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DIRECTIONAL SURVEY REPORT

YATES PETROLEUM

PERDOMO BMP STATE COM #1H- PILOT

EDDY COUNTY, NEW MEXICO

PREPARED BY: FRANCISCO SINISTERRA

Pathfinder Energy Services, Inc.
6213 W. Interstate 20 • Midland, TX • 79706
(432) 681-6000

MR

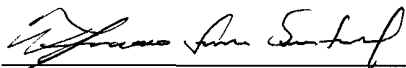
DIRECTIONAL SURVEY COMPANY REPORT

1. NAME OF SURVEYING COMPANY PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) DEREK BOYD
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED 05-03-10 TO 05-10-10
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
PERDOMO BMPSTATE COM #1- PILOT
EDDY COUNTY, NM
RIG. PATRIOT 5

9. SURVEY CERTIFIED FROM. 853 TO 8552 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 19 48 FEET ON A BEARING OF 177 95 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 8600 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: 05/03/2010
Date Completed: 05/10/2010

YATES PETROLEUM
PERDOMO BMP STATE COM #1H - PILOT HOLE
EDDY COUNTY, NM
Rig: PATRIOT #5
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: Derek Boyd
James Cloud

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.12.1.4925 N LON: 104.9.2.6375 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 597818.1110 Y: 436693.0700
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.88° EAST TO GRID
Vertical Section Plane: 179.66
Survey Vert. Reference: 24.50' Rotary Table To Ground
Altitude: 3149.00' Ground To MSL

Measured Depth	8600.00	(feet)
Inclination	1.41	(deg)
Azimuth	153.51	(deg)
True Vertical Depth	8598.36	(feet)
Vertical Section	19.47	(feet)
Survey X cord	597818.81	(feet)
Survey Y cord	436673.60	(feet)
Survey Lat	32.20036105 N	(deg)
Survey Lon	104.15073049 W	(deg)
Rectangular Corr. N/S	19.47 S	(feet)
Rectangular Corr. E/W	0.70 E	(feet)
Closure Distance	19.48	(feet)
Direction of Closure	177.95	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
PERDOMO BMP STATE COM #1H - PILOT HOLE
EDDY COUNTY, NM
Rig:PATRIOT #5
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: Derek Boyd
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Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.12.1.4925 N LON:104.9.2.6375 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 597818.1110 Y: 436693.0700
North Aligned To:GRID NORTH
Total Magnetic Correction: 7.88° EAST TO GRID
Vertical Section Plane: 179.66
Survey Vert. Reference: 24.50' Rotary Table To Ground
Altitude:3149.00' Ground To MSL

Survey Calculations by RX5 V6.03 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 GYROSCOPIC DIRECTIONAL SURVEY @ 800' MD.										
800.00	0.75	340.52	799.98	0.00	-2.36	2.35 N	1.38 W	2.73@	329.58	0.00
THE FOLLOWING ARE PATHFINDER ENERGY SERVICES MWD SURVEYS:										
853.00	0.97	352.84	852.97	53.00	-3.13	3.12 N	1.55 W	3.49@	333.57	0.54
1041.00	0.09	122.84	1040.97	188.00	-4.63	4.62 N	1.63 W	4.90@	340.62	0.55
1230.00	0.62	240.79	1229.96	189.00	-4.06	4.04 N	2.39 W	4.70@	329.36	0.35
1419.00	0.35	284.82	1418.96	189.00	-3.71	3.69 N	3.84 W	5.33@	313.83	0.23
1604.00	0.35	104.30	1603.95	185.00	-3.72	3.70 N	3.84 W	5.33@	313.88	0.38
1701.00	2.64	64.66	1700.92	97.00	-4.59	4.58 N	1.54 W	4.83@	341.45	2.46
1795.00	3.61	65.10	1794.78	94.00	-6.73	6.75 N	3.10 E	7.43@	24.70	1.03
1888.00	2.90	35.21	1887.63	93.00	-9.86	9.91 N	7.12 E	12.20@	35.70	1.95
1982.00	3.43	55.87	1981.49	94.00	-13.36	13.43 N	10.82 E	17.24@	38.85	1.33
2076.00	2.11	112.82	2075.39	94.00	-14.25	14.33 N	14.74 E	20.56@	45.80	3.07
2170.00	1.85	178.21	2169.35	94.00	-12.05	12.15 N	16.38 E	20.39@	53.45	2.29
2212.00	0.88	183.22	2211.34	42.00	-11.05	11.15 N	16.38 E	19.82@	55.77	2.32
2350.00	0.88	30.12	2349.33	138.00	-10.90	11.00 N	16.86 E	20.13@	56.86	1.24
2538.00	0.70	11.22	2537.31	188.00	-13.27	13.38 N	17.80 E	22.27@	53.08	0.17
2726.00	1.06	7.09	2725.29	188.00	-16.12	16.23 N	18.24 E	24.42@	48.34	0.19
2914.00	0.70	332.90	2913.27	188.00	-18.87	18.98 N	17.93 E	26.11@	43.38	0.33
3103.00	0.70	308.82	3102.26	189.00	-20.63	20.73 N	16.51 E	26.50@	38.53	0.15
3291.00	0.79	279.20	3290.24	188.00	-21.57	21.66 N	14.33 E	25.97@	33.50	0.21
3479.00	0.79	271.29	3478.22	188.00	-21.82	21.89 N	11.76 E	24.85@	28.24	0.06
3667.00	0.88	269.09	3666.20	188.00	-21.85	21.90 N	9.02 E	23.69@	22.39	0.05
3855.00	0.88	263.99	3854.18	188.00	-21.69	21.73 N	6.14 E	22.58@	15.78	0.04
4044.00	0.70	236.31	4043.16	189.00	-20.91	20.93 N	3.74 E	21.27@	10.12	0.22
4232.00	0.53	245.01	4231.15	188.00	-19.92	19.93 N	1.99 E	20.03@	5.71	0.10

