



Yates Petroleum Corp.

Eddy County
Juniper "BIP" Federal
#10H
OH



Survey: MWD #1

Pathfinder X & Y Survey Report

21 September, 2010



A Schlumberger Company



Pathfinder
Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County
Site: Juniper "BIP" Federal
Well: #10H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #10H
TVD Reference: WELL @ 3082.00ft (18' KB Silver Oak #10)
MD Reference: WELL @ 3082.00ft (18' KB Silver Oak #10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

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 Juniper "BIP" Federal

Site Position:		Northing:	452,382.500 ft	Latitude:	32° 14' 35.626 N
From:	Map	Easting:	645,120.500 ft	Longitude:	103° 59' 51.534 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.18 °

Well #10H

Well Position	+N/-S	0.00 ft	Northing:	456,020.528 ft	Latitude:	32° 15' 11.609 N
	+E/-W	0.00 ft	Easting:	645,686.911 ft	Longitude:	103° 59' 44.805 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	3,064.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/26/10	7.88	60.16	48,669

Design OH

Audit Notes:

Version: 1.0 Phase: ACTUAL Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	94.33

Survey Program Date 09/21/10

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
95.00	10,673.00	MWD #1 (OH)	MWD	MWD - Standard



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0.00	0.00	0.00	0.00	-3,082.00	0.00	0.00	0.00	0.00	456,020.53	645,686.91
95.00	0.35	335.15	95.00	-2,987.00	0.26	-0.12	-0.14	0.37	456,020.79	645,686.79
215.00	0.44	294.81	215.00	-2,867.00	0.79	-0.69	-0.75	0.24	456,021.32	645,686.22
399.00	1.23	307.36	398.98	-2,683.02	2.28	-2.91	-3.07	0.44	456,022.81	645,684.01
552.00	1.76	305.36	551.92	-2,530.08	4.64	-6.13	-6.46	0.35	456,025.17	645,680.78
703.00	0.44	131.89	702.90	-2,379.10	5.60	-7.59	-7.99	1.46	456,026.12	645,679.32
890.00	2.90	174.42	889.81	-2,192.19	0.41	-6.59	-6.60	1.39	456,020.93	645,680.32
1,076.00	1.85	165.42	1,075.65	-2,006.35	-7.18	-5.38	-4.82	0.60	456,013.35	645,681.53
1,169.00	1.06	108.34	1,168.63	-1,913.37	-8.91	-4.18	-3.50	1.67	456,011.62	645,682.73
1,262.00	0.70	42.16	1,261.62	-1,820.38	-8.75	-2.99	-2.32	1.08	456,011.77	645,683.93
1,356.00	1.76	353.68	1,355.60	-1,726.40	-6.89	-2.76	-2.23	1.49	456,013.63	645,684.15
1,448.00	2.20	13.48	1,447.54	-1,634.46	-3.77	-2.50	-2.21	0.88	456,016.75	645,684.41
1,541.00	1.67	24.86	1,540.49	-1,541.51	-0.81	-1.52	-1.45	0.70	456,019.72	645,685.39
1,634.00	0.88	34.35	1,633.46	-1,448.54	1.01	-0.54	-0.62	0.88	456,021.54	645,686.37
1,728.00	0.88	60.30	1,727.45	-1,354.55	1.97	0.49	0.34	0.42	456,022.49	645,687.40
1,820.00	1.41	66.16	1,819.43	-1,262.57	2.77	2.14	1.92	0.59	456,023.30	645,689.05
1,913.00	1.49	79.42	1,912.41	-1,169.59	3.46	4.37	4.10	0.37	456,023.99	645,691.28
2,006.00	1.93	84.41	2,005.36	-1,076.64	3.83	7.12	6.81	0.50	456,024.36	645,694.03
2,099.00	1.41	88.34	2,098.32	-983.68	4.02	9.82	9.49	0.57	456,024.55	645,696.73
2,193.00	1.32	126.46	2,192.30	-889.70	3.41	11.85	11.56	0.95	456,023.94	645,698.76
2,287.00	2.73	122.38	2,286.24	-795.76	1.57	14.61	14.45	1.51	456,022.09	645,701.52
2,380.00	3.69	100.95	2,379.09	-702.91	-0.19	19.42	19.38	1.64	456,020.34	645,706.33
2,474.00	3.87	96.66	2,472.89	-609.11	-1.13	25.54	25.55	0.36	456,019.40	645,712.45
2,569.00	4.04	92.87	2,567.66	-514.34	-1.67	32.07	32.10	0.33	456,018.86	645,718.98
2,663.00	3.34	120.79	2,661.48	-420.52	-3.24	37.73	37.86	2.03	456,017.29	645,724.64
2,757.00	2.73	173.83	2,755.36	-326.64	-6.87	40.32	40.72	2.94	456,013.66	645,727.23
2,850.00	3.17	186.45	2,848.24	-233.76	-11.62	40.27	41.03	0.84	456,008.90	645,727.18



