



Weatherford®

SURVEY REPORT

 Report Date: **3/24/2013**

 Customer: **Anadarko**

 Job Name: **4028453**

 Well Name: **Dechant State 36N-E1HZ**

 Field: **Wattenburg**

 Rig: **H&P 307**

 Rig Loc: **Colorado**

Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
True North	179.94 deg	52870 nT	66.93 deg	8.66 deg	0.00 deg	8.66 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	637.00 ft	0.09 deg	281.23 deg	637.00 ft	0.24 ft	-1.42 ft

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		Vsect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
774.00	0.16	168.62	774.00	0.07	-1.49	-0.07	0.15
866.00	0.16	89.66	866.00	-0.05	-1.33	0.05	0.22
958.00	0.36	99.83	958.00	-0.10	-0.92	0.10	0.22
1050.00	0.29	90.21	1050.00	-0.15	-0.40	0.15	0.10
1142.00	0.22	100.13	1142.00	-0.18	0.00	0.18	0.09
1233.00	0.31	63.96	1232.99	-0.11	0.40	0.11	0.20
1325.00	0.16	109.45	1324.99	-0.04	0.74	0.04	0.25
1417.00	0.25	266.06	1416.99	-0.10	0.66	0.10	0.44
1508.00	0.22	225.27	1507.99	-0.23	0.34	0.23	0.18
1598.00	0.20	269.31	1597.99	-0.36	0.06	0.36	0.18
1690.00	0.35	264.76	1689.99	-0.38	-0.38	0.38	0.16
1780.00	0.36	256.26	1779.99	-0.48	-0.93	0.47	0.06
1872.00	0.51	261.96	1871.99	-0.60	-1.61	0.60	0.17
1963.00	0.69	271.88	1962.98	-0.64	-2.56	0.64	0.23
2054.00	0.22	253.55	2053.98	-0.67	-3.28	0.67	0.53
2146.00	0.69	13.83	2145.98	-0.18	-3.32	0.18	0.89
2238.00	0.93	340.12	2237.97	1.06	-3.44	-1.06	0.57
2329.00	1.34	342.33	2328.95	2.77	-4.01	-2.77	0.45
2424.00	0.64	243.21	2423.94	3.58	-4.82	-3.59	1.66
2518.00	1.16	298.47	2517.93	3.80	-6.13	-3.81	1.01
2613.00	1.54	318.75	2612.90	5.22	-7.81	-5.23	0.64
2707.00	1.40	226.86	2706.88	5.38	-9.48	-5.39	2.25
2802.00	1.24	242.23	2801.86	4.11	-11.24	-4.12	0.41
2897.00	1.37	252.01	2896.83	3.28	-13.23	-3.30	0.27
2991.00	1.73	257.76	2990.80	2.63	-15.69	-2.65	0.42
3086.00	1.44	264.10	3085.76	2.21	-18.28	-2.23	0.36
3181.00	3.29	276.27	3180.68	2.38	-22.17	-2.41	2.01
3275.00	4.20	268.92	3274.48	2.61	-28.30	-2.64	1.09
3370.00	5.48	284.86	3369.14	3.71	-36.16	-3.75	1.94
3464.00	7.99	292.46	3462.49	7.36	-46.54	-7.41	2.83
3559.00	8.98	290.12	3556.45	12.43	-59.60	-12.49	1.10
3653.00	7.23	285.30	3649.50	16.52	-72.20	-16.59	2.00
3748.00	7.09	278.96	3743.76	19.01	-83.75	-19.09	0.84
3842.00	5.56	275.77	3837.19	20.37	-94.01	-20.47	1.67
3937.00	4.94	255.71	3931.80	19.82	-102.56	-19.93	2.03

