

C-104 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
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REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT**Section 1 - Operator and Well Information**

Submittal Type: ☐ Test Allowable (C-104RT) ☐ New Well (C-104NW) ☐ Recomplete (C-104RC) ☐ Pay Add (C-104RC) ☐ Amended	
Operator Name:	OGRID:
Property Name and Well Number:	Property Code:
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☐ Federal	API Number:
Pool Name:	Pool Code:

Section 2 – Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
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Section 3 – Completion Information

Producing Method	Ready Date	Perforations MD	Perforations TVD
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Section 4 – Action IDs for Submissions and Order Numbers

List Action IDs for Drilling Sundries	Was an Order required / needed (Y/N), if yes list Order number:
C-104 RT Action ID (if C-104NW):	Communitization Agreement ☐ Yes ☐ No, Order No.
Surface Casing Action ID:	Unit: ☐ Yes ☐ No, Order No.
Intermediate 1 Casing Action ID:	Compulsory Pooling: ☐ Yes ☐ No, Order No.
Intermediate 2 Casing Action ID:	Down Hole Commingling: ☐ Yes ☐ No, Order No.
Production Casing Action ID:	Surface Commingling: ☐ Yes ☐ No, Order No.
All casing was pressure tested in accordance with NMAC ☐ Yes ☐ No	Non-standard Location: ☐ Yes ☐ No ☐ Common ownership Order No.
Liner 1 Action ID:	Non-standard Proration: ☐ Yes ☐ No, Order No.
Casing was installed prior to OCD's Action ID system (Y/N):	Simultaneous Dedication: ☐ Yes ☐ No, Order No.

Section 5 - Operator Signature and Certification

☐ I hereby certify that the required Water Use Report has been, or will be, submitted for this well's completion.	
☐ I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well's completion.	
☐ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name	
Title	Date

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

WELL LOCATION INFORMATION

API Number 30-015-54902	Pool Code 98220	Pool Name PURPLE SAGE; WOLFCAMP (GAS)
Property Code 330184	Property Name TOMAHAWK WC UNIT	Well Number 723H
OGRID No. 229137	Operator Name COG OPERATING LLC	Ground Level Elevation 3093.6'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	30	24-S	28-E		225 FNL	1346 FWL	32.195203°N	104.131148°W	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
4	31	24-S	28-E		204 FSL	517 FWL	32.167117°N	104.133847°W	EDDY

Dedicated Acres 1283.96	Infill or Defining Well INFILL	Defining Well API 30-015-47584	Overlapping Spacing Unit (Y/N) NO	Consolidation Code
Order Numbers. R-21254			Well setbacks are under Common Ownership: ☐ Yes ☒ No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
1	30	24-S	28-E		76 FNL	570 FWL	32.195580°N	104.133657°W	EDDY

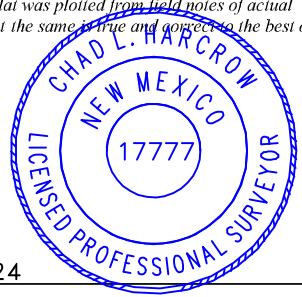
First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
1	30	24-S	28-E		419 FNL	566 FWL	32.194636°N	104.133669°W	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
4	31	24-S	28-E		367 FSL	523 FWL	32.167565°N	104.133824°W	EDDY

Unitized Area or Area of Uniform Interest YES	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation: 3125.6'
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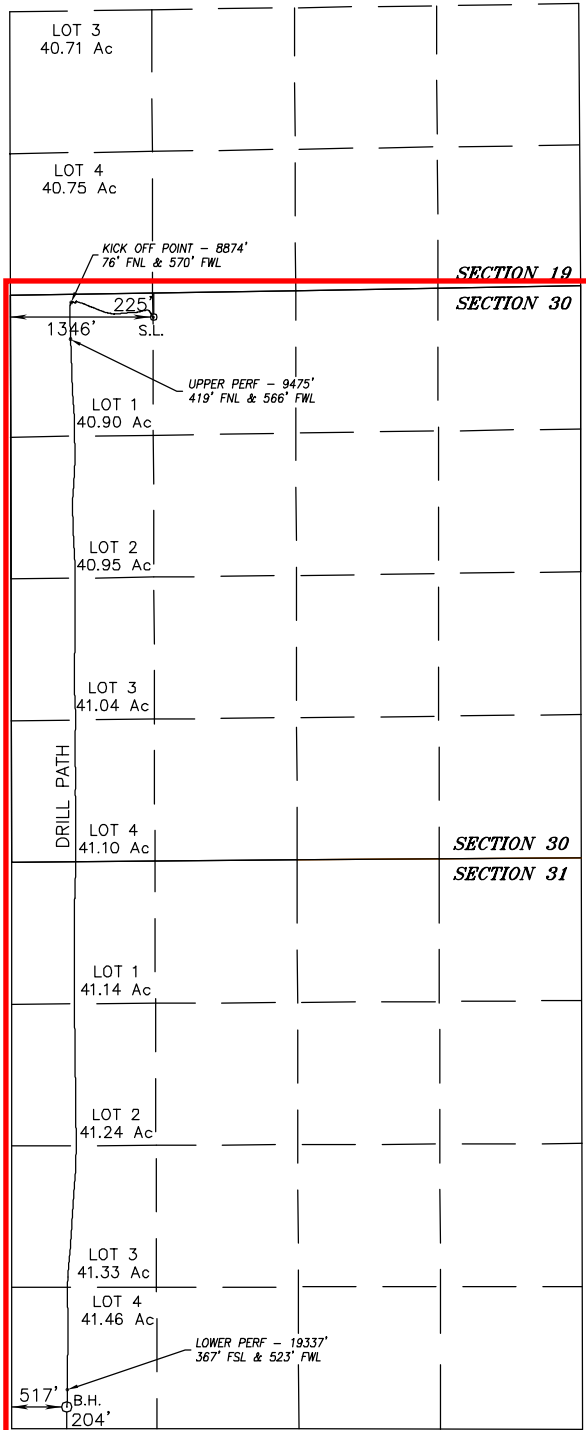
OPERATOR CERTIFICATIONS <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the 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> <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>		SURVEYOR CERTIFICATIONS <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>	
Signature <i>Kayla Estrada</i> Date 3/1/25		Signature and Seal of Professional Surveyor  <i>Chad Harcrow</i> 12/10/24	
Printed Name Kayla Estrada		Certificate Number 17777	Date of Survey OCTOBER 6, 2022
Email Address kayla.l.estrada@conocophillips.com		W.O.#24-1265	DRAWN BY: WN PAGE 1 OF 2

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

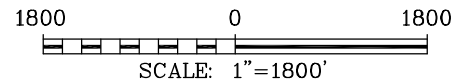
ACREAGE DEDICATION PLATS

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

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



SURFACE INFO & BOREPATH SHOWN HEREON IS BASED ON DIRECTIONAL SURVEY REPORT PROVIDED BY COG OPERATING LLC FOR THE TOMAHAWK WC UNIT 723H SUPPLIED TO HARCROW SURVEYING, LLC ON DECEMBER 9, 2024



NAD 83 NME
SURFACE LOCATION
Y=434807.9 N
X=603879.3 E
LAT.=32.195203° N
LONG.=104.131148° W

NAD 83 NME
BOTTOM
HOLE LOCATION
Y=424589.5 N
X=603063.5 E
LAT.=32.167117° N
LONG.=104.133847° W

DELAWARE BASIN WEST

TOMAHAWK PROSPECT__DBW__NM_E

TOMAHAWK WC UNIT S19-30-31 R24S T28E

TOMAHAWK WC UNIT #723H

300155490200

OWB

Design: AWP

Standard Survey Report

04 July, 2024

ConocoPhillips
Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Project	TOMAHAWK PROSPECT__DBW__NM_E		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	TOMAHAWK WC UNIT S19-30-31 R24S T28E		
Site Position:		Northing:	429,658.13 usft
From:	Map	Easting:	564,040.01 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 51.880 N
		Longitude:	104° 7' 34.829 W

Well	TOMAHAWK WC UNIT #723H					
Well Position	+N/-S	0.0 usft	Northing:	434,749.70 usft	Latitude:	32° 11' 42.294 N
	+E/-W	0.0 usft	Easting:	562,696.00 usft	Longitude:	104° 7' 50.357 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,093.0 usft
Grid Convergence:		0.11 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2023	6/5/2024	6.73	59.79	47,281.23723383

Design	AWP				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	184.24	

Survey Program	Date	7/4/2024			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	666.0	SDI GYRO SURFACE (OWB)	r.5 SDI_KPR_WL_NS-CT	SDI Keeper Wireline Gyrocomp.-Initilzd Cont. rev.5	
736.0	795.0	MWD-SURFACE (OWB)	r.5 MWD	OWSG MWD - Standard rev.5	
807.4	8,844.4	MWD+IFR1+SAG+FDIR-INT (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr. rev.5	
8,859.0	19,500.0	MWD+IFR1+SAG+FDIR-CRV/LAT (OWB)	r.5 MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + SAG + FDIR Corr. rev.5	

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	0.66	239.49	100.0	-0.3	-0.5	0.3	0.66	0.66	0.00	
125.0	1.16	257.35	125.0	-0.4	-0.9	0.5	2.28	2.00	71.44	
150.0	1.21	246.40	150.0	-0.6	-1.4	0.7	0.93	0.20	-43.80	
175.0	1.43	234.94	175.0	-0.9	-1.9	1.0	1.37	0.88	-45.84	
200.0	1.78	238.18	200.0	-1.3	-2.4	1.4	1.45	1.40	12.96	
225.0	2.21	236.63	225.0	-1.7	-3.2	2.0	1.73	1.72	-6.20	

ConocoPhillips

Survey Report

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Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
250.0	2.16	233.79	249.9	-2.3	-4.0	2.6	0.48	-0.20	-11.36	
275.0	2.16	223.73	274.9	-2.9	-4.7	3.2	1.51	0.00	-40.24	
300.0	2.08	224.09	299.9	-3.5	-5.3	3.9	0.32	-0.32	1.44	
325.0	2.19	222.44	324.9	-4.2	-5.9	4.7	0.50	0.44	-6.60	
350.0	1.90	224.78	349.9	-4.9	-6.6	5.3	1.21	-1.16	9.36	
375.0	1.45	223.53	374.9	-5.4	-7.1	5.9	1.81	-1.80	-5.00	
400.0	1.16	219.41	399.9	-5.8	-7.4	6.4	1.22	-1.16	-16.48	
425.0	0.82	226.86	424.9	-6.1	-7.7	6.7	1.45	-1.36	29.80	
450.0	0.87	230.88	449.8	-6.4	-8.0	7.0	0.31	0.20	16.08	
475.0	0.57	237.54	474.8	-6.6	-8.3	7.2	1.24	-1.20	26.64	
500.0	0.39	262.70	499.8	-6.6	-8.5	7.3	1.09	-0.72	100.64	
525.0	0.13	220.39	524.8	-6.7	-8.6	7.3	1.23	-1.04	-169.24	
550.0	0.15	252.55	549.8	-6.7	-8.6	7.3	0.32	0.08	128.64	
575.0	0.37	205.54	574.8	-6.8	-8.7	7.4	1.16	0.88	-188.04	
600.0	0.75	184.78	599.8	-7.0	-8.7	7.7	1.70	1.52	-83.04	
625.0	1.00	177.21	624.8	-7.4	-8.7	8.0	1.10	1.00	-30.28	
650.0	1.19	166.65	649.8	-7.9	-8.7	8.5	1.11	0.76	-42.24	
666.0	1.35	165.38	665.8	-8.2	-8.6	8.8	1.02	1.00	-7.94	
736.0	1.63	145.00	735.8	-9.8	-7.8	10.4	0.85	0.40	-29.11	
795.0	1.98	136.36	794.8	-11.3	-6.6	11.7	0.75	0.59	-14.64	
807.4	1.91	136.35	807.2	-11.6	-6.3	12.0	0.56	-0.56	-0.08	
819.8	1.83	136.32	819.6	-11.9	-6.0	12.3	0.65	-0.65	-0.24	
832.2	1.74	136.11	832.0	-12.1	-5.8	12.5	0.73	-0.73	-1.69	
844.6	1.65	135.48	844.4	-12.4	-5.5	12.8	0.74	-0.73	-5.08	
857.0	1.57	134.10	856.7	-12.6	-5.3	13.0	0.72	-0.65	-11.13	
872.0	1.49	130.98	871.7	-12.9	-5.0	13.3	0.77	-0.53	-20.80	
887.0	1.43	126.60	886.7	-13.2	-4.7	13.5	0.84	-0.40	-29.20	
902.0	1.38	121.41	901.7	-13.4	-4.4	13.6	0.91	-0.33	-34.60	
917.0	1.35	115.91	916.7	-13.5	-4.1	13.8	0.90	-0.20	-36.67	
932.0	1.35	110.64	931.7	-13.7	-3.7	13.9	0.83	0.00	-35.13	
947.0	1.36	106.21	946.7	-13.8	-3.4	14.0	0.70	0.07	-29.53	
960.0	1.34	103.68	959.7	-13.9	-3.1	14.1	0.48	-0.15	-19.46	
973.0	1.34	101.75	972.7	-13.9	-2.8	14.1	0.35	0.00	-14.85	
986.0	1.34	100.21	985.7	-14.0	-2.5	14.1	0.28	0.00	-11.85	
999.0	1.34	98.88	998.7	-14.0	-2.2	14.2	0.24	0.00	-10.23	
1,012.0	1.35	97.63	1,011.7	-14.1	-1.9	14.2	0.24	0.08	-9.62	
1,025.0	1.36	96.30	1,024.7	-14.1	-1.6	14.2	0.25	0.08	-10.23	
1,038.0	1.36	94.72	1,037.7	-14.2	-1.3	14.2	0.29	0.00	-12.15	
1,053.0	1.37	92.38	1,052.7	-14.2	-0.9	14.2	0.38	0.07	-15.60	
1,068.0	1.38	89.68	1,067.7	-14.2	-0.6	14.2	0.44	0.07	-18.00	
1,083.0	1.39	86.78	1,082.7	-14.2	-0.2	14.1	0.47	0.07	-19.33	
1,098.0	1.40	83.78	1,097.7	-14.1	0.2	14.1	0.49	0.07	-20.00	
1,113.0	1.41	80.70	1,112.7	-14.1	0.5	14.0	0.51	0.07	-20.53	

ConocoPhillips

Survey Report

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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
1,128.0	1.43	77.54	1,127.7	-14.0	0.9	13.9	0.54	0.13	-21.07	
1,141.0	1.42	74.54	1,140.7	-13.9	1.2	13.8	0.58	-0.08	-23.08	
1,154.0	1.42	71.55	1,153.7	-13.8	1.5	13.7	0.57	0.00	-23.00	
1,167.0	1.43	68.74	1,166.7	-13.7	1.8	13.6	0.54	0.08	-21.62	
1,180.0	1.44	66.31	1,179.7	-13.6	2.1	13.4	0.47	0.08	-18.69	
1,193.0	1.32	58.83	1,192.7	-13.5	2.4	13.3	1.66	-0.92	-57.54	
1,206.0	1.10	356.45	1,205.6	-13.3	2.5	13.0	9.75	-1.69	-479.85	
1,219.0	1.85	322.27	1,218.6	-13.0	2.4	12.8	8.65	5.77	-262.92	
1,234.0	1.91	322.38	1,233.6	-12.6	2.1	12.4	0.40	0.40	0.73	
1,249.0	1.99	322.74	1,248.6	-12.2	1.8	12.0	0.54	0.53	2.40	
1,264.0	2.08	323.18	1,263.6	-11.8	1.4	11.6	0.61	0.60	2.93	
1,279.0	2.17	323.54	1,278.6	-11.3	1.1	11.2	0.61	0.60	2.40	
1,294.0	2.26	323.71	1,293.6	-10.8	0.8	10.8	0.60	0.60	1.13	
1,309.0	2.34	323.50	1,308.6	-10.4	0.4	10.3	0.54	0.53	-1.40	
1,324.0	2.42	323.04	1,323.6	-9.9	0.0	9.8	0.55	0.53	-3.07	
1,339.0	2.48	322.43	1,338.6	-9.3	-0.4	9.4	0.44	0.40	-4.07	
1,354.0	2.91	319.33	1,353.5	-8.8	-0.8	8.8	3.03	2.87	-20.67	
1,369.0	4.38	313.13	1,368.5	-8.1	-1.5	8.2	10.13	9.80	-41.33	
1,384.0	5.46	310.42	1,383.5	-7.3	-2.4	7.4	7.36	7.20	-18.07	
1,399.0	5.48	310.61	1,398.4	-6.3	-3.5	6.6	0.18	0.13	1.27	
1,412.0	5.48	311.02	1,411.3	-5.5	-4.5	5.8	0.30	0.00	3.15	
1,425.0	5.47	311.56	1,424.3	-4.7	-5.4	5.1	0.40	-0.08	4.15	
1,438.0	5.45	312.20	1,437.2	-3.9	-6.3	4.3	0.49	-0.15	4.92	
1,451.0	5.42	312.90	1,450.1	-3.1	-7.2	3.6	0.56	-0.23	5.38	
1,464.0	5.39	313.64	1,463.1	-2.2	-8.1	2.8	0.58	-0.23	5.69	
1,477.0	5.34	314.37	1,476.0	-1.4	-9.0	2.0	0.65	-0.38	5.62	
1,490.0	5.29	315.05	1,489.0	-0.5	-9.8	1.2	0.62	-0.38	5.23	
1,505.0	5.22	315.61	1,503.9	0.5	-10.8	0.3	0.58	-0.47	3.73	
1,520.0	5.13	316.14	1,518.9	1.4	-11.7	-0.6	0.68	-0.60	3.53	
1,535.0	5.04	316.76	1,533.8	2.4	-12.7	-1.4	0.70	-0.60	4.13	
1,550.0	4.93	317.60	1,548.7	3.3	-13.5	-2.3	0.88	-0.73	5.60	
1,565.0	4.80	318.83	1,563.7	4.3	-14.4	-3.2	1.11	-0.87	8.20	
1,580.0	4.66	320.72	1,578.6	5.2	-15.2	-4.1	1.40	-0.93	12.60	
1,593.0	4.50	323.26	1,591.6	6.1	-15.8	-4.9	1.99	-1.23	19.54	
1,606.0	4.34	326.51	1,604.6	6.9	-16.4	-5.6	2.29	-1.23	25.00	
1,619.0	4.19	330.37	1,617.5	7.7	-16.9	-6.4	2.49	-1.15	29.69	
1,632.0	4.07	334.75	1,630.5	8.5	-17.3	-7.2	2.60	-0.92	33.69	
1,645.0	3.98	339.51	1,643.5	9.4	-17.7	-8.0	2.66	-0.69	36.62	
1,658.0	3.93	344.44	1,656.4	10.2	-18.0	-8.9	2.64	-0.38	37.92	
1,671.0	3.95	349.30	1,669.4	11.1	-18.2	-9.7	2.57	0.15	37.38	
1,686.0	3.87	354.49	1,684.4	12.1	-18.3	-10.7	2.42	-0.53	34.60	
1,701.0	3.85	359.46	1,699.3	13.1	-18.4	-11.7	2.23	-0.13	33.13	
1,716.0	4.00	356.52	1,714.3	14.1	-18.4	-12.7	1.67	1.00	-19.60	
1,731.0	4.99	345.37	1,729.2	15.3	-18.6	-13.9	8.77	6.60	-74.33	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
1,746.0	5.46	344.84	1,744.2	16.6	-19.0	-15.2	3.15	3.13	-3.53
1,761.0	5.53	346.61	1,759.1	18.0	-19.3	-16.5	1.22	0.47	11.80
1,774.0	5.62	347.22	1,772.0	19.2	-19.6	-17.7	0.83	0.69	4.69
1,787.0	5.73	347.42	1,785.0	20.5	-19.9	-19.0	0.86	0.85	1.54
1,800.0	5.84	347.55	1,797.9	21.8	-20.2	-20.2	0.85	0.85	1.00
1,813.0	5.94	337.88	1,810.8	23.0	-20.6	-21.4	7.66	0.77	-74.38
1,826.0	6.78	328.41	1,823.8	24.3	-21.2	-22.7	10.32	6.46	-72.85
1,839.0	7.35	325.66	1,836.7	25.6	-22.1	-23.9	5.10	4.38	-21.15
1,852.0	7.40	326.34	1,849.6	27.0	-23.0	-25.3	0.77	0.38	5.23
1,867.0	7.39	327.51	1,864.4	28.7	-24.1	-26.8	1.01	-0.07	7.80
1,882.0	7.33	328.98	1,879.3	30.3	-25.1	-28.3	1.32	-0.40	9.80
1,897.0	7.25	330.64	1,894.2	31.9	-26.0	-29.9	1.50	-0.53	11.07
1,912.0	7.15	332.43	1,909.1	33.6	-26.9	-31.5	1.64	-0.67	11.93
1,927.0	7.04	334.30	1,924.0	35.2	-27.8	-33.1	1.71	-0.73	12.47
1,942.0	6.93	336.18	1,938.8	36.9	-28.5	-34.7	1.69	-0.73	12.53
1,957.0	6.79	337.86	1,953.7	38.5	-29.2	-36.3	1.63	-0.93	11.20
1,972.0	6.85	333.07	1,968.6	40.2	-30.0	-37.8	3.81	0.40	-31.93
1,987.0	7.37	323.00	1,983.5	41.7	-31.0	-39.3	8.99	3.47	-67.13
2,002.0	7.74	318.93	1,998.4	43.3	-32.2	-40.8	4.34	2.47	-27.13
2,017.0	7.54	320.61	2,013.3	44.8	-33.5	-42.2	2.00	-1.33	11.20
2,032.0	7.30	322.63	2,028.1	46.3	-34.7	-43.6	2.36	-1.60	13.47
2,047.0	6.98	325.06	2,043.0	47.8	-35.8	-45.0	2.93	-2.13	16.20
2,062.0	6.66	327.78	2,057.9	49.3	-36.8	-46.4	3.03	-2.13	18.13
2,077.0	6.37	330.05	2,072.8	50.7	-37.7	-47.8	2.59	-1.93	15.13
2,092.0	6.22	325.56	2,087.7	52.1	-38.5	-49.1	3.43	-1.00	-29.93
2,107.0	6.60	316.95	2,102.6	53.4	-39.6	-50.4	6.88	2.53	-57.40
2,122.0	7.24	310.78	2,117.5	54.7	-40.9	-51.5	6.53	4.27	-41.13
2,135.0	7.08	311.55	2,130.4	55.7	-42.1	-52.5	1.44	-1.23	5.92
2,148.0	7.00	313.75	2,143.3	56.8	-43.3	-53.5	2.16	-0.62	16.92
2,161.0	6.89	313.23	2,156.2	57.9	-44.4	-54.5	0.97	-0.85	-4.00
2,174.0	6.72	313.55	2,169.1	59.0	-45.5	-55.4	1.34	-1.31	2.46
2,187.0	6.59	314.10	2,182.0	60.0	-46.6	-56.4	1.11	-1.00	4.23
2,200.0	7.04	306.90	2,195.0	61.0	-47.8	-57.3	7.42	3.46	-55.38
2,213.0	7.45	299.28	2,207.9	61.9	-49.2	-58.1	8.03	3.15	-58.62
2,228.0	8.16	290.60	2,222.7	62.7	-51.0	-58.8	9.16	4.73	-57.87
2,243.0	9.07	283.05	2,237.5	63.4	-53.2	-59.3	9.67	6.07	-50.33
2,258.0	9.78	275.83	2,252.3	63.8	-55.6	-59.5	9.19	4.73	-48.13
2,273.0	10.66	270.04	2,267.1	63.9	-58.2	-59.4	9.01	5.87	-38.60
2,288.0	10.97	269.54	2,281.8	63.9	-61.1	-59.2	2.16	2.07	-3.33
2,303.0	11.05	270.69	2,296.6	63.9	-63.9	-59.0	1.56	0.53	7.67
2,316.0	11.14	271.34	2,309.3	64.0	-66.4	-58.9	1.19	0.69	5.00
2,329.0	11.51	269.01	2,322.1	64.0	-69.0	-58.7	4.53	2.85	-17.92
2,342.0	12.37	264.54	2,334.8	63.8	-71.7	-58.3	9.71	6.62	-34.38

