

NORTHERN DELAWARE BASIN

**LEA COUNTY, NM
BULLDOG
FEZ FED COM #601H**

OWB

Design: ACTUAL WELLPATH

Standard Survey Report

14 August, 2019

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Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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	Latitude:	32° 5' 36.820 N	
From:	Map	Easting:	741,887.40 usft	Longitude:	103° 33' 8.116 W	
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	FEZ FED COM #601H					
Well Position	+N/-S	0.0 usft	Northing:	415,348.30 usft	Latitude:	32° 8' 17.809 N
	+E/-W	0.0 usft	Easting:	796,667.50 usft	Longitude:	103° 22' 29.652 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,243.9 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	7/11/2018	6.77	59.98	47,785.02202533

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	2.29	

Survey Program	Date 3/13/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	11,523.0	GYRO (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
11,670.0	22,213.0	MWD-CURVE/LATERALPHX (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	0.67	139.26	100.0	-0.4	0.4	-0.4	0.67	0.67	0.00	
125.0	0.71	146.62	125.0	-0.7	0.6	-0.7	0.39	0.16	29.44	
150.0	0.87	142.83	150.0	-1.0	0.8	-0.9	0.67	0.64	-15.16	
175.0	0.89	152.04	175.0	-1.3	1.0	-1.2	0.57	0.08	36.84	
200.0	0.88	154.98	200.0	-1.6	1.1	-1.6	0.19	-0.04	11.76	
225.0	0.94	152.32	225.0	-2.0	1.3	-1.9	0.29	0.24	-10.64	
250.0	0.88	156.28	250.0	-2.3	1.5	-2.3	0.35	-0.24	15.84	
275.0	0.95	151.53	275.0	-2.7	1.7	-2.6	0.41	0.28	-19.00	
300.0	0.94	152.81	300.0	-3.1	1.9	-3.0	0.09	-0.04	5.12	

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Well:	FEZ FED COM #601H	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)
325.0	0.81	155.77	325.0	-3.4	2.0	-3.3	0.55	-0.52	11.84
350.0	0.64	156.59	350.0	-3.7	2.2	-3.6	0.68	-0.68	3.28
375.0	0.75	162.50	375.0	-4.0	2.3	-3.9	0.52	0.44	23.64
400.0	0.51	161.55	400.0	-4.2	2.3	-4.1	0.96	-0.96	-3.80
425.0	0.52	179.08	425.0	-4.5	2.4	-4.4	0.63	0.04	70.12
450.0	0.45	189.74	450.0	-4.7	2.4	-4.6	0.46	-0.28	42.64
475.0	0.45	218.61	475.0	-4.8	2.3	-4.8	0.90	0.00	115.48
500.0	0.60	232.53	500.0	-5.0	2.1	-4.9	0.78	0.60	55.68
525.0	0.67	236.63	525.0	-5.2	1.9	-5.1	0.33	0.28	16.40
550.0	0.50	242.81	550.0	-5.3	1.7	-5.2	0.72	-0.68	24.72
575.0	0.55	244.46	575.0	-5.4	1.5	-5.3	0.21	0.20	6.60
600.0	0.50	236.57	600.0	-5.5	1.3	-5.5	0.35	-0.20	-31.56
625.0	0.48	235.21	625.0	-5.6	1.1	-5.6	0.09	-0.08	-5.44
650.0	0.38	247.89	650.0	-5.7	0.9	-5.7	0.55	-0.40	50.72
675.0	0.30	241.77	675.0	-5.8	0.8	-5.7	0.35	-0.32	-24.48
700.0	0.24	245.23	700.0	-5.8	0.7	-5.8	0.25	-0.24	13.84
725.0	0.22	251.65	725.0	-5.9	0.6	-5.8	0.13	-0.08	25.68
750.0	0.15	246.54	750.0	-5.9	0.5	-5.9	0.29	-0.28	-20.44
775.0	0.08	308.65	775.0	-5.9	0.5	-5.9	0.53	-0.28	248.44
800.0	0.05	81.67	800.0	-5.9	0.5	-5.9	0.48	-0.12	532.08
825.0	0.08	70.86	825.0	-5.9	0.5	-5.9	0.13	0.12	-43.24
850.0	0.07	61.22	850.0	-5.9	0.5	-5.8	0.06	-0.04	-38.56
875.0	0.15	26.73	875.0	-5.8	0.6	-5.8	0.40	0.32	-137.96
900.0	0.11	55.42	900.0	-5.8	0.6	-5.8	0.30	-0.16	114.76
925.0	0.07	47.37	925.0	-5.8	0.6	-5.7	0.17	-0.16	-32.20
950.0	0.12	35.60	950.0	-5.7	0.7	-5.7	0.21	0.20	-47.08
975.0	0.05	10.91	975.0	-5.7	0.7	-5.7	0.31	-0.28	-98.76
1,000.0	0.04	111.62	1,000.0	-5.7	0.7	-5.7	0.28	-0.04	402.84
1,025.0	0.08	174.27	1,025.0	-5.7	0.7	-5.7	0.28	0.16	250.60
1,050.0	0.09	174.93	1,050.0	-5.8	0.7	-5.7	0.04	0.04	2.64
1,075.0	0.21	181.56	1,075.0	-5.8	0.7	-5.8	0.48	0.48	26.52
1,100.0	0.26	184.47	1,100.0	-5.9	0.7	-5.9	0.21	0.20	11.64
1,125.0	0.11	215.30	1,125.0	-6.0	0.7	-6.0	0.70	-0.60	123.32
1,150.0	0.15	181.54	1,150.0	-6.0	0.7	-6.0	0.34	0.16	-135.04
1,175.0	0.12	194.53	1,175.0	-6.1	0.6	-6.1	0.17	-0.12	51.96
1,200.0	0.08	217.61	1,200.0	-6.1	0.6	-6.1	0.22	-0.16	92.32
1,225.0	0.23	176.24	1,225.0	-6.2	0.6	-6.2	0.71	0.60	-165.48
1,250.0	0.11	173.14	1,250.0	-6.3	0.6	-6.3	0.48	-0.48	-12.40
1,275.0	0.13	169.85	1,275.0	-6.3	0.6	-6.3	0.08	0.08	-13.16
1,300.0	0.16	181.66	1,300.0	-6.4	0.6	-6.4	0.17	0.12	47.24
1,325.0	0.10	184.66	1,325.0	-6.5	0.6	-6.4	0.24	-0.24	12.00
1,350.0	0.10	161.37	1,350.0	-6.5	0.6	-6.5	0.16	0.00	-93.16
1,375.0	0.09	152.06	1,375.0	-6.5	0.7	-6.5	0.07	-0.04	-37.24

