

HOBBS OCD

JAN 15 2020

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NORTHERN DELAWARE BASIN

LEA COUNTY, NM

BULLDOG

FEZ FED COM #704H

OWB

Design: ACTUAL WELLPATH

Standard Survey Report

08 May, 2019

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

Project	LEA COUNTY, NM		
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	BULLDOG		
Site Position:		Northing:	398,637.10 usft
From:	Map	Easting:	741,887.40 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 36.820 N
		Longitude:	103° 33' 8.116 W
		Grid Convergence:	0.42 °

Well	FEZ FED COM #704H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	3.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 8' 17.812 N
		Longitude:	103° 22' 44.421 W
		Ground Level:	3,260.3 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	2/28/2018	6.81	59.99	47,823.01304759

Design	ACTUAL WELLPATH				
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	1.53	

Survey Program	Date 3/25/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	11,600.0	GYRO (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
11,721.0	22,550.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

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	0.45	63.13	100.0	0.2	0.4	0.2	0.45	0.45	0.00	
125.0	0.42	82.03	125.0	0.2	0.5	0.2	0.58	-0.12	75.60	
150.0	0.59	103.06	150.0	0.2	0.7	0.2	1.00	0.68	84.12	
175.0	0.76	116.95	175.0	0.1	1.0	0.1	0.94	0.68	55.56	
200.0	0.92	92.37	200.0	0.0	1.4	0.1	1.56	0.64	-98.32	
225.0	0.91	84.04	225.0	0.0	1.8	0.1	0.53	-0.04	-33.32	
250.0	0.91	82.21	250.0	0.1	2.2	0.1	0.12	0.00	-7.32	
275.0	0.86	74.83	275.0	0.2	2.5	0.2	0.50	-0.20	-29.52	
300.0	0.80	74.33	300.0	0.3	2.9	0.3	0.24	-0.24	-2.00	

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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
325.0	0.69	72.45	325.0	0.4	3.2	0.4	0.45	-0.44	-7.52
350.0	0.61	85.74	350.0	0.4	3.5	0.5	0.68	-0.32	53.16
375.0	0.57	99.00	375.0	0.4	3.7	0.5	0.57	-0.16	53.04
400.0	0.54	106.32	400.0	0.3	4.0	0.5	0.31	-0.12	29.28
425.0	0.52	106.31	425.0	0.3	4.2	0.4	0.08	-0.08	-0.04
450.0	0.54	102.77	450.0	0.2	4.4	0.3	0.15	0.08	-14.16
475.0	0.49	99.41	475.0	0.2	4.6	0.3	0.23	-0.20	-13.44
500.0	0.42	96.01	500.0	0.2	4.8	0.3	0.30	-0.28	-13.60
525.0	0.39	88.21	525.0	0.1	5.0	0.3	0.25	-0.12	-31.20
550.0	0.40	74.13	550.0	0.2	5.2	0.3	0.39	0.04	-56.32
575.0	0.37	68.84	575.0	0.2	5.3	0.4	0.19	-0.12	-21.16
600.0	0.34	51.67	600.0	0.3	5.5	0.4	0.44	-0.12	-68.68
625.0	0.25	39.90	625.0	0.4	5.6	0.5	0.43	-0.36	-47.08
650.0	0.11	13.43	650.0	0.5	5.6	0.6	0.64	-0.56	-105.88
675.0	0.04	246.45	675.0	0.5	5.6	0.6	0.55	-0.28	-507.92
700.0	0.20	160.14	700.0	0.4	5.6	0.6	0.81	0.64	-345.24
725.0	0.19	131.77	725.0	0.4	5.6	0.5	0.38	-0.04	-113.48
750.0	0.22	112.56	750.0	0.3	5.7	0.5	0.30	0.12	-76.84
775.0	0.23	98.54	775.0	0.3	5.8	0.4	0.22	0.04	-56.08
800.0	0.22	75.22	800.0	0.3	5.9	0.5	0.37	-0.04	-93.28
825.0	0.22	64.55	825.0	0.3	6.0	0.5	0.16	0.00	-42.68
850.0	0.15	37.92	850.0	0.4	6.1	0.5	0.44	-0.28	-106.52
875.0	0.16	9.66	875.0	0.4	6.1	0.6	0.31	0.04	-113.04
900.0	0.12	359.65	900.0	0.5	6.1	0.7	0.19	-0.16	-40.04
925.0	0.21	356.12	925.0	0.6	6.1	0.7	0.36	0.36	-14.12
950.0	0.18	351.82	950.0	0.7	6.1	0.8	0.13	-0.12	-17.20
975.0	0.17	341.95	975.0	0.7	6.1	0.9	0.13	-0.04	-39.48
1,000.0	0.23	325.12	1,000.0	0.8	6.0	1.0	0.33	0.24	-67.32
1,025.0	0.20	311.02	1,025.0	0.9	6.0	1.0	0.24	-0.12	-56.40
1,050.0	0.09	330.77	1,050.0	0.9	5.9	1.1	0.48	-0.44	79.00
1,075.0	0.12	131.66	1,075.0	0.9	5.9	1.1	0.83	0.12	643.56
1,100.0	0.26	117.51	1,100.0	0.9	6.0	1.0	0.59	0.56	-56.60
1,125.0	0.36	126.51	1,125.0	0.8	6.1	1.0	0.44	0.40	36.00
1,150.0	0.42	126.23	1,150.0	0.7	6.3	0.9	0.24	0.24	-1.12
1,175.0	0.44	127.99	1,175.0	0.6	6.4	0.8	0.10	0.08	7.04
1,200.0	0.45	126.86	1,200.0	0.5	6.6	0.6	0.05	0.04	-4.52
1,225.0	0.51	124.42	1,225.0	0.3	6.7	0.5	0.25	0.24	-9.76
1,250.0	0.58	129.95	1,250.0	0.2	6.9	0.4	0.35	0.28	22.12
1,275.0	0.53	112.43	1,275.0	0.1	7.1	0.3	0.70	-0.20	-70.08
1,300.0	0.55	116.93	1,300.0	0.0	7.3	0.2	0.19	0.08	18.00
1,325.0	0.60	111.54	1,325.0	-0.1	7.6	0.1	0.29	0.20	-21.56
1,350.0	0.64	93.07	1,350.0	-0.2	7.8	0.0	0.81	0.16	-73.88
1,375.0	0.60	101.74	1,375.0	-0.2	8.1	0.0	0.41	-0.16	34.68

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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
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1,400.0	0.59	100.78	1,400.0	-0.3	8.3	0.0	0.06	-0.04	-3.84
1,425.0	0.63	97.42	1,425.0	-0.3	8.6	-0.1	0.21	0.16	-13.44
1,450.0	0.50	99.79	1,450.0	-0.3	8.9	-0.1	0.53	-0.52	9.48
1,475.0	0.57	132.39	1,475.0	-0.4	9.1	-0.2	1.23	0.28	130.40
1,500.0	1.04	113.03	1,499.9	-0.6	9.4	-0.4	2.15	1.88	-77.44
1,525.0	1.37	122.30	1,524.9	-0.9	9.8	-0.6	1.53	1.32	37.08
1,550.0	1.76	120.17	1,549.9	-1.2	10.4	-0.9	1.58	1.56	-8.52
1,575.0	2.15	124.47	1,574.9	-1.7	11.1	-1.4	1.67	1.56	17.20
1,600.0	2.41	125.19	1,599.9	-2.2	11.9	-1.9	1.05	1.04	2.88
1,625.0	2.96	130.46	1,624.9	-3.0	12.9	-2.6	2.41	2.20	21.08
1,650.0	3.22	132.03	1,649.8	-3.9	13.9	-3.5	1.09	1.04	6.28
1,675.0	3.31	132.98	1,674.8	-4.8	14.9	-4.4	0.42	0.36	3.80
1,700.0	3.33	132.84	1,699.8	-5.8	16.0	-5.4	0.09	0.08	-0.56
1,725.0	3.34	137.37	1,724.7	-6.8	17.0	-6.4	1.05	0.04	18.12
1,750.0	3.30	138.87	1,749.7	-7.9	18.0	-7.4	0.38	-0.16	6.00
1,775.0	3.34	140.50	1,774.6	-9.0	18.9	-8.5	0.41	0.16	6.52
1,800.0	3.40	140.90	1,799.6	-10.2	19.8	-9.6	0.26	0.24	1.60
1,825.0	3.53	142.53	1,824.5	-11.3	20.8	-10.8	0.65	0.52	6.52
1,850.0	3.99	147.93	1,849.5	-12.7	21.7	-12.1	2.32	1.84	21.60
1,875.0	4.02	146.97	1,874.4	-14.2	22.6	-13.5	0.29	0.12	-3.84
1,900.0	3.97	146.86	1,899.4	-15.6	23.6	-15.0	0.20	-0.20	-0.44
1,925.0	3.99	148.04	1,924.3	-17.1	24.5	-16.4	0.34	0.08	4.72
1,950.0	4.14	146.80	1,949.2	-18.6	25.5	-17.9	0.70	0.60	-4.96
1,975.0	4.13	146.88	1,974.2	-20.1	26.5	-19.4	0.05	-0.04	0.32
2,000.0	4.31	146.29	1,999.1	-21.6	27.5	-20.9	0.74	0.72	-2.36
2,025.0	4.50	143.79	2,024.0	-23.2	28.6	-22.4	1.08	0.76	-10.00
2,050.0	4.65	142.37	2,049.0	-24.8	29.8	-24.0	0.75	0.60	-5.68
2,075.0	4.54	142.36	2,073.9	-26.4	31.0	-25.5	0.44	-0.44	-0.04
2,100.0	4.73	134.49	2,098.8	-27.9	32.3	-27.0	2.65	0.76	-31.48
2,125.0	5.53	131.04	2,123.7	-29.4	34.0	-28.5	3.43	3.20	-13.80
2,150.0	5.70	130.63	2,148.6	-31.0	35.8	-30.0	0.70	0.68	-1.64
2,175.0	5.73	127.71	2,173.4	-32.6	37.8	-31.5	1.17	0.12	-11.68
2,200.0	5.77	127.84	2,198.3	-34.1	39.7	-33.0	0.17	0.16	0.52
2,225.0	5.81	127.17	2,223.2	-35.6	41.7	-34.5	0.31	0.16	-2.68
2,250.0	5.81	127.16	2,248.1	-37.2	43.8	-36.0	0.00	0.00	-0.04
2,275.0	5.86	125.82	2,272.9	-38.7	45.8	-37.4	0.58	0.20	-5.36
2,300.0	5.95	124.43	2,297.8	-40.1	47.9	-38.9	0.68	0.36	-5.56
2,325.0	5.98	124.49	2,322.7	-41.6	50.1	-40.3	0.12	0.12	0.24
2,350.0	6.08	123.93	2,347.5	-43.1	52.2	-41.7	0.46	0.40	-2.24
2,375.0	6.11	124.08	2,372.4	-44.6	54.4	-43.1	0.14	0.12	0.60
2,400.0	6.08	124.56	2,397.2	-46.1	56.6	-44.6	0.24	-0.12	1.92
2,425.0	5.88	124.20	2,422.1	-47.5	58.8	-46.0	0.81	-0.80	-1.44
2,450.0	6.03	123.27	2,447.0	-49.0	60.9	-47.3	0.71	0.60	-3.72

