

CASE 5576: GEORGE D. RIGGS FOR A
WATERFLOOD PROJECT, EDDY COUNTY,
NEW MEXICO

Cont to Nov 5-

CASE NO.

5576

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5576
Order No. R-5122

APPLICATION OF GEORGE D. RIGGS
FOR A WATERFLOOD PROJECT, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 5, 1975, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 17th day of November, 1975, the Commission, a quorum being present, 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 Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, George D. Riggs, seeks authority to institute a waterflood project on his Hughes Federal, Malco, and Mayfield Federal Leases in the Saladar-Yates Pool by the injection of water into the Yates formation through his Hughes-Federal No. 4, Malco No. 2 and Mayfield-Federal No. 4 wells located, respectively, in Units F, L, and O of Section 33, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico.

(3) That the applicant proposes to inject water into said wells by gravity pressure only.

(4) That the applicant should file an analysis of the supply water and a report of water treatment.

(5) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(6) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

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Case No. 5576
Order No. R-5122

(7) That the operator should 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 from injection, production, or plugged and abandoned wells.

(8) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, George D. Riggs, is hereby authorized to institute a waterflood project on his Hughes Federal, Malco, and Mayfield Federal Leases in the Saladar-Yates Pool by the injection of water by gravity pressure only into the Yates formation through the following-described wells in Section 33, Township 26 South, Range 28 East, NMPM, Eddy County, New Mexico:

Hughes-Federal No. 4, Unit F
Malco No. 2, Unit L
Mayfield-Federal No. 4, Unit O

(2) That injection into each of said wells shall be through internally coated tubing, set in a packer which shall be located within the casing as near as practicable to the casing shoe; that the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure gauge or leak detection device. Internal coating of the tubing shall not be required if the injected fluid is treated on a continuing basis to prevent corrosion.

(3) That the operator shall immediately notify the supervisor of the Commission's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(4) That the operator shall file with the Supervisor of the Artesia District Office of the Commission within 30 days of the date of initial water injection a report showing analysis of the supply water, a report of water treatment processes or chemicals to be used, and a sketch of the treatment facilities.

(5) That the subject waterflood project is hereby designated the Riggs-Saladar Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

-3-

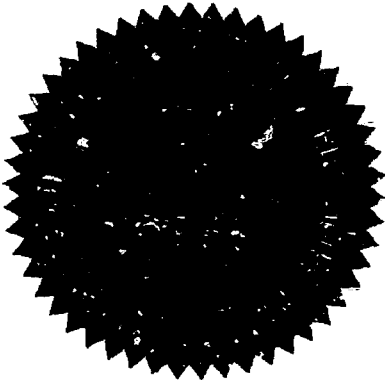
Case No. 5576
Order No. R-5122

(6) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

dr/

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICOHearing Date NOVEMBER 5, 1975 TIME: 9:00 A.M.

NAME	REPRESENTING	LOCATION
J. E. Sperling	Mohrall Sperling	alb.
James H. Smith	et al	Roswell
John Seerey	Exxon -	Midland
John Thomas	Mobile	Midland
Tom Kellahin	Exxon	Santa Fe
	Kellahin & Fox	

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General Court Reporting Service
825 Calle Mojito, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 5, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of George D. Riggs for
a waterflood project, Eddy County,
New Mexico.

CASE
5576

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

William F. Carr, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

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Phone (505) 982-9212

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I N D E X

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Page

GEORGE D. RIGGS

Examination by Mr. Stamets

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EXHIBIT INDEX

Page

Applicant's Exhibit No. One, Sketch

8

Applicant's Exhibit No. Two, Sketch

8

Applicant's Exhibit No. Three, Sketch

8

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Page 3

1 MR. STAMETS: The Hearing will come to order,
2 please.

3 We will call first, Case 5576.

4 MR. CARR: Case 5576, Application of George D. Riggs
5 for a waterflood project, Eddy County, New Mexico.

6 MR. STAMETS: Call for appearances in this Case.
7 Would you state your name for the record, sir?

8 MR. RIGGS: George D. Riggs.

9 MR. STAMETS: And you are the applicant in this
10 Case?

11 MR. RIGGS: Yes.

12 MR. STAMETS: And you are the owner of the wells
13 in question, and the operator?

14 MR. RIGGS: I have a quarter interest and operate
15 this property.

16 MR. STAMETS: You have been operating these wells
17 for how many years?

18 MR. RIGGS: Since 1956.

19 MR. STAMETS: What do you propose in this
20 Application, Mr. Riggs?

21 MR. RIGGS: To put three wells to water flood.

22 MR. STAMETS: Now, how much water do you intend
23 to put in the ground in these wells?

24 MR. RIGGS: Whatever they will take under a
25 gravity head.

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1 MR. STAMETS: Okay, so you don't intend to put
2 any pressure on them?

3 MR. RIGGS: No pressure, no.

4 MR. STAMETS: What's the source of your water?

5 MR. RIGGS: The water in each well is about fifty-
6 five feet in the sand.

7 MR. STAMETS: Is this water at fifty-five feet the
8 only fresh water in the area?

9 MR. RIGGS: It's the only fresh water in the area
10 and it's not fresh, its gyp water.

11 MR. STAMETS: Are all of the wells in your project,
12 the injection wells and the producing wells, cemented through
13 this water section?

14 MR. RIGGS: Yes, all of them.

15 MR. STAMETS: To your knowledge are there any
16 plugged and abandoned wells in this area which have not been
17 properly plugged off in the injection interval?

18 MR. RIGGS: No, there are not.

19 MR. STAMETS: What type of surface facilities
20 will you have there for handling the water?

21 MR. RIGGS: None as yet, I haven't started the
22 project until I get approval of it.

23 MR. STAMETS: What did you have in mind in the
24 way of storage tanks? Do you intend to have a central
25 tank and then flow lines?

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1 MR. RIGGS: Well, there would be a central tank for
2 two of them that are fairly close together and another tank
3 for the one on the south end and a proper filtering, depending
4 on the report from the chemical engineer that I have tentatively
5 on the job.

6 MR. STAMETS: Then the head of water that you would
7 have in the tank would be the pressure that would go to the
8 formation?

9 MR. RIGGS: I don't understand that.

10 MR. STAMETS: You have a tank and it would be
11 filled with water and the weight of the water going through
12 the flow line would be all of the pressure that you would
13 have?

14 MR. RIGGS: Yes.

15 MR. STAMETS: Now, you have previously handed me,
16 Mr. Riggs, three exhibits which are labeled One, Two and
17 Three and these appear to be sketches of the three injection
18 wells, is that right?

19 MR. RIGGS: Yes.

20 MR. STAMETS: I was looking at the Exhibit Number
21 One of the Hughes Number Four well and it would appear that
22 the casing is landed just below six hundred and forty feet?

23 MR. RIGGS: That's right.

24 MR. STAMETS: And then the tubing is set on a
25 packer at six hundred and seventy feet in open hole, is

1 that correct?

2 MR. RIGGS: That's right.

3 MR. STAMETS: Have you been able to test this seal
4 or have you done this work yet?

5 MR. RIGGS: This work is not done, no, that is
6 proposed work.

7 MR. STAMETS: Okay. Normally, Mr. Riggs, we
8 require that the annular space between the tubing and the
9 casing be filled with a fluid and a pressure gauge put on
10 there to determine whether or not there are any leaks. In
11 your system would that be possible or would the fluid simply
12 leak off into the formation between the packer and the base
13 of the casing?

14 MR. RIGGS: Well, there is no place for it to leak
15 to that I know of.

16 MR. STAMETS: Are the formations there very tight
17 and permeable above the packer?

18 MR. RIGGS: Yes, there is no fluid at all until
19 that sand below that line where I propose to set the pipe,
20 set the tubing packer.

21 MR. STAMETS: If it were required, Mr. Riggs,
22 would it cause you any problem if you had to put the
23 packer in the base of the casing instead of an open hole?

