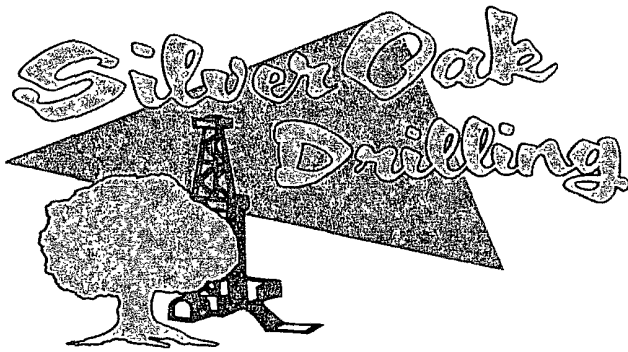
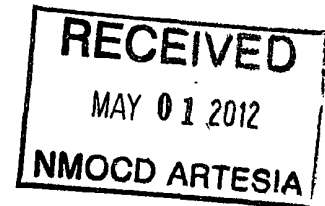




PO Box 1370
Artesia, NM 88211-1370
(505) 748-1288

30-015-37779



October 22, 2010

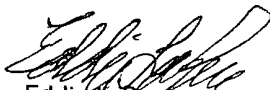
Yates Petroleum Corporation
105 S. 4th
Artesia, NM 88211-1395

RE: Tractor BPC Federal #1H
1310' FNL & 660' FWL
Sec. 20, T25S, R25E
Eddy County, New Mexico

Dear Sir,

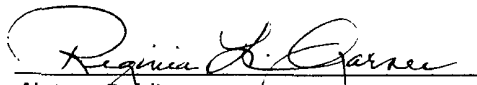
The attached is the Deviation Survey for the above captioned well.

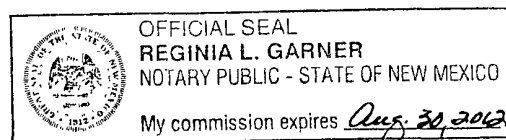
Very truly yours,


Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 22nd day of October, 2010.


Regina L. Garner
Notary Public



Pason DataHub Deviation Survey
 # Well Dossier 1285535075 - TRACTOR BPC FED#1-H
 #

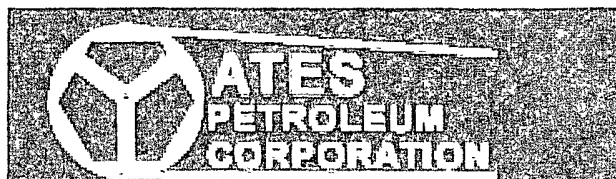
#	Date	Depth	Deviation	Direction	TVD	Horiz
	9/27/2010	220	0.60	0.00	0.00	0.00
	9/27/2010	360	0.70	0.00	0.00	0.00
	9/29/2010	430	1.06	166.89	0.00	0.00
	9/29/2010	522	0.62	206.19	0.00	0.00
	9/29/2010	704	0.26	212.59	0.00	0.00
	9/30/2010	894	0.53	32.12	0.00	0.00
	9/30/2010	1084	0.70	42.14	0.00	0.00
	9/30/2010	1274	0.35	111.50	0.00	0.00
	9/30/2010	1465	0.35	94.56	0.00	0.00
	9/30/2010	1582	0.53	63.89	0.00	0.00
	10/2/2010	1917	0.30	0.00	0.00	0.00
	10/3/2010	2393	0.50	0.00	0.00	0.00
	10/3/2010	2867	0.40	0.00	0.00	0.00
	10/3/2010	3344	0.90	0.00	0.00	0.00
	10/4/2010	3820	0.30	0.00	0.00	0.00
	10/4/2010	4320	1.20	0.00	0.00	0.00
	10/4/2010	4802	1.20	0.00	0.00	0.00
	10/4/2010	5278	1.70	0.00	0.00	0.00
	10/6/2010	5754	3.20	0.00	0.00	0.00
	10/6/2010	5975	3.70	0.00	0.00	0.00
	10/12/2010	4768	1.41	196.80	4767.76	0.00
	10/12/2010	4799	2.46	182.02	4798.00	0.00
	10/12/2010	4830	5.80	172.51	4829.66	0.00
	10/12/2010	4862	10.55	171.47	4861.37	0.00
	10/12/2010	4894	15.83	172.96	4892.42	0.00
	10/13/2010	4925	20.93	174.55	4921.00	0.00
	10/13/2010	4957	25.15	174.87	4951.00	0.00
	10/13/2010	4989	28.67	175.37	4979.00	0.00
	10/13/2010	5020	32.18	175.75	5006.00	0.00
	10/13/2010	5052	35.70	176.21	5033.00	0.00
	10/13/2010	5084	39.31	177.39	5058.00	0.00
	10/13/2010	5115	43.00	178.38	5081.00	0.00
	10/13/2010	5147	46.56	179.62	5104.00	0.00
	10/13/2010	5179	49.95	180.03	5125.00	0.00
	10/13/2010	5211	52.85	179.80	5145.84	0.00
	10/13/2010	5243	56.01	179.57	5164.45	0.00
	10/13/2010	5274	59.71	179.50	5180.00	0.00
	10/13/2010	5338	65.42	178.98	5210.30	0.00
	10/14/2010	5369	68.24	179.53	5222.00	0.00
	10/14/2010	5401	70.26	179.28	5233.00	0.00
	10/14/2010	5432	72.55	179.67	5243.00	0.00
	10/14/2010	5464	75.27	179.75	5252.00	0.00
	10/14/2010	5496	77.47	179.76	5260.00	0.00
	10/14/2010	5528	80.20	179.73	5266.30	0.00
	10/15/2010	5560	81.43	179.18	5271.00	0.00
	10/15/2010	5591	83.45	180.15	5275.00	0.00
	10/15/2010	5623	86.26	180.19	5278.00	0.00
	10/15/2010	5655	86.44	180.80	5280.00	627.00
	10/15/2010	5686	85.91	180.63	5282.00	658.00
	10/15/2010	5782	88.46	180.19	5287.00	753.00

