

COG

SURVEY REPORT

BASEBALL CAP FED COM #701H

SCAN QUEST

7/26/2019

This survey is correct to the best of my knowledge and is supported by actual field data.

JAKE ELGER

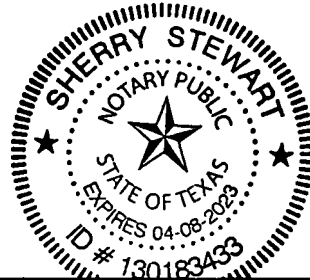
Notarized this date 05 of AUGUST, 2019.

Sherry Stewart

Notary Signature

County of Midland

State of Texas



Scientific Drilling

The ~~COG~~ ~~COG~~ In Wellbore Placement

SURVEY REPORT

BASEBALL CAP FED COM #701H

KEEPER GYRO SURVEY

CUSTOMER COG
PROJECT Baseball Cap Fed Com #701H
FIELD N/A

SDI JOB NO. OP.020058
SDI DISTRICT Midland
SDI KIT/UNIT

SITE INFORMATION

Site Name Baseball Cap Fed Com #701H
Lat/Long 32.182108° N, 103.41831° W
Northing 431,175.3 ft
Easting 783,096.9 ft

Section
Township
Range

MAP INFORMATION

North Reference Grid North
Grid Correction -0.49 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001

**WELL INFORMATION**

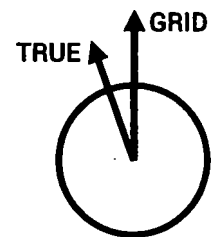
Lat/Long 32.182108° N, 103.41831° W
Northing
Easting
UWI 30-025-45793

DEPTH AND ELEVATION REFERENCE

Ground Level 3377.1 ft above Mean Sea
Level
Reference Datum RKB
Reference Height 30 ft above G.L.
Reference Elevation 3407.1 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 1.56°
Calculation Method Minimum Curvature

**LOCAL GRAVITY REFERENCE INFORMATION**

Local Gravity 998.499 mG [computed]
True to Grid subtract 0.49°

WELL NOTES

Keeper Gyro Survey

OPERATORS

Troy Morgan

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.34	322.07	100.00	0.23	0.23	-0.18	0.34	0.29	322.07
125.00	0.60	308.91	125.00	0.36	0.37	-0.33	1.12	0.49	318.63
150.00	0.44	314.05	150.00	0.50	0.52	-0.50	0.66	0.72	316.27
175.00	0.54	310.90	175.00	0.64	0.66	-0.65	0.43	0.93	315.36
200.00	0.44	320.29	200.00	0.79	0.81	-0.80	0.52	1.14	315.32
225.00	0.42	314.41	225.00	0.92	0.95	-0.93	0.19	1.33	315.61
250.00	0.34	309.77	249.99	1.03	1.06	-1.05	0.35	1.49	315.25
275.00	0.29	297.89	274.99	1.11	1.14	-1.16	0.31	1.63	314.34
300.00	0.18	286.49	299.99	1.14	1.18	-1.26	0.48	1.72	313.12
325.00	0.18	270.46	324.99	1.15	1.19	-1.34	0.20	1.79	311.69
350.00	0.13	226.36	349.99	1.13	1.17	-1.40	0.51	1.82	309.96
375.00	0.16	220.53	374.99	1.08	1.12	-1.44	0.14	1.83	307.98
400.00	0.14	297.79	399.99	1.07	1.11	-1.49	0.76	1.86	306.73
425.00	0.15	282.10	424.99	1.09	1.13	-1.55	0.17	1.92	306.16
450.00	0.16	286.67	449.99	1.11	1.15	-1.62	0.06	1.99	305.42
475.00	0.03	125.47	474.99	1.11	1.16	-1.65	0.77	2.01	305.10
500.00	0.09	11.26	499.99	1.13	1.17	-1.64	0.43	2.01	305.62
525.00	0.09	94.94	524.99	1.15	1.19	-1.61	0.50	2.01	306.44
550.00	0.16	117.21	549.99	1.13	1.17	-1.56	0.33	1.95	306.92
575.00	0.13	144.57	574.99	1.09	1.13	-1.51	0.30	1.89	306.84
600.00	0.18	149.35	599.99	1.04	1.08	-1.48	0.19	1.83	306.10
625.00	0.16	148.11	624.99	0.97	1.01	-1.44	0.05	1.76	305.17
650.00	0.14	159.71	649.99	0.92	0.96	-1.41	0.15	1.70	304.12
675.00	0.20	162.37	674.99	0.85	0.89	-1.39	0.23	1.64	302.56
700.00	0.17	198.62	699.99	0.77	0.81	-1.39	0.47	1.60	300.25
725.00	0.14	211.20	724.99	0.71	0.75	-1.41	0.19	1.60	297.79
750.00	0.11	246.22	749.99	0.67	0.71	-1.45	0.33	1.62	296.01
775.00	0.06	253.76	774.99	0.65	0.69	-1.49	0.22	1.64	295.04
800.00	0.04	52.07	799.99	0.66	0.70	-1.49	0.41	1.65	295.04
825.00	0.11	84.27	824.99	0.67	0.71	-1.46	0.29	1.62	295.77
850.00	0.09	95.02	849.99	0.67	0.71	-1.42	0.09	1.58	296.47

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
875.00	0.12	65.12	874.99	0.68	0.72	-1.37	0.24	1.55	297.49
900.00	0.21	102.32	899.99	0.68	0.72	-1.31	0.55	1.49	298.74
925.00	0.21	123.53	924.99	0.65	0.68	-1.22	0.31	1.40	299.12
950.00	0.18	133.92	949.99	0.60	0.63	-1.16	0.18	1.31	298.52
975.00	0.15	159.54	974.99	0.54	0.57	-1.11	0.32	1.25	297.02
1000.00	0.23	200.61	999.99	0.46	0.49	-1.12	0.61	1.22	293.61
1025.00	0.11	209.65	1024.99	0.39	0.42	-1.15	0.51	1.22	290.18
1050.00	0.02	239.04	1049.99	0.37	0.40	-1.17	0.34	1.23	288.94
1075.00	0.02	304.11	1074.99	0.37	0.40	-1.17	0.10	1.24	288.81
1100.00	0.14	324.47	1099.99	0.39	0.43	-1.19	0.47	1.27	289.66
1125.00	0.15	74.42	1124.99	0.43	0.46	-1.18	0.96	1.27	291.31
1150.00	0.16	87.36	1149.99	0.44	0.47	-1.11	0.14	1.21	292.95
1175.00	0.18	116.10	1174.99	0.43	0.45	-1.04	0.36	1.14	293.60
1200.00	0.16	127.19	1199.99	0.39	0.42	-0.98	0.17	1.06	293.06
1225.00	0.13	179.65	1224.99	0.34	0.37	-0.95	0.52	1.02	291.12
1250.00	0.22	242.93	1249.99	0.29	0.32	-0.99	0.79	1.04	287.72
1275.00	0.46	253.98	1274.99	0.24	0.27	-1.13	0.99	1.16	283.34
1300.00	0.79	260.40	1299.99	0.17	0.21	-1.40	1.36	1.41	278.62
1325.00	0.71	254.75	1324.99	0.10	0.14	-1.71	0.43	1.72	274.74
1350.00	0.73	261.51	1349.98	0.02	0.08	-2.02	0.35	2.02	272.20
1375.00	0.60	263.28	1374.98	-0.02	0.04	-2.31	0.54	2.31	270.96
1400.00	0.61	253.59	1399.98	-0.08	-0.01	-2.57	0.41	2.57	269.69
1425.00	0.66	255.15	1424.98	-0.17	-0.09	-2.83	0.21	2.83	268.22
1450.00	0.68	250.07	1449.98	-0.26	-0.18	-3.11	0.26	3.12	266.77
1475.00	0.76	241.81	1474.98	-0.40	-0.31	-3.40	0.53	3.41	264.87
1500.00	0.86	236.39	1499.97	-0.59	-0.49	-3.70	0.48	3.73	262.50
1525.00	0.91	221.06	1524.97	-0.85	-0.74	-3.99	0.96	4.05	259.49
1550.00	0.96	221.71	1549.97	-1.16	-1.04	-4.25	0.21	4.38	256.21
1575.00	0.92	220.73	1574.96	-1.48	-1.35	-4.53	0.15	4.72	253.35
1600.00	0.96	220.31	1599.96	-1.79	-1.66	-4.79	0.14	5.07	250.84
1625.00	0.95	220.98	1624.96	-2.12	-1.98	-5.06	0.06	5.43	248.64
1650.00	0.97	225.34	1649.95	-2.43	-2.28	-5.35	0.30	5.81	246.88

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
1675.00	0.98	224.65	1674.95	-2.74	-2.58	-5.65	0.08	6.21	245.42
1700.00	0.95	218.81	1699.95	-3.06	-2.90	-5.93	0.41	6.60	243.95
1725.00	0.97	226.61	1724.94	-3.37	-3.21	-6.21	0.53	6.99	242.71
1750.00	0.80	224.36	1749.94	-3.65	-3.48	-6.49	0.68	7.36	241.82
1775.00	0.51	210.75	1774.94	-3.88	-3.70	-6.67	1.33	7.62	241.00
1800.00	0.26	183.22	1799.94	-4.03	-3.85	-6.73	1.21	7.75	240.23
1825.00	0.30	141.00	1824.94	-4.14	-3.96	-6.69	0.82	7.77	239.40
1850.00	0.30	128.13	1849.94	-4.22	-4.05	-6.60	0.27	7.74	238.48
1875.00	0.30	132.77	1874.94	-4.31	-4.13	-6.50	0.10	7.70	237.56
1900.00	0.27	131.10	1899.94	-4.39	-4.21	-6.41	0.12	7.67	236.67
1925.00	0.29	123.32	1924.94	-4.46	-4.29	-6.31	0.17	7.63	235.81
1950.00	0.28	133.90	1949.94	-4.53	-4.36	-6.21	0.21	7.59	234.92
1975.00	0.23	123.38	1974.94	-4.60	-4.43	-6.13	0.28	7.56	234.11
2000.00	0.36	121.92	1999.94	-4.67	-4.50	-6.02	0.53	7.52	233.20
2025.00	0.30	128.89	2024.94	-4.74	-4.59	-5.90	0.31	7.47	232.15
2050.00	0.41	120.25	2049.94	-4.83	-4.67	-5.77	0.49	7.43	231.03
2075.00	0.44	122.06	2074.93	-4.92	-4.77	-5.61	0.14	7.37	229.67
2100.00	0.49	122.06	2099.93	-5.02	-4.88	-5.44	0.21	7.31	228.14
2125.00	0.46	123.98	2124.93	-5.13	-4.99	-5.27	0.16	7.26	226.56
2150.00	0.51	121.53	2149.93	-5.24	-5.10	-5.09	0.21	7.21	224.94
2175.00	0.51	126.79	2174.93	-5.36	-5.23	-4.91	0.19	7.17	223.21
2200.00	0.56	123.91	2199.93	-5.49	-5.36	-4.72	0.23	7.14	221.35
2225.00	0.56	125.66	2224.93	-5.62	-5.50	-4.52	0.07	7.12	219.39
2250.00	0.60	126.18	2249.93	-5.76	-5.65	-4.31	0.15	7.11	217.37
2275.00	0.51	131.29	2274.93	-5.91	-5.80	-4.13	0.40	7.12	215.43
2300.00	0.54	134.04	2299.93	-6.06	-5.95	-3.96	0.16	7.15	213.61
2325.00	0.59	137.21	2324.92	-6.23	-6.13	-3.79	0.22	7.20	211.70
2350.00	0.78	130.62	2349.92	-6.43	-6.33	-3.57	0.82	7.27	209.41
2375.00	0.89	126.12	2374.92	-6.64	-6.56	-3.28	0.53	7.33	206.61
2400.00	0.54	124.43	2399.92	-6.82	-6.74	-3.03	1.39	7.39	204.21
2425.00	1.01	142.84	2424.92	-7.06	-6.98	-2.80	2.11	7.52	201.84
2450.00	1.67	139.19	2449.91	-7.50	-7.43	-2.43	2.64	7.82	198.08

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	"/100ft	ft	deg
2475.00	1.99	135.86	2474.90	-8.07	-8.02	-1.89	1.35	8.24	193.23
2500.00	2.31	135.82	2499.88	-8.72	-8.69	-1.23	1.29	8.78	188.07
2525.00	2.78	138.59	2524.85	-9.52	-9.51	-0.48	1.92	9.52	182.90
2550.00	3.26	138.53	2549.82	-10.48	-10.50	0.39	1.93	10.50	177.87
2575.00	3.47	138.39	2574.78	-11.55	-11.59	1.36	0.84	11.67	173.30
2600.00	3.37	139.65	2599.73	-12.65	-12.72	2.34	0.50	12.93	169.58
2625.00	3.56	137.75	2624.69	-13.76	-13.85	3.34	0.88	14.25	166.46
2650.00	3.46	138.13	2649.64	-14.86	-14.99	4.36	0.39	15.61	163.78
2675.00	3.68	136.11	2674.59	-15.98	-16.13	5.42	1.00	17.02	161.42
2700.00	3.71	135.24	2699.54	-17.10	-17.28	6.55	0.27	18.48	159.25
2725.00	4.05	133.87	2724.48	-18.25	-18.47	7.76	1.41	20.03	157.22
2750.00	4.40	132.08	2749.41	-19.47	-19.72	9.10	1.46	21.72	155.22
2775.00	4.58	131.00	2774.34	-20.72	-21.02	10.57	0.81	23.53	153.31
2800.00	5.01	131.89	2799.25	-22.06	-22.40	12.13	1.73	25.48	151.56
2825.00	5.26	130.79	2824.15	-23.50	-23.88	13.81	1.10	27.59	149.95
2850.00	5.60	132.89	2849.04	-25.03	-25.46	15.57	1.57	29.85	148.54
2875.00	5.67	132.66	2873.91	-26.64	-27.13	17.38	0.29	32.22	147.36
2900.00	5.72	132.68	2898.79	-28.28	-28.81	19.20	0.19	34.62	146.32
2925.00	5.78	132.78	2923.67	-29.93	-30.51	21.04	0.26	37.06	145.41
2950.00	5.83	132.05	2948.54	-31.58	-32.22	22.91	0.36	39.53	144.58
2975.00	5.76	132.41	2973.41	-33.23	-33.91	24.78	0.34	42.00	143.84
3000.00	5.80	132.85	2998.28	-34.88	-35.62	26.63	0.24	44.47	143.21
3025.00	5.84	132.07	3023.15	-36.54	-37.33	28.50	0.36	46.97	142.64
3050.00	5.81	134.79	3048.02	-38.23	-39.07	30.34	1.11	49.47	142.17
3075.00	6.29	136.61	3072.88	-40.07	-40.96	32.18	2.05	52.09	141.84
3100.00	6.46	139.66	3097.73	-42.08	-43.03	34.03	1.53	54.86	141.66
3125.00	6.65	140.91	3122.57	-44.23	-45.22	35.86	0.96	57.71	141.59
3150.00	6.71	140.50	3147.40	-46.43	-47.47	37.70	0.30	60.62	141.55
3175.00	6.80	140.79	3172.22	-48.65	-49.75	39.57	0.39	63.56	141.50
3200.00	6.68	140.95	3197.05	-50.88	-52.03	41.42	0.49	66.50	141.48
3225.00	6.85	140.39	3221.88	-53.11	-54.30	43.28	0.70	69.44	141.44
3250.00	6.83	140.98	3246.70	-55.36	-56.61	45.17	0.29	72.42	141.41

