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What's Happening in Reno

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1981, he will complete an investigation of wood waste supplies and other plant requirements at Lakeview.

From the above discussion, it will be apparent that NGC has no firm commitments with any second party to develop a power project. A geothermal heating district operation is a definite possibility which can have some expansion to serve light industry.

Beyond that, applications for geothermal energy must grow with the community base, which by most economic indicators, is stag-

nant. The Oregon Department of Economic Development and its Board have selected Lakeview as a demonstration community. Whatever the state can do to promote economic development will be tried. A task force has been at work defining solvable community problems since July. The combination of support from the Lakeview community, several state agencies, and DOE at the federal level have encouraged Northwest Geothermal Corporation to persevere in developing the Lakeview geothermal resource. The year 1981 will test whether or not the Company can achieve its goal.

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WHAT'S HAPPENING IN RENO

By

Gene Culver*

No, the Bulletin hasn't started listing which stars are at what casinos. What's happening in Reno is far more interesting to the geothermal direct-use community. Reno has the potential of becoming one of the really "hot" spots in direct-use geothermal applications.

Reno and the areas around the city have utilized geothermal for many years. The Peppermill Motel, which recently expanded its use, the Mark Twain Motel, Steamboat Springs, and several other spas, swimming pools, and smaller space heating applications from south of Carson City north into Reno, have been in operation for years (see Geo-Heat Bulletin, Vol. 3, No. 4, July, 1978, for article on Steamboat Springs). Recent energy cost escalations have sparked new interest in these old applications and in new applications in the whole area.

It's difficult to say which projects will ultimately have the greatest impact so we will report them in order of progress development.

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As usual in space heating applications, private residential and other small applications were the first in service. Several homes used geothermal water directly in their heating systems in the early 1920s. In 1962, the first downhole heat exchanger was installed and the use continued to grow slowly until, in 1975, there were about 40 space, domestic water, and pool heating applications. Since then the number has almost tripled, and currently a new well is being drilled almost every week in the Moana area and old wells have been reopened and put into service. Temperatures range from about boiling (100°C or 212°F) down to about 38°C (100°F). Several of the newer wells on the outskirts of the "hot zone" barely reach the 50°C (122°F) required for federal tax credits. Users now include several churches and apartments as well as single residences. McKay Drilling is probably the most active contractor in the residential sector but other drillers are also working in the area. The Geo-Heat Center has just started an investigation into the possibilities of using convection promoting pipes to increase the output and decrease the costs of these residential and small commercial wells.

The Nevada Bureau of Mines and Geology, Dennis Trexler and crew, are planning a

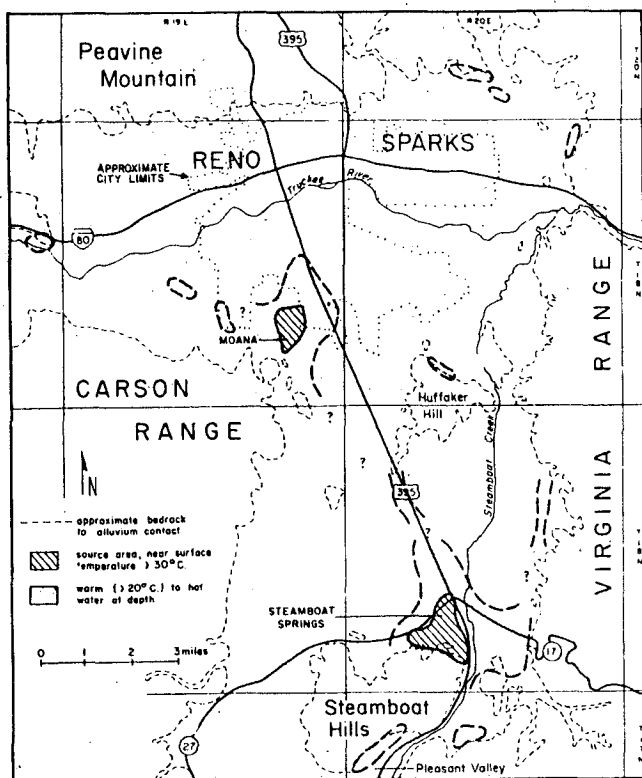


Figure 1. Areas of known thermal groundwater occurrence near Reno, Nevada. Source: Bateman, Richard L., and R. Bruce Scheibach, 1975, Evaluation of Geothermal Activity in the Truckee Meadows, Washoe County, Nevada. Nevada Bureau of Mines and Geology Report 25.

comprehensive study of the Moana area next summer. The study will provide much needed information for future developments in the area.

