

# ENSIGN

## Directional

### Well Name: MSH Farms 12-15

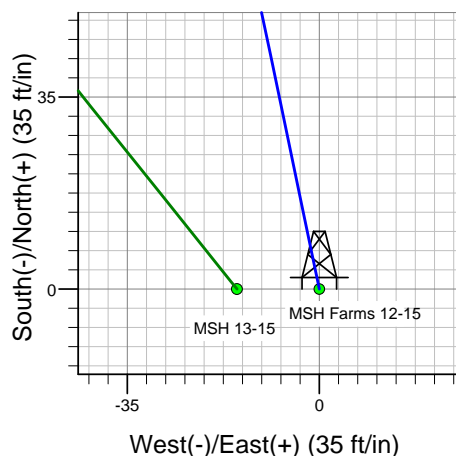
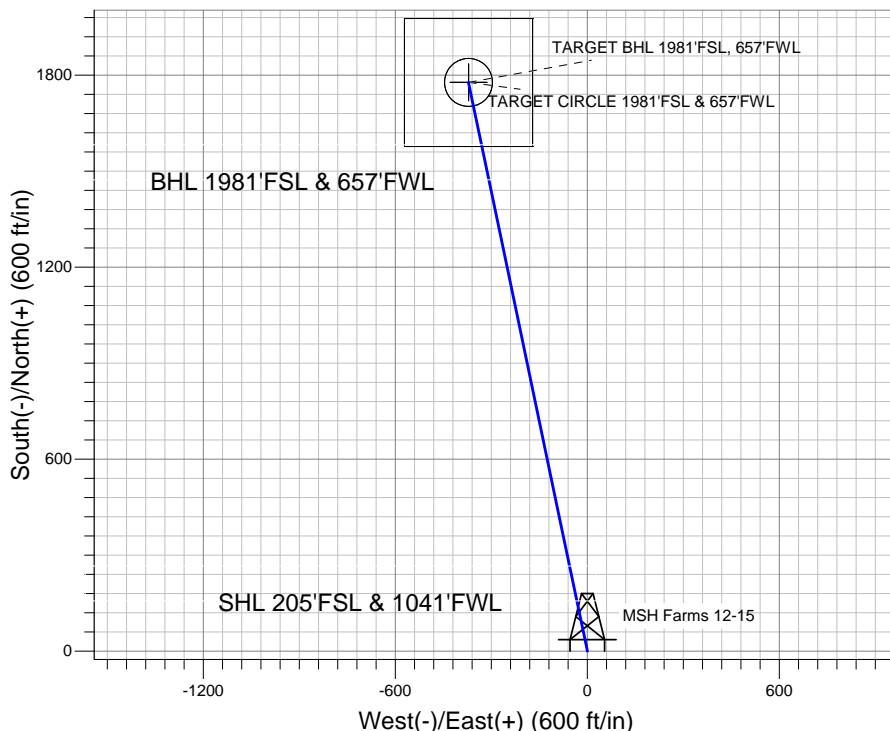
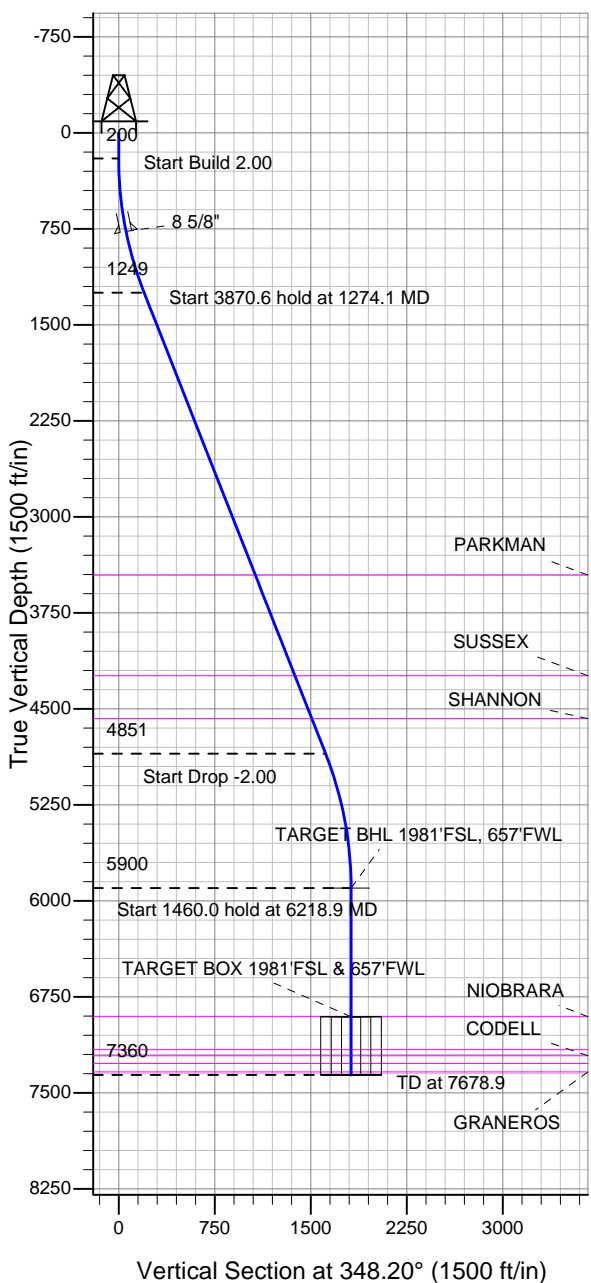
Surface Location: MSH Farms 12-15 Pad Sec.15-T7N-R67W  
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 5054.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1450181.70	3170840.07	40.567522	-104.885069	

Original Well Elev WELL @ 5070.0ft (Original Well Elev)

## Bayswater Exploration & Production, LLC



MSH Farms 12-15 Pad Sec.15-T7N-R67W  
MSH Farms 12-15  
Plan #1 (4-19-13)



