

GTLT - _____7_____

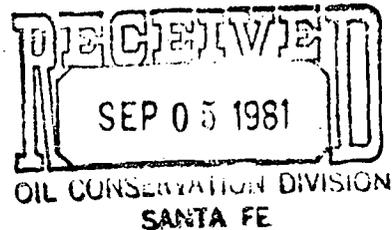
**(12-16)-21S-1W
Dona Ana County**

784; 11-77; 781 & 3-77



Chevron Resources Company

A Division of Chevron Industries, Inc.
595 Market Street, San Francisco, California
Mail Address: P.O. Box 3722, San Francisco, CA 94119



August 31, 1981

Mr. Carl Ulvog
New Mexico Oil and Gas Commission
P.O. Box 2088
Sante Fe, New Mexico 87501

Dear Mr. Ulvog:

Chevron Resources respectfully submits well completion reports for the following shallow temperature observation wells in Dona Ana and Hidalgo Counties, New Mexico:

McKibbin #786 and Wamel #179

Chevron did not drill and requests that the permits be cancelled for the following proposed holes:

Radium Springs Area, Dona Ana Co.
State Lease 781, Colquitt 784
Lordsburg Area, Hidalgo Co.
Evans 279, Davis 379, Evans 479

Should you have any questions regarding these matters, please feel free to contact me at (415) 894-2508.

Thank you for your time and consideration regarding this request.

Respectfully,

Mark Kehoe
Permit Representative

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe, N.M. 87501

MAY - 4 1978

Form G-101

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

5A. Indicate Type of Lease
 STATE FEDERAL
 5. State Lease No.

NO. OF COPIES RECEIVED		
DISTRIBUTION		
N.M.	1	✓
S.G.S.	1	
Operator	1	
and Office		

6. Type of Work: Drill Deepen Plug Back
 7. Type of Well: Geothermal Producer Temp Observation
 Low-Temp Thermal Injection/Disposal
 Name of Operator: Chevron U.S.A. Inc.
 Address of Operator: P. O. Box 3722 San Francisco, California 94119

7. Unit Agreement Name
 8. Farm or Lease Name: Colquitt
 9. Well No.: 784
 10. Field and Pool, or Wildcat

Location of Well: UNIT LETTER C LOCATED 300 FEET FROM THE N LINE
 1600' FEET FROM THE W LINE OF SEC. 12 TWP. 215 RCF. 1W NMPM

12. County: Dona Ana

19. Proposed Depth: 2000'
 19A. Formation
 20. Rotary or C.T.: Rotary
 21. Kind & Status Plug. Bond: To be named later
 22. Approx. Date Work will start: 6/1/78

3. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP

Per Exhibit "A"
 In addition to Exhibit "A":
 Should measurable formation water be encountered the hole will be cemented from T.D. into the surface casing if at all possible.

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

APPROVAL VALID FOR 90 DAYS
 PERMIT EXPIRES 8/3/78
 UNLESS DRILLING UNDERWAY

ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRO-
 DUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed J. G. Turner Title Attorney-In-Fact Date 3/13/78

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 5/5/78

GEOHERMAL RESOURCES WELL LOCATION AND ACREAGE INDICATION PLAT

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

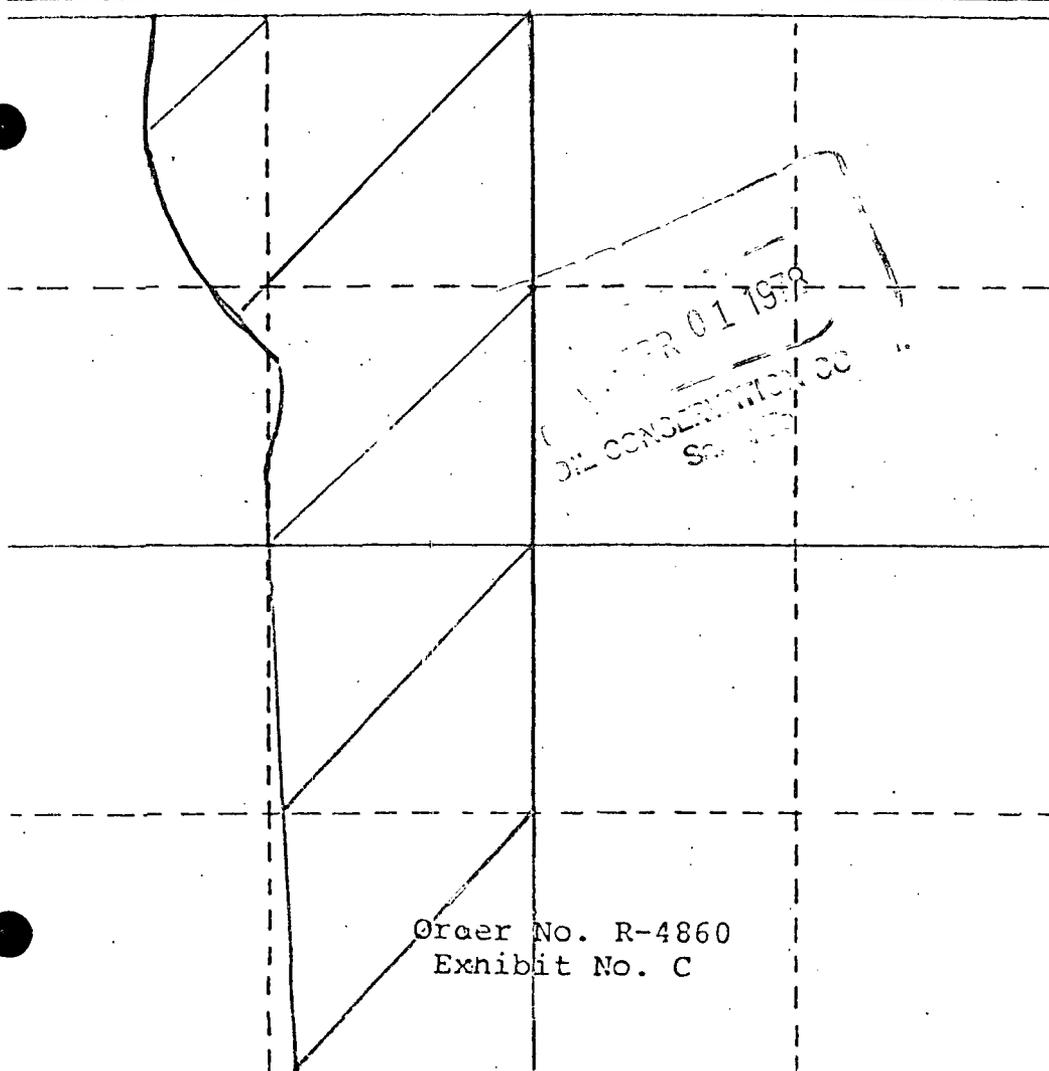
Operator Chevron U.S.A. Inc.		Lease Colquitt		Well No. 784
Well Letter C	Section 12	Township T25	Range R1W	County Dona Ana
Well Location: Location of Well: 1600' feet from the W line and 300 feet from the N line				
Sound Level Elev. 4120'	Producing Formation	Pool	Dedicated Acreage: Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes No If answer is "yes," type of consolidation _____

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

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



CERTIFICATION

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

Name <i>J. P. Winer</i>
Position Attorney-In-Fact
Company Chevron U.S.A. Inc.
Date 3/13/78

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

Date Surveyed
Registered Professional Engineer and/or Land Surveyor
Certificate No.

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

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

**SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS**

5. Indicate Type of Lease
State Fee

5.a State Lease No.

7. Unit Agreement Name

8. Farm or Lease Name
Colquitt

9. Well No.
784

10. Field and Pool, or Wildcat

12. County
Dona Ana

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

1. Type of well
Geothermal Producer Temp. Observation
Low-Temp Thermal Injection/Disposal

2. Name of Operator
Chevron U.S.A. Inc.

3. Address of Operator
P. O. Box 3722 San Francisco, California 94119

4. Location of Well
Unit Letter **C** **300** Feet From The **N** Line and **1600** Feet From
The **W** Line, Section **12** Township **T215** Range **R1W** NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
4120'

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input checked="" type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG & ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	OTHER <input type="checkbox"/>

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

See Exhibit "A"



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

SIGNED J. P. Turner TITLE **Attorney-In-Fact** DATE **3/13/78**

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

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

NEW MEXICO OIL CONSERVATION COMMISSION

P. O. Box 2088, Santa Fe 87501

NOV 14 1977

SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS

5. Indicate Type of Lease
State Fee
S.A. State Lease No.

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

1. Type of well Geothermal Producer <input type="checkbox"/> Temp. Observation <input checked="" type="checkbox"/> Low-Temp Thermal <input type="checkbox"/> Injection/Disposal <input type="checkbox"/>	7. Unit Agreement Name
2. Name of Operator Chevron U.S.A. Inc.	8. Farm or Lease Name Colquitt Co.
3. Address of Operator P.O. Box 3722 San Francisco, CA 94119	9. Well No. 11-77
4. Location of Well Unit Letter <u>H</u> <u>700'</u> Feet From The <u>E</u> Line and <u>3900</u> Feet From The <u>S</u> Line, Section <u>13</u> Township <u>21 S</u> Range <u>1W</u> NMPM.	10. Field and Pool, or Wildcat
15. Elevation (Show whether DF, RT, GR, etc.) 4060'	12. County Dona Ana

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG & ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

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

Drilling was Canceled

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

SIGNED J. P. Turner TITLE Attorney-in-Fact DATE 11-8-77

APPROVED BY Carl Uvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 12-5-77

CONDITIONS OF APPROVAL, IF ANY:

NO. OF COPIES RECEIVED	4
DISTRIBUTION	
File	1 ✓
N.M.	1
U.S.G.S.	1
Operator	1
Land Office	
BLM	1

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

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

Form G-101

5A. Indicate Type of Lease
STATE FCC

5. State Lease No.

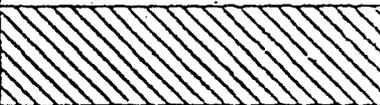


7. Unit Agreement Name

8. Farm or Lease Name
Colquitt Co.

9. Well No.
11-77

10. Field and Pool, or Wildcat



12. County
Dona Ana



19. Proposed Depth
500'

19A. Formation

20. Rotary or C.T.
Rotary

21. Elevation (Show whether DF, RT, etc.)
4060'

21A. Kind & Status Plug. Bond

21B. Drilling Contractor
To be named later

22. Approx. Date Work will start
5/1/77

a. Type of Work
Drill Deepen Plug Back

b. Type of Well
Geothermal Producer Temp Observation
Low-Temp Thermal Injection/Disposal

c. Name of Operator
Chevron U.S.A. Inc.

d. Address of Operator
P. O. Box 3722 San Francisco, CA 94119

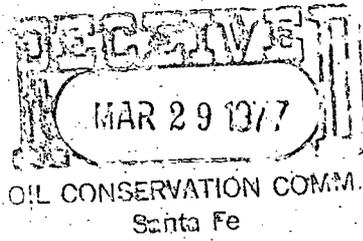
e. Location of Well
UNIT LETTER H LOCATED 700' FEET FROM THE E LINE
3900' FEET FROM THE S LINE OF SEC. 13 TWP. 21S RCF. 1W NMPM



PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP

SEE ATTACHED PROPOSED PLAN OF EXPLORATION.



APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED
EXPIRES 7/3/77

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODU

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

Signed By: Chevron U.S.A. Inc. Title Asst. Secretary Date 3/22/77

(This space for State Use)

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 4/4/77

CONDITIONS OF APPROVAL, IF ANY:

CHEVRON RESOURCES COMPANY
PLAN OF OPERATION
SHALLOW TEMPERATURE OPERATION HOLES

1. Description of the Operation

The Shallow Temperature Observation Hole Program, as conducted by the Chevron Resources Company, requires the drilling of 250-500 foot holes with a diameter of 4-3/4 to 5-3/8 inches. The number of holes will vary with the size of the area to be evaluated. These holes will be drilled by a state licensed drilling contractor using a truck mounted drill rig.

