

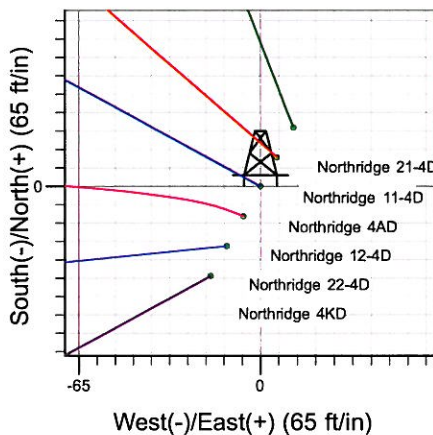
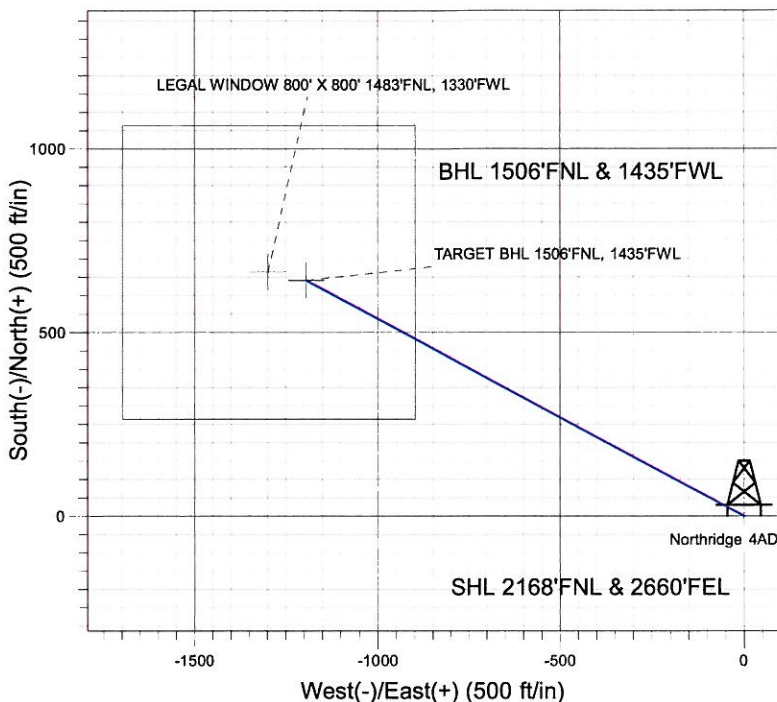
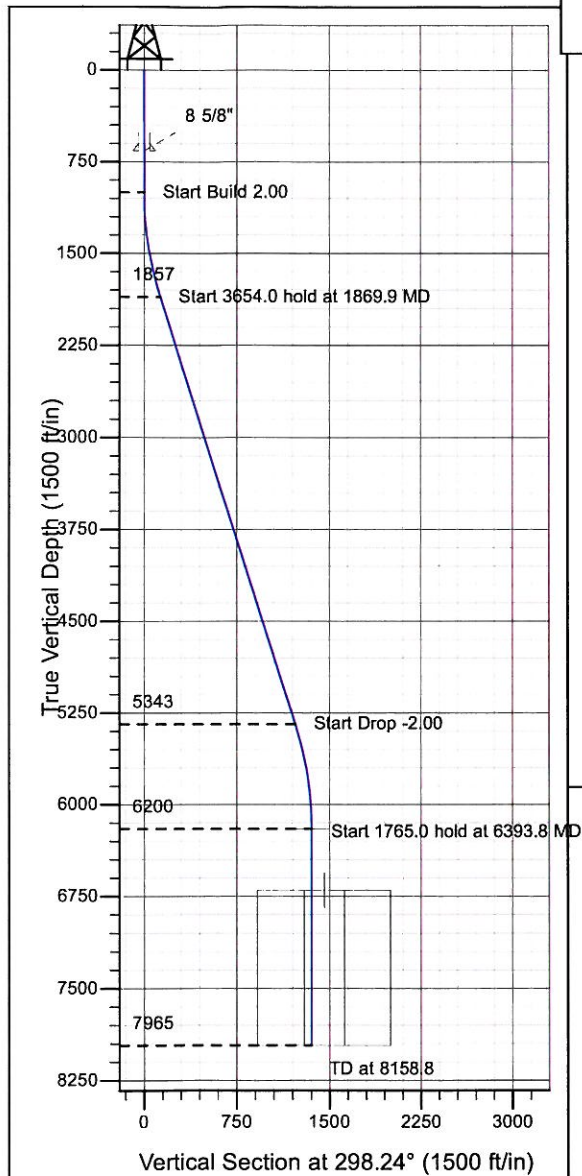
# ENSIGN

## Directional

### Well Name: Northridge 4AD

Surface Location: Northridge Pad Sec.4-T5N-R66W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4740.0  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1400815.77 3199462.72 40° 25' 53.144 N 104° 47' 0.539 W  
 Original Well Elev WELL @ 4753.0ft (Original Well Elev)

### Synergy Resources



Northridge Pad Sec.4-T5N-R66W  
 Northridge 4AD  
 Plan #3 (1-11-10)  
 16:15, January 13 2010



Azimuths to True North  
 Magnetic North: 9.04°  
 Magnetic Field  
 Strength: 53319.3nT  
 Dip Angle: 67.13°  
 Date: 12/31/2009  
 Model: IGRF200510

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1506'FNL, 1435'FWL	6200.0	641.0	-1193.4	40° 25' 59.478 N	104° 47' 15.972 W	Point
LEGAL WINDOW 800' X 800' 1483'FNL, 1330'FWL	6700.0	664.0	-1298.4	40° 25' 59.705 N	104° 47' 17.329 W	Rectangle (Sides: L800.0 W800.0)

#### 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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1869.9	17.40	298.24	1856.6	62.0	-115.5	2.00	298.24	131.1	
4	5523.9	17.40	298.24	5343.4	579.0	-1077.9	0.00	0.00	1223.6	
5	6393.8	0.00	0.00	6200.0	641.0	-1193.4	2.00	180.00	1354.6	TARGET BHL 1506'FNL, 1435'FWL
6	8158.8	0.00	0.00	7965.0	641.0	-1193.4	0.00	0.00	1354.6	



## **Directional**

### **Synergy Resources**

**SEC.4-T5N-R66W**

**Northridge Pad Sec.4-T5N-R66W**

**Northridge 4AD**

**Wellbore #1**

**Plan: Plan #3 (1-11-10)**

### **Standard Planning Report**

**13 January, 2010**

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Project:</b>	SEC.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Northridge 4AD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3 (1-11-10)		

<b>Project</b>	SEC.4-T5N-R66W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Northridge Pad Sec.4-T5N-R66W											
Site Position:						Northing:			1,400,867.38 ft			Latitude:			40° 25' 53.652 N		
From:			Lat/Long			Easting:			3,199,490.98 ft			Longitude:			104° 47' 0.168 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.46 °		

Well	Northridge 4AD					
Well Position	+N/-S	-51.4 ft	Northing:	1,400,815.77 ft	Latitude:	40° 25' 53.144 N
	+E/-W	-28.7 ft	Easting:	3,199,462.72 ft	Longitude:	104° 47' 0.539 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,740.0 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>
	IGRF200510	9/26/2008	9.21	67.17	53,450
	IGRF200510	12/31/2009	9.04	67.13	53,319

<b>Design</b>	Plan #3 (1-11-10)			
<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	298.24

