

# Bayswater Exploration & Production, LLC

Well Name: **Thornton B-29-30HC**

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

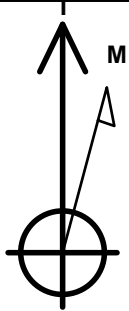
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone

Ground Elevation: 4909.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1443566.15	3196883.73	40.548830	-104.791520	
RKB - 23' WELL @ 4932.0ft (RKB - 23')						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1569'FNL, 355'FWL, SEC.28	1.0	0.0	0.0	Point
BHL 325'FNL, 470'FWL, SEC.30	7385.0	1028.7	-10768.8	Point
LPL 325'FNL, 470'FEL, SEC.29	7422.0	1235.1	-781.4	Point



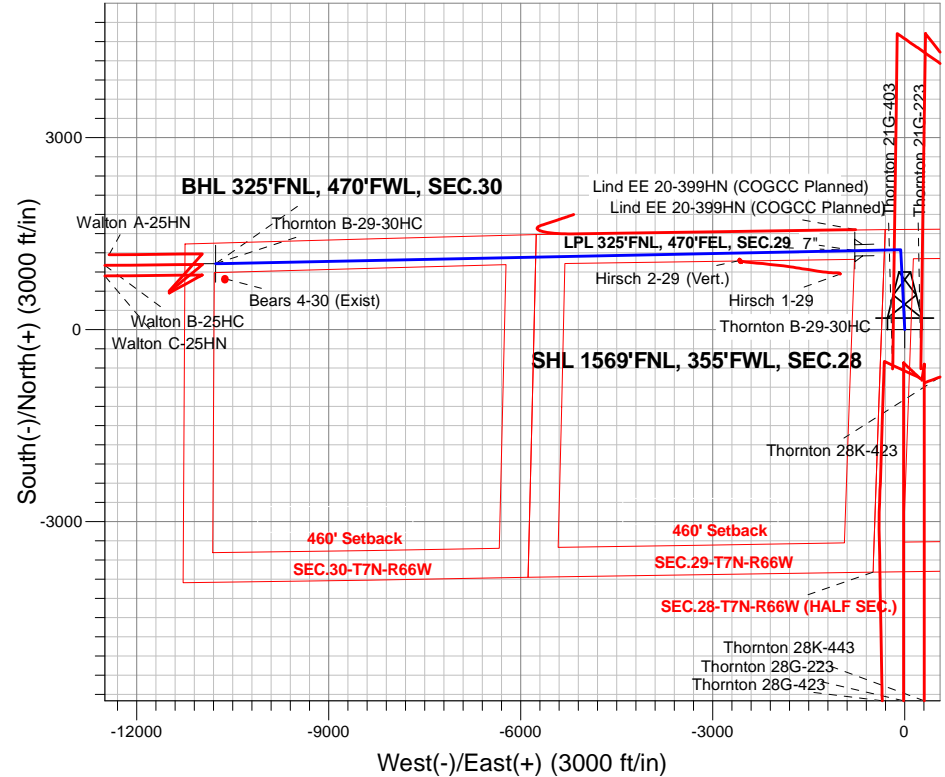
Azimuths to True North  
Magnetic North: 8.26°

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

Thornton 28-H Pad Sec.28-T7N-R66W  
Thornton B-29-30HC  
Plan #1 (1-28-16)  
7:21, February 22 2016

