E X H I B I T S

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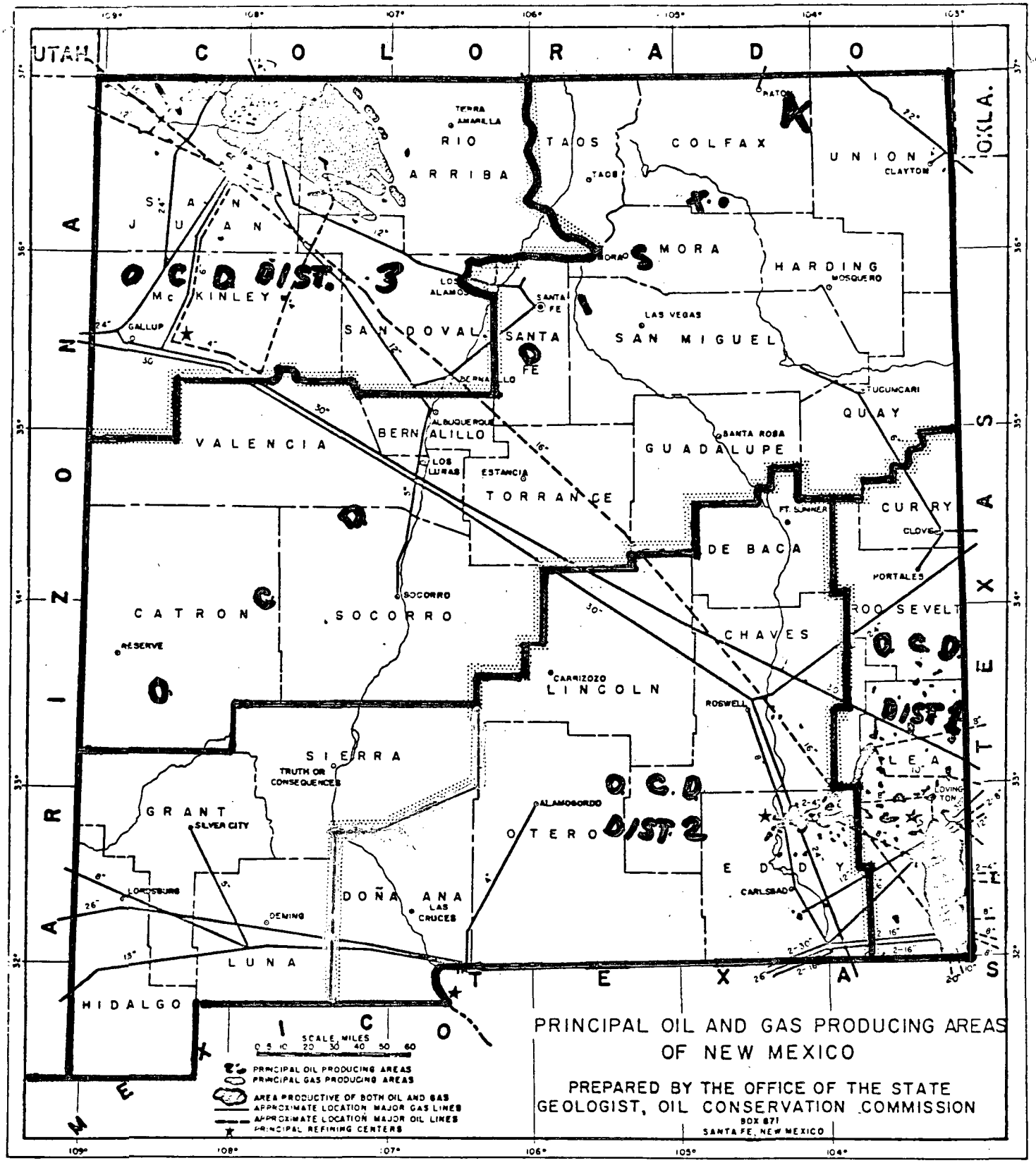

New Mexico Oil Conservation Division Districts and Offices:

District 1: *Lea, Roosevelt, and Curry Counties; also that portion of Chaves County East from and including Range 30 East, NMPM. District Office at Hobbs.*

District 2: *Eddy, Otero, Doña Ana, Lincoln, and De Baca Counties; also that portion of Chaves County West from and including Range 29 East, NMPM. District Office at Artesia.* ALSO LUNA, HIDALGO, GRANT, SIERRA.

District 3: *San Juan, Rio Arriba, Mc Kinley, and Sandoval Counties. District Office at Aztec.*

District 4: *All remaining counties. District Office at Santa Fe.* GEOTHERMAL REGULATION FOR ALL COUNTIES.

Program Description EXHIBIT II

OIL CONSERVATION DIVISION TABLE OF ORGANIZATION (60 staff)

SANTA FE ADMINISTRATIVE OFFICE/DISTRICT IV OFFICE
(32 staff)

Division Director

Secretary
General Counsel
Technical Services Bureau

Technical Support Chief

Secretary

Records Management and Support Section

2 Clerks

Underground Injection Control Section

Planner

Data Processing Section

Information Systems Manager

Programmer Analyst

Development Programmer

Records Manager

Computer Operator

Key Entry Supervisor

5 Key Entry Operators

Clerk

Oil and Gas Proration Unit

Supervisor

2 Clerks

Data Processing Trainee

Engineering and Geological Services Bureau

Chief Petroleum Engineer

Petroleum Engineer

Secretary

Geothermal and Geological Services Section

Supervisor *

Field Inspector*

Water Resource Specialist

Staff Specialist

Typist

*District IV staff

Program Description
EXHIBIT II page 2

HOBBS DISTRICT I OFFICE

13 staff members

Supervisor
Geologist
Chief Field Inspector
4 Field Inspectors
Staff Specialist
Clerk Specialist
4 Clerks

ARTESIA DISTRICT II OFFICE

8 staff members

Supervisor
Geologist
Chief Field Inspector
2 Field Inspectors
3 Clerks

AZTEC DISTRICT III OFFICE

7 staff members

Supervisor
Chief Field Inspector
Geological Field Inspector
4 Clerks

Program Description EXHIBIT III

SUBJECT: SALT WATER DISPOSAL WELL ORDER NO. SWD-227

THE APPLICATION OF J. M. HUBER CORPORATION FOR A SALT WATER DISPOSAL WELL.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701 (C), J. M. Huber Corporation made application to the New Mexico Oil Conservation Division on June 30, 1980, for permission to complete for salt water disposal its Griffin No. 1 located in Unit A of Section 4, Township 14 South, Range 36 East, NMPM, Lea County, New Mexico.

The Division Director finds:

(1) That application has been duly filed under the provisions of Rule 701 (C) of the Division Rules and Regulations;

(2) That satisfactory information has been provided that all offset operators and surface owners have been duly notified; and

(3) That the applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 (C) will be met.

(4) That no objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED:

That the applicant herein, J. M. Huber Corporation, is hereby authorized to complete its Griffin No. 1 located in Unit A of Section 4, Township 14 South, Range 36 East, NMPM, Lea County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the Cisco formation at approximately 10,870 feet to approximately 11,093 feet through 2 3/8 inch plastic lined tubing set in a packer located at approximately 10,177 feet.

IT IS FURTHER ORDERED:

That the operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

That the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

That injection pressure shall not exceed 2175 pounds per square inch as measured at the surface.

That the operator shall notify the supervisor of the Division's Hobbs District Office before injection is commenced through said well;

That the operator shall immediately notify the Supervisor of the Division Hobbs District Office of the failure of the tubing casing, or packer in said well or the leakage of water from or around said well and shall take such steps as may be timely or necessary to correct such failure or leakage.

PROVIDED FURTHER: That jurisdiction of this cause is

hereby retained by the Division for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after notice and hearing, the Division may terminate the authority hereby granted in the interest of conservation. That applicant shall submit monthly reports of the disposal operations in accordance with Rule 704 and 1120 of the Commission Rules and Regulations.

APPROVED at Santa Fe, New Mexico, on this 17th day of July, 1980.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Division Director

SEAL

Program Description
EXHIBIT III page 3

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

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

December 8, 1980

J. M. Huber Corporation
1900 Wilco Building
Midland, Texas 79701

Attention: Robert G. Setzler

Re: Stoltz State SWD Well
No. 1-M, Section 6,
T15S, R35E
SWD-230

Gentlemen:

In regards to your application to increase surface injection pressures in the subject well, we cannot allow you to inject at such pressures without a step-rate test. These pressures are far above those permitted in the area and would like to see further evidence to substantiate such an increase.

If you have further questions, please call upon my office.

Yours very truly,

JOE D. RAMEY
Director

JDR/MH/fd

NOTICE OF PUBLICATION

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

SANTA FE - NEW MEXICO

The State of New Mexico by its Oil Conservation Division hereby gives notice pursuant to law and the Rules and Regulations of said Division promulgated thereunder of the following public hearing to be held at 9 O'clock a.m. on September 23, 1981, at the Oil Conservation Division Conference Room, State Land Office Building, Santa Fe, New Mexico, before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner, both duly appointed for said hearing as provided by law.

STATE OF NEW MEXICO TO:

All named parties and persons
having any right, title, interest
or claim in the following cases
and notice to the public.

(NOTE: All land descriptions herein refer to the New Mexico Principal Meridian whether or not so stated.)

CASE 7353

Application of Texaco, Inc., for the amendment of Division Order No. R-5530, Lea County, New Mexico.

Applicant, in the above-styled cause, seeks the amendment of Order No. R-5530, which authorized its Central Vacuum Unit Area Pressure Maintenance Project, to increase the total project area allowable, or as an alternative, to reclassify the project as a waterflood project.

CASE 7354

Application of Corona Oil Company for a pilot steam-enhanced oil recovery project, Guadalupe County, New Mexico.

Applicant, in the above-styled cause, seeks authority to institute a pilot steam-enhanced oil recovery project in the Santa Rosa formation by using two existing wells and three additional wells to be drilled to complete a five spot pattern located in NE/4 NW/4 of Section 17, Township 11 North, Range 26 East.

Docket No. 9-81

Dockets Nos. 12-81 and 13-81 are tentatively set for April 8 and 22, 1981. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - MONDAY - MARCH 16, 1981

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases are continued from the February 18, 1981, Commission Hearing:

CASE 7155: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 35, Township 18 South, Range 29 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7057: (DE NOVO)

Application of Doyle Hartman for the extension of the vertical limits of the Langlie Mattix Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the vertical limits of the Jalmat Pool and the upward extension of the vertical limits of the Langlie Mattix Pool to the following depths underlying the following 40-acre tracts in Township 24 South, Range 37 East: SE/4 SE/4 of Section 30: 3364 feet; NE/4 SE/4 of Section 30: 3389 feet; and SE/4 SW/4 of Section 20: 3390 feet.

Upon application of ARCO Oil and Gas Company this case will be heard De Novo pursuant to the provisions of Rule 1220.

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Docket No. 10-81

DOCKET: COMMISSION HEARING - WEDNESDAY - MARCH 18, 1981

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 7198: Application of Amoco Production Company for temporary special rules, Union, Harding, and Quay Counties, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of temporary special area rules for the Bravo Dome carbon dioxide gas area, including provision for 640-acre spacing units, specified well locations, casing and cementing rules, and authority to inject carbon dioxide gas for test purposes only.

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Docket No. 11-81

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 25, 1981

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 7199: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider amendments to its SPECIAL RULES FOR APPLICATIONS FOR WELLHEAD PRICE CEILING CATEGORY DETERMINATIONS as promulgated by Division Order No. R-5878, as amended. The proposed amendments relate to individual well filing requirements for price category determinations for the following categories:

(1) High cost production enhancement gas under Section 107 of the NGPA;

(2) Continued stripper qualification resulting from temporary pressure buildups under Section 108 of the NGPA.

