

Results of Directional Survey

API number:	30-025-39660		
OGRID:		Operator:	YATES PETROLEUM CORP
		Property:	PRESIDENTE BPD STATE COM # 1H

surface	ULSTR:	D	32	T	25S	R	32E
				330	FNL	660	FWL

BH Loc	ULSTR:	M	32	T	25S	R	32E
13132	MD	8842.9	TVD	4944	FNL	676	FWL

Top Perf/OH	ULSTR:	D	32	T	25S	R	32E
9215	MD	8848.3	TVD	1029	FNL	699	FWL

Bot Perf/OH	ULSTR:	M	32	T	25S	R	32E
13046	MD	8842.4	TVD	4858	FNL	673	FWL

	MD	N/S	E/W	VD
	9197	-680.54	39.26	8848.42
TOP PERFS/OH	9215	-698.53	39.26	8848.33
	9228	-711.53	39.26	8848.26
	13017	-4499.16	12.38	8842.24
BOT PERFS/OH	13046	-4528.14	13.30	8842.40
	13084	-4566.12	14.51	8842.61

NEXT TO LAST	13017	-4499.16	12.38	8842.24
LAST READING	13084	-4566.12	14.51	8842.61
TD	13132	-4614.09	16.04	8842.88

Surface Location	330	FN	660	FW
Projected BHL	4944	FN	676	FW
Location of				
Top Perfs/OH	1029	FN	699	FW
Bottom Perfs/OH	4858	FN	673	FW

SUMMARY of Subsurface Locations

Surface Location	D-32-25S-32E	330	FN	660	FW	Vert. Depth
Top Perfs/OH	D-32-25S-32E	1029	FN	699	FW	8848.33
Bottom Perfs/OH	M-32-25S-32E	4858	FN	673	FW	8842.40
Projected TD	M-32-25S-32E	4944	FN	676	FW	8842.88



RECEIVED

An Operating Unit of Smith International, Inc.

FEB 21 2011
HOBBSOCD

DIRECTIONAL SURVEY REPORT

YATES PETROLEUM
PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO

SUR: D-32-25s-32e, 330/N & 660/W
BHL: M-32-25s-32e, 4944/N & 676/W
API # 30-025-39660

PREPARED BY: FRANCISCO SINISTERRA

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

Pathfinder

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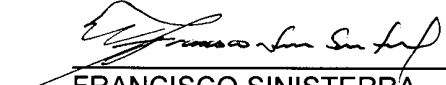


DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) JESUS GARCIA
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 12-02-10 TO 12-13-10
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: LEA COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

YATES PETROLEUM
PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NM
RIG: LATSHAW 3
9. SURVEY CERTIFIED FROM: 8357 TO 13084 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4614.11 FEET ON A BEARING OF 179.80 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 13132 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: 11/29/2010
Date Completed: 12/13/2010

YATES PETROLEUM CORPORATION
PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO
Rig: LATSHAW #3
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: JESUS GARCIA
MURAD ALIYEV

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.5.35.4332 N LON: 103.42.13.4452 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 736309.6350 Y: 398203.3510
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.37° EAST TO GRID
Vertical Section Plane: 179.70
Survey Vert. Reference: 19.00' Kelly Bushing To Ground
Altitude: 3335.00' Ground To MSL

Measured Depth	13132.00	(feet)
Inclination	89.69	(deg)
Azimuth	177.66	(deg)
True Vertical Depth	8842.87	(feet)
Vertical Section	4614.11	(feet)
Survey X cord	736326.08	(feet)
Survey Y cord	393589.25	(feet)
Survey Lat	32.08049240 N	(deg)
Survey Lon	103.70376865 W	(deg)
Rectangular Corr. N/S	4614.08 S	(feet)
Rectangular Corr. E/W	16.47 E	(feet)
Closure Distance	4614.11	(feet)
Direction of Closure	179.80	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION

PRESIDENTE BPD STATE COM #1H

LEA COUNTY, NEW MEXICO

Rig: LATSHAW #3

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: JESUS GARCIA

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GRID Reference: NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 736309.6350 Y: 398203.3510

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.37° EAST TO GRID

Vertical Section Plane: 179.70

Survey Vert. Reference: 19.00' Kelly Bushing To Ground

Altitude: 3335.00' 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)
THE FOLLOWING ARE MS ENERGY GYRO SURVEYS.										
200.00	0.25	111.59	200.00	0.00	0.17	0.16 S	0.41 E	0.44@	111.98	0.00
400.00	0.25	88.89	400.00	200.00	0.32	0.32 S	1.25 E	1.29@	104.22	0.05
600.00	0.25	19.09	600.00	200.00	-0.09	0.10 N	1.83 E	1.83@	86.74	0.14
800.00	0.75	214.29	799.99	200.00	0.57	0.56 S	1.23 E	1.36@	114.61	0.50
1000.00	3.25	175.49	999.86	200.00	7.30	7.30 S	0.94 E	7.36@	172.65	1.35
1200.00	5.25	187.16	1199.30	200.00	22.03	22.03 S	0.25 E	22.03@	179.36	1.08
1400.00	3.25	176.40	1398.75	200.00	36.77	36.77 S	0.54 W	36.77@	180.84	1.07
1600.00	1.75	165.61	1598.55	200.00	45.39	45.39 S	0.58 E	45.39@	179.27	0.78
1800.00	1.75	153.81	1798.46	200.00	51.10	51.09 S	2.68 E	51.16@	176.99	0.18
2000.00	1.75	138.02	1998.37	200.00	56.13	56.10 S	6.07 E	56.42@	173.82	0.24
2200.00	1.50	147.01	2198.29	200.00	60.61	60.56 S	9.54 E	61.31@	171.05	0.18
2400.00	1.50	153.01	2398.22	200.00	65.15	65.09 S	12.16 E	66.22@	169.42	0.08
2600.00	1.75	162.02	2598.14	200.00	70.40	70.33 S	14.29 E	71.76@	168.52	0.18
2800.00	1.75	172.01	2798.04	200.00	76.34	76.26 S	15.65 E	77.85@	168.40	0.15
3000.00	1.50	185.01	2997.96	200.00	81.97	81.89 S	15.85 E	83.41@	169.05	0.22
3200.00	2.00	166.02	3197.87	200.00	87.97	87.88 S	16.46 E	89.41@	169.39	0.38
3400.00	1.50	115.02	3397.79	200.00	92.48	92.38 S	19.68 E	94.45@	167.97	0.79
3600.00	1.75	108.02	3597.71	200.00	94.56	94.43 S	24.96 E	97.67@	165.20	0.16
3800.00	2.00	90.02	3797.60	200.00	95.54	95.37 S	31.35 E	100.39@	161.80	0.32
4000.00	1.75	93.02	3997.50	200.00	95.73	95.54 S	37.89 E	102.78@	158.37	0.13
4200.00	1.75	105.03	4197.40	200.00	96.72	96.49 S	43.89 E	106.00@	155.54	0.18
4400.00	0.75	102.02	4397.35	200.00	97.80	97.55 S	48.12 E	108.78@	153.75	0.50
4600.00	0.50	112.02	4597.34	200.00	98.41	98.15 S	50.21 E	110.25@	152.91	0.14
4800.00	0.25	138.03	4797.34	200.00	99.07	98.80 S	51.31 E	111.33@	152.56	0.15
5000.00	0.25	116.03	4997.33	200.00	99.59	99.32 S	51.99 E	112.11@	152.37	0.05

