

Well Name: AVION FEDERAL COM	Well Location: T23S / R32E / SEC 22 / NWNE / 32.296758 / -103.658381	County or Parish/State: LEA / NM
Well Number: 703H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM88163	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002553795	Operator: COG OPERATING LLC	

Notice of Intent

Sundry ID: 2833112

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 01/21/2025

Time Sundry Submitted: 02:49

Date proposed operation will begin: 01/21/2025

Procedure Description: COG Operating LLC, respectfully requests approval for the following changes to the original approved APD. SHL Change: Due to another company pipelines being in the way of the original SHL. From: 235' FNL & 1365' FEL Section 22. T23S. R32E. To: 265' FNL & 1385' FEL Section 22. T23S. R32E. C102 Attached. Drilling: Drilling Program, Directional Program, AC Report and Specs Attached.

NOI Attachments

Procedure Description

AVION_FEDERAL_COM_703H_Updated_New_C102_20250121144833.pdf

Avion_Fed_Com_703H_Updated_Drilling_Program_for_Sundry_20250121144829.pdf

AVION_FEDERAL_COM_703H_PWP1_WPLOT_20250121144828.pdf

5.500_23_P110_CY_TXP_BTC_08192024_20250121144826.pdf

AVION_FEDERAL_COM_703H_PWP1_AC_RPT_20250121144829.pdf

5.500_23_P110_CY_WEDGE_441_08192024_20250121144828.pdf

AVION_FEDERAL_COM_703H_PWP1_DIR_RPT_20250121144828.pdf

Well Name: AVION FEDERAL COM

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County or Parish/State: LEA / NM

Well Number: 703H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM88163

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002553795

Operator: COG OPERATING LLC

Conditions of Approval

Additional

SEC22_T23S_R32E_AVION_FED_COM_Lea__CONOCOPHILLIPS_COMPANY_45567_JS_20250129104547.pdf
AVION_FED_COM_703H_COAs_20250129104547.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: JAN 21, 2025 02:49 PM

Name: COG OPERATING LLC

Title: Regulatory Analyst

Street Address: 925 N ELDRIDGE PARKWAY

City: HOUSTON

State: TX

Phone: (281) 293-1000

Email address: MAYTE.X.REYES@CONOCOPHILLIPS.COM

Field

Representative Name: Gerald Herrera

Street Address: 2208 West Main Street

City: Artesia

State: NM

Zip: 88210

Phone: (575)748-6940

Email address: gerald.a.herrera@conocophillips.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: 01/29/2025

Signature: Chris Walls

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: <input type="checkbox"/> Initial Submittal <input type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled
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WELL LOCATION INFORMATION

API Number 30-025-53795	Pool Code 98248	Pool Name WC-025-G-08 S243217P; UPR Wolfcamp
Property Code 325741	Property Name AVION FEDERAL COM	Well Number 703H
OGRID No. 229137	Operator Name COG OPERATING LLC	Ground Level Elevation 3701.1'
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	22	23-S	32-E		265 FNL	1385 FEL	32.296676°N	103.658445°W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
0	27	23-S	32-E		50 FSL	1650 FEL	32.268502°N	103.659295°W	LEA

Dedicated Acres 640	Infill or Defining Well Infill	Defining Well API 30-025-53595	Overlapping Spacing Unit (Y/N) N	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	22	23-S	32-E		265 FNL	1385 FEL	32.296676°N	103.658445°W	LEA

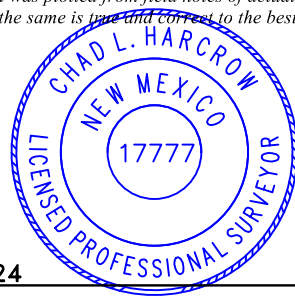
First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	22	23-S	32-E		100 FNL	1650 FEL	32.297127°N	103.659303°W	LEA

Last Take Point (LTP)

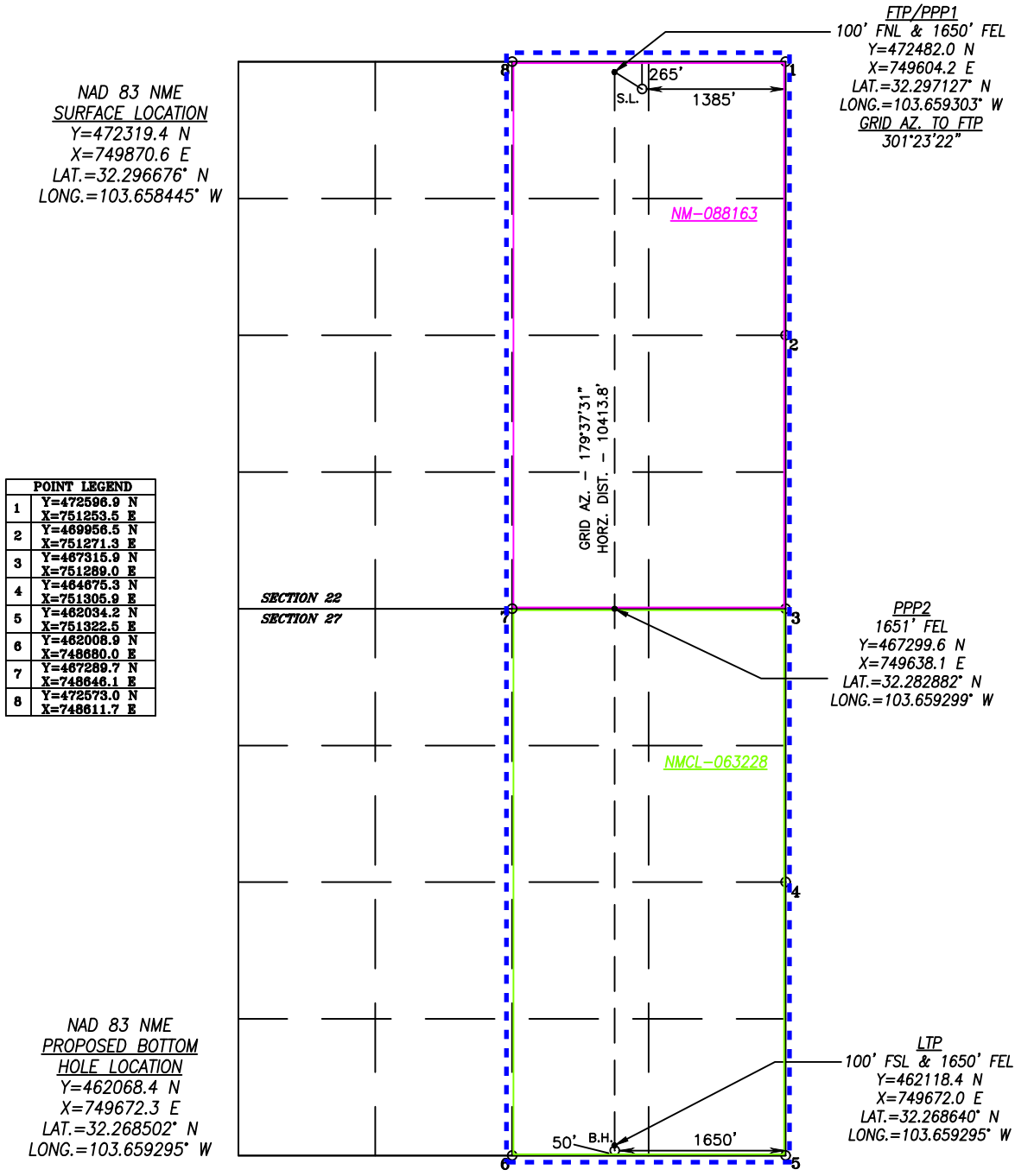
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
0	27	23-S	32-E		100 FSL	1650 FEL	32.268640°N	103.659295°W	LEA

Unitized Area or Area of Uniform Interest COM	Spacing Unit Type <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation: 3701.1'
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<p>OPERATOR CERTIFICATIONS</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p><i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i></p>	<p>SURVEYOR CERTIFICATIONS</p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <div style="text-align: right;">  </div> <p style="text-align: right;"><i>Chad Harcrow</i> 12/16/24</p>	
Signature Mayte Reyes	Date 1/21/2025	Signature and Seal of Professional Surveyor
Printed Name Mayte Reyes	Certificate Number 17777	Date of Survey DECEMBER 10, 2024
Email Address mayte.x.reyes@cop.com	W.O.#24-1248 DRAWN BY: WN PAGE 1 OF 2	

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

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



ConocoPhillips - Avion Fed Com 703H

1. Geologic Formations

TVD of target	12,384' EOL	Pilot hole depth	NA
MD at TD:	22,659'	Deepest expected fresh water:	713'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1227	Water	
Top of Salt	1694	Salt	
Base of Salt	4694	Salt	
Lamar	4942	Salt Water	
Bell Canyon	5001	Salt Water	
Cherry Canyon	5893	Oil/Gas	
Brushy Canyon	7052	Oil/Gas	
Bone Spring	8790	Oil/Gas	
1st Bone Spring Sand	9908	Oil/Gas	
2nd Bone Spring Sand	10517	Oil/Gas	
3rd Bone Spring Sand	11851	Oil/Gas	
Wolfcamp Sand	12284	Target Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	1350	10.75"	45.5	J55	BTC	3.38	1.15	11.64	12.96
9.875"	0	8200	7.625"	29.7	L80-ICY	BTC	1.50	1.07	2.98	3.01
8.750"	8200	11800	7.625"	29.7	P110-ICY	W513	1.30	1.63	3.05	1.83
6.75"	0	11600	5.5"	23	P110-CY	BTC	1.93	2.13	2.73	2.73
6.75"	11600	22,659	5.5"	23	P110-CY	W441	1.81	2.13	2.56	2.32
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.

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

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3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	501	13.5	1.75	9	12	Lead: Class C
	187	14.8	1.34	6.34	8	Tail: Class C
Int. Stage 1	1194	11	2.54	15.33	12	Lead: Class C
	112	14.8	1.34	6.52	8	Tail: Class C
Int. Stage 2	524	12.9	1.9	10.52	24	Lead: Class C
	192	14.8	1.34	6.52	8	Tail: Class C
Prod	641	12.7	1.68	9.09	72	Lead: Class C
	1057	14.5	1.18	5.26	19	Tail: Class H

Intermediate cement job to be performed offline.

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	50%
Int Stg 1	0'	50%
Int Stg 2	0'	20%
Production	11,300'	35% OH in Lateral (KOP to EOL)

3b. Contingency Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	501	13.5	1.75	9	12	Lead: Class C
	187	14.8	1.34	6.34	8	Tail: Class C
Bradenhead Stage 1	626	15.6	1.216	5.28	6	Stage 1 Lead: Class H
	134	16.2	1.123	4.6	11	Stage 1 Tail: Class H
Bradenhead Stage 2	2500	14.8	1.5	7.2	4	Bradenhead: Thixotropic Class C
	400	14.8	1.33	6.4	5	Top Out: Class C
Prod	641	12.7	1.68	9.09	72	Lead: Class C
	1057	14.5	1.18	5.26	19	Tail: Class H

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

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	50%
BH Stg 1	0'	50%
BH Stg 2	7,052'	151%
Production	11,300'	35% OH in Lateral (KOP to EOL)

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4. Pressure Control Equipment

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

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

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

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

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR Part 3170 Subpart 3172.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9.2	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9 - 12.5	35-45	<20

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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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
Y	Mud log	Intermediate shoe to TD
N	PEX	

ConocoPhillips - Avion Fed Com 703H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	8050 psi at 12384' TVD
Abnormal Temperature	NO 180 Deg. F.

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other Facets of Operation

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

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

DELAWARE BASIN EAST

**LEA COUNTY SOUTHEAST
AVION FEDERAL COM PROJECT
AVION FEDERAL COM 703H**

**OWB
PWP1**

Anticollision Report

12 January, 2025

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference PWP1	
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD + Stations Interval 100.0usft
Depth Range:	0.0 to 22,658.9usft
Results Limited by:	Maximum centre distance of 1,000.0usft
Warning Levels Evaluated at:	2.79 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Combined Pedal Curve
Casing Method:	Added to Error Values

Survey Tool Program		Date 1/12/2025		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	2,000.0	PWP1 (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp-Initialzd Cor
2,000.0	11,926.0	PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR	ISCWSA MWD + IFR1 + SAG + FDIR Corri
11,926.0	22,658.9	PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR	ISCWSA MWD + IFR1 + SAG + FDIR Corri

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
AVION FEDERAL COM PROJECT						
AVION FEDERAL COM 501H - OWB - PWP1	1,966.3	1,967.3	60.0	51.8	7.288 CC	
AVION FEDERAL COM 501H - OWB - PWP1	2,000.0	2,001.0	60.0	51.7	7.228 ES	
AVION FEDERAL COM 501H - OWB - PWP1	2,100.0	2,099.0	61.7	53.0	7.090 SF	
AVION FEDERAL COM 502H - OWB - PWP1	1,466.3	1,467.3	20.0	12.6	2.705 Normal Operations, CC	
AVION FEDERAL COM 502H - OWB - PWP1	1,500.0	1,501.0	20.0	12.5	2.677 Normal Operations, ES, SF	
AVION FEDERAL COM 503H - OWB - PWP1	1,500.0	1,500.0	19.9	12.4	2.663 Normal Operations, CC, ES, SF	
AVION FEDERAL COM 701H - OWB - PWP1	1,466.3	1,467.3	80.0	72.6	10.818 CC	
AVION FEDERAL COM 701H - OWB - PWP1	1,500.0	1,500.0	80.0	72.5	10.708 ES, SF	
AVION FEDERAL COM 702H - OWB - PWP1	1,166.3	1,167.3	40.1	33.4	6.014 CC	
AVION FEDERAL COM 702H - OWB - PWP1	1,200.0	1,201.0	40.1	33.3	5.935 ES	
AVION FEDERAL COM 702H - OWB - PWP1	22,658.9	22,681.5	640.1	459.7	3.548 SF	
AVION FEDERAL COM 704H - OWB - PWP1	1,200.0	1,200.0	39.9	33.1	5.908 CC, ES	
AVION FEDERAL COM 704H - OWB - PWP1	22,658.9	22,731.6	660.0	479.4	3.655 SF	
GRUMPY CAT 15 FEDERAL 213H - OWB - AWP	10,748.5	15,671.0	276.6	153.0	2.239 Caution - Monitor Closely, CC, ES, SF	

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 501H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10558-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)		Separation Factor
0.0	0.0	1.0	1.0	0.0	0.0	89.52	0.5	60.0	60.0				
100.0	100.0	101.0	101.0	0.6	0.6	89.52	0.5	60.0	60.0	57.9	2.07	29.031	
200.0	200.0	201.0	201.0	1.1	1.1	89.52	0.5	60.0	60.0	57.0	3.00	19.991	
300.0	300.0	301.0	301.0	1.4	1.4	89.52	0.5	60.0	60.0	56.4	3.63	16.546	
400.0	400.0	401.0	401.0	1.7	1.7	89.52	0.5	60.0	60.0	55.9	4.13	14.527	
500.0	500.0	501.0	501.0	1.9	1.9	89.52	0.5	60.0	60.0	55.4	4.56	13.145	
600.0	600.0	601.0	601.0	2.1	2.1	89.52	0.5	60.0	60.0	55.1	4.95	12.117	
700.0	700.0	701.0	701.0	2.3	2.3	89.52	0.5	60.0	60.0	54.7	5.30	11.311	
800.0	800.0	801.0	801.0	2.5	2.5	89.52	0.5	60.0	60.0	54.4	5.63	10.655	
900.0	900.0	901.0	901.0	2.7	2.7	89.52	0.5	60.0	60.0	54.1	5.94	10.108	
1,000.0	1,000.0	1,001.0	1,001.0	2.9	2.9	89.52	0.5	60.0	60.0	53.8	6.22	9.641	

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

ConocoPhillips Anticollision Report

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Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 501H - OWB - PWP1													Offset Site Error:	0.0 usft	
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10558-r.5 MWD+IFR1+SAG+FDIR											Rule Assigned:		Offset Well Error:		0.0 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
1,100.0	1,100.0	1,101.0	1,101.0	3.1	3.1	89.52		0.5	60.0	60.0	53.5	6.50	9.237		
1,200.0	1,200.0	1,201.0	1,201.0	3.2	3.2	89.52		0.5	60.0	60.0	53.2	6.76	8.882		
1,300.0	1,300.0	1,301.0	1,301.0	3.4	3.4	89.52		0.5	60.0	60.0	53.0	7.00	8.567		
1,400.0	1,400.0	1,401.0	1,401.0	3.5	3.5	89.52		0.5	60.0	60.0	52.8	7.24	8.284		
1,500.0	1,500.0	1,501.0	1,501.0	3.7	3.7	89.52		0.5	60.0	60.0	52.5	7.47	8.029		
1,600.0	1,600.0	1,601.0	1,601.0	3.8	3.8	89.52		0.5	60.0	60.0	52.5	7.48	8.026		
1,700.0	1,700.0	1,701.0	1,701.0	4.0	4.0	89.52		0.5	60.0	60.0	52.3	7.69	7.801		
1,800.0	1,800.0	1,801.0	1,801.0	4.1	4.1	89.52		0.5	60.0	60.0	52.1	7.90	7.595		
1,900.0	1,900.0	1,901.0	1,901.0	4.3	4.3	89.52		0.5	60.0	60.0	51.9	8.10	7.405		
1,966.3	1,966.3	1,967.3	1,967.3	4.4	4.4	89.52		0.5	60.0	60.0	51.8	8.23	7.288 CC		
2,000.0	2,000.0	2,001.0	2,001.0	4.4	4.4	89.52		0.5	60.0	60.0	51.7	8.30	7.228 ES		
2,100.0	2,100.0	2,099.0	2,099.0	4.6	4.5	89.03		1.0	61.6	61.7	53.0	8.70	7.090 SF		
2,200.0	2,200.0	2,196.8	2,196.6	4.8	4.7	87.74		2.6	66.4	66.6	57.5	9.15	7.279		
2,300.0	2,300.0	2,294.0	2,293.4	5.0	4.9	138.55		5.2	74.3	76.2	66.5	9.64	7.897		
2,400.0	2,399.8	2,390.1	2,388.9	5.2	5.1	138.57		8.8	85.2	91.6	81.4	10.11	9.056		
2,500.0	2,499.5	2,484.5	2,482.2	5.4	5.3	139.16		13.4	98.8	112.7	102.1	10.55	10.680		
2,550.1	2,549.2	2,531.1	2,528.1	5.4	5.4	139.55		15.9	106.6	125.4	114.7	10.66	11.768		
2,600.0	2,598.8	2,578.3	2,574.4	5.5	5.4	140.05		18.8	115.1	139.0	128.3	10.73	12.951		
2,700.0	2,698.0	2,674.5	2,668.8	5.6	5.5	140.81		24.5	132.5	166.4	155.4	11.04	15.082		
2,800.0	2,797.3	2,770.6	2,763.2	5.8	5.7	141.35		30.3	149.9	193.9	182.5	11.36	17.069		
2,900.0	2,896.5	2,866.8	2,857.6	5.9	5.9	141.76		36.1	167.3	221.3	209.7	11.68	18.945		
3,000.0	2,995.8	2,962.9	2,951.9	6.1	6.0	142.08		41.9	184.7	248.8	236.8	12.01	20.717		
3,100.0	3,095.0	3,059.1	3,046.3	6.2	6.2	142.33		47.6	202.2	276.3	263.9	12.34	22.392		
3,200.0	3,194.3	3,155.2	3,140.7	6.4	6.4	142.54		53.4	219.6	303.8	291.1	12.67	23.977		
3,300.0	3,293.5	3,251.3	3,235.1	6.5	6.5	142.72		59.2	237.0	331.2	318.2	13.00	25.479		
3,400.0	3,392.8	3,347.5	3,329.5	6.7	6.7	142.86		64.9	254.4	358.7	345.4	13.33	26.904		
3,500.0	3,492.0	3,443.6	3,423.8	6.9	6.9	142.99		70.7	271.8	386.2	372.5	13.67	28.257		
3,600.0	3,591.3	3,539.8	3,518.2	7.0	7.1	143.10		76.5	289.2	413.7	399.7	14.00	29.542		
3,700.0	3,690.6	3,635.9	3,612.6	7.2	7.2	143.20		82.3	306.7	441.2	426.8	14.34	30.765		
3,800.0	3,789.8	3,732.1	3,707.0	7.4	7.4	143.28		88.0	324.1	468.7	454.0	14.68	31.929		
3,900.0	3,889.1	3,828.2	3,801.4	7.5	7.6	143.36		93.8	341.5	496.1	481.1	15.02	33.039		
4,000.0	3,988.3	3,924.4	3,895.7	7.7	7.8	143.43		99.6	358.9	523.6	508.3	15.36	34.097		
4,100.0	4,087.6	4,020.5	3,990.1	7.9	8.0	143.49		105.3	376.3	551.1	535.4	15.70	35.108		
4,200.0	4,186.8	4,116.7	4,084.5	8.0	8.2	143.54		111.1	393.7	578.6	562.6	16.04	36.073		
4,300.0	4,286.1	4,212.8	4,178.9	8.2	8.3	143.59		116.9	411.1	606.1	589.7	16.38	36.997		
4,400.0	4,385.3	4,309.0	4,273.3	8.4	8.5	143.64		122.7	428.6	633.6	616.9	16.73	37.881		
4,500.0	4,484.6	4,405.1	4,367.6	8.6	8.7	143.68		128.4	446.0	661.1	644.0	17.07	38.728		
4,600.0	4,583.8	4,501.2	4,462.0	8.7	8.9	143.72		134.2	463.4	688.6	671.2	17.41	39.539		
4,700.0	4,683.1	4,597.4	4,556.4	8.9	9.1	143.75		140.0	480.8	716.1	698.3	17.76	40.318		
4,800.0	4,782.3	4,693.5	4,650.8	9.1	9.3	143.79		145.8	498.2	743.5	725.4	18.11	41.051		
4,805.2	4,787.5	4,698.6	4,655.7	9.1	9.3	143.79		146.1	499.1	745.0	726.9	18.13	41.089		
4,900.0	4,881.7	4,789.9	4,745.3	9.3	9.5	143.94		151.5	515.7	770.4	752.0	18.45	41.752		
5,000.0	4,981.2	4,886.5	4,840.2	9.4	9.7	144.01		157.3	533.2	796.0	777.2	18.80	42.348		
5,100.0	5,080.9	4,983.5	4,935.5	9.6	9.9	144.01		163.2	550.7	820.1	801.0	19.14	42.857		
5,200.0	5,180.7	5,080.9	5,031.0	9.8	10.1	143.93		169.0	568.4	842.9	823.4	19.47	43.285		
5,300.0	5,280.6	5,178.5	5,126.8	9.9	10.3	143.79		174.9	586.0	864.3	844.5	19.81	43.637		
5,400.0	5,380.6	5,276.3	5,222.8	10.1	10.4	143.58		180.7	603.8	884.4	864.3	20.14	43.922		
5,500.0	5,480.6	5,374.4	5,319.1	10.2	10.6	143.31		186.6	621.5	903.2	882.7	20.45	44.168		
5,505.4	5,486.0	5,379.7	5,324.3	10.2	10.7	91.45		187.0	622.5	904.1	883.7	20.47	44.179		
5,600.0	5,580.6	5,472.5	5,415.4	10.3	10.8	91.07		192.5	639.3	921.2	900.4	20.73	44.429		
5,700.0	5,680.6	5,571.2	5,512.3	10.4	11.0	90.68		198.5	657.2	939.2	918.2	21.01	44.712		

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 EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 501H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10558-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
5,800.0	5,780.6	5,700.0	5,639.1	10.5	11.3	90.24	205.5	678.4	955.7	934.3	21.38	44.704					
5,900.0	5,880.6	5,830.1	5,768.0	10.5	11.6	89.89	211.2	695.7	969.0	947.3	21.75	44.547					
6,000.0	5,980.6	5,961.4	5,898.5	10.6	11.8	89.63	215.6	709.0	979.1	957.0	22.11	44.288					
6,100.0	6,080.6	6,093.5	6,030.3	10.7	12.1	89.46	218.6	718.0	986.0	963.5	22.44	43.938					
6,200.0	6,180.6	6,226.1	6,162.8	10.8	12.3	89.38	220.2	722.7	989.5	966.8	22.73	43.539					
6,300.0	6,280.6	6,344.9	6,281.6	10.9	12.4	89.36	220.4	723.4	990.1	967.1	22.91	43.210					
6,400.0	6,380.6	6,444.9	6,381.6	11.0	12.5	89.36	220.4	723.4	990.1	967.0	23.06	42.928					
6,500.0	6,480.6	6,544.9	6,481.6	11.1	12.5	89.36	220.4	723.4	990.1	966.8	23.22	42.646					
6,600.0	6,580.6	6,644.9	6,581.6	11.2	12.6	89.36	220.4	723.4	990.1	966.7	23.37	42.369					
6,700.0	6,680.6	6,744.9	6,681.6	11.2	12.7	89.36	220.4	723.4	990.1	966.5	23.52	42.094					
6,800.0	6,780.6	6,844.9	6,781.6	11.3	12.7	89.36	220.4	723.4	990.1	966.4	23.67	41.823					
6,900.0	6,880.6	6,944.9	6,881.6	11.4	12.8	89.36	220.4	723.4	990.1	966.2	23.83	41.555					
7,000.0	6,980.6	7,044.9	6,981.6	11.5	12.9	89.36	220.4	723.4	990.1	966.1	23.98	41.290					
7,100.0	7,080.6	7,144.9	7,081.6	11.6	12.9	89.36	220.4	723.4	990.1	965.9	24.13	41.028					
7,200.0	7,180.6	7,244.9	7,181.6	11.7	13.0	89.36	220.4	723.4	990.1	965.8	24.28	40.770					
7,300.0	7,280.6	7,344.9	7,281.6	11.8	13.1	89.36	220.4	723.4	990.1	965.6	24.44	40.515					
7,400.0	7,380.6	7,444.9	7,381.6	11.8	13.1	89.36	220.4	723.4	990.1	965.5	24.59	40.262					
7,500.0	7,480.6	7,544.9	7,481.6	11.9	13.2	89.36	220.4	723.4	990.1	965.3	24.74	40.013					
7,600.0	7,580.6	7,644.9	7,581.6	12.0	13.3	89.36	220.4	723.4	990.1	965.2	24.90	39.766					
7,700.0	7,680.6	7,744.9	7,681.6	12.1	13.4	89.36	220.4	723.4	990.1	965.0	25.05	39.523					
7,800.0	7,780.6	7,844.9	7,781.6	12.2	13.4	89.36	220.4	723.4	990.1	964.9	25.20	39.282					
7,900.0	7,880.6	7,944.9	7,881.6	12.3	13.5	89.36	220.4	723.4	990.1	964.7	25.36	39.044					
8,000.0	7,980.6	8,044.9	7,981.6	12.4	13.6	89.36	220.4	723.4	990.1	964.5	25.51	38.808					
8,100.0	8,080.6	8,144.9	8,081.6	12.4	13.6	89.36	220.4	723.4	990.1	964.4	25.67	38.576					
8,200.0	8,180.6	8,244.9	8,181.6	12.5	13.7	89.36	220.4	723.4	990.1	964.2	25.82	38.346					
8,300.0	8,280.6	8,344.9	8,281.6	12.6	13.8	89.36	220.4	723.4	990.1	964.1	25.97	38.118					
8,400.0	8,380.6	8,444.9	8,381.6	12.7	13.8	89.36	220.4	723.4	990.1	963.9	26.13	37.893					
8,500.0	8,480.6	8,544.9	8,481.6	12.8	13.9	89.36	220.4	723.4	990.1	963.8	26.28	37.671					
8,600.0	8,580.6	8,644.9	8,581.6	12.9	14.0	89.36	220.4	723.4	990.1	963.6	26.44	37.451					
8,700.0	8,680.6	8,744.9	8,681.6	12.9	14.1	89.36	220.4	723.4	990.1	963.5	26.59	37.234					
8,800.0	8,780.6	8,844.9	8,781.6	13.0	14.1	89.36	220.4	723.4	990.1	963.3	26.74	37.019					
8,900.0	8,880.6	8,944.9	8,881.6	13.1	14.2	89.36	220.4	723.4	990.1	963.2	26.90	36.806					
9,000.0	8,980.6	9,044.9	8,981.6	13.2	14.3	89.36	220.4	723.4	990.1	963.0	27.05	36.596					
9,100.0	9,080.6	9,144.9	9,081.6	13.3	14.3	89.36	220.4	723.4	990.1	962.9	27.21	36.388					
9,200.0	9,180.6	9,244.9	9,181.6	13.4	14.4	89.36	220.4	723.4	990.1	962.7	27.36	36.182					
9,300.0	9,280.6	9,344.9	9,281.6	13.5	14.5	89.36	220.4	723.4	990.1	962.5	27.52	35.978					
9,400.0	9,380.6	9,444.9	9,381.6	13.5	14.6	89.36	220.4	723.4	990.1	962.4	27.67	35.777					
9,500.0	9,480.6	9,544.9	9,481.6	13.6	14.6	89.36	220.4	723.4	990.1	962.2	27.83	35.578					
9,600.0	9,580.6	9,644.9	9,581.6	13.7	14.7	89.36	220.4	723.4	990.1	962.1	27.98	35.381					
9,700.0	9,680.6	9,744.9	9,681.6	13.8	14.8	89.36	220.4	723.4	990.1	961.9	28.14	35.186					
9,800.0	9,780.6	9,844.9	9,781.6	13.9	14.8	89.36	220.4	723.4	990.1	961.8	28.29	34.993					
9,900.0	9,880.6	9,944.9	9,881.6	14.0	14.9	89.36	220.4	723.4	990.1	961.6	28.45	34.802					
10,000.0	9,980.6	10,044.9	9,981.6	14.0	15.0	89.36	220.4	723.4	990.1	961.5	28.60	34.613					
10,100.0	10,080.6	10,144.9	10,081.6	14.1	15.1	89.36	220.4	723.4	990.1	961.3	28.76	34.426					
10,200.0	10,180.6	10,244.9	10,181.6	14.2	15.1	89.36	220.4	723.4	990.1	961.1	28.91	34.241					
10,300.0	10,280.6	10,344.9	10,281.6	14.3	15.2	89.36	220.4	723.4	990.1	961.0	29.07	34.057					
10,400.0	10,380.6	10,444.9	10,381.6	14.4	15.3	89.36	220.4	723.4	990.1	960.8	29.23	33.876					
10,500.0	10,480.6	10,544.9	10,481.6	14.5	15.3	89.36	220.4	723.4	990.1	960.7	29.36	33.716					
10,578.8	10,559.4	10,623.9	10,560.4	14.5	15.3	89.63	215.8	723.4	990.1	960.6	29.44	33.632					
10,600.0	10,580.6	10,644.8	10,581.0	14.6	15.3	89.82	212.5	723.5	990.1	960.6	29.46	33.611					
10,700.0	10,680.6	10,737.7	10,670.1	14.6	15.4	91.30	186.9	723.6	990.5	961.0	29.54	33.531					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 501H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 2000-r.5 MWD+IFR1+SAG+FDIR, 10558-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference													
Offset				Semi Major Axis			Highside		Distance				
Measured	Vertical	Measured	Vertical	Reference	Offset	Toolface	+N/-S	+E/-W	Between	Between	No-Go	Separation	Warning
Depth	Depth	Depth	Depth			(°)	(usft)	(usft)	Centres	Ellipses	Distance	Factor	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)				(usft)	(usft)	(usft)		
10,800.0	10,780.6	10,818.3	10,742.3	14.7	15.4	93.37	151.1	723.9	992.9	963.3	29.65	33.486	
10,900.0	10,880.6	10,885.4	10,796.9	14.8	15.5	95.59	112.4	724.1	999.0	969.2	29.85	33.473	

