



Directional Survey Report

Calpine Corp

Well ID: Prati 32

Well Name: Prati 32

Field: Geysers

Sect: 35 Town: 12N Rng: 9W County: Sonoma State: CA

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Coordinates N-S	E-W	Closure	Vertical Section	Dog Leg Severity
Well Bore: Original Well Bore				Plane of Vertical Section: 0					
MSS	160.0	0.15	93	160.0	0.0	0.2	0.2	0.0	0.094
MSS	306.0	0.45	166	306.0	-0.6	0.5	0.8	-0.6	0.295
MSS	393.0	0.30	207	393.0	-1.1	0.5	1.2	-1.1	0.342
MSS	498.0	1.00	208	498.0	-2.2	0.0	2.2	-2.2	0.667
MSS	594.0	0.45	222	594.0	-3.2	-0.7	3.3	-3.2	0.598
MSS	721.0	0.45	43	721.0	-3.2	-0.7	3.3	-3.2	0.709
MSS	848.0	1.15	22	848.0	-1.6	0.1	1.7	-1.6	0.589
MSS	975.0	1.45	353	974.9	1.1	0.4	1.2	1.1	0.561
MSS	1,102.0	2.15	18	1,101.9	5.0	1.0	5.1	5.0	0.816
MSS	1,195.0	2.00	2	1,194.8	8.3	1.6	8.4	8.3	0.641
MSS	1,320.0	2.00	3	1,319.7	12.6	1.7	12.8	12.6	0.028
MSS	1,416.0	2.15	18	1,415.7	16.0	2.4	16.2	16.0	0.585
MSS	1,543.0	2.45	42	1,542.6	20.3	4.9	20.9	20.3	0.788
MSS	1,671.0	2.30	39	1,670.5	24.3	8.4	25.7	24.3	0.152
MSS	1,830.0	2.15	29	1,829.3	29.4	11.8	31.7	29.4	0.261
MSS	1,989.0	2.00	28	1,988.2	34.5	14.6	37.4	34.5	0.097
MSS	2,148.0	1.45	12	2,147.2	38.9	16.3	42.2	38.9	0.457
MSS	2,267.0	2.00	4	2,266.1	42.4	16.8	45.6	42.4	0.503
MSS	2,394.0	1.45	342	2,393.1	46.2	16.4	49.0	46.2	0.670
MSS	2,552.0	2.15	334	2,551.0	50.7	14.5	52.8	50.7	0.470
MSS	2,709.0	3.00	318	2,707.8	56.4	10.5	57.4	56.4	0.704
MSS	2,868.0	4.00	298	2,866.5	62.1	2.8	62.2	62.1	0.984
MSS	2,980.0	5.15	298	2,978.2	66.3	-5.1	66.5	66.3	1.027
MSS	3,078.0	5.15	298	3,075.8	70.5	-12.9	71.6	70.5	0.000
MSS	3,171.0	5.00	294	3,168.4	74.1	-20.2	76.8	74.1	0.413
MSS	3,297.0	4.45	294	3,294.0	78.3	-29.7	83.7	78.3	0.437
MSS	3,420.0	4.45	290	3,416.6	81.9	-38.6	90.5	81.9	0.252
MSS	3,545.0	4.30	293	3,541.2	85.4	-47.4	97.7	85.4	0.219
MSS	3,668.0	4.00	286	3,663.9	88.3	-55.8	104.5	88.3	0.478
MSS	3,787.0	4.00	278	3,782.6	90.1	-63.9	110.4	90.1	0.469
MSS	3,911.0	4.15	273	3,906.3	90.9	-72.7	116.4	90.9	0.311
MSS	4,035.0	4.30	269	4,030.0	91.0	-81.8	122.4	91.0	0.267
MSS	4,157.0	4.45	265	4,151.6	90.6	-91.1	128.4	90.6	0.279
MSS	4,189.0	4.45	260	4,183.5	90.2	-93.6	130.0	90.2	1.212
MSS	4,303.0	4.30	258	4,297.2	88.6	-102.1	135.2	88.6	0.188
MSS	4,327.0	5.15	260	4,321.1	88.2	-104.0	136.4	88.2	3.607
MSS	4,357.0	5.45	266	4,351.0	87.9	-106.8	138.3	87.9	2.099
MSS	4,390.0	6.00	273	4,383.8	87.9	-110.1	140.8	87.9	2.691
MSS	4,419.0	6.30	280	4,412.7	88.2	-113.1	143.5	88.2	2.783
MSS	4,451.0	6.45	286	4,444.5	89.0	-116.6	146.7	89.0	2.133
MSS	4,482.0	7.00	293	4,475.3	90.2	-120.0	150.1	90.2	3.181
MSS	4,510.0	7.00	298	4,503.0	91.7	-123.1	153.5	91.7	2.176
MSS	4,571.0	7.00	308	4,563.6	95.7	-129.3	160.9	95.7	1.995
MSS	4,603.0	7.15	310	4,595.3	98.2	-132.4	164.8	98.2	0.901



