



Well Name: **Bower 15-3**

Surface Location: Bowers 2 Pad Sec.3-T6N-R67W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

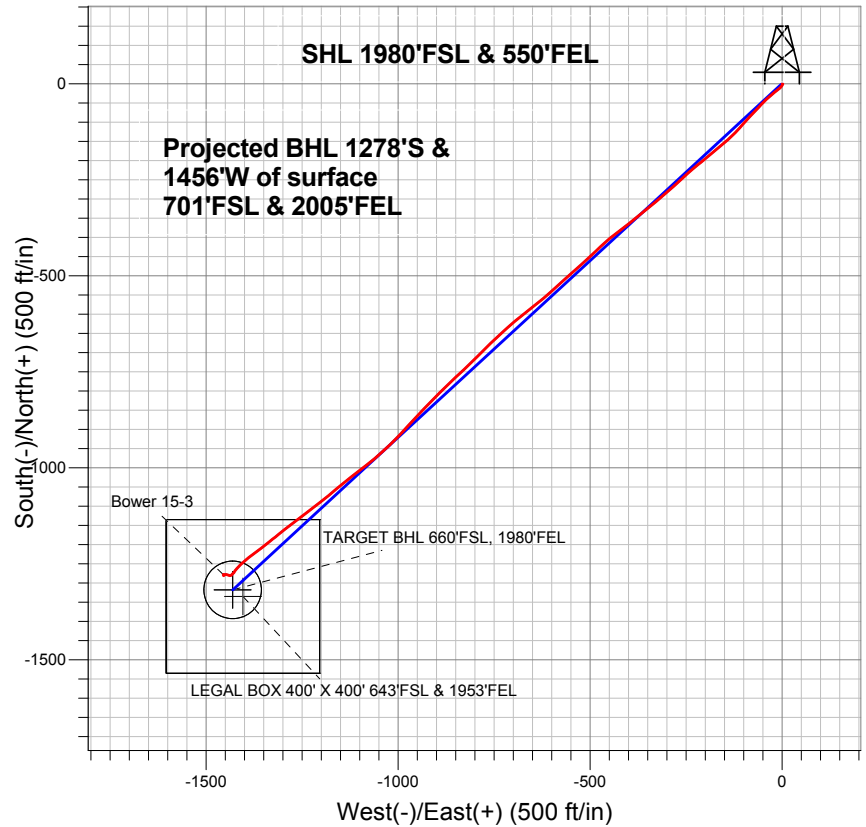
Ground Elevation: 4941.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1430859.74	3174587.00	40.514414	-104.872075

Original Well Elev WELL @ 4957.0ft (Original Well Elev)

