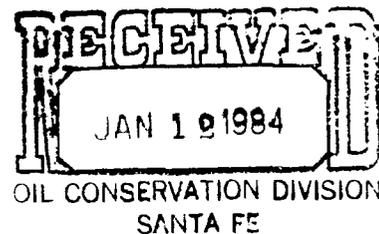




Amoco Production Company (USA)

Post Office Box 68
Hobbs, New Mexico 88240

S. J. Okerson
District Superintendent



January 6, 1984

File: SJ0-35-WF

Re: Application for Authorization To Inject
South Hobbs (GSA) Unit Nos. 171, 172 and 173
Lea County, New Mexico

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attention: Mr. Richard L. Stamets

Gentlemen:

Amoco Production Company hereby makes application for administrative approval to expand its South Hobbs (GSA) Unit Pressure Maintenance Project. Forms C-108 and necessary documentations are attached. Our plans are to drill three replacement wells (No. 171, 172 and 173) and equip them for injection. Copies of NMOCD Approved Drilling Permits are attached for South Hobbs Unit Wells No. 171 and 172. Well No. 173 will be directionally drilled and is tentatively scheduled for hearing February 1, 1984. Your prompt consideration of these applications will be appreciated.

If additional information is needed, contact Charles Herring (505) 393-1781.

Yours very truly,

Attachments

January 6, 1984
File: SJ0-35-WF
Page 2

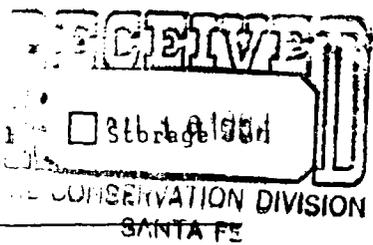
cc: Mrs. N. T. McNeill
P. O. Box 686
Hobbs, NM 88240

State of New Mexico
Commissioner of Public Lands
P. O. Box 1148
Santa Fe, NM 87501

Getty Oil Company
P. O. Box 730
Hobbs, NM 88240

Conoco, Inc.
P. O. Box 460
Hobbs, NM 88240

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 1980
Hobbs, NM 88240



APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no

II. Operator: AMOCO PRODUCTION COMPANY
Address: P. O. Box 68, Hobbs, NM 88240

Contact party: Mr. John M. Breeden Phone: (505) 393-1781

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project R-4934

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Charles M. Herring Title Administrative Analyst

Signature: Charles M. Herring Date: January 6, 1984

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. August 17, 1983, Order Nos. R-4934-B and R-4934-C copy

attached.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well: with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

AFFIDAVIT OF PUBLICATION

State of New Mexico,

County of Lea.

I, _____

Robert L. Summers

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____ day
One ~~weeks~~ weeks

Beginning with the issue dated
January 4, 19 84

and ending with the issue dated
January 4, 19 84

Robert L. Summers
Publisher.

Sworn and subscribed to before

me this 5 day of
January, 19 84

Jane Paulowsky
Notary Public.

My Commission expires _____
3-24, 19 87

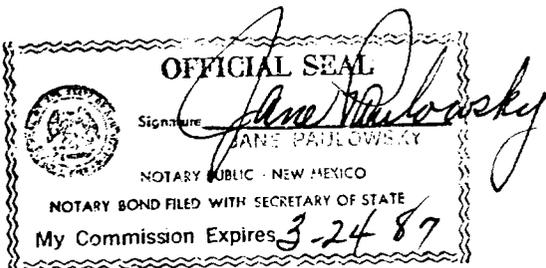
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

JANUARY 4, 1984

To Whom It May Concern:
Amoco Production Company has applied to the NMOCD for administrative approval to drill 3 water injection wells and to convert 1 oil well to a water injection well. The 3 wells to be drilled will be located in Section 9 and 10, Township 19-South, and Range 38-East, Lea County, New Mexico. The well to be converted is located in Section 4, Township 19-South, and Range 38-East, Lea County, New Mexico. The purpose of this work is to expand the pressure maintenance operations of our South Hobbs (GSA) Unit. Water will be injected into the Grayburg-San Andres Formation at an average rate of 800 BWIPD with an average injection pressure of 500 psi. Any questions concerning this project may be directed to Mr. John M. Breeden, District Foreman, Amoco Production Company, P. O. Box 68, Hobbs, NM 88240, Phone: (505) 393-1781. Interested parties must file objections or request for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, NM 87501, within 15 days.



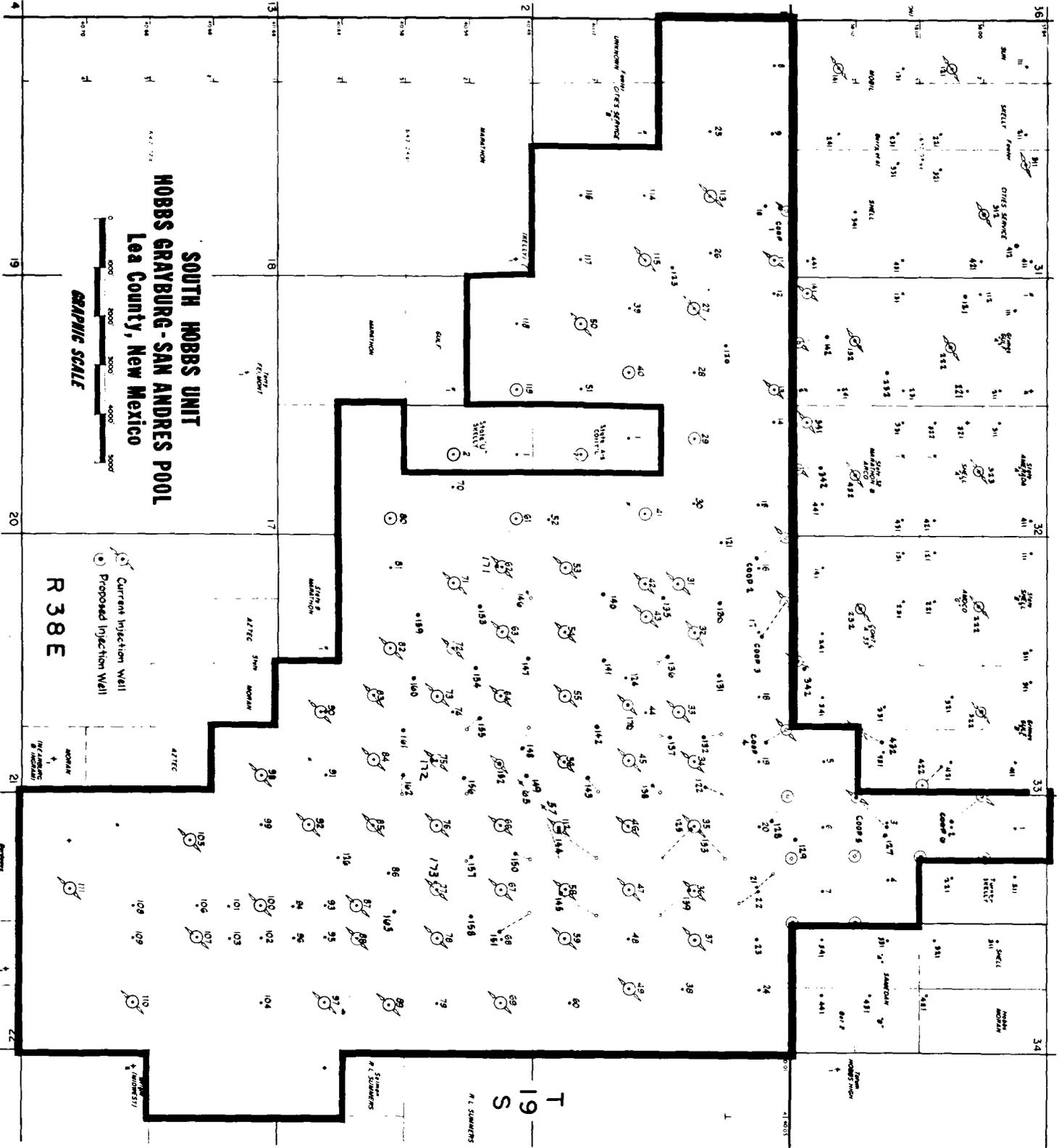
SOUTH HOBBS UNIT
HOBBS GRAYBURG-SAN ANDRES POOL
 Lea County, New Mexico

GRAPHIC SCALE



R 38 E

Current Injection Well
 Proposed Injection Well



South Hobbs Units 171, 172, 173

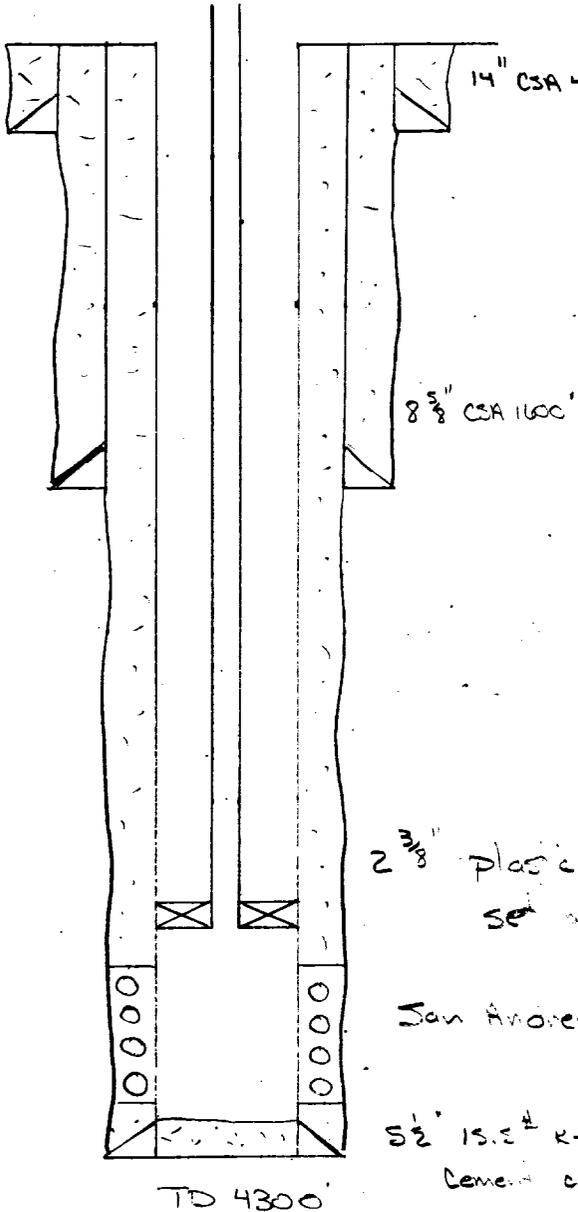
VII

1. Average 800 BWIPD Maximum 1200 BWIPD
2. Closed System.
3. Average 500 psi Maximum 830 psi (.2 PSI/FT. max.)
4. Reinjecting produced water.
5. Reinjecting into produced zone.

