

ENSIGN Directional

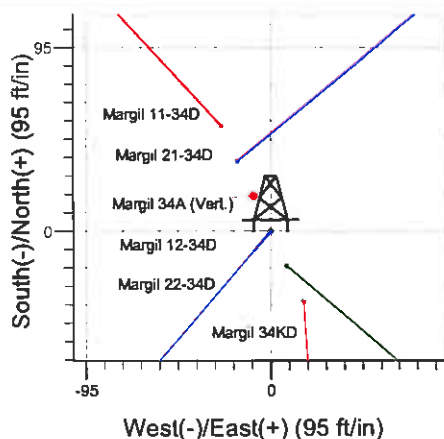
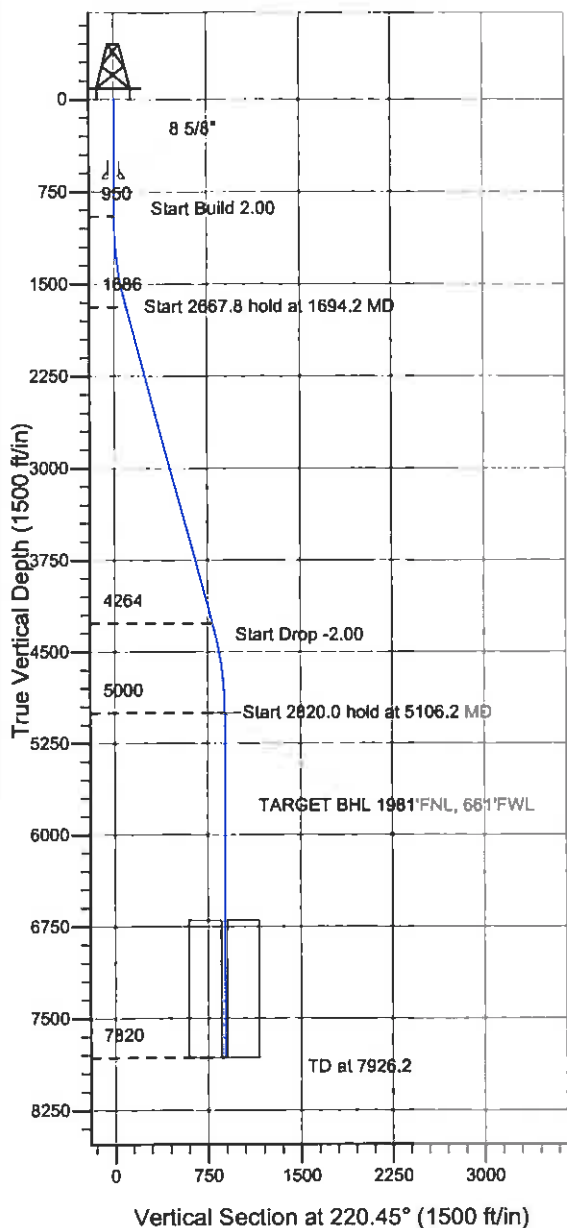
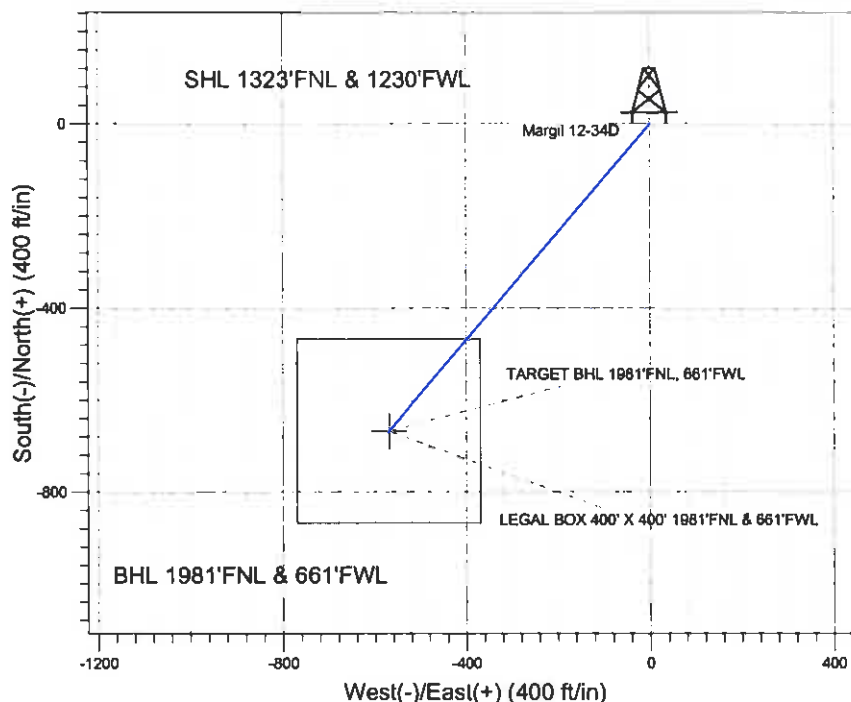
Well Name: Margil 12-34D

Surface Location: Margil 11-34D Pad Sec.34-T4N-R68W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone

Ground Elevation: 5105.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1342861.24	3141113.20	40.273449	-104.994270	
Original Well Elev WELL @ 5118.0ft (Original Well Elev)						

Synergy Resources



Margil 11-34D Pad Sec.34-T4N-R68W
 Margil 12-34D
 Plan #1 (5-23-11)
 7.45, May 27 2011



Azimuths to True North
 Magnetic North 8.98°
 Magnetic Field
 Strength: 53044.2snT
 Dip Angle: 66.91°
 Date: 5/23/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1981'FNL, 661'FWL	5000.0	-667.8	-569.3	40.271616	-104.996310	Point
LEGAL BOX 400' X 400' 1981'FNL & 661'FWL	6700.0	-667.8	-569.3	40.271616	-104.996310	Rectangle (Sides: L400.0 W400.0)

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	950.0	0.00	0.00	950.0	0.0	0.0	0.00	0.00	0.0	
3	1694.2	14.88	220.45	1685.8	-73.1	-62.4	2.00	220.45	96.1	
4	4362.0	14.88	220.45	4264.2	-594.6	-506.9	0.00	0.00	781.4	
5	5106.2	0.00	0.00	5000.0	-667.8	-569.3	2.00	180.00	877.5	TARGET BHL 1981'FNL, 661'FWL
6	7926.2	0.00	0.00	7820.0	-667.8	-569.3	0.00	0.00	877.5	



Directional

Synergy Resources

SEC.34-T4N-R68W

Margil 11-34D Pad Sec.34-T4N-R68W

Margil 12-34D

Wellbore #1

Plan: Plan #1 (5-23-11)

Standard Planning Report

27 May, 2011

Database:	Landmark
Company:	Synergy Resources
Project:	SEC.34-T4N-R68W
Site:	Margil 11-34D Pad Sec.34-T4N-R68W
Well:	Margil 12-34D
Wellbore:	Wellbore #1
Design:	Plan #1 (5-23-11)