CASE 7200: Application of Estoril Producing Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Belco Fed. Well No. 1 located in Unit O of Section 15, Township 23 South, Range 34 East, to produce gas and gas liquids from the Strawn and Morrow formations, Antelope Ridge Field, thru parallel strings of tubing.

CASE 7201: Application of Layton Enterprises, Inc. for a unit agreement, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Todd Lower San Andres Unit Area, comprising 3256 acres, more or less, of Federal and State lands in Township 7 South, Ranges 35 and 36 East.

CASE 7202: Application of Layton Enterprises, Inc. for a waterflood project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the San Andres formation thru 4 injection wells located in Sections 30, 31 and 32 of its Todd Lower San Andres Unit in Township 7 South, Range 36 East.

CASE 7203: Application of Southern Union Exploration Co. of Texas for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Susco Bough "C" Unit Area, comprising 2560 acres, more or less, of State lands in Township 10 South, Range 33 East.

CASE 7204: Application of Bass Enterprises Production Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the interval from 3820 feet to 3915 feet in its Federal Legg Well No. 1 in Unit B of Section 27, Township 22 South, Range 30 East, Quahada Ridge Field.

CASE 7205: Application of Supron Energy Corporation for a non-standard gas proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Blanco Mesaverde gas proration unit comprising the NE/4 of Section 35, Township 31 North, Range 12 West, to be dedicated to a well to be drilled at a standard location thereon.

CASE 7183: (Continued from March 11, 1981, Examiner Hearing)

Application of Flag-Redfern Oil Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Osudo St. Com Well No. 2 at an unorthodox location 990 feet from the North and East lines of Section 18, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool.

CASE 7206: Application of Mobil Producing Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation through perforations from 12,212 feet to 12,218 feet and the open hole interval from 12,240 feet to 12,555 feet in its Santa Fe Pacific Well No. 3 in Unit M of Section 26, Township 9 South, Range 36 East, Crossroads Field.

CASE 7207: Application of Mobil Producing Inc. for lease commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the commingling of Vacuum Grayburg-San Andres production from the State J and State II leases in Section 22, Township 17 South, Range 34 East.

CASE 7208: Application of Gulf Oil Corporation for the amendment of pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of the White City-Pennsylvanian Gas Pool Rules to provide for 320-acre spacing rather than 640 acres with well locations specified as being at least 1650 feet from the end boundary and 660 feet from the side boundary of the proration unit.

CASE 7129: (Continued from February 25, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the N/2 of Section 28, Township 28 North, Range 8 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7169: (Continued from February 25, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the S/2 of Section 22, Township 28 North, Range 8 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

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. 6367
Order No. R-5897

APPLICATION OF PHILLIPS PETROLEUM COMPANY FOR A PRESSURE MAINTENANCE PROJECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on October 25, 1978, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of January, 1979, 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 by Division Order No. R-5871 dated November 27, 1978, statutory unitization was approved for the East Vacuum Grayburg-San Andres Unit Area, Lea County, New Mexico.

(3) That the applicant herein, Phillips Petroleum Company, seeks authority to institute a pressure maintenance project on the aforesaid East Vacuum Grayburg-San Andres Unit Area, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, by the injection of water into the San Andres formation through 59 wells, 31 of which would be drilled in 1979 during Phase II of the Project Development Program and 28 of which would be drilled in 1980 during Phase III of the Development Program.

(4) Applicant further seeks the designation of a project area for said pressure maintenance project and the promulgation of special rules and regulations governing said project including special allowable provisions.

(5) That for Phase I of the Project Development Program, applicant proposes to drill during 1979 ten producing wells at unorthodox locations as specified below:

TRACT NO.	WELL NO.	LOCATION	UNIT	SECTION
3229	005	1310' FSL and 1310' FWL	M	32
3202	001	1310' FSL and 1330' FEL	O	32
3202	003	1330' FNL and 1330' FEL	G	32
3328	002	1310' FSL and 1310' FWL	M	33
3366	001	1330' FNL and 1310' FWL	E	33
3333	004	1330' FNL and 1330' FEL	G	33
3456	005	1330' FNL and 1310' FWL	E	34
2801	002	1310' FSL and 1310' FWL	M	28
2801	004	1310' FSL and 1330' FEL	O	28
2721	001	1310' FSL and 1310' FWL	M	27

all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico.

(6) That during Phase II of the Development Program applicant proposes to drill 18 additional producing wells, all at unorthodox locations, and during Phase III of the Program applicant proposes to drill 26 additional producing wells, also at unorthodox locations.

(7) That all of the wells referred to in Findings Nos. (3), (5) and (6) above, being 59 injection wells at unorthodox locations and 54 producing wells at unorthodox locations, together with the currently completed producing wells in the Unit Area, will provide a thorough and efficient sweep of hydrocarbons throughout the unitized area, and will result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(8) That the above-described injection and producing wells, some of which would be at unorthodox locations along the unit boundaries in accordance with lease-line agreements with operators of offsetting lands, will not impair but will protect correlative rights.

(9) That the applicant's request for the designation of a Pressure Maintenance Project for the East Vacuum Grayburg-San Andres Unit Area, and for the promulgation of special rules and regulations governing said project, is in the interest of conservation and should be approved, subject to certain provisions.

(10) That the project area should consist of those proration units within the boundary of the East Vacuum Grayburg-San Andres Unit upon which is located an injection well and any directly or diagonally offsetting proration unit which contains a producing well.

(11) That the total project area allowable should be equal to the sum of the basic project area allowable plus the water injection credit allowable.

(12) That the basic project area allowable should be equal to 80 barrels of oil per day times the number of developed 40-acre proration units in the project area.

(13) That the water injection credit allowable should be based on the following formula:

$$\text{Water Injection Credit Allowable} = \left[\frac{\text{net water injected}}{\text{basic project area allowable voidage}}\right] \times \text{basic project area allowable}$$

and should be calculated in accordance with Exhibits "A" and "B" attached hereto and by reference made a part hereof.

(14) That the project area allowable should be produced from the wells within the project area in any proportion provided that any proration unit situated on the boundary of said East Vacuum Unit which proration unit is not directly or diagonally offset by a San Andres injection well outside the Unit or on the Unit boundary should not be permitted to produce in excess of 80 barrels of oil per day.

(15) That each of the newly drilled production or injection wells in the project should be equipped with surface casing set at approximately 350 feet and cemented to the surface and with "production" casing set at total depth, approximately 4900 feet.

(16) That the "production" casing on each of said newly drilled wells should be cemented to the surface, except that in any well in which an intermediate casing string has been run to below the top of the Yates formation and cemented to the surface, the "production" casing may be cemented back into the base of the intermediate casing string.

(17) That injection should be accomplished through tubing installed in a packer set within 100 feet of the uppermost perforation. The injection tubing should be corrosion protected by a non-reactive internal lining or coating. The casing-tubing

annulus in each injection well should be filled with an inert fluid and a surface pressure gauge or approved leak detection device should be attached to the annulus.

(18) The injection wells or system should be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the uppermost perforation. Provision should be made for the Division Director to administratively authorize a pressure limitation in excess of the above upon showing by the Unit Operator that such higher pressure will not result in fracturing of the confining strata.

(19) All wells within the project area should be equipped with risers or in some other acceptable manner as to facilitate the periodic testing of the bradenhead for pressure or fluid production.

(20) That provision should be made for the Division Director to authorize placing wells on injection and the drilling of injection wells and additional producing wells at orthodox and unorthodox locations anywhere within the Unit Area without notice and hearing, provided that no unorthodox location is closer than ten feet to a quarter-quarter section line nor closer than 330 feet to the unit boundary, unless such well located closer than 330 feet to the unit boundary is covered by a lease-line agreement with the operator of the lands offsetting such well or the owner of the offsetting lands has waived objection to such location in writing.

(21) That there are a number of wells within the East Vacuum Grayburg-San Andres Unit Area and on lands offsetting the unit area which have previously been plugged and abandoned in a manner which may permit waters injected into the San Andres formation to escape into other formations, including the Salado formation and the shallow fresh water-bearing formations unless remedial action is taken on said wells prior to injection in their near vicinity.

(22) That there are a number of wells within the East Vacuum Grayburg-San Andres Unit Area and on lands offsetting the unit area which penetrate the Vacuum Grayburg-San Andres Pool and are completed in deeper pay zones, but which are cased and cemented in such a manner as may permit the escape of waters injected into the San Andres formation into other formations as described above.

(23) That those wells referred to in Findings Nos. (21) and (22) above which are inadequately plugged and abandoned or are inadequately cased and cemented, or are suspected of being so, include, but are not necessarily limited to, the wells listed in Exhibit "C" attached hereto and by reference made a part hereof.

(24) That no injection at greater than hydrostatic pressure should be made into the Grayburg or San Andres formation in any well in the East Vacuum Grayburg-San Andres Unit Area within one-half mile of any well listed on Exhibit "C" attached hereto until remedial action has been taken on such well to ensure that it will not serve as an avenue of escape for injected waters or until tests have been conducted on such well or other evidence concerning such well has been presented, all establishing to the satisfaction of the Supervisor of the Hobbs District Office of the Division that remedial work on such well is unnecessary.

IT IS THEREFORE ORDERED:

(1) That the applicant, Phillips Petroleum Company, is hereby authorized to institute and operate a pressure maintenance project in the East Vacuum Grayburg-San Andres Unit Area, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, by the injection of water into the San Andres formation through certain wells which will be administratively approved for water injection at some later date by the Division Director.

(2) That said project shall be designated the East Vacuum Unit Pressure Maintenance Project.

(3) That the following unorthodox locations are hereby approved for new producing wells which are to be drilled by the unit operator during Phase I of the Project Development Program:

TRACT NO.	WELL NO.	LOCATION	UNIT	SECTION
3229	005	1310' FSL and 1310' FWL	M	32
3202	001	1310' FSL and 1330' FEL	O	32
3202	003	1330' FNL and 1330' FEL	G	32
3328	002	1310' FSL and 1310' FWL	M	33
3366	001	1330' FNL and 1310' FWL	E	33
3333	004	1330' FNL and 1330' FEL	G	33
3456	005	1330' FNL and 1310' FWL	E	34
2801	002	1310' FSL and 1310' FWL	M	28
2801	004	1310' FSL and 1330' FEL	O	28
2721	001	1310' FSL and 1310' FWL	M	27

all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico.

(4) That Special Rules and Regulations governing the East Vacuum Unit Pressure Maintenance Project are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
EAST VACUUM UNIT PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the East Vacuum Unit Pressure Maintenance Project shall consist of those proration units within the boundaries of the East Vacuum Grayburg-San Andres Unit upon which is located an injection well and any directly or diagonally offsetting proration unit which contains a producing well.

RULE 2. The project area shall receive a project area allowable, and said project area allowable shall be the sum of the basic project area allowable plus the water injection credit allowable.

RULE 3. The basic project area allowable shall be equal to 80 barrels of oil per day times the number of developed 40-acre proration units in the project area.

RULE 4. The water injection credit allowable shall be contingent upon full reservoir voidage replacement of all produced fluids and shall be based upon the following formula:

$$\text{Water Injection Credit Allowable} = \left[\frac{\text{Net Water Injected}}{\text{Basic Project Area Allowable Reservoir Voidage}}\right]_{-1} \times \text{Basic Project Area Allowable}$$

The water injection credit allowable shall be calculated in accordance with the procedures and parameters depicted on Exhibits "A" and "B" to Order No. R-5897.

In no event shall the water injection credit allowable be less than zero, i.e., negative numbers derived from application of the above formula shall be ignored.