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2,969.00	2.81	196.76	2,967.08	-114.92	-17.69	39.06	40.28	0.54	456,002.84	645,725.97
3,069.00	1.14	194.39	3,067.01	-14.99	-21.00	38.11	39.58	1.67	455,999.53	645,725.02
3,196.00	1.32	263.47	3,193.99	111.99	-22.39	36.34	37.92	1.10	455,998.14	645,723.25
3,385.00	0.97	5.35	3,382.97	300.97	-21.04	34.32	35.81	0.95	455,999.49	645,721.23
3,576.00	0.79	116.48	3,573.96	491.96	-20.02	35.65	37.06	0.76	456,000.51	645,722.56
3,766.00	0.26	127.30	3,763.95	681.95	-20.86	37.17	38.64	0.28	455,999.66	645,724.08
3,956.00	0.53	78.79	3,953.94	871.94	-20.96	38.37	39.85	0.21	455,999.57	645,725.28
4,146.00	0.53	48.85	4,143.93	1,061.93	-20.21	39.90	41.31	0.14	456,000.32	645,726.81
4,337.00	0.26	106.07	4,334.93	1,252.93	-19.74	40.98	42.35	0.23	456,000.78	645,727.89
4,527.00	0.26	283.32	4,524.93	1,442.93	-19.76	40.97	42.35	0.27	456,000.76	645,727.88
4,717.00	0.53	271.12	4,714.93	1,632.93	-19.65	39.68	41.05	0.15	456,000.88	645,726.59
4,907.00	0.44	239.87	4,904.92	1,822.92	-20.00	38.17	39.57	0.14	456,000.53	645,725.08
5,097.00	0.44	336.61	5,094.92	2,012.92	-19.69	37.25	38.63	0.35	456,000.83	645,724.16
5,287.00	0.62	315.01	5,284.91	2,202.91	-18.30	36.23	37.51	0.14	456,002.23	645,723.14
5,477.00	0.79	221.79	5,474.90	2,392.90	-18.55	34.63	35.93	0.54	456,001.98	645,721.54
5,668.00	0.70	335.95	5,665.89	2,583.89	-18.46	33.28	34.58	0.66	456,002.06	645,720.19
5,858.00	0.70	307.82	5,855.88	2,773.88	-16.69	31.89	33.06	0.18	456,003.84	645,718.80
6,048.00	0.44	340.00	6,045.87	2,963.87	-15.29	30.72	31.79	0.21	456,005.23	645,717.63
6,115.00	0.53	270.37	6,112.86	3,030.86	-15.05	30.32	31.37	0.83	456,005.48	645,717.23
6,208.00	1.67	94.00	6,205.85	3,123.85	-15.14	31.24	32.30	2.36	456,005.39	645,718.16
6,240.00	4.66	90.90	6,237.80	3,155.80	-15.20	33.01	34.06	9.36	456,005.33	645,719.92
6,271.00	7.91	90.84	6,268.61	3,186.61	-15.25	36.40	37.45	10.48	456,005.28	645,723.31
6,302.00	10.99	90.49	6,299.19	3,217.19	-15.30	41.49	42.53	9.94	456,005.22	645,728.40
6,333.00	14.42	90.41	6,329.42	3,247.42	-15.36	48.31	49.33	11.06	456,005.17	645,735.22
6,365.00	17.67	91.02	6,360.17	3,278.17	-15.47	57.15	58.16	10.17	456,005.06	645,744.06
6,396.00	21.28	92.14	6,389.39	3,307.39	-15.76	67.48	68.48	11.71	456,004.76	645,754.39
6,427.00	25.15	94.02	6,417.88	3,335.88	-16.44	79.68	80.69	12.71	456,004.09	645,766.59