INJECTION WELL DATA SHEET

AMOCO PRODUCTION OPERATOR SOUTH HOBBS UNIT LEASE
172 WELL NO. 2030 FNLX 710 FEL FOOTAGE LOCATION 9 SECTION T19S TOWNSHIP R38E RANGE

Schematic



Tabular Data

Surface Casing

Size 14 " Cemented with 4 yds sx.
 TOC Circulated feet determined by _____
 Hole size 16" x 40'

Intermediate Casing

Size 8 5/8 " Cemented with 850 sx.
 TOC Circulated feet determined by _____
 Hole size 12 1/4" x 600'

Long string

Size 5 1/2 " Cemented with 1200 sx.
 TOC Circulated feet determined by _____
 Hole size 7 7/8" x 4300'
 Total depth 4300'

Injection interval

4150 feet to 4250 feet
 (perforated or open-hole, indicate which)

2 3/8" plastic coated tubing and Baker Lok-set packer set at 4000'.

San Andres Zones II and III 4150' - 4250'.

5 1/2" 15.2# R-SS CSA 4300'.
Cement circulated.

Tubing size 2 3/8" lined with PLASTIC set in a _____
 (material)
BAKER LOK-SET packer at 4000 feet
 (brand and model)

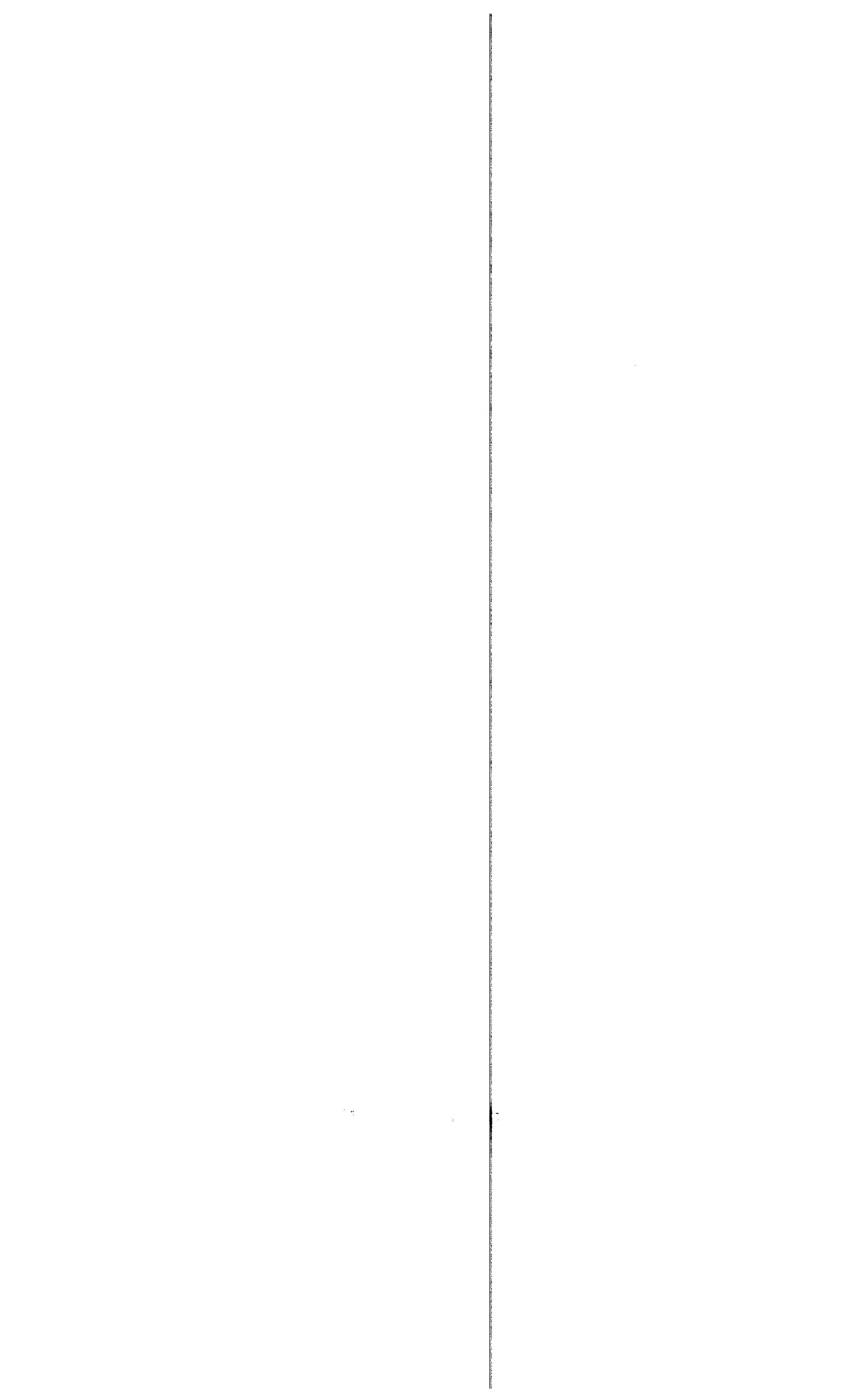
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES
- Name of Field or Pool (if applicable) HOBBS GRAYBURG SAN ANDRES
- Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? _____

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____
No.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Yates - Gas 2700' ; Bousier - Oil 3100'
Drinkard - oil 7000'.

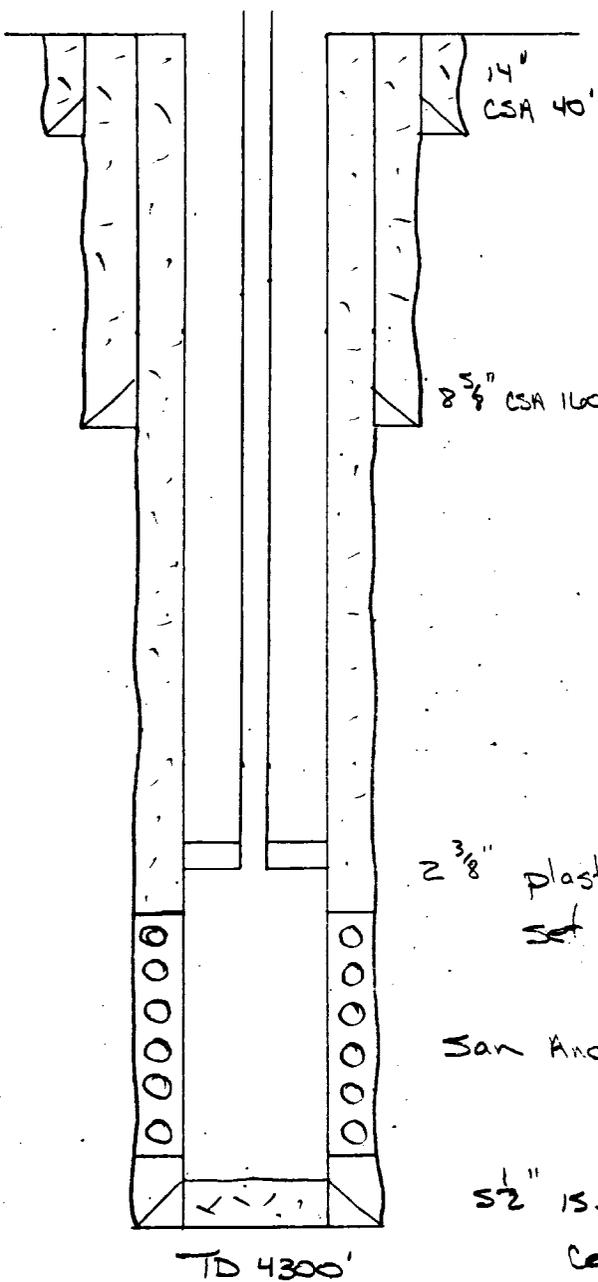


INJECTION WELL DATA SHEET

Amoco PRODUCTION OPERATOR SOUTH HOBBS UNIT LEASE
173 WELL NO. 2030' FNL X 1930' FWL FOOTAGE LOCATION 10 SECTION 19S TOWNSHIP 38 E RANGE

Schematic

Tabular Data



Surface Casing
 Size 14 " Cemented with 4 yds sx.
 TOC Circulated feet determined by _____
 Hole size 16" X 40'
Intermediate Casing
 Size 8 5/8 " Cemented with 850 sx.
 TOC Circulated feet determined by _____
 Hole size 12 1/4" X 1600'
Long string
 Size 5 1/2 " Cemented with 1200 sx.
 TOC Circulated feet determined by _____
 Hole size 7 7/8" X 4300'
 Total depth 4300'
Injection interval
4150 feet to 4250' feet
 (perforated or open-hole, indicate which)

2 3/8" plastic coated tubing and Baker Lok-Set packer set at 4000'.

