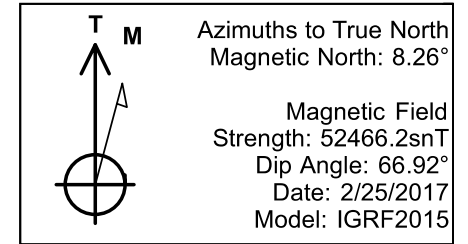




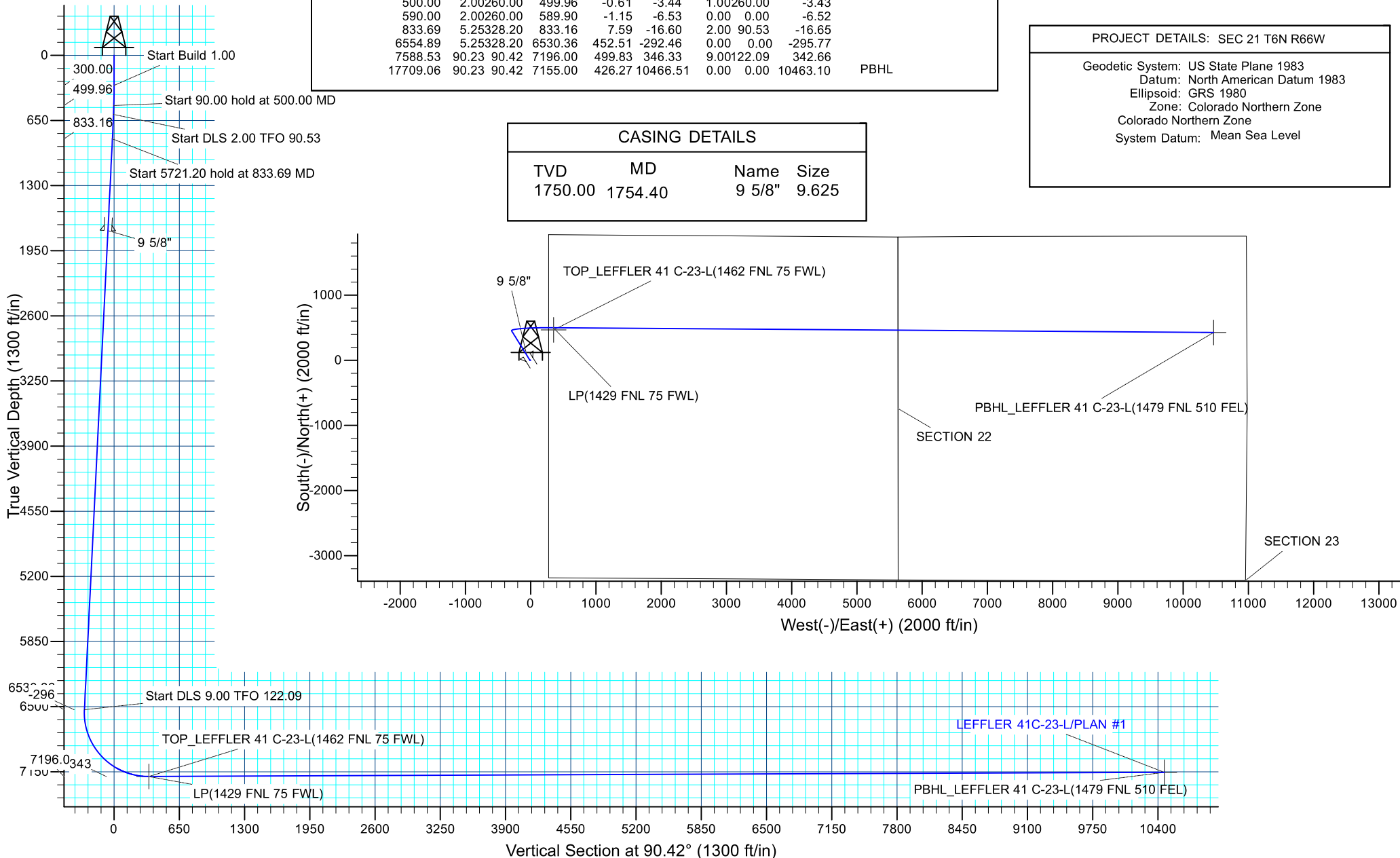
Project: SEC 21 T6N R66W
Site: LEFFLER 8-21 PAD
Well: LEFFLER 41C-23-L
Wellbore: OH
Design: PLAN #1



