

30-015-37555

Project: Eddy County
 Site: Cheroot "BPF" State Com
 Well: #1H
 Wellbore: OH
 Plan: Plan #2 (#1H/OH)

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PATHFINDER
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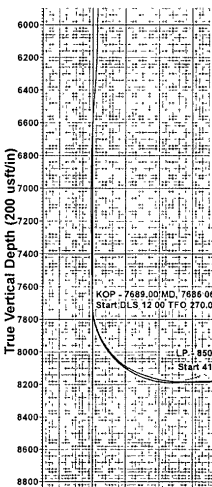
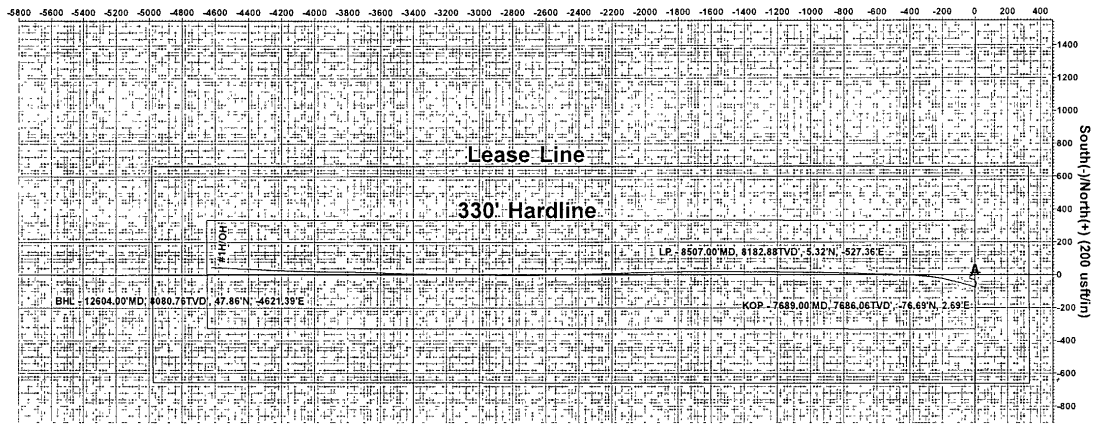


PROJECT DETAILS, Eddy County
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level
 Local North: Grid



Azimuths to Grid North
 True North: -0.09°
 Magnetic North: 7.78°
 Magnetic Field
 Strength: 48523.1snT
 Dip Angle: 60.02°
 Date: 4/20/2011
 Model: IGRF2010

West(-)/East(+) (200 usf/in)



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/S	+E/W	Dipg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7712.00	0.00	0.00	7712.00	0.00	0.00	12.00	0.00	0.00	0.00
8472.25	91.23	270.06	8183.35	0.51	-487.71	12.00	270.06	487.71	
12634.65	91.23	270.06	8100.00	4.88	-4649.15	0.00	0.00	4649.15	BHL (Cheroot BPF #1H)

WELL DETAILS #1H					
Ground Elevation	3191.00				
RKB Elevation	WELL @ 3214.00usft (Original Well Elev)				
Rig Name	Original Well Elev				
+N/S	+E/W	Northing	Easting	Latitude	Longitude
0.00	0.00	419707.650	591638.430	32° 9' 13.501" N	104° 10' 14.859" W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N-S	+E/W	Northing	Easting
BHL (Cheroot BPF #1H)	8100.00	4.88	-4649.15	419712.534	586989.275

Vertical Section at 270.06° (200 usf/in)

Plan: Plan #2 (#1H/OH)
 Created By: Nate Bingham Date: 10/05, May 23 2011
 Checked: _____ Date: _____



Yates Petroleum Corp.

