GTLT - \_\_\_\_11\_\_\_\_

# Lamar Hunt Geothermal Operations (27&34)-20S-1W Dona Ana County

Well No. 25 (LRG-503) & 25-34

	20	Adopted 10/1/74
NO. OF COPIES RECEIVED NEW MEXICO OIL	L CONSERVATION COMMISSION	
DISTRIBUTION P. O. Bo	x 2088, Santa Fe 87501	
File		
N. M. B. M. SUNDRY N	OTICES AND REPORTS	
U. S. G. S	ON	5. Indicate Type of Lease
<del></del>	AL RESOURCES WELLS	State Federal Fee
Land Office	AL HESOUNCES WELES	5.a State Lease No.
		Fed. NM-25557
,		
Do Not Use This Form for Proposals to Drill or to Deepen or Plug Ba For Permit —" (Form G-101) for Such Proposals.)	ck to a Different Reservoir. Use "Application	
1. Type of well Geothermal Producer Temp. Observ	ation []	7. Unit Agreement Name
		· · · · · · · · · · · · · · · · · · ·
Low-Temp Thermal LX Injection/Disp  2. Name of Operator	10291	8. Farm or Lease Name
LAMAD HUNER CEORDEDMAL ODEDARIONS		Radium Springs
LAMAR HUNT GEOTHERMAL OPERATIONS  3. Address of Operator		9. Well No.
	F5001	5 3
2800 Thanksgiving Tower, Dallas, Texa	s /5201	10. Field and Pool, or Wildcat
	Fort 7521 27	10. Tield and Foot, of Wildcat
Unit Letter G- 2510.54 Feet From The	EdSL Line and 3521.23 Feet From	ATTITUTE TO THE PARTY OF THE PA
South 27	20 C 1 W	
The South Line, Section 27 Township	ZU S. Range I W. NMPM	
The Flevation (Show	w whether DF, RT, GR, etc.)	
4376 Ft.		Dona Ana
16. Check Appropriate Box To-Indi	icate Nature of Notice, Report or Other Da	ata
NOTICE OF INTENTION TO:	SUBSEQUE	ENT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND ABANDON		ALTERING CASING
TEMPORARILY ABANDON	COMMENCE DRILLING OPNS.	PLUG & ABANDONMENT
PULL OR ALTER CASING CHANGE PLANS	CASING TEST AND CEMENT JOE	
Perforate & Test	OTHER	
Perforate & Test	_ 🗆	
		-
17. Describe Proposed or completed Operations (Clearly state all p	ertinent details, and give pertinenet dates, incl	luding estimated date of starting any
proposed work) SEE RULE 203.	•	
Work plan is to perforate a zon	e from 1590-to 1600 feet	hy incomting
a standard perforating gun to p	roduce two perforations	ner foot in
the 10-foot zone specified.	roduce two periorations p	per 100t, In
one to react home specified.		
The well will be used as a moni	toring well during sten-	flow test on
We 11 25-34.	colling woll duling Step-	riow cest on
		•
e e e e e e e e e e e e e e e e e e e		
		·
	•	
18. I hereby certify that the information above is true and complete to	o the best of my knowledge and holiaf	
	I.AMAR HINT	
Har JA	CEOTHERMAL OPERATIONS	10 1 00
SIGNED 1115 - 115	- GEUTHERMAL OPERATIONS	17-1-87
SIGNED DOGGE C CONTRACTOR IIII	LE GEOTHERMAL OPERATIONS	DATE12-1-82
a 171lion	LE_GEOTHERMAL OPERATIONS	
18. I hereby certify that the information above is true and complete to SIGNED Roger & Bouses TITI  APPROVED BY  TITI	DISTRICT SUPERVISOR	

CONDITIONS OF APPROVAL, IF ANY:

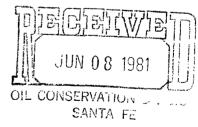
NO. OF COPIES RECEIVED		
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File	1	V
N. M. B. M.		
U. S. G. S		
Operator	1	
Land Office		

NEW MEXICO OIL CONSERVATION COMMISSION

NO. OF COTTES RECEIVED							
DISTRIBUTION			P. O. Box	2088, 9	Santa Fe 87501		
File	1	$\nu$					
N. M. B. M.			SUNDRY NO	OTICES	AND REPORTS		
U. S. G. S				ON		5. Indicate Type	of Lease
Operator	1		GEOTHERM/		OURCES WELLS	State 🗔	Fee 🗆
Land Office						5.a State Lease I	
			_			Federal N	NM-25557
Do Not Use This Form for P For Permit —" (Form G-101)				k to a C	Different Reservoir. Use "Application		
1. Type of well Geothe	ermal	Produ	ucer Temp. Observa	ition	TXI	7. Unit Agreeme	nt Name
Low-T	emp -	Therm	nal Injection/Dispo	osal			
2. Name of Operator						8. Farm or Leas	e Name
Lamar Hunt						Radium S	prings
3. Address of Operator						9. Well No.	
_2500 First	Nat	iona	1 Bank Building, Da	allas	, Texas 75202	53	
4. Location of Well						10. Field and Po	ool, or Wildcat
Unit Letter G		25	10.54 Feet From The	East	Line and 3521.23 Feet From	Wildcat	
			Township	20 S	Range 1 W. NMPM.		
	////	////	15. Elevation (Show	whether	DF, RT, GR, etc.)	12. County	
			4376 GR			Dona Ana	
16.	(	Check	Appropriate Box To India	cate Na	ture of Notice, Report or Other Da	ita	
NOTICE	OF	INTE	NTION TO:		SUBSEOUE	NT REPORT OF:	
PERFORM REMEDIAL WOL	RK [		PLUG AND ABANDON		REMEDIAL WORK		ING CASING
TEMPORARILY ABANDON					COMMENCE DRILLING OPNS.		ABANDONMENT
PULL OR ALTER CASING			CHANGE PLANS		CASING TEST AND CEMENT JOB		, , , , , , , , , , , , , , , , , , ,
				_	chemic ver implement ces		_
OTHER Shut in	(	Obse	ervation Well	_ [X]	OTHER		

17. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinenet dates, including estimated date of starting any proposed work) SEE RULE 203.

Well is shut in and to be used as a temperature observation well.



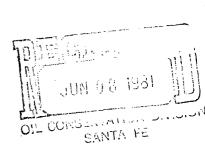
	JU JUN 08 1981
	OIL CONSERVATION SANTA FE
18. I hereby certify that the information above is true and com	aplete to the best of my knowledge and belief.
SIGNED J. S. Bungarner J.	тітье Lamar Hunt Geothermal Operations June 3, 1981
APPROVED BY Carl Ulvag	TITLESENIOR PETROLEUM GEOLOGIST 6/26/81
CONDITIONS OF APPROVAL, IF ANY:	

A STATE OF THE PROPERTY OF THE	
COPIES RECEIVED	
DISTRIBUTION	
File	
N. M. B. M.	
U. S. G; S	
Operator	V
Land Office	

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NEW	MEXIC	OOIL	_ CONSERVATION COMMISS
- '			<del>-</del>
	٠.	O. 607	x 2088, Santa Fé 87501

COPIES RECEIVED	NEW MEXICO OIL	CONSERVATION COMMISS	
DISTRIBUTION	P. O. Box	2088, Santa Fé 87501	·
File			
N. M. B. M.	SUNDRY NO	TICES AND REPORTS	
U. S. G; S		ON TATELLE	5. Indicate Type of Lease
Operator V	GEOTHERMA	AL RESOURCES WELLS	
Land Office		700.00	5.a State Lease No.
		MIN APR 08	196@dena1 NM-25557
Do Not Use This Form for Proposals to For Permit -" (Form G-101) for Such		k to a Different Reservoir. Cuse Application OIL CONSCIVED	
1. Type of well Geothermal Produ	ucer Temp. Observat	tion X SANTA	7 EUnit Agreement Name
Low-Temp Therm	nal Injection/Dispo	osai 🗆	
2. Name of Operator			8. Farm or Lease Name
Lamar Hunt			Radium Springs
3. Address of Operator			9. Well No.
2500 First Nationa	al Bank Building, Da	illas, Texas 75202	53
4. Location of Well			10. Field and Pool, or Wildcat
Unit Letter G 25	510.54 Feet From TheE	ast Line and 3521.23 Feet From	Wildcat
The South Line, Section		20 S. Range 1 W. NMPM.	
	15. Elevation (Show	whether DF, RT, GR, etc.)	12. County
	4376 GR	· -	Dona Ana
16. Check	k Appropriate Box To Indica	ate Nature of Notice, Report or Other Da	ta
NOTICE OF INTE	NTION TO:	SUBSEQUE	NT REPORT OF:
PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WORK	☐ ALTERING CASING
TEMPORARILY ABANDON		COMMENCE DRILLING OPNS.	PLUG & ABANDONMENT
PULL OR ALTER CASING	CHANGE PLANS	CASING TEST AND CEMENT JOB	
		-	,
		OTHER	
OTHER Shut in - Obse	ervation Well	_ 🔀 📗	
	perations (Clearly state all per	rtinent details, and give pertinenet dates, inclu	iding estimated date of starting any
proposed work) SEE RULE 203.			
No. 10 Percentage Control of the Con			

Well is shut in and to be used as a temperature observation well.



	OIL CONSERVATION DE SANTA FE
18. I hereby certify that the information above is true and considered and signal of the signal of t	nplete to the best of my knowledge and belief
APPROVED BY Carl Woog  CONDITIONS OF APPROVAL, IF ANY:	TITLE SENIOR PETROLEUM GEOLOGIST DATE 6/26/81

	`* <u></u>		,		Form G-103
	<i>(</i>	C <sup>2</sup>	المالايات	577775	Adopted 10/1/74
NO. OF COPIES RECEIVED	C.767	SERVATION COMMISSIO	المرالم ألم	ا جنا ہر ۱۸۸ تا جما	11 11
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File		TRITED F	∭. JUN	2.4 1981	
N. M. B. M.	SUNDRY NOTICE	S AND REPORTS	412		עטע
U. S. G. S	0	N FAT	IL CONSE	WTCP#ONA A	SPONease _
Operator	GEOTHERMAL RI	ESOURCES WELLS 198	_ !	ANSTATE	Fee
Land Office		138	-	5.a State Lease	
		OIL COMS	الدالي	Federal	NM-25557
Do Not Use This Form for Proposals to For Permit —" (Form G-101) for Such P	Drill or to Deepen or Plug Back to a Proposals.)	Different Reservoir. Use "A	pplication		
1. Type of well Geothermal Produ	<del></del>			7. Unit Agreem	ent Name
				Cill rigidali	
Low-Temp Therm	al L Injection/Disposal			8. Farm or Lea	a Nama
2. Name of Operator  Lamar Hunt			ļ		Springs
: 		· · · · · · · · · · · · · · · · · · ·			3pi 11193
3. Address of Operator	-1 Danie Budliddin - Dall	Taura 75202		9. Well No. 53	
2500 First Nation	al Bank Building, Dalla	as, lexas /5202			
4. Location of Well		0.501 00	ļ	10. Field and P	ool, or Wildcat
Unit Letter G 2510.54	Feet From The East	Line and3521.23	Feet From		
	•		ļ		
The South Line, Section	$\frac{27}{\text{Township}}$ 20	S. Range 1 W.	NMPM		
		Nullye			
	15. Elevation (Show wheth	er DF, RT, GR, etc.)		12. County	<del>,4444444</del>
	4376 Ft. GR			Dona Ana	
	77777	CNU			<u> </u>
Check	Appropriate Box To Indicate N	lature of Notice, Report o	r Other Dai	ta	
NOTICE OF INTER	ITION TO:		SUBSEQUE	NT REPORT OF:	
PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WORK		ALTER	ING CASING
TEMPORARILY ABANDON		COMMENCE DRILLING	G OPNS.	PLUG	ABANDONMENT
PULL OR ALTER CASING	CHANGE PLANS	CASING TEST AND CE			
				<del></del>	
		OTHER			
OTHER	·	<b>.</b>		-	
:		1			
17. Describe Proposed or completed O	perations (Clearly state all pertinen	t details, and give pertinenet	dates, inclu	ding estimated d	ate of starting any
proposed work) SEE RULE 203.		-		J	
	Method of Cement Pl	acement.			
20" 100'	From inside - out				
13 3/8" 1408'	Haliburton Pump T				
9 5/8" 5553'	Haliburton Pump T	ruck			,
3	53301				
	liner hanger 5330'				
Top of	Fliner 5343'				
Slotted interv	<sub>'</sub> als 7291' <b>-</b> 7418	•			
	7505' - 7633				
	7505' <b>-</b> 7633 7801' <b>-</b> 8058	1			
		1			
Rottom of line	7801' - 8058	1		·	·
Bottom of line	7801' - 8058	1		·	
Bottom of line	7801' - 8058	1			*
Bottom of line	7801' - 8058	1		·	
	7801' - 8058 er 8980'	1		·	·
Bottom of line Total depth 9005'	7801' - 8058 er 8980'	1		·	
	7801' - 8058 er 8980'	1			
	7801' - 8058 er 8980'	1		·	
	7801' - 8058 er 8980'	1	ef.		·
Total depth 9005'	7801' - 8058 er 8980'	1	ef.		
Total depth 9005'	7801' - 8058 er 8980'	est of my knowledge and belie		tions_	June 22, 1981
Total depth 9005'	7801' - 8058 er 8980'	1		tiggş <sub>⊑</sub>	June 22, 1981
Total depth 9005'	7801' - 8058  er 8980'  above is true and complete to the b	est of my knowledge and beli mar Hunt Geotherma	al Opera	tiggs <sub>e</sub>	June 22, 1981
Total depth 9005'  18. I herebs/certify that the information  SIGNED A. A. Duma	7801' - 8058 er 8980'  above is true and complete to the b	est of my knowledge and beli mar Hunt Geotherma	al Opera		June 22, 1981
Total depth 9005'	7801' - 8058  er 8980'  above is true and complete to the b	est of my knowledge and belie	al Opera	tiggs	June 22, 1981

aple Spirate

### DEPARTMENT OF THE INTERIOR

**GEOLOGICAL SURVEY** 

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<sup>≟</sup> 6.	İF	INDIAN,	ALLO	TT	EE C	RTR	IBE	ΝÃ	M	E
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7.3

Radium Springs

25-34

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

SUNDRY NOTICES AND REPO	ORTS- ON WELLS
-------------------------	----------------

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well Geothermal other well 2. NAME OF OPERATOR Lamar Hunt

3. ADDRESS OF OPERATOR

2500 lst Nat'l Bank, Dallas, TX 75202

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 968.37 fwl, 2335.13 fsl, Sec. AT SURFACE: 34 T. 20S., R.1 W. NMPM AT TOP PROD. INTERVAL: AT TOTAL DEPTH:

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE. REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO: TEST WATER SHUT-OFF FRACTURE TREAT SHOOT OR ACIDIZE REPAIR WELL PULL OR ALTER CASING MULTIPLE COMPLETE CHANGE ZONES ABANDON\*Operations suspended

SUBSEQUENT REPORT OF:

10. FIELD OR WILDCAT NAME 11. SEC., T., R., M., OR BLK. AND SURVEY OR

Sec. 34, T. 20S., R. 1W.

12. COUNTY OR PARISH 13. STATE Dona Ana New Mexico

14. API NO. 0118

15. ELEVATIONS (SHOW DF, KDB, AND WD) 4240 GR

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Suspension of Operations

well to be used for observation and/or possibly reinjection arrangements have been made to fence in the location

Subsurface Safety Valve: Manu. and Type

Set @

18. I hereby certify that the foregoing is true and correct Lamar Hunt

TITLGeothermal Operations

2/6/81

(This space for Federal or State office use)

APPROVED BY

Le TITLE Dist. Geothermal Sungev. Feb. 12,

CONDITIONS OF APAROVAL, IF ANY:

Please submit your completion report using Form 9-1960 for work to this point.



#### STATE OF NEW MEXICO

### STATE ENGINEER OFFICE DEMING

S. E. REYNOLDS STATE ENGINEER

August 26, 1981

ADDRESS CORRESPONDENCE TO:
P. O. BOX 844
DEMING, N. M. 88030

FILE: LRG-564-Exploratory

Hunt Energy Corporation 2500 First National Bank Building Dallas, Texas 75202

Gentlemen:

Enclosed is your copy of the well record for your geothermal exploration test well No. LRG-564-Exploratory, which has been accepted for filing.