Azimuths to True North  
Magnetic North: 8.69°

Magnetic Field  
Strength: 53009.9snT  
Dip Angle: 67.10°  
Date: 4/19/2013  
Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1981'FSL, 657'FWL	5900.0	1777.2	-371.2	40.572400	-104.886405	Point
TARGET BOX 1981'FSL & 657'FWL	6906.0	1777.2	-371.2	40.572400	-104.886405	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 1981'FSL & 657'FWL	6906.0	1777.2	-371.2	40.572400	-104.886405	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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1274.1	21.48	348.20	1249.1	194.8	-40.7	2.00	348.20	199.0	
4	5144.8	21.48	348.20	4850.9	1582.4	-330.5	0.00	0.00	1616.5	
5	6218.9	0.00	0.00	5900.0	1777.2	-371.2	2.00	180.00	1815.5	TARGET BHL 1981'FSL, 657'FWL
6	7678.9	0.00	0.00	7360.0	1777.2	-371.2	0.00	0.00	1815.5	



**Directional**

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

**SEC.15-T7N-R67W**

**MSH Farms 12-15 Pad Sec.15-T7N-R67W**

**MSH Farms 12-15**

**Wellbore #1**

**Plan: Plan #1 (4-19-13)**

## **Standard Planning Report**

**22 April, 2013**



**Directional**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (4-19-13)		

<b>Project</b>	SEC.15-T7N-R67W		
<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		MSH Farms 12-15 Pad Sec.15-T7N-R67W				
Site Position:		Northing:	1,450,181.70ft	Latitude:	40.567522	
From:	Lat/Long	Easting:	3,170,840.07ft	Longitude:	-104.885069	
Position Uncertainty:		0.0 ft	Slot Radius:	"	Grid Convergence:	0.40 °

Well	MSH Farms 12-15					
Well Position	+N-S	0.0 ft	Northing:	1,450,181.70 ft	Latitude:	40.567522
	+E-W	0.0 ft	Easting:	3,170,840.07 ft	Longitude:	-104.885069
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,054.0 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	4/19/2013	8.70	67.10	53,010

<b>Design</b>	Plan #1 (4-19-13)			
<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	348.20

<b>Plan Sections</b>										
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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,274.1	21.48	348.20	1,249.1	194.8	-40.7	2.00	2.00	0.00	348.20	
5,144.8	21.48	348.20	4,850.9	1,582.4	-330.5	0.00	0.00	0.00	0.00	
6,218.9	0.00	0.00	5,900.0	1,777.2	-371.2	2.00	-2.00	0.00	180.00	TARGET BHL 1981
7,678.9	0.00	0.00	7,360.0	1,777.2	-371.2	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (4-19-13)		

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	0.80	348.20	240.0	0.3	-0.1	0.3	2.00	2.00	0.00
280.0	1.60	348.20	280.0	1.1	-0.2	1.1	2.00	2.00	0.00
320.0	2.40	348.20	320.0	2.5	-0.5	2.5	2.00	2.00	0.00
360.0	3.20	348.20	359.9	4.4	-0.9	4.5	2.00	2.00	0.00
400.0	4.00	348.20	399.8	6.8	-1.4	7.0	2.00	2.00	0.00
440.0	4.80	348.20	439.7	9.8	-2.1	10.0	2.00	2.00	0.00
480.0	5.60	348.20	479.6	13.4	-2.8	13.7	2.00	2.00	0.00
520.0	6.40	348.20	519.3	17.5	-3.6	17.9	2.00	2.00	0.00
560.0	7.20	348.20	559.1	22.1	-4.6	22.6	2.00	2.00	0.00
600.0	8.00	348.20	598.7	27.3	-5.7	27.9	2.00	2.00	0.00
640.0	8.80	348.20	638.3	33.0	-6.9	33.7	2.00	2.00	0.00
680.0	9.60	348.20	677.8	39.3	-8.2	40.1	2.00	2.00	0.00
720.0	10.40	348.20	717.1	46.1	-9.6	47.1	2.00	2.00	0.00
760.0	11.20	348.20	756.4	53.4	-11.2	54.6	2.00	2.00	0.00
773.8	11.48	348.20	770.0	56.1	-11.7	57.3	2.00	2.00	0.00
8 5/8"									
800.0	12.00	348.20	795.6	61.3	-12.8	62.6	2.00	2.00	0.00
840.0	12.80	348.20	834.7	69.7	-14.6	71.2	2.00	2.00	0.00
880.0	13.60	348.20	873.6	78.6	-16.4	80.3	2.00	2.00	0.00
920.0	14.40	348.20	912.4	88.1	-18.4	90.0	2.00	2.00	0.00
960.0	15.20	348.20	951.1	98.1	-20.5	100.2	2.00	2.00	0.00
1,000.0	16.00	348.20	989.6	108.6	-22.7	111.0	2.00	2.00	0.00
1,040.0	16.80	348.20	1,028.0	119.7	-25.0	122.3	2.00	2.00	0.00
1,080.0	17.60	348.20	1,066.2	131.3	-27.4	134.1	2.00	2.00	0.00
1,120.0	18.40	348.20	1,104.3	143.4	-29.9	146.5	2.00	2.00	0.00
1,160.0	19.20	348.20	1,142.1	156.0	-32.6	159.3	2.00	2.00	0.00
1,200.0	20.00	348.20	1,179.8	169.1	-35.3	172.8	2.00	2.00	0.00
1,240.0	20.80	348.20	1,217.3	182.8	-38.2	186.7	2.00	2.00	0.00
1,274.1	21.48	348.20	1,249.1	194.8	-40.7	199.0	2.00	2.00	0.00
1,280.0	21.48	348.20	1,254.6	196.9	-41.1	201.2	0.00	0.00	0.00
1,320.0	21.48	348.20	1,291.8	211.3	-44.1	215.8	0.00	0.00	0.00
1,360.0	21.48	348.20	1,329.0	225.6	-47.1	230.5	0.00	0.00	0.00
1,400.0	21.48	348.20	1,366.3	239.9	-50.1	245.1	0.00	0.00	0.00
1,440.0	21.48	348.20	1,403.5	254.3	-53.1	259.8	0.00	0.00	0.00
1,480.0	21.48	348.20	1,440.7	268.6	-56.1	274.4	0.00	0.00	0.00
1,520.0	21.48	348.20	1,477.9	283.0	-59.1	289.1	0.00	0.00	0.00
1,560.0	21.48	348.20	1,515.1	297.3	-62.1	303.7	0.00	0.00	0.00
1,600.0	21.48	348.20	1,552.4	311.6	-65.1	318.4	0.00	0.00	0.00
1,640.0	21.48	348.20	1,589.6	326.0	-68.1	333.0	0.00	0.00	0.00
1,680.0	21.48	348.20	1,626.8	340.3	-71.1	347.7	0.00	0.00	0.00
1,720.0	21.48	348.20	1,664.0	354.7	-74.1	362.3	0.00	0.00	0.00
1,760.0	21.48	348.20	1,701.3	369.0	-77.1	377.0	0.00	0.00	0.00
1,800.0	21.48	348.20	1,738.5	383.3	-80.1	391.6	0.00	0.00	0.00
1,840.0	21.48	348.20	1,775.7	397.7	-83.1	406.3	0.00	0.00	0.00
1,880.0	21.48	348.20	1,812.9	412.0	-86.0	420.9	0.00	0.00	0.00
1,920.0	21.48	348.20	1,850.1	426.3	-89.0	435.5	0.00	0.00	0.00
1,960.0	21.48	348.20	1,887.4	440.7	-92.0	450.2	0.00	0.00	0.00
2,000.0	21.48	348.20	1,924.6	455.0	-95.0	464.8	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (4-19-13)		

