

# Bayswater Exploration & Production, LLC

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

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

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

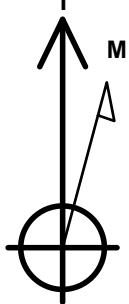
Ground Elevation: 4908.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1443551.21	3196883.57	40.548789	-104.791521	

RKB - 23' WELL @ 4931.0ft (RKB - 23')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1584'FNL, 355'FWL, SEC.28	1.0	0.0	0.0	Point
BHL 545'FNL, 470'FWL, SEC.30	7211.0	823.5	-10769.7	Point
LPL 545'FNL, 470'FEL, SEC.29	7271.0	1030.0	-788.9	Point



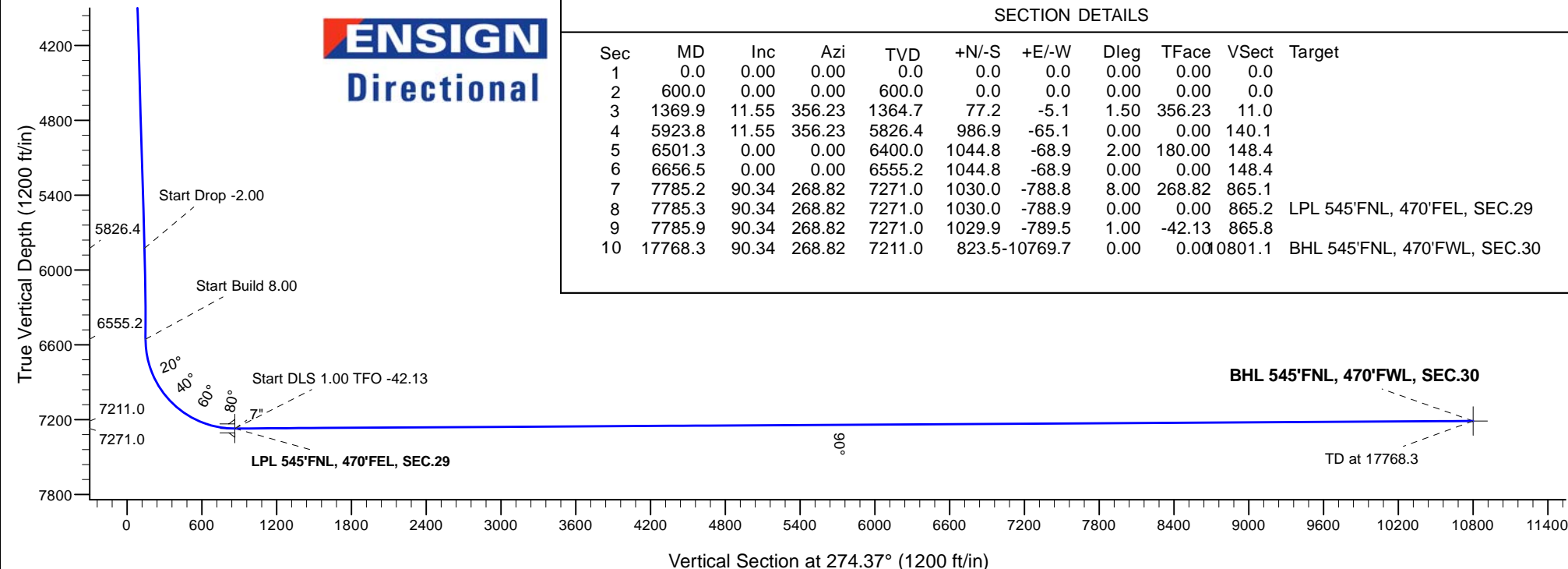
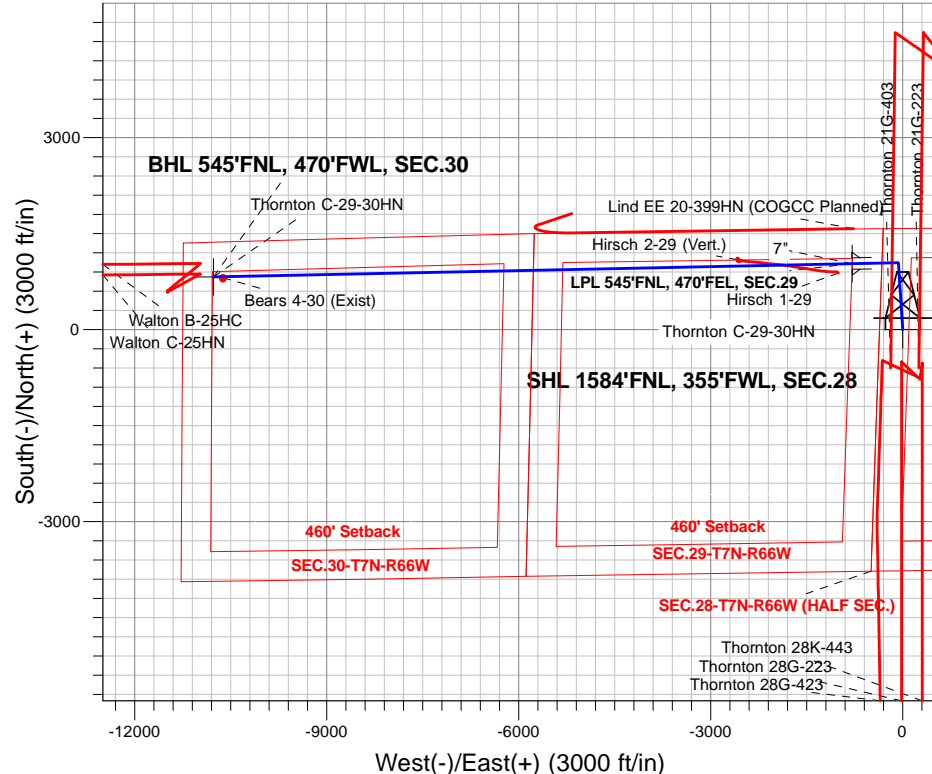
Azimuths to True North  
Magnetic North:  $8.26^\circ$

