LAW OFFICES
LOSEE, CARSON & DICKERSON, P. A.
300 AMERICAN HOME BUILDING
P. O. DRAWER 239
ARTESIA, NEW MEXICO 88210
AREA CODE 505
746-3508

A. J. LOSEE
JOEL M. CARSON
CHAD DICKERSON
DAVID R. VANDIVER

27 October 1980

Mrs. Florine Davidson
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Case No. 6555, Jake L. Hamon Unorthodox
Gas Well Location, Lea County, New Mexico

Dear Florine:

Our client advises that they have lost the transcript in the above case, and asks that we give the State their apologies. Please duplicate the original by xerox, and advise us of the cost so that we may reimburse you. If there is anything further we can do, please let us know.

Very truly yours,

LOSEE, CARSON & DICKERSON, P.A.

A. J. Losee

AJL:jcb

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

(6) That the offset operator in the N/2 of said Section 29 has objected to the proposed non-standard location.

(7) That said offset operator would not have objected to a non-standard location 660 feet from the North and East lines of said Section 30.

(8) That a shallow dry hole located 660 feet from the North and East lines of said Section 30 precludes the applicant from drilling at such location.

(9) That a well located at the proposed non-standard location would have a drainage radius that extends into the N/2 of said Section 29 approximately 4.8 acres more than a well located 660 feet from the North and East lines of said Section 30.

(10) That this 4.8-acre net additional drainage outside said Section 30 constitutes approximately 0.75 percent of a standard proration unit (640-acres) within said pool.

(11) That no practical procedure was proposed for offsetting so small an advantage as would be gained by the applicant over the objecting offset operator resulting from the drilling and completion of a well at the proposed non-standard location.

(12) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Morrow formation is hereby approved for a well to be located at a point 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, NMPM, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(2) That all of said Section 30 shall be dedicated to the above-described well.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6555
Order No. R-6029

APPLICATION OF JAKE L. HAMON FOR
AN UNORTHODOX GAS WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 23, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 26th day of June, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Jake L. Hamon, seeks approval of an unorthodox gas well location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, NMPM, to test the Morrow formation, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(3) That all of said Section 30 is to be dedicated to the well.

(4) That a well at said unorthodox location will better enable applicant to produce the gas underlying the proration unit.

(5) That offsetting applicant's proposed unorthodox location to the East is a 320-acre non-standard proration unit consisting of the N/2 of Section 29, said unit being dedicated to a well at a non-standard location 660 feet from the North and West lines of said Section 29.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

JERRY APODACA
GOVERNOR

NICK FRANKLIN
SECRETARY

June 29, 1979

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

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

Re: CASE NO. 6555
ORDER NO. R-6029

Applicant:

Jake L. Hamon

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division 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 A. J. Losee

KELLAHIN and KELLAHIN
Attorneys at Law
500 Don Gaspar Avenue
Post Office Box 1769
Santa Fe, New Mexico 87501

Jason Kellahin
W. Thomas Kellahin

Karen Aubrey

Telephone 982-4285
Area Code 505

April 27, 1979

Mr. Joe Ramey
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Jake L. Hammond

Dear Joe:

I would appreciate you setting the enclosed application for unorthodox well location for hearing at the next available examiner hearing on May 23, 1979.

Very truly yours,

W. Thomas Kellahin

CC: Mr. H. W. Shaw
Jake L. Hammond

WTK:kfm

Enclosure

STATE OF NEW MEXICO

ENERGY AND MINERAL DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF JAKE L. ~~HAMMOND~~ HAMON FOR APPROVAL
OF AN UNORTHODOX WELL LOCATION,
LEA COUNTY, NEW MEXICO

Case 6555

A P P L I C A T I O N

COMES NOW JAKE L. ~~HAMMOND~~ HAMON, by and through his attorneys, Kellahin & Kellahin, and applies to the Oil Conservation Division of New Mexico for approval of an unorthodox well location, Lea County, New Mexico and in support thereof should show the Division:

1. Applicant is the owner of the right to drill and develop Section 30, T20S, R36E, NMPM, Lea County, New Mexico.

2. Applicant proposes to drill a well to test the Morrow formation at a depth of approximately 11,600 feet at a location 660 feet from the North Line and 360 feet from the East Line of said Section 30.

3. That the subject section consists of 638.88 acres, all of which will be dedicated to the subject well.

4. That the subject well will be located in the North Osudo-Morrow Gas Pool.

5. A well located as proposed will recover gas that would not otherwise be recovered, allow the operator to protect his correlative rights; be in the best interest of conservation and not adversely affect the correlative rights of any offset operator.

WHEREFORE Applicant prays that this matter be set for hearing and that after notice and hearing, the Division enter its order approving the application as requested.

Respectfully submitted,
JAKE L. HAMMOND

By _____
Kellahin & Kellahin
P. O. Box 1769
Santa Fe, New Mexico 87501
ATTORNEYS FOR APPLICANT

STATE OF NEW MEXICO

ENERGY AND MINERAL DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF JAKE L. ~~HAMMOND~~ HAMON FOR APPROVAL
OF AN UNORTHODOX WELL LOCATION,
LEA COUNTY, NEW MEXICO

Case 6555

A P P L I C A T I O N

COMES NOW JAKE L. ~~HAMMOND~~ HAMON, by and through his attorneys, Kellahin & Kellahin, and applies to the Oil Conservation Division of New Mexico for approval of an unorthodox well location, Lea County, New Mexico and in support thereof should show the Division:

1. Applicant is the owner of the right to drill and develop Section 30, T20S, R36E, NMPM, Lea County, New Mexico.

2. Applicant proposes to drill a well to test the Morrow formation at a depth of approximately 11,600 feet at a location 660 feet from the North Line and 560 feet from the East Line of said Section 30.

3. That the subject section consists of 638.88 acres, all of which will be dedicated to the subject well.

4. That the subject well will be located in the North Osudo-Morrow Gas Pool.

5. A well located as proposed will recover gas that would not otherwise be recovered, allow the operator to protect his correlative rights; be in the best interest of conservation and not adversely affect the correlative rights of any offset operator.

WHEREFORE Applicant prays that this matter be set for hearing and that after notice and hearing, the Division enter its order approving the application as requested.

Respectfully submitted,

JAKE L. HAMMOND

By _____

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

ATTORNEYS FOR APPLICANT

STATE OF NEW MEXICO

ENERGY AND MINERAL DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF JAKE L. ~~HAMMOND~~ Hamon FOR APPROVAL
OF AN UNORTHODOX WELL LOCATION,
LEA COUNTY, NEW MEXICO

Case 6555

A P P L I C A T I O N

COMES NOW JAKE L. ~~HAMMOND~~ HAMON, by and through his attorneys, Kellahin & Kellahin, and applies to the Oil Conservation Division of New Mexico for approval of an unorthodox well location, Lea County, New Mexico and in support thereof should show the Division:

1. Applicant is the owner of the right to drill and develop Section 30, T20S, R36E, NMPM, Lea County, New Mexico.

2. Applicant proposes to drill a well to test the Morrow formation at a depth of approximately 11,600 feet at a location 660 feet from the North Line and 560 feet from the East Line of said Section 30.

3. That the subject section consists of 638.88 acres, all of which will be dedicated to the subject well.

4. That the subject well will be located in the North Osudo-Morrow Gas Pool.

5. A well located as proposed will recover gas that would not otherwise be recovered, allow the operator to protect his correlative rights; be in the best interest of conservation and not adversely affect the correlative rights of any offset operator.

WHEREFORE Applicant prays that this matter be set for hearing and that after notice and hearing, the Division enter its order approving the application as requested.

Respectfully submitted,

JAKE L. HAMMOND

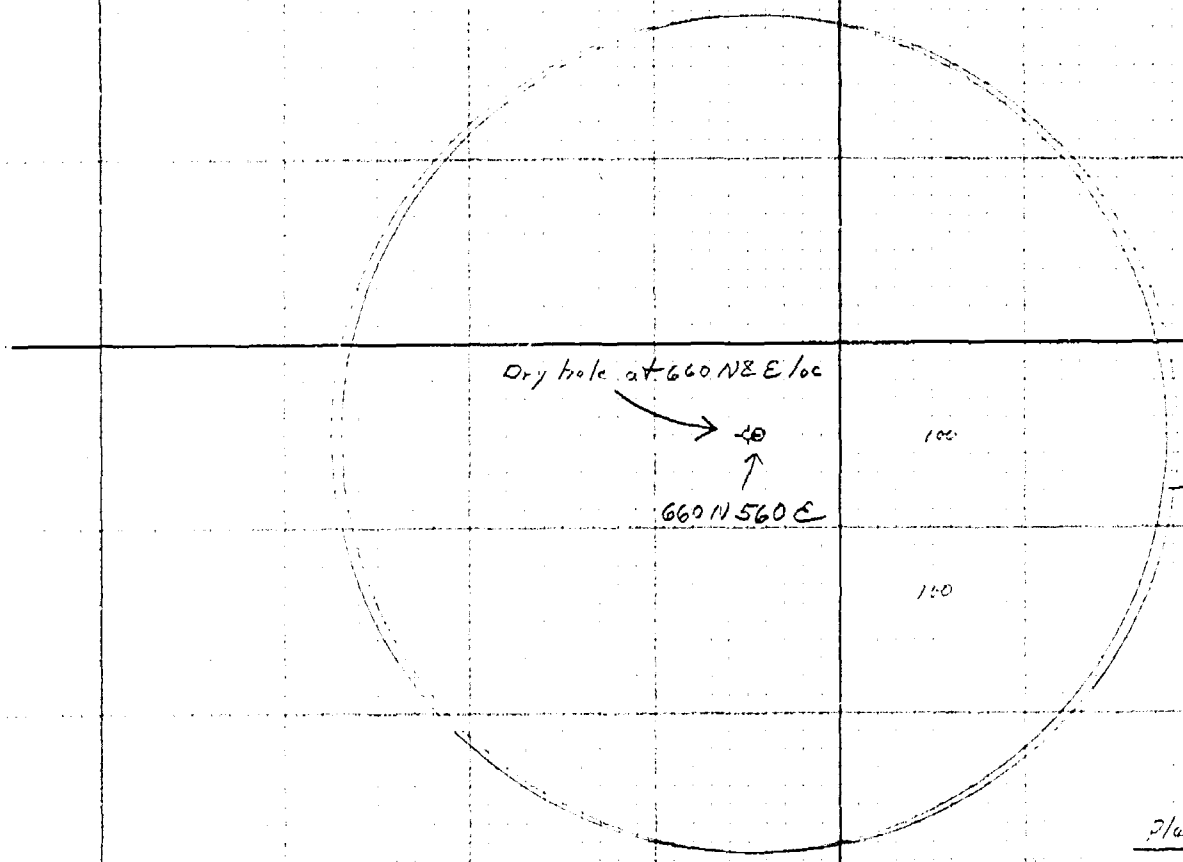
By _____

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

ATTORNEYS FOR APPLICANT

No objection to 660-660 location

Case 6555



— est 24.5 acre
extra
at 2.5 net add'l
or

Planimeter

4 arcs 1

R-36-E

18

Flag-Redfern
OSUD-St. Com.
TD 11,700'

121 MMCF
149 MCFGPD
SP 2175 (9-78)

17

BHP 200 (9-78)
Jake L. Hamon
Amerada Fed
TD 11,580'

5488 MMCF + 75,089 BO
96 MCFGPD

Jake L. Hamon
State E-8913
TD 11,457'

8831 MMCF + 74,978 BO
290 MCFGPD
SP 161 (9-78)

19

Southwestern Nat.
State
TD 11,600'

2438 MMCF + 24,711 BO
647 MCFGPD
BHP 5161 (1-76)

20

T
20
S

CAOF 27.5 MMCFGPD
3-15-79

Jake L. Hamon
Union State
TD 11,470'

30

5938 MMCF + 29,950 BO
114 MCFGPD
BHP 5931 (9-78)

29

Western Oil
State "J"
TD 12,640'

-N-

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 1
CASE NO. 6555
Submitted by DAILY RATE TXO
Hearing Date

LEGEND
CUMULATIVE PRODUCTION TO 1-1-1979

Texas Oil & Gas Corp.

OSUDO AREA
LEA COUNTY, NEW MEXICO

PRODUCTION MAP

Scale 1"=2000'

R-36-E

18

Flag-Redfern
OSUD-St. Com.
TD 11,700'

1
0'

17

Jake L. Hamon
Amerada Fed.
TD 11,580'

1
0'

Jake L. Hamon
State E-8913
TD 11,457'

1
0'

19

Southwestern Nat.
State
TD 11,600'

1
0'

20

T
20
S

JAKE L. HAMON'S
PROPOSED LOCATION

0'
5'
10'
15'

A'
16'

Jake L. Hamon
Union State
TD 11,470'

A
1
3'

30

29

Western Oil
State "J"
TD 12,640'

10'

-N-

ELEVATION
2
6955
TXO
8/23

Texas Oil & Gas Corp.