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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)
1,400.0	0.04	114.12	1,400.0	-6.6	0.7	-6.5	0.25	-0.20	-151.76
1,425.0	0.07	89.87	1,425.0	-6.6	0.7	-6.5	0.15	0.12	-97.00
1,450.0	0.13	156.42	1,450.0	-6.6	0.7	-6.6	0.48	0.24	266.20
1,475.0	0.10	218.45	1,475.0	-6.6	0.7	-6.6	0.49	-0.12	248.12
1,500.0	0.03	205.52	1,500.0	-6.7	0.7	-6.6	0.28	-0.28	-51.72
1,525.0	0.08	112.31	1,525.0	-6.7	0.7	-6.6	0.35	0.20	-372.84
1,550.0	0.09	145.00	1,550.0	-6.7	0.7	-6.7	0.20	0.04	130.76
1,575.0	0.07	182.64	1,575.0	-6.7	0.8	-6.7	0.22	-0.08	150.56
1,600.0	0.06	163.20	1,600.0	-6.7	0.8	-6.7	0.10	-0.04	-77.76
1,625.0	0.07	129.60	1,625.0	-6.8	0.8	-6.7	0.16	0.04	-134.40
1,650.0	0.08	144.40	1,650.0	-6.8	0.8	-6.8	0.09	0.04	59.20
1,675.0	0.12	152.74	1,675.0	-6.8	0.8	-6.8	0.17	0.16	33.36
1,700.0	0.09	179.98	1,700.0	-6.9	0.8	-6.8	0.23	-0.12	108.96
1,725.0	0.10	132.04	1,725.0	-6.9	0.9	-6.9	0.31	0.04	-191.76
1,750.0	0.12	151.30	1,750.0	-6.9	0.9	-6.9	0.17	0.08	77.04
1,775.0	0.16	125.96	1,775.0	-7.0	0.9	-6.9	0.29	0.16	-101.36
1,800.0	0.10	145.14	1,800.0	-7.0	1.0	-7.0	0.29	-0.24	76.72
1,825.0	0.08	127.87	1,825.0	-7.1	1.0	-7.0	0.13	-0.08	-69.08
1,850.0	0.12	117.42	1,850.0	-7.1	1.0	-7.0	0.18	0.16	-41.80
1,875.0	0.06	95.68	1,875.0	-7.1	1.1	-7.0	0.27	-0.24	-86.96
1,900.0	0.05	126.17	1,900.0	-7.1	1.1	-7.0	0.12	-0.04	121.96
1,925.0	0.12	102.24	1,925.0	-7.1	1.1	-7.1	0.31	0.28	-95.72
1,950.0	0.28	112.96	1,950.0	-7.1	1.2	-7.1	0.65	0.64	42.88
1,975.0	0.57	113.29	1,975.0	-7.2	1.4	-7.2	1.16	1.16	1.32
2,000.0	1.07	112.08	1,999.9	-7.3	1.7	-7.3	2.00	2.00	-4.84
2,025.0	1.37	115.86	2,024.9	-7.6	2.2	-7.5	1.24	1.20	15.12
2,050.0	1.62	115.68	2,049.9	-7.9	2.8	-7.7	1.00	1.00	-0.72
2,075.0	1.74	109.75	2,074.9	-8.1	3.4	-8.0	0.84	0.48	-23.72
2,100.0	1.77	116.02	2,099.9	-8.4	4.2	-8.3	0.78	0.12	25.08
2,125.0	1.70	113.62	2,124.9	-8.7	4.8	-8.5	0.40	-0.28	-9.60
2,150.0	1.74	113.22	2,149.9	-9.0	5.5	-8.8	0.17	0.16	-1.60
2,175.0	1.67	112.04	2,174.9	-9.3	6.2	-9.1	0.31	-0.28	-4.72
2,200.0	1.59	112.37	2,199.9	-9.6	6.9	-9.3	0.32	-0.32	1.32
2,225.0	1.54	109.32	2,224.9	-9.8	7.5	-9.5	0.39	-0.20	-12.20
2,250.0	1.42	110.09	2,249.9	-10.1	8.1	-9.7	0.49	-0.48	3.08
2,275.0	1.62	107.63	2,274.8	-10.3	8.7	-9.9	0.84	0.80	-9.84
2,300.0	1.46	105.52	2,299.8	-10.5	9.4	-10.1	0.68	-0.64	-8.44
2,325.0	1.44	106.87	2,324.8	-10.6	10.0	-10.2	0.16	-0.08	5.40
2,350.0	1.47	103.48	2,349.8	-10.8	10.6	-10.4	0.36	0.12	-13.56
2,375.0	1.61	106.17	2,374.8	-11.0	11.3	-10.5	0.63	0.56	10.76
2,400.0	1.39	103.04	2,399.8	-11.1	11.9	-10.7	0.94	-0.88	-12.52
2,425.0	1.47	104.42	2,424.8	-11.3	12.5	-10.8	0.35	0.32	5.52
2,450.0	1.52	103.71	2,449.8	-11.5	13.1	-10.9	0.21	0.20	-2.84

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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
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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	1.50	102.95	2,474.8	-11.6	13.8	-11.0	0.11	-0.08	-3.04
2,500.0	1.50	102.33	2,499.8	-11.8	14.4	-11.2	0.06	0.00	-2.48
2,525.0	1.47	101.39	2,524.8	-11.9	15.0	-11.3	0.15	-0.12	-3.76
2,550.0	1.45	100.40	2,549.7	-12.0	15.7	-11.4	0.13	-0.08	-3.96
2,575.0	1.56	101.38	2,574.7	-12.1	16.3	-11.5	0.45	0.44	3.92
2,600.0	1.61	101.39	2,599.7	-12.3	17.0	-11.6	0.20	0.20	0.04
2,625.0	1.54	99.90	2,624.7	-12.4	17.7	-11.7	0.32	-0.28	-5.96
2,650.0	1.50	97.57	2,649.7	-12.5	18.3	-11.8	0.29	-0.16	-9.32
2,675.0	1.36	94.39	2,674.7	-12.6	18.9	-11.8	0.64	-0.56	-12.72
2,700.0	1.42	95.78	2,699.7	-12.6	19.5	-11.8	0.28	0.24	5.56
2,725.0	1.44	94.16	2,724.7	-12.7	20.2	-11.9	0.18	0.08	-6.48
2,750.0	1.40	93.20	2,749.7	-12.7	20.8	-11.9	0.19	-0.16	-3.84
2,775.0	1.39	94.79	2,774.7	-12.7	21.4	-11.9	0.16	-0.04	6.36
2,800.0	1.33	93.02	2,799.7	-12.8	22.0	-11.9	0.29	-0.24	-7.08
2,825.0	1.34	91.49	2,824.7	-12.8	22.6	-11.9	0.15	0.04	-6.12
2,850.0	1.17	89.12	2,849.7	-12.8	23.1	-11.9	0.71	-0.68	-9.48
2,875.0	1.36	84.12	2,874.6	-12.8	23.7	-11.8	0.88	0.76	-20.00
2,900.0	1.14	77.13	2,899.6	-12.7	24.2	-11.7	1.07	-0.88	-27.96
2,925.0	1.17	75.12	2,924.6	-12.6	24.7	-11.6	0.20	0.12	-8.04
2,950.0	1.29	74.25	2,949.6	-12.4	25.2	-11.4	0.49	0.48	-3.48
2,975.0	1.24	69.47	2,974.6	-12.3	25.7	-11.2	0.47	-0.20	-19.12
3,000.0	1.20	68.18	2,999.6	-12.1	26.2	-11.0	0.19	-0.16	-5.16
3,025.0	1.24	70.65	3,024.6	-11.9	26.7	-10.8	0.26	0.16	9.88
3,050.0	1.14	65.24	3,049.6	-11.7	27.2	-10.6	0.60	-0.40	-21.64
3,075.0	1.29	67.28	3,074.6	-11.5	27.7	-10.4	0.62	0.60	8.16
3,100.0	1.46	70.87	3,099.6	-11.3	28.3	-10.1	0.76	0.68	14.36
3,125.0	1.67	77.20	3,124.6	-11.1	28.9	-9.9	1.09	0.84	25.32
3,150.0	1.85	73.99	3,149.6	-10.9	29.7	-9.7	0.82	0.72	-12.84
3,175.0	1.93	76.91	3,174.6	-10.7	30.5	-9.5	0.50	0.32	11.68
3,200.0	1.72	74.74	3,199.5	-10.5	31.2	-9.2	0.88	-0.84	-8.68
3,225.0	1.88	74.88	3,224.5	-10.3	32.0	-9.0	0.64	0.64	0.56
3,250.0	1.91	76.23	3,249.5	-10.1	32.8	-8.8	0.22	0.12	5.40
3,275.0	1.91	76.69	3,274.5	-9.9	33.6	-8.5	0.06	0.00	1.84
3,300.0	1.97	84.80	3,299.5	-9.7	34.4	-8.4	1.12	0.24	32.44
3,325.0	2.04	93.48	3,324.5	-9.7	35.3	-8.3	1.25	0.28	34.72
3,350.0	2.06	95.26	3,349.5	-9.8	36.2	-8.3	0.27	0.08	7.12
3,375.0	2.01	93.49	3,374.4	-9.9	37.1	-8.4	0.32	-0.20	-7.08
3,400.0	1.98	95.90	3,399.4	-9.9	37.9	-8.4	0.36	-0.12	9.64
3,425.0	2.04	91.68	3,424.4	-10.0	38.8	-8.4	0.64	0.24	-16.88
3,450.0	1.83	87.91	3,449.4	-10.0	39.7	-8.4	0.98	-0.84	-15.08
3,475.0	1.76	87.16	3,474.4	-10.0	40.4	-8.3	0.30	-0.28	-3.00
3,500.0	1.62	84.17	3,499.4	-9.9	41.2	-8.3	0.66	-0.56	-11.96
3,525.0	1.62	83.56	3,524.4	-9.8	41.9	-8.1	0.07	0.00	-2.44
3,550.0	1.58	82.23	3,549.4	-9.7	42.6	-8.0	0.22	-0.16	-5.32