RULE 5. The weighted average project area reservoir pressure shall be determined prior to commencement of injection of water into the reservoir and at least annually thereafter. The weighted average project area pressure shall be determined from the pressures in at least ten representative wells selected by the unit operator and the Supervisor of the Hobbs District Office of the Division.

RULE 6. The project area allowable may be produced from the wells within the project area in any proportion provided, however, that any proration unit situated on the boundary of the East Vacuum Unit which proration unit is not directly or diagonally offset by a San Andres injection well outside said East Vacuum Unit or on the East Vacuum Unit boundary shall not be permitted to produce in excess of 80 barrels of oil per day.

RULE 7. Those wells within the East Vacuum Unit Area that are not included within the project area as defined above shall be prorated in accordance with the Rules and Regulations of the Division.

RULE 8. The Division Director shall have authority to approve, without notice and hearing, the drilling of wells at unorthodox locations anywhere within the unit boundary, provided however, no unorthodox location shall be closer than ten feet to any quarter-quarter section line, and provided further, that no such unorthodox location shall be closer than 330 feet to the outer boundary of the unit area, unless such well is covered by a lease-line agreement with the operator of the lands offsetting such well, and a copy of the lease-line agreement accompanies the application for such unorthodox location, or unless such offset operator has waived objection to the proposed unorthodox location in writing, and his waiver accompanies the application.

RULE 9. No well shall be placed on water injection in the East Vacuum Unit Area unless the Division Director has approved such well for injection. Applications for injection approval shall be filed in accordance with Rule 701 of the Division Rules and Regulations.

RULE 10. Each newly drilled injection or producing well shall be equipped with a minimum of 350 feet of surface casing and "production" casing run to total depth (approximately 4900 feet). All casing strings shall be cemented to the surface except that in any well in which an intermediate casing string has been run to below the top of the Yates formation and cemented to the surface, the "production" string may be cemented back into the base of the intermediate casing.

RULE 11. Injection shall be accomplished through tubing installed in a packer set within 100 feet of the uppermost perforation. The injection tubing shall be corrosion protected by a non-reactive internal lining or coating. The casing-tubing annulus in each injection well shall be filled with an inert fluid and a surface pressure gauge or approved leak detection device shall be attached to the annulus.

RULE 12. The injection wells or system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the uppermost perforation. The Division Director may administratively authorize a pressure limitation in excess of the above upon showing by the unit operator that such higher pressure will not result in fracturing of the confining strata.

RULE 13. All wells within the project area shall be equipped with risers or in some other acceptable manner as to facilitate the periodic testing of the bradenhead for pressure or fluid production.

RULE 14. The unit operator shall immediately notify the Supervisor of the Hobbs District Office of the Division of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, the leakage of water or oil from or around any plugged and abandoned well within the project area, or any other evidence of fluid migration from the injection zone, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

RULE 15. Each month the project operator shall submit to the Division a Pressure Maintenance Project Operator's Report, on a form prescribed by the Division, outlining thereon the data required and requesting allowables for each of the several wells in the Project as well as the total project area allowable.

RULE 16. The Division shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for the wells in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and, except as provided under Rule 6 above, may be produced from the wells in the Project in any proportion.

IT IS FURTHER ORDERED:

(1) That no injection at greater than hydrostatic pressure shall be made into the Grayburg or San Andres formation in any well in the East Vacuum Grayburg-San Andres Unit Area within one-half mile of any well listed on Exhibit "C" attached hereto until remedial action has been taken on such well to ensure that it will not serve as an avenue of escape for injected waters, or until tests have been conducted on such well or other evidence concerning such well has been presented

establishing to the satisfaction of the Supervisor of the Hobbs District Office of the Division that remedial work on such well is unnecessary.

(2) That Order No. R-3150 which authorized a pilot waterflood project in this area is hereby rescinded.

(3) 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

S E A L

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VACUUM GRAYBURG-SAN ANDRES POOL, LEA COUNTY, NEW MEXICO

WATER INJECTION CREDIT ALLOWABLE CALCULATION DATA

ATTACHMENT TO _____, 19__, REPORT

$$\text{Water Injection Credit Allowable} = \left[\frac{W_i - W_p}{\text{BPAA} \left[B_o + \frac{(R_p - R_s)}{(1{,}000)} B_g \right]} - 1 \right] \text{BPAA}$$

W_i = _____ = Average daily water injection, barrels per day, project area only.

W_p = _____ = Average daily water produced, barrels per day, project area only.

BPAA = _____ = Basic project area allowable, 80 bopd x _____ (number of developed 40-acre tracts in project area).

_____ = Weighted average project area reservoir pressure, psig, from _____, 19__, survey data.

B_o = _____ = Oil formation volume factor, reservoir barrels per stock tank barrel (Exhibit B).

R_p = _____ = Producing gas-oil ratio, cubic feet per barrel, project area only.

R_s = _____ = Solution gas-oil ratio, cubic feet per barrel (Exhibit B).

B_g = _____ = Gas formation volume factor, reservoir barrels per Mcf (Exhibit B).

Water injection credit allowable for _____, 19__, = _____ barrels of oil per day.

EXHIBIT "A"
ORDER NO. R-5897

OIL (B_o) AND GAS (B_g) FORMATION
VOLUME FACTORS AND GAS
SOLUBILITY VS RESERVOIR PRESSURE.
GRAYBURG-SAN ANDRES RESERVOIR
VACUUM FIELD
LEA COUNTY, NEW MEXICO
Initial Press. 1613
Initial FVF = 1.238
Initial Sol. GOR = 465
FVF @ BPP = 1.296
Solubility
B_o — FVF
B_g — FVF
B_o (RB/STB)
B_g (RB/MCF)
RESERVOIR PRESSURE, PSIG

EXHIBIT "C"

WELLS SUSPECTED OF BEING INADEQUATELY PLUGGED AND ABANDONED OR INADEQUATELY CASED AND CEMENTED

OPERATOR	LEASE	WELL NO.	UNIT	SEC-TWP-RGE
Mobil	State P	7	P	22-17S-35E
Penrose	State	2	N	24-17S-35E
Phillips	Santa Fe	15	A	28-17S-35E
Phillips	Santa Fe	16	L	5-18S-35E
Phillips	Santa Fe	37	F	28-17S-35E
Phillips	Santa Fe	47	C	35-17S-35E
Shell	State U	1	C	3-18S-35E
Shell	State VAA	6	K	5-18S-35E
Shell	State C	1	I	24-17S-34E
Shell	State I	1	E	29-17S-35E
Shell	State S	1	I	21-17S-35E
Stoltz etal.	Abo	1	O	24-17S-35E
Zapata	Shell State	1	O	23-17S-35E
Barnett	State B	1	D	19-17S-35E
Jones	State	2	A	35-17S-35E
Penrose	Scarborough	1	C	25-17S-35E
Amoco	State CV	1	F	25-17S-35E
Amoco	State CV	4	L	25-17S-35E
Amoco	State CV	5	F	25-17S-35E
Chevron	State 6-34	4	J	34-17S-35E
Cities Service	State BJ	2	K	35-17S-35E
Crusader	State	1	E	20-17S-35E
Crusader	State	2	C	19-17S-35E
Crusader	State	3	N	18-17S-35E
Exxon	State J	1	M	19-17S-35E
Exxon	State J	2	L	19-17S-35E
Exxon	State AC	1	H	22-17S-35E
Great Western	State E	2	L	25-17S-35E
Marathon	Warn State	1	M	23-17S-35E
Amoco	State CV	2	E	25-17S-35E
Amoco	State CV	2-Y	E	25-17S-35E
Millard Deck	Carthay State	2	G	20-17S-35E
Exxon	State K	17	P	32-17S-35E
Marathon	Staplin State	1	L	20-17S-35E
Marathon	Warn State	1	B	4-18S-35E
Mobil	N.Vac.AboUnit	207	H	24-17S-34E
Pennzoil	Phillips State	1	A	28-17S-35E
Pennzoil	Phillips State	2	F	28-17S-35E
Phillips	Vac.AboUnit	6-68	H	34-17S-35E
Phillips	Vac.Abo Unit	1-9	J	27-17S-35E
Phillips	Vac.Abo Unit	7-3	P	27-17S-35E
Phillips	Vac.Abo Unit	7-4	I	27-17S-35E
Phillips	Vac.Abo Unit	9-5	H	33-17S-35E
Phillips	Vac.Abo Unit	13-2	E	4-18S-35E

OPERATOR	LEASE	WELL NO.	UNIT	SEC-TWP-RGE
Phillips	Vac.Abo Unit	14-3	N	5-18S-35E
Phillips	Vac.Abo Unit	14-4	L	5-18S-35E
Shell	State V	6	P	27-17S-35E
Shell	State K	1	O	19-17S-35E

EXHIBIT "C"
ORDER NO. R-5897

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. 7226
Order No. R-6685

APPLICATION OF ENSERCH EXPLORATION,
INC. FOR SALT WATER DISPOSAL,
ROOSEVELT COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on April 22, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of May, 1981, 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, Enserch Exploration, Inc., is the owner and operator of the Rader Well No. 2, located in Unit E of Section 32, Township 5 South, Range 33 East, NMPM, South Peterson Field, Roosevelt County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Montoya formation, with injection into the perforated interval from approximately 7902 feet to 7930 feet.

(4) That said Montoya formation immediately underlies the Fusselman formation, and Phillips Petroleum Company, which operates a well producing from the Fusselman formation at a location some 1731 feet Northwest of said Rader Well No. 2, appeared at the hearing and objected to applicant's proposed disposal of water into said Fusselman formation.

(5) That the basis for the Phillips objection is the alleged possibility of disposal water breaking out of the Montoya formation and migrating into the Fusselman producing zone, thereby posing a threat to the oil production from the aforesaid Phillips producing well, its Lambirth "A" Well No. 4.

(6) That the Enserch interpretation of the logs of said Lambirth "A" Well No. 4 below the productive interval of 7814 feet to 7826 feet indicates the presence of two zones of only slight permeability, the first being at a depth from 7840 feet to 7850 feet and the second being at a depth of 7924 feet to 7934 feet.

(7) That while Enserch alleges that these "tight" zones would provide vertical separation between the Phillips producing interval and the Enserch disposal zone, Phillips contends that there is no physical separation between the base of its producing interval in the Fusselman formation and the top of the Enserch disposal interval in the Montoya formation, inasmuch as there are vertical fractures in the Fusselman through which water injected into the upper Montoya could migrate to the upper Fusselman and endanger its producing well, the Lambirth "A" Well No. 4.

(8) That there is evidence of vertical fracturing in the Fusselman formation in this area.

(9) That while the extent of said fracturing is not known, the vertical fractures may well extend through the "tight" zones Enserch relies upon to keep the disposal zone and the productive zone separated.

(10) That should said fractures extend through the "tight" zones, said zone's efficacy as an efficient barrier would be diminished and the Phillips production could be subject to water invasion.

(11) That such water invasion could result in premature abandonment by the Phillips production, thereby causing loss of otherwise recoverable hydrocarbons and waste of oil and gas, as well as impairment of correlative rights.

(12) That there is no means presently available whereby the migration of injected water could be monitored and a determination made of imminent water invasion in the Phillips well prior to its actual occurrence, at which time it could be too late to prevent loss of hydrocarbons.

(13) That Enserch has not investigated all other possible means of water disposal in the subject area.

(14) That the application should be denied.

IT IS THEREFORE ORDERED:

(1) That the application of Enserch Exploration, Inc., for salt water disposal into the Montoya formation in the perforated interval from 7902 feet to 7930 feet in its Rader Well No. 2, located in Unit E of Section 32, Township 5 South, Range 33 East, NMPM, South Peterson Field, Roosevelt County, New Mexico, is hereby denied.