OSUDO AREA
LEA COUNTY, NEW MEXICO

ISOPACH MAP
MIDDLE MORROW SAND PAY
C.I. = 5'

Scale 1"=2000'

Dockets Nos. 23-79 and 24-79 are tentatively set for hearing on June 13 and 27, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 23, 1979

9 A.M. - OIL CONSERVATION DIVISION 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 6545: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corinne Grace, Travelers Indemnity Company, and all other interested parties to appear and show cause why the Kuklah Baby Well No. 1 located in Unit G of Section 24, Township 22 South, Range 26 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6422: (Continued from February 28, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Helton Engineering & Geological Services, Inc., Travelers Indemnity Company, and all other interested parties to appear and show cause why the Brent Well No. 1 located in Unit M of Section 29 and the Brent Well No. 3 located in Unit G of Section 19, both in Township 13 North, Range 6 East, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6546: Application of Black River Corporation for compulsory pooling and non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the SW/4 of Section 32, Township 23 South, Range 37 East, to form a 160-acre non-standard gas proration unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6536: (Continued from May 9, 1979, Examiner Hearing)

Application of Black River Corporation for two non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for two 80-acre non-standard gas proration units in the Jalmat Gas Pool as follows: the N/2 SE/4 of Section 22, Township 23 South, Range 36 East, to be dedicated to applicant's well to be drilled in Unit J of said Section 22; and the S/2 SE/4 of said Section 22 to be dedicated to El Paso Natural Gas Company's Shell State Well No. 3 located in Unit P.

CASE 6535: (Continued from May 9, 1979, Examiner Hearing)

Application of Torreon Oil Company for a waterflood project, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the San Luis-Mesaverde Pool by the injection of water into the Menefee formation through two wells located in Section 21, Township 18 North, Range 3 West, Sandoval County, New Mexico.

CASE 6547: Application of American Petrofina Company of Texas for the creation of a waterflood buffer zone, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a waterflood buffer zone comprising the NE/4 SE/4 of Section 26, Township 17 South, Range 32 East, Maljamar Grayburg-San Andres Pool, to enable applicant to produce its Johns B Well No. 4 located thereon at an unrestricted rate.

CASE 6548: Application of John F. Staver for salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Dakota formation through the open hole interval from 1408 feet to 1412 feet in his Table Mesa Well No. 22 located in Unit N and from 1394 feet to 1400 feet in his Table Mesa Well No. 23 located in Unit O, both in Section 34, Township 28 North, Range 17 West, Table Mesa-Dakota Oil Pool.

CASE 6549: Application of Gulf Oil Corporation for pool creation, discovery allowable, and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new Bone Springs oil pool for its Lea "YH" State Well No. 1 located in Unit O of Section 25, Township 18 South, Range 34 East. Applicant also seeks a discovery allowable and promulgation of special pool rules, including a provision for 80-acre spacing.

CASE 6550: Application of Yates Petroleum Corporation for an unorthodox gas well location and compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp through Mississippian formations underlying the S/2 of Section 12, Township 19 South, Range 24 East, to be dedicated to its Allison Federal "CQ" Well No. 2 to be drilled at an unorthodox location 1980 feet from the South line and 660 feet from the West line of said Section 12. 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 6492: (Continued from May 9, 1979, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the NE/4 NW/4 of Section 13, Township 17 South, Range 25 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6551: Application of Bass Enterprises Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox Lower Morrow gas well location 1980 feet from the North line and 660 feet from the East line of Section 1, Township 19 South, Range 28 East, the N/2 of said Section 1 to be dedicated to the well.

CASE 6528: (Continued from April 25, 1979, Examiner Hearing)

Application of Bass Enterprises Production Co. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox Morrow test well location to be drilled 660 feet from the North and West lines of Section 10, Township 21 South, Range 32 East, Lea County, New Mexico, the W/2 of said Section 10 to be dedicated to the well.

CASE 6552: Application of Maddox Energy Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the E/2 of Section 3, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6553: Application of The Atlantic Richfield Company for approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the Division waived existing well-spacing requirements and found that the drilling of additional wells was necessary to effectively and efficiently drain those portions of the proration units in the Empire Abo Unit located in Townships 17 and 18 South, Ranges 27, 28 and 29 East, which could not be so drained by the existing wells.

CASE 6554: Application of The Atlantic Richfield Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all royalty interests in the Devonian, McKee, and Ellenburger formations underlying the E/2 of Section 20, Township 22 South, Range 36 East, Langlie Field, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6555: Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, all of said Section 30 to be dedicated to the well.

CASE 6556: Application of Curtis Little for the amendment of Order No. R-5962, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5962 to provide for the unorthodox location of a well to be drilled 1000 feet from the South line and 50 feet from the East line of Section 11, Township 28 North, Range 12 West, Basin-Dakota Pool, and for the extension of the date to commence drilling.

CASE 6435: (Continued from February 28, 1979, Examiner Hearing)

Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its W. A. Weir "B" Well No. 3 located in Unit B of Section 26, Township 19 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6559: Application of Roy L. McKay for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for his Morton Solid State Unit Area, comprising 1,480 acres, more or less, of State lands in Township 15 South, Range 34 East.

CASE 6487: (Continued from February 28, 1979, Examiner Hearing)

Application of El Paso Natural Gas Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Shell E State Com Well No. 2 located in Unit N of Section 6, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6471: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Freeman Well No. 1-A to be located in Unit C of Section 11, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6472: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Jenny Well No. 1-A to be located in Unit P of Section 13, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6473: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its McIntyre Well No. 1-A to be located in Unit K of Section 11, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6474: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Williams Well No. 1-A to be located in Unit C of Section 24, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6475: (Continued from February 28, 1979, Examiner Hearing)

Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Montoya Well No. 1-A to be located in Unit I of Section 35, Township 32 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

DOCKET: COMMISSION HEARING - TUESDAY - MAY 29, 1979

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

CASE 6557: Application of Getty Oil Company for pool creation and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new Morrow gas pool for its State 35 Well No. 1 located in Unit K of Section 35, Township 21 South, Range 34 East, and its Getty Two State Well No. 1 located in Unit F of Section 2, Township 22 South, Range 34 East, and for promulgation of special pool rules, including provision for 640-acre gas well spacing.

CASE 6497: (DE NOVO)

Application of Llano, Inc. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be located 1650 feet from the South line and 660 feet from the East line of Section 34, Township 21 South, Range 34 East, Grama Ridge-Morrow Gas Pool, the E/2 of said Section 34 to be dedicated to the well.

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

CASE 6558: Application of Llano, Inc. for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 320-acre non-standard gas proration unit comprising the E/2 of Section 34, Township 21 South, Range 34 East, to be dedicated to its Llano 34 State Com Well No. 1 located in Unit I of said Section 34.

DRAFT

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6555

ORDER NO. R- 6029

APPLICATION OF JAKE L. HAMON

FOR AN UNORTHODOX GAS WELL LOCATION,

LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 23, 19 79, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this _____ day of _____, 19 79, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Jake L. Hamon, seeks approval of an unorthodox gas well location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South Range 36 East, NMPM, to test the Morrow formation, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(3) That ~~the~~ all of said Section 30 is to be dedicated to the well.

(4) That a well at said unorthodox location will better enable applicant to produce the gas underlying the proration unit.

~~(5) That no offset operator objected to the proposed unorthodox~~ location.

(5) That offsetting applicant's proposed ~~non-standard~~ location to the East is a 320-acre non-standard proration unit consisting of the N/2 of Section 29, ~~said unit being dedicated to of said Township and contains~~ a well at a non standard location 660 feet from ~~the~~ North and West lines of said section 29.

(6) That the offset operator in the N/2 of Section 29 ~~of said township~~ has objected to the proposed non-standard location.

(7) That said offset operator would not have objected to a non-standard location ~~as set out in Finding No. 5 above.~~ 660 feet from the North and East lines of said Section 30.

(8) That a shallow dry hole located 660 feet from the North and East lines of said Section 30 precludes the applicant from drilling at such location.

(9)(8) That a well located at the proposed non-standard location would have a drainage radius that extends into the N/2 of said Section 29 approximately ~~10~~ 4.8 acres more than a well located 660 feet from the North and East lines of said Section 30.

(10)(9) That this ~~10~~ 4.8-acre net additional drainage outside said Section 30 constitutes approximately ~~1.56~~ 0.75 percent of a standard proration unit (640-acres) within said pool.

(11)(~~10~~) That no practical procedure was proposed for offsetting so small an advantage as would ~~to~~ be gained by the applicant over the objecting offset operator resulting from the drilling and completion of a well at the proposed non-standard location.

(8) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Morrow formation is hereby approved for a well to be located at a point 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East NMPM, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(2) That ~~the~~ all of said Section 30 shall be dedicated to the above-described well.

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

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

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IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONS. ~~DIV.~~
DIV. FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6555 DE NOVO
~~CASE NO.~~ Order No R-6029-A

APPLICATION OF JAKE L. HAMON FOR
AN UNORTHODOX GAS WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on August 28, 1979, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this ——— day of September, 1979, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Jake L. Hamon, seeks approval of an unorthodox gas well location 660 feet from the North line ~~and~~ 560 feet from the East line of Section 30, Township 20 South, Range 36 East, N.M.P.M., to test the Morrow formation, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(3) That all of said Section 30 is to be dedicated to the well.

(4) That upon receipt of the ~~application~~ of Jake L. Hamon in this matter, the same was set for hearing on May 23, 1979, before Examiner Richard L. Stamets.

(5) That subsequent to said hearing the Oil Conservation Division entered Order No. R-6029 approving the unorthodox location of said well for the Morrow formation.

(6) That subsequent to the entry of said Order No. R-6029, Texas Oil and Gas Corporation, an offset operator, filed timely application for hearing De Novo of Case No. 6555, and the matter was set for hearing before the Commission.

(7) That the matter came on for hearing De Novo on August 28, 1979.

(8) That a well at ~~the proposed~~ said unorthodox location will better enable applicant to produce gas underlying the proration unit.

(9) That offsetting applicant's proposed unorthodox location to the East is a ~~320~~ 320-acre non-standard proration unit consisting of the N/2 of Section 29, said unit being dedicated to a well at an ~~non-standard~~ unorthodox location 660 feet from the North and West lines of said ~~S~~Section 29.

(10) That the offset operator in the N/2 of said Section 29 has objected to the proposed ~~non-standard~~ unorthodox location in Section 30.

(11) That said offset operator would not have objected to an unorthodox location 660 feet from the North and East lines of said Section 30.

(12) That a shallow dry hole located 660 feet from the North and East lines of said Section 30 precludes the applicant from drilling at such location.

(13) That it is reasonable for an operator to locate a drilling well at least 100 feet from an existing dry hole to ensure against ~~not~~ intercepting the ~~dry hole~~ existing well bore during drilling operations.

(14) That ~~the~~ offset operator ~~requested~~ ~~proposed~~ ~~that~~ the said applicant's proposed ~~reduction~~ well be penalized to offset any advantage to be gained by a well at said unorthodox location based on productive acres in the main ~~[redacted]~~ Morrow zone of interest.

(15) That the evidence presented at the hearing was insufficient to accurately ~~determine~~ the amount of productive acres under ~~the~~ ~~Reynolds~~ applicant's tract or under any of the offsetting tracts.

(16) That because of this inability to ~~be able to~~ accurately measure productive acreage under any of the tracts, acreage should not be used ~~as a factor~~ in any penalty ~~case~~ formula which might be established.

(17) That Penalty formulas may also be based upon well location and drainage estimates.

(18) That a well located at the proposed unorthodox location would have a drainage radius that extends into the N/2 of said Section 29 approximately 4.8 acres more than a well located 660 feet from the North and East lines of said Section 30,

(19) That this 4.8-acre net additional drainage outside said Section 30 constitutes approximately 0.75 percent of a standard proration unit (640 acres) within said pool.

(20) That it would be impractical to implement a procedure to offset so small an advantage as would be gained by the applicant over the objecting offset operator resulting from the drilling & completion of a well at the proposed unorthodox location.

(21) That approval of the subject application will afford the applicant the opportunity to produce its just

nor under any of the offsetting tracts.

(16) That because of this inability to ~~be able to~~ accurately measure productive acreage under any of the tracts, acreage should not be used ~~as a factor~~ in any penalty ~~case~~ formula which might be established.

(17) That Penalty formulas may also be based upon well location and drainage estimates.

(18) That a well located at the proposed unorthodox location would have a drainage radius that extends into the N/2 of said Section 29 approximately 4.8 acres more than a well located 660 feet from the North and East lines of said Section 30,

(19) That this 4.8-acre net additional drainage outside said Section 30 constitutes approximately 0.75 percent of a Standard proration unit (640 acres) within said pool.

