



Job Number: MI-06161
 Company: BTA Oil Producers
 Lease/Well: 9205 JV-P Vacuum #1
 Location: Lea County
 Rig Name: Nabors #441
 RKB:
 G.L. or M.S.L.: 4029'

State/Country: New Mexico
 Declination: 8.19892
 Grid: -0.42
 File name: Z:\2006\Q060230\Q060233\PLANR1~1.SVY
 Date/Time: 18-Jul-06 / 18:24
 Curve Name: Gyro Data Survey

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 24.56
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

SUR: L-31-16s-35e, 1980/S & 660/W
 BHL #1: C-31-16s-35e, 4853/S & 1946/W
 BHL #2: N-31-16s-35e, 766/S & 1960/W
 API # 30-025-31621

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	CLOSURE Distance FT	Direction Deg
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Interpolated Point									
100.00	.31	293.12	100.00	-.01	.31	.11	-.25	.27	293.12
200.00	.36	254.32	200.00	-.22	.23	.13	-.81	.82	279.08
300.00	.36	256.00	300.00	-.62	.01	-.03	-1.42	1.42	268.64
400.00	.36	255.00	399.99	-1.02	.01	-.19	-2.03	2.04	264.60
500.00	.30	252.98	499.99	-1.39	.06	-.35	-2.58	2.61	262.29
600.00	.36	259.74	599.99	-1.74	.07	-.48	-3.14	3.18	261.28
700.00	.28	265.72	699.99	-2.04	.09	-.56	-3.70	3.74	261.44
800.00	.35	256.02	799.99	-2.35	.09	-.65	-4.24	4.29	261.30
1000.00	.36	255.80	999.98	-3.13	.01	-.95	-5.45	5.53	260.09
1100.00	.31	249.25	1099.98	-3.52	.07	-1.12	-6.01	6.11	259.40
1200.00	.27	239.26	1199.98	-3.90	.06	-1.34	-6.46	6.60	258.28

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	C L O S U R E	
								Distance FT	Direction Deg
1300.00	.30	236.97	1299.98	-4.31	.03	-1.60	-6.88	7.06	256.90
1400.00	.25	236.70	1399.98	-4.72	.05	-1.86	-7.28	7.51	255.65
1500.00	.18	230.06	1499.98	-5.04	.08	-2.08	-7.58	7.86	254.64
1600.00	.24	225.85	1599.98	-5.38	.06	-2.33	-7.85	8.18	253.49
1700.00	.17	212.71	1699.98	-5.72	.08	-2.59	-8.07	8.48	252.19
1800.00	.25	239.11	1799.98	-6.04	.13	-2.83	-8.34	8.81	251.25
1900.00	.28	250.93	1899.97	-6.40	.06	-3.03	-8.77	9.27	250.95
2000.00	.31	276.14	1999.97	-6.65	.13	-3.08	-9.27	9.76	251.63
2100.00	.22	292.39	2099.97	-6.74	.12	-2.98	-9.71	10.16	252.97
2200.00	.20	9.79	2199.97	-6.58	.26	-2.73	-9.86	10.23	254.52
2300.00	.24	15.51	2299.97	-6.21	.04	-2.36	-9.77	10.05	256.43
2400.00	.37	21.45	2399.97	-5.68	.14	-1.86	-9.60	9.78	259.06
2500.00	.34	35.75	2499.97	-5.06	.10	-1.31	-9.30	9.40	261.99
2600.00	.45	28.80	2599.97	-4.37	.12	-.72	-8.94	8.97	265.38
2700.00	.50	34.12	2699.96	-3.55	.07	-.01	-8.51	8.51	269.91
2800.00	1.19	38.07	2799.95	-2.11	.69	1.16	-7.62	7.71	278.69
2900.00	1.21	40.73	2899.93	-.08	.06	2.78	-6.29	6.88	293.88
3000.00	1.24	39.97	2999.91	1.98	.03	4.41	-4.91	6.60	311.98
3100.00	1.25	39.48	3099.88	4.07	.02	6.08	-3.52	7.03	329.97
3200.00	1.00	44.79	3199.86	5.94	.28	7.54	-2.21	7.86	343.68
3300.00	.51	48.53	3299.85	7.16	.49	8.45	-1.27	8.55	351.48
3400.00	.55	41.38	3399.85	8.02	.08	9.11	-.62	9.13	356.11
3500.00	.26	19.97	3499.85	8.71	.32	9.68	-.23	9.68	358.67
3600.00	.20	310.82	3599.85	8.98	.26	10.00	-.28	10.01	358.42
3700.00	.31	273.68	3699.85	8.94	.19	10.13	-.67	10.16	356.19
3800.00	.28	274.00	3799.84	8.75	.02	10.17	-1.19	10.24	353.32
3900.00	.35	294.02	3899.84	8.66	.13	10.31	-1.72	10.45	350.55
4000.00	.38	273.94	3999.84	8.54	.13	10.45	-2.32	10.71	347.47
4100.00	.49	286.47	4099.84	8.37	.14	10.60	-3.06	11.03	343.89
4200.00	.52	279.00	4199.83	8.19	.07	10.79	-3.91	11.48	340.06
4300.00	.64	279.31	4299.83	7.92	.12	10.95	-4.91	12.00	335.84
4400.00	.70	289.23	4399.82	7.71	.13	11.24	-6.04	12.76	331.75
4500.00	.66	279.86	4499.81	7.51	.12	11.54	-7.18	13.59	328.11

