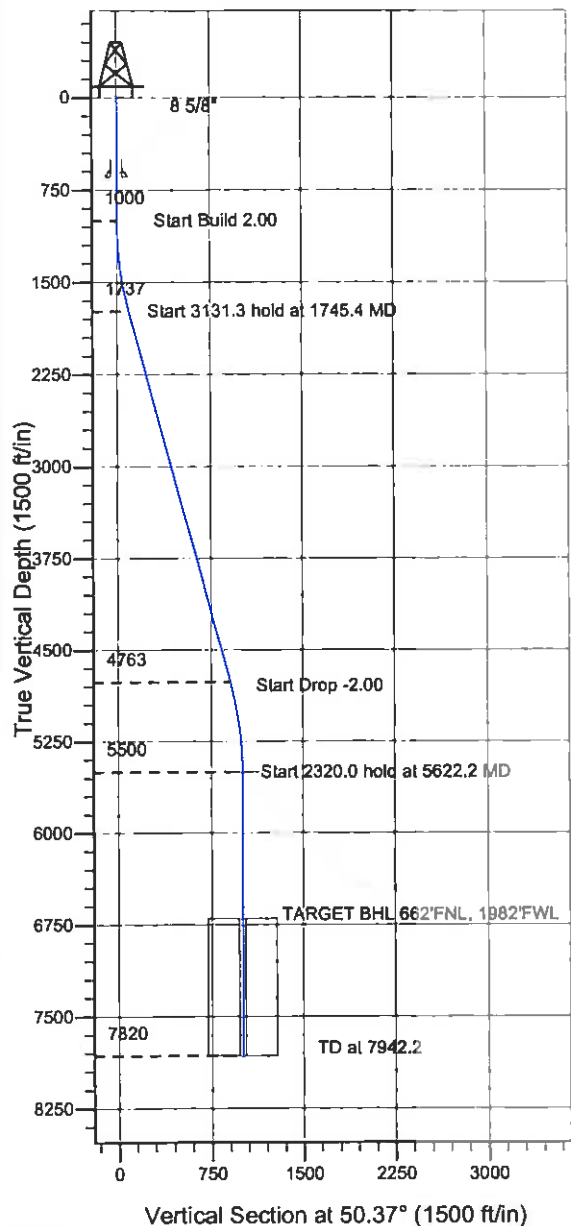


ENSIGN

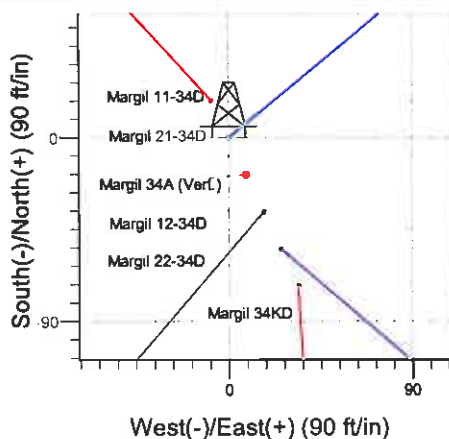
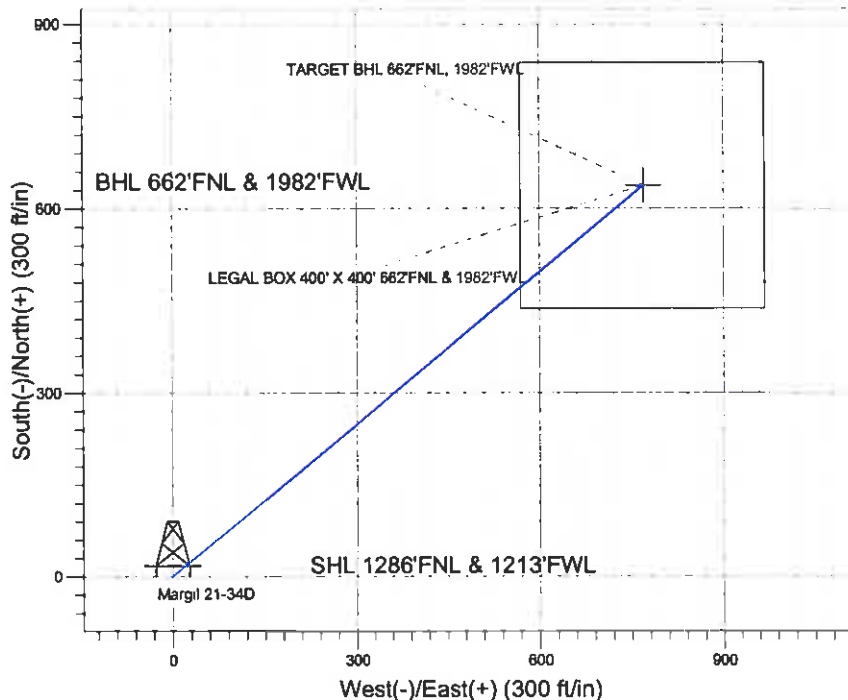
Directional

Well Name: Margil 21-34D

Surface Location: Margil 11-34D Pad Sec.34-T4N-R68W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 5104.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1342897.58 3141095.98 40.273549 -104.994331
 Original Well Elev WELL @ 5117.0ft (Original Well Elev)



Synergy Resources



Margil 11-34D Pad Sec.34-T4N-R68W
 Margil 21-34D
 Plan #1 (5-23-11)
 7:31, May 27 2011



Azimuths to True North
 Magnetic North: 8.98°
 Magnetic Field
 Strength: 53044.3snT
 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 662'FNL, 1982'FWL	5500.0	636.8	769.0	40.275297	-104.991575	Point
LEGAL BOX 400' X 400' 662'FNL & 1982'FWL	6700.0	636.8	769.0	40.275297	-104.991575	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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1745.4	14.91	50.37	1737.0	61.5	74.3	2.00	50.37	96.4	
4	4876.8	14.91	50.37	4763.0	575.3	694.7	0.00	0.00	902.0	
5	5622.2	0.00	0.00	5500.0	636.8	769.0	2.00	180.00	998.5	TARGET BHL 662'FNL, 1982'FWL
6	7942.2	0.00	0.00	7820.0	636.8	769.0	0.00	0.00	998.5	



Directional

Synergy Resources

SEC.34-T4N-R68W

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

Margil 21-34D

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 21-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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:		Northing:	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 21-34D					
Well Position	+N/-S	-18.2 ft	Northing:	1,342,897.58 ft	Latitude:	40.273549
	+E/-W	8.4 ft	Easting:	3,141,095.98 ft	Longitude:	-104.994331
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,104.0 ft

Wellbore	Wellbore #1				
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	50.37