(20) That it would be impractical to implement a procedure to offset so small an advantage as would be gained by the applicant over the objecting offset operator resulting from the drilling & completion of a well at the proposed unorthodox location,

(21) ~~(19)~~ That approval of the subject application will afford the applicant the opportunity to produce its just & equitable share of the ~~gas~~ in the

subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, ~~&~~ and will otherwise prevent waste & protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Morrow formation is hereby ~~approved~~ for a well to be located at a point 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, NMPM, Osudo-Morrow Gas Pool, Lea County, New Mexico

(2) That all of said Section 30 shall be dedicated to the above-described well

(3) Jurisdiction

Case No.

6555

Application

Transcripts

Small Exhibits

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION COMMISSION
State Land Office Building
Santa Fe, New Mexico
28 August 1979

COMMISSION HEARING

IN THE MATTER OF: CASE 6555

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

BEFORE: Commissioner Ramey
Commissioner Arnold

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Commission: Ernest L. Padilla, Esq.
Legal Counsel for the Commission
State Land Office Bldg.
Santa Fe, New Mexico 87503

For Jake L. Hamon: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

For Texas Oil & Gas: A.J. Losee, Esq.
LOSEE, CARSON, & DICKERSON
Artesia, New Mexico 88201

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I N D E X

E X H I B I T S

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MR. RAMEY: The hearing will come to order. We have only one case this morning and that is Case Number 6555.

MR. PADILLA: Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

MR. RAMEY: I'll call for appearances at this time.

MR. KELLAHIN: I'm Tom Kellahin, Kellahin and Kellahin, Santa Fe, New Mexico, appearing on behalf of Jake L. Hamon, and I'll have two witnesses.

MR. LOSEE: A. J. Losee, Losee, Carson, and Dickerson, Artesia, New Mexico, and I have one witness.

MR. RAMEY: Will the witnesses stand and be sworn, please?

(Witnesses sworn.)

MR. RAMEY: Mr. Kellahin, you may proceed.

MR. KELLAHIN: I'll call John Casey.

JOHN CASEY

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Casey, would you please state your name, by whom you are employed, and in what capacity?

A. My name is John Casey. I'm employed by Jake L. Hamon as the District Geologist in Midland, Texas.

Q. Mr. Casey, have you previously testified before the Oil Conservation Division and had your qualifications as a geologist accepted and made a matter of record?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Casey as an expert geologist.

MR. RAMEY: We consider him qualified.

Q. (Mr. Kellahin continuing.) Mr. Casey, would you please turn to what we have marked as Jake L. Hamon Exhibit Number One and identify that exhibit for us?

A. Exhibit One is a contour map on top of the Morrow formation.

Q. What is depicted by the yellow outline?

A. The area outlined in yellow is the North Osudo-Morrow Field.

Q. And what is the current spacing for the North Osudo-Morrow Pool?

A. The spacing is 640 except the spacing for

Texas Oil and Gas Well in the north half of 29, and that's 320.

All the other wells are 640.

Q. Within a 640 acre spacing unit, what is a standard location for this pool?

A. It's 1650 from an outer boundary.

Q. Would you indicate for us on your plat how the Morrow wells in this pool are identified?

A. I have -- we show them as gas wells and I've underlined the Morrow datum that I used for this map. They're underlined in red.

Q. Of the wells within the outer boundaries of the North Osudo Pool, which of the wells are at unorthodox locations, Mr. Casey?

A. All of the wells in the pool are unorthodox locations except the Flag-Redfern Well.

Q. And where is that well?

A. In Section 18. It's the only one that's a standard location.

Q. I direct your attention to the Texas Oil and Gas well in the north half of Section 29 and ask you to tell me what the footage location of that well is.

A. It's 660 from the north and 660 from the west.

Q. And was that well the subject of a Division

hearing to approve its unorthodox location and its non-standard proration unit?

A Yes, sir, it was.

Q Do you recall what the order number was for that case?

A No, sir, I do not.

MR. KELLAHIN: If the Commission please, that case was 6215, Order Number R-5735, heard on May 17th, 1978.

MR. RAMEY: What was the order number again, please?

MR. KELLAHIN: R-5735.

MR. RAMEY: Okay, thank you.

MR. KELLAHIN: If the Commission please, we believe it would be appropriate to incorporate the record transcript, exhibits, and orders of that Texas Oil and Gas case into the transcript of this case.

MR. RAMEY: Are there any objections?

MR. LOSEE: No objection.

MR. RAMEY: It will be incorporated.

Q (Mr. Kellahin continuing.) Is the Texas Oil and Gas Well penalized in any way because of its unorthodox location?

A No, sir.

Q And is it penalized in any way for any non-

productive acreage within the north half of Section 29?

A. No, sir, not to my knowledge.

Q. In fact, are any of the unorthodox location wells in this pool penalized in any way?

A. No, sir.

Q. What is the proposed location for the Hamon Well in Section 30?

A. We propose to drill 660 from the north line and 560 from the east line of Section 30.

Q. I notice that there is a well south of that location in Section 30. Would you identify that well for us?

A. Yes, sir, that's the Hamon No. 1 Union State.

Q. And what is the status of that well, Mr. Casey?

A. It's producing but it's very near the economic limit.

Q. What do you propose to do with regards to that well and your new location?

A. If Mr. Hamon is successful at the proposed location, 660 from the north and 560 from the east, we will then plug the No. 1 Union State.

Q. What acreage is currently dedicated to the Union State Well?

A. All of Section 30, 640 acres.

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Q. And if the Division approves the proposed unorthodox location what will the acreage dedication be to that well?

A. We propose to dedicate all of Section 30.

Q. Would you describe for me the significance of the structure lines in this general area?

A. What I've shown here is the general westerly, somewhat northwesterly, dip of the Morrow formation that I've contoured and in some areas we have slight interruptions in the regional dip, and where that has happened we, oh, propose that there may be some anomalies, small anomalies.

Q. Have you chosen your particular location based upon structural reasons alone?

A. No, sir, we have not.

Q. What do you conclude based upon the structure map itself?

A. That the general strike is north, essentially north/south and dips to the west.

Q. Would you describe for me the significance of the green line connecting the wells in a north/south direction here?

A. Yes, sir. We have a cross section A-A' which will be one of our other exhibits, and I've from north to south taken off from the Hamon State "E" 8913 in Section 20, proceeded into the well in Section 19, through the Texas

Oil and Gas Well, through a location that we had proposed for our well, and through the Hamon No. 1 Union State, proceeding on southeasternly to the Western Oil State Well in the south half of 29, and then southwesterly through the Texaco State "CUL" in 31, and finally to the Texaco No. 1 State "CD" in Section 36.

Q. Let me direct your attention to the Moran Well in Section 19. Has that well been known by any other names, and if so, what qre those names?

A. Yes, sir. Most recently it was known as the HyTech Well, and then it was drilled, I believe it was originally drilled as Southwestern Natural Gas, but Moran Exploration is now the -- taken over HyTech and we show that name.

Q. You testified that the proposed location for Mr. Hamon is 660 from the north line and 560 from the east line of Section 30. What, if anything, precludes you from drilling at a location 660 out of that corner?

A. At a location 660 from the north and east lines in Section 30 there is an old abandoned Seven Rivers Well that's drilled to a depth slightly in excess of 4000 feet, and it is completed from the Seven Rivers.

Q. What's the current status of that well?

A. It's plugged.

Q. And in your opinion can that old wellbore

now be used as a location from which to test the Morrow formation?

A. No, sir, we would not advise that at all.

Q. Why not?

A. Well, the well, of course, is old and there would be mechanical problems getting back in the hole. I don't know that we could even ascertain the exact condition of the hole or the pipe, but I'm sure that good engineering practices would dictate that we would not go back in that old hole.

Q. Why have you chosen to move 100 feet to the east of the 660 location?

A. We feel that moving in that direction will give us, oh, our best opportunity to stay out of that old hole and yet give us the best chance of getting into the pay that we want to.

Q. Let me refer you to Exhibit Number Two now and have you identify that.

A. Mr. Kellahin, this is a -- you asked me to identify this. It's our stratigraphic cross section.

Q. Let's do this, Mr. Casey. Let's put this on the wall so we can all be looking at the same points that you identify as you talk.

Mr. Casey, would you please go to the cross section, Exhibit Number Two, that we've placed on the

wall here, and identify that exhibit for us?

A. All right. This is our stratigraphic cross section, the location of which I referred to on Exhibit One. The southwesterlymost well being, or point, being A and this being A' on the north end of the cross section.

What I've done with this cross section is use this point here I call Morrow as a correlative point. Bear in mind it is a stratigraphic section, and then I've identified the -- all pertinent sand bodies, let us say, and shown the producing body in the Texas Oil and Gas No. 1 Osudo State.

Q. Let me ask you this, Mr. Casey.

A. All right.

Q. Does your cross section depict all the Morrow sands in each of the wells that you've put on the cross section or have you confined it to certain Morrow sands?

A. Well, I think that -- of course there are some sands in here that I know I have not colored in. I think that can be shown with the perforations in a number of the wells, selected perforations, where they're known, of course, that helps identify some of the sands, but some of the wells where an overall section is perforated, why, some of those sands I haven't shown.

The sands that I, oh, will probably get to later, but I've used a 60 API figure for my sands.

Q. The cumulative production information on your cross section is through what date?

A. It's through June.

Q. Of what year?

A. To September 1 -- or to July 1 of this year.

Q. And would you identify for us now the Texas Oil and Gas Well in Section 29 that offsets your location?

A. That's this well right here.

Q. And what sands are producing from that well?

A. The -- I've chosen to call this the TXO Sand to, oh, facilitate ease in referring to that body in the other exhibits which we'll show later, but here are the perforations of that sand shown in red.

Q. All right. Now would you look at the Jake L. Hamon Union State Well, which is the well in Section 30.

A. Yes, it is.

Q. And would you correlate for us the sands in that well with the Texas Oil and Gas Well?

A. This is the Jake Hamon No. 1 Union State Well. I've shown these sands here. There are some perforations open above these but by the aid of this cross section we hope and propose to and do demonstrate the sand bodies producing in the Texas Oil and Gas Well is not present, the

Morrow wasn't encountered in Mr. Hanson's No. 1 Union State Well.

Q. What do you intend to accomplish by your proposed location?

A. Our proposed location at this point, we hope to get in this producing sand body that is producing in the Texas Oil and Gas Well and thereby protect our rights and get what we think we're justified in producing.

Q. Let's have you correlate, if they are, the Texas Oil and Gas Well with the Western Oil Producers Well, and that Western Oil Producers Well, is that the one in the south half of Section 29?

A. Yes, that's this well right here.

Q. Do you find that TXO Sand present in the Western Oil Producers Well?

A. My interpretation, I do not believe it is present in that well.

I believe that the Texas Oil and Gas Sand, TXO Sand, if you will, is producing or appears to be present, anyway, in the Moran Exploration Well, and that's -- those are the only two wells that have this sand body present.

Q. That Moran Exploration Well is the one in Section 19.

A. Yes.

Q. What is the producing history of that

Western Oil Producers Well in the south half of Section 29?

A. This -- the Western Oil Producers Well has never produced.

Q. Why not?

A. I guess they just didn't find sands with producing capability, at least at that time. This well was never produced.

There were, as far as the record shows, scout records or scout information, there were tests taken in the well and the scout information showed that those tests were typed and not released, however, they did mention that it was noncommercial, and I think it has been testified to that this well had a test that they got 360 Mcf, something like that, but I'm not certain as to where in the borehole those tests were taken. It was plugged, however.

Q. Your cross section shows a lower few feet of perforated sand in the Texas Oil and Gas Well. Does that correlate in any way with any of the zones that were produced in the Hamon well?

A. I don't believe that it does. I've shown these sands in the Texas Oil and Gas well, particularly these that produce open to the borehole through perforations, as being discontinuous and not present in Mr. Hamon's well.

Q. In your opinion, then, Mr. Casey, is there Morrow production available to Section 30 that has not been

produced by the existing [illegible], I'm not well on that proration unit, nor will be produced by the well, that correspondingly is being produced by the Texas Oil and Gas Well?

A. Yes, I do believe that our proposed location in Section 30, that we will be able to encounter this sand and be able to effect a completion.

Q. In your opinion, Mr. Casey, is that proposed location necessary in order to protect the correlative rights of Mr. Hamon in Section 30?

A. Very definitely, yes, sir.

Q. Would you please return to your seat?

Would you turn now to your Exhibit Number Three? Will you identify that exhibit for us?

A. Exhibit Number Three is an Isopach of the sand body that I've referred to as the TXO Sand and so represented on our cross section.

Q. That's all that you've represented on this Isopach?

A. That's true.

Q. All right. What is the number of feet of Morrow sand you've attributed to the Texas Oil and Gas Well?

A. I've given it twelve feet to that TXO Sand body.

Q. And what would be the number of feet of Morrow sand that you propose to encounter in Section 30 at

your location?

