

Results of Directional Survey

API number:	30-025-40489		
OGRID:		Operator:	YATES PETROLEUM CORPORATION
		Property:	HEMLOCK BSH STATE # 1H

surface	ULSTR:	C	32	T	23S	R	33E
				330	FNL	1980	FWL

BH Loc	ULSTR:	N	32	T	23S	R	33E
15532	MD	11095.8	TVD	354	FSL	2006	FWL
				4926	FNL		

Top Perf/OH	ULSTR:	C	32	T	23S	R	33E
11515	MD	11162.9	TVD	910	FNL	1982	FWL

Bot Perf/OH	ULSTR:	N	32	T	23S	R	33E
15430	MD	11098.5	TVD	456	FSL	2006	FWL
				4824	FNL		

	MD	N/S	E/W	VD
	11506	-571.30	1.40	11162.9
TOP PERFS/OH	11515	-580.30	1.78	11162.93
	11537	-602.30	2.70	11163.00
	15392	-4455.80	25.80	11099.50
BOT PERFS/OH	15430	-4493.75	25.85	11098.47
	15473	-4536.70	25.90	11097.30

NEXT TO LAST	15473	-4536.70	25.90	11097.30
LAST READING	15532	-4595.70	26.00	11095.80
TD	15532	-4595.70	26.00	11095.80

Surface Location	330	FN	1980	FW
Projected BHL	4926	FN	2006	FW
Location of				
Top Perfs/OH	910	FN	1982	FW
Bottom Perfs/OH	4824	FN	2006	FW

SUMMARY of Subsurface Locations

Surface Location	C-32-23S-33E	330	FN	1980	FW	Vert. Depth
Top Perfs/OH	C-32-23S-33E	910	FN	1982	FW	11162.93
Bottom Perfs/OH	N-32-23S-33E	4824	FN	2006	FW	11098.47
Projected TD	N-32-23S-33E	4926	FN	2006	FW	11095.80



ATES
PETROLEUM
CORPORATION

Yates Petroleum Corp.

Lea County(NAD 83)
Hemlock "BSH" State
#1H
OH

Design: OH

PathfinderX & Y Report

17 September, 2012

PATHFINDER[®]

A Schlumberger Company

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Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County(NAD 83)	TVD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Site:	Hemlock "BSH" State	MD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Lea County(NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Hemlock "BSH" State				
Site Position:		Northing:	461,849.584	usft	Latitude:	32.267550
From:	Map	Easting:	769,087.864	usft	Longitude:	-103.596488
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#1H					
Well Position	+N/-S	0.0 usft	Northing:	461,849.584 usft	Latitude:	32.267550
	+E/-W	0.0 usft	Easting:	769,087.864 usft	Longitude:	-103.596488
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level:	3,667.0 usft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	6/28/2012	7.47	60.22	48,575

Design:		OH			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	179.61	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey/Program		Date	9/17/2012		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	600.0	Gyro (OH)	CTG-SR-SS	Continuous gyro - surface ref. s/s	
740.0	15,532.0	MWD #1 (OH)	MWD	MWD - Standard	

