

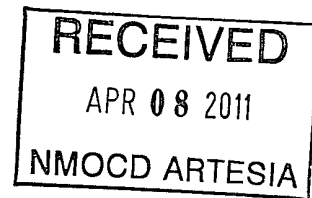


An Operating Unit of Smith International, Inc.

DIRECTIONAL SURVEY REPORT

30-015-37942

YATES PETROLEUM
CHAMAELEON BIN STATE COM #1H –
HORIZONTAL
EDDY COUNTY, NEW MEXICO



PREPARED BY: FRANCISCO SINISTERRA

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

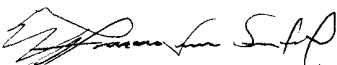
DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) BRYANT BLAKEMORE
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 10-26-10 TO 11-17-10
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
CHAMAELEOM BIP STATE COM #1H - HORIZONTAL
EDDY COUNTY, NM
RIG: PATRIOT 5

9. SURVEY CERTIFIED FROM: 477 TO 12725 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 6590.80 FEET ON A BEARING OF 181.37 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 12783 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: 10/26/2010
Date Completed: 11/17/2010

YATES PETROLEUM CORPORATION
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO
Rig: PATRIOT #5
PathFinder Office Supervisor: FRANCISCO SINISTERRA
PathFinder Field Engineers: BRYANT BLAKEMORE
MARK RISENHOOVER
PRITHWISH DAS

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.1.11.6782 N LON: 104.8.27.2387 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 600976.8000 Y: 371035.4940
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.80° EAST TO GRID
Vertical Section Plane: 181.48
Survey Vert. Reference: 26.50' Rotary Table To Ground
Altitude: 3106.00' Ground To MSL

Measured Depth	12783.00	(feet)
Inclination	89.43	(deg)
Azimuth	181.22	(deg)
True Vertical Depth	6449.09	(feet)
Vertical Section	6590.79	(feet)
Survey X cord	600818.95	(feet)
Survey Y cord	364446.59	(feet)
Survey Lat	32.00179859 N	(deg)
Survey Lon	104.14144672 W	(deg)
Rectangular Corr. N/S	6588.91 S	(feet)
Rectangular Corr. E/W	157.85 W	(feet)
Closure Distance	6590.80	(feet)
Direction of Closure	181.37	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO

Rig: PATRIOT #5

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: BRYANT BLAKEMORE
MARK RISENHOOVER

PRITHWISH DAS

Survey Calculations by RX5 V6.03B using Minimum Curvature

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.1.11.6782 N LON: 104.8.27.2387 W

GRID Reference: NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 600976.8000 Y: 371035.4940