Once each hole is completed a 1 inch (I.D.) black steel pipe, sealed at the bottom, will be placed in the hole with the top being 8-12 inches from the ground surface. The pipe is then filled with water and capped. The hole is then back-filled with cuttings and/or drilling mud to within 10 feet of the surface. The remaining void is then filled with cement.

As necessary, the pipe is unearthed and a temperature probe is lowered to total depth. Once the series of temperature logs are completed, the pipe is then filled with cement and buried. The ground surface is then smoothed and returned to as nearly as practical to pre-drilling condition.

The equipment for drilling, as well as the drill rig, consists of a water truck and a light pickup truck. The temperature probe consists of a thermometer or thermister device on the end of a wire line and a small tripod-mounted wheel for lowering the probe down the hole.

2. The following plan of operations as required by Section 270.34 of the Federal Regulations for Geothermal Operations on public acquired and withdrawn lands, covering paragraphs (a) through (h), is submitted pursuant to Section 270.78:

- (a) The hole locations, lease numbers (Exhibit "A") and outline of a typical drill site layout (Exhibit "B") are attached.
- (b) No new roads will be constructed for this operation. Access to sites will be along existing roads.
- (c) No water sources on federally administered lands will be developed and no road building material will be used.
- (d) Campsites, airstrips or other supporting facilities will not be required.
- (e) Minimal access scars, limited mainly to tire impressions, may occur during the course of drilling the hole. All such disturbances will be restored as nearly as possible to pre-drilling condition. All materials will be removed from the area once the hole is completed.

- (f) Topographic features of the drill site areas and drainage can be observed from the attached map (Exhibit "A").
- (g) If drilling mud is used, it will be contained by an 8' x 3' x 3-1/2' steel mud pit. When the hole is completed the mud residue will be dried and spread on the ground surface.
- (h) The Chevron Resources Company will use all reasonable precautions to prevent waste of geothermal resources and other natural resources found in the area. At all times during operations the following precautions will be taken:

Traffic will be light and only when necessary. Light pickups will be used whenever possible. To the extent possible only existing roads, fence lines or jeep trails will be used.

Site preparation will be limited to driving the truck-mounted drill rig to the site and setting it up for drilling.

Since the topography is not severe, the construction of drill pads will not be required.

All vehicles will be equipped with spark arresters and will carry the required fire-fighting equipment and all adequate fire protection measures will be taken to prevent any damage from fire.

No water or other material will be pumped onto the surface of the ground which might result in soil erosion. Appropriate care will be taken so that natural drainage will not be affected and so that no pollution can occur to surface or ground water.

Geothermal operations will have no material impact on fish and the disturbance of wildlife and vegetation in the area will be minor due to the short duration of operations and the limited number of personnel comprising the field crews. No significant damage or destruction of vegetation will occur and unavoidable dislocation of wildlife will be short term only.

Mufflers and other available devices will be used on all vehicles to control noise pollution. Minor air pollution will occur from vehicle exhaust, but all feasible measures will be used to control this pollution, in compliance with applicable laws, rules and regulations. Minor air pollution will occur from dust caused by vehicle traffic on dirt roads. Since this pollution is dependent upon natural road conditions and is temporary it therefore has no significant affect on the areas environment.

There will be very little hazard to public health and safety due to the lack of population in the area. All such hazard is confined to the crew or the rig. All appropriate safety measures and equipment will be utilized.

WATER TRUCK



DRILL RIG



MUD PIT (IF NEEDED)



PIPE TRAILER (IF NEEDED)



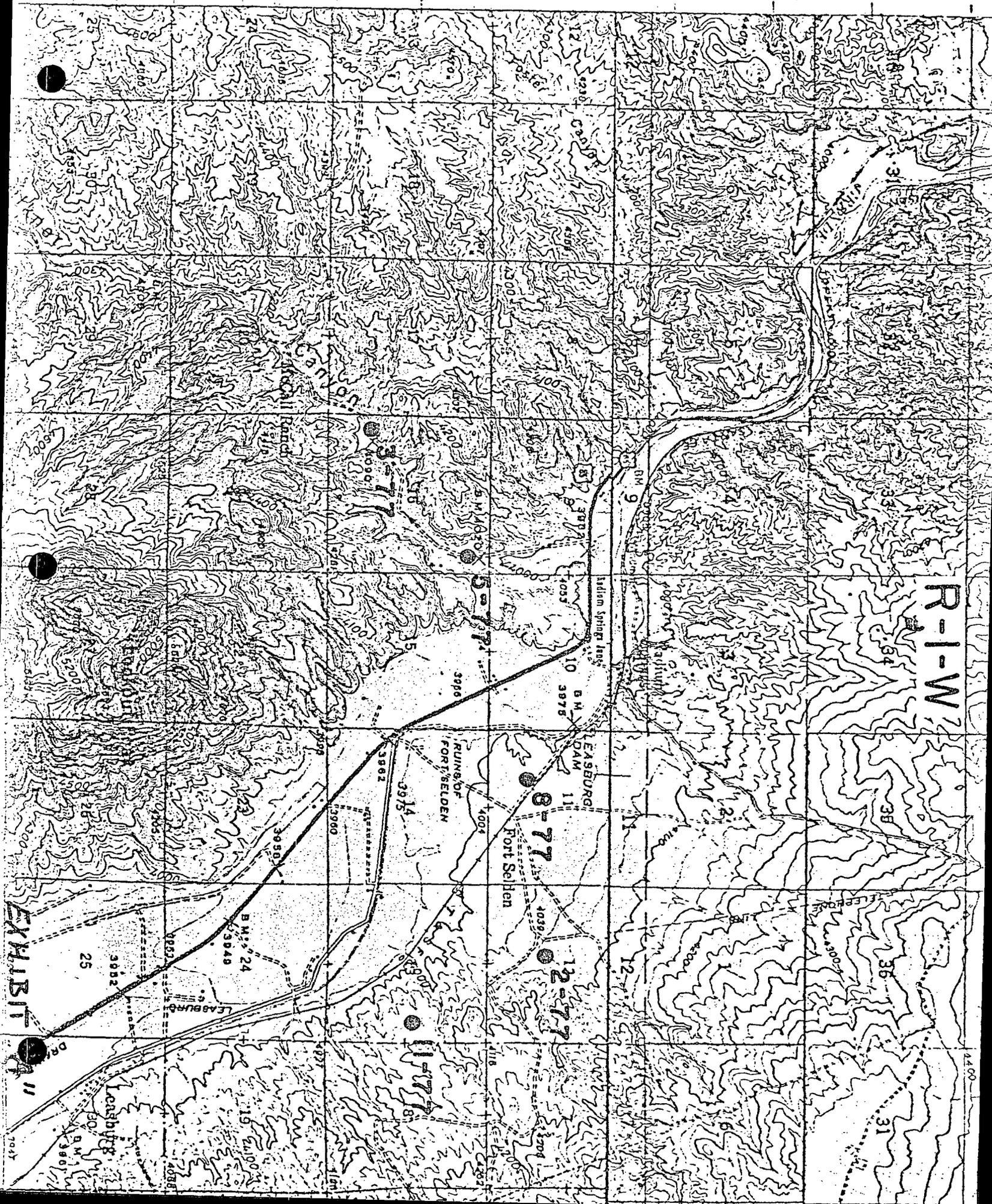
SCHEMATIC OF SHALLOW TEMPERATURE HOLE DRILL SITE

EXHIBIT "B"

T
21
S

R-1-W

EXHIBIT



CHEVRON RESOURCES COMPANY
PLAN OF OPERATION
SHALLOW TEMPERATURE OPERATION HOLES

1. Description of the Operation

The Shallow Temperature Observation Hole Program, as conducted by the Chevron Resources Company, requires the drilling of 250-500 foot holes with a diameter of 4-3/4 to 5-3/8 inches. The number of holes will vary with the size of the area to be evaluated. These holes will be drilled by a state licensed drilling contractor using a truck mounted drill rig.

Once each hole is completed a 1 inch (I.D.) black steel pipe, sealed at the bottom, will be placed in the hole with the top being 8-12 inches from the ground surface. The pipe is then filled with water and capped. The hole is then back-filled with cuttings and/or drilling mud to within 10 feet of the surface. The remaining void is then filled with cement.

As necessary, the pipe is unearthed and a temperature probe is lowered to total depth. Once the series of temperature logs are completed, the pipe is then filled with cement and buried. The ground surface is then smoothed and returned to as nearly as practical to pre-drilling condition.

The equipment for drilling, as well as the drill rig, consists of a water truck and a light pickup truck. The temperature probe consists of a thermometer or thermister device on the end of a wire line and a small tripod-mounted wheel for lowering the probe down the hole.

2. The following plan of operations as required by Section 270.34 of the Federal Regulations for Geothermal Operations on public acquired and withdrawn lands, covering paragraphs (a) through (h), is submitted pursuant to Section 270.78:

- (a) The hole locations, lease numbers (Exhibit "A") and outline of a typical drill site layout (Exhibit "B") are attached.
- (b) No new roads will be constructed for this operation. Access to sites will be along existing roads.
- (c) No water sources on federally administered lands will be developed and no road building material will be used.
- (d) Campsites, airstrips or other supporting facilities will not be required.
- (e) Minimal access scars, limited mainly to tire impressions, may occur during the course of drilling the hole. All such disturbances will be restored as nearly as possible to pre-drilling condition. All materials will be removed from the area once the hole is completed.

- (f) Topographic features of the drill site areas and drainage can be observed from the attached map (Exhibit "A").
- (g) If drilling mud is used, it will be contained by an 8' x 3' x 3-1/2' steel mud pit. When the hole is completed the mud residue will be dried and spread on the ground surface.
- (h) The Chevron Resources Company will use all reasonable precautions to prevent waste of geothermal resources and other natural resources found in the area. At all times during operations the following precautions will be taken:

Traffic will be light and only when necessary. Light pickups will be used whenever possible. To the extent possible only existing roads, fence lines or jeep trails will be used.

Site preparation will be limited to driving the truck-mounted drill rig to the site and setting it up for drilling.

Since the topography is not severe, the construction of drill pads will not be required.

All vehicles will be equipped with spark arresters and will carry the required fire-fighting equipment and all adequate fire protection measures will be taken to prevent any damage from fire.

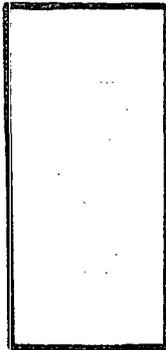
No water or other material will be pumped onto the surface of the ground which might result in soil erosion. Appropriate care will be taken so that natural drainage will not be affected and so that no pollution can occur to surface or ground water.

Geothermal operations will have no material impact on fish and the disturbance of wildlife and vegetation in the area will be minor due to the short duration of operations and the limited number of personnel comprising the field crews. No significant damage or destruction of vegetation will occur and unavoidable dislocation of wildlife will be short term only.

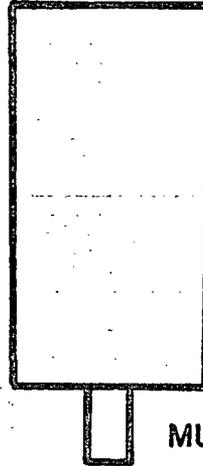
Mufflers and other available devices will be used on all vehicles to control noise pollution. Minor air pollution will occur from vehicle exhaust, but all feasible measures will be used to control this pollution, in compliance with applicable laws, rules and regulations. Minor air pollution will occur from dust caused by vehicle traffic on dirt roads. Since this pollution is dependent upon natural road conditions and is temporary it therefore has no significant affect on the areas environment.

There will be very little hazard to public health and safety due to the lack of population in the area. All such hazard is confined to the crew or the rig. All appropriate safety measures and equipment will be utilized.

