

# Synergy Resources

Well Name: **Conrad 44-1GHZ**

Surface Location: Brian Conrad 1-C Pad Sec.1-T6N-R59W

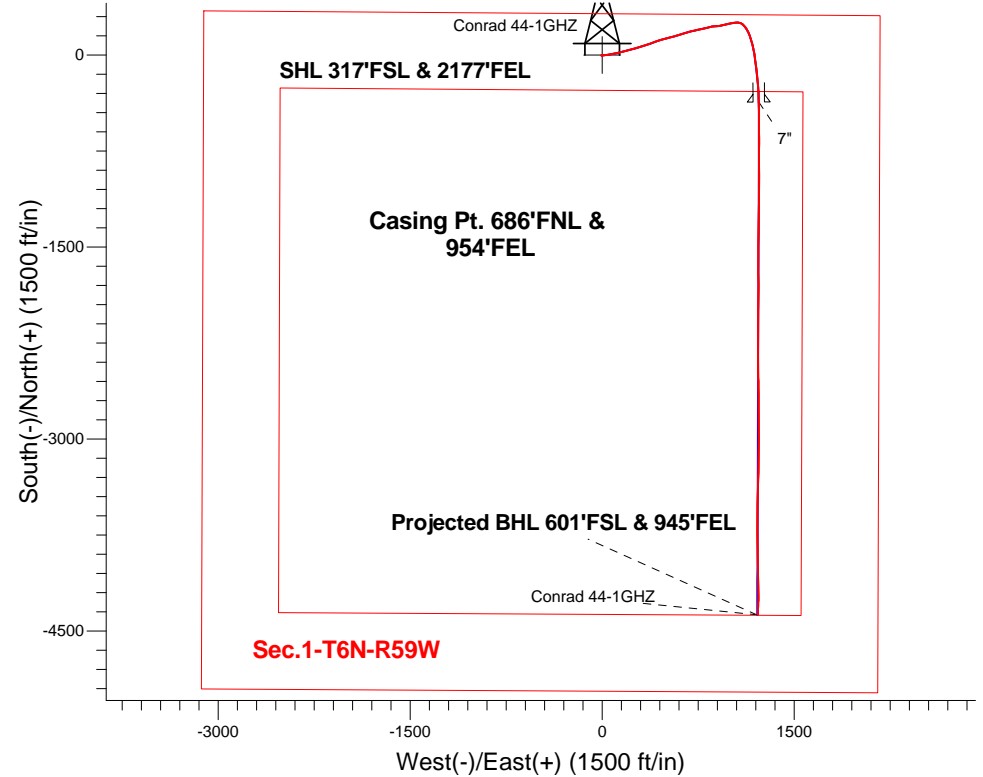
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4911.0

