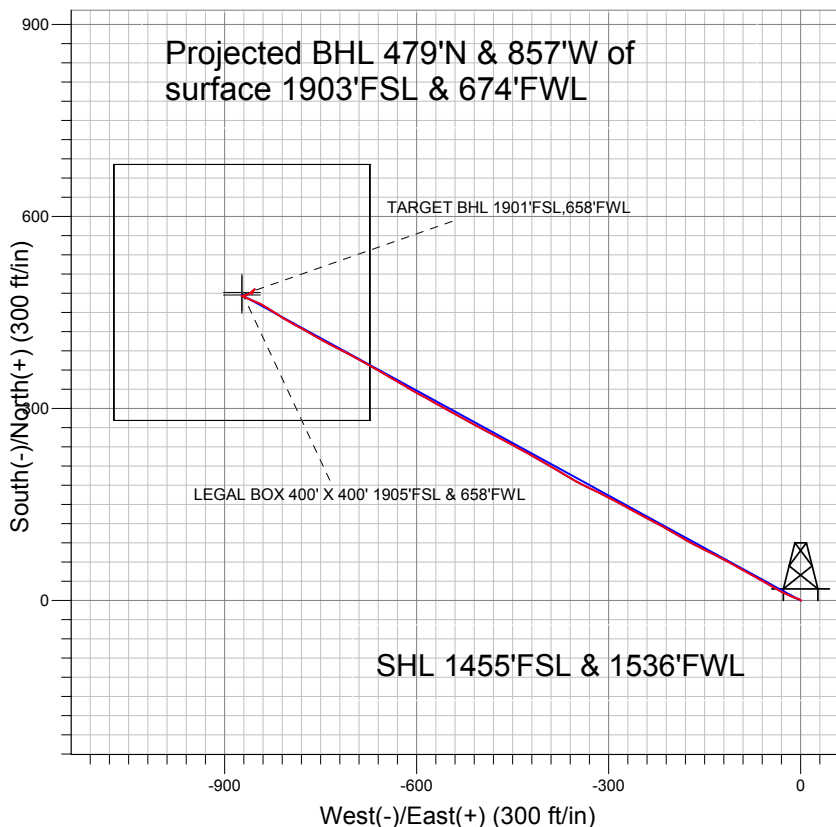


## Great Western

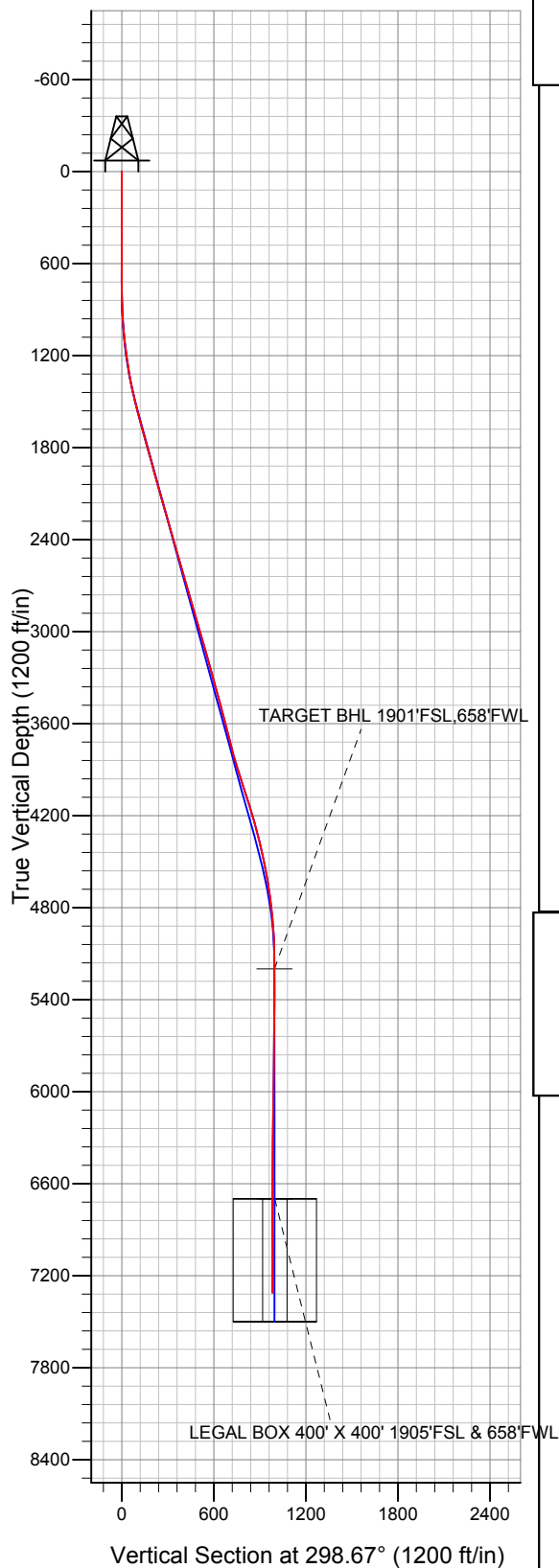


### LEGEND

- △ Appaloosa 33-13, Wellbore #1, Plan #1, (1-13-11) V0
- Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
7439'MD & 7311'TVD @ 982'VS  
0.3 deg Inc 200.1 deg AZ