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
3275.00	6.94	140.02	3271.52	-57.61	-58.92	47.08	0.62	75.42	141.37
3300.00	6.96	140.39	3296.33	-59.88	-61.24	49.01	0.21	78.44	141.33
3325.00	6.95	140.51	3321.15	-62.16	-63.58	50.94	0.08	81.47	141.30
3350.00	6.94	140.18	3345.97	-64.44	-65.90	52.87	0.16	84.49	141.26
3375.00	7.02	140.10	3370.78	-66.72	-68.23	54.82	0.31	87.53	141.22
3400.00	6.93	140.35	3395.60	-69.00	-70.57	56.76	0.37	90.56	141.19
3425.00	6.93	139.86	3420.41	-71.26	-72.88	58.69	0.23	93.58	141.16
3450.00	6.95	139.54	3445.23	-73.51	-75.19	60.65	0.17	96.60	141.11
3475.00	6.94	139.29	3470.05	-75.75	-77.48	62.61	0.13	99.62	141.06
3500.00	6.65	137.96	3494.87	-77.91	-79.70	64.57	1.30	102.57	140.99
3525.00	6.52	137.61	3519.71	-79.98	-81.82	66.49	0.57	105.43	140.90
3550.00	6.31	136.78	3544.55	-81.98	-83.87	68.39	0.91	108.22	140.81
3575.00	6.36	136.28	3569.40	-83.93	-85.87	70.29	0.30	110.97	140.70
3600.00	6.32	135.36	3594.25	-85.85	-87.85	72.21	0.43	113.72	140.58
3625.00	6.37	135.97	3619.09	-87.78	-89.83	74.14	0.33	116.47	140.47
3650.00	6.38	135.85	3643.94	-89.72	-91.82	76.07	0.06	119.24	140.36
3675.00	6.41	135.65	3668.78	-91.66	-93.82	78.01	0.17	122.02	140.25
3700.00	6.41	135.52	3693.63	-93.60	-95.81	79.97	0.06	124.80	140.15
3725.00	6.41	135.88	3718.47	-95.54	-97.81	81.92	0.16	127.58	140.05
3750.00	6.40	135.71	3743.31	-97.49	-99.81	83.86	0.09	130.36	139.96
3775.00	6.41	135.74	3768.16	-99.43	-101.81	85.81	0.02	133.15	139.87
3800.00	6.39	135.95	3793.00	-101.38	-103.80	87.75	0.12	135.92	139.79
3825.00	6.31	136.03	3817.85	-103.31	-105.79	89.67	0.29	138.68	139.71
3850.00	6.33	136.31	3842.70	-105.25	-107.78	91.58	0.14	141.43	139.65
3875.00	6.32	136.23	3867.54	-107.18	-109.77	93.48	0.06	144.18	139.58
3900.00	6.29	136.69	3892.39	-109.12	-111.76	95.37	0.23	146.92	139.52
3925.00	6.36	136.90	3917.24	-111.08	-113.77	97.26	0.30	149.67	139.47
3950.00	6.35	136.80	3942.09	-113.04	-115.78	99.15	0.07	152.44	139.43
3975.00	6.39	137.08	3966.93	-115.02	-117.81	101.04	0.21	155.21	139.38
4000.00	6.32	136.46	3991.78	-116.98	-119.83	102.94	0.38	157.97	139.34
4025.00	6.41	136.26	4016.63	-118.93	-121.83	104.85	0.36	160.74	139.28
4050.00	6.37	137.03	4041.47	-120.90	-123.86	106.76	0.38	163.52	139.24

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
4075.00	6.45	136.82	4066.31	-122.89	-125.89	108.67	0.32	166.31	139.20
4100.00	6.46	136.70	4091.16	-124.88	-127.94	110.59	0.08	169.11	139.16
4125.00	6.47	136.43	4116.00	-126.87	-129.99	112.53	0.12	171.93	139.12
4150.00	6.54	137.00	4140.84	-128.88	-132.05	114.47	0.39	174.76	139.08
4175.00	6.49	136.84	4165.67	-130.90	-134.12	116.41	0.21	177.59	139.04
4200.00	6.49	137.22	4190.51	-132.92	-136.19	118.33	0.17	180.42	139.01
4225.00	6.51	136.97	4215.35	-134.94	-138.26	120.26	0.14	183.25	138.98
4250.00	6.50	137.25	4240.19	-136.96	-140.34	122.19	0.14	186.08	138.95
4275.00	6.52	136.96	4265.03	-138.98	-142.41	124.12	0.16	188.91	138.93
4300.00	6.56	137.26	4289.87	-141.02	-144.50	126.06	0.21	191.76	138.90
4325.00	6.50	136.99	4314.71	-143.05	-146.58	127.99	0.29	194.60	138.87
4350.00	6.16	137.28	4339.55	-145.01	-148.60	129.87	1.37	197.35	138.85
4375.00	5.76	138.55	4364.42	-146.89	-150.53	131.61	1.68	199.95	138.84
4400.00	5.65	138.21	4389.29	-148.70	-152.39	133.26	0.45	202.43	138.83
4425.00	5.52	137.66	4414.18	-150.46	-154.19	134.89	0.56	204.86	138.82
4450.00	5.16	137.18	4439.07	-152.13	-155.91	136.46	1.44	207.19	138.80
4475.00	5.05	135.88	4463.97	-153.71	-157.52	137.99	0.64	209.41	138.78
4500.00	5.17	135.91	4488.87	-155.26	-159.12	139.54	0.46	211.64	138.75
4525.00	5.16	135.53	4513.77	-156.83	-160.73	141.11	0.14	213.89	138.72
4550.00	5.22	136.64	4538.66	-158.41	-162.36	142.68	0.46	216.14	138.69
4575.00	5.33	135.44	4563.56	-160.03	-164.01	144.28	0.64	218.44	138.66
4600.00	5.53	134.41	4588.45	-161.65	-165.68	145.95	0.88	220.80	138.62
4625.00	5.70	135.45	4613.33	-163.33	-167.41	147.68	0.79	223.24	138.58
4650.00	5.99	134.13	4638.20	-165.07	-169.21	149.49	1.26	225.78	138.54
4675.00	6.21	135.49	4663.06	-166.89	-171.08	151.37	1.06	228.43	138.50
4700.00	6.44	137.00	4687.90	-168.83	-173.07	153.28	1.14	231.18	138.47
4725.00	6.71	139.42	4712.74	-170.91	-175.20	155.18	1.56	234.05	138.47
4750.00	7.00	141.78	4737.56	-173.17	-177.51	157.08	1.60	237.03	138.49
4775.00	7.05	141.23	4762.37	-175.51	-179.90	158.98	0.35	240.08	138.53
4800.00	6.99	140.81	4787.18	-177.83	-182.28	160.90	0.33	243.13	138.56
4825.00	7.04	141.70	4812.00	-180.16	-184.66	162.81	0.48	246.18	138.60
4850.00	7.05	141.35	4836.81	-182.50	-187.06	164.72	0.18	249.24	138.63

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
4875.00	7.15	141.62	4861.62	-184.87	-189.47	166.64	0.45	252.33	138.67
4900.00	7.06	141.16	4886.43	-187.23	-191.89	168.57	0.43	255.42	138.70
4925.00	7.15	141.41	4911.23	-189.59	-194.30	170.51	0.39	258.51	138.73
4950.00	7.17	141.64	4936.04	-191.98	-196.74	172.45	0.14	261.62	138.77
4975.00	7.11	141.24	4960.84	-194.35	-199.18	174.39	0.33	264.73	138.80
5000.00	7.14	141.01	4985.65	-196.71	-201.59	176.33	0.16	267.83	138.82
5025.00	7.09	140.50	5010.46	-199.06	-203.99	178.29	0.31	270.92	138.85
5050.00	7.19	140.55	5035.27	-201.40	-206.38	180.26	0.39	274.03	138.86
5075.00	7.25	140.59	5060.07	-203.77	-208.81	182.26	0.25	277.17	138.88
5100.00	7.23	140.61	5084.87	-206.15	-211.25	184.26	0.08	280.32	138.90
5125.00	7.25	139.89	5109.67	-208.52	-213.67	186.27	0.37	283.47	138.92
5150.00	7.30	140.37	5134.47	-210.89	-216.10	188.30	0.30	286.63	138.93
5175.00	7.18	138.31	5159.27	-213.23	-218.49	190.36	1.13	289.78	138.94
5200.00	7.12	138.26	5184.07	-215.49	-220.81	192.43	0.27	292.89	138.93
5225.00	7.26	138.69	5208.88	-217.78	-223.15	194.50	0.60	296.02	138.92
5250.00	7.22	138.46	5233.68	-220.08	-225.52	196.59	0.17	299.17	138.92
5275.00	6.45	139.18	5258.50	-222.26	-227.75	198.55	3.14	302.15	138.92
5300.00	5.76	139.85	5283.36	-224.24	-229.77	200.27	2.76	304.80	138.92
5325.00	5.33	139.57	5308.24	-226.04	-231.62	201.83	1.72	307.22	138.93
5350.00	5.26	140.34	5333.13	-227.76	-233.38	203.32	0.41	309.52	138.94
5375.00	5.10	138.63	5358.03	-229.44	-235.10	204.78	0.87	311.78	138.94
5400.00	4.99	135.88	5382.94	-231.01	-236.71	206.27	1.06	313.98	138.93
5425.00	4.91	134.34	5407.84	-232.50	-238.24	207.80	0.63	316.13	138.90
5450.00	5.05	134.93	5432.75	-233.98	-239.77	209.34	0.59	318.30	138.88
5475.00	4.92	135.24	5457.65	-235.48	-241.31	210.88	0.52	320.47	138.85
5500.00	4.88	134.81	5482.56	-236.95	-242.82	212.39	0.24	322.60	138.82
5525.00	4.79	134.17	5507.47	-238.38	-244.29	213.89	0.40	324.70	138.80
5550.00	4.71	134.70	5532.39	-239.79	-245.74	215.37	0.37	326.76	138.77
5575.00	4.70	134.52	5557.30	-241.19	-247.18	216.83	0.08	328.81	138.74
5600.00	4.76	135.12	5582.22	-242.60	-248.64	218.29	0.33	330.86	138.72
5625.00	4.61	134.26	5607.13	-244.00	-250.07	219.74	0.66	332.90	138.69
5650.00	4.67	133.47	5632.05	-245.36	-251.47	221.20	0.35	334.92	138.66

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
5675.00	4.74	133.91	5656.97	-246.74	-252.89	222.68	0.31	336.96	138.63
5700.00	4.75	133.80	5681.88	-248.13	-254.32	224.17	0.05	339.02	138.61
5725.00	4.73	133.72	5706.80	-249.51	-255.75	225.67	0.07	341.08	138.58
5750.00	4.75	133.94	5731.71	-250.90	-257.18	227.16	0.09	343.14	138.55
5775.00	4.77	133.88	5756.62	-252.30	-258.62	228.65	0.10	345.20	138.52
5800.00	4.83	133.40	5781.54	-253.70	-260.07	230.16	0.27	347.29	138.49
5825.00	4.87	133.95	5806.45	-255.12	-261.52	231.69	0.26	349.39	138.46
5850.00	4.88	134.37	5831.36	-256.56	-263.00	233.22	0.15	351.51	138.44
5875.00	4.84	133.60	5856.27	-257.99	-264.48	234.74	0.31	353.63	138.41
5900.00	4.83	132.38	5881.18	-259.38	-265.91	236.28	0.41	355.72	138.38
5925.00	4.79	134.12	5906.09	-260.78	-267.35	237.81	0.60	357.81	138.35
5950.00	4.85	134.01	5931.00	-262.19	-268.81	239.32	0.23	359.90	138.32
5975.00	4.82	134.00	5955.91	-263.62	-270.27	240.83	0.12	362.01	138.30
6000.00	4.84	133.83	5980.82	-265.04	-271.73	242.35	0.12	364.10	138.27
6025.00	4.78	132.87	6005.74	-266.43	-273.17	243.88	0.40	366.20	138.24
6050.00	4.83	133.76	6030.65	-267.83	-274.61	245.40	0.35	368.28	138.22
6075.00	4.91	133.56	6055.56	-269.25	-276.08	246.94	0.32	370.40	138.19
6100.00	4.83	133.76	6080.47	-270.68	-277.54	248.47	0.31	372.52	138.16
6125.00	4.96	132.53	6105.38	-272.09	-279.00	250.03	0.67	374.64	138.13
6150.00	4.85	132.90	6130.28	-273.50	-280.45	251.60	0.49	376.77	138.10
6175.00	4.85	133.33	6155.19	-274.90	-281.90	253.14	0.15	378.87	138.08
6200.00	4.95	133.11	6180.10	-276.32	-283.36	254.70	0.38	381.00	138.05
6225.00	4.93	133.45	6205.01	-277.75	-284.83	256.27	0.13	383.15	138.02
6250.00	4.84	134.64	6229.92	-279.19	-286.32	257.80	0.54	385.27	138.00
6275.00	4.85	134.72	6254.83	-280.64	-287.80	259.30	0.05	387.38	137.98
6300.00	4.79	135.35	6279.74	-282.08	-289.29	260.78	0.34	389.48	137.97
6325.00	4.88	135.80	6304.65	-283.54	-290.79	262.26	0.40	391.59	137.95
6350.00	4.92	134.76	6329.56	-285.02	-292.31	263.76	0.40	393.72	137.94
6375.00	4.89	135.08	6354.47	-286.49	-293.82	265.28	0.17	395.86	137.92
6400.00	4.80	133.99	6379.38	-287.93	-295.30	266.78	0.51	397.96	137.90
6425.00	4.71	135.04	6404.29	-289.34	-296.75	268.26	0.51	400.03	137.89
6450.00	4.73	136.00	6429.21	-290.77	-298.22	269.70	0.33	402.09	137.87

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
6475.00	4.69	134.59	6454.13	-292.19	-299.68	271.14	0.48	404.14	137.86
6500.00	4.73	133.82	6479.04	-293.58	-301.11	272.62	0.30	406.19	137.84
6525.00	4.73	134.43	6503.96	-294.97	-302.55	274.10	0.20	408.24	137.82
6550.00	4.68	133.65	6528.87	-296.36	-303.97	275.57	0.32	410.29	137.81
6575.00	4.62	133.63	6553.79	-297.71	-305.37	277.04	0.24	412.31	137.79
6600.00	4.60	132.52	6578.71	-299.05	-306.74	278.50	0.36	414.31	137.76
6625.00	4.68	133.74	6603.63	-300.39	-308.13	279.98	0.50	416.33	137.74
6650.00	4.66	133.48	6628.54	-301.75	-309.53	281.45	0.12	418.36	137.72
6675.00	4.79	133.49	6653.46	-303.13	-310.95	282.95	0.51	420.41	137.70
6700.00	4.71	134.44	6678.37	-304.52	-312.38	284.44	0.44	422.48	137.68
6725.00	5.00	135.89	6703.28	-305.98	-313.88	285.93	1.27	424.59	137.67
6750.00	5.02	138.31	6728.19	-307.54	-315.48	287.41	0.85	426.77	137.67
6775.00	5.06	138.37	6753.09	-309.14	-317.12	288.87	0.17	428.97	137.67
6800.00	5.03	137.76	6777.99	-310.74	-318.76	290.34	0.24	431.17	137.67
6825.00	5.04	138.66	6802.90	-312.33	-320.39	291.80	0.32	433.36	137.67
6850.00	5.12	137.81	6827.80	-313.94	-322.05	293.28	0.44	435.58	137.68
6875.00	5.15	137.35	6852.70	-315.55	-323.70	294.79	0.19	437.81	137.68
6900.00	5.10	138.82	6877.60	-317.17	-325.36	296.28	0.56	440.05	137.68
6925.00	5.05	138.29	6902.50	-318.79	-327.02	297.74	0.27	442.26	137.68
6950.00	5.03	137.35	6927.40	-320.38	-328.65	299.22	0.34	444.45	137.68
6975.00	4.98	138.51	6952.31	-321.96	-330.26	300.68	0.47	446.64	137.68
7000.00	5.15	138.33	6977.21	-323.57	-331.91	302.14	0.69	448.84	137.69
7025.00	5.12	138.53	7002.11	-325.20	-333.59	303.63	0.13	451.08	137.69
7050.00	5.15	138.32	7027.01	-326.83	-335.26	305.11	0.14	453.31	137.70
7075.00	5.16	137.49	7051.91	-328.46	-336.93	306.62	0.30	455.56	137.70
7100.00	5.11	137.41	7076.81	-330.06	-338.58	308.13	0.20	457.80	137.70
7125.00	5.18	138.41	7101.71	-331.69	-340.24	309.64	0.46	460.04	137.70
7150.00	5.27	138.52	7126.60	-333.35	-341.95	311.15	0.33	462.32	137.70
7175.00	5.21	137.47	7151.50	-335.00	-343.64	312.67	0.44	464.60	137.70
7200.00	5.25	137.65	7176.40	-336.64	-345.32	314.21	0.15	466.88	137.70
7225.00	5.25	137.50	7201.29	-338.29	-347.01	315.75	0.06	469.17	137.70
7250.00	5.29	137.57	7226.19	-339.94	-348.71	317.30	0.17	471.46	137.70