<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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,869.9	17.40	298.24	1,856.6	62.0	-115.5	2.00	2.00	0.00	298.24	
5,523.9	17.40	298.24	5,343.4	579.0	-1,077.9	0.00	0.00	0.00	0.00	
6,393.8	0.00	0.00	6,200.0	641.0	-1,193.4	2.00	-2.00	0.00	180.00	TARGET BHL 150€
8,158.8	0.00	0.00	7,965.0	641.0	-1,193.4	0.00	0.00	0.00	0.00	

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Project:</b>	SEC.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Northridge 4AD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3 (1-11-10)		

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	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	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
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
660.0	0.00	0.00	660.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	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
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	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
1,040.0	0.80	298.24	1,040.0	0.1	-0.2	0.3	2.00	2.00	0.00
1,080.0	1.60	298.24	1,080.0	0.5	-1.0	1.1	2.00	2.00	0.00
1,120.0	2.40	298.24	1,120.0	1.2	-2.2	2.5	2.00	2.00	0.00
1,160.0	3.20	298.24	1,159.9	2.1	-3.9	4.5	2.00	2.00	0.00
1,200.0	4.00	298.24	1,199.8	3.3	-6.1	7.0	2.00	2.00	0.00
1,240.0	4.80	298.24	1,239.7	4.8	-8.9	10.0	2.00	2.00	0.00
1,280.0	5.60	298.24	1,279.6	6.5	-12.0	13.7	2.00	2.00	0.00
1,320.0	6.40	298.24	1,319.3	8.4	-15.7	17.9	2.00	2.00	0.00
1,360.0	7.20	298.24	1,359.1	10.7	-19.9	22.6	2.00	2.00	0.00
1,400.0	8.00	298.24	1,398.7	13.2	-24.6	27.9	2.00	2.00	0.00
1,440.0	8.80	298.24	1,438.3	16.0	-29.7	33.7	2.00	2.00	0.00
1,480.0	9.60	298.24	1,477.8	19.0	-35.3	40.1	2.00	2.00	0.00
1,520.0	10.40	298.24	1,517.1	22.3	-41.5	47.1	2.00	2.00	0.00
1,560.0	11.20	298.24	1,556.4	25.8	-48.1	54.6	2.00	2.00	0.00
1,600.0	12.00	298.24	1,595.6	29.6	-55.2	62.6	2.00	2.00	0.00
1,640.0	12.80	298.24	1,634.7	33.7	-62.7	71.2	2.00	2.00	0.00
1,680.0	13.60	298.24	1,673.6	38.0	-70.8	80.3	2.00	2.00	0.00
1,720.0	14.40	298.24	1,712.4	42.6	-79.3	90.0	2.00	2.00	0.00
1,760.0	15.20	298.24	1,751.1	47.4	-88.3	100.2	2.00	2.00	0.00
1,800.0	16.00	298.24	1,789.6	52.5	-97.8	111.0	2.00	2.00	0.00
1,840.0	16.80	298.24	1,828.0	57.9	-107.7	122.3	2.00	2.00	0.00
1,869.9	17.40	298.24	1,856.6	62.0	-115.5	131.1	2.00	2.00	0.00
1,880.0	17.40	298.24	1,866.2	63.4	-118.1	134.1	0.00	0.00	0.00
1,920.0	17.40	298.24	1,904.4	69.1	-128.7	146.0	0.00	0.00	0.00
1,960.0	17.40	298.24	1,942.6	74.8	-139.2	158.0	0.00	0.00	0.00
2,000.0	17.40	298.24	1,980.7	80.4	-149.7	170.0	0.00	0.00	0.00

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Project:</b>	SEC.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Northridge 4AD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3 (1-11-10)		

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	17.40	298.24	2,018.9	86.1	-160.3	181.9	0.00	0.00	0.00
2,080.0	17.40	298.24	2,057.1	91.7	-170.8	193.9	0.00	0.00	0.00
2,120.0	17.40	298.24	2,095.3	97.4	-181.3	205.8	0.00	0.00	0.00
2,160.0	17.40	298.24	2,133.4	103.1	-191.9	217.8	0.00	0.00	0.00
2,200.0	17.40	298.24	2,171.6	108.7	-202.4	229.8	0.00	0.00	0.00
2,240.0	17.40	298.24	2,209.8	114.4	-212.9	241.7	0.00	0.00	0.00
2,280.0	17.40	298.24	2,247.9	120.0	-223.5	253.7	0.00	0.00	0.00
2,320.0	17.40	298.24	2,286.1	125.7	-234.0	265.6	0.00	0.00	0.00
2,360.0	17.40	298.24	2,324.3	131.4	-244.6	277.6	0.00	0.00	0.00
2,400.0	17.40	298.24	2,362.4	137.0	-255.1	289.6	0.00	0.00	0.00
2,440.0	17.40	298.24	2,400.6	142.7	-265.6	301.5	0.00	0.00	0.00
2,480.0	17.40	298.24	2,438.8	148.3	-276.2	313.5	0.00	0.00	0.00
2,520.0	17.40	298.24	2,477.0	154.0	-286.7	325.4	0.00	0.00	0.00
2,560.0	17.40	298.24	2,515.1	159.6	-297.2	337.4	0.00	0.00	0.00
2,600.0	17.40	298.24	2,553.3	165.3	-307.8	349.4	0.00	0.00	0.00
2,640.0	17.40	298.24	2,591.5	171.0	-318.3	361.3	0.00	0.00	0.00
2,680.0	17.40	298.24	2,629.6	176.6	-328.8	373.3	0.00	0.00	0.00
2,720.0	17.40	298.24	2,667.8	182.3	-339.4	385.2	0.00	0.00	0.00
2,760.0	17.40	298.24	2,706.0	187.9	-349.9	397.2	0.00	0.00	0.00
2,800.0	17.40	298.24	2,744.1	193.6	-360.5	409.2	0.00	0.00	0.00
2,840.0	17.40	298.24	2,782.3	199.3	-371.0	421.1	0.00	0.00	0.00
2,880.0	17.40	298.24	2,820.5	204.9	-381.5	433.1	0.00	0.00	0.00
2,920.0	17.40	298.24	2,858.7	210.6	-392.1	445.0	0.00	0.00	0.00
2,960.0	17.40	298.24	2,896.8	216.2	-402.6	457.0	0.00	0.00	0.00
3,000.0	17.40	298.24	2,935.0	221.9	-413.1	469.0	0.00	0.00	0.00
3,040.0	17.40	298.24	2,973.2	227.6	-423.7	480.9	0.00	0.00	0.00
3,080.0	17.40	298.24	3,011.3	233.2	-434.2	492.9	0.00	0.00	0.00
3,120.0	17.40	298.24	3,049.5	238.9	-444.7	504.8	0.00	0.00	0.00
3,160.0	17.40	298.24	3,087.7	244.5	-455.3	516.8	0.00	0.00	0.00
3,200.0	17.40	298.24	3,125.8	250.2	-465.8	528.8	0.00	0.00	0.00
3,240.0	17.40	298.24	3,164.0	255.8	-476.4	540.7	0.00	0.00	0.00
3,280.0	17.40	298.24	3,202.2	261.5	-486.9	552.7	0.00	0.00	0.00
3,320.0	17.40	298.24	3,240.4	267.2	-497.4	564.6	0.00	0.00	0.00
3,360.0	17.40	298.24	3,278.5	272.8	-508.0	576.6	0.00	0.00	0.00
3,400.0	17.40	298.24	3,316.7	278.5	-518.5	588.6	0.00	0.00	0.00
3,440.0	17.40	298.24	3,354.9	284.1	-529.0	600.5	0.00	0.00	0.00
3,480.0	17.40	298.24	3,393.0	289.8	-539.6	612.5	0.00	0.00	0.00
3,520.0	17.40	298.24	3,431.2	295.5	-550.1	624.4	0.00	0.00	0.00
3,560.0	17.40	298.24	3,469.4	301.1	-560.6	636.4	0.00	0.00	0.00
3,600.0	17.40	298.24	3,507.5	306.8	-571.2	648.4	0.00	0.00	0.00
3,640.0	17.40	298.24	3,545.7	312.4	-581.7	660.3	0.00	0.00	0.00
3,680.0	17.40	298.24	3,583.9	318.1	-592.3	672.3	0.00	0.00	0.00
3,720.0	17.40	298.24	3,622.1	323.8	-602.8	684.2	0.00	0.00	0.00
3,760.0	17.40	298.24	3,660.2	329.4	-613.3	696.2	0.00	0.00	0.00
3,800.0	17.40	298.24	3,698.4	335.1	-623.9	708.2	0.00	0.00	0.00
3,840.0	17.40	298.24	3,736.6	340.7	-634.4	720.1	0.00	0.00	0.00
3,880.0	17.40	298.24	3,774.7	346.4	-644.9	732.1	0.00	0.00	0.00
3,920.0	17.40	298.24	3,812.9	352.1	-655.5	744.0	0.00	0.00	0.00
3,960.0	17.40	298.24	3,851.1	357.7	-666.0	756.0	0.00	0.00	0.00
4,000.0	17.40	298.24	3,889.3	363.4	-676.5	768.0	0.00	0.00	0.00
4,040.0	17.40	298.24	3,927.4	369.0	-687.1	779.9	0.00	0.00	0.00
4,080.0	17.40	298.24	3,965.6	374.7	-697.6	791.9	0.00	0.00	0.00
4,120.0	17.40	298.24	4,003.8	380.3	-708.2	803.8	0.00	0.00	0.00
4,160.0	17.40	298.24	4,041.9	386.0	-718.7	815.8	0.00	0.00	0.00