Magnetic Field  
Strength: 52711.4snT  
Dip Angle: 67.00°  
Date: 2/22/2016  
Model: IGRF2010

Thornton 28-H Pad Sec.28-T7N-R66W  
Thornton C-29-30HN  
Plan #1 (1-28-16)  
7:34, February 22 2016

## ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP - Start Build 1.50
5826.4	5923.8	Start Drop -2.00
6555.2	6656.5	Start Build 8.00
7271.0	7785.3	Start DLS 1.00 TFO -42.13
7271.0	7785.9	Start 9982.5 hold at 7785.9 MD
7211.0	77768.3	TD at 77768.3



# **ENSIGN**

## **Directional**

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

**SEC.28-T7N-R66W**

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

**Thornton C-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 C-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 C-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 C-29-30HN					
Well Position	+N/-S	-29.9 ft	Northing:	1,443,551.22 usft	Latitude:	40.548789
	+E/-W	-0.8 ft	Easting:	3,196,883.57 usft	Longitude:	-104.791521
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	274.37

<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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,369.9	11.55	356.23	1,364.7	77.2	-5.1	1.50	1.50	0.00	356.23	
5,923.8	11.55	356.23	5,826.4	986.9	-65.1	0.00	0.00	0.00	0.00	
6,501.3	0.00	0.00	6,400.0	1,044.8	-68.9	2.00	-2.00	0.00	180.00	
6,656.5	0.00	0.00	6,555.2	1,044.8	-68.9	0.00	0.00	0.00	0.00	
7,785.2	90.34	268.82	7,271.0	1,030.0	-788.8	8.00	8.00	0.00	268.82	
7,785.3	90.34	268.82	7,271.0	1,030.0	-788.9	0.00	0.00	0.00	0.00	LPL 545'FNL, 470'FEI
7,785.9	90.34	268.82	7,271.0	1,029.9	-789.5	1.00	0.74	-0.67	-42.13	
17,768.3	90.34	268.82	7,211.0	823.5	-10,769.7	0.00	0.00	0.00	0.00	BHL 545'FNL, 470'FW