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
2,355.0	13.45	261.86	2,347.5	63.5	-74.5	-57.8	9.50	8.31	-20.62	
2,368.0	14.47	258.38	2,360.1	62.9	-77.6	-57.0	10.16	7.85	-26.77	
2,381.0	14.91	257.41	2,372.6	62.2	-80.8	-56.1	3.88	3.38	-7.46	
2,394.0	14.91	257.43	2,385.2	61.5	-84.1	-55.1	0.04	0.00	0.15	
2,409.0	14.83	257.34	2,399.7	60.7	-87.9	-54.0	0.56	-0.53	-0.60	
2,424.0	14.70	257.17	2,414.2	59.8	-91.6	-52.9	0.91	-0.87	-1.13	
2,439.0	14.53	256.92	2,428.7	59.0	-95.3	-51.8	1.21	-1.13	-1.67	
2,454.0	14.35	256.62	2,443.3	58.1	-98.9	-50.6	1.30	-1.20	-2.00	
2,469.0	14.16	256.26	2,457.8	57.2	-102.5	-49.5	1.40	-1.27	-2.40	
2,484.0	13.97	255.83	2,472.3	56.4	-106.1	-48.4	1.45	-1.27	-2.87	
2,499.0	13.78	255.37	2,486.9	55.5	-109.5	-47.2	1.46	-1.27	-3.07	
2,514.0	13.60	254.87	2,501.5	54.6	-113.0	-46.1	1.44	-1.20	-3.33	
2,529.0	13.45	254.39	2,516.1	53.6	-116.4	-44.9	1.25	-1.00	-3.20	
2,544.0	12.82	256.63	2,530.7	52.8	-119.6	-43.8	5.40	-4.20	14.93	
2,559.0	11.90	258.77	2,545.3	52.1	-122.8	-42.9	6.85	-6.13	14.27	
2,574.0	11.83	258.38	2,560.0	51.5	-125.8	-42.0	0.71	-0.47	-2.60	
2,587.0	11.81	258.12	2,572.7	50.9	-128.4	-41.3	0.44	-0.15	-2.00	
2,600.0	11.82	257.92	2,585.4	50.4	-131.0	-40.6	0.32	0.08	-1.54	
2,613.0	11.84	257.74	2,598.2	49.8	-133.6	-39.8	0.32	0.15	-1.38	
2,626.0	11.87	257.60	2,610.9	49.3	-136.2	-39.0	0.32	0.23	-1.08	
2,639.0	11.90	257.48	2,623.6	48.7	-138.8	-38.3	0.30	0.23	-0.92	
2,652.0	11.93	257.39	2,636.3	48.1	-141.5	-37.5	0.27	0.23	-0.69	
2,665.0	11.94	257.33	2,649.1	47.5	-144.1	-36.7	0.12	0.08	-0.46	
2,680.0	11.93	257.33	2,663.7	46.8	-147.1	-35.8	0.07	-0.07	0.00	
2,695.0	11.90	257.36	2,678.4	46.1	-150.1	-34.9	0.20	-0.20	0.20	
2,710.0	11.87	257.42	2,693.1	45.5	-153.2	-34.0	0.22	-0.20	0.40	
2,725.0	11.83	257.49	2,707.8	44.8	-156.2	-33.1	0.28	-0.27	0.47	
2,740.0	11.79	257.56	2,722.4	44.1	-159.2	-32.3	0.28	-0.27	0.47	
2,755.0	11.77	257.63	2,737.1	43.5	-162.1	-31.4	0.16	-0.13	0.47	
2,768.0	11.76	258.26	2,749.9	42.9	-164.7	-30.6	0.99	-0.08	4.85	
2,781.0	11.84	262.11	2,762.6	42.5	-167.4	-30.0	6.09	0.62	29.62	
2,794.0	12.12	268.10	2,775.3	42.2	-170.0	-29.6	9.80	2.15	46.08	
2,807.0	12.19	269.05	2,788.0	42.2	-172.8	-29.3	1.63	0.54	7.31	
2,820.0	12.22	269.08	2,800.7	42.1	-175.5	-29.0	0.24	0.23	0.23	
2,833.0	12.26	269.11	2,813.4	42.1	-178.3	-28.8	0.31	0.31	0.23	
2,846.0	12.30	269.15	2,826.1	42.0	-181.0	-28.5	0.31	0.31	0.31	
2,859.0	12.36	269.18	2,838.8	42.0	-183.8	-28.3	0.46	0.46	0.23	
2,872.0	12.41	269.20	2,851.5	42.0	-186.6	-28.1	0.39	0.38	0.15	
2,885.0	12.47	269.22	2,864.2	41.9	-189.4	-27.8	0.46	0.46	0.15	
2,898.0	12.53	269.22	2,876.9	41.9	-192.2	-27.6	0.46	0.46	0.00	
2,911.0	12.58	269.19	2,889.6	41.9	-195.1	-27.3	0.39	0.38	-0.23	
2,924.0	12.63	269.13	2,902.3	41.8	-197.9	-27.1	0.40	0.38	-0.46	
2,937.0	12.65	269.03	2,915.0	41.8	-200.7	-26.8	0.23	0.15	-0.77	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
2,952.0	12.66	268.82	2,929.6	41.7	-204.0	-26.5	0.31	0.07	-1.40	
2,967.0	12.65	268.55	2,944.2	41.6	-207.3	-26.2	0.40	-0.07	-1.80	
2,982.0	12.64	268.25	2,958.9	41.5	-210.6	-25.9	0.44	-0.07	-2.00	
2,997.0	12.61	267.93	2,973.5	41.4	-213.9	-25.5	0.51	-0.20	-2.13	
3,012.0	12.59	267.60	2,988.2	41.3	-217.1	-25.1	0.50	-0.13	-2.20	
3,027.0	12.58	267.27	3,002.8	41.2	-220.4	-24.7	0.48	-0.07	-2.20	
3,042.0	12.59	266.97	3,017.4	41.0	-223.7	-24.3	0.44	0.07	-2.00	
3,057.0	12.60	266.68	3,032.1	40.8	-226.9	-23.9	0.43	0.07	-1.93	
3,072.0	12.62	266.40	3,046.7	40.6	-230.2	-23.5	0.43	0.13	-1.87	
3,087.0	12.64	266.13	3,061.3	40.4	-233.5	-23.0	0.42	0.13	-1.80	
3,102.0	12.68	265.87	3,076.0	40.2	-236.7	-22.6	0.46	0.27	-1.73	
3,117.0	12.72	265.61	3,090.6	39.9	-240.0	-22.1	0.47	0.27	-1.73	
3,130.0	12.77	265.40	3,103.3	39.7	-242.9	-21.6	0.52	0.38	-1.62	
3,143.0	12.82	265.18	3,116.0	39.5	-245.8	-21.2	0.54	0.38	-1.69	
3,156.0	12.87	264.97	3,128.6	39.2	-248.6	-20.7	0.53	0.38	-1.62	
3,169.0	12.92	264.76	3,141.3	39.0	-251.5	-20.3	0.53	0.38	-1.62	
3,182.0	12.96	264.54	3,154.0	38.7	-254.4	-19.8	0.49	0.31	-1.69	
3,195.0	12.98	264.30	3,166.7	38.4	-257.3	-19.3	0.44	0.15	-1.85	
3,208.0	12.98	264.03	3,179.3	38.1	-260.2	-18.8	0.47	0.00	-2.08	
3,223.0	12.94	263.69	3,193.9	37.7	-263.6	-18.2	0.57	-0.27	-2.27	
3,238.0	12.87	263.31	3,208.6	37.4	-266.9	-17.5	0.73	-0.47	-2.53	
3,253.0	12.77	262.92	3,223.2	37.0	-270.2	-16.9	0.88	-0.67	-2.60	
3,268.0	12.66	262.53	3,237.8	36.5	-273.5	-16.2	0.93	-0.73	-2.60	
3,283.0	12.53	262.15	3,252.5	36.1	-276.7	-15.6	1.03	-0.87	-2.53	
3,298.0	12.39	261.81	3,267.1	35.7	-279.9	-14.9	1.05	-0.93	-2.27	
3,311.0	12.23	261.58	3,279.8	35.3	-282.7	-14.3	1.29	-1.23	-1.77	
3,324.0	11.83	260.82	3,292.5	34.8	-285.4	-13.7	3.31	-3.08	-5.85	
3,337.0	11.39	261.19	3,305.3	34.4	-287.9	-13.1	3.43	-3.38	2.85	
3,350.0	11.29	265.65	3,318.0	34.1	-290.5	-12.6	6.79	-0.77	34.31	
3,363.0	11.04	267.86	3,330.8	34.0	-293.0	-12.2	3.81	-1.92	17.00	
3,376.0	10.87	267.73	3,343.5	33.9	-295.5	-12.0	1.32	-1.31	-1.00	
3,389.0	10.72	267.58	3,356.3	33.8	-297.9	-11.7	1.17	-1.15	-1.15	
3,404.0	10.60	267.32	3,371.0	33.7	-300.7	-11.4	0.86	-0.80	-1.73	
3,419.0	10.52	267.02	3,385.8	33.5	-303.4	-11.0	0.65	-0.53	-2.00	
3,434.0	10.46	266.70	3,400.5	33.4	-306.1	-10.7	0.56	-0.40	-2.13	
3,449.0	10.41	266.37	3,415.3	33.2	-308.9	-10.3	0.52	-0.33	-2.20	
3,464.0	10.38	266.04	3,430.0	33.0	-311.6	-9.9	0.44	-0.20	-2.20	
3,479.0	10.36	265.72	3,444.8	32.9	-314.2	-9.5	0.41	-0.13	-2.13	
3,492.0	10.34	265.47	3,457.6	32.7	-316.6	-9.2	0.38	-0.15	-1.92	
3,505.0	10.33	265.22	3,470.4	32.5	-318.9	-8.8	0.35	-0.08	-1.92	
3,518.0	10.33	264.99	3,483.2	32.3	-321.2	-8.5	0.32	0.00	-1.77	
3,531.0	10.32	264.76	3,495.9	32.1	-323.5	-8.1	0.33	-0.08	-1.77	
3,544.0	10.32	264.54	3,508.7	31.9	-325.9	-7.7	0.30	0.00	-1.69	
3,557.0	10.33	264.31	3,521.5	31.6	-328.2	-7.3	0.33	0.08	-1.77	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
3,570.0	10.33	264.09	3,534.3	31.4	-330.5	-6.9	0.30	0.00	-1.69	
3,585.0	10.34	263.83	3,549.1	31.1	-333.2	-6.4	0.32	0.07	-1.73	
3,600.0	10.35	263.57	3,563.8	30.8	-335.9	-5.9	0.32	0.07	-1.73	
3,615.0	10.36	263.32	3,578.6	30.5	-338.5	-5.4	0.31	0.07	-1.67	
3,630.0	10.36	263.09	3,593.3	30.2	-341.2	-4.9	0.28	0.00	-1.53	
3,645.0	10.36	262.88	3,608.1	29.9	-343.9	-4.4	0.25	0.00	-1.40	
3,660.0	10.34	262.69	3,622.8	29.5	-346.6	-3.8	0.26	-0.13	-1.27	
3,675.0	10.31	262.55	3,637.6	29.2	-349.2	-3.3	0.26	-0.20	-0.93	
3,690.0	10.26	262.47	3,652.4	28.8	-351.9	-2.7	0.35	-0.33	-0.53	
3,705.0	10.21	262.50	3,667.1	28.5	-354.5	-2.2	0.34	-0.33	0.20	
3,720.0	10.15	262.69	3,681.9	28.1	-357.2	-1.7	0.46	-0.40	1.27	
3,735.0	10.10	263.14	3,696.7	27.8	-359.8	-1.1	0.62	-0.33	3.00	
3,750.0	10.05	263.99	3,711.4	27.5	-362.4	-0.7	1.05	-0.33	5.67	
3,763.0	10.07	265.36	3,724.2	27.3	-364.6	-0.3	1.85	0.15	10.54	
3,776.0	10.23	266.77	3,737.0	27.2	-366.9	0.0	2.27	1.23	10.85	
3,789.0	9.80	269.18	3,749.8	27.1	-369.2	0.3	4.62	-3.31	18.54	
3,802.0	10.05	274.83	3,762.6	27.2	-371.4	0.4	7.73	1.92	43.46	
3,815.0	10.25	278.14	3,775.4	27.4	-373.7	0.3	4.74	1.54	25.46	
3,828.0	10.21	280.13	3,788.2	27.8	-376.0	0.1	2.74	-0.31	15.31	
3,841.0	10.23	281.53	3,801.0	28.2	-378.2	-0.2	1.92	0.15	10.77	
3,856.0	10.20	282.38	3,815.8	28.8	-380.8	-0.5	1.02	-0.20	5.67	
3,871.0	10.15	282.73	3,830.5	29.3	-383.4	-0.9	0.53	-0.33	2.33	
3,886.0	10.09	282.77	3,845.3	29.9	-386.0	-1.3	0.40	-0.40	0.27	
3,901.0	10.03	282.61	3,860.1	30.5	-388.6	-1.7	0.44	-0.40	-1.07	
3,916.0	9.96	282.33	3,874.8	31.1	-391.1	-2.1	0.57	-0.47	-1.87	
3,931.0	9.88	282.00	3,889.6	31.6	-393.6	-2.4	0.65	-0.53	-2.20	
3,944.0	9.80	281.74	3,902.4	32.1	-395.8	-2.7	0.70	-0.62	-2.00	
3,957.0	9.72	281.49	3,915.2	32.5	-398.0	-3.0	0.70	-0.62	-1.92	
3,970.0	9.66	281.49	3,928.1	32.9	-400.1	-3.3	0.46	-0.46	0.00	
3,983.0	9.52	281.69	3,940.9	33.4	-402.2	-3.6	1.11	-1.08	1.54	
3,996.0	9.25	282.87	3,953.7	33.8	-404.3	-3.8	2.55	-2.08	9.08	
4,009.0	9.20	282.63	3,966.5	34.3	-406.3	-4.2	0.49	-0.38	-1.85	
4,022.0	9.18	282.39	3,979.4	34.7	-408.4	-4.5	0.33	-0.15	-1.85	
4,037.0	9.19	282.12	3,994.2	35.2	-410.7	-4.8	0.29	0.07	-1.80	
4,052.0	9.23	281.86	4,009.0	35.7	-413.0	-5.1	0.38	0.27	-1.73	
4,067.0	9.29	281.62	4,023.8	36.2	-415.4	-5.4	0.48	0.40	-1.60	
4,082.0	9.36	281.39	4,038.6	36.7	-417.8	-5.7	0.53	0.47	-1.53	
4,097.0	9.43	281.18	4,053.4	37.2	-420.2	-6.0	0.52	0.47	-1.40	
4,112.0	9.50	281.01	4,068.2	37.7	-422.6	-6.3	0.50	0.47	-1.13	
4,127.0	9.57	280.88	4,083.0	38.1	-425.0	-6.6	0.49	0.47	-0.87	
4,142.0	9.63	280.79	4,097.8	38.6	-427.5	-6.9	0.41	0.40	-0.60	
4,157.0	9.70	280.74	4,112.6	39.1	-430.0	-7.2	0.47	0.47	-0.33	
4,172.0	9.76	280.73	4,127.3	39.6	-432.5	-7.5	0.40	0.40	-0.07	

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Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,187.0	9.83	280.76	4,142.1	40.0	-435.0	-7.8	0.47	0.47	0.20	
4,202.0	9.90	280.87	4,156.9	40.5	-437.5	-8.1	0.48	0.47	0.73	
4,217.0	9.98	281.09	4,171.7	41.0	-440.0	-8.4	0.59	0.53	1.47	
4,232.0	10.06	281.36	4,186.4	41.5	-442.6	-8.7	0.62	0.53	1.80	
4,247.0	10.14	281.65	4,201.2	42.0	-445.2	-9.0	0.63	0.53	1.93	
4,262.0	10.22	281.92	4,216.0	42.6	-447.8	-9.4	0.62	0.53	1.80	
4,277.0	10.29	282.15	4,230.7	43.1	-450.4	-9.7	0.54	0.47	1.53	
4,292.0	10.34	282.30	4,245.5	43.7	-453.0	-10.1	0.38	0.33	1.00	
4,305.0	10.42	282.76	4,258.3	44.2	-455.3	-10.4	0.89	0.62	3.54	
4,318.0	10.76	285.50	4,271.1	44.8	-457.6	-10.9	4.67	2.62	21.08	
4,331.0	10.49	290.92	4,283.8	45.5	-459.9	-11.4	7.96	-2.08	41.69	
4,344.0	10.22	293.24	4,296.6	46.4	-462.1	-12.1	3.82	-2.08	17.85	
4,357.0	10.16	293.30	4,309.4	47.3	-464.2	-12.9	0.47	-0.46	0.46	
4,370.0	10.14	292.98	4,322.2	48.2	-466.3	-13.6	0.46	-0.15	-2.46	
4,383.0	10.10	292.63	4,335.0	49.1	-468.4	-14.4	0.56	-0.31	-2.69	
4,398.0	10.00	292.22	4,349.8	50.1	-470.8	-15.2	0.82	-0.67	-2.73	
4,413.0	9.86	291.79	4,364.6	51.1	-473.2	-16.0	1.06	-0.93	-2.87	
4,428.0	9.71	291.36	4,379.3	52.0	-475.6	-16.7	1.11	-1.00	-2.87	
4,443.0	9.55	290.94	4,394.1	52.9	-477.9	-17.5	1.16	-1.07	-2.80	
4,458.0	9.39	290.54	4,408.9	53.8	-480.2	-18.2	1.15	-1.07	-2.67	
4,473.0	9.24	290.20	4,423.7	54.6	-482.5	-18.8	1.07	-1.00	-2.27	
4,486.0	9.13	290.02	4,436.6	55.4	-484.4	-19.4	0.87	-0.85	-1.38	
4,499.0	9.04	289.90	4,449.4	56.1	-486.4	-20.0	0.71	-0.69	-0.92	
4,512.0	8.95	289.80	4,462.2	56.8	-488.3	-20.5	0.70	-0.69	-0.77	
4,525.0	8.86	289.71	4,475.1	57.4	-490.2	-21.0	0.70	-0.69	-0.69	
4,538.0	8.77	289.61	4,487.9	58.1	-492.1	-21.6	0.70	-0.69	-0.77	
4,551.0	8.68	289.49	4,500.8	58.8	-493.9	-22.1	0.71	-0.69	-0.92	
4,564.0	8.57	289.31	4,513.6	59.4	-495.7	-22.6	0.87	-0.85	-1.38	
4,579.0	8.43	288.99	4,528.5	60.1	-497.8	-23.2	0.99	-0.93	-2.13	
4,594.0	8.28	288.62	4,543.3	60.8	-499.9	-23.7	1.06	-1.00	-2.47	
4,609.0	8.11	288.26	4,558.2	61.5	-501.9	-24.2	1.18	-1.13	-2.40	
4,624.0	7.94	287.96	4,573.0	62.2	-503.9	-24.7	1.17	-1.13	-2.00	
4,639.0	7.75	287.81	4,587.9	62.8	-505.9	-25.2	1.27	-1.27	-1.00	
4,654.0	7.54	287.95	4,602.7	63.4	-507.8	-25.7	1.41	-1.40	0.93	
4,669.0	7.31	288.66	4,617.6	64.0	-509.6	-26.2	1.65	-1.53	4.73	
4,684.0	7.08	289.62	4,632.5	64.6	-511.4	-26.7	1.73	-1.53	6.40	
4,699.0	6.76	289.66	4,647.4	65.2	-513.1	-27.1	2.13	-2.13	0.27	
4,714.0	7.38	291.79	4,662.3	65.9	-514.8	-27.7	4.49	4.13	14.20	
4,729.0	8.74	294.50	4,677.1	66.7	-516.7	-28.3	9.41	9.07	18.07	
4,744.0	9.82	294.42	4,691.9	67.7	-518.9	-29.2	7.20	7.20	-0.53	
4,757.0	9.75	294.44	4,704.7	68.6	-521.0	-29.9	0.54	-0.54	0.15	
4,770.0	9.69	294.39	4,717.5	69.5	-523.0	-30.7	0.47	-0.46	-0.38	
4,783.0	9.64	294.30	4,730.4	70.4	-524.9	-31.5	0.40	-0.38	-0.69	