Well Dossier 1285535075 - TRACTOR BPC FED#1-H

#

#	Date	Depth	Deviation	Direction	TVD	Horiz
	10/15/2010	5877	87.14	179.51	5290.00	848.00
	10/16/2010	5994	86.97	179.65	5294.30	915.00
	10/16/2010	6037	89.16	179.41	5297.47	1008.68
	10/16/2010	6130	88.20	179.79	5299.51	1101.65
	10/17/2010	6318	89.43	180.42	5302.60	1289.60
	10/17/2010	6399	89.34	179.71	5306.10	1370.50
	10/17/2010	6412	89.69	180.13	5303.36	1381.59
	10/17/2010	6505	88.81	180.38	5304.50	1476.00
	10/17/2010	6691	88.64	179.60	5307.00	1662.00
	10/17/2010	6785	89.34	180.80	5309.00	1756.00
	10/17/2010	6878	88.55	181.29	5311.00	1849.00
	10/17/2010	6972	89.52	181.54	5312.00	1943.00
	10/17/2010	7065	88.37	181.86	5314.00	2036.00
	10/17/2010	7159	88.90	181.29	5316.62	2130.60
	10/18/2010	7252	90.31	180.90	5317.26	2223.11
	10/18/2010	7345	89.34	181.08	5317.55	2316.07
	10/18/2010	7432	88.20	181.50	5319.00	2402.00
	10/19/2010	7532	89.52	181.11	5321.40	2502.91
	10/19/2010	7626	90.48	180.11	5321.40	2596.88
	10/19/2010	7719	89.69	180.70	5321.27	2689.87
	10/19/2010	7813	88.90	180.80	5322.42	2783.83
	10/19/2010	7906	89.60	180.74	5323.00	2876.00
	10/19/2010	8000	88.81	181.31	5325.00	2970.00
	10/19/2010	8094	89.60	180.91	5326.00	3064.00
	10/19/2010	8187	87.93	181.18	5328.20	3157.60
	10/19/2010	8281	87.76	180.67	5331.70	3251.00

EOF



Yates Petroleum Corp.

Eddy County
Tractor "BPC" Federal Com
#1H
OH

Survey: MWD #1

Pathfinder X & Y Survey Report

20 October, 2010



A Schlumberger Company



Pathfinder

Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County
Site: Tractor "BPC" Federal Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: RKBtoGL-18.5' @ 3615 50ft (Original Well Elev)
MD Reference: RKBtoGL-18 5' @ 3615 50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project: Eddy County
Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site: Tractor "BPC" Federal Com

Site Position: Northing: 407,291.707 ft Latitude: 32° 7' 10.889 N
From: Map Easting: 513,199.718 ft Longitude: 104° 25' 27.200 W
Position Uncertainty: 0 00 ft Slot Radius: " Grid Convergence: -0 05 °

Well: #1H

Well Position: +N/-S 0 00 ft Northing: 407,291.707 ft Latitude: 32° 7' 10.889 N
+E/-W 0 00 ft Easting: 513,199.718 ft Longitude: 104° 25' 27.200 W
Position Uncertainty: 0 00 ft Wellhead Elevation: ft Ground Level: 3,597.00 ft

Wellbore: OH

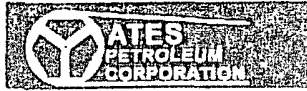
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/09/10	8 05	59.96	48,530

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	179.30



Pathfinder

Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
 Project: Eddy County
 Site: Tractor "BPC" Federal Com
 Well: #1H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #1H
 TVD Reference: RKBtoGL-18.5' @ 3615.50ft (Original Well Elev)
 MD Reference: RKBtoGL-18.5' @ 3615.50ft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Midland Database

Survey Program Date 10/20/10

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
200 00	4,600 00	GYRO (OH)	CB-GYRO-MS	Camera based gyro multishot
4,768 00	8,390 00	MWD #1 (OH)	MWD	MWD - Standard

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
4,600 00	1.25	190.34	4,599.81	984.31	-10 74	-0 12	10.74	0.00	407,280.97	513,199 60
KOP-4600.00'MD,1.25°INC,190.34°AZI,4599.81'TVD										
4,768.00	1 41	196 80	4,767.77	1,152 27	-14.52	-1.05	14.51	0.13	407,277.19	513,198.67
4,799 00	2 46	182 02	4,798 75	1,183 25	-15.55	-1.18	15 53	3.72	407,276 16	513,198.54
4,830 00	5 80	172.51	4,829 66	1,214.16	-17 77	-1.00	17 75	10 96	407,273 94	513,198.72
4,862.00	10 55	171.47	4,861 33	1,245.83	-22 27	-0 36	22.27	14 85	407,269.44	513,199 36
4,894.00	15 83	172 96	4,892.47	1,276 97	-29 50	0.61	29.51	16.53	407,262 20	513,200.33
4,925 00	20 93	174 55	4,921.88	1,306.38	-39 22	1.66	39 24	16.53	407,252 49	513,201 38
4,957 00	25.15	174.87	4,951.32	1,335.82	-51.69	2 81	51 72	13 19	407,240 02	513,202 53
4,989 00	28 67	175 37	4,979 85	1,364.35	-66.12	4.04	66 16	11 02	407,225.59	513,203 76
5,020.00	32 18	175.75	5,006 58	1,391 08	-81.77	5.25	81 82	11 34	407,209 94	513,204 97
5,052 00	35 70	176 21	5,033 13	1,417 63	-99 59	6.50	99.66	11 03	407,192 12	513,206 22
5,084.00	39 31	177.39	5,058 51	1,443 01	-119 03	7.58	119 12	11 50	407,172.67	513,207 30
5,115 00	43 00	178.38	5,081.84	1,466 34	-139 42	8.33	139 51	12 09	407,152.29	513,208 04
5,147 00	46 52	179 62	5,104 56	1,489.06	-161 94	8.71	162 04	11.33	407,129 77	513,208 43
5,179 00	49 95	180.03	5,125 87	1,510.37	-185 81	8.78	185 90	10.76	407,105 90	513,208.50
5,211.00	52 85	179 80	5,145 84	1,530 34	-210 81	8 82	210 90	9 08	407,080 89	513,208.54
5,243.00	56 01	179 57	5,164 45	1,548 95	-236.84	8 96	236 93	9 89	407,054.87	513,208 68
5,274 00	59.71	179.50	5,180 94	1,565 44	-263.08	9.18	263 17	11 94	407,028 63	513,208 90
5,306.00	62 70	179 47	5,196.35	1,580.85	-291.12	9 43	291 21	9.34	407,000.59	513,209.15
5,338.00	65 42	178 98	5,210 35	1,594 85	-319.89	9 82	319 99	8 61	406,971 82	513,209 54