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton C-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 C-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 1584'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
<b>KOP - Start Build 1.50</b>									
700.0	1.50	356.23	700.0	1.3	-0.1	0.2	1.50	1.50	0.00
800.0	3.00	356.23	799.9	5.2	-0.3	0.7	1.50	1.50	0.00
900.0	4.50	356.23	899.7	11.7	-0.8	1.7	1.50	1.50	0.00
1,000.0	6.00	356.23	999.3	20.9	-1.4	3.0	1.50	1.50	0.00
1,100.0	7.50	356.23	1,098.6	32.6	-2.2	4.6	1.50	1.50	0.00
1,200.0	9.00	356.23	1,197.5	46.9	-3.1	6.7	1.50	1.50	0.00
1,300.0	10.50	356.23	1,296.1	63.8	-4.2	9.1	1.50	1.50	0.00
1,369.9	11.55	356.23	1,364.7	77.2	-5.1	11.0	1.50	1.50	0.00
1,400.0	11.55	356.23	1,394.2	83.2	-5.5	11.8	0.00	0.00	0.00
1,500.0	11.55	356.23	1,492.2	103.2	-6.8	14.6	0.00	0.00	0.00
1,600.0	11.55	356.23	1,590.1	123.1	-8.1	17.5	0.00	0.00	0.00
1,700.0	11.55	356.23	1,688.1	143.1	-9.4	20.3	0.00	0.00	0.00
1,800.0	11.55	356.23	1,786.1	163.1	-10.8	23.2	0.00	0.00	0.00
1,900.0	11.55	356.23	1,884.1	183.1	-12.1	26.0	0.00	0.00	0.00
2,000.0	11.55	356.23	1,982.0	203.0	-13.4	28.8	0.00	0.00	0.00
2,100.0	11.55	356.23	2,080.0	223.0	-14.7	31.7	0.00	0.00	0.00
2,200.0	11.55	356.23	2,178.0	243.0	-16.0	34.5	0.00	0.00	0.00
2,300.0	11.55	356.23	2,276.0	263.0	-17.3	37.3	0.00	0.00	0.00
2,400.0	11.55	356.23	2,373.9	282.9	-18.7	40.2	0.00	0.00	0.00
2,500.0	11.55	356.23	2,471.9	302.9	-20.0	43.0	0.00	0.00	0.00
2,600.0	11.55	356.23	2,569.9	322.9	-21.3	45.9	0.00	0.00	0.00
2,700.0	11.55	356.23	2,667.9	342.9	-22.6	48.7	0.00	0.00	0.00
2,800.0	11.55	356.23	2,765.8	362.9	-23.9	51.5	0.00	0.00	0.00
2,900.0	11.55	356.23	2,863.8	382.8	-25.2	54.4	0.00	0.00	0.00
3,000.0	11.55	356.23	2,961.8	402.8	-26.6	57.2	0.00	0.00	0.00
3,100.0	11.55	356.23	3,059.8	422.8	-27.9	60.0	0.00	0.00	0.00
3,200.0	11.55	356.23	3,157.7	442.8	-29.2	62.9	0.00	0.00	0.00
3,300.0	11.55	356.23	3,255.7	462.7	-30.5	65.7	0.00	0.00	0.00
3,400.0	11.55	356.23	3,353.7	482.7	-31.8	68.5	0.00	0.00	0.00
3,500.0	11.55	356.23	3,451.7	502.7	-33.2	71.4	0.00	0.00	0.00
