



Energen Resources

SJBR-SE S18, T30N, R4W

San Juan 30-4 Unit #62

San Juan 30-4 #62

OH

Survey: Survey #1

End of Well Survey

16 September, 2008

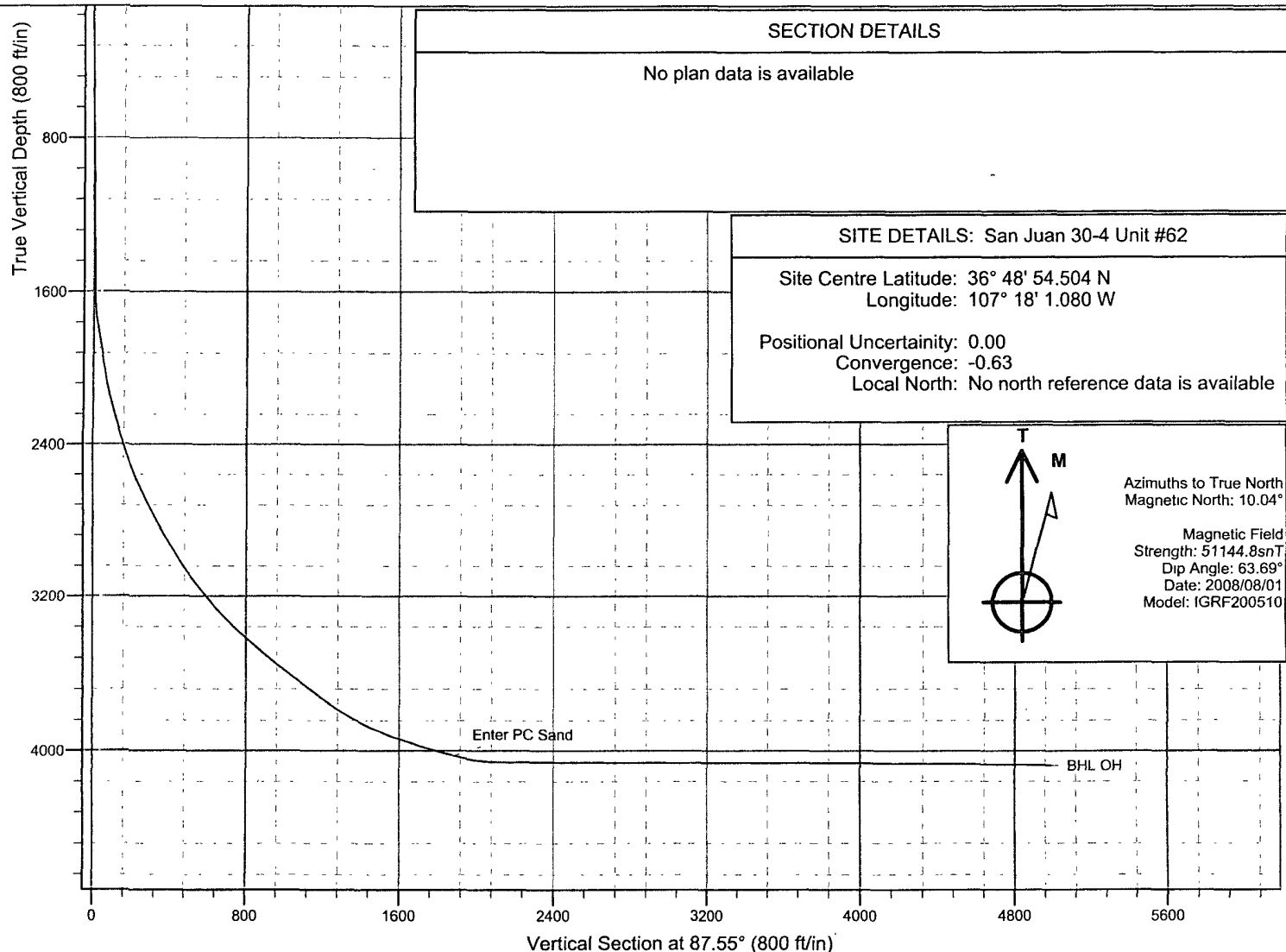
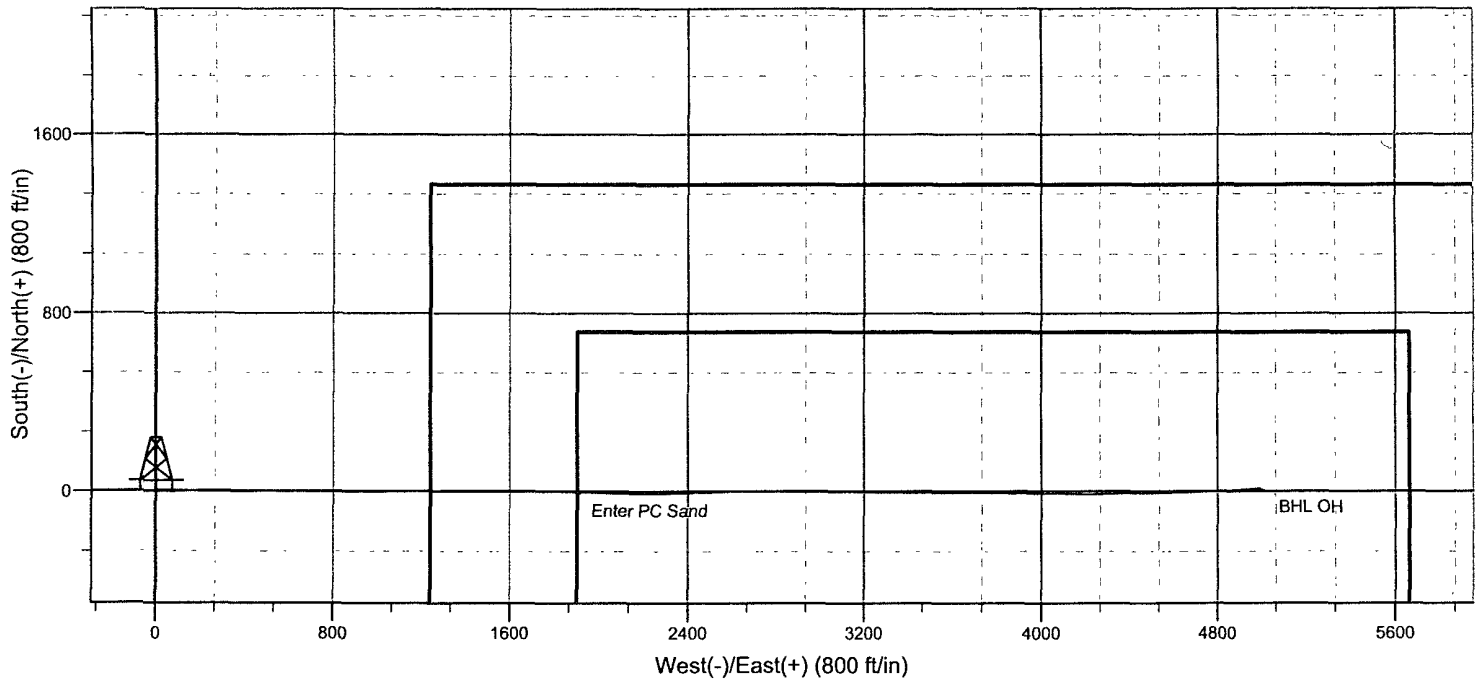
RCVD OCT 24 '08