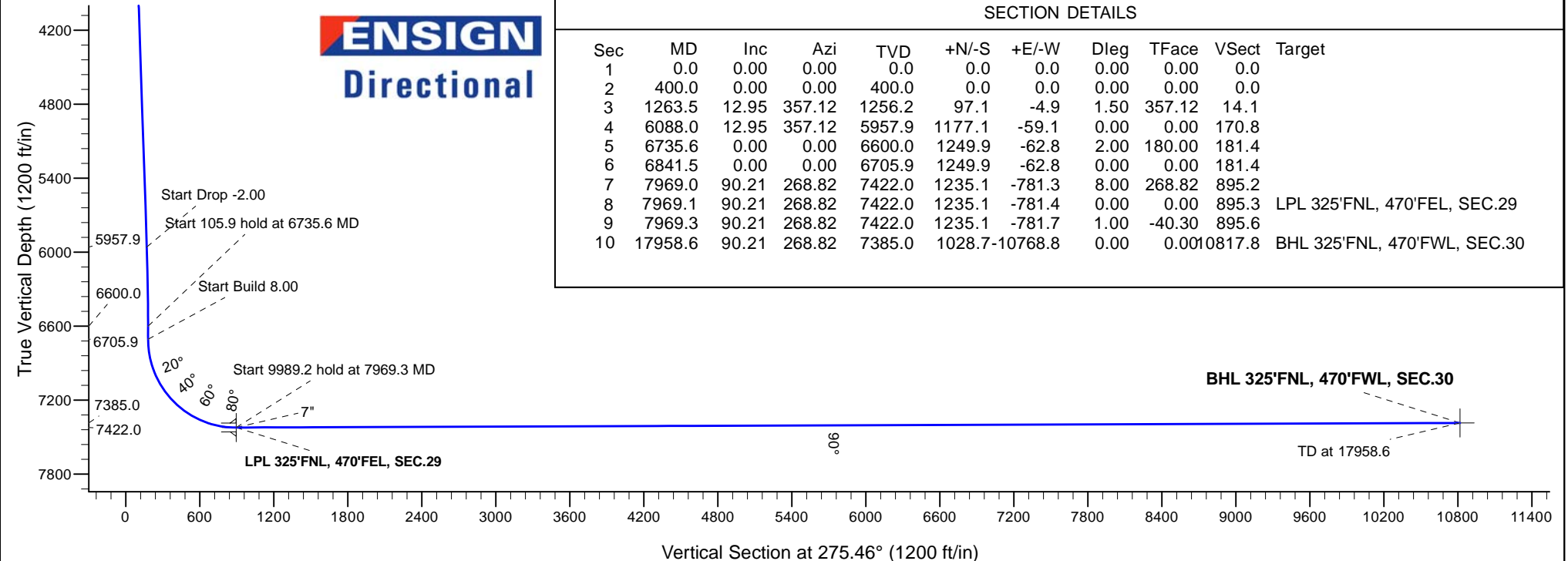
## ANNOTATIONS

TVD	MD	Annotation
400.0	400.0	KOP - Start Build 1.50
5957.9	6088.0	Start Drop -2.00
6600.0	6735.6	Start 105.9 hold at 6735.6 MD
6705.9	6841.5	Start Build 8.00
7422.0	7969.3	Start 9989.2 hold at 7969.3 MD
7385.0	17958.6	TD at 17958.6



## 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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1263.5	12.95	357.12	1256.2	97.1	-4.9	1.50	357.12	14.1	
4	6088.0	12.95	357.12	5957.9	1177.1	-59.1	0.00	0.00	170.8	
5	6735.6	0.00	0.00	6600.0	1249.9	-62.8	2.00	180.00	181.4	
6	6841.5	0.00	0.00	6705.9	1249.9	-62.8	0.00	0.00	181.4	
7	7969.0	90.21	268.82	7422.0	1235.1	-781.3	8.00	268.82	895.2	
8	7969.1	90.21	268.82	7422.0	1235.1	-781.4	0.00	0.00	895.3	LPL 325'FNL, 470'FEL, SEC.29
9	7969.3	90.21	268.82	7422.0	1235.1	-781.7	1.00	-40.30	895.6	
10	17958.6	90.21	268.82	7385.0	1028.7	-10768.8	0.00	0.00	10817.8	BHL 325'FNL, 470'FWL, SEC.30



# **ENSIGN**

## **Directional**

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

**SEC.28-T7N-R66W**

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

**Thornton B-29-30HC**

**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 B-29-30HC
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton B-29-30HC	<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 B-29-30HC					
Well Position	+N/-S	-14.9 ft	Northing:	1,443,566.15 usft	Latitude:	40.548830
	+E/-W	-0.6 ft	Easting:	3,196,883.73 usft	Longitude:	-104.791520
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,909.0 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	275.46