Eddy County
Cheroot "BPF" State Com
#1H
OH

Design: OH

Pathfinder X&Y Report

23 May, 2011

PATHFINDER[®]
A Schlumberger Company



Pathfinder
Pathfinder X&Y Report



Company: Yates Petroleum Corp.	Local Co-ordinate Reference: Well #1H
Project: Eddy County	TVD Reference: WELL @ 3214.00usft (Original Well Elev)
Site: Cheroof "BPF" State Com	MD Reference: WELL @ 3214.00usft (Original Well Elev)
Well: #1H	North Reference: Gnd
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: OH	Database: EDM 5000.1 Single User Db

Project: Eddy County

Map System: US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum: North American Datum 1983		
Map Zone: New Mexico Eastern Zone		

Site: Cheroof "BPF" State Com

Site Position:	Northing: 419,707.650 usft	Latitude: 32° 9' 13.501 N
From: Map	Easting: 591,638.430 usft	Longitude: 104° 10' 14.859 W
Position Uncertainty: 0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.09 °

Well: #1H			
Well Position	+N/-S 0.00 usft	Northing: 419,707.650 usft	Latitude: 32° 9' 13.501 N
	+E/-W 0.00 usft	Easting: 591,638.430 usft	Longitude: 104° 10' 14.859 W
Position Uncertainty	0.00 usft	Wellhead Elevation: usft	Ground Level: 3,191.00 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (RT)
	IGRF2010	4/20/2011	7.87	60.02	48,523

Design: OH

Audit Notes:		
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	270.06



Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County	TVD Reference:	WELL @ 3214.00usft (Original Well Elev)
Site:	Cheroot "BPF" State Com	MD Reference:	WELL @ 3214 00usft (Original Well Elev)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey Program:	Date			
	5/23/2011			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
200.00	6,654.00	Survey #2 - Gyro (OH)	CB-GYRO-MS	Camera based gyro multishot
6,711.00	12,604.00	Survey #2 - MWD (OH)	MWD	MWD - Standard

MD (usft)	Inc (")	Azi (azimuth) (")	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg ("/100usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	-3,214.00	0.00	0.00	0.00	0.00	419,707.65	591,638.43
200.00	2.25	264.60	199.95	-3,014.05	-0.37	-3.91	3.91	1.12	419,707.28	591,634.52
400.00	1.75	266.42	399.83	-2,814.17	-0.93	-10.87	10.86	0.25	419,706.72	591,627.56
600.00	0.75	218.23	599.78	-2,614.22	-2.15	-14.72	14.72	0.68	419,705.50	591,623.71
800.00	0.75	247.04	799.76	-2,414.24	-3.69	-16.74	16.74	0.19	419,703.96	591,621.69
1,000.00	0.75	255.86	999.75	-2,214.25	-4.52	-19.21	19.21	0.06	419,703.13	591,619.22
1,200.00	1.50	266.67	1,199.71	-2,014.29	-4.99	-23.10	23.09	0.39	419,702.66	591,615.33
1,400.00	1.25	273.49	1,399.65	-1,814.35	-5.01	-27.89	27.88	0.15	419,702.64	591,610.54
1,600.00	1.50	50.29	1,599.62	-1,614.38	-3.20	-28.05	28.05	1.28	419,704.45	591,610.38
1,800.00	0.50	95.11	1,799.59	-1,414.41	-1.61	-25.17	25.17	0.60	419,706.04	591,613.26
2,000.00	1.75	87.93	1,999.55	-1,214.45	-1.58	-21.25	21.24	0.63	419,706.07	591,617.18
2,200.00	0.25	317.74	2,199.52	-1,014.48	-1.14	-18.49	18.49	0.96	419,706.51	591,619.94
2,400.00	0.25	246.55	2,399.52	-814.48	-0.99	-19.18	19.18	0.15	419,706.66	591,619.25
2,600.00	0.25	256.37	2,599.52	-614.48	-1.27	-20.01	20.00	0.02	419,706.38	591,618.42
2,800.00	0.25	317.25	2,799.52	-414.48	-1.05	-20.73	20.72	0.13	419,706.60	591,617.70
3,000.00	0.25	281.07	2,999.52	-214.48	-0.65	-21.45	21.45	0.08	419,707.00	591,616.98
3,200.00	0.50	249.88	3,199.51	-14.49	-0.86	-22.70	22.70	0.16	419,706.79	591,615.73
3,400.00	0.50	256.69	3,399.50	185.50	-1.37	-24.37	24.37	0.03	419,706.28	591,614.06
3,600.00	0.50	234.51	3,599.50	385.50	-2.07	-25.93	25.92	0.10	419,705.58	591,612.50
3,800.00	0.50	226.32	3,799.49	585.49	-3.18	-27.27	27.26	0.04	419,704.47	591,611.16
4,000.00	0.75	211.13	3,999.48	785.48	-4.91	-28.58	28.57	0.15	419,702.74	591,609.85