Yours truly,

L. T. Putnam

Supervisor, District III

LTP:sfs

Encl: Well Record cc: State Engineer

#### STATE ENGINEER OFFICE WELL RECORD

(C)

			SIA	WELL	RECORD	ICE		TOP	3(L)		10/1	
			Section 1	. GENER	AL INFOR	MATIC	N .		νDΒ -	n 8	1982	,
Owner o	of well	<u> </u>	UNIT GO	0740	Book )	MEN'A	Tons.	_ Owne				
Street or	of well r Post Office Ad l State	dress <u>250</u> Dec	<u>C. FIX.C.</u> Zast Zew	<u> </u>	<u>002/5</u> 202	<u> </u>	Faitelin.	OIL G	:O:::=- S	t - 17 p	<u> </u>	· · · · · · · · · · · · · · · · · · ·
	d under Permit											
	1 1/4 5 311 1/4							Rar	nge s	LDJ.	,	_ N.M.P.M.
	No						•					
c. Lot l	No	of Block No		(	of the	· .						
	ivision, recorded		•				e System					Zone in
the_			· <del></del>									Grant.
	Contractor		,		•			e No. 🏄	115-	<u>90</u>	7_	<del> </del>
•	RAB.											. 100
	2-9-81											
Elevation of la	and surface or _			8	at well is	376	ft. Tot	al depth	of well	1_2	<u>005,</u>	ft.
Completed we	ell is 🔲 sh	nallow 🗀 a	rtesian.		Depth	to wat	ter upon coi	npletion	of wel	l	·	ft.
			ion 2. PRIN	CIPAL W	ATER-BEA	RING	STRATA		1	-		
From	in Feet To	Thickness in Feet	1	Descriptio	n of Water-	Bearing	Formation	! 	1		ated Y per m	inute)
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			•									
		L									<u>`</u>	
Diameter	Pounds	Threads		n 3. REC	ORD OF C.	ASING ength					Perfora	ations
(inches)	per foot	per in.	Top Supm	Botto	om (	feet)		e of Sho	ье 	Fre	om	То
133/8	155 51E	1 1	SURF.	1408		408	11 .	wide				
9 5/8	K.55 40#		5URE.	555.	3. <	553	*3,a.277.	2.11.1	· 5/ <sub>4</sub> -			· · · · · · · · · · · · · · · · · · ·
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		Section	on 4. RECO	RD OF M	UDDING A	ND CE				,		
Depth From	in Feet To	Hole Diameter	Sacl of M		Cubic F of Cem		,	Metho	od of P	lacem	ent	
0	110	2.4"			1170		From in	neide	- 7	Van d		D
0	1908	17.1/2"			1034		1/2/.6	من المراجع			<del>سو</del> تاریزار	E/
	0453	12 1/4"			1786		From in 12 1. 16 Call	1. 6	Prince	20		<del></del>
		<u></u>	Section	. 5 PI II	GGING RE			the part of	7.5	617		<u> </u>
Plugging Cont	ractor					CORD			77	: 91	era Dese	TT. CO
	od					No.	Tor	epth in	Feet S	<del></del>	Cu	bic Feet Cement
	gged					1					- 37	
riugging appro						$\frac{2}{3}$						·
		State Engi	neer Repres	entative		4	<u> </u>					
Date Received	August 1	17, 1981	FOR USE	OF STAT	re engine	EER ON	NLY					
Date Received				,	Quad		<del></del> :	FWL_	<u> </u>		FSL.	
File No	1.20-564		<del></del>	Use	Test W	e11 ——	_ Location		20.1.	27	463 	<u>-</u>

Orm:	USCS	9-1958

UNITED STATES D MENT OF THE INTERIOR

EOTHERMAL	SUNDRY	NOTICE

GEOLOGICAL SURVEY, CONSERVATION DIVISION

11 53-27	
Ka Car	Form Approved Budget Bureau
ATTE OF SHEET	······

O I I DI C	SHORE HOLLC	٠,				L"	<b>ン</b>
m or other	Supervisor	approved	form	to he	inrepared	and	filed

The U.S. Geological Survey requests this form or other supervisor approved form to approve this permit prior triplicate with requisite attachments with the Supervisor. The Supervisor must approve this permit prior 1982

LEASE SERIAL NO. NM-25557 SURFACE MANAGER: BLM (X)

la. WELL TYPE: PRODUCTION ( ) INJECTION ( ) HEAT EXCHANGE ( ) OTE CONS.

-UNIT AGREEMENT NAME . . . . \_ \_ \_

WELL STATUS:

WELL NO. 53-27

8. PERMIT NO. 0142

Other ( )

(χ)

FS (

OB NAME OF LESSEE/OPERATOR

Radium Springs 10. SEC. T., R., B.& M.

Lamar Hunt ADDRESS OF LESSEE/OPERATOR Sec. 27, T20S, R1W, NMPM

2500 First National Bank Bldg., Dallas, Texas 75202

11. COUNTY Dona Ana

LOCATION OF WELL OR FACILITY 2510.54' from E. line and 3521.23' from South line of Sec. 27,

12. STATE

Township 20 South, Range 1 West, NMPM

New Mexico

FIELD OR AREA

CHANGE PLANS SITE AND ROAD CONSTRUCTION CONSTRUCT NEW PRODUCTION FACILITIES ALTER EXISTING PRODUCTION FACILITIES ( ) CONVERT TO INJECTION FRACTURE TEST SHOOT OR ACIDIZE REPAIR WELL

PULL OR ALTER CASING MULTIPLE COMPLETE ABANDON

15. DESCRIBE PROPOSED OPERATIONS (Use this space for well activities only. See instructions for current well conditions on reverse)

TD 9005' Hang 7" liner Top at 5343.25' Bottom at 8980'

Slotted Intervals 7290' - 7418' 7504' - 7633' 7800' - 8057'

GEOTHERMAL DEPT.

Well is shut in and to be used as an observation hole and later will be tested.

16. DESCRIBE PROPOSED OPERATIONS (Use this space for all activities other than well work)

certify that the foregoing is true and correct

TITLE Lamar Hunt Geothermal Operations

(Use reverse side if needed)

APPROVAL, IF ANY

SIGNED

APPROVED BY CONDITIONS OF

This permit is required by law (30 U.S.C. 1023); regulations: 30 CFR 270.34, 30 CFR 270.35, 30 CFR 270.45, 30 CFR 270.71-1, 30 CFR 270.72; Federal Geothermal Lease Terms and Stipulations and other regulatory requirements. The United States Criminal Code (18 U.S.C. 1001) makes it a criminal offense to make a willfully false statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction.

#### **HUNT ENERGY CORPORATION**

2500 FIRST NATIONAL BANK BUILDING DALLAS, TEXAS 75202



Telephone (214) 748-1300

April 6, 1982

New Mexico Oil Conservation Commission P.O. Box 2088 SANTE FE, NEW MEXICO 87501

ATTENTION: CARL ULVOG

Dear Mr. Ulvog:

re: RADIUM SPRINGS - WELL No. 22

Enclosed are Forms G-103 and G-106 for the abandonment of Well 22.

Also, for your files are copies of reports for Wells 25 and 53% These two wells are still being used for observation purposes if you have any questions please call me at (214)748-1300 ext. 464.

Very truly yours

HUNT ENERGY CORPORATION

G. S. BUMGARNER JR. GEOTHERMAL OPERATIONS

GSB:jv

Enclosures

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File											OIL CON	CEUVAT	CICANI DU		
N. M. B. M.				SUNDF	RYN	OTICES	S AND	REPO	DRTS		OIL CON				
U. S. G. S						10	V					1		of Lease	$\Box$
Operator	1			GEOTH	ERM	AL RE	SOUR	CES W	ELLS			State			
Land Office	ĺ											1	te Lease l		
												rec	ierai i	M-25557	,,,,
Do Not Use This Form for For Permit —" (Form G-10)				Deepen or Pl	ug Ba	ck to a		t Reser	rvoir. U	se "A	pplication				
1. Type of well Geoti	nermal	Producer		Temp. (	Observ	ation	LXi					7. Uni	t Agreeme	nt Name	•
Low-	Temp	Thermal		Injection	n/Disp	osal						<u> </u>			
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18. I hereby/certify that the information above is true and com	nplete to the best of my knowledge and belief.	
SIGNED J. S. Bungamer J.	_ тітіє <u>Lamar Hunt Geothermal Operatign</u> s <sub>e_</sub>	June 22, 1981
APPROVED BY Carl Woog	TITLE SENIOR PETROLEUM GEOLOGIST	6/26/81
CONDITIONS OF APPROVAL, IF ANY:		,

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NEW MEXICO OIL P. O. Box	2088, Santa Fe	87501	MISSION V	FEB	

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CONSERVATION COMMISSION × 2088, Santa Fe 87501 ( FEB 12 1981	

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N. M. B. M.	SUNDRY NOTICES	AND REPORTS CONS	21 DIVISION
U. S. G. S	ON	SANTA	5. Indicate Type of Lease
Operator .	GEOTHERMAL RES	OURCES WELLS	State Fee Fee
Land Office			5.a State Lease No.
			Federal NM-25557
Do Not Use This Form for Proposals to For Permit -" (Form G-101) for Such	Drill or to Deepen or Plug Back to a Di Proposals.)	ifferent Reservoir. Use "Application	
1. Type of well Geothermal Produ	ucer 🗆 Temp. Observation		7. Unit Agreement Name
Low-Temp Therm	nal 🗆 Injection/Disposal	□ Wildcat	
2. Name of Operator			8. Farm or Lease Name
Lamar Hu	int		Radium Springs
3. Address of Operator	D-17 mr 75000		9. Well No.
2500 lst Nat'l Bank,	Dallas, TX /5202		53
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	15. Elevation (Show whether	DF, RT, GR, etc.)	12. County
	4376 ft. GR		Dona Ana
16. Chec	k Appropriate Box To Indicate Nat	ure of Notice, Report or Other Da	ta
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PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WORK	ALTERING CASING
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<ol> <li>Describe Proposed or completed C proposed work) SEE RULE 203.</li> </ol>	Operations (Clearly state all pertinent d	letails, and give pertinenet dates, inch	uding estimated date of starting any .
Moving onto locatio Preparing to spud	on .		

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

Lamar Hunt

Geothermal Operations TITLE SENIOR PETROLEUM GEOLOGIST

	Form G-103
NO OF COPIES RECEIVED NEW MEXICO OIL CONSERVATION COMMISSION	Adopted 10/1/74
NO. OF COPIES RECEIVED	Tir M
DISTRIBUTION P. O. Box 2088, Santa Fe 87501	1981
N. M. B. M. SUNDRY NOTICES AND REPORTS	THE ENVISION
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Operator / GEOTHERMAL RESOURCES WELLS	State Fee
Land Office	5.a State Lease No.
	Federal NM-25557
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 L Temp. Observation L	7. Unit Agreement Name
Low-Temp Thermal 🔲 Injection/Disposal 🔲 Wildcat	
2. Name of Operator	8. Farm or Lease Name
Lamar Hunt	Radium Springs
3. Address of Operator	9. Well No.
2500 lst Nat'l Bank, Dallas, TX 75202	53
4. Location of Well	10. Field and Pool, or Wildcat
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4376 ft. GR	Dona Ana
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18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.	
Lamar Hunt	
SIGNED LA Rumanamul . Geothermal Operations	2 /6 /01
SIGNED TITLE GEOTHERMAN OPERATIONS	2/6/81
	1 - 1
APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST	DATE 2/18/81
LITTE DELIVER I MINAMENTAL ACCEPTAGE	
	DATEDATE
CONDITIONS OF APPROVAL, IF ANY:	DATE

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N.M.B.M.								_	Type of Lease	_
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teand=Office BLM		11					ļ	TITITITI TELEPIAT	Lease NM-255	777
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ar a porcio.	Lamar I	Hunt			•	•	į		53	
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hereby certify that the				lete to the best of my	knowledge and beli	ef.				<del>- :</del>
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gned Ologa	2 Kci	Doc	eere_	Title Lamar Hur	nt Geothermal	Opera	ations_ <i>D</i>	ate <u>1/8</u>	181	
(This	space for Si	tate Use)								
$\alpha$ .	ر د م	0		CENTUR DE	ETROLEUM GEOLOG	IST		, ,	13-81	
PPROVED BY	u $u$	200		TITLE SENIOR FI	TIVOFFORM OFFIRM	F 40 14	_	/ _ /	フェロト	

ONDITIONS OF APPROVAL, IF ANY

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

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

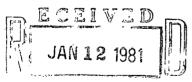
		All distances mu	st be from	the outer	boundari	es of the Section	ori.	
Operator	I		Leas		NACOL	·		Well No.
Lamar H	T		F(	·	NM-25	<del></del>		53
Unit Letter G	Section 27	Township 20 South		Range	1 West	County [	Dona Ana	
Actual Footage Loca 2510.54	•	Eac+		2521	22		المدينية ٢	
Ground Level Elev.	feet from the Producing For	East	line and Pool	3521	.23	feet from th	< South	line Dedicated Acreage:
4376 fe			100		N//			Acres
		ed to the subject v	vell by co	lared ne			on the plat	<u> </u>
1. Outline	the acreage dedical	ed to the subject	ven by co	iorea pe	nen or n	achare mark.	on the plat	0010 11.
2. If more and roys		dedicated to the v	vell, outlii	ne each	and ider	ntify the owr	nership thereo	f (both as to working interest
		different ownersing, on, force-pooling, e		ated to	the well	, have the in	terests of all	owners been consolidated by
☐ Yes	□ No If an	nswer is "yes," typ	e of consc	olidation				
	s "no," list the ow	ners and tract des	criptions v	which h	ave actu	ally been cor	nsolidated. (U	se reverse side of this form if
								communitization, unitization, ed by the Commission.
				1				CERTIFICATION
	I i			İ		1	I hereby	certify that the information
	, }			ţ			contained	I herein is true and complete to
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	1			` 1			Position	Bumgarner, Jr.
1	1			1	,		Geolog	ist
	!	41		l t			Company	
	1			i				nergy Corporation
	i			1			Date	y 7, 1981
				<u> </u>			Junuar	<i>y</i>
-	İ			1				
	1			i			1	certify that the well location
	1			1			1	this plat was plotted from field actual surveys made by me or
				1		•	l l	supervision, and that the same
				1			1	and correct to the best of my
}	ECEI	VEDA		1			knowledg	e and belief.
<b>-</b>	Le Le		<del>-</del>					
	M JAN 12	1981						
							Date Survey	ed
	OIL CONSTRVAT	ICN DIVISION		1			January	6, 1980
	SANTA			1			Registered P and/or Land	rofessional Engineer Surveyor
				İ			Jorge M	oy
December 1				WEIGHT			Certificate N	
<b>330 666</b>	90 1320 1650 191	NG 2310 2640	2000	1500	1000	500 0	NM 593	9

**BUBMIT IN TRIPLICATE\*** 

(Other instructions on

Form approved. Budget Bureau No. 42-R1425.

	DEPARTMEN	IT OF THE		reverse st	ae)	5. LEADE	DESIGNATIO	N AND B	RIAL NO.	_
	GEOL	OGICAL SURV	ΕΥ			Feder	aT NM-	25557~		
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1a. TYPE OF WORK  DR		DEEPEN [		LUG BAC	ж 🗆 🍦		AGREEMENT	MAMB SELE		_
OTL C	AS OTHER	Geothermal	SINGLE	multipi Bone	u □ 🖔	S. FARM	OR LEASE !	AMB .		_
2. NAME OF OPERATOR					3	Radi	um Spr	ings		
Lamar Hunt					<del>.</del> .	9. WELL	÷ ?	\$ 7		_
3. ADDRESS OF OPERATOR					]; 2		3-27	3 3 -	· 	_
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						Dona	2	-	₹M	
15. DISTANCE FROM PROP LOCATION TO NEARES' PROPERTY OR LEASE I (Also to nearest dr)	T Line, FT. 9	510.54 ft.	16. NO. OF ACRES	IN LEASE		OF ACRES A				_
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23.		PROPOSED CASI	NG AND CEMENT	ING PROGRA	м :			:		_
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	See attach	ed drilling	program.					9 7 7 7 9 .		



OIL CONSERVATION DIVISION

SANTA FE

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. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.	BIGNED Roger L. Bornses TITLE	Lamar Hunt Geothermal Operations	DATE 1/8/8/
	(This space for Federal or State office use)		
	PERMIT NO.	APPROVAL DATE	
	APPROVED BY TITLE .  CONDITIONS OF APPROVAL, IF ANY :		DATE

PLAT OF SURVEY SHOWING THE LOCATION OF A GEOTHERMAL WELL LOCATED IN SECTION 27, T.20S., H. IW., N.M.P.M. OF THE U.S.G.L.O. SURVEYS NORTH OF RADIUM SPRINGS. DONA ANA COUNTY, NEW MEXICO

SCALE: 1" 1000'

**JANUARY 5, 1981** 

21	22		22	23	
28	27		27	26	
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	i	TION = 4376	2510.54		
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33	34		34	35	

A Control

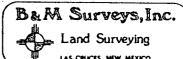
José man

HUNT GEOTHERMAL OPERATIONS

Well Location

Radium Springs No. 53-27

PREPARED BY:



HUNT ENERGY CORPORA SANTA FE

2400 THANKSGIVING TOWER

Dallas, Texas, 75201

July 22, 1985

Mr. R. E. Johnson Oil Conservation Division P.O. Box 2088 State Land Office Bldg. Santa Fe, NM 87501

Dear Mr. Johnson:

Thank you for your letter of July 19, 1985 calling my attention to the request to release the bond on our geothermal well #25-34 at Radium Springs, Dona Ana County. Your records are correct that the well has not been plugged and abandoned. The request to release the bond was an apparent misunderstanding within Hunt and between Hunt and our bonding agent. The bond will remain in force.

Well 25-34 is still shut in. As you may remember, Hunt had proposed a development project for the prospect. This proposal failed to materialize because El Paso Electric Co. was not interested in negotiating an agreement with us. Hunt still hopes to develop the prospect and use well 25-34 as a production well, but we cannot proceed until we find a legitimate buyer for the heat and/or electricity. The well will remain shut in until then. As soon as we reach an agreement with a buyer, we will submit the appropriate applications for permits.

While I am unable to set a definite time frame to our program, I would be happy to update you on our progress at any time. Please write or call me at 214/880-8420.

Yours truly,

Roger L. Bowers

Geothermal Operations Manager

Roger L. Bowers

RLB:dsh

OIL CONSERVATION DIVISION

SANTA FE

February 10, 1984

Hunt Energy Corporation 2800 Thanksgiving Tower Dallas, Texas 75201

Attention: Mr. Roger L. Bowers,

Geothermal Operations

Dear Mr. Bowers:

Thank you for your letter of January 9, 1984, received this week. The guestions and comments listed indecate the quality of expertise which we will have to apply before proceeding further with this development.