24 MR. RIGGS: No, no mechanical problem. I don't
25 believe it would be as good a job, though.

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1 MR. STAMETS: Why is that?

2 MR. RIGGS: There are some other formations below
3 there that -- I don't believe they would take any water,
4 but it's a possibility.

5 MR. STAMETS: Looking at Exhibit Number Two and
6 Exhibit Number Three -- well, Exhibit Number Two shows
7 more or less the same type of a set-up. Exhibit Number Three
8 shows that the packer will be located in the base of the
9 casing, is that correct?

10 MR. RIGGS: Yes, that casing is located in that
11 same lime formation.

12 MR. STAMETS: What type of tubing do you intend to
13 use in this system?

14 MR. RIGGS: Two inch offset.

15 MR. STAMETS: Just plain steel tubing?

16 MR. RIGGS: Yes, just regular offset tubing.

17 MR. STAMETS: Do you know at this time if you
18 will be treating the water for corrosion to prevent corrosion
19 of the tubing?

20 MR. RIGGS: What's that?

21 MR. STAMETS: Will you be treating the water that's
22 being injected to prevent corrosion?

23 MR. RIGGS: Yes, if my chemical report requires
24 it, and I think it should.

25 MR. STAMETS: Would you be willing to file the

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1 results of the water analyses and the recommended chemical
2 treatment?

3 MR. RIGGS: Yes, whatever I get.

4 MR. STAMETS: Okay. I believe that the producing
5 formation here is the Yates?

6 MR. RIGGS: It is the Yates sand, yes.

7 MR. STAMETS: And you have effective control of all
8 of the producing wells in the area?

9 MR. RIGGS: Yes.

10 MR. STAMETS: Are there any questions of the
11 witness? He may be excused.

12 (THEREUPON, the witness was excused.)

13 MR. STAMETS: Is there anything else in this Case?

14 Mr. Riggs, did you prepare these exhibits?

15 MR. RIGGS: Yes, I did.

16 MR. STAMETS: Any objection to the admission of
17 the exhibits? They will be admitted.

18 (THEREUPON, Exhibits One, Two and Three
19 were admitted into evidence.)

20 MR. STAMETS: Anything further in this Case?

21 We will take the Case under advisement. Mr. Riggs,
22 thank you.


23

24

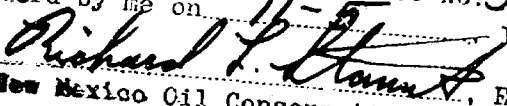
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a court reporter, do hereby
certify that the foregoing and attached Transcript of Hearing
before the New Mexico Oil Conservation Commission was reported
by me, and the same is a true and correct record of the said
proceedings to the best of my knowledge, skill and ability.


Sidney F. Morrish, Court Reporter

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Phone (505) 982-9212

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5576
heard by me on 11-5-75 19 75
, Examiner
New Mexico Oil Conservation Commission

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Page 1

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 22, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of George D. Riggs for a
waterflood project, Eddy County,
New Mexico.

CASE
5576

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

Thomas Derryberry, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

1 MR. NUTTER: We will call the next Case, 5576.

2 MR. DERRYBERRY: Case 5576, application of George
3 D. Riggs for a waterflood project, Eddy County, New Mexico.

4 Mr. Examiner, the Commission has received a request
5 from Mr. Riggs to continue the Case to November 5th.

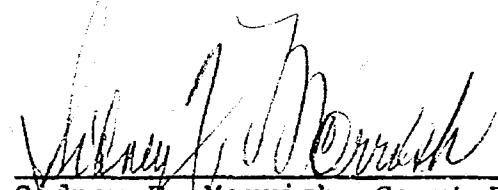
6 MR. NUTTER: Case Number 5576 will be continued
7 to the Examiner Hearing scheduled to be held at this same
8 place at nine o'clock A.M., November 5, 1975.

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REPORTER'S CERTIFICATE

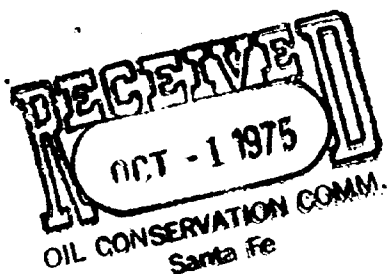
I, SIDNEY F. MORRISH, a court reporter, do hereby
 certify that the foregoing and attached Transcript of Hearing
 before the New Mexico Oil Conservation Commission was reported
 by me, and the same is a true and correct record of the said
 proceedings to the best of my knowledge, skill and ability.


 Sidney F. Morrish, Court Reporter

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Examiner hearing of Case No. 5576,
 heard by me on 10/22, 1975.


 Examiner
 New Mexico Oil Conservation Commission

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 Phone (505) 982-9212



Case 5576

Carlsbad, New Mexico
29 Sept. 1975

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

Application is hereby made for the original authority to inject water into the Yates sand formation of the Saladar-Yates field for the purpose of secondary recovery of oil.

Enclosed are:

- 1 A plat showing the location of the proposed injection wells and other wells in the field. There^{are} no other wells in the 2 mile radius area which produce from the Yates sand.
- 2 Sample logs of two of the proposed injection wells.
- 3 A diagram to show the relation of casing, tubing, packer and the injection zone.
- 4 The injection zone is a sand in the Yates formation at a depth of about 650 feet. The fluid to be injected will be water from a lease water well which is 55 feet deep.

