

# Bayswater Exploration & Production, LLC

Well Name: **Thornton D-29-30HN**

Surface Location: Thornton 28-H Pad Sec.28-T7N-R66W

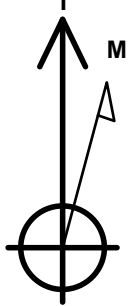
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

Ground Elevation: 4908.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1443536.27	3196883.14	40.548748	-104.791523	
RKB - 23' WELL @ 4931.0ft (RKB - 23')						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1599'FNL, 355'FWL, SEC.28	1.0	0.0	0.0	Point
BHL 820'FNL, 470'FWL, SEC.30	7296.0	563.4	-10770.6	Point
LPL 820'FNL, 470'FEL, SEC.29	7346.0	769.8	-798.1	Point



Azimuths to True North  
Magnetic North: 8.26°

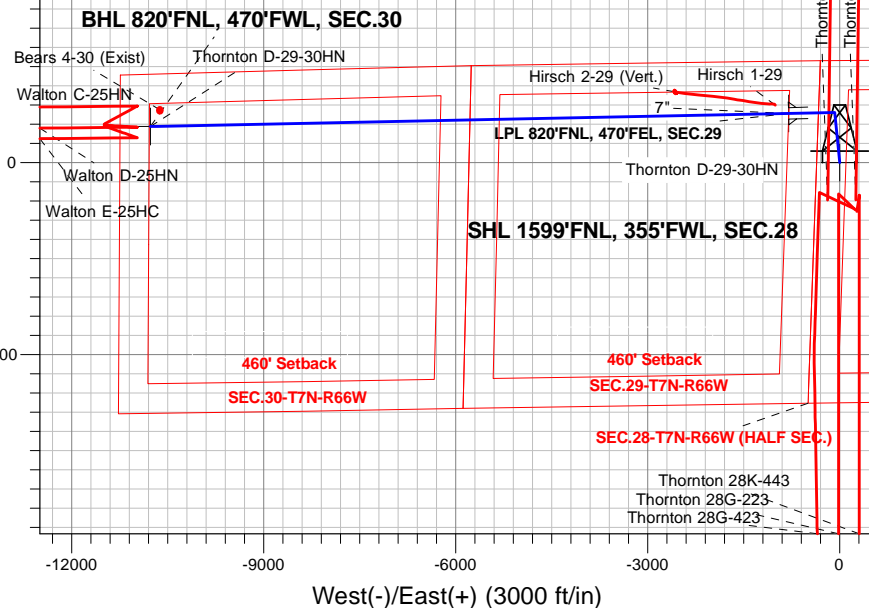
Magnetic Field  
Strength: 52711.3nT  
Dip Angle: 67.00°  
Date: 2/22/2016  
Model: IGRF2010

Thornton 28-H Pad Sec.28-T7N-R66W  
Thornton D-29-30HN  
Plan #1 (1-28-16)  
7:46, February 22 2016

## ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 1.50
5295.2	5359.5	Start Drop -2.00
6630.0	6696.9	Start Build 8.00
7346.0	7825.4	Start DLS 1.00 TFO 115.92
7346.0	7826.0	Start 9974.1 hold at 7826.0 MD
7296.0	17800.2	TD at 17800.2

South(-)/North(+) (3000 ft/in)