Rest assured we have no desire to embark on any course that will unnecessarily cool down a proven hot water production zone or effect the quality of existing producing fresh water resources which are equally valuable to us.

As also mentioned before, we have a community of interest with Hunt in the orderly development and application of these resources at Radium Springs. Good communication as demonstrated by your letter can only assist toward that end.

As for Section 3 mentioned in your last paragraph "...section 3 is federal land.", we do own 1/4 of this section and as you know are considering this as a site for a reinjection well. We, of course, are aware that the BLM has mineral rights to the entire section which they have leased to Hunt.

Sincerely,

Harry N. Bailey

HNB/rf

PEB 1984

# LAMAR HUNT GEOTHERMAL OPERATIONS 2400 Thanksgiving Tower Dallas, Texas 75201



December 6, 1983

Carl Ulvog
New Mexico State Oil & Gas
Conservation Division
P. O. Box 2088
Santa Fe. New Mexico 87503

Dear Mr. Ulvoq:

A copy of our company report on the flow test of Radium Springs Well 25-34 is being sent to you in a separate package. The report contains all of the raw data obtained from the test plus interpretations of most of the data.

This same report was submitted to the State Engineer's office to fulfill their requirements. If you have any questions or comments about the report, please do not hesitate to contact Dave Lloyd or me.

Yours truly,

LAMAR HUNT

Roger L. Bowers, Geothermal Operations

RLB/ct

P.S. Please note our new address and phone numbers: 2400 Thanksgiving Tower Dallas, Texas 75201

Roger Bowers (214)880-8420 Dave Lloyd (214)880-8421

#### LAMAR HUNT 2800 THANKSGIVING TOWER DALLAS, TEXAS 75201



April 21, 1983

Mr. Joe D. Ramey
Division Director
State of New Mexico
Energy and Minerals Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe. New Mexico 87501

Dear Mr. Ramey;

Pursuant to the stipulations outlined in your approval of our "application to discharge produced geothermal water for testing purposes" at Radium Springs, New Mexico, I am formally notifying you of our intent to begin the testing of our well #25-34 (LRG 503).

Dirtwork to deepen and modify the existing pits has already begun. Perforating is planned for Wednesday, April 27. Wellhead modifications (BOPE, valves, flowlines, etc.) will begin on Thursday, April 28. If everything proceeds as planned, we will be ready to begin air-jetting on Tuesday, May 3, 1983. I will notify Carl Ulvog and Oscar Simpson one week prior and 36 hours prior to commencement of the test.

Sincerely,

LAMAR HIINT

Geothermal Operations

c.c. Carl Ulvog Oscar Simpson Roger Bowers

#### LAMAR HUNT 2800 Thanksgiving Tower Dallas, Texas 75201

DEGES 1983

OIL CONSE V

Star Fi

April 6, 1983

Mr. Joe D. Ramey Director, Oil Conservation Division P.O. Box 2088 State Land Office Building Santa Fe, NM 87501

Dear Mr. Ramey;

For purposes of information, this letter advises you of a slight change of plans for our flow test of Radium Springs well 25-34. As you can see by the attached sketch, we are changing the configurations of the holding ponds to provide for an increased capacity and better percolation.

We also wish to advise you that the test will be conducted using air-jetting in lieu of mechanical pumping to bring the water to the surface. All other terms and conditions previously stipulated by you will be observed.

Our current plans envision that well modification will be completed by the end of April, 1983, with air-jetting planned for the first week of May. We will advise you of exact dates for the air-jet test at least 10 days in advance.

Sincerely,

David J. Lloyd Geothermal Operations

1 Enclosure Sketch of Holding Ponds

			·		-
•				Form G-103 Adopted 10/1/7	,
NÓ. OF COPIES RECEIVED			NEW MEXICO OIL CONSERVATION COMMISSION		
DISTRIBUTION			P. O. Box 2088, Santa Fe 87501		
File	1	V			
N. M. B. M.			SUNDRY NOTICES AND REPORTS		
U. S. G. S			ON	5. Indicate Type of Lease	_
Operator	1		GEOTHERMAL RESOURCES WELLS	State Fee	
Land Office				5.a State Lease No.	
		I	· _ · · _ · · _ · · _ · · _ · · _ ·	FED NM-25557	_
Do Not Use This Form for P For Permit —" (Form G-101)	ropos ) for	als to Such I	Drill or to Deepen or Plug Back to a Different Reservoir. Use "Application roposals.)		'\\\
1. Type of well Geothe	ermal	Produ	cer Temp. Observation	7. Unit Agreement Name · ·	~
Low-T	emp	Therm	al 🖾 Injection/Disposal 🗀		
2. Name of Operator				8. Farm or Lease Name	_
Lamar Hunt			·	Radium Springs	
3. Address of Operator				9. Well No.	
2800 Thanksgi	vin	g To	wer, Dallas, Texas 75201	25-34 (LRG 503)	
4. Location of Well				10. Field and Pool, or Wildcat	
Unit Letter L 968	.37		Feet From The West Line and 2335.13 Feet From		_
The <u>South</u> Lir	ne, Se	ction	34 Township 205. Range 1 Q. NMPM.		11111
			15. Elevation (Show whether DF, RT, GR, etc.) 4240 Ft. Gr.	12. County Dona Ana	
16.		Check	Appropriate Box To Indicate Nature of Notice, Report or Other Da	ta	
NOTICE	OF	INTE	NTION TO: SUBSEQUE	NT REPORT OF:	
PERFORM REMEDIAL WOR	ak [		PLUG AND ABANDON REMEDIAL WORK	ALTERING CASING	
TEMPORARILY ABANDON			COMMENCE DRILLING OPNS.	PLUG & ABANDONMENT	i
PULL OR ALTER CASING		X	CHANGE PLANS CASING TEST AND CEMENT JOB		

17. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinenet dates, including estimated date of starting any proposed work) SEE RULE 203.

Operator proposes to air-jet the well for 3-5 days. See attachment for details.



Pump Test

	1	1 /	, 1				
18. I here	by certify that the	information	n above is tr	ue and complete to the best of my knowledge and belief.			
SIGNED_	David J.	Lloyd	<u> </u>	TITLE LAMAR HUNT GEOTHERMAL OPERATIONS	_DATE_	6 April 1	983
	0	07	11.	DISTRICT SUBSPICEOR		0.14	104

#### PROPOSED PUMP TEST WELL 25-34 (LRG-503) RADIUM SPRINGS, NEW MEXICO

One zone (approximately 2390 feet to 2420 feet) will be tested to determine water quality and reservoir characteristics for potential direct-use applications. One 3-5-day step test will be conducted to evaluate the zone. Water produced during the tests will be contained in existing 5 ponds at the well site and will be allowed to percolate into the subsurface, in accordance with surface disposal order, OCD letter received March 14, 1983. (Copy attached.)

The test zone will be perforated at planned 4 shots per foot. A temporary air line 2 3/8-inch OD upset tubing will be set to 700 teet, and used with sufficient compressed air to jet planned rates of up to 1500 gpm. A BOP well head will be used to control flow. Test is planned for three stages of 500, 750, and 1000 gpm, each of 24-hours duration. Depending on aquifer characteristics, subsequent testing, up to 48 hours total duration, will be used to test higher flow rates. Water samples will be acquired at start of flow test and during subsequent step increases. A continuous record will be acquired of flow rates, temperature, and draw-down levels through-out the test.

At the conclusion of the tests the well will be shut in and locked.





### ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

TONEY ANAYA

Lamar Hunt 7800 Thanksgiving Tower Dallas, Texas 75201

Attention: Roger L. Bowers

Geothermal Operations

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

Re: Discharge of Geothermal

Water from Test Well 25-34 near Radium Springs, NM

Dear Sir:

Pursuant to your application of November 30, 1982, and the additional information supplied thereafter, you are hereby granted permission to discharge produced geothermal water for testing purposes if the procedures as outlined in your application are followed.

The Oil Conservation Division conditionally grants your application with the provision that a report be submitted to the Division that summarizes the results of the test. The report shall include all water analysis conducted on the produced water and a description along with results of the pump test on well No. 25-34. The report will be submitted to the OCD within 3 months after completion.

The Division requests that you notify the District IV Supervisor, Carl Ulvog, and Oscar Simpson, Water Resource Specialist, one week and 36 hours in advance of starting the test so they may have the opportunity of witnessing the test.

If you have any questions regarding this matter, you may contact Oscar Simpson at (505) 827-5822.

JOE D. RAMEY

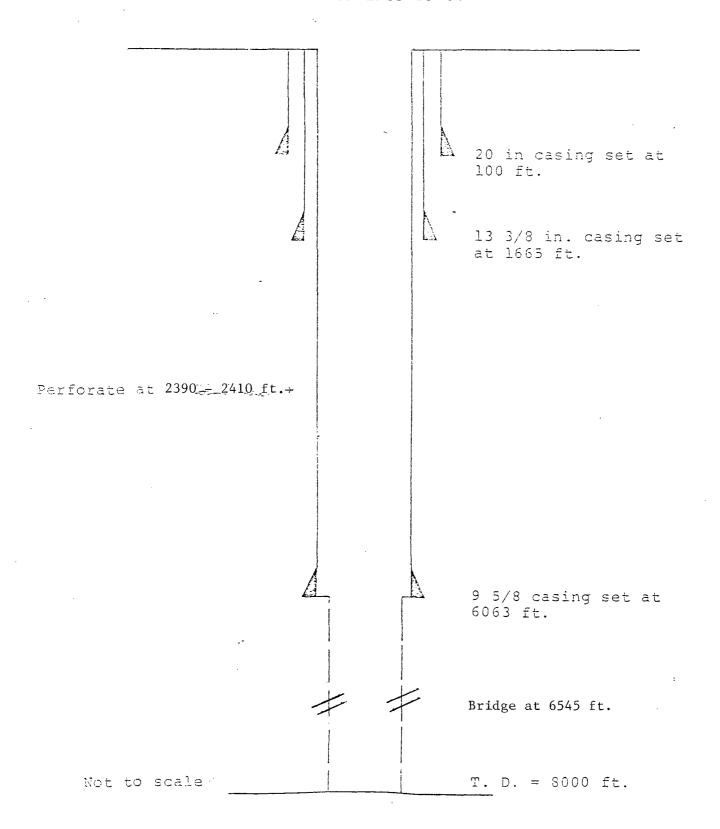
Sincerely,

Division Director

JDR/OS/dp

## SCHEMATIC DIAGRAM PROPOSED TESTING | PROGRAM

RADIUM SPRINGS 25-34



				Form G-103 Adopted 10/1/74
NO. OF COPIES RECEIVED		NEW MEXICO OIL CONSERV	ATION COMMISSION	
DISTRIBUTION	/	P. O. Box 2088, San	ta Fe 87501	•
File	V			
N. M. B. M.		SUNDRY NOTICES A	ND REPORTS	
U. S. G. S		ON		5. Indicate Type of Lease
Operator		GEOTHERMAL RESOL	URCES WELLS	State Fee
Land Office		:		5.a State Lease No.
		<del>'</del>		Federal NM-25557
Do Not Use This Form for P For Permit —" (Form G-101		ls to Drill or to Deepen or Plug Back to a Diffe uch Proposals.)	erent Reservoir. Use "Application	
1. Type of well Geothe	ermal	Producer Temp. Observation		7. Unit Agreement Name
Low-T	emp T	hermal 🖾 Injection/Disposal 🗌	•	
2. Name of Operator				8. Farm or Lease Name
LAMAR H	UNT			RADIUM SPRINGS
3. Address of Operator		.'		9. Well No.
2500 Fi	rst	National Bank Bldg., Da	llas, TX 75202	25 (LRG-503)
4. Location of Well				10. Field and Pool, or Wildcat
Unit Letter	L	968.37 <sub>eet From The</sub> West	Line and 2,335.13 eet From	Wildcat
•		tion 34 Township 20 S	RangeNMPM.	
		15. Elevation (Show whether D.	F, RT, GR, etc.)	12. County
		4240 Ft. GR		Dona Ana
16.	C	heck Appropriate Box To-Indicate Nature	e of Notice, Report or Other Da	ta
NOTICE	OF I	NTENTION TO:	SUBSEQUE	NT REPORT OF:
		PLUG AND ABANDON	REMEDIAL WORK	☐ ALTERING CASING [
TEMPORARILY ABANDON	_	1	COMMENCE DRILLING OPNS	

17. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinenet dates, including estimated date of starting any proposed work) SEE RULE 203.

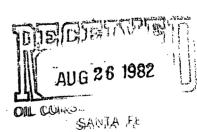
CASING TEST AND CEMENT JOB

Operator proposes to pump test well for 10 days. See attachment for details.

PULL OR ALTER CASING

OTHER

Pump. Test



	SAMA It
	•
18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.	÷e
SIGNED Rager LAMAR HUNT GEOTHERMAL OPERATIONS	8-23-82 DATE
UPERATIONS	
APPROVED BY Carl Wood TITLE DISTRICT SUPERVISOR	DATE 12/6/82
CONDITIONS OF APPROVAL, IF ANY:	

## PROPOSED PUMP TEST WELL 25-34 (LRG-503) RADIUM SPRINGS, NEW MEXICO

Two zones (approximately 1180 feet to 1230 feet and 2380 feet to 2430 feet) will be pump tested to determine water quality and reservoir characteristics for potential direct-use applications. Two 5-day step pump tests will be conducted to evaluate the two zones. Water produced during the tests will be contained in existing sumps at the well site and will be allowed to percolate into the subsurface.

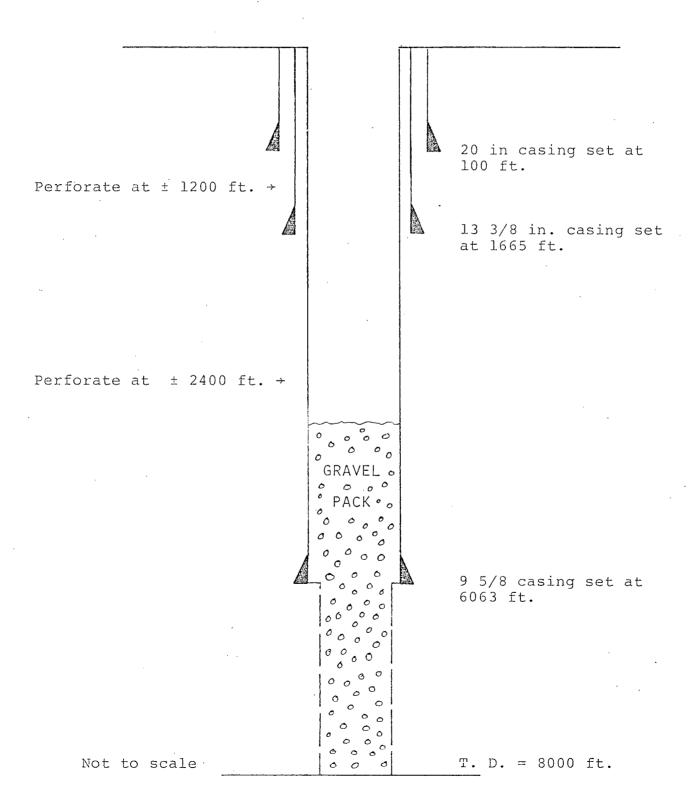
The well will be back-filled with gravel to approximately 2500 feet. The upper zone will then be perforated and a 5 1/2 " pump column (REDA pump) will be run in the hole followed by the installation of a flow line and monitoring system. The 5-day step pump test will then be conducted. The test of the lower zone will then be conducted in a similar fashion.

At the conclusion of the tests the well will be shut in and locked.

#### SCHEMATIC DIAGRAM

#### PROPOSED TESTING PROGRAM

#### RADIUM SPRINGS 25-34



Form Approved

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY, CONSERVATION DIVISION

D. Sold Hell (Married H. 1921 (M) FS ( )		Budget Hureau !	10.
5. SURFACE MANAGER: BLM (X) FS ( )	4.		
	5.		BLM (X) FS ( ) Other ( )

tr	GEOTHERMAL SUNDRY NOTICE  U.S. Geological Survey requests this form or other Supervisor approved form to be prepared and filed in applicate with requisite attachments with the Supervisor. The Supervisor must approve this permit prior any lease operations.	NM-25557  S. SURFACE MANAGER: BLM (X) Other ( )	FS ( )
à.	WELL TYPE: PRODUCTION () INJECTION () HEAT EXCHANGE () OBSERVATION	UNIT AGREEMENT NAME	
b.	Shut in JAN - 3 1982	WELL NO. 8. PERMIT 25-34 011	
	NAME OF LESSEE/OPERATOR  LAMAR HUNT, OPERATOR  ADDRESS OF LESSEE/OPERATOR  OIL CONSERVATION DIVISION	Padium Springs	
-	SANTA FE	34, T20 S RIW, NMP	М
3.	LOCATION OF WELL OR FACILITY	Dona Ana	
	968.37' FWL, 2,335.13' FSL, Sec. 34	New Mexico	
4.	TYPE OF WORK  CHANGE PLANS  () CONVERT TO INJECTION  () PULL OR ALTER SITE AND ROAD CONSTRUCTION  () FRACTURE TEST  () MULTIPLE COMPLETOR SHOOT OR ACIDIZE  ADBANDON  ALTER EXISTING PRODUCTION FACILITIES  () REPAIR WELL  () OTHER FIC		
<u></u>	DESCRIBE PROPOSED OPERATIONS (Use this space for well activities only. See instructions for current well cond	ditions on reverse)	

Operator proposes to pump test well for 10 days. See attachment for details.