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 502H - OWB - PWP1														Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 9487-r.5 MWD+IFR1+SAG+FDIR											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)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning	
0.0	0.0	1.0	1.0	0.0	0.0	89.14	0.3	20.0	20.0					
100.0	100.0	101.0	101.0	0.6	0.6	89.14	0.3	20.0	20.0	17.9	2.07	9.678		
200.0	200.0	201.0	201.0	1.1	1.1	89.14	0.3	20.0	20.0	17.0	3.00	6.664		
300.0	300.0	301.0	301.0	1.4	1.4	89.14	0.3	20.0	20.0	16.4	3.63	5.516		
400.0	400.0	401.0	401.0	1.7	1.7	89.14	0.3	20.0	20.0	15.9	4.13	4.843		
500.0	500.0	501.0	501.0	1.9	1.9	89.14	0.3	20.0	20.0	15.4	4.56	4.382		
600.0	600.0	601.0	601.0	2.1	2.1	89.14	0.3	20.0	20.0	15.1	4.95	4.039		
700.0	700.0	701.0	701.0	2.3	2.3	89.14	0.3	20.0	20.0	14.7	5.30	3.771		
800.0	800.0	801.0	801.0	2.5	2.5	89.14	0.3	20.0	20.0	14.4	5.63	3.552		
900.0	900.0	901.0	901.0	2.7	2.7	89.14	0.3	20.0	20.0	14.1	5.94	3.370		
1,000.0	1,000.0	1,001.0	1,001.0	2.9	2.9	89.14	0.3	20.0	20.0	13.8	6.22	3.214		
1,100.0	1,100.0	1,101.0	1,101.0	3.1	3.1	89.14	0.3	20.0	20.0	13.5	6.50	3.079		
1,200.0	1,200.0	1,201.0	1,201.0	3.2	3.2	89.14	0.3	20.0	20.0	13.2	6.76	2.961	Normal Operations	
1,300.0	1,300.0	1,301.0	1,301.0	3.4	3.4	89.14	0.3	20.0	20.0	13.0	7.00	2.856	Normal Operations	
1,400.0	1,400.0	1,401.0	1,401.0	3.5	3.5	89.14	0.3	20.0	20.0	12.8	7.24	2.762	Normal Operations	
1,466.3	1,466.3	1,467.3	1,467.3	3.6	3.6	89.14	0.3	20.0	20.0	12.6	7.40	2.705	Normal Operations, CC	
1,500.0	1,500.0	1,501.0	1,501.0	3.7	3.7	89.14	0.3	20.0	20.0	12.5	7.47	2.677	Normal Operations, ES, SF	
1,600.0	1,600.0	1,600.8	1,600.8	3.8	3.9	84.28	2.0	20.4	20.5	13.0	7.49	2.729	Normal Operations	
1,700.0	1,700.0	1,700.4	1,700.2	4.0	4.2	71.48	7.2	21.4	22.6	14.6	7.94	2.842	Normal Operations	
1,800.0	1,800.0	1,799.5	1,798.9	4.1	4.5	55.92	15.6	23.1	28.0	19.4	8.56	3.268		
1,900.0	1,900.0	1,897.8	1,896.5	4.3	4.8	42.98	27.3	25.5	37.6	28.4	9.19	4.092		
2,000.0	2,000.0	1,996.0	1,993.6	4.4	4.9	34.13	41.9	28.4	51.2	41.6	9.58	5.343		
2,100.0	2,100.0	2,094.8	2,091.2	4.6	5.1	28.89	57.1	31.5	65.9	55.9	10.04	6.565		
2,200.0	2,200.0	2,193.6	2,188.7	4.8	5.3	25.57	72.2	34.5	81.0	70.6	10.43	7.766		
2,300.0	2,300.0	2,292.4	2,286.4	5.0	5.4	75.88	87.4	37.6	95.8	85.0	10.78	8.885		
2,400.0	2,399.8	2,391.4	2,384.1	5.2	5.6	76.46	102.5	40.7	109.8	98.7	11.11	9.888		
2,500.0	2,499.5	2,490.4	2,481.9	5.4	5.8	78.46	117.7	43.8	123.1	111.7	11.40	10.797		
2,550.1	2,549.2	2,540.0	2,530.9	5.4	5.9	79.86	125.3	45.3	129.6	118.1	11.50	11.267		
2,600.0	2,598.8	2,589.3	2,579.6	5.5	6.0	81.42	132.9	46.8	136.1	124.5	11.60	11.729		
2,700.0	2,698.0	2,688.7	2,677.8	5.6	6.1	84.15	148.1	49.9	149.3	137.5	11.84	12.618		
2,800.0	2,797.3	2,790.2	2,778.2	5.8	6.3	86.65	162.5	52.8	161.8	149.7	12.12	13.345		
2,900.0	2,896.5	2,892.1	2,879.2	5.9	6.5	89.06	175.1	55.4	172.9	160.5	12.41	13.926		
3,000.0	2,995.8	2,994.1	2,980.7	6.1	6.7	91.44	186.0	57.6	182.7	170.0	12.70	14.386		
3,100.0	3,095.0	3,096.4	3,082.5	6.2	6.8	93.86	195.2	59.4	191.2	178.3	12.97	14.741		
3,200.0	3,194.3	3,198.7	3,184.6	6.4	7.0	96.35	202.6	60.9	198.6	185.4	13.24	15.003		
3,300.0	3,293.5	3,301.1	3,286.8	6.5	7.2	98.95	208.1	62.1	204.8	191.4	13.49	15.186		
3,400.0	3,392.8	3,403.4	3,389.0	6.7	7.4	101.70	211.9	62.8	210.1	196.4	13.73	15.303		
3,500.0	3,492.0	3,505.7	3,491.3	6.9	7.5	104.63	214.0	63.2	214.4	200.5	13.95	15.370		
3,600.0	3,591.3	3,606.7	3,592.3	7.0	7.6	107.70	214.3	63.3	218.1	204.0	14.10	15.468		
3,700.0	3,690.6	3,706.0	3,691.6	7.2	7.7	110.68	214.3	63.3	222.1	207.8	14.30	15.534		
3,800.0	3,789.8	3,805.2	3,790.8	7.4	7.8	113.54	214.3	63.3	226.8	212.2	14.51	15.629		
3,900.0	3,889.1	3,904.5	3,890.1	7.5	7.9	116.29	214.3	63.3	231.9	217.2	14.73	15.749		
4,000.0	3,988.3	4,003.7	3,989.3	7.7	8.0	118.91	214.3	63.3	237.6	222.7	14.95	15.891		
4,100.0	4,087.6	4,103.0	4,088.6	7.9	8.2	121.40	214.3	63.3	243.8	228.6	15.19	16.051		
4,200.0	4,186.8	4,202.2	4,187.8	8.0	8.3	123.77	214.3	63.3	250.4	234.9	15.43	16.225		
4,300.0	4,286.1	4,301.5	4,287.1	8.2	8.4	126.02	214.3	63.3	257.4	241.7	15.68	16.413		
4,400.0	4,385.3	4,400.7	4,386.3	8.4	8.5	128.14	214.3	63.3	264.8	248.8	15.94	16.611		
4,500.0	4,484.6	4,500.0	4,485.6	8.6	8.6	130.15	214.3	63.3	272.5	256.3	16.20	16.817		
4,600.0	4,583.8	4,599.2	4,584.8	8.7	8.7	132.05	214.3	63.3	280.5	264.1	16.47	17.031		
4,700.0	4,683.1	4,698.5	4,684.1	8.9	8.8	133.84	214.3	63.3	288.9	272.1	16.75	17.249		
4,800.0	4,782.3	4,797.7	4,783.3	9.1	8.9	135.52	214.3	63.3	297.5	280.5	17.03	17.465		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 502H - OWB - PWP1														Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 9487-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor		
4,805.2	4,787.5	4,802.9	4,788.5	9.1	8.9	135.61	214.3	63.3	297.9	280.9	17.05	17.477		
4,900.0	4,881.7	4,897.1	4,882.7	9.3	9.0	137.07	214.3	63.3	305.8	288.5	17.31	17.667		
5,000.0	4,981.2	4,996.6	4,982.2	9.4	9.1	138.32	214.3	63.3	312.9	295.4	17.58	17.797		
5,100.0	5,080.9	5,096.3	5,081.9	9.6	9.2	139.31	214.3	63.3	318.9	301.1	17.86	17.861		
5,200.0	5,180.7	5,196.1	5,181.7	9.8	9.3	140.05	214.3	63.3	323.7	305.5	18.12	17.860		
5,300.0	5,280.6	5,296.0	5,281.6	9.9	9.4	140.58	214.3	63.3	327.1	308.7	18.38	17.795		
5,400.0	5,380.6	5,396.0	5,381.6	10.1	9.5	140.89	214.3	63.3	329.2	310.6	18.63	17.670		
5,500.0	5,480.6	5,496.0	5,481.6	10.2	9.6	141.00	214.3	63.3	329.9	311.1	18.86	17.498		
5,505.4	5,486.0	5,501.4	5,487.0	10.2	9.6	89.15	214.3	63.3	329.9	311.1	18.87	17.487		
5,600.0	5,580.6	5,596.0	5,581.6	10.3	9.7	89.15	214.3	63.3	329.9	310.9	19.05	17.322		
5,700.0	5,680.6	5,696.0	5,681.6	10.4	9.8	89.15	214.3	63.3	329.9	310.7	19.24	17.146		
5,800.0	5,780.6	5,796.0	5,781.6	10.5	9.9	89.15	214.3	63.3	329.9	310.5	19.44	16.974		
5,900.0	5,880.6	5,896.0	5,881.6	10.5	10.0	89.15	214.3	63.3	329.9	310.3	19.63	16.806		
6,000.0	5,980.6	5,996.0	5,981.6	10.6	10.1	89.15	214.3	63.3	329.9	310.1	19.83	16.641		
6,100.0	6,080.6	6,096.0	6,081.6	10.7	10.2	89.15	214.3	63.3	329.9	309.9	20.02	16.481		
6,200.0	6,180.6	6,196.0	6,181.6	10.8	10.3	89.15	214.3	63.3	329.9	309.7	20.21	16.324		
6,300.0	6,280.6	6,296.0	6,281.6	10.9	10.4	89.15	214.3	63.3	329.9	309.5	20.40	16.170		
6,400.0	6,380.6	6,396.0	6,381.6	11.0	10.5	89.15	214.3	63.3	329.9	309.3	20.60	16.020		
6,500.0	6,480.6	6,496.0	6,481.6	11.1	10.6	89.15	214.3	63.3	329.9	309.2	20.79	15.873		
6,600.0	6,580.6	6,596.0	6,581.6	11.2	10.7	89.15	214.3	63.3	329.9	309.0	20.98	15.729		
6,700.0	6,680.6	6,696.0	6,681.6	11.2	10.8	89.15	214.3	63.3	329.9	308.8	21.17	15.588		
6,800.0	6,780.6	6,796.0	6,781.6	11.3	10.9	89.15	214.3	63.3	329.9	308.6	21.36	15.450		
6,900.0	6,880.6	6,896.0	6,881.6	11.4	11.0	89.15	214.3	63.3	329.9	308.4	21.54	15.314		
7,000.0	6,980.6	6,996.0	6,981.6	11.5	11.1	89.15	214.3	63.3	329.9	308.2	21.73	15.181		
7,100.0	7,080.6	7,096.0	7,081.6	11.6	11.2	89.15	214.3	63.3	329.9	308.0	21.92	15.051		
7,200.0	7,180.6	7,196.0	7,181.6	11.7	11.3	89.15	214.3	63.3	329.9	307.8	22.11	14.923		
7,300.0	7,280.6	7,296.0	7,281.6	11.8	11.4	89.15	214.3	63.3	329.9	307.6	22.30	14.798		
7,400.0	7,380.6	7,396.0	7,381.6	11.8	11.5	89.15	214.3	63.3	329.9	307.5	22.48	14.675		
7,500.0	7,480.6	7,496.0	7,481.6	11.9	11.6	89.15	214.3	63.3	329.9	307.3	22.67	14.555		
7,600.0	7,580.6	7,596.0	7,581.6	12.0	11.7	89.15	214.3	63.3	329.9	307.1	22.85	14.436		
7,700.0	7,680.6	7,696.0	7,681.6	12.1	11.8	89.15	214.3	63.3	329.9	306.9	23.04	14.320		
7,800.0	7,780.6	7,796.0	7,781.6	12.2	11.9	89.15	214.3	63.3	329.9	306.7	23.23	14.206		
7,900.0	7,880.6	7,896.0	7,881.6	12.3	12.0	89.15	214.3	63.3	329.9	306.5	23.41	14.094		
8,000.0	7,980.6	7,996.0	7,981.6	12.4	12.1	89.15	214.3	63.3	329.9	306.3	23.59	13.984		
8,100.0	8,080.6	8,096.0	8,081.6	12.4	12.2	89.15	214.3	63.3	329.9	306.2	23.78	13.876		
8,200.0	8,180.6	8,196.0	8,181.6	12.5	12.3	89.15	214.3	63.3	329.9	306.0	23.96	13.769		
8,300.0	8,280.6	8,296.0	8,281.6	12.6	12.4	89.15	214.3	63.3	329.9	305.8	24.15	13.665		
8,400.0	8,380.6	8,396.0	8,381.6	12.7	12.5	89.15	214.3	63.3	329.9	305.6	24.33	13.562		
8,500.0	8,480.6	8,496.0	8,481.6	12.8	12.6	89.15	214.3	63.3	329.9	305.4	24.51	13.461		
8,600.0	8,580.6	8,596.0	8,581.6	12.9	12.7	89.15	214.3	63.3	329.9	305.2	24.69	13.361		
8,700.0	8,680.6	8,696.0	8,681.6	12.9	12.8	89.15	214.3	63.3	329.9	305.1	24.88	13.263		
8,800.0	8,780.6	8,796.0	8,781.6	13.0	12.8	89.15	214.3	63.3	329.9	304.9	25.06	13.167		
8,900.0	8,880.6	8,896.0	8,881.6	13.1	12.9	89.15	214.3	63.3	329.9	304.7	25.24	13.073		
9,000.0	8,980.6	8,996.0	8,981.6	13.2	13.0	89.15	214.3	63.3	329.9	304.5	25.42	12.979		
9,100.0	9,080.6	9,096.0	9,081.6	13.3	13.1	89.15	214.3	63.3	329.9	304.3	25.60	12.888		
9,200.0	9,180.6	9,196.0	9,181.6	13.4	13.2	89.15	214.3	63.3	329.9	304.2	25.78	12.797		
9,300.0	9,280.6	9,296.0	9,281.6	13.5	13.3	89.15	214.3	63.3	329.9	304.0	25.96	12.708		
9,400.0	9,380.6	9,396.0	9,381.6	13.5	13.4	89.15	214.3	63.3	329.9	303.8	26.14	12.621		
9,500.0	9,480.6	9,496.0	9,481.6	13.6	13.5	89.16	214.2	63.3	329.9	303.6	26.31	12.542		
9,542.1	9,522.7	9,538.2	9,523.7	13.7	13.5	89.63	211.5	63.3	329.9	303.6	26.36	12.518		
9,600.0	9,580.6	9,594.7	9,579.4	13.7	13.5	91.25	202.2	63.4	330.1	303.6	26.43	12.489		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 502H - OWB - PWP1													Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 9487-r.5 MWD+IFR1+SAG+FDIR													Rule Assigned:		Offset Well Error:	0.0 usft
Measured Reference Depth (usft)	Vertical Depth (usft)	Measured Offset Depth (usft)	Vertical Offset Depth (usft)	Semi Major Axis 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			
9,700.0	9,680.6	9,685.0	9,665.0	13.8	13.6	96.15	173.8	63.6	332.5	305.9	26.61	12.493				
9,800.0	9,780.6	9,762.5	9,733.0	13.9	13.7	102.36	137.0	63.8	341.7	314.7	27.01	12.652				
9,900.0	9,880.6	9,825.0	9,783.1	14.0	13.7	108.38	99.5	64.0	362.1	334.2	27.84	13.007				
10,000.0	9,980.6	9,875.0	9,819.3	14.0	13.7	113.56	65.1	64.3	395.8	366.6	29.13	13.586				
10,100.0	10,080.6	9,925.0	9,851.7	14.1	13.8	118.84	27.1	64.5	442.4	411.9	30.51	14.499				
10,200.0	10,180.6	9,950.0	9,866.3	14.2	13.8	121.45	6.8	64.7	500.1	468.0	32.15	15.557				
10,300.0	10,280.6	9,983.6	9,884.3	14.3	13.8	124.87	-21.5	64.8	566.5	533.1	33.43	16.946				
10,400.0	10,380.6	10,007.1	9,895.8	14.4	13.8	127.19	-42.1	65.0	639.7	605.1	34.62	18.478				
10,500.0	10,480.6	10,025.0	9,903.7	14.5	13.9	128.89	-58.1	65.1	718.0	682.3	35.67	20.129				
10,600.0	10,580.6	10,050.0	9,913.9	14.6	13.9	131.19	-81.0	65.2	800.1	763.7	36.49	21.926				
10,700.0	10,680.6	10,058.3	9,917.0	14.6	13.9	131.93	-88.7	65.3	885.2	847.9	37.34	23.705				
10,800.0	10,780.6	10,075.0	9,922.8	14.7	13.9	133.38	-104.3	65.4	972.7	934.6	38.03	25.577				

