

FORMATION THERMAL CONDUCTIVITY ANALYSIS

Project: LCCC Laramie, WY

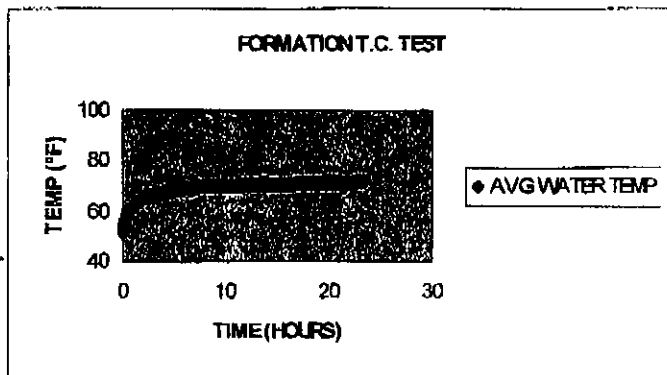
Test Date: 05/23/05 – 05/24/05

Test Conducted By: GBT, Inc.

Drilling Log:

0 – 10 Sand and limestone boulders
 10 – 50 Red Shale (Satanka formation)
 50 – 110 Red Shale with tan sandstone layers
 110 – 300 Sandstone and limestone layers –
 (Casper formation)
 First water @ 90 ft.
 Main Water @ 110 – 300 ft. approx. 300 gal/min.

Drilling contractor: Watson Well, Laramie, Wyo.

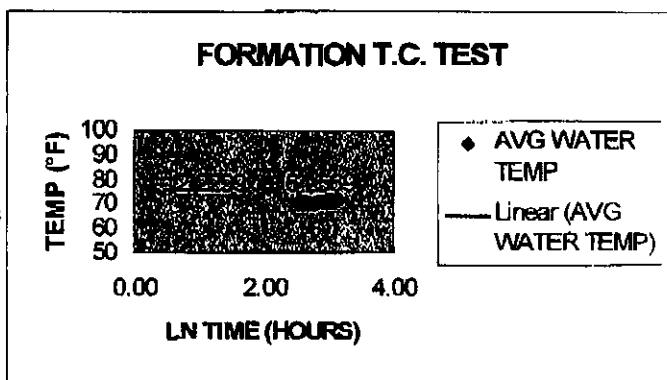


Vertical Heat Exchanger:

VHE Type	2 pipe
U-bend depth	300'
U-bend pipe size	1"
Borehole diameter	6"
Grout (bentonite)	20%

In-situ Testing/Analysis:

Circulating Fluid	Water
Average input (volts)	231.99
Average input (amps)	17.76
Average power (watts)	4120.42
Test duration	23.47 hours
Time period analyzed	12 – 23.47 hours



Calculated Thermal Conductivity: 1.67 Btu/hr-ft-°F

Estimated Diffusivity : .9 Btu/hr-ft-F

Watson Well 722 US HWY 30 Laramie, WY 82072 (307) 742-6311**WELL LOG LARAMIE L.C.C.C.****Total depth 300'****First water 90'****Main water 110-300'****0-10' Sand and limestone boulders****10-50' Red shale (Satanka formation)****50-110' Red shale with tan sandstone layers****110-300' Sandstone and limestone layers (Casper formation)****Hole size 0-19' 10"****19-300' 6"**