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
7275.00	5.31	138.63	7251.08	-341.62	-350.43	318.85	0.40	473.77	137.70
7300.00	5.26	138.07	7275.97	-343.29	-352.15	320.38	0.29	476.08	137.70
7325.00	5.25	138.51	7300.87	-344.96	-353.86	321.90	0.17	478.36	137.71
7350.00	5.02	139.23	7325.77	-346.61	-355.54	323.37	0.93	480.60	137.71
7375.00	4.64	139.85	7350.68	-348.17	-357.14	324.74	1.56	482.71	137.72
7400.00	4.50	142.06	7375.60	-349.68	-358.69	325.99	0.90	484.69	137.73
7425.00	4.44	141.65	7400.52	-351.18	-360.22	327.20	0.29	486.64	137.75
7450.00	4.41	141.95	7425.45	-352.66	-361.74	328.39	0.12	488.56	137.77
7475.00	4.41	141.64	7450.37	-354.14	-363.25	329.58	0.10	490.48	137.78
7500.00	4.40	141.82	7475.30	-355.61	-364.75	330.77	0.06	492.39	137.80
7525.00	4.47	141.67	7500.23	-357.10	-366.27	331.96	0.26	494.32	137.81
7550.00	4.20	141.01	7525.15	-358.54	-367.75	333.14	1.10	496.21	137.83
7575.00	3.58	144.71	7550.10	-359.86	-369.09	334.17	2.65	497.90	137.84
7600.00	3.32	145.13	7575.05	-361.07	-370.32	335.03	1.07	499.39	137.86
7625.00	3.19	145.80	7600.01	-362.21	-371.49	335.84	0.52	500.79	137.89
7650.00	2.81	139.91	7624.98	-363.24	-372.54	336.62	1.97	502.10	137.90
7675.00	2.54	149.75	7649.95	-364.16	-373.49	337.30	2.12	503.25	137.91
7700.00	2.39	155.85	7674.93	-365.11	-374.44	337.79	1.22	504.29	137.95
7725.00	2.53	152.40	7699.90	-366.06	-375.40	338.26	0.83	505.32	137.98
7750.00	2.49	153.07	7724.88	-367.02	-376.38	338.76	0.20	506.38	138.01
7775.00	2.45	151.65	7749.86	-367.96	-377.33	339.26	0.28	507.42	138.04
7800.00	2.50	153.36	7774.83	-368.90	-378.29	339.76	0.34	508.47	138.07
7825.00	2.41	156.09	7799.81	-369.86	-379.26	340.22	0.58	509.50	138.11
7850.00	2.49	155.73	7824.79	-370.82	-380.23	340.65	0.30	510.51	138.14
7875.00	2.44	160.10	7849.76	-371.80	-381.23	341.06	0.77	511.52	138.18
7900.00	2.35	160.74	7874.74	-372.78	-382.21	341.41	0.37	512.49	138.23
7925.00	2.34	167.93	7899.72	-373.75	-383.20	341.68	1.18	513.41	138.28
7950.00	2.30	169.44	7924.70	-374.74	-384.19	341.88	0.29	514.28	138.33
7975.00	2.21	176.63	7949.68	-375.71	-385.16	342.00	1.19	515.09	138.40
8000.00	2.25	175.03	7974.66	-376.68	-386.13	342.07	0.30	515.86	138.46
8025.00	2.26	171.52	7999.64	-377.65	-387.11	342.19	0.55	516.67	138.52
8050.00	2.21	171.39	8024.62	-378.61	-388.07	342.33	0.18	517.49	138.58

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
8075.00	2.21	175.42	8049.61	-379.56	-389.03	342.44	0.62	518.28	138.64
8100.00	2.29	174.69	8074.59	-380.54	-390.01	342.53	0.32	519.07	138.71
8125.00	2.28	174.53	8099.57	-381.53	-391.00	342.62	0.04	519.88	138.77
8150.00	2.18	170.32	8124.55	-382.49	-391.96	342.75	0.76	520.68	138.83
8175.00	2.24	173.33	8149.53	-383.44	-392.92	342.89	0.51	521.49	138.89
8200.00	2.30	173.86	8174.51	-384.42	-393.90	343.00	0.28	522.31	138.95
8225.00	2.28	175.30	8199.49	-385.41	-394.89	343.09	0.25	523.12	139.02
8250.00	2.07	171.93	8224.47	-386.35	-395.84	343.20	0.97	523.90	139.07
8275.00	1.98	174.66	8249.46	-387.22	-396.71	343.30	0.52	524.63	139.13
8300.00	1.85	171.57	8274.44	-388.05	-397.54	343.40	0.67	525.32	139.18
8325.00	1.63	172.52	8299.43	-388.79	-398.29	343.50	0.90	525.96	139.22
8350.00	1.10	173.65	8324.42	-389.38	-398.88	343.58	2.10	526.45	139.26
8375.00	1.24	175.93	8349.42	-389.89	-399.39	343.62	0.57	526.87	139.29
8400.00	1.30	174.23	8374.41	-390.44	-399.94	343.67	0.30	527.32	139.33
8425.00	1.31	169.04	8399.41	-391.00	-400.51	343.75	0.47	527.80	139.36
8450.00	1.15	172.29	8424.40	-391.53	-401.04	343.84	0.70	528.26	139.39
8475.00	1.27	173.60	8449.39	-392.05	-401.56	343.91	0.49	528.70	139.42
8500.00	1.27	170.15	8474.39	-392.59	-402.11	343.98	0.31	529.16	139.45
8525.00	1.18	166.39	8499.38	-393.11	-402.63	344.09	0.50	529.63	139.48
8550.00	1.10	168.26	8524.38	-393.59	-403.11	344.20	0.34	530.07	139.51
8575.00	1.15	169.86	8549.37	-394.07	-403.60	344.29	0.23	530.50	139.53
8600.00	1.04	177.12	8574.37	-394.54	-404.07	344.35	0.72	530.89	139.56
8625.00	1.15	172.99	8599.36	-395.02	-404.54	344.39	0.55	531.28	139.59
8650.00	1.14	166.54	8624.36	-395.50	-405.03	344.48	0.52	531.71	139.62
8675.00	1.09	174.21	8649.35	-395.98	-405.51	344.56	0.62	532.13	139.65
8700.00	1.16	173.83	8674.35	-396.47	-406.00	344.61	0.27	532.54	139.68
8725.00	1.24	171.05	8699.34	-396.98	-406.52	344.68	0.38	532.97	139.71
8750.00	1.11	166.92	8724.34	-397.48	-407.02	344.78	0.61	533.42	139.73
8775.00	1.01	177.14	8749.33	-397.94	-407.48	344.84	0.86	533.81	139.76
8800.00	1.17	175.87	8774.33	-398.41	-407.95	344.87	0.66	534.19	139.79
8825.00	1.15	172.14	8799.32	-398.91	-408.45	344.93	0.31	534.61	139.82
8850.00	1.01	178.07	8824.32	-399.38	-408.92	344.97	0.72	535.00	139.85

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
8875.00	1.05	178.76	8849.32	-399.83	-409.37	344.98	0.17	535.35	139.88
8900.00	1.16	175.64	8874.31	-400.31	-409.86	345.00	0.49	535.73	139.91
8925.00	1.14	173.54	8899.31	-400.81	-410.35	345.05	0.19	536.14	139.94
8950.00	1.11	175.01	8924.30	-401.30	-410.84	345.10	0.14	536.55	139.97
8975.00	1.06	178.26	8949.30	-401.77	-411.32	345.13	0.33	536.93	140.00
9000.00	1.21	181.56	8974.29	-402.26	-411.81	345.13	0.64	537.31	140.03
9025.00	1.13	174.26	8999.29	-402.77	-412.32	345.15	0.67	537.71	140.07
9050.00	1.04	186.97	9024.28	-403.24	-412.79	345.14	1.02	538.07	140.10
9075.00	1.15	185.22	9049.28	-403.72	-413.26	345.09	0.43	538.40	140.14
9100.00	1.16	184.39	9074.27	-404.22	-413.77	345.05	0.08	538.76	140.17
9125.00	1.17	184.97	9099.27	-404.73	-414.27	345.01	0.08	539.12	140.21
9150.00	0.95	182.88	9124.26	-405.19	-414.73	344.98	0.93	539.46	140.25
9175.00	1.15	187.12	9149.26	-405.64	-415.19	344.94	0.87	539.78	140.28
9200.00	1.17	184.86	9174.25	-406.15	-415.69	344.88	0.21	540.13	140.32
9225.00	1.17	184.80	9199.25	-406.66	-416.20	344.84	0.03	540.50	140.36
9250.00	1.31	177.94	9224.24	-407.20	-416.74	344.83	0.83	540.91	140.39
9275.00	1.08	188.89	9249.24	-407.72	-417.26	344.80	1.29	541.29	140.43
9300.00	1.08	188.26	9274.23	-408.19	-417.73	344.73	0.05	541.60	140.47
9325.00	1.18	180.57	9299.23	-408.68	-418.22	344.70	0.74	541.96	140.50
9350.00	1.08	189.12	9324.22	-409.17	-418.71	344.66	0.80	542.31	140.54
9375.00	1.10	188.52	9349.22	-409.64	-419.18	344.58	0.12	542.63	140.58
9400.00	1.19	191.23	9374.21	-410.14	-419.67	344.50	0.41	542.96	140.62
9425.00	1.18	188.36	9399.21	-410.65	-420.18	344.41	0.24	543.29	140.66
9450.00	1.02	187.41	9424.20	-411.12	-420.65	344.34	0.63	543.62	140.70
9475.00	1.09	196.06	9449.20	-411.57	-421.10	344.25	0.69	543.91	140.73
9500.00	1.14	194.85	9474.19	-412.05	-421.57	344.12	0.22	544.19	140.78
9525.00	1.06	190.84	9499.19	-412.52	-422.04	344.01	0.45	544.48	140.82
9550.00	1.03	198.67	9524.19	-412.96	-422.48	343.90	0.58	544.75	140.85
9575.00	1.09	197.67	9549.18	-413.40	-422.92	343.75	0.28	545.00	140.90
9600.00	1.13	194.02	9574.18	-413.87	-423.38	343.62	0.31	545.28	140.94
9625.00	1.18	193.03	9599.17	-414.36	-423.87	343.50	0.21	545.58	140.98
9650.00	1.23	191.91	9624.17	-414.88	-424.38	343.39	0.24	545.91	141.02

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
9675.00	1.04	194.57	9649.16	-415.36	-424.86	343.28	0.79	546.21	141.06
9700.00	1.16	198.02	9674.16	-415.82	-425.32	343.14	0.56	546.49	141.10
9725.00	1.11	191.25	9699.15	-416.31	-425.80	343.02	0.58	546.78	141.15
9750.00	1.08	198.50	9724.15	-416.77	-426.26	342.90	0.57	547.06	141.19
9775.00	1.17	198.57	9749.14	-417.24	-426.73	342.74	0.38	547.33	141.23
9800.00	1.14	199.75	9774.14	-417.72	-427.20	342.57	0.14	547.59	141.27
9825.00	1.18	198.76	9799.13	-418.20	-427.68	342.41	0.17	547.86	141.32
9850.00	1.11	198.29	9824.13	-418.68	-428.16	342.25	0.31	548.13	141.36
9875.00	1.17	199.59	9849.12	-419.15	-428.63	342.09	0.27	548.40	141.41
9900.00	1.14	199.88	9874.12	-419.63	-429.10	341.92	0.10	548.67	141.45
9925.00	1.24	198.83	9899.11	-420.13	-429.59	341.74	0.39	548.94	141.50
9950.00	1.18	190.16	9924.11	-420.64	-430.10	341.61	0.77	549.26	141.54
9975.00	1.12	199.85	9949.10	-421.13	-430.58	341.48	0.81	549.56	141.58
10000.00	1.11	197.43	9974.10	-421.59	-431.04	341.33	0.19	549.82	141.63
10025.00	1.06	200.04	9999.09	-422.04	-431.49	341.18	0.28	550.08	141.67
10050.00	0.97	208.06	10024.09	-422.45	-431.90	341.00	0.68	550.29	141.71
10075.00	1.00	208.23	10049.08	-422.84	-432.28	340.79	0.12	550.46	141.75
10100.00	1.01	214.38	10074.08	-423.22	-432.65	340.57	0.43	550.61	141.79
10125.00	1.01	211.03	10099.08	-423.59	-433.02	340.33	0.24	550.75	141.83
10150.00	0.85	233.07	10124.07	-423.90	-433.32	340.07	1.56	550.83	141.88
10175.00	1.24	334.20	10149.07	-423.78	-433.19	339.80	6.52	550.56	141.89
10200.00	3.75	359.07	10174.05	-422.72	-432.13	339.67	10.71	549.65	141.83
10225.00	5.11	1.34	10198.97	-420.79	-430.20	339.69	5.47	548.14	141.71
10250.00	5.54	3.07	10223.86	-418.47	-427.88	339.78	1.86	546.38	141.55
10275.00	5.58	2.39	10248.75	-416.05	-425.46	339.89	0.30	544.56	141.38
10300.00	5.61	2.60	10273.63	-413.61	-423.02	340.00	0.16	542.72	141.21
10325.00	5.43	1.91	10298.51	-411.21	-420.62	340.09	0.76	540.91	141.04
10350.00	5.26	1.10	10323.40	-408.88	-418.29	340.15	0.74	539.14	140.88
10375.00	5.35	0.80	10348.29	-406.56	-415.98	340.19	0.37	537.37	140.72
10400.00	5.28	2.70	10373.19	-404.25	-413.66	340.26	0.77	535.63	140.56
10425.00	4.91	0.97	10398.09	-402.03	-411.45	340.33	1.60	533.96	140.40
10450.00	4.66	1.50	10423.00	-399.94	-409.36	340.38	0.99	532.39	140.26