WATER TRUCK



DRILL RIG



MUD PIT (IF NEEDED)

PIPE TRAILER (IF NEEDED)



SCHEMATIC OF SHALLOW TEMPERATURE HOLE DRILL SITE

EXHIBIT "B"

CHEVRON RESOURCES COMPANY

PLAN OF OPERATION

SHALLOW TEMPERATURE GRADIENT HOLES

EXHIBIT "A"

1. Description of the Operation

The Shallow Temperature Observation Hole Program, as conducted by the Chevron Resources Company, requires the drilling of 250-500 foot holes with a diameter of 4-3/4 to 5-3/8 inches. The number of holes will vary with the size of the area to be evaluated. These holes will be drilled by a state licensed drilling contractor using a truck mounted drill rig. The mud-out temperature will be monitored continually during the actual drilling.

Once each hole is completed a 1 inch (I.D.) black steel pipe, sealed at the bottom, will be placed in the hole with the top being 8-12 inches from the ground surface. The pipe is then filled with water and capped. The hole is then back-filled with cuttings and/or drilling mud to within 10 feet of the surface. The remaining void is then filled with cement.

As necessary, the pipe is unearthed and a temperature probe is lowered to total depth. Once the series of temperature logs is completed, the pipe is then filled with cement and buried. The ground surface is then smoothed and returned to as nearly as practical to pre-drilling condition.

The drilling operations will be suspended if the mud-out temperature reaches 125°F and cannot be lowered or stabilized with the addition of well-head or cooling devices. The hole will then be completed as a temperature gradient hole or abandoned.

The drilling operations will also be suspended if flowing hot water or steam at 150°F or more is encountered. The hole will then be completed as a temperature gradient hole by placing 1 inch (I.D.), black, steel pipe to total depth and cementing from total depth to surface. If the hole is to be abandoned it will be plugged with cement from total depth to surface.

If cold artesian flow is encountered the hole will be completed or abandoned as described in the paragraph above.

The equipment for drilling, as well as the drill rig, consists of a water truck and a light pickup truck. The temperature probe consists of a thermometer or thermister device on the end of a wire line and a small tripod-mounted wheel for lowering the probe down the hole.

2. The following plan of operations as required by Section 270.34 of the Federal Regulations for Geothermal Operations on public acquired and

withdrawn lands, covering paragraphs (a) through (h), is submitted pursuant to Section 270.78:

- (a) The hole locations, lease numbers (Exhibit "B") and outline of a typical drill site layout (Exhibit "C") are attached.
- (b) No new roads will be constructed for this operation. Access to area of operations will be along existing roads.
- (c) No water sources on federally administered lands will be developed and no road building material will be used.
- (d) Campsites, airstrips or other supporting facilities will not be required.
- (e) Minimal access scars, limited mainly to tire impressions, may occur during the course of drilling the hole. All such disturbances will be restored as nearly as possible to pre-drilling condition. All materials will be removed from the area once the hole is completed.
- (f) Topographic features of the drill site areas and drainage can be observed from the attached map (Exhibit "B").
- (g) If drilling mud or foam are used they will be contained by portable steel containers. When the hole is completed, the mud residue will be dried and spread on the ground surface.
- (h) The Chevron Resources Company will use all reasonable precautions to prevent waste of geothermal resources and other natural resources found in the area. At all times during operations the following precautions will be taken:

Traffic will be light and only when necessary. Light pickups will be used whenever possible. To the extent possible, only existing roads, fence lines or jeep trails will be used.

Site preparation will be limited to driving the truck-mounted drill rig to the site and setting it up for drilling.

Since the topography is not severe, the construction of drill pads will not be required.

All vehicles will be equipped with spark arresters and will carry the required fire-fighting equipment and all adequate fire protection measures will be taken to prevent any damage from fire.

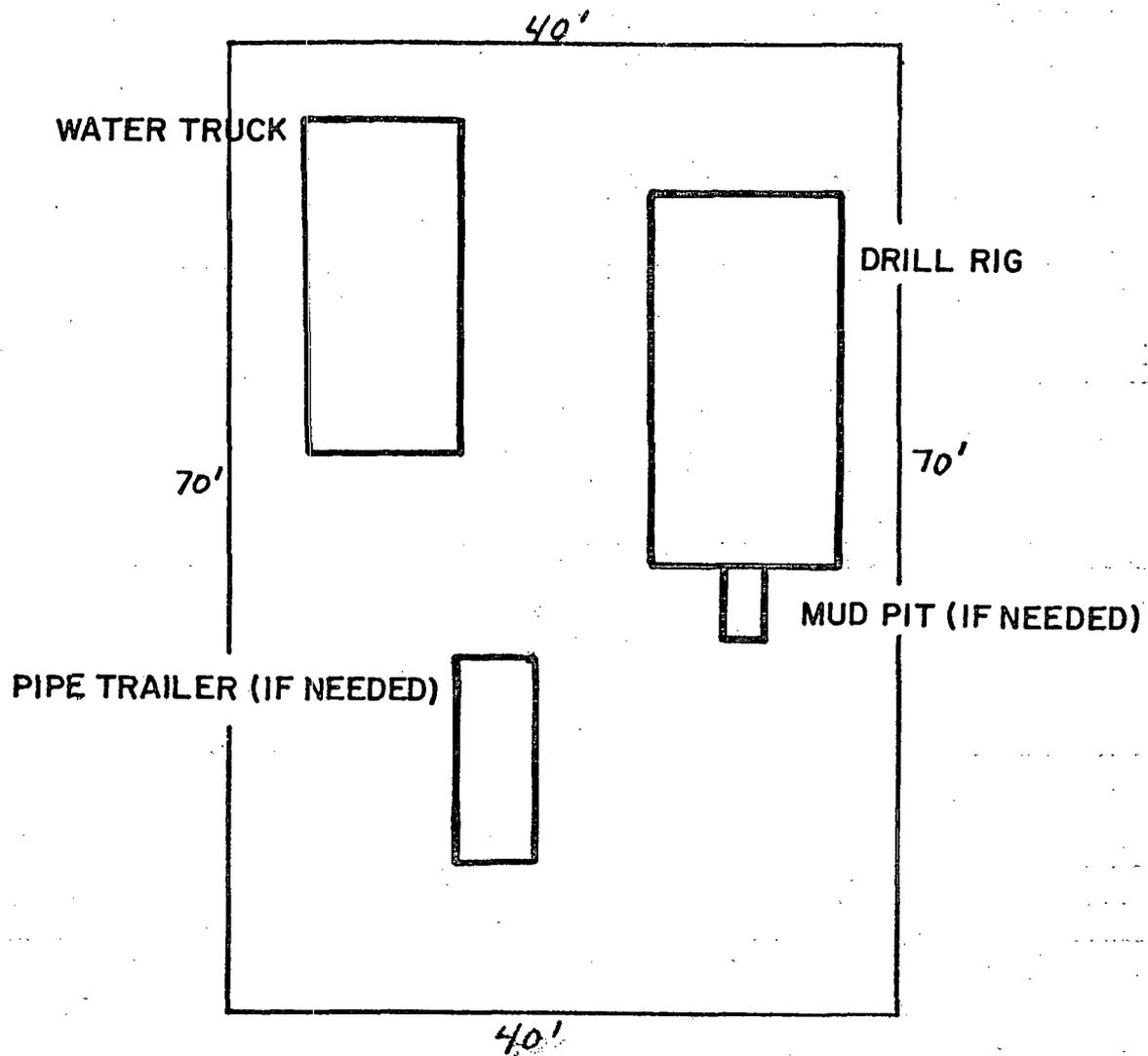
No water or other material will be pumped onto the surface of the ground which might result in soil erosion. Appropriate care will be taken so that natural drainage will not be affected and so that no pollution can occur to surface or ground water.

Geothermal operations will have no material impact on fish and the

disturbance of wildlife and vegetation in the area will be minor due to the short duration of operations and the limited number of personnel comprising the field crews. No significant damage or destruction of vegetation will occur and unavoidable dislocation of wildlife will be short term only.

Mufflers and other available devices will be used on all vehicles to control noise pollution. Minor air pollution will occur from vehicle exhaust, but all feasible measures will be used to control this pollution, in compliance with applicable laws, rules and regulations. Minor air pollution will occur from dust caused by vehicle traffic on dirt roads. Since this pollution is dependent upon natural road conditions and is temporary it therefore has no significant affect on the areas environment.

There will be very little hazard to public health and safety due to the lack of population in the area. All such hazard is confined to the crew or the rig. All appropriate safety measures and equipment will be utilized.



SCHEMATIC OF SHALLOW TEMPERATURE HOLE DRILL SITE

EXHIBIT "C"

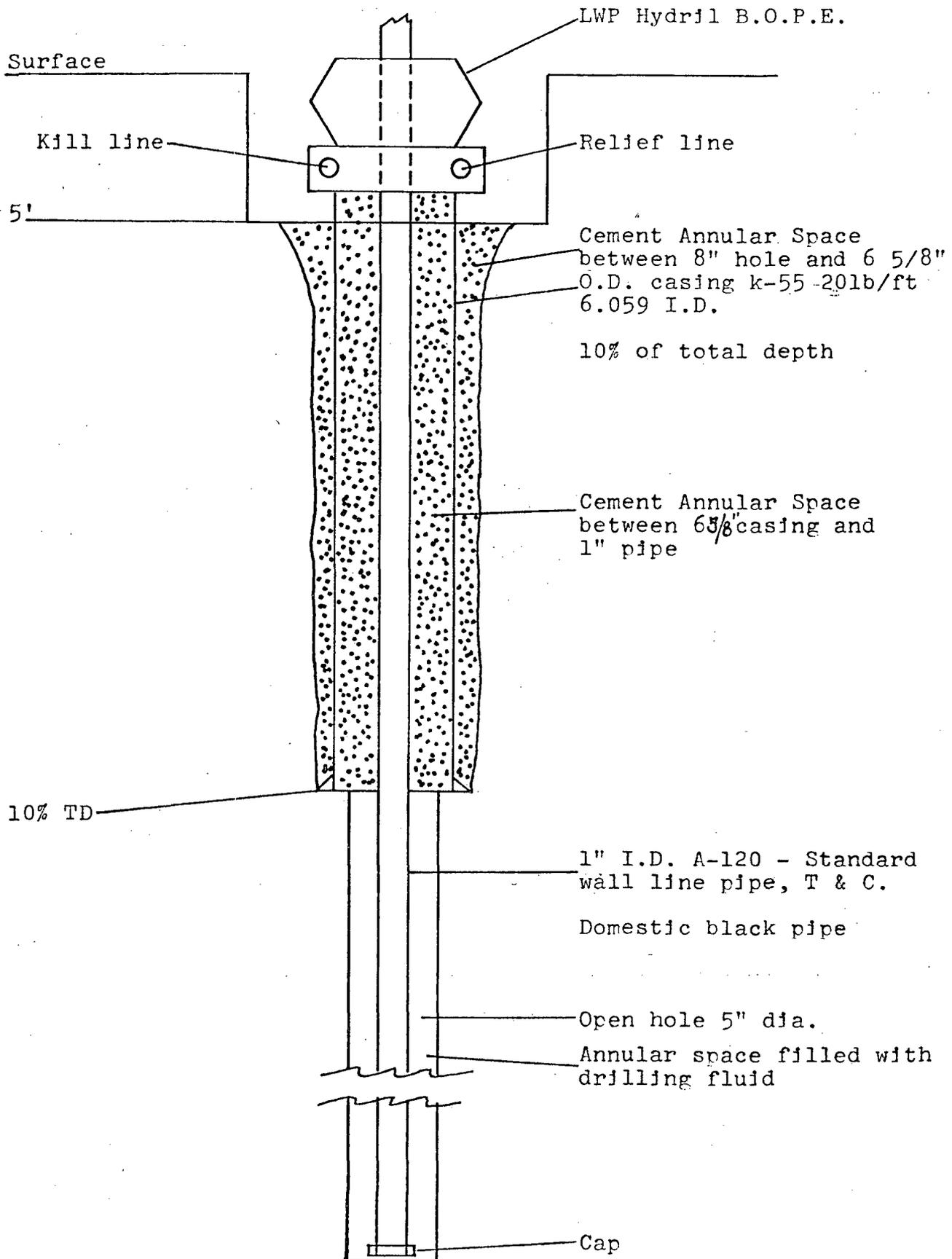
ADDITION TO PLAN OF OPERATION (EXHIBIT "A")
SHALLOW TEMPERATURE GRADIENT HOLES
DEEPER THAN 500 FEET