Pathfinder
Pathfinder X&Y Report



Company: Yates Petroleum Corp.	Local Co-ordinate Reference: Well #1H
Project: Eddy County	TVD Reference: WELL @ 3214.00usft (Original Well Elev)
Site: Cheroot "BPF" State Com	MD Reference: WELL @ 3214 00usft (Original Well Elev)
Well: #1H	North Reference: Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature
Design: OH	Database: EDM 5000.1 Single User Db.

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
4,200.00	0.50	185.95	4,199.47	985.47	-6.89	-29.34	29.34	0.18	419,700.76	591,609.09
4,400.00	0.50	180.76	4,399.46	1,185.46	-8.63	-29.44	29.44	0.02	419,699.02	591,608.99
4,600.00	0.75	183.58	4,599.45	1,385.45	-10.81	-29.54	29.53	0.13	419,696.84	591,608.89
4,800.00	0.75	189.39	4,799.43	1,585.43	-13.41	-29.83	29.82	0.04	419,694.24	591,608.60
5,000.00	0.50	182.65	4,999.42	1,785.42	-15.57	-30.09	30.07	0.13	419,692.08	591,608.34
5,200.00	0.75	179.92	5,199.40	1,985.40	-17.76	-30.13	30.11	0.13	419,689.89	591,608.30
5,400.00	0.50	194.18	5,399.39	2,185.39	-19.91	-30.34	30.32	0.15	419,687.74	591,608.09
5,600.00	0.75	189.44	5,599.38	2,385.38	-22.05	-30.77	30.74	0.13	419,685.60	591,607.66
5,800.00	0.75	165.71	5,799.36	2,585.36	-24.61	-30.66	30.63	0.15	419,683.04	591,607.77
6,000.00	0.75	135.98	5,999.35	2,785.35	-26.82	-29.43	29.40	0.19	419,680.83	591,609.00
6,200.00	2.00	46.22	6,199.30	2,985.30	-25.34	-26.00	25.97	1.07	419,682.31	591,612.43
6,400.00	5.75	112.64	6,398.88	3,184.88	-26.79	-14.22	14.19	2.64	419,680.86	591,624.21
6,600.00	4.00	127.83	6,598.16	3,384.16	-34.92	0.54	-0.57	1.08	419,672.73	591,638.97
6,654.00	3.75	132.35	6,652.03	3,438.03	-37.27	3.33	-3.37	0.73	419,670.38	591,641.76
6,711.00	3.87	158.51	6,708.91	3,494.91	-40.31	5.41	-5.45	3.03	419,667.34	591,643.84
6,902.00	2.37	160.62	6,899.62	3,685.62	-50.04	9.08	-9.14	0.79	419,657.61	591,647.51
7,093.00	0.62	233.22	7,090.56	3,876.56	-54.38	9.57	-9.62	1.18	419,653.27	591,648.00
7,283.00	2.73	193.05	7,280.47	4,066.47	-59.41	7.72	-7.78	1.21	419,648.24	591,646.15
7,474.00	2.73	193.49	7,471.25	4,257.25	-68.26	5.63	-5.71	0.01	419,639.39	591,644.06
7,596.00	2.46	194.90	7,593.13	4,379.13	-73.61	4.28	-4.36	0.23	419,634.04	591,642.71
7,625.00	2.46	193.93	7,622.10	4,408.10	-74.82	3.97	-4.05	0.14	419,632.83	591,642.40
7,657.00	2.11	209.40	7,654.08	4,440.08	-76.00	3.52	-3.60	2.21	419,631.65	591,641.95
7,689.00	2.02	252.12	7,686.06	4,472.06	-76.69	2.69	-2.77	4.71	419,630.96	591,641.12
7,720.00	3.96	291.23	7,717.02	4,503.02	-76.47	1.17	-1.25	8.74	419,631.18	591,639.60
7,752.00	7.21	294.39	7,748.86	4,534.86	-75.24	-1.69	1.61	10.20	419,632.41	591,636.74
7,784.00	11.17	292.19	7,780.44	4,566.44	-73.24	-6.39	6.31	12.42	419,634.41	591,632.04
7,816.00	14.86	289.64	7,811.62	4,597.62	-70.69	-13.12	13.05	11.67	419,636.96	591,625.31