Project: SEC.33-T7N-R65W  
Site: Appaloosa 33-13 Pad Sec.33-T7N-R65W  
Well: Appaloosa 33-13  
Plan: Wellbore #1



# **Directional**

## **Great Western**

**SEC.33-T7N-R65W**

**Appaloosa 33-13 Pad Sec.33-T7N-R65W**

**Appaloosa 33-13**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**03 June, 2011**



<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Appaloosa 33-13
<b>Project:</b>	SEC.33-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4800.0ft (Original Well Elev)
<b>Site:</b>	Appaloosa 33-13 Pad Sec.33-T7N-R65W	<b>MD Reference:</b>	WELL @ 4800.0ft (Original Well Elev)
<b>Well:</b>	Appaloosa 33-13	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)	
1,734.0	15.60	296.90	1,719.6	67.8	-127.7	144.6	0.70	0.32	-2.34	
1,828.0	15.20	296.20	1,810.2	79.0	-150.0	169.5	0.47	-0.43	-0.74	
1,921.0	14.90	298.90	1,900.0	90.2	-171.4	193.7	0.82	-0.32	2.90	
2,016.0	16.00	300.70	1,991.6	102.8	-193.4	219.0	1.26	1.16	1.89	
2,110.0	16.10	299.40	2,081.9	115.8	-215.9	244.9	0.40	0.11	-1.38	
2,203.0	15.70	297.80	2,171.4	128.0	-238.2	270.4	0.64	-0.43	-1.72	
2,297.0	15.70	297.80	2,261.9	139.8	-260.7	295.8	0.00	0.00	0.00	
2,390.0	16.40	298.80	2,351.3	152.0	-283.4	321.6	0.81	0.75	1.08	
2,484.0	16.30	296.80	2,441.5	164.4	-306.8	348.0	0.61	-0.11	-2.13	
2,578.0	16.30	294.70	2,531.7	175.8	-330.5	374.4	0.63	0.00	-2.23	
2,671.0	15.60	300.20	2,621.1	187.6	-353.2	399.9	1.79	-0.75	5.91	
2,765.0	15.70	300.70	2,711.6	200.4	-375.1	425.2	0.18	0.11	0.53	
2,859.0	16.00	299.90	2,802.0	213.4	-397.2	450.9	0.39	0.32	-0.85	
2,952.0	16.60	299.10	2,891.3	226.2	-419.9	477.0	0.69	0.65	-0.86	
3,047.0	16.50	299.10	2,982.4	239.4	-443.6	504.0	0.11	-0.11	0.00	
3,141.0	15.70	297.50	3,072.7	251.7	-466.5	530.1	0.97	-0.85	-1.70	
3,235.0	16.30	298.70	3,163.0	264.0	-489.4	556.0	0.73	0.64	1.28	
3,329.0	16.20	298.40	3,253.3	276.5	-512.5	582.3	0.14	-0.11	-0.32	
3,423.0	14.80	298.40	3,343.9	288.5	-534.6	607.4	1.49	-1.49	0.00	
3,517.0	14.90	299.30	3,434.7	300.1	-555.7	631.5	0.27	0.11	0.96	
3,611.0	14.80	299.40	3,525.6	311.9	-576.7	655.6	0.11	-0.11	0.11	
3,705.0	13.50	297.00	3,616.7	322.8	-596.9	678.6	1.52	-1.38	-2.55	
3,798.0	14.10	302.10	3,707.0	333.7	-616.2	700.8	1.46	0.65	5.48	
3,893.0	16.00	300.00	3,798.8	346.4	-637.3	725.4	2.08	2.00	-2.21	
3,986.0	17.40	299.90	3,887.9	359.8	-660.5	752.1	1.51	1.51	-0.11	
4,080.0	18.10	298.70	3,977.4	373.8	-685.5	780.8	0.84	0.74	-1.28	
4,174.0	18.40	297.70	4,066.7	387.7	-711.4	810.2	0.46	0.32	-1.06	
4,267.0	16.60	297.40	4,155.3	400.6	-736.2	838.2	1.94	-1.94	-0.32	
4,361.0	15.60	300.90	4,245.7	413.3	-759.0	864.2	1.48	-1.06	3.72	
4,455.0	14.30	298.30	4,336.5	425.3	-780.0	888.5	1.56	-1.38	-2.77	
4,549.0	12.90	299.50	4,427.8	436.0	-799.4	910.6	1.52	-1.49	1.28	