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
500.00	2.00	260.00	499.96	-0.61	-3.44	1.00	260.00	-3.43	
590.00	2.00	260.00	589.90	-1.15	-6.53	0.00	0.00	-6.52	
833.69	5.25	328.20	833.16	7.59	-16.60	2.00	90.53	-16.65	
6554.89	5.25	328.20	6530.36	452.51	-292.46	0.00	0.00	-295.77	
7588.53	90.23	90.42	7196.00	499.83	346.33	9.00	122.09	342.66	
17709.06	90.23	90.42	7155.00	426.27	10466.51	0.00	0.00	10463.10	PBHL

PROJECT DETAILS: SEC 21 T6N R66W									
Geodetic System: US State Plane 1983									
Datum: North American Datum 1983									
Ellipsoid: GRS 1980									
Zone: Colorado Northern Zone									
Colorado Northern Zone									
System Datum: Mean Sea Level									

CASING DETAILS				
TVD	MD	Name	Size	
1750.00	1754.40	9 5/8"	9.625	





Synergy Resources Corporation

**SEC 21 T6N R66W
LEFFLER 8-21 PAD
LEFFLER 41C-23-L**

OH

Plan: PLAN #1

Standard Planning Report

27 February, 2017

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well LEFFLER 41C-23-L
Company:	Synergy Resources Corporation	TVD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Project:	SEC 21 T6N R66W	MD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Site:	LEFFLER 8-21 PAD	North Reference:	True
Well:	LEFFLER 41C-23-L	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Project	SEC 21 T6N R66W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		LEFFLER 8-21 PAD			
Site Position:		Northing:	1,417,151.07 ft	Latitude:	40.4762060
From:	Lat/Long	Easting:	3,201,878.01 ft	Longitude:	-104.7743500
Position Uncertainty:	3.28 ft	Slot Radius:	13.200 in	Grid Convergence:	0.47 °

Well	LEFFLER 41C-23-L, 1921' FNL & 275' FEL					
Well Position	+N/-S	-119.86 ft	Northing:	1,417,031.21 ft	Latitude:	40.4758770
	+E/-W	0.00 ft	Easting:	3,201,878.99 ft	Longitude:	-104.7743500
Position Uncertainty		3.28 ft	Wellhead Elevation:		Ground Level:	4,748.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/25/2017	8.26	66.92	52,466

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	90.42

Plan Survey Tool Program	Date	2/27/2017			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	17,708.87	PLAN #1 (OH)	MWD+IFR1+MS	
				OWSG MWD + IFR1 + Multi-St	

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	2.00	260.00	499.96	-0.61	-3.44	1.00	1.00	0.00	260.00	
590.00	2.00	260.00	589.90	-1.15	-6.53	0.00	0.00	0.00	0.00	
833.69	5.25	328.20	833.16	7.59	-16.60	2.00	1.33	27.99	90.53	
6,554.90	5.25	328.20	6,530.36	452.51	-292.46	0.00	0.00	0.00	0.00	
7,588.53	90.23	90.42	7,196.01	499.83	346.33	9.00	8.22	11.82	122.09	
17,709.06	90.23	90.42	7,155.00	426.27	10,466.51	0.00	0.00	0.00	0.00	PBHL_LEFFLER 41 C