Local Co-ordinate Reference:	Well Margil 12-34D
TVD Reference:	WELL @ 5118.0ft (Original Well Elev)
MD Reference:	WELL @ 5118.0ft (Original Well Elev)
North Reference:	True
Survey Calculation Method:	Minimum Curvature

Project	SEC.34-T4N-R68W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Margil 11-34D Pad Sec.34-T4N-R68W				
Site Position:		Northlng:	1,342,915.75 ft	Latitude:	40.273599
From:	Lat/Long	Easting:	3,141,087.50 ft	Longitude:	-104.994361
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.33 °

Well	Margil 12-34D					
Well Position	+N/-S	-54.7 ft	Northing:	1,342,861.24 ft	Latitude:	40.273449
	+E/-W	25.4 ft	Eastling:	3,141,113.20 ft	Longitude:	-104.994270
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,105.0 ft

Wellbore	Wellbore #1
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/23/2011	8.98	66.91	53,044

Design Plan #1 (5-23-11)

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	220.45

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Bulld 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	
950.0	0.00	0.00	950.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,694.2	14.88	220.45	1,685.8	-73.1	-62.4	2.00	2.00	0.00	220.45	
4,362.0	14.88	220.45	4,264.2	-594.6	-506.9	0.00	0.00	0.00	0.00	
5,106.2	0.00	0.00	5,000.0	-667.8	-569.3	2.00	-2.00	0.00	180.00	TARGET BHL 1981
7,926.2	0.00	0.00	7,820.0	-667.8	-569.3	0.00	0.00	0.00	0.00	

ENSIGN Directional

Planning Report

Database: Landmark
Company: Synergy Resources
Project: SEC.34-T4N-R68W
Site: Margil 11-34D Pad Sec.34-T4N-R68W
Well: Margil 12-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Margil 12-34D
 WELL @ 5118.0ft (Original Well Elev)
 WELL @ 5118.0ft (Original Well Elev)
 True
 Minimum Curvature

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
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
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.20	220.45	960.0	0.0	0.0	0.0	2.00	2.00	0.00
1,000.0	1.00	220.45	1,000.0	-0.3	-0.3	0.4	2.00	2.00	0.00
1,040.0	1.80	220.45	1,040.0	-1.1	-0.9	1.4	2.00	2.00	0.00
1,080.0	2.60	220.45	1,080.0	-2.2	-1.9	2.9	2.00	2.00	0.00
1,120.0	3.40	220.45	1,119.9	-3.8	-3.3	5.0	2.00	2.00	0.00
1,160.0	4.20	220.45	1,159.8	-5.9	-5.0	7.7	2.00	2.00	0.00
1,200.0	5.00	220.45	1,199.7	-8.3	-7.1	10.9	2.00	2.00	0.00
1,240.0	5.80	220.45	1,239.5	-11.2	-9.5	14.7	2.00	2.00	0.00
1,280.0	6.60	220.45	1,279.3	-14.4	-12.3	19.0	2.00	2.00	0.00
1,320.0	7.40	220.45	1,319.0	-18.2	-15.5	23.9	2.00	2.00	0.00
1,360.0	8.20	220.45	1,358.6	-22.3	-19.0	29.3	2.00	2.00	0.00
1,400.0	9.00	220.45	1,398.2	-26.8	-22.9	35.3	2.00	2.00	0.00
1,440.0	9.80	220.45	1,437.6	-31.8	-27.1	41.8	2.00	2.00	0.00
1,480.0	10.60	220.45	1,477.0	-37.2	-31.7	48.9	2.00	2.00	0.00
1,520.0	11.40	220.45	1,516.2	-43.0	-36.7	56.5	2.00	2.00	0.00
1,560.0	12.20	220.45	1,555.4	-49.2	-42.0	64.7	2.00	2.00	0.00
1,600.0	13.00	220.45	1,594.4	-55.9	-47.6	73.4	2.00	2.00	0.00
1,640.0	13.80	220.45	1,633.3	-62.9	-53.6	82.7	2.00	2.00	0.00
1,680.0	14.60	220.45	1,672.1	-70.4	-60.0	92.5	2.00	2.00	0.00
1,694.2	14.88	220.45	1,685.8	-73.1	-62.4	96.1	2.00	2.00	0.00
1,720.0	14.88	220.45	1,710.8	-78.2	-66.7	102.7	0.00	0.00	0.00
1,760.0	14.88	220.45	1,749.5	-86.0	-73.3	113.0	0.00	0.00	0.00
1,800.0	14.88	220.45	1,788.1	-93.8	-80.0	123.3	0.00	0.00	0.00
1,840.0	14.88	220.45	1,826.8	-101.6	-86.7	133.6	0.00	0.00	0.00
1,880.0	14.88	220.45	1,865.4	-109.5	-93.3	143.8	0.00	0.00	0.00
1,920.0	14.88	220.45	1,904.1	-117.3	-100.0	154.1	0.00	0.00	0.00
1,960.0	14.88	220.45	1,942.7	-125.1	-106.6	164.4	0.00	0.00	0.00
2,000.0	14.88	220.45	1,981.4	-132.9	-113.3	174.7	0.00	0.00	0.00

