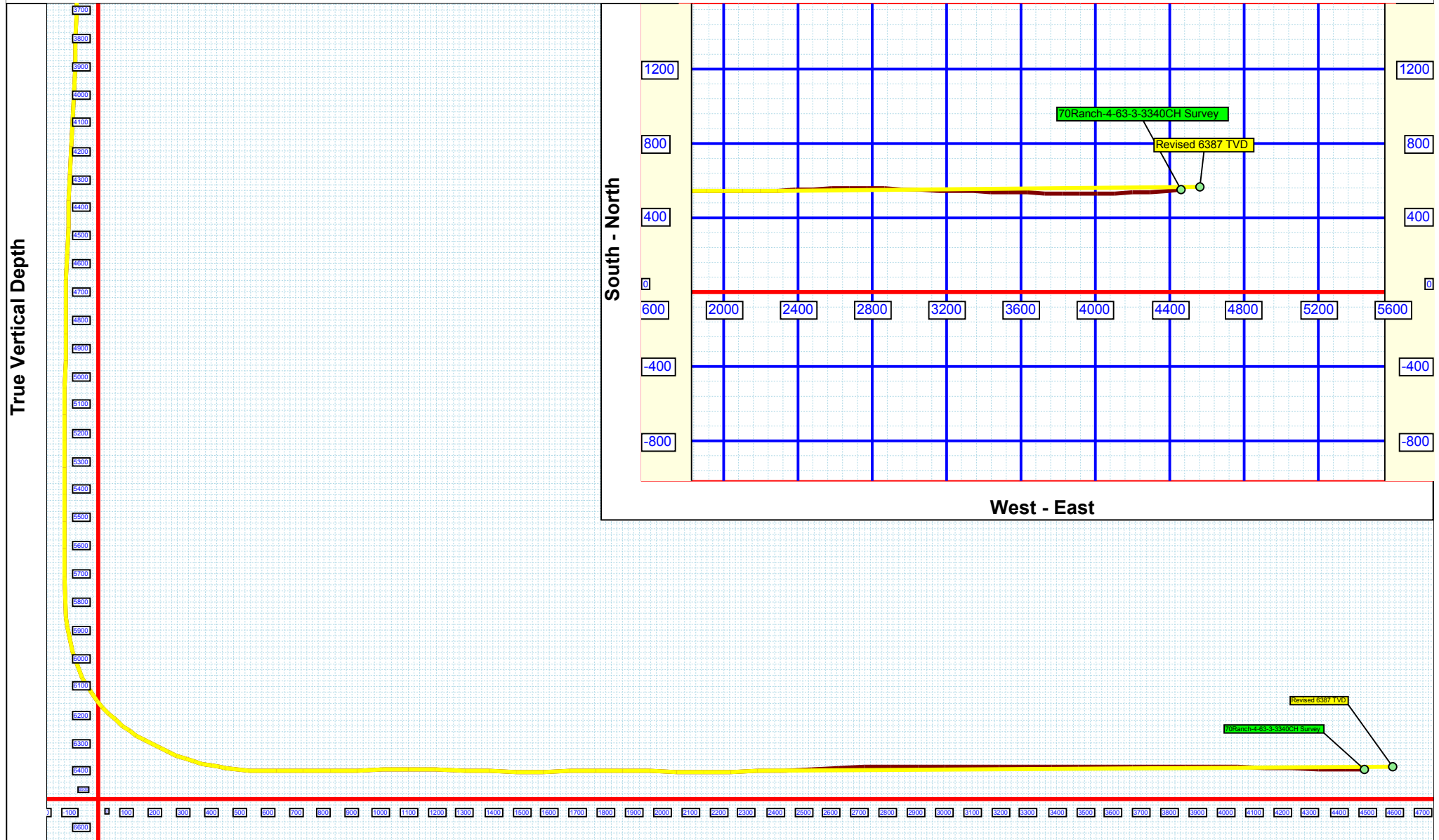
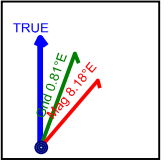




