

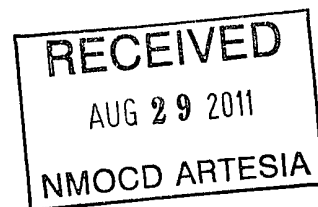


An Operating Unit of Smith International, Inc.

DIRECTIONAL SURVEY REPORT

30-015-37555

YATES PETROLEUM
CHEROOT BPF STATE 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) NICK POND
3. POSITION OF SAID PERSON(S): (A-F) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 05-01-11 TO 05-21-11
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
CHEROOT BPF STATE COM #1H
EDDY COUNTY, NM
RIG: PATTERSON 75
9. SURVEY CERTIFIED FROM: 6711 TO 12524 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4621.64 FEET ON A BEARING OF 270.59 DEGREES FROM THE
CENTER OF THE ROTARY TABLE AT A PROJECTED BIT DEPTH OF 12604 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: 05/02/2011
Date Completed: 05/20/2011

YATES PETROLEUM CORPORATION

CHEROOT BPF STATE COM #1

EDDY COUNTY, NM

Rig:PATTERSON 75

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers:NICK POND

JAKE NEWHOUSE

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.9.13.5013 N LON:104.10.14.8595 W

GRID Reference:NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 591638.4300 Y: 419707.6500

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.78° EAST TO GRID

Vertical Section Plane: 270.06

Survey Vert. Reference: 23.00' Kelly Bushing To Ground

Altitude:3191.00' Ground To MSL

Measured Depth	12604.00	(feet)
Inclination	93.12	(deg)
Azimuth	273.12	(deg)
True Vertical Depth	8080.76	(feet)
Vertical Section	4621.44	(feet)
Survey X cord	587017.04	(feet)
Survey Y cord	419755.51	(feet)
Survey Lat	32.15390020 N	(deg)
Survey Lon	104.18572729 W	(deg)
Rectangular Corr. N/S	47.86 N	(feet)
Rectangular Corr. E/W	4621.39 W	(feet)
Closure Distance	4621.64	(feet)
Direction of Closure	270.59	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION

CHEROOT BPF STATE COM #1

EDDY COUNTY, NM

Rig:PATTERSON 75

PathFinder Office Supervisor: FRANCISCO SINISTERRA

PathFinder Field Engineers: NICK POND

JAKE NEWHOUSE

Survey Horiz. Reference:WELLHEAD

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North Aligned To:GRID NORTH

Total Magnetic Correction: 7.78° EAST TO GRID

Vertical Section Plane: 270.06

Survey Vert. Reference: 23.00' Kelly Bushing To Ground

Altitude:3191.00' Ground To MSL

Survey Calculations by RX5 V6.03E 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 SURVEY GYRO SURVEYS										
0.00	0.00	0.00	-0.00	0.00	0.00	0.00 S	0.00 W	0.00@	181.05	0.00
200.00	2.25	264.60	199.95	200.00	3.91	0.37 S	3.91 W	3.93@	264.56	1.12
400.00	1.75	266.42	399.82	200.00	10.86	0.93 S	10.87 W	10.91@	265.10	0.25
600.00	0.75	218.23	599.78	200.00	14.72	2.15 S	14.72 W	14.88@	261.69	0.68
800.00	0.75	247.04	799.76	200.00	16.74	3.69 S	16.74 W	17.14@	257.57	0.19
1000.00	0.75	255.86	999.75	200.00	19.21	4.52 S	19.21 W	19.74@	256.76	0.06
1200.00	1.50	266.67	1199.71	200.00	23.09	4.99 S	23.10 W	23.63@	257.80	0.39
1400.00	1.25	273.49	1399.65	200.00	27.88	5.01 S	27.89 W	28.33@	259.81	0.15
1600.00	1.50	50.29	1599.62	200.00	28.05	3.21 S	28.05 W	28.23@	263.48	1.28
1800.00	0.50	95.11	1799.59	200.00	25.17	1.61 S	25.17 W	25.22@	266.34	0.60
2000.00	1.75	87.93	1999.55	200.00	21.24	1.58 S	21.25 W	21.30@	265.75	0.63
2200.00	0.25	317.74	2199.52	200.00	18.49	1.15 S	18.49 W	18.52@	266.46	0.96
2400.00	0.25	246.55	2399.52	200.00	19.18	1.00 S	19.18 W	19.21@	267.03	0.14
2600.00	0.25	256.37	2599.52	200.00	20.00	1.27 S	20.01 W	20.05@	266.36	0.02
2800.00	0.25	317.25	2799.52	200.00	20.72	1.05 S	20.73 W	20.75@	267.09	0.13
3000.00	0.25	281.07	2999.51	200.00	21.45	0.65 S	21.45 W	21.46@	268.26	0.08
3200.00	0.50	249.88	3199.51	200.00	22.70	0.87 S	22.70 W	22.71@	267.81	0.16
3400.00	0.50	256.69	3399.50	200.00	24.36	1.37 S	24.37 W	24.40@	266.79	0.03
3600.00	0.50	234.51	3599.50	200.00	25.92	2.08 S	25.93 W	26.01@	265.42	0.10
3800.00	0.50	226.32	3799.49	200.00	27.26	3.19 S	27.27 W	27.45@	263.34	0.03
4000.00	0.75	211.13	3999.48	200.00	28.57	4.91 S	28.58 W	28.99@	260.25	0.15
4200.00	0.50	185.95	4199.46	200.00	29.34	6.90 S	29.34 W	30.14@	256.77	0.18
4400.00	0.50	180.76	4399.46	200.00	29.44	8.64 S	29.45 W	30.69@	253.65	0.02
4600.00	0.75	183.58	4599.44	200.00	29.53	10.82 S	29.54 W	31.46@	249.89	0.13
4800.00	0.75	189.39	4799.43	200.00	29.82	13.41 S	29.83 W	32.71@	245.79	0.04