The normal drilling procedures (Exhibit "A") will be changed to adhere to U.S.G.S. requirements when drilling shallow temperature gradient holes deeper than 500 feet. The logistical and environmental factors will remain the same since the drilling equipment is identical. The changes for the holes deeper than 500 feet are as follows:

1. An 8 3/4 inch hole will be drilled to 10 % of proposed total depth and 6 5/8 inch (O.D.) welded, steel casing will be lowered into the hole and cemented into place. The cement will be allowed to set for a minimum of 24 hours.
2. A small cellar will then be dug to allow for the blow-out preventer and flange to be attached to the surface casing beneath the truck-mounted drill rig.
3. A bag or ram type blow-out prevention unit will be bolted into place. The blow-out equipment will conform to U.S.G.S. requirements.
4. The remaining hole to proposed total depth will be completed as a temperature gradient hole as described in Exhibit "A".
5. Drilling operations will be suspended immediately if:
 - a. Mud-out temperature reaches 175°F and cannot be lowered or stabilized by the addition of cooling devices or materials.
 - b. Flowing steam or hot water at or greater than 175°F is encountered.
6. If the temperature limit as described in item "5a" is reached, the hole will be completed as a temperature gradient hole or abandoned as described in Exhibit "A".
7. If the temperature limit as described in "5b" is reached, the hole will be completed as a temperature gradient hole by inserting 1 inch (I.D.) black steel pipe and filling the hole with drilling mud and laying a 100 foot plug both above and below the casing shoe. Then a ten foot cement surface plug will be added. If the hole is to be abandoned the 1 inch black steel pipe will not be placed in the hole.
8. Should cold artesian flow be encountered, the hole will be completed as a temperature gradient hole or abandoned as in item "6".

9. A 10'x10' sump will be dug on the drill site to provide adequate water for cooling and well control. Upon completion of the drilling operations, it will be filled in and the ground surface restored as near as practical to its original condition.

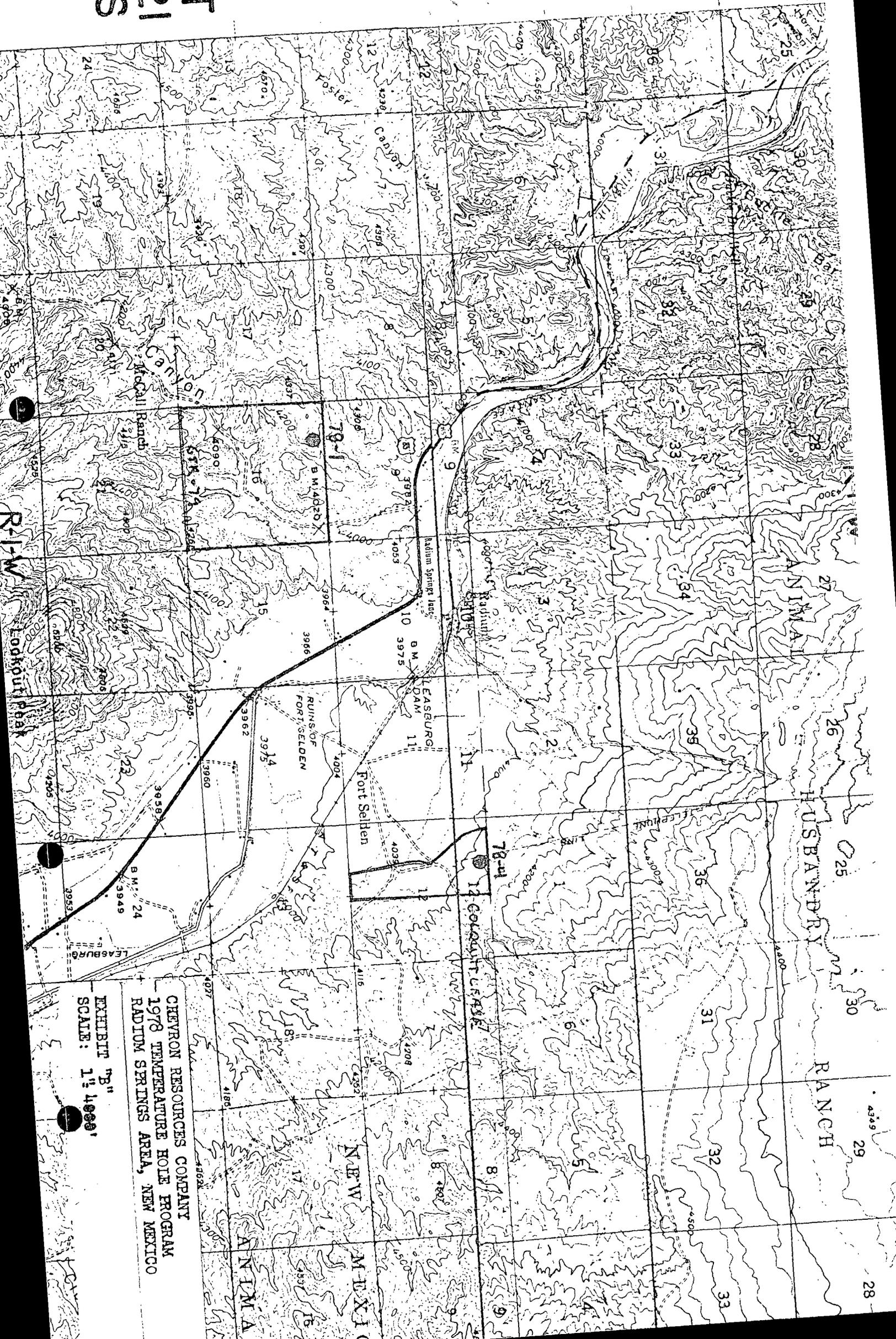
Schematic Diagram Temperature Gradient Well and B.O.P.E.



TD

EXHIBIT "D"

T 21 S



CHEVRON RESOURCES COMPANY
 1978 TEMPERATURE HOLE PROGRAM
 RADION SPRINGS AREA, NEW MEXICO

EXHIBIT "B"
 SCALE: 1" = 4000'

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

MAY - 4 1978

Form G-701

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

Indicate Type of Lease
 STATE FCC

5. State Lease No.
 GTR-79

a. Type of Work
 Drill Deepen [] Plug Back []

7. Unit Agreement Name

b. Type of Well
 Geothermal Producer [] Temp Observation
 Low-Temp Thermal [] Injection/Disposal []

8. Farm or Lease Name

Name of Operator
 Chevron U.S.A. Inc.

9. Well No.
 781

Address of Operator
 P. O. Box 3722 San Francisco, California 94119

10. Field and Pool, or Wildcat

Location of Well
 UNIT LETTER C LOCATED 400 FEET FROM THE N LINE

NO 1400 FEET FROM THE W LINE OF SEC. 16 TWP. 21S RCF. 1W NMPM

12. County
 Dona Ana

1. Elevation: (Show whether DF, RT, etc.)
 4200'

19. Proposed Depth
 2000'

19A. Formation

20. Rotary or C.T.
 Rotary

21A. Kind & Status Plug. Bond

21B. Drilling Contractor
 To be named later

22. Approx. Date Work will start
 6/1/78

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP

Per Exhibit "A"

In addition to Exhibit "A":

Should measurable formation water be encountered the hole will be cemented from T.D. into the surface casing if at all possible.

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

APPROVAL VALID FOR 90 DAYS
 PERMIT EXPIRES 8/3/78
 UNLESS DRILLING UNDERWAY

ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed J. H. Turner Title Attorney-In-Fact Date 3/13/78

(This space for State Use)

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 5/5/78

CONDITIONS OF APPROVAL, IF ANY:

GEOHERMAL RESOURCES WELL LOCATION AND ACREAGE DEDICATION PLAT

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

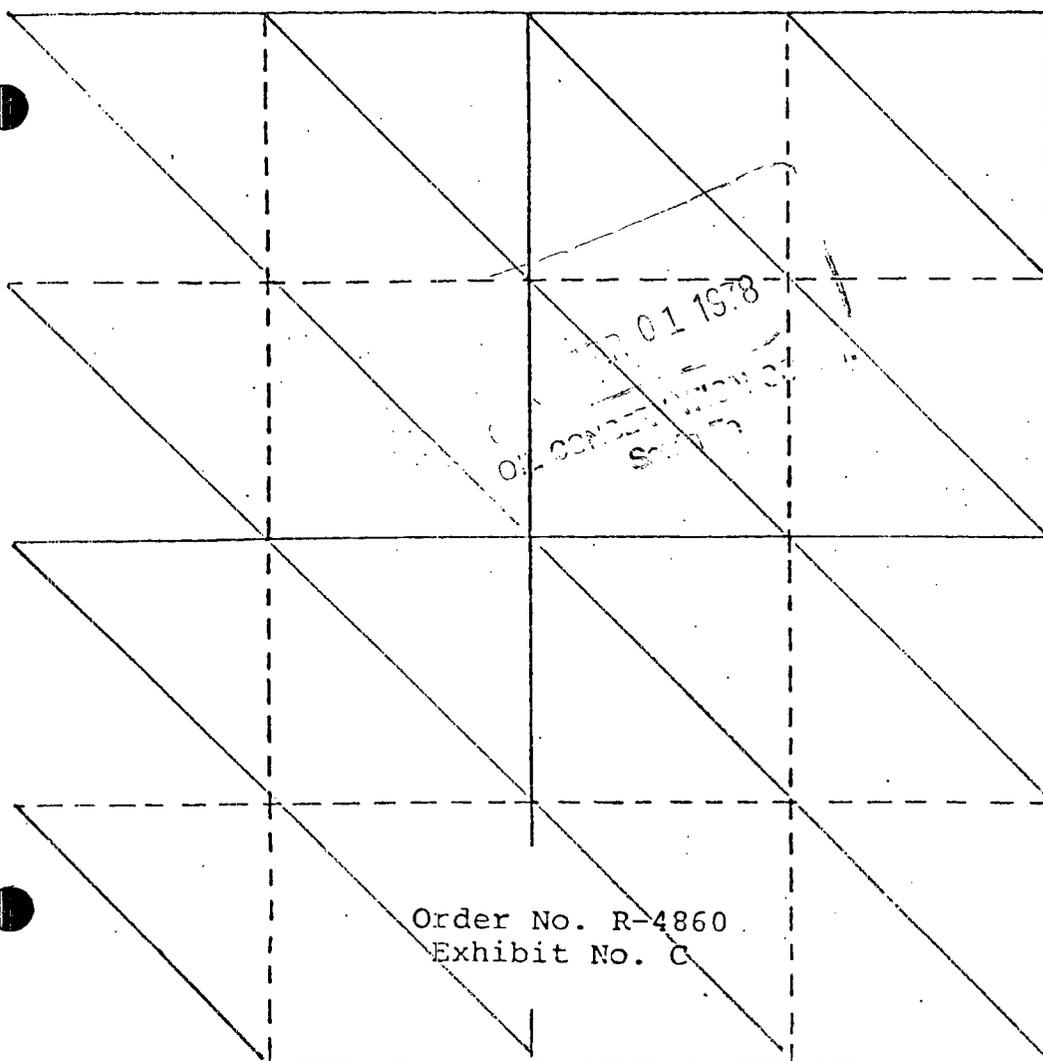
Operator Chevron U.S.A. Inc.		Lease GTR-79		Well No. 781
Section Letter C	Section 16	Township T215	Range R1W	County Dona Ana
Well Location of Wells: 400 feet from the N line and 1400 feet from the W line Round Level Elev. _____ Producing Formation _____ Pool _____ Dedicated Acreage: 639.36 Acres				

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes No If answer is "yes," type of consolidation _____

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

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



CERTIFICATION

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

Name
X. J. Turner

Position
Attorney-In-Fact

Company
Chevron U.S.A. Inc.

