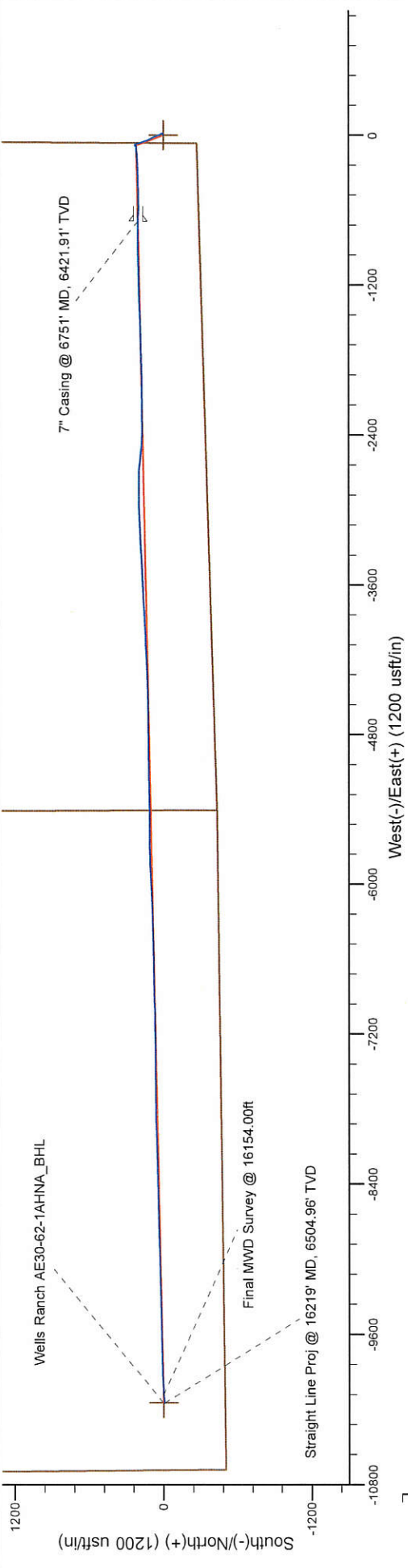


Project: Weld County, CO (NAD 83)
Site: Sec. 29-T6N-R62W (Wells Ranch AE32-30-A Pad)
Well: Wells Ranch AE30-62-1AHNA
Wellbore: Plan B
Design: Field Surveys

Noble Energy



LEGEND

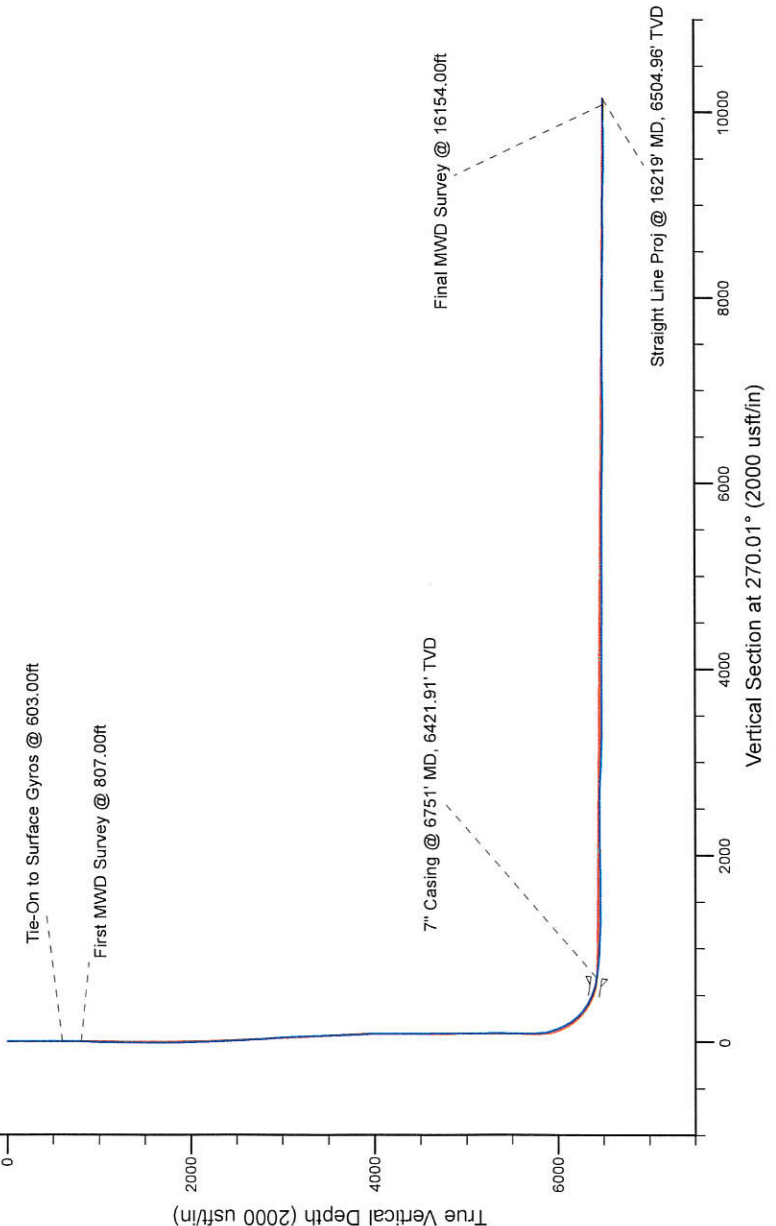
Wells Ranch AE30-62-1AHNA, Plan B, Rev B0 - PROPOSAL V0