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 503H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 10536-r.5 MWD+IFR1+SAG+FDIR														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				
0.0	0.0	0.0	0.0	0.0	0.0	0.0	-90.58	-0.2	-19.9	19.9							
100.0	100.0	100.0	100.0	0.6	0.6	-90.58	-0.2	-19.9	19.9	17.8	2.06	9.651					
200.0	200.0	200.0	200.0	1.1	1.1	-90.58	-0.2	-19.9	19.9	16.9	3.00	6.637					
300.0	300.0	300.0	300.0	1.4	1.4	-90.58	-0.2	-19.9	19.9	16.3	3.62	5.492					
400.0	400.0	400.0	400.0	1.7	1.7	-90.58	-0.2	-19.9	19.9	15.8	4.13	4.821					
500.0	500.0	500.0	500.0	1.9	1.9	-90.58	-0.2	-19.9	19.9	15.3	4.56	4.362					
600.0	600.0	600.0	600.0	2.1	2.1	-90.58	-0.2	-19.9	19.9	15.0	4.95	4.020					
700.0	700.0	700.0	700.0	2.3	2.3	-90.58	-0.2	-19.9	19.9	14.6	5.30	3.753					
800.0	800.0	800.0	800.0	2.5	2.5	-90.58	-0.2	-19.9	19.9	14.3	5.63	3.535					
900.0	900.0	900.0	900.0	2.7	2.7	-90.58	-0.2	-19.9	19.9	14.0	5.93	3.353					
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	-90.58	-0.2	-19.9	19.9	13.7	6.22	3.198					
1,100.0	1,100.0	1,100.0	1,100.0	3.1	3.1	-90.58	-0.2	-19.9	19.9	13.4	6.49	3.064					
1,200.0	1,200.0	1,200.0	1,200.0	3.2	3.2	-90.58	-0.2	-19.9	19.9	13.1	6.75	2.946	Normal Operations				
1,300.0	1,300.0	1,300.0	1,300.0	3.4	3.4	-90.58	-0.2	-19.9	19.9	12.9	7.00	2.842	Normal Operations				
1,400.0	1,400.0	1,400.0	1,400.0	3.5	3.5	-90.58	-0.2	-19.9	19.9	12.7	7.24	2.748	Normal Operations				
1,500.0	1,500.0	1,500.0	1,500.0	3.7	3.7	-90.58	-0.2	-19.9	19.9	12.4	7.47	2.663	Normal Operations, CC, ES, SF				
1,600.0	1,600.0	1,599.3	1,599.3	3.8	3.8	-88.98	0.4	-21.5	21.5	13.9	7.60	2.834	Normal Operations				
1,700.0	1,700.0	1,698.4	1,698.2	4.0	4.1	-85.38	2.1	-26.4	26.5	18.5	8.04	3.298					
1,800.0	1,800.0	1,797.0	1,796.5	4.1	4.3	-81.69	5.0	-34.4	34.9	26.4	8.47	4.124					
1,900.0	1,900.0	1,894.9	1,893.6	4.3	4.6	-78.78	9.0	-45.5	46.8	37.9	8.88	5.268					
2,000.0	2,000.0	1,992.8	1,990.4	4.4	4.7	-76.70	14.0	-59.4	61.8	52.7	9.10	6.790					
2,100.0	2,100.0	2,091.5	2,088.0	4.6	4.9	-75.38	19.3	-73.9	77.3	67.8	9.48	8.160					
2,200.0	2,200.0	2,190.3	2,185.5	4.8	5.0	-74.50	24.5	-88.4	92.9	83.1	9.84	9.439					
2,300.0	2,300.0	2,289.3	2,283.3	5.0	5.2	-22.27	29.8	-103.0	106.9	96.6	10.29	10.395					
2,400.0	2,399.8	2,388.7	2,381.5	5.2	5.4	-22.63	35.1	-117.6	117.7	107.0	10.71	10.989					
2,500.0	2,499.5	2,488.4	2,479.9	5.4	5.6	-23.55	40.3	-132.3	125.4	114.2	11.13	11.263					
2,550.1	2,549.2	2,538.4	2,529.3	5.4	5.7	-24.22	43.0	-139.7	128.0	116.7	11.26	11.366					
2,600.0	2,598.8	2,588.2	2,578.5	5.5	5.8	-24.96	45.6	-147.0	130.2	118.8	11.39	11.437					
2,700.0	2,698.0	2,688.1	2,677.1	5.6	6.0	-26.37	50.9	-161.7	134.8	123.1	11.72	11.498					
2,800.0	2,797.3	2,787.9	2,775.8	5.8	6.2	-27.69	56.2	-176.4	139.4	127.4	12.06	11.560					
2,900.0	2,896.5	2,887.8	2,874.4	5.9	6.3	-28.92	61.5	-191.1	144.2	131.8	12.40	11.623					
3,000.0	2,995.8	2,987.6	2,973.0	6.1	6.5	-30.07	66.8	-205.8	148.9	136.2	12.74	11.688					
3,100.0	3,095.0	3,087.4	3,071.6	6.2	6.7	-31.15	72.1	-220.5	153.8	140.7	13.08	11.752					
3,200.0	3,194.3	3,187.3	3,170.2	6.4	6.9	-32.17	77.4	-235.2	158.6	145.2	13.42	11.817					
3,300.0	3,293.5	3,287.1	3,268.8	6.5	7.1	-33.12	82.7	-249.9	163.6	149.8	13.77	11.883					
3,400.0	3,392.8	3,387.0	3,367.4	6.7	7.3	-34.02	88.0	-264.5	168.5	154.4	14.11	11.948					
3,500.0	3,492.0	3,486.8	3,466.0	6.9	7.5	-34.87	93.3	-279.2	173.5	159.1	14.45	12.013					
3,600.0	3,591.3	3,586.7	3,564.7	7.0	7.7	-35.66	98.6	-293.9	178.6	163.8	14.79	12.079					
3,700.0	3,690.6	3,686.5	3,663.3	7.2	7.9	-36.42	103.9	-308.6	183.7	168.5	15.13	12.143					
3,800.0	3,789.8	3,786.3	3,761.9	7.4	8.1	-37.13	109.2	-323.3	188.8	173.3	15.46	12.208					
3,900.0	3,889.1	3,886.2	3,860.5	7.5	8.3	-37.81	114.5	-338.0	193.9	178.1	15.80	12.272					
4,000.0	3,988.3	3,986.0	3,959.1	7.7	8.5	-38.45	119.8	-352.7	199.1	182.9	16.14	12.335					
4,100.0	4,087.6	4,085.9	4,057.7	7.9	8.7	-39.06	125.1	-367.4	204.3	187.8	16.48	12.398					
4,200.0	4,186.8	4,185.7	4,156.3	8.0	8.9	-39.64	130.4	-382.1	209.5	192.7	16.81	12.460					
4,300.0	4,286.1	4,285.6	4,255.0	8.2	9.1	-40.19	135.7	-396.8	214.7	197.5	17.15	12.521					
4,400.0	4,385.3	4,385.4	4,353.6	8.4	9.3	-40.71	141.0	-411.5	219.9	202.5	17.48	12.582					
4,500.0	4,484.6	4,485.2	4,452.2	8.6	9.5	-41.21	146.3	-426.2	225.2	207.4	17.81	12.642					
4,600.0	4,583.8	4,585.1	4,550.8	8.7	9.7	-41.69	151.6	-440.9	230.5	212.3	18.15	12.701					
4,700.0	4,683.1	4,684.9	4,649.4	8.9	9.9	-42.14	156.9	-455.6	235.8	217.3	18.48	12.759					
4,800.0	4,782.3	4,784.8	4,748.0	9.1	10.1	-42.58	162.2	-470.2	241.1	222.3	18.82	12.812					
4,805.2	4,787.5	4,790.0	4,753.2	9.1	10.1	-42.60	162.5	-471.0	241.4	222.5	18.83	12.815					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 503H - OWB - PWP1														Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 10536-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error: 0.0 usft
Reference: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 10536-r.5 MWD+IFR1+SAG+FDIR														
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
		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	4,881.7	4,884.6	4,846.6	9.3	10.2	-42.91	167.5	-484.9	247.0	227.8	19.15	12.900		
5,000.0	4,981.2	4,984.3	4,945.1	9.4	10.4	-42.97	172.8	-499.6	254.1	234.7	19.49	13.043		
5,100.0	5,080.9	5,084.0	5,043.5	9.6	10.6	-42.77	178.1	-514.3	262.6	242.8	19.83	13.241		
5,200.0	5,180.7	5,183.5	5,141.8	9.8	10.8	-42.36	183.4	-528.9	272.3	252.2	20.18	13.496		
5,300.0	5,280.6	5,287.1	5,244.3	9.9	11.1	-41.77	188.6	-543.4	282.7	262.1	20.59	13.728		
5,400.0	5,380.6	5,391.3	5,347.6	10.1	11.3	-41.14	193.3	-556.3	292.7	271.8	20.95	13.971		
5,500.0	5,480.6	5,495.8	5,451.4	10.2	11.5	-40.45	197.3	-567.4	302.5	281.2	21.29	14.209		
5,505.4	5,486.0	5,501.5	5,457.1	10.2	11.5	-92.27	197.5	-568.0	303.0	281.7	21.30	14.222		
5,600.0	5,580.6	5,600.6	5,555.7	10.3	11.7	-91.62	200.6	-576.8	311.3	289.7	21.58	14.424		
5,700.0	5,680.6	5,705.7	5,660.5	10.4	11.9	-91.09	203.4	-584.3	318.4	296.6	21.86	14.564		
5,800.0	5,780.6	5,811.0	5,765.7	10.5	12.0	-90.70	205.5	-590.1	323.9	301.7	22.13	14.635		
5,900.0	5,880.6	5,916.6	5,871.1	10.5	12.2	-90.44	206.9	-594.1	327.6	305.2	22.38	14.639		
6,000.0	5,980.6	6,022.2	5,976.8	10.6	12.4	-90.30	207.7	-596.2	329.6	307.0	22.60	14.585		
6,100.0	6,080.6	6,126.0	6,080.6	10.7	12.5	-90.28	207.8	-596.6	330.0	307.2	22.78	14.489		
6,200.0	6,180.6	6,226.0	6,180.6	10.8	12.6	-90.28	207.8	-596.6	330.0	307.0	22.97	14.364		
6,300.0	6,280.6	6,326.0	6,280.6	10.9	12.6	-90.28	207.8	-596.6	330.0	306.9	23.13	14.269		
6,400.0	6,380.6	6,426.0	6,380.6	11.0	12.7	-90.28	207.8	-596.6	330.0	306.7	23.28	14.175		
6,500.0	6,480.6	6,526.0	6,480.6	11.1	12.8	-90.28	207.8	-596.6	330.0	306.6	23.43	14.082		
6,600.0	6,580.6	6,626.0	6,580.6	11.2	12.8	-90.28	207.8	-596.6	330.0	306.4	23.59	13.990		
6,700.0	6,680.6	6,726.0	6,680.6	11.2	12.9	-90.28	207.8	-596.6	330.0	306.3	23.74	13.900		
6,800.0	6,780.6	6,826.0	6,780.6	11.3	13.0	-90.28	207.8	-596.6	330.0	306.1	23.90	13.811		
6,900.0	6,880.6	6,926.0	6,880.6	11.4	13.0	-90.28	207.8	-596.6	330.0	306.0	24.05	13.722		
7,000.0	6,980.6	7,026.0	6,980.6	11.5	13.1	-90.28	207.8	-596.6	330.0	305.8	24.20	13.635		
7,100.0	7,080.6	7,126.0	7,080.6	11.6	13.2	-90.28	207.8	-596.6	330.0	305.6	24.36	13.549		
7,200.0	7,180.6	7,226.0	7,180.6	11.7	13.3	-90.28	207.8	-596.6	330.0	305.5	24.51	13.464		
7,300.0	7,280.6	7,326.0	7,280.6	11.8	13.3	-90.28	207.8	-596.6	330.0	305.3	24.66	13.380		
7,400.0	7,380.6	7,426.0	7,380.6	11.8	13.4	-90.28	207.8	-596.6	330.0	305.2	24.82	13.296		
7,500.0	7,480.6	7,526.0	7,480.6	11.9	13.5	-90.28	207.8	-596.6	330.0	305.0	24.97	13.214		
7,600.0	7,580.6	7,626.0	7,580.6	12.0	13.5	-90.28	207.8	-596.6	330.0	304.9	25.13	13.133		
7,700.0	7,680.6	7,726.0	7,680.6	12.1	13.6	-90.28	207.8	-596.6	330.0	304.7	25.28	13.053		
7,800.0	7,780.6	7,826.0	7,780.6	12.2	13.7	-90.28	207.8	-596.6	330.0	304.6	25.44	12.973		
7,900.0	7,880.6	7,926.0	7,880.6	12.3	13.7	-90.28	207.8	-596.6	330.0	304.4	25.59	12.895		
8,000.0	7,980.6	8,026.0	7,980.6	12.4	13.8	-90.28	207.8	-596.6	330.0	304.3	25.75	12.818		
8,100.0	8,080.6	8,126.0	8,080.6	12.4	13.9	-90.28	207.8	-596.6	330.0	304.1	25.90	12.741		
8,200.0	8,180.6	8,226.0	8,180.6	12.5	13.9	-90.28	207.8	-596.6	330.0	303.9	26.06	12.665		
8,300.0	8,280.6	8,326.0	8,280.6	12.6	14.0	-90.28	207.8	-596.6	330.0	303.8	26.21	12.590		
8,400.0	8,380.6	8,426.0	8,380.6	12.7	14.1	-90.28	207.8	-596.6	330.0	303.6	26.37	12.516		
8,500.0	8,480.6	8,526.0	8,480.6	12.8	14.2	-90.28	207.8	-596.6	330.0	303.5	26.52	12.443		
8,600.0	8,580.6	8,626.0	8,580.6	12.9	14.2	-90.28	207.8	-596.6	330.0	303.3	26.68	12.371		
8,700.0	8,680.6	8,726.0	8,680.6	12.9	14.3	-90.28	207.8	-596.6	330.0	303.2	26.83	12.299		
8,800.0	8,780.6	8,826.0	8,780.6	13.0	14.4	-90.28	207.8	-596.6	330.0	303.0	26.99	12.228		
8,900.0	8,880.6	8,926.0	8,880.6	13.1	14.4	-90.28	207.8	-596.6	330.0	302.9	27.14	12.158		
9,000.0	8,980.6	9,026.0	8,980.6	13.2	14.5	-90.28	207.8	-596.6	330.0	302.7	27.30	12.089		
9,100.0	9,080.6	9,126.0	9,080.6	13.3	14.6	-90.28	207.8	-596.6	330.0	302.6	27.45	12.021		
9,200.0	9,180.6	9,226.0	9,180.6	13.4	14.7	-90.28	207.8	-596.6	330.0	302.4	27.61	11.953		
9,300.0	9,280.6	9,326.0	9,280.6	13.5	14.7	-90.28	207.8	-596.6	330.0	302.2	27.76	11.886		
9,400.0	9,380.6	9,426.0	9,380.6	13.5	14.8	-90.28	207.8	-596.6	330.0	302.1	27.92	11.820		
9,500.0	9,480.6	9,526.0	9,480.6	13.6	14.9	-90.28	207.8	-596.6	330.0	301.9	28.08	11.754		
9,600.0	9,580.6	9,626.0	9,580.6	13.7	14.9	-90.28	207.8	-596.6	330.0	301.8	28.23	11.689		
9,700.0	9,680.6	9,726.0	9,680.6	13.8	15.0	-90.28	207.8	-596.6	330.0	301.6	28.39	11.625		
9,800.0	9,780.6	9,826.0	9,780.6	13.9	15.1	-90.28	207.8	-596.6	330.0	301.5	28.54	11.561		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 503H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 10536-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
9,900.0	9,880.6	9,926.0	9,880.6	14.0	15.2	-90.28	207.8	-596.6	330.0	301.3	28.70	11.499		
10,000.0	9,980.6	10,026.0	9,980.6	14.0	15.2	-90.28	207.8	-596.6	330.0	301.1	28.86	11.436		
10,100.0	10,080.6	10,126.0	10,080.6	14.1	15.3	-90.28	207.8	-596.6	330.0	301.0	29.01	11.375		
10,200.0	10,180.6	10,226.0	10,180.6	14.2	15.4	-90.28	207.8	-596.6	330.0	300.8	29.17	11.314		
10,300.0	10,280.6	10,326.0	10,280.6	14.3	15.4	-90.28	207.8	-596.6	330.0	300.7	29.32	11.254		
10,400.0	10,380.6	10,426.0	10,380.6	14.4	15.5	-90.28	207.8	-596.6	330.0	300.5	29.48	11.194		
10,500.0	10,480.6	10,526.0	10,480.6	14.5	15.6	-90.28	207.8	-596.6	330.0	300.4	29.62	11.140		
10,532.8	10,513.4	10,558.9	10,513.4	14.5	15.6	-90.37	207.3	-596.6	330.0	300.4	29.65	11.129		
10,600.0	10,580.6	10,625.0	10,579.0	14.6	15.6	-91.71	199.5	-596.5	330.1	300.4	29.67	11.125		
10,700.0	10,680.6	10,717.0	10,667.3	14.6	15.6	-96.15	173.9	-596.4	332.0	302.3	29.64	11.199		
10,800.0	10,780.6	10,796.9	10,738.6	14.7	15.7	-102.18	138.3	-596.1	339.7	310.0	29.76	11.414		
10,900.0	10,880.6	10,863.3	10,792.8	14.8	15.7	-108.39	99.9	-595.9	357.9	327.5	30.43	11.761		
11,000.0	10,980.6	10,917.5	10,832.7	14.9	15.7	-113.93	63.3	-595.7	389.2	357.4	31.84	12.223		
11,100.0	11,080.6	10,961.4	10,861.9	15.0	15.8	-118.55	30.5	-595.4	433.6	399.8	33.74	12.850		
11,200.0	11,180.6	11,000.0	10,884.9	15.1	15.8	-122.56	-0.5	-595.2	489.4	453.7	35.68	13.716		
11,300.0	11,280.6	11,025.0	10,898.4	15.1	15.8	-125.10	-21.5	-595.1	554.3	516.7	37.64	14.728		
11,400.0	11,380.6	11,050.0	10,910.9	15.2	15.9	-127.56	-43.1	-595.0	626.3	587.0	39.24	15.960		
11,500.0	11,480.6	11,075.0	10,922.1	15.3	15.9	-129.94	-65.5	-594.8	703.7	663.1	40.55	17.351		
11,600.0	11,580.6	11,089.1	10,928.0	15.4	15.9	-131.24	-78.3	-594.7	785.1	743.3	41.80	18.782		
11,700.0	11,680.6	11,100.0	10,932.2	15.5	15.9	-132.22	-88.3	-594.7	869.6	826.8	42.88	20.280		
11,800.0	11,780.6	11,125.0	10,941.1	15.6	16.0	-134.40	-111.7	-594.5	956.7	913.1	43.67	21.910		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 701H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 12028-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
0.0	0.0	1.0	1.0	0.0	0.0	89.50	0.7	80.0	80.0	77.9	2.07	38.709					
100.0	100.0	101.0	101.0	0.6	0.6	89.50	0.7	80.0	80.0	77.0	3.00	26.655					
200.0	200.0	201.0	201.0	1.1	1.1	89.50	0.7	80.0	80.0	77.0	3.00	26.655					
300.0	300.0	301.0	301.0	1.4	1.4	89.50	0.7	80.0	80.0	76.4	3.63	22.062					
400.0	400.0	401.0	401.0	1.7	1.7	89.50	0.7	80.0	80.0	75.9	4.13	19.369					
500.0	500.0	501.0	501.0	1.9	1.9	89.50	0.7	80.0	80.0	75.4	4.56	17.527					
600.0	600.0	601.0	601.0	2.1	2.1	89.50	0.7	80.0	80.0	75.1	4.95	16.156					
700.0	700.0	701.0	701.0	2.3	2.3	89.50	0.7	80.0	80.0	74.7	5.30	15.081					
800.0	800.0	801.0	801.0	2.5	2.5	89.50	0.7	80.0	80.0	74.4	5.63	14.207					
900.0	900.0	901.0	901.0	2.7	2.7	89.50	0.7	80.0	80.0	74.1	5.94	13.477					
1,000.0	1,000.0	1,001.0	1,001.0	2.9	2.9	89.50	0.7	80.0	80.0	73.8	6.22	12.855					
1,100.0	1,100.0	1,101.0	1,101.0	3.1	3.1	89.50	0.7	80.0	80.0	73.5	6.50	12.316					
1,200.0	1,200.0	1,201.0	1,201.0	3.2	3.2	89.50	0.7	80.0	80.0	73.2	6.76	11.842					
1,300.0	1,300.0	1,301.0	1,301.0	3.4	3.4	89.50	0.7	80.0	80.0	73.0	7.00	11.422					
1,400.0	1,400.0	1,401.0	1,401.0	3.5	3.5	89.50	0.7	80.0	80.0	72.8	7.24	11.046					
1,466.3	1,466.3	1,467.3	1,467.3	3.6	3.6	89.50	0.7	80.0	80.0	72.6	7.40	10.818 CC					
1,500.0	1,500.0	1,500.0	1,500.0	3.7	3.7	89.50	0.7	80.0	80.0	72.5	7.47	10.708 ES, SF					
1,600.0	1,600.0	1,598.3	1,598.3	3.8	3.8	89.24	1.1	81.6	81.7	74.1	7.60	10.745					
1,700.0	1,700.0	1,695.4	1,695.2	4.0	4.0	88.55	2.2	86.5	86.7	78.7	8.03	10.799					
1,800.0	1,800.0	1,792.0	1,791.5	4.1	4.3	87.56	4.0	94.5	95.1	86.6	8.44	11.266					
1,900.0	1,900.0	1,888.0	1,886.8	4.3	4.5	86.45	6.6	105.6	106.7	97.9	8.83	12.089					
2,000.0	2,000.0	1,983.1	1,980.8	4.4	4.8	85.33	9.8	119.6	121.7	112.5	9.20	13.224					
2,100.0	2,100.0	2,077.1	2,073.2	4.6	5.0	84.29	13.6	136.5	139.9	130.3	9.65	14.502					
2,200.0	2,200.0	2,172.4	2,166.4	4.8	5.2	83.37	18.2	156.2	161.0	151.1	9.96	16.162					
2,300.0	2,300.0	2,269.8	2,261.4	5.0	5.4	134.55	22.9	176.7	183.7	173.4	10.35	17.754					
2,400.0	2,399.8	2,366.6	2,355.9	5.2	5.5	134.62	27.5	197.2	208.9	198.1	10.74	19.446					
2,500.0	2,499.5	2,462.6	2,449.7	5.4	5.7	135.18	32.2	217.4	236.4	225.3	11.13	21.246					
2,550.1	2,549.2	2,510.5	2,496.4	5.4	5.8	135.58	34.5	227.5	251.1	239.8	11.26	22.290					
2,600.0	2,598.8	2,558.0	2,542.8	5.5	5.9	136.20	36.8	237.5	266.1	254.7	11.40	23.343					
2,700.0	2,698.0	2,653.2	2,635.8	5.6	6.1	137.25	41.4	257.6	296.1	284.4	11.74	25.235					
2,800.0	2,797.3	2,748.5	2,728.8	5.8	6.3	138.11	46.0	277.7	326.3	314.2	12.07	27.023					
2,900.0	2,896.5	2,843.7	2,821.7	5.9	6.4	138.82	50.6	297.8	356.5	344.1	12.41	28.715					
3,000.0	2,995.8	2,939.0	2,914.7	6.1	6.6	139.42	55.2	317.9	386.7	374.0	12.76	30.317					
3,100.0	3,095.0	3,034.2	3,007.7	6.2	6.8	139.93	59.8	338.0	417.0	403.9	13.10	31.833					
3,200.0	3,194.3	3,129.5	3,100.7	6.4	7.0	140.38	64.4	358.1	447.3	433.9	13.44	33.272					
3,300.0	3,293.5	3,224.7	3,193.7	6.5	7.2	140.77	69.0	378.2	477.6	463.9	13.79	34.636					
3,400.0	3,392.8	3,319.9	3,286.7	6.7	7.4	141.11	73.6	398.3	508.0	493.9	14.14	35.932					
3,500.0	3,492.0	3,415.2	3,379.7	6.9	7.6	141.41	78.2	418.4	538.4	523.9	14.49	37.164					
3,600.0	3,591.3	3,510.4	3,472.6	7.0	7.8	141.68	82.8	438.5	568.7	553.9	14.84	38.337					
3,700.0	3,690.6	3,605.7	3,565.6	7.2	8.0	141.93	87.4	458.6	599.1	583.9	15.19	39.453					
3,800.0	3,789.8	3,700.9	3,658.6	7.4	8.2	142.15	92.0	478.6	629.5	614.0	15.54	40.518					
3,900.0	3,889.1	3,796.2	3,751.6	7.5	8.3	142.35	96.6	498.7	659.9	644.0	15.89	41.533					
4,000.0	3,988.3	3,891.4	3,844.6	7.7	8.5	142.53	101.2	518.8	690.3	674.1	16.24	42.502					
4,100.0	4,087.6	3,986.6	3,937.6	7.9	8.7	142.70	105.8	538.9	720.7	704.1	16.60	43.429					
4,200.0	4,186.8	4,081.9	4,030.6	8.0	8.9	142.85	110.4	559.0	751.1	734.2	16.95	44.315					
4,300.0	4,286.1	4,177.1	4,123.5	8.2	9.1	142.99	115.0	579.1	781.6	764.3	17.31	45.163					
4,400.0	4,385.3	4,272.4	4,216.5	8.4	9.3	143.12	119.6	599.2	812.0	794.3	17.66	45.975					
4,500.0	4,484.6	4,367.6	4,309.5	8.6	9.5	143.24	124.2	619.3	842.4	824.4	18.02	46.754					
4,600.0	4,583.8	4,462.9	4,402.5	8.7	9.7	143.35	128.8	639.4	872.8	854.5	18.38	47.500					
4,700.0	4,683.1	4,558.1	4,495.5	8.9	9.9	143.46	133.4	659.5	903.3	884.5	18.73	48.217					
4,800.0	4,782.3	4,653.3	4,588.5	9.1	10.1	143.56	138.0	679.6	933.7	914.6	19.10	48.892					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 701H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 12028-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference:													
Offset				Semi Major Axis			Offset Wellbore Centre		Distance				
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
4,805.2	4,787.5	4,658.3	4,593.3	9.1	10.1	143.56	138.3	680.6	935.3	916.2	19.12	48.926	
4,900.0	4,881.7	4,748.8	4,681.7	9.3	10.3	143.80	142.6	699.7	963.6	944.1	19.45	49.539	
5,000.0	4,981.2	4,844.6	4,775.2	9.4	10.5	143.97	147.3	719.9	992.1	972.2	19.81	50.088	