Pathfinder

Pathfinder X & Y Survey Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp
Project: Eddy County
Site: Tractor "BPC" Federal Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: RKBtoGL-18 5' @ 3615 50ft (Original Well Elev)
MD Reference: RKBtoGL-18 5' @ 3615 50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,369 00	68 24	179 53	5,222.54	1,607 04	-348 38	10.19	348 48	9 24	406,943 32	513,209 91
5,401 00	70 26	179.28	5,233 88	1,618.38	-378 31	10.50	378 41	6 35	406,913 40	513,210 22
5,432 00	72 55	179 67	5,243.76	1,628 26	-407 68	10 77	407.79	7 48	406,884 02	513,210 49
5,464 00	75 27	179 75	5,252 63	1,637.13	-438 43	10.92	438 53	8 50	406,853 28	513,210 64
5,496 00	77.47	179 76	5,260.17	1,644.67	-469 52	11.06	469 62	6.88	406,822.18	513,210 77
5,528.00	80 20	179 73	5,266.37	1,650 87	-500 92	11 20	501 01	8 53	406,790.79	513,210 91
5,560 00	81 43	179.18	5,271.47	1,655 97	-532 50	11.50	532 60	4.20	406,759.20	513,211.22
5,591.00	83 45	180.15	5,275.55	1,660.05	-563 23	11.68	563 33	7 22	406,728.48	513,211 39
5,623 00	86 26	180.19	5,278 42	1,662.92	-595.10	11 58	595 20	8 78	406,696.61	513,211.30
5,655.00	86.44	180.80	5,280 46	1,664.96	-627 03	11 31	627 12	1.98	406,664.67	513,211 02
5,686 00	85 91	180 63	5,282 53	1,667.03	-657 96	10.92	658 05	1.80	406,633 75	513,210 64
5,782 00	88 46	180 19	5,287 24	1,671 74	-753 83	10.23	753 90	2 70	406,537.87	513,209 95
5,877 00	87 14	179 51	5,290 89	1,675 39	-848 76	10 48	848 83	1.56	406,442.95	513,210 20
5,944 00	86 97	179 65	5,294.33	1,678 83	-915 67	10.97	915 74	0.33	406,376.04	513,210 69
6,037 00	89 16	179 41	5,297 47	1,681 97	-1,008.61	11.74	1,008 68	2.37	406,283.10	513,211 45
EOC-6037.00°MD,89.16°INC,179.41°AZI,5297.47°TVD,2.37°DLS, 1008.68°VS, -1008.61°N, 11.74°E										
6,130 00	88 20	179 79	5,299 61	1,684 11	-1,101.58	12.38	1,101.65	1 11	406,190 13	513,212 10
6,224 00	89 34	179 94	5,301 63	1,686 13	-1,195.56	12.61	1,195 62	1 22	406,096 15	513,212 32
6,318.00	89 43	180.42	5,302 64	1,687 14	-1,289 55	12.31	1,289 61	0 52	406,002 16	513,212 03
6,412.00	89 69	180.13	5,303 36	1,687 86	-1,383 55	11.86	1,383 59	0 41	405,908.16	513,211 58
6,505 00	88.81	180.38	5,304.58	1,689 08	-1,476 54	11.45	1,476 57	0 98	405,815.17	513,211 16
6,599 00	89.34	179.91	5,306.10	1,690.60	-1,570.52	11.21	1,570 54	0.75	405,721.18	513,210 93
6,691 00	88 64	179 60	5,307 72	1,692 22	-1,662 51	11.60	1,662 53	0 83	405,629.20	513,211.32
6,785 00	89.34	180 80	5,309 38	1,693.88	-1,756.49	11.27	1,756.50	1.48	405,535.22	513,210 99
6,878 00	88 55	181 29	5,311 09	1,695.59	-1,849.46	9 58	1,849 44	1 00	405,442 25	513,209 30
6,972.00	89 52	181 54	5,312 67	1,697.17	-1,943 42	7 26	1,943 36	1 07	405,348 29	513,206 97
7,065 00	88.37	181 86	5,314 38	1,698 88	-2,036 36	4 50	2,036 26	1 28	405,255 35	513,204 22



Pathfinder

Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County
Site: Tractor "BPC" Federal Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: RKBtoGL-18 5' @ 3615 50ft (Original Well Elev)
MD Reference: RKBtoGL-18 5' @ 3615 50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
7,159 00	88 90	181 29	5,316.62	1,701 12	-2,130.29	1 92	2,130.16	0 83	405,161.41	513,201 63
7,252 00	90 31	180 90	5,317 26	1,701.76	-2,223 27	0 14	2,223.11	1 57	405,068 43	513,199 86
7,345 00	89.34	181 08	5,317.55	1,702 05	-2,316.26	-1.47	2,316.07	1 06	404,975 45	513,198.25
7,432 00	88.20	181 50	5,319 41	1,703.91	-2,403.21	-3.43	2,402.99	1 40	404,888.49	513,196 29
7,532 00	89 52	181.11	5,321.40	1,705.90	-2,503.17	-5 70	2,502 91	1.38	404,788 54	513,194 01
7,626 00	90.48	180.11	5,321.40	1,705.90	-2,597.16	-6 70	2,596 88	1 47	404,694 55	513,193.01
7,719 00	89 69	180 70	5,321.27	1,705.77	-2,690 15	-7.36	2,689 86	1 06	404,601 55	513,192 36
7,813 00	88 90	180 80	5,322 42	1,706 92	-2,784.14	-8 59	2,783.83	0 85	404,507 57	513,191 13
7,906 00	89 60	180 74	5,323.64	1,708 14	-2,877.12	-9 84	2,876.79	0 76	404,414 59	513,189 88
8,000 00	88.81	181 31	5,324.94	1,709.44	-2,971.10	-11 52	2,970 73	1 04	404,320 61	513,188.20
8,094 00	89 60	180.91	5,326.25	1,710 75	-3,065.07	-13.34	3,064.68	0 94	404,226.64	513,186.37
8,187 00	87 93	181 18	5,328.25	1,712.75	-3,158.03	-15 04	3,157 61	1.82	404,133.68	513,184 68
8,281 00	87 76	180.67	5,331 79	1,716 29	-3,251 95	-16 56	3,251 50	0 57	404,039 76	513,183.16
8,340 00	88.29	180 89	5,333 82	1,718 32	-3,310 91	-17 36	3,310 45	0.97	403,980 80	513,182.36
8,390.00	88 29	180.89	5,335.31	1,719.81	-3,360 88	-18.13	3,360.41	0 00	403,930 83	513,181.58

