

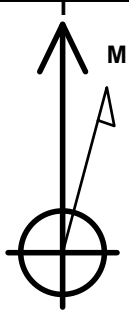
Bayswater Exploration & Production, LLC

Well Name: **Thornton E-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: 4907.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1443520.97 3196882.70 40.548706 -104.791525
RKB - 23' WELL @ 4930.0ft (RKB - 23')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1614'FNL, 355'FWL, SEC.28	1.0	0.0	0.0	Point
BHL 985'FNL, 470'FWL, SEC.30	7383.0	413.7	-10771.0	Point
LPL 985'FNL, 470'FEL, SEC.29	7420.0	620.1	-803.4	Point



Azimuths to True North
Magnetic North: 8.26°

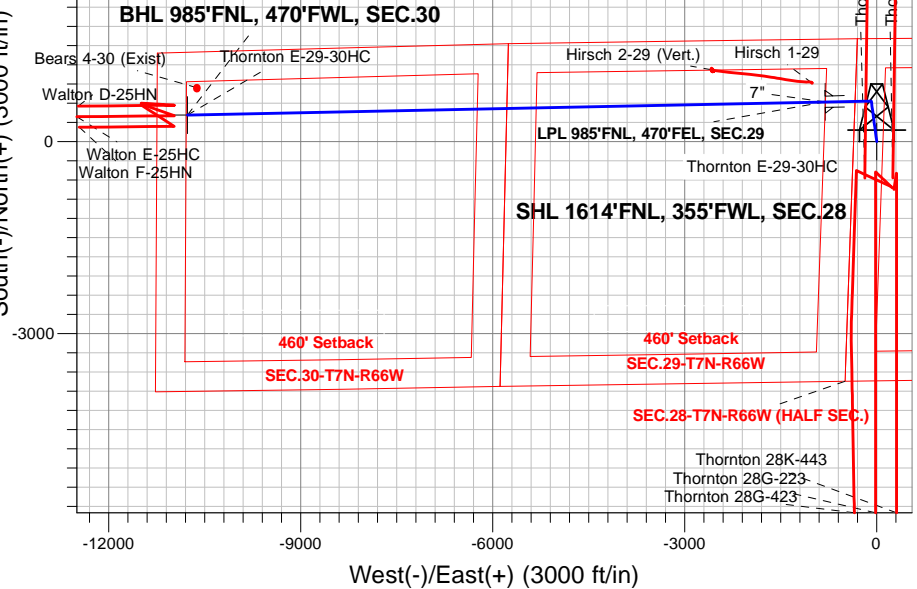
Magnetic Field
Strength: 52711.3nT
Dip Angle: 67.00°
Date: 2/22/2016
Model: IGRF2010

Thornton 28-H Pad Sec.28-T7N-R66W
Thornton E-29-30HC
Plan #1 (1-28-16)
8:03, February 22 2016

ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP - Start Build 1.50
5155.4	5201.5	Start Drop -2.00
5600.0	5647.9	Start 1104.2 hold at 5647.9 MD
6704.2	6752.1	Start Build 8.00
7420.0	7879.5	Start 9969.4 hold at 7879.5 MD
7383.0	17848.9	TD at 17848.9