Field Surveys

Platted SHL: 267' FSL, 65' FWL
Platted Lat/Long: 40.45115 N, 104.35628 W
Location: Sec. 29-T6N-R62W

7\"/>

WELL DETAILS: Wells Ranch AE30-62-1AHNA	
Ground Level:	4747.00
RKB-24 @ 4771.00usft (H&P 343)	
Created By: Fred Hartmann Created On: 10/24, May 22 2014	



Noble Energy

Weld County, CO (NAD 83)

Sec. 29-T6N-R62W (Wells Ranch AE32-30-A Pad)

Wells Ranch AE30-62-1AHNA

Design: Field Surveys

Sperry Drilling Services

Final Survey Report

22 May, 2014

Well Coordinates: 1,409,246.93 N, 3,318,288.70 E (40° 27' 04.14" N, 104° 21' 22.61" W)

Ground Level: 4,747.00 usft

Local Coordinate Origin:

Centered on Well Wells Ranch AE30-62-1AHNA

Viewing Datum:

RKB=24 @ 4771.00usft (H&P 343)

TVDs to System:

N

North Reference:

Grid

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Design Report for Wells Ranch AE30-62-1AHNA - Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.00	0.50	249.38	360.00	-0.55	-1.47	1.47	0.14
603.00	0.60	58.38	602.99	-0.26	-1.38	1.38	0.45
Tie-On to Surface Gyros @ 603.00ft							
807.00	1.02	62.55	806.97	1.14	1.14	-1.14	0.21
First MWD Survey @ 807.00ft							
991.00	1.40	70.61	990.93	2.64	4.72	-4.71	0.23
1,176.00	1.11	74.54	1,175.88	3.87	8.57	-8.57	0.16
1,269.00	0.97	66.17	1,268.87	4.42	10.16	-10.16	0.22
1,362.00	0.99	73.22	1,361.86	4.97	11.65	-11.65	0.13
1,456.00	0.85	1.19	1,455.85	5.91	12.44	-12.44	1.16
1,549.00	0.76	354.36	1,548.84	7.21	12.40	-12.40	0.14
1,737.00	0.93	347.01	1,736.82	9.94	11.93	-11.93	0.11
1,832.00	0.79	335.50	1,831.81	11.28	11.49	-11.48	0.23
1,927.00	0.51	331.45	1,926.80	12.25	11.01	-11.01	0.30
2,022.00	1.92	326.45	2,021.78	13.95	9.93	-9.93	1.49
2,117.00	4.98	326.58	2,116.59	18.72	6.78	-6.78	3.22
2,212.00	7.44	339.58	2,211.03	27.93	2.36	-2.36	2.97