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Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,796.0	9.59	294.19	4,743.2	71.3	-526.9	-32.2	0.41	-0.38	-0.85
4,809.0	9.54	294.05	4,756.0	72.2	-528.9	-32.9	0.42	-0.38	-1.08
4,822.0	9.49	293.89	4,768.8	73.1	-530.9	-33.7	0.44	-0.38	-1.23
4,835.0	9.43	293.72	4,781.6	74.0	-532.8	-34.4	0.51	-0.46	-1.31
4,850.0	9.35	293.54	4,796.4	74.9	-535.1	-35.2	0.57	-0.53	-1.20
4,865.0	9.25	293.35	4,811.2	75.9	-537.3	-36.0	0.70	-0.67	-1.27
4,880.0	9.15	293.15	4,826.0	76.9	-539.5	-36.8	0.70	-0.67	-1.33
4,895.0	9.05	292.96	4,840.9	77.8	-541.7	-37.5	0.70	-0.67	-1.27
4,910.0	8.97	292.77	4,855.7	78.7	-543.8	-38.3	0.57	-0.53	-1.27
4,925.0	8.89	292.59	4,870.5	79.6	-546.0	-39.0	0.56	-0.53	-1.20
4,940.0	8.84	292.45	4,885.3	80.5	-548.1	-39.7	0.36	-0.33	-0.93
4,955.0	8.81	292.32	4,900.1	81.4	-550.2	-40.5	0.24	-0.20	-0.87
4,970.0	8.79	292.19	4,915.0	82.2	-552.4	-41.2	0.19	-0.13	-0.87
4,985.0	8.77	292.06	4,929.8	83.1	-554.5	-41.9	0.19	-0.13	-0.87
5,000.0	8.75	291.92	4,944.6	83.9	-556.6	-42.6	0.19	-0.13	-0.93
5,015.0	8.73	291.76	4,959.4	84.8	-558.7	-43.3	0.21	-0.13	-1.07
5,028.0	8.70	291.58	4,972.3	85.5	-560.6	-43.8	0.31	-0.23	-1.38
5,041.0	8.66	291.38	4,985.1	86.2	-562.4	-44.4	0.39	-0.31	-1.54
5,054.0	8.62	291.17	4,998.0	86.9	-564.2	-45.0	0.39	-0.31	-1.62
5,067.0	8.57	290.94	5,010.8	87.6	-566.0	-45.6	0.47	-0.38	-1.77
5,080.0	8.52	290.71	5,023.7	88.3	-567.8	-46.1	0.47	-0.38	-1.77
5,093.0	8.45	290.47	5,036.6	89.0	-569.6	-46.7	0.60	-0.54	-1.85
5,106.0	8.36	290.22	5,049.4	89.7	-571.4	-47.2	0.75	-0.69	-1.92
5,121.0	8.23	289.94	5,064.3	90.4	-573.4	-47.8	0.91	-0.87	-1.87
5,136.0	8.08	289.67	5,079.1	91.1	-575.4	-48.3	1.03	-1.00	-1.80
5,151.0	7.93	289.38	5,094.0	91.8	-577.4	-48.9	1.04	-1.00	-1.93
5,166.0	7.78	289.10	5,108.8	92.5	-579.3	-49.4	1.03	-1.00	-1.87
5,181.0	7.65	288.82	5,123.7	93.2	-581.2	-49.9	0.90	-0.87	-1.87
5,196.0	7.56	288.54	5,138.6	93.8	-583.1	-50.4	0.65	-0.60	-1.87
5,211.0	7.52	288.30	5,153.4	94.4	-585.0	-50.9	0.34	-0.27	-1.60
5,226.0	7.52	288.07	5,168.3	95.0	-586.9	-51.4	0.20	0.00	-1.53
5,241.0	7.53	287.89	5,183.2	95.6	-588.7	-51.8	0.17	0.07	-1.20
5,256.0	7.55	287.76	5,198.0	96.2	-590.6	-52.3	0.18	0.13	-0.87
5,271.0	7.56	287.71	5,212.9	96.8	-592.5	-52.8	0.08	0.07	-0.33
5,286.0	7.56	287.79	5,227.8	97.4	-594.4	-53.2	0.07	0.00	0.53
5,299.0	7.53	288.04	5,240.7	98.0	-596.0	-53.6	0.34	-0.23	1.92
5,312.0	8.22	289.61	5,253.5	98.5	-597.7	-54.1	5.56	5.31	12.08
5,325.0	8.96	292.60	5,266.4	99.2	-599.5	-54.7	6.65	5.69	23.00
5,338.0	9.09	293.57	5,279.2	100.0	-601.3	-55.3	1.54	1.00	7.46
5,351.0	9.02	294.03	5,292.1	100.9	-603.2	-56.0	0.77	-0.54	3.54
5,364.0	8.96	294.48	5,304.9	101.7	-605.1	-56.7	0.71	-0.46	3.46
5,377.0	8.90	294.86	5,317.8	102.5	-606.9	-57.4	0.65	-0.46	2.92
5,390.0	8.85	295.03	5,330.6	103.4	-608.7	-58.1	0.43	-0.38	1.31
5,403.0	8.81	295.08	5,343.4	104.2	-610.5	-58.8	0.31	-0.31	0.38

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
5,416.0	8.78	295.05	5,356.3	105.1	-612.3	-59.5	0.23	-0.23	-0.23
5,429.0	8.75	294.96	5,369.1	105.9	-614.1	-60.2	0.25	-0.23	-0.69
5,442.0	8.71	294.84	5,382.0	106.7	-615.9	-60.9	0.34	-0.31	-0.92
5,455.0	8.67	294.70	5,394.8	107.6	-617.7	-61.6	0.35	-0.31	-1.08
5,468.0	8.62	294.56	5,407.7	108.4	-619.5	-62.3	0.42	-0.38	-1.08
5,483.0	8.54	294.41	5,422.5	109.3	-621.5	-63.1	0.55	-0.53	-1.00
5,498.0	8.44	294.26	5,437.4	110.2	-623.5	-63.8	0.68	-0.67	-1.00
5,513.0	8.34	294.11	5,452.2	111.1	-625.5	-64.6	0.68	-0.67	-1.00
5,528.0	8.24	293.95	5,467.0	112.0	-627.5	-65.3	0.68	-0.67	-1.07
5,543.0	8.14	293.78	5,481.9	112.9	-629.5	-66.0	0.69	-0.67	-1.13
5,558.0	8.05	293.58	5,496.7	113.7	-631.4	-66.7	0.63	-0.60	-1.33
5,571.0	7.99	293.39	5,509.6	114.4	-633.1	-67.3	0.50	-0.46	-1.46
5,584.0	7.94	293.18	5,522.5	115.1	-634.7	-67.9	0.45	-0.38	-1.62
5,597.0	7.90	292.96	5,535.4	115.8	-636.4	-68.5	0.39	-0.31	-1.69
5,610.0	7.85	292.75	5,548.2	116.5	-638.0	-69.1	0.44	-0.38	-1.62
5,623.0	7.81	292.54	5,561.1	117.2	-639.6	-69.6	0.38	-0.31	-1.62
5,636.0	7.77	292.35	5,574.0	117.9	-641.3	-70.2	0.37	-0.31	-1.46
5,649.0	7.72	292.18	5,586.9	118.6	-642.9	-70.7	0.42	-0.38	-1.31
5,664.0	7.65	292.07	5,601.7	119.3	-644.7	-71.3	0.48	-0.47	-0.73
5,679.0	7.58	292.00	5,616.6	120.1	-646.6	-71.9	0.47	-0.47	-0.47
5,694.0	7.50	291.94	5,631.5	120.8	-648.4	-72.5	0.54	-0.53	-0.40
5,709.0	7.42	291.88	5,646.4	121.5	-650.2	-73.1	0.54	-0.53	-0.40
5,724.0	7.34	291.81	5,661.2	122.2	-652.0	-73.7	0.54	-0.53	-0.47
5,739.0	7.26	291.71	5,676.1	122.9	-653.8	-74.3	0.54	-0.53	-0.67
5,752.0	7.20	291.56	5,689.0	123.5	-655.3	-74.8	0.48	-0.46	-1.15
5,765.0	7.13	291.39	5,701.9	124.1	-656.8	-75.2	0.56	-0.54	-1.31
5,778.0	7.07	291.19	5,714.8	124.7	-658.3	-75.7	0.50	-0.46	-1.54
5,791.0	7.01	290.98	5,727.7	125.3	-659.8	-76.2	0.50	-0.46	-1.62
5,804.0	6.95	290.76	5,740.6	125.9	-661.3	-76.6	0.51	-0.46	-1.69
5,817.0	6.89	290.55	5,753.5	126.4	-662.7	-77.1	0.50	-0.46	-1.62
5,830.0	6.83	290.36	5,766.4	127.0	-664.2	-77.5	0.49	-0.46	-1.46
5,845.0	6.77	290.17	5,781.3	127.6	-665.9	-78.0	0.43	-0.40	-1.27
5,860.0	6.70	290.00	5,796.2	128.2	-667.5	-78.5	0.49	-0.47	-1.13
5,875.0	6.63	289.80	5,811.1	128.8	-669.1	-79.0	0.49	-0.47	-1.33
5,890.0	6.55	289.55	5,826.0	129.3	-670.8	-79.4	0.57	-0.53	-1.67
5,905.0	6.46	289.20	5,840.9	129.9	-672.4	-79.9	0.66	-0.60	-2.33
5,920.0	6.34	288.67	5,855.8	130.5	-673.9	-80.3	0.89	-0.80	-3.53
5,933.0	6.19	287.96	5,868.7	130.9	-675.3	-80.6	1.30	-1.15	-5.46
5,946.0	6.03	287.08	5,881.7	131.3	-676.6	-80.9	1.43	-1.23	-6.77
5,959.0	5.85	286.08	5,894.6	131.7	-677.9	-81.2	1.60	-1.38	-7.69
5,972.0	5.67	284.99	5,907.5	132.0	-679.2	-81.5	1.62	-1.38	-8.38
5,985.0	5.49	283.84	5,920.5	132.4	-680.4	-81.7	1.63	-1.38	-8.85
5,998.0	5.32	282.68	5,933.4	132.6	-681.6	-81.9	1.55	-1.31	-8.92

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
6,011.0	5.15	281.60	5,946.4	132.9	-682.7	-82.1	1.51	-1.31	-8.31
6,026.0	4.96	280.83	5,961.3	133.2	-684.0	-82.2	1.34	-1.27	-5.13
6,041.0	4.79	280.23	5,976.3	133.4	-685.3	-82.4	1.18	-1.13	-4.00
6,056.0	4.63	279.74	5,991.2	133.6	-686.5	-82.5	1.10	-1.07	-3.27
6,071.0	4.49	279.34	6,006.2	133.8	-687.7	-82.6	0.96	-0.93	-2.67
6,086.0	4.37	278.99	6,021.1	134.0	-688.8	-82.7	0.82	-0.80	-2.33
6,101.0	4.28	278.68	6,036.1	134.2	-689.9	-82.8	0.62	-0.60	-2.07
6,114.0	4.24	278.45	6,049.0	134.3	-690.9	-82.9	0.33	-0.31	-1.77
6,127.0	4.65	285.87	6,062.0	134.5	-691.9	-83.0	5.43	3.15	57.08
6,140.0	5.43	287.81	6,074.9	134.8	-693.0	-83.3	6.14	6.00	14.92
6,153.0	5.45	287.67	6,087.9	135.2	-694.1	-83.5	0.18	0.15	-1.08
6,166.0	5.49	287.57	6,100.8	135.6	-695.3	-83.8	0.32	0.31	-0.77
6,179.0	5.53	287.55	6,113.8	136.0	-696.5	-84.1	0.31	0.31	-0.15
6,192.0	5.57	287.65	6,126.7	136.4	-697.7	-84.4	0.32	0.31	0.77
6,207.0	5.58	287.98	6,141.6	136.8	-699.1	-84.7	0.22	0.07	2.20
6,222.0	5.57	288.45	6,156.6	137.3	-700.5	-85.1	0.31	-0.07	3.13
6,237.0	5.56	289.00	6,171.5	137.7	-701.9	-85.5	0.36	-0.07	3.67
6,252.0	5.54	289.61	6,186.4	138.2	-703.2	-85.8	0.42	-0.13	4.07
6,267.0	5.53	290.23	6,201.3	138.7	-704.6	-86.2	0.40	-0.07	4.13
6,282.0	5.52	290.83	6,216.3	139.2	-705.9	-86.6	0.39	-0.07	4.00
6,295.0	5.52	291.32	6,229.2	139.6	-707.1	-87.0	0.36	0.00	3.77
6,308.0	5.53	291.79	6,242.2	140.1	-708.3	-87.4	0.36	0.08	3.62
6,321.0	5.54	292.25	6,255.1	140.6	-709.4	-87.8	0.35	0.08	3.54
6,334.0	5.53	292.70	6,268.0	141.1	-710.6	-88.1	0.34	-0.08	3.46
6,347.0	5.52	293.16	6,281.0	141.5	-711.7	-88.5	0.35	-0.08	3.54
6,360.0	5.47	293.66	6,293.9	142.0	-712.9	-89.0	0.53	-0.38	3.85
6,373.0	5.39	294.23	6,306.9	142.5	-714.0	-89.4	0.74	-0.62	4.38
6,388.0	5.23	294.94	6,321.8	143.1	-715.3	-89.9	1.15	-1.07	4.73
6,403.0	5.02	295.69	6,336.7	143.7	-716.5	-90.3	1.47	-1.40	5.00
6,418.0	4.78	296.39	6,351.7	144.3	-717.6	-90.8	1.65	-1.60	4.67
6,433.0	4.53	296.92	6,366.6	144.8	-718.7	-91.3	1.69	-1.67	3.53
6,448.0	4.27	297.07	6,381.6	145.3	-719.7	-91.7	1.74	-1.73	1.00
6,463.0	4.02	296.49	6,396.5	145.8	-720.7	-92.1	1.69	-1.67	-3.87
6,478.0	3.80	294.41	6,411.5	146.2	-721.6	-92.5	1.74	-1.47	-13.87
6,493.0	3.60	291.26	6,426.5	146.6	-722.5	-92.8	1.90	-1.33	-21.00
6,508.0	3.42	287.26	6,441.5	146.9	-723.4	-93.1	2.03	-1.20	-26.67
6,523.0	3.28	282.57	6,456.4	147.2	-724.2	-93.2	2.05	-0.93	-31.27
6,538.0	3.15	277.38	6,471.4	147.3	-725.1	-93.3	2.12	-0.87	-34.60
6,553.0	3.05	271.88	6,486.4	147.4	-725.9	-93.3	2.09	-0.67	-36.67
6,566.0	2.86	268.21	6,499.4	147.4	-726.5	-93.3	2.06	-1.46	-28.23
6,579.0	2.67	264.34	6,512.3	147.3	-727.2	-93.2	2.05	-1.46	-29.77
6,592.0	2.50	260.12	6,525.3	147.2	-727.8	-93.1	1.96	-1.31	-32.46
6,605.0	2.33	255.46	6,538.3	147.1	-728.3	-92.9	2.00	-1.31	-35.85

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
6,618.0	2.20	250.34	6,551.3	147.0	-728.8	-92.7	1.85	-1.00	-39.38
6,631.0	2.09	244.83	6,564.3	146.8	-729.2	-92.5	1.80	-0.85	-42.38
6,644.0	2.03	239.18	6,577.3	146.6	-729.6	-92.2	1.63	-0.46	-43.46
6,659.0	1.94	233.60	6,592.3	146.3	-730.1	-91.9	1.42	-0.60	-37.20
6,674.0	1.88	227.93	6,607.3	146.0	-730.5	-91.6	1.32	-0.40	-37.80
6,689.0	1.86	222.37	6,622.3	145.6	-730.8	-91.2	1.22	-0.13	-37.07
6,704.0	1.87	217.09	6,637.3	145.3	-731.1	-90.8	1.15	0.07	-35.20
6,719.0	1.88	212.23	6,652.3	144.9	-731.4	-90.4	1.06	0.07	-32.40
6,734.0	1.90	207.87	6,667.2	144.4	-731.6	-89.9	0.97	0.13	-29.07
6,747.0	1.89	204.56	6,680.2	144.0	-731.8	-89.5	0.85	-0.08	-25.46
6,760.0	1.87	201.56	6,693.2	143.6	-732.0	-89.1	0.77	-0.15	-23.08
6,773.0	1.85	198.83	6,706.2	143.3	-732.1	-88.7	0.70	-0.15	-21.00
6,786.0	1.83	196.33	6,719.2	142.9	-732.3	-88.3	0.64	-0.15	-19.23
6,799.0	1.80	194.06	6,732.2	142.5	-732.4	-87.9	0.60	-0.23	-17.46
6,812.0	1.77	192.02	6,745.2	142.1	-732.5	-87.5	0.54	-0.23	-15.69
6,825.0	1.72	190.25	6,758.2	141.7	-732.6	-87.1	0.57	-0.38	-13.62
6,840.0	1.64	188.60	6,773.2	141.2	-732.6	-86.7	0.62	-0.53	-11.00
6,855.0	1.54	187.26	6,788.2	140.8	-732.7	-86.3	0.71	-0.67	-8.93
6,870.0	1.44	186.16	6,803.2	140.4	-732.7	-85.9	0.69	-0.67	-7.33
6,885.0	1.33	185.26	6,818.2	140.1	-732.8	-85.5	0.75	-0.73	-6.00
6,900.0	1.23	184.55	6,833.2	139.7	-732.8	-85.2	0.67	-0.67	-4.73
6,915.0	1.14	184.01	6,848.2	139.4	-732.8	-84.9	0.60	-0.60	-3.60
6,928.0	1.08	183.24	6,861.2	139.2	-732.8	-84.6	0.48	-0.46	-5.92
6,941.0	0.62	167.93	6,874.2	139.0	-732.8	-84.4	3.92	-3.54	-117.77
6,954.0	0.45	146.59	6,887.2	138.9	-732.8	-84.3	1.99	-1.31	-164.15
6,967.0	0.47	155.64	6,900.2	138.8	-732.7	-84.3	0.58	0.15	69.62
6,980.0	0.51	163.63	6,913.2	138.7	-732.7	-84.1	0.61	0.31	61.46
6,993.0	0.55	170.47	6,926.2	138.6	-732.7	-84.0	0.58	0.31	52.62
7,006.0	0.60	176.25	6,939.2	138.4	-732.7	-83.9	0.59	0.38	44.46
7,021.0	0.65	169.41	6,954.2	138.3	-732.6	-83.7	0.60	0.33	-45.60
7,036.0	0.70	163.55	6,969.2	138.1	-732.6	-83.6	0.57	0.33	-39.07
7,051.0	0.76	158.56	6,984.2	137.9	-732.5	-83.4	0.58	0.40	-33.27
7,066.0	0.83	154.33	6,999.2	137.7	-732.4	-83.2	0.61	0.47	-28.20
7,081.0	0.90	150.74	7,014.2	137.5	-732.3	-83.0	0.59	0.47	-23.93
7,096.0	0.97	147.66	7,029.2	137.3	-732.2	-82.8	0.57	0.47	-20.53
7,109.0	0.95	147.06	7,042.2	137.1	-732.1	-82.7	0.17	-0.15	-4.62
7,122.0	0.92	146.43	7,055.2	137.0	-732.0	-82.5	0.24	-0.23	-4.85
7,135.0	0.90	145.77	7,068.2	136.8	-731.9	-82.3	0.17	-0.15	-5.08
7,148.0	0.88	145.08	7,081.2	136.6	-731.7	-82.2	0.17	-0.15	-5.31
7,161.0	0.86	144.36	7,094.1	136.5	-731.6	-82.0	0.18	-0.15	-5.54
7,174.0	0.84	143.59	7,107.1	136.3	-731.5	-81.9	0.18	-0.15	-5.92
7,187.0	0.82	142.79	7,120.1	136.2	-731.4	-81.7	0.18	-0.15	-6.15
7,200.0	0.69	135.66	7,133.1	136.0	-731.3	-81.6	1.23	-1.00	-54.85
7,213.0	0.12	218.00	7,146.1	136.0	-731.3	-81.5	5.26	-4.38	633.38

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
7,226.0	0.57	274.79	7,159.1	136.0	-731.3	-81.5	3.96	3.46	436.85
7,239.0	0.80	301.96	7,172.1	136.0	-731.5	-81.6	3.01	1.77	209.00
7,252.0	0.80	310.69	7,185.1	136.1	-731.6	-81.7	0.94	0.00	67.15
7,265.0	0.81	319.23	7,198.1	136.2	-731.7	-81.8	0.93	0.08	65.69
7,278.0	0.85	327.22	7,211.1	136.4	-731.9	-81.9	0.94	0.31	61.46
7,293.0	0.69	325.68	7,226.1	136.6	-732.0	-82.1	1.08	-1.07	-10.27
7,308.0	0.53	323.20	7,241.1	136.7	-732.1	-82.2	1.08	-1.07	-16.53
7,323.0	0.37	318.57	7,256.1	136.8	-732.1	-82.3	1.09	-1.07	-30.87
7,338.0	0.22	307.21	7,271.1	136.8	-732.2	-82.3	1.07	-1.00	-75.73
7,353.0	0.10	261.33	7,286.1	136.9	-732.2	-82.4	1.11	-0.80	-305.87
7,368.0	0.16	189.89	7,301.1	136.8	-732.2	-82.3	1.06	0.40	-476.27
7,381.0	0.26	203.92	7,314.1	136.8	-732.3	-82.3	0.86	0.77	107.92
7,394.0	0.37	210.14	7,327.1	136.7	-732.3	-82.2	0.88	0.85	47.85
7,407.0	0.47	213.57	7,340.1	136.6	-732.3	-82.1	0.79	0.77	26.38
7,420.0	0.58	215.72	7,353.1	136.5	-732.4	-82.0	0.86	0.85	16.54
7,433.0	0.69	217.20	7,366.1	136.4	-732.5	-81.9	0.86	0.85	11.38
7,446.0	0.80	218.28	7,379.1	136.3	-732.6	-81.8	0.85	0.85	8.31
7,459.0	0.91	219.10	7,392.1	136.1	-732.7	-81.6	0.85	0.85	6.31
7,474.0	0.99	214.90	7,407.1	136.0	-732.9	-81.4	0.71	0.53	-28.00
7,489.0	1.07	211.33	7,422.1	135.7	-733.0	-81.2	0.68	0.53	-23.80
7,504.0	1.16	208.29	7,437.1	135.5	-733.2	-80.9	0.72	0.60	-20.27
7,519.0	1.24	205.67	7,452.1	135.2	-733.3	-80.6	0.65	0.53	-17.47
7,534.0	1.33	203.40	7,467.1	134.9	-733.4	-80.3	0.69	0.60	-15.13
7,549.0	1.43	201.43	7,482.1	134.6	-733.6	-80.0	0.74	0.67	-13.13
7,564.0	1.42	213.58	7,497.1	134.2	-733.7	-79.6	2.01	-0.07	81.00
7,579.0	1.50	226.86	7,512.1	133.9	-734.0	-79.3	2.31	0.53	88.53
7,594.0	1.66	238.69	7,527.1	133.7	-734.3	-79.0	2.42	1.07	78.87
7,609.0	1.87	247.80	7,542.1	133.5	-734.7	-78.8	2.33	1.40	60.73
7,624.0	2.10	254.14	7,557.1	133.3	-735.2	-78.6	2.12	1.53	42.27
7,639.0	2.34	263.27	7,572.1	133.2	-735.8	-78.4	2.84	1.60	60.87
7,652.0	2.69	277.37	7,585.1	133.2	-736.4	-78.4	5.45	2.69	108.46
7,665.0	3.11	288.39	7,598.0	133.4	-737.0	-78.5	5.36	3.23	84.77
7,678.0	3.16	288.94	7,611.0	133.6	-737.7	-78.7	0.45	0.38	4.23
7,691.0	3.23	288.90	7,624.0	133.8	-738.4	-78.9	0.54	0.54	-0.31
7,704.0	3.30	288.44	7,637.0	134.1	-739.1	-79.1	0.57	0.54	-3.54
7,717.0	3.38	287.68	7,650.0	134.3	-739.8	-79.2	0.70	0.62	-5.85
7,730.0	3.46	286.68	7,662.9	134.5	-740.5	-79.4	0.77	0.62	-7.69
7,745.0	3.52	285.07	7,677.9	134.8	-741.4	-79.6	0.77	0.40	-10.73
7,760.0	3.56	283.34	7,692.9	135.0	-742.3	-79.8	0.76	0.27	-11.53
7,775.0	3.59	281.63	7,707.9	135.2	-743.2	-79.9	0.74	0.20	-11.40
7,790.0	3.60	280.04	7,722.8	135.4	-744.1	-80.0	0.67	0.07	-10.60
7,805.0	3.58	278.71	7,737.8	135.5	-745.1	-80.1	0.57	-0.13	-8.87
7,820.0	3.52	277.82	7,752.8	135.7	-746.0	-80.2	0.54	-0.40	-5.93