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)
0.0	0.00	0.00	0.0	-3,692.0	0.0	0.0	0.0	0.00	461,849.58	769,087.86
100.0	0.19	54.07	100.0	-3,592.0	0.1	0.1	-0.1	0.19	461,849.68	769,088.00
200.0	0.18	70.31	200.0	-3,492.0	0.2	0.4	-0.2	0.05	461,849.83	769,088.28
300.0	0.15	14.64	300.0	-3,392.0	0.4	0.6	-0.4	0.16	461,850.01	769,088.46
400.0	0.19	72.15	400.0	-3,292.0	0.6	0.8	-0.6	0.17	461,850.19	769,088.65
500.0	0.04	353.28	500.0	-3,192.0	0.7	0.9	-0.7	0.19	461,850.27	769,088.81
600.0	0.13	153.78	600.0	-3,092.0	0.6	1.0	-0.6	0.17	461,850.21	769,088.85
740.0	0.62	179.62	740.0	-2,952.0	-0.3	1.1	0.3	0.36	461,849.31	769,088.93
858.0	0.44	160.55	858.0	-2,834.0	-1.3	1.2	1.4	0.21	461,848.24	769,089.08
951.0	0.53	183.34	951.0	-2,741.0	-2.1	1.3	2.1	0.23	461,847.48	769,089.18
1,109.0	0.53	163.25	1,109.0	-2,583.0	-3.5	1.5	3.5	0.12	461,846.05	769,089.34
1,299.0	0.44	169.09	1,299.0	-2,393.0	-5.1	1.9	5.1	0.05	461,844.49	769,089.74
1,489.0	0.09	196.27	1,489.0	-2,203.0	-6.0	2.0	6.0	0.19	461,843.63	769,089.83
1,680.0	0.35	349.99	1,680.0	-2,012.0	-5.5	1.8	5.5	0.23	461,844.06	769,089.69
1,869.0	0.18	68.52	1,869.0	-1,823.0	-4.8	2.0	4.9	0.19	461,844.74	769,089.86
2,060.0	0.09	109.34	2,060.0	-1,632.0	-4.8	2.4	4.8	0.07	461,844.80	769,090.29
2,251.0	0.26	350.52	2,251.0	-1,441.0	-4.4	2.5	4.4	0.16	461,845.17	769,090.36
2,439.0	0.35	29.80	2,439.0	-1,253.0	-3.5	2.7	3.5	0.12	461,846.09	769,090.57
2,627.0	0.26	320.27	2,627.0	-1,065.0	-2.7	2.7	2.7	0.19	461,846.92	769,090.58
2,816.0	0.09	48.58	2,816.0	-876.0	-2.2	2.6	2.3	0.14	461,847.35	769,090.42
3,006.0	0.18	273.19	3,006.0	-686.0	-2.1	2.4	2.1	0.13	461,847.46	769,090.23



Pathfinder PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well: #1H
Project:	Lea County(NAD 83)	TVD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Site:	Hemlock "BSH" State	MD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Well:	#1H	North Reference:	Grid
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)		
3,195.0	0.26	17.93	3,195.0	-497.0	-1.7	2.2	1.7	0.19	461,847.89	769,090.07		
3,385.0	0.35	310.62	3,385.0	-307.0	-0.9	1.9	0.9	0.18	461,848.68	769,089.76		
3,575.0	0.26	310.28	3,575.0	-117.0	-0.3	1.1	0.3	0.05	461,849.33	769,088.99		
3,764.0	0.09	224.15	3,764.0	72.0	-0.1	0.7	0.1	0.14	461,849.50	769,088.56		
3,954.0	0.09	94.98	3,954.0	262.0	-0.2	0.7	0.2	0.09	461,849.38	769,088.61		
4,144.0	0.18	167.48	4,144.0	452.0	-0.5	1.0	0.5	0.09	461,849.08	769,088.82		
4,238.0	0.18	106.82	4,238.0	546.0	-0.7	1.1	0.7	0.19	461,848.89	769,088.99		
4,333.0	0.18	68.56	4,333.0	641.0	-0.7	1.4	0.7	0.12	461,848.90	769,089.28		
4,429.0	0.70	135.87	4,429.0	737.0	-1.0	2.0	1.1	0.68	461,848.54	769,089.82		
4,524.0	0.79	121.24	4,523.9	831.9	-1.8	2.9	1.8	0.22	461,847.78	769,090.79		
4,619.0	1.23	108.20	4,618.9	926.9	-2.5	4.5	2.5	0.52	461,847.12	769,092.32		
4,714.0	1.14	116.26	4,713.9	1,021.9	-3.2	6.3	3.2	0.20	461,846.39	769,094.13		
4,807.0	0.70	155.70	4,806.9	1,114.9	-4.1	7.3	4.2	0.80	461,845.46	769,095.20		
4,901.0	0.62	144.80	4,900.9	1,208.9	-5.1	7.9	5.1	0.16	461,844.52	769,095.73		
4,995.0	0.70	136.14	4,994.9	1,302.9	-5.9	8.6	6.0	0.14	461,843.69	769,096.42		
5,090.0	0.53	135.70	5,089.9	1,397.9	-6.6	9.3	6.7	0.18	461,842.96	769,097.13		
5,234.0	0.26	147.54	5,233.9	1,541.9	-7.4	9.9	7.4	0.19	461,842.21	769,097.77		
5,391.0	0.35	150.24	5,390.9	1,698.9	-8.1	10.3	8.2	0.06	461,841.49	769,098.20		
5,587.0	0.44	167.50	5,586.9	1,894.9	-9.4	10.8	9.4	0.08	461,840.23	769,098.66		
5,771.0	0.79	171.75	5,770.9	2,078.9	-11.3	11.1	11.4	0.19	461,838.29	769,098.99		
5,866.0	0.35	186.03	5,865.9	2,173.9	-12.2	11.2	12.3	0.48	461,837.35	769,099.05		
6,057.0	0.26	161.98	6,056.8	2,364.8	-13.2	11.3	13.3	0.08	461,836.36	769,099.13		
6,248.0	0.26	178.01	6,247.8	2,555.8	-14.1	11.4	14.1	0.04	461,835.51	769,099.28		
6,438.0	0.18	201.47	6,437.8	2,745.8	-14.8	11.3	14.9	0.06	461,834.81	769,099.18		
6,625.0	0.18	166.89	6,624.8	2,932.8	-15.3	11.3	15.4	0.06	461,834.25	769,099.14		
6,815.0	0.35	184.60	6,814.8	3,122.8	-16.2	11.3	16.3	0.10	461,833.38	769,099.16		
7,004.0	0.44	221.28	7,003.8	3,311.8	-17.3	10.8	17.4	0.14	461,832.26	769,098.64		



