GTLT - ____9___

(12-21)-2S-3W Sunoco Energy Development Corporation (Socorro County)

5-77-4; 5-77-3; 5-77-2 & 5-77-7

NO. OF COPIES RECEIVED	NEW MEXICO OIL CONSERVATION COMMISSION	
DISTRIBUTION	P. O. Box 2088, Santa Fe 87501	
File	•	
N. M. B. M.	SUNDRY NOTICES AND REPORTS	
. G. S	ON	5. Indicate Type of Lease
Operator	GEOTHERMAL RESOURCES WELLS	State Fee X
Land Office .		5.a State Lease No.
	· · · · · · · · · · · · · · · · · · ·	
Do Not Use This Form for Proposals to I	Drill or to Deepen or Plug Back to a Different Reservoir. Use "Application	
For Permit —" (Form G-101) for Such Pr		
1. Type of well Geothermal Produc	cer Temp. Observation K	7. Unit Agreement Name
Low-Temp Therma	I Injection/Disposal	None
2. Name of Operator		8. Farm or Lease Name
Sunoco Energy D	evelopment Corporation	
3. Address of Operator		9. Well No.
12700 Park Cent	ral Pl., Suite 1500, Dallas, TX 75251	5-77-4
4. Location of Well		10. Field and Pool, or Wildcat
Unit Letter P, 200	Feet From The S_ullet Line and 400 Feet From	None
The E Line, Section	12 Township 2S. Range 3W. NMPN	
	·	
	15. Elevation (Show whether DF, RT, GR, etc.)	12. County
	5850' G.L.	Socorro
16. Check	Appropriate Box To Indicate Nature of Notice, Report or Other D	
	1	
NOTICE OF INTEN		ENT REPORT OF:
TEMPORARILY ABANDON .		☐ ALTERING CASING
	COMMENCE DRILLING OPNS. CHANGE PLANS CASING TEST AND CEMENT JO	☐ PLUG & ABANDONMENT
PULL OR ALTER CASING	CHANGE PLANS LA CASING TEST AND CEMENT JO	В
	OTHER	
OTHER	· п	
•		
17. Describe Proposed or completed Op	erations (Clearly state all pertinent details, and give pertinenet dates, inc	luding estimated date of starting any
proposed work) SEE RULE 203.		
		· · · · · · · · · · · · · · · · · · ·
The ref	erenced temperature observation well have	as been
	· · · · · · · · · · · · · · · · · · ·	
dropped	from the drilling program and will no	t be
drilled	. The site has not been occupied by a	ny ·
dmillin		,
aritin	g equipment.	·
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T 31 19	77	
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Company of the Compan	(;)	
Children	· Olym	·
<i>م</i> ن		
hereby certify that the information :	above is true and complete to the best of my knowledge and belief.	
SIGNED AUTO VILL	TITLE VICE PRESIDENT	DATE10/25/77
	Geothermal Services,	
	doomerman berviees,	/
APPROVED BY Carl Ulu	TITLE SENIOR PETROLEUM GEOLOGIST	DATE 11/22/77

CONDITIONS OF APPROVAL, IF ANY:

al.h.	•					25,177.	N 12
NO. OF COPIES REC	·	NEV	W MEXICO OIL CONSER		MA KPF	25:07	Adopted 10/1/
DISTRIBUTION File N.N.	1 /		P. O. Box 2088, Sa	•	3		Type of Lease
U.S.O.S. Operator Land Office		1		IT TO DRILL, DEEPEN MAL RESOURCES WE		STATE	
BLM							
1a. Type of Work	Drill 🖾	l	Deepen 🗆	Plug Back		7. Unit Agre	eement Name
b. Type of Well	Geothermal F Low-Temp Th			emp Observation X ection/Disposal		8. Farm or I	
2. Name of Operator SUNOCO	ENERGY DE	VELOPMENT	CORPORATION			9. Well No.	-77∋ 4
3. Address of Operato	or .		uite 1500, Da	ıllas, Texas	75251	10. Field and	d Pool, or Wildcat
4. Location of Well AND 400 FE	·	P LOCAT	SEC. $f 12$ TWP. $f 2$	ROM THE South	LINE		
						12. County Socorr	
				9. Proposed Depth 1	9A. Formatio		20. Rotary or C.T.
				500 ft	unknov		rotary
21. Elevations (Show to 5850	whether DF, RT, ft (GL.)		1 & Status Plug. Bond 2 note "A" G	11B. Drilling Contractor Seothermal Ser	vices	22. Approx May	x. Date Work will start 10, 1977
		P	ROPOSED CASING AND	CEMENT PROGRAM			- 74
SIZE OF HOLE	E SIZ	E OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF		EST. TOP
5-1/8"		3/4"	1.14#	500 '	1.5) · · ·	6" BGL
						,	
	Pr		ee attached " ole Drilling	Standard Shal Program".	low Ten	peratu	re Gradient
Quad (To Bo a	emperature We ond". Bond i bond number	vill be "\$10,0 ell or Geother s in the proc will be furni ons commence.	mal Obs	servation being	on Well filed;
(Vua.		D.	store operati	ons commentee.	FOR 90 DRILLING	DAYS UNLE COMMENC	CED.
				EΣ	KPIRES	/11/7	7
ie. Give blowout preve	enter program, if	any.		plug back, give data on pi	resent produc	tive zone and	proposed new productive
eret ertify that the	information abov	e is true and comp	olete to the best of my kn Title Chief Geole	nowledge and belief. Geother ogist,Service		ate_Apri.	l 18, 1977
(This s	space for State Us	se j					
ROVED BY	serl Ul	vog	TITLE SENIOR PETR	ROLEUM GEOLOGIST	D/	ATE	13/77

PEROVED BY COURT ULVOG

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. BOX 2088 SANTA FE 87501 GEOTHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION BI All distances must be from the outer boundaries of the Section Lease Sunoco Energy Development Corp. Township Range Section Letter Socorro 12 Actual Footage Location of Well: 200 feet from the South 400 East feet from the line and Dedicated Acreage: Producing Formation Ground Level Elev. Pool 5850' None None 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 rovalty). 3. If more than one lease of different ownersip is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc? ☐ 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 Hole #5-77+4 to be located: Chief Geologist SE1/4SE1/4\$E1/4, sec.12, T.2S, R.3W Geothermal Services, Ind April 18, 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

1320 1650 - 1980 2310

2000

1500

1000

500

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 <u>CLEAN</u> <u>WATER</u> (water that is oily or contains solvents such as gasoline <u>MUST</u> <u>NOT</u> 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.

