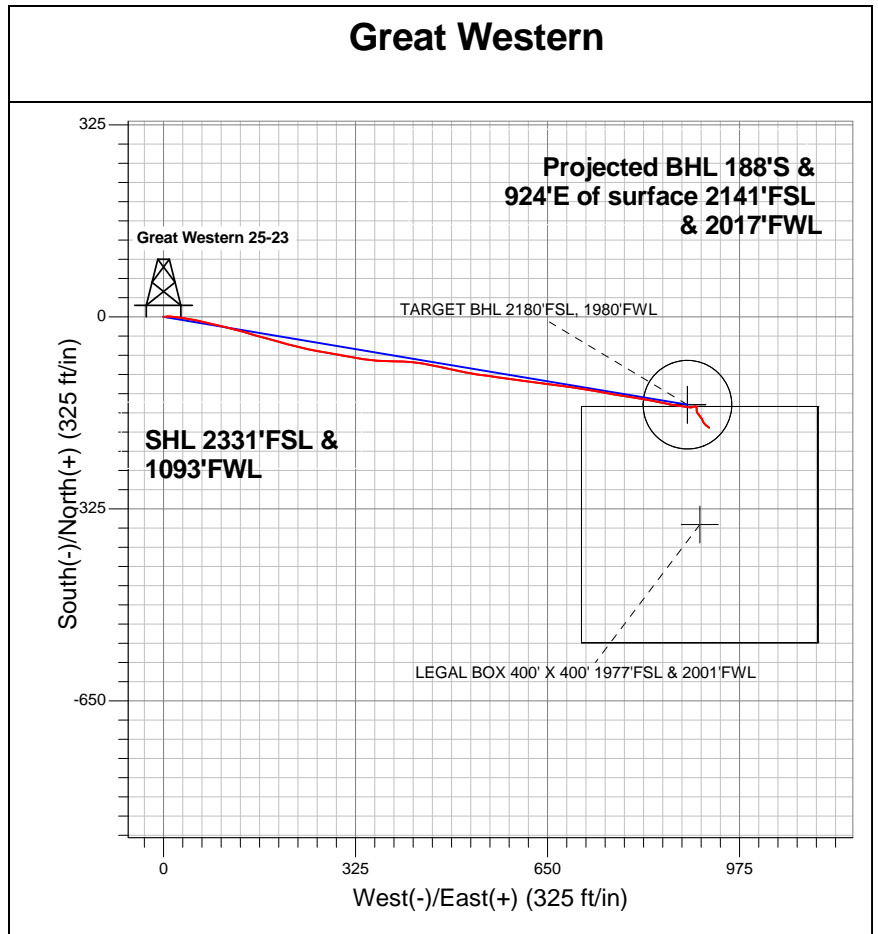
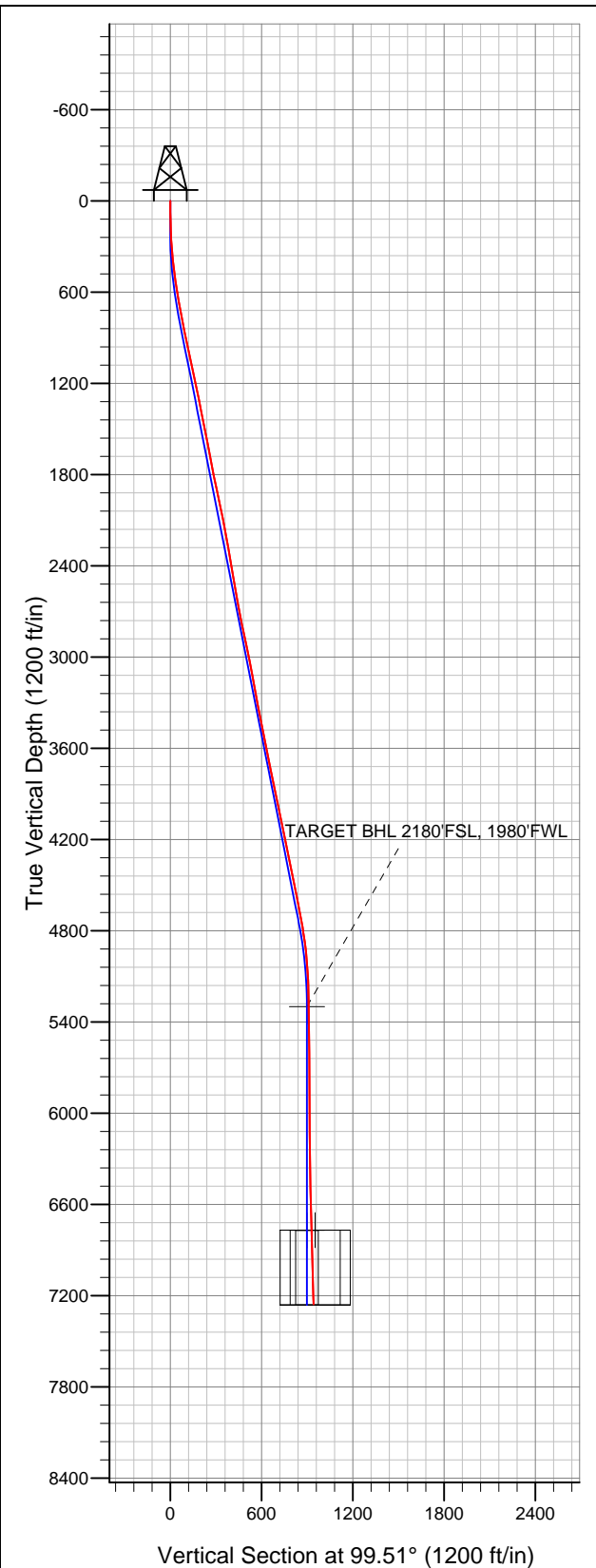