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
10475.00	4.63	359.91	10447.92	-397.92	-407.34	340.40	0.53	530.85	140.12
10500.00	4.44	0.47	10472.84	-395.94	-405.36	340.41	0.80	529.33	139.98
10525.00	4.38	0.37	10497.77	-394.02	-403.44	340.42	0.26	527.87	139.84
10550.00	4.29	354.20	10522.69	-392.14	-401.55	340.34	1.90	526.38	139.72
10575.00	4.32	1.17	10547.62	-390.27	-399.68	340.26	2.09	524.90	139.59
10600.00	4.02	358.80	10572.56	-388.45	-397.87	340.26	1.37	523.52	139.46
10625.00	3.94	0.06	10597.50	-386.72	-396.13	340.24	0.49	522.19	139.34
10650.00	3.84	357.04	10622.44	-385.03	-394.44	340.20	0.91	520.88	139.22
10675.00	3.71	357.96	10647.39	-383.39	-392.79	340.13	0.55	519.59	139.11
10700.00	3.63	356.96	10672.34	-381.79	-391.19	340.06	0.43	518.34	139.00
10725.00	3.73	0.35	10697.28	-380.19	-389.59	340.02	0.97	517.10	138.89
10750.00	3.61	356.36	10722.23	-378.59	-387.99	339.98	1.13	515.87	138.77
10775.00	3.76	358.49	10747.18	-376.99	-386.39	339.91	0.82	514.62	138.66
10800.00	3.55	356.61	10772.13	-375.40	-384.79	339.84	0.95	513.38	138.55
10825.00	3.79	0.01	10797.08	-373.80	-383.19	339.79	1.29	512.15	138.44
10850.00	3.68	357.79	10822.03	-372.17	-381.57	339.76	0.73	510.91	138.32
10875.00	3.36	357.12	10846.98	-370.64	-380.03	339.69	1.30	509.72	138.21
10900.00	2.72	357.85	10871.94	-369.32	-378.71	339.63	2.58	508.70	138.11
10925.00	2.42	358.27	10896.92	-368.20	-377.59	339.60	1.17	507.84	138.03
10950.00	2.29	357.94	10921.90	-367.18	-376.56	339.56	0.52	507.05	137.96
10975.00	2.18	357.43	10946.88	-366.20	-375.58	339.52	0.46	506.30	137.89
11000.00	2.25	356.37	10971.86	-365.24	-374.62	339.47	0.32	505.55	137.82
11025.00	2.26	356.36	10996.84	-364.26	-373.64	339.41	0.02	504.78	137.75
11050.00	2.25	354.46	11021.82	-363.28	-372.66	339.33	0.30	504.00	137.68
11075.00	2.11	356.09	11046.80	-362.34	-371.71	339.25	0.61	503.25	137.61
11100.00	2.10	353.50	11071.79	-361.43	-370.80	339.17	0.38	502.52	137.55
11125.00	2.04	353.16	11096.77	-360.53	-369.90	339.06	0.24	501.79	137.49
11150.00	1.98	353.86	11121.75	-359.66	-369.03	338.96	0.25	501.08	137.43
11175.00	1.97	352.84	11146.74	-358.81	-368.17	338.86	0.16	500.38	137.37
11200.00	1.88	354.08	11171.72	-357.98	-367.34	338.77	0.37	499.70	137.32
11225.00	1.82	349.86	11196.71	-357.18	-366.54	338.66	0.60	499.04	137.26
11250.00	1.76	349.94	11221.70	-356.42	-365.77	338.52	0.26	498.38	137.22

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
11275.00	1.63	348.96	11246.69	-355.70	-365.04	338.38	0.51	497.76	137.17
11300.00	1.68	348.62	11271.68	-354.99	-364.34	338.24	0.21	497.14	137.13
11325.00	1.74	345.37	11296.67	-354.27	-363.61	338.07	0.45	496.49	137.08
11350.00	1.77	348.86	11321.65	-353.53	-362.86	337.90	0.44	495.83	137.04
11375.00	1.69	347.76	11346.64	-352.79	-362.12	337.75	0.33	495.18	136.99
11400.00	1.80	349.63	11371.63	-352.05	-361.37	337.60	0.49	494.54	136.95
11425.00	1.89	345.59	11396.62	-351.27	-360.59	337.43	0.64	493.84	136.90
11450.00	1.74	346.55	11421.61	-350.50	-359.82	337.24	0.62	493.15	136.86
11475.00	1.69	347.80	11446.60	-349.78	-359.09	337.07	0.26	492.50	136.81
11500.00	1.59	346.50	11471.58	-349.08	-358.39	336.91	0.45	491.89	136.77
11525.00	1.39	345.28	11496.58	-348.46	-357.76	336.75	0.80	491.32	136.73
11550.00	1.22	340.77	11521.57	-347.92	-357.21	336.59	0.78	490.81	136.70
11575.00	1.02	332.89	11546.57	-347.47	-356.76	336.40	1.02	490.35	136.68
11600.00	0.93	330.56	11571.56	-347.11	-356.39	336.20	0.38	489.94	136.67
11625.00	0.92	319.96	11596.56	-346.78	-356.06	335.97	0.69	489.55	136.66
11650.00	0.81	313.25	11621.56	-346.52	-355.79	335.71	0.59	489.17	136.66
11675.00	0.74	310.74	11646.55	-346.30	-355.56	335.46	0.29	488.83	136.67
11700.00	0.75	298.98	11671.55	-346.12	-355.38	335.20	0.61	488.52	136.67
11725.00	0.70	305.80	11696.55	-345.96	-355.21	334.93	0.39	488.21	136.68
11750.00	0.69	297.92	11721.55	-345.80	-355.05	334.67	0.39	487.92	136.69
11775.00	0.77	295.09	11746.55	-345.67	-354.90	334.39	0.33	487.62	136.70
11800.00	0.74	286.54	11771.54	-345.56	-354.79	334.08	0.46	487.32	136.72
11825.00	0.80	291.75	11796.54	-345.46	-354.68	333.77	0.37	487.03	136.74
11850.00	0.90	288.17	11821.54	-345.34	-354.55	333.42	0.45	486.70	136.76
11875.00	0.91	287.79	11846.53	-345.23	-354.43	333.04	0.05	486.35	136.78
11900.00	1.11	283.09	11871.53	-345.13	-354.31	332.62	0.89	485.98	136.81

NORTHERN DELAWARE BASIN

LEA COUNTY, NM

BULLDOG

BASEBALL CAP FED COM #701H

OWB

Design: AWP

Standard Survey Report

01 October, 2019

HOBBS OCD

FEB 27 2020

RECEIVED

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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		BASEBALL CAP FED COM #701H				
Well Position	+N/-S	0.0 usft	Northing:	431,175.30 usft	Latitude:	32° 10' 55.589 N
	+E/-W	0.0 usft	Easting:	783,096.90 usft	Longitude:	103° 25' 5.901 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,377.1 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/19/2019	6.66	60.02	47,723.27206568

Design	AWP				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	0.25	

Survey Program	Date 9/23/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	11,900.0	GYRO-SURF/INTER (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
12,081.0	22,990.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR 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	0.34	322.07	100.0	0.2	-0.2	0.2	0.34	0.34	0.00	
125.0	0.60	308.91	125.0	0.4	-0.3	0.4	1.12	1.04	-52.64	
150.0	0.44	314.05	150.0	0.5	-0.5	0.5	0.67	-0.64	20.56	
175.0	0.54	310.90	175.0	0.7	-0.7	0.7	0.41	0.40	-12.60	
200.0	0.44	320.29	200.0	0.8	-0.8	0.8	0.51	-0.40	37.56	
225.0	0.42	314.41	225.0	1.0	-0.9	1.0	0.19	-0.08	-23.52	
250.0	0.34	309.77	250.0	1.1	-1.1	1.1	0.34	-0.32	-18.56	
275.0	0.29	297.89	275.0	1.1	-1.2	1.1	0.33	-0.20	-47.52	
300.0	0.18	286.49	300.0	1.2	-1.3	1.2	0.48	-0.44	-45.60	

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	0.18	270.46	325.0	1.2	-1.3	1.2	0.20	0.00	-64.12
350.0	0.13	226.36	350.0	1.2	-1.4	1.2	0.50	-0.20	-176.40
375.0	0.16	220.53	375.0	1.1	-1.4	1.1	0.13	0.12	-23.32
400.0	0.14	297.79	400.0	1.1	-1.5	1.1	0.75	-0.08	309.04
425.0	0.15	282.10	425.0	1.1	-1.6	1.1	0.16	0.04	-62.76
450.0	0.16	286.67	450.0	1.2	-1.6	1.2	0.06	0.04	18.28
475.0	0.03	125.47	475.0	1.2	-1.6	1.2	0.75	-0.52	-644.80
500.0	0.09	11.26	500.0	1.2	-1.6	1.2	0.42	0.24	-456.84
525.0	0.09	94.94	525.0	1.2	-1.6	1.2	0.48	0.00	334.72
550.0	0.16	117.21	550.0	1.2	-1.6	1.2	0.34	0.28	89.08
575.0	0.13	144.57	575.0	1.1	-1.5	1.1	0.30	-0.12	109.44
600.0	0.18	149.35	600.0	1.1	-1.5	1.1	0.21	0.20	19.12
625.0	0.16	148.11	625.0	1.0	-1.4	1.0	0.08	-0.08	-4.96
650.0	0.14	159.71	650.0	1.0	-1.4	1.0	0.15	-0.08	46.40
675.0	0.20	162.37	675.0	0.9	-1.4	0.9	0.24	0.24	10.64
700.0	0.17	198.62	700.0	0.8	-1.4	0.8	0.47	-0.12	145.00
725.0	0.14	211.20	725.0	0.8	-1.4	0.7	0.18	-0.12	50.32
750.0	0.11	246.22	750.0	0.7	-1.5	0.7	0.32	-0.12	140.08
775.0	0.06	253.76	775.0	0.7	-1.5	0.7	0.20	-0.20	30.16
800.0	0.04	52.07	800.0	0.7	-1.5	0.7	0.39	-0.08	633.24
825.0	0.11	84.27	825.0	0.7	-1.5	0.7	0.32	0.28	128.80
850.0	0.09	95.02	850.0	0.7	-1.4	0.7	0.11	-0.08	43.00
875.0	0.12	65.12	875.0	0.7	-1.4	0.7	0.25	0.12	-119.60
900.0	0.21	102.32	900.0	0.7	-1.3	0.7	0.54	0.36	148.80
925.0	0.21	123.53	925.0	0.7	-1.2	0.7	0.31	0.00	84.84
950.0	0.18	133.92	950.0	0.6	-1.2	0.6	0.19	-0.12	41.56
975.0	0.15	159.54	975.0	0.6	-1.1	0.6	0.32	-0.12	102.48
1,000.0	0.23	200.61	1,000.0	0.5	-1.1	0.5	0.61	0.32	164.28
1,025.0	0.11	209.65	1,025.0	0.4	-1.2	0.4	0.49	-0.48	36.16
1,050.0	0.02	239.04	1,050.0	0.4	-1.2	0.4	0.37	-0.36	117.56
1,075.0	0.02	304.11	1,075.0	0.4	-1.2	0.4	0.09	0.00	260.28
1,100.0	0.14	324.47	1,100.0	0.4	-1.2	0.4	0.49	0.48	81.44
1,125.0	0.15	74.42	1,125.0	0.5	-1.2	0.5	0.95	0.04	439.80
1,150.0	0.16	87.36	1,150.0	0.5	-1.1	0.5	0.15	0.04	51.76
1,175.0	0.18	116.10	1,175.0	0.5	-1.0	0.5	0.35	0.08	114.96
1,200.0	0.16	127.19	1,200.0	0.4	-1.0	0.4	0.15	-0.08	44.36
1,225.0	0.13	179.65	1,225.0	0.4	-1.0	0.4	0.52	-0.12	209.84
1,250.0	0.22	242.93	1,250.0	0.3	-1.0	0.3	0.80	0.36	253.12
1,275.0	0.46	253.98	1,275.0	0.3	-1.1	0.3	0.99	0.96	44.20
1,300.0	0.79	260.40	1,300.0	0.2	-1.4	0.2	1.35	1.32	25.68
1,325.0	0.71	254.75	1,325.0	0.2	-1.7	0.1	0.44	-0.32	-22.60
1,350.0	0.73	261.51	1,350.0	0.1	-2.0	0.1	0.35	0.08	27.04
1,375.0	0.60	263.28	1,375.0	0.1	-2.3	0.0	0.53	-0.52	7.08

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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)
1,400.0	0.61	253.59	1,400.0	0.0	-2.6	0.0	0.41	0.04	-38.76
1,425.0	0.66	255.15	1,425.0	-0.1	-2.8	-0.1	0.21	0.20	6.24
1,450.0	0.68	250.07	1,450.0	-0.2	-3.1	-0.2	0.25	0.08	-20.32
1,475.0	0.76	241.81	1,475.0	-0.3	-3.4	-0.3	0.52	0.32	-33.04
1,500.0	0.86	236.39	1,500.0	-0.5	-3.7	-0.5	0.50	0.40	-21.68
1,525.0	0.91	221.06	1,525.0	-0.7	-4.0	-0.7	0.96	0.20	-61.32
1,550.0	0.96	221.71	1,550.0	-1.0	-4.3	-1.1	0.20	0.20	2.60
1,575.0	0.92	220.73	1,575.0	-1.3	-4.5	-1.4	0.17	-0.16	-3.92
1,600.0	0.96	220.31	1,600.0	-1.7	-4.8	-1.7	0.16	0.16	-1.68
1,625.0	0.95	220.98	1,625.0	-2.0	-5.1	-2.0	0.06	-0.04	2.68
1,650.0	0.97	225.34	1,650.0	-2.3	-5.4	-2.3	0.30	0.08	17.44
1,675.0	0.98	224.65	1,675.0	-2.6	-5.7	-2.6	0.06	0.04	-2.76
1,700.0	0.95	218.81	1,699.9	-2.9	-5.9	-2.9	0.41	-0.12	-23.36
1,725.0	0.97	226.61	1,724.9	-3.2	-6.2	-3.2	0.53	0.08	31.20
1,750.0	0.80	224.36	1,749.9	-3.5	-6.5	-3.5	0.69	-0.68	-9.00
1,775.0	0.51	210.75	1,774.9	-3.7	-6.7	-3.7	1.31	-1.16	-54.44
1,800.0	0.26	183.22	1,799.9	-3.8	-6.7	-3.9	1.22	-1.00	-110.12
1,825.0	0.30	141.00	1,824.9	-3.9	-6.7	-4.0	0.82	0.16	-168.88
1,850.0	0.30	128.13	1,849.9	-4.0	-6.6	-4.1	0.27	0.00	-51.48
1,875.0	0.30	132.77	1,874.9	-4.1	-6.5	-4.2	0.10	0.00	18.56
1,900.0	0.27	131.10	1,899.9	-4.2	-6.4	-4.2	0.12	-0.12	-6.68
1,925.0	0.29	123.32	1,924.9	-4.3	-6.3	-4.3	0.17	0.08	-31.12
1,950.0	0.28	133.90	1,949.9	-4.4	-6.2	-4.4	0.21	-0.04	42.32
1,975.0	0.23	123.38	1,974.9	-4.4	-6.1	-4.5	0.27	-0.20	-42.08
2,000.0	0.36	121.92	1,999.9	-4.5	-6.0	-4.5	0.52	0.52	-5.84
2,025.0	0.30	128.89	2,024.9	-4.6	-5.9	-4.6	0.29	-0.24	27.88
2,050.0	0.41	120.25	2,049.9	-4.7	-5.8	-4.7	0.49	0.44	-34.56
2,075.0	0.44	122.06	2,074.9	-4.8	-5.6	-4.8	0.13	0.12	7.24
2,100.0	0.49	122.06	2,099.9	-4.9	-5.5	-4.9	0.20	0.20	0.00
2,125.0	0.46	123.98	2,124.9	-5.0	-5.3	-5.0	0.14	-0.12	7.68
2,150.0	0.51	121.53	2,149.9	-5.1	-5.1	-5.1	0.22	0.20	-9.80
2,175.0	0.51	126.79	2,174.9	-5.2	-4.9	-5.2	0.19	0.00	21.04
2,200.0	0.56	123.91	2,199.9	-5.4	-4.7	-5.4	0.23	0.20	-11.52
2,225.0	0.56	125.66	2,224.9	-5.5	-4.5	-5.5	0.07	0.00	7.00
2,250.0	0.60	126.18	2,249.9	-5.6	-4.3	-5.7	0.16	0.16	2.08
2,275.0	0.51	131.29	2,274.9	-5.8	-4.1	-5.8	0.41	-0.36	20.44
2,300.0	0.54	134.04	2,299.9	-6.0	-4.0	-6.0	0.16	0.12	11.00
2,325.0	0.59	137.21	2,324.9	-6.1	-3.8	-6.1	0.24	0.20	12.68
2,350.0	0.78	130.62	2,349.9	-6.3	-3.6	-6.3	0.82	0.76	-26.36
2,375.0	0.89	126.12	2,374.9	-6.6	-3.3	-6.6	0.51	0.44	-18.00
2,400.0	0.54	124.43	2,399.9	-6.7	-3.0	-6.8	1.40	-1.40	-6.76
2,425.0	1.01	142.84	2,424.9	-7.0	-2.8	-7.0	2.10	1.88	73.64
2,450.0	1.67	139.19	2,449.9	-7.4	-2.4	-7.4	2.66	2.64	-14.60