DOCKET MAILED

Date 10/14/75

DOCKET MAILED

Date 10/27/75

Geo. D. Riggs Operator

P.O. Box 116

Carlsbad, NM 88220

Geo. D. Riggs

Case 5576

SALADAR - YATES FIELD

Sec 33 T 20 S R 28 E

Eddy County NM

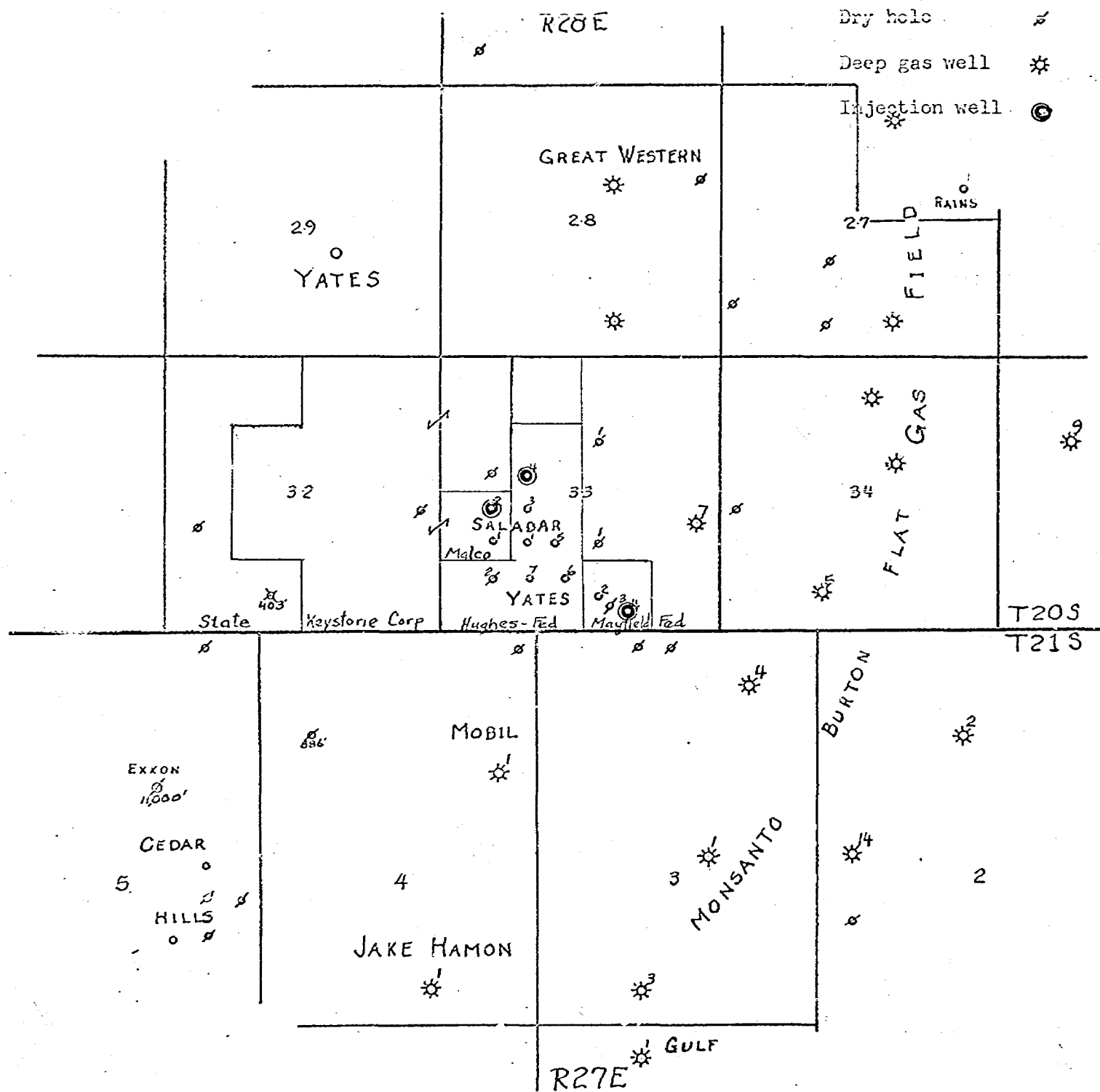
Scale 2" = 1 mile

Oil well •

Dry hole ⚡

Deep gas well ⚙

Injection well ⊙



Case 5576

SAMPLE LOG

Geo. D. Riggs

#4 Mayfield-Fedral LG C62254

Sec 33, 203-28E

330 ft from S line

1753 ft from East line

Elev. 3195 rig floor

Depth	Sample	Description
Sur to 78		surface sand and clay, unconsolidated
78	275	red beds and fine red sand, some gyp
275	383	red beds and gyp some red sand
383	436	salt with few gyp streaks some red clay
436	440	gyp and anhydrite <u>Top Fletcher 436</u>
440	460	anhydrite dense, hard
460	464	dolomite, brown, anhydritic <u>Top Tansill 460</u>
460	466	anhydrite, soft, some sandy shale
466	472	dolomite, gray hard
472	474	shale, blue gray silty
474	478	dolomite, gray hard
478	483	shale, fine sandy, gray
484	491	dolomite, gray with some anhydrite
491	493	shale, gray silty
493	501	dolomite, hard gray
501	504	shale, green gray with thin dolomite beds
504	515	shale, red some anhydrite
515	520	anhydrite, gray silty
520	539	dolomite, lite gray, hard
539	549	dolomite lite tan and gray, hard
549	557	dolomite and anhydrite
557	559	dolomite, gray, hard
559	565	dolomite and anhydrite some gray shale
565	578	anhydrite, white granular
578	585	dolomite, lite tan some shale
585	589	anhydrite, white dolomitic
589	592	dolomite, lite brown
592	597	anhydrite, white granular
597	607	dolomite, gray hard
607	608	shale, gray silty
608	612	dolomite, gray some anhydrite
612	618	anhydrite, lite dolomite, some shale <u>Top Yates 612</u>
618	622	anhydrite, shale and dolomite
622	624	dolomite, lite gray
624	636	sand, fine gray
636	638	dolomite, lite gray
638	659	sand, fine gray show oil 642-44; 650-52
659	664	dolomite, lite gray
664	672	sand, fine gray
672	677	dolomite, lite gray
677	680	dolomite, dark gray
680	688	sand, fine gray
688	694	dolomite, sandy gray
694	728	sand, limy, tite
728	730	dolomite, dense white T. D.

September 22, 1964

Geo. D. Riggs
Geo. D. Riggs

Case 5576

SAMPLE LOG

Geo. D. Riggs

#4, Hughes Fedral, N.M. C3277
 Sec 33, T 20 S; R 20 E
 2310 ft. from N, 1650 ft. from W
 Elev. 3203.6 rig floor

Depth	Sample description
Surface - 187	7" surface pipe
187 - 195	gyp
195 - 268	red sand and clay, some gyp streaks
268 - 278	gyp, white
278 - 290	red sand, fine some gyp
290 - 320	gyp and red beds
320 - 340	fine red sand
340 - 360	gyp, some red clay
360 - 370	fine sand
370 - 400	gyp, some red and blue clay
400 - 410	red and blue clay, some gyp
410 - 483	salt, some red clay and gyp
483 - 497	anhydrite
497 - 510	brown dolomite 75, anhydrite 25
510 - 520	brown dolomite and anhydrite
520 - 530	" " 80 " 20
530 - 537	" " 80 " 15 fine gray silt 5
537 - 550	gray dolo 35; sandy gray shale 65
550 - 589	gray dolo, and hard anhydrite
589 - 600	gray dolo 45, anhydrite 40, gray sandy shale 15
600 - 615	gray dolo and anhydrite
615 - 642	brown stained dolomite, hard
642 - 655	gray sand 15, anhy, 25, dolo 60
655 - 657	white granular anhydrite
657 - 660	lite gray dolo
660 - 669	fine gray sand
669 - 671	lite gray dolo
671 - 705	sand oil 677-81, 682-95
705 - 767	lite gray dolomite, some pyrite. T. D.

