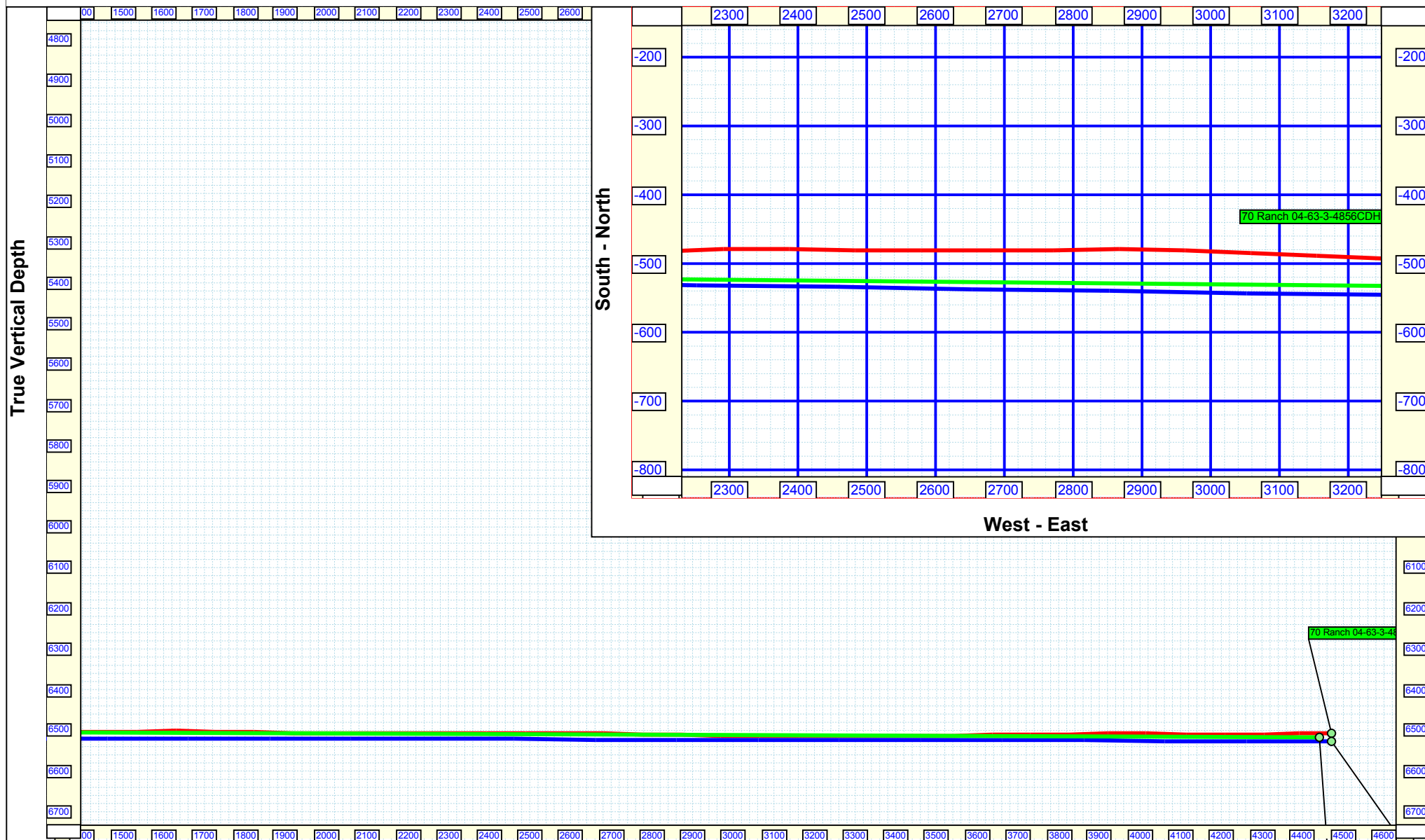
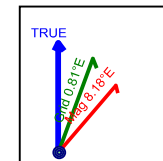




Job Number: 12182013
Company: Bill BARrett Corp.
Lease/Well: 70 Ranch 4-63-3-4856CDH
Location: East Kersey
Rig Name: Nabors M-37
State/County: Colorado/ Weld
Country: USA
API Number: 15-123-37994