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,745.4	14.91	50.37	1,737.0	61.5	74.3	2.00	2.00	0.00	50.37	
4,876.8	14.91	50.37	4,763.0	575.3	694.7	0.00	0.00	0.00	0.00	
5,622.2	0.00	0.00	5,500.0	636.8	769.0	2.00	-2.00	0.00	180.00	TARGET BHL 662'
7,942.2	0.00	0.00	7,820.0	636.8	769.0	0.00	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 21-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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)
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
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	50.37	1,040.0	0.2	0.2	0.3	2.00	2.00	0.00
1,080.0	1.60	50.37	1,080.0	0.7	0.9	1.1	2.00	2.00	0.00
1,120.0	2.40	50.37	1,120.0	1.6	1.9	2.5	2.00	2.00	0.00
1,160.0	3.20	50.37	1,159.9	2.8	3.4	4.5	2.00	2.00	0.00
1,200.0	4.00	50.37	1,199.8	4.5	5.4	7.0	2.00	2.00	0.00
1,240.0	4.80	50.37	1,239.7	6.4	7.7	10.0	2.00	2.00	0.00
1,280.0	5.60	50.37	1,279.6	8.7	10.5	13.7	2.00	2.00	0.00
1,320.0	6.40	50.37	1,319.3	11.4	13.8	17.9	2.00	2.00	0.00
1,360.0	7.20	50.37	1,359.1	14.4	17.4	22.6	2.00	2.00	0.00
1,400.0	8.00	50.37	1,398.7	17.8	21.5	27.9	2.00	2.00	0.00
1,440.0	8.80	50.37	1,438.3	21.5	26.0	33.7	2.00	2.00	0.00
1,480.0	9.60	50.37	1,477.8	25.6	30.9	40.1	2.00	2.00	0.00
1,520.0	10.40	50.37	1,517.1	30.0	36.2	47.1	2.00	2.00	0.00
1,560.0	11.20	50.37	1,556.4	34.8	42.0	54.6	2.00	2.00	0.00
1,600.0	12.00	50.37	1,595.6	39.9	48.2	62.6	2.00	2.00	0.00
1,640.0	12.80	50.37	1,634.7	45.4	54.8	71.2	2.00	2.00	0.00
1,680.0	13.60	50.37	1,673.6	51.2	61.9	80.3	2.00	2.00	0.00
1,720.0	14.40	50.37	1,712.4	57.4	69.3	90.0	2.00	2.00	0.00
1,745.4	14.91	50.37	1,737.0	61.5	74.3	96.4	2.00	2.00	0.00
1,760.0	14.91	50.37	1,751.1	63.9	77.2	100.2	0.00	0.00	0.00
1,800.0	14.91	50.37	1,789.8	70.5	85.1	110.5	0.00	0.00	0.00
1,840.0	14.91	50.37	1,828.4	77.0	93.0	120.8	0.00	0.00	0.00
1,880.0	14.91	50.37	1,867.1	83.6	100.9	131.1	0.00	0.00	0.00
1,920.0	14.91	50.37	1,905.7	90.2	108.9	141.3	0.00	0.00	0.00
1,960.0	14.91	50.37	1,944.4	96.7	116.8	151.6	0.00	0.00	0.00
2,000.0	14.91	50.37	1,983.0	103.3	124.7	161.9	0.00	0.00	0.00
2,040.0	14.91	50.37	2,021.7	109.8	132.6	172.2	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 21-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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)
2,080.0	14.91	50.37	2,060.4	116.4	140.6	182.5	0.00	0.00	0.00
2,120.0	14.91	50.37	2,099.0	123.0	148.5	192.8	0.00	0.00	0.00
2,160.0	14.91	50.37	2,137.7	129.5	156.4	203.1	0.00	0.00	0.00
2,200.0	14.91	50.37	2,176.3	136.1	164.3	213.4	0.00	0.00	0.00
2,240.0	14.91	50.37	2,215.0	142.7	172.3	223.7	0.00	0.00	0.00
2,280.0	14.91	50.37	2,253.6	149.2	180.2	234.0	0.00	0.00	0.00
2,320.0	14.91	50.37	2,292.3	155.8	188.1	244.3	0.00	0.00	0.00
2,360.0	14.91	50.37	2,330.9	162.4	196.1	254.5	0.00	0.00	0.00
2,400.0	14.91	50.37	2,369.6	168.9	204.0	264.8	0.00	0.00	0.00
2,440.0	14.91	50.37	2,408.2	175.5	211.9	275.1	0.00	0.00	0.00
2,480.0	14.91	50.37	2,446.9	182.0	219.8	285.4	0.00	0.00	0.00
2,520.0	14.91	50.37	2,485.5	188.6	227.8	295.7	0.00	0.00	0.00
2,560.0	14.91	50.37	2,524.2	195.2	235.7	306.0	0.00	0.00	0.00
2,600.0	14.91	50.37	2,562.9	201.7	243.6	316.3	0.00	0.00	0.00
2,640.0	14.91	50.37	2,601.5	208.3	251.5	326.6	0.00	0.00	0.00
2,680.0	14.91	50.37	2,640.2	214.9	259.5	336.9	0.00	0.00	0.00
2,720.0	14.91	50.37	2,678.8	221.4	267.4	347.2	0.00	0.00	0.00
2,760.0	14.91	50.37	2,717.5	228.0	275.3	357.5	0.00	0.00	0.00
2,800.0	14.91	50.37	2,756.1	234.6	283.2	367.7	0.00	0.00	0.00
2,840.0	14.91	50.37	2,794.8	241.1	291.2	378.0	0.00	0.00	0.00
2,880.0	14.91	50.37	2,833.4	247.7	299.1	388.3	0.00	0.00	0.00
2,920.0	14.91	50.37	2,872.1	254.2	307.0	398.6	0.00	0.00	0.00
2,960.0	14.91	50.37	2,910.7	260.8	314.9	408.9	0.00	0.00	0.00
3,000.0	14.91	50.37	2,949.4	267.4	322.9	419.2	0.00	0.00	0.00
3,040.0	14.91	50.37	2,988.0	273.9	330.8	429.5	0.00	0.00	0.00
3,080.0	14.91	50.37	3,026.7	280.5	338.7	439.8	0.00	0.00	0.00
3,120.0	14.91	50.37	3,065.3	287.1	346.6	450.1	0.00	0.00	0.00
3,160.0	14.91	50.37	3,104.0	293.6	354.6	460.4	0.00	0.00	0.00
3,200.0	14.91	50.37	3,142.7	300.2	362.5	470.7	0.00	0.00	0.00
3,240.0	14.91	50.37	3,181.3	306.7	370.4	480.9	0.00	0.00	0.00
3,280.0	14.91	50.37	3,220.0	313.3	378.4	491.2	0.00	0.00	0.00
3,320.0	14.91	50.37	3,258.6	319.9	386.3	501.5	0.00	0.00	0.00
3,360.0	14.91	50.37	3,297.3	326.4	394.2	511.8	0.00	0.00	0.00
3,400.0	14.91	50.37	3,335.9	333.0	402.1	522.1	0.00	0.00	0.00
3,440.0	14.91	50.37	3,374.6	339.6	410.1	532.4	0.00	0.00	0.00
3,480.0	14.91	50.37	3,413.2	346.1	418.0	542.7	0.00	0.00	0.00
3,520.0	14.91	50.37	3,451.9	352.7	425.9	553.0	0.00	0.00	0.00
3,560.0	14.91	50.37	3,490.5	359.3	433.8	563.3	0.00	0.00	0.00
3,600.0	14.91	50.37	3,529.2	365.8	441.8	573.6	0.00	0.00	0.00
3,640.0	14.91	50.37	3,567.8	372.4	449.7	583.9	0.00	0.00	0.00
3,680.0	14.91	50.37	3,606.5	378.9	457.6	594.1	0.00	0.00	0.00
3,720.0	14.91	50.37	3,645.2	385.5	465.5	604.4	0.00	0.00	0.00
3,760.0	14.91	50.37	3,683.8	392.1	473.5	614.7	0.00	0.00	0.00
3,800.0	14.91	50.37	3,722.5	398.6	481.4	625.0	0.00	0.00	0.00
3,840.0	14.91	50.37	3,761.1	405.2	489.3	635.3	0.00	0.00	0.00
3,880.0	14.91	50.37	3,799.8	411.8	497.2	645.6	0.00	0.00	0.00
3,920.0	14.91	50.37	3,838.4	418.3	505.2	655.9	0.00	0.00	0.00
3,960.0	14.91	50.37	3,877.1	424.9	513.1	666.2	0.00	0.00	0.00
4,000.0	14.91	50.37	3,915.7	431.5	521.0	676.5	0.00	0.00	0.00
4,040.0	14.91	50.37	3,954.4	438.0	528.9	686.8	0.00	0.00	0.00
4,080.0	14.91	50.37	3,993.0	444.6	536.9	697.1	0.00	0.00	0.00
4,120.0	14.91	50.37	4,031.7	451.1	544.8	707.3	0.00	0.00	0.00
4,160.0	14.91	50.37	4,070.3	457.7	552.7	717.6	0.00	0.00	0.00
4,200.0	14.91	50.37	4,109.0	464.3	560.6	727.9	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 21-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

