

Drillers search beneath the crust for precious hot water

by MARK FLOYD

The search continues for hot water beneath the earth's surface in the Mt. Hood National Forest.

A number of private drilling companies, hired by the Northwest Natural Gas Company, have been drilling gradient holes as part of an effort to assess the region's geothermal potential.

"All that they're after in these holes is a temperature reading," said Monty Heath, land-uses administrator for the U.S. Forest Service. "They want to see if the temperature is greater in these areas than what is average for the Cascades."

The latest drilling effort is taking place off Lolo Pass Road near the Clear Fork of the Sandy River. So far the going has been slow due to the weather, but employees of the Stiles Drilling Company hope to drill at least 500 feet before the snow and ice force them to shut down for the winter. Tentative plans call for the hole to be dug down to 1,500 feet.

Northwest Natural Gas also has a permit to have another 1,500 foot hole drilled at McGee Creek.

The gradient holes will help scientists determine the overall geothermal potential of the area, according to John Geyer, energy supervisor for Mt. Hood National Forest.

"The drilling of the temperature gradient holes has been to find different temperature rates according to depth," Geyer said.

Geyer added that the work is part of a three-year, four-agency study which includes the Forest Service, the State of Oregon, the U.S. Geologic Survey and the Department of Energy, which is footing most of the bill.

This winter will mark the end of the second year of the study. Representatives from the groups will gather over the winter to discuss the latest data collected and how it will shape next year's program.

In addition to the temperature readings collected from the gradient holes, information is being gathered from various agencies on rock formations, gravity, water quality, seismic activity and the earth's magnetic and electrical fields.

One of the more extensive areas of research occurred at Old Maid Flat

where the American Deep Drilling Co. bored a 4,000 foot hole and shored up the entire depth of the hole with tubing.

A similar operation near Timberline ran into trouble this summer when a 1,300 foot hole collapsed, but tubing has since been inserted 830 feet into the hole. Scientists hope to collect data from the hole this winter after stabilization has occurred.

Temperatures of 165-170 degrees were recorded at Old Maid Flat, according to Northwest Natural Gas reports. However, that statistic alone does not ensure that the area is suitable for geothermal development, according to Geyer.

"You have to know the quantity, the quality and the accessibility of the heat and water," he said. "Once you know what you have to work with, you can start making plans."

Until then, he added, the only plans that can be made for geothermal development are very tentative.

Some of the more immediate plans for development, should the geothermal potential be great enough, include the heating of the new Timberline Daylodge as well as the conversion of the existing lodge to 'steam' heat.

A far more ambitious and long range plan is the construction of a pipeline from the western slopes of Mt. Hood to Portland, Geyer said.

"We have a number of hopes," Geyer said, "but until a resource is tapped and defined it is hard to make any plans."

Timberline would probably be converted to a space heating arrangement, Geyer said, which works through a heat exchanger.

A heat exchanger involves putting a pipe down the hole and running water through it. The hot water from the earth would heat the outside water which would be pumped back up into the dwelling.

Geyer said that many portions of Klamath Falls are heated in this manner and that they require temperatures from 90-190 degrees, depending on the size of the building. Temperatures of at least 150 degrees would be needed at Timberline.

A detailed study has not yet been done on what temperatures and water quantity would be needed to warrant a pipeline to Portland, but it would be significantly higher than the figures needed for Timberline.

Geyer said that it is also possible to convert steam to electricity as they do with some geysers in California, but that it is unlikely to be done in the Mt. Hood area because of the cost, the type of facility needed and the extreme high temperatures required.

Similar geothermal studies and inter-agency agreements are going on in several western states. The Mt. Hood region was chosen for Oregon because of its recent history of volcanic activity (200 years), its close proximity to a major potential market and the population currently living in the area. The Mt. Hood exploration is also one of the more concentrated studies going on in the western states.

Meanwhile the work goes on, but slowly now that winter has set in, according to Heath.

"It's really hard to drill much in the winter," Heath said. "They have to thaw out the drill rig every morning."