NO. OF COPIES RECEIVED	NEW MEXICO OIL CONSERVATION COMMISSION	
DISTRIBUTION	P. O. Box 2088, Santa Fe 87501	
File / /		
N. M. B. M.	SUNDRY NOTICES AND REPORTS	
. G. S	ON	5. Indicate Type of Lease
Operator	GEOTHERMAL RESOURCES WELLS	State Lease No.
Land Office		S.a State Lease 110.
		minmum
Do Not Use This Form for Proposals to Drill or t For Permit —" (Form G-101) for Such Proposals.	to Deepen or Plug Back to a Different Reservoir. Use "Appli	cation ()
1. Type of well Geothermal Producer	W1	7. Unit Agreement Name
Low-Temp Thermal	Temp. Observation A. Injection/Disposal	None
2. Name of Operator	Injection/Disposat	8. Farm or Lease Name
Sunoco Energy Devel	onment Cornoration	
3. Address of Operator	opment corporation	9. Well No.
12700 Park Central	Pl.,Suite 1500, Dallas, TX 752	251 5-77-3
4. Location of Well		10. Field and Pool, or Wildcat
Unit Letter A. 300	Feet From The N_{ullet} Line and 300 Fee	None -
The E. Line, Section 15	Township $2S_{ullet}$ Range $3W_{ullet}$	_NMPM. ()
	·	
	15. Elevation (Show whether DF, RT, GR, etc.)	12. County
	5990'	G.L. Socorro
16. Check Approp	priate Box To Indicate Nature of Notice, Report or O	Other Data
NOTICE OF INTENTION TO	o: su	BSEQUENT REPORT OF:
PERFORM REMEDIAL WORK PLUG	AND ABANDON REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON	COMMENCE DRILLING O	PNS. D PLUG & ABANDONMENT
PULL OR ALTER CASING " CHAN	GE PLANS TEST AND CEME	ENT JOB
		·
	OTHER	
OTHER	U	
17. Describe Proposed or completed Operations	(Clearly state all pertinent details, and give pertinenet da	tes, including estimated date of starting any
proposed work) SEE RULE 203.		
The referen	ced temperature observation wel	ll has been
	-	
dropped from	m the drilling program and will	not be
drilled. T	he site has not been occupied b	oy any
drilling eq	· -	,
diffing eq	arbmenc.	•
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5 T 3 1 1977		
	Frank 123	
Service Others	7	•
C. T		
Salar Control of the		
hereby certify that the information above is,	true and complete to the best of my knowledge and belief.	
	>	
SIGNED WILL	TITLE VICE PRESIDENT	DATE 10/25/77
	Geothermal Service	
$O = 0 \cdot 1 \cdot 0$		
APPROVED BY Carl llog	TITLE SENIOR PETROLEUM GEOLOGIST	DATE 11/22/77

CONDITIONS OF APPROVAL, IF ANY:

Form G-101 Adopted 10/1
e Type of Lease FEE [] Lease No.
reement Name
1 <u>e</u> Lease Name
-77∋3 nd Pool, or Wildcat 1e
20. Rotary or C.T. rotary ox. Date Work will start 7 10, 1977
.;, EST. TOP
6" BGL
ıre Gradient
Well Low- ion Well filed; as available
SS CED
d proposed new productive

NEW MEXICO OIL CONSERVATION COMMISSION NO. OF COPIES RECEIVED P. O. Box 2088, Santa Fe 87501 DISTRIBUTION File STATE [APPLICATION FOR PERMIT TO DRILL, DEEPEN. 5.a State L Operator OR PLUG BACK--GEOTHERMAL RESOURCES WELL Land Office BLM 7. Unit Ag Drill [X] Deepen Plug Back : 17 1a. Type of Work Temp Observation Geothermal Producer b. Type of Well 8. Farm or Injection/Disposal Low-Temp Thermal 9. Well No 2. Name of Operator SUNOCO ENERGY DEVELOPMENT CORPORATION **65-**3. Address of Operator 10. Field a 12700 Park Central Pl., Suite 1500, Dallas, Texas noi 4. Location of Well . UNIT LETTER A LOCATED 300 FEET FROM THE North FEET FROM THE East LINE OF SEC. 15 TWP. 12. County Socorr 9. Proposed Depth 500 ft unknown 21. Elevations (Show whether DF, RT, etc.) 21A. Kind & Status Plug. Bond 21B. Drilling Contractor 5990 ft (GL) see note "A" Geothermal Se Geothermal Services May PROPOSED CASING AND CEMENT PROGRAM SIZE OF HOLE SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH SACKS OF CEMENT 5-1/8" 3/4" 500' 1.14# Program - See attached "Standard Shallow Temperatu

Hole Drilling Program".