5. DESCRIBE PROPOSED OPERATIONS (Use this space for all activities other than well work)

I hereby cerrify that the foregoing is true and correct LAMAR HUNT, GEOTHERMAL DATE \_\_\_ (This space for Federal use) PPROVED BY ONDITIONS OF APPROV

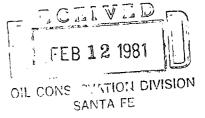
Approved pursuant to EA 147-80, APD 0118, and in conjunction with State of NM permit his permit is required by law (30 U.S.C. 1023); regulations: 30 CFR 270.34, 30 CFR 270.35, 30 CFR 270.45, 30 CFR 270.71-1, 30 CFR 270.72; Federal (attached) eothermal Lease Terms and Stipulations and other regulatory requirements. The United States Criminal Code (18 U.S.C. 1001) makes it a criminal offense make a willfully faise statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction.

See attached conditions.

#### CONDITIONS OF APPROVAL



- 1. The Acting Salt Lake City District Geothermal Supervisor will be notified immediately prior to commencement of operations.
- 2. An operations report will be called in daily to the District Supervisor. Phone (702) 784-5676
- 3. At least 24 hours advance notice will be provided to the District Supervisor for all BOPE and cement plug pressure tests.



List of Lost Circulation
Intervals in Lamar Hunt
25-34 Radium Spring Federal
Sec. 34, T.20S., R.1W.

Depth	Remarks
844'	LCM - No returns - Cemented zone
856' - 857'	Drilled ahead - No returns Cemented 50 bbls/Hr.
870' - 890'	LCM
1013' - 1014'	Lost 6 bbls mud
1017' - 1019'	Lost 6 bbls mud
1031' - 1032'	Lost circulation - Cemented zone
1061' - 1062'	Lost circulation
1063' - 1064'	Lost circulation - Cemented zone
1077'	Cemented zone
1103' - 1108'	Lost circulation - LCM
1111' - 1115'	Lost circulation - LCM
1170' - 1171'	Lost circulation - 220 bbls.
1176'	Lost circulation
1188' - 1189'	Lost circulation - Cemented
1192'	Cemented with 1265 bbls - no returns Switched to aerated water. Lost 5400 bbls by 1263'
1500 *	Losing 200-300 bbls. of water per hour
1600'	Losing 200-300 bbls. of water per hour
	Set casing 13-3/8 at 1665'

Depth	Remarks
1682'	Lost circulation 30 bbls - 10-40 bbls per hour
1745'	Lost circulation 10-15 bbls per hour
1822' - 1823'	Lost circulation 10 bbls per hour
1890'	Losing 10-15 bbls per hour from 1890'
2070'	Losing 40-50 bbls per hour
2157'	LCM and losing 5 bbls per hour
2270'	Losing 20 bbls per hour
2400' - 2415'	Lost circulation - set 2 cement plugs No returns
3130' - 3230'	No returns
3460' - 3500'	No returns - Might be due to lost circulation zone at 2400' and 3130'
3590' - 3620'	11 11 11 11
3750' - 3800'	77 11 11 11
4030' - 4070'	, 11 11 11 11
4750' - 4760'	10 10 10
4790' ÷ 4820'	11 11 11 11

## Short Well Test at 700' Depth Radium Springs Well

Time	Pressure Pounds/Sq.In.	Temp. OF	Remarks
7:01 - on loc.			
7:05 - begin test	120	50	700' deep
7:06	156	51	Ħ
7:08 - 1st flow	141 - 156	151	" 1 minute blow
7:08 - " "	137	155	ŧŧ
7:10	137	183 peak	Still blowing
7:12	160	182	"
7:14	154	189	π
7:15	154	188	n
7:16	153	185	n
7:18	150	186	n
7:20	149	187	n
7:22	152	182	n
7:24	151	178	Flow decreasing liquid
7:25	151	175	11 11 11
7:26	151	175	Pulsing now but flows continue
7:28	152	175	Steady flow
7:30	152	177	11

<u>Time</u>	Pressure Pounds/Sq.In.	Temp. °F	Remarks
7:33	154	179	Steady flow
7:34 - Compressor off	112	180	End at 700'
7:35 - Flow stopped			

## Short Well Test at 1100' Depth Radium Springs Well.

Time		<u>Pressure</u> Pounds/ <u>Sq.In</u> .	Temp. °F	Remarks
7:44	Lower Pipe			
7:55	Compressor on	0'	100	
7:57		166	96	
7:58		200	94	
8:00	Peaked	313	91	
8:01		309	89	
8:03		309	87	
8:04		309	85	
8:05		309	84	
8:06		309	82	
8:07	Broke	309	81	
8:07.5	Flow starts	279	181	Starts flowing
8:09		309	179	Flowing
8:10		308	180	Ħ
8:10	Flow stops	310	176	Hot pipe
8:11	Flow starts	304	176	Flowing
8:12		307	181	н ,
8:13		304	188	"
8:13		300	190	11
8:13		295	187	11
8:14		301	188	n
8:15		305	186	18
•				

p.20/28

<u>Time</u>	<u> </u>	Pressure Pounds/Sq.In.	Temp. oF	Remarks
8:16		306	186	Flowing
8:17		307	188	11
8:17.5		303	190	
8:18		303	191	11
8:18	,	302	189	17
8:19		303	187	n
8:20		309	183	n
<sub>~</sub> 8:21		305	182	Flow decreasing
8:21		307	184	Flow steady
8:22		306	185	11
8:25	Flow about 1/2 pipe in dia.	308	186	Flow surges
8:26		309	187	11
8:27		305	190	11
8:27	Flow more vigorous	305	191	π
8:27		310	190	**
8:28		312	190	n
8:29		309	192	Steady flow
8:29		307	194	11
8:30		303	197	11
8:30	Flow vigorous Slight "Bell"	300	196	<b>11</b>
8:32		307	196	п
8:32		306	198	"

Time	<u>Pc</u>	Pressure ounds/Sq.In.	Temp. °F	Remarks
8:32.5		305	199	Steady flow
8:34		306	200	н
8:35		306	200	TI .
8:36		306	201	11
8:36		306	202	11
8:37	Steady	307	202	н
8:37.5		307	203	п
8:38		307	203	17
8:38		307-6	204	Ħ
8:39	Slight press. & temp. waver	307	204	19
8:40		307	205	11
8:41	·	307	205	11
8:42		307	206-5	n
8:43		307	207	Slight belling on flow
8:44	Pulsing,slight "Bell" shape on flow	307	207-6	
8:45		307	207	
8:46		307	208	
8:47		307	208	
8:48		307	208	
8:48.5		308	209	
8:49		307	209	
8:50		307	209	

Time	Pressure Pounds/Sq.In.	Temp. OF	Remarks
8:51	308	209	
8:51.5	308	209	
8:52	308	210	
8:53	308	210	
8:54	308	210	Steady
8:55	308	210	
8:55.5	308	211	
8:56	308	211	
8:57	308	211	
8:58	308	211	
8:59	308	211	
9:00	308	211	
9:01	308	211	
9:01.5	308	212	
9:03	308	212	
9:04	308	212	
9:05	308	212	
9:06 Bell more steady	308	212	
9:07	308	212	
9:09	308 .	212	
9:10	308	212	
9:11 1/4 Bell	308	213	
9:12	308	213	
9:13	308	213	
	•		

Time		<u>Pressure</u> Pounds/Sq.In.	Temp. °F	Remarks
9:14		308	213	
9:15		308	213	
9:16		308	213	
9:17		308	213	
9:18		308	213	
9:19		308	213	
9:20		308	213	
~9:21		308	213	
9:22		308	214 .	•
9:23		308	214-13	•
9:24		309	214	
9:25		309	214	
9:26		· <u>-</u>	-	
9:27		-	_	
9:28	1/4 Bell	309	214	
9:29	11	309	213-14	
9:30		308	214	
9:31		309	214-15	
9:32		308	214	
9:33		309	214	
9:34		309	214	
9:34.5		309	215	
9:35		309	214	Flickers

<u>Time</u>		Pressure Pounds/Sq.In.	Temp. °F	Remarks
9:36		309	214	
9:37		308	214	
9:38		309	214	
9:39		309	215-14	Flickers
9:40		309	215-14	11
9:41		309	215-14	11
9:42		309	214	
9:43		309	215-14	
9:44		309	215	
9:45		309	215	
9:46		309	215-14	
9:47		309	215-14	
9:48	·	309	215	
9:49		309	215	
9:50		309	215	
9:51		309	215	
9:52		309	215	
9:53		309	215	
9:54		309	215	
9:55	<pre>1/4 Bell Steady w/same pulse</pre>	309	215	
9:56		309	215	

Time	<u>Pressure</u> <u>Pounds/Sq.In</u> .	Temp. OF	Remarks
9:57	309	215	
9:58	. 309	215	
9:59	309	215	
10:00	309	215	
10:01	309	215-16	
10:02	309	215-16	
10:03	309	215-16	
10:04	309	215-16	
10:05	309	215-16	
10:06	309	215-16	
10:07	309	215-16	
10:08	309	215-16	
10:09	309	215-16	
10:10	309	215-16	
10:11	309	215-16	
10:12	309	216-15	
10:13	309	215-16	
10:14	309	216-15	
10:15	309	216-15	
10:16	309	216	Fairly steady now
10:17	309	216	
10:18	309	216	
10:19	309	215-16	
10:20	309	216-15	

<u>Time</u>		Pressure Pounds/Sq.In.	Temp. OF	Remarks
10:21		309	216-15	
10:22		309	216-15	
10:23		309	216-15	
10:24		309	216-15	
10:25		309	216-15	
10:26		309	216	
10:27	iv.	309	216	
10:29		310	216	•
10:29		311	216	
10:30		310	216	Flicker to 217
10:31		309	217-16	
10:32		310	217-16	
10:33	·	309	216-17	
10:34		309	216-17	
10:35	Took Ph & Salinity	309	216	
10:36		309	216-17	
10:37		309	216-17	
10:38	1/3 bell to 1/4 bell - white cone	309	217-16	Flickers rapidly
10:39		309	216-17	

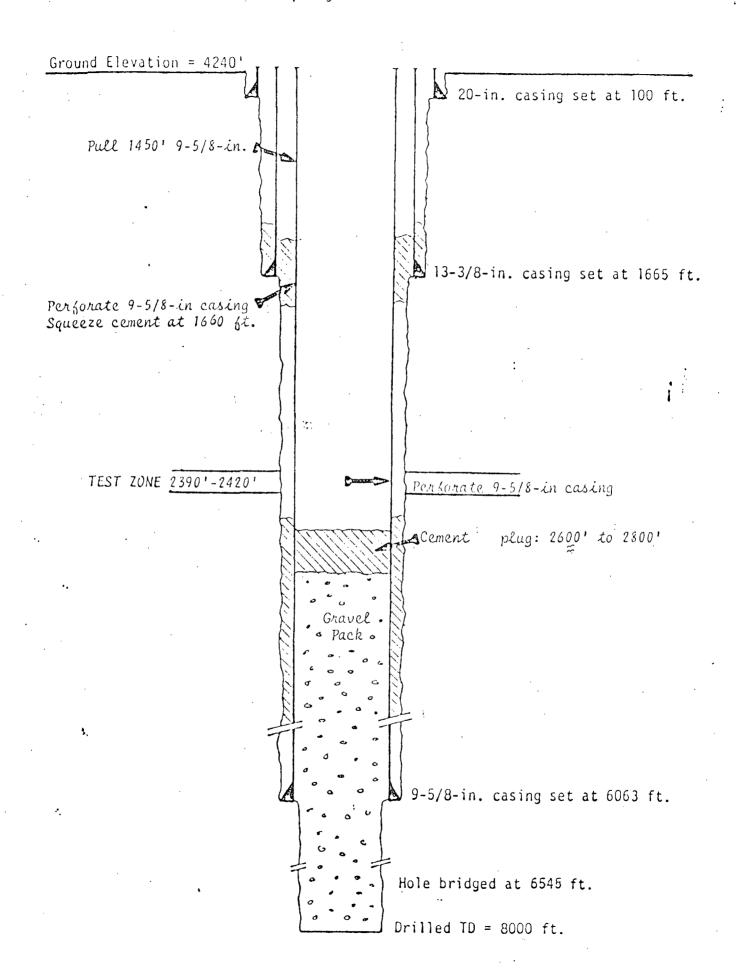
Time	Pressure Pounds/Sq.In.	Temp. OF	Remarks
10:40	309	216-17	
10:41	309	216-17	
10:42	309	217	
10:43	309	217	
10:44	309	217	
10:45	309	217	
10:46 Compressor	off 246	216	
10:46.5	234	216	
10:47	212	214	
10:47.5	184	206	
10:48 Flow ended	151	202	
10:48-3/4 Hot air	106	203	
10:49	88	200	
10:50	19	202	
10:50			
10:50-1/4	0	200	Hot Air

Stopped Test

REMARKS (C) R. 6 Smith R F SMITH CORP PAGE	H2S ppm	PRESSURE psi OUT IN	0UT IN	TEMPERATURE (F) C	нітношосу	Oepth.			
					in an				
						-			
		A BERT	3						
(1) 10 mm (1)			JAMBS A. HIL						
				DATA COMPILED BY					
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		OF PESIT	S TO 171 NEAR EN	NOTE: TEMP SURGES TO		7000			
e mental and a second a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second	1								
	107b)1/hr				5:30am				
	107001/hr!				3:30am			=	
	TQ/TGG2DT		167°		1:30am			3	10/6/3
	1.12001/hr		-	2	11: 30pm			=	
一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	<u>.                                    </u>		_		9:30pm			3	
	107001/hr		165°		7:30pm			=	
						700	X	BULK DENSITY	
	Res.	O PRESSURE IN		0 502 mpm	A.		÷		
	O H <sub>2</sub> S,—	O PRESSURE OUT-	(F)	O TEMPERATURE					
			ļ.,					DRILL RATE	
	700		1650	-3	5:30pm				
	E.			-2	3: 30cm				
	75 pg 1/hr			=	1:30pm			3	
	HIOM BATE	NOTE: DOUBLE FIASH	176/1	MATER:	11:2ham			39271	
			101	/ W.TER	9:01am			36001	
					8:10am			32101	
					7:22am			2700	
1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、1、			653# 179°	Nat. Vrs	61Llam			10914	
		O METHANE ppm	-	SSO					
			1720	TER	6:07am			1620	
					5:50am			1080	
			1).0# 7n°	LEVEL CIULH	5:31am			51.6	
			1	<i>i</i> 1		_			
			PST	FIOW COMMENTS	TIME			माउत्यत	
			<u> </u>						
			1 TEMP 201.420	PRUITT MAX BOTTOM TEME		************	1901	.ट. प्रधापता	
						2079			
on we			nt belondard the	LAWAR HUNT	K 10-10.	STREET, T			
	,								

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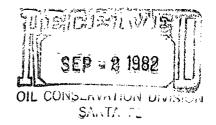
4.4



### HUNT ENERGY CORPORATION 1601 ELM STREET 2800 THANKSGIVING TOWER DALLAS, TEXAS 7520

August 31, 1982

New Mexico State Oil & Gas Commission Conservation Divison P. O. Box 2088 Santa Fe, New Mexico 87503 Attn: Mr. Carl Ulvog



Dear Mr. Ulvog,

Enclosed is the chemical analysis from the flow test of Radium Springs 25-34 which you requested from Roy Cunniff.

If you need anything further please feel free to call me at (214) 573-8718.

Sincerely yours,

Martin H. Littmann



GOVERNOR

STATE OF NEW MEXICO

### ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

August 23, 1982 BRUCE KING

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-2434

Hunt Energy Corporation 2500 First National Bank Bldg. Dallas, Texas 75202

> \$10,000 Multiple-Well Geothermal Re:

Exploratory, Development, Injection

or Disposal Well Bond Lamar Hunt, Principal

American Home Assurance Company,

Surety

Bond No. E-054

Gentlemen:

The Oil Conservation Division hereby approves the above-referenced bond effective August 17, 1982.

Sincerely,

JOE D. RAMEY, Director

dr/

cc: Carl Ulvog OCD Santa Fe, New Mexico



### STATE OF NEW MEXICO

# ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

February 2, 1983

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

Chas. L. Dexter & Co., Inc. 6440 N. Central Expressway Suite 505
Dallas, Texas 75206

Re: \$10,000 Multiple-Well Geothermal Bond, Lease: NM 25556 Well 25-34

Bond No. 520 48 89

Gentlemen:

The Oil Conservation Division hereby approves release of the above-referenced geothermal bond effective August 19, 1982.

