

Company: Caza Operating, LLC.

Field: Bone Springs

County / State: Lea, New Mexico

Well Name: Lennox 32 State 4H

Surveys Corrected to Grid North

Job Number: 147149

API Number: 30-025-41270

Permit Number:

Magnetic North: 6.48

Start Date: 09/10/14

Proposed Azimuth: 359.46

Target Inclination: 90.00

Surface Location: Sec 32,T-22S R-35E 330 FSL & 660 FWL

Bottom Hole Location: N 32°21' 16.33" W 103°23' 45.76

End Date: 09/17/14

**CATHEDRAL**

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth(ft)	TVD (ft)	VS (ft)	Coordinates		Closure		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')
								N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)			
0		0	0.00	0.00		0.00	0.00	0.00 N	0.00 W					
1	Gyro	100.00	0.64	85.18	100	100.00	0.04	0.05 N	0.56 E	0.56	85.18	0.64	0.64	85.18
2	Gyro	200.00	0.54	92.19	100	199.99	0.06	0.08 N	1.58 E	1.59	87.26	0.12	-0.10	7.01
3	Gyro	300.00	0.51	92.15	100	299.99	0.02	0.04 N	2.50 E	2.50	89.06	0.03	-0.03	-0.04
4	Gyro	400.00	0.63	98.34	100	399.98	-0.09	0.06 S	3.49 E	3.49	90.91	0.13	0.12	6.19
5	Gyro	500.00	0.71	99.85	100	499.98	-0.28	0.24 S	4.64 E	4.65	92.97	0.08	0.08	1.51
6	Gyro	600.00	0.80	103.30	100	599.97	-0.56	0.51 S	5.93 E	5.95	94.89	0.10	0.09	3.45
7	Gyro	700.00	0.49	105.93	100	699.96	-0.85	0.79 S	7.02 E	7.07	96.38	0.31	-0.31	2.63
8	Gyro	800.00	0.25	109.97	100	799.96	-1.05	0.98 S	7.64 E	7.70	97.29	0.24	-0.24	4.04
9	Gyro	900.00	0.17	133.70	100	899.96	-1.23	1.15 S	7.95 E	8.03	98.26	0.12	-0.08	23.73
10	Gyro	1000.00	0.09	48.31	100	999.96	-1.28	1.20 S	8.12 E	8.21	98.44	0.19	-0.08	-85.39
11	Gyro	1100.00	0.22	19.23	100	1099.96	-1.05	0.97 S	8.24 E	8.30	96.72	0.15	0.13	-29.08
12	Gyro	1200.00	0.19	123.03	100	1199.96	-0.96	0.88 S	8.44 E	8.49	95.95	0.32	-0.03	103.80
13	Gyro	1300.00	0.08	163.76	100	1299.96	-1.12	1.04 S	8.60 E	8.66	96.88	0.14	-0.11	40.73
14	Gyro	1400.00	0.08	239.28	100	1399.96	-1.22	1.14 S	8.56 E	8.64	97.59	0.10	0.00	75.52
15	Gyro	1500.00	0.20	275.53	100	1499.96	-1.24	1.16 S	8.33 E	8.41	97.93	0.14	0.12	36.25
16	Gyro	1600.00	0.23	329.44	100	1599.96	-1.05	0.97 S	8.05 E	8.11	96.87	0.20	0.03	53.91
17	Gyro	1700.00	0.28	21.32	100	1699.95	-0.64	0.57 S	8.04 E	8.06	94.05	0.23	0.05	51.88