North Aligned To: GRID NORTH

Total Magnetic Correction: 7.80° EAST TO GRID

Vertical Section Plane: 181.48

Survey Vert. Reference: 26.50' Rotary Table To Ground

Altitude: 3106.00' Ground To MSL

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 GYRO SURVEY @ 450' MD.										
450.00	0.50	153.86	450.00	0.00	1.06	1.09 S	1.15 E	1.58@	133.47	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
477.00	0.53	128.75	477.00	27.00	1.24	1.27 S	1.30 E	1.82@	134.44	0.84
568.00	0.62	172.20	567.99	91.00	1.98	2.03 S	1.69 E	2.64@	140.08	0.48
657.00	1.06	153.95	656.99	89.00	3.19	3.24 S	2.12 E	3.87@	146.80	0.57
754.00	0.26	215.75	753.98	97.00	4.16	4.23 S	2.39 E	4.85@	150.55	1.00
849.00	0.35	208.40	848.98	95.00	4.60	4.66 S	2.12 E	5.12@	155.49	0.10
943.00	0.79	202.88	942.97	94.00	5.46	5.51 S	1.73 E	5.77@	162.52	0.47
1037.00	1.14	209.62	1036.96	94.00	6.89	6.92 S	1.02 E	6.99@	171.61	0.39
1131.00	1.93	225.15	1130.92	94.00	8.86	8.85 S	0.56 W	8.86@	183.65	0.94
1225.00	0.70	179.19	1224.90	94.00	10.58	10.54 S	1.68 W	10.67@	189.05	1.63
1319.00	0.62	185.17	1318.89	94.00	11.66	11.62 S	1.72 W	11.74@	188.40	0.11
1413.00	0.53	209.15	1412.89	94.00	12.55	12.50 S	1.97 W	12.66@	188.97	0.27
1507.00	0.26	258.59	1506.89	94.00	12.98	12.92 S	2.39 W	13.14@	190.50	0.44
1601.00	0.88	99.42	1600.88	94.00	13.13	13.09 S	1.89 W	13.22@	188.23	1.20
1695.00	2.29	92.71	1694.85	94.00	13.27	13.29 S	0.70 E	13.31@	177.00	1.51
1790.00	2.02	96.11	1789.78	95.00	13.45	13.56 S	4.26 E	14.21@	162.57	0.31
1884.00	2.81	85.76	1883.70	94.00	13.35	13.57 S	8.20 E	15.85@	148.84	0.96
1978.00	3.52	76.68	1977.55	94.00	12.38	12.73 S	13.31 E	18.42@	133.73	0.92
2071.00	3.61	45.58	2070.38	93.00	9.55	10.02 S	18.18 E	20.76@	118.87	2.06
2098.00	3.34	34.09	2097.33	27.00	8.28	8.78 S	19.23 E	21.13@	114.54	2.76
2295.00	2.11	16.56	2294.11	197.00	-0.06	0.55 S	23.48 E	23.48@	91.34	0.75
2452.00	1.14	1.73	2451.04	157.00	-4.41	3.78 N	24.35 E	24.64@	81.17	0.67
2640.00	1.32	3.30	2639.00	188.00	-8.45	7.81 N	24.53 E	25.74@	72.33	0.10
2828.00	1.06	5.64	2826.96	188.00	-12.34	11.71 N	24.82 E	27.45@	64.75	0.14
3017.00	0.62	340.53	3015.94	189.00	-15.04	14.41 N	24.66 E	28.56@	59.69	0.30

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT #5

Page 02/05

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)
3205.00	0.79	330.64	3203.92	188.00	-17.11	16.50 N	23.68 E	28.86@	55.13	0.11
3393.00	0.53	244.97	3391.92	188.00	-17.83	17.26 N	22.26 E	28.17@	52.21	0.49
3581.00	0.18	302.27	3579.91	188.00	-17.59	17.05 N	21.22 E	27.22@	51.22	0.24
3770.00	0.53	269.52	3768.91	189.00	-17.72	17.20 N	20.09 E	26.45@	49.43	0.21
3958.00	0.62	223.81	3956.90	188.00	-16.93	16.46 N	18.52 E	24.78@	48.37	0.24
4147.00	0.53	221.13	4145.89	189.00	-15.50	15.06 N	17.24 E	22.89@	48.85	0.05
4336.00	0.26	295.73	4334.89	189.00	-15.01	14.59 N	16.28 E	21.86@	48.12	0.28
4525.00	0.53	191.60	4523.88	189.00	-14.32	13.92 N	15.71 E	20.99@	48.46	0.34
4714.00	0.44	202.28	4712.88	189.00	-12.78	12.39 N	15.26 E	19.66@	50.92	0.07
4902.00	0.53	161.15	4900.87	188.00	-11.29	10.90 N	15.27 E	18.76@	54.47	0.19
5090.00	0.79	149.52	5088.86	188.00	-9.38	8.96 N	16.21 E	18.52@	61.06	0.16
5279.00	0.79	169.46	5277.84	189.00	-7.00	6.56 N	17.11 E	18.32@	69.02	0.14
5467.00	0.79	213.82	5465.82	188.00	-4.64	4.21 N	16.62 E	17.15@	75.79	0.32
5561.00	0.97	207.35	5559.81	94.00	-3.37	2.96 N	15.90 E	16.17@	79.44	0.22
5749.00	1.76	201.86	5747.76	188.00	0.76	1.13 S	14.09 E	14.14@	94.58	0.43
5937.00	1.93	269.92	5935.68	188.00	3.56	3.81 S	9.85 E	10.56@	111.16	1.10
5994.00	4.13	215.62	5992.61	57.00	5.28	5.48 S	7.69 E	9.45@	125.48	5.94
6025.00	9.94	196.99	6023.37	31.00	8.79	8.95 S	6.26 E	10.93@	145.03	19.90
6057.00	17.24	192.12	6054.45	32.00	16.12	16.24 S	4.46 E	16.84@	164.66	23.07
6088.00	25.41	189.46	6083.30	31.00	27.24	27.31 S	2.40 E	27.42@	174.99	26.53
6120.00	32.10	185.05	6111.34	32.00	42.54	42.57 S	0.52 E	42.58@	179.31	21.92
6151.00	34.91	181.43	6137.19	31.00	59.64	59.65 S	0.43 W	59.65@	180.41	11.12
6182.00	37.55	180.71	6162.20	31.00	77.96	77.97 S	0.77 W	77.97@	180.57	8.63
6213.00	40.45	181.77	6186.29	31.00	97.47	97.47 S	1.20 W	97.48@	180.70	9.60
6245.00	42.47	182.82	6210.27	32.00	118.65	118.64 S	2.05 W	118.65@	180.99	6.68
6276.00	43.18	182.62	6233.00	31.00	139.72	139.69 S	3.05 W	139.72@	181.25	2.33
6307.00	45.11	182.84	6255.25	31.00	161.30	161.25 S	4.08 W	161.30@	181.45	6.25
6339.00	47.22	182.65	6277.41	32.00	184.38	184.31 S	5.18 W	184.38@	181.61	6.61
6370.00	49.51	181.78	6298.00	31.00	207.54	207.46 S	6.07 W	207.54@	181.68	7.68