Sincerely,

JOE D. RAMEY, Director

dr/

cc: Oil Conservation Division Santa Fe - Carl Ulvog

> Mr. Lamar Hunt 2500 First National Bank Bldg. Dallas, Texas 75202

NO. OF COPIES RECEIVED	NEW	MEXICO OIL CONSERV	ATION COMMISSION				
DISTRIBUTION		P. O. Box 2088, Sar	nta Fe 87501				
File							
N.M.B.M.				ļ.		Type of Lease	_
U.S.G.S.			T TO DRILL, DEEPEN		STATE L	FEE ase No.	
Operator   Land Office	OR PLUC	G BACKGEOTHERN	MAL RESOURCES WE	LL I		Lease NM-25557	7
Land Office					1111111	11111111111111111111111111111111111111	77.
							//
1a. Type of Work Drill		eepen 🗆	Plug Back 🔲		7. Unit Agre	ement Name	77.
1a. Type of Work Drill	<b>Ω</b>	eepen 🗀	Plug Back				
b. Type of Well Geother	mal Producer 🔲	Ter	mp Observation 🔲		8. Farm or L	ease Name	
Low-Ter	np Thermal 🔲 🛭 🖺	xploratory Inje	ction/Disposal 🗆		Radium	Springs	
2. Name of Operator					9. Well No.		
· ·	Geothermal Oper	ations			25-34		
3. Address of Operator	<u> </u>				10. Field and	Pool, or Wildcat	
2500 First N	National Bank Bl	dg.			Wildca	t	
4. Location of Well UNIT LET	TERLOCATE	D 968.37 FEET ER	OM THE West	LINE			
AND 2335.13 FEET FROM	THESouth LINE OF S	EC. 34 TWP. 20	S. RGE. 1 W.	NMPM			77.
					12. County		///
				7/////	Dona An	ia ()	77)
							11.
							//
			· · · · · · · · · · · · · · · · · · ·	9A. Formation		20. Rotary or C.T.	
			9,000 ft	Unknow	n	Rotary	
21. Elevations (Show whether DF 4,240 GR		& Status Plug. Bond 2	1B. Drilling Contractor	J		c. Date Work will start	
4,240 GK	1310,000	#5204889	to be contracte	<u>:a</u>	1 Sept	ember 1, 1980	
	PF	ROPOSED CASING AND	CEMENT PROGRAM		•		
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF	CEMENT	CCT TOD	
:: 26 in.	20 in.	94 #	100 ft	per con		EST. TOP	
1 <u>7-1/2</u> in.	13-3/8 in.	54.5 #	900 ft	590+			
12-1/4 in.	9-5/8 in.	40.0 #	6000 ft	1920+			
8-1/2 in.	7 in.	26.0 #	' Perf. liner to				
., –			, , , , , , , , , , , , , , , , , , ,	]F		VED	
			•	Connection			
•	•			17.	uu o s	100n	
1				1.1	JUL 25	1980	
				L. 1.9 1			
						ION DIVISION	
Drilling and	l blowout preven	tion programs m	eet or exceed al	1 Federa	1 rēģù†f	ements	
for this Fed	leral lease.						
NABOVE SPACE DESCRIBE PROpries. Give blowout preventer progr		proposal is to deepen or	plug back, give data on pi	esent product	ive zone and	proposed new produc	tive
hereby certify that the informatio		lete to the best of my kr	nowledge and belief.				
	. 0	Lamar Hunt					
med Brosen J.	Bouers	Title Geothermal		Da	rte <u>7/14/</u>	8.0	
(This space for S							
	,				-		
PPROVED BY Carl	lvog	SENIOR PETE	ROLEUM GEOLOGIST		7/	28/80	

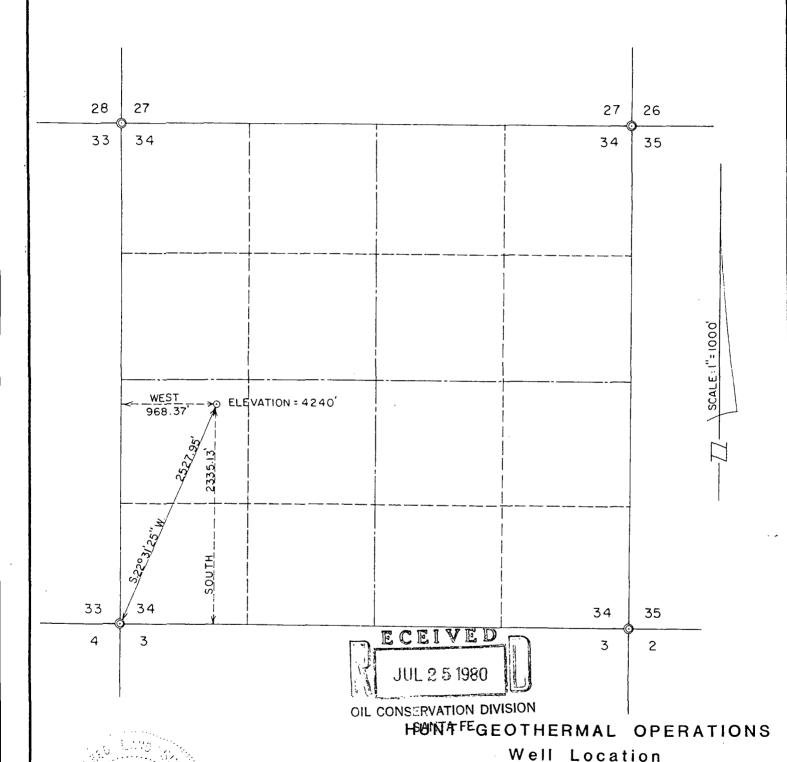
CONDITIONS OF APPROVAL, IF ANY:  $\int$ 

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

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

All distances must be from the outer boundaries of the Section. Well No. Lease 25-34 Lamar Hunt, Geothermal Operations Federal NM-25557 Township Section Range Unit Letter 34 T. 20 S. R. 1.W. Dona Ana Actual Footage Location of Well: 968.37 feet from the South feet from the West line and 2335.13 Dedicated Acreage: Ground Level Elev. Producing Formation Pool 4,240 Unknown 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? ☐ 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. Donna Butts Position Landman / Company Hunt Energy Corp. 7/23/80 I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or OIL CONSERVATION DIVISION under my supervision, and that the same SANTA FE is true and correct to the best of my knowledge and belief. SEE ATTACHMENT Date Surveyed 5/5/80 Registered Professional Engineer and/or Land Surveyor Certificate No. 3130 660 1320 1650 1980 2310 2000 1000 500

PLAT OF SURVEY SHOWING THE LOCATION OF A GEOTHERMAL WELL LOCATED IN SECTION 34, T.20S., R.1W., N.M.P.M. OF THE U.S.G.L.O. SURVEYS NORTH OF RADIUM SPRINGS, DONA ANA COUNTY, NEW MEXICO SCALE: 1" = 1000' MAY 5, 1980



I BEERBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR AND THE STATE OF NEW MEXICO AND THAT THIS PLAT WAS MADE BY ME OR UNDER MY SUPERVISION FROM THE NOTES

OF AN ACTUAL FREID SURVEY AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PREPARED BY:

B&M Surveys, Inc.

Land Surveying

LAS CRUCES. NEW MEXICO

a Bold of

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N, M. B. M.		
U. S. G. S		
Operator		
Land Office		

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

SUNDRY NOTICES AND REPORTS ON

5. Indicate Type of Lease		
State 🗆	Fee	
5.a State Lease No.		
FED. NM-255	57	

Occupants and the second of th	State Fee
Operator GEOTHERMAL RESOURCES WELLS	5.a State Lease No.
Land Office	FED. NM-25557
	TED: MM 25557
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 X Injection/Disposal	• •
2. Name of Operator	8. Farm or Lease Name
LAMAR HUNT	RADIUM SPRINGS
3. Address of Operator 2800 Thanksgiving Tower, 1601 Elm, Dallas, TX 75201	9. Well No. 25-34 (LRG 503)
4. Location of Well	10. Field and Pool, or Wildcat
Unit Letter L 968.37 Feet From The West Line and 2335.13 Feet From	
The South Line, Section 34 Township 20 S Range 1 W NMPM.	
Thousand the Character Character DE DE CR and	
15. Elevation (Show whether DF, RT, GR, etc.)	12. County
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Dona Ana
16. Check Appropriate Box To-Indicate Nature of Notice, Report or Other Dat	a
NOTICE OF INTENTION TO:	NT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON COMMENCE DRILLING OPNS.	PLUG & ABANDONMENT
PULL OR ALTER CASING CHANGE PLANS CASING TEST AND CEMENT JOB	T FEOG & ABANDONNIENT E
the state of the s	. <u>.</u>
OTHER Report Pump	Test Results 🛛 🗓
OTHER	
17. Describe Proposed or completed Operations (Clearly state all pertinent details, and give pertinent dates, inclu- proposed work) SEE RULE 203. Persuant to the G-103 Sundry Notice, dated (approved April 8), the casing was perforated in the above read a 3 day pump test performed.	d April 6, 1983
Pump Test Summary: The well was gravel packed from bridge a to bottom of 9 5/8 inch casing at 6041 feet. The 9 5/8 csn as follows: 2410 to 2404 ft., 6 shots per foot; 2403 to 2397 2396 to 2390 ft., 6 spf; 2389 ft., 4 spf; 2388 to 2387 ft., 2 spf. Pump test commenced on May 2, 1983 at 11:30 AM and Total producing time = 4283 minutes (71.38 hrs). Total prod 1,923,000 gallons (48,076 BBL). At conclusion of test, all removed from the site and the well was shut in and locked.	was perforated ft., 6 spf; 6 spf; 2386 ft., lasted 3 days. uced volume = equipment was

	back into the ground and had done so within
the require 96 hours. The site	has been cleaned of trash and the percolation
pit has been fenced off.	
•	
•	
18. I hereby centify that the information above is true and com	plete to the best of my knowledge and helief.
	· · · · · · · · · · · · · · · · · · ·
Lhurd J. Land	LAMAR HUNT GEOTHERMAL OPERATIONS
SIGNED HULL J. WOOD	TITLE DATE June 28, 1983
Davio J. hybyd	
APPROVED BY Carl Wood	DICTRICT CHEEDVICAD 7/1/62
APPROVED BY	TITLE DISTRICT SUPERVISOR DATE 7/1/83
CONDITIONS OF APPROVAL, IF ANY:	

		ভাষা	Form G-103
. • 		13/2	Adopted 10/1/7
NO. OF COPIES RECEIVED	NEW MEXICO OIL CONSE	RVATION COMMISSION	11 - 1 1983
DISTRIBUTION	P. O. Box 2088, S	Santa Fe 87501	1 - 1 1202 [][]
File			2.
N. M. B. M.	SUNDRY NOTICES		SERVARE FOR SERVICE
U. S. G. S	ON ON	AND HEI OH 13	5. Indicate Type of Lease
Operator	GEOTHERMAL RES	OURCES WELLS	State Fee
Land Office	GEOTTERWAL RES	OUNCES WEELS	5.a State Lease No.
	· •		FED. NM-25557
Do Not Use This Form for Proposals to For Permit —" (Form G-101) for Such P		oifferent Reservoir. Use "Applicat	ion
1. Type of well Geothermal Production Low-Temp Thermal	(TEXT)		7. Unit Agreement Name
2. Name of Operator			8. Farm or Lease Name
LAMAR H	UNT		RADIUM SPRINGS 9. Well No.
•	ower, 1601 Elm, Dall	as, TX 75201	25-34 (LRG 503)
4. Location of Well	•		10. Field and Pool, or Wildcat
Unit Letter L 96	8.37 Feet From The West	Line and $2335.13$ Feet F	From Allering
The South Line, Section	34	S Range 1 W N	MPM.
	15. Elevation (Show whether	DF RT GR etc.	12. County
	4240	GR	Dona Ana
16. Check	Appropriate Box To-Indicate Nat	ture of Notice, Report or Other	er Data
NOTICE OF INTEN	ITION TO	SURSI	EQUENT REPORT OF:
PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON	TEGG AND ABANDON	COMMENCE DRILLING OPN	
PULL OR ALTER CASING	CHANGE PLANS	CASING TEST AND CEMENT	
	CHANGE PLANS		
	. •	отнек <u>Report Pu</u>	ımp Test Results
OTHER			
	ersuant to the G-103 the casing was perfo	S Sundry Notice, d	
Pump Test Summary:  to bottom of 9 5/8 is as follows: 2410 to 2396 to 2390 ft., 6 2 spf. Pump test control producing time 1,923,000 gallons (4 removed from the sit water was allowed to the require 96 hours pit has been fenced	nch casing at 6041 f 2404 ft., 6 shots pe spf; 2389 ft., 4 spf ommenced on May 2, 1 = 4283 minutes (71. 8,076 BBL). At conde e and the well was se percolate back into	Teet. The 9 5/8 cer foot; 2403 to 2 f; 2388 to 2387 ft 1983 at 11:30 AM at 38 hrs). Total pelusion of test, as the ground and he	esn was perforated 2397 ft., 6 spf; 2., 6 spf; 2386 ft., and lasted 3 days. produced volume = 1 all equipment was d. All produced
·			
	· · · · · · · · · · · · · · · · · · ·		

APPROVED BY Carl Wood

DISTRICT SUPERVISOR

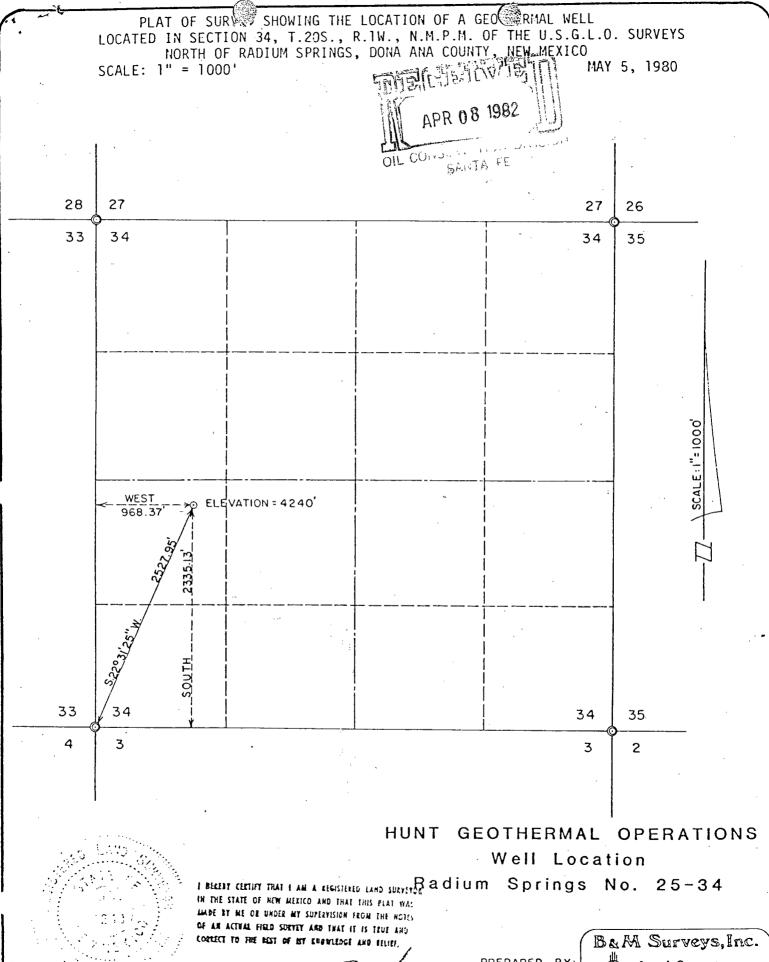
LAMAR HUNT GEOTHERMAL OPERATIONS
TITLE \_\_\_\_\_\_DATE \_\_\_\_\_\_ June 28, 1983

7-1-83

	9-	Adopted 10/1/74
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DISTRIBUTION	0 (P. O.) Box 2088, Santa Fe 87501	
1 File	. 3 !	RECOUNTION DIVISION
N. M. B. M.	UNDRY NOTICES AND REPORTS	SAN 5. Indicate Type of Lease
0. 3. G. 3	NOTE ON	State Fee
Operator / G	EOTHERMAL RESOURCES WELLS	5.a State Lease No.
Land Office		Federal NM-25557
Do Not Use This Form for Proposals to Drill or to Deepe For Permit —" (Form G-101) for Such Proposals.)	n or Plug Back to a Different Reservoir. Use "Appli	
1. Type of well Geothermal Producer T	emp. Observation	7. Unit Agreement Name
	njection/Disposal 🔲	
2. Name of Operator		8. Farm or Lease Name
Lamar Hunt		Radium Springs
3. Address of Operator	my 75303	9. Well No.
2500 lst Nat'l Bank Dallas	, TX /5202	25
4. Location of Well	2225 12	10. Field and Pool, or Wildcat
Unit Letter L 968.37 Feet F	rom The West Line and 2335.13 Fee	t From Wildcat
34	20.0	
The South Line, Section 34	Township 20 S. Range 1 W.	_NMPM.
	vation (Show whether DF, RT, GR, etc.)	12. County
	1240 ft. GR	Dona Ana
16. Check Appropriate F	ox To Indicate Nature of Notice, Report or O	Other Data
	<u> </u>	
NOTICE OF INTENTION TO:		BSEQUENT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND A	•	ALTERING CASING
TEMPORARILY ABANDON XX	COMMENCE DRILLING O	
PULL OR ALTER CASING L CHANGE PLA	NS L CASING TEST AND CEME	ENT JOB L.J
	OTHER	
OTHER		
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.		
	s, well to be used for obse	
reinjection, arrangement	s have been made to fence	in the location
201		
20" conductor 100'		
13 3/8" csg 1667'	V.	
9 5/8" csg 6063'	•	
TD 8000'		•
•		
		6A56780
	•	
		B AL "AR 100 - 3)
		REGIONAL SOLUTION OF THE RMAN
	·	DO DEPARED OF
•		EAT, MAL ST
•		
		C7771707
		Sec Colone
18. I hereby certify that the information above is true and	complete to the best of my knowledge and belief	
	•	
SIGNED JA BRIM ARAMA IL	Lamar Hunt	2/6/81
SIGNED ~ E / OWNIGHTY VI	TITLE _Geothermal Operati	ONS DATE
		,
APPROVED ON ( AZZ ) I P.	SENIOR PETROLEUM GEOLOGIST	2/18/81
ALLENOVED BY COUNTY	TITLE SEMION PERMOTERM GEOFGAIS	DATE // U/
CONDITIONS OF APPROVAL, IF ANY $U$		

, - 4	GEOTHERMA		OX 2088 SA	RVATION COM ANTA FE 8750 ION AND AC	ı 😭			Form G-102
•		All distances must be		uter boundaries	of the Section		PR 08 1982	444
Operator Lamar Hunt,	Geothermal O	perations	Lease Feder	ral NM-2555	57	OIL CONS	Well No. 25-34	<u> </u>
Unit Letter S	Section 34	Township T. 20 S.	Rang	R. 1 W.	County			Nuici
Actual Footage Location	on of Well:							
968.37	feet from the			2335.13	feet from th		line	
Ground Level Elev.	Producing Form		Pool	NΛ			Dedicated Acreage:	
4,240		nown  ed to the subject well		NA NA	1		- alous	Acres
2. If more the and royalt	nan one lease is d y).	ledicated to the well,	outline ea	ach and identi	fy the owr	nership thereof	(both as to wo	
communit	ization, unitizatio	different ownersip is in, force-pooling, etc? swer is "yes," type of			ave the in	terests of all (	owners been cor	
necessary.) No_allowable	will be assigned	ed to the well unt	il all inte	erests have be	een consol	idated (by co	ommunitization,	unitization,
	1			! ;			CERTIFICATION	N
	1					contained	certify that the herein is true and f my knowledge ar	complete to
	 					Name Donna Position Landma Company Hunt E Date 7/23/8	n nergy Corp.	an agent of the state of the st
						is true an knowledge  Date Surveyed	certify that the this plat was plott inctual surveys mad supervision, and to do correct to the and belief.  ATTACHMENT 15	ed from field de by me or hat the same
						Registered Pro and/or Land S	ofessional Engineer Survey or	

90 "1370 1650 1985 2310 2640



a Bolaford

PREPARED BY:

Land Surveying



S. E. REYNOLDS STATE ENGINEER

March 18, 1981



ADDRESS CORRESPONDENCE TO:
P. O. BOX 844
DEMING, N. M. 88030

FILE: LRG-503-Exploratory

Mr. Lamar Hunt
Hunt Energy Corporation
2500 First National Bank Building
Dallas, Texas 75202

Dear Sir:

Enclosed is your copy of the well record for your Exploratory Geothermal Test Well No. LRG-503-\_\_\_ Exploratory, which has been accepted for filing.

