

Tecton Geologic

COMPANY Calpine Corporation
 WELL NAME Prati 38 Sidetrack 2
 FIELD The Geysers
 COUNTY Sonoma
 COUNTY STATE CA
 WELL HEAD COORDINATES 113 N 3000 W / 43E cor Sec 35 T12N R9SW
 N 426,710 E 1,763,118
 ELEVATION 1901. GL KB 35
 RIG - DAY RATE START DATE 11/3/2010
 TO DATE 1/7/2011
 TOTAL DEPTH 9942'
 TRUE VERTICAL DEPTH 9596'
 TO LOCATION 1765 S & 441' W of Wellhead

DRILLING CONTRACTOR ThermoSource Rig #108
 COMPANY REPRESENTATIVE Gambie, Silva

LOG INTERVAL
 DATE LOGGED 11/15/10 to 1/11/11
 DEPTH LOGGED 5311' to 9942'
 MUD DRILLING 5311' to 5917'
 AIR DRILLING 5917' to 9942'
 LOG SCALE 1:600
 UNIT NO. C32

LOGGING GEOLOGISTS
 Nate Bogie (NB), Joe Whately (JW), Dick Durlap (DD), Charley Wah (CW), Patrick Derick (PB)

HOLE

26"	TO	289'
20.5"	TO	1700'
14.75"	TO	5297'
10.625"	TO	9942'

ABBREVIATIONS

RB	New Bit	CB	Bottom Hole Temp
CB	Core Bit	NR	No Returns
WB	Weight on Bit	LA	Logged After Trip
SPM	Strokes per Minute	CM	Cubic Feet per Min
PP	Pump Pressure	BT	Bottoms Up Temp
RPM	Revolutions per Min		

LITHOLOGY

[Symbol]	Argillite	[Symbol]	Siliceous Graywacke
[Symbol]	Chert	[Symbol]	Metamorphic Ultramafic
[Symbol]	Siltstone	[Symbol]	Weak Foliation
[Symbol]	Greenstone	[Symbol]	Strong Foliation
[Symbol]	Serpentine	[Symbol]	Marginal Alteration
[Symbol]	Blueschist	[Symbol]	Pervasive Alteration
[Symbol]	Micaselite	[Symbol]	Weakly Hornfelsic
[Symbol]	Clay	[Symbol]	Strongly Hornfelsic
[Symbol]	Lithic Graywacke		
[Symbol]	Argillaceous Graywacke		

CASING

37"	FROM	Surface	TO	37'
22"	FROM	Surface	TO	286'
16"	FROM	Surface	TO	1666'
11.75"	FROM	1467'	TO	5276'
8.625"	FROM	5106'	TO	9942'

SYMBOLS

- Wireline Log
- Steam/Water Entry
- Deviation Survey
- Casing Shoe
- Flow Test
- Corred Interval
- No Recovery

REMARKS

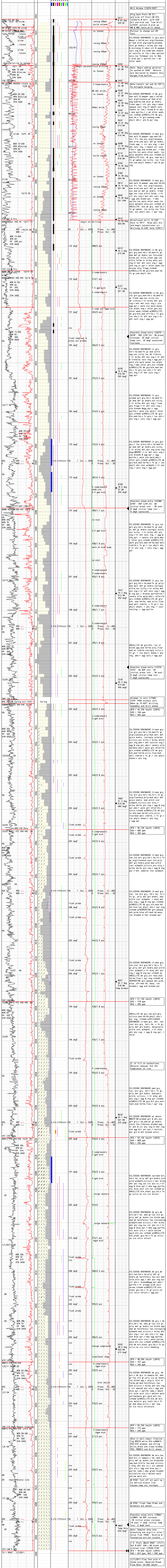
All depths from kelly bushing KB=35'

STEAM ENTRIES	WATER ENTRIES
6270-6278' 0# 2#	
6788-6795' 0# 0#	
7270-7272' 4# 1#	
9863-9865' 4# 3#	

SECONDARY MINERALS

Q = Quartz
 C = Calcite
 P = Pyrite
 E = Epidote
 R = Pyroxene
 X = Chlorite
 A = Actinolite
 T = Tourmaline

Trace < 1%
 Minor 1% to 10%
 Common 10% to 25%
 Abundant 25% to 100%
 > 100%



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