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6,458.00	29.19	95.94	6,445.45	3,363.45	-17.68	93.77	94.84	13.33	456,002.85	645,780.68
6,489.00	33.77	98.54	6,471.89	3,389.89	-19.74	109.82	111.00	15.41	456,000.78	645,796.73
6,520.00	38.08	100.59	6,496.98	3,414.98	-22.78	127.75	129.10	14.43	455,997.75	645,814.66
6,551.00	42.74	101.64	6,520.58	3,438.58	-26.66	147.46	149.05	15.19	455,993.86	645,834.37
6,583.00	46.96	101.43	6,543.26	3,461.26	-31.17	169.57	171.44	13.20	455,989.35	645,856.48
6,614.00	51.18	100.64	6,563.57	3,481.57	-35.65	192.55	194.69	13.75	455,984.88	645,879.46
6,645.00	55.31	99.50	6,582.11	3,500.11	-39.99	217.00	219.40	13.64	455,980.54	645,903.91
6,676.00	59.18	99.39	6,598.88	3,516.88	-44.26	242.71	245.36	12.49	455,976.26	645,929.62
6,707.00	62.96	99.40	6,613.88	3,531.88	-48.69	269.47	272.38	12.19	455,971.84	645,956.39
6,739.00	66.92	99.38	6,627.43	3,545.43	-53.42	298.07	301.25	12.38	455,967.11	645,984.98
6,770.00	71.14	99.60	6,638.52	3,556.52	-58.19	326.61	330.07	13.63	455,962.34	646,013.52
6,801.00	75.19	99.17	6,647.50	3,565.50	-63.03	355.88	359.62	13.13	455,957.50	646,042.79
6,832.00	78.70	98.46	6,654.50	3,572.50	-67.65	385.72	389.72	11.54	455,952.87	646,072.63
6,858.00	81.78	98.20	6,658.91	3,576.91	-71.37	411.07	415.28	11.89	455,949.16	646,097.98
6,889.00	84.68	97.67	6,662.56	3,580.56	-75.61	441.55	446.00	9.51	455,944.91	646,128.47
6,920.00	85.82	98.26	6,665.13	3,583.13	-79.90	472.15	476.83	4.14	455,940.63	646,159.06
7,014.00	87.23	97.79	6,670.82	3,588.82	-92.99	565.05	570.46	1.58	455,927.53	646,251.97
7,108.00	89.78	97.53	6,673.28	3,591.28	-105.52	658.18	664.26	2.73	455,915.01	646,345.09
7,202.00	89.87	97.76	6,673.56	3,591.56	-118.02	751.34	758.11	0.26	455,902.51	646,438.25
7,295.00	88.55	96.09	6,674.85	3,592.85	-129.23	843.65	851.00	2.29	455,891.29	646,530.56
7,389.00	87.05	93.78	6,678.45	3,596.45	-137.32	937.22	944.91	2.93	455,883.21	646,624.13
7,482.00	87.58	93.72	6,682.81	3,600.81	-143.39	1,029.92	1,037.81	0.57	455,877.14	646,716.83
7,576.00	86.88	93.26	6,687.35	3,605.35	-149.11	1,123.64	1,131.69	0.89	455,871.42	646,810.55
7,668.00	90.48	92.40	6,689.47	3,607.47	-153.65	1,215.48	1,223.61	4.02	455,866.88	646,902.39
7,762.00	90.22	92.44	6,688.90	3,606.90	-157.62	1,309.40	1,317.56	0.28	455,862.91	646,996.31
7,855.00	89.52	92.58	6,689.11	3,607.11	-161.69	1,402.31	1,410.51	0.77	455,858.84	647,089.22
7,949.00	88.29	92.43	6,690.91	3,608.91	-165.80	1,496.20	1,504.45	1.32	455,854.73	647,183.11



