

30-005-64020

Yates Petroleum Corporation



Azimuths to Grid North
True North: -0.03°
Magnetic North: 8.32°

Magnetic Field
Strength: 49537.6snT
Dip Angle: 61.14°
Date: 6/12/2008
Model: IGRF200510

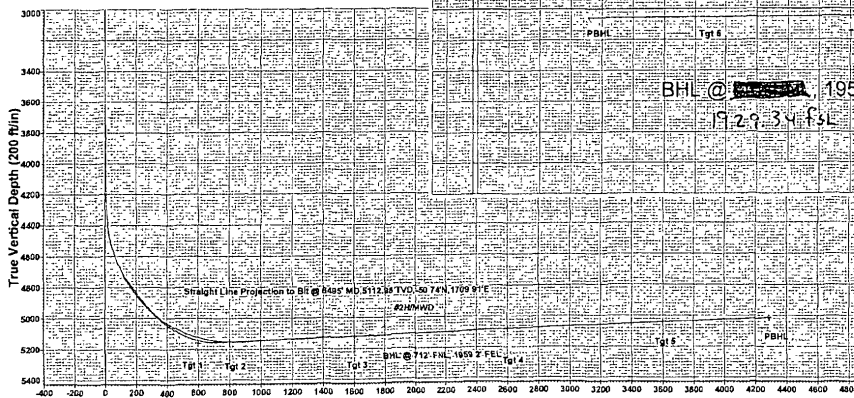
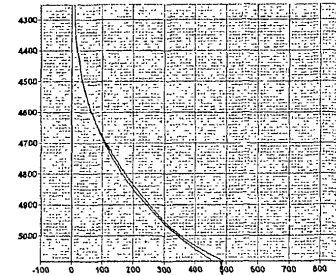


EOW

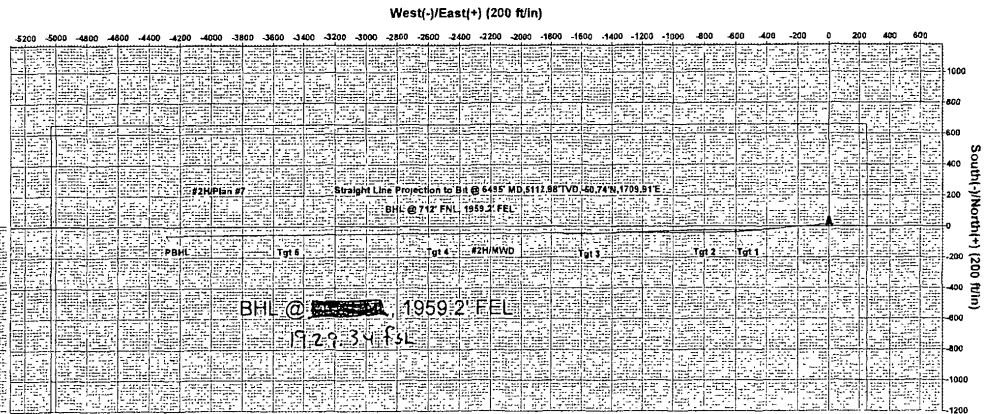
WELL DETAILS #2H					
Ground Elevation: 3748.00					
RKB Elevation: 2908.12.5' @ 3780 SOR (JW #4)					
Rig Name JW #4					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	838492.197	555828.990	33° 18' 17.830 N	104° 17' 9.240 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)					
Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL	5013.00	-54.00	-4287.44	838435.197	551541.246
Tgt 5	5040.00	-50.76	-3600.56	838441.427	552228.136
Tgt 4	5080.00	-46.05	-2801.37	838448.147	553227.320
Tgt 3	5120.00	-41.35	-1802.16	838450.847	554226.510
Tgt 2	5162.00	-37.58	-802.83	838454.617	555025.860
Tgt 1	5180.00	-36.64	-452.99	838456.557	555226.700

Project: Chaves County, NM
Site: Football BCF Federal
Well: #2H
Wellbore: ST 1
Survey: MWD (#2H/ST 1)



Vertical Section at 270.00° (200 ft/in)



PROJECT DETAILS: Chaves County, NM
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

Survey: MWD (#2H/ST 1)
Created By: Kate Bingham Date: 8/16/July 11 2008
Checked: _____ Date: _____

Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.	Local Co-ordinate Reference: Well #2H
Project: Chaves County, NM	TVD Reference: RKB 12.5' @ 3760.50ft (JW #4)
Site: Football BCF Federal	MD Reference: RKB 12.5' @ 3760.50ft (JW #4)
Well: #2H	North Reference: Grid
Wellbore: ST 1	Survey Calculation Method: Minimum Curvature
Design: ST 1	Database: EDM 2003.16 Single User Db

Project: Chaves County, NM	System Datum: Mean Sea Level
Map System: US State Plane 1983	
Geo Datum: North American Datum 1983	
Map Zone: New Mexico Eastern Zone	

Site: Football BCF Federal			
Site Position:	Northing: 838,492.197 ft	Latitude: 33° 18' 17.830 N	
From: Map	Easting: 555,828.690 ft	Longitude: 104° 17' 9.246 W	
Position Uncertainty: 0.00 ft	Slot Radius: "	Grid Convergence: 0.03 °	

Well: #2H			
Well Position +N/-S 0.00 ft	Northing: 838,492.197 ft	Latitude: 33° 18' 17.830 N	
+E/-W 0.00 ft	Easting: 555,828.690 ft	Longitude: 104° 17' 9.246 W	
Position Uncertainty 0.00 ft	Wellhead Elevation: ft	Ground Level: 3,748.00 ft	

Wellbore: ST 1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/12/2008	8.35	61.14	49,538

Design: ST 1

Audit Notes:				
Version: 1.0	Phase: ACTUAL	Tie On Depth: 4,300.00		
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	270.00

Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Chaves County, NM
Site: Football BCF Federal
Well: #2H
Wellbore: ST 1
Design: ST 1

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB 12.5' @ 3760.50ft (JW #4)
MD Reference: RKB 12.5' @ 3760.50ft (JW #4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey Program		Date 7/11/2008			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	4,300.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s	
4,309.00	6,495.00	MWD (ST 1)			

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
4,300.00	0.87	255.41	4,299.82	539.32	17.61	-11.14	11.14	0.00	838,509.81	555,817.55
4,309.00	2.55	262.68	4,308.81	548.31	17.57	-11.41	11.41	18.78	838,509.76	555,817.28
4,340.00	4.48	261.94	4,339.75	579.25	17.31	-13.29	13.29	6.23	838,509.51	555,815.40
4,371.00	5.89	263.12	4,370.63	610.13	16.95	-16.07	16.07	4.56	838,509.15	555,812.62
4,401.00	7.39	259.79	4,400.42	639.92	16.42	-19.49	19.49	5.16	838,508.62	555,809.20
4,431.00	9.06	260.02	4,430.11	669.61	15.67	-23.72	23.72	5.57	838,507.87	555,804.97
4,462.00	10.46	258.66	4,460.66	700.16	14.70	-28.88	28.88	4.58	838,506.89	555,799.81
4,493.00	12.75	260.15	4,491.03	730.53	13.56	-35.01	35.01	7.45	838,505.75	555,793.68
4,525.00	14.60	262.23	4,522.12	761.62	12.41	-42.49	42.49	5.98	838,504.60	555,786.20
4,556.00	16.62	263.47	4,551.98	791.48	11.37	-50.77	50.77	6.60	838,503.57	555,777.92
4,588.00	18.91	263.39	4,582.45	821.95	10.26	-60.46	60.46	7.16	838,502.45	555,768.23
4,620.00	21.19	262.86	4,612.51	852.01	8.94	-71.36	71.36	7.15	838,501.14	555,757.33
4,652.00	23.92	263.34	4,642.06	881.56	7.47	-83.54	83.54	8.55	838,499.67	555,745.15
4,683.00	26.91	263.80	4,670.05	909.55	5.98	-96.76	96.76	9.67	838,498.18	555,731.93
4,715.00	29.19	264.31	4,698.29	937.79	4.43	-111.72	111.72	7.16	838,496.62	555,716.97
4,747.00	31.22	265.12	4,725.95	965.45	2.95	-127.75	127.75	6.47	838,495.14	555,700.94
4,779.00	32.80	266.25	4,753.08	992.58	1.68	-144.67	144.67	5.28	838,493.87	555,684.02
4,810.00	33.94	266.01	4,778.97	1,018.47	0.52	-161.68	161.68	3.70	838,492.72	555,667.01
4,842.00	35.17	266.28	4,805.32	1,044.82	-0.70	-179.79	179.79	3.87	838,491.50	555,648.90
4,874.00	36.49	266.11	4,831.27	1,070.77	-1.94	-198.48	198.48	4.14	838,490.26	555,630.21
4,906.00	37.28	265.90	4,856.86	1,096.36	-3.28	-217.64	217.64	2.50	838,488.92	555,611.05

Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Chaves County, NM
Site: Football BCF Federal
Well: #2H
Wellbore: ST 1
Design: ST 1

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB 12.5' @ 3760.50ft (JW #4)
MD Reference: RKB 12.5' @ 3760.50ft (JW #4)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (ft/100ft)	Northing (ft)	Eastng (ft)
4,937.00	38.43	265.51	4,881.34	1,120.84	-4.70	-236.61	236.61	3.79	838,487.49	555,592.08
4,969.00	40.27	265.60	4,906.08	1,145.58	-6.28	-256.84	256.84	5.75	838,485.92	555,571.85
5,001.00	42.38	265.50	4,930.11	1,169.61	-7.91	-277.90	277.90	6.60	838,484.28	555,550.79
5,093.00	51.09	265.42	4,993.11	1,232.61	-13.22	-344.62	344.62	9.47	838,478.98	555,484.07
5,125.00	54.87	265.91	5,012.37	1,251.87	-15.14	-370.09	370.09	11.88	838,477.05	555,458.60
5,157.00	58.39	266.50	5,029.97	1,269.47	-16.91	-396.75	396.75	11.11	838,475.29	555,431.94
5,188.00	60.23	266.40	5,045.79	1,285.29	-18.56	-423.36	423.36	5.94	838,473.64	555,405.33
5,220.00	61.64	266.40	5,061.33	1,300.83	-20.32	-451.28	451.28	4.41	838,471.88	555,377.41
5,252.00	63.33	267.23	5,076.12	1,315.62	-21.89	-479.61	479.61	5.76	838,470.30	555,349.08
5,283.00	65.95	267.92	5,089.39	1,328.89	-23.08	-507.60	507.60	8.69	838,469.12	555,321.09
5,315.00	69.73	269.11	5,101.46	1,340.96	-23.84	-537.22	537.22	12.30	838,468.36	555,291.47
5,347.00	73.25	270.49	5,111.62	1,351.12	-23.94	-567.55	567.55	11.74	838,468.26	555,261.14
5,379.00	74.48	270.75	5,120.51	1,360.01	-23.61	-598.29	598.29	3.92	838,468.59	555,230.40
5,410.00	75.62	270.75	5,128.51	1,368.01	-23.22	-628.24	628.24	3.68	838,468.98	555,200.45
5,442.00	77.47	270.54	5,135.96	1,375.46	-22.87	-659.36	659.36	5.82	838,469.33	555,169.33
5,474.00	80.55	270.08	5,142.06	1,381.56	-22.70	-690.77	690.77	9.73	838,469.50	555,137.92
5,506.00	82.57	269.64	5,146.75	1,386.25	-22.77	-722.42	722.42	6.46	838,469.42	555,106.27
5,538.00	86.44	269.48	5,149.82	1,389.32	-23.02	-754.26	754.26	12.10	838,469.18	555,074.43
5,569.00	87.93	269.40	5,151.34	1,390.84	-23.32	-785.22	785.22	4.81	838,468.88	555,043.47
5,601.00	89.08	269.40	5,152.17	1,391.67	-23.66	-817.21	817.21	3.59	838,468.54	555,011.48
5,633.00	89.96	269.02	5,152.44	1,391.94	-24.10	-849.21	849.21	3.00	838,468.10	554,979.48
5,656.00	91.63	269.39	5,152.12	1,391.62	-24.42	-872.20	872.20	7.44	838,467.78	554,956.49
5,696.00	92.42	269.19	5,150.71	1,390.21	-24.91	-912.17	912.17	2.04	838,467.28	554,916.52
5,759.00	93.56	269.02	5,147.42	1,386.92	-25.90	-975.08	975.08	1.83	838,466.30	554,853.61
5,791.00	93.65	268.83	5,145.41	1,384.91	-26.49	-1,007.01	1,007.01	0.66	838,465.70	554,821.68
5,823.00	93.65	268.41	5,143.37	1,382.87	-27.26	-1,038.94	1,038.94	1.31	838,464.93	554,789.75
5,918.00	92.51	268.42	5,138.27	1,377.77	-29.89	-1,133.76	1,133.76	1.20	838,462.31	554,694.93

