

GTLT - ____9____

**(9&26)-11N-1E
Sunoco Energy
Development Corporation
(Bernalillo County)**

10-76-5 & 10-76-3

OCT - 2 1978

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NEW MEXICO OIL CONSERVATION COMMISSION
P. O. Box 2088, Santa Fe 87501SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS5. Indicate Type of Lease
State ☐ Fee ☒

5.a State Lease No.

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 ☐ Temp. Observation ☒
Low-Temp Thermal ☐ Injection/Disposal ☐7. Unit Agreement Name
NONE

2. Name of Operator

SUNOCO ENERGY DEVELOPMENT CORPORATION

8. Farm or Lease Name

Alameda Grant

3. Address of Operator

12700 PARK CENTRAL PLACE, SUITE 1500, DALLAS, TX 75251

9. Well No.

5

4. Location of Well

Unit Letter C 1100 Feet From The NORTH Line and 2100 Feet From

10. Field and Pool, or Wildcat

NONE

The WEST Line, Section 9 Township 11N. Range 1E. NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)

5880' (G.L.)

12. County

Bernalillo

16.

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐TEMPORARILY ABANDON ☐PULL OR ALTER CASING ☐CHANGE PLANS ☒OTHER ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐COMMENCE DRILLING OPNS. ☐ PLUG & ABANDONMENT ☐CASING TEST AND CEMENT JOB ☐OTHER ☐

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.

This hole location was dropped from our drilling program and will not be drilled in the near future.

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

SIGNED

PROJECT SUPERVISOR

TITLE GEOTHERMAL SERVICES, INC.

DATE 9-10-78

APPROVED BY

TITLE

SENIOR PETROLEUM GEOLOGIST

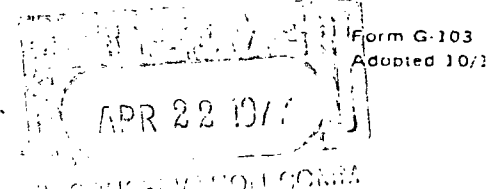
DATE

10-3-78

CONDITIONS OF APPROVAL, IF ANY:

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



SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS

5. Indicate Type of Lease
State ☐ Fee ☒
5.a State Lease No.

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 ☐ Temp. Observation ☒
Low-Temp Thermal ☐ Injection/Disposal ☐
2. Name of Operator
SUNOCO ENERGY DEVELOPMENT CORPORATION
3. Address of Operator
12700 Park Central Place., Suite 1500, Dallas, TX 75251
4. Location of Well
Unit Letter C 1100 Feet From The North Line and 2100 Feet From
The West Line, Section 9 Township 11N Range 1E NMPM.

7. Unit Agreement Name
none
8. Farm or Lease Name
Alameda Grant
9. Well No.
10-76-5
10. Field and Pool, or Wildcat
none

15. Elevation (Show whether DF, RT, GR, etc.)
5880 ft. (GL)

12. County
Bernalillo

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

NOTICE OF INTENTION TO:
PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐ CHANGE PLANS ☒
OTHER ☐

SUBSEQUENT REPORT OF:
REMEDIAL WORK ☐ ALTERING CASING
COMMENCE DRILLING OPNS. ☐ PLUG & ABANDONMENT
CASING TEST AND CEMENT JOB ☐
OTHER _____

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.

The drilling of Temperature Observation Well has been postponed until Mid-1977. Anticipated start-up date will be August 1, 1977. We will notify your office approximately two weeks prior to equipment move-in; until then this project is on inactive status.

APPROVAL VALID
180 DAYS UNLESS
DRILLING COMMENCED
EXPIRES 10/19/77

I hereby certify that the information above is true and complete to the best of my knowledge and belief.
SIGNED [Signature] TITLE Chief Geologist, DATE 4/20/77
Geothermal Services, Inc.
APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 4/22/77
CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

SEP - 8 1976

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

NO. OF COPIES RECEIVED	4
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Land Office	

5. Indicate Type of Lease

STATE ☐FEE ☒

5.a State Lease No.

