

**GTLT - \_\_\_\_\_ 13 \_\_\_\_\_**

**Steam Reserve Corporation  
32-15S-7W  
Sierra County**

**GTR-290 Well No. 6**

NEW MEXICO OIL CONSERVATION COMMISSION  
P. O. Box 2088, Santa Fe 87501

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SUNDRY NOTICES AND REPORTS  
ON  
GEOTHERMAL RESOURCES WELLS

5. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5.a State Lease No. GIR - 290
7. Unit Agreement Name N/A
8. Farm or Lease Name N.M. State
9. Well No. 6
10. Field and Pool, or Wildcat Wildcat
12. County

Do Not Use This Form for Proposals to Drill or to Deepen or Plug Back to a Different Reservoir. Use "Application For Permit -" (Form G-101) for Such Proposals.

1. Type of well Geothermal Producer <input type="checkbox"/> Temp. Observation <input checked="" type="checkbox"/> Low-Temp Thermal <input type="checkbox"/> Injection/Disposal <input type="checkbox"/>
2. Name of Operator STEAM RESERVE CORPORATION
3. Address of Operator 1707 Cole Blvd., Golden, Colorado 80401-3293
4. Location of Well Unit Letter <u>I</u> <u>2900</u> Feet From The <u>North</u> Line and <u>5000</u> Feet From The <u>West</u> Line, Section <u>32</u> Township <u>15S</u> Range <u>7 West</u> NMPM.
15. Elevation (Show whether DF, RT, GR, etc.) GR - 5660'

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

<p>NOTICE OF INTENTION TO:</p> <p>PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input checked="" type="checkbox"/></p> <p>TEMPORARILY ABANDON <input type="checkbox"/></p> <p>PULL OR ALTER CASING <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/></p> <p>OTHER <input type="checkbox"/></p>	<p>SUBSEQUENT REPORT OF:</p> <p>REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/></p> <p>COMMENCE DRILLING OPNS. <input type="checkbox"/> PLUG &amp; ABANDONMENT <input type="checkbox"/></p> <p>CASING TEST AND CEMENT JOB <input type="checkbox"/></p> <p>OTHER <input type="checkbox"/></p>
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17. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 203.

Completion - After hole No. 1124-6 was completed on 1-8-85 and the drill stem removed from the holes, a 3/4" PVC pipe, which had been capped on the bottom, was inserted into the holes. The pipe was filled with water and capped. The area around the intruded pipe was then backfilled with drill cuttings to 10 feet below surface, the upper 10 feet of annulus was filled with cement.

Abandonment - Hole No. 1124-6 was properly abandoned on 3-14-85. The PVC pipe was cut off below ground level. The upper 3m (10 feet) was filled with cement. Any remaining depression was filled with soil and raked to restore the site to its original appearance and contour. All drilling-related refuse was removed and disposed of properly.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Auita Clement TITLE Attorney-in-Fact DATE 4-18-85

APPROVED BY Roy Johnson TITLE DISTRICT SUPERVISOR DATE 11/1/85

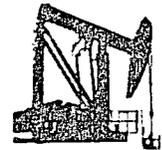
CONDITIONS OF APPROVAL IF ANY:

50 YEARS



TONEY ANAYA  
GOVERNOR

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION



1935 - 1985

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

January 15, 1986

Steam Reserve Corporation  
1707 Cole Boulevard  
Golden, Colorado 08401

Re: \$10,000 Geothermal Well Bond  
Steam Reserve Corporation, Principal;  
Fireman's Insurance Co. of Newark,  
New Jersey, Surety  
Bond No. 220 76 78

Gentlemen:

The Oil Conservation Division hereby approves release of  
the above-referenced geothermal bond effective this date.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. L. Stamets".

R. L. STAMETS,  
Director

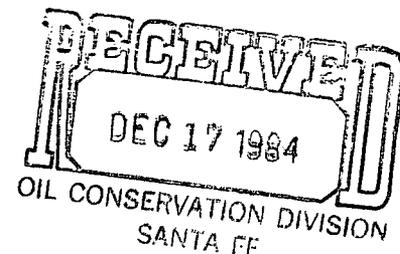
dr/

cc: Oil Conservation Division  
Santa Fe, New Mexico

Fireman's Insurance Co. of  
Newark, New Jersey  
80 Maiden Lane  
New York, New York 10038

December 10, 1984

Mr. Roy Johnson  
District Supervisor  
State of New Mexico  
Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, NM 87501



RE: Extensions for Wells Nos. 6, 7 and 9 at  
Steam Reserve Corporation's Hillsboro Project

Dear Mr. Johnson:

As we discussed on the phone today, SRC hereby requests an extension to the approved applications for Permits to Drill, Deepen, or Plug Back Geothermal Resources Wells Nos. 6, 7 and 9 at its Hillsboro project in Sierra County, New Mexico. The permits for the subject shallow holes were approved by your office in May and August of this year. Drilling operations are now scheduled to commence on or about December 17, 1984.