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	21.48	348.20	1,961.8	469.4	-98.0	479.5	0.00	0.00	0.00
2,080.0	21.48	348.20	1,999.0	483.7	-101.0	494.1	0.00	0.00	0.00
2,120.0	21.48	348.20	2,036.2	498.0	-104.0	508.8	0.00	0.00	0.00
2,160.0	21.48	348.20	2,073.5	512.4	-107.0	523.4	0.00	0.00	0.00
2,200.0	21.48	348.20	2,110.7	526.7	-110.0	538.1	0.00	0.00	0.00
2,240.0	21.48	348.20	2,147.9	541.1	-113.0	552.7	0.00	0.00	0.00
2,280.0	21.48	348.20	2,185.1	555.4	-116.0	567.4	0.00	0.00	0.00
2,320.0	21.48	348.20	2,222.4	569.7	-119.0	582.0	0.00	0.00	0.00
2,360.0	21.48	348.20	2,259.6	584.1	-122.0	596.7	0.00	0.00	0.00
2,400.0	21.48	348.20	2,296.8	598.4	-125.0	611.3	0.00	0.00	0.00
2,440.0	21.48	348.20	2,334.0	612.8	-128.0	626.0	0.00	0.00	0.00
2,480.0	21.48	348.20	2,371.2	627.1	-131.0	640.6	0.00	0.00	0.00
2,520.0	21.48	348.20	2,408.5	641.4	-134.0	655.3	0.00	0.00	0.00
2,560.0	21.48	348.20	2,445.7	655.8	-137.0	669.9	0.00	0.00	0.00
2,600.0	21.48	348.20	2,482.9	670.1	-140.0	684.6	0.00	0.00	0.00
2,640.0	21.48	348.20	2,520.1	684.5	-142.9	699.2	0.00	0.00	0.00
2,680.0	21.48	348.20	2,557.3	698.8	-145.9	713.9	0.00	0.00	0.00
2,720.0	21.48	348.20	2,594.6	713.1	-148.9	728.5	0.00	0.00	0.00
2,760.0	21.48	348.20	2,631.8	727.5	-151.9	743.2	0.00	0.00	0.00
2,800.0	21.48	348.20	2,669.0	741.8	-154.9	757.8	0.00	0.00	0.00
2,840.0	21.48	348.20	2,706.2	756.2	-157.9	772.5	0.00	0.00	0.00
2,880.0	21.48	348.20	2,743.4	770.5	-160.9	787.1	0.00	0.00	0.00
2,920.0	21.48	348.20	2,780.7	784.8	-163.9	801.8	0.00	0.00	0.00
2,960.0	21.48	348.20	2,817.9	799.2	-166.9	816.4	0.00	0.00	0.00
3,000.0	21.48	348.20	2,855.1	813.5	-169.9	831.1	0.00	0.00	0.00
3,040.0	21.48	348.20	2,892.3	827.8	-172.9	845.7	0.00	0.00	0.00
3,080.0	21.48	348.20	2,929.6	842.2	-175.9	860.4	0.00	0.00	0.00
3,120.0	21.48	348.20	2,966.8	856.5	-178.9	875.0	0.00	0.00	0.00
3,160.0	21.48	348.20	3,004.0	870.9	-181.9	889.7	0.00	0.00	0.00
3,200.0	21.48	348.20	3,041.2	885.2	-184.9	904.3	0.00	0.00	0.00
3,240.0	21.48	348.20	3,078.4	899.5	-187.9	919.0	0.00	0.00	0.00
3,280.0	21.48	348.20	3,115.7	913.9	-190.9	933.6	0.00	0.00	0.00
3,320.0	21.48	348.20	3,152.9	928.2	-193.9	948.2	0.00	0.00	0.00
3,360.0	21.48	348.20	3,190.1	942.6	-196.8	962.9	0.00	0.00	0.00
3,400.0	21.48	348.20	3,227.3	956.9	-199.8	977.5	0.00	0.00	0.00
3,440.0	21.48	348.20	3,264.5	971.2	-202.8	992.2	0.00	0.00	0.00
3,480.0	21.48	348.20	3,301.8	985.6	-205.8	1,006.8	0.00	0.00	0.00
3,520.0	21.48	348.20	3,339.0	999.9	-208.8	1,021.5	0.00	0.00	0.00
3,560.0	21.48	348.20	3,376.2	1,014.3	-211.8	1,036.1	0.00	0.00	0.00
3,600.0	21.48	348.20	3,413.4	1,028.6	-214.8	1,050.8	0.00	0.00	0.00
3,640.0	21.48	348.20	3,450.7	1,042.9	-217.8	1,065.4	0.00	0.00	0.00
3,645.7	21.48	348.20	3,456.0	1,045.0	-218.2	1,067.5	0.00	0.00	0.00
<b>PARKMAN</b>									
3,680.0	21.48	348.20	3,487.9	1,057.3	-220.8	1,080.1	0.00	0.00	0.00
3,720.0	21.48	348.20	3,525.1	1,071.6	-223.8	1,094.7	0.00	0.00	0.00
3,760.0	21.48	348.20	3,562.3	1,086.0	-226.8	1,109.4	0.00	0.00	0.00
3,800.0	21.48	348.20	3,599.5	1,100.3	-229.8	1,124.0	0.00	0.00	0.00
3,840.0	21.48	348.20	3,636.8	1,114.6	-232.8	1,138.7	0.00	0.00	0.00
3,880.0	21.48	348.20	3,674.0	1,129.0	-235.8	1,153.3	0.00	0.00	0.00
3,920.0	21.48	348.20	3,711.2	1,143.3	-238.8	1,168.0	0.00	0.00	0.00
3,960.0	21.48	348.20	3,748.4	1,157.6	-241.8	1,182.6	0.00	0.00	0.00
4,000.0	21.48	348.20	3,785.6	1,172.0	-244.8	1,197.3	0.00	0.00	0.00
4,040.0	21.48	348.20	3,822.9	1,186.3	-247.8	1,211.9	0.00	0.00	0.00