San Andres Zones II and III perfs 4150'-4250'.

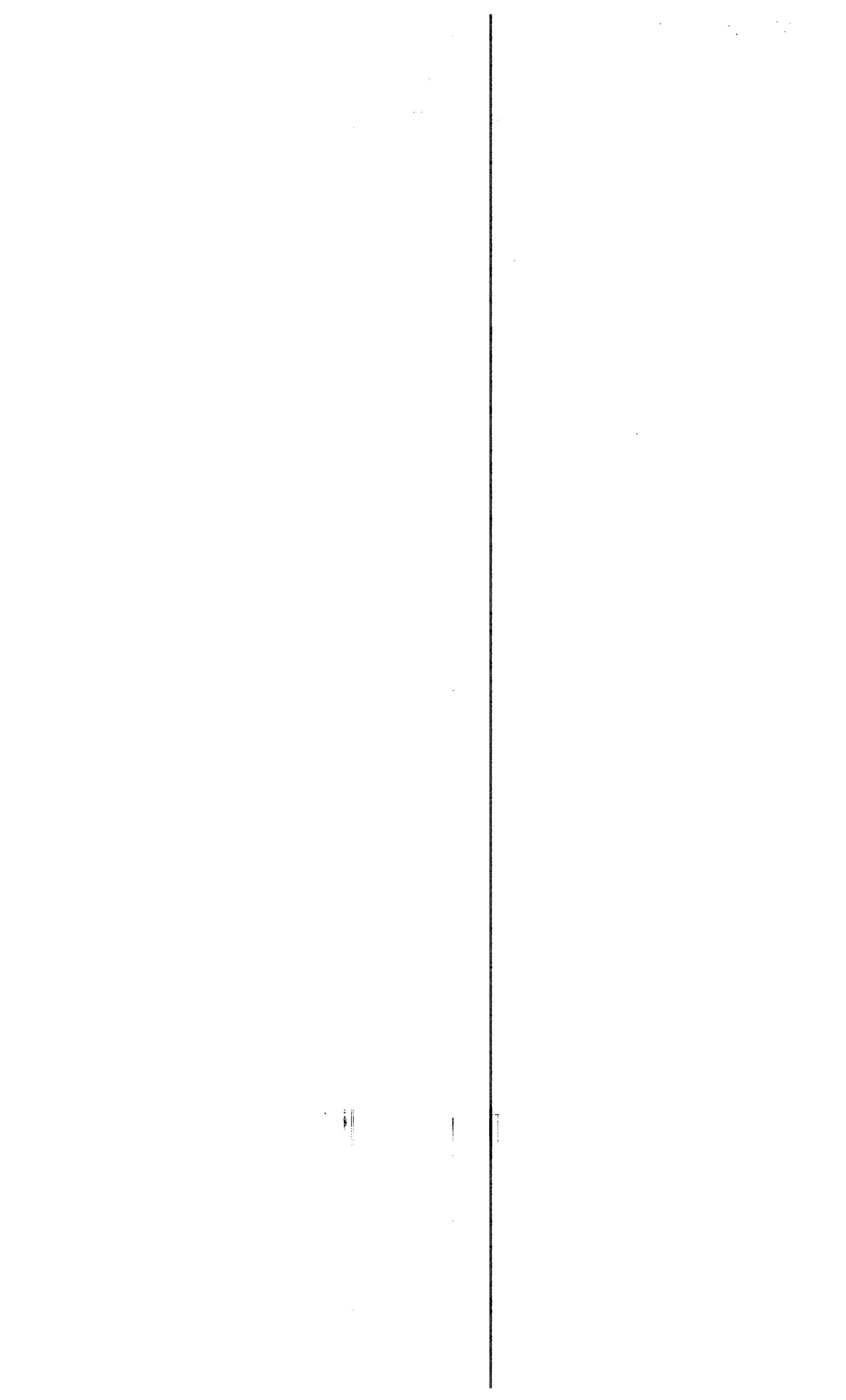
5 1/2" K-SS CSA 4300'
 Cement circulated.

Tubing size 2 3/8" lined with Plastic (material) set in a
Baker Lok-set packer at 4000' feet
 (brand and model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation San Andres
- Name of Field or Pool (if applicable) Hobbs Grayburg San Andres
- Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? _____
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____
No.
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Yates - Gas 2700' Bowers - Oil 3100' Drinard - Oil 7000'

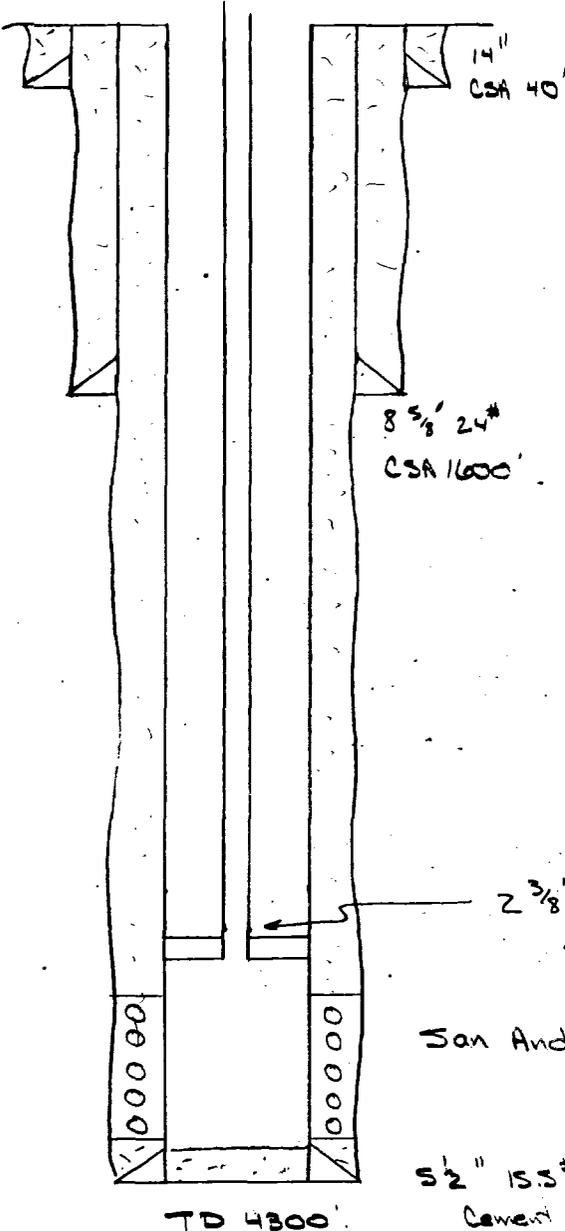


INJECTION WELL DATA SHEET

AMOCO PRODUCTION SOUTH HOBBS UNIT
 OPERATOR LEASE
 171 710' ANLX 610' FWL 9 195 38E
 WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Schematic

Tabular Data



Surface Casing
 Size 14 " Cemented with 4 yds. sx.
 TOC Circulated feet determined by _____
 Hole size 16" X 40'
Intermediate Casing
 Size 8 5/8" " Cemented with 850 sx.
 TOC Circulated feet determined by _____
 Hole size 12 1/4" X 1600'
Long string
 Size 5 1/2 " Cemented with 1200 sx.
 TOC Circulated feet determined by _____
 Hole size 7 7/8" X 4300'
 Total depth 4300'
Injection interval
4150 feet to 4250 feet
 (perforated or open-hole, indicate which)

2 3/8" plastic coated tubing and Baker Lok-set packer set at 4000'.

San Andres Zones II and III conts ~ 4150-4250'.

5 1/2" 15.5# K85 CSA 4300'.
 Cement circulated.

Tubing size 2 3/8" lined with PLASTIC set in a
 (material)
BAKER LOK-SET packer at 4000 feet
 (brand and model)