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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)
2,475.0	1.99	135.86	2,474.9	-8.0	-1.9	-8.0	1.35	1.28	-13.32
2,500.0	2.31	135.82	2,499.9	-8.7	-1.2	-8.7	1.28	1.28	-0.16
2,525.0	2.78	138.59	2,524.9	-9.5	-0.5	-9.5	1.94	1.88	11.08
2,550.0	3.26	138.53	2,549.8	-10.5	0.4	-10.5	1.92	1.92	-0.24
2,575.0	3.47	138.39	2,574.8	-11.6	1.4	-11.6	0.84	0.84	-0.56
2,600.0	3.37	139.65	2,599.7	-12.7	2.3	-12.7	0.50	-0.40	5.04
2,625.0	3.56	137.75	2,624.7	-13.9	3.3	-13.8	0.89	0.76	-7.60
2,650.0	3.46	138.13	2,649.6	-15.0	4.4	-15.0	0.41	-0.40	1.52
2,675.0	3.68	136.11	2,674.6	-16.1	5.4	-16.1	1.01	0.88	-8.08
2,700.0	3.71	135.24	2,699.5	-17.3	6.5	-17.3	0.25	0.12	-3.48
2,725.0	4.05	133.87	2,724.5	-18.5	7.8	-18.4	1.41	1.36	-5.48
2,750.0	4.40	132.08	2,749.4	-19.7	9.1	-19.7	1.50	1.40	-7.16
2,775.0	4.58	131.00	2,774.3	-21.0	10.6	-21.0	0.80	0.72	-4.32
2,800.0	5.01	131.89	2,799.2	-22.4	12.1	-22.4	1.75	1.72	3.56
2,825.0	5.26	130.79	2,824.1	-23.9	13.8	-23.8	1.07	1.00	-4.40
2,850.0	5.60	132.89	2,849.0	-25.5	15.6	-25.4	1.58	1.36	8.40
2,875.0	5.67	132.66	2,873.9	-27.1	17.4	-27.1	0.29	0.28	-0.92
2,900.0	5.72	132.68	2,898.8	-28.8	19.2	-28.7	0.20	0.20	0.08
2,925.0	5.78	132.78	2,923.7	-30.5	21.0	-30.4	0.24	0.24	0.40
2,950.0	5.83	132.05	2,948.5	-32.2	22.9	-32.1	0.36	0.20	-2.92
2,975.0	5.76	132.41	2,973.4	-33.9	24.8	-33.8	0.32	-0.28	1.44
3,000.0	5.80	132.85	2,998.3	-35.6	26.6	-35.5	0.24	0.16	1.76
3,025.0	5.84	132.07	3,023.2	-37.3	28.5	-37.2	0.35	0.16	-3.12
3,050.0	5.81	134.79	3,048.0	-39.1	30.3	-38.9	1.11	-0.12	10.88
3,075.0	6.29	136.61	3,072.9	-41.0	32.2	-40.8	2.07	1.92	7.28
3,100.0	6.46	139.66	3,097.7	-43.0	34.0	-42.9	1.52	0.68	12.20
3,125.0	6.65	140.91	3,122.6	-45.2	35.9	-45.1	0.95	0.76	5.00
3,150.0	6.71	140.50	3,147.4	-47.5	37.7	-47.3	0.31	0.24	-1.64
3,175.0	6.80	140.79	3,172.2	-49.7	39.6	-49.6	0.38	0.36	1.16
3,200.0	6.68	140.95	3,197.1	-52.0	41.4	-51.8	0.49	-0.48	0.64
3,225.0	6.85	140.39	3,221.9	-54.3	43.3	-54.1	0.73	0.68	-2.24
3,250.0	6.83	140.98	3,246.7	-56.6	45.2	-56.4	0.29	-0.08	2.36
3,275.0	6.94	140.02	3,271.5	-58.9	47.1	-58.7	0.64	0.44	-3.84
3,300.0	6.96	140.39	3,296.3	-61.2	49.0	-61.0	0.20	0.08	1.48
3,325.0	6.95	140.51	3,321.2	-63.6	50.9	-63.4	0.07	-0.04	0.48
3,350.0	6.94	140.18	3,346.0	-65.9	52.9	-65.7	0.16	-0.04	-1.32
3,375.0	7.02	140.10	3,370.8	-68.2	54.8	-68.0	0.32	0.32	-0.32
3,400.0	6.93	140.35	3,395.6	-70.6	56.8	-70.3	0.38	-0.36	1.00
3,425.0	6.93	139.86	3,420.4	-72.9	58.7	-72.6	0.24	0.00	-1.96
3,450.0	6.95	139.54	3,445.2	-75.2	60.6	-74.9	0.17	0.08	-1.28
3,475.0	6.94	139.29	3,470.0	-77.5	62.6	-77.2	0.13	-0.04	-1.00
3,500.0	6.65	137.96	3,494.9	-79.7	64.6	-79.4	1.32	-1.16	-5.32
3,525.0	6.52	137.61	3,519.7	-81.8	66.5	-81.5	0.54	-0.52	-1.40
3,550.0	6.31	136.78	3,544.6	-83.9	68.4	-83.6	0.92	-0.84	-3.32

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	6.36	136.28	3,569.4	-85.9	70.3	-85.6	0.30	0.20	-2.00
3,600.0	6.32	135.36	3,594.2	-87.9	72.2	-87.5	0.44	-0.16	-3.68
3,625.0	6.37	135.97	3,619.1	-89.8	74.1	-89.5	0.34	0.20	2.44
3,650.0	6.38	135.85	3,643.9	-91.8	76.1	-91.5	0.07	0.04	-0.48
3,675.0	6.41	135.65	3,668.8	-93.8	78.0	-93.5	0.15	0.12	-0.80
3,700.0	6.41	135.52	3,693.6	-95.8	80.0	-95.5	0.06	0.00	-0.52
3,725.0	6.41	135.88	3,718.5	-97.8	81.9	-97.5	0.16	0.00	1.44
3,750.0	6.40	135.71	3,743.3	-99.8	83.9	-99.4	0.09	-0.04	-0.68
3,775.0	6.41	135.74	3,768.2	-101.8	85.8	-101.4	0.04	0.04	0.12
3,800.0	6.39	135.95	3,793.0	-103.8	87.7	-103.4	0.12	-0.08	0.84
3,825.0	6.31	136.03	3,817.8	-105.8	89.7	-105.4	0.32	-0.32	0.32
3,850.0	6.33	136.31	3,842.7	-107.8	91.6	-107.4	0.15	0.08	1.12
3,875.0	6.32	136.23	3,867.5	-109.8	93.5	-109.4	0.05	-0.04	-0.32
3,900.0	6.29	136.69	3,892.4	-111.8	95.4	-111.3	0.24	-0.12	1.84
3,925.0	6.36	136.90	3,917.2	-113.8	97.3	-113.3	0.29	0.28	0.84
3,950.0	6.35	136.80	3,942.1	-115.8	99.1	-115.4	0.06	-0.04	-0.40
3,975.0	6.39	137.08	3,966.9	-117.8	101.0	-117.4	0.20	0.16	1.12
4,000.0	6.32	136.46	3,991.8	-119.8	102.9	-119.4	0.39	-0.28	-2.48
4,025.0	6.41	136.26	4,016.6	-121.8	104.8	-121.4	0.37	0.36	-0.80
4,050.0	6.37	137.03	4,041.5	-123.9	106.8	-123.4	0.38	-0.16	3.08
4,075.0	6.45	136.82	4,066.3	-125.9	108.7	-125.4	0.33	0.32	-0.84
4,100.0	6.46	136.70	4,091.2	-127.9	110.6	-127.5	0.07	0.04	-0.48
4,125.0	6.47	136.43	4,116.0	-130.0	112.5	-129.5	0.13	0.04	-1.08
4,150.0	6.54	137.00	4,140.8	-132.0	114.5	-131.6	0.38	0.28	2.28
4,175.0	6.49	136.84	4,165.7	-134.1	116.4	-133.6	0.21	-0.20	-0.64
4,200.0	6.49	137.22	4,190.5	-136.2	118.3	-135.7	0.17	0.00	1.52
4,225.0	6.51	136.97	4,215.4	-138.3	120.3	-137.7	0.14	0.08	-1.00
4,250.0	6.50	137.25	4,240.2	-140.3	122.2	-139.8	0.13	-0.04	1.12
4,275.0	6.52	136.96	4,265.0	-142.4	124.1	-141.9	0.15	0.08	-1.16
4,300.0	6.56	137.26	4,289.9	-144.5	126.1	-144.0	0.21	0.16	1.20
4,325.0	6.50	136.99	4,314.7	-146.6	128.0	-146.0	0.27	-0.24	-1.08
4,350.0	6.16	137.28	4,339.6	-148.6	129.9	-148.0	1.37	-1.36	1.16
4,375.0	5.76	138.55	4,364.4	-150.5	131.6	-150.0	1.68	-1.60	5.08
4,400.0	5.65	138.21	4,389.3	-152.4	133.3	-151.8	0.46	-0.44	-1.36
4,425.0	5.52	137.66	4,414.2	-154.2	134.9	-153.6	0.56	-0.52	-2.20
4,450.0	5.16	137.18	4,439.1	-155.9	136.5	-155.3	1.45	-1.44	-1.92
4,475.0	5.05	135.88	4,464.0	-157.5	138.0	-156.9	0.64	-0.44	-5.20
4,500.0	5.17	135.91	4,488.9	-159.1	139.5	-158.5	0.48	0.48	0.12
4,525.0	5.16	135.53	4,513.8	-160.7	141.1	-160.1	0.14	-0.04	-1.52
4,550.0	5.22	136.64	4,538.7	-162.4	142.7	-161.7	0.47	0.24	4.44
4,575.0	5.33	135.44	4,563.6	-164.0	144.3	-163.4	0.62	0.44	-4.80
4,600.0	5.53	134.41	4,588.4	-165.7	145.9	-165.1	0.89	0.80	-4.12
4,625.0	5.70	135.45	4,613.3	-167.4	147.7	-166.8	0.79	0.68	4.16

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	5.99	134.13	4,638.2	-169.2	149.5	-168.6	1.28	1.16	-5.28
4,675.0	6.21	135.49	4,663.1	-171.1	151.4	-170.4	1.05	0.88	5.44
4,700.0	6.44	137.00	4,687.9	-173.1	153.3	-172.4	1.14	0.92	6.04
4,725.0	6.71	139.42	4,712.7	-175.2	155.2	-174.5	1.55	1.08	9.68
4,750.0	7.00	141.78	4,737.6	-177.5	157.1	-176.8	1.62	1.16	9.44
4,775.0	7.05	141.23	4,762.4	-179.9	159.0	-179.2	0.34	0.20	-2.20
4,800.0	6.99	140.81	4,787.2	-182.3	160.9	-181.6	0.32	-0.24	-1.68
4,825.0	7.04	141.70	4,812.0	-184.7	162.8	-184.0	0.48	0.20	3.56
4,850.0	7.05	141.35	4,836.8	-187.1	164.7	-186.3	0.18	0.04	-1.40
4,875.0	7.15	141.62	4,861.6	-189.5	166.6	-188.8	0.42	0.40	1.08
4,900.0	7.06	141.16	4,886.4	-191.9	168.6	-191.2	0.43	-0.36	-1.84
4,925.0	7.15	141.41	4,911.2	-194.3	170.5	-193.6	0.38	0.36	1.00
4,950.0	7.17	141.64	4,936.0	-196.7	172.4	-196.0	0.14	0.08	0.92
4,975.0	7.11	141.24	4,960.8	-199.2	174.4	-198.4	0.31	-0.24	-1.60
5,000.0	7.14	141.01	4,985.7	-201.6	176.3	-200.8	0.17	0.12	-0.92
5,025.0	7.09	140.50	5,010.5	-204.0	178.3	-203.2	0.32	-0.20	-2.04
5,050.0	7.19	140.55	5,035.3	-206.4	180.3	-205.6	0.40	0.40	0.20
5,075.0	7.25	140.59	5,060.1	-208.8	182.3	-208.0	0.24	0.24	0.16
5,100.0	7.23	140.61	5,084.9	-211.2	184.3	-210.5	0.08	-0.08	0.08
5,125.0	7.25	139.89	5,109.7	-213.7	186.3	-212.9	0.37	0.08	-2.88
5,150.0	7.30	140.37	5,134.5	-216.1	188.3	-215.3	0.31	0.20	1.92
5,175.0	7.18	138.31	5,159.3	-218.5	190.4	-217.7	1.14	-0.48	-8.24
5,200.0	7.12	138.26	5,184.1	-220.8	192.4	-220.0	0.24	-0.24	-0.20
5,225.0	7.26	138.69	5,208.9	-223.2	194.5	-222.3	0.60	0.56	1.72
5,250.0	7.22	138.46	5,233.7	-225.5	196.6	-224.7	0.20	-0.16	-0.92
5,275.0	6.45	139.18	5,258.5	-227.8	198.5	-226.9	3.10	-3.08	2.88
5,300.0	5.76	139.85	5,283.4	-229.8	200.3	-228.9	2.77	-2.76	2.68
5,325.0	5.33	139.57	5,308.2	-231.6	201.8	-230.7	1.72	-1.72	-1.12
5,350.0	5.26	140.34	5,333.1	-233.4	203.3	-232.5	0.40	-0.28	3.08
5,375.0	5.10	138.63	5,358.0	-235.1	204.8	-234.2	0.89	-0.64	-6.84
5,400.0	4.99	135.88	5,382.9	-236.7	206.3	-235.8	1.06	-0.44	-11.00
5,425.0	4.91	134.34	5,407.8	-238.2	207.8	-237.3	0.62	-0.32	-6.16
5,450.0	5.05	134.93	5,432.7	-239.8	209.3	-238.9	0.60	0.56	2.36
5,475.0	4.92	135.24	5,457.7	-241.3	210.9	-240.4	0.53	-0.52	1.24
5,500.0	4.88	134.81	5,482.6	-242.8	212.4	-241.9	0.22	-0.16	-1.72
5,525.0	4.79	134.17	5,507.5	-244.3	213.9	-243.4	0.42	-0.36	-2.56
5,550.0	4.71	134.70	5,532.4	-245.7	215.4	-244.8	0.36	-0.32	2.12
5,575.0	4.70	134.52	5,557.3	-247.2	216.8	-246.2	0.07	-0.04	-0.72
5,600.0	4.76	135.12	5,582.2	-248.6	218.3	-247.7	0.31	0.24	2.40
5,625.0	4.61	134.26	5,607.1	-250.1	219.7	-249.1	0.66	-0.60	-3.44
5,650.0	4.67	133.47	5,632.1	-251.5	221.2	-250.5	0.35	0.24	-3.16
5,675.0	4.74	133.91	5,657.0	-252.9	222.7	-251.9	0.32	0.28	1.76
5,700.0	4.75	133.80	5,681.9	-254.3	224.2	-253.4	0.05	0.04	-0.44