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
4032.00	3.52	245.92	4026.54	17.62	-109.18	-17.73	1.67
4126.00	1.48	223.43	4120.45	15.56	-112.65	-15.68	2.37
4221.00	0.55	147.40	4215.43	14.29	-113.25	-14.40	1.53
4315.00	0.41	134.65	4309.43	13.67	-112.77	-13.79	0.19
4410.00	0.36	354.23	4404.43	13.73	-112.56	-13.85	0.76
4505.00	0.56	355.63	4499.43	14.49	-112.62	-14.61	0.21
4599.00	0.62	10.21	4593.42	15.45	-112.57	-15.56	0.17
4694.00	0.31	38.54	4688.42	16.15	-112.32	-16.27	0.40
4789.00	0.35	156.46	4783.42	16.09	-112.04	-16.21	0.60
4883.00	0.35	212.91	4877.42	15.58	-112.08	-15.70	0.35
4978.00	0.28	101.03	4972.41	15.30	-112.01	-15.41	0.55
5073.00	0.30	111.50	5067.41	15.16	-111.55	-15.28	0.06
5167.00	0.07	335.78	5161.41	15.12	-111.35	-15.24	0.38
5262.00	0.22	349.36	5256.41	15.35	-111.40	-15.47	0.16
5356.00	0.50	339.81	5350.41	15.92	-111.58	-16.03	0.30
5451.00	0.66	334.96	5445.41	16.80	-111.95	-16.92	0.18
5545.00	1.16	268.42	5539.40	17.27	-113.13	-17.38	1.15
5640.00	1.08	75.27	5634.39	17.47	-113.23	-17.59	2.34
5735.00	1.04	18.00	5729.38	18.51	-112.10	-18.63	1.07
5829.00	1.06	352.06	5823.36	20.19	-111.95	-20.30	0.50
5924.00	0.97	230.62	5918.35	20.55	-112.70	-20.67	1.86
6018.00	0.73	309.75	6012.35	20.43	-113.77	-20.54	1.17
6113.00	1.19	335.73	6107.33	21.71	-114.64	-21.83	0.65
6208.00	1.12	289.43	6202.32	22.92	-115.92	-23.04	0.96
6302.00	0.88	244.21	6296.30	22.91	-117.44	-23.03	0.85
6350.00	2.09	183.43	6344.29	21.88	-117.83	-22.00	3.81
6397.00	3.98	176.31	6391.22	19.39	-117.77	-19.52	4.09
6444.00	14.18	176.26	6437.57	12.00	-117.29	-12.12	21.70
6492.00	20.49	177.22	6483.37	-2.27	-116.50	2.15	13.16
6539.00	22.10	174.40	6527.16	-19.29	-115.24	19.17	4.06
6586.00	25.21	173.48	6570.20	-38.04	-113.24	37.92	6.66
6633.00	30.55	175.65	6611.73	-59.91	-111.19	59.79	11.56
6681.00	35.18	180.42	6652.05	-85.92	-110.37	85.80	11.04
6728.00	36.94	180.65	6690.04	-113.58	-110.63	113.46	3.76
6775.00	39.63	181.09	6726.93	-142.69	-111.07	142.58	5.75
6822.00	44.23	178.90	6761.89	-174.09	-111.04	173.97	10.27
6870.00	50.26	177.89	6794.46	-209.30	-110.04	209.19	12.66
6917.00	52.80	179.03	6823.70	-246.08	-109.06	245.97	5.73
6965.00	56.99	179.57	6851.29	-285.34	-108.58	285.23	8.78
7012.00	63.00	179.83	6874.79	-326.02	-108.37	325.91	12.80
7059.00	68.81	180.65	6893.97	-368.91	-108.56	368.79	12.46
7106.00	70.81	181.54	6910.19	-413.01	-109.41	412.89	4.61
7154.00	73.77	181.63	6924.79	-458.71	-110.67	458.59	6.17
7201.00	79.47	182.53	6935.66	-504.38	-112.33	504.27	12.27
7225.00	82.51	182.86	6939.42	-528.06	-113.45	527.94	12.74
7364.00	88.83	184.85	6949.91	-666.27	-122.77	666.14	4.77
7458.00	89.88	183.34	6950.97	-760.02	-129.48	759.89	1.96
7553.00	90.12	181.72	6950.97	-854.93	-133.68	854.79	1.72
7647.00	90.19	180.07	6950.71	-948.91	-135.14	948.77	1.76
7742.00	90.74	179.62	6949.94	-1043.91	-134.89	1043.76	0.75