Pathfinder
Pathfinder X&Y Report



Company: Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project: Eddy County	TVD Reference:	WELL @ 3214.00usft (Original Well Elev)
Site: Cheroot "BPF" State Com	MD Reference:	WELL @ 3214.00usft (Original Well Elev)
Well: #1H	North Reference:	Gnd
Wellbore: OH	Survey Calculation Method:	Minimum Curvature
Design: OH	Database:	EDM 5000.1 Single User.Db

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDS (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
7,847.00	18.91	288.24	7,841.27	4,627.27	-67.78	-21.64	21.57	13.13	419,639.87	591,616.79
7,879.00	22.60	287.54	7,871.19	4,657.19	-64.30	-32.43	32.37	11.56	419,643.35	591,606.00
7,911.00	26.12	287.45	7,900.34	4,686.34	-60.33	-45.02	44.96	11.00	419,647.32	591,593.41
7,943.00	29.37	285.69	7,928.66	4,714.66	-56.10	-59.30	59.24	10.47	419,651.55	591,579.13
7,975.00	32.80	284.02	7,956.06	4,742.06	-51.87	-75.27	75.21	11.05	419,655.78	591,563.16
8,006.00	36.40	283.58	7,981.57	4,767.57	-47.68	-92.36	92.31	11.64	419,659.97	591,546.07
8,038.00	40.19	283.67	8,006.68	4,792.68	-43.01	-111.63	111.58	11.85	419,664.64	591,526.80
8,069.00	43.88	283.41	8,029.70	4,815.70	-38.15	-131.81	131.77	11.92	419,669.50	591,506.62
8,101.00	48.10	282.97	8,051.93	4,837.93	-32.90	-154.21	154.17	13.22	419,674.75	591,484.22
8,133.00	52.32	282.44	8,072.40	4,858.40	-27.50	-178.19	178.16	13.25	419,680.15	591,460.24
8,165.00	57.42	281.47	8,090.81	4,876.81	-22.09	-203.79	203.76	16.13	419,685.56	591,434.64
8,197.00	61.73	279.71	8,107.02	4,893.02	-17.03	-230.90	230.89	14.28	419,690.62	591,407.53
8,228.00	65.16	277.87	8,120.87	4,906.87	-12.80	-258.30	258.29	12.27	419,694.85	591,380.13
8,260.00	67.53	276.55	8,133.71	4,919.71	-9.12	-287.38	287.37	8.31	419,698.53	591,351.05
8,292.00	70.00	275.32	8,145.30	4,931.30	-6.04	-317.05	317.04	8.51	419,701.61	591,321.38
8,324.00	72.81	274.18	8,155.50	4,941.50	-3.53	-347.27	347.26	9.41	419,704.12	591,291.16
8,355.00	76.33	273.03	8,163.75	4,949.75	-1.65	-377.09	377.08	11.90	419,706.00	591,261.34
8,387.00	79.32	272.95	8,170.50	4,956.50	-0.02	-408.32	408.32	9.35	419,707.63	591,230.11
8,419.00	80.99	272.95	8,175.97	4,961.97	1.60	-439.81	439.81	5.22	419,709.25	591,198.62
8,451.00	84.50	272.95	8,180.01	4,966.01	3.23	-471.50	471.51	10.97	419,710.88	591,166.93
8,475.00	86.35	271.98	8,181.93	4,967.93	4.26	-495.40	495.41	8.70	419,711.91	591,143.03
8,507.00	90.22	271.80	8,182.88	4,968.88	5.32	-527.36	527.37	12.11	419,712.97	591,111.07
8,539.00	91.71	271.72	8,182.34	4,968.34	6.30	-559.34	559.35	4.66	419,713.95	591,079.09
8,571.00	91.80	271.80	8,181.36	4,967.36	7.28	-591.31	591.32	0.38	419,714.93	591,047.12
8,666.00	92.07	271.89	8,178.16	4,964.16	10.34	-686.21	686.22	0.30	419,717.99	590,952.22
8,761.00	91.19	271.28	8,175.45	4,961.45	12.96	-781.13	781.15	1.13	419,720.61	590,857.30
8,857.00	91.45	270.92	8,173.24	4,959.24	14.81	-877.09	877.11	0.46	419,722.46	590,761.34