2,306.00	8.86	341.51	2,304.08	40.50	-2.06	2.07	1.54
2,401.00	8.50	338.07	2,397.99	53.95	-7.00	7.01	0.66
2,496.00	8.10	337.45	2,492.00	66.64	-12.19	12.20	0.43
2,591.00	7.80	336.98	2,586.09	78.76	-17.28	17.29	0.32
2,686.00	7.94	337.27	2,680.19	90.74	-22.33	22.35	0.15
2,781.00	8.19	334.55	2,774.25	102.90	-27.77	27.80	0.48
2,876.00	8.64	332.66	2,868.23	115.35	-33.96	33.99	0.56
2,971.00	8.07	328.43	2,962.22	127.37	-40.73	40.76	0.88
3,066.00	6.93	341.15	3,056.41	138.48	-46.07	46.10	2.11
3,160.00	6.85	344.61	3,149.73	149.25	-49.39	49.43	0.45
3,255.00	6.87	339.91	3,244.06	160.05	-52.85	52.88	0.59
3,350.00	5.89	334.00	3,338.47	169.76	-56.94	56.97	1.24
3,445.00	6.58	340.91	3,432.91	179.29	-60.85	60.89	1.07
3,540.00	6.52	343.82	3,527.29	189.61	-64.14	64.18	0.36
3,634.00	7.05	344.17	3,620.63	200.29	-67.20	67.24	0.57
3,729.00	6.41	342.21	3,714.97	210.95	-70.41	70.46	0.72
3,824.00	5.59	335.50	3,809.45	220.21	-73.95	74.00	1.13
3,919.00	3.49	317.26	3,904.15	226.54	-77.83	77.88	2.66
4,014.00	0.99	287.28	3,999.08	228.91	-80.57	80.63	2.82
4,109.00	0.96	247.65	4,094.06	228.85	-82.09	82.15	0.70
4,203.00	0.93	212.61	4,188.05	227.91	-83.23	83.29	0.61
4,298.00	0.91	203.13	4,283.04	226.57	-83.95	84.00	0.16
4,393.00	0.59	263.50	4,378.03	225.82	-84.73	84.78	0.85
4,488.00	0.62	269.72	4,473.03	225.76	-85.73	85.78	0.08
4,582.00	0.50	260.29	4,567.02	225.69	-86.64	86.69	0.16
4,677.00	0.50	205.19	4,662.02	225.24	-87.23	87.28	0.49
4,772.00	0.72	213.07	4,757.01	224.37	-87.73	87.78	0.25
4,866.00	0.68	205.70	4,851.01	223.37	-88.29	88.34	0.10
4,961.00	0.69	226.81	4,946.00	222.47	-88.95	89.00	0.26
5,055.00	0.47	251.75	5,039.99	221.96	-89.73	89.78	0.35
5,150.00	0.34	46.57	5,134.99	222.03	-89.90	89.95	0.83
5,245.00	0.57	33.28	5,229.99	222.62	-89.43	89.49	0.26

