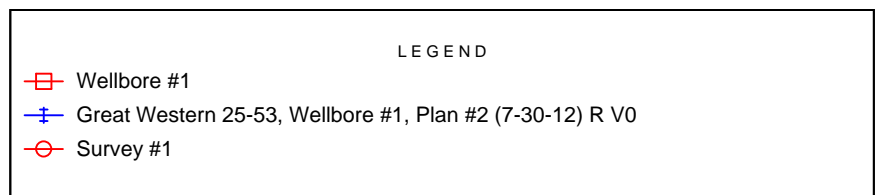
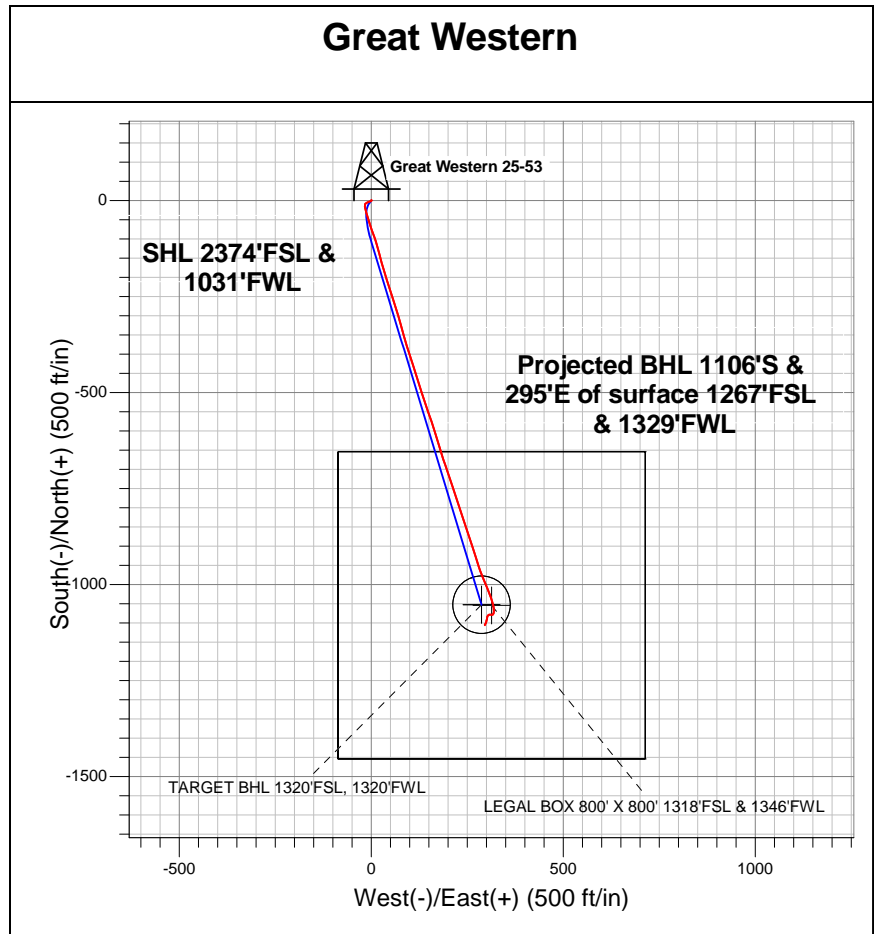
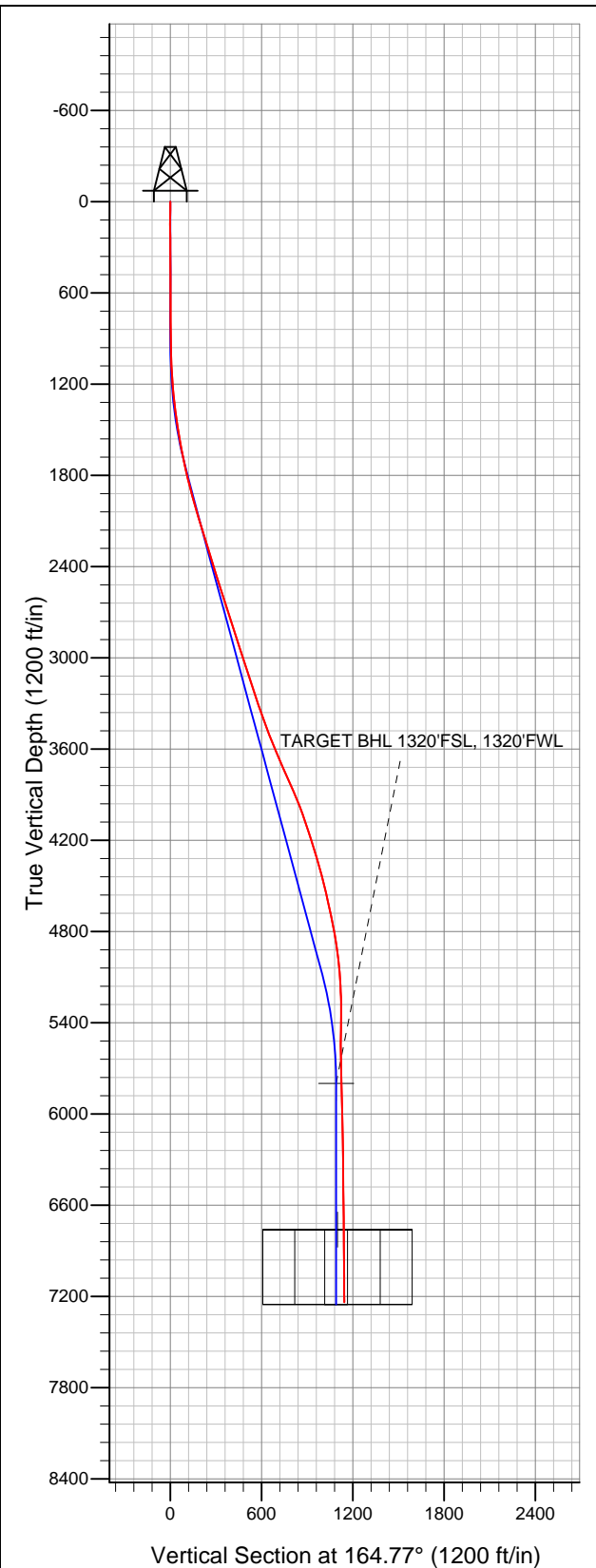