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Site:	Hemlock "BSH" State	MD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Well:	#1H	North Reference:	Grid
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)	
7,194.0	0.53	213.37	7,193.8	3,501.8	-18.6	9.8	18.7	0.06	461,830.97	769,097.67	
7,384.0	0.79	213.14	7,383.8	3,691.8	-20.4	8.6	20.5	0.14	461,829.14	769,096.47	
7,571.0	1.14	204.13	7,570.8	3,878.8	-23.2	7.1	23.3	0.20	461,826.37	769,095.01	
7,666.0	0.70	259.12	7,665.8	3,973.8	-24.2	6.2	24.2	0.98	461,825.39	769,094.05	
7,761.0	0.88	313.02	7,760.8	4,068.8	-23.8	5.1	23.8	0.77	461,825.78	769,092.95	
7,856.0	0.88	348.79	7,855.8	4,163.8	-22.6	4.4	22.6	0.57	461,827.00	769,092.27	
7,950.0	0.88	341.25	7,949.8	4,257.8	-21.2	4.0	21.2	0.12	461,828.39	769,091.90	
8,046.0	0.88	314.15	8,045.7	4,353.7	-20.0	3.3	20.0	0.43	461,829.60	769,091.13	
8,140.0	1.41	358.94	8,139.7	4,447.7	-18.3	2.7	18.3	1.06	461,831.26	769,090.59	
8,235.0	0.97	0.07	8,234.7	4,542.7	-16.4	2.7	16.4	0.46	461,833.23	769,090.57	
8,330.0	0.97	337.08	8,329.7	4,637.7	-14.8	2.4	14.8	0.41	461,834.78	769,090.26	
8,423.0	0.70	326.97	8,422.7	4,730.7	-13.6	1.8	13.6	0.33	461,835.98	769,089.65	
8,519.0	0.88	319.16	8,518.7	4,826.7	-12.6	1.0	12.6	0.22	461,837.03	769,088.84	
8,614.0	0.79	315.58	8,613.7	4,921.7	-11.5	0.0	11.5	0.11	461,838.05	769,087.91	
8,709.0	1.06	325.02	8,708.6	5,016.6	-10.3	-0.9	10.3	0.33	461,839.23	769,086.95	
8,804.0	1.32	330.64	8,803.6	5,111.6	-8.7	-2.0	8.7	0.30	461,840.91	769,085.91	
8,899.0	1.14	318.50	8,898.6	5,206.6	-7.0	-3.1	7.0	0.33	461,842.57	769,084.74	
8,993.0	1.06	313.80	8,992.6	5,300.6	-5.7	-4.4	5.7	0.13	461,843.87	769,083.50	
9,088.0	0.88	300.54	9,087.6	5,395.6	-4.7	-5.6	4.7	0.30	461,844.85	769,082.23	
9,177.0	1.06	285.74	9,176.6	5,484.6	-4.2	-7.0	4.1	0.35	461,845.42	769,080.85	
9,272.0	1.06	20.53	9,271.6	5,579.6	-3.1	-7.5	3.1	1.64	461,846.48	769,080.32	
9,367.0	0.97	26.22	9,366.5	5,674.5	-1.6	-6.9	1.5	0.14	461,848.03	769,080.98	
9,462.0	1.06	43.72	9,461.5	5,769.5	-0.2	-5.9	0.2	0.34	461,849.38	769,081.94	
9,557.0	1.58	79.28	9,556.5	5,864.5	0.7	-4.0	-0.7	1.00	461,850.26	769,083.84	
9,652.0	1.76	89.62	9,651.5	5,959.5	0.9	-1.3	-0.9	0.37	461,850.52	769,086.58	
9,747.0	1.85	111.71	9,746.4	6,054.4	0.4	1.6	-0.4	0.73	461,849.96	769,089.46	
9,841.0	1.41	138.34	9,840.4	6,148.4	-1.1	3.8	1.1	0.92	461,848.53	769,091.64	



