

GTLT - _____9_____

**(1-28)-17N-2E
Sunoco Energy
Development Corporation
(Sandoval County)**

**4-J(PA); 7-A(PA); 6-E(PA)
& 12-G**

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

SEP 18 1978

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 <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 SAN DIEGO GRANT
3. Address of Operator 12700 PARK CENTRAL PLACE, SUITE 1500, DALLAS, TX 75251	9. Well No. 4
4. Location of Well Unit Letter J 1400 Feet From The SOUTH Line and 2300 Feet From The EAST Line, Section 1 Township 17N. Range 2E. NMPM.	10. Field and Pool, or Wildcat NONE
15. Elevation (Show whether DF, RT, GR, etc.) 2300 (G.L.)	12. County SANDOVAL

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 was abandoned by: a) cutting off the 3/4" pipe below ground level; b) cementing the top 10' of the pipe and annulus; c) covering the hole with soil and, d) restoring the site as nearly as possible to its original condition.

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

SIGNED Berry Williams TITLE PROJECT SUPERVISOR
GEOTHERMAL SERVICES, INC. DATE 9/10/78APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 9/20/78

CONDITIONS OF APPROVAL, IF ANY:

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NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

MAY -3 1977

APPLICATION FOR PERMIT TO DRILL, DEEPENATION OF
OR PLUG BACK--GEOTHERMAL RESOURCES WELLS TO

5. Indicate Type of Lease

STATE ☐FEE ☒

5.a State Lease No.

BLM

1a. Type of Work Drill <input checked="" type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/>	7. Unit Agreement Name None		
b. 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"/>	8. Farm or Lease Name San Diego Grant		
2. Name of Operator SUNOCO ENERGY DEVELOPMENT CORPORATION	9. Well No. 3-77-4		
3. Address of Operator 12700 Park Central Pl., Suite 1500, Dallas, TX 75251	10. Field and Pool, or Wildcat None		
4. Location of Well UNIT LETTER <u>J</u> LOCATED <u>1400</u> FEET FROM THE <u>South</u> LINE AND <u>2300</u> FEET FROM THE <u>E</u> LINE OF SEC. <u>1</u> TWP. <u>17N</u> RGE. <u>2E</u> NMPM <u>projected</u>	12. County Sandoval		
19. Proposed Depth 500 ft.	19A. Formation unknown	20. Rotary or C.T. rotary	
21. Elevations (Show whether DF, RT, etc.) 7360 (GL)	21A. Kind & Status Plug. Bond see note "A"	21B. Drilling Contractor Geothermal Services	22. Approx. Date Work will start June 15, 1977

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 lbs.	500'	1.5	6" BGL

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

**- All section lines projected

Note A- Type of bond will be \$10,000 multiple-well low-temperature
well or geothermal observation well bond. The bond is in
the process of being filed, and a bond number will be
furnished as soon as available before operations commence.

Active - 12/12/77

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED.EXPIRES 8/11/77ON 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 Chief Geologist, Services, Inc. Date April 26, 1977

(This space for State Use)

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 5/13/77

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 San Diego Grant		Well No. 3-77-4
Unit Letter J	Section 1	Township 17N	Range 2E	County Sandoval
Actual Footage Location of Well: 1400 feet from the projected S line and 2300 feet from the E line (projected)				
Ground Level Elev. 7360'	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.

Hole #3-77-4 to be located:

SW1/4NW1/4SE1/4, sec.1, T.17N,R.2E

CERTIFICATION

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

Name

Steve Quiett

Position

Chief Geologist

Company

Geothermal Services, Inc.

Date

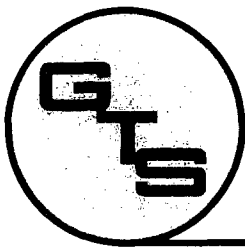
April 26, 1977

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.

