

SITE DETAILS: Grenemyer Pad

Site Centre Northing: 1248189.26
Easting: 3175594.84
Positional Uncertainty: 0.0
Convergence: 0.41
Local North: Grid

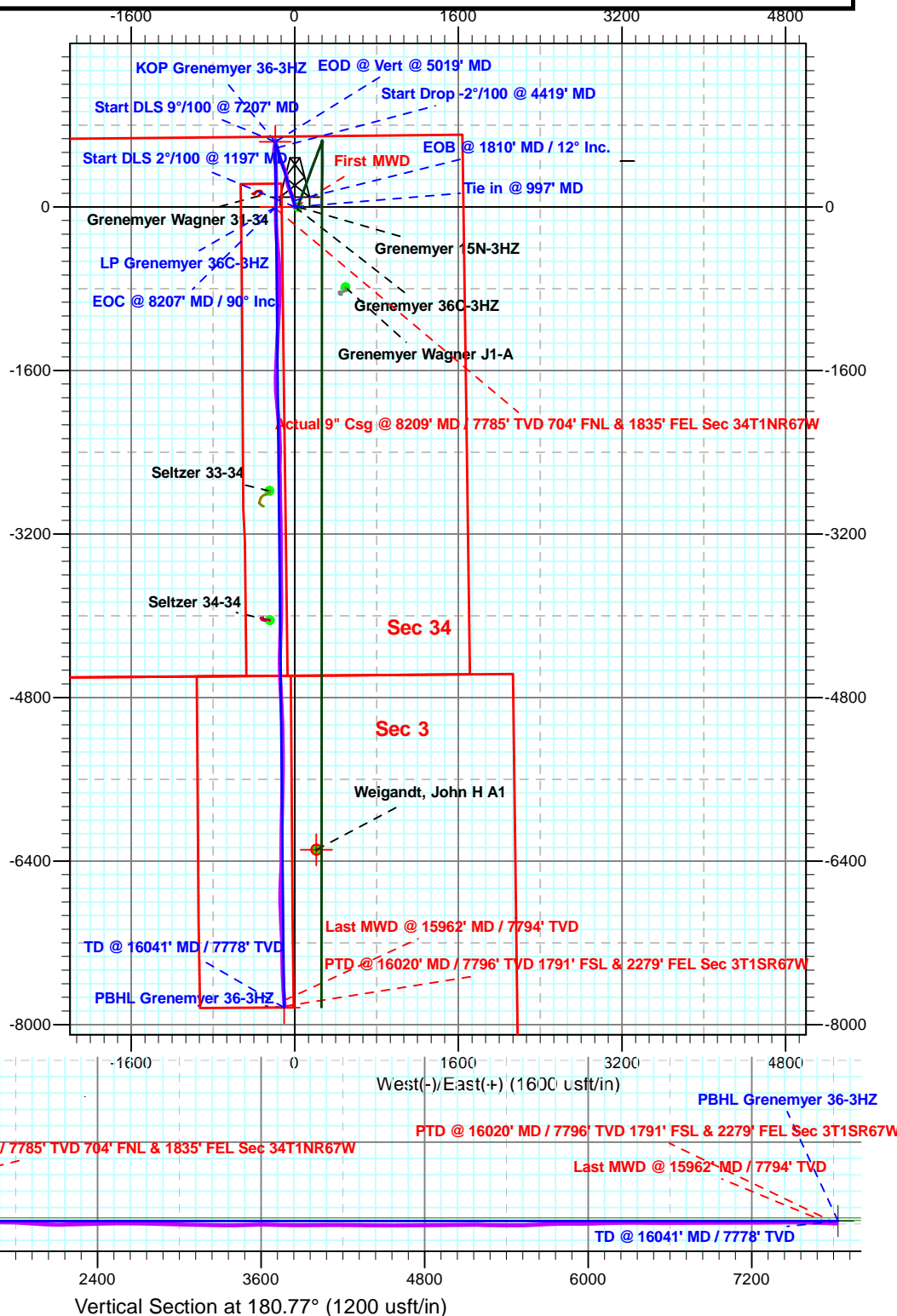
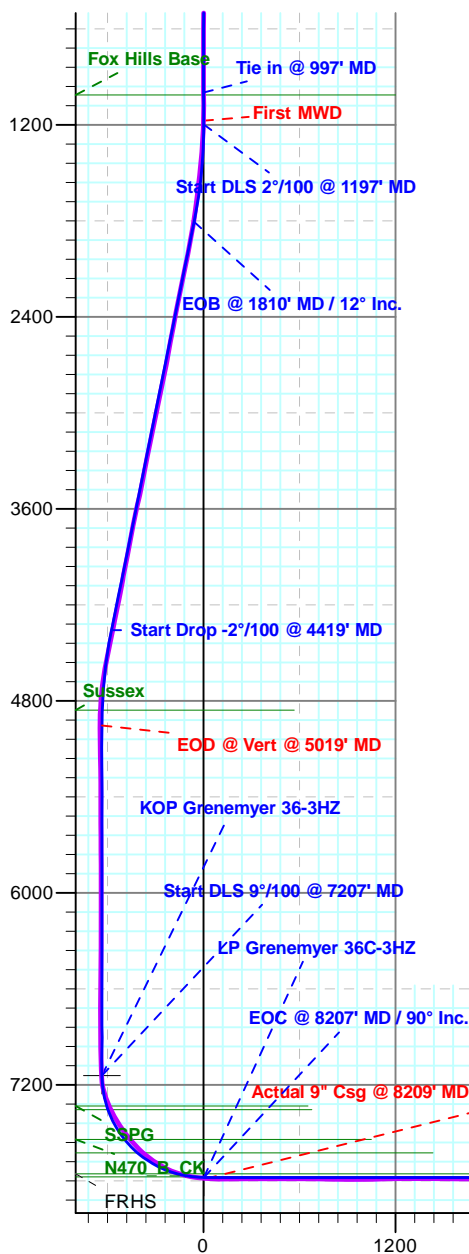