Elevation (To MSL): 0.00 ft
RKB: 0.00 ft
Projection System: US State Plane 1927 (Exact solution)
Projection Group: Colorado North 501
Projection Datum: CLARKE 1866
Magnetic Declination: 8.18
Grid Convergence: 0.80920 E
Date: Wednesday, December 25, 2013



Vertical Section (100 Ft/Div) VSP: 90.86°



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-4856CDH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	12/25/2013
Start Date	12/19/2013	Proposed Direction	90.86
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
TIE IN	760	0.23	189.28	760.00	-2.10	0.90	0.93	0.00
1	876	0.30	86.00	876.00	-2.31	1.17	1.20	0.4
2	975	0.4	70.9	975.00	-2.18	1.75	1.78	0.1
3	1068	0.4	82.3	1068.00	-2.03	2.38	2.41	0.1
4	1159	0.9	163.0	1158.99	-2.67	2.90	2.94	1.0
5	1251	0.3	208.4	1250.99	-3.57	3.00	3.05	0.8
6	1344	0.3	284.3	1343.98	-3.73	2.65	2.70	0.4
7	1438	0.4	299.1	1437.98	-3.51	2.12	2.17	0.1
8	1533	0.6	204.0	1532.98	-3.80	1.63	1.69	0.8
9	1628	0.6	225.6	1627.98	-4.60	1.07	1.14	0.2
10	1724	0.4	95.9	1723.97	-4.99	1.05	1.12	0.9
11	1819	0.6	182.7	1818.97	-5.52	1.35	1.44	0.7
12	1916	0.4	178.5	1915.97	-6.36	1.34	1.43	0.2
13	2012	0.1	117.7	2011.97	-6.74	1.42	1.52	0.4
14	2107	1.1	249.7	2106.96	-7.09	0.64	0.75	1.2
15	2203	0.6	218.2	2202.95	-7.81	-0.54	-0.42	0.7
16	2300	0.7	211.9	2299.94	-8.71	-1.16	-1.03	0.1
17	2395	0.7	229.5	2394.94	-9.58	-1.91	-1.77	0.2
18	2491	0.5	207.7	2490.93	-10.33	-2.55	-2.40	0.3
19	2586	0.6	211.7	2585.93	-11.12	-3.01	-2.84	0.1
20	2682	2.0	199.2	2681.90	-13.13	-3.82	-3.62	1.5
21	2778	3.3	193.8	2777.80	-17.40	-5.03	-4.77	1.4
22	2873	5.2	197.8	2872.53	-24.15	-7.00	-6.64	2.0
23	2968	6.9	198.2	2967.00	-33.67	-10.10	-9.59	1.8
24	3064	9.7	195.0	3061.98	-46.96	-13.99	-13.29	3.0
25	3159	12.2	199.8	3155.25	-64.14	-19.47	-18.50	2.8
26	3254	13.1	199.9	3247.94	-83.71	-26.53	-25.27	0.9