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

Well Margil 21-34D
 WELL @ 5117.0ft (Original Well Elev)
 WELL @ 5117.0ft (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)
4,240.0	14.91	50.37	4,147.6	470.8	568.6	738.2	0.00	0.00	0.00
4,280.0	14.91	50.37	4,186.3	477.4	576.5	748.5	0.00	0.00	0.00
4,320.0	14.91	50.37	4,225.0	484.0	584.4	758.8	0.00	0.00	0.00
4,360.0	14.91	50.37	4,263.6	490.5	592.4	769.1	0.00	0.00	0.00
4,400.0	14.91	50.37	4,302.3	497.1	600.3	779.4	0.00	0.00	0.00
4,440.0	14.91	50.37	4,340.9	503.7	608.2	789.7	0.00	0.00	0.00
4,480.0	14.91	50.37	4,379.6	510.2	616.1	800.0	0.00	0.00	0.00
4,520.0	14.91	50.37	4,418.2	516.8	624.1	810.3	0.00	0.00	0.00
4,560.0	14.91	50.37	4,456.9	523.3	632.0	820.5	0.00	0.00	0.00
4,600.0	14.91	50.37	4,495.5	529.9	639.9	830.8	0.00	0.00	0.00
4,640.0	14.91	50.37	4,534.2	536.5	647.8	841.1	0.00	0.00	0.00
4,680.0	14.91	50.37	4,572.8	543.0	655.8	851.4	0.00	0.00	0.00
4,720.0	14.91	50.37	4,611.5	549.6	663.7	861.7	0.00	0.00	0.00
4,760.0	14.91	50.37	4,650.1	556.2	671.6	872.0	0.00	0.00	0.00
4,800.0	14.91	50.37	4,688.8	562.7	679.5	882.3	0.00	0.00	0.00
4,840.0	14.91	50.37	4,727.5	569.3	687.5	892.6	0.00	0.00	0.00
4,876.8	14.91	50.37	4,763.0	575.3	694.7	902.0	0.00	0.00	0.00
4,880.0	14.84	50.37	4,766.1	575.9	695.4	902.9	2.00	-2.00	0.00
4,920.0	14.04	50.37	4,804.8	582.2	703.1	912.8	2.00	-2.00	0.00
4,960.0	13.24	50.37	4,843.7	588.2	710.3	922.3	2.00	-2.00	0.00
5,000.0	12.44	50.37	4,882.7	593.9	717.2	931.2	2.00	-2.00	0.00
5,040.0	11.64	50.37	4,921.8	599.2	723.6	939.5	2.00	-2.00	0.00
5,080.0	10.84	50.37	4,961.1	604.2	729.6	947.3	2.00	-2.00	0.00
5,120.0	10.04	50.37	5,000.4	608.8	735.2	954.6	2.00	-2.00	0.00
5,160.0	9.24	50.37	5,039.8	613.1	740.4	961.3	2.00	-2.00	0.00
5,200.0	8.44	50.37	5,079.4	617.0	745.1	967.4	2.00	-2.00	0.00
5,240.0	7.64	50.37	5,119.0	620.6	749.4	973.0	2.00	-2.00	0.00
5,280.0	6.84	50.37	5,158.6	623.8	753.3	978.1	2.00	-2.00	0.00
5,320.0	6.04	50.37	5,198.4	626.7	756.8	982.5	2.00	-2.00	0.00
5,360.0	5.24	50.37	5,238.2	629.2	759.8	986.5	2.00	-2.00	0.00
5,400.0	4.44	50.37	5,278.1	631.3	762.4	989.9	2.00	-2.00	0.00
5,440.0	3.64	50.37	5,318.0	633.1	764.6	992.7	2.00	-2.00	0.00
5,480.0	2.84	50.37	5,357.9	634.6	766.3	994.9	2.00	-2.00	0.00
5,520.0	2.04	50.37	5,397.9	635.7	767.6	996.6	2.00	-2.00	0.00
5,560.0	1.24	50.37	5,437.8	636.4	768.5	997.8	2.00	-2.00	0.00
5,600.0	0.44	50.37	5,477.8	636.8	769.0	998.4	2.00	-2.00	0.00
5,622.2	0.00	0.00	5,500.0	636.8	769.0	998.5	2.00	-2.00	-227.21
TARGET BHL 662'FNL, 1982'FWL									
5,640.0	0.00	0.00	5,517.8	636.8	769.0	998.5	0.00	0.00	0.00
5,680.0	0.00	0.00	5,557.8	636.8	769.0	998.5	0.00	0.00	0.00
5,720.0	0.00	0.00	5,597.8	636.8	769.0	998.5	0.00	0.00	0.00
5,760.0	0.00	0.00	5,637.8	636.8	769.0	998.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,677.8	636.8	769.0	998.5	0.00	0.00	0.00
5,840.0	0.00	0.00	5,717.8	636.8	769.0	998.5	0.00	0.00	0.00
5,880.0	0.00	0.00	5,757.8	636.8	769.0	998.5	0.00	0.00	0.00
5,920.0	0.00	0.00	5,797.8	636.8	769.0	998.5	0.00	0.00	0.00
5,960.0	0.00	0.00	5,837.8	636.8	769.0	998.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,877.8	636.8	769.0	998.5	0.00	0.00	0.00
6,040.0	0.00	0.00	5,917.8	636.8	769.0	998.5	0.00	0.00	0.00
6,080.0	0.00	0.00	5,957.8	636.8	769.0	998.5	0.00	0.00	0.00
6,120.0	0.00	0.00	5,997.8	636.8	769.0	998.5	0.00	0.00	0.00
6,160.0	0.00	0.00	6,037.8	636.8	769.0	998.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,077.8	636.8	769.0	998.5	0.00	0.00	0.00
6,240.0	0.00	0.00	6,117.8	636.8	769.0	998.5	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 21-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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)
6,280.0	0.00	0.00	6,157.8	636.8	769.0	998.5	0.00	0.00	0.00
6,320.0	0.00	0.00	6,197.8	636.8	769.0	998.5	0.00	0.00	0.00