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	C L O S U R E	
								Distance FT	Direction Deg
4600.00	.66	272.59	4599.81	7.15	.08	11.66	-8.32	14.33	324.49
4700.00	.61	280.43	4699.80	6.80	.10	11.79	-9.42	15.09	321.36
4800.00	.63	301.13	4799.80	6.74	.22	12.16	-10.41	16.01	319.43
4900.00	.60	301.53	4899.79	6.86	.03	12.72	-11.33	17.03	318.32
5000.00	.60	300.34	4999.79	6.98	.01	13.26	-12.22	18.03	317.33
5100.00	.69	301.87	5099.78	7.11	.09	13.84	-13.18	19.11	316.39
5200.00	.57	290.84	5199.77	7.15	.17	14.33	-14.16	20.15	315.35
5300.00	.41	283.98	5299.77	7.05	.17	14.60	-14.97	20.91	314.27
5400.00	.22	237.23	5399.77	6.82	.30	14.58	-15.48	21.26	313.28
5500.00	.31	190.72	5499.77	6.40	.23	14.21	-15.69	21.17	312.15
5600.00	.34	187.99	5599.77	5.85	.03	13.65	-15.79	20.87	310.84
5700.00	.25	182.94	5699.76	5.36	.09	13.13	-15.84	20.58	309.67
5800.00	.35	188.71	5799.76	4.86	.11	12.61	-15.90	20.29	308.42
5900.00	.19	183.43	5899.76	4.41	.17	12.14	-15.95	20.05	307.26
6000.00	.20	170.31	5999.76	4.11	.05	11.80	-15.93	19.83	306.52
6100.00	.14	139.98	6099.76	3.91	.11	11.53	-15.82	19.58	306.08
6200.00	.10	101.35	6199.76	3.88	.09	11.42	-15.66	19.38	306.10
6300.00	.16	65.11	6299.76	4.00	.10	11.46	-15.46	19.24	306.56
6400.00	.05	156.53	6399.76	4.08	.17	11.48	-15.31	19.14	306.86
6500.00	.09	135.28	6499.76	4.02	.05	11.39	-15.24	19.02	306.76
6600.00	.21	204.65	6599.76	3.80	.20	11.16	-15.26	18.90	306.17
6700.00	.27	211.20	6699.76	3.38	.07	10.78	-15.46	18.85	304.89
6800.00	.29	210.01	6799.76	2.89	.01	10.36	-15.71	18.82	303.40
6900.00	.23	152.54	6899.76	2.52	.26	9.96	-15.74	18.63	302.32
7000.00	.26	153.49	6999.76	2.25	.02	9.58	-15.55	18.26	301.64
7100.00	.30	106.17	7099.75	2.15	.23	9.31	-15.20	17.82	301.49
7200.00	.32	104.67	7199.75	2.24	.02	9.16	-14.67	17.30	301.99
7300.00	.34	103.20	7299.75	2.34	.01	9.03	-14.11	16.75	302.60
7400.00	.43	99.69	7399.75	2.50	.10	8.89	-13.46	16.13	303.46
7500.00	.33	119.06	7499.75	2.57	.16	8.69	-12.83	15.50	304.11
7600.00	.19	134.28	7599.75	2.49	.15	8.43	-12.46	15.04	304.10
7700.00	.07	58.21	7699.75	2.48	.19	8.35	-12.29	14.85	304.19
7800.00	.19	51.56	7799.75	2.69	.13	8.48	-12.10	14.78	305.03