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-4856CDH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	12/25/2013
Start Date	12/19/2013	Proposed Direction	90.86
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
27	3349	13.5	200.8	3340.39	-104.20	-34.13	-32.56	0.5
28	3444	14.7	206.8	3432.53	-125.33	-43.51	-41.62	2.0
29	3540	15.2	206.3	3525.28	-147.48	-54.57	-52.35	0.5
30	3635	15.2	205.6	3616.96	-169.88	-65.47	-62.92	0.2
31	3732	14.5	205.2	3710.72	-192.33	-76.14	-73.24	0.7
32	3829	13.7	203.1	3804.80	-213.89	-85.82	-82.60	1.0
33	3924	12.5	204.5	3897.32	-233.59	-94.49	-90.98	1.3
34	4019	10.8	204.7	3990.36	-251.03	-102.48	-98.70	1.8
35	4115	9.9	206.6	4084.80	-266.58	-109.93	-105.92	1.0
36	4211	9.3	208.2	4179.46	-280.80	-117.29	-113.06	0.7
37	4307	10.0	205.7	4274.10	-295.15	-124.57	-120.13	0.8
38	4403	11.3	203.6	4368.44	-311.28	-131.95	-127.26	1.4
39	4499	12.6	206.6	4462.36	-329.26	-140.41	-135.45	1.5
40	4594	11.3	205.0	4555.30	-346.96	-148.98	-143.75	1.4
41	4691	10.6	205.7	4650.53	-363.61	-156.86	-151.39	0.7
42	4788	11.3	205.4	4745.77	-380.24	-164.81	-159.08	0.7
43	4884	10.0	204.5	4840.11	-396.32	-172.30	-166.33	1.4
44	4979	8.5	204.9	4933.87	-410.19	-178.68	-172.50	1.6
45	5076	8.4	200.6	5029.82	-423.33	-184.19	-177.81	0.7
46	5171	8.4	197.8	5123.80	-436.43	-188.75	-182.18	0.4
47	5266	7.7	199.4	5217.87	-449.04	-192.99	-186.23	0.8
48	5363	6.9	208.9	5314.08	-460.27	-197.96	-191.03	1.5
49	5458	5.6	206.8	5408.52	-469.40	-202.81	-195.74	1.4
50	5554	3.6	214.2	5504.20	-476.08	-206.62	-199.45	2.2
51	5645	2.3	216.5	5595.08	-479.91	-209.31	-202.08	1.4
52	5742	1.2	218.4	5692.03	-482.27	-211.10	-203.83	1.1
53	5838	0.9	206.3	5788.02	-483.73	-212.06	-204.77	0.4
54	5934	1.0	194.8	5884.00	-485.22	-212.60	-205.30	0.2
55	5962	0.9	136.7	5912.00	-485.62	-212.51	-205.20	3.3
56	5994	3.4	97.5	5943.98	-485.92	-211.40	-204.08	8.6



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-4856CDH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	12/25/2013
Start Date	12/19/2013	Proposed Direction	90.86
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
57	6028	6.6	92.2	5977.84	-486.13	-208.45	-201.13	9.5
58	6056	10.3	86.2	6005.54	-486.03	-204.34	-197.02	13.6
59	6092	13.3	83.6	6040.77	-485.35	-197.01	-189.71	8.5
60	6124	15.6	83.4	6071.76	-484.45	-189.08	-181.79	7.2
61	6156	18.9	82.3	6102.31	-483.26	-179.67	-172.39	10.4
62	6188	21.9	81.8	6132.30	-481.71	-168.62	-161.37	9.4
63	6220	24.4	82.2	6161.72	-479.96	-156.16	-148.94	7.8
64	6251	27.4	82.2	6189.61	-478.12	-142.75	-135.56	9.7
65	6283	30.2	81.5	6217.65	-475.93	-127.49	-120.33	8.8
66	6317	33.2	80.6	6246.57	-473.15	-109.85	-102.73	8.9
67	6348	36.2	81.5	6272.05	-470.41	-92.42	-85.35	9.8
68	6380	39.4	81.8	6297.34	-467.56	-73.01	-65.99	10.0
69	6412	41.8	83.6	6321.63	-464.93	-52.36	-45.38	8.3
70	6444	45.5	84.3	6344.78	-462.60	-30.40	-23.45	11.7
71	6476	49.0	85.2	6366.50	-460.46	-7.00	-0.09	11.1
72	6508	52.4	86.2	6386.77	-458.61	17.69	24.57	10.9
73	6539	56.4	85.2	6404.81	-456.71	42.82	49.67	13.2
74	6571	57.9	89.0	6422.17	-455.36	69.66	76.48	11.0
75	6603	60.4	91.0	6438.58	-455.37	97.12	103.95	9.5
76	6633	62.2	94.3	6452.99	-456.59	123.40	130.24	11.4
77	6664	64.5	94.6	6466.89	-458.74	151.03	157.89	7.5
78	6683	66.2	94.8	6474.82	-460.15	168.24	175.12	9.0
79	6742	72.4	97.5	6495.67	-466.09	223.07	230.04	11.3
80	6776	77.9	98.3	6504.38	-470.61	255.61	262.65	16.3
81	6807	83.4	98.5	6509.41	-475.08	285.86	292.96	17.8
82	6840	89.2	98.9	6511.54	-480.06	318.40	325.57	17.6
83	6873	90.5	98.5	6511.63	-485.05	351.02	358.26	4.1
84	6903	90.5	98.0	6511.36	-489.35	380.71	388.01	1.7
85	6968	91.1	96.4	6510.46	-497.50	445.19	452.60	2.6
86	6999	91.2	96.1	6509.83	-500.87	475.99	483.46	1.0