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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)
3,575.0	1.64	82.57	3,574.4	-9.7	43.3	-7.9	0.24	0.24	1.36
3,600.0	1.52	81.44	3,599.3	-9.6	44.0	-7.8	0.50	-0.48	-4.52
3,625.0	1.40	81.81	3,624.3	-9.5	44.6	-7.7	0.48	-0.48	1.48
3,650.0	1.34	82.53	3,649.3	-9.4	45.2	-7.6	0.25	-0.24	2.88
3,675.0	1.30	79.16	3,674.3	-9.3	45.7	-7.5	0.35	-0.16	-13.48
3,700.0	1.14	77.70	3,699.3	-9.2	46.3	-7.3	0.65	-0.64	-5.84
3,725.0	0.99	78.80	3,724.3	-9.1	46.7	-7.2	0.61	-0.60	4.40
3,750.0	1.03	77.81	3,749.3	-9.0	47.1	-7.1	0.17	0.16	-3.96
3,775.0	0.99	77.06	3,774.3	-8.9	47.6	-7.0	0.17	-0.16	-3.00
3,800.0	1.12	78.74	3,799.3	-8.8	48.0	-6.9	0.53	0.52	6.72
3,825.0	1.04	80.50	3,824.3	-8.7	48.5	-6.8	0.35	-0.32	7.04
3,850.0	1.02	99.12	3,849.3	-8.7	48.9	-6.8	1.34	-0.08	74.48
3,875.0	1.37	115.58	3,874.3	-8.9	49.4	-6.9	1.95	1.40	65.84
3,900.0	1.70	124.14	3,899.3	-9.2	50.0	-7.2	1.60	1.32	34.24
3,925.0	1.64	127.67	3,924.3	-9.6	50.6	-7.6	0.48	-0.24	14.12
3,950.0	1.76	127.21	3,949.3	-10.1	51.2	-8.0	0.48	0.48	-1.84
3,975.0	1.81	127.01	3,974.2	-10.6	51.8	-8.5	0.20	0.20	-0.80
4,000.0	1.84	128.21	3,999.2	-11.1	52.4	-9.0	0.19	0.12	4.80
4,025.0	1.70	125.98	4,024.2	-11.5	53.0	-9.4	0.62	-0.56	-8.92
4,050.0	1.60	122.08	4,049.2	-11.9	53.6	-9.8	0.60	-0.40	-15.60
4,075.0	1.31	117.37	4,074.2	-12.2	54.2	-10.1	1.25	-1.16	-18.84
4,100.0	1.39	117.70	4,099.2	-12.5	54.7	-10.3	0.32	0.32	1.32
4,125.0	1.47	115.09	4,124.2	-12.8	55.3	-10.6	0.41	0.32	-10.44
4,150.0	1.59	114.11	4,149.2	-13.1	55.9	-10.8	0.49	0.48	-3.92
4,175.0	1.66	105.44	4,174.2	-13.3	56.5	-11.0	1.02	0.28	-34.68
4,200.0	1.91	104.38	4,199.2	-13.5	57.3	-11.2	1.01	1.00	-4.24
4,225.0	2.05	103.08	4,224.1	-13.7	58.1	-11.4	0.59	0.56	-5.20
4,250.0	2.66	106.40	4,249.1	-14.0	59.1	-11.6	2.50	2.44	13.28
4,275.0	2.74	100.09	4,274.1	-14.2	60.3	-11.8	1.23	0.32	-25.24
4,300.0	3.08	97.54	4,299.1	-14.4	61.5	-12.0	1.45	1.36	-10.20
4,325.0	3.32	97.49	4,324.0	-14.6	62.9	-12.1	0.96	0.96	-0.20
4,350.0	3.40	97.46	4,349.0	-14.8	64.4	-12.2	0.32	0.32	-0.12
4,375.0	3.26	99.47	4,373.9	-15.0	65.8	-12.4	0.73	-0.56	8.04
4,400.0	3.32	98.25	4,398.9	-15.2	67.2	-12.5	0.37	0.24	-4.88
4,425.0	3.48	98.00	4,423.8	-15.5	68.7	-12.7	0.64	0.64	-1.00
4,450.0	3.40	97.67	4,448.8	-15.7	70.2	-12.8	0.33	-0.32	-1.32
4,475.0	3.33	97.99	4,473.8	-15.9	71.6	-13.0	0.29	-0.28	1.28
4,500.0	3.29	98.74	4,498.7	-16.1	73.1	-13.1	0.24	-0.16	3.00
4,525.0	3.12	98.91	4,523.7	-16.3	74.4	-13.3	0.68	-0.68	0.68
4,550.0	2.96	98.40	4,548.6	-16.5	75.7	-13.4	0.65	-0.64	-2.04
4,575.0	2.84	98.31	4,573.6	-16.7	77.0	-13.6	0.48	-0.48	-0.36
4,600.0	2.88	96.62	4,598.6	-16.8	78.2	-13.7	0.37	0.16	-6.76
4,625.0	2.76	98.83	4,623.5	-17.0	79.5	-13.8	0.65	-0.48	8.84

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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	2.67	97.52	4,648.5	-17.2	80.6	-13.9	0.44	-0.36	-5.24
4,675.0	2.41	99.40	4,673.5	-17.3	81.7	-14.0	1.09	-1.04	7.52
4,700.0	2.27	100.91	4,698.5	-17.5	82.7	-14.2	0.61	-0.56	6.04
4,725.0	2.14	102.27	4,723.5	-17.7	83.7	-14.3	0.56	-0.52	5.44
4,750.0	1.99	104.61	4,748.4	-17.9	84.5	-14.5	0.69	-0.60	9.36
4,775.0	1.78	105.50	4,773.4	-18.1	85.3	-14.7	0.85	-0.84	3.56
4,800.0	1.90	105.57	4,798.4	-18.3	86.1	-14.9	0.48	0.48	0.28
4,825.0	1.94	105.56	4,823.4	-18.6	86.9	-15.1	0.16	0.16	-0.04
4,850.0	1.98	105.27	4,848.4	-18.8	87.7	-15.3	0.16	0.16	-1.16
4,875.0	1.90	104.72	4,873.4	-19.0	88.6	-15.4	0.33	-0.32	-2.20
4,900.0	2.11	102.05	4,898.4	-19.2	89.4	-15.6	0.92	0.84	-10.68
4,925.0	2.29	99.70	4,923.3	-19.4	90.4	-15.8	0.81	0.72	-9.40
4,950.0	2.33	97.92	4,948.3	-19.5	91.4	-15.9	0.33	0.16	-7.12
4,975.0	2.41	98.49	4,973.3	-19.7	92.4	-16.0	0.33	0.32	2.28
5,000.0	2.39	96.78	4,998.3	-19.8	93.4	-16.1	0.30	-0.08	-6.84
5,025.0	2.24	95.62	5,023.3	-19.9	94.4	-16.1	0.63	-0.60	-4.64
5,050.0	2.18	96.74	5,048.2	-20.0	95.4	-16.2	0.30	-0.24	4.48
5,075.0	2.10	98.08	5,073.2	-20.2	96.3	-16.3	0.38	-0.32	5.36
5,100.0	1.93	97.46	5,098.2	-20.3	97.2	-16.4	0.69	-0.68	-2.48
5,125.0	1.83	97.46	5,123.2	-20.4	98.0	-16.5	0.40	-0.40	0.00
5,150.0	1.74	96.82	5,148.2	-20.5	98.8	-16.5	0.37	-0.36	-2.56
5,175.0	1.70	99.08	5,173.2	-20.6	99.5	-16.6	0.31	-0.16	9.04
5,200.0	1.68	96.88	5,198.2	-20.7	100.2	-16.7	0.27	-0.08	-8.80
5,225.0	1.54	95.61	5,223.1	-20.8	100.9	-16.7	0.58	-0.56	-5.08
5,250.0	1.36	97.77	5,248.1	-20.8	101.6	-16.8	0.75	-0.72	8.64
5,275.0	1.33	98.00	5,273.1	-20.9	102.1	-16.8	0.12	-0.12	0.92
5,300.0	1.32	96.96	5,298.1	-21.0	102.7	-16.9	0.10	-0.04	-4.16
5,325.0	1.19	100.05	5,323.1	-21.1	103.3	-16.9	0.59	-0.52	12.36
5,350.0	1.05	94.42	5,348.1	-21.1	103.7	-17.0	0.71	-0.56	-22.52
5,375.0	0.99	95.42	5,373.1	-21.2	104.2	-17.0	0.25	-0.24	4.00
5,400.0	0.90	99.59	5,398.1	-21.2	104.6	-17.0	0.45	-0.36	16.68
5,425.0	0.98	90.69	5,423.1	-21.3	105.0	-17.0	0.66	0.32	-35.60
5,450.0	0.82	96.24	5,448.1	-21.3	105.4	-17.1	0.73	-0.64	22.20
5,475.0	0.88	97.19	5,473.1	-21.3	105.8	-17.1	0.25	0.24	3.80
5,500.0	0.72	101.20	5,498.1	-21.4	106.1	-17.1	0.68	-0.64	16.04
5,525.0	0.79	98.13	5,523.1	-21.4	106.4	-17.2	0.32	0.28	-12.28
5,550.0	0.80	94.94	5,548.1	-21.5	106.8	-17.2	0.18	0.04	-12.76
5,575.0	0.67	85.82	5,573.1	-21.5	107.1	-17.2	0.70	-0.52	-36.48
5,600.0	0.70	92.57	5,598.1	-21.5	107.4	-17.2	0.34	0.12	27.00
5,625.0	0.77	93.90	5,623.1	-21.5	107.7	-17.2	0.29	0.28	5.32
5,650.0	0.87	114.92	5,648.1	-21.6	108.0	-17.3	1.26	0.40	84.08
5,675.0	1.33	130.54	5,673.1	-21.9	108.4	-17.5	2.18	1.84	62.48
5,700.0	1.40	135.65	5,698.1	-22.3	108.9	-17.9	0.56	0.28	20.44