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
7836.00	91.23	179.49	6948.32	-1137.89	-134.16	1137.75	0.54
7931.00	91.50	179.32	6946.06	-1232.86	-133.17	1232.72	0.34
8026.00	92.10	179.13	6943.08	-1327.80	-131.89	1327.66	0.66
8120.00	91.23	178.94	6940.35	-1421.75	-130.31	1421.61	0.95
8215.00	90.43	179.51	6938.97	-1516.73	-129.02	1516.59	1.03
8309.00	89.44	180.05	6939.08	-1610.73	-128.66	1610.59	1.20
8404.00	89.88	180.07	6939.64	-1705.72	-128.76	1705.59	0.46
8499.00	90.49	179.69	6939.33	-1800.72	-128.56	1800.59	0.76
8593.00	90.49	180.26	6938.53	-1894.72	-128.52	1894.58	0.61
8688.00	88.89	180.15	6939.04	-1989.71	-128.86	1989.58	1.69
8782.00	89.32	180.45	6940.51	-2083.70	-129.35	2083.56	0.56
8877.00	90.43	180.26	6940.72	-2178.70	-129.94	2178.56	1.19
8971.00	89.20	180.26	6941.02	-2272.69	-130.37	2272.56	1.31
9066.00	89.75	180.45	6941.89	-2367.69	-130.95	2367.55	0.61
9161.00	89.88	179.73	6942.20	-2462.69	-131.10	2462.55	0.77
9255.00	89.74	179.32	6942.51	-2556.68	-130.32	2556.54	0.46
9347.00	89.69	179.40	6942.97	-2648.67	-129.30	2648.54	0.10
9439.00	89.44	179.21	6943.67	-2740.67	-128.18	2740.53	0.34
9531.00	89.57	178.97	6944.46	-2832.65	-126.72	2832.52	0.30
9623.00	88.83	177.99	6945.75	-2924.61	-124.28	2924.48	1.33
9716.00	88.95	177.60	6947.55	-3017.52	-120.70	3017.39	0.44
9808.00	89.32	177.28	6948.94	-3109.42	-116.59	3109.29	0.53
9900.00	90.37	177.34	6949.19	-3201.31	-112.28	3201.20	1.14
9992.00	91.73	178.78	6947.50	-3293.24	-109.16	3293.13	2.15
10084.00	92.10	179.51	6944.43	-3385.18	-107.79	3385.06	0.89
10175.00	91.11	180.54	6941.88	-3476.14	-107.83	3476.03	1.57
10267.00	89.32	181.00	6941.53	-3568.13	-109.07	3568.01	2.01
10359.00	90.06	181.12	6942.03	-3660.11	-110.77	3659.99	0.81
10451.00	91.91	181.69	6940.45	-3752.07	-113.02	3751.94	2.10
10543.00	91.05	181.56	6938.07	-3844.00	-115.63	3843.87	0.95
10635.00	90.25	181.80	6937.03	-3935.95	-118.33	3935.82	0.91
10726.00	88.40	181.70	6938.10	-4026.90	-121.11	4026.77	2.04
10816.00	87.35	179.40	6941.44	-4116.82	-121.97	4116.69	2.81
10907.00	88.09	179.50	6945.06	-4207.75	-121.10	4207.62	0.82
10998.00	88.46	179.72	6947.80	-4298.70	-120.48	4298.58	0.47
11089.00	88.52	180.05	6950.20	-4389.67	-120.30	4389.54	0.37
11181.00	91.05	181.23	6950.54	-4481.66	-121.32	4481.53	3.03
11272.00	89.08	179.75	6950.44	-4572.65	-122.10	4572.52	2.71
11364.00	89.38	176.17	6951.67	-4664.56	-118.83	4664.44	3.90
11456.00	88.71	173.76	6953.21	-4756.19	-110.76	4756.07	2.72
11547.00	89.08	172.96	6954.96	-4846.56	-100.24	4846.45	0.97
11638.00	87.78	172.91	6957.46	-4936.83	-89.05	4936.74	1.43
11729.00	86.24	174.74	6962.20	-5027.18	-79.27	5027.09	2.63
11822.00	86.61	176.44	6968.00	-5119.72	-72.13	5119.64	1.87
11913.00	85.75	177.34	6974.06	-5210.38	-67.21	5210.31	1.37
12005.00	87.41	178.70	6979.55	-5302.16	-64.04	5302.09	2.33
12099.00	88.09	180.23	6983.24	-5396.08	-63.16	5396.01	1.78
12194.00	91.23	181.60	6983.81	-5491.05	-64.68	5490.98	3.61
12288.00	92.53	181.80	6980.72	-5584.95	-67.46	5584.88	1.40
12383.00	93.83	182.20	6975.45	-5679.75	-70.77	5679.67	1.43

Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	Well Head		VSect (ft)	Dogleg (deg/100ft)
				NS (ft)	EW (ft)		
12477.00	93.53	181.78	6969.42	-5773.50	-74.03	5773.42	0.55
12572.00	90.62	181.78	6965.98	-5868.38	-76.98	5868.29	3.06
12666.00	89.57	181.94	6965.83	-5962.33	-80.03	5962.24	1.13
12761.00	88.27	180.17	6967.62	-6057.29	-81.78	6057.20	2.31
12856.00	89.14	179.56	6969.76	-6152.26	-81.56	6152.17	1.12
12950.00	89.63	179.82	6970.77	-6246.26	-81.05	6246.17	0.59
13045.00	90.00	179.45	6971.08	-6341.25	-80.44	6341.17	0.55
13140.00	90.31	178.92	6970.82	-6436.24	-79.09	6436.16	0.65
13234.00	90.06	178.15	6970.52	-6530.21	-76.69	6530.13	0.86
13329.00	89.88	178.93	6970.57	-6625.18	-74.27	6625.10	0.84
13423.00	89.26	180.06	6971.27	-6719.17	-73.44	6719.09	1.37
13518.00	88.21	178.53	6973.37	-6814.14	-72.27	6814.06	1.95
13613.00	89.14	178.25	6975.57	-6909.07	-69.60	6909.00	1.02
13707.00	92.34	180.21	6974.35	-7003.04	-68.34	7002.96	3.99
13802.00	90.80	178.78	6971.75	-7097.99	-67.50	7097.92	2.21
13897.00	91.48	180.16	6969.86	-7192.97	-66.62	7192.89	1.62
13991.00	91.67	180.75	6967.28	-7286.93	-67.37	7286.86	0.66
14086.00	92.84	181.29	6963.54	-7381.84	-69.06	7381.76	1.36
14180.00	90.93	182.06	6960.45	-7475.74	-71.80	7475.66	2.19
14275.00	91.30	181.67	6958.60	-7570.67	-74.90	7570.59	0.57
14370.00	90.18	182.48	6957.37	-7665.60	-78.34	7665.52	1.45
14464.00	90.31	183.07	6956.97	-7759.49	-82.89	7759.40	0.64
14559.00	87.84	182.27	6958.50	-7854.37	-87.31	7854.27	2.73
14653.00	88.15	183.69	6961.79	-7948.18	-92.19	7948.08	1.55
14748.00	87.47	181.60	6965.42	-8043.00	-96.58	8042.90	2.31
14843.00	86.67	181.61	6970.28	-8137.84	-99.23	8137.73	0.84
14937.00	85.37	180.72	6976.80	-8231.59	-101.14	8231.48	1.67
15032.00	89.21	182.31	6981.29	-8326.43	-103.65	8326.32	4.37
15126.00	89.26	182.69	6982.55	-8420.33	-107.75	8420.22	0.41
15221.00	89.07	183.50	6983.93	-8515.18	-112.88	8515.06	0.88
15316.00	88.40	182.05	6986.03	-8610.05	-117.48	8609.92	1.68
15410.00	87.47	182.08	6989.42	-8703.92	-120.86	8703.79	0.99
15505.00	88.64	182.14	6992.64	-8798.80	-124.36	8798.67	1.23
15599.00	89.38	180.62	6994.27	-8892.76	-126.62	8892.62	1.80
15694.00	88.83	181.41	6995.75	-8987.73	-128.30	8987.59	1.01
15789.00	89.69	180.33	6996.98	-9082.71	-129.75	9082.57	1.45
15883.00	89.88	181.61	6997.33	-9176.69	-131.34	9176.55	1.38
15978.00	89.81	183.14	6997.59	-9271.61	-135.27	9271.46	1.61
16072.00	89.32	183.75	6998.30	-9365.44	-140.92	9365.28	0.83
16167.00	89.88	183.68	6998.96	-9460.23	-147.08	9460.07	0.59
16261.00	89.20	183.63	6999.72	-9554.04	-153.07	9553.87	0.73
16356.00	89.38	183.48	7000.90	-9648.85	-158.96	9648.68	0.25
16450.00	89.29	183.72	7001.99	-9742.66	-164.86	9742.48	0.27
16463.00	89.32	184.01	7002.14	-9755.63	-165.74	9755.45	2.24
16517.00	89.32	184.01	7002.79	-9809.49	-169.51	9809.31	0.00

[illegible]

Weatherford M/LWD Surveys from 774.0 to 15463.0 MD.

TD at 16517.0 MD.

The total correction is 8.66 deg relative to True North.