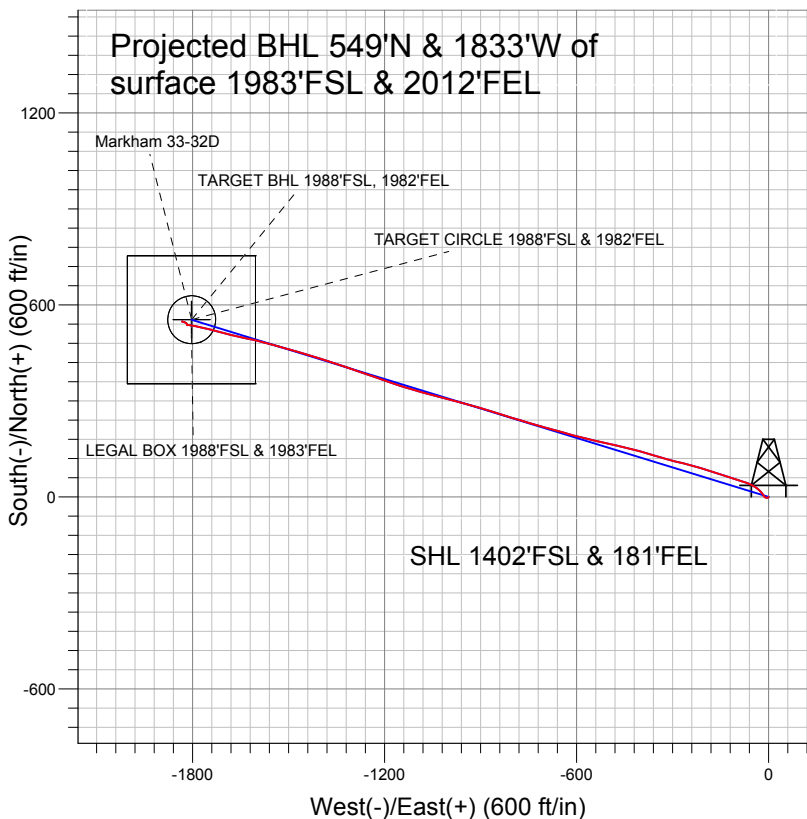


Apollo Operating, LLC.