A. I'd hope to encounter as much as twelve, but say ten to twelve, anyway, we hope.

Q. And how many feet of TXO Sand have you attributed to the Union State Well in ---

A. None.

Q. --- the south offset to this location?

A. Zero.

Q. How many feet have you attributed to the Moran Well in 19?

A. I've given that well ten feet.

Q. Now, when you talk in terms of the number of feet of this TXO Sand, what have you used as a cutoff to make that?

A. We used the 60 API units as a cutoff.

Q. If you had of used a 50 API cutoff, what would that do your Isopach?

A. Mr. Kellahin, I don't believe that it would affect that particular Isopach. The --- since these sand bodies are both rather hot and radioactive, they would both fit under the 50 API unit, too, but 60 is a number that in making our overall Isopach of a sand body, we're a little bit more optimistic.

Q. A 60 API cutoff, if I understand you correctly, would include more of the TXO Sand?

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A. Not in this particular case, no.

Q. I notice that you've excluded from your Isopach any of the TXO Sand from the Western Oil Producers well in the south half of Section 29.

A. That's true.

Q. Why?

A. I don't believe that sand body is present in the Western Oil Producers Well, and I -- my cross section there demonstrates that.

Q. In your opinion, Mr. Casey, what number of feet of TXO Sand would you believe necessary in order to obtain an economic well?

A. Mr. Kellahin, I believe you've got to have at least ten feet. If we could just -- if we knew for sure we'd get nine, why, I'd probably say nine, but we do need, I would say, ten or twelve feet to effect a commercial producer.

Q. In your opinion, Mr. Casey, can -- can you move to a standard location under the North Osudo Morrow Pool rules and obtain a commercial well?

A. No, sir, I don't believe I can. If we did that, we would be going -- we would be going a direction that would be -- show less of the TXO Sand and we would increase our risk for completing a well.

Q. What is the anticipated cost of Mr. Hamon's

proposed well in Section 30?

A. Our AFE cost for that well is a little over a Million Dollars for a completed well.

And our dry hole cost is estimated at -- right at $780,000.

Q. Would you go back now to a standard location 1650 out of the north and east sides of Section 30 and approximate for me the number of feet of TXO Sand you would encounter at that location?

A. I'll have to guess at 1650 here. I don't have a scale with me, but probably in the neighborhood of four to six feet.

Q. In your opinion, Mr. Casey, based upon your Isopach and your cross section and your other studies of this area, do you have an opinion as to whether the Hamon Union State Well depleted all the Morrow formations underlying Section 30?

A. No, certainly not. They, since the TXO Sand was not present in the Hamon Union State, it could not have drained any gas from that particular sand body.

Q. In your opinion, Mr. Casey, concerning whether the Texas Oil and Gas Well is draining any portion of Section 30, do you have an opinion with regards to that?

A. Yes, sir. I certainly think that they are draining Mr. Hamon's acreage in Section 30.

And I show that on my cross section that that sand is present where we want to drill.

Q. Were Exhibits One, Two, and Three compiled under your direction and supervision?

A. They were.

Q. In your opinion, Mr. Casey, is approval of Mr. Hamon's application for the proposed unorthodox location in the best interests of conservation, prevention of waste, and the protection of correlative rights?

A. I believe that to be true, yes, sir.

MR. KELLAHIN: We move the introduction of Exhibits One, Two, and Three.

MR. RAMEY: They will be admitted.

MR. KELLAHIN: That concludes our direct examination.

MR. RAMEY: Any questions of the witness, Mr. Losee?

MR. LOSEE: I have some, Mr. Ramey.

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Casey, has Mr. Hamon commenced drilling this well?

A. Yes, sir, he has.

Q. How deep is the well at this point?

A. I haven't checked today, Mr. Losee, but yesterday it was 1100 feet. They had already set surface pipe and drilled out, and I suspect today they're probably below 2000, somewhere, 21 and 2200.

Q. And that's at a location 560 from the east line and 660 from the north?

A. Yes, sir.

Q. I believe you stated that good engineering practice would require you to be a hundred feet from this shallow dry hole, shallow plugged and abandoned well.

A. Yes, sir.

Q. Would it have been possible for you to move 100 feet north?

A. Yes, sir.

Q. Wouldn't that have been as good a location or really a little better location on your Isopach than 100 feet east?

A. Possibly it could be, yes, sir, Mr. Losee.

Q. Would you explain why you chose to move 100 feet east, then?

A. At our location 100 feet east of the old hole we think that we'll be closer to the Texas Oil and Gas producing well, and have a better chance to affect a completed well.

Q. Would you -- well, I believe you just

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stated that on your Isopach, at least, a location 100 feet north would probably be a little better.

A. On my map that's quite possible, yes, sir. You'll note, however, from the Texas Oil and Gas Well twelve feet, I've given ten feet to Moran's, so we are less than the amount of thickness as we go to the west and to the northwest.

Q. I just suggested going 100 feet north and wondered why you didn't choose that if this map was the guide.

A. Did I answer your question to your satisfaction?

Q. Well, --

A. We just felt that that was the best location.

Q. You are closer to the production by this.

A. Yes, sir, right.

Q. I don't know whether you want to answer or not at your seat. I see you have Exhibit Two, your cross section, for a layman's benefit would you explain to me why this so-called TXO Sand, which is open to perforations at 11,324 to 340, doesn't correlate with the Hamon Union State sand, which is open to perforations at 11,306 to 11,312?

A. Mr. Losee, it appears to me they do not

correlate because, first of all, the TXO Sand is a thicker sand body. It appears to be a hotter sand and in those terms it's more radioactive. The character on the log just doesn't appear to me to be correlative, and I've chosen not to correlate the two.

Q. Well, the mere fact that one sand is somewhat thicker than the other, and by some slight percentage, does that in itself show that they don't correlate?

A. I believe that it certainly weighs my decision on the fact that they do not correlate. They are, you know, because of the proximity of the two wells, if that sand body were continuous over a larger area, I think they would be more closely related as far as thickness is concerned.

Q. Well, that's one factor. Another factor, you said there was, what, more radiation in the samples?

A. More radioactive as represented by the curve, yes, sir.

Q. Is that the only two factors upon which you base that conclusion that they do not correlate?

A. Well, I think that I could state that probably from the pressure information that has been available that I'd think those two were not related.

And the -- the amount of condensate that is being produced from Texas Oil and Gas Well.

Q. What volume of condensate per thousand cubic feet of gas is it making?

A. The Texas Oil and Gas Well? I don't know, Mr. Losee. I have a gross figure that I've been able to obtain from the Commission, but I don't know when -- how that relates to thousand cubic feet, but it's making a considerable amount of distillate or condensate.

Q. Well, is that unusual in an initial completion of a Morrow well?

A. No, sir, not -- not in all cases.

Q. Isn't it true, Mr. Casey, that another geologist looking at these two logs might well correlate this TXO Sand with the sand I mentioned in the Jake L. Hamon Union State Well?

A. Yes, sir, I think that's completely possible.

Q. Now, let me ask you to explain why, and as a matter of fact seems to correlate the sand I mentioned in the Union State Well at 11,306, perforations 11,312, to a sand body present in this plugged and abandoned well, Western Oil Producers Well at 11, about 230 -- 250?

A. Yes, sir, I see it. Why do I correlate those two?

Q. Well, they do correlate, don't they?

A. Yes, sir, I think so. I've shown them that

way.

Q So that another geologist looking at this cross section might well correlate the TXO Sand with the sand that's present and open in the wellbore of the Hamon Union State, as well as the sand that was encountered in the Western Oil Producers State "J" Well?

A Yes, sir, I think that would be possible.

Q And if he arrived at those -- that conclusion, or those conclusions, and were preparing an Isopach, his Isopach would actually in Section 30, at least for six or seven feet of it, the sand would -- would swing to the south, the Isopach would, to pick up your Hamon Union State Well, and considerably on to the south to pick up the Western Oil Producers Well, would it not?

A Yes, sir, I think it could.

MR. LOSEE: I think that's all, Mr. Casey.

MR. RAMEY: Any other questions of the witness?

MR. KELLAHIN: I have some.

MR. RAMEY: Mr. Kellahin.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Casey, you've indicated that Mr. Hamon has commenced drilling of the well at this proposed location.

Was that done in accordance to a Commission order?

A. Yes, sir.

Q. So I show you a copy of a Commission Order Number R-6029. Is that the order under which Mr. Hamon commenced drilling this well?

A. Yes, sir.

Q. And does that order provide for any penalty in any way?

A. No, sir.

Q. And does it approve the location?

A. It surely does, yes, sir.

MR. KELLAHIN: I believe this is part of the Commission records, Mr. Ramey, and I show it to you for convenience.

Q. Now, in response to Mr. Losee's question with regards to factors as to why you didn't think the TXO Sand in the Texas Oil and Gas Well correlated with the Jake L. Hamon, you made reference to the fact that the Texas Oil and Gas Well had produced considerable condensate. Was that your testimony?

A. Yes.

Q. How does that condensate production in the Texas Oil and Gas Well compare to the condensate production in the Hamon Union State Well?

A. I don't recall that we produced condensate

from our well, but in the early stages I'm not sure if we did or not.

I have some production figures that may show that. Mr. Kellahin, I think that we were going to cover that in another exhibit on our production, but --

Q. I won't ask you if you've got another exhibit and another witness to talk about that.

A. In May, now let me see, in March our records reflect that Texas Oil and Gas Well made 1200 --

Q. Mr. Casey, the question posed to you was you set forth certain factors to Mr. Losee as to why you didn't believe the TXO Sand correlated between the two wells, and one of those factors was the amount of condensate.

What information do you have to support that opinion?

A. Our records show that in March the Texas Oil and Gas Well made 1261 barrels of condensate. In April production was 1796 barrels of condensate. And in May it made 1614, 1-6-1-4, along with the gas.

MR. RAMEY: What was that last figure?

A. 1614.

Q. And how does that condensate production compare to the condensate production in the Hamon Union State Well?

A. Mr. Kellahin, I'm not sure if our well has

ever produced any condensate. Mr. Cooksey may have records reflecting whether or not it's produced any.

Q. Mr. Losee asked you if another geologist could recontour this Isopach to pick up sands in the Western Oil Producers Well in the south half of Section 29 and you indicated that he could do so.

Would you agree with that interpretation of the geology to restructure the Isopach in that manner?

A. No, sir, I would not, but I think any geologist would have his right to his opinion, and my opinion and my interpretation is reflected in the cross section, and I do not believe that there's any -- there's a TXO Sand present in the Western Oil Producers, nor do I believe it's present in Mr. Hamon's Union State. But that's my interpretation and my Isopach reflects that.

Q. Would you describe in general terms what the geology is in this particular area?

A. Well, these are strand lines, if you will, or deposits of sand that I've shown on my Exhibit One, and from the cross section I've shown that you can have a number of sands, but they are certainly not continuous. They are discontinuous. That's the nature of the -- nature of the beast.

MR. KELLAHIN: I have no further questions.

MR. RAMEY: Do you have any questions of

the witness?

MR. LOSEE: No more questions to ask.

MR. RAMEY: He may be excused.

Let's take a short fifteen minute break.

(Thereupon a recess was taken.)

MR. RAMEY: The hearing will come to order. You may proceed with your next witness, Mr. Kellahin.

JAMES G. COOKSEY

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, would you please state your name, by whom you're employed, and in what capacity?

A. My name is James G. Cooksey. I'm employed by Jake L. Hamon, Dallas, Texas, and a petroleum engineer.

Q. Have you previously testified before the Oil Conservation Division of New Mexico as a petroleum engineer?

A. Yes, I have.

Q. And have your qualifications as an expert witness been accepted and made a matter of record?

A Yes, sir.

MR. KELLAHIN: We tender Mr. Cooksey as an expert petroleum engineer.

MR. RAMEY: He is considered an expert.

Q (Mr. Kellahin continuing.) Would you please refer to what we have marked as Exhibit Number Four and identify that?

A Yes, sir. Exhibit Number Four is a production map of the North Osudo-Morrow Gas Field, Lea County, New Mexico.

We have shown on this plat the June, 1979 production for the Morrow completions in the area, the cumulative production for the same wells, July 1st, 1979.

For example, in Section 30, which is the Jake L. Hamon Union State Well No. 1, which is also outlined in yellow, the June, 1979 production is 41 Mcf; the cumulative production for that well is 5,938,125 Mcf.

Q Let me refer you to the Texas Oil and Gas Well in 29. Where did you obtain the production information that's on that well?

A. That information was obtained from the New Mexico Oil Conservation Commission records.

Q And what do those figures reflect?

A. We show on Exhibit Four the March, 1979 gas production was 98,636 -- let me correct that. 98,636 Mcf

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gas, 1,261 barrels of condensate for the month.

The April, 1979 production is 191,160 Mcf gas with 1,796 barrels of condensate.

The May, 1979 production is 230,915 Mcf and 1,614 barrels of condensate per day.

The average daily producing rate for May of 1979 for the Texas Oil and Gas Osudo State Well No. 1, Section 29, is in excess of 7-million cubic feet of gas per day.

