

WESTERN-YATES

Oil Production History - State 648 Lease, Wells No. 62, 63, 64, 67, 69, 71, 72, 73, 75 & 174

Cumulative to January 1, 1947 135,084

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
Jan.	230	340	355	146	279	362	370	403	315	121	221	108	83	55	22
Feb.	224	236	374	336	302	227	307	300	253	33	181	99	89	66	46
Mar.	438	303	411	626	318	419	307	292	107	107	122	97	116	61	34
Apr.	576	472	373	112	306	298	351	283	44	110	139	99	50	55	44
May	470	472	315	374	355	324	355	219	42	195	118	108	0	59	53
June	400	142	360	351	340	264	331	392	61	242	98	163	16	33	44
July	419	439	384	381	274	449	283	333	217	202	185	97	87	50	45
Aug.	412	237	472	373	272	427	321	283	320	242	152	74	91	55	74
Sept.	431	313	256	364	338	424	464	293	292	186	143	43	47	57	74
Oct.	432	467	381	364	325	376	450	229	204	207	110	107	55	55	76
Nov.	207	402	329	237	362	332	129	255	223	217	113	101	19	47	55
Dec.	421	433	641	335	343	310	405	193	204	179	116	91	58	33	55
Total	4,660	4,260	4,651	4,099	3,814	4,212	4,093	3,475	2,282	2,040	1,698	1,187	711	626	622
Cum.	139,744	144,004	148,655	152,754	156,568	160,780	164,873	168,348	170,630	172,670	174,368	175,555	176,266	176,892	177,514

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. 4

CASE NO. 2-1952

EXHIBIT NO. 4

Company, Lease And Well Number	Completion Date	Elevation C. L.	Total Depth	Sizes	Casing Depth	Cement	Perforated Intervals
N. STERN-YATES							
State 648 No. 62	7-21-32	3536	2183	Unknown			OH
State 648 No. 63	9-30-32	3524	2196	8 1/4" @ 580 (No record of cement)			OH - 580 - 2196
State 648 No. 64	6-21-33	3531	2190	Unknown			OH
State 648 No. 67	1-8-34	3539	2856	10 3/4" @ 315 (No record of cement)			OH - 315 - 2856
State 648 No. 69	4-13-34	3506	2180	8 1/4" @ 610 (No record of cement)			OH - 610 - 2180
State 648 No. 71	3-29-35	3514	2132	8 1/4" @ 570 (No record of cement)			OH - 570 - 2132
State 648 No. 72	12-19-35	3520	2139	8 1/4" @ 575 (No record of cement)			OH - 575 - 2139
State 648 No. 73	3-20-36	3500	2149	8 1/4" @ 570 (No record of cement)			OH - 570 - 2149
State 648 No. 75	3-3-37	3499	2238	8 1/4" @ 579 (No record of cement)			OH - 579 - 2238
State 648 No. 174	Not Completed	3550	2200	7" @ 390 with 75 sacks, 4 1/2" @ 2197 with 125 sacks			2016-27, 2068-72, 2084-92; 2150-54

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 71157

EXHIBIT NO. 5

[Handwritten signature and notes]

