

Well Name: **Bower 10-3**

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

Ground Elevation: 4942.0

+N/-S +E/-W
 0.0 0.0

Northing
 1430859.63

Easting
 3174571.99

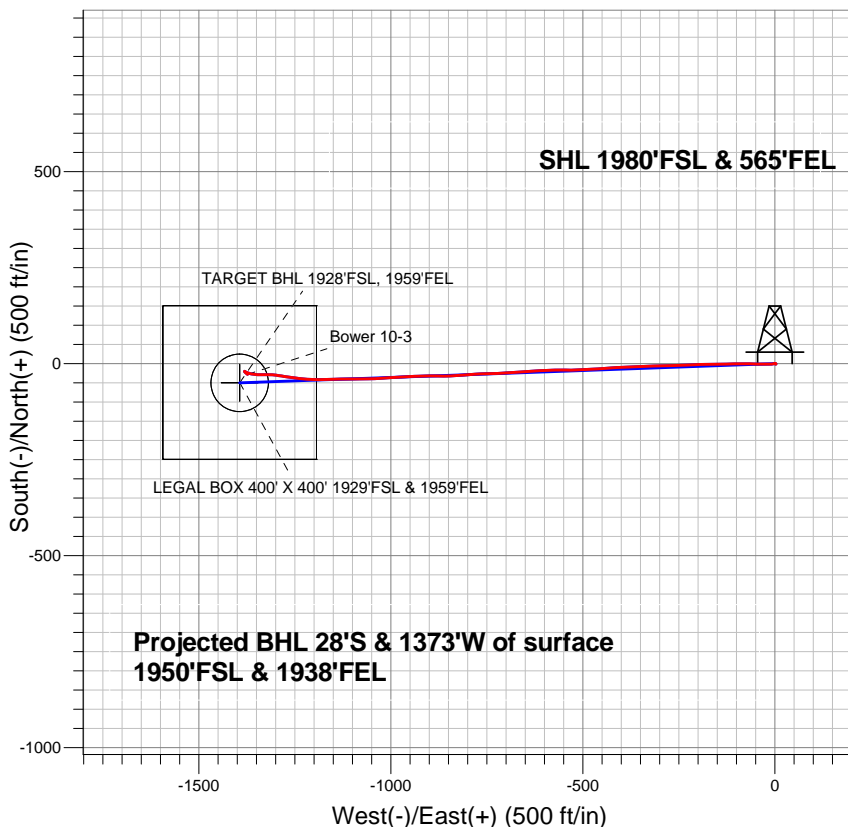
Latitude
 40.514414

Longitude
 -104.872129

Slot

Original Well Elev WELL @ 4958.0ft (Original Well Elev)