18	Gyro	1800.00	0.23	152.72	100	1799.95	-0.60	0.52 S	8.22 E	8.23	93.62	0.47	-0.05	131.40
19	Gyro	1900.00	0.22	16.62	100	1899.95	-0.59	0.51 S	8.36 E	8.38	93.52	0.42	-0.01	-136.10
20	Gyro	2000.00	0.18	47.40	100	1999.95	-0.30	0.22 S	8.54 E	8.54	91.50	0.11	-0.04	30.78
21	Gyro	2100.00	0.05	200.86	100	2099.95	-0.24	0.16 S	8.64 E	8.64	91.05	0.23	-0.13	153.46
22	Gyro	2200.00	0.04	232.74	100	2199.95	-0.30	0.22 S	8.59 E	8.59	91.47	0.03	-0.01	31.88
23	Gyro	2300.00	0.15	333.24	100	2299.95	-0.20	0.12 S	8.51 E	8.51	90.84	0.16	0.11	100.50
24	Gyro	2400.00	0.10	220.26	100	2399.95	-0.15	0.07 S	8.39 E	8.39	90.51	0.21	-0.05	-112.98
25	Gyro	2500.00	0.20	196.43	100	2499.95	-0.39	0.31 S	8.28 E	8.29	92.13	0.12	0.10	-23.83
26	Gyro	2600.00	0.14	275.29	100	2599.95	-0.54	0.46 S	8.11 E	8.13	93.28	0.22	-0.06	78.86
27	Gyro	2700.00	0.16	295.96	100	2699.95	-0.47	0.39 S	7.87 E	7.88	92.85	0.06	0.02	20.67
28	Gyro	2800.00	0.20	350.82	100	2799.95	-0.23	0.16 S	7.71 E	7.71	91.18	0.17	0.04	54.86
29	Gyro	2900.00	0.11	39.83	100	2899.95	0.01	0.09 N	7.75 E	7.75	89.35	0.15	-0.09	49.01
30	Gyro	3000.00	0.13	231.81	100	2999.95	0.02	0.09 N	7.72 E	7.72	89.33	0.24	0.02	191.98
31	Gyro	3100.00	0.22	315.94	100	3099.95	0.09	0.16 N	7.50 E	7.50	88.79	0.24	0.09	84.13
32	Gyro	3200.00	0.05	319.71	100	3199.95	0.26	0.33 N	7.33 E	7.34	87.42	0.17	-0.17	3.77
33	Gyro	3300.00	0.15	355.85	100	3299.95	0.43	0.49 N	7.30 E	7.31	86.13	0.11	0.10	36.14
34	Gyro	3400.00	0.13	21.76	100	3399.95	0.66	0.73 N	7.33 E	7.37	84.31	0.07	-0.02	25.91
35	Gyro	3500.00	0.17	289.44	100	3499.95	0.82	0.88 N	7.23 E	7.29	83.03	0.22	0.04	-92.32
36	Gyro	3600.00	0.07	182.50	100	3599.95	0.81	0.87 N	7.09 E	7.14	82.98	0.20	-0.10	-106.94
37	Gyro	3700.00	0.22	40.05	100	3699.95	0.89	0.96 N	7.21 E	7.27	82.43	0.28	0.15	-142.45
38	Gyro	3800.00	0.24	335.20	100	3799.95	1.23	1.30 N	7.25 E	7.36	79.86	0.25	0.02	-64.85
39	Gyro	3900.00	0.17	332.53	100	3899.95	1.55	1.62 N	7.09 E	7.27	77.15	0.07	-0.07	-2.67
40	Gyro	4000.00	0.18	348.55	100	3999.95	1.84	1.90 N	6.99 E	7.24	74.77	0.05	0.01	16.02
41	Gyro	4100.00	0.19	60.48	100	4099.95	2.07	2.14 N	7.10 E	7.42	73.24	0.22	0.01	71.93
42	Gyro	4200.00	0.17	233.73	100	4199.95	2.07	2.13 N	7.13 E	7.44	73.34	0.36	-0.02	173.25