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
7,835.0	3.37	278.32	7,767.7	135.8	-746.9	-80.2	1.02	-1.00	3.33	
7,850.0	3.18	279.60	7,782.7	135.9	-747.7	-80.3	1.36	-1.27	8.53	
7,865.0	2.98	281.45	7,797.7	136.1	-748.5	-80.4	1.49	-1.33	12.33	
7,880.0	2.79	283.72	7,812.7	136.2	-749.2	-80.5	1.48	-1.27	15.13	
7,895.0	2.60	286.18	7,827.7	136.4	-749.9	-80.6	1.48	-1.27	16.40	
7,910.0	2.45	288.46	7,842.6	136.6	-750.6	-80.8	1.20	-1.00	15.20	
7,923.0	2.20	295.86	7,855.6	136.8	-751.0	-80.9	3.00	-1.92	56.92	
7,936.0	1.89	312.94	7,868.6	137.1	-751.4	-81.1	5.23	-2.38	131.38	
7,949.0	1.77	322.24	7,881.6	137.4	-751.7	-81.4	2.46	-0.92	71.54	
7,962.0	1.73	321.29	7,894.6	137.7	-752.0	-81.7	0.38	-0.31	-7.31	
7,975.0	1.71	319.81	7,907.6	138.0	-752.2	-82.0	0.37	-0.15	-11.38	
7,988.0	1.70	317.79	7,920.6	138.3	-752.5	-82.3	0.47	-0.08	-15.54	
8,001.0	1.72	315.23	7,933.6	138.6	-752.7	-82.5	0.61	0.15	-19.69	
8,016.0	1.75	311.31	7,948.6	138.9	-753.1	-82.8	0.82	0.20	-26.13	
8,031.0	1.81	307.05	7,963.6	139.2	-753.4	-83.1	0.97	0.40	-28.40	
8,046.0	1.88	302.95	7,978.6	139.4	-753.8	-83.3	1.00	0.47	-27.33	
8,061.0	1.96	299.35	7,993.6	139.7	-754.2	-83.6	0.96	0.53	-24.00	
8,076.0	2.04	296.48	8,008.6	139.9	-754.7	-83.8	0.85	0.53	-19.13	
8,091.0	2.11	294.58	8,023.5	140.2	-755.2	-84.0	0.65	0.47	-12.67	
8,106.0	2.12	293.81	8,038.5	140.4	-755.7	-84.2	0.20	0.07	-5.13	
8,121.0	2.13	294.06	8,053.5	140.6	-756.2	-84.3	0.09	0.07	1.67	
8,136.0	2.13	295.05	8,068.5	140.9	-756.7	-84.5	0.25	0.00	6.60	
8,151.0	2.13	296.64	8,083.5	141.1	-757.2	-84.7	0.39	0.00	10.60	
8,166.0	2.13	298.79	8,098.5	141.4	-757.7	-85.0	0.53	0.00	14.33	
8,181.0	2.14	301.54	8,113.5	141.6	-758.2	-85.2	0.69	0.07	18.33	
8,194.0	2.15	304.82	8,126.5	141.9	-758.6	-85.4	0.95	0.08	25.23	
8,207.0	2.16	308.42	8,139.5	142.2	-759.0	-85.7	1.04	0.08	27.69	
8,220.0	2.17	312.06	8,152.5	142.5	-759.4	-86.0	1.06	0.08	28.00	
8,233.0	2.17	315.51	8,165.4	142.9	-759.7	-86.3	1.00	0.00	26.54	
8,246.0	2.16	318.58	8,178.4	143.2	-760.1	-86.6	0.90	-0.08	23.62	
8,259.0	2.11	321.06	8,191.4	143.6	-760.4	-87.0	0.81	-0.38	19.08	
8,272.0	2.01	322.68	8,204.4	144.0	-760.7	-87.3	0.89	-0.77	12.46	
8,287.0	1.80	319.99	8,219.4	144.3	-761.0	-87.7	1.52	-1.40	-17.93	
8,302.0	1.56	313.75	8,234.4	144.7	-761.3	-88.0	2.01	-1.60	-41.60	
8,317.0	1.35	303.40	8,249.4	144.9	-761.6	-88.2	2.24	-1.40	-69.00	
8,332.0	1.20	288.95	8,264.4	145.1	-761.9	-88.3	2.36	-1.00	-96.33	
8,347.0	1.16	272.75	8,279.4	145.1	-762.2	-88.4	2.23	-0.27	-108.00	
8,362.0	1.22	259.12	8,294.4	145.1	-762.5	-88.3	1.92	0.40	-90.87	
8,377.0	1.08	252.22	8,309.4	145.0	-762.8	-88.2	1.31	-0.93	-46.00	
8,392.0	1.17	243.05	8,324.4	144.9	-763.0	-88.1	1.34	0.60	-61.13	
8,407.0	1.31	237.04	8,339.4	144.7	-763.3	-87.9	1.27	0.93	-40.07	
8,422.0	1.47	232.24	8,354.4	144.5	-763.6	-87.7	1.32	1.07	-32.00	
8,437.0	1.63	228.35	8,369.4	144.3	-763.9	-87.4	1.28	1.07	-25.93	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
8,452.0	1.79	225.18	8,384.4	144.0	-764.2	-87.1	1.24	1.07	-21.13
8,465.0	1.84	223.89	8,397.4	143.7	-764.5	-86.8	0.50	0.38	-9.92
8,478.0	1.91	222.71	8,410.3	143.4	-764.8	-86.4	0.61	0.54	-9.08
8,491.0	1.99	221.75	8,423.3	143.0	-765.1	-86.1	0.66	0.62	-7.38
8,504.0	2.07	221.11	8,436.3	142.7	-765.4	-85.7	0.64	0.62	-4.92
8,517.0	2.14	220.91	8,449.3	142.3	-765.7	-85.3	0.54	0.54	-1.54
8,530.0	2.19	221.30	8,462.3	142.0	-766.1	-84.9	0.40	0.38	3.00
8,543.0	2.21	222.54	8,475.3	141.6	-766.4	-84.5	0.40	0.15	9.54
8,558.0	2.17	225.52	8,490.3	141.2	-766.8	-84.1	0.80	-0.27	19.87
8,573.0	2.11	229.67	8,505.3	140.8	-767.2	-83.7	1.11	-0.40	27.67
8,588.0	2.04	234.58	8,520.3	140.5	-767.6	-83.3	1.27	-0.47	32.73
8,603.0	1.98	239.77	8,535.3	140.2	-768.1	-83.0	1.28	-0.40	34.60
8,618.0	1.93	244.57	8,550.3	139.9	-768.5	-82.7	1.14	-0.33	32.00
8,633.0	1.89	248.09	8,565.2	139.7	-769.0	-82.5	0.83	-0.27	23.47
8,646.0	1.85	248.16	8,578.2	139.6	-769.4	-82.3	0.31	-0.31	0.54
8,659.0	1.84	247.03	8,591.2	139.4	-769.8	-82.1	0.29	-0.08	-8.69
8,672.0	1.84	245.20	8,604.2	139.2	-770.1	-81.9	0.45	0.00	-14.08
8,685.0	1.85	243.05	8,617.2	139.1	-770.5	-81.7	0.54	0.08	-16.54
8,698.0	1.88	240.93	8,630.2	138.9	-770.9	-81.5	0.58	0.23	-16.31
8,711.0	1.91	239.12	8,643.2	138.7	-771.3	-81.3	0.51	0.23	-13.92
8,724.0	1.94	237.90	8,656.2	138.4	-771.6	-81.0	0.39	0.23	-9.38
8,735.0	1.95	237.54	8,667.2	138.2	-772.0	-80.8	0.14	0.09	-3.27
8,746.0	1.97	237.57	8,678.2	138.0	-772.3	-80.6	0.18	0.18	0.27
8,757.0	1.98	237.75	8,689.2	137.8	-772.6	-80.3	0.11	0.09	1.64
8,771.6	1.96	238.29	8,703.7	137.6	-773.0	-80.0	0.19	-0.14	3.71
8,786.1	1.93	238.48	8,718.3	137.3	-773.4	-79.7	0.21	-0.21	1.30
8,800.7	1.89	238.41	8,732.9	137.0	-773.9	-79.5	0.28	-0.27	-0.48
8,815.3	1.84	237.91	8,747.4	136.8	-774.3	-79.2	0.36	-0.34	-3.43
8,829.9	2.22	249.02	8,762.0	136.6	-774.7	-78.9	3.74	2.61	76.25
8,844.4	2.13	247.52	8,776.6	136.4	-775.2	-78.7	0.73	-0.62	-10.30
8,859.0	2.00	244.74	8,791.1	136.2	-775.7	-78.4	1.13	-0.89	-19.08
8,874.0	1.81	239.11	8,806.1	135.9	-776.1	-78.2	1.78	-1.27	-37.53
8,889.0	3.02	218.04	8,821.1	135.5	-776.6	-77.7	9.88	8.07	-140.47
8,904.0	5.61	206.49	8,836.1	134.5	-777.2	-76.7	18.13	17.27	-77.00
8,919.0	8.35	200.62	8,850.9	132.8	-777.9	-75.0	18.85	18.27	-39.13
8,934.0	11.34	196.83	8,865.7	130.4	-778.7	-72.5	20.39	19.93	-25.27
8,949.0	14.34	195.28	8,880.3	127.2	-779.6	-69.2	20.13	20.00	-10.33
8,962.0	16.86	195.02	8,892.9	123.8	-780.5	-65.8	19.39	19.38	-2.00
8,975.0	19.06	194.77	8,905.2	120.0	-781.5	-61.9	16.93	16.92	-1.92
8,988.0	19.41	194.23	8,917.5	115.8	-782.6	-57.6	3.02	2.69	-4.15
9,001.0	19.65	193.15	8,929.8	111.6	-783.6	-53.4	3.33	1.85	-8.31
9,014.0	20.75	190.94	8,942.0	107.2	-784.6	-48.9	10.30	8.46	-17.00
9,027.0	22.88	187.81	8,954.0	102.4	-785.4	-44.1	18.66	16.38	-24.08
9,040.0	24.78	185.50	8,965.9	97.2	-786.0	-38.9	16.28	14.62	-17.77

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,055.0	24.91	184.93	8,979.5	90.9	-786.5	-32.5	1.82	0.87	-3.80	
9,070.0	25.25	184.22	8,993.1	84.6	-787.0	-26.2	3.03	2.27	-4.73	
9,085.0	25.56	183.57	9,006.7	78.2	-787.5	-19.8	2.78	2.07	-4.33	
9,100.0	26.14	182.90	9,020.2	71.7	-787.9	-13.2	4.33	3.87	-4.47	
9,115.0	28.90	181.72	9,033.5	64.7	-788.1	-6.3	18.75	18.40	-7.87	
9,130.0	31.79	180.50	9,046.4	57.2	-788.3	1.3	19.70	19.27	-8.13	
9,143.0	34.37	179.26	9,057.3	50.1	-788.3	8.3	20.52	19.85	-9.54	
9,156.0	35.48	178.66	9,068.0	42.6	-788.1	15.8	8.94	8.54	-4.62	
9,169.0	35.17	178.45	9,078.6	35.1	-787.9	23.2	2.56	-2.38	-1.62	
9,182.0	34.86	178.24	9,089.2	27.6	-787.7	30.7	2.56	-2.38	-1.62	
9,195.0	35.58	178.30	9,099.8	20.2	-787.5	38.1	5.54	5.54	0.46	
9,208.0	37.69	178.51	9,110.3	12.4	-787.3	45.8	16.26	16.23	1.62	
9,221.0	40.41	178.40	9,120.4	4.2	-787.1	54.0	20.93	20.92	-0.85	
9,236.0	43.56	177.85	9,131.5	-5.8	-786.7	64.0	21.14	21.00	-3.67	
9,251.0	46.42	177.31	9,142.1	-16.4	-786.3	74.5	19.24	19.07	-3.60	
9,266.0	47.08	177.35	9,152.4	-27.3	-785.8	85.3	4.40	4.40	0.27	
9,281.0	47.74	177.24	9,162.5	-38.4	-785.2	96.3	4.43	4.40	-0.73	
9,296.0	50.63	177.79	9,172.3	-49.7	-784.8	107.6	19.47	19.27	3.67	
9,311.0	53.83	178.12	9,181.5	-61.5	-784.3	119.4	21.40	21.33	2.20	
9,324.0	56.59	178.06	9,188.9	-72.2	-784.0	130.0	21.23	21.23	-0.46	
9,337.0	59.27	177.85	9,195.8	-83.2	-783.6	140.9	20.66	20.62	-1.62	
9,350.0	60.75	177.54	9,202.3	-94.5	-783.1	152.1	11.57	11.38	-2.38	
9,363.0	60.60	177.70	9,208.7	-105.8	-782.7	163.4	1.58	-1.15	1.23	
9,376.0	61.25	177.77	9,215.0	-117.1	-782.2	174.6	5.02	5.00	0.54	
9,377.5	61.54	177.77	9,215.7	-118.5	-782.2	176.0	19.08	19.08	-0.31	
FTP @ 9377' MD / 9215' TVD										
9,389.0	63.73	177.73	9,221.0	-128.7	-781.8	186.1	19.08	19.08	-0.31	
9,402.0	66.24	177.96	9,226.5	-140.4	-781.3	197.8	19.37	19.31	1.77	
9,417.0	67.69	178.61	9,232.4	-154.2	-780.9	211.5	10.46	9.67	4.33	
9,432.0	67.63	178.48	9,238.1	-168.1	-780.5	225.3	0.90	-0.40	-0.87	
9,447.0	67.58	178.33	9,243.8	-182.0	-780.2	239.1	0.98	-0.33	-1.00	
9,462.0	67.73	178.20	9,249.5	-195.8	-779.7	252.9	1.28	1.00	-0.87	
9,474.6	70.01	178.25	9,254.1	-207.6	-779.4	264.6	18.07	18.07	0.40	
70 DEG INC @ 9474' MD / 9254' TVD										
9,477.0	70.44	178.26	9,254.9	-209.8	-779.3	266.9	18.07	18.07	0.39	
9,492.0	73.31	177.98	9,259.5	-224.1	-778.8	281.0	19.22	19.13	-1.87	
9,505.0	74.27	178.04	9,263.2	-236.6	-778.4	293.5	7.40	7.38	0.46	
9,518.0	74.33	177.89	9,266.7	-249.1	-778.0	305.9	1.20	0.46	-1.15	
9,531.0	74.40	177.73	9,270.2	-261.6	-777.5	318.3	1.30	0.54	-1.23	
9,544.0	74.48	177.58	9,273.7	-274.1	-777.0	330.8	1.27	0.62	-1.15	
9,557.0	75.51	177.63	9,277.0	-286.6	-776.4	343.2	7.93	7.92	0.38	
9,570.0	77.73	177.87	9,280.0	-299.3	-776.0	355.8	17.17	17.08	1.85	
9,583.0	80.10	178.03	9,282.5	-312.0	-775.5	368.5	18.27	18.23	1.23	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,598.0	82.93	177.94	9,284.8	-326.8	-775.0	383.2	18.88	18.87	-0.60	
9,613.0	83.62	178.07	9,286.5	-341.7	-774.5	398.0	4.68	4.60	0.87	
9,628.0	83.70	178.02	9,288.2	-356.6	-773.9	412.9	0.63	0.53	-0.33	
9,643.0	83.94	177.99	9,289.8	-371.5	-773.4	427.7	1.61	1.60	-0.20	
9,658.0	86.48	178.11	9,291.0	-386.5	-772.9	442.6	16.95	16.93	0.80	
9,673.0	89.21	178.06	9,291.6	-401.5	-772.4	457.5	18.20	18.20	-0.33	
9,686.0	89.59	178.21	9,291.7	-414.4	-772.0	470.4	3.14	2.92	1.15	
9,699.0	89.80	178.25	9,291.8	-427.4	-771.6	483.3	1.64	1.62	0.31	
9,712.0	90.04	178.31	9,291.8	-440.4	-771.2	496.2	1.90	1.85	0.46	
9,725.0	90.31	178.37	9,291.8	-453.4	-770.8	509.2	2.13	2.08	0.46	
9,738.0	90.51	178.40	9,291.7	-466.4	-770.5	522.1	1.56	1.54	0.23	
9,751.0	90.49	178.43	9,291.6	-479.4	-770.1	535.0	0.28	-0.15	0.23	
9,764.0	90.52	178.49	9,291.5	-492.4	-769.8	548.0	0.52	0.23	0.46	
9,779.0	90.36	178.31	9,291.4	-507.4	-769.3	562.9	1.61	-1.07	-1.20	
9,794.0	90.10	178.15	9,291.3	-522.4	-768.9	577.8	2.04	-1.73	-1.07	
9,809.0	89.61	178.00	9,291.3	-537.4	-768.4	592.7	3.42	-3.27	-1.00	
9,824.0	89.08	177.89	9,291.5	-552.4	-767.8	607.6	3.61	-3.53	-0.73	
9,839.0	88.72	177.81	9,291.8	-567.4	-767.3	622.5	2.46	-2.40	-0.53	
9,854.0	88.46	177.72	9,292.2	-582.4	-766.7	637.4	1.83	-1.73	-0.60	
9,867.0	88.21	177.65	9,292.5	-595.3	-766.2	650.3	2.00	-1.92	-0.54	
9,880.0	87.98	177.60	9,293.0	-608.3	-765.6	663.2	1.81	-1.77	-0.38	
9,893.0	87.87	177.54	9,293.4	-621.3	-765.1	676.2	0.96	-0.85	-0.46	
9,906.0	87.85	177.46	9,293.9	-634.3	-764.5	689.1	0.63	-0.15	-0.62	
9,919.0	87.89	177.37	9,294.4	-647.3	-763.9	702.0	0.76	0.31	-0.69	
9,932.0	87.97	177.26	9,294.9	-660.2	-763.3	714.8	1.05	0.62	-0.85	
9,945.0	88.06	177.20	9,295.3	-673.2	-762.7	727.7	0.83	0.69	-0.46	
9,960.0	87.97	177.01	9,295.8	-688.2	-761.9	742.6	1.40	-0.60	-1.27	
9,975.0	87.88	176.86	9,296.4	-703.1	-761.1	757.5	1.17	-0.60	-1.00	
9,990.0	87.87	176.71	9,296.9	-718.1	-760.3	772.4	1.00	-0.07	-1.00	
10,005.0	87.80	176.56	9,297.5	-733.1	-759.4	787.2	1.10	-0.47	-1.00	
10,020.0	87.64	176.45	9,298.1	-748.0	-758.5	802.1	1.29	-1.07	-0.73	
10,035.0	87.56	176.36	9,298.7	-763.0	-757.5	816.9	0.80	-0.53	-0.60	
10,048.0	87.56	176.19	9,299.3	-776.0	-756.7	829.8	1.31	0.00	-1.31	
10,061.0	87.59	176.04	9,299.8	-788.9	-755.8	842.6	1.18	0.23	-1.15	
10,074.0	87.65	175.88	9,300.4	-801.9	-754.9	855.5	1.31	0.46	-1.23	
10,087.0	87.73	175.73	9,300.9	-814.8	-754.0	868.3	1.31	0.62	-1.15	
10,100.0	87.83	175.61	9,301.4	-827.8	-753.0	881.2	1.20	0.77	-0.92	
10,113.0	87.97	175.53	9,301.9	-840.7	-752.0	894.0	1.24	1.08	-0.62	
10,126.0	89.48	176.47	9,302.2	-853.7	-751.1	906.9	13.68	11.62	7.23	
10,141.0	89.65	176.33	9,302.3	-868.7	-750.1	921.7	1.47	1.13	-0.93	
10,156.0	89.78	176.25	9,302.4	-883.6	-749.2	936.6	1.02	0.87	-0.53	
10,171.0	89.83	176.22	9,302.4	-898.6	-748.2	951.4	0.39	0.33	-0.20	
10,186.0	89.92	176.22	9,302.4	-913.6	-747.2	966.3	0.60	0.60	0.00	
10,201.0	90.05	176.26	9,302.5	-928.5	-746.2	981.2	0.91	0.87	0.27	