(2) 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

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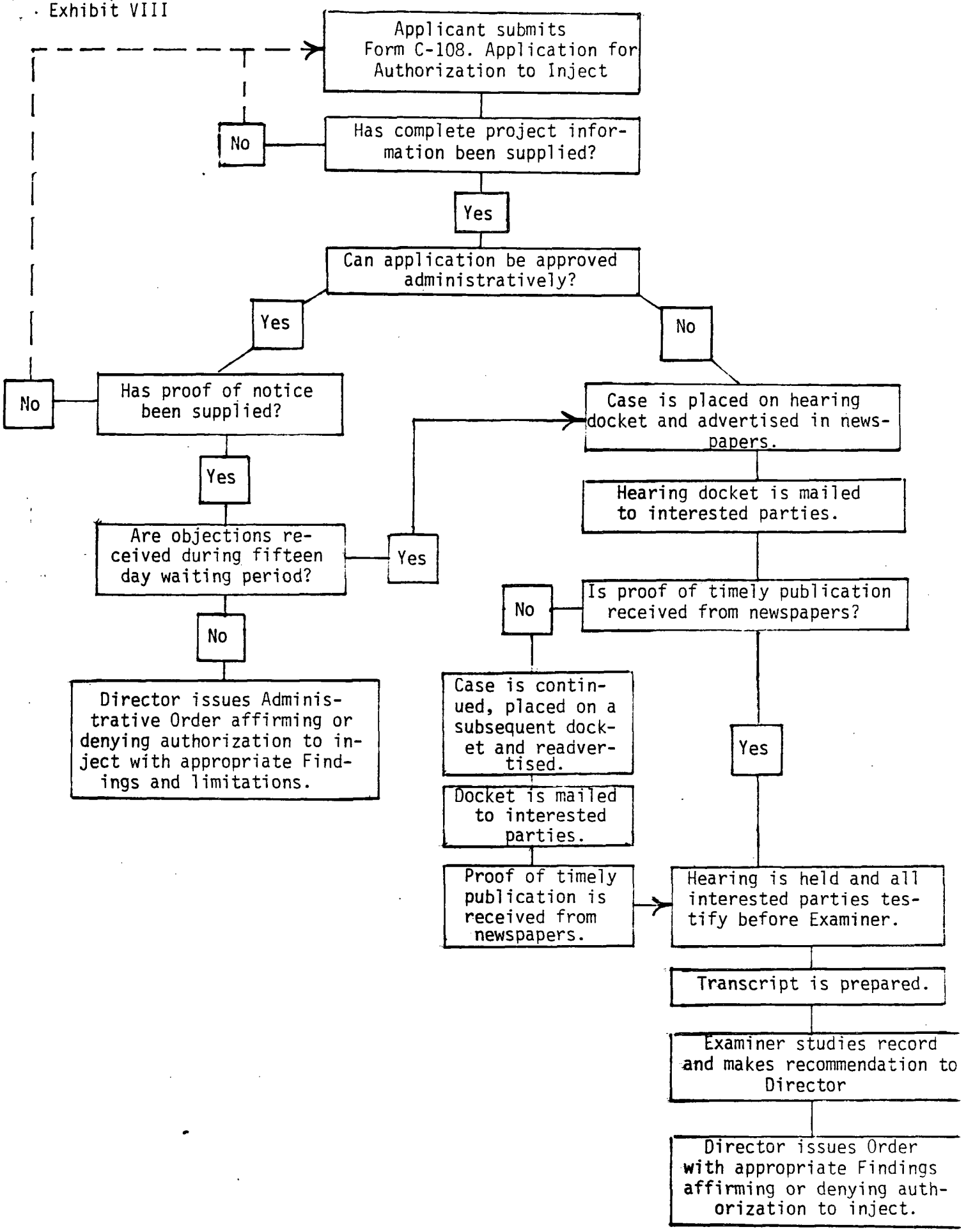
OCD PERMIT APPROVAL PROCESS FOR INJECTION WELLS



PROGRAM DESCRIPTION EXHIBIT 9

Effectiveness of Existing State Program by

R. L. Stamets, OCD Technical Support Chief

During the process of EPA review of the Division's submittal of New Mexico's Draft UIC Primacy Application, questions were raised as to the efficiency of the existing program relative to pre 1975 projects without pressure limits in the authorizing permit.

It is the Division's position that our inspection-corrective action program, our statutes, and our rules give us the ability to locate any problems related to injection operations and remedy the same. Further, we believe that well construction elements protect USDWs even in the case of well failure or fluid out-of-zone while detection and remedial operations take place. A more detailed discussion of each of these items follows:

INSPECTION - CORRECTIVE ACTION

The requirements of Section 1425 guidance call for mechanical integrity testing at least once every five years with 25% of such tests to be witnessed. New Mexico's program far exceeds this standard in that at this time essentially every well is tested every year with every test being witnessed. This is a program begun in District I (Hobbs) in 1974, extended to District II (Artesia) in 1979, and District III (Aztec) in 1981.

The inspection program detects both mechanical failures and water out-of-zone, if any, permitting the Division to require corrective action. At my request, District I prepared a report entitled "District I Approach To The Confinement of Water in Waterfloods And The Protection of Fresh Water Supplies". This report chronicles the history of the inspection - corrective action program in that district, discusses actual corrective action taken, illustrates that casing and cementing programs protect fresh waters (USDWs) even when there is a well failure as close as 150 feet, shows actual casing and cementing programs (well bore sketches) and shows a district map with waterflood and problem areas. While the report speaks for itself, I believe that reader can conclude that the Division's program finds bad wells, corrects bad wells, and protects USDWs.

Discussions were held with District II personnel relative to their more recent inspection - corrective action program and its results. The following summarizes the important issues coming from these discussions:

1. The program is in its third year with 100% of the injection wells being tested and witnessed for the last two years.

2. As a result of the surveys, operators have been ordered to take corrective action on 107 wells.

Illustrations of corrective action include:

(a) Artesia Pool project in the SE quadrant of T17S-R28E: the operator had the choice of replugging three old wells or depressurizing part of the project. After back flowing over 300,000 barrels from 5 wells, problem wells were reduced from 20 to 1. Backflowing continues.

(b) Shugart Pool area T18S-R31E:
One operator was given the option of recementing a shallow zone in a number of wells or ceasing injection therein. Discontinuance of shallow injection has reduced problem wells from 16 to 2.

One operator disposing of saltwater at 2500 feet with 2500 psi was required to cease injection and plug his well. Problem wells have declined from 13 to none.

(c) Loco Hills Pool - two projects in the Northern part of T18S-R29E:

Two operators were given the option of repairing or plugging numerous wells and reducing pressures or shutting down injection. After reducing injection to produced water volumes only, within the problem area, and discontinuing injection within one-half mile of suspect poorly plugged wells, problem wells were reduced from 42 to two.

3. The attached "District II Project" map and "Typical Well Completion" crossection shows that most projects are located outside the area of major aquifers in the district. The crossection also shows typical completion techniques that would protect any USDWs or isolate aquifers above the salt section in the eastern part of the district from out-of-zone waters.

The District III project has as yet revealed no more than an occasional case of equipment failure and nothing which could be considered a threat to USDWs. If such should turn up, appropriate action will be taken.

STATUTES AND RULES

These items are covered throughout the Program Description and clearly show that the Division has the authority to require corrective action even to the point of shutting a well or project down.

WELL CONSTRUCTION

In Districts I and II all known USDWs lie above the salt section in the area East of the Pecos River. Standard casing practice is to set casing to the top of the salt and cement such casing to the surface. Intermediate and/or production casing is set and cemented at some greater depth. Water out-of-zone, if any, is contained between the surface casing and the production casing where its presence may be detected triggering corrective action. The salt section itself serves to protect the overlying USDWs where, because of the nature of the salt, out-of-zone fluids move laterally at the base thereof rather than vertically. This further acts to reduce pressures opposite any shallow USDWs. West of the Pecos, surface and/or intermediate casing is set through all USDWs and cemented to the surface. No problems have been found at any project West of the Pecos. There is no injection into the Capitan Reef. Some minor back reef oil pools have been waterflooded. If a USDW was present at such a location it would qualify for exempt aquifer status.

CONCLUSION

We believe that New Mexico's program more than meets the basic requirements relative to existing wells and projects, including wells and projects permitted prior to 1975, as contained in the Administrator's regulations. We further believe that New Mexico leads the nation in the inspection-corrective action process and that we should be allowed to continue therewith in order to help EPA understand and act upon the results of inspection-corrective action programs that will soon begin nationwide.

DISTRICT I APPROACH TO THE CONFINEMENT OF WATER IN WATERFLOODS AND THE PROTECTION OF FRESH WATER SOURCES

September 1981

Program Description
Exhibit 9

DISTRICT I APPROACH TO THE CONFINEMENT OF WATER IN WATERFLOODS AND THE PROTECTION OF FRESH WATER SOURCES

The confinement of water to the injection zone can be accomplished by the following methods:

(1) Re-enter improperly plugged wells and plug wells in such a manner that will isolate injection zone.

(2) Prohibit injection within a one-half mile radius of a poorly plugged well.

(3) Limit volume of injected water to produced water or a voidage figure.

(4) Log wells to determine if water is entering injection zone.

(5) Flow-back of injection wells in problem areas to reduce pressure.

(6) Cement casing strings to prevent any migration of injected water up to the fresh water aquifer.

To date all of the above methods have been used in Southeast New Mexico to control injection problems. In most instances a combination of the above has been used with the decision of what method to be used reached at meetings with operators of wells in the area. The steps taken to date have been working as we have protected the fresh water in this area.

One example of fresh water protection is in Section 6, Township 18 South, Range 35 East, Lea County, NM, (Vacuum Area) where a fresh water well is located within 150 feet of three wells(2 producing oil wells and 1 water injection well) which had waterflows to the surface. You will note on the wellbore diagrams of the three wells concerned that they are cemented off from beneath the fresh water zone.(see Exhibit 1) A recent test of the fresh water well shows no contamination.

We feel the bradenhead test is one of the best methods available for use in locating the problem on a particular well. In 1974 District I began a limited bradenhead test program, and as you will see from the chart below the program has grown considerably over a period of a few years.

-2-
District I Approach to the Confinement of Water in
Waterfloods and the Protection of Fresh Water Sources

In the beginning bradenhead surveys were set up for a small area around a water flow in order to attempt to determine the extent of the problem, but as time passed, a need for a more extensive surveilance of the injection wells became apparent. In 1980 our District began a policy of testing all injection and salt water disposal wells each year. In addition to this, we also test producing wells within certain flood areas where the test of injection wells indicate this should be done in order to maintain the integrity of the testing program. Also, we have found the testing of producing wells in flood areas to be very important since a major portion of the problems occur on producing wells within a flood area.

PERCENTAGE OF INCREASE IN DISTRICT I BRADENHEAD TEST PROGRAM

Year	Prod Wells Dist. I	Prod.Wells Tested	Percentage	Inj.Wells Dist. I	Inj.Wells Tested	Percentage
1974	11,717	747	6.3%	1,632	142	8.7%
1975	11,364	775	6.8%	1,695	189	11.1%
1976	11,283	863	6.6%	1,761	174	9.9%
1977	11,436	1,177	10.3%	1,784	239	13.4%
1978	11,548	1,370	11.9%	1,900	420	22.1%
1979	11,915	1,352	11.3%	1,936	625	32.3%
1980	11,919	2,130	17.9%	2,179	2,179	100.0%
1981	11,825	2,620	22.2%	2,273	2,273	100.0%

The map of District I (Exhibit 2) shows the waterflood areas and two areas where we have had waterflow problems are outlined. The following is a brief summary of what this office has done to protect the fresh water in these areas.

