

CASE 4627: Appli. of ANADARKO
FOR A WATERFLOOD EXPANSION,
LEA COUNTY, NEW MEXICO.

WILLARD
990 FM 2-2
1310 FM
SER 23-22-37

Case Number

4627

Application

Transcripts

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
November 17, 1971

IN THE MATTER OF:

Application of Anadarko Pro-
duction Company for a water-
flood expansion, Lea County,
New Mexico.

Case No. 4627

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

dearnley-meier reporting service

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS
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PAGE

3

I N D E X

WITNESS

PAGE

Clarence Stumhoffer

Direct Examination by Mr. Kellahin

4

EXHIBITS

Exhibit No. 1

6

Exhibit No. 3

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1 CASE NO. 4627:

2 HEARING EXAMINER: Case 4627: Application of
3 Anadarko Production Company for a water-flood expansion, Lea
4 County, New Mexico.

5 MR. KELLAHIN: I am Jason Kellahin, Kellahin & Fox,
6 Santa Fe, appearing for the applicant, and I have one witness I
7 would like to have sworn, and three exhibits marked.

8 (Whereupon applicant's Exhibits 1, 2, and 3 were marked
9 for identification by the Reporter.)

10 HEARING EXAMINER: Other appearances in the case? If
11 there are none, you may proceed.

12 CLARENCE STUMHOFFER

13 a Witness, having been first duly sworn according to law, upon
14 his oath testified as follows:

15 DIRECT EXAMINATION

16 BY MR. KELLAHIN

17 Q Would you state your name, please?

18 A Clarence Stumhoffer.

19 Q Whom are you employed by and in what position?

20 A Anadarko Production Company, Fort Worth, Texas, as
21 supervisor of the second recovery division.

22 Q Have you testified before the Oil Conservation Commission
23 or one of its Examiners and made your qualifications a
24 matter of record?

25 A Yes.

1 MR. KELLAHIN: Are the witness' qualifications
2 acceptable?

3 HEARING EXAMINER: Yes.

4 Q (By Mr. Kellahin) Are you familiar with the application of
5 Anadarko Production Company in Case 4627?

6 A Yes.

7 Q Briefly, what is proposed by the applicant in this case?

8 A The applicant, Anadarko Production Company, in this case,
9 4627, seeks Oil Conservation Commission approval to expand
10 the Langlie-Mattix Penrose Sand Unit Water Flood Project
11 by drilling for water injection wells at non-standard
12 locations near the outside boundaries of the unit area, to
13 provide back up water injection to outside Langlie-Mattix
14 Penrose sand under its producing wells.

15 Q The Penrose sand unit is a water flood project that has
16 been approved by the Commission, is it not?

17 A Yes.

18 Q You are presently injecting water in injection wells in
19 that project?

20 A Yes, we are.

21 Q Would you give the location of the proposed new injection
22 wells?

23 A I would like to refer you to Exhibit No. 1, a map of the
24 Langlie-Mattix Penrose Sand Unit that shows the present
25 water flood development and the proposed water flood
development that we are requesting in this hearing.

1 The proposed locations are shown in red on the map.
2 and I would like to refer to those at this time.

3 The first well is Well No. 8-5, to be located ten feet
4 south of the north line of Section 21, Township 22, South
5 Range 37 East, Lea County, New Mexico.

6 The next well would be Well No. 1-2, to be located
7 1,310 feet north of the south line, 1,310 feet east of the
8 west line of Section 14, same township and range.

9 The third well, No. 2-2 is proposed to be located 990
10 feet south of the north line, 1,310 feet east of the west
11 line of Section 23, same township and range, and the fourth
12 well, No. 40-1 is proposed to be located 1,650 feet north
13 of the south line, 1,310 feet east of the west line of
14 Section 23, same township and range.

15 The first well, No. 8-5, is offset to the northeast
16 and southwest by two producing wells that could have the
17 unitized formation open.

18 The northeast offset is Anadarko Cole No. 3. That,
19 for proration purposes, is carried in the Penrose-Skelly
20 field, and Anadarko is the owner of this 100 percent owner
21 of this No. 3, and the second well is Miller Deck No. 1
22 Patsy, located to the southwest of the proposed ir-
23 action well.

24 It is carried in the Langlie Mattix oil pool and it
25 also has the Penrose or United formation open for

1 production.

2 We are in verbal negotiations with Miller Deck and
3 Anaconda as the owner of the Cole well as to a
4 cooperative or joint venture in drilling this injection
5 well.

6 There was no objection to the drilling of the well,
7 just a matter of the ownership of the well.

8 The other three wells, number 1-22-2 and 40-1 are
9 located on the east side of the Langlie Mattix Penrose Sand
10 unit, and there are no producing wells outside of the unit
11 area offsetting this eastern boundary producing from the
12 unitized formation.