<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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,263.5	12.95	357.12	1,256.2	97.1	-4.9	1.50	1.50	0.00	357.12	
6,088.0	12.95	357.12	5,957.9	1,177.1	-59.1	0.00	0.00	0.00	0.00	
6,735.6	0.00	0.00	6,600.0	1,249.9	-62.8	2.00	-2.00	0.00	180.00	
6,841.5	0.00	0.00	6,705.9	1,249.9	-62.8	0.00	0.00	0.00	0.00	
7,969.0	90.21	268.82	7,422.0	1,235.1	-781.3	8.00	8.00	0.00	268.82	
7,969.1	90.21	268.82	7,422.0	1,235.1	-781.4	0.00	0.00	0.00	0.00	LPL 325'FNL, 470'FEI
7,969.3	90.21	268.82	7,422.0	1,235.1	-781.7	1.00	0.76	-0.65	-40.30	
17,958.6	90.21	268.82	7,385.0	1,028.7	-10,768.8	0.00	0.00	0.00	0.00	BHL 325'FNL, 470'FW

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton B-29-30HC
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton B-29-30HC	<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 1569'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
<b>KOP - Start Build 1.50</b>									
500.0	1.50	357.12	500.0	1.3	-0.1	0.2	1.50	1.50	0.00
600.0	3.00	357.12	599.9	5.2	-0.3	0.8	1.50	1.50	0.00
700.0	4.50	357.12	699.7	11.8	-0.6	1.7	1.50	1.50	0.00
800.0	6.00	357.12	799.3	20.9	-1.1	3.0	1.50	1.50	0.00
900.0	7.50	357.12	898.6	32.6	-1.6	4.7	1.50	1.50	0.00
1,000.0	9.00	357.12	997.5	47.0	-2.4	6.8	1.50	1.50	0.00
1,100.0	10.50	357.12	1,096.1	63.9	-3.2	9.3	1.50	1.50	0.00
1,200.0	12.00	357.12	1,194.2	83.4	-4.2	12.1	1.50	1.50	0.00
1,263.5	12.95	357.12	1,256.2	97.1	-4.9	14.1	1.50	1.50	0.00
1,300.0	12.95	357.12	1,291.7	105.2	-5.3	15.3	0.00	0.00	0.00
1,400.0	12.95	357.12	1,389.2	127.6	-6.4	18.5	0.00	0.00	0.00
1,500.0	12.95	357.12	1,486.6	150.0	-7.5	21.8	0.00	0.00	0.00
1,600.0	12.95	357.12	1,584.1	172.4	-8.7	25.0	0.00	0.00	0.00
1,700.0	12.95	357.12	1,681.6	194.8	-9.8	28.3	0.00	0.00	0.00
1,800.0	12.95	357.12	1,779.0	217.2	-10.9	31.5	0.00	0.00	0.00
1,900.0	12.95	357.12	1,876.5	239.6	-12.0	34.8	0.00	0.00	0.00
2,000.0	12.95	357.12	1,973.9	261.9	-13.2	38.0	0.00	0.00	0.00
2,100.0	12.95	357.12	2,071.4	284.3	-14.3	41.3	0.00	0.00	0.00
2,200.0	12.95	357.12	2,168.8	306.7	-15.4	44.5	0.00	0.00	0.00
2,300.0	12.95	357.12	2,266.3	329.1	-16.5	47.8	0.00	0.00	0.00
2,400.0	12.95	357.12	2,363.7	351.5	-17.7	51.0	0.00	0.00	0.00
2,500.0	12.95	357.12	2,461.2	373.9	-18.8	54.3	0.00	0.00	0.00
2,600.0	12.95	357.12	2,558.7	396.3	-19.9	57.5	0.00	0.00	0.00
2,700.0	12.95	357.12	2,656.1	418.6	-21.0	60.7	0.00	0.00	0.00
2,800.0	12.95	357.12	2,753.6	441.0	-22.2	64.0	0.00	0.00	0.00