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8,042.00	87.76	92.13	6,694.11	3,612.11	-169.49	1,589.07	1,597.33	0.65	455,851.03	647,275.98
8,134.00	88.55	91.84	6,697.07	3,615.07	-172.68	1,680.97	1,689.20	0.91	455,847.85	647,367.88
8,227.00	89.25	92.61	6,698.86	3,616.86	-176.29	1,773.88	1,782.12	1.12	455,844.24	647,460.79
8,320.00	89.60	93.08	6,699.79	3,617.79	-180.90	1,866.76	1,875.09	0.63	455,839.62	647,553.67
8,413.00	89.60	93.30	6,700.44	3,618.44	-186.08	1,959.61	1,968.07	0.24	455,834.45	647,646.52
8,506.00	88.81	93.73	6,701.73	3,619.73	-191.78	2,052.43	2,061.05	0.97	455,828.75	647,739.34
8,600.00	89.52	93.37	6,703.10	3,621.10	-197.60	2,146.23	2,155.03	0.85	455,822.93	647,833.15
8,693.00	89.34	93.91	6,704.03	3,622.03	-203.50	2,239.04	2,248.02	0.61	455,817.02	647,925.95
8,786.00	89.69	94.61	6,704.81	3,622.81	-210.41	2,331.78	2,341.01	0.84	455,810.12	648,018.69
8,880.00	91.19	95.19	6,704.09	3,622.09	-218.44	2,425.43	2,435.00	1.71	455,802.09	648,112.34
8,998.00	90.48	95.91	6,702.37	3,620.37	-229.85	2,542.86	2,552.96	0.86	455,790.68	648,229.78
9,091.00	89.52	94.67	6,702.37	3,620.37	-238.43	2,635.47	2,645.94	1.69	455,782.10	648,322.38
9,185.00	88.72	94.99	6,703.82	3,621.82	-246.34	2,729.12	2,739.93	0.92	455,774.19	648,416.03
9,278.00	88.90	94.49	6,705.75	3,623.75	-254.02	2,821.78	2,832.91	0.57	455,766.51	648,508.69
9,372.00	88.81	94.00	6,707.63	3,625.63	-260.98	2,915.50	2,926.89	0.53	455,759.55	648,602.42
9,465.00	89.08	92.90	6,709.34	3,627.34	-266.57	3,008.32	3,019.86	1.22	455,753.95	648,695.23
9,559.00	89.60	92.15	6,710.42	3,628.42	-270.72	3,102.22	3,113.80	0.97	455,749.81	648,789.13
9,652.00	89.25	92.61	6,711.35	3,629.35	-274.58	3,195.13	3,206.75	0.62	455,745.95	648,882.05
9,745.00	89.78	92.78	6,712.14	3,630.14	-278.95	3,288.03	3,299.70	0.60	455,741.58	648,974.94
9,838.00	89.25	93.41	6,712.93	3,630.93	-283.97	3,380.89	3,392.68	0.89	455,736.56	649,067.80
9,932.00	90.48	93.56	6,713.15	3,631.15	-289.68	3,474.71	3,486.67	1.32	455,730.84	649,161.62
10,026.00	90.56	93.84	6,712.30	3,630.30	-295.75	3,568.51	3,580.66	0.31	455,724.78	649,255.42
10,119.00	89.96	93.39	6,711.87	3,629.87	-301.61	3,661.33	3,673.65	0.81	455,718.91	649,348.24
10,213.00	89.16	93.95	6,712.60	3,630.60	-307.63	3,755.13	3,767.64	1.04	455,712.90	649,442.04
10,305.00	89.34	93.92	6,713.80	3,631.80	-313.94	3,846.90	3,859.63	0.20	455,706.58	649,533.82
10,399.00	88.11	93.18	6,715.89	3,633.89	-319.76	3,940.70	3,953.59	1.53	455,700.77	649,627.61
10,493.00	88.37	93.28	6,718.78	3,636.78	-325.06	4,034.50	4,047.53	0.30	455,695.47	649,721.42



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10,586.00	88.88	93.06	6,721.01	3,639.01	-330.20	4,127.34	4,140.49	0.60	455,690.33	649,814.25
10,673.00	88.88	93.06	6,722.71	3,640.71	-334.84	4,214.19	4,227.45	0.00	455,685.69	649,901.11

BHL-10673.00°MD,88.88°INC,93.06°AZI, 6722.71'TVD, 4227.45°VS, -334.84°N, 4214.19°E

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(Jun#10)	0.00	0.00	6,720.00	-321.19	4,245.79	455,699.342	649,932.705	32° 15' 8.296 N	103° 58' 55.374 W
- survey misses target center by 34.53ft at 10673.00ft MD (6722.71 TVD, -334.84 N, 4214.19 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
10,673.00	6,722.71	-334.84	4,214.19	BHL-10673.00°MD,88.88°INC,93.06°AZI, 6722.71'TVD, 4227.45°VS, -334.84°N, 4214.19°E

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County
Site: Juniper "BIP" Federal
Well: #10H
Wellbore: OH
Plan: Plan #2 (#10H/OH)