Yours truly,

L. T. Putnam

Supervisor, District III

LTP:sfs

Encl: Well Record cc: State Engineer

•

# STATE ENGINEER OFFICE WELL RECORD

APR 08 1982

WELL RECORD

APP

Section 1. GENERAL INFORMATION

OIL CONS...

A) Owner of Street or F	well Lama Post Office Ad	dress 2500 las, Texas	First Na	tional	Bank	Buildi	oll cons	_S/o₩	ner's We	ell No	25-	34
Well was drilled		•								7		
		NW 14 S										_N.M.P.M
		of Map No.						•				······································
c. Lot No Subdiv	ision, recorded	of Block No d in		of	the_ _ Cou	nty.						
		_ feet, Y=										Zone ir Grant
(B) 'Drilling Co	ontractor	Montgomery	Drilling	Compan	IJ		Licen	se No	WD 9	07		<del></del>
Address	P.O. Box 2	2508 <b>, B</b> aker	sfield,	Califor	nia	93303					<del></del> -	7 1/2
Drilling Began	11-3-80	Comp	leted 2-	4-81		Type tools	Rotar	У		Size of ho	ole 1	2 1/4 8 3/4
Elevation of lan	d surface or _						ft. To	tal der	th of w	ell 800	00	ft
Completed well	is	hallow 🗆 a	rtesian.	:,;	D	epth to wa	ter upon co	mpleti	on of w	eli	,	ft
· · ·		ing_ Co+ijSect	ion 2. PRIN	CIPAL WA	TER-	BEARING	STRATA		qta s	3.75 34.75 ± 1	1457	
Depth i	n Feet To	Thickness in Feet	T.	Description	of Wa	iter-Bearing	g Formatio	n		Estima (gallons)		
2400'		15	Faul	t Zone						Unknov	٧n	
. :		:. :		, .		N				:		
			7									
		a .		· organ	· fi	v or .				unt.	'	
			Section			F. CASING				77.1		1 1
Diameter (inches)	Pounds per foot	Threads per in.	Depth Top	in Feet Botton	n	Length (feet)	Ту	pe of S	Shoe	From		ations To
20"		8 Kd.	Surface	100'		100'	0pen	Sho	e .	1	No	ne
13 3/8	54.50	Buff.	Surface	1665		1665	Guid	e Sho	oe :		No	ne
9 5/8	40.00	Buff.	Surface	6063		6063	1	le Go Shoe	uide		No	ne
· .	· .	Section	on 4. RECOR	RD OF MU	DDIN	G AND C			,	<i>3</i> 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		,
Depth i	n Feet To	Hole Diameter	Sack of Mu			ic Feet Cement		Me	thod of	Placeme	nt	
Surface	100'	24"			160	ft³	From i	nside	e - OI	ıt		
Surface	1665'	17 1/2"			1414	ft³	Halibu	rton	Pump	Truck		
Surface	6063'	12 1/4"			2500	ft³	Halibu	rton	Pump	Truck		
Plugging Contra			· · · · · ·		GING	RECORD	• .			ري م ا	i 1	18H 18°
AddressPlugging Metho	d					No.	To	Depth p	in Feet Bot	E S	Cu of	bic Feet Cement
Date Well Plugg Plugging approv	ed			n 2		1 2		_ <del></del>		3 R	· · · · · · · · · · · · · · · · · · ·	· ·
		State Eng	ineer Represe	entative		3				五二		- 60
Date Received	March 1	11, 1982	FOR USE				NLY		-	e Property in the control of the con		52

gher well DST 4/hrs from 24/50

To:

G. S. Bumgarner, Geologist; Hunt Energy Corp.

From:

Andrew Lee Bristol, Analytical Consultant

Test samples taken February 2 & 3, 1981 at first hole Radium Springs, NM Subject:

	-		6-9	mmhos/cm				mg/L	250		
	Samp	le	PH	E.C.	Na	<u>K</u>	<u>Ca</u>	Mg	<u>(C1)</u>	C03.	HC03
2 3 4 5	2/2/81 2/2/81 2/2/81 2/2/81 2/3/81 2/3/81	1:45 PM 5:00 PM 8:15 PM 11:30 PM 2:00 AM 5:30 AM	9.14 9.30 9.21 9.13 9.16 9.15	3.47 3.38 3.31 3.10 3.09 3.02	829.9 792.2 769.7 703.5 689.0 680.5	56.7 55.9 54.7 52.4 52.4	14.6 14.6 11.2 6.8 6.0 5.2	.6 .8 1.0 1.0 1.1	789.9 683.5 626.8	48.6 67.8 60.0 57.0 64.8 72.0	232.1 206.4 237.0 234.5 218.6 225.4

	600	10.0			.75	g/L	1.6	1-0	•2	0.1	.05
Sample	S04	NO <sub>3</sub> -N	N02-N	NH <sub>A</sub> -N	B	Si02	F	Fe	(Mn)	As	Pb
1 2 3 4 5 6	437.5 415.0 400.0 392.5 375.0 377.5	56.2 24.6 9.2 6.7 9.2 3.2	66.5 64.0 59.0 41.0 34.0 32.0	.71 .62 .70 .68 .57	.71 .68 .66 .65 .65	56.0 57.5 58.0 56.5 59.0 61.0	5.70 6.00 5.85 5.70 5.65 5.70	9.94 7.07 6.92 11.30 5.71 4.98	.77 .62 .77 .89 .58	.006 .006 .007	<.01 <.01 <.01 <.01 <.01 <.01

		.002	10.0		1000		TIPE IN
	Sb	Нд	mg/L Zn	<u>Sr</u>	TDS	180/160 X10	DO SEI
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L CUMBENIATION UNTERNAL

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status wh their well 270'

## Physical Science Laboratory

BOX 3548, LAS CRUCES, NEW MEXICO 88003-3548 AREA (505) 522-9100 TWX 910-983-0541

August 4, 1982

Mr. Carl Ulvog New Mexico Oil Conservation Division P.O. Box 2086 Santa Fe, NM 87503

Dear Mr. Ulvog:

Enclosed please find an original and four copies of forms G-101 and G-102 for our planned new Geothermal disposal well, GD-2.

Also enclosed is a copy of the Plugging Bond. Please note that this bond is a multiple bond, also covering our planned deep gradient well. When we have picked a precise location for this new gradient well, forms G-101 and G-102 will be submitted.

Also please note that the wells contain an identifying number different from our current numbering scheme. After the State Engineer has assigned a Lower Rio Grande (LRG) designation for these wells, I will advise you of the amended numbering.

Sincerely,

Roy A. Cunniff

RAC/bj1

Enclosure

### PLANNED MODIFICATION TO WELL 25-34

A said to

We propose the following well modifications for the purpose of conducting an expanded flow test:

- 1. Make ready the location by installing four rig anchors, repairing two existing reserve pits, and excavating a third pit.
- 2. Reinstalling the 13 3/8" and 9 5/8" wellheads with a packoff flange on the 9 5/8 x 13 3/8 annulus.
- 3. Gravel pack the open hole and 3265' of 9 5/8". Spot a cement plug on top of the gravel pack from 2800' to 2650'.
- 4. Perforate and squeeze the 9 5/8" casing at 2650' to ensure a seal from any deeper zones. If squeeze pressures do not indicate an adequate job, cement will be drilled out, a CBL run and resqueezed if needed.
- 5. Pressure test cement plugs to 1000 psi for 15 minutes.
- 6. Perforate and squeeze the 9 5/8" casing at 1660' to isolate the zones of interest. Test casing to 1000 psi for 15 minutes.
- 7. Back off and retrieve 1450' of 9 5/8" casing.
- 8. Perforate the primary zone at 2420' to 2390'.
- 9. Install a lineshaft pump, flowlines, and monitoring equipment to run a productivity-potential flow test.

NOTE: BOPE will be installed during steps 3,4,5 and 6. It can be determined during step 6 if BOPE will be needed during the perforation of the proposed test interval, and provisions are made for using such equipment if deemed necessary.

				•	fol	12(G):	\$1.00 hz	Form G-1
					M	100	_ 9 1082	Adopted
NO. OF COPIES RECEIVED		NEW	MEXICO OIL CONSE		11/9		= 3, 1982	للا
DISTRIBUTION	_		P. O. Box 2088,	Santa Fe 8750]		CONSER	VATION DI	VISION
.1_M.B.M.					ــازن	SA.	<b>Ne. Sonata</b> Seate	Type of Lease
J.S.G.S.			CATION FOR PERM					Federal FEE
Operator	- V	OR PLU	G BACKGEOTHE	RMAL RESOURCE	ES WEL	.L	5.a State Lea	NM - 25557
and Office	<del>  </del> J						777777	111111111
		. *						
ea. Type of Work Drill			Deepen 🗆	Plug Back	( <u>X</u> )		7. Unit Agre	ement Name
b. Type of Well Geothe	ermal Produce	r 🗆	-	Temp Observation			8. Farm or 1.	ease Name
, ,	emp Thermal		11	njection/Disposal				Springs
1. Name of Operator LAMAR HUN	T CEOTHERN					4	9. Well No.	
	1 OLOTTICIO					A.A	2.5	
3. Address of Operator 2800 Than	ksgiving	Tower	r, Dallas, T	exas 75201	L		10. Field and	Pool, or Wildcat
			ED 968.37 FEET			LINE	111111	
ND 2335.13 FEET FROM	VIVIVIV	LINE OF	SEC. 34 TWP. 20	S. RGE I Y		MMPM	12. County	77777777
							Dona Ana	
	<i>                                     </i>						(11111)	
				19. Proposed Depth	15	A. Formati	on	20. Rotary or C.T.
11. Elevations (Show whether L	OF, RT, etc.)	21A. Kind	& Status Plug. Bond	n/a 21B. Drilling Contra	etor	n/a	22. Approx	n/a  Date Work will sta
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ABOVE SPACE DESCRIBE Fac. Give blowout preventer pro	PROPOSED PRO	GRAM: II	proposal is to deepen	or plug back, give da	ta on pr	esent produ	ctive zone and	proposed new prod
ereby certify that the informa	tion above is tru	e and com	plete to the best of my	knowledge and belie	ſ.			
ned House I.	Drue	n	Title LAMAR	HUNT GEOTHERN	1AL		Decem	ber 1, 1982
(This space for	State Use)						/#10	
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PROVED BY		<i>i</i>	TITLE DISTRI	CT SUPERV	1001	i <b>s</b> 	DATE	2-10.82
INDITIONS OF APPROVAL,	IF ANY:							

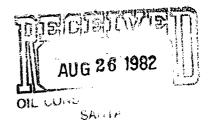
### LAMAR HUNT

#### 2500 FIRST NATIONAL BANK BUILDING DALLAS, TEXAS 75202

August 24, 1982

State of New Mexico Oil Conservation Commission P.O. Box 2088 Santa Fe, New Mexico 87501

Attention: Carl Ulvog



Dear Mr. Ulvog:

Enclosed are copies of a Sundry Notice for a pump test on our geothermal well 25-34 (LRG-503) at Radium Springs.

The test will be conducted by the Physical Science Laboratory, New Mexico State University. Roy Cunniff will be in charge. We hope to start the test by October 1, 1982.

If you need additional information, please contact me or Roy Cunniff.

Yours truly,

LAMAR HUNT, GEOTHERMAL OPERATIONS

Roger L. Bowers

encl.

NO. OF COPIES RECEIVED  DISTRIBUTION	NEW MEXICO OIL CON P. O. Box 2088	SERVATION COMMISSION FEB 1	Form G-103 Adopted 10/1/74
File		O'L CONS "	ATION DIVISION
N. M. B. M.	SUNDRY NOTICE		5. Indicate Type of Lease
U. S. G. S	<del>-</del>	) IX	State Fee
Operator Land Office	GEOTHERMAL R	ESOURCES WELLS	5.a State Lease No.
	· · · · · · · · · · · · · · · · · · ·		Federal NM-25557
Do Not Use This Form for Proposals to For Permit -" (Form G-101) for Such I	Drill or to Deepen or Plug Back to a Proposals.)	a Different Reservoir. Use "Application	
1. Type of well Geothermal Produ	—	<del>[</del> ]	7. Unit Agreement Name · ·
Low-Temp Therm 2. Name of Operator	nal Injection/Disposal		8. Farm or Lease Name
Lamar Hunt			Radium Springs
3. Address of Operator 2500 lst Nat'l Bar	nk Dallas, TX 75202		9. Well No. 25
4. Location of Well Unit Letter L 968.3	37 Feet From The West	Line and 2335.13 Feet From	10. Field and Pool, or Wildcat Wildcat
The South Line, Section	34Township 20	S. Range 1 W. NMPM.	
	1111115. Elevation (Show whether	her DF, RT, GR, etc.)	12. County
	4240 ft. G	R	Dona Ana
16. Check	Appropriate Box To Indicate 1	Nature of Notice, Report or Other Da	ita .
NOTICE OF INTE	NTION TO:	SUBSEQUE	NT REPORT OF:
PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WORK	☐ ALTERING CASING ☐
TEMPORARILY ABANDON XX		COMMENCE DRILLING OPNS.	PLUG & ABANDONMENT
PULL OR ALTER CASING L	CHANGE PLANS	CASING TEST AND CEMENT JOB	
		OTHER	
OTHER			
proposed work) SEE RULE 203.  Suspension of o	operations, well to	t details, and give pertinenet dates, incl	ion and/or possibly
reinjection, ar	rangements have be	en made to fence in t	he location
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TD 8000'			
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s -			
18. I hereby certify that the information	n above is true and complete to the !	best of my knowledge and belief.	
SIGNED JSBumgarner	) L	amar Hunt eothermal Operations	2/6/81
APPROVED JY Carl Ulu		SENIOR PETROLEUM GEOLOGIST	
			<del></del>

CONDITIONS OF APPROVAL, IF ANY

		,		Form G-103
	1		NEW WEST OF THE PROPERTY OF TH	Adopted 10/1/74
NO. OF COPIES RECEIVED	ļ		NEW MEXICO OIL CONSERVATION COMMISSION FEB	121981
DISTRIBUTION	1	1	P. O. Box 2088, Santa Fe 87501	
File N. M. B. M.	+′		OIL CONS	CATION DIVISION
		$\vdash$	SANDAT NOTICES AND REPORTS	S. lindicate Type of Lease
U. S. G. S	,	-		State Fee
Operator	1		GEOTHERMAL RESOURCES WELLS	5.a State Lease No.
Land Office	J			Federal NM-25557
			Drill or to Deepen or Plug Back to a Different Reservoir. Use "Application	
For Permit —" (Form G-101				7. Unit Agreement Name
Low-1		Therm.	ai	
2. Name of Operator				8. Farm or Lease Name
Lamar Hunt				Radium Springs
3. Address of Operator		_	* D 11	9. Well No.
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4. Location of Well				10. Field and Pool, or Wildcat
Unit Letter L	96	08.3	Feet From The West Line and 2335.13 Feet From	Wildcat
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The South	ne, Se	ection _	34	
			15. Elevation (Show whether DF, RT, GR, etc.)	12. County
			4240 ft. GR	Dona Ana
16.		Check	Appropriate Box To Indicate Nature of Notice, Report or Other D	ata
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PERFORM REMEDIAL WO	r		PLUG AND ABANDON REMEDIAL WORK	ALTERING CASING
TEMPORARILY ABANDON	r	СХ	COMMENCE DRILLING OPNS.	PLUG & ABANDONMENT
PULL OR ALTER CASING			CHANGE PLANS CASING TEST AND CEMENT JO	
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proposed work) SEE RU	JLE 2	03.		
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18. I hereby certify that the	infor	mation	a above is true and complete to the best of my knowledge and belief.	
400			/ Lamar Hunt	
SIGNED JA BruM	M	MI	TITLE Geothermal Operations	2/6/81
1-1000		. , 🕊	Geothermal Operations	DATE
APPROVED BY Carl	le	lvo	SENIOR PETROLEUM GEOLOGIST	DATE 2/18/81
CONDITIONS OF APPROVA	۰، ۱۸	= ANIC		
CONDITIONS OF APPROVA	<b>≒∟, H</b>	- ANY	4	