Please indicate at your earliest convenience approval of SRC's request for extension of the permits.

Very truly yours,

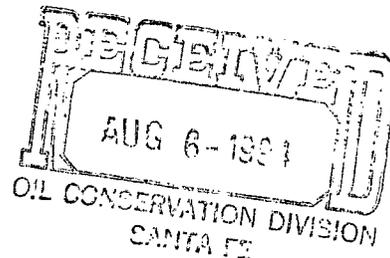
A handwritten signature in cursive script that reads "Anita Clement".

Anita Clement

AC:br



July 31, 1984



Mr. R. E. Johnson  
Senior Petroleum Geologist  
State of New Mexico  
Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, New Mexico 87501

Re: Steam Reserve Corporation' Well No. 6  
Hillsboro Project, New Mexico

Dear Mr. Johnson:

Pursuant to our phone conversation please find enclosed a new Application for Permit to Drill, Deepen, or Plug Back - Geothermal Resources Well (Form No. G-101) and Geothermal Resources Well Location and Acreage Dedication Plat (Form No. G-102) for the above-referenced well.

The original permit was approved by your office on May 22, 1984 but due to a change of location you requested we file a new application. We believe that all other necessary documents and maps pertaining to this well are already on file in your office.

Very truly yours,

STEAM RESERVE CORPORATION

*Anita Clement*

Anita Clement

/ac  
enclosures

*Paris Copy*

NEW MEXICO OIL CONSERVATION COMMISSION  
P. O. Box 2088, Santa Fe 87501

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U.S.G.S.	2
Operator	1
Land Office	1

APPLICATION FOR PERMIT TO DRILL, DEEPEN,  
OR PLUG BACK--GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease  
STATE  FEE

5.a State Lease No.  
GTR-290

a. Type of Work Drill  Deepen  Plug Back   
b. Type of Well Geothermal Producer  Temp Observation   
Low-Temp Thermal  Injection/Disposal

7. Unit Agreement Name  
N/A

8. Farm or Lease Name  
N.M. State

2. Name of Operator  
Steam Reserve Corporation

9. Well No.  
6

3. Address of Operator  
1707 Cole Blvd., Golden, Colorado 80401

10. Field and Pool, or Wildcat  
Wildcat

4. Location of Well UNIT LETTER I LOCATED 2900 FEET FROM THE North LINE  
AND 5000 FEET FROM THE West LINE OF SEC. 32 TWP. 15S RGE. 7W NMPM

12. County  
Sierra

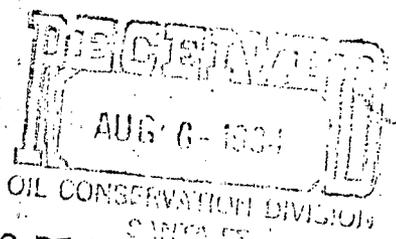
21. Elevations (Show whether DF, RT, etc.) 5660'	21A. Kind & Status Plug. Bond 10,000 Well Low	21B. Drilling Contractor To be determined	19. Proposed Depth 500'	19A. Formation Tertiary Seds.	20. Rotary or C.T. Rotary	22. Approx. Date Work will start 8-15-84 or later
---	--	--	----------------------------	----------------------------------	------------------------------	--

Temp Well or Geo. Observation Well Bond  
PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
4-3/4" - 6-3/4"	N/A	N/A	N/A	N/A	N/A

- (1) Drill hole 4-3/4" - 6-3/4" to TD
- (2) Run 3/4" PVC or 3/4" iron pipe to TD
- (3) Cement top 10' of annulus around pipe
- (4) Fill pipe with water
- (5) Measure temperature of hole
- (6) Install cement plug inside the PVC or iron pipe