Design Report for Wells Ranch AE30-62-1AHNA - Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
5,340.00	0.36	70.95	5,324.99	223.12	-88.89	88.94	0.38
5,435.00	0.28	145.59	5,419.99	223.02	-88.48	88.53	0.41
5,530.00	0.47	142.70	5,514.98	222.52	-88.11	88.16	0.20
5,625.00	0.69	171.33	5,609.98	221.64	-87.79	87.84	0.38
5,688.00	0.75	165.48	5,672.98	220.87	-87.63	87.68	0.15
5,718.00	0.73	169.39	5,702.97	220.49	-87.54	87.60	0.18
5,813.00	2.50	250.28	5,797.94	219.20	-89.38	89.43	2.62
5,908.00	13.92	267.42	5,891.82	217.98	-102.79	102.85	12.16
6,002.00	22.96	265.50	5,980.90	216.03	-132.43	132.48	9.64
6,050.00	23.58	264.20	6,024.99	214.32	-151.31	151.36	1.68
6,097.00	26.55	265.61	6,067.56	212.57	-171.14	171.19	6.45
6,145.00	30.14	266.20	6,109.80	210.95	-193.87	193.92	7.50
6,192.00	34.29	267.08	6,149.56	209.49	-218.88	218.93	8.89
6,240.00	38.80	267.54	6,188.11	208.16	-247.42	247.47	9.41
6,287.00	44.81	267.78	6,223.13	206.88	-278.71	278.76	12.79
6,335.00	49.92	269.53	6,255.63	206.08	-314.00	314.05	10.98
6,381.00	53.86	269.07	6,284.02	205.63	-350.19	350.23	8.60
6,429.00	57.48	268.43	6,311.08	204.76	-389.81	389.86	7.62
6,476.00	60.16	268.14	6,335.41	203.56	-430.00	430.04	5.73
6,524.00	63.02	268.24	6,358.25	202.22	-472.19	472.24	5.96
6,571.00	68.87	270.08	6,377.40	201.61	-515.08	515.13	12.95
6,619.00	72.62	270.40	6,393.22	201.80	-560.39	560.44	7.84
6,666.00	76.80	270.71	6,405.62	202.24	-605.71	605.76	8.92
6,706.00	79.01	270.97	6,414.00	202.82	-644.82	644.87	5.56
6,751.00	80.74	270.82	6,421.91	203.51	-689.11	689.16	3.87
7" Casing @ 6751' MD, 6421.91' TVD							
6,843.00	84.29	270.52	6,433.89	204.57	-780.31	780.35	3.87
6,937.00	85.28	270.37	6,442.43	205.30	-873.91	873.96	1.07
7,032.00	87.13	268.99	6,448.72	204.77	-968.70	968.74	2.43
7,127.00	87.13	268.31	6,453.47	202.53	-1,063.55	1,063.60	0.71
7,222.00	87.07	267.57	6,458.28	199.12	-1,158.37	1,158.41	0.78
7,317.00	89.14	267.71	6,461.42	195.21	-1,253.23	1,253.28	2.18
7,412.00	90.83	267.86	6,461.45	191.54	-1,348.16	1,348.20	1.79
7,506.00	89.20	268.43	6,461.42	188.50	-1,442.10	1,442.15	1.84
7,601.00	90.46	269.77	6,461.70	187.01	-1,537.09	1,537.13	1.94
7,696.00	89.11	267.49	6,462.06	184.74	-1,632.05	1,632.09	2.79
7,791.00	90.18	268.93	6,462.65	181.77	-1,727.00	1,727.04	1.89
7,886.00	89.07	267.91	6,463.27	179.15	-1,821.96	1,822.00	1.59
7,980.00	91.02	270.04	6,463.20	177.47	-1,915.93	1,915.97	3.07
8,075.00	91.39	269.56	6,461.20	177.14	-2,010.91	2,010.95	0.64
8,169.00	91.69	268.47	6,458.67	175.52	-2,104.86	2,104.90	1.20
8,264.00	91.08	269.72	6,456.38	174.02	-2,199.82	2,199.86	1.46
8,359.00	90.68	269.47	6,454.92	173.35	-2,294.80	2,294.85	0.50
8,454.00	89.51	270.08	6,454.76	172.98	-2,389.80	2,389.84	1.39
8,548.00	89.63	273.70	6,455.47	176.08	-2,483.73	2,483.77	3.85
8,643.00	89.97	276.90	6,455.80	184.85	-2,578.31	2,578.36	3.39
8,738.00	89.85	275.27	6,455.95	194.92	-2,672.77	2,672.82	1.72
8,833.00	86.14	270.24	6,459.27	199.49	-2,767.56	2,767.61	6.58
8,927.00	87.41	269.75	6,464.56	199.48	-2,861.41	2,861.46	1.45
9,022.00	87.66	267.87	6,468.65	197.51	-2,956.30	2,956.34	1.99
9,117.00	87.44	267.36	6,472.71	193.56	-3,051.13	3,051.17	0.58