13 Now, I might add, along the north boundary of the
14 unit we show a proposed development along that line, well
15 number 73--

16 Q Inside the unit?

17 A Inside the unit area.

18 Q Yes.

19 A Well No. 3-3. Well No. 7-3 5A-1 and 3-388 are proposed for
20 conversion to water injection in a cooperative agreement
21 with the offset operators to the north. We propose to
22 convert these wells under the provisions of Order 3247
23 dated June 5, 1967, which allows for administrative
24 approval to convert injection wells within the unit area.

25 Q Now, you also show some injection wells outside the unit

1 on the northern boundary. What is the status of those
2 wells?

3 A Those are proposed injection wells to be converted by the
4 offset operator.

5 Q That would be under a proposed lease-line agreement?

6 A A lease-line agreement.

7 Q They have not yet been converted?

8 A We are in negotiation on the lease-line agreement at this
9 time.

10 Q In referring to what has been marked as Applicant's Exhibit
11 No. 2, would you identify that exhibit?

12 A Exhibit No. 2 is a log of Langlie Mattix Penrose Sand Unit
13 No. 55-3 located in the northwest quarter of the northeast
14 quarter of Section 28, Township 22, South Range 37 East,
15 showing the unitized formation which is the Penrose sand,
16 and we present this as an exhibit as the log of a typical
17 well, the type of section that we anticipate in drilling
18 of the four proposed wells.

19 Q That is the zone in which you will inject water?

20 A That is the zone we will inject water into.

21 Q In referring to Exhibit No. 3, would you identify that
22 exhibit?

23 A Exhibit 3 is a diagrammatic sketch of the typical water
24 injection well completion. In this case it is the

25 completion of the Well No. 25-3, of which we just submitted

1 the log, showing the perforations, the casing program, and
2 the type of injection hookup we have.

3 Also on this exhibit we have shown the proposed
4 injection rate of 500 barrels of water per day at 2,100
5 pounds pressure down 2 3/8ths inch O.D. tubing, that is to
6 be internally coated to be set on the tacker immediately
7 above the perforation in the casing.

8 Q Do you fill the tuber casing with an inner fluid?

9 A Yes.

10 Q Is this the type proposed for this injection well?

11 A Yes, that is correct.

12 Q There may be some difference in perforation?

13 A Yes, this is just to show a typical completion of four
14 proposed wells.

15 Q Your source of water is from Skelly Oil?

16 A That is correct.

17 Q Is that the same water you are using in the balance of the
18 water flood project?

19 A That is right.

20 Q Have you had, encountered any problem in using that water?

21 A No, we haven't.

22 Q Were Exhibits 1 and 2 and 3 prepared by you or under your
23 supervision?

24 A Yes.

25 MR. KELLAHIN: At this time I would like to offer in

1 evidence Exhibits 1, 2, and 3.

2 HEARING EXAMINER: Without objection, Exhibits 1, 2,
3 3 will be entered into the record of this case.

4 MR. KELLAHIN: If the Examiner, please, we also have
5 a letter from the oil company advising they have no objection
6 to the proposed injection wells as presented in this hearing.

7 THE WITNESS: I would like to request that--we have
8 three of these proposed injection wells that are budjeted for
9 1971, and we have made a tentative commitment for a right on
10 approximately the first week in December, and if at all
11 possible, we would like to have an indication of approval on
12 this in time so we could act on this drilling operation during
13 this year.

14 HEARING EXAMINER: It shouldn't be too long before you
15 have a decision on it.

16 Q Mr. Stumhoffer, have you been using any inner fluid in
17 your inlet on any of your other injection wells?

18 A We use it in just a water--not--we monitor the back side of
19 the casing, see.

20 Q There is no leakage, there is no chemical treatment?

21 A The water is treated with corrosion inhibitor.

22 Q That would be considered fluid, wouldn't it?

23 A Yes.

24 Q Is the tubing lined in this injection well?

25 A Yes, it is lined with a plastic liner.

1 MR. HATCH: Is there a guage on the annulus or is it
2 left open?

3 A It is left open. Our pumpers make the wells every day,
4 and they would detect any leakage.

5 HEARING EXAMINER: Are there any other questions of
6 the witness?

7 You may be excused.

8 Statements in the case?

9 The next case will be taken under advisement and the
10 hearing is adjourned.

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1 STATE OF NEW MEXICO)
2 COUNTY OF BERNALILLO)

3 I, RICHARD STURGES, Certified Shorthand Reporter, do
4 hereby certify that the foregoing and attached Transcript of
5 Hearing before the New Mexico Oil Conservation Commission was
6 reported by me; and that the same is a true and correct record
7 of the said proceedings, to the best of my knowledge, skill
8 and ability.