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	4.73	133.72	5,706.8	-255.8	225.7	-254.8	0.08	-0.08	-0.32
5,750.0	4.75	133.94	5,731.7	-257.2	227.2	-256.2	0.11	0.08	0.88
5,775.0	4.77	133.88	5,756.6	-258.6	228.6	-257.6	0.08	0.08	-0.24
5,800.0	4.83	133.40	5,781.5	-260.1	230.2	-259.1	0.29	0.24	-1.92
5,825.0	4.87	133.95	5,806.4	-261.5	231.7	-260.5	0.25	0.16	2.20
5,850.0	4.88	134.37	5,831.4	-263.0	233.2	-262.0	0.15	0.04	1.68
5,875.0	4.84	133.60	5,856.3	-264.5	234.7	-263.5	0.31	-0.16	-3.08
5,900.0	4.83	132.38	5,881.2	-265.9	236.3	-264.9	0.41	-0.04	-4.88
5,925.0	4.79	134.12	5,906.1	-267.3	237.8	-266.3	0.61	-0.16	6.96
5,950.0	4.85	134.01	5,931.0	-268.8	239.3	-267.8	0.24	0.24	-0.44
5,975.0	4.82	134.00	5,955.9	-270.3	240.8	-269.2	0.12	-0.12	-0.04
6,000.0	4.84	133.83	5,980.8	-271.7	242.3	-270.7	0.10	0.08	-0.68
6,025.0	4.78	132.87	6,005.7	-273.2	243.9	-272.1	0.40	-0.24	-3.84
6,050.0	4.83	133.76	6,030.6	-274.6	245.4	-273.6	0.36	0.20	3.56
6,075.0	4.91	133.56	6,055.6	-276.1	246.9	-275.0	0.33	0.32	-0.80
6,100.0	4.83	133.76	6,080.5	-277.5	248.5	-276.5	0.33	-0.32	0.80
6,125.0	4.96	132.53	6,105.4	-279.0	250.0	-277.9	0.67	0.52	-4.92
6,150.0	4.85	132.90	6,130.3	-280.4	251.6	-279.4	0.46	-0.44	1.48
6,175.0	4.85	133.33	6,155.2	-281.9	253.1	-280.8	0.15	0.00	1.72
6,200.0	4.95	133.11	6,180.1	-283.4	254.7	-282.3	0.41	0.40	-0.88
6,225.0	4.93	133.45	6,205.0	-284.8	256.3	-283.7	0.14	-0.08	1.36
6,250.0	4.84	134.64	6,229.9	-286.3	257.8	-285.2	0.54	-0.36	4.76
6,275.0	4.85	134.72	6,254.8	-287.8	259.3	-286.7	0.05	0.04	0.32
6,300.0	4.79	135.35	6,279.7	-289.3	260.8	-288.2	0.32	-0.24	2.52
6,325.0	4.88	135.80	6,304.7	-290.8	262.2	-289.7	0.39	0.36	1.80
6,350.0	4.92	134.76	6,329.6	-292.3	263.8	-291.2	0.39	0.16	-4.16
6,375.0	4.89	135.08	6,354.5	-293.8	265.3	-292.7	0.16	-0.12	1.28
6,400.0	4.80	133.99	6,379.4	-295.3	266.8	-294.1	0.51	-0.36	-4.36
6,425.0	4.71	135.04	6,404.3	-296.7	268.2	-295.6	0.50	-0.36	4.20
6,450.0	4.73	136.00	6,429.2	-298.2	269.7	-297.1	0.33	0.08	3.84
6,475.0	4.69	134.59	6,454.1	-299.7	271.1	-298.5	0.49	-0.16	-5.64
6,500.0	4.73	133.82	6,479.0	-301.1	272.6	-299.9	0.30	0.16	-3.08
6,525.0	4.73	134.43	6,504.0	-302.5	274.1	-301.4	0.20	0.00	2.44
6,550.0	4.68	133.65	6,528.9	-304.0	275.6	-302.8	0.32	-0.20	-3.12
6,575.0	4.62	133.63	6,553.8	-305.4	277.0	-304.2	0.24	-0.24	-0.08
6,600.0	4.60	132.52	6,578.7	-306.7	278.5	-305.5	0.37	-0.08	-4.44
6,625.0	4.68	133.74	6,603.6	-308.1	280.0	-306.9	0.51	0.32	4.88
6,650.0	4.66	133.48	6,628.5	-309.5	281.4	-308.3	0.12	-0.08	-1.04
6,675.0	4.79	133.49	6,653.5	-310.9	282.9	-309.7	0.52	0.52	0.04
6,700.0	4.71	134.44	6,678.4	-312.4	284.4	-311.2	0.45	-0.32	3.80
6,725.0	5.00	135.89	6,703.3	-313.9	285.9	-312.6	1.26	1.16	5.80
6,750.0	5.02	138.31	6,728.2	-315.5	287.4	-314.2	0.85	0.08	9.68
6,775.0	5.06	138.37	6,753.1	-317.1	288.9	-315.9	0.16	0.16	0.24
6,800.0	5.03	137.76	6,778.0	-318.8	290.3	-317.5	0.25	-0.12	-2.44

Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: BASEBALL CAP FED COM #701H
Wellbore: OWB
Design: AWP

Local Co-ordinate Reference: Well BASEBALL CAP FED COM #701H
TVD Reference: KB=30' @ 3407.1usft (SCAN QUEST)
MD Reference: KB=30' @ 3407.1usft (SCAN 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)
6,825.0	5.04	138.66	6,802.9	-320.4	291.8	-319.1	0.32	0.04	3.60
6,850.0	5.12	137.81	6,827.8	-322.0	293.3	-320.8	0.44	0.32	-3.40
6,875.0	5.15	137.35	6,852.7	-323.7	294.8	-322.4	0.20	0.12	-1.84
6,900.0	5.10	138.82	6,877.6	-325.4	296.3	-324.1	0.56	-0.20	5.88
6,925.0	5.05	138.29	6,902.5	-327.0	297.7	-325.7	0.27	-0.20	-2.12
6,950.0	5.03	137.35	6,927.4	-328.6	299.2	-327.4	0.34	-0.08	-3.76
6,975.0	4.98	138.51	6,952.3	-330.3	300.7	-329.0	0.45	-0.20	4.64
7,000.0	5.15	138.33	6,977.2	-331.9	302.1	-330.6	0.68	0.68	-0.72
7,025.0	5.12	138.53	7,002.1	-333.6	303.6	-332.3	0.14	-0.12	0.80
7,050.0	5.15	138.32	7,027.0	-335.3	305.1	-333.9	0.14	0.12	-0.84
7,075.0	5.16	137.49	7,051.9	-336.9	306.6	-335.6	0.30	0.04	-3.32
7,100.0	5.11	137.41	7,076.8	-338.6	308.1	-337.2	0.20	-0.20	-0.32
7,125.0	5.18	138.41	7,101.7	-340.2	309.6	-338.9	0.46	0.28	4.00
7,150.0	5.27	138.52	7,126.6	-341.9	311.1	-340.6	0.36	0.36	0.44
7,175.0	5.21	137.47	7,151.5	-343.6	312.7	-342.3	0.45	-0.24	-4.20
7,200.0	5.25	137.65	7,176.4	-345.3	314.2	-344.0	0.17	0.16	0.72
7,225.0	5.25	137.50	7,201.3	-347.0	315.7	-345.6	0.05	0.00	-0.60
7,250.0	5.29	137.57	7,226.2	-348.7	317.3	-347.3	0.16	0.16	0.28
7,275.0	5.31	138.63	7,251.1	-350.4	318.8	-349.0	0.40	0.08	4.24
7,300.0	5.26	138.07	7,276.0	-352.1	320.4	-350.8	0.29	-0.20	-2.24
7,325.0	5.25	138.51	7,300.9	-353.9	321.9	-352.5	0.17	-0.04	1.76
7,350.0	5.02	139.23	7,325.8	-355.5	323.4	-354.1	0.96	-0.92	2.88
7,375.0	4.64	139.85	7,350.7	-357.1	324.7	-355.7	1.53	-1.52	2.48
7,400.0	4.50	142.06	7,375.6	-358.7	326.0	-357.3	0.90	-0.56	8.84
7,425.0	4.44	141.65	7,400.5	-360.2	327.2	-358.8	0.27	-0.24	-1.64
7,450.0	4.41	141.95	7,425.4	-361.7	328.4	-360.3	0.15	-0.12	1.20
7,475.0	4.41	141.64	7,450.4	-363.2	329.6	-361.8	0.10	0.00	-1.24
7,500.0	4.40	141.82	7,475.3	-364.7	330.8	-363.3	0.07	-0.04	0.72
7,525.0	4.47	141.67	7,500.2	-366.3	332.0	-364.8	0.28	0.28	-0.60
7,550.0	4.20	141.01	7,525.2	-367.7	333.1	-366.3	1.10	-1.08	-2.64
7,575.0	3.58	144.71	7,550.1	-369.1	334.2	-367.7	2.67	-2.48	14.80
7,600.0	3.32	145.13	7,575.1	-370.3	335.0	-368.9	1.04	-1.04	1.68
7,625.0	3.19	145.80	7,600.0	-371.5	335.8	-370.0	0.54	-0.52	2.68
7,650.0	2.81	139.91	7,625.0	-372.5	336.6	-371.1	1.96	-1.52	-23.56
7,675.0	2.54	149.75	7,649.9	-373.5	337.3	-372.0	2.13	-1.08	39.36
7,700.0	2.39	155.85	7,674.9	-374.4	337.8	-373.0	1.21	-0.60	24.40
7,725.0	2.53	152.40	7,699.9	-375.4	338.3	-373.9	0.81	0.56	-13.80
7,750.0	2.49	153.07	7,724.9	-376.4	338.8	-374.9	0.20	-0.16	2.68
7,775.0	2.45	151.65	7,749.9	-377.3	339.3	-375.9	0.29	-0.16	-5.68
7,800.0	2.50	153.36	7,774.8	-378.3	339.8	-376.8	0.36	0.20	6.84
7,825.0	2.41	156.09	7,799.8	-379.3	340.2	-377.8	0.59	-0.36	10.92
7,850.0	2.49	155.73	7,824.8	-380.2	340.6	-378.8	0.33	0.32	-1.44
7,875.0	2.44	160.10	7,849.8	-381.2	341.0	-379.8	0.78	-0.20	17.48

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	2.35	160.74	7,874.7	-382.2	341.4	-380.7	0.38	-0.36	2.56
7,925.0	2.34	167.93	7,899.7	-383.2	341.7	-381.7	1.18	-0.04	28.76
7,950.0	2.30	169.44	7,924.7	-384.2	341.9	-382.7	0.29	-0.16	6.04
7,975.0	2.21	176.63	7,949.7	-385.2	342.0	-383.7	1.19	-0.36	28.76
8,000.0	2.25	175.03	7,974.7	-386.1	342.1	-384.7	0.30	0.16	-6.40
8,025.0	2.26	171.52	7,999.6	-387.1	342.2	-385.6	0.55	0.04	-14.04
8,050.0	2.21	171.39	8,024.6	-388.1	342.3	-386.6	0.20	-0.20	-0.52
8,075.0	2.21	175.42	8,049.6	-389.0	342.4	-387.6	0.62	0.00	16.12
8,100.0	2.29	174.69	8,074.6	-390.0	342.5	-388.5	0.34	0.32	-2.92
8,125.0	2.28	174.53	8,099.6	-391.0	342.6	-389.5	0.05	-0.04	-0.64
8,150.0	2.18	170.32	8,124.5	-392.0	342.7	-390.5	0.77	-0.40	-16.84
8,175.0	2.24	173.33	8,149.5	-392.9	342.9	-391.4	0.52	0.24	12.04
8,200.0	2.30	173.86	8,174.5	-393.9	343.0	-392.4	0.25	0.24	2.12
8,225.0	2.28	175.30	8,199.5	-394.9	343.1	-393.4	0.24	-0.08	5.76
8,250.0	2.07	171.93	8,224.5	-395.8	343.2	-394.4	0.98	-0.84	-13.48
8,275.0	1.98	174.66	8,249.5	-396.7	343.3	-395.2	0.53	-0.36	10.92
8,300.0	1.85	171.57	8,274.4	-397.5	343.4	-396.1	0.66	-0.52	-12.36
8,325.0	1.63	172.52	8,299.4	-398.3	343.5	-396.8	0.89	-0.88	3.80
8,350.0	1.10	173.65	8,324.4	-398.9	343.6	-397.4	2.12	-2.12	4.52
8,375.0	1.24	175.93	8,349.4	-399.4	343.6	-397.9	0.59	0.56	9.12
8,400.0	1.30	174.23	8,374.4	-399.9	343.7	-398.5	0.28	0.24	-6.80
8,425.0	1.31	169.04	8,399.4	-400.5	343.7	-399.0	0.47	0.04	-20.76
8,450.0	1.15	172.29	8,424.4	-401.0	343.8	-399.6	0.70	-0.64	13.00
8,475.0	1.27	173.60	8,449.4	-401.6	343.9	-400.1	0.49	0.48	5.24
8,500.0	1.27	170.15	8,474.4	-402.1	344.0	-400.6	0.31	0.00	-13.80
8,525.0	1.18	166.39	8,499.4	-402.6	344.1	-401.2	0.48	-0.36	-15.04
8,550.0	1.10	168.26	8,524.4	-403.1	344.2	-401.6	0.35	-0.32	7.48
8,575.0	1.15	169.86	8,549.4	-403.6	344.3	-402.1	0.24	0.20	6.40
8,600.0	1.04	177.12	8,574.4	-404.1	344.3	-402.6	0.71	-0.44	29.04
8,625.0	1.15	172.99	8,599.4	-404.6	344.4	-403.1	0.54	0.44	-16.52
8,650.0	1.14	166.54	8,624.4	-405.0	344.5	-403.6	0.52	-0.04	-25.80
8,675.0	1.09	174.21	8,649.4	-405.5	344.6	-404.0	0.63	-0.20	30.68
8,700.0	1.16	173.83	8,674.3	-406.0	344.6	-404.5	0.28	0.28	-1.52
8,725.0	1.24	171.05	8,699.3	-406.5	344.7	-405.0	0.40	0.32	-11.12
8,750.0	1.11	166.92	8,724.3	-407.0	344.8	-405.5	0.62	-0.52	-16.52
8,775.0	1.01	177.14	8,749.3	-407.5	344.8	-406.0	0.85	-0.40	40.88
8,800.0	1.17	175.87	8,774.3	-408.0	344.9	-406.5	0.65	0.64	-5.08
8,825.0	1.15	172.14	8,799.3	-408.5	344.9	-407.0	0.31	-0.08	-14.92
8,850.0	1.01	178.07	8,824.3	-408.9	345.0	-407.4	0.72	-0.56	23.72
8,875.0	1.05	178.76	8,849.3	-409.4	345.0	-407.9	0.17	0.16	2.76
8,900.0	1.16	175.64	8,874.3	-409.9	345.0	-408.4	0.50	0.44	-12.48
8,925.0	1.14	173.54	8,899.3	-410.4	345.0	-408.9	0.19	-0.08	-8.40
8,950.0	1.11	175.01	8,924.3	-410.9	345.1	-409.4	0.17	-0.12	5.88