Azimuths to Grid North
Convergence: 0.41°
Total Correction: 8.13°

Magnetic Field
Strength: 52640.2snT
Dip Angle: 66.63°
Date: 1/21/2014
Model: IGRF2010

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
997.0	0.33	127.47	997.0	-0.2	3.4	0.00	0.00	0.1	
1197.0	0.33	127.47	1197.0	-0.9	4.3	0.00	0.00	0.8	
1810.4	12.00	342.82	1806.0	59.2	-13.2	2.00	-145.52	-59.0	
4419.3	12.00	342.82	4357.9	577.3	-173.3	0.00	0.00	-574.9	
5019.2	0.00	0.00	4953.4	637.1	-191.8	2.00	180.00	-634.5	
7207.2	0.00	0.00	7141.4	637.1	-191.8	0.00	0.00	-634.5	KOP Grenemyer 36-3HZ
8207.2	90.00	179.42	7778.0	0.5	-185.3	9.00	179.42	2.0	
16041.3	90.00	179.42	7778.0	-7833.2	-105.5	0.00	0.00	7833.9	PBHL Grenemyer 36-3HZ



Vertical Section at 180.77° (1200 usft/in)



Anadarko

**Weld Co., Co (NAD 83)
Grenemyer Pad
Grenemyer 36C-3HZ**

Wellbore #1

Design: OH

Standard Survey Report

06 March, 2014



Company:	Anadarko	Local Co-ordinate Reference:	Well Grenemyer 36C-3HZ
Project:	Weld Co., Co (NAD 83)	TVD Reference:	Well @ 5068.0usft (Xtreme 23)
Site:	Grenemyer Pad	MD Reference:	Well @ 5068.0usft (Xtreme 23)
Well:	Grenemyer 36C-3HZ	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Weld Co., Co (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Grenemyer Pad				
Site Position: From:		Northing:	1,248,189.25	usft	Latitude:	40° 0' 46.663 N
	Lat/Long	Easting:	3,175,594.84	usft	Longitude:	104° 52' 23.142 W
	Position Uncertainty:	0.0	usft	Slot Radius:	13-3/16 "	Grid Convergence:

Well	Grenemyer 36C-3HZ					
Well Position	+N-S	0.0 usft	Northing:	1,248,189.25 usft	Latitude:	40° 0' 46.663 N
	+E-W	0.0 usft	Easting:	3,175,594.84 usft	Longitude:	104° 52' 23.142 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,052.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/21/2014	8.54	66.63	52,640

Design	OH				
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	180.77	

Survey Program	Date	3/6/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	997.0	Survey #1 (Wellbore #1)	CT_GYRO_MS	Continuous Gyro Multishot	
1,174.0	16,020.0	Survey #2 (Wellbore #1)	MWD	MWD - Standard	

