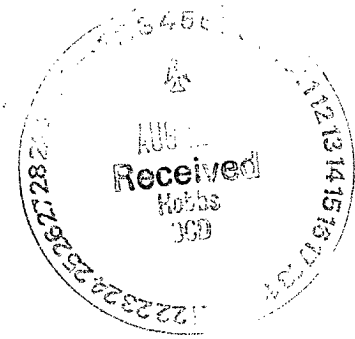


# Scientific Drilling

SUR: P-15-15s-34e, 660/S & 660/E  
BHL: P-15-15s-34e, 665/S & 699/E  
API # 30-025-37454

## YATES PETROLEUM

Field: Grassland  
Site: Lea County, NM  
Well: New Grass State #3  
Wellpath: VH - Job #32K0506398  
Survey: 05/17/06

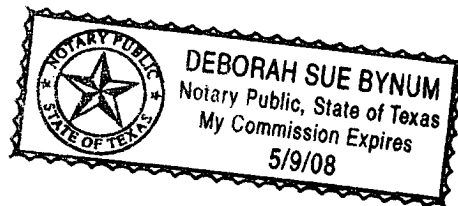


This survey is correct to the best of my knowledge and is supported by actual field data.

*Shawn*.....Company Representative

Notorized this date 10<sup>th</sup> of July, 2006.

*Deborah Sue Bynum*  
Notary Signature  
County of Midland  
State of Texas





# Scientific Drilling International Survey Report

<b>Company:</b> YATES PETROLEUM	<b>Date:</b> 07/10/2006	<b>Time:</b> 19:20:50	<b>Page:</b> 1
<b>Field:</b> Grassland	<b>Co-ordinate(NE) Reference:</b>	<b>Site:</b> Lea County, NM, Grid North	
<b>Site:</b> Lea County, NM	<b>Vertical (TVD) Reference:</b> SITE 0.0		
<b>Well:</b> New Grass State #3	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,89.75Azi)		
<b>Wellpath:</b> VH - Job #32K0506398	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

<b>Survey:</b> 05/17/06 KSRG -0'-12117'	<b>Start Date:</b> 05/17/2006	
<b>Company:</b> Scientific Drilling Internatio	<b>Engineer:</b> Guebara w/Gray	
<b>Tool:</b> Keeper;Keeper Gyro	<b>Tied-to:</b> From Surface	