Dec. 4, 1956

Geo. D. Riggs
 Geo. D. Riggs

Case 5576

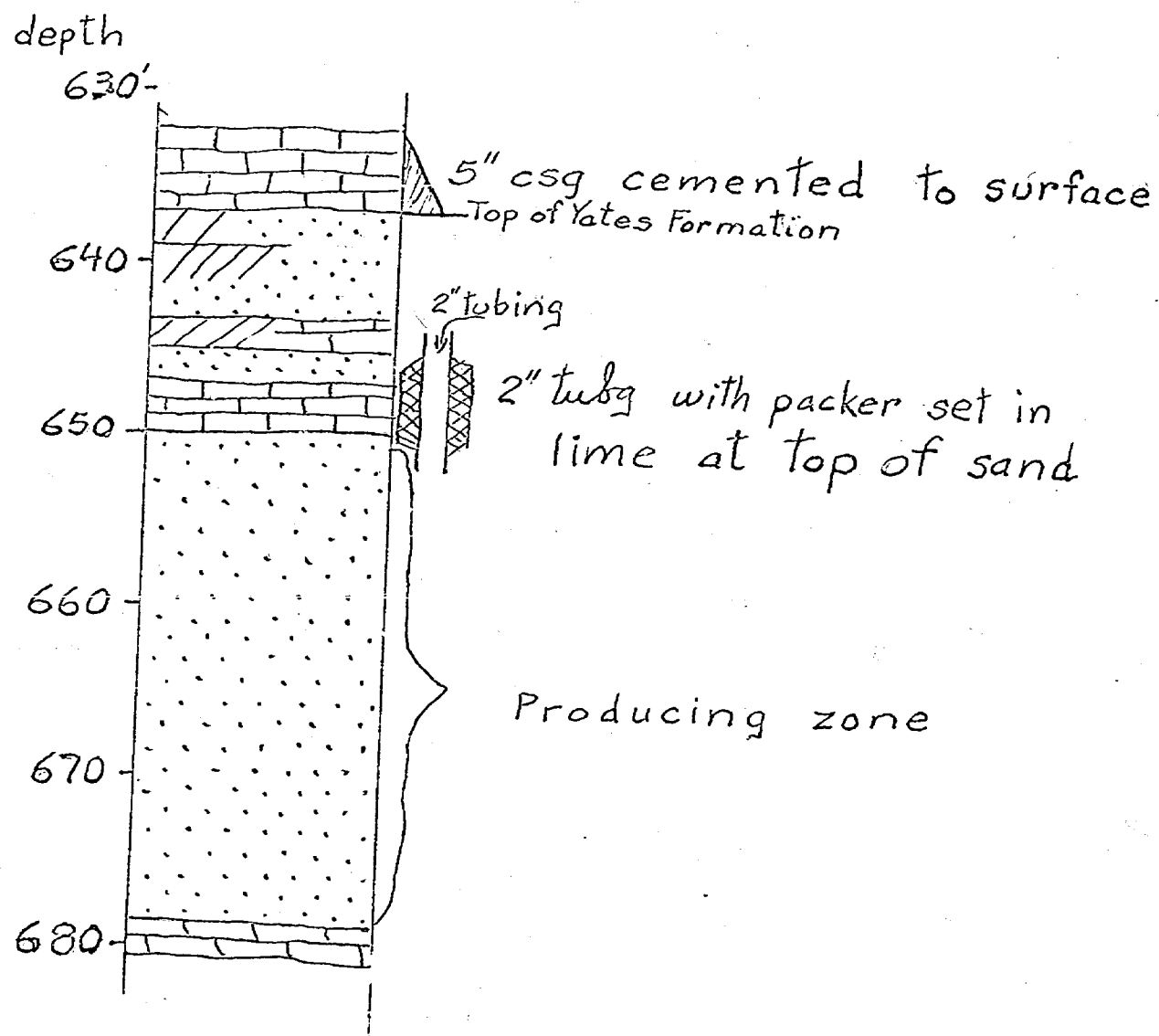
SALADAR - YATES FIELD

Sec 33 T20S R28E

Eddy County NM

Diagram of:

Casing, tubing &
producing zone





STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

LAND COMMISSIONER
PHIL R. LUCERO
November 18, 1975



STATE GEOLOGIST
EMERY C. ARNOLD

George D. Riggs
Box 116
Carlsbad, New Mexico

Re: CASE NO. 5576
ORDER NO. R-5122

Applicant:

George D. Riggs

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/ fd

Copy of order also sent to:

Hobbs OCC	x
Artesia OCC	x
Aztec OCC	

Other _____

Case 5576

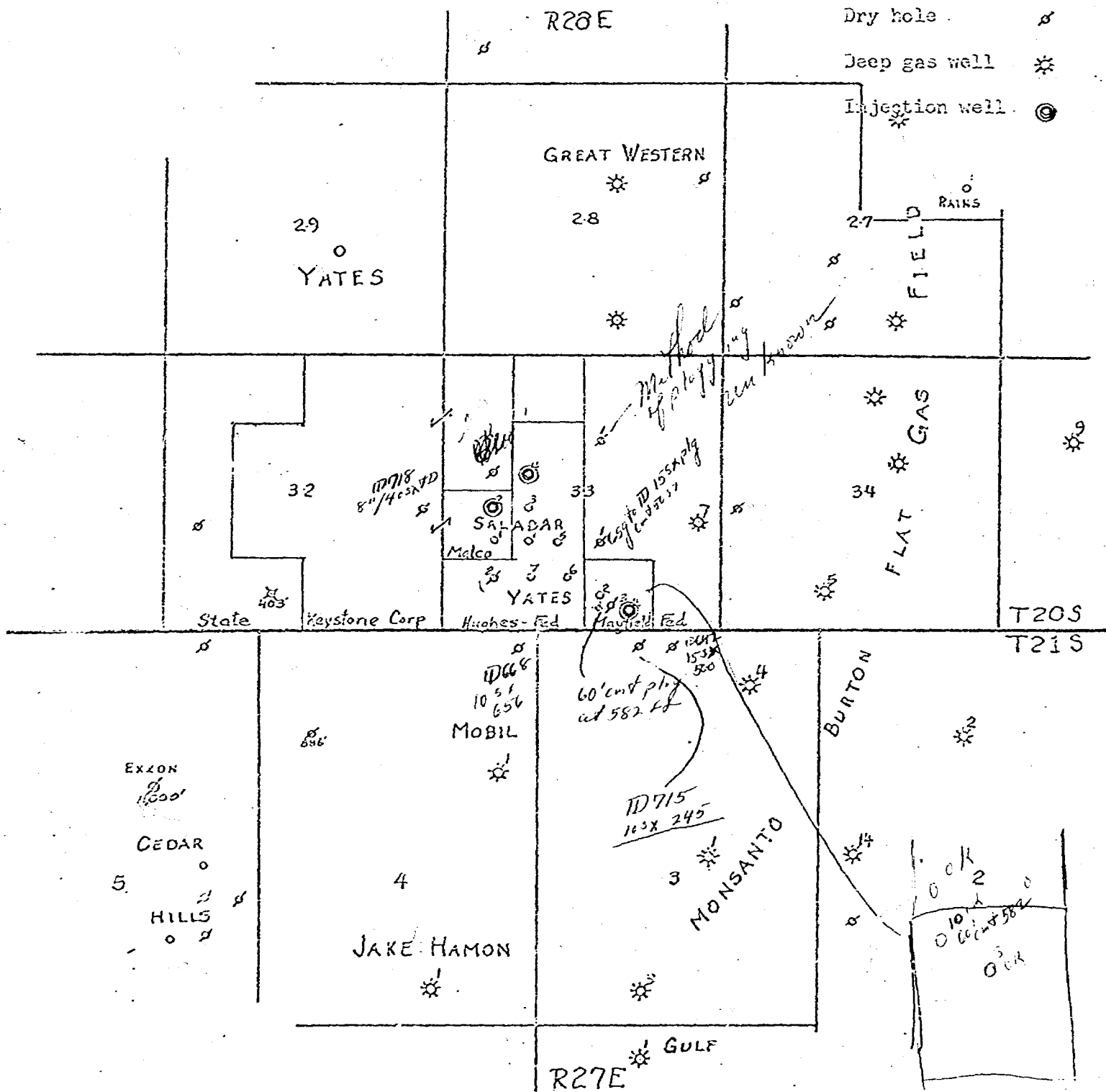
SALADAR - YATES FIELD

Sec 33 T 20 S R 28 E

Eddy County NM

Scale 2" = 1 mile

- Oil well ○
- Dry hole ⋈
- Deep gas well ⋆
- Injection well ⊙



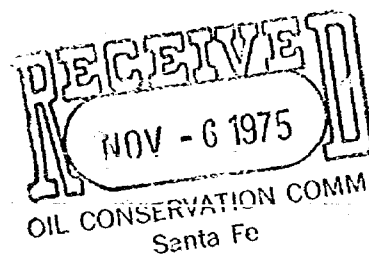
Mobil Oil Corporation

P.O. BOX 633
MIDLAND, TEXAS 79701

November 4, 1975

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

Attention: Mr. R. L. Stamets



RE: C-125 GAS WELL
SHUT-IN PRESSURE REPORT

Dear Sir:

Please refer to your letter dated October 27, 1975 concerning the subject report.

The Marshall Com #9C - Drinkard Field - was submitted on 10-1-75 (copy attached).

If additional information is required, please advise.

Yours very truly,

A handwritten signature in cursive script, reading "Christine O. Tucker".