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEROOT BPF STATE COM #1
EDDY COUNTY, NM
RIG:PATTERSON 75

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)
5000.00	0.50	182.65	4999.42	200.00	30.07	15.58 S	30.09 W	33.88@	242.63	0.13
5200.00	0.75	179.92	5199.40	200.00	30.11	17.76 S	30.13 W	34.97@	239.48	0.13
5400.00	0.50	194.18	5399.39	200.00	30.32	19.91 S	30.34 W	36.29@	236.72	0.15
5600.00	0.75	189.44	5599.38	200.00	30.74	22.05 S	30.77 W	37.85@	234.37	0.13
5800.00	0.75	165.71	5799.36	200.00	30.63	24.61 S	30.66 W	39.31@	231.24	0.15
6000.00	0.75	135.98	5999.35	200.00	29.40	26.82 S	29.43 W	39.81@	227.65	0.19
6200.00	2.00	46.22	6199.30	200.00	25.97	25.35 S	26.00 W	36.31@	225.72	1.07
6400.00	5.75	112.64	6398.88	200.00	14.19	26.79 S	14.22 W	30.33@	207.96	2.64
6600.00	4.00	127.83	6598.15	200.00	-0.57	34.93 S	0.54 E	34.93@	179.12	1.08
** TIE INTO MS ENERGY GYRO SURVEYS @ 6654' MD										
6654.00	3.75	132.35	6652.03	54.00	-3.37	37.27 S	3.33 E	37.42@	174.89	0.73
THE FOLLOWING ARE PATHFINDER MWD SURVEYS										
6711.00	3.87	158.51	6708.91	57.00	-5.45	40.32 S	5.41 E	40.68@	172.35	3.03
6902.00	2.37	160.62	6899.62	191.00	-9.14	50.04 S	9.08 E	50.86@	169.71	0.79
7093.00	0.62	233.22	7090.56	191.00	-9.62	54.38 S	9.57 E	55.22@	170.02	1.19
7283.00	2.73	193.05	7280.47	190.00	-7.78	59.41 S	7.72 E	59.91@	172.59	1.21
7474.00	2.73	193.49	7471.25	191.00	-5.71	68.26 S	5.63 E	68.49@	175.28	0.01
7596.00	2.46	194.90	7593.13	122.00	-4.36	73.62 S	4.28 E	73.74@	176.67	0.23
7625.00	2.46	193.93	7622.10	29.00	-4.05	74.82 S	3.97 E	74.93@	176.96	0.14
7657.00	2.11	209.40	7654.08	32.00	-3.60	76.00 S	3.52 E	76.08@	177.35	2.21
7689.00	2.02	252.12	7686.06	32.00	-2.77	76.69 S	2.69 E	76.74@	177.99	4.71
7720.00	3.96	291.23	7717.02	31.00	-1.25	76.47 S	1.17 E	76.48@	179.12	8.74
7752.00	7.21	294.39	7748.86	32.00	1.61	75.24 S	1.69 W	75.26@	181.28	10.20
7784.00	11.17	292.19	7780.44	32.00	6.31	73.24 S	6.39 W	73.52@	184.98	12.42
7816.00	14.86	289.64	7811.62	32.00	13.05	70.69 S	13.12 W	71.90@	190.52	11.67
7847.00	18.91	288.24	7841.27	31.00	21.57	67.78 S	21.64 W	71.15@	197.71	13.13
7879.00	22.60	287.54	7871.19	32.00	32.37	64.30 S	32.43 W	72.02@	206.77	11.56
7911.00	26.12	287.45	7900.34	32.00	44.96	60.34 S	45.02 W	75.28@	216.73	11.00
7943.00	29.37	285.69	7928.66	32.00	59.24	56.10 S	59.30 W	81.63@	226.59	10.47