Date
3/13/78

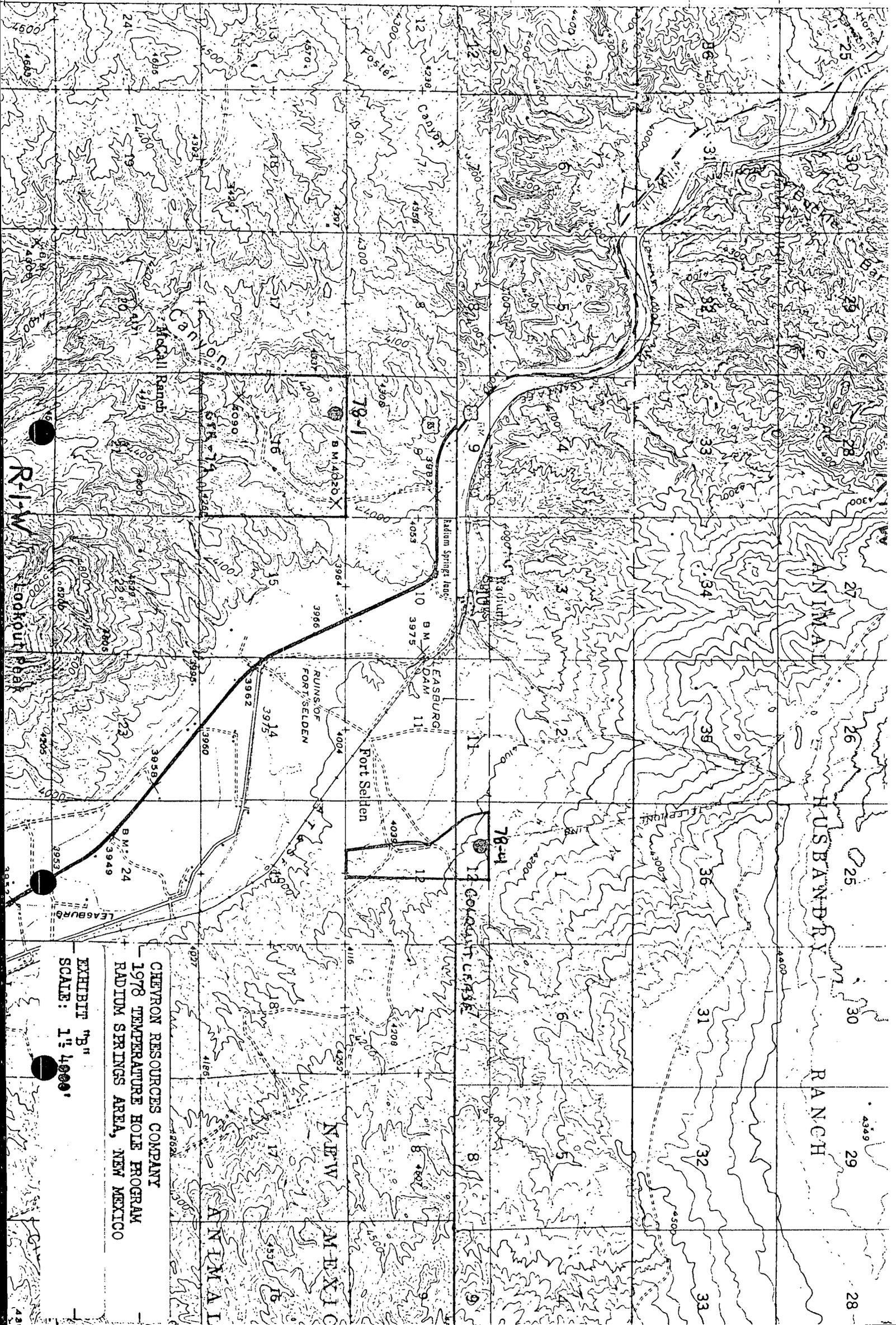
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

T 21 S



CHEVRON RESOURCES COMPANY
 1978 TEMPERATURE HOLE PROGRAM
 RADIIUM SPRINGS AREA, NEW MEXICO

EXHIBIT "B"
 SCALE: 1" = 4000'

R-1-W
 Lockout Pass

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P. O. Box 2088, Santa Fe 87501

SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS

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

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

1. Type of well Geothermal Producer Temp. Observation
Low-Temp Thermal Injection/Disposal

7. Unit Agreement Name

2. Name of Operator
Chevron U.S.A. Inc.

8. Farm or Lease Name

3. Address of Operator
P. O. Box 3722 San Francisco, California 94119

9. Well No.
781

4. Location of Well
Unit Letter **C 400** Feet From The **N** Line and **1400** Feet From
The **W** Line, Section **16** Township **T215** Range **R1W** NMPM.

10. Field and Pool, or Wildcat

15. Elevation (Show whether DF, RT, GR, etc.)
4200'

12. County
Dona Ana

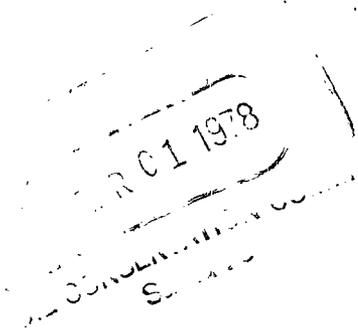
16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

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

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

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

See Exhibit "A"



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

SIGNED J. F. Turner TITLE **Attorney-In-Fact** DATE **3/13/78**

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

CHEVRON RESOURCES COMPANY

PLAN OF OPERATION

SHALLOW TEMPERATURE GRADIENT HOLES

EXHIBIT "A"

1. Description of the Operation

The Shallow Temperature Observation Hole Program, as conducted by the Chevron Resources Company, requires the drilling of 250-500 foot holes with a diameter of 4-3/4 to 5-3/8 inches. The number of holes will vary with the size of the area to be evaluated. These holes will be drilled by a state licensed drilling contractor using a truck mounted drill rig. The mud-out temperature will be monitored continually during the actual drilling.

Once each hole is completed a 1 inch (I.D.) black steel pipe, sealed at the bottom, will be placed in the hole with the top being 8-12 inches from the ground surface. The pipe is then filled with water and capped. The hole is then back-filled with cuttings and/or drilling mud to within 10 feet of the surface. The remaining void is then filled with cement.

As necessary, the pipe is unearthed and a temperature probe is lowered to total depth. Once the series of temperature logs is completed, the pipe is then filled with cement and buried. The ground surface is then smoothed and returned to as nearly as practical to pre-drilling condition.

The drilling operations will be suspended if the mud-out temperature reaches 125°F and cannot be lowered or stabilized with the addition of well-head or cooling devices. The hole will then be completed as a temperature gradient hole or abandoned.

The drilling operations will also be suspended if flowing hot water or steam at 150°F or more is encountered. The hole will then be completed as a temperature gradient hole by placing 1 inch (I.D.), black, steel pipe to total depth and cementing from total depth to surface. If the hole is to be abandoned it will be plugged with cement from total depth to surface.

If cold artesian flow is encountered the hole will be completed or abandoned as described in the paragraph above.

The equipment for drilling, as well as the drill rig, consists of a water truck and a light pickup truck. The temperature probe consists of a thermometer or thermister device on the end of a wire line and a small tripod-mounted wheel for lowering the probe down the hole.

2. The following plan of operations as required by Section 270.34 of the Federal Regulations for Geothermal Operations on public acquired and

withdrawn lands, covering paragraphs (a) through (h), is submitted pursuant to Section 270.78:

- (a) The hole locations, lease numbers (Exhibit "B") and outline of a typical drill site layout (Exhibit "C") are attached.
- (b) No new roads will be constructed for this operation. Access to area of operations will be along existing roads.
- (c) No water sources on federally administered lands will be developed and no road building material will be used.
- (d) Campsites, airstrips or other supporting facilities will not be required.
- (e) Minimal access scars, limited mainly to tire impressions, may occur during the course of drilling the hole. All such disturbances will be restored as nearly as possible to pre-drilling condition. All materials will be removed from the area once the hole is completed.
- (f) Topographic features of the drill site areas and drainage can be observed from the attached map (Exhibit "B").
- (g) If drilling mud or foam are used they will be contained by portable steel containers. When the hole is completed, the mud residue will be dried and spread on the ground surface.
- (h) The Chevron Resources Company will use all reasonable precautions to prevent waste of geothermal resources and other natural resources found in the area. At all times during operations the following precautions will be taken:

Traffic will be light and only when necessary. Light pickups will be used whenever possible. To the extent possible, only existing roads, fence lines or jeep trails will be used.

Site preparation will be limited to driving the truck-mounted drill rig to the site and setting it up for drilling.

Since the topography is not severe, the construction of drill pads will not be required.

All vehicles will be equipped with spark arresters and will carry the required fire-fighting equipment and all adequate fire protection measures will be taken to prevent any damage from fire.

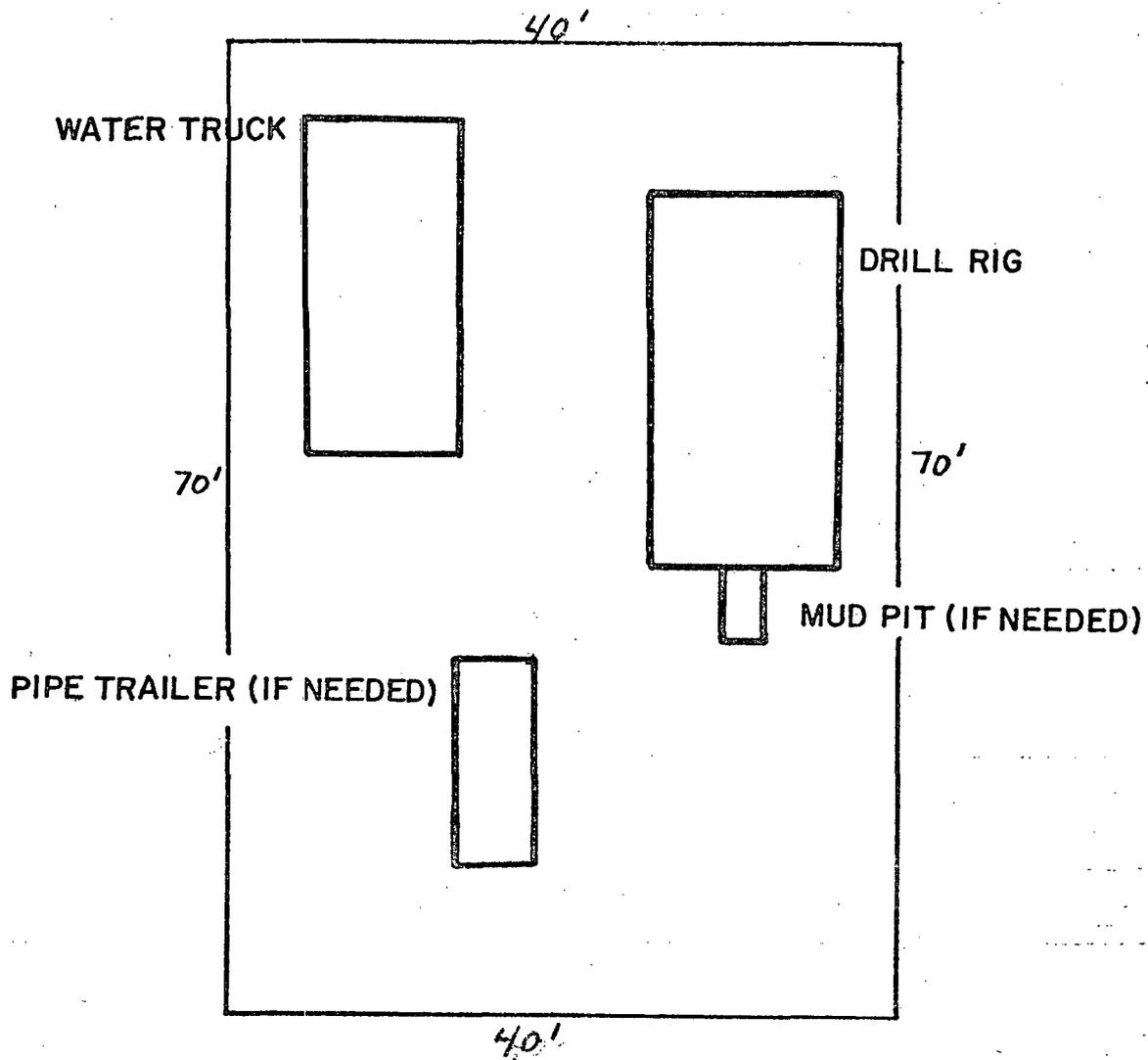
No water or other material will be pumped onto the surface of the ground which might result in soil erosion. Appropriate care will be taken so that natural drainage will not be affected and so that no pollution can occur to surface or ground water.