9 Richard Sturges
10 CERTIFIED SHORTHAND REPORTER

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22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
24 the hearing of Case No. 46-27
25 heard by me on 4/24/77 1977
New Mexico Oil Conservation Commission

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. 4627
Order No. R-4225

APPLICATION OF ANADARKO PRODUCTION
COMPANY FOR A WATERFLOOD EXPANSION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 17, 1971, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 19th day of November, 1971, 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, Anadarko Production Company, seeks permission to expand its Langlie-Mattix Penrose Sand Unit Waterflood Project in the Langlie-Mattix Penrose Sand Unit Area, Langlie-Mattix Pool, by the injection of water into the Penrose Sand of the Queen formation through four additional injection wells at unorthodox locations in Township 22 South, Range 37 East, NMPM, Lea County, New Mexico, as follows:

Well No. 8-5	10 feet from the North line and 10 feet from the West line of Section 21;
Well No. 1-2	1310 feet from the South line and 1310 feet from the West line of Section 14;

-2-

CASE NO. 4627

Order No. R-4225

Well No. 2-2 990 feet from the North line and 1310
feet from the West line of Section 23;

Well No. 40-1 1650 feet from the South line and 1310
feet from the West line of Section 23.

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

(4) That the proposed expansion of the Langlie-Mattix Penrose Sand Unit Waterflood Project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the expanded project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided, however, that the showing of well response as required by Rule 701 E-5 should not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Anadarko Production Company, is hereby authorized to expand its Langlie-Mattix Penrose Sand Unit Waterflood Project in the Langlie-Mattix Penrose Sand Unit Area, Langlie-Mattix Pool, by the injection of water into the Penrose Sand of the Queen formation through the following-described wells at unorthodox locations in Township 22 South, Range 37 East, NMPM, Lea County, New Mexico:

Well No. 8-5 10 feet from the North line and 10 feet
from the West line of Section 21;

Well No. 1-2 1310 feet from the South line and 1310
feet from the West line of Section 14;

Well No. 2-2 990 feet from the North line and 1310
feet from the West line of Section 23;

Well No. 40-1 1650 feet from the South line and 1310
feet from the West line of Section 23.

-3-

CASE NO. 4627

Order No. R-4225

(2) That the expanded waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve such additional injection wells within said project area as may be necessary to complete an efficient injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

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

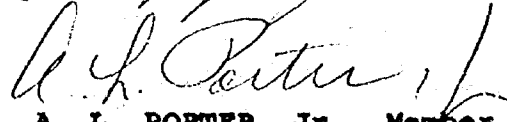
(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

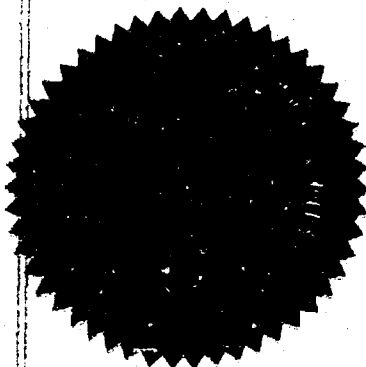
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


BRUCE KING, Chairman


ALEX J. ARMIJO, Member


A. L. PORTER, Jr., Member & Secretary



S E A L

dr/

Docket No. 25-71

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 17, 1971

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

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for December, 1971, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico, and also presentation of purchaser's nominations for said pools for the six-month period beginning January 1, 1972.

(2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for December, 1971.

CASE 4624: Application of Gulf Oil Corporation for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the consolidation of two non-standard gas proration units into one 320-acre non-standard unit comprising the S/2 N/2 and N/2 S/2 of Section 29, Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its A. B. Reeves Wells No. 1 and 2 located, respectively, in Units L and E of said Section 29. Applicant further seeks authority to produce the allowable assigned to said unit from either of said wells in any proportion.

CASE 4625: Application of Texaco Inc. for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Paduca-Morrow and Paduca-Wolfcamp Gas Pools in the wellbore of its Cotton Draw Unit Well No. 65 located in Unit G of Section 2, Township 25 South, Range 31 East, Eddy County, New Mexico.