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Project:</b>	SEC.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Northridge 4AD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3 (1-11-10)		

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)
4,200.0	17.40	298.24	4,080.1	391.7	-729.2	827.7	0.00	0.00	0.00
4,240.0	17.40	298.24	4,118.3	397.3	-739.8	839.7	0.00	0.00	0.00
4,280.0	17.40	298.24	4,156.4	403.0	-750.3	851.7	0.00	0.00	0.00
4,320.0	17.40	298.24	4,194.6	408.6	-760.8	863.6	0.00	0.00	0.00
4,360.0	17.40	298.24	4,232.8	414.3	-771.4	875.6	0.00	0.00	0.00
4,400.0	17.40	298.24	4,271.0	420.0	-781.9	887.5	0.00	0.00	0.00
4,440.0	17.40	298.24	4,309.1	425.6	-792.4	899.5	0.00	0.00	0.00
4,480.0	17.40	298.24	4,347.3	431.3	-803.0	911.5	0.00	0.00	0.00
4,520.0	17.40	298.24	4,385.5	436.9	-813.5	923.4	0.00	0.00	0.00
4,560.0	17.40	298.24	4,423.6	442.6	-824.1	935.4	0.00	0.00	0.00
4,600.0	17.40	298.24	4,461.8	448.3	-834.6	947.3	0.00	0.00	0.00
4,640.0	17.40	298.24	4,500.0	453.9	-845.1	959.3	0.00	0.00	0.00
4,680.0	17.40	298.24	4,538.1	459.6	-855.7	971.3	0.00	0.00	0.00
4,720.0	17.40	298.24	4,576.3	465.2	-866.2	983.2	0.00	0.00	0.00
4,760.0	17.40	298.24	4,614.5	470.9	-876.7	995.2	0.00	0.00	0.00
4,800.0	17.40	298.24	4,652.7	476.5	-887.3	1,007.1	0.00	0.00	0.00
4,840.0	17.40	298.24	4,690.8	482.2	-897.8	1,019.1	0.00	0.00	0.00
4,880.0	17.40	298.24	4,729.0	487.9	-908.3	1,031.1	0.00	0.00	0.00
4,920.0	17.40	298.24	4,767.2	493.5	-918.9	1,043.0	0.00	0.00	0.00
4,960.0	17.40	298.24	4,805.3	499.2	-929.4	1,055.0	0.00	0.00	0.00
5,000.0	17.40	298.24	4,843.5	504.8	-940.0	1,066.9	0.00	0.00	0.00
5,040.0	17.40	298.24	4,881.7	510.5	-950.5	1,078.9	0.00	0.00	0.00
5,080.0	17.40	298.24	4,919.8	516.2	-961.0	1,090.9	0.00	0.00	0.00
5,120.0	17.40	298.24	4,958.0	521.8	-971.6	1,102.8	0.00	0.00	0.00
5,160.0	17.40	298.24	4,996.2	527.5	-982.1	1,114.8	0.00	0.00	0.00
5,200.0	17.40	298.24	5,034.4	533.1	-992.6	1,126.7	0.00	0.00	0.00
5,240.0	17.40	298.24	5,072.5	538.8	-1,003.2	1,138.7	0.00	0.00	0.00
5,280.0	17.40	298.24	5,110.7	544.5	-1,013.7	1,150.7	0.00	0.00	0.00
5,320.0	17.40	298.24	5,148.9	550.1	-1,024.2	1,162.6	0.00	0.00	0.00
5,360.0	17.40	298.24	5,187.0	555.8	-1,034.8	1,174.6	0.00	0.00	0.00
5,400.0	17.40	298.24	5,225.2	561.4	-1,045.3	1,186.5	0.00	0.00	0.00
5,440.0	17.40	298.24	5,263.4	567.1	-1,055.8	1,198.5	0.00	0.00	0.00
5,480.0	17.40	298.24	5,301.5	572.7	-1,066.4	1,210.5	0.00	0.00	0.00
5,520.0	17.40	298.24	5,339.7	578.4	-1,076.9	1,222.4	0.00	0.00	0.00
5,523.9	17.40	298.24	5,343.4	579.0	-1,077.9	1,223.6	0.00	0.00	0.00
5,560.0	16.68	298.24	5,378.0	584.0	-1,087.3	1,234.2	2.00	-2.00	0.00
5,600.0	15.88	298.24	5,416.4	589.3	-1,097.1	1,245.4	2.00	-2.00	0.00
5,640.0	15.08	298.24	5,454.9	594.3	-1,106.5	1,256.0	2.00	-2.00	0.00
5,680.0	14.28	298.24	5,493.6	599.1	-1,115.5	1,266.2	2.00	-2.00	0.00
5,720.0	13.48	298.24	5,532.4	603.7	-1,123.9	1,275.8	2.00	-2.00	0.00
5,760.0	12.68	298.24	5,571.4	607.9	-1,131.9	1,284.8	2.00	-2.00	0.00
5,800.0	11.88	298.24	5,610.5	612.0	-1,139.4	1,293.3	2.00	-2.00	0.00
5,840.0	11.08	298.24	5,649.7	615.7	-1,146.4	1,301.3	2.00	-2.00	0.00
5,880.0	10.28	298.24	5,689.0	619.2	-1,152.9	1,308.7	2.00	-2.00	0.00
5,920.0	9.48	298.24	5,728.4	622.5	-1,159.0	1,315.6	2.00	-2.00	0.00
5,960.0	8.68	298.24	5,767.9	625.5	-1,164.5	1,321.9	2.00	-2.00	0.00
6,000.0	7.88	298.24	5,807.5	628.2	-1,169.6	1,327.6	2.00	-2.00	0.00
6,040.0	7.08	298.24	5,847.1	630.6	-1,174.2	1,332.8	2.00	-2.00	0.00
6,080.0	6.28	298.24	5,886.9	632.8	-1,178.3	1,337.5	2.00	-2.00	0.00
6,120.0	5.48	298.24	5,926.7	634.8	-1,181.9	1,341.6	2.00	-2.00	0.00
6,160.0	4.68	298.24	5,966.5	636.5	-1,185.0	1,345.1	2.00	-2.00	0.00
6,200.0	3.88	298.24	6,006.4	637.9	-1,187.6	1,348.1	2.00	-2.00	0.00
6,240.0	3.08	298.24	6,046.3	639.0	-1,189.8	1,350.5	2.00	-2.00	0.00
6,280.0	2.28	298.24	6,086.3	639.9	-1,191.4	1,352.4	2.00	-2.00	0.00

