

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

GSN-050-99-41

**GEOHERMAL SUNDRY NOTICE**

FORM APPROVED  
OMB NO. 1004-0132  
Expires: September 30, 1993

The Bureau of Land Management (BLM) requests this form or other BLM-approved forms to be prepared and filed in triplicate with requisite attachments with the authorized officer. The authorized officer must approve this permit prior to any lease operations.

6. Lease Serial No.  
OR- 45505

7. Surface Manager:  BLM  FS  
 Other

8. Unit Agreement Name  
Deschutes

9. Well No. | 10. Permit No  
86-21 | GSN-050-99-41

11. Field or Area  
Newberry KGRA

12. Sec., T., R., B. & M.  
Sec 21, T21S, R12E

13. County  
Deschutes

14. State  
Oregon

1a. Well Type:  Production  Injection  Heat Exchange  Observation  Other

1b. Well Status:  
Shut-in

2. Name of Lessee/Operator  
CE Exploration / CalEnergy Co., Inc.

3. Address of Lessee/Operator  
950 W. Lindsey Road, Calipatria, CA 92233

4. Location of Well or Facility  
At surface: Approx. 1000' N & 200" W of SE corner Sec 21, T21S, R12E  
at TD: From surface location vs 2137.8 S 668.23 E 2034.1

5. Type of Work

<input type="checkbox"/> Change Plans	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Site and Road Construction	<input type="checkbox"/> Fracture Test	<input type="checkbox"/> Multiple Complete
<input type="checkbox"/> Construct New Production Facilities	<input type="checkbox"/> Shoot or Acidize	<input checked="" type="checkbox"/> Abandon
<input type="checkbox"/> Alter Existing Production Facilities	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Other

15. Describe Proposed Operations (Use this space for well activities only. See instructions for current well conditions on reverse)

See attachments 1 - 4 for current well condition

1) Well completion, 2) Directional survey, 3) Well profile, 4) Location map

See attachments 5 and 6 for proposed abandonment of Well 86-21

16. Describe Proposed Operations (Use this space for all activities other than well work)

17. I hereby certify that the foregoing is true and correct

Signed [Signature] Title Resource Manager Date 08/27/99

(This space for Federal use)

Approved by [Signature] Title Authorized Officer Date 9/23/99

Conditions of Approval, if any:

DM See attached Surface and Downhole Conditions of Approval

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

DOWNHOLE CONDITIONS OF APPROVAL FOR GSN 050-99-41  
Well 86-21  
OR-45505  
CE Exploration  
Newberry KGRA  
Deschutes County, Oregon

Unless otherwise authorized by the Lakeview District Manager:

1. The BLM shall be notified at least 24 hours prior to start up of plugging operations. Call Dennis Simontacchi at 541-947-6116 (office), or 541-947-2355 (home).
2. Prior to plugging, blowout prevention equipment shall be installed and tested with clear water to 1000 psig. BOPE shall consist of a blind ram and pipe ram capable of sealing around the coiled tubing.
3. Prior to starting plugging, at least 1000 bbls of water shall be kept on site, connected to the wellhead in such a way that it can immediately be pumped down the well in an emergency. This condition will not be required once plug #2 has been successfully set and there is no longer any wellhead pressure.
4. All cement used in plugging shall be API Class "G" with 40% silica flour. (Note: ASTM Type II Cement will not be accepted)
5. Plug number 1 will be considered successful only after tagging the top (with the full weight of the coiled tubing or 10,000 lbs, whichever is less), and the top is found to be at or above 4,780'.
6. The design interval for plug #2 shall be 3,890' to 4,250'.
7. Plug number 2 will be considered successful only after tagging the top (with the full weight of the coiled tubing or 10,000 lbs, whichever is less), and the top is found to be at or above 3,940'.
8. The design interval for plug #3 shall be 1,660' to 1,860'.
9. After setting plug #3 and pulling the tubing back a safe distance, the hole shall be re-filled with mud, and the fallback shall be monitored for at least one hour. If the amount of fallback exceeds 50 linear feet:

- a) Plug shall be tagged; and
  - b) Plug number 3 will be considered successful only after tagging the top (with the full weight of the coiled tubing or 10,000 lbs, whichever is less), and the top is found to be at or above 1,710'.
10. Within 30 days of plugging, a report detailing the plugging operation shall be submitted to:

Dennis Simontacchi  
Bureau of Land Management  
HC 10, Box 337  
Lakeview, OR 97630

With a copy going to:

Rich Estabrook  
Bureau of Land Management  
2550 North State St  
Ukiah, CA 95482

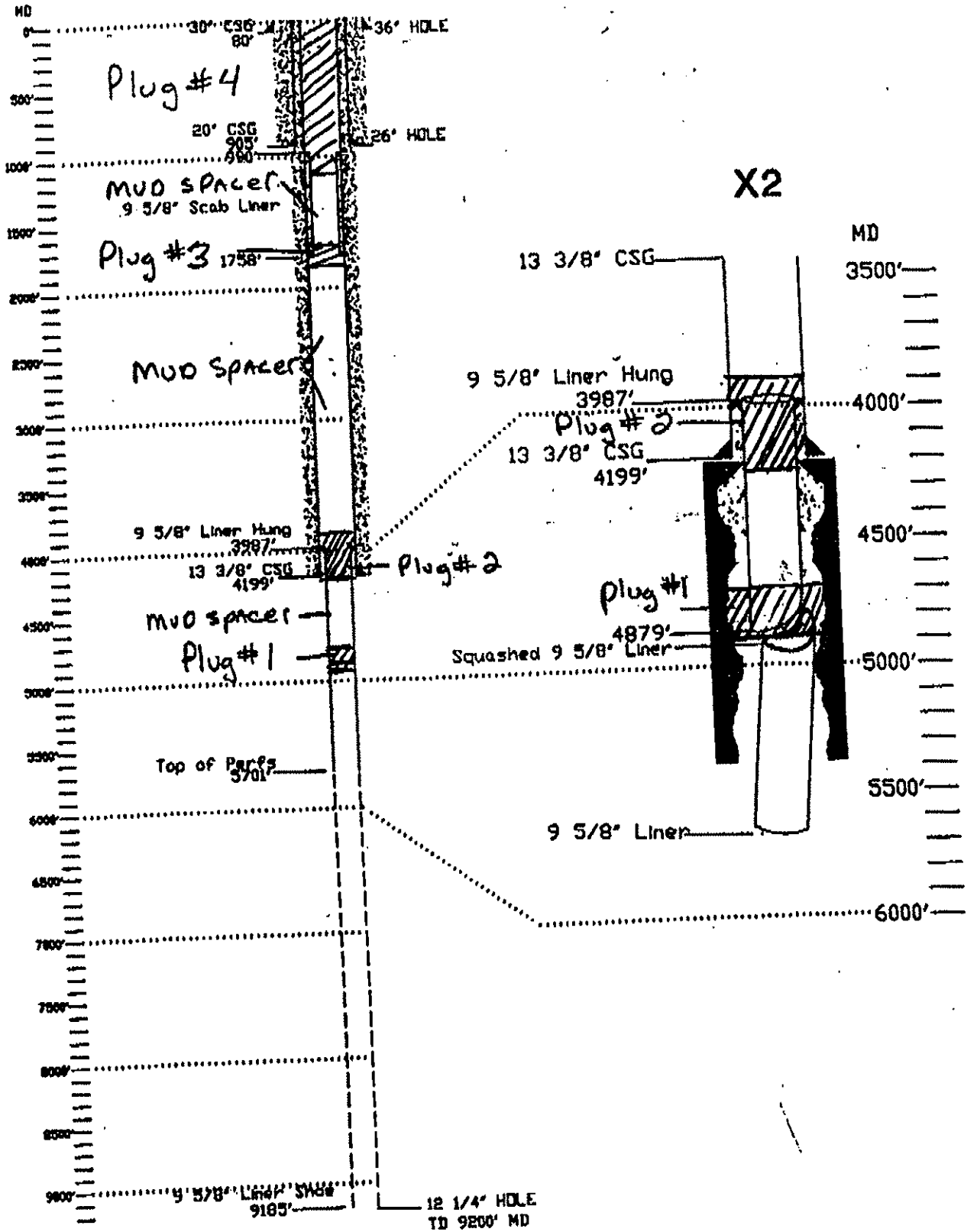
**Newberry Crater  
Abandonment Procedure  
Well 86-21**