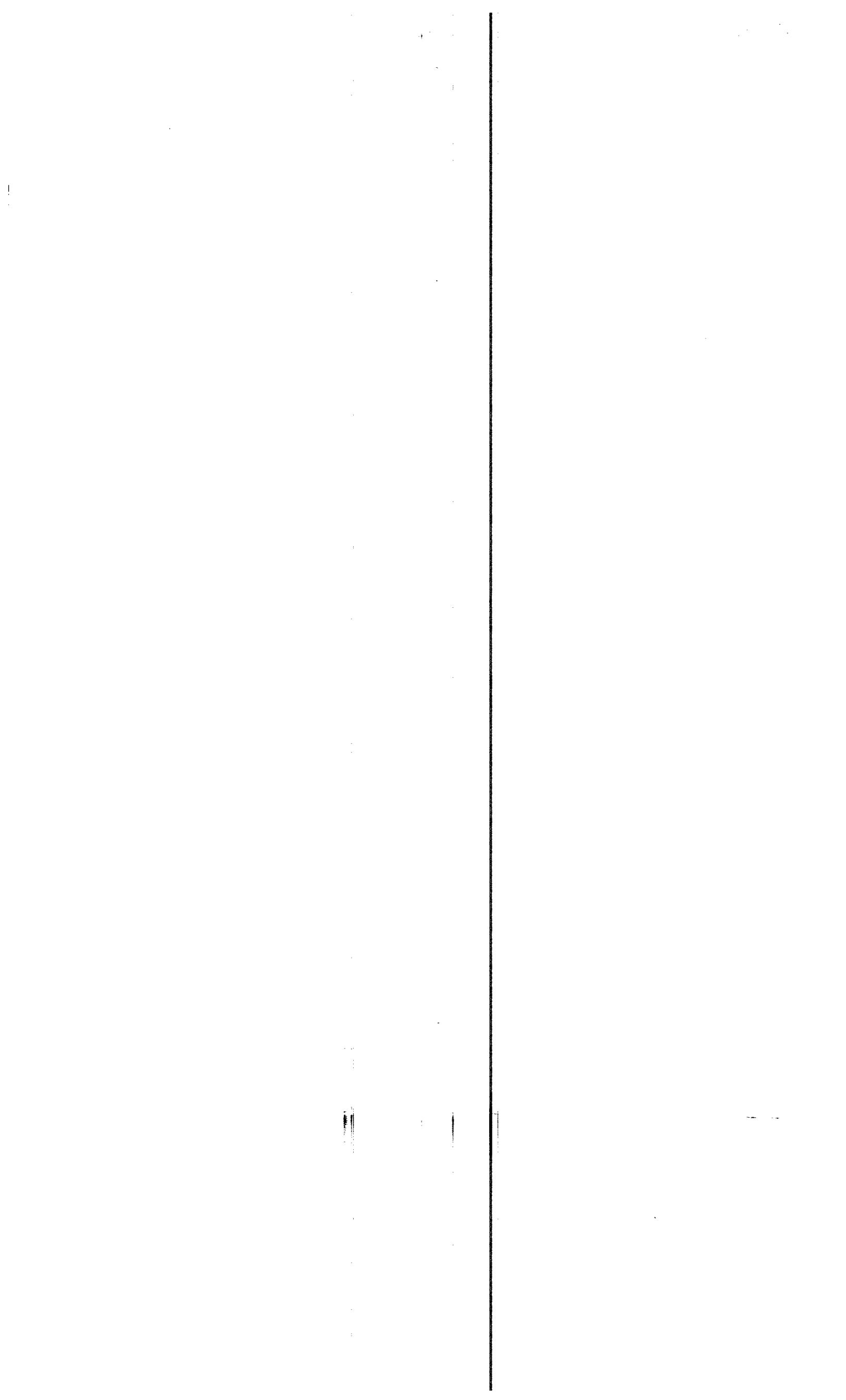
(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES
- Name of Field or Pool (if applicable) HOBBS GRAYBURG SAN ANDRES
- Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? _____

- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) _____
No.

- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
Yates Gas 2700', Bowers Oil 3100'
Drinkard 7000'

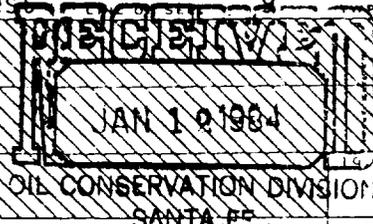


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OPERATOR	

5A. Indicate Type of Lease
STATE REC
5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
b. Type of Well DRILL DEEPEN PLUG BACK
OIL WELL GAS WELL OTHER Injection Well SINGLE ZONE MULTIPLE ZONE
2. Name of Operator Amoco Production Company
3. Address of Operator P. O. Box 68, Hobbs, New Mexico 88240
4. Location of Well UNIT LETTER D LOCATED 710 FEET FROM THE North LINE AND 640 FEET FROM THE West 19-S RGE. 38-E NMPM
7. Unit Agreement Name
8. Farm or Lease Name South Hobbs (GSA) Unit
9. Well No. 171
10. Field and Pool, or Wildcat Hobbs GSA
17. County Lea
19. Proposed Depth 4500'
19A. Formation Grayburg San Andres
20. Rotary or C.T. Rotary
21. Elevations (Show whether DT, HT, etc.) 3599.4' GL
21A. Kind & Status Plug Bond Blanket-on-file
21B. Drilling Contractor N/A
22. Approx. Date Work will start As Soon as possible



23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12-1/4"	8-5/8"	24#	1600'	Circulate	Surface
7-7/8"	5-1/2"	15.5#	4500'	Circulate	Surface

Propose to drill and equip well in the Grayburg San Andres formation. After reaching TD, logs will be run and evaluated.

* This is a replacement well for South Hobbs (GSA) Unit No. 62. The well will be left shut-in pending approval of Forms C-108, authorization to injection.

Mud Program: 0 - 1600 Fresh water and native muds.
1600 - 4500 Brine with minimum properties for safe hole conditions.

BOP Diagram attached.

O+6-NMOCD, H 1-HOU, R. E. Ogden, Rm 21.150 1-F. J. Nash, HOU Rm 4.206 1-CMH 1-Texaco
1-Shell 1-Sun 1-Petro Lewis

4. 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.

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

Signed Charles M. Herring Title Administrative Analyst Date 12-19-83

(This space for State Use)

ORIGINAL SIGNED BY JERRY SEXTON

APPROVED BY DISTRICT I SUPERVISOR TITLE _____ DATE DEC 21 1983

CONDITIONS OF APPROVAL, IF ANY:

APPROVAL VALID FOR 180 DAYS
PERMIT EXPIRES 6/21/84
EXCEPT DRILLING UNDER

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LAND OFFICE	
OPERATOR	

5A. Indicate Type of Lease
STATE FEDERAL
5. State Oil & Gas Lease No.
A-1212-1

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
b. Type of Well DRILL DEEPEN PLUG BACK
OIL WELL GAS WELL OTHER Injection Well SINGLE ZONE MULTIPLE ZONE

2. Name of Operator
Amoco Production Company

3. Address of Operator
P. O. Box 68, Hobbs, New Mexico 88240

4. Location of Well UNIT LETTER H LOCATED 2030 FEET FROM THE North LINE
AND 680 FEET FROM THE East LINE OF SEC. 9 TWP. 19-S RGE. 38-E NMPM

7. Unit Agreement Name
8. Farm or Lease Name
South Hobbs (GSA) Unit

9. Well No.
172

10. Field and Pool, or Wildcat
Hobbs GSA

12. County
Lea

15. Proposed Depth
4500'

19A. Formation
Grayburg San Andres

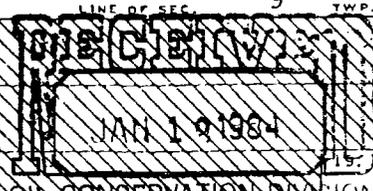
20. Rotary or C.T.
Rotary

21. Elevations, (show whether DF, HI, etc.)
3599.9' GL

21A. Kind & Amount of Bond
Blanket-on-file

21B. Drilling Contractor
N/A

22. Approx. Date Work will start
As Soon as possible



PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12-1/4"	8-5/8"	24#	1600'	Circulate	Surface
7-7/8"	5-1/2"	15.5#	4500'	Circulate	Surface

Propose to drill and equip well in the Grayburg San Andres formation. After reaching TD, logs will be run and evaluated.

* This is a replacement well for South Hobbs (GSA) Unit No. 75. The well will be left shut-in pending approval of Forms C-108, authorization to injection.

Mud Program: 0 - 1600' Fresh water and Native mu
1600 - 4500' Brine with minimum prop-
erties for safe hole con-
ditions

BOP Diagram attached.

O+6-NMOCD, H 1-HOU, R. E. Ogden, Rm 21.150 1-F. J. Nash, HOU Rm 4.206 1-CMH 1-Texaco
1-Shell 1-Sun 1-Petro Lewis

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

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

Signed Charles M. Herring Title Administrative Analyst Date 12-19-83

(This space for State Use)

APPROVED BY ORIGINAL SIGNED BY JERRY SEXTON TITLE DISTRICT 1 SUPERVISOR DATE DEC 21 1983

CONDITIONS OF APPROVAL, IF ANY:

APPROVAL VALID FOR 180 DAYS
PERMIT EXPIRES 6/21/84
UNLESS DRILLING UNDERWAY.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7939
Order No. R-4934-B

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR UNORTHODOX LOCATIONS,
DIRECTIONAL DRILLING, AND PRESSURE
MAINTENANCE EXPANSION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 17, 1983, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 23rd day of August, 1983, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amoco Production Company, seeks authority to drill 36 South Hobbs Unit wells at unorthodox oil well locations and to directionally drill 21 of said wells to various bottomhole locations all as shown on Exhibit "A" attached to this order.

(3) That the unorthodox surface locations and the unorthodox bottomhole locations are necessitated by topography and to permit efficient recovery from the South Hobbs Pressure Maintenance Project.

(4) That the quarter-quarter section wherein any of said wells is drilled or, in the case of directionally drilled wells, the quarter-quarter section wherein any one of said

wells is ultimately bottomed should be dedicated to such well.

(5) That a 75-foot radius tolerance should be provided for the bottomhole location for any directionally drilled well authorized by this order.

(6) That the applicant should be required to determine the subsurface location of the bottom of directionally drilled holes by means of a continuous multi-shot directional survey conducted subsequent to said directional drilling.

(7) That the applicant also seeks expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152 authorized herein.

(8) That said well should be authorized for injection subject to the provisions of Order No. R-4934 which authorized said project.

(9) That, in addition, said well or the injection system should be equipped so as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in any such well but the Director should have authority to increase said pressure limitation should circumstances warrant.

(10) That approval of the subject-application will afford the applicant the opportunity to produce its just and equitable share of the oil in the Hobbs Pool and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized 36 unorthodox oil well locations in its South Hobbs Unit, Hobbs Pool, Lea County, New Mexico, all as shown on Exhibit "A" attached to this order.

(2) That the applicant is further authorized to directionally drill 21 of said wells to bottomhole locations also as shown on said Exhibit "A" with a 75 foot radius tolerance target being provided for each such well.