Database: Landmark
Company: Synergy Resources
Project: SEC.34-T4N-R68W
Site: Margil 11-34D Pad Sec.34-T4N-R68W
Well: Margil 12-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Bulld Rate (°/100ft)	Turn Rate (°/100ft)
2,040.0	14.88	220.45	2,020.1	-140.7	-120.0	184.9	0.00	0.00	0.00
2,080.0	14.88	220.45	2,058.7	-148.6	-126.6	195.2	0.00	0.00	0.00
2,120.0	14.88	220.45	2,097.4	-156.4	-133.3	205.5	0.00	0.00	0.00
2,160.0	14.88	220.45	2,136.0	-164.2	-140.0	215.8	0.00	0.00	0.00
2,200.0	14.88	220.45	2,174.7	-172.0	-146.6	226.0	0.00	0.00	0.00
2,240.0	14.88	220.45	2,213.3	-179.8	-153.3	236.3	0.00	0.00	0.00
2,280.0	14.88	220.45	2,252.0	-187.6	-160.0	246.6	0.00	0.00	0.00
2,320.0	14.88	220.45	2,290.7	-195.5	-166.6	256.9	0.00	0.00	0.00
2,360.0	14.88	220.45	2,329.3	-203.3	-173.3	267.1	0.00	0.00	0.00
2,400.0	14.88	220.45	2,368.0	-211.1	-180.0	277.4	0.00	0.00	0.00
2,440.0	14.88	220.45	2,406.6	-218.9	-186.6	287.7	0.00	0.00	0.00
2,480.0	14.88	220.45	2,445.3	-226.7	-193.3	298.0	0.00	0.00	0.00
2,520.0	14.88	220.45	2,484.0	-234.6	-200.0	308.2	0.00	0.00	0.00
2,560.0	14.88	220.45	2,522.6	-242.4	-206.6	318.5	0.00	0.00	0.00
2,600.0	14.88	220.45	2,561.3	-250.2	-213.3	328.8	0.00	0.00	0.00
2,640.0	14.88	220.45	2,599.9	-258.0	-220.0	339.1	0.00	0.00	0.00
2,680.0	14.88	220.45	2,638.6	-265.8	-226.6	349.3	0.00	0.00	0.00
2,720.0	14.88	220.45	2,677.2	-273.7	-233.3	359.6	0.00	0.00	0.00
2,760.0	14.88	220.45	2,715.9	-281.5	-240.0	369.9	0.00	0.00	0.00
2,800.0	14.88	220.45	2,754.6	-289.3	-246.6	380.1	0.00	0.00	0.00
2,840.0	14.88	220.45	2,793.2	-297.1	-253.3	390.4	0.00	0.00	0.00
2,880.0	14.88	220.45	2,831.9	-304.9	-260.0	400.7	0.00	0.00	0.00
2,920.0	14.88	220.45	2,870.5	-312.7	-266.6	411.0	0.00	0.00	0.00
2,960.0	14.88	220.45	2,909.2	-320.6	-273.3	421.2	0.00	0.00	0.00
3,000.0	14.88	220.45	2,947.8	-328.4	-280.0	431.5	0.00	0.00	0.00
3,040.0	14.88	220.45	2,986.5	-336.2	-286.6	441.8	0.00	0.00	0.00
3,080.0	14.88	220.45	3,025.2	-344.0	-293.3	452.1	0.00	0.00	0.00
3,120.0	14.88	220.45	3,063.8	-351.8	-299.9	462.3	0.00	0.00	0.00
3,160.0	14.88	220.45	3,102.5	-359.7	-306.6	472.6	0.00	0.00	0.00
3,200.0	14.88	220.45	3,141.1	-367.5	-313.3	482.9	0.00	0.00	0.00
3,240.0	14.88	220.45	3,179.8	-375.3	-319.9	493.2	0.00	0.00	0.00
3,280.0	14.88	220.45	3,218.5	-383.1	-326.6	503.4	0.00	0.00	0.00
3,320.0	14.88	220.45	3,257.1	-390.9	-333.3	513.7	0.00	0.00	0.00
3,360.0	14.88	220.45	3,295.8	-398.8	-339.9	524.0	0.00	0.00	0.00
3,400.0	14.88	220.45	3,334.4	-406.6	-346.6	534.3	0.00	0.00	0.00
3,440.0	14.88	220.45	3,373.1	-414.4	-353.3	544.5	0.00	0.00	0.00
3,480.0	14.88	220.45	3,411.7	-422.2	-359.9	554.8	0.00	0.00	0.00
3,520.0	14.88	220.45	3,450.4	-430.0	-366.6	565.1	0.00	0.00	0.00
3,560.0	14.88	220.45	3,489.1	-437.8	-373.3	575.4	0.00	0.00	0.00
3,600.0	14.88	220.45	3,527.7	-445.7	-379.9	585.6	0.00	0.00	0.00
3,640.0	14.88	220.45	3,566.4	-453.5	-386.6	595.9	0.00	0.00	0.00
3,680.0	14.88	220.45	3,605.0	-461.3	-393.3	606.2	0.00	0.00	0.00
3,720.0	14.88	220.45	3,643.7	-469.1	-399.9	616.5	0.00	0.00	0.00
3,760.0	14.88	220.45	3,682.4	-476.9	-406.6	626.7	0.00	0.00	0.00
3,800.0	14.88	220.45	3,721.0	-484.8	-413.3	637.0	0.00	0.00	0.00
3,840.0	14.88	220.45	3,759.7	-492.6	-419.9	647.3	0.00	0.00	0.00
3,880.0	14.88	220.45	3,798.3	-500.4	-426.6	657.5	0.00	0.00	0.00
3,920.0	14.88	220.45	3,837.0	-508.2	-433.3	667.8	0.00	0.00	0.00
3,960.0	14.88	220.45	3,875.6	-516.0	-439.9	678.1	0.00	0.00	0.00
4,000.0	14.88	220.45	3,914.3	-523.8	-446.6	688.4	0.00	0.00	0.00
4,040.0	14.88	220.45	3,953.0	-531.7	-453.3	698.6	0.00	0.00	0.00
4,080.0	14.88	220.45	3,991.6	-539.5	-459.9	708.9	0.00	0.00	0.00
4,120.0	14.88	220.45	4,030.3	-547.3	-466.6	719.2	0.00	0.00	0.00
4,160.0	14.88	220.45	4,068.9	-555.1	-473.2	729.5	0.00	0.00	0.00

Database: Landmark
Company: Synergy Resources
Project: SEC.34-T4N-R68W
Site: Margil 11-34D Pad Sec.34-T4N-R68W
Well: Margil 12-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference:
TVD Reference:
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North Reference:
Survey Calculation Method:

Well Margil 12-34D
 WELL @ 5118.0ft (Original Well Elev)
 WELL @ 5118.0ft (Original Well Elev)
 True
 Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Bulld Rate (°/100ft)	Turn Rate (°/100ft)
4,200.0	14.88	220.45	4,107.6	-562.9	-479.9	739.7	0.00	0.00	0.00
4,240.0	14.88	220.45	4,146.2	-570.8	-486.6	750.0	0.00	0.00	0.00
4,280.0	14.88	220.45	4,184.9	-578.6	-493.2	760.3	0.00	0.00	0.00
4,320.0	14.88	220.45	4,223.6	-586.4	-499.9	770.6	0.00	0.00	0.00
4,360.0	14.88	220.45	4,262.2	-594.2	-506.6	780.8	0.00	0.00	0.00
4,362.0	14.88	220.45	4,264.2	-594.6	-506.9	781.4	0.00	0.00	0.00
4,400.0	14.12	220.45	4,300.9	-601.8	-513.1	790.9	2.00	-2.00	0.00
4,440.0	13.32	220.45	4,339.8	-609.1	-519.2	800.4	2.00	-2.00	0.00
4,480.0	12.52	220.45	4,378.8	-615.9	-525.0	809.3	2.00	-2.00	0.00
4,520.0	11.72	220.45	4,417.9	-622.3	-530.5	817.7	2.00	-2.00	0.00
4,560.0	10.92	220.45	4,457.1	-628.2	-535.6	825.6	2.00	-2.00	0.00
4,600.0	10.12	220.45	4,496.4	-633.8	-540.3	832.9	2.00	-2.00	0.00
4,640.0	9.32	220.45	4,535.9	-638.9	-544.7	839.6	2.00	-2.00	0.00
4,680.0	8.52	220.45	4,575.4	-643.7	-548.7	845.8	2.00	-2.00	0.00
4,720.0	7.72	220.45	4,615.0	-648.0	-552.4	851.5	2.00	-2.00	0.00
4,760.0	6.92	220.45	4,654.7	-651.9	-555.7	856.6	2.00	-2.00	0.00
4,800.0	6.12	220.45	4,694.4	-655.3	-558.7	861.1	2.00	-2.00	0.00
4,840.0	5.32	220.45	4,734.2	-658.3	-561.2	865.1	2.00	-2.00	0.00
4,880.0	4.52	220.45	4,774.0	-661.0	-563.5	868.5	2.00	-2.00	0.00
4,920.0	3.72	220.45	4,813.9	-663.1	-565.3	871.4	2.00	-2.00	0.00
4,960.0	2.92	220.45	4,853.9	-664.9	-566.8	873.7	2.00	-2.00	0.00
5,000.0	2.12	220.45	4,893.8	-666.3	-568.0	875.5	2.00	-2.00	0.00
5,040.0	1.32	220.45	4,933.8	-667.2	-568.8	876.7	2.00	-2.00	0.00
5,080.0	0.52	220.45	4,973.8	-667.7	-569.2	877.3	2.00	-2.00	0.00
5,106.2	0.00	0.00	5,000.0	-667.8	-569.3	877.5	2.00	-2.00	532.91
TARGET BHL 1981'FNL, 661'FWL									
5,120.0	0.00	0.00	5,013.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,160.0	0.00	0.00	5,053.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,093.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,240.0	0.00	0.00	5,133.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,280.0	0.00	0.00	5,173.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,320.0	0.00	0.00	5,213.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,360.0	0.00	0.00	5,253.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,293.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,440.0	0.00	0.00	5,333.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,480.0	0.00	0.00	5,373.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,520.0	0.00	0.00	5,413.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,560.0	0.00	0.00	5,453.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,493.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,640.0	0.00	0.00	5,533.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,680.0	0.00	0.00	5,573.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,720.0	0.00	0.00	5,613.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,760.0	0.00	0.00	5,653.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,693.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,840.0	0.00	0.00	5,733.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,880.0	0.00	0.00	5,773.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,920.0	0.00	0.00	5,813.8	-667.8	-569.3	877.5	0.00	0.00	0.00
5,960.0	0.00	0.00	5,853.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,893.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,040.0	0.00	0.00	5,933.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,080.0	0.00	0.00	5,973.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,120.0	0.00	0.00	6,013.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,160.0	0.00	0.00	6,053.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,093.8	-667.8	-569.3	877.5	0.00	0.00	0.00