<b>Database:</b>	EDM den0-adp01 Server Data	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Project:</b>	SEC.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Northridge 4AD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3 (1-11-10)		

### 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)
6,320.0	1.48	298.24	6,126.2	640.5	-1,192.6	1,353.7	2.00	-2.00	0.00
6,360.0	0.68	298.24	6,166.2	640.9	-1,193.2	1,354.4	2.00	-2.00	0.00
6,393.8	0.00	0.00	6,200.0	641.0	-1,193.4	1,354.6	2.00	-2.00	0.00
<b>TARGET BHL 1506'FNL, 1435'FWL</b>									
6,400.0	0.00	0.00	6,206.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,440.0	0.00	0.00	6,246.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,480.0	0.00	0.00	6,286.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,520.0	0.00	0.00	6,326.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,560.0	0.00	0.00	6,366.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,406.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,640.0	0.00	0.00	6,446.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,680.0	0.00	0.00	6,486.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,720.0	0.00	0.00	6,526.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,760.0	0.00	0.00	6,566.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,606.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,840.0	0.00	0.00	6,646.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,880.0	0.00	0.00	6,686.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,893.8	0.00	0.00	6,700.0	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
<b>LEGAL WINDOW 800' X 800' 1483'FNL, 1330'FWL</b>									
6,920.0	0.00	0.00	6,726.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
6,960.0	0.00	0.00	6,766.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,806.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,040.0	0.00	0.00	6,846.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,080.0	0.00	0.00	6,886.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,120.0	0.00	0.00	6,926.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,160.0	0.00	0.00	6,966.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,006.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,240.0	0.00	0.00	7,046.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,280.0	0.00	0.00	7,086.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,320.0	0.00	0.00	7,126.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,360.0	0.00	0.00	7,166.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,206.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,440.0	0.00	0.00	7,246.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,443.8	0.00	0.00	7,250.0	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
<b>CODELL</b>									
7,480.0	0.00	0.00	7,286.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,520.0	0.00	0.00	7,326.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,560.0	0.00	0.00	7,366.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,406.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,640.0	0.00	0.00	7,446.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,680.0	0.00	0.00	7,486.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,720.0	0.00	0.00	7,526.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,760.0	0.00	0.00	7,566.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,606.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,840.0	0.00	0.00	7,646.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,880.0	0.00	0.00	7,686.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,920.0	0.00	0.00	7,726.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
7,960.0	0.00	0.00	7,766.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
8,000.0	0.00	0.00	7,806.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
8,040.0	0.00	0.00	7,846.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
8,080.0	0.00	0.00	7,886.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
8,120.0	0.00	0.00	7,926.2	641.0	-1,193.4	1,354.6	0.00	0.00	0.00
8,158.8	0.00	0.00	7,965.0	641.0	-1,193.4	1,354.6	0.00	0.00	0.00

**Database:** EDM den0-adp01 Server Data  
**Company:** Synergy Resources  
**Project:** SEC.4-T5N-R66W  
**Site:** Northridge Pad Sec.4-T5N-R66W  
**Well:** Northridge 4AD  
**Wellbore:** Wellbore #1  
**Design:** Plan #3 (1-11-10)

**Local Co-ordinate Reference:** Well Northridge 4AD  
**TVD Reference:** WELL @ 4753.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4753.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Targets

#### Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 1506'F - plan hits target center - Point	0.00	0.00	6,200.0	641.0	-1,193.4	1,401,447.05	3,198,264.23	40° 25' 59.478 N	104° 47' 15.972 W
LEGAL WINDOW 80C - plan misses target center by 107.5ft at 6893.8ft MD (6700.0 TVD, 641.0 N, -1193.4 E) - Rectangle (sides W800.0 H800.0 D1,265.0)	0.00	0.00	6,700.0	664.0	-1,298.4	1,401,469.23	3,198,159.05	40° 25' 59.705 N	104° 47' 17.329 W

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
660.0	660.0	8 5/8"	8-5/8	12-1/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,443.8	7,250.0	CODELL		0.00	



