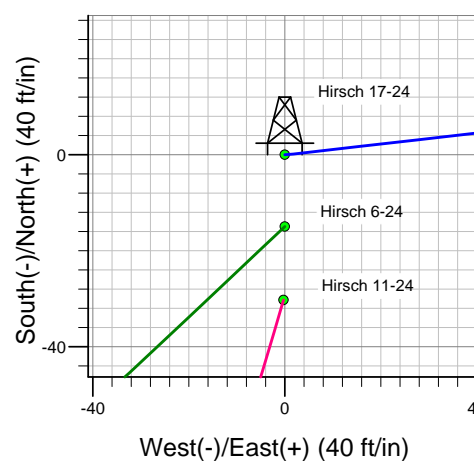
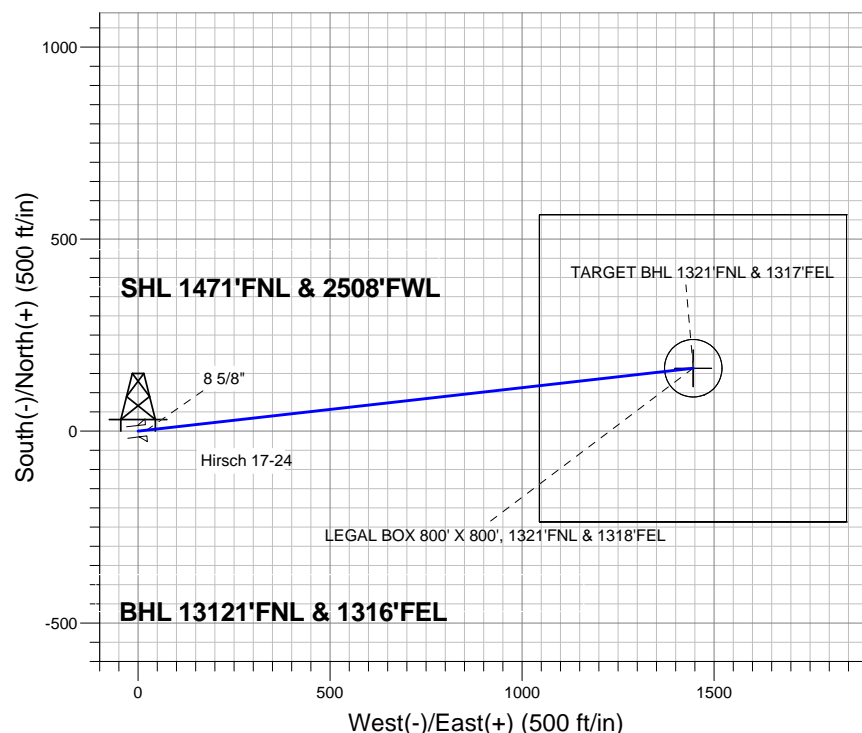
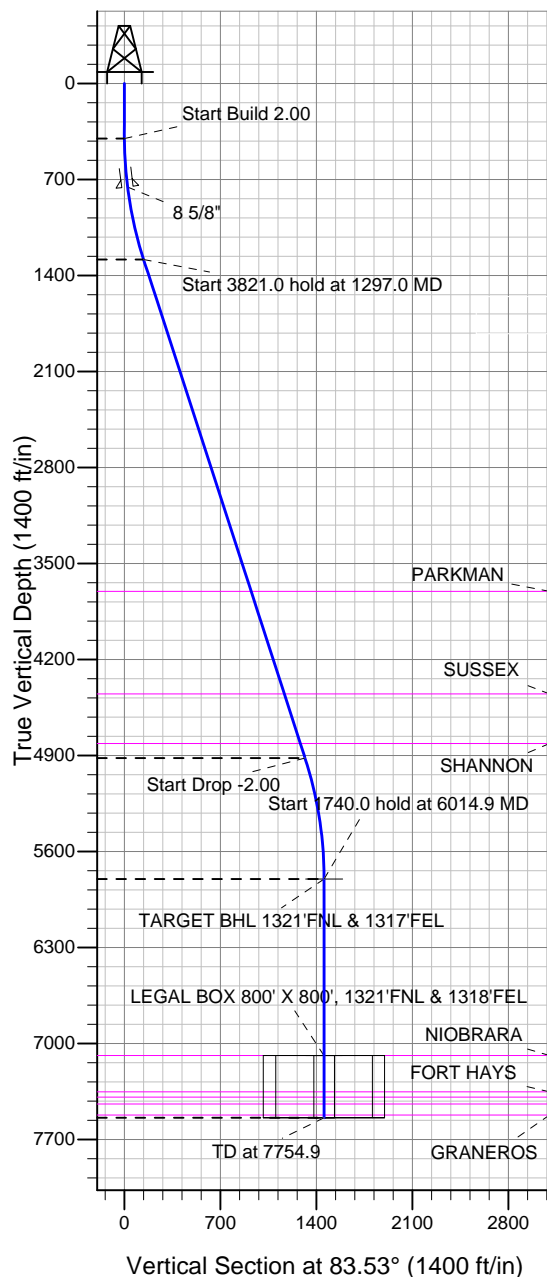
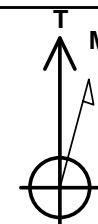


Well Name: Hirsch 17-24
 Surface Location: Hirsch 24-G Pad Sec. 24-T7N-R67W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 5035.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1448583.38 3182862.79 40.562898 -104.841838
 RKB-16' WELL @ 5051.0ft (RKB-16')

Bayswater Exploration & Production, LLC



Hirsch 17-24
 14:48, June 11 2013
 Plan #1 (06-10-13)



Azimuths to True North
 Magnetic North: 8.65°
 Magnetic Field
 Strength: 52997.2snT
 Dip Angle: 67.10°
 Date: 6/10/2013
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1321' FNL & 1317' FEL	5800.0	164.0	1446.2	40.563348	-104.836633	Point
LEGAL BOX 800' X 800', 1321' FNL & 1318' FEL	7086.0	164.0	1445.2	40.563348	-104.836637	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1321' FNL & 1317' FEL	7086.0	164.0	1446.2	40.563348	-104.836633	Circle (Radius: 75.0)

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	1297.0	17.94	83.53	1282.4	15.7	138.4	2.00	83.53	139.3	
4	5118.0	17.94	83.53	4917.6	148.3	1307.8	0.00	0.00	1316.2	
5	6014.9	0.00	0.00	5800.0	164.0	1446.2	2.00	180.00	1455.5	TARGET BHL 1321' FNL & 1317' FEL
6	7754.9	0.00	0.00	7540.0	164.0	1446.2	0.00	0.00	1455.5	



Bayswater Exploration & Production, LLC

SEC.24-T7N-R67W

Hirsch 24-G Pad Sec. 24-T7N-R67W

Hirsch 17-24

Wellbore #1

Plan: Plan #1 (06-10-13)

Standard Planning Report

11 June, 2013



Database:	Landmark	Local Co-ordinate Reference:	Well Hirsch 17-24
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Project:	SEC.24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	North Reference:	True
Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (06-10-13)		

Project	SEC.24-T7N-R67W		
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	Hirsch 24-G Pad Sec. 24-T7N-R67W				
Site Position:		Northing:	1,448,553.15 ft	Latitude:	40.562815
From:	Lat/Long	Easting:	3,182,862.74 ft	Longitude:	-104.841839
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.43 °

Well		Hirsch 17-24				
Well Position	+N-S	30.2 ft	Northing:	1,448,583.38 ft	Latitude:	40.562898
	+E-W	0.3 ft	Easting:	3,182,862.79 ft	Longitude:	-104.841838
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,035.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/10/2013	8.65	67.10	52,997

Design	Plan #1 (06-10-13)			
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	83.53