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO
RIG:PATRIOT #5

Page 03/05

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)
6401.00	53.02	180.31	6317.40	31.00	231.72	231.63 S	6.51 W	231.72@	181.61	11.91
6433.00	56.98	180.54	6335.75	32.00	257.92	257.84 S	6.70 W	257.92@	181.49	12.39
6464.00	60.32	180.65	6351.87	31.00	284.39	284.30 S	6.98 W	284.39@	181.41	10.78
6496.00	64.37	181.45	6366.72	32.00	312.73	312.64 S	7.50 W	312.73@	181.37	12.85
6527.00	68.50	182.14	6379.12	31.00	341.13	341.03 S	8.39 W	341.13@	181.41	13.48
6559.00	72.46	182.81	6389.81	32.00	371.28	371.16 S	9.70 W	371.28@	181.50	12.53
6590.00	76.24	182.71	6398.17	31.00	401.12	400.97 S	11.14 W	401.12@	181.59	12.20
6622.00	80.81	181.80	6404.53	32.00	432.47	432.30 S	12.37 W	432.47@	181.64	14.55
6654.00	85.03	180.75	6408.47	32.00	464.22	464.04 S	13.07 W	464.22@	181.61	13.58
6685.00	88.55	180.28	6410.21	31.00	495.16	494.98 S	13.35 W	495.16@	181.54	11.45
6716.00	88.99	179.86	6410.88	31.00	526.14	525.97 S	13.39 W	526.14@	181.46	1.96
6811.00	88.55	182.18	6412.91	95.00	621.11	620.93 S	15.08 W	621.11@	181.39	2.49
6905.00	87.93	182.00	6415.80	94.00	715.06	714.82 S	18.51 W	715.06@	181.48	0.69
7000.00	88.02	182.01	6419.16	95.00	810.00	809.71 S	21.83 W	810.00@	181.54	0.10
7094.00	87.05	181.85	6423.20	94.00	903.91	903.56 S	24.99 W	903.91@	181.58	1.05
7188.00	88.72	182.00	6426.67	94.00	997.84	997.44 S	28.15 W	997.84@	181.62	1.78
7283.00	89.87	182.10	6427.84	95.00	1092.83	1092.37 S	31.54 W	1092.83@	181.65	1.22
7377.00	89.78	181.37	6428.13	94.00	1186.82	1186.33 S	34.39 W	1186.83@	181.66	0.78
7471.00	89.34	182.05	6428.85	94.00	1280.82	1280.29 S	37.19 W	1280.83@	181.66	0.86
7564.00	90.48	182.07	6428.99	93.00	1373.81	1373.22 S	40.54 W	1373.82@	181.69	1.23
7659.00	89.96	181.83	6428.63	95.00	1468.81	1468.17 S	43.77 W	1468.82@	181.71	0.60
7752.00	90.75	181.71	6428.05	93.00	1561.80	1561.12 S	46.64 W	1561.82@	181.71	0.86
7846.00	89.78	181.67	6427.62	94.00	1655.80	1655.08 S	49.41 W	1655.81@	181.71	1.03
7940.00	90.13	181.68	6427.69	94.00	1749.80	1749.04 S	52.16 W	1749.81@	181.71	0.37
8033.00	89.78	181.96	6427.77	93.00	1842.80	1841.99 S	55.12 W	1842.81@	181.71	0.48
8127.00	89.34	182.15	6428.49	94.00	1936.79	1935.93 S	58.49 W	1936.81@	181.73	0.51
8222.00	89.52	182.31	6429.43	95.00	2031.78	2030.85 S	62.18 W	2031.80@	181.75	0.25
8316.00	89.43	181.98	6430.29	94.00	2125.77	2124.78 S	65.70 W	2125.80@	181.77	0.36
8410.00	88.90	181.79	6431.66	94.00	2219.75	2218.72 S	68.79 W	2219.78@	181.78	0.60