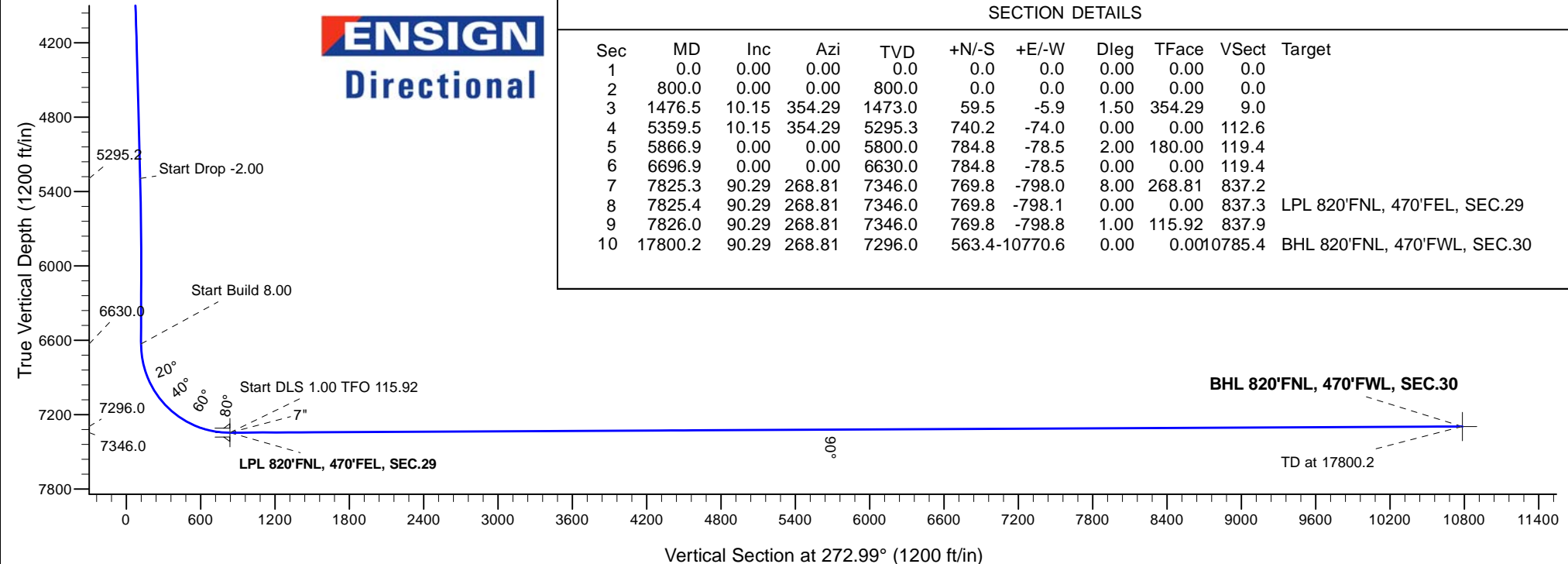


West(-)/East(+) (3000 ft/in)

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1476.5	10.15	354.29	1473.0	59.5	-5.9	1.50	354.29	9.0	
4	5359.5	10.15	354.29	5295.3	740.2	-74.0	0.00	0.00	112.6	
5	5866.9	0.00	0.00	5800.0	784.8	-78.5	2.00	180.00	119.4	
6	6696.9	0.00	0.00	6630.0	784.8	-78.5	0.00	0.00	119.4	
7	7825.3	90.29	268.81	7346.0	769.8	-798.0	8.00	268.81	837.2	
8	7825.4	90.29	268.81	7346.0	769.8	-798.1	0.00	0.00	837.3	LPL 820'FNL, 470'FEL, SEC.29
9	7826.0	90.29	268.81	7346.0	769.8	-798.8	1.00	115.92	837.9	
10	17800.2	90.29	268.81	7296.0	563.4	-10770.6	0.00	0.00	10785.4	BHL 820'FNL, 470'FWL, SEC.30

**ENSIGN**  
Directional



# **ENSIGN**

## **Directional**

### **Bayswater Exploration & Production, LLC**

**SEC.28-T7N-R66W**

**Thornton 28-H Pad Sec.28-T7N-R66W**

**Thornton D-29-30HN**

**Wellbore #1**

**Plan: Plan #1 (1-28-16)**

### **Standard Planning Report**

**22 February, 2016**



**BAYSWATER**  
**EXPLORATION & PRODUCTION, LLC**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton D-29-30HN
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton D-29-30HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (1-28-16)		