3,600.0	11.55	356.23	3,549.6	522.7	-34.5	74.2	0.00	0.00	0.00
3,700.0	11.55	356.23	3,647.6	542.7	-35.8	77.1	0.00	0.00	0.00
3,800.0	11.55	356.23	3,745.6	562.6	-37.1	79.9	0.00	0.00	0.00
3,900.0	11.55	356.23	3,843.6	582.6	-38.4	82.7	0.00	0.00	0.00
4,000.0	11.55	356.23	3,941.5	602.6	-39.7	85.6	0.00	0.00	0.00
4,100.0	11.55	356.23	4,039.5	622.6	-41.1	88.4	0.00	0.00	0.00
4,200.0	11.55	356.23	4,137.5	642.5	-42.4	91.2	0.00	0.00	0.00
4,300.0	11.55	356.23	4,235.5	662.5	-43.7	94.1	0.00	0.00	0.00
4,400.0	11.55	356.23	4,333.4	682.5	-45.0	96.9	0.00	0.00	0.00
4,500.0	11.55	356.23	4,431.4	702.5	-46.3	99.8	0.00	0.00	0.00
4,600.0	11.55	356.23	4,529.4	722.5	-47.6	102.6	0.00	0.00	0.00
4,700.0	11.55	356.23	4,627.4	742.4	-49.0	105.4	0.00	0.00	0.00
4,800.0	11.55	356.23	4,725.3	762.4	-50.3	108.3	0.00	0.00	0.00
4,900.0	11.55	356.23	4,823.3	782.4	-51.6	111.1	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 C-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	11.55	356.23	4,921.3	802.4	-52.9	113.9	0.00	0.00	0.00
5,100.0	11.55	356.23	5,019.3	822.3	-54.2	116.8	0.00	0.00	0.00
5,200.0	11.55	356.23	5,117.3	842.3	-55.5	119.6	0.00	0.00	0.00
5,300.0	11.55	356.23	5,215.2	862.3	-56.9	122.4	0.00	0.00	0.00
5,400.0	11.55	356.23	5,313.2	882.3	-58.2	125.3	0.00	0.00	0.00
5,500.0	11.55	356.23	5,411.2	902.2	-59.5	128.1	0.00	0.00	0.00
5,600.0	11.55	356.23	5,509.2	922.2	-60.8	131.0	0.00	0.00	0.00
5,700.0	11.55	356.23	5,607.1	942.2	-62.1	133.8	0.00	0.00	0.00
5,800.0	11.55	356.23	5,705.1	962.2	-63.5	136.6	0.00	0.00	0.00
5,900.0	11.55	356.23	5,803.1	982.2	-64.8	139.5	0.00	0.00	0.00
5,923.8	11.55	356.23	5,826.4	986.9	-65.1	140.1	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,000.0	10.03	356.23	5,901.2	1,001.1	-66.0	142.2	2.00	-2.00	0.00
6,100.0	8.03	356.23	6,000.0	1,016.8	-67.1	144.4	2.00	-2.00	0.00
6,200.0	6.03	356.23	6,099.2	1,029.0	-67.9	146.1	2.00	-2.00	0.00
6,300.0	4.03	356.23	6,198.9	1,037.7	-68.4	147.4	2.00	-2.00	0.00
6,400.0	2.03	356.23	6,298.7	1,043.0	-68.8	148.1	2.00	-2.00	0.00
6,500.0	0.03	356.23	6,398.7	1,044.8	-68.9	148.4	2.00	-2.00	0.00