Job Number: 01032014
Company: Bill Barrett Corp
Lease/Well: 70 Ranch/04-63-03-3340CH
Location: Kersey
Rig Name: Nabors M-37
State/County: Colorado/ Weld
Country: USA
API Number: 15-123-37930

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: Sunday, January 12, 2014



Vertical Section (100 Ft/Div) VSP: 83.65°



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-3340CH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	1/12/2014
Start Date	1/4/2014	Proposed Direction	83.65
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS %/100'
TIE IN	755	0.20	44.04	755.00	-1.30	0.10	0.00	0.00
1	882	0.1	306.6	882.00	-1.07	0.17	0.05	0.2
2	975	2.0	340.9	974.98	0.51	-0.43	-0.37	2.1
3	1067	6.5	332.5	1066.70	6.65	-3.36	-2.61	4.9
4	1159	7.5	335.5	1158.02	16.73	-8.26	-6.36	1.2
5	1251	7.8	336.7	1249.20	27.93	-13.22	-10.05	0.4
6	1344	7.7	336.9	1341.35	39.45	-18.16	-13.68	0.1
7	1438	6.9	337.6	1434.59	50.47	-22.78	-17.06	0.9
8	1534	6.2	335.1	1529.96	60.50	-27.16	-20.30	0.8
9	1630	6.3	347.8	1625.39	70.35	-30.46	-22.49	1.4
10	1726	6.8	350.8	1720.77	81.11	-32.48	-23.31	0.6
11	1821	7.7	351.6	1815.01	92.96	-34.31	-23.81	1.0
12	1916	7.4	349.0	1909.18	105.26	-36.40	-24.54	0.5
13	2012	6.9	345.3	2004.44	116.91	-39.05	-25.88	0.7
14	2108	6.2	339.2	2099.81	127.33	-42.35	-28.01	1.0
15	2203	7.4	336.7	2194.14	137.75	-46.59	-31.07	1.3
16	2298	8.0	339.3	2288.28	149.55	-51.35	-34.49	0.7
17	2393	7.6	335.5	2382.41	161.45	-56.29	-38.09	0.7
18	2489	8.0	334.2	2477.52	173.24	-61.83	-42.29	0.5
19	2585	8.8	340.0	2572.49	186.16	-67.25	-46.25	1.2
20	2682	9.2	346.7	2668.30	200.67	-71.57	-48.94	1.2
21	2778	8.4	346.5	2763.17	214.96	-74.97	-50.74	0.8
22	2874	7.7	346.7	2858.22	228.04	-78.09	-52.39	0.7
23	2969	6.2	344.6	2952.52	239.18	-80.92	-53.97	1.6
24	3064	6.1	332.7	3046.98	248.61	-84.59	-56.58	1.3
25	3161	6.2	334.6	3143.42	257.92	-89.21	-60.13	0.2
26	3256	6.9	336.7	3237.80	267.80	-93.66	-63.47	0.8