<b>Project</b>	SEC.28-T7N-R66W, 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	Thornton 28-H Pad Sec.28-T7N-R66W				
Site Position:		Northing:	1,443,581.10 usft	Latitude:	40.548871
From:	Lat/Long	Easting:	3,196,884.17 usft	Longitude:	-104.791518
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46

Well	Thornton D-29-30HN					
Well Position	+N/-S	-44.8 ft	Northing:	1,443,536.28 usft	Latitude:	40.548748
	+E/-W	-1.4 ft	Easting:	3,196,883.14 usft	Longitude:	-104.791523
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,908.0 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	2/22/2016	8.26	67.00	52,711

<b>Design</b>	Plan #1 (1-28-16)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	272.99

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,476.5	10.15	354.29	1,473.0	59.5	-5.9	1.50	1.50	0.00	354.29	
5,359.5	10.15	354.29	5,295.3	740.2	-74.0	0.00	0.00	0.00	0.00	
5,866.9	0.00	0.00	5,800.0	784.8	-78.5	2.00	-2.00	0.00	180.00	
6,696.9	0.00	0.00	6,630.0	784.8	-78.5	0.00	0.00	0.00	0.00	
7,825.3	90.29	268.81	7,346.0	769.8	-798.0	8.00	8.00	0.00	268.81	
7,825.4	90.29	268.81	7,346.0	769.8	-798.1	0.00	0.00	0.00	0.00	LPL 820'FNL, 470'FEI
7,826.0	90.29	268.81	7,346.0	769.8	-798.8	1.00	-0.44	0.90	115.92	
17,800.2	90.29	268.81	7,296.0	563.4	-10,770.6	0.00	0.00	0.00	0.00	BHL 820'FNL, 470'FW