CASE 4627: Application of Anadarko Production Company for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Langlie-Mattix Penrose Sand Unit Waterflood Project by the addition of four injection wells at non-standard locations in Township 22 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico, as follows:

(Case 4627 continued)

Well No. 8-5	10 feet from the North line and 10 feet from the West line of Section 21;
Well No. 1-2	1310 feet from the South and West lines of Section 14;
Well No. 40-1	1650 feet from the South line and 1310 feet from the West line of Section 23;
Well No. 2-2	990 feet from the North line and 1310 feet from the West line of Section 23;

CASE 4609: (Continued from the October 13, 1971 Examiner Hearing)
Application of Jack L. McClellan for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Sulimar-Queen Unit Area comprising 1520 acres, more or less, of Federal lands in Sections 13, 23, 24, 25, and 26 of Township 15 South, Range 29 East, and Sections 18 and 19 of Township 15 South, Range 30 East, Chaves County, New Mexico.

CASE 4539: (Continued from the October 13, 1971 Examiner Hearing)
In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Doanbuy Lease & Company, Inc., and all other interested persons to appear and show cause why its following described wells in Section 27, Township 14 South, Range 33 East, Saunders Pool, Lea County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 4593: (Continued from the October 13, 1971, Examiner Hearing)
Application of Continental Oil Company for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, to dispose of water produced by wells located on its W. R. Means lease comprising the S/2 and NW/4 of Section 28, and E/2 and E/2 W/2 of Section 29, Township 14 South, Range 30 East, Vest Ranch-Queen Pool, Chaves County, New Mexico, in unlined surface pits.

CASE 4613: Continued from the October 27, 1971, Examiner Hearing Application of Scoggins Petroleum Corporation for creation of a new gas pool and special rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Morrow gas pool for its State BI Well No. 1 located in Unit F of Section 33, Township 18 South, Range 25 East, Eddy County, New Mexico, and the promulgation of special rules therefor, including a provision for 640-acre spacing units.

CASE 4626: Southeastern New Mexico nomenclature case calling for an order for the creation and extension of certain pools in Lea and Roosevelt Counties, New Mexico.

(a) Create a new pool in Lea County, New Mexico classified as an oil pool for Drinkard production and designated as the Garrett Drinkard Pool.

The discovery well is the Green & Michaelson Producing Company, Burson Well No. 1 located in Unit C of Section 28, Township 16 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 16 SOUTH, RANGE 38 EAST, NMPM
SECTION 28: NW/4

(b) Extend the Justis Tubb/Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
SECTION 12: SE/4

(c) Extend the Vacuum-Abo Reef Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 36 EAST, NMPM
SECTION 18: S/2

(d) Extend the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
SECTION 15: NE/4 and N/2 SE/4
SECTION 27: NW/4
SECTION 28: NE/4

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Examiner Hearing - November 17, 1971

(Case 4626 Continued)

(e) Extend the Vada-Pennsylvanian Pool in Roosevelt
County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 34 EAST, NMPM
SECTION 35: SW/4

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

November 19, 1971

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Dear Mr. Kellahin:

Enclosed herewith is Commission Order No. R-4225, entered in Case No. 4627, approving the expansion of the Langlie-Mattix Penrose Sand Unit Waterflood Project.

Injection into each of the four newly authorized water injection wells shall be through internally plastic-coated tubing which shall be set in a packer located as near as is practicable to the uppermost perforation. The casing-tubing annulus shall be loaded with a corrosion inhibited fluid and equipped with a gauge at the surface or left open to facilitate detection of a leak in the casing, tubing or packer.

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/DSM/lr

cc: Oil Conservation Commission
Hobbs, New Mexico

U. S. Geological Survey
Post Office Box 1838
Hobbs, New Mexico 88240

Mr. D. E. Gray
State Engineer Office - Santa Fe

ROUGH DRAFT FOR WATERFLOOD LETTERS

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Dear Sir:

expansion of the

Enclosed herewith is Commission Order No. R-4225, entered in Case No. 4627, approving the LANGLIE-MATTIE PENROSE SAND UNIT Waterflood Project.

Injection into each of the four newly authorized water injection wells shall be through internally plastic-coated tubing which shall be set in a packer located as near as is practicable to the upper most perforation. The casing-tubing annulus shall be loaded with a corrosion inhibited fluid and

~~As to allowable, our calculations indicate that 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 _____ barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.~~

~~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 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

cc: OCC: Hobbs X
Artesia _____
Aztec _____

USGS Hobbs

~~Mr. D. E. Gray~~, State Engineer Office, Santa Fe, New Mexico
Mr. D. E. Gray,

*equipped with a gauge at the surface
or left open to facilitate detection
of a leak in the casing, tubing or
packer.*

Cask 4627

Filed 11-17-71

Rec. 11-17-71

Grant Anadarko permission
to drill 4 N 34 E section wells
in their Lauglie Mattie Penrose
Sand Unit.

The location of the wells
is on the application & are
correct.

Thos. D. W.

Gulf Oil Company - U.S.