7. Unit Agreement Name

none

8. Farm or Lease Name

Alameda Grant

9. Well No.

10-76-5

10. Field and Pool, or Wildcat

none

12. County

Bernalillo

1a. Type of Work	Drill <input checked="" type="checkbox"/>	Deepen <input type="checkbox"/>	Plug Back <input type="checkbox"/>
b. Type of Well	Geothermal Producer <input type="checkbox"/>	Temp Observation <input checked="" type="checkbox"/>	Injection/Disposal <input type="checkbox"/>
Low-Temp Thermal	<input type="checkbox"/>		
2. Name of Operator	SUNOCO ENERGY DEVELOPMENT CORPORATION		
3. Address of Operator	12700 Park Central Pl., Suite 1500, Dallas, TX 75251		
4. Location of Well**	UNIT LETTER <u>C</u> LOCATED <u>1100</u> FEET FROM THE <u>NORTH</u> LINE AND <u>2100</u> FEET FROM THE <u>WEST</u> LINE OF SEC. <u>9</u> TWP. <u>11N.</u> RGE. <u>1E.</u> NMPM		

19. Proposed Depth	500 ft	19A. Formation	unknown	20. Rotary or C.T.	rotary
21. Elevations (Show whether DF, RT, etc.)	5880 ft (GL)	21A. Kind & Status Plug. Bond	see note "A"	21B. Drilling Contractor	Geothermal Services
				22. Approx. Date Work will start	Oct. 1, 1976

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
5-1/8"	3/4"	1.14#	500'	1.5	6" BGL

Program- See attached "Standard Shallow Temperature Gradient Hole Drilling Program".

Note A - Type of bond will be "\$10,000 Multiple-Well Low-Temperature Well or Geothermal Observation Well Bond". Bond is in the process of being filed; a bond number will be furnished as soon as available before operations commence.

** - Section lines projected

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.

Signature: [Signature] Title: Chief Geologist, Geothermal Services, Inc. Date: Sept. 1, 1976

(This space for State Use)

APPROVED BY: Carl Ulvog TITLE: SENIOR PETROLEUM GEOLOGIST DATE: 9/27/76

CONDITIONS OF APPROVAL, IF ANY:

GEOHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT

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

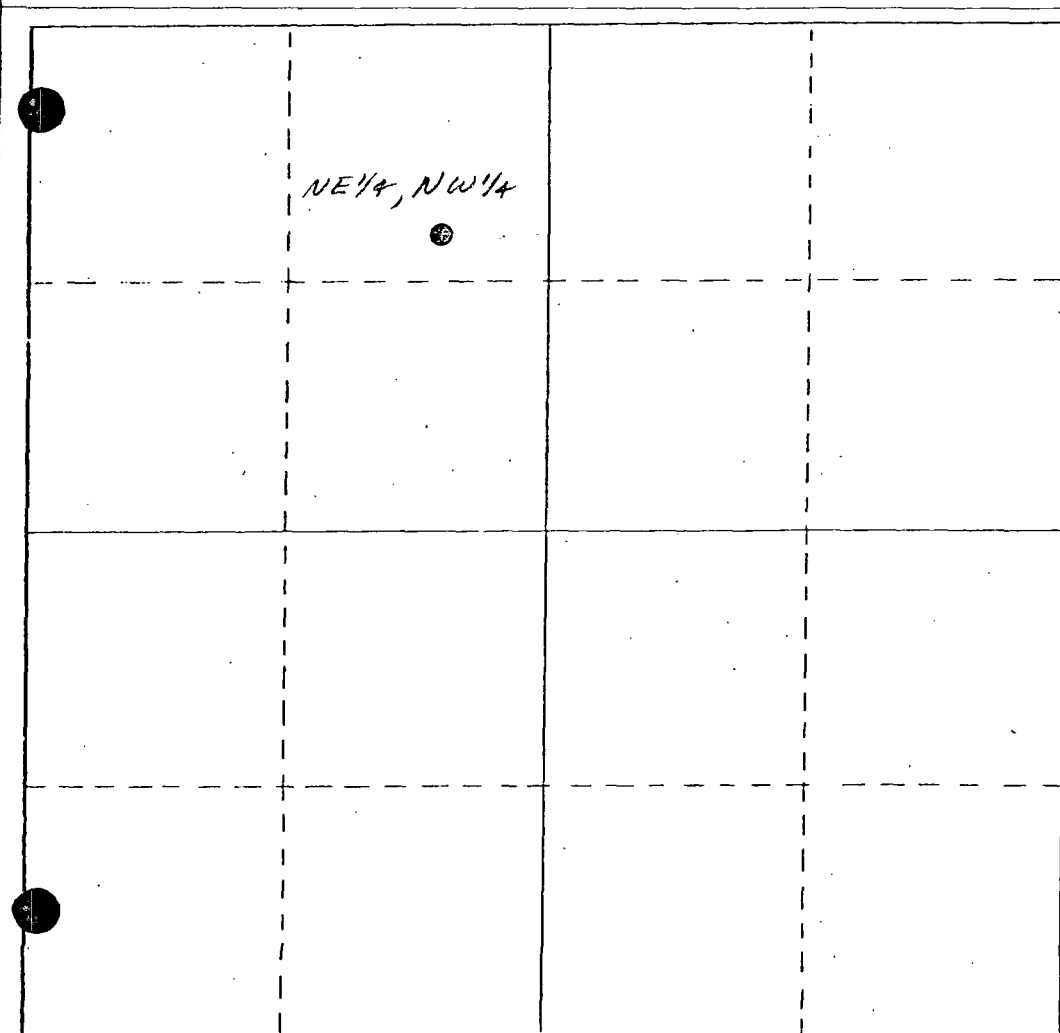
Operator Sunoco Energy Development Corp.		Lease Alameda Grant		Well No. 10-76-5	
Section Letter C	Section 9	Township 11N.	Range 1E.	County Bernalillo	
Actual Footage Location of Well: 1,100 feet from the North line and 2,100 feet from the West line					
Ground Level Elev. 5,880	Producing Formation None	Pool None		Dedicated Acreage: None Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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? .