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	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	
1,297.0	17.94	83.53	1,282.4	15.7	138.4	2.00	2.00	0.00	83.53	
5,118.0	17.94	83.53	4,917.6	148.3	1,307.8	0.00	0.00	0.00	0.00	
6,014.9	0.00	0.00	5,800.0	164.0	1,446.2	2.00	-2.00	0.00	180.00	TARGET BHL 1321
7,754.9	0.00	0.00	7,540.0	164.0	1,446.2	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Hirsch 17-24
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Project:	SEC.24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	North Reference:	True
Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (06-10-13)		

Planned 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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	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
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	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
440.0	0.80	83.53	440.0	0.0	0.3	0.3	2.00	2.00	0.00
480.0	1.60	83.53	480.0	0.1	1.1	1.1	2.00	2.00	0.00
520.0	2.40	83.53	520.0	0.3	2.5	2.5	2.00	2.00	0.00
560.0	3.20	83.53	559.9	0.5	4.4	4.5	2.00	2.00	0.00
600.0	4.00	83.53	599.8	0.8	6.9	7.0	2.00	2.00	0.00
640.0	4.80	83.53	639.7	1.1	10.0	10.0	2.00	2.00	0.00
680.0	5.60	83.53	679.6	1.5	13.6	13.7	2.00	2.00	0.00
720.0	6.40	83.53	719.3	2.0	17.7	17.9	2.00	2.00	0.00
755.9	7.12	83.53	755.0	2.5	21.9	22.1	2.00	2.00	0.00
8 5/8"									
760.0	7.20	83.53	759.1	2.5	22.4	22.6	2.00	2.00	0.00
800.0	8.00	83.53	798.7	3.1	27.7	27.9	2.00	2.00	0.00
840.0	8.80	83.53	838.3	3.8	33.5	33.7	2.00	2.00	0.00
880.0	9.60	83.53	877.8	4.5	39.9	40.1	2.00	2.00	0.00
920.0	10.40	83.53	917.1	5.3	46.8	47.1	2.00	2.00	0.00
960.0	11.20	83.53	956.4	6.1	54.2	54.6	2.00	2.00	0.00
1,000.0	12.00	83.53	995.6	7.1	62.2	62.6	2.00	2.00	0.00
1,040.0	12.80	83.53	1,034.7	8.0	70.7	71.2	2.00	2.00	0.00
1,080.0	13.60	83.53	1,073.6	9.1	79.8	80.3	2.00	2.00	0.00
1,120.0	14.40	83.53	1,112.4	10.1	89.4	90.0	2.00	2.00	0.00
1,160.0	15.20	83.53	1,151.1	11.3	99.6	100.2	2.00	2.00	0.00
1,200.0	16.00	83.53	1,189.6	12.5	110.3	111.0	2.00	2.00	0.00
1,240.0	16.80	83.53	1,228.0	13.8	121.5	122.3	2.00	2.00	0.00
1,280.0	17.60	83.53	1,266.2	15.1	133.2	134.1	2.00	2.00	0.00
1,297.0	17.94	83.53	1,282.4	15.7	138.4	139.3	2.00	2.00	0.00
1,320.0	17.94	83.53	1,304.3	16.5	145.4	146.4	0.00	0.00	0.00
1,360.0	17.94	83.53	1,342.4	17.9	157.7	158.7	0.00	0.00	0.00
1,400.0	17.94	83.53	1,380.4	19.3	169.9	171.0	0.00	0.00	0.00
1,440.0	17.94	83.53	1,418.5	20.7	182.2	183.3	0.00	0.00	0.00
1,480.0	17.94	83.53	1,456.5	22.0	194.4	195.7	0.00	0.00	0.00
1,520.0	17.94	83.53	1,494.6	23.4	206.6	208.0	0.00	0.00	0.00
1,560.0	17.94	83.53	1,532.6	24.8	218.9	220.3	0.00	0.00	0.00
1,600.0	17.94	83.53	1,570.7	26.2	231.1	232.6	0.00	0.00	0.00
1,640.0	17.94	83.53	1,608.7	27.6	243.4	244.9	0.00	0.00	0.00
1,680.0	17.94	83.53	1,646.8	29.0	255.6	257.3	0.00	0.00	0.00
1,720.0	17.94	83.53	1,684.8	30.4	267.9	269.6	0.00	0.00	0.00
1,760.0	17.94	83.53	1,722.9	31.8	280.1	281.9	0.00	0.00	0.00
1,800.0	17.94	83.53	1,761.0	33.2	292.3	294.2	0.00	0.00	0.00
1,840.0	17.94	83.53	1,799.0	34.5	304.6	306.5	0.00	0.00	0.00
1,880.0	17.94	83.53	1,837.1	35.9	316.8	318.9	0.00	0.00	0.00
1,920.0	17.94	83.53	1,875.1	37.3	329.1	331.2	0.00	0.00	0.00
1,960.0	17.94	83.53	1,913.2	38.7	341.3	343.5	0.00	0.00	0.00
2,000.0	17.94	83.53	1,951.2	40.1	353.6	355.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Hirsch 17-24
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Project:	SEC.24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	North Reference:	True
Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (06-10-13)		