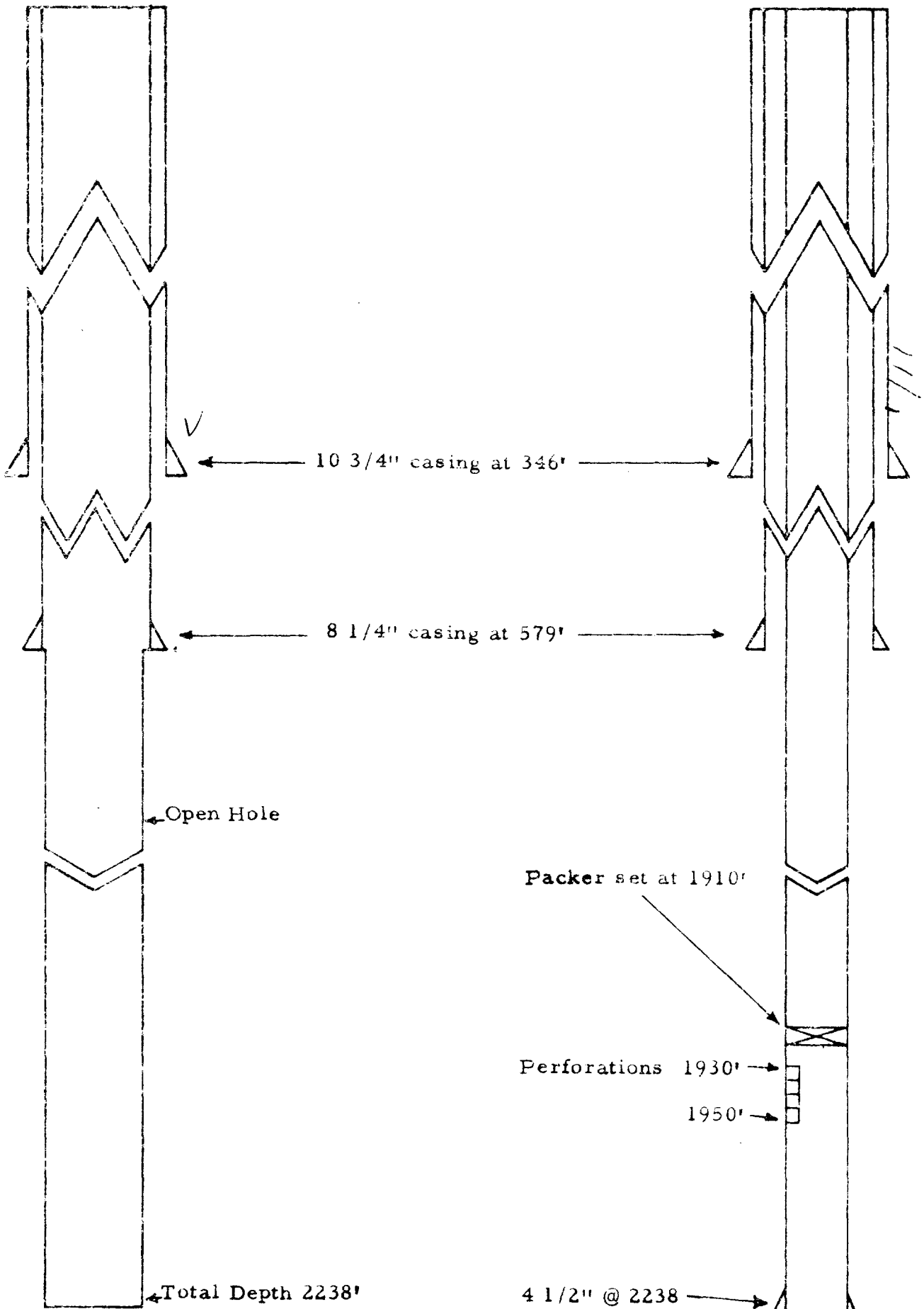
WESTERN-YATES STATE 648 NO. 75

Location: 1980' FNL & 1520' FEL

Section 10, T-19S, R-28E

Present Casing Program

Proposed Casing Program



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE NO. 2492

Cement volumes will be calculated
after running Caliper Log. Cement
to return to 1750.