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								N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)			
43	Gyro	4300.00	0.17	275.83	100	4299.95	2.00	2.06 N	6.86 E	7.16	73.28	0.12	0.00	42.10
44	Gyro	4400.00	0.17	285.34	100	4399.94	2.05	2.11 N	6.57 E	6.90	72.16	0.03	0.00	9.51
45	Gyro	4500.00	0.25	240.36	100	4499.94	1.99	2.05 N	6.24 E	6.56	71.84	0.18	0.08	-44.98
46	Gyro	4600.00	0.15	249.92	100	4599.94	1.84	1.89 N	5.92 E	6.22	72.28	0.11	-0.10	9.56
47	Gyro	4700.00	0.19	333.59	100	4699.94	1.94	2.00 N	5.73 E	6.07	70.78	0.23	0.04	83.67
48	Gyro	4800.00	0.20	346.55	100	4799.94	2.26	2.31 N	5.61 E	6.07	67.59	0.05	0.01	12.96
49	Gyro	4900.00	0.15	82.04	100	4899.94	2.45	2.50 N	5.70 E	6.23	66.30	0.26	-0.05	95.49
50	Gyro	5000.00	0.12	227.61	100	4999.94	2.40	2.45 N	5.75 E	6.25	66.94	0.26	-0.03	145.57
51	Gyro	5100.00	0.21	251.77	100	5099.94	2.27	2.32 N	5.50 E	5.97	67.12	0.11	0.09	24.16
52	Gyro	5200.00	0.22	150.94	100	5199.94	2.05	2.10 N	5.42 E	5.81	68.86	0.33	0.01	-100.83
53	Gyro	5300.00	0.17	136.37	100	5299.94	1.77	1.82 N	5.62 E	5.91	72.03	0.07	-0.05	-14.57
54	Gyro	5400.00	0.18	171.71	100	5399.94	1.50	1.56 N	5.74 E	5.95	74.81	0.11	0.01	35.34
55	Gyro	5500.00	0.16	223.97	100	5499.94	1.25	1.30 N	5.67 E	5.82	77.05	0.15	-0.02	52.26
56	Gyro	5600.00	0.16	293.94	100	5599.94	1.21	1.26 N	5.44 E	5.59	76.98	0.18	0.00	69.97
57	Gyro	5700.00	0.20	298.81	100	5699.94	1.35	1.40 N	5.16 E	5.35	74.83	0.04	0.04	4.87
58	Gyro	5800.00	0.18	330.17	100	5799.94	1.57	1.62 N	4.93 E	5.19	71.81	0.10	-0.02	31.36
59	Gyro	5900.00	0.12	221.70	100	5899.94	1.63	1.68 N	4.78 E	5.07	70.67	0.25	-0.06	-108.47
60	Gyro	6000.00	0.43	121.32	100	5999.94	1.36	1.41 N	5.04 E	5.23	74.41	0.47	0.31	-100.38
61	Gyro	6100.00	0.33	101.39	100	6099.93	1.10	1.15 N	5.64 E	5.75	78.44	0.16	-0.10	-19.93
62	Gyro	6200.00	0.15	356.64	100	6199.93	1.17	1.23 N	5.91 E	6.04	78.28	0.40	-0.18	255.25
63	Gyro	6300.00	0.20	244.28	100	6299.93	1.23	1.28 N	5.75 E	5.89	77.43	0.29	0.05	-112.36
