



CONCHO

NORTHERN DELAWARE BASIN

LEA COUNTY, NM

BULLDOG

COONSKIN FEE #702H

OWB

Design: ACTUAL WELLPATH

Standard Survey Report

26 December, 2018



Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well COONSKIN FEE #702H
Project:	LEA COUNTY, NM	TVD Reference:	RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
Site:	BULLDOG	MD Reference:	RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
Well:	COONSKIN FEE #702H	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	COONSKIN FEE #702H					
Well Position	+N/-S	0.0 usft	Northing:	436,151.70 usft	Latitude:	32° 11' 43.773 N
	+E/-W	0.0 usft	Easting:	795,391.10 usft	Longitude:	103° 22' 42.349 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,306.7 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	6/23/2018	6.78	60.04	47,823.40559461

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	177.64	

Survey Program	Date 12/26/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
99.6	11,603.4	GYRO (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
11,763.0	19,882.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

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
99.6	0.49	200.06	99.6	-0.4	-0.1	0.4	0.49	0.49	0.00
100.0	0.49	200.07	100.0	-0.4	-0.1	0.4	0.02	0.00	2.27
125.0	0.51	200.77	125.0	-0.6	-0.2	0.6	0.08	0.08	2.80
150.0	0.48	197.54	150.0	-0.8	-0.3	0.8	0.16	-0.12	-12.92
175.0	0.53	196.79	175.0	-1.0	-0.4	1.0	0.20	0.20	-3.00
200.0	0.58	191.93	200.0	-1.3	-0.4	1.2	0.27	0.20	-19.44
225.0	0.59	193.37	225.0	-1.5	-0.5	1.5	0.07	0.04	5.76



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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)
250.0	0.38	209.23	250.0	-1.7	-0.5	1.7	0.99	-0.84	63.44
275.0	0.49	199.55	275.0	-1.9	-0.6	1.8	0.53	0.44	-38.72
300.0	0.67	196.68	300.0	-2.1	-0.7	2.1	0.73	0.72	-11.48
325.0	0.77	191.76	325.0	-2.4	-0.8	2.4	0.47	0.40	-19.68
350.0	0.77	194.98	350.0	-2.7	-0.9	2.7	0.17	0.00	12.88
375.0	0.83	194.98	375.0	-3.1	-0.9	3.0	0.24	0.24	0.00
400.0	0.68	197.59	400.0	-3.4	-1.0	3.4	0.62	-0.60	10.44
425.0	0.85	197.84	425.0	-3.7	-1.1	3.7	0.68	0.68	1.00
450.0	0.84	200.14	450.0	-4.1	-1.3	4.0	0.14	-0.04	9.20
475.0	0.95	198.31	475.0	-4.4	-1.4	4.4	0.45	0.44	-7.32
500.0	0.88	199.50	500.0	-4.8	-1.5	4.7	0.29	-0.28	4.76
525.0	0.87	197.80	525.0	-5.2	-1.6	5.1	0.11	-0.04	-6.80
550.0	0.89	198.09	550.0	-5.5	-1.8	5.5	0.08	0.08	1.16
575.0	0.95	198.48	575.0	-5.9	-1.9	5.8	0.24	0.24	1.56
600.0	0.96	199.35	600.0	-6.3	-2.0	6.2	0.07	0.04	3.48
625.0	0.95	196.66	625.0	-6.7	-2.1	6.6	0.18	-0.04	-10.76
650.0	0.91	199.05	650.0	-7.1	-2.3	7.0	0.22	-0.16	9.56
675.0	0.92	198.07	674.9	-7.5	-2.4	7.4	0.07	0.04	-3.92
700.0	0.90	200.90	699.9	-7.9	-2.5	7.7	0.20	-0.08	11.32
725.0	0.93	200.83	724.9	-8.2	-2.7	8.1	0.12	0.12	-0.28
750.0	0.94	194.96	749.9	-8.6	-2.8	8.5	0.39	0.04	-23.48
775.0	0.94	196.77	774.9	-9.0	-2.9	8.9	0.12	0.00	7.24
800.0	0.93	194.51	799.9	-9.4	-3.0	9.3	0.15	-0.04	-9.04
825.0	1.06	186.60	824.9	-9.8	-3.1	9.7	0.76	0.52	-31.64
850.0	1.17	184.21	849.9	-10.3	-3.1	10.2	0.48	0.44	-9.56
875.0	1.15	180.63	874.9	-10.8	-3.2	10.7	0.30	-0.08	-14.32
900.0	1.23	179.92	899.9	-11.3	-3.2	11.2	0.33	0.32	-2.84
925.0	1.24	180.77	924.9	-11.9	-3.2	11.7	0.08	0.04	3.40
950.0	1.21	182.22	949.9	-12.4	-3.2	12.3	0.17	-0.12	5.80
975.0	1.15	181.69	974.9	-12.9	-3.2	12.8	0.24	-0.24	-2.12
1,000.0	1.22	183.20	999.9	-13.4	-3.2	13.3	0.31	0.28	6.04
1,025.0	1.20	181.84	1,024.9	-14.0	-3.2	13.8	0.14	-0.08	-5.44
1,050.0	1.22	180.31	1,049.9	-14.5	-3.3	14.3	0.15	0.08	-8.12
1,075.0	1.14	178.87	1,074.9	-15.0	-3.3	14.9	0.34	-0.32	-5.76
1,100.0	1.07	182.91	1,099.9	-15.5	-3.3	15.3	0.42	-0.28	16.16
1,125.0	1.18	179.01	1,124.9	-16.0	-3.3	15.8	0.54	0.44	-15.60
1,150.0	1.12	171.99	1,149.9	-16.5	-3.2	16.3	0.61	-0.24	-28.08
1,175.0	1.02	154.34	1,174.9	-16.9	-3.1	16.8	1.37	-0.40	-70.60
1,200.0	0.86	132.88	1,199.9	-17.3	-2.9	17.1	1.53	-0.64	-85.84
1,225.0	0.92	119.61	1,224.8	-17.5	-2.5	17.4	0.86	0.24	-53.08
1,250.0	1.05	91.29	1,249.8	-17.6	-2.1	17.5	1.99	0.52	-113.28
1,275.0	1.08	86.25	1,274.8	-17.6	-1.7	17.5	0.39	0.12	-20.16