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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	1.32	135.73	5,723.1	-22.7	109.3	-18.3	0.32	-0.32	0.32
5,750.0	1.42	135.21	5,748.1	-23.1	109.7	-18.7	0.40	0.40	-2.08
5,775.0	1.43	137.88	5,773.0	-23.6	110.1	-19.1	0.27	0.04	10.68
5,800.0	1.46	135.28	5,798.0	-24.0	110.6	-19.6	0.29	0.12	-10.40
5,825.0	1.46	135.65	5,823.0	-24.5	111.0	-20.0	0.04	0.00	1.48
5,850.0	1.38	134.74	5,848.0	-24.9	111.5	-20.4	0.33	-0.32	-3.64
5,875.0	1.31	135.84	5,873.0	-25.3	111.9	-20.8	0.30	-0.28	4.40
5,900.0	1.47	133.93	5,898.0	-25.8	112.3	-21.3	0.67	0.64	-7.64
5,925.0	1.36	134.41	5,923.0	-26.2	112.7	-21.7	0.44	-0.44	1.92
5,950.0	1.25	133.56	5,948.0	-26.6	113.1	-22.0	0.45	-0.44	-3.40
5,975.0	1.24	131.02	5,973.0	-27.0	113.5	-22.4	0.22	-0.04	-10.16
6,000.0	1.23	129.39	5,998.0	-27.3	114.0	-22.7	0.15	-0.04	-6.52
6,025.0	1.23	130.60	6,023.0	-27.6	114.4	-23.1	0.10	0.00	4.84
6,050.0	1.35	123.61	6,048.0	-28.0	114.8	-23.4	0.79	0.48	-27.96
6,075.0	1.56	115.21	6,073.0	-28.3	115.4	-23.7	1.20	0.84	-33.60
6,100.0	1.53	109.55	6,098.0	-28.5	116.0	-23.9	0.62	-0.12	-22.64
6,125.0	1.84	108.27	6,122.9	-28.8	116.7	-24.1	1.25	1.24	-5.12
6,150.0	1.95	102.73	6,147.9	-29.0	117.5	-24.3	0.85	0.44	-22.16
6,175.0	2.22	100.72	6,172.9	-29.2	118.4	-24.4	1.12	1.08	-8.04
6,200.0	2.28	102.53	6,197.9	-29.4	119.3	-24.6	0.37	0.24	7.24
6,225.0	2.29	101.25	6,222.9	-29.6	120.3	-24.8	0.21	0.04	-5.12
6,250.0	2.05	101.26	6,247.9	-29.8	121.2	-24.9	0.96	-0.96	0.04
6,275.0	2.20	103.62	6,272.8	-30.0	122.1	-25.1	0.69	0.60	9.44
6,300.0	2.31	101.99	6,297.8	-30.2	123.1	-25.2	0.51	0.44	-6.52
6,325.0	2.25	100.89	6,322.8	-30.4	124.1	-25.4	0.30	-0.24	-4.40
6,350.0	2.20	99.88	6,347.8	-30.6	125.0	-25.5	0.25	-0.20	-4.04
6,375.0	2.31	99.06	6,372.8	-30.7	126.0	-25.7	0.46	0.44	-3.28
6,400.0	2.39	96.12	6,397.7	-30.9	127.0	-25.8	0.58	0.32	-11.76
6,425.0	2.67	94.45	6,422.7	-31.0	128.1	-25.8	1.16	1.12	-6.68
6,450.0	2.74	91.60	6,447.7	-31.0	129.3	-25.8	0.61	0.28	-11.40
6,475.0	2.82	91.84	6,472.7	-31.1	130.5	-25.8	0.32	0.32	0.96
6,500.0	2.99	90.94	6,497.6	-31.1	131.8	-25.8	0.70	0.68	-3.60
6,525.0	2.90	92.34	6,522.6	-31.1	133.1	-25.8	0.46	-0.36	5.60
6,550.0	2.78	89.96	6,547.6	-31.2	134.3	-25.8	0.67	-0.48	-9.52
6,575.0	2.79	90.96	6,572.5	-31.2	135.5	-25.7	0.20	0.04	4.00
6,600.0	2.82	90.39	6,597.5	-31.2	136.7	-25.7	0.16	0.12	-2.28
6,625.0	2.98	90.27	6,622.5	-31.2	138.0	-25.6	0.64	0.64	-0.48
6,650.0	2.70	89.64	6,647.4	-31.2	139.2	-25.6	1.13	-1.12	-2.52
6,675.0	2.75	90.90	6,672.4	-31.2	140.4	-25.6	0.31	0.20	5.04
6,700.0	2.69	89.49	6,697.4	-31.2	141.6	-25.5	0.36	-0.24	-5.64
6,725.0	2.83	91.78	6,722.4	-31.2	142.8	-25.5	0.71	0.56	9.16
6,750.0	2.64	89.96	6,747.3	-31.2	144.0	-25.4	0.84	-0.76	-7.28
6,775.0	2.74	88.60	6,772.3	-31.2	145.2	-25.4	0.47	0.40	-5.44
6,800.0	2.67	88.46	6,797.3	-31.2	146.4	-25.3	0.28	-0.28	-0.56

Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FEZ FED COM #601H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FEZ FED COM #601H
TVD Reference: RKB=3243.9+26 @ 3269.9usft (IDC 205)
MD Reference: RKB=3243.9+26 @ 3269.9usft (IDC 205)
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)
6,825.0	2.61	86.19	6,822.2	-31.1	147.5	-25.2	0.48	-0.24	-9.08
6,850.0	2.55	86.79	6,847.2	-31.1	148.6	-25.1	0.26	-0.24	2.40
6,875.0	2.73	87.04	6,872.2	-31.0	149.8	-25.0	0.72	0.72	1.00
6,900.0	2.64	86.87	6,897.2	-30.9	151.0	-24.9	0.36	-0.36	-0.68
6,925.0	2.50	84.60	6,922.1	-30.9	152.1	-24.7	0.69	-0.56	-9.08
6,950.0	2.54	87.57	6,947.1	-30.8	153.2	-24.6	0.55	0.16	11.88
6,975.0	2.70	87.56	6,972.1	-30.7	154.3	-24.5	0.64	0.64	-0.04
7,000.0	2.52	87.72	6,997.1	-30.7	155.4	-24.4	0.72	-0.72	0.64
7,025.0	2.59	87.18	7,022.0	-30.6	156.6	-24.4	0.30	0.28	-2.16
7,050.0	2.58	87.69	7,047.0	-30.6	157.7	-24.3	0.10	-0.04	2.04
7,075.0	2.75	88.05	7,072.0	-30.5	158.9	-24.2	0.68	0.68	1.44
7,100.0	2.58	86.65	7,097.0	-30.5	160.0	-24.1	0.73	-0.68	-5.60
7,125.0	2.54	86.85	7,121.9	-30.4	161.1	-24.0	0.16	-0.16	0.80
7,150.0	2.68	87.50	7,146.9	-30.4	162.3	-23.9	0.57	0.56	2.60
7,175.0	2.60	86.11	7,171.9	-30.3	163.4	-23.7	0.41	-0.32	-5.56
7,200.0	2.71	86.77	7,196.9	-30.2	164.6	-23.6	0.46	0.44	2.64
7,225.0	2.67	87.52	7,221.8	-30.2	165.7	-23.5	0.21	-0.16	3.00
7,250.0	2.64	86.60	7,246.8	-30.1	166.9	-23.4	0.21	-0.12	-3.68
7,275.0	2.95	89.50	7,271.8	-30.1	168.1	-23.3	1.36	1.24	11.60
7,300.0	2.98	87.84	7,296.7	-30.0	169.4	-23.2	0.36	0.12	-6.64
7,325.0	3.08	86.95	7,321.7	-30.0	170.7	-23.1	0.44	0.40	-3.56
7,350.0	3.05	87.73	7,346.7	-29.9	172.1	-23.0	0.21	-0.12	3.12
7,375.0	3.07	87.89	7,371.6	-29.9	173.4	-22.9	0.09	0.08	0.64
7,400.0	3.04	87.41	7,396.6	-29.8	174.7	-22.8	0.16	-0.12	-1.92
7,425.0	3.10	87.54	7,421.6	-29.8	176.1	-22.7	0.24	0.24	0.52
7,450.0	3.06	88.05	7,446.5	-29.7	177.4	-22.6	0.19	-0.16	2.04
7,475.0	3.08	87.75	7,471.5	-29.7	178.7	-22.5	0.10	0.08	-1.20
7,500.0	3.07	87.27	7,496.5	-29.6	180.1	-22.4	0.11	-0.04	-1.92
7,525.0	3.13	86.34	7,521.4	-29.5	181.4	-22.2	0.31	0.24	-3.72
7,550.0	3.13	87.14	7,546.4	-29.4	182.8	-22.1	0.17	0.00	3.20
7,575.0	3.14	87.22	7,571.3	-29.4	184.2	-22.0	0.04	0.04	0.32
7,600.0	3.05	87.19	7,596.3	-29.3	185.5	-21.9	0.36	-0.36	-0.12
7,625.0	2.99	87.48	7,621.3	-29.2	186.8	-21.8	0.25	-0.24	1.16
7,650.0	2.77	86.82	7,646.2	-29.2	188.1	-21.6	0.89	-0.88	-2.64
7,675.0	2.67	87.78	7,671.2	-29.1	189.3	-21.5	0.44	-0.40	3.84
7,700.0	2.59	87.98	7,696.2	-29.1	190.4	-21.5	0.32	-0.32	0.80
7,725.0	2.49	86.67	7,721.2	-29.0	191.5	-21.4	0.46	-0.40	-5.24
7,750.0	2.27	84.94	7,746.1	-29.0	192.6	-21.2	0.93	-0.88	-6.92
7,775.0	2.06	82.03	7,771.1	-28.9	193.5	-21.1	0.95	-0.84	-11.64
7,800.0	1.98	80.35	7,796.1	-28.7	194.4	-20.9	0.40	-0.32	-6.72
7,825.0	2.03	81.66	7,821.1	-28.6	195.2	-20.8	0.27	0.20	5.24
7,850.0	1.81	82.56	7,846.1	-28.5	196.1	-20.6	0.89	-0.88	3.60
7,875.0	1.73	82.76	7,871.1	-28.4	196.8	-20.5	0.32	-0.32	0.80