**Well Name: Great Western 25-23**

Surface Location: Great Western 25-12-15 Pad Sec.25-T6N-R67W  
North American Datum 1983 US State Plane 1983Colorado Northern Zone  
Ground Elevation: 4751.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1410025.90	3181574.17	40.457089	-104.847497	
Original Well Elev			WELL @ 4765.0ft (Original Well Elev)			



LEGEND

- Wellbore #1
- Great Western 25-23, Wellbore #1, Plan #3 (8-20-12)R V0
- Survey #1

# Final Survey Plot

Projected Final Survey -  
7343'MD & 7256'TVD @ 942'VS  
1.60 deg Inc 124.10 deg AZ

Project: SEC.25-T6N-R67W  
Site: Great Western 25-12-15 Pad Sec.25-T6N-R67W  
Well: Great Western 25-23  
Plan: Wellbore #1



## **Great Western**

**SEC.25-T6N-R67W**

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

**Great Western 25-23**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**27 August, 2012**

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Great Western 25-23
<b>Project:</b>	SEC.25-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4765.0ft (Original Well Elev)
<b>Site:</b>	Great Western 25-12-15 Pad Sec.25-T6N-R67W	<b>MD Reference:</b>	WELL @ 4765.0ft (Original Well Elev)
<b>Well:</b>	Great Western 25-23	<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	
From:	Lat/Long	Easting:		Longitude:	
		3,181,487.19ft		-104.847808	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
0.0 ft		"		0.42 °	

Well	Great Western 25-23					
Well Position	+N/-S	0.0 ft	Northing:	1,410,025.90 ft	Latitude:	40.457089
	+E/-W	0.0 ft	Easting:	3,181,574.17 ft	Longitude:	-104.847497
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,751.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/20/2012	8.76	67.04	53,028

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	99.51	

Survey Program		Date	8/27/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
147.0	7,343.0	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
	147.0	1.80	82.50	147.0	0.3	2.3	2.2	1.22	1.22	0.00
	238.0	3.10	86.50	237.9	0.6	6.2	6.0	1.44	1.43	4.40
	330.0	4.30	93.50	329.7	0.6	12.1	11.8	1.39	1.30	7.61
	421.0	6.20	95.60	420.3	-0.1	20.4	20.1	2.10	2.09	2.31
	511.0	8.20	99.70	509.6	-1.7	31.5	31.4	2.29	2.22	4.56
	602.0	9.80	100.90	599.5	-4.2	45.6	45.6	1.77	1.76	1.32
	693.0	10.70	102.30	689.0	-7.5	61.4	61.8	1.03	0.99	1.54
	792.0	10.90	103.00	786.3	-11.5	79.5	80.3	0.24	0.20	0.71
	887.0	11.00	102.70	879.5	-15.6	97.1	98.3	0.12	0.11	-0.32
	981.0	12.10	104.80	971.6	-20.1	115.4	117.1	1.25	1.17	2.23
	1,076.0	12.30	105.80	1,064.5	-25.4	134.7	137.1	0.31	0.21	1.05
	1,171.0	12.40	106.00	1,157.3	-30.9	154.3	157.3	0.11	0.11	0.21