6,501.3	0.00	0.00	6,400.0	1,044.8	-68.9	148.4	2.00	-2.00	0.00
6,600.0	0.00	0.00	6,498.7	1,044.8	-68.9	148.4	0.00	0.00	0.00
6,656.5	0.00	0.00	6,555.2	1,044.8	-68.9	148.4	0.00	0.00	0.00
<b>Start Build 8.00</b>									
6,700.0	3.48	268.82	6,598.7	1,044.8	-70.2	149.7	8.01	8.01	0.00
6,800.0	11.49	268.82	6,697.7	1,044.5	-83.2	162.6	8.00	8.00	0.00
6,900.0	19.49	268.82	6,794.0	1,044.0	-109.9	189.2	8.00	8.00	0.00
7,000.0	27.50	268.82	6,885.7	1,043.1	-149.7	228.8	8.00	8.00	0.00
7,100.0	35.50	268.82	6,970.9	1,042.1	-201.9	280.8	8.00	8.00	0.00
7,200.0	43.50	268.82	7,048.0	1,040.7	-265.5	344.1	8.00	8.00	0.00
7,300.0	51.51	268.82	7,115.4	1,039.2	-339.1	417.4	8.00	8.00	0.00
7,400.0	59.51	268.82	7,172.0	1,037.5	-421.5	499.4	8.00	8.00	0.00
7,500.0	67.52	268.82	7,216.6	1,035.7	-510.9	588.4	8.00	8.00	0.00
7,600.0	75.52	268.82	7,248.3	1,033.7	-605.6	682.7	8.00	8.00	0.00
7,700.0	83.52	268.82	7,266.4	1,031.7	-703.9	780.5	8.00	8.00	0.00
7,785.2	90.34	268.82	7,271.0	1,030.0	-788.8	865.1	8.00	8.00	0.00
7,785.3	90.34	268.82	7,271.0	1,030.0	-788.9	865.2	0.00	0.00	0.00
<b>Start DLS 1.00 TFO -42.13 - 7" - LPL 545'FNL, 470'FEL, SEC.29</b>									
7,785.9	90.34	268.82	7,271.0	1,029.9	-789.6	865.8	0.94	0.70	-0.63
<b>Start 9982.5 hold at 7785.9 MD</b>									
7,800.0	90.34	268.82	7,270.9	1,029.7	-803.7	879.8	0.00	0.00	0.00
7,900.0	90.34	268.82	7,270.3	1,027.6	-903.6	979.4	0.00	0.00	0.00
8,000.0	90.34	268.82	7,269.7	1,025.5	-1,003.6	1,078.9	0.00	0.00	0.00
8,100.0	90.34	268.82	7,269.1	1,023.5	-1,103.6	1,178.4	0.00	0.00	0.00
8,200.0	90.34	268.82	7,268.5	1,021.4	-1,203.6	1,277.9	0.00	0.00	0.00
8,300.0	90.34	268.82	7,267.9	1,019.3	-1,303.6	1,377.5	0.00	0.00	0.00
8,400.0	90.34	268.82	7,267.3	1,017.2	-1,403.5	1,477.0	0.00	0.00	0.00
8,500.0	90.34	268.82	7,266.7	1,015.2	-1,503.5	1,576.5	0.00	0.00	0.00
8,600.0	90.34	268.82	7,266.1	1,013.1	-1,603.5	1,676.1	0.00	0.00	0.00
8,700.0	90.34	268.82	7,265.5	1,011.0	-1,703.5	1,775.6	0.00	0.00	0.00
8,800.0	90.34	268.82	7,264.9	1,009.0	-1,803.4	1,875.1	0.00	0.00	0.00
8,900.0	90.34	268.82	7,264.3	1,006.9	-1,903.4	1,974.6	0.00	0.00	0.00