BHL-8390.00°MD,88.29°INC,180.89°AZI, 5335.31'TVD, 3360.41'VS, -3360.88'N, -18.13'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									
TractorBPC#1H_BHL	0 00	0.00	5,330 00	-3,387 60	41.40	403,904.107	513,241.118	32° 6' 37.365 N	104° 25' 26 685 W
- survey misses target center by 65 47ft at 8390 00ft MD (5335 31 TVD, -3360.88 N, -18 13 E)									
- Point									



Pathfinder

Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Eddy County
Site: Tractor "BPC" Federal Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: RKBtoGL-18.5' @ 3615.50ft (Original Well Elev)
MD Reference: RKBtoGL-18.5' @ 3615.50ft (Original Well Elev)
North Reference: Grd
Survey Calculation Method: Minimum Curvature
Database: Midland Database

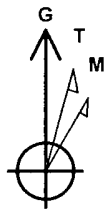
Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,600.00	4,599.81	-10.74	-0.12	KOP-4600.00'MD,1.25°INC,190.34°AZI,4599.81'TVD
6,037.00	5,297.47	-1,008.61	11.74	EOC-6037.00'MD,89.16°INC,179.41°AZI,5297.47'TVD,2.37°DLS, 1008
8,390.00	5,335.31	-3,360.88	-18.13	BHL-8390.00'MD,88.29°INC,180.89°AZI, 5335.31'TVD, 3360.41°VS, -3:

Checked By: _____ Approved By: _____ Date: _____



Project: Eddy County
Site: Tractor "BPC" Federal
Well: #1H
Wellbore: OH
Plan: Plan #2 (#1H/OH)



Azimuths to Grid North
True North: 0.05°
Magnetic North: 8.10°

Magnetic Field
Strength: 48530.3nT
Dip Angle: 59.96°
Date: 09/09/2010
Model: IGRF2010

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	4811.00	1.02	191.94	4810.77	-14.79	-0.87	0.00	0.00	14.78	
2	5544.60	89.00	179.25	5280.00	-483.99	3.46	12.00	-12.70	484.00	
3	8448.89	89.00	179.25	5330.69	-3387.60	41.48	0.00	0.00	3387.85	TractorBPC#1H_BHLnew

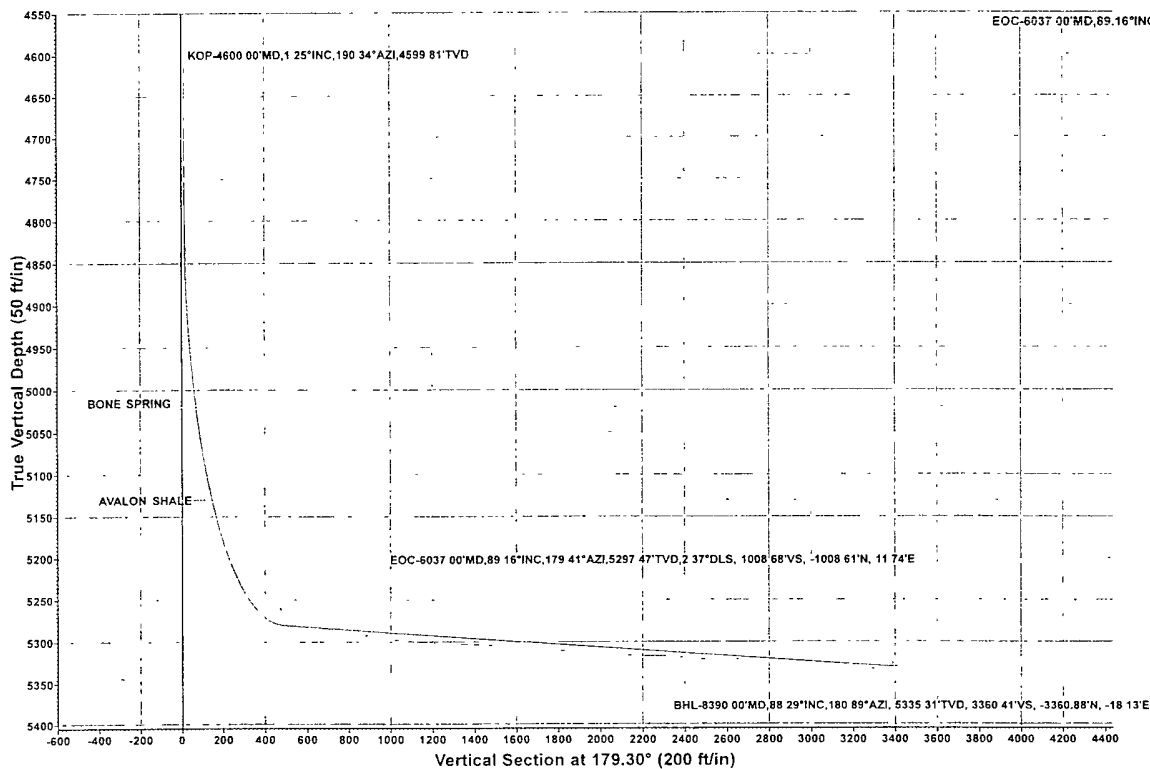
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
TractorBPC#1H_BHLnew	5330.69	-3387.60	41.48	403904.107	513241.118	Point

WELL DETAILS #1H

Ground Elevation: 3597.00
RKB Elevation: RKBtoGL-18.5' @ 3615.50ft (Original Well Elev)
Rig Name: Original Well Elev