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<b>Project:</b>	SEC.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (4-19-13)		

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	21.48	348.20	3,860.1	1,200.7	-250.8	1,226.6	0.00	0.00	0.00
4,120.0	21.48	348.20	3,897.3	1,215.0	-253.7	1,241.2	0.00	0.00	0.00
4,160.0	21.48	348.20	3,934.5	1,229.3	-256.7	1,255.9	0.00	0.00	0.00
4,200.0	21.48	348.20	3,971.7	1,243.7	-259.7	1,270.5	0.00	0.00	0.00
4,240.0	21.48	348.20	4,009.0	1,258.0	-262.7	1,285.2	0.00	0.00	0.00
4,280.0	21.48	348.20	4,046.2	1,272.4	-265.7	1,299.8	0.00	0.00	0.00
4,320.0	21.48	348.20	4,083.4	1,286.7	-268.7	1,314.5	0.00	0.00	0.00
4,360.0	21.48	348.20	4,120.6	1,301.0	-271.7	1,329.1	0.00	0.00	0.00
4,400.0	21.48	348.20	4,157.9	1,315.4	-274.7	1,343.8	0.00	0.00	0.00
4,440.0	21.48	348.20	4,195.1	1,329.7	-277.7	1,358.4	0.00	0.00	0.00
4,480.0	21.48	348.20	4,232.3	1,344.1	-280.7	1,373.1	0.00	0.00	0.00
4,489.4	21.48	348.20	4,241.0	1,347.4	-281.4	1,376.5	0.00	0.00	0.00
<b>SUSSEX</b>									
4,520.0	21.48	348.20	4,269.5	1,358.4	-283.7	1,387.7	0.00	0.00	0.00
4,560.0	21.48	348.20	4,306.7	1,372.7	-286.7	1,402.4	0.00	0.00	0.00
4,600.0	21.48	348.20	4,344.0	1,387.1	-289.7	1,417.0	0.00	0.00	0.00
4,640.0	21.48	348.20	4,381.2	1,401.4	-292.7	1,431.7	0.00	0.00	0.00
4,680.0	21.48	348.20	4,418.4	1,415.8	-295.7	1,446.3	0.00	0.00	0.00
4,720.0	21.48	348.20	4,455.6	1,430.1	-298.7	1,461.0	0.00	0.00	0.00
4,760.0	21.48	348.20	4,492.8	1,444.4	-301.7	1,475.6	0.00	0.00	0.00
4,800.0	21.48	348.20	4,530.1	1,458.8	-304.7	1,490.2	0.00	0.00	0.00
4,840.0	21.48	348.20	4,567.3	1,473.1	-307.7	1,504.9	0.00	0.00	0.00
4,849.4	21.48	348.20	4,576.0	1,476.5	-308.4	1,508.3	0.00	0.00	0.00
<b>SHANNON</b>									
4,880.0	21.48	348.20	4,604.5	1,487.5	-310.6	1,519.5	0.00	0.00	0.00
4,920.0	21.48	348.20	4,641.7	1,501.8	-313.6	1,534.2	0.00	0.00	0.00
4,960.0	21.48	348.20	4,679.0	1,516.1	-316.6	1,548.8	0.00	0.00	0.00
5,000.0	21.48	348.20	4,716.2	1,530.5	-319.6	1,563.5	0.00	0.00	0.00
5,040.0	21.48	348.20	4,753.4	1,544.8	-322.6	1,578.1	0.00	0.00	0.00
5,080.0	21.48	348.20	4,790.6	1,559.1	-325.6	1,592.8	0.00	0.00	0.00
5,120.0	21.48	348.20	4,827.8	1,573.5	-328.6	1,607.4	0.00	0.00	0.00
5,144.8	21.48	348.20	4,850.9	1,582.4	-330.5	1,616.5	0.00	0.00	0.00
5,160.0	21.18	348.20	4,865.1	1,587.8	-331.6	1,622.0	2.00	-2.00	0.00
5,200.0	20.38	348.20	4,902.5	1,601.7	-334.5	1,636.2	2.00	-2.00	0.00
5,240.0	19.58	348.20	4,940.1	1,615.1	-337.3	1,649.9	2.00	-2.00	0.00
5,280.0	18.78	348.20	4,977.8	1,627.9	-340.0	1,663.0	2.00	-2.00	0.00
5,320.0	17.98	348.20	5,015.8	1,640.3	-342.6	1,675.7	2.00	-2.00	0.00
5,360.0	17.18	348.20	5,053.9	1,652.1	-345.0	1,687.7	2.00	-2.00	0.00
5,400.0	16.38	348.20	5,092.2	1,663.4	-347.4	1,699.3	2.00	-2.00	0.00
5,440.0	15.58	348.20	5,130.7	1,674.2	-349.6	1,710.3	2.00	-2.00	0.00
5,480.0	14.78	348.20	5,169.3	1,684.4	-351.8	1,720.8	2.00	-2.00	0.00
5,520.0	13.98	348.20	5,208.0	1,694.1	-353.8	1,730.7	2.00	-2.00	0.00
5,560.0	13.18	348.20	5,246.9	1,703.3	-355.7	1,740.1	2.00	-2.00	0.00
5,600.0	12.38	348.20	5,285.9	1,712.0	-357.5	1,748.9	2.00	-2.00	0.00
5,640.0	11.58	348.20	5,325.1	1,720.1	-359.2	1,757.2	2.00	-2.00	0.00
5,680.0	10.78	348.20	5,364.3	1,727.7	-360.8	1,765.0	2.00	-2.00	0.00
5,720.0	9.98	348.20	5,403.6	1,734.8	-362.3	1,772.2	2.00	-2.00	0.00
5,760.0	9.18	348.20	5,443.1	1,741.3	-363.7	1,778.8	2.00	-2.00	0.00
5,800.0	8.38	348.20	5,482.6	1,747.3	-364.9	1,784.9	2.00	-2.00	0.00
5,840.0	7.58	348.20	5,522.2	1,752.7	-366.0	1,790.5	2.00	-2.00	0.00
5,880.0	6.78	348.20	5,561.9	1,757.6	-367.1	1,795.5	2.00	-2.00	0.00
5,920.0	5.98	348.20	5,601.7	1,761.9	-368.0	1,799.9	2.00	-2.00	0.00
5,960.0	5.18	348.20	5,641.5	1,765.7	-368.8	1,803.8	2.00	-2.00	0.00
6,000.0	4.38	348.20	5,681.3	1,769.0	-369.4	1,807.2	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (4-19-13)		