Planned 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)
2,040.0	17.94	83.53	1,989.3	41.5	365.8	368.1	0.00	0.00	0.00
2,080.0	17.94	83.53	2,027.3	42.9	378.0	380.5	0.00	0.00	0.00
2,120.0	17.94	83.53	2,065.4	44.3	390.3	392.8	0.00	0.00	0.00
2,160.0	17.94	83.53	2,103.5	45.6	402.5	405.1	0.00	0.00	0.00
2,200.0	17.94	83.53	2,141.5	47.0	414.8	417.4	0.00	0.00	0.00
2,240.0	17.94	83.53	2,179.6	48.4	427.0	429.7	0.00	0.00	0.00
2,280.0	17.94	83.53	2,217.6	49.8	439.2	442.1	0.00	0.00	0.00
2,320.0	17.94	83.53	2,255.7	51.2	451.5	454.4	0.00	0.00	0.00
2,360.0	17.94	83.53	2,293.7	52.6	463.7	466.7	0.00	0.00	0.00
2,400.0	17.94	83.53	2,331.8	54.0	476.0	479.0	0.00	0.00	0.00
2,440.0	17.94	83.53	2,369.8	55.4	488.2	491.3	0.00	0.00	0.00
2,480.0	17.94	83.53	2,407.9	56.8	500.5	503.7	0.00	0.00	0.00
2,520.0	17.94	83.53	2,446.0	58.1	512.7	516.0	0.00	0.00	0.00
2,560.0	17.94	83.53	2,484.0	59.5	524.9	528.3	0.00	0.00	0.00
2,600.0	17.94	83.53	2,522.1	60.9	537.2	540.6	0.00	0.00	0.00
2,640.0	17.94	83.53	2,560.1	62.3	549.4	552.9	0.00	0.00	0.00
2,680.0	17.94	83.53	2,598.2	63.7	561.7	565.3	0.00	0.00	0.00
2,720.0	17.94	83.53	2,636.2	65.1	573.9	577.6	0.00	0.00	0.00
2,760.0	17.94	83.53	2,674.3	66.5	586.2	589.9	0.00	0.00	0.00
2,800.0	17.94	83.53	2,712.3	67.9	598.4	602.2	0.00	0.00	0.00
2,840.0	17.94	83.53	2,750.4	69.2	610.6	614.5	0.00	0.00	0.00
2,880.0	17.94	83.53	2,788.5	70.6	622.9	626.9	0.00	0.00	0.00
2,920.0	17.94	83.53	2,826.5	72.0	635.1	639.2	0.00	0.00	0.00
2,960.0	17.94	83.53	2,864.6	73.4	647.4	651.5	0.00	0.00	0.00
3,000.0	17.94	83.53	2,902.6	74.8	659.6	663.8	0.00	0.00	0.00
3,040.0	17.94	83.53	2,940.7	76.2	671.8	676.2	0.00	0.00	0.00
3,080.0	17.94	83.53	2,978.7	77.6	684.1	688.5	0.00	0.00	0.00
3,120.0	17.94	83.53	3,016.8	79.0	696.3	700.8	0.00	0.00	0.00
3,160.0	17.94	83.53	3,054.8	80.4	708.6	713.1	0.00	0.00	0.00
3,200.0	17.94	83.53	3,092.9	81.7	720.8	725.4	0.00	0.00	0.00
3,240.0	17.94	83.53	3,131.0	83.1	733.1	737.8	0.00	0.00	0.00
3,280.0	17.94	83.53	3,169.0	84.5	745.3	750.1	0.00	0.00	0.00
3,320.0	17.94	83.53	3,207.1	85.9	757.5	762.4	0.00	0.00	0.00
3,360.0	17.94	83.53	3,245.1	87.3	769.8	774.7	0.00	0.00	0.00
3,400.0	17.94	83.53	3,283.2	88.7	782.0	787.0	0.00	0.00	0.00
3,440.0	17.94	83.53	3,321.2	90.1	794.3	799.4	0.00	0.00	0.00
3,480.0	17.94	83.53	3,359.3	91.5	806.5	811.7	0.00	0.00	0.00
3,520.0	17.94	83.53	3,397.3	92.8	818.7	824.0	0.00	0.00	0.00
3,560.0	17.94	83.53	3,435.4	94.2	831.0	836.3	0.00	0.00	0.00
3,600.0	17.94	83.53	3,473.4	95.6	843.2	848.6	0.00	0.00	0.00
3,640.0	17.94	83.53	3,511.5	97.0	855.5	861.0	0.00	0.00	0.00
3,680.0	17.94	83.53	3,549.6	98.4	867.7	873.3	0.00	0.00	0.00
3,720.0	17.94	83.53	3,587.6	99.8	880.0	885.6	0.00	0.00	0.00
3,760.0	17.94	83.53	3,625.7	101.2	892.2	897.9	0.00	0.00	0.00
3,800.0	17.94	83.53	3,663.7	102.6	904.4	910.2	0.00	0.00	0.00
3,840.0	17.94	83.53	3,701.8	104.0	916.7	922.6	0.00	0.00	0.00
3,841.3	17.94	83.53	3,703.0	104.0	917.1	923.0	0.00	0.00	0.00
PARKMAN									
3,880.0	17.94	83.53	3,739.8	105.3	928.9	934.9	0.00	0.00	0.00
3,920.0	17.94	83.53	3,777.9	106.7	941.2	947.2	0.00	0.00	0.00
3,960.0	17.94	83.53	3,815.9	108.1	953.4	959.5	0.00	0.00	0.00
4,000.0	17.94	83.53	3,854.0	109.5	965.7	971.8	0.00	0.00	0.00
4,040.0	17.94	83.53	3,892.1	110.9	977.9	984.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Hirsch 17-24
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Project:	SEC.24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	North Reference:	True
Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (06-10-13)		

Planned 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)
4,080.0	17.94	83.53	3,930.1	112.3	990.1	996.5	0.00	0.00	0.00
4,120.0	17.94	83.53	3,968.2	113.7	1,002.4	1,008.8	0.00	0.00	0.00
4,160.0	17.94	83.53	4,006.2	115.1	1,014.6	1,021.1	0.00	0.00	0.00
4,200.0	17.94	83.53	4,044.3	116.4	1,026.9	1,033.4	0.00	0.00	0.00
4,240.0	17.94	83.53	4,082.3	117.8	1,039.1	1,045.8	0.00	0.00	0.00
4,280.0	17.94	83.53	4,120.4	119.2	1,051.3	1,058.1	0.00	0.00	0.00
4,320.0	17.94	83.53	4,158.4	120.6	1,063.6	1,070.4	0.00	0.00	0.00
4,360.0	17.94	83.53	4,196.5	122.0	1,075.8	1,082.7	0.00	0.00	0.00
4,400.0	17.94	83.53	4,234.6	123.4	1,088.1	1,095.0	0.00	0.00	0.00
4,440.0	17.94	83.53	4,272.6	124.8	1,100.3	1,107.4	0.00	0.00	0.00
4,480.0	17.94	83.53	4,310.7	126.2	1,112.6	1,119.7	0.00	0.00	0.00
4,520.0	17.94	83.53	4,348.7	127.5	1,124.8	1,132.0	0.00	0.00	0.00
4,560.0	17.94	83.53	4,386.8	128.9	1,137.0	1,144.3	0.00	0.00	0.00
4,600.0	17.94	83.53	4,424.8	130.3	1,149.3	1,156.6	0.00	0.00	0.00
4,627.5	17.94	83.53	4,451.0	131.3	1,157.7	1,165.1	0.00	0.00	0.00
SUSSEX									
4,640.0	17.94	83.53	4,462.9	131.7	1,161.5	1,169.0	0.00	0.00	0.00
4,680.0	17.94	83.53	4,500.9	133.1	1,173.8	1,181.3	0.00	0.00	0.00
4,720.0	17.94	83.53	4,539.0	134.5	1,186.0	1,193.6	0.00	0.00	0.00
4,760.0	17.94	83.53	4,577.1	135.9	1,198.3	1,205.9	0.00	0.00	0.00
4,800.0	17.94	83.53	4,615.1	137.3	1,210.5	1,218.3	0.00	0.00	0.00
4,840.0	17.94	83.53	4,653.2	138.7	1,222.7	1,230.6	0.00	0.00	0.00
4,880.0	17.94	83.53	4,691.2	140.0	1,235.0	1,242.9	0.00	0.00	0.00
4,920.0	17.94	83.53	4,729.3	141.4	1,247.2	1,255.2	0.00	0.00	0.00
4,960.0	17.94	83.53	4,767.3	142.8	1,259.5	1,267.5	0.00	0.00	0.00
5,000.0	17.94	83.53	4,805.4	144.2	1,271.7	1,279.9	0.00	0.00	0.00
5,005.9	17.94	83.53	4,811.0	144.4	1,273.5	1,281.7	0.00	0.00	0.00
SHANNON									
5,040.0	17.94	83.53	4,843.4	145.6	1,283.9	1,292.2	0.00	0.00	0.00
5,080.0	17.94	83.53	4,881.5	147.0	1,296.2	1,304.5	0.00	0.00	0.00
5,118.0	17.94	83.53	4,917.6	148.3	1,307.8	1,316.2	0.00	0.00	0.00
5,120.0	17.90	83.53	4,919.6	148.4	1,308.4	1,316.8	2.00	-2.00	0.00
5,160.0	17.10	83.53	4,957.7	149.7	1,320.4	1,328.8	2.00	-2.00	0.00
5,200.0	16.30	83.53	4,996.0	151.0	1,331.8	1,340.3	2.00	-2.00	0.00
5,240.0	15.50	83.53	5,034.5	152.3	1,342.7	1,351.3	2.00	-2.00	0.00
5,280.0	14.70	83.53	5,073.1	153.4	1,353.0	1,361.7	2.00	-2.00	0.00
5,320.0	13.90	83.53	5,111.9	154.5	1,362.9	1,371.6	2.00	-2.00	0.00
5,360.0	13.10	83.53	5,150.8	155.6	1,372.1	1,380.9	2.00	-2.00	0.00
5,400.0	12.30	83.53	5,189.8	156.6	1,380.9	1,389.7	2.00	-2.00	0.00
5,440.0	11.50	83.53	5,228.9	157.5	1,389.1	1,398.0	2.00	-2.00	0.00
5,480.0	10.70	83.53	5,268.2	158.4	1,396.7	1,405.7	2.00	-2.00	0.00
5,520.0	9.90	83.53	5,307.5	159.2	1,403.8	1,412.8	2.00	-2.00	0.00
5,560.0	9.10	83.53	5,347.0	159.9	1,410.4	1,419.4	2.00	-2.00	0.00
5,600.0	8.30	83.53	5,386.5	160.6	1,416.4	1,425.5	2.00	-2.00	0.00
5,640.0	7.50	83.53	5,426.1	161.2	1,421.9	1,431.0	2.00	-2.00	0.00
5,680.0	6.70	83.53	5,465.8	161.8	1,426.8	1,435.9	2.00	-2.00	0.00
5,720.0	5.90	83.53	5,505.6	162.3	1,431.1	1,440.3	2.00	-2.00	0.00
5,760.0	5.10	83.53	5,545.4	162.7	1,434.9	1,444.1	2.00	-2.00	0.00
5,800.0	4.30	83.53	5,585.3	163.1	1,438.2	1,447.4	2.00	-2.00	0.00
5,840.0	3.50	83.53	5,625.2	163.4	1,440.9	1,450.1	2.00	-2.00	0.00
5,880.0	2.70	83.53	5,665.1	163.6	1,443.0	1,452.3	2.00	-2.00	0.00
5,920.0	1.90	83.53	5,705.1	163.8	1,444.6	1,453.9	2.00	-2.00	0.00
5,960.0	1.10	83.53	5,745.1	163.9	1,445.7	1,454.9	2.00	-2.00	0.00
6,000.0	0.30	83.53	5,785.1	164.0	1,446.2	1,455.4	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Hirsch 17-24
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Project:	SEC.24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	North Reference:	True
Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (06-10-13)		