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well LEFFLER 41C-23-L
Company:	Synergy Resources Corporation	TVD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Project:	SEC 21 T6N R66W	MD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Site:	LEFFLER 8-21 PAD	North Reference:	True
Well:	LEFFLER 41C-23-L	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.00									
400.00	1.00	260.00	399.99	-0.15	-0.86	-0.86	1.00	1.00	0.00
500.00	2.00	260.00	499.96	-0.61	-3.44	-3.43	1.00	1.00	0.00
Start 90.00 hold at 500.00 MD									
590.00	2.00	260.00	589.90	-1.15	-6.53	-6.52	0.00	0.00	0.00
Start DLS 2.00 TFO 90.53									
600.00	2.01	265.72	599.90	-1.19	-6.88	-6.87	2.00	0.08	57.17
700.00	2.96	308.04	699.81	0.26	-10.66	-10.66	2.00	0.95	42.32
800.00	4.63	325.02	799.59	5.17	-15.01	-15.04	2.00	1.68	16.98
833.69	5.25	328.20	833.16	7.59	-16.60	-16.65	2.00	1.83	9.45
Start 5721.20 hold at 833.69 MD									
900.00	5.25	328.20	899.19	12.75	-19.80	-19.89	0.00	0.00	0.00
1,000.00	5.25	328.20	998.77	20.52	-24.62	-24.77	0.00	0.00	0.00
1,100.00	5.25	328.20	1,098.35	28.30	-29.44	-29.65	0.00	0.00	0.00
1,200.00	5.25	328.20	1,197.93	36.08	-34.26	-34.53	0.00	0.00	0.00
1,300.00	5.25	328.20	1,297.51	43.85	-39.08	-39.40	0.00	0.00	0.00
1,400.00	5.25	328.20	1,397.09	51.63	-43.91	-44.28	0.00	0.00	0.00
1,500.00	5.25	328.20	1,496.67	59.41	-48.73	-49.16	0.00	0.00	0.00
1,600.00	5.25	328.20	1,596.25	67.18	-53.55	-54.04	0.00	0.00	0.00
1,700.00	5.25	328.20	1,695.83	74.96	-58.37	-58.92	0.00	0.00	0.00
1,754.40	5.25	328.20	1,750.00	79.19	-60.99	-61.57	0.00	0.00	0.00
9 5/8"									
1,800.00	5.25	328.20	1,795.41	82.74	-63.19	-63.80	0.00	0.00	0.00
1,900.00	5.25	328.20	1,894.99	90.51	-68.01	-68.68	0.00	0.00	0.00
2,000.00	5.25	328.20	1,994.57	98.29	-72.84	-73.55	0.00	0.00	0.00
2,100.00	5.25	328.20	2,094.15	106.07	-77.66	-78.43	0.00	0.00	0.00
2,200.00	5.25	328.20	2,193.73	113.84	-82.48	-83.31	0.00	0.00	0.00
2,300.00	5.25	328.20	2,293.31	121.62	-87.30	-88.19	0.00	0.00	0.00
2,400.00	5.25	328.20	2,392.90	129.40	-92.12	-93.07	0.00	0.00	0.00
2,500.00	5.25	328.20	2,492.48	137.17	-96.94	-97.95	0.00	0.00	0.00
2,600.00	5.25	328.20	2,592.06	144.95	-101.77	-102.83	0.00	0.00	0.00
2,700.00	5.25	328.20	2,691.64	152.73	-106.59	-107.70	0.00	0.00	0.00
2,800.00	5.25	328.20	2,791.22	160.50	-111.41	-112.58	0.00	0.00	0.00
2,900.00	5.25	328.20	2,890.80	168.28	-116.23	-117.46	0.00	0.00	0.00
3,000.00	5.25	328.20	2,990.38	176.06	-121.05	-122.34	0.00	0.00	0.00