(Mrs.) Christine O. Tucker
Authorized Agent

COT/jm

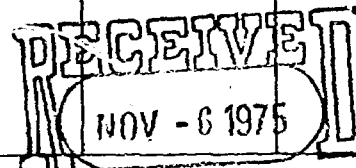
cc: NMOCC-Hobbs

NEW MEXICO OIL CONSERVATION COMMISSION
GAS WELL SHUT-IN PRESSURE REPORT

Form O-115
Revised 1-1-65

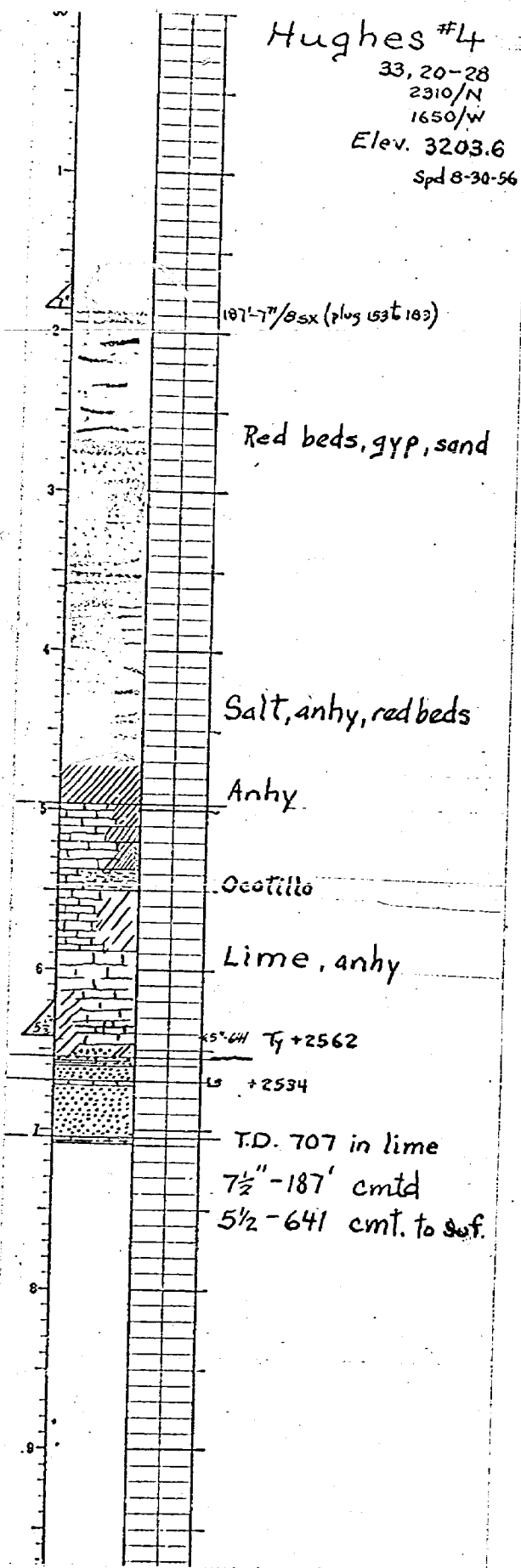
Operator Mobil Oil Corporation	Address P. O. Box 1800 Hobbs, NM 88240	Pool Drinkard	County Lea
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LEASE	WELL NO.	LOCATION				DATE PRESS. RUN	TIME S.I. HRS. MIN.	S.I. PRESSURE PSIG (DWT)	S.I. PRESSURE PSIA	DATE TEST
		UNIT	SEC.	TWP.	RGE.					
Brunson Argo T	6	E	10	22	37	4-11-75	73.3	728.0	741.2	5-31-74
Brunson Argo	9	B	9	22	37	1-31-75	74.0	742.0	755.2	1-24-75
Brunson Argo	10	G	9	22	37	4-14-75	72.0	622.0	635.2	6-10-75
Brunson Argo	12	H	9	22	37	4-14-75	72.3	882.0	895.2	6-10-75
Brunson Argo T	13	A	9	22	37	3-17-75	73.0	818.0	831.2	1-31-75
Brunson Argo LT	15	F	10	22	37	2-13-75	71.5	1148.0	1161.2	1-31-75
Brunson Argo	17	D	10	22	37	4-14-75	72.5	532.0	545.2	5-31-75
Brunson Argo	18	C	10	22	37	4-14-75	73.0	512.0	525.2	1-31-75
Long	3	O	11	22	37	1-16-75	73.0	1047.0	1060.2	
Long	6	P	11	22	37	1-23-75	74.3	1006.0	1019.2	1-24-75
Long	7	I	11	22	37	9-11-75	69.3	530.0	543.2	6-10-75
Marshall Com T	3	D	34	21	37	4-7-75	69.8	645.0	658.2	5-31-75
Marshall Unit	6	E	34	21	37	1-20-75	73.8	969.0	982.2	9-12-75
Marshall Com	9	C	34	21	37	7-10-75	69.0	682.0	695.2	5-31-75



I hereby certify that the above information is true and complete to the best of my knowledge and belief. SEE RULE 402