2,900.0	12.95	357.12	2,851.0	463.4	-23.3	67.2	0.00	0.00	0.00
3,000.0	12.95	357.12	2,948.5	485.8	-24.4	70.5	0.00	0.00	0.00
3,100.0	12.95	357.12	3,045.9	508.2	-25.5	73.7	0.00	0.00	0.00
3,200.0	12.95	357.12	3,143.4	530.6	-26.7	77.0	0.00	0.00	0.00
3,300.0	12.95	357.12	3,240.8	553.0	-27.8	80.2	0.00	0.00	0.00
3,400.0	12.95	357.12	3,338.3	575.4	-28.9	83.5	0.00	0.00	0.00
3,500.0	12.95	357.12	3,435.8	597.7	-30.0	86.7	0.00	0.00	0.00
3,600.0	12.95	357.12	3,533.2	620.1	-31.2	90.0	0.00	0.00	0.00
3,700.0	12.95	357.12	3,630.7	642.5	-32.3	93.2	0.00	0.00	0.00
3,800.0	12.95	357.12	3,728.1	664.9	-33.4	96.5	0.00	0.00	0.00
3,900.0	12.95	357.12	3,825.6	687.3	-34.5	99.7	0.00	0.00	0.00
4,000.0	12.95	357.12	3,923.0	709.7	-35.7	103.0	0.00	0.00	0.00
4,100.0	12.95	357.12	4,020.5	732.1	-36.8	106.2	0.00	0.00	0.00
4,200.0	12.95	357.12	4,117.9	754.4	-37.9	109.5	0.00	0.00	0.00
4,300.0	12.95	357.12	4,215.4	776.8	-39.0	112.7	0.00	0.00	0.00
4,400.0	12.95	357.12	4,312.9	799.2	-40.2	116.0	0.00	0.00	0.00
4,500.0	12.95	357.12	4,410.3	821.6	-41.3	119.2	0.00	0.00	0.00
4,600.0	12.95	357.12	4,507.8	844.0	-42.4	122.5	0.00	0.00	0.00
4,700.0	12.95	357.12	4,605.2	866.4	-43.5	125.7	0.00	0.00	0.00
4,800.0	12.95	357.12	4,702.7	888.8	-44.7	129.0	0.00	0.00	0.00
4,900.0	12.95	357.12	4,800.1	911.2	-45.8	132.2	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton B-29-30HC
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton B-29-30HC	<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	12.95	357.12	4,897.6	933.5	-46.9	135.5	0.00	0.00	0.00
5,100.0	12.95	357.12	4,995.0	955.9	-48.0	138.7	0.00	0.00	0.00
5,200.0	12.95	357.12	5,092.5	978.3	-49.2	142.0	0.00	0.00	0.00
5,300.0	12.95	357.12	5,190.0	1,000.7	-50.3	145.2	0.00	0.00	0.00
5,400.0	12.95	357.12	5,287.4	1,023.1	-51.4	148.5	0.00	0.00	0.00
5,500.0	12.95	357.12	5,384.9	1,045.5	-52.5	151.7	0.00	0.00	0.00
5,600.0	12.95	357.12	5,482.3	1,067.9	-53.7	155.0	0.00	0.00	0.00
5,700.0	12.95	357.12	5,579.8	1,090.2	-54.8	158.2	0.00	0.00	0.00
5,800.0	12.95	357.12	5,677.2	1,112.6	-55.9	161.4	0.00	0.00	0.00
5,900.0	12.95	357.12	5,774.7	1,135.0	-57.0	164.7	0.00	0.00	0.00
6,000.0	12.95	357.12	5,872.1	1,157.4	-58.2	167.9	0.00	0.00	0.00
6,088.0	12.95	357.12	5,957.9	1,177.1	-59.1	170.8	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,100.0	12.71	357.12	5,969.6	1,179.8	-59.3	171.2	2.01	-2.01	0.00
6,200.0	10.71	357.12	6,067.5	1,200.0	-60.3	174.1	2.00	-2.00	0.00