**Well Name: Great Western 25-53**

Surface Location: Great Western 25-12-15 Pad Sec.25-T6N-R67W  
North American Datum 1983 US State Plane 1983Colorado Northern Zone  
Ground Elevation: 4752.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1410068.08	3181512.08	40.457206	-104.847719	
Original Well Elev		WELL @ 4766.0ft (Original Well Elev)				



## Final Survey Plot

Projected Final Survey -  
7407'MD & 7238'TVD @ 1145'VS  
0.50 deg Inc 164.00 deg AZ

Project: SEC.25-T6N-R67W  
Site: Great Western 25-12-15 Pad Sec.25-T6N-R67W  
Well: Great Western 25-53  
Plan: Wellbore #1



## **Great Western**

**SEC.25-T6N-R67W**

**Great Western 25-12-15 Pad Sec.25-T6N-R67W**

**Great Western 25-53**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**07 August, 2012**

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Great Western 25-53
<b>Project:</b>	SEC.25-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	Great Western 25-12-15 Pad Sec.25-T6N-R67W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Well:</b>	Great Western 25-53	<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

<b>Project</b>	SEC.25-T6N-R67W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		Great Western 25-12-15 Pad Sec.25-T6N-R67W			
Site Position:		Northing:	1,410,085.03ft	Latitude:	40.457253
From:	Lat/Long	Easting:	3,181,487.19ft	Longitude:	-104.847808
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.42 °

Well	Great Western 25-53					
Well Position	+N/-S	0.0 ft	Northing:	1,410,068.08 ft	Latitude:	40.457206
	+E/-W	0.0 ft	Easting:	3,181,512.08 ft	Longitude:	-104.847719
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,752.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/30/2012	8.76	67.04	53,035