APPROVAL VALID FOR 90 DAYS  
PERMIT EXPIRES 11-1-84  
UNLESS DRILLING UNDERWAY



OIL CONSERVATION COMMISSION TO BE NOTIFIED  
WITHIN 24 HOURS OF BEGINNING OPERATIONS

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

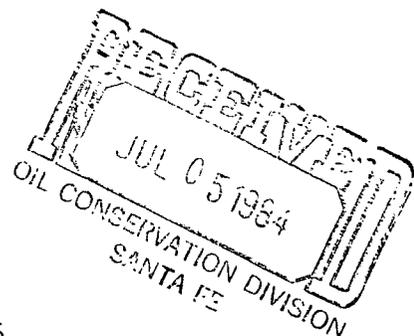
Signed [Signature] Title Attorney-in-Fact Date 7/31/84

APPROVED BY [Signature] TITLE DISTRICT SUPERVISOR DATE 8.6.84



June 29, 1984

Mr. Carl Ulvog  
Senior Petroleum Geologist  
State of New Mexico  
Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, New Mexico 87501



Re: Steam Reserve Corporation's Well No. 6  
Hillsboro Project, New Mexico

Dear Mr. Ulvog:

This is to advise you of a location change of Well No. 6 located on New Mexico State Lease No. GTR-290 in Sierra County, New Mexico. The Application for Permit to Drill, Deepen, or Plug Back - Geothermal Resources Well was approved by you on May 22, 1984. The reason for the location change is that the road is impassable. Please see attached map for new location.