6,300.0	8.71	357.12	6,166.1	1,216.9	-61.1	176.6	2.00	-2.00	0.00
6,400.0	6.71	357.12	6,265.2	1,230.3	-61.8	178.5	2.00	-2.00	0.00
6,500.0	4.71	357.12	6,364.7	1,240.2	-62.3	180.0	2.00	-2.00	0.00
6,600.0	2.71	357.12	6,464.5	1,246.7	-62.6	180.9	2.00	-2.00	0.00
6,700.0	0.71	357.12	6,564.4	1,249.7	-62.8	181.3	2.00	-2.00	0.00
6,735.6	0.00	0.00	6,600.0	1,249.9	-62.8	181.4	2.00	-2.00	0.00
<b>Start 105.9 hold at 6735.6 MD</b>									
6,800.0	0.00	0.00	6,664.4	1,249.9	-62.8	181.4	0.00	0.00	0.00
6,841.5	0.00	0.00	6,705.9	1,249.9	-62.8	181.4	0.00	0.00	0.00
<b>Start Build 8.00</b>									
6,900.0	4.68	268.82	6,764.3	1,249.9	-65.2	183.7	8.00	8.00	0.00
7,000.0	12.68	268.82	6,863.1	1,249.5	-80.3	198.7	8.00	8.00	0.00
7,100.0	20.68	268.82	6,958.8	1,248.9	-108.9	227.2	8.00	8.00	0.00
7,200.0	28.68	268.82	7,049.6	1,248.1	-150.6	268.6	8.00	8.00	0.00
7,300.0	36.68	268.82	7,133.7	1,247.0	-204.6	322.2	8.00	8.00	0.00
7,400.0	44.69	268.82	7,209.5	1,245.6	-269.7	386.9	8.00	8.00	0.00
7,500.0	52.69	268.82	7,275.5	1,244.1	-344.7	461.5	8.00	8.00	0.00
7,600.0	60.69	268.82	7,330.3	1,242.4	-428.2	544.4	8.00	8.00	0.00
7,700.0	68.69	268.82	7,373.0	1,240.5	-518.5	634.1	8.00	8.00	0.00
7,800.0	76.69	268.82	7,402.8	1,238.5	-613.9	728.9	8.00	8.00	0.00
7,900.0	84.69	268.82	7,418.9	1,236.5	-712.5	826.8	8.00	8.00	0.00
7,969.0	90.21	268.82	7,422.0	1,235.1	-781.3	895.2	8.00	8.00	0.00
7,969.1	90.21	268.82	7,422.0	1,235.1	-781.4	895.3	0.00	0.00	0.00
<b>7" - LPL 325'FNL, 470'FEL, SEC.29</b>									
7,969.3	90.21	268.82	7,422.0	1,235.1	-781.7	895.6	0.00	0.00	0.00
<b>Start 9989.2 hold at 7969.3 MD</b>									
8,000.0	90.21	268.82	7,421.9	1,234.4	-812.4	926.1	0.01	0.01	-0.01
8,100.0	90.21	268.82	7,421.5	1,232.4	-912.4	1,025.4	0.00	0.00	0.00
8,200.0	90.21	268.82	7,421.1	1,230.3	-1,012.3	1,124.7	0.00	0.00	0.00
8,300.0	90.21	268.82	7,420.8	1,228.2	-1,112.3	1,224.1	0.00	0.00	0.00
8,400.0	90.21	268.82	7,420.4	1,226.2	-1,212.3	1,323.4	0.00	0.00	0.00
8,500.0	90.21	268.82	7,420.0	1,224.1	-1,312.3	1,422.7	0.00	0.00	0.00
8,600.0	90.21	268.82	7,419.7	1,222.0	-1,412.2	1,522.0	0.00	0.00	0.00
8,700.0	90.21	268.82	7,419.3	1,220.0	-1,512.2	1,621.4	0.00	0.00	0.00
8,800.0	90.21	268.82	7,418.9	1,217.9	-1,612.2	1,720.7	0.00	0.00	0.00
8,900.0	90.21	268.82	7,418.6	1,215.8	-1,712.2	1,820.0	0.00	0.00	0.00
9,000.0	90.21	268.82	7,418.2	1,213.8	-1,812.2	1,919.4	0.00	0.00	0.00
9,100.0	90.21	268.82	7,417.8	1,211.7	-1,912.1	2,018.7	0.00	0.00	0.00