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1,300.0	1.13	86.22	1,299.8	-17.5	-1.2	17.5	0.20	0.20	-0.12
1,325.0	1.14	84.78	1,324.8	-17.5	-0.7	17.5	0.12	0.04	-5.78
1,350.0	1.14	81.69	1,349.8	-17.4	-0.2	17.4	0.25	0.00	-12.36
1,375.0	1.18	86.84	1,374.8	-17.4	0.3	17.4	0.45	0.16	20.60
1,400.0	1.14	88.04	1,399.8	-17.4	0.8	17.4	0.19	-0.16	4.80
1,425.0	1.15	82.30	1,424.8	-17.3	1.3	17.4	0.46	0.04	-22.96
1,450.0	1.17	82.28	1,449.8	-17.3	1.8	17.3	0.08	0.08	-0.08
1,475.0	1.24	85.23	1,474.8	-17.2	2.3	17.3	0.37	0.28	11.80
1,500.0	1.79	87.05	1,499.8	-17.2	3.0	17.3	2.21	2.20	7.28
1,525.0	2.66	84.39	1,524.8	-17.1	3.9	17.2	3.50	3.48	-10.64
1,550.0	3.17	85.52	1,549.7	-17.0	5.2	17.2	2.05	2.04	4.52
1,575.0	3.37	84.80	1,574.7	-16.9	6.6	17.1	0.82	0.80	-2.88
1,600.0	3.57	83.38	1,599.7	-16.7	8.1	17.0	0.87	0.80	-5.68
1,625.0	3.89	82.78	1,624.6	-16.5	9.7	16.9	1.29	1.28	-2.40
1,650.0	3.93	81.86	1,649.5	-16.3	11.4	16.7	0.30	0.16	-3.68
1,675.0	3.92	81.44	1,674.5	-16.0	13.1	16.6	0.12	-0.04	-1.68
1,700.0	3.94	82.62	1,699.4	-15.8	14.8	16.4	0.33	0.08	4.72
1,725.0	3.94	80.78	1,724.4	-15.5	16.5	16.2	0.51	0.00	-7.36
1,750.0	3.97	82.24	1,749.3	-15.3	18.2	16.0	0.42	0.12	5.84
1,775.0	3.98	83.01	1,774.2	-15.1	20.0	15.9	0.22	0.04	3.08
1,800.0	3.93	83.03	1,799.2	-14.9	21.7	15.7	0.20	-0.20	0.08
1,825.0	3.97	82.42	1,824.1	-14.6	23.4	15.6	0.23	0.16	-2.44
1,850.0	4.00	82.37	1,849.1	-14.4	25.1	15.4	0.12	0.12	-0.20
1,875.0	3.99	82.03	1,874.0	-14.2	26.8	15.3	0.10	-0.04	-1.36
1,900.0	3.98	81.78	1,898.9	-13.9	28.5	15.1	0.08	-0.04	-1.00
1,925.0	4.02	81.38	1,923.9	-13.7	30.3	14.9	0.20	0.16	-1.60
1,950.0	4.03	82.84	1,948.8	-13.4	32.0	14.7	0.41	0.04	5.84
1,975.0	4.00	83.21	1,973.8	-13.2	33.7	14.6	0.16	-0.12	1.48
2,000.0	4.04	83.82	1,998.7	-13.0	35.5	14.5	0.23	0.16	2.44
2,025.0	4.07	82.45	2,023.6	-12.8	37.2	14.3	0.41	0.12	-5.48
2,050.0	4.03	82.12	2,048.6	-12.6	39.0	14.2	0.19	-0.16	-1.32
2,075.0	4.08	82.50	2,073.5	-12.3	40.7	14.0	0.23	0.20	1.52
2,100.0	4.13	82.33	2,098.4	-12.1	42.5	13.8	0.21	0.20	-0.68
2,125.0	4.31	84.07	2,123.4	-11.9	44.3	13.7	0.88	0.72	6.96
2,150.0	4.32	83.68	2,148.3	-11.7	46.2	13.6	0.12	0.04	-1.56
2,175.0	4.45	83.29	2,173.2	-11.5	48.1	13.4	0.53	0.52	-1.56
2,200.0	4.72	83.38	2,198.2	-11.2	50.1	13.3	1.08	1.08	0.36
2,225.0	4.86	83.71	2,223.1	-11.0	52.2	13.1	0.57	0.56	1.32
2,250.0	5.00	82.37	2,248.0	-10.7	54.3	13.0	0.73	0.56	-5.36
2,275.0	5.18	83.22	2,272.9	-10.5	56.5	12.8	0.78	0.72	3.40
2,300.0	5.20	83.51	2,297.8	-10.2	58.7	12.6	0.13	0.08	1.16
2,325.0	5.24	83.57	2,322.7	-9.9	61.0	12.4	0.16	0.16	0.24



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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)
2,350.0	5.31	82.64	2,347.6	-9.7	63.3	12.3	0.44	0.28	-3.72
2,375.0	5.42	83.39	2,372.5	-9.4	65.6	12.1	0.52	0.44	3.00
2,400.0	5.53	83.19	2,397.3	-9.1	68.0	11.9	0.45	0.44	-0.80
2,425.0	5.63	82.53	2,422.2	-8.8	70.4	11.7	0.48	0.40	-2.64
2,450.0	5.72	82.71	2,447.1	-8.5	72.8	11.5	0.37	0.36	0.72
2,475.0	5.78	83.08	2,472.0	-8.2	75.3	11.3	0.28	0.24	1.48
2,500.0	5.92	83.36	2,496.8	-7.9	77.9	11.1	0.57	0.56	1.12
2,525.0	6.05	82.91	2,521.7	-7.6	80.4	10.9	0.55	0.52	-1.80
2,550.0	6.11	82.62	2,546.6	-7.2	83.1	10.6	0.27	0.24	-1.16
2,575.0	6.16	83.61	2,571.4	-6.9	85.7	10.4	0.47	0.20	3.96
2,600.0	6.19	83.26	2,596.3	-6.6	88.4	10.2	0.19	0.12	-1.40
2,625.0	6.44	82.64	2,621.1	-6.3	91.1	10.0	1.04	1.00	-2.48
2,650.0	6.56	82.21	2,646.0	-5.9	93.9	9.7	0.52	0.48	-1.72
2,675.0	6.79	82.46	2,670.8	-5.5	96.8	9.5	0.93	0.92	1.00
2,700.0	6.79	82.19	2,695.6	-5.1	99.7	9.2	0.13	0.00	-1.08
2,725.0	6.77	82.85	2,720.4	-4.7	102.7	8.9	0.32	-0.08	2.64
2,750.0	6.80	82.29	2,745.3	-4.3	105.6	8.7	0.29	0.12	-2.24
2,775.0	6.85	82.04	2,770.1	-3.9	108.5	8.4	0.23	0.20	-1.00
2,800.0	6.83	82.35	2,794.9	-3.5	111.5	8.1	0.17	-0.08	1.24
2,825.0	6.94	82.65	2,819.7	-3.1	114.5	7.8	0.46	0.44	1.20
2,850.0	7.03	82.28	2,844.6	-2.7	117.5	7.6	0.40	0.36	-1.48
2,875.0	7.01	82.56	2,869.4	-2.3	120.5	7.3	0.16	-0.08	1.12
2,900.0	7.10	82.40	2,894.2	-1.9	123.5	7.0	0.37	0.36	-0.64
2,925.0	7.09	82.60	2,919.0	-1.5	126.6	6.7	0.11	-0.04	0.80
2,950.0	7.11	81.83	2,943.8	-1.1	129.7	6.4	0.39	0.08	-3.08
2,975.0	7.10	82.08	2,968.6	-0.7	132.7	6.1	0.13	-0.04	1.00
3,000.0	7.28	82.44	2,993.4	-0.3	135.8	5.8	0.66	0.64	1.44
3,025.0	7.32	81.99	3,018.2	0.2	139.0	5.5	0.33	0.24	-1.80
3,050.0	7.40	82.60	3,043.0	0.6	142.1	5.2	0.45	0.32	2.44
3,075.0	7.39	82.42	3,067.8	1.0	145.3	5.0	0.10	-0.04	-0.72
3,100.0	7.40	82.74	3,092.6	1.4	148.5	4.7	0.17	0.04	1.28
3,125.0	7.11	82.85	3,117.4	1.8	151.7	4.4	1.16	-1.16	0.44
3,150.0	6.82	82.37	3,142.2	2.2	154.7	4.1	1.18	-1.16	-1.92
3,175.0	6.63	82.55	3,167.0	2.6	157.6	3.9	0.76	-0.76	0.72
3,200.0	6.63	83.14	3,191.9	3.0	160.4	3.6	0.27	0.00	2.36
3,225.0	6.61	82.77	3,216.7	3.3	163.3	3.4	0.19	-0.08	-1.48
3,250.0	6.54	83.24	3,241.5	3.7	166.1	3.2	0.35	-0.28	1.88
3,275.0	6.51	83.43	3,266.4	4.0	169.0	2.9	0.15	-0.12	0.76
3,300.0	6.21	82.90	3,291.2	4.3	171.7	2.7	1.22	-1.20	-2.12
3,325.0	4.98	83.33	3,316.1	4.6	174.1	2.5	4.92	-4.92	1.72
3,350.0	4.60	82.65	3,341.0	4.9	176.2	2.4	1.54	-1.52	-2.72
3,375.0	4.51	82.47	3,365.9	5.1	178.2	2.2	0.36	-0.36	-0.72