Geothermal operations will have no material impact on fish and the

disturbance of wildlife and vegetation in the area will be minor due to the short duration of operations and the limited number of personnel comprising the field crews. No significant damage or destruction of vegetation will occur and unavoidable dislocation of wildlife will be short term only.

Mufflers and other available devices will be used on all vehicles to control noise pollution. Minor air pollution will occur from vehicle exhaust, but all feasible measures will be used to control this pollution, in compliance with applicable laws, rules and regulations. Minor air pollution will occur from dust caused by vehicle traffic on dirt roads. Since this pollution is dependent upon natural road conditions and is temporary it therefore has no significant affect on the areas environment.

There will be very little hazard to public health and safety due to the lack of population in the area. All such hazard is confined to the crew or the rig. All appropriate safety measures and equipment will be utilized.



SCHEMATIC OF SHALLOW TEMPERATURE HOLE DRILL SITE

EXHIBIT "C"

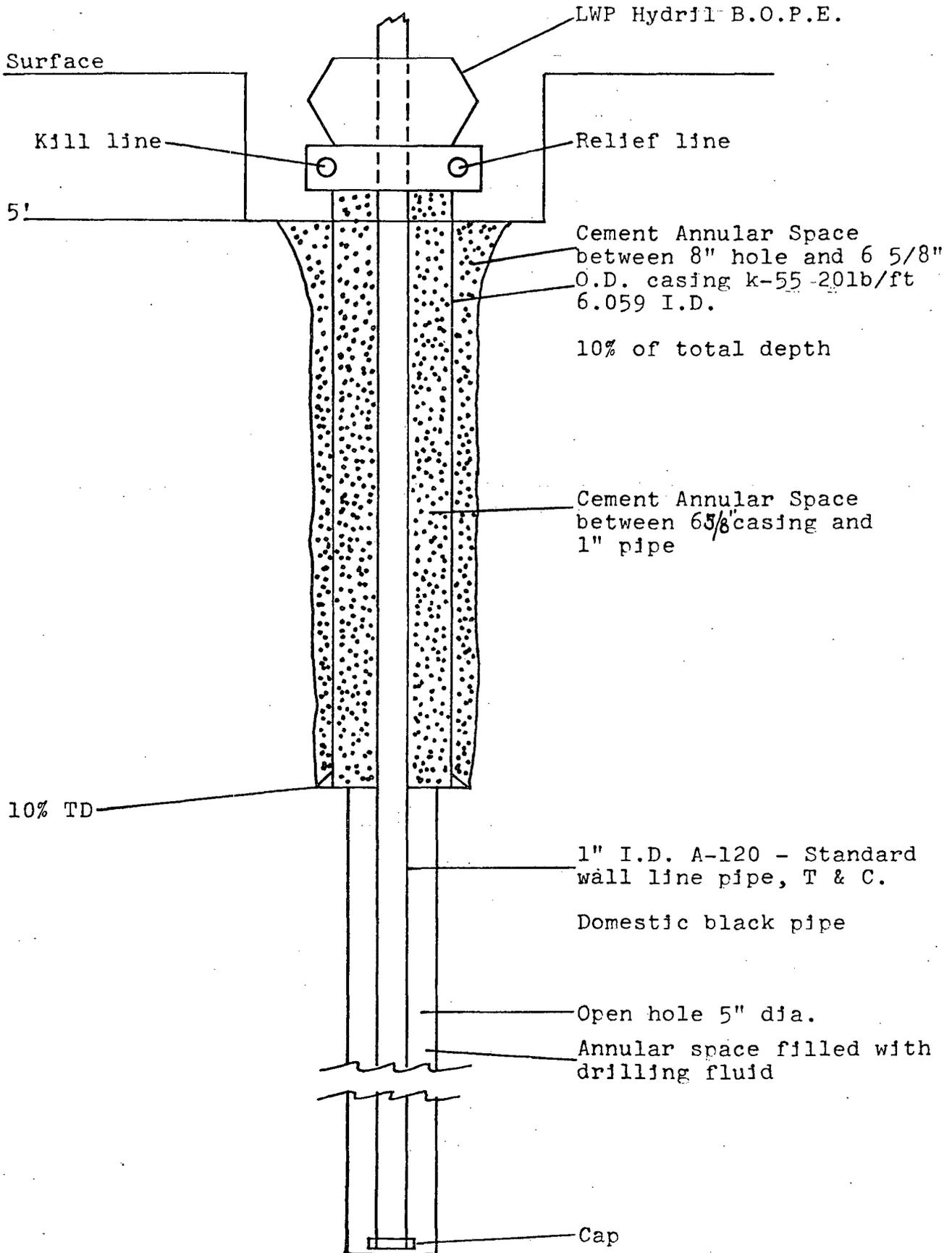
ADDITION TO PLAN OF OPERATION (EXHIBIT "A")
SHALLOW TEMPERATURE GRADIENT HOLES
DEEPER THAN 500 FEET

The normal drilling procedures (Exhibit "A") will be changed to adhere to U.S.G.S. requirements when drilling shallow temperature gradient holes deeper than 500 feet. The logistical and environmental factors will remain the same since the drilling equipment is identical. The changes for the holes deeper than 500 feet are as follows:

1. An 8 3/4 inch hole will be drilled to 10 % of proposed total depth and 6 5/8 inch (O.D.) welded, steel casing will be lowered into the hole and cemented into place. The cement will be allowed to set for a minimum of 24 hours.
2. A small cellar will then be dug to allow for the blow-out preventer and flange to be attached to the surface casing beneath the truck-mounted drill rig.
3. A bag or ram type blow-out prevention unit will be bolted into place. The blow-out equipment will conform to U.S.G.S. requirements.
4. The remaining hole to proposed total depth will be completed as a temperature gradient hole as described in Exhibit "A".
5. Drilling operations will be suspended immediately if:
 - a. Mud-out temperature reaches 175°F and cannot be lowered or stabilized by the addition of cooling devices or materials.
 - b. Flowing steam or hot water at or greater than 175°F is encountered.
6. If the temperature limit as described in item "5a" is reached, the hole will be completed as a temperature gradient hole or abandoned as described in Exhibit "A".
7. If the temperature limit as described in "5b" is reached, the hole will be completed as a temperature gradient hole by inserting 1 inch (I.D.) black steel pipe and filling the hole with drilling mud and laying a 100 foot plug both above and below the casing shoe. Then a ten foot cement surface plug will be added. If the hole is to be abandoned the 1 inch black steel pipe will not be placed in the hole.
8. Should cold artesian flow be encountered, the hole will be completed as a temperature gradient hole or abandoned as in item "6".

9. A 10'x10' sump will be dug on the drill site to provide adequate water for cooling and well control. Upon completion of the drilling operations, it will be filled in and the ground surface restored as near as practical to its original condition.

Schematic Diagram Temperature Gradient Well and B.O.P.E.



- (f) Topographic features of the drill site areas and drainage can be observed from the attached map (Exhibit "A").
- (g) If drilling mud is used, it will be contained by an 8' x 3' x 3-1/2' steel mud pit. When the hole is completed the mud residue will be dried and spread on the ground surface.
- (h) The Chevron Resources Company will use all reasonable precautions to prevent waste of geothermal resources and other natural resources found in the area. At all times during operations the following precautions will be taken:

Traffic will be light and only when necessary. Light pickups will be used whenever possible. To the extent possible only existing roads, fence lines or jeep trails will be used.

Site preparation will be limited to driving the truck-mounted drill rig to the site and setting it up for drilling.

Since the topography is not severe, the construction of drill pads will not be required.

All vehicles will be equipped with spark arresters and will carry the required fire-fighting equipment and all adequate fire protection measures will be taken to prevent any damage from fire.

No water or other material will be pumped onto the surface of the ground which might result in soil erosion. Appropriate care will be taken so that natural drainage will not be affected and so that no pollution can occur to surface or ground water.

Geothermal operations will have no material impact on fish and the disturbance of wildlife and vegetation in the area will be minor due to the short duration of operations and the limited number of personnel comprising the field crews. No significant damage or destruction of vegetation will occur and unavoidable dislocation of wildlife will be short term only.

Mufflers and other available devices will be used on all vehicles to control noise pollution. Minor air pollution will occur from vehicle exhaust, but all feasible measures will be used to control this pollution, in compliance with applicable laws, rules and regulations. Minor air pollution will occur from dust caused by vehicle traffic on dirt roads. Since this pollution is dependent upon natural road conditions and is temporary it therefore has no significant affect on the areas environment.

There will be very little hazard to public health and safety due to the lack of population in the area. All such hazard is confined to the crew or the rig. All appropriate safety measures and equipment will be utilized.

WATER TRUCK



DRILL RIG



MUD PIT (IF NEEDED)



PIPE TRAILER (IF NEEDED)



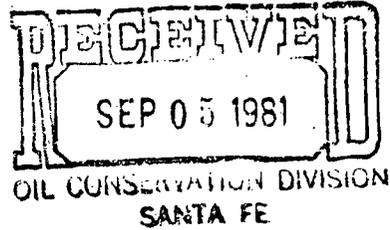
SCHEMATIC OF SHALLOW TEMPERATURE HOLE DRILL SITE

EXHIBIT "B"



Chevron Resources Company

A Division of Chevron Industries, Inc.
595 Market Street, San Francisco, California
Mail Address: P.O. Box 3722, San Francisco, CA 94119



August 31, 1981

Mr. Carl Ulvog
New Mexico Oil and Gas Commission
P.O. Box 2088
Sante Fe, New Mexico 87501

Dear Mr. Ulvog:

Chevron Resources respectfully submits well completion reports for the following shallow temperature observation wells in Dona Ana and Hidalgo Counties, New Mexico:

McKibbin #786 and Wamel #179

Chevron did not drill and requests that the permits be cancelled for the following proposed holes:

Radium Springs Area, Dona Ana Co.
State Lease 781, Colquitt 784
Lordsburg Area, Hidalgo Co.
Evans 279, Davis 379, Evans 479

Should you have any questions regarding these matters, please feel free to contact me at (415) 894-2508.

Thank you for your time and consideration regarding this request.