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton B-29-30HC
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton B-29-30HC	<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)	
9,200.0	90.21	268.82	7,417.4	1,209.6	-2,012.1	2,118.0	0.00	0.00	0.00	
9,300.0	90.21	268.82	7,417.1	1,207.6	-2,112.1	2,217.3	0.00	0.00	0.00	
9,400.0	90.21	268.82	7,416.7	1,205.5	-2,212.1	2,316.7	0.00	0.00	0.00	
9,500.0	90.21	268.82	7,416.3	1,203.4	-2,312.0	2,416.0	0.00	0.00	0.00	
9,600.0	90.21	268.82	7,416.0	1,201.4	-2,412.0	2,515.3	0.00	0.00	0.00	
9,700.0	90.21	268.82	7,415.6	1,199.3	-2,512.0	2,614.7	0.00	0.00	0.00	
9,800.0	90.21	268.82	7,415.2	1,197.2	-2,612.0	2,714.0	0.00	0.00	0.00	
9,900.0	90.21	268.82	7,414.8	1,195.2	-2,712.0	2,813.3	0.00	0.00	0.00	
10,000.0	90.21	268.82	7,414.5	1,193.1	-2,811.9	2,912.6	0.00	0.00	0.00	
10,100.0	90.21	268.82	7,414.1	1,191.0	-2,911.9	3,012.0	0.00	0.00	0.00	
10,200.0	90.21	268.82	7,413.7	1,189.0	-3,011.9	3,111.3	0.00	0.00	0.00	
10,300.0	90.21	268.82	7,413.4	1,186.9	-3,111.9	3,210.6	0.00	0.00	0.00	
10,400.0	90.21	268.82	7,413.0	1,184.8	-3,211.8	3,310.0	0.00	0.00	0.00	
10,500.0	90.21	268.82	7,412.6	1,182.8	-3,311.8	3,409.3	0.00	0.00	0.00	
10,600.0	90.21	268.82	7,412.3	1,180.7	-3,411.8	3,508.6	0.00	0.00	0.00	
10,700.0	90.21	268.82	7,411.9	1,178.6	-3,511.8	3,607.9	0.00	0.00	0.00	
10,800.0	90.21	268.82	7,411.5	1,176.6	-3,611.8	3,707.3	0.00	0.00	0.00	
10,900.0	90.21	268.82	7,411.1	1,174.5	-3,711.7	3,806.6	0.00	0.00	0.00	
11,000.0	90.21	268.82	7,410.8	1,172.4	-3,811.7	3,905.9	0.00	0.00	0.00	
11,100.0	90.21	268.82	7,410.4	1,170.4	-3,911.7	4,005.3	0.00	0.00	0.00	
11,200.0	90.21	268.82	7,410.0	1,168.3	-4,011.7	4,104.6	0.00	0.00	0.00	
11,300.0	90.21	268.82	7,409.7	1,166.2	-4,111.6	4,203.9	0.00	0.00	0.00	
11,400.0	90.21	268.82	7,409.3	1,164.2	-4,211.6	4,303.2	0.00	0.00	0.00	
11,500.0	90.21	268.82	7,408.9	1,162.1	-4,311.6	4,402.6	0.00	0.00	0.00	
11,600.0	90.21	268.82	7,408.6	1,160.0	-4,411.6	4,501.9	0.00	0.00	0.00	
11,700.0	90.21	268.82	7,408.2	1,158.0	-4,511.6	4,601.2	0.00	0.00	0.00	