OIL CONS. DIV.

DIST. 3

PATHFINDER
ENERGY SERVICES

Survey: Survey #1 (San Juan 30-4 #62/OH)



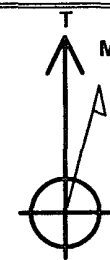
SECTION DETAILS

No plan data is available

SITE DETAILS: San Juan 30-4 Unit #62

Site Centre Latitude: 36° 48' 54.504 N
Longitude: 107° 18' 1.080 W

Positional Uncertainty: 0.00
Convergence: -0.63
Local North: No north reference data is available



Azimuths to True North
Magnetic North: 10.04°

Magnetic Field
Strength: 51144.8nT
Dip Angle: 63.69°
Date: 2008/08/01
Model: IGRF200510

Vertical Section at 87.55° (800 ft/in)

Company: Energen Resources
 Project: SJBR-SE S18, T30N, R4W
 Site: San Juan 30-4 Unit #62
 Well: San Juan 30-4 #62
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
 TVD Reference: WELL @ 7108.00ft (Original Well Elev)
 MD Reference: WELL @ 7108.00ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM 2003.16 Single User Db

Project	SJBR-SE S18, T30N, R4W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	San Juan 30-4 Unit #62		
Site Position:		Northing:	2,117,685.549 ft
From:	Lat/Long	Easting:	1,332,979.889 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	36° 48' 54.504 N
		Longitude:	107° 18' 1.080 W
		Grid Convergence:	-0.63 °

Well	San Juan 30-4 #62		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	36° 48' 54.504 N
		Longitude:	107° 18' 1.080 W
		Ground Level:	7,094.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2008/08/01	10.04	63.69	51,145

Design	OH			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	87.55

Survey Program	Date	2008/09/16		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
1,565.00	8,007.00	Survey #1 (OH)	UNKNOWN	Unknown survey

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,565.00	0.97	69.74	1,564.93	4.59	12.43	0.06	12.61
1,600.00	0.70	79.46	1,599.92	4.73	12.92	0.87	13.11
1,631.00	1.67	91.12	1,630.91	4.75	13.55	3.21	13.74
1,662.00	2.99	92.55	1,661.89	4.71	14.81	4.26	15.00
1,691.00	4.75	93.21	1,690.82	4.61	16.77	6.07	16.95
1,723.00	6.60	94.24	1,722.66	4.40	19.92	5.79	20.09
1,753.00	8.00	94.82	1,752.42	4.10	23.72	4.67	23.88
1,784.00	9.15	94.34	1,783.07	3.73	28.33	3.72	28.47
1,815.00	9.32	95.14	1,813.67	3.32	33.29	0.69	33.40
1,845.00	9.41	94.56	1,843.27	2.90	38.15	0.43	38.24
1,875.00	9.32	94.18	1,872.87	2.53	43.02	0.36	43.09
1,905.00	9.23	92.51	1,902.48	2.25	47.85	0.95	47.90
1,934.00	9.23	88.45	1,931.10	2.21	52.50	2.25	52.54
1,963.00	9.15	85.68	1,959.73	2.45	57.12	1.55	57.17
1,994.00	9.23	86.68	1,990.33	2.78	62.06	0.58	62.12
2,024.00	9.76	89.47	2,019.92	2.94	67.00	2.34	67.07
2,054.00	10.55	91.99	2,049.45	2.87	72.29	3.02	72.35
2,084.00	11.26	93.78	2,078.91	2.58	77.96	2.62	78.00
2,114.00	12.13	94.74	2,108.29	2.13	84.02	2.97	84.04
2,145.00	13.19	94.09	2,138.53	1.60	90.80	3.45	90.78
2,176.00	14.07	92.45	2,168.66	1.19	98.09	3.10	98.05
2,208.00	14.77	91.37	2,199.65	0.93	106.05	2.34	106.00
2,238.00	14.95	90.66	2,228.65	0.79	113.75	0.85	113.68
2,269.00	15.39	91.12	2,258.57	0.66	121.86	1.47	121.77
2,299.00	15.74	91.43	2,287.47	0.49	129.91	1.20	129.81
2,330.00	15.92	92.01	2,317.29	0.23	138.36	0.77	138.24