Database: Landmark
Company: Synergy Resources
Project: SEC.34-T4N-R68W
Site: Margil 11-34D Pad Sec.34-T4N-R68W
Well: Margil 12-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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)
6,240.0	0.00	0.00	6,133.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,280.0	0.00	0.00	6,173.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,320.0	0.00	0.00	6,213.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,360.0	0.00	0.00	6,253.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,293.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,440.0	0.00	0.00	6,333.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,480.0	0.00	0.00	6,373.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,520.0	0.00	0.00	6,413.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,560.0	0.00	0.00	6,453.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,493.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,640.0	0.00	0.00	6,533.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,680.0	0.00	0.00	6,573.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,720.0	0.00	0.00	6,613.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,760.0	0.00	0.00	6,653.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,693.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,806.2	0.00	0.00	6,700.0	-667.8	-569.3	877.5	0.00	0.00	0.00
LEGAL BOX 400' X 400' 1981'FNL & 661'FWL									
6,840.0	0.00	0.00	6,733.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,880.0	0.00	0.00	6,773.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,920.0	0.00	0.00	6,813.8	-667.8	-569.3	877.5	0.00	0.00	0.00
6,960.0	0.00	0.00	6,853.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,893.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,040.0	0.00	0.00	6,933.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,080.0	0.00	0.00	6,973.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,120.0	0.00	0.00	7,013.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,160.0	0.00	0.00	7,053.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,093.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,240.0	0.00	0.00	7,133.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,280.0	0.00	0.00	7,173.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,320.0	0.00	0.00	7,213.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,360.0	0.00	0.00	7,253.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,293.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,440.0	0.00	0.00	7,333.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,480.0	0.00	0.00	7,373.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,520.0	0.00	0.00	7,413.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,560.0	0.00	0.00	7,453.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,493.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,640.0	0.00	0.00	7,533.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,680.0	0.00	0.00	7,573.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,720.0	0.00	0.00	7,613.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,760.0	0.00	0.00	7,653.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,693.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,840.0	0.00	0.00	7,733.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,880.0	0.00	0.00	7,773.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,920.0	0.00	0.00	7,813.8	-667.8	-569.3	877.5	0.00	0.00	0.00
7,926.2	0.00	0.00	7,820.0	-667.8	-569.3	877.5	0.00	0.00	0.00

Database: Landmark
Company: Synergy Resources
Project: SEC.34-T4N-R68W
Site: Margil 11-34D Pad Sec.34-T4N-R68W
Well: Margil 12-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
TARGET BHL 1981'F	0.00	0.00	5,000.0	-667.8	-569.3	1,342,190.29	3,140,547.78	40.271616	-104.996310
- plan hits target center									
- Point									
LEGAL BOX 400' X 400'	0.00	0.00	6,700.0	-667.8	-569.3	1,342,190.24	3,140,547.75	40.271616	-104.996310
- plan misses target center by 0.1ft at 6806.2ft MD (6700.0 TVD, -667.8 N, -569.3 E)									
- Rectangle (slides W400.0 H400.0 D1,120.0)									

Casing Points

Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(")	(")
640.0	640.0	8 5/8"	8-5/8	12-1/4



Directional

Synergy Resources

SEC.34-T4N-R68W

Margil 11-34D Pad Sec.34-T4N-R68W

Margil 12-34D

Wellbore #1

Plan #1 (5-23-11)

Anticollision Report

27 May, 2011

Company: Synergy Resources
Project: SEC.34-T4N-R68W
Reference Site: Margil 11-34D Pad Sec.34-T4N-R68W
Site Error: 0.0ft
Reference Well: Margil 12-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Reference Plan #1 (5-23-11)

Filter type: NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method: Stations
Depth Range: Unlimited
Results Limited by: Maximum center-center distance of 10,000.0ft
Warning Levels Evaluated at: 2.00 Sigma

Error Model: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic

Survey Tool Program Date 5/27/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,926.2	Plan #1 (5-23-11) (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						
Margil 11-34D Pad Sec.34-T4N-R68W						
Margil 22-34D - Wellbore #1 - Plan #1 (5-23-11)	732.1	733.1	20.1	17.0	6.534	CC, ES
Margil 22-34D - Wellbore #1 - Plan #1 (5-23-11)	800.0	800.7	20.5	17.1	6.087	SF
Margil 34A (Vert.) - Wellbore #1 - Design #1	950.0	950.0	20.2	16.1	4.984	CC
Margil 34A (Vert.) - Wellbore #1 - Design #1	1,000.0	1,000.0	20.3	16.1	4.779	ES
Margil 34A (Vert.) - Wellbore #1 - Design #1	1,100.0	1,099.9	22.1	17.4	4.732	SF