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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
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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)
2,475.0	5.97	123.22	2,471.8	-50.4	63.1	-48.7	0.24	-0.24	-0.20
2,500.0	6.05	123.22	2,496.7	-51.9	65.3	-50.1	0.32	0.32	0.00
2,525.0	6.16	123.56	2,521.6	-53.3	67.5	-51.5	0.46	0.44	1.36
2,550.0	6.14	123.46	2,546.4	-54.8	69.8	-52.9	0.09	-0.08	-0.40
2,575.0	6.05	123.58	2,571.3	-56.3	72.0	-54.3	0.36	-0.36	0.48
2,600.0	6.10	122.98	2,596.1	-57.7	74.2	-55.7	0.32	0.20	-2.40
2,625.0	6.13	123.41	2,621.0	-59.2	76.4	-57.1	0.22	0.12	1.72
2,650.0	6.14	122.73	2,645.8	-60.6	78.6	-58.5	0.29	0.04	-2.72
2,675.0	6.11	121.79	2,670.7	-62.1	80.9	-59.9	0.42	-0.12	-3.76
2,700.0	5.96	119.93	2,695.6	-63.4	83.2	-61.2	0.99	-0.60	-7.44
2,725.0	5.89	120.39	2,720.4	-64.7	85.4	-62.4	0.34	-0.28	1.84
2,750.0	5.63	118.78	2,745.3	-65.9	87.6	-63.6	1.22	-1.04	-6.44
2,775.0	5.04	116.03	2,770.2	-67.0	89.6	-64.6	2.57	-2.36	-11.00
2,800.0	4.85	113.59	2,795.1	-67.9	91.6	-65.5	1.13	-0.76	-9.76
2,825.0	4.74	114.43	2,820.0	-68.8	93.5	-66.3	0.52	-0.44	3.36
2,850.0	4.31	113.52	2,844.9	-69.6	95.3	-67.0	1.74	-1.72	-3.64
2,875.0	4.08	112.89	2,869.9	-70.3	97.0	-67.7	0.94	-0.92	-2.52
2,900.0	4.08	112.09	2,894.8	-71.0	98.6	-68.3	0.23	0.00	-3.20
2,925.0	4.06	112.39	2,919.7	-71.6	100.3	-68.9	0.12	-0.08	1.20
2,950.0	4.02	112.55	2,944.7	-72.3	101.9	-69.6	0.17	-0.16	0.64
2,975.0	4.05	112.24	2,969.6	-73.0	103.5	-70.2	0.15	0.12	-1.24
3,000.0	4.08	112.94	2,994.6	-73.7	105.2	-70.8	0.23	0.12	2.80
3,025.0	4.10	112.91	3,019.5	-74.4	106.8	-71.5	0.08	0.08	-0.12
3,050.0	4.15	112.66	3,044.4	-75.1	108.5	-72.1	0.21	0.20	-1.00
3,075.0	4.06	113.07	3,069.4	-75.8	110.1	-72.8	0.38	-0.36	1.64
3,100.0	4.03	112.84	3,094.3	-76.4	111.7	-73.4	0.14	-0.12	-0.92
3,125.0	3.93	116.17	3,119.2	-77.2	113.3	-74.1	1.01	-0.40	13.32
3,150.0	4.02	116.02	3,144.2	-77.9	114.9	-74.8	0.36	0.36	-0.60
3,175.0	4.25	117.65	3,169.1	-78.7	116.5	-75.6	1.03	0.92	6.52
3,200.0	4.28	118.77	3,194.0	-79.6	118.1	-76.4	0.35	0.12	4.48
3,225.0	4.22	121.11	3,219.0	-80.5	119.7	-77.3	0.73	-0.24	9.36
3,250.0	4.20	117.64	3,243.9	-81.4	121.3	-78.2	1.02	-0.08	-13.88
3,275.0	4.31	118.16	3,268.8	-82.3	123.0	-79.0	0.47	0.44	2.08
3,300.0	4.24	118.76	3,293.8	-83.2	124.6	-79.8	0.33	-0.28	2.40
3,325.0	4.26	117.76	3,318.7	-84.1	126.2	-80.7	0.31	0.08	-4.00
3,350.0	4.28	118.17	3,343.6	-84.9	127.9	-81.5	0.15	0.08	1.64
3,375.0	4.27	118.98	3,368.6	-85.8	129.5	-82.4	0.24	-0.04	3.24
3,400.0	4.16	117.70	3,393.5	-86.7	131.1	-83.2	0.58	-0.44	-5.12
3,425.0	4.31	117.25	3,418.4	-87.6	132.8	-84.0	0.61	0.60	-1.80
3,450.0	4.26	116.84	3,443.4	-88.4	134.4	-84.8	0.23	-0.20	-1.64
3,475.0	4.24	115.40	3,468.3	-89.2	136.1	-85.6	0.43	-0.08	-5.76
3,500.0	4.07	114.69	3,493.2	-90.0	137.7	-86.3	0.71	-0.68	-2.84
3,525.0	4.17	115.58	3,518.2	-90.8	139.4	-87.0	0.47	0.40	3.56
3,550.0	4.22	115.16	3,543.1	-91.5	141.0	-87.7	0.23	0.20	-1.68

Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FEZ FED COM #704H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FEZ FED COM #704H
TVD Reference: RKB=3260.3+29 @ 3289.3usft (NORAM 21)
MD Reference: RKB=3260.3+29 @ 3289.3usft (NORAM 21)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