### READ INSTRUCTIONS ON BACK

Revised March 1972

# 0 DEC 17 AH 8 37

### DRILL A TEST WELL

APPLICATION TO ARRECEREATEXMINITERIORINE CONTINUES AND ARRECT AND

87382 D \$1.00

LRG-503-Exploratory

' File No. \_

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	HUNT ENERGY CORPORATION
	2500 First National Bk. Bldg.
	Dallas, Texas 75202
	2. Describe well location under one of the following subheadings:
	a. NE ½ NW ½ SW ½ of Sec. 34 Twp. 20S Rge. 1W N. M. P. M.,
	Dona Ana County.
	b. Tract No of Map No of the
	c. Lot No of Block No of the
	Subdivision, recorded in County.
	d. X = feet, Y = feet, N. M. Coordinate System Zo in the Gran
	in the Gran
	e. Give street address or route and box No. of property upon which well is to be located, or location by direction a distance from known landmarks
	3. Approximate depth (if known) 9000 feet; outside diameter of casing 9 5/8 inch
	Name of driller (if known) Carl Ratliff; Montgomery Drilling Company
	4. Use of water (check appropriate box or boxes):
	Household, non-commercial trees, lawn and garden not to exceed 1 acre.
	Livestock watering.
	Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction wis a commercial operation.
	Prospecting, mining or drilling operations to discover or develop natural resources.
	Construction of public works, highways and roads.
	X Drill and test a geothermal well.  If any of the last three were marked, give name and nature of business under Remarks. (Item 5)
	5. Remarks:
	I, B. W. Berthelot, affirm that the for going statements are true to the best of my knowled
	and belief and that development shall not commence until approval of the permit has been obtained.
	HUNT ENERGY CORPORATION Applicant
	By B. W. Besthe tot. December 12, 1980
	ACTION OF STATE ENGINEER
	This application is approved for the use indicated, subject to all general conditions and to the specific conditions number attached sheet.
	9 through 15 on the provided on or before December 30, 1981  S. E. Reynolds, State Engineer

Supervisor, District III
Date: December 17, 1980

#### GENERAL CONDITIONS OF APPROVAL

- A. The maximum amount of water that may be appropriated under this permit is 3 acre feet in any calendar year.
- B. The well shall be drilled only by a driller licensed in the State of New Mexico in accordance with Section 75-11-13 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eights (2 3/8) inches outside diameter (Section 75-11-13).
- C. Driller's log must be filed in the office of the State Engineer within 10 days after the well is drilled or driven. Failure to file the log within that time shall result in automatic cancellation of the permit. Log forms will be provided by the State Engineer upon request.
- D. The easing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown
- E. If the well under this permit is used at any time to serve more than one household, livestock in a commercial feed lot operation, or any other commercial purpose, the permittee shall comply with Specific Condition of Approval number 5(b).
- F. In the event this well is combined with other wells perm tted under Section 75-11-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3 acre feet per annum

### SPECIFIC CONDITIONS OF APPROVAL

(Applicable only when so indicated on the other side of this form.)

- 1. Depth of the well shall not exceed the thickness of the (a) the valley fill or (b) Ogallala formation.
- 2. The well shall be constructed to artesian well specifications and the State Engineer Office shall be notified before casing is landed or cemented.
- 3. Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval.
- 4. Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.
- 5. A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the State Engineer shall be advised of the reake, model, serial number, date of installation, and initial reading of the meter prior to approprime of the water and pumping records shall be submitted to the District Supervisor (a) for each calendar the on or before the 30th day of the following month (b) on or before the 10th of Ianuary, April, Indy and October of each year for the three preceding calendar months (c) for each calendar year on or before the 30th day of January of the following year.
- 6. The well shall be plugged upon completion of the permitted use and a plugging report shall be filed in the office of the State Engineer within 10 days.
- 7. Final approval for the use of the well shall be dependent upon a leakage test made by the State Engineer Office.
- 8. Use shall be limited strictly to household and/or drinking and sanitary purposes; water shall be conveyed from the well to the place of use in closed conduit and the effluent returned to the underground so that it will not appear on the surface. No irrigation of lawns, garden, trees or use in any proof pool or pond is authorized under this permit.

### **INSTRUCTIONS**

The application shall be made in the name of the actual user of the well for the purpose specified in the application.

The application shall be executed in triplicate and forwarded with a \$1.00 filing fee to the appropriate office of the State Engineer.

A separate application must be filed for each well to be drilled or used.

If well to be used is an existing well, an explanation (and file number, if possible) should be given under Remarks. (Item 5.)

Applications for appropriation, well logs and request for information in the following basins should be addressed to the State Engineer at the office indicated;

Bluewater, Estancia, Rio Grande, and Sandia Basins

District No. 1, 505 Marquette NW, Room 1023, Albuquerque, New Mexico 87101.

Capitan, Carlsbad, Fort Sumner, Hondo, Jal, Lea, Penasco, Portales, Roswell, and Upper Pecos Basins

District No. 2, Box 1717, Roswell, New Mexico 88201

Animas, Gila-San Francisco, Hot Springs, Las Animas Creek, Lordsburg, Mimbres, Nutt-Hockett, Playas, San Simon, and Virden Valley Basins

District No. 3, Box 844, Deming, New Mexico 88030

Canadian River Basin

State Engineer Office, State Capitol, Bataan Memorial Bldg., Santa Fe, New Mexico 87501

### ATTACHED TO AND FORMING PART OF EXPLORATORY

### WELL PERMIT NUMBER LRG-503-Exploratory

FILED DECEMBER 17, 1980.

### SPECIFIC CONDITIONS OF APPROVAL NO. 9 THROUGH 15 ARE AS FOLLOWS:

- 9. Well shall be drilled only by a drilling contractor licensed by the State Engineer of New Mexico.
- 10. The State Engineer shall be given 3 days advance notice in writing of the initiation of any flow test utilizing the well.
- 11. Personnel from the State Engineer shall have acess to the well site at all times during the flow test.
- 12. No water shall be diverted from the well except during the testing operation designated to develop the geothermal resource and no beneficial use of the water pumped during the test shall be made.
- 13. Diversion of water shall be measured by a totalizing meter, or meters, of a type and at a location(s) approved by and installed in a manner acceptable to the State Engineer. Records of such diversion and the amount of water, if any, reinjected into the geothermal reservoir shall be submitted to the State Engineer no later than 40 days from the completion of the test but in no event later than December 30, 1981.
- 14. Testing shall not be conducted for more than 90 days without the written permission of the State Engineer.
- 15. Well shall be plugged or capped on or before December 30, 1981, unless a permit to use water from the well is obtained from the State Engineer.

orm 9-881 C (May 1963)

### SUBMIT IN TRIPLICATE\*

(Other instructions on

Form approved. Budget Bureau No. 42-R1425.

**UNITED STATES** 

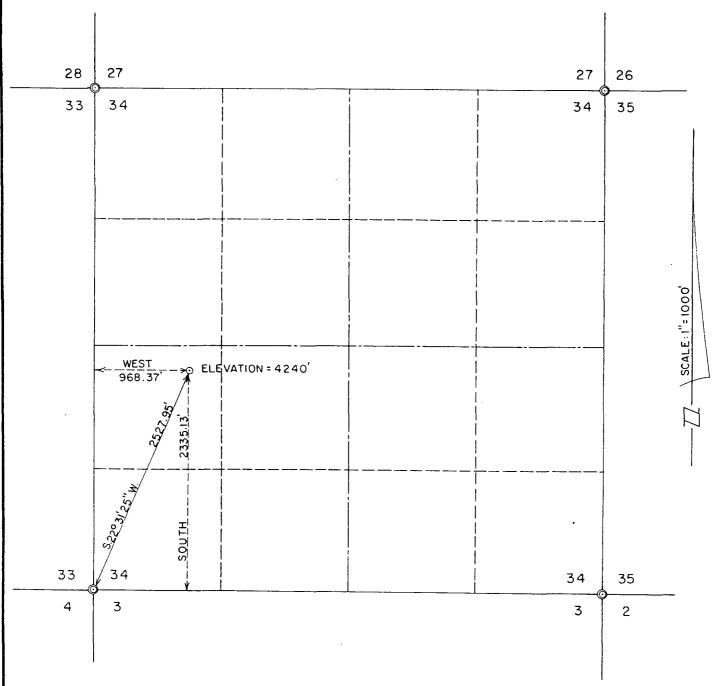
DEPARTMENT OF THE INTERIOR 5. LFARE DEBIGNATION AND BERIAL NO. **GEOLOGICAL SURVEY** NM 25557 6. IF INDIAN, ALLOTTEE OR TRIBE NAME APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK 1a. TYPE OF WORK J. BNIT AGPEEMENT NAME DEEPEN [ PLUG BACK DRILL XX b. TYPE OF WELL MULTIPLE ZONE WELL SINGLE Zone & FARM OR LEASE NAME OTHER Radium Springs NAME OF OPERATOR 9. WELL NO. Lamar Hunt, Geothermal Operations 25 - 3410. FIELD AND POOL, OR WILDCAT 2500 First National Bank Bldg. Dallas, TX 75202 4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*) Wildcat At surface 11. BBC., T., R., M., OR BLK. AND SURVEY OR AREA 968.37 fwl, 2335.13 fsl, Sec. 34 At proposed prod. zone Sec. 34, T20S, R1W. 14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\* 12. COUNTY OR PARISH | 13. STATE New Mexico Dona Ana 17. NO. OF ACRES ASSIGNED TO THIS WELL 15. DISTANCE FROM PROPOSED 16 NO OF ACRES IN LEASE DISTANCE FROM PROFUSED
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig, unit line, if any) 968.37 2560.00 20. ROTARY OR CABLE TOOLS 19. PROPOSED DEPTH 18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 9,000 ft Rotary 21. ELEVATIONS (Show whether DF, RT, GR, etc.) 22. APPROX. DATE WORK WILL START\* 4,240 GR September 1, 1980 23 PROPOSED CASING AND CEMENTING PROGRAM SIZE OF HOLE SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH OCANTITY OF CEMENT

See attached Drilling Program

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive sone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any. 24 Lamar Hunt  $_{\text{DATE}} = \frac{7}{14}/80$ Geothermal Operations (This space for Federal or State office use) PERMIT NO. CONDITIONS OF APPROVAL, IF ANY:

PLAT OF SURVEY SHOWING THE LOCATION OF A GEOTHERMAL WELL LOCATED IN SECTION 34, T.20S., R.1W., N.M.P.M. OF THE U.S.G.L.O. SURVEYS NORTH OF RADIUM SPRINGS, DONA ANA COUNTY, NEW MEXICO. SCALE: 1" = 1000' MAY 5, 1980





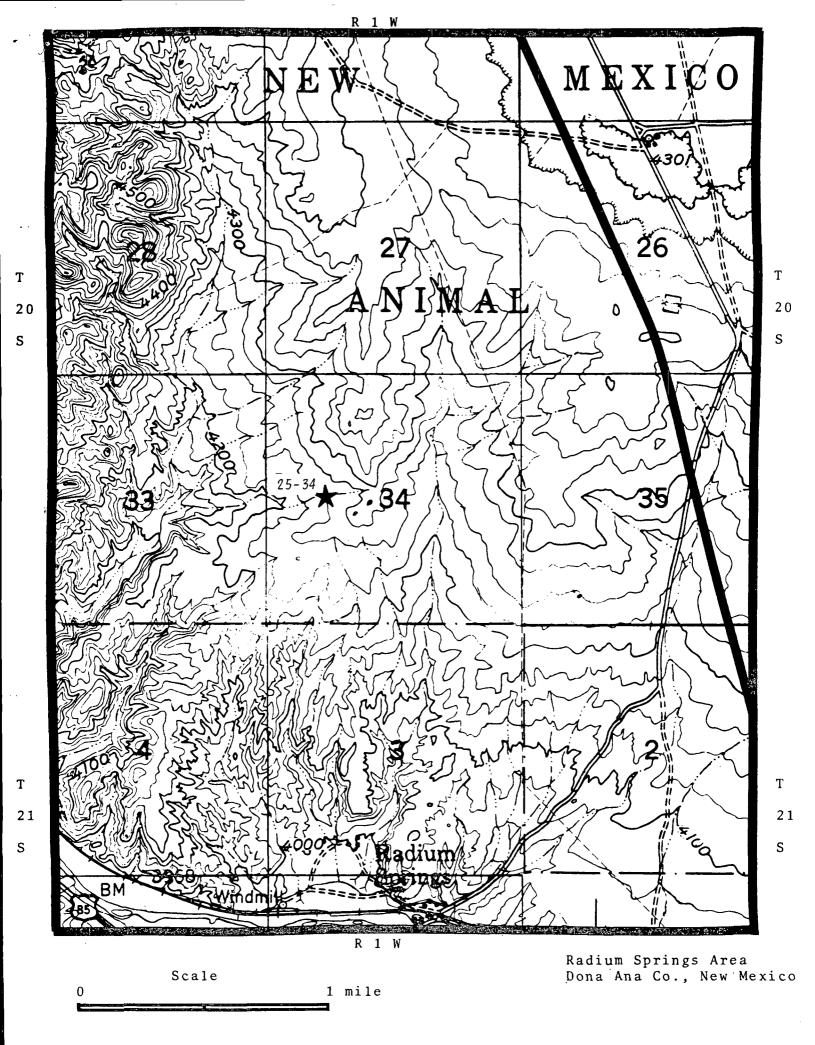
## HUNT GEOTHERMAL OPERATIONS Well Location

I BERENT CERTIFY TRAI I AM A REGISTERED LAND SURVEYOR Addium Springs No. 25-34 IN THE STATE OF NEW MEXICO AND THAT THIS PLAT WAS MADE BY ME OR UNDER MY SUPERVISION FROM THE HOTES

OF AN ACTUAL FIELD SURVEY AND THAT IT IS TRUE AND CORRECT TO THE DEST OF MY KNOWLEDGE AND SELICE.

PREPARED BY:





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

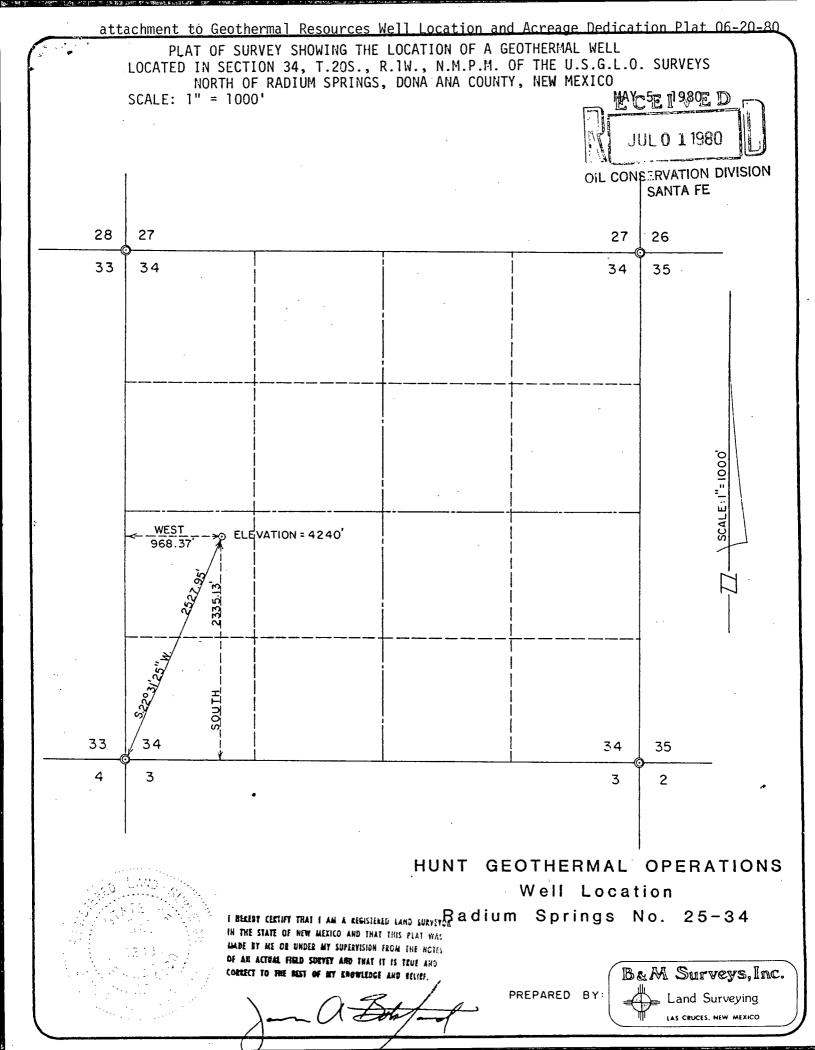
•		All distances mu	st be from the c	uter boundari	ies of the Section	Drive of the same operations	DIVISION
Operator La	amar Hunt		Lease	M-25556	Oil C	ONS RVATIC	FE 25-34
Unit Letter	Section 34	Township 20S	Ran	ge 7W	County	ona Ana	
Actual Footage L 2335.	1.7	South	line and	068.37	feet from the	West	line
Ground Level Ele	Teet Hom the		Pool	700.37	reet from the		Dedicated Acreage:
	240'						Acres
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☐ Ye	es 🗆 No If	answer is "yes," typ	e of consolida	tion	······		
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		or until a non-stand	lard unit, elim				ommunitization, unitization, d by the Commission.
		See Attachm	<u>ent</u>			<del></del>	
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	i			1	1	Position La	ndman <sup>`</sup>
	ļ			 	į	Company	
	1			i	Ì	Hunt Ener	rgy Corporation
·	Ì			1 .		06-20	0-80
						shown on notes of a under my is true an	certify that the well location this plat was plotted from field actual surveys made by me or supervision, and that the same and correct to the best of my and belief.
	•			1.		Registered Pro	ofessional Engineer
	 			- 		and/or Land	
0 310. 660	90 1320 1650	1980 2310 2640	2000 150	9 1000	500 0	Certificate No	o.