Azimuths to Grid North
True North: -0.18°
Magnetic North: 7.70°

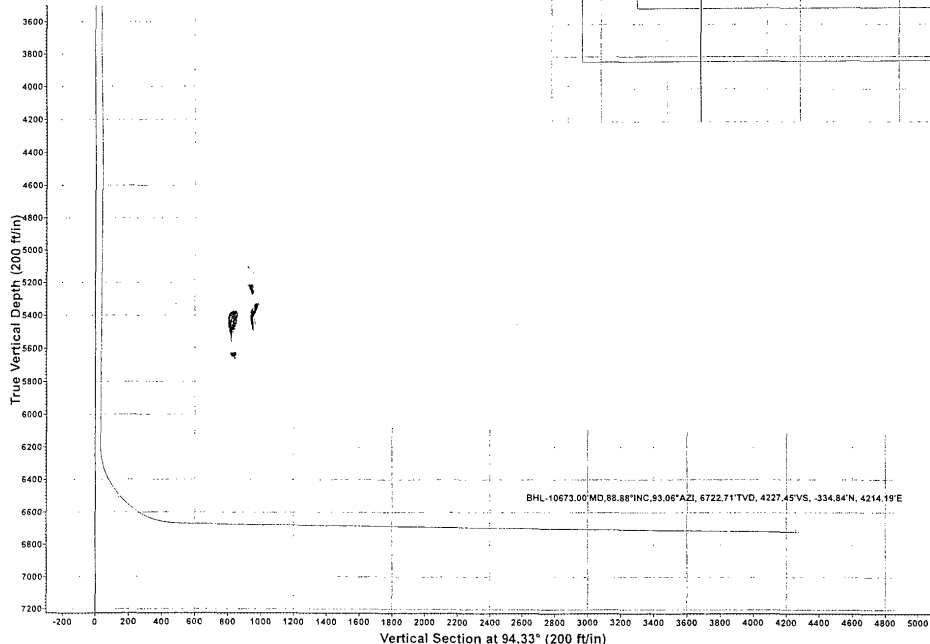
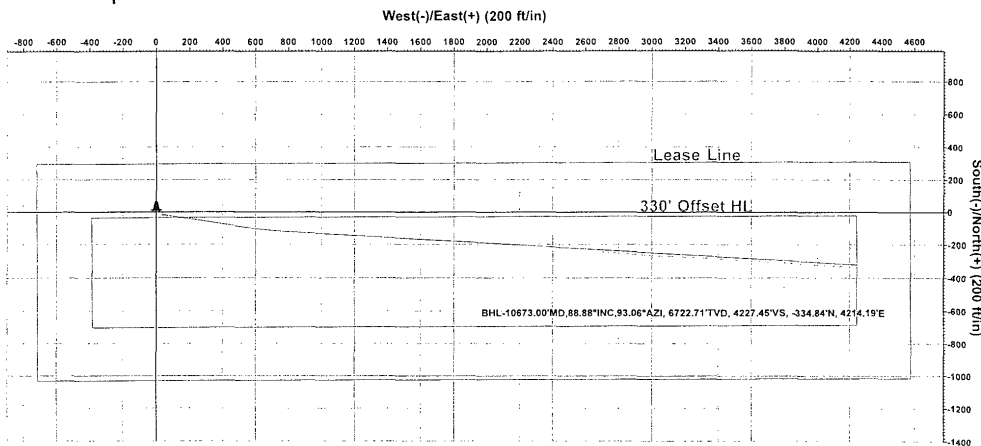
Magnetic Field
Strength: 48669.2snT
Dip Angle: 60.16°
Date: 08/26/2010
Model: IGRF2010

PATHFINDER

A Schlumberger Company

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

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	6142.00	0.11	106.27	6139.86	-15.06	30.22	0.00	0.00	31.27	
2	6193.50	0.11	106.27	6191.36	-15.09	30.32	0.00	0.00	31.37	
3	6935.57	89.24	99.00	6670.00	-89.23	497.72	11.95	-7.27	603.03	
4	7223.19	89.24	93.33	6673.77	-119.67	779.55	2.00	-90.07	786.36	
5	10695.59	89.24	93.33	6720.00	-321.19	4245.79	0.00	0.00	4257.93	PBHL(Jun#10)



WELL DETAILS: #10H							
Ground Elevation: 3064.00							
RKB Elevation: WELL @ 3082.00ft (15' KB Silver Oak #10)							
Rig Name: 15' KB Silver Oak #10							
+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot	
0.00	0.00	456020.528	645686.911	32° 15' 11.609 N	103° 59' 44.805 W		

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+N-S	+E-W	Northing	Easting	Shape
PBHL(Jun#10)	6720.00	-321.19	4245.79	455699.342	649932.705	Point

Plan: Plan #2 (#10H/OH)
Created By: Nate Bingham Date: 8:39, September 21 2010
Checked: _____ Date: _____