

Tekton Energy

Well Name: **Kodak 11 #7-3-28-270-4-CH**

Surface Location: Kodak Pad Sec.27-T6N-R67W

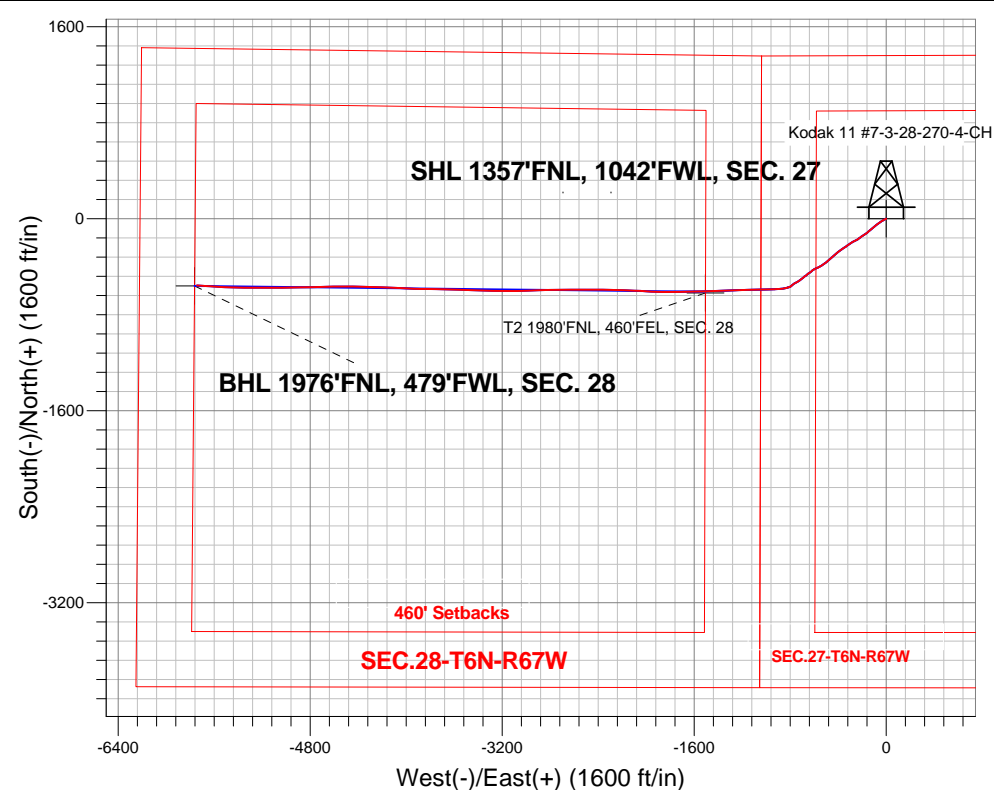
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4769.0