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 Wellbore: OWB
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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)
3,400.0	4.51	83.28	3,390.8	5.4	180.1	2.0	0.25	0.00	3.24
3,425.0	4.56	81.75	3,415.8	5.6	182.1	1.9	0.52	0.20	-6.12
3,450.0	4.48	80.81	3,440.7	5.9	184.0	1.6	0.44	-0.32	-3.76
3,475.0	4.53	81.65	3,465.6	6.2	186.0	1.4	0.33	0.20	3.36
3,500.0	4.47	81.97	3,490.5	6.5	187.9	1.2	0.26	-0.24	1.28
3,525.0	4.53	81.13	3,515.5	6.8	189.8	1.0	0.36	0.24	-3.36
3,550.0	4.40	80.39	3,540.4	7.1	191.8	0.8	0.57	-0.52	-2.96
3,575.0	4.24	80.74	3,565.3	7.4	193.6	0.5	0.65	-0.64	1.40
3,600.0	4.21	80.99	3,590.2	7.7	195.4	0.3	0.14	-0.12	1.00
3,625.0	4.23	82.05	3,615.2	8.0	197.3	0.1	0.32	0.08	4.24
3,650.0	4.20	82.30	3,640.1	8.2	199.1	0.0	0.14	-0.12	1.00
3,675.0	4.23	81.80	3,665.0	8.5	200.9	-0.2	0.19	0.12	-2.00
3,700.0	4.22	82.18	3,690.0	8.7	202.7	-0.4	0.12	-0.04	1.52
3,725.0	4.23	83.50	3,714.9	9.0	204.6	-0.6	0.39	0.04	5.28
3,750.0	4.24	83.66	3,739.8	9.2	206.4	-0.7	0.06	0.04	0.64
3,775.0	4.24	84.60	3,764.8	9.4	208.2	-0.8	0.28	0.00	3.76
3,800.0	4.36	90.68	3,789.7	9.4	210.1	-0.8	1.88	0.48	24.32
3,825.0	4.51	93.38	3,814.6	9.4	212.0	-0.7	1.03	0.60	10.80
3,850.0	4.63	95.75	3,839.5	9.2	214.0	-0.4	0.89	0.48	9.48
3,875.0	4.82	98.25	3,864.5	9.0	216.1	-0.1	1.12	0.76	10.00
3,900.0	5.11	102.31	3,889.4	8.6	218.2	0.4	1.82	1.16	16.24
3,925.0	5.31	104.05	3,914.3	8.1	220.4	1.0	1.02	0.80	6.96
3,950.0	5.55	104.83	3,939.2	7.5	222.7	1.7	1.00	0.96	3.12
3,975.0	5.65	104.68	3,964.0	6.8	225.0	2.4	0.40	0.40	-0.60
4,000.0	5.57	103.73	3,988.9	6.2	227.4	3.1	0.49	-0.32	-3.80
4,025.0	5.58	104.87	4,013.8	5.6	229.8	3.8	0.44	0.04	4.56
4,050.0	5.87	106.23	4,038.7	5.0	232.1	4.6	0.64	0.36	5.44
4,075.0	5.71	106.59	4,063.5	4.3	234.5	5.4	0.21	0.16	1.44
4,100.0	5.76	106.15	4,088.4	3.6	236.9	6.2	0.27	0.20	-1.76
4,125.0	5.75	105.71	4,113.3	2.9	239.3	6.9	0.18	-0.04	-1.76
4,150.0	5.32	101.19	4,138.2	2.3	241.7	7.6	2.45	-1.72	-18.08
4,175.0	4.46	87.70	4,163.1	2.1	243.8	7.9	5.72	-3.44	-53.96
4,200.0	4.49	78.84	4,188.0	2.4	245.7	7.7	2.77	0.12	-35.44
4,225.0	4.75	75.58	4,212.9	2.8	247.7	7.4	1.48	1.04	-13.04
4,250.0	5.23	71.92	4,237.8	3.4	249.7	6.8	2.30	1.92	-14.64
4,275.0	5.87	68.68	4,262.7	4.3	252.0	6.1	2.85	2.56	-12.96
4,300.0	6.61	64.78	4,287.6	5.3	254.5	5.1	3.41	2.96	-15.60
4,325.0	7.01	63.44	4,312.4	6.6	257.2	3.9	1.72	1.60	-5.36
4,350.0	7.19	62.72	4,337.2	8.0	259.9	2.7	0.80	0.72	-2.88
4,375.0	7.20	62.70	4,362.0	9.5	262.7	1.3	0.04	0.04	-0.08
4,400.0	7.16	63.24	4,386.8	10.9	265.5	0.0	0.31	-0.16	2.16
4,425.0	7.09	62.90	4,411.6	12.3	268.3	-1.3	0.33	-0.28	-1.36



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: COONSKIN FEE #702H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
 TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
 MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
 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)
4,450.0	6.28	59.66	4,436.4	13.7	270.8	-2.5	3.57	-3.24	-12.96
4,475.0	5.90	57.41	4,461.3	15.1	273.1	-3.8	1.79	-1.52	-9.00
4,500.0	5.77	58.27	4,486.2	16.4	275.2	-5.1	0.63	-0.52	3.44
4,525.0	5.30	54.20	4,511.1	17.8	277.2	-6.3	2.45	-1.88	-16.28
4,550.0	3.94	50.25	4,536.0	19.0	278.8	-7.5	5.58	-5.44	-15.80
4,575.0	3.55	49.46	4,560.9	20.0	280.1	-8.5	1.57	-1.56	-3.16
4,600.0	3.54	48.20	4,585.9	21.0	281.2	-9.5	0.31	-0.04	-5.04
4,625.0	2.88	47.69	4,610.8	22.0	282.3	-10.4	2.64	-2.64	-2.04
4,650.0	1.94	39.45	4,635.8	22.7	283.0	-11.1	4.00	-3.76	-32.96
4,675.0	1.61	46.16	4,660.8	23.3	283.5	-11.6	1.56	-1.32	26.84
4,700.0	1.61	41.39	4,685.8	23.8	284.0	-12.1	0.54	0.00	-19.08
4,725.0	1.65	35.91	4,710.8	24.4	284.5	-12.7	0.64	0.16	-21.92
4,750.0	0.87	26.23	4,735.8	24.8	284.8	-13.1	3.22	-3.12	-38.72
4,775.0	0.79	24.15	4,760.8	25.2	284.9	-13.4	0.34	-0.32	-8.32
4,800.0	0.49	9.81	4,785.8	25.4	285.0	-13.7	1.35	-1.20	-57.36
4,825.0	0.46	300.60	4,810.8	25.6	284.9	-13.8	2.16	-0.12	-276.84
4,850.0	0.53	292.73	4,835.8	25.7	284.7	-13.9	0.39	0.28	-31.48
4,875.0	0.55	286.40	4,860.8	25.7	284.5	-14.0	0.25	0.08	-25.32
4,900.0	0.49	294.51	4,885.8	25.8	284.3	-14.1	0.38	-0.24	32.44
4,925.0	0.58	286.86	4,910.8	25.9	284.1	-14.2	0.46	0.36	-30.60
4,950.0	0.52	291.37	4,935.8	26.0	283.9	-14.3	0.30	-0.24	18.04
4,975.0	0.60	280.67	4,960.8	26.1	283.6	-14.4	0.53	0.32	-42.80
5,000.0	0.99	234.73	4,985.8	25.9	283.3	-14.3	2.87	1.56	-183.76
5,025.0	1.89	217.66	5,010.8	25.5	282.9	-13.9	3.95	3.60	-68.28
5,050.0	2.02	216.13	5,035.7	24.8	282.4	-13.2	0.56	0.52	-6.12
5,075.0	1.97	215.20	5,060.7	24.1	281.9	-12.5	0.24	-0.20	-3.72
5,100.0	1.98	214.81	5,085.7	23.4	281.4	-11.8	0.07	0.04	-1.56
5,125.0	1.85	213.91	5,110.7	22.7	280.9	-11.1	0.53	-0.52	-3.60
5,150.0	1.80	213.50	5,135.7	22.1	280.5	-10.5	0.21	-0.20	-1.64
5,175.0	1.77	212.91	5,160.7	21.4	280.0	-9.9	0.14	-0.12	-2.36
5,200.0	1.80	213.98	5,185.7	20.8	279.6	-9.2	0.18	0.12	4.28
5,225.0	1.69	213.81	5,210.7	20.1	279.2	-8.6	0.44	-0.44	-0.68
5,250.0	1.72	215.76	5,235.6	19.5	278.8	-8.0	0.26	0.12	7.80
5,275.0	1.69	214.57	5,260.6	18.9	278.3	-7.4	0.19	-0.12	-4.76
5,300.0	1.70	214.22	5,285.6	18.3	277.9	-6.9	0.06	0.04	-1.40
5,325.0	1.62	212.21	5,310.6	17.7	277.5	-6.3	0.40	-0.32	-8.04
5,350.0	1.74	217.50	5,335.6	17.1	277.1	-5.7	0.78	0.48	21.16
5,375.0	2.09	224.54	5,360.6	16.5	276.5	-5.1	1.68	1.40	28.16
5,400.0	2.29	228.92	5,385.6	15.8	275.9	-4.5	1.04	0.80	17.52
5,425.0	2.41	228.96	5,410.5	15.1	275.1	-3.8	0.48	0.48	0.16
5,450.0	2.27	227.94	5,435.5	14.5	274.3	-3.2	0.58	-0.58	-4.08
5,475.0	2.34	229.76	5,460.5	13.8	273.6	-2.5	0.41	0.28	7.28