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

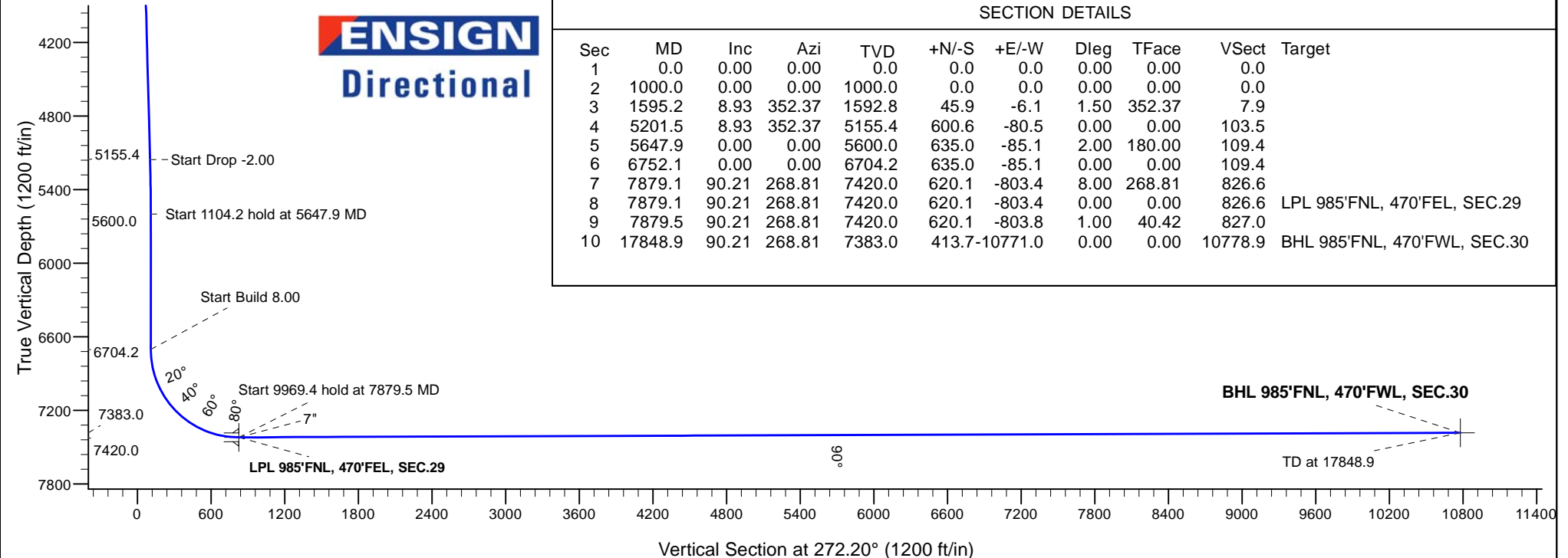


West(-)/East(+) (3000 ft/in)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1595.2	8.93	352.37	1592.8	45.9	-6.1	1.50	352.37	7.9	
4	5201.5	8.93	352.37	5155.4	600.6	-80.5	0.00	0.00	103.5	
5	5647.9	0.00	0.00	5600.0	635.0	-85.1	2.00	180.00	109.4	
6	6752.1	0.00	0.00	6704.2	635.0	-85.1	0.00	0.00	109.4	
7	7879.1	90.21	268.81	7420.0	620.1	-803.4	8.00	268.81	826.6	
8	7879.1	90.21	268.81	7420.0	620.1	-803.4	0.00	0.00	826.6	LPL 985'FNL, 470'FEL, SEC.29
9	7879.5	90.21	268.81	7420.0	620.1	-803.8	1.00	40.42	827.0	
10	17848.9	90.21	268.81	7383.0	413.7	-10771.0	0.00	0.00	10778.9	BHL 985'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 E-29-30HC

Wellbore #1

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

Standard Planning Report

22 February, 2016



BAYSWATER
EXPLORATION & PRODUCTION, LLC

Database:	US_EDM	Local Co-ordinate Reference:	Well Thornton E-29-30HC
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4930.0ft (RKB - 23')
Project:	SEC.28-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 23')
Site:	Thornton 28-H Pad Sec.28-T7N-R66W	North Reference:	True
Well:	Thornton E-29-30HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-28-16)		

Project	SEC.28-T7N-R66W, 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	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 E-29-30HC					
Well Position	+N/-S	-60.1 ft	Northing:	1,443,520.97 usft	Latitude:	40.548706
	+E/-W	-1.9 ft	Easting:	3,196,882.70 usft	Longitude:	-104.791525
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,907.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/22/2016	8.26	67.00	52,711

Design	Plan #1 (1-28-16)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	272.20