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)
3,575.0	4.19	114.52	3,568.0	-92.3	142.7	-88.5	0.22	-0.12	-2.56
3,600.0	4.18	113.98	3,593.0	-93.1	144.3	-89.2	0.16	-0.04	-2.16
3,625.0	4.36	112.39	3,617.9	-93.8	146.0	-89.9	0.86	0.72	-6.36
3,650.0	4.27	111.21	3,642.8	-94.5	147.8	-90.5	0.51	-0.36	-4.72
3,675.0	4.30	112.30	3,667.8	-95.2	149.5	-91.2	0.35	0.12	4.36
3,700.0	4.25	113.22	3,692.7	-95.9	151.2	-91.8	0.34	-0.20	3.68
3,725.0	4.33	111.55	3,717.6	-96.6	153.0	-92.5	0.59	0.32	-6.68
3,750.0	4.34	111.99	3,742.5	-97.3	154.7	-93.2	0.14	0.04	1.76
3,775.0	4.38	111.22	3,767.5	-98.0	156.5	-93.8	0.28	0.16	-3.08
3,800.0	4.56	118.56	3,792.4	-98.8	158.3	-94.6	2.40	0.72	29.36
3,825.0	4.81	120.59	3,817.3	-99.8	160.0	-95.5	1.20	1.00	8.12
3,850.0	5.05	122.64	3,842.2	-101.0	161.9	-96.6	1.19	0.96	8.20
3,875.0	5.16	123.68	3,867.1	-102.2	163.7	-97.8	0.57	0.44	4.16
3,900.0	5.12	123.21	3,892.0	-103.4	165.6	-99.0	0.23	-0.16	-1.88
3,925.0	5.09	123.58	3,916.9	-104.6	167.4	-100.1	0.18	-0.12	1.48
3,950.0	5.08	123.46	3,941.8	-105.9	169.3	-101.3	0.06	-0.04	-0.48
3,975.0	5.09	123.83	3,966.7	-107.1	171.1	-102.5	0.14	0.04	1.48
4,000.0	5.17	124.94	3,991.6	-108.4	173.0	-103.7	0.51	0.32	4.44
4,025.0	4.89	125.66	4,016.5	-109.6	174.8	-104.9	1.15	-1.12	2.88
4,050.0	5.11	123.19	4,041.4	-110.9	176.6	-106.1	1.23	0.88	-9.88
4,075.0	5.11	123.54	4,066.3	-112.1	178.4	-107.3	0.12	0.00	1.40
4,100.0	5.13	122.94	4,091.2	-113.3	180.3	-108.5	0.23	0.08	-2.40
4,125.0	5.13	121.99	4,116.1	-114.5	182.2	-109.6	0.34	0.00	-3.80
4,150.0	5.09	120.82	4,141.0	-115.7	184.1	-110.7	0.45	-0.16	-4.68
4,175.0	5.09	121.27	4,165.9	-116.8	186.0	-111.8	0.16	0.00	1.80
4,200.0	5.10	121.54	4,190.8	-118.0	187.9	-112.9	0.10	0.04	1.08
4,225.0	5.10	121.02	4,215.7	-119.1	189.8	-114.0	0.18	0.00	-2.08
4,250.0	5.11	120.55	4,240.6	-120.3	191.7	-115.1	0.17	0.04	-1.88
4,275.0	5.23	120.49	4,265.5	-121.4	193.6	-116.2	0.48	0.48	-0.24
4,300.0	5.44	121.08	4,290.4	-122.6	195.6	-117.3	0.87	0.84	2.36
4,325.0	5.71	120.46	4,315.3	-123.8	197.7	-118.5	1.11	1.08	-2.48
4,350.0	5.73	120.19	4,340.2	-125.1	199.9	-119.7	0.13	0.08	-1.08
4,375.0	5.97	118.91	4,365.1	-126.3	202.1	-120.9	1.09	0.96	-5.12
4,400.0	6.14	118.42	4,389.9	-127.6	204.4	-122.1	0.71	0.68	-1.96
4,425.0	6.16	118.68	4,414.8	-128.9	206.7	-123.3	0.14	0.08	1.04
4,450.0	6.17	119.88	4,439.6	-130.2	209.1	-124.6	0.52	0.04	4.80
4,475.0	6.18	119.30	4,464.5	-131.5	211.4	-125.9	0.25	0.04	-2.32
4,500.0	6.24	118.58	4,489.3	-132.8	213.8	-127.1	0.39	0.24	-2.88
4,525.0	6.19	118.80	4,514.2	-134.1	216.2	-128.3	0.22	-0.20	0.88
4,550.0	6.12	120.99	4,539.0	-135.5	218.5	-129.6	0.98	-0.28	8.76
4,575.0	5.75	122.72	4,563.9	-136.8	220.7	-130.9	1.64	-1.48	6.92
4,600.0	5.47	122.07	4,588.8	-138.1	222.7	-132.2	1.15	-1.12	-2.60
4,625.0	5.64	121.01	4,613.7	-139.4	224.8	-133.4	0.79	0.68	-4.24

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
4,650.0	5.71	121.37	4,638.5	-140.7	226.9	-134.6	0.31	0.28	1.44
4,675.0	5.73	121.11	4,663.4	-142.0	229.1	-135.8	0.13	0.08	-1.04
4,700.0	5.75	120.83	4,688.3	-143.3	231.2	-137.1	0.14	0.08	-1.12
4,725.0	5.78	120.73	4,713.2	-144.6	233.4	-138.3	0.13	0.12	-0.40
4,750.0	5.77	120.36	4,738.0	-145.8	235.5	-139.5	0.15	-0.04	-1.48
4,775.0	5.63	123.18	4,762.9	-147.1	237.6	-140.8	1.25	-0.56	11.28
4,800.0	5.86	120.91	4,787.8	-148.5	239.8	-142.0	1.29	0.92	-9.08
4,825.0	5.83	120.41	4,812.7	-149.8	241.9	-143.3	0.24	-0.12	-2.00
4,850.0	5.75	122.01	4,837.5	-151.1	244.1	-144.5	0.72	-0.32	6.40
4,875.0	5.89	120.15	4,862.4	-152.4	246.3	-145.8	0.94	0.56	-7.44
4,900.0	5.92	120.61	4,887.3	-153.7	248.5	-147.0	0.22	0.12	1.84
4,925.0	5.85	121.52	4,912.1	-155.0	250.7	-148.3	0.47	-0.28	3.64
4,950.0	5.46	122.40	4,937.0	-156.3	252.8	-149.5	1.60	-1.56	3.52
4,975.0	5.30	122.65	4,961.9	-157.6	254.8	-150.7	0.65	-0.64	1.00
5,000.0	5.28	122.10	4,986.8	-158.8	256.7	-151.9	0.22	-0.08	-2.20
5,025.0	5.37	122.69	5,011.7	-160.0	258.7	-153.1	0.42	0.36	2.36
5,050.0	5.37	122.76	5,036.6	-161.3	260.6	-154.3	0.03	0.00	0.28
5,075.0	5.40	122.70	5,061.5	-162.6	262.6	-155.5	0.12	0.12	-0.24
5,100.0	5.36	122.32	5,086.4	-163.8	264.6	-156.7	0.21	-0.16	-1.52
5,125.0	5.31	122.33	5,111.3	-165.1	266.5	-157.9	0.20	-0.20	0.04
5,150.0	5.31	122.74	5,136.2	-166.3	268.5	-159.1	0.15	0.00	1.64
5,175.0	5.16	122.77	5,161.0	-167.6	270.4	-160.3	0.60	-0.60	0.12
5,200.0	4.99	122.57	5,185.9	-168.8	272.3	-161.4	0.68	-0.68	-0.80
5,225.0	5.11	121.53	5,210.9	-169.9	274.1	-162.6	0.60	0.48	-4.16
5,250.0	5.04	122.35	5,235.8	-171.1	276.0	-163.7	0.40	-0.28	3.28
5,275.0	5.05	123.16	5,260.7	-172.3	277.9	-164.8	0.29	0.04	3.24
5,300.0	4.93	122.23	5,285.6	-173.5	279.7	-165.9	0.58	-0.48	-3.72
5,325.0	4.96	122.12	5,310.5	-174.6	281.5	-167.0	0.13	0.12	-0.44
5,350.0	4.92	121.61	5,335.4	-175.7	283.3	-168.1	0.24	-0.16	-2.04
5,375.0	4.73	122.78	5,360.3	-176.9	285.1	-169.2	0.86	-0.76	4.68
5,400.0	4.54	122.80	5,385.2	-178.0	286.8	-170.3	0.76	-0.76	0.08
5,425.0	4.41	122.74	5,410.1	-179.0	288.5	-171.3	0.52	-0.52	-0.24
5,450.0	4.38	121.52	5,435.1	-180.0	290.1	-172.2	0.39	-0.12	-4.88
5,475.0	4.50	120.70	5,460.0	-181.0	291.7	-173.2	0.54	0.48	-3.28
5,500.0	4.60	121.18	5,484.9	-182.0	293.4	-174.2	0.43	0.40	1.92
5,525.0	4.61	120.79	5,509.8	-183.1	295.2	-175.2	0.13	0.04	-1.56
5,550.0	4.50	121.16	5,534.7	-184.1	296.9	-176.1	0.46	-0.44	1.48
5,575.0	4.60	120.39	5,559.7	-185.1	298.6	-177.1	0.47	0.40	-3.08
5,600.0	4.60	121.59	5,584.6	-186.2	300.3	-178.1	0.38	0.00	4.80
5,625.0	4.66	121.67	5,609.5	-187.2	302.0	-179.1	0.24	0.24	0.32
5,650.0	4.71	121.46	5,634.4	-188.3	303.8	-180.1	0.21	0.20	-0.84
5,675.0	4.65	121.54	5,659.3	-189.3	305.5	-181.1	0.24	-0.24	0.32
5,700.0	4.54	122.53	5,684.3	-190.4	307.2	-182.2	0.54	-0.44	3.96