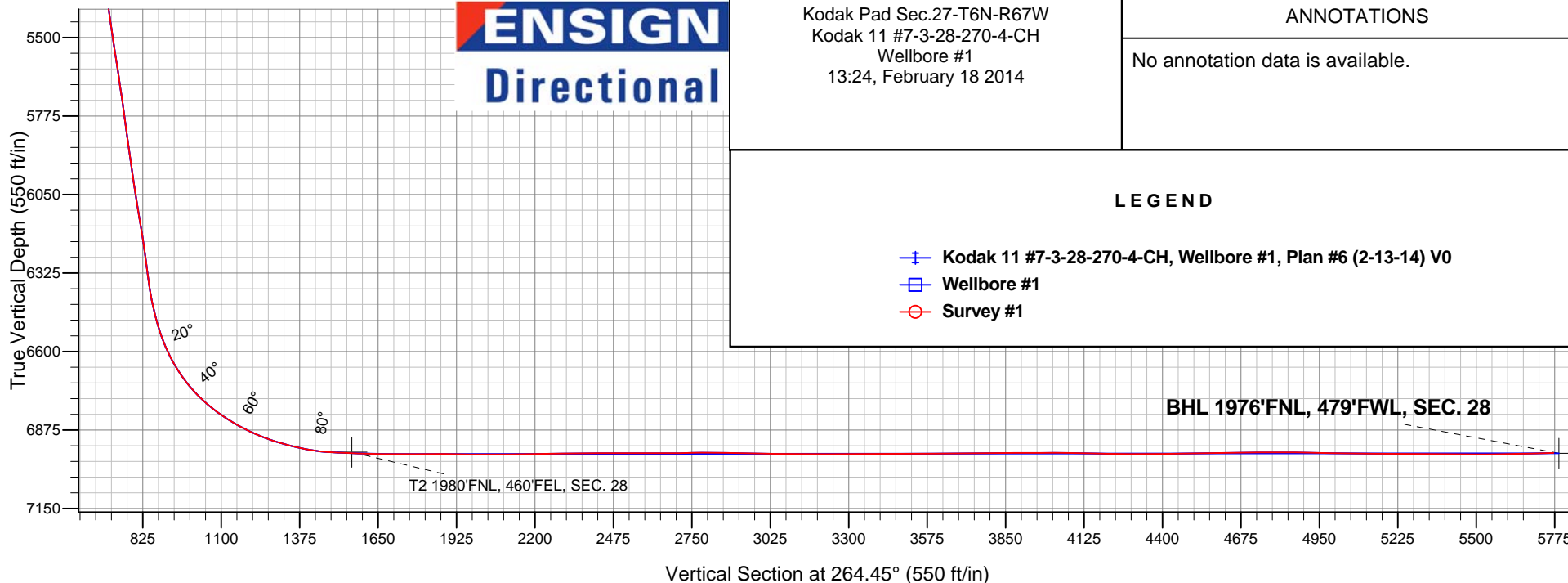
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1411535.62	3171021.53	40.461440	-104.885380	
RKB - 22.5' WELL @ 4791.5ft (RKB - 22.5')						

FINAL SURVEY

Projected Bottom Hole Location
11713'MD 6955'TVD 556'S & 5745'W of SHL
91.5 degree Incl @ 273.8 degree AZM



ENSIGN
Directional



Kodak Pad Sec.27-T6N-R67W
Kodak 11 #7-3-28-270-4-CH
Wellbore #1
13:24, February 18 2014

ANNOTATIONS

No annotation data is available.

LEGEND

- Kodak 11 #7-3-28-270-4-CH, Wellbore #1, Plan #6 (2-13-14) V0
- Wellbore #1
- Survey #1



Tekton Energy

SEC.27-T6N-R67W

Kodak Pad Sec.27-T6N-R67W

Kodak 11 #7-3-28-270-4-CH

Wellbore #1

Survey: Survey #1

Standard Survey Report

18 February, 2014

Company:	Tekton Energy	Local Co-ordinate Reference:	Well Kodak 11 #7-3-28-270-4-CH
Project:	SEC.27-T6N-R67W	TVD Reference:	WELL @ 4791.5ft (RKB - 22.5')
Site:	Kodak Pad Sec.27-T6N-R67W	MD Reference:	WELL @ 4791.5ft (RKB - 22.5')
Well:	Kodak 11 #7-3-28-270-4-CH	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.27-T6N-R67W, 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	Kodak Pad Sec.27-T6N-R67W				
Site Position:		Northing:	1,411,648.57 ft	Latitude:	40.461750
From:	Lat/Long	Easting:	3,171,020.75 ft	Longitude:	-104.885380
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.40 °

Well	Kodak 11 #7-3-28-270-4-CH					
Well Position	+N/-S	0.0 ft	Northing:	1,411,535.62 ft	Latitude:	40.461440
	+E/-W	0.0 ft	Easting:	3,171,021.53 ft	Longitude:	-104.885380
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,769.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/13/2014	8.58	66.99	52,870

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	264.45	

Survey Program	Date	2/18/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
131.0	11,713.0	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	242.00	1.0	0.0	0.0	0.0	0.69	0.69	0.00	
SHL 1357'FNL, 1042'FWL, SEC. 27										
131.0	0.90	242.00	131.0	-0.5	-0.9	1.0	0.69	0.69	0.00	
223.0	1.10	232.10	223.0	-1.4	-2.2	2.4	0.29	0.22	-10.76	
315.0	1.40	236.90	315.0	-2.5	-3.9	4.1	0.35	0.33	5.22	
407.0	1.50	240.90	406.9	-3.7	-5.9	6.2	0.15	0.11	4.35	
500.0	1.40	249.70	499.9	-4.7	-8.0	8.4	0.26	-0.11	9.46	
636.0	1.30	256.60	635.9	-5.6	-11.1	11.6	0.14	-0.07	5.07	
730.0	3.10	236.20	729.8	-7.3	-14.2	14.9	2.06	1.91	-21.70	
824.0	5.10	243.30	823.5	-10.6	-20.1	21.0	2.19	2.13	7.55	
918.0	7.70	238.70	917.0	-15.7	-29.2	30.6	2.82	2.77	-4.89	
1,012.0	9.70	236.80	1,009.9	-23.4	-41.2	43.2	2.15	2.13	-2.02	