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 702H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+SAG+FDIR, 11947-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
0.0	0.0	1.0	1.0	0.0	0.0	89.57	0.3	40.1	40.1								
100.0	100.0	101.0	101.0	0.6	0.6	89.57	0.3	40.1	40.1	38.0	2.07	19.403					
200.0	200.0	201.0	201.0	1.1	1.1	89.57	0.3	40.1	40.1	37.1	3.00	13.361					
300.0	300.0	301.0	301.0	1.4	1.4	89.57	0.3	40.1	40.1	36.5	3.63	11.058					
400.0	400.0	401.0	401.0	1.7	1.7	89.57	0.3	40.1	40.1	36.0	4.13	9.709					
500.0	500.0	501.0	501.0	1.9	1.9	89.57	0.3	40.1	40.1	35.5	4.56	8.785					
600.0	600.0	601.0	601.0	2.1	2.1	89.57	0.3	40.1	40.1	35.1	4.95	8.098					
700.0	700.0	701.0	701.0	2.3	2.3	89.57	0.3	40.1	40.1	34.8	5.30	7.559					
800.0	800.0	801.0	801.0	2.5	2.5	89.57	0.3	40.1	40.1	34.5	5.63	7.121					
900.0	900.0	901.0	901.0	2.7	2.7	89.57	0.3	40.1	40.1	34.2	5.94	6.755					
1,000.0	1,000.0	1,001.0	1,001.0	2.9	2.9	89.57	0.3	40.1	40.1	33.9	6.22	6.443					
1,100.0	1,100.0	1,101.0	1,101.0	3.1	3.1	89.57	0.3	40.1	40.1	33.6	6.50	6.173					
1,166.3	1,166.3	1,167.3	1,167.3	3.2	3.2	89.57	0.3	40.1	40.1	33.4	6.67	6.014 CC					
1,200.0	1,200.0	1,201.0	1,201.0	3.2	3.2	89.57	0.3	40.1	40.1	33.3	6.76	5.935 ES					
1,300.0	1,300.0	1,300.0	1,300.0	3.4	3.5	87.73	1.6	41.2	41.3	34.2	7.07	5.835					
1,400.0	1,400.0	1,398.9	1,398.7	3.5	3.8	82.85	5.6	44.5	44.9	37.4	7.52	5.980					
1,500.0	1,500.0	1,497.2	1,496.7	3.7	4.1	76.40	12.1	50.0	51.6	43.6	7.98	6.466					
1,600.0	1,600.0	1,594.9	1,593.6	3.8	4.4	69.86	21.1	57.6	61.8	53.5	8.25	7.487					
1,700.0	1,700.0	1,693.8	1,691.6	4.0	4.6	64.51	31.7	66.4	74.2	65.5	8.65	8.580					
1,800.0	1,800.0	1,791.4	1,788.2	4.1	4.8	61.59	41.3	76.4	87.8	78.8	8.99	9.764					
1,900.0	1,900.0	1,889.2	1,884.9	4.3	4.9	60.97	49.4	89.0	103.1	93.9	9.22	11.188					
2,000.0	2,000.0	1,988.0	1,982.4	4.4	5.1	60.77	57.3	102.4	118.8	109.2	9.52	12.475					
2,100.0	2,100.0	2,086.8	2,080.0	4.6	5.2	60.62	65.1	115.7	134.4	124.5	9.91	13.563					
2,200.0	2,200.0	2,185.5	2,177.5	4.8	5.4	60.50	73.0	129.0	150.0	139.8	10.28	14.602					
2,300.0	2,300.0	2,284.2	2,275.0	5.0	5.6	112.51	80.8	142.3	166.3	155.7	10.64	15.630					
2,400.0	2,399.8	2,382.5	2,372.1	5.2	5.8	113.58	88.6	155.5	184.0	173.0	10.99	16.738					
2,500.0	2,499.5	2,480.4	2,468.8	5.4	6.0	115.28	96.4	168.7	203.2	191.9	11.34	17.929					
2,550.1	2,549.2	2,529.3	2,517.0	5.4	6.1	116.30	100.3	175.3	213.5	202.1	11.46	18.629					
2,600.0	2,598.8	2,577.8	2,565.0	5.5	6.2	117.49	104.2	181.9	224.1	212.5	11.59	19.338					
2,700.0	2,698.0	2,675.2	2,661.1	5.6	6.4	119.58	111.9	195.0	245.4	233.5	11.91	20.601					
2,800.0	2,797.3	2,772.5	2,757.3	5.8	6.5	121.33	119.6	208.1	267.0	254.8	12.24	21.814					
2,900.0	2,896.5	2,869.8	2,853.4	5.9	6.7	122.82	127.4	221.2	288.8	276.2	12.57	22.976					
3,000.0	2,995.8	2,967.2	2,949.5	6.1	6.9	124.10	135.1	234.3	310.8	297.9	12.90	24.087					
3,100.0	3,095.0	3,064.5	3,045.7	6.2	7.1	125.21	142.9	247.4	332.9	319.6	13.23	25.151					
3,200.0	3,194.3	3,161.9	3,141.8	6.4	7.3	126.19	150.6	260.6	355.1	341.5	13.57	26.168					
3,300.0	3,293.5	3,259.2	3,237.9	6.5	7.5	127.05	158.3	273.7	377.3	363.4	13.90	27.142					
3,400.0	3,392.8	3,356.5	3,334.1	6.7	7.7	127.81	166.1	286.8	399.7	385.5	14.24	28.074					
3,500.0	3,492.0	3,453.9	3,430.2	6.9	7.9	128.49	173.8	299.9	422.1	407.5	14.57	28.966					
3,600.0	3,591.3	3,551.5	3,526.7	7.0	8.0	129.11	181.6	313.1	444.6	429.7	14.88	29.881					
3,700.0	3,690.6	3,657.0	3,631.0	7.2	8.2	129.75	189.4	326.4	466.2	451.0	15.21	30.645					
3,800.0	3,789.8	3,763.2	3,736.3	7.4	8.4	130.41	196.4	338.1	486.1	470.5	15.57	31.225					
3,900.0	3,889.1	3,870.0	3,842.5	7.5	8.6	131.11	202.3	348.3	504.4	488.5	15.92	31.688					
4,000.0	3,988.3	3,977.4	3,949.5	7.7	8.8	131.83	207.3	356.7	521.0	504.8	16.26	32.043					
4,100.0	4,087.6	4,085.4	4,057.1	7.9	9.0	132.59	211.3	363.4	536.0	519.4	16.59	32.299					
4,200.0	4,186.8	4,193.8	4,165.4	8.0	9.2	133.38	214.2	368.5	549.3	532.4	16.92	32.467					
4,300.0	4,286.1	4,302.5	4,274.0	8.2	9.4	134.23	216.2	371.7	561.0	543.7	17.23	32.556					
4,400.0	4,385.3	4,411.6	4,383.1	8.4	9.5	135.12	217.0	373.2	571.0	553.5	17.52	32.597					
4,500.0	4,484.6	4,514.1	4,485.6	8.6	9.6	135.99	217.1	373.3	579.8	562.1	17.71	32.733					
4,600.0	4,583.8	4,613.3	4,584.8	8.7	9.7	136.81	217.1	373.3	588.7	570.8	17.95	32.802					
4,700.0	4,683.1	4,712.6	4,684.1	8.9	9.8	137.61	217.1	373.3	597.7	579.5	18.18	32.871					
4,800.0	4,782.3	4,811.8	4,783.3	9.1	9.9	138.38	217.1	373.3	606.8	588.3	18.43	32.930					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 702H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+SAG+FDIR, 11947-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
4,805.2	4,787.5	4,817.0	4,788.5	9.1	9.9	138.42	217.1	373.3	607.3	588.8	18.44	32.933					
4,900.0	4,881.7	4,911.2	4,882.7	9.3	9.9	139.14	217.1	373.3	615.4	596.7	18.66	32.980					
5,000.0	4,981.2	5,010.7	4,982.2	9.4	10.0	139.77	217.1	373.3	622.7	603.9	18.90	32.957					
5,100.0	5,080.9	5,110.4	5,081.9	9.6	10.1	140.27	217.1	373.3	628.8	609.7	19.13	32.870					
5,200.0	5,180.7	5,210.2	5,181.7	9.8	10.2	140.66	217.1	373.3	633.6	614.3	19.36	32.723					
5,300.0	5,280.6	5,310.1	5,281.6	9.9	10.3	140.94	217.1	373.3	637.1	617.5	19.59	32.518					
5,400.0	5,380.6	5,410.1	5,381.6	10.1	10.4	141.10	217.1	373.3	639.2	619.4	19.81	32.259					
5,500.0	5,480.6	5,510.1	5,481.6	10.2	10.5	141.16	217.1	373.3	639.9	619.9	20.02	31.967					
5,505.4	5,486.0	5,515.5	5,487.0	10.2	10.5	89.31	217.1	373.3	639.9	619.9	20.03	31.950					
5,600.0	5,580.6	5,610.1	5,581.6	10.3	10.6	89.31	217.1	373.3	639.9	619.8	20.19	31.692					
5,700.0	5,680.6	5,710.1	5,681.6	10.4	10.7	89.31	217.1	373.3	639.9	619.6	20.37	31.415					
5,800.0	5,780.6	5,810.1	5,781.6	10.5	10.7	89.31	217.1	373.3	639.9	619.4	20.55	31.143					
5,900.0	5,880.6	5,910.1	5,881.6	10.5	10.8	89.31	217.1	373.3	639.9	619.2	20.73	30.876					
6,000.0	5,980.6	6,010.1	5,981.6	10.6	10.9	89.31	217.1	373.3	639.9	619.0	20.90	30.615					
6,100.0	6,080.6	6,110.1	6,081.6	10.7	11.0	89.31	217.1	373.3	639.9	618.9	21.08	30.358					
6,200.0	6,180.6	6,210.1	6,181.6	10.8	11.1	89.31	217.1	373.3	639.9	618.7	21.26	30.105					
6,300.0	6,280.6	6,310.1	6,281.6	10.9	11.2	89.31	217.1	373.3	639.9	618.5	21.43	29.858					
6,400.0	6,380.6	6,410.1	6,381.6	11.0	11.3	89.31	217.1	373.3	639.9	618.3	21.61	29.614					
6,500.0	6,480.6	6,510.1	6,481.6	11.1	11.4	89.31	217.1	373.3	639.9	618.2	21.79	29.375					
6,600.0	6,580.6	6,610.1	6,581.6	11.2	11.4	89.31	217.1	373.3	639.9	618.0	21.96	29.140					
6,700.0	6,680.6	6,710.1	6,681.6	11.2	11.5	89.31	217.1	373.3	639.9	617.8	22.14	28.909					
6,800.0	6,780.6	6,810.1	6,781.6	11.3	11.6	89.31	217.1	373.3	639.9	617.6	22.31	28.682					
6,900.0	6,880.6	6,910.1	6,881.6	11.4	11.7	89.31	217.1	373.3	639.9	617.5	22.49	28.459					
7,000.0	6,980.6	7,010.1	6,981.6	11.5	11.8	89.31	217.1	373.3	639.9	617.3	22.66	28.240					
7,100.0	7,080.6	7,110.1	7,081.6	11.6	11.9	89.31	217.1	373.3	639.9	617.1	22.84	28.024					
7,200.0	7,180.6	7,210.1	7,181.6	11.7	12.0	89.31	217.1	373.3	639.9	616.9	23.01	27.811					
7,300.0	7,280.6	7,310.1	7,281.6	11.8	12.0	89.31	217.1	373.3	639.9	616.8	23.18	27.603					
7,400.0	7,380.6	7,410.1	7,381.6	11.8	12.1	89.31	217.1	373.3	639.9	616.6	23.36	27.397					
7,500.0	7,480.6	7,510.1	7,481.6	11.9	12.2	89.31	217.1	373.3	639.9	616.4	23.53	27.195					
7,600.0	7,580.6	7,610.1	7,581.6	12.0	12.3	89.31	217.1	373.3	639.9	616.2	23.71	26.996					
7,700.0	7,680.6	7,710.1	7,681.6	12.1	12.4	89.31	217.1	373.3	639.9	616.1	23.88	26.800					
7,800.0	7,780.6	7,810.1	7,781.6	12.2	12.5	89.31	217.1	373.3	639.9	615.9	24.05	26.607					
7,900.0	7,880.6	7,910.1	7,881.6	12.3	12.6	89.31	217.1	373.3	639.9	615.7	24.23	26.417					
8,000.0	7,980.6	8,010.1	7,981.6	12.4	12.7	89.31	217.1	373.3	639.9	615.5	24.40	26.229					
8,100.0	8,080.6	8,110.1	8,081.6	12.4	12.7	89.31	217.1	373.3	639.9	615.4	24.57	26.045					
8,200.0	8,180.6	8,210.1	8,181.6	12.5	12.8	89.31	217.1	373.3	639.9	615.2	24.74	25.863					
8,300.0	8,280.6	8,310.1	8,281.6	12.6	12.9	89.31	217.1	373.3	639.9	615.0	24.92	25.684					
8,400.0	8,380.6	8,410.1	8,381.6	12.7	13.0	89.31	217.1	373.3	639.9	614.9	25.09	25.508					
8,500.0	8,480.6	8,510.1	8,481.6	12.8	13.1	89.31	217.1	373.3	639.9	614.7	25.26	25.334					
8,600.0	8,580.6	8,610.1	8,581.6	12.9	13.2	89.31	217.1	373.3	639.9	614.5	25.43	25.163					
8,700.0	8,680.6	8,710.1	8,681.6	12.9	13.3	89.31	217.1	373.3	639.9	614.3	25.60	24.994					
8,800.0	8,780.6	8,810.1	8,781.6	13.0	13.3	89.31	217.1	373.3	639.9	614.2	25.78	24.828					
8,900.0	8,880.6	8,910.1	8,881.6	13.1	13.4	89.31	217.1	373.3	639.9	614.0	25.95	24.664					
9,000.0	8,980.6	9,010.1	8,981.6	13.2	13.5	89.31	217.1	373.3	639.9	613.8	26.12	24.502					
9,100.0	9,080.6	9,110.1	9,081.6	13.3	13.6	89.31	217.1	373.3	639.9	613.7	26.29	24.342					
9,200.0	9,180.6	9,210.1	9,181.6	13.4	13.7	89.31	217.1	373.3	639.9	613.5	26.46	24.185					
9,300.0	9,280.6	9,310.1	9,281.6	13.5	13.8	89.31	217.1	373.3	639.9	613.3	26.63	24.030					
9,400.0	9,380.6	9,410.1	9,381.6	13.5	13.9	89.31	217.1	373.3	639.9	613.1	26.80	23.877					
9,500.0	9,480.6	9,510.1	9,481.6	13.6	13.9	89.31	217.1	373.3	639.9	613.0	26.97	23.726					
9,600.0	9,580.6	9,610.1	9,581.6	13.7	14.0	89.31	217.1	373.3	639.9	612.8	27.14	23.576					
9,700.0	9,680.6	9,710.1	9,681.6	13.8	14.1	89.31	217.1	373.3	639.9	612.6	27.31	23.429					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 702H - OWB - PWP1														Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+SAG+FDIR, 11947-r.5 MWD+IFR1+SAG+FDIR														Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor		
9,800.0	9,780.6	9,810.1	9,781.6	13.9	14.2	89.31	217.1	373.3	639.9	612.5	27.48	23.284		
9,900.0	9,880.6	9,910.1	9,881.6	14.0	14.3	89.31	217.1	373.3	639.9	612.3	27.65	23.141		
10,000.0	9,980.6	10,010.1	9,981.6	14.0	14.4	89.31	217.1	373.3	639.9	612.1	27.82	22.999		
10,100.0	10,080.6	10,110.1	10,081.6	14.1	14.5	89.31	217.1	373.3	639.9	612.0	27.99	22.860		
10,200.0	10,180.6	10,210.1	10,181.6	14.2	14.5	89.31	217.1	373.3	639.9	611.8	28.16	22.722		
10,300.0	10,280.6	10,310.1	10,281.6	14.3	14.6	89.31	217.1	373.3	639.9	611.6	28.33	22.586		
10,400.0	10,380.6	10,410.1	10,381.6	14.4	14.7	89.31	217.1	373.3	639.9	611.4	28.50	22.451		
10,500.0	10,480.6	10,510.1	10,481.6	14.5	14.8	89.31	217.1	373.3	639.9	611.3	28.67	22.318		
10,600.0	10,580.6	10,610.1	10,581.6	14.6	14.9	89.31	217.1	373.3	639.9	611.1	28.84	22.187		
10,700.0	10,680.6	10,710.1	10,681.6	14.6	15.0	89.31	217.1	373.3	639.9	610.9	29.01	22.058		
10,800.0	10,780.6	10,810.1	10,781.6	14.7	15.1	89.31	217.1	373.3	639.9	610.8	29.18	21.930		
10,900.0	10,880.6	10,910.1	10,881.6	14.8	15.1	89.31	217.1	373.3	639.9	610.6	29.35	21.803		
11,000.0	10,980.6	11,010.1	10,981.6	14.9	15.2	89.31	217.1	373.3	639.9	610.4	29.52	21.679		
11,100.0	11,080.6	11,110.1	11,081.6	15.0	15.3	89.31	217.1	373.3	639.9	610.3	29.69	21.555		
11,200.0	11,180.6	11,210.1	11,181.6	15.1	15.4	89.31	217.1	373.3	639.9	610.1	29.86	21.433		
11,300.0	11,280.6	11,310.1	11,281.6	15.1	15.5	89.31	217.1	373.3	639.9	609.9	30.03	21.313		
11,400.0	11,380.6	11,410.1	11,381.6	15.2	15.6	89.31	217.1	373.3	639.9	609.8	30.20	21.194		
11,500.0	11,480.6	11,510.1	11,481.6	15.3	15.6	89.31	217.1	373.3	639.9	609.6	30.36	21.076		
11,600.0	11,580.6	11,610.1	11,581.6	15.4	15.7	89.31	217.1	373.3	639.9	609.4	30.53	20.960		
11,700.0	11,680.6	11,710.1	11,681.6	15.5	15.8	89.31	217.1	373.3	639.9	609.2	30.70	20.845		
11,800.0	11,780.6	11,810.1	11,781.6	15.6	15.9	89.31	217.1	373.3	639.9	609.1	30.87	20.731		
11,900.0	11,880.6	11,910.1	11,881.6	15.6	16.0	89.31	217.1	373.3	639.9	608.9	31.03	20.620		
11,926.0	11,906.5	11,936.0	11,907.5	15.7	16.0	89.31	217.1	373.3	639.9	608.9	31.06	20.606		
11,950.0	11,930.6	11,960.2	11,931.7	15.7	16.0	-90.35	216.9	373.3	639.9	609.1	30.81	20.771		
11,975.0	11,955.5	11,985.4	11,956.8	15.7	16.0	-90.41	215.6	373.3	640.0	609.1	30.82	20.766		
12,000.0	11,980.3	12,010.6	11,981.9	15.7	16.0	-90.45	212.9	373.3	640.0	609.1	30.82	20.764		
12,025.0	12,004.9	12,035.9	12,006.9	15.7	16.0	-90.50	208.9	373.4	640.0	609.1	30.82	20.763		
12,050.0	12,029.2	12,061.2	12,031.6	15.7	16.0	-90.55	203.5	373.4	640.0	609.1	30.82	20.762		
12,075.0	12,053.2	12,086.5	12,056.1	15.7	16.1	-90.60	196.9	373.4	640.0	609.1	30.82	20.762		
12,100.0	12,076.7	12,111.9	12,080.2	15.7	16.1	-90.64	188.9	373.5	640.0	609.2	30.82	20.762		
12,125.0	12,099.9	12,137.3	12,103.8	15.7	16.1	-90.68	179.7	373.5	640.0	609.2	30.82	20.762		
12,150.0	12,122.4	12,162.7	12,127.0	15.7	16.1	-90.72	169.2	373.6	640.0	609.2	30.82	20.762		
12,175.0	12,144.4	12,188.1	12,149.5	15.8	16.1	-90.76	157.5	373.7	640.0	609.2	30.83	20.762		
12,200.0	12,165.8	12,213.6	12,171.5	15.8	16.1	-90.80	144.6	373.8	640.0	609.2	30.83	20.760		
12,225.0	12,186.4	12,239.1	12,192.7	15.8	16.1	-90.83	130.5	373.9	640.0	609.2	30.83	20.758		
12,250.0	12,206.3	12,264.6	12,213.2	15.8	16.2	-90.86	115.3	374.0	640.0	609.2	30.84	20.754		
12,275.0	12,225.3	12,290.1	12,232.8	15.8	16.2	-90.89	99.1	374.1	640.0	609.2	30.85	20.748		
12,300.0	12,243.5	12,315.6	12,251.6	15.8	16.2	-90.92	81.7	374.2	640.0	609.2	30.86	20.740		
12,325.0	12,260.7	12,341.2	12,269.4	15.9	16.2	-90.94	63.4	374.3	640.0	609.2	30.87	20.730		
12,350.0	12,277.0	12,366.8	12,286.3	15.9	16.2	-90.96	44.2	374.4	640.0	609.1	30.89	20.717		
12,375.0	12,292.2	12,392.4	12,302.0	15.9	16.2	-90.98	24.1	374.6	640.0	609.1	30.92	20.701		
12,400.0	12,306.4	12,417.9	12,316.7	15.9	16.3	-91.00	3.1	374.7	640.0	609.1	30.95	20.682		
12,425.0	12,319.5	12,443.5	12,330.3	15.9	16.3	-91.01	-18.6	374.8	640.0	609.1	30.98	20.659		
12,450.0	12,331.5	12,469.2	12,342.6	16.0	16.3	-91.02	-41.0	375.0	640.0	609.0	31.02	20.633		
12,475.0	12,342.3	12,494.8	12,353.8	16.0	16.3	-91.03	-64.1	375.1	640.0	609.0	31.07	20.602		
12,500.0	12,351.9	12,520.4	12,363.7	16.0	16.4	-91.03	-87.7	375.3	640.0	608.9	31.12	20.568		
12,525.0	12,360.3	12,546.0	12,372.3	16.0	16.4	-91.03	-111.8	375.4	640.0	608.9	31.18	20.529		
12,550.0	12,367.5	12,571.6	12,379.6	16.0	16.4	-91.03	-136.4	375.6	640.0	608.8	31.24	20.487		
12,575.0	12,373.4	12,597.2	12,385.6	16.1	16.4	-91.03	-161.3	375.8	640.0	608.7	31.31	20.441		
12,600.0	12,378.0	12,622.9	12,390.2	16.1	16.5	-91.02	-186.5	375.9	640.0	608.7	31.39	20.391		
12,625.0	12,381.3	12,648.5	12,393.5	16.1	16.5	-91.01	-211.9	376.1	640.0	608.6	31.47	20.338		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 702H - OWB - PWP1													Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+SAG+FDIR, 11947-r.5 MWD+IFR1+SAG+FDIR													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			
12,650.0	12,383.3	12,674.1	12,395.4	16.1	16.5	-91.00	-237.4	376.3	640.0	608.5	31.56	20.281				
12,675.7	12,384.0	12,700.3	12,396.0	16.2	16.6	-90.98	-263.6	376.4	640.0	608.4	31.65	20.220				
12,676.0	12,384.0	12,700.6	12,396.0	16.2	16.6	-90.98	-263.9	376.4	640.0	608.4	31.65	20.220				
12,700.0	12,384.0	12,724.6	12,396.0	16.2	16.6	-90.98	-287.9	376.6	640.0	608.3	31.76	20.155				
12,800.0	12,384.0	12,824.6	12,396.0	16.3	16.8	-90.98	-387.9	377.2	640.0	607.8	32.23	19.857				
12,900.0	12,384.0	12,924.6	12,396.0	16.5	17.0	-90.98	-487.9	377.9	640.0	607.2	32.79	19.518				
13,000.0	12,384.0	13,024.6	12,396.0	16.8	17.2	-90.98	-587.9	378.5	640.0	606.6	33.43	19.146				
13,100.0	12,384.0	13,124.6	12,396.0	17.1	17.5	-90.98	-687.9	379.2	640.0	605.9	34.14	18.746				
13,200.0	12,384.0	13,224.6	12,396.0	17.5	17.9	-90.98	-787.9	379.8	640.0	605.1	34.92	18.327				
13,300.0	12,384.0	13,324.6	12,396.0	17.9	18.3	-90.98	-887.9	380.5	640.0	604.3	35.77	17.894				
13,400.0	12,384.0	13,424.6	12,396.0	18.3	18.7	-90.98	-987.9	381.1	640.0	603.4	36.68	17.452				
13,500.0	12,384.0	13,524.6	12,396.0	18.8	19.2	-90.98	-1,087.9	381.8	640.0	602.4	37.64	17.006				
13,600.0	12,384.0	13,624.6	12,396.0	19.3	19.7	-90.98	-1,187.9	382.4	640.0	601.4	38.65	16.560				
13,700.0	12,384.0	13,724.6	12,396.0	19.8	20.2	-90.98	-1,287.9	383.1	640.0	600.3	39.71	16.117				
13,800.0	12,384.0	13,824.6	12,396.0	20.4	20.7	-90.98	-1,387.9	383.8	640.0	599.2	40.82	15.681				
13,900.0	12,384.0	13,924.6	12,396.0	20.9	21.3	-90.98	-1,487.9	384.4	640.0	598.1	41.96	15.253				
14,000.0	12,384.0	14,024.6	12,396.0	21.5	21.9	-90.98	-1,587.9	385.1	640.0	596.9	43.14	14.835				
14,100.0	12,384.0	14,124.6	12,396.0	22.2	22.5	-90.98	-1,687.9	385.7	640.0	595.7	44.36	14.428				
14,200.0	12,384.0	14,224.6	12,396.0	22.8	23.1	-90.98	-1,787.9	386.4	640.0	594.4	45.61	14.033				
14,300.0	12,384.0	14,324.6	12,396.0	23.4	23.8	-90.98	-1,887.9	387.0	640.0	593.2	46.89	13.651				
14,400.0	12,384.0	14,424.6	12,396.0	24.1	24.4	-90.98	-1,987.9	387.7	640.1	591.9	48.19	13.282				
14,500.0	12,384.0	14,524.6	12,396.0	24.8	25.1	-90.98	-2,087.9	388.3	640.1	590.5	49.52	12.926				
14,600.0	12,384.0	14,624.6	12,396.0	25.4	25.7	-90.98	-2,187.9	389.0	640.1	589.2	50.87	12.583				
14,700.0	12,384.0	14,724.6	12,396.0	26.1	26.4	-90.98	-2,287.9	389.6	640.1	587.8	52.24	12.253				
14,800.0	12,384.0	14,824.6	12,396.0	26.8	27.1	-90.98	-2,387.9	390.3	640.1	586.4	53.63	11.935				
14,900.0	12,384.0	14,924.6	12,396.0	27.6	27.8	-90.98	-2,487.9	390.9	640.1	585.0	55.03	11.630				
15,000.0	12,384.0	15,024.6	12,396.0	28.3	28.6	-90.98	-2,587.9	391.6	640.1	583.6	56.46	11.337				
15,100.0	12,384.0	15,124.6	12,396.0	29.0	29.3	-90.98	-2,687.9	392.2	640.1	582.2	57.90	11.055				
15,200.0	12,384.0	15,224.6	12,396.0	29.8	30.0	-90.98	-2,787.9	392.9	640.1	580.7	59.35	10.785				
15,300.0	12,384.0	15,324.6	12,396.0	30.5	30.8	-90.98	-2,887.9	393.5	640.1	579.2	60.81	10.525				
15,400.0	12,384.0	15,424.6	12,396.0	31.2	31.5	-90.98	-2,987.9	394.2	640.1	577.8	62.29	10.275				
15,500.0	12,384.0	15,524.6	12,396.0	32.0	32.2	-90.98	-3,087.9	394.8	640.1	576.3	63.78	10.035				
15,600.0	12,384.0	15,624.6	12,396.0	32.8	33.0	-90.98	-3,187.9	395.5	640.1	574.8	65.28	9.805				
15,700.0	12,384.0	15,724.6	12,396.0	33.5	33.8	-90.98	-3,287.9	396.1	640.1	573.3	66.79	9.583				
15,800.0	12,384.0	15,824.6	12,396.0	34.3	34.5	-90.98	-3,387.9	396.8	640.1	571.8	68.31	9.370				
15,900.0	12,384.0	15,924.6	12,396.0	35.1	35.3	-90.98	-3,487.9	397.4	640.1	570.2	69.83	9.165				
16,000.0	12,384.0	16,024.6	12,396.0	35.9	36.1	-90.98	-3,587.9	398.1	640.1	568.7	71.37	8.968				
16,100.0	12,384.0	16,124.6	12,396.0	36.6	36.9	-90.98	-3,687.8	398.7	640.1	567.2	72.91	8.779				
16,200.0	12,384.0	16,224.6	12,396.0	37.4	37.6	-90.98	-3,787.8	399.4	640.1	565.6	74.46	8.596				
16,300.0	12,384.0	16,324.6	12,396.0	38.2	38.4	-90.98	-3,887.8	400.0	640.1	564.1	76.02	8.420				
16,400.0	12,384.0	16,424.6	12,396.0	39.0	39.2	-90.98	-3,987.8	400.7	640.1	562.5	77.58	8.251				
16,500.0	12,384.0	16,524.6	12,396.0	39.8	40.0	-90.98	-4,087.8	401.3	640.1	560.9	79.14	8.087				
16,600.0	12,384.0	16,624.6	12,396.0	40.6	40.8	-90.98	-4,187.8	402.0	640.1	559.4	80.72	7.930				
16,700.0	12,384.0	16,724.6	12,396.0	41.4	41.6	-90.98	-4,287.8	402.6	640.1	557.8	82.30	7.778				
16,800.0	12,384.0	16,824.6	12,396.0	42.2	42.4	-90.98	-4,387.8	403.3	640.1	556.2	83.88	7.631				
16,900.0	12,384.0	16,924.6	12,396.0	43.0	43.2	-90.98	-4,487.8	403.9	640.1	554.6	85.47	7.489				
17,000.0	12,384.0	17,024.6	12,396.0	43.8	44.0	-90.98	-4,587.8	404.6	640.1	553.0	87.06	7.352				
17,100.0	12,384.0	17,124.6	12,396.0	44.6	44.8	-90.98	-4,687.8	405.2	640.1	551.4	88.65	7.220				
17,200.0	12,384.0	17,224.6	12,396.0	45.4	45.6	-90.98	-4,787.8	405.9	640.1	549.8	90.25	7.092				
17,300.0	12,384.0	17,324.6	12,396.0	46.3	46.4	-90.98	-4,887.8	406.5	640.1	548.2	91.86	6.968				
17,400.0	12,384.0	17,424.6	12,396.0	47.1	47.2	-90.98	-4,987.8	407.2	640.1	546.6	93.46	6.848				

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

ConocoPhillips
Anticollision Report

Company: DELAWARE BASIN EAST
Project: LEA COUNTY SOUTHEAST
Reference Site: AVION FEDERAL COM PROJECT
Site Error: 0.0 usft
Reference Well: AVION FEDERAL COM 703H
Well Error: 0.0 usft
Reference Wellbore: OWB
Reference Design: PWP1
Local Co-ordinate Reference: Well AVION FEDERAL COM 703H
TVD Reference: RKB=27ft @ 3728.0usft
MD Reference: RKB=27ft @ 3728.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDT 17 Permian Prod
Offset TVD Reference: Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 702H - OWB - PWP1
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+SAG+FDIR, 11947-r.5 MWD+IFR1+SAG+FDIR
Rule Assigned:
Measured Depth (usft), Vertical Depth (usft), Measured Depth (usft), Vertical Depth (usft), Reference (usft), Offset (usft), Highside Toolface (°), +N/-S (usft), +E/-W (usft), Between Centres (usft), Between Ellipses (usft), No-Go Distance (usft), Separation Factor, Warning

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 702H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1200-r.5 MWD+IFR1+SAG+FDIR, 11947-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference:													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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	
22,600.0	12,384.0	22,624.6	12,396.0	90.7	90.8	-90.98	-10,187.7	441.1	640.1	460.7	179.43	3.568	
22,608.9	12,384.0	22,633.5	12,396.0	90.8	90.9	-90.98	-10,196.6	441.1	640.1	460.5	179.58	3.565	
22,613.7	12,384.0	22,638.3	12,396.0	90.8	90.9	-90.98	-10,201.4	441.1	640.1	460.5	179.66	3.563	
22,658.9	12,384.0	22,681.5	12,396.0	91.2	91.3	-90.98	-10,244.6	441.4	640.1	459.7	180.39	3.548 SF	