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	CLOSURE	
								Distance FT	Direction Deg
7900.00	.24	18.97	7899.74	3.05	.13	8.79	-11.90	14.79	306.45
8000.00	.28	23.55	7999.74	3.50	.04	9.22	-11.73	14.92	308.15
8100.00	.24	359.21	8099.74	3.94	.12	9.65	-11.64	15.12	309.67
8200.00	.41	345.83	8199.74	4.41	.19	10.21	-11.73	15.55	311.04
8300.00	.48	352.36	8299.74	5.05	.09	10.98	-11.87	16.17	312.76
8400.00	.46	357.29	8399.73	5.76	.05	11.80	-11.95	16.79	314.63
8500.00	.38	1.51	8499.73	6.42	.08	12.52	-11.96	17.32	316.32
8600.00	.47	20.04	8599.73	7.13	.16	13.24	-11.81	17.74	318.27
8693.00	.70	359.53	8692.72	8.03	.33	14.17	-11.68	18.36	320.49



Job Number: MI-06161
 Company: BTA Oil Producers
 Lease/Well: 9205 JV-P Vacuum #1
 Location: Lea County
 Rig Name: Nabors #441
 RKB:
 G.L. or M.S.L.: 4029'

State/Country: New Mexico
 Declination: 8.19892
 Grid: -0.42
 File name: Z:\2006\Q060230\Q060233\PLANR1-1.SVY
 Date/Time: 18-Jul-06 / 18:27
 Curve Name: Lateral #1

Lat #1

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 24.56
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	CLOSURE Distance FT	Direction Deg
Tie into Gyro Data Survey									
8693.00	.70	359.61	8692.70	7.82	.00	13.90	-11.60	18.10	320.15
8791.00	21.60	317.00	8788.34	15.33	21.52	27.85	-24.05	36.79	319.19
8816.00	30.00	319.10	8810.83	19.69	33.79	35.95	-31.29	47.66	318.97
8847.00	40.40	336.10	8836.18	29.63	45.83	51.07	-40.48	65.17	321.60
8878.00	51.30	343.90	8857.76	45.52	39.47	71.96	-47.93	86.46	326.33
8910.00	62.00	351.80	8875.35	66.96	39.25	98.04	-53.43	111.66	331.41
8941.00	70.00	2.00	8887.97	92.02	39.58	126.25	-54.88	137.67	336.50
8973.00	75.30	7.80	8897.52	120.76	23.94	156.66	-52.25	165.14	341.55
9005.00	78.30	13.60	8904.83	151.00	19.98	187.25	-46.46	192.93	346.06
9036.00	83.60	16.00	8909.71	181.16	18.73	216.84	-38.64	220.25	349.90
9068.00	92.20	19.90	8910.88	212.89	29.50	247.22	-28.80	248.89	353.36
9106.00	92.90	21.30	8909.19	250.76	4.12	282.76	-15.44	283.18	356.87