☐ 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.

Steve Quiett

Name
Steve Quiett

Position
Chief Geologist

Company
Geothermal Services, Inc.

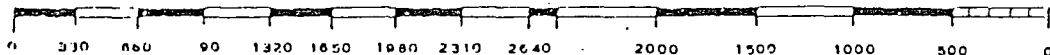
Date
September 1, 1976

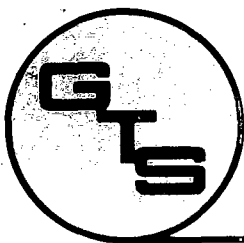
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed _____

Registered Professional Engineer and/or Land Surveyor _____

Certificate No. _____





GEOThermal SERVICES, INC.

7860 CONVOY COURT, SAN DIEGO, CALIFORNIA 92111 • (714) 565-4712

STANDARD SHALLOW TEMPERATURE GRADIENT HOLE DRILLING PROGRAM (500'/150m; Rubber Tired Equipment; Rotary/Mud)

1. Coordinate "Special Stipulations" or other unusual requirements with the Project Geologist prior to set-up and spud.
2. Choose location and orientation of drilling rig so as to minimize surface disturbance.
3. Drill 4" to 6" hole to maximum depth of 500'/150m. Take cuttings samples, cores, etc. at direction of Project Geologist.
4. If drilling with mud, use regular Bentonite drilling mud. No toxic additives are to be used in drilling fluids without permission of Project Geologist. Have supply of lost circulation material available. Use portable mud pits unless specifically directed otherwise.
5. Have a supply of Barite available in case of artesian flow. If artesian flow is encountered, comply with United States Geological Survey's Stipulations.
6. Mud return temperature shall be measured and recorded on "Drilling History" every 10'/3m.
 - a. If temperature reaches 120°F/50°C, STOP DRILLING and circulate for 30 minutes, monitoring mud temperature and pit volume for possible hot artesian flow. If no flow, run pipe at this depth after logging is completed.
 - b. If there is a sudden increase in temperature of the drilling mud (several degrees in only a few feet) STOP DRILLING and circulate for 30 minutes, monitoring mud temperature and pit volume for possible hot artesian flow. If no flow, continue drilling CAUTIOUSLY, keeping a careful watch on return temperature of drilling fluid. In no case shall drilling continue after mud return temperature reaches 120°F/50°C.

7. Run pipe immediately after running electric logs or reaching T.D. (if hole is not logged).
 - a. Install cap on bottom of first length of pipe. (If using steel pipe, seal each joint with teflon tape to ensure watertight).
 - b. Steel pipe must be used when air temperature is 40°F or below, as PVC cement will not adhere.
 - c. Steel pipe must be used if drilling fluid temperature exceeds 100°F/40°C.
 - d. When pipe is landed, top must be 6" to 12"/15cm to 30cm below ground level. (Cut and thread as necessary).
 - e. Fill pipe with CLEAN WATER (water that is oily or contains solvents such as gasoline MUST NOT be used) and install cap. Do not seal.
 - f. Set paper, rag or dirt bridge down open annulus at least 10'/3m below ground level. Fill annulus with cement up to base of cap on pipe.
8. Clean up location THOROUGHLY.
9. Any excavated pits or sumps must be backfilled to conform to the original topography.
10. When temperature surveys are completed, fill pipe with cement from 10'/3m to top of pipe, fill excavation to original ground topography and restore location as nearly as possible to original condition.