Planned 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)
6,014.9	0.00	0.00	5,800.0	164.0	1,446.2	1,455.5	2.00	-2.00	-559.33
TARGET BHL 1321'FNL & 1317'FEL									
6,040.0	0.00	0.00	5,825.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,080.0	0.00	0.00	5,865.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,120.0	0.00	0.00	5,905.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,160.0	0.00	0.00	5,945.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,200.0	0.00	0.00	5,985.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,240.0	0.00	0.00	6,025.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,280.0	0.00	0.00	6,065.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,320.0	0.00	0.00	6,105.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,360.0	0.00	0.00	6,145.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,185.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,440.0	0.00	0.00	6,225.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,480.0	0.00	0.00	6,265.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,520.0	0.00	0.00	6,305.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,560.0	0.00	0.00	6,345.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,385.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,640.0	0.00	0.00	6,425.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,680.0	0.00	0.00	6,465.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,720.0	0.00	0.00	6,505.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,760.0	0.00	0.00	6,545.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,585.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,840.0	0.00	0.00	6,625.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,880.0	0.00	0.00	6,665.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,920.0	0.00	0.00	6,705.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
6,960.0	0.00	0.00	6,745.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,785.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,040.0	0.00	0.00	6,825.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,080.0	0.00	0.00	6,865.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,120.0	0.00	0.00	6,905.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,160.0	0.00	0.00	6,945.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,200.0	0.00	0.00	6,985.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,240.0	0.00	0.00	7,025.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,280.0	0.00	0.00	7,065.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,300.9	0.00	0.00	7,086.0	164.0	1,446.2	1,455.5	0.00	0.00	0.00
NIORARA - TARGET CIRCLE 1321'FNL & 1317'FEL - LEGAL BOX 800' X 800', 1321'FNL & 1318'FEL									
7,320.0	0.00	0.00	7,105.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,360.0	0.00	0.00	7,145.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,185.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,440.0	0.00	0.00	7,225.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,480.0	0.00	0.00	7,265.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,520.0	0.00	0.00	7,305.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,560.0	0.00	0.00	7,345.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,565.9	0.00	0.00	7,351.0	164.0	1,446.2	1,455.5	0.00	0.00	0.00
FORT HAYS									
7,600.0	0.00	0.00	7,385.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,605.9	0.00	0.00	7,391.0	164.0	1,446.2	1,455.5	0.00	0.00	0.00
CODELL									
7,640.0	0.00	0.00	7,425.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,655.9	0.00	0.00	7,441.0	164.0	1,446.2	1,455.5	0.00	0.00	0.00
GREENHORN									
7,680.0	0.00	0.00	7,465.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00
7,720.0	0.00	0.00	7,505.1	164.0	1,446.2	1,455.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Hirsch 17-24
Company:	Bayswater Exploration & Production, LLC	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Project:	SEC.24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	North Reference:	True
Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (06-10-13)		

Planned 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)
7,735.9	0.00	0.00	7,521.0	164.0	1,446.2	1,455.5	0.00	0.00	0.00
GRANEROS									
7,754.9	0.00	0.00	7,540.0	164.0	1,446.2	1,455.5	0.00	0.00	0.00

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
755.9	755.0	8 5/8"	8-5/8	12-1/4

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,841.3	3,703.0	PARKMAN		0.00	
4,627.5	4,451.0	SUSSEX		0.00	
5,005.9	4,811.0	SHANNON		0.00	
7,300.9	7,086.0	NIOBRARA		0.00	
7,565.9	7,351.0	FORT HAYS		0.00	
7,605.9	7,391.0	CODELL		0.00	
7,655.9	7,441.0	GREENHORN		0.00	
7,735.9	7,521.0	GRANEROS		0.00	



Directional

Bayswater Exploration & Production, LLC

SEC.24-T7N-R67W

Hirsch 24-G Pad Sec. 24-T7N-R67W

Hirsch 17-24

Wellbore #1

Plan #1 (06-10-13)

Anticollision Report

13 June, 2013



Directional

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Hirsch 17-24
Project:	SEC.24-T7N-R67W	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Reference Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (06-10-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (06-10-13)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 6/11/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,754.9	Plan #1 (06-10-13) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Hirsch 24-G Pad Sec. 24-T7N-R67W						
Hirsch 11-24 - Wellbore #1 - Plan #1 (06-10-13)	200.0	200.0	30.2	29.6	44.847	CC, ES
Hirsch 11-24 - Wellbore #1 - Plan #1 (06-10-13)	500.0	495.8	45.8	43.8	23.176	SF
Hirsch 6-24 - Wellbore #1 - Plan #1 (06-10-13)	400.0	400.0	14.9	13.4	9.494	CC
Hirsch 6-24 - Wellbore #1 - Plan #1 (06-10-13)	500.0	500.0	15.2	13.2	7.568	ES
Hirsch 6-24 - Wellbore #1 - Plan #1 (06-10-13)	600.0	599.8	17.2	14.7	7.002	SF

