



# Survey Report

with Projection

**Service Company:** PDSI

**Location:** Sec 32-T5N-R63W

**Well:** CVR-5-63-32-3340BH

**Rig:** Nabors M-37

**API or UWI:** 512336899

**Job Number:** DL1697

**State:** Colorado

**Operating Company:** Bill Barrett Corporation

**County:** Weld County

**Magnetic Declination:** 0.00

**Comment:**

**Proposed Azimuth:** 86.69

**North Reference:** GRID

**Tie-In Data:**

MD	Inclination	Azimuth	TVD	NS	EW
745.00	0.26	115.35	744.98	0.47	-3.37

**Survey Data:**

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
932.00	0.40	39.40	931.98	0.79	-2.57	287.13	2.69	-2.52	0.23
1026.00	0.40	41.00	1025.98	1.29	-2.15	301.06	2.51	-2.07	0.01
1333.00	0.70	31.50	1332.96	3.70	-0.47	352.83	3.73	-0.25	0.10
1610.00	0.60	355.10	1609.94	6.59	0.29	2.56	6.60	0.67	0.15
1893.00	0.70	294.70	1892.93	8.79	-1.40	350.93	8.90	-0.89	0.23
2183.00	1.50	280.60	2182.87	10.23	-6.74	326.60	12.25	-6.14	0.29
2467.00	1.40	262.40	2466.78	10.45	-13.84	307.07	17.34	-13.21	0.17
2751.00	1.30	244.20	2750.71	8.59	-20.18	293.06	21.93	-19.65	0.15
3036.00	0.10	294.30	3035.68	7.29	-23.31	287.36	24.42	-22.85	0.43
3320.00	0.60	278.00	3319.68	7.59	-25.01	286.89	26.14	-24.53	0.18
3604.00	0.50	302.70	3603.66	8.47	-27.53	287.11	28.80	-26.99	0.09
3883.00	1.40	221.40	3882.63	6.57	-30.80	282.04	31.50	-30.37	0.51
4164.00	2.40	253.70	4163.48	2.35	-38.72	273.47	38.79	-38.52	0.51
4448.00	2.80	245.60	4447.19	-2.19	-50.75	267.53	50.79	-50.79	0.19
4732.00	6.90	256.30	4730.11	-9.10	-73.65	262.96	74.21	-74.05	1.47
5016.00	6.60	255.50	5012.15	-17.22	-106.02	260.77	107.41	-106.84	0.11
5111.00	6.20	268.10	5106.56	-18.76	-116.44	260.85	117.94	-117.33	1.53
5205.00	6.30	288.00	5200.01	-17.34	-126.42	262.19	127.60	-127.21	2.30

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
5300.00	5.30	303.10	5294.53	-13.33	-135.05	264.36	135.71	-135.59	1.91
5395.00	3.50	302.70	5389.25	-9.37	-141.17	266.20	141.48	-141.47	1.90
5489.00	1.70	325.20	5483.15	-6.67	-144.38	267.35	144.53	-144.52	2.17
5583.00	1.30	326.80	5577.11	-4.63	-145.76	268.18	145.83	-145.78	0.43
5678.00	1.30	309.80	5672.09	-3.04	-147.17	268.82	147.21	-147.10	0.40
5773.00	0.40	357.60	5767.08	-2.02	-148.02	269.22	148.03	-147.89	1.13
5887.00	7.30	58.20	5880.76	2.20	-141.87	270.89	141.89	-141.51	6.24
5919.00	11.30	60.70	5912.34	4.81	-137.41	272.00	137.49	-136.90	12.56
5950.00	14.00	63.30	5942.58	7.98	-131.41	273.47	131.65	-130.73	8.90
5982.00	16.30	65.60	5973.47	11.57	-123.86	275.34	124.40	-122.98	7.43
6012.00	18.90	67.90	6002.06	15.14	-115.52	277.47	116.51	-114.45	8.97
6043.00	21.50	66.80	6031.15	19.27	-105.65	280.34	107.39	-104.36	8.48
6075.00	23.70	66.10	6060.69	24.18	-94.37	284.37	97.42	-92.82	6.93
6106.00	25.50	66.30	6088.88	29.39	-82.57	289.59	87.64	-80.73	5.81
6137.00	27.10	65.10	6116.67	35.05	-70.05	296.58	78.33	-67.91	5.44
6169.00	27.90	63.20	6145.05	41.49	-56.76	306.17	70.31	-54.27	3.71
6200.00	29.30	63.30	6172.27	48.17	-43.51	317.91	64.91	-40.65	4.52
6232.00	31.50	64.40	6199.87	55.30	-28.97	332.35	62.43	-25.73	7.09
6263.00	34.30	64.90	6225.89	62.51	-13.75	347.59	64.00	-10.12	9.07
6294.00	37.60	64.40	6250.99	70.30	2.69	2.19	70.35	6.74	10.69
6326.00	41.20	63.70	6275.71	79.19	20.95	14.82	81.92	25.49	11.34
6357.00	44.20	62.40	6298.49	88.72	39.68	24.10	97.19	44.74	10.09
6427.00	51.40	59.10	6345.49	114.11	84.84	36.63	142.20	91.29	10.86
6458.00	57.80	62.10	6363.44	126.49	106.86	40.19	165.58	113.98	22.10
6490.00	64.20	64.20	6378.95	139.10	131.82	43.46	191.64	139.63	20.81
6519.00	69.90	68.20	6390.25	149.86	156.24	46.20	216.49	164.63	23.40
6550.00	75.80	73.30	6399.40	159.59	184.19	49.09	243.71	193.10	24.68
6581.00	83.70	74.80	6404.91	167.97	213.50	51.81	271.65	222.84	25.92
6612.00	88.50	77.60	6407.02	175.34	243.52	54.25	300.08	253.24	17.91
6642.00	87.80	82.30	6407.98	180.57	273.04	56.52	327.35	283.01	15.83
6673.00	87.80	81.10	6409.17	185.04	303.69	58.65	355.62	313.87	3.87
6734.00	89.80	85.70	6410.45	192.05	364.26	62.20	411.78	374.74	8.22
6795.00	92.40	86.00	6409.28	196.46	425.08	65.19	468.28	435.71	4.29
6888.00	93.60	87.40	6404.42	201.81	517.79	68.71	555.73	528.58	1.98
6980.00	93.40	87.80	6398.80	205.65	609.54	71.36	643.30	620.40	0.49