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton D-29-30HN
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton D-29-30HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (1-28-16)		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>SHL 1599'FNL, 355'FWL, SEC.28</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP - Start Build 1.50</b>									
900.0	1.50	354.29	900.0	1.3	-0.1	0.2	1.50	1.50	0.00
1,000.0	3.00	354.29	999.9	5.2	-0.5	0.8	1.50	1.50	0.00
1,100.0	4.50	354.29	1,099.7	11.7	-1.2	1.8	1.50	1.50	0.00
1,200.0	6.00	354.29	1,199.3	20.8	-2.1	3.2	1.50	1.50	0.00
1,300.0	7.50	354.29	1,298.6	32.5	-3.3	4.9	1.50	1.50	0.00
1,400.0	9.00	354.29	1,397.5	46.8	-4.7	7.1	1.50	1.50	0.00
1,476.5	10.15	354.29	1,473.0	59.5	-5.9	9.0	1.50	1.50	0.00
1,500.0	10.15	354.29	1,496.1	63.6	-6.4	9.7	0.00	0.00	0.00
1,600.0	10.15	354.29	1,594.5	81.1	-8.1	12.3	0.00	0.00	0.00
1,700.0	10.15	354.29	1,693.0	98.6	-9.9	15.0	0.00	0.00	0.00
1,800.0	10.15	354.29	1,791.4	116.2	-11.6	17.7	0.00	0.00	0.00
1,900.0	10.15	354.29	1,889.8	133.7	-13.4	20.3	0.00	0.00	0.00
2,000.0	10.15	354.29	1,988.3	151.2	-15.1	23.0	0.00	0.00	0.00
2,100.0	10.15	354.29	2,086.7	168.8	-16.9	25.7	0.00	0.00	0.00
2,200.0	10.15	354.29	2,185.2	186.3	-18.6	28.3	0.00	0.00	0.00
2,300.0	10.15	354.29	2,283.6	203.8	-20.4	31.0	0.00	0.00	0.00
2,400.0	10.15	354.29	2,382.0	221.4	-22.1	33.7	0.00	0.00	0.00
2,500.0	10.15	354.29	2,480.5	238.9	-23.9	36.3	0.00	0.00	0.00
2,600.0	10.15	354.29	2,578.9	256.4	-25.6	39.0	0.00	0.00	0.00
2,700.0	10.15	354.29	2,677.3	274.0	-27.4	41.7	0.00	0.00	0.00
2,800.0	10.15	354.29	2,775.8	291.5	-29.2	44.3	0.00	0.00	0.00
2,900.0	10.15	354.29	2,874.2	309.0	-30.9	47.0	0.00	0.00	0.00
3,000.0	10.15	354.29	2,972.6	326.5	-32.7	49.7	0.00	0.00	0.00
3,100.0	10.15	354.29	3,071.1	344.1	-34.4	52.3	0.00	0.00	0.00
3,200.0	10.15	354.29	3,169.5	361.6	-36.2	55.0	0.00	0.00	0.00
3,300.0	10.15	354.29	3,267.9	379.1	-37.9	57.7	0.00	0.00	0.00
3,400.0	10.15	354.29	3,366.4	396.7	-39.7	60.3	0.00	0.00	0.00
3,500.0	10.15	354.29	3,464.8	414.2	-41.4	63.0	0.00	0.00	0.00
3,600.0	10.15	354.29	3,563.2	431.7	-43.2	65.7	0.00	0.00	0.00
3,700.0	10.15	354.29	3,661.7	449.3	-44.9	68.3	0.00	0.00	0.00
3,800.0	10.15	354.29	3,760.1	466.8	-46.7	71.0	0.00	0.00	0.00
3,900.0	10.15	354.29	3,858.6	484.3	-48.4	73.7	0.00	0.00	0.00
4,000.0	10.15	354.29	3,957.0	501.9	-50.2	76.3	0.00	0.00	0.00
4,100.0	10.15	354.29	4,055.4	519.4	-52.0	79.0	0.00	0.00	0.00
4,200.0	10.15	354.29	4,153.9	536.9	-53.7	81.7	0.00	0.00	0.00
4,300.0	10.15	354.29	4,252.3	554.5	-55.5	84.3	0.00	0.00	0.00
4,400.0	10.15	354.29	4,350.7	572.0	-57.2	87.0	0.00	0.00	0.00
4,500.0	10.15	354.29	4,449.2	589.5	-59.0	89.7	0.00	0.00	0.00
4,600.0	10.15	354.29	4,547.6	607.0	-60.7	92.3	0.00	0.00	0.00
4,700.0	10.15	354.29	4,646.0	624.6	-62.5	95.0	0.00	0.00	0.00
4,800.0	10.15	354.29	4,744.5	642.1	-64.2	97.7	0.00	0.00	0.00
4,900.0	10.15	354.29	4,842.9	659.6	-66.0	100.4	0.00	0.00	0.00