Design Report for Wells Ranch AE30-62-1AHNA - Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
9,212.00	88.09	266.59	6,476.41	188.55	-3,145.92	3,145.96	1.06
9,307.00	89.41	267.80	6,478.48	183.90	-3,240.78	3,240.82	1.88
9,402.00	90.00	267.82	6,478.97	180.27	-3,335.71	3,335.75	0.62
9,496.00	90.49	267.49	6,478.57	176.43	-3,429.63	3,429.67	0.63
9,590.00	88.31	265.01	6,479.56	170.28	-3,523.41	3,523.45	3.51
9,685.00	90.93	268.18	6,480.19	164.64	-3,618.22	3,618.26	4.33
9,779.00	90.62	267.69	6,478.91	161.25	-3,712.15	3,712.19	0.62
9,873.00	90.25	266.78	6,478.20	156.72	-3,806.04	3,806.07	1.05
9,968.00	89.44	267.26	6,478.46	151.78	-3,900.91	3,900.94	0.99
10,062.00	89.91	267.55	6,478.99	147.52	-3,994.81	3,994.84	0.59
10,162.00	89.48	266.34	6,479.52	142.19	-4,094.66	4,094.70	1.28
10,257.00	89.69	268.01	6,480.21	137.51	-4,189.54	4,189.57	1.77
10,352.00	89.75	267.60	6,480.68	133.87	-4,284.47	4,284.50	0.44
10,445.00	89.82	269.17	6,481.02	131.25	-4,377.43	4,377.46	1.69
10,538.00	89.38	267.46	6,481.67	128.52	-4,470.38	4,470.41	1.90
10,629.00	90.03	269.30	6,482.14	125.95	-4,561.34	4,561.37	2.14
10,721.00	89.48	268.65	6,482.54	124.30	-4,653.33	4,653.35	0.93
10,814.00	90.28	270.05	6,482.73	123.24	-4,746.32	4,746.34	1.73
10,906.00	89.14	268.10	6,483.20	121.76	-4,838.30	4,838.33	2.46
10,999.00	91.36	270.47	6,482.79	120.60	-4,931.28	4,931.30	3.49
11,092.00	90.15	270.49	6,481.57	121.38	-5,024.26	5,024.29	1.30
11,184.00	89.48	269.02	6,481.86	120.98	-5,116.26	5,116.29	1.76
11,276.00	90.15	268.94	6,482.16	119.35	-5,208.24	5,208.27	0.73
11,369.00	89.75	267.81	6,482.24	116.71	-5,301.20	5,301.23	1.29
11,461.00	90.22	269.56	6,482.26	114.60	-5,393.18	5,393.20	1.97
11,554.00	90.40	270.05	6,481.76	114.28	-5,486.17	5,486.20	0.56
11,647.00	89.01	269.70	6,482.24	114.08	-5,579.17	5,579.20	1.54
11,741.00	89.08	268.89	6,483.81	112.92	-5,673.15	5,673.18	0.86
11,834.00	90.28	268.78	6,484.33	111.03	-5,766.13	5,766.15	1.30
11,927.00	90.49	268.02	6,483.70	108.44	-5,859.09	5,859.11	0.85
12,022.00	87.93	266.13	6,485.01	103.59	-5,953.94	5,953.97	3.35
12,117.00	89.04	267.01	6,487.52	97.91	-6,048.74	6,048.76	1.49
12,212.00	88.61	268.04	6,489.47	93.81	-6,143.63	6,143.65	1.17
12,307.00	88.58	267.06	6,491.80	89.75	-6,238.51	6,238.53	1.03
12,402.00	88.77	267.83	6,494.00	85.51	-6,333.39	6,333.41	0.83
12,497.00	90.12	269.94	6,494.92	83.66	-6,428.36	6,428.38	2.64
12,592.00	89.01	268.56	6,495.64	82.42	-6,523.35	6,523.36	1.86
12,687.00	89.81	268.77	6,496.62	80.21	-6,618.31	6,618.33	0.87
12,781.00	90.18	269.56	6,496.63	78.84	-6,712.30	6,712.32	0.93
12,876.00	90.46	268.94	6,496.09	77.59	-6,807.29	6,807.31	0.72
12,971.00	90.74	267.22	6,495.10	74.41	-6,902.23	6,902.25	1.83
13,066.00	91.67	269.12	6,493.10	71.38	-6,997.16	6,997.17	2.23
13,161.00	91.29	269.08	6,490.65	69.89	-7,092.11	7,092.13	0.40
13,256.00	90.56	269.19	6,489.11	68.45	-7,187.09	7,187.10	0.78
13,351.00	89.75	268.97	6,488.86	66.93	-7,282.07	7,282.09	0.88
13,446.00	89.14	270.00	6,489.78	66.07	-7,377.06	7,377.08	1.26
13,540.00	89.17	269.28	6,491.16	65.48	-7,471.05	7,471.07	0.77
13,635.00	89.97	269.49	6,491.88	64.46	-7,566.04	7,566.06	0.87
13,730.00	90.83	269.58	6,491.21	63.69	-7,661.04	7,661.05	0.91
13,825.00	89.69	269.37	6,490.78	62.82	-7,756.03	7,756.04	1.22
13,919.00	88.49	269.46	6,492.28	61.86	-7,850.01	7,850.03	1.28