Slot

## BAYSWATER EXPLORATION & PRODUCTION



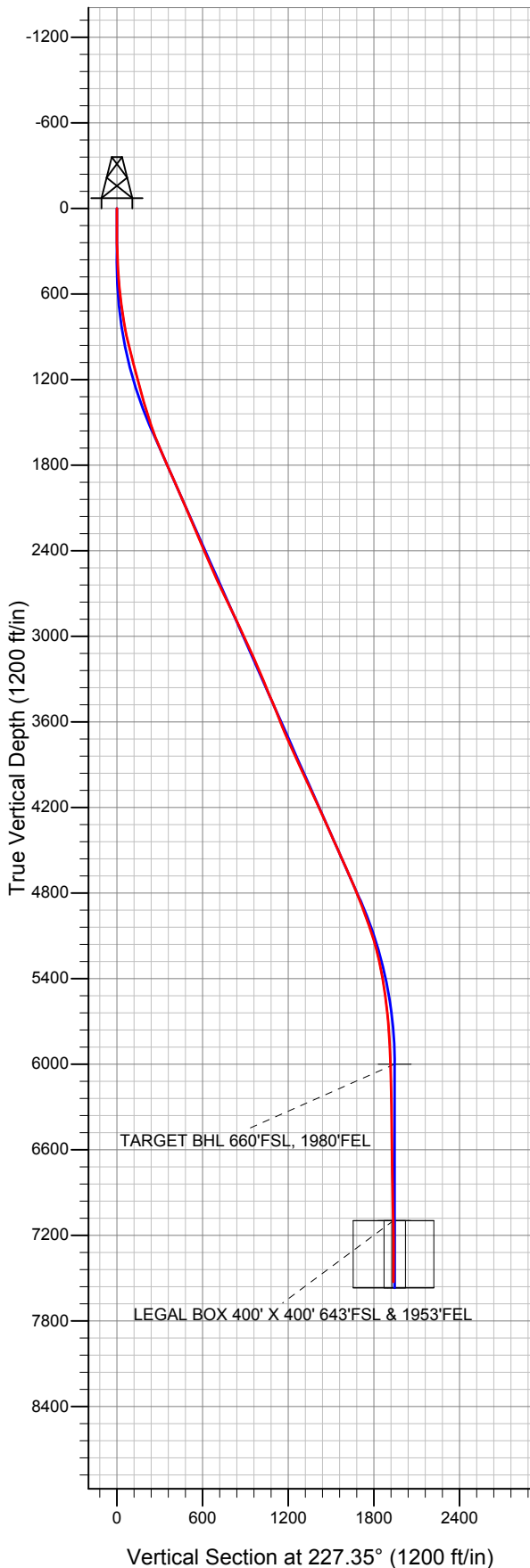
### LEGEND

- +— Bower 15-3, Wellbore #1, Plan #1 (3-28-13) V0
- +— Wellbore #1
- Survey #1

## Final Survey Plot

Projected Final Survey -  
7933'MD & 7569'TVD @ 1936'VS  
0.8 deg Inc 326.6 deg AZ

Project: SEC.3-T6N-R67W  
Site: Bowers 2 Pad Sec.3-T6N-R67W  
Well: Bower 15-3  
Plan: Wellbore #1





**Directional**

# **BAYSWATER EXPLORATION & PRODUCTION**

**SEC.3-T6N-R67W**

**Bowers 2 Pad Sec.3-T6N-R67W**

**Bower 15-3**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**08 April, 2013**



**Directional**

<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Bower 15-3
<b>Project:</b>	SEC.3-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4957.0ft (Original Well Elev)
<b>Site:</b>	Bowers 2 Pad Sec.3-T6N-R67W	<b>MD Reference:</b>	WELL @ 4957.0ft (Original Well Elev)
<b>Well:</b>	Bower 15-3	<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.3-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		Bowers 2 Pad Sec.3-T6N-R67W			
Site Position:		Northing:	1,430,859.75 ft	Latitude:	40.514414
From:	Lat/Long	Easting:	3,174,587.00 ft	Longitude:	-104.872075
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.41 °

Well	Bower 15-3					
Well Position	+N-S	0.0 ft	Northing:	1,430,859.74 ft	Latitude:	40.514414
	+E-W	0.0 ft	Easting:	3,174,587.00 ft	Longitude:	-104.872075
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,941.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/28/2013	8.69	67.06	52,991

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	227.35	

<b>Survey Program</b>	<b>Date</b>	4/8/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
126.0	7,933.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
126.0	0.90	106.00	126.0	-0.3	1.0	-0.5	0.71	0.71	0.00
244.0	1.20	203.90	244.0	-1.7	1.3	0.1	1.35	0.25	82.97
366.0	3.00	216.20	365.9	-5.4	-1.1	4.4	1.51	1.48	10.08
487.0	3.90	222.00	486.7	-11.0	-5.7	11.6	0.80	0.74	4.79
609.0	6.20	235.50	608.2	-17.8	-13.9	22.3	2.11	1.89	11.07
731.0	8.40	229.90	729.2	-27.3	-26.1	37.7	1.89	1.80	-4.59
856.0	11.10	224.60	852.4	-41.8	-41.6	58.9	2.27	2.16	-4.24
981.0	13.90	224.10	974.4	-61.1	-60.5	85.9	2.24	2.24	-0.40
1,108.0	14.90	223.90	1,097.4	-83.8	-82.4	117.4	0.79	0.79	-0.16
1,233.0	14.90	220.80	1,218.2	-107.6	-104.1	149.4	0.64	0.00	-2.48
1,358.0	15.70	224.10	1,338.8	-131.9	-126.3	182.3	0.95	0.64	2.64