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<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton D-29-30HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (1-28-16)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	10.15	354.29	4,941.3	677.2	-67.7	103.0	0.00	0.00	0.00
5,100.0	10.15	354.29	5,039.8	694.7	-69.5	105.7	0.00	0.00	0.00
5,200.0	10.15	354.29	5,138.2	712.2	-71.2	108.4	0.00	0.00	0.00
5,300.0	10.15	354.29	5,236.7	729.8	-73.0	111.0	0.00	0.00	0.00
5,359.5	10.15	354.29	5,295.2	740.2	-74.0	112.6	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,400.0	9.34	354.29	5,335.1	747.0	-74.7	113.6	2.00	-2.00	0.00
5,500.0	7.34	354.29	5,434.1	761.5	-76.2	115.8	2.00	-2.00	0.00
5,600.0	5.34	354.29	5,533.5	772.4	-77.3	117.5	2.00	-2.00	0.00
5,700.0	3.34	354.29	5,633.2	780.0	-78.0	118.7	2.00	-2.00	0.00
5,800.0	1.34	354.29	5,733.1	784.0	-78.4	119.3	2.00	-2.00	0.00
5,866.9	0.00	0.00	5,800.0	784.8	-78.5	119.4	2.00	-2.00	0.00
5,900.0	0.00	0.00	5,833.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,933.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,100.0	0.00	0.00	6,033.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,133.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,233.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,333.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,433.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,533.1	784.8	-78.5	119.4	0.00	0.00	0.00
6,696.9	0.00	0.00	6,630.0	784.8	-78.5	119.4	0.00	0.00	0.00
<b>Start Build 8.00</b>									
6,700.0	0.25	268.81	6,633.1	784.8	-78.5	119.4	8.06	8.06	0.00
6,800.0	8.25	268.81	6,732.7	784.6	-85.9	126.8	8.00	8.00	0.00
6,900.0	16.25	268.81	6,830.4	784.2	-107.1	147.9	8.00	8.00	0.00
7,000.0	24.25	268.81	6,924.1	783.5	-141.7	182.4	8.00	8.00	0.00
7,100.0	32.26	268.81	7,012.1	782.5	-189.0	229.6	8.00	8.00	0.00
7,200.0	40.26	268.81	7,092.7	781.3	-248.1	288.5	8.00	8.00	0.00
7,300.0	48.26	268.81	7,164.2	779.8	-317.8	358.1	8.00	8.00	0.00
7,400.0	56.26	268.81	7,225.4	778.2	-396.8	436.9	8.00	8.00	0.00
7,500.0	64.26	268.81	7,275.0	776.4	-483.5	523.4	8.00	8.00	0.00
7,600.0	72.26	268.81	7,312.0	774.4	-576.3	616.0	8.00	8.00	0.00
7,700.0	80.27	268.81	7,335.7	772.4	-673.4	712.8	8.00	8.00	0.00
7,800.0	88.27	268.81	7,345.7	770.4	-772.8	811.9	8.00	8.00	0.00
7,825.3	90.29	268.81	7,346.0	769.8	-798.0	837.2	8.00	8.00	0.00
7,825.4	90.29	268.81	7,346.0	769.8	-798.1	837.3	0.00	0.00	0.00
<b>Start DLS 1.00 TFO 115.92 - 7" - LPL 820'FNL, 470'FEL, SEC.29</b>									
7,826.0	90.29	268.81	7,346.0	769.8	-798.7	837.9	1.00	-0.44	0.90
<b>Start 9974.1 hold at 7826.0 MD</b>									
7,900.0	90.29	268.81	7,345.6	768.3	-872.7	911.7	0.00	0.00	0.00
8,000.0	90.29	268.81	7,345.1	766.2	-972.7	1,011.4	0.00	0.00	0.00
8,100.0	90.29	268.81	7,344.6	764.1	-1,072.7	1,111.1	0.00	0.00	0.00