Company:	Tekton Energy	Local Co-ordinate Reference:	Well Kodak 11 #7-3-28-270-4-CH
Project:	SEC.27-T6N-R67W	TVD Reference:	WELL @ 4791.5ft (RKB - 22.5')
Site:	Kodak Pad Sec.27-T6N-R67W	MD Reference:	WELL @ 4791.5ft (RKB - 22.5')
Well:	Kodak 11 #7-3-28-270-4-CH	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)	
1,107.0	11.30	234.80	1,103.3	-33.1	-55.5	58.4	1.73	1.68	-2.11	
1,202.0	10.60	232.40	1,196.5	-43.8	-70.0	73.9	0.88	-0.74	-2.53	
1,294.0	9.90	230.40	1,287.1	-54.0	-82.8	87.6	0.85	-0.76	-2.17	
1,386.0	10.60	233.80	1,377.6	-64.0	-95.7	101.5	1.01	0.76	3.70	
1,478.0	9.40	230.60	1,468.2	-73.8	-108.4	115.0	1.44	-1.30	-3.48	
1,571.0	10.50	229.90	1,559.8	-84.1	-120.7	128.3	1.19	1.18	-0.75	
1,663.0	11.00	227.80	1,650.2	-95.4	-133.6	142.2	0.69	0.54	-2.28	
1,755.0	10.70	231.30	1,740.5	-106.6	-146.8	156.4	0.79	-0.33	3.80	
1,847.0	11.30	231.50	1,830.9	-117.6	-160.5	171.1	0.65	0.65	0.22	
1,939.0	11.40	235.00	1,921.1	-128.4	-175.0	186.6	0.76	0.11	3.80	
2,032.0	11.30	238.70	2,012.2	-138.4	-190.3	202.8	0.79	-0.11	3.98	
2,124.0	9.90	233.40	2,102.7	-147.8	-204.4	217.7	1.85	-1.52	-5.76	
2,219.0	10.60	236.80	2,196.2	-157.5	-218.3	232.5	0.97	0.74	3.58	
2,312.0	9.50	228.70	2,287.7	-167.2	-231.2	246.3	1.92	-1.18	-8.71	
2,406.0	10.10	240.60	2,380.4	-176.4	-244.2	260.1	2.24	0.64	12.66	
2,501.0	11.00	246.60	2,473.8	-184.1	-259.8	276.4	1.49	0.95	6.32	
2,595.0	10.40	239.70	2,566.1	-191.9	-275.3	292.6	1.50	-0.64	-7.34	
2,689.0	9.50	237.10	2,658.7	-200.4	-289.2	307.2	1.07	-0.96	-2.77	
2,782.0	9.10	235.00	2,750.5	-208.8	-301.6	320.4	0.56	-0.43	-2.26	
2,877.0	8.70	236.20	2,844.4	-217.1	-313.8	333.3	0.46	-0.42	1.26	
2,970.0	6.90	234.60	2,936.5	-224.2	-324.2	344.3	1.95	-1.94	-1.72	
3,064.0	8.50	233.10	3,029.6	-231.7	-334.3	355.2	1.72	1.70	-1.60	
3,158.0	9.50	238.90	3,122.5	-239.9	-346.5	368.1	1.44	1.06	6.17	
3,251.0	9.80	239.60	3,214.2	-247.8	-359.9	382.2	0.35	0.32	0.75	
3,344.0	10.30	234.80	3,305.7	-256.6	-373.5	396.6	1.05	0.54	-5.16	