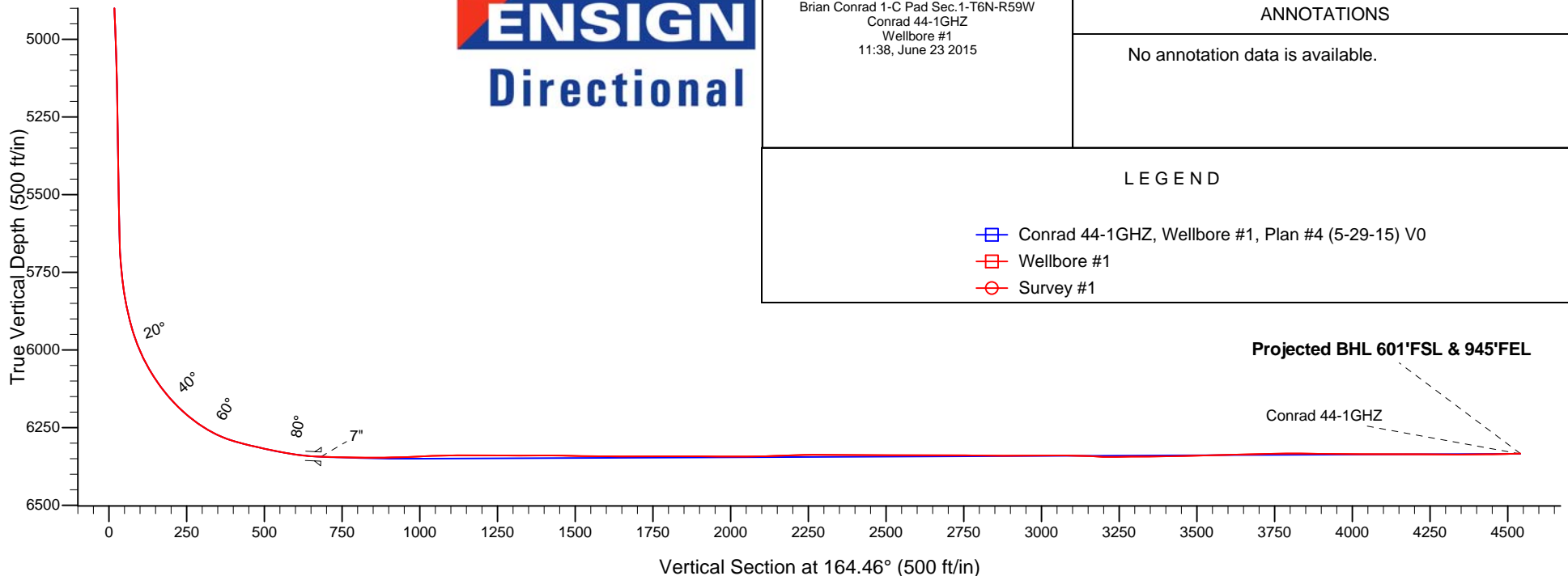
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1437216.84	3437633.22	40.522897	-103.925728	
RKB - 13.5' WELL @ 4924.5ft (RKB - 13.5')						

## FINAL SURVEY

Projected Bottom Hole Location  
10880'MD 6334'TVD 4375'S & 1216'E of SHL  
91.8 degree Incl @ 182.3 degree AZM



**ENSIGN**  
Directional



Brian Conrad 1-C Pad Sec.1-T6N-R59W  
Conrad 44-1GHZ  
Wellbore #1  
11:38, June 23 2015

### ANNOTATIONS

No annotation data is available.

### LEGEND

- Conrad 44-1GHZ, Wellbore #1, Plan #4 (5-29-15) V0
- Wellbore #1
- Survey #1



## **Synergy Resources**

**SEC.1-T6N-R59W**

**Brian Conrad 1-C Pad Sec.1-T6N-R59W**

**Conrad 44-1GHZ**

**Wellbore #1**

**Survey: Survey #1**

## **Standard Survey Report**

**23 June, 2015**

<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Conrad 44-1GHZ
<b>Project:</b>	SEC.1-T6N-R59W	<b>TVD Reference:</b>	WELL @ 4924.5ft (RKB - 13.5')
<b>Site:</b>	Brian Conrad 1-C Pad Sec.1-T6N-R59W	<b>MD Reference:</b>	WELL @ 4924.5ft (RKB - 13.5')
<b>Well:</b>	Conrad 44-1GHZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 2003.21 Single User Db

<b>Project</b>	SEC.1-T6N-R59W, Morgan County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		Brian Conrad 1-C Pad Sec.1-T6N-R59W			
Site Position:		Northing:	1,437,177.96ft	Latitude:	40.522805
From:	Lat/Long	Easting:	3,437,331.12ft	Longitude:	-103.926817
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	1.02 °

Well	Conrad 44-1GHZ					
Well Position	+N/-S	0.0 ft	Northing:	1,437,216.84 ft	Latitude:	40.522897
	+E/-W	0.0 ft	Easting:	3,437,633.22 ft	Longitude:	-103.925728
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,911.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/20/2015	7.93	67.16	52,902