Pathfinder
Pathfinder X&Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County	TVD Reference:	WELL @ 3214.00usft (Original Well Elev)
Site:	Cherooot "BPF" State Com	MD Reference:	WELL @ 3214.00usft (Original Well Elev)
Well:	#1H	North Reference:	Grd
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,952.00	90.66	270.31	8,171.49	4,957.49	15.83	-972.07	972.08	1.05	419,723.48	590,666.36	
9,047.00	90.22	270.31	8,170.76	4,956.76	16.34	-1,067.06	1,067.08	0.46	419,723.99	590,571.37	
9,143.00	90.48	270.66	8,170.18	4,956.18	17.15	-1,163.06	1,163.08	0.45	419,724.80	590,475.37	
9,238.00	90.66	270.31	8,169.23	4,955.23	17.96	-1,258.05	1,258.07	0.41	419,725.61	590,380.38	
9,333.00	90.84	270.66	8,167.99	4,953.99	18.76	-1,353.04	1,353.06	0.41	419,726.41	590,285.39	
9,429.00	90.40	270.31	8,166.95	4,952.95	19.57	-1,449.03	1,449.05	0.59	419,727.22	590,189.40	
9,524.00	90.40	270.66	8,166.29	4,952.29	20.38	-1,544.02	1,544.04	0.37	419,728.03	590,094.41	
9,620.00	90.66	269.52	8,165.40	4,951.40	20.53	-1,640.02	1,640.04	1.22	419,728.18	589,998.41	
9,715.00	90.92	269.52	8,164.09	4,950.09	19.73	-1,735.00	1,735.02	0.27	419,727.38	589,903.43	
9,810.00	90.31	269.34	8,163.07	4,949.07	18.79	-1,829.99	1,830.01	0.67	419,726.44	589,808.44	
9,905.00	90.57	268.55	8,162.34	4,948.34	17.04	-1,924.97	1,924.99	0.88	419,724.69	589,713.46	
10,000.00	90.75	268.55	8,161.25	4,947.25	14.63	-2,019.94	2,019.95	0.19	419,722.28	589,618.49	
10,096.00	91.01	269.17	8,159.77	4,945.77	12.72	-2,115.91	2,115.92	0.70	419,720.37	589,522.52	
10,191.00	90.57	268.38	8,158.46	4,944.46	10.69	-2,210.87	2,210.88	0.95	419,718.34	589,427.56	
10,287.00	90.66	268.29	8,157.43	4,943.43	7.90	-2,306.83	2,306.84	0.13	419,715.55	589,331.60	
10,382.00	90.57	268.55	8,156.41	4,942.41	5.29	-2,401.79	2,401.79	0.29	419,712.94	589,236.64	
10,478.00	91.01	268.38	8,155.09	4,941.09	2.71	-2,497.74	2,497.74	0.49	419,710.36	589,140.69	
10,573.00	91.54	268.73	8,152.97	4,938.97	0.32	-2,592.69	2,592.69	0.67	419,707.97	589,045.74	
10,668.00	92.24	269.17	8,149.84	4,935.84	-1.42	-2,687.62	2,687.62	0.87	419,706.23	588,950.81	
10,763.00	91.45	270.22	8,146.78	4,932.78	-1.93	-2,782.57	2,782.56	1.38	419,705.72	588,855.86	
10,859.00	91.54	270.84	8,144.28	4,930.28	-1.04	-2,878.53	2,878.53	0.65	419,706.61	588,759.90	
10,954.00	91.01	270.92	8,142.16	4,928.16	0.42	-2,973.50	2,973.49	0.56	419,708.07	588,664.93	
11,049.00	91.19	271.10	8,140.34	4,926.34	2.09	-3,068.46	3,068.46	0.27	419,709.74	588,569.97	
11,144.00	91.45	270.92	8,138.15	4,924.15	3.77	-3,163.42	3,163.43	0.33	419,711.42	588,475.01	
11,239.00	91.45	271.19	8,135.75	4,921.75	5.52	-3,258.38	3,258.38	0.28	419,713.17	588,380.05	
11,335.00	91.10	271.28	8,133.61	4,919.61	7.59	-3,354.33	3,354.34	0.38	419,715.24	588,284.10	
11,430.00	91.10	271.36	8,131.79	4,917.79	9.77	-3,449.29	3,449.30	0.08	419,717.42	588,189.14	