007-21570

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NEW MEXICO OIL CONSERVATION COMMISSION
P. O. Box 2088, Santa Fe 87501SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS

5. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5.a State Lease No.

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"/>	7. Unit Agreement Name NONE
2. Name of Operator SUNOCO ENERGY DEVELOPMENT CORPORATION	8. Farm or Lease Name -
3. Address of Operator 12700 PARK CENTRAL PLACE, SUITE 1500, DALLAS, TX 75251	9. Well No. 3
4. Location of Well Unit Letter L 2200 Feet From The SOUTH Line and 700 Feet From The WEST Line, Section 26 Township 11N. Range 1E. NMPM.	10. Field and Pool, or Wildcat NONE
15. Elevation (Show whether DF, RT, GR, etc.) 5850' (G.L.)	12. County Bernalillo

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	
PULL OR ALTER CASING <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>
OTHER <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG & ABANDONMENT <input type="checkbox"/>
CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER <input type="checkbox"/>	

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.

This hole location was dropped from our drilling program and will not be drilled in the near future.

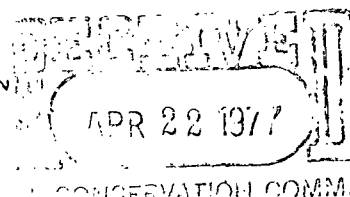
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Barry Williams PROJECT SUPERVISOR
TITLE GEOTHERMAL SERVICES, INC. DATE 9-10-78APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 10-3-78

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
P. O. Box 2088, Santa Fe 87501SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS

NO. OF COPIES RECEIVED	2
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File	1
N. M. B. M.	
S. G. S.	
Operator	1
Land Office	

5. Indicate Type of Lease
State ☐ Fee ☒
5.a State Lease No.

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"/>	7. Unit Agreement Name none
2. Name of Operator SUNOCO ENERGY DEVELOPMENT CORPORATION	8. Farm or Lease Name Town of Atrisco Grant
3. Address of Operator 12700 Park Central Place., Suite 1500, Dallas, TX 75251	9. Well No. 10-76-3
4. Location of Well Unit Letter <u>L</u> <u>2200</u> Feet From The <u>South</u> Line and <u>700</u> Feet From The <u>West</u> Line, Section <u>26</u> Township <u>11N</u> Range <u>1E</u> NMPM.	10. Field and Pool, or Wildcat none
15. Elevation (Show whether DF, RT, GR, etc.) 5850 ft. (GL)	12. County Bernalillo

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐ CHANGE PLANS ☒
OTHER ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG & ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐
OTHER ☐

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.

The drilling of Temperature Observation Well has been postponed until Mid-1977. Anticipated start-up date will be August 1, 1977. We will notify your office approximately two weeks prior to equipment move-in; until then this project is on inactive status.

APPROVAL VALID
180 DAYS UNLESS
DRILLING COMMENCED

EXPIRES 10/19/77

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

SIGNED [Signature] TITLE Chief Geologist, DATE 4/20/77

Geothermal Services, Inc.

APPROVED BY Carl Ulvog

TITLE SENIOR PETROLEUM GEOLOGIST

DATE 4/22/77

CONDITIONS OF APPROVAL, IF ANY:

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File	<input checked="" type="checkbox"/>
B.M.	<input type="checkbox"/>
U.S.G.S.	<input type="checkbox"/>
Operator	<input type="checkbox"/>
Land Office	<input type="checkbox"/>

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

SEP - 8 1976

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

5. Indicate Type of Lease ***

STATE ☐FEE ☒

5.a State Lease No.