Plan Sections										
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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,595.2	8.93	352.37	1,592.8	45.9	-6.1	1.50	1.50	0.00	352.37	
5,201.5	8.93	352.37	5,155.4	600.6	-80.5	0.00	0.00	0.00	0.00	
5,647.9	0.00	0.00	5,600.0	635.0	-85.1	2.00	-2.00	0.00	180.00	
6,752.1	0.00	0.00	6,704.2	635.0	-85.1	0.00	0.00	0.00	0.00	
7,879.1	90.21	268.81	7,420.0	620.1	-803.4	8.00	8.00	0.00	268.81	
7,879.1	90.21	268.81	7,420.0	620.1	-803.4	0.00	0.00	0.00	0.00	LPL 985'FNL, 470'FEI
7,879.5	90.21	268.81	7,420.0	620.1	-803.8	1.00	0.76	0.65	40.42	
17,848.9	90.21	268.81	7,383.0	413.7	-10,771.0	0.00	0.00	0.00	0.00	BHL 985'FNL, 470'FW

Database:	US_EDM	Local Co-ordinate Reference:	Well Thornton E-29-30HC
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4930.0ft (RKB - 23')
Project:	SEC.28-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 23')
Site:	Thornton 28-H Pad Sec.28-T7N-R66W	North Reference:	True
Well:	Thornton E-29-30HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
SHL 1614'FNL, 355'FWL, SEC.28									
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
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,100.0	1.50	352.37	1,100.0	1.3	-0.2	0.2	1.50	1.50	0.00
1,200.0	3.00	352.37	1,199.9	5.2	-0.7	0.9	1.50	1.50	0.00
1,300.0	4.50	352.37	1,299.7	11.7	-1.6	2.0	1.50	1.50	0.00
1,400.0	6.00	352.37	1,399.3	20.7	-2.8	3.6	1.50	1.50	0.00
1,500.0	7.50	352.37	1,498.6	32.4	-4.3	5.6	1.50	1.50	0.00
1,595.2	8.93	352.37	1,592.8	45.9	-6.1	7.9	1.50	1.50	0.00
1,600.0	8.93	352.37	1,597.5	46.6	-6.2	8.0	0.00	0.00	0.00
1,700.0	8.93	352.37	1,696.3	62.0	-8.3	10.7	0.00	0.00	0.00
1,800.0	8.93	352.37	1,795.1	77.4	-10.4	13.3	0.00	0.00	0.00
1,900.0	8.93	352.37	1,893.9	92.8	-12.4	16.0	0.00	0.00	0.00
2,000.0	8.93	352.37	1,992.7	108.1	-14.5	18.6	0.00	0.00	0.00
2,100.0	8.93	352.37	2,091.5	123.5	-16.6	21.3	0.00	0.00	0.00
2,200.0	8.93	352.37	2,190.3	138.9	-18.6	23.9	0.00	0.00	0.00
2,300.0	8.93	352.37	2,289.1	154.3	-20.7	26.6	0.00	0.00	0.00
2,400.0	8.93	352.37	2,387.8	169.7	-22.7	29.2	0.00	0.00	0.00
2,500.0	8.93	352.37	2,486.6	185.0	-24.8	31.9	0.00	0.00	0.00
2,600.0	8.93	352.37	2,585.4	200.4	-26.9	34.5	0.00	0.00	0.00
2,700.0	8.93	352.37	2,684.2	215.8	-28.9	37.2	0.00	0.00	0.00