Pathfinder Energy Services
Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Chaves County, NM
Site: Football BCF Federal
Well: #2H
Wellbore: ST 1
Design: ST 1

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB 12.5' @ 3760.50ft (JW #4)
MD Reference: RKB 12.5' @ 3760.50ft (JW #4)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Survey											
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
5,981.00	92.24	268.21	5,135.66	1,375.16	-31.74	-1,196.68	1,196.68	0.54	838,460.46	554,632.01	
6,045.00	92.33	268.49	5,133.11	1,372.61	-33.58	-1,260.60	1,260.60	0.46	838,458.62	554,568.09	
6,140.00	91.98	267.91	5,129.53	1,369.03	-36.56	-1,355.49	1,355.49	0.71	838,455.64	554,473.20	
6,203.00	91.98	267.37	5,127.36	1,366.86	-39.15	-1,418.40	1,418.40	0.86	838,453.04	554,410.29	
6,298.00	91.89	267.20	5,124.15	1,363.65	-43.65	-1,513.23	1,513.23	0.20	838,448.55	554,315.46	
6,393.00	93.65	268.20	5,119.56	1,359.06	-47.46	-1,608.04	1,608.04	2.13	838,444.74	554,220.65	
6,495.00	93.65	268.20	5,113.07	1,352.57	-50.66	-1,709.78	1,709.79	0.00	838,441.54	554,118.91	
Straight Line Projection to Bit @ 6495' MD,5112.98'TVD,-50.74'N,1709.91'E - BHL @ 712' FNL, 1959.2' FEL											

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Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Chaves County, NM
Site: Football BCF Federal
Well: #2H
Wellbore: ST 1
Design: ST 1

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB 12.5' @ 3760.50ft (JW #4)
MD Reference: RKB 12.5' @ 3760.50ft (JW #4)
North Reference: Grid
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
Tgt 2 - survey misses by 14.07ft at 5586.77ft MD (5151.88 TVD, -23.51 N, -802.98 E) - Point	0.00	0.00	5,152.00	-37.58	-802.83	838,454.617	555,025.860	33° 18' 17.461 N	104° 17' 18.706 W
Tgt 4 - survey misses by 892.21ft at 6495.00ft MD (5113.07 TVD, -50.66 N, -1709.78 E) - Point	0.00	0.00	5,080.00	-46.05	-2,601.37	838,446.147	553,227.320	33° 18' 17.385 N	104° 17' 39.899 W
Tgt 1 - survey misses by 39.16ft at 5393.56ft MD (5124.34 TVD, -23.42 N, -612.34 E) - Point	0.00	0.00	5,160.00	-36.64	-602.99	838,455.557	555,225.700	33° 18' 17.470 N	104° 17' 16.352 W
PBHL - survey misses by 2579.60ft at 6495.00ft MD (5113.07 TVD, -50.66 N, -1709.78 E) - Point	0.00	0.00	5,013.00	-54.00	-4,287.44	838,438.197	551,541.248	33° 18' 17.312 N	104° 17' 59.767 W
Tgt 5 - survey misses by 1892.19ft at 6495.00ft MD (5113.07 TVD, -50.66 N, -1709.78 E) - Point	0.00	0.00	5,040.00	-50.76	-3,600.56	838,441.437	552,228.130	33° 18' 17.342 N	104° 17' 51.673 W
Tgt 3 - survey misses by 5.92ft at 6386.88ft MD (5119.94 TVD, -47.26 N, -1601.94 E) - Point	0.00	0.00	5,120.00	-41.35	-1,602.18	838,450.847	554,226.510	33° 18' 17.427 N	104° 17' 28.125 W

Survey Annotations:

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
6,495.00	5,113.07	-50.66	-1,709.78	Straight Line Projection to Bit @ 6495' MD, 5112.98' TVD, -50.74' N, 1709.
6,495.00	5,113.07	-50.66	-1,709.78	BHL @ 712' FNL, 1959.2' FEL

Checked By: _____ Approved By: _____ Date: _____