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-3340CH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	1/12/2014
Start Date	1/4/2014	Proposed Direction	83.65
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
27	3351	7.7	339.0	3332.03	278.98	-98.20	-66.74	0.9
28	3448	8.3	337.2	3428.08	291.50	-103.24	-70.37	0.7
29	3543	8.9	345.0	3522.02	304.92	-107.80	-73.42	1.4
30	3640	9.1	343.7	3617.82	319.53	-111.90	-75.87	0.3
31	3736	7.9	343.0	3712.77	333.13	-115.96	-78.40	1.3
32	3831	7.4	342.1	3806.92	345.19	-119.75	-80.83	0.5
33	3926	6.3	341.4	3901.24	355.95	-123.29	-83.16	1.2
34	4022	6.2	334.9	3996.67	365.64	-127.17	-85.95	0.7
35	4117	6.5	331.1	4091.09	374.99	-131.94	-89.66	0.5
36	4213	7.7	334.2	4186.35	385.54	-137.37	-93.88	1.3
37	4310	6.5	327.7	4282.61	396.03	-143.13	-98.45	1.5
38	4405	5.7	324.9	4377.07	404.44	-148.72	-103.07	0.9
39	4500	6.8	332.0	4471.50	413.27	-154.07	-107.42	1.4
40	4595	7.1	340.9	4565.81	423.78	-158.63	-110.79	1.2
41	4690	8.4	349.5	4659.94	436.15	-161.82	-112.59	1.8
42	4785	7.5	349.9	4754.03	449.08	-164.17	-113.49	0.9
43	4882	6.1	344.3	4850.34	460.27	-166.67	-114.75	1.6
44	4977	4.4	343.2	4944.94	468.62	-169.09	-116.23	1.8
45	5072	4.3	339.3	5039.67	475.44	-171.41	-117.77	0.3
46	5167	3.1	335.8	5134.47	481.12	-173.72	-119.44	1.3
47	5262	3.3	357.1	5229.32	486.19	-174.91	-120.06	1.3
48	5358	2.0	359.6	5325.22	490.62	-175.06	-119.72	1.4
49	5453	1.8	354.1	5420.17	493.77	-175.23	-119.54	0.3
50	5549	0.3	106.6	5516.15	495.19	-175.14	-119.30	2.0
51	5645	0.3	80.6	5612.15	495.16	-174.65	-118.81	0.1
52	5741	0.3	351.6	5708.15	495.45	-174.44	-118.57	0.4
53	5885	4.6	76.7	5851.99	497.16	-168.87	-112.85	3.2
54	5920	7.1	94.1	5886.81	497.32	-165.35	-109.33	8.7
55	6014	18.7	103.1	5978.29	493.48	-144.81	-89.34	12.5
56	6110	25.8	104.8	6067.09	484.64	-109.57	-55.30	7.4



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-3340CH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	1/12/2014
Start Date	1/4/2014	Proposed Direction	83.65
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
57	6142	30.2	99.2	6095.34	481.58	-94.89	-41.04	16.0
58	6174	34.6	96.1	6122.35	479.32	-77.90	-24.41	14.7
59	6207	38.2	95.5	6148.91	477.35	-58.42	-5.26	11.0
60	6239	41.9	92.5	6173.40	475.93	-37.88	14.99	13.0
61	6271	44.6	87.8	6196.72	475.90	-15.97	36.76	13.1
62	6303	48.0	84.5	6218.82	477.47	7.10	59.86	13.0
63	6335	52.1	80.1	6239.37	480.78	31.39	84.37	16.6
64	6367	56.5	75.8	6258.05	486.23	56.78	110.21	17.5
65	6398	59.6	75.7	6274.45	492.70	82.27	136.26	10.0
66	6430	61.9	77.6	6290.09	499.15	109.43	163.97	8.9
67	6494	65.7	87.1	6318.39	506.70	166.26	221.28	14.6
68	6526	65.7	90.3	6331.56	507.36	195.41	250.33	9.1
69	6558	66.5	90.4	6344.53	507.18	224.67	279.38	2.5
70	6590	70.6	91.0	6356.22	506.82	254.44	308.93	12.9
71	6622	73.1	92.1	6366.19	505.99	284.83	339.05	8.5
72	6654	77.1	92.5	6374.42	504.75	315.73	369.62	12.6
73	6686	78.7	92.5	6381.13	503.39	346.98	400.53	5.0
74	6718	80.6	91.5	6386.88	502.29	378.44	431.68	6.7
75	6735	81.3	91.3	6389.55	501.88	395.23	448.31	4.3
76	6821	88.5	86.0	6397.19	503.92	480.77	533.56	10.4
77	6918	89.2	85.9	6399.14	510.76	577.51	630.46	0.7
78	7014	89.9	85.5	6399.90	517.96	673.24	726.40	0.8
79	7109	90.4	85.3	6399.65	525.58	767.93	821.35	0.6
80	7204	90.7	84.6	6398.73	533.94	862.56	916.32	0.8
81	7299	91.5	85.2	6396.91	542.39	957.16	1011.28	1.1
82	7389	90.3	86.7	6395.50	548.74	1046.92	1101.19	2.1
83	7485	89.3	88.5	6395.83	552.76	1142.83	1196.96	2.1
84	7588	88.4	90.3	6397.90	553.84	1245.80	1299.41	2.0
85	7676	88.5	89.6	6400.28	553.92	1333.77	1386.85	0.8
86	7772	88.2	89.0	6403.04	555.09	1429.72	1482.34	0.7