3,100.00	5.25	328.20	3,089.96	183.83	-125.87	-127.22	0.00	0.00	0.00
3,200.00	5.25	328.20	3,189.54	191.61	-130.70	-132.10	0.00	0.00	0.00
3,300.00	5.25	328.20	3,289.12	199.39	-135.52	-136.98	0.00	0.00	0.00
3,400.00	5.25	328.20	3,388.70	207.16	-140.34	-141.85	0.00	0.00	0.00
3,500.00	5.25	328.20	3,488.28	214.94	-145.16	-146.73	0.00	0.00	0.00
3,600.00	5.25	328.20	3,587.86	222.72	-149.98	-151.61	0.00	0.00	0.00
3,700.00	5.25	328.20	3,687.44	230.49	-154.81	-156.49	0.00	0.00	0.00
3,800.00	5.25	328.20	3,787.02	238.27	-159.63	-161.37	0.00	0.00	0.00
3,900.00	5.25	328.20	3,886.60	246.05	-164.45	-166.25	0.00	0.00	0.00
4,000.00	5.25	328.20	3,986.18	253.82	-169.27	-171.13	0.00	0.00	0.00
4,100.00	5.25	328.20	4,085.76	261.60	-174.09	-176.00	0.00	0.00	0.00
4,200.00	5.25	328.20	4,185.34	269.38	-178.91	-180.88	0.00	0.00	0.00
4,300.00	5.25	328.20	4,284.92	277.15	-183.74	-185.76	0.00	0.00	0.00
4,400.00	5.25	328.20	4,384.51	284.93	-188.56	-190.64	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well LEFFLER 41C-23-L
Company:	Synergy Resources Corporation	TVD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Project:	SEC 21 T6N R66W	MD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Site:	LEFFLER 8-21 PAD	North Reference:	True
Well:	LEFFLER 41C-23-L	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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)
4,500.00	5.25	328.20	4,484.09	292.71	-193.38	-195.52	0.00	0.00	0.00
4,600.00	5.25	328.20	4,583.67	300.48	-198.20	-200.40	0.00	0.00	0.00
4,700.00	5.25	328.20	4,683.25	308.26	-203.02	-205.28	0.00	0.00	0.00
4,800.00	5.25	328.20	4,782.83	316.04	-207.84	-210.16	0.00	0.00	0.00
4,900.00	5.25	328.20	4,882.41	323.81	-212.67	-215.03	0.00	0.00	0.00
5,000.00	5.25	328.20	4,981.99	331.59	-217.49	-219.91	0.00	0.00	0.00
5,100.00	5.25	328.20	5,081.57	339.37	-222.31	-224.79	0.00	0.00	0.00
5,200.00	5.25	328.20	5,181.15	347.14	-227.13	-229.67	0.00	0.00	0.00
5,300.00	5.25	328.20	5,280.73	354.92	-231.95	-234.55	0.00	0.00	0.00
5,400.00	5.25	328.20	5,380.31	362.70	-236.77	-239.43	0.00	0.00	0.00
5,500.00	5.25	328.20	5,479.89	370.47	-241.60	-244.31	0.00	0.00	0.00
5,600.00	5.25	328.20	5,579.47	378.25	-246.42	-249.18	0.00	0.00	0.00
5,700.00	5.25	328.20	5,679.05	386.03	-251.24	-254.06	0.00	0.00	0.00
5,800.00	5.25	328.20	5,778.63	393.80	-256.06	-258.94	0.00	0.00	0.00
5,900.00	5.25	328.20	5,878.21	401.58	-260.88	-263.82	0.00	0.00	0.00
6,000.00	5.25	328.20	5,977.79	409.36	-265.70	-268.70	0.00	0.00	0.00