EUNICE AREA -- It became apparent in 1974 that water being injected into the Queen and San Andres formations was showing up above the salt section in an area located just south of Eunice, NM, in Townships 21 and 22 South, Range 37 East. At that time the Division and an Industry Committee began a study of the problem and it was decided to attempt to confine the problem in the

-3-
District I Approach to the Confinement of Water in
Waterfloods and the Protection of Fresh Water Sources

following manner:

(1) Reduce total injected water to 100--150% of reservoir voidage

(2) Reduce injection pressures of major floods in the area

(3) Recement certain wells in the area with sufficient cement to ensure the isolation of the Queen and San Andres formations

(4) Replug certain wells in the area which could possibly allow migration of injected water

(5) Run temperature surveys, bond logs, and radio-active tracer surveys to determine if remedial work is required.

(6) Repair surface waterflows by cementing

(7) Conduct bradenhead tests on all wells in the area to monitor the problem

At the outset of the program in the Eunice Area 39 wells were recemented to ensure the isolation of the injection zone, 5 wells were replugged in a manner adequate to prevent the migration of injected fluids, and 14 wells with surface waterflows recemented in a manner adequate to protect the fresh water.

A bradenhead survey was witnessed on all wells in the area quarterly for three years and has been witnessed yearly since that time. On the most recent survey of this area 597 wells were tested and only 5 surface waterflows were found, or less than 1% of wells tested.

Letters requesting repair of these problems have been written and a Field Inspector will witness the workovers to ensure they meet our specifications.

VACUUM AREA -- The possibility of a waterflow problem was first noted in this area in 1975, and at that time the Oil Conservation Division did a study of two waterfloods in the area, the Texaco Inc. Vacuum GB-SA Unit and the West Vacuum Unit. Bradenhead tests were run on the 75 unit wells and approximately 10% of the wells exhibited waterflows from the surface casing. In 1976 the

-4-
District I Approach to the Confinement of Water in
Waterfloods and the Protection of Fresh Water Sources

area of study was extended to include 199 more wells and of these 13% had waterflows from the surface.

After an extensive study by the Division and an Industry Committee, composed of operators of the area floods, we chose to attempt to confine the waterflow problem in this area by the following methods:

(1) Conduct bradenhead test on remaining wells in the area Evaluate test to determine the size of the problem

(2) Confirm cement tops on wells in the area in order to determine if the injection zone (Grayburg-San Andres) was isolated

(3) Run bond logs on wells where cement tops were not available to determine if injection zone was isolated by cement

(4) Run radio-active tracer surveys and temperature surveys to determine if injected water was going into flood zone

(5) Require the recementing of wells that did not show adequate cement for the protection of fresh water

(6) Require the replugging of wells suspected of being inadequately plugged

(7) Require the repair of waterflows by cementing

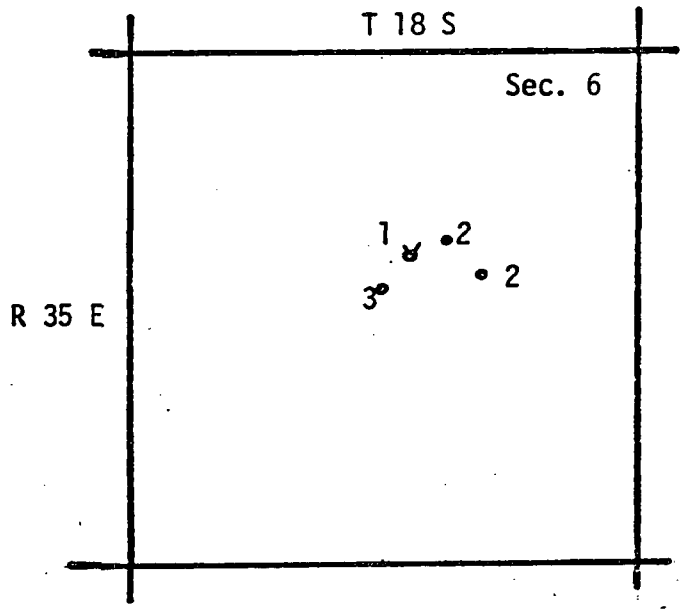
There are 1314 wells in this area and during 1979 and 1980 the operators of the floods and the producing wells in this area repaired 137 wells or 10% and replugged 30 wells to prevent the migration of fluids. The area was retested in May and June of this year and at that time only 30 waterflows were found, or 2.3% of wells in area.

Letters requesting the repair of the above problems have been written and these workover jobs are witnessed by an OCD Field Inspector to ensure that the work is done according to our specifications. This area will be tested again next year to see if the area is stable.

Exhibit 1
Page 1

To Program
Description
Exhibit 9

SECTION PLAT
SHOWING LOCATION OF FRESH WATER WELL
AND PRODUCING AND INJECTION WELLS



1 Fresh Water well

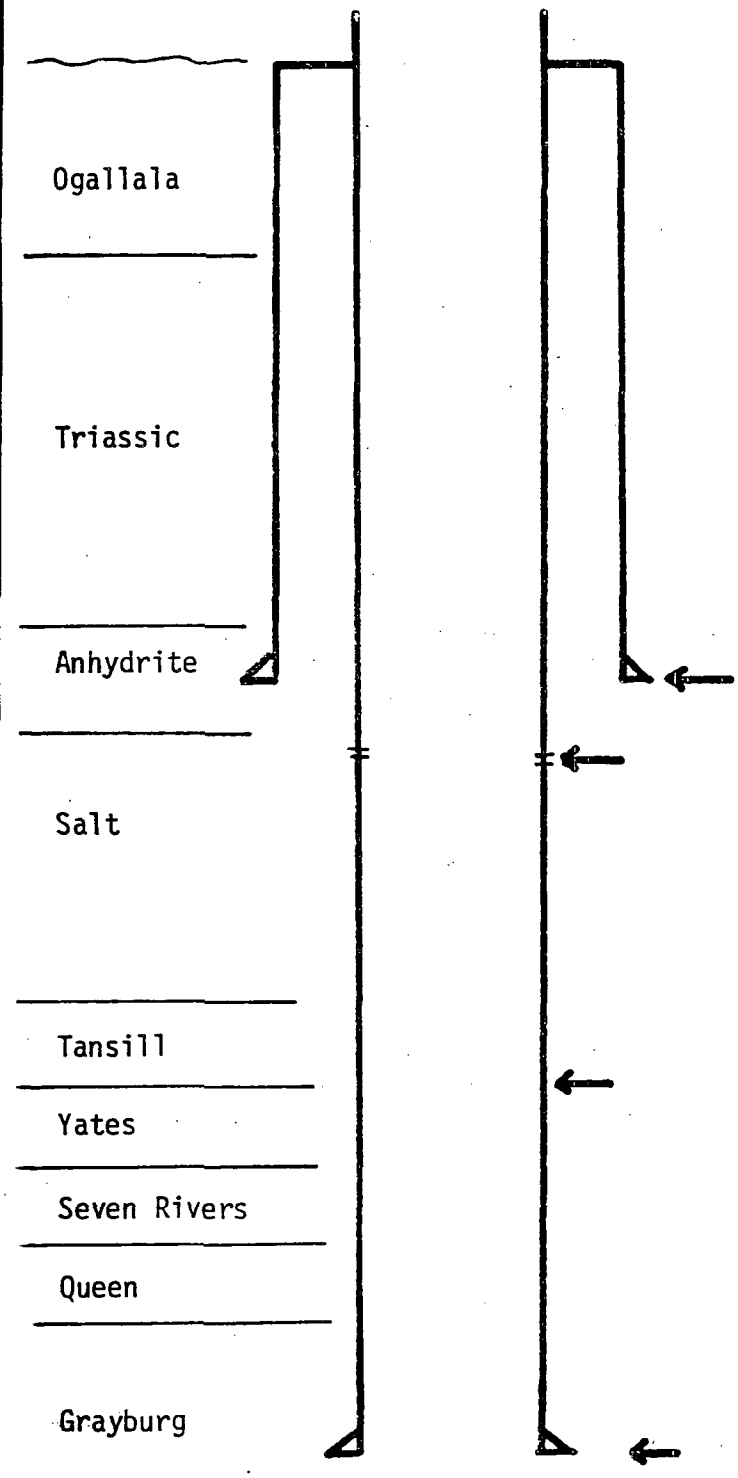
2 Producing well

3 Injection well

Exhibit 1
Page 2

To Program
Description
Exhibit 9

TEXACO INC.
Central Vacuum Unit #103-G
(1980/N & 1980/E)
Sec. 6, T18S, R35E
Producing Oil Well
Completed 10-30-39



Ran 200' 1" pipe & circ csg w/100 sx

10" Hole)

8 5/8" 28# LW Csg.Set @ 1503' w/200 sx.

Perf. csg. @ 1569' & cmt w/600 sx Cmt w/2% CaCl2
Top cmt @ 400' by temp. survey

Sqz. csg. leak @ 2208' w/200 sx Class C cmt.

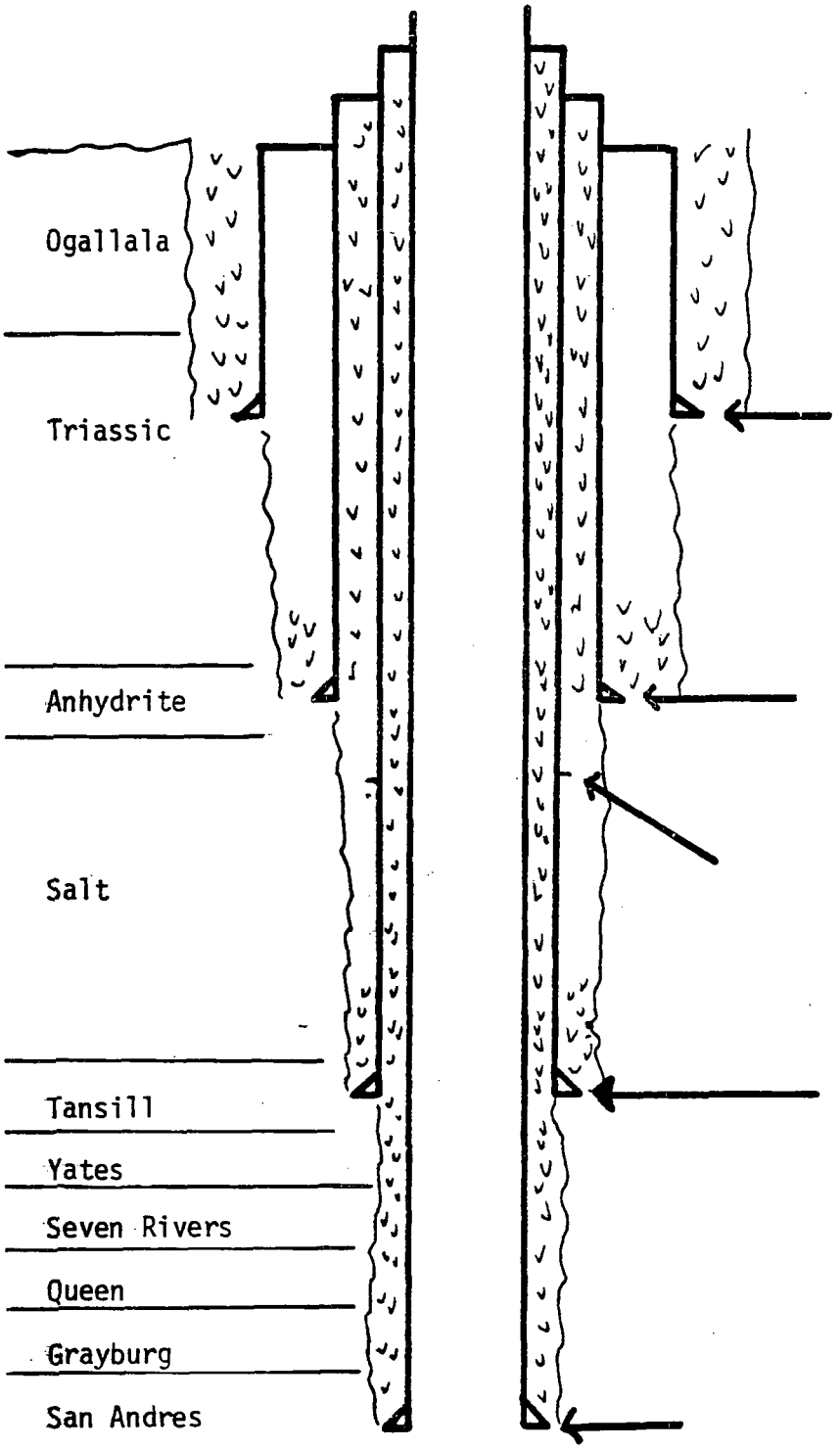
5½" 17# csg. set @ 4058' w/200 sx

Exhibit 1
Page 3

To Program
Description

Exhibit 9

TEXACO INC.
Central Vacuum Unit #107-G
(2450/N & 2632/E)
Sec. 6, T18S, R35E
(completed 6-28-79)
Water Injection Well