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)
6,040.0	3.58	348.20	5,721.2	1,771.7	-370.0	1,809.9	2.00	-2.00	0.00
6,080.0	2.78	348.20	5,761.2	1,773.9	-370.5	1,812.2	2.00	-2.00	0.00
6,120.0	1.98	348.20	5,801.1	1,775.5	-370.8	1,813.8	2.00	-2.00	0.00
6,160.0	1.18	348.20	5,841.1	1,776.6	-371.0	1,814.9	2.00	-2.00	0.00
6,200.0	0.38	348.20	5,881.1	1,777.1	-371.1	1,815.5	2.00	-2.00	0.00
6,218.9	0.00	0.00	5,900.0	1,777.2	-371.2	1,815.5	2.00	-2.00	0.00
6,240.0	0.00	0.00	5,921.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,280.0	0.00	0.00	5,961.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,320.0	0.00	0.00	6,001.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,360.0	0.00	0.00	6,041.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,081.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,440.0	0.00	0.00	6,121.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,480.0	0.00	0.00	6,161.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,520.0	0.00	0.00	6,201.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,560.0	0.00	0.00	6,241.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,281.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,640.0	0.00	0.00	6,321.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,680.0	0.00	0.00	6,361.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,720.0	0.00	0.00	6,401.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,760.0	0.00	0.00	6,441.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,481.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,840.0	0.00	0.00	6,521.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,880.0	0.00	0.00	6,561.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,920.0	0.00	0.00	6,601.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
6,960.0	0.00	0.00	6,641.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,681.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,040.0	0.00	0.00	6,721.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,080.0	0.00	0.00	6,761.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,120.0	0.00	0.00	6,801.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,160.0	0.00	0.00	6,841.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,200.0	0.00	0.00	6,881.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,224.9	0.00	0.00	6,906.0	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
<b>NIOBRARA</b>									
7,240.0	0.00	0.00	6,921.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,280.0	0.00	0.00	6,961.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,320.0	0.00	0.00	7,001.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,360.0	0.00	0.00	7,041.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,081.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,440.0	0.00	0.00	7,121.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,480.0	0.00	0.00	7,161.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,480.9	0.00	0.00	7,162.0	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
<b>FORT HAYS</b>									
7,520.0	0.00	0.00	7,201.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,528.9	0.00	0.00	7,210.0	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
<b>CODELL</b>									
7,560.0	0.00	0.00	7,241.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,588.9	0.00	0.00	7,270.0	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
<b>GREENHORN</b>									
7,600.0	0.00	0.00	7,281.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,640.0	0.00	0.00	7,321.1	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
7,654.9	0.00	0.00	7,336.0	1,777.2	-371.2	1,815.5	0.00	0.00	0.00
<b>GRANEROS</b>									
7,678.9	0.00	0.00	7,360.0	1,777.2	-371.2	1,815.5	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Project:</b>	SEC.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (4-19-13)		

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
773.8	770.0	8 5/8"	8-5/8	12-1/4

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,645.7	3,456.0	PARKMAN		0.00	
4,489.4	4,241.0	SUSSEX		0.00	
4,849.4	4,576.0	SHANNON		0.00	
7,224.9	6,906.0	NIOBRARA		0.00	
7,480.9	7,162.0	FORT HAYS		0.00	
7,528.9	7,210.0	CODELL		0.00	
7,588.9	7,270.0	GREENHORN		0.00	
7,654.9	7,336.0	GRANEROS		0.00	





**Directional**

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

**SEC.15-T7N-R67W**

**MSH Farms 12-15 Pad Sec.15-T7N-R67W**

**MSH Farms 12-15**

**Wellbore #1**

**Plan #1 (4-19-13)**

## **Anticollision Report**

**22 April, 2013**



**Directional**

<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Project:</b>	SEC.15-T7N-R67W	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Reference Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (4-19-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (4-19-13)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 4/22/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	7,678.9	Plan #1 (4-19-13) (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
MSH Farms 12-15 Pad Sec.15-T7N-R67W						
MSH 13-15 - Wellbore #1 - Plan #1 (4-22-13)	332.4	332.4	14.7	13.4	11.556	CC, ES
MSH 13-15 - Wellbore #1 - Plan #1 (4-22-13)	500.0	499.5	19.4	17.3	9.422	SF