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEROOT BPF STATE COM #1
EDDY COUNTY, NM
RIG:PATTERSON 75

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)
7975.00	32.80	284.02	7956.06	32.00	75.21	51.88 S	75.27 W	91.41@	235.42	11.05
8006.00	36.40	283.58	7981.57	31.00	92.31	47.68 S	92.36 W	103.94@	242.69	11.64
8038.00	40.19	283.67	8006.68	32.00	111.58	43.01 S	111.63 W	119.63@	248.93	11.85
8069.00	43.88	283.41	8029.70	31.00	131.77	38.15 S	131.81 W	137.22@	253.86	11.92
8101.00	48.10	282.97	8051.93	32.00	154.17	32.91 S	154.21 W	157.68@	257.95	13.22
8133.00	52.32	282.44	8072.40	32.00	178.16	27.50 S	178.19 W	180.30@	261.23	13.25
8165.00	57.42	281.47	8090.81	32.00	203.76	22.09 S	203.79 W	204.98@	263.81	16.13
8197.00	61.73	279.71	8107.01	32.00	230.89	17.03 S	230.90 W	231.53@	265.78	14.28
8228.00	65.16	277.87	8120.87	31.00	258.29	12.80 S	258.30 W	258.62@	267.16	12.27
8260.00	67.53	276.55	8133.71	32.00	287.37	9.12 S	287.38 W	287.53@	268.18	8.31
8292.00	70.00	275.32	8145.30	32.00	317.04	6.04 S	317.05 W	317.10@	268.91	8.51
8324.00	72.81	274.18	8155.50	32.00	347.26	3.53 S	347.27 W	347.29@	269.42	9.41
8355.00	76.33	273.03	8163.75	31.00	377.08	1.66 S	377.09 W	377.09@	269.75	11.91
8387.00	79.32	272.95	8170.50	32.00	408.32	0.03 S	408.32 W	408.32@	270.00	9.35
8419.00	80.99	272.95	8175.97	32.00	439.81	1.60 N	439.81 W	439.81@	270.21	5.22
8451.00	84.50	272.95	8180.01	32.00	471.51	3.23 N	471.50 W	471.51@	270.39	10.97
8475.00	86.35	271.98	8181.92	24.00	495.41	4.26 N	495.40 W	495.42@	270.49	8.70
8507.00	90.22	271.80	8182.88	32.00	527.37	5.31 N	527.36 W	527.39@	270.58	12.11
8539.00	91.71	271.72	8182.34	32.00	559.35	6.30 N	559.34 W	559.38@	270.64	4.66
8571.00	91.80	271.80	8181.36	32.00	591.32	7.28 N	591.31 W	591.36@	270.71	0.38
8666.00	92.07	271.89	8178.16	95.00	686.22	10.33 N	686.21 W	686.29@	270.86	0.30
8761.00	91.19	271.28	8175.45	95.00	781.15	12.96 N	781.13 W	781.24@	270.95	1.13
8857.00	91.45	270.92	8173.24	96.00	877.11	14.80 N	877.09 W	877.22@	270.97	0.46
8952.00	90.66	270.31	8171.49	95.00	972.08	15.82 N	972.07 W	972.20@	270.93	1.05
9047.00	90.22	270.31	8170.76	95.00	1067.08	16.34 N	1067.06 W	1067.19@	270.88	0.46
9143.00	90.48	270.66	8170.18	96.00	1163.08	17.15 N	1163.06 W	1163.18@	270.84	0.45
9238.00	90.66	270.31	8169.23	95.00	1258.07	17.95 N	1258.05 W	1258.18@	270.82	0.41
9333.00	90.84	270.66	8167.99	95.00	1353.06	18.76 N	1353.04 W	1353.17@	270.79	0.41