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Great Western 25-23
<b>Project:</b>	SEC.25-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4765.0ft (Original Well Elev)
<b>Site:</b>	Great Western 25-12-15 Pad Sec.25-T6N-R67W	<b>MD Reference:</b>	WELL @ 4765.0ft (Original Well Elev)
<b>Well:</b>	Great Western 25-23	<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)	
1,266.0	11.90	105.20	1,250.2	-36.3	173.5	177.2	0.56	-0.53	-0.84	
1,361.0	10.60	105.80	1,343.3	-41.2	191.4	195.6	1.37	-1.37	0.63	
1,456.0	11.90	104.60	1,436.5	-46.1	209.3	214.0	1.39	1.37	-1.26	
1,551.0	11.00	103.90	1,529.6	-50.7	227.6	232.8	0.96	-0.95	-0.74	
1,646.0	11.70	101.80	1,622.8	-54.9	245.8	251.5	0.86	0.74	-2.21	
1,741.0	10.20	99.20	1,716.0	-58.2	263.5	269.5	1.66	-1.58	-2.74	
1,836.0	11.30	100.60	1,809.4	-61.3	281.0	287.2	1.19	1.16	1.47	
1,931.0	11.70	100.00	1,902.5	-64.6	299.6	306.2	0.44	0.42	-0.63	
2,025.0	11.50	100.70	1,994.5	-68.0	318.2	325.1	0.26	-0.21	0.74	
2,120.0	11.60	99.20	2,087.6	-71.3	336.9	344.1	0.33	0.11	-1.58	
2,215.0	11.30	93.50	2,180.7	-73.4	355.7	362.9	1.23	-0.32	-6.00	
2,310.0	10.40	93.90	2,274.0	-74.6	373.5	380.7	0.95	-0.95	0.42	
2,405.0	9.40	91.40	2,367.6	-75.3	389.8	396.9	1.15	-1.05	-2.63	
2,499.0	9.30	91.40	2,460.4	-75.7	405.1	412.0	0.11	-0.11	0.00	
2,594.0	9.90	95.60	2,554.0	-76.7	420.9	427.8	0.97	0.63	4.42	
2,689.0	10.20	99.30	2,647.6	-78.9	437.3	444.3	0.75	0.32	3.89	
2,784.0	11.10	102.30	2,740.9	-82.2	454.5	461.9	1.11	0.95	3.16	
2,879.0	12.50	101.40	2,833.9	-86.1	473.6	481.3	1.49	1.47	-0.95	
2,974.0	12.00	101.40	2,926.8	-90.1	493.3	501.4	0.53	-0.53	0.00	
3,069.0	11.30	102.00	3,019.8	-94.0	512.1	520.6	0.75	-0.74	0.63	
3,164.0	11.30	98.60	3,113.0	-97.3	530.4	539.2	0.70	0.00	-3.58	
3,259.0	10.60	96.20	3,206.2	-99.7	548.3	557.2	0.88	-0.74	-2.53	
3,346.0	10.20	99.50	3,291.8	-101.8	563.9	572.9	0.82	-0.46	3.79	
3,441.0	10.60	97.40	3,385.2	-104.3	580.8	590.1	0.58	0.42	-2.21	
3,536.0	10.90	97.90	3,478.6	-106.7	598.4	607.8	0.33	0.32	0.53	
3,630.0	11.30	97.20	3,570.8	-109.1	616.3	625.9	0.45	0.43	-0.74	
3,725.0	11.80	97.80	3,663.9	-111.5	635.2	644.9	0.54	0.53	0.63	
3,820.0	11.70	97.60	3,756.9	-114.1	654.3	664.2	0.11	-0.11	-0.21	
3,914.0	10.90	97.90	3,849.1	-116.6	672.6	682.6	0.85	-0.85	0.32	
4,009.0	11.40	97.60	3,942.3	-119.1	690.8	701.0	0.53	0.53	-0.32	
4,104.0	11.70	99.90	4,035.4	-122.0	709.6	720.0	0.58	0.32	2.42	