17½" hole

13 3/8" 48# K-55 csg set @ 342' w/400 sx Class C + 2% CaCl2
Cmt Circulated

12¼" hole

9 5/8" 32# K-55 csg set @ 1498'

DV Tool @ 1530' cmt 2nd stg w/350 sx C
Cement Circulated

8 3/4" hole

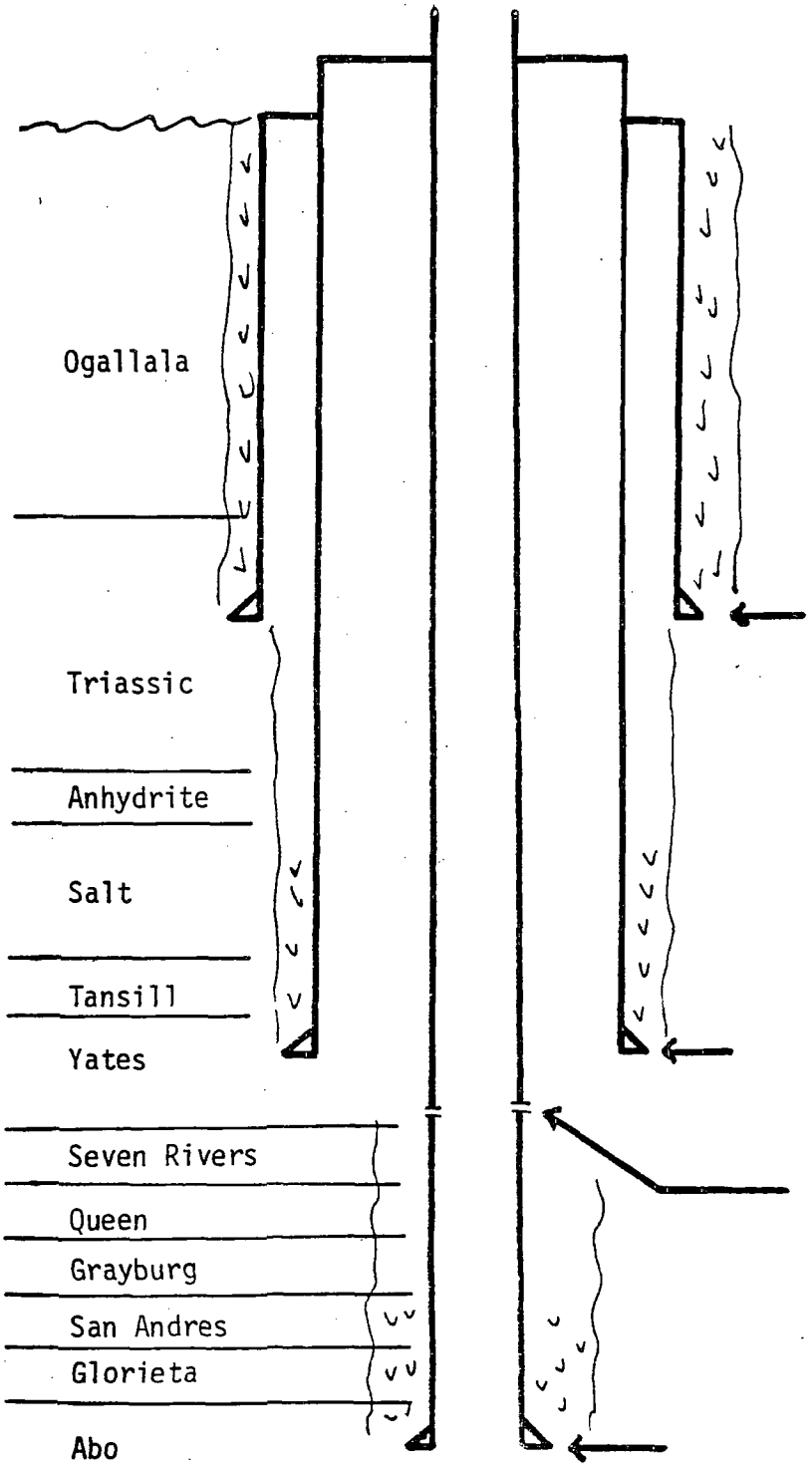
7" 23# K-55 Csg set @ 2720'
cemented w/300 sx Class C cement

6 1/8" hole

4½" 10.5# K-55 csg set @ 4800' & cmt w/600 sx
50/50 pos-mix + 2% gel + 6# NaCl + 3%H Lx
249/sx + 200 sx Class C + 5# Nacl/sx
Cement Circulated

Exhibit 1
Page 4
To Program Description Exhibit 9

TEXACO INC.
New Mexico R State NCT-1 #7-G
2310/N & 1650/E
Sec. 6, T18S, R35E
Completed 7-21-63
Vacuum Abo Reef Producing Well



15" hole

11 3/4" 42# H-40 csg set @ 360'
cement w/400 sx
Cement circulated

10 5/8" hole

8 5/8" 24# J-55 csg set @ 3032'
Cmt w/1500 sx Di Mix + 8% gel + 150 sx Neat

Perf 2 7/8" csg @ 3050' & sqz w/50 sx cmt.