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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	1.55	81.94	7,896.1	-28.3	197.5	-20.4	0.73	-0.72	-3.28
7,925.0	1.62	81.60	7,921.0	-28.2	198.2	-20.2	0.28	0.28	-1.36
7,950.0	1.72	83.74	7,946.0	-28.1	198.9	-20.1	0.47	0.40	8.56
7,975.0	1.63	84.00	7,971.0	-28.0	199.7	-20.0	0.36	-0.36	1.04
8,000.0	1.53	81.30	7,996.0	-27.9	200.4	-19.9	0.50	-0.40	-10.80
8,025.0	1.47	85.19	8,021.0	-27.8	201.0	-19.8	0.47	-0.24	15.56
8,050.0	1.50	86.60	8,046.0	-27.8	201.6	-19.7	0.19	0.12	5.64
8,075.0	1.55	87.05	8,071.0	-27.8	202.3	-19.7	0.21	0.20	1.80
8,100.0	1.53	87.23	8,096.0	-27.7	203.0	-19.6	0.08	-0.08	0.72
8,125.0	1.44	86.71	8,121.0	-27.7	203.6	-19.5	0.36	-0.36	-2.08
8,150.0	1.32	84.98	8,146.0	-27.6	204.2	-19.5	0.51	-0.48	-6.92
8,175.0	1.26	83.37	8,171.0	-27.6	204.8	-19.4	0.28	-0.24	-6.44
8,200.0	1.47	91.24	8,195.9	-27.6	205.4	-19.3	1.12	0.84	31.48
8,225.0	1.52	68.58	8,220.9	-27.5	206.0	-19.2	2.36	0.20	-90.64
8,250.0	1.32	87.26	8,245.9	-27.3	206.6	-19.0	2.01	-0.80	74.72
8,275.0	1.30	86.89	8,270.9	-27.3	207.2	-19.0	0.09	-0.08	-1.48
8,300.0	1.29	88.48	8,295.9	-27.3	207.7	-18.9	0.15	-0.04	6.36
8,325.0	1.34	89.76	8,320.9	-27.3	208.3	-18.9	0.23	0.20	5.12
8,350.0	1.36	90.95	8,345.9	-27.3	208.9	-18.9	0.14	0.08	4.76
8,375.0	1.34	88.87	8,370.9	-27.3	209.5	-18.9	0.21	-0.08	-8.32
8,400.0	1.28	85.30	8,395.9	-27.2	210.1	-18.8	0.41	-0.24	-14.28
8,425.0	1.26	87.57	8,420.9	-27.2	210.6	-18.8	0.22	-0.08	9.08
8,450.0	1.22	88.19	8,445.9	-27.2	211.2	-18.7	0.17	-0.16	2.48
8,475.0	1.24	84.68	8,470.9	-27.1	211.7	-18.7	0.31	0.08	-14.04
8,500.0	1.06	86.68	8,495.9	-27.1	212.2	-18.6	0.74	-0.72	8.00
8,525.0	1.08	86.31	8,520.9	-27.1	212.7	-18.6	0.08	0.08	-1.48
8,550.0	1.09	83.40	8,545.9	-27.0	213.1	-18.5	0.22	0.04	-11.64
8,575.0	1.15	84.89	8,570.9	-27.0	213.6	-18.4	0.27	0.24	5.96
8,600.0	0.95	89.10	8,595.9	-27.0	214.1	-18.4	0.86	-0.80	16.84
8,625.0	0.96	83.83	8,620.8	-26.9	214.5	-18.3	0.35	0.04	-21.08
8,650.0	0.95	80.13	8,645.8	-26.9	214.9	-18.3	0.25	-0.04	-14.80
8,675.0	1.03	83.91	8,670.8	-26.8	215.3	-18.2	0.41	0.32	15.12
8,700.0	1.02	86.78	8,695.8	-26.8	215.8	-18.1	0.21	-0.04	11.48
8,725.0	1.09	86.67	8,720.8	-26.8	216.2	-18.1	0.28	0.28	-0.44
8,750.0	1.06	80.47	8,745.8	-26.7	216.7	-18.0	0.48	-0.12	-24.80
8,775.0	0.97	83.16	8,770.8	-26.6	217.1	-17.9	0.41	-0.36	10.76
8,800.0	0.99	85.03	8,795.8	-26.6	217.6	-17.9	0.15	0.08	7.48
8,825.0	1.03	90.77	8,820.8	-26.6	218.0	-17.8	0.43	0.16	22.96
8,850.0	0.98	95.91	8,845.8	-26.6	218.4	-17.8	0.41	-0.20	20.56
8,875.0	1.02	98.17	8,870.8	-26.7	218.9	-17.9	0.22	0.16	9.04
8,900.0	1.01	97.67	8,895.8	-26.7	219.3	-17.9	0.05	-0.04	-2.00
8,925.0	1.18	106.53	8,920.8	-26.8	219.8	-18.0	0.96	0.68	35.44
8,950.0	0.97	112.70	8,945.8	-27.0	220.2	-18.2	0.96	-0.84	24.68