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Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
10,216.0	90.91	177.32	9,302.3	-943.5	-745.4	996.0	9.10	5.73	7.07	
10,231.0	91.48	178.20	9,302.0	-958.5	-744.8	1,010.9	6.99	3.80	5.87	
10,246.0	91.28	178.17	9,301.7	-973.5	-744.3	1,025.8	1.35	-1.33	-0.20	
10,261.0	90.99	178.15	9,301.4	-988.5	-743.8	1,040.8	1.94	-1.93	-0.13	
10,276.0	90.83	178.14	9,301.1	-1,003.5	-743.3	1,055.7	1.07	-1.07	-0.07	
10,291.0	90.59	178.14	9,300.9	-1,018.5	-742.8	1,070.6	1.60	-1.60	0.00	
10,306.0	90.53	179.30	9,300.8	-1,033.5	-742.5	1,085.5	7.74	-0.40	7.73	
10,319.0	90.67	180.91	9,300.6	-1,046.5	-742.5	1,098.5	12.43	1.08	12.38	
10,332.0	90.50	180.62	9,300.5	-1,059.4	-742.7	1,111.5	2.59	-1.31	-2.23	
10,345.0	90.22	180.31	9,300.4	-1,072.4	-742.8	1,124.4	3.21	-2.15	-2.38	
10,358.0	89.94	180.02	9,300.4	-1,085.4	-742.8	1,137.4	3.10	-2.15	-2.23	
10,371.0	89.75	179.74	9,300.5	-1,098.4	-742.8	1,150.4	2.60	-1.46	-2.15	
10,384.0	89.56	179.42	9,300.5	-1,111.4	-742.7	1,163.3	2.86	-1.46	-2.46	
10,397.0	89.28	179.12	9,300.7	-1,124.4	-742.6	1,176.3	3.16	-2.15	-2.31	
10,410.0	89.14	178.95	9,300.8	-1,137.4	-742.3	1,189.2	1.69	-1.08	-1.31	
10,423.0	89.11	178.77	9,301.0	-1,150.4	-742.1	1,202.1	1.40	-0.23	-1.38	
10,436.0	89.06	178.59	9,301.2	-1,163.4	-741.8	1,215.1	1.44	-0.38	-1.38	
10,449.0	88.95	178.41	9,301.5	-1,176.4	-741.4	1,228.0	1.62	-0.85	-1.38	
10,462.0	88.82	178.25	9,301.7	-1,189.4	-741.1	1,240.9	1.59	-1.00	-1.23	
10,475.0	88.68	178.10	9,302.0	-1,202.4	-740.6	1,253.9	1.58	-1.08	-1.15	
10,488.0	88.55	177.96	9,302.3	-1,215.4	-740.2	1,266.8	1.47	-1.00	-1.08	
10,503.0	88.89	178.15	9,302.7	-1,230.4	-739.7	1,281.7	2.60	2.27	1.27	
10,518.0	89.31	178.34	9,302.9	-1,245.4	-739.2	1,296.6	3.07	2.80	1.27	
10,533.0	89.73	178.59	9,303.0	-1,260.4	-738.8	1,311.5	3.26	2.80	1.67	
10,548.0	90.02	178.93	9,303.1	-1,275.4	-738.5	1,326.5	2.98	1.93	2.27	
10,563.0	90.49	179.30	9,303.0	-1,290.4	-738.3	1,341.4	3.99	3.13	2.47	
10,578.0	91.05	179.97	9,302.8	-1,305.4	-738.2	1,356.4	5.82	3.73	4.47	
10,591.0	90.84	181.18	9,302.6	-1,318.4	-738.3	1,369.3	9.45	-1.62	9.31	
10,604.0	91.01	182.48	9,302.4	-1,331.4	-738.7	1,382.3	10.08	1.31	10.00	
10,617.0	90.56	182.69	9,302.2	-1,344.3	-739.3	1,395.3	3.82	-3.46	1.62	
10,630.0	90.06	182.83	9,302.1	-1,357.3	-739.9	1,408.3	3.99	-3.85	1.08	
10,643.0	89.44	183.01	9,302.2	-1,370.3	-740.6	1,421.3	4.97	-4.77	1.38	
10,656.0	88.82	183.19	9,302.4	-1,383.3	-741.3	1,434.3	4.97	-4.77	1.38	
10,669.0	88.34	183.35	9,302.7	-1,396.3	-742.0	1,447.3	3.89	-3.69	1.23	
10,684.0	88.18	183.22	9,303.1	-1,411.2	-742.9	1,462.3	1.37	-1.07	-0.87	
10,699.0	88.06	183.09	9,303.6	-1,426.2	-743.7	1,477.3	1.18	-0.80	-0.87	
10,714.0	87.98	182.94	9,304.2	-1,441.2	-744.5	1,492.3	1.13	-0.53	-1.00	
10,729.0	87.95	182.80	9,304.7	-1,456.1	-745.3	1,507.2	0.95	-0.20	-0.93	
10,744.0	87.88	182.67	9,305.2	-1,471.1	-746.0	1,522.2	0.98	-0.47	-0.87	
10,759.0	87.77	182.57	9,305.8	-1,486.1	-746.7	1,537.2	0.99	-0.73	-0.67	
10,774.0	87.90	182.65	9,306.4	-1,501.1	-747.3	1,552.2	1.02	0.87	0.53	
10,789.0	88.00	182.77	9,306.9	-1,516.0	-748.1	1,567.2	1.04	0.67	0.80	
10,804.0	88.30	182.94	9,307.4	-1,531.0	-748.8	1,582.2	2.30	2.00	1.13	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
10,819.0	88.82	183.16	9,307.8	-1,546.0	-749.6	1,597.2	3.76	3.47	1.47	
10,834.0	89.36	183.40	9,308.0	-1,561.0	-750.5	1,612.2	3.94	3.60	1.60	
10,849.0	91.19	183.76	9,307.9	-1,575.9	-751.4	1,627.2	12.43	12.20	2.40	
10,862.0	92.06	183.94	9,307.6	-1,588.9	-752.3	1,640.1	6.83	6.69	1.38	
10,875.0	92.34	183.97	9,307.1	-1,601.8	-753.2	1,653.1	2.17	2.15	0.23	
10,888.0	92.60	183.98	9,306.5	-1,614.8	-754.1	1,666.1	2.00	2.00	0.08	
10,901.0	92.71	183.98	9,305.9	-1,627.8	-755.0	1,679.1	0.85	0.85	0.00	
10,914.0	92.70	183.97	9,305.3	-1,640.7	-755.9	1,692.1	0.11	-0.08	-0.08	
10,927.0	92.62	183.96	9,304.7	-1,653.7	-756.8	1,705.1	0.62	-0.62	-0.08	
10,940.0	92.54	183.96	9,304.1	-1,666.6	-757.7	1,718.1	0.62	-0.62	0.00	
10,955.0	92.47	183.60	9,303.4	-1,681.6	-758.6	1,733.1	2.44	-0.47	-2.40	
10,970.0	92.39	183.30	9,302.8	-1,696.5	-759.6	1,748.0	2.07	-0.53	-2.00	
10,985.0	92.39	182.97	9,302.2	-1,711.5	-760.4	1,763.0	2.20	0.00	-2.20	
11,000.0	92.40	182.64	9,301.6	-1,726.5	-761.1	1,778.0	2.20	0.07	-2.20	
11,015.0	92.40	182.34	9,300.9	-1,741.4	-761.8	1,793.0	2.00	0.00	-2.00	
11,030.0	92.20	180.64	9,300.3	-1,756.4	-762.1	1,808.0	11.40	-1.33	-11.33	
11,043.0	92.53	178.75	9,299.8	-1,769.4	-762.1	1,820.9	14.75	2.54	-14.54	
11,056.0	92.57	178.53	9,299.2	-1,782.4	-761.8	1,833.8	1.72	0.31	-1.69	
11,069.0	92.59	178.47	9,298.6	-1,795.4	-761.4	1,846.8	0.49	0.15	-0.46	
11,082.0	92.57	178.43	9,298.0	-1,808.4	-761.1	1,859.7	0.34	-0.15	-0.31	
11,095.0	92.50	178.40	9,297.5	-1,821.3	-760.7	1,872.6	0.59	-0.54	-0.23	
11,108.0	92.38	178.38	9,296.9	-1,834.3	-760.4	1,885.5	0.94	-0.92	-0.15	
11,121.0	92.24	178.37	9,296.4	-1,847.3	-760.0	1,898.4	1.08	-1.08	-0.08	
11,136.0	92.13	178.36	9,295.8	-1,862.3	-759.6	1,913.3	0.74	-0.73	-0.07	
11,151.0	92.06	178.32	9,295.3	-1,877.3	-759.1	1,928.3	0.54	-0.47	-0.27	
11,166.0	91.93	178.26	9,294.7	-1,892.3	-758.7	1,943.2	0.95	-0.87	-0.40	
11,181.0	91.87	178.25	9,294.2	-1,907.2	-758.2	1,958.1	0.41	-0.40	-0.07	
11,196.0	91.96	178.25	9,293.7	-1,922.2	-757.8	1,973.0	0.60	0.60	0.00	
11,211.0	92.08	178.23	9,293.2	-1,937.2	-757.3	1,987.9	0.81	0.80	-0.13	
11,224.0	92.11	178.13	9,292.7	-1,950.2	-756.9	2,000.8	0.80	0.23	-0.77	
11,237.0	92.12	178.01	9,292.3	-1,963.2	-756.4	2,013.7	0.93	0.08	-0.92	
11,250.0	92.08	177.90	9,291.8	-1,976.2	-756.0	2,026.6	0.90	-0.31	-0.85	
11,263.0	92.04	177.79	9,291.3	-1,989.1	-755.5	2,039.6	0.90	-0.31	-0.85	
11,276.0	91.97	177.66	9,290.9	-2,002.1	-755.0	2,052.5	1.14	-0.54	-1.00	
11,289.0	91.54	177.63	9,290.5	-2,015.1	-754.4	2,065.4	3.32	-3.31	-0.23	
11,302.0	90.56	177.88	9,290.2	-2,028.1	-753.9	2,078.3	7.78	-7.54	1.92	
11,317.0	90.58	177.80	9,290.1	-2,043.1	-753.4	2,093.2	0.55	0.13	-0.53	
11,332.0	90.67	177.71	9,289.9	-2,058.1	-752.8	2,108.1	0.85	0.60	-0.60	
11,347.0	90.79	177.57	9,289.7	-2,073.1	-752.2	2,123.0	1.23	0.80	-0.93	
11,362.0	90.84	177.42	9,289.5	-2,088.0	-751.5	2,137.9	1.05	0.33	-1.00	
11,377.0	90.84	177.27	9,289.3	-2,103.0	-750.8	2,152.8	1.00	0.00	-1.00	
11,392.0	90.80	177.11	9,289.1	-2,118.0	-750.1	2,167.7	1.10	-0.27	-1.07	
11,405.0	90.21	176.95	9,289.0	-2,131.0	-749.4	2,180.6	4.70	-4.54	-1.23	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
11,418.0	89.63	176.83	9,289.0	-2,144.0	-748.7	2,193.5	4.56	-4.46	-0.92
11,431.0	89.04	176.75	9,289.1	-2,157.0	-748.0	2,206.3	4.58	-4.54	-0.62
11,444.0	88.45	176.69	9,289.4	-2,169.9	-747.2	2,219.2	4.56	-4.54	-0.46
11,457.0	87.85	176.66	9,289.8	-2,182.9	-746.5	2,232.1	4.62	-4.62	-0.23
11,470.0	87.32	176.66	9,290.4	-2,195.9	-745.7	2,245.0	4.08	-4.08	0.00
11,483.0	86.90	176.65	9,291.0	-2,208.8	-745.0	2,257.9	3.23	-3.23	-0.08
11,498.0	86.72	176.63	9,291.9	-2,223.8	-744.1	2,272.7	1.21	-1.20	-0.13
11,513.0	86.56	176.63	9,292.8	-2,238.7	-743.2	2,287.5	1.07	-1.07	0.00
11,528.0	86.68	176.67	9,293.6	-2,253.7	-742.3	2,302.4	0.84	0.80	0.27
11,543.0	87.02	176.74	9,294.5	-2,268.6	-741.5	2,317.2	2.31	2.27	0.47
11,558.0	87.59	176.91	9,295.2	-2,283.6	-740.6	2,332.1	3.97	3.80	1.13
11,573.0	88.85	178.78	9,295.6	-2,298.6	-740.1	2,347.0	15.03	8.40	12.47
11,588.0	89.25	179.42	9,295.9	-2,313.6	-739.8	2,361.9	5.03	2.67	4.27
11,603.0	89.39	179.25	9,296.1	-2,328.6	-739.7	2,376.9	1.47	0.93	-1.13
11,618.0	89.41	179.06	9,296.2	-2,343.6	-739.4	2,391.8	1.27	0.13	-1.27
11,633.0	89.34	178.84	9,296.4	-2,358.6	-739.2	2,406.7	1.54	-0.47	-1.47
11,648.0	89.09	178.60	9,296.6	-2,373.6	-738.8	2,421.7	2.31	-1.67	-1.60
11,663.0	88.57	178.37	9,296.9	-2,388.5	-738.4	2,436.6	3.79	-3.47	-1.53
11,676.0	87.95	178.27	9,297.3	-2,401.5	-738.1	2,449.5	4.83	-4.77	-0.77
11,689.0	87.47	178.24	9,297.8	-2,414.5	-737.7	2,462.4	3.70	-3.69	-0.23
11,702.0	87.23	178.27	9,298.4	-2,427.5	-737.3	2,475.4	1.86	-1.85	0.23
11,715.0	87.22	178.32	9,299.0	-2,440.5	-736.9	2,488.3	0.39	-0.08	0.38
11,728.0	87.31	178.37	9,299.7	-2,453.5	-736.5	2,501.2	0.79	0.69	0.38
11,741.0	87.42	178.42	9,300.3	-2,466.4	-736.1	2,514.1	0.93	0.85	0.38
11,754.0	87.62	178.79	9,300.8	-2,479.4	-735.8	2,527.0	3.23	1.54	2.85
11,769.0	88.29	180.55	9,301.4	-2,494.4	-735.7	2,542.0	12.55	4.47	11.73
11,784.0	88.47	180.90	9,301.8	-2,509.4	-735.9	2,556.9	2.62	1.20	2.33
11,799.0	88.55	180.82	9,302.2	-2,524.4	-736.2	2,571.9	0.75	0.53	-0.53
11,814.0	88.64	180.76	9,302.5	-2,539.4	-736.4	2,586.9	0.72	0.60	-0.40
11,829.0	88.96	180.73	9,302.8	-2,554.4	-736.6	2,601.8	2.14	2.13	-0.20
11,844.0	89.37	180.67	9,303.1	-2,569.4	-736.7	2,616.8	2.76	2.73	-0.40
11,857.0	89.57	180.57	9,303.2	-2,582.4	-736.9	2,629.8	1.72	1.54	-0.77
11,870.0	89.56	180.51	9,303.3	-2,595.4	-737.0	2,642.8	0.47	-0.08	-0.46
11,883.0	89.52	180.49	9,303.4	-2,608.4	-737.1	2,655.7	0.34	-0.31	-0.15
11,896.0	89.58	180.53	9,303.5	-2,621.4	-737.2	2,668.7	0.55	0.46	0.31
11,909.0	89.89	180.60	9,303.6	-2,634.4	-737.4	2,681.7	2.44	2.38	0.54
11,922.0	90.37	180.66	9,303.5	-2,647.4	-737.5	2,694.6	3.72	3.69	0.46
11,935.0	90.86	180.68	9,303.4	-2,660.4	-737.7	2,707.6	3.77	3.77	0.15
11,950.0	90.66	180.40	9,303.2	-2,675.4	-737.8	2,722.6	2.29	-1.33	-1.87
11,965.0	90.22	180.17	9,303.1	-2,690.4	-737.9	2,737.6	3.31	-2.93	-1.53
11,980.0	89.68	179.98	9,303.1	-2,705.4	-737.9	2,752.5	3.82	-3.60	-1.27
11,995.0	89.35	179.81	9,303.2	-2,720.4	-737.9	2,767.5	2.47	-2.20	-1.13
12,010.0	89.07	179.58	9,303.4	-2,735.4	-737.8	2,782.4	2.42	-1.87	-1.53
12,025.0	88.60	179.34	9,303.7	-2,750.4	-737.6	2,797.4	3.52	-3.13	-1.60

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,038.0	88.00	179.23	9,304.1	-2,763.4	-737.5	2,810.3	4.69	-4.62	-0.85
12,051.0	87.33	179.18	9,304.6	-2,776.3	-737.3	2,823.3	5.17	-5.15	-0.38
12,064.0	86.78	179.18	9,305.3	-2,789.3	-737.1	2,836.2	4.23	-4.23	0.00
12,077.0	86.59	179.16	9,306.1	-2,802.3	-736.9	2,849.1	1.47	-1.46	-0.15
12,090.0	86.63	179.15	9,306.8	-2,815.3	-736.7	2,862.0	0.32	0.31	-0.08
12,103.0	86.84	179.16	9,307.6	-2,828.3	-736.5	2,875.0	1.62	1.62	0.08
12,116.0	87.43	180.31	9,308.2	-2,841.2	-736.5	2,887.9	9.93	4.54	8.85
12,131.0	87.58	181.42	9,308.9	-2,856.2	-736.7	2,902.9	7.46	1.00	7.40
12,146.0	87.30	181.19	9,309.5	-2,871.2	-737.1	2,917.8	2.41	-1.87	-1.53
12,161.0	87.13	180.99	9,310.3	-2,886.2	-737.3	2,932.8	1.75	-1.13	-1.33
12,176.0	87.13	180.74	9,311.0	-2,901.2	-737.6	2,947.7	1.66	0.00	-1.67
12,191.0	87.07	180.48	9,311.8	-2,916.1	-737.7	2,962.7	1.78	-0.40	-1.73
12,206.0	86.94	180.24	9,312.6	-2,931.1	-737.8	2,977.6	1.82	-0.87	-1.60
12,221.0	86.83	180.11	9,313.4	-2,946.1	-737.9	2,992.6	1.13	-0.73	-0.87
12,236.0	86.80	180.08	9,314.2	-2,961.1	-737.9	3,007.5	0.28	-0.20	-0.20
12,251.0	86.91	180.12	9,315.0	-2,976.1	-737.9	3,022.5	0.78	0.73	0.27
12,266.0	87.18	180.18	9,315.8	-2,991.0	-738.0	3,037.4	1.84	1.80	0.40
12,281.0	87.53	180.25	9,316.5	-3,006.0	-738.0	3,052.3	2.38	2.33	0.47
12,296.0	88.79	181.12	9,317.0	-3,021.0	-738.2	3,067.3	10.21	8.40	5.80
12,309.0	89.54	181.62	9,317.2	-3,034.0	-738.5	3,080.3	6.93	5.77	3.85
12,322.0	89.80	181.56	9,317.2	-3,047.0	-738.9	3,093.3	2.05	2.00	-0.46
12,335.0	90.03	181.51	9,317.3	-3,060.0	-739.2	3,106.3	1.81	1.77	-0.38
12,348.0	90.21	181.48	9,317.2	-3,073.0	-739.5	3,119.3	1.40	1.38	-0.23
12,361.0	90.40	181.48	9,317.2	-3,086.0	-739.9	3,132.2	1.46	1.46	0.00
12,374.0	90.60	181.48	9,317.1	-3,099.0	-740.2	3,145.2	1.54	1.54	0.00
12,387.0	90.76	181.46	9,316.9	-3,112.0	-740.6	3,158.2	1.24	1.23	-0.15
12,402.0	90.82	181.48	9,316.7	-3,127.0	-740.9	3,173.2	0.42	0.40	0.13
12,417.0	90.87	181.44	9,316.5	-3,142.0	-741.3	3,188.2	0.43	0.33	-0.27
12,432.0	90.91	181.38	9,316.2	-3,157.0	-741.7	3,203.1	0.48	0.27	-0.40
12,447.0	90.92	181.31	9,316.0	-3,172.0	-742.0	3,218.1	0.47	0.07	-0.47
12,462.0	90.92	181.25	9,315.8	-3,186.9	-742.4	3,233.1	0.40	0.00	-0.40
12,477.0	90.89	181.20	9,315.5	-3,201.9	-742.7	3,248.1	0.39	-0.20	-0.33
12,492.0	90.79	181.15	9,315.3	-3,216.9	-743.0	3,263.1	0.75	-0.67	-0.33
12,507.0	90.75	181.10	9,315.1	-3,231.9	-743.3	3,278.0	0.43	-0.27	-0.33
12,522.0	90.74	181.04	9,314.9	-3,246.9	-743.6	3,293.0	0.41	-0.07	-0.40
12,537.0	90.74	180.98	9,314.7	-3,261.9	-743.8	3,308.0	0.40	0.00	-0.40
12,552.0	90.72	180.90	9,314.5	-3,276.9	-744.1	3,323.0	0.55	-0.13	-0.53
12,567.0	90.68	180.82	9,314.3	-3,291.9	-744.3	3,337.9	0.60	-0.27	-0.53
12,580.0	90.54	180.66	9,314.2	-3,304.9	-744.5	3,350.9	1.64	-1.08	-1.23
12,593.0	90.42	180.53	9,314.1	-3,317.9	-744.6	3,363.9	1.36	-0.92	-1.00
12,606.0	90.30	180.41	9,314.0	-3,330.9	-744.7	3,376.9	1.31	-0.92	-0.92
12,619.0	90.16	180.31	9,314.0	-3,343.9	-744.8	3,389.8	1.32	-1.08	-0.77
12,632.0	90.02	180.21	9,313.9	-3,356.9	-744.9	3,402.8	1.32	-1.08	-0.77

