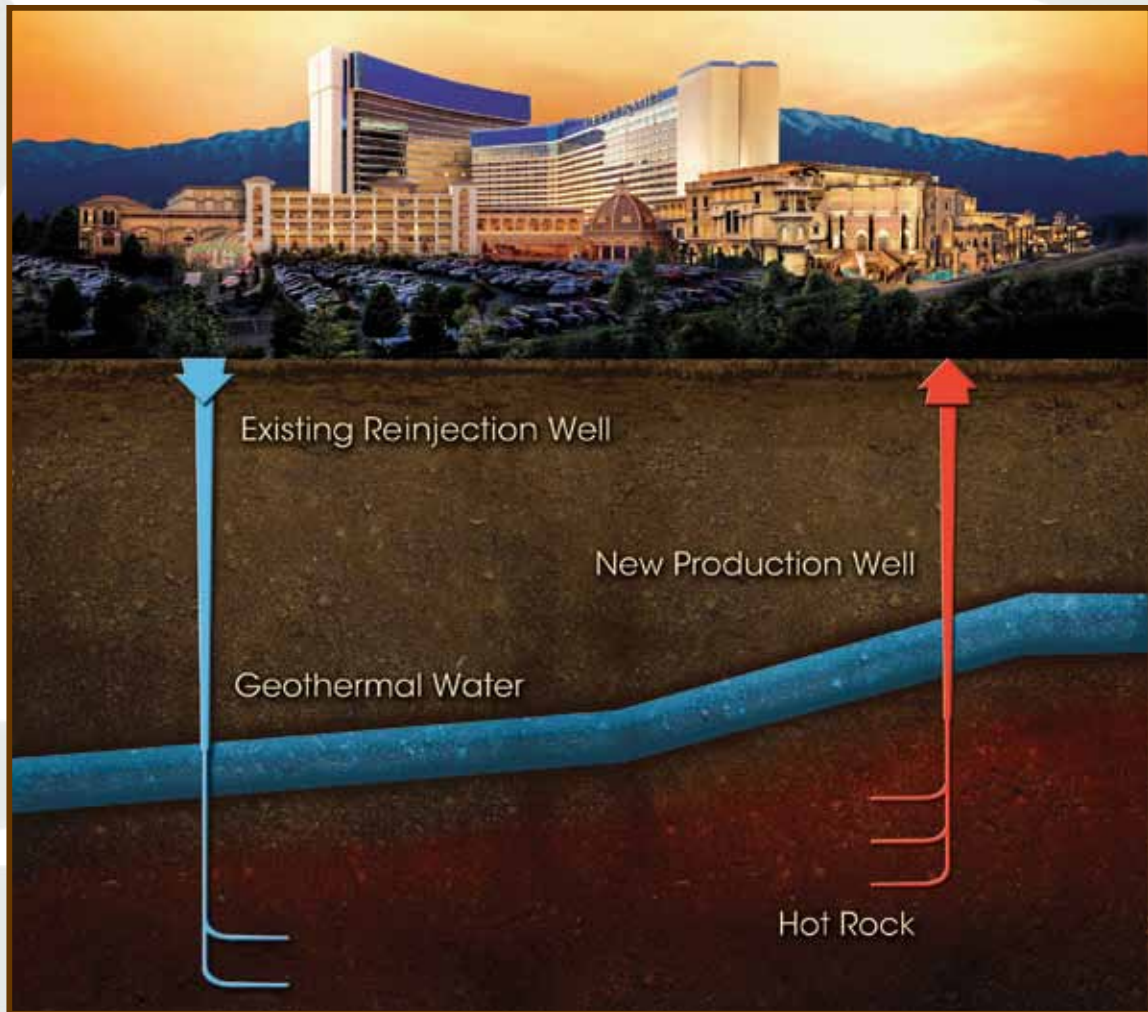




GREEN INITIATIVES

PEPPERMILL
RESORT ♦ SPA ♦ CASINO

PEPPERMILL'S BIG GAMBLE ON GREEN PAYS OFF



Over the years, the Peppermill has been quietly mindful of energy conservation - working to harness natural sources of energy - but their latest commitment to harvesting geothermal energy peaks the investment at \$9.7 million. Like the industry they represent, the privately held resort took a gamble - drill a well that taps into the geothermal aquifer, betting on finding water at the correct temperature that could be captured and converted to energy through a closed-loop system then returned to the earth via a reinjection well, which would heat the entire resort's water and mechanical heat via geothermal energy.

Peppermill President Bill Paganetti engaged world-renowned geothermal expert Dr. Jim Combs of Geo Hills Associates LLC of Reno to consult on the existing historical data and information from earlier projects. Because the Peppermill already had a reinjection well on the property, Dr. Combs recommended a new geothermal well be drilled on the property. And the gamble paid off.

