

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
GEOHERMAL SUNDRY NOTICE

FORM APPROVED  
OMB NO. 1004-0132  
Expires: September 30, 1990

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  PS  
 Other

8. Unit Agreement Name  
Deschutes

9. Well No. 10. Permit No.  
86-21 SN 050-96-26

11. Field or Area  
Newberry KGRA

12. Sec., T., R., B. & M.

Sec. 21, T21S, R12E

13. Country

Deschutes

14. State

Oregon

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

1b. Well Status:  
Completed

2. Name of Lessee/Operator

C.E. Exploration

3. Address of Lessee/Operator

34 NW First St., Ste. 302. Portland Oregon 97209

4. Location of Well or Facility

1000' north and 200' west of southeast corner Sec. 21, T21S, R12E

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 checked="" type="checkbox"/> Shoot or Acidize | <input 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)

CE Exploration proposes to acidize Well 86-21 in accordance with the attached procedure. A 15% solution of hydrochloric acid will be used (approximately 4000 gallons total) to acidize the well, with water being pumped downhole prior to, during, and after the acid flush. A copy of the Material Safety Data Sheet for hydrochloric acid is attached for your review, along with standard industry safety procedures. The acid will be stored for a minimum amount of time on the wellpad in frac tanks. An earthen berm will be constructed around the tanks to contain any releases. All personnel will be briefed on hazard communication, emergency response and hazardous material handling instructions prior to the start of the job.

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:

By: Dave McClain

Signed: *[Signature]*

Title: Project Manager

Date: 12/26/95

(This space for Federal use)

Approved by: *[Signature]*

Title: District Manager

Date: 12/28/95

Conditions of Approval, if any:  
See Attachment

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)

*Federal permit to acidize*

DEC 28 1995

Sundry Notice Attachment

SN-050-96-26

This Sundry Notice modifies Geothermal Drill Permit GDP-050-95-03 for Production Well 86-21 to acidize the well.

Acid shall not contact the repaired casing (as approved in SN-050-96-25).

Acid shall be pumped through tubing or drill pipe with a packer inside the 9 5/8 production liner or some other method to prevent acid from contacting the repaired casing.

## ACID/CHEMICAL SERVICE JOBS SAFETY PRECAUTIONS

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When working with acid and other chemicals, the following safety precautions should be observed:

1. Always wear rubber gloves and face shields when working around acid.
2. Due to the potential of leaks occurring in pump lines when acidizing a well under pressure, goggles should be worn by personnel.
3. Safety precautions should be taken when handling an acid hose during the loading of trucks or tanks and when disconnecting lines on a job since acid may be left in the hose.
4. Notify all personnel on the location of the possible danger of acid being used under pressure.
5. Each acid pump truck or transport truck should be furnished with a first aid kit containing soda (sodium bicarbonate) for acid burns. Drivers and operators should see that it is always accessible in case of emergency. A solution of one teaspoonful of soda to a pint of water should be kept for use in the eyes. Dry soda can be applied directly to the skin and then rinsed with water. **DO NOT USE DRY SODA IN THE EYES.**

Note: When washing eyes be sure to use a gentle flow of water when rinsing. It is possible to damage an eyeball or wash it out of its socket with a heavy stream of water.

6. No smoking is allowed on an acid tank. Tanks containing acid, or those that have contained acid, can have explosive mixtures trapped inside. Not only are crude oil vapors mixed with air in approximately five percent explosive, but there is a possibility of hydrogen gas being present in a tank due to the action of acid on steel according to the following chemical equation:

Hydrochloric acid + iron → iron chloride + hydrogen gas

Even though an acid tank is coated with Gavlön, there may be some exposed metal. Hydrogen gas could be present.

7. Never add water to acid; always add the water to the tank first and then add the concentrated acid.
8. Hydrogen mixed with air in the ratio of one part per 24 parts of air is an explosive mixture. It is for this reason that loading hoses have no metal connections that could strike the tank and ignite an explosion with a spark.
9. If contact with the acid occurs, wash off any chemical with water and, if necessary, seek medical attention. Also, clothes contaminated with chemicals should be removed and should not be reworn until they have been washed.
10. Wear a dust mask when handling powders. Inhalation of any powdered material can be irritating even if the chemical is non-toxic.
11. Spot all equipment no closer than 75' from the wellhead, upwind if possible.

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- 13. Operators on pumping units must wear protective suits during pumping.
- 14. Hold tailgate safety meeting prior to starting pumping operations.
- 15. Have all unnecessary personnel stay away from pumps, lines and wellhead during operation.
- 16. Pressure test lines with fresh water or brine prior to start of job. Never use acid for pressure test.