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

Quad 64

APPROVAL VALID FOR 90 DAYS UNLE DRILLING COMMENC

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

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

Geothermal

Title Chief Geologist, Services, Inc. page April 18, 1977

SENIOR PETROLEUM GEOLOGIST

DATE 5/13/77

NEW MEXICO OIL CONSERVATION COMMISSION P. O. BOX 2088 SANTA FE 87501

Form G-102 Agopted 10/1/

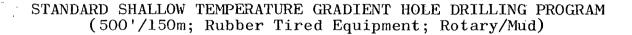
GEOTHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section. Sunoco Energy Development Corp. Letter Section Township Range County Socorro 15 **2S** Actual Footage Location of Well: 300 feet from the North 300 feet from the East Dedicated Acreage: Producing Formation Ground Level Elev. Pool 5990 None None 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 ownersip is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc? If answer is "yes," type of consolidation_ ☐ Yes □ No 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 0 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Steve Quiett Position Hole #5-77-3 to be located: Chief Geologist NE1/4NE1/4NE1/4, sec.15, T.2S, R.3W Geothermal Services, Inc April 18, 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. 65.5 1320 1650 , 1880 2310 2640 2000 1500 1000 500



GEOTHERMAL SERVICES, INC.

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



- 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.
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- 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 <u>CLEAN WATER</u> (water that is oily or contains solvents such as gasoline <u>MUST NOT</u> 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.

The same of the sa	
	Form G-103
	Adopted 10/1,
NO. OF COPIES RECEIVED NEW MEXICO OIL CONSERVATION COMMISSION	
DISTRIBUTION P. O. Box 2088, Santa Fe 87501	
File / /	,
N. M. B. M. SUNDRY NOTICES AND REPORTS	
ON ON	5. Indicate Type of Lease
Operator / GEOTHERMAL RESOURCES WELLS	State Lease No.
Land Office	5.a State Lease No.
	minimizini.
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	7. Unit Agreement Name ·
Low-Temp Thermal Injection/Disposal	None
2. Name of Operator	8. Farm or Lease Name
Sunoco Energy Development Corporation	
3. Address of Operator	9. Well No.
12700 Park Central Pl., Suite 1500, Dallas, TX 75251	5-77-2
4. Location of Well	10. Field and Pool, or Wildcat
Unit Letter $0,600$ Feet From The W_{\bullet} Line and 300 Feet From	None
The No. Line, Section 17 Township 2S Range 3W NMPM.	
15. Elevation (Show whether DF, RT, GR, etc.)	12. County
6190' G.L.	Socorro AllIIIII
Check Appropriate Box To Indicate Nature of Notice, Report or Other Da	ta
	NT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WORK	☐ ALTERING CASING
TEMPORARILY ABANDON U COMMENCE DRILLING OPNS.	PLUG & ABANDONMENT
PULL OR ALTER CASING CHANGE PLANS (X) CASING TEST AND CEMENT JOB	
OTHER	
OTHER LJ	•
17. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinenet dates, inclu	ding estimated date of starting any
proposed work) SEE RULE 203.	
The referenced temperature observation well ha	s been
dropped from the drilling program and will not	•
drilled. The site has not been occupied by an	У
drilling equipment.	
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	-
77.04.40	
33T 31 1977	·
Show the state of	,
Co)	

hereby certify that the information above is true and complete to the best of my knowledge and belief. TITLE_VICE PRESIDENT DATE 10/25/77

Geothermal Services, Inc. SENIOR PETROLEUM GEOLOGIST

CONDITIONS OF APPROVAL, IF ANY:

(**						BESTY.		Form G-10 Adopted 1	
NO. OF COPIES REC	v i		NEW MEXICO OIL I		ATION COMMISSIO	DR 25 107			
B.M. Operator		AF	PPLICATION FOR		·	•	STATE 5.a State Le	Type of Lease FEE Pase No.	
BLM	1								7
la. Type of Work	Drill 🛛		Deepen 🗌		Plug Back]		eement Name	
b. Type of Well	Geothermal Low-Temp			-	o Observation 🛚 🛣 ion/Disposal 🗀	_	8. Farm or 1		
2. Name of Operator SUNOCO	ENERGY D	EVELOPMEN	NT CORPORAT	CION	,			77÷2	
3. Address of Operato 12700 P 4. Location of Well	ark Cent		Suite 1500	•		75251	10. Field and	d Pool, or Wildcat e	77
			CATED 600 F		M THE West RGE. 3W	LINE			
							12. County Socorr		7
									7
				19.	Proposed Depth 500 ft	19A. Formati unknov		20. Rotarý or C.T. rotary	
21. Elevations (Show	whether DF, RT		Kind & Status Plug. I		Drilling Contractor		22. Approx	x. Date Work will start 10, 1977	
					EMENT PROGRAM		,	-24	
SIZE OF HOL	E SI	ZE OF CASING	WEIGHT PER	FOOT	SETTING DEPTH		CEMENT	EST. TOP	
5-1/8"		3/4"	1.14#	₹	500 '	1.	5	6" BGL	
			-						
		ote A -	Type of bo Temperatur Bond". Bo	ond will be Well and is ond is	rogram". ll be "\$10; l or Geothe in the pro ill be furr	,000 Mulermal Observations of a	tiple-W servations	on Well	e
	ن		before ope	21 at 1 01	is commence		APPROVAL V	ALID	
Quad		4				FOI	R 90 DAYS I LING COIAN	UNLESS	
			•				8/11/		
ne. Give blowout prev	enter program, i	fany.	<u>-</u>			n present produc	ctive zone and	proposed new produc	:tiv
nereby certify that the	information ab	ove is true and co	•		vledge and belief. Geothe gist,Servic	ermal ces.Inc.	one Apri	1 18, 1977	
	Y /								

APPROVED BY Carl Ulvog

SENIOR PETROLEUM GEOLOGIST DATE 5/13/77

NEW MEXICO DIL CONSERVATION COMMISSION P. O. BOX 2088 SANTA FE 87501 GEOTHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT

Sundo Delegy Development Corp. County Description of Verification of Veri			All distances	must be from the	outer bound.	aries of the Sect.	1070DD 2.5 107 "
Section Forces and Provided to the subject well by colored pencil or lackure masks on the plat below. County that are good different owners in the subject well by colored pencil or lackure masks on the plat below. 2	Operator			Lease		1, 6,	Well No.
Actual Fibrolage becation of Well: 600 Free, from the West Inne and 300 feet from the North tipe 670 None None Access 1. Outline the acreage declirated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease of different concerning is dedicated to the well, have the interests of all owners been consolidated by communitization, unnitization, unnitization, unnitization, unnitization, unnitization force-pooling, etc? Yes No I answer is "yes," type of consolidation If answer is "no," his the concern 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, unnitization forced-pooling, or otherwise) or until a non-standard until, eliminating such interests, has been approved by the Commission. CERTIFICATION I have been consolidated the communitization, unitization contained herein to use and complete to the best of my knowledge and belief. Hole #5-77-2 to be located: NNI/4NWI/4NWI/4, sec.17, T.2S, R.3W CERTIFICATION I have consulting the accessory. Appill 18, 1977 I have given the well location above on the plat way plotted from field notes my supervision after the same of the median of the plat way plotted from field notes my supervision after the same of the median of the same of the median		. 00	<u>-,</u>				- 1-3 - 1-1-1 - 1-1-1 - 1-1-2 - 1-2
Actual Protuge Location of Well 600 feet from the West thre and 300 feet from the North line Crowd Level Dr. Producing Formation Crowd Level Dr. Producing Formation None 1. Outline the acreage dedicated to the subject well by colored pencil or hardware masks on the plat below. 2. If more than one lease is dedicated to the well, outline cach and identify the ownership thereof (both as to wocking interest and royalty). 3. If more than one lease of different ownersip is dedicated to the well, have the interests of all owners been consolidated by communication, unitization, interest processory. 1. I asswer is "no." But 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 communicization, unitization forced-pooling, or otherwist) or until a non-standard unit, eliminating such interests, has been approved by the Commission. Hole #5-77-2 to be located: NWI/4NWI/4NWI/4, sec.17, T.28, R.3W CERTIFICATION 1 hereby certify that the well interests in two and complete to the best of my knowledge and belief. None Steve Quiett None Cincipal Geologist Company Geothermal Services, In. Date Apr;1 18, 1977 1 hereby certify that the well including and that he same a true and convert to the bast of my knowledge and belief. Date Surveyor Registrace Professional Engineer and/or Led Surveyor Certificat No.		1		Ra	_	1 _	20000
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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 <u>CLEAN WATER</u> (water that is oily or contains solvents such as gasoline <u>MUST NOT</u> 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.