Offset Design Margil 11-34D Pad Sec.34-T4N-R68W - Margil 22-34D - Wellbore #1 - Plan #1 (5-23-11)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	155.32	-18.2	8.4	20.1	20.0	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	155.32	-18.2	8.4	20.1	19.8	0.23	88.323	
200.0	200.0	201.0	201.0	0.3	0.3	155.32	-18.2	8.4	20.1	19.4	0.68	29.637	
300.0	300.0	301.0	301.0	0.6	0.6	155.32	-18.2	8.4	20.1	18.9	1.13	17.806	
400.0	400.0	401.0	401.0	0.8	0.8	155.32	-18.2	8.4	20.1	18.5	1.58	12.726	
500.0	500.0	501.0	501.0	1.0	1.0	155.32	-18.2	8.4	20.1	18.0	2.03	9.901	
600.0	600.0	601.0	601.0	1.2	1.2	155.32	-18.2	8.4	20.1	17.6	2.47	8.102	
700.0	700.0	701.0	701.0	1.5	1.5	155.32	-18.2	8.4	20.1	17.1	2.92	6.857	
732.1	732.1	733.1	733.1	1.5	1.5	155.32	-18.2	8.4	20.1	17.0	3.07	6.534 CC, ES	
800.0	800.0	800.7	800.7	1.7	1.7	154.79	-18.5	8.7	20.5	17.1	3.36	6.087 SF	
900.0	900.0	900.0	899.9	1.9	1.9	151.31	-20.8	11.4	23.7	19.9	3.77	6.284	
950.0	950.0	949.4	949.2	2.0	2.0	148.98	-22.7	13.7	26.6	22.6	3.98	6.672	
1,000.0	1,000.0	998.8	998.5	2.1	2.1	-74.53	-25.2	16.6	30.2	26.0	4.18	7.218	
1,100.0	1,099.9	1,097.0	1,096.2	2.3	2.3	-83.14	-31.8	24.4	39.7	35.2	4.56	8.706	
1,200.0	1,199.7	1,194.2	1,192.5	2.5	2.5	-91.96	-40.5	34.6	53.3	48.3	4.97	10.725	
1,300.0	1,299.1	1,290.2	1,287.0	2.7	2.8	-99.31	-51.1	47.1	71.4	66.0	5.40	13.224	
1,400.0	1,398.2	1,384.5	1,379.3	3.0	3.2	-104.94	-63.5	61.7	94.3	88.4	5.87	16.062	
1,500.0	1,496.6	1,476.9	1,469.1	3.2	3.5	-109.12	-77.6	78.3	121.9	115.5	6.39	19.078	
1,600.0	1,594.4	1,571.0	1,560.2	3.6	3.9	-112.55	-93.1	96.5	153.0	146.0	6.97	21.965	
1,694.2	1,685.8	1,659.4	1,645.6	3.9	4.4	-115.44	-107.7	113.7	184.0	176.5	7.55	24.375	
1,700.0	1,691.5	1,664.9	1,650.9	4.0	4.4	-115.65	-108.6	114.7	186.0	178.4	7.59	24.511	
1,800.0	1,788.1	1,758.3	1,741.3	4.4	4.8	-118.60	-124.0	132.9	220.2	212.0	8.27	26.623	