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	C L O S U R E	
								Distance FT	Direction Deg
9131.00	92.20	21.50	8908.08	275.69	2.91	306.01	-6.33	306.07	358.82
9163.00	90.00	24.00	8907.46	307.67	10.41	335.51	6.04	335.56	1.03
9194.00	90.20	24.30	8907.41	338.67	1.16	363.80	18.73	364.28	2.95
9226.00	90.20	24.50	8907.30	370.67	.62	392.94	31.95	394.23	4.65
9258.00	88.60	25.70	8907.63	402.66	6.25	421.91	45.52	424.36	6.16
9289.00	88.40	25.20	8908.44	433.65	1.74	449.90	58.84	453.73	7.45
9320.00	88.70	25.20	8909.23	464.63	.97	477.94	72.03	483.33	8.57
9351.00	89.10	25.40	8909.82	495.63	1.44	505.96	85.28	513.09	9.57
9383.00	89.30	25.50	8910.27	527.62	.70	534.85	99.03	543.94	10.49
9415.00	89.30	25.40	8910.66	559.61	.31	563.74	112.78	574.91	11.31
9447.00	89.10	25.40	8911.11	591.61	.62	592.65	126.50	606.00	12.05
9479.00	89.30	25.40	8911.55	623.60	.62	621.55	140.23	637.17	12.71
9510.00	89.60	25.20	8911.85	654.60	1.16	649.57	153.47	667.46	13.29
9541.00	89.20	25.20	8912.18	685.59	1.29	677.62	166.67	697.82	13.82
9572.00	90.40	26.20	8912.28	716.59	5.04	705.56	180.11	728.18	14.32
9604.00	90.20	26.20	8912.12	748.57	.62	734.27	194.24	759.53	14.82
9636.00	90.50	26.70	8911.92	780.55	1.82	762.92	208.50	790.89	15.28
9667.00	91.10	27.10	8911.49	811.52	2.33	790.56	222.52	821.28	15.72
9699.00	91.90	27.30	8910.65	843.48	2.58	819.01	237.14	852.65	16.15
9731.00	92.20	27.10	8909.51	875.42	1.13	847.45	251.76	884.06	16.55
9762.00	92.20	27.30	8908.32	906.37	.64	875.01	265.92	914.52	16.90
9794.00	92.20	26.90	8907.09	938.31	1.25	903.47	280.49	946.01	17.25
9826.00	91.10	27.50	8906.17	970.27	3.92	931.92	295.11	977.53	17.57
9857.00	91.20	27.30	8905.54	1001.22	.72	959.44	309.37	1008.08	17.87
9889.00	90.90	26.80	8904.96	1033.19	1.82	987.93	323.92	1039.68	18.15
9921.00	90.00	26.80	8904.71	1065.16	2.81	1016.49	338.35	1071.32	18.41
9952.00	90.00	27.10	8904.71	1096.13	.97	1044.13	352.40	1101.99	18.65
9984.00	90.10	27.10	8904.68	1128.10	.31	1072.61	366.97	1133.65	18.89
10016.00	90.50	26.90	8904.51	1160.07	1.40	1101.13	381.50	1165.34	19.11
10047.00	89.60	28.20	8904.48	1191.03	5.10	1128.61	395.84	1196.01	19.33
10079.00	89.10	28.00	8904.85	1222.97	1.68	1156.84	410.91	1227.65	19.56
10111.00	89.40	27.80	8905.26	1254.91	1.13	1185.11	425.88	1259.31	19.77
10143.00	89.50	28.00	8905.57	1286.85	.70	1213.39	440.86	1291.00	19.97

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	C L O S U R E	
								Distance FT	Direction Deg
10175.00	89.30	27.50	8905.91	1318.80	1.68	1241.71	455.76	1322.71	20.16
10206.00	89.40	27.50	8906.26	1349.76	.32	1269.21	470.07	1353.46	20.32
10237.00	89.50	27.60	8906.56	1380.71	.46	1296.69	484.41	1384.22	20.48
10269.00	89.90	27.60	8906.72	1412.67	1.25	1325.05	499.23	1415.97	20.64
10301.00	89.80	27.80	8906.81	1444.62	.70	1353.38	514.11	1447.74	20.80
10333.00	89.50	28.20	8907.00	1476.56	1.56	1381.63	529.13	1479.49	20.96
10364.00	89.90	28.20	8907.17	1507.50	1.29	1408.95	543.78	1510.25	21.10
10396.00	89.70	28.50	8907.28	1539.43	1.13	1437.12	558.97	1542.00	21.25
10427.00	89.70	28.30	8907.44	1570.36	.65	1464.38	573.72	1572.76	21.39
10459.00	89.70	28.70	8907.61	1602.28	1.25	1492.51	588.99	1604.52	21.54
10490.00	89.80	28.90	8907.74	1633.20	.72	1519.67	603.92	1635.27	21.67
10521.00	90.00	28.90	8907.80	1664.11	.65	1546.81	618.90	1666.03	21.81
10553.00	89.60	28.00	8907.91	1696.03	3.08	1574.95	634.15	1697.82	21.93
10584.00	90.00	26.60	8908.02	1727.00	4.70	1602.49	648.36	1728.69	22.03
10615.00	90.00	26.60	8908.02	1757.98	.00	1630.21	662.24	1759.59	22.11
10647.00	90.30	26.80	8907.93	1789.96	1.13	1658.80	676.62	1791.49	22.19
10678.00	90.70	26.80	8907.66	1820.93	1.29	1686.47	690.60	1822.39	22.27
10710.00	91.00	27.30	8907.19	1852.90	1.82	1714.96	705.15	1854.28	22.35
10741.00	90.30	27.30	8906.84	1883.86	2.26	1742.51	719.37	1885.16	22.43
10772.00	89.60	27.30	8906.86	1914.82	2.26	1770.06	733.59	1916.05	22.51
10804.00	89.60	27.10	8907.09	1946.79	.62	1798.52	748.21	1947.94	22.59
10834.00	90.10	27.10	8907.16	1976.76	1.67	1825.22	761.88	1977.85	22.66
10865.00	90.40	26.90	8907.03	2007.73	1.16	1852.84	775.95	2008.76	22.72
10897.00	89.00	27.50	8907.20	2039.70	4.76	1881.30	790.58	2040.67	22.79
10929.00	88.50	26.90	8907.90	2071.65	2.44	1909.76	805.20	2072.56	22.86
10960.00	88.60	26.90	8908.68	2102.62	.32	1937.39	819.22	2103.48	22.92
10992.00	88.90	27.10	8909.38	2134.58	1.13	1965.90	833.75	2135.39	22.98
11024.00	89.10	26.90	8909.94	2166.55	.88	1994.41	848.27	2167.31	23.04
11055.00	89.30	26.80	8910.37	2197.52	.72	2022.06	862.27	2198.24	23.09
11086.00	89.60	26.80	8910.67	2228.49	.97	2049.73	876.25	2229.17	23.15
11118.00	89.40	26.80	8910.95	2260.47	.62	2078.29	890.68	2261.11	23.20
11148.00	89.30	26.60	8911.29	2290.45	.75	2105.09	904.16	2291.05	23.24
11180.00	89.50	26.90	8911.62	2322.42	1.13	2133.67	918.56	2322.99	23.29