## **Directional**

### **Synergy Resources**

**SEC.4-T5N-R66W**

**Northridge Pad Sec.4-T5N-R66W**

**Northridge 4AD**

**Wellbore #1**

**Plan #3 (1-11-10)**

## **Anticollision Report**

**13 January, 2010**



<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Project:</b>	SEC.4-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Reference Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Northridge 4AD	<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>	EDM den0-adp01 Server Data
<b>Reference Design:</b>	Plan #3 (1-11-10)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Northridge Pad Sec.4-T5N-R66W - Northridge 11-4D - Wellbore #1 - Plan #3 (1-12-10)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (ft)	+E-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
2,200.0	2,171.6	2,124.3	2,027.5	6.5	11.3	21.81	348.0	-388.1	335.4	324.2	11.29	29.712		
2,300.0	2,267.0	2,222.9	2,116.2	7.1	12.2	22.39	376.1	-420.8	351.8	339.7	12.06	29.172		
2,400.0	2,362.4	2,321.5	2,204.9	7.7	13.1	22.92	404.1	-453.5	368.2	355.3	12.84	28.665		
2,500.0	2,457.9	2,420.1	2,293.6	8.3	14.0	23.40	432.1	-486.2	384.5	370.9	13.64	28.190		
2,600.0	2,553.3	2,518.7	2,382.3	8.9	14.9	23.84	460.2	-518.9	401.0	386.5	14.45	27.747		
2,700.0	2,648.7	2,617.3	2,470.9	9.5	15.8	24.25	488.2	-551.6	417.4	402.1	15.27	27.333		
2,800.0	2,744.1	2,715.9	2,559.6	10.1	16.7	24.63	516.3	-584.3	433.9	417.8	16.10	26.947		
2,900.0	2,839.6	2,814.5	2,648.3	10.7	17.6	24.98	544.3	-617.0	450.4	433.4	16.94	26.587		
3,000.0	2,935.0	2,913.1	2,737.0	11.3	18.6	25.30	572.3	-649.7	466.9	449.1	17.78	26.250		
3,100.0	3,030.4	3,011.7	2,825.7	11.9	19.5	25.61	600.4	-682.4	483.4	464.7	18.64	25.936		
3,200.0	3,125.8	3,110.3	2,914.4	12.5	20.4	25.89	628.4	-715.1	499.9	480.4	19.49	25.642		
3,300.0	3,221.3	3,208.9	3,003.1	13.1	21.3	26.15	656.4	-747.8	516.4	496.1	20.36	25.366		
3,400.0	3,316.7	3,307.5	3,091.8	13.8	22.2	26.40	684.5	-780.5	533.0	511.7	21.23	25.108		
3,500.0	3,412.1	3,406.1	3,180.5	14.4	23.1	26.63	712.5	-813.2	549.5	527.4	22.10	24.865		
3,600.0	3,507.5	3,504.7	3,269.2	15.0	24.0	26.85	740.5	-845.9	566.1	543.1	22.98	24.636		
3,700.0	3,603.0	3,603.3	3,357.9	15.6	24.9	27.06	768.6	-878.6	582.6	558.8	23.86	24.421		
3,800.0	3,698.4	3,701.9	3,446.6	16.2	25.8	27.26	796.6	-911.2	599.2	574.5	24.74	24.219		
3,900.0	3,793.8	3,800.5	3,535.2	16.9	26.7	27.44	824.7	-943.9	615.8	590.2	25.63	24.027		
4,000.0	3,889.3	3,899.1	3,623.9	17.5	27.7	27.62	852.7	-976.6	632.4	605.9	26.52	23.847		
4,100.0	3,984.7	3,997.7	3,712.6	18.1	28.6	27.78	880.7	-1,009.3	649.0	621.6	27.41	23.675		
4,200.0	4,080.1	4,096.3	3,801.3	18.7	29.5	27.94	908.8	-1,042.0	665.6	637.3	28.31	23.513		
4,300.0	4,175.5	4,194.8	3,890.0	19.4	30.4	28.09	936.8	-1,074.7	682.2	653.0	29.20	23.359		
4,400.0	4,271.0	4,293.4	3,978.7	20.0	31.3	28.24	964.8	-1,107.4	698.8	668.7	30.10	23.213		
4,500.0	4,366.4	4,392.0	4,067.4	20.6	32.2	28.37	992.9	-1,140.1	715.4	684.4	31.00	23.074		
4,600.0	4,461.8	4,490.6	4,156.1	21.2	33.1	28.50	1,020.9	-1,172.8	732.0	700.1	31.91	22.942		
4,700.0	4,557.2	4,589.2	4,244.8	21.9	34.0	28.63	1,049.0	-1,205.5	748.6	715.8	32.81	22.816		
4,800.0	4,652.7	4,687.8	4,333.5	22.5	35.0	28.75	1,077.0	-1,238.2	765.2	731.5	33.72	22.696		
4,900.0	4,748.1	4,786.4	4,422.2	23.1	35.9	28.86	1,105.0	-1,270.9	781.9	747.2	34.62	22.581		
5,000.0	4,843.5	4,885.0	4,510.9	23.8	36.8	28.97	1,133.1	-1,303.6	798.5	762.9	35.53	22.471		
5,100.0	4,938.9	4,983.6	4,599.5	24.4	37.7	29.08	1,161.1	-1,336.3	815.1	778.7	36.44	22.366		
5,200.0	5,034.4	5,082.2	4,688.2	25.0	38.6	29.18	1,189.1	-1,369.0	831.7	794.4	37.35	22.266		
5,300.0	5,129.8	5,180.8	4,776.9	25.6	39.5	29.27	1,217.2	-1,401.7	848.4	810.1	38.27	22.170		
5,400.0	5,225.2	5,279.4	4,865.6	26.3	40.4	29.37	1,245.2	-1,434.4	865.0	825.8	39.18	22.077		
5,500.0	5,320.6	5,378.0	4,954.3	26.9	41.3	29.46	1,273.3	-1,467.1	881.6	841.6	40.10	21.989		
5,600.0	5,416.4	5,476.5	5,042.9	27.5	42.3	29.65	1,301.3	-1,499.7	899.2	858.2	40.96	21.953		
5,700.0	5,513.0	5,574.3	5,130.9	27.9	43.2	29.80	1,329.1	-1,532.2	919.6	877.9	41.68	22.061		
5,800.0	5,610.5	5,706.9	5,251.1	28.3	44.2	29.84	1,365.5	-1,574.6	941.5	899.1	42.37	22.221		
5,900.0	5,708.7	5,850.1	5,383.6	28.6	45.1	29.85	1,400.7	-1,615.7	961.8	918.8	42.96	22.386		
6,000.0	5,807.5	5,995.2	5,520.5	28.9	45.9	29.82	1,432.0	-1,652.1	980.4	937.0	43.46	22.560		
6,100.0	5,906.7	6,142.1	5,661.5	29.1	46.6	29.76	1,459.0	-1,683.6	997.2	953.4	43.84	22.747		
6,200.0	6,006.4	6,290.7	5,805.9	29.3	47.2	29.67	1,481.5	-1,709.9	1,012.2	968.1	44.12	22.943		
6,300.0	6,106.3	6,440.8	5,953.5	29.5	47.7	29.55	1,499.2	-1,730.6	1,025.3	981.0	44.28	23.155		
6,400.0	6,206.2	6,592.2	6,103.7	29.6	48.1	-32.37	1,512.0	-1,745.5	1,036.3	992.0	44.35	23.369		
6,500.0	6,306.2	6,745.0	6,256.0	29.7	48.3	-32.56	1,519.6	-1,754.4	1,043.7	999.1	44.59	23.406		
6,600.0	6,406.2	6,895.3	6,406.2	29.8	48.4	-32.61	1,522.0	-1,757.2	1,046.0	1,001.1	44.87	23.311		
6,700.0	6,506.2	6,995.3	6,506.2	29.9	48.5	-32.61	1,522.0	-1,757.2	1,046.0	1,000.8	45.13	23.175		
6,800.0	6,606.2	7,095.3	6,606.2	30.0	48.6	-32.61	1,522.0	-1,757.2	1,046.0	1,000.6	45.40	23.039		
6,900.0	6,706.2	7,195.3	6,706.2	30.1	48.6	-32.61	1,522.0	-1,757.2	1,046.0	1,000.3	45.67	22.903		
7,000.0	6,806.2	7,295.3	6,806.2	30.2	48.7	-32.61	1,522.0	-1,757.2	1,046.0	1,000.0	45.94	22.768		
7,100.0	6,906.2	7,395.3	6,906.2	30.3	48.8	-32.61	1,522.0	-1,757.2	1,046.0	999.7	46.21	22.633		
7,200.0	7,006.2	7,495.3	7,006.2	30.4	48.8	-32.61	1,522.0	-1,757.2	1,046.0	999.5	46.49	22.498		
7,300.0	7,106.2	7,595.3	7,106.2	30.5	48.9	-32.61	1,522.0	-1,757.2	1,046.0	999.2	46.77	22.363		

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

<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Project:</b>	SEC.4-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Reference Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Northridge 4AD	<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>	EDM den0-adp01 Server Data
<b>Reference Design:</b>	Plan #3 (1-11-10)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Northridge Pad Sec.4-T5N-R66W - Northridge 11-4D - Wellbore #1 - Plan #3 (1-12-10)													<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b> 0-MWD													<b>Offset Well Error:</b>	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis 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	
7,400.0	7,206.2	7,695.3	7,206.2	30.7	49.0	-32.61	1,522.0	-1,757.2	1,046.0	998.9	47.05	22.229		
7,500.0	7,306.2	7,795.3	7,306.2	30.8	49.0	-32.61	1,522.0	-1,757.2	1,046.0	998.6	47.34	22.095		
7,600.0	7,406.2	7,895.3	7,406.2	30.9	49.1	-32.61	1,522.0	-1,757.2	1,046.0	998.3	47.63	21.962		
7,700.0	7,506.2	7,995.3	7,506.2	31.0	49.2	-32.61	1,522.0	-1,757.2	1,046.0	998.0	47.92	21.829		
7,800.0	7,606.2	8,095.3	7,606.2	31.1	49.2	-32.61	1,522.0	-1,757.2	1,046.0	997.8	48.21	21.696		
7,900.0	7,706.2	8,195.3	7,706.2	31.2	49.3	-32.61	1,522.0	-1,757.2	1,046.0	997.5	48.50	21.564		
8,000.0	7,806.2	8,295.3	7,806.2	31.4	49.4	-32.61	1,522.0	-1,757.2	1,046.0	997.2	48.80	21.433		
8,100.0	7,906.2	8,395.3	7,906.2	31.5	49.5	-32.61	1,522.0	-1,757.2	1,046.0	996.9	49.10	21.302		
8,158.8	7,965.0	8,454.1	7,965.0	31.6	49.5	-32.61	1,522.0	-1,757.2	1,046.0	996.7	49.28	21.226		