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO
RIG: LATSHAW #3

Page 02/05

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)
5200.00	0.25	80.03	5197.33	200.00	99.71	99.44 S	52.81 E	112.59@	152.03	0.08
5400.00	0.25	193.03	5397.33	200.00	100.06	99.79 S	53.14 E	113.06@	151.96	0.21
5600.00	0.25	254.03	5597.33	200.00	100.61	100.33 S	52.63 E	113.30@	152.32	0.13
5800.00	0.50	270.13	5797.33	200.00	100.72	100.45 S	51.33 E	112.81@	152.93	0.13
6000.00	0.50	277.23	5997.32	200.00	100.60	100.34 S	49.60 E	111.93@	153.70	0.03
6200.00	0.50	296.33	6197.31	200.00	100.09	99.84 S	47.95 E	110.76@	154.35	0.08
6400.00	0.25	277.43	6397.31	200.00	99.64	99.40 S	46.73 E	109.84@	154.82	0.14
6600.00	0.25	48.53	6597.31	200.00	99.29	99.05 S	46.63 E	109.48@	154.79	0.23
6800.00	0.25	52.64	6797.30	200.00	98.74	98.50 S	47.30 E	109.27@	154.35	0.01
7000.00	0.25	130.74	6997.30	200.00	98.77	98.52 S	47.98 E	109.58@	154.03	0.16
7200.00	0.25	116.84	7197.30	200.00	99.25	99.00 S	48.70 E	110.33@	153.81	0.03
7400.00	0.25	27.94	7397.30	200.00	99.07	98.81 S	49.29 E	110.42@	153.49	0.17
7600.00	0.25	154.04	7597.30	200.00	99.08	98.82 S	49.69 E	110.61@	153.31	0.22
7800.00	0.25	172.75	7797.30	200.00	99.90	99.64 S	49.93 E	111.45@	153.38	0.04
8000.00	0.25	194.85	7997.29	200.00	100.76	100.50 S	49.88 E	112.19@	153.60	0.05
** TIE IN TO MS ENERGY GYRO SURVEYS @ 8200' MD.										
8200.00	0.50	192.95	8197.29	200.00	102.03	101.77 S	49.57 E	113.20@	154.03	0.13
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
8357.00	1.49	196.74	8354.26	157.00	104.65	104.39 S	48.83 E	115.25@	154.93	0.63
8388.00	4.13	186.67	8385.22	31.00	106.14	105.89 S	48.58 E	116.50@	155.35	8.63
8419.00	8.18	183.89	8416.04	31.00	109.45	109.20 S	48.30 E	119.40@	156.14	13.10
8450.00	13.19	182.11	8446.49	31.00	115.19	114.94 S	48.02 E	124.57@	157.32	16.19
8481.00	18.55	180.70	8476.30	31.00	123.66	123.41 S	47.83 E	132.35@	158.81	17.33
8512.00	22.95	180.75	8505.28	31.00	134.63	134.39 S	47.69 E	142.60@	160.46	14.19
8543.00	26.20	181.21	8533.47	31.00	147.52	147.28 S	47.47 E	154.74@	162.13	10.50
8575.00	29.11	181.39	8561.81	32.00	162.37	162.12 S	47.13 E	168.83@	163.79	9.10
8605.00	32.01	181.47	8587.64	30.00	177.61	177.37 S	46.75 E	183.43@	165.23	9.67
8637.00	35.00	182.17	8614.32	32.00	195.26	195.02 S	46.19 E	200.42@	166.68	9.42
8667.00	38.51	181.92	8638.35	30.00	213.20	212.96 S	45.55 E	217.78@	167.93	11.71

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO
RIG:LATSHAW #3

Page 03/05

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)
8699.00	42.03	180.72	8662.77	32.00	233.87	233.64 S	45.08 E	237.94@	169.08	11.26
8729.00	46.17	180.11	8684.31	30.00	254.74	254.51 S	44.93 E	258.44@	169.99	13.87
8761.00	49.68	179.64	8705.75	32.00	278.49	278.26 S	44.99 E	281.87@	170.82	11.02
8792.00	52.76	179.54	8725.16	31.00	302.65	302.42 S	45.16 E	305.77@	171.51	9.94
8823.00	55.66	179.74	8743.29	31.00	327.79	327.56 S	45.32 E	330.68@	172.12	9.37
8855.00	58.65	180.16	8760.64	32.00	354.68	354.44 S	45.34 E	357.33@	172.71	9.41
8886.00	61.99	180.53	8775.99	31.00	381.60	381.37 S	45.17 E	384.04@	173.24	10.82
8917.00	65.77	180.87	8789.63	31.00	409.43	409.20 S	44.83 E	411.65@	173.75	12.23
8948.00	67.62	181.82	8801.90	31.00	437.88	437.66 S	44.16 E	439.88@	174.24	6.60
8979.00	70.35	182.15	8813.01	31.00	466.80	466.58 S	43.16 E	468.57@	174.72	8.86
9010.00	73.78	181.57	8822.56	31.00	496.27	496.05 S	42.20 E	497.84@	175.14	11.21
9041.00	76.50	180.93	8830.51	31.00	526.21	526.00 S	41.55 E	527.64@	175.48	9.00
9072.00	78.61	181.46	8837.19	31.00	556.47	556.27 S	40.92 E	557.77@	175.79	7.01
9104.00	81.95	180.72	8842.59	32.00	588.00	587.80 S	40.32 E	589.18@	176.08	10.68
9134.00	85.21	180.98	8845.94	30.00	617.80	617.60 S	39.88 E	618.89@	176.31	10.90
9166.00	88.29	180.62	8847.76	32.00	649.74	649.54 S	39.43 E	650.74@	176.53	9.69
9197.00	89.25	180.00	8848.42	31.00	680.73	680.54 S	39.26 E	681.67@	176.70	3.69
9228.00	91.36	180.00	8848.26	31.00	711.73	711.53 S	39.26 E	712.62@	176.84	6.81
9259.00	92.68	179.81	8847.17	31.00	742.71	742.51 S	39.32 E	743.55@	176.97	4.30
9291.00	92.77	179.46	8845.64	32.00	774.67	774.48 S	39.52 E	775.48@	177.08	1.13
9321.00	91.45	179.38	8844.54	30.00	804.65	804.45 S	39.82 E	805.44@	177.17	4.41
9353.00	90.40	179.82	8844.02	32.00	836.65	836.45 S	40.05 E	837.41@	177.26	3.56
9447.00	90.22	179.06	8843.52	94.00	930.64	930.44 S	40.97 E	931.34@	177.48	0.83
9540.00	90.40	179.61	8843.01	93.00	1023.64	1023.43 S	42.04 E	1024.30@	177.65	0.62
9633.00	91.10	179.92	8841.79	93.00	1116.63	1116.42 S	42.43 E	1117.23@	177.82	0.82
9725.00	91.01	181.72	8840.10	92.00	1208.59	1208.40 S	41.11 E	1209.09@	178.05	1.96
9818.00	90.84	181.38	8838.60	93.00	1301.53	1301.35 S	38.59 E	1301.92@	178.30	0.41
9912.00	90.22	183.06	8837.73	94.00	1395.43	1395.27 S	34.95 E	1395.71@	178.56	1.91

PathFinder Energy Services, Inc.