Signature [Signature] Title Director-Production Evaluation Date 10-1-75



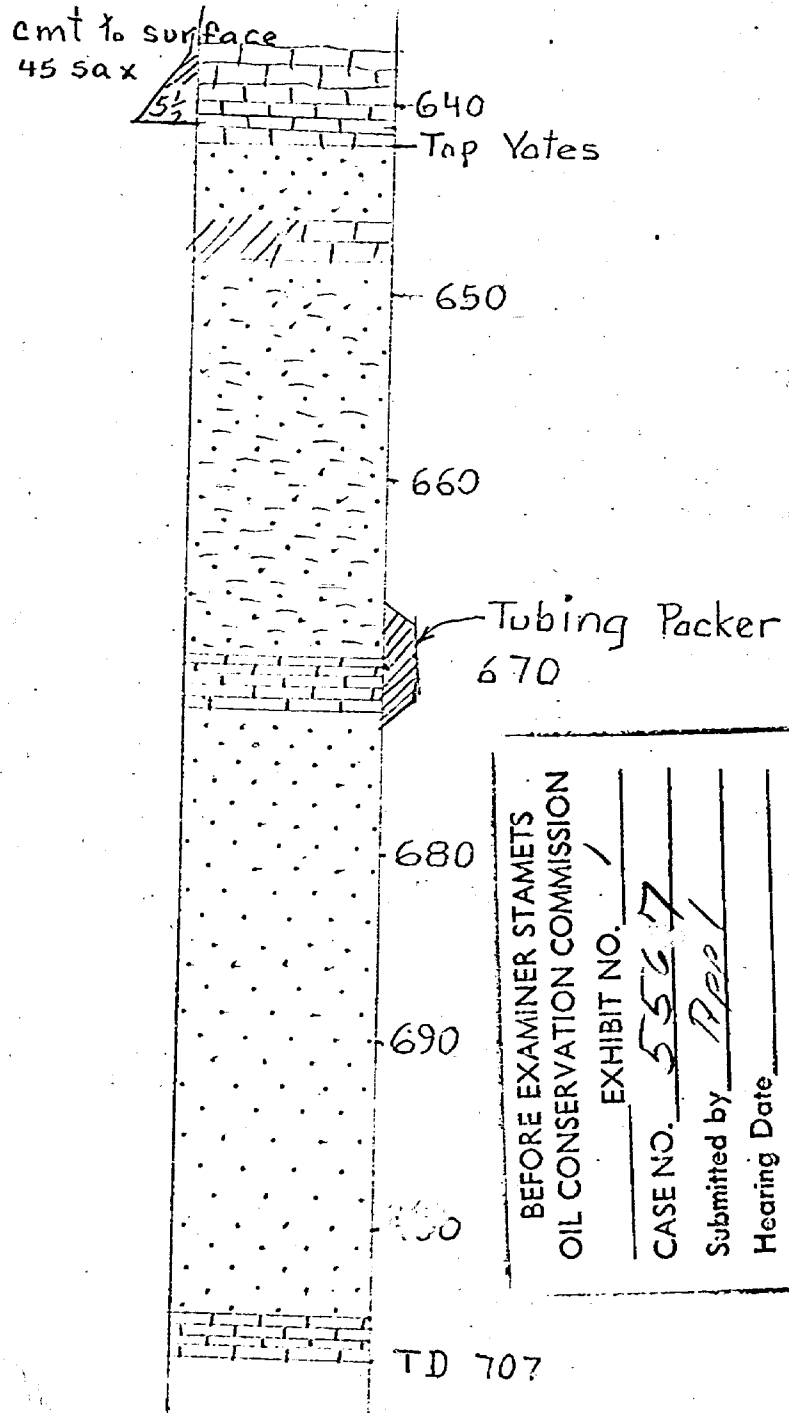
SALADAR - YATES FIELD

Sec 33 T20S R28E

Eddy County NM

Diagram of:
 Casing, tubing &
 producing zone

Hughes No. 4 Unit F
 2310 ft. from North line
 1650 ft. from West line



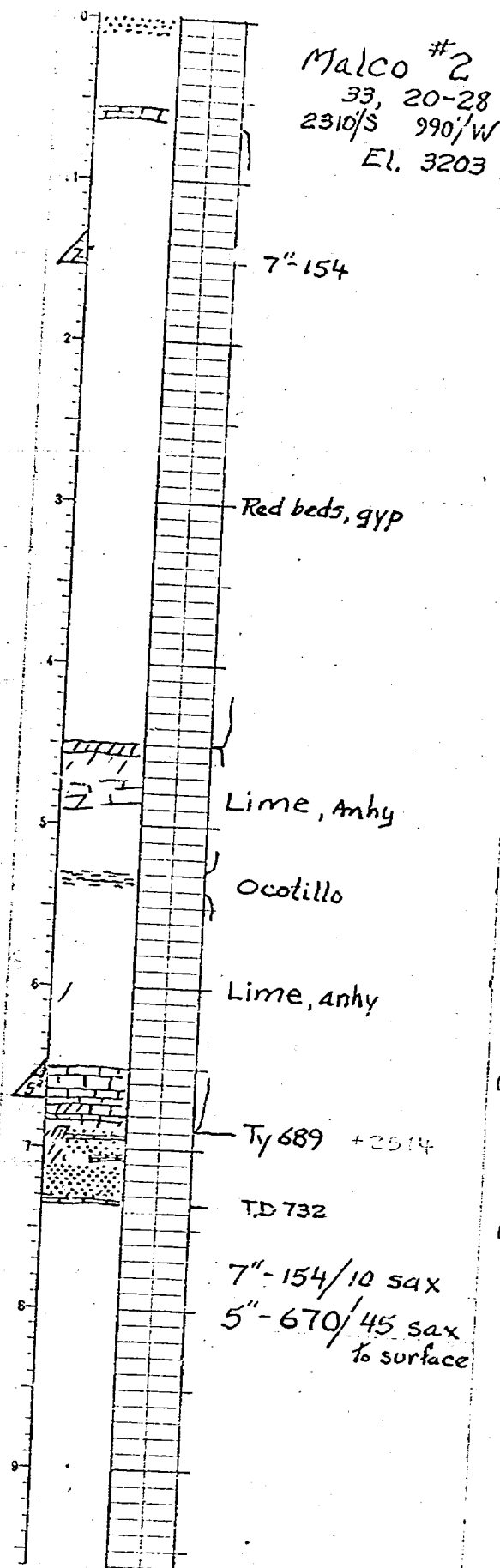
BEFORE EXAMINER STAMETS
 OIL CONSERVATION COMMISSION

EXHIBIT NO. 1

CASE NO. 5567

Submitted by Rpeel

Hearing Date



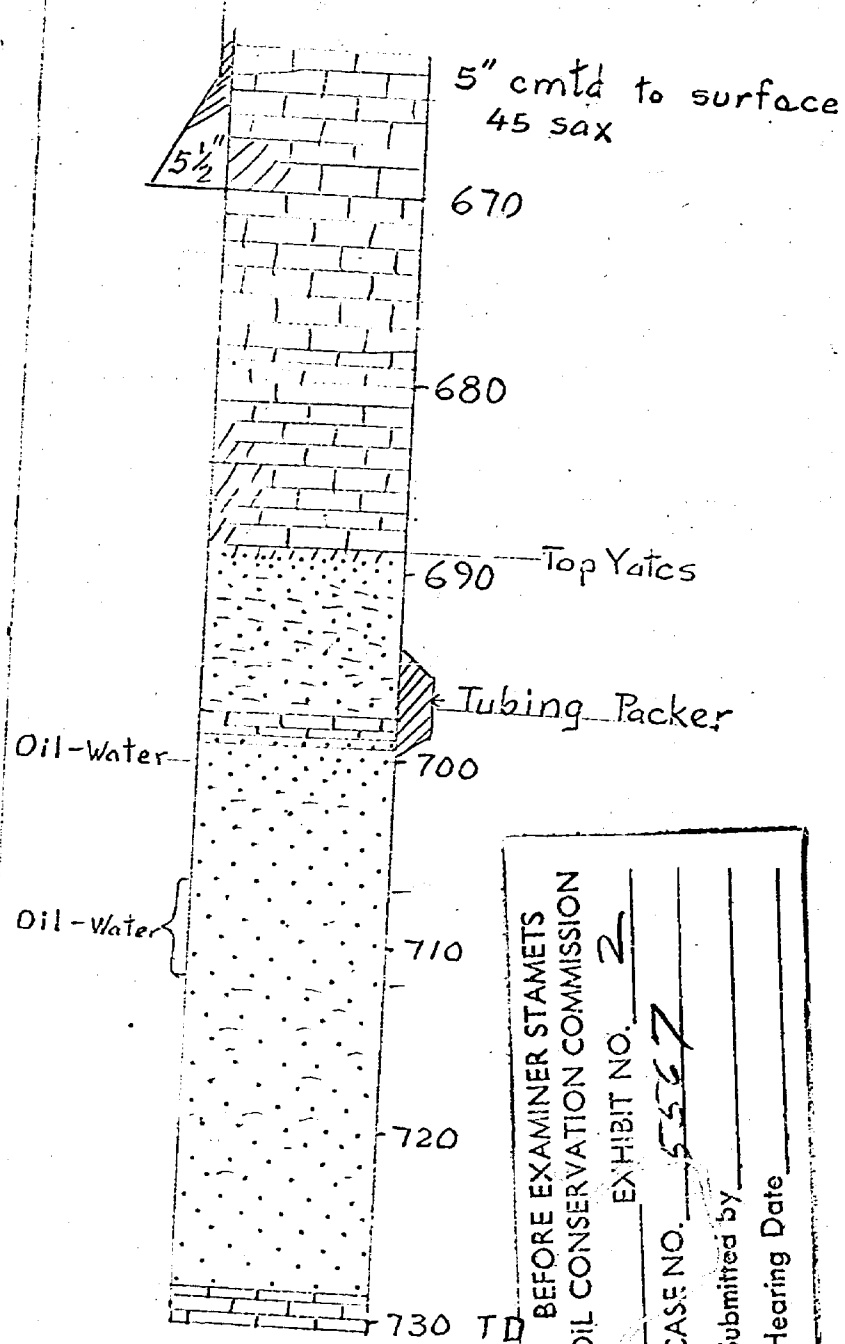
SALADAR - YATES FIELD

Sec 33 T20S R28E

Eddy County NM

Diagram of:
Casing, tubing &
producing zone

Malco No. 2 Unit L
2310 ft. from South line
990 ft. from West line



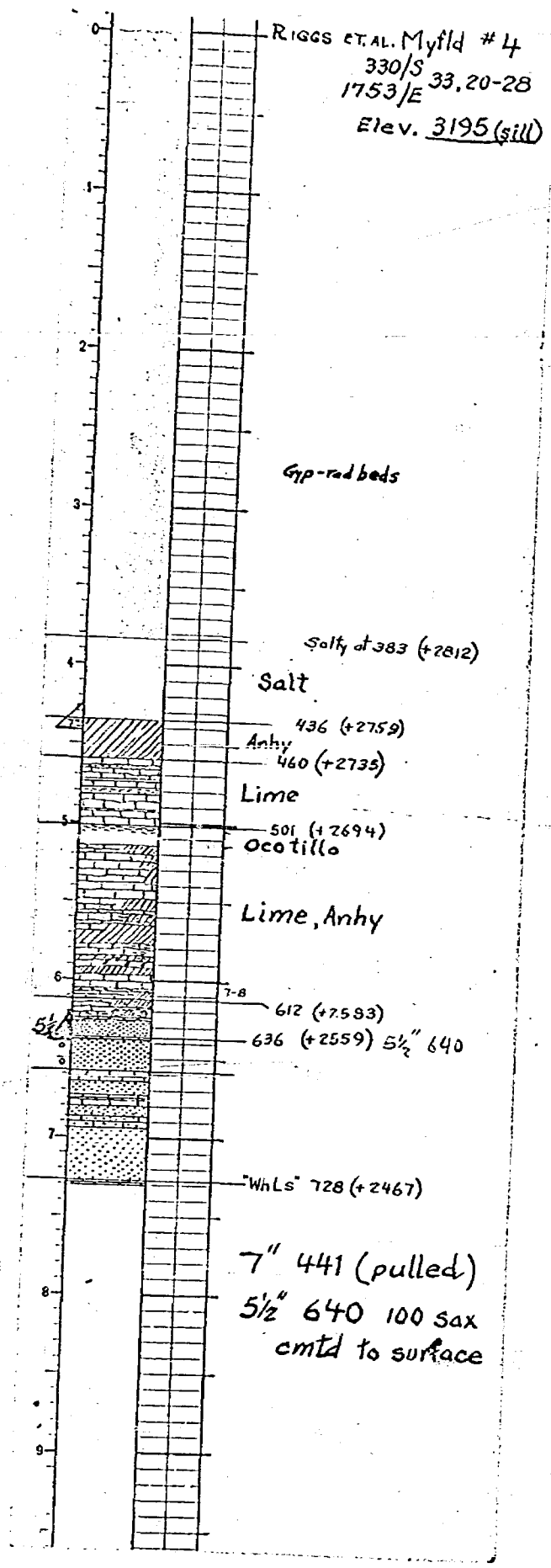
BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

EXHIBIT NO. 2

CASE NO. 5567

Submitted by _____

Hearing Date _____

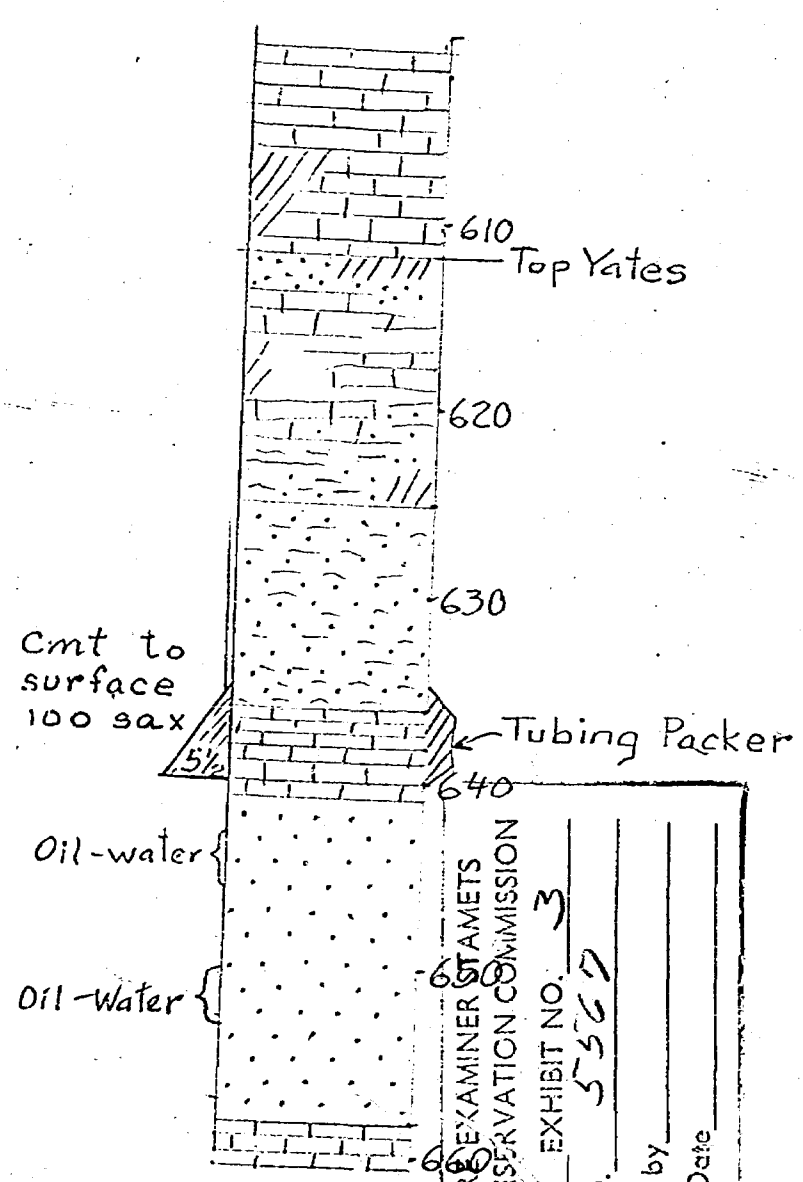


SALADAR - YATES FIELD

Sec 33 T20S R28E
 Eddy County NM

Diagram of:
 Casing, tubing &
 producing zone

Mayfield No.4 Unit 0
 330 ft. from South line
 1753 ft. from East line



BEFORE EXAMINER STAMETS
 OIL CONSERVATION COMMISSION

EXHIBIT NO. 3

CASE NO. 5567

Submitted by _____

Hearing Date _____

Docket No. 28-75

Dockets Nos. 29-75 and 30-75 are tentatively set for hearing on November 19 and December 3, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 5, 1975

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

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

CASE 5533: (Continued from September 24, 1975 Examiner Hearing)

Application of Southern Union Production Company for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Ellenburger formation underlying the N/2 of Section 21, Township 12 South, Range 26 East, Chaves County, New Mexico, to be dedicated to a well to be drilled at an orthodox location in Unit 2 of said Section 21. 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. Also to be considered will be the designation of the applicant as the operator of the well and a charge for the risk involved in drilling said well.