**Survey**

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.34	75.49	100.00	0.29	0.07	0.29	0.34	0.30	75.49
200.00	0.40	96.70	200.00	0.92	0.11	0.92	0.15	0.93	83.32
300.00	0.68	103.30	299.99	1.84	-0.07	1.84	0.28	1.84	92.14
400.00	0.58	104.99	399.99	2.91	-0.34	2.91	0.10	2.93	96.59
500.00	0.62	98.77	499.98	3.93	-0.55	3.93	0.08	3.97	97.95
600.00	0.79	103.30	599.97	5.13	-0.79	5.14	0.18	5.20	98.75
700.00	0.70	107.34	699.97	6.39	-1.13	6.39	0.10	6.49	100.04
800.00	0.61	110.25	799.96	7.47	-1.50	7.48	0.10	7.62	101.33
900.00	0.56	105.35	899.95	8.44	-1.81	8.45	0.07	8.64	102.11
1000.00	0.68	107.23	999.95	9.47	-2.12	9.48	0.12	9.72	102.58
1100.00	0.54	93.61	1099.94	10.51	-2.32	10.52	0.20	10.77	102.44
1200.00	0.49	105.81	1199.94	11.39	-2.47	11.40	0.12	11.67	102.21
1300.00	0.48	106.60	1299.93	12.21	-2.70	12.22	0.01	12.51	102.48
1400.00	0.50	105.81	1399.93	13.02	-2.94	13.04	0.02	13.37	102.72
1500.00	0.45	117.58	1499.93	13.79	-3.24	13.81	0.11	14.18	103.22
1600.00	0.47	126.13	1599.92	14.47	-3.67	14.49	0.07	14.94	104.21
1700.00	0.50	121.55	1699.92	15.17	-4.14	15.19	0.05	15.74	105.24
1800.00	0.44	121.10	1799.92	15.87	-4.56	15.89	0.06	16.53	106.03
1900.00	0.45	90.13	1899.91	16.59	-4.76	16.61	0.24	17.28	106.00
2000.00	0.46	101.22	1999.91	17.37	-4.84	17.40	0.09	18.06	105.55
2100.00	0.25	99.10	2099.91	17.99	-4.95	18.01	0.21	18.68	105.39
2200.00	0.47	107.57	2199.91	18.59	-5.11	18.62	0.22	19.30	105.36
2300.00	0.87	87.21	2299.90	19.75	-5.20	19.77	0.46	20.44	104.74
2400.00	1.50	81.90	2399.88	21.80	-4.98	21.82	0.63	22.38	102.85
2500.00	2.01	79.72	2499.83	24.82	-4.48	24.84	0.51	25.24	100.23
2600.00	2.38	78.48	2599.76	28.57	-3.76	28.59	0.37	28.84	97.49
2700.00	2.59	73.67	2699.66	32.78	-2.71	32.79	0.30	32.90	94.72
2800.00	2.62	72.03	2799.56	37.12	-1.37	37.13	0.08	37.16	92.11
2900.00	2.74	73.60	2899.45	41.60	0.01	41.60	0.14	41.60	89.98
3000.00	2.64	73.63	2999.34	46.10	1.34	46.10	0.10	46.12	88.34
3100.00	2.48	71.84	3099.24	50.38	2.66	50.37	0.18	50.44	86.98
3200.00	2.45	76.15	3199.15	54.51	3.85	54.50	0.19	54.63	85.96
3300.00	2.28	76.91	3299.06	58.53	4.81	58.51	0.17	58.71	85.30
3400.00	2.17	75.55	3398.99	62.31	5.73	62.28	0.12	62.55	84.74
3500.00	1.82	76.98	3498.93	65.69	6.56	65.67	0.35	65.99	84.29
3600.00	1.56	78.41	3598.88	68.58	7.19	68.55	0.26	68.93	84.01
3700.00	1.26	75.86	3698.85	70.99	7.74	70.96	0.31	71.38	83.78
3800.00	1.00	84.71	3798.83	72.93	8.09	72.89	0.31	73.34	83.67
3900.00	0.90	91.41	3898.82	74.58	8.15	74.55	0.15	74.99	83.76
4000.00	0.85	91.37	3998.81	76.11	8.11	76.08	0.05	76.51	83.91
4100.00	0.62	93.02	4098.80	77.39	8.06	77.36	0.23	77.78	84.05
4200.00	0.69	103.64	4198.79	78.52	7.89	78.48	0.14	78.88	84.26
4300.00	0.47	79.36	4298.79	79.51	7.83	79.47	0.32	79.86	84.37
4400.00	0.44	89.39	4398.79	80.29	7.91	80.26	0.09	80.65	84.37
4500.00	0.44	65.69	4498.78	81.03	8.07	80.99	0.18	81.40	84.31
4600.00	0.45	69.40	4598.78	81.75	8.37	81.71	0.03	82.14	84.15
4700.00	0.28	80.92	4698.78	82.36	8.54	82.32	0.18	82.76	84.07
4800.00	0.26	73.37	4798.78	82.82	8.65	82.78	0.04	83.23	84.04



# Scientific Drilling International

## Survey Report

<b>Company:</b> YATES PETROLEUM	<b>Date:</b> 07/10/2006	<b>Time:</b> 19:20:50	<b>Page:</b> 2
<b>Field:</b> Grassland	<b>Co-ordinate(NE) Reference:</b>	<b>Site:</b> Lea County, NM, Grid North	
<b>Site:</b> Lea County, NM	<b>Vertical (TVD) Reference:</b>	<b>SITE</b> 0.0	
<b>Well:</b> New Grass State #3	<b>Section (VS) Reference:</b>	<b>Well</b> (0.00N,0.00E,89.75Azi)	
<b>Wellpath:</b> VH - Job #32K0506398	<b>Survey Calculation Method:</b>	<b>Minimum Curvature</b>	<b>Db:</b> Sybase