EXPLORATION AND PRODUCTION DEPARTMENT
MIDLAND DISTRICT

W. B. Hopkins
DISTRICT MANAGER
J. A. Hord
DISTRICT EXPLORATION
MANAGER
J. L. Pike
DISTRICT PRODUCTION
MANAGER
H. E. Braunig, Jr.
DISTRICT PRODUCTION
MANAGER
M. B. Moseley
DISTRICT SERVICES MANAGER

November 15, 1971

P. O. Drawer 113C
Midland, Texas 79701

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

Re: Case 4627: Application of
Anadarko Production Company
for a Waterflood Expansion,
Langlie-Mattix Penrose Sand
Unit, Lea County, New Mexico

Gentlemen:

This is to advise that Gulf Oil Corporation has been given due notice that Anadarko Production Company, as Unit Operator of the Langlie-Mattix Penrose Sand Unit, Langlie-Mattix Oil Pool, Lea County, New Mexico, proposes to drill a Langlie-Mattix water injection well at an unorthodox location directly offsetting Gulf's O. I. Boyd lease located in the NE/4 SW/4 Section 23, T-22-S, R-37-E.

We have no objection to the drilling of LMPSU Well No. 40-1 located:

1650 feet from the south line and
1310 feet from the west line of
Section 23, T-22-S, R-37-E, N.M.P.M.,
Lea County, New Mexico.

Executed this 15th day of November, 1971.