Offset Design Hirsch 24-G Pad Sec. 24-T7N-R67W - Hirsch 11-24 - Wellbore #1 - Plan #1 (06-10-13)												
Survey Program: 0-MWD												
Reference	Offset	Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-30.2	-0.3	30.2			
100.0	100.0	100.0	100.0	0.1	0.1	-179.47	-30.2	-0.3	30.2	30.0	0.22	134.540
200.0	200.0	200.0	200.0	0.3	0.3	-179.47	-30.2	-0.3	30.2	29.6	0.67	44.847 CC, ES
300.0	300.0	299.0	298.9	0.6	0.5	-178.63	-31.9	-0.8	31.9	30.8	1.10	29.048
400.0	400.0	397.7	397.5	0.8	0.7	-176.56	-36.8	-2.2	36.9	35.4	1.53	24.165
500.0	500.0	495.8	495.3	1.0	1.0	104.27	-44.9	-4.6	45.8	43.8	1.97	23.176 SF
600.0	599.8	593.0	591.7	1.2	1.3	110.55	-56.0	-7.9	59.3	56.9	2.43	24.428
700.0	699.5	688.6	686.2	1.5	1.6	116.47	-70.1	-12.1	78.1	75.2	2.91	26.872
800.0	798.7	782.3	778.3	1.7	1.9	121.26	-86.8	-17.0	102.5	99.1	3.42	29.988
900.0	897.5	873.7	867.5	2.0	2.3	124.89	-105.9	-22.7	132.3	128.4	3.96	33.413
1,000.0	995.6	962.5	953.5	2.4	2.8	127.58	-127.0	-28.9	167.4	162.9	4.54	36.912
1,100.0	1,093.1	1,048.4	1,036.0	2.8	3.2	129.53	-149.8	-35.7	207.6	202.5	5.15	40.345
1,200.0	1,189.6	1,131.0	1,114.7	3.3	3.7	130.93	-174.0	-42.8	252.7	246.9	5.79	43.629
1,297.0	1,282.4	1,208.0	1,187.3	3.8	4.2	131.88	-198.5	-50.1	300.8	294.3	6.45	46.628
1,300.0	1,285.3	1,210.4	1,189.5	3.9	4.2	131.94	-199.3	-50.3	302.3	295.8	6.47	46.716
1,400.0	1,380.4	1,286.9	1,261.0	4.5	4.7	133.29	-225.6	-58.1	355.2	348.1	7.19	49.412
1,500.0	1,475.5	1,366.4	1,334.6	5.1	5.3	134.23	-254.5	-66.6	410.0	402.1	7.94	51.608
1,600.0	1,570.7	1,449.8	1,411.6	5.7	5.9	134.97	-285.0	-75.7	465.0	456.3	8.70	53.470
1,700.0	1,665.8	1,533.1	1,488.7	6.3	6.5	135.56	-315.5	-84.7	520.1	510.6	9.46	54.952
1,800.0	1,761.0	1,616.5	1,565.8	6.9	7.2	136.03	-346.0	-93.7	575.2	565.0	10.24	56.157
1,900.0	1,856.1	1,699.9	1,642.8	7.6	7.8	136.43	-376.4	-102.7	630.3	619.3	11.03	57.153
2,000.0	1,951.2	1,783.2	1,719.9	8.2	8.4	136.75	-406.9	-111.7	685.5	673.6	11.82	57.982

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Hirsch 17-24
Project:	SEC.24-T7N-R67W	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Reference Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (06-10-13)	Offset TVD Reference:	Offset Datum

Offset Design		Hirsch 24-G Pad Sec. 24-T7N-R67W - Hirsch 11-24 - Wellbore #1 - Plan #1 (06-10-13)											Offset Site Error:		0.0 ft											
Survey Program: 0-MWD													Offset Well Error:		0.0 ft											
Reference		Offset		Semi Major Axis			Distance							Warning												
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor														
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)															
2,100.0	2,046.4	1,866.6	1,797.0	8.9	9.0	137.03	-437.4	-120.8	740.6	728.0	12.62	58.685														
2,200.0	2,141.5	1,950.0	1,874.0	9.5	9.7	137.28	-467.9	-129.8	795.8	782.4	13.42	59.287														
2,300.0	2,236.7	2,033.3	1,951.1	10.2	10.3	137.49	-498.4	-138.8	850.9	836.7	14.23	59.807														
2,400.0	2,331.8	2,116.7	2,028.1	10.8	10.9	137.67	-528.9	-147.8	906.1	891.1	15.04	60.260														
2,500.0	2,426.9	2,200.1	2,105.2	11.4	11.5	137.83	-559.4	-156.8	961.3	945.5	15.85	60.657														
2,600.0	2,522.1	2,283.4	2,182.3	12.1	12.2	137.98	-589.9	-165.9	1,016.5	999.8	16.66	61.006														
														2,700.0	2,617.2	2,366.8	2,259.3	12.7	12.8	138.11	-620.4	-174.9	1,071.7	1,054.2	17.48	61.316
														2,800.0	2,712.3	2,450.1	2,336.4	13.4	13.4	138.23	-650.9	-183.9	1,126.9	1,108.6	18.30	61.594
														2,900.0	2,807.5	2,533.5	2,413.5	14.0	14.1	138.33	-681.4	-192.9	1,182.1	1,163.0	19.11	61.843
														3,000.0	2,902.6	2,616.9	2,490.5	14.7	14.7	138.43	-711.8	-202.0	1,237.3	1,217.4	19.93	62.068
3,100.0	2,997.8	2,700.2	2,567.6	15.3	15.3	138.52	-742.3	-211.0	1,292.5	1,271.7	20.76	62.271														
														3,200.0	3,092.9	2,783.6	2,644.6	16.0	16.0	138.60	-772.8	-220.0	1,347.7	1,326.1	21.58	62.456
														3,300.0	3,188.0	2,867.0	2,721.7	16.7	16.6	138.68	-803.3	-229.0	1,402.9	1,380.5	22.40	62.625
														3,400.0	3,283.2	2,950.3	2,798.8	17.3	17.2	138.75	-833.8	-238.0	1,458.1	1,434.9	23.23	62.780
														3,500.0	3,378.3	3,033.7	2,875.8	18.0	17.9	138.81	-864.3	-247.1	1,513.3	1,489.3	24.05	62.922
3,600.0	3,473.4	3,117.1	2,952.9	18.6	18.5	138.87	-894.8	-256.1	1,568.6	1,543.7	24.88	63.053														
														3,700.0	3,568.6	3,200.4	3,030.0	19.3	19.1	138.93	-925.3	-265.1	1,623.8	1,598.1	25.70	63.174
														3,800.0	3,663.7	3,283.8	3,107.0	19.9	19.8	138.98	-955.8	-274.1	1,679.0	1,652.5	26.53	63.286
														3,900.0	3,758.9	3,367.2	3,184.1	20.6	20.4	139.03	-986.3	-283.1	1,734.2	1,706.8	27.36	63.390
														4,000.0	3,854.0	3,450.5	3,261.1	21.2	21.0	139.07	-1,016.7	-292.2	1,789.4	1,761.2	28.19	63.487
4,100.0	3,949.1	3,533.9	3,338.2	21.9	21.7	139.12	-1,047.2	-301.2	1,844.6	1,815.6	29.01	63.577														
														4,200.0	4,044.3	3,617.2	3,415.3	22.5	22.3	139.16	-1,077.7	-310.2	1,899.9	1,870.0	29.84	63.662
														4,300.0	4,139.4	3,700.6	3,492.3	23.2	22.9	139.19	-1,108.2	-319.2	1,955.1	1,924.4	30.67	63.741
														4,400.0	4,234.6	3,784.0	3,569.4	23.8	23.6	139.23	-1,138.7	-328.3	2,010.3	1,978.8	31.50	63.815
														4,500.0	4,329.7	3,867.3	3,646.5	24.5	24.2	139.26	-1,169.2	-337.3	2,065.5	2,033.2	32.33	63.884
4,600.0	4,424.8	3,950.7	3,723.5	25.1	24.8	139.30	-1,199.7	-346.3	2,120.7	2,087.6	33.16	63.949														
														4,700.0	4,520.0	4,034.1	3,800.6	25.8	25.5	139.33	-1,230.2	-355.3	2,176.0	2,142.0	33.99	64.011
														4,800.0	4,615.1	4,117.4	3,877.6	26.5	26.1	139.36	-1,260.7	-364.3	2,231.2	2,196.4	34.82	64.069
														4,900.0	4,710.2	4,200.8	3,954.7	27.1	26.7	139.38	-1,291.2	-373.4	2,286.4	2,250.7	35.66	64.124
														5,000.0	4,805.4	4,284.2	4,031.8	27.8	27.4	139.41	-1,321.6	-382.4	2,341.6	2,305.1	36.49	64.175
5,100.0	4,900.5	4,367.5	4,108.8	28.4	28.0	139.44	-1,352.1	-391.4	2,396.9	2,359.5	37.32	64.224														
														5,118.0	4,917.6	4,382.5	4,122.7	28.5	28.1	139.44	-1,357.6	-393.0	2,406.8	2,369.3	37.47	64.233
														5,200.0	4,996.0	4,451.4	4,186.3	29.0	28.6	140.12	-1,382.8	-400.5	2,451.3	2,413.0	38.31	63.993
														5,300.0	5,092.5	4,536.6	4,265.1	29.4	29.3	140.85	-1,414.0	-409.7	2,503.6	2,464.3	39.24	63.799
														5,400.0	5,189.8	4,623.2	4,345.1	29.8	30.0	141.46	-1,445.6	-419.1	2,553.5	2,513.4	40.14	63.613
5,500.0	5,287.8	4,710.9	4,426.2	30.2	30.6	141.97	-1,477.7	-428.6	2,601.0	2,560.0	41.00	63.440														
														5,600.0	5,386.5	4,799.7	4,508.3	30.5	31.3	142.38	-1,510.2	-438.2	2,646.2	2,604.4	41.81	63.285
														5,700.0	5,485.7	4,889.5	4,591.3	30.7	32.0	142.70	-1,543.0	-447.9	2,688.9	2,646.3	42.58	63.149
														5,800.0	5,585.3	4,980.2	4,675.2	30.9	32.7	142.94	-1,576.2	-457.7	2,729.1	2,685.8	43.29	63.036
														5,900.0	5,685.1	5,071.6	4,759.7	31.0	33.4	143.10	-1,609.6	-467.6	2,766.8	2,722.8	43.95	62.947
6,000.0	5,785.1	5,412.8	5,080.2	31.1	35.2	142.34	-1,721.3	-500.6	2,800.2	2,754.9	45.32	61.786														
														6,014.9	5,800.0	5,515.9	5,179.5	31.2	35.6	-134.37	-1,747.9	-508.5	2,803.8	2,758.1	45.62	61.453
														6,100.0	5,885.1	6,133.1	5,788.9	31.2	37.2	-135.26	-1,834.1	-534.0	2,814.8	2,767.9	46.90	60.021
														6,200.0	5,985.1	6,329.3	5,985.1	31.3	37.3	-135.28	-1,836.2	-534.6	2,815.0	2,767.8	47.22	59.613
														6,300.0	6,085.1	6,429.3	6,085.1	31.4	37.4	-135.28	-1,836.2	-534.6	2,815.0	2,767.6	47.43	59.349
6,400.0	6,185.1	6,529.3	6,185.1	31.5	37.4	-135.28	-1,836.2	-534.6	2,815.0	2,767.4	47.64	59.084														
														6,500.0	6,285.1	6,629.3	6,285.1	31.6	37.5	-135.28	-1,836.2	-534.6	2,815.0	2,767.2	47.86	58.817
														6,600.0	6,385.1	6,729.3	6,385.1	31.7	37.6	-135.28	-1,836.2	-534.6	2,815.0	2,766.9	48.08	58.549
														6,700.0	6,485.1	6,829.3	6,485.1	31.8	37.6	-135.28	-1,836.2	-534.6	2,815.0	2,766.7	48.30	58.279
														6,800.0	6,585.1	6,929.3	6,585.1	31.9	37.7	-135.28	-1,836.2	-534.6	2,815.0	2,766.5	48.53	58.008
6,900.0	6,685.1	7,029.3	6,685.1	32.0	37.8	-135.28	-1,836.2	-534.6	2,815.0	2,766.3	48.76	57.736														
														7,000.0	6,785.1	7,129.3	6,785.1	32.1	37.8	-135.28	-1,836.2	-534.6	2,815.0	2,766.0	48.99	57.463