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: COONSKIN FEE #702H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
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)
5,500.0	2.32	228.47	5,485.5	13.1	272.8	-1.9	0.22	-0.08	-5.16
5,525.0	2.30	226.01	5,510.5	12.4	272.1	-1.3	0.40	-0.08	-9.84
5,550.0	2.18	227.81	5,535.4	11.8	271.3	-0.6	0.56	-0.48	7.20
5,575.0	1.95	225.61	5,560.4	11.2	270.7	0.0	0.97	-0.92	-8.80
5,600.0	1.82	225.82	5,585.4	10.6	270.1	0.5	0.52	-0.52	0.84
5,625.0	1.80	222.36	5,610.4	10.0	269.5	1.1	0.44	-0.08	-13.84
5,650.0	1.70	223.20	5,635.4	9.5	269.0	1.6	0.41	-0.40	3.36
5,675.0	1.52	222.05	5,660.4	8.9	268.5	2.1	0.73	-0.72	-4.60
5,700.0	1.57	221.84	5,685.4	8.4	268.1	2.6	0.20	0.20	-0.84
5,725.0	1.51	220.11	5,710.4	7.9	267.7	3.1	0.30	-0.24	-6.92
5,750.0	1.45	220.18	5,735.4	7.4	267.2	3.6	0.24	-0.24	0.28
5,775.0	1.55	219.35	5,760.3	6.9	266.8	4.0	0.41	0.40	-3.32
5,800.0	1.49	219.06	5,785.3	6.4	266.4	4.5	0.24	-0.24	-1.16
5,825.0	1.42	220.61	5,810.3	5.9	266.0	5.0	0.32	-0.28	6.20
5,850.0	1.49	220.66	5,835.3	5.5	265.6	5.5	0.28	0.28	0.20
5,875.0	1.50	222.11	5,860.3	5.0	265.2	5.9	0.16	0.04	5.80
5,900.0	1.42	222.46	5,885.3	4.5	264.7	6.4	0.32	-0.32	1.40
5,925.0	1.24	217.34	5,910.3	4.0	264.4	6.8	0.86	-0.72	-20.48
5,950.0	1.25	221.75	5,935.3	3.6	264.0	7.2	0.39	0.04	17.64
5,975.0	0.45	246.59	5,960.3	3.4	263.7	7.5	3.45	-3.20	99.36
6,000.0	0.42	319.62	5,985.3	3.4	263.6	7.4	2.07	-0.12	292.12
6,025.0	0.56	340.58	6,010.3	3.6	263.5	7.2	0.90	0.56	83.84
6,050.0	0.56	349.80	6,035.3	3.8	263.4	7.0	0.36	0.00	36.88
6,075.0	0.57	338.68	6,060.3	4.1	263.4	6.8	0.44	0.04	-44.48
6,100.0	0.57	337.48	6,085.3	4.3	263.3	6.5	0.05	0.00	-4.80
6,125.0	0.59	350.45	6,110.3	4.5	263.2	6.3	0.53	0.08	51.88
6,150.0	0.58	345.78	6,135.3	4.8	263.1	6.0	0.19	-0.04	-18.68
6,175.0	0.60	356.20	6,160.3	5.1	263.1	5.8	0.44	0.08	41.68
6,200.0	0.61	349.94	6,185.3	5.3	263.1	5.5	0.27	0.04	-25.04
6,225.0	0.53	346.99	6,210.3	5.6	263.0	5.3	0.34	-0.32	-11.80
6,250.0	0.56	10.09	6,235.3	5.8	263.0	5.0	0.88	0.12	92.40
6,275.0	0.51	357.03	6,260.3	6.0	263.0	4.8	0.53	-0.20	-52.24
6,300.0	0.52	1.34	6,285.3	6.2	263.0	4.6	0.16	0.04	17.24
6,325.0	0.49	1.75	6,310.3	6.5	263.0	4.4	0.12	-0.12	1.64
6,350.0	0.52	1.04	6,335.3	6.7	263.0	4.1	0.12	0.12	-2.84
6,375.0	0.46	1.19	6,360.3	6.9	263.0	3.9	0.24	-0.24	0.60
6,400.0	0.44	0.26	6,385.3	7.1	263.0	3.7	0.09	-0.08	-3.72
6,425.0	0.44	355.55	6,410.3	7.3	263.0	3.5	0.14	0.00	-18.84
6,450.0	0.51	4.85	6,435.3	7.5	263.0	3.3	0.42	0.28	37.20
6,475.0	0.49	16.88	6,460.3	7.7	263.1	3.1	0.43	-0.08	48.12
6,500.0	0.37	354.01	6,485.3	7.9	263.1	2.9	0.83	-0.48	-91.48
6,525.0	0.38	17.62	6,510.3	8.0	263.1	2.8	0.61	0.04	94.44



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: COONSKIN FEE #702H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
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)
6,550.0	0.42	9.91	6,535.3	8.2	263.2	2.6	0.27	0.16	-30.84
6,575.0	0.41	8.46	6,560.3	8.4	263.2	2.4	0.06	-0.04	-5.80
6,600.0	0.43	15.67	6,585.3	8.6	263.2	2.3	0.23	0.08	28.84
6,625.0	0.35	7.09	6,610.3	8.7	263.3	2.1	0.40	-0.32	-34.32
6,650.0	0.40	19.15	6,635.3	8.9	263.3	1.9	0.37	0.20	48.24
6,675.0	0.35	10.36	6,660.3	9.1	263.3	1.8	0.30	-0.20	-35.16
6,700.0	0.39	9.37	6,685.3	9.2	263.4	1.6	0.16	0.16	-3.96
6,725.0	0.37	18.11	6,710.3	9.4	263.4	1.5	0.24	-0.08	34.96
6,750.0	0.42	13.63	6,735.3	9.5	263.5	1.3	0.23	0.20	-17.92
6,775.0	0.34	4.97	6,760.3	9.7	263.5	1.1	0.39	-0.32	-34.64
6,800.0	0.37	15.21	6,785.3	9.9	263.5	1.0	0.28	0.12	40.96
6,825.0	0.42	18.15	6,810.3	10.0	263.6	0.8	0.22	0.20	11.76
6,850.0	0.36	1.22	6,835.3	10.2	263.6	0.7	0.52	-0.24	-67.72
6,875.0	0.44	11.11	6,860.3	10.4	263.6	0.5	0.42	0.32	39.56
6,900.0	0.39	354.41	6,885.3	10.5	263.6	0.3	0.52	-0.20	-66.80
6,925.0	0.43	351.96	6,910.3	10.7	263.6	0.1	0.17	0.16	-9.80
6,950.0	0.40	345.33	6,935.3	10.9	263.6	-0.1	0.23	-0.12	-26.52
6,975.0	0.40	350.51	6,960.3	11.1	263.5	-0.2	0.14	0.00	20.72
7,000.0	0.38	3.81	6,985.3	11.2	263.5	-0.4	0.37	-0.08	53.20
7,025.0	0.37	344.34	7,010.3	11.4	263.5	-0.6	0.51	-0.04	-77.88
7,050.0	0.39	357.59	7,035.3	11.6	263.5	-0.7	0.36	0.08	53.00
7,075.0	0.38	2.01	7,060.3	11.7	263.5	-0.9	0.13	-0.04	17.68
7,100.0	0.36	341.51	7,085.3	11.9	263.5	-1.0	0.53	-0.08	-82.00
7,125.0	0.41	2.37	7,110.3	12.0	263.4	-1.2	0.59	0.20	83.44
7,150.0	0.38	347.13	7,135.2	12.2	263.4	-1.4	0.44	-0.12	-60.96
7,175.0	0.38	348.59	7,160.2	12.4	263.4	-1.5	0.04	0.00	5.84
7,200.0	0.39	350.77	7,185.2	12.5	263.4	-1.7	0.07	0.04	8.72
7,225.0	0.37	342.00	7,210.2	12.7	263.3	-1.9	0.25	-0.08	-35.08
7,250.0	0.42	348.02	7,235.2	12.9	263.3	-2.0	0.26	0.20	24.08
7,275.0	0.33	348.14	7,260.2	13.0	263.2	-2.2	0.36	-0.36	0.48
7,300.0	0.37	349.37	7,285.2	13.2	263.2	-2.4	0.16	0.16	4.92
7,325.0	0.39	343.16	7,310.2	13.3	263.2	-2.5	0.18	0.08	-24.84
7,350.0	0.38	341.10	7,335.2	13.5	263.1	-2.7	0.07	-0.04	-8.24
7,375.0	0.39	347.71	7,360.2	13.7	263.1	-2.8	0.18	0.04	26.44
7,400.0	0.37	334.33	7,385.2	13.8	263.0	-3.0	0.36	-0.08	-53.52
7,425.0	0.37	324.79	7,410.2	14.0	262.9	-3.1	0.25	0.00	-38.16
7,450.0	0.35	334.44	7,435.2	14.1	262.9	-3.3	0.26	-0.08	38.60
7,475.0	0.40	345.12	7,460.2	14.2	262.8	-3.4	0.34	0.20	42.72
7,500.0	0.37	324.78	7,485.2	14.4	262.7	-3.6	0.56	-0.12	-81.36
7,525.0	0.39	337.43	7,510.2	14.5	262.7	-3.7	0.34	0.08	50.60
7,550.0	0.36	332.43	7,535.2	14.7	262.6	-3.9	0.18	-0.12	-20.00
7,575.0	0.41	335.93	7,560.2	14.8	262.5	-4.0	0.22	0.20	14.00