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	1.06	178.26	8,949.3	-411.3	345.1	-409.8	0.32	-0.20	13.00
9,000.0	1.21	181.56	8,974.3	-411.8	345.1	-410.3	0.65	0.60	13.20
9,025.0	1.13	174.26	8,999.3	-412.3	345.1	-410.8	0.68	-0.32	-29.20
9,050.0	1.04	186.97	9,024.3	-412.8	345.1	-411.3	1.03	-0.36	50.84
9,075.0	1.15	185.22	9,049.3	-413.3	345.1	-411.8	0.46	0.44	-7.00
9,100.0	1.16	184.39	9,074.3	-413.8	345.0	-412.3	0.08	0.04	-3.32
9,125.0	1.17	184.97	9,099.3	-414.3	345.0	-412.8	0.06	0.04	2.32
9,150.0	0.95	182.88	9,124.3	-414.7	345.0	-413.3	0.89	-0.88	-8.36
9,175.0	1.15	187.12	9,149.3	-415.2	344.9	-413.7	0.86	0.80	16.96
9,200.0	1.17	184.86	9,174.3	-415.7	344.9	-414.2	0.20	0.08	-9.04
9,225.0	1.17	184.80	9,199.2	-416.2	344.8	-414.7	0.00	0.00	-0.24
9,250.0	1.31	177.94	9,224.2	-416.7	344.8	-415.3	0.82	0.56	-27.44
9,275.0	1.08	188.89	9,249.2	-417.3	344.8	-415.8	1.29	-0.92	43.80
9,300.0	1.08	188.26	9,274.2	-417.7	344.7	-416.2	0.05	0.00	-2.52
9,325.0	1.18	180.57	9,299.2	-418.2	344.7	-416.7	0.73	0.40	-30.76
9,350.0	1.08	189.12	9,324.2	-418.7	344.6	-417.2	0.78	-0.40	34.20
9,375.0	1.10	188.52	9,349.2	-419.2	344.6	-417.7	0.09	0.08	-2.40
9,400.0	1.19	191.23	9,374.2	-419.7	344.5	-418.2	0.42	0.36	10.84
9,425.0	1.18	188.36	9,399.2	-420.2	344.4	-418.7	0.24	-0.04	-11.48
9,450.0	1.02	187.41	9,424.2	-420.7	344.3	-419.2	0.64	-0.64	-3.80
9,475.0	1.09	196.06	9,449.2	-421.1	344.2	-419.6	0.70	0.28	34.60
9,500.0	1.14	194.85	9,474.2	-421.6	344.1	-420.1	0.22	0.20	-4.84
9,525.0	1.06	190.84	9,499.2	-422.0	344.0	-420.6	0.44	-0.32	-16.04
9,550.0	1.03	198.67	9,524.2	-422.5	343.9	-421.0	0.58	-0.12	31.32
9,575.0	1.09	197.67	9,549.2	-422.9	343.7	-421.4	0.25	0.24	-4.00
9,600.0	1.13	194.02	9,574.2	-423.4	343.6	-421.9	0.32	0.16	-14.60
9,625.0	1.18	193.03	9,599.2	-423.9	343.5	-422.4	0.22	0.20	-3.96
9,650.0	1.23	191.91	9,624.2	-424.4	343.4	-422.9	0.22	0.20	-4.48
9,675.0	1.04	194.57	9,649.2	-424.9	343.3	-423.4	0.79	-0.76	10.64
9,700.0	1.16	198.02	9,674.2	-425.3	343.1	-423.9	0.55	0.48	13.80
9,725.0	1.11	191.25	9,699.2	-425.8	343.0	-424.3	0.57	-0.20	-27.08
9,750.0	1.08	198.50	9,724.1	-426.3	342.9	-424.8	0.57	-0.12	29.00
9,775.0	1.17	198.57	9,749.1	-426.7	342.7	-425.3	0.36	0.36	0.28
9,800.0	1.14	199.75	9,774.1	-427.2	342.6	-425.7	0.15	-0.12	4.72
9,825.0	1.18	198.76	9,799.1	-427.7	342.4	-426.2	0.18	0.16	-3.96
9,850.0	1.11	198.29	9,824.1	-428.2	342.2	-426.7	0.28	-0.28	-1.88
9,875.0	1.17	199.59	9,849.1	-428.6	342.1	-427.2	0.26	0.24	5.20
9,900.0	1.14	199.88	9,874.1	-429.1	341.9	-427.6	0.12	-0.12	1.16
9,925.0	1.24	198.83	9,899.1	-429.6	341.7	-428.1	0.41	0.40	-4.20
9,950.0	1.18	190.16	9,924.1	-430.1	341.6	-428.6	0.77	-0.24	-34.68
9,975.0	1.12	199.85	9,949.1	-430.6	341.5	-429.1	0.81	-0.24	38.76
10,000.0	1.11	197.43	9,974.1	-431.1	341.3	-429.6	0.19	-0.04	-9.68
10,025.0	1.06	200.04	9,999.1	-431.5	341.2	-430.0	0.28	-0.20	10.44
10,050.0	0.97	208.06	10,024.1	-431.9	341.0	-430.4	0.67	-0.36	32.08

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	1.00	208.23	10,049.1	-432.3	340.8	-430.8	0.12	0.12	0.68
10,100.0	1.01	214.38	10,074.1	-432.7	340.6	-431.2	0.43	0.04	24.60
10,125.0	1.01	211.03	10,099.1	-433.0	340.3	-431.6	0.24	0.00	-13.40
10,150.0	0.85	233.07	10,124.1	-433.3	340.1	-431.9	1.55	-0.64	88.16
10,175.0	1.24	334.20	10,149.1	-433.2	339.8	-431.7	6.53	1.56	404.52
10,200.0	3.75	359.07	10,174.0	-432.1	339.7	-430.7	10.70	10.04	99.48
10,225.0	5.11	1.34	10,199.0	-430.2	339.7	-428.7	5.48	5.44	9.08
10,250.0	5.54	3.07	10,223.9	-427.9	339.8	-426.4	1.84	1.72	6.92
10,275.0	5.58	2.39	10,248.7	-425.5	339.9	-424.0	0.31	0.16	-2.72
10,300.0	5.61	2.60	10,273.6	-423.0	340.0	-421.6	0.15	0.12	0.84
10,325.0	5.43	1.91	10,298.5	-420.6	340.1	-419.2	0.77	-0.72	-2.76
10,350.0	5.26	1.10	10,323.4	-418.3	340.1	-416.8	0.74	-0.68	-3.24
10,375.0	5.35	0.80	10,348.3	-416.0	340.2	-414.5	0.38	0.36	-1.20
10,400.0	5.28	2.70	10,373.2	-413.7	340.3	-412.2	0.76	-0.28	7.60
10,425.0	4.91	0.97	10,398.1	-411.5	340.3	-410.0	1.60	-1.48	-6.92
10,450.0	4.66	1.50	10,423.0	-409.4	340.4	-407.9	1.02	-1.00	2.12
10,475.0	4.63	359.91	10,447.9	-407.4	340.4	-405.9	0.53	-0.12	-6.36
10,500.0	4.44	0.47	10,472.8	-405.4	340.4	-403.9	0.78	-0.76	2.24
10,525.0	4.38	0.37	10,497.8	-403.5	340.4	-402.0	0.24	-0.24	-0.40
10,550.0	4.29	354.20	10,522.7	-401.6	340.3	-400.1	1.90	-0.36	-24.68
10,575.0	4.32	1.17	10,547.6	-399.7	340.3	-398.2	2.09	0.12	27.88
10,600.0	4.02	358.80	10,572.6	-397.9	340.3	-396.4	1.38	-1.20	-9.48
10,625.0	3.94	0.06	10,597.5	-396.1	340.2	-394.7	0.47	-0.32	5.04
10,650.0	3.84	357.04	10,622.4	-394.5	340.2	-393.0	0.91	-0.40	-12.08
10,675.0	3.71	357.96	10,647.4	-392.8	340.1	-391.3	0.57	-0.52	3.68
10,700.0	3.63	356.96	10,672.3	-391.2	340.0	-389.7	0.41	-0.32	-4.00
10,725.0	3.73	0.35	10,697.3	-389.6	340.0	-388.1	0.96	0.40	13.56
10,750.0	3.61	356.36	10,722.2	-388.0	340.0	-386.5	1.13	-0.48	-15.96
10,775.0	3.76	358.49	10,747.2	-386.4	339.9	-384.9	0.81	0.60	8.52
10,800.0	3.55	356.61	10,772.1	-384.8	339.8	-383.3	0.97	-0.84	-7.52
10,825.0	3.79	0.01	10,797.1	-383.2	339.8	-381.7	1.30	0.96	13.60
10,850.0	3.68	357.79	10,822.0	-381.6	339.8	-380.1	0.73	-0.44	-8.88
10,875.0	3.36	357.12	10,847.0	-380.0	339.7	-378.6	1.29	-1.28	-2.68
10,900.0	2.72	357.85	10,871.9	-378.7	339.6	-377.3	2.56	-2.56	2.92
10,925.0	2.42	358.27	10,896.9	-377.6	339.6	-376.1	1.20	-1.20	1.68
10,950.0	2.29	357.94	10,921.9	-376.6	339.6	-375.1	0.52	-0.52	-1.32
10,975.0	2.18	357.43	10,946.9	-375.6	339.5	-374.1	0.45	-0.44	-2.04
11,000.0	2.25	356.37	10,971.9	-374.6	339.5	-373.2	0.32	0.28	-4.24
11,025.0	2.26	356.36	10,996.8	-373.7	339.4	-372.2	0.04	0.04	-0.04
11,050.0	2.25	354.46	11,021.8	-372.7	339.3	-371.2	0.30	-0.04	-7.60
11,075.0	2.11	356.09	11,046.8	-371.7	339.2	-370.3	0.61	-0.56	6.52
11,100.0	2.10	353.50	11,071.8	-370.8	339.2	-369.4	0.38	-0.04	-10.36
11,125.0	2.04	353.16	11,096.8	-369.9	339.1	-368.5	0.24	-0.24	-1.36

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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	1.98	353.86	11,121.8	-369.0	339.0	-367.6	0.26	-0.24	2.80
11,175.0	1.97	352.84	11,146.7	-368.2	338.9	-366.7	0.15	-0.04	-4.08
11,200.0	1.88	354.08	11,171.7	-367.4	338.8	-365.9	0.40	-0.36	4.96
11,225.0	1.82	349.86	11,196.7	-366.6	338.6	-365.1	0.60	-0.24	-16.88
11,250.0	1.76	349.94	11,221.7	-365.8	338.5	-364.3	0.24	-0.24	0.32
11,275.0	1.63	348.96	11,246.7	-365.1	338.4	-363.6	0.53	-0.52	-3.92
11,300.0	1.68	348.62	11,271.7	-364.4	338.2	-362.9	0.20	0.20	-1.36
11,325.0	1.74	345.37	11,296.7	-363.6	338.1	-362.2	0.46	0.24	-13.00
11,350.0	1.77	348.86	11,321.7	-362.9	337.9	-361.4	0.44	0.12	13.96
11,375.0	1.69	347.76	11,346.6	-362.1	337.7	-360.7	0.35	-0.32	-4.40
11,400.0	1.80	349.63	11,371.6	-361.4	337.6	-359.9	0.50	0.44	7.48
11,425.0	1.89	345.59	11,396.6	-360.6	337.4	-359.2	0.63	0.36	-16.16
11,450.0	1.74	346.55	11,421.6	-359.8	337.2	-358.4	0.61	-0.60	3.84
11,475.0	1.69	347.80	11,446.6	-359.1	337.1	-357.7	0.25	-0.20	5.00
11,500.0	1.59	346.50	11,471.6	-358.4	336.9	-357.0	0.43	-0.40	-5.20
11,525.0	1.39	345.28	11,496.6	-357.8	336.7	-356.3	0.81	-0.80	-4.88
11,550.0	1.22	340.77	11,521.6	-357.2	336.6	-355.8	0.79	-0.68	-18.04
11,575.0	1.02	332.89	11,546.6	-356.8	336.4	-355.3	1.01	-0.80	-31.52
11,600.0	0.93	330.56	11,571.6	-356.4	336.2	-355.0	0.39	-0.36	-9.32
11,625.0	0.92	319.96	11,596.6	-356.1	336.0	-354.6	0.68	-0.04	-42.40
11,650.0	0.81	313.25	11,621.6	-355.8	335.7	-354.4	0.60	-0.44	-26.84
11,675.0	0.74	310.74	11,646.6	-355.6	335.5	-354.1	0.31	-0.28	-10.04
11,700.0	0.75	298.98	11,671.6	-355.4	335.2	-354.0	0.61	0.04	-47.04
11,725.0	0.70	305.80	11,696.5	-355.2	334.9	-353.8	0.40	-0.20	27.28
11,750.0	0.69	297.92	11,721.5	-355.1	334.7	-353.6	0.38	-0.04	-31.52
11,775.0	0.77	295.09	11,746.5	-354.9	334.4	-353.5	0.35	0.32	-11.32
11,800.0	0.74	286.54	11,771.5	-354.8	334.1	-353.4	0.47	-0.12	-34.20
11,825.0	0.80	291.75	11,796.5	-354.7	333.8	-353.3	0.37	0.24	20.84
11,850.0	0.90	288.17	11,821.5	-354.6	333.4	-353.1	0.45	0.40	-14.32
11,875.0	0.91	287.79	11,846.5	-354.5	333.0	-353.0	0.05	0.04	-1.52
11,900.0	1.11	283.09	11,871.5	-354.3	332.6	-352.9	0.87	0.80	-18.80
12,081.0	1.00	265.81	12,052.5	-354.1	329.3	-352.6	0.19	-0.06	-9.55
FIRST PHX SVY @ 12081'MD									
12,176.0	1.40	309.24	12,147.5	-353.4	327.6	-352.0	1.01	0.42	45.72
12,270.0	4.33	342.01	12,241.4	-349.3	325.6	-347.9	3.45	3.12	34.86
12,302.0	6.11	348.96	12,273.2	-346.5	324.9	-345.1	5.89	5.56	21.72
12,334.0	9.93	354.28	12,304.9	-342.0	324.3	-340.6	12.15	11.94	16.63
12,365.0	15.31	353.68	12,335.1	-335.3	323.6	-333.9	17.36	17.35	-1.94
12,396.0	20.15	352.90	12,364.7	-325.9	322.5	-324.5	15.63	15.61	-2.52
12,428.0	22.86	353.18	12,394.4	-314.3	321.1	-312.9	8.47	8.47	0.88
12,459.0	25.41	353.62	12,422.7	-301.7	319.6	-300.3	8.25	8.23	1.42
12,491.0	27.10	352.73	12,451.4	-287.6	317.9	-286.3	5.42	5.28	-2.78
12,522.0	28.64	352.17	12,478.8	-273.3	316.0	-271.9	5.04	4.97	-1.81