6,360.0	0.00	0.00	6,237.8	636.8	769.0	998.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,277.8	636.8	769.0	998.5	0.00	0.00	0.00
6,440.0	0.00	0.00	6,317.8	636.8	769.0	998.5	0.00	0.00	0.00
6,480.0	0.00	0.00	6,357.8	636.8	769.0	998.5	0.00	0.00	0.00
6,520.0	0.00	0.00	6,397.8	636.8	769.0	998.5	0.00	0.00	0.00
6,560.0	0.00	0.00	6,437.8	636.8	769.0	998.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,477.8	636.8	769.0	998.5	0.00	0.00	0.00
6,640.0	0.00	0.00	6,517.8	636.8	769.0	998.5	0.00	0.00	0.00
6,680.0	0.00	0.00	6,557.8	636.8	769.0	998.5	0.00	0.00	0.00
6,720.0	0.00	0.00	6,597.8	636.8	769.0	998.5	0.00	0.00	0.00
6,760.0	0.00	0.00	6,637.8	636.8	769.0	998.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,677.8	636.8	769.0	998.5	0.00	0.00	0.00
6,822.2	0.00	0.00	6,700.0	636.8	769.0	998.5	0.00	0.00	0.00
LEGAL BOX 400' X 400' 662'FNL & 1982'FWL									
6,840.0	0.00	0.00	6,717.8	636.8	769.0	998.5	0.00	0.00	0.00
6,880.0	0.00	0.00	6,757.8	636.8	769.0	998.5	0.00	0.00	0.00
6,920.0	0.00	0.00	6,797.8	636.8	769.0	998.5	0.00	0.00	0.00
6,960.0	0.00	0.00	6,837.8	636.8	769.0	998.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,877.8	636.8	769.0	998.5	0.00	0.00	0.00
7,040.0	0.00	0.00	6,917.8	636.8	769.0	998.5	0.00	0.00	0.00
7,080.0	0.00	0.00	6,957.8	636.8	769.0	998.5	0.00	0.00	0.00
7,120.0	0.00	0.00	6,997.8	636.8	769.0	998.5	0.00	0.00	0.00
7,160.0	0.00	0.00	7,037.8	636.8	769.0	998.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,077.8	636.8	769.0	998.5	0.00	0.00	0.00
7,240.0	0.00	0.00	7,117.8	636.8	769.0	998.5	0.00	0.00	0.00
7,280.0	0.00	0.00	7,157.8	636.8	769.0	998.5	0.00	0.00	0.00
7,320.0	0.00	0.00	7,197.8	636.8	769.0	998.5	0.00	0.00	0.00
7,360.0	0.00	0.00	7,237.8	636.8	769.0	998.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,277.8	636.8	769.0	998.5	0.00	0.00	0.00
7,440.0	0.00	0.00	7,317.8	636.8	769.0	998.5	0.00	0.00	0.00
7,480.0	0.00	0.00	7,357.8	636.8	769.0	998.5	0.00	0.00	0.00
7,520.0	0.00	0.00	7,397.8	636.8	769.0	998.5	0.00	0.00	0.00
7,560.0	0.00	0.00	7,437.8	636.8	769.0	998.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,477.8	636.8	769.0	998.5	0.00	0.00	0.00
7,640.0	0.00	0.00	7,517.8	636.8	769.0	998.5	0.00	0.00	0.00
7,680.0	0.00	0.00	7,557.8	636.8	769.0	998.5	0.00	0.00	0.00
7,720.0	0.00	0.00	7,597.8	636.8	769.0	998.5	0.00	0.00	0.00
7,760.0	0.00	0.00	7,637.8	636.8	769.0	998.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,677.8	636.8	769.0	998.5	0.00	0.00	0.00
7,840.0	0.00	0.00	7,717.8	636.8	769.0	998.5	0.00	0.00	0.00
7,880.0	0.00	0.00	7,757.8	636.8	769.0	998.5	0.00	0.00	0.00
7,920.0	0.00	0.00	7,797.8	636.8	769.0	998.5	0.00	0.00	0.00
7,942.2	0.00	0.00	7,820.0	636.8	769.0	998.5	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 21-34D
Wellbore: Wellbore #1
Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
LEGAL BOX 400' X 400'	0.00	0.00	6,700.0	636.8	769.0	1,343,538.73	3,141,861.30	40.275297	-104.991575
- plan hits target center									
- Rectangle (sides W400.0 H400.0 D1,120.0)									
TARGET BHL 662'FN	0.00	0.00	5,500.0	636.8	769.0	1,343,538.75	3,141,861.32	40.275297	-104.991575
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
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 21-34D

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 21-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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 Conc

Survey Tool Program Date 5/27/2011

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,942.2	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 11-34D - Wellbore #1 - Plan #1 (5-23-11)	800.0	800.0	20.1	16.7	5.947	CC, ES
Margil 11-34D - Wellbore #1 - Plan #1 (5-23-11)	900.0	899.3	21.7	17.9	5.689	SF
Margil 34A (Vert.) - Wellbore #1 - Design #1	1,000.0	1,001.0	20.0	15.8	4.692	CC, ES
Margil 34A (Vert.) - Wellbore #1 - Design #1	1,100.0	1,101.0	20.6	15.8	4.359	SF