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 704H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 11999-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
0.0	0.0	0.0	0.0	0.0	0.0	-90.57	-0.4	-39.9	39.9								
100.0	100.0	100.0	100.0	0.6	0.6	-90.57	-0.4	-39.9	39.9	37.8	2.06	19.350					
200.0	200.0	200.0	200.0	1.1	1.1	-90.57	-0.4	-39.9	39.9	36.9	3.00	13.308					
300.0	300.0	300.0	300.0	1.4	1.4	-90.57	-0.4	-39.9	39.9	36.3	3.62	11.011					
400.0	400.0	400.0	400.0	1.7	1.7	-90.57	-0.4	-39.9	39.9	35.8	4.13	9.666					
500.0	500.0	500.0	500.0	1.9	1.9	-90.57	-0.4	-39.9	39.9	35.3	4.56	8.745					
600.0	600.0	600.0	600.0	2.1	2.1	-90.57	-0.4	-39.9	39.9	35.0	4.95	8.061					
700.0	700.0	700.0	700.0	2.3	2.3	-90.57	-0.4	-39.9	39.9	34.6	5.30	7.524					
800.0	800.0	800.0	800.0	2.5	2.5	-90.57	-0.4	-39.9	39.9	34.3	5.63	7.088					
900.0	900.0	900.0	900.0	2.7	2.7	-90.57	-0.4	-39.9	39.9	34.0	5.93	6.723					
1,000.0	1,000.0	1,000.0	1,000.0	2.9	2.9	-90.57	-0.4	-39.9	39.9	33.7	6.22	6.413					
1,100.0	1,100.0	1,100.0	1,100.0	3.1	3.1	-90.57	-0.4	-39.9	39.9	33.4	6.49	6.144					
1,200.0	1,200.0	1,200.0	1,200.0	3.2	3.2	-90.57	-0.4	-39.9	39.9	33.1	6.75	5.908 CC, ES					
1,300.0	1,300.0	1,298.6	1,298.6	3.4	3.4	-90.02	0.0	-41.6	41.6	34.4	7.15	5.815					
1,400.0	1,400.0	1,397.0	1,396.9	3.5	3.6	-88.61	1.1	-46.5	46.6	39.1	7.53	6.190					
1,500.0	1,500.0	1,494.9	1,494.4	3.7	3.8	-86.84	3.0	-54.7	55.0	47.1	7.90	6.964					
1,600.0	1,600.0	1,592.2	1,591.0	3.8	4.1	-85.12	5.6	-66.0	66.9	58.8	8.03	8.325					
1,700.0	1,700.0	1,688.5	1,686.2	4.0	4.3	-83.64	9.0	-80.4	82.1	73.6	8.42	9.740					
1,800.0	1,800.0	1,783.8	1,779.7	4.1	4.6	-82.44	13.0	-97.6	100.6	91.8	8.81	11.419					
1,900.0	1,900.0	1,877.7	1,871.4	4.3	4.9	-81.50	17.6	-117.6	122.3	113.2	9.17	13.343					
2,000.0	2,000.0	1,973.8	1,964.7	4.4	5.0	-80.77	22.8	-140.2	146.4	136.9	9.47	15.454					
2,100.0	2,100.0	2,070.8	2,058.8	4.6	5.2	-80.23	28.1	-163.1	170.5	160.7	9.84	17.335					
2,200.0	2,200.0	2,167.8	2,152.9	4.8	5.4	-79.83	33.4	-186.0	194.7	184.5	10.19	19.107					
2,300.0	2,300.0	2,265.2	2,247.4	5.0	5.6	-27.66	38.7	-208.9	217.4	206.8	10.61	20.485					
2,400.0	2,399.8	2,363.3	2,342.6	5.2	5.7	-27.80	44.0	-232.0	237.0	226.0	11.02	21.500					
2,500.0	2,499.5	2,461.8	2,438.2	5.4	5.9	-28.29	49.4	-255.3	253.6	242.2	11.43	22.183					
2,550.1	2,549.2	2,511.4	2,486.3	5.4	6.0	-28.65	52.1	-266.9	260.9	249.3	11.57	22.546					
2,600.0	2,598.8	2,560.8	2,534.2	5.5	6.1	-29.11	54.8	-278.6	267.7	256.0	11.70	22.869					
2,700.0	2,698.0	2,659.7	2,630.2	5.6	6.3	-29.95	60.2	-301.9	281.4	269.3	12.05	23.342					
2,800.0	2,797.3	2,758.7	2,726.3	5.8	6.5	-30.72	65.6	-325.2	295.1	282.7	12.41	23.787					
2,900.0	2,896.5	2,857.7	2,822.3	5.9	6.7	-31.42	71.0	-348.6	308.9	296.2	12.76	24.206					
3,000.0	2,995.8	2,956.7	2,918.3	6.1	6.9	-32.06	76.4	-371.9	322.8	309.7	13.12	24.602					
3,100.0	3,095.0	3,055.6	3,014.4	6.2	7.1	-32.64	81.8	-395.2	336.7	323.2	13.48	24.976					
3,200.0	3,194.3	3,154.6	3,110.4	6.4	7.3	-33.18	87.2	-418.6	350.6	336.7	13.84	25.329					
3,300.0	3,293.5	3,253.6	3,206.4	6.5	7.5	-33.68	92.6	-441.9	364.5	350.3	14.20	25.665					
3,400.0	3,392.8	3,352.6	3,302.5	6.7	7.7	-34.14	97.9	-465.2	378.5	363.9	14.57	25.982					
3,500.0	3,492.0	3,451.5	3,398.5	6.9	7.9	-34.57	103.3	-488.6	392.5	377.5	14.93	26.284					
3,600.0	3,591.3	3,550.5	3,494.5	7.0	8.1	-34.97	108.7	-511.9	406.5	391.2	15.30	26.572					
3,700.0	3,690.6	3,649.5	3,590.6	7.2	8.3	-35.34	114.1	-535.2	420.5	404.9	15.66	26.845					
3,800.0	3,789.8	3,748.5	3,686.6	7.4	8.5	-35.69	119.5	-558.6	434.6	418.5	16.03	27.106					
3,900.0	3,889.1	3,847.4	3,782.6	7.5	8.7	-36.02	124.9	-581.9	448.6	432.2	16.40	27.355					
4,000.0	3,988.3	3,946.4	3,878.7	7.7	8.9	-36.33	130.3	-605.2	462.7	445.9	16.77	27.592					
4,100.0	4,087.6	4,045.4	3,974.7	7.9	9.2	-36.62	135.7	-628.6	476.8	459.6	17.14	27.820					
4,200.0	4,186.8	4,144.4	4,070.7	8.0	9.4	-36.89	141.1	-651.9	490.9	473.4	17.51	28.037					
4,300.0	4,286.1	4,243.4	4,166.8	8.2	9.6	-37.15	146.5	-675.2	505.0	487.1	17.88	28.245					
4,400.0	4,385.3	4,342.3	4,262.8	8.4	9.8	-37.39	151.9	-698.6	519.1	500.8	18.25	28.445					
4,500.0	4,484.6	4,441.3	4,358.8	8.6	10.0	-37.62	157.3	-721.9	533.2	514.6	18.62	28.637					
4,600.0	4,583.8	4,540.3	4,454.9	8.7	10.2	-37.84	162.7	-745.2	547.4	528.4	18.99	28.821					
4,700.0	4,683.1	4,639.3	4,550.9	8.9	10.4	-38.04	168.1	-768.6	561.5	542.1	19.36	28.998					
4,800.0	4,782.3	4,738.2	4,646.9	9.1	10.7	-38.24	173.5	-791.9	575.6	555.9	19.74	29.160					
4,805.2	4,787.5	4,743.4	4,652.0	9.1	10.7	-38.25	173.8	-793.1	576.4	556.6	19.76	29.168					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 704H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 11999-r.5 MWD+IFR1+SAG+FDIR											Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning		
		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)	
4,900.0	4,881.7	4,837.1	4,742.9	9.3	10.9	-38.47	178.9	-815.2	590.4	570.3	20.09	29.387		
5,000.0	4,981.2	4,953.2	4,856.0	9.4	11.1	-38.63	184.8	-841.0	605.1	584.6	20.50	29.514		
5,100.0	5,080.9	5,070.6	4,971.0	9.6	11.4	-38.75	190.1	-863.7	618.3	597.3	20.93	29.538		
5,200.0	5,180.7	5,188.7	5,087.4	9.8	11.6	-38.81	194.5	-883.0	629.8	608.4	21.34	29.515		
5,300.0	5,280.6	5,307.4	5,205.0	9.9	11.9	-38.82	198.2	-898.8	639.7	617.9	21.72	29.451		
5,400.0	5,380.6	5,426.6	5,323.5	10.1	12.1	-38.78	201.1	-911.2	647.9	625.8	22.07	29.352		
5,500.0	5,480.6	5,546.2	5,442.7	10.2	12.3	-38.70	203.1	-919.9	654.4	632.0	22.39	29.232		
5,505.4	5,486.0	5,552.7	5,449.2	10.2	12.3	-90.55	203.2	-920.3	654.7	632.3	22.40	29.224		
5,600.0	5,580.6	5,666.1	5,562.5	10.3	12.5	-90.45	204.3	-925.0	658.7	636.0	22.65	29.088		
5,700.0	5,680.6	5,784.1	5,680.6	10.4	12.7	-90.42	204.6	-926.5	659.9	637.1	22.80	28.938		
5,800.0	5,780.6	5,884.1	5,780.6	10.5	12.7	-90.42	204.6	-926.5	659.9	637.0	22.95	28.759		
5,900.0	5,880.6	5,984.1	5,880.6	10.5	12.8	-90.42	204.6	-926.5	659.9	636.8	23.09	28.574		
6,000.0	5,980.6	6,084.1	5,980.6	10.6	12.9	-90.42	204.6	-926.5	659.9	636.7	23.24	28.392		
6,100.0	6,080.6	6,184.1	6,080.6	10.7	12.9	-90.42	204.6	-926.5	659.9	636.5	23.39	28.213		
6,200.0	6,180.6	6,284.1	6,180.6	10.8	13.0	-90.42	204.6	-926.5	659.9	636.4	23.54	28.035		
6,300.0	6,280.6	6,384.1	6,280.6	10.9	13.0	-90.42	204.6	-926.5	659.9	636.2	23.69	27.859		
6,400.0	6,380.6	6,484.1	6,380.6	11.0	13.1	-90.42	204.6	-926.5	659.9	636.1	23.84	27.686		
6,500.0	6,480.6	6,584.1	6,480.6	11.1	13.2	-90.42	204.6	-926.5	659.9	635.9	23.98	27.514		
6,600.0	6,580.6	6,684.1	6,580.6	11.2	13.2	-90.42	204.6	-926.5	659.9	635.8	24.13	27.344		
6,700.0	6,680.6	6,784.1	6,680.6	11.2	13.3	-90.42	204.6	-926.5	659.9	635.6	24.28	27.177		
6,800.0	6,780.6	6,884.1	6,780.6	11.3	13.4	-90.42	204.6	-926.5	659.9	635.5	24.43	27.011		
6,900.0	6,880.6	6,984.1	6,880.6	11.4	13.4	-90.42	204.6	-926.5	659.9	635.3	24.58	26.847		
7,000.0	6,980.6	7,084.1	6,980.6	11.5	13.5	-90.42	204.6	-926.5	659.9	635.2	24.73	26.684		
7,100.0	7,080.6	7,184.1	7,080.6	11.6	13.6	-90.42	204.6	-926.5	659.9	635.0	24.88	26.524		
7,200.0	7,180.6	7,284.1	7,180.6	11.7	13.6	-90.42	204.6	-926.5	659.9	634.9	25.03	26.365		
7,300.0	7,280.6	7,384.1	7,280.6	11.8	13.7	-90.42	204.6	-926.5	659.9	634.7	25.18	26.208		
7,400.0	7,380.6	7,484.1	7,380.6	11.8	13.8	-90.42	204.6	-926.5	659.9	634.6	25.33	26.053		
7,500.0	7,480.6	7,584.1	7,480.6	11.9	13.8	-90.42	204.6	-926.5	659.9	634.4	25.48	25.899		
7,600.0	7,580.6	7,684.1	7,580.6	12.0	13.9	-90.42	204.6	-926.5	659.9	634.3	25.63	25.747		
7,700.0	7,680.6	7,784.1	7,680.6	12.1	14.0	-90.42	204.6	-926.5	659.9	634.1	25.78	25.597		
7,800.0	7,780.6	7,884.1	7,780.6	12.2	14.0	-90.42	204.6	-926.5	659.9	634.0	25.93	25.448		
7,900.0	7,880.6	7,984.1	7,880.6	12.3	14.1	-90.42	204.6	-926.5	659.9	633.8	26.08	25.301		
8,000.0	7,980.6	8,084.1	7,980.6	12.4	14.2	-90.42	204.6	-926.5	659.9	633.7	26.23	25.156		
8,100.0	8,080.6	8,184.1	8,080.6	12.4	14.2	-90.42	204.6	-926.5	659.9	633.5	26.38	25.012		
8,200.0	8,180.6	8,284.1	8,180.6	12.5	14.3	-90.42	204.6	-926.5	659.9	633.4	26.54	24.869		
8,300.0	8,280.6	8,384.1	8,280.6	12.6	14.4	-90.42	204.6	-926.5	659.9	633.2	26.69	24.728		
8,400.0	8,380.6	8,484.1	8,380.6	12.7	14.4	-90.42	204.6	-926.5	659.9	633.1	26.84	24.589		
8,500.0	8,480.6	8,584.1	8,480.6	12.8	14.5	-90.42	204.6	-926.5	659.9	632.9	26.99	24.451		
8,600.0	8,580.6	8,684.1	8,580.6	12.9	14.6	-90.42	204.6	-926.5	659.9	632.8	27.14	24.315		
8,700.0	8,680.6	8,784.1	8,680.6	12.9	14.6	-90.42	204.6	-926.5	659.9	632.6	27.29	24.179		
8,800.0	8,780.6	8,884.1	8,780.6	13.0	14.7	-90.42	204.6	-926.5	659.9	632.5	27.44	24.046		
8,900.0	8,880.6	8,984.1	8,880.6	13.1	14.8	-90.42	204.6	-926.5	659.9	632.3	27.60	23.913		
9,000.0	8,980.6	9,084.1	8,980.6	13.2	14.9	-90.42	204.6	-926.5	659.9	632.2	27.75	23.782		
9,100.0	9,080.6	9,184.1	9,080.6	13.3	14.9	-90.42	204.6	-926.5	659.9	632.0	27.90	23.653		
9,200.0	9,180.6	9,284.1	9,180.6	13.4	15.0	-90.42	204.6	-926.5	659.9	631.9	28.05	23.524		
9,300.0	9,280.6	9,384.1	9,280.6	13.5	15.1	-90.42	204.6	-926.5	659.9	631.7	28.20	23.397		
9,400.0	9,380.6	9,484.1	9,380.6	13.5	15.1	-90.42	204.6	-926.5	659.9	631.6	28.36	23.272		
9,500.0	9,480.6	9,584.1	9,480.6	13.6	15.2	-90.42	204.6	-926.5	659.9	631.4	28.51	23.147		
9,600.0	9,580.6	9,684.1	9,580.6	13.7	15.3	-90.42	204.6	-926.5	659.9	631.3	28.66	23.024		
9,700.0	9,680.6	9,784.1	9,680.6	13.8	15.3	-90.42	204.6	-926.5	659.9	631.1	28.81	22.902		
9,800.0	9,780.6	9,884.1	9,780.6	13.9	15.4	-90.42	204.6	-926.5	659.9	630.9	28.97	22.781		

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 704H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 11999-r.5 MWD+IFR1+SAG+FDIR														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				
9,900.0	9,880.6	9,984.1	9,880.6	14.0	15.5	-90.42	204.6	-926.5	659.9	630.8	29.12	22.662					
10,000.0	9,980.6	10,084.1	9,980.6	14.0	15.6	-90.42	204.6	-926.5	659.9	630.6	29.27	22.543					
10,100.0	10,080.6	10,184.1	10,080.6	14.1	15.6	-90.42	204.6	-926.5	659.9	630.5	29.43	22.426					
10,200.0	10,180.6	10,284.1	10,180.6	14.2	15.7	-90.42	204.6	-926.5	659.9	630.3	29.58	22.310					
10,300.0	10,280.6	10,384.1	10,280.6	14.3	15.8	-90.42	204.6	-926.5	659.9	630.2	29.73	22.195					
10,400.0	10,380.6	10,484.1	10,380.6	14.4	15.8	-90.42	204.6	-926.5	659.9	630.0	29.89	22.081					
10,500.0	10,480.6	10,584.1	10,480.6	14.5	15.9	-90.42	204.6	-926.5	659.9	629.9	30.04	21.968					
10,600.0	10,580.6	10,684.1	10,580.6	14.6	16.0	-90.42	204.6	-926.5	659.9	629.7	30.19	21.857					
10,700.0	10,680.6	10,784.1	10,680.6	14.6	16.0	-90.42	204.6	-926.5	659.9	629.6	30.35	21.746					
10,800.0	10,780.6	10,884.1	10,780.6	14.7	16.1	-90.42	204.6	-926.5	659.9	629.4	30.50	21.637					
10,900.0	10,880.6	10,984.1	10,880.6	14.8	16.2	-90.42	204.6	-926.5	659.9	629.3	30.65	21.528					
11,000.0	10,980.6	11,084.1	10,980.6	14.9	16.3	-90.42	204.6	-926.5	659.9	629.1	30.81	21.421					
11,100.0	11,080.6	11,184.1	11,080.6	15.0	16.3	-90.42	204.6	-926.5	659.9	629.0	30.96	21.314					
11,200.0	11,180.6	11,284.1	11,180.6	15.1	16.4	-90.42	204.6	-926.5	659.9	628.8	31.12	21.209					
11,300.0	11,280.6	11,384.1	11,280.6	15.1	16.5	-90.42	204.6	-926.5	659.9	628.6	31.27	21.104					
11,400.0	11,380.6	11,484.1	11,380.6	15.2	16.6	-90.42	204.6	-926.5	659.9	628.5	31.42	21.001					
11,500.0	11,480.6	11,584.1	11,480.6	15.3	16.6	-90.42	204.6	-926.5	659.9	628.3	31.58	20.898					
11,600.0	11,580.6	11,684.1	11,580.6	15.4	16.7	-90.42	204.6	-926.5	659.9	628.2	31.73	20.797					
11,700.0	11,680.6	11,784.1	11,680.6	15.5	16.8	-90.42	204.6	-926.5	659.9	628.0	31.89	20.696					
11,800.0	11,780.6	11,884.1	11,780.6	15.6	16.8	-90.42	204.6	-926.5	659.9	627.9	32.04	20.597					
11,900.0	11,880.6	11,984.1	11,880.6	15.6	16.9	-90.42	204.6	-926.5	659.9	627.7	32.18	20.506					
11,902.6	11,883.2	11,986.7	11,883.2	15.6	16.9	-90.42	204.6	-926.5	659.9	627.7	32.18	20.504					
11,926.0	11,906.5	12,010.1	11,906.5	15.7	16.9	-90.43	204.5	-926.5	659.9	627.7	32.20	20.495					
11,950.0	11,930.6	12,034.1	11,930.5	15.7	16.9	89.90	203.3	-926.5	659.9	628.0	31.94	20.660					
11,975.0	11,955.5	12,059.0	11,955.3	15.7	16.9	89.85	200.8	-926.5	659.9	628.0	31.94	20.659					
12,000.0	11,980.3	12,083.9	11,979.9	15.7	16.9	89.80	197.1	-926.5	659.9	628.0	31.94	20.658					
12,025.0	12,004.9	12,108.7	12,004.2	15.7	16.9	89.75	192.1	-926.4	659.9	628.0	31.95	20.658					
12,050.0	12,029.2	12,133.6	12,028.2	15.7	16.9	89.70	185.8	-926.4	659.9	628.0	31.95	20.658					
12,075.0	12,053.2	12,158.4	12,051.9	15.7	17.0	89.66	178.3	-926.3	659.9	628.0	31.95	20.658					
12,100.0	12,076.7	12,183.1	12,075.0	15.7	17.0	89.61	169.6	-926.3	659.9	628.0	31.94	20.659					
12,125.0	12,099.9	12,207.9	12,097.7	15.7	17.0	89.56	159.7	-926.2	659.9	628.0	31.94	20.659					
12,150.0	12,122.4	12,232.6	12,119.8	15.7	17.0	89.52	148.6	-926.1	659.9	628.0	31.94	20.659					
12,175.0	12,144.4	12,257.3	12,141.3	15.8	17.0	89.48	136.5	-926.1	659.9	628.0	31.95	20.658					
12,200.0	12,165.8	12,282.0	12,162.2	15.8	17.0	89.44	123.2	-926.0	659.9	628.0	31.95	20.657					
12,225.0	12,186.4	12,306.6	12,182.2	15.8	17.1	89.40	108.9	-925.9	660.0	628.0	31.95	20.654					
12,250.0	12,206.3	12,331.3	12,201.5	15.8	17.1	89.36	93.7	-925.8	660.0	628.0	31.96	20.650					
12,275.0	12,225.3	12,355.9	12,220.0	15.8	17.1	89.32	77.4	-925.7	660.0	628.0	31.97	20.645					
12,300.0	12,243.5	12,380.5	12,237.6	15.8	17.1	89.29	60.2	-925.6	660.0	628.0	31.98	20.637					
12,325.0	12,260.7	12,405.0	12,254.3	15.9	17.1	89.26	42.2	-925.4	660.0	628.0	32.00	20.627					
12,350.0	12,277.0	12,429.6	12,270.0	15.9	17.2	89.23	23.4	-925.3	660.0	628.0	32.02	20.614					
12,375.0	12,292.2	12,454.1	12,284.7	15.9	17.2	89.20	3.7	-925.2	660.0	627.9	32.04	20.599					
12,400.0	12,306.4	12,478.6	12,298.4	15.9	17.2	89.17	-16.6	-925.1	660.0	627.9	32.07	20.581					
12,425.0	12,319.5	12,503.1	12,311.0	15.9	17.3	89.15	-37.6	-924.9	660.0	627.9	32.10	20.559					
12,450.0	12,331.5	12,527.6	12,322.5	16.0	17.3	89.13	-59.2	-924.8	660.0	627.9	32.14	20.534					
12,475.0	12,342.3	12,552.1	12,332.9	16.0	17.3	89.11	-81.4	-924.6	660.0	627.8	32.19	20.505					
12,500.0	12,351.9	12,576.6	12,342.2	16.0	17.4	89.09	-104.0	-924.5	660.0	627.8	32.24	20.472					
12,525.0	12,360.3	12,601.0	12,350.2	16.0	17.4	89.08	-127.1	-924.3	660.0	627.7	32.30	20.436					
12,550.0	12,367.5	12,625.5	12,357.1	16.0	17.4	89.07	-150.6	-924.2	660.0	627.6	32.36	20.397					
12,575.0	12,373.4	12,650.0	12,362.8	16.1	17.5	89.06	-174.5	-924.0	660.0	627.6	32.43	20.354					
12,576.1	12,373.6	12,651.0	12,363.0	16.1	17.5	89.06	-175.5	-924.0	660.0	627.6	32.43	20.352					
12,600.0	12,378.0	12,674.4	12,367.2	16.1	17.5	89.05	-198.4	-923.9	660.0	627.5	32.50	20.307					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 704H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 11999-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
12,625.0	12,381.3	12,698.8	12,370.4	16.1	17.5	89.05	-222.6	-923.7	660.0	627.4	32.58	20.258					
12,650.0	12,383.3	12,723.2	12,372.3	16.1	17.6	89.04	-247.0	-923.6	660.0	627.3	32.66	20.205					
12,676.0	12,384.0	12,748.6	12,373.0	16.2	17.6	89.05	-272.4	-923.4	660.0	627.3	32.76	20.148					
12,677.0	12,384.0	12,749.7	12,373.0	16.2	17.6	89.05	-273.4	-923.4	660.0	627.2	32.76	20.146					
12,700.0	12,384.0	12,772.6	12,373.0	16.2	17.7	89.05	-296.4	-923.2	660.0	627.2	32.85	20.092					
12,800.0	12,384.0	12,872.6	12,373.0	16.3	17.9	89.05	-396.4	-922.6	660.0	626.7	33.31	19.815					
12,900.0	12,384.0	12,972.6	12,373.0	16.5	18.1	89.05	-496.4	-921.9	660.0	626.2	33.85	19.498					
13,000.0	12,384.0	13,072.6	12,373.0	16.8	18.4	89.05	-596.4	-921.3	660.0	625.5	34.47	19.149					
13,100.0	12,384.0	13,172.6	12,373.0	17.1	18.7	89.05	-696.4	-920.6	660.0	624.9	35.16	18.774					
13,200.0	12,384.0	13,272.6	12,373.0	17.5	19.1	89.05	-796.4	-920.0	660.0	624.1	35.91	18.377					
13,300.0	12,384.0	13,372.6	12,373.0	17.9	19.5	89.05	-896.4	-919.3	660.0	623.3	36.74	17.966					
13,400.0	12,384.0	13,472.6	12,373.0	18.3	19.9	89.05	-996.4	-918.7	660.0	622.4	37.62	17.545					
13,500.0	12,384.0	13,572.6	12,373.0	18.8	20.3	89.05	-1,096.4	-918.0	660.0	621.5	38.56	17.118					
13,600.0	12,384.0	13,672.6	12,373.0	19.3	20.8	89.05	-1,196.4	-917.4	660.0	620.5	39.54	16.690					
13,700.0	12,384.0	13,772.6	12,373.0	19.8	21.3	89.05	-1,296.4	-916.7	660.0	619.4	40.58	16.264					
13,800.0	12,384.0	13,872.6	12,373.0	20.4	21.8	89.05	-1,396.4	-916.1	660.0	618.3	41.66	15.842					
13,900.0	12,384.0	13,972.6	12,373.0	20.9	22.3	89.05	-1,496.4	-915.4	660.0	617.2	42.78	15.427					
14,000.0	12,384.0	14,072.6	12,373.0	21.5	22.9	89.05	-1,596.4	-914.8	660.0	616.1	43.94	15.020					
14,100.0	12,384.0	14,172.6	12,373.0	22.2	23.5	89.05	-1,696.3	-914.1	660.0	614.9	45.14	14.622					
14,200.0	12,384.0	14,272.6	12,373.0	22.8	24.1	89.05	-1,796.3	-913.5	660.0	613.6	46.36	14.236					
14,300.0	12,384.0	14,372.6	12,373.0	23.4	24.7	89.05	-1,896.3	-912.8	660.0	612.4	47.62	13.860					
14,400.0	12,384.0	14,472.6	12,373.0	24.1	25.3	89.05	-1,996.3	-912.2	660.0	611.1	48.90	13.497					
14,500.0	12,384.0	14,572.6	12,373.0	24.8	25.9	89.05	-2,096.3	-911.5	660.0	609.8	50.21	13.145					
14,600.0	12,384.0	14,672.6	12,373.0	25.4	26.6	89.05	-2,196.3	-910.9	660.0	608.5	51.54	12.806					
14,700.0	12,384.0	14,772.6	12,373.0	26.1	27.3	89.05	-2,296.3	-910.2	660.0	607.1	52.89	12.478					
14,800.0	12,384.0	14,872.6	12,373.0	26.8	27.9	89.05	-2,396.3	-909.6	660.0	605.7	54.27	12.163					
14,900.0	12,384.0	14,972.6	12,373.0	27.6	28.6	89.05	-2,496.3	-908.9	660.0	604.4	55.66	11.859					
15,000.0	12,384.0	15,072.6	12,373.0	28.3	29.3	89.05	-2,596.3	-908.3	660.0	602.9	57.06	11.566					
15,100.0	12,384.0	15,172.6	12,373.0	29.0	30.0	89.05	-2,696.3	-907.6	660.0	601.5	58.49	11.285					
15,200.0	12,384.0	15,272.6	12,373.0	29.8	30.7	89.05	-2,796.3	-907.0	660.0	600.1	59.92	11.014					
15,300.0	12,384.0	15,372.6	12,373.0	30.5	31.5	89.05	-2,896.3	-906.3	660.0	598.6	61.38	10.754					
15,400.0	12,384.0	15,472.6	12,373.0	31.2	32.2	89.05	-2,996.3	-905.7	660.0	597.2	62.84	10.503					
15,500.0	12,384.0	15,572.6	12,373.0	32.0	32.9	89.05	-3,096.3	-905.0	660.0	595.7	64.31	10.262					
15,600.0	12,384.0	15,672.6	12,373.0	32.8	33.7	89.05	-3,196.3	-904.4	660.0	594.2	65.80	10.030					
15,700.0	12,384.0	15,772.6	12,373.0	33.5	34.4	89.05	-3,296.3	-903.7	660.0	592.7	67.30	9.807					
15,800.0	12,384.0	15,872.6	12,373.0	34.3	35.2	89.05	-3,396.3	-903.1	660.0	591.2	68.80	9.593					
15,900.0	12,384.0	15,972.6	12,373.0	35.1	35.9	89.05	-3,496.3	-902.4	660.0	589.7	70.32	9.386					
16,000.0	12,384.0	16,072.6	12,373.0	35.9	36.7	89.05	-3,596.3	-901.8	660.0	588.2	71.84	9.187					
16,100.0	12,384.0	16,172.6	12,373.0	36.6	37.4	89.05	-3,696.3	-901.1	660.0	586.6	73.38	8.995					
16,200.0	12,384.0	16,272.6	12,373.0	37.4	38.2	89.05	-3,796.3	-900.5	660.0	585.1	74.91	8.810					
16,300.0	12,384.0	16,372.6	12,373.0	38.2	39.0	89.05	-3,896.3	-899.8	660.0	583.6	76.46	8.632					
16,400.0	12,384.0	16,472.6	12,373.0	39.0	39.8	89.05	-3,996.3	-899.2	660.0	582.0	78.01	8.460					
16,500.0	12,384.0	16,572.6	12,373.0	39.8	40.5	89.05	-4,096.3	-898.5	660.0	580.4	79.57	8.295					
16,600.0	12,384.0	16,672.6	12,373.0	40.6	41.3	89.05	-4,196.3	-897.9	660.0	578.9	81.14	8.135					
16,700.0	12,384.0	16,772.6	12,373.0	41.4	42.1	89.05	-4,296.3	-897.2	660.0	577.3	82.70	7.980					
16,800.0	12,384.0	16,872.6	12,373.0	42.2	42.9	89.05	-4,396.3	-896.6	660.0	575.7	84.28	7.831					
16,900.0	12,384.0	16,972.6	12,373.0	43.0	43.7	89.05	-4,496.3	-895.9	660.0	574.2	85.86	7.687					
17,000.0	12,384.0	17,072.6	12,373.0	43.8	44.5	89.05	-4,596.3	-895.3	660.0	572.6	87.44	7.548					
17,100.0	12,384.0	17,172.6	12,373.0	44.6	45.3	89.05	-4,696.3	-894.6	660.0	571.0	89.03	7.413					
17,200.0	12,384.0	17,272.6	12,373.0	45.4	46.1	89.05	-4,796.3	-894.0	660.0	569.4	90.62	7.283					
17,300.0	12,384.0	17,372.6	12,373.0	46.3	46.9	89.05	-4,896.3	-893.3	660.0	567.8	92.22	7.157					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 704H - OWB - PWP1														Offset Site Error:	0.0 usft		
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 11999-r.5 MWD+IFR1+SAG+FDIR														Rule Assigned:		Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning				
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
17,400.0	12,384.0	17,472.6	12,373.0	47.1	47.7	89.05	-4,996.3	-892.7	660.0	566.2	93.82	7.035					
17,500.0	12,384.0	17,572.6	12,373.0	47.9	48.5	89.05	-5,096.3	-892.0	660.0	564.6	95.42	6.917					
17,600.0	12,384.0	17,672.6	12,373.0	48.7	49.3	89.05	-5,196.3	-891.4	660.0	563.0	97.03	6.802					
17,700.0	12,384.0	17,772.6	12,373.0	49.5	50.1	89.05	-5,296.3	-890.7	660.0	561.4	98.64	6.691					
17,800.0	12,384.0	17,872.6	12,373.0	50.3	50.9	89.05	-5,396.3	-890.1	660.0	559.8	100.25	6.583					
17,900.0	12,384.0	17,972.6	12,373.0	51.2	51.7	89.05	-5,496.3	-889.4	660.0	558.1	101.87	6.479					
18,000.0	12,384.0	18,072.6	12,373.0	52.0	52.6	89.05	-5,596.3	-888.8	660.0	556.5	103.49	6.378					
18,100.0	12,384.0	18,172.6	12,373.0	52.8	53.4	89.05	-5,696.3	-888.1	660.0	554.9	105.11	6.279					
18,200.0	12,384.0	18,272.6	12,373.0	53.6	54.2	89.05	-5,796.3	-887.5	660.0	553.3	106.73	6.184					
18,300.0	12,384.0	18,372.6	12,373.0	54.5	55.0	89.05	-5,896.3	-886.8	660.0	551.7	108.36	6.091					
18,400.0	12,384.0	18,472.6	12,373.0	55.3	55.8	89.05	-5,996.3	-886.2	660.0	550.0	109.99	6.001					
18,500.0	12,384.0	18,572.6	12,373.0	56.1	56.7	89.05	-6,096.3	-885.5	660.0	548.4	111.62	5.913					
18,600.0	12,384.0	18,672.6	12,373.0	57.0	57.5	89.05	-6,196.3	-884.9	660.0	546.8	113.25	5.828					
18,700.0	12,384.0	18,772.6	12,373.0	57.8	58.3	89.05	-6,296.3	-884.2	660.0	545.1	114.89	5.745					
18,800.0	12,384.0	18,872.6	12,373.0	58.6	59.1	89.05	-6,396.3	-883.6	660.0	543.5	116.52	5.664					
18,900.0	12,384.0	18,972.6	12,373.0	59.5	60.0	89.05	-6,496.2	-882.9	660.0	541.9	118.16	5.586					
19,000.0	12,384.0	19,072.6	12,373.0	60.3	60.8	89.05	-6,596.2	-882.3	660.0	540.2	119.80	5.509					
19,100.0	12,384.0	19,172.6	12,373.0	61.1	61.6	89.05	-6,696.2	-881.6	660.0	538.6	121.44	5.435					
19,200.0	12,384.0	19,272.6	12,373.0	62.0	62.4	89.05	-6,796.2	-881.0	660.0	536.9	123.09	5.362					
19,300.0	12,384.0	19,372.6	12,373.0	62.8	63.3	89.05	-6,896.2	-880.3	660.0	535.3	124.73	5.291					
19,400.0	12,384.0	19,472.6	12,373.0	63.6	64.1	89.05	-6,996.2	-879.7	660.0	533.6	126.38	5.222					
19,500.0	12,384.0	19,572.6	12,373.0	64.5	64.9	89.05	-7,096.2	-879.0	660.0	532.0	128.03	5.155					
19,600.0	12,384.0	19,672.6	12,373.0	65.3	65.8	89.05	-7,196.2	-878.4	660.0	530.3	129.68	5.090					
19,700.0	12,384.0	19,772.6	12,373.0	66.2	66.6	89.05	-7,296.2	-877.7	660.0	528.7	131.33	5.026					
19,800.0	12,384.0	19,872.6	12,373.0	67.0	67.4	89.05	-7,396.2	-877.1	660.0	527.0	132.98	4.963					
19,900.0	12,384.0	19,972.6	12,373.0	67.8	68.3	89.05	-7,496.2	-876.4	660.0	525.4	134.63	4.902					
20,000.0	12,384.0	20,072.6	12,373.0	68.7	69.1	89.05	-7,596.2	-875.8	660.0	523.7	136.29	4.843					
20,100.0	12,384.0	20,172.6	12,373.0	69.5	69.9	89.05	-7,696.2	-875.1	660.0	522.1	137.94	4.785					
20,200.0	12,384.0	20,272.6	12,373.0	70.4	70.8	89.05	-7,796.2	-874.5	660.0	520.4	139.60	4.728					
20,300.0	12,384.0	20,372.6	12,373.0	71.2	71.6	89.05	-7,896.2	-873.8	660.0	518.8	141.26	4.672					
20,400.0	12,384.0	20,472.6	12,373.0	72.0	72.5	89.05	-7,996.2	-873.2	660.0	517.1	142.92	4.618					
20,500.0	12,384.0	20,572.6	12,373.0	72.9	73.3	89.05	-8,096.2	-872.5	660.0	515.4	144.57	4.565					
20,600.0	12,384.0	20,672.6	12,373.0	73.7	74.1	89.05	-8,196.2	-871.9	660.0	513.8	146.24	4.513					
20,700.0	12,384.0	20,772.6	12,373.0	74.6	75.0	89.05	-8,296.2	-871.2	660.0	512.1	147.90	4.463					
20,800.0	12,384.0	20,872.6	12,373.0	75.4	75.8	89.05	-8,396.2	-870.6	660.0	510.5	149.56	4.413					
20,900.0	12,384.0	20,972.6	12,373.0	76.3	76.7	89.05	-8,496.2	-869.9	660.0	508.8	151.22	4.365					
21,000.0	12,384.0	21,072.6	12,373.0	77.1	77.5	89.05	-8,596.2	-869.3	660.0	507.1	152.89	4.317					
21,100.0	12,384.0	21,172.6	12,373.0	78.0	78.3	89.05	-8,696.2	-868.6	660.0	505.5	154.55	4.271					
21,200.0	12,384.0	21,272.6	12,373.0	78.8	79.2	89.05	-8,796.2	-868.0	660.0	503.8	156.22	4.225					
21,300.0	12,384.0	21,372.6	12,373.0	79.6	80.0	89.05	-8,896.2	-867.3	660.0	502.1	157.88	4.180					
21,400.0	12,384.0	21,472.6	12,373.0	80.5	80.9	89.05	-8,996.2	-866.7	660.0	500.5	159.55	4.137					
21,500.0	12,384.0	21,572.6	12,373.0	81.3	81.7	89.05	-9,096.2	-866.0	660.0	498.8	161.22	4.094					
21,600.0	12,384.0	21,672.6	12,373.0	82.2	82.5	89.05	-9,196.2	-865.4	660.0	497.1	162.89	4.052					
21,700.0	12,384.0	21,772.6	12,373.0	83.0	83.4	89.05	-9,296.2	-864.7	660.0	495.5	164.56	4.011					
21,800.0	12,384.0	21,872.6	12,373.0	83.9	84.2	89.05	-9,396.2	-864.1	660.0	493.8	166.23	3.971					
21,900.0	12,384.0	21,972.6	12,373.0	84.7	85.1	89.05	-9,496.2	-863.4	660.0	492.1	167.90	3.931					
22,000.0	12,384.0	22,072.6	12,373.0	85.6	85.9	89.05	-9,596.2	-862.8	660.0	490.5	169.57	3.892					
22,100.0	12,384.0	22,172.6	12,373.0	86.4	86.8	89.05	-9,696.2	-862.1	660.0	488.8	171.24	3.854					
22,200.0	12,384.0	22,272.6	12,373.0	87.3	87.6	89.05	-9,796.2	-861.5	660.0	487.1	172.91	3.817					
22,300.0	12,384.0	22,372.6	12,373.0	88.1	88.5	89.05	-9,896.2	-860.8	660.0	485.4	174.58	3.781					
22,400.0	12,384.0	22,472.6	12,373.0	89.0	89.3	89.05	-9,996.2	-860.2	660.0	483.8	176.26	3.745					