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9,936.0	0.44	110.24	9,935.4	6,243.4	-2.1	4.9	2.1	1.10	461,847.53	769,092.76	
10,031.0	0.88	17.22	10,030.4	6,338.4	-1.5	5.5	1.5	1.06	461,848.10	769,093.32	
10,126.0	1.41	320.68	10,125.3	6,433.3	0.1	4.9	-0.1	1.24	461,849.70	769,092.80	
10,220.0	1.14	308.92	10,219.3	6,527.3	1.6	3.5	-1.6	0.40	461,851.19	769,091.34	
10,314.0	1.06	310.92	10,313.3	6,621.3	2.8	2.1	-2.7	0.09	461,852.34	769,089.95	
10,410.0	0.97	341.88	10,409.3	6,717.3	4.1	1.2	-4.1	0.57	461,853.70	769,089.03	
10,534.0	0.88	322.13	10,533.3	6,841.3	5.9	0.3	-5.9	0.27	461,855.45	769,088.12	
10,611.0	0.88	290.26	10,610.3	6,918.3	6.5	-0.7	-6.5	0.63	461,856.12	769,087.20	
10,691.0	5.19	180.38	10,690.2	6,998.2	3.1	-1.3	-3.1	6.94	461,852.71	769,086.60	
KOP - 10691.0' MD, 10690.2' TVD, 3.1' N, -1.3' E											
10,722.0	9.32	182.83	10,720.9	7,028.9	-0.8	-1.4	0.8	13.36	461,848.80	769,086.46	
10,754.0	13.81	182.86	10,752.2	7,060.2	-7.2	-1.7	7.2	14.03	461,842.39	769,086.15	
10,786.0	16.80	180.19	10,783.1	7,091.1	-15.6	-1.9	15.6	9.60	461,833.95	769,085.94	
10,817.0	19.43	176.15	10,812.6	7,120.6	-25.3	-1.6	25.2	9.40	461,824.33	769,086.27	
10,849.0	23.48	175.35	10,842.3	7,150.3	-36.9	-0.7	36.9	12.69	461,812.66	769,087.15	
10,881.0	27.35	176.89	10,871.2	7,179.2	-50.6	0.2	50.6	12.27	461,798.96	769,088.06	
10,913.0	31.22	179.93	10,899.1	7,207.1	-66.3	0.6	66.3	12.95	461,783.32	769,088.47	
10,945.0	34.65	182.80	10,926.0	7,234.0	-83.7	0.2	83.7	11.77	461,765.93	769,088.04	
10,976.0	39.39	183.25	10,950.7	7,258.7	-102.3	-0.8	102.3	15.32	461,747.30	769,087.05	
11,008.0	43.97	183.57	10,974.6	7,282.6	-123.5	-2.1	123.5	14.33	461,726.06	769,085.78	
11,040.0	47.04	182.11	10,997.1	7,305.1	-146.3	-3.2	146.3	10.13	461,703.27	769,084.66	
11,071.0	50.39	180.95	11,017.5	7,325.5	-169.6	-3.8	169.6	11.17	461,679.99	769,084.04	
11,103.0	53.46	180.51	11,037.2	7,345.2	-194.8	-4.1	194.8	9.65	461,654.80	769,083.72	
11,135.0	56.01	180.51	11,055.7	7,363.7	-220.9	-4.4	220.9	7.97	461,628.68	769,083.49	
11,167.0	59.44	180.30	11,072.8	7,380.8	-248.0	-4.6	247.9	10.73	461,601.63	769,083.30	
11,199.0	63.49	179.53	11,088.1	7,396.1	-276.1	-4.5	276.0	12.83	461,573.52	769,083.34	
11,230.0	66.57	179.33	11,101.2	7,409.2	-304.2	-4.2	304.1	9.95	461,545.42	769,083.62	