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)	
5,725.0	4.34	122.05	5,709.2	-191.4	308.8	-183.1	0.81	-0.80	-1.92	
5,750.0	4.45	120.78	5,734.1	-192.4	310.5	-184.1	0.59	0.44	-5.08	
5,775.0	4.55	121.37	5,759.0	-193.5	312.1	-185.1	0.44	0.40	2.36	
5,800.0	4.58	121.22	5,784.0	-194.5	313.8	-186.1	0.13	0.12	-0.60	
5,825.0	4.30	124.73	5,808.9	-195.5	315.5	-187.1	1.56	-1.12	14.04	
5,850.0	4.20	119.98	5,833.8	-196.5	317.0	-188.0	1.46	-0.40	-19.00	
5,875.0	4.32	119.69	5,858.7	-197.5	318.6	-188.9	0.49	0.48	-1.16	
5,900.0	4.45	119.67	5,883.7	-198.4	320.3	-189.8	0.52	0.52	-0.08	
5,925.0	4.44	120.17	5,908.6	-199.4	322.0	-190.7	0.16	-0.04	2.00	
5,950.0	4.40	119.86	5,933.5	-200.3	323.6	-191.6	0.19	-0.16	-1.24	
5,975.0	4.44	120.47	5,958.4	-201.3	325.3	-192.6	0.25	0.16	2.44	
6,000.0	4.46	119.45	5,983.4	-202.3	327.0	-193.5	0.33	0.08	-4.08	
6,025.0	4.52	119.84	6,008.3	-203.2	328.7	-194.4	0.27	0.24	1.56	
6,050.0	4.52	119.98	6,033.2	-204.2	330.4	-195.3	0.04	0.00	0.56	
6,075.0	4.49	120.69	6,058.1	-205.2	332.1	-196.3	0.25	-0.12	2.84	
6,100.0	4.50	120.75	6,083.1	-206.2	333.8	-197.2	0.04	0.04	0.24	
6,125.0	4.58	120.91	6,108.0	-207.2	335.5	-198.2	0.32	0.32	0.64	
6,150.0	4.26	121.40	6,132.9	-208.2	337.1	-199.2	1.29	-1.28	1.96	
6,175.0	4.02	119.65	6,157.8	-209.1	338.7	-200.0	1.08	-0.96	-7.00	
6,200.0	4.19	118.36	6,182.8	-210.0	340.2	-200.9	0.77	0.68	-5.16	
6,225.0	4.35	119.23	6,207.7	-210.9	341.9	-201.7	0.69	0.64	3.48	
6,250.0	4.40	118.57	6,232.6	-211.8	343.5	-202.6	0.28	0.20	-2.64	
6,275.0	4.23	117.52	6,257.6	-212.7	345.2	-203.4	0.75	-0.68	-4.20	
6,300.0	4.19	119.03	6,282.5	-213.6	346.8	-204.3	0.47	-0.16	6.04	
6,325.0	4.11	118.62	6,307.4	-214.4	348.4	-205.1	0.34	-0.32	-1.64	
6,350.0	4.03	118.09	6,332.4	-215.3	350.0	-205.9	0.35	-0.32	-2.12	
6,375.0	4.06	117.18	6,357.3	-216.1	351.5	-206.7	0.28	0.12	-3.64	
6,400.0	4.06	117.86	6,382.2	-216.9	353.1	-207.4	0.19	0.00	2.72	
6,425.0	3.90	117.92	6,407.2	-217.7	354.6	-208.2	0.64	-0.64	0.24	
6,450.0	4.02	116.99	6,432.1	-218.5	356.2	-209.0	0.54	0.48	-3.72	
6,475.0	3.90	120.50	6,457.1	-219.4	357.7	-209.8	1.08	-0.48	14.04	
6,500.0	3.80	118.07	6,482.0	-220.2	359.1	-210.5	0.77	-0.40	-9.72	
6,525.0	3.95	118.37	6,506.9	-221.0	360.6	-211.3	0.61	0.60	1.20	
6,550.0	3.70	118.95	6,531.9	-221.8	362.1	-212.1	1.01	-1.00	2.32	
6,575.0	3.48	121.54	6,556.8	-222.6	363.4	-212.8	1.09	-0.88	10.36	
6,600.0	3.33	118.47	6,581.8	-223.3	364.7	-213.5	0.94	-0.60	-12.28	
6,625.0	3.30	118.07	6,606.8	-224.0	366.0	-214.2	0.15	-0.12	-1.60	
6,650.0	2.41	125.11	6,631.7	-224.6	367.1	-214.8	3.82	-3.56	28.16	
6,675.0	1.83	126.08	6,656.7	-225.2	367.8	-215.3	2.32	-2.32	3.88	
6,700.0	1.81	126.77	6,681.7	-225.6	368.5	-215.8	0.12	-0.08	2.76	
6,725.0	1.63	128.28	6,706.7	-226.1	369.1	-216.2	0.74	-0.72	6.04	
6,750.0	1.06	148.38	6,731.7	-226.5	369.5	-216.6	2.93	-2.28	80.40	
6,775.0	0.67	145.16	6,756.7	-226.8	369.7	-216.9	1.57	-1.56	-12.88	
6,800.0	0.70	142.40	6,781.7	-227.1	369.8	-217.1	0.18	0.12	-11.04	

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
6,825.0	0.76	157.37	6,806.7	-227.4	370.0	-217.4	0.80	0.24	59.88
6,850.0	0.55	165.11	6,831.7	-227.6	370.1	-217.7	0.91	-0.84	30.96
6,875.0	0.55	142.42	6,856.7	-227.8	370.2	-217.9	0.87	0.00	-90.76
6,900.0	0.71	159.93	6,881.7	-228.1	370.3	-218.1	0.99	0.64	70.04
6,925.0	0.59	166.50	6,906.7	-228.3	370.4	-218.4	0.56	-0.48	26.28
6,950.0	0.57	149.22	6,931.7	-228.6	370.5	-218.6	0.70	-0.08	-69.12
6,975.0	0.75	155.38	6,956.7	-228.8	370.6	-218.9	0.77	0.72	24.64
7,000.0	0.54	167.99	6,981.7	-229.1	370.7	-219.1	1.01	-0.84	50.44
7,025.0	0.53	150.04	7,006.7	-229.3	370.8	-219.4	0.67	-0.04	-71.80
7,050.0	0.72	150.34	7,031.7	-229.5	370.9	-219.6	0.76	0.76	1.20
7,075.0	0.60	168.14	7,056.7	-229.8	371.0	-219.8	0.94	-0.48	71.20
7,100.0	0.52	154.73	7,081.7	-230.0	371.1	-220.1	0.61	-0.32	-53.64
7,125.0	0.70	160.10	7,106.7	-230.3	371.2	-220.3	0.75	0.72	21.48
7,150.0	0.51	164.94	7,131.7	-230.5	371.3	-220.6	0.79	-0.76	19.36
7,175.0	0.60	150.86	7,156.7	-230.8	371.4	-220.8	0.65	0.36	-56.32
7,200.0	0.76	167.12	7,181.6	-231.0	371.5	-221.1	1.00	0.64	65.04
7,225.0	0.53	154.08	7,206.6	-231.3	371.6	-221.3	1.09	-0.92	-52.16
7,250.0	0.65	154.03	7,231.6	-231.5	371.7	-221.6	0.48	0.48	-0.20
7,275.0	0.63	170.05	7,256.6	-231.8	371.8	-221.8	0.72	-0.08	64.08
7,300.0	0.30	159.66	7,281.6	-232.0	371.8	-222.0	1.36	-1.32	-41.56
7,325.0	0.39	176.67	7,306.6	-232.1	371.9	-222.2	0.54	0.36	68.04
7,350.0	0.40	223.04	7,331.6	-232.3	371.8	-222.3	1.24	0.04	185.48
7,375.0	0.21	218.56	7,356.6	-232.4	371.7	-222.4	0.77	-0.76	-17.92
7,400.0	0.38	183.58	7,381.6	-232.5	371.7	-222.5	0.96	0.68	-139.92
7,425.0	0.32	221.97	7,406.6	-232.6	371.6	-222.7	0.95	-0.24	153.56
7,450.0	0.35	181.53	7,431.6	-232.8	371.6	-222.8	0.93	0.12	-161.76
7,475.0	0.39	248.31	7,456.6	-232.9	371.5	-222.9	1.63	0.16	267.12
7,500.0	0.32	266.07	7,481.6	-232.9	371.4	-222.9	0.52	-0.28	71.04
7,525.0	0.46	264.29	7,506.6	-232.9	371.2	-223.0	0.56	0.56	-7.12
7,550.0	0.60	273.53	7,531.6	-232.9	371.0	-223.0	0.65	0.56	36.96
7,575.0	0.44	290.26	7,556.6	-232.9	370.7	-222.9	0.88	-0.64	66.92
7,600.0	0.54	266.10	7,581.6	-232.9	370.5	-222.9	0.91	0.40	-96.64
7,625.0	0.67	274.99	7,606.6	-232.9	370.3	-222.9	0.64	0.52	35.56
7,650.0	0.51	290.39	7,631.6	-232.8	370.0	-222.9	0.90	-0.64	61.60
7,675.0	0.50	263.25	7,656.6	-232.8	369.8	-222.8	0.95	-0.04	-108.56
7,700.0	0.71	275.21	7,681.6	-232.8	369.5	-222.9	0.98	0.84	47.84
7,725.0	0.51	286.84	7,706.6	-232.7	369.3	-222.8	0.94	-0.80	46.52
7,750.0	0.43	267.30	7,731.6	-232.7	369.1	-222.8	0.71	-0.32	-78.16
7,775.0	0.68	274.12	7,756.6	-232.7	368.8	-222.8	1.03	1.00	27.28
7,800.0	0.48	293.40	7,781.6	-232.6	368.6	-222.7	1.11	-0.80	77.12
7,825.0	0.59	267.21	7,806.6	-232.6	368.4	-222.7	1.06	0.44	-104.76
7,850.0	0.61	284.07	7,831.6	-232.6	368.1	-222.7	0.71	0.08	67.44
7,875.0	0.46	274.78	7,856.6	-232.5	367.9	-222.7	0.69	-0.60	-37.16