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
2,360.00	16.44	91.84	2,346.10	-0.05	146.71	1.74	146.58
2,392.00	17.24	90.91	2,376.73	-0.27	155.98	2.64	155.83
2,423.00	18.03	89.77	2,406.27	-0.32	165.37	2.78	165.21
2,455.00	18.99	88.09	2,436.62	-0.13	175.53	3.43	175.36
2,487.00	19.26	86.74	2,466.85	0.34	186.00	1.62	185.84
2,519.00	19.87	87.42	2,497.00	0.89	196.70	2.03	196.56
2,550.00	20.58	88.05	2,526.09	1.31	207.41	2.40	207.28
2,582.00	21.54	89.20	2,555.96	1.58	218.91	3.27	218.77
2,614.00	22.51	89.92	2,585.62	1.68	230.91	3.15	230.77
2,646.00	23.39	90.77	2,615.09	1.60	243.38	2.94	243.23
2,677.00	24.09	90.92	2,643.46	1.41	255.86	2.27	255.69
2,709.00	24.36	90.67	2,672.65	1.23	268.99	0.90	268.80
2,741.00	24.36	90.13	2,701.80	1.14	282.19	0.70	281.98
2,773.00	25.50	89.66	2,730.81	1.17	295.68	3.62	295.46
2,804.00	26.38	89.59	2,758.69	1.25	309.24	2.84	309.01
2,836.00	27.52	89.67	2,787.22	1.35	323.74	3.56	323.50
2,868.00	28.58	90.13	2,815.46	1.37	338.79	3.38	338.53
2,899.00	29.55	90.41	2,842.55	1.30	353.85	3.16	353.58
2,931.00	30.25	90.51	2,870.29	1.17	369.80	2.19	369.51
2,963.00	30.42	90.50	2,897.91	1.03	385.96	0.53	385.65
2,995.00	31.22	90.77	2,925.39	0.85	402.35	2.54	402.02
3,026.00	32.01	90.96	2,951.79	0.60	418.60	2.57	418.24
3,058.00	32.62	91.30	2,978.84	0.27	435.70	1.99	435.31
3,090.00	32.54	91.24	3,005.80	-0.12	452.93	0.27	452.51
3,122.00	33.24	90.97	3,032.67	-0.45	470.30	2.23	469.85
3,154.00	34.21	90.52	3,059.28	-0.68	488.07	3.13	487.59
3,185.00	35.61	90.76	3,084.71	-0.88	505.81	4.54	505.31

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
3,217.00	36.84	90.60	3,110.52	-1.10	524.72	3.86	524.19
3,249.00	37.72	90.71	3,135.98	-1.33	544.10	2.76	543.54
3,281.00	38.25	91.09	3,161.20	-1.64	563.79	1.81	563.20
3,312.00	39.13	90.66	3,185.40	-1.93	583.17	2.97	582.55
3,344.00	40.19	90.93	3,210.03	-2.21	603.59	3.36	602.94
3,375.00	40.89	90.93	3,233.59	-2.54	623.73	2.26	623.05
3,407.00	41.86	90.82	3,257.61	-2.86	644.88	3.04	644.17
3,439.00	42.38	90.76	3,281.34	-3.16	666.34	1.63	665.60
3,470.00	43.09	90.50	3,304.11	-3.39	687.38	2.36	686.60
3,502.00	44.23	90.61	3,327.26	-3.61	709.47	3.57	708.66
3,534.00	45.55	90.23	3,349.93	-3.77	732.05	4.21	731.22
3,566.00	46.78	89.96	3,372.09	-3.81	755.13	3.89	754.28
3,597.00	47.57	90.07	3,393.17	-3.81	777.87	2.56	776.99
3,629.00	47.75	90.04	3,414.72	-3.84	801.52	0.57	800.62
3,661.00	48.28	89.68	3,436.12	-3.78	825.31	1.86	824.39
3,692.00	48.80	89.52	3,456.65	-3.62	848.54	1.72	847.61
3,724.00	49.42	89.81	3,477.60	-3.47	872.73	2.06	871.78
3,756.00	50.03	89.87	3,498.28	-3.41	897.14	1.91	896.18
3,788.00	50.56	90.19	3,518.73	-3.42	921.76	1.83	920.77
3,819.00	51.00	90.10	3,538.33	-3.48	945.78	1.44	944.76
3,851.00	51.70	89.86	3,558.31	-3.47	970.77	2.26	969.73
3,883.00	52.32	89.65	3,578.01	-3.36	995.99	2.01	994.93
3,915.00	52.85	89.75	3,597.45	-3.23	1,021.41	1.67	1,020.33
3,946.00	53.20	89.64	3,616.10	-3.10	1,046.17	1.16	1,045.08
3,978.00	53.38	89.44	3,635.23	-2.89	1,071.82	0.75	1,070.72
4,010.00	53.29	88.96	3,654.33	-2.53	1,097.49	1.24	1,096.38
4,042.00	53.46	88.58	3,673.42	-1.98	1,123.17	1.09	1,122.05