<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Project:</b>	SEC.4-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Reference Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Northridge 4AD	<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>	EDM den0-adp01 Server Data
<b>Reference Design:</b>	Plan #3 (1-11-10)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Northridge Pad Sec.4-T5N-R66W - Northridge 12-4D - Wellbore #1 - Plan #3 (1-12-10)														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	1.0	1.0	0.0	0.0	-149.90	-10.6	-6.1	12.2	12.2	0.00	9,238.698			
100.0	100.0	101.0	101.0	0.1	0.1	-149.90	-10.6	-6.1	12.2	12.0	0.23	53.794			
200.0	200.0	201.0	201.0	0.3	0.3	-149.90	-10.6	-6.1	12.2	11.5	0.68	18.051			
266.3	266.3	267.3	267.3	0.5	0.5	-149.90	-10.6	-6.1	12.2	11.2	0.97	12.529 CC			
300.0	300.0	301.0	301.0	0.6	0.6	-149.90	-10.6	-6.1	12.2	11.1	1.13	10.845			
400.0	400.0	400.9	400.9	0.8	0.8	-141.95	-10.0	-7.8	12.6	11.1	1.57	8.061 ES			
500.0	500.0	500.5	500.4	1.0	1.0	-122.71	-8.2	-12.7	15.1	13.1	2.02	7.500 SF			
600.0	600.0	599.6	599.0	1.2	1.2	-105.73	-5.9	-20.9	21.8	19.4	2.47	8.836			
700.0	700.0	697.9	696.7	1.5	1.5	-96.73	-3.8	-32.5	33.0	30.0	2.95	11.192			
800.0	800.0	795.4	793.0	1.7	1.8	-92.39	-2.0	-47.2	47.9	44.4	3.45	13.863			
900.0	900.0	891.7	887.7	1.9	2.2	-90.27	-0.3	-64.9	66.3	62.3	4.00	16.560			
1,000.0	1,000.0	986.8	980.5	2.1	2.6	-89.23	1.2	-85.6	88.0	83.4	4.59	19.156			
1,100.0	1,100.0	1,080.8	1,071.5	2.4	3.0	-27.16	2.4	-108.9	111.4	106.6	4.76	23.384			
1,200.0	1,199.8	1,173.9	1,160.9	2.6	3.5	-27.64	3.5	-135.1	135.0	129.8	5.22	25.848			
1,300.0	1,299.5	1,266.3	1,248.6	2.8	4.1	-28.54	4.4	-163.8	158.7	153.0	5.69	27.881			
1,400.0	1,398.7	1,357.9	1,334.7	3.0	4.7	-29.69	5.1	-195.1	182.7	176.5	6.18	29.552			
1,500.0	1,497.5	1,455.1	1,425.5	3.3	5.4	-31.10	5.8	-229.8	205.4	198.7	6.70	30.661			
1,600.0	1,595.6	1,552.9	1,516.9	3.6	6.1	-32.68	6.4	-264.6	225.3	218.1	7.26	31.036			
1,700.0	1,693.1	1,651.0	1,608.6	4.0	6.9	-34.46	7.1	-299.6	242.6	234.8	7.87	30.845			
1,800.0	1,789.6	1,749.5	1,700.6	4.4	7.6	-36.45	7.8	-334.7	257.4	248.9	8.54	30.145			
1,900.0	1,885.3	1,848.1	1,792.7	4.9	8.3	-38.71	8.5	-369.9	269.9	260.6	9.30	29.008			
2,000.0	1,980.7	1,946.7	1,884.9	5.4	9.1	-40.97	9.1	-405.0	282.2	272.1	10.16	27.781			
2,100.0	2,076.2	2,045.4	1,977.0	6.0	9.8	-43.05	9.8	-440.2	294.9	283.8	11.07	26.642			
2,200.0	2,171.6	2,144.0	2,069.2	6.5	10.6	-44.95	10.5	-475.4	308.0	295.9	12.03	25.598			
2,300.0	2,267.0	2,242.6	2,161.3	7.1	11.3	-46.70	11.2	-510.5	321.3	308.3	13.04	24.649			
2,400.0	2,362.4	2,341.3	2,253.5	7.7	12.1	-48.31	11.9	-545.7	334.9	320.9	14.08	23.793			
2,500.0	2,457.9	2,439.9	2,345.7	8.3	12.8	-49.79	12.5	-580.8	348.8	333.7	15.15	23.021			
2,600.0	2,553.3	2,538.6	2,437.8	8.9	13.6	-51.16	13.2	-616.0	362.9	346.7	16.25	22.328			
2,700.0	2,648.7	2,637.2	2,530.0	9.5	14.3	-52.43	13.9	-651.2	377.2	359.8	17.38	21.705			
2,800.0	2,744.1	2,735.9	2,622.1	10.1	15.1	-53.61	14.6	-686.3	391.6	373.1	18.52	21.144			
2,900.0	2,839.6	2,834.5	2,714.3	10.7	15.8	-54.70	15.2	-721.5	406.2	386.5	19.68	20.639			
3,000.0	2,935.0	2,933.1	2,806.4	11.3	16.6	-55.72	15.9	-756.7	421.0	400.1	20.86	20.182			
3,100.0	3,030.4	3,031.8	2,898.6	11.9	17.3	-56.66	16.6	-791.8	435.8	413.8	22.05	19.769			
3,200.0	3,125.8	3,130.4	2,990.8	12.5	18.1	-57.55	17.3	-827.0	450.8	427.5	23.24	19.394			
3,300.0	3,221.3	3,229.1	3,082.9	13.1	18.8	-58.38	18.0	-862.1	465.8	441.4	24.45	19.053			
3,400.0	3,316.7	3,327.7	3,175.1	13.8	19.6	-59.15	18.6	-897.3	481.0	455.3	25.66	18.742			
3,500.0	3,412.1	3,426.3	3,267.2	14.4	20.4	-59.88	19.3	-932.5	496.2	469.3	26.89	18.457			
3,600.0	3,507.5	3,525.0	3,359.4	15.0	21.1	-60.57	20.0	-967.6	511.5	483.4	28.11	18.196			
3,700.0	3,603.0	3,623.6	3,451.6	15.6	21.9	-61.21	20.7	-1,002.8	526.9	497.6	29.34	17.956			
3,800.0	3,698.4	3,722.3	3,543.7	16.2	22.6	-61.82	21.3	-1,038.0	542.3	511.8	30.58	17.735			
3,900.0	3,793.8	3,820.9	3,635.9	16.9	23.4	-62.40	22.0	-1,073.1	557.8	526.0	31.82	17.530			
4,000.0	3,889.3	3,919.5	3,728.0	17.5	24.1	-62.94	22.7	-1,108.3	573.4	540.3	33.06	17.341			
4,100.0	3,984.7	4,018.2	3,820.2	18.1	24.9	-63.46	23.4	-1,143.4	589.0	554.7	34.31	17.165			
4,200.0	4,080.1	4,116.8	3,912.3	18.7	25.6	-63.95	24.1	-1,178.6	604.6	569.0	35.56	17.002			
4,300.0	4,175.5	4,215.5	4,004.5	19.4	26.4	-64.41	24.7	-1,213.8	620.3	583.5	36.81	16.850			
4,400.0	4,271.0	4,314.1	4,096.7	20.0	27.2	-64.85	25.4	-1,248.9	636.0	597.9	38.07	16.708			
4,500.0	4,366.4	4,412.8	4,188.8	20.6	27.9	-65.28	26.1	-1,284.1	651.8	612.4	39.32	16.575			
4,600.0	4,461.8	4,511.4	4,281.0	21.2	28.7	-65.68	26.8	-1,319.3	667.5	627.0	40.58	16.451			
4,700.0	4,557.2	4,610.0	4,373.1	21.9	29.4	-66.06	27.4	-1,354.4	683.4	641.5	41.84	16.334			
4,800.0	4,652.7	4,708.7	4,465.3	22.5	30.2	-66.42	28.1	-1,389.6	699.2	656.1	43.10	16.224			
4,900.0	4,748.1	4,807.3	4,557.5	23.1	30.9	-66.77	28.8	-1,424.7	715.1	670.7	44.36	16.120			
5,000.0	4,843.5	4,906.0	4,649.6	23.8	31.7	-67.11	29.5	-1,459.9	731.0	685.3	45.62	16.023			