64	Gyro	6400.00	0.66	46.79	100	6399.93	1.54	1.60 N	6.01 E	6.22	75.09	0.85	0.46	-197.49
65	Gyro	6500.00	0.31	29.55	100	6499.93	2.17	2.23 N	6.56 E	6.93	71.23	0.38	-0.35	-17.24
66	Gyro	6600.00	0.79	358.61	100	6599.92	3.09	3.15 N	6.68 E	7.39	64.72	0.55	0.48	-30.94
67	Gyro	6700.00	0.73	26.12	100	6699.91	4.35	4.42 N	6.94 E	8.23	57.55	0.37	-0.06	27.51
68	Gyro	6800.00	0.81	33.93	100	6799.91	5.50	5.57 N	7.62 E	9.44	53.81	0.13	0.08	7.81
69	Gyro	6900.00	0.59	43.06	100	6899.90	6.46	6.54 N	8.37 E	10.62	51.99	0.25	-0.22	9.13
70	Gyro	7000.00	0.58	46.93	100	6999.89	7.17	7.26 N	9.09 E	11.63	51.38	0.04	-0.01	3.87
71	Gyro	7100.00	0.72	50.90	100	7099.89	7.91	8.00 N	9.94 E	12.76	51.18	0.15	0.14	3.97
72	Gyro	7200.00	0.78	23.40	100	7199.88	8.92	9.02 N	10.70 E	14.00	49.87	0.36	0.06	-27.50
73	Gyro	7300.00	0.53	16.02	100	7299.87	9.99	10.09 N	11.10 E	15.00	47.73	0.26	-0.25	-7.38
74	Gyro	7400.00	0.44	66.27	100	7399.87	10.58	10.69 N	11.58 E	15.76	47.29	0.42	-0.09	50.25
75	Gyro	7500.00	0.67	55.26	100	7499.86	11.06	11.18 N	12.41 E	16.70	47.99	0.25	0.23	-11.01
76	Gyro	7600.00	0.72	52.31	100	7599.86	11.77	11.90 N	13.39 E	17.91	48.38	0.06	0.05	-2.95
77	Gyro	7700.00	0.87	59.18	100	7699.85	12.53	12.67 N	14.54 E	19.28	48.93	0.18	0.15	6.87
78	Gyro	7800.00	0.57	59.41	100	7799.84	13.16	13.31 N	15.62 E	20.52	49.56	0.30	-0.30	0.23
79	Gyro	7900.00	0.73	79.67	100	7899.83	13.52	13.68 N	16.67 E	21.57	50.64	0.28	0.16	20.26
80	Gyro	8000.00	0.65	80.53	100	7999.83	13.72	13.89 N	17.86 E	22.62	52.14	0.08	-0.08	0.86
81	Gyro	8100.00	0.54	94.64	100	8099.82	13.76	13.94 N	18.89 E	23.48	53.57	0.18	-0.11	14.11
82	Gyro	8200.00	0.71	102.32	100	8199.81	13.58	13.77 N	19.96 E	24.25	55.40	0.19	0.17	7.68
83	Gyro	8300.00	0.88	108.10	100	8299.80	13.20	13.40 N	21.30 E	25.16	57.82	0.19	0.17	5.78
84	Gyro	8400.00	0.93	109.75	100	8399.79	12.67	12.89 N	22.79 E	26.18	60.52	0.06	0.05	1.65
85	Gyro	8500.00	1.49	111.56	100	8499.77	11.90	12.13 N	24.76 E	27.58	63.90	0.56	0.56	1.81
86	Gyro	8600.00	1.09	113.57	100	8599.74	11.02	11.28 N	26.85 E	29.12	67.22	0.40	-0.40	2.01