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Hirsch 17-24
Project:	SEC.24-T7N-R67W	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Reference Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (06-10-13)	Offset TVD Reference:	Offset Datum

Offset Design Hirsch 24-G Pad Sec. 24-T7N-R67W - Hirsch 11-24 - Wellbore #1 - Plan #1 (06-10-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis			Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
7,100.0	6,885.1	7,229.3	6,885.1	32.2	37.9	-135.28	-1,836.2	-534.6	2,815.0	2,765.8	49.22	57.188	
7,200.0	6,985.1	7,329.3	6,985.1	32.3	38.0	-135.28	-1,836.2	-534.6	2,815.0	2,765.6	49.46	56.913	
7,300.0	7,085.1	7,429.3	7,085.1	32.4	38.0	-135.28	-1,836.2	-534.6	2,815.0	2,765.3	49.70	56.638	
7,400.0	7,185.1	7,529.3	7,185.1	32.5	38.1	-135.28	-1,836.2	-534.6	2,815.0	2,765.1	49.95	56.362	
7,500.0	7,285.1	7,629.3	7,285.1	32.6	38.2	-135.28	-1,836.2	-534.6	2,815.0	2,764.8	50.19	56.085	
7,600.0	7,385.1	7,729.3	7,385.1	32.7	38.3	-135.28	-1,836.2	-534.6	2,815.0	2,764.6	50.44	55.808	
7,700.0	7,485.1	7,829.3	7,485.1	32.8	38.3	-135.28	-1,836.2	-534.6	2,815.0	2,764.3	50.69	55.530	
7,714.6	7,499.7	7,843.9	7,499.7	32.8	38.3	-135.28	-1,836.2	-534.6	2,815.0	2,764.3	50.73	55.490	
7,754.9	7,540.0	7,854.2	7,510.0	32.9	38.4	-135.28	-1,836.2	-534.6	2,815.2	2,764.4	50.80	55.420	