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEROOT BPF STATE COM #1
EDDY COUNTY, NM
RIG:PATTERSON 75

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)
9429.00	90.40	270.31	8166.95	96.00	1449.05	19.57 N	1449.03 W	1449.16@	270.77	0.59
9524.00	90.40	270.66	8166.29	95.00	1544.04	20.37 N	1544.02 W	1544.16@	270.76	0.37
9620.00	90.66	269.52	8165.40	96.00	1640.04	20.53 N	1640.02 W	1640.15@	270.72	1.22
9715.00	90.92	269.52	8164.09	95.00	1735.02	19.73 N	1735.00 W	1735.12@	270.65	0.27
9810.00	90.31	269.34	8163.07	95.00	1830.01	18.78 N	1829.99 W	1830.09@	270.59	0.67
9905.00	90.57	268.55	8162.34	95.00	1924.99	17.04 N	1924.97 W	1925.05@	270.51	0.87
10000.00	90.75	268.55	8161.24	95.00	2019.95	14.63 N	2019.94 W	2019.99@	270.42	0.19
10096.00	91.01	269.17	8159.77	96.00	2115.92	12.72 N	2115.91 W	2115.94@	270.34	0.70
10191.00	90.57	268.38	8158.46	95.00	2210.88	10.69 N	2210.87 W	2210.90@	270.28	0.95
10287.00	90.66	268.29	8157.43	96.00	2306.84	7.90 N	2306.83 W	2306.84@	270.20	0.13
10382.00	90.57	268.55	8156.41	95.00	2401.79	5.28 N	2401.79 W	2401.79@	270.13	0.29
10478.00	91.01	268.38	8155.09	96.00	2497.74	2.71 N	2497.74 W	2497.74@	270.06	0.49
10573.00	91.54	268.73	8152.97	95.00	2592.69	0.32 N	2592.69 W	2592.69@	270.01	0.67
10668.00	92.24	269.17	8149.84	95.00	2687.62	1.42 S	2687.62 W	2687.62@	269.97	0.87
10763.00	91.45	270.22	8146.78	95.00	2782.56	1.93 S	2782.57 W	2782.57@	269.96	1.38
10859.00	91.54	270.84	8144.28	96.00	2878.53	1.04 S	2878.53 W	2878.53@	269.98	0.65
10954.00	91.01	270.92	8142.16	95.00	2973.49	0.42 N	2973.50 W	2973.50@	270.01	0.56
11049.00	91.19	271.10	8140.34	95.00	3068.46	2.09 N	3068.46 W	3068.46@	270.04	0.27
11144.00	91.45	270.92	8138.15	95.00	3163.43	3.77 N	3163.42 W	3163.43@	270.07	0.33
11239.00	91.45	271.19	8135.75	95.00	3258.38	5.51 N	3258.38 W	3258.38@	270.10	0.28
11335.00	91.10	271.28	8133.61	96.00	3354.34	7.58 N	3354.33 W	3354.34@	270.13	0.38
11430.00	91.10	271.36	8131.79	95.00	3449.30	9.77 N	3449.29 W	3449.30@	270.16	0.08
11526.00	91.45	271.98	8129.65	96.00	3545.23	12.57 N	3545.22 W	3545.24@	270.20	0.74
11621.00	91.80	271.19	8126.96	95.00	3640.16	15.19 N	3640.15 W	3640.18@	270.24	0.91
11717.00	92.42	271.10	8123.42	96.00	3736.08	17.11 N	3736.06 W	3736.10@	270.26	0.65
11812.00	92.33	270.84	8119.48	95.00	3830.98	18.72 N	3830.97 W	3831.01@	270.28	0.29
11907.00	92.95	271.10	8115.11	95.00	3925.87	20.32 N	3925.85 W	3925.90@	270.30	0.71
12003.00	93.39	271.19	8109.80	96.00	4021.71	22.24 N	4021.69 W	4021.75@	270.32	0.47

PathFinder Energy Services, Inc.

