

Company: Patterson Petroleum

Lease/Well: Bougainvillea 33 ST #1

Location: Lea County

Rig Name: Unknown

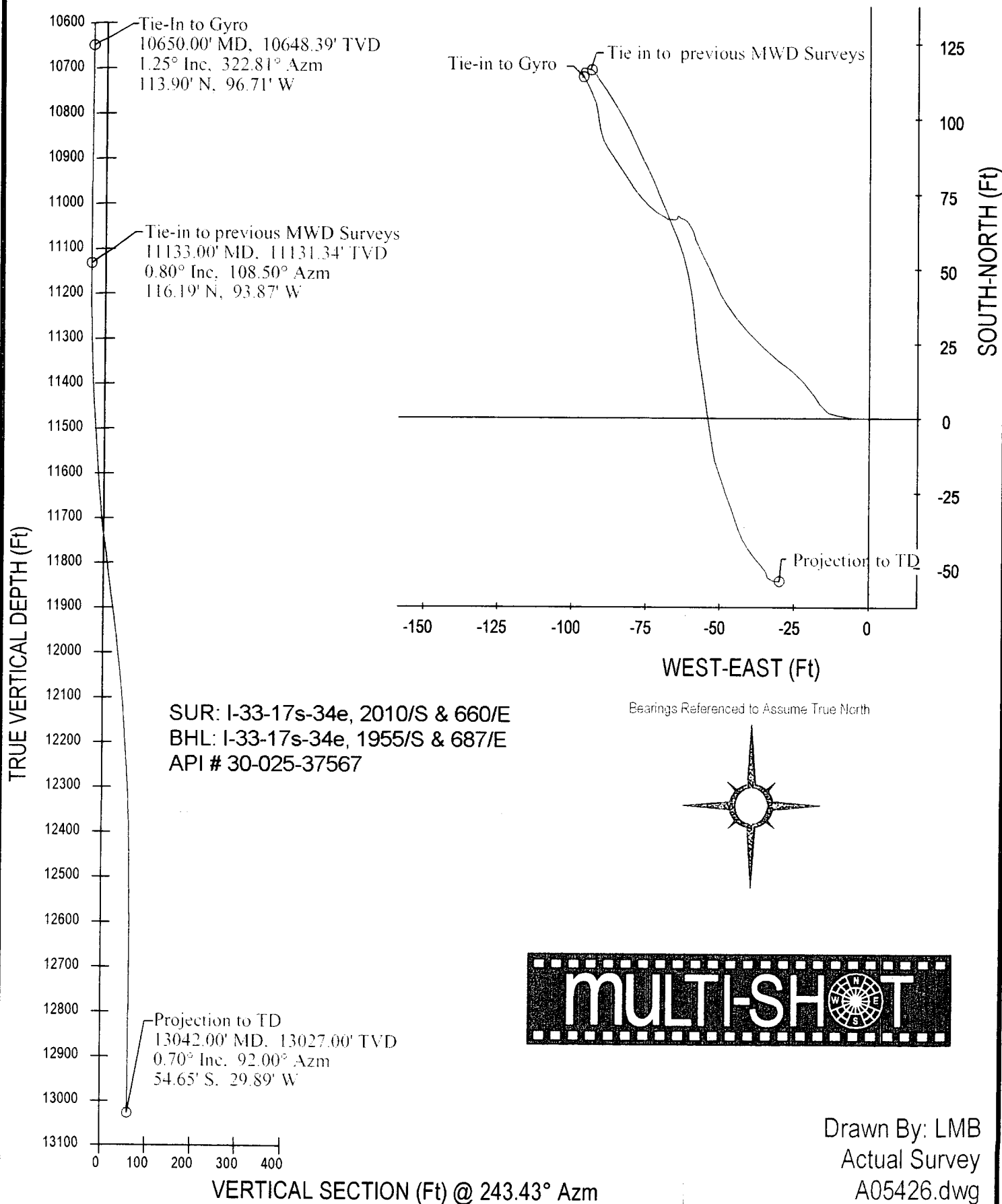
State/Country: New Mexico

Declination:

Grid: Assumed to True North

Date/Time: 02/14/2006

Patterson Petroleum





Directional Services

Job Number: P05-426

Company: Patterson Petroleum

Lease/Well: Bougainvillea 33 ST #1

Location: Lea County

Rig Name: Unknown

RKB:

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

State/Country: New Mexico

Declination: 8.179

Grid: Assumed to True North

File name: F:\WELLPL~1\2005\IP05420\S\IP05426\05426.SVY

Date/Time: 15-Feb-06 / 08:33

Curve Name: Gyro

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 220.65
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
200.00	.50	270.19	200.00	.00	-.87	.57	.87	270.19	.25
400.00	.75	273.05	399.99	.08	-3.05	1.93	3.05	271.42	.13
600.00	.75	276.03	599.97	.28	-5.66	3.47	5.67	272.86	.02
800.00	.75	281.00	799.95	.67	-8.25	4.86	8.28	274.64	.03
1000.00	1.00	280.99	999.93	1.25	-11.25	6.38	11.32	276.35	.13
1200.00	.50	291.96	1199.91	1.91	-13.77	7.52	13.90	277.90	.26
1400.00	.50	339.94	1399.90	3.06	-14.88	7.37	15.19	281.61	.20
1600.00	.25	272.92	1599.90	3.90	-15.61	7.21	16.09	284.02	.23
1800.00	.50	327.90	1799.90	4.66	-16.51	7.22	17.16	285.76	.21
2000.00	1.50	325.89	1999.86	7.57	-18.44	6.27	19.94	292.31	.50
2200.00	1.75	319.97	2199.78	12.07	-21.88	5.09	24.99	298.89	.15
2400.00	1.50	306.05	2399.70	15.95	-25.96	4.81	30.47	301.57	.23
2600.00	1.75	307.13	2599.62	19.34	-30.51	5.20	36.12	302.37	.13
2800.00	2.25	315.22	2799.50	23.97	-35.71	5.08	43.00	303.87	.29
3000.00	2.00	314.29	2999.36	29.19	-40.97	4.54	50.31	305.47	.13
3200.00	1.50	325.36	3199.27	33.78	-44.96	3.66	56.23	306.92	.30
3400.00	1.25	324.44	3399.21	37.71	-47.71	2.47	60.82	308.32	.13
3600.00	1.25	334.52	3599.16	41.45	-49.92	1.07	64.89	309.71	.11
3800.00	1.25	337.60	3799.12	45.44	-51.69	-.80	68.82	311.32	.03
4000.00	1.50	333.68	3999.06	49.80	-53.68	-2.81	73.23	312.85	.13
4200.00	1.75	332.16	4198.98	54.85	-56.27	-4.96	78.58	314.27	.13
4400.00	1.25	341.23	4398.91	59.61	-58.40	-7.19	83.45	315.59	.28

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	
4600.00	.25	348.31	4598.89	62.11	-59.19	-8.56	85.79	316.38	.50
4800.00	.50	329.39	4798.88	63.29	-59.72	-9.11	87.02	316.66	.14
5000.00	.50	334.46	4998.88	64.82	-60.54	-9.74	88.70	316.96	.02
5200.00	.50	299.54	5198.87	66.04	-61.68	-9.93	90.36	316.96	.15
5400.00	.25	296.62	5398.87	66.67	-62.83	-9.65	91.61	316.70	.13
5600.00	.25	293.70	5598.86	67.04	-63.62	-9.42	92.42	316.50	.01
5800.00	.25	340.78	5798.86	67.63	-64.16	-9.51	93.22	316.51	.10
6000.00	.25	206.86	5998.86	67.65	-64.50	-9.31	93.47	316.37	.23
6200.00	.25	168.74	6198.86	66.83	-64.61	-8.61	92.96	315.97	.08
6400.00	.50	272.62	6398.86	66.44	-65.40	-7.81	93.23	315.45	.31
6600.00	.25	284.50	6598.85	66.59	-66.69	-7.08	94.25	314.96	.13
6800.00	.25	248.38	6798.85	66.54	-67.52	-6.50	94.80	314.58	.08
7000.00	.25	324.26	6998.85	66.73	-68.18	-6.22	95.41	314.39	.15
7200.00	.50	292.14	7198.84	67.42	-69.24	-6.04	96.64	314.23	.16
7400.00	1.00	302.02	7398.83	68.67	-71.53	-5.50	99.16	313.83	.26
7600.00	1.00	315.90	7598.80	70.85	-74.23	-5.40	102.61	313.67	.12
7800.00	1.25	315.78	7798.76	73.67	-76.96	-5.76	106.54	313.75	.13
8000.00	1.00	327.66	7998.72	76.71	-79.42	-6.46	110.41	314.00	.17
8200.00	1.00	326.81	8198.69	79.64	-81.31	-7.46	113.81	314.41	.01
8400.00	.75	326.69	8398.67	82.19	-82.98	-8.30	116.80	314.73	.13
8600.00	1.00	325.57	8598.64	84.73	-84.69	-9.12	119.79	315.01	.13
8800.00	1.00	325.45	8798.61	87.61	-86.66	-10.01	123.23	315.31	.00
9000.00	.75	324.33	8998.59	90.11	-88.42	-10.77	126.24	315.54	.13
9200.00	1.00	338.21	9198.57	92.79	-89.83	-11.88	129.15	315.93	.16
9400.00	1.00	348.08	9398.53	96.12	-90.84	-13.75	132.25	316.62	.09
9600.00	.75	351.96	9598.51	99.12	-91.38	-15.68	134.82	317.33	.13
9800.00	1.00	350.79	9798.49	102.14	-91.84	-17.67	137.36	318.04	.13
10000.00	.75	342.57	9998.46	105.11	-92.51	-19.48	140.03	318.65	.14
10200.00	.75	332.13	10198.45	107.52	-93.52	-20.65	142.50	318.98	.07
10400.00	.75	342.69	10398.43	109.93	-94.52	-21.83	144.97	319.31	.07
10600.00	1.25	327.25	10598.40	113.01	-96.09	-23.15	148.34	319.63	.28
Final Survey									
10650.00	1.25	322.81	10648.39	113.90	-96.71	-23.42	149.42	319.67	.19