"If there gets to be too much snow and ice, they'll just pack it up for the winter," he added.

The end of the drilling will not mark the end of the work, however. The various scientific studies will continue and as the data is collected, plans for next year will be drawn up. The investigation of what lies beneath the surface of the Mt. Hood area is a lengthy one.

Recently, U.S.G.S. employees drilled several holes around Mt. Hood and inserted charges into them. They then placed 110 listening devices around the forest, set off the charges and timed the shock waves created by the blasts. The waves will give scientists more insight on the structure and shape of the subsurface rock.

With these and other experiments, Northwest Natural Gas and the four agencies will soon have an idea as to what kind of geothermal resource lies beneath the ground.

The three-year project has one year to go, maybe more depending on how much the weather delays upcoming projects.

In the meantime, the only plans for geothermal development are very tentative ones.

"There is a reasonable chance that a usable geothermal resource exists and we're trying to find out if it would be feasible to develop it," Geyer said.

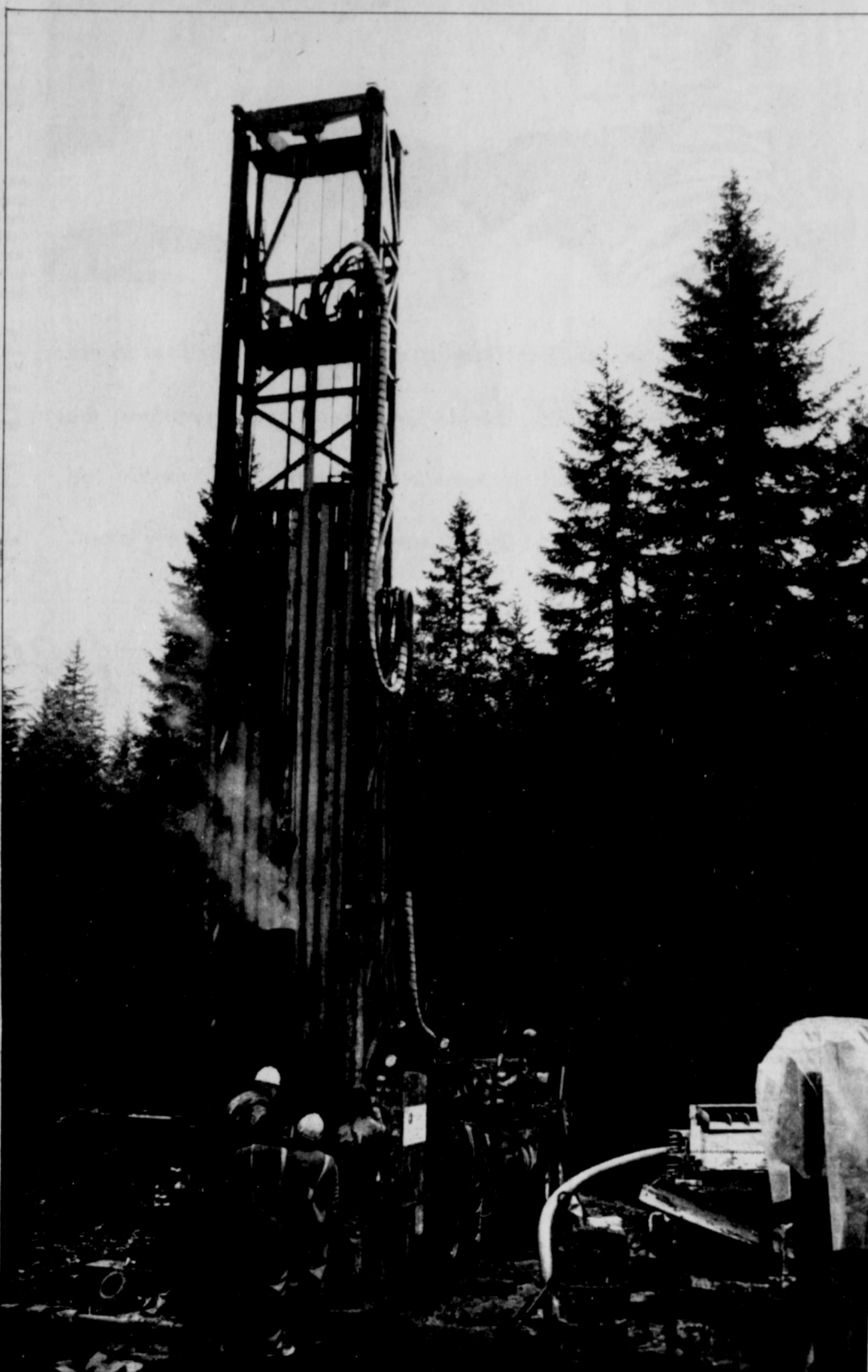


photo by Mark Floyd

Workers drill at site near the Clear Fork of the Sandy River.

County to raise sanitation fees

OREGON CITY — In an effort to bring the Clackamas County sanitation inspection program up to par with other sanitation programs in the state, the board of commissioners approved a sharp increase in environmental health licenses and inspection fees for certain facilities last week.

The facilities affected by the fee hike include traveler's accommodations, picnic parks, organizational camps, swimming pools, restaurants, vending machines, commissaries and mobile units.

The new fees will be effective Jan. 1, 1979 when the county takes over in-

spection duties that were previously administered by the state.

Some of the fees will increase by more than 200 percent. Fees for swimming pools will jump from \$50 to \$150 while restaurant fees will increase from \$50 to \$135.

Picnic parks will be charged \$75 and organizational camps \$125. Vending machine fees will be charged by the number of units the owner operates.

The fee hike will cover the costs of personnel and time spent to administer the program, according to Steve Kasserman, head of sanitation inspections for Clackamas County.

Kasserman said it will take a lot of "catch up" work to bring the program up to state law standards because state inspections have been inadequate.