EXHIBIT NO. 7

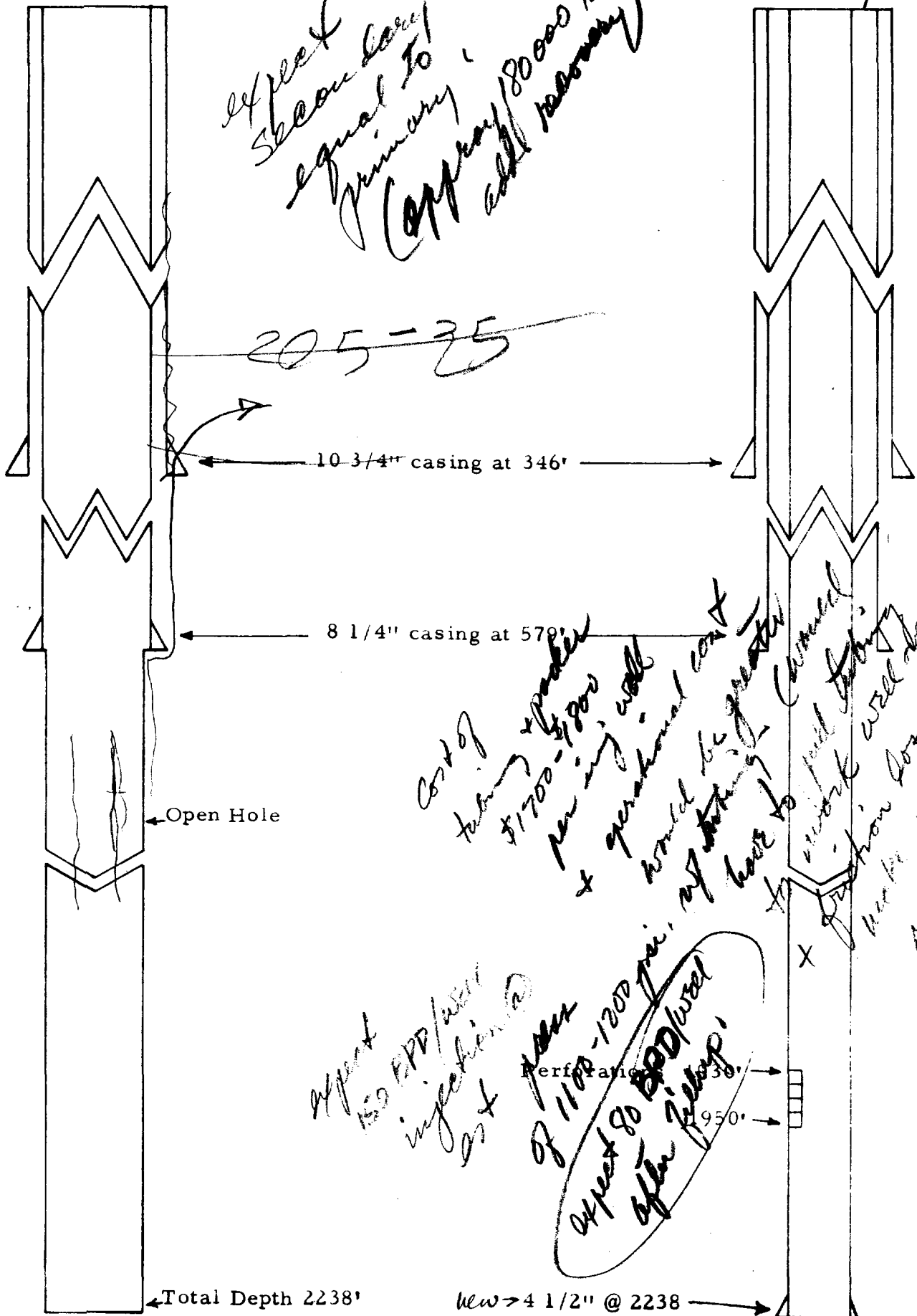
WESTERN-YATES STATE 648 NO. 75

Location: 1980' FNL & 1520' FEL

Section 10, T-19S, R-28E

Present Casing Program

Proposed Casing Program



Cement volumes will be calculated after running Caliper Log. Cement to return to 1750.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7A
CASE NO. 2492

EXHIBIT NO. 7A

SMITH MACHINERY COMPANY
ROSWELL, NEW MEXICO

WELL AND TEST DATA SHEET

Customer: Western Development Company Date: 1-3-62
 Address: P. O. Box 427, Artesia, New Mexico
 Well Location: 330' FNL & 2310' FEL, Section 14, T-19S, R-28E
 Casing: 235 ft. of 7" in. I. D. ft. of in. I. D.
 Perforations (size and location): Slotted
 Drilled depth: 235' Depth before test: _____ Depth after test: _____
 Drilled by: _____ Date: _____
 Remarks: Equipment for Test: 210' x 4" pipe; 3' x 4" Suction, 25 Stage MA bowl pump.
Total 223'

TEST DATA

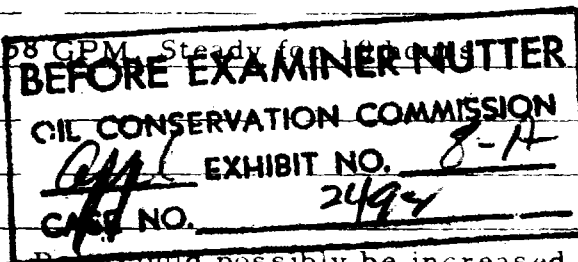
NOTICE. Take largest reading first; give plenty of time between readings to assure that conditions are stabilized.

