

June 20, 1979

MEMORANDUM

TO: State Coupled Program Core Group

FROM: Debra Struhsacker and Duncan Foley

SUBJECT: Trip Report - Butte, Montana

Place: Montana Bureau of Mines and Geology, Butte, MT

Date of Trip: May 31, 1979

Purpose of Trip: Discussion of the Montana State Coupled Geothermal Program

Attendees: John Sonderegger, MBMG
Debra Struhsacker, Duncan Foley; ESL/UURI

General and Business:

1. Sonderegger recommends publication of a compendium of all age dates obtained under the auspices of the State Coupled program. Isochron West is a suggested journal.
2. MBMG will get an ICP in a couple of months. They already have an AA.
3. The West Yellowstone exploration program is facing public opposition. The community fears that drilling and geothermal development might damage the geysers in Yellowstone National Park. Awareness of differences between Island Park industry activity and MBMG activity does not exist.
4. MBMG will soon receive a 1500' temperature probe. This probe will not work in holes drilled with heavy mud.
5. Work continues on an annotated bibliography of geothermal references in Montana. There are presently about 3 dozen entries.

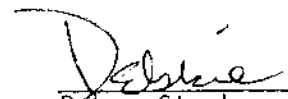
Technical


1. The Montana map:
 - a base map of 1:750,000 will be used
 - Sonderegger wants township and range and a culture grid as part of the base
 - a shaded relief base may be used if it doesn't obscure other data
 - anticipated delivery date for map data to NOAA is October 1

2. This summer MBMG's activities will focus upon:
 - completing the Centennial Valley studies
 - the Little Bitterroot - Camas area
 - The Radersburg Basin - Plunkett Hot Springs area (the possibility of contributions from the Madison will be emphasized)
 - The West Yellowstone area (gravity and seismic work.)
 - The Ennis area
 - support for the Warm Springs PON
 - inventory of eastern Montana geothermal resources
3. At West Yellowstone, two 1000' thermal gradient holes will be drilled during the summer of 1980. \$50K has been budgeted for these holes. MBMG has contacted Bill Berge of Phillips to ensure that there will be no problems with both groups working in the area.
4. Sonderegger is concerned with drawdown and temperature degradation of the Madison limestone, fault-controlled types of resources. Production from these systems must not exceed recharge rates.
5. Sonderegger is planning a thermal isopach map of the Madison Limestone in eastern Montana. This study may define stratigraphic controls on water quality by delineating evaporite zones.
6. Sonderegger will do a reservoir temperature and size analysis for Keith Brown (OR team), although questions about assumed reservoir porosity and volume remain to be solved. This study should be useful in a low temperature update of Circular 790.
7. Coordination of mining industry exploration holes and heat flow measurements may be possible.
8. Sonderegger provided a copy of the drilling bid specs that he wrote for the Warm Springs project; these will be useful too.

Action Items

1. MBMG has a partial set of core and cuttings from some of the holes drilled in the Bitterroot Valley for the NURE program. Perhaps these samples should be stored at the Geothermal Sample Library.


Debra Struhsacker


Duncan Foley