I also show in that same box that the cumulative gas production for the first three months productive history of the well is in excess of a half a billion cubic feet of gas. That's 555,795 Mcf and 4,671 barrels of condensate.

MR. NUTTER: Mr. Cooksey, excuse me. Did the well go on production in March?

A. It's my understanding it did. It was the first reported production.

Q. I want to ask you some questions about Exhibit Number Four but at the same time I'd like to have you identify Exhibit Number Five, and let's look at both of these exhibits at the same time.

A. Yes, sir.

Q. What is Exhibit Number Five?

A. Exhibit Number Five is a bottom hole pres-

sure map of the same area, that is, the North Osudo-Morrow Gas Field. The same wells are shown on it with the bottom hole pressures this time shown in the squares by each of the wells. These pressures and completion dates are tabulated and these are obtained from our well records or from the Commission's records.

I might point out that the discovery well for the field is in Section 20. That is Jake L. Hamon's State "E" 8913 Well No. 1, which is located in the northwest corner of Section 20.

Q. And what was the second well in the field?

A. The second well was the Jake L. Hamon Amerada Federal Well No. 1, which is in the lower part of Section 17.

Q. And the third well?

A. The third well was Jake L. Hamon's Union State Well No. 1 in Section 30.

Q. The fourth well?

A. Was the well that is shown in Section 19 as Moran Exploration. It was completed in February, 1970. At the hearing that was held last May that was identified as the HyTech Energy, Incorporated Well, and I think was the well that Mr. Casey testified to was originally drilled by Southwestern Natural Gas.

Q. What is the current status of the Hamon

Union State Well, Mr. Cooksey?

A. The Hake L. Hamon Union State Well NO. 1, Well No. 30, as shown on Exhibit Four, produced 41 Mcf gas for the month of June, 1979. It is at its economic limit and we have examined the well for possible re-work characteristics and cannot find any Morrow stringers in the well that warrant recompletion. It's essentially depleted.

Q. In your opinion, Mr. Cooksey, -- in your opinion, Mr. Cooksey, is the Texas Oil and Gas Well in Section 29 producing from Morrow stringers that have not been produced in this Hamon Union State Well?

A. It is my opinion that the Texas Oil and Gas Osudo State Well No. 1 in Section 29 produces from a Morrow sand stringer that has not been effectively depleted by any of the wells in the North Osudo-Morrow Gas Pool.

Q. Upon what do you base that opinion?

A. That opinion is based on several factors. One, the initial bottom hole pressure, as shown on Exhibit Number Five, was 4887 psi. This is a bottom hole pressure that reflects a pressure gradient of an excess of .4 pounds per square foot. Excuse me, pounds per foot of depth. This would be considered a normal bottom hole pressure for a normally pressured reservoir.

I would state that the Jake L. Hamon Union State Well No. 1 in its final stages of depletion has a bottom

hole pressure of less than 200 psi, and you can note that the other pressures shown on the exhibit indicate that the other wells in the field also have low bottom hole pressures.

I have also based the opinion that the Texas Oil and Gas Well is producing from a separate source of supply on its production characteristics. There is no other well in the field that comes anywhere near approaching 7-million cubic feet of gas per day. It also has production characteristics that were initially exhibited by all of the wells in the field; that is, for example, the March condensate yield was 12.8 barrels per million, based on a figure shown on Exhibit Number Four.

The condensate yield for April, 1979 was 9.3 barrels per million.

May, 1979 was 6.9 barrels per million.

This is a condensate recovery that was exhibited initially by all initial completions, that being the Hamon Amerada Federal Well, the Hamon State "E" 8913, and the Hamon Union State.

Currently these wells produce no condensate and they haven't for years.

Q. You've indicated certain factors to explain why you believe the Texas Oil and Gas Well to be draining a Morrow stringer that was not previously depleted

by the Hamon Union State Well. Would you describe those factors in terms of whether or not the HyTech or the Moran Well in Section 19 may have produced gas that is now being produced from the Texas Oil and Gas Well?

A. Would you re-clarify your question, please, sir?

Q. Yes, sir.

You've indicated to me factors why you believe the Hamon Union State Well did not deplete that Morrow zone now being produced in the Texas Oil and Gas Well. Has the Texas Oil and Gas Well, those zones being produced in the Texas Oil and Gas Well, been depleted by the production from the Moran Well in Section 19?

A. I would say that it has not, and I base this opinion on the fact that it came in with what I term a virgin reservoir pressure of 4837.

Q. That pressure is somewhat lower than the pressures you indicate for wells north of the Texas Oil and Gas Well.

A. That's correct. You look at the wells that generally lie in a line from northeast to southwest, that would be the wells in Section 17, Section 20, and Section 19, these wells appear to have a normally high bottom hole pressure.

For example, the discovery well reported

6653 psi bottom hole pressure upon initial completion. That was in May of 1965.

The well that's identified as the Moran Exploration Well in Section 19 was nearly five years later drilled and completed, and had a reservoir pressure of 6945.

Now you relate that bottom hole pressure to the Jake L. Hamon Union State Well, which was drilled in 1966, now this was four years prior to the Moran well, and it exhibited a bottom hole pressure of 4772, and it's a comparison of these pressures that I've concluded that the -- there has been no drainage taking place, significant drainage.

Q. Now with regards to the Hamon "E" 8913 Well in Section 20, do you have an opinion as to whether or not that well has drained the producing sand that is now producing in the Texas Oil and Gas Well?

A. It's my opinion that it has not.

Q. And what are your reasons for that opinion?

A. Well, again, these are based on the pressure information that's shown on Exhibit Number Five, the difference in the pressures, the initial virgin pressure displayed by the Texas Oil and Gas Well, and its producing characteristics, which also indicate that the well is producing from a virgin, new reservoir.

Q. Do you have an explanation, Mr. Cooksey, as to why the three wells we've discussed north of the Texas

Oil and Gas Well have initial pressures higher than that encountered by either the Hamon Union State Well or the Texas Oil and Gas Well?

A. It's my opinion that that phenomenon was created by a geologic situation and the other information of Morrow fields, it's not uncommon for some of the Morrow stringers to be overpressured, as I understand the possibility in Morrow sand production, you know, thereby causing an abnormally high pressure -- pressure flow well.

For example, the Moran Exploration Well has a pressure gradient of .609 psi per foot. That's above normal and would be considered an abnormally pressured reservoir, and it's my understanding it's created by geologic features.

Q. Let me ask you about the well that's located 660 out of the north and east corners of Section 30. What is the status of that well?

A. This was an old well that was originally drilled to a TD of about 4000 feet and produced, I believe, Mr. Casey testified from the Seven Rivers formation. It has been plugged and abandoned, and --

Q. In your opinion as a petroleum engineer is that well suitable for re-entry as a Morrow completion?

A. No, sir, I could not recommend re-entering that old well to drill it deeper, considerably deeper, to

the 11,000 foot area that the subject Morrow formation is found.

Q. What distance would you want to remove yourself from that existing wellbore in order to commence drilling of the Morrow test?

A. I believe the 100 feet removal from the existing wellbore that we recommended here is adequate. That's based on several factors. You just would like to have enough space to reasonably drill a safe well without any drilling problems.

For example, I believe I testified earlier and looked at the completion papers of the Texas Oil and Gas Well, for example, at somewhere around 4000 feet the inclination reports a cumulative displacement in excess of 60 feet, you know, so that's pretty well proof that you're playing with as close a distance to an old well as you feel it would be safe.

Q. Were Exhibits Four and Five compiled under your direction and supervision, Mr. Cooksey?

A. Yes, sir.

Q. And in your opinion will approval of Mr. Hamon's application for the unorthodox location be in the best interests of conservation, the prevention of waste, and the protection of correlative rights?

A. In my opinion that it will.

MR. KELLAHIN: We move the introduction of Exhibits Four and Five.

MR. RAMEY: Exhibits Four and Five will be admitted.

Any questions of the witness? Mr. Losee?

MR. LOSEE: Yes Mr. Ramey.

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Cooksey, from looking at your production map, Exhibit Four, the only well I notice that you show any condensate production for is the TXO. Is it intended by this map to portray that there was no condensate production from any of the other wells?

A. No, sir, it does not. As I testified earlier, the wells produced condensate in their early life. None of Mr. Hamon's wells have produced condensate in recent years, and the condensate production for the Union State Well No. 1 in Section 30 has been 29,725 barrels of condensate through April, 1979; however, there has -- the last reported condensate production from that well was in April of 1976. At that month it produced five barrels of condensate.

Q. Mr. Cooksey, would you have the condensate production records for the Hamon Union State Well with you?

A. Yes, sir, I do; however, I believe they were presented as an exhibit at the last hearing.

Q. What I really am curious about is you have the condensate records for the first month in which the well produced?

A. Yes, sir, I surely do.

Q. What was the condensate production during that month? It was apparently September, 1966.

A. Yes, sir. My production information, Mr. Losee, begins in October of 1966.

Q. Okay.

A. And in October of 1966 the well produced 311,782 Mcf gas. The condensate for that month was 4353 barrels of condensate, for a yield of 14.0 barrels per million, and this was the numbers that I related to in my direct testimony that upon initial completion all of Mr. Hamon's wells reported production very similar to the Texas Oil and Gas Well. In other words, the yields were between 6 and 12 or 13 barrels per million condensate, which was evidence to me that the Texas Oil and Gas Well has encountered a Morrow sand stringer that has been efficiently and effectively depleted by any other wells in the field.

Q. Well, maybe I misunderstood Mr. Casey when he testified. I thought one of his reasons for concluding that the Hamon Union State Well did not have the --

the log wouldn't correlate to the Texas Oil and Gas Well was the condensate production in the Texas Oil and Gas Well, and are you explaining that in your opinion in the initial stages the condensate production rates for each of those wells were similar?

A. Yes, sir. I've concluded that they are similar. They are not today, by any means. The Texas Oil and Gas Well, you know, has condensate production similar to production from a new and virgin reservoir, and that's my contention, that the Texas Oil and Gas Well has encountered a sand stringer that has not been depleted or drained or affected by any of the existing wells in the field.

If they were in communication I would assume that some of the wells in the reservoir would still be producing condensate.

Q. Well then, if I understand you correctly, the fact that TXO Well is producing condensate now is very -- and the fact that the Hamon Union State Well is not producing any condensate and its latter state of depletion, doesn't distinguish in itself the two zones that the so-called TXO zone.

A. You say it does not distinguish separation of the two?

Q. Yes.

A. It's a parameter that I use to conclude

that they were producing from separate reservoirs, yes, sir.

Q. Well, didn't they both have condensate when they were initially completed?

A. That is correct.

Q. Well then how does that distinguish the two zones? I probably don't understand.

A. What I'm trying to explain to you, Mr. Losee, and I hope that the Commission understands, is that had the reservoir that produces from the Texas Oil and Gas Well been affected by any of the wells, not necessarily Mr. Hamon's Union State Well, but by any of the wells in the field, that you would not have obtained upon initial completion the high condensate yield that your well apparently displays.

Q. Well, I think I understand that, Mr. Cooksey, but I thought -- and probably I didn't understand Mr. Casey -- I thought he was explaining the reason that he didn't think it was the same zone was that the Texas Oil and Gas Well had condensate production.

A. Do you want me to comment on that?

Q. Yes. That's the purpose of my question.

A. Would you mind restating what you understood Mr. Casey to testify to?

Q. I thought Mr. Casey said one reason that he felt that the Hamon Union State Well didn't have open in

its wellbore the so-called TXO sand was lack of condensate production in the Ramon Well, not being similar to that which was present in the TXO Well.

A. Well, then --

Q. Yes? I want an explanation, I guess, really.

A. I don't know as I have an explanation but I assume you -- when I listen to the testimony and come back to your questions, I assume maybe you didn't relate exactly to Mr. Casey's testimony. I put that as a basis of separation, that the Union State Well today does not produce condensate. It hasn't produced condensate for years. And that TXO Well now, a new completion in the reservoir, does produce condensate. And that was the way I interpreted his answer, but that's just strictly James G. Cooksey.

Q. Well, that's the question I asked.

A. Yes, sir.

Q. And I respect that anszwer.

I believe you also said that this TXO Well encountered virgin pressure in this sand that it's producing from, and if I'm correct that that stringer had not been depleted by any other wells in the North Osudo-Morrow Field.

A. That is my opinion of -- of the pressure information that's available to me.

Q. And is that true of the Moran Exploration

Well that you do not feel like it is depleted any gas from the so-called TXO Sand, from the pressure data you've examined? A.

A. I wouldn't think it has significantly affected it, no, sir.

Q. Well, isn't the Morrow -- aren't Morrow stringers in good communication with each other, the same producing stringer? Generally speaking?

A. Good? Are you referring to a quality of communication?

Q. Yes.

A. I think that varies with Morrow production. I think that's obvious, as is shown by the information -- I mean obvious based on information shown on Exhibit Five, and that is the difference in the pressures on the producing life of the field.