Representatives from restaurants, organized camps, vending machine owners and swimming pool facilities objected to the fee increases at last week's meeting.

Other representatives objected the fees were much greater than those charged in surrounding counties. Commissioners Skoko and Schumacher pledged they would carefully review the fee schedule after the "catch up" period is over to see if the fees could be reduced.

Ski areas plan major expansion projects

by CAROL THURLKILL
Post Correspondent

The four downhill ski areas on Mt. Hood are all proposing to expand their operations in the near future. Plans for all areas will more than double the number of skiers who use the facilities.

If all proposals are approved by the Forest Service, seven chairlifts, four parking lots, two day lodges and a number of other facilities will be constructed on the mountain's slopes.

Expansion at Timberline and Mt. Hood Meadows has already been approved by the Forest Service. Multnorpor Ski Bowl will submit its plans at the end of December, and Summit ski area is now making preliminary plans.

Zigzag District Ranger Roger Deaver, in whose district the ski areas lie, said the additions are being planned to meet expected increases in demand for skiing.

The four ski areas could face as much as a 200 percent increase in skier use in the next 20 years, according to projections from the Mt. Hood Planning Unit written in 1977. Approximately 8,200 skiers can now use the developments at one time; the unit plan calls for an increase to 20,000.

The unit plan is the key document detailing growth proposals for the Mt. Hood corridor which extends from Alder Creek to Government Camp. It was compiled by representatives from numerous government agencies with input from resort operators and environmentalists.

Each proposal in the plan will require individual approval by Clackamas or Hood River counties (private land

development) or the Forest Service (public land).

Deaver explained that all ski areas must submit a master plan of their proposals before construction may begin. The plan is analyzed by the Forest Service, and an Environmental Impact Statement is submitted. Those opposed to the development may appeal the decision within 30 days through Forest Service administration or the courts.

Timberline

Timberline ski area will accommodate 850 more skiers with the addition of Blossom Chairlift. Timberline operator Richard Kohnstamm hopes to gather snow data and survey the site.

Construction of the lift would begin next year according to Dick Hoffman, Forest Service Timberline Administrator. About 3,500 feet long, it would be located 100 miles west of the Mile Chairlift.