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	164.46	

Survey Program		Date	6/23/2015		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
76.0	10,880.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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
1.0	0.01	231.90	1.0	0.0	0.0	0.0	0.92	0.92	0.00
SHL 317'FSL & 2177'FEL									
76.0	0.70	231.90	76.0	-0.3	-0.4	0.2	0.92	0.92	0.00
166.0	0.40	292.50	166.0	-0.5	-1.1	0.2	0.68	-0.33	67.33
258.0	0.70	258.80	258.0	-0.5	-1.9	0.0	0.47	0.33	-36.63
349.0	0.70	215.70	349.0	-1.1	-2.8	0.3	0.57	0.00	-47.36
440.0	1.00	204.30	440.0	-2.2	-3.5	1.2	0.38	0.33	-12.53
529.0	0.90	219.60	529.0	-3.5	-4.2	2.2	0.31	-0.11	17.19
623.0	0.10	186.70	623.0	-4.1	-4.7	2.7	0.87	-0.85	-35.00
718.0	0.40	260.70	718.0	-4.3	-5.0	2.8	0.40	0.32	77.89
812.0	0.70	111.80	812.0	-4.5	-4.8	3.1	1.13	0.32	-158.40
907.0	1.70	89.00	906.9	-4.7	-2.9	3.8	1.15	1.05	-24.00

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<b>Well:</b>	Conrad 44-1GHZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 2003.21 Single User Db