For example, there is a pressure difference in the three Hamon wells in September 1972.

Q. Well, the -- when was this Moran Exploration Well completed?

A. February of 1970.

Q. Which is some nine and a half years ago. Would you not -- if it is in fact open in the wellbore to the TXO Sand, wouldn't you expect to have some material depletion in that sand when TXO encountered it in drilling

their well earlier this year?

A. If the sand stringer was present and if it had adequate porosity and permeability to affect communication, yes, sir.

Q. Well, I'm sure you're familiar with the Exhibit Three to which Mr. Casey testified, being his Isopach of the -- I think it's the TXO. No, it's not the cross section. It's the Isopach.

A. Okay, I have it, yes, sir.

Q. He credits the so-called TXO Sand on this Isopach with ten feet. Are you agreeing with his interpretation based upon your pressure studies?

A. Well, the -- excuse me.

Q. That the Moran Well has ten feet of TXO Sand?

A. I really couldn't -- couldn't conclude how many feet of Morrow sand is in the Moran Well based on the pressure studies.

Q. And can you conclude -- or I thought you concluded that they weren't in communication, the Moran Well with the TXO Sand that's open in this wellbore.

A. I stated that it didn't appear to be effectively draining the TXO Sand in some other words. I'd have to have the reporter read that back to me to give you exactly what I stated, but --

Q. I think that's all, Mr. Cooksey.

A. Yes, sir.

MR. RANEY: Mr. Kellahin?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, in relation to the Isopach and the pressure information, Exhibits Three and Five, if I understood your testimony correctly, the fact that a geologist demonstrates on his Isopach and his cross sections that certain sands are present at particular locations, can you also conclude then that those sands are going to be productive?

A. Just because they're present, no, sir. I also, to add to that, Mr. Kellahin, is the fact that I'm not aware of the individual selective perforations in the Moran Exploration Well. My information is it's perforated 11,281 toll,562 feet. That's a 281 foot interval and I'm not for sure what Mr. Casey has depicted as a TXO Sand is perforated in the Moran wellbore.

Q. Well, based upon your study of the production and pressure information, Mr. Cooksey, do you have an opinion concerning whether or not the TXO Well in Section 29 is draining any portion of Section 30?

A. Yes, sir. It is my opinion that if the

TXO Sand exists in Section 30, that it is draining hydrocarbons from beneath Section 30.

Q. Do you have any opinion as to the extent of the reservoir being drained by the Texas Oil and Gas Well?

A. Without any pressure information I haven't been able to calculate a drainage radius or pressure decline curve. I haven't been privileged to that information, and so I haven't got an idea other than what's been depicted by the geologist, Mr. Casey, his geological interpretation.

MR. KELLAHIN: I have nothing further. Thank you.

MR. RAMEY: Any other questions of the witness?

MR LOSEE: No further questions.

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Cooksey, I would like to pursue this condensate production a little more.

On your Union State do you have a point where your condensate production fell off from what it was, or do you have an estimate of the dew point pressure?

A. Is it -- excuse me. Can I speak off the record? I want to ask my attorney a question.

(There followed a discussion

between Mr. Cooksey and
Mr. Kellahin off the
record.)

MR. KELLAHIN: Mr. Cooksey, I hand you what I've marked as Hamon Exhibit Number Six that consists of four pages, and ask you to identify that document.

A. Yes, sir, this is a production tabulation for Jake L. Hamon's production records for the Union State Well No. 1, Section 30, Lea County, New Mexico.

It begins with the monthly gas sales in October of 1966, through April, 1979. It has shown on it the cumulative gas production by month.

The third column in this tabulation is a monthly condensate production, beginning with October of '66 through April '79.

The fifth column is a cumulative condensate production by month, and then in the fifth column to the right we have calculated the yield in barrels per million and to --

MR. KELLAHIN: Does that exhibit include more than one well?

A. No, sir.

MR. KELLAHIN: It's all on the Union State?

A. Union State Well No. 1.

And to answer Mr. Ramey's question, the

Initial condensate yield was -- yield in barrels per million, was the greatest in the initial monthly production of October, 1966, and at that month that was 14.0 barrels per million.

It gradually declined and the exhibit speaks for itself, but it gradually declined to where the next three years the condensate yield was in the range of 4.5 barrels per million. This is yield of condensate. Beginning in the early part of 1969 the yield decreased to 1.5 to 2 barrels per million, and the well essentially ceased to produce condensate in -- well, let me correct that.

It would be my interpretation of the exhibit that beginning in 1972 the average condensate production per month was less than 10 barrels per month and had a yield of less than 1 barrel per million.

And then it ceased to produce condensate in any quantities in May of 1976.

So to answer your question, Mr. Ramey, it produced condensate for some period of time and the yield, as I calculate it, slowly went to zero.

Q. (Mr. Ramey continuing.) There wasn't a rapid -- a rapid dropoff in your barrels per million?

A. No, sir.

Q. And did you have similar performance, say, on your Amerada Federal?

A. Yes, sir, I would interpret the production

characteristics of the Amerada Federal Well No. 1 in Section 17 to have similar characteristics; however, the significant difference is it had a much higher condensate yield initially. It started out in September of 1966 with a yield of 98.2 barrels per million, and that gradually went down to 73, to 58, to 49, and it got less than 10 barrels per million in one year, in September of 1967. The yield from that well continually declined, as it did in the Union State Well, and it ceased to produce condensate in any quantities in June of 1976.

I have the same information for the other well that's operated by Mr. Hamon, that is the State "E" 8913 in Section 20. Its characteristics were more similar to the Union State Well. In July of 1965 the yield from that well was 24.8 barrels per million. It declined to less than 10 barrels per million in August of 1966, displaying the same characteristics, and ceased to produce condensate in significant quantities in December, 1972.

Q Well, I would surmise from your testimony, Mr. Cooksey, that you're contending the Texas Oil and Gas Well, had it been in communication with the Union State Well, that the overall pressure should have depleted, and the condensate production should have depleted, also.

A I believe you would have seen something less than the 12.8, 9.3 barrel per million yield that it

displays on initial production, yes, sir.

MR. RAMEY: Thank you. Any other questions of the witness?

MR. KELLAHIN: Yes, I have one more.

MR. RAMEY: Mr. Kellahin.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, do you have an opinion as to whether or not Mr. Hamon's proposed location 660/560 in Section 30 ought to be penalized in any way by the Commission?

A. In my opinion no penalty is warranted. I think the penalty, if Mr. Hamon is to suffer one, has been -- has been displayed in the drainage that it has suffered since March of 1979 to the date that we get a well completed in the reservoir capable of protecting our correlative rights.

Q. The drainage from where?

A. From Section 30 to the Texas Oil and Gas Well in Section 29.

MR. KELLAHIN: I have nothing further.

MR. RAMEY: Did you offer your exhibit?

MR. KELLAHIN: Yes, sir, I did.

MR. RAMEY: Did I accept it?

MR. KELLAHIN: I'm sorry, Exhibit Number Six I haven't offered. I do so now.

MR. RAMEY: It will be admitted.

MR. LOSEE: Yes, I have a question.

MR. RAMEY: All right, Mr. Losee.

RECROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Cooksey, you don't think any penalty is warranted at 560 feet. Do you think a penalty would be warranted if you were one foot off the leaseline?

A. Well, being not totally familiar with the rules of procedure in the State of New Mexico, and what little I know about it, possibly a penalty could be considered at one foot off the leaseline; however, as indicated in the permit to drill, the difference between 560 and 660 is sort of insignificant, in my opinion.

Q. Well, not with regard to the Oil Commission rules, at what point between 560 and 1 feet do you think a penalty would be warranted?

A. On Mr. Hanon's part, never, but the -- taking into account the point of the application, and it happens to be 560 feet from the lease line versus your unorthodox location at 660, I've tinkered around with some numbers in an effort to try to have an answer for you, and

if you take the overlap of -- of circular radial drainage and come up with a guess that would be recoverable in place in that overlap, just on the outside number, giving it the most liberal interpretation that I can give it, you're talking about less than 200,000 Mcf, and golly, you did that in May of 1979.

Q. Did you do any calculations at one feet?

A. No, sir.

MR. LOSEE: I think that's all.

MR. RAMEY: Any other questions of the witness? He may be excused.

MR. KELLAHIN: I have nothing further. Thank you.

WILLIAM SIRUTA

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOSEE:

Q. Would you state your name, please?

A. William Siruta.

MR. RAMEY: Would you spell that, please?

A. S-I-R-U-T-A.

Q. Where do you live and what is your occu-

pation?

A. I live in Midland, Texas. I'm a District Geologist for Texas Oil and GAs.

Q. Have you previously testified before the Commission and had your qualifications as a geologist made a matter of record?

A. Yes, sir.

MR. LOSEE: Are Mr. Siruta's qualifications acceptable?

MR. RAMEY: Yes, they are acceptable.

Q. (Mr. Losee continuing.) Let me ask you initially, Mr. Siruta, whether or not Texas Oil and Gas has any objections to a 660 foot location?

A. No, sir, we do not.

Q. And for what reason?

A. We feel like that our location is 660 from the lease line and it would only be fair that Jake L. Hamon be allowed to drill that close, also.

Q. Isn't it true -- or strike that.

Were you not present and did you not testify in the hearing on, oh, Case Number 6215, which is the transcript of which has been made a part of the record?

A. Yes sir, I was present.

Q. And no recommendation at that time was made for any penalty to be applied to that well?

A. No, sir.

Q. There was no objection?

A There was no objection.

Q. They -- Mr. Hamon objected to that well, did he not?

A. Yes, he objected to the unorthodox location.

Q. But did not recommend a penalty to the Commission?

A. No, sir, he did not.

Q. Please refer to what has been marked as Exhibit One, and explain what is portrayed by this exhibit.

A. This is a production map on the wells in the North Osudo Field. The top number listed below the wells indicates the cumulative production in terms of gas and condensate production.

The denominator, or the line -- figures underneath the line, indicate the daily production as of May the 1st of '79.

Q When were most of these wells in this field completed?

A. Between 1968 and '70.

Q. With the exception of the recently completed TXO Well, do you feel that the rest of the wells in the field are substantially depleted?

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A. Yes, sir, I feel they are depleted.

Q. Do you - I notice you've got some bottom hole pressure data on all these wells except the TXO. From one of your subsequent exhibits would you give the initial pressure on this TXO Well, if you have it?

A. The bottom hole pressure that was obtained on a DST over the producing interval, the final shut-in pressure was 4903.

Q. Now, do you know what the initial flowing pressure of this well was?

A. It was approximately 18 or 1900 pounds. I don't have the exact figure.

Q. Do you know approximately what it is at the present?

A. Yes, at the present time it is down to 1200 pounds. That is flowing tubing pressure.

Q. Do you have anything further to add with respect to this exhibit?

A. No, sir.

Q. Let's refer to what's been marked as Exhibit Two, labeled Isopach Map, and explain what is portrayed by this exhibit.

A. This is an Isopach map on the Middle Morrow Sand pay which Mr. Casey has referred to as the TXO Sand. It shows the Texas Oil and Gas Osudo State No. 1 having 16

feet of this sand present.

The Jake L. Hamon Union State in Section 30 having 3 feet of this sand; the Western Oil State "J" No. 1 in Section 29 having 10 feet; the Southwestern Natural, which I think has been referred to as the Moran Well, having zero feet of pay.

Q. Is the well on your map entitled Southwestern Natural State the same well as the Moran Exploration Well we've been talking about?

A. Yes, sir.

Q. Does this Isopach have any cross section marked on it?

A. Yes, sir, it has a cross section indicated by a dashed line. It goes from the Southwest Natural Well in 19 to the Jake L. Hamon Union State Well in Section 30 to the Texas Oil and Gas Well in Section 29 to the Western Oil State "J" Well in the south half of Section 29.

Q. You have reviewed Mr. Casey's Isopach, which is their exhibit -- Mr. Hamon's Exhibit Three, have you not?

A. Yes, sir.

Q. Generally speaking, would you explain wherein these Isopachs differ?

A. The major difference is the Southwestern Natural Well in Section 19, which I give zero feet of pay,

and Mr. Casey gave 10 feet of pay, and then the Wester Oil State "J" No. 1 Well in the south half of 29 I'm giving 10 feet of pay and Mr Casey gave zero feet.

Q. Well, aren't you also giving 3 feet to the Hamon Union State?

A. Yes, sir.

Q. Did he give it any feet?

A. He gave it zero feet.

Q. Zero feet. So it's that area in which the Isopachs differ?

A. Yes, sir.

Q. Let's refer to what's been marked as Exhibit Three, being your cross section, and going from the Moran Well, do you show the TXO Sand present in it? Do you correlate it with the so-called TXO Sand?

A. No, sir, I do not show the TXO Sand being present in the Southwestern Natural Well.

Q. Let me ask before I go any further, your Isopach, on what basis, API basis, was it calculated?

A. Using a 50 API unit basis.

Q. Okay, and to that extent it differs from Mr. Casey's?

A. Yes, sir.

Q. I believe he testified a 60 API.

A. Yes, sir, that's correct.

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Q. Would yours be somewhat more conservative?