Survey Report

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PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO
RIG: LATSHAW #3

Page 04/05

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)
10006.00	90.04	181.62	8837.52	94.00	1489.33	1489.19 S	31.12 E	1489.52@	178.80	1.54
10100.00	88.72	181.57	8838.53	94.00	1583.27	1583.15 S	28.50 E	1583.40@	178.97	1.41
10193.00	89.52	181.19	8839.96	93.00	1676.22	1676.11 S	26.26 E	1676.31@	179.10	0.95
10287.00	90.22	181.77	8840.18	94.00	1770.17	1770.07 S	23.83 E	1770.23@	179.23	0.97
10380.00	89.87	181.88	8840.10	93.00	1863.11	1863.03 S	20.87 E	1863.14@	179.36	0.39
10474.00	91.28	182.32	8839.16	94.00	1957.02	1956.96 S	17.43 E	1957.03@	179.49	1.57
10566.00	88.64	180.13	8839.22	92.00	2048.98	2048.92 S	15.46 E	2048.98@	179.57	3.73
10687.00	89.60	179.47	8841.08	121.00	2169.96	2169.90 S	15.88 E	2169.96@	179.58	0.96
10781.00	90.84	179.94	8840.72	94.00	2263.96	2263.90 S	16.37 E	2263.96@	179.59	1.41
10873.00	89.87	179.13	8840.15	92.00	2355.95	2355.89 S	17.11 E	2355.96@	179.58	1.37
10966.00	90.84	179.28	8839.57	93.00	2448.95	2448.88 S	18.40 E	2448.95@	179.57	1.05
11059.00	91.19	178.77	8837.93	93.00	2541.92	2541.85 S	19.99 E	2541.93@	179.55	0.67
11152.00	89.78	178.53	8837.14	93.00	2634.90	2634.82 S	22.18 E	2634.92@	179.52	1.54
11246.00	89.43	178.70	8837.79	94.00	2728.88	2728.79 S	24.45 E	2728.90@	179.49	0.41
11338.00	89.52	180.51	8838.63	92.00	2820.87	2820.78 S	25.08 E	2820.89@	179.49	1.97
11431.00	90.84	180.51	8838.34	93.00	2913.86	2913.78 S	24.25 E	2913.88@	179.52	1.42
11524.00	88.81	179.62	8838.62	93.00	3006.86	3006.77 S	24.15 E	3006.87@	179.54	2.38
11619.00	88.20	180.53	8841.10	95.00	3101.82	3101.74 S	24.03 E	3101.83@	179.56	1.15
11711.00	89.96	181.00	8842.58	92.00	3193.79	3193.71 S	22.80 E	3193.79@	179.59	1.98
11805.00	90.92	180.93	8841.86	94.00	3287.76	3287.70 S	21.21 E	3287.76@	179.63	1.02
11898.00	90.31	181.44	8840.86	93.00	3380.72	3380.67 S	19.29 E	3380.72@	179.67	0.86
11991.00	89.87	181.07	8840.71	93.00	3473.69	3473.65 S	17.25 E	3473.69@	179.72	0.62
12085.00	90.04	180.84	8840.79	94.00	3567.67	3567.63 S	15.69 E	3567.67@	179.75	0.30
12176.00	89.16	181.16	8841.42	91.00	3658.64	3658.62 S	14.10 E	3658.64@	179.78	1.03
12270.00	89.78	182.51	8842.29	94.00	3752.57	3752.56 S	11.09 E	3752.58@	179.83	1.58
12364.00	90.84	183.37	8841.78	94.00	3846.41	3846.43 S	6.27 E	3846.44@	179.91	1.45
12457.00	90.75	181.56	8840.49	93.00	3939.29	3939.33 S	2.27 E	3939.34@	179.97	1.95
12549.00	89.78	179.28	8840.07	92.00	4031.28	4031.32 S	1.59 E	4031.32@	179.98	2.69

PathFinder Energy Services, Inc.

Survey Report

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PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO
RIG:LATSHAW #3

Page 05/05

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
12642.00	90.92	179.30	8839.50	93.00	4124.27	4124.31 S	2.75 E	4124.31@	179.96	1.23
12736.00	89.16	177.89	8839.43	94.00	4218.25	4218.28 S	5.05 E	4218.28@	179.93	2.40
12829.00	88.81	178.59	8841.08	93.00	4311.20	4311.22 S	7.91 E	4311.23@	179.89	0.84
12923.00	90.04	178.63	8842.02	94.00	4405.18	4405.19 S	10.19 E	4405.20@	179.87	1.31
13017.00	89.69	178.70	8842.24	94.00	4499.16	4499.16 S	12.38 E	4499.18@	179.84	0.38
13084.00	89.69	177.66	8842.61	67.00	4566.14	4566.12 S	14.51 E	4566.15@	179.82	1.55
STRAIGHT LINE PROJECTION TO BIT @ 13132' MD.										
13132.00	89.69	177.66	8842.87	48.00	4614.11	4614.08 S	16.47 E	4614.11@	179.80	0.00

** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder Energy Services, Inc. and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.



A Schlumberger Company

TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM CORPORATION		
LEASE / WELL No.:	PRESIDENTE "BPD"	STATE COM #1H	
WELL LOCATION:	LEA COUNTY		
COUNTY / STATE / COUNTRY:	LEA	NM	USA
RIG:	LATSHAW #3		
API WELL No:	30-025-39660		
JOB No:	700000816-WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):		7.37	
On Wall Plat:	7.36	LWD Calculated:	7.3688
Agreed Upon:		7.37	
X =	398203.351000	Feet	Y = 736309.635000
		Feet	
SITE LATITUDE:	32.093176 N	SITE LONGITUDE:	103.703735 W
GRID SYSTEM:	TRUE ☐ UTM ☒ LAMBERT ☐	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	179.7		
KELLY BUSHING ELEVATION:	19'		
ALTITUDE:	3335	Feet	WATER DEPTH:
		N/A	
		Feet	

TIE-IN SURVEY

MEASURED DEPTH:	8200		
DRIFT ANGLE:	0.5		
DRIFT DIRECTION:	192.95		
TRUE VERTICAL DEPTH:	8197.29		
VERTICAL SECTION:	-101.77		
RECTANGULAR COORDINATE (N / S) :	101.77 S		
RECTANGULAR COORDINATE (E / W) :	49.57 E		
CLOSURE DISTANCE / DIRECTION:	113.2	154.03	
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐ BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	MS ENERGY SERVICE		
COPY OF TIE-IN SURVEY REPORT	☒ YES ☐ NO		

WELL PLAN

KICKOFF DEPTH:	8376'	TOTAL DEPTH:	13159.85
KICKOFF ANGLE:	0.46	MAX ANGLE:	90

PES Engineers:

JESUS GARCIA

M. ALIYEV

**Signature of both field engineers required if applicable

Directional Driller: PHILLIP GARRISON

DATE: 29-Nov-2010

MS ENERGY SERVICE
ODESSA, TEXAS

JOB NUMBER: SVCO 1001013

WELL NAME: PRESIDENTE BPD STATE COM #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	-0.16	0.406	00.25	111.59	0.16 S	0.41 E	0.13	0.25	0.44 AT	111.59
400.0	400.00	-0.31	1.248	00.25	088.89	0.31 S	1.25 E	0.05	0.10	1.29 AT	104.07
600.0	600.00	0.11	1.827	00.25	019.09	0.11 N	1.83 E	0.14	0.29	1.83 AT	086.61
800.0	799.99	-0.56	1.232	00.75	214.29	0.56 S	1.23 E	0.50	0.99	1.35 AT	114.48
1000.0	999.86	-7.30	0.940	03.25	175.49	7.30 S	0.94 E	1.35	2.71	7.36 AT	172.66
1200.0	1199.30	-22.03	0.245	05.25	187.16	22.03 S	0.25 E	1.08	2.17	22.03 AT	179.36
1400.0	1398.75	-36.77	-0.539	03.25	176.40	36.77 S	0.54 W	1.07	2.14	36.77 AT	180.84
1600.0	1598.55	-45.38	0.576	01.75	165.61	45.38 S	0.58 E	0.78	1.57	45.39 AT	179.27
1800.0	1798.46	-51.08	2.683	01.75	153.81	51.08 S	2.68 E	0.18	0.36	51.15 AT	176.99
2000.0	1998.37	-56.09	6.073	01.75	138.02	56.09 S	6.07 E	0.24	0.48	56.42 AT	173.82
2200.0	2198.29	-60.56	9.541	01.50	147.01	60.56 S	9.54 E	0.18	0.36	61.30 AT	171.05
2400.0	2398.22	-65.09	12.154	01.50	153.01	65.09 S	12.15 E	0.08	0.16	66.21 AT	169.42
2600.0	2598.14	-70.32	14.285	01.75	162.02	70.32 S	14.29 E	0.18	0.36	71.76 AT	168.52
2800.0	2798.04	-76.25	15.652	01.75	172.01	76.25 S	15.65 E	0.15	0.30	77.84 AT	168.40
3000.0	2997.96	-81.88	15.848	01.50	185.01	81.88 S	15.85 E	0.22	0.44	83.40 AT	169.05
3200.0	3197.87	-87.88	16.463	02.00	166.02	87.88 S	16.46 E	0.38	0.76	89.41 AT	169.39
3400.0	3397.79	-92.37	19.678	01.50	115.02	92.37 S	19.68 E	0.79	1.57	94.45 AT	167.97
3600.0	3597.71	-94.42	24.954	01.75	108.02	94.42 S	24.95 E	0.16	0.32	97.67 AT	165.20
3800.0	3797.60	-95.37	31.348	02.00	090.02	95.37 S	31.35 E	0.32	0.64	100.39 AT	161.80
4000.0	3997.50	-95.53	37.888	01.75	093.02	95.53 S	37.89 E	0.13	0.27	102.77 AT	158.37
4200.0	4197.40	-96.49	43.887	01.75	105.03	96.49 S	43.89 E	0.18	0.37	106.00 AT	155.54
4400.0	4397.35	-97.55	48.117	00.75	102.02	97.55 S	48.12 E	0.50	1.00	108.77 AT	153.75
4600.0	4597.34	-98.15	50.206	00.50	112.02	98.15 S	50.21 E	0.14	0.27	110.24 AT	152.91
4800.0	4797.34	-98.80	51.307	00.25	138.03	98.80 S	51.31 E	0.15	0.30	111.33 AT	152.56
5000.0	4997.34	-99.32	51.990	00.25	116.03	99.32 S	51.99 E	0.05	0.10	112.10 AT	152.37
5200.0	5197.33	-99.43	52.812	00.25	080.03	99.43 S	52.81 E	0.08	0.15	112.59 AT	152.03
5400.0	5397.33	-99.78	53.144	00.25	193.03	99.78 S	53.14 E	0.21	0.42	113.05 AT	151.96
5600.0	5597.33	-100.33	52.626	00.25	254.03	100.33 S	52.63 E	0.13	0.25	113.29 AT	152.32
5800.0	5797.33	-100.45	51.334	00.50	270.13	100.45 S	51.33 E	0.13	0.27	112.80 AT	152.93
6000.0	5997.32	-100.33	49.595	00.50	277.23	100.33 S	49.60 E	0.03	0.06	111.92 AT	153.70
6200.0	6197.31	-99.84	47.947	00.50	296.33	99.84 S	47.95 E	0.08	0.17	110.75 AT	154.35
6400.0	6397.31	-99.39	46.733	00.25	277.43	99.39 S	46.73 E	0.14	0.28	109.83 AT	154.82
6600.0	6597.31	-99.05	46.627	00.25	048.53	99.05 S	46.63 E	0.23	0.46	109.47 AT	154.79
6800.0	6797.30	-98.49	47.301	00.25	052.64	98.49 S	47.30 E	0.01	0.02	109.26 AT	154.35
7000.0	6997.30	-98.51	47.978	00.25	130.74	98.51 S	47.98 E	0.16	0.31	109.58 AT	154.03
7200.0	7197.30	-99.00	48.698	00.25	116.84	99.00 S	48.70 E	0.03	0.06	110.33 AT	153.81
7400.0	7397.30	-98.81	49.292	00.25	027.94	98.81 S	49.29 E	0.18	0.35	110.42 AT	153.49
7600.0	7597.30	-98.81	49.687	00.25	154.04	98.81 S	49.69 E	0.22	0.45	110.60 AT	153.31
7800.0	7797.30	-99.64	49.933	00.25	172.75	99.64 S	49.93 E	0.04	0.08	111.45 AT	153.38
8000.0	7997.29	-100.49	49.876	00.25	194.85	100.49 S	49.88 E	0.05	0.10	112.19 AT	153.60
8200.0	8197.29	-101.77	49.569	00.50	192.95	101.77 S	49.57 E	0.13	0.25	113.20 AT	154.03
8400.0	8397.28	-102.62	48.501	00.50	270.05	102.62 S	48.50 E	0.31	0.62	113.50 AT	154.70
8600.0	8597.26	-103.24	45.539	01.25	253.25	103.24 S	45.54 E	0.39	0.78	112.84 AT	156.20
8800.0	8797.20	-104.92	41.051	01.50	246.45	104.92 S	41.05 E	0.15	0.30	112.66 AT	158.63

*
* THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
* ***** *
* 8800.00 FEET EQUALS 112.66 FEET AT 158.63 *
* ***** *

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM
PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO, USA
Rig:LATSHAW #3

Sun Nov 28 17:52:31 2010

Coordinates

Latitude: 32.093176 N (32 deg. 5 min. 35.4332 sec.)
Longitude: 103.703735 W (-103 deg. 42 min. 13.4452 sec.)
Elevation: 3354.00 feet.
Calculation Date: Nov/28/2010

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0556 degrees
Total Magnetic Field: 0.48578 gauss
Magnetic Declination: 7.703332 degrees
Horizontal Intensity: 0.242480 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.703332 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 736309.6350 feet
Y: 398203.3510 feet
True to Grid: (convergence) -0.334514 degrees
Magnetic to Grid: 7.368818 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.368818 Degr.