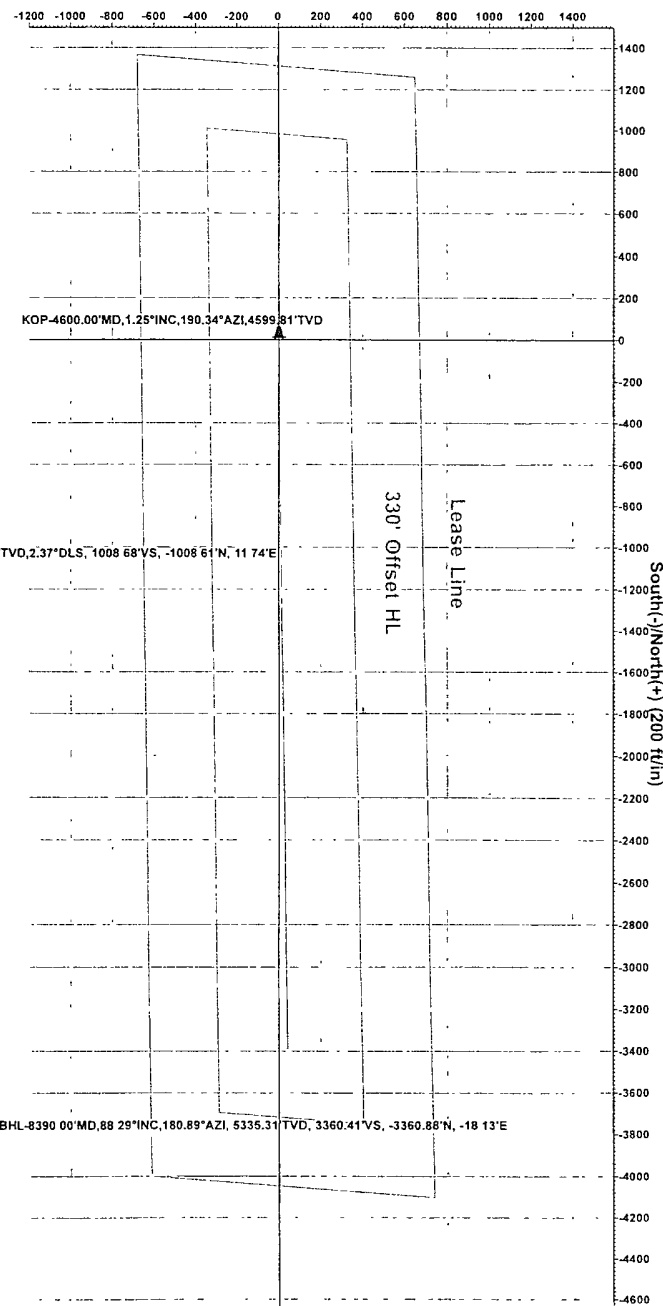
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	407291.707	513199.718	32° 7' 10.889 N	104° 25' 27.200 W	



PATHFINDER®

A Schlumberger Company

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



DIRECTIONAL SURVEY REPORT

YATES PETROLEUM
TRACTOR BPC FEDERAL COM #1H -
HORIZONTAL
EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA



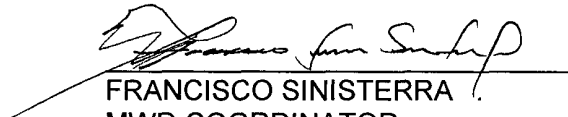
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JAY FULTON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 10-12-10 TO 10-19-10
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
TRACTOR BPC FEDERAL COM #1H
EDDY COUNTY, NM
RIG: SILVER OAK 10

9. SURVEY CERTIFIED FROM: 4768 TO 8340 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 3360.93 FEET ON A BEARING OF 180.31 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 8390 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


FRANCISCO SINISTERRA
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 09/28/2010
Date Completed: 10/19/2010

YATES PETROLEUM CORPORATION
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
Rig:SILVEROAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:J. FULTON
C. SANDIFER

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.7.10.8889 N LON:104.25.27.1996 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 513199.7180 Y: 407291.7070
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.10° EAST TO GRID
Vertical Section Plane: 179.30
Survey Vert. Reference: 18.00' Rotary Table To Ground
Altitude:3597.00' Ground To MSL

Measured Depth	8390.00	(feet)
Inclination	88.29	(deg)
Azimuth	180.89	(deg)
True Vertical Depth	5335.31	(feet)
Vertical Section	3360.41	(feet)
Survey X cord	513181.57	(feet)
Survey Y cord	403930.81	(feet)
Survey Lat	32.11045239 N	(deg)
Survey Lon	104.42427158 W	(deg)
Rectangular Corr. N/S	3360.88 S	(feet)
Rectangular Corr. E/W	18.13 W	(feet)
Closure Distance	3360.93	(feet)
Direction of Closure	180.31	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
Rig:SILVEROAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: J. FULTON
C. SANDIFER

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.7.10.8889 N LON:104.25.27.1996 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 513199.7180 Y: 407291.7070
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.10°EAST TO GRID
Vertical Section Plane: 179.30
Survey Vert. Reference: 18.00' Rotary Table To Ground
Altitude:3597.00' Ground To MSL

Survey Calculations by RX4 using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
TIE-IN TO MS ENERGY SERVICES GYRO SURVEY @ 4600' MD.										
4600.00	1.25	190.34	4599.81	0.00	10.74	10.74 S	0.12 W	10.74@	180.64	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
4768.00	1.41	196.80	4767.76	168.00	14.51	14.52 S	1.05 W	14.56@	184.12	0.13
4799.00	2.46	182.02	4798.75	31.00	15.54	15.55 S	1.18 W	15.60@	184.34	3.72
4830.00	5.80	172.51	4829.66	31.00	17.76	17.77 S	1.00 W	17.80@	183.22	10.96
4862.00	10.55	171.47	4861.33	32.00	22.27	22.27 S	0.35 W	22.28@	180.91	14.85
4894.00	15.83	172.96	4892.47	32.00	29.51	29.51 S	0.62 E	29.51@	178.80	16.53
4925.00	20.93	174.55	4921.88	31.00	39.24	39.22 S	1.66 E	39.26@	177.57	16.53
4957.00	25.15	174.87	4951.32	32.00	51.72	51.69 S	2.81 E	51.77@	176.89	13.19
4989.00	28.67	175.37	4979.85	32.00	66.16	66.12 S	4.04 E	66.24@	176.50	11.02
5020.00	32.18	175.75	5006.58	31.00	81.83	81.77 S	5.25 E	81.94@	176.32	11.34
5052.00	35.70	176.21	5033.12	32.00	99.66	99.59 S	6.50 E	99.80@	176.26	11.03
5084.00	39.31	177.39	5058.51	32.00	119.12	119.04 S	7.58 E	119.28@	176.36	11.50
5115.00	43.00	178.38	5081.84	31.00	139.51	139.42 S	8.33 E	139.67@	176.58	12.09
5147.00	46.52	179.62	5104.56	32.00	162.04	161.94 S	8.71 E	162.18@	176.92	11.33
5179.00	49.95	180.03	5125.87	32.00	185.90	185.81 S	8.78 E	186.02@	177.29	10.76
5211.00	52.85	179.80	5145.84	32.00	210.91	210.81 S	8.82 E	211.00@	177.60	9.08
5243.00	56.01	179.57	5164.45	32.00	236.93	236.84 S	8.97 E	237.01@	177.83	9.89
5274.00	59.71	179.50	5180.94	31.00	263.18	263.08 S	9.18 E	263.24@	178.00	11.94
5306.00	62.70	179.47	5196.35	32.00	291.22	291.12 S	9.43 E	291.27@	178.14	9.34
5338.00	65.42	178.98	5210.34	32.00	319.99	319.89 S	9.82 E	320.04@	178.24	8.61
5369.00	68.24	179.53	5222.54	31.00	348.49	348.39 S	10.19 E	348.54@	178.32	9.24
5401.00	70.26	179.28	5233.88	32.00	378.41	378.31 S	10.50 E	378.45@	178.41	6.36
5432.00	72.55	179.67	5243.76	31.00	407.79	407.69 S	10.77 E	407.83@	178.49	7.48
5464.00	75.27	179.75	5252.63	32.00	438.53	438.43 S	10.93 E	438.57@	178.57	8.50
5496.00	77.47	179.76	5260.17	32.00	469.63	469.53 S	11.06 E	469.66@	178.65	6.88