6,100.00	5.25	328.20	6,077.37	417.13	-270.53	-273.58	0.00	0.00	0.00
6,200.00	5.25	328.20	6,176.95	424.91	-275.35	-278.46	0.00	0.00	0.00
6,300.00	5.25	328.20	6,276.53	432.69	-280.17	-283.33	0.00	0.00	0.00
6,400.00	5.25	328.20	6,376.11	440.46	-284.99	-288.21	0.00	0.00	0.00
6,500.00	5.25	328.20	6,475.70	448.24	-289.81	-293.09	0.00	0.00	0.00
6,554.90	5.25	328.20	6,530.36	452.51	-292.46	-295.77	0.00	0.00	0.00
Start DLS 9.00 TFO 122.09									
6,600.00	4.62	16.30	6,575.32	456.01	-293.04	-296.37	9.00	-1.39	106.63
6,700.00	11.18	67.22	6,674.41	463.64	-282.95	-286.34	9.00	6.55	50.93
6,800.00	19.75	77.89	6,770.72	470.96	-257.44	-260.89	9.00	8.58	10.67
6,900.00	28.58	82.19	6,861.87	477.76	-217.14	-220.63	9.00	8.83	4.30
7,000.00	37.49	84.58	6,945.62	483.90	-163.03	-166.57	9.00	8.91	2.39
7,100.00	46.43	86.16	7,019.91	489.21	-96.45	-100.03	9.00	8.94	1.58
7,200.00	55.38	87.32	7,082.90	493.57	-19.04	-22.66	9.00	8.95	1.17
7,300.00	64.35	88.26	7,133.05	496.87	67.29	63.65	9.00	8.96	0.94
7,400.00	73.32	89.06	7,169.13	499.03	160.42	156.76	9.00	8.97	0.80
7,500.00	82.29	89.80	7,190.23	499.99	258.06	254.39	9.00	8.97	0.73
7,588.53	90.23	90.42	7,196.01	499.83	346.33	342.66	9.00	8.97	0.70
LP(1429 FNL 75 FWL)									
7,592.70	90.23	90.42	7,195.99	499.80	350.50	346.83	0.00	0.00	0.00
TOP_LEFFLER 41 C-23-L(1462 FNL 75 FWL)									
7,600.00	90.23	90.42	7,195.96	499.74	357.80	354.13	0.00	0.00	0.00
7,700.00	90.23	90.42	7,195.55	499.02	457.80	454.13	0.00	0.00	0.00
7,800.00	90.23	90.42	7,195.15	498.29	557.79	554.12	0.00	0.00	0.00
7,900.00	90.23	90.42	7,194.74	497.56	657.79	654.12	0.00	0.00	0.00
8,000.00	90.23	90.42	7,194.34	496.84	757.79	754.12	0.00	0.00	0.00
8,100.00	90.23	90.42	7,193.93	496.11	857.78	854.12	0.00	0.00	0.00
8,200.00	90.23	90.42	7,193.53	495.38	957.78	954.12	0.00	0.00	0.00
8,300.00	90.23	90.42	7,193.12	494.66	1,057.78	1,054.12	0.00	0.00	0.00
8,400.00	90.23	90.42	7,192.72	493.93	1,157.77	1,154.12	0.00	0.00	0.00
8,500.00	90.23	90.42	7,192.31	493.20	1,257.77	1,254.12	0.00	0.00	0.00
8,600.00	90.23	90.42	7,191.91	492.48	1,357.76	1,354.12	0.00	0.00	0.00
8,700.00	90.23	90.42	7,191.50	491.75	1,457.76	1,454.12	0.00	0.00	0.00
8,800.00	90.23	90.42	7,191.10	491.02	1,557.76	1,554.12	0.00	0.00	0.00
8,900.00	90.23	90.42	7,190.69	490.30	1,657.75	1,654.12	0.00	0.00	0.00
9,000.00	90.23	90.42	7,190.29	489.57	1,757.75	1,754.11	0.00	0.00	0.00
9,100.00	90.23	90.42	7,189.88	488.84	1,857.75	1,854.11	0.00	0.00	0.00