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO
RIG:PATRIOT #5

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)
8504.00	89.16	181.40	6433.26	94.00	2313.74	2312.67 S	71.41 W	2313.77@	181.77	0.50
8599.00	89.43	181.33	6434.42	95.00	2408.73	2407.63 S	73.67 W	2408.76@	181.75	0.29
8693.00	89.52	179.93	6435.29	94.00	2502.72	2501.62 S	74.70 W	2502.74@	181.71	1.49
8786.00	90.13	180.64	6435.57	93.00	2595.70	2594.62 S	75.17 W	2595.71@	181.66	1.01
8880.00	91.36	181.78	6434.35	94.00	2689.68	2688.59 S	77.15 W	2689.69@	181.64	1.78
8974.00	89.52	181.10	6433.63	94.00	2783.68	2782.55 S	79.51 W	2783.69@	181.64	2.09
9068.00	90.04	179.99	6433.99	94.00	2877.66	2876.54 S	80.41 W	2877.67@	181.60	1.30
9162.00	92.59	181.93	6431.83	94.00	2971.62	2970.49 S	81.98 W	2971.62@	181.58	3.41
9257.00	91.80	181.89	6428.19	95.00	3066.55	3065.37 S	85.15 W	3066.55@	181.59	0.83
9351.00	90.92	182.11	6425.96	94.00	3160.52	3159.29 S	88.42 W	3160.52@	181.60	0.97
9445.00	90.13	182.69	6425.10	94.00	3254.50	3253.20 S	92.36 W	3254.51@	181.63	1.04
9539.00	89.78	181.73	6425.17	94.00	3348.49	3347.13 S	95.99 W	3348.50@	181.64	1.09
9633.00	89.08	181.32	6426.11	94.00	3442.48	3441.09 S	98.49 W	3442.50@	181.64	0.86
9727.00	89.87	181.52	6426.97	94.00	3536.48	3535.05 S	100.82 W	3536.49@	181.63	0.87
9821.00	88.90	181.19	6427.98	94.00	3630.47	3629.02 S	103.04 W	3630.48@	181.63	1.09
9915.00	89.69	181.52	6429.13	94.00	3724.46	3722.99 S	105.26 W	3724.48@	181.62	0.91
10009.00	90.13	182.07	6429.28	94.00	3818.46	3816.94 S	108.21 W	3818.47@	181.62	0.75
10104.00	89.78	182.19	6429.36	95.00	3913.46	3911.87 S	111.74 W	3913.47@	181.64	0.39
10198.00	88.64	182.04	6430.65	94.00	4007.44	4005.80 S	115.21 W	4007.46@	181.65	1.22
10292.00	88.81	181.07	6432.74	94.00	4101.41	4099.74 S	117.76 W	4101.43@	181.65	1.05
10386.00	90.31	180.58	6433.47	94.00	4195.40	4193.73 S	119.11 W	4195.42@	181.63	1.68
10480.00	89.34	179.96	6433.75	94.00	4289.38	4287.72 S	119.55 W	4289.39@	181.60	1.22
10575.00	90.04	180.38	6434.27	95.00	4384.35	4382.72 S	119.83 W	4384.36@	181.57	0.86
10693.00	91.01	179.53	6433.19	118.00	4502.30	4500.71 S	119.74 W	4502.30@	181.52	1.09
10787.00	91.10	179.42	6431.46	94.00	4596.23	4594.69 S	118.88 W	4596.23@	181.48	0.15
10881.00	90.66	178.89	6430.01	94.00	4690.14	4688.67 S	117.49 W	4690.14@	181.44	0.73
10975.00	90.66	180.53	6428.93	94.00	4784.09	4782.66 S	117.02 W	4784.09@	181.40	1.74
11069.00	90.84	180.37	6427.70	94.00	4878.06	4876.65 S	117.76 W	4878.07@	181.38	0.26
11164.00	90.75	182.45	6426.38	95.00	4973.05	4971.61 S	120.09 W	4973.06@	181.38	2.19