2,800.0	8.93	352.37	2,783.0	231.2	-31.0	39.8	0.00	0.00	0.00
2,900.0	8.93	352.37	2,881.8	246.6	-33.0	42.5	0.00	0.00	0.00
3,000.0	8.93	352.37	2,980.6	262.0	-35.1	45.1	0.00	0.00	0.00
3,100.0	8.93	352.37	3,079.4	277.3	-37.2	47.8	0.00	0.00	0.00
3,200.0	8.93	352.37	3,178.1	292.7	-39.2	50.4	0.00	0.00	0.00
3,300.0	8.93	352.37	3,276.9	308.1	-41.3	53.1	0.00	0.00	0.00
3,400.0	8.93	352.37	3,375.7	323.5	-43.4	55.7	0.00	0.00	0.00
3,500.0	8.93	352.37	3,474.5	338.9	-45.4	58.4	0.00	0.00	0.00
3,600.0	8.93	352.37	3,573.3	354.3	-47.5	61.0	0.00	0.00	0.00
3,700.0	8.93	352.37	3,672.1	369.6	-49.5	63.7	0.00	0.00	0.00
3,800.0	8.93	352.37	3,770.9	385.0	-51.6	66.3	0.00	0.00	0.00
3,900.0	8.93	352.37	3,869.7	400.4	-53.7	69.0	0.00	0.00	0.00
4,000.0	8.93	352.37	3,968.5	415.8	-55.7	71.6	0.00	0.00	0.00
4,100.0	8.93	352.37	4,067.2	431.2	-57.8	74.3	0.00	0.00	0.00
4,200.0	8.93	352.37	4,166.0	446.5	-59.8	76.9	0.00	0.00	0.00
4,300.0	8.93	352.37	4,264.8	461.9	-61.9	79.6	0.00	0.00	0.00
4,400.0	8.93	352.37	4,363.6	477.3	-64.0	82.2	0.00	0.00	0.00
4,500.0	8.93	352.37	4,462.4	492.7	-66.0	84.9	0.00	0.00	0.00
4,600.0	8.93	352.37	4,561.2	508.1	-68.1	87.5	0.00	0.00	0.00
4,700.0	8.93	352.37	4,660.0	523.5	-70.2	90.2	0.00	0.00	0.00
4,800.0	8.93	352.37	4,758.8	538.8	-72.2	92.8	0.00	0.00	0.00
4,900.0	8.93	352.37	4,857.6	554.2	-74.3	95.5	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Thornton E-29-30HC
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4930.0ft (RKB - 23')
Project:	SEC.28-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 23')
Site:	Thornton 28-H Pad Sec.28-T7N-R66W	North Reference:	True
Well:	Thornton E-29-30HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	8.93	352.37	4,956.3	569.6	-76.3	98.1	0.00	0.00	0.00
5,100.0	8.93	352.37	5,055.1	585.0	-78.4	100.8	0.00	0.00	0.00
5,200.0	8.93	352.37	5,153.9	600.4	-80.5	103.4	0.00	0.00	0.00
5,201.5	8.93	352.37	5,155.4	600.6	-80.5	103.5	0.00	0.00	0.00
Start Drop -2.00									
5,300.0	6.96	352.37	5,252.9	614.1	-82.3	105.8	2.00	-2.00	0.00
5,400.0	4.96	352.37	5,352.4	624.4	-83.7	107.6	2.00	-2.00	0.00
5,500.0	2.96	352.37	5,452.2	631.2	-84.6	108.8	2.00	-2.00	0.00
5,600.0	0.96	352.37	5,552.1	634.6	-85.0	109.3	2.00	-2.00	0.00
5,647.9	0.00	352.37	5,600.0	635.0	-85.1	109.4	2.00	-2.00	0.00