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	0.32	182.26	100.0	-0.3	0.0	0.3	0.32	0.32	0.00	
200.0	0.31	188.09	200.0	-0.8	-0.1	0.8	0.03	-0.01	5.83	
300.0	0.15	73.18	300.0	-1.1	0.0	1.1	0.40	-0.16	-114.91	
400.0	0.23	59.51	400.0	-0.9	0.3	0.9	0.09	0.08	-13.67	
500.0	0.40	45.09	500.0	-0.6	0.7	0.6	0.19	0.17	-14.42	
600.0	0.37	64.74	600.0	-0.2	1.3	0.2	0.13	-0.03	19.65	
700.0	0.23	60.44	700.0	0.1	1.8	-0.1	0.14	-0.14	-4.30	
800.0	0.38	87.71	800.0	0.2	2.3	-0.2	0.20	0.15	27.27	
900.0	0.37	106.34	900.0	0.1	2.9	-0.1	0.12	-0.01	18.63	

Company:	Anadarko	Local Co-ordinate Reference:	Well Grenemyer 36C-3HZ
Project:	Weld Co., Co (NAD 83)	TVD Reference:	Well @ 5068.0usft (Xtreme 23)
Site:	Grenemyer Pad	MD Reference:	Well @ 5068.0usft (Xtreme 23)
Well:	Grenemyer 36C-3HZ	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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)
997.0	0.33	127.47	997.0	-0.2	3.4	0.1	0.14	-0.04	21.78
1,174.0	0.40	327.30	1,174.0	0.0	3.5	-0.1	0.41	0.04	-90.49
First MWD									
1,268.0	4.00	351.30	1,267.9	3.6	2.8	-3.6	3.87	3.83	25.53
1,361.0	4.00	349.50	1,360.7	10.0	1.7	-10.0	0.14	0.00	-1.94
1,455.0	6.30	348.10	1,454.3	18.2	0.1	-18.2	2.45	2.45	-1.49
1,548.0	6.30	346.00	1,546.7	28.2	-2.2	-28.1	0.25	0.00	-2.26
1,642.0	7.60	343.30	1,640.0	39.1	-5.2	-39.1	1.43	1.38	-2.87
1,736.0	7.70	340.20	1,733.2	51.0	-9.2	-50.9	0.45	0.11	-3.30
1,829.0	9.90	338.40	1,825.1	64.3	-14.2	-64.1	2.38	2.37	-1.94
1,923.0	11.80	344.90	1,917.4	81.1	-19.7	-80.8	2.40	2.02	6.91
2,019.0	12.00	343.20	2,011.4	100.1	-25.1	-99.8	0.42	0.21	-1.77
2,111.0	11.80	336.80	2,101.4	117.9	-31.6	-117.5	1.45	-0.22	-6.96
2,205.0	12.10	341.40	2,193.3	136.1	-38.5	-135.6	1.06	0.32	4.89
2,297.0	12.30	339.70	2,283.3	154.4	-45.0	-153.8	0.45	0.22	-1.85
2,389.0	12.00	336.80	2,373.2	172.4	-52.2	-171.7	0.74	-0.33	-3.15