PathFinder Energy Services, Inc. Magnetic & Grid Calculations

YATES PETROLEUM
PRESIDENTE BPD STATE COM #1H
LEA COUNTY, NEW MEXICO
Rig: LATSHAW #3

Tue Nov 09 10:39:27 2010

Coordinates

Latitude: 32.093176 N (32 deg. 5 min. 35.4332 sec.)
Longitude: 103.703735 W (-103 deg. 42 min. 13.4452 sec.)
Elevation: 3354.00 feet.
Calculation Date: Nov/09/2010

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0569 degrees
Total Magnetic Field: 0.48583 gauss
Magnetic Declination: 7.709674 degrees
Horizontal Intensity: 0.242496 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.709674 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 736309.6350 feet
Y: 398203.3510 feet
True to Grid: (convergence) -0.334514 degrees
Magnetic to Grid: 7.375159 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.375159 Degr.



Job Number: SVCO-101013

Company: Yates Petroleum

Lease/Well: Presidente BPD State Com 1H

Location: Lea County, NM

Rig Name: Latshaw #3

RKB: 22'

G.L. or M.S.L.: GL

State/Country: New Mexico/USA

Declination: 7.38°

Grid: East To Grid

File name: F:\SURVEY\2010SU~1\YATESP~1\PRESID1H.SVY

Date/Time: 29-Nov-10 / 09:15

Curve Name: Surface - 8800' M.D. (Gyroscopic)

RECEIVED

FEB 21 2011

HOODSUCD

SUR: D-32-25s-32e, 330/N & 660/W
BHL: M-32-25s-32e, 4944/N & 676/W
API # 30-025-39660

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane .00
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
Surface MD to 8,800' MD is, to the best of
our knowledge a true and accurate account of
the well bore.

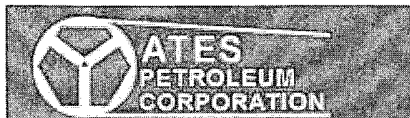
Dana Outter 11/29/10
MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.25	111.59	200.00	-.16	.41	-.16	.44	111.59	.12
400.00	.25	88.89	400.00	-.31	1.25	-.31	1.29	104.07	.05
600.00	.25	19.09	600.00	.11	1.83	.11	1.83	86.61	.14
800.00	.75	214.29	799.99	-.56	1.23	-.56	1.35	114.48	.50
1000.00	3.25	175.49	999.86	-7.30	.94	-7.30	7.36	172.66	1.35
1200.00	5.25	187.16	1199.30	-22.03	.25	-22.03	22.03	179.36	1.08
1400.00	3.25	176.40	1398.75	-36.77	-.54	-36.77	36.77	180.84	1.07
1600.00	1.75	165.61	1598.55	-45.38	.58	-45.38	45.39	179.27	.78
1800.00	1.75	153.81	1798.46	-51.08	2.68	-51.08	51.15	176.99	.18

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
2000.00	1.75	138.02	1998.37	-56.09	6.07	-56.09	56.42	173.82	.24
2200.00	1.50	147.01	2198.29	-60.56	9.54	-60.56	61.30	171.05	.18
2400.00	1.50	153.01	2398.22	-65.09	12.15	-65.09	66.21	169.42	.08
2600.00	1.75	162.02	2598.14	-70.32	14.29	-70.32	71.76	168.52	.18
2800.00	1.75	172.01	2798.04	-76.25	15.65	-76.25	77.84	168.40	.15
3000.00	1.50	185.01	2997.96	-81.88	15.85	-81.88	83.40	169.05	.22
3200.00	2.00	166.02	3197.87	-87.88	16.46	-87.88	89.41	169.39	.38
3400.00	1.50	115.02	3397.79	-92.37	19.68	-92.37	94.45	167.97	.79
3600.00	1.75	108.02	3597.71	-94.42	24.95	-94.42	97.67	165.20	.16
3800.00	2.00	90.02	3797.60	-95.37	31.35	-95.37	100.39	161.80	.32
4000.00	1.75	93.02	3997.50	-95.53	37.89	-95.53	102.77	158.37	.13
4200.00	1.75	105.03	4197.40	-96.49	43.89	-96.49	106.00	155.54	.18
4400.00	.75	102.02	4397.35	-97.55	48.12	-97.55	108.77	153.75	.50
4600.00	.50	112.02	4597.34	-98.15	50.21	-98.15	110.24	152.91	.14
4800.00	.25	138.03	4797.34	-98.80	51.31	-98.80	111.33	152.56	.15
5000.00	.25	116.03	4997.34	-99.32	51.99	-99.32	112.10	152.37	.05
5200.00	.25	80.03	5197.33	-99.43	52.81	-99.43	112.59	152.03	.08
5400.00	.25	193.03	5397.33	-99.78	53.14	-99.78	113.05	151.96	.21
5600.00	.25	254.03	5597.33	-100.33	52.63	-100.33	113.29	152.32	.13
5800.00	.50	270.13	5797.33	-100.45	51.33	-100.45	112.80	152.93	.13
6000.00	.50	277.23	5997.32	-100.33	49.60	-100.33	111.92	153.70	.03
6200.00	.50	296.33	6197.31	-99.84	47.95	-99.84	110.75	154.35	.08
6400.00	.25	277.43	6397.31	-99.39	46.73	-99.39	109.83	154.82	.14
6600.00	.25	48.53	6597.31	-99.05	46.63	-99.05	109.47	154.79	.23
6800.00	.25	52.64	6797.30	-98.49	47.30	-98.49	109.26	154.35	.01
7000.00	.25	130.74	6997.30	-98.51	47.98	-98.51	109.58	154.03	.16
7200.00	.25	116.84	7197.30	-99.00	48.70	-99.00	110.33	153.81	.03
7400.00	.25	27.94	7397.30	-98.81	49.29	-98.81	110.42	153.49	.18
7600.00	.25	154.04	7597.30	-98.81	49.69	-98.81	110.60	153.31	.22

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
7800.00	.25	172.75	7797.30	-99.64	49.93	-99.64	111.45	153.38	.04
8000.00	.25	194.85	7997.30	-100.49	49.88	-100.49	112.19	153.60	.05
8200.00	.50	192.95	8197.29	-101.77	49.57	-101.77	113.20	154.03	.13
8400.00	.50	270.05	8397.29	-102.62	48.50	-102.62	113.50	154.70	.31
8600.00	1.25	253.25	8597.26	-103.24	45.54	-103.24	112.84	156.20	.39

Last Survey Depth Recorded									
8800.00	1.50	246.45	8797.20	-104.92	41.05	-104.92	112.66	158.63	.15



Project: Lea County
 Site: Presidente "BPD" State
 Well: #1H
 Wellbore: OH
 Plan: Plan #2 (#1H/OH)



Azimuths to Grid North
 True North: -0.33°
 Magnetic North: 7.36°

Magnetic Field
 Strength: 48612.0snT
 Dip Angle: 60.08°
 Date: 11/30/2010
 Model: IGRF200510

PATHFINDER
 A Schlumberger Company

PROJECT DETAILS: Lea 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	8376.00	0.46	262.70	8373.29	-102.60	48.70	0.00	0.00	102.86	
2	9125.13	90.00	180.26	8850.00	-579.81	42.76	12.01	-82.44	580.03	
3	13159.85	90.00	180.26	8850.00	-4614.49	24.46	0.00	0.00	4614.55	PBHL(presidente#1H)