Start 1104.2 hold at 5647.9 MD									
5,700.0	0.00	0.00	5,652.1	635.0	-85.1	109.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,752.1	635.0	-85.1	109.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,852.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,952.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,100.0	0.00	0.00	6,052.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,152.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,252.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,352.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,452.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,552.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,652.1	635.0	-85.1	109.4	0.00	0.00	0.00
6,752.1	0.00	0.00	6,704.2	635.0	-85.1	109.4	0.00	0.00	0.00
Start Build 8.00									
6,800.0	3.84	268.81	6,752.1	635.0	-86.7	111.0	8.01	8.01	0.00
6,900.0	11.84	268.81	6,851.0	634.7	-100.3	124.6	8.00	8.00	0.00
7,000.0	19.84	268.81	6,947.2	634.1	-127.6	151.8	8.00	8.00	0.00
7,100.0	27.85	268.81	7,038.6	633.3	-168.0	192.2	8.00	8.00	0.00
7,200.0	35.85	268.81	7,123.4	632.2	-220.7	244.8	8.00	8.00	0.00
7,300.0	43.86	268.81	7,200.1	630.9	-284.7	308.7	8.00	8.00	0.00
7,400.0	51.86	268.81	7,267.2	629.3	-358.8	382.7	8.00	8.00	0.00
7,500.0	59.86	268.81	7,323.2	627.6	-441.5	465.2	8.00	8.00	0.00
7,600.0	67.87	268.81	7,367.3	625.7	-531.2	554.8	8.00	8.00	0.00
7,700.0	75.87	268.81	7,398.4	623.8	-626.1	649.6	8.00	8.00	0.00
7,800.0	83.88	268.81	7,415.9	621.7	-724.4	747.8	8.00	8.00	0.00
7,879.1	90.21	268.81	7,420.0	620.1	-803.4	826.6	8.00	8.00	0.00
7" - LPL 985'FNL, 470'FEL, SEC.29									
7,879.5	90.21	268.81	7,420.0	620.1	-803.8	827.0	1.61	1.49	0.62
Start 9969.4 hold at 7879.5 MD									
7,900.0	90.21	268.81	7,419.9	619.7	-824.3	847.4	0.00	0.00	0.00
8,000.0	90.21	268.81	7,419.6	617.6	-924.3	947.3	0.00	0.00	0.00
8,100.0	90.21	268.81	7,419.2	615.5	-1,024.2	1,047.1	0.00	0.00	0.00
8,200.0	90.21	268.81	7,418.8	613.5	-1,124.2	1,146.9	0.00	0.00	0.00
8,300.0	90.21	268.81	7,418.4	611.4	-1,224.2	1,246.7	0.00	0.00	0.00
8,400.0	90.21	268.81	7,418.1	609.3	-1,324.2	1,346.6	0.00	0.00	0.00
8,500.0	90.21	268.81	7,417.7	607.2	-1,424.1	1,446.4	0.00	0.00	0.00
8,600.0	90.21	268.81	7,417.3	605.2	-1,524.1	1,546.2	0.00	0.00	0.00