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)	
1,002.0	2.60	76.70	1,001.9	-4.2	0.6	4.2	1.06	0.95	-12.95	
1,096.0	3.40	83.90	1,095.7	-3.4	5.5	4.7	0.94	0.85	7.66	
1,191.0	4.30	88.10	1,190.5	-3.0	11.8	6.1	0.99	0.95	4.42	
1,285.0	5.00	87.60	1,284.2	-2.7	19.4	7.8	0.75	0.74	-0.53	
1,380.0	6.10	81.10	1,378.8	-1.7	28.6	9.3	1.33	1.16	-6.84	
1,474.0	8.00	76.10	1,472.1	0.6	39.9	10.1	2.12	2.02	-5.32	
1,525.0	8.40	79.30	1,522.5	2.1	47.0	10.5	1.19	0.78	6.27	
1,571.0	9.50	82.10	1,568.0	3.3	54.0	11.3	2.57	2.39	6.09	
1,665.0	10.00	83.20	1,660.6	5.3	69.8	13.6	0.57	0.53	1.17	
1,759.0	11.10	78.10	1,753.0	8.2	86.8	15.4	1.53	1.17	-5.43	
1,852.0	13.50	78.60	1,843.9	12.1	106.2	16.7	2.58	2.58	0.54	
1,946.0	14.50	76.80	1,935.1	17.0	128.4	18.0	1.16	1.06	-1.91	
2,040.0	14.90	73.10	2,026.0	23.2	151.4	18.2	1.09	0.43	-3.94	
2,134.0	14.80	76.00	2,116.9	29.6	174.6	18.2	0.80	-0.11	3.09	
2,228.0	14.70	76.50	2,207.8	35.3	197.9	19.0	0.17	-0.11	0.53	
2,322.0	15.80	75.40	2,298.5	41.3	221.8	19.6	1.21	1.17	-1.17	
2,416.0	15.20	73.80	2,389.0	48.0	246.1	19.7	0.78	-0.64	-1.70	
2,510.0	14.70	73.00	2,479.9	54.9	269.3	19.2	0.58	-0.53	-0.85	
2,604.0	15.90	72.60	2,570.5	62.2	293.0	18.5	1.28	1.28	-0.43	
2,698.0	15.90	73.10	2,660.9	69.8	317.6	17.8	0.15	0.00	0.53	
2,792.0	15.40	72.30	2,751.5	77.4	341.8	17.0	0.58	-0.53	-0.85	
2,886.0	16.80	71.20	2,841.8	85.5	366.6	15.8	1.52	1.49	-1.17	
2,980.0	15.90	70.90	2,932.0	94.1	391.6	14.2	0.96	-0.96	-0.32	
3,075.0	16.40	70.30	3,023.2	102.9	416.5	12.4	0.55	0.53	-0.63	
3,171.0	15.00	69.80	3,115.6	111.8	440.9	10.4	1.47	-1.46	-0.52	
3,266.0	14.40	73.50	3,207.5	119.4	463.8	9.2	1.17	-0.63	3.89	
3,361.0	15.70	77.00	3,299.3	125.6	487.7	9.6	1.67	1.37	3.68	
3,456.0	15.60	75.10	3,390.7	131.8	512.5	10.3	0.55	-0.11	-2.00	
3,551.0	15.80	75.60	3,482.2	138.3	537.4	10.7	0.25	0.21	0.53	
3,646.0	15.80	73.70	3,573.6	145.1	562.3	10.8	0.54	0.00	-2.00	
3,741.0	15.20	73.10	3,665.2	152.4	586.7	10.3	0.65	-0.63	-0.63	
3,836.0	15.40	74.20	3,756.8	159.5	610.7	10.0	0.37	0.21	1.16	
3,931.0	15.40	72.30	3,848.4	166.7	634.9	9.4	0.53	0.00	-2.00	
4,026.0	13.90	71.60	3,940.3	174.2	657.7	8.4	1.59	-1.58	-0.74	
4,121.0	12.40	76.00	4,032.8	180.2	678.4	8.1	1.90	-1.58	4.63	
4,216.0	12.90	78.60	4,125.5	184.8	698.7	9.1	0.80	0.53	2.74	
4,311.0	12.00	77.40	4,218.3	189.0	718.8	10.4	0.99	-0.95	-1.26	
4,406.0	12.10	74.60	4,311.2	193.8	738.0	10.9	0.62	0.11	-2.95	
4,501.0	12.20	78.40	4,404.0	198.5	757.4	11.6	0.85	0.11	4.00	
4,596.0	13.30	77.70	4,496.7	202.8	777.9	13.0	1.17	1.16	-0.74	
4,691.0	14.20	79.10	4,589.0	207.4	800.1	14.5	1.01	0.95	1.47	
4,786.0	13.70	75.10	4,681.2	212.5	822.4	15.6	1.14	-0.53	-4.21	
4,881.0	12.70	74.00	4,773.7	218.2	843.3	15.6	1.09	-1.05	-1.16	
4,976.0	11.70	82.50	4,866.5	222.4	862.9	16.9	2.16	-1.05	8.95	
5,071.0	10.40	87.20	4,959.8	224.1	881.0	20.1	1.66	-1.37	4.95	
5,166.0	11.60	85.30	5,053.0	225.3	899.1	23.8	1.32	1.26	-2.00	
5,261.0	12.00	79.60	5,146.0	227.8	918.3	26.5	1.30	0.42	-6.00	
5,356.0	12.40	78.20	5,238.9	231.7	938.0	28.0	0.52	0.42	-1.47	
5,451.0	13.10	74.60	5,331.5	236.6	958.4	28.7	1.11	0.74	-3.79	
5,546.0	13.90	80.70	5,423.9	241.3	980.0	30.0	1.72	0.84	6.42	
5,641.0	13.10	79.30	5,516.3	245.2	1,001.9	32.1	0.91	-0.84	-1.47	
5,736.0	13.90	77.90	5,608.6	249.6	1,023.6	33.7	0.91	0.84	-1.47	
5,784.0	13.50	80.40	5,655.3	251.7	1,034.8	34.7	1.49	-0.83	5.21	
5,831.0	15.60	88.30	5,700.8	252.8	1,046.5	36.7	6.14	4.47	16.81	

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<b>Well:</b>	Conrad 44-1GHZ	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 2003.21 Single User Db