Directional Survey Report

Well ID: Prati 32

Field: Geysers

Calpine Corp

Well Name: Prati 32

Sect: 35 Town: 12N Rng: 9W County: Sonoma State: CA

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Coordinates N-S	E-W	Closure	Vertical Section	Dog Leg Severity
MSS	4,665.0	7.30	308	4,656.9	103.1	-138.4	172.6	103.1	0.472
MSS	4,724.0	8.00	305	4,715.3	107.8	-144.7	180.5	107.8	1.366
MSS	4,840.0	7.30	296	4,830.3	115.6	-158.0	195.8	115.6	1.194
MSS	4,930.0	7.45	296	4,919.6	120.7	-168.4	207.2	120.7	0.167
MSS	5,020.0	7.30	298	5,008.8	125.9	-178.7	218.6	125.9	0.330
MSS	5,114.0	7.30	298	5,102.1	131.5	-189.2	230.4	131.5	0.000
MSS	5,203.0	7.45	298	5,190.3	136.9	-199.3	241.8	136.9	0.169
MSS	5,295.0	7.15	292	5,281.6	141.9	-209.9	253.3	141.9	0.890
MSS	5,366.0	7.30	289	5,352.0	145.0	-218.2	262.0	145.0	0.572
MSS	5,428.0	7.30	283	5,413.5	147.2	-225.8	269.5	147.2	1.229
MSS	5,520.0	8.00	282	5,504.7	149.8	-237.7	281.0	149.8	0.774
MSS	5,613.0	9.00	285	5,596.7	153.0	-251.1	294.1	153.0	1.176
MSS	5,705.0	9.00	278	5,687.5	155.9	-265.2	307.6	155.9	1.190
MSS	5,761.0	9.00	279	5,742.8	157.2	-273.8	315.7	157.2	0.279
MSS	5,792.0	9.15	273	5,773.5	157.7	-278.7	320.2	157.7	3.089
MSS	5,939.0	10.00	297	5,918.5	164.1	-301.7	343.5	164.1	2.755
MSS	6,023.0	10.15	308	6,001.2	172.0	-314.1	358.1	172.0	2.294
MSS	6,098.0	10.30	309	6,075.0	180.3	-324.5	371.2	180.3	0.310
MSS	6,158.0	10.00	308	6,134.0	186.8	-332.8	381.6	186.8	0.580
MSS	6,201.0	10.00	315	6,176.4	191.8	-338.4	388.9	191.8	2.825
MSS	6,248.0	9.30	324	6,222.7	197.7	-343.5	396.3	197.7	3.534
MSS	6,359.0	10.00	327	6,332.2	213.1	-354.0	413.2	213.1	0.776
MSS	6,453.0	10.00	326	6,424.7	226.7	-363.0	428.0	226.7	0.185
MSS	6,582.0	10.00	323	6,551.8	244.9	-376.0	448.7	244.9	0.404
MSS	6,707.0	9.00	313	6,675.1	260.3	-389.7	468.6	260.3	1.541
MSS	6,833.0	9.00	313	6,799.5	273.7	-404.1	488.1	273.7	0.000
MSS	6,958.0	9.00	305	6,923.0	286.0	-419.3	507.5	286.0	1.000
MSS	7,075.0	8.45	305	7,038.6	296.2	-433.8	525.3	296.2	0.470
MSS	7,212.0	9.00	303	7,174.0	307.8	-451.0	546.0	307.8	0.458
MSS	7,371.0	8.15	304	7,331.3	320.8	-470.8	569.7	320.8	0.543
MSS	7,498.0	7.45	294	7,457.1	329.2	-485.8	586.8	329.2	1.200
MSS	7,561.0	8.00	284	7,519.5	331.9	-493.8	595.0	331.9	2.302
MSS	7,627.0	8.45	283	7,584.8	334.1	-503.0	603.8	334.1	0.715
MSS	7,689.0	9.30	281	7,646.1	336.1	-512.3	612.7	336.1	1.458
MSS	7,812.0	10.30	278	7,767.3	339.6	-533.0	631.9	339.6	0.913
MSS	7,911.0	11.15	278	7,864.6	342.1	-551.2	648.8	342.1	0.859
MSS	8,037.0	12.45	276	7,987.9	345.2	-576.8	672.2	345.2	1.081
MSS	8,133.0	13.30	271	8,081.5	346.5	-598.1	691.2	346.5	1.459
MSS	8,259.0	13.00	270	8,204.2	346.8	-626.8	716.3	346.8	0.299
MSS	8,350.0	14.00	272	8,292.7	347.1	-648.0	735.1	347.1	1.213
MSS	8,450.0	15.15	273	8,389.5	348.3	-673.2	757.9	348.3	1.177
MSS	8,567.0	16.30	272	8,502.1	349.6	-704.8	786.8	349.6	1.010
MSS	8,638.0	17.30	271	8,570.0	350.2	-725.3	805.4	350.2	1.466
MSS	8,731.0	19.45	271	8,658.3	350.7	-754.7	832.2	350.7	2.312
MSS	8,791.0	20.00	272	8,714.8	351.2	-774.9	850.8	351.2	1.075
MSS	8,855.0	21.00	270	8,774.7	351.6	-797.3	871.4	351.6	1.907