Respectfully,

Mark Kehoe
Permit Representative

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

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G. S.	
Operator	1
Land Office	

SUNDRY NOTICES AND REPORTS
ON
GEOTHERMAL RESOURCES WELLS

5. Indicate Type of Lease
State Fee

5.a State Lease No.
GTR-79

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

1. Type of well
Geothermal Producer Temp. Observation
Low-Temp Thermal Injection/Disposal

7. Unit Agreement Name

2. Name of Operator
Chevron U.S.A. Inc.

8. Farm or Lease Name

3. Address of Operator
P.O. Box 3722 San Francisco, CA 94119

9. Well No. 3-77

4. Location of Well
Unit Letter L 500 Feet From The W Line and 1450 Feet From

10. Field and Pool, or Wildcat

The S Line, Section 16 Township 21S Range 1W NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
4000'

12. County
Dona Ana

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

NOTICE OF INTENTION TO:

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

SUBSEQUENT REPORT OF:

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

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

Drilling was canceled

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

SIGNED J. H. Turner TITLE Attorney in Fact DATE 11-8-77

APPROVED BY Carl Klugog TITLE SENIOR PETROLEUM GEOLOGIST DATE 12-5-77

CONDITIONS OF APPROVAL, IF ANY:

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

Form G-101

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

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

5A. Indicate Type of Lease
STATE FCC

5. State Lease No.
GTR-79

a. Type of Work Drill Deepen [] Plug Back []

7. Unit Agreement Name

b. Type of Well Geothermal Producer [] Temp Observation
Low-Temp Thermal [] Injection/Disposal []

8. Farm or Lease Name

c. Name of Operator
Chevron U.S.A. Inc.

9. Well No.
3-77

d. Address of Operator
P. O. Box 3722 San Francisco, CA 94119

10. Field and Pool, or Wildcat

e. Location of Well UNIT LETTER L LOCATED 500 FEET FROM THE W LINE
1450 FEET FROM THE S LINE OF SEC. 16 TWP. 21S RGE. 1 W NMPM

12. County
Dona Ana

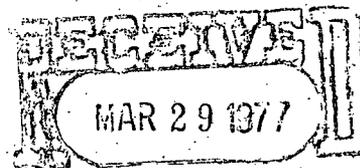
19. Proposed Depth 500' 19A. Formation - 20. Rotary or C.T.
Rotary

21. Elevations (Show whether DF, RT, etc.) 4000' 21A. Kind & Status Plug. Bond - 21B. Drilling Contractor
To be named later 22. Approx. Date Work will start
5/1/77

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP

see attached proposed plan of exploration



OIL CONSERVATION COMM.
Santa Fe

APPROVAL VALID
FOR 90 DAYS, UNLESS
DRILLING COMMENCED
EXPIRES 7/3/77

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODU

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

Signed By: C. J. Bebb Title Asst. Secretary Date 3/22/77

(This space for State Use)

APPROVED BY Carl Ulvog TITLE SENIOR PETROLEUM GEOLOGIST DATE 4/4/77

CONDITIONS OF APPROVAL, IF ANY:

CHEVRON RESOURCES COMPANY
PLAN OF OPERATION
SHALLOW TEMPERATURE OPERATION HOLES

1. Description of the Operation

The Shallow Temperature Observation Hole Program, as conducted by the Chevron Resources Company, requires the drilling of 250-500 foot holes with a diameter of 4-3/4 to 5-3/8 inches. The number of holes will vary with the size of the area to be evaluated. These holes will be drilled by a state licensed drilling contractor using a truck mounted drill rig.

Once each hole is completed a 1 inch (I.D.) black steel pipe, sealed at the bottom, will be placed in the hole with the top being 8-12 inches from the ground surface. The pipe is then filled with water and capped. The hole is then back-filled with cuttings and/or drilling mud to within 10 feet of the surface. The remaining void is then filled with cement.

As necessary, the pipe is unearthed and a temperature probe is lowered to total depth. Once the series of temperature logs are completed, the pipe is then filled with cement and buried. The ground surface is then smoothed and returned to as nearly as practical to pre-drilling condition.

The equipment for drilling, as well as the drill rig, consists of a water truck and a light pickup truck. The temperature probe consists of a thermometer or thermister device on the end of a wire line and a small tripod-mounted wheel for lowering the probe down the hole.

2. The following plan of operations as required by Section 270.34 of the Federal Regulations for Geothermal Operations on public acquired and withdrawn lands, covering paragraphs (a) through (h), is submitted pursuant to Section 270.78:

- (a) The hole locations, lease numbers (Exhibit "A") and outline of a typical drill site layout (Exhibit "B") are attached.
- (b) No new roads will be constructed for this operation. Access to sites will be along existing roads.
- (c) No water sources on federally administered lands will be developed and no road building material will be used.
- (d) Campsites, airstrips or other supporting facilities will not be required.
- (e) Minimal access scars, limited mainly to tire impressions, may occur during the course of drilling the hole. All such disturbances will be restored as nearly as possible to pre-drilling condition. All materials will be removed from the area once the hole is completed.

- (f) Topographic features of the drill site areas and drainage can be observed from the attached map (Exhibit "A").
- (g) If drilling mud is used, it will be contained by an 8' x 3' x 3-1/2' steel mud pit. When the hole is completed the mud residue will be dried and spread on the ground surface.
- (h) The Chevron Resources Company will use all reasonable precautions to prevent waste of geothermal resources and other natural resources found in the area. At all times during operations the following precautions will be taken:

Traffic will be light and only when necessary. Light pickups will be used whenever possible. To the extent possible only existing roads, fence lines or jeep trails will be used.

Site preparation will be limited to driving the truck-mounted drill rig to the site and setting it up for drilling.

Since the topography is not severe, the construction of drill pads will not be required.

All vehicles will be equipped with spark arresters and will carry the required fire-fighting equipment and all adequate fire protection measures will be taken to prevent any damage from fire.

No water or other material will be pumped onto the surface of the ground which might result in soil erosion. Appropriate care will be taken so that natural drainage will not be affected and so that no pollution can occur to surface or ground water.

Geothermal operations will have no material impact on fish and the disturbance of wildlife and vegetation in the area will be minor due to the short duration of operations and the limited number of personnel comprising the field crews. No significant damage or destruction of vegetation will occur and unavoidable dislocation of wildlife will be short term only.

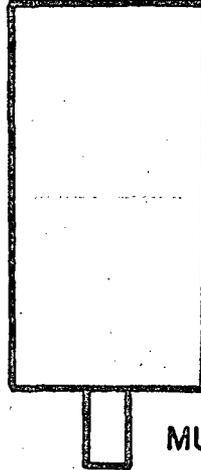
Mufflers and other available devices will be used on all vehicles to control noise pollution. Minor air pollution will occur from vehicle exhaust, but all feasible measures will be used to control this pollution, in compliance with applicable laws, rules and regulations. Minor air pollution will occur from dust caused by vehicle traffic on dirt roads. Since this pollution is dependent upon natural road conditions and is temporary it therefore has no significant affect on the areas environment.

There will be very little hazard to public health and safety due to the lack of population in the area. All such hazard is confined to the crew or the rig. All appropriate safety measures and equipment will be utilized.

WATER TRUCK



DRILL RIG



MUD PIT (IF NEEDED)

PIPE TRAILER (IF NEEDED)

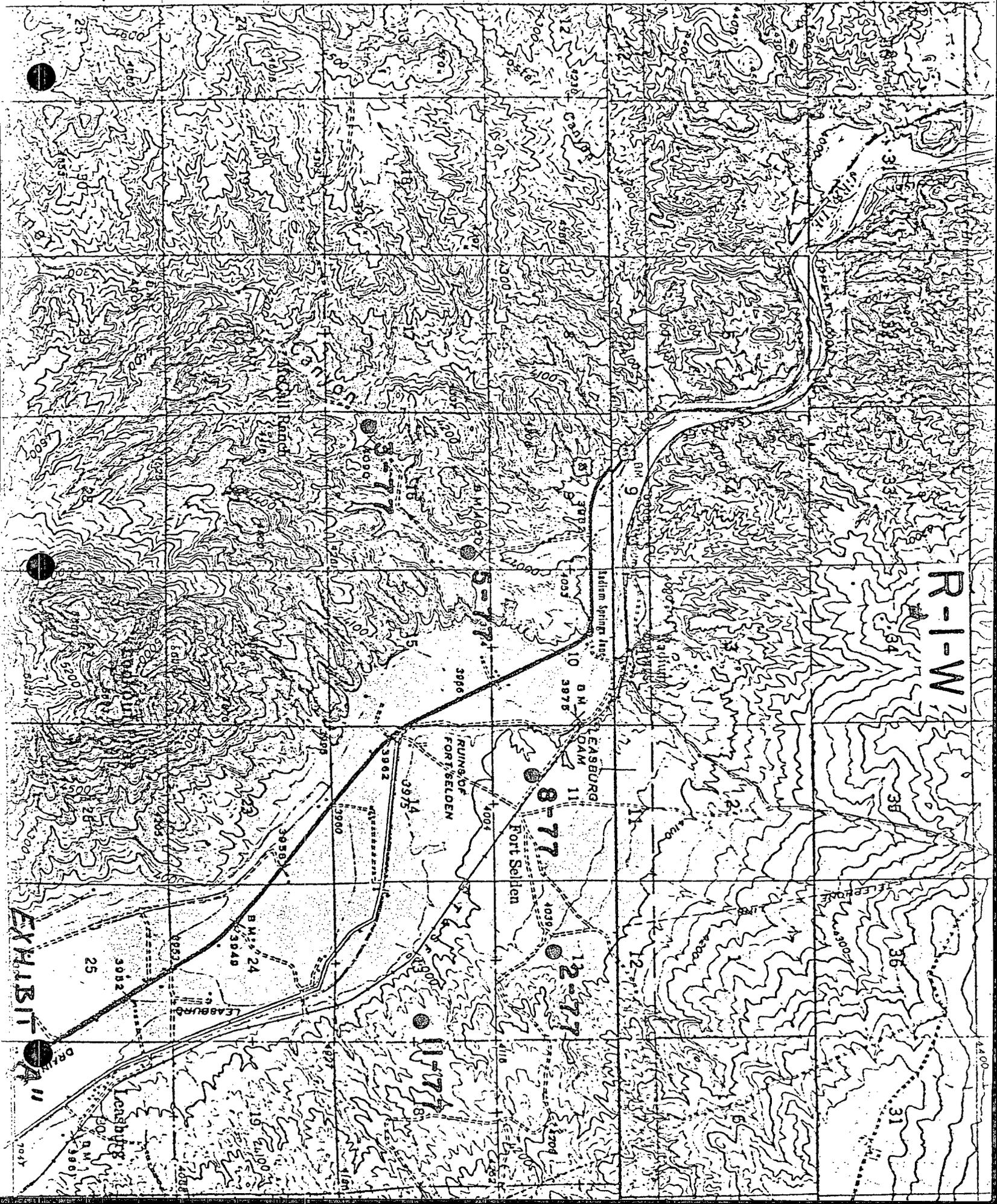


SCHEMATIC OF SHALLOW TEMPERATURE HOLE DRILL SITE

EXHIBIT "B"