11,800.0	90.21	268.82	7,407.8	1,155.9	-4,611.5	4,700.6	0.00	0.00	0.00	
11,900.0	90.21	268.82	7,407.4	1,153.8	-4,711.5	4,799.9	0.00	0.00	0.00	
12,000.0	90.21	268.82	7,407.1	1,151.8	-4,811.5	4,899.2	0.00	0.00	0.00	
12,100.0	90.21	268.82	7,406.7	1,149.7	-4,911.5	4,998.5	0.00	0.00	0.00	
12,200.0	90.21	268.82	7,406.3	1,147.6	-5,011.5	5,097.9	0.00	0.00	0.00	
12,300.0	90.21	268.82	7,406.0	1,145.6	-5,111.4	5,197.2	0.00	0.00	0.00	
12,400.0	90.21	268.82	7,405.6	1,143.5	-5,211.4	5,296.5	0.00	0.00	0.00	
12,500.0	90.21	268.82	7,405.2	1,141.4	-5,311.4	5,395.9	0.00	0.00	0.00	
12,600.0	90.21	268.82	7,404.8	1,139.4	-5,411.4	5,495.2	0.00	0.00	0.00	
12,700.0	90.21	268.82	7,404.5	1,137.3	-5,511.3	5,594.5	0.00	0.00	0.00	
12,800.0	90.21	268.82	7,404.1	1,135.2	-5,611.3	5,693.8	0.00	0.00	0.00	
12,900.0	90.21	268.82	7,403.7	1,133.2	-5,711.3	5,793.2	0.00	0.00	0.00	
13,000.0	90.21	268.82	7,403.4	1,131.1	-5,811.3	5,892.5	0.00	0.00	0.00	
13,100.0	90.21	268.82	7,403.0	1,129.0	-5,911.3	5,991.8	0.00	0.00	0.00	
13,200.0	90.21	268.82	7,402.6	1,127.0	-6,011.2	6,091.2	0.00	0.00	0.00	
13,300.0	90.21	268.82	7,402.3	1,124.9	-6,111.2	6,190.5	0.00	0.00	0.00	
13,400.0	90.21	268.82	7,401.9	1,122.8	-6,211.2	6,289.8	0.00	0.00	0.00	
13,500.0	90.21	268.82	7,401.5	1,120.8	-6,311.2	6,389.1	0.00	0.00	0.00	
13,600.0	90.21	268.82	7,401.1	1,118.7	-6,411.1	6,488.5	0.00	0.00	0.00	
13,700.0	90.21	268.82	7,400.8	1,116.7	-6,511.1	6,587.8	0.00	0.00	0.00	
13,800.0	90.21	268.82	7,400.4	1,114.6	-6,611.1	6,687.1	0.00	0.00	0.00	
13,900.0	90.21	268.82	7,400.0	1,112.5	-6,711.1	6,786.5	0.00	0.00	0.00	
14,000.0	90.21	268.82	7,399.7	1,110.5	-6,811.1	6,885.8	0.00	0.00	0.00	
14,100.0	90.21	268.82	7,399.3	1,108.4	-6,911.0	6,985.1	0.00	0.00	0.00	
14,200.0	90.21	268.82	7,398.9	1,106.3	-7,011.0	7,084.4	0.00	0.00	0.00	
14,300.0	90.21	268.82	7,398.6	1,104.3	-7,111.0	7,183.8	0.00	0.00	0.00	
14,400.0	90.21	268.82	7,398.2	1,102.2	-7,211.0	7,283.1	0.00	0.00	0.00	
14,500.0	90.21	268.82	7,397.8	1,100.1	-7,310.9	7,382.4	0.00	0.00	0.00	

