6	0.00	0.00	10115.5	-260.0	-798.5	0.00	0.00	-260.0
	10928.0	90.66	359.62	10593.9	222.9	-801.6	12.00	359.62	222.9
	15578.1	90.66	359.62	10540.8	487.6	-832.3	0.00	0.00	487.6
	15582.1	90.65	359.70	10540.7	487.6	-832.3	2.00	90.48	487.6
	20811.3	90.65	359.70	10481.0	10105.4	-859.5	0.00	0.00	10105.4



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG OPERATING LLC
WELL NAME & NO.:	ORE DIGGER FED 501H
LOCATION:	Section 35, T.20 S., R.33 E., NMP
COUNTY:	Lea County, New Mexico

COA

H₂S	☐ No	☒ Yes	
Potash / WIPP	☐ None	☐ Secretary	☒ R-111-Q ☐ Open Annulus
	4-String Design: Open 2nd Int x Production Casing (ICP 2 above Relief Zone)		☐ WIPP
Cave / Karst	☒ Low	☐ Medium	☐ High ☐ Critical
Wellhead	☐ Conventional	☒ Multibowl	☐ Both ☐ Diverter
Cementing	☐ Primary Squeeze	☒ Cont. Squeeze	☒ EchoMeter ☐ DV Tool
Special Req	☒ Capitan Reef	☐ Water Disposal	☐ COM ☐ Unit
Waste Prev.	☐ Self-Certification	☒ Waste Min. Plan	☐ APD Submitted prior to 06/10/2024
Additional Language	☒ Flex Hose	☒ Casing Clearance	☐ Pilot Hole ☒ Break Testing
	☒ Four-String	☒ Offline Cementing	☐ Fluid-Filled

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.

APD is within the R-111-Q defined boundary. Operator must follow all procedures and requirements listed within the updated order.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1730 feet** (a minimum of 25 feet (Lea 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. The minimum required fill of cement behind the **10-3/4** inch intermediate 1 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, Capitan Reef, or potash.**
3. Intermediate 2 should be set prior to entering Delaware group to facilitate monitoring during hydraulic fracturing, and post-frac bradenhead cementing. The **8-5/8** inch intermediate 2 casing shall be set at approximately **5500 feet per BLM Geologist**. The minimum required fill of cement behind the **8-5/8** inch intermediate 2 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, Capitan Reef, or potash.**
4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, 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.**

(Primary + Post Frac Bradenhead):

- **A monitored open annulus will be incorporated during completion by leaving the Intermediate 2 x Production annulus un-cemented and monitored inside the Intermediate String.** Operator must follow monitoring requirements listed within R-111-Q. Tieback requirements shall be met within **180 days**.

Operator has proposed to pump down **intermediate 2 x Production** annulus post completion. **Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus OR operator shall run a CBL from TD of the intermediate 2/Production casing to surface after the second stage BH to verify TOC.** Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry during

second stage bradenhead when running Echo-meter if cement is required to surface. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

Operator has proposed an open annulus completion in R-111-Q. Operator shall provide a method of verification pre-completion top of cement. **Submit results to the BLM. Pressure monitoring device and Pressure Safety Valves must be installed at surface on both the intermediate annulus and the production annulus for the life of the well.**

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-361-2822 Eddy County).

- After bradenhead mentioned above Cement should tie-back **500 feet or 50 feet on top of the Capitan Reef, whichever is closer to surface** into the previous casing but not higher than USGS Marker Bed No. 126. **Operator must verify top of cement per R-111-Q requirements.** Submit results to the BLM. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, Capitan Reef, 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 **20 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)

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for intervals utilizing a 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 (575-689-5981 Lea 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 **43 CFR 3172**.
- 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)

Contact Petroleum Engineering Inspection Staff:

☒ 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 9/23/2025

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

General Information
Phone: (505) 629-6116

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

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

1220 S. St Francis Dr.

Santa Fe, NM 87505

CONDITIONS

Action 509010

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 509010
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
matthew.gomez	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.	10/7/2025
matthew.gomez	Any previous COA's not addressed within the updated COA's still apply.	10/7/2025