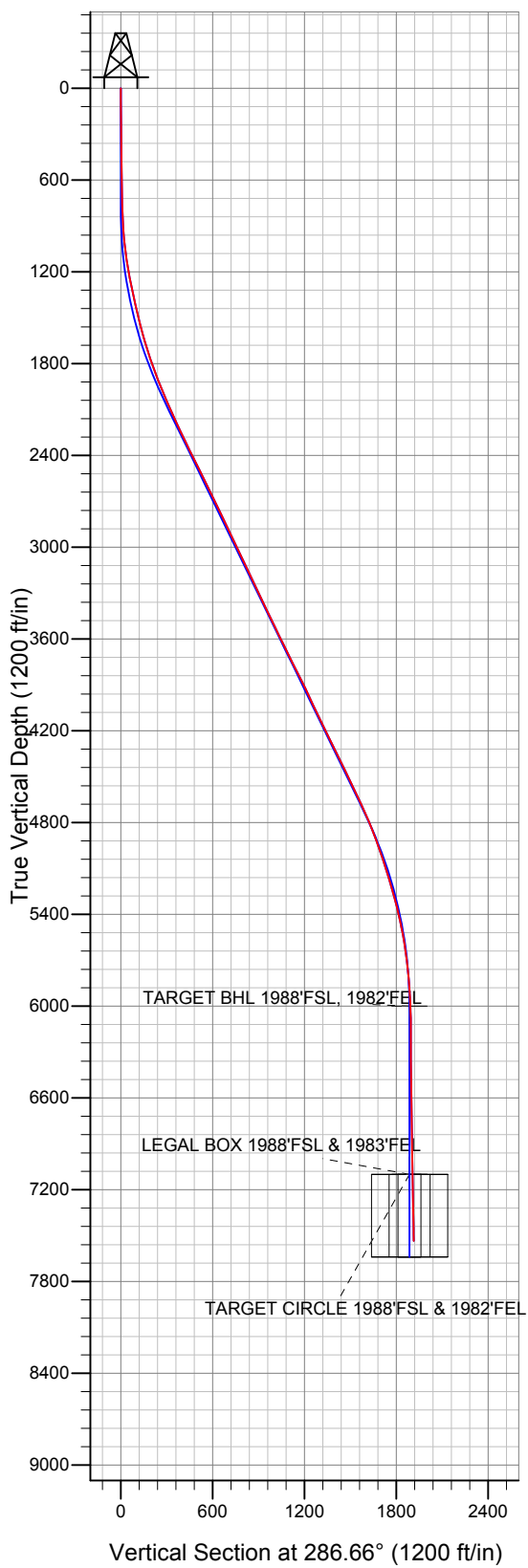
LEGEND

- Markham 33-32D, Wellbore #1, Plan #4 (4-25-13) R V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7915'MD & 7535'TVD @
 1913' VS
 0.80 deg Inc 306.30 deg AZ

Project: SEC.32-T4N-R68W
 Site: Markham 44-32D Pad Sec.32-T4N-R68W
 Well: Markham 33-32D
 Plan: Wellbore #1





Apollo Operating, LLC.