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
4,073.00	53.46	88.54	3,691.88	-1.36	1,148.06	0.10	1,146.95
4,105.00	53.55	88.52	3,710.91	-0.70	1,173.78	0.29	1,172.68
4,137.00	54.08	88.88	3,729.81	-0.11	1,199.60	1.89	1,198.50
4,169.00	54.61	88.64	3,748.46	0.45	1,225.60	1.76	1,224.49
4,200.00	55.49	88.71	3,766.22	1.04	1,251.00	2.84	1,249.90
4,232.00	56.81	88.89	3,784.04	1.60	1,277.57	4.15	1,276.47
4,264.00	58.56	89.62	3,801.15	1.94	1,304.61	5.80	1,303.50
4,295.00	60.06	89.90	3,816.97	2.06	1,331.27	4.90	1,330.13
4,327.00	61.03	89.72	3,832.71	2.15	1,359.13	3.07	1,357.98
4,359.00	62.17	89.61	3,847.92	2.31	1,387.28	3.58	1,386.10
4,391.00	63.75	89.82	3,862.47	2.45	1,415.78	4.97	1,414.59
4,422.00	65.16	90.41	3,875.84	2.40	1,443.75	4.86	1,442.53
4,454.00	66.74	90.23	3,888.88	2.23	1,472.97	4.96	1,471.71
4,486.00	67.88	90.47	3,901.22	2.05	1,502.49	3.63	1,501.20
4,517.00	68.68	90.27	3,912.70	1.87	1,531.29	2.65	1,529.96
4,549.00	69.20	90.29	3,924.20	1.72	1,561.15	1.63	1,559.79
4,581.00	69.82	90.28	3,935.40	1.57	1,591.12	1.94	1,589.73
4,613.00	70.43	90.44	3,946.28	1.38	1,621.22	1.96	1,619.79
4,644.00	70.96	90.71	3,956.52	1.09	1,650.47	1.90	1,649.01
4,676.00	71.58	90.95	3,966.80	0.65	1,680.78	2.06	1,679.26
4,708.00	71.93	90.79	3,976.82	0.19	1,711.16	1.19	1,709.60
4,739.00	72.55	90.89	3,986.27	-0.24	1,740.68	2.02	1,739.08
4,771.00	73.34	90.73	3,995.66	-0.68	1,771.27	2.51	1,769.62
4,803.00	74.30	90.73	4,004.58	-1.07	1,802.00	3.00	1,800.30
4,835.00	75.27	91.22	4,012.97	-1.59	1,832.87	3.37	1,831.13
4,849.00	75.27	91.20	4,016.53	-1.88	1,846.41	0.14	1,844.64