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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	1.03	116.52	8,970.8	-27.2	220.6	-18.3	0.36	0.24	15.28
9,000.0	1.05	133.26	8,995.8	-27.4	221.0	-18.6	1.21	0.08	66.96
9,025.0	1.15	140.01	9,020.8	-27.8	221.3	-18.9	0.65	0.40	27.00
9,050.0	1.37	144.72	9,045.8	-28.2	221.6	-19.3	0.97	0.88	18.84
9,075.0	1.21	159.62	9,070.8	-28.7	221.9	-19.8	1.48	-0.64	59.60
9,100.0	1.38	162.85	9,095.8	-29.2	222.1	-20.3	0.74	0.68	12.92
9,125.0	1.41	167.21	9,120.8	-29.8	222.2	-20.9	0.44	0.12	17.44
9,150.0	1.55	171.91	9,145.7	-30.4	222.4	-21.5	0.74	0.56	18.80
9,175.0	1.71	177.50	9,170.7	-31.2	222.4	-22.2	0.90	0.64	22.36
9,200.0	1.91	187.15	9,195.7	-31.9	222.4	-23.0	1.46	0.80	38.60
9,225.0	2.07	191.08	9,220.7	-32.8	222.3	-23.9	0.84	0.64	15.72
9,250.0	2.20	193.72	9,245.7	-33.7	222.1	-24.8	0.65	0.52	10.56
9,275.0	2.18	194.32	9,270.7	-34.6	221.8	-25.7	0.12	-0.08	2.40
9,300.0	2.23	195.05	9,295.7	-35.6	221.6	-26.7	0.23	0.20	2.92
9,325.0	2.49	197.92	9,320.6	-36.5	221.3	-27.7	1.14	1.04	11.48
9,350.0	2.54	199.70	9,345.6	-37.6	220.9	-28.7	0.37	0.20	7.12
9,375.0	2.59	200.23	9,370.6	-38.6	220.5	-29.8	0.22	0.20	2.12
9,400.0	2.66	202.74	9,395.6	-39.7	220.1	-30.9	0.54	0.28	10.04
9,425.0	2.88	203.60	9,420.5	-40.8	219.7	-32.0	0.90	0.88	3.44
9,450.0	2.96	202.64	9,445.5	-42.0	219.2	-33.2	0.38	0.32	-3.84
9,475.0	3.19	203.29	9,470.5	-43.2	218.6	-34.4	0.93	0.92	2.60
9,500.0	3.59	204.07	9,495.4	-44.6	218.0	-35.8	1.61	1.60	3.12
9,525.0	3.99	203.35	9,520.4	-46.1	217.4	-37.4	1.61	1.60	-2.88
9,550.0	4.18	206.08	9,545.3	-47.7	216.6	-39.0	1.09	0.76	10.92
9,575.0	4.58	204.95	9,570.2	-49.4	215.8	-40.8	1.64	1.60	-4.52
9,600.0	4.92	204.31	9,595.1	-51.3	214.9	-42.7	1.38	1.36	-2.56
9,625.0	5.16	203.98	9,620.0	-53.3	214.0	-44.7	0.97	0.96	-1.32
9,650.0	5.36	203.55	9,644.9	-55.4	213.1	-46.8	0.82	0.80	-1.72
9,675.0	5.59	203.32	9,669.8	-57.6	212.2	-49.1	0.92	0.92	-0.92
9,700.0	5.95	203.44	9,694.7	-59.9	211.2	-51.4	1.44	1.44	0.48
9,725.0	6.09	202.75	9,719.6	-62.3	210.1	-53.9	0.63	0.56	-2.76
9,750.0	6.26	202.55	9,744.4	-64.8	209.1	-56.4	0.69	0.68	-0.80
9,775.0	6.52	201.93	9,769.3	-67.4	208.1	-59.0	1.08	1.04	-2.48
9,800.0	6.66	201.97	9,794.1	-70.0	207.0	-61.7	0.56	0.56	0.16
9,825.0	6.94	201.16	9,818.9	-72.8	205.9	-64.5	1.18	1.12	-3.24
9,850.0	7.29	200.20	9,843.7	-75.7	204.8	-67.4	1.48	1.40	-3.84
9,875.0	7.45	199.86	9,868.5	-78.7	203.7	-70.5	0.66	0.64	-1.36
9,900.0	7.56	201.50	9,893.3	-81.8	202.6	-73.6	0.96	0.44	6.56
9,925.0	7.78	199.36	9,918.1	-84.9	201.4	-76.8	1.44	0.88	-8.56
9,950.0	7.76	194.86	9,942.9	-88.1	200.4	-80.0	2.43	-0.08	-18.00
9,975.0	7.44	192.32	9,967.6	-91.3	199.6	-83.3	1.86	-1.28	-10.16
10,000.0	7.26	189.99	9,992.4	-94.5	199.0	-86.4	1.39	-0.72	-9.32
10,025.0	7.10	188.68	10,017.2	-97.5	198.5	-89.5	0.92	-0.64	-5.24
10,050.0	6.52	188.69	10,042.1	-100.5	198.0	-92.5	2.32	-2.32	0.04

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
10,075.0	5.32	188.46	10,066.9	-103.0	197.7	-95.0	4.80	-4.80	-0.92
10,100.0	5.00	188.22	10,091.8	-105.2	197.3	-97.3	1.28	-1.28	-0.96
10,125.0	4.64	186.49	10,116.7	-107.3	197.1	-99.4	1.55	-1.44	-6.92
10,150.0	4.09	184.88	10,141.7	-109.2	196.9	-101.3	2.25	-2.20	-6.44
10,175.0	3.60	183.58	10,166.6	-110.9	196.7	-102.9	1.99	-1.96	-5.20
10,200.0	3.21	175.75	10,191.6	-112.4	196.8	-104.4	2.42	-1.56	-31.32
10,225.0	3.05	171.53	10,216.5	-113.7	196.9	-105.8	1.12	-0.64	-16.88
10,250.0	2.73	160.99	10,241.5	-115.0	197.2	-107.0	2.48	-1.28	-42.16
10,275.0	2.50	151.40	10,266.5	-116.0	197.6	-108.0	1.97	-0.92	-38.36
10,300.0	2.31	143.41	10,291.4	-116.9	198.2	-108.9	1.54	-0.76	-31.96
10,325.0	2.16	132.01	10,316.4	-117.6	198.9	-109.6	1.87	-0.60	-45.60
10,350.0	2.09	114.83	10,341.4	-118.1	199.6	-110.0	2.55	-0.28	-68.72
10,375.0	2.18	108.82	10,366.4	-118.4	200.5	-110.3	0.96	0.36	-24.04
10,400.0	2.25	104.52	10,391.4	-118.7	201.4	-110.6	0.72	0.28	-17.20
10,425.0	2.35	98.81	10,416.4	-118.9	202.4	-110.7	1.00	0.40	-22.84
10,450.0	2.54	93.57	10,441.3	-119.0	203.5	-110.8	1.17	0.76	-20.96
10,475.0	2.59	93.97	10,466.3	-119.1	204.6	-110.8	0.21	0.20	1.60
10,500.0	2.62	93.18	10,491.3	-119.2	205.7	-110.9	0.19	0.12	-3.16
10,525.0	2.70	93.13	10,516.3	-119.2	206.9	-110.9	0.32	0.32	-0.20
10,550.0	2.69	93.32	10,541.2	-119.3	208.0	-110.9	0.05	-0.04	0.76
10,575.0	2.76	93.35	10,566.2	-119.4	209.2	-110.9	0.28	0.28	0.12
10,600.0	2.72	93.00	10,591.2	-119.4	210.4	-110.9	0.17	-0.16	-1.40
10,625.0	2.63	93.45	10,616.1	-119.5	211.6	-111.0	0.37	-0.36	1.80
10,650.0	2.46	92.83	10,641.1	-119.6	212.7	-111.0	0.69	-0.68	-2.48
10,675.0	2.31	92.38	10,666.1	-119.6	213.7	-111.0	0.60	-0.60	-1.80
10,700.0	2.29	92.54	10,691.1	-119.7	214.7	-111.0	0.08	-0.08	0.64
10,725.0	2.17	94.31	10,716.1	-119.7	215.7	-111.0	0.55	-0.48	7.08
10,750.0	2.15	90.93	10,741.0	-119.8	216.6	-111.0	0.52	-0.08	-13.52
10,775.0	2.15	91.84	10,766.0	-119.8	217.6	-111.0	0.14	0.00	3.64
10,800.0	2.16	91.87	10,791.0	-119.8	218.5	-111.0	0.04	0.04	0.12
10,825.0	2.10	89.84	10,816.0	-119.8	219.4	-111.0	0.39	-0.24	-8.12
10,850.0	2.16	91.00	10,841.0	-119.8	220.4	-110.9	0.30	0.24	4.64
10,875.0	2.13	91.55	10,865.9	-119.9	221.3	-110.9	0.15	-0.12	2.20
10,900.0	2.13	90.31	10,890.9	-119.9	222.2	-110.9	0.18	0.00	-4.96
10,925.0	2.05	92.38	10,915.9	-119.9	223.2	-110.9	0.44	-0.32	8.28
10,950.0	2.03	93.39	10,940.9	-119.9	224.0	-110.9	0.16	-0.08	4.04
10,975.0	1.99	97.69	10,965.9	-120.0	224.9	-110.9	0.62	-0.16	17.20
11,000.0	1.92	97.97	10,990.9	-120.1	225.8	-111.0	0.28	-0.28	1.12
11,025.0	2.00	101.19	11,015.9	-120.3	226.6	-111.1	0.54	0.32	12.88
11,050.0	2.07	99.38	11,040.8	-120.4	227.5	-111.3	0.38	0.28	-7.24
11,075.0	2.10	91.86	11,065.8	-120.5	228.4	-111.3	1.10	0.12	-30.08
11,100.0	2.31	78.02	11,090.8	-120.4	229.3	-111.2	2.28	0.84	-55.36
11,125.0	2.39	71.24	11,115.8	-120.2	230.3	-110.9	1.16	0.32	-27.12