3,440.0	8.20	235.30	3,400.5	-265.5	-386.2	410.1	2.19	-2.19	0.52	
3,535.0	10.60	229.70	3,494.2	-275.0	-398.4	423.2	2.70	2.53	-5.89	
3,630.0	11.00	228.30	3,587.5	-286.7	-411.8	437.7	0.50	0.42	-1.47	
3,724.0	11.30	229.40	3,679.8	-298.6	-425.5	452.4	0.39	0.32	1.17	
3,819.0	11.30	228.00	3,772.9	-310.9	-439.5	467.5	0.29	0.00	-1.47	
3,912.0	10.20	228.30	3,864.3	-322.5	-452.4	481.5	1.18	-1.18	0.32	
4,006.0	10.50	228.50	3,956.7	-333.7	-465.1	495.2	0.32	0.32	0.21	
4,100.0	10.30	225.20	4,049.2	-345.3	-477.4	508.6	0.67	-0.21	-3.51	
4,195.0	10.60	231.80	4,142.6	-356.7	-490.3	522.6	1.30	0.32	6.95	
4,290.0	10.40	228.30	4,236.0	-367.8	-503.6	536.8	0.70	-0.21	-3.68	
4,383.0	10.10	240.10	4,327.6	-377.4	-516.9	551.0	2.28	-0.32	12.69	
4,477.0	9.10	239.90	4,420.2	-385.3	-530.5	565.3	1.06	-1.06	-0.21	
4,570.0	9.70	245.00	4,512.0	-392.3	-544.0	579.4	1.10	0.65	5.48	
4,664.0	9.10	241.00	4,604.7	-399.2	-557.7	593.7	0.94	-0.64	-4.26	
4,759.0	9.80	242.20	4,698.4	-406.6	-571.4	608.1	0.77	0.74	1.26	
4,852.0	9.20	240.30	4,790.2	-414.0	-584.8	622.2	0.73	-0.65	-2.04	
4,946.0	9.10	241.50	4,883.0	-421.3	-597.9	635.9	0.23	-0.11	1.28	
5,039.0	9.60	235.20	4,974.7	-429.2	-610.7	649.4	1.22	0.54	-6.77	
5,133.0	9.00	230.30	5,067.5	-438.4	-622.8	662.3	1.06	-0.64	-5.21	
5,227.0	8.60	235.50	5,160.4	-447.1	-634.3	674.6	0.95	-0.43	5.53	
5,321.0	8.50	232.90	5,253.4	-455.2	-645.6	686.6	0.42	-0.11	-2.77	
5,416.0	9.30	227.60	5,347.2	-464.6	-656.9	698.8	1.21	0.84	-5.58	
5,509.0	9.40	233.40	5,439.0	-474.2	-668.5	711.3	1.02	0.11	6.24	
5,604.0	9.80	233.60	5,532.7	-483.7	-681.3	724.9	0.42	0.42	0.21	
5,699.0	10.60	231.70	5,626.2	-493.9	-694.6	739.2	0.91	0.84	-2.00	
5,794.0	9.50	230.30	5,719.7	-504.3	-707.5	753.0	1.19	-1.16	-1.47	
5,888.0	8.80	234.50	5,812.5	-513.4	-719.3	765.6	1.03	-0.74	4.47	
5,983.0	9.00	241.00	5,906.4	-521.3	-731.8	778.8	1.08	0.21	6.84	
6,077.0	9.20	241.00	5,999.2	-528.5	-744.8	792.4	0.21	0.21	0.00	

