



## Calpine and The Geysers

*A Tradition of Environmental Stewardship and Community Education*

by John Galbraith

### Calpine Honors Cartwright – Dedicates Geothermal Visitors Center

Calpine Corporation, the nation's largest renewable geothermal power producer operating 15 geothermal power plants in The Geysers region of Northern California, dedicated its Geothermal Visitors Center in a private dedication ceremony in honor of company founder Pete Cartwright on April 16. Calpine honored Cartwright for his vision, dedication, and commitment to promoting The Geysers, furthering geothermal energy production and fostering environmental stewardship as a pioneer in green, renewable power production. The recognition ceremony took place at the Cartwright Geothermal Visitors Center in Middletown, and was attended by Calpine executives and employees, state and local elected officials, and community and industry leaders.

In 1984, Cartwright founded Calpine, an independent power company focusing on geothermal and natural gas-fired power plants. He served as the company's first CEO until his retirement in 2005.

"We are proud to honor a lifetime of dedication to clean, reliable power generation in California and across the United States. Pete is a visionary, who has made incredibly significant contributions to the energy industry during his 50-plus-year career," said Calpine President and CEO Jack Fusco. "It is an honor to recognize the founder of this groundbreaking company."

Marilyn Nemzer, Executive Director of the Geothermal Education Office, presented



*Jim Comstock, Supervisor, District 1, on behalf of Congressman Thompson, presents Pete Cartwright with a U.S. Congressional Resolution.*  
PHOTOS BY J. GALBRAITH UNLESS OTHERWISE NOTED.

Cartwright with a certificate of honor and recognition on behalf of the Geothermal Resources Council, "On behalf of GRC members worldwide, it is our distinct pleasure and honor to present you – Pete, with the GRC Award in recognition of your vision, dedication, and commitment to promoting The Geysers and furthering geothermal education," Nemzer said.

Cartwright also received a Congressional Resolution recognizing and thanking him for his decades of ingenuity and service to the cause of renewable energy technology and civic involvement. Additionally, the Lake County Board of Supervisors acknowledged Calpine's community outreach and related benefits the Visitors Center brings to Lake County.

Since opening in 2001, Calpine's Geothermal Visitors Center has received over 60,000 visitors

## The Geysers

from all 50 states and from 77 countries around the world. Located in Middletown about 70 miles north of San Francisco, it is a single-story 6,000 square foot building incorporating a number of green features including a geothermal heat pump system. The building has a lobby area, an exhibit hall featuring geothermal power displays, small offices, a conference room, a kitchen, and a multipurpose room. Visitors come to learn about Calpine, The Geysers, and the vital role of geothermal energy in California's energy portfolio. The Visitors Center also serves as a venue for community and civic involvement for Lake County.

"The dedication of the Geothermal Visitors Center is such an honor for me," said Cartwright.

"I am excited that so many people are able to come together this evening in support of this effort that we began a long time ago."

Early in his career, Cartwright joined Princeton University's Project Matterhorn, an Atomic Energy Commission project developing thermonuclear energy. He spent 19 years with General Electric's Nuclear Energy Division, helping to build nuclear power plants in India, Japan, Taiwan, and Mexico. Cartwright also was active in designing and building geothermal power plants at The Geysers, in Utah, and in Southern California.

Calpine's power plants sit on the largest geothermal field in the world and are the largest base-load renewable power resource in the United States, generating approximately 21% of California's renewable energy, a fact not lost on Cartwright. "We were proud of the operations and knew that it was a world-class resource. We got the idea that we needed to share it with



View of Calpine's Sonoma Geothermal Power Plant. PHOTO BY J. GRICE. COURTESY OF CALPINE.

## The Geysers

people and the surrounding community,” said Cartwright during his acceptance speech.

“The Geysers is spread out over nearly 40 square miles and it’s a little hard for friends, neighbors, and members of the community to understand what all is going on here. So, we built the Visitors Center to establish The Geysers as part of the community. I’m particularly proud that the Visitors Center has continued to play that role and I’m delighted that so many members of the community have joined us today.”

“When you think about The Geysers and what’s really important – the hot rocks and the steam that is produced, the hundreds of miles of pipes, the power plants, kilowatt hours generated without releasing greenhouse gas for more than 50 years – that’s important. But what’s really important are the people who work here and have worked here during the past five decades,” said Cartwright.

This year marks the 50th Anniversary of construction on the original power plant at The

Geysers – the first commercial geothermal plant in the United States. In closing his acceptance speech, Cartwright initiated a new exhibit at the Visitors Center – The Geysers Guest Book, a compilation of all people who have worked at The Geysers. Cartwright invited all who have served on “the hill” to come and sign the book, dates, and site served, and write comments if they desire.

“I’d like this to become a permanent exhibit and I invite everyone who has worked here to sign it, so that years from now your grandchildren or great grandchildren might say, ‘I don’t know who Pete Cartwright was, but that’s my grandma or grandpa,’” said Cartwright.

For more information about the Pete Cartwright Visitors Center, please call 1-866-GEYSERS or visit [www.geysers.com](http://www.geysers.com).