2,481.0	11.60	334.60	2,463.3	189.6	-59.9	-188.7	0.65	-0.43	-2.39
2,574.0	11.40	346.90	2,554.4	207.0	-66.0	-206.1	2.64	-0.22	13.23
2,665.0	10.70	343.70	2,643.7	223.8	-70.4	-222.9	1.02	-0.77	-3.52
2,758.0	11.80	353.20	2,734.9	241.6	-74.0	-240.5	2.31	1.18	10.22
2,851.0	11.30	351.60	2,826.1	260.0	-76.4	-259.0	0.64	-0.54	-1.72
2,943.0	12.80	350.70	2,916.0	279.0	-79.4	-277.9	1.64	1.63	-0.98
3,035.0	12.10	349.10	3,005.9	298.5	-82.9	-297.4	0.85	-0.76	-1.74
3,128.0	11.60	346.20	3,096.9	317.2	-86.9	-316.0	0.84	-0.54	-3.12
3,219.0	11.30	343.90	3,186.1	334.6	-91.6	-333.4	0.60	-0.33	-2.53
3,312.0	12.70	341.40	3,277.0	353.1	-97.4	-351.7	1.61	1.51	-2.69
3,404.0	12.10	337.70	3,366.9	371.6	-104.3	-370.1	1.08	-0.65	-4.02
3,495.0	11.40	336.00	3,456.0	388.6	-111.5	-387.1	0.86	-0.77	-1.87
3,587.0	14.10	339.30	3,545.7	407.4	-119.2	-405.8	3.04	2.93	3.59
3,672.0	13.40	338.10	3,628.3	426.2	-126.5	-424.5	0.89	-0.82	-1.41
3,757.0	12.30	334.20	3,711.1	443.5	-134.1	-441.7	1.65	-1.29	-4.59
3,842.0	11.40	344.00	3,794.3	459.7	-140.4	-457.8	2.59	-1.06	11.53
3,927.0	10.40	342.30	3,877.8	475.1	-145.1	-473.1	1.24	-1.18	-2.00
4,012.0	12.50	345.80	3,961.1	491.4	-149.6	-489.3	2.60	2.47	4.12
4,098.0	10.60	342.30	4,045.4	507.9	-154.3	-505.8	2.35	-2.21	-4.07
4,183.0	11.10	342.30	4,128.9	523.2	-159.2	-521.0	0.59	0.59	0.00
4,268.0	12.30	347.00	4,212.1	539.8	-163.7	-537.5	1.80	1.41	5.53
4,353.0	11.40	344.20	4,295.3	556.7	-168.0	-554.4	1.26	-1.06	-3.29
4,439.0	13.20	344.60	4,379.3	574.3	-173.0	-572.0	2.10	2.09	0.47
4,524.0	12.50	340.20	4,462.2	592.3	-178.7	-589.9	1.41	-0.82	-5.18
4,609.0	12.00	339.30	4,545.2	609.3	-184.9	-606.7	0.63	-0.59	-1.06
4,695.0	9.10	342.50	4,629.8	624.1	-190.1	-621.5	3.44	-3.37	3.72
4,780.0	7.00	351.10	4,713.9	635.6	-192.9	-633.0	2.84	-2.47	10.12