9,000.0	90.34	268.82	7,263.7	1,004.8	-2,003.4	2,074.2	0.00	0.00	0.00
9,100.0	90.34	268.82	7,263.1	1,002.8	-2,103.4	2,173.7	0.00	0.00	0.00
9,200.0	90.34	268.82	7,262.5	1,000.7	-2,203.3	2,273.2	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton C-29-30HN
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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 C-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	90.34	268.82	7,261.9	998.6	-2,303.3	2,372.8	0.00	0.00	0.00	
9,400.0	90.34	268.82	7,261.3	996.6	-2,403.3	2,472.3	0.00	0.00	0.00	
9,500.0	90.34	268.82	7,260.7	994.5	-2,503.3	2,571.8	0.00	0.00	0.00	
9,600.0	90.34	268.82	7,260.1	992.4	-2,603.3	2,671.3	0.00	0.00	0.00	
9,700.0	90.34	268.82	7,259.5	990.4	-2,703.2	2,770.9	0.00	0.00	0.00	
9,800.0	90.34	268.82	7,258.9	988.3	-2,803.2	2,870.4	0.00	0.00	0.00	
9,900.0	90.34	268.82	7,258.3	986.2	-2,903.2	2,969.9	0.00	0.00	0.00	
10,000.0	90.34	268.82	7,257.7	984.2	-3,003.2	3,069.5	0.00	0.00	0.00	
10,100.0	90.34	268.82	7,257.1	982.1	-3,103.1	3,169.0	0.00	0.00	0.00	
10,200.0	90.34	268.82	7,256.5	980.0	-3,203.1	3,268.5	0.00	0.00	0.00	
10,300.0	90.34	268.82	7,255.9	978.0	-3,303.1	3,368.0	0.00	0.00	0.00	
10,400.0	90.34	268.82	7,255.3	975.9	-3,403.1	3,467.6	0.00	0.00	0.00	
10,500.0	90.34	268.82	7,254.7	973.8	-3,503.0	3,567.1	0.00	0.00	0.00	
10,600.0	90.34	268.82	7,254.1	971.8	-3,603.0	3,666.6	0.00	0.00	0.00	
10,700.0	90.34	268.82	7,253.5	969.7	-3,703.0	3,766.2	0.00	0.00	0.00	
10,800.0	90.34	268.82	7,252.9	967.6	-3,803.0	3,865.7	0.00	0.00	0.00	
10,900.0	90.34	268.82	7,252.3	965.6	-3,903.0	3,965.2	0.00	0.00	0.00	
11,000.0	90.34	268.82	7,251.7	963.5	-4,002.9	4,064.7	0.00	0.00	0.00	
11,100.0	90.34	268.82	7,251.1	961.4	-4,102.9	4,164.3	0.00	0.00	0.00	
11,200.0	90.34	268.82	7,250.5	959.4	-4,202.9	4,263.8	0.00	0.00	0.00	
11,300.0	90.34	268.82	7,249.9	957.3	-4,302.9	4,363.3	0.00	0.00	0.00	
11,400.0	90.34	268.82	7,249.3	955.2	-4,402.8	4,462.9	0.00	0.00	0.00	
11,500.0	90.34	268.82	7,248.7	953.2	-4,502.8	4,562.4	0.00	0.00	0.00	
11,600.0	90.34	268.82	7,248.1	951.1	-4,602.8	4,661.9	0.00	0.00	0.00	