<b>Offset Design</b> MSH Farms 12-15 Pad Sec.15-T7N-R67W - MSH 13-15 - Wellbore #1 - Plan #1 (4-22-13)												
Survey Program: 0-MWD												
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>			<b>Distance</b>							
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>
0.0	0.0	0.0	0.0	0.0	0.0	-90.03	0.0	-15.0	15.0	15.0	0.00	N/A
100.0	100.0	100.0	100.0	0.1	0.1	-90.03	0.0	-15.0	15.0	14.8	0.22	66.749
200.0	200.0	200.0	200.0	0.3	0.3	-90.03	0.0	-15.0	15.0	14.3	0.67	22.250
300.0	300.0	300.0	300.0	0.6	0.6	-84.89	0.0	-15.0	14.7	13.6	1.12	13.126
332.4	332.4	332.4	332.4	0.6	0.6	-90.00	0.0	-15.0	14.7	13.4	1.27	11.556 CC, ES
400.0	399.8	399.8	399.8	0.8	0.8	-104.91	0.0	-15.0	15.2	13.6	1.58	9.619
500.0	499.5	499.5	499.5	1.0	1.0	-130.55	0.0	-15.0	19.4	17.3	2.06	9.422 SF
600.0	598.7	598.7	598.7	1.3	1.2	-149.14	0.0	-15.0	28.8	26.3	2.53	11.394
700.0	697.5	697.5	697.5	1.6	1.5	-159.77	0.0	-15.0	43.0	40.0	3.00	14.357
800.0	795.6	795.6	795.6	2.0	1.7	-165.85	0.0	-15.0	61.3	57.9	3.46	17.711
900.0	893.1	893.1	893.1	2.5	1.9	-169.55	0.0	-15.0	83.3	79.4	3.93	21.220
1,000.0	989.6	989.6	989.6	2.9	2.1	-171.94	0.0	-15.0	108.9	104.5	4.39	24.786
1,100.0	1,085.3	1,085.3	1,085.3	3.5	2.3	-173.58	0.0	-15.0	137.9	133.1	4.86	28.367
1,200.0	1,179.8	1,184.0	1,184.0	4.1	2.5	-174.55	1.0	-15.8	169.3	164.0	5.34	31.741
1,300.0	1,273.2	1,284.3	1,284.2	4.8	2.8	-174.78	4.6	-18.7	201.2	195.4	5.82	34.588
1,400.0	1,366.3	1,386.3	1,385.8	5.5	3.0	-174.52	11.1	-23.9	231.1	224.8	6.34	36.454
1,500.0	1,459.3	1,490.0	1,488.8	6.2	3.3	-173.86	20.7	-31.6	258.1	251.2	6.89	37.459
1,600.0	1,552.4	1,588.9	1,586.7	6.9	3.5	-173.06	31.8	-40.5	283.0	275.6	7.46	37.948
1,700.0	1,645.4	1,685.7	1,682.5	7.6	3.8	-172.39	42.8	-49.3	307.8	299.8	8.04	38.279
1,800.0	1,738.5	1,782.5	1,778.3	8.3	4.1	-171.82	53.7	-58.0	332.7	324.1	8.64	38.524
1,900.0	1,831.5	1,879.3	1,874.0	9.0	4.4	-171.33	64.7	-66.8	357.6	348.4	9.24	38.707
2,000.0	1,924.6	1,976.2	1,969.8	9.7	4.7	-170.91	75.7	-75.6	382.5	372.7	9.85	38.841
2,100.0	2,017.6	2,073.0	2,065.6	10.4	5.0	-170.53	86.7	-84.4	407.5	397.0	10.47	38.934
2,200.0	2,110.7	2,169.8	2,161.4	11.2	5.3	-170.20	97.6	-93.2	432.4	421.3	11.09	39.001
2,300.0	2,203.7	2,266.6	2,257.2	11.9	5.6	-169.90	108.6	-102.0	457.4	445.7	11.71	39.048