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)	
5,879.0	16.50	94.10	5,746.9	252.5	1,059.7	40.6	3.83	1.88	12.08	
5,926.0	15.90	101.30	5,792.0	250.8	1,072.7	45.7	4.46	-1.28	15.32	
5,974.0	14.80	119.00	5,838.4	246.5	1,084.5	53.0	9.99	-2.29	36.88	
6,021.0	15.70	125.70	5,883.7	239.9	1,094.9	62.2	4.21	1.91	14.26	
6,069.0	18.30	135.50	5,929.6	230.7	1,105.5	73.8	8.04	5.42	20.42	
6,116.0	21.70	141.90	5,973.8	218.6	1,116.0	88.3	8.59	7.23	13.62	
6,164.0	25.90	148.20	6,017.7	202.7	1,127.0	106.6	10.22	8.75	13.13	
6,211.0	30.50	152.40	6,059.1	183.4	1,138.0	128.1	10.65	9.79	8.94	
6,259.0	34.40	158.00	6,099.6	160.0	1,148.7	153.5	10.25	8.13	11.67	
6,306.0	38.40	161.70	6,137.4	133.9	1,158.3	181.3	9.71	8.51	7.87	
6,401.0	49.20	165.80	6,205.9	70.8	1,176.4	246.9	11.75	11.37	4.32	
6,496.0	60.50	172.30	6,260.6	-5.3	1,190.8	324.1	13.13	11.89	6.84	
6,591.0	75.00	173.90	6,296.4	-92.4	1,201.3	410.8	15.34	15.26	1.68	
6,686.0	78.10	173.90	6,318.5	-184.3	1,211.1	502.0	3.26	3.26	0.00	
6,734.0	79.20	173.90	6,328.0	-231.1	1,216.1	548.4	2.29	2.29	0.00	
6,782.0	81.20	175.60	6,336.2	-278.2	1,220.5	594.9	5.44	4.17	3.54	
6,838.0	86.70	179.00	6,342.1	-333.8	1,223.1	649.2	11.53	9.82	6.07	
6,873.0	87.50	179.44	6,343.8	-368.7	1,223.5	683.0	2.61	2.28	1.27	
7"										
6,917.0	88.50	180.00	6,345.4	-412.7	1,223.8	725.4	2.61	2.28	1.27	
6,965.0	89.20	179.70	6,346.3	-460.7	1,223.9	771.7	1.59	1.46	-0.63	
7,012.0	90.10	179.30	6,346.6	-507.7	1,224.3	817.1	2.10	1.91	-0.85	
7,060.0	89.70	179.00	6,346.7	-555.7	1,225.0	863.5	1.04	-0.83	-0.63	
7,107.0	91.10	179.30	6,346.4	-602.6	1,225.7	908.9	3.05	2.98	0.64	
7,154.0	92.10	179.50	6,345.1	-649.6	1,226.2	954.3	2.17	2.13	0.43	
7,201.0	92.50	180.40	6,343.2	-696.6	1,226.2	999.6	2.09	0.85	1.91	
7,249.0	91.80	180.70	6,341.4	-744.6	1,225.8	1,045.7	1.59	-1.46	0.63	
7,296.0	91.40	180.20	6,340.1	-791.5	1,225.4	1,090.9	1.36	-0.85	-1.06	
7,344.0	90.70	179.70	6,339.2	-839.5	1,225.4	1,137.1	1.79	-1.46	-1.04	
7,439.0	88.70	179.70	6,339.7	-934.5	1,225.9	1,228.8	2.11	-2.11	0.00	
7,534.0	90.60	180.20	6,340.3	-1,029.5	1,226.0	1,320.3	2.07	2.00	0.53	
7,629.0	89.80	180.00	6,339.9	-1,124.5	1,225.9	1,411.8	0.87	-0.84	-0.21	
7,725.0	88.70	181.10	6,341.2	-1,220.5	1,224.9	1,504.0	1.62	-1.15	1.15	
7,820.0	89.30	181.80	6,342.8	-1,315.4	1,222.5	1,594.9	0.97	0.63	0.74	
7,915.0	90.60	181.10	6,342.9	-1,410.4	1,220.1	1,685.7	1.55	1.37	-0.74	
8,010.0	90.30	180.50	6,342.2	-1,505.4	1,218.8	1,776.9	0.71	-0.32	-0.63	
8,105.0	89.20	179.30	6,342.6	-1,600.4	1,219.0	1,868.4	1.71	-1.16	-1.26	
8,200.0	90.10	179.50	6,343.2	-1,695.4	1,220.0	1,960.2	0.97	0.95	0.21	
8,295.0	90.00	179.50	6,343.1	-1,790.4	1,220.8	2,052.0	0.11	-0.11	0.00	
8,390.0	92.20	180.90	6,341.3	-1,885.4	1,220.5	2,143.4	2.74	2.32	1.47	
8,485.0	91.20	180.90	6,338.4	-1,980.3	1,219.0	2,234.5	1.05	-1.05	0.00	
8,580.0	89.20	180.00	6,338.1	-2,075.3	1,218.2	2,325.8	2.31	-2.11	-0.95	
8,675.0	90.00	180.70	6,338.8	-2,170.3	1,217.6	2,417.1	1.12	0.84	0.74	
8,770.0	89.90	179.50	6,338.9	-2,265.3	1,217.5	2,508.6	1.27	-0.11	-1.26	
8,865.0	89.60	179.50	6,339.3	-2,360.3	1,218.3	2,600.4	0.32	-0.32	0.00	
8,961.0	90.40	180.00	6,339.3	-2,456.3	1,218.7	2,693.0	0.98	0.83	0.52	
9,056.0	89.10	178.30	6,339.7	-2,551.3	1,220.1	2,784.9	2.25	-1.37	-1.79	
9,151.0	89.70	179.50	6,340.7	-2,646.2	1,222.0	2,876.9	1.41	0.63	1.26	
9,246.0	90.70	179.50	6,340.4	-2,741.2	1,222.8	2,968.6	1.05	1.05	0.00	
9,341.0	90.20	180.40	6,339.6	-2,836.2	1,222.9	3,060.1	1.08	-0.53	0.95	
9,436.0	86.80	179.30	6,342.1	-2,931.2	1,223.1	3,151.7	3.76	-3.58	-1.16	
9,483.0	88.50	179.50	6,344.0	-2,978.1	1,223.6	3,197.1	3.64	3.62	0.43	
9,531.0	90.60	180.40	6,344.4	-3,026.1	1,223.7	3,243.3	4.76	4.38	1.88	
9,578.0	91.10	180.50	6,343.7	-3,073.1	1,223.3	3,288.5	1.08	1.06	0.21	