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM
PERDOMO BMP STATE COM #1H - PILOT HOLE
EDDY COUNTY, NM
RIG:PATRIOT #5

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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)
4421.00	1.14	174.96	4420.13	189.00	-17.68	17.69 N	1.37 E	17.74@	4.42	0.57
4514.00	1.41	63.87	4513.12	93.00	-17.26	17.27 N	2.48 E	17.45@	8.16	2.27
4608.00	1.85	192.45	4607.10	94.00	-16.28	16.30 N	3.19 E	16.61@	11.06	3.13
4796.00	0.35	215.21	4795.06	188.00	-12.85	12.87 N	2.20 E	13.05@	9.71	0.82
4984.00	0.44	224.18	4983.06	188.00	-11.87	11.88 N	1.37 E	11.96@	6.57	0.06
5173.00	0.62	234.73	5172.05	189.00	-10.77	10.77 N	0.03 E	10.77@	0.14	0.11
5360.00	0.79	231.83	5359.04	187.00	-9.40	9.39 N	1.81 W	9.56@	349.07	0.09
5548.00	0.79	221.63	5547.02	188.00	-7.64	7.62 N	3.69 W	8.46@	334.13	0.08
5736.00	0.97	207.83	5735.00	188.00	-5.27	5.24 N	5.30 W	7.45@	314.70	0.15
5821.00	1.14	216.27	5819.98	85.00	-3.96	3.92 N	6.13 W	7.28@	302.60	0.27
6113.00	0.88	256.87	6111.94	292.00	-1.13	1.07 N	10.04 W	10.09@	276.09	0.25
6301.00	1.06	91.11	6299.93	188.00	-0.77	0.71 N	9.70 W	9.73@	274.18	1.02
6489.00	1.93	117.48	6487.87	188.00	0.75	0.78 S	5.16 W	5.21@	261.34	0.58
6678.00	2.11	133.30	6676.75	189.00	4.64	4.64 S	0.20 E	4.64@	177.52	0.31
6866.00	0.44	135.67	6864.70	188.00	7.55	7.53 S	3.22 E	8.19@	156.82	0.89
6960.00	0.88	127.76	6958.69	94.00	8.25	8.23 S	4.05 E	9.17@	153.81	0.48
7147.00	0.18	228.22	7145.68	187.00	9.33	9.30 S	4.96 E	10.55@	151.92	0.50
7336.00	0.88	257.14	7334.68	189.00	9.85	9.83 S	3.33 E	10.37@	161.29	0.38
7525.00	0.97	290.36	7523.65	189.00	9.59	9.59 S	0.41 E	9.60@	177.54	0.28
7714.00	0.88	276.74	7712.63	189.00	8.85	8.87 S	2.53 W	9.22@	195.92	0.13
7903.00	0.97	277.70	7901.60	189.00	8.45	8.48 S	5.56 W	10.14@	213.23	0.05
8091.00	0.53	244.57	8089.59	188.00	8.59	8.64 S	7.92 W	11.72@	222.50	0.32
8279.00	2.11	132.77	8277.55	188.00	11.33	11.36 S	6.16 W	12.93@	208.47	1.25
8373.00	2.37	133.74	8371.47	94.00	13.86	13.88 S	3.49 W	14.31@	194.10	0.28
8552.00	1.41	153.51	8550.38	179.00	18.41	18.41 S	0.17 E	18.41@	179.48	0.64
STRAIGHT-LINE PROJECTION TO BIT @ 8600' MD										
8600.00	1.41	153.51	8598.36	48.00	19.47	19.47 S	0.70 E	19.48@	177.95	0.00