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
7072.00	91.80	88.10	6394.63	208.94	701.38	73.41	731.84	712.28	1.77
7164.00	89.70	89.90	6393.42	210.54	793.35	75.14	820.82	804.19	3.01
7259.00	87.60	89.50	6395.66	211.04	888.32	76.64	913.05	899.02	2.25
7354.00	89.90	90.40	6397.73	211.12	983.29	77.88	1005.70	993.84	2.60
7449.00	90.00	88.10	6397.81	212.37	1078.28	78.86	1098.99	1088.74	2.42
7545.00	91.50	88.80	6396.56	214.96	1174.23	79.63	1193.74	1184.68	1.72
7641.00	90.70	87.90	6394.72	217.73	1270.17	80.27	1288.70	1280.62	1.25
7736.00	90.00	87.80	6394.14	221.29	1365.10	80.79	1382.92	1375.60	0.74
7832.00	91.90	87.80	6392.54	224.98	1461.01	81.25	1478.23	1471.57	1.98
7927.00	90.30	87.40	6390.72	228.95	1555.91	81.63	1572.66	1566.53	1.74
8023.00	89.50	87.10	6390.89	233.56	1651.80	81.95	1668.23	1662.53	0.89
8118.00	87.80	87.60	6393.13	237.95	1746.67	82.24	1762.80	1757.49	1.87
8214.00	87.00	88.60	6397.48	241.13	1842.51	82.54	1858.22	1853.36	1.33
8310.00	88.90	88.60	6400.91	243.47	1938.42	82.84	1953.65	1949.24	1.98
8405.00	91.60	89.00	6400.50	245.46	2033.39	83.12	2048.15	2044.17	2.87
8501.00	93.00	91.10	6396.65	245.38	2129.30	83.43	2143.39	2139.92	2.63
8596.00	94.10	91.50	6390.76	243.23	2224.09	83.76	2237.35	2234.43	1.23
8692.00	91.90	89.20	6385.74	242.65	2319.95	84.03	2332.60	2330.09	3.31
8788.00	90.70	88.30	6383.56	244.74	2415.90	84.22	2428.26	2426.00	1.56
8883.00	91.40	87.80	6381.82	247.97	2510.83	84.36	2523.04	2520.95	0.91
8978.00	91.00	89.50	6379.83	250.21	2605.77	84.52	2617.76	2615.87	1.84
9073.00	91.50	89.00	6377.76	251.45	2700.74	84.68	2712.42	2710.76	0.74
9169.00	90.40	88.60	6376.17	253.46	2796.71	84.82	2808.17	2806.68	1.22
9265.00	90.70	91.50	6375.25	253.38	2892.69	84.99	2903.77	2902.50	3.04
9361.00	91.80	92.20	6373.15	250.28	2988.62	85.21	2999.08	2998.08	1.36
9456.00	90.70	89.90	6371.08	248.54	3083.57	85.39	3093.57	3092.78	2.68
9488.00	90.90	89.90	6370.63	248.60	3115.57	85.44	3125.47	3124.72	0.63
9552.00	90.10	89.30	6370.07	249.04	3179.56	85.52	3189.30	3188.64	1.56
9648.00	89.00	89.70	6370.83	249.88	3275.55	85.64	3285.07	3284.52	1.22
9712.00	90.50	89.30	6371.11	250.44	3339.55	85.71	3348.93	3348.44	2.43
9744.00	91.10	89.30	6370.66	250.83	3371.54	85.75	3380.86	3380.40	1.88
9839.00	89.10	88.30	6370.49	252.82	3466.52	85.83	3475.72	3475.33	2.35
9935.00	89.90	88.30	6371.33	255.67	3562.47	85.90	3571.63	3571.29	0.83
10030.00	91.50	85.80	6370.17	260.56	3657.33	85.93	3666.60	3666.27	3.12
10126.00	88.60	85.70	6370.09	267.67	3753.05	85.92	3762.59	3762.25	3.02

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
10222.00	88.90	84.10	6372.18	276.20	3848.65	85.90	3858.55	3858.17	1.70
10317.00	88.50	86.40	6374.34	284.07	3943.29	85.88	3953.51	3953.11	2.46
10362.00	88.70	87.10	6375.44	286.62	3988.20	85.89	3998.49	3998.10	1.62
10413.00	88.70	86.90	6376.59	289.28	4039.12	85.90	4049.47	4049.09	0.39
10509.00	90.00	86.20	6377.68	295.06	4134.94	85.92	4145.45	4145.08	0.00
10509.00	90.00	86.20	6377.68	295.06	4134.94	85.92	4145.45	4145.08	1.54

**Projection Data:**

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
10566.00	90.00	86.20	6377.68	298.84	4191.81	85.92	4202.45	4202.07	0.00