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

<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Project:</b>	SEC.15-T7N-R67W	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Reference Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (4-19-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design MSH Farms 12-15 Pad Sec.15-T7N-R67W - MSH 13-15 - Wellbore #1 - Plan #1 (4-22-13)													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		
2,400.0	2,296.8	2,363.4	2,353.0	12.6	5.9	-169.64	119.6	-110.8	482.3	470.0	12.34	39.077		
2,500.0	2,389.8	2,460.2	2,448.7	13.3	6.2	-169.40	130.5	-119.6	507.3	494.3	12.98	39.095		
2,600.0	2,482.9	2,557.0	2,544.5	14.1	6.5	-169.18	141.5	-128.4	532.3	518.7	13.61	39.103		
2,700.0	2,576.0	2,653.8	2,640.3	14.8	6.8	-168.99	152.5	-137.1	557.3	543.0	14.25	39.103		
2,800.0	2,669.0	2,750.6	2,736.1	15.5	7.2	-168.81	163.5	-145.9	582.3	567.4	14.89	39.098		
2,900.0	2,762.1	2,847.4	2,831.9	16.2	7.5	-168.64	174.4	-154.7	607.3	591.8	15.54	39.088		
3,000.0	2,855.1	2,944.3	2,927.7	16.9	7.8	-168.49	185.4	-163.5	632.3	616.1	16.18	39.075		
3,100.0	2,948.2	3,041.1	3,023.4	17.7	8.1	-168.35	196.4	-172.3	657.3	640.5	16.83	39.059		
3,200.0	3,041.2	3,137.9	3,119.2	18.4	8.5	-168.22	207.4	-181.1	682.3	664.9	17.48	39.042		
3,300.0	3,134.3	3,234.7	3,215.0	19.1	8.8	-168.10	218.3	-189.9	707.4	689.2	18.13	39.022		
3,400.0	3,227.3	3,331.5	3,310.8	19.8	9.1	-167.99	229.3	-198.7	732.4	713.6	18.78	39.002		
3,500.0	3,320.4	3,428.3	3,406.6	20.6	9.5	-167.88	240.3	-207.5	757.4	738.0	19.43	38.981		
3,600.0	3,413.4	3,525.1	3,502.4	21.3	9.8	-167.78	251.2	-216.2	782.4	762.3	20.08	38.960		
3,700.0	3,506.5	3,621.9	3,598.1	22.0	10.1	-167.69	262.2	-225.0	807.4	786.7	20.74	38.939		
3,800.0	3,599.5	3,718.7	3,693.9	22.7	10.5	-167.60	273.2	-233.8	832.5	811.1	21.39	38.917		
3,900.0	3,692.6	3,815.5	3,789.7	23.5	10.8	-167.52	284.2	-242.6	857.5	835.5	22.05	38.895		
4,000.0	3,785.6	3,912.3	3,885.5	24.2	11.1	-167.44	295.1	-251.4	882.5	859.8	22.70	38.873		
4,100.0	3,878.7	4,009.2	3,981.3	24.9	11.5	-167.37	306.1	-260.2	907.6	884.2	23.36	38.852		
4,200.0	3,971.7	4,106.0	4,077.1	25.7	11.8	-167.30	317.1	-269.0	932.6	908.6	24.02	38.831		
4,300.0	4,064.8	4,202.8	4,172.8	26.4	12.1	-167.24	328.1	-277.8	957.6	933.0	24.68	38.810		
4,400.0	4,157.9	4,299.6	4,268.6	27.1	12.5	-167.17	339.0	-286.5	982.7	957.4	25.33	38.789		
4,500.0	4,250.9	4,396.4	4,364.4	27.8	12.8	-167.12	350.0	-295.3	1,007.7	981.7	25.99	38.769		
4,600.0	4,344.0	4,493.2	4,460.2	28.6	13.1	-167.06	361.0	-304.1	1,032.8	1,006.1	26.65	38.749		
4,700.0	4,437.0	4,590.0	4,556.0	29.3	13.5	-167.01	371.9	-312.9	1,057.8	1,030.5	27.31	38.729		
4,800.0	4,530.1	4,686.8	4,651.8	30.0	13.8	-166.96	382.9	-321.7	1,082.8	1,054.9	27.97	38.710		
4,900.0	4,623.1	4,783.6	4,747.5	30.7	14.2	-166.91	393.9	-330.5	1,107.9	1,079.3	28.63	38.691		
5,000.0	4,716.2	4,880.4	4,843.3	31.5	14.5	-166.86	404.9	-339.3	1,132.9	1,103.6	29.30	38.673		
5,100.0	4,809.2	4,977.3	4,939.1	32.2	14.8	-166.82	415.8	-348.1	1,158.0	1,128.0	29.96	38.655		
5,200.0	4,902.5	5,074.2	5,035.0	32.9	15.2	-166.83	426.8	-356.9	1,182.5	1,151.9	30.65	38.580		
5,300.0	4,996.8	5,160.0	5,120.0	33.4	15.4	-166.87	436.4	-364.5	1,204.3	1,173.0	31.27	38.512		
5,400.0	5,092.2	5,233.9	5,193.3	33.9	15.6	-166.93	443.3	-370.0	1,224.5	1,192.7	31.77	38.540		
5,500.0	5,188.6	5,300.0	5,259.1	34.3	15.8	-167.01	448.2	-374.0	1,243.3	1,211.1	32.18	38.630		
5,600.0	5,285.9	5,381.3	5,340.2	34.7	16.0	-167.12	452.7	-377.6	1,260.7	1,228.1	32.56	38.720		
5,700.0	5,384.0	5,454.8	5,413.7	35.0	16.1	-167.25	455.1	-379.5	1,276.7	1,243.8	32.85	38.858		
5,800.0	5,482.6	5,528.3	5,487.1	35.3	16.2	-167.40	456.1	-380.3	1,291.2	1,258.1	33.09	39.024		
5,900.0	5,581.8	5,623.0	5,581.8	35.5	16.3	-167.57	456.1	-380.3	1,303.7	1,270.4	33.31	39.139		
6,000.0	5,681.3	5,722.5	5,681.3	35.7	16.5	-167.69	456.1	-380.3	1,312.9	1,279.4	33.52	39.167		
6,100.0	5,781.2	5,822.3	5,781.2	35.9	16.7	-167.77	456.1	-380.3	1,318.7	1,285.0	33.69	39.135		
6,200.0	5,881.1	5,922.3	5,881.1	36.0	16.8	-167.80	456.1	-380.3	1,321.0	1,287.2	33.83	39.046		
6,300.0	5,981.1	6,022.3	5,981.1	36.1	17.0	-179.60	456.1	-380.3	1,321.1	1,287.0	34.12	38.724		
6,400.0	6,081.1	6,122.3	6,081.1	36.1	17.2	-179.60	456.1	-380.3	1,321.1	1,286.6	34.45	38.345		
6,500.0	6,181.1	6,222.3	6,181.1	36.2	17.3	-179.60	456.1	-380.3	1,321.1	1,286.3	34.79	37.971		
6,600.0	6,281.1	6,322.3	6,281.1	36.3	17.5	-179.60	456.1	-380.3	1,321.1	1,285.9	35.13	37.602		
6,700.0	6,381.1	6,422.3	6,381.1	36.4	17.7	-179.60	456.1	-380.3	1,321.1	1,285.6	35.48	37.237		
6,800.0	6,481.1	6,522.3	6,481.1	36.5	17.9	-179.60	456.1	-380.3	1,321.1	1,285.2	35.82	36.877		
6,900.0	6,581.1	6,622.3	6,581.1	36.5	18.0	-179.60	456.1	-380.3	1,321.1	1,284.9	36.17	36.522		
7,000.0	6,681.1	6,722.3	6,681.1	36.6	18.2	-179.60	456.1	-380.3	1,321.1	1,284.5	36.52	36.171		
7,100.0	6,781.1	6,822.3	6,781.1	36.7	18.4	-179.60	456.1	-380.3	1,321.1	1,284.2	36.87	35.826		
7,200.0	6,881.1	6,922.3	6,881.1	36.8	18.6	-179.60	456.1	-380.3	1,321.1	1,283.8	37.23	35.484		
7,300.0	6,981.1	7,022.3	6,981.1	36.9	18.8	-179.60	456.1	-380.3	1,321.1	1,283.5	37.59	35.148		
7,400.0	7,081.1	7,122.3	7,081.1	37.0	18.9	-179.60	456.1	-380.3	1,321.1	1,283.1	37.94	34.816		
7,500.0	7,181.1	7,222.3	7,181.1	37.0	19.1	-179.60	456.1	-380.3	1,321.1	1,282.8	38.30	34.489		