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: COONSKIN FEE #702H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
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)
7,600.0	0.40	330.40	7,585.2	15.0	262.4	-4.2	0.16	-0.04	-22.12
7,625.0	0.39	323.79	7,610.2	15.1	262.3	-4.3	0.19	-0.04	-26.44
7,650.0	0.38	345.67	7,635.2	15.3	262.3	-4.5	0.59	-0.04	87.52
7,675.0	0.39	336.16	7,660.2	15.4	262.2	-4.7	0.26	0.04	-38.04
7,700.0	0.37	330.99	7,685.2	15.6	262.1	-4.8	0.16	-0.08	-20.68
7,725.0	0.35	338.63	7,710.2	15.7	262.1	-5.0	0.16	-0.08	22.56
7,750.0	0.43	325.32	7,735.2	15.9	262.0	-5.1	0.44	0.32	-45.24
7,775.0	0.41	328.56	7,760.2	16.0	261.9	-5.3	0.12	-0.08	12.96
7,800.0	0.34	349.39	7,785.2	16.2	261.8	-5.4	0.61	-0.28	83.32
7,825.0	0.21	353.13	7,810.2	16.3	261.8	-5.5	0.52	-0.52	14.96
7,850.0	0.14	28.56	7,835.2	16.4	261.8	-5.6	0.50	-0.28	141.72
7,875.0	0.14	31.83	7,860.2	16.4	261.9	-5.7	0.03	0.00	13.08
7,900.0	0.16	14.89	7,885.2	16.5	261.9	-5.7	0.19	0.08	-67.76
7,925.0	0.20	31.61	7,910.2	16.6	261.9	-5.8	0.26	0.16	66.88
7,950.0	0.21	24.32	7,935.2	16.6	261.9	-5.9	0.11	0.04	-29.16
7,975.0	0.13	10.05	7,960.2	16.7	262.0	-5.9	0.36	-0.32	-57.08
8,000.0	0.22	30.64	7,985.2	16.8	262.0	-6.0	0.43	0.36	82.36
8,025.0	0.24	38.98	8,010.2	16.9	262.1	-6.1	0.16	0.08	33.36
8,050.0	0.27	41.48	8,035.2	16.9	262.1	-6.2	0.13	0.12	10.00
8,075.0	0.25	52.81	8,060.2	17.0	262.2	-6.2	0.22	-0.08	45.32
8,100.0	0.38	52.00	8,085.2	17.1	262.3	-6.3	0.52	0.52	-3.24
8,125.0	0.35	61.89	8,110.2	17.2	262.5	-6.4	0.28	-0.12	39.56
8,150.0	0.39	64.42	8,135.2	17.3	262.6	-6.5	0.17	0.16	10.12
8,175.0	0.38	61.09	8,160.2	17.3	262.7	-6.5	0.10	-0.04	-13.32
8,200.0	0.39	68.86	8,185.2	17.4	262.9	-6.6	0.21	0.04	31.08
8,225.0	0.47	71.31	8,210.2	17.5	263.1	-6.7	0.33	0.32	9.80
8,250.0	0.55	75.78	8,235.2	17.5	263.3	-6.7	0.36	0.32	17.88
8,275.0	0.52	77.08	8,260.2	17.6	263.5	-6.8	0.13	-0.12	5.20
8,300.0	0.55	80.35	8,285.2	17.6	263.7	-6.8	0.17	0.12	13.08
8,325.0	0.66	82.90	8,310.2	17.7	264.0	-6.8	0.45	0.44	10.20
8,350.0	0.65	85.68	8,335.2	17.7	264.3	-6.8	0.13	-0.04	11.12
8,375.0	0.71	84.15	8,360.2	17.7	264.6	-6.8	0.25	0.24	-6.12
8,400.0	0.66	85.45	8,385.2	17.8	264.9	-6.9	0.21	-0.20	5.20
8,425.0	0.77	85.59	8,410.2	17.8	265.2	-6.9	0.44	0.44	0.56
8,450.0	0.72	91.53	8,435.2	17.8	265.5	-6.9	0.37	-0.20	23.76
8,475.0	0.71	86.90	8,460.2	17.8	265.8	-6.9	0.23	-0.04	-18.52
8,500.0	0.71	89.28	8,485.2	17.8	266.1	-6.9	0.12	0.00	9.52
8,525.0	0.67	94.20	8,510.2	17.8	266.4	-6.8	0.29	-0.16	19.68
8,550.0	0.70	88.91	8,535.2	17.8	266.7	-6.8	0.28	0.12	-21.16
8,575.0	0.71	95.72	8,560.2	17.8	267.0	-6.8	0.34	0.04	27.24
8,600.0	0.74	92.38	8,585.2	17.8	267.4	-6.8	0.21	0.12	-13.36
8,625.0	0.74	98.88	8,610.2	17.7	267.7	-6.7	0.33	0.00	25.20