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
4,890.00	76.01	91.47	4,026.70	-2.80	1,886.12	1.92	1,884.27
Enter PC Sand							
<u>4,956.00</u>	77.21	91.89	<u>4,041.98</u>	<u>-4.68</u>	<u>1,950.30</u>	1.92	1,948.31
4,987.00	79.93	92.48	4,048.13	-5.84	1,980.66	8.97	1,978.59
5,018.00	82.92	92.65	4,052.75	-7.21	2,011.28	9.66	2,009.12
5,049.00	84.33	92.57	4,056.19	-8.62	2,042.05	4.56	2,039.81
5,080.00	85.91	91.43	4,058.83	-9.69	2,072.92	6.28	2,070.60
5,110.00	87.41	91.11	4,060.57	-10.36	2,102.86	5.11	2,100.49
5,141.00	89.08	90.40	4,061.52	-10.77	2,133.84	5.85	2,131.43
5,172.00	89.69	90.18	4,061.86	-10.92	2,164.84	2.09	2,162.39
5,203.00	90.04	89.94	4,061.93	-10.96	2,195.84	1.37	2,193.36
5,234.00	90.13	89.98	4,061.88	-10.93	2,226.84	0.32	2,224.33
5,265.00	90.22	89.80	4,061.79	-10.87	2,257.84	0.65	2,255.30
5,295.00	90.04	89.44	4,061.72	-10.68	2,287.84	1.34	2,285.28
5,326.00	90.22	88.48	4,061.65	-10.11	2,318.83	3.15	2,316.27
5,357.00	89.25	88.26	4,061.79	-9.23	2,349.82	3.21	2,347.27
5,388.00	88.99	88.67	4,062.27	-8.40	2,380.80	1.57	2,378.26
5,419.00	88.90	88.37	4,062.84	-7.60	2,411.79	1.01	2,409.25
5,450.00	89.69	88.38	4,063.22	-6.72	2,442.77	2.55	2,440.25
5,480.00	89.60	87.76	4,063.41	-5.71	2,472.76	2.09	2,470.25
5,509.00	89.43	87.86	4,063.65	-4.60	2,501.73	0.68	2,499.24
5,540.00	89.96	87.83	4,063.82	-3.44	2,532.71	1.71	2,530.24
5,571.00	89.78	87.79	4,063.89	-2.25	2,563.69	0.59	2,561.24
5,601.00	89.96	88.57	4,063.96	-1.30	2,593.67	2.67	2,591.24
5,632.00	89.96	89.11	4,063.98	-0.67	2,624.67	1.74	2,622.23
5,663.00	90.04	89.00	4,063.98	-0.16	2,655.66	0.44	2,653.22
5,693.00	89.78	89.50	4,064.03	0.23	2,685.66	1.88	2,683.21

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
5,724.00	89.43	90.24	4,064.24	0.30	2,716.66	2.64	2,714.18
5,754.00	89.43	89.97	4,064.54	0.25	2,746.66	0.90	2,744.15
5,785.00	90.13	90.47	4,064.66	0.13	2,777.66	2.77	2,775.12
5,816.00	90.04	91.24	4,064.61	-0.33	2,808.65	2.50	2,806.06
5,847.00	90.48	91.57	4,064.47	-1.09	2,839.64	1.77	2,836.99
5,878.00	90.31	91.71	4,064.26	-1.98	2,870.63	0.71	2,867.91
5,908.00	90.22	91.43	4,064.12	-2.80	2,900.62	0.98	2,897.84
5,939.00	89.60	90.24	4,064.17	-3.26	2,931.61	4.33	2,928.79
5,970.00	88.99	89.45	4,064.55	-3.17	2,962.61	3.22	2,959.76
6,001.00	88.90	88.95	4,065.12	-2.74	2,993.60	1.64	2,990.74
6,032.00	89.08	89.23	4,065.67	-2.25	3,024.59	1.07	3,021.73
6,062.00	89.69	89.53	4,065.99	-1.92	3,054.59	2.27	3,051.71
6,093.00	90.48	90.50	4,065.94	-1.93	3,085.59	4.04	3,082.68
6,123.00	90.92	90.46	4,065.57	-2.18	3,115.59	1.47	3,112.64
6,155.00	91.45	90.95	4,064.91	-2.57	3,147.58	2.26	3,144.58
6,186.00	90.75	91.12	4,064.32	-3.13	3,178.57	2.32	3,175.52
6,216.00	90.22	90.64	4,064.06	-3.60	3,208.56	2.38	3,205.47
6,246.00	89.87	90.43	4,064.04	-3.88	3,238.56	1.36	3,235.43
6,277.00	89.78	90.63	4,064.14	-4.16	3,269.56	0.71	3,266.38
6,307.00	89.78	90.63	4,064.25	-4.49	3,299.56	0.00	3,296.34
6,338.00	89.60	91.05	4,064.42	-4.95	3,330.55	1.47	3,327.29
6,369.00	89.43	90.95	4,064.68	-5.49	3,361.55	0.64	3,358.23
6,399.00	89.34	90.66	4,065.00	-5.91	3,391.54	1.01	3,388.18
6,431.00	89.08	90.45	4,065.44	-6.22	3,423.54	1.04	3,420.13
6,462.00	89.60	89.99	4,065.80	-6.34	3,454.53	2.24	3,451.10
6,493.00	89.69	89.63	4,065.99	-6.24	3,485.53	1.20	3,482.07
6,522.00	89.69	89.74	4,066.15	-6.08	3,514.53	0.38	3,511.05