Survey Report

YATES PETROLEUM CORPORATION
CHEROOT BPF STATE COM #1
EDDY COUNTY, NM
RIG:PATTERSON 75

Page 05/05

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)
12098.00	92.86	271.80	8104.62	95.00	4116.54	24.72 N	4116.51 W	4116.59@	270.34	0.85
12193.00	92.15	271.89	8100.47	95.00	4211.40	27.77 N	4211.37 W	4211.46@	270.38	0.75
12289.00	92.33	272.59	8096.72	96.00	4307.25	31.52 N	4307.22 W	4307.34@	270.42	0.75
12384.00	92.86	272.95	8092.42	95.00	4402.05	36.11 N	4402.01 W	4402.16@	270.47	0.67
12524.00	93.12	273.12	8085.11	140.00	4541.67	43.51 N	4541.63 W	4541.84@	270.55	0.22
STRAIGHT LINE PROJECTION TO BIT@ 12604' MD										
12604.00	93.12	273.12	8080.76	80.00	4621.44	47.86 N	4621.39 W	4621.64@	270.59	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.:	CHEROOT BPF	STATE COM #1	
WELL LOCATION	EDDY COUNTY, NEW MEXICO		
COUNTY / STATE / COUNTRY:	EDDY	NM	USA
RIG:	PATTERSON 75		
API WELL No.:	30-015-37555		
JOB No.:	700002378-WT-WT		
P.O. / AFE No.			
DIRECTIONAL COMPANY:	PATHFINDER		

WELL SITE INFORMATION

TOTAL MAGNETIC CORRECTION (TMC)			
On Wall Plat:	7.78	LWD Calculated:	7.78
		Agreed Upon:	7.78
X =	591638.430000	Feet	Y = 419707.650000
			Feet
SITE LATITUDE:	32.15375	SITE LONGITUDE:	104.170794
GRID SYSTEM:	TRUE ☐ UTM ☐ LAMBERT ☒	ZONE:	NEW MEXICO EAST
PROPOSED DRIFT DIRECTION:	270.06		
KELLY BUSHING ELEVATION:	27		
ALTITUDE:	3191	Feet	WATER DEPTH:
			N/A
			Feet

TIE-IN SURVEY

MEASURED DEPTH:	6654		
DRIFT ANGLE:	3.75		
DRIFT DIRECTION:	132.35		
TRUE VERTICAL DEPTH:	6652.03		
VERTICAL SECTION:	-3.37		
RECTANGULAR COORDINATE (N / S) :	-37.27		
RECTANGULAR COORDINATE (E / W) :	3.33		
CLOSURE DISTANCE / DIRECTION:			
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:	8472	TOTAL DEPTH:	12634.65
KICKOFF ANGLE:	0	MAX ANGLE:	91.23

PES Engineers

Jake Newhouse

**Signature of both field engineers required if applicable

Directional Driller: Scott Brandt

DATE: 10-May-2011

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM** *

JOB NUMBER: SVCO-110500
WELL NAME: CHEROOT BPF STATE COM #1H
LOCATION: EDDY COUNTY, NEW MEXICO
SURVEY DATE: MAY 09,2011
SURVEY ENGINEER: S. SMITH
MAGNETIC DECLINATION: 07.78 GRID NORTH
GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 270.06
SURF. ELEVATION: 23

*****	*****
***** DEPTH MEASURED IN FEET *****	*****
*****	*** THIS DIRECTIONAL SURVEY REPORT IS ***
	** CORRECT TO THE BEST OF MY KNOWLEDGE **
COMMENTS: PATTERSON 75	* AND IS SUPPORTED BY ACTUAL FIELD DATA! *
RKB 23'	**
TBUSSELL@YATESPETROLEUM.COM**	**
MIKEL@YATESPETROLEUM.COM	** *****
	** COMPANY REPRESENTATIVE **