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Well:	Kodak 11 #7-3-28-270-4-CH	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,172.0	10.50	239.70	6,092.8	-536.5	-758.9	807.2	1.39	1.37	-1.37
6,267.0	10.60	231.00	6,186.2	-546.4	-773.1	822.4	1.68	0.11	-9.16
6,361.0	9.50	228.30	6,278.7	-557.0	-785.6	835.9	1.27	-1.17	-2.87
6,408.0	8.60	228.30	6,325.1	-561.9	-791.2	841.8	1.91	-1.91	0.00
6,454.0	9.10	245.50	6,370.6	-565.7	-797.0	848.1	5.83	1.09	37.39
6,501.0	11.40	251.90	6,416.8	-568.7	-804.8	856.1	5.45	4.89	13.62
6,549.0	14.40	251.30	6,463.6	-572.1	-815.0	866.5	6.26	6.25	-1.25
6,596.0	16.50	254.00	6,508.9	-575.8	-827.0	878.8	4.72	4.47	5.74
6,643.0	20.20	259.10	6,553.5	-579.2	-841.4	893.5	8.57	7.87	10.85
6,690.0	24.70	263.10	6,597.0	-581.9	-859.1	911.4	10.11	9.57	8.51
6,737.0	29.40	264.90	6,638.8	-584.1	-880.3	932.7	10.15	10.00	3.83
6,784.0	34.00	265.20	6,678.8	-586.2	-904.9	957.4	9.79	9.79	0.64
6,830.0	39.30	267.00	6,715.7	-588.0	-932.3	984.8	11.76	11.52	3.91
6,877.0	44.20	268.70	6,750.7	-589.2	-963.6	1,016.1	10.70	10.43	3.62
6,925.0	49.40	268.70	6,783.6	-590.0	-998.5	1,051.0	10.83	10.83	0.00
6,972.0	53.90	269.40	6,812.7	-590.6	-1,035.4	1,087.7	9.65	9.57	1.49
7,019.0	58.00	268.90	6,839.1	-591.2	-1,074.3	1,126.5	8.77	8.72	-1.06
7,066.0	61.90	268.60	6,862.6	-592.1	-1,115.0	1,167.1	8.32	8.30	-0.64
7,112.0	65.40	268.60	6,883.0	-593.1	-1,156.2	1,208.2	7.61	7.61	0.00
7,159.0	69.00	268.40	6,901.2	-594.2	-1,199.5	1,251.4	7.67	7.66	-0.43
7,206.0	72.90	267.90	6,916.5	-595.6	-1,243.9	1,295.7	8.36	8.30	-1.06
7,253.0	76.00	267.90	6,929.1	-597.3	-1,289.1	1,340.9	6.60	6.60	0.00
7,301.0	78.30	267.30	6,939.8	-599.3	-1,335.9	1,387.6	4.94	4.79	-1.25
7,348.0	82.00	267.70	6,947.9	-601.3	-1,382.1	1,433.8	7.92	7.87	0.85
7,395.0	86.50	268.00	6,952.6	-603.0	-1,428.9	1,480.5	9.60	9.57	0.64
7,456.0	88.30	268.60	6,955.3	-604.8	-1,489.8	1,541.3	3.11	2.95	0.98
7,471.9	88.28	268.63	6,955.8	-605.2	-1,505.7	1,557.2	0.25	-0.11	0.22
T2 1980'FNL, 460'FEL, SEC. 28									
7,543.0	88.20	268.79	6,958.0	-606.8	-1,576.7	1,628.0	0.25	-0.11	0.22
7,638.0	90.22	268.66	6,959.3	-608.9	-1,671.7	1,722.7	2.13	2.13	-0.14
7,732.0	90.75	268.62	6,958.5	-611.2	-1,765.6	1,816.5	0.57	0.56	-0.04
7,827.0	88.72	271.75	6,958.9	-610.9	-1,860.6	1,911.0	3.93	-2.14	3.29
7,921.0	89.43	272.94	6,960.5	-607.0	-1,954.5	2,004.1	1.47	0.76	1.27
8,015.0	90.84	273.40	6,960.2	-601.8	-2,048.4	2,097.0	1.58	1.50	0.49
8,110.0	90.92	272.31	6,958.8	-597.1	-2,143.2	2,191.0	1.15	0.08	-1.15
8,204.0	90.66	271.14	6,957.5	-594.3	-2,237.2	2,284.2	1.27	-0.28	-1.24
8,298.0	90.92	270.54	6,956.2	-592.9	-2,331.2	2,377.6	0.70	0.28	-0.64
8,393.0	89.78	271.28	6,955.6	-591.4	-2,426.2	2,472.0	1.43	-1.20	0.78
8,487.0	89.96	269.53	6,955.8	-590.7	-2,520.2	2,565.5	1.87	0.19	-1.86
8,581.0	90.13	269.53	6,955.7	-591.5	-2,614.1	2,659.1	0.18	0.18	0.00
8,676.0	91.28	269.48	6,954.6	-592.3	-2,709.1	2,753.7	1.21	1.21	-0.05
8,770.0	88.90	268.67	6,954.4	-593.8	-2,803.1	2,847.4	2.67	-2.53	-0.86
8,864.0	88.64	267.68	6,956.4	-596.8	-2,897.0	2,941.2	1.09	-0.28	-1.05
8,959.0	89.69	268.15	6,957.8	-600.3	-2,992.0	3,036.0	1.21	1.11	0.49
9,053.0	89.34	269.10	6,958.6	-602.5	-3,085.9	3,129.8	1.08	-0.37	1.01
9,148.0	90.13	270.59	6,959.1	-602.8	-3,180.9	3,224.3	1.78	0.83	1.57
9,242.0	90.48	271.53	6,958.6	-601.0	-3,274.9	3,317.7	1.07	0.37	1.00
9,336.0	89.87	271.94	6,958.3	-598.2	-3,368.9	3,410.9	0.78	-0.65	0.44
9,430.0	90.48	272.05	6,958.0	-594.9	-3,462.8	3,504.1	0.66	0.65	0.12
9,525.0	90.31	270.99	6,957.3	-592.4	-3,557.8	3,598.4	1.13	-0.18	-1.12
9,620.0	90.48	271.69	6,956.7	-590.2	-3,652.7	3,692.7	0.76	0.18	0.74
9,714.0	90.84	271.62	6,955.6	-587.5	-3,746.7	3,786.0	0.39	0.38	-0.07
9,809.0	89.69	270.74	6,955.2	-585.5	-3,841.7	3,880.3	1.52	-1.21	-0.93
9,903.0	90.57	272.17	6,954.9	-583.1	-3,935.6	3,973.6	1.79	0.94	1.52