Test Pump:	<u>25 Stage 6" MA</u>	<u>210</u>	<u>4"</u>	<u>3' x 4"</u>
	Bowls (No. stages and size)	setting	col. size	suction (length and diam)
Static level:	<u>180' (Prior to Test)</u>	Orifice used	<u>4" ID x 2"</u>	

	Pumping level	Orifice	GPM	Remarks (air? sand? etc.)
1	<u>190'</u>	<u>17"</u>	<u>58</u>	<u>Clear</u>
2	<u>187'</u>	<u>11"</u>	<u>46</u>	
3				

4. Fluid level at 190' - rate 58 GPM. Steady for 18 hours.
 5. _____
 6. _____

Remarks: Well pumped 18 hours.
Suspect some restriction - Rate could possibly be increased by washing water sand with acid.



Handwritten: 1100 BFD

Recommendation: Pump level at 190' - rate of 50 to 55 GPM.

Western Development Company of Delaware

~~SANTA FE, SANTA FE, NEW MEXICO~~
~~TELEPHONE YUM 2-2140~~
P O BOX 427 ARTESIA NEW MEXICO

January 22, 1962

Commissioner of Public Lands
State Land Office
P. O. Box 791
Santa Fe, New Mexico

Attention: Mr. Ted Bilberry

Ref: Proposed Waterflood
Sec. 10, T-19-S, R-28-E
Eddy County, New Mexico

Dear Sir:

Western Development Company of Delaware and Yates Petroleum Corporation have made application to the New Mexico Oil Conservation Commission to waterflood a portion of its State 648 lease located in Section 10, T-19-S, R-28-E, Artesia Pool, Eddy County, New Mexico. This application has tentatively been set for hearing February 7, 1962.

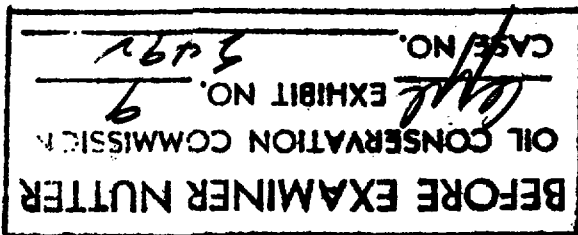
Enclosed are two copies of the application and exhibits that will be presented to the Commission at the hearing.

Yours very truly,

WESTERN DEVELOPMENT COMPANY
of Delaware

M. E. Spitler

M. E. Spitler
General Manager



MES:cm

EXHIBIT NO. 9

Western Development Company of Delaware



~~ARTEZIA, SANTA FE, NEW MEXICO~~
~~TELEPHONE 911-8540~~
P. O. BOX 427 ARTESIA, NEW MEXICO

January 22, 1962

State of New Mexico
State Engineer Office
Santa Fe, New Mexico

Ref: Proposed Waterflood
Sec. 10, T-19-S, R-28-E
Eddy County, New Mexico

Dear Sir:

Western Development Company of Delaware and Yates Petroleum Corporation have made a joint application to the New Mexico Oil Conservation Commission to waterflood its State 648 lease located in Section 10, T-19-S, R-28-E, Artesia Pool, Eddy County, New Mexico. This application has tentatively been set for hearing February 7, 1962.

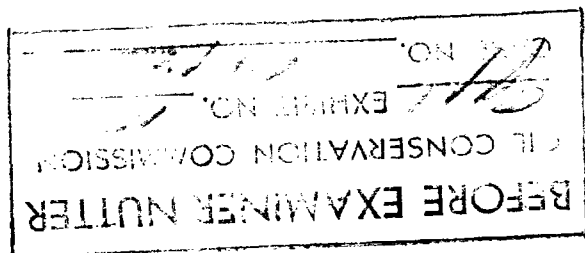
Enclosed is one copy of the application and exhibits that will be presented to the Commission at the hearing.

Common completion practices when these wells were drilled were to set 8 1/4" casing around 600 feet, drill the Grayburg pay and complete openhole. Driller's logs in the area are very incomplete and there is little information concerning shallow waters. Six of the original nine wells are still producing water free oil after twenty-seven years indicating satisfactory casing jobs. The remaining three wells are plugged and abandoned. If you would like to discuss the present casing program further prior to the hearing, we will be happy to meet you at your convenience.