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

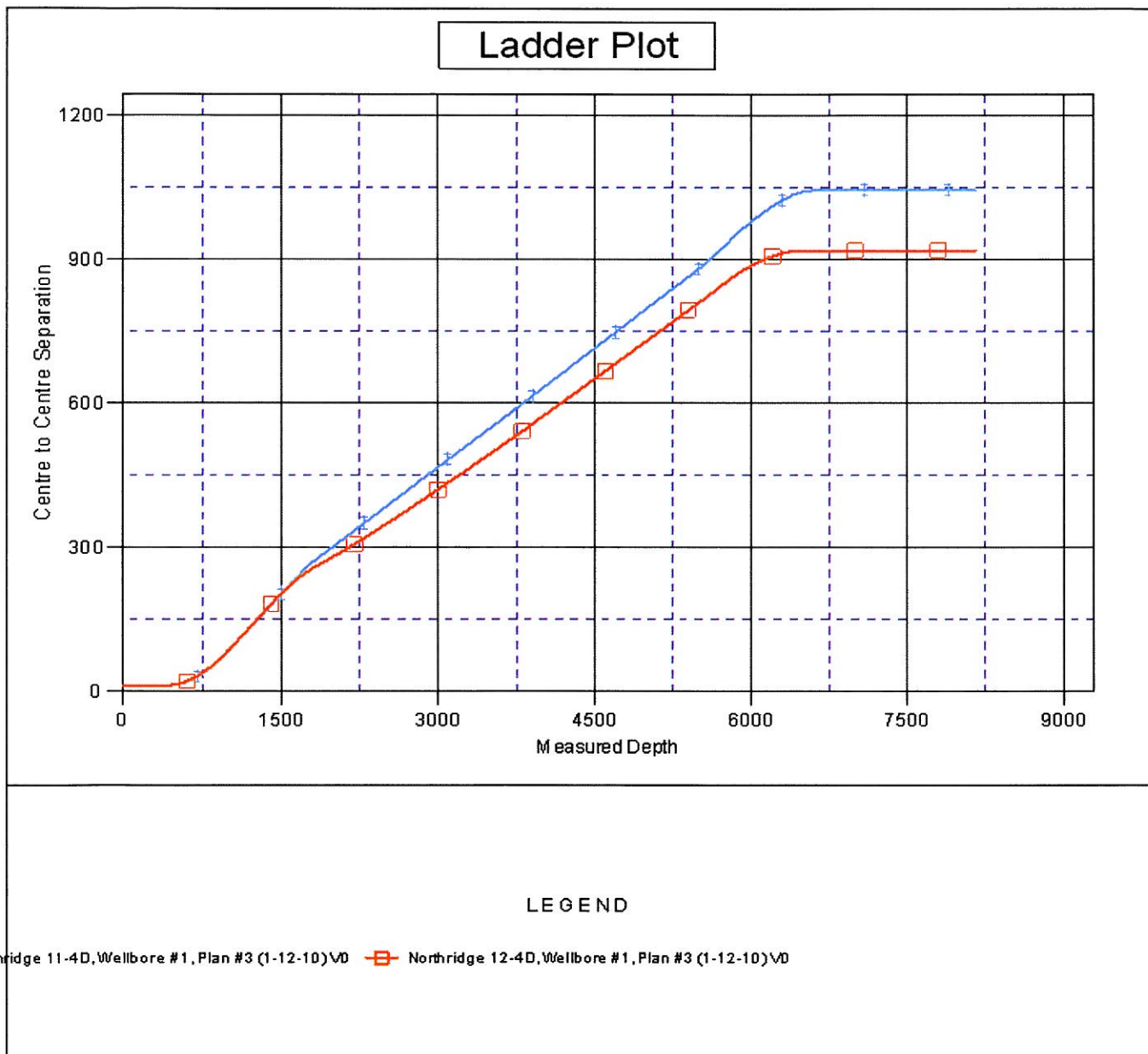
**Company:** Synergy Resources  
**Project:** SEC.4-T5N-R66W  
**Reference Site:** Northridge Pad Sec.4-T5N-R66W  
**Site Error:** 0.0ft  
**Reference Well:** Northridge 4AD  
**Well Error:** 0.0ft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Plan #3 (1-11-10)

**Local Co-ordinate Reference:** Well Northridge 4AD  
**TVD Reference:** WELL @ 4753.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4753.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM den0-adp01 Server Data  
**Offset TVD Reference:** Offset Datum