Pathfinder PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Lea County(NAD 83)
Site: Hemlock "BSH" State
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well #1H
KB = 25 @ 3692.0usft (Cactus 124)
KB = 25 @ 3692.0usft (Cactus 124)
Grid
Minimum Curvature
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)	
11,262.0	68.68	179.28	11,113.4	7,421.4	-333.7	-3.9	333.7	6.60	461,515.83	769,083.98	
11,294.0	71.40	179.44	11,124.3	7,432.3	-363.8	-3.5	363.8	8.51	461,485.76	769,084.32	
11,325.0	72.81	178.91	11,133.8	7,441.8	-393.3	-3.1	393.3	4.83	461,456.26	769,084.74	
11,357.0	75.10	178.92	11,142.6	7,450.6	-424.1	-2.5	424.0	7.16	461,425.52	769,085.33	
11,388.0	78.52	178.63	11,149.7	7,457.7	-454.2	-1.9	454.2	11.07	461,395.35	769,085.97	
11,420.0	81.60	178.70	11,155.2	7,463.2	-485.7	-1.2	485.7	9.63	461,363.84	769,086.71	
11,452.0	83.71	178.62	11,159.3	7,467.3	-517.5	-0.4	517.5	6.60	461,332.11	769,087.45	
11,474.0	85.65	177.79	11,161.4	7,469.4	-539.4	0.3	539.4	9.58	461,310.22	769,088.14	
11,506.0	88.99	178.06	11,162.9	7,470.9	-571.3	1.4	571.3	10.47	461,278.28	769,089.29	
11,537.0	90.57	177.37	11,163.0	7,471.0	-602.3	2.7	602.3	5.56	461,247.31	769,090.53	
LP -11537.0 'MD, 11163.0 'TVD, -602.3 'N, 2.7 'E											
11,601.0	90.04	177.64	11,162.6	7,470.6	-666.2	5.5	666.2	0.93	461,183.37	769,093.31	
11,696.0	89.87	177.45	11,162.7	7,470.7	-761.1	9.5	761.2	0.27	461,088.46	769,097.38	
11,791.0	90.48	178.60	11,162.4	7,470.4	-856.1	12.8	856.1	1.37	460,993.52	769,100.66	
11,886.0	90.66	179.79	11,161.5	7,469.5	-951.1	14.1	951.1	1.27	460,898.53	769,101.99	
11,981.0	90.57	179.92	11,160.5	7,468.5	-1,046.0	14.4	1,046.1	0.17	460,803.54	769,102.23	
12,076.0	90.92	180.33	11,159.2	7,467.2	-1,141.0	14.2	1,141.1	0.57	460,708.55	769,102.03	
12,172.0	90.31	181.16	11,158.2	7,466.2	-1,237.0	12.9	1,237.1	1.07	460,612.56	769,100.78	
12,266.0	88.81	180.77	11,158.9	7,466.9	-1,331.0	11.3	1,331.1	1.65	460,518.58	769,099.19	
12,361.0	88.81	181.49	11,160.9	7,468.9	-1,426.0	9.5	1,426.0	0.76	460,423.62	769,097.32	
12,456.0	89.43	181.46	11,162.4	7,470.4	-1,520.9	7.0	1,520.9	0.65	460,328.66	769,094.88	
12,552.0	89.08	181.37	11,163.6	7,471.6	-1,616.9	4.6	1,616.9	0.38	460,232.70	769,092.51	
12,647.0	90.31	180.51	11,164.1	7,472.1	-1,711.9	3.1	1,711.8	1.58	460,137.72	769,090.95	
12,742.0	90.84	180.47	11,163.2	7,471.2	-1,806.9	2.3	1,806.8	0.56	460,042.73	769,090.13	
12,837.0	90.48	179.01	11,162.1	7,470.1	-1,901.8	2.7	1,901.8	1.58	459,947.74	769,090.57	
12,932.0	91.71	178.98	11,160.2	7,468.2	-1,996.8	4.4	1,996.8	1.30	459,852.77	769,092.23	
13,026.0	90.57	178.52	11,158.4	7,466.4	-2,090.8	6.4	2,090.8	1.31	459,758.81	769,094.28	