Company:	Anadarko	Local Co-ordinate Reference:	Well Grenemyer 36C-3HZ
Project:	Weld Co., Co (NAD 83)	TVD Reference:	Well @ 5068.0usft (Xtreme 23)
Site:	Grenemyer Pad	MD Reference:	Well @ 5068.0usft (Xtreme 23)
Well:	Grenemyer 36C-3HZ	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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)
4,866.0	3.70	347.60	4,799.5	643.5	-194.3	-640.9	3.85	-3.84	-4.07
4,951.0	2.30	13.20	4,884.4	647.9	-194.5	-645.2	2.24	-1.65	30.12
5,037.0	1.40	103.20	4,970.4	649.3	-193.1	-646.7	3.13	-1.05	104.65
5,122.0	1.40	127.50	5,055.4	648.4	-191.3	-645.8	0.69	0.00	28.59
5,207.0	1.20	144.90	5,140.4	647.1	-189.9	-644.5	0.52	-0.24	20.47
5,293.0	1.40	126.60	5,226.3	645.7	-188.6	-643.1	0.53	0.23	-21.28
5,378.0	1.10	104.30	5,311.3	644.9	-187.0	-642.3	0.67	-0.35	-26.24
5,464.0	1.10	97.80	5,397.3	644.6	-185.3	-642.0	0.15	0.00	-7.56
5,549.0	0.70	101.30	5,482.3	644.4	-184.0	-641.8	0.47	-0.47	4.12
5,634.0	0.20	139.80	5,567.3	644.2	-183.4	-641.6	0.66	-0.59	45.29
5,720.0	0.40	213.40	5,653.3	643.8	-183.5	-641.3	0.46	0.23	85.58
5,805.0	0.70	218.90	5,738.3	643.1	-184.0	-640.6	0.36	0.35	6.47
5,890.0	0.50	215.00	5,823.3	642.4	-184.5	-639.9	0.24	-0.24	-4.59
5,975.0	0.50	288.30	5,908.3	642.2	-185.1	-639.7	0.70	0.00	86.24
6,061.0	0.50	247.40	5,994.3	642.2	-185.8	-639.7	0.41	0.00	-47.56
6,146.0	0.40	319.80	6,079.3	642.3	-186.3	-639.7	0.63	-0.12	85.18
6,232.0	0.20	108.70	6,165.3	642.5	-186.4	-639.9	0.68	-0.23	173.14
6,317.0	0.40	108.70	6,250.3	642.3	-186.0	-639.8	0.24	0.24	0.00
6,402.0	0.50	24.80	6,335.3	642.6	-185.5	-640.0	0.71	0.12	-98.71
6,488.0	0.70	9.00	6,421.3	643.4	-185.3	-640.9	0.30	0.23	-18.37
6,573.0	1.10	33.30	6,506.2	644.6	-184.7	-642.1	0.64	0.47	28.59
6,658.0	1.10	43.80	6,591.2	645.9	-183.7	-643.4	0.24	0.00	12.35
6,743.0	0.90	2.90	6,676.2	647.2	-183.1	-644.6	0.85	-0.24	-48.12
6,829.0	1.20	239.50	6,762.2	647.4	-183.9	-644.9	2.16	0.35	-143.49
6,914.0	1.60	235.20	6,847.2	646.3	-185.6	-643.7	0.49	0.47	-5.06
7,000.0	1.90	219.90	6,933.1	644.5	-187.5	-641.9	0.64	0.35	-17.79
7,085.0	1.90	231.50	7,018.1	642.5	-189.5	-639.9	0.45	0.00	13.65
7,170.0	1.40	228.90	7,103.1	641.0	-191.4	-638.3	0.59	-0.59	-3.06
7,213.0	2.30	184.30	7,146.0	639.8	-191.9	-637.1	3.80	2.09	-103.72
7,256.0	6.90	178.10	7,188.9	636.3	-191.8	-633.7	10.74	10.70	-14.42
7,298.0	14.40	180.70	7,230.1	628.6	-191.8	-625.9	17.89	17.86	6.19
7,341.0	19.00	188.80	7,271.3	616.3	-193.0	-613.6	11.96	10.70	18.84
7,384.0	22.70	188.30	7,311.5	601.1	-195.2	-598.5	8.61	8.60	-1.16
7,427.0	24.80	189.50	7,350.9	584.0	-197.9	-581.3	5.01	4.88	2.79
7,469.0	27.80	188.00	7,388.5	565.7	-200.7	-562.9	7.32	7.14	-3.57
7,512.0	32.70	178.80	7,425.7	544.1	-201.9	-541.3	15.66	11.40	-21.40
7,555.0	34.50	173.70	7,461.5	520.4	-200.3	-517.6	7.78	4.19	-11.86
7,597.0	36.40	172.50	7,495.7	496.2	-197.4	-493.5	4.82	4.52	-2.86
7,640.0	38.70	172.50	7,529.8	470.2	-194.0	-467.6	5.35	5.35	0.00
7,683.0	41.70	173.90	7,562.6	442.6	-190.7	-440.0	7.29	6.98	3.26
7,725.0	45.20	174.60	7,593.1	413.9	-187.8	-411.3	8.41	8.33	1.67
7,768.0	48.60	178.60	7,622.5	382.6	-186.0	-380.0	10.42	7.91	9.30
7,811.0	51.70	179.70	7,650.0	349.6	-185.5	-347.1	7.47	7.21	2.56

