



G107392

FIGURES INCLUDED:
CY - D. ALLMAN
D. SKIBA UURI
B. RUSSELL UURI
R. BLACKETT UURI
M. WRIGHT UURI
R. CAPUANO UURI
H. ROSS UURI
T. ALLEN
M. DOLENC
T. RANSTADLER

INTEROFFICE CORRESPONDENCE

date August 26, 1982
to J. H. Pietscher
from M. R. Dolenc MRD
subject RAFT RIVER CONCEPTUAL MODEL, AUGUST 16, 1982 - MRD-14-82

Geoscientific personnel from UURI and EG&G Idaho met on Monday, August 16, to discuss geoscientific data and arrive at a mutually-agreed to conceptual model of the Raft River Reservoir and specifically, a pictorial model of the geohydrologic subsurface environment adjacent to the RRG-5 well. The purpose of this exercise was to develop a sound technical basis upon which predictions, calculations, and planning of future experiments are based.

Each party to the meeting presented a generalized conceptual model related to their discipline. Bob Blackett discussed the geology and metamorphism, Howard Ross reviewed the geophysics, Regina Capuano and Tony Allen presented their ideas on geochemistry, Dave Allman discussed his interpretations of the hydrology, and Max Dolenc summarized specific data on the RRG-5 borehole. From these discussions, and the question and answer sessions that were generated, it was evident that all participants' data support the following conclusions:

1. The heat source for fluids at Raft River likely derive from intrusions and metamorphic events of about 30 MY, enhanced by more recent rhyolitic events of about 7 MY;
2. The Raft River geothermal reservoir is basically a system of meteoric water, moving within the metasediments and adamellites, from areas possibly as far away as the Albion Range;
3. The relatively fresh waters leak upward through faults and fractures in the Salt Lake Formation and Raft Formation, creating great confusion with water chemistries, temperatures, etc., above the basement reservoir.
4. The RRG-5 well was hydraulically fractured in the Elba Quartzite, below the Upper Narrows Schist; if the fracture treatment went as expected, the Schist would likely serve as a barrier to vertical movement of the fracture. Supporting this hypothesis is the occurrence of the "natural" main fracture of the Schist/Quartzite interface. Therefore, all pictorial presentations of the wellbore conditions and quantitative estimates of fluid transport distances will be based upon these parameters.

J. H. Pletscher
August 26, 1982

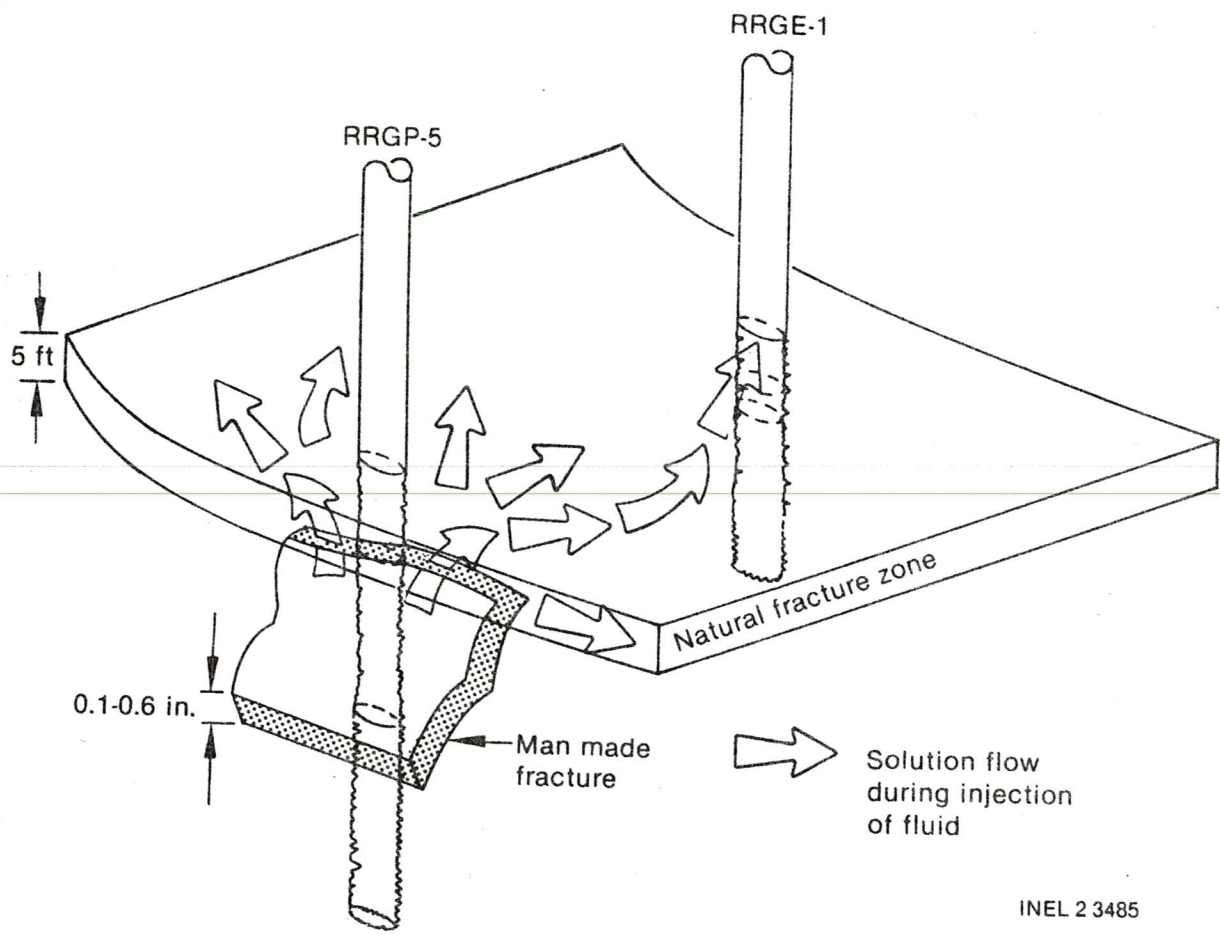
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The meeting was concluded with the concurrence of all parties to accept the enclosed pictorial presentation of RRG-5 near-wellbore parameters as the basis for planning. A discussion of tracers and the resistivity experiment followed, which will be entered into a revised UURI model.

WFD:ju

Enclosure:
As Stated

cc: W. F. Downs *WFD*
B. F. Russell *for by still*
G. B. Wiersma *ju*
Letter File
Central File w/o enc.



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