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: COONSKIN FEE #702H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
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)
8,650.0	0.77	100.20	8,635.2	17.7	268.0	-6.6	0.14	0.12	6.08
8,675.0	0.83	94.70	8,660.2	17.6	268.4	-6.6	0.39	0.24	-22.00
8,700.0	0.76	100.79	8,685.2	17.6	268.7	-6.5	0.44	-0.28	24.36
8,725.0	0.77	100.89	8,710.2	17.5	269.0	-6.4	0.04	0.04	0.40
8,750.0	0.72	105.66	8,735.2	17.4	269.3	-6.4	0.32	-0.20	19.08
8,775.0	0.76	109.11	8,760.2	17.3	269.6	-6.3	0.24	0.16	13.80
8,800.0	0.70	117.43	8,785.2	17.2	269.9	-6.1	0.49	-0.24	33.28
8,825.0	0.75	120.93	8,810.2	17.1	270.2	-5.9	0.27	0.20	14.00
8,850.0	0.74	128.12	8,835.2	16.9	270.5	-5.8	0.38	-0.04	28.76
8,875.0	0.80	132.10	8,860.2	16.7	270.7	-5.5	0.32	0.24	15.92
8,900.0	0.75	120.53	8,885.2	16.5	271.0	-5.3	0.66	-0.20	-46.28
8,925.0	0.77	122.45	8,910.2	16.3	271.3	-5.1	0.13	0.08	7.68
8,950.0	0.78	122.18	8,935.2	16.1	271.6	-4.9	0.04	0.04	-1.08
8,975.0	0.74	132.75	8,960.2	15.9	271.8	-4.7	0.58	-0.16	42.28
9,000.0	0.74	167.05	8,985.2	15.6	272.0	-4.5	1.75	0.00	137.20
9,025.0	0.74	176.76	9,010.2	15.3	272.0	-4.1	0.50	0.00	38.84
9,050.0	0.75	168.13	9,035.2	15.0	272.1	-3.8	0.45	0.04	-34.52
9,075.0	0.78	174.82	9,060.2	14.7	272.1	-3.5	0.38	0.12	26.76
9,100.0	0.81	172.85	9,085.2	14.3	272.2	-3.1	0.16	0.12	-7.88
9,125.0	0.85	177.69	9,110.2	14.0	272.2	-2.8	0.32	0.16	19.36
9,150.0	0.85	176.29	9,135.2	13.6	272.2	-2.4	0.08	0.00	-5.60
9,175.0	0.84	177.98	9,160.2	13.2	272.2	-2.0	0.11	-0.04	6.76
9,200.0	0.84	176.72	9,185.2	12.9	272.3	-1.7	0.07	0.00	-5.04
9,225.0	0.84	176.13	9,210.1	12.5	272.3	-1.3	0.03	0.00	-2.36
9,250.0	0.83	178.00	9,235.1	12.1	272.3	-0.9	0.12	-0.04	7.48
9,275.0	0.81	181.71	9,260.1	11.8	272.3	-0.6	0.23	-0.08	14.84
9,300.0	0.80	188.97	9,285.1	11.4	272.3	-0.2	0.41	-0.04	29.04
9,325.0	0.77	189.14	9,310.1	11.1	272.2	0.1	0.12	-0.12	0.68
9,350.0	0.77	196.92	9,335.1	10.8	272.1	0.4	0.42	0.00	31.12
9,375.0	0.81	200.23	9,360.1	10.4	272.0	0.7	0.24	0.16	13.24
9,400.0	0.71	202.50	9,385.1	10.1	271.9	1.1	0.42	-0.40	9.08
9,425.0	0.85	207.12	9,410.1	9.8	271.8	1.4	0.61	0.56	18.48
9,450.0	0.80	207.85	9,435.1	9.5	271.6	1.7	0.20	-0.20	2.92
9,475.0	0.74	200.96	9,460.1	9.2	271.5	2.0	0.44	-0.24	-27.56
9,500.0	0.90	206.68	9,485.1	8.9	271.3	2.3	0.72	0.64	22.88
9,525.0	0.89	208.06	9,510.1	8.5	271.1	2.6	0.10	-0.04	5.52
9,550.0	0.93	206.13	9,535.1	8.2	271.0	3.0	0.20	0.16	-7.72
9,575.0	0.94	202.98	9,560.1	7.8	270.8	3.3	0.21	0.04	-12.60
9,600.0	0.90	206.44	9,585.1	7.4	270.6	3.7	0.27	-0.16	13.84
9,625.0	0.96	207.53	9,610.1	7.1	270.4	4.0	0.25	0.24	4.36
9,650.0	1.07	210.09	9,635.1	6.7	270.2	4.4	0.48	0.44	10.24
9,675.0	0.97	206.30	9,660.1	6.3	270.0	4.8	0.48	-0.40	-15.16



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: COONSKIN FEE #702H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
 TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
 MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
 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)
9,700.0	0.98	205.48	9,685.1	5.9	269.8	5.2	0.07	0.04	-3.28
9,725.0	1.03	206.38	9,710.1	5.5	269.6	5.6	0.21	0.20	3.60
9,750.0	0.96	204.68	9,735.1	5.1	269.4	6.0	0.30	-0.28	-6.80
9,775.0	1.05	208.30	9,760.1	4.7	269.2	6.3	0.44	0.36	14.48
9,800.0	0.92	207.57	9,785.1	4.4	269.0	6.7	0.52	-0.52	-2.92
9,825.0	0.85	210.06	9,810.1	4.0	268.9	7.0	0.32	-0.28	9.96
9,850.0	0.85	214.24	9,835.1	3.7	268.7	7.3	0.25	0.00	16.72
9,875.0	0.68	217.41	9,860.1	3.4	268.5	7.6	0.70	-0.68	12.68
9,900.0	0.71	219.55	9,885.1	3.2	268.3	7.8	0.16	0.12	8.56
9,925.0	0.64	224.00	9,910.1	3.0	268.1	8.0	0.35	-0.28	17.80
9,950.0	0.74	230.73	9,935.1	2.8	267.9	8.2	0.51	0.40	26.92
9,975.0	0.67	229.14	9,960.1	2.6	267.6	8.4	0.29	-0.28	-6.36
10,000.0	0.56	232.43	9,985.1	2.4	267.4	8.6	0.46	-0.44	13.16
10,025.0	0.69	235.98	10,010.1	2.2	267.2	8.7	0.54	0.52	14.20
10,050.0	0.55	237.04	10,035.1	2.1	267.0	8.9	0.56	-0.56	4.24
10,075.0	0.65	244.07	10,060.1	2.0	266.7	9.0	0.50	0.40	28.12
10,100.0	0.57	246.96	10,085.1	1.9	266.5	9.1	0.34	-0.32	11.56
10,125.0	0.61	241.62	10,110.1	1.7	266.3	9.2	0.27	0.16	-21.36
10,150.0	0.85	251.17	10,135.1	1.6	266.0	9.3	1.07	0.96	38.20
10,175.0	0.92	252.60	10,160.0	1.5	265.6	9.4	0.29	0.28	5.72
10,200.0	0.93	250.02	10,185.0	1.4	265.2	9.5	0.17	0.04	-10.32
10,225.0	0.73	248.07	10,210.0	1.2	264.9	9.6	0.81	-0.80	-7.80
10,250.0	0.91	248.05	10,235.0	1.1	264.6	9.8	0.72	0.72	-0.08
10,275.0	0.97	265.40	10,260.0	1.0	264.2	9.8	1.16	0.24	69.40
10,300.0	1.03	285.30	10,285.0	1.1	263.7	9.8	1.40	0.24	79.60
10,325.0	1.12	292.99	10,310.0	1.2	263.3	9.6	0.68	0.36	30.76
10,350.0	1.07	291.39	10,335.0	1.4	262.8	9.4	0.23	-0.20	-6.40
10,375.0	1.19	290.81	10,360.0	1.6	262.4	9.2	0.48	0.48	-2.32
10,400.0	1.12	292.02	10,385.0	1.8	261.9	9.0	0.30	-0.28	4.84
10,425.0	1.29	292.07	10,410.0	2.0	261.4	8.8	0.68	0.68	0.20
10,450.0	1.22	291.60	10,435.0	2.2	260.9	8.6	0.28	-0.28	-1.88
10,475.0	1.19	291.84	10,460.0	2.4	260.4	8.4	0.12	-0.12	0.96
10,500.0	1.19	290.60	10,485.0	2.5	260.0	8.1	0.10	0.00	-4.96
10,525.0	1.24	290.11	10,510.0	2.7	259.5	7.9	0.20	0.20	-1.96
10,550.0	1.33	291.75	10,535.0	2.9	258.9	7.7	0.39	0.36	6.56
10,575.0	1.28	291.79	10,560.0	3.1	258.4	7.5	0.20	-0.20	0.16
10,600.0	1.16	303.52	10,585.0	3.4	257.9	7.2	1.11	-0.48	46.92
10,625.0	1.34	300.27	10,610.0	3.7	257.5	6.9	0.77	0.72	-13.00
10,650.0	1.20	305.37	10,635.0	4.0	257.0	6.6	0.72	-0.56	20.40
10,675.0	1.35	311.31	10,660.0	4.3	256.6	6.2	0.80	0.60	23.76
10,700.0	1.40	310.77	10,684.9	4.7	256.1	5.8	0.21	0.20	-2.16
10,725.0	1.29	314.25	10,709.9	5.1	255.7	5.4	0.55	-0.44	13.92