<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Bower 15-3
<b>Project:</b>	SEC.3-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4957.0ft (Original Well Elev)
<b>Site:</b>	Bowers 2 Pad Sec.3-T6N-R67W	<b>MD Reference:</b>	WELL @ 4957.0ft (Original Well Elev)
<b>Well:</b>	Bower 15-3	<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)
1,483.0	18.20	231.10	1,458.4	-156.3	-153.3	218.6	2.58	2.00	5.60
1,608.0	20.00	229.20	1,576.5	-182.5	-184.7	259.5	1.52	1.44	-1.52
1,733.0	23.10	231.80	1,692.7	-211.7	-220.1	305.3	2.59	2.48	2.08
1,858.0	24.00	226.40	1,807.3	-244.4	-257.8	355.2	1.87	0.72	-4.32
1,983.0	23.70	229.50	1,921.7	-278.2	-295.3	405.7	1.03	-0.24	2.48
2,108.0	23.30	229.00	2,036.3	-310.7	-333.1	455.5	0.36	-0.32	-0.40
2,233.0	23.90	231.10	2,150.8	-342.9	-371.5	505.5	0.83	0.48	1.68
2,358.0	23.10	234.10	2,265.5	-373.1	-411.0	555.1	1.15	-0.64	2.40
2,483.0	22.10	229.40	2,380.9	-402.8	-448.8	603.0	1.65	-0.80	-3.76
2,607.0	23.90	226.40	2,495.0	-435.3	-484.7	651.4	1.73	1.45	-2.42
2,732.0	24.90	228.30	2,608.9	-470.3	-522.6	703.0	1.02	0.80	1.52
2,857.0	26.30	228.00	2,721.6	-506.3	-562.9	757.1	1.12	1.12	-0.24
2,982.0	24.70	228.10	2,834.4	-542.3	-602.9	810.9	1.28	-1.28	0.08
3,107.0	25.00	231.70	2,947.8	-576.1	-643.1	863.3	1.23	0.24	2.88
3,232.0	25.80	230.80	3,060.8	-609.7	-684.9	916.8	0.71	0.64	-0.72
3,357.0	23.00	227.30	3,174.6	-643.5	-723.9	968.4	2.52	-2.24	-2.80
3,482.0	22.00	226.90	3,290.1	-676.0	-759.0	1,016.2	0.81	-0.80	-0.32
3,607.0	23.50	224.30	3,405.3	-709.9	-793.5	1,064.5	1.44	1.20	-2.08
3,732.0	22.00	226.00	3,520.6	-744.0	-827.7	1,112.8	1.31	-1.20	1.36
3,857.0	21.80	227.60	3,636.6	-775.9	-861.7	1,159.4	0.50	-0.16	1.28
3,982.0	23.70	224.80	3,751.9	-809.4	-896.5	1,207.8	1.75	1.52	-2.24
4,106.0	24.90	223.70	3,864.9	-845.9	-932.1	1,258.7	1.03	0.97	-0.89
4,231.0	26.00	222.00	3,977.8	-885.3	-968.6	1,312.2	1.06	0.88	-1.36
4,356.0	23.80	224.10	4,091.1	-923.8	-1,004.5	1,364.7	1.90	-1.76	1.68
4,481.0	24.40	228.10	4,205.2	-959.1	-1,041.3	1,415.7	1.39	0.48	3.20
4,606.0	25.00	232.50	4,318.8	-992.5	-1,081.5	1,467.8	1.55	0.48	3.52
4,731.0	23.30	231.80	4,432.9	-1,023.8	-1,121.9	1,518.8	1.38	-1.36	-0.56
4,856.0	25.10	229.70	4,546.9	-1,056.3	-1,161.5	1,569.9	1.60	1.44	-1.68
4,981.0	23.60	231.70	4,660.8	-1,088.9	-1,201.4	1,621.4	1.37	-1.20	1.60
5,106.0	22.10	232.70	4,776.0	-1,118.7	-1,239.7	1,669.8	1.24	-1.20	0.80