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Site:	Grenemyer Pad	MD Reference:	Well @ 5068.0usft (Xtreme 23)
Well:	Grenemyer 36C-3HZ	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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)
7,853.0	55.10	177.60	7,675.1	315.9	-184.7	-313.4	9.04	8.10	-5.00
7,896.0	58.80	177.40	7,698.5	279.9	-183.1	-277.4	8.61	8.60	-0.47
7,938.0	62.50	178.10	7,719.1	243.3	-181.7	-240.8	8.93	8.81	1.67
7,981.0	67.70	180.00	7,737.2	204.3	-181.0	-201.9	12.74	12.09	4.42
8,024.0	71.10	180.00	7,752.3	164.1	-181.0	-161.6	7.91	7.91	0.00
8,066.0	75.50	180.40	7,764.4	123.9	-181.2	-121.4	10.52	10.48	0.95
8,109.0	79.00	181.50	7,773.9	81.9	-181.9	-79.5	8.51	8.14	2.56
8,152.0	83.80	182.90	7,780.3	39.5	-183.5	-37.0	11.62	11.16	3.26
8,171.0	85.00	182.50	7,782.2	20.6	-184.4	-18.1	6.65	6.32	-2.11
8,209.0	86.24	181.25	7,785.1	-17.3	-185.6	19.8	4.62	3.26	-3.28
Actual 9" Csg @ 8209' MD / 7785' TVD 704' FNL & 1835' FEL Sec 34T1NR67W									
8,321.0	89.90	177.60	7,788.9	-129.2	-184.5	131.7	4.62	3.27	-3.26
8,407.0	90.80	178.30	7,788.3	-215.1	-181.4	217.6	1.33	1.05	0.81
8,492.0	91.10	176.40	7,786.9	-300.0	-177.5	302.4	2.26	0.35	-2.24
8,577.0	89.20	174.60	7,786.7	-384.8	-170.8	387.0	3.08	-2.24	-2.12
8,663.0	90.30	173.90	7,787.1	-470.3	-162.2	472.5	1.52	1.28	-0.81
8,748.0	89.90	176.90	7,786.9	-555.0	-155.4	557.1	3.56	-0.47	3.53
8,833.0	89.60	179.20	7,787.3	-640.0	-152.5	642.0	2.73	-0.35	2.71
8,918.0	89.40	178.10	7,788.0	-725.0	-150.5	726.9	1.32	-0.24	-1.29
9,004.0	89.20	179.50	7,789.1	-810.9	-148.7	812.8	1.64	-0.23	1.63
9,089.0	89.40	182.20	7,790.1	-895.9	-150.0	897.8	3.18	0.24	3.18
9,174.0	90.60	184.10	7,790.1	-980.8	-154.7	982.8	2.64	1.41	2.24
9,259.0	91.10	182.30	7,788.9	-1,065.6	-159.4	1,067.7	2.20	0.59	-2.12
9,345.0	91.00	183.00	7,787.3	-1,151.5	-163.4	1,153.6	0.82	-0.12	0.81
9,438.0	90.30	182.20	7,786.2	-1,244.4	-167.6	1,246.6	1.14	-0.75	-0.86
9,530.0	90.40	183.20	7,785.7	-1,336.3	-171.9	1,338.5	1.09	0.11	1.09
9,624.0	89.00	183.70	7,786.2	-1,430.1	-177.6	1,432.4	1.58	-1.49	0.53
9,716.0	89.40	181.80	7,787.4	-1,522.0	-182.0	1,524.3	2.11	0.43	-2.07
9,808.0	89.70	181.50	7,788.2	-1,614.0	-184.6	1,616.3	0.46	0.33	-0.33
9,900.0	90.10	180.40	7,788.3	-1,706.0	-186.2	1,708.3	1.27	0.43	-1.20
9,993.0	88.30	177.10	7,789.6	-1,798.9	-184.1	1,801.2	4.04	-1.94	-3.55
10,084.0	85.50	173.70	7,794.5	-1,889.5	-176.9	1,891.7	4.84	-3.08	-3.74
10,177.0	86.40	175.60	7,801.1	-1,981.8	-168.2	1,983.9	2.26	0.97	2.04
10,270.0	89.20	176.00	7,804.7	-2,074.5	-161.4	2,076.5	3.04	3.01	0.43
10,362.0	91.70	175.80	7,804.0	-2,166.2	-154.8	2,168.1	2.73	2.72	-0.22
10,454.0	91.10	176.70	7,801.7	-2,258.0	-148.8	2,259.8	1.18	-0.65	0.98
10,547.0	91.10	180.00	7,799.9	-2,351.0	-146.1	2,352.7	3.55	0.00	3.55
10,638.0	91.80	182.00	7,797.6	-2,441.9	-147.7	2,443.7	2.33	0.77	2.20
10,731.0	90.60	179.50	7,795.7	-2,534.9	-148.9	2,536.6	2.98	-1.29	-2.69
10,823.0	89.40	178.80	7,795.7	-2,626.9	-147.6	2,628.6	1.51	-1.30	-0.76
10,914.0	89.60	179.30	7,796.5	-2,717.8	-146.1	2,719.6	0.59	0.22	0.55
11,006.0	89.00	178.60	7,797.6	-2,809.8	-144.4	2,811.5	1.00	-0.65	-0.76
11,091.0	88.20	179.50	7,799.7	-2,894.8	-143.0	2,896.4	1.42	-0.94	1.06
11,177.0	88.70	178.80	7,802.0	-2,980.7	-141.7	2,982.4	1.00	0.58	-0.81