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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)
9,998.0	89.25	272.25	6,955.1	-579.5	-4,030.6	4,067.7	1.39	-1.39	0.08
10,092.0	88.81	272.58	6,956.7	-575.5	-4,124.5	4,160.8	0.59	-0.47	0.35
10,186.0	89.34	272.44	6,958.2	-571.4	-4,218.4	4,253.9	0.58	0.56	-0.15
10,281.0	90.13	272.12	6,958.6	-567.6	-4,313.3	4,348.0	0.90	0.83	-0.34
10,375.0	90.66	270.57	6,958.0	-565.4	-4,407.3	4,441.3	1.74	0.56	-1.65
10,470.0	91.36	269.53	6,956.3	-565.3	-4,502.2	4,535.8	1.32	0.74	-1.09
10,564.0	90.92	269.33	6,954.5	-566.2	-4,596.2	4,629.4	0.51	-0.47	-0.21
10,658.0	90.31	268.29	6,953.4	-568.2	-4,690.2	4,723.2	1.28	-0.65	-1.11
10,753.0	90.22	268.42	6,953.0	-570.9	-4,785.2	4,817.9	0.17	-0.09	0.14
10,847.0	88.64	269.30	6,953.9	-572.8	-4,879.1	4,911.7	1.92	-1.68	0.94
10,942.0	88.81	269.43	6,956.1	-573.9	-4,974.1	5,006.3	0.23	0.18	0.14
11,036.0	89.69	269.29	6,957.3	-574.9	-5,068.1	5,099.9	0.95	0.94	-0.15
11,130.0	89.52	270.45	6,957.9	-575.1	-5,162.1	5,193.5	1.25	-0.18	1.23
11,225.0	89.69	270.37	6,958.6	-574.4	-5,257.1	5,288.0	0.20	0.18	-0.08
11,319.0	89.52	270.05	6,959.2	-574.1	-5,351.1	5,381.5	0.39	-0.18	-0.34
11,413.0	89.52	271.30	6,960.0	-573.0	-5,445.1	5,475.0	1.33	0.00	1.33
11,508.0	90.92	273.29	6,959.7	-569.2	-5,540.0	5,569.1	2.56	1.47	2.09
11,602.0	91.19	273.40	6,957.9	-563.7	-5,633.8	5,661.9	0.31	0.29	0.12
11,633.0	91.54	273.78	6,957.2	-561.8	-5,664.7	5,692.5	1.67	1.13	1.23
11,713.0	91.54	273.78	6,955.0	-556.5	-5,744.5	5,771.4	0.00	0.00	0.00
BHL 1980'FNL, 460'FWL, SEC. 28									

Checked By: _____ Approved By: _____ Date: _____