Directional Services

Job Number: P05-426

Company: Patterson Petroleum

Lease/Well: Bougainvillea 33 ST #1

Location: Lea County

Rig Name: Unknown

RKB:

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

State/Country: New Mexico

Declination: 8.179

Grid: Assumed to True North

File name: F:\WELLPL-1\2005\IP05420\S\IP05426\05426.SVY

Date/Time: 15-Feb-06 / 08:36

Curve Name: MWD SVY 10650'-11133'

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 220.65
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
MWD SVYS 10650' - 11133'									
10650.00	1.25	322.81	10648.39	113.90	-96.71	-23.42	149.42	319.67	.00
10771.00	1.00	358.60	10769.37	116.01	-97.53	-24.48	151.56	319.94	.60
10864.00	.70	93.30	10862.36	116.79	-96.99	-25.43	151.81	320.29	1.36
10932.00	.90	96.70	10930.35	116.70	-96.04	-25.98	151.14	320.55	.30
11102.00	.40	114.40	11100.34	116.30	-94.17	-26.89	149.65	321.00	.31
Last Survey									
11133.00	.80	108.50	11131.34	116.19	-93.87	-27.00	149.37	321.06	1.30



Directional Services

Job Number: P05-426

Company: Patterson Petroleum

Lease/Well: Bougainvillea 33 ST #1

Location: Lea County

Rig Name: Unknown

RKB:

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

State/Country: New Mexico

Declination: 8.179

Grid: Assumed to True North

File name: F:\WELLPL~1\2005\PO5420\S\PO5426\05426.SVY

Date/Time: 15-Feb-06 / 14:23

Curve Name: MWD SURVEY 11133'-13042'

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 220.65
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
MWD SURVEY 11133'- 13042'									
11133.00	80	108.50	11131.34	116.19	-93.87	-27.00	149.37	321.07	.00
11164.00	1.10	143.50	11162.34	115.88	-93.49	-27.02	148.89	321.11	2.06
11196.00	1.70	134.80	11194.33	115.30	-92.97	-26.92	148.11	321.12	1.98
11228.00	2.40	154.30	11226.31	114.36	-92.34	-26.61	146.99	321.08	3.06
11259.00	3.50	144.80	11257.26	113.00	-91.51	-26.12	145.41	321.00	3.87
11290.00	4.10	142.70	11288.20	111.35	-90.30	-25.66	143.36	320.96	1.99
11322.00	4.80	146.40	11320.10	109.32	-88.86	-25.06	140.88	320.89	2.36
11354.00	5.80	148.40	11351.96	106.83	-87.27	-24.20	137.95	320.75	3.18
11384.00	6.80	147.60	11381.78	104.04	-85.53	-23.22	134.68	320.58	3.35
11416.00	8.40	149.30	11413.50	100.43	-83.32	-21.92	130.49	320.32	5.05
11448.00	8.70	153.20	11445.14	96.26	-81.04	-20.24	125.83	319.91	2.04
11479.00	9.20	154.90	11475.77	91.92	-78.93	-18.33	121.16	319.35	1.82
11511.00	8.90	153.00	11507.37	87.40	-76.72	-16.34	116.30	318.72	1.32
11542.00	8.80	152.40	11538.00	83.16	-74.53	-14.55	111.67	318.13	.44
11573.00	8.40	157.60	11568.65	78.97	-72.57	-12.64	107.25	317.42	2.82
11605.00	8.70	156.70	11600.29	74.59	-70.72	-10.52	102.78	316.52	1.03
11636.00	9.50	156.90	11630.90	70.08	-68.79	-8.36	98.20	315.53	2.58
11668.00	9.90	156.40	11662.45	65.13	-66.65	-5.99	93.19	314.34	1.28
11700.00	10.00	158.70	11693.97	60.02	-64.54	-3.49	88.14	312.92	1.28
11732.00	10.60	163.70	11725.45	54.61	-62.71	-.58	83.15	311.05	3.36