PROVIDED HOWEVER, that prior to the above-described directional drilling, the applicant shall establish the location of the kick-off point by conducting a continuous multi-shot directional survey of the well.

PROVIDED FURTHER, that subsequent to the above-described directional drilling, a continuous multi-shot directional survey shall be made of the wellbore from total depth to the kick-off point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Division, P. O. Box 2088, Santa Fe, New Mexico-87501, and that the operator shall notify the Division's Hobbs District Office of the date and time said survey is to be commenced.

(3) That Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true VERTICAL depth in addition to measured depths.

(4) That the quarter-quarter section wherein any one of said wells is drilled or, in the case of directionally drilled wells, the quarter-quarter section wherein any such well is ultimately bottomed shall be dedicated to the well.

(5) That approval is also given for the expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152 being authorized herein.

(6) That injection into and operation of said well shall be in compliance with the provisions of Division Order No. R-4934 and Division Rules 702 through 708.

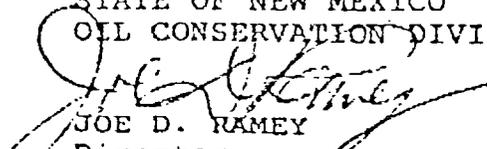
(7) That the injection well herein authorized and/or the injection pressurization system shall be equipped as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in such well.

(8) That the Director of the Division may administratively authorize a higher injection pressure upon a proper showing that such pressure will not result in fracturing of the confining zone.

(9) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


JOE D. RAMEY
Director

UNIT
WELL
NO.

SURFACE LOCATION
ALL WELLS

BOTTOMHOLE LOCATION
DIRECTIONALLY DRILLED
WELLS

TOWNSHIP 18 SOUTH, RANGE 38 EAST

127	1980'	FSL x	860'	FWL, Sec. 34	1330'	FSL x	1230'	FWL, Sec. 3
129	100'	FSL x	900'	FWL, Sec. 34	10'	FSL x	1310'	FWL, Sec. 3

TOWNSHIP 19 SOUTH, RANGE 38 EAST

128	335'	FNL x	520'	FWL, Sec. 3	10'	FNL x	10'	FWL, Sec. 3
130	1403'	FNL x	1403'	FWL, Sec. 4				
131	1383'	FNL x	2498'	FEL, Sec. 4				
132	1790'	FNL x	1185'	FEL, Sec. 4	1403'	FNL x	1238'	FEL, Sec. 4
133	1840'	FNL x	748'	FWL, Sec. 3	1330'	FNL x	1310'	FWL, Sec. 3
135	2558'	FNL x	1353'	FWL, Sec. 4				
136	2490'	FNL x	2504'	FWL, Sec. 4	2630'	FNL x	2630'	FWL, Sec. 4
137	2458'	FSL x	1180'	FEL, Sec. 4	2630'	FSL x	1200'	FEL, Sec. 4
138	2490'	FSL x	173'	FEL, Sec. 4	2630'	FSL x	10'	FEL, Sec. 4
139	2052'	FNL x	1941'	FWL, Sec. 3	2630'	FNL x	2475'	FWL, Sec. 3
140	1485'	FSL x	1245'	FWL, Sec. 4				
141	1478'	FSL x	2595'	FWL, Sec. 4				
142	1310'	FSL x	1370'	FEL, Sec. 4				
143	1160'	FSL x	330'	FEL, Sec. 4	1310'	FSL x	10'	FEL, Sec. 4
144	580'	FSL x	755'	FWL, Sec. 3	1310'	FSL x	1310'	FWL, Sec. 3
145	577'	FSL x	1984'	FWL, Sec. 3	1310'	FSL x	2475'	FWL, Sec. 3
146	75'	FNL x	1205'	FWL, Sec. 9	10'	FNL x	1310'	FWL, Sec. 9
147	70'	FNL x	2570'	FWL, Sec. 9				
148	192'	FNL x	990'	FEL, Sec. 9	10'	FNL x	1310'	FEL, Sec. 9
149	150'	FNL x	380'	FEL, Sec. 9	10'	FNL x	10'	FEL, Sec. 9
150	330'	FNL x	1220'	FWL, Sec. 10	10'	FNL x	1310'	FWL, Sec. 1
151	710'	FNL x	2410'	FEL, Sec. 10	10'	FNL x	2475'	FWL, Sec. 1
152	623'	FNL x	632'	FEL, Sec. 9				
153	1105'	FNL x	1485'	FWL, Sec. 9				
154	1163'	FNL x	2600'	FEL, Sec. 9				
155	1158'	FNL x	1568'	FEL, Sec. 9	1310'	FNL x	1330'	FEL, Sec. 9
156	1370'	FNL x	330'	FEL, Sec. 9	1330'	FNL x	10'	FEL, Sec. 9
157	1245'	FNL x	1245'	FWL, Sec. 10	1310'	FNL x	1310'	FWL, Sec. 1
158	1245'	FNL x	2475'	FWL, Sec. 10				
159	2335'	FNL x	1675'	FWL, Sec. 9				
160	2475'	FNL x	2425'	FEL, Sec. 9				
161	2630'	FNL x	1331'	FEL, Sec. 9				
162	2630'	FNL x	395'	FEL, Sec. 9	2630'	FNL x	10'	FEL, Sec. 9
163	2475'	FSL x	2475'	FWL, Sec. 10				

CASE NO. 7939
ORDER NO. R-4934-B

EXHIBIT "A"

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7939
Order No. R-4934-C

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR UNORTHODOX LOCATIONS,
DIRECTIONAL DRILLING, AND PRESSURE
MAINTENANCE EXPANSION, LEA COUNTY,
NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-4934-B dated August 23, 1983, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That Paragraphs (7), (8) and (9) on Page 2 of Order No. R-4934-B in Case No. 7939 are hereby amended to read in their entirety as follows:

"(7) That the applicant also seeks expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152, authorized herein, and into 19 other unit wells as shown on Exhibit "B", attached to this order, said wells to be converted from producing wells to injection wells.

(8) That said wells should be authorized for injection subject to the provisions of Order No. R-4934 which authorized said project.

(9) That, in addition, said wells or the injection system should be equipped so as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in any such well but the Director should have authority to increase said pressure limitation should circumstances warrant."

(2) That Paragraphs (5), (6) and (7) on Page 3 of Order No. R-4934-B are hereby amended to read in their entirety as follows:

Case No. 7939
Order No. R-4934-C

(5) That approval is also given for the expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152, being authorized herein, and into 19 other unit wells as shown on Exhibit "B" attached to this order, such wells to be converted from production to injection.

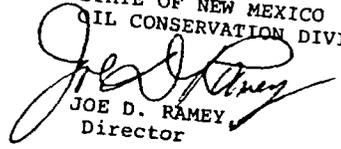
(6) That injection into and operation of said wells shall be in compliance with the provisions of Division Order No. R-4934 and Division Rules 702 through 708.

(7) That the injection wells herein authorized and/or the injection pressurization system shall be equipped as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in such wells.

(3) That this order shall be effective nunc pro tunc as of August 23, 1983.

DONE at Santa Fe, New Mexico, this 30th day of September, 1983.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


JOE D. RAMEY
Director

S E A L

SOUTH HOBBS UNIT PRODUCING WELLS
TO BE CONVERTED TO INJECTION

TOWNSHIP 19 SOUTH, RANGE 38 EAST, NMPM

<u>UNIT WELL No.</u>	<u>UNIT LETTER</u>	<u>SECTION No.</u>
11	A	6
13	C	5
32	F	4
34	H	4
36	F	3
42	L	4
46	L	3
54	N	4
56	P	3
58	N	9
62	D	9
64	B	10
66	D	9
72	F	9
75	H	10
77	F	9
83	J	19
85	L	19
88	J	

CASE NO. 7939
Order No. R-4934-C

EXHIBIT "B"

P 267 164 413

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO		<i>Conoco Inc.</i>	
STREET AND NO.		<i>P.O. Box 460</i>	
P.O. STATE AND ZIP CODE		<i>Hobbs, NM 88240</i>	
POSTAGE		\$	<i>.71</i>
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		<i>75 c</i>
	SPECIAL DELIVERY		c
	RESTRICTED DELIVERY		c
	OPTIONAL SERVICES		
	RETURN RECEIPT SERVICE	<i>60</i>	c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY		c
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY		c	
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY		c	
TOTAL POSTAGE AND FEES		\$	<i>2.06</i>
POSTMARK OR DATE			

PS Form 3800, Apr. 1976

P 267 164 414

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO		<i>Betty O. Co.</i>	
STREET AND NO.		<i>P.O. Box 730</i>	
P.O. STATE AND ZIP CODE		<i>Hobbs, NM 88240</i>	
POSTAGE		\$	<i>.71</i>
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		<i>75 c</i>
	SPECIAL DELIVERY		c
	RESTRICTED DELIVERY		c
	OPTIONAL SERVICES		
	RETURN RECEIPT SERVICE	<i>60</i>	c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY		c
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY		c	
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY		c	
TOTAL POSTAGE AND FEES		\$	<i>2.06</i>
POSTMARK OR DATE			

PS Form 3800, Apr. 1976

P 267 164 415

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO		<i>State of New Mexico</i>	
STREET AND NO.		<i>Commissioner of Public Lands</i>	
P.O. STATE AND ZIP CODE		<i>P.O. Box 1148</i>	
		<i>Santa Fe, NM 87501</i>	
POSTAGE		\$	<i>.71</i>
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		<i>75 c</i>
	SPECIAL DELIVERY		c
	RESTRICTED DELIVERY		c
	OPTIONAL SERVICES		
	RETURN RECEIPT SERVICE	<i>60</i>	c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY		c
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY		c	
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY		c	
TOTAL POSTAGE AND FEES		\$	<i>2.06</i>
POSTMARK OR DATE			