Pathfinder PathfinderX & Y Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County(NAD 83)	TVD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Site:	Hemlock "BSH" State	MD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Well:	#1H	North Reference:	Grid
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)
13,121.0	92.07	179.50	11,156.2	7,464.2	-2,185.7	8.1	2,185.7	1.89	459,663.86	769,095.92
13,216.0	92.33	179.83	11,152.5	7,460.5	-2,280.7	8.6	2,280.7	0.44	459,568.93	769,096.48
13,312.0	91.63	179.85	11,149.2	7,457.2	-2,376.6	8.9	2,376.6	0.73	459,472.99	769,096.75
13,406.0	91.89	180.42	11,146.3	7,454.3	-2,470.6	8.7	2,470.6	0.67	459,379.03	769,096.52
13,502.0	91.19	178.73	11,143.8	7,451.8	-2,566.5	9.4	2,566.5	1.90	459,283.07	769,097.24
13,596.0	91.01	179.04	11,142.0	7,450.0	-2,660.5	11.2	2,660.5	0.38	459,189.11	769,099.07
13,690.0	90.22	179.25	11,140.9	7,448.9	-2,754.5	12.6	2,754.5	0.87	459,095.12	769,100.47
13,785.0	90.40	179.00	11,140.4	7,448.4	-2,849.4	14.1	2,849.5	0.32	459,000.14	769,101.92
13,880.0	90.66	178.70	11,139.6	7,447.6	-2,944.4	16.0	2,944.5	0.42	458,905.16	769,103.83
13,975.0	90.92	179.23	11,138.2	7,446.2	-3,039.4	17.7	3,039.4	0.62	458,810.18	769,105.54
14,070.0	92.42	179.68	11,135.5	7,443.5	-3,134.4	18.6	3,134.4	1.65	458,715.23	769,106.44
14,165.0	92.95	179.80	11,131.0	7,439.0	-3,229.2	19.0	3,229.3	0.57	458,620.34	769,106.88
14,260.0	91.80	180.04	11,127.1	7,435.1	-3,324.2	19.1	3,324.2	1.24	458,525.42	769,107.01
14,355.0	91.63	179.91	11,124.2	7,432.2	-3,419.1	19.2	3,419.2	0.23	458,430.46	769,107.05
14,449.0	90.57	179.48	11,122.4	7,430.4	-3,513.1	19.7	3,513.2	1.22	458,336.48	769,107.55
14,544.0	90.57	179.11	11,121.5	7,429.5	-3,608.1	20.9	3,608.1	0.39	458,241.50	769,108.72
14,638.0	92.24	179.77	11,119.2	7,427.2	-3,702.1	21.8	3,702.1	1.91	458,147.53	769,109.64
14,731.0	91.36	179.85	11,116.3	7,424.3	-3,795.0	22.1	3,795.1	0.95	458,054.58	769,109.95
14,825.0	91.10	180.16	11,114.3	7,422.3	-3,889.0	22.1	3,889.0	0.43	457,960.60	769,109.94
14,920.0	91.45	179.53	11,112.1	7,420.1	-3,984.0	22.3	3,984.0	0.76	457,865.63	769,110.19
15,014.0	91.63	179.70	11,109.6	7,417.6	-4,077.9	23.0	4,078.0	0.26	457,771.66	769,110.83
15,109.0	91.63	179.83	11,106.9	7,414.9	-4,172.9	23.4	4,172.9	0.14	457,676.70	769,111.21
15,203.0	91.54	178.74	11,104.3	7,412.3	-4,266.8	24.5	4,266.9	1.16	457,582.75	769,112.39
15,298.0	91.45	179.87	11,101.8	7,409.8	-4,361.8	25.7	4,361.9	1.19	457,487.79	769,113.54
15,392.0	91.45	179.98	11,099.5	7,407.5	-4,455.8	25.8	4,455.8	0.12	457,393.82	769,113.66
15,473.0	91.54	179.90	11,097.3	7,405.3	-4,536.7	25.9	4,536.8	0.15	457,312.85	769,113.75