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-3340CH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	1/12/2014
Start Date	1/4/2014	Proposed Direction	83.65
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS %/100'
87	7868	92.2	90.4	6402.71	555.59	1525.70	1577.79	4.4
88	7964	91.7	92.4	6399.44	553.25	1621.61	1672.85	2.1
89	8060	89.1	91.5	6398.77	549.98	1717.54	1767.83	2.9
90	8155	89.5	91.5	6399.93	547.50	1812.50	1861.93	0.4
91	8251	89.3	90.8	6400.94	545.57	1908.48	1957.11	0.8
92	8348	89.5	90.3	6401.95	544.64	2005.47	2053.40	0.6
93	8443	89.7	90.1	6402.62	544.31	2100.46	2147.78	0.3
94	8539	89.5	89.7	6403.29	544.47	2196.46	2243.20	0.5
95	8635	92.2	89.0	6401.86	545.56	2292.43	2338.71	2.9
96	8731	92.2	88.0	6398.18	548.07	2388.33	2434.29	1.0
97	8827	92.8	86.7	6393.99	552.51	2484.13	2530.00	1.5
98	8923	92.0	87.8	6389.97	557.11	2579.94	2625.72	1.4
99	9017	91.9	88.8	6386.77	559.90	2673.84	2719.36	1.1
100	9114	91.5	91.5	6383.89	559.64	2770.79	2815.68	2.8
101	9210	89.4	92.2	6383.14	556.54	2866.73	2910.69	2.3
102	9305	89.1	91.7	6384.38	553.31	2961.66	3004.69	0.6
103	9401	89.6	92.0	6385.47	550.21	3057.61	3099.70	0.6
104	9497	90.0	91.8	6385.81	547.03	3153.55	3194.71	0.5
105	9592	91.3	91.5	6384.73	544.29	3248.51	3288.78	1.4
106	9687	89.3	92.0	6384.23	541.39	3343.45	3382.82	2.2
107	9783	89.3	91.3	6385.41	538.63	3439.41	3477.88	0.7
108	9879	90.8	92.0	6385.32	535.86	3535.36	3572.94	1.7
109	9975	89.6	91.1	6384.99	533.27	3631.33	3668.03	1.6
110	10071	89.6	90.4	6385.66	532.01	3727.31	3763.29	0.7
111	10166	91.5	90.6	6384.74	531.18	3822.30	3857.60	2.0
112	10260	90.9	90.6	6382.78	530.20	3916.28	3950.89	0.6
113	10355	87.3	89.2	6384.27	530.36	4011.25	4045.30	4.1
114	10451	87.5	88.5	6388.62	532.29	4107.13	4140.80	0.8
115	10547	88.2	87.6	6392.22	535.55	4203.00	4236.45	1.2
116	10642	88.7	86.9	6394.79	540.11	4297.86	4331.23	0.9



Precision

Survey Report

Client	Bighorn Directional	MWD Operator	D. Rask / A. Skoog
Well Name	70 Ranch 04-63-03-3340CH	Rig Name	Nabors M37
Location	Weld County, CO	End Date	1/12/2014
Start Date	1/4/2014	Proposed Direction	83.65
		Total Correction	8.34

SUR NUM	MD ft	INC °	AZM °	TVD ft	N-S ft	E-W ft	SECT ft	DLS °/100'
117	10739	89.7	86.2	6396.15	545.95	4394.67	4428.09	1.3
118	10804	90.0	85.0	6396.32	550.93	4459.48	4493.05	1.9
PTB	10865	90.0	85.0	6396.32	556.25	4520.25	4554.03	0.0
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