Company:	Anadarko	Local Co-ordinate Reference:	Well Grenemyer 36C-3HZ
Project:	Weld Co., Co (NAD 83)	TVD Reference:	Well @ 5068.0usft (Xtreme 23)
Site:	Grenemyer Pad	MD Reference:	Well @ 5068.0usft (Xtreme 23)
Well:	Grenemyer 36C-3HZ	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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)	
11,262.0	87.60	179.30	7,804.7	-3,065.7	-140.3	3,067.3	1.42	-1.29	0.59	
11,347.0	88.30	179.70	7,807.8	-3,150.6	-139.5	3,152.2	0.95	0.82	0.47	
11,432.0	89.20	179.50	7,809.6	-3,235.6	-139.0	3,237.2	1.08	1.06	-0.24	
11,518.0	90.30	180.00	7,810.0	-3,321.6	-138.6	3,323.2	1.40	1.28	0.58	
11,603.0	90.60	179.20	7,809.3	-3,406.6	-138.0	3,408.1	1.01	0.35	-0.94	
11,688.0	92.00	178.80	7,807.4	-3,491.5	-136.5	3,493.1	1.71	1.65	-0.47	
11,773.0	91.10	179.30	7,805.1	-3,576.5	-135.1	3,578.0	1.21	-1.06	0.59	
11,869.0	87.80	179.90	7,806.0	-3,672.5	-134.4	3,674.0	3.49	-3.44	0.63	
11,954.0	89.00	180.20	7,808.4	-3,757.5	-134.5	3,758.9	1.46	1.41	0.35	
12,039.0	90.30	178.60	7,808.9	-3,842.4	-133.6	3,843.9	2.43	1.53	-1.88	
12,124.0	90.60	180.70	7,808.3	-3,927.4	-133.1	3,928.9	2.50	0.35	2.47	
12,210.0	90.30	181.80	7,807.6	-4,013.4	-135.0	4,014.9	1.33	-0.35	1.28	
12,295.0	89.60	182.30	7,807.7	-4,098.4	-138.0	4,099.8	1.01	-0.82	0.59	
12,380.0	89.60	180.90	7,808.3	-4,183.3	-140.4	4,184.8	1.65	0.00	-1.65	
12,465.0	89.90	182.20	7,808.6	-4,268.3	-142.7	4,269.8	1.57	0.35	1.53	
12,551.0	88.90	180.20	7,809.5	-4,354.3	-144.5	4,355.8	2.60	-1.16	-2.33	
12,636.0	90.10	181.30	7,810.3	-4,439.2	-145.6	4,440.8	1.92	1.41	1.29	
12,721.0	89.40	180.20	7,810.6	-4,524.2	-146.7	4,525.8	1.53	-0.82	-1.29	
12,807.0	90.70	178.80	7,810.6	-4,610.2	-146.0	4,611.8	2.22	1.51	-1.63	
12,892.0	90.60	176.20	7,809.6	-4,695.1	-142.2	4,696.6	3.06	-0.12	-3.06	
12,978.0	89.40	176.20	7,809.6	-4,780.9	-136.5	4,782.3	1.40	-1.40	0.00	
13,063.0	90.80	176.50	7,809.5	-4,865.8	-131.1	4,867.1	1.68	1.65	0.35	
13,124.0	90.30	176.90	7,808.9	-4,926.7	-127.6	4,927.9	1.05	-0.82	0.66	
13,209.0	91.70	178.60	7,807.4	-5,011.6	-124.3	5,012.8	2.59	1.65	2.00	
13,294.0	90.60	178.60	7,805.7	-5,096.5	-122.2	5,097.7	1.29	-1.29	0.00	
13,379.0	89.00	178.60	7,806.0	-5,181.5	-120.1	5,182.6	1.88	-1.88	0.00	
13,465.0	88.30	179.20	7,808.0	-5,267.5	-118.5	5,268.6	1.07	-0.81	0.70	
13,550.0	89.70	179.90	7,809.5	-5,352.4	-117.8	5,353.5	1.84	1.65	0.82	
13,635.0	90.10	179.50	7,809.6	-5,437.4	-117.4	5,438.5	0.67	0.47	-0.47	
13,721.0	90.30	180.00	7,809.3	-5,523.4	-117.0	5,524.5	0.63	0.23	0.58	
13,806.0	93.40	180.70	7,806.6	-5,608.4	-117.5	5,609.5	3.74	3.65	0.82	
13,891.0	93.10	181.60	7,801.8	-5,693.2	-119.2	5,694.3	1.11	-0.35	1.06	
13,977.0	91.10	182.50	7,798.6	-5,779.1	-122.3	5,780.2	2.55	-2.33	1.05	
14,062.0	89.40	181.60	7,798.2	-5,864.0	-125.3	5,865.2	2.26	-2.00	-1.06	
14,147.0	89.90	181.10	7,798.8	-5,949.0	-127.3	5,950.2	0.83	0.59	-0.59	
14,233.0	92.40	181.50	7,797.0	-6,035.0	-129.3	6,036.2	2.94	2.91	0.47	
14,318.0	91.00	180.00	7,794.5	-6,119.9	-130.4	6,121.1	2.41	-1.65	-1.76	
14,403.0	92.00	180.00	7,792.3	-6,204.9	-130.4	6,206.1	1.18	1.18	0.00	
14,489.0	90.40	179.00	7,790.5	-6,290.9	-129.6	6,292.0	2.19	-1.86	-1.16	
14,574.0	89.20	180.20	7,790.8	-6,375.9	-129.1	6,377.0	2.00	-1.41	1.41	
14,659.0	89.00	182.70	7,792.1	-6,460.8	-131.2	6,462.0	2.95	-0.24	2.94	
14,745.0	89.60	183.20	7,793.2	-6,546.7	-135.6	6,547.9	0.91	0.70	0.58	
14,830.0	91.00	182.30	7,792.7	-6,631.6	-139.7	6,632.9	1.96	1.65	-1.06	