1a. Type of Work	Drill <input checked="" type="checkbox"/>	Deepen <input type="checkbox"/>	Plug Back <input type="checkbox"/>
b. Type of Well	Geothermal Producer <input type="checkbox"/>	Temp Observation <input checked="" type="checkbox"/>	Injection/Disposal <input type="checkbox"/>
2. Name of Operator	SUNOCO ENERGY DEVELOPMENT CORPORATION		
3. Address of Operator	12700 Park Central Pl., Suite 1500, Dallas, TX 75251		
4. Location of Well	UNIT LETTER <u>L</u> LOCATED <u>2200</u> FEET FROM THE <u>SOUTH</u> LINE AND <u>700</u> FEET FROM THE WEST LINE OF SEC. 26 TWP. 11N. RGE. 1E. NMPM		

7. Unit Agreement Name

none

8. Farm or Lease Name

9. Well No.

10-76-3

10. Field and Pool, or Wildcat

none

12. County

BERNALILLO

19. Proposed Depth	500 ft	19A. Formation	unknown	20. Rotary or C.T.	rotary
21. Elevations (Show whether DF, RT, etc.)	5850 ft (GL)	21A. Kind & Status Plug. Bond	see note "A"	21B. Drilling Contractor	Geothermal Services
				22. Approx. Date Work will start	Oct. 1, 1976

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
5-1/8"	3/4"	1.14#	500'	1.5	6" BGL

Program- See attached "Standard Shallow Temperature Gradient Hole Drilling Program".

*** - Surface is fee land, minerals are held by BLM.

"Notice of Intent" will be filed with appropriate BLM office.

Note A- Type of bond will be "\$10,000 Multiple-Well Low-Temperature Well or Geothermal Observation Well Bond". Bond is in the process of being filed; a bond number will be furnished as soon as available before operations commence.

Quad 41

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 Steve Jones Title Chief Geologist, Services, Inc Date Sept. 1, 1976

(This space for State Use)

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 9/27/76

CONDITIONS OF APPROVAL, IF ANY:

GEOTHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT

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

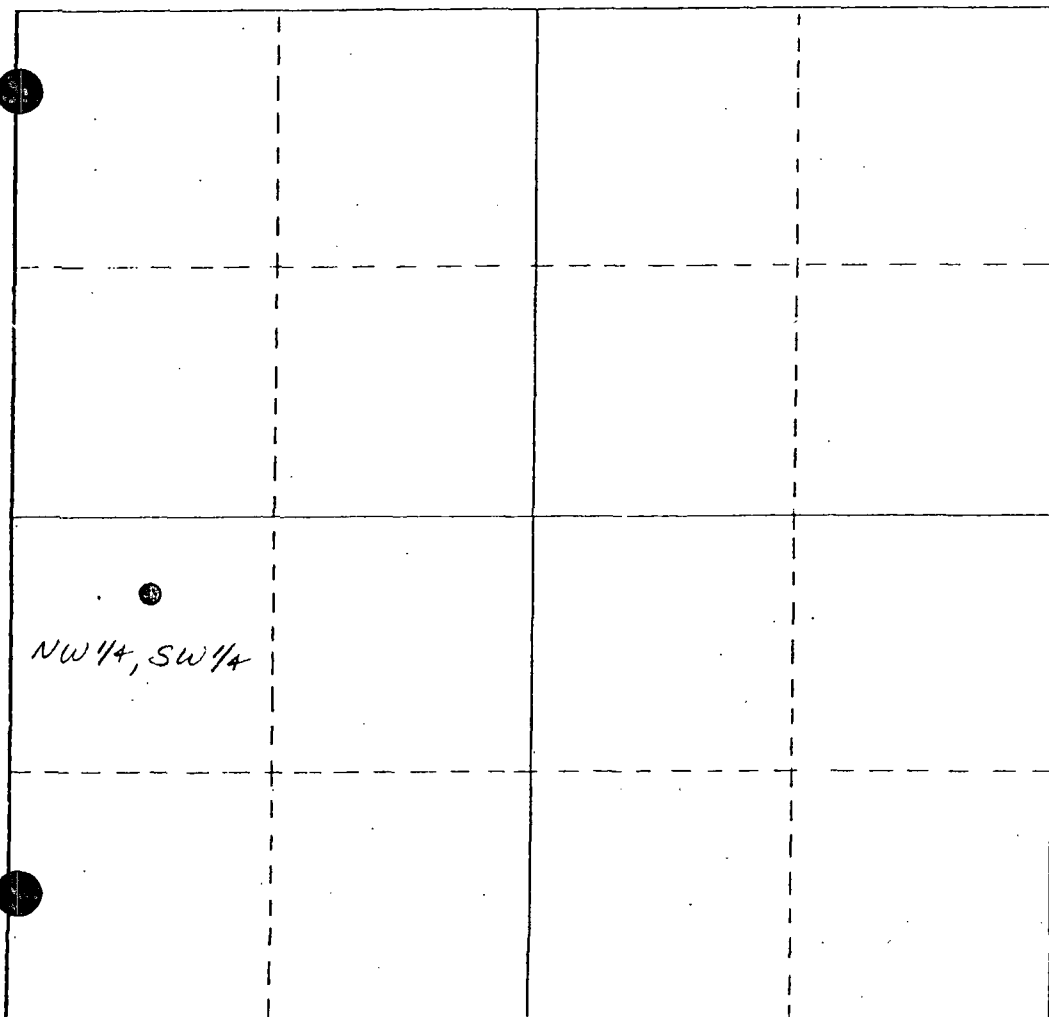
Operator Sunoco Energy Development Corp.		Lease		Well No. 10-76-3	
Section Letter L	Section 26	Township 11N.	Range 1E.	County Bernalillo	
Actual Footage Location of Well: 2,200 feet from the South line and 700 feet from the West line					
Ground Level Elev. 5,850 ft.	Producing Formation None	Pool None		Dedicated Acreage: None Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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?