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87	Gyro	8700.00	2.03	118.21	100	8699.71	9.78	10.06 N	29.28 E	30.96	71.04	0.95	0.94	4.64
88	Gyro	8800.00	1.53	118.34	100	8799.66	8.29	8.59 N	32.01 E	33.15	74.98	0.50	-0.50	0.13
89	Gyro	8900.00	1.88	120.66	100	8899.61	6.79	7.12 N	34.60 E	35.32	78.38	0.36	0.35	2.32
90	Gyro	9000.00	1.75	132.23	100	8999.56	4.90	5.25 N	37.14 E	37.51	81.95	0.39	-0.13	11.57
91	Gyro	9100.00	1.35	127.11	100	9099.53	3.15	3.52 N	39.21 E	39.37	84.87	0.42	-0.40	-5.12
92	Gyro	9200.00	0.55	95.63	100	9199.51	2.38	2.76 N	40.63 E	40.72	86.11	0.93	-0.80	-31.48
93	Gyro	9300.00	0.25	166.91	100	9299.51	2.11	2.50 N	41.16 E	41.23	86.52	0.53	-0.30	71.28
94	Gyro	9400.00	0.24	258.96	100	9399.51	1.86	2.25 N	41.00 E	41.06	86.86	0.35	-0.01	92.05
95	Gyro	9500.00	0.15	8.54	100	9499.51	1.95	2.34 N	40.81 E	40.88	86.72	0.32	-0.09	-250.42
96	Gyro	9600.00	0.18	85.42	100	9599.51	2.09	2.48 N	40.99 E	41.06	86.54	0.21	0.03	76.88
97	Gyro	9700.00	0.23	183.60	100	9699.51	1.90	2.29 N	41.13 E	41.20	86.81	0.31	0.05	98.18
98	Gyro	9800.00	0.16	215.73	100	9799.51	1.59	1.98 N	41.04 E	41.09	87.24	0.13	-0.07	32.13
99	Gyro	9900.00	0.19	312.91	100	9899.51	1.59	1.98 N	40.84 E	40.88	87.23	0.26	0.03	97.18
100	Gyro	10000.00	0.27	36.06	100	9999.51	1.90	2.28 N	40.85 E	40.92	86.80	0.31	0.08	83.15
101	Gyro	10100.00	0.32	85.86	100	10099.50	2.10	2.49 N	41.27 E	41.35	86.55	0.25	0.05	49.80
102	Gyro	10200.00	0.33	156.73	100	10199.50	1.85	2.25 N	41.66 E	41.72	86.91	0.38	0.01	70.87
103	Gyro	10300.00	0.24	178.94	100	10299.50	1.38	1.77 N	41.78 E	41.82	87.57	0.14	-0.09	22.21
104	Gyro	10400.00	0.45	256.20	100	10399.50	1.08	1.47 N	41.40 E	41.43	87.97	0.46	0.21	77.26
105	Gyro	10490.00	0.11	347.75	90	10489.50	1.08	1.47 N	41.04 E	41.07	87.95	0.52	-0.38	101.72
106	MWD	10603.00	8.60	358.50	113	10602.07	9.65	10.04 N	40.80 E	42.01	76.18	7.52	7.51	9.51
107	MWD	10634.00	9.50	359.60	31	10632.68	14.53	14.91 N	40.72 E	43.36	69.89	2.96	2.90	3.55
108	MWD	10666.00	10.90	360.00	32	10664.18	20.19	20.58 N	40.70 E	45.61	63.18	4.38	4.38	1.25
109	MWD	10698.00	13.90	1.60	32	10695.43	27.06	27.45 N	40.81 E	49.18	56.07	9.44	9.38	5.00
110	MWD	10729.00	16.80	0.60	31	10725.32	35.26	35.65 N	40.96 E	54.30	48.96	9.39	9.35	-3.23
111	MWD	10761.00	19.50	359.70	32	10755.72	45.23	45.62 N	40.98 E	61.32	41.93	8.48	8.44	-2.81
112	MWD	10793.00	22.00	355.30	32	10785.65	56.55	56.94 N	40.46 E	69.85	35.40	9.20	7.81	-13.75
113	MWD	10824.00	23.80	355.30	31	10814.20	68.58	68.96 N	39.47 E	79.46	29.79	5.81	5.81	0.00
114	MWD	10856.00	26.20	356.90	32	10843.20	82.08	82.45 N	38.56 E	91.02	25.07	7.79	7.50	5.00
115	MWD	10888.00	28.70	359.50	32	10871.60	96.83	97.19 N	38.11 E	104.39	21.41	8.66	7.81	8.13
116	MWD	10919.00	30.60	2.50	31	10898.54	112.15	112.52 N	38.39 E	118.89	18.84	7.78	6.13	9.68
117	MWD	10951.00	33.10	3.10	32	10925.72	129.01	129.38 N	39.22 E	135.19	16.86	7.87	7.81	1.88
118	MWD	10983.00	35.40	3.00	32	10952.17	146.98	147.36 N	40.18 E	152.74	15.25	7.19	7.19	-0.31
119	MWD	11014.00	37.60	2.50	31	10977.09	165.39	165.78 N	41.06 E	170.79	13.91	7.16	7.10	-1.61
120	MWD	11046.00	40.60	2.00	32	11001.92	185.54	185.95 N	41.85 E	190.60	12.68	9.43	9.38	-1.56
121	MWD	11078.00	43.70	0.90	32	11025.64	207.00	207.41 N	42.39 E	211.70	11.55	9.96	9.69	-3.44
122	MWD	11109.00	45.80	0.90	31	11047.65	228.82	229.23 N	42.73 E	233.18	10.56	6.77	6.77	0.00
123	MWD	11141.00	48.30	0.10	32	11069.46	252.23	252.65 N	42.93 E	256.27	9.64	8.02	7.81	-2.50
124	MWD	11173.00	50.80	359.40	32	11090.22	276.58	277.00 N	42.82 E	280.29	8.79	7.99	7.81	-2.19
125	MWD	11204.00	53.80	359.50	31	11109.17	301.11	301.52 N	42.59 E	304.51	8.04	9.68	9.68	0.32
126	MWD	11236.00	56.70	359.70	32	11127.41	327.40	327.81 N	42.40 E	330.54	7.37	9.08	9.06	0.62
127	MWD	11263.00	59.60	359.70	27	11141.66	350.33	350.74 N	42.28 E	353.28	6.87	10.74	10.74	0.00
128	MWD	11295.00	62.20	359.40	32	11157.22	378.29	378.70 N	42.06 E	381.03	6.34	8.17	8.13	-0.94
129	MWD	11327.00	64.60	358.90	32	11171.54	406.90	407.31 N	41.64 E	409.43	5.84	7.63	7.50	-1.56
130	MWD	11358.00	67.50	358.60	31	11184.13	435.22	435.63 N	41.02 E	437.56	5.38	9.40	9.35	-0.97