	\	Form G-103 Adopted 10/1
NO. OF COPIES RECEIVED NEW MEXICO OIL CONS	SERVATION COMMISSION	
······································	, Santa Fe 87501	
File		
N. M. B. M. SUNDRY NOTICE	S AND REPORTS	•
	N	S. Indicate Type of Lease
· · · · · · · · · · · · · · · · · · ·	ESOURCES WELLS	State Fee X
Land Office	· ·	5.a State Lease No.
Do Not Use This Form for Proposals to Drill or to Deepen or Plug Back to a For Permit —" (Form G-101) for Such Proposals.)	·	
1. Type of well Geothermal Producer Temp. Observation	X	7. Unit Agreement Name
Low-Temp Thermal Injection/Disposal		None
2. Name of Operator		8. Farm or Lease Name
Sunoco Energy Development Corpora	tion	
3. Address of Operator		9. Well No.
12700 Park Central Pl., Suite 1500	, Dallas, TX 75251	5-77-7
4. Location of Well		10. Field and Pool, or Wildcat
Unit Letter P , 700 Feet From The S .	Line and500Feet From	None
The E_{ullet} Line, Section 21 Township $2S_{ullet}$	Range 3W • NMPM.	
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6160'	G.L.	Socorro
16. Check Appropriate Box To Indicate N		
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PERFORM REMEDIAL WORK LJ PLUG AND ABANDON LJ TEMPORARILY ABANDON	REMEDIAL WORK COMMENCE DRILLING OPNS.	ALTERING CASING
PULL OR ALTER CASING CHANGE PLANS	CASING TEST AND CEMENT JOB	PLUG & ABANDONMENT
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OTHER	·	•
17. Describe Proposed or completed Operations (Clearly state all pertinent	t details and give pertinenet dates inch	iding estimated date of starting any
proposed work) SEE RULE 203.	and give perimener dates, men	communed dute of starting any
proposed more, and name 200.		·
The referenced temperature	- charaction roll be	a hoon
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dropped from the drilling program and will not be drilled. The site has not been occupied by any drilling equipment.

T 31 1977

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hereby certify that the information above is true and co	omplete to t	he best of my knowledge and belief.		
SIGNED JULY	TITLE	VICE PRESIDENT	DATE 10	/25/77
		Geothermal Servic	-	
APPROVED BY Carl Woog	TITLE	SENIOR PETROLEUM GEOLOGIS	DATE //	22/77
CONDITIONS OF APPROVAL, IF ANY:			/	/