## Calpine’s Geysers Operations Win Ninth Consecutive Environmental Award from California Department of Conservation

For the ninth year in a row, Calpine’s geothermal operations at The Geysers is the winner of the California Department of Conservation (DOC) award for its ongoing



Visitors gathered on April 17, 2010, at the Pete Cartwright Geothermal Visitors Center to celebrate Earth Day at Calpine’s annual, free, community event showcasing local businesses and celebrating Lake County energy sustainability.

## The Geysers

### Calpine's Operations at The Geysers, Facts at a Glance

- World's single largest geothermal resource developed for electrical generation
- 15 geothermal plants generating 725 MWe
- Supplies about 21% of California's renewable electrical generation
- Generates about 40% of geothermal electrical generation in the U.S.
- 330 steam wells, 75 injection wells
- 80 miles of steamlines
- 350 employees

commitment to safety and the environment and its excellence in lease maintenance.

"I'm proud to once again recognize Calpine for its efforts to enhance safety and practice environmental stewardship at The Geysers," California Department of Conservation Director Bridgett Luther said. "This is becoming something of a tradition: This is the ninth consecutive year that Calpine has received an outstanding field lease and facility maintenance award. The company's leadership and the facility's employees are to be congratulated for serving as a role model to industry."

Mike Rogers, Calpine's Senior Vice President, Geothermal Region, accepted the award on behalf of Calpine from Elena Miller, State Oil and Gas Supervisor California Department of Conservation.



Mike Rogers.

"We are very pleased that for the ninth year in a row

The Geysers has been recognized for exemplary performance in maintaining leases that are environmentally clean and safe," Rogers said. "We take seriously our responsibilities to put forth our best efforts to protect the environment and act as good neighbors in the community. This award is a testament to the team spirit and effort by our employees at The Geysers."

Recognizing the importance of The Geysers, Calpine is expanding and sustaining production through wastewater recharge projects in which clean, reclaimed wastewater from local municipalities is recycled into the geothermal resource where it is converted into steam for electricity production. This provides an environmentally sound wastewater discharge solution for neighboring cities and communities, increasing the long-term productivity of The Geysers resource.

### Calpine Employees Jay Hepper and Charlotte Dorrity

On April 17, Calpine presented Earth Day 2010, an annual free community event showcasing local businesses and celebrating Lake County sustainability. Highlighted by guided bus tours to the West Ford Flat Power Plant, the event featured music, demonstrations, 40 information booths, activities, live entertainment and educational presentations featuring renewable energy, sustainable practices, gardening, health and well being.

Calpine employees Jay Hepper, Operator Technician, with 32 years of service at The Geysers and Charlotte Dorrity, Environmental Health & Safety Specialist, with 20 Years of Service at The Geysers, happily took turns escorting busloads of people up to the West Ford Flat Power Plant during Calpine Corporation's Earth Day Celebration. Spend just a few minutes with them and it's easy to distill a common thread – they are immensely proud to be a part of the world's largest steam producing field at The Geysers and eager to promote geothermal energy to any and all who will listen.

Hepper and Dorrity recently took a few moments to reflect on how they were introduced to The Geysers, the unique qualities of the area, and the duty to engage and educate the surrounding communities.

## The Geysers

### *Q. How did you find your way to working at The Geysers?*

**HEPPER:** I was putting myself through college working three part-time jobs in a small community outside Geyserville. One of the homeowners was a foreman for Hughes Aircraft's Thermogenics Project. My part-time jobs all paid between \$3-\$3.50 an hour. He offered me work at \$6.00 working full-time at some 'thermal thing' in the mountains nearby. I started my 1st day September 23, 1978 as construction labor, then to equipment operations and on to production work.

**DORRITY:** In 1989 I answered an ad in the Santa Rosa paper for a Power Plant Chemist. When I first came to the plant, I did not know condensers from condensed soup and I was almost scared away because the roads were terrible after the first big rainstorm of the year. Lucky for me, the Aidlin Power Plant must have needed a chemist as much as I needed a job, because they hired me!

### *Q. Briefly describe a typical day and what you like the most about The Geysers.*

**HEPPER:** I work rotating, 12-hour production shifts, so depending on the week, I get up at 4:15 a.m. (p.m.) leave the house by 5 a.m. (p.m.), get to work by 6:15 a.m. (p.m.) change into my PPE (personnel protective gear) then meet with my off going shift mate to learn what happened during the previous shift. There are regular area checks to do, assist maintenance staff on

## Tour Guides Charlotte Dorrity and Jay Hepper

Charlotte and Jay shared their enthusiasm about The Geysers as they led a tour of the West Ford Flat Geothermal Power Plant.



## The Geysers

their projects, startup, shut downs, steam shifts, injection shifts from the SRGRP, SEGEP, and other sources, too.