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	164.77	

Survey Program		Date	8/6/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
57.0	7,407.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey	Wellbore Data									
	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)
Main Wellbore	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	57.0	0.40	16.90	57.0	0.2	0.1	-0.2	0.70	0.70	0.00
	149.0	0.00	100.60	149.0	0.5	0.2	-0.4	0.43	-0.43	0.00
	238.0	0.70	213.20	238.0	0.0	-0.1	-0.1	0.79	0.79	0.00
	324.0	0.80	229.80	324.0	-0.8	-0.9	0.5	0.28	0.12	19.30
	419.0	1.30	242.60	419.0	-1.7	-2.4	1.0	0.58	0.53	13.47
	510.0	1.50	244.90	509.9	-2.7	-4.4	1.5	0.23	0.22	2.53
	602.0	1.70	250.30	601.9	-3.7	-6.7	1.8	0.27	0.22	5.87
	692.0	1.80	249.80	691.9	-4.6	-9.3	2.0	0.11	0.11	-0.56
	789.0	1.80	240.00	788.8	-5.9	-12.1	2.5	0.32	0.00	-10.10
	884.0	1.80	238.40	883.8	-7.4	-14.6	3.3	0.05	0.00	-1.68
	979.0	1.30	200.90	978.7	-9.2	-16.3	4.6	1.16	-0.53	-39.47
1,073.0	3.10	187.20	1,072.7	-12.7	-17.0	7.8	1.98	1.91	-14.57	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Great Western 25-53
<b>Project:</b>	SEC.25-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	Great Western 25-12-15 Pad Sec.25-T6N-R67W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Well:</b>	Great Western 25-53	<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)	
1,168.0	4.00	173.50	1,167.5	-18.6	-16.9	13.5	1.30	0.95	-14.42	
1,263.0	5.30	160.70	1,262.2	-26.0	-15.1	21.1	1.74	1.37	-13.47	
1,358.0	6.70	160.90	1,356.7	-35.4	-11.8	31.0	1.47	1.47	0.21	
1,452.0	8.50	167.40	1,449.8	-47.3	-8.5	43.4	2.12	1.91	6.91	
1,547.0	9.80	160.70	1,543.6	-61.8	-4.3	58.5	1.77	1.37	-7.05	
1,642.0	11.20	160.50	1,637.0	-78.1	1.4	75.8	1.47	1.47	-0.21	
1,737.0	12.10	160.30	1,730.1	-96.2	7.9	94.9	0.95	0.95	-0.21	
1,832.0	13.40	164.40	1,822.7	-116.2	14.2	115.8	1.67	1.37	4.32	
1,927.0	14.90	164.90	1,914.8	-138.6	20.3	139.1	1.58	1.58	0.53	
2,021.0	16.20	164.40	2,005.4	-162.9	27.0	164.3	1.39	1.38	-0.53	
2,116.0	17.10	163.80	2,096.4	-189.1	34.5	191.5	0.96	0.95	-0.63	
2,211.0	17.10	161.20	2,187.2	-215.7	42.9	219.4	0.80	0.00	-2.74	
2,306.0	17.70	161.90	2,277.9	-242.7	51.8	247.7	0.67	0.63	0.74	
2,401.0	16.60	162.60	2,368.6	-269.3	60.4	275.7	1.18	-1.16	0.74	
2,496.0	17.80	164.00	2,459.4	-296.2	68.5	303.8	1.34	1.26	1.47	
2,591.0	18.20	164.00	2,549.7	-324.5	76.5	333.2	0.42	0.42	0.00	
2,685.0	17.10	164.20	2,639.3	-351.9	84.4	361.7	1.17	-1.17	0.21	
2,780.0	17.30	162.60	2,730.1	-378.8	92.4	389.7	0.54	0.21	-1.68	
2,875.0	18.30	162.10	2,820.5	-406.5	101.2	418.8	1.06	1.05	-0.53	
2,970.0	18.60	162.60	2,910.6	-435.1	110.3	448.8	0.36	0.32	0.53	
3,065.0	18.10	163.30	3,000.8	-463.7	119.1	478.7	0.58	-0.53	0.74	
3,160.0	18.00	162.80	3,091.1	-491.9	127.7	508.1	0.19	-0.11	-0.53	
3,255.0	17.90	160.50	3,181.5	-519.6	136.9	537.3	0.75	-0.11	-2.42	
3,347.0	18.60	159.60	3,268.9	-546.7	146.7	566.1	0.82	0.76	-0.98	
3,441.0	20.00	162.60	3,357.6	-576.1	156.7	597.1	1.82	1.49	3.19	
3,536.0	19.50	162.30	3,447.0	-606.7	166.4	629.1	0.54	-0.53	-0.32	
3,631.0	21.90	163.10	3,535.9	-638.8	176.4	662.7	2.54	2.53	0.84	