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - AVION FEDERAL COM 704H - OWB - PWP1													Offset Site Error: 0.0 usft
Survey Program: 0-r.5 SDI_KPR_WL_NS-CT, 1500-r.5 MWD+IFR1+SAG+FDIR, 11999-r.5 MWD+IFR1+SAG+FDIR													Offset Well Error: 0.0 usft
Reference:													
Offset				Semi Major Axis			Offset Wellbore Centre			Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	No-Go Distance (usft)	Separation Factor	Warning
22,500.0	12,384.0	22,572.6	12,373.0	89.8	90.2	89.05	-10,096.2	-859.5	660.0	482.1	177.93	3.709	
22,600.0	12,384.0	22,672.6	12,373.0	90.7	91.0	89.05	-10,196.2	-858.9	660.0	480.4	179.60	3.675	
22,608.9	12,384.0	22,681.6	12,373.0	90.8	91.1	89.05	-10,205.1	-858.8	660.0	480.3	179.75	3.672	
22,658.9	12,384.0	22,731.6	12,373.0	91.2	91.5	89.05	-10,255.1	-858.5	660.0	479.4	180.59	3.655 SF	

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

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: AVION FEDERAL COM PROJECT - GRUMPY CAT 15 FEDERAL 213H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 72-MWD - OWSG R1										Rule Assigned:		Offset Well Error:		3.0 usft
Measured Reference		Measured Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		No-Go Distance (usft)	Separation Factor	Warning	
Depth (usft)	Vertical Depth (usft)	Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
9,800.0	9,780.6	15,671.0	10,705.0	13.9	93.5	-59.56	349.5	-505.1	988.0	915.1	72.84	13.564		
9,900.0	9,880.6	15,671.0	10,705.0	14.0	93.5	-59.56	349.5	-505.1	892.4	818.4	73.97	12.064		
10,000.0	9,980.6	15,671.0	10,705.0	14.0	93.5	-59.56	349.5	-505.1	797.9	722.5	75.48	10.571		
10,100.0	10,080.6	15,671.0	10,705.0	14.1	93.5	-59.56	349.5	-505.1	705.0	627.4	77.56	9.090		
10,200.0	10,180.6	15,671.0	10,705.0	14.2	93.5	-59.56	349.5	-505.1	614.3	533.8	80.50	7.631		
10,300.0	10,280.6	15,671.0	10,705.0	14.3	93.5	-59.56	349.5	-505.1	526.9	442.2	84.75	6.217		
10,400.0	10,380.6	15,671.0	10,705.0	14.4	93.5	-59.56	349.5	-505.1	444.9	353.9	91.00	4.889		
10,500.0	10,480.6	15,671.0	10,705.0	14.5	93.5	-59.56	349.5	-505.1	371.8	271.9	99.94	3.721		
10,600.0	10,580.6	15,671.0	10,705.0	14.6	93.5	-59.56	349.5	-505.1	313.9	202.6	111.30	2.821	Normal Operations	
10,700.0	10,680.6	15,671.0	10,705.0	14.6	93.5	-59.56	349.5	-505.1	280.8	159.5	121.32	2.315	Caution - Monitor Closely	
10,748.5	10,729.1	15,671.0	10,705.0	14.7	93.5	-59.56	349.5	-505.1	276.6	153.0	123.57	2.239	Caution - Monitor Closely, CC, ES, SF	
10,800.0	10,780.6	15,671.0	10,705.0	14.7	93.5	-59.56	349.5	-505.1	281.4	158.1	123.26	2.283	Caution - Monitor Closely	
10,900.0	10,880.6	15,671.0	10,705.0	14.8	93.5	-59.56	349.5	-505.1	315.4	199.0	116.42	2.709	Normal Operations	
11,000.0	10,980.6	15,671.0	10,705.0	14.9	93.5	-59.56	349.5	-505.1	373.9	266.9	106.95	3.496		
11,100.0	11,080.6	15,671.0	10,705.0	15.0	93.5	-59.56	349.5	-505.1	447.3	348.4	98.88	4.524		
11,200.0	11,180.6	15,671.0	10,705.0	15.1	93.5	-59.56	349.5	-505.1	529.5	436.6	92.95	5.697		
11,300.0	11,280.6	15,671.0	10,705.0	15.1	93.5	-59.56	349.5	-505.1	617.0	528.3	88.77	6.951		
11,400.0	11,380.6	15,671.0	10,705.0	15.2	93.5	-59.56	349.5	-505.1	707.8	622.0	85.81	8.248		
11,500.0	11,480.6	15,671.0	10,705.0	15.3	93.5	-59.56	349.5	-505.1	800.8	717.1	83.71	9.566		
11,600.0	11,580.6	15,671.0	10,705.0	15.4	93.5	-59.56	349.5	-505.1	895.3	813.1	82.20	10.892		
11,700.0	11,680.6	15,671.0	10,705.0	15.5	93.5	-59.56	349.5	-505.1	990.9	909.8	81.10	12.218		

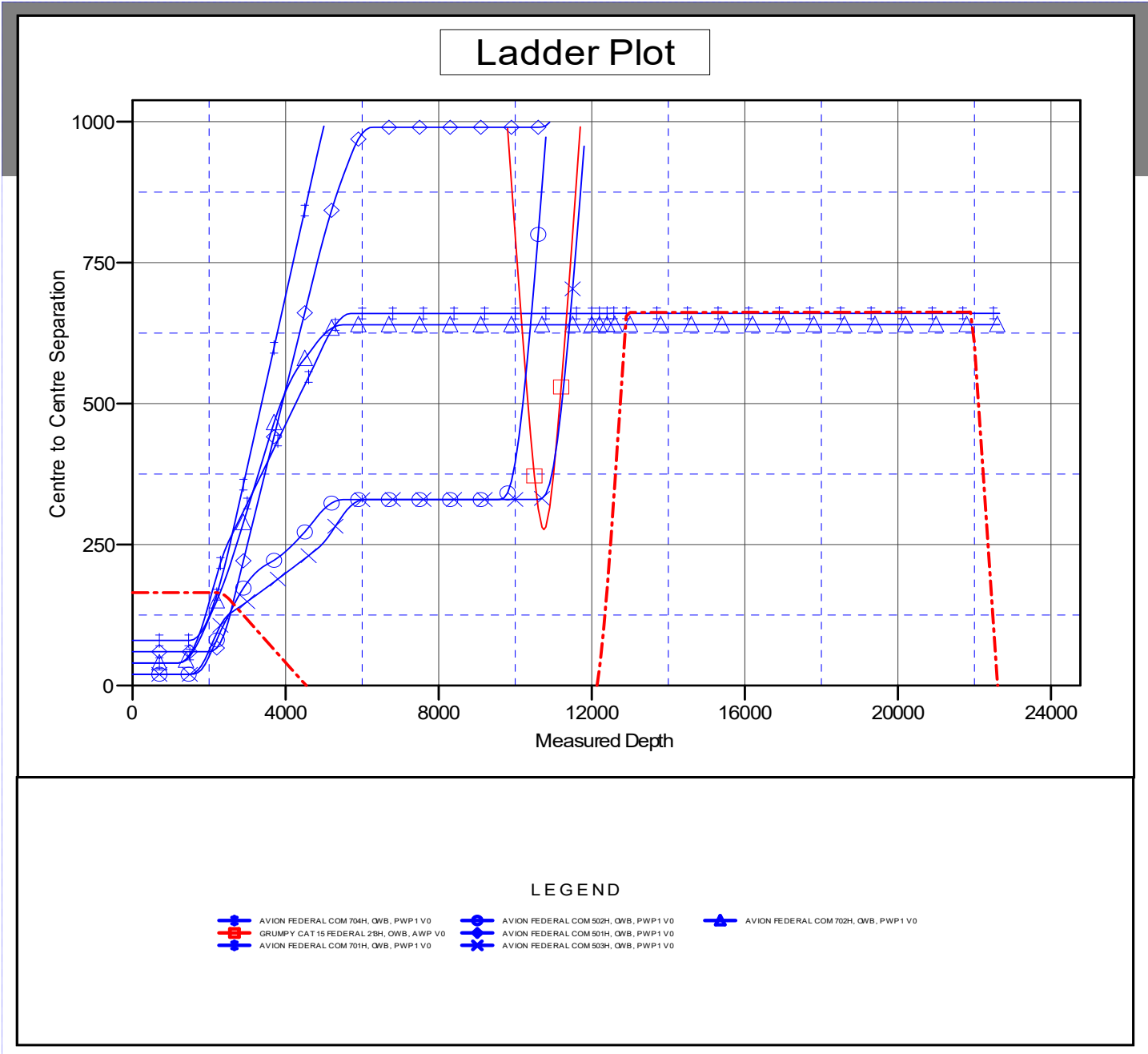
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=27ft @ 3728.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: AVION FEDERAL COM 703H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.36°



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

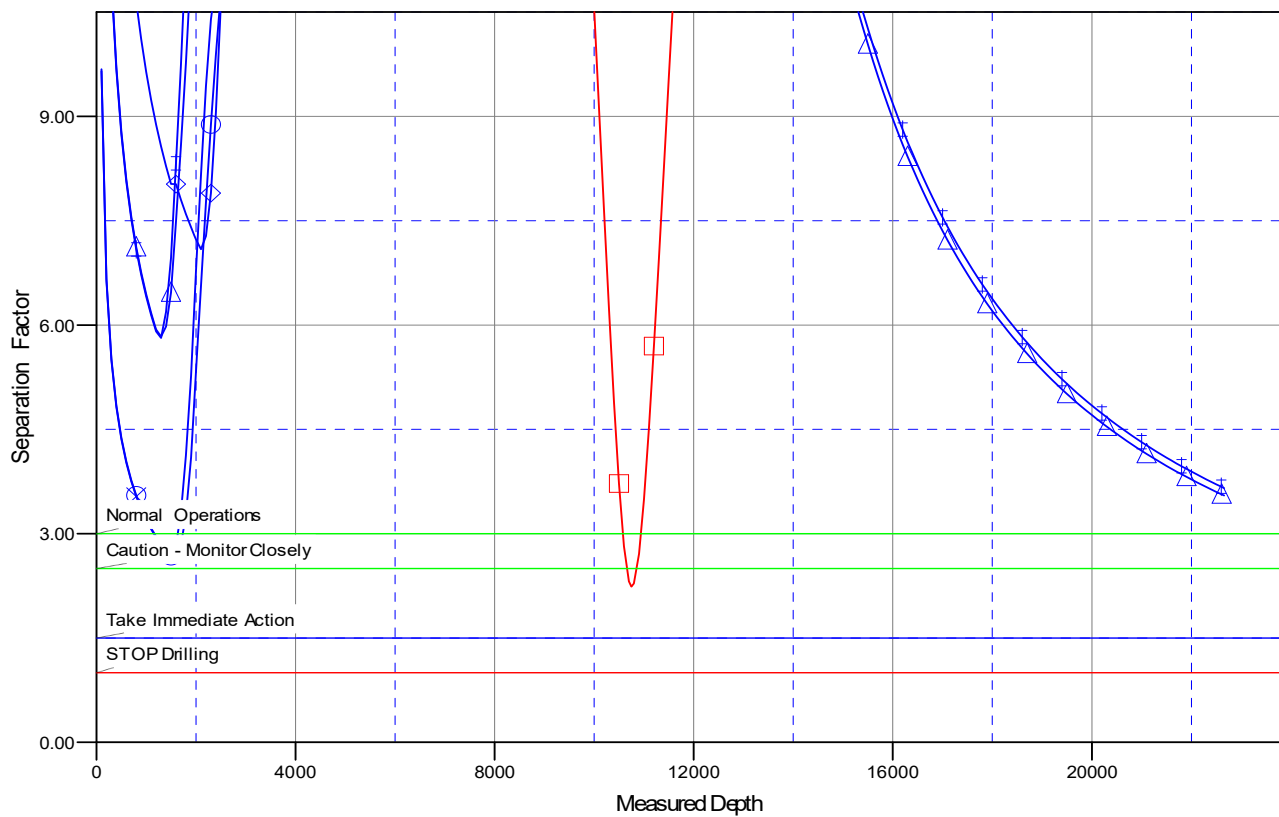
ConocoPhillips Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Project:	LEA COUNTY SOUTHEAST	TVD Reference:	RKB=27ft @ 3728.0usft
Reference Site:	AVION FEDERAL COM PROJECT	MD Reference:	RKB=27ft @ 3728.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 17 Permian Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=27ft @ 3728.0usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: AVION FEDERAL COM 703H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.36°

Separation Factor Plot



LEGEND

- AVION FEDERAL COM 704H, QWB, PWP1 V0
- AVION FEDERAL COM 502H, QWB, PWP1 V0
- ▲ AVION FEDERAL COM 702H, QWB, PWP1 V0
- GRUMPY CAT 15 FEDERAL 28H, QWB, AWP V0
- AVION FEDERAL COM 501H, QWB, PWP1 V0
- ✖ AVION FEDERAL COM 503H, QWB, PWP1 V0
- AVION FEDERAL COM 701H, QWB, PWP1 V0

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

DELAWARE BASIN EAST

**LEA COUNTY SOUTHEAST
AVION FEDERAL COM PROJECT
AVION FEDERAL COM 703H**

OWB

Plan: PWP1

Standard Planning Report

12 January, 2025

ConocoPhillips Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Project	LEA COUNTY SOUTHEAST		
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	AVION FEDERAL COM PROJECT				
Site Position:		Northing:	467,238.17 usft	Latitude:	32° 16' 57.890 N
From:	Map	Easting:	708,776.75 usft	Longitude:	103° 39' 27.986 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well	AVION FEDERAL COM 703H					
Well Position	+N/-S	0.0 usft	Northing:	472,259.90 usft	Latitude:	32° 17' 47.589 N
	+E/-W	0.0 usft	Easting:	708,687.20 usft	Longitude:	103° 39' 28.661 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,701.0 usft
Grid Convergence:	0.36 °					

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2024	7/1/2025	6.28	59.87	47,291.71489981

Design	PWP1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	181.11

Plan Survey Tool Program	Date	1/12/2025		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	2,000.0 PWP1 (OWB)	r.5 SDI_KPR_WL_NS-CT SDI Keeper Wireline Gyrocomp	
2	2,000.0	11,926.0 PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR ISCWSA MWD + IFR1 + SAG	
3	11,926.0	22,658.9 PWP1 (OWB)	r.5 MWD+IFR1+SAG+FDIR ISCWSA MWD + IFR1 + SAG	