PS Form 3800, Apr. 1976

P 267 164 416

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO		<i>Mrs. N. T. McNeill</i>	
STREET AND NO.		<i>P.O. Box 686</i>	
P.O. STATE AND ZIP CODE		<i>Hobbs, NM 88240</i>	
POSTAGE		\$	<i>.71</i>
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		<i>75 c</i>
	SPECIAL DELIVERY		c
	RESTRICTED DELIVERY		c
	OPTIONAL SERVICES		
	RETURN RECEIPT SERVICE	<i>60</i>	c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY		c
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY		c	
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY		c	
TOTAL POSTAGE AND FEES		\$	<i>2.06</i>
POSTMARK OR DATE			

PS Form 3800, Apr. 1976



Amoco Production Company (USA)

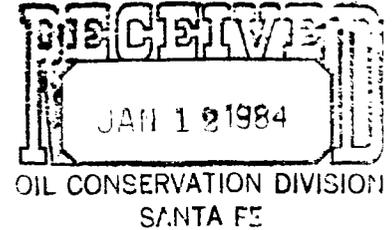
Post Office Box 68
Hobbs, New Mexico 88240

S. J. Okerson
District Superintendent

January 6, 1984

File: SJO-34-WF

Re: Application For Authorization To Inject
State A No. 37
Lea County, New Mexico



State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attn: Mr. Richard L. Stamets

Gentlemen:

Amoco Production Company hereby makes application for administrative approval to expand its South Hobbs (GSA) Unit Pressure Maintenance Project. Forms C-108 and necessary documentations are attached. The wellbore of State A No. 37 has been purchased by South Hobbs (GSA) Unit and our plans are to recomplete this well from the Drinkard to the Grayburg-San Andres formation. When this work is completed, it will be renamed South Hobbs (GSA) Unit No. 170 and equipped for injection. Your prompt consideration of this application will be appreciated.

If additional information is needed, contact Charles Herring (505)393-1781.

Yours very truly,

S. J. Okerson #12

Attachments

January 6, 1984
File: SJ0-34-WF
Page 2

cc: State of New Mexico
Commissioner of Public Lands
P. O. Box 1148
Santa Fe, NM 87501

Mrs. George L. New
P. O. Box 580
Hobbs, NM 88240

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
P. O. Box 1980
Hobbs, NM 88240

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no

II. Operator: AMOCO PRODUCTION COMPANY

Address: P. O. Box 68, Hobbs, NM 88240

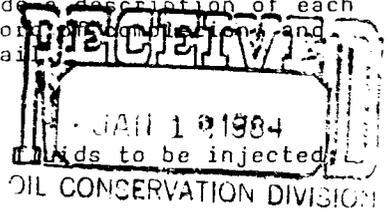
Contact party: Mr. John M. Breeden Phone: (505) 393-1781

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? yes no
If yes, give the Division order number authorizing the project R-4934

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completions, and a schematic of any plugged well illustrating all plugging details.



VII. Attach data on the proposed operation, including:

- Proposed average and maximum daily rate and volume of fluids to be injected;
- Whether the system is open or closed;
- Proposed average and maximum injection pressure;
- Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
- If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Charles M. Herring Title Administrative Analyst

Signature: Charles M. Herring Date: January 6, 1984

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. August 17, 1983, Order No.s R-4934-B and R-4934-C copy

attached.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well: with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

1, _____

Robert L. Summers

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not in a supplement thereof for a period

of _____ day
One ~~weeks/~~

Beginning with the issue dated
January 4, 19 84

and ending with the issue dated
January 4, 19 84

Robert L. Summers
Publisher.

Sworn and subscribed to before
me this 5 day of

January, 19 84
Jane Paulowsky
Notary Public.

My Commission expires _____
3-24, 19 87
(Seal)

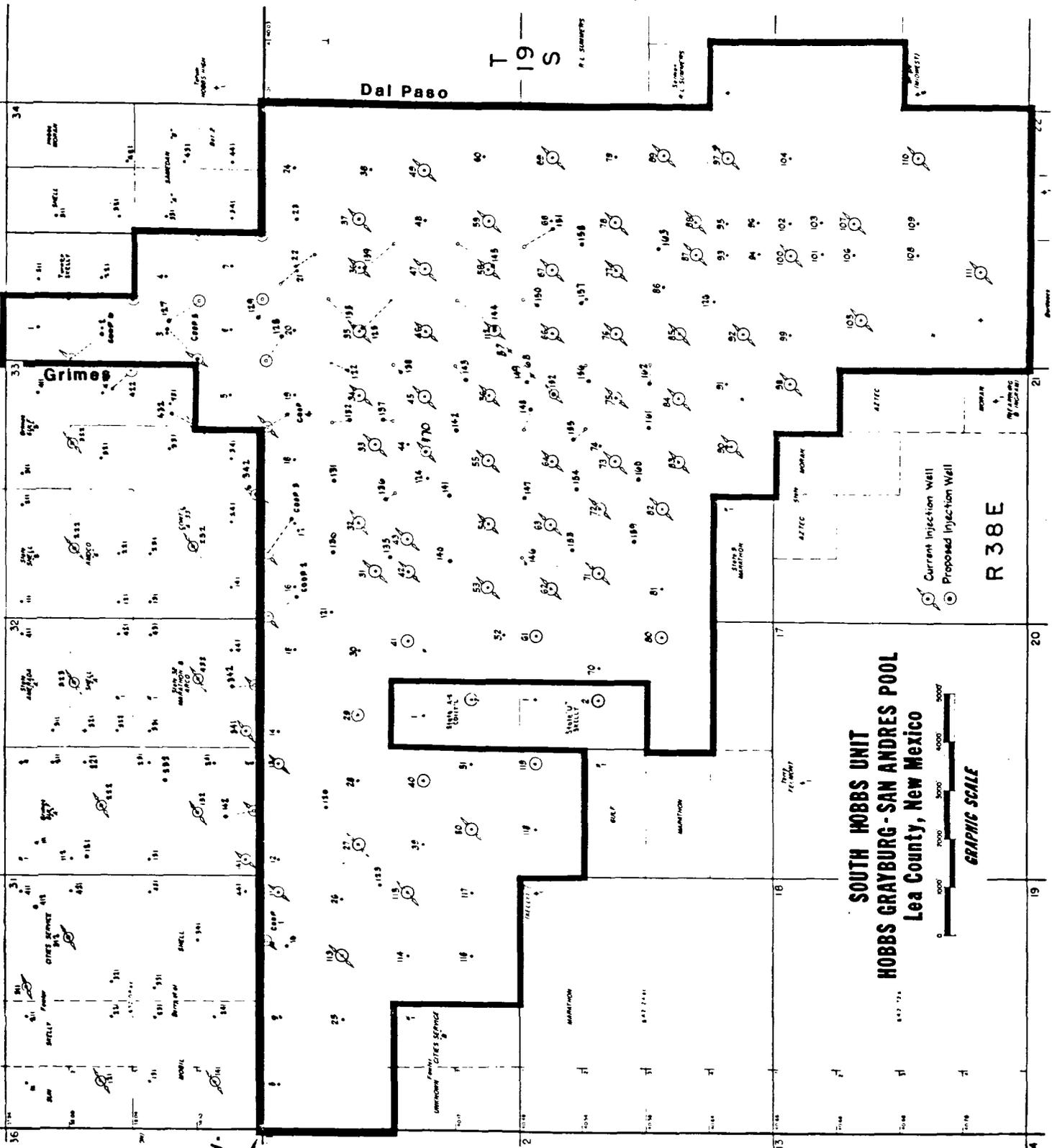
This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

JANUARY 4, 1984

To Whom It May Concern:
Amoco Production Company has applied to the NMOCB for administrative approval to drill 3 water injection wells and to convert 1 oil well to a water injection well. The 3 wells to be drilled will be located in Section 9 and 10, Township 19-South, and Range 38-East, Lea County, New Mexico. The well to be converted is located in Section 4, Township 19-South, and Range 38-East, Lea County, New Mexico. The purpose of this work is to expand the pressure maintenance operations of our South Hobbs (GSA) Unit. Water will be injected into the Grayburg-San Andres Formation at an average rate of 800 BWIPD with an average injection pressure of 500 psi. Any questions concerning this project may be directed to Mr. John M. Breeden, District Foreman, Amoco Production Company, P. O. Box 68, Hobbs, NM 88240, Phone: (505) 393-1781. Interested parties must file objections or request for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, NM 87501, within 15 days.





State "A" No. 37

VII.