☐ 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.

Steve Quiett

Name
Steve Quiett

Position
Chief Geologist

Company
Geothermal Services, Inc

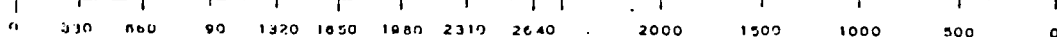
Date
September 1, 1976

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.





GEO THERMAL SERVICES, INC.

7860 CONVOY COURT, SAN DIEGO, CALIFORNIA 92111 • (714) 565-4712

STANDARD SHALLOW TEMPERATURE GRADIENT HOLE DRILLING PROGRAM (500'/150m; Rubber Tired Equipment; Rotary/Mud)

1. Coordinate "Special Stipulations" or other unusual requirements with the Project Geologist prior to set-up and spud.
2. Choose location and orientation of drilling rig so as to minimize surface disturbance.
3. Drill 4" to 6" hole to maximum depth of 500'/150m. Take cuttings samples, cores, etc. at direction of Project Geologist.
4. If drilling with mud, use regular Bentonite drilling mud. No toxic additives are to be used in drilling fluids without permission of Project Geologist. Have supply of lost circulation material available. Use portable mud pits unless specifically directed otherwise.
5. Have a supply of Barite available in case of artesian flow. If artesian flow is encountered, comply with United States Geological Survey's Stipulations.
6. Mud return temperature shall be measured and recorded on "Drilling History" every 10'/3m.
 - a. If temperature reaches 120°F/50°C, STOP DRILLING and circulate for 30 minutes, monitoring mud temperature and pit volume for possible hot artesian flow. If no flow, run pipe at this depth after logging is completed.
 - b. If there is a sudden increase in temperature of the drilling mud (several degrees in only a few feet) STOP DRILLING and circulate for 30 minutes, monitoring mud temperature and pit volume for possible hot artesian flow. If no flow, continue drilling CAUTIOUSLY, keeping a careful watch on return temperature of drilling fluid. In no case shall drilling continue after mud return temperature reaches 120°F/50°C.

7. Run pipe immediately after running electric logs or reaching T.D. (if hole is not logged).
 - a. Install cap on bottom of first length of pipe. (If using steel pipe, seal each joint with teflon tape to ensure watertight).
 - b. Steel pipe must be used when air temperature is 40°F or below, as PVC cement will not adhere.
 - c. Steel pipe must be used if drilling fluid temperature exceeds 100°F/40°C.
 - d. When pipe is landed, top must be 6" to 12"/15cm to 30cm below ground level. (Cut and thread as necessary).
 - e. Fill pipe with CLEAN WATER (water that is oily or contains solvents such as gasoline MUST NOT be used) and install cap. Do not seal.
 - f. Set paper, rag or dirt bridge down open annulus at least 10'/3m below ground level. Fill annulus with cement up to base of cap on pipe.
8. Clean up location THOROUGHLY.
9. Any excavated pits or sumps must be backfilled to conform to the original topography.
10. When temperature surveys are completed, fill pipe with cement from 10'/3m to top of pipe, fill excavation to original ground topography and restore location as nearly as possible to original condition.