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	Dogleg Severity Deg/100	N-S FT	E-W FT	C L O S U R E	
								Distance FT	Direction Deg
11211.00	89.90	26.40	8911.78	2353.40	2.07	2161.37	932.46	2353.94	23.34
11242.00	90.30	26.40	8911.73	2384.38	1.29	2189.14	946.25	2384.89	23.38
11273.00	90.60	26.80	8911.49	2415.36	1.61	2216.86	960.13	2415.84	23.42
11305.00	90.60	26.40	8911.15	2447.34	1.25	2245.47	974.45	2447.79	23.46
11336.00	90.60	25.90	8910.83	2478.33	1.61	2273.29	988.11	2478.76	23.49
11368.00	91.00	25.70	8910.38	2510.32	1.40	2302.10	1002.04	2510.73	23.52
11400.00	89.00	25.50	8910.38	2542.31	6.28	2330.96	1015.87	2542.71	23.55
11431.00	88.50	25.50	8911.06	2573.30	1.61	2358.93	1029.21	2573.68	23.57
11463.00	88.80	25.40	8911.81	2605.29	.99	2387.82	1042.96	2605.65	23.59
11494.00	89.30	25.40	8912.32	2636.28	1.61	2415.82	1056.25	2636.64	23.62
11526.00	89.80	25.50	8912.57	2668.27	1.59	2444.71	1070.00	2668.62	23.64
11557.00	91.20	26.40	8912.30	2699.26	5.37	2472.58	1083.57	2699.59	23.66
11588.00	91.80	26.60	8911.49	2730.23	2.04	2500.32	1097.39	2730.54	23.70
11620.00	92.50	26.60	8910.29	2762.19	2.19	2528.91	1111.71	2762.48	23.73
11652.00	90.30	27.10	8909.51	2794.15	7.05	2557.45	1126.16	2794.42	23.77
11683.00	90.00	26.80	8909.43	2825.13	1.37	2585.08	1140.21	2825.37	23.80
11715.00	89.70	27.10	8909.51	2857.10	1.33	2613.61	1154.71	2857.33	23.84
11747.00	90.30	27.10	8909.51	2889.07	1.87	2642.09	1169.29	2889.27	23.87
11778.00	90.70	26.90	8909.24	2920.04	1.44	2669.71	1183.36	2920.23	23.91
11810.00	88.50	27.10	8909.47	2952.00	6.90	2698.22	1197.89	2952.18	23.94
11841.00	89.00	27.50	8910.14	2982.96	2.07	2725.77	1212.10	2983.12	23.97
11873.00	88.50	26.80	8910.84	3014.92	2.69	2754.23	1226.70	3015.06	24.01
11905.00	88.10	26.10	8911.79	3046.89	2.52	2782.87	1240.95	3047.02	24.03
11937.00	88.20	26.20	8912.82	3078.86	.44	2811.58	1255.05	3078.98	24.06
11968.00	88.70	26.20	8913.66	3109.84	1.61	2839.38	1268.73	3109.95	24.08
T.D.									
12006.00	88.70	26.20	8914.52	3147.81	.00	2873.47	1285.50	3147.91	24.10