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
7,900.0	0.72	276.74	7,881.6	-232.5	367.6	-222.6	1.04	1.04	7.84
7,925.0	0.37	289.34	7,906.6	-232.5	367.4	-222.6	1.47	-1.40	50.40
7,950.0	0.56	259.57	7,931.6	-232.5	367.2	-222.6	1.21	0.76	-119.08
7,975.0	0.64	276.84	7,956.6	-232.5	366.9	-222.6	0.79	0.32	69.08
8,000.0	0.50	281.79	7,981.6	-232.4	366.7	-222.6	0.59	-0.56	19.80
8,025.0	0.49	266.05	8,006.6	-232.4	366.5	-222.6	0.54	-0.04	-62.96
8,050.0	0.58	277.90	8,031.6	-232.4	366.2	-222.6	0.57	0.36	47.40
8,075.0	0.37	264.47	8,056.6	-232.4	366.0	-222.6	0.95	-0.84	-53.72
8,100.0	0.54	261.96	8,081.6	-232.4	365.8	-222.6	0.68	0.68	-10.04
8,125.0	0.45	284.92	8,106.6	-232.4	365.6	-222.6	0.86	-0.36	91.84
8,150.0	0.49	255.93	8,131.6	-232.4	365.4	-222.6	0.95	0.16	-115.96
8,175.0	0.55	276.66	8,156.6	-232.4	365.2	-222.6	0.78	0.24	82.92
8,200.0	0.32	271.71	8,181.6	-232.4	365.0	-222.6	0.93	-0.92	-19.80
8,225.0	0.57	263.45	8,206.6	-232.4	364.8	-222.6	1.03	1.00	-33.04
8,250.0	0.44	281.98	8,231.6	-232.4	364.6	-222.6	0.83	-0.52	74.12
8,275.0	0.52	261.01	8,256.6	-232.4	364.4	-222.6	0.77	0.32	-83.88
8,300.0	0.42	283.11	8,281.6	-232.4	364.2	-222.6	0.82	-0.40	88.40
8,325.0	0.43	255.87	8,306.6	-232.4	364.0	-222.6	0.80	0.04	-108.96
8,350.0	0.46	282.10	8,331.6	-232.4	363.8	-222.6	0.82	0.12	104.92
8,375.0	0.33	251.32	8,356.6	-232.4	363.7	-222.7	0.98	-0.52	-123.12
8,400.0	0.47	271.32	8,381.6	-232.4	363.5	-222.7	0.78	0.56	80.00
8,425.0	0.26	263.02	8,406.6	-232.4	363.3	-222.7	0.86	-0.84	-33.20
8,450.0	0.40	266.76	8,431.6	-232.5	363.2	-222.7	0.57	0.56	14.96
8,475.0	0.19	269.78	8,456.6	-232.5	363.1	-222.7	0.84	-0.84	12.08
8,500.0	0.31	245.87	8,481.6	-232.5	363.0	-222.7	0.63	0.48	-95.64
8,525.0	0.30	278.59	8,506.6	-232.5	362.8	-222.8	0.69	-0.04	130.88
8,550.0	0.16	223.13	8,531.6	-232.5	362.7	-222.8	0.99	-0.56	-221.84
8,575.0	0.36	252.15	8,556.6	-232.6	362.6	-222.8	0.93	0.80	116.08
8,600.0	0.20	275.97	8,581.6	-232.6	362.5	-222.9	0.78	-0.64	95.28
8,625.0	0.22	216.59	8,606.6	-232.6	362.5	-222.9	0.84	0.08	-237.52
8,650.0	0.31	275.44	8,631.6	-232.7	362.4	-222.9	1.09	0.36	235.40
8,675.0	0.16	183.61	8,656.6	-232.7	362.3	-223.0	1.41	-0.60	-367.32
8,700.0	0.30	245.92	8,681.6	-232.8	362.2	-223.0	1.07	0.56	249.24
8,725.0	0.07	197.93	8,706.6	-232.8	362.2	-223.1	1.03	-0.92	-191.96
8,750.0	0.24	216.65	8,731.6	-232.8	362.1	-223.1	0.70	0.68	74.88
8,775.0	0.11	243.56	8,756.6	-232.9	362.1	-223.2	0.60	-0.52	107.64
8,800.0	0.30	209.37	8,781.6	-233.0	362.0	-223.2	0.87	0.76	-136.76
8,825.0	0.24	248.69	8,806.6	-233.0	361.9	-223.3	0.76	-0.24	157.28
8,850.0	0.04	193.81	8,831.6	-233.1	361.9	-223.3	0.88	-0.80	-219.52
8,875.0	0.24	204.33	8,856.6	-233.1	361.9	-223.4	0.80	0.80	42.08
8,900.0	0.16	263.40	8,881.6	-233.2	361.8	-223.5	0.84	-0.32	236.28
8,925.0	0.21	186.85	8,906.6	-233.2	361.8	-223.5	0.93	0.20	-306.20
8,950.0	0.23	244.70	8,931.6	-233.3	361.7	-223.6	0.85	0.08	231.40

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)	
8,975.0	0.10	209.45	8,956.6	-233.3	361.7	-223.6	0.64	-0.52	-141.00	
9,000.0	0.27	219.02	8,981.6	-233.4	361.6	-223.7	0.69	0.68	38.28	
9,025.0	0.10	201.01	9,006.6	-233.5	361.6	-223.8	0.71	-0.68	-72.04	
9,050.0	0.22	245.49	9,031.6	-233.5	361.5	-223.8	0.66	0.48	177.92	
9,075.0	0.13	174.91	9,056.6	-233.6	361.5	-223.8	0.86	-0.36	-282.32	
9,100.0	0.19	232.73	9,081.6	-233.6	361.4	-223.9	0.65	0.24	231.28	
9,125.0	0.13	139.95	9,106.6	-233.7	361.4	-223.9	0.94	-0.24	-371.12	
9,150.0	0.24	210.69	9,131.6	-233.7	361.4	-224.0	0.93	0.44	282.96	
9,175.0	0.03	228.86	9,156.6	-233.8	361.4	-224.1	0.85	-0.84	72.68	
9,200.0	0.21	194.67	9,181.6	-233.8	361.4	-224.1	0.74	0.72	-136.76	
9,225.0	0.13	239.82	9,206.6	-233.9	361.3	-224.2	0.60	-0.32	180.60	
9,250.0	0.21	158.66	9,231.6	-233.9	361.3	-224.2	0.92	0.32	-324.64	
9,275.0	0.32	211.30	9,256.6	-234.0	361.3	-224.3	1.02	0.44	210.56	
9,300.0	0.18	222.53	9,281.6	-234.1	361.2	-224.4	0.59	-0.56	44.92	
9,325.0	0.32	189.26	9,306.6	-234.2	361.2	-224.5	0.78	0.56	-133.08	
9,350.0	0.31	227.98	9,331.6	-234.3	361.1	-224.6	0.84	-0.04	154.88	
9,375.0	0.38	200.13	9,356.6	-234.5	361.1	-224.8	0.72	0.28	-111.40	
9,400.0	0.30	223.82	9,381.6	-234.6	361.0	-224.9	0.64	-0.32	94.76	
9,425.0	0.44	221.18	9,406.6	-234.7	360.9	-225.0	0.56	0.56	-10.56	
9,450.0	0.53	216.00	9,431.6	-234.9	360.8	-225.2	0.40	0.36	-20.72	
9,475.0	0.52	214.97	9,456.6	-235.1	360.6	-225.4	0.05	-0.04	-4.12	
9,500.0	0.77	225.12	9,481.6	-235.3	360.4	-225.6	1.10	1.00	40.60	
9,525.0	0.60	218.71	9,506.6	-235.5	360.2	-225.8	0.74	-0.68	-25.64	
9,550.0	0.75	218.86	9,531.6	-235.7	360.1	-226.0	0.60	0.60	0.60	
9,575.0	0.62	220.60	9,556.6	-236.0	359.9	-226.3	0.53	-0.52	6.96	
9,600.0	0.81	222.31	9,581.6	-236.2	359.7	-226.5	0.76	0.76	6.84	
9,625.0	0.78	225.62	9,606.6	-236.4	359.4	-226.8	0.22	-0.12	13.24	
9,650.0	0.75	236.53	9,631.6	-236.6	359.2	-227.0	0.59	-0.12	43.64	
9,675.0	0.90	231.00	9,656.6	-236.9	358.9	-227.2	0.68	0.60	-22.12	
9,700.0	1.00	240.74	9,681.6	-237.1	358.5	-227.5	0.76	0.40	38.96	
9,725.0	0.87	235.75	9,706.6	-237.3	358.2	-227.7	0.61	-0.52	-19.96	
9,750.0	1.05	239.87	9,731.6	-237.5	357.8	-227.9	0.77	0.72	16.48	
9,775.0	1.00	250.67	9,756.6	-237.7	357.4	-228.1	0.80	-0.20	43.20	
9,800.0	1.21	246.01	9,781.6	-237.9	357.0	-228.3	0.91	0.84	-18.64	
9,825.0	1.12	251.46	9,806.6	-238.1	356.5	-228.5	0.57	-0.36	21.80	
9,850.0	1.20	254.05	9,831.5	-238.2	356.0	-228.7	0.38	0.32	10.36	
9,875.0	1.19	268.68	9,856.5	-238.3	355.5	-228.7	1.22	-0.04	58.52	
9,900.0	1.24	267.21	9,881.5	-238.3	355.0	-228.8	0.24	0.20	-5.88	
9,925.0	1.33	270.89	9,906.5	-238.3	354.4	-228.8	0.49	0.36	14.72	
9,950.0	1.33	273.35	9,931.5	-238.3	353.8	-228.8	0.23	0.00	9.84	
9,975.0	1.26	272.38	9,956.5	-238.3	353.3	-228.8	0.29	-0.28	-3.88	
10,000.0	1.29	275.43	9,981.5	-238.2	352.7	-228.8	0.30	0.12	12.20	
10,025.0	1.27	272.64	10,006.5	-238.2	352.2	-228.7	0.26	-0.08	-11.16	
10,050.0	1.33	269.83	10,031.5	-238.2	351.6	-228.7	0.35	0.24	-11.24	