Yours very truly,

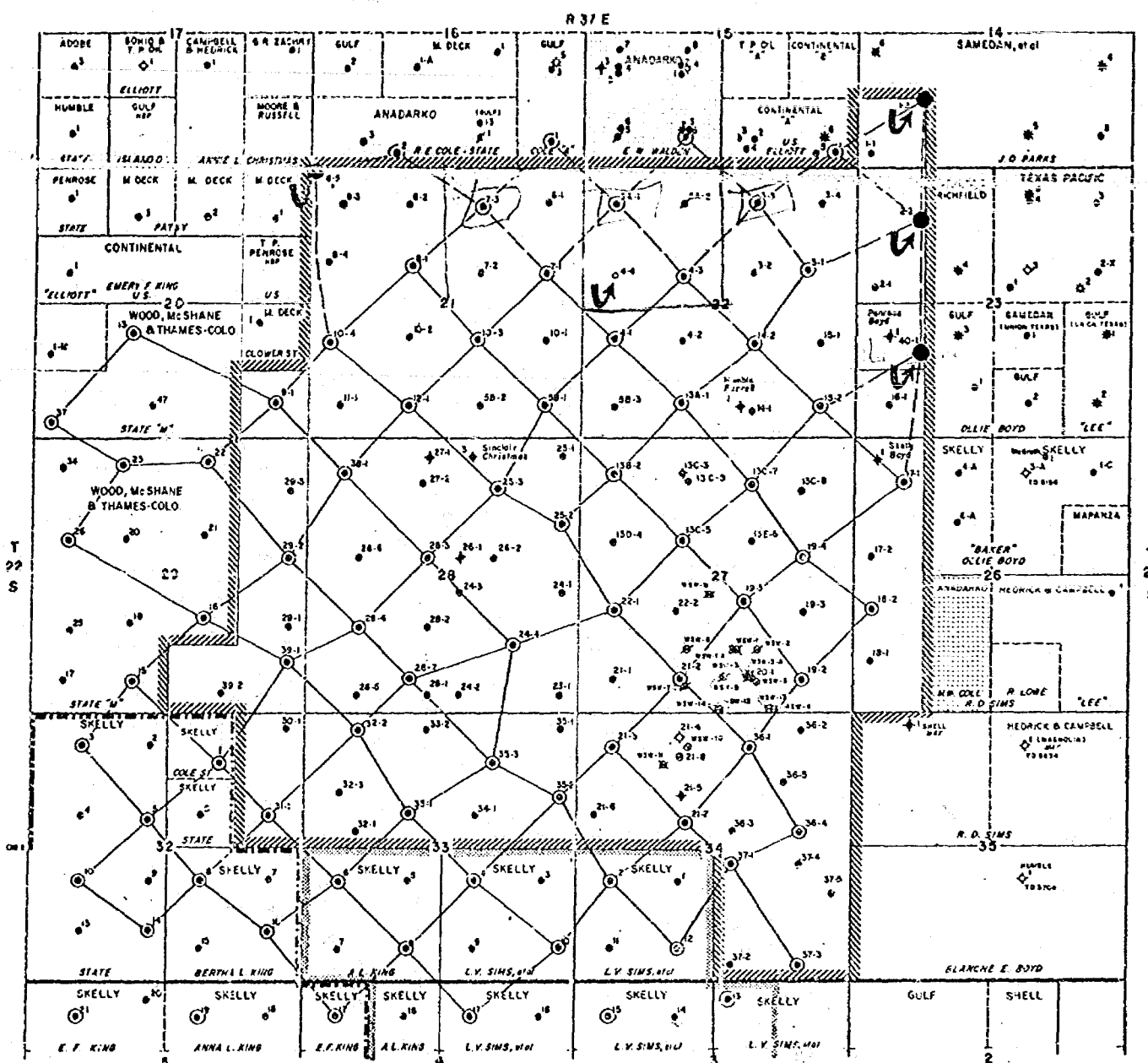
GULF OIL CORPORATION

By:

W. C. Palmer
W. C. PALMER
District Engineer



A DIVISION OF GULF OIL CORPORATION



LEGEND

- - Oil Well
- ◆ - Plugged & Abandoned
- ✱ - Temporarily Abandoned
- ◇ - Dry & Abandoned
- ☆ - Gas Well
- * - Dual Completion (Oil & Gas)
- ⊙ - Water Injection Well
- ⊕ - Proposed Water Injection Well
- ⊗ - Water Supply Well
- ⊘ - WSW - Plugged & Abandoned
- ▨ - Langlie-Mattix Penrose Sand Unit
- ▩ - Skelly Penrose "A" Unit
- - Skelly Penrose "B" Unit
- ⊙ - Proposed Location



ANADARKO PRODUCTION COMPANY

Unit Operator
Langlie-Mattix Penrose Sand Unit
Lea County, New Mexico

EXHIBIT

OCC November 17, 1971

Examiner Hearing
Unorthodox Water Injection
Well Locations

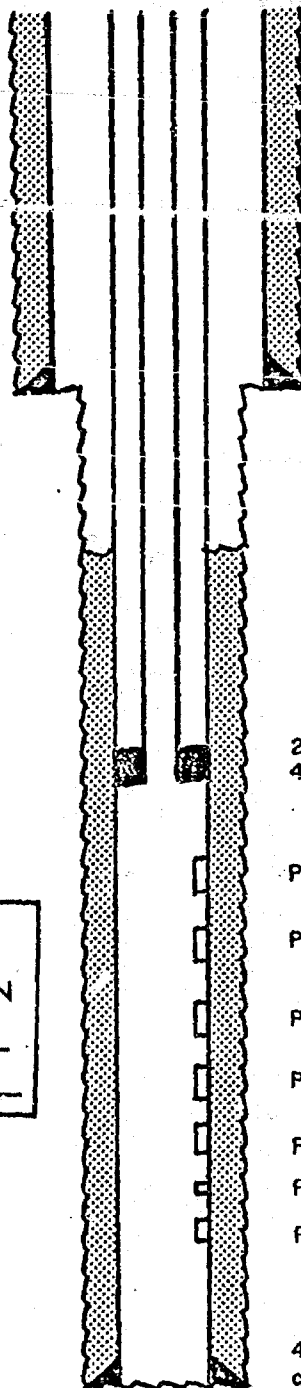
BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
anadarko EXHIBIT NO. 1
CASE NO. 4637

Proposed Injection Rate:
500 BPD @ 2100 PSI
Injection Water Source:
Nonpotable water purchased from
Skelly Oil Company's Jal Water
System.

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
anadarko EXHIBIT NO. 3
CASE NO. 4627

L.M.P.S.U. 25-3
1650 FEL & 990 FNL
Sec. 28, T-22-S, R-37-E
Lea Co., New Mexico

TYPICAL WATER INJECTION
WELL COMPLETION



8 5/8" Casing @ 390'
cmt. circ. w/250 sks.

2 3/8" Tubing @ 3494'
4 1/2" Packer @ 3496'

Perfs. 3546' - 3556'

Perfs. 3567' - 3576'

Perfs. 3586' - 3590'

Perfs. 3614' - 3620'

Perfs. 3630' - 3634'

Perfs. 3642' - 3644'

Perfs. 3650' - 3654'

PENROSE SAND

4 1/2" Casing @ 3700'
cmt. w/400 sks.



ANADARKO
PRODUCTION COMPANY

Unit Operator
Langlie-Mattix Penrose Sand Unit
Lea County, New Mexico
EXHIBIT
OCC November 17, 1971
Examiner Hearing
Unorthodox Water Injection
Well Locations

JASON W. KELLAHIN
ROBERT E. FOX

KELLAHIN AND FOX
ATTORNEYS AT LAW
54 1/2 EAST SAN FRANCISCO STREET
POST OFFICE BOX 1789
SANTA FE, NEW MEXICO 87501

RECEIVED
NOV 8 1971
OIL CONSERVATION COMM.
SANTA FE

PHONE 982-4315
AREA CODE 505

November 5, 1971

Mr. George Hatch, Attorney
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear George:

Enclosed is a corrected copy of the application of
Anadarko Production Company for expansion of their
Langlie-Mattix Penrose Sand Unit Waterflood project.