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
6,553.00	89.69	90.17	4,066.32	-6.05	3,545.53	1.39	3,542.02
6,584.00	89.78	90.50	4,066.46	-6.23	3,576.53	1.10	3,572.99
6,614.00	89.87	90.44	4,066.55	-6.48	3,606.53	0.36	3,602.95
6,648.00	89.96	89.89	4,066.60	-6.58	3,640.53	1.64	3,636.91
6,679.00	90.22	89.82	4,066.55	-6.50	3,671.53	0.87	3,667.89
6,711.00	90.04	89.81	4,066.48	-6.39	3,703.53	0.56	3,699.86
6,742.00	90.31	90.70	4,066.39	-6.53	3,734.53	3.00	3,730.83
6,773.00	90.84	91.28	4,066.08	-7.07	3,765.52	2.53	3,761.77
6,804.00	90.04	90.72	4,065.84	-7.61	3,796.52	3.15	3,792.71
6,836.00	89.96	90.33	4,065.84	-7.90	3,828.51	1.24	3,824.67
6,867.00	89.96	90.60	4,065.86	-8.15	3,859.51	0.87	3,855.63
6,898.00	89.96	90.34	4,065.88	-8.41	3,890.51	0.84	3,886.59
6,929.00	89.78	89.99	4,065.95	-8.50	3,921.51	1.27	3,917.55
6,960.00	89.43	90.11	4,066.17	-8.52	3,952.51	1.19	3,948.52
6,992.00	89.34	89.95	4,066.51	-8.54	3,984.51	0.57	3,980.49
7,023.00	89.25	90.19	4,066.89	-8.58	4,015.51	0.83	4,011.46
7,055.00	89.34	90.68	4,067.28	-8.82	4,047.50	1.56	4,043.42
7,087.00	89.87	91.47	4,067.50	-9.42	4,079.50	2.97	4,075.35
7,118.00	89.78	91.66	4,067.60	-10.27	4,110.49	0.68	4,106.28
7,149.00	89.60	91.63	4,067.77	-11.16	4,141.47	0.59	4,137.20
7,180.00	89.52	90.70	4,068.00	-11.79	4,172.46	3.01	4,168.14
7,212.00	89.87	90.16	4,068.18	-12.03	4,204.46	2.01	4,200.09
7,243.00	90.04	89.95	4,068.20	-12.06	4,235.46	0.87	4,231.06
7,274.00	89.52	88.90	4,068.32	-11.75	4,266.46	3.78	4,262.05
7,306.00	89.34	88.39	4,068.64	-10.99	4,298.45	1.69	4,294.04
7,337.00	88.90	87.89	4,069.11	-9.99	4,329.43	2.15	4,325.03
7,368.00	88.99	88.19	4,069.68	-8.93	4,360.41	1.01	4,356.03