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

Company: Synergy Resources
Project: SEC.34-T4N-R68W
Reference Site: Margil 11-34D Pad Sec.34-T4N-R68W
Site Error: 0.0ft
Reference Well: Margil 12-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Offset Design Margil 11-34D Pad Sec.34-T4N-R68W - Margil 22-34D - Wellbore #1 - Plan #1 (5-23-11)													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
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	
1,900.0	1,884.8	1,851.8	1,831.6	4.8	5.3	-120.77	-139.4	151.0	254.8	245.8	8.98	28.377		
2,000.0	1,981.4	1,945.2	1,922.0	5.3	5.8	-122.42	-154.8	169.1	289.6	279.9	9.71	29.831		
2,100.0	2,078.0	2,038.7	2,012.4	5.8	6.3	-123.71	-170.2	187.2	324.6	314.2	10.46	31.048		
2,200.0	2,174.7	2,132.1	2,102.8	6.3	6.8	-124.76	-185.6	205.4	359.7	348.5	11.22	32.074		
2,300.0	2,271.3	2,225.6	2,193.1	6.8	7.2	-125.62	-201.0	223.5	394.9	383.0	11.99	32.947		
2,400.0	2,368.0	2,319.0	2,283.5	7.3	7.7	-126.33	-216.4	241.6	430.2	417.4	12.77	33.697		
2,500.0	2,464.8	2,412.5	2,373.9	7.8	8.2	-126.94	-231.8	259.8	465.5	452.0	13.55	34.347		
2,600.0	2,561.3	2,505.9	2,464.2	8.3	8.7	-127.47	-247.2	277.9	500.9	486.5	14.35	34.913		
2,700.0	2,657.9	2,599.4	2,554.6	8.9	9.2	-127.92	-262.6	296.0	536.3	521.1	15.14	35.410		
2,800.0	2,754.6	2,692.8	2,645.0	9.4	9.7	-128.32	-278.0	314.1	571.7	555.7	15.95	35.850		
2,900.0	2,851.2	2,786.3	2,735.4	9.9	10.2	-128.67	-293.4	332.3	607.1	590.4	16.75	36.240		
3,000.0	2,947.8	2,879.7	2,825.7	10.5	10.8	-128.99	-308.8	350.4	642.6	625.0	17.56	36.590		
3,100.0	3,044.5	2,973.2	2,916.1	11.0	11.3	-129.27	-324.2	368.5	678.0	659.7	18.37	36.904		
3,200.0	3,141.1	3,066.6	3,006.5	11.5	11.8	-129.52	-339.6	386.7	713.5	694.3	19.19	37.187		
3,300.0	3,237.8	3,160.1	3,096.9	12.1	12.3	-129.75	-355.0	404.8	749.0	729.0	20.00	37.444		
3,400.0	3,334.4	3,253.5	3,187.2	12.6	12.8	-129.96	-370.4	422.9	784.5	763.7	20.82	37.679		
3,500.0	3,431.1	3,347.0	3,277.6	13.1	13.3	-130.15	-385.8	441.0	820.0	798.4	21.64	37.892		
3,600.0	3,527.7	3,440.4	3,368.0	13.7	13.8	-130.32	-401.2	459.2	855.5	833.1	22.46	38.089		
3,700.0	3,624.4	3,533.9	3,458.3	14.2	14.3	-130.48	-416.6	477.3	891.0	867.8	23.28	38.269		
3,800.0	3,721.0	3,627.3	3,548.7	14.7	14.8	-130.63	-432.0	495.4	926.6	902.5	24.11	38.436		
3,900.0	3,817.7	3,720.8	3,639.1	15.3	15.3	-130.77	-447.4	513.6	962.1	937.2	24.93	38.590		
4,000.0	3,914.3	3,814.2	3,729.5	15.8	15.8	-130.90	-462.8	531.7	997.6	971.9	25.76	38.732		
4,100.0	4,010.9	3,907.7	3,819.8	16.4	16.4	-131.02	-478.2	549.8	1,033.2	1,006.6	26.58	38.865		
4,200.0	4,107.6	4,001.1	3,910.2	16.9	16.9	-131.13	-493.6	567.9	1,068.7	1,041.3	27.41	38.989		
4,300.0	4,204.2	4,094.6	4,000.6	17.5	17.4	-131.23	-509.0	586.1	1,104.3	1,076.0	28.24	39.105		
4,362.0	4,264.2	4,152.5	4,056.6	17.8	17.7	-131.29	-518.6	597.3	1,126.3	1,097.6	28.75	39.172		
4,400.0	4,300.9	4,188.1	4,091.0	18.0	17.9	-131.53	-524.4	604.2	1,139.7	1,110.6	29.09	39.181		
4,500.0	4,398.3	4,282.2	4,182.1	18.3	18.4	-132.04	-540.0	622.5	1,173.3	1,143.4	29.89	39.252		
4,600.0	4,496.4	4,377.1	4,273.8	18.7	18.9	-132.37	-555.6	640.9	1,204.7	1,174.1	30.66	39.289		
4,700.0	4,595.2	4,472.6	4,366.1	18.9	19.5	-132.55	-571.3	659.4	1,234.0	1,202.6	31.40	39.299		
4,800.0	4,694.4	4,568.5	4,458.9	19.2	20.0	-132.58	-587.1	678.0	1,260.9	1,228.8	32.09	39.291		
4,900.0	4,794.0	4,706.8	4,593.3	19.4	20.5	-132.33	-608.2	702.8	1,284.3	1,251.6	32.77	39.193		
5,000.0	4,893.8	4,854.5	4,738.3	19.5	21.0	-132.02	-626.0	723.8	1,301.8	1,268.5	33.34	39.043		
5,106.2	5,000.0	5,014.2	4,896.7	19.7	21.4	88.78	-639.8	740.0	1,313.8	1,279.9	33.86	38.805		
5,200.0	5,093.8	5,157.1	5,039.0	19.8	21.7	89.11	-647.3	748.9	1,319.5	1,285.3	34.22	38.561		
5,300.0	5,193.8	5,310.2	5,192.0	19.9	21.9	89.24	-650.3	752.3	1,321.7	1,287.1	34.55	38.256		
5,400.0	5,293.8	5,412.9	5,294.8	20.0	22.0	89.24	-650.3	752.3	1,321.7	1,286.9	34.80	37.976		
5,500.0	5,393.8	5,512.9	5,394.8	20.1	22.1	89.24	-650.3	752.3	1,321.7	1,286.6	35.05	37.706		
5,600.0	5,493.8	5,612.9	5,494.8	20.2	22.2	89.24	-650.3	752.3	1,321.7	1,286.4	35.31	37.436		
5,700.0	5,593.8	5,712.9	5,594.8	20.3	22.3	89.24	-650.3	752.3	1,321.7	1,286.1	35.56	37.166		
5,800.0	5,693.8	5,812.9	5,694.8	20.5	22.4	89.24	-650.3	752.3	1,321.7	1,285.9	35.82	36.895		
5,900.0	5,793.8	5,912.9	5,794.8	20.6	22.5	89.24	-650.3	752.3	1,321.7	1,285.6	36.09	36.625		
6,000.0	5,893.8	6,012.9	5,894.8	20.7	22.7	89.24	-650.3	752.3	1,321.7	1,285.3	36.36	36.355		
6,100.0	5,993.8	6,112.9	5,994.8	20.8	22.8	89.24	-650.3	752.3	1,321.7	1,285.1	36.63	36.086		
6,200.0	6,093.8	6,212.9	6,094.8	20.9	22.9	89.24	-650.3	752.3	1,321.7	1,284.8	36.90	35.817		
6,300.0	6,193.8	6,312.9	6,194.8	21.1	23.0	89.24	-650.3	752.3	1,321.7	1,284.5	37.18	35.548		
6,400.0	6,293.8	6,412.9	6,294.8	21.2	23.1	89.24	-650.3	752.3	1,321.7	1,284.2	37.46	35.281		
6,500.0	6,393.8	6,512.9	6,394.8	21.3	23.2	89.24	-650.3	752.3	1,321.7	1,284.0	37.75	35.014		
6,600.0	6,493.8	6,612.9	6,494.8	21.5	23.4	89.24	-650.3	752.3	1,321.7	1,283.7	38.04	34.749		
6,700.0	6,593.8	6,712.9	6,594.8	21.6	23.5	89.24	-650.3	752.3	1,321.7	1,283.4	38.33	34.485		
6,800.0	6,693.8	6,812.9	6,694.8	21.7	23.6	89.24	-650.3	752.3	1,321.7	1,283.1	38.62	34.222		
6,900.0	6,793.8	6,912.9	6,794.8	21.9	23.7	89.24	-650.3	752.3	1,321.7	1,282.8	38.92	33.961		

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

Company: Synergy Resources
Project: SEC.34-T4N-R68W
Reference Site: Margil 11-34D Pad Sec.34-T4N-R68W
Site Error: 0.0ft
Reference Well: Margil 12-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Offset Design Margil 11-34D Pad Sec.34-T4N-R68W - Margil 22-34D - Wellbore #1 - Plan #1 (5-23-11)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		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		
7,000.0	6,893.8	7,012.9	6,894.8	22.0	23.9	89.24	-650.3	752.3	1,321.7	1,282.5	39.22	33.701		
7,100.0	6,993.8	7,112.9	6,994.8	22.1	24.0	89.24	-650.3	752.3	1,321.7	1,282.2	39.52	33.442		
7,200.0	7,093.8	7,212.9	7,094.8	22.3	24.1	89.24	-650.3	752.3	1,321.7	1,281.9	39.83	33.186		
7,300.0	7,193.8	7,312.9	7,194.8	22.4	24.3	89.24	-650.3	752.3	1,321.7	1,281.8	40.14	32.931		
7,400.0	7,293.8	7,412.9	7,294.8	22.6	24.4	89.24	-650.3	752.3	1,321.7	1,281.3	40.45	32.677		
7,500.0	7,393.8	7,512.9	7,394.8	22.7	24.5	89.24	-650.3	752.3	1,321.7	1,280.9	40.76	32.426		
7,600.0	7,493.8	7,612.9	7,494.8	22.8	24.7	89.24	-650.3	752.3	1,321.7	1,280.6	41.08	32.176		
7,700.0	7,593.8	7,712.9	7,594.8	23.0	24.8	89.24	-650.3	752.3	1,321.7	1,280.3	41.40	31.928		
7,800.0	7,693.8	7,812.9	7,694.8	23.1	24.9	89.24	-650.3	752.3	1,321.7	1,280.0	41.72	31.683		
7,900.0	7,793.8	7,912.9	7,794.8	23.3	25.1	89.24	-650.3	752.3	1,321.7	1,279.7	42.04	31.439		
7,917.1	7,810.9	7,930.1	7,811.9	23.3	25.1	89.24	-650.3	752.3	1,321.7	1,279.6	42.10	31.397		
7,926.2	7,820.0	7,938.1	7,820.0	23.3	25.1	89.24	-650.3	752.3	1,321.7	1,279.6	42.12	31.376		