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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)
12,554.0	30.57	351.55	12,506.6	-257.6	313.8	-256.3	6.11	6.03	-1.94
12,585.0	31.88	351.83	12,533.2	-241.7	311.5	-240.4	4.25	4.23	0.90
12,617.0	33.40	350.35	12,560.1	-224.7	308.8	-223.4	5.36	4.75	-4.63
12,648.0	36.15	348.78	12,585.6	-207.3	305.6	-206.0	9.33	8.87	-5.06
12,680.0	39.51	347.83	12,610.8	-188.1	301.6	-186.8	10.66	10.50	-2.97
12,711.0	41.95	347.69	12,634.3	-168.3	297.3	-167.0	7.88	7.87	-0.45
12,743.0	43.60	347.90	12,657.8	-147.1	292.7	-145.8	5.18	5.16	0.66
12,774.0	44.65	348.77	12,680.1	-125.9	288.3	-124.7	3.91	3.39	2.81
12,805.0	46.36	348.35	12,701.8	-104.3	284.0	-103.0	5.60	5.52	-1.35
12,807.0	46.40	348.25	12,703.2	-102.9	283.7	-101.6	4.32	2.22	-5.12
FTP @ 12807'MD / 12703.2'TVD									
12,837.0	47.08	346.73	12,723.7	-81.5	278.9	-80.3	4.32	2.25	-5.06
12,869.0	48.62	346.26	12,745.2	-58.5	273.4	-57.3	4.93	4.81	-1.47
12,900.0	52.79	346.38	12,764.8	-35.2	267.7	-34.0	13.45	13.45	0.39
12,931.0	56.24	346.96	12,782.8	-10.6	261.9	-9.5	11.23	11.13	1.87
12,963.0	58.50	348.08	12,800.1	15.7	256.1	16.8	7.65	7.06	3.50
12,994.0	59.41	348.74	12,816.1	41.7	250.7	42.8	3.46	2.94	2.13
13,026.0	61.83	349.49	12,831.8	69.1	245.5	70.2	7.83	7.56	2.34
13,057.0	66.93	350.29	12,845.2	96.6	240.6	97.7	16.62	16.45	2.58
13,089.0	67.65	350.05	12,857.5	125.7	235.5	126.7	2.35	2.25	-0.75
13,120.0	67.84	349.87	12,869.3	154.0	230.5	155.0	0.82	0.61	-0.58
13,152.0	71.81	350.06	12,880.3	183.5	225.3	184.5	12.42	12.41	0.59
13,183.0	76.97	350.89	12,888.6	213.0	220.4	213.9	16.84	16.65	2.68
13,214.0	79.84	351.15	12,894.9	243.0	215.6	243.9	9.29	9.26	0.84
13,246.0	82.49	350.85	12,899.8	274.2	210.7	275.1	8.33	8.28	-0.94
13,277.0	84.36	350.62	12,903.3	304.6	205.7	305.5	6.08	6.03	-0.74
13,309.0	86.34	350.98	12,905.9	336.1	200.6	336.9	6.29	6.19	1.13
13,403.0	90.61	351.82	12,908.4	429.0	186.6	429.8	4.63	4.54	0.89
13,497.0	90.85	351.79	12,907.2	522.0	173.2	522.7	0.26	0.26	-0.03
13,592.0	91.47	351.87	12,905.3	616.0	159.7	616.7	0.66	0.65	0.08
13,631.0	91.48	352.09	12,904.3	654.6	154.2	655.3	0.56	0.03	0.56
13,725.0	93.19	352.88	12,900.5	747.7	142.0	748.3	2.00	1.82	0.84
13,819.0	93.05	355.14	12,895.3	841.1	132.2	841.6	2.41	-0.15	2.40
13,914.0	93.10	357.22	12,890.3	935.7	125.8	936.2	2.19	0.05	2.19
14,008.0	94.10	359.95	12,884.3	1,029.5	123.5	1,030.0	3.09	1.06	2.90
14,102.0	89.79	358.56	12,881.2	1,123.4	122.3	1,123.9	4.82	-4.59	-1.48
14,197.0	91.29	1.18	12,880.3	1,218.4	122.1	1,218.9	3.18	1.58	2.76
14,291.0	89.85	1.23	12,879.3	1,312.4	124.1	1,312.9	1.53	-1.53	0.05
14,385.0	89.50	1.11	12,879.9	1,406.3	126.0	1,406.9	0.39	-0.37	-0.13
14,479.0	90.97	0.97	12,879.5	1,500.3	127.7	1,500.8	1.57	1.56	-0.15
14,574.0	84.86	1.57	12,882.9	1,595.2	129.8	1,595.7	6.46	-6.43	0.63
14,668.0	85.00	358.27	12,891.2	1,688.8	129.7	1,689.3	3.50	0.15	-3.51
14,762.0	89.33	355.87	12,895.9	1,782.5	124.9	1,783.1	5.26	4.61	-2.55
14,856.0	96.31	355.68	12,891.3	1,876.1	117.9	1,876.6	7.43	7.43	-0.20

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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)
14,950.0	95.13	357.11	12,881.9	1,969.4	112.1	1,969.9	1.97	-1.26	1.52
15,055.0	91.33	356.43	12,876.0	2,074.1	106.2	2,074.5	3.68	-3.62	-0.65
15,149.0	92.40	358.95	12,872.9	2,168.0	102.4	2,168.4	2.91	1.14	2.68
15,243.0	93.25	358.96	12,868.3	2,261.8	100.7	2,262.2	0.90	0.90	0.01
15,337.0	90.51	356.50	12,865.2	2,355.7	96.9	2,356.1	3.92	-2.91	-2.62
15,432.0	91.45	358.28	12,863.6	2,450.6	92.6	2,450.9	2.12	0.99	1.87
15,527.0	91.76	357.40	12,860.9	2,545.5	89.0	2,545.8	0.98	0.33	-0.93
15,621.0	92.75	359.52	12,857.2	2,639.4	86.5	2,639.7	2.49	1.05	2.26
15,715.0	93.06	0.57	12,852.5	2,733.2	86.6	2,733.6	1.16	0.33	1.12
15,809.0	92.05	359.08	12,848.3	2,827.1	86.3	2,827.5	1.91	-1.07	-1.59
15,903.0	90.54	357.00	12,846.1	2,921.0	83.1	2,921.4	2.73	-1.61	-2.21
15,997.0	90.22	355.12	12,845.5	3,014.8	76.6	3,015.1	2.03	-0.34	-2.00
16,091.0	92.89	357.46	12,843.0	3,108.6	70.5	3,108.8	3.78	2.84	2.49
16,185.0	93.65	358.42	12,837.6	3,202.4	67.2	3,202.6	1.30	0.81	1.02
16,280.0	93.17	358.27	12,832.0	3,297.1	64.4	3,297.4	0.53	-0.51	-0.16
16,374.0	91.11	358.30	12,828.4	3,391.0	61.6	3,391.3	2.19	-2.19	0.03
16,468.0	90.83	0.30	12,826.9	3,485.0	60.5	3,485.2	2.15	-0.30	2.13
16,563.0	91.33	1.31	12,825.1	3,580.0	61.8	3,580.2	1.19	0.53	1.06
16,657.0	91.13	1.44	12,823.0	3,673.9	64.1	3,674.2	0.25	-0.21	0.14
16,752.0	90.76	0.08	12,821.5	3,768.9	65.3	3,769.2	1.48	-0.39	-1.43
16,846.0	89.37	0.19	12,821.4	3,862.9	65.5	3,863.2	1.48	-1.48	0.12
16,940.0	90.60	1.21	12,821.4	3,956.9	66.7	3,957.1	1.70	1.31	1.09
17,035.0	92.24	2.53	12,819.0	4,051.8	69.8	4,052.1	2.22	1.73	1.39
17,123.0	91.80	2.93	12,815.9	4,139.7	74.0	4,139.9	0.68	-0.50	0.45
17,217.0	93.14	1.31	12,811.9	4,233.5	77.5	4,233.8	2.24	1.43	-1.72
17,312.0	93.14	359.74	12,806.7	4,328.3	78.3	4,328.6	1.65	0.00	-1.65
17,406.0	93.07	358.41	12,801.6	4,422.2	76.8	4,422.5	1.41	-0.07	-1.41
17,500.0	92.40	359.16	12,797.1	4,516.1	74.8	4,516.3	1.07	-0.71	0.80
17,595.0	92.23	358.64	12,793.3	4,611.0	73.0	4,611.2	0.58	-0.18	-0.55
17,689.0	92.87	357.94	12,789.1	4,704.8	70.2	4,705.1	1.01	0.68	-0.74
17,784.0	92.08	356.61	12,785.0	4,799.6	65.7	4,799.9	1.63	-0.83	-1.40
17,878.0	91.19	357.42	12,782.3	4,893.5	60.8	4,893.7	1.28	-0.95	0.86
17,972.0	91.22	357.79	12,780.3	4,987.4	56.9	4,987.6	0.39	0.03	0.39
18,066.0	91.20	358.25	12,778.3	5,081.3	53.6	5,081.5	0.49	-0.02	0.49
18,161.0	90.89	0.18	12,776.6	5,176.3	52.3	5,176.4	2.06	-0.33	2.03
18,255.0	92.31	0.67	12,774.0	5,270.2	53.0	5,270.4	1.60	1.51	0.52
18,350.0	91.80	358.74	12,770.6	5,365.2	52.5	5,365.3	2.10	-0.54	-2.03
18,444.0	92.36	357.22	12,767.2	5,459.0	49.2	5,459.2	1.72	0.60	-1.62
18,538.0	91.64	355.44	12,763.9	5,552.8	43.2	5,552.9	2.04	-0.77	-1.89
18,633.0	93.46	357.70	12,759.7	5,647.5	37.5	5,647.6	3.05	1.92	2.38
18,727.0	94.07	1.31	12,753.5	5,741.3	36.7	5,741.4	3.89	0.65	3.84
18,821.0	92.96	4.06	12,747.7	5,835.0	41.1	5,835.1	3.15	-1.18	2.93
18,915.0	93.08	3.29	12,742.8	5,928.7	47.1	5,928.8	0.83	0.13	-0.82

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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)
19,010.0	93.04	2.47	12,737.7	6,023.4	51.9	6,023.6	0.86	-0.04	-0.86
19,104.0	93.10	1.70	12,732.7	6,117.2	55.3	6,117.4	0.82	0.06	-0.82
19,198.0	92.42	2.40	12,728.1	6,211.0	58.7	6,211.2	1.04	-0.72	0.74
19,293.0	92.23	2.11	12,724.3	6,305.9	62.4	6,306.1	0.36	-0.20	-0.31
19,387.0	92.00	1.64	12,720.8	6,399.8	65.5	6,400.0	0.56	-0.24	-0.50
19,481.0	92.29	0.51	12,717.3	6,493.7	67.2	6,493.9	1.24	0.31	-1.20
19,576.0	91.88	358.05	12,713.8	6,588.6	66.0	6,588.8	2.62	-0.43	-2.59
19,670.0	92.97	359.06	12,709.9	6,682.5	63.7	6,682.7	1.58	1.16	1.07
19,765.0	91.12	357.95	12,706.5	6,777.4	61.2	6,777.6	2.27	-1.95	-1.17
19,859.0	91.18	356.91	12,704.6	6,871.3	57.0	6,871.5	1.11	0.06	-1.11
19,953.0	91.00	356.38	12,702.8	6,965.1	51.5	6,965.3	0.60	-0.19	-0.56
20,048.0	91.62	357.86	12,700.6	7,060.0	46.7	7,060.1	1.69	0.65	1.56
20,142.0	90.83	359.96	12,698.6	7,153.9	44.9	7,154.0	2.39	-0.84	2.23
20,236.0	92.26	1.36	12,696.1	7,247.9	46.0	7,248.0	2.13	1.52	1.49
20,331.0	92.25	1.23	12,692.3	7,342.8	48.1	7,342.9	0.14	-0.01	-0.14
20,425.0	92.23	359.38	12,688.7	7,436.7	48.6	7,436.8	1.97	-0.02	-1.97
20,519.0	91.18	358.28	12,685.9	7,530.6	46.7	7,530.8	1.62	-1.12	-1.17
20,613.0	90.18	357.74	12,684.8	7,624.6	43.5	7,624.7	1.21	-1.06	-0.57
20,707.0	89.28	358.07	12,685.2	7,718.5	40.0	7,718.6	1.02	-0.96	0.35
20,801.0	90.09	358.34	12,685.7	7,812.4	37.1	7,812.5	0.91	0.86	0.29
20,895.0	89.31	358.00	12,686.2	7,906.4	34.1	7,906.5	0.91	-0.83	-0.36
20,989.0	89.72	358.33	12,687.0	8,000.3	31.1	8,000.4	0.56	0.44	0.35
21,083.0	90.13	356.88	12,687.1	8,094.3	27.1	8,094.3	1.60	0.44	-1.54
21,178.0	91.87	356.84	12,685.5	8,189.1	21.9	8,189.1	1.83	1.83	-0.04
21,272.0	93.05	358.70	12,681.4	8,282.9	18.3	8,282.9	2.34	1.26	1.98
21,366.0	93.02	1.50	12,676.5	8,376.8	18.4	8,376.8	2.97	-0.03	2.98
21,461.0	91.43	3.44	12,672.8	8,471.6	22.5	8,471.6	2.64	-1.67	2.04
21,555.0	92.22	4.36	12,669.8	8,565.4	28.9	8,565.4	1.29	0.84	0.98
21,649.0	90.15	3.58	12,667.8	8,659.1	35.4	8,659.2	2.35	-2.20	-0.83
21,743.0	90.83	3.36	12,667.0	8,752.9	41.1	8,753.0	0.76	0.72	-0.23
21,838.0	90.78	3.28	12,665.7	8,847.8	46.6	8,847.9	0.10	-0.05	-0.08
21,932.0	90.01	2.90	12,665.0	8,941.6	51.7	8,941.8	0.91	-0.82	-0.40
22,026.0	90.27	2.99	12,664.8	9,035.5	56.5	9,035.7	0.29	0.28	0.10
22,121.0	89.75	2.62	12,664.8	9,130.4	61.2	9,130.6	0.67	-0.55	-0.39
22,215.0	89.63	2.36	12,665.3	9,224.3	65.3	9,224.5	0.30	-0.13	-0.28
22,309.0	89.54	2.41	12,666.0	9,318.2	69.2	9,318.4	0.11	-0.10	0.05
22,404.0	88.70	1.99	12,667.4	9,413.1	72.8	9,413.4	0.99	-0.88	-0.44
22,498.0	87.90	1.47	12,670.2	9,507.0	75.6	9,507.3	1.01	-0.85	-0.55
22,592.0	87.91	1.57	12,673.7	9,600.9	78.1	9,601.2	0.11	0.01	0.11
22,687.0	87.05	1.24	12,677.8	9,695.8	80.5	9,696.1	0.97	-0.91	-0.35
22,781.0	87.14	1.35	12,682.6	9,789.7	82.6	9,789.9	0.15	0.10	0.12
22,861.0	86.69	1.49	12,686.9	9,869.5	84.6	9,869.8	0.59	-0.56	0.17
LTP @ 22861'MD / 12686.9'TVD									
22,875.0	86.61	1.51	12,687.7	9,883.5	84.9	9,883.8	0.59	-0.56	0.17

Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well BASEBALL CAP FED COM #701H
Project:	LEA COUNTY, NM	TVD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Site:	BULLDOG	MD Reference:	KB=30' @ 3407.1usft (SCAN QUEST)
Well:	BASEBALL CAP FED COM #701H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	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)
22,964.0	86.86	1.50	12,692.8	9,972.3	87.3	9,972.6	0.28	0.28	-0.01
FINAL PHX SVY @ 22964'MD / 12692.8'TVD									
22,990.0	86.86	1.50	12,694.2	9,998.3	87.9	9,998.6	0.00	0.00	0.00
PTD @ 22990'MD / 12694.2'TVD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,081.0	12,052.5	-354.1	329.3	FIRST PHX SVY @ 12081'MD
12,807.0	12,703.2	-102.9	283.7	FTP @ 12807'MD / 12703.2'TVD
22,861.0	12,686.9	9,869.5	84.6	LTP @ 22861'MD / 12686.9'TVD
22,964.0	12,692.8	9,972.3	87.3	FINAL PHX SVY @ 22964'MD / 12692.8'TVD
22,990.0	12,694.2	9,998.3	87.9	PTD @ 22990'MD / 12694.2'TVD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------