8,700.0	90.21	268.81	7,417.0	603.1	-1,624.1	1,646.0	0.00	0.00	0.00
8,800.0	90.21	268.81	7,416.6	601.0	-1,724.1	1,745.9	0.00	0.00	0.00
8,900.0	90.21	268.81	7,416.2	599.0	-1,824.1	1,845.7	0.00	0.00	0.00
9,000.0	90.21	268.81	7,415.8	596.9	-1,924.0	1,945.5	0.00	0.00	0.00
9,100.0	90.21	268.81	7,415.5	594.8	-2,024.0	2,045.3	0.00	0.00	0.00
9,200.0	90.21	268.81	7,415.1	592.7	-2,124.0	2,145.2	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Thornton E-29-30HC
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4930.0ft (RKB - 23')
Project:	SEC.28-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 23')
Site:	Thornton 28-H Pad Sec.28-T7N-R66W	North Reference:	True
Well:	Thornton E-29-30HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	90.21	268.81	7,414.7	590.7	-2,224.0	2,245.0	0.00	0.00	0.00	
9,400.0	90.21	268.81	7,414.4	588.6	-2,323.9	2,344.8	0.00	0.00	0.00	
9,500.0	90.21	268.81	7,414.0	586.5	-2,423.9	2,444.6	0.00	0.00	0.00	
9,600.0	90.21	268.81	7,413.6	584.5	-2,523.9	2,544.5	0.00	0.00	0.00	
9,700.0	90.21	268.81	7,413.2	582.4	-2,623.9	2,644.3	0.00	0.00	0.00	
9,800.0	90.21	268.81	7,412.9	580.3	-2,723.9	2,744.1	0.00	0.00	0.00	
9,900.0	90.21	268.81	7,412.5	578.3	-2,823.8	2,843.9	0.00	0.00	0.00	
10,000.0	90.21	268.81	7,412.1	576.2	-2,923.8	2,943.8	0.00	0.00	0.00	
10,100.0	90.21	268.81	7,411.8	574.1	-3,023.8	3,043.6	0.00	0.00	0.00	
10,200.0	90.21	268.81	7,411.4	572.0	-3,123.8	3,143.4	0.00	0.00	0.00	
10,300.0	90.21	268.81	7,411.0	570.0	-3,223.7	3,243.2	0.00	0.00	0.00	
10,400.0	90.21	268.81	7,410.6	567.9	-3,323.7	3,343.1	0.00	0.00	0.00	
10,500.0	90.21	268.81	7,410.3	565.8	-3,423.7	3,442.9	0.00	0.00	0.00	
10,600.0	90.21	268.81	7,409.9	563.8	-3,523.7	3,542.7	0.00	0.00	0.00	
10,700.0	90.21	268.81	7,409.5	561.7	-3,623.7	3,642.5	0.00	0.00	0.00	
10,800.0	90.21	268.81	7,409.2	559.6	-3,723.6	3,742.4	0.00	0.00	0.00	
10,900.0	90.21	268.81	7,408.8	557.6	-3,823.6	3,842.2	0.00	0.00	0.00	
11,000.0	90.21	268.81	7,408.4	555.5	-3,923.6	3,942.0	0.00	0.00	0.00	
11,100.0	90.21	268.81	7,408.0	553.4	-4,023.6	4,041.8	0.00	0.00	0.00	
11,200.0	90.21	268.81	7,407.7	551.3	-4,123.5	4,141.7	0.00	0.00	0.00	
11,300.0	90.21	268.81	7,407.3	549.3	-4,223.5	4,241.5	0.00	0.00	0.00	
11,400.0	90.21	268.81	7,406.9	547.2	-4,323.5	4,341.3	0.00	0.00	0.00	