T 21 S

R-1-W



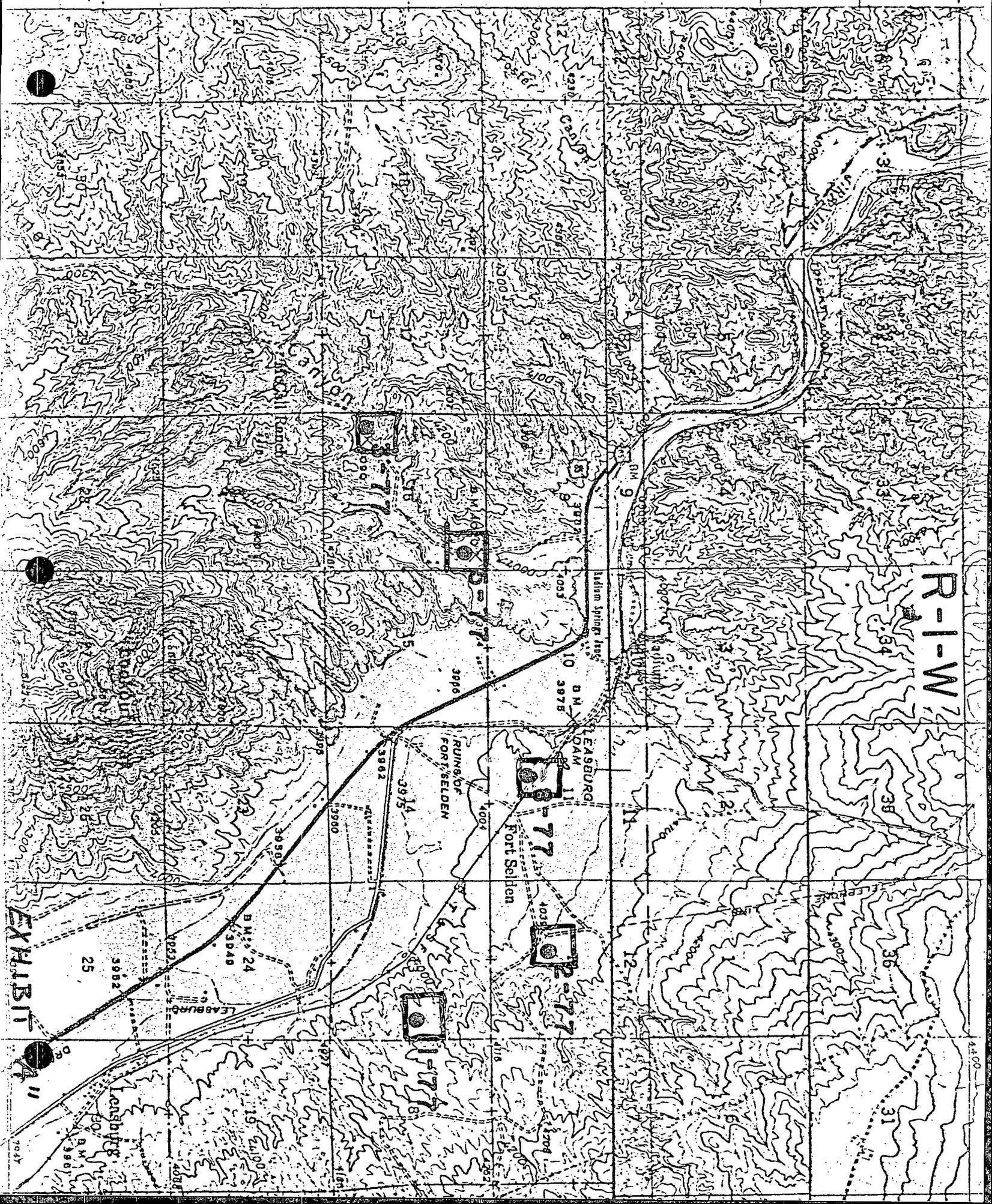
EXHIBIT

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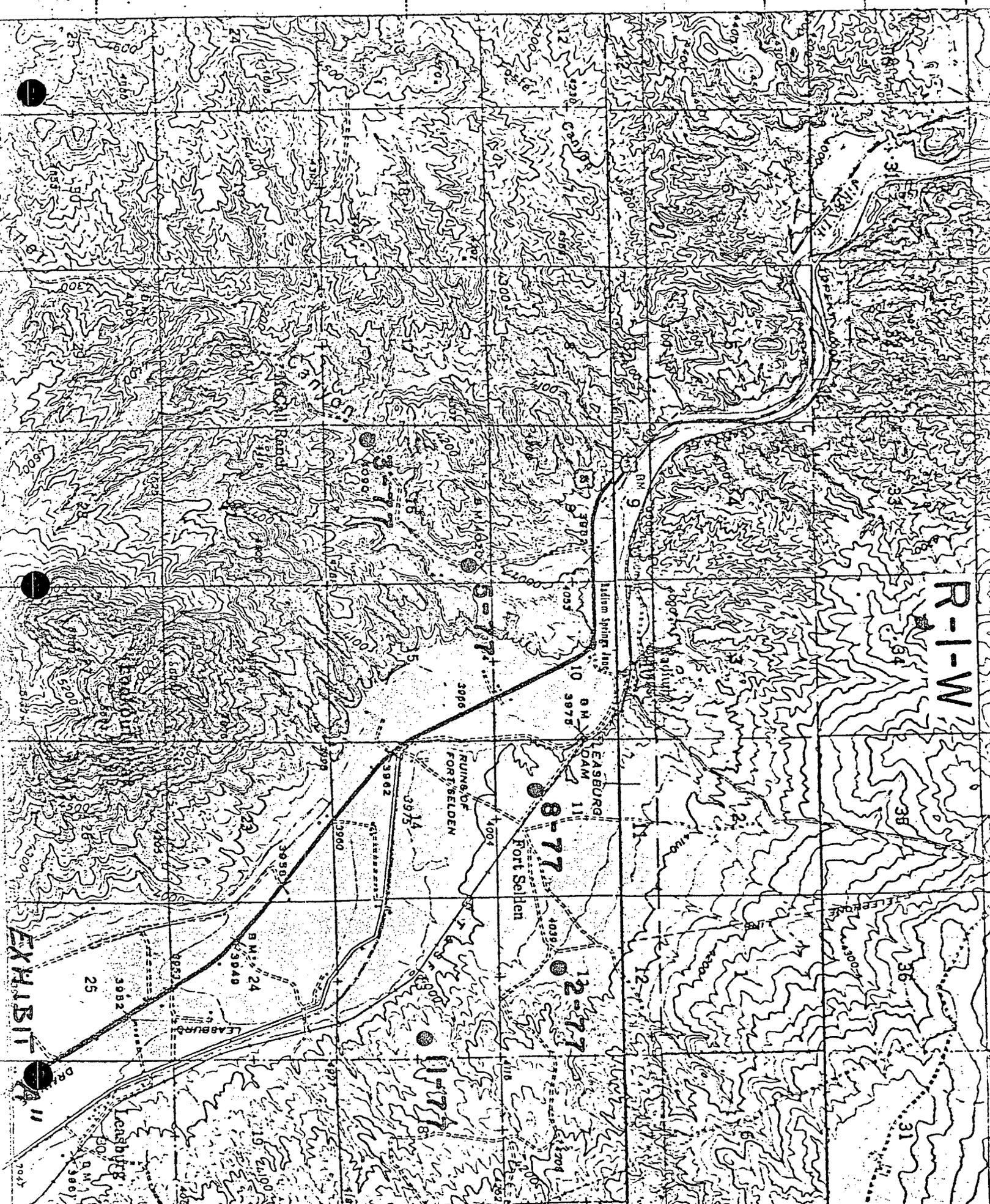
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EXHIBIT

DR 11

CHEVRON RESOURCES COMPANY
PLAN OF OPERATION
SHALLOW TEMPERATURE OPERATION HOLES

1. Description of the Operation

The Shallow Temperature Observation Hole Program, as conducted by the Chevron Resources Company, requires the drilling of 250-500 foot holes with a diameter of 4-3/4 to 5-3/8 inches. The number of holes will vary with the size of the area to be evaluated. These holes will be drilled by a state licensed drilling contractor using a truck mounted drill rig.

Once each hole is completed a 1 inch (I.D.) black steel pipe, sealed at the bottom, will be placed in the hole with the top being 8-12 inches from the ground surface. The pipe is then filled with water and capped. The hole is then back-filled with cuttings and/or drilling mud to within 10 feet of the surface. The remaining void is then filled with cement.

As necessary, the pipe is unearthed and a temperature probe is lowered to total depth. Once the series of temperature logs are completed, the pipe is then filled with cement and buried. The ground surface is then smoothed and returned to as nearly as practical to pre-drilling condition.

The equipment for drilling, as well as the drill rig, consists of a water truck and a light pickup truck. The temperature probe consists of a thermometer or thermister device on the end of a wire line and a small tripod-mounted wheel for lowering the probe down the hole.

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CHEVRON RESOURCES COMPANY
PLAN OF OPERATION
SHALLOW TEMPERATURE OPERATION HOLES

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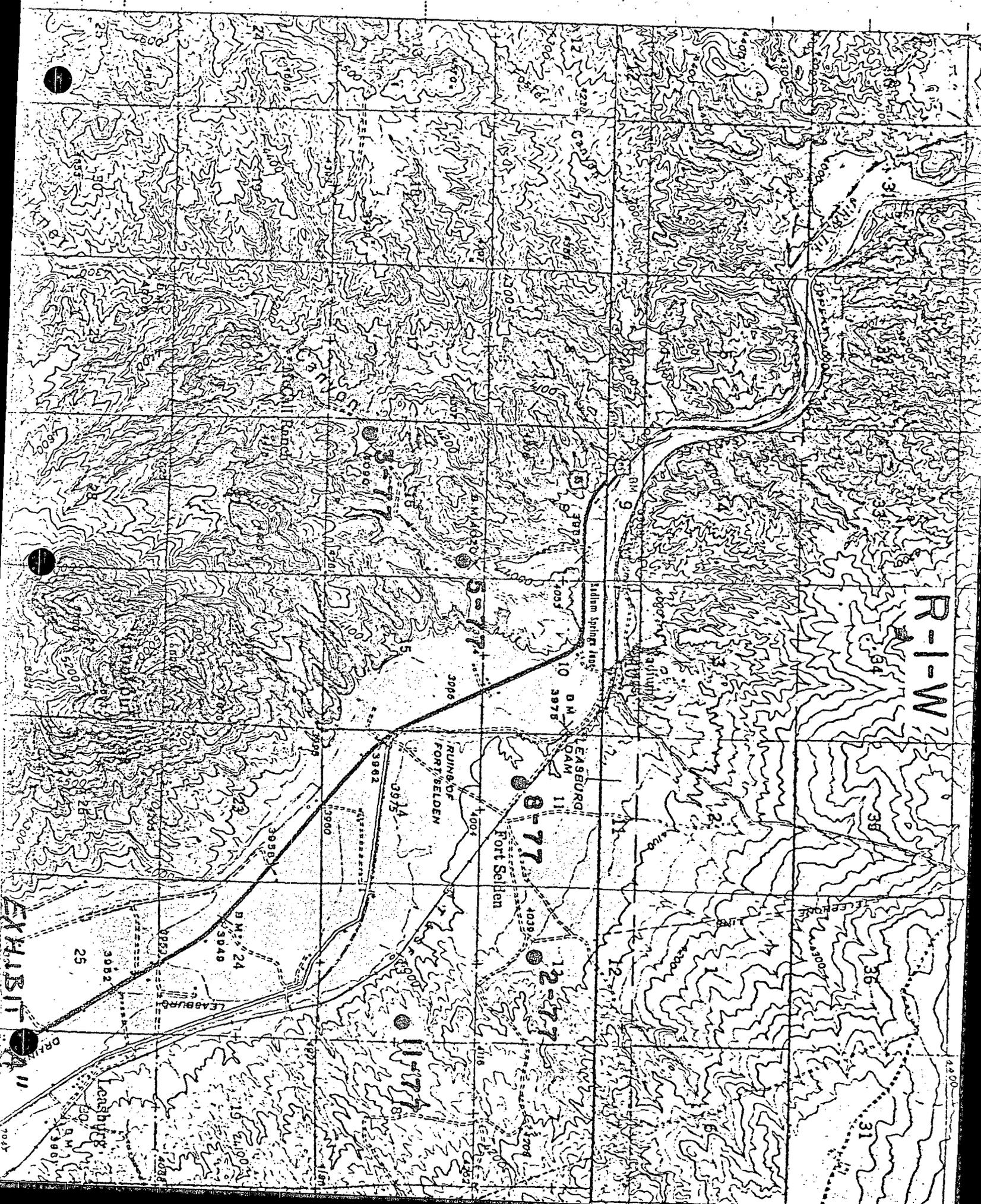
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R-1-W

EASBURG DAM
RUINS OF FORT SEIDEN
Fort Seiden

8-77

12-77

11-77

EXHIBIT

DRAIN 11