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO
RIG: PATRIOT #5

Page 05/05

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)
11243.00	91.01	185.81	6425.17	79.00	5051.94	5050.38 S	125.78 W	5051.95@	181.43	4.26
11257.00	90.75	185.71	6424.95	14.00	5065.90	5064.31 S	127.19 W	5065.90@	181.44	1.99
11351.00	87.76	184.34	6426.17	94.00	5159.70	5157.93 S	135.42 W	5159.70@	181.50	3.50
11446.00	87.76	182.87	6429.89	95.00	5254.56	5252.66 S	141.39 W	5254.57@	181.54	1.55
11540.00	87.93	182.04	6433.42	94.00	5348.48	5346.51 S	145.41 W	5348.49@	181.56	0.90
11635.00	89.43	180.52	6435.61	95.00	5443.45	5441.45 S	147.53 W	5443.45@	181.55	2.25
11728.00	91.28	179.25	6435.03	93.00	5536.41	5534.45 S	147.35 W	5536.41@	181.53	2.41
11823.00	91.71	180.33	6432.55	95.00	5631.33	5629.41 S	147.00 W	5631.33@	181.50	1.22
11918.00	92.51	182.02	6429.06	95.00	5726.26	5724.32 S	148.94 W	5726.26@	181.49	1.97
12012.00	86.53	179.94	6429.84	94.00	5820.21	5818.26 S	150.55 W	5820.21@	181.48	6.74
12106.00	88.29	180.30	6434.09	94.00	5914.08	5912.16 S	150.75 W	5914.08@	181.46	1.91
12200.00	88.11	180.34	6437.04	94.00	6008.01	6006.11 S	151.27 W	6008.02@	181.44	0.20
12293.00	88.64	180.53	6439.68	93.00	6100.96	6099.07 S	151.98 W	6100.96@	181.43	0.61
12387.00	87.93	180.05	6442.50	94.00	6194.90	6193.03 S	152.45 W	6194.90@	181.41	0.91
12481.00	88.37	180.48	6445.53	94.00	6288.83	6286.98 S	152.89 W	6288.83@	181.39	0.65
12575.00	89.69	180.84	6447.12	94.00	6382.80	6380.95 S	153.97 W	6382.81@	181.38	1.45
12669.00	89.34	181.04	6447.92	94.00	6476.79	6474.94 S	155.51 W	6476.80@	181.38	0.43
12725.00	89.43	181.22	6448.52	56.00	6532.79	6530.92 S	156.62 W	6532.80@	181.37	0.36
STRAIGHT- LINE PROJECTION TO BIT @ 12783' MD (6590.79' TVD).										
12783.00	89.43	181.22	6449.09	58.00	6590.79	6588.91 S	157.85 W	6590.80@	181.37	0.00