Thanks for calling me.

Yours very truly,

Jason

Jason W. Kellahin

JWK:abs

Enclosure: as noted

DM
file - Cone
4627

RECEIVED

NOV 8 1971

OIL CONSERVATION COMM.
SANTA FE

BEFORE THE

OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF ANADARKO PRODUCTION COMPANY
FOR APPROVAL OF ADDITIONAL INJECTION
WELLS, LANGLIE-MADDIX PENROSE SAND
UNIT, AND EXPANSION THEREOF, LEA
COUNTY, NEW MEXICO

A P P L I C A T I O N

Comes now Anadarko Production Company and applies to the Oil Conservation Commission of New Mexico for expansion of the Langlie-Mattix Penrose Sand Unit waterflood project by the addition of injection wells, and in support thereof would show the Commission:

1. Applicant is the operator of the Langlie-Mattix Penrose Sand Unit and waterflood project, which has been expanded from time to time with approval of the Commission.
2. Applicant proposes to expand the waterflood project by the addition of four injection wells, as follows:

Well No. 8-5, located 10 feet from the North line, and 10 feet from the West line of Section 21, Township 22 South, Range 37 East, N.M.P.M.

Well No. 2-2, located 990 feet from the North line and 1310 feet from the West line of Section 23, Township 22 South, Range 37 East, N.M.P.M.

Well No. 1-2, located 1310 feet from the South line and 1310 feet from the West line of Section 14, Township 22 South, Range 37 East, N.M.P.M.

Well No. 40-1, located 1650 feet from the South line and 1310 feet from the West line of Section 23, Township 22 South, Range 37 East, N.M.P.M.

3. Applicant proposes to inject into the Penrose Sand of the Queen formation. Source of water will be from the Skelly

Jal water system, and applicant anticipates the injection of approximately 500 barrels of water per day, with anticipated pressures of 2100 pounds. Wells will be completed for use as injection wells in conformity with other injection wells in the project area.

WHEREFORE applicant prays that this application be set for hearing before the Commission's duly appointed examiner, and that after notice and hearing as required by law, the Commission enter its order approving the expansion of the waterflood project as prayed for.

Respectfully submitted,

ANADARKO PRODUCTION COMPANY

By Jason W. Kellahin
Jason W. Kellahin

ATTORNEY FOR APPLICANT

KELLAHIN & FOX
P. O. Box 1769
Santa Fe, New Mexico 87501

JASON W. KELLAHIN
ROBERT E. FOX

KELLAHIN AND FOX
ATTORNEYS AT LAW
54 1/2 EAST SAN FRANCISCO STREET
POST OFFICE BOX 1760
SANTA FE, NEW MEXICO 87501

RECEIVED

OCT 28 1971

TELEPHONE 982-4318
AREA CODE 505

OIL CONSERVATION COMMISSION

October 28, 1971

Case 4627

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

Gentlemen:

Enclosed is the application of Anadarko Production Company for expansion of the Langlie-Mattix Penrose Sand Unit water-flood project by the addition of four injection wells.

It is requested that this application be set for hearing before the commission's examiner on November 17, 1971.

Yours very truly,

Jason W. Kellahin
Jason W. Kellahin

JWK/sr
Encl. Orig. and 3

DOCKET MARKED

Date 11-4-71

BEFORE THE
OIL CONSERVATION COMMISSION OF NEW MEXICO

RECEIVED
OCT 2 1971

IN THE MATTER OF THE APPLICATION
OF ANADARKO PRODUCTION COMPANY
FOR APPROVAL OF ADDITIONAL INJECTION
WELLS, LANGLEIE-MADDIX PENROSE SAND
UNIT, AND EXPANSION THEREOF, LEA
COUNTY, NEW MEXICO

Case 4627

A P P L I C A T I O N

Comes now Anadarko Production Company and applies to the Oil Conservation Commission of New Mexico for expansion of the Langlie-Mattix Penrose Sand Unit waterflood project by the addition of injection wells, and in support thereof would show the Commission:

1. Applicant is the operator of the Langlie-Mattix Penrose Sand Unit and waterflood project, which has been expanded from time to time with approval of the Commission.

2. Applicant proposes to expand the waterflood project by the addition of four injection wells, as follows:

Well No. 8-5, located 10 feet from the North line, and 10 feet from the West line of Section 21, Township 22 South, Range 37 East, N.M.P.M.