Company: Energen Resources
Project: SJBR-SE S18, T30N, R4W
Site: San Juan 30-4 Unit #62
Well: San Juan 30-4 #62
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
TVD Reference: WELL @ 7108.00ft (Original Well Elev)
MD Reference: WELL @ 7108.00ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	DLeg (°/100ft)	V. Sec (ft)
7,399.00	89.43	88.55	4,070.11	-8.04	4,391.39	1.83	4,387.02
7,431.00	89.87	89.83	4,070.31	-7.59	4,423.39	4.23	4,419.01
7,462.00	90.22	90.40	4,070.28	-7.65	4,454.39	2.16	4,449.98
7,493.00	89.43	89.73	4,070.38	-7.69	4,485.39	3.34	4,480.94
7,525.00	89.25	89.56	4,070.75	-7.49	4,517.38	0.77	4,512.92
7,557.00	88.81	88.78	4,071.29	-7.03	4,549.37	2.80	4,544.90
7,589.00	88.90	88.31	4,071.93	-6.21	4,581.36	1.50	4,576.89
7,620.00	88.72	88.32	4,072.57	-5.30	4,612.34	0.58	4,607.88
7,652.00	88.81	88.47	4,073.26	-4.41	4,644.32	0.55	4,639.87
7,684.00	89.08	88.44	4,073.85	-3.54	4,676.30	0.85	4,671.86
7,714.00	89.25	87.96	4,074.29	-2.60	4,706.28	1.70	4,701.86
7,744.00	89.34	87.80	4,074.66	-1.49	4,736.26	0.61	4,731.85
7,776.00	89.43	87.63	4,075.00	-0.22	4,768.23	0.60	4,763.85
7,807.00	89.60	87.18	4,075.26	1.19	4,799.20	1.55	4,794.85
7,840.00	89.34	86.85	4,075.57	2.90	4,832.15	1.27	4,827.85
7,872.00	89.16	86.55	4,075.99	4.75	4,864.10	1.09	4,859.84
7,903.00	88.90	86.14	4,076.51	6.72	4,895.03	1.57	4,890.83
7,933.00	89.08	86.26	4,077.04	8.71	4,924.96	0.72	4,920.82
8,007.00	89.08	86.26	4,078.23	13.54	4,998.79	0.00	4,994.79

BHL OH

Company: Energen Resources
 Project: SJBR-SE S18, T30N, R4W
 Site: San Juan 30-4 Unit #62
 Well: San Juan 30-4 #62
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well San Juan 30-4 #62
 TVD Reference: WELL @ 7108.00ft (Original Well Elev)
 MD Reference: WELL @ 7108.00ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM 2003.16 Single User Db

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
Enter Upper PC Sand - survey misses by 4 93ft at 4905.11ft MD (4030.32 TVD, -3.19 N, 1900.78 E) - Point	0.00	0.00	4,034.00	0.00	1,900.00	2,117,664.676	1,334,879.775	36° 48' 54.503 N	107° 17' 37.715 W
KOP(#62) - survey misses by 13.75ft at 1599.88ft MD (1599.80 TVD, 4.73 N, 12.91 E) - Point	0.00	0.00	1,600.00	0.00	0.00	2,117,685.549	1,332,979.889	36° 48' 54.504 N	107° 18' 1.080 W
PBHL OH - survey misses by 565.93ft at 8007.00ft MD (4078.23 TVD, 13.54 N, 4998.79 E) - Point	0.00	0.00	4,074.19	-5.28	5,564.39	2,117,619.139	1,338,543.885	36° 48' 54.446 N	107° 16' 52.651 W
Land Curve (#62) - survey misses by 5.98ft at 5184.35ft MD (4061.91 TVD, -10.95 N, 2177.19 E) - Point	0.00	0.00	4,060.00	-5.28	2,177.20	2,117,656.351	1,335,156.900	36° 48' 54.451 N	107° 17' 34.306 W

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,890.00	4,026.70	-2.80	1,886.12	Enter PC Sand
8,007.00	4,078.23	13.54	4,998.79	BHL OH

Checked By: _____ Approved By: _____ Date: _____