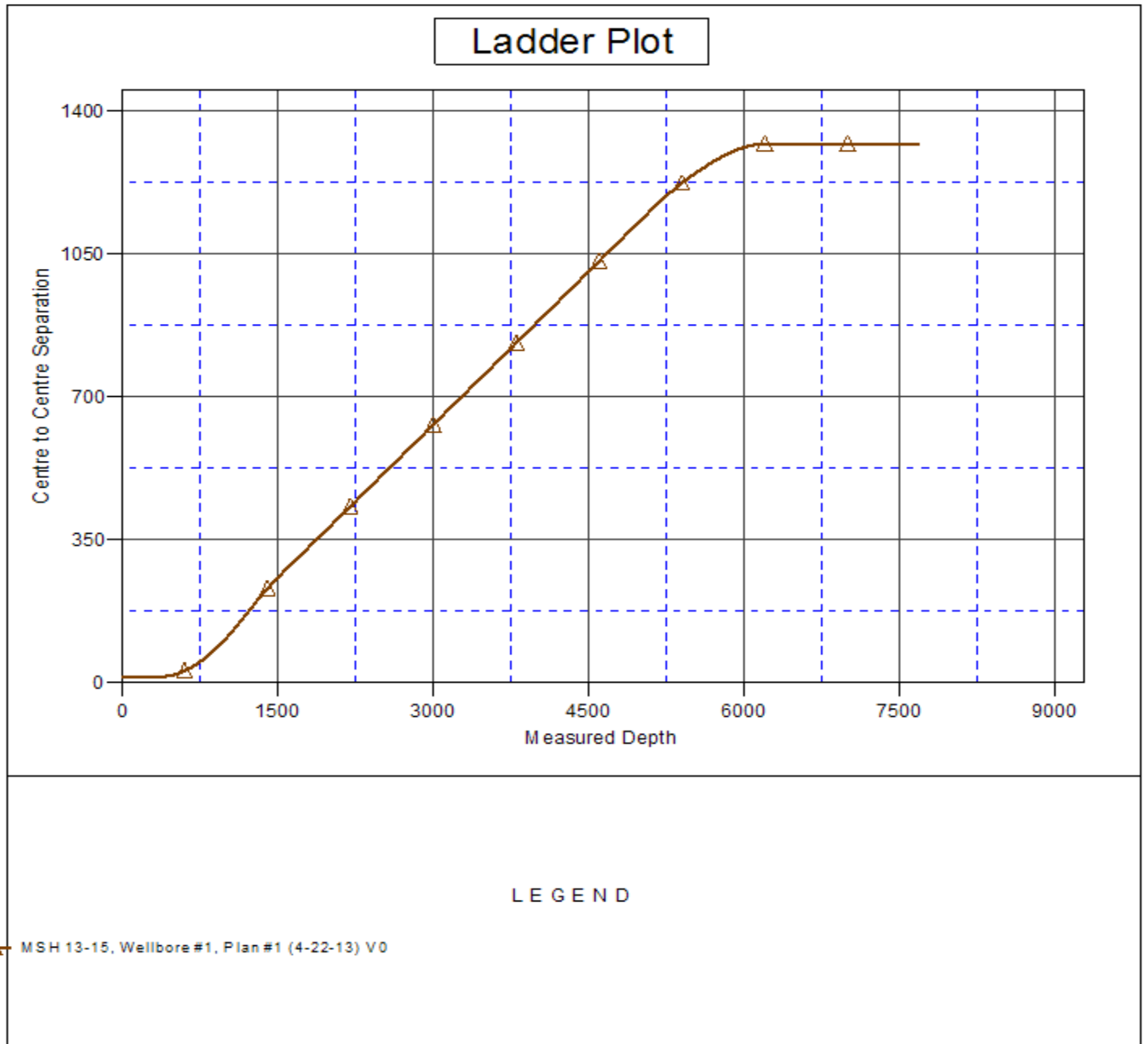
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Project:</b>	SEC.15-T7N-R67W	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Reference Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (4-19-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> MSH Farms 12-15 Pad Sec.15-T7N-R67W - MSH 13-15 - Wellbore #1 - Plan #1 (4-22-13)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
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
7,600.0	7,281.1	7,322.3	7,281.1	37.1	19.3	-179.60	456.1	-380.3	1,321.1	1,282.4	38.67	34.166	
7,678.9	7,360.0	7,401.2	7,360.0	37.2	19.4	-179.60	456.1	-380.3	1,321.1	1,282.1	38.95	33.914	

<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Project:</b>	SEC.15-T7N-R67W	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Reference Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (4-19-13)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5070.0ft (Original Well Elev) Coordinates are relative to: MSH Farms 12-15  
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.40°



<b>Company:</b>	Bayswater Exploration & Production, LLC	<b>Local Co-ordinate Reference:</b>	Well MSH Farms 12-15
<b>Project:</b>	SEC.15-T7N-R67W	<b>TVD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Reference Site:</b>	MSH Farms 12-15 Pad Sec.15-T7N-R67W	<b>MD Reference:</b>	WELL @ 5070.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	MSH Farms 12-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (4-19-13)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5070.0ft (Original Well Elev) Coordinates are relative to: MSH Farms 12-15  
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.40°