8,200.0	90.29	268.81	7,344.1	762.1	-1,172.7	1,210.9	0.00	0.00	0.00
8,300.0	90.29	268.81	7,343.6	760.0	-1,272.6	1,310.6	0.00	0.00	0.00
8,400.0	90.29	268.81	7,343.1	757.9	-1,372.6	1,410.3	0.00	0.00	0.00
8,500.0	90.29	268.81	7,342.6	755.9	-1,472.6	1,510.1	0.00	0.00	0.00
8,600.0	90.29	268.81	7,342.1	753.8	-1,572.6	1,609.8	0.00	0.00	0.00
8,700.0	90.29	268.81	7,341.6	751.7	-1,672.5	1,709.5	0.00	0.00	0.00
8,800.0	90.29	268.81	7,341.1	749.7	-1,772.5	1,809.3	0.00	0.00	0.00
8,900.0	90.29	268.81	7,340.6	747.6	-1,872.5	1,909.0	0.00	0.00	0.00
9,000.0	90.29	268.81	7,340.1	745.5	-1,972.5	2,008.7	0.00	0.00	0.00
9,100.0	90.29	268.81	7,339.6	743.5	-2,072.5	2,108.5	0.00	0.00	0.00
9,200.0	90.29	268.81	7,339.1	741.4	-2,172.4	2,208.2	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton D-29-30HN
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton D-29-30HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (1-28-16)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,300.0	90.29	268.81	7,338.6	739.3	-2,272.4	2,307.9	0.00	0.00	0.00
9,400.0	90.29	268.81	7,338.1	737.2	-2,372.4	2,407.7	0.00	0.00	0.00
9,500.0	90.29	268.81	7,337.6	735.2	-2,472.4	2,507.4	0.00	0.00	0.00
9,600.0	90.29	268.81	7,337.1	733.1	-2,572.3	2,607.1	0.00	0.00	0.00
9,700.0	90.29	268.81	7,336.6	731.0	-2,672.3	2,706.9	0.00	0.00	0.00
9,800.0	90.29	268.81	7,336.1	729.0	-2,772.3	2,806.6	0.00	0.00	0.00
9,900.0	90.29	268.81	7,335.6	726.9	-2,872.3	2,906.3	0.00	0.00	0.00
10,000.0	90.29	268.81	7,335.1	724.8	-2,972.3	3,006.1	0.00	0.00	0.00
10,100.0	90.29	268.81	7,334.6	722.8	-3,072.2	3,105.8	0.00	0.00	0.00
10,200.0	90.29	268.81	7,334.1	720.7	-3,172.2	3,205.5	0.00	0.00	0.00
10,300.0	90.29	268.81	7,333.6	718.6	-3,272.2	3,305.3	0.00	0.00	0.00
10,400.0	90.29	268.81	7,333.1	716.6	-3,372.2	3,405.0	0.00	0.00	0.00
10,500.0	90.29	268.81	7,332.6	714.5	-3,472.1	3,504.7	0.00	0.00	0.00
10,600.0	90.29	268.81	7,332.1	712.4	-3,572.1	3,604.5	0.00	0.00	0.00
10,700.0	90.29	268.81	7,331.6	710.3	-3,672.1	3,704.2	0.00	0.00	0.00
10,800.0	90.29	268.81	7,331.1	708.3	-3,772.1	3,803.9	0.00	0.00	0.00
10,900.0	90.29	268.81	7,330.6	706.2	-3,872.0	3,903.7	0.00	0.00	0.00
11,000.0	90.29	268.81	7,330.1	704.1	-3,972.0	4,003.4	0.00	0.00	0.00
11,100.0	90.29	268.81	7,329.6	702.1	-4,072.0	4,103.1	0.00	0.00	0.00
11,200.0	90.29	268.81	7,329.1	700.0	-4,172.0	4,202.9	0.00	0.00	0.00
11,300.0	90.29	268.81	7,328.6	697.9	-4,272.0	4,302.6	0.00	0.00	0.00
11,400.0	90.29	268.81	7,328.1	695.9	-4,371.9	4,402.3	0.00	0.00	0.00
11,500.0	90.29	268.81	7,327.6	693.8	-4,471.9	4,502.0	0.00	0.00	0.00
11,600.0	90.29	268.81	7,327.1	691.7	-4,571.9	4,601.8	0.00	0.00	0.00
11,700.0	90.29	268.81	7,326.6	689.7	-4,671.9	4,701.5	0.00	0.00	0.00
11,800.0	90.29	268.81	7,326.1	687.6	-4,771.8	4,801.2	0.00	0.00	0.00
11,900.0	90.29	268.81	7,325.6	685.5	-4,871.8	4,901.0	0.00	0.00	0.00