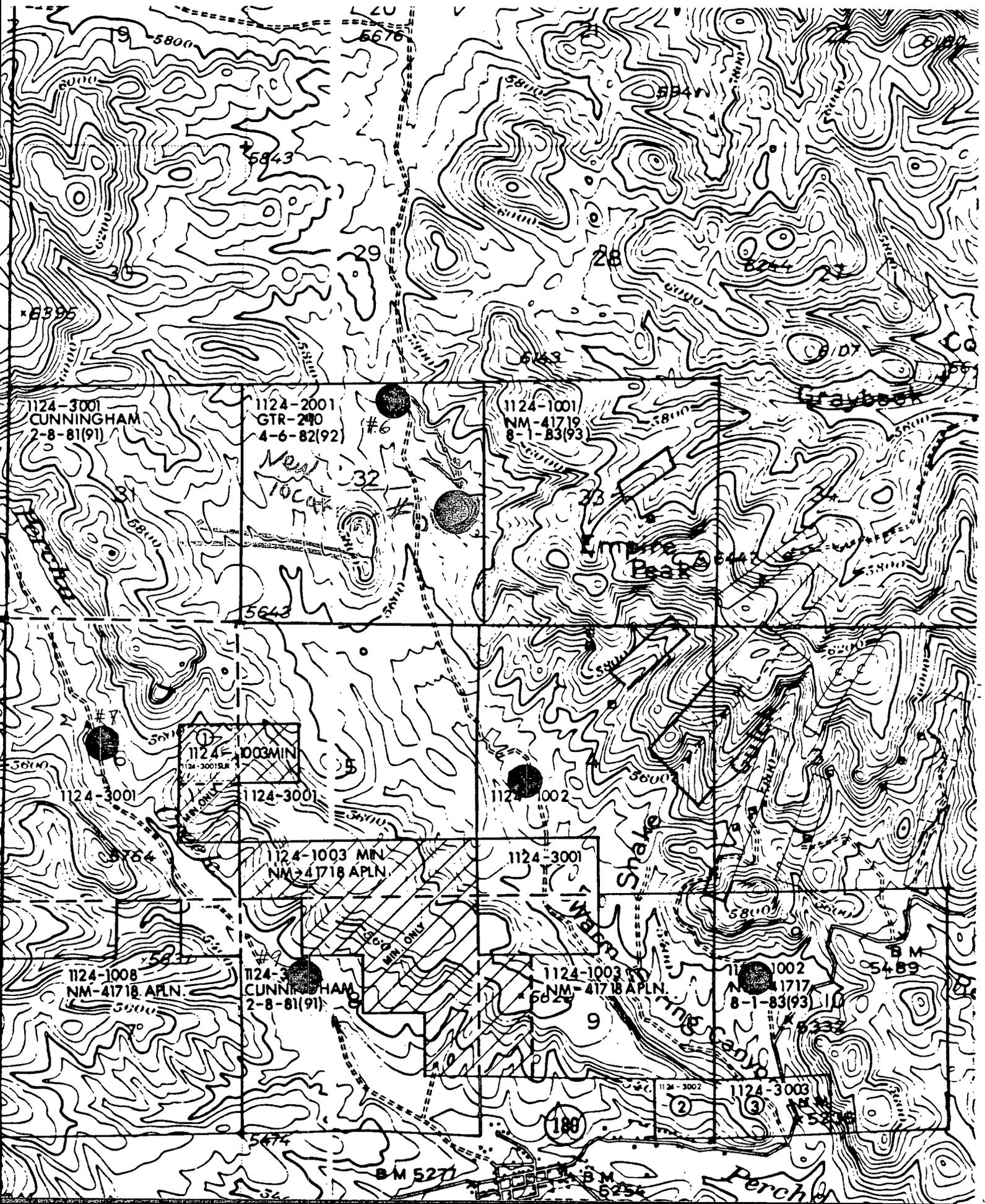
Very truly yours,

STEAM RESERVE CORPORATION

Anita Clement

/ac  
attachment

Township 15 & 16 South, Range 7 West





STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

TONEY ANAYA  
GOVERNOR

May 24, 1984

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

Steam Reserve Corporation  
1707 Cole Boulevard  
Golden, Colorado 80401

Re: \$10,000 Geothermal Well Bond  
Steam Reserve Corporation,  
Principal; Fireman's Insurance  
Co. of Newark, New Jersey, Surety  
Sec. 32, T-15-S, R-7-W;  
Sec. 6, T-16-S, R-7-W;  
Sec. 8, T-16-S, R-7-W,  
Bond No. 220 76 78

Gentlemen:

The Oil Conservation Division hereby approves  
the above-captioned Geothermal Bond effective  
this date.

Sincerely,

JOE D. RAMEY,  
Director

dr/

cc: OCD - Santa Fe Office

Fireman's Insurance Co.  
of Newark, New Jersey  
80 Maiden Lane  
New York, New York 10038

NEW MEXICO OIL CONSERVATION COMMISSION  
P. O. Box 2088, Santa Fe 87501

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Operator	/	
Land Office	/	

APPLICATION FOR PERMIT TO DRILL, DEEPEN,  
OR PLUG BACK--GEOTHERMAL RESOURCES WELL

5. Indicate Type of Lease  
STATE  FEE

5.a State Lease No.  
GTR-290

1a. Type of Work Drill  Deepen  Plug Back   
b. Type of Well Geothermal Producer  Temp Observation   
Low-Temp Thermal  Injection/Disposal

7. Unit Agreement Name  
N/A

8. Farm or Lease Name  
N.M. State

2. Name of Operator  
Steam Reserve Corporation

9. Well No.  
6

3. Address of Operator  
1707 Cole Boulevard, Golden, Colorado 80401

10. Field and Pool, or Wildcat  
Wildcat

4. Location of Well UNIT LETTER O LOCATED 3250 FEET FROM THE West LINE  
AND 400 FEET FROM THE South LINE OF SEC. 32 TWP. 15S RGE. 7W NMPM

12. County  
Sierra

19. Proposed Depth 500'  
19A. Formation Tertiary seds & volcanics  
20. Rotary or C.T. Rotary  
21. Elevations (Show whether DF, RT, etc.) 5680'  
21A. Kind & Status Plug. Bond 10,000 Multiple  
21B. Drilling Contractor To be determined  
22. Approx. Date Work will start June 1, 1984

Well Low Temp. Well or Geothermal Observation Well Bond  
PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
4-3/4" - 6-3/4"	N/A	N/A	N/A	N/A	N/A

- (1) Drill hole 4-3/4" - 6-3/4" to TD
- (2) Run 3/4" PVC or 3/4" iron pipe to TD
- (3) Cement top 10' of annulus around pipe
- (4) Fill pipe with water
- (5) Measure temperature of hole
- (6) Install cement plug inside the PVC or iron pipe

APPROVAL VALID FOR 90 DAYS  
PERMIT EXPIRES 8-20-84  
UNLESS DRILLING UNDERWAY

RECEIVED  
MAY 22 1984  
OIL CONSERVATION DIVISION  
SANTA FE

OIL CONSERVATION COMMISSION TO BE NOTIFIED  
WITHIN 24 HOURS OF BEGINNING OPERATIONS

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. Give blowout preventer program, if any.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.  
Signed Joyce Emerson Title Attorney-in-Fact Date 5/4/84

(This space for State Use)  
APPROVED BY Carl Ulvog TITLE DISTRICT SUPERVISOR DATE 5/22/84