ENERGY SERVICES

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM		
LEASE / WELL No.:	PERDOMO BMP STATE COM	#1H	
WELL LOCATION:	EDDY COUNTY, NM		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	PATRIOT #5		
API WELL No:	30-015-36499		
JOB No:	101010350-WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):			
On Wall Plat:	7.88°	LWD Calculated:	7.88°
		Agreed Upon:	7.88°
X =	597818.111000	Feet	Y = 436693.070000
			Feet
SITE LATITUDE:	32.200415 N	SITE LONGITUDE:	104.150733 W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	WILDCAT MORROW
PROPOSED DRIFT DIRECTION:	179.66		
KELLY BUSHING ELEVATION:	24.5		
ALTITUDE:	3149	Feet	WATER DEPTH: N/A
			Feet

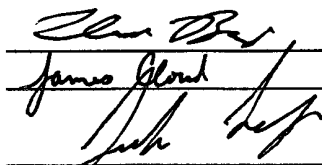
TIE-IN SURVEY

MEASURED DEPTH:	800		
DRIFT ANGLE:	0.75°		
DRIFT DIRECTION:	340.52°		
TRUE VERTICAL DEPTH:	799.98		
VERTICAL SECTION:	-2.36		
RECTANGULAR COORDINATE (N / S):	2.35		
RECTANGULAR COORDINATE (E / W):	-1.38		
CLOSURE DISTANCE / DIRECTION:	2.73	329.67°	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	GYROSCOPIC		
COPY OF TIE-IN SURVEY REPORT	☒ YES		☐ NO

WELL PLAN

KICKOFF DEPTH:	760.00' MD	TOTAL DEPTH:	6327.00' MD
KICKOFF ANGLE:	0°	MAX ANGLE:	0°

PES Engineers:



**Signature of both field engineers required if applicable

Directional Driller:

DATE: _____

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM** *

JOB NUMBER: 101117505364

WELL NAME: PERDOMO BMP STATE #1H

LOCATION: EDDY COUNTY, NEW MEXICO

SURVEY DATE: MAY 06, 2010

SURVEY ENGINEER: S. SMITH

MAGNETIC DECLINATION: 07.88 GRID NORTH

GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 179.66
SURF. ELEVATION: 27'

***** DEPTH MEASURED IN FEET *****

***** THIS DIRECTIONAL SURVEY REPORT IS *****
***** ** CORRECT TO THE BEST OF MY KNOWLEDGE **
***** * AND IS SUPPORTED BY ACTUAL FIELD DATA! *
***** **
COMMENTS: PATRIOT 5
RKB 27'
TBUSSELL@YATESPETROLEUM.COM**
MIKEL@YATESPETROLEUM.COM **
***** COMPANY REPRESENTATIVE *****

MS ENERGY SERVICES
ODESSA, TEXAS

JOB NUMBER: 101117505364

WELL NAME: PERDOMO BMP STATE #1H

INRUN SURVEY BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL	BEARING AZIMUTH	COORDINATES LATITUDE DEPARTURE		D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
0.0	0.00	0.00	0.000	00.00	000.00	0.00 N	0.00 E	0.00		0.00	AT 000.00
200.0	200.00	-0.06	0.432	00.25	278.11	0.06 N	0.43 W	0.13	0.25	0.44	AT 278.11
400.0	400.00	0.21	1.135	00.25	218.24	0.22 S	1.13 W	0.12	0.25	1.16	AT 259.04
600.0	600.00	-0.29	1.171	00.50	015.38	0.28 N	1.17 W	0.37	0.74	1.21	AT 283.39
800.0	799.98	-2.36	1.364	00.75	340.52	2.35 N	1.38 W	0.22	0.44	2.73	AT 329.67

```
*****  
*                               *  
*          THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *  
*          *****  
*      800.00 FEET EQUALS           2.73    FEET AT   329.67    *  
*          *****  
*****
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