With no guarantees and just a steadfast commitment, the Peppermill has successfully hit proverbial pay dirt at over 4,400 feet, becoming geothermal energy innovators and making local history with a well of this magnitude. "No one else has a geothermal well of this depth in the city of Reno," said Dean Parker, Facilities Director at the Peppermill. "In order for a well to produce the level of geothermal energy that could accomplish what we've set out to do, we need to find water at 170 degrees that can pump 800 gallons per minute at 80-90 psi. With this well, we found that and more."

The "and more" translates into enabling the Peppermill to harness geothermal energy that will heat 100% of the resort's water and mechanical heat - 2.1 million square feet, 24/7. According to Dr. Combs, "The green energy heating addition to the HVAC system at the Peppermill will now make it the only hotel in the United States whose heating source is totally provided from geothermal energy produced on their own immediate property."

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The Peppermill Resort Spa Casino in Reno, Nevada acknowledges a crucial role in minimizing the impact of its operations on the environment while, at the same time, maintaining an uncompromised level of service and experience for our guests.

In response to the movement toward energy conservation and sustainability, we continue to investigate and implement green and alternative energy sources and products that maximize efficiency and reduce our carbon footprint for future generations.

The Peppermill went back to the basics:

REDUCE

- ◆ A complete overhaul of existing geothermal system resulting in a \$9.7 million investment in geothermal energy including drilling new deep wells to handle heating 100% of the resort's domestic hot water and mechanical systems, pools and whirlpool tubs.
 - ◆ A hydronic system (water) to heat or cool the facility by using a closed-loop system. The cold water is cooled by a pre-chill system utilizing outdoor temperatures instead of chillers; the hot water is heated by geothermal. In the winter time, we use our cooling towers to cool the return hydronic chill water and then send it through a plate and frame exchanger that acts like big Trane chillers. The pre-cooling process keeps the Trane chillers shut off, which saves the Peppermill approximately \$5,000 per 24-hour period. On the boiler side, the geothermal will heat our entire facility – keeping our Cleaver Brook boilers shut off, which will save the company around \$2.2 million per year.
 - ◆ A building management system to control and regulate heating room and water temperatures as opposed to constantly heating the water throughout the day. It is difficult to estimate the savings by having our facility controlled by "Building Control System" (Computer) but the BCS, in conjunction with DDC (Direct Digital Control) stats and VFD (Variable Frequency Drive) units, makes our entire control systems 1,000% more efficient than running manually.
 - ◆ An ongoing property-wide water conservation program through room placards encouraging reuse of towels and water conservation and changing guest bed linens and towels per stay on a request-only basis.
 - ◆ Installed over 30,000 square feet of Artificial Grass Turf, saving the Peppermill approximately 5,184,000 gallons of water per season and over \$18,000 in annual cost, including reducing our chemicals and pesticide use.
 - ◆ LED and fluorescent retrofit lighting throughout the entire resort. The Peppermill obtains a monetary rebate each year from the NV Energy Sure Bet program by using low-energy bulbs such as LEDs and fluorescents. The Peppermill's average rebate check each year is around \$30,000, not including the electrical savings on top of this.
- Creation of a virtually paperless HR department through the implementation of new software systems and transferring all forms and documents into digital applications.

REUSE

- ◆ Working with Clean the World, a nonprofit that collects, sorts and processes discarded soaps and shampoos from hospitality partners and redistributes into the hands of Third World children whose lives are threatened by poor hygiene. The Peppermill diverts more than 1,000 pounds of soap and shampoo per month from local landfills and to communities in need. Annually, soap recycled from the Peppermill will serve more than 1,200 children a year.
- ◆ Reusable serving utensils, eating utensils, napkins and tablecloths in all restaurants.

GREEN INITIATIVES

RECYCLE

- ◆ Installation of 30 plasma air generators within the mechanical systems throughout the casino resulting in a cleaner, healthier casino environment. Plasma air purification units produce an all-natural bi-polar ionization that significantly improves the casino air quality by neutralizing odors, cigarette smoke, allergens, bacteria and other airborne irritants and inhibiting volatile organic compounds found in carpet, furniture and cleaning agents. The concept is similar to how sunlight helps improve the atmosphere.
- ◆ Installation of a water recycling system for all laundry services, conserving millions of gallons of water each year. Installed an Aqua Recycling system that captures, filters and reuses commercial wash machine grey laundry water. This system saves the Peppermill approximately \$246,000 per year in domestic water consumption and detergents.
- ◆ Shredding and recycling paper receptacles in all administrative offices including onsite print shop and advertising departments.
- ◆ The Peppermill participates in an organics/composting program where food scraps from the general waste produced in the casino's kitchens are collected by Waste Management and are then transported to a local composting facility, where the material is processed and turned into compost. The production of compost is a natural process, where plant and animal materials are decomposed by microbes. The final product is used for gardening to improve soil. The Peppermill diverts 60 yards of organic waste from the local landfill monthly, and as time goes on, that amount will increase.

"The only resort in the United States whose heating source is totally provided from Geothermal Energy produced on the immediate property."

— Dr. Jim Combs, Geo Hills Associates LLC of Reno



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