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton B-29-30HC
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton B-29-30HC	<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)	
14,600.0	90.21	268.82	7,397.4	1,098.1	-7,410.9	7,481.8	0.00	0.00	0.00	
14,700.0	90.21	268.82	7,397.1	1,096.0	-7,510.9	7,581.1	0.00	0.00	0.00	
14,800.0	90.21	268.82	7,396.7	1,093.9	-7,610.9	7,680.4	0.00	0.00	0.00	
14,900.0	90.21	268.82	7,396.3	1,091.9	-7,710.9	7,779.7	0.00	0.00	0.00	
15,000.0	90.21	268.82	7,396.0	1,089.8	-7,810.8	7,879.1	0.00	0.00	0.00	
15,100.0	90.21	268.82	7,395.6	1,087.7	-7,910.8	7,978.4	0.00	0.00	0.00	
15,200.0	90.21	268.82	7,395.2	1,085.7	-8,010.8	8,077.7	0.00	0.00	0.00	
15,300.0	90.21	268.82	7,394.8	1,083.6	-8,110.8	8,177.1	0.00	0.00	0.00	
15,400.0	90.21	268.82	7,394.5	1,081.5	-8,210.7	8,276.4	0.00	0.00	0.00	
15,500.0	90.21	268.82	7,394.1	1,079.5	-8,310.7	8,375.7	0.00	0.00	0.00	
15,600.0	90.21	268.82	7,393.7	1,077.4	-8,410.7	8,475.0	0.00	0.00	0.00	
15,700.0	90.21	268.82	7,393.4	1,075.3	-8,510.7	8,574.4	0.00	0.00	0.00	
15,800.0	90.21	268.82	7,393.0	1,073.3	-8,610.7	8,673.7	0.00	0.00	0.00	
15,900.0	90.21	268.82	7,392.6	1,071.2	-8,710.6	8,773.0	0.00	0.00	0.00	
16,000.0	90.21	268.82	7,392.3	1,069.1	-8,810.6	8,872.4	0.00	0.00	0.00	
16,100.0	90.21	268.82	7,391.9	1,067.1	-8,910.6	8,971.7	0.00	0.00	0.00	
16,200.0	90.21	268.82	7,391.5	1,065.0	-9,010.6	9,071.0	0.00	0.00	0.00	
16,300.0	90.21	268.82	7,391.1	1,062.9	-9,110.5	9,170.3	0.00	0.00	0.00	
16,400.0	90.21	268.82	7,390.8	1,060.9	-9,210.5	9,269.7	0.00	0.00	0.00	
16,500.0	90.21	268.82	7,390.4	1,058.8	-9,310.5	9,369.0	0.00	0.00	0.00	
16,600.0	90.21	268.82	7,390.0	1,056.7	-9,410.5	9,468.3	0.00	0.00	0.00	
16,700.0	90.21	268.82	7,389.7	1,054.7	-9,510.5	9,567.7	0.00	0.00	0.00	
16,800.0	90.21	268.82	7,389.3	1,052.6	-9,610.4	9,667.0	0.00	0.00	0.00	
16,900.0	90.21	268.82	7,388.9	1,050.5	-9,710.4	9,766.3	0.00	0.00	0.00	
17,000.0	90.21	268.82	7,388.6	1,048.5	-9,810.4	9,865.6	0.00	0.00	0.00	
17,100.0	90.21	268.82	7,388.2	1,046.4	-9,910.4	9,965.0	0.00	0.00	0.00	
17,200.0	90.21	268.82	7,387.8	1,044.3	-10,010.3	10,064.3	0.00	0.00	0.00	
17,300.0	90.21	268.82	7,387.4	1,042.3	-10,110.3	10,163.6	0.00	0.00	0.00	
17,400.0	90.21	268.82	7,387.1	1,040.2	-10,210.3	10,263.0	0.00	0.00	0.00	
17,500.0	90.21	268.82	7,386.7	1,038.1	-10,310.3	10,362.3	0.00	0.00	0.00	
17,600.0	90.21	268.82	7,386.3	1,036.1	-10,410.3	10,461.6	0.00	0.00	0.00	
17,700.0	90.21	268.82	7,386.0	1,034.0	-10,510.2	10,560.9	0.00	0.00	0.00	
17,800.0	90.21	268.82	7,385.6	1,031.9	-10,610.2	10,660.3	0.00	0.00	0.00	
17,900.0	90.21	268.82	7,385.2	1,029.9	-10,710.2	10,759.6	0.00	0.00	0.00	
17,958.6	90.21	268.82	7,385.0	1,028.7	-10,768.8	10,817.8	0.00	0.00	0.00	
TD at 17958.6 - BHL 325°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 1569°FNL, 355°FNL - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,443,566.16	3,196,883.73	40.548830		-104.791520
BHL 325°FNL, 470°FNL, - plan hits target center - Point	0.00	0.00	7,385.0	1,028.7	-10,768.8	1,444,508.71	3,186,107.45	40.551647		-104.830271
LPL 325°FNL, 470°FNL, - plan hits target center - Point	0.00	0.00	7,422.0	1,235.1	-781.4	1,444,794.90	3,196,092.48	40.552220		-104.794332

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Thornton B-29-30HC
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Project:</b>	SEC.28-T7N-R66W	<b>MD Reference:</b>	WELL @ 4932.0ft (RKB - 23')
<b>Site:</b>	Thornton 28-H Pad Sec.28-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Thornton B-29-30HC	<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 (")
7,969.1	7,422.0	7"		7	8-3/4

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP - Start Build 1.50	
6,088.0	5,957.9	1,177.1	-59.1	Start Drop -2.00	
6,735.6	6,600.0	1,249.9	-62.8	Start 105.9 hold at 6735.6 MD	
6,841.5	6,705.9	1,249.9	-62.8	Start Build 8.00	
7,969.3	7,422.0	1,235.1	-781.7	Start 9989.2 hold at 7969.3 MD	
17,958.6	7,385.0	1,028.7	-10,768.8	TD at 17958.6	