5/13/77

			•	4 to 2				
.						1375	137	Form G-101 Adopted 10/
NO. OF COPIES RECE	VED 4	NEW MEXICO OIL C	ONSERVATION COMMI	SSION I				
	VED 7		088, Santa Fe 87501		DD 91	5 1977		
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B.M.		APPLICATION FOR	PERMIT TO DRILL, I	DEEDEN		STATE L]:```	FEE
Operator	1 . 1		THERMAL RESOUR	•		5.a State Le	ase No.	
Land Office		THEOS DAON GEO	11721111712 11200011	010 11111	1			•
BLM		•			1			
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la. Type of Work	Drill X	Deepen 🗆	Plug Back		1	7. Unit Agra	eement Na	me
• -	C 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Temp Observation	n X D		non		
b. Type of Well			Injection/Disposal	, 100 	i	8. Farm or 1	Lease Nam	ı e
	Low-Temp Thermal							<u> </u>
2. Name of Operator			~0.1			9. Well No.	3	
	NERGY DEVELOPM	ENT CORPORAT	TON				7 7 >7	
3. Address of Operator	wie Cassi 1 D1	Cuita 1500	Dollac To-	cas 752		10. Field an	-	wildcat
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			19. Proposed Dept	h 19A. F	ormation	u	20. Rotar	ry or C.T.
			500 ft	ur	know	n	ro	tary
21. Elevations (Show wh		Kind & Status Plug. B	ond 21B. Drilling Cont	ractor		22. Appro	x. Date We	ork will start
6160 f	t (GL)	see note "A"	Geothermal	. Servic	es	May	10,	1977
T.		PROPOSED CASIN	IG AND CEMENT PROG	RAM				•
							• • •	
SIZE OF HOLE	SIZE OF CASI					CEMENT		ST. TOP
5-1/8"	3/4"	1.14#	500 '		1.5		6"	BGL
			·					
	<u> </u>						<u> </u>	
					•			
	Program	- See attach	ed "Standard	Shallow	7 Tem	peratu	re Gra	adient
	11061		ing Program".					
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	Note A		nd will be "\$					
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			ber will be f		ed as	soon	as ava	аттарте
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Quad 64						<i>PROVAL VA</i> 90 days l		
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	RIBE PROPOSED PROGRA	M: If proposal is to dee	epen or plug back, give d	ata on present	product	ive zone and	proposed	new producti
one. Give blowout preven								
here certify that the in	formation above is true and	complete to the best o	f my knowledge and beli	_{ef.} thermal				
igned Sta	1 Veuel	TwoChief (Geologist,Ser			. Anri	1 18.	1977
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SENIOR PETROLEUM GEOLOGIST

APPROVED BY Carl Ulway CONDITIONS OF APPROVAL, IF ANY:

(This space for State Use)

NEW MEXICO OIL CONSERVATION COMMISSION

Form G-102 Adopted 10/1/74

P. O. BOX 2088 SANTA FE 87501

GEOTHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT

erator			Lease		1.1	(.()	Well-No.
	ergy Devel	opment Corp		•		COLUMNICATION	well-No.
Letter	Section	Township		Range	County	را تا آليدا الله ا	
<u> P</u>	21	2S		3W	S	ocorro	
ual Footage Loca		~		500		. ·	•
700 nund Level Elev.	feet from the Producing Fo		line and Pool	500	feet from		line Dedicated Acreage:
6160	I	one	1001	Non	e		None Acres
		ated to the subject	well by col			ks on the plat l	
Outline	the acreage dedica	ated to the subject	wen by core	nea penen e	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, -, •
2. If more and roya		s dedicated to the	well, outline	e each and i	dentify the ov	vnership thereo	(both as to working inte
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				ed to the w	ell, have the	nterests of all	owners been consolidated
commun	mization, unitizat	ion, force-pooling,	etc:				
☐ Yes	□ No lf a	inswer is "yes," typ	e of consoli	idation			•
	"no," list the ov	wners and tract des	scriptions w	hich have ac	tually been co	onsolidated. (U:	se reverse side of this for
necessary.) _		1	1 11			olidated (by -	ammunitization unitimat
							ommunitization, unitizat d by the Commission.
rorcea-poom	ng, or otherwise)	or until a non-stand	aara unit, ei	immating suc	m mieresis, n	as been approve	u by the Commission.
						<u> </u>	
	ŀ			1			CERTIFICATION
	1			_ i -	•	I hereby	certify that the informati
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	1			1		the best o	f my knowledge and belief.
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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 tefler 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 <u>CLEAN WATER</u> (water that is oily or contains solvents such as gasoline <u>MUST NOT</u> be used) and install cap. a 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.