A. Yes, sir, it would be more conservative.

Q. From your cross section do you correlate the presence of the so-called TXO Sand to have been present in the Hamon Well?

A. Yes, sir, I show approximately 3 feet of the sand being present in the Jake L. Hamon Union State No. 1 Well, located in Section 30.

Q. Do you show whether or not that sand was open by perforation?

A. Yes, sir, it was open by perforations.

Q. Would you explain why you correlate it as TX -- with the so-called TXO Sand?

A. It is in the same stratigraphic equivalent zone and it appears to be correlatable to the thinner section of the TXO Sand, which I feel the thin and the fat sections in the Texas Oil and Gas Well are really the same strand line or stringer body. They are just separated by a thin shale party of two feet.

Q. About two feet in the TXO Well separates these?

A. Yes.

Q. And, like Mr. Casey, is that a matter of interpretation among geologists?

A. Yes, sir.

Q I believe your cross section portrays that the so-called TXO Sand was also present in the Western Oil Producers Well.

A Yes, sir, it does.

Q Would you explain how it correlates with that Western Well with the TXO Well?

A The Western Oil Producers Well has a 10 foot section of sand that is stratigraphic equivalent and also appears to correlate with the thicker section of the Texas Oil and Gas sand, being referred to as the TXO Sand.

Q I notice beside the Western Oil Producers log you have a drill stem taken at 11,070 feet to 11,292 feet.

A Yes, sir.

Q Is that correct? You record 2.28 MMCF of gas per day from that sand.

A Yes, sir.

Q I believe Mr Casey testified that according to records, that well on drill stem had about 300 Mcf.

A It does on the scout tickets and the PI cards. It is reported as a little over 200 Mcf.

Q Okay. How do you distinguish those two data?

A We received --- well, I guess to lay sort

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of a background of this, is that we had approached another company in terms of re-entering this well, and they gave us a copy of the DST chart over this interval, which I have marked on the log, and when you take the choke size versus the flowing pressure, it calculates 2.2 million. We have no reason why Western Oil plugged this well. We looked at the charts. Our engineers ran calculations. Halliburton engineers ran calculations. They all agreed that it looked like a good test to them and that the rate that we had calculated was valid.

Q. Okay. What other company has this well and acreage at this time?

A. Wilson Oil.

Q. Did you attempt to make a deal with them?

A. Yes, we attempted to farm this acreage in from them, to re-enter this well and make a Morrow completion but Mr. Wilson believes that there is a deeper potential in this area and he would not give up the well for just a Morrow unless we agreed to go to a deeper horizon.

We felt like there was no pay in a deeper horizon, so we decided not to pursue it.

Q. Do you have an opinion as to whether or not Western Oil Producers plugged what may have been a commercially productive gas well?

A. In my opinion I believe they did plug a

well that could produce gas in commercial quantities.

Q. Mr. Siruta, do you have a recommendation to the Commission as to a productive limitation factor that should be applied to this Hamon Well at 560 to 660 feet?

A. Yes. I think this production limitation factor should be based on the productive acreage and the deliverability of the well.

Q. How many acres do you determine are productive in Section 30?

A. By using a planimeter to determine this, we determined that there was 101 acres that would be productive in Section 30, as determined from my Isopach.

Q. And to arrive at this production limitation factor, would you space the well on the -- as a half section well on the east half of Section 30?

A. Yes, sir.

Q. And arrive at a limitation of 101 over 320?

A. Yes, sir.

Q. What is that factor?

A. It would be .31.

Q. Now, are you aware that this North Osudo-Morrow Gas Field is not prorated?

A. Yes, sir.

Q. How would you propose to enforce this

production limitation factor?

A. By determining the deliverability of the well, using the standard testing procedures, and multiply this deliverability by the production limitation factor.

Q. Do you propose special rules for this Hamon well at 660 and 560 location?

A. Yes sir.

Q. And are those rules portrayed on your Exhibit Four?

A. Yes, sir.

Q. Turning to what has been marked Exhibit Four, generally do those rules provide for semi-annual deliverability tests?

A. Yes, sir.

Q. And the application of the production limitation factor to those deliverabilities?

A. Yes, sir.

Q. For each six-month period?

A. Yes, sir, that's correct.

Q. And when the well has declined to 1-million cubic feet a day, does the production limitation factor continue to apply?

A. No, sir, it does not.

Q. Are these proposed similar -- pool rules similar to those which the Commission has entered in other

gas fields in Eddy County, New Mexico?

A. Yes, sir.

Q. And were those similar pool rules adopted in Case 6231 and 6233?

A. Yes, sir.

Q. Is there -- is the difference between these pool rules and those adopted -- or the proposed pool rules and those adopted in the other two cases the increase of the minimum allowable from a half million to one million?

A. Yes, sir, that's correct.

Q. Turn to your Exhibit Five and explain the purpose of this exhibit.

A. This was a profitability study that was done under my supervision by Texas Oil and Gas engineer.

We tried to illustrate here what it would take to pay out a well at the rate of a million cubic feet of gas per day.

It cost Texas Oil and Gas $780,000 to drill the Osudo State No. 1. Our gas price at present is $2.08 with -- we're not including any escalation in this profitability study.

Condensate price per barrel was $13.92. Of course, the 1/8 royalty, taxes, local, severance, and ad valorum tax on the oil was 7.6 percent, and the operating expenses per year are based on some of our other gas wells

that we operate of $13,200.

This shows that at a daily production rate of one million cubic feet of gas per day, payout time would be 1.66 years, with the DCFROR being 100 percent.

Q. And is this exhibit presented to show that even though a well was down to a million Mcf per day, that they would receive payout in 1.6 years?

A. Yes, sir, that's correct.

Q. And this profitability study is conservative in that there is no gas escalation price?

A. That's correct.

Q. And do present rules under the Natural Gas Policy Act of 1978 provide for an escalation of price?

A. Yes, sir.

MR. LOSEE: I have no further questions of the witness.

MR. RAMEY: Let me ask one question, Mr. Siruta.

CROSS EXAMINATION

BY MR. RAMEY:

Q. What type of NGPA determination have you asked for in this hearing?

A. NGPA?

Q. Natural Gas Policy Act.

A. I am not sure. That would be handled mostly by our production engineer, so I'm really not sure.

Q. Whether it's 102 or 103?

A. I've tried my best to stay out of that.

MR. PATTY: Mr. Kellahin?

CROSS EXAMINATION

BY MR. KELLAHIN:

Q. What was your initial daily gas production rate on your well in 29, Mr. Siruta?

A. The well fluctuated at first but I think we ended up stabilizing on something like 8-1/2 million rate, I believe is what we started at, 8-1/2 to 9.

Q. If you got an initial daily gas production rate using your Exhibit Number Five of 8-1/2 to 9, how many months would it take you to pay out that well?

A. It would be pure guesswork on my part, but I would say probably less than half a year.

Q. Well, in fact, if the initial daily gas production rate was only 7000 Mcf a day, it would pay out in 3.4 months, wouldn't it?

A. I don't know. That could very well be correct.

Q. Did you do the calculations on Exhibit Number Five?

A. I observed an engineer doing the calculations and they were explained to me, but no, sir, I did not do the calculations myself.

Q. Now, this production limitation factor on Exhibit Number Four of .31, tell me again how you got that?

A. That was determined by taking the number of productive acreage -- the amount of productive acreage in Section 30, which was 101 acres, and dividing it by the -- what we determined was the total proration unit here of 320, and came up with .31.

Q. What did you look at to get your 101 acres? Did you look at your Isopach?

A. Yes, sir, it was planimetered off of the Isopach using the zero foot line as the limit of the reservoir.

Q. If we used Mr. Casey's Isopach, do you have an opinion of the number of productive acres that we would use in order to make the computation for your production limitation factor?

A. Just from looking at the map and making an estimate, I would say probably 160 acres.

Q. And I realize that the Texas Oil and Gas Well is not penalized in any way, but let's assume, looking at Mr. Casey's exhibit, that a production limitation factor was assessed against the Texas Oil and Gas Well, how many

productive acres would you have for that well?

A. Probably somewhere around 125 to 130 acres, just from estimation from the Isopach.

Q. So looking at Mr. Casey's Isopach, it appears as if he's got about 160 productive acres in Section 30 and about 125 productive acres in your Section 29.

A. Yes, sir, that's correct.

MR. RAMEY: What were those figures, Mr. Kellahin?

MR. KELLAHIN: Mr. Siruta's testified that based upon Mr. Casey's Isopach, that the productive acreage for making the productive limitation factor in Section 30 would be 160 acres.

If you made the computation for Section 29, it would be 125 acres.

Q. All right, Mr. Siruta, let's look at your Exhibit Number Two, which is your Isopach now.

You've already testified that there's 101 acres productive in Section 30 on your Isopcah. What's the productive acreage in 29?

A. In the north half of 29, which is the Texas Oil and Gas property, there would be 101 acres, that would be productive.

Q. Wouldn't a more equitable solution for -- if the Commission decides at all to impose a production

limitation factor, as you've outlined in Exhibit Number Four, wouldn't -- wouldn't the more adequate solution, or equitable solution, Mr. Siruta, be one that took into account the advantage or disadvantage of Section 29 over Section 30 with regards to both locations?

A. I'm not sure that I understand what advantage that you're speaking of.

Q. Wouldn't you -- couldn't we make a computation on Mr. Casey's Isopach and come up with a production limitation factor of 160 versus the 320, and that would give you a percentage, right?

A. Yes, sir.

Q. And you'll come up with a different percentage based upon Section 29 productive acreage.

A. Yes, sir.

Q. All right. One method of computing a penalty would simply take that as a difference.

A. Yes, sir.

Q. All right. Conversely, we could do the same if the Commission believed that your Isopach was more accurate, to set up the same kind of equation whereby you took 181 productive acres versus 101 productive acres.

A. Yes, sir.

Q. If I understand correctly, your Exhibit Number Four simply takes into consideration the number of

productive acres you've attributed to Mr. Hamon's well in Section 30 and does not take into consideration either the number of productive acres in Section 29 or the location itself of your particular well.

A. No, sir, it does not.

Q. All right. In your testimony before the Examiner in this case back in May of 1979, you did not propose this production limitation factor, did you?

A. No, sir.

Q. You had introduced an exhibit showing a circular radius of drainage, did you not?

A. Yes, sir, exhibit showing that theoretical circular drainage.

Q. And based upon that theoretical circle of drainage, it showed that in terms of distance Mr. Hamon's well was some 7 percent closer to the common section line than the Texas Oil and Gas well, wasn't it?

A. Yes, sir, that's correct.

Q. And that using the circle basis for establishing a penalty, there was some difference in acreage of 4.8 acres, I believe, something like that?

A. Yes, I think that's correct.

Q. Now let me ask you some questions about your structure map -- I'm sorry, your cross section, Mr. Siruta.

A. Okay.

Q. If you don't mind, I'm going to put this on the wall over here and have you come over to the wall.

A. Okay.

Q. Now, in setting up your cross section next to Mr. Casey's cross section, it's obvious that the wells are placed upon the cross section in reverse order, are they not?

A. Yes, sir, that's essentially correct.

Q. All right. In preparing your Isopach, you've indicated that's the Middle Morrow Sand pay, Mr. Siruta. Would you take my red pen here and mark on the exhibit, your Exhibit Number Three on the board, the number of feet of pay in each of the wells that you've indicated on your Isopach?

A. It would be ten feet here, and in the Texas Oil and Gas Well it would be 16 feet. In the Jake L. Hamon Union State Well there would be 3 feet; this would be zero feet.

Q. What I was trying to understand, Mr. Siruta, is that your Isopach is not of the entire Middle Morrow section but simply that sand that we've been calling the TXO Sand.

A. Yes, sir, that's correct.

Q. You may resume your seat. Thank you.

If you'll return now to your Exhibit Number One, you indicated an initial bottom hole pressure on a drill stem test of 4903 psi?

A. Yes, sir, on the Texas Oil and Gas Well.

Q. And what is the current flowing tubing pressure?

A. It's approximately 1200 pounds.

Q. What's your daily rate of production again?

A. At the present rate of 1200 pounds, it's around 6-million cubic feet.

Q. In your opinion is that the most effective and efficient rate of producing this well so as not to damage the reservoir?

A. I'm not an engineer, but the well does not appear to be having any damage. We don't see any water encroachment, any surging, or anything like that.

Q. Your daily production rate has stabilized and you don't see any decline at this point?

A. No, sir, it has not stabilized and is still declining.

Q. How long has this well been on production?

A. Since March, I think it was the latter part of March. I'm not sure.

Q. So we have about five months of production.

A. No, it would be more than that, wouldn't it?

Q. Six?

A. Yeah, five and half, six, something like that.

Q. And in only five and a half months of production you're already experiencing a decline in the volumes of production?

A. Yes, sir, that's correct.

Q. You've indicated that Western Oil Producers in their well in the south half of Section 29 had productive sands present and in your opinion plugged a commercially -- a potentially commercial well.