Warren Properties are progressing nicely on the Warren Estates subdivision. It is planned to heat 162 homes on the 45-hectares (112-acre) site in the Moana area. Geothermal Development Associates sited a 213-meter (700-foot), 95°C (203°F) well on the property (one of the hottest in the area) and Rovanco insulated pipe has been ordered for the distribution system. Installation of the pipe is scheduled early this spring.

The Double Diamond Ranch recently received approval for a 753-hectare (1,860-acre), 3,046-unit subdivision between Reno

and Steamboat Springs. Geophysical work by Geothermal Development Associates and several heat flow holes indicate possibilities of a resource suitable for space heating.

The Damonte Ranch subdivision (adjacent to the Double Diamond) has had approval for some time for 6,000 residential units plus supporting commercial developments. A sewage disposal system capable of expansion to handle the development is operating and serving an earlier development by the company. Good geothermal possibilities were indicated by an old 49°C (120°F) artesian well on the property and the proximity to the Steamboat area which is just across the road. Several test holes have temperatures ranging up to 85°C (185°F). Under the technical assistance program and at the request of the Nevada Central Holding Co., developers, S.E.A. Consulting Engineers are performing a preliminary feasibility study of the geothermal heating system.

The U.S. Department of Energy announced in January they would begin negotiating cost sharing agreements with eight firms under the User-Coupled Drilling Program. One of the firms was Hydrothermal Energy Corp., with a proposal for space heating, air conditioning, domestic water heating, and snow melting at the MGM Grand Hotel in Reno. Successful drilling at the MGM would most certainly provide stimulus for further developments.

The city of Reno has submitted a proposal for a geothermal district heating study to HUD. The recipients of those grants will be announced soon and we certainly hope Reno is among them, for the city probably has one of the best opportunities for a large district heating system. The Steamboat area (which has so far been bypassed for electric power is but still under study) could almost certainly provide space heat for a major portion of the city. Cascading electric power and space heating, while presenting formidable institutional problems, seems to be within the realm of engineering feasibility in the near future.

Another development of considerable interest because it would expand the known hot water area is being studied at Sparks. The Wild Creek Racquet Club, on the north edge of Sparks, has requested a feasibility study from the Geo-Heat Center. The request was prompted by the fact that a mine nearby hit "hot acid waters at 65 meters (213 feet)" ultimately closing the mine. A fault is projected

to extend from the mine to nearly under the proposed site.

Several other entities, both private and public, have expressed considerable interest in their geothermal possibilities. Some of these are in known hot water areas and as they develop, more interest will be stimulated. Reno certainly could be one of the "hot" spots in more than entertainment.

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GEOHERMAL MARKET PLACE

A SUMMARY OF GEOHERMAL ACTIVITIES

OIT GEO-HEAT CENTER MARKET DEVELOPMENT UPDATE

Preliminary analysis and site investigations have been conducted for locations in Idaho and Washington. Additional sites in Idaho and Oregon will be visited by Center personnel during the last week of March.

The market development team visited Ketchum, Idaho, and found local interest to be high. An existing pipeline from Guyer Hot Springs presently heats 40 to 60 structures. The University of Utah Research Institute is completing a resource investigation under their technical assistance program and is expected to recommend an exploration strategy. A geothermal land use study, presented to the Blaine County Commission and a local map of city-owned property being compiled for the hot springs area, will aid in analysis of the city's role in geothermal development.

Stanley, Idaho, a small community in the Sawtooth National Recreation Area, has recently completed an engineering/economic analysis for a district heating system. Additional information is being sought by the market development team from the city to further refine the analysis.

Walla Walla, Washington, shows potential for geothermal development using a heat pump to heat local schools. An existing but capped well with a temperature of 80°F and flow rate of 2,000-3,000 gallons/minute is reported and potentials for developments are being considered.

Vale, Oregon, has been scheduled for a site visit the week of March 23, 1981. The federal schools and hospital program energy audit has indicated that the three schools are a substantial portion of the city's heat load. Funding to retrofit the schools for geothermal heating is being investigated.

The Office of Energy Management in King County, Washington, has requested assistance from the market development team to assess the district heating potential in the southeastern part of the county. (Source: Debra Justus, OIT Geo-Heat Center.)

KLAMATH FALLS MUNICIPAL GEOHERMAL HEATING DISTRICT

A special election will be held in Klamath Falls on March 31, 1981. A proposed charter