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
RIG:SILVEROAK 10

Page 02/03

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
5528.00	80.20	179.73	5266.37	32.00	501.02	500.92 S	11.20 E	501.04@	178.72	8.53
5560.00	81.43	179.18	5271.47	32.00	532.61	532.50 S	11.50 E	532.63@	178.76	4.20
5591.00	83.45	180.15	5275.55	31.00	563.33	563.23 S	11.68 E	563.35@	178.81	7.22
5623.00	86.26	180.19	5278.42	32.00	595.20	595.10 S	11.58 E	595.21@	178.88	8.78
5655.00	86.44	180.80	5280.46	32.00	627.13	627.03 S	11.31 E	627.14@	178.97	1.98
5686.00	85.91	180.63	5282.53	31.00	658.05	657.96 S	10.92 E	658.05@	179.05	1.80
5782.00	88.46	180.19	5287.24	96.00	753.91	753.84 S	10.24 E	753.91@	179.22	2.69
5877.00	87.14	179.51	5290.89	95.00	848.83	848.76 S	10.49 E	848.83@	179.29	1.56
5944.00	86.97	179.65	5294.33	67.00	915.74	915.67 S	10.98 E	915.74@	179.31	0.33
6037.00	89.16	179.41	5297.47	93.00	1008.68	1008.61 S	11.74 E	1008.68@	179.33	2.37
6130.00	88.20	179.79	5299.61	93.00	1101.65	1101.58 S	12.39 E	1101.65@	179.36	1.11
6224.00	89.34	179.94	5301.63	94.00	1195.62	1195.56 S	12.61 E	1195.63@	179.40	1.22
6318.00	89.43	180.42	5302.64	94.00	1289.61	1289.55 S	12.31 E	1289.61@	179.45	0.52
6412.00	89.69	180.13	5303.36	94.00	1383.59	1383.55 S	11.86 E	1383.60@	179.51	0.41
6505.00	88.81	180.38	5304.58	93.00	1476.57	1476.54 S	11.45 E	1476.58@	179.56	0.98
6599.00	89.34	179.91	5306.10	94.00	1570.55	1570.53 S	11.21 E	1570.57@	179.59	0.75
6691.00	88.64	179.60	5307.72	92.00	1662.53	1662.51 S	11.60 E	1662.55@	179.60	0.83
6785.00	89.34	180.80	5309.37	94.00	1756.50	1756.49 S	11.28 E	1756.53@	179.63	1.48
6878.00	88.55	181.29	5311.09	93.00	1849.44	1849.46 S	9.58 E	1849.48@	179.70	1.00
6972.00	89.52	181.54	5312.67	94.00	1943.36	1943.42 S	7.26 E	1943.43@	179.79	1.07
7065.00	88.37	181.86	5314.38	93.00	2036.26	2036.36 S	4.50 E	2036.36@	179.87	1.28
7159.00	88.90	181.29	5316.62	94.00	2130.16	2130.30 S	1.92 E	2130.30@	179.95	0.83
7252.00	90.31	180.90	5317.26	93.00	2223.11	2223.27 S	0.14 E	2223.27@	180.00	1.57
7345.00	89.34	181.08	5317.55	93.00	2316.07	2316.26 S	1.47 W	2316.26@	180.04	1.06
7432.00	88.20	181.50	5319.41	87.00	2402.99	2403.22 S	3.42 W	2403.22@	180.08	1.40
7532.00	89.52	181.11	5321.40	100.00	2502.91	2503.17 S	5.70 W	2503.17@	180.13	1.38
7626.00	90.48	180.11	5321.40	94.00	2596.88	2597.16 S	6.70 W	2597.17@	180.15	1.47
7719.00	89.69	180.70	5321.27	93.00	2689.87	2690.16 S	7.36 W	2690.17@	180.16	1.06
7813.00	88.90	180.80	5322.42	94.00	2783.83	2784.14 S	8.59 W	2784.15@	180.18	0.85

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
RIG:SILVEROAK 10

Page 03/03

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
7906.00	89.60	180.74	5323.64	93.00	2876.79	2877.12 S	9.84 W	2877.14@	180.20	0.76
8000.00	88.81	181.31	5324.94	94.00	2970.73	2971.10 S	11.52 W	2971.12@	180.22	1.04
8094.00	89.60	180.91	5326.25	94.00	3064.68	3065.07 S	13.34 W	3065.10@	180.25	0.94
8187.00	87.93	181.18	5328.25	93.00	3157.61	3158.03 S	15.04 W	3158.07@	180.27	1.82
8281.00	87.76	180.67	5331.79	94.00	3251.51	3251.95 S	16.55 W	3251.99@	180.29	0.57
8340.00	88.29	180.89	5333.82	59.00	3310.45	3310.91 S	17.36 W	3310.96@	180.30	0.97
STRAIGHT LINE PROJECTION TO BIT @ 8390' MD.										
8390.00	88.29	180.89	5335.31	50.00	3360.41	3360.88 S	18.13 W	3360.93@	180.31	0.00



TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM		
LEASE / WELL No.:	TRACTOR "BPC" FEDERAL COM	1H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NEW MEXICO	USA
RIG:	SILVER OAK 10		
API WELL No:	30-015-37779		
JOB No:	700000378-WT-WT		
P.O. / AFE No.	10-005-0		
DIRECTIONAL COMPANY:	PATHFINDER ENERGY		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	8.1	LWD Calculated:	8.1
		Agreed Upon:	8.1
X =	513199.720000	Feet	Y = 407291.710000
			Feet
SITE LATITUDE:	32.119691 N	SITE LONGITUDE:	104.424222 W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	179.3		
KELLY BUSHING ELEVATION:	18		
ALTITUDE:	3597	Feet	WATER DEPTH:
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	4600		
DRIFT ANGLE:	1.25		
DRIFT DIRECTION:	190.34		
TRUE VERTICAL DEPTH:	4599.81		
VERTICAL SECTION:	10.74		
RECTANGULAR COORDINATE (N / S):	-10.74		
RECTANGULAR COORDINATE (E / W):	-0.12		
CLOSURE DISTANCE / DIRECTION:	0	0	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	MS GYRO SURVEY		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	4795	TOTAL DEPTH:	8448.89
KICKOFF ANGLE:	1	MAX ANGLE:	89

PES Engineers: JAY FULTON Jay D. Fulton
CHARLIE SANDIFER Charlie Sandifer

**Signature of both field engineers required if applicable

Directional Driller: RICHARD HILL Rich. Hill

DATE: 11-Oct-2010

Survey

CUSTOMER: YATES PETROLEUM
 JOB NUMBER: SVCO-100842
 WELL NAME: TRACTOR BPC FEDERAL #1H
 LOCATION: EDDY COUNTY, NEW MEXICO
 SURVEY DATE: 10/7/2010
 SURVEYOR: S. SMITH
 VERTICAL SEC: 179.29
 DECLINATION: 8.1 E TO GRID
 COMMENTS: SILVER OAK 10

RKB 18'									
MEASURED DEPTH	VERTICAL DEPTH	VERTICAL SECTION	INCLINATION ANGLE	BEARING AZIMUTH	COORDINATES		DOG-LEG PER 100	STATION DISPLACEMENT	DISPLACEMENT DIRECTION
					LATITUDE	DEPARTURE			
0	0	0	0	0	0	0	0	0	0
200	199.99	1.3	0.75	171.02	-1.29	0.2	0.38	1.31	171.02
400	399.98	3.9	0.75	182.11	-3.89	0.36	0.07	3.91	174.71
600	599.97	5.92	0.5	214.19	-5.92	-0.18	0.21	5.93	181.72
800	799.96	6.99	0.25	143.28	-7	-0.41	0.24	7.01	183.33
1000	999.95	6.55	1	62.36	-6.54	1.4	0.5	6.68	167.91
1200	1199.94	5.43	0.25	39.45	-5.39	3.22	0.39	6.28	149.12
1400	1399.94	4.89	0.25	60.54	-4.84	3.88	0.05	6.2	141.27
1600	1599.93	4.25	0.25	9.62	-4.19	4.33	0.11	6.03	134.06
1800	1799.93	3.39	0.25	345.71	-3.34	4.3	0.05	5.44	127.85
2000	1999.93	3	0.25	264.8	-2.96	3.76	0.16	4.78	128.21
2200	2199.93	2.25	0.5	24.88	-2.2	3.69	0.33	4.3	120.86
2400	2399.93	1.46	0	0	-1.41	4.06	0.25	4.29	109.2
2600	2599.93	1.33	0.25	71.05	-1.27	4.47	0.13	4.65	105.88
2800	2799.93	1.41	0.25	239.14	-1.35	4.51	0.25	4.7	106.71
3000	2999.92	1.49	0.25	288.23	-1.44	3.72	0.1	3.99	111.18
3200	3199.92	0.42	0.75	314.32	-0.39	2.37	0.27	2.4	99.34
3400	3399.9	-0.88	0.5	294.83	0.89	0.64	0.16	1.1	35.58
3600	3599.9	-0.99	0.25	230.92	0.98	-0.49	0.23	1.1	333.38
3800	3799.9	-0.32	0.25	203	0.31	-1	0.06	1.05	287
4000	3999.89	1.32	0.75	161.09	-1.33	-0.75	0.29	1.53	209.3
4200	4199.87	3.84	0.75	165.17	-3.84	0.01	0.03	3.84	179.84
4400	4399.85	6.85	1	181.26	-6.85	0.31	0.17	6.85	177.43
4600	4599.81	10.74	1.25	190.34	-10.74	-0.12	0.15	10.74	180.65
4800	4799.77	14.59	1	190.43	-14.6	-0.83	0.13	14.62	183.25
5000	4999.73	18.56	1.5	209.51	-18.6	-2.44	0.32	18.75	187.46
5200	5199.67	23.31	1.5	160.61	-23.34	-2.86	0.62	23.52	188.97
5400	5399.53	30.55	2.75	185.68	-30.59	-2.46	0.76	30.69	184.6
5600	5599.25	40.76	3.25	195.75	-40.82	-4.48	0.36	41.06	186.26
5800	5798.93	51.27	3.25	205.82	-51.38	-8.48	0.29	52.07	189.38
6000	5998.59	61.8	3.5	205.9	-61.97	-13.62	0.13	63.45	192.39
6190	6188.26	72.26	3.25	191.01	-72.48	-17.18	0.48	74.48	193.34

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM
TRACTOR BPC FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
Rig:SILVER OAK 10

Thu Sep 23 12:12:20 2010

Coordinates

Latitude: 32.119691 N (32 deg. 7 min. 10.8889 sec.)
Longitude: 104.424222 W (-104 deg. 25 min. 27.1996 sec.)
Elevation: 3615.50 feet.
Calculation Date: Sep/23/2010

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9557 degrees
Total Magnetic Field: 0.48526 gauss
Magnetic Declination: 8.050080 degrees
Horizontal Intensity: 0.242956 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 8.050080 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 513199.7180 feet
Y: 407291.7070 feet
True to Grid: (convergence) 0.048325 degrees
Magnetic to Grid: 8.098405 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 8.098405 Degr.

PathFinder Energy Services, Inc.
Magnetic & Grid Calculations

Field
Calculations

YATES PETROLEUM
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY
Rig:SILVEROAK 10

Tue Sep 28 12:08:56 2010

Coordinates

Latitude: 32.119691 N (32 deg. 7 min. 10.8890 sec.)
Longitude: 104.424222 W (-104 deg. 25 min. 27.1996 sec.)
Elevation: 3615.00 feet.
Calculation Date: Sep/28/2010

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9554 degrees
Total Magnetic Field: 0.48525 gauss
Magnetic Declination: 8.048434 degrees
Horizontal Intensity: 0.242952 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 8.048434 Degs

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 513199.7200 feet
Y: 407291.7100 feet
True to Grid: (convergence) 0.048325 degrees
Magnetic to Grid: 8.096758 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 8.096758 Degs.