GEO THERMAL SERVICES, INC.
San Diego, California
December, 1975

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NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box, 2088, Santa Fe 87501

SUNDRY NOTICES AND REPORTS
ON
GEOHERMAL RESOURCES WELLS

NOV - 7 1977

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 San Diego Grant
3. Address of Operator 12700 Park Central Pl., Suite 1500, Dallas, TX 75251	9. Well No. 3-77-7
4. Location of Well Unit Letter <u>A</u> , <u>200</u> Feet From The <u>N.</u> Line and <u>450</u> Feet From The <u>E.</u> Line, Section <u>14</u> Township <u>17N.</u> Range <u>2E.</u> NMPM.	10. Field and Pool, or Wilocat None
15. Elevation (Show whether DF, RT, GR, etc.) <u>7100' (GL)</u>	12. County Sandoval

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"/>	CHANGE PLANS <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>

SUBSEQUENT REPORT OF:

REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
COMMENCE DRILLING OPNS. <input checked="" 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.

On 10/25/77 Hole No. 3-77-7 was spudded at 8:00 AM PMThe hole was T.D.'d on 10/28/77 @ 380 BGL

18. 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 11/3/77
Geothermal Services, Inc.

APPROVED BY _____ TITLE _____ DATE _____

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

SEP 18 1978

SUNDRY 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
NONE2. Name of Operator
SUNOCO ENERGY DEVELOPMENT CORPORATION8. Farm or Lease Name
SAN DIEGO GRANT3. Address of Operator
12700 PARK CENTRAL PLACE, SUITE 1500, DALLAS, TX 752519. Well No.
74. Location of Well
Unit Letter A 200 Feet From The NORTH Line and 450 Feet From
The EAST Line, Section 14 Township 17N. Range 2E. NMPM.10. Field and Pool, or Wildcat
NONE15. Elevation (Show whether DF, RT, GR, etc.)
7100' (G.L.)12. County
SANDOVAL

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 was abandoned by: a) cutting off the 3/4" pipe below ground level; b) cementing the top 10' of the pipe and annulus; c) covering the hole with soil and, d) restoring the site as nearly as possible to its original condition.

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

SIGNED Barry Williams TITLE PROJECT SUPERVISOR
GEOTHERMAL SERVICES, INC. DATE 9/10/78APPROVED BY Carl Uluog TITLE SENIOR PETROLEUM GEOLOGIST DATE 9/20/78

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NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

MAY - 3 1977

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

5. Indicate Type of Lease

STATE ☐FEE ☒

5.a State Lease No.

BLM

1

1a. Type of Work	Drill <input checked="" type="checkbox"/>	Deepen <input type="checkbox"/>	Plug Back <input type="checkbox"/>	7. Unit Agreement Name	None
b. Type of Well	Geothermal Producer <input type="checkbox"/>	Temp Observation <input checked="" type="checkbox"/>	Injection/Disposal <input type="checkbox"/>	8. Farm or Lease Name	San Diego Grant
2. Name of Operator	SUNOCO ENERGY DEVELOPMENT CORPORATION			9. Well No.	3-77 7
3. Address of Operator	12700 Park Central Pl., Suite 1500, Dallas, TX 75251			10. Field and Pool, or Wildcat	None
4. Location of Well	UNIT LETTER <u>A</u> LOCATED <u>200</u> FEET FROM THE <u>North</u> LINE AND <u>450</u> FEET FROM THE <u>E</u> LINE OF SEC. <u>14</u> TWP. <u>17N</u> RGE. <u>2E</u> NMPM <u>projected</u>			12. County	Sandoval
19. Proposed Depth	500 ft.	19A. Formation	unknown	20. Rotary or C.T.	rotary
21. Elevations (Show whether DF, RT, etc.)	7100' (GL)	21A. Kind & Status Plug. Bond	see note "A"	21B. Drilling Contractor	Geothermal Services
22. Approx. Date Work will start	June 15, 1977				

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 lbs.	500'	1.5	6" BGL

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

**- All section lines projected

Note A- Type of bond will be \$10,000 multiple-well low-temperature well or geothermal observation well bond. The bond is in the process of being filed, and a bond number will be furnished as soon as available before operations commence.

Active 12/12

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED.

EXPIRES 8/11/77

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 Luedtke Title Chief Geologist, Services, Inc. Date April 26, 1977

(This space for State Use)

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 5/13/77
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 San Diego Grant		Well No. 3-77-7
Unit Letter A	Section 14	Township 17N	Range 2E	County Sandoval
Actual Footage Location of Well: 200 feet from the projected N line and 450 feet from the E line (projected)				
Ground Level Elev. 7100'	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.