Directional Survey Report

Well ID: Prati 32

Field: Geysers

Calpine Corp

Well Name: Prati 32

Sect: 35 Town: 12N Rng: 9W County: Sonoma State: CA

Survey Type	Meas. Depth	Inc.	Azimuth	TVD	Coordinates N-S	E-W	Closure	Vertical Section	Dog Leg Severity
MSS	8,917.0	22.00	272	8,832.4	352.0	-820.0	892.4	352.0	2.000
MSS	9,011.0	21.30	270	8,919.8	352.6	-854.7	924.6	352.6	1.082
MSS	9,177.0	20.45	265	9,074.9	350.1	-913.7	978.5	350.1	1.189
MSS	9,177.0	20.45	265	9,074.9	350.1	-913.7	978.5	350.1	0.000
MSS	9,262.0	21.00	261	9,154.4	346.4	-943.6	1,005.1	346.4	1.786
MSS	9,399.0	21.15	256	9,282.2	336.6	-991.8	1,047.4	336.6	1.317
MSS	9,526.0	19.30	254	9,401.4	325.2	-1,034.2	1,084.2	325.2	1.555
MSS	9,590.0	18.30	257	9,462.0	320.1	-1,054.2	1,101.7	320.1	2.173
MSS	9,600.0	18.30	257	9,471.5	319.4	-1,057.2	1,104.4	319.4	0.000
MSS	9,670.0	18.80	256.3	9,537.9	314.2	-1,078.9	1,123.7	314.2	0.782
MSS	9,923.0	21.20	257.8	9,775.6	294.9	-1,163.2	1,200.0	294.9	0.970
MSS	10,004.0	21.20	257.8	9,851.1	288.7	-1,191.9	1,226.3	288.7	0.000
MSS	11,143.0	21.20	257.8	10,913.0	201.7	-1,594.4	1,607.2	201.7	0.000

Calculations using Minimum Curvature Method