Offset Design Northridge Pad Sec.4-T5N-R66W - Northridge 12-4D - Wellbore #1 - Plan #3 (1-12-10)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
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	4,938.9	5,004.6	4,741.8	24.4	32.5	-67.43	30.2	-1,495.1	746.9	700.0	46.88	15.931		
5,200.0	5,034.4	5,103.2	4,833.9	25.0	33.2	-67.73	30.8	-1,530.2	762.8	714.7	48.15	15.844		
5,300.0	5,129.8	5,201.9	4,926.1	25.6	34.0	-68.02	31.5	-1,565.4	778.8	729.4	49.41	15.761		
5,400.0	5,225.2	5,300.5	5,018.3	26.3	34.7	-68.31	32.2	-1,600.6	794.8	744.1	50.68	15.683		
5,500.0	5,320.6	5,399.2	5,110.4	26.9	35.5	-68.58	32.9	-1,635.7	810.8	758.8	51.94	15.609		
5,600.0	5,416.4	5,497.8	5,202.5	27.5	36.2	-69.01	33.5	-1,670.9	827.1	773.9	53.18	15.552		
5,700.0	5,513.0	5,600.9	5,298.9	27.9	37.0	-69.31	34.3	-1,707.5	844.7	790.4	54.25	15.568		
5,800.0	5,610.5	5,726.8	5,417.8	28.3	37.7	-69.48	35.1	-1,748.9	861.3	806.1	55.20	15.604		
5,900.0	5,708.7	5,853.9	5,539.5	28.6	38.3	-69.59	35.8	-1,785.4	876.0	820.0	56.02	15.637		
6,000.0	5,807.5	5,981.9	5,663.7	28.9	38.9	-69.64	36.4	-1,816.6	888.7	832.0	56.72	15.669		
6,100.0	5,906.7	6,110.9	5,790.1	29.1	39.3	-69.64	36.9	-1,842.4	899.3	842.1	57.28	15.700		
6,200.0	6,006.4	6,240.6	5,918.2	29.3	39.7	-69.59	37.2	-1,862.6	907.9	850.2	57.71	15.731		
6,300.0	6,106.3	6,371.0	6,047.7	29.5	39.9	-69.48	37.5	-1,877.0	914.3	856.3	58.02	15.759		
6,400.0	6,206.2	6,501.8	6,178.3	29.6	40.1	-131.08	37.7	-1,885.5	918.6	860.4	58.20	15.782		
6,500.0	6,306.2	6,630.8	6,307.2	29.7	40.2	-130.97	37.7	-1,888.1	920.1	861.7	58.39	15.758		
6,600.0	6,406.2	6,730.8	6,407.2	29.8	40.3	-130.97	37.7	-1,888.1	920.1	861.5	58.58	15.705		
6,700.0	6,506.2	6,830.8	6,507.2	29.9	40.4	-130.97	37.7	-1,888.1	920.1	861.3	58.79	15.651		
6,800.0	6,606.2	6,930.8	6,607.2	30.0	40.5	-130.97	37.7	-1,888.1	920.1	861.1	58.99	15.596		
6,900.0	6,706.2	7,030.8	6,707.2	30.1	40.5	-130.97	37.7	-1,888.1	920.1	860.9	59.20	15.541		
7,000.0	6,806.2	7,130.8	6,807.2	30.2	40.6	-130.97	37.7	-1,888.1	920.1	860.7	59.41	15.486		
7,100.0	6,906.2	7,230.8	6,907.2	30.3	40.7	-130.97	37.7	-1,888.1	920.1	860.4	59.63	15.431		
7,200.0	7,006.2	7,330.8	7,007.2	30.4	40.8	-130.97	37.7	-1,888.1	920.1	860.2	59.84	15.375		
7,300.0	7,106.2	7,430.8	7,107.2	30.5	40.9	-130.97	37.7	-1,888.1	920.1	860.0	60.06	15.319		
7,400.0	7,206.2	7,530.8	7,207.2	30.7	41.0	-130.97	37.7	-1,888.1	920.1	859.8	60.28	15.263		
7,500.0	7,306.2	7,630.8	7,307.2	30.8	41.0	-130.97	37.7	-1,888.1	920.1	859.6	60.51	15.206		
7,600.0	7,406.2	7,730.8	7,407.2	30.9	41.1	-130.97	37.7	-1,888.1	920.1	859.3	60.73	15.149		
7,700.0	7,506.2	7,830.8	7,507.2	31.0	41.2	-130.97	37.7	-1,888.1	920.1	859.1	60.96	15.093		
7,800.0	7,606.2	7,930.8	7,607.2	31.1	41.3	-130.97	37.7	-1,888.1	920.1	858.9	61.19	15.036		
7,900.0	7,706.2	8,030.8	7,707.2	31.2	41.4	-130.97	37.7	-1,888.1	920.1	858.6	61.43	14.978		
8,000.0	7,806.2	8,130.8	7,807.2	31.4	41.5	-130.97	37.7	-1,888.1	920.1	858.4	61.66	14.921		
8,100.0	7,906.2	8,230.8	7,907.2	31.5	41.6	-130.97	37.7	-1,888.1	920.1	858.2	61.90	14.863		
8,138.8	7,945.1	8,269.6	7,946.1	31.5	41.6	-130.97	37.7	-1,888.1	920.1	858.1	61.99	14.841		
8,158.8	7,965.0	8,288.6	7,965.0	31.6	41.6	-130.97	37.7	-1,888.1	920.1	858.0	62.04	14.830		

<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Project:</b>	SEC.4-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Reference Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Northridge 4AD	<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>	EDM den0-adp01 Server Data
<b>Reference Design:</b>	Plan #3 (1-11-10)	<b>Offset TVD Reference:</b>	Offset Datum

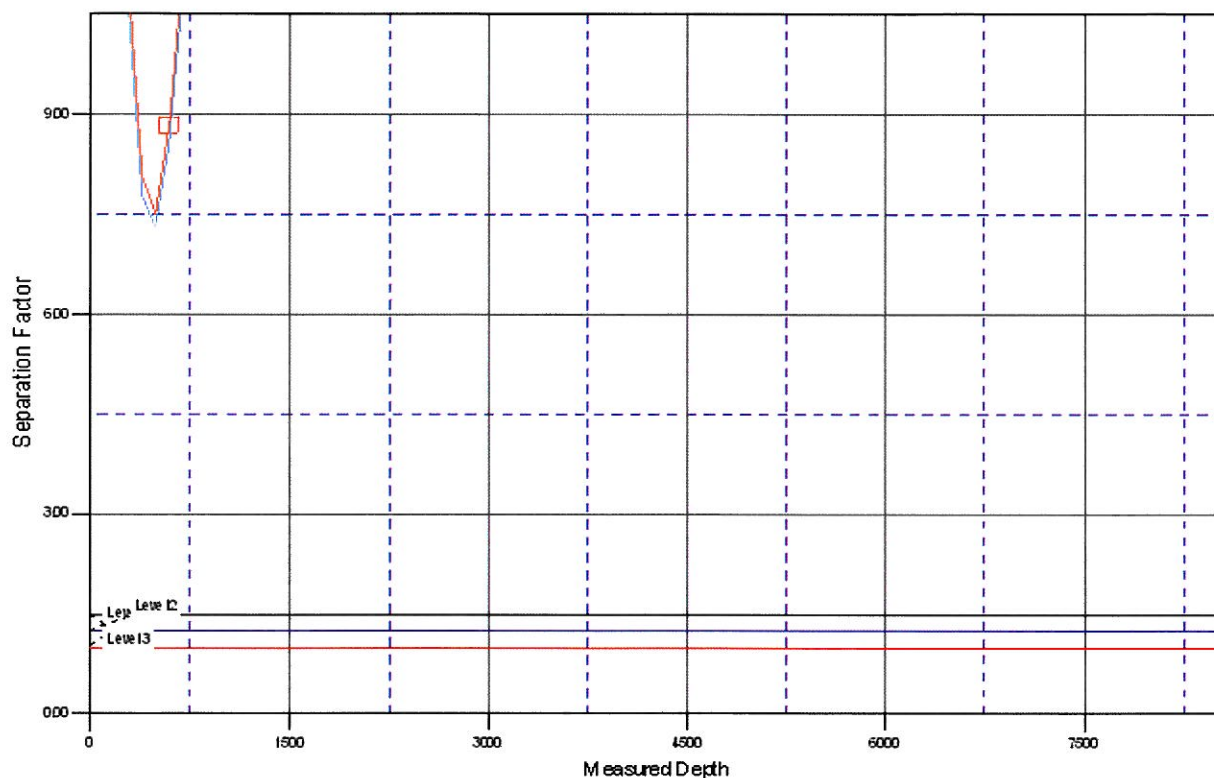
Reference Depths are relative to WELL @ 4753.0ft (Original Well Elev) Coordinates are relative to: Northridge 4AD  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.46°



<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Northridge 4AD
<b>Project:</b>	SEC.4-T5N-R66W	<b>TVD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Reference Site:</b>	Northridge Pad Sec.4-T5N-R66W	<b>MD Reference:</b>	WELL @ 4753.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Northridge 4AD	<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>	EDM den0-adp01 Server Data
<b>Reference Design:</b>	Plan #3 (1-11-10)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4753.0ft (Original Well Elev) Coordinates are relative to: Northridge 4AD  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 105° 30' 0.000 W °  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.46°

### Separation Factor Plot



### LEGEND

Northridge 11-4D, Wellbore #1, Plan #3 (1-12-10) \VD — Northridge 12-4D, Wellbore #1, Plan #3 (1-12-10) \VD