- 1) Mobilize coil tubing unit and cement pumping units.
- 2) Bleeding off wellhead pressure. Ample Scott air packs should be present during bleedoff in case of toxic gasses.
- 3) RIH circulate water while recording surface temperatures.
- 4) Plug #1 pump 200 lin. Ft of 15.8# cement with 40% silica from 4929' to 4729'. POOH and wait on cement.
- 5) RIH and tag cement plug#1 at or above 4780' and pressure test to 500 psig, if plug is not present repeat step 4.
- 6) POOH with tubing to 4250' while displacing with drilling mud made of 9.0 #/gal and 36 Viscosity.
- 7) Plug #2 pump 200 lin. Ft of 15.8# cement with 40% silica from 4250' to 3890'. POOH and wait on cement.
- 8) RIH and tag cement plug#2 at or above 3940' and pressure test to 500 psig, if plug is not present repeat step 7.
- 9) Pull tubing to 1860' while displacing with drilling mud made of 9.0 # and 36 Viscosity.
- 10) Plug #3 pump 150 lin. Ft of 15.8 # cement with 40 % silica from 1860' to 1708' WOC 2 hours and fill the hole from surface. Note if the fill volume exceeds 50 lin feet then RIH and tag plug # 3, repeat plug #3 as required.
- 11) Pull tubing to 1040' while displacing with drilling mud made of 9.0 # and 36 Viscosity.
- 12) Plug #4 pump 1040 lin. Ft of 15.8 # cement with 40 % silica.
- 13) Top off cement from surface.
- 14) Cut off all casings 4' below ground level. Weld plate on 13 3/8" casing inscribed with well name, number and date. Fill in hole to ground level.
- 15) Clean up pad. Release equipment.

**Note \*** All operations and/or plugs are to be witnessed and approved by the BLM representative.

# NEWBERRY 86-21

SPUD 6/28/86  
 COMPLETION 12/11/86  
 MD 8200', TVD 8887', 880' 2887'



DESCHUTES NF

SURFACE CONDITIONS OF APPROVAL FOR GSN 050-99-41  
Well 86-21  
OR 45505

CE Exploration  
Newberry KGRA  
Deschutes County, Oregon

1. The Deschutes National Forest is presently in a closed fire season, and fire precaution requirements are in effect. CalEnergy must submit a Fire Plan to the Bend-Fort Rock Ranger District, and comply with restrictions for the Industrial Fire Precaution Levels. (The daily Fire Precaution Level can be obtained by calling 541-385-5353). Waiver requests may be submitted in writing to the Ranger District. Forms and additional information (blank Fire Plan, waiver application, and IFPL card) are attached. No work may begin until the Fire Plan has been submitted and approved.
2. Waterbarred roads may be opened as needed to allow vehicles to access the pads. Waterbars will be reinstalled and access roads to the pads will be maintained as needed to repair and limit future damage from erosion.
3. If no surface rehabilitation/restoration will be done this year, adequate road maintenance will need to be done in lieu of rehab. This may include cleaning culverts and other work to be identified on site by the Forest Service road manager. The Forest Service Road Manager will need to review and approve the work before the equipment is demobilized.
4. Hunting seasons may be in effect during the time work is being done at the Newberry geothermal project. CalEnergy should check with the Oregon Department of Fish and Wildlife for dates and to be aware that there may be hunters or hunting activity in the area.
5. Work crews and employees of CalEnergy are subject to the same access limitations as the general public for hunting. Vehicle access behind closed gates in the lease or project area is not allowed for hunting purposes.
6. Be aware that other traffic may be using the roads within or leading to the project area. Work crews and employees need to drive safely and watch for truck and heavy equipment traffic associated with other forest activities, and also for traffic from other users including firewood cutters and hunters.
7. The following signing will be required to help reduce travel risks and to alert other users to possible geothermal traffic:

<u>ROAD #</u>	<u>LOCATION</u>	<u>COLOR</u>	<u>WORDING</u>
9735	300 feet before the 600 intersection, both above & below the intersection	Black on Orange	"Caution Trucks"
9735-600	At gate	Black on Orange	"Trucks"

8. Upon completion of 1999 field activities, the water well shall be secured to prevent vandalism.