BAYSWATER EXPLORATION & PRODUCTION



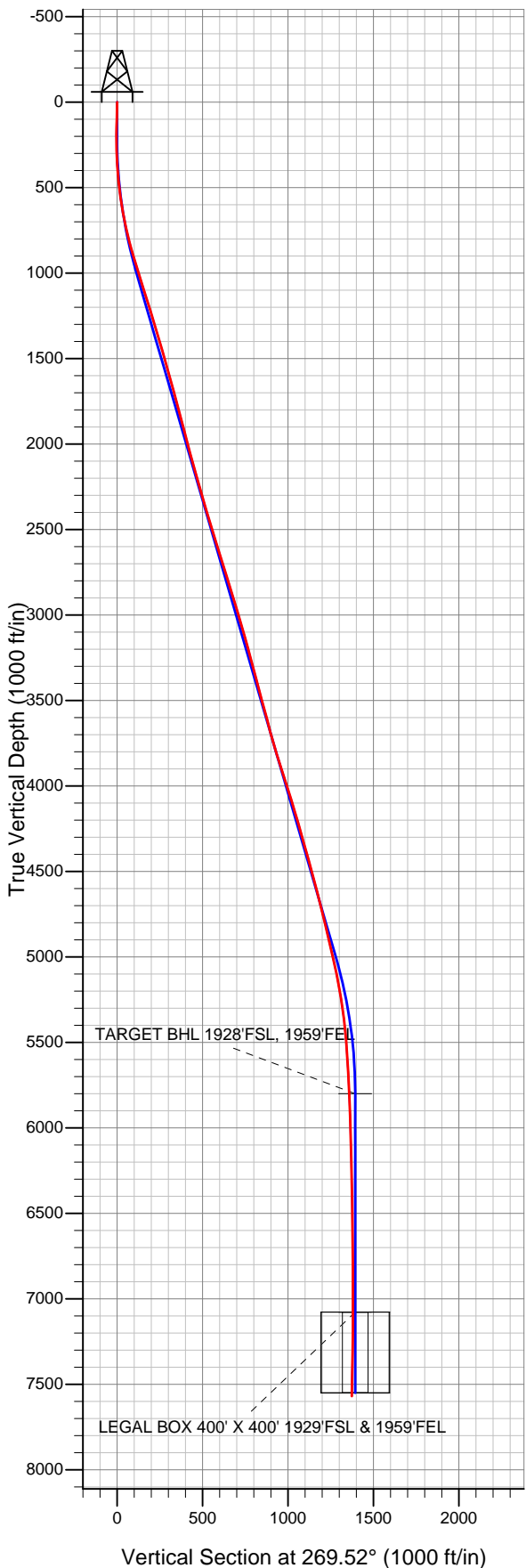
LEGEND

- + Bower 10-3, Wellbore #1, Plan #1 (9-24-12) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7750'MD & 7569'TVD @ 1373'VS
 1.8 deg Inc 132.0 deg AZ

Project: SEC.3-T6N-R67W
 Site: Bowers 2 Pad Sec.3-T6N-R67W
 Well: Bower 10-3
 Plan: Wellbore #1





Directional

BAYSWATER EXPLORATION & PRODUCTION

SEC.3-T6N-R67W

Bowers 2 Pad Sec.3-T6N-R67W

Bower 10-3

Wellbore #1

Survey: Survey #1

Standard Survey Report

02 April, 2013



Directional

Company:	BAYSWATER EXPLORATION & PRODUCTION	Local Co-ordinate Reference:	Well Bower 10-3
Project:	SEC.3-T6N-R67W	TVD Reference:	WELL @ 4958.0ft (Original Well Elev)
Site:	Bowers 2 Pad Sec.3-T6N-R67W	MD Reference:	WELL @ 4958.0ft (Original Well Elev)
Well:	Bower 10-3	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.3-T6N-R67W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	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 10-3					
Well Position	+N-S	0.0 ft	Northing:	1,430,859.63 ft	Latitude:	40.514414
	+E-W	0.0 ft	Easting:	3,174,571.99 ft	Longitude:	-104.872129
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,942.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/22/2013	8.69	67.06	52,993

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	269.52	

Survey Program	Date	4/2/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
99.0	7,750.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
99.0	1.80	109.50	99.0	-0.5	1.5	-1.5	1.82	1.82	0.00
186.0	0.60	60.60	186.0	-0.8	3.2	-3.1	1.70	-1.38	-56.21
277.0	1.50	293.50	277.0	0.0	2.5	-2.5	2.11	0.99	-139.67
368.0	3.60	263.80	367.9	0.1	-1.5	1.5	2.65	2.31	-32.64
459.0	5.30	262.90	458.6	-0.7	-8.5	8.5	1.87	1.87	-0.99
550.0	7.90	270.70	549.0	-1.1	-18.9	18.9	3.02	2.86	8.57
641.0	10.20	269.80	638.8	-1.1	-33.2	33.2	2.53	2.53	-0.99
733.0	12.60	272.40	729.0	-0.7	-51.4	51.4	2.67	2.61	2.83
827.0	14.70	270.50	820.4	-0.2	-73.6	73.6	2.28	2.23	-2.02
921.0	16.60	268.70	910.9	-0.4	-98.9	98.9	2.09	2.02	-1.91
1,014.0	17.40	269.10	999.8	-0.9	-126.1	126.1	0.87	0.86	0.43