Company:	Anadarko	Local Co-ordinate Reference:	Well Grenemyer 36C-3HZ
Project:	Weld Co., Co (NAD 83)	TVD Reference:	Well @ 5068.0usft (Xtreme 23)
Site:	Grenemyer Pad	MD Reference:	Well @ 5068.0usft (Xtreme 23)
Well:	Grenemyer 36C-3HZ	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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)	
14,915.0	90.60	180.20	7,791.5	-6,716.6	-141.6	6,717.9	2.51	-0.47	-2.47	
15,000.0	90.30	179.20	7,790.9	-6,801.6	-141.1	6,802.8	1.23	-0.35	-1.18	
15,085.0	90.10	177.90	7,790.6	-6,886.5	-139.0	6,887.8	1.55	-0.24	-1.53	
15,171.0	90.30	177.60	7,790.3	-6,972.5	-135.6	6,973.7	0.42	0.23	-0.35	
15,256.0	89.90	177.20	7,790.1	-7,057.4	-131.7	7,058.5	0.67	-0.47	-0.47	
15,342.0	89.70	177.20	7,790.4	-7,143.3	-127.5	7,144.3	0.23	-0.23	0.00	
15,427.0	90.60	178.60	7,790.2	-7,228.2	-124.4	7,229.2	1.96	1.06	1.65	
15,512.0	91.00	179.70	7,789.0	-7,313.2	-123.2	7,314.2	1.38	0.47	1.29	
15,598.0	89.90	178.30	7,788.3	-7,399.2	-121.7	7,400.1	2.07	-1.28	-1.63	
15,685.0	90.40	178.30	7,788.1	-7,486.1	-119.1	7,487.1	0.57	0.57	0.00	
15,770.0	89.20	177.20	7,788.4	-7,571.1	-115.7	7,571.9	1.92	-1.41	-1.29	
15,855.0	88.30	176.70	7,790.3	-7,655.9	-111.2	7,656.7	1.21	-1.06	-0.59	
15,941.0	87.80	175.80	7,793.2	-7,741.7	-105.6	7,742.4	1.20	-0.58	-1.05	
15,962.0	87.80	175.60	7,794.0	-7,762.6	-104.0	7,763.3	0.95	0.00	-0.95	
Last MWD @ 15962' MD / 7794' TVD										
16,020.0	87.80	175.60	7,796.2	-7,820.4	-99.6	7,821.0	0.00	0.00	0.00	
PTD @ 16020' MD / 7796' TVD 1791' FSL & 2279' FEL Sec 3T1SR67W										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N-S (usft)	+E-W (usft)	Comment	
1,174.0	1,174.0	0.0	3.5	First MWD	
8,209.0	7,785.1	-17.3	-185.6	Actual 9" Csg @ 8209' MD / 7785' TVD 704' FNL & 1835' FEL Sec 34T	
15,962.0	7,794.0	-7,762.6	-104.0	Last MWD @ 15962' MD / 7794' TVD	
16,020.0	7,796.2	-7,820.4	-99.6	PTD @ 16020' MD / 7796' TVD 1791' FSL & 2279' FEL Sec 3T1SR67W	

Checked By: _____	Approved By: _____	Date: _____
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