MS ENERGY SERVICES
ODESSA, TEXAS

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

* **YATES PETROLEUM** *

JOB NUMBER: SVCO-110500

WELL NAME: CHEROOT BPF STATE COM #1H

LOCATION: EDDY COUNTY, NEW MEXICO

SURVEY DATE: MAY 09,2011

SURVEY ENGINEER: S. SMITH

MAGNETIC DECLINATION: 07.78 GRID NORTH

GYRO REFERENCE BEARING: GRID NORTH

VERTICAL SECTION CALCULATED IN A
PROPOSAL DIRECTION OF: 270.06
SURF. ELEVATION: 23

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*****
***** DEPTH MEASURED IN FEET *****
*****
***** THIS DIRECTIONAL SURVEY REPORT IS *****
***** ** CORRECT TO THE BEST OF MY KNOWLEDGE ** *****
***** * AND IS SUPPORTED BY ACTUAL FIELD DATA! * *****
***** ** ***** ** *****
***** ** COMPANY REPRESENTATIVE ** *****
*****
```

COMMENTS: PATTERSON 75
RKB 23'
TBUSSELL@YATESPETROLEUM.COM**
MIKEL@YATESPETROLEUM.COM **

MS ENERGY SERVICES
ODESSA, TEXAS

JOB NUMBER: SVCO-110500

WELL NAME: CHEROOT BPF STATE COM #1H

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	L/R PROP.	INCL	BEARING AZIMUTH	COORDINATES		D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
						LATITUDE	DEPARTURE				
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	199.95	3.91	-0.374	02.25	264.60	0.37 S	3.91 W	1.13	2.25	3.93	AT 264.60
400.0	399.83	10.86	-0.941	01.75	266.42	0.93 S	10.87 W	0.25	0.50	10.91	AT 265.11
600.0	599.78	14.72	-2.164	00.75	218.23	2.15 S	14.72 W	0.68	1.37	14.88	AT 261.70
800.0	799.76	16.74	-3.705	00.75	247.04	3.69 S	16.74 W	0.19	0.37	17.14	AT 257.58
1000.0	999.75	19.21	-4.538	00.75	255.86	4.52 S	19.21 W	0.06	0.12	19.74	AT 256.77
1200.0	1199.71	23.09	-5.014	01.50	266.67	4.99 S	23.10 W	0.39	0.78	23.63	AT 257.81
1400.0	1399.65	27.88	-5.038	01.25	273.49	5.01 S	27.89 W	0.15	0.30	28.33	AT 259.82
1600.0	1599.63	28.05	-3.233	01.50	050.29	3.20 S	28.05 W	1.28	2.56	28.23	AT 263.48
1800.0	1799.59	25.17	-1.635	00.50	095.11	1.61 S	25.17 W	0.60	1.20	25.22	AT 266.34
2000.0	1999.55	21.24	-1.598	01.75	087.93	1.58 S	21.25 W	0.63	1.26	21.30	AT 265.76
2200.0	2199.52	18.49	-1.162	00.25	317.74	1.14 S	18.49 W	0.96	1.92	18.52	AT 266.46
2400.0	2399.52	19.18	-1.014	00.25	246.55	0.99 S	19.18 W	0.15	0.29	19.21	AT 267.04
2600.0	2599.52	20.00	-1.291	00.25	256.37	1.27 S	20.01 W	0.02	0.04	20.05	AT 266.37
2800.0	2799.52	20.72	-1.074	00.25	317.25	1.05 S	20.73 W	0.13	0.25	20.75	AT 267.09
3000.0	2999.52	21.45	-0.671	00.25	281.07	0.65 S	21.45 W	0.08	0.16	21.46	AT 268.27
3200.0	3199.51	22.70	-0.888	00.50	249.88	0.86 S	22.70 W	0.16	0.31	22.71	AT 267.82
3400.0	3399.50	24.37	-1.391	00.50	256.69	1.37 S	24.37 W	0.03	0.06	24.40	AT 266.79
3600.0	3599.50	25.92	-2.100	00.50	234.51	2.07 S	25.93 W	0.10	0.19	26.01	AT 265.43
3800.0	3799.49	27.26	-3.211	00.50	226.32	3.18 S	27.27 W	0.04	0.07	27.45	AT 263.34
4000.0	3999.48	28.57	-4.936	00.75	211.13	4.91 S	28.58 W	0.15	0.30	28.99	AT 260.26
4200.0	4199.47	29.34	-6.925	00.50	185.95	6.89 S	29.34 W	0.18	0.37	30.14	AT 256.78
4400.0	4399.46	29.44	-8.665	00.50	180.76	8.63 S	29.44 W	0.02	0.05	30.68	AT 253.66