11,500.0	90.21	268.81	7,406.6	545.1	-4,423.5	4,441.1	0.00	0.00	0.00	
11,600.0	90.21	268.81	7,406.2	543.1	-4,523.5	4,541.0	0.00	0.00	0.00	
11,700.0	90.21	268.81	7,405.8	541.0	-4,623.4	4,640.8	0.00	0.00	0.00	
11,800.0	90.21	268.81	7,405.4	538.9	-4,723.4	4,740.6	0.00	0.00	0.00	
11,900.0	90.21	268.81	7,405.1	536.8	-4,823.4	4,840.4	0.00	0.00	0.00	
12,000.0	90.21	268.81	7,404.7	534.8	-4,923.4	4,940.3	0.00	0.00	0.00	
12,100.0	90.21	268.81	7,404.3	532.7	-5,023.3	5,040.1	0.00	0.00	0.00	
12,200.0	90.21	268.81	7,404.0	530.6	-5,123.3	5,139.9	0.00	0.00	0.00	
12,300.0	90.21	268.81	7,403.6	528.6	-5,223.3	5,239.7	0.00	0.00	0.00	
12,400.0	90.21	268.81	7,403.2	526.5	-5,323.3	5,339.6	0.00	0.00	0.00	
12,500.0	90.21	268.81	7,402.9	524.4	-5,423.3	5,439.4	0.00	0.00	0.00	
12,600.0	90.21	268.81	7,402.5	522.4	-5,523.2	5,539.2	0.00	0.00	0.00	
12,700.0	90.21	268.81	7,402.1	520.3	-5,623.2	5,639.0	0.00	0.00	0.00	
12,800.0	90.21	268.81	7,401.7	518.2	-5,723.2	5,738.9	0.00	0.00	0.00	
12,900.0	90.21	268.81	7,401.4	516.1	-5,823.2	5,838.7	0.00	0.00	0.00	
13,000.0	90.21	268.81	7,401.0	514.1	-5,923.1	5,938.5	0.00	0.00	0.00	
13,100.0	90.21	268.81	7,400.6	512.0	-6,023.1	6,038.3	0.00	0.00	0.00	
13,200.0	90.21	268.81	7,400.3	509.9	-6,123.1	6,138.2	0.00	0.00	0.00	
13,300.0	90.21	268.81	7,399.9	507.9	-6,223.1	6,238.0	0.00	0.00	0.00	
13,400.0	90.21	268.81	7,399.5	505.8	-6,323.1	6,337.8	0.00	0.00	0.00	
13,500.0	90.21	268.81	7,399.1	503.7	-6,423.0	6,437.6	0.00	0.00	0.00	
13,600.0	90.21	268.81	7,398.8	501.7	-6,523.0	6,537.5	0.00	0.00	0.00	
13,700.0	90.21	268.81	7,398.4	499.6	-6,623.0	6,637.3	0.00	0.00	0.00	
13,800.0	90.21	268.81	7,398.0	497.5	-6,723.0	6,737.1	0.00	0.00	0.00	
13,900.0	90.21	268.81	7,397.7	495.4	-6,822.9	6,836.9	0.00	0.00	0.00	
14,000.0	90.21	268.81	7,397.3	493.4	-6,922.9	6,936.8	0.00	0.00	0.00	
14,100.0	90.21	268.81	7,396.9	491.3	-7,022.9	7,036.6	0.00	0.00	0.00	
14,200.0	90.21	268.81	7,396.5	489.2	-7,122.9	7,136.4	0.00	0.00	0.00	
14,300.0	90.21	268.81	7,396.2	487.2	-7,222.9	7,236.2	0.00	0.00	0.00	
14,400.0	90.21	268.81	7,395.8	485.1	-7,322.8	7,336.1	0.00	0.00	0.00	
14,500.0	90.21	268.81	7,395.4	483.0	-7,422.8	7,435.9	0.00	0.00	0.00	
14,600.0	90.21	268.81	7,395.1	480.9	-7,522.8	7,535.7	0.00	0.00	0.00	