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,645.0	89.88	180.13	9,313.9	-3,369.9	-744.9	3,415.8	1.24	-1.08	-0.62
12,658.0	89.72	180.05	9,314.0	-3,382.9	-744.9	3,428.7	1.38	-1.23	-0.62
12,673.0	89.46	179.84	9,314.1	-3,397.9	-744.9	3,443.7	2.23	-1.73	-1.40
12,688.0	89.25	179.63	9,314.3	-3,412.9	-744.8	3,458.6	1.98	-1.40	-1.40
12,703.0	89.08	179.36	9,314.5	-3,427.9	-744.7	3,473.6	2.13	-1.13	-1.80
12,718.0	88.95	179.08	9,314.7	-3,442.9	-744.5	3,488.5	2.06	-0.87	-1.87
12,733.0	88.85	178.79	9,315.0	-3,457.9	-744.2	3,503.5	2.04	-0.67	-1.93
12,748.0	88.73	178.52	9,315.3	-3,472.9	-743.9	3,518.4	1.97	-0.80	-1.80
12,761.0	88.63	178.33	9,315.6	-3,485.9	-743.5	3,531.3	1.65	-0.77	-1.46
12,774.0	88.61	178.16	9,316.0	-3,498.9	-743.1	3,544.2	1.32	-0.15	-1.31
12,787.0	88.58	177.98	9,316.3	-3,511.9	-742.7	3,557.2	1.40	-0.23	-1.38
12,800.0	88.56	177.79	9,316.6	-3,524.8	-742.2	3,570.1	1.47	-0.15	-1.46
12,813.0	88.52	177.59	9,316.9	-3,537.8	-741.7	3,583.0	1.57	-0.31	-1.54
12,826.0	88.43	177.37	9,317.3	-3,550.8	-741.1	3,595.9	1.83	-0.69	-1.69
12,839.0	88.24	177.15	9,317.7	-3,563.8	-740.5	3,608.8	2.24	-1.46	-1.69
12,854.0	87.96	177.11	9,318.2	-3,578.8	-739.7	3,623.7	1.89	-1.87	-0.27
12,869.0	87.80	177.14	9,318.7	-3,593.7	-739.0	3,638.5	1.09	-1.07	0.20
12,884.0	87.87	177.27	9,319.3	-3,608.7	-738.2	3,653.4	0.98	0.47	0.87
12,899.0	88.24	177.47	9,319.8	-3,623.7	-737.6	3,668.3	2.80	2.47	1.33
12,914.0	88.81	177.63	9,320.2	-3,638.7	-736.9	3,683.2	3.95	3.80	1.07
12,929.0	89.38	177.68	9,320.4	-3,653.7	-736.3	3,698.1	3.81	3.80	0.33
12,944.0	89.61	177.71	9,320.5	-3,668.6	-735.7	3,713.0	1.55	1.53	0.20
12,959.0	89.60	177.75	9,320.6	-3,683.6	-735.1	3,727.9	0.27	-0.07	0.27
12,974.0	89.52	177.85	9,320.8	-3,698.6	-734.5	3,742.8	0.85	-0.53	0.67
12,989.0	89.72	178.02	9,320.9	-3,713.6	-734.0	3,757.7	1.75	1.33	1.13
13,004.0	90.05	178.22	9,320.9	-3,728.6	-733.5	3,772.6	2.57	2.20	1.33
13,019.0	90.41	178.50	9,320.8	-3,743.6	-733.1	3,787.5	3.04	2.40	1.87
13,032.0	90.62	180.08	9,320.7	-3,756.6	-732.9	3,800.5	12.26	1.62	12.15
13,045.0	90.48	180.76	9,320.6	-3,769.6	-733.0	3,813.5	5.34	-1.08	5.23
13,058.0	90.57	180.92	9,320.5	-3,782.6	-733.2	3,826.4	1.41	0.69	1.23
13,071.0	90.78	181.09	9,320.3	-3,795.6	-733.4	3,839.4	2.08	1.62	1.31
13,084.0	91.01	181.27	9,320.1	-3,808.6	-733.7	3,852.4	2.25	1.77	1.38
13,097.0	91.26	181.45	9,319.9	-3,821.6	-734.0	3,865.4	2.37	1.92	1.38
13,110.0	91.48	181.58	9,319.5	-3,834.6	-734.3	3,878.4	1.97	1.69	1.00
13,125.0	91.71	181.47	9,319.1	-3,849.6	-734.7	3,893.3	1.70	1.53	-0.73
13,140.0	91.82	181.43	9,318.7	-3,864.5	-735.1	3,908.3	0.78	0.73	-0.27
13,155.0	91.93	181.39	9,318.2	-3,879.5	-735.5	3,923.3	0.78	0.73	-0.27
13,170.0	92.06	181.35	9,317.7	-3,894.5	-735.8	3,938.3	0.91	0.87	-0.27
13,185.0	92.11	181.31	9,317.1	-3,909.5	-736.2	3,953.2	0.43	0.33	-0.27
13,200.0	92.15	181.29	9,316.5	-3,924.5	-736.5	3,968.2	0.30	0.27	-0.13
13,213.0	92.06	181.16	9,316.1	-3,937.5	-736.8	3,981.2	1.22	-0.69	-1.00
13,226.0	91.96	181.05	9,315.6	-3,950.5	-737.1	3,994.1	1.14	-0.77	-0.85
13,239.0	91.87	180.92	9,315.2	-3,963.5	-737.3	4,007.1	1.22	-0.69	-1.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
13,252.0	91.80	180.78	9,314.8	-3,976.5	-737.5	4,020.1	1.20	-0.54	-1.08	
13,265.0	91.74	180.62	9,314.4	-3,989.4	-737.6	4,033.1	1.31	-0.46	-1.23	
13,278.0	91.64	180.47	9,314.0	-4,002.4	-737.8	4,046.0	1.39	-0.77	-1.15	
13,291.0	91.53	180.36	9,313.6	-4,015.4	-737.9	4,059.0	1.20	-0.85	-0.85	
13,306.0	91.43	180.28	9,313.2	-4,030.4	-737.9	4,073.9	0.85	-0.67	-0.53	
13,321.0	91.35	180.22	9,312.9	-4,045.4	-738.0	4,088.9	0.67	-0.53	-0.40	
13,336.0	91.26	180.16	9,312.5	-4,060.4	-738.1	4,103.9	0.72	-0.60	-0.40	
13,351.0	91.14	180.10	9,312.2	-4,075.4	-738.1	4,118.8	0.89	-0.80	-0.40	
13,366.0	91.12	180.05	9,311.9	-4,090.4	-738.1	4,133.8	0.36	-0.13	-0.33	
13,381.0	91.08	179.93	9,311.6	-4,105.4	-738.1	4,148.7	0.84	-0.27	-0.80	
13,394.0	90.67	179.46	9,311.4	-4,118.4	-738.0	4,161.7	4.80	-3.15	-3.62	
13,407.0	90.27	179.08	9,311.3	-4,131.4	-737.9	4,174.6	4.24	-3.08	-2.92	
13,420.0	89.86	178.72	9,311.3	-4,144.4	-737.6	4,187.6	4.20	-3.15	-2.77	
13,433.0	89.44	178.38	9,311.4	-4,157.4	-737.3	4,200.5	4.16	-3.23	-2.62	
13,446.0	89.00	178.06	9,311.6	-4,170.4	-736.9	4,213.5	4.18	-3.38	-2.46	
13,459.0	88.69	177.79	9,311.8	-4,183.4	-736.4	4,226.4	3.16	-2.38	-2.08	
13,472.0	88.50	177.55	9,312.1	-4,196.4	-735.9	4,239.3	2.35	-1.46	-1.85	
13,485.0	89.49	178.12	9,312.4	-4,209.4	-735.4	4,252.2	8.79	7.62	4.38	
13,498.0	90.45	178.53	9,312.4	-4,222.3	-735.0	4,265.1	8.03	7.38	3.15	
13,511.0	91.42	178.90	9,312.2	-4,235.3	-734.7	4,278.1	7.99	7.46	2.85	
13,524.0	92.47	179.19	9,311.7	-4,248.3	-734.5	4,291.0	8.38	8.08	2.23	
13,537.0	93.53	179.45	9,311.0	-4,261.3	-734.4	4,303.9	8.39	8.15	2.00	
13,550.0	94.50	179.70	9,310.1	-4,274.3	-734.3	4,316.9	7.70	7.46	1.92	
13,563.0	95.28	179.95	9,309.0	-4,287.2	-734.2	4,329.8	6.30	6.00	1.92	
13,578.0	95.24	180.25	9,307.7	-4,302.2	-734.2	4,344.7	2.01	-0.27	2.00	
13,593.0	95.23	180.34	9,306.3	-4,317.1	-734.3	4,359.6	0.60	-0.07	0.60	
13,608.0	95.19	180.37	9,304.9	-4,332.0	-734.4	4,374.5	0.33	-0.27	0.20	
13,623.0	95.10	180.32	9,303.6	-4,347.0	-734.5	4,389.4	0.69	-0.60	-0.33	
13,638.0	94.79	180.26	9,302.3	-4,361.9	-734.6	4,404.3	2.10	-2.07	-0.40	
13,653.0	93.26	180.89	9,301.2	-4,376.9	-734.7	4,419.2	11.03	-10.20	4.20	
13,668.0	92.36	181.02	9,300.5	-4,391.9	-735.0	4,434.2	6.06	-6.00	0.87	
13,683.0	91.95	180.80	9,299.9	-4,406.9	-735.2	4,449.2	3.10	-2.73	-1.47	
13,698.0	91.72	180.54	9,299.5	-4,421.9	-735.4	4,464.1	2.31	-1.53	-1.73	
13,713.0	91.65	180.25	9,299.0	-4,436.8	-735.5	4,479.1	1.99	-0.47	-1.93	
13,728.0	91.57	179.98	9,298.6	-4,451.8	-735.5	4,494.0	1.88	-0.53	-1.80	
13,743.0	91.41	179.77	9,298.2	-4,466.8	-735.5	4,509.0	1.76	-1.07	-1.40	
13,756.0	91.04	179.53	9,297.9	-4,479.8	-735.4	4,521.9	3.39	-2.85	-1.85	
13,769.0	90.61	179.37	9,297.7	-4,492.8	-735.3	4,534.9	3.53	-3.31	-1.23	
13,782.0	90.19	179.30	9,297.6	-4,505.8	-735.1	4,547.8	3.28	-3.23	-0.54	
13,795.0	89.91	179.26	9,297.6	-4,518.8	-735.0	4,560.8	2.18	-2.15	-0.31	
13,808.0	89.77	179.22	9,297.7	-4,531.8	-734.8	4,573.7	1.12	-1.08	-0.31	
13,821.0	89.71	179.15	9,297.7	-4,544.8	-734.6	4,586.7	0.71	-0.46	-0.54	
13,834.0	89.65	179.10	9,297.8	-4,557.8	-734.4	4,599.6	0.60	-0.46	-0.38	
13,849.0	89.89	179.16	9,297.9	-4,572.8	-734.2	4,614.6	1.65	1.60	0.40	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
13,864.0	90.09	179.17	9,297.9	-4,587.8	-734.0	4,629.5	1.33	1.33	0.07
13,879.0	90.30	179.19	9,297.8	-4,602.8	-733.8	4,644.5	1.41	1.40	0.13
13,894.0	90.47	179.24	9,297.7	-4,617.8	-733.6	4,659.4	1.18	1.13	0.33
13,909.0	90.73	179.28	9,297.6	-4,632.8	-733.4	4,674.3	1.75	1.73	0.27
13,924.0	91.12	180.06	9,297.3	-4,647.8	-733.3	4,689.3	5.81	2.60	5.20
13,937.0	91.44	180.87	9,297.0	-4,660.8	-733.4	4,702.3	6.70	2.46	6.23
13,950.0	91.42	180.76	9,296.7	-4,673.8	-733.6	4,715.2	0.86	-0.15	-0.85
13,963.0	91.44	180.63	9,296.4	-4,686.8	-733.7	4,728.2	1.01	0.15	-1.00
13,976.0	91.47	180.50	9,296.0	-4,699.8	-733.9	4,741.2	1.03	0.23	-1.00
13,989.0	91.50	180.36	9,295.7	-4,712.8	-734.0	4,754.1	1.10	0.23	-1.08
14,002.0	91.55	180.23	9,295.4	-4,725.8	-734.0	4,767.1	1.07	0.38	-1.00
14,015.0	91.62	180.12	9,295.0	-4,738.8	-734.1	4,780.1	1.00	0.54	-0.85
14,030.0	91.79	179.95	9,294.6	-4,753.8	-734.1	4,795.0	1.60	1.13	-1.13
14,045.0	91.90	179.83	9,294.1	-4,768.8	-734.0	4,810.0	1.08	0.73	-0.80
14,060.0	92.03	179.73	9,293.6	-4,783.8	-734.0	4,824.9	1.09	0.87	-0.67
14,075.0	92.17	179.64	9,293.0	-4,798.7	-733.9	4,839.9	1.11	0.93	-0.60
14,090.0	92.33	179.57	9,292.4	-4,813.7	-733.8	4,854.8	1.16	1.07	-0.47
14,105.0	92.48	179.50	9,291.8	-4,828.7	-733.7	4,869.7	1.10	1.00	-0.47
14,120.0	92.59	179.32	9,291.1	-4,843.7	-733.5	4,884.7	1.41	0.73	-1.20
14,135.0	92.63	179.18	9,290.4	-4,858.7	-733.3	4,899.6	0.97	0.27	-0.93
14,150.0	92.61	179.06	9,289.8	-4,873.7	-733.1	4,914.5	0.81	-0.13	-0.80
14,165.0	92.60	178.98	9,289.1	-4,888.6	-732.8	4,929.4	0.54	-0.07	-0.53
14,180.0	92.64	178.90	9,288.4	-4,903.6	-732.6	4,944.4	0.60	0.27	-0.53
14,195.0	92.74	178.84	9,287.7	-4,918.6	-732.3	4,959.3	0.78	0.67	-0.40
14,208.0	92.85	178.85	9,287.1	-4,931.6	-732.0	4,972.2	0.85	0.85	0.08
14,221.0	92.97	178.83	9,286.4	-4,944.6	-731.7	4,985.1	0.94	0.92	-0.15
14,234.0	93.10	178.79	9,285.7	-4,957.6	-731.5	4,998.1	1.05	1.00	-0.31
14,247.0	93.23	178.78	9,285.0	-4,970.5	-731.2	5,011.0	1.00	1.00	-0.08
14,260.0	93.29	178.78	9,284.2	-4,983.5	-730.9	5,023.9	0.46	0.46	0.00
14,273.0	93.33	178.80	9,283.5	-4,996.5	-730.6	5,036.8	0.34	0.31	0.15
14,286.0	93.34	178.82	9,282.7	-5,009.5	-730.4	5,049.7	0.17	0.08	0.15
14,301.0	93.00	180.01	9,281.9	-5,024.4	-730.2	5,064.7	8.24	-2.27	7.93
14,316.0	92.66	180.02	9,281.2	-5,039.4	-730.2	5,079.6	2.27	-2.27	0.07
14,331.0	92.87	180.05	9,280.4	-5,054.4	-730.2	5,094.5	1.41	1.40	0.20
14,346.0	92.98	180.12	9,279.7	-5,069.4	-730.3	5,109.5	0.87	0.73	0.47
14,361.0	93.05	180.18	9,278.9	-5,084.4	-730.3	5,124.4	0.61	0.47	0.40
14,376.0	92.58	180.98	9,278.2	-5,099.3	-730.4	5,139.4	6.18	-3.13	5.33
14,389.0	92.04	181.68	9,277.6	-5,112.3	-730.7	5,152.4	6.80	-4.15	5.38
14,402.0	92.21	181.71	9,277.1	-5,125.3	-731.1	5,165.3	1.33	1.31	0.23
14,415.0	92.37	181.74	9,276.6	-5,138.3	-731.5	5,178.3	1.25	1.23	0.23
14,428.0	92.49	181.74	9,276.1	-5,151.3	-731.9	5,191.3	0.92	0.92	0.00
14,441.0	92.59	181.67	9,275.5	-5,164.3	-732.3	5,204.3	0.94	0.77	-0.54
14,454.0	92.38	181.74	9,274.9	-5,177.2	-732.7	5,217.2	1.70	-1.62	0.54

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
14,467.0	91.35	182.30	9,274.5	-5,190.2	-733.1	5,230.2	9.02	-7.92	4.31
14,482.0	90.64	182.31	9,274.3	-5,205.2	-733.8	5,245.2	4.73	-4.73	0.07
14,497.0	90.51	182.19	9,274.1	-5,220.2	-734.3	5,260.2	1.18	-0.87	-0.80
14,512.0	90.31	181.98	9,274.0	-5,235.2	-734.9	5,275.2	1.93	-1.33	-1.40
14,527.0	90.01	181.75	9,274.0	-5,250.2	-735.4	5,290.2	2.52	-2.00	-1.53
14,542.0	89.53	181.54	9,274.0	-5,265.2	-735.8	5,305.2	3.49	-3.20	-1.40
14,557.0	88.38	181.62	9,274.3	-5,280.2	-736.2	5,320.1	7.69	-7.67	0.53
14,570.0	87.34	181.97	9,274.8	-5,293.1	-736.6	5,333.1	8.44	-8.00	2.69
14,583.0	87.08	182.05	9,275.4	-5,306.1	-737.1	5,346.1	2.09	-2.00	0.62
14,596.0	87.17	182.08	9,276.1	-5,319.1	-737.5	5,359.1	0.73	0.69	0.23
14,609.0	87.38	182.06	9,276.7	-5,332.1	-738.0	5,372.0	1.62	1.62	-0.15
14,622.0	87.65	181.98	9,277.2	-5,345.1	-738.5	5,385.0	2.17	2.08	-0.62
14,635.0	87.92	181.83	9,277.7	-5,358.0	-738.9	5,398.0	2.38	2.08	-1.15
14,648.0	88.15	181.68	9,278.2	-5,371.0	-739.3	5,411.0	2.11	1.77	-1.15
14,663.0	88.36	181.54	9,278.6	-5,386.0	-739.7	5,426.0	1.68	1.40	-0.93
14,678.0	88.51	181.42	9,279.1	-5,401.0	-740.1	5,440.9	1.28	1.00	-0.80
14,693.0	88.61	181.34	9,279.4	-5,416.0	-740.5	5,455.9	0.85	0.67	-0.53
14,708.0	88.67	181.27	9,279.8	-5,431.0	-740.8	5,470.9	0.61	0.40	-0.47
14,723.0	88.70	181.23	9,280.1	-5,446.0	-741.1	5,485.9	0.33	0.20	-0.27
14,738.0	88.72	181.22	9,280.5	-5,461.0	-741.5	5,500.8	0.15	0.13	-0.07
14,751.0	88.81	181.17	9,280.7	-5,474.0	-741.7	5,513.8	0.79	0.69	-0.38
14,764.0	88.90	181.13	9,281.0	-5,487.0	-742.0	5,526.8	0.76	0.69	-0.31
14,777.0	88.98	181.12	9,281.2	-5,500.0	-742.3	5,539.8	0.62	0.62	-0.08
14,790.0	89.05	181.13	9,281.5	-5,512.9	-742.5	5,552.8	0.54	0.54	0.08
14,803.0	89.10	181.16	9,281.7	-5,525.9	-742.8	5,565.7	0.45	0.38	0.23
14,816.0	89.14	181.20	9,281.9	-5,538.9	-743.0	5,578.7	0.44	0.31	0.31
14,829.0	89.17	181.24	9,282.1	-5,551.9	-743.3	5,591.7	0.38	0.23	0.31
14,844.0	89.25	181.24	9,282.3	-5,566.9	-743.6	5,606.7	0.53	0.53	0.00
14,859.0	89.32	181.24	9,282.5	-5,581.9	-744.0	5,621.6	0.47	0.47	0.00
14,874.0	89.41	181.21	9,282.6	-5,596.9	-744.3	5,636.6	0.63	0.60	-0.20
14,889.0	89.51	181.15	9,282.8	-5,611.9	-744.6	5,651.6	0.78	0.67	-0.40
14,904.0	89.65	181.11	9,282.9	-5,626.9	-744.9	5,666.6	0.97	0.93	-0.27
14,919.0	89.80	181.09	9,283.0	-5,641.9	-745.2	5,681.6	1.01	1.00	-0.13
14,932.0	89.73	180.97	9,283.0	-5,654.9	-745.4	5,694.5	1.07	-0.54	-0.92
14,945.0	89.66	180.87	9,283.1	-5,667.9	-745.6	5,707.5	0.94	-0.54	-0.77
14,958.0	89.57	180.79	9,283.2	-5,680.9	-745.8	5,720.5	0.93	-0.69	-0.62
14,971.0	89.53	180.73	9,283.3	-5,693.9	-746.0	5,733.5	0.55	-0.31	-0.46
14,984.0	89.43	180.61	9,283.4	-5,706.9	-746.1	5,746.4	1.20	-0.77	-0.92
14,997.0	89.24	180.49	9,283.5	-5,719.9	-746.3	5,759.4	1.73	-1.46	-0.92
15,010.0	88.33	180.71	9,283.8	-5,732.9	-746.4	5,772.4	7.20	-7.00	1.69
15,025.0	88.01	180.66	9,284.3	-5,747.9	-746.6	5,787.4	2.16	-2.13	-0.33
15,040.0	87.88	180.60	9,284.8	-5,762.9	-746.7	5,802.3	0.95	-0.87	-0.40
15,055.0	87.81	180.51	9,285.4	-5,777.9	-746.9	5,817.3	0.76	-0.47	-0.60