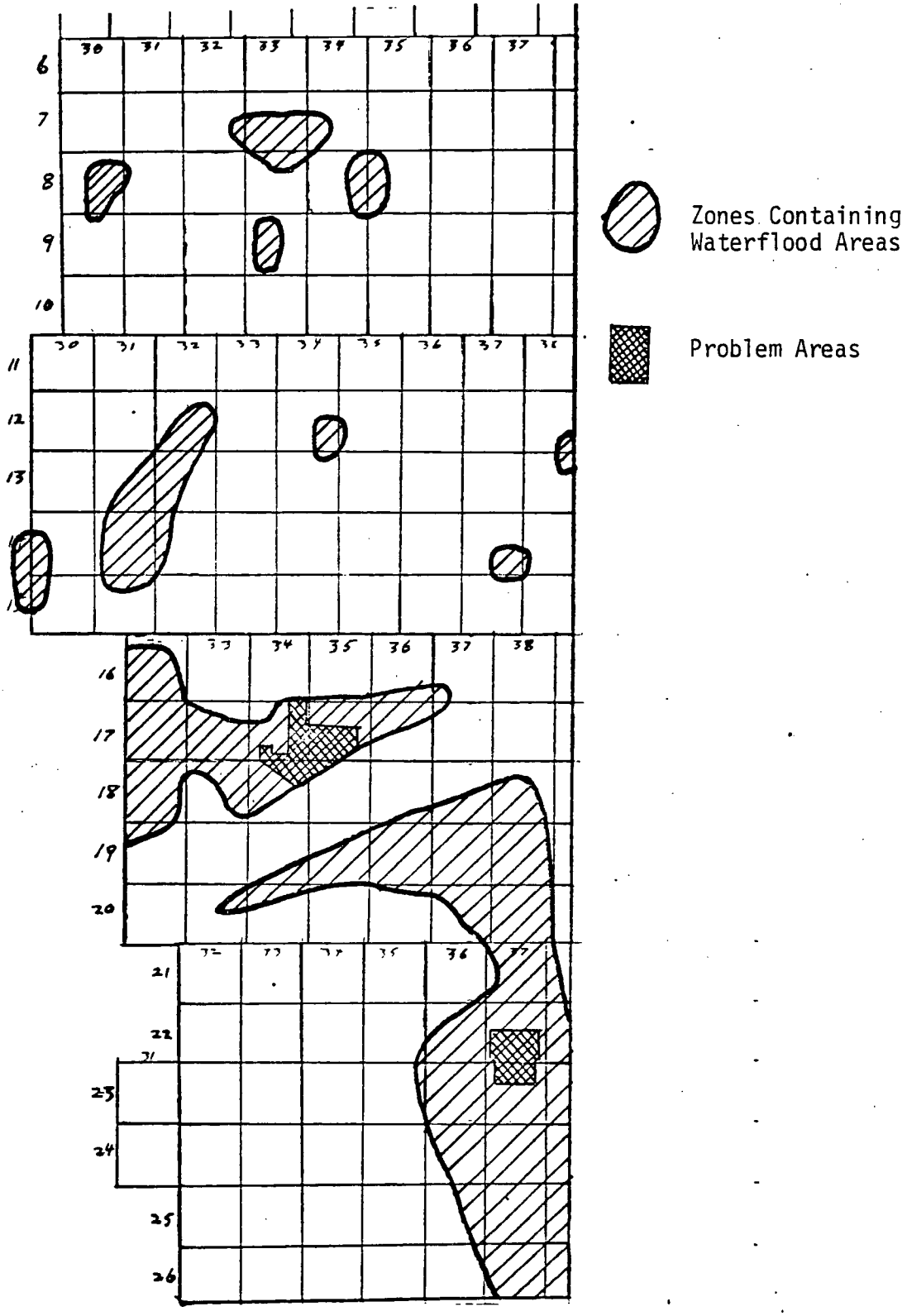
7 5/8" hole

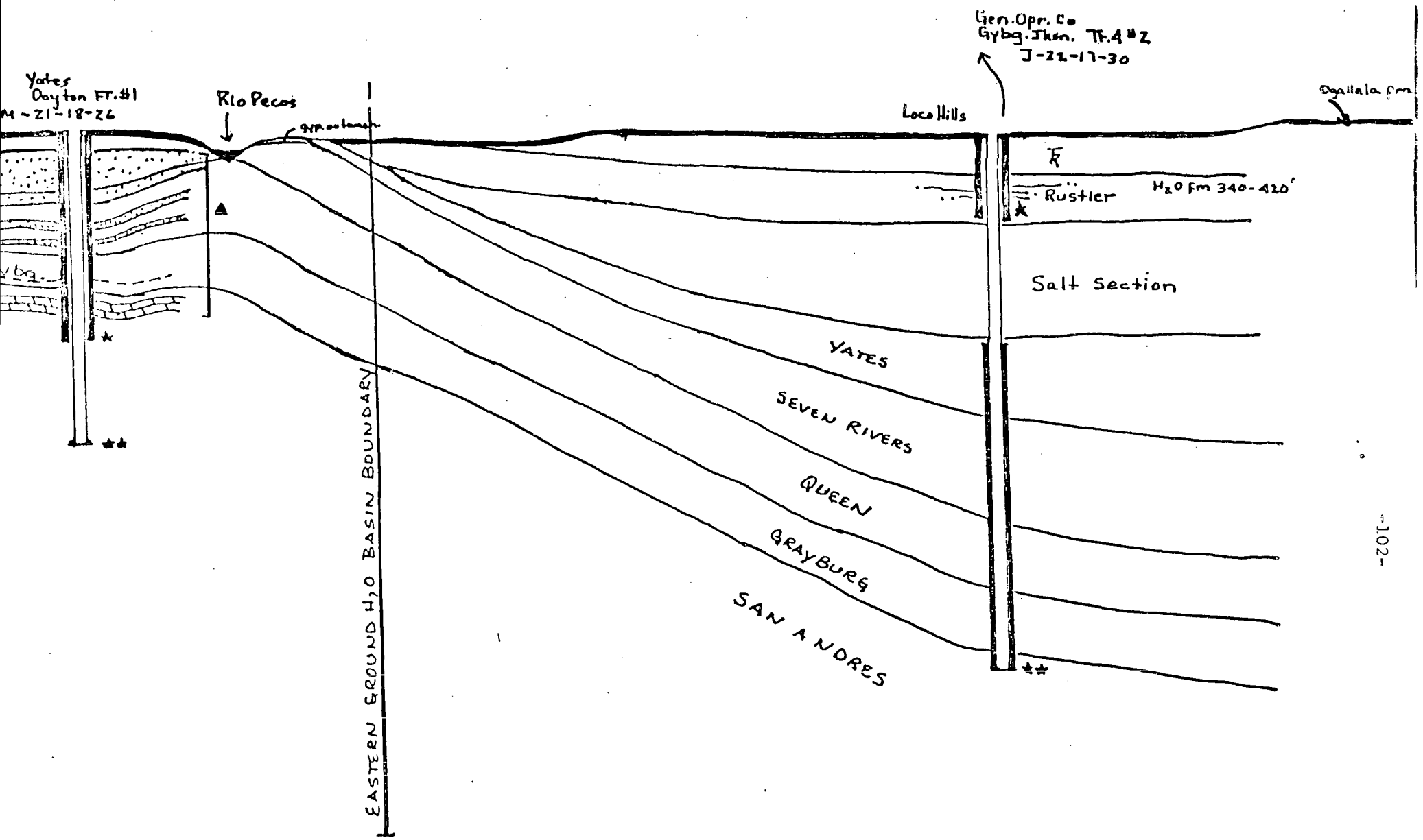
2 7/8" 6.5# set @ 8847' cmt w/1300 sx
Class C cmt + 4% gel

Exhibit 2

To Program Description
Exhibit 9

DISTRICT I MAP





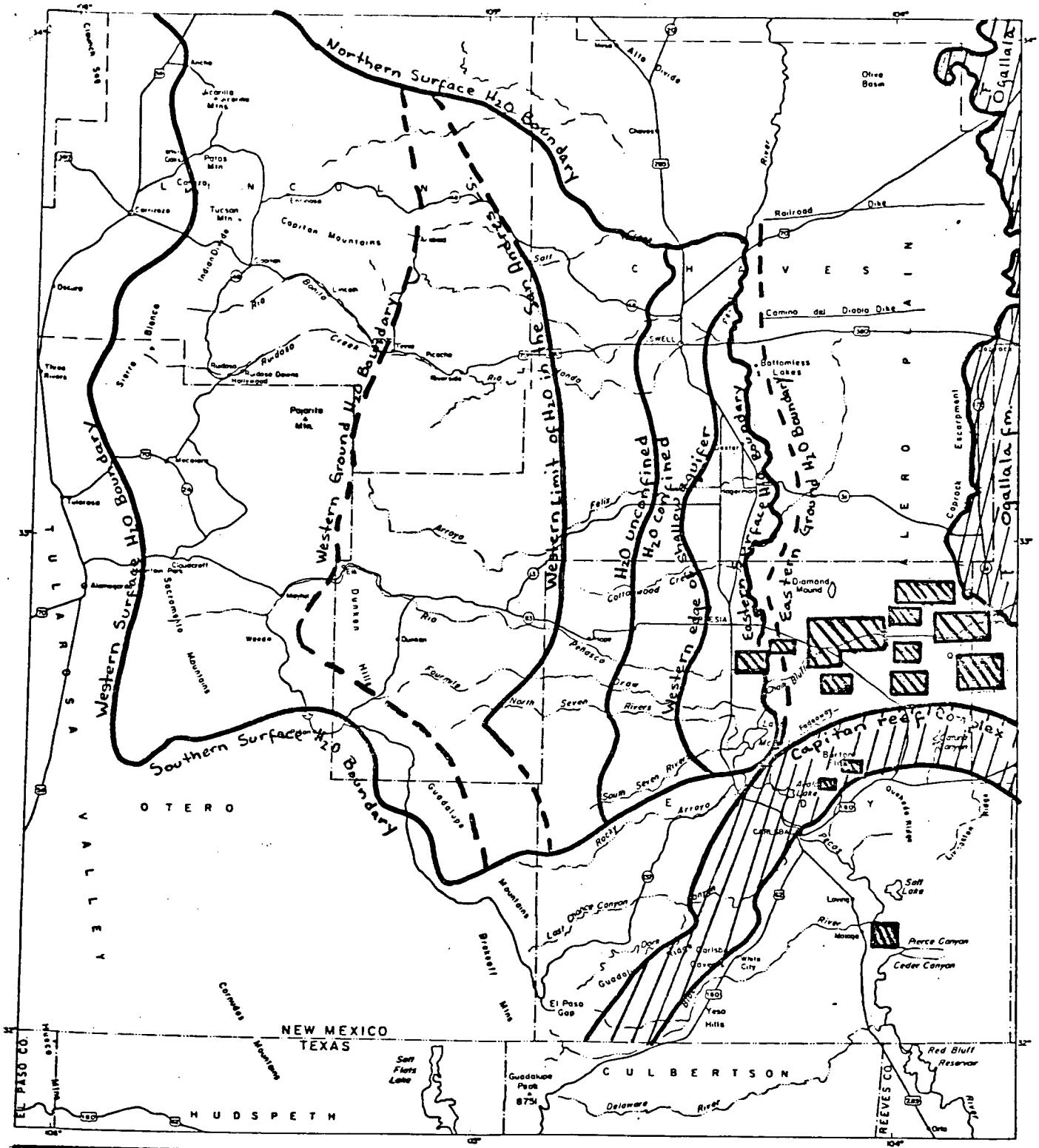
Typical Well Completions: E & W of the Pecos River, Eddy Co. NM.

★ Sur. csg. landed @ 1201', cmt. circ. 8 3/8" csg.
★ Prod. csg. landed @ 1780', cmtd w/ 175 sxs. 4 1/2 csg.

VS: 1/16"=50'
HS: NOT TO SCALE.

District II
Program Description

★ Sur. csg. landed @ T. Salt, cmt. circ. 8 3/8"
★★ Prod. csg. landed @ 3142', cmt. brought back to B. Salt. TOC 1190'. 4 1/2" csg.



Symbol	Explaination
———	Surface H_2O Boundary & Shallow aquifer Boundary
- - - -	Ground H_2O Basin Boundary
▨	Capitan reef & T Ogallala
▨	Major H_2O flood project or projects.
--·—·--	Appx. W. limit of San Andres H_2O
9/1/81	Prepared By Larry Brooks Geologist NMOCD DIST II.

PLATE 5—GEOGRAPHIC INDEX MAP.

District II Project Map

Program Description Exhibit 9

OIL CONSERVATION DIVISION

Guidelines for Plugging Programs

The following is intended for use by Commission personnel only as a guide or check list in preparation of plugging programs. The guide is not all inclusive and care must be exercised in establishing special plugging program in unique or unusual cases.

A. To be determined

1. Land type, State, private, or federal. The USGS normally formulates and/or approves plugging on federal or indian lands.

2. Depth and thickness of:

   (a) pay zone (perforations or open-hole)
   (b) porosity zones not covered by casing and cement, and
   (c) artesian and fresh water zones (including zones of non-drinkable water having total dissolved solids concentrations of 10,000 mg/l or less)

3. Casing to be pulled and depth of casing shoes.

4. Formation tops.

5. Hole use and age (production, disposal, injection, drilling well, etc.).

B. Requirements for old holes

1. Minimum plug size.

   (a) Not less than 100 feet or 25 sacks, whichever is greater, or,
   (b) a cast iron bridge plug with 35 feet of cement.

2. Plugs to be tagged.

   (a) Bottom plugs
   (b) Plugs at casing shoe or cut-off point.
   (c) Other isolation plugs if the hole does not stand full.

3. Mud to be used

   (a) Salt gel mud consisting of 10 pound brine with 25 pounds of gel per barrel.

      (1) Load hole from total depth to first casing cut-off point.
      (2) Fill hole to make certain it will hold fluid.

4. Plugs to be set

   (a) A bottom plug across or above pay.
   (b) Above and below casing cut points (even if casing is not recovered).
   (c) To isolate other oil, gas, or water zones exposed in the hole.
   (d) Across casing shoes.
   (e) Minimum surface plug of 10 sacks.
   (f) Above and below artesian water zones.
   (g) Across fresh water zones (inside and outside the casing).

C. Requirements for new holes

1. Minimum plug size.

   (a) Same as for old holes.

2. Plugs to be tagged.

   (a) In unusual cases such as for a well having a water flow, isolation plugs will be tagged.

3. Mud to be used.

   (a) Drilling mud or salt gel mud as for old wells.
      (1) Hole should remain full at least 30 minutes after the last plug is set and all tubing is pulled.

4. Plugs to be set

   (a) Same as for old well except bottom plug may not be required.

EXHIBIT XI - ENFORCEMENT ACTIONS

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
ARTESIA DISTRICT OFFICE

Program Descrip.
EXHIBIT XI

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

September 29, 1980

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88210
(505) 748-1283

Yates Drilling Company
207 South 4th Street
Artesia, NM 88210

Re: Federal DY #3
Unit-B, Sec. 28-18-29
Eddy County, New Mexico

Gentlemen:

During our recent braden head survey it was noted you had a water flow out the bradenhead. The New Mexico Oil Conservation Division is asking that this well be repaired in accordance with New Mexico Oil Conservation Division Rules and Regulations by November 30, 1980.

If you have any questions concerning this matter please contact Mike Williams at this office.

Sincerely yours,

Mike Williams
Oil & Gas Inspector

MW:jw

Program Descrip. EXHIBIT XI

-107-

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Yates Drilling Company

3. ADDRESS OF OPERATOR
207 South 4th St., Artesia, NM 88210

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
660' FNL & 1980' FEL

5. LEASE DESIGNATION AND SERIAL NO.
LC-067348

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
~~Federal~~ Federal D

9. WELL NO.
3

10. FIELD AND POOL, OR WILDCAT
Turkey Tract

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Unit B
Section 28-18S-29E

14. PERMIT NO.	15. ELEVATIONS (Show whether DF, RT, GR, etc.)	12. COUNTY OR PARISH	13. STATE
	3461' GR	Eddy	NM

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	X	PULL OR ALTER CASING		WATER SHUT-OFF		REPAIRING WELL	
FRACTURE TREAT		MULTIPLE COMPLETE		FRACTURE TREATMENT		ALTERING CASING	
SHOOT OR ACIDIZE		ABANDON*		SHOOTING OR ACIDIZING		ABANDONMENT*	
REPAIR WELL		CHANGE PLANS		(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

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

December 1, 1980 -
We propose to fill hole w/frac sand above existing perfs @1910-14'; 1802-10'. Perforate 4 holes @1550', 50 feet above existing cement. Set cement retainer @1500', squeeze cement fo surface w/100 sacks Hallibuton Lite, 350 sacks Class C.