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: COONSKIN FEE #702H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
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)
10,750.0	1.37	315.40	10,734.9	5.5	255.3	5.0	0.34	0.32	4.60
10,775.0	1.40	313.63	10,759.9	5.9	254.8	4.5	0.21	0.12	-7.08
10,800.0	1.39	313.53	10,784.9	6.4	254.4	4.1	0.04	-0.04	-0.40
10,825.0	1.42	315.30	10,809.9	6.8	254.0	3.7	0.21	0.12	7.08
10,850.0	1.42	313.89	10,834.9	7.2	253.5	3.2	0.14	0.00	-5.84
10,875.0	1.37	315.67	10,859.9	7.6	253.1	2.8	0.26	-0.20	7.12
10,900.0	1.46	311.87	10,884.9	8.1	252.6	2.3	0.52	0.36	-15.20
10,925.0	1.57	312.86	10,909.9	8.5	252.2	1.8	0.45	0.44	4.36
10,950.0	1.42	311.47	10,934.9	9.0	251.7	1.4	0.62	-0.60	-5.96
10,975.0	1.50	306.06	10,959.9	9.4	251.2	1.0	0.64	0.32	-21.64
11,000.0	1.41	313.69	10,984.9	9.8	250.7	0.5	0.85	-0.36	30.52
11,025.0	1.45	310.76	11,009.8	10.2	250.2	0.1	0.33	0.16	-11.72
11,050.0	1.35	308.05	11,034.8	10.6	249.8	-0.3	0.48	-0.40	-10.84
11,075.0	1.23	312.30	11,059.8	10.9	249.3	-0.7	0.61	-0.48	17.00
11,100.0	1.27	311.59	11,084.8	11.3	248.9	-1.1	0.17	0.16	-2.84
11,125.0	1.30	313.91	11,109.8	11.7	248.5	-1.5	0.24	0.12	9.28
11,150.0	1.22	316.24	11,134.8	12.1	248.1	-1.9	0.38	-0.32	9.32
11,175.0	1.20	321.92	11,159.8	12.5	247.8	-2.3	0.49	-0.08	22.72
11,200.0	1.10	317.61	11,184.8	12.8	247.5	-2.7	0.53	-0.40	-17.24
11,225.0	1.04	328.89	11,209.8	13.2	247.2	-3.0	0.87	-0.24	45.12
11,250.0	1.18	318.53	11,234.8	13.6	246.9	-3.4	0.98	0.56	-41.44
11,275.0	1.12	319.54	11,259.8	14.0	246.6	-3.8	0.25	-0.24	4.04
11,300.0	1.16	316.36	11,284.8	14.4	246.2	-4.2	0.30	0.16	-12.72
11,325.0	1.18	317.64	11,309.8	14.7	245.9	-4.6	0.13	0.08	5.12
11,350.0	1.07	313.28	11,334.8	15.1	245.5	-5.0	0.56	-0.44	-17.44
11,375.0	0.98	316.68	11,359.8	15.4	245.2	-5.3	0.43	-0.36	13.60
11,400.0	0.94	308.24	11,384.8	15.7	244.9	-5.6	0.59	-0.18	-33.76
11,425.0	0.88	305.32	11,409.8	15.9	244.6	-5.8	0.30	-0.24	-11.68
11,450.0	0.97	303.74	11,434.8	16.1	244.3	-6.1	0.37	0.36	-6.32
11,475.0	1.03	301.73	11,459.8	16.4	243.9	-6.3	0.28	0.24	-8.04
11,500.0	1.04	297.90	11,484.8	16.6	243.5	-6.6	0.28	0.04	-15.32
11,525.0	1.07	297.96	11,509.7	16.8	243.1	-6.8	0.12	0.12	0.24
11,550.0	1.05	289.49	11,534.7	17.0	242.7	-7.0	0.63	-0.08	-33.88
11,575.0	1.10	275.76	11,559.7	17.1	242.2	-7.1	1.05	0.20	-54.92
11,600.0	1.03	272.05	11,584.7	17.1	241.8	-7.2	0.39	-0.28	-14.84
11,603.4	1.02	271.52	11,588.1	17.1	241.7	-7.2	0.41	-0.30	-15.77
11,763.0	0.74	243.15	11,747.7	16.7	239.4	-6.9	0.32	-0.18	-17.77
11,857.0	0.87	223.59	11,841.7	15.9	238.3	-6.1	0.32	0.14	-20.81
11,889.0	6.76	181.16	11,873.6	13.9	238.1	-4.1	19.21	18.41	-132.59
11,920.0	11.49	180.90	11,904.2	8.9	238.0	0.8	15.26	15.26	-0.84
11,952.0	15.97	183.45	11,935.3	1.4	237.7	8.4	14.12	14.00	7.97
11,983.0	18.86	177.95	11,964.9	-7.9	237.6	17.7	10.72	9.32	-17.74



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: COONSKIN FEE #702H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
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)
12,014.0	21.59	173.27	11,994.0	-18.6	238.5	28.4	10.23	8.81	-15.10
12,046.0	21.21	175.19	12,023.8	-30.2	239.7	40.0	2.49	-1.19	6.00
12,078.0	22.79	176.30	12,053.4	-42.2	240.5	52.0	5.11	4.94	3.47
12,109.0	25.54	179.29	12,081.7	-54.8	241.0	64.7	9.71	8.87	9.65
12,140.0	28.44	180.94	12,109.3	-68.9	241.0	78.7	9.66	9.35	5.32
12,172.0	31.17	179.73	12,137.1	-84.8	240.9	94.6	8.74	8.53	-3.78
12,203.0	33.59	179.84	12,163.3	-101.4	240.9	111.2	7.81	7.81	0.35
12,234.0	36.67	179.33	12,188.6	-119.2	241.1	129.0	9.98	9.94	-1.65
12,266.0	40.12	178.99	12,213.7	-139.1	241.4	148.9	10.80	10.78	-1.06
12,297.0	41.96	176.99	12,237.1	-159.4	242.1	169.3	7.29	5.94	-6.45
12,329.0	43.42	175.63	12,260.6	-181.1	243.5	190.9	5.40	4.56	-4.25
12,360.0	43.76	174.24	12,283.1	-202.4	245.4	212.3	3.28	1.10	-4.48
12,391.0	46.27	176.96	12,305.0	-224.2	247.1	234.2	10.20	8.10	8.77
12,423.0	47.42	180.22	12,326.9	-247.6	247.6	257.5	8.25	3.59	10.19
12,454.0	50.26	180.18	12,347.3	-270.9	247.5	280.8	9.16	9.16	-0.13
12,463.0	50.91	179.97	12,353.0	-277.9	247.5	287.8	7.44	7.22	-2.33
12,486.0	52.58	179.46	12,367.2	-295.9	247.6	305.8	7.47	7.26	-2.22
12,517.0	55.89	178.58	12,385.3	-321.1	248.1	331.0	10.92	10.68	-2.84
12,548.0	60.45	176.86	12,401.7	-347.4	249.1	357.3	15.45	14.71	-5.55
12,580.0	64.34	178.39	12,418.5	-375.7	250.3	385.7	12.87	12.16	4.78
12,611.0	66.87	178.47	12,429.3	-403.9	251.1	413.9	8.16	8.16	0.26
12,643.0	69.80	179.13	12,441.1	-433.6	251.7	443.6	9.35	9.16	2.06
12,674.0	73.33	180.06	12,450.9	-463.0	251.9	473.0	11.74	11.39	3.00
12,706.0	78.36	181.61	12,458.7	-494.1	251.4	504.0	16.40	15.72	4.84
12,738.0	80.69	181.33	12,464.6	-525.5	250.6	535.4	7.33	7.28	-0.88
12,769.0	83.56	181.11	12,468.8	-556.2	250.0	566.0	9.28	9.26	-0.71
12,801.0	88.50	180.87	12,471.0	-588.1	249.4	597.9	15.46	15.44	-0.75
12,898.0	89.58	180.32	12,472.7	-685.1	248.4	694.7	1.25	1.11	-0.57
12,993.0	91.07	181.25	12,472.1	-780.1	247.1	789.6	1.85	1.57	0.98
13,088.0	90.32	178.82	12,471.0	-875.1	247.0	884.5	2.68	-0.79	-2.56
13,182.0	93.37	180.12	12,467.9	-969.0	247.9	978.4	3.53	3.24	1.38
13,276.0	86.65	179.02	12,467.9	-1,063.0	248.6	1,072.3	7.24	-7.15	-1.17
13,370.0	87.59	179.28	12,472.6	-1,156.8	250.0	1,166.1	1.04	1.00	0.28
13,464.0	86.40	178.01	12,477.6	-1,250.7	252.2	1,260.0	1.85	-1.27	-1.35
13,558.0	87.31	178.53	12,482.7	-1,344.5	255.1	1,353.8	1.11	0.97	0.55
13,652.0	85.80	179.09	12,488.4	-1,438.3	257.0	1,447.6	1.71	-1.61	0.60
13,747.0	87.40	177.11	12,494.0	-1,533.1	260.2	1,542.5	2.68	1.68	-2.08
13,842.0	87.17	177.98	12,498.5	-1,627.9	264.2	1,637.3	0.95	-0.24	0.92
13,936.0	90.27	177.56	12,500.6	-1,721.8	267.9	1,731.3	3.33	3.30	-0.45
14,031.0	89.85	178.53	12,500.5	-1,816.7	271.1	1,826.3	1.11	-0.44	1.02
14,126.0	89.19	178.82	12,501.3	-1,911.7	273.3	1,921.3	0.76	-0.69	0.31
14,220.0	88.81	178.84	12,502.9	-2,005.6	275.2	2,015.3	0.40	-0.40	0.02