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
15,070.0	87.76	180.42	9,286.0	-5,792.9	-747.0	5,832.2	0.69	-0.33	-0.60
15,085.0	87.70	180.32	9,286.6	-5,807.8	-747.1	5,847.2	0.78	-0.40	-0.67
15,100.0	87.59	180.22	9,287.2	-5,822.8	-747.2	5,862.1	0.99	-0.73	-0.67
15,115.0	87.51	180.12	9,287.8	-5,837.8	-747.2	5,877.1	0.85	-0.53	-0.67
15,130.0	87.48	180.01	9,288.5	-5,852.8	-747.2	5,892.0	0.76	-0.20	-0.73
15,145.0	87.52	179.87	9,289.1	-5,867.8	-747.2	5,907.0	0.97	0.27	-0.93
15,160.0	87.63	179.72	9,289.8	-5,882.8	-747.2	5,921.9	1.24	0.73	-1.00
15,175.0	87.80	179.55	9,290.4	-5,897.8	-747.1	5,936.9	1.60	1.13	-1.13
15,190.0	87.98	179.40	9,290.9	-5,912.8	-746.9	5,951.8	1.56	1.20	-1.00
15,203.0	88.30	179.30	9,291.3	-5,925.7	-746.8	5,964.7	2.58	2.46	-0.77
15,216.0	88.58	179.23	9,291.7	-5,938.7	-746.6	5,977.7	2.22	2.15	-0.54
15,229.0	88.80	179.24	9,292.0	-5,951.7	-746.4	5,990.6	1.69	1.69	0.08
15,242.0	88.99	179.28	9,292.2	-5,964.7	-746.3	6,003.6	1.49	1.46	0.31
15,255.0	89.14	179.34	9,292.5	-5,977.7	-746.1	6,016.5	1.24	1.15	0.46
15,268.0	89.27	179.42	9,292.6	-5,990.7	-746.0	6,029.5	1.17	1.00	0.62
15,281.0	89.42	179.48	9,292.8	-6,003.7	-745.9	6,042.4	1.24	1.15	0.46
15,296.0	89.71	179.71	9,292.9	-6,018.7	-745.7	6,057.4	2.47	1.93	1.53
15,311.0	90.04	179.88	9,292.9	-6,033.7	-745.7	6,072.3	2.47	2.20	1.13
15,326.0	90.34	180.02	9,292.9	-6,048.7	-745.7	6,087.3	2.21	2.00	0.93
15,341.0	90.55	180.15	9,292.8	-6,063.7	-745.7	6,102.3	1.65	1.40	0.87
15,356.0	90.70	180.29	9,292.6	-6,078.7	-745.8	6,117.2	1.37	1.00	0.93
15,371.0	90.84	180.44	9,292.4	-6,093.7	-745.9	6,132.2	1.37	0.93	1.00
15,384.0	90.93	180.40	9,292.2	-6,106.7	-745.9	6,145.2	0.76	0.69	-0.31
15,397.0	91.01	180.34	9,292.0	-6,119.7	-746.0	6,158.1	0.77	0.62	-0.46
15,410.0	91.08	180.25	9,291.7	-6,132.7	-746.1	6,171.1	0.88	0.54	-0.69
15,423.0	91.15	180.17	9,291.5	-6,145.7	-746.1	6,184.1	0.82	0.54	-0.62
15,436.0	91.23	180.07	9,291.2	-6,158.7	-746.2	6,197.0	0.98	0.62	-0.77
15,449.0	91.29	179.99	9,290.9	-6,171.7	-746.2	6,210.0	0.77	0.46	-0.62
15,462.0	91.34	179.95	9,290.6	-6,184.7	-746.2	6,222.9	0.49	0.38	-0.31
15,477.0	91.55	179.95	9,290.3	-6,199.7	-746.2	6,237.9	1.40	1.40	0.00
15,492.0	91.74	179.97	9,289.8	-6,214.7	-746.2	6,252.8	1.27	1.27	0.13
15,507.0	91.94	180.05	9,289.3	-6,229.7	-746.2	6,267.8	1.44	1.33	0.53
15,522.0	92.15	180.13	9,288.8	-6,244.7	-746.2	6,282.7	1.50	1.40	0.53
15,537.0	92.41	180.16	9,288.2	-6,259.7	-746.2	6,297.7	1.74	1.73	0.20
15,552.0	91.77	180.41	9,287.7	-6,274.7	-746.3	6,312.7	4.58	-4.27	1.67
15,565.0	91.97	180.44	9,287.2	-6,287.6	-746.4	6,325.6	1.56	1.54	0.23
15,578.0	92.07	180.46	9,286.8	-6,300.6	-746.5	6,338.6	0.78	0.77	0.15
15,591.0	92.19	180.44	9,286.3	-6,313.6	-746.6	6,351.5	0.94	0.92	-0.15
15,604.0	92.31	180.37	9,285.8	-6,326.6	-746.7	6,364.5	1.07	0.92	-0.54
15,617.0	92.40	180.34	9,285.3	-6,339.6	-746.8	6,377.5	0.73	0.69	-0.23
15,630.0	92.52	180.35	9,284.7	-6,352.6	-746.8	6,390.4	0.93	0.92	0.08
15,643.0	92.66	180.38	9,284.1	-6,365.6	-746.9	6,403.4	1.10	1.08	0.23
15,658.0	92.51	180.18	9,283.4	-6,380.6	-747.0	6,418.3	1.67	-1.00	-1.33
15,673.0	91.56	180.08	9,282.9	-6,395.6	-747.0	6,433.3	6.37	-6.33	-0.67

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
15,688.0	91.21	179.78	9,282.5	-6,410.5	-747.0	6,448.2	3.07	-2.33	-2.00
15,703.0	90.85	179.66	9,282.3	-6,425.5	-746.9	6,463.2	2.53	-2.40	-0.80
15,718.0	90.63	179.59	9,282.1	-6,440.5	-746.8	6,478.1	1.54	-1.47	-0.47
15,733.0	90.66	179.54	9,281.9	-6,455.5	-746.7	6,493.1	0.39	0.20	-0.33
15,746.0	90.68	179.25	9,281.8	-6,468.5	-746.6	6,506.0	2.24	0.15	-2.23
15,759.0	90.60	178.95	9,281.6	-6,481.5	-746.4	6,519.0	2.39	-0.62	-2.31
15,772.0	90.27	178.64	9,281.5	-6,494.5	-746.1	6,531.9	3.48	-2.54	-2.38
15,785.0	89.78	178.39	9,281.5	-6,507.5	-745.8	6,544.9	4.23	-3.77	-1.92
15,798.0	89.40	178.21	9,281.6	-6,520.5	-745.4	6,557.8	3.23	-2.92	-1.38
15,811.0	89.13	178.05	9,281.8	-6,533.5	-745.0	6,570.7	2.41	-2.08	-1.23
15,824.0	88.86	177.92	9,282.0	-6,546.5	-744.5	6,583.6	2.31	-2.08	-1.00
15,839.0	88.38	178.20	9,282.4	-6,561.5	-744.0	6,598.5	3.70	-3.20	1.87
15,854.0	88.09	178.49	9,282.8	-6,576.5	-743.6	6,613.5	2.73	-1.93	1.93
15,869.0	88.29	178.64	9,283.3	-6,591.5	-743.2	6,628.4	1.67	1.33	1.00
15,884.0	88.66	178.72	9,283.7	-6,606.5	-742.8	6,643.3	2.52	2.47	0.53
15,899.0	88.99	178.70	9,284.0	-6,621.5	-742.5	6,658.2	2.20	2.20	-0.13
15,914.0	89.14	178.69	9,284.2	-6,636.4	-742.2	6,673.2	1.00	1.00	-0.07
15,927.0	89.12	178.71	9,284.4	-6,649.4	-741.9	6,686.1	0.22	-0.15	0.15
15,940.0	89.02	178.76	9,284.7	-6,662.4	-741.6	6,699.0	0.86	-0.77	0.38
15,953.0	88.83	178.86	9,284.9	-6,675.4	-741.3	6,712.0	1.65	-1.46	0.77
15,966.0	88.70	179.07	9,285.2	-6,688.4	-741.1	6,724.9	1.90	-1.00	1.62
15,979.0	88.57	179.29	9,285.5	-6,701.4	-740.9	6,737.9	1.97	-1.00	1.69
15,992.0	88.59	179.52	9,285.8	-6,714.4	-740.8	6,750.8	1.78	0.15	1.77
16,005.0	88.72	179.73	9,286.1	-6,727.4	-740.7	6,763.8	1.90	1.00	1.62
16,020.0	88.82	179.63	9,286.4	-6,742.4	-740.6	6,778.7	0.94	0.67	-0.67
16,035.0	88.73	179.50	9,286.8	-6,757.4	-740.5	6,793.7	1.05	-0.60	-0.87
16,050.0	88.53	179.39	9,287.1	-6,772.4	-740.3	6,808.6	1.52	-1.33	-0.73
16,065.0	88.42	179.30	9,287.5	-6,787.4	-740.2	6,823.5	0.95	-0.73	-0.60
16,080.0	88.36	179.22	9,287.9	-6,802.4	-740.0	6,838.5	0.67	-0.40	-0.53
16,095.0	87.89	179.40	9,288.4	-6,817.4	-739.8	6,853.4	3.36	-3.13	1.20
16,108.0	87.07	179.74	9,289.0	-6,830.4	-739.7	6,866.4	6.83	-6.31	2.62
16,121.0	86.83	179.74	9,289.7	-6,843.3	-739.6	6,879.3	1.85	-1.85	0.00
16,134.0	86.81	179.72	9,290.4	-6,856.3	-739.6	6,892.2	0.22	-0.15	-0.15
16,147.0	86.90	179.67	9,291.1	-6,869.3	-739.5	6,905.2	0.79	0.69	-0.38
16,160.0	87.05	179.61	9,291.8	-6,882.3	-739.4	6,918.1	1.24	1.15	-0.46
16,173.0	87.22	179.58	9,292.5	-6,895.3	-739.3	6,931.1	1.33	1.31	-0.23
16,186.0	87.39	179.53	9,293.1	-6,908.3	-739.2	6,944.0	1.36	1.31	-0.38
16,201.0	87.55	179.40	9,293.7	-6,923.2	-739.1	6,958.9	1.37	1.07	-0.87
16,216.0	87.63	179.28	9,294.4	-6,938.2	-738.9	6,973.9	0.96	0.53	-0.80
16,231.0	87.64	179.16	9,295.0	-6,953.2	-738.7	6,988.8	0.80	0.07	-0.80
16,246.0	87.60	179.05	9,295.6	-6,968.2	-738.5	7,003.7	0.78	-0.27	-0.73
16,261.0	87.60	178.97	9,296.2	-6,983.2	-738.2	7,018.6	0.53	0.00	-0.53
16,276.0	87.62	178.91	9,296.9	-6,998.2	-737.9	7,033.6	0.42	0.13	-0.40

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)
16,289.0	87.71	178.94	9,297.4	-7,011.2	-737.7	7,046.5	0.73	0.69	0.23
16,302.0	87.78	178.96	9,297.9	-7,024.1	-737.5	7,059.4	0.56	0.54	0.15
16,315.0	87.88	178.95	9,298.4	-7,037.1	-737.2	7,072.4	0.77	0.77	-0.08
16,328.0	87.99	178.93	9,298.9	-7,050.1	-737.0	7,085.3	0.86	0.85	-0.15
16,341.0	88.10	178.89	9,299.3	-7,063.1	-736.7	7,098.2	0.90	0.85	-0.31
16,354.0	88.22	178.86	9,299.7	-7,076.1	-736.5	7,111.2	0.95	0.92	-0.23
16,367.0	88.33	178.83	9,300.1	-7,089.1	-736.2	7,124.1	0.88	0.85	-0.23
16,382.0	88.45	178.66	9,300.5	-7,104.1	-735.9	7,139.0	1.39	0.80	-1.13
16,397.0	88.54	178.52	9,300.9	-7,119.1	-735.5	7,154.0	1.11	0.60	-0.93
16,412.0	88.62	178.40	9,301.3	-7,134.1	-735.1	7,168.9	0.96	0.53	-0.80
16,427.0	88.67	178.31	9,301.7	-7,149.1	-734.7	7,183.8	0.69	0.33	-0.60
16,442.0	88.73	178.26	9,302.0	-7,164.0	-734.2	7,198.7	0.52	0.40	-0.33
16,457.0	88.83	178.24	9,302.3	-7,179.0	-733.8	7,213.6	0.68	0.67	-0.13
16,470.0	88.92	178.22	9,302.6	-7,192.0	-733.4	7,226.6	0.71	0.69	-0.15
16,483.0	88.78	178.34	9,302.8	-7,205.0	-733.0	7,239.5	1.42	-1.08	0.92
16,496.0	88.46	178.80	9,303.1	-7,218.0	-732.7	7,252.4	4.31	-2.46	3.54
16,509.0	88.37	179.50	9,303.5	-7,231.0	-732.5	7,265.4	5.43	-0.69	5.38
16,522.0	88.29	180.23	9,303.9	-7,244.0	-732.4	7,278.3	5.65	-0.62	5.62
16,535.0	88.39	180.25	9,304.3	-7,257.0	-732.5	7,291.3	0.78	0.77	0.15
16,548.0	88.46	180.27	9,304.6	-7,270.0	-732.6	7,304.2	0.56	0.54	0.15
16,563.0	88.47	180.14	9,305.0	-7,285.0	-732.6	7,319.2	0.87	0.07	-0.87
16,578.0	88.48	180.02	9,305.4	-7,300.0	-732.6	7,334.2	0.80	0.07	-0.80
16,593.0	88.49	179.91	9,305.8	-7,315.0	-732.6	7,349.1	0.74	0.07	-0.73
16,608.0	88.52	179.82	9,306.2	-7,330.0	-732.6	7,364.1	0.63	0.20	-0.60
16,623.0	88.64	179.73	9,306.6	-7,345.0	-732.5	7,379.0	1.00	0.80	-0.60
16,638.0	88.82	179.65	9,306.9	-7,360.0	-732.4	7,394.0	1.31	1.20	-0.53
16,651.0	89.00	179.64	9,307.2	-7,373.0	-732.4	7,406.9	1.39	1.38	-0.08
16,664.0	89.13	179.62	9,307.4	-7,385.9	-732.3	7,419.9	1.01	1.00	-0.15
16,677.0	89.27	179.58	9,307.5	-7,398.9	-732.2	7,432.8	1.12	1.08	-0.31
16,690.0	89.44	179.56	9,307.7	-7,411.9	-732.1	7,445.8	1.32	1.31	-0.15
16,703.0	89.61	179.54	9,307.8	-7,424.9	-732.0	7,458.7	1.32	1.31	-0.15
16,716.0	89.75	179.54	9,307.9	-7,437.9	-731.9	7,471.7	1.08	1.08	0.00
16,729.0	89.90	179.55	9,307.9	-7,450.9	-731.8	7,484.7	1.16	1.15	0.08
16,744.0	89.98	179.53	9,307.9	-7,465.9	-731.7	7,499.6	0.55	0.53	-0.13
16,759.0	90.06	179.49	9,307.9	-7,480.9	-731.5	7,514.6	0.60	0.53	-0.27
16,774.0	90.13	179.41	9,307.9	-7,495.9	-731.4	7,529.5	0.71	0.47	-0.53
16,789.0	90.17	179.31	9,307.9	-7,510.9	-731.2	7,544.4	0.72	0.27	-0.67
16,804.0	90.17	179.23	9,307.8	-7,525.9	-731.0	7,559.4	0.53	0.00	-0.53
16,819.0	90.18	179.16	9,307.8	-7,540.9	-730.8	7,574.3	0.47	0.07	-0.47
16,832.0	90.20	178.88	9,307.7	-7,553.9	-730.6	7,587.3	2.16	0.15	-2.15
16,845.0	90.21	178.66	9,307.7	-7,566.9	-730.3	7,600.2	1.69	0.08	-1.69
16,858.0	90.24	178.45	9,307.6	-7,579.9	-730.0	7,613.2	1.63	0.23	-1.62
16,871.0	90.30	178.26	9,307.6	-7,592.9	-729.6	7,626.1	1.53	0.46	-1.46

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
16,884.0	90.41	178.07	9,307.5	-7,605.9	-729.2	7,639.0	1.69	0.85	-1.46	
16,897.0	90.51	177.91	9,307.4	-7,618.9	-728.7	7,651.9	1.45	0.77	-1.23	
16,910.0	90.62	177.78	9,307.3	-7,631.9	-728.3	7,664.9	1.31	0.85	-1.00	
16,925.0	90.68	178.12	9,307.1	-7,646.9	-727.7	7,679.8	2.30	0.40	2.27	
16,940.0	90.83	178.36	9,306.9	-7,661.9	-727.3	7,694.7	1.89	1.00	1.60	
16,955.0	90.98	178.60	9,306.7	-7,676.9	-726.9	7,709.6	1.89	1.00	1.60	
16,970.0	91.11	178.91	9,306.4	-7,691.9	-726.5	7,724.5	2.24	0.87	2.07	
16,985.0	91.21	179.16	9,306.1	-7,706.9	-726.3	7,739.5	1.79	0.67	1.67	
17,000.0	90.86	180.18	9,305.8	-7,721.9	-726.2	7,754.4	7.19	-2.33	6.80	
17,013.0	90.08	181.00	9,305.7	-7,734.9	-726.3	7,767.4	8.71	-6.00	6.31	
17,026.0	89.62	181.87	9,305.7	-7,747.9	-726.7	7,780.4	7.57	-3.54	6.69	
17,039.0	89.55	181.98	9,305.8	-7,760.8	-727.1	7,793.4	1.00	-0.54	0.85	
17,052.0	89.54	181.90	9,305.9	-7,773.8	-727.5	7,806.3	0.62	-0.08	-0.62	
17,065.0	89.58	181.79	9,306.0	-7,786.8	-727.9	7,819.3	0.90	0.31	-0.85	
17,078.0	89.66	181.65	9,306.1	-7,799.8	-728.3	7,832.3	1.24	0.62	-1.08	
17,091.0	89.75	181.53	9,306.2	-7,812.8	-728.7	7,845.3	1.15	0.69	-0.92	
17,106.0	89.88	181.32	9,306.2	-7,827.8	-729.1	7,860.3	1.65	0.87	-1.40	
17,121.0	89.97	181.17	9,306.2	-7,842.8	-729.4	7,875.3	1.17	0.60	-1.00	
17,136.0	90.03	181.07	9,306.2	-7,857.8	-729.7	7,890.2	0.78	0.40	-0.67	
17,151.0	90.03	180.99	9,306.2	-7,872.8	-730.0	7,905.2	0.53	0.00	-0.53	
17,166.0	90.03	180.96	9,306.2	-7,887.8	-730.2	7,920.2	0.20	0.00	-0.20	
17,181.0	90.11	180.96	9,306.2	-7,902.8	-730.5	7,935.2	0.53	0.53	0.00	
17,194.0	90.06	181.19	9,306.2	-7,915.8	-730.7	7,948.2	1.81	-0.38	1.77	
17,207.0	90.12	181.35	9,306.2	-7,928.8	-731.0	7,961.1	1.31	0.46	1.23	
17,220.0	90.24	181.52	9,306.1	-7,941.8	-731.3	7,974.1	1.60	0.92	1.31	
17,233.0	90.33	181.70	9,306.1	-7,954.8	-731.7	7,987.1	1.55	0.69	1.38	
17,246.0	90.26	181.86	9,306.0	-7,967.8	-732.1	8,000.1	1.34	-0.54	1.23	
17,259.0	90.04	182.04	9,306.0	-7,980.8	-732.5	8,013.1	2.19	-1.69	1.38	
17,272.0	89.37	183.16	9,306.0	-7,993.8	-733.1	8,026.1	10.04	-5.15	8.62	
17,287.0	88.91	184.58	9,306.3	-8,008.7	-734.1	8,041.1	9.95	-3.07	9.47	
17,302.0	88.74	185.08	9,306.6	-8,023.7	-735.4	8,056.1	3.52	-1.13	3.33	
17,317.0	88.84	184.83	9,306.9	-8,038.6	-736.7	8,071.1	1.79	0.67	-1.67	
17,332.0	88.97	184.56	9,307.2	-8,053.6	-737.9	8,086.1	2.00	0.87	-1.80	
17,347.0	89.04	184.28	9,307.4	-8,068.5	-739.1	8,101.1	1.92	0.47	-1.87	
17,362.0	89.12	184.03	9,307.7	-8,083.5	-740.2	8,116.1	1.75	0.53	-1.67	
17,375.0	89.23	183.96	9,307.9	-8,096.4	-741.1	8,129.1	1.00	0.85	-0.54	
17,388.0	89.34	183.92	9,308.0	-8,109.4	-742.0	8,142.1	0.90	0.85	-0.31	
17,401.0	89.54	183.91	9,308.1	-8,122.4	-742.9	8,155.1	1.54	1.54	-0.08	
17,414.0	89.75	183.92	9,308.2	-8,135.3	-743.7	8,168.1	1.62	1.62	0.08	
17,427.0	90.03	183.94	9,308.3	-8,148.3	-744.6	8,181.1	2.16	2.15	0.15	
17,440.0	90.32	183.97	9,308.2	-8,161.3	-745.5	8,194.1	2.24	2.23	0.23	
17,453.0	90.62	183.99	9,308.1	-8,174.2	-746.4	8,207.1	2.31	2.31	0.15	
17,468.0	90.96	184.05	9,307.9	-8,189.2	-747.5	8,222.1	2.30	2.27	0.40	
17,483.0	91.23	184.09	9,307.6	-8,204.2	-748.5	8,237.1	1.82	1.80	0.27	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,498.0	91.45	184.12	9,307.3	-8,219.1	-749.6	8,252.0	1.48	1.47	0.20
17,513.0	91.60	184.16	9,306.9	-8,234.1	-750.7	8,267.0	1.03	1.00	0.27
17,528.0	91.70	184.19	9,306.4	-8,249.0	-751.8	8,282.0	0.70	0.67	0.20
17,543.0	91.76	184.22	9,306.0	-8,264.0	-752.9	8,297.0	0.45	0.40	0.20
17,556.0	91.64	184.16	9,305.6	-8,276.9	-753.8	8,310.0	1.03	-0.92	-0.46
17,569.0	91.65	184.10	9,305.2	-8,289.9	-754.8	8,323.0	0.47	0.08	-0.46
17,582.0	91.66	184.02	9,304.8	-8,302.9	-755.7	8,336.0	0.62	0.08	-0.62
17,595.0	91.67	183.94	9,304.5	-8,315.8	-756.6	8,349.0	0.62	0.08	-0.62
17,608.0	91.60	183.87	9,304.1	-8,328.8	-757.5	8,362.0	0.76	-0.54	-0.54
17,621.0	91.38	183.79	9,303.8	-8,341.8	-758.4	8,375.0	1.80	-1.69	-0.62
17,634.0	90.21	184.11	9,303.6	-8,354.7	-759.2	8,388.0	9.33	-9.00	2.46
17,649.0	88.76	184.23	9,303.7	-8,369.7	-760.3	8,403.0	9.70	-9.67	0.80
17,664.0	88.41	184.08	9,304.1	-8,384.6	-761.4	8,418.0	2.54	-2.33	-1.00
17,679.0	88.31	183.82	9,304.5	-8,399.6	-762.5	8,433.0	1.86	-0.67	-1.73
17,694.0	88.36	183.54	9,304.9	-8,414.6	-763.4	8,448.0	1.90	0.33	-1.87
17,709.0	88.55	183.27	9,305.4	-8,429.5	-764.3	8,463.0	2.20	1.27	-1.80
17,724.0	88.76	183.03	9,305.7	-8,444.5	-765.1	8,478.0	2.13	1.40	-1.60
17,737.0	89.05	183.06	9,306.0	-8,457.5	-765.8	8,491.0	2.24	2.23	0.23
17,750.0	89.32	183.11	9,306.1	-8,470.5	-766.5	8,504.0	2.11	2.08	0.38
17,763.0	89.57	183.20	9,306.3	-8,483.4	-767.2	8,517.0	2.04	1.92	0.69
17,776.0	89.79	183.32	9,306.3	-8,496.4	-768.0	8,529.9	1.93	1.69	0.92
17,789.0	89.99	183.46	9,306.4	-8,509.4	-768.7	8,542.9	1.88	1.54	1.08
17,802.0	90.17	183.59	9,306.3	-8,522.4	-769.5	8,555.9	1.71	1.38	1.00
17,815.0	90.31	183.72	9,306.3	-8,535.4	-770.4	8,568.9	1.47	1.08	1.00
17,830.0	90.17	183.69	9,306.2	-8,550.3	-771.3	8,583.9	0.95	-0.93	-0.20
17,845.0	90.13	183.63	9,306.2	-8,565.3	-772.3	8,598.9	0.48	-0.27	-0.40
17,860.0	90.14	183.53	9,306.2	-8,580.3	-773.2	8,613.9	0.67	0.07	-0.67
17,875.0	90.13	183.42	9,306.1	-8,595.2	-774.2	8,628.9	0.74	-0.07	-0.73
17,890.0	90.03	183.31	9,306.1	-8,610.2	-775.0	8,643.9	0.99	-0.67	-0.73
17,905.0	88.77	183.98	9,306.3	-8,625.2	-776.0	8,658.9	9.51	-8.40	4.47
17,918.0	88.27	184.02	9,306.6	-8,638.1	-776.9	8,671.9	3.86	-3.85	0.31
17,931.0	88.14	184.00	9,307.0	-8,651.1	-777.8	8,684.9	1.01	-1.00	-0.15
17,944.0	87.99	183.94	9,307.4	-8,664.1	-778.7	8,697.9	1.24	-1.15	-0.46
17,957.0	88.03	183.89	9,307.9	-8,677.0	-779.6	8,710.9	0.49	0.31	-0.38
17,970.0	88.11	183.84	9,308.3	-8,690.0	-780.5	8,723.9	0.73	0.62	-0.38
17,983.0	88.17	183.80	9,308.7	-8,703.0	-781.3	8,736.9	0.55	0.46	-0.31
17,996.0	88.25	183.76	9,309.2	-8,715.9	-782.2	8,749.9	0.69	0.62	-0.31
18,011.0	88.70	184.08	9,309.6	-8,730.9	-783.2	8,764.9	3.68	3.00	2.13
18,026.0	89.16	184.36	9,309.8	-8,745.8	-784.3	8,779.9	3.59	3.07	1.87
18,041.0	89.73	184.67	9,310.0	-8,760.8	-785.5	8,794.9	4.33	3.80	2.07
18,056.0	90.25	185.01	9,310.0	-8,775.7	-786.8	8,809.9	4.14	3.47	2.27
18,071.0	90.65	185.37	9,309.9	-8,790.7	-788.1	8,824.9	3.59	2.67	2.40
18,086.0	90.94	185.69	9,309.7	-8,805.6	-789.6	8,839.9	2.88	1.93	2.13