CASE 5565: (Continued from October 8, 1975 Examiner Hearing)

Application of Atlantic Richfield Company for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Vacuum Grayburg-San Andres Pool by injection of water through seven wells on its State "B" and State "C" Leases, six of said wells being converted producers located in Units C, E, I, K, M, and O of Section 32, Township 17 South, Range 34 East, Lea County, New Mexico, and the seventh being a new well drilled at an unorthodox location 250 feet from the South line and 2250 feet from the West line of said Section 32. Applicant further seeks an administrative procedure whereby the project area could be expanded and additional wells at standard and non-standard locations put on injection and production.

CASE 5576: (Continued from October 22, 1975 Examiner Hearing)

Application of George D. Riggs for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Saladar-Yates Pool by the injection of water through his Hughes-Federal No. 4, Malco Well No. 2, and Mayfield Federal No. 4 Wells located, respectively, in Units F, L, and O of Section 33, Township 20 South, Range 28 East, Eddy County, New Mexico.

CASE 5578: Application of Mobil Oil Corporation for a non-standard gas proration unit, two unorthodox gas well locations, and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of a 320-acre non-standard gas proration unit comprising the W/2 SW/4 and the SE/4 SW/4 of Section 28, and the NW/4 and SW/4 NE/4 of Section 33, Township 21 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to its E. O. Carson Wells Nos. 4 and 22 located in Units N and L, respectively, of said Section 28.

CASE 5579: Application of Exxon Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Laguna Grande Unit Area comprising 7640 acres, more or less, of Federal, State, and fee lands in Township 23 South, Range 29 East, Eddy County, New Mexico.