Palmer Chairlift was recently completed in October, and construction of the Daylodge is scheduled to begin in spring of 1979.

A 60-room hotel unit under the parking lot in front of Timberline Lodge was also approved in the Timberline Final Environmental Impact Statement, 1975. But construction is not being contemplated at this time, Deaver said. "It is only a possibility after the Daylodge is built," he said.

Mt. Hood Meadows

Mt. Hood Meadows additions will gradually increase the capacity of the ski area from the present 4,500 to a total of 7,500 skiers.

A new base area to service 2,500

skiers at Chairlift 8 north of Hood River Meadows is one of the major additions according to Don Vaughn, Forest Service Recreational and Land Staff Officer. He said he hopes to have a 5-acre parking lot in operation by next winter. The daylodge would not be built for two or three seasons.

The additions of four new chairlifts, numbers 7, 12, 15 and 9 have been approved. Construction of Shooting Star, number 7, on the ridge north of the existing developed area, is projected to begin next year said Clay Simon, manager. The other lifts would be built as demand increases.

"The operation is run on a profitable basis," Simon said. "We will not build chairlifts unless there is sufficient demand. Demand is based on the number of skiers in an area at a given time — in the lodge, on the lifts and trails. We have had an excess of terrain and a deficit of uphill capacity."

Other approved additions include: Replacement of two existing rope tows with lifts; cross-country ski trails out of Hood River Meadows; two overflow parking lots; an expansion of the existing daylodge; and a new overpass interchange at the junction of Highway 35 and the existing road.

The proposal to add several 100-room hotels was rejected. Vaughn indicated that the Meadows area cannot sustain the year-round visitor impact, and the Forest Service feels private lands are not being fully utilized for that purpose.

"If the need is real, the private sector will take care of it," Vaughn said. "We will be examining that within the next few years."

Multnorpor-Ski Bowl

If the proposals in the final Multnorpor-Ski Bowl Masterplan are accepted, they could double the area's capacity to 6,000 skiers, according to Keith Petrie, manager. Deaver said that "There is not any agency speculation on what will and will not be approved."

The ski area at Government Camp hopes to add a chairlift from the base to the top of Tom Dick and Harry Mountain and another down the back side of the mountain.

"Right now our efforts are on building up mid week and night business. Developing the back side of Tom Dick and lighting Multnorpor will mean earlier skiing," Petrie said.

Petrie added that the ski area would have to upgrade the existing lodge, parking lot, and septic system as attendance grows. The permittee would also like to replace two rope tows with chairlifts, add a beginner rope tow, and install a road connecting Multnorpor with Ski Bowl.

"This plan has been developed over the last 15 years by the owner, Carl Reynolds. We aren't proposing anything new."

Summit

Summit ski area may start the Masterplan process this summer, Deaver said. "They are asking us what they should do to present the plan and are trying to formulate what is realistic," he said.

The downhill development, under the management of Lori Darr, is investigating the possibility of expanding the existing daylodge and replacing the T-bar and three rope tows with aerial lifts, Deaver said.



Staff photo

Smucker's plant on Bluff Road

Jelly company seeks new Cottrell plant

The J.M. Smuckers Co. based in Woodburn plans to give up its lease on a commercial building on Bluff Road in Cottrell and build its own plant approximately one-half mile away.

The company plans to use the new building for receiving berries from the local growers as it did with the building presently under lease from Holliday House.

Bob Loudon, area representative for Smuckers and manager of the plant during its four months of operation in the summer, said the company believes the \$25,000 a year lease Holliday House

is charging for the existing building is too high.

The company plans to build the new plant on a two-acre piece of land owned by berry farmer James Fujii. Loudon said the company still intends to employ six to 10 people in the plant when the berry season gets under way.

Smuckers will first be required to get approval from Clackamas County to build the plant. Hearings Officer Richard Christ will hear the request for a conditional use permit application submitted by the company in Oregon City today (Dec. 14).