4,198.0	11.40	98.60	4,127.5	-125.0	728.2	738.8	0.42	-0.32	-1.38	
4,293.0	12.40	101.40	4,220.4	-128.4	747.5	758.4	1.22	1.05	2.95	
4,387.0	12.60	99.00	4,312.2	-132.0	767.5	778.7	0.59	0.21	-2.55	
4,482.0	11.30	98.30	4,405.1	-135.0	786.9	798.4	1.38	-1.37	-0.74	
4,577.0	11.30	99.90	4,498.3	-138.0	805.3	817.0	0.33	0.00	1.68	
4,671.0	11.00	101.10	4,590.5	-141.3	823.2	835.2	0.40	-0.32	1.28	
4,768.0	10.60	101.10	4,685.8	-144.8	841.0	853.4	0.41	-0.41	0.00	
4,863.0	9.90	101.10	4,779.3	-148.0	857.6	870.3	0.74	-0.74	0.00	
4,958.0	7.70	98.10	4,873.2	-150.5	871.9	884.8	2.36	-2.32	-3.16	
5,053.0	5.20	98.60	4,967.5	-152.0	882.5	895.5	2.63	-2.63	0.53	
5,147.0	3.80	96.70	5,061.3	-153.0	889.8	902.8	1.50	-1.49	-2.02	
5,242.0	1.90	71.90	5,156.1	-152.9	894.4	907.4	2.34	-2.00	-26.11	
5,385.7	1.07	71.90	5,299.8	-151.7	897.9	910.7	0.58	-0.58	0.00	
TARGET BHL 2180'FSL, 1980'FWL										
5,432.0	0.80	71.90	5,346.1	-151.5	898.7	911.3	0.58	-0.58	0.00	
5,622.0	0.60	107.20	5,536.1	-151.4	900.9	913.5	0.24	-0.11	18.58	
5,812.0	0.80	162.10	5,726.1	-153.0	902.2	915.1	0.35	0.11	28.89	
6,001.0	1.00	181.30	5,915.0	-155.9	902.6	915.9	0.19	0.11	10.16	
6,187.0	1.10	178.40	6,101.0	-159.3	902.6	916.5	0.06	0.05	-1.56	
6,376.0	1.40	148.70	6,290.0	-163.0	903.9	918.4	0.37	0.16	-15.71	
6,566.0	1.70	134.50	6,479.9	-167.0	907.1	922.2	0.26	0.16	-7.47	
6,756.0	2.40	154.40	6,669.8	-172.6	910.8	926.8	0.52	0.37	10.47	
6,856.0	2.08	153.07	6,769.7	-176.1	912.5	929.1	0.32	-0.32	-1.33	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Great Western 25-23
<b>Project:</b>	SEC.25-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4765.0ft (Original Well Elev)
<b>Site:</b>	Great Western 25-12-15 Pad Sec.25-T6N-R67W	<b>MD Reference:</b>	WELL @ 4765.0ft (Original Well Elev)
<b>Well:</b>	Great Western 25-23	<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)
<b>TARGET CIRCLE 2102'FSL &amp; 1876'FWL</b>									
6,861.5	2.06	152.99	6,775.2	-176.3	912.6	929.2	0.32	-0.32	-1.54
<b>LEGAL BOX 400' X 400' 1977'FSL &amp; 2001'FWL</b>									
6,945.0	1.80	151.50	6,858.6	-178.7	913.9	930.9	0.32	-0.32	-1.78
7,135.0	2.20	127.50	7,048.5	-183.6	918.2	936.0	0.48	0.21	-12.63
7,293.0	1.70	124.30	7,206.4	-186.8	922.6	940.8	0.32	-0.32	-2.03
7,343.0	1.60	124.10	7,256.4	-187.6	923.8	942.1	0.20	-0.20	-0.40

Checked By: _____	Approved By: _____	Date: _____
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