11,700.0	90.34	268.82	7,247.5	949.0	-4,702.8	4,761.4	0.00	0.00	0.00	
11,800.0	90.34	268.82	7,246.9	946.9	-4,802.7	4,861.0	0.00	0.00	0.00	
11,900.0	90.34	268.82	7,246.3	944.9	-4,902.7	4,960.5	0.00	0.00	0.00	
12,000.0	90.34	268.82	7,245.7	942.8	-5,002.7	5,060.0	0.00	0.00	0.00	
12,100.0	90.34	268.82	7,245.1	940.7	-5,102.7	5,159.5	0.00	0.00	0.00	
12,200.0	90.34	268.82	7,244.5	938.7	-5,202.6	5,259.1	0.00	0.00	0.00	
12,300.0	90.34	268.82	7,243.9	936.6	-5,302.6	5,358.6	0.00	0.00	0.00	
12,400.0	90.34	268.82	7,243.3	934.5	-5,402.6	5,458.1	0.00	0.00	0.00	
12,500.0	90.34	268.82	7,242.7	932.5	-5,502.6	5,557.7	0.00	0.00	0.00	
12,600.0	90.34	268.82	7,242.1	930.4	-5,602.6	5,657.2	0.00	0.00	0.00	
12,700.0	90.34	268.82	7,241.5	928.3	-5,702.5	5,756.7	0.00	0.00	0.00	
12,800.0	90.34	268.82	7,240.9	926.3	-5,802.5	5,856.2	0.00	0.00	0.00	
12,900.0	90.34	268.82	7,240.3	924.2	-5,902.5	5,955.8	0.00	0.00	0.00	
13,000.0	90.34	268.82	7,239.7	922.1	-6,002.5	6,055.3	0.00	0.00	0.00	
13,100.0	90.34	268.82	7,239.1	920.1	-6,102.4	6,154.8	0.00	0.00	0.00	
13,200.0	90.34	268.82	7,238.5	918.0	-6,202.4	6,254.4	0.00	0.00	0.00	
13,300.0	90.34	268.82	7,237.9	915.9	-6,302.4	6,353.9	0.00	0.00	0.00	
13,400.0	90.34	268.82	7,237.3	913.9	-6,402.4	6,453.4	0.00	0.00	0.00	
13,500.0	90.34	268.82	7,236.7	911.8	-6,502.3	6,552.9	0.00	0.00	0.00	
13,600.0	90.34	268.82	7,236.1	909.7	-6,602.3	6,652.5	0.00	0.00	0.00	
13,700.0	90.34	268.82	7,235.5	907.7	-6,702.3	6,752.0	0.00	0.00	0.00	
13,800.0	90.34	268.82	7,234.9	905.6	-6,802.3	6,851.5	0.00	0.00	0.00	
13,900.0	90.34	268.82	7,234.2	903.5	-6,902.3	6,951.1	0.00	0.00	0.00	
14,000.0	90.34	268.82	7,233.6	901.5	-7,002.2	7,050.6	0.00	0.00	0.00	
14,100.0	90.34	268.82	7,233.0	899.4	-7,102.2	7,150.1	0.00	0.00	0.00	
14,200.0	90.34	268.82	7,232.4	897.3	-7,202.2	7,249.6	0.00	0.00	0.00	
14,300.0	90.34	268.82	7,231.8	895.3	-7,302.2	7,349.2	0.00	0.00	0.00	
14,400.0	90.34	268.82	7,231.2	893.2	-7,402.1	7,448.7	0.00	0.00	0.00	
14,500.0	90.34	268.82	7,230.6	891.1	-7,502.1	7,548.2	0.00	0.00	0.00	
14,600.0	90.34	268.82	7,230.0	889.1	-7,602.1	7,647.8	0.00	0.00	0.00	