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,099.0	91.09	185.71	9,309.4	-8,818.5	-790.9	8,852.9	1.16	1.15	0.15
18,112.0	91.24	185.73	9,309.2	-8,831.5	-792.1	8,865.9	1.16	1.15	0.15
18,125.0	91.39	185.70	9,308.9	-8,844.4	-793.4	8,878.9	1.18	1.15	-0.23
18,138.0	91.56	185.64	9,308.5	-8,857.3	-794.7	8,891.8	1.39	1.31	-0.46
18,151.0	91.71	185.57	9,308.2	-8,870.3	-796.0	8,904.8	1.27	1.15	-0.54
18,164.0	91.83	185.51	9,307.8	-8,883.2	-797.2	8,917.8	1.03	0.92	-0.46
18,177.0	91.55	184.68	9,307.4	-8,896.1	-798.4	8,930.8	6.74	-2.15	-6.38
18,192.0	91.43	184.24	9,307.0	-8,911.1	-799.6	8,945.8	3.04	-0.80	-2.93
18,207.0	91.40	184.00	9,306.6	-8,926.0	-800.6	8,960.8	1.61	-0.20	-1.60
18,222.0	91.46	183.85	9,306.2	-8,941.0	-801.7	8,975.8	1.08	0.40	-1.00
18,237.0	91.65	183.70	9,305.8	-8,956.0	-802.7	8,990.8	1.61	1.27	-1.00
18,252.0	91.95	183.57	9,305.4	-8,970.9	-803.6	9,005.8	2.18	2.00	-0.87
18,267.0	92.31	183.45	9,304.8	-8,985.9	-804.5	9,020.8	2.53	2.40	-0.80
18,282.0	92.28	183.16	9,304.2	-9,000.9	-805.4	9,035.8	1.94	-0.20	-1.93
18,297.0	92.24	182.93	9,303.6	-9,015.8	-806.2	9,050.7	1.56	-0.27	-1.53
18,312.0	92.17	182.70	9,303.0	-9,030.8	-806.9	9,065.7	1.60	-0.47	-1.53
18,327.0	92.02	182.49	9,302.5	-9,045.8	-807.6	9,080.7	1.72	-1.00	-1.40
18,342.0	91.55	182.29	9,302.0	-9,060.7	-808.2	9,095.7	3.40	-3.13	-1.33
18,357.0	89.68	181.89	9,301.9	-9,075.7	-808.8	9,110.7	12.75	-12.47	-2.67
18,370.0	88.81	180.64	9,302.0	-9,088.7	-809.1	9,123.7	11.71	-6.69	-9.62
18,383.0	88.41	179.42	9,302.3	-9,101.7	-809.1	9,136.6	9.87	-3.08	-9.38
18,396.0	88.49	179.48	9,302.7	-9,114.7	-808.9	9,149.6	0.77	0.62	0.46
18,409.0	88.55	179.54	9,303.0	-9,127.7	-808.8	9,162.5	0.65	0.46	0.46
18,422.0	88.61	179.56	9,303.4	-9,140.7	-808.7	9,175.5	0.49	0.46	0.15
18,435.0	88.62	179.60	9,303.7	-9,153.7	-808.6	9,188.4	0.32	0.08	0.31
18,448.0	88.65	179.65	9,304.0	-9,166.7	-808.6	9,201.4	0.45	0.23	0.38
18,463.0	88.73	179.61	9,304.3	-9,181.7	-808.5	9,216.3	0.60	0.53	-0.27
18,478.0	88.83	179.62	9,304.6	-9,196.7	-808.4	9,231.3	0.67	0.67	0.07
18,493.0	88.93	179.61	9,304.9	-9,211.7	-808.3	9,246.2	0.67	0.67	-0.07
18,508.0	89.01	179.59	9,305.2	-9,226.7	-808.1	9,261.2	0.55	0.53	-0.13
18,523.0	89.02	179.51	9,305.5	-9,241.7	-808.0	9,276.1	0.54	0.07	-0.53
18,538.0	88.98	179.43	9,305.7	-9,256.7	-807.9	9,291.1	0.60	-0.27	-0.53
18,551.0	88.93	179.43	9,306.0	-9,269.7	-807.8	9,304.0	0.38	-0.38	0.00
18,564.0	88.90	179.44	9,306.2	-9,282.7	-807.6	9,317.0	0.24	-0.23	0.08
18,577.0	88.96	179.46	9,306.4	-9,295.7	-807.5	9,329.9	0.49	0.46	0.15
18,590.0	89.06	179.46	9,306.7	-9,308.7	-807.4	9,342.9	0.77	0.77	0.00
18,603.0	89.18	179.49	9,306.9	-9,321.7	-807.3	9,355.8	0.95	0.92	0.23
18,616.0	89.29	179.53	9,307.0	-9,334.7	-807.2	9,368.8	0.90	0.85	0.31
18,629.0	89.40	179.58	9,307.2	-9,347.7	-807.1	9,381.7	0.93	0.85	0.38
18,644.0	89.78	179.73	9,307.3	-9,362.7	-807.0	9,396.7	2.72	2.53	1.00
18,659.0	90.10	179.87	9,307.3	-9,377.7	-806.9	9,411.7	2.33	2.13	0.93
18,674.0	90.51	180.00	9,307.2	-9,392.7	-806.9	9,426.6	2.87	2.73	0.87
18,689.0	91.02	180.11	9,307.0	-9,407.7	-806.9	9,441.6	3.48	3.40	0.73

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
18,704.0	91.62	180.17	9,306.7	-9,422.7	-806.9	9,456.5	4.02	4.00	0.40	
18,719.0	92.14	180.20	9,306.2	-9,437.7	-807.0	9,471.5	3.47	3.47	0.20	
18,732.0	92.28	179.95	9,305.7	-9,450.6	-807.0	9,484.4	2.20	1.08	-1.92	
18,745.0	92.41	179.79	9,305.2	-9,463.6	-807.0	9,497.4	1.59	1.00	-1.23	
18,758.0	92.44	179.68	9,304.6	-9,476.6	-806.9	9,510.3	0.88	0.23	-0.85	
18,771.0	92.28	179.60	9,304.1	-9,489.6	-806.8	9,523.3	1.38	-1.23	-0.62	
18,784.0	92.14	179.53	9,303.6	-9,502.6	-806.7	9,536.2	1.20	-1.08	-0.54	
18,797.0	91.93	179.39	9,303.1	-9,515.6	-806.6	9,549.2	1.94	-1.62	-1.08	
18,810.0	91.66	179.26	9,302.7	-9,528.6	-806.5	9,562.1	2.30	-2.08	-1.00	
18,825.0	91.41	179.22	9,302.3	-9,543.6	-806.3	9,577.1	1.69	-1.67	-0.27	
18,840.0	91.38	179.21	9,301.9	-9,558.6	-806.1	9,592.0	0.21	-0.20	-0.07	
18,855.0	91.53	179.28	9,301.6	-9,573.6	-805.9	9,606.9	1.10	1.00	0.47	
18,870.0	91.76	179.41	9,301.1	-9,588.6	-805.7	9,621.9	1.76	1.53	0.87	
18,885.0	91.86	179.57	9,300.7	-9,603.5	-805.6	9,636.8	1.26	0.67	1.07	
18,900.0	91.48	179.76	9,300.2	-9,618.5	-805.5	9,651.8	2.83	-2.53	1.27	
18,913.0	90.85	180.18	9,300.0	-9,631.5	-805.5	9,664.7	5.82	-4.85	3.23	
18,926.0	90.26	180.68	9,299.8	-9,644.5	-805.6	9,677.7	5.95	-4.54	3.85	
18,939.0	90.66	180.88	9,299.7	-9,657.5	-805.7	9,690.7	3.44	3.08	1.54	
18,952.0	91.11	181.02	9,299.5	-9,670.5	-806.0	9,703.7	3.63	3.46	1.08	
18,965.0	91.50	181.15	9,299.2	-9,683.5	-806.2	9,716.6	3.16	3.00	1.00	
18,978.0	91.83	181.33	9,298.8	-9,696.5	-806.5	9,729.6	2.89	2.54	1.38	
18,991.0	92.12	181.53	9,298.4	-9,709.5	-806.8	9,742.6	2.71	2.23	1.54	
19,006.0	92.16	181.58	9,297.8	-9,724.5	-807.2	9,757.6	0.43	0.27	0.33	
19,021.0	91.44	181.43	9,297.4	-9,739.5	-807.6	9,772.5	4.90	-4.80	-1.00	
19,036.0	91.55	181.30	9,297.0	-9,754.5	-808.0	9,787.5	1.14	0.73	-0.87	
19,051.0	91.62	181.30	9,296.6	-9,769.5	-808.3	9,802.5	0.47	0.47	0.00	
19,066.0	91.72	181.30	9,296.1	-9,784.4	-808.6	9,817.5	0.67	0.67	0.00	
19,081.0	91.94	181.31	9,295.6	-9,799.4	-809.0	9,832.4	1.47	1.47	0.07	
19,096.0	90.92	181.08	9,295.3	-9,814.4	-809.3	9,847.4	6.97	-6.80	-1.53	
19,111.0	90.09	180.74	9,295.1	-9,829.4	-809.5	9,862.4	5.98	-5.53	-2.27	
19,126.0	89.93	180.43	9,295.1	-9,844.4	-809.7	9,877.3	2.33	-1.07	-2.07	
19,141.0	89.91	180.22	9,295.2	-9,859.4	-809.8	9,892.3	1.41	-0.13	-1.40	
19,156.0	89.96	179.99	9,295.2	-9,874.4	-809.8	9,907.3	1.57	0.33	-1.53	
19,171.0	89.96	179.78	9,295.2	-9,889.4	-809.8	9,922.2	1.40	0.00	-1.40	
19,184.0	89.89	179.72	9,295.2	-9,902.4	-809.7	9,935.2	0.71	-0.54	-0.46	
19,197.0	89.88	179.67	9,295.2	-9,915.4	-809.6	9,948.1	0.39	-0.08	-0.38	
19,210.0	89.87	179.64	9,295.3	-9,928.4	-809.6	9,961.1	0.24	-0.08	-0.23	
19,223.0	89.80	179.62	9,295.3	-9,941.4	-809.5	9,974.1	0.56	-0.54	-0.15	
19,236.0	89.76	179.64	9,295.3	-9,954.4	-809.4	9,987.0	0.34	-0.31	0.15	
19,249.0	89.76	179.67	9,295.4	-9,967.4	-809.3	10,000.0	0.23	0.00	0.23	
19,262.0	89.73	179.71	9,295.5	-9,980.4	-809.3	10,012.9	0.38	-0.23	0.31	
19,277.0	89.66	179.87	9,295.5	-9,995.4	-809.2	10,027.9	1.16	-0.47	1.07	
19,292.0	89.57	179.97	9,295.6	-10,010.4	-809.2	10,042.8	0.90	-0.60	0.67	
19,307.0	89.41	180.07	9,295.8	-10,025.4	-809.2	10,057.8	1.26	-1.07	0.67	

ConocoPhillips
Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well TOMAHAWK WC UNIT #723H
Project:	TOMAHAWK PROSPECT__DBW__NM_E	TVD Reference:	KB=32 @ 3125.0usft
Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

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)	
19,322.0	89.28	180.23	9,295.9	-10,040.4	-809.2	10,072.8	1.37	-0.87	1.07	
19,337.0	89.18	180.41	9,296.1	-10,055.4	-809.3	10,087.7	1.37	-0.67	1.20	
19,352.0	89.07	180.60	9,296.4	-10,070.4	-809.4	10,102.7	1.46	-0.73	1.27	
19,365.0	89.12	181.13	9,296.6	-10,083.4	-809.6	10,115.7	4.09	0.38	4.08	
19,373.7	89.20	181.41	9,296.7	-10,092.1	-809.8	10,124.4	3.36	0.92	3.23	
LTP @ 19373' MD / 9296' TVD										
19,378.0	89.24	181.55	9,296.8	-10,096.4	-809.9	10,128.7	3.36	0.92	3.23	
19,391.0	89.46	181.97	9,296.9	-10,109.4	-810.3	10,141.6	3.65	1.69	3.23	
19,404.0	89.81	182.37	9,297.0	-10,122.4	-810.8	10,154.6	4.09	2.69	3.08	
19,417.0	90.24	182.74	9,297.0	-10,135.4	-811.4	10,167.6	4.36	3.31	2.85	
19,430.0	90.72	183.02	9,296.9	-10,148.4	-812.1	10,180.6	4.27	3.69	2.15	
19,443.0	91.13	183.21	9,296.7	-10,161.3	-812.8	10,193.6	3.48	3.15	1.46	
FINAL SVY @ 19443' MD / 9296' TVD										
19,500.0	91.13	183.21	9,295.5	-10,218.2	-816.0	10,250.6	0.00	0.00	0.00	
BIT PROJ @ 19500' MD / 9295' TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
- hit/miss target										
- Shape										
TOMAHAWK 723H 60'X	0.00	0.01	6,700.0	149.9	-771.0	434,899.60	561,925.00	32° 11' 43.791 N		104° 7' 59.326 W
- actual wellpath misses target center by 39.4usft at 6767.0usft MD (6700.2 TVD, 143.4 N, -732.1 E)										
- Rectangle (sides W100.0 H60.0 D2,150.0)										
FTP_TOMAHAWK WC I	0.00	0.00	9,294.0	-118.0	-770.8	434,631.70	561,925.20	32° 11' 41.140 N		104° 7' 59.329 W
- actual wellpath misses target center by 71.6usft at 9408.1usft MD (9228.9 TVD, -146.0 N, -781.1 E)										
- Circle (radius 50.0)										
PBHL_TOMAHAWK WC	0.09	179.93	9,310.0	-10,222.1	-757.7	424,527.60	561,938.30	32° 10' 1.146 N		104° 7' 59.396 W
- actual wellpath misses target center by 60.1usft at 19500.0usft MD (9295.5 TVD, -10218.2 N, -816.0 E)										
- Rectangle (sides W100.0 H10,104.1 D20.0)										
LTP_TOMAHAWK WC L	90.00	179.89	9,310.0	-10,092.1	-757.9	424,657.60	561,938.10	32° 10' 2.432 N		104° 7' 59.395 W
- actual wellpath misses target center by 53.6usft at 19372.7usft MD (9296.7 TVD, -10091.1 N, -809.8 E)										
- Circle (radius 50.0)										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
19,526.0	9,310.0	5 1/2"		5-1/2	6

ConocoPhillips
Survey Report

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Site:	TOMAHAWK WC UNIT S19-30-31 R24S T28E	MD Reference:	KB=32 @ 3125.0usft
Well:	TOMAHAWK WC UNIT #723H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDT 17 Permian Prod

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
9,377.5	9,215.7	-118.5	-782.2	FTP @ 9377' MD / 9215' TVD	
9,474.6	9,254.1	-207.6	-779.4	70 DEG INC @ 9474' MD / 9254' TVD	
19,373.7	9,296.7	-10,092.1	-809.8	LTP @ 19373' MD / 9296' TVD	
19,443.0	9,296.7	-10,161.3	-812.8	FINAL SVY @ 19443' MD / 9296' TVD	
19,500.0	9,295.5	-10,218.2	-816.0	BIT PROJ @ 19500' MD / 9295' TVD	

Checked By: _____

Approved By: _____

Date: _____

C-105 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
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WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Section 1 - Operator and Well Information

Submittal Type: ☐ New Well ☐ Workover ☐ Deepening ☐ Plugback ☐ Different Reservoir ☐ C-144 Closure Attachment ☐ Other	
Operator Name:	OGRID:
Property Name and Well Number:	Property Code:
Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☐ Federal	API Number:
Pool Name:	Pool Code:

Section 2 – Well Location

	UI or lot no.	Section	Township	Range	Lot Id	Feet from	N/S Line	Feet from	E/W Line	County
SHL:										
BHL										

Section 3 – Completion Information

Date T.D. Reached	Total Measured Depth of Well	Acid Volume (bbls)	☐ Directional Survey Submitted ☐ Deviation Survey Submitted
Date Rig Released	Plug-Back Measured Depth	Completion Fluid Used (bbls)	Were Logs Ran (Y/N)
Completion Date	Perforations (MD and TVD)	Completion Proppant Used (lbs)	List Type of Logs Ran if applicable:

Section 4 – Action IDs for Submissions and Order Numbers

Surface Casing Action ID:	UIC Permit/Order (UIC wells only) ☐ Yes ☐ No, Order No.
Intermediate 1 Casing Action ID:	NOI Recomplete Action ID (if applicable):
Intermediate 2 Casing Action ID:	NOI Plugback Action ID (if applicable):
Production Casing Action ID:	Cement Squeeze Action ID (if applicable):
Tubing Action ID:	All casing was pressure tested in accordance with NMAC ☐ Yes ☐ No
Liner 1 Action ID:	Casing was installed prior to Action ID system (Y/N):

Section 5 – Test Data

Date First Production	Production Method	Well Status	Gas – Oil Ratio
Date of Test	Choke Size	Flowing Tubing Pressure	Casing Pressure
24 hr Oil (bbls)	24 hr Gas (MCF)	24 hr Water (bbls)	Oil Gravity - API
Disposition of Gas:			

Section 6 – Pits

☐ A temporary pit was used at the well. If so, attach a plat with the location of the temporary pit. ☐ A Closed Loop System was used. ☐ If an on-site burial was used at the well, report the exact location of the on-site burial: LAT: _____ LONG: _____
--

Section 7 - Operator Signature and Certification

☐ I hereby certify that the required Water Use Report has been, or will be, submitted for this well’s completion.	
☐ I hereby certify that the required Fracfocus disclosure has been, or will be, submitted for this well’s completion.	
☐ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.	
Name	
Title	Date

South Formations				North Formations			
Formation/Zone	MD	TVD	W/O/G	Formation/Zone	MD	TVD	W/O/G
T. Anhy				T. San Jose			
T. Salt				T. Nacimiento			
B. Salt				T. Ojo Alamo			
T. Yates				T. Kirtland			
T. 7 Rivers				T. Fruitland			
T. Queen				T. Pictured Cliffs			
T. Grayburg				T. Lewis Shale			
T. San Andres				T. Chacra			
T. Glorieta				T. Cliff House			
T. Yeso				T. Menefee			
T. Paddock				T. Point Lookout			
T. Blinebry				T. Mancos			
T.Tubb				T. Gallup			
T. Drinkard				T. Greenhorn			
T. Abo				T. Graneros			
T. Wolfcamp				T. Dakota			
T. Penn				T. Morrison			
T. Cisco				T. Bluff			
T. Canyon				T.Todilto			
T. Strawn				T. Entrada			
T. Atoka				T. Wingate			
T. Morrow				T. Chinle			
T. Barnett Shale				T. Permian			
T. Miss				T. Penn A"			
T. Woodford Shale				T. Penn. "B"			
T. Devonian				T. Penn. "C"			
T. Silurian				T. Penn. "D"			
T. Fusselman				T. Leadville			
T. Montoya				T. Madison			
T. Simpson				T. Elbert			
T. McKee				T. McCracken			
T. Waddell				T. Ignacio Otzte			
T. Connel				T. Granite			
T. Ellenburger				T. Hermosa			
T. Gr. Wash				T. De Chelly			
T. Delaware Sand				T. Pinkerton			
T. Lamar Lime							
T. Bell Canyon							
T. Cherry Canyon							
T. Brushy Canyon							
T. Bone Springs							
T. 1st BS Sand							
T. 2nd BS Carbonate							
T. 2nd BS Sand							
T. 3rd BS Carbonate							
T. 3rd BS Sand							

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

ACKNOWLEDGMENTS

Action 447762

ACKNOWLEDGMENTS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 447762
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.
☒	I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

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

CONDITIONS

Action 447762

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 447762
	Action Type: [C-104] Completion Packet - New Well (C-104NW)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 Completion Report and 3160-5 Completion Sundry within 10 days of BLM approval.	11/6/2025