**Survey**

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
4900.00	0.23	19.79	4898.78	83.10	8.90	83.07	0.22	83.54	83.88
5000.00	0.25	23.15	4998.77	83.26	9.29	83.22	0.02	83.74	83.63
5100.00	0.24	29.66	5098.77	83.45	9.67	83.41	0.03	83.97	83.39
5200.00	0.22	302.99	5198.77	83.39	9.96	83.35	0.32	83.94	83.19
5300.00	0.39	287.08	5298.77	82.91	10.16	82.87	0.19	83.49	83.01
5400.00	0.57	303.03	5398.77	82.17	10.53	82.13	0.22	82.80	82.69
5500.00	0.68	304.64	5498.76	81.27	11.14	81.22	0.11	81.98	82.19
5600.00	0.61	288.06	5598.76	80.28	11.64	80.23	0.20	81.07	81.74
5700.00	0.37	226.32	5698.75	79.54	11.59	79.49	0.54	80.33	81.71
5800.00	0.54	244.79	5798.75	78.88	11.16	78.83	0.22	79.62	81.94
5900.00	0.78	251.27	5898.74	77.81	10.74	77.76	0.25	78.50	82.13
6000.00	1.16	265.54	5998.73	76.16	10.45	76.11	0.44	76.82	82.18
6100.00	0.94	280.54	6098.71	74.34	10.52	74.30	0.35	75.04	81.94
6200.00	0.77	282.05	6198.70	72.88	10.81	72.83	0.17	73.63	81.56
6300.00	0.70	290.92	6298.69	71.65	11.17	71.61	0.13	72.47	81.14
6400.00	0.55	297.83	6398.69	70.66	11.61	70.61	0.17	71.56	80.66
6500.00	0.48	310.40	6498.68	69.92	12.11	69.87	0.13	70.91	80.17
6600.00	0.38	332.11	6598.68	69.44	12.67	69.39	0.19	70.54	79.65
6700.00	0.46	338.33	6698.68	69.14	13.34	69.09	0.09	70.36	79.07
6800.00	0.43	341.65	6798.67	68.88	14.07	68.82	0.04	70.24	78.45
6900.00	0.45	346.52	6898.67	68.67	14.81	68.61	0.04	70.19	77.82
7000.00	0.34	14.60	6998.67	68.66	15.47	68.59	0.22	70.32	77.29
7100.00	0.30	49.90	7098.67	68.94	15.93	68.87	0.20	70.69	76.98
7200.00	0.43	78.28	7198.67	69.51	16.18	69.44	0.22	71.30	76.89
7300.00	0.48	86.70	7298.66	70.29	16.28	70.22	0.08	72.08	76.95
7400.00	0.61	88.49	7398.66	71.24	16.31	71.17	0.13	73.01	77.09
7500.00	0.66	91.01	7498.65	72.35	16.32	72.28	0.06	74.09	77.28
7600.00	0.66	93.81	7598.65	73.50	16.27	73.43	0.03	75.21	77.51
7700.00	0.80	91.18	7698.64	74.77	16.22	74.70	0.14	76.44	77.75
7800.00	0.88	91.61	7798.63	76.23	16.18	76.16	0.08	77.86	78.01
7900.00	0.95	87.60	7898.61	77.82	16.19	77.75	0.09	79.42	78.24
8000.00	1.07	87.40	7998.60	79.58	16.27	79.51	0.12	81.16	78.44
8100.00	1.47	88.44	8098.57	81.80	16.35	81.73	0.40	83.35	78.69
8200.00	1.86	88.39	8198.53	84.70	16.43	84.63	0.39	86.21	79.01
8300.00	2.20	90.69	8298.47	88.23	16.45	88.16	0.35	89.69	79.43
8400.00	2.42	92.82	8398.39	92.26	16.32	92.19	0.24	93.62	79.96
8500.00	2.46	92.39	8498.30	96.51	16.13	96.44	0.05	97.78	80.50
8600.00	2.52	93.42	8598.20	100.84	15.91	100.78	0.07	102.02	81.03
8700.00	2.58	96.48	8698.10	105.27	15.52	105.21	0.15	106.35	81.61
8800.00	2.58	96.18	8798.00	109.74	15.03	109.68	0.01	110.70	82.20
8900.00	2.55	96.86	8897.90	114.19	14.52	114.13	0.04	115.05	82.75
9000.00	2.77	98.95	8997.79	118.78	13.88	118.72	0.24	119.53	83.33
9100.00	2.76	97.30	9097.68	123.55	13.20	123.49	0.08	124.20	83.90
9200.00	2.87	99.87	9197.56	128.40	12.46	128.35	0.17	128.95	84.45
9300.00	3.34	99.34	9297.41	133.73	11.56	133.68	0.47	134.18	85.06
9400.00	3.69	103.97	9397.22	139.72	10.31	139.68	0.45	140.06	85.78
9500.00	3.73	103.56	9497.01	146.00	8.77	145.96	0.05	146.22	86.56
9600.00	2.06	119.91	9596.88	150.71	7.11	150.68	1.84	150.85	87.30
9700.00	0.97	144.62	9696.85	152.76	5.52	152.73	1.25	152.83	87.93
9800.00	1.01	145.76	9796.83	153.74	4.10	153.72	0.04	153.78	88.47
9900.00	0.98	141.72	9896.82	154.76	2.70	154.75	0.08	154.77	89.00
10000.00	1.02	149.79	9996.80	155.73	1.26	155.72	0.15	155.73	89.53