12,000.0	90.29	268.81	7,325.1	683.4	-4,971.8	5,000.7	0.00	0.00	0.00
12,100.0	90.29	268.81	7,324.6	681.4	-5,071.8	5,100.4	0.00	0.00	0.00
12,200.0	90.29	268.81	7,324.1	679.3	-5,171.8	5,200.2	0.00	0.00	0.00
12,300.0	90.29	268.81	7,323.6	677.2	-5,271.7	5,299.9	0.00	0.00	0.00
12,400.0	90.29	268.81	7,323.1	675.2	-5,371.7	5,399.6	0.00	0.00	0.00
12,500.0	90.29	268.81	7,322.6	673.1	-5,471.7	5,499.4	0.00	0.00	0.00
12,600.0	90.29	268.81	7,322.1	671.0	-5,571.7	5,599.1	0.00	0.00	0.00
12,700.0	90.29	268.81	7,321.6	669.0	-5,671.6	5,698.8	0.00	0.00	0.00
12,800.0	90.29	268.81	7,321.1	666.9	-5,771.6	5,798.6	0.00	0.00	0.00
12,900.0	90.29	268.81	7,320.6	664.8	-5,871.6	5,898.3	0.00	0.00	0.00
13,000.0	90.29	268.81	7,320.1	662.8	-5,971.6	5,998.0	0.00	0.00	0.00
13,100.0	90.29	268.81	7,319.6	660.7	-6,071.5	6,097.8	0.00	0.00	0.00
13,200.0	90.29	268.81	7,319.1	658.6	-6,171.5	6,197.5	0.00	0.00	0.00
13,300.0	90.29	268.81	7,318.6	656.5	-6,271.5	6,297.2	0.00	0.00	0.00
13,400.0	90.29	268.81	7,318.1	654.5	-6,371.5	6,397.0	0.00	0.00	0.00
13,500.0	90.29	268.81	7,317.6	652.4	-6,471.5	6,496.7	0.00	0.00	0.00
13,600.0	90.29	268.81	7,317.1	650.3	-6,571.4	6,596.4	0.00	0.00	0.00
13,700.0	90.29	268.81	7,316.6	648.3	-6,671.4	6,696.2	0.00	0.00	0.00
13,800.0	90.29	268.81	7,316.1	646.2	-6,771.4	6,795.9	0.00	0.00	0.00
13,900.0	90.29	268.81	7,315.5	644.1	-6,871.4	6,895.6	0.00	0.00	0.00
14,000.0	90.29	268.81	7,315.0	642.1	-6,971.3	6,995.4	0.00	0.00	0.00
14,100.0	90.29	268.81	7,314.5	640.0	-7,071.3	7,095.1	0.00	0.00	0.00
14,200.0	90.29	268.81	7,314.0	637.9	-7,171.3	7,194.8	0.00	0.00	0.00
14,300.0	90.29	268.81	7,313.5	635.8	-7,271.3	7,294.6	0.00	0.00	0.00
14,400.0	90.29	268.81	7,313.0	633.8	-7,371.3	7,394.3	0.00	0.00	0.00
14,500.0	90.29	268.81	7,312.5	631.7	-7,471.2	7,494.0	0.00	0.00	0.00
14,600.0	90.29	268.81	7,312.0	629.6	-7,571.2	7,593.8	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton D-29-30HN
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton D-29-30HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (1-28-16)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,700.0	90.29	268.81	7,311.5	627.6	-7,671.2	7,693.5	0.00	0.00	0.00	
14,800.0	90.29	268.81	7,311.0	625.5	-7,771.2	7,793.2	0.00	0.00	0.00	
14,900.0	90.29	268.81	7,310.5	623.4	-7,871.1	7,893.0	0.00	0.00	0.00	
15,000.0	90.29	268.81	7,310.0	621.4	-7,971.1	7,992.7	0.00	0.00	0.00	
15,100.0	90.29	268.81	7,309.5	619.3	-8,071.1	8,092.4	0.00	0.00	0.00	
15,200.0	90.29	268.81	7,309.0	617.2	-8,171.1	8,192.2	0.00	0.00	0.00	
15,300.0	90.29	268.81	7,308.5	615.2	-8,271.0	8,291.9	0.00	0.00	0.00	
15,400.0	90.29	268.81	7,308.0	613.1	-8,371.0	8,391.6	0.00	0.00	0.00	
15,500.0	90.29	268.81	7,307.5	611.0	-8,471.0	8,491.4	0.00	0.00	0.00	
15,600.0	90.29	268.81	7,307.0	608.9	-8,571.0	8,591.1	0.00	0.00	0.00	