SEC.32-T4N-R68W

Markham 44-32D Pad Sec.32-T4N-R68W

Markham 33-32D

Wellbore #1

Survey: Survey #1

Standard Survey Report

01 May, 2013

Company:	Apollo Operating, LLC.	Local Co-ordinate Reference:	Well Markham 33-32D
Project:	SEC.32-T4N-R68W	TVD Reference:	WELL @ 5074.0ft (Original Well Elev)
Site:	Markham 44-32D Pad Sec.32-T4N-R68W	MD Reference:	WELL @ 5074.0ft (Original Well Elev)
Well:	Markham 33-32D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
1,414.0	12.60	286.70	1,406.3	48.9	-83.1	93.6	1.28	0.63	-5.31	
1,542.0	14.20	287.50	1,530.9	57.6	-111.4	123.3	1.26	1.25	0.63	
1,671.0	16.40	288.40	1,655.3	68.1	-143.8	157.3	1.72	1.71	0.70	
1,799.0	18.70	288.90	1,777.3	80.5	-180.4	195.9	1.80	1.80	0.39	
1,927.0	21.20	284.50	1,897.6	92.9	-222.2	239.5	2.28	1.95	-3.44	
2,055.0	23.00	284.00	2,016.2	104.8	-268.9	287.6	1.41	1.41	-0.39	
2,183.0	24.50	286.80	2,133.4	118.5	-318.5	339.1	1.47	1.17	2.19	
2,311.0	25.30	285.90	2,249.5	133.7	-370.3	393.0	0.69	0.63	-0.70	
2,440.0	26.30	284.50	2,365.6	148.4	-424.4	449.2	0.91	0.78	-1.09	
2,568.0	26.90	283.10	2,480.1	162.0	-480.1	506.4	0.68	0.47	-1.09	
2,696.0	25.50	281.90	2,594.9	174.3	-535.3	562.8	1.17	-1.09	-0.94	
2,825.0	26.40	285.10	2,710.9	187.5	-590.1	619.1	1.29	0.70	2.48	
2,953.0	25.90	285.40	2,825.8	202.3	-644.6	675.5	0.40	-0.39	0.23	
3,081.0	25.00	285.60	2,941.4	217.0	-697.6	730.5	0.71	-0.70	0.16	
3,209.0	25.00	285.90	3,057.4	231.7	-749.6	784.6	0.10	0.00	0.23	
3,337.0	25.90	287.70	3,173.0	247.6	-802.3	839.6	0.93	0.70	1.41	
3,466.0	25.30	287.20	3,289.3	264.3	-855.4	895.3	0.49	-0.47	-0.39	
3,594.0	26.00	286.50	3,404.7	280.4	-908.5	950.7	0.60	0.55	-0.55	
3,723.0	25.40	284.90	3,520.9	295.5	-962.3	1,006.6	0.71	-0.47	-1.24	
3,851.0	26.40	283.10	3,636.1	309.0	-1,016.6	1,062.5	0.99	0.78	-1.41	
3,979.0	26.60	286.70	3,750.6	323.7	-1,071.7	1,119.5	1.26	0.16	2.81	
4,107.0	26.70	286.70	3,865.0	340.2	-1,126.7	1,177.0	0.08	0.08	0.00	
4,236.0	25.10	288.60	3,981.1	357.3	-1,180.4	1,233.3	1.40	-1.24	1.47	
4,364.0	25.00	289.60	4,097.0	375.0	-1,231.6	1,287.4	0.34	-0.08	0.78	
4,492.0	26.70	288.80	4,212.2	393.3	-1,284.3	1,343.2	1.36	1.33	-0.63	
4,621.0	26.50	288.80	4,327.6	412.0	-1,339.0	1,400.9	0.16	-0.16	0.00	
4,749.0	25.80	287.40	4,442.5	429.5	-1,392.6	1,457.3	0.73	-0.55	-1.09	
4,878.0	25.40	286.50	4,558.8	445.7	-1,445.9	1,513.0	0.43	-0.31	-0.70	
5,006.0	24.70	285.80	4,674.8	460.8	-1,498.0	1,567.2	0.59	-0.55	-0.55	
5,134.0	23.30	285.60	4,791.7	474.9	-1,548.1	1,619.3	1.10	-1.09	-0.16	
5,263.0	20.20	284.00	4,911.5	487.2	-1,594.3	1,667.1	2.45	-2.40	-1.24	
5,391.0	18.40	281.90	5,032.3	496.7	-1,635.5	1,709.3	1.51	-1.41	-1.64	
5,519.0	17.20	284.00	5,154.2	505.4	-1,673.7	1,748.3	1.06	-0.94	1.64	
5,647.0	15.50	282.60	5,277.0	513.7	-1,708.7	1,784.3	1.36	-1.33	-1.09	
5,776.0	12.80	286.10	5,402.1	521.4	-1,739.3	1,815.8	2.19	-2.09	2.71	
5,904.0	10.60	284.20	5,527.4	528.3	-1,764.3	1,841.7	1.74	-1.72	-1.48	
6,033.0	8.00	278.40	5,654.7	532.5	-1,784.7	1,862.4	2.14	-2.02	-4.50	
6,161.0	5.50	279.60	5,781.8	534.8	-1,799.6	1,877.3	1.96	-1.95	0.94	
6,289.0	3.90	285.40	5,909.4	537.0	-1,809.8	1,887.8	1.30	-1.25	4.53	
6,379.2	2.31	261.49	5,999.5	537.5	-1,814.6	1,892.5	2.24	-1.76	-26.51	
TARGET BHL 1988'FSL, 1982'FEL										
6,417.0	1.90	241.10	6,037.2	537.1	-1,815.9	1,893.6	2.24	-1.08	-53.95	
6,545.0	0.80	15.40	6,165.2	537.0	-1,817.5	1,895.1	1.97	-0.86	104.92	
6,673.0	0.90	0.80	6,293.2	538.8	-1,817.2	1,895.4	0.19	0.08	-11.41	
6,802.0	0.50	329.70	6,422.2	540.3	-1,817.5	1,896.1	0.42	-0.31	-24.11	
6,930.0	0.90	320.90	6,550.2	541.6	-1,818.4	1,897.4	0.32	0.31	-6.88	
7,059.0	1.00	306.50	6,679.1	543.0	-1,820.0	1,899.3	0.20	0.08	-11.16	
7,187.0	1.10	300.40	6,807.1	544.3	-1,821.9	1,901.5	0.12	0.08	-4.77	
7,315.0	0.90	301.20	6,935.1	545.5	-1,823.8	1,903.7	0.16	-0.16	0.63	
7,444.0	1.00	298.40	7,064.1	546.5	-1,825.7	1,905.7	0.09	0.08	-2.17	
7,479.6	0.99	292.93	7,099.7	546.8	-1,826.3	1,906.4	0.27	-0.03	-15.37	
LEGAL BOX 1988'FSL & 1983'FEL - TARGET CIRCLE 1988'FSL & 1982'FEL										
7,572.0	1.00	278.60	7,192.1	547.2	-1,827.8	1,907.9	0.27	0.01	-15.51	
7,701.0	0.90	269.10	7,321.1	547.4	-1,829.9	1,910.0	0.14	-0.08	-7.36	

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7,829.0	1.10	292.50	7,449.0	547.8	-1,832.0	1,912.2	0.35	0.16	18.28	
7,871.0	0.80	306.30	7,491.0	548.2	-1,832.7	1,912.9	0.89	-0.71	32.86	
7,915.0	0.80	306.30	7,535.0	548.5	-1,833.2	1,913.5	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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