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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)	Builld Rate (°/100usft)	Turn Rate (°/100usft)
11,150.0	2.46	60.89	11,140.8	-119.7	231.3	-110.4	1.77	0.28	-41.40
11,175.0	2.51	54.52	11,165.7	-119.2	232.2	-109.8	1.12	0.20	-25.48
11,200.0	2.43	46.20	11,190.7	-118.5	233.0	-109.1	1.47	-0.32	-33.28
11,225.0	2.33	32.64	11,215.7	-117.7	233.7	-108.3	2.28	-0.40	-54.24
11,250.0	2.35	23.08	11,240.7	-116.8	234.2	-107.3	1.56	0.08	-38.24
11,275.0	2.52	10.23	11,265.6	-115.8	234.4	-106.3	2.28	0.68	-51.40
11,300.0	2.74	2.72	11,290.6	-114.6	234.6	-105.2	1.63	0.88	-30.04
11,325.0	2.94	1.01	11,315.6	-113.4	234.6	-103.9	0.87	0.80	-6.84
11,350.0	3.12	1.59	11,340.6	-112.1	234.6	-102.6	0.73	0.72	2.32
11,375.0	3.54	2.45	11,365.5	-110.6	234.7	-101.2	1.69	1.68	3.44
11,400.0	3.86	4.85	11,390.5	-109.0	234.8	-99.5	1.42	1.28	9.60
11,425.0	4.28	4.69	11,415.4	-107.2	234.9	-97.8	1.68	1.68	-0.64
11,450.0	4.68	6.58	11,440.3	-105.3	235.1	-95.8	1.71	1.60	7.56
11,475.0	5.18	6.05	11,465.2	-103.2	235.4	-93.7	2.01	2.00	-2.12
11,500.0	5.73	7.44	11,490.1	-100.8	235.7	-91.3	2.26	2.20	5.56
11,523.0	6.28	7.50	11,513.0	-98.4	236.0	-88.9	2.39	2.39	0.26
11,670.0	9.87	5.58	11,658.5	-77.9	238.2	-68.3	2.45	2.44	-1.31
11,702.0	9.76	4.30	11,690.0	-72.5	238.7	-62.9	0.76	-0.34	-4.00
11,734.0	11.94	6.77	11,721.5	-66.5	239.3	-56.9	6.96	6.81	7.72
11,765.0	15.64	15.15	11,751.6	-59.3	240.8	-49.6	13.53	11.94	27.03
11,797.0	17.95	21.27	11,782.2	-50.5	243.7	-40.7	9.08	7.22	19.13
11,829.0	20.76	22.05	11,812.4	-40.6	247.6	-30.7	8.82	8.78	2.44
11,860.0	22.44	20.41	11,841.2	-30.0	251.7	-19.9	5.76	5.42	-5.29
11,892.0	23.71	19.39	11,870.7	-18.2	256.0	-8.0	4.16	3.97	-3.19
11,924.0	25.33	16.93	11,899.8	-5.6	260.1	4.8	5.98	5.06	-7.69
11,956.0	27.67	14.68	11,928.4	8.1	264.0	18.7	7.96	7.31	-7.03
11,987.0	30.11	14.72	11,955.5	22.6	267.8	33.3	7.87	7.87	0.13
12,019.0	32.17	15.83	11,982.9	38.6	272.2	49.4	6.68	6.44	3.47
12,051.0	36.19	17.77	12,009.4	55.8	277.4	66.8	13.01	12.56	6.06
12,083.0	39.02	18.80	12,034.8	74.3	283.5	85.6	9.06	8.84	3.22
12,114.0	42.05	18.55	12,058.3	93.4	290.0	104.9	9.79	9.77	-0.81
12,146.0	44.10	19.04	12,081.7	114.1	297.0	125.9	6.49	6.41	1.53
12,178.0	46.11	18.84	12,104.3	135.5	304.4	147.6	6.30	6.28	-0.63
12,210.0	49.42	16.73	12,125.8	158.1	311.6	170.4	11.44	10.34	-6.59
12,242.0	53.18	14.50	12,145.8	182.1	318.3	194.7	12.95	11.75	-6.97
12,274.0	56.44	12.84	12,164.2	207.6	324.5	220.4	11.03	10.19	-5.19
12,305.0	60.57	11.44	12,180.4	233.4	330.0	246.4	13.87	13.32	-4.52
12,337.0	64.32	10.18	12,195.2	261.3	335.3	274.4	12.23	11.72	-3.94
12,369.0	67.78	10.36	12,208.2	290.0	340.6	303.4	10.82	10.81	0.56
12,400.0	68.74	10.55	12,219.7	318.3	345.8	331.9	3.15	3.10	0.61
12,431.0	69.96	11.40	12,230.6	346.8	351.3	360.6	4.70	3.94	2.74
12,462.0	71.68	12.63	12,240.8	375.5	357.4	389.4	6.70	5.55	3.97
12,493.0	73.71	13.19	12,250.0	404.3	364.0	418.5	6.77	6.55	1.81

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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)
12,525.0	76.28	13.72	12,258.3	434.4	371.2	448.8	8.19	8.03	1.66
12,557.0	78.20	12.95	12,265.4	464.7	378.4	479.5	6.44	6.00	-2.41
12,589.0	80.22	12.26	12,271.4	495.4	385.3	510.4	6.66	6.31	-2.16
12,621.0	82.68	11.95	12,276.1	526.3	391.9	541.6	7.75	7.69	-0.97
12,714.0	92.61	7.09	12,279.9	617.8	407.2	633.6	11.88	10.68	-5.23
12,809.0	92.58	7.78	12,275.6	711.9	419.5	728.1	0.73	-0.03	0.73
12,905.0	92.35	7.30	12,271.5	807.0	432.1	823.7	0.55	-0.24	-0.50
12,999.0	92.41	7.13	12,267.6	900.2	443.9	917.2	0.19	0.06	-0.18
13,095.0	92.46	6.95	12,263.5	995.4	455.6	1,012.8	0.19	0.05	-0.19
13,190.0	92.89	6.10	12,259.1	1,089.7	466.4	1,107.4	1.00	0.45	-0.89
13,284.0	92.47	5.35	12,254.7	1,183.1	475.8	1,201.2	0.91	-0.45	-0.80
13,380.0	92.30	4.46	12,250.7	1,278.7	484.0	1,297.0	0.94	-0.18	-0.93
13,475.0	92.58	2.56	12,246.7	1,373.4	489.8	1,391.9	2.02	0.29	-2.00
13,571.0	93.17	2.29	12,241.8	1,469.2	493.9	1,487.8	0.68	0.61	-0.28
13,666.0	93.31	0.72	12,236.5	1,564.0	496.3	1,582.6	1.66	0.15	-1.65
13,761.0	93.84	359.91	12,230.6	1,658.8	496.9	1,677.3	1.02	0.56	-0.85
13,857.0	92.61	357.50	12,225.2	1,754.6	494.7	1,773.0	2.81	-1.28	-2.51
13,952.0	92.58	357.34	12,220.8	1,849.4	490.4	1,867.6	0.17	-0.03	-0.17
14,047.0	92.49	357.58	12,216.6	1,944.2	486.2	1,962.1	0.27	-0.09	0.25
14,142.0	91.34	357.38	12,213.5	2,039.1	482.1	2,056.7	1.23	-1.21	-0.21
14,238.0	90.56	357.74	12,211.9	2,135.0	478.0	2,152.4	0.89	-0.81	0.38
14,333.0	90.50	358.13	12,211.0	2,229.9	474.5	2,247.1	0.42	-0.06	0.41
14,429.0	89.72	357.97	12,210.8	2,325.9	471.3	2,342.9	0.83	-0.81	-0.17
14,524.0	89.61	357.87	12,211.4	2,420.8	467.8	2,437.6	0.16	-0.12	-0.11
14,619.0	89.97	358.25	12,211.7	2,515.8	464.6	2,532.3	0.55	0.38	0.40
14,713.0	90.36	358.71	12,211.5	2,609.7	462.1	2,626.1	0.64	0.41	0.49
14,808.0	90.56	358.18	12,210.7	2,704.7	459.5	2,720.9	0.60	0.21	-0.56
14,904.0	90.17	358.24	12,210.1	2,800.6	456.5	2,816.6	0.41	-0.41	0.06
14,999.0	89.86	358.69	12,210.1	2,895.6	454.0	2,911.4	0.58	-0.33	0.47
15,095.0	88.74	358.59	12,211.2	2,991.6	451.7	3,007.2	1.17	-1.17	-0.10
15,190.0	90.06	358.46	12,212.2	3,086.5	449.3	3,102.0	1.40	1.39	-0.14
15,285.0	90.67	358.28	12,211.6	3,181.5	446.6	3,196.8	0.67	0.64	-0.19
15,380.0	90.50	358.83	12,210.6	3,276.5	444.2	3,291.6	0.61	-0.18	0.58
15,476.0	92.16	359.21	12,208.4	3,372.4	442.5	3,387.4	1.77	1.73	0.40
15,571.0	92.30	359.23	12,204.7	3,467.3	441.2	3,482.2	0.15	0.15	0.02
15,667.0	92.47	359.26	12,200.7	3,563.2	440.0	3,578.0	0.18	0.18	0.03
15,762.0	91.62	359.64	12,197.3	3,658.2	439.1	3,672.8	0.98	-0.89	0.40
15,858.0	90.90	0.61	12,195.2	3,754.1	439.3	3,768.7	1.26	-0.75	1.01
15,953.0	90.78	0.70	12,193.8	3,849.1	440.4	3,863.7	0.16	-0.13	0.09
16,048.0	91.48	1.43	12,192.0	3,944.1	442.1	3,958.6	1.06	0.74	0.77
16,143.0	90.36	2.04	12,190.4	4,039.0	445.0	4,053.6	1.34	-1.18	0.64
16,238.0	90.34	1.89	12,189.9	4,134.0	448.3	4,148.6	0.16	-0.02	-0.16
16,333.0	89.72	1.19	12,189.8	4,228.9	450.8	4,243.6	0.98	-0.65	-0.74
16,429.0	87.79	0.38	12,191.9	4,324.9	452.1	4,339.5	2.18	-2.01	-0.84