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### STATE OF NEW MEXICO

## ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING GOVERNOR LARRY KEHOE June 27, 1980

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-2434

Querbes & Nelson
P. O. Box 5
Shreveport, Louisiana 71161

Re:

\$10,000 Multiple-Well Geothermal

Bond, Lamar Hunt, Principal

American Insurance Company, Surety

Lease: NM 25556 Well 25-34 Sec. 34, T-20-S, R-1-W,

Bond No. 520 48 89

Gentlemen:

The Oil Conservation Division hereby approves the above-referenced geothermal bond effective June 20, 1980.

Sincerely,

JOE D. RAMEY, Director

JDR/dr

cc: √ Carl Ulvog - Oil Conservation Division Santa Fe

> Lamar Hunt 2500 First National Bank Bldg. Dallas, Texas 75202

HUNT ENERGY CORPORATION

2500 FIRST NATIONAL BANK BUILDING CONSERVATION DIVISION SANTA FE

February 23, 1981

Mr. Carl Ulvog New Mexico State Oil & Gas Commission Conservation Division P.O. Box 2088 Santa Fe, New Mexico 87503

Dear Mr. Ulvog:

Please find enclosed the results of the New Mexico State University testing of the spill at Radium Springs 25-34.

Call us if you have any questions or comments.

Sincerely,

J. S. Burngainer J.

G. S. Bumgarner, Jr.

Geologist

FEB 2 7 1981

OIL CONSTRUCTION DIVISION SANTA FE

dh

Enclosure

#### REPORT OF SPILL

Lamar Hunt, Geothermal Operations Geothermal Wildcat Radium Springs 25-34 (APD #0118) Dona Ana Co., New Mexico

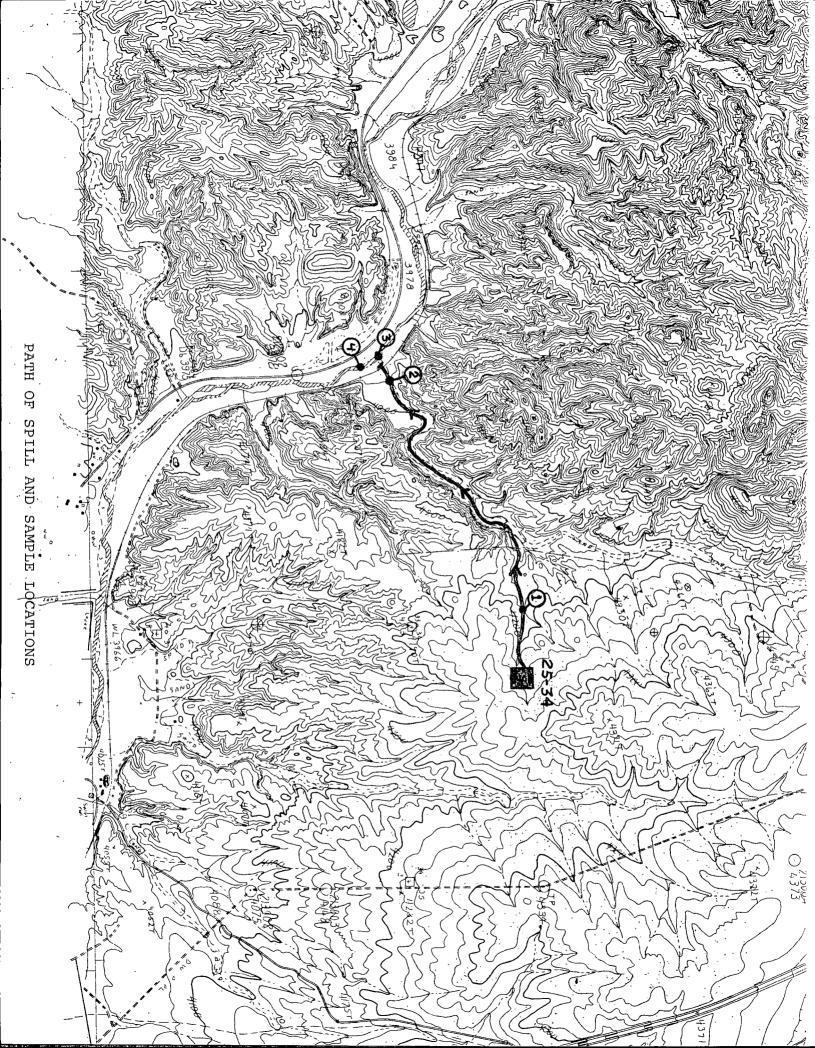
On December 21, 1980 at approximately 3:30 pm, an embankment of a drainage ditch was breached by drilling fluids resulting in a spill of an estimated 350 to 500 barrels of fluid. The fluid ran westward for approximately one half mile down the natural drainage into an arroyo and continued southwesterly down the arroyo toward the Rio Grande (see map). The fluid went under a railroad trestle but was blocked from entering the Rio Grande by a natural embankment of the river.

Drilling was stopped immediately and repair work was begun. A tractor was called out to build up the drainage ditch bank and as an extra preventative measure, a sump and dam were constructed along the entire west side of the location. By the time damage could be surveyed and agencies notified, all fluid had soaked into the sandy arroyo.

The drilling fluid lost was primarily water and soap. Some formation water may have been included as evidenced by  ${\rm CO}_2$  concentrations during drilling just before the spill. No toxic materials were used in the drilling fluid system. A sample of the water supply had been tested previously by New Mexico State University and was found to be satisfactory for livestock use.

After the spill, samples of wet sand were taken approximately ½ milewest of the wellsite and approximately 100 yards northeast of the railroad trestle. Water samples were also taken from the Rio Grande at points just upstream and 100 yards downstream of the projected point of fluid entry. All samples have been taken to New Mexico State University to be analyzed.

Normal drilling operations resumed after repair and clean-up work was completed.



#### COLLEGE OF AGRICULTURE AND HOME ECONOMICS

DEPARTMENT OF AGRONOMY Box 3Q/Las Cruces, New Mexico 88003 Telephone (505) 646-3405

February 18, 1981



Hunt Energy Corp. 2500 1st Nat'l. Bank Bldg. Dallas, Texas 75202

Data for first sampling at well No. 1-Radium Springs and spill samples

Spill Samples----

						mg/L			
Sample						Ba			
Drilling Fluid Bank of Rio Grande Rio Grande 100 yds	<.01	<.5	.04	< .10	< .05	< . 4		< .05	<.005<.005<.005
						mg/Kg -			
1/4 mi. down wash 100 yds. up creek from river		<10 <10					164.6 201.2	5.2 6.0	.20

## HUNT ENERGY CORPORATION

2500 FIRST NATIONAL BANK BUILDING DALLAS, TEXAS 75202



Telephone (214) 748-1300

April 6, 1982

New Mexico Oil Conservation Commission P.O. Box 2088 SANTE FE, NEW MEXICO 87501

ATTENTION: CARL ULVOG

Dear Mr. Ulvog:

re: RADIUM SPRINGS - WELL No. 22

Enclosed are Forms G-103 and G-106 for the abandonment of Well 22.

Also, for your files are copies of reports for Wells 25 and 53. These two wells are still being used for observation purposes if you have any questions please call me at (214)748-1300 ext. 464.

Very truly yours

HUNT ENERGY CORPORATION

G. S. BUMGARNER JR. GEOTHERMAL OPERATIONS

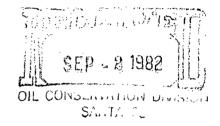
GSB:jv

Enclosures

## HUNT ENERGY CORPORATION 1601 ELM STREET 2800 THANKSGIVING TOWER DALLAS, TEXAS 7520

August 31, 1982

New Mexico State Oil & Gas Commission Conservation Divison P. O. Box 2088 Santa Fe, New Mexico 87503 Attn: Mr. Carl Ulvog



Dear Mr. Ulvog,

Enclosed is the chemical analysis from the flow test of Radium Springs 25--34 which you requested from Roy Cunniff.

If you need anything further please feel free to call me at (214) 573-8718.

Sincerely yours,

Martin H. Littmann

palming grings

To:

G. S. Bumgarner, Geologist; Hunt Energy Corp.

From:

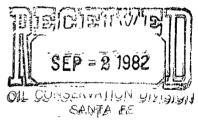
Andrew Lee Bristol, Analytical Consultant

Subject: Test samples taken February 2 & 3, 1981 at first hole Radium Springs, NM

	Samp	10	5U	mmhos/cm				•			
	Saliip	16	рН	E.C.	IVa	<u>K</u>	<u>La</u>	rig	<u></u>	<u> </u>	псоз
2	2/2/81 2/2/81 2/2/81	1:45 PM 5:00 PM 8:15 PM	9.14 9.30 9.21	3.47 3.38 3.31	769.7	56.7 55.9 54.7	14.6 11.2	.8 1.0	840.9 789.9 789.9	67.8 60.0	206.4 237.0
5	2/2/81 2/3/81 2/3/81	11:30 PM 2:00 AM 5:30 AM	9.13 9.16 9.15	3.10 3.09 3.02	703.5 689.0 680.5	52.4	6.8 6.0 5.2	1.1	683.5 626.8 591.4	64.8	234.5 218.6 225.4

					ma	/L					
Sample	S0 <sub>4</sub>	<u>NO3-N</u>	NO <sub>2</sub> -N	NH4-N	J	_	<u>F</u>	Fe	Mn	As	Pb
1 2 3 4 5	437.5 415.0 400.0 392.5 375.0 377.5	56.2 24.6 9.2 6.7 9.2 3.2	66.5 64.0 59.0 41.0 34.0 32.0	.71 .62 .70 .68 .57	.71 .68 .66 .65 .65	56.0 57.5 58.0 56.5 59.0 61.0	5.70 6.00 5.85 5.70 5.65 5.70	9.94 7.07 6.92 11.30 5.71 4.98	.77 .62 .77 .89 .58	.006 .006 .007 .007	<.01 <.01 <.01 <.01 <.01 <.01

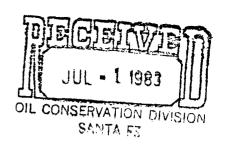
	mg/L											
	Sb	Hg	Zn	<u>Sr</u>	TDS	18 <sub>0</sub> /16 <sub>0</sub> x100						
1 2 3 4 5	<.5 .5</.5</.5</.5</td <td>&lt;.0002<!--.0002</.0002</.0002</.0002</.0002</td--><td>.06 .06 .04 .04 .03</td><td>.39 .33 .28 .23 .23</td><td>2302 2174 2110 1970 1970 1920</td><td>.188 ± .019 .201 ± .002 .199 ± .002 .208 ± .006 .205 ± .007 .201 ± .011</td><td>. 0</td></td>	<.0002 .0002</.0002</.0002</.0002</.0002</td <td>.06 .06 .04 .04 .03</td> <td>.39 .33 .28 .23 .23</td> <td>2302 2174 2110 1970 1970 1920</td> <td>.188 ± .019 .201 ± .002 .199 ± .002 .208 ± .006 .205 ± .007 .201 ± .011</td> <td>. 0</td>	.06 .06 .04 .04 .03	.39 .33 .28 .23 .23	2302 2174 2110 1970 1970 1920	.188 ± .019 .201 ± .002 .199 ± .002 .208 ± .006 .205 ± .007 .201 ± .011	. 0					
						.204 ± .007 fc	or t					



for tap H<sub>2</sub>0

Water onolysis

LAMAR HUNT
2800 THANKSGIVING TOWER
DALLAS, TEXAS 75201



June 28, 1983

Carl Ulvog New Mexico State Oil & Gas Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87503

Dear Mr. Ulvog:

Enclosed please find results of the chemical analysis of water samples collected during our recent pump test of Radium Springs geothermal well #25-34.

The water was produced using an air-lift method. This was accomplished by pumping air down the hole through 2 3/8 inch tubing which had been suspended in the wellbore at a depth of 700 feet. The air was pumped utilizing a standard oilfield type air compressor. The air compressor did not have throttling capabilities, so we were unable to run a staged test as originally intended.

Included with the above referenced analyses is a table indicating when the samples were taken. Also enclosed is graph of flowrate vs. time.

If you have any further questions or desire clarification, please don't hesitate to give me a call.

Sincerely,

LAMAR HUNT

David J. Lloyd

Geothermal Operations

TIME OF SAMPLE TAKING

DATE	Sample No.	Real Time	Total Flow Time (min)
5-2-83	#1	15:45	255
5-3-83	<b>#</b> 2	10:20	1370
	#3	15:40	1495
5-4-83	#4	9:55	2590
	<b>#</b> 5	12:30	2680
	#6	17:00	2981
5-5-83	#7	10:00	4000
	#8	12:10	4130
	#9	15:00	4283

•To: Roy Cunniff, PSL Box 3PSL

From: Andrew Lee Bristol, Soil & Mater Testing Lab

Subject: Water analysis of geothermal well (May 1983) (Lab Nos 5813-5821)

		mmhos/cm				m	g/L			
Sample.	pН	E.C.	Na	K	Ca	Mg	C1	$CO_3$	HCO <sub>3</sub>	so <sub>4</sub>
1	7.94	6.21	1131	188.3	38.3	10.2	1643	0	185.5	250
2	7.98	6.17	1071	186.7	41.1	10.6	1643	0	183.0	150
3	7.86	6.23	1127	187.5	53.3	11.6	1621	0	238.0	250
4 .	7.94	6.17	1099	185.0	43.8	11.2	1621	0	209.9	200
5	7.86	6.18	1131	186.7	54.1	11.5	1665	0	239.2	200
6	7.93	6.18	1031	189.2	49.0	11.3	1599	0	288.0	150
7	8.11	6.18	1141	190.1	44.4	11.1	1688	0	219.7	80
8	8.11	6.26	1113	190.1	46.9	11.0	1688	0	228.2	200
9	7.88	6.21	1122	188.3	50.5	10.7	1643	0	241.6	<u>1</u> 80
5 6 7 8	7.86 7.93 8.11 8.11	6.18 6.18 6.18 6.26	1131 1031 1141 1113	186.7 189.2 190.1 190.1	54.1 49.0 44.4 46.9	11.5 11.3 11.1 11.0	1665 1599 1688 1688	0 0 0 0	239.2 288.0 219.7 228.2	200 150 80 200

			mg/L					
Sample	NO <sub>3</sub> N	SiO <sub>2</sub>	F	В	Fe	Mn	As	TDS by $ ot \sum_{i=1}^{n} f(x_i) dx_i = 0 ot \sum_{i=1}^{n} f(x_i) $
1	<.01	140	96	99	.68	.03	.009	3585
2	.07	138	1.09	.92	.61	.02	.009	3306
3	.02	137	1.03	.96	.87	02	.009	<del>-3</del> 628
4	.04	135	1.00	.89	.47	.03	.008	3508
5	.04	133	1.03	.91	70	.03	.008	3623
6	.04	132	1.03	.90	.31	.03	.008	3466
. 7	.06	132	1.03	.84	.16	.03	.008	3523
8	.06	140	1.06	. 86	.16	.03	.008	3634
9	.04	135	1.07	.82	.65	.04	.008	3588

			mg/L-		<del></del>		
Sample	Ba	Cd	Cr	РЬ	Hg	Se	Ag
1	.15	<.005	<b>&lt;,</b> 01	<.005	,0011	<.001	<b>&lt;.</b> 05
2	.16	<.005	<.01	.019	.0002	<b>&lt;.</b> 001	<.05 .
3	.16	<.005	<.01	.0.22	<,0002	<.001	< .05
4	.15	<.005	.01	.016	<,0002	<.001	< .05
5	.16	<b>&lt;.</b> 005	<.01	.018	.0002	<.001	<.05
6	.14	<.005	<.01	.014	<,0002	<.001	₹.05
7	.14	<.005	.02	.010	८,0002	<.001	<.05
8	.15	<.005	<.01	.011	<.0002	<.001	<.05
9	.15	<.005	₹.01	.028	<.0002	<.001	<.05