ConocoPhillips
 Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,550.1	7.00	308.15	2,549.2	13.2	-16.8	2.00	2.00	0.00	308.15	
4,805.2	7.00	308.15	4,787.5	183.0	-233.0	0.00	0.00	0.00	0.00	
5,505.4	0.00	0.00	5,486.0	209.4	-266.6	1.00	-1.00	0.00	180.00	
11,926.0	0.00	0.00	11,906.5	209.4	-266.6	0.00	0.00	0.00	0.00	
12,676.0	90.00	179.63	12,384.0	-268.1	-263.5	12.00	12.00	23.95	179.63	
22,608.9	90.00	179.63	12,384.0	-10,200.8	-198.9	0.00	0.00	0.00	0.00	
22,658.9	90.00	179.63	12,384.0	-10,250.8	-198.6	0.00	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	2.00	308.15	2,300.0	1.1	-1.4	-1.1	2.00	2.00	0.00
2,400.0	4.00	308.15	2,399.8	4.3	-5.5	-4.2	2.00	2.00	0.00
2,500.0	6.00	308.15	2,499.5	9.7	-12.3	-9.5	2.00	2.00	0.00
2,550.1	7.00	308.15	2,549.2	13.2	-16.8	-12.9	2.00	2.00	0.00
2,600.0	7.00	308.15	2,598.8	17.0	-21.6	-16.5	0.00	0.00	0.00
2,700.0	7.00	308.15	2,698.0	24.5	-31.2	-23.9	0.00	0.00	0.00
2,800.0	7.00	308.15	2,797.3	32.0	-40.8	-31.2	0.00	0.00	0.00
2,900.0	7.00	308.15	2,896.5	39.5	-50.3	-38.6	0.00	0.00	0.00
3,000.0	7.00	308.15	2,995.8	47.1	-59.9	-45.9	0.00	0.00	0.00
3,100.0	7.00	308.15	3,095.0	54.6	-69.5	-53.2	0.00	0.00	0.00
3,200.0	7.00	308.15	3,194.3	62.1	-79.1	-60.6	0.00	0.00	0.00
3,300.0	7.00	308.15	3,293.5	69.7	-88.7	-67.9	0.00	0.00	0.00
3,400.0	7.00	308.15	3,392.8	77.2	-98.3	-75.3	0.00	0.00	0.00
3,500.0	7.00	308.15	3,492.0	84.7	-107.9	-82.6	0.00	0.00	0.00
3,600.0	7.00	308.15	3,591.3	92.3	-117.5	-90.0	0.00	0.00	0.00
3,700.0	7.00	308.15	3,690.6	99.8	-127.0	-97.3	0.00	0.00	0.00
3,800.0	7.00	308.15	3,789.8	107.3	-136.6	-104.6	0.00	0.00	0.00
3,900.0	7.00	308.15	3,889.1	114.8	-146.2	-112.0	0.00	0.00	0.00
4,000.0	7.00	308.15	3,988.3	122.4	-155.8	-119.3	0.00	0.00	0.00
4,100.0	7.00	308.15	4,087.6	129.9	-165.4	-126.7	0.00	0.00	0.00
4,200.0	7.00	308.15	4,186.8	137.4	-175.0	-134.0	0.00	0.00	0.00
4,300.0	7.00	308.15	4,286.1	145.0	-184.6	-141.4	0.00	0.00	0.00
4,400.0	7.00	308.15	4,385.3	152.5	-194.1	-148.7	0.00	0.00	0.00
4,500.0	7.00	308.15	4,484.6	160.0	-203.7	-156.0	0.00	0.00	0.00
4,600.0	7.00	308.15	4,583.8	167.6	-213.3	-163.4	0.00	0.00	0.00
4,700.0	7.00	308.15	4,683.1	175.1	-222.9	-170.7	0.00	0.00	0.00
4,805.2	7.00	308.15	4,787.5	183.0	-233.0	-178.5	0.00	0.00	0.00
4,900.0	6.05	308.15	4,881.7	189.7	-241.5	-184.9	1.00	-1.00	0.00
5,000.0	5.05	308.15	4,981.2	195.6	-249.1	-190.8	1.00	-1.00	0.00
5,100.0	4.05	308.15	5,080.9	200.5	-255.3	-195.6	1.00	-1.00	0.00
5,200.0	3.05	308.15	5,180.7	204.4	-260.2	-199.3	1.00	-1.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,300.0	2.05	308.15	5,280.6	207.1	-263.7	-202.0	1.00	-1.00	0.00	
5,400.0	1.05	308.15	5,380.6	208.8	-265.8	-203.6	1.00	-1.00	0.00	
5,505.4	0.00	0.00	5,486.0	209.4	-266.6	-204.2	1.00	-1.00	0.00	
5,600.0	0.00	0.00	5,580.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,680.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,780.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,880.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,980.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,080.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,180.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,280.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,380.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,480.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,580.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,680.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,780.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,880.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,980.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,080.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,180.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,280.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,380.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,480.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,580.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,680.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,780.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,880.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,980.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,080.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,180.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,280.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,380.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,480.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,580.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,680.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,780.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,880.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,980.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,080.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,180.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,280.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,380.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,480.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,580.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,680.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,780.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,880.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
10,000.0	0.00	0.00	9,980.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,080.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,180.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,280.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,380.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
10,500.0	0.00	0.00	10,480.6	209.4	-266.6	-204.2	0.00	0.00	0.00	
10,600.0	0.00	0.00	10,580.6	209.4	-266.6	-204.2	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.0	0.00	0.00	10,680.6	209.4	-266.6	-204.2	0.00	0.00	0.00
10,800.0	0.00	0.00	10,780.6	209.4	-266.6	-204.2	0.00	0.00	0.00
10,900.0	0.00	0.00	10,880.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,000.0	0.00	0.00	10,980.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,100.0	0.00	0.00	11,080.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,200.0	0.00	0.00	11,180.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,300.0	0.00	0.00	11,280.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,400.0	0.00	0.00	11,380.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,500.0	0.00	0.00	11,480.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,600.0	0.00	0.00	11,580.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,700.0	0.00	0.00	11,680.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,800.0	0.00	0.00	11,780.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,900.0	0.00	0.00	11,880.6	209.4	-266.6	-204.2	0.00	0.00	0.00
11,926.0	0.00	0.00	11,906.5	209.4	-266.6	-204.2	0.00	0.00	0.00
11,950.0	2.88	179.63	11,930.6	208.8	-266.6	-203.6	12.00	12.00	0.00
11,975.0	5.88	179.63	11,955.5	206.9	-266.6	-201.7	12.00	12.00	0.00
12,000.0	8.88	179.63	11,980.3	203.7	-266.6	-198.5	12.00	12.00	0.00
12,025.0	11.88	179.63	12,004.9	199.2	-266.5	-194.0	12.00	12.00	0.00
12,050.0	14.88	179.63	12,029.2	193.4	-266.5	-188.2	12.00	12.00	0.00
12,075.0	17.88	179.63	12,053.2	186.3	-266.4	-181.1	12.00	12.00	0.00
12,100.0	20.88	179.63	12,076.7	178.0	-266.4	-172.8	12.00	12.00	0.00
12,125.0	23.88	179.63	12,099.9	168.5	-266.3	-163.3	12.00	12.00	0.00
12,150.0	26.88	179.63	12,122.4	157.8	-266.3	-152.6	12.00	12.00	0.00
12,175.0	29.88	179.63	12,144.4	145.9	-266.2	-140.7	12.00	12.00	0.00
12,200.0	32.88	179.63	12,165.8	132.9	-266.1	-127.7	12.00	12.00	0.00
12,225.0	35.88	179.63	12,186.4	118.8	-266.0	-113.6	12.00	12.00	0.00
12,250.0	38.88	179.63	12,206.3	103.6	-265.9	-98.4	12.00	12.00	0.00
12,275.0	41.88	179.63	12,225.3	87.4	-265.8	-82.2	12.00	12.00	0.00
12,300.0	44.88	179.63	12,243.5	70.2	-265.7	-65.1	12.00	12.00	0.00
12,325.0	47.88	179.63	12,260.7	52.1	-265.6	-47.0	12.00	12.00	0.00
12,350.0	50.88	179.63	12,277.0	33.2	-265.5	-28.0	12.00	12.00	0.00
12,375.0	53.88	179.63	12,292.2	13.4	-265.3	-8.2	12.00	12.00	0.00
12,400.0	56.88	179.63	12,306.4	-7.2	-265.2	12.3	12.00	12.00	0.00
12,425.0	59.88	179.63	12,319.5	-28.5	-265.1	33.6	12.00	12.00	0.00
12,450.0	62.88	179.63	12,331.5	-50.4	-264.9	55.6	12.00	12.00	0.00
12,475.0	65.88	179.63	12,342.3	-73.0	-264.8	78.1	12.00	12.00	0.00
12,500.0	68.88	179.63	12,351.9	-96.0	-264.6	101.2	12.00	12.00	0.00
12,525.0	71.88	179.63	12,360.3	-119.6	-264.5	124.7	12.00	12.00	0.00
12,550.0	74.88	179.63	12,367.5	-143.5	-264.3	148.6	12.00	12.00	0.00
12,575.0	77.88	179.63	12,373.4	-167.8	-264.1	172.9	12.00	12.00	0.00
12,600.0	80.88	179.63	12,378.0	-192.4	-264.0	197.5	12.00	12.00	0.00
12,625.0	83.88	179.63	12,381.3	-217.2	-263.8	222.3	12.00	12.00	0.00
12,650.0	86.88	179.63	12,383.3	-242.1	-263.7	247.2	12.00	12.00	0.00
12,676.0	90.00	179.63	12,384.0	-268.1	-263.5	273.1	12.00	12.00	0.00
12,700.0	90.00	179.63	12,384.0	-292.1	-263.3	297.1	0.00	0.00	0.00
12,800.0	90.00	179.63	12,384.0	-392.1	-262.7	397.1	0.00	0.00	0.00
12,900.0	90.00	179.63	12,384.0	-492.1	-262.0	497.1	0.00	0.00	0.00
13,000.0	90.00	179.63	12,384.0	-592.1	-261.4	597.0	0.00	0.00	0.00
13,100.0	90.00	179.63	12,384.0	-692.1	-260.7	697.0	0.00	0.00	0.00
13,200.0	90.00	179.63	12,384.0	-792.1	-260.1	797.0	0.00	0.00	0.00
13,300.0	90.00	179.63	12,384.0	-892.1	-259.4	896.9	0.00	0.00	0.00
13,400.0	90.00	179.63	12,384.0	-992.1	-258.8	996.9	0.00	0.00	0.00
13,500.0	90.00	179.63	12,384.0	-1,092.1	-258.1	1,096.9	0.00	0.00	0.00
13,600.0	90.00	179.63	12,384.0	-1,192.1	-257.5	1,196.8	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,700.0	90.00	179.63	12,384.0	-1,292.1	-256.8	1,296.8	0.00	0.00	0.00
13,800.0	90.00	179.63	12,384.0	-1,392.1	-256.2	1,396.8	0.00	0.00	0.00
13,900.0	90.00	179.63	12,384.0	-1,492.1	-255.5	1,496.7	0.00	0.00	0.00
14,000.0	90.00	179.63	12,384.0	-1,592.1	-254.9	1,596.7	0.00	0.00	0.00
14,100.0	90.00	179.63	12,384.0	-1,692.1	-254.2	1,696.7	0.00	0.00	0.00
14,200.0	90.00	179.63	12,384.0	-1,792.1	-253.6	1,796.6	0.00	0.00	0.00
14,300.0	90.00	179.63	12,384.0	-1,892.1	-252.9	1,896.6	0.00	0.00	0.00
14,400.0	90.00	179.63	12,384.0	-1,992.1	-252.3	1,996.6	0.00	0.00	0.00
14,500.0	90.00	179.63	12,384.0	-2,092.1	-251.6	2,096.5	0.00	0.00	0.00
14,600.0	90.00	179.63	12,384.0	-2,192.0	-251.0	2,196.5	0.00	0.00	0.00
14,700.0	90.00	179.63	12,384.0	-2,292.0	-250.3	2,296.5	0.00	0.00	0.00
14,800.0	90.00	179.63	12,384.0	-2,392.0	-249.7	2,396.4	0.00	0.00	0.00
14,900.0	90.00	179.63	12,384.0	-2,492.0	-249.0	2,496.4	0.00	0.00	0.00
15,000.0	90.00	179.63	12,384.0	-2,592.0	-248.4	2,596.4	0.00	0.00	0.00
15,100.0	90.00	179.63	12,384.0	-2,692.0	-247.7	2,696.3	0.00	0.00	0.00
15,200.0	90.00	179.63	12,384.0	-2,792.0	-247.1	2,796.3	0.00	0.00	0.00
15,300.0	90.00	179.63	12,384.0	-2,892.0	-246.4	2,896.3	0.00	0.00	0.00
15,400.0	90.00	179.63	12,384.0	-2,992.0	-245.8	2,996.2	0.00	0.00	0.00
15,500.0	90.00	179.63	12,384.0	-3,092.0	-245.1	3,096.2	0.00	0.00	0.00
15,600.0	90.00	179.63	12,384.0	-3,192.0	-244.5	3,196.2	0.00	0.00	0.00
15,700.0	90.00	179.63	12,384.0	-3,292.0	-243.8	3,296.1	0.00	0.00	0.00
15,800.0	90.00	179.63	12,384.0	-3,392.0	-243.2	3,396.1	0.00	0.00	0.00
15,900.0	90.00	179.63	12,384.0	-3,492.0	-242.5	3,496.1	0.00	0.00	0.00
16,000.0	90.00	179.63	12,384.0	-3,592.0	-241.9	3,596.0	0.00	0.00	0.00
16,100.0	90.00	179.63	12,384.0	-3,692.0	-241.2	3,696.0	0.00	0.00	0.00
16,200.0	90.00	179.63	12,384.0	-3,792.0	-240.6	3,796.0	0.00	0.00	0.00
16,300.0	90.00	179.63	12,384.0	-3,892.0	-239.9	3,895.9	0.00	0.00	0.00
16,400.0	90.00	179.63	12,384.0	-3,992.0	-239.3	3,995.9	0.00	0.00	0.00
16,500.0	90.00	179.63	12,384.0	-4,092.0	-238.6	4,095.9	0.00	0.00	0.00
16,600.0	90.00	179.63	12,384.0	-4,192.0	-238.0	4,195.8	0.00	0.00	0.00
16,700.0	90.00	179.63	12,384.0	-4,292.0	-237.3	4,295.8	0.00	0.00	0.00
16,800.0	90.00	179.63	12,384.0	-4,392.0	-236.7	4,395.8	0.00	0.00	0.00
16,900.0	90.00	179.63	12,384.0	-4,492.0	-236.0	4,495.7	0.00	0.00	0.00
17,000.0	90.00	179.63	12,384.0	-4,592.0	-235.4	4,595.7	0.00	0.00	0.00
17,100.0	90.00	179.63	12,384.0	-4,692.0	-234.7	4,695.7	0.00	0.00	0.00
17,200.0	90.00	179.63	12,384.0	-4,792.0	-234.1	4,795.6	0.00	0.00	0.00
17,300.0	90.00	179.63	12,384.0	-4,892.0	-233.4	4,895.6	0.00	0.00	0.00
17,400.0	90.00	179.63	12,384.0	-4,992.0	-232.8	4,995.6	0.00	0.00	0.00
17,500.0	90.00	179.63	12,384.0	-5,092.0	-232.1	5,095.5	0.00	0.00	0.00
17,600.0	90.00	179.63	12,384.0	-5,192.0	-231.5	5,195.5	0.00	0.00	0.00
17,700.0	90.00	179.63	12,384.0	-5,292.0	-230.8	5,295.5	0.00	0.00	0.00
17,800.0	90.00	179.63	12,384.0	-5,392.0	-230.2	5,395.4	0.00	0.00	0.00
17,900.0	90.00	179.63	12,384.0	-5,492.0	-229.5	5,495.4	0.00	0.00	0.00
18,000.0	90.00	179.63	12,384.0	-5,592.0	-228.9	5,595.4	0.00	0.00	0.00
18,100.0	90.00	179.63	12,384.0	-5,692.0	-228.2	5,695.3	0.00	0.00	0.00
18,200.0	90.00	179.63	12,384.0	-5,792.0	-227.6	5,795.3	0.00	0.00	0.00
18,300.0	90.00	179.63	12,384.0	-5,892.0	-226.9	5,895.3	0.00	0.00	0.00
18,400.0	90.00	179.63	12,384.0	-5,992.0	-226.3	5,995.2	0.00	0.00	0.00
18,500.0	90.00	179.63	12,384.0	-6,092.0	-225.6	6,095.2	0.00	0.00	0.00
18,600.0	90.00	179.63	12,384.0	-6,192.0	-225.0	6,195.2	0.00	0.00	0.00
18,700.0	90.00	179.63	12,384.0	-6,292.0	-224.3	6,295.1	0.00	0.00	0.00
18,800.0	90.00	179.63	12,384.0	-6,392.0	-223.7	6,395.1	0.00	0.00	0.00
18,900.0	90.00	179.63	12,384.0	-6,492.0	-223.0	6,495.1	0.00	0.00	0.00
19,000.0	90.00	179.63	12,384.0	-6,592.0	-222.4	6,595.0	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
19,100.0	90.00	179.63	12,384.0	-6,692.0	-221.7	6,695.0	0.00	0.00	0.00	
19,200.0	90.00	179.63	12,384.0	-6,792.0	-221.1	6,795.0	0.00	0.00	0.00	
19,300.0	90.00	179.63	12,384.0	-6,891.9	-220.4	6,894.9	0.00	0.00	0.00	
19,400.0	90.00	179.63	12,384.0	-6,991.9	-219.8	6,994.9	0.00	0.00	0.00	
19,500.0	90.00	179.63	12,384.0	-7,091.9	-219.1	7,094.9	0.00	0.00	0.00	
19,600.0	90.00	179.63	12,384.0	-7,191.9	-218.5	7,194.8	0.00	0.00	0.00	
19,700.0	90.00	179.63	12,384.0	-7,291.9	-217.8	7,294.8	0.00	0.00	0.00	
19,800.0	90.00	179.63	12,384.0	-7,391.9	-217.2	7,394.8	0.00	0.00	0.00	
19,900.0	90.00	179.63	12,384.0	-7,491.9	-216.5	7,494.7	0.00	0.00	0.00	
20,000.0	90.00	179.63	12,384.0	-7,591.9	-215.9	7,594.7	0.00	0.00	0.00	
20,100.0	90.00	179.63	12,384.0	-7,691.9	-215.2	7,694.7	0.00	0.00	0.00	
20,200.0	90.00	179.63	12,384.0	-7,791.9	-214.6	7,794.6	0.00	0.00	0.00	
20,300.0	90.00	179.63	12,384.0	-7,891.9	-213.9	7,894.6	0.00	0.00	0.00	
20,400.0	90.00	179.63	12,384.0	-7,991.9	-213.3	7,994.6	0.00	0.00	0.00	
20,500.0	90.00	179.63	12,384.0	-8,091.9	-212.6	8,094.5	0.00	0.00	0.00	
20,600.0	90.00	179.63	12,384.0	-8,191.9	-212.0	8,194.5	0.00	0.00	0.00	
20,700.0	90.00	179.63	12,384.0	-8,291.9	-211.3	8,294.5	0.00	0.00	0.00	
20,800.0	90.00	179.63	12,384.0	-8,391.9	-210.7	8,394.4	0.00	0.00	0.00	
20,900.0	90.00	179.63	12,384.0	-8,491.9	-210.0	8,494.4	0.00	0.00	0.00	
21,000.0	90.00	179.63	12,384.0	-8,591.9	-209.4	8,594.4	0.00	0.00	0.00	
21,100.0	90.00	179.63	12,384.0	-8,691.9	-208.7	8,694.3	0.00	0.00	0.00	
21,200.0	90.00	179.63	12,384.0	-8,791.9	-208.1	8,794.3	0.00	0.00	0.00	
21,300.0	90.00	179.63	12,384.0	-8,891.9	-207.4	8,894.3	0.00	0.00	0.00	
21,400.0	90.00	179.63	12,384.0	-8,991.9	-206.8	8,994.2	0.00	0.00	0.00	
21,500.0	90.00	179.63	12,384.0	-9,091.9	-206.1	9,094.2	0.00	0.00	0.00	
21,600.0	90.00	179.63	12,384.0	-9,191.9	-205.5	9,194.2	0.00	0.00	0.00	
21,700.0	90.00	179.63	12,384.0	-9,291.9	-204.8	9,294.1	0.00	0.00	0.00	
21,800.0	90.00	179.63	12,384.0	-9,391.9	-204.2	9,394.1	0.00	0.00	0.00	
21,900.0	90.00	179.63	12,384.0	-9,491.9	-203.5	9,494.1	0.00	0.00	0.00	
22,000.0	90.00	179.63	12,384.0	-9,591.9	-202.9	9,594.0	0.00	0.00	0.00	
22,100.0	90.00	179.63	12,384.0	-9,691.9	-202.2	9,694.0	0.00	0.00	0.00	
22,200.0	90.00	179.63	12,384.0	-9,791.9	-201.6	9,794.0	0.00	0.00	0.00	
22,300.0	90.00	179.63	12,384.0	-9,891.9	-200.9	9,893.9	0.00	0.00	0.00	
22,400.0	90.00	179.63	12,384.0	-9,991.9	-200.3	9,993.9	0.00	0.00	0.00	
22,500.0	90.00	179.63	12,384.0	-10,091.9	-199.6	10,093.9	0.00	0.00	0.00	
22,608.9	90.00	179.63	12,384.0	-10,200.8	-198.9	10,202.7	0.00	0.00	0.00	
22,658.9	90.00	179.63	12,384.0	-10,250.8	-198.6	10,252.7	0.00	0.00	0.00	

ConocoPhillips

Planning Report

Database:	EDT 17 Permian Prod	Local Co-ordinate Reference:	Well AVION FEDERAL COM 703H
Company:	DELAWARE BASIN EAST	TVD Reference:	RKB=27ft @ 3728.0usft
Project:	LEA COUNTY SOUTHEAST	MD Reference:	RKB=27ft @ 3728.0usft
Site:	AVION FEDERAL COM PROJECT	North Reference:	Grid
Well:	AVION FEDERAL COM 703H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP1		

Design Targets										
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
- Shape										
TNGT WNDW_50'A/B x - plan hits target center - Rectangle (sides W70.0 H100.0 D2,255.1)	7.00	128.15	4,787.5	183.0	-233.0	472,442.91	708,454.20	32° 17' 49.414 N	103° 39' 31.362 W	
KOP BOX_0'N x 100'S x - plan hits target center - Rectangle (sides W100.0 H100.0 D6,420.5)	0.00	359.63	11,906.5	209.4	-266.6	472,469.30	708,420.60	32° 17' 49.677 N	103° 39' 31.751 W	
FTP (AVION FEDERAL) - plan misses target center by 165.5usft at 12325.0usft MD (12260.7 TVD, 52.1 N, -265.6 E) - Circle (radius 50.0)	0.00	0.00	12,384.0	162.5	-266.3	472,422.40	708,420.90	32° 17' 49.213 N	103° 39' 31.751 W	
LTP (AVION FEDERAL) - plan hits target center - Point	0.00	0.00	12,384.0	-10,200.8	-198.9	462,059.10	708,488.30	32° 16' 6.658 N	103° 39' 31.725 W	
PBHL (AVION FEDERAL) - plan misses target center by 0.1usft at 22658.9usft MD (12384.0 TVD, -10250.8 N, -198.6 E) - Rectangle (sides W100.0 H10,413.5 D20.0)	0.00	359.63	12,384.0	-10,250.8	-198.5	462,009.10	708,488.70	32° 16' 6.163 N	103° 39' 31.724 W	

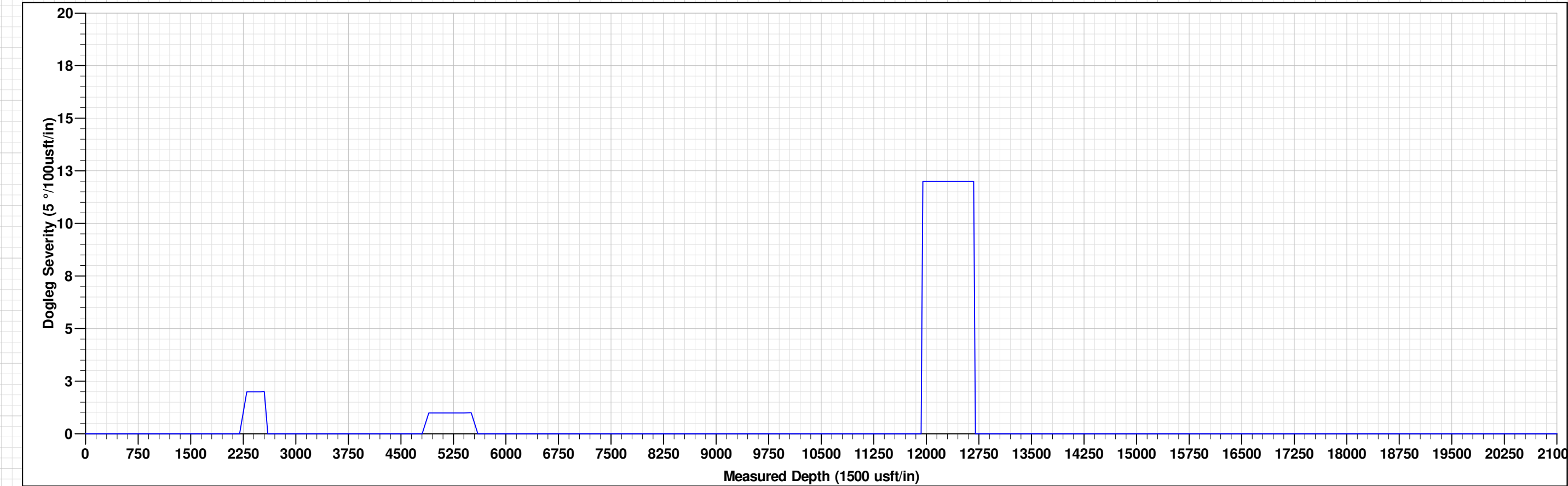
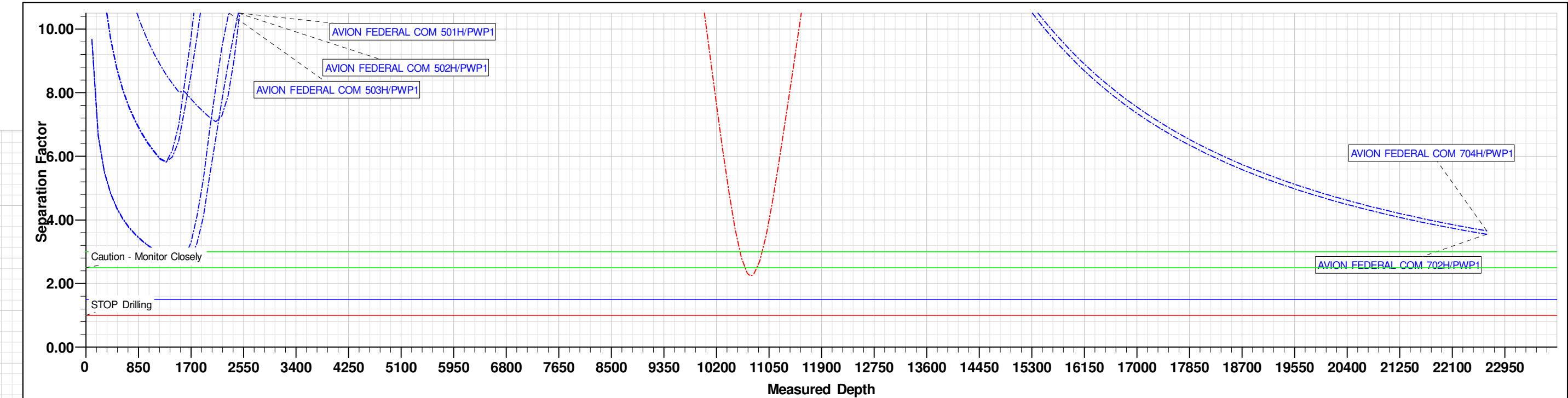
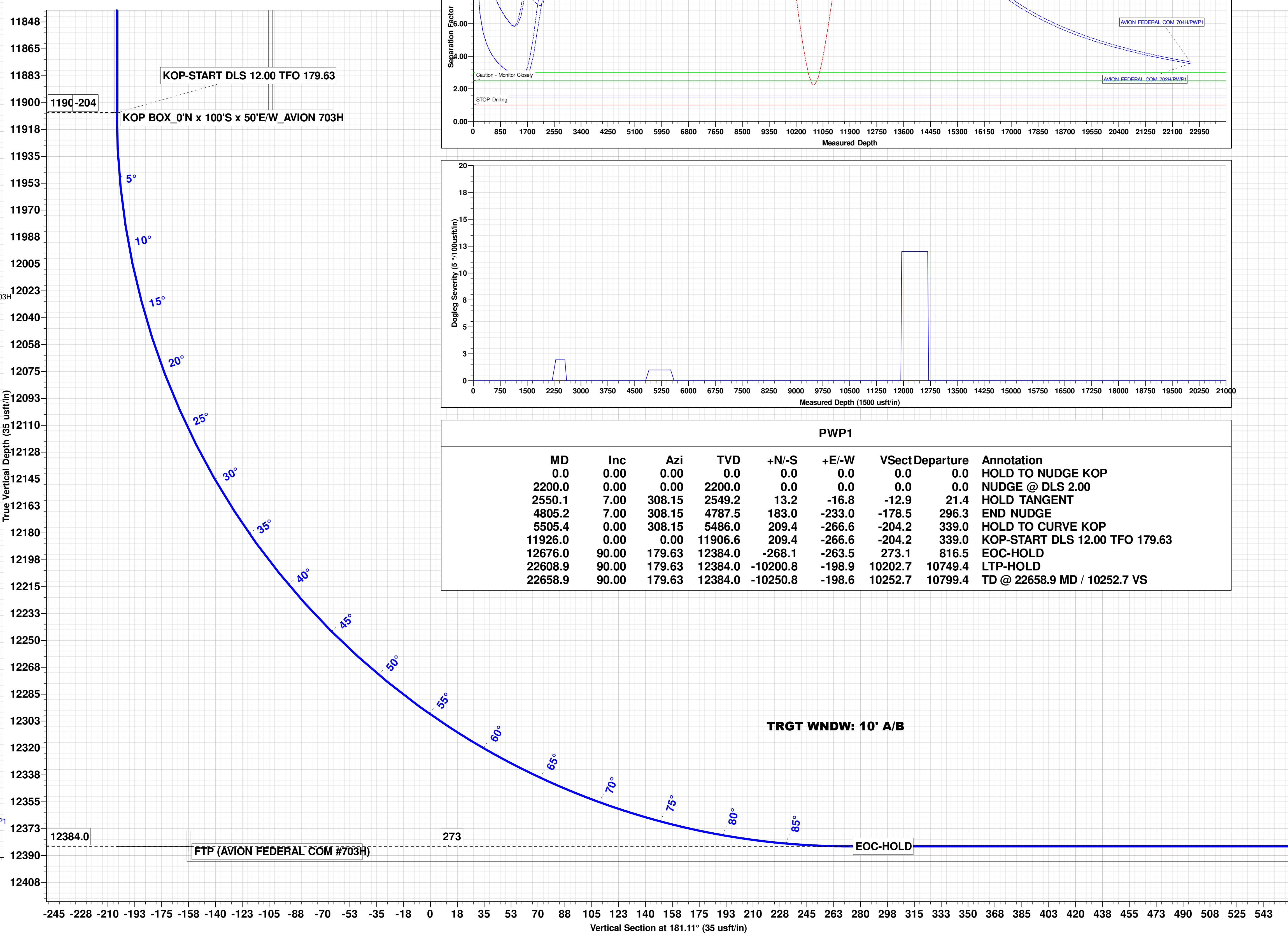
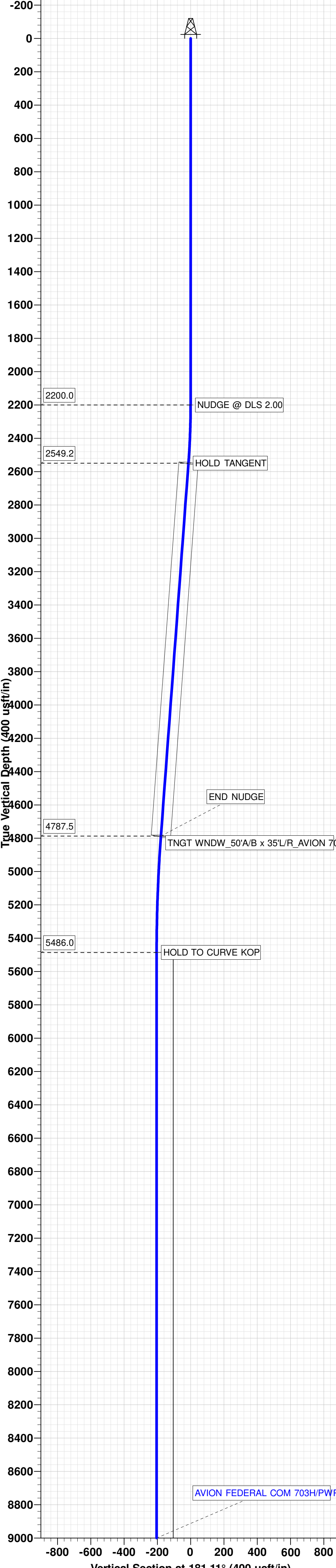
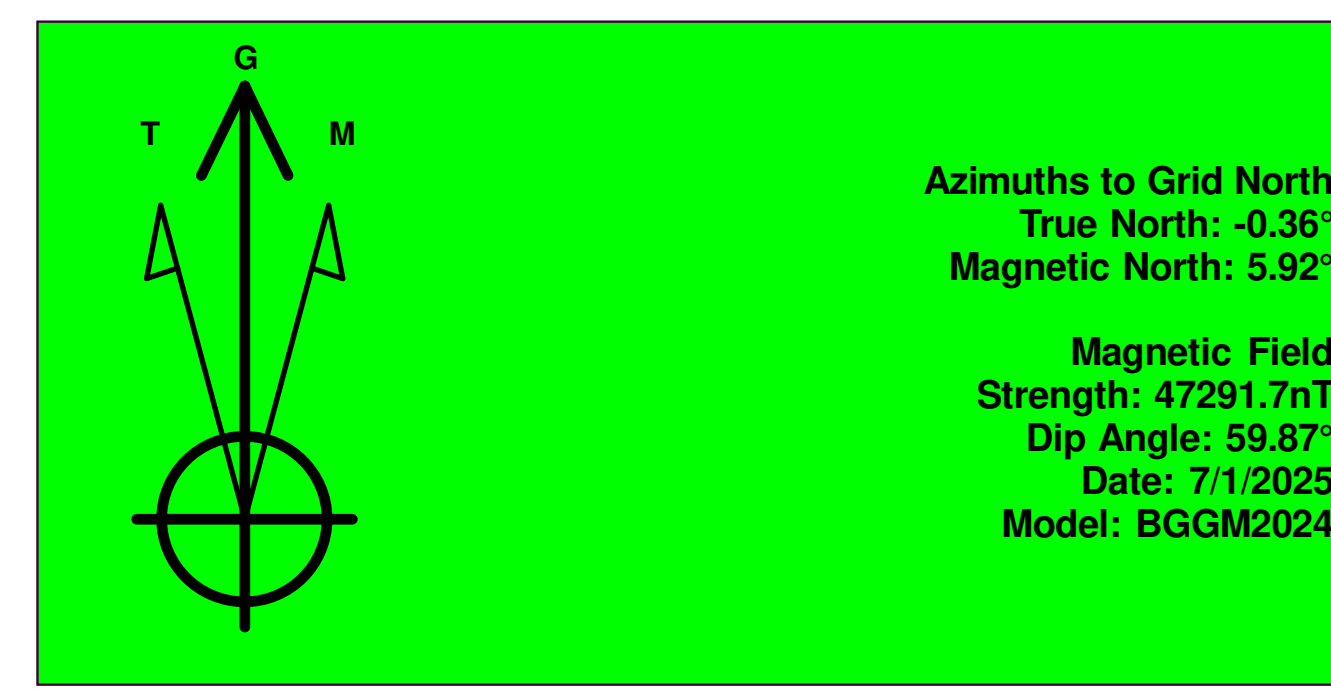
Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
0.0	0.0	0.0	0.0	HOLD TO NUDGE KOP	
2,200.0	2,200.0	0.0	0.0	NUDGE @ DLS 2.00	
2,550.1	2,549.2	13.2	-16.8	HOLD TANGENT	
4,805.2	4,787.5	183.0	-233.0	END NUDGE	
5,505.4	5,486.0	209.4	-266.6	HOLD TO CURVE KOP	
11,926.0	11,906.6	209.4	-266.6	KOP-START DLS 12.00 TFO 179.63	
12,676.0	12,384.0	-268.1	-263.5	EOC-HOLD	
22,608.9	12,384.0	-10,200.8	-198.9	LTP-HOLD	
22,658.9	12,384.0	-10,250.8	-198.6	TD @ 22658.9 MD / 10252.7 VS	