Design Report for Wells Ranch AE30-62-1AHNA - Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
14,014.00	88.52	268.26	6,494.75	59.97	-7,944.96	7,944.97	1.26
14,109.00	88.34	267.17	6,497.36	56.19	-8,039.85	8,039.86	1.16
14,204.00	89.29	267.35	6,499.32	51.65	-8,134.72	8,134.73	1.02
14,299.00	89.54	268.71	6,500.29	48.38	-8,229.65	8,229.66	1.46
14,394.00	89.97	270.38	6,500.70	47.63	-8,324.64	8,324.66	1.82
14,489.00	88.95	268.21	6,501.59	46.46	-8,419.63	8,419.64	2.52
14,584.00	88.86	268.21	6,503.41	43.49	-8,514.56	8,514.57	0.09
14,678.00	90.03	268.91	6,504.32	41.13	-8,608.53	8,608.54	1.45
14,773.00	90.31	269.01	6,504.04	39.41	-8,703.51	8,703.52	0.31
14,868.00	90.37	267.93	6,503.47	36.87	-8,798.47	8,798.48	1.14
14,963.00	91.11	268.29	6,502.25	33.74	-8,893.41	8,893.42	0.87
15,058.00	90.31	269.06	6,501.07	31.54	-8,988.38	8,988.39	1.17
15,153.00	88.40	268.80	6,502.14	29.77	-9,083.35	9,083.36	2.03
15,248.00	88.46	268.27	6,504.74	27.34	-9,178.28	9,178.29	0.56
15,343.00	88.43	267.68	6,507.32	23.98	-9,273.19	9,273.20	0.62
15,437.00	88.89	268.02	6,509.52	20.46	-9,367.10	9,367.10	0.61
15,532.00	89.48	268.20	6,510.87	17.32	-9,462.04	9,462.04	0.65
15,627.00	90.00	270.25	6,511.30	16.04	-9,557.02	9,557.02	2.23
15,722.00	90.93	268.39	6,510.53	14.91	-9,652.01	9,652.01	2.19
15,817.00	90.59	269.10	6,509.27	12.83	-9,746.97	9,746.98	0.83
15,912.00	90.28	268.35	6,508.55	10.72	-9,841.95	9,841.95	0.85
16,007.00	90.65	267.56	6,507.78	7.33	-9,936.88	9,936.88	0.92
16,101.00	90.86	266.84	6,506.54	2.74	-10,030.76	10,030.76	0.80
16,154.00	90.74	265.64	6,505.80	-0.74	-10,083.64	10,083.64	2.28
Final MWD Survey @ 16154.00ft							
16,219.00	90.74	265.64	6,504.96	-5.68	-10,148.45	10,148.45	0.00
Straight Line Proj @ 16219' MD, 6504.96' TVD							

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
603.00	602.99	-0.26	-1.38	Tie-On to Surface Gyros @ 603.00ft
807.00	806.97	1.14	1.14	First MWD Survey @ 807.00ft
16,154.00	6,505.80	-0.74	-10,083.64	Final MWD Survey @ 16154.00ft
16,219.00	6,504.96	-5.68	-10,148.45	Straight Line Proj @ 16219' MD, 6504.96' TVD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/-S (usft)	+E/-W (usft)	
Target	Wells Ranch AE30-62-1AHNA_BHL	270.01	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
360.00	603.00	Surface Gyros	Flexi-Shot
807.00	6,706.00	MWD Surveys - Intermediate	MWD+IFR1+MS_WY
6,843.00	16,154.00	MWD Surveys - Production	MWD+IFR1+MS_WY

