

6107317-4

INTEROFFICE CORRESPONDENCE

date February 26, 1979
to H. M. Burton/J. E. Driscoll
from W. L. Niemi *Niemi*
subject SCHLUMBERGER FLUID TEMPERATURE LOG, RRGE-1, FEBRUARY 1979 - WLN-11-79

Schlumberger Well Services recorded a temperature log in RRGE-1 on February 15, 1979. The log reveals two items of concern to Reservoir Engineering:

1. The Schlumberger log was not calibrated.
2. The log suggested a decrease in RRGE-1 maximum temperature.

Log Calibration

A 7°C (13°F) temperature difference occurred between RRGE-1 wellhead temperature and the Schlumberger log. A wellhead temperature of 132°C (270°F) was recorded by RRFO compared to 125°C (257°F) recorded by Schlumberger. Accurate temperature logs are of utmost importance to Reservoir Engineering in predicting thermal well performance, when a well will begin yielding water of temperatures unsuitable for power plant operation. Replacement wells must be drilled before wells begin discharging unsuitable temperature water. Temperature logs are used by Reservoir Engineering hydrogeologists to assist in locating drill sites for future production wells.

Temperature logs should not be accepted unless calibration is assured. Reservoir Engineering suggests that methods for calibrating commercial geophysical logging temperature probes be available at the Raft River facilities. It is requested that a forced circulation oil bath be used for calibration although any appropriate fluid is suitable. The calibration device should be portable, so that it can be transported to wells being logged. Reservoir Engineering also requests that the calibration of RRGE-1 thermocouples be checked.

RRGE-1 Maximum Temperature

The Schlumberger log recorded a maximum downhole temperature of 129°C (265°F). This temperature cannot be considered accurate; however, if the temperature difference is constant, a maximum downhole temperature of 137°C (278°F) is suggested. The maximum downhole temperature recorded after drilling, April 6, 1975, was 144°C (292°F). The February 1979 Schlumberger log suggests that the temperature of RRGE-1 has declined since drilling. It is known

H. M. Burton/J. E. Driscoll
February 26, 1979
WLN-11-79
Page 2

that 133°C (272°F) occurs in RRGP-5B. The artesian flow of RRGE-1 has perhaps induced the migration of cool water from the west. This possibility should be addressed in any future testing of RRGE-1. RRGE-1 should be produced at the highest attainable rate, and temperature trends should be closely scrutinized.

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