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Company:	Synergy Resources Corporation	TVD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Project:	SEC 21 T6N R66W	MD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Site:	LEFFLER 8-21 PAD	North Reference:	True
Well:	LEFFLER 41C-23-L	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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)	
9,200.00	90.23	90.42	7,189.48	488.12	1,957.74	1,954.11	0.00	0.00	0.00	
9,300.00	90.23	90.42	7,189.07	487.39	2,057.74	2,054.11	0.00	0.00	0.00	
9,400.00	90.23	90.42	7,188.67	486.66	2,157.74	2,154.11	0.00	0.00	0.00	
9,500.00	90.23	90.42	7,188.26	485.93	2,257.73	2,254.11	0.00	0.00	0.00	
9,600.00	90.23	90.42	7,187.86	485.21	2,357.73	2,354.11	0.00	0.00	0.00	
9,700.00	90.23	90.42	7,187.45	484.48	2,457.73	2,454.11	0.00	0.00	0.00	
9,800.00	90.23	90.42	7,187.04	483.75	2,557.72	2,554.11	0.00	0.00	0.00	
9,900.00	90.23	90.42	7,186.64	483.03	2,657.72	2,654.11	0.00	0.00	0.00	
10,000.00	90.23	90.42	7,186.23	482.30	2,757.72	2,754.11	0.00	0.00	0.00	
10,100.00	90.23	90.42	7,185.83	481.57	2,857.71	2,854.11	0.00	0.00	0.00	
10,200.00	90.23	90.42	7,185.42	480.85	2,957.71	2,954.11	0.00	0.00	0.00	
10,300.00	90.23	90.42	7,185.02	480.12	3,057.71	3,054.10	0.00	0.00	0.00	
10,400.00	90.23	90.42	7,184.61	479.39	3,157.70	3,154.10	0.00	0.00	0.00	
10,500.00	90.23	90.42	7,184.21	478.67	3,257.70	3,254.10	0.00	0.00	0.00	
10,600.00	90.23	90.42	7,183.80	477.94	3,357.70	3,354.10	0.00	0.00	0.00	
10,700.00	90.23	90.42	7,183.40	477.21	3,457.69	3,454.10	0.00	0.00	0.00	
10,800.00	90.23	90.42	7,182.99	476.49	3,557.69	3,554.10	0.00	0.00	0.00	
10,900.00	90.23	90.42	7,182.59	475.76	3,657.69	3,654.10	0.00	0.00	0.00	
11,000.00	90.23	90.42	7,182.18	475.03	3,757.68	3,754.10	0.00	0.00	0.00	
11,100.00	90.23	90.42	7,181.78	474.31	3,857.68	3,854.10	0.00	0.00	0.00	
11,200.00	90.23	90.42	7,181.37	473.58	3,957.67	3,954.10	0.00	0.00	0.00	
11,300.00	90.23	90.42	7,180.97	472.85	4,057.67	4,054.10	0.00	0.00	0.00	
11,400.00	90.23	90.42	7,180.56	472.13	4,157.67	4,154.10	0.00	0.00	0.00	
11,500.00	90.23	90.42	7,180.16	471.40	4,257.66	4,254.09	0.00	0.00	0.00	