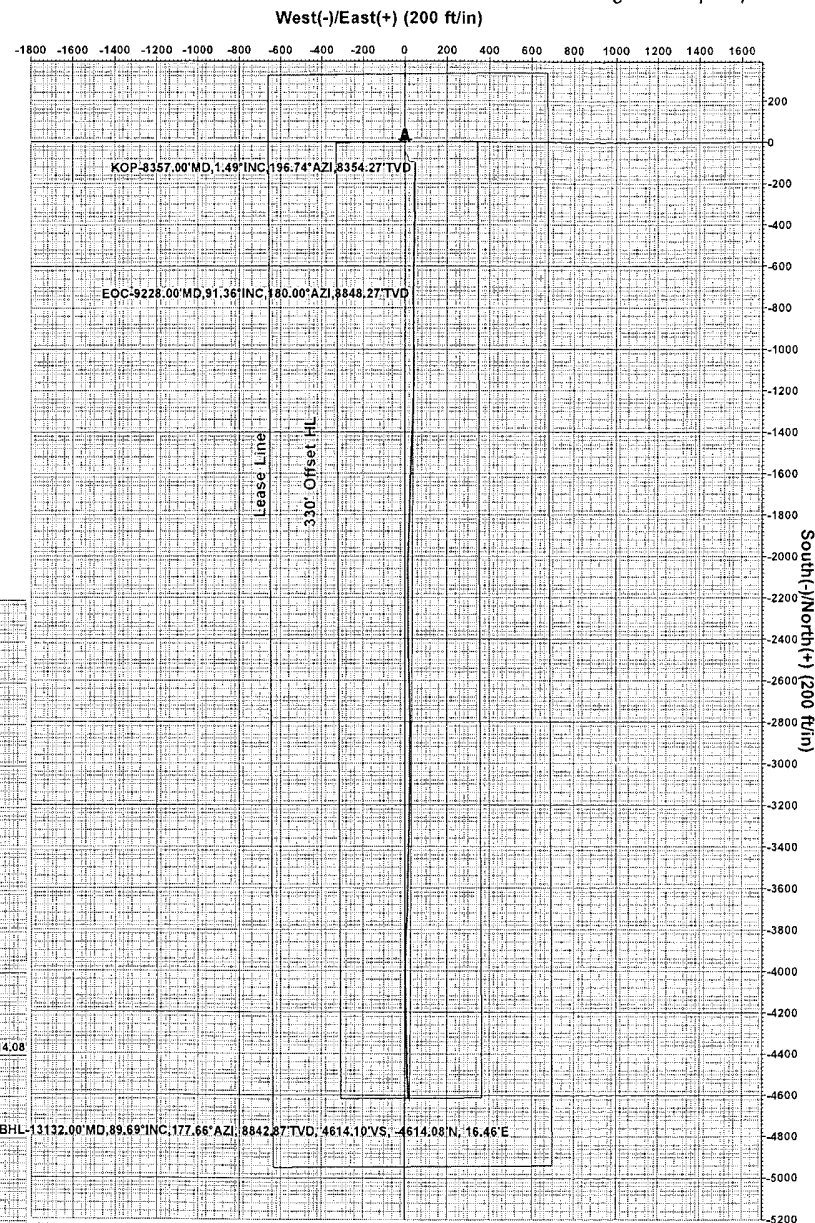
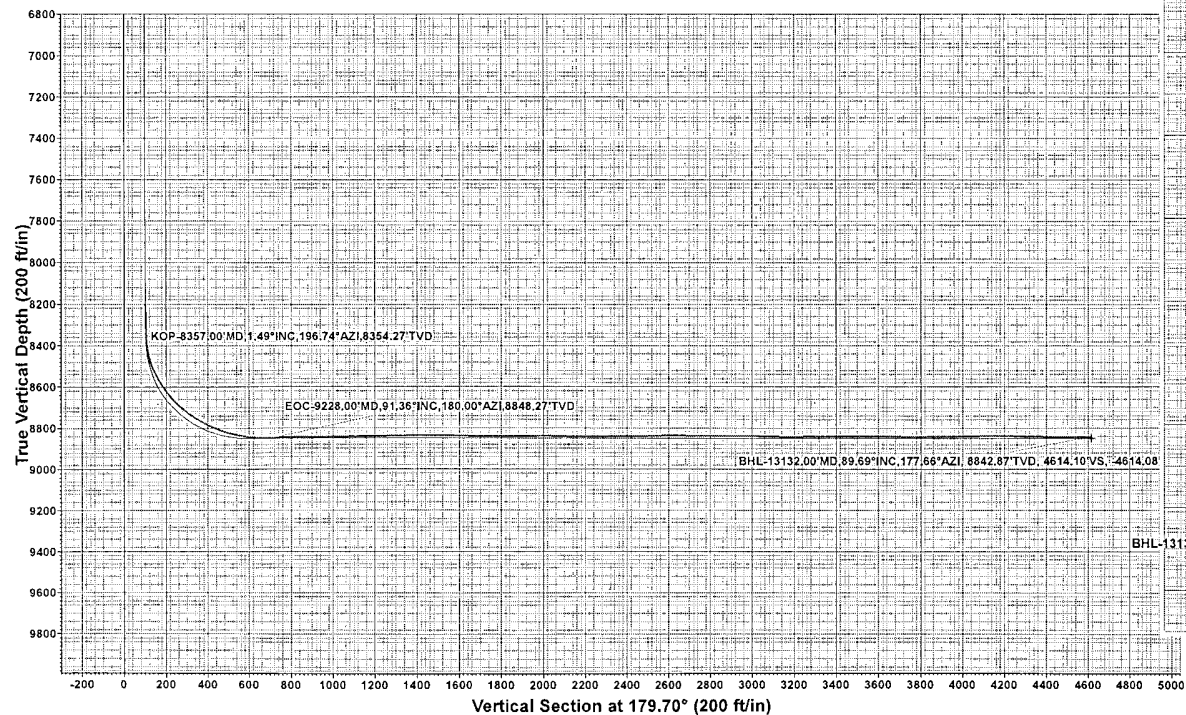
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL(presidente#1H)	50.00	-4614.49	24.04	393588.859	736333.673	Point

WELL DETAILS: #1H

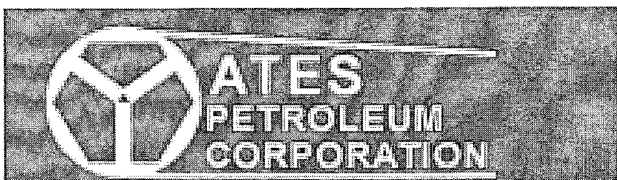
Ground Elevation: 3335.00
 RKB Elevation: WELL @ 3354.00ft (19' KB Correction)
 Rig Name: 19' KB Correction

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	398203.351	736309.635	32° 5' 35.433 N	103° 42' 13.445 W	



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

Created By: Nate Bingham Date: 8:41, December 14 2010



SUR: D-32-25s-32e, 330/N & 660/W
BHL: M-32-25s-32e, 4944/N & 676/W
API # 30-025-39660

Yates Petroleum Corp.