Offset Design Margil 11-34D Pad Sec.34-T4N-R68W - Margil 11-34D - 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		Warning						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-24.68	18.2	-8.4	20.1					
100.0	100.0	100.0	100.0	0.1	0.1	-24.68	18.2	-8.4	20.1	19.8	0.22	89.206		
200.0	200.0	200.0	200.0	0.3	0.3	-24.68	18.2	-8.4	20.1	19.4	0.67	29.735		
300.0	300.0	300.0	300.0	0.6	0.6	-24.68	18.2	-8.4	20.1	18.9	1.12	17.841		
400.0	400.0	400.0	400.0	0.8	0.8	-24.88	18.2	-8.4	20.1	18.5	1.57	12.744		
500.0	500.0	500.0	500.0	1.0	1.0	-24.88	18.2	-8.4	20.1	18.0	2.02	9.912		
600.0	600.0	600.0	600.0	1.2	1.2	-24.68	18.2	-8.4	20.1	17.6	2.47	8.110		
700.0	700.0	700.0	700.0	1.5	1.5	-24.68	18.2	-8.4	20.1	17.1	2.92	6.862		
800.0	800.0	800.0	800.0	1.7	1.7	-24.68	18.2	-8.4	20.1	16.7	3.37	5.947 CC, ES		
900.0	900.0	899.3	899.3	1.9	1.9	-26.05	19.5	-9.5	21.7	17.9	3.82	5.689 SF		
1,000.0	1,000.0	998.4	998.2	2.1	2.1	-29.14	23.3	-13.0	26.7	22.5	4.26	6.277		
1,100.0	1,100.0	1,096.9	1,096.4	2.4	2.4	-85.32	29.6	-18.7	35.0	30.3	4.71	7.441		
1,200.0	1,199.8	1,194.6	1,193.4	2.6	2.6	-93.19	38.3	-26.6	47.0	41.9	5.15	9.132		
1,300.0	1,299.5	1,291.1	1,288.7	2.8	2.9	-100.41	49.3	-36.6	63.5	57.9	5.60	11.332		
1,400.0	1,398.7	1,386.2	1,382.1	3.0	3.2	-106.15	62.4	-48.6	84.7	78.6	6.07	13.947		
1,500.0	1,497.5	1,480.8	1,474.4	3.3	3.5	-110.60	77.6	-62.3	110.5	103.9	6.57	16.800		
1,600.0	1,595.6	1,576.3	1,567.6	3.6	3.9	-114.47	93.3	-76.6	138.6	131.5	7.10	19.507		
1,700.0	1,693.1	1,671.1	1,660.0	4.0	4.3	-117.91	108.8	-90.7	168.7	161.1	7.67	22.004		
1,745.4	1,737.0	1,713.8	1,701.7	4.2	4.5	-119.35	115.8	-97.1	183.2	175.2	7.94	23.075		
1,800.0	1,789.8	1,765.1	1,751.7	4.4	4.7	-121.19	124.2	-104.7	200.9	192.6	8.28	24.264		
1,900.0	1,886.4	1,859.1	1,843.4	4.8	5.1	-123.83	139.6	-118.7	233.7	224.8	8.92	26.206		
2,000.0	1,983.0	1,953.1	1,935.0	5.3	5.5	-125.83	155.0	-132.7	266.9	257.3	9.58	27.866		
2,100.0	2,079.7	2,047.0	2,026.6	5.7	5.9	-127.39	170.5	-146.7	300.3	290.1	10.25	29.290		