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Hirsch 17-24
Project:	SEC.24-T7N-R67W	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Reference Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (06-10-13)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-14.9	0.0	14.9	14.9	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-14.9	0.0	14.9	14.7	0.22	66.457		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-14.9	0.0	14.9	14.3	0.67	22.152		
300.0	300.0	300.0	300.0	0.6	0.6	-180.00	-14.9	0.0	14.9	13.8	1.12	13.291		
400.0	400.0	400.0	400.0	0.8	0.8	-180.00	-14.9	0.0	14.9	13.4	1.57	9.494 CC		
500.0	500.0	500.0	500.0	1.0	1.0	103.00	-14.9	0.0	15.2	13.2	2.01	7.568 ES		
600.0	599.8	599.8	599.8	1.2	1.2	120.21	-14.9	0.0	17.2	14.7	2.45	7.002 SF		
700.0	699.5	699.5	699.5	1.5	1.5	139.34	-14.9	0.0	22.9	19.9	2.91	7.860		
800.0	798.7	798.7	798.7	1.7	1.7	153.12	-14.9	0.0	33.1	29.7	3.36	9.844		
900.0	897.5	897.5	897.5	2.0	1.9	161.56	-14.9	0.0	47.6	43.8	3.81	12.487		
1,000.0	995.6	995.6	995.6	2.4	2.1	166.72	-14.9	0.0	66.0	61.7	4.26	15.491		
1,100.0	1,093.1	1,090.5	1,090.5	2.8	2.3	169.50	-15.9	-1.0	89.4	84.7	4.69	19.049		
1,200.0	1,189.6	1,183.1	1,182.9	3.3	2.5	170.61	-18.9	-4.3	119.0	113.8	5.12	23.235		
1,297.0	1,282.4	1,270.1	1,269.7	3.8	2.7	170.88	-23.7	-9.3	153.3	147.8	5.55	27.653		
1,300.0	1,285.3	1,272.7	1,272.3	3.9	2.7	170.88	-23.8	-9.4	154.5	148.9	5.56	27.792		
1,400.0	1,380.4	1,359.9	1,359.0	4.5	2.9	170.79	-30.4	-16.4	194.1	188.0	6.03	32.203		
1,500.0	1,475.5	1,445.0	1,443.2	5.1	3.1	170.40	-38.6	-25.1	236.1	229.5	6.51	36.285		
1,600.0	1,570.7	1,529.9	1,526.9	5.7	3.3	169.87	-48.4	-35.5	280.3	273.3	7.00	40.065		
1,700.0	1,665.8	1,619.3	1,614.9	6.3	3.6	169.40	-59.1	-46.9	325.2	317.7	7.50	43.348		
1,800.0	1,761.0	1,708.6	1,702.8	6.9	3.9	169.05	-69.9	-58.4	370.1	362.1	8.01	46.206		
1,900.0	1,856.1	1,797.9	1,790.8	7.6	4.1	168.77	-80.6	-69.8	415.0	406.5	8.53	48.674		
2,000.0	1,951.2	1,887.3	1,878.7	8.2	4.5	168.54	-91.4	-81.2	459.9	450.9	9.05	50.812		
2,100.0	2,046.4	1,976.6	1,966.7	8.9	4.8	168.36	-102.1	-92.6	504.9	495.3	9.58	52.686		
2,200.0	2,141.5	2,065.9	2,054.6	9.5	5.1	168.20	-112.8	-104.0	549.8	539.7	10.12	54.344		
2,300.0	2,236.7	2,155.3	2,142.5	10.2	5.4	168.07	-123.6	-115.5	594.7	584.1	10.66	55.808		
2,400.0	2,331.8	2,244.6	2,230.5	10.8	5.8	167.96	-134.3	-126.9	639.7	628.5	11.20	57.112		
2,500.0	2,426.9	2,333.9	2,318.4	11.4	6.1	167.86	-145.1	-138.3	684.6	672.8	11.75	58.279		
2,600.0	2,522.1	2,423.2	2,406.4	12.1	6.4	167.78	-155.8	-149.7	729.5	717.2	12.30	59.328		
2,700.0	2,617.2	2,512.6	2,494.3	12.7	6.8	167.70	-166.6	-161.1	774.5	761.6	12.85	60.275		
2,800.0	2,712.3	2,601.9	2,582.3	13.4	7.1	167.63	-177.3	-172.6	819.4	806.0	13.40	61.133		
2,900.0	2,807.5	2,691.2	2,670.2	14.0	7.5	167.57	-188.1	-184.0	864.3	850.4	13.96	61.913		
3,000.0	2,902.6	2,780.6	2,758.2	14.7	7.8	167.52	-198.8	-195.4	909.3	894.8	14.52	62.625		
3,100.0	2,997.8	2,869.9	2,846.1	15.3	8.2	167.47	-209.6	-206.8	954.2	939.1	15.08	63.277		
3,200.0	3,092.9	2,959.2	2,934.0	16.0	8.5	167.43	-220.3	-218.2	999.2	983.5	15.64	63.877		
3,300.0	3,188.0	3,048.6	3,022.0	16.7	8.9	167.38	-231.1	-229.7	1,044.1	1,027.9	16.21	64.430		
3,400.0	3,283.2	3,137.9	3,109.9	17.3	9.2	167.35	-241.8	-241.1	1,089.0	1,072.3	16.77	64.941		
3,500.0	3,378.3	3,227.2	3,197.9	18.0	9.6	167.31	-252.6	-252.5	1,134.0	1,116.6	17.34	65.415		
3,600.0	3,473.4	3,316.6	3,285.8	18.6	9.9	167.28	-263.3	-263.9	1,178.9	1,161.0	17.90	65.855		
3,700.0	3,568.6	3,405.9	3,373.8	19.3	10.3	167.25	-274.1	-275.3	1,223.9	1,205.4	18.47	66.264		
3,800.0	3,663.7	3,495.2	3,461.7	19.9	10.7	167.22	-284.8	-286.8	1,268.8	1,249.8	19.04	66.646		
3,900.0	3,758.9	3,584.5	3,549.6	20.6	11.0	167.20	-295.5	-298.2	1,313.7	1,294.1	19.61	67.003		
4,000.0	3,854.0	3,673.9	3,637.6	21.2	11.4	167.17	-306.3	-309.6	1,358.7	1,338.5	20.18	67.337		
4,100.0	3,949.1	3,763.2	3,725.5	21.9	11.7	167.15	-317.0	-321.0	1,403.6	1,382.9	20.75	67.650		
4,200.0	4,044.3	3,852.5	3,813.5	22.5	12.1	167.13	-327.8	-332.4	1,448.6	1,427.2	21.32	67.944		
4,300.0	4,139.4	3,941.9	3,901.4	23.2	12.4	167.11	-338.5	-343.9	1,493.5	1,471.6	21.89	68.221		
4,400.0	4,234.6	4,031.2	3,989.4	23.8	12.8	167.09	-349.3	-355.3	1,538.5	1,516.0	22.46	68.483		
4,500.0	4,329.7	4,120.5	4,077.3	24.5	13.2	167.07	-360.0	-366.7	1,583.4	1,560.4	23.04	68.729		
4,600.0	4,424.8	4,209.9	4,165.2	25.1	13.5	167.06	-370.8	-378.1	1,628.3	1,604.7	23.61	68.962		
4,700.0	4,520.0	4,299.2	4,253.2	25.8	13.9	167.04	-381.5	-389.5	1,673.3	1,649.1	24.19	69.183		
4,800.0	4,615.1	4,388.5	4,341.1	26.5	14.3	167.03	-392.3	-401.0	1,718.2	1,693.5	24.76	69.391		
4,900.0	4,710.2	4,477.9	4,429.1	27.1	14.6	167.01	-403.0	-412.4	1,763.2	1,737.8	25.34	69.589		
5,000.0	4,805.4	4,567.2	4,517.0	27.8	15.0	167.00	-413.8	-423.8	1,808.1	1,782.2	25.91	69.777		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