4,644.0	11.20	302.10	4,520.7	446.1	-816.5	930.4	1.88	-1.79	2.74	
4,737.0	10.30	303.90	4,612.1	455.5	-831.0	947.7	1.03	-0.97	1.94	
4,831.0	8.10	297.00	4,704.9	463.2	-843.9	962.7	2.61	-2.34	-7.34	
4,925.0	5.90	290.90	4,798.2	468.0	-854.3	974.1	2.47	-2.34	-6.49	
5,018.0	4.40	294.50	4,890.8	471.1	-862.0	982.4	1.65	-1.61	3.87	
5,110.0	3.50	293.40	4,982.6	473.7	-867.8	988.7	0.98	-0.98	-1.20	
5,204.0	1.50	294.40	5,076.5	475.4	-871.6	992.8	2.13	-2.13	1.06	
5,297.0	0.30	252.34	5,169.5	475.8	-872.9	994.1	1.39	-1.29	-45.23	
5,327.5	0.27	254.94	5,200.0	475.8	-873.0	994.2	0.12	-0.11	8.54	
TARGET BHL 1901'FSL,658'FWL										
5,391.0	0.20	263.10	5,263.5	475.7	-873.3	994.4	0.12	-0.11	12.84	
5,486.0	0.10	84.20	5,358.5	475.7	-873.4	994.5	0.32	-0.11	-188.32	
5,578.0	0.30	66.60	5,450.5	475.8	-873.1	994.3	0.22	0.22	-19.13	
5,672.0	0.60	70.60	5,544.5	476.1	-872.4	993.8	0.32	0.32	4.26	
5,766.0	1.10	91.80	5,638.5	476.2	-871.0	992.7	0.62	0.53	22.55	
5,860.0	0.80	79.90	5,732.5	476.3	-869.5	991.4	0.38	-0.32	-12.66	
5,953.0	0.60	81.20	5,825.5	476.5	-868.3	990.5	0.22	-0.22	1.40	
6,047.0	0.90	66.80	5,919.4	476.8	-867.2	989.6	0.37	0.32	-15.32	
6,141.0	0.90	71.30	6,013.4	477.4	-865.8	988.7	0.08	0.00	4.79	
6,235.0	1.20	61.70	6,107.4	478.1	-864.2	987.6	0.37	0.32	-10.21	
6,329.0	1.90	61.40	6,201.4	479.3	-862.0	986.3	0.74	0.74	-0.32	
6,423.0	2.90	54.70	6,295.3	481.4	-858.7	984.4	1.10	1.06	-7.13	
6,516.0	2.50	51.60	6,388.2	484.0	-855.2	982.5	0.46	-0.43	-3.33	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Appaloosa 33-13
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<b>Site:</b>	Appaloosa 33-13 Pad Sec.33-T7N-R65W	<b>MD Reference:</b>	WELL @ 4800.0ft (Original Well Elev)
<b>Well:</b>	Appaloosa 33-13	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	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)
6,610.0	0.70	39.60	6,482.2	485.7	-853.2	981.6	1.94	-1.91	-12.77
6,703.0	0.20	48.40	6,575.2	486.3	-852.7	981.5	0.54	-0.54	9.46
6,797.0	0.30	253.70	6,669.2	486.3	-852.8	981.6	0.52	0.11	-164.57
6,828.0	0.42	237.84	6,700.2	486.2	-853.0	981.7	0.50	0.38	-51.15
LEGAL BOX 400' X 400' 1905'FSL & 658'FWL									
6,890.0	0.70	224.30	6,762.2	485.8	-853.5	981.9	0.50	0.45	-21.84
6,984.0	0.90	225.50	6,856.1	484.9	-854.4	982.3	0.21	0.21	1.28
7,078.0	0.90	213.00	6,950.1	483.8	-855.3	982.6	0.21	0.00	-13.30
7,170.0	1.10	194.70	7,042.1	482.3	-855.9	982.4	0.41	0.22	-19.89
7,264.0	0.90	204.30	7,136.1	480.8	-856.5	982.1	0.28	-0.21	10.21
7,390.0	0.60	202.20	7,262.1	479.3	-857.1	982.0	0.24	-0.24	-1.67
7,439.0	0.30	200.10	7,311.1	478.9	-857.3	981.9	0.61	-0.61	-4.29

Checked By: _____	Approved By: _____	Date: _____
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