DIRECTIONAL SURVEY REPORT

YATES PETROLEUM
TRACTOR BPC FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA



DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JAY FULTON
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 09-28-10 TO 09-30-10
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
TRACTOR BPC FEDERAL COM #1H
EDDY COUNTY, NM
RIG: SILVER OAK 10

9. SURVEY CERTIFIED FROM: 430 TO 1582 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4.77 FEET ON A BEARING OF 97.42 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 1634 FEET,
ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.


FRANCISCO SINISTERRA
MWD COORDINATOR

PathFinder Energy Services, Inc.

BHL Report

Page 01/01
Tie-in Date: 09/28/2010
Date Completed: 09/30/2010

YATES PETROLEUM
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
Rig:SILVEROAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers:J. FULTON
R. PAGE

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.7.10.8889 N LON:104.25.27.1996 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 513199.7180 Y: 407291.7070
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.10° EAST TO GRID
Vertical Section Plane: 179.29
Survey Vert. Reference: 18.00' Rotary Table To Ground
Altitude:3597.00' Ground To MSL

Measured Depth	1634.00	(feet)
Inclination	0.53	(deg)
Azimuth	63.89	(deg)
True Vertical Depth	1633.95	(feet)
Vertical Section	0.67	(feet)
Survey X cord	513204.45	(feet)
Survey Y cord	407291.09	(feet)
Survey Lat	32.11968969 N	(deg)
Survey Lon	104.42420684 W	(deg)
Rectangular Corr. N/S	0.62 S	(feet)
Rectangular Corr. E/W	4.73 E	(feet)
Closure Distance	4.77	(feet)
Direction of Closure	97.42	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
Rig:SILVEROAK 10
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: J. FULTON
R. PAGE

Page 01/01
Tie-in Date: 09/28/2010
Date Completed: 09/30/2010

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GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 513199.7180 Y: 407291.7070
North Aligned To:GRID NORTH
Total Magnetic Correction: 8.10° EAST TO GRID
Vertical Section Plane: 179.29
Survey Vert. Reference: 18.00' Rotary Table To Ground
Altitude:3597.00' Ground To MSL

Survey Calculations by PathCalc v2.00 using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
TIE-IN ASSUMING VERTICAL DEPTH @ 330' MD								
330.00	0.00	0.00	330.00	0.00	0.00	0.00	0.00@ 0.00	1.#J
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.								
430.00	1.06	166.89	429.99	100.00	0.90	0.90 S 0.21 E	0.92@ 166.89	1.06
522.00	0.62	206.19	521.98	92.00	2.18	2.18 S 0.18 E	2.18@ 175.19	0.76
704.00	0.26	212.20	703.98	182.00	3.40	3.41 S 0.47 W	3.44@ 187.87	0.20
894.00	0.53	32.12	893.98	190.00	3.03	3.03 S 0.23 W	3.04@ 184.42	0.42
1084.00	0.70	42.14	1083.97	190.00	1.44	1.43 S 1.01 E	1.75@ 144.62	0.11
1274.00	0.35	111.50	1273.96	190.00	0.81	0.78 S 2.33 E	2.46@ 108.44	0.35
1465.00	0.35	94.56	1464.96	191.00	1.08	1.04 S 3.45 E	3.61@ 106.71	0.05
1582.00	0.53	63.89	1581.95	117.00	0.88	0.83 S 4.30 E	4.38@ 100.90	0.25
STRAIGHT LINE PROJECTION TO BIT @ 1634' MD								
1634.00	0.53	63.89	1633.95	52.00	0.67	0.62 S 4.73 E	4.77@ 97.42	0.00



TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM		
LEASE / WELL No.:	TRACTOR "BPC" FEDERAL COM	1H	
WELL LOCATION:	EDDY COUNTY		
COUNTY / STATE / COUNTRY:	EDDY	NEW MEXICO	USA
RIG:	SILVER OAK 10		
API WELL No:	30-015-37779		
JOB No:	700000378-WT-WT		
P.O. / AFE No.	10-005-0		
DIRECTIONAL COMPANY:	PATHFINDER ENERGY		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	8.1	LWD Calculated:	8.1
Agreed Upon:		8.1	
X =	513199.720000	Feet	Y =
407291.710000		Feet	
SITE LATITUDE:	32.119691 N	SITE LONGITUDE:	104.424222 W
GRID SYSTEM:	TRUE ☐ UTM ☒	LAMBERT ☐	ZONE:
NEW MEXICO EAST			
PROPOSED DRIFT DIRECTION:	179.29		
KELLY BUSHING ELEVATION:	18		
ALTITUDE:	3597'	Feet	WATER DEPTH:
		Feet	

TIE-IN SURVEY

MEASURED DEPTH:	0		
DRIFT ANGLE:	0		
DRIFT DIRECTION:	0		
TRUE VERTICAL DEPTH:	0		
VERTICAL SECTION:	0		
RECTANGULAR COORDINATE (N / S) :	0		
RECTANGULAR COORDINATE (E / W) :	0		
CLOSURE DISTANCE / DIRECTION:	0	0	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):			
COPY OF TIE-IN SURVEY REPORT	☐ YES		☒ NO

WELL PLAN

KICKOFF DEPTH:	400	TOTAL DEPTH:	6300
KICKOFF ANGLE:	0	MAX ANGLE:	0

PES Engineers:

JAY FULTON

RICHARD PAGE

**Signature of both field engineers required if applicable

Directional Driller: RICHARD HILL

DATE: 28-Sep-2010

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM
TRACTOR BPC FEDERAL COM #1H
EDDY COUNTY, NEW MEXICO
Rig:SILVER OAK 10

Thu Sep 23 12:12:20 2010

Coordinates

Latitude: 32.119691 N (32 deg. 7 min. 10.8889 sec.)
Longitude: 104.424222 W (-104 deg. 25 min. 27.1996 sec.)
Elevation: 3615.50 feet.
Calculation Date: Sep/23/2010

Magnetic Calculations

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PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

Field
Calculations

YATES PETROLEUM
TRACTOR "BPC" FEDERAL COM #1H
EDDY COUNTY
Rig:SILVEROAK 10

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