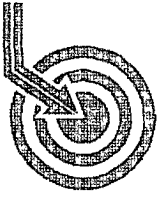


# Scientific Drilling International Survey Report

<b>Company:</b> YATES PETROLEUM	<b>Date:</b> 07/10/2006	<b>Time:</b> 19:20:50	<b>Page:</b> 3
<b>Field:</b> Grassland	<b>Co-ordinate(NE) Reference:</b>	<b>Site:</b> Lea County, NM, Grid North	
<b>Site:</b> Lea County, NM	<b>Vertical (TVD) Reference:</b>	<b>SITE 0.0</b>	
<b>Well:</b> New Grass State #3	<b>Section (VS) Reference:</b>	<b>Well (0.00N,0.00E,89.75Azi)</b>	
<b>Wellpath:</b> VH - Job #32K0506398	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

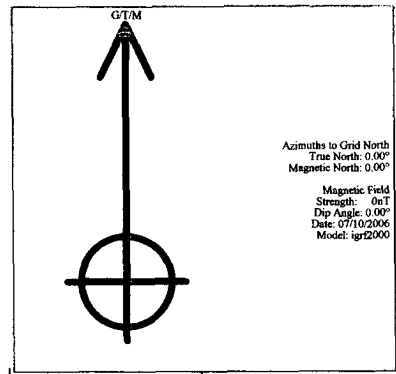
**Survey**

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
10100.00	0.96	141.29	10096.79	156.69	-0.16	156.70	0.16	156.70	90.06
10200.00	1.02	129.14	10196.77	157.90	-1.37	157.91	0.22	157.92	90.50
10300.00	1.05	125.74	10296.76	159.33	-2.47	159.34	0.07	159.36	90.89
10400.00	1.20	107.82	10396.74	161.07	-3.33	161.08	0.38	161.12	91.18
10500.00	1.47	101.76	10496.71	163.32	-3.91	163.33	0.30	163.38	91.37
10600.00	1.58	97.34	10596.68	165.93	-4.34	165.95	0.16	166.01	91.50
10700.00	2.09	89.84	10696.62	169.12	-4.52	169.14	0.56	169.20	91.53
10800.00	2.87	92.27	10796.53	173.44	-4.61	173.46	0.79	173.53	91.52
10900.00	3.01	99.99	10896.40	178.53	-5.16	178.55	0.42	178.63	91.66
11000.00	2.26	95.32	10996.29	183.08	-5.80	183.10	0.77	183.19	91.81
11100.00	1.97	85.66	11096.22	186.76	-5.86	186.78	0.46	186.87	91.80
11200.00	1.98	91.52	11196.16	190.20	-5.77	190.22	0.20	190.31	91.74
11300.00	2.02	92.07	11296.10	193.68	-5.88	193.71	0.04	193.80	91.74
11400.00	1.96	93.84	11396.04	197.15	-6.06	197.18	0.09	197.27	91.76
11500.00	2.06	93.36	11495.98	200.65	-6.28	200.68	0.10	200.78	91.79
11600.00	1.75	89.25	11595.93	203.97	-6.36	204.00	0.34	204.10	91.79
11700.00	1.76	86.97	11695.88	207.03	-6.26	207.06	0.07	207.16	91.73
11800.00	1.88	68.31	11795.83	210.09	-5.58	210.12	0.60	210.19	91.52
11900.00	2.92	56.99	11895.74	213.76	-3.58	213.77	1.14	213.80	90.96
12000.00	3.49	68.42	11995.59	218.74	-1.08	218.74	0.85	218.74	90.28
12100.00	3.52	77.06	12095.40	224.56	0.73	224.56	0.53	224.56	89.81
12117.00	3.57	75.85	12112.37	225.59	0.98	225.59	0.53	225.59	89.75



**Scientific  
Drilling**

**Field: Grassland**  
**Site: Lea County, NM**  
**Well: New Grass State #3**  
**Wellpath: VH - Job #32K0506398**  
**Survey: 05/17/06**



Azimuths to Grid North:  
True North: 0.00°  
Magnetic North: 0.00°  
Magnetic Field  
Strength: 0nT  
Dip Angle: 0.00°  
Date: 07/10/2006  
Model: igr2000