Pathfinder
PathfinderX & Y Report

PATHFINDER
A Schlumberger Company

Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County(NAD 83)	TVD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Site:	Hemlock "BSH" State	MD Reference:	KB = 25 @ 3692.0usft (Cactus 124)
Well:	#1H	North Reference:	Grid
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)
15,532.0	91.54	179.90	11,095.8	7,403.8	-4,595.7	26.0	4,595.8	0.00	457,253.87	769,113.85
PROJECTED BHL - 15532.0 'MD, 11095.8 'TVD, -4595.7 'N, 26.0 'E - FWL:652', FSL:355', FEL:668'										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,691.0	10,690.2	3.1	-1.3	KOP - 10691.0 'MD, 10690.2 'TVD, 3.1 'N, -1.3 'E
11,537.0	11,163.0	-602.3	2.7	LP - 11537.0 'MD, 11163.0 'TVD, -602.3 'N, 2.7 'E
15,532.0	11,095.8	-4,595.7	26.0	PROJECTED BHL - 15532.0 'MD, 11095.8 'TVD, -4595.7 'N, 26.0 'E
15,532.0	11,095.8	-4,595.7	26.0	FWL:652', FSL:355', FEL:668'

Checked By: _____	Approved By: _____	Date: _____
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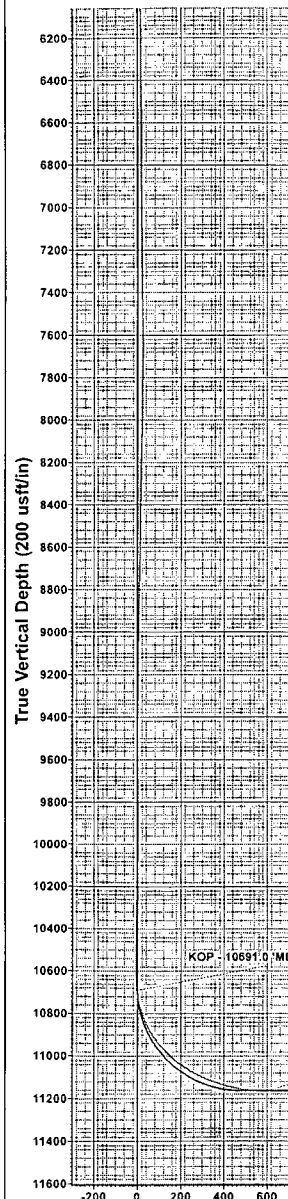
PROJECT DETAILS: Lea County(NAD 83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid



Azimuths to Grid North
True North: -0.39°
Magnetic North: 7.07°

Magnetic Field
Strength: 48574.7snT
Dip Angle: 60.22°
Date: 6/28/2012
Model: IGRF200510