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 21-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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 11-34D - Wellbore #1 - Plan #1 (5-23-11)													Offset Site Error:	0.0 ft
Survey Program: Q-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	
2,200.0	2,176.3	2,141.0	2,118.3	6.2	6.3	-128.63	185.9	-160.7	333.9	323.0	10.94	30.519		
2,300.0	2,272.9	2,235.0	2,209.9	6.7	6.7	-129.65	201.3	-174.7	367.6	356.0	11.64	31.586		
2,400.0	2,369.6	2,329.0	2,301.5	7.2	7.2	-130.50	216.7	-188.7	401.4	389.0	12.34	32.519		
2,500.0	2,466.2	2,422.9	2,393.2	7.7	7.6	-131.22	232.1	-202.7	435.2	422.2	13.05	33.339		
2,600.0	2,562.9	2,516.9	2,484.8	8.2	8.0	-131.83	247.5	-216.7	469.1	455.4	13.77	34.064		
2,700.0	2,659.5	2,610.9	2,576.5	8.7	8.5	-132.36	262.9	-230.7	503.1	488.6	14.49	34.709		
2,800.0	2,756.1	2,704.8	2,668.1	9.2	8.9	-132.82	278.3	-244.7	537.0	521.8	15.22	35.286		
2,900.0	2,852.8	2,798.8	2,759.7	9.7	9.3	-133.23	293.7	-258.7	571.0	555.1	15.95	35.805		
3,000.0	2,949.4	2,892.8	2,851.4	10.3	9.8	-133.60	309.1	-272.7	605.0	588.4	16.68	36.273		
3,100.0	3,046.0	2,986.7	2,943.0	10.8	10.2	-133.92	324.5	-286.7	639.1	621.7	17.42	36.897		
3,200.0	3,142.7	3,080.7	3,034.6	11.3	10.6	-134.21	340.0	-300.7	673.1	655.0	18.15	37.083		
3,300.0	3,239.3	3,174.7	3,126.3	11.8	11.1	-134.47	355.4	-314.7	707.2	688.3	18.89	37.436		
3,400.0	3,335.9	3,268.7	3,217.9	12.4	11.5	-134.71	370.8	-328.7	741.3	721.7	19.63	37.759		
3,500.0	3,432.6	3,362.6	3,309.5	12.9	12.0	-134.93	386.2	-342.7	775.4	755.0	20.37	38.056		
3,600.0	3,529.2	3,456.6	3,401.2	13.4	12.4	-135.13	401.6	-356.7	809.5	788.4	21.12	38.330		
3,700.0	3,625.8	3,550.6	3,492.8	13.9	12.9	-135.32	417.0	-370.7	843.6	821.7	21.86	38.584		
3,800.0	3,722.5	3,644.5	3,584.4	14.5	13.3	-135.49	432.4	-384.7	877.7	855.1	22.61	38.819		
3,900.0	3,819.1	3,738.5	3,676.1	15.0	13.7	-135.64	447.8	-398.7	911.8	888.5	23.36	39.038		
4,000.0	3,915.7	3,832.5	3,767.7	15.5	14.2	-135.79	463.2	-412.7	946.0	921.8	24.11	39.242		
4,100.0	4,012.4	3,926.4	3,859.3	16.0	14.6	-135.92	478.6	-426.7	980.1	955.2	24.86	39.432		
4,200.0	4,109.0	4,020.4	3,951.0	16.6	15.1	-136.05	494.1	-440.7	1,014.2	988.6	25.61	39.610		
4,300.0	4,205.6	4,114.4	4,042.6	17.1	15.5	-136.17	509.5	-454.7	1,048.4	1,022.0	26.36	39.777		
4,400.0	4,302.3	4,208.4	4,134.2	17.6	16.0	-136.28	524.9	-468.7	1,082.5	1,055.4	27.11	39.934		
4,500.0	4,398.9	4,302.3	4,225.9	18.2	16.4	-136.38	540.3	-482.7	1,116.7	1,088.8	27.86	40.081		
4,600.0	4,495.5	4,396.3	4,317.5	18.7	16.8	-136.48	555.7	-496.8	1,150.8	1,122.2	28.61	40.220		
4,700.0	4,592.2	4,508.5	4,427.1	19.2	17.3	-136.61	571.6	-511.0	1,184.6	1,155.2	29.40	40.292		
4,800.0	4,688.8	4,642.4	4,558.9	19.8	17.8	-136.95	591.1	-529.0	1,215.8	1,185.6	30.16	40.316		
4,876.8	4,763.0	4,746.7	4,662.2	20.2	18.0	-137.35	601.6	-538.5	1,237.6	1,206.9	30.70	40.309		
4,900.0	4,785.5	4,778.5	4,693.8	20.3	18.1	-137.57	604.3	-540.9	1,243.8	1,212.9	30.88	40.277		
5,000.0	4,882.7	4,917.1	4,831.8	20.7	18.4	-138.51	612.8	-548.6	1,267.0	1,235.4	31.55	40.152		
5,100.0	4,980.7	5,057.6	4,972.3	21.0	18.6	-139.42	616.3	-551.8	1,284.4	1,252.2	32.13	39.974		
5,200.0	5,079.4	5,164.7	5,079.4	21.3	18.7	-140.09	616.4	-551.9	1,297.0	1,264.4	32.60	39.784		
5,300.0	5,178.5	5,263.8	5,178.5	21.6	18.9	-140.58	616.4	-551.9	1,307.0	1,274.0	33.02	39.579		
5,400.0	5,278.1	5,363.4	5,278.1	21.8	19.0	-140.94	616.4	-551.9	1,314.4	1,281.0	33.40	39.350		
5,500.0	5,377.9	5,463.2	5,377.9	22.0	19.1	-141.16	616.4	-551.9	1,319.1	1,285.3	33.74	39.096		
5,600.0	5,477.8	5,563.1	5,477.8	22.1	19.3	-141.25	616.4	-551.9	1,321.0	1,287.0	34.03	38.815		
5,622.2	5,500.0	5,585.3	5,500.0	22.1	19.3	-90.89	616.4	-551.9	1,321.1	1,287.0	34.09	38.749		
5,700.0	5,577.8	5,663.1	5,577.8	22.2	19.4	-90.89	616.4	-551.9	1,321.1	1,286.8	34.32	38.494		
5,800.0	5,677.8	5,763.1	5,677.8	22.3	19.5	-90.89	616.4	-551.9	1,321.1	1,286.5	34.62	38.160		
5,900.0	5,777.8	5,863.1	5,777.8	22.5	19.7	-90.89	616.4	-551.9	1,321.1	1,286.2	34.92	37.828		
6,000.0	5,877.8	5,963.1	5,877.8	22.6	19.8	-90.89	616.4	-551.9	1,321.1	1,285.9	35.23	37.499		
6,100.0	5,977.8	6,063.1	5,977.8	22.7	20.0	-90.89	616.4	-551.9	1,321.1	1,285.6	35.54	37.173		
6,200.0	6,077.8	6,163.1	6,077.8	22.8	20.1	-90.89	616.4	-551.9	1,321.1	1,285.3	35.85	36.849		
6,300.0	6,177.8	6,263.1	6,177.8	23.0	20.2	-90.89	616.4	-551.9	1,321.1	1,284.9	36.17	36.527		
6,400.0	6,277.8	6,363.1	6,277.8	23.1	20.4	-90.89	616.4	-551.9	1,321.1	1,284.6	36.49	36.209		
6,500.0	6,377.8	6,463.1	6,377.8	23.2	20.5	-90.89	616.4	-551.9	1,321.1	1,284.3	36.81	35.893		
6,600.0	6,477.8	6,563.1	6,477.8	23.3	20.7	-90.89	616.4	-551.9	1,321.1	1,284.0	37.13	35.580		
6,700.0	6,577.8	6,663.1	6,577.8	23.5	20.8	-90.89	616.4	-551.9	1,321.1	1,283.7	37.46	35.270		
6,800.0	6,677.8	6,763.1	6,677.8	23.6	21.0	-90.89	616.4	-551.9	1,321.1	1,283.3	37.79	34.964		
6,900.0	6,777.8	6,863.1	6,777.8	23.7	21.2	-90.89	616.4	-551.9	1,321.1	1,283.0	38.12	34.660		
7,000.0	6,877.8	6,963.1	6,877.8	23.9	21.3	-90.89	616.4	-551.9	1,321.1	1,282.7	38.45	34.359		
7,100.0	6,977.8	7,063.1	6,977.8	24.0	21.5	-90.89	616.4	-551.9	1,321.1	1,282.3	38.79	34.061		

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 21-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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 11-34D - 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					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
7,200.0	7,077.8	7,163.1	7,077.8	24.2	21.6	-90.89	616.4	-551.9	1,321.1	1,282.0	39.12	33.767	
7,300.0	7,177.8	7,263.1	7,177.8	24.3	21.8	-90.89	616.4	-551.9	1,321.1	1,281.6	39.46	33.476	
7,400.0	7,277.8	7,363.1	7,277.8	24.4	21.9	-90.89	616.4	-551.9	1,321.1	1,281.3	39.81	33.188	
7,500.0	7,377.8	7,463.1	7,377.8	24.6	22.1	-90.89	616.4	-551.9	1,321.1	1,281.0	40.15	32.903	
7,600.0	7,477.8	7,563.1	7,477.8	24.7	22.3	-90.89	616.4	-551.9	1,321.1	1,280.6	40.50	32.621	
7,700.0	7,577.8	7,663.1	7,577.8	24.9	22.4	-90.89	616.4	-551.9	1,321.1	1,280.3	40.85	32.342	
7,800.0	7,677.8	7,763.1	7,677.8	25.0	22.6	-90.89	616.4	-551.9	1,321.1	1,279.9	41.20	32.067	
7,900.0	7,777.8	7,863.1	7,777.8	25.2	22.8	-90.89	616.4	-551.9	1,321.1	1,279.6	41.55	31.795	
7,942.2	7,820.0	7,905.3	7,820.0	25.2	22.8	-90.89	616.4	-551.9	1,321.1	1,279.4	41.70	31.681	