Hole #3-77-7 to be located:
NE1/4NE1/4NE1/4, sec.14, T.17N, R.2E

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

April 26, 1977

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 logging electric logs or reaching T.D. (if not logged).
 - a. Install cement seal on first length of pipe. (If using cement, seal each joint with teflon tape or sealant).
 - b. Steel pipe must be installed when air temperature is 40°F or lower, or cement will not adhere.
 - c. Steel pipe must be installed if drilling fluid temperature is 100°F or lower.
 - d. When pipe is installed, it must be 6" to 12"/15cm to 30cm below ground level. (Cut and thread as required).
 - e. Fill pipe with FLEETMASTER (water that is oily or contains kerosene or gasoline MUST NOT be used) and install cap. Do not seal.
 - f. Set paper or other material down open annulus at least 1/2 way below ground level. Fill annulus with cement up to base of cap on pipe.
8. Clean up location.
9. Any excavated pits or mounds must be backfilled to conform to the original topography.
10. When temperature logs are completed, fill pipe with cement from 10' to top of pipe, fill excavation to original ground topography and restore location as nearly as possible to original condition.

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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 <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"/>
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>E</u> , <u>900</u> Feet From The <u>W</u> Line and <u>1800</u> Feet From The <u>N</u> Line, Section <u>15</u> Township <u>17N</u> Range <u>2E</u> NMPM.	

7. Unit Agreement Name
None
8. Farm or Lease Name
San Diego Grant
9. Well No.
3-77-6
10. Field and Pool, or Wilocat
None

15. Elevation (Show whether DF, RT, GR, etc.)
5900 G.L.

12. County
Sandoval

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 type="checkbox"/>
OTHER	<input type="checkbox"/>		

SUBSEQUENT REPORT OF:

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

On 8/12/77 Hole No. 3-77-6 was spudded at 2:30 AM PMThe hole was T.D.'d on 8/15/77 @ 320 ' BGL

OK - Inspected

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

SIGNED Steve Lueck TITLE Chief Geologist DATE 8/13/77
Geothermal Services, Inc.APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 8/16/77

CONDITIONS OF APPROVAL, IF ANY:

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Operator	1
Land Office	

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

MAY -3 1977

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

5. Indicate Type of Lease

COMM. ☐
STATE ☐FEE ☒

5.a State Lease No.

7. Unit Agreement Name

None

8. Farm or Lease Name

San Diego Grant

9. Well No.

3-77-6

10. Field and Pool, or Wildcat

None

12. County

Sandoval

1a. Type of Work

Drill ☒Deepen ☐Plug Back ☐

b. 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 Pl., Suite 1500, Dallas, TX 75251

4. Location of Well **

UNIT LETTER E LOCATED 900 FEET FROM THE West LINEAND 1800 FEET FROM THE N LINE OF SEC. 15 TWP. 17N RGE. 2E NMPM

projected

19. Proposed Depth

500 ft.

19A. Formation

unknown

20. Rotary or C.T.

rotary

21. Elevations (Show whether DF, RT, etc.)

5900 (GL)

21A. Kind & Status Plug. Bond

see note "A"

21B. Drilling Contractor

Geothermal Services

22. Approx. Date Work will start

June 15, 1977

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 lbs.	500'	1.5	6" BGL

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

**- All section lines projected

Note A- Type of bond will be \$10,000 multiple-well low-temperature well or geothermal observation well bond. The bond is in the process of being filed, and a bond number will be furnished as soon as available before operations commence.

APPROVAL
FOR 90 DAYS UNLESS
DRILLING COMMENCED

EXPIRES 8/11/77

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

Title Chief Geologist, Services, Inc.

Date April 26, 1977

(This space for State Use)

APPROVED BY

Carl Ulvog

TITLE

SENIOR PETROLEUM GEOLOGIST

DATE

5/13/77

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 San Diego Grant		Well No. 3-77-6
Unit Letter E	Section 15	Township 17N	Range 2E	County Sandoval	
Actual Footage Location of Well: 900 feet from the projected W line and 1800 feet from the N line (projected)					
Ground Level Elev. 5900'	Producing Formation None		Pool None	Dedicated Acreage: None Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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.

Hole #3-77-6 to be located:
NE1/4SW1/4NW1/4, sec.15,T.17N,R.2E

CERTIFICATION

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

Name

Steve Quiett

Position

Chief Geologist

Company

Geothermal Services, Inc.