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
10,075.0	1.29	275.63	10,056.5	-238.2	351.0	-228.7	0.55	-0.16	23.20
10,100.0	1.27	276.95	10,081.5	-238.1	350.5	-228.7	0.14	-0.08	5.28
10,125.0	1.40	278.30	10,106.5	-238.0	349.9	-228.6	0.53	0.52	5.40
10,150.0	1.24	280.52	10,131.5	-237.9	349.3	-228.5	0.67	-0.64	8.88
10,175.0	1.43	270.16	10,156.5	-237.9	348.7	-228.5	1.23	0.76	-41.44
10,200.0	1.45	281.22	10,181.5	-237.8	348.1	-228.5	1.11	0.08	44.24
10,225.0	1.53	272.68	10,206.5	-237.7	347.5	-228.4	0.94	0.32	-34.16
10,250.0	1.41	281.71	10,231.4	-237.7	346.8	-228.3	1.04	-0.48	36.12
10,275.0	1.46	272.12	10,256.4	-237.6	346.2	-228.3	0.98	0.20	-38.36
10,300.0	1.39	282.37	10,281.4	-237.5	345.6	-228.2	1.06	-0.28	41.00
10,325.0	1.19	270.48	10,306.4	-237.4	345.1	-228.2	1.33	-0.80	-47.56
10,350.0	1.24	275.69	10,331.4	-237.4	344.5	-228.2	0.48	0.20	20.84
10,375.0	1.11	287.64	10,356.4	-237.3	344.0	-228.1	1.11	-0.52	47.80
10,400.0	0.93	274.81	10,381.4	-237.2	343.6	-228.0	1.16	-0.72	-51.32
10,425.0	1.31	285.67	10,406.4	-237.1	343.1	-227.9	1.73	1.52	43.44
10,450.0	0.97	283.16	10,431.4	-237.0	342.6	-227.8	1.37	-1.36	-10.04
10,475.0	1.25	283.78	10,456.4	-236.9	342.2	-227.7	1.12	1.12	2.48
10,500.0	0.98	289.78	10,481.4	-236.8	341.7	-227.6	1.18	-1.08	24.00
10,525.0	1.00	282.76	10,506.4	-236.6	341.3	-227.5	0.49	0.08	-28.08
10,550.0	0.99	288.00	10,531.4	-236.5	340.9	-227.4	0.37	-0.04	20.96
10,575.0	0.89	310.20	10,556.4	-236.3	340.5	-227.2	1.50	-0.40	88.80
10,600.0	0.60	311.26	10,581.4	-236.1	340.3	-227.0	1.16	-1.16	4.24
10,625.0	0.77	304.79	10,606.4	-235.9	340.0	-226.8	0.75	0.68	-25.88
10,650.0	0.42	292.35	10,631.4	-235.8	339.8	-226.7	1.48	-1.40	-49.76
10,675.0	0.67	287.69	10,656.4	-235.7	339.6	-226.6	1.01	1.00	-18.64
10,700.0	0.59	291.71	10,681.4	-235.6	339.3	-226.5	0.37	-0.32	16.08
10,725.0	0.46	312.39	10,706.4	-235.5	339.1	-226.4	0.91	-0.52	82.72
10,750.0	0.10	200.78	10,731.4	-235.5	339.0	-226.4	2.02	-1.44	-446.44
10,775.0	0.26	213.94	10,756.4	-235.5	339.0	-226.4	0.66	0.64	52.64
10,800.0	0.34	212.17	10,781.4	-235.6	338.9	-226.5	0.32	0.32	-7.08
10,825.0	0.16	250.82	10,806.4	-235.7	338.9	-226.6	0.95	-0.72	154.60
10,850.0	0.11	199.22	10,831.4	-235.8	338.8	-226.6	0.50	-0.20	-206.40
10,875.0	0.14	182.06	10,856.4	-235.8	338.8	-226.7	0.19	0.12	-68.64
10,900.0	0.20	146.92	10,881.4	-235.9	338.8	-226.8	0.47	0.24	-140.56
10,925.0	0.36	141.42	10,906.4	-236.0	338.9	-226.9	0.65	0.64	-22.00
10,950.0	0.48	142.78	10,931.4	-236.1	339.0	-227.0	0.48	0.48	5.44
10,975.0	0.56	140.48	10,956.4	-236.3	339.2	-227.2	0.33	0.32	-9.20
11,000.0	0.50	150.99	10,981.4	-236.5	339.3	-227.4	0.46	-0.24	42.04
11,025.0	0.54	152.61	11,006.4	-236.7	339.4	-227.6	0.17	0.16	6.48
11,050.0	0.59	157.14	11,031.4	-236.9	339.5	-227.8	0.27	0.20	18.12
11,075.0	0.66	158.86	11,056.4	-237.2	339.6	-228.0	0.29	0.28	6.88
11,100.0	0.69	149.13	11,081.4	-237.4	339.7	-228.3	0.47	0.12	-38.92
11,125.0	0.99	147.88	11,106.4	-237.7	339.9	-228.6	1.20	1.20	-5.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
11,150.0	1.13	134.78	11,131.3	-238.1	340.2	-228.9	1.12	0.56	-52.40
11,175.0	0.90	136.27	11,156.3	-238.4	340.5	-229.3	0.93	-0.92	5.96
11,200.0	1.10	140.47	11,181.3	-238.7	340.8	-229.6	0.85	0.80	16.80
11,225.0	1.10	130.49	11,206.3	-239.1	341.2	-229.9	0.77	0.00	-39.92
11,250.0	1.22	138.01	11,231.3	-239.4	341.5	-230.2	0.77	0.48	30.08
11,275.0	1.20	138.54	11,256.3	-239.8	341.9	-230.6	0.09	-0.08	2.12
11,300.0	1.27	136.98	11,281.3	-240.2	342.2	-231.0	0.31	0.28	-6.24
11,325.0	1.25	129.92	11,306.3	-240.6	342.6	-231.4	0.63	-0.08	-28.24
11,350.0	1.46	132.71	11,331.3	-241.0	343.1	-231.8	0.88	0.84	11.16
11,375.0	1.27	132.07	11,356.3	-241.4	343.5	-232.2	0.76	-0.76	-2.56
11,400.0	1.04	119.89	11,381.3	-241.7	343.9	-232.4	1.34	-0.92	-48.72
11,425.0	0.84	82.38	11,406.3	-241.8	344.3	-232.5	2.53	-0.80	-150.04
11,450.0	0.99	67.83	11,431.3	-241.7	344.7	-232.4	1.10	0.60	-58.20
11,475.0	1.04	70.46	11,456.3	-241.5	345.1	-232.2	0.27	0.20	10.52
11,500.0	1.09	72.83	11,481.3	-241.4	345.5	-232.1	0.27	0.20	9.48
11,525.0	1.13	71.00	11,506.3	-241.2	346.0	-231.9	0.21	0.16	-7.32
11,550.0	1.24	74.69	11,531.3	-241.1	346.5	-231.8	0.54	0.44	14.76
11,575.0	1.27	82.05	11,556.3	-241.0	347.0	-231.6	0.66	0.12	29.44
11,600.0	1.15	81.75	11,581.3	-240.9	347.5	-231.5	0.48	-0.48	-1.20
11,721.0	1.87	102.32	11,702.2	-241.1	350.7	-231.7	0.74	0.60	17.00
11,816.0	1.90	97.81	11,797.2	-241.7	353.7	-232.2	0.16	0.03	-4.75
11,878.0	1.21	117.12	11,859.1	-242.1	355.3	-232.6	1.38	-1.11	31.15
11,910.0	2.87	348.32	11,891.1	-241.5	355.5	-231.9	11.71	5.19	-402.50
11,941.0	8.49	348.98	11,922.0	-238.5	354.9	-228.9	18.13	18.13	2.13
11,973.0	13.61	353.01	11,953.4	-232.4	354.0	-222.9	16.17	16.00	12.59
12,004.0	17.93	352.02	11,983.2	-224.1	352.9	-214.6	13.96	13.94	-3.19
12,036.0	21.21	347.67	12,013.3	-213.5	350.9	-204.1	11.21	10.25	-13.59
12,067.0	23.98	348.76	12,042.0	-201.9	348.5	-192.5	9.04	8.94	3.52
12,098.0	27.07	356.19	12,069.9	-188.6	346.8	-179.3	14.34	9.97	23.97
12,130.0	30.23	355.54	12,098.0	-173.3	345.7	-164.1	9.92	9.88	-2.03
12,161.0	32.04	357.08	12,124.5	-157.4	344.7	-148.1	6.38	5.84	4.97
12,193.0	33.36	359.84	12,151.5	-140.1	344.2	-130.9	6.22	4.13	8.63
12,224.0	36.10	3.06	12,177.0	-122.4	344.7	-113.2	10.63	8.84	10.39
12,255.0	39.24	0.09	12,201.5	-103.5	345.2	-94.3	11.70	10.13	-9.58
12,287.0	42.76	0.19	12,225.6	-82.5	345.3	-73.3	11.00	11.00	0.31
12,318.0	46.14	0.29	12,247.8	-60.8	345.3	-51.6	10.91	10.90	0.32
12,350.0	47.93	359.13	12,269.6	-37.4	345.2	-28.2	6.19	5.59	-3.63
12,381.0	48.08	358.72	12,290.3	-14.4	344.8	-5.2	1.10	0.48	-1.32
12,413.0	49.26	358.50	12,311.4	9.7	344.2	18.8	3.72	3.69	-0.69
12,444.0	50.43	0.17	12,331.4	33.4	343.9	42.5	5.59	3.77	5.39
12,475.0	53.78	358.37	12,350.5	57.8	343.6	66.9	11.74	10.81	-5.81
12,507.0	58.83	357.14	12,368.2	84.4	342.6	93.5	16.10	15.78	-3.84
12,538.0	65.05	356.10	12,382.8	111.7	340.9	120.7	20.28	20.06	-3.35