Pathfinder
Pathfinder X&Y Report



Company: Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project: Eddy County	TVD Reference:	WELL @ 3214.00usft (Original Well Elev)
Site: Cheroot "BPF" State Com	MD Reference:	WELL @ 3214.00usft (Original Well Elev)
Well: #1H	North Reference:	Grid
Wellbore: OH	Survey Calculation Method:	Minimum Curvature
Design: OH	Database:	EDM 5000.1 Single User Db

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
11,526.00	91.45	271.98	8,129.65	4,915.65	12.57	-3,545.22	3,545.23	0.74	419,720.22	588,093.21
11,621.00	91.80	271.19	8,126.96	4,912.96	15.20	-3,640.15	3,640.16	0.91	419,722.85	587,998.28
11,717.00	92.42	271.10	8,123.42	4,909.42	17.11	-3,736.06	3,736.08	0.65	419,724.76	587,902.37
11,812.00	92.33	270.84	8,119.49	4,905.49	18.72	-3,830.97	3,830.98	0.29	419,726.37	587,807.46
11,907.00	92.95	271.10	8,115.11	4,901.11	20.33	-3,925.85	3,925.87	0.71	419,727.98	587,712.58
12,003.00	93.39	271.19	8,109.80	4,895.80	22.24	-4,021.69	4,021.71	0.47	419,729.89	587,616.74
12,098.00	92.86	271.80	8,104.62	4,890.62	24.72	-4,116.51	4,116.53	0.85	419,732.37	587,521.92
12,193.00	92.15	271.89	8,100.47	4,886.47	27.77	-4,211.37	4,211.40	0.75	419,735.42	587,427.06
12,289.00	92.33	272.59	8,096.72	4,882.72	31.52	-4,307.22	4,307.25	0.75	419,739.17	587,331.21
12,384.00	92.86	272.95	8,092.42	4,878.42	36.11	-4,402.01	4,402.05	0.67	419,743.76	587,236.42
12,524.00	93.12	273.12	8,085.11	4,871.11	43.51	-4,541.63	4,541.67	0.22	419,751.16	587,096.80
12,604.00	93.12	273.12	8,080.76	4,866.76	47.86	-4,621.39	4,621.44	0.00	419,755.51	587,017.04

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,689.00	7,686.06	-76.69	2.69	KOP - 7689.00'MD, 7686.06'TVD', -76.69°N, 2.69°E
8,507.00	8,182.88	5.32	-527.36	LP - 8507.00'MD, 8182.88'TVD', 5.32°N, -527.36°E
12,604.00	8,080.76	47.86	-4,621.39	BHL - 12604.00'MD, 8080.76'TVD', 47.86°N, -4621.39°E

Checked By: _____ Approved By: _____ Date: _____