Date

April 26, 1977

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 logging electric logs or reaching T.O. (if necessary, log first).

 - a. Install pipe in hole, first length of pipe. (If using pipe, seal each joint with teflon tape, ensure airtight).
 - b. Steel pipe must be set when air temperature is 40°F or higher, as cement will not adhere.
 - c. Steel pipe must be set if drilling fluid temperature is 100°F or higher.
 - d. When pipe is in hole, must be 6" to 12" / 15cm to 30cm above ground level. (Cut and thread as necessary).
 - e. Fill pipe with LEAK STOPPER (water that is oily or containing solvents such as gasoline MUST NOT be used) to top of pipe. Do not seal.
 - f. Set pipe in hole, bridge down open annulus at least 10" below ground level. Fill annulus with cement up to top of cap on pipe.

8. Clean up location.
9. Any excavated pits or ramps must be backfilled to conform to the original topography.
10. When temperature logs are completed, fill pipe with cement from 10' / 5m top of pipe, fill excavation to original ground topography. Restore location as nearly as possible to original condition.

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

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 <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"/>
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>G₂</u> <u>2400</u> Feet From The <u>E</u> Line and <u>2400</u> Feet From The <u>N</u> Line, Section <u>28</u> Township <u>17N</u> Range <u>2E</u> NMPM.		

7. Unit Agreement Name None
8. Farm or Lease Name San Diego Grant
9. Well No. 3-77-12
10. Field and Pool, or Wilcat None

15. Elevation (Show whether DF, RT, GR, etc.) 5700 GL
--

12. County Sandoval

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 type="checkbox"/>
OTHER <input type="checkbox"/>	

SUBSEQUENT REPORT OF:

REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
COMMENCE DRILLING OPNS. <input checked="" 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.

On 8/9/77 Hole No. 3-77-12 was spudded at 9:00 AM PMThe hole was T.D.'d on 8/12/77 @ 280 ' BGL

OK - Inspected

18. 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 8/13/77

Geothermal Services, Inc.

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 8/16/77

CONDITIONS OF APPROVAL, IF ANY:

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Operator	/
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NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

MAY -3 1977

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

5. Indicate Type of Lease
STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
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"/>
Low-Temp Thermal <input type="checkbox"/>			

7. Unit Agreement Name
None
8. Farm or Lease Name
San Diego Grant

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>G</u> LOCATED <u>2400</u> FEET FROM THE <u>East</u> LINE
AND <u>2400</u> FEET FROM THE <u>N</u> LINE OF SEC. <u>28</u> TWP. <u>17N</u> RGE. <u>2E</u> NMPM

9. Well No.
3-77-12
10. Field and Pool, or Wildcat
None

projected

12. County
Sandoval

19. Proposed Depth	500 ft.	19A. Formation	unknown	20. Rotary or C.T.	rotary
21. Elevations (Show whether DF, RT, etc.)	5700 (GL)	21A. Kind & Status Plug. Bond	see note "A"	21B. Drilling Contractor	Geothermal Services
				22. Approx. Date Work will start	June 15, 1977

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 lbs.	500'	1.5	6" BGL

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

** - All section lines projected

Note A- Type of bond will be \$10,000 multiple-well low-temperature well or geothermal observation well bond. The bond is in the process of being filed, and a bond number will be furnished as soon as available before operations commence.

APPROVAL VALID.
FOR 90 DAYS UNLESS
DRILLING COMMENCED.

EXPIRES 8/11/77

ON 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 Chief Geologist, Services, Inc. Date April 26, 1977

(This space for State Use)

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 5/13/77

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 San Diego Grant		Well No. 3-77-12
Unit Letter G	Section 28	Township 17N	Range 2E	County Sandoval	
Actual Footage Location of Well: 2400 feet from the projected E line and 2400 feet from the N line (projected)					
Ground Level Elev. 5700'	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.

Hole #3-77-12 to be located:
SW1/4SW1/4NE1/4, sec.28, T.17N, R.2E

CERTIFICATION

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

Name

Steve Quiett

Position

Chief Geologist

Company

Geothermal Services, Inc.

Date

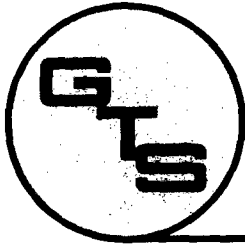
April 26, 1977

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.