RECEIVED
DEC 11 1980
U.S. GEOLOGICAL SURVEY
ROSWELL, NEW MEXICO

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

SIGNED _____ TITLE Drilling Supervisor DATE Dec. 8, 1980

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

APPROVED
DEC 12 1980
for DISTRICT SUPERVISOR

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: LC-067348

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Yates Drilling Company

8. FARM OR LEASE NAME: Federal DY

3. ADDRESS OF OPERATOR: 207 South 4th St., Artesia, NM 88210

9. WELL NO.: 3

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 660' FNL & 1980' FEL

10. FIELD AND POOL, OR WILDCAT: Turkey Tract

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Unit B Section 28-18S-29E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 3461' GR

12. COUNTY OR PARISH: Eddy

13. STATE: NM

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[X]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			[ ]
(Other)			[ ]				

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

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

December 1, 1980 - We plugged back with frac sand above existing perfs 1910-14'; 1802-10' Perforated 4 holes @ 1550'. Set cement retainer @1512'. Squeezed w/100 sacks Halliburton Lite, 350 sacks Class C cement. We did not circulate cement to surface.

December 4, 1980 - Ran temperature survey - found top of cement @750', shot 4 holes @700'. Squeezed w/300 sacks Halliburton Lite w/15 lbs salt to sack & 100 sacks Class C 2% CaCl. Cement circulated 75 sacks Halliburton Lite to pit. We propose to temporarily abandon well for further evaluation.

Witnessed by Mr. Weaver, Oil Conservation Division, Artesia.

RECEIVED
DEC 11 1980
O. C. D.
ARTESIA, OFFICE

RECEIVED
DEC 16 1980
OIL CONSERVATION DIVISION
SANTA FE

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

SIGNED _____ TITLE Drilling Supervisor DATE Dec. 8,1980

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
ARTESIA DISTRICT OFFICE

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

September 30, 1980

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88210
~~(505) 746-4861~~
748-1283

JEM Resources, Inc.
P. O. Box 648
Artesia, NM 88210

Re: Cave Pool Unit #27-P, 5-17-29
Cave Pool Unit #36-B, 8-17-29
Cave Pool Unit #35-A, "
Cave Pool Unit #26-O, 5-17-29
Cave Pool Unit #49-L, 8-17-29

Gentlemen:

As of this date this office has not received Form C-103 showing the running of tubing and a packer on the #27 and #36 wells.

This report needs to be filed as soon as possible.

Our recent bradenhead survey revealed your #25 & #36 wells have water-flow problems. These wells need to be repaired in accordance with NM Oil Conservation Division Rules & Regulations.

The Cave Pool Unit #49 well has been leaking ever since the well was plugged in 1976. This well needs to be re-entered and replugged in accordance with NM Oil Conservation Division Rules & Regulations.

The notice of intention to repair the above mentioned wells needs to be filed immediately and the work completed by November 30, 1980.

If you have any further questions concerning this matter please call Mike Williams at this office.

Sincerely yours,

Mike Williams
Oil & Gas Inspector

MW:jw

Program Description, EXHIBIT XI

-110-

ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE	/	
FILE	/	
U.S.G.S.		
LAND OFFICE		
OPERATOR	/	

OIL CONSERVATION DIVISION

P O BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

OCT 2 - 1980

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: E 10163

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [ ] GAS WELL [ ] OTHER. Water Disposal

7. Unit Agreement Name: CAVE POOL UNIT

2. Name of Operator: J E M Resources Inc. ✓

8. Farm or Lease Name:

3. Address of Operator: Box 648 Artesia, N. Mex. 88210

9. Well No.: 27

4. Location of Well: UNIT LETTER P, 990 FEET FROM THE S LINE AND 990 FEET FROM THE E LINE, SECTION 5 TOWNSHIP 17 RANGE 29 NMPM.

10. Field and Pool, or Wildcat: CAVE-GREG

15. Elevation (Show whether DF, RT, GR, etc.): 3614 Gr

12. County: EDDY

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [ ]	REMEDIAL WORK [X]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		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 1103.

Pulled Tubing, put on Bit & Casing Scraper. Ran in Hole & Cleaned out to 2385'. Well is completed open hole from 2346 to 2391.

Ran 2310' Plastic Lined Pipe & Plastic Coated Packer. Circulated Hole with 2% KCL water & set packer at 2314'. Pressured up on Casing to 600#, no leak off. Treated formation with Surfactant & 15% acid.

Put Well back on Disposal & it takes all the produced water with minumal peessures.

NOV 0 5 1980

OIL CONSERVATION DIVISION SANTA FE

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

SIGNED [signature] TITLE PRES. DATE 10-29-80

APPROVED BY [signature] TITLE OIL AND GAS INSPECTOR DATE NOV 0 3 1980

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

July 3, 1980

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

Pontotoc Oil Corporation
P.O. Box 5094
Midland, Texas 79701

SUBJECT: Wells Suspected of Being Inadequately Cemented
Hobbs State #1, Unit F, Sec. 29, T18S, R38E
Hobbs State #2, Unit G, Sec. 29, T18S, R38E

Gentlemen:

You have two wells, Hobbs State #1 and #2, in the Hobbs-Drinkard Pool which may not be adequately cemented to prevent migration of fluid from the Hobbs-Grayburg-San Andres formation to other zones. Shell Oil Company is installing a waterflood project in the Grayburg-San Andres zone and the cement top behind the production casing in the above wells needs to be confirmed.

Our rules state that cement must be brought 600 feet above any producing interval.

If temperature surveys were run on the original completions, please submit these logs to the Hobbs Oil Conservation Division Office. If temperature logs are not available, you are requested to run bond logs to determine if the Grayburg-San Andres zone is cemented in such a manner as to prevent fluid migration from the zone. If the temperature surveys or bond logs show the wells are not adequately cemented, recementing of the wells will be required.

You are requested to notify the Hobbs OCD Office 24 hours in advance of doing any work on the subject wells. Also, it is requested that this work be completed by September 1, 1980.

Yours very truly,

OIL CONSERVATION DIVISION

Jerry Sexton
Supervisor, District I

ed/JS

cc: R.W. Phillips, Shell Oil Co. P.O. Box 991, Houston, TX 77001
Joe D. Ramey, OCD- Santa Fe, NM
R.L. Stamets, OCD- Santa Fe, NM
File

Program Description EXHIBIT XI-112-

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

July 30, 1980

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

Mr. Gordon G. Marcum
Pontotoc Oil Corporation
P.O. Box 5094
Midland, Texas 79701

SUBJECT: Wells Suspected of Being Inadequately Cemented
Hobbs State #1, Unit F, Section 29, T18S, R38E
Hobbs State #2, Unit G, Section 29, T18S, R38E

Dear Mr. Marcum:

After examining the cement bond log on your Hobbs State #1-F in Sec. 29, T18S, R38E, and the cement and casing records on the Hobbs State #2, it is agreed that additional cementing work will not be required at this time.

At a later date some additional cementing on the above wells may have to be done since about 30 feet of formation below the intermediate casing shoe in the Hobbs State #1 is not cemented, but the casing in the well will prevent any migration of fluids out of zone.

Yours very truly,

OIL CONSERVATION DIVISION

Jerry Sexton
Supervisor, District I

cc: Shell Oil Company - Attn: Bob Phillips
Mr. J.D. Ramey
Mr. Prentiss Childs

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

July 25, 1980

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

Mr. Keith Spradlin
Union Oil Company of Calif.
Route 1
Lovington, NM 88260

SUBJECT: Nix 24 SWD Well #1
F-35-18-46

Gentlemen:

The Oil Conservation Division witnessed a requested retest of your Nix 24 SWD well #1 on July 23, 1980, and as a result of this test we will not require any repair work be done on this well at the present time.

Very truly yours,

OIL CONSERVATION DIVISION

Jerry Sexton
Supervisor, District I

ed

RECEIVED
JUL 28 1980
OIL CONSERVATION DIVISION
SANTA FE

cc: J.D.Ramey
R.L.Stamets
File

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

August 20, 1980

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

Gulf Oil Corporation
Box 670
Hobbs, NM 88240

SUBJECT: C.E. LaMunyon SWD #6-A 28-23-37
SWD-204

Gentlemen:

The Oil Conservation Division conducted a casing leak test on your C.E. LaMunyon SWD #6 well August 11, 1980, and it was noted that the injection pressure of 2500 psi exceeds the injection pressure limit of 1865 psi established by SWD Order #204 authorizing disposal into this well.

You are requested to take measures to reduce the injection pressure on this well to 1865 psi or below. We will recheck the well in the next few months.

Very truly yours,

OIL CONSERVATION DIVISION

Jerry Sexton
Supervisor, District I

ed

cc: Joe D. Ramey - Santa Fe
R.L. Stamets - Santa Fe
File

Program Descrip.
EXHIBIT XI

J. M. HUBER CORPORATION
OIL AND GAS DIVISION
1900 WILCO BUILDING
MIDLAND, TEXAS 79701

MIDLAND DISTRICT OFFICE

TELEPHONE
915-682-3794

April 9, 1981

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

File
Case 4280

RE: Stoltz State SWD #1-M in 6-15-34
SWD-230, Sec. 6, T-15-S, R-35-E

R3899

Gentlemen:

Disposal into the San Andres and Glorieta formations in the above captioned well was approved by SWD-230 on August 29, 1980. The order specified a limiting injection pressure of 930 psi. During October, 1980, surface injection pressures of 1400 psi were observed. Following this, disposal into this well was restricted so as not to exceed the specified injection pressure of 930 psi. A workover was performed in January, 1981 to reacidize the perforations. Following this work water is currently being injected at a rate of 360 BWPD with a surface injection pressure of 550 psi to 580 psi. A summary of this work is shown on the attached Form C-103.

Very truly yours,

J M. HUBER CORPORATION

Robert G. Settler
District Production Manager

RGS:dc

Attachments

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
ARTESIA DISTRICT OFFICE

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

March 10, 1980

P.O. DRAWER DD
ARTESIA, NEW MEXICO 88210
(505) 746-4861

Norwood Oil Company
P. O. Drawer BN
Malakoff, Tx 75148

Re: Skelly State Leases
Section 16-T16S-R29E
Eddy County, NM

Gentlemen:

A recent field inspection revealed the following Skelly State wells number 13-A, 14-B, 23-H, 24-G and 25-F, all in section 16-16-29, have not taken water for sometime.

Whenever there is a continuous six month period of non-injection in to any injection project, salt water disposal well or special purpose injection well, such project or well shall be considered abandoned and the authority for injection shall automatically terminate ipso facto.

The Division is asking that all abandoned water injection facilities be plugged and abandoned in accordance with the Division Rules and Regulations.

It was noticed that there are two wells, one located in Unit B and one located in Unit F of 16-16-29, that are possibly water supply wells that should also be plugged and abandoned.

If you have any further questions concerning this matter please contact me at this office.

Sincerely yours,

Mike Williams
Oil & Gas Inspector

MW:jw

COMPLAINT TAKEN BY: _____ DATE: _____ TIME: _____

PERSON COMPLAINING: IN PERSON: ____ PHONE: _____

Name: _____ Complaint: _____

Address: _____ _____

_____ _____

Phone: _____ _____

_____

_____

INVESTIGATION

INVESTIGATOR: _____ DATE: _____ TIME: _____

DESCRIBE INVESTIGATION AND FINDINGS: _____

_____

_____

_____

_____

_____

ACTION TAKEN: DATE: _____ TIME: _____

_____

_____

_____

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_____

USE ADDITIONAL SHEET IF NECESSARY