11,600.00	90.23	90.42	7,179.75	470.67	4,357.66	4,354.09	0.00	0.00	0.00	
11,700.00	90.23	90.42	7,179.35	469.95	4,457.66	4,454.09	0.00	0.00	0.00	
11,800.00	90.23	90.42	7,178.94	469.22	4,557.65	4,554.09	0.00	0.00	0.00	
11,900.00	90.23	90.42	7,178.54	468.49	4,657.65	4,654.09	0.00	0.00	0.00	
12,000.00	90.23	90.42	7,178.13	467.77	4,757.65	4,754.09	0.00	0.00	0.00	
12,100.00	90.23	90.42	7,177.73	467.04	4,857.64	4,854.09	0.00	0.00	0.00	
12,200.00	90.23	90.42	7,177.32	466.31	4,957.64	4,954.09	0.00	0.00	0.00	
12,300.00	90.23	90.42	7,176.92	465.59	5,057.64	5,054.09	0.00	0.00	0.00	
12,400.00	90.23	90.42	7,176.51	464.86	5,157.63	5,154.09	0.00	0.00	0.00	
12,500.00	90.23	90.42	7,176.11	464.13	5,257.63	5,254.09	0.00	0.00	0.00	
12,600.00	90.23	90.42	7,175.70	463.41	5,357.63	5,354.09	0.00	0.00	0.00	
12,700.00	90.23	90.42	7,175.30	462.68	5,457.62	5,454.08	0.00	0.00	0.00	
12,800.00	90.23	90.42	7,174.89	461.95	5,557.62	5,554.08	0.00	0.00	0.00	
12,900.00	90.23	90.42	7,174.48	461.22	5,657.62	5,654.08	0.00	0.00	0.00	
13,000.00	90.23	90.42	7,174.08	460.50	5,757.61	5,754.08	0.00	0.00	0.00	
13,100.00	90.23	90.42	7,173.67	459.77	5,857.61	5,854.08	0.00	0.00	0.00	
13,200.00	90.23	90.42	7,173.27	459.04	5,957.61	5,954.08	0.00	0.00	0.00	
13,300.00	90.23	90.42	7,172.86	458.32	6,057.60	6,054.08	0.00	0.00	0.00	
13,400.00	90.23	90.42	7,172.46	457.59	6,157.60	6,154.08	0.00	0.00	0.00	
13,500.00	90.23	90.42	7,172.05	456.86	6,257.60	6,254.08	0.00	0.00	0.00	
13,600.00	90.23	90.42	7,171.65	456.14	6,357.59	6,354.08	0.00	0.00	0.00	
13,700.00	90.23	90.42	7,171.24	455.41	6,457.59	6,454.08	0.00	0.00	0.00	
13,800.00	90.23	90.42	7,170.84	454.68	6,557.58	6,554.08	0.00	0.00	0.00	
13,900.00	90.23	90.42	7,170.43	453.96	6,657.58	6,654.07	0.00	0.00	0.00	
14,000.00	90.23	90.42	7,170.03	453.23	6,757.58	6,754.07	0.00	0.00	0.00	
14,100.00	90.23	90.42	7,169.62	452.50	6,857.57	6,854.07	0.00	0.00	0.00	
14,200.00	90.23	90.42	7,169.22	451.78	6,957.57	6,954.07	0.00	0.00	0.00	
14,300.00	90.23	90.42	7,168.81	451.05	7,057.57	7,054.07	0.00	0.00	0.00	
14,400.00	90.23	90.42	7,168.41	450.32	7,157.56	7,154.07	0.00	0.00	0.00	
14,500.00	90.23	90.42	7,168.00	449.60	7,257.56	7,254.07	0.00	0.00	0.00	