5,231.0	21.00	233.20	4,892.2	-1,146.4	-1,276.4	1,715.5	0.89	-0.88	0.40
5,356.0	20.00	230.90	5,009.3	-1,173.3	-1,310.9	1,759.1	1.03	-0.80	-1.84
5,481.0	16.60	232.70	5,128.0	-1,197.6	-1,341.7	1,798.2	2.76	-2.72	1.44
5,606.0	13.00	232.00	5,248.8	-1,217.0	-1,367.0	1,830.0	2.88	-2.88	-0.56
5,730.0	10.70	232.20	5,370.1	-1,232.7	-1,387.1	1,855.4	1.86	-1.85	0.16
5,855.0	8.10	228.80	5,493.5	-1,245.6	-1,402.9	1,875.7	2.13	-2.08	-2.72
5,980.0	6.40	223.00	5,617.5	-1,256.5	-1,414.3	1,891.5	1.48	-1.36	-4.64
6,105.0	4.00	220.80	5,741.9	-1,264.9	-1,421.9	1,902.8	1.93	-1.92	-1.76
6,230.0	3.30	209.20	5,866.7	-1,271.3	-1,426.5	1,910.5	0.81	-0.56	-9.28
6,355.0	1.60	242.90	5,991.6	-1,275.3	-1,429.8	1,915.6	1.73	-1.36	26.96
6,364.2	1.58	241.13	6,000.7	-1,275.4	-1,430.0	1,915.9	0.57	-0.20	-19.26
TARGET BHL 660'FSL, 1980'FEL									
6,480.0	1.50	216.60	6,116.5	-1,277.4	-1,432.3	1,918.9	0.57	-0.07	-21.18
6,605.0	1.10	221.80	6,241.5	-1,279.6	-1,434.1	1,921.7	0.33	-0.32	4.16
6,730.0	1.10	255.60	6,366.5	-1,280.8	-1,436.0	1,924.0	0.51	0.00	27.04
6,855.0	1.10	281.00	6,491.4	-1,280.9	-1,438.4	1,925.7	0.39	0.00	20.32
6,980.0	1.50	293.70	6,616.4	-1,280.0	-1,441.0	1,927.1	0.39	0.32	10.16
7,105.0	1.60	284.20	6,741.4	-1,278.9	-1,444.2	1,928.7	0.22	0.08	-7.60
7,229.0	1.60	279.60	6,866.3	-1,278.2	-1,447.6	1,930.7	0.10	0.00	-3.71
7,354.0	1.30	259.20	6,990.3	-1,278.1	-1,450.7	1,933.0	0.47	-0.24	-16.32
7,460.5	1.25	220.34	7,096.8	-1,279.3	-1,452.7	1,935.2	0.80	-0.05	-36.47
LEGAL BOX 400' X 400' 643'FSL & 1953'FEL									
7,461.1	1.25	220.13	7,097.4	-1,279.3	-1,452.7	1,935.2	0.80	0.23	-35.03

<b>Company:</b>	BAYSWATER EXPLORATION & PRODUCTION	<b>Local Co-ordinate Reference:</b>	Well Bower 15-3
<b>Project:</b>	SEC.3-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4957.0ft (Original Well Elev)
<b>Site:</b>	Bowers 2 Pad Sec.3-T6N-R67W	<b>MD Reference:</b>	WELL @ 4957.0ft (Original Well Elev)
<b>Well:</b>	Bower 15-3	<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)
TARGET CIRCLE 660'FSL & 1980'FEL									
7,479.0	1.30	214.10	7,115.2	-1,279.6	-1,452.9	1,935.6	0.80	0.27	-33.77
7,604.0	0.50	210.70	7,240.2	-1,281.2	-1,454.0	1,937.5	0.64	-0.64	-2.72
7,729.0	1.10	347.00	7,365.2	-1,280.5	-1,454.5	1,937.4	1.20	0.48	109.04
7,891.0	0.80	326.60	7,527.2	-1,278.1	-1,455.5	1,936.5	0.28	-0.19	-12.59
7,933.0	0.80	326.60	7,569.2	-1,277.6	-1,455.8	1,936.4	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------