Company: Caza Operating, LLC.

Field: Bone Springs

County / State: Lea, New Mexico

Well Name: Lennox 32 State 4H

Surveys Corrected to Grid North

Job Number: 147149

API Number: 30-025-41270

Permit Number:

Magnetic North: 6.48

Start Date: 09/10/14

Proposed Azimuth: 359.46

Target Inclination: 90.00

Surface Location: Sec 32, T-22S R-35E 330 FSL & 660 FWL

Bottom Hole Location: N 32°21' 16.33" W 103°23' 45.76"

End Date: 09/17/14

**CATHEDRAL**

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth(ft)	TVD (ft)	VS (ft)	Coordinates		Closure		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')
								N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)			
131	MWD	11390.00	70.20	358.70	32	11195.67	465.06	465.46	N 40.31 E	467.20	4.95	8.44	8.44	0.31
132	MWD	11422.00	73.70	358.60	32	11205.59	495.48	495.87	N 39.60 E	497.45	4.57	10.94	10.94	-0.31
133	MWD	11454.00	76.50	358.20	32	11213.81	526.39	526.78	N 38.73 E	528.21	4.21	8.83	8.75	-1.25
134	MWD	11485.00	79.90	357.80	31	11220.15	556.73	557.11	N 37.67 E	558.38	3.87	11.04	10.97	-1.29
135	MWD	11580.00	89.20	356.70	95	11229.17	651.12	651.46	N 33.13 E	652.30	2.91	9.86	9.79	-1.16
136	MWD	11675.00	90.90	357.30	95	11229.08	746.03	746.33	N 28.16 E	746.86	2.16	1.90	1.79	0.63
137	MWD	11770.00	92.10	357.40	95	11226.60	840.93	841.19	N 23.77 E	841.53	1.62	1.27	1.26	0.11
138	MWD	11865.00	91.30	359.90	95	11223.78	935.87	936.11	N 21.54 E	936.36	1.32	2.76	-0.84	2.63
139	MWD	11959.00	89.30	360.00	94	11223.28	1029.86	1030.11	N 21.45 E	1030.33	1.19	2.13	-2.13	0.11
140	MWD	12055.00	90.10	0.10	96	11223.79	1125.85	1126.11	N 21.54 E	1126.31	1.10	0.84	0.83	0.10
141	MWD	12150.00	89.30	359.60	95	11224.28	1220.85	1221.10	N 21.29 E	1221.29	1.00	0.99	-0.84	-0.53
142	MWD	12245.00	90.60	359.60	95	11224.37	1315.85	1316.10	N 20.63 E	1316.26	0.90	1.37	1.37	0.00
143	MWD	12340.00	89.90	359.00	95	11223.95	1410.84	1411.09	N 19.46 E	1411.22	0.79	0.97	-0.74	-0.63
144	MWD	12435.00	91.30	358.70	95	11222.96	1505.83	1506.06	N 17.56 E	1506.17	0.67	1.51	1.47	-0.32
145	MWD	12530.00	89.70	359.00	95	11222.13	1600.82	1601.04	N 15.65 E	1601.11	0.56	1.71	-1.68	0.32
146	MWD	12625.00	88.10	359.30	95	11223.95	1695.80	1696.01	N 14.24 E	1696.07	0.48	1.71	-1.68	0.32
147	MWD	12720.00	89.40	359.70	95	11226.03	1790.77	1790.98	N 13.41 E	1791.03	0.43	1.43	1.37	0.42
148	MWD	12815.00	90.90	359.90	95	11225.78	1885.77	1885.97	N 13.08 E	1886.02	0.40	1.59	1.58	0.21
149	MWD	12911.00	89.40	359.10	96	11225.53	1981.76	1981.97	N 12.24 E	1982.00	0.35	1.77	-1.56	-0.83
150	MWD	13006.00	90.70	359.20	95	11225.44	2076.76	2076.95	N 10.84 E	2076.98	0.30	1.37	1.37	0.11