Company: Synergy Resources
Project: SEC.34-T4N-R68W
Reference Site: Margil 11-34D Pad Sec.34-T4N-R68W
Site Error: 0.0ft
Reference Well: Margil 12-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Margil 11-34D Pad Sec.34-T4N-R68W - Margil 34A (Vert.) - Wellbore #1 - Design #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	+N/-S (ft)		+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-25.40	18.2	-8.7	20.2					
100.0	100.0	100.0	100.0	0.1	0.1	-25.40	18.2	-8.7	20.2	19.9	0.22	89.715		
200.0	200.0	200.0	200.0	0.3	0.3	-25.40	18.2	-8.7	20.2	19.5	0.67	29.905		
300.0	300.0	300.0	300.0	0.6	0.6	-25.40	18.2	-8.7	20.2	19.0	1.12	17.943		
400.0	400.0	400.0	400.0	0.8	0.8	-25.40	18.2	-8.7	20.2	18.6	1.57	12.816		
500.0	500.0	500.0	500.0	1.0	1.0	-25.40	18.2	-8.7	20.2	18.1	2.02	9.968		
600.0	600.0	600.0	600.0	1.2	1.2	-25.40	18.2	-8.7	20.2	17.7	2.47	8.156		
700.0	700.0	700.0	700.0	1.5	1.5	-25.40	18.2	-8.7	20.2	17.2	2.92	6.901		
800.0	800.0	800.0	800.0	1.7	1.7	-25.40	18.2	-8.7	20.2	16.8	3.37	5.981		
900.0	900.0	900.0	900.0	1.9	1.9	-25.40	18.2	-8.7	20.2	16.3	3.82	5.277		
950.0	950.0	950.0	950.0	2.0	2.0	-25.40	18.2	-8.7	20.2	16.1	4.05	4.984 CC		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	115.27	18.2	-8.7	20.3	16.1	4.26	4.779 ES		
1,100.0	1,099.9	1,099.9	1,099.9	2.3	2.4	123.46	18.2	-8.7	22.1	17.4	4.66	4.732 SF		
1,200.0	1,199.7	1,199.7	1,199.7	2.5	2.6	136.04	18.2	-8.7	26.6	21.5	5.08	5.232		
1,300.0	1,299.1	1,299.1	1,299.1	2.7	2.8	147.94	18.2	-8.7	34.9	29.4	5.49	6.349		
1,400.0	1,398.2	1,398.2	1,398.2	3.0	3.0	156.83	18.2	-8.7	47.2	41.3	5.90	8.007		
1,500.0	1,496.6	1,496.6	1,496.6	3.2	3.3	162.89	18.2	-8.7	63.6	57.3	6.31	10.081		
1,600.0	1,594.4	1,594.4	1,594.4	3.6	3.5	166.98	18.2	-8.7	83.7	77.0	6.71	12.469		
1,694.2	1,685.8	1,685.8	1,685.8	3.9	3.7	169.66	18.2	-8.7	106.0	98.9	7.09	14.938		
1,700.0	1,691.5	1,691.5	1,691.5	4.0	3.7	169.80	18.2	-8.7	107.4	100.3	7.12	15.091		
1,800.0	1,788.1	1,788.1	1,788.1	4.4	3.9	171.76	18.2	-8.7	132.8	125.3	7.57	17.557		
1,900.0	1,884.8	1,884.8	1,884.8	4.8	4.1	173.10	18.2	-8.7	158.3	150.3	8.02	19.743		
2,000.0	1,981.4	1,981.4	1,981.4	5.3	4.3	174.06	18.2	-8.7	183.8	175.4	8.48	21.687		
2,100.0	2,078.0	2,078.0	2,078.0	5.8	4.6	174.79	18.2	-8.7	209.4	200.5	8.94	23.422		
2,200.0	2,174.7	2,174.7	2,174.7	6.3	4.8	175.35	18.2	-8.7	235.0	225.6	9.41	24.978		
2,300.0	2,271.3	2,271.3	2,271.3	6.8	5.0	175.81	18.2	-8.7	260.6	250.7	9.88	26.378		
2,400.0	2,368.0	2,368.0	2,368.0	7.3	5.2	176.19	18.2	-8.7	286.2	275.9	10.35	27.644		
2,500.0	2,464.6	2,464.6	2,464.6	7.8	5.4	176.50	18.2	-8.7	311.9	301.1	10.83	28.793		
2,600.0	2,561.3	2,561.3	2,561.3	8.3	5.6	176.77	18.2	-8.7	337.5	326.2	11.31	29.840		
2,700.0	2,657.9	2,657.9	2,657.9	8.9	5.9	177.00	18.2	-8.7	363.2	351.4	11.79	30.797		
2,800.0	2,754.6	2,754.6	2,754.6	9.4	6.1	177.19	18.2	-8.7	388.8	376.6	12.28	31.675		
2,900.0	2,851.2	2,851.2	2,851.2	9.9	6.3	177.37	18.2	-8.7	414.5	401.7	12.76	32.483		
3,000.0	2,947.8	2,947.8	2,947.8	10.5	6.5	177.52	18.2	-8.7	440.2	426.9	13.25	33.229		
3,100.0	3,044.5	3,044.5	3,044.5	11.0	6.7	177.66	18.2	-8.7	465.8	452.1	13.73	33.919		
3,200.0	3,141.1	3,141.1	3,141.1	11.5	6.9	177.78	18.2	-8.7	491.5	477.3	14.22	34.560		
3,300.0	3,237.8	3,237.8	3,237.8	12.1	7.2	177.89	18.2	-8.7	517.2	502.4	14.71	35.156		
3,400.0	3,334.4	3,334.4	3,334.4	12.6	7.4	177.99	18.2	-8.7	542.8	527.6	15.20	35.711		
3,500.0	3,431.1	3,431.1	3,431.1	13.1	7.6	178.08	18.2	-8.7	568.5	552.8	15.69	36.230		
3,600.0	3,527.7	3,527.7	3,527.7	13.7	7.8	178.16	18.2	-8.7	594.2	578.0	16.18	36.717		
3,700.0	3,624.4	3,624.4	3,624.4	14.2	8.0	178.24	18.2	-8.7	619.8	603.2	16.67	37.173		
3,800.0	3,721.0	3,721.0	3,721.0	14.7	8.3	178.31	18.2	-8.7	645.5	628.3	17.17	37.601		
3,900.0	3,817.7	3,817.7	3,817.7	15.3	8.5	178.37	18.2	-8.7	671.2	653.5	17.66	38.005		
4,000.0	3,914.3	3,914.3	3,914.3	15.8	8.7	178.43	18.2	-8.7	696.9	678.7	18.15	38.385		
4,100.0	4,010.9	4,010.9	4,010.9	16.4	8.9	178.49	18.2	-8.7	722.5	703.9	18.65	38.745		
4,200.0	4,107.6	4,107.6	4,107.6	16.9	9.1	178.54	18.2	-8.7	748.2	729.1	19.14	39.085		
4,300.0	4,204.2	4,204.2	4,204.2	17.5	9.3	178.59	18.2	-8.7	773.9	754.3	19.64	39.407		
4,362.0	4,264.2	4,264.2	4,264.2	17.8	9.5	178.62	18.2	-8.7	789.8	769.9	19.95	39.598		
4,400.0	4,300.9	4,300.9	4,300.9	18.0	9.6	178.64	18.2	-8.7	799.3	779.2	20.16	39.650		
4,500.0	4,398.3	4,398.3	4,398.3	18.3	9.8	178.69	18.2	-8.7	822.0	801.3	20.69	39.733		
4,600.0	4,496.4	4,496.4	4,496.4	18.7	10.0	178.73	18.2	-8.7	841.3	820.1	21.19	39.704		
4,700.0	4,595.2	4,595.2	4,595.2	18.9	10.2	178.76	18.2	-8.7	857.2	835.5	21.66	39.574		
4,800.0	4,694.4	4,694.4	4,694.4	19.2	10.4	178.78	18.2	-8.7	869.6	847.5	22.10	39.349		