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<b>Design:</b>	Wellbore #1	<b>Database:</b>	EDM 2003.21 Single User Db

## 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)
9,626.0	89.80	181.10	6,343.3	-3,121.1	1,222.6	3,334.6	2.98	-2.71	1.25
9,721.0	91.20	180.70	6,342.5	-3,216.1	1,221.1	3,425.7	1.53	1.47	-0.42
9,816.0	91.60	181.80	6,340.2	-3,311.0	1,219.1	3,516.6	1.23	0.42	1.16
9,910.0	91.60	181.60	6,337.5	-3,405.0	1,216.3	3,606.3	0.21	0.00	-0.21
10,005.0	91.40	180.20	6,335.1	-3,499.9	1,214.8	3,697.4	1.49	-0.21	-1.47
10,100.0	90.10	181.10	6,333.8	-3,594.9	1,213.7	3,788.6	1.66	-1.37	0.95
10,195.0	89.00	180.50	6,334.6	-3,689.9	1,212.4	3,879.8	1.32	-1.16	-0.63
10,290.0	89.60	179.70	6,335.7	-3,784.9	1,212.2	3,971.3	1.05	0.63	-0.84
10,385.0	90.50	178.40	6,335.6	-3,879.9	1,213.8	4,063.2	1.66	0.95	-1.37
10,480.0	89.40	178.60	6,335.7	-3,974.8	1,216.3	4,155.4	1.18	-1.16	0.21
10,576.0	89.40	178.80	6,336.7	-4,070.8	1,218.4	4,248.4	0.21	0.00	0.21
10,670.0	90.50	178.80	6,336.8	-4,164.8	1,220.4	4,339.5	1.17	1.17	0.00
10,765.0	90.00	181.30	6,336.4	-4,259.8	1,220.3	4,431.0	2.68	-0.53	2.63
10,830.0	91.80	182.30	6,335.4	-4,324.7	1,218.3	4,493.0	3.17	2.77	1.54
10,880.0	91.80	182.30	6,333.8	-4,374.7	1,216.3	4,540.6	0.00	0.00	0.00

**BHL 600'FSL & 950'FEL**

## Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SHL 317'FSL & 2177'I - survey hits target - Point	0.00	0.00	1.0	0.0	0.0	1,437,216.84	3,437,633.22	40.522897	-103.925728

## Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,873.0	6,343.8	7"	7	7-1/2

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_