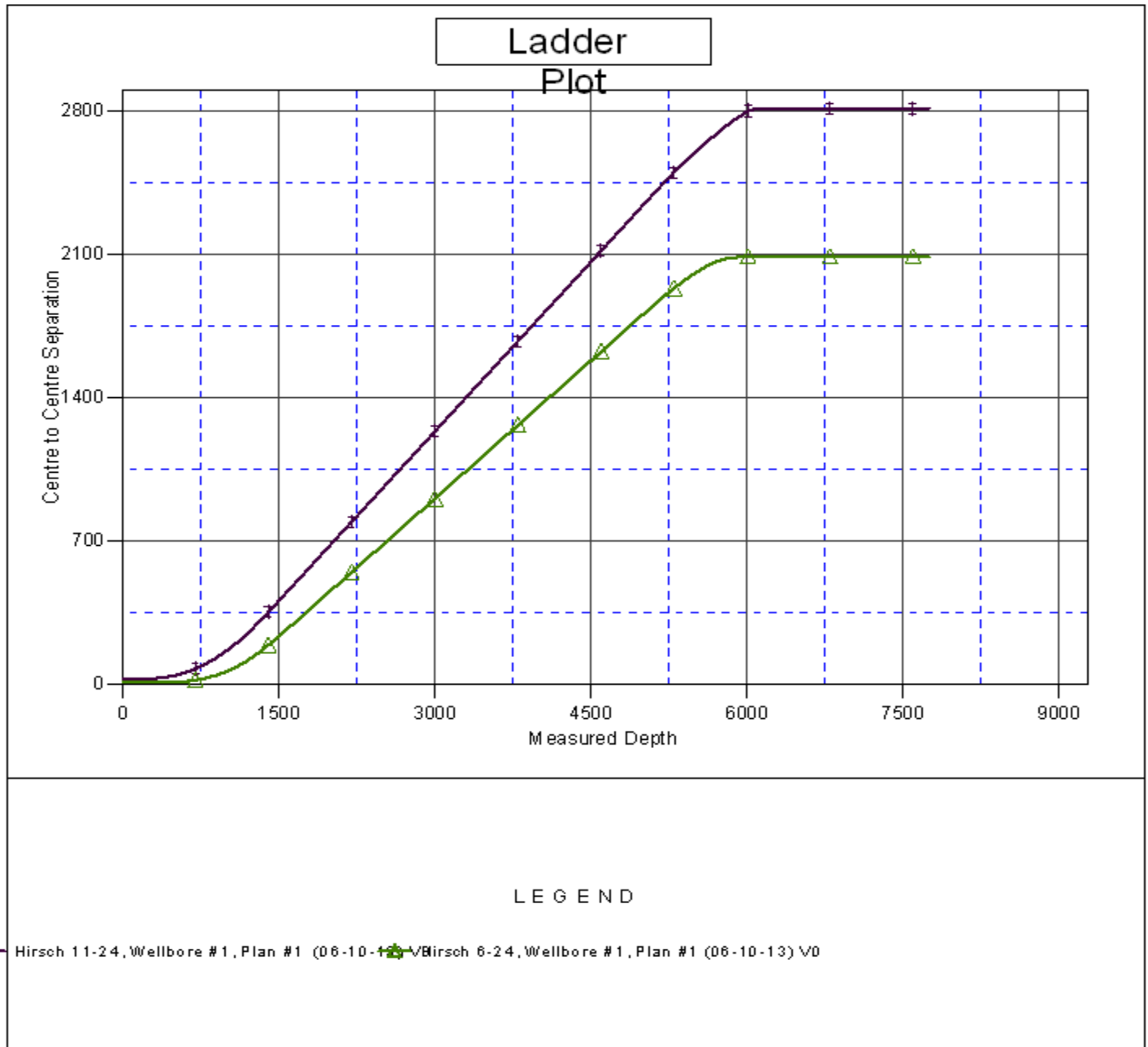
Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Hirsch 17-24
Project:	SEC.24-T7N-R67W	TVD Reference:	WELL @ 5051.0ft (RKB-16')
Reference Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (06-10-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Hirsch 24-G Pad Sec. 24-T7N-R67W - Hirsch 6-24 - Wellbore #1 - Plan #1 (06-10-13)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	4,900.5	4,656.5	4,605.0	28.4	15.3	166.99	-424.5	-435.2	1,853.1	1,826.6	26.49	69.956	
5,118.0	4,917.6	4,672.6	4,620.8	28.5	15.4	166.98	-426.4	-437.3	1,861.1	1,834.5	26.59	69.987	
5,200.0	4,996.0	4,746.3	4,693.4	29.0	15.7	167.14	-435.3	-446.7	1,897.0	1,869.8	27.14	69.884	
5,300.0	5,092.5	4,837.6	4,783.2	29.4	16.1	167.30	-446.3	-458.4	1,937.9	1,910.1	27.76	69.799	
5,400.0	5,189.8	4,930.2	4,874.4	29.8	16.4	167.41	-457.4	-470.2	1,975.6	1,947.3	28.35	69.683	
5,500.0	5,287.8	5,023.9	4,966.7	30.2	16.8	167.48	-468.7	-482.2	2,010.2	1,981.3	28.91	69.539	
5,600.0	5,386.5	5,118.8	5,060.1	30.5	17.2	167.51	-480.1	-494.3	2,041.6	2,012.1	29.43	69.374	
5,700.0	5,485.7	5,226.9	5,265.7	30.7	17.8	167.42	-501.7	-517.3	2,068.1	2,038.0	30.13	68.645	
5,800.0	5,585.3	5,318.2	5,556.3	30.9	18.4	167.43	-514.9	-531.3	2,083.1	2,052.3	30.83	67.570	
5,900.0	5,685.1	5,747.0	5,685.1	31.0	18.5	167.49	-515.1	-531.5	2,088.8	2,057.7	31.17	67.019	
6,000.0	5,785.1	5,847.0	5,785.1	31.1	18.7	167.52	-515.1	-531.5	2,091.1	2,059.6	31.41	66.573	
6,014.9	5,800.0	5,861.9	5,800.0	31.2	18.7	-108.95	-515.1	-531.5	2,091.1	2,059.6	31.44	66.503	
6,100.0	5,885.1	5,947.0	5,885.1	31.2	18.8	-108.95	-515.1	-531.5	2,091.1	2,059.4	31.71	65.952	
6,200.0	5,985.1	6,047.0	5,985.1	31.3	18.9	-108.95	-515.1	-531.5	2,091.1	2,059.1	32.02	65.301	
6,300.0	6,085.1	6,147.0	6,085.1	31.4	19.1	-108.95	-515.1	-531.5	2,091.1	2,058.7	32.34	64.657	
6,400.0	6,185.1	6,247.0	6,185.1	31.5	19.2	-108.95	-515.1	-531.5	2,091.1	2,058.4	32.66	64.019	
6,500.0	6,285.1	6,347.0	6,285.1	31.6	19.3	-108.95	-515.1	-531.5	2,091.1	2,058.1	32.99	63.388	
6,600.0	6,385.1	6,447.0	6,385.1	31.7	19.5	-108.95	-515.1	-531.5	2,091.1	2,057.8	33.32	62.764	
6,700.0	6,485.1	6,547.0	6,485.1	31.8	19.6	-108.95	-515.1	-531.5	2,091.1	2,057.4	33.65	62.147	
6,800.0	6,585.1	6,647.0	6,585.1	31.9	19.8	-108.95	-515.1	-531.5	2,091.1	2,057.1	33.98	61.537	
6,900.0	6,685.1	6,747.0	6,685.1	32.0	19.9	-108.95	-515.1	-531.5	2,091.1	2,056.8	34.32	60.935	
7,000.0	6,785.1	6,847.0	6,785.1	32.1	20.1	-108.95	-515.1	-531.5	2,091.1	2,056.4	34.66	60.339	
7,100.0	6,885.1	6,947.0	6,885.1	32.2	20.2	-108.95	-515.1	-531.5	2,091.1	2,056.1	35.00	59.751	
7,200.0	6,985.1	7,047.0	6,985.1	32.3	20.3	-108.95	-515.1	-531.5	2,091.1	2,055.7	35.34	59.170	
7,300.0	7,085.1	7,147.0	7,085.1	32.4	20.5	-108.95	-515.1	-531.5	2,091.1	2,055.4	35.69	58.596	
7,400.0	7,185.1	7,247.0	7,185.1	32.5	20.6	-108.95	-515.1	-531.5	2,091.1	2,055.1	36.03	58.030	
7,500.0	7,285.1	7,347.0	7,285.1	32.6	20.8	-108.95	-515.1	-531.5	2,091.1	2,054.7	36.38	57.471	
7,600.0	7,385.1	7,447.0	7,385.1	32.7	21.0	-108.95	-515.1	-531.5	2,091.1	2,054.4	36.74	56.920	
7,700.0	7,485.1	7,547.0	7,485.1	32.8	21.1	-108.95	-515.1	-531.5	2,091.1	2,054.0	37.09	56.376	
7,721.3	7,506.4	7,568.3	7,506.4	32.8	21.1	-108.95	-515.1	-531.5	2,091.1	2,053.9	37.17	56.261	
7,754.9	7,540.0	7,576.9	7,515.0	32.9	21.2	-108.95	-515.1	-531.5	2,091.2	2,054.0	37.24	56.154	

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Hirsch 17-24
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Reference Site:	Hirsch 24-G Pad Sec. 24-T7N-R67W	MD Reference:	WELL @ 5051.0ft (RKB-16')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Hirsch 17-24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (06-10-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5051.0ft (RKB-16')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Hirsch 17-24
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.43°



Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Hirsch 17-24
Project:	SEC.24-T7N-R67W	TVD Reference:	WELL @ 5051.0ft (RKB-16')
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