

Lat 12



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 / 18:29
 Curve Name: Lateral #2

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

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 134.53
 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									
8500.00	.38	1.06	8499.70	-17.11	.00	12.30	-11.90	17.11	315.95
8569.00	17.90	131.70	8567.60	-6.59	26.30	5.42	-3.91	6.68	324.17
8600.00	23.10	119.60	8596.64	4.06	21.56	-.76	4.94	5.00	98.77
8632.00	22.60	124.70	8626.13	16.18	6.38	-7.36	15.46	17.12	115.47
8664.00	22.20	126.40	8655.72	28.23	2.38	-14.45	25.38	29.21	119.66
8696.00	22.00	126.40	8685.36	40.15	.62	-21.60	35.07	41.19	121.63
8728.00	26.30	128.70	8714.56	53.14	13.75	-29.59	45.43	54.22	123.08
8759.00	31.70	130.10	8741.66	68.10	17.56	-39.14	57.03	69.17	124.46
8790.00	36.70	131.00	8767.29	85.48	16.21	-50.47	70.26	86.51	125.69
8821.00	42.00	132.10	8791.26	105.10	17.24	-63.51	84.96	106.07	126.78
8853.00	48.30	132.40	8813.81	127.76	19.70	-78.76	101.74	128.66	127.74
8884.00	50.70	133.30	8833.94	151.32	8.05	-94.79	119.02	152.15	128.53

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
8915.00	56.60	133.50	8852.31	176.27	19.04	-111.94	137.15	177.03	129.22
8947.00	62.70	133.50	8868.47	203.87	19.06	-130.94	157.17	204.56	129.80
8979.00	68.40	134.00	8881.71	232.98	17.87	-151.07	178.20	233.62	130.29
9010.00	71.30	134.30	8892.39	262.08	9.40	-171.34	199.08	262.66	130.72
9042.00	77.40	134.30	8901.02	292.88	19.06	-192.85	221.12	293.41	131.09
9074.00	83.48	134.20	8906.33	324.42	19.00	-214.86	243.72	324.91	131.40
9105.00	89.20	133.50	8908.31	355.34	18.59	-236.29	266.02	355.80	131.61
9137.00	89.20	133.30	8908.75	387.33	.62	-258.27	289.27	387.79	131.76
9168.00	88.80	133.50	8909.30	418.32	1.44	-279.57	311.79	418.77	131.88
9200.00	88.10	133.80	8910.16	450.31	2.38	-301.65	334.93	450.74	132.01
9231.00	89.10	133.30	8910.92	481.29	3.61	-323.00	357.39	481.72	132.11
9262.00	89.50	133.50	8911.30	512.28	1.44	-344.30	379.91	512.71	132.18
9294.00	88.70	134.30	8911.80	544.28	3.54	-366.48	402.97	544.70	132.29
9325.00	88.80	134.20	8912.48	575.27	.46	-388.11	425.17	575.67	132.39
9357.00	88.80	133.80	8913.15	607.26	1.25	-410.33	448.18	607.65	132.48
9389.00	88.90	133.80	8913.79	639.25	.31	-432.48	471.27	639.64	132.54
9421.00	89.20	133.60	8914.32	671.24	1.13	-454.58	494.41	671.63	132.60
9452.00	89.20	132.40	8914.75	702.23	3.87	-475.72	517.08	702.62	132.61
9483.00	89.30	132.20	8915.16	733.20	.72	-496.58	540.00	733.62	132.60
9515.00	90.00	132.10	8915.35	765.18	2.21	-518.06	563.73	765.62	132.58
9546.00	88.20	130.70	8915.84	796.12	7.36	-538.55	586.98	796.61	132.54
9578.00	87.30	130.50	8917.10	828.02	2.88	-559.36	611.25	828.56	132.46
9609.00	87.70	130.70	8918.45	858.92	1.44	-579.52	634.77	859.52	132.39
9641.00	88.60	132.20	8919.48	890.86	5.46	-600.69	658.74	891.50	132.36
9673.00	88.60	133.30	8920.26	922.83	3.44	-622.40	682.23	923.48	132.37
9705.00	89.70	133.50	8920.74	954.82	3.49	-644.39	705.48	955.48	132.41
9736.00	89.30	131.90	8921.01	985.80	5.32	-665.41	728.26	986.47	132.42
9768.00	89.50	131.00	8921.34	1017.75	2.88	-686.59	752.24	1018.47	132.39
9799.00	90.00	131.00	8921.48	1048.70	1.61	-706.93	775.64	1049.46	132.35
9831.00	89.30	131.40	8921.67	1080.64	2.52	-728.01	799.71	1081.45	132.31
9863.00	88.50	129.90	8922.29	1112.56	5.31	-748.85	823.99	1113.43	132.26
9894.00	88.20	129.60	8923.18	1143.44	1.37	-768.66	847.81	1144.39	132.20
9926.00	90.00	132.40	8923.68	1175.37	10.40	-789.65	871.96	1176.37	132.16

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
9958.00	89.40	134.30	8923.85	1207.36	6.23	-811.61	895.22	1208.36	132.20
9989.00	88.00	135.40	8924.55	1238.35	5.74	-833.47	917.19	1239.32	132.26
10021.00	89.20	135.60	8925.34	1270.34	3.80	-856.29	939.62	1271.26	132.34
10053.00	89.90	136.50	8925.59	1302.32	3.56	-879.32	961.82	1303.20	132.43
10085.00	90.00	136.50	8925.62	1334.31	.31	-902.54	983.85	1335.12	132.53
10116.00	90.70	135.90	8925.43	1365.29	2.97	-924.91	1005.31	1366.05	132.61
10148.00	88.00	134.00	8925.79	1397.28	10.32	-947.51	1027.95	1398.02	132.67
10180.00	90.10	134.90	8926.32	1429.28	7.14	-969.92	1050.79	1430.00	132.71
10212.00	90.30	134.30	8926.21	1461.28	1.98	-992.39	1073.57	1461.98	132.75
10244.00	91.10	135.00	8925.82	1493.27	3.32	-1014.87	1096.34	1493.96	132.79
10275.00	90.40	135.00	8925.41	1524.27	2.26	-1036.79	1118.26	1524.94	132.84
10306.00	91.50	135.00	8924.90	1555.26	3.55	-1058.71	1140.17	1555.91	132.88
10338.00	91.90	134.70	8923.95	1587.25	1.56	-1081.27	1162.85	1587.88	132.92
10370.00	92.90	134.50	8922.61	1619.22	3.19	-1103.72	1185.61	1619.84	132.95
10402.00	92.90	134.70	8920.99	1651.18	.62	-1126.16	1208.37	1651.78	132.98
10433.00	92.20	134.30	8919.61	1682.15	2.60	-1147.86	1230.46	1682.74	133.01
10465.00	91.80	133.60	8918.49	1714.13	2.52	-1170.06	1253.48	1714.72	133.03
10496.00	91.50	133.80	8917.60	1745.11	1.16	-1191.47	1275.88	1745.70	133.04
Projection to Bit									
10529.00	91.50	133.80	8916.74	1778.10	.00	-1214.30	1299.69	1778.69	133.05