TIE-IN SURVEY INFORMATION SHEET

CLIENT INFORMATION

CLIENT:	YATES PETROLEUM CORPORATION		
LEASE / WELL No.:	CHAMAELEON BIN STATE COM	#1H	
WELL LOCATION:	EDDY COUNTY, NEW MEXICO		
COUNTY / STATE / COUNTRY:	EDDY	NEW MEXICO	USA
RIG:	PATRIOT #5		
API WELL No:	30-015-37942		
JOB No:	700000640 WT-WT		
P.O. / AFE No.	102320		
DIRECTIONAL COMPANY:	PATHFINDER ENERGY SERVICES		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC):					
On Wall Plat:	7.81	LWD Calculated:	7.803	Agreed Upon:	7.8
X = 600976.800000		Feet	Y = 731035.490000		Feet
SITE LATITUDE:	32.019911 N	SITE LONGITUDE:	104.140900 W		
GRID SYSTEM:	TRUE ☐	UTM ☒	LAMBERT ☐	ZONE:	new mexico east
PROPOSED DRIFT DIRECTION:	181.48				
KELLY BUSHING ELEVATION:	26.5				
ALTITUDE:	3106	Feet	WATER DEPTH:	N/A	Feet

TIE-IN SURVEY

MEASURED DEPTH:	450			
DRIFT ANGLE:	0.5			
DRIFT DIRECTION:	153.86			
TRUE VERTICAL DEPTH:	450			
VERTICAL SECTION:	1.06			
RECTANGULAR COORDINATE (N / S) :	-1.09			
RECTANGULAR COORDINATE (E / W) :	1.15			
CLOSURE DISTANCE / DIRECTION:	1.58	133.68		
SURVEY CALCULATION METHOD:	AA ☐	MC ☒	RC ☐	BT ☐
SOURCE OF TIE-IN DATA (COMPANY):	MS ENERGY SERVICES			
COPY OF TIE-IN SURVEY REPORT	☒ YES		☒ NO	

WELL PLAN

KICKOFF DEPTH:	400	TOTAL DEPTH:	2200
KICKOFF ANGLE:	0	MAX ANGLE:	0

PES Engineers: Bryant Blakemore
Mark Risenhoover

**Signature of both field engineers required if applicable

Directional Driller: Irby LeJeune

DATE: 30-Oct-2010

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM** *

JOB NUMBER: SVCO-100930

WELL NAME: CHAMAELEON BIN ST. COM #1H

LOCATION: EDDY COUNTY, NEW MEXICO

SURVEY DATE: OCTOBER 29, 2010

SURVEY ENGINEER: S. SMITH

MAGNETIC DECLINATION: 07.80 GRID NORTH

GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 181.48
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! *
**
**
TBUSSELL@YATESPETROLEUM.COM**
MIKEL@YATESPETROLEUM.COM **

** COMPANY REPRESENTATIVE **



A Schlumberger Company

PathFinder Energy Services, Inc. Magnetic & Grid Calculations

YATES PETROLEUM
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO
Rig: PATRIOT #5

Wed Oct 20 16:10:05 2010

Coordinates

Latitude: 32.019911 N (32 deg. 1 min. 11.6782 sec.)
Longitude: 104.140900 W (-104 deg. 8 min. 27.2387 sec.)
Elevation: 3132.50 feet.
Calculation Date: Oct/20/2010

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9118 degrees
Total Magnetic Field: 0.48495 gauss
Magnetic Declination: 7.907617 degrees
Horizontal Intensity: 0.243123 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.907617 Degs

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 600976.8000 feet
Y: 371035.4940 feet
True to Grid: (convergence) -0.102031 degrees
Magnetic to Grid: 7.805586 degrees

To Convert a Magnetic Dir. to a GRID dir. Add 7.805586 Degs.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CORPORATION
CHAMAELEON BIN STATE COM #1H
EDDY COUNTY, NEW MEXICO
Rig:PATRIOT #5

Tue Oct 26 17:12:58 2010

Coordinates

Latitude: 32.019911 N (32 deg. 1 min. 11.6782 sec.)
Longitude: 104.140900 W (-104 deg. 8 min. 27.2387 sec.)
Elevation: 3132.50 feet.
Calculation Date: Oct/26/2010

Magnetic Calculations

Model: IGRF2010
Dip Angle: 59.9114 degrees
Total Magnetic Field: 0.48494 gauss
Magnetic Declination: 7.905632 degrees
Horizontal Intensity: 0.243117 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.905632 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 600976.8000 feet
Y: 371035.4940 feet
True to Grid: (convergence) -0.102031 degrees
Magnetic to Grid: 7.803601 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.803601 Degr.