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

Company: Synergy Resources
Project: SEC.34-T4N-R68W
Reference Site: Margil 11-34D Pad Sec.34-T4N-R68W
Site Error: 0.0ft
Reference Well: Margil 12-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Offset Design Margil 11-34D Pad Sec.34-T4N-R68W - Margil 34A (Vert.) - Wellbore #1 - Design #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (ft)	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
4,900.0	4,794.0	4,794.0	4,794.0	19.4	10.7	178.80	18.2	-8.7	878.5	856.0	22.50	39.036		
5,000.0	4,893.8	4,893.8	4,893.8	19.5	10.9	178.81	18.2	-8.7	883.9	861.1	22.88	38.640		
5,108.2	5,000.0	5,000.0	5,000.0	19.7	11.1	39.26	18.2	-8.7	885.9	862.7	23.24	38.118		
5,200.0	5,093.8	5,093.8	5,093.8	19.8	11.3	39.26	18.2	-8.7	885.9	862.3	23.62	37.511		
5,300.0	5,193.8	5,193.8	5,193.8	19.9	11.6	39.26	18.2	-8.7	885.9	861.9	24.01	36.891		
5,400.0	5,293.8	5,293.8	5,293.8	20.0	11.8	39.26	18.2	-8.7	885.9	861.5	24.41	36.290		
5,500.0	5,393.8	5,393.8	5,393.8	20.1	12.0	39.26	18.2	-8.7	885.9	861.1	24.81	35.705		
5,600.0	5,493.8	5,493.8	5,493.8	20.2	12.2	39.26	18.2	-8.7	885.9	860.7	25.21	35.137		
5,700.0	5,593.8	5,593.8	5,593.8	20.3	12.5	39.26	18.2	-8.7	885.9	860.3	25.62	34.585		
5,800.0	5,693.8	5,693.8	5,693.8	20.5	12.7	39.26	18.2	-8.7	885.9	859.9	26.02	34.047		
5,900.0	5,793.8	5,793.8	5,793.8	20.6	12.9	39.26	18.2	-8.7	885.9	859.5	26.43	33.525		
6,000.0	5,893.8	5,893.8	5,893.8	20.7	13.1	39.26	18.2	-8.7	885.9	859.1	26.83	33.017		
6,100.0	5,993.8	5,993.8	5,993.8	20.8	13.4	39.26	18.2	-8.7	885.9	858.7	27.24	32.522		
6,200.0	6,093.8	6,093.8	6,093.8	20.9	13.6	39.26	18.2	-8.7	885.9	858.3	27.65	32.041		
6,300.0	6,193.8	6,193.8	6,193.8	21.1	13.8	39.26	18.2	-8.7	885.9	857.8	28.06	31.572		
6,400.0	6,293.8	6,293.8	6,293.8	21.2	14.0	39.26	18.2	-8.7	885.9	857.4	28.47	31.116		
6,500.0	6,393.8	6,393.8	6,393.8	21.3	14.3	39.26	18.2	-8.7	885.9	857.0	28.88	30.671		
6,600.0	6,493.8	6,493.8	6,493.8	21.5	14.5	39.26	18.2	-8.7	885.9	856.6	29.30	30.238		
6,700.0	6,593.8	6,593.8	6,593.8	21.6	14.7	39.26	18.2	-8.7	885.9	856.2	29.71	29.816		
6,800.0	6,693.8	6,693.8	6,693.8	21.7	14.9	39.26	18.2	-8.7	885.9	855.8	30.13	29.405		
6,900.0	6,793.8	6,793.8	6,793.8	21.9	15.2	39.26	18.2	-8.7	885.9	855.4	30.54	29.004		
7,000.0	6,893.8	6,893.8	6,893.8	22.0	15.4	39.26	18.2	-8.7	885.9	854.9	30.96	28.613		
7,100.0	6,993.8	6,993.8	6,993.8	22.1	15.6	39.26	18.2	-8.7	885.9	854.5	31.38	28.232		
7,200.0	7,093.8	7,093.8	7,093.8	22.3	15.8	39.26	18.2	-8.7	885.9	854.1	31.80	27.860		
7,300.0	7,193.8	7,193.8	7,193.8	22.4	16.1	39.26	18.2	-8.7	885.9	853.7	32.22	27.497		
7,400.0	7,293.8	7,293.8	7,293.8	22.6	16.3	39.26	18.2	-8.7	885.9	853.3	32.64	27.142		
7,500.0	7,393.8	7,393.8	7,393.8	22.7	16.5	39.26	18.2	-8.7	885.9	852.8	33.06	26.796		
7,600.0	7,493.8	7,493.8	7,493.8	22.8	16.7	39.26	18.2	-8.7	885.9	852.4	33.48	26.458		
7,700.0	7,593.8	7,593.8	7,593.8	23.0	17.0	39.26	18.2	-8.7	885.9	852.0	33.91	26.129		
7,800.0	7,693.8	7,693.8	7,693.8	23.1	17.2	39.26	18.2	-8.7	885.9	851.6	34.33	25.806		
7,900.0	7,793.8	7,793.8	7,793.8	23.3	17.4	39.26	18.2	-8.7	885.9	851.2	34.75	25.492		
7,926.2	7,820.0	7,820.0	7,820.0	23.3	17.5	39.26	18.2	-8.7	885.9	851.0	34.86	25.410		

Company: Synergy Resources
Project: SEC.34-T4N-R68W
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Site Error: 0.0ft
Reference Well: Margil 12-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 12-34D
TVD Reference: WELL @ 5118.0ft (Original Well Elev)
MD Reference: WELL @ 5118.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 5118.0ft (Original Well Elev) Coordinates are relative to: Margil 12-34D

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.33°



Company: Synergy Resources
Project: SEC.34-T4N-R68W
Reference Site: Margil 11-34D Pad Sec.34-T4N-R68W
Site Error: 0.0ft
Reference Well: Margil 12-34D
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