Yours very truly,

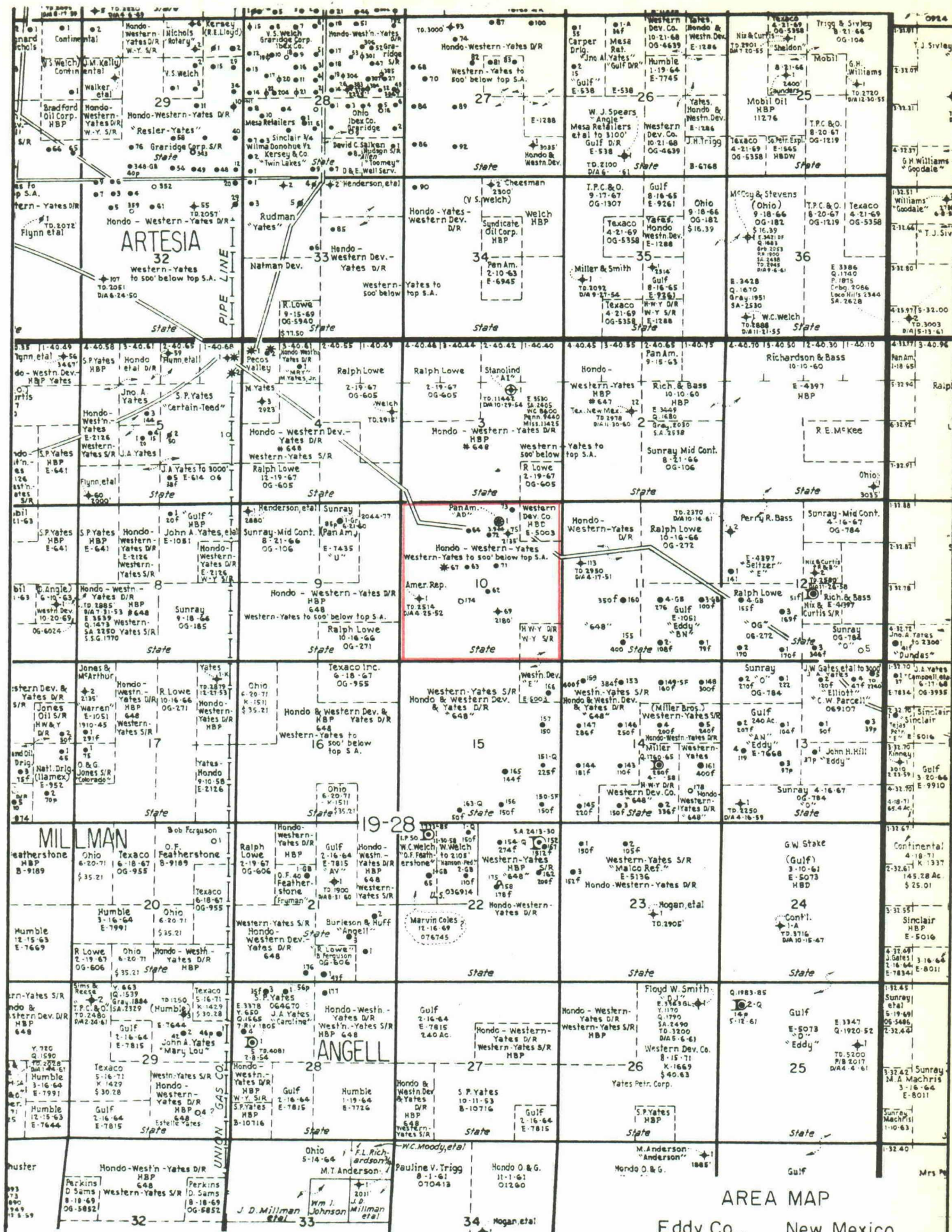
WESTERN DEVELOPMENT COMPANY
of Delaware

M. E. Spitler
General Manager



MES:cm

EXHIBIT NO. 10



AREA MAP
Eddy Co., New Mexico
EXHIBIT NO. 1

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Apple EXHIBIT NO. 1

CASE NO. 2492

Western Development Company of Delaware

2492
MAIN OFFICE OCC

1962 JAN 22 AM 8:42

~~SENA PLAZA, SANTA FE, NEW MEXICO~~

~~TELEPHONE YUCA 2-5568~~

P. O. BOX 427 ARTESIA, NEW MEXICO

January 19, 1962

New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico

Attention: Mr. J. E. Whitfield

Dear Sir:

The following information is forwarded to you concerning the joint application of Waterflood Associates, Incorporated, Western Development Company of Delaware and Yates Petroleum Corporation for a waterflood in the East Artesia Pool Area, Eddy County, New Mexico.