Company:	BAYSWATER EXPLORATION & PRODUCTION	Local Co-ordinate Reference:	Well Bower 10-3
Project:	SEC.3-T6N-R67W	TVD Reference:	WELL @ 4958.0ft (Original Well Elev)
Site:	Bowers 2 Pad Sec.3-T6N-R67W	MD Reference:	WELL @ 4958.0ft (Original Well Elev)
Well:	Bower 10-3	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)
1,119.0	17.20	269.30	1,100.1	-1.3	-157.3	157.3	0.20	-0.19	0.19
1,236.0	17.20	268.40	1,211.8	-2.0	-191.9	191.9	0.23	0.00	-0.77
1,361.0	17.00	267.20	1,331.3	-3.4	-228.6	228.7	0.32	-0.16	-0.96
1,486.0	16.40	267.90	1,451.0	-5.0	-264.5	264.6	0.51	-0.48	0.56
1,611.0	15.40	269.40	1,571.2	-5.8	-298.7	298.8	0.86	-0.80	1.20
1,736.0	15.00	269.30	1,691.9	-6.2	-331.5	331.6	0.32	-0.32	-0.08
1,861.0	14.90	266.50	1,812.6	-7.3	-363.7	363.8	0.58	-0.08	-2.24
1,985.0	14.80	266.80	1,932.5	-9.2	-395.5	395.5	0.10	-0.08	0.24
2,110.0	15.20	265.00	2,053.2	-11.5	-427.7	427.8	0.49	0.32	-1.44
2,235.0	15.80	267.90	2,173.7	-13.6	-461.1	461.2	0.78	0.48	2.32
2,360.0	16.10	266.30	2,293.9	-15.3	-495.4	495.5	0.43	0.24	-1.28
2,485.0	16.50	269.10	2,413.9	-16.7	-530.4	530.5	0.71	0.32	2.24
2,610.0	17.10	269.60	2,533.5	-17.1	-566.5	566.7	0.49	0.48	0.40
2,735.0	17.40	267.90	2,652.9	-17.9	-603.6	603.7	0.47	0.24	-1.36
2,860.0	17.70	265.40	2,772.1	-20.1	-641.2	641.4	0.65	0.24	-2.00
2,985.0	16.40	266.30	2,891.6	-22.8	-677.8	677.9	1.06	-1.04	0.72
3,110.0	16.80	266.80	3,011.4	-25.0	-713.4	713.6	0.34	0.32	0.40
3,235.0	15.70	269.40	3,131.4	-26.1	-748.4	748.5	1.05	-0.88	2.08
3,360.0	14.60	265.40	3,252.0	-27.6	-781.0	781.2	1.21	-0.88	-3.20
3,484.0	15.30	265.60	3,371.8	-30.1	-812.9	813.1	0.57	0.56	0.16
3,609.0	15.20	268.00	3,492.4	-31.9	-845.7	845.9	0.51	-0.08	1.92
3,734.0	14.70	271.40	3,613.2	-32.1	-877.9	878.2	0.81	-0.40	2.72
3,859.0	15.70	268.60	3,733.8	-32.1	-910.7	910.9	0.99	0.80	-2.24
3,984.0	17.60	267.50	3,853.6	-33.4	-946.5	946.7	1.54	1.52	-0.88
4,109.0	18.20	265.80	3,972.5	-35.6	-984.8	985.1	0.64	0.48	-1.36
4,234.0	17.10	266.80	4,091.7	-38.1	-1,022.6	1,022.9	0.91	-0.88	0.80
4,359.0	16.00	268.90	4,211.5	-39.4	-1,058.2	1,058.5	1.00	-0.88	1.68
4,484.0	15.40	269.80	4,331.8	-39.8	-1,092.0	1,092.3	0.52	-0.48	0.72
4,609.0	15.00	269.10	4,452.4	-40.1	-1,124.8	1,125.1	0.35	-0.32	-0.56