One of the things I like about the job is change, sometimes fast, sometimes slow. If the shift is light on production changes, then I try to catch up on weekly and monthly assignments. I also like the ability to work outdoors most of the time. Often, I see more wildlife in a night or day than I see people. For me, the job in the field is a good mix of outdoor work, ingenuity, action, teamwork, mechanical activity, natural (environmental), geological, and green power production. There is also an amount of freedom working sometimes

alone in remote locations in all types of weather amid the beautiful scenery. I am currently spending time in Calpine's main control room and hope to attain Senior Control Room level.

**DORRITY:** I do not know if I have ever had a 'typical day' working in The Geysers (which is one of the great things about my job). In the old days my job ranged from process and environmental chemistry analysis and troubleshooting to corrosion mitigation monitoring to safety, to representing the Plant at Public Hearings and Board meetings, all with a little pipefitting thrown in. Now I 'just do' safety, but that involves a wide range of duties, challenges, and responsibilities.

As a Safety Professional, I provide technical advice, industrial hygiene recommendations, and interpretation of regulatory standards. I



*Charlotte Dorrity led the tour to the West Ford Flat cooling towers.*

## The Geysers

develop programs, do hazard evaluations, and develop and facilitate training and workshops. I also advise and lead in incorporating behavioral-based safety, sit in on safety and management meetings, and develop and facilitate training. I do have routines and much of my work is planned out to help me meet my short- and long-term goals, but the nature of my job requires some built in reactive time so that I can be available to the crews that I work with.

I try to start most days by going to one of the 6:30 a.m. crew meetings, so that I can find out what is happening on the front lines and am available if anyone wants to ask safety questions or raise concerns. After the crew meetings, I check e-mail and current news and regulatory actions as they pertain to OSHA and safety and

how they may impact Calpine. Then I may attend one of the four management and staff meetings with different groups and managers. Afternoons may be spent writing reports, researching safety concerns and issues and regulations, doing accident analysis, writing programs, conducting training, going out to one of the 10 power plants that I provide safety services for, or any combination thereof.

As difficult as it is to describe a typical day, it is almost impossible to isolate one thing that represents what I like best about The Geysers. I work in an amazingly beautiful place in a job that I feel has contributed to a cleaner environment and a safer working environment. We provide something important in the way of clean energy. I work with great people and feel like part of a community within a community because our ties to co-workers and the community are so much a part of life up here. My job allows constant learning and growth, while providing



*Calpine's Lake View Power Plant at The Geysers Geothermal Field.*

## The Geysers

challenges to meet. What I like best about The Geysers is all of it.

***Q. You obviously enjoy what you are doing and are adept at conducting plant tours. Describe the importance to reaching out to the surrounding community and other audience about The Geysers and geothermal energy.***

**HEPPER:** Reaching out to the surrounding communities is extremely important. I've enjoyed working on several of Calpine's Public Relations projects including the Lake County Fair, Cloverdale Fair, and the Calpine Visitors Center. I've also staffed display booths and done PR work for former geothermal employers over the years, including GRC conferences – my favorite being the '90 conference in Hawaii. (I still have the old, faded red GRC t-shirt.)

I feel there is a willingness to want to know, but a general lack of public knowledge regarding geothermal energy. Additionally, there seems to be a certain degree of industry self-stifling of the general public's knowledge, which may deserve some consideration. That said, I feel strongly enough about the geothermal industry in general, that I would continue its promotion, regardless of employer. I want to do my part to help change what I believe is a surprising lack of knowledge or misinformation out there. I believe it would be in the geothermal community's best interest to change that.

**DORRITY:** I conduct tours because I think The Geysers is an absolutely amazing place and I like showing it off. I believe that most people are surprised by what we have up here and how small our ecological footprint really is at The Geysers. I enjoy showing people what a great place we have, how beautiful it is, and how much we respect and care for our environment. We live and work in a place that amazes me with its beauty, even after 20 years up here. I am proud of our environmental stewardship and I am proud of how we work with the community and how well

we all work together. Sharing The Geysers and our enthusiasm for it is one way that we are able to show our community and visitors how much we respect them and want to work with them to produce electricity in a sustainable manner.

I especially like giving tours to students. When our local high school Environmental class visits, we have an opportunity to discuss where geothermal fits with other renewable energy resources, keeping the lights on in a sustainable manner, and how important clean green energy is for their futures. These students and others that come to The Geysers walk away with a bit more appreciation for green energy and geothermal's contribution.

***Q. What would you tell other geothermalists and GRC members who may not yet have visited The Geysers, but may have the opportunity during the GRC Annual Meeting, October 24-27?***

**HEPPER:** Come to The Geysers! Get a tour; go see all that you can. Ask questions and give input. See the Visitors Center in Middletown; take a personalized tour through Calpine's operation. If possible, go tour the other Geysers operations – NCPA and Bottle Rock included.

**DORRITY:** We look forward to seeing you and showing you this operation that we are so proud of. Our history at The Geysers is one of learning and adaptation, of working together to solve challenges in a creative and forward looking manner. Our practical approach to technical, environmental, safety, and community issues contributes greatly to the sustainability that we enjoy here. We are able to achieve excellent production and availability while also achieving an environmental record that has resulted in several commendations and awards for our environmental stewardship. ■