Wells proposed for water injection:

Waterflood Associates, Inc., State 14 No. 3, SE/4 NW/4, Sec. 14, T-18S, R-28E.
Waterflood Associates, Inc., State 14 No. 5, NW/4 NE/4, Sec. 14, T-18S, R-28E.
Waterflood Associates, Inc., State 14 No. 8, SE/4 NE/4, Sec. 14, T-18S, R-28E.
Waterflood Associates, Inc., State 14 No. 14, SE/4 SW/4, Sec. 14, T-18S, R-28E.
Western-Yates, State 647 No. 118, NW/4 SW/4, Sec. 14, T-18S, R-28E.
Western-Yates, State 647 No. 123, NW/4 SE/4, Sec. 14, T-18S, R-28E.

The following wells are proposed for water injection on the Western Development Company of Delaware and Yates Petroleum Corporation application to waterflood the Section 10 area of the Artesia Pool, Eddy County, New Mexico:

Western-Yates, State 648 No. 64, NE/4 NW/4, Sec. 10, T-19S, R-28E.
Western-Yates, State 648 No. 67, SW/4 NW/4, Sec. 10, T-19S, R-28E.
Western-Yates, State 648 No. 69, SW/4 SE/4, Sec. 10, T-19S, R-28E.
Western-Yates, State 648 No. 73, NW/4 NE/4, Sec. 10, T-19S, R-28E.
Western-Yates, State 648 No. 75, SW/4 NE/4, Sec. 10, T-19S, R-28E.
Western-Yates, State 648 No. 174, NE/4 SW/4, Sec. 10, T-19S, R-28E.

Production from both pool areas is from the Grayburg formation.

Very truly yours,

WESTERN DEVELOPMENT COMPANY
of Delaware

RJD
R. J. Davenport

Production Superintendent

RJD:cm

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

500-2448

C
O
P
Y

January 15, 1962

Mr. M. E. Spitler
P. O. Box 427
Artesia, New Mexico

Dear Mr. Spitler:

The Commission is in receipt of two applications for waterflood projects, one on behalf of Waterflood Associates, Inc., Western Development Company of Delaware and Yates Petroleum Corporation, and the other on behalf of Western Development Company of Delaware and Yates Petroleum Corporation.

Reference is made to Paragraph B of Commission Rule 701 concerning the method of making application for approval of a waterflood. This rule requires that plats, logs, casing programs and other pertinent information be submitted to the Commission along with the application for hearing. It will be appreciated if you will submit this information as soon as possible to supplement these two applications.

An examiner hearing is tentatively scheduled for February 7, at which time your cases will be docketed.

Very truly yours,

RICHARD S. MORRIS
Attorney

RSM/esr

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

March 29, 1962

Mr. Jerry Losee
Losee & Stewart
Attorneys at Law
Box 239
Artesia, New Mexico

Dear Mr. Losee:

Enclosed herewith is Commission Order No. R-2203, entered in Case No. 2492, approving the Western-Yates Waterflood Project in the Artesia Pool, Eddy County, New Mexico.

According to our calculations, when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 364 barrels per day.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

-2-

Mr. Jerry Losee

March 29, 1962

producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

cc: Oil Conservation Commission
Drawer DD
Artesia, New Mexico

Mr. J. E. Kapteina
Oil Conservation Commission
Santa Fe, New Mexico

Case 2492

Western Development Company of Delaware

MAIN

1962 JAN 15

~~SENA PLAZA, SANTA FE, NEW MEXICO~~

~~TELEPHONE YUco 2-5548~~

P. O. BOX 427 ARTESIA, NEW MEXICO

January 22, 1962

New Mexico Oil Conservation Commission
P.O. Box 871
Santa Fe, New Mexico

Attention: Mr. Richard S. Morris, General Counsel

Ref: Proposed Waterflood
Sec. 10, T-19-S, R-28-E
Eddy County, New Mexico

Dear Sir:

Please find enclosed a plat of the area requested for water-flooding on the Western Development Company of Delaware and Yates Petroleum Corporation joint waterflood application. The area is outlined in red and proposed injection wells denoted by a red triangle.

Injection will be into the upper Grayburg sand and sandy dolomite pay section. Anticipated rates and pressures are 150 barrels of water per day per injection well at 1200 PSI.

The enclosed radioactivity log on our State 648 No. 174 well is the only electric log in the proposed waterflood area.