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	
11763.00	11.00	166.60	11755.90	48.99	-61.22	2.71	78.41	308.67	2.18
11795.00	10.60	169.40	11787.33	43.13	-59.97	6.35	73.87	305.72	2.06
11826.00	10.50	173.60	11817.81	37.52	-59.13	10.05	70.03	302.40	2.50
11858.00	10.40	174.20	11849.28	31.75	-58.52	14.03	66.57	298.48	.46
11890.00	10.10	173.60	11880.77	26.09	-57.91	17.93	63.52	294.25	1.00
11921.00	10.50	171.70	11911.27	20.59	-57.20	21.64	60.79	289.80	1.69
11952.00	10.40	171.20	11941.76	15.03	-56.36	25.31	58.33	284.93	.44
11983.00	10.10	172.40	11972.26	9.57	-55.58	28.94	56.40	279.77	1.19
12014.00	9.70	170.00	12002.80	4.30	-54.76	32.41	54.93	274.49	1.85
12045.00	8.70	172.00	12033.40	-.59	-53.98	35.61	53.99	269.38	3.39
12077.00	8.20	172.00	12065.05	-5.25	-53.33	38.72	53.59	264.38	1.56
12108.00	8.20	170.60	12095.74	-9.62	-52.66	41.60	53.53	259.65	.64
12139.00	7.50	165.70	12126.45	-13.76	-51.80	44.18	53.60	255.13	3.12
12171.00	7.30	161.10	12158.18	-17.70	-50.63	46.41	53.63	250.72	1.95
12203.00	7.50	160.20	12189.91	-21.59	-49.26	48.47	53.78	246.33	.72
12241.00	7.30	160.10	12227.60	-26.20	-47.60	50.88	54.33	241.17	.53
12273.00	7.30	161.30	12259.34	-30.03	-46.25	52.92	55.15	237.00	.48
12304.00	7.20	160.90	12290.09	-33.73	-44.99	54.90	56.23	233.13	.36
12335.00	7.00	160.90	12320.85	-37.36	-43.73	56.83	57.52	229.50	.65
12367.00	6.30	152.60	12352.64	-40.76	-42.29	58.47	58.73	226.06	3.71
12399.00	6.10	148.30	12384.45	-43.76	-40.59	59.64	59.69	222.84	1.58
12424.00	5.50	139.60	12409.32	-45.81	-39.11	60.23	60.23	220.49	4.25
12459.00	4.60	139.30	12444.19	-48.15	-37.11	60.70	60.79	217.62	2.57
12489.00	3.80	139.30	12474.11	-49.81	-35.68	61.03	61.27	215.61	2.67
12521.00	2.30	149.80	12506.06	-51.17	-34.66	61.40	61.81	214.11	4.98
12552.00	1.30	160.90	12537.04	-52.04	-34.23	61.79	62.29	213.34	3.40
12584.00	1.10	166.40	12569.04	-52.68	-34.04	62.15	62.72	212.87	.72
12615.00	.70	169.90	12600.03	-53.16	-33.94	62.44	63.07	212.56	1.30
12677.00	.00	140.50	12662.03	-53.53	-33.87	62.68	63.35	212.32	1.13
12741.00	.70	103.20	12726.03	-53.62	-33.49	62.50	63.22	211.99	1.09
12773.00	.90	143.40	12758.03	-53.87	-33.15	62.47	63.25	211.61	1.82
12834.00	.90	107.10	12819.02	-54.39	-32.41	62.38	63.32	210.79	.92
12897.00	.60	95.60	12882.01	-54.57	-31.61	61.99	63.06	210.08	.53
12960.00	.70	92.00	12945.01	-54.62	-30.90	61.56	62.75	209.50	.17
Projection to TD									
13042.00	.70	92.00	13027.00	-54.65	-29.89	60.94	62.29	208.68	.00