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 21-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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 (Ver.) - Wellbore #1 - Design #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +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	20.0	20.0	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	155.32	-18.2	8.4	20.0	19.8	0.23	88.306		
200.0	200.0	201.0	201.0	0.3	0.3	155.32	-18.2	8.4	20.0	19.4	0.68	29.631		
300.0	300.0	301.0	301.0	0.6	0.6	155.32	-18.2	8.4	20.0	18.9	1.13	17.802		
400.0	400.0	401.0	401.0	0.8	0.8	155.32	-18.2	8.4	20.0	18.5	1.58	12.723		
500.0	500.0	501.0	501.0	1.0	1.0	155.32	-18.2	8.4	20.0	18.0	2.03	9.899		
600.0	600.0	601.0	601.0	1.2	1.2	155.32	-18.2	8.4	20.0	17.6	2.47	8.101		
700.0	700.0	701.0	701.0	1.5	1.5	155.32	-18.2	8.4	20.0	17.1	2.92	6.855		
800.0	800.0	801.0	801.0	1.7	1.7	155.32	-18.2	8.4	20.0	16.7	3.37	5.942		
900.0	900.0	901.0	901.0	1.9	1.9	155.32	-18.2	8.4	20.0	16.2	3.82	5.243		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	155.32	-18.2	8.4	20.0	15.8	4.27	4.692 CC, ES		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	109.64	-18.2	8.4	20.6	15.8	4.72	4.359 SF		
1,200.0	1,199.8	1,200.8	1,200.8	2.6	2.6	122.03	-18.2	8.4	22.9	17.7	5.16	4.431		
1,300.0	1,299.5	1,300.5	1,300.5	2.8	2.8	136.97	-18.2	8.4	28.5	22.9	5.60	5.081		
1,400.0	1,398.7	1,399.7	1,399.7	3.0	3.0	149.38	-18.2	8.4	38.3	32.3	6.04	6.342		
1,500.0	1,497.5	1,498.5	1,498.5	3.3	3.3	158.01	-18.2	8.4	52.4	45.9	6.47	8.102		
1,600.0	1,595.6	1,596.6	1,596.6	3.6	3.5	163.71	-18.2	8.4	70.5	63.6	6.89	10.233		
1,700.0	1,693.1	1,694.1	1,694.1	4.0	3.7	167.53	-18.2	8.4	92.3	85.0	7.30	12.642		
1,745.4	1,737.0	1,738.0	1,738.0	4.2	3.8	168.84	-18.2	8.4	103.4	95.9	7.49	13.810		
1,800.0	1,789.8	1,790.8	1,790.8	4.4	3.9	170.17	-18.2	8.4	117.3	109.5	7.74	15.155		
1,900.0	1,886.4	1,887.4	1,887.4	4.8	4.1	171.93	-18.2	8.4	142.7	134.5	8.20	17.412		
2,000.0	1,983.0	1,984.0	1,984.0	5.3	4.3	173.16	-18.2	8.4	168.2	159.6	8.66	19.427		
2,100.0	2,079.7	2,080.7	2,080.7	5.7	4.6	174.07	-18.2	8.4	193.8	184.7	9.13	21.234		
2,200.0	2,176.3	2,177.3	2,177.3	6.2	4.8	174.76	-18.2	8.4	219.4	209.8	9.60	22.859		
2,300.0	2,272.9	2,273.9	2,273.9	6.7	5.0	175.31	-18.2	8.4	245.0	235.0	10.07	24.327		
2,400.0	2,369.6	2,370.6	2,370.6	7.2	5.2	175.75	-18.2	8.4	270.7	260.2	10.55	25.658		
2,500.0	2,466.2	2,467.2	2,467.2	7.7	5.4	176.12	-18.2	8.4	296.4	285.3	11.03	26.870		
2,600.0	2,562.9	2,563.9	2,563.9	8.2	5.7	176.43	-18.2	8.4	322.0	310.5	11.51	27.976		
2,700.0	2,659.5	2,660.5	2,660.5	8.7	5.9	176.70	-18.2	8.4	347.7	335.7	11.99	28.990		
2,800.0	2,756.1	2,757.1	2,757.1	9.2	6.1	176.92	-18.2	8.4	373.4	360.9	12.48	29.923		
2,900.0	2,852.8	2,853.8	2,853.8	9.7	6.3	177.12	-18.2	8.4	399.1	386.1	12.97	30.783		
3,000.0	2,949.4	2,950.4	2,950.4	10.3	6.5	177.30	-18.2	8.4	424.8	411.4	13.45	31.578		
3,100.0	3,046.0	3,047.0	3,047.0	10.8	6.7	177.45	-18.2	8.4	450.5	436.6	13.94	32.315		
3,200.0	3,142.7	3,143.7	3,143.7	11.3	7.0	177.59	-18.2	8.4	476.2	461.8	14.43	33.000		
3,300.0	3,239.3	3,240.3	3,240.3	11.8	7.2	177.71	-18.2	8.4	501.9	487.0	14.92	33.639		
3,400.0	3,335.9	3,336.9	3,336.9	12.4	7.4	177.82	-18.2	8.4	527.6	512.2	15.41	34.236		
3,500.0	3,432.6	3,433.6	3,433.6	12.9	7.6	177.92	-18.2	8.4	553.3	537.4	15.90	34.794		
3,600.0	3,529.2	3,530.2	3,530.2	13.4	7.8	178.02	-18.2	8.4	579.1	562.7	16.40	35.317		
3,700.0	3,625.8	3,626.8	3,626.8	13.9	8.0	178.10	-18.2	8.4	604.8	587.9	16.89	35.809		
3,800.0	3,722.5	3,723.5	3,723.5	14.5	8.3	178.18	-18.2	8.4	630.5	613.1	17.38	36.271		
3,900.0	3,819.1	3,820.1	3,820.1	15.0	8.5	178.25	-18.2	8.4	656.2	638.3	17.88	36.708		
4,000.0	3,915.7	3,916.7	3,916.7	15.5	8.7	178.32	-18.2	8.4	681.9	663.5	18.37	37.119		
4,100.0	4,012.4	4,013.4	4,013.4	16.0	8.9	178.38	-18.2	8.4	707.6	688.8	18.87	37.509		
4,200.0	4,109.0	4,110.0	4,110.0	16.6	9.1	178.43	-18.2	8.4	733.4	714.0	19.36	37.878		
4,300.0	4,205.6	4,206.6	4,206.6	17.1	9.3	178.49	-18.2	8.4	759.1	739.2	19.86	38.227		
4,400.0	4,302.3	4,303.3	4,303.3	17.6	9.6	178.54	-18.2	8.4	784.8	764.4	20.35	38.559		
4,500.0	4,398.9	4,399.9	4,399.9	18.2	9.8	178.58	-18.2	8.4	810.5	789.7	20.85	38.875		
4,600.0	4,495.5	4,496.5	4,496.5	18.7	10.0	178.63	-18.2	8.4	836.2	814.9	21.35	39.175		
4,700.0	4,592.2	4,593.2	4,593.2	19.2	10.2	178.67	-18.2	8.4	862.0	840.1	21.84	39.461		
4,800.0	4,688.8	4,689.8	4,689.8	19.8	10.4	178.71	-18.2	8.4	887.7	865.3	22.34	39.734		
4,876.8	4,763.0	4,764.0	4,764.0	20.2	10.6	178.73	-18.2	8.4	907.4	884.7	22.72	39.935		
4,900.0	4,785.5	4,786.5	4,786.5	20.3	10.6	178.75	-18.2	8.4	913.3	890.4	22.86	39.961		