4600.0	4599.45	29.53	-10.845	00.75	183.58	10.81 S	29.54 W	0.13	0.25	31.46	AT 249.89
4800.0	4799.43	29.82	-13.443	00.75	189.39	13.41 S	29.83 W	0.04	0.08	32.71	AT 245.79
5000.0	4999.42	30.07	-15.606	00.50	182.65	15.57 S	30.09 W	0.13	0.26	33.88	AT 242.63
5200.0	5199.40	30.11	-17.787	00.75	179.92	17.76 S	30.13 W	0.13	0.25	34.97	AT 239.49
5400.0	5399.39	30.32	-19.942	00.50	194.18	19.91 S	30.34 W	0.15	0.29	36.29	AT 236.72
5600.0	5599.38	30.74	-22.080	00.75	189.44	22.05 S	30.77 W	0.13	0.26	37.85	AT 234.37
5800.0	5799.36	30.63	-24.639	00.75	165.71	24.61 S	30.66 W	0.15	0.31	39.31	AT 231.25
6000.0	5999.35	29.40	-26.848	00.75	135.98	26.82 S	29.43 W	0.19	0.38	39.81	AT 227.66
6200.0	6199.30	25.97	-25.371	02.00	046.22	25.34 S	26.00 W	1.07	2.13	36.31	AT 225.73
6400.0	6398.88	14.19	-26.801	05.75	112.64	26.79 S	14.22 W	2.64	5.28	30.33	AT 207.96
6600.0	6598.16	-0.57	-34.922	04.00	127.83	34.92 S	0.54 E	1.08	2.16	34.93	AT 179.12
6654.0	6652.03	-3.37	-37.264	03.75	132.35	37.27 S	3.33 E	0.73	0.39	37.42	AT 174.89

 * THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
 * 6654.00 FEET EQUALS 37.42 FEET AT 174.89 *

MS ENERGY SERVICES
ODESSA, TEXAS

JOB NUMBER: SVCO-110500

WELL NAME: CHEROOT BPF 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	199.95	3.91	-0.374	02.25	264.60	0.37 S 3.91 W	1.13	2.25	3.93	AT 264.60
400.0	399.83	10.86	-0.941	01.75	266.42	0.93 S 10.87 W	0.25	0.50	10.91	AT 265.11
600.0	599.78	14.72	-2.164	00.75	218.23	2.15 S 14.72 W	0.68	1.37	14.88	AT 261.70
800.0	799.76	16.74	-3.705	00.75	247.04	3.69 S 16.74 W	0.19	0.37	17.14	AT 257.58
1000.0	999.75	19.21	-4.538	00.75	255.86	4.52 S 19.21 W	0.06	0.12	19.74	AT 256.77
1200.0	1199.71	23.09	-5.014	01.50	266.67	4.99 S 23.10 W	0.39	0.78	23.63	AT 257.81
1400.0	1399.65	27.88	-5.038	01.25	273.49	5.01 S 27.89 W	0.15	0.30	28.33	AT 259.82
1600.0	1599.63	28.05	-3.233	01.50	050.29	3.20 S 28.05 W	1.28	2.56	28.23	AT 263.48
1800.0	1799.59	25.17	-1.635	00.50	095.11	1.61 S 25.17 W	0.60	1.20	25.22	AT 266.34
2000.0	1999.55	21.24	-1.598	01.75	087.93	1.58 S 21.25 W	0.63	1.26	21.30	AT 265.76
2200.0	2199.52	18.49	-1.162	00.25	317.74	1.14 S 18.49 W	0.96	1.92	18.52	AT 266.46
2400.0	2399.52	19.18	-1.014	00.25	246.55	0.99 S 19.18 W	0.15	0.29	19.21	AT 267.04
2600.0	2599.52	20.00	-1.291	00.25	256.37	1.27 S 20.01 W	0.02	0.04	20.05	AT 266.37
2800.0	2799.52	20.72	-1.074	00.25	317.25	1.05 S 20.73 W	0.13	0.25	20.75	AT 267.09
3000.0	2999.52	21.45	-0.671	00.25	281.07	0.65 S 21.45 W	0.08	0.16	21.46	AT 268.27
3200.0	3199.51	22.70	-0.888	00.50	249.88	0.86 S 22.70 W	0.16	0.31	22.71	AT 267.82
3400.0	3399.50	24.37	-1.391	00.50	256.69	1.37 S 24.37 W	0.03	0.06	24.40	AT 266.79
3600.0	3599.50	25.92	-2.100	00.50	234.51	2.07 S 25.93 W	0.10	0.19	26.01	AT 265.43
3800.0	3799.49	27.26	-3.211	00.50	226.32	3.18 S 27.27 W	0.04	0.07	27.45	AT 263.34
4000.0	3999.48	28.57	-4.936	00.75	211.13	4.91 S 28.58 W	0.15	0.30	28.99	AT 260.26
4200.0	4199.47	29.34	-6.925	00.50	185.95	6.89 S 29.34 W	0.18	0.37	30.14	AT 256.78