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-4856CDH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	12/25/2013
Start Date	12/19/2013	Proposed Direction	90.86
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
87	7095	90.1	93.6	6508.74	-508.99	571.64	579.21	2.8
88	7189	90.0	91.3	6508.66	-513.00	665.54	673.17	2.4
89	7285	91.0	89.2	6507.82	-513.42	761.53	769.15	2.4
90	7381	90.5	88.3	6506.57	-511.33	857.50	865.08	1.1
91	7477	90.3	90.6	6505.90	-510.41	953.49	961.04	2.4
92	7572	90.7	91.1	6505.07	-511.82	1048.47	1056.04	0.7
93	7666	91.3	92.0	6503.43	-514.36	1142.42	1150.01	1.2
94	7762	89.6	91.3	6502.67	-517.12	1238.38	1246.00	1.9
95	7858	90.0	91.0	6503.01	-519.05	1334.35	1342.00	0.5
96	7955	90.2	89.6	6502.84	-519.56	1431.35	1438.99	1.5
97	8051	90.0	87.8	6502.67	-517.38	1527.32	1534.92	1.9
98	8147	90.2	86.4	6502.51	-512.52	1623.20	1630.71	1.5
99	8243	88.9	86.2	6503.26	-506.33	1718.99	1726.40	1.4
100	8338	88.9	85.0	6505.08	-499.04	1813.69	1820.98	1.3
101	8434	89.3	86.4	6506.59	-491.84	1909.41	1916.57	1.5
102	8529	89.8	88.3	6507.34	-487.45	2004.30	2011.39	2.1
103	8624	90.1	88.8	6507.42	-485.05	2099.27	2106.31	0.6
104	8721	90.3	88.0	6507.08	-482.34	2196.23	2203.22	0.9
105	8817	89.1	89.0	6507.58	-479.83	2292.19	2299.13	1.6
106	8913	89.8	90.8	6508.51	-479.66	2388.18	2395.11	2.0
107	9009	90.4	90.8	6508.34	-481.00	2484.17	2491.11	0.6
108	9104	90.2	88.7	6507.84	-480.59	2579.16	2586.09	2.2
109	9199	89.2	90.8	6508.34	-480.17	2674.16	2681.06	2.4
110	9295	89.0	89.2	6509.85	-480.17	2770.14	2777.04	1.7
111	9391	88.5	89.6	6511.94	-479.17	2866.11	2872.98	0.7
112	9487	89.7	92.2	6513.45	-480.67	2962.08	2968.96	3.0
113	9583	90.5	92.2	6513.28	-484.36	3058.01	3064.93	0.8
114	9679	89.0	92.4	6513.70	-488.21	3153.93	3160.90	1.6
115	9774	89.6	92.4	6514.86	-492.19	3248.83	3255.86	0.6
116	9868	89.9	92.5	6515.27	-496.21	3342.75	3349.82	0.3



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-4856CDH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	12/25/2013
Start Date	12/19/2013	Proposed Direction	90.86
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
117	9963	90.3	92.4	6515.10	-500.27	3437.66	3444.78	0.4
118	10059	91.2	93.6	6513.85	-505.29	3533.52	3540.70	1.6
119	10155	92.2	93.9	6511.00	-511.57	3629.27	3636.54	1.1
120	10250	89.4	92.5	6509.67	-516.87	3724.10	3731.44	3.3
121	10345	90.1	92.4	6510.09	-520.93	3819.01	3826.40	0.7
122	10440	91.2	92.4	6509.01	-524.91	3913.92	3921.36	1.2
123	10535	88.6	92.2	6509.18	-528.72	4008.84	4016.32	2.7
124	10631	89.3	92.2	6510.94	-532.41	4104.75	4112.28	0.7
125	10727	90.0	91.8	6511.52	-535.76	4200.69	4208.26	0.8
126	10823	90.9	92.2	6510.77	-539.11	4296.62	4304.23	1.0
127	10912	91.8	91.8	6508.67	-542.21	4385.54	4393.19	1.1
PTB	10989	91.8	91.8	6506.25	-544.63	4462.47	4470.14	0.0