PATHFINDER
A Schlumberger Company



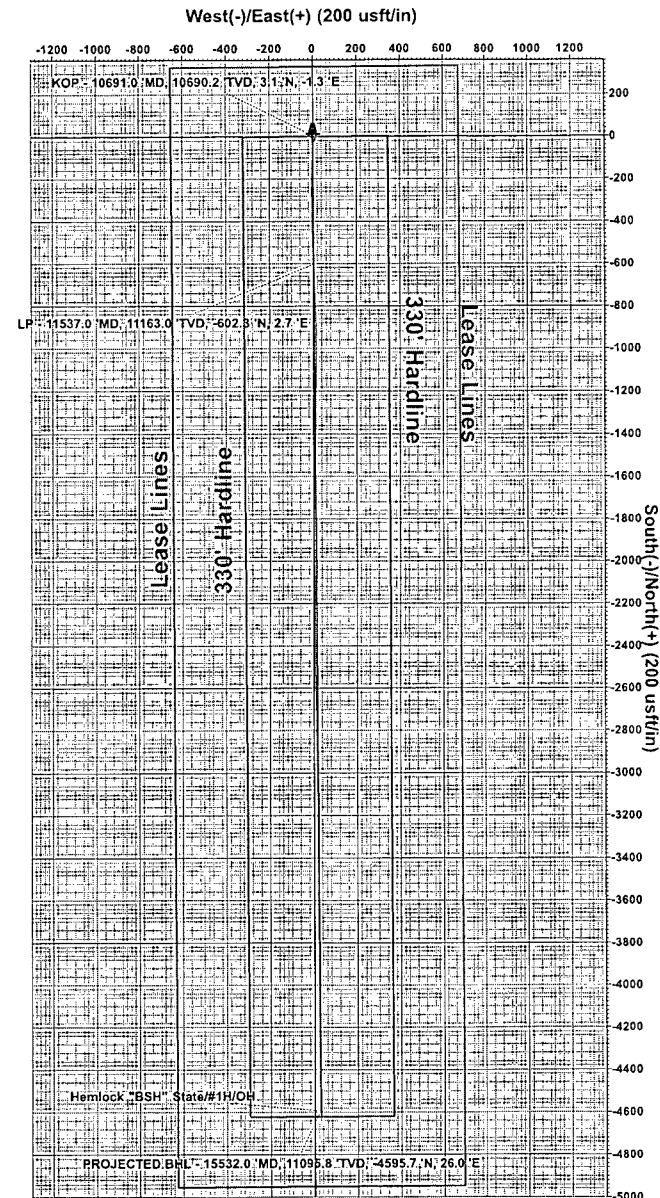
EOW

Project: Lea County(NAD 83)
Site: Hemlock "BSH" State
Well: #1H
Wellbore: OH
Plan: Plan #2 (#1H/OH)

WELL DETAILS: #1H						
Ground Elevation: 3667.0						
RKB Elevation: KB = 25 @ 3692.0usft (Cactus 124)						
Rig Name: Cactus 124						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	461849.584	769087.864	32.267550	-103.596488	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
PBHL(Hemlock #1H)	11162.0	-4620.8	31.1	457228.800	769118.920	

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Deg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	10684.5	0.00	0.00	10684.5	0.0	0.0	0.00	0.00	0.0	
3	11434.5	90.00	179.61	11162.0	-477.4	3.2	12.00	179.61	477.5	
4	15577.9	90.00	179.61	11162.0	-4620.8	31.1	0.00	0.00	4620.9	PBHL(Hemlock #1H)



Plan: Plan #2 (#1H/OH)

Created By: Sam Biffle Date: 9:17, September 17 2012

Checked: _____ Date: _____

Travis Petroleum Corp
Lea County(NAD 83)
Hemlock "BSH" State
Cactus 124
Plan #2



Job Number: SVCO-121196
 Company: Yates Petroleum Corporation
 Lease/Well: HEMLOCK BSH STATE 1H
 Location: Lea County, NM
 Rig Name: Cactus #124
 RKB: 25'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.07°
 Grid: East To Grid North
 File name: F:\SURVEY\2012SU-1\YATES\CONROE\HEMLOC-1\1H.SVY
 Date/Time: 27-Aug-12 / 14:28
 Curve Name: Surface - 600' M.D. (Rate Gyro)

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 179.61
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 600 MD is, to the best of
 our knowledge a true and accurate account of the
 well bore.
 Trey Finch 8/27/12
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.19	54.07	100.00	.10	.13	-.10	.17	54.07	.19
200.00	.18	70.31	200.00	.25	.42	-.24	.48	59.27	.05
300.00	.15	14.64	300.00	.43	.60	-.42	.73	54.44	.16
400.00	.19	72.15	400.00	.60	.79	-.60	.99	52.51	.17
500.00	.04	353.28	500.00	.69	.94	-.68	1.17	53.78	.19
Last Survey Depth Recorded									
600.00	.13	153.78	600.00	.62	.99	-.62	1.17	57.77	.17

WELL NAME: Hemlock BSH St #1H FIELD

LOCATION: Unit C, 330' FNL and 1980' FWL (Surf) Sec 32-23S-33E Lea County

GL: 3,667' ZERO: KB: 3,692'

SPUD DATE: 5/30/45 COMPLETION DATE:

COMMENTS: Resume Drl date: 8/21/12. API No.: 30-025-40489

CASING PROGRAM

13-3/8" 48# J-55 St&C	657'
9-5/8" 40# HCK-55 & 36# J-55	5,185'
5 1/2" 17# P-110 LT&C & Buttress (Buttress from 10,556' to TD)	15,530'