Well No. 1-2, located 1310 feet from the South Line and 1310 feet from the West line of Section 14, Township 22 South, Range 37 East, N.M.P.M.

Well No. 40-1. located 1650 feet from the South Line and 1310 feet from the West line of Section 23, Township 22 South, Range 37 East, N.M.P.M.

3. Applicant proposes to inject into the Penrose Sand of the Queen formation. Source of water will be from the Skelly Jal water system, and applicant anticipates the injection of approximately 500 barrels of water per day, with anticipated pressures of 2100

pounds. Wells will be completed for use as injection wells in conformity with other injection wells in the project area.

WHEREFORE applicant prays that this application be set for hearing before the Commission's duly appointed examiner, and that after notice and hearing as required by law, the Commission enter its order approving the expansion of the waterflood project as prayed for.

Respectfully submitted,

ANADARKO PRODUCTION COMPANY

By

Jason W. Kellahin
Jason W. Kellahin

ATTORNEY FOR APPLICANT

KELLAHIN & FOX
P.O. Box 1769
Santa Fe, New Mexico 87501

DRAFT
GMH/dr

(Handwritten mark)

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:

(Handwritten signature)

CASE No. 4627

Order No. R-4225

APPLICATION OF ANADARKO PRODUCTION
COMPANY FOR A WATERFLOOD EXPANSION,
LEA COUNTY, NEW MEXICO.

(Handwritten initials)

(Handwritten signature)

(Handwritten signature and date 11-18-71)

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 17, 1971,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of November, 1971, 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, Anadarko Production Company, seeks
permission to expand ^{its} ~~the~~ Langlie-Mattix Penrose Sand Unit Waterflood
Project in the Langlie-Mattix Penrose Sand Unit Area, Langlie-
Mattix Pool, by the injection of water into the Penrose Sand &
the Deven formation through four additional injection wells at
unorthodox locations in Township 22 South, Range 37 East, NMPM,
Lea County, New Mexico, as follows:

Well No. 8-5 10 feet from the North line and 10 feet
from the West line of Section 21; ✓

Well No. 1-2 1310 feet from the South line and 1310
feet from the West line of Section 14; ✓

Well No. 40-1 1650 feet from the South line and 1310
feet from the West line of Section 23; ✓

Well No. 2-2 990 feet from the North line and 1310
feet from the West line of Section 23; ✓

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

(4) That the proposed expansion of the Langlie-Mattix Penrose Sand Unit Waterflood Project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That an administrative procedure should be adopted whereby the Secretary-Director of the Commission may authorize additional injection wells and producing wells at orthodox and unorthodox locations within said waterflood project as may be necessary to complete efficient injection and production patterns.

(5) That the subject application should be approved and the expanded project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided, however, that the showing of well response as required by Rule 701 E-5 should not be necessary before obtaining administrative approval for the conversion of additional wells to water injection, ~~and provided further that said injection and producing wells would be drilled no closer than 5 feet to the outer boundary of the waterflood project area nor closer than 5 feet to any quarter-quarter section or subdivision inner boundary.~~

IT IS THEREFORE ORDERED:

(1) That the applicant, Anadarko Production Company, is hereby authorized to expand ^{its} the Langlie-Mattix Penrose Sand Unit Waterflood Project in the Langlie-Mattix Penrose Sand Unit Area, Langlie-Mattix Pool, by the injection of water into the Penrose Sand of the Permian formation through the following-described wells at unorthodox locations in Township 22 South, Range 37 East, NMPM, Lea County, New Mexico:

Well No. 8-5 10 feet from the North line and 10 feet from the West line of Section 21; ✓

Well No. 1-2 1310 feet from the South line and 1310 feet from the West line of Section 14; ✓

Well No. 40-1 1650 feet from the South line and 1310 feet from the West line of Section 23; ✓

Well No. 2-2 990 feet from the North line and 1310 feet from the West line of Section 23; ✓

(2) That the expanded waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve such additional injection wells ~~and producing wells at orthodox and unorthodox locations~~ within said project area as may be necessary to complete ^{an} efficient injection ~~and production patterns; provided said wells are drilled no closer than 5 feet to the outer boundary of said waterflood project area nor closer than 5 feet to any quarter-quarter section or subdivision inner boundary, and provided that the application therefor has been filed in accordance with Rule 701 B of the Commission Rules and Regulations and is accompanied by evidence that the operator of any productive lease offsetting the proposed location has assented thereto.~~ ^{that} The showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells

-4-

CASE NO. 4627

Order No. R-

to water injection.

(3) That monthly progress reports of the expanded water-flood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) 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.