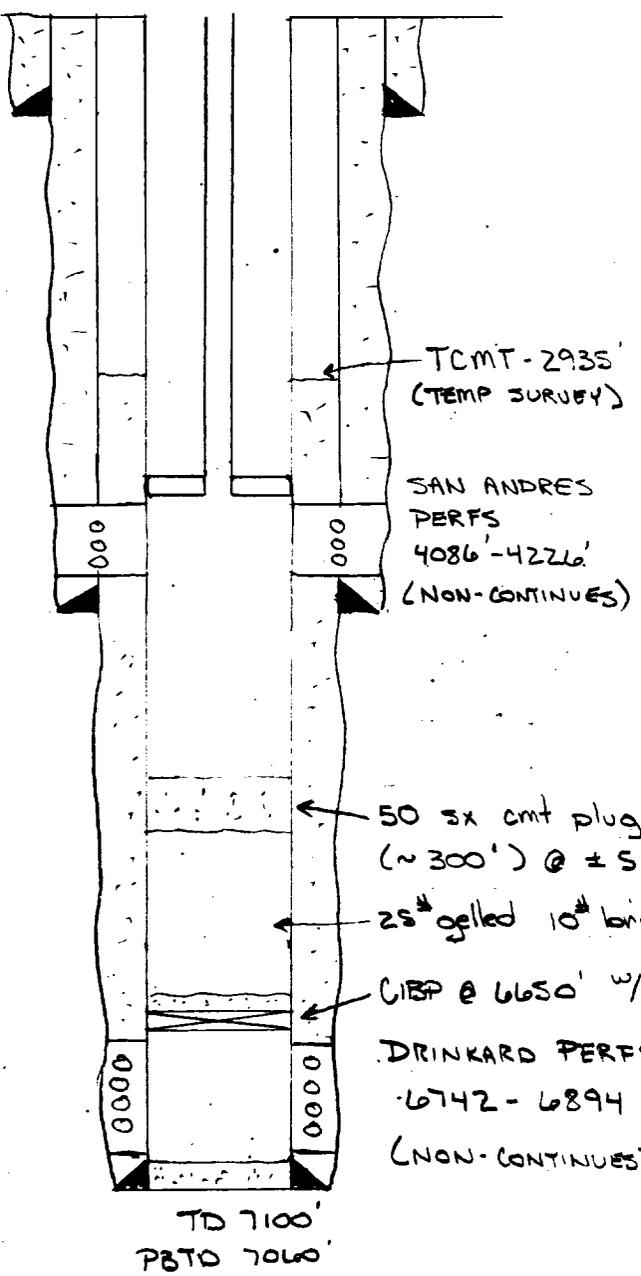
1. Average 800 BWIPD Maximum 1200 BWIPD
2. Closed System
3. Average 500 psi Maximum 830 psi (.2PSI/FT. max.)
4. Reinjecting produced water.
5. Reinjecting into produced zone.

INJECTION WELL DATA SHEET

Amoco PRODUCTION STATE 'A'
 OPERATOR LEASE
 37 1980 FSLX 1832 FEL, 4 19S 38E
 WELL NO. FOOTAGE LOCATION SECTION TOWNSHIP RANGE

Schematic

Tabular Data



Surface Casing

Size 13 3/8 " Cemented with 450 sx.
 TOC CIRCULATED feet determined by _____
 Hole size 17 1/2 x 395

Intermediate Casing

Size 9 5/8 " Cemented with 1000 sx.
 TOC CIRCULATED feet determined by _____
 Hole size 12 1/4 x 4302

Long string

Size 7 " Cemented with 700 sx.
 TOC 2935 feet determined by TEMP SURVEY
 Hole size 8 3/4 x 7100
 Total depth 7100

Injection interval

4086 feet to 4226 feet
 (perforated or open-hole, indicate which)

TCMT-2935
 (TEMP SURVEY)
 SAN ANDRES
 PERFS
 4086'-4226'
 (NON-CONTINUES)
 50 sx cmt plug
 (~300') @ ± 5300'
 25# gelled 10# brine between plugs.
 CBP @ 6650' w/ 35' CMT.
 DRINKARD PERFS
 6742-6894
 (NON-CONTINUES)

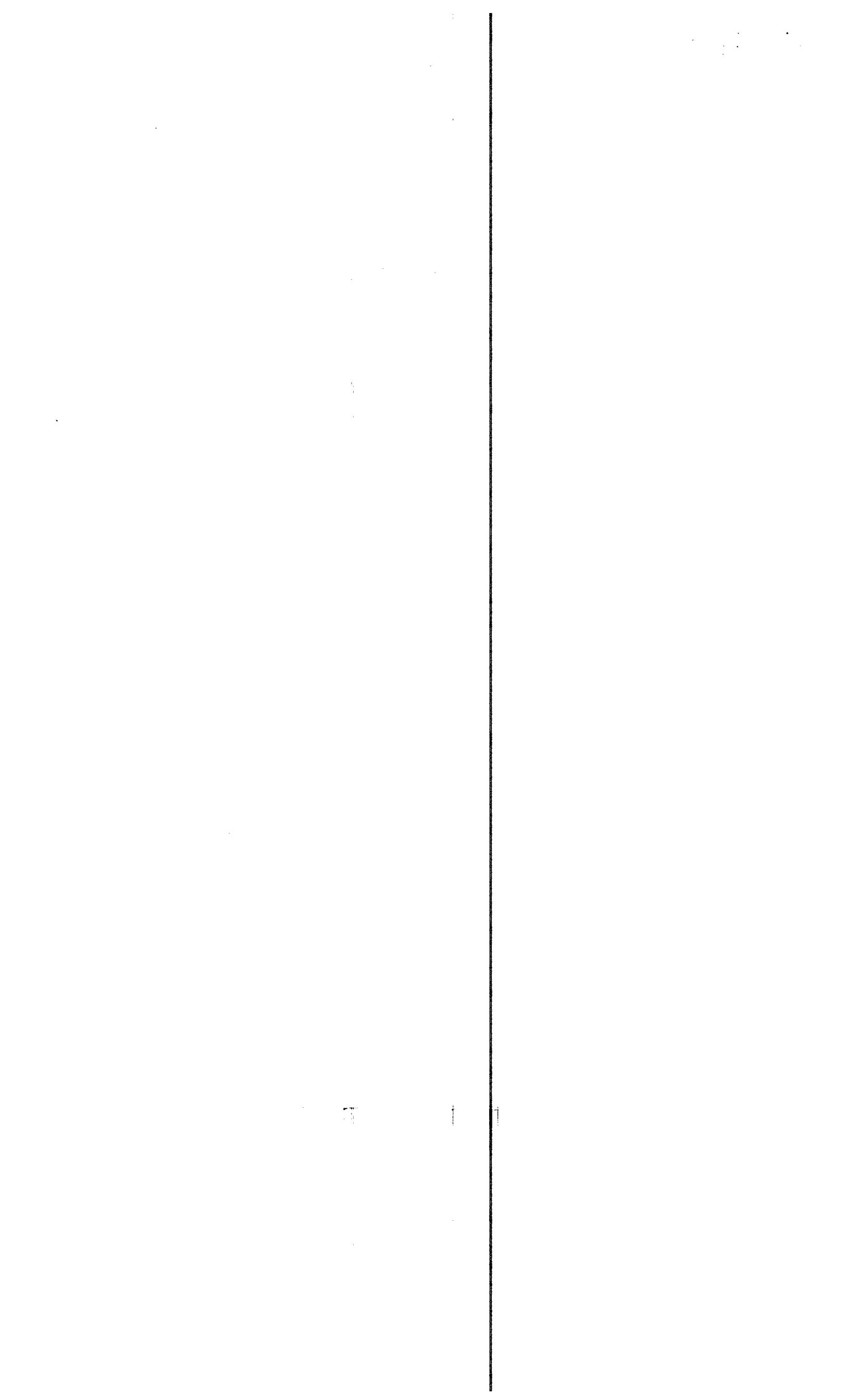
TD 7100'
 PBTO 7060'

Tubing size 2 3/8 " lined with PLASTIC set in a
 (material)
BAKER LOK-SET packer at 3950 feet
 (brand and model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation SAN ANDRES
- Name of Field or Pool (if applicable) HOBBS
- Is this a new well drilled for injection? Yes No
 If no, for what purpose was the well originally drilled? DRINKARD OIL PRODUCTION - INTERVAL 6742'-6894'
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)
DRINKARD - INTERVAL 6742'-6894' - CAST IRON BRIDGE PLUG SET AT 6650 AND CAPPED WITH 35' OF CEMENT.
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.
BOWERS - 3138



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7939
Order No. R-4934-B

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR UNORTHODOX LOCATIONS,
DIRECTIONAL DRILLING, AND PRESSURE
MAINTENANCE EXPANSION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 17, 1983, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 23rd day of August, 1983, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amoco Production Company, seeks authority to drill 36 South Hobbs Unit wells at unorthodox oil well locations and to directionally drill 21 of said wells to various bottomhole locations all as shown on Exhibit "A" attached to this order.

(3) That the unorthodox surface locations and the unorthodox bottomhole locations are necessitated by topography and to permit efficient recovery from the South Hobbs Pressure Maintenance Project.

(4) That the quarter-quarter section wherein any of said wells is drilled or, in the case of directionally drilled wells, the quarter-quarter section wherein any one of said

Case No. 7939
Order No. R-4934-B

wells is ultimately bottomed should be dedicated to such well.

(5) That a 75-foot radius tolerance should be provided for the bottomhole location for any directionally drilled well authorized by this order.

(6) That the applicant should be required to determine the subsurface location of the bottom of directionally drilled holes by means of a continuous multi-shot directional survey conducted subsequent to said directional drilling.

(7) That the applicant also seeks expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152 authorized herein.

(8) That said well should be authorized for injection subject to the provisions of Order No. R-4934 which authorized said project.

(9) That, in addition, said well or the injection system should be equipped so as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in any such well but the Director should have authority to increase said pressure limitation should circumstances warrant.

(10) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the oil in the Hobbs Pool and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized 36 unorthodox oil well locations in its South Hobbs Unit, Hobbs Pool, Lea County, New Mexico, all as shown on Exhibit "A" attached to this order.

(2) That the applicant is further authorized to directionally drill 21 of said wells to bottomhole locations also as shown on said Exhibit "A" with a 75 foot radius tolerance target being provided for each such well.

PROVIDED HOWEVER, that prior to the above-described directional drilling, the applicant shall establish the location of the kick-off point by conducting a continuous multi-shot directional survey of the well.

PROVIDED FURTHER, that subsequent to the above-described directional drilling, a continuous multi-shot directional survey shall be made of the wellbore from total depth to the kick-off point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Division, P. O. Box 2088, Santa Fe, New Mexico-87501, and that the operator shall notify the Division's Hobbs District Office of the date and time said survey is to be commenced.