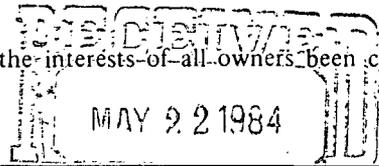
CONDITIONS OF APPROVAL, IF ANY:

**GEOTHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section.

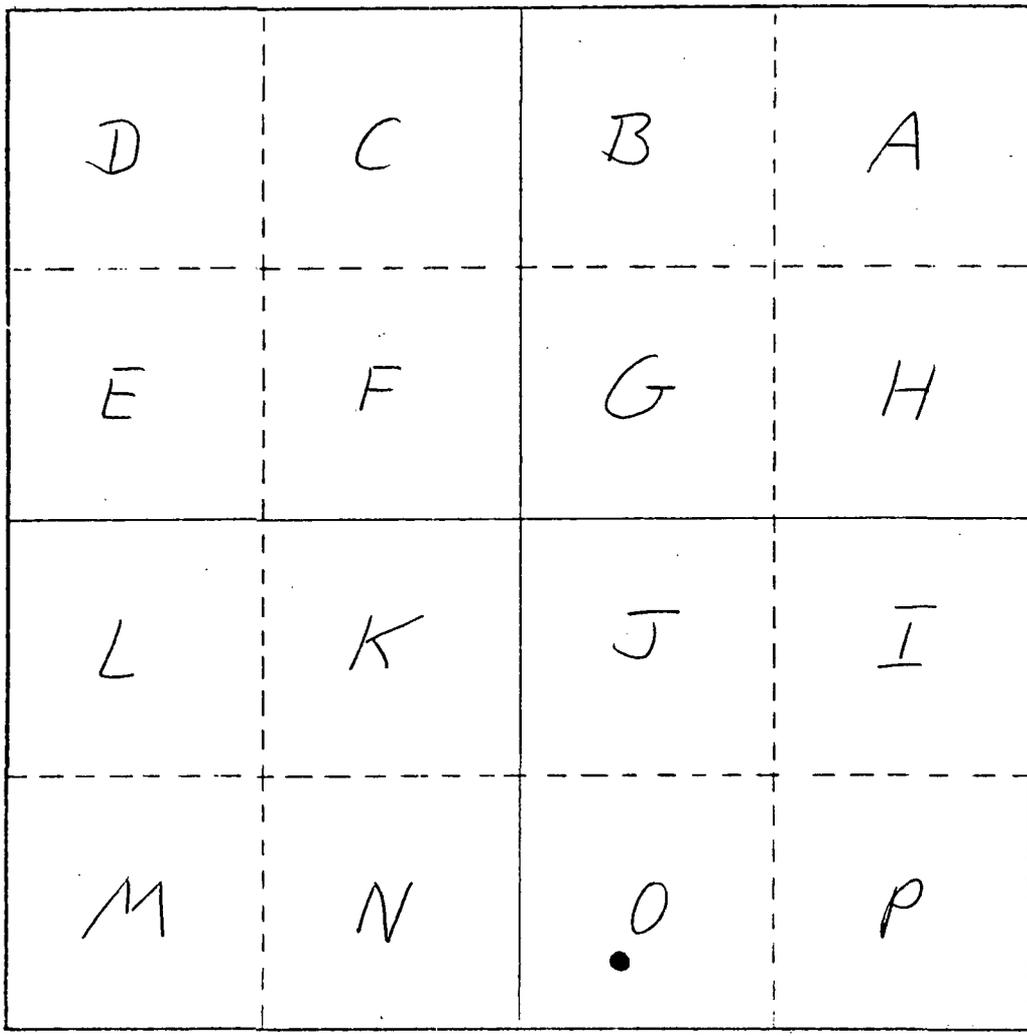
Operator Steam Reserve Corporation		Lease State of New Mexico			Well No. 6
Unit Letter 0	Section 32	Township 15 South	Range 7 West	County Sierra	
Actual Footage Location of Well: 3250 feet from the West line and 400 feet from the South line					
Ground Level Elev. 5680'	Producing Formation N/A	Pool N/A			Dedicated Acreage: N/A Acres

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). N/A
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc? N/A  
 Yes  No If answer is "yes," type of consolidation \_\_\_\_\_



If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



**CERTIFICATION**

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

*Joyce Emerson*  
 Name Joyce Emerson

Position  
 Attorney-in-Fact

Company  
 Steam Reserve Corporation

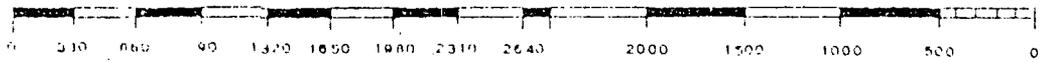
Date  
 5/4/84

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.