15,700.0	90.29	268.81	7,306.5	606.9	-8,671.0	8,690.8	0.00	0.00	0.00	
15,800.0	90.29	268.81	7,306.0	604.8	-8,770.9	8,790.6	0.00	0.00	0.00	
15,900.0	90.29	268.81	7,305.5	602.7	-8,870.9	8,890.3	0.00	0.00	0.00	
16,000.0	90.29	268.81	7,305.0	600.7	-8,970.9	8,990.0	0.00	0.00	0.00	
16,100.0	90.29	268.81	7,304.5	598.6	-9,070.9	9,089.8	0.00	0.00	0.00	
16,200.0	90.29	268.81	7,304.0	596.5	-9,170.8	9,189.5	0.00	0.00	0.00	
16,300.0	90.29	268.81	7,303.5	594.5	-9,270.8	9,289.2	0.00	0.00	0.00	
16,400.0	90.29	268.81	7,303.0	592.4	-9,370.8	9,389.0	0.00	0.00	0.00	
16,500.0	90.29	268.81	7,302.5	590.3	-9,470.8	9,488.7	0.00	0.00	0.00	
16,600.0	90.29	268.81	7,302.0	588.3	-9,570.8	9,588.4	0.00	0.00	0.00	
16,700.0	90.29	268.81	7,301.5	586.2	-9,670.7	9,688.1	0.00	0.00	0.00	
16,800.0	90.29	268.81	7,301.0	584.1	-9,770.7	9,787.9	0.00	0.00	0.00	
16,900.0	90.29	268.81	7,300.5	582.0	-9,870.7	9,887.6	0.00	0.00	0.00	
17,000.0	90.29	268.81	7,300.0	580.0	-9,970.7	9,987.3	0.00	0.00	0.00	
17,100.0	90.29	268.81	7,299.5	577.9	-10,070.6	10,087.1	0.00	0.00	0.00	
17,200.0	90.29	268.81	7,299.0	575.8	-10,170.6	10,186.8	0.00	0.00	0.00	
17,300.0	90.29	268.81	7,298.5	573.8	-10,270.6	10,286.5	0.00	0.00	0.00	
17,400.0	90.29	268.81	7,298.0	571.7	-10,370.6	10,386.3	0.00	0.00	0.00	
17,500.0	90.29	268.81	7,297.5	569.6	-10,470.6	10,486.0	0.00	0.00	0.00	
17,600.0	90.29	268.81	7,297.0	567.6	-10,570.5	10,585.7	0.00	0.00	0.00	
17,700.0	90.29	268.81	7,296.5	565.5	-10,670.5	10,685.5	0.00	0.00	0.00	
17,800.0	90.29	268.81	7,296.0	563.4	-10,770.5	10,785.2	0.00	0.00	0.00	
17,800.2	90.29	268.81	7,296.0	563.4	-10,770.6	10,785.4	0.00	0.00	0.00	
TD at 17800.2 - BHL 820°FNL, 470°FWL, SEC.30										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude		Longitude
SHL 1599°FNL, 355°FWL - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,443,536.28	3,196,883.14	40.548748		-104.791523
BHL 820°FNL, 470°FWL, - plan hits target center - Point	0.00	0.00	7,296.0	563.4	-10,770.6	1,444,013.61	3,186,108.68	40.550288		-104.830280
LPL 820°FNL, 470°FEL, 1 - plan hits target center - Point	0.00	0.00	7,346.0	769.8	-798.1	1,444,299.68	3,196,078.91	40.550861		-104.794395

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton D-29-30HN
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4931.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton D-29-30HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (1-28-16)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,825.4	7,346.0	7"	7	8-3/4	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
800.0	800.0	0.0	0.0	KOP - Start Build 1.50	
5,359.5	5,295.2	740.2	-74.0	Start Drop -2.00	
6,696.9	6,630.0	784.8	-78.5	Start Build 8.00	
7,825.4	7,346.0	769.8	-798.1	Start DLS 1.00 TFO 115.92	
7,826.0	7,346.0	769.8	-798.7	Start 9974.1 hold at 7826.0 MD	
17,800.2	7,296.0	563.4	-10,770.6	TD at 17800.2	