4,734.0	15.70	267.90	4,573.0	-41.0	-1,157.9	1,158.2	0.61	0.56	-0.96
4,859.0	14.00	270.70	4,693.8	-41.4	-1,189.9	1,190.2	1.48	-1.36	2.24
4,984.0	13.20	274.00	4,815.3	-40.3	-1,219.3	1,219.6	0.89	-0.64	2.64
5,108.0	13.40	278.10	4,936.0	-37.3	-1,247.6	1,247.9	0.78	0.16	3.31
5,233.0	12.70	278.40	5,057.7	-33.2	-1,275.5	1,275.8	0.56	-0.56	0.24
5,358.0	9.80	276.30	5,180.3	-30.0	-1,299.7	1,299.9	2.34	-2.32	-1.68
5,483.0	8.20	272.10	5,303.8	-28.5	-1,319.2	1,319.4	1.38	-1.28	-3.36
5,608.0	5.90	270.10	5,427.8	-28.2	-1,334.5	1,334.7	1.85	-1.84	-1.60
5,733.0	4.00	268.00	5,552.4	-28.3	-1,345.3	1,345.5	1.53	-1.52	-1.68
5,858.0	2.80	276.10	5,677.1	-28.2	-1,352.7	1,352.9	1.03	-0.96	6.48
5,982.4	2.50	280.68	5,801.5	-27.3	-1,358.4	1,358.6	0.29	-0.24	3.68
TARGET BHL 1928'FSL, 1959'FEL									
5,983.0	2.50	280.70	5,802.0	-27.3	-1,358.4	1,358.6	0.29	-0.23	4.11
6,109.0	1.90	283.50	5,927.9	-26.3	-1,363.2	1,363.3	0.48	-0.48	2.22
6,233.0	1.80	281.20	6,051.9	-25.5	-1,367.1	1,367.2	0.10	-0.08	-1.85
6,358.0	1.50	285.60	6,176.8	-24.7	-1,370.6	1,370.7	0.26	-0.24	3.52
6,483.0	1.20	288.30	6,301.8	-23.8	-1,373.4	1,373.5	0.25	-0.24	2.16
6,607.0	1.10	294.10	6,425.7	-22.9	-1,375.7	1,375.8	0.12	-0.08	4.68
6,732.0	0.90	302.10	6,550.7	-21.9	-1,377.6	1,377.8	0.19	-0.16	6.40
6,857.0	0.60	301.30	6,675.7	-21.0	-1,379.0	1,379.2	0.24	-0.24	-0.64
6,982.0	0.30	314.10	6,800.7	-20.5	-1,379.8	1,379.9	0.25	-0.24	10.24
7,107.0	0.30	306.30	6,925.7	-20.1	-1,380.3	1,380.4	0.03	0.00	-6.24
7,232.0	0.30	209.30	7,050.7	-20.1	-1,380.7	1,380.9	0.36	0.00	-77.60
7,259.5	0.33	178.15	7,078.2	-20.3	-1,380.8	1,380.9	0.62	0.10	-113.43

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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)
TARGET CIRCLE 1928'FSL & 1959'FEL - LEGAL BOX 400' X 400' 1929'FSL & 1959'FEL									
7,357.0	0.80	134.60	7,175.7	-21.0	-1,380.3	1,380.4	0.62	0.48	-44.65
7,482.0	1.30	136.60	7,300.7	-22.7	-1,378.7	1,378.8	0.40	0.40	1.60
7,607.0	1.80	133.90	7,425.6	-25.1	-1,376.3	1,376.5	0.40	0.40	-2.16
7,750.0	1.80	132.00	7,568.6	-28.1	-1,373.0	1,373.2	0.04	0.00	-1.33

Checked By: _____	Approved By: _____	Date: _____
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