CASE 5580: Application of Cities Service Oil Company for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 18, Township 22 South, Range 27 East, South Carlsbad Gas Field, Eddy County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 1650 feet from the South line and 1980 feet from the West line of said Section 18. 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. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 5581: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Astro-Tex Oil Corporation of New Mexico, American Employers' Insurance Company and all other interested parties to appear and show cause why the Cain Well No. 2 located in Unit J of Section 22, Township 15 North, Range 33 East, NMPM, Harding County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5582: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Eddy, Lea, and Chaves Counties, New Mexico.

(a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Bass-Morrow Gas Pool. The discovery well is the Perry R. Bass Big Eddy Unit Well No. 39 located in Unit G of Section 29, Township 21 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 29: E/2

(b) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Cherry Canyon production and designated as the South Carlsbad-Cherry Canyon Pool. Further to assign approximately 16,275 barrels of oil discovery allowable to the discovery well, the Belco Petroleum Company Martin Com Well No. 2, located in Unit F of Section 20, Township 22 South, Range 27 East, NMPM. Said well was completed September 12, 1975. The top of the perforations is at 3255 feet. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 20: NW/4

(c) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Corral Draw-Wolfcamp Gas Pool. The discovery well is the Mobil Oil Corporation Corral Draw Unit Well No. 2 located in Unit K of Section 22, Township 25 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 29 EAST, NMPM
Section 22: SW/4

(d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Phantom Draw-Wolfcamp Gas Pool. The discovery well is the Texas Pacific Oil Company, Inc. Phantom Draw Unit Well No. 1, located in Unit M of Section 20, Township 26 South, Range 31 East, NMPM. Said pool would comprise:

TOWNSHIP 26 SOUTH, RANGE 31 EAST, NMPM
Section 20: SW/4

(e) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Bone Springs production and designated as the Sand Dunes-Bone Springs Pool. The discovery well is the Skelly Oil Company Federal Sand 18 Well No. 1, located in Unit H of Section 18, Township 23 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 32 EAST, NMPM
Section 18: E/2

(f) EXTEND the Atoka-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 1: W/2
Section 3: E/2

(g) EXTEND the South Bell Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 34 EAST, NMPM
Section 6: S/2
Section 7: N/2

(h) EXTEND the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 27: NW/4

(i) EXTEND the Casey-Strawn Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 34: NW/4

(j) EXTEND the East Carlsbad-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 1: NE/4

(k) EXTEND the Cemetary-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 25 EAST, NMPM
Section 28: N/2

(l) EXTEND the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM
Section 32: SE/4
Section 33: SW/4

(m) EXTEND the Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 18: NE/4

(n) EXTEND the Indian Draw-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 18: S/2 NE/4 & E/2 SW/4

(o) EXTEND the West Knowles-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 35: NW/4

(p) EXTEND the Langlie Mattix Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM
Section 3: NW/4

(q) EXTEND the Llano-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 35 EAST, NMPM
Section 31: NE/4

(r) EXTEND the Penasco Draw San Andres-Yeso Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM
Section 1: SE/4 SW/4

(s) EXTEND the Red Tank-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 32 EAST, NMPM
Section 17: All

(t) EXTEND the Sand Dunes-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
Section 25: W/2

(u) EXTEND the Shugart Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 23: E/2 SW/4

(v) EXTEND the Tom Tom-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 31 EAST, NMPM
Section 27: SE/4

(w) EXTEND the Tres Papalotes-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM
Section 28: SE/4

(x) EXTEND the Tulk-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 32 EAST, NMPM
Section 27: NW/4

(y) EXTEND the North Vacuum-Ibo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 35: SE/4

Examiner Hearing - Wednesday November 5, 1975

Docket No. 28-75

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TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 2: E/2

(z) EXTEND the Vada-Pennsylvanian Pool in Lea County, New Mexico,
to include therein:

TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM
Section 3: SE/4

(aa) EXTEND the Wantz-Granite Wash Pool in Lea County, New Mexico,
to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 1: NE/4

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 19: SE/4

(bb) EXTEND the Warren-Tubb Gas Pool in Lea County, New Mexico, to
include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 34: NW/4

Examiner Hearing - Wednesday - October 22, 1975

Docket No. 26-75

-2-

CASE 5576: Application of George D. Riggs for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Saladar-Yates Pool by the injection of water through his Hughes-Federal No. 4, Malco Well No. 2, and Mayfield-Federal No. 4 Wells located, respectively, in Units F, L, and O of Section 33, Township 20 South, Range 28 East, Eddy County, New Mexico.

CASE 5577: Application of Atlantic Richfield Company for amendment of Order No. R-4549, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-4549, as amended, which order approved the institution of the Empire-Abo Pressure Maintenance Project in the Empire-Abo Unit Area, Eddy County, New Mexico, and established rules for the operation of said project. Applicant seeks the amendment of said rules to permit the injection of non-Abo gas and to establish a separate non-Abo gas bank for said project.

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5576

Order No. R-5122

APPLICATION OF GEORGE D. RIGGSFOR A WATERFLOOD PROJECT, EDDY

COUNTY, NEW MEXICO.

ORDER OF THE COMMISSIONBY THE COMMISSION:

This cause came on for hearing at 9 a.m. on ~~October 22~~ ^{NOVEMBER 25}
19 ⁷⁵, at Santa Fe, New Mexico, before Examiner, Daniel S.

Natter Richard L. STANLEY.

NOW, on this November day of October, 1975, the
Commission, a quorum being present, 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 Commission has jurisdiction of this cause and the
subject matter thereof.

(2) That the applicant, George D. Riggs,
seeks authority to institute a waterflood project on ~~his~~ ^{his} Hughes-Federal
Malco, and Mayfield Federal Leases, ^{in the} Saladar-Yates
Pool, by the ~~injection~~ ^{injection} of water into the Yates
his Hughes-Federal No. 4, Malco No. 2 and Mayfield
formation through ~~injection wells in Sections~~
Federal No. 4 wells located, respectively, in Units F, L, and O of Section 33,
TOWNSHIP 20 South, Range 28 East, NMPM, Eddy
County, New Mexico.

(5) That the wells in the project area are in an advanced
state of depletion and should properly be classified as
"stripper" wells.

(6) That the proposed waterflood project should result
in the recovery of otherwise unrecoverable oil, thereby preventing
waste.

(3) That the applicant proposes to inject
water into said wells by gravity pressure
only.

That the applicant shall file an affidavit
of the supply of water and a report of water
treatment.

Case NO. _____

Order No. R- _____

(7) That the operator should 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 from injection, production, or plugged and abandoned wells.

(8) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, George D. Piggs,
is hereby authorized to institute a waterflood project on his Hughes
Federal, Malco, and Mayfield Federal Lease, in the Saladar-Yates Pool,
by the injection of water by gravity pressure only into the Yates
formation through the following-described wells in Section 33 Township _____
20 South, Range 28 East, NMPM, Eddy County,
New Mexico:

Hughes-Federal No. 4, Unit F
Malco ~~No. 2~~ No. 2, Unit L
Mayfield-Federal No. 4, Unit O

(2) That injection into each of said wells shall be through internally coated tubing, set in a packer which shall be located within the casing as near as practicable to the casing shoe ~~uppermost perforation~~; that the casing-tubing annulus of each injection well shall be loaded with an inert fluid and equipped with an approved pressure

gauge or ~~attention attracting~~ leak detection device. Internal coating of the tubing shall not be required if the injected fluid is treated.

(3) That the operator shall immediately notify the supervisor of the Commission's Artesia district office of the containing basic to commission failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(5) That the subject waterflood project is hereby designated the Rioja - Salador Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(6) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

(4) That the operator shall file with the Supervisor of the Artesia District office of the Commission within 30 days of the date of initial water injection a report showing analysis of the supply water, a report of water treatment processes or chemicals to be used, and a sketch of the treatment facilities.