Lea County

Presidente "BPD" State Com

#1H

OH

Survey: MWD #1

Pathfinder X & Y Survey Report

14 December, 2010

PATHFINDER®

A Schlumberger Company



Pathfinder

Pathfinder X & Y Survey Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Lea County
Site: Presidente "BPD" State Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3354.00ft (19' KB Correction)
MD Reference: WELL @ 3354.00ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Project Lea 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 Presidente "BPD" State Com

Site Position: Northing: 398,203.351 ft Latitude: 32° 5' 35.433 N
From: Map Easting: 736,309.635 ft Longitude: 103° 42' 13.445 W
Position Uncertainty: 0.00 ft Slot Radius: " Grid Convergence: 0.33 °

Well #1H

Well Position +N/-S 0.00 ft Northing: 398,203.351 ft Latitude: 32° 5' 35.433 N
+E/-W 0.00 ft Easting: 736,309.635 ft Longitude: 103° 42' 13.445 W
Position Uncertainty 0.00 ft Wellhead Elevation: ft Ground Level: 3,335.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/30/10	7.69	60.08	48,612

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	179.70



Pathfinder

Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
Project: Lea County
Site: Presidente "BPD" State Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3354.00ft (19' KB Correction)
MD Reference: WELL @ 3354.00ft (19' KB Correction)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Midland Database

Survey Program		Date	12/14/10		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
200.00	8,200.00	GYRO (OH)	MWD	MWD - Standard	
8,357.00	13,132.00	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)	
8,200.00	0.50	192.95	8,197.29	4,843.29	-101.77	49.57	102.02	0.00	398,101.58	736,359.20	
8,357.00	1.49	196.74	8,354.27	5,000.27	-104.39	48.83	104.64	0.63	398,098.96	736,358.46	
KOP-8357.00'MD,1.49°INC,196.74°AZI,8354.27'TVD											
8,388.00	4.13	186.67	8,385.23	5,031.23	-105.88	48.58	106.14	8.63	398,097.47	736,358.22	
8,419.00	8.18	183.89	8,416.04	5,062.04	-109.19	48.30	109.45	13.10	398,094.16	736,357.94	
8,450.00	13.19	182.11	8,446.49	5,092.49	-114.93	48.02	115.18	16.19	398,088.42	736,357.66	
8,481.00	18.55	180.70	8,476.30	5,122.30	-123.40	47.83	123.65	17.33	398,079.95	736,357.47	
8,512.00	22.95	180.75	8,505.28	5,151.28	-134.38	47.69	134.63	14.19	398,068.97	736,357.33	
8,543.00	26.20	181.21	8,533.47	5,179.47	-147.27	47.47	147.52	10.50	398,056.08	736,357.10	
8,575.00	29.11	181.39	8,561.81	5,207.81	-162.12	47.13	162.36	9.10	398,041.23	736,356.77	
8,605.00	32.01	181.47	8,587.64	5,233.64	-177.37	46.75	177.61	9.67	398,025.98	736,356.38	
8,637.00	35.00	182.17	8,614.32	5,260.32	-195.02	46.18	195.26	9.42	398,008.33	736,355.82	
8,667.00	38.51	181.92	8,638.35	5,284.35	-212.96	45.55	213.19	11.71	397,990.39	736,355.18	
8,699.00	42.03	180.72	8,662.77	5,308.77	-233.63	45.08	233.86	11.26	397,969.72	736,354.71	
8,729.00	46.17	180.11	8,684.31	5,330.31	-254.50	44.93	254.74	13.87	397,948.85	736,354.56	
8,761.00	49.68	179.64	8,705.75	5,351.75	-278.25	44.98	278.48	11.02	397,925.10	736,354.62	
8,792.00	52.76	179.54	8,725.16	5,371.16	-302.42	45.16	302.65	9.94	397,900.94	736,354.79	
8,823.00	55.66	179.74	8,743.29	5,389.29	-327.56	45.31	327.79	9.37	397,875.79	736,354.95	
8,855.00	58.65	180.16	8,760.64	5,406.64	-354.44	45.34	354.67	9.41	397,848.91	736,354.97	
8,886.00	61.99	180.53	8,775.99	5,421.99	-381.37	45.17	381.60	10.82	397,821.98	736,354.81	
8,917.00	65.77	180.87	8,789.63	5,435.63	-409.20	44.83	409.42	12.23	397,794.16	736,354.47	



Pathfinder

Pathfinder X & Y Survey Report



Company:	Yates Petroleum Corp.	Local Co-ordinate Reference:	Well #1H
Project:	Lea County	TVD Reference:	WELL @ 3354.00ft (19' KB Correction)
Site:	Presidente "BPD" State Com	MD Reference:	WELL @ 3354.00ft (19' KB Correction)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	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)
8,948.00	67.62	181.82	8,801.90	5,447.90	-437.66	44.16	437.88	6.60	397,765.69	736,353.80
8,979.00	70.35	182.15	8,813.01	5,459.01	-466.57	43.16	466.79	8.86	397,736.78	736,352.79
9,010.00	73.78	181.57	8,822.56	5,468.56	-496.05	42.20	496.26	11.21	397,707.30	736,351.84
9,041.00	76.50	180.93	8,830.51	5,476.51	-526.00	41.55	526.21	9.00	397,677.35	736,351.19
9,072.00	78.61	181.46	8,837.19	5,483.19	-556.26	40.92	556.47	7.01	397,647.09	736,350.55
9,104.00	81.95	180.72	8,842.59	5,488.59	-587.79	40.32	588.00	10.68	397,615.56	736,349.95
9,134.00	85.21	180.98	8,845.95	5,491.95	-617.60	39.88	617.80	10.90	397,585.75	736,349.51
9,166.00	88.28	180.62	8,847.76	5,493.76	-649.54	39.43	649.74	9.66	397,553.81	736,349.07
9,197.00	89.25	180.00	8,848.43	5,494.43	-680.53	39.26	680.73	3.71	397,522.82	736,348.90
9,228.00	91.36	180.00	8,848.27	5,494.27	-711.53	39.26	711.73	6.81	397,491.82	736,348.90
EOC-9228.00'MD,91.36°INC,180.00°AZI,8848.27'TVD										
9,259.00	92.68	179.81	8,847.17	5,493.17	-742.51	39.32	742.71	4.30	397,460.84	736,348.95
9,291.00	92.77	179.46	8,845.65	5,491.65	-774.47	39.52	774.67	1.13	397,428.88	736,349.15
9,321.00	91.45	179.38	8,844.55	5,490.55	-804.45	39.82	804.65	4.41	397,398.90	736,349.46
9,353.00	90.40	179.82	8,844.03	5,490.03	-836.45	40.05	836.64	3.56	397,366.91	736,349.68
9,447.00	90.22	179.06	8,843.52	5,489.52	-930.44	40.96	930.64	0.83	397,272.91	736,350.60
9,540.00	90.40	179.61	8,843.02	5,489.02	-1,023.43	42.04	1,023.64	0.62	397,179.92	736,351.68
9,633.00	91.10	179.92	8,841.80	5,487.80	-1,116.42	42.43	1,116.63	0.82	397,086.93	736,352.06
9,725.00	91.01	181.72	8,840.11	5,486.11	-1,208.39	41.11	1,208.59	1.96	396,994.96	736,350.74
9,818.00	90.84	181.38	8,838.61	5,484.61	-1,301.35	38.59	1,301.53	0.41	396,902.01	736,348.23
9,912.00	90.22	183.06	8,837.74	5,483.74	-1,395.27	34.95	1,395.43	1.90	396,808.08	736,344.59
10,006.00	90.04	181.62	8,837.52	5,483.52	-1,489.19	31.11	1,489.33	1.54	396,714.16	736,340.75
10,100.00	88.72	181.57	8,838.54	5,484.54	-1,583.14	28.50	1,583.27	1.41	396,620.21	736,338.13
10,193.00	89.52	181.19	8,839.97	5,485.97	-1,676.10	26.26	1,676.22	0.95	396,527.25	736,335.89
10,287.00	90.22	181.77	8,840.18	5,486.18	-1,770.07	23.83	1,770.17	0.97	396,433.28	736,333.47
10,380.00	89.87	181.88	8,840.11	5,486.11	-1,863.02	20.87	1,863.11	0.39	396,340.33	736,330.50
10,474.00	91.28	182.32	8,839.17	5,485.17	-1,956.95	17.43	1,957.02	1.57	396,246.40	736,327.06