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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)
16,524.0	87.11	0.08	12,196.1	4,419.8	452.5	4,434.4	0.78	-0.72	-0.32
16,619.0	88.35	359.65	12,199.9	4,514.7	452.3	4,529.2	1.38	1.31	-0.45
16,715.0	88.57	359.41	12,202.5	4,610.7	451.5	4,625.1	0.34	0.23	-0.25
16,809.0	89.05	359.27	12,204.4	4,704.7	450.4	4,718.9	0.53	0.51	-0.15
16,904.0	90.22	358.53	12,205.0	4,799.6	448.6	4,813.7	1.46	1.23	-0.78
17,000.0	89.66	358.41	12,205.1	4,895.6	446.0	4,909.5	0.60	-0.58	-0.13
17,095.0	89.33	358.40	12,206.0	4,990.6	443.4	5,004.3	0.35	-0.35	-0.01
17,189.0	88.52	357.74	12,207.7	5,084.5	440.2	5,098.0	1.11	-0.86	-0.70
17,284.0	89.24	357.67	12,209.6	5,179.4	436.4	5,192.7	0.76	0.76	-0.07
17,378.0	90.28	358.57	12,210.0	5,273.4	433.3	5,286.5	1.46	1.11	0.96
17,473.0	89.94	358.71	12,209.8	5,368.3	431.1	5,381.3	0.39	-0.36	0.15
17,567.0	90.20	358.68	12,209.7	5,462.3	428.9	5,475.1	0.28	0.28	-0.03
17,661.0	90.64	358.52	12,209.0	5,556.3	426.6	5,568.9	0.50	0.47	-0.17
17,756.0	91.26	359.74	12,207.4	5,651.2	425.2	5,663.7	1.44	0.65	1.28
17,850.0	90.67	0.38	12,205.8	5,745.2	425.3	5,757.6	0.93	-0.63	0.68
17,945.0	90.62	0.70	12,204.8	5,840.2	426.2	5,852.6	0.34	-0.05	0.34
18,040.0	91.23	0.96	12,203.2	5,935.2	427.6	5,947.5	0.70	0.64	0.27
18,134.0	91.40	0.97	12,201.1	6,029.2	429.2	6,041.5	0.18	0.18	0.01
18,229.0	91.15	0.73	12,198.9	6,124.1	430.6	6,136.4	0.36	-0.26	-0.25
18,323.0	89.33	1.11	12,198.6	6,218.1	432.1	6,230.4	1.98	-1.94	0.40
18,416.0	89.27	1.52	12,199.7	6,311.1	434.2	6,323.4	0.45	-0.06	0.44
18,509.0	88.54	1.17	12,201.5	6,404.0	436.4	6,416.4	0.87	-0.78	-0.38
18,603.0	88.52	0.30	12,203.9	6,498.0	437.6	6,510.3	0.93	-0.02	-0.93
18,698.0	87.81	0.10	12,206.9	6,592.9	437.9	6,605.2	0.78	-0.75	-0.21
18,792.0	88.29	0.20	12,210.1	6,686.9	438.2	6,699.1	0.52	0.51	0.11
18,888.0	87.90	0.63	12,213.3	6,782.8	438.9	6,795.0	0.60	-0.41	0.45
18,983.0	86.78	0.30	12,217.7	6,877.7	439.6	6,889.8	1.23	-1.18	-0.35
19,078.0	86.67	359.73	12,223.1	6,972.6	439.7	6,984.6	0.61	-0.12	-0.60
19,172.0	86.44	359.72	12,228.8	7,066.4	439.2	7,078.3	0.24	-0.24	-0.01
19,266.0	85.99	359.37	12,235.0	7,160.2	438.5	7,172.0	0.61	-0.48	-0.37
19,361.0	86.92	359.43	12,240.9	7,255.0	437.5	7,266.7	0.98	0.98	0.06
19,456.0	87.95	0.72	12,245.1	7,349.9	437.6	7,361.5	1.74	1.08	1.36
19,549.0	88.04	0.49	12,248.4	7,442.8	438.6	7,454.4	0.27	0.10	-0.25
19,644.0	87.68	0.36	12,251.9	7,537.8	439.3	7,549.3	0.40	-0.38	-0.14
19,740.0	87.68	359.95	12,255.8	7,633.7	439.5	7,645.2	0.43	0.00	-0.43
19,834.0	88.85	359.51	12,258.7	7,727.6	439.1	7,739.0	1.33	1.24	-0.47
19,929.0	88.46	359.27	12,260.9	7,822.6	438.1	7,833.9	0.48	-0.41	-0.25
20,024.0	87.62	358.68	12,264.1	7,917.5	436.4	7,928.7	1.08	-0.88	-0.62
20,118.0	90.28	359.66	12,265.9	8,011.5	435.0	8,022.5	3.02	2.83	1.04
20,214.0	90.39	359.47	12,265.3	8,107.5	434.3	8,118.4	0.23	0.11	-0.20
20,308.0	87.23	357.07	12,267.3	8,201.4	431.5	8,212.1	4.22	-3.36	-2.55
20,404.0	86.52	356.92	12,272.5	8,297.1	426.4	8,307.6	0.76	-0.74	-0.16
20,498.0	86.27	357.03	12,278.4	8,390.8	421.5	8,401.0	0.29	-0.27	0.12

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well FEZ FED COM #601H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Site:	BULLDOG	MD Reference:	RKB=3243.9+26 @ 3269.9usft (IDC 205)
Well:	FEZ FED COM #601H	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)
20,592.0	86.92	356.80	12,284.0	8,484.5	416.4	8,494.4	0.73	0.69	-0.24
20,687.0	87.11	356.86	12,288.9	8,579.3	411.2	8,588.8	0.21	0.20	0.06
20,782.0	86.22	356.78	12,294.5	8,673.9	405.9	8,683.2	0.94	-0.94	-0.08
20,877.0	86.30	356.82	12,300.6	8,768.6	400.6	8,777.6	0.09	0.08	0.04
20,972.0	91.04	358.67	12,302.9	8,863.5	396.9	8,872.2	5.36	4.99	1.95
21,068.0	88.94	357.96	12,302.9	8,959.4	394.1	8,968.0	2.31	-2.19	-0.74
21,163.0	92.44	359.34	12,301.7	9,054.4	391.8	9,062.8	3.96	3.68	1.45
21,258.0	90.08	1.83	12,299.6	9,149.3	392.8	9,157.7	3.61	-2.48	2.62
21,353.0	90.28	2.61	12,299.3	9,244.3	396.5	9,252.7	0.85	0.21	0.82
21,448.0	89.16	3.47	12,299.8	9,339.1	401.5	9,347.7	1.49	-1.18	0.91
21,544.0	87.84	3.99	12,302.3	9,434.9	407.8	9,443.6	1.48	-1.38	0.54
21,639.0	90.95	3.58	12,303.3	9,529.7	414.0	9,538.6	3.30	3.27	-0.43
21,735.0	89.52	1.49	12,302.9	9,625.5	418.3	9,634.6	2.64	-1.49	-2.18
21,830.0	89.22	359.33	12,304.0	9,720.5	419.0	9,729.5	2.30	-0.32	-2.27
21,924.0	88.80	357.12	12,305.6	9,814.5	416.1	9,823.3	2.39	-0.45	-2.35
22,019.0	87.70	354.72	12,308.5	9,909.2	409.3	9,917.6	2.78	-1.16	-2.53
22,113.0	88.85	356.68	12,311.3	10,002.9	402.3	10,010.9	2.42	1.22	2.09
22,159.0	89.27	358.63	12,312.1	10,048.8	400.4	10,056.8	4.34	0.91	4.24
22,213.0	89.27	358.63	12,312.8	10,102.8	399.1	10,110.7	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____