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton C-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 C-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	90.34	268.82	7,229.4	887.0	-7,702.1	7,747.3	0.00	0.00	0.00	
14,800.0	90.34	268.82	7,228.8	884.9	-7,802.0	7,846.8	0.00	0.00	0.00	
14,900.0	90.34	268.82	7,228.2	882.8	-7,902.0	7,946.3	0.00	0.00	0.00	
15,000.0	90.34	268.82	7,227.6	880.8	-8,002.0	8,045.9	0.00	0.00	0.00	
15,100.0	90.34	268.82	7,227.0	878.7	-8,102.0	8,145.4	0.00	0.00	0.00	
15,200.0	90.34	268.82	7,226.4	876.6	-8,202.0	8,244.9	0.00	0.00	0.00	
15,300.0	90.34	268.82	7,225.8	874.6	-8,301.9	8,344.4	0.00	0.00	0.00	
15,400.0	90.34	268.82	7,225.2	872.5	-8,401.9	8,444.0	0.00	0.00	0.00	
15,500.0	90.34	268.82	7,224.6	870.4	-8,501.9	8,543.5	0.00	0.00	0.00	
15,600.0	90.34	268.82	7,224.0	868.4	-8,601.9	8,643.0	0.00	0.00	0.00	
15,700.0	90.34	268.82	7,223.4	866.3	-8,701.8	8,742.6	0.00	0.00	0.00	
15,800.0	90.34	268.82	7,222.8	864.2	-8,801.8	8,842.1	0.00	0.00	0.00	
15,900.0	90.34	268.82	7,222.2	862.2	-8,901.8	8,941.6	0.00	0.00	0.00	
16,000.0	90.34	268.82	7,221.6	860.1	-9,001.8	9,041.1	0.00	0.00	0.00	
16,100.0	90.34	268.82	7,221.0	858.0	-9,101.7	9,140.7	0.00	0.00	0.00	
16,200.0	90.34	268.82	7,220.4	856.0	-9,201.7	9,240.2	0.00	0.00	0.00	
16,300.0	90.34	268.82	7,219.8	853.9	-9,301.7	9,339.7	0.00	0.00	0.00	
16,400.0	90.34	268.82	7,219.2	851.8	-9,401.7	9,439.3	0.00	0.00	0.00	
16,500.0	90.34	268.82	7,218.6	849.8	-9,501.7	9,538.8	0.00	0.00	0.00	
16,600.0	90.34	268.82	7,218.0	847.7	-9,601.6	9,638.3	0.00	0.00	0.00	
16,700.0	90.34	268.82	7,217.4	845.6	-9,701.6	9,737.8	0.00	0.00	0.00	
16,800.0	90.34	268.82	7,216.8	843.6	-9,801.6	9,837.4	0.00	0.00	0.00	
16,900.0	90.34	268.82	7,216.2	841.5	-9,901.6	9,936.9	0.00	0.00	0.00	
17,000.0	90.34	268.82	7,215.6	839.4	-10,001.5	10,036.4	0.00	0.00	0.00	
17,100.0	90.34	268.82	7,215.0	837.4	-10,101.5	10,136.0	0.00	0.00	0.00	
17,200.0	90.34	268.82	7,214.4	835.3	-10,201.5	10,235.5	0.00	0.00	0.00	
17,300.0	90.34	268.82	7,213.8	833.2	-10,301.5	10,335.0	0.00	0.00	0.00	
17,400.0	90.34	268.82	7,213.2	831.2	-10,401.4	10,434.5	0.00	0.00	0.00	
17,500.0	90.34	268.82	7,212.6	829.1	-10,501.4	10,534.1	0.00	0.00	0.00	
17,600.0	90.34	268.82	7,212.0	827.0	-10,601.4	10,633.6	0.00	0.00	0.00	
17,700.0	90.34	268.82	7,211.4	825.0	-10,701.4	10,733.1	0.00	0.00	0.00	
17,768.3	90.34	268.82	7,211.0	823.5	-10,769.7	10,801.1	0.00	0.00	0.00	
TD at 17768.3 - BHL 545'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		
- hit/miss target										
- Shape								Longitude		
SHL 1584'FNL, 355'FWL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,443,551.22	3,196,883.57	40.548789 -104.791521		
BHL 545'FNL, 470'FWL, - plan hits target center - Point	0.00	0.00	7,211.0	823.5	-10,769.7	1,444,288.66	3,186,108.00	40.551043 -104.830275		
LPL 545'FNL, 470'FEL, † - plan hits target center - Point	0.00	0.00	7,271.0	1,030.0	-788.9	1,444,574.81	3,196,086.45	40.551616 -104.794360		

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton C-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 C-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 (")	
7,785.3	7,271.0	7"	7	8-3/4	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
600.0	600.0	0.0	0.0	KOP - Start Build 1.50	
5,923.8	5,826.4	986.9	-65.1	Start Drop -2.00	
6,656.5	6,555.2	1,044.8	-68.9	Start Build 8.00	
7,785.3	7,271.0	1,030.0	-789.0	Start DLS 1.00 TFO -42.13	
7,785.9	7,271.0	1,029.9	-789.6	Start 9982.5 hold at 7785.9 MD	
17,768.3	7,211.0	823.5	-10,769.7	TD at 17768.3	