3,725.0	22.60	162.40	3,622.9	-672.8	186.9	698.3	0.80	0.74	-0.74	
3,820.0	23.70	161.00	3,710.2	-708.2	198.7	735.5	1.29	1.16	-1.47	
3,915.0	24.50	161.20	3,796.9	-744.9	211.2	774.3	0.85	0.84	0.21	
4,009.0	23.60	162.40	3,882.8	-781.3	223.2	812.5	1.09	-0.96	1.28	
4,104.0	21.10	161.20	3,970.6	-815.6	234.5	848.6	2.67	-2.63	-1.26	
4,199.0	18.60	161.90	4,060.0	-846.2	244.7	880.8	2.64	-2.63	0.74	
4,293.0	18.70	161.40	4,149.0	-874.8	254.2	910.8	0.20	0.11	-0.53	
4,388.0	17.10	162.10	4,239.4	-902.5	263.3	940.0	1.70	-1.68	0.74	
4,483.0	16.10	162.30	4,330.5	-928.3	271.6	967.1	1.05	-1.05	0.21	
4,577.0	15.10	161.70	4,421.0	-952.4	279.4	992.3	1.08	-1.06	-0.64	
4,672.0	13.90	159.00	4,513.0	-974.8	287.4	1,016.0	1.45	-1.26	-2.84	
4,765.0	12.50	158.00	4,603.5	-994.5	295.2	1,037.1	1.53	-1.51	-1.08	
4,860.0	11.60	158.00	4,696.4	-1,012.9	302.6	1,056.8	0.95	-0.95	0.00	
4,955.0	10.80	158.00	4,789.6	-1,030.0	309.5	1,075.2	0.84	-0.84	0.00	
5,049.0	8.70	164.60	4,882.3	-1,045.0	314.7	1,091.0	2.53	-2.23	7.02	
5,144.0	6.90	170.20	4,976.4	-1,057.6	317.6	1,103.9	2.05	-1.89	5.89	
5,239.0	4.80	179.10	5,070.9	-1,067.2	318.6	1,113.4	2.40	-2.21	9.37	
5,334.0	3.40	189.50	5,165.6	-1,073.9	318.2	1,119.8	1.66	-1.47	10.95	
5,429.0	2.40	225.00	5,260.5	-1,078.1	316.3	1,123.4	2.11	-1.05	37.37	
5,524.0	2.70	284.60	5,355.5	-1,079.0	312.8	1,123.2	2.68	0.32	62.74	
5,619.0	2.10	272.50	5,450.4	-1,078.3	308.9	1,121.6	0.82	-0.63	-12.74	
5,714.0	1.70	244.50	5,545.3	-1,078.9	305.9	1,121.3	1.05	-0.42	-29.47	
5,809.0	1.40	220.50	5,640.3	-1,080.4	303.8	1,122.2	0.75	-0.32	-25.26	
5,967.0	1.80	194.40	5,798.2	-1,084.2	302.0	1,125.5	0.52	0.25	-16.52	
5,967.9	1.80	194.40	5,799.2	-1,084.3	301.9	1,125.5	0.00	0.00	0.00	
TARGET BHL 1320'FSL, 1320'FWL										
6,156.0	1.70	190.70	5,987.1	-1,089.9	300.7	1,130.6	0.08	-0.05	-1.97	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Great Western 25-53
<b>Project:</b>	SEC.25-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Site:</b>	Great Western 25-12-15 Pad Sec.25-T6N-R67W	<b>MD Reference:</b>	WELL @ 4766.0ft (Original Well Elev)
<b>Well:</b>	Great Western 25-53	<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)	
6,346.0	1.10	193.60	6,177.1	-1,094.4	299.7	1,134.7	0.32	-0.32	1.53	
6,472.0	0.70	186.00	6,303.1	-1,096.3	299.4	1,136.5	0.33	-0.32	-6.03	
6,662.0	0.70	218.00	6,493.0	-1,098.4	298.5	1,138.3	0.20	0.00	16.84	
6,851.0	0.70	190.00	6,682.0	-1,100.5	297.6	1,140.0	0.18	0.00	-14.81	
6,929.4	0.73	200.22	6,760.4	-1,101.4	297.4	1,140.8	0.17	0.03	13.04	
LEGAL BOX 800' X 800' 1318'FSL & 1346'FWL										
6,929.4	0.73	200.23	6,760.5	-1,101.4	297.4	1,140.8	0.17	0.05	12.50	
TARGET CIRCLE 1320'FSL & 1320'FWL										
7,041.0	0.80	213.00	6,872.0	-1,102.7	296.7	1,141.9	0.17	0.07	11.45	
7,231.0	0.60	223.00	7,062.0	-1,104.6	295.3	1,143.3	0.12	-0.11	5.26	
7,357.0	0.50	164.00	7,188.0	-1,105.6	295.0	1,144.2	0.44	-0.08	-46.83	
7,407.0	0.50	164.00	7,238.0	-1,106.0	295.1	1,144.7	0.00	0.00	0.00	

Checked By: _____	Approved By: _____	Date: _____
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