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
12,569.0	68.61	356.83	12,395.0	140.1	339.2	149.1	11.69	11.48	2.35
12,601.0	72.76	358.75	12,405.6	170.3	338.0	179.3	14.15	12.97	6.00
12,632.0	75.15	359.55	12,414.1	200.1	337.6	209.0	8.10	7.71	2.58
12,664.0	76.76	0.47	12,421.9	231.1	337.6	240.1	5.75	5.03	2.88
12,695.0	78.50	0.91	12,428.6	261.4	338.0	270.3	5.78	5.61	1.42
12,726.0	80.45	0.34	12,434.2	291.9	338.3	300.8	6.54	6.29	-1.84
12,758.0	82.88	0.05	12,438.9	323.6	338.4	332.5	7.65	7.59	-0.91
12,789.0	83.21	359.95	12,442.6	354.3	338.4	363.2	1.11	1.06	-0.32
12,821.0	82.70	359.17	12,446.5	386.1	338.2	395.0	2.90	-1.59	-2.44
12,852.0	83.46	358.52	12,450.3	416.8	337.5	425.7	3.22	2.45	-2.10
12,884.0	86.36	358.62	12,453.1	448.7	336.7	457.5	9.07	9.06	0.31
12,955.0	90.20	357.40	12,455.2	519.6	334.3	528.3	5.67	5.41	-1.72
13,049.0	89.55	357.54	12,455.4	613.5	330.1	622.1	0.71	-0.69	0.15
13,144.0	89.50	357.64	12,456.2	708.4	326.1	716.9	0.12	-0.05	0.11
13,238.0	89.44	358.54	12,457.1	802.4	323.0	810.7	0.96	-0.06	0.96
13,332.0	89.33	358.53	12,458.1	896.3	320.6	904.6	0.12	-0.12	-0.01
13,427.0	88.82	359.02	12,459.6	991.3	318.6	999.4	0.74	-0.54	0.52
13,521.0	88.35	359.43	12,462.0	1,085.3	317.3	1,093.3	0.66	-0.50	0.44
13,615.0	87.45	0.49	12,465.4	1,179.2	317.2	1,187.2	1.48	-0.96	1.13
13,710.0	86.36	359.90	12,470.5	1,274.1	317.6	1,282.1	1.30	-1.15	-0.62
13,804.0	87.14	359.81	12,475.9	1,367.9	317.3	1,375.9	0.84	0.83	-0.10
13,898.0	86.95	0.16	12,480.7	1,461.8	317.3	1,469.7	0.42	-0.20	0.37
13,992.0	87.58	0.22	12,485.2	1,555.7	317.6	1,563.6	0.67	0.67	0.06
14,086.0	89.11	1.02	12,487.9	1,649.6	318.6	1,657.5	1.84	1.63	0.85
14,181.0	89.69	0.63	12,488.9	1,744.6	320.0	1,752.5	0.74	0.61	-0.41
14,275.0	90.87	0.50	12,488.4	1,838.6	320.9	1,846.5	1.26	1.26	-0.14
14,369.0	91.46	0.05	12,486.5	1,932.6	321.4	1,940.5	0.79	0.63	-0.48
14,464.0	91.85	0.20	12,483.8	2,027.5	321.6	2,035.4	0.44	0.41	0.16
14,558.0	92.22	359.66	12,480.5	2,121.5	321.5	2,129.3	0.70	0.39	-0.57
14,652.0	92.29	359.33	12,476.8	2,215.4	320.6	2,223.2	0.36	0.07	-0.35
14,746.0	92.94	359.13	12,472.5	2,309.3	319.4	2,317.0	0.72	0.69	-0.21
14,840.0	92.94	359.00	12,467.6	2,403.2	317.8	2,410.8	0.14	0.00	-0.14
14,935.0	92.38	358.79	12,463.2	2,498.0	316.0	2,505.6	0.63	-0.59	-0.22
15,029.0	90.11	359.35	12,461.2	2,592.0	314.5	2,599.5	2.49	-2.41	0.60
15,123.0	90.95	1.63	12,460.3	2,686.0	315.3	2,693.4	2.58	0.89	2.43
15,217.0	91.74	2.08	12,458.1	2,779.9	318.3	2,787.4	0.97	0.84	0.48
15,312.0	91.57	2.55	12,455.4	2,874.8	322.2	2,882.4	0.53	-0.18	0.49
15,406.0	92.63	2.93	12,451.9	2,968.6	326.7	2,976.3	1.20	1.13	0.40
15,500.0	89.91	1.47	12,449.8	3,062.5	330.3	3,070.2	3.28	-2.89	-1.55
15,595.0	89.30	0.26	12,450.5	3,157.5	331.7	3,165.2	1.43	-0.64	-1.27
15,689.0	89.33	359.91	12,451.6	3,251.5	331.8	3,259.2	0.37	0.03	-0.37
15,783.0	89.91	359.04	12,452.2	3,345.5	331.0	3,353.1	1.11	0.62	-0.93
15,877.0	90.92	358.71	12,451.6	3,439.5	329.1	3,447.0	1.13	1.07	-0.35
15,971.0	91.23	358.70	12,449.8	3,533.4	327.0	3,540.9	0.33	0.33	-0.01

Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FEZ FED COM #704H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FEZ FED COM #704H
TVD Reference: RKB=3260.3+29 @ 3289.3usft (NORAM 21)
MD Reference: RKB=3260.3+29 @ 3289.3usft (NORAM 21)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
16,065.0	91.07	358.78	12,447.9	3,627.4	324.9	3,634.8	0.19	-0.17	0.09
16,159.0	89.41	358.06	12,447.5	3,721.4	322.3	3,728.6	1.92	-1.77	-0.77
16,254.0	89.30	357.68	12,448.6	3,816.3	318.8	3,823.4	0.42	-0.12	-0.40
16,348.0	89.36	356.95	12,449.7	3,910.2	314.4	3,917.2	0.78	0.06	-0.78
16,442.0	90.61	357.17	12,449.7	4,004.0	309.6	4,010.9	1.35	1.33	0.23
16,536.0	90.17	357.76	12,449.1	4,097.9	305.4	4,104.6	0.78	-0.47	0.63
16,631.0	91.68	358.72	12,447.5	4,192.9	302.5	4,199.5	1.88	1.59	1.01
16,725.0	91.23	359.10	12,445.2	4,286.8	300.7	4,293.3	0.63	-0.48	0.40
16,819.0	91.68	358.44	12,442.8	4,380.8	298.7	4,387.2	0.85	0.48	-0.70
16,913.0	92.38	359.16	12,439.4	4,474.7	296.7	4,481.0	1.07	0.74	0.77
17,008.0	91.29	358.25	12,436.4	4,569.6	294.6	4,575.9	1.49	-1.15	-0.96
17,102.0	92.44	358.69	12,433.3	4,663.5	292.1	4,669.7	1.31	1.22	0.47
17,196.0	92.10	359.41	12,429.6	4,757.5	290.5	4,763.5	0.85	-0.36	0.77
17,290.0	90.92	359.79	12,427.1	4,851.4	289.9	4,857.4	1.32	-1.26	0.40
17,385.0	91.85	0.29	12,424.8	4,946.4	289.9	4,952.4	1.11	0.98	0.53
17,479.0	90.22	0.91	12,423.1	5,040.4	290.9	5,046.3	1.86	-1.73	0.66
17,573.0	90.92	1.40	12,422.2	5,134.3	292.8	5,140.3	0.91	0.74	0.52
17,667.0	90.98	1.16	12,420.7	5,228.3	294.9	5,234.3	0.26	0.06	-0.26
17,761.0	90.53	0.91	12,419.4	5,322.3	296.6	5,328.3	0.55	-0.48	-0.27
17,855.0	90.09	0.52	12,418.9	5,416.3	297.8	5,422.3	0.63	-0.47	-0.41
17,949.0	89.91	359.92	12,418.9	5,510.3	298.1	5,516.3	0.67	-0.19	-0.64
18,044.0	90.81	0.44	12,418.3	5,605.3	298.4	5,611.2	1.09	0.95	0.55
18,138.0	91.65	0.10	12,416.3	5,699.2	298.9	5,705.2	0.96	0.89	-0.36
18,232.0	91.01	359.85	12,414.1	5,793.2	298.8	5,799.1	0.73	-0.68	-0.27
18,326.0	89.52	358.80	12,413.7	5,887.2	297.7	5,893.0	1.94	-1.59	-1.12
18,421.0	90.36	358.86	12,413.8	5,982.2	295.8	5,987.9	0.89	0.88	0.06
18,515.0	93.03	1.11	12,411.0	6,076.1	295.8	6,081.9	3.71	2.84	2.39
18,609.0	92.13	4.26	12,406.8	6,169.9	300.2	6,175.7	3.48	-0.96	3.35
18,703.0	92.35	7.35	12,403.1	6,263.4	309.7	6,269.4	3.29	0.23	3.29
18,797.0	92.88	6.26	12,398.8	6,356.6	320.8	6,362.9	1.29	0.56	-1.16
18,862.0	92.78	4.66	12,395.6	6,421.2	327.0	6,427.6	2.46	-0.15	-2.46
18,956.0	90.30	1.73	12,393.1	6,515.0	332.2	6,521.6	4.08	-2.64	-3.12
19,051.0	88.50	1.53	12,394.1	6,610.0	334.9	6,616.5	1.91	-1.89	-0.21
19,145.0	88.33	1.39	12,396.7	6,703.9	337.3	6,710.5	0.23	-0.18	-0.15
19,239.0	88.25	359.74	12,399.5	6,797.9	338.2	6,804.5	1.76	-0.09	-1.76
19,334.0	87.05	358.51	12,403.4	6,892.8	336.8	6,899.3	1.81	-1.26	-1.29
19,428.0	86.43	356.45	12,408.7	6,986.5	332.7	6,992.9	2.29	-0.66	-2.19
19,522.0	86.11	356.54	12,414.8	7,080.1	326.9	7,086.3	0.35	-0.34	0.10
19,616.0	86.15	356.20	12,421.2	7,173.7	321.0	7,179.7	0.36	0.04	-0.36
19,710.0	87.40	357.00	12,426.4	7,267.4	315.4	7,273.2	1.58	1.33	0.85
19,804.0	86.51	355.71	12,431.4	7,361.1	309.5	7,366.7	1.67	-0.95	-1.37
19,899.0	87.30	357.28	12,436.6	7,455.8	303.7	7,461.2	1.85	0.83	1.65
19,993.0	87.19	357.26	12,441.1	7,549.6	299.2	7,554.8	0.12	-0.12	-0.02

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #704H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Site:	BULLDOG	MD Reference:	RKB=3260.3+29 @ 3289.3usft (NORAM 21)
Well:	FEZ FED COM #704H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

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)
20,087.0	86.97	357.33	12,445.9	7,643.3	294.8	7,648.5	0.25	-0.23	0.07
20,181.0	86.22	357.82	12,451.5	7,737.1	290.8	7,742.1	0.95	-0.80	0.52
20,276.0	87.87	357.71	12,456.4	7,831.9	287.1	7,836.7	1.74	1.74	-0.12
20,370.0	90.01	356.66	12,458.1	7,925.7	282.5	7,930.5	2.54	2.28	-1.12
20,464.0	89.76	358.21	12,458.3	8,019.6	278.3	8,024.2	1.67	-0.27	1.65
20,559.0	90.01	1.26	12,458.5	8,114.6	277.8	8,119.2	3.22	0.26	3.21
20,653.0	89.13	2.53	12,459.2	8,208.6	280.9	8,213.1	1.64	-0.94	1.35
20,747.0	89.45	3.88	12,460.3	8,302.4	286.2	8,307.1	1.48	0.34	1.44
20,841.0	88.10	2.04	12,462.4	8,396.3	291.0	8,401.0	2.43	-1.44	-1.96
20,936.0	88.42	1.36	12,465.2	8,491.2	293.9	8,496.0	0.79	0.34	-0.72
21,030.0	89.19	2.91	12,467.2	8,585.1	297.4	8,590.0	1.84	0.82	1.65
21,124.0	88.14	3.14	12,469.4	8,678.9	302.3	8,683.9	1.14	-1.12	0.24
21,218.0	90.24	4.39	12,470.7	8,772.7	308.5	8,777.8	2.60	2.23	1.33
21,312.0	88.99	4.66	12,471.4	8,866.4	315.9	8,871.7	1.36	-1.33	0.29
21,406.0	89.67	5.15	12,472.5	8,960.1	323.9	8,965.5	0.89	0.72	0.52
21,501.0	88.19	4.65	12,474.2	9,054.7	332.1	9,060.3	1.64	-1.56	-0.53
21,595.0	88.19	3.36	12,477.2	9,148.4	338.6	9,154.2	1.37	0.00	-1.37
21,689.0	90.12	4.72	12,478.6	9,242.2	345.2	9,248.1	2.51	2.05	1.45
21,783.0	89.78	4.64	12,478.7	9,335.9	352.9	9,341.9	0.37	-0.36	-0.09
21,877.0	90.45	4.34	12,478.5	9,429.6	360.3	9,435.8	0.78	0.71	-0.32
21,971.0	90.13	4.23	12,478.0	9,523.3	367.3	9,529.7	0.36	-0.34	-0.12
22,066.0	88.16	3.56	12,479.4	9,618.1	373.7	9,624.6	2.19	-2.07	-0.71
22,160.0	87.90	4.32	12,482.6	9,711.8	380.2	9,718.5	0.85	-0.28	0.81
22,254.0	88.37	4.72	12,485.7	9,805.4	387.6	9,812.3	0.66	0.50	0.43
22,349.0	89.64	5.01	12,487.4	9,900.1	395.7	9,907.1	1.37	1.34	0.31
22,443.0	87.85	2.96	12,489.4	9,993.8	402.2	10,001.0	2.89	-1.90	-2.18
22,474.0	89.02	1.18	12,490.3	10,024.8	403.3	10,032.0	6.87	3.77	-5.74
22,550.0	88.00	359.00	12,492.2	10,100.8	403.4	10,107.9	3.17	-1.34	-2.87

Checked By: _____ Approved By: _____ Date: _____