151	MWD	13101.00	89.40	358.40	95	11225.36	2171.75	2171.93	N 8.85 E	2171.95	0.23	1.61	-1.37	-0.84
152	MWD	13196.00	88.00	357.20	95	11227.51	2266.68	2266.83	N 5.20 E	2266.84	0.13	1.94	-1.47	-1.26
153	MWD	13291.00	89.20	357.40	95	11229.84	2361.58	2361.70	N 0.73 E	2361.70	0.02	1.28	1.26	0.21
154	MWD	13386.00	90.50	357.90	95	11230.08	2456.53	2456.61	N 3.17 W	2456.62	359.93	1.47	1.37	0.53
155	MWD	13481.00	89.00	357.50	95	11230.50	2551.49	2551.53	N 6.98 W	2551.54	359.84	1.63	-1.58	-0.42
156	MWD	13576.00	90.20	357.90	95	11231.16	2646.44	2646.45	N 10.79 W	2646.47	359.77	1.33	1.26	0.42
157	MWD	13672.00	91.60	358.00	96	11229.65	2742.39	2742.38	N 14.23 W	2742.41	359.70	1.46	1.46	0.10
158	MWD	13767.00	90.10	358.80	95	11228.25	2837.36	2837.33	N 16.88 W	2837.38	359.66	1.79	-1.58	0.84
159	MWD	13862.00	91.30	359.60	95	11227.08	2932.35	2932.31	N 18.20 W	2932.36	359.64	1.52	1.26	0.84
160	MWD	13958.00	89.50	359.20	96	11226.41	3028.34	3028.30	N 19.21 W	3028.36	359.64	1.92	-1.88	-0.42
161	MWD	14053.00	90.50	359.00	95	11226.41	3123.34	3123.28	N 20.70 W	3123.35	359.62	1.07	1.05	-0.21
162	MWD	14148.00	88.60	358.90	95	11227.16	3218.33	3218.26	N 22.44 W	3218.34	359.60	2.00	-2.00	-0.11
163	MWD	14243.00	89.50	359.10	95	11228.74	3313.31	3313.23	N 24.10 W	3313.32	359.58	0.97	0.95	0.21
164	MWD	14338.00	91.10	359.60	95	11228.24	3408.31	3408.22	N 25.18 W	3408.31	359.58	1.76	1.68	0.53
165	MWD	14433.00	89.40	359.50	95	11227.82	3503.30	3503.21	N 25.92 W	3503.31	359.58	1.79	-1.79	-0.11
166	MWD	14529.00	90.50	359.80	96	11227.91	3599.30	3599.21	N 26.51 W	3599.31	359.58	1.19	1.15	0.31
167	MWD	14624.00	88.60	359.40	95	11228.65	3694.29	3694.20	N 27.17 W	3694.30	359.58	2.04	-2.00	-0.42
168	MWD	14719.00	89.50	359.50	95	11230.23	3789.28	3789.18	N 28.09 W	3789.29	359.58	0.95	0.95	0.11
169	MWD	14813.00	90.90	359.80	94	11229.90	3883.27	3883.18	N 28.66 W	3883.28	359.58	1.52	1.49	0.32
170	MWD	14908.00	88.80	358.70	95	11230.15	3978.27	3978.16	N 29.90 W	3978.27	359.57	2.50	-2.21	-1.16
171	MWD	15003.00	90.00	358.70	95	11231.14	4073.25	4073.13	N 32.06 W	4073.26	359.55	1.26	1.26	0.00
172	MWD	15098.00	88.90	358.60	95	11232.06	4168.24	4168.10	N 34.30 W	4168.24	359.53	1.16	-1.16	-0.11
173	MWD	15193.00	90.00	358.70	95	11232.97	4263.22	4263.07	N 36.53 W	4263.22	359.51	1.16	1.16	0.11
174	MWD	15289.00	91.40	358.90	96	11231.79	4359.20	4359.03	N 38.55 W	4359.20	359.49	1.47	1.46	0.21

Proposed Azimuth: 359.46

Target Inclination: 90.00

Surface Location: Sec 32,T-22S R-35E 330 FSL & 660 FWL

Bottom Hole Location: N 32°21' 16.33" W 103°23' 45.76

End Date: 09/17/14



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[illegible]