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well LEFFLER 41C-23-L
Company:	Synergy Resources Corporation	TVD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Project:	SEC 21 T6N R66W	MD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Site:	LEFFLER 8-21 PAD	North Reference:	True
Well:	LEFFLER 41C-23-L	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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)	
14,600.00	90.23	90.42	7,167.60	448.87	7,357.56	7,354.07	0.00	0.00	0.00	
14,700.00	90.23	90.42	7,167.19	448.14	7,457.55	7,454.07	0.00	0.00	0.00	
14,800.00	90.23	90.42	7,166.79	447.42	7,557.55	7,554.07	0.00	0.00	0.00	
14,900.00	90.23	90.42	7,166.38	446.69	7,657.55	7,654.07	0.00	0.00	0.00	
15,000.00	90.23	90.42	7,165.98	445.96	7,757.54	7,754.07	0.00	0.00	0.00	
15,100.00	90.23	90.42	7,165.57	445.24	7,857.54	7,854.07	0.00	0.00	0.00	
15,200.00	90.23	90.42	7,165.17	444.51	7,957.54	7,954.06	0.00	0.00	0.00	
15,300.00	90.23	90.42	7,164.76	443.78	8,057.53	8,054.06	0.00	0.00	0.00	
15,400.00	90.23	90.42	7,164.36	443.06	8,157.53	8,154.06	0.00	0.00	0.00	
15,500.00	90.23	90.42	7,163.95	442.33	8,257.53	8,254.06	0.00	0.00	0.00	
15,600.00	90.23	90.42	7,163.55	441.60	8,357.52	8,354.06	0.00	0.00	0.00	
15,700.00	90.23	90.42	7,163.14	440.88	8,457.52	8,454.06	0.00	0.00	0.00	
15,800.00	90.23	90.42	7,162.74	440.15	8,557.52	8,554.06	0.00	0.00	0.00	
15,900.00	90.23	90.42	7,162.33	439.42	8,657.51	8,654.06	0.00	0.00	0.00	
16,000.00	90.23	90.42	7,161.92	438.70	8,757.51	8,754.06	0.00	0.00	0.00	
16,100.00	90.23	90.42	7,161.52	437.97	8,857.51	8,854.06	0.00	0.00	0.00	
16,200.00	90.23	90.42	7,161.11	437.24	8,957.50	8,954.06	0.00	0.00	0.00	
16,300.00	90.23	90.42	7,160.71	436.51	9,057.50	9,054.06	0.00	0.00	0.00	
16,400.00	90.23	90.42	7,160.30	435.79	9,157.49	9,154.05	0.00	0.00	0.00	
16,500.00	90.23	90.42	7,159.90	435.06	9,257.49	9,254.05	0.00	0.00	0.00	
16,600.00	90.23	90.42	7,159.49	434.33	9,357.49	9,354.05	0.00	0.00	0.00	
16,700.00	90.23	90.42	7,159.09	433.61	9,457.48	9,454.05	0.00	0.00	0.00	
16,800.00	90.23	90.42	7,158.68	432.88	9,557.48	9,554.05	0.00	0.00	0.00	
16,900.00	90.23	90.42	7,158.28	432.15	9,657.48	9,654.05	0.00	0.00	0.00	
17,000.00	90.23	90.42	7,157.87	431.43	9,757.47	9,754.05	0.00	0.00	0.00	
17,100.00	90.23	90.42	7,157.47	430.70	9,857.47	9,854.05	0.00	0.00	0.00	
17,200.00	90.23	90.42	7,157.06	429.97	9,957.47	9,954.05	0.00	0.00	0.00	
17,300.00	90.23	90.42	7,156.66	429.25	10,057.46	10,054.05	0.00	0.00	0.00	
17,400.00	90.23	90.42	7,156.25	428.52	10,157.46	10,154.05	0.00	0.00	0.00	
17,500.00	90.23	90.42	7,155.85	427.79	10,257.46	10,254.05	0.00	0.00	0.00	
17,600.00	90.23	90.42	7,155.44	427.07	10,357.45	10,354.04	0.00	0.00	0.00	
17,700.00	90.23	90.42	7,155.04	426.34	10,457.45	10,454.04	0.00	0.00	0.00	
17,709.06	90.23	90.42	7,155.00	426.27	10,466.51	10,463.10	0.00	0.00	0.00	
TD at 17709.06 - PBHL_LEFFLER 41 C-23-L(1479 FNL 510 FEL)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL_LEFFLER 41 C-2	0.00	0.00	7,155.00	426.27	10,466.51	1,417,543.12	3,212,341.66	40.4770410	-104.7367270	
- plan hits target center										
- Point										
TOP_LEFFLER 41 C-23	0.00	0.00	7,196.00	464.86	350.25	1,417,498.92	3,202,225.42	40.4771530	-104.7730910	
- plan misses target center by 34.94ft at 7592.70ft MD (7195.99 TVD, 499.80 N, 350.50 E)										
- Point										

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well LEFFLER 41C-23-L
Company:	Synergy Resources Corporation	TVD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Project:	SEC 21 T6N R66W	MD Reference:	GL 4747 & KB 25 @ 4773.00ft (ASSUMED)
Site:	LEFFLER 8-21 PAD	North Reference:	True
Well:	LEFFLER 41C-23-L	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (in)	Hole Diameter (in)
1,754.40	1,750.00	9 5/8"		9.625	13.500

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 1.00	
500.00	499.96	-0.61	-3.44	Start 90.00 hold at 500.00 MD	
590.00	589.90	-1.15	-6.53	Start DLS 2.00 TFO 90.53	
833.69	833.16	7.59	-16.60	Start 5721.20 hold at 833.69 MD	
6,554.90	6,530.36	452.51	-292.46	Start DLS 9.00 TFO 122.09	
7,588.53	7,196.01	499.83	346.33	LP(1429 FNL 75 FWL)	
17,709.06	7,155.00	426.27	10,466.51	TD at 17709.06	