Design Report for Wells Ranch AE30-62-1AHNA - Field Surveys

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
6,751.00	6,421.91	7" Casing @ 6751' MD, 6421.91' TVD	7	8-3/4

Wellbore Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Wells Ranch AE30-62-	0.00	0.00	0.00	0.01	0.00	1,409,246.94	3,318,288.70	40.451150	-104.356280
- actual wellpath misses target center by 0.01usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	4,815.42	-10,725.72	1,414,062.18	3,307,563.38	
Point 2				0.00	-499.78	-10,678.94	1,408,747.18	3,307,610.16	
Point 3				0.00	-433.46	-5,405.29	1,408,813.49	3,312,883.61	
Point 4				0.00	-270.47	-66.09	1,408,976.48	3,318,222.61	
Point 5				0.00	5,031.14	-37.06	1,414,277.89	3,318,251.64	
Point 6				0.00	4,871.02	-5,433.59	1,414,117.78	3,312,855.31	
Point 7				0.00	-433.46	-5,405.29	1,408,813.49	3,312,883.61	
Point 8				0.00	4,871.02	-5,433.59	1,414,117.78	3,312,855.31	
Point 9				0.00	4,815.42	-10,725.72	1,414,062.18	3,307,563.38	
Wells Ranch AE30-62-	0.00	0.00	0.00	0.01	0.00	1,409,246.94	3,318,288.70	40.451150	-104.356280
- actual wellpath misses target center by 0.01usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1				0.00	4,355.40	-10,265.70	1,413,602.18	3,308,023.38	
Point 2				0.00	-39.76	-10,218.92	1,409,207.18	3,308,070.16	
Point 3				0.00	26.55	-5,405.29	1,409,273.49	3,312,883.61	
Point 4				0.00	189.55	-526.11	1,409,436.48	3,317,762.61	
Point 5				0.00	4,571.12	-497.08	1,413,817.89	3,317,791.64	
Point 6				0.00	4,411.01	-5,433.59	1,413,657.78	3,312,855.31	
Point 7				0.00	4,355.40	-10,265.70	1,413,602.18	3,308,023.38	
Wells Ranch AE30-62-	0.00	0.00	0.00	0.01	0.00	1,409,246.94	3,318,288.70	40.451150	-104.356280
- actual wellpath misses target center by 0.01usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
Wells Ranch AE30-62-	0.00	0.00	6,513.56	2.37	-10,148.02	1,409,249.30	3,308,141.06	40.451510	-104.392740
- actual wellpath misses target center by 11.73usft at 16217.85usft MD (6504.97 TVD, -5.59 N, -10147.30 E)									
- Point									

Directional Difficulty Index

Average Dogleg over Survey:	1.61 °/100usft	Maximum Dogleg over Survey:	12.95 °/100usft at 6,571.00 usft
Net Tortousity applicable to Plans:	0.96 °/100usft	Directional Difficulty Index:	6.827

Audit Info

North Reference Sheet for Sec. 29-T6N-R62W (Wells Ranch AE32-30-A Pad) - Wells Ranch AE30-62-1AHNA

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to RKB=24 @ 4771.00usft (H&P 343). Northing and Easting are relative to Wells Ranch AE30-62-1AHNA

Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is -105.500000°, Longitude Origin:0.000000°, Latitude Origin:40.783333°

False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99996295

Grid Coordinates of Well: 1,409,246.93 usft N, 3,318,288.70 usft E

Geographical Coordinates of Well: 40° 27' 04.14" N, 104° 21' 22.61" W

Grid Convergence at Surface is: 0.74°

Based upon Minimum Curvature type calculations, at a Measured Depth of 16,219.00usft
the Bottom Hole Displacement is 10,148.45usft in the Direction of 269.97° (Grid).

Magnetic Convergence at surface is: -7.58° (19 February 2014, , BGGM2013)