Common completion practices when these wells were drilled were to set 8 1/4" casing at approximately 600 feet and complete openhole. We plan to clean out the injection wells, run a caliper survey and cement 4 1/2" casing. We would then be able to perforate the 4 1/2" and inject through tubing under a packer.

Yours very truly,

WESTERN DEVELOPMENT COMPANY
of Delaware



M. E. Spitler
General Manager

MES:cm



MAIN OFFICE OCC
1962 FEB 13 AM 8:08

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

February 12, 1962

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Western Development Company of Delaware and Yates Petroleum Corporation, which seeks permission to institute water flood operation in Section 10, Township 19 South, Range 28 East in Eddy County, New Mexico and to my letter on that subject dated February 2, 1962 on which hearing has already been held.

After discussing this with Mr. Nutter, who was the Examiner at the hearing, I have reached the conclusion that this office will offer no objection to the injection of water through the casing provided the surface casing is cemented well into the salt section and the 4½ inch casing has been cemented from the shoe up to a point well above the perforations in the casing. In each case where these two conditions do not prevail, we do object to the injection of water through the casing and suggest that it be injected through tubing and packer with the packer set well below the top of the cement outside the 4½ inch casing. Naturally, we object to any injection whatsoever if the 4½ inch casing is not adequately cemented either at total depth or immediately above the producing formation.

Yours truly,

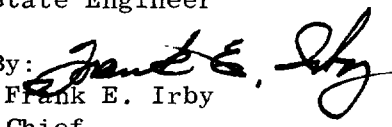
S. E. Reynolds
State Engineer

FEI/ma
cc-Losee & Stewart
Artesia, N. M.

Yates Petroleum Corp.
Artesia, N. M.

Western Development Co.
Denver 2, Colorado

F. H. Hennighausen
Roswell, N. M.

By: 
Frank E. Irby
Chief
Water Rights Division



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

February 2, 1962

MAIN OFFICE OCC
1962 FEB 5 AM 8:19
ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Western Development Company of Delaware and Yates Petroleum Corporation which seeks permission to institute water flood operations in Section 10, Township 19 South, Range 28 East in Eddy County, New Mexico.

Information submitted indicates that the injection wells will have $4\frac{1}{2}$ inch casing set at 2238 feet which is the total depth of the hole and that cement will be returned to 1950 feet. The diagram shows the perforations to be immediately above the top of the cement between 1930 and 1950 feet. My off-hand opinion is that all fluids injected will return to the surface through the annulus outside the $4\frac{1}{2}$ inch casing. The diagram also shows that a packer will be set at 1910 feet in the $4\frac{1}{2}$ inch casing and this location is some 20 feet above perforations and 40 feet above the cement on the outside of the $4\frac{1}{2}$ inch casing. The diagram does not indicate, nor do any of their statements indicate that injection is to be through tubing, but I presume that it will be since the packer is shown at 1910 feet. It is my opinion that the cement outside the $4\frac{1}{2}$ inch casing should return to a point above the packer setting, in order to control the injection and that injection should be through tubing and packer.

If injection is to be through tubing and packer with the packer set a reasonable distance below the top of the cement outside the $4\frac{1}{2}$ inch casing, then this office offers no objection to the granting of the application.

Yours truly,

S. E. Reynolds
State Engineer

FEI/ma
cc-F. H. Hennighausen
Western Development Co.

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Division

Western Development Company of Delaware

~~85 SENA PLAZA, SANTA FE, NEW MEXICO~~

~~TELEPHONE Yucca 2-3388~~

~~P. O BOX 427 ARTESIA, NEW MEXICO~~

October 15, 1962

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr., Secretary

Dear Sir:

This is to inform you that casing pressure tests on our State 648 Lease, Wells No. 64, 73 and 75 as per Commission Order No. R-2203 have been completed and water injection has been initiated.

Well No. 64, located in Unit C Section 10, was tested prior to perforating on June 14, 1962 by Dowell Incorporated to 4,000 pounds and held that pressure for 30 minutes.


Well No. 73, located in Unit B Section 10, was pressure tested by The Western Company August 4, 1962 before perforating to 4,000 pounds and held for 30 minutes.

Well No. 75, located in Unit H Section 10, was pressure tested by The Western Company before perforating April 28, 1962 to 4,000 pounds and held for 30 minutes.