## PROJECT DESCRIPTION

Steam Reserve Corporation will take necessary measures to protect all aspects of the environment. Steam Reserve Corporation also agrees that the proposed drilling program will be conducted in accordance with terms and conditions included within the approved permit.

Steam Reserve Corporation is currently permitting three (3) drill site locations for the Hillsboro Project in Sierra County, New Mexico. Two of these holes are located on privately held land to which the owner has 100% surface and minerals rights and one of the holes will be located on New Mexico State Lease No. GIR-290. Steam Reserve Corporation will notify the New Mexico Oil Conservation Commission prior to commencing operations.

Exhibit A - Hillsboro Project Information indicates:

- (1) Hole numbers
- (2) Location
- (3) Section
- (4) Township
- (5) Range
- (6) Elevation
- (7) AMAX lease number
- (8) Land status

Shallow exploratory thermal gradient drill holes are usually drilled to depths of 30 to 500 feet. The holes which Steam Reserve Corporation proposes to drill will have a maximum depth of 500 feet.

Thermal gradient holes generally are drilled with bits 4-3/4" to 6-3/4" in diameter. Water wells, by contrast, frequently are drilled with bits 8" to 12" in diameter. Consequently, the drilling of a thermal gradient hole usually has less overall impact than the drilling of a water well of comparable depth.

The equipment used to drill shallow thermal gradient drill holes consist of a light truck-mounted rotary drill rig and a water truck. The truck-mounted drill is usually set up on level ground as close as possible to existing roads. No bulldozing or leveling is required nor is the drill dug in. The water truck is parked adjacent to the drill.

Air is used to remove drill cuttings from the holes when drilling above the water table. Water mixed with drilling mud and circulated through a portable mud tank accomplishes the same in drilling below the water table or in areas where the water table is relatively shallow. Foam will be used when necessary and contained within mud tanks or mud sumps. Defoamer will be used only when necessary and also will be contained within mud tanks or mud sumps. No toxic substances will be used at any time. Drill cuttings from the holes are used to back-fill the drill holes.

A 300 foot hole generally requires approximately 5 to 20 hours to drill depending upon rock hardness and other drilling conditions. Under normal conditions, a 500 foot hole requires between 10 and 40 hours to drill. Therefore, depending upon shift length, a 500 foot well can usually be completed in a maximum of five days.

After the drill hole is completed and the drill rods removed from the hole, a PVC or iron pipe of approximately 1" in outside diameter is inserted into the hole. The pipe is capped on the bottom and is filled with water. The drill hole is then backfilled with drill cuttings. Approximately one week later, after the hole has had a chance to reach near thermal equilibrium with the surrounding rocks, a thermister probe is lowered into the hole and temperature measurements are made at intervals down the hole. A second and final temperature survey is made about a month after completion of the well.

Drilling operations are planned to take approximately 30 days. Temperature observation measurements will require an additional 60 days. Thus, the total project operations will require approximately 90 days. Each hole will be used for temperature observation purposes for approximately 8 weeks. Upon completion of operations, the pipe will be cut off at ground level and the top 10' filled with cement.

Mr. Dean Pilkington, Chief Geologist, Steam Reserve Corporation will be in charge of the overall operation. Ms. Joyce Emerson, Manager of Government Relations Steam Reserve Corporation will be responsible for regulatory and environmental matters. All personnel can be contacted at the letterhead address.

EXHIBIT A  
Hillsboro Project (1124)  
Sierra County, New Mexico NMPM

<u>Hole Number</u>	<u>Description</u>	<u>Location</u>			<u>Elevation</u>	<u>Lease No.</u>	<u>Land Status</u>
		<u>Section</u>	<u>Township</u>	<u>Range</u>			
1124-6	NW/4NE/4	32	15S	7W	5,680'	1124-2001	New Mex. GTR-290
1124-7	SW/4NW/4	6	16S	7W	5,520'	1124-3001	V.H. Cunningham
1124-9	SE/4NW/4	8	16S	7W	5,360'	1124-3001	V.H. Cunningham

Township 15 & 16 South, Range 7 West