Pathfinder

Pathfinder X & Y Survey Report



Company: Yates Petroleum Corp.
 Project: Lea County
 Site: Presidente "BPD" State Com
 Well: #1H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #1H
 TVD Reference: WELL @ 3354.00ft (19' KB Correction)
 MD Reference: WELL @ 3354.00ft (19' KB Correction)
 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)
10,566.00	88.64	180.13	8,839.23	5,485.23	-2,048.92	15.46	2,048.97	3.73	396,154.43	736,325.09
10,687.00	89.60	179.47	8,841.09	5,487.09	-2,169.90	15.88	2,169.95	0.96	396,033.45	736,325.52
10,781.00	90.84	179.94	8,840.73	5,486.73	-2,263.90	16.37	2,263.95	1.41	395,939.45	736,326.00
10,873.00	89.87	179.13	8,840.16	5,486.16	-2,355.89	17.11	2,355.95	1.37	395,847.46	736,326.75
10,966.00	90.84	179.28	8,839.58	5,485.58	-2,448.88	18.40	2,448.94	1.06	395,754.47	736,328.04
11,059.00	91.19	178.77	8,837.93	5,483.93	-2,541.85	19.98	2,541.92	0.67	395,661.50	736,329.62
11,152.00	89.78	178.53	8,837.15	5,483.15	-2,634.82	22.18	2,634.90	1.54	395,568.53	736,331.81
11,246.00	89.43	178.70	8,837.79	5,483.79	-2,728.79	24.45	2,728.88	0.41	395,474.56	736,334.08
11,338.00	89.52	180.51	8,838.64	5,484.64	-2,820.78	25.08	2,820.87	1.97	395,382.57	736,334.72
11,431.00	90.84	180.51	8,838.34	5,484.34	-2,913.77	24.25	2,913.86	1.42	395,289.58	736,333.89
11,524.00	88.81	179.62	8,838.63	5,484.63	-3,006.77	24.15	3,006.85	2.38	395,196.58	736,333.78
11,619.00	88.20	180.53	8,841.11	5,487.11	-3,101.73	24.02	3,101.82	1.15	395,101.62	736,333.66
11,711.00	89.96	181.00	8,842.58	5,488.58	-3,193.71	22.80	3,193.78	1.98	395,009.64	736,332.43
11,805.00	90.92	180.93	8,841.86	5,487.86	-3,287.69	21.21	3,287.76	1.02	394,915.66	736,330.85
11,898.00	90.31	181.44	8,840.86	5,486.86	-3,380.67	19.29	3,380.72	0.85	394,822.69	736,328.92
11,991.00	89.87	181.07	8,840.72	5,486.72	-3,473.64	17.25	3,473.69	0.62	394,729.71	736,326.89
12,085.00	90.04	180.84	8,840.79	5,486.79	-3,567.63	15.69	3,567.66	0.30	394,635.72	736,325.32
12,176.00	89.16	181.16	8,841.43	5,487.43	-3,658.61	14.10	3,658.64	1.03	394,544.74	736,323.73
12,270.00	89.78	182.51	8,842.30	5,488.30	-3,752.56	11.09	3,752.56	1.58	394,450.79	736,320.72
12,364.00	90.84	183.37	8,841.79	5,487.79	-3,846.43	6.27	3,846.41	1.45	394,356.92	736,315.90
12,457.00	90.75	181.56	8,840.50	5,486.50	-3,939.33	2.27	3,939.29	1.95	394,264.02	736,311.90
12,549.00	89.78	179.28	8,840.07	5,486.07	-4,031.32	1.59	4,031.27	2.69	394,172.03	736,311.23
12,642.00	90.92	179.30	8,839.50	5,485.50	-4,124.31	2.75	4,124.27	1.23	394,079.04	736,312.38
12,736.00	89.16	177.89	8,839.44	5,485.44	-4,218.28	5.05	4,218.24	2.40	393,985.08	736,314.69
12,829.00	88.81	178.59	8,841.09	5,487.09	-4,311.22	7.91	4,311.20	0.84	393,892.13	736,317.54
12,923.00	90.04	178.63	8,842.03	5,488.03	-4,405.18	10.19	4,405.18	1.31	393,798.17	736,319.82
13,017.00	89.69	178.70	8,842.25	5,488.25	-4,499.16	12.38	4,499.16	0.38	393,704.19	736,322.01



Pathfinder

Pathfinder X & Y Survey Report

PATHFINDER
A Schlumberger Company

Company: Yates Petroleum Corp.
Project: Lea County
Site: Presidente "BPD" State Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #1H
TVD Reference: WELL @ 3354.00ft (19' KB Correction)
MD Reference: WELL @ 3354.00ft (19' KB Correction)
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)
13,084.00	89.69	177.66	8,842.61	5,488.61	-4,566.12	14.50	4,566.13	1.55	393,637.23	736,324.14
13,132.00	89.69	177.66	8,842.87	5,488.87	-4,614.08	16.46	4,614.10	0.00	393,589.27	736,326.10
BHL-13132.00'MD,89.69°INC,177.66°AZI, 8842.87'TVD, 4614.10'VS, -4614.08'N, 16.46'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(presidente#1H)	0.00	0.00	8,850.00	-4,614.49	24.04	393,588.859	736,333.673	32° 4' 49.768 N	103° 42' 13.479 W
- survey misses target center by 10.41ft at 13132.00ft MD (8842.87 TVD, -4614.08 N, 16.46 E)									
- Point									

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,357.00	8,354.27	-104.39	48.83	KOP-8357.00'MD,1.49°INC,196.74°AZI,8354.27'TVD
9,228.00	8,848.27	-711.53	39.26	EOC-9228.00'MD,91.36°INC,180.00°AZI,8848.27'TVD
13,132.00	8,842.87	-4,614.08	16.46	BHL-13132.00'MD,89.69°INC,177.66°AZI, 8842.87'TVD, 4614.10'VS, -

Checked By: _____ Approved By: _____ Date: _____