

13 SEP 1977

FROM: DEPD

SUBJECT: Briefing on Visit to MHAFB by Dr. Carl Austin, Geothermal  
ExpertTO: 366 CSG/CC  
366 EFW/CC  
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1. Dr. Carl Austin, Geothermal Research Specialist from the China Lake Weapons Center, California, visited Mountain Home Air Force Base on the 23rd of August 1977. His visit was a semi-official one since he was in the area on private business and vacation.
2. Dr. Austin wished to see the base layout, existing types and locations of base utilities and meet base personnel with whom he and others of his staff would be dealing when geothermal exploration and development is initiated on base. He also wished to see the Saylor Creek Range.
3. He met initially with Mr. John Barrutia, Chief of Civil Engineering Program Development (DEPD) who arranged meetings with Lt Col Mario B. Ginnetti (BCR) and Captain Lynn Jordan (JA). A briefing on geothermal resources was presented to Lt Col Phillip Clark, Deputy Base Commander. Lt Col Ginnetti, Captain Jordan and Mr. John Barrutia attended the briefing in the Base Commander's office.
4. The presentation began with a technical overview of geothermal resources and how they occur in the world (copy attached). This was presented orally by Dr. Austin and augmented with 35mm color slides.
5. As far as technical data about geothermal potential at Mtn. Home AFB is concerned, Dr. Austin said he has obtained already-available geothermal data from various sources such as the USGS. There definitely are many indications that geothermal potential exists here. Little more data is required before an exploration well is drilled. Dr. Austin indicated that the only additional data required would be logging temperature gradients in several of our existing domestic water wells. He is especially interested in obtaining temperatures in our abandoned water wells, one on base and one at Saylor Creek. A man by the name of David Blackwell, Dept. of Geological Sciences, Southern Methodist University, Dallas, Texas will probably be the one to obtain this data from us sometime in the near future.
6. The idea that problems with geothermal are simple or non-existent is fallacious. These are some of the problems we should be prepared to deal with:
  - a. Extreme aggressiveness of non-condensibles vented from most geothermals. Some "dirty" geothermal non-condensibles steadily ruin equipment from the inside out.

b. Gasses, vapors, mists and dusts are sometimes expelled from plants to create environmental problems.

c. There are problems with the visual impact of geothermal plants.

d. Problems of waste water disposal.

e. Audible impact of exploration and production.

7. The most significant problems to deal with are legal problems. Captain Jordan (JA) has been provided with more detailed information on legal problems experienced by Naval Weapons Center people; however, these are a few of them:

a. When a geothermal well is developed, temperature and mineral content of the resource raises legal questions of whether the resource comes under jurisdiction of mining laws for mineral rights or under jurisdiction of water laws for water rights.

b. Further, there will be many interested or concerned non-owners (including regulatory agencies):

(1) Environmental Protection Agency (EPA)

(2) Energy Research and Development Agency (ERDA)

(3) Idaho Public Utilities Commission

(4) USGS - Conservation Division

(5) USGS - Water Resource Division

(6) Elmore and Owyhee Counties

(7) Duck Valley Indian Tribal Council

(8) Sierra Club, et al

(9) Industrial bidders such as Union Oil, Getty Oil, Gulf Oil, Idaho Power Company.

(10) U. S. Forest Service

(11) Bureau of Reclamation

(12) Idaho Power Company and any other transmission line owners.

(13) Idaho Water Resource Board

(14) Idaho Bureau of Mines and Geology.

8. The problems of finding and producing geothermal energy are real and should not be glossed over. The opportunities, however, are tremendous, and the rewards, both financial and in terms of freedom from imported hydrocarbon fuels, are well worth pursuing.

9. Dr. Austin predicted that Mountain Home would have an exploratory well drilling operation going sometime in the winter of calendar year 1978.

MEMORANDUM FOR THE SECRETARY, USAF

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Technical Overview of Geothermal Resources

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