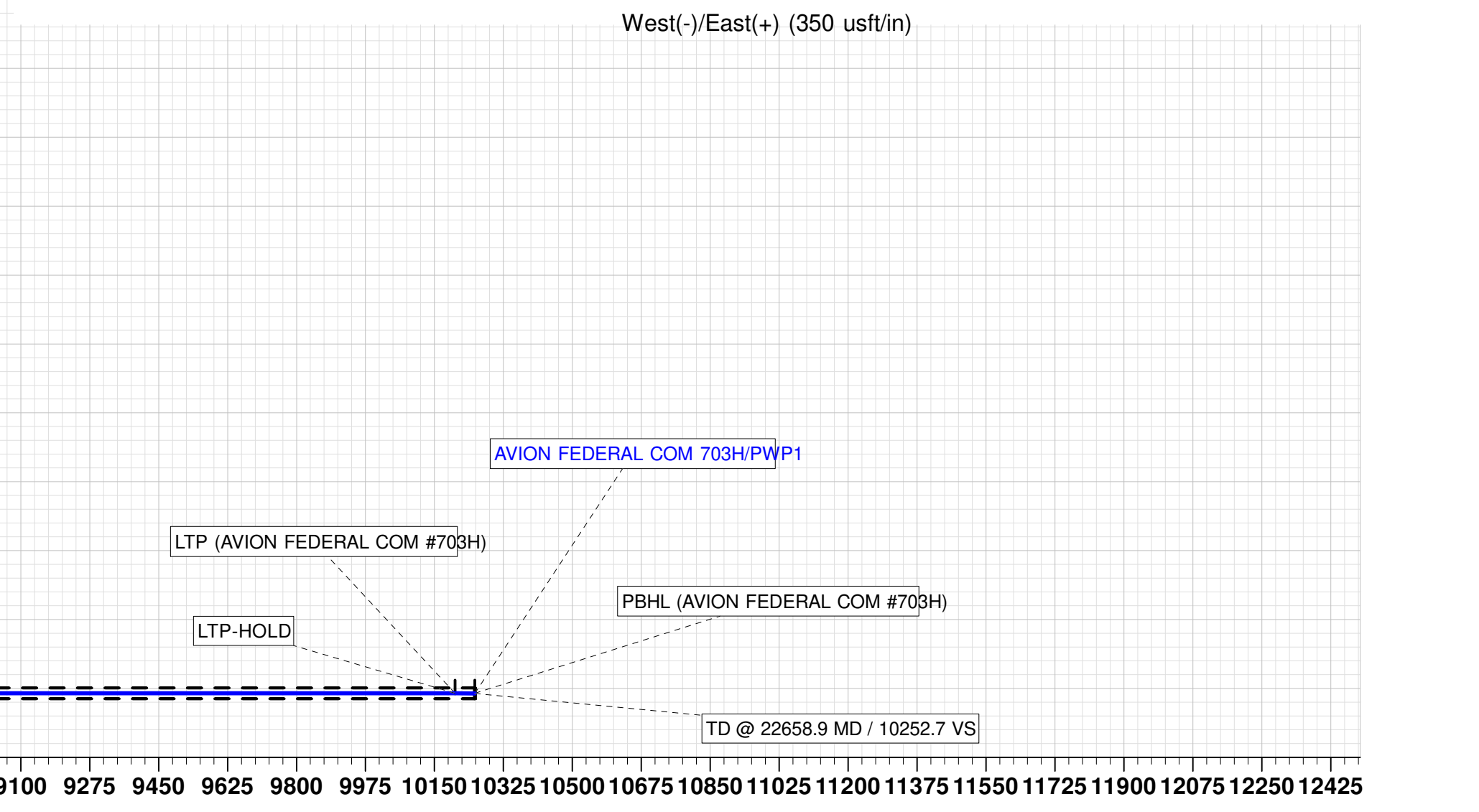
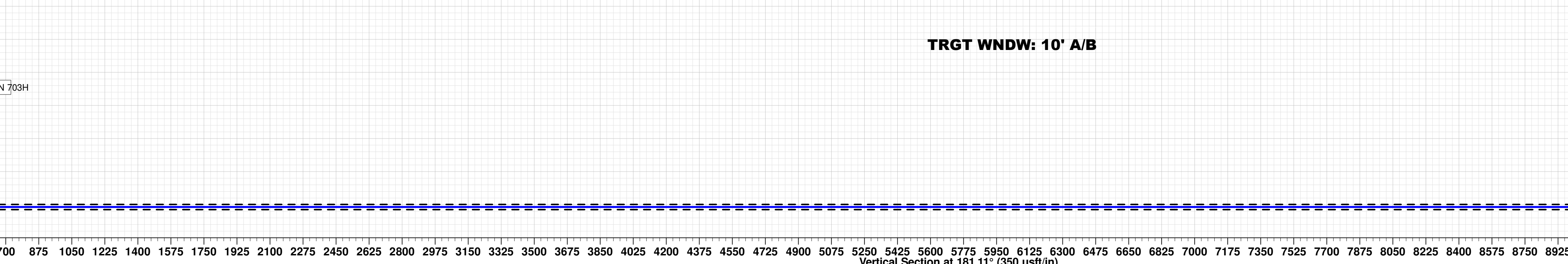
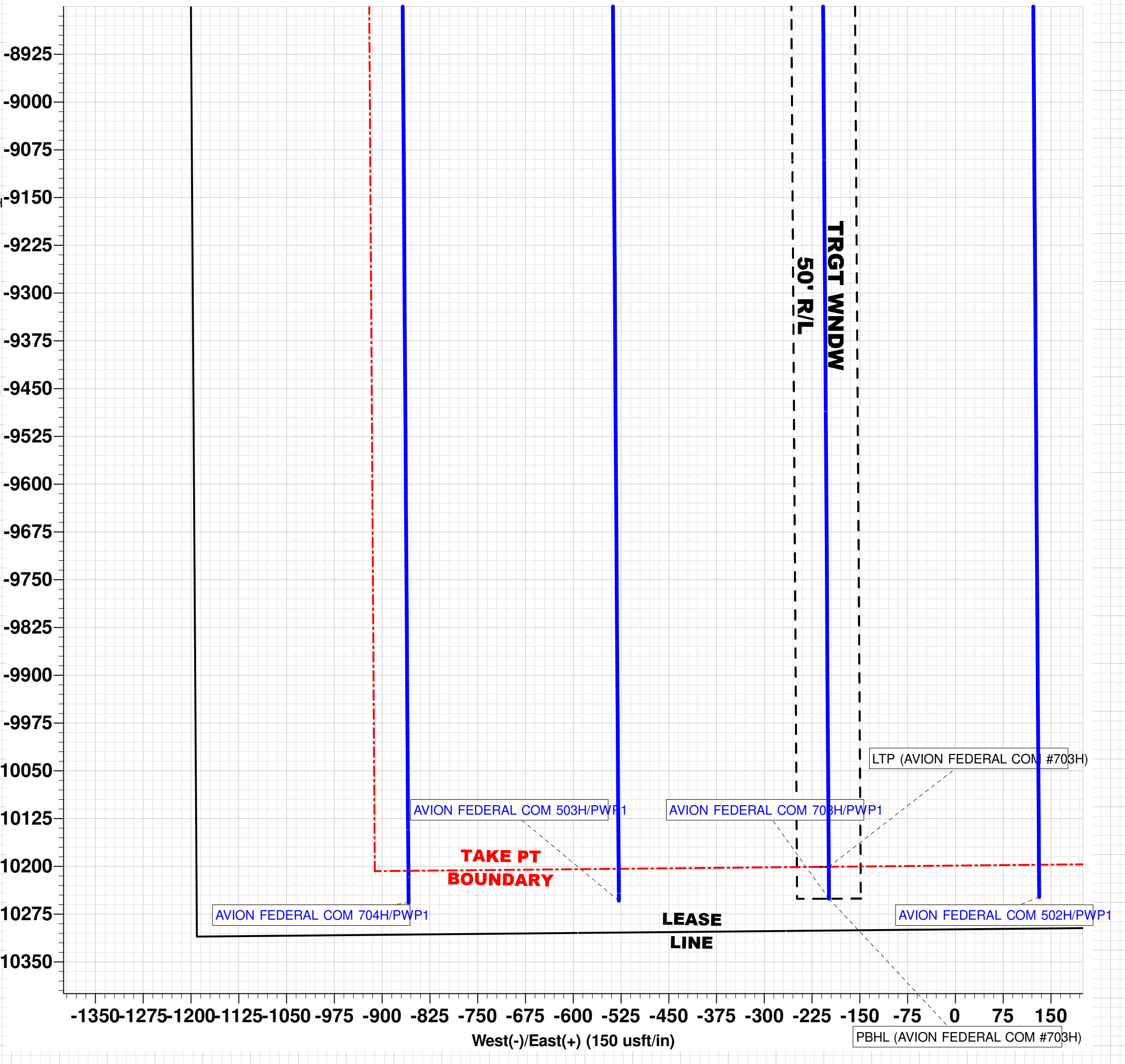
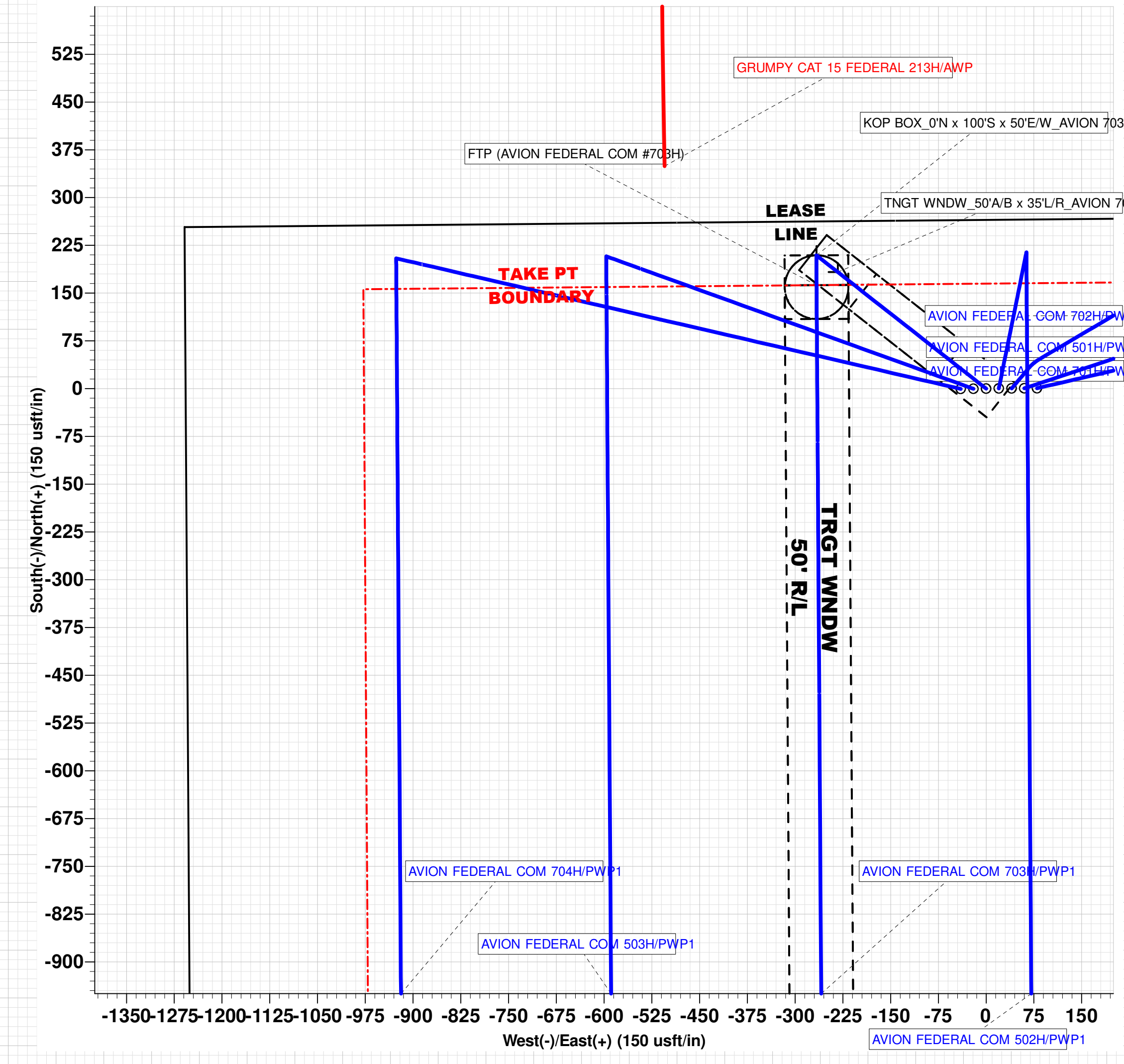
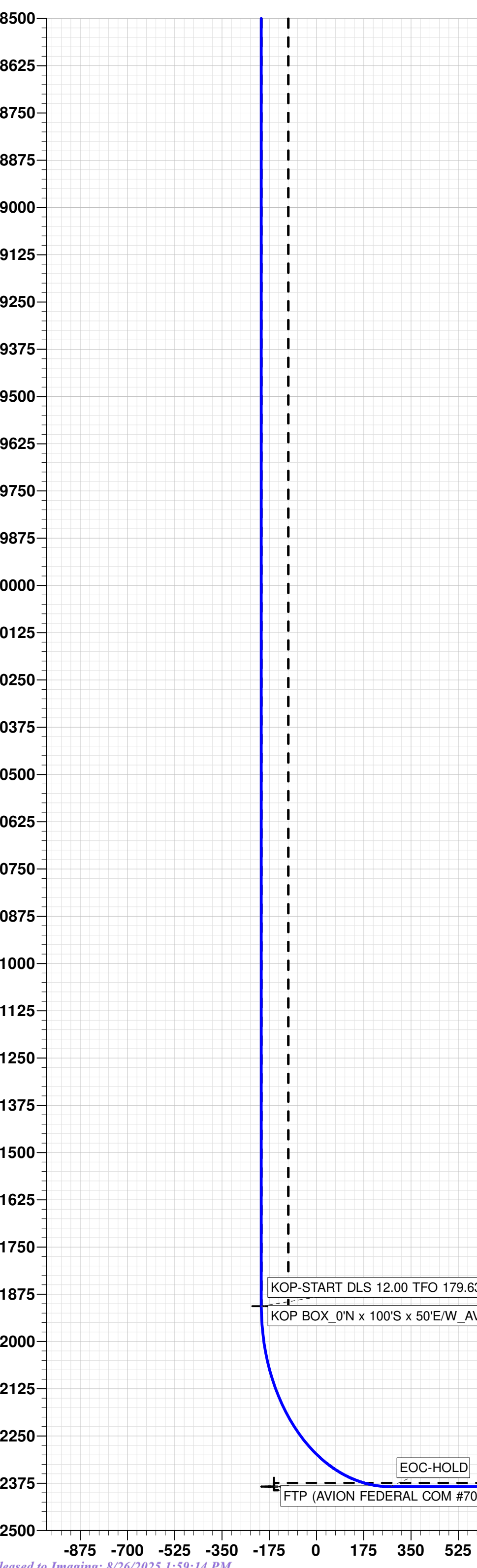
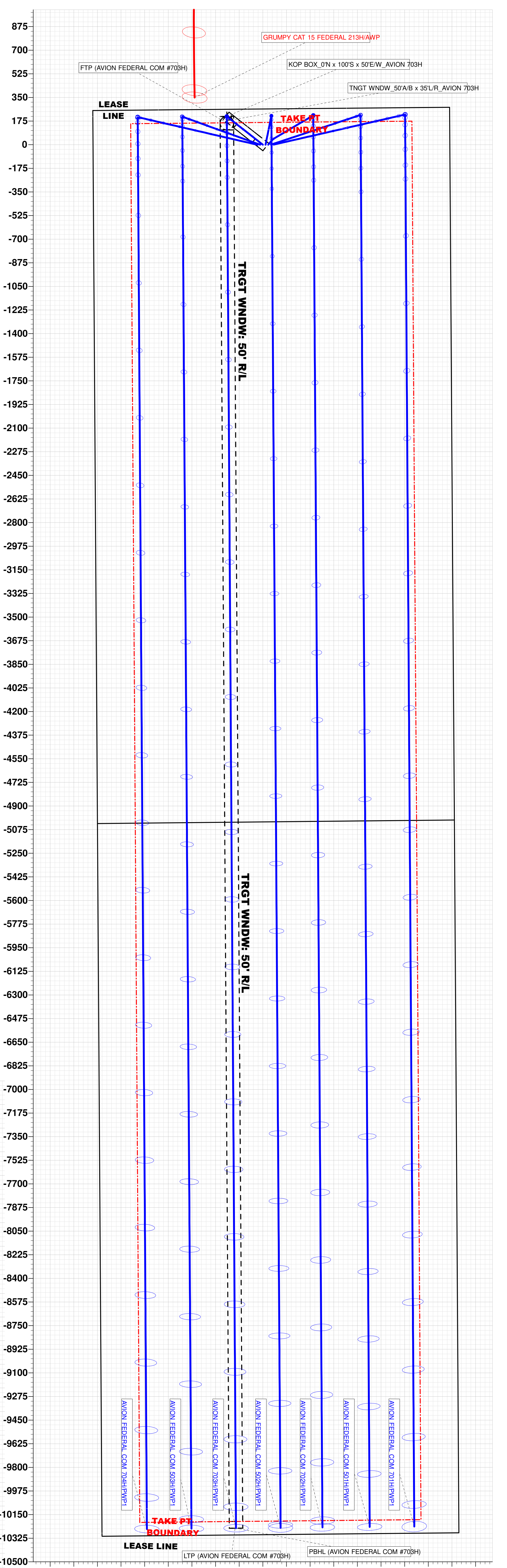
Project: LEA COUNTY SOUTHEAST
 Site: AVION FEDERAL COM PROJECT
 Wellbore: OWB
 Design: PWP1
 GL: 3701.0
 RKB=27ft @ 3728.0ustf

WELL DETAILS: AVION FEDERAL COM 703H					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	472259.90	708687.20	32° 17' 47.589 N	103° 39' 28.661 W

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
TRGT WNDW 50'A/B x 35'L/R AVION 703H	4787.5	183.0	-233.0	472442.91	708454.20
KOP BOX_0'N x 100'S x 50'E/W AVION 703H	11906.5	209.4	-266.6	472469.30	708420.60
FTP (AVION FEDERAL COM #703H)	12384.0	162.5	-266.3	472422.40	708420.30
LTP (AVION FEDERAL COM #703H)	12384.0	-10200.8	-198.9	462058.10	708488.30
PBHL (AVION FEDERAL COM #703H)	12384.0	-10250.8	-198.5	462009.10	708488.70
Shape					
Rectangle (Sides: L100.0 W70.0)					
Rectangle (Sides: L100.0 W100.0)					
Circle (Radius: 50.0)					
Point					
Rectangle (Sides: L10413.5 W100.0)					



MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.0	HOLD TO NUDGE KOP
2200.0	0.00	0.00	2200.0	0.0	0.0	0.0	0.0	NUDGE @ DLS 2.00
2550.1	7.00	308.15	2549.2	13.2	-16.8	-12.9	21.4	HOLD TANGENT
4805.2	7.00	308.15	4787.5	183.0	-233.0	-178.5	296.3	END NUDGE
5505.4	0.00	308.15	5486.0	209.4	-266.6	-204.2	339.0	HOLD TO CURVE KOP
11926.0	0.00	0.00	11906.6	209.4	-266.6	-204.2	339.0	KOP-START DLS 12.00 TFO 179.63
12676.0	90.00	179.63	12384.0	-268.1	-263.5	273.1	816.5	EOC-HOLD
22608.9	90.00	179.63	12384.0	-10200.8	-198.9	10202.7	10749.4	LTP-HOLD
22658.9	90.00	179.63	12384.0	-10250.8	-198.6	10252.7	10799.4	TD @ 22658.9 MD / 10252.7 VS





TXP[®] BTC



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

Outside Diameter	5.500 in.	Wall Thickness	0.415 in.	Grade	P110-CY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	5.500 in.	Wall Thickness	0.415 in.	Body Yield Strength	729 x1000 lb
Nominal Weight	23.00 lb/ft	Plain End Weight	22.56 lb/ft	Min. Internal Yield Pressure	14,530 psi
Drift	4.545 in.	OD Tolerance	API	SMYS	110,000 psi
Nominal ID	4.670 in.			Collapse Pressure	14,540 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.200 in.	Tension Efficiency	100 %	Minimum	12,980 ft-lb
Coupling Length	9.450 in.	Joint Yield Strength	729 x1000 lb	Optimum	14,420 ft-lb
Connection ID	4.658 in.	Internal Pressure Capacity	14,530 psi	Maximum	15,860 ft-lb
Make-up Loss	4.204 in.	Compression Efficiency	100 %		
Threads per inch	5	Compression Strength	729 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	92 °/100 ft	Operating Torque	24,200 ft-lb
		External Pressure Capacity	14,540 psi	Yield Torque	26,900 ft-lb
		Coupling Face Load	302,000 lb		

Notes

This connection is fully interchangeable with:
 TXP[®] BTC - 5.5 in. - 0.275 (15.50) / 0.304 (17.00) / 0.361 (20.00) / 0.476 (26.00) in. (lb/ft)
 Connections with Dopeless[®] Technology are fully compatible with the same connection in its doped version
 Datasheet is also valid for Special Bevel option when applicable - except for Coupling Face Load, which will be reduced. Please contact a local Tenaris technical sales representative.
 Standard coupling design comes with optimized 20° bevel.

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

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TenarisHydril Wedge 441®



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

Outside Diameter	5.500 in.	Wall Thickness	0.415 in.	Grade	P110-CY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Wall Thickness	0.415 in.
Nominal Weight	23.00 lb/ft	Plain End Weight	22.56 lb/ft
Drift	4.545 in.	OD Tolerance	API
Nominal ID	4.670 in.		
		Body Yield Strength	729 x1000 lb
		Min. Internal Yield Pressure	14,530 psi
		SMYS	110,000 psi
		Collapse Pressure	14,540 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	5.900 in.	Tension Efficiency	90.80 %	Minimum	15,000 ft-lb
Coupling Length	8.714 in.	Joint Yield Strength	662 x1000 lb	Optimum	16,000 ft-lb
Connection ID	4.670 in.	Internal Pressure Capacity	14,530 psi	Maximum	19,200 ft-lb
Make-up Loss	3.780 in.	Compression Efficiency	90.80 %		
Threads per inch	3.40	Compression Strength	662 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	83.54 °/100 ft	Operating Torque	33,000 ft-lb
		External Pressure Capacity	14,540 psi	Yield Torque	39,000 ft-lb
		Coupling Face Load	172,000 lb		
				Buck-On	
				Minimum	19,200 ft-lb
				Maximum	20,700 ft-lb

Notes

This connection is fully interchangeable with:
 Wedge 441® - 5.5 in. - 0.476 (26.00) in. (lb/ft)
 Connections with Dopeless® Technology are fully compatible with the same connection in its doped version

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

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PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG OPERATING LLC
WELL NAME & NO.:	AVION FED COM 703H
LOCATION:	Section 22, T.23 S., R.32 E.
COUNTY:	Lea County, New Mexico

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

Primary Casing Design:

1. The **10-3/4** inch surface casing shall be set at approximately **1350 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. The surface hole shall be **14 3/4 inch** in diameter.
 - 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above. **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.**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
 - b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **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.**
3. **The W441 connection should tie back 500'+ into the W513 intermediate casing for clearance overlap.** The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Contingency Bradenhead Squeeze

Operator has proposed to pump down 10-3/4" X 7-5/8" annulus. Operator must top out cement after the bradenhead squeeze and verify cement to surface. Operator can also check TOC with Echo-meter. CBL must be run from TD of the 7-5/8" casing to surface if confidence is lacking on the quality of the bradenhead squeeze cement job. Submit results to BLM.

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

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

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

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **10-3/4** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)**Communitization Agreement**

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

Offline Cementing

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

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.

GENERAL REQUIREMENTS

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

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

Eddy County

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

BLM_NM_CFO_DrillingNotifications@BLM.GOV

(575) 361-2822

Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 689-5981

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line

must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.
 - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement

- reaches 500 psi compressive strength (including lead when specified).
- ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
 - iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - v. The results of the test shall be reported to the appropriate BLM office.
 - vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
 - viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR 3172**.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

JS 1/29/2025

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 427020

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 427020
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
matthew.gomez	The C-103 NOI was not approved or rejected; however, the work requested in the C-103 NOI was performed and completed without NMOCD approval. This action will result in review for potential compliance actions.	8/26/2025