Database:	US_EDM	Local Co-ordinate Reference:	Well Thornton E-29-30HC
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4930.0ft (RKB - 23')
Project:	SEC.28-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 23')
Site:	Thornton 28-H Pad Sec.28-T7N-R66W	North Reference:	True
Well:	Thornton E-29-30HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	90.21	268.81	7,394.7	478.9	-7,622.8	7,635.5	0.00	0.00	0.00	
14,800.0	90.21	268.81	7,394.3	476.8	-7,722.7	7,735.4	0.00	0.00	0.00	
14,900.0	90.21	268.81	7,393.9	474.7	-7,822.7	7,835.2	0.00	0.00	0.00	
15,000.0	90.21	268.81	7,393.6	472.7	-7,922.7	7,935.0	0.00	0.00	0.00	
15,100.0	90.21	268.81	7,393.2	470.6	-8,022.7	8,034.8	0.00	0.00	0.00	
15,200.0	90.21	268.81	7,392.8	468.5	-8,122.7	8,134.7	0.00	0.00	0.00	
15,300.0	90.21	268.81	7,392.5	466.5	-8,222.6	8,234.5	0.00	0.00	0.00	
15,400.0	90.21	268.81	7,392.1	464.4	-8,322.6	8,334.3	0.00	0.00	0.00	
15,500.0	90.21	268.81	7,391.7	462.3	-8,422.6	8,434.1	0.00	0.00	0.00	
15,600.0	90.21	268.81	7,391.3	460.2	-8,522.6	8,534.0	0.00	0.00	0.00	
15,700.0	90.21	268.81	7,391.0	458.2	-8,622.5	8,633.8	0.00	0.00	0.00	
15,800.0	90.21	268.81	7,390.6	456.1	-8,722.5	8,733.6	0.00	0.00	0.00	
15,900.0	90.21	268.81	7,390.2	454.0	-8,822.5	8,833.4	0.00	0.00	0.00	
16,000.0	90.21	268.81	7,389.9	452.0	-8,922.5	8,933.3	0.00	0.00	0.00	
16,100.0	90.21	268.81	7,389.5	449.9	-9,022.5	9,033.1	0.00	0.00	0.00	
16,200.0	90.21	268.81	7,389.1	447.8	-9,122.4	9,132.9	0.00	0.00	0.00	
16,300.0	90.21	268.81	7,388.7	445.7	-9,222.4	9,232.7	0.00	0.00	0.00	
16,400.0	90.21	268.81	7,388.4	443.7	-9,322.4	9,332.6	0.00	0.00	0.00	
16,500.0	90.21	268.81	7,388.0	441.6	-9,422.4	9,432.4	0.00	0.00	0.00	
16,600.0	90.21	268.81	7,387.6	439.5	-9,522.3	9,532.2	0.00	0.00	0.00	
16,700.0	90.21	268.81	7,387.3	437.5	-9,622.3	9,632.0	0.00	0.00	0.00	
16,800.0	90.21	268.81	7,386.9	435.4	-9,722.3	9,731.9	0.00	0.00	0.00	
16,900.0	90.21	268.81	7,386.5	433.3	-9,822.3	9,831.7	0.00	0.00	0.00	
17,000.0	90.21	268.81	7,386.2	431.3	-9,922.3	9,931.5	0.00	0.00	0.00	
17,100.0	90.21	268.81	7,385.8	429.2	-10,022.2	10,031.3	0.00	0.00	0.00	
17,200.0	90.21	268.81	7,385.4	427.1	-10,122.2	10,131.1	0.00	0.00	0.00	
17,300.0	90.21	268.81	7,385.0	425.0	-10,222.2	10,231.0	0.00	0.00	0.00	
17,400.0	90.21	268.81	7,384.7	423.0	-10,322.2	10,330.8	0.00	0.00	0.00	
17,500.0	90.21	268.81	7,384.3	420.9	-10,422.1	10,430.6	0.00	0.00	0.00	
17,600.0	90.21	268.81	7,383.9	418.8	-10,522.1	10,530.4	0.00	0.00	0.00	
17,700.0	90.21	268.81	7,383.6	416.8	-10,622.1	10,630.3	0.00	0.00	0.00	
17,800.0	90.21	268.81	7,383.2	414.7	-10,722.1	10,730.1	0.00	0.00	0.00	
17,848.9	90.21	268.81	7,383.0	413.7	-10,771.0	10,778.9	0.00	0.00	0.00	
TD at 17848.9 - BHL 985°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 1614°FNL, 355°FWL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,443,520.98	3,196,882.70	40.548706 -104.791525		
BHL 985°FNL, 470°FWL, - plan hits target center - Point	0.00	0.00	7,383.0	413.7	-10,771.0	1,443,848.57	3,186,109.10	40.549835 -104.830283		
LPL 985°FNL, 470°FEL, † - plan hits target center - Point	0.00	0.00	7,420.0	620.1	-803.4	1,444,134.61	3,196,074.39	40.550408 -104.794416		

Database:	US_EDM	Local Co-ordinate Reference:	Well Thornton E-29-30HC
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 4930.0ft (RKB - 23')
Project:	SEC.28-T7N-R66W	MD Reference:	WELL @ 4930.0ft (RKB - 23')
Site:	Thornton 28-H Pad Sec.28-T7N-R66W	North Reference:	True
Well:	Thornton E-29-30HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-28-16)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,879.1	7,420.0	7"	7	8-3/4	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.0	1,000.0	0.0	0.0	KOP - Start Build 1.50	
5,201.5	5,155.4	600.6	-80.5	Start Drop -2.00	
5,647.9	5,600.0	635.0	-85.1	Start 1104.2 hold at 5647.9 MD	
6,752.1	6,704.2	635.0	-85.1	Start Build 8.00	
7,879.5	7,420.0	620.1	-803.8	Start 9969.4 hold at 7879.5 MD	
17,848.9	7,383.0	413.7	-10,771.0	TD at 17848.9	