Survey Report

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Project: LEA COUNTY, NM
Site: BULLDOG
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Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well COONSKIN FEE #702H
TVD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
MD Reference: RKB=3306.7+30 @ 3336.7usft (SCANDRILL QUEST)
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)
14,314.0	89.22	178.89	12,504.6	-2,099.6	277.1	2,109.2	0.44	0.44	0.05
14,408.0	90.29	179.27	12,505.0	-2,193.6	278.6	2,203.2	1.21	1.14	0.40
14,502.0	91.41	180.10	12,503.6	-2,287.6	279.1	2,297.1	1.48	1.19	0.88
14,597.0	89.99	181.14	12,502.4	-2,382.6	278.1	2,392.0	1.85	-1.49	1.09
14,691.0	88.42	180.77	12,503.7	-2,476.5	276.5	2,485.8	1.72	-1.67	-0.39
14,785.0	87.68	180.79	12,506.9	-2,570.5	275.3	2,579.6	0.79	-0.79	0.02
14,880.0	89.33	180.80	12,509.4	-2,665.4	273.9	2,674.4	1.74	1.74	0.01
14,974.0	86.49	180.93	12,512.8	-2,759.3	272.5	2,768.2	3.02	-3.02	0.14
15,069.0	86.22	180.62	12,518.9	-2,854.1	271.2	2,862.9	0.43	-0.28	-0.33
15,163.0	86.96	179.78	12,524.4	-2,948.0	270.9	2,956.6	1.19	0.79	-0.89
15,258.0	90.59	177.96	12,526.5	-3,042.9	272.8	3,051.6	4.27	3.82	-1.92
15,352.0	88.98	177.78	12,526.8	-3,136.8	276.3	3,145.5	1.72	-1.71	-0.19
15,447.0	87.13	177.70	12,530.1	-3,231.7	280.0	3,240.5	1.95	-1.95	-0.08
15,541.0	90.61	177.90	12,531.9	-3,325.6	283.6	3,334.5	3.71	3.70	0.21
15,635.0	89.36	176.76	12,531.9	-3,419.5	288.0	3,428.4	1.80	-1.33	-1.21
15,730.0	90.73	178.74	12,531.9	-3,514.4	291.7	3,523.4	2.53	1.44	2.08
15,824.0	87.77	179.58	12,533.1	-3,608.4	293.1	3,617.4	3.27	-3.15	0.89
15,917.0	89.14	181.29	12,535.6	-3,701.3	292.4	3,710.2	2.36	1.47	1.84
16,011.0	88.87	180.87	12,537.2	-3,795.3	290.6	3,804.1	0.53	-0.29	-0.45
16,106.0	88.86	181.09	12,539.1	-3,890.3	289.0	3,898.9	0.23	-0.01	0.23
16,200.0	89.67	180.52	12,540.3	-3,984.3	287.7	3,992.7	1.05	0.86	-0.61
16,294.0	90.22	180.86	12,540.4	-4,078.3	286.6	4,086.6	0.69	0.59	0.36
16,389.0	90.16	180.30	12,540.1	-4,173.3	285.6	4,181.5	0.59	-0.06	-0.59
16,483.0	88.33	179.48	12,541.3	-4,267.2	285.8	4,275.4	2.13	-1.95	-0.87
16,578.0	88.22	179.41	12,544.2	-4,362.2	286.7	4,370.3	0.14	-0.12	-0.07
16,672.0	87.39	180.64	12,547.8	-4,456.1	286.7	4,464.1	1.58	-0.88	1.31
16,767.0	87.53	182.13	12,552.0	-4,551.0	284.4	4,558.8	1.57	0.15	1.57
16,849.0	87.65	181.52	12,555.4	-4,632.9	281.8	4,640.5	0.76	0.15	-0.74
16,944.0	87.48	180.57	12,559.5	-4,727.8	280.0	4,735.3	1.01	-0.18	-1.00
17,039.0	87.17	180.32	12,563.9	-4,822.7	279.3	4,830.1	0.42	-0.33	-0.26
17,133.0	87.98	178.86	12,567.9	-4,916.6	280.0	4,923.9	1.77	0.86	-1.55
17,228.0	89.94	172.65	12,569.6	-5,011.3	287.0	5,018.8	6.85	2.06	-6.54
17,322.0	89.89	171.11	12,569.8	-5,104.3	300.3	5,112.3	1.64	-0.05	-1.64
17,416.0	90.22	170.74	12,569.7	-5,197.1	315.1	5,205.7	0.53	0.35	-0.39
17,510.0	90.50	169.74	12,569.1	-5,289.8	331.0	5,298.9	1.10	0.30	-1.06
17,605.0	88.71	177.66	12,569.7	-5,384.1	341.4	5,393.6	8.55	-1.88	8.34
17,699.0	84.45	180.28	12,575.3	-5,477.9	343.1	5,487.4	5.32	-4.53	2.79
17,794.0	90.00	183.01	12,579.9	-5,572.7	340.4	5,582.0	6.51	5.84	2.87
17,888.0	86.53	181.95	12,582.8	-5,666.6	336.3	5,675.6	3.86	-3.69	-1.13
17,983.0	83.89	182.65	12,590.7	-5,761.1	332.5	5,769.9	2.87	-2.78	0.74
18,077.0	86.22	182.67	12,598.8	-5,854.7	328.2	5,863.2	2.48	2.48	0.02
18,173.0	85.80	182.33	12,605.5	-5,950.4	324.0	5,958.7	0.56	-0.44	-0.35



Survey Report

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North Reference: Grid
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)
18,267.0	86.10	182.67	12,612.1	-6,044.0	319.9	6,052.1	0.48	0.32	0.36
18,362.0	87.03	182.66	12,617.8	-6,138.8	315.5	6,146.5	0.98	0.98	-0.01
18,456.0	86.67	181.45	12,623.0	-6,232.6	312.2	6,240.1	1.34	-0.38	-1.29
18,552.0	92.77	181.00	12,623.5	-6,328.5	310.1	6,335.9	6.37	6.35	-0.47
18,647.0	92.72	180.63	12,618.9	-6,423.4	308.7	6,430.6	0.39	-0.05	-0.39
18,741.0	88.85	180.39	12,617.6	-6,517.3	307.9	6,524.5	4.12	-4.12	-0.26
18,835.0	86.25	180.23	12,621.6	-6,611.2	307.4	6,618.3	2.77	-2.77	-0.17
18,930.0	91.32	180.91	12,623.7	-6,706.2	306.5	6,713.1	5.38	5.34	0.72
19,024.0	88.85	180.46	12,623.5	-6,800.2	305.3	6,807.0	2.67	-2.63	-0.48
19,118.0	86.47	180.14	12,627.4	-6,894.1	304.8	6,900.8	2.55	-2.53	-0.34
19,213.0	87.31	179.49	12,632.5	-6,988.9	305.2	6,995.6	1.12	0.88	-0.68
19,308.0	88.46	179.87	12,636.0	-7,083.9	305.7	7,090.5	1.27	1.21	0.40
19,403.0	90.36	179.46	12,637.0	-7,178.9	306.2	7,185.4	2.05	2.00	-0.43
19,497.0	92.55	180.79	12,634.6	-7,272.8	306.0	7,279.3	2.73	2.33	1.41
19,592.0	86.78	179.31	12,635.2	-7,367.8	305.9	7,374.1	6.27	-6.07	-1.56
19,686.0	86.58	179.29	12,640.6	-7,461.6	307.1	7,467.9	0.21	-0.21	-0.02
19,817.0	90.11	179.57	12,644.4	-7,592.5	308.4	7,598.8	2.70	2.69	0.21
19,882.0	90.11	179.57	12,644.3	-7,657.5	308.9	7,663.8	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____