

**GEOHERMAL BRANCH**

**INTER-OFFICE MEMORANDUM**

SUBJECT: Hydrogeochemical Analysis of Animas Wells

DATE: April 25, 1980

cc: H. D. Pilkington

TO: H. J. Olson

FROM: A. E. Shenker


Two water samples from Animas, New Mexico were recently analyzed by AMAX's Denver lab. The waters are very similar in chemistry and are of the sulphate family. Of the trace elements analyzed (lithium, boron, fluoride), only fluoride was unusually high at 12 and 13 ppm.

Geothermometry was performed on both samples, and the results are as follows:

<u>Sample</u>	<u>TSiO<sub>2</sub>°C</u>	<u>TNa-K-Ca°C</u>
W13457 - Original Hot Well	152.4	171.9
W13458 - Burgett Well	161.2	174.4

These results indicate that the waters sampled have not been mixed to any significant degree since last equilibrated. The slightly lower silica temperatures may indicate a small addition of non-thermal water, but the alkali temperatures are not effected by dilution. All cations are found in typical concentrations, further adding to the reliability of the alkali sub-surface temperature projections.

The very close agreement in sub-surface temperatures and total ion chemistry between the two samples indicates that both wells are sunken into the same aquifer.

  
A. E. Shenker