(3) That Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

(4) That the quarter-quarter section wherein any one of said wells is drilled or, in the case of directionally drilled wells, the quarter-quarter section wherein any such well is ultimately bottomed shall be dedicated to the well.

(5) That approval is also given for the expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152 being authorized herein.

(6) That injection into and operation of said well shall be in compliance with the provisions of Division Order No. R-4934 and Division Rules 702 through 708.

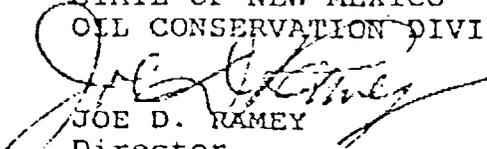
(7) That the injection well herein authorized and/or the injection pressurization system shall be equipped as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in such well.

(8) That the Director of the Division may administratively authorize a higher injection pressure upon a proper showing that such pressure will not result in fracturing of the confining zone.

(9) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


JOE D. RAMEY
Director

UNIT
WELL
NO.

SURFACE LOCATION
ALL WELLS

DÖTTOMHOLE LOCATION
DIRECTIONALLY DRILLED
WELLS

TOWNSHIP 18 SOUTH, RANGE 38 EAST

127	1980'	FSL x	860'	FWL, Sec. 34	1330'	FSL x	1230'	FWL, Sec. 3
129	100'	FSL x	900'	FWL, Sec. 34	10'	FSL x	1310'	FWL, Sec. 3

TOWNSHIP 19 SOUTH, RANGE 38 EAST

128	335'	FNL x	520'	FWL, Sec. 3	10'	FNL x	10'	FWL, Sec. 3
130	1403'	FNL x	1403'	FWL, Sec. 4				
131	1383'	FNL x	2498'	FEL, Sec. 4				
132	1790'	FNL x	1185'	FEL, Sec. 4	1402'	FNL x	1238'	FEL, Sec. 4
133	1840'	FNL x	748'	FWL, Sec. 3	1330'	FNL x	1310'	FWL, Sec. 3
135	2558'	FNL x	1353'	FWL, Sec. 4				
136	2490'	FNL x	2504'	FWL, Sec. 4	2630'	FNL x	2630'	FWL, Sec. 4
137	2458'	FSL x	1180'	FEL, Sec. 4	2630'	FSL x	1200'	FEL, Sec. 4
138	2490'	FSL x	173'	FEL, Sec. 4	2630'	FSL x	10'	FEL, Sec. 4
139	2052'	FNL x	1941'	FWL, Sec. 3	2630'	FNL x	2475'	FWL, Sec. 3
140	1485'	FSL x	1245'	FWL, Sec. 4				
141	1478'	FSL x	2595'	FWL, Sec. 4				
142	1310'	FSL x	1370'	FEL, Sec. 4				
143	1160'	FSL x	330'	FEL, Sec. 4	1310'	FSL x	10'	FEL, Sec. 4
144	580'	FSL x	755'	FWL, Sec. 3	1310'	FSL x	1310'	FWL, Sec. 3
145	577'	FSL x	1984'	FWL, Sec. 3	1310'	FSL x	2475'	FWL, Sec. 3
146	75'	FNL x	1205'	FWL, Sec. 9	10'	FNL x	1310'	FWL, Sec. 9
147	70'	FNL x	2570'	FWL, Sec. 9				
148	192'	FNL x	990'	FEL, Sec. 9	10'	FNL x	1310'	FEL, Sec. 9
149	150'	FNL x	380'	FEL, Sec. 9	10'	FNL x	10'	FEL, Sec. 9
150	330'	FNL x	1220'	FWL, Sec. 10	10'	FNL x	1310'	FWL, Sec. 1
151	710'	FNL x	2410'	FEL, Sec. 10	10'	FNL x	2475'	FWL, Sec. 1
152	623'	FNL x	632'	FEL, Sec. 9				
153	1105'	FNL x	1485'	FWL, Sec. 9				
154	1163'	FNL x	2600'	FEL, Sec. 9				
155	1158'	FNL x	1568'	FEL, Sec. 9	1310'	FNL x	1330'	FEL, Sec. 9
156	1370'	FNL x	330'	FEL, Sec. 9	1330'	FNL x	10'	FEL, Sec. 9
157	1245'	FNL x	1245'	FWL, Sec. 10	1310'	FNL x	1310'	FWL, Sec. 1
158	1245'	FNL x	2475'	FWL, Sec. 10				
159	2335'	FNL x	1675'	FWL, Sec. 9				
160	2475'	FNL x	2425'	FEL, Sec. 9				
161	2630'	FNL x	1331'	FEL, Sec. 9				
162	2630'	FNL x	395'	FEL, Sec. 9	2630'	FNL x	10'	FEL, Sec. 9
163	2475'	FSL x	2475'	FWL, Sec. 10				

CASE NO. 7939
ORDER NO. R-4934-B

EXHIBIT "A"

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7939
Order No. R-4934-C

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR UNORTHODOX LOCATIONS,
DIRECTIONAL DRILLING, AND PRESSURE
MAINTENANCE EXPANSION, LEA COUNTY,
NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE DIVISION:

It appearing to the Division that Order No. R-4934-B dated August 23, 1983, does not correctly state the intended order of the Division,

IT IS THEREFORE ORDERED:

(1) That Paragraphs (7), (8) and (9) on Page 2 of Order No. R-4934-B in Case No. 7939 are hereby amended to read in their entirety as follows:

"(7) That the applicant also seeks expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152, authorized herein, and into 19 other unit wells as shown on Exhibit "B", attached to this order, said wells to be converted from producing wells to injection wells.

(8) That said wells should be authorized for injection subject to the provisions of Order No. R-4934 which authorized said project.

(9) That, in addition, said wells or the injection system should be equipped so as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in any such well but the Director should have authority to increase said pressure limitation should circumstances warrant."

(2) That Paragraphs (5), (6) and (7) on Page 3 of Order No. R-4934-B are hereby amended to read in their entirety as follows:

(5) That approval is also given for the expansion of the South Hobbs Grayburg-San Andres Pressure Maintenance Project to permit injection into Unit Well No. 152, being authorized herein, and into 19 other unit wells as shown on Exhibit "B" attached to this order, such wells to be converted from production to injection.

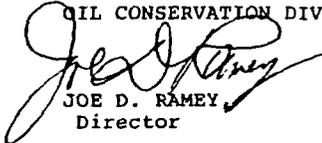
(6) That injection into and operation of said wells shall be in compliance with the provisions of Division Order No. R-4934 and Division Rules 702 through 708.

(7) That the injection wells herein authorized and/or the injection pressurization system shall be equipped as to limit injection pressure at the wellhead to no more than 0.2 pounds per foot of depth to the topmost perforation in such wells.

(3) That this order shall be effective nunc pro tunc as of August 23, 1983.

DONE at Santa Fe, New Mexico, this 30th day of September, 1983.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


JOE D. RAMEY
Director

S E A L

SOUTH HOBBS UNIT PRODUCING WELLS
TO BE CONVERTED TO INJECTION

TOWNSHIP 19 SOUTH, RANGE 38 EAST, NMPM

<u>UNIT WELL</u> <u>No.</u>	<u>UNIT</u> <u>LETTER</u>	<u>SECTION</u> <u>No.</u>
11	A	6
13	C	5
32	F	4
34	H	4
36	F	3
42	L	4
46	L	3
54	N	4
56	P	4
58	N	3
62	D	9
64	B	9
66	D	10
72	F	9
75	H	9
77	F	10
83	J	9
85	L	19
88	J	19

CASE NO. 7939
Order No. R-4934-C

EXHIBIT "B"

P 26, 164 411

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO <i>Mrs. George H. New</i>	
STREET AND NO. <i>1110 Ave 530</i>	
CITY, STATE AND ZIP CODE <i>Albuquerque, NM 87102</i>	
POSTAGE	<i>.71</i>
CERTIFIED FEE	<i>.75</i>
CONSULT POSTMASTER FOR FEES OF ADDITIONAL SERVICES	
RETURN RECEIPT SERVICE	<i>60</i>
TOTAL POSTAGE AND FEES	<i>2.06</i>
POSTMARK OR DATE <i>APR 19 1976</i>	

PS Form 3800, Apr. 1976

P 267 164 412

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

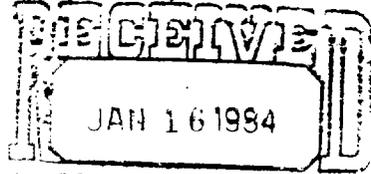
SENT TO <i>State of New Mexico</i>	
STREET AND NO. <i>Commissioner of Insurance</i>	
CITY, STATE AND ZIP CODE <i>Albuquerque, NM 87102</i>	
POSTAGE	<i>.71</i>
CERTIFIED FEE	<i>.75</i>
CONSULT POSTMASTER FOR FEES OF ADDITIONAL SERVICES	
RETURN RECEIPT SERVICE	<i>60</i>
TOTAL POSTAGE AND FEES	<i>2.06</i>
POSTMARK OR DATE <i>APR 19 1976</i>	

PS Form 3800, Apr. 1976



FILE PMX-126

OIL CONSERVATION DIVISION
DISTRICT I



OIL CONSERVATION DIVISION
SANTA FE

DATE January 12, 1984

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed HSP _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX X

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

Gentlemen:

I have examined the application for the:

Amoco Production Co. South Hobbs (G/SA) Unit #172, #172, #173 9-19-38
Operator Lease and Well No. Unit, S - T - R

and my recommendations are as follows:

O.K.----J.S.

Yours very truly,

Jerry Sexton
me

/mc