Water injection was initiated on Well No. 75 September 18, 1962; Well No. 73 September 19, 1962; Well No. 64 September 29, 1962. Injection is down casing and plans will be made to pressure test 4 1/2" casing over a packer in September, 1963.

Very truly yours,

WESTERN DEVELOPMENT COMPANY
of Delaware


R. J. Davenport
Production Superintendent

RJD:cm

cc: State Engineer Office
Santa Fe, New Mexico
Attn: Mr. Frank Irby

New Mexico Oil Conservation Commission
P.O. Drawer DD
Artesia, New Mexico
Attn: Mr. M. L. Armstrong

October 17, 1962

C
O
P
Y

Western Development Company of Delaware
P. O. Box 427
Artesia, New Mexico

Attn. Mr. R. J. Davenport
Production Superintendent

Dear Mr. Davenport:

Receipt of your letter of October 13, 1962 reporting pressure tests on your wells No. 64, 73 and 75 in the Artesia Pool in Section 10, Township 19 South, Range 28 East is hereby acknowledged. I assume that we may expect a similar report on Wells 67, 69 and 174 at a later date. Please advise me if this assumption is incorrect.

Very truly yours,

S. E. Reynolds
State Engineer

FEI/ma
cc-Mr. A. L. Porter, Jr.

By:
Frank E. Irby
Chief
Water Rights Division

Western Development Company of Delaware



~~SANTA PLAZA, SANTA FE, NEW MEXICO~~

~~TELEPHONE YU 2-6666~~

~~P. O. BOX 427 ARTESIA, NEW MEXICO~~

October 18, 1962

State of New Mexico
State Engineer Office
State Capitol
Santa Fe, New Mexico

Attention: Mr. Frank E. Irby, Chief
Water Rights Division

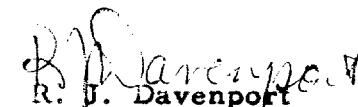
Dear Mr. Irby:

I will forward pressure test results on Well No. 67, 69 and 174, located on our State 648 Lease in Section 10, T.19 S., R.28 E., as soon as they are performed. These wells have not been prepared for water injection as yet, therefore, have not been pressure tested. The State 648 No. 174 well had pipe run to total depth upon completion and the surface pipe was cemented. This test will have to be performed over a packer.

Thank you for your letter of acknowledgement and early reply.

Very truly yours,

WESTERN DEVELOPMENT COMPANY
of Delaware


R. J. Davenport
Production Superintendent

RJD:cm

cc: New Mexico Oil Conservation Commission
P.O. Box 871
Santa Fe, New Mexico
Attn: Mr. A. L. Porter, Jr., Secretary

Western Development Company
825 Petroleum Club Building
Denver 2, Colorado

MAIN OFFICE OCC



1962 MAR 16 11 22
STATE OF NEW MEXICO
STATE ENGINEER OFFICE
SANTA FE

S. E. REYNOLDS
STATE ENGINEER

March 14, 1962

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

A
Reference is made to the application of Western Development Company and Yates Petroleum Corporation which seeks permission to institute a water flood operation in Section 10, Township 19 South, Range 28 East in Eddy County, New Mexico, and to my letters of February 2nd and February 12th 1962, pertaining to this application.

B
Yesterday this application was discussed with Mr. Nutter of your office and Mr. Spitler of Western Development Company who was accompanied by his District Engineer. After considerable discussion of the casing and cementing program to be used in this injection project I arrived at the following conclusion:

C
Injection through 4½ inch J-55 casing (11.6 pounds) will be permitted provided the casing is cemented from bottom to top, or provided casing is cemented from ^{the} shoe up to ~~50~~ ²⁰⁰ feet above the shoe, casing is pressure tested ~~over a packer~~ ^{annually, the packer over a packer} to 4000 psi on installation and tested to injection pressure ~~at one year intervals (1000 psi minimum)~~ ^{or 10000 psi, whichever is greater}. As an alternate, injection may be made through tubing under packer set below the top of the cement surrounding the 4½ inch casing. All pressure test results shall be forwarded to the Oil Conservation Commission and the State Engineer Office on completion of each test.

I have concluded that if these conditions are met there is not likely to be a threat of contamination to any of the fresh water which may exist in the area.

Very truly yours,

S. E. Reynolds
State Engineer

By: *Frank E. Irby*
Frank E. Irby, Chief
Water Rights Division

FEI:hmv

the application of perforation or to a minimum of