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

ENSIGN Directional

Anticollision Report

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 21-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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: G-MWD													Offset Well Error:	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	
5,000.0	4,882.7	4,883.7	4,883.7	20.7	10.9	178.79	-18.2	8.4	936.5	913.2	23.38	40.050		
5,100.0	4,980.7	4,981.7	4,981.7	21.0	11.1	178.82	-18.2	8.4	956.4	932.5	23.88	40.045		
5,200.0	5,079.4	5,080.4	5,080.4	21.3	11.3	178.85	-18.2	8.4	972.8	948.4	24.35	39.953		
5,300.0	5,178.5	5,179.5	5,179.5	21.6	11.5	178.87	-18.2	8.4	985.7	961.0	24.78	39.781		
5,400.0	5,278.1	5,279.1	5,279.1	21.8	11.8	178.88	-18.2	8.4	995.2	970.0	25.18	39.532		
5,500.0	5,377.9	5,378.9	5,378.9	22.0	12.0	178.89	-18.2	8.4	1,001.2	975.7	25.53	39.210		
5,600.0	5,477.8	5,478.8	5,478.8	22.1	12.2	178.89	-18.2	8.4	1,003.7	977.9	25.86	38.819		
5,622.2	5,500.0	5,501.0	5,501.0	22.1	12.3	-130.73	-18.2	8.4	1,003.8	977.9	25.92	38.722		
5,700.0	5,577.8	5,578.8	5,578.8	22.2	12.4	-130.73	-18.2	8.4	1,003.8	977.6	26.23	38.267		
5,800.0	5,677.8	5,678.8	5,678.8	22.3	12.7	-130.73	-18.2	8.4	1,003.8	977.2	26.64	37.677		
5,900.0	5,777.8	5,778.8	5,778.8	22.5	12.9	-130.73	-18.2	8.4	1,003.8	976.8	27.06	37.103		
6,000.0	5,877.8	5,878.8	5,878.8	22.6	13.1	-130.73	-18.2	8.4	1,003.8	976.4	27.47	36.545		
6,100.0	5,977.8	5,978.8	5,978.8	22.7	13.3	-130.73	-18.2	8.4	1,003.8	975.9	27.88	36.002		
6,200.0	6,077.8	6,078.8	6,078.8	22.8	13.6	-130.73	-18.2	8.4	1,003.8	975.5	28.30	35.473		
6,300.0	6,177.8	6,178.8	6,178.8	23.0	13.8	-130.73	-18.2	8.4	1,003.8	975.1	28.71	34.958		
6,400.0	6,277.8	6,278.8	6,278.8	23.1	14.0	-130.73	-18.2	8.4	1,003.8	974.7	29.13	34.458		
6,500.0	6,377.8	6,378.8	6,378.8	23.2	14.2	-130.73	-18.2	8.4	1,003.8	974.3	29.55	33.971		
6,600.0	6,477.8	6,478.8	6,478.8	23.3	14.4	-130.73	-18.2	8.4	1,003.8	973.9	29.97	33.496		
6,700.0	6,577.8	6,578.8	6,578.8	23.5	14.7	-130.73	-18.2	8.4	1,003.8	973.4	30.39	33.033		
6,800.0	6,677.8	6,678.8	6,678.8	23.6	14.9	-130.73	-18.2	8.4	1,003.8	973.0	30.81	32.583		
6,900.0	6,777.8	6,778.8	6,778.8	23.7	15.1	-130.73	-18.2	8.4	1,003.8	972.6	31.23	32.143		
7,000.0	6,877.8	6,878.8	6,878.8	23.9	15.3	-130.73	-18.2	8.4	1,003.8	972.2	31.65	31.715		
7,100.0	6,977.8	6,978.8	6,978.8	24.0	15.6	-130.73	-18.2	8.4	1,003.8	971.8	32.07	31.297		
7,200.0	7,077.8	7,078.8	7,078.8	24.2	15.8	-130.73	-18.2	8.4	1,003.8	971.3	32.50	30.889		
7,300.0	7,177.8	7,178.8	7,178.8	24.3	16.0	-130.73	-18.2	8.4	1,003.8	970.9	32.92	30.491		
7,400.0	7,277.8	7,278.8	7,278.8	24.4	16.2	-130.73	-18.2	8.4	1,003.8	970.5	33.35	30.103		
7,500.0	7,377.8	7,378.8	7,378.8	24.6	16.5	-130.73	-18.2	8.4	1,003.8	970.1	33.77	29.724		
7,600.0	7,477.8	7,478.8	7,478.8	24.7	16.7	-130.73	-18.2	8.4	1,003.8	969.6	34.20	29.354		
7,700.0	7,577.8	7,578.8	7,578.8	24.9	16.9	-130.73	-18.2	8.4	1,003.8	969.2	34.62	28.992		
7,800.0	7,677.8	7,678.8	7,678.8	25.0	17.1	-130.73	-18.2	8.4	1,003.8	968.8	35.05	28.639		
7,900.0	7,777.8	7,778.8	7,778.8	25.2	17.4	-130.73	-18.2	8.4	1,003.8	968.3	35.48	28.294		
7,927.8	7,805.6	7,806.6	7,806.6	25.2	17.4	-130.73	-18.2	8.4	1,003.8	968.2	35.60	28.199		
7,942.2	7,820.0	7,820.0	7,820.0	25.2	17.5	-130.73	-18.2	8.4	1,003.8	968.2	35.66	28.152		

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 21-34D
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (5-23-11)

Local Co-ordinate Reference: Well Margil 21-34D
TVD Reference: WELL @ 5117.0ft (Original Well Elev)
MD Reference: WELL @ 5117.0ft (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 @ 5117.0ft (Original Well Elev) Coordinates are relative to: Margil 21-34D

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: 0.33°



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