4400.0	4399.46	29.44	-8.665	00.50	180.76	8.63 S 29.44 W	0.02	0.05	30.68	AT 253.66
4600.0	4599.45	29.53	-10.845	00.75	183.58	10.81 S 29.54 W	0.13	0.25	31.46	AT 249.89
4800.0	4799.43	29.82	-13.443	00.75	189.39	13.41 S 29.83 W	0.04	0.08	32.71	AT 245.79
5000.0	4999.42	30.07	-15.606	00.50	182.65	15.57 S 30.09 W	0.13	0.26	33.88	AT 242.63
5200.0	5199.40	30.11	-17.787	00.75	179.92	17.76 S 30.13 W	0.13	0.25	34.97	AT 239.49
5400.0	5399.39	30.32	-19.942	00.50	194.18	19.91 S 30.34 W	0.15	0.29	36.29	AT 236.72
5600.0	5599.38	30.74	-22.080	00.75	189.44	22.05 S 30.77 W	0.13	0.26	37.85	AT 234.37
5800.0	5799.36	30.63	-24.639	00.75	165.71	24.61 S 30.66 W	0.15	0.31	39.31	AT 231.25
6000.0	5999.35	29.40	-26.848	00.75	135.98	26.82 S 29.43 W	0.19	0.38	39.81	AT 227.66
6200.0	6199.30	25.97	-25.371	02.00	046.22	25.34 S 26.00 W	1.07	2.13	36.31	AT 225.73
6400.0	6398.88	14.19	-26.801	05.75	112.64	26.79 S 14.22 W	2.64	5.28	30.33	AT 207.96
6600.0	6598.16	-0.57	-34.922	04.00	127.83	34.92 S 0.54 E	1.08	2.16	34.93	AT 179.12
6654.0	6652.03	-3.37	-37.264	03.75	132.35	37.27 S 3.33 E	0.73	0.39	37.42	AT 174.89

 * THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF *
 * 6654.00 FEET EQUALS 37.42 FEET AT 174.89 *

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATE SPETROLEUM
CHEROOT BPF STATE COM #1H
EDDY COUNTY, NEW MEXICO
Rig: PATTERSON 75

Thu Apr 28 17:32:08 2011

Coordinates

Latitude: 32.153750 N (32 deg. 9 min. 13.5013 sec.)
Longitude: 104.170794 W (-104 deg. 10 min. 14.8595 sec.)
Elevation: 3214.00 feet.
Calculation Date: Apr/28/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0195 degrees
Total Magnetic Field: 0.48521 gauss
Magnetic Declination: 7.868557 degrees
Horizontal Intensity: 0.242460 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.868557 Degr

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 591638.4300 feet
Y: 419707.6500 feet
True to Grid: (convergence) -0.086502 degrees
Magnetic to Grid: 7.782055 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.782055 Degr.

PathFinder Energy Services, Inc.

Magnetic & Grid Calculations

YATES PETROLEUM CORPORATION
CHEROOT BPF STATE COM #1
EDDY COUNTY, NEW MEXICO
Rig: PATTERSON 75

Thu May 05 12:46:12 2011

Coordinates

Latitude: 32.153750 N (32 deg. 9 min. 13.5013 sec.)
Longitude: 104.170794 W (-104 deg. 10 min. 14.8595 sec.)
Elevation: 3214.00 feet.
Calculation Date: May/02/2011

Magnetic Calculations

Model: IGRF2010
Dip Angle: 60.0191 degrees
Total Magnetic Field: 0.48543 gauss
Magnetic Declination: 7.868871 degrees
Horizontal Intensity: 0.242577 gauss
To Convert a Magnetic Dir. to a TRUE North Dir. Add 7.868871 Degs

Transverse Mercator Grid Calculations NAD83

Grid System: Transverse Mercator: new mexico east
Ellipsoid: GRS80
X: 591638.4300 feet
Y: 419707.6500 feet
True to Grid: (convergence) -0.086502 degrees
Magnetic to Grid: 7.782368 degrees
To Convert a Magnetic Dir. to a GRID dir. Add 7.782368 Degs.