A. Yes, that's correct.

Q. If that was the case, Mr. Siruta, why did you propose a location 660/660 out of the corner of 29 and not simply come down to a location closer to the Western Oil well?

A. When this well was being considered to be drilled, the pay zone that we were going after was not what is being called the Texas Oil and Gas Sand right now, the TXO Sand. Our major pay that we were hoping to encounter was the pay in the Jake L. Hamon Union State Well, which is below the Morrow massive shale, which produced most of their gas volume, and we did encounter this pay at our location and

it was depleted.

Q. In looking at your Isopach on Exhibit Number Two, it would appear that your well could have been drilled at a standard location, could it not, and still obtain the same number of feet of TXO Sand?

A. Yes, now that the Texas Oil and Gas Well has been drilled you can see that, but before you could not.

Q. What is the number of feet of TXO Sand that you would want present in a commercial well?

A. Before I would recommend drilling a well in a sand of this sort, I would have to have in excess of five feet.

Q. Using your Isopach, there is not a standard location in Section 30 that exceeds five feet, does it?

A. No, sir, there is not.

Q. The Texas Oil and Gas Well when it obtained its order from the Commission approving its unorthodox location and its non-standard proration unit, did not impose any kind of deliverability factor as you propose for this well.

A. No, sir, it did not.

Q. And didn't make any determination of the number of productive acres in the north half of Section 29?

A. No, sir, we did not.

Q. There is no question in your mind, is there

Mr. Siruta, that there is productive acreage in Section 30 that has not been depleted by the Jake L. Hamon Union State Well? This TXO Sand we've been talking about?

A. Yes, sir, there probably is some acreage that has not been drained by the Union State Well.

MR. KELLAHIN: I have nothing further. Thank you.

MR. RAMEY: Do you have any questions of the witness?

MR. LOSEE: I have one question of the witness.

REDIRECT EXAMINATION

BY MR. LOSEE:

Q. Mr. Siruta, by proposing this productive limitation factor based upon productive acres in the east half of Section 30, TXO does not take the position that either Mr. Hamon or the Commission on its own motion cannot at a later date apply this productive limitation factor, or whatever is a reasonable one, based on productive acres in the north half of Section 29, does it?

A. No, we do not think that this cannot be applied; that is, we do believe it can be.

MR. LOSEE: I don't think I moved to introduce my exhibits. Were they prepared by you or under your

direction and supervision, Exhibits One through Five?

A. Yes, sir, they were.

MR. LOSEE: We move their introduction.

MR. RAMEY: They will be admitted.

MR. KELLAHIN: In light of Mr. Losee's last question, may I ask one more?

MR. RAMEY: Certainly.

RECROSS EXAMINATION

BY MR. KELLAHIN:

Q. Don't you think it would be fair, Mr. Siruta, that before any kind of production limitation factor be assessed against Mr. Hamon, that a similar factor also be assessed against Texas Oil and Gas Corporation for their well?

A. Yes, sir, at the same time that this factor is applied to the Hamon Well it should be applied to the Texas Oil and Gas Well.

Q. Don't you think, also, that that factor also include a penalty from the initial inception of production in the Texas Oil and Gas Well in order to place the two wells on an equal status?

A. No, sir, I do not.

MR. KELLAHIN: Nothing further.

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RECROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Siruta, you haven't talked about drainage of this particular sand. Are you contending that this sand is not present in the present Hamon Well, the one in Section 30?

A. Yes, it is present in the Hamon well.

Q. A two-foot stringer -- three-foot stringer?

A. Yes, a three-foot stringer, yes, sir.

Q. And you are contending that they are in pressure communication.

A. I'm not for certain if they're in total communication or not. Our well has exhibited a lower bottom hole pressure than any other wells in the area.

The Union State Hamon Well down here, you will notice on my cross section, has a DST across the pay interval that had a final shut-in pressure of in excess of 6100 pounds, and whereas our well had a final shut-in of 4903 pounds.

I'm not sure if this is really illustrating, you know, communication or not.

Q. You did find other zones in your well that were -- that are evidently good pressure communication with the Hamon well?

A. Yes, sir. We did find that the sand -- if I could go to the cross section.

The sand that is what we call directly below the Morrow massive shale was encountered with good porosity, good permeability, and it was perforated and tested and found to have a shut-in tubing pressure of less than 400 pounds, so it was definitely completed by the Union.

MR. RAMEY: Okay, thank you.

Any other questions of the witness?

He may be excused.

Anything further, Mr. Losee?

MR. LOSEE: I have a statement, short statement I'd like to make.

MR. RAMEY: Will you do it, please?

MR. LOSEE: Back a year ago the Commission gave TXO an unorthodox location on a 320 spacing rather than 640, 660 out of the north line. A reading of the transcript and the order of the Commission will reflect -- which has been made a part of this record -- that it was granted because from all of the evidence it was a materially depleted field.

Mr. Hamon appeared at that hearing and simply objected to the 320 and 660 location; made no recommendation to the Commission as to a penalty factor; offered no evidence as to on either productive acres or radial drain-

age.

Now, in the drilling of this well, TXO has obtained a commercial well and obviously, by reason of its 660 location could not object in good conscience to a similar 660 location by Mr. Hamon.

Mr. Hamon's Isopach would better support a location a 100 feet north of this dry hole, or plugged well, than would 100 feet east. Mr. Casey was honest enough to recite that they probably didn't believe the Isopach that much and at least they had a proven well that was -- rather than being 1320 feet, they could get 1220 feet from it.

Now, as they did in the prior hearing, they claim minimal drainage. Mr. Kellahin's question points out that you can draw a circular pattern when you move it 660 to 560, you only increase the circle by about 7 percent.

You can follow that logic down to one foot from the lease line and you get only a 35 percent additional drainage, and I am sure they would prefer to drill at one foot from the lease line. I would, if I were in Mr. Hamon's shoes.

But somewhere there has to be a point at which the advantage obtained by getting closer to the line would require the industry to have some reasonable footages. If you go entirely by radial drainage, as I point out, everybody would want to get within one foot to the well and get

penalized 35 percent.

It seems logical in this case that productive acreage is a reasonable basis. I'd be the first to admit that there to be some leeway in drilling for these Morrow stringers, because they're not any blanket sand.

But we think this is a case which having chosen to move 100 foot inside of another unorthodox, that a penalty should be applied.

We don't take the position that the -- Mr. Hamon, if he elects to, can go back and re-open Order 6215 and provide a production limitation factor to the TXO Well.

If you take Mr. Hamon's Isopach, as far as the east half of Section 30, you'll get a productive limitation factor of .50, 50 percent. If you use Mr. Siruta's map, you come up with a limitation factor of .31.

We think, because the operator has elected to move the well inside of a 660 location, that this factor along with these proposed special pool rules, are reasonable.

MR. KELLAHIN: Back in May of 1978 Texas Oil and Gas set in motion a set of circumstances that now has come back to haunt them.

The pool rules at that time, and they still provide for spacing no closer than 1650 from the outer section line.

Texas Oil and Gas chose to drill at a loca-

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tion 660 out of the northwest corner of Section 29

That case was disputed before an Examiner back in May of '78. Testimony was presented. The location was objected. The Commission approved that location without a penalty either with regards to its location, without regards to the number of productive acres in that -- in that given area.

The testimony you've heard today is no different than what Mr. Stamets heard in May of this year. The same argument Mr. Losee has just made is one he made towards Mr. Stamets. On page 53 of the Examiner transcript he cites the same orders that he cites as basis for his Exhibit Number Four.

I think the evidence here today fully suppor' that there's substantial evidence to show that a production limitation factor should not be assessed.

As Mr. Stamets has found in his order, that the difference of 100 feet is inconsequential. In other words, there's no practical way of assessing a penalty in this situation, and as a practical matter, I think the equities balance themselves out pretty well.

Texas Oil and Gas has produced their well for some seven and a half months at very high rates. You can see the volume of production they've obtained. I think because it's going to take Mr. Hamon some several months

more to complete his well, that that is penalty enough. That certainly offsets the 100 foot advantage that he may have obtained by moving closer to the section line.

To come back now at this late date and propose a penalty, whether it's a production limitation factor or one simply based upon the theoretical circles, I think is inappropriate. The equities have been balanced out by the course of events here of the operator completing his well earlier this year and obtaining substantial production from it.

I don't believe that any penalty at all should be established.

The record here before you today is substantially the same as the record before Mr. Stamets and there is nothing here that should cause you to change that order.

MR. RAMEY: Thank you, Mr. Kellahin.

Anything further in this case?

The Commission will take the case under advisement, and the hearing is adjourned.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Commission was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
23 May 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

CASE 6555

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

APPEARANCES

For the Oil Conservation Division:	Ernest L. Padilla, Esq. Legal Counsel for the Division State Land Office Bldg. Santa Fe, New Mexico 87503
For the Applicant:	W. Thomas Kellahin, Esq. KELLAHIN & KELLAHIN 500 Don Gaspar Santa Fe, New Mexico 87501
For Texas Oil and Gas Corporation:	A. J. Losee, Esq. LOSEE, CARSON, & DICKERSON Artesia, New Mexico

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E X H I B I T S

MR. STAMETS: We'll call next Case 6555.

MR. PADILLA: Application of Jake L. Hamon for an unorthodox gas well location in Lea County, New Mexico.

MR. KELLAHIN: I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant, and I have two witnesses to be sworn.

MR. STAMETS: I'd like to have them both stand and be sworn at this time.

MR. LOSEE: A. J. Losee, appearing on behalf of Texas Oil and Gas Corporation, and I have one witness.

(All witnesses sworn.)

MR. STAMETS: All right, I think we will recess the hearing and resume at 1:00 o'clock.

(Thereupon the noon recess was taken.)

MR. STAMETS: The hearing will come to order. I believe both attorneys have identified themselves and the witnesses have been sworn at this time.

MR. KELLAHIN: That's correct.

MR. STAMETS: Mr. Kellahin, you may proceed.

JOHN CASEY

being called as a witness and being duly sworn upon his oath testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name, by whom you're employed and in what capacity?

A My name is John Casey. I'm employed by Jake L. Hamon as the district geologist for his Midland District.

Q Mr. Casey, when did you obtain your degree in geology?

A I first graduated from college in 1950 and have a Master's degree acquired in 1953.

Q And how long have you been employed by the applicant as a geologist?

A A little over eight years, going on nine years.

Q During the course of that employment have you made a study of and are you familiar with the geological facts of this particular case?

A. Yes, I am.

MR. KELLAHIN: We tender Mr. Casey as an expert geologist.

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Kellahin continuing.) Mr. Casey, would you refer to what has been marked as Applicant Exhibit Number One, identify that for us?

A. This is a contour map that we've contoured on what we call the top of the Morrow. It's a map with scale 1-inch to 2000-feet.

Q. What is depicted by the yellow outline of certain of the sections?

A. The yellow outline encompasses those sections that are in the Osudo North Morrow Field.

Q. What is the current spacing for the North Osudo Morrow Pool?

A. 640.

Q. Within a 640 section what would be a standard location for a Morrow test?

A. It's 1650 from an outside section boundary.

Q. Would you indicate for us how the Morrow wells on the plat are identified?

A. We have identified these wells that are producing from the Morrow with a datum on top of the Morrow,

and we've underlined those datums in red.

Q. Of the Morrow wells within the outer boundaries of the North Osudo Morrow Pool, which of the wells are at unorthodox locations?

A. All of them are unorthodox locations with the exception of the Flag-Redfern Osudo State well that has been drilled in Section 18.

Q. I direct your attention to a well located in the north half of Section 29 and ask you to identify that well.

A. That is the Texas Oil and Gas No. 1 Osudo State.

Q. And is that well drilled subject to the rules of the North Osudo Morrow Pool?

A. No, it is not. That is a 660 location from the north and west of that section.

Q. All right. Where is the subject well that this application is based?

A. We propose to drill a well 660 from the north, 560 from the east, of Section 30, which would be a west offset to the Texas Oil and Gas Well.

Q. What, if any, other Morrow wells are on Section 30?

A. Mr. Hamon has a well currently producing, the No. 1 Union State.

Q What's the footage location of that well?

A Mr. Kellahin, I'm not sure of the location of that well. I believe that it's -- I'd have to scale that off. I think it's 1980 and 660 from the east. It appears to be very close to that.

Q All right, sir, and what is the current status of that well?

A The current status of that well is -- well, it's very low and very near the economic limit.

Q What will be your intentions with regard to that well if the Division approves the requested unorthodox location?

A If we are successful in the drilling and completion of our well, then we would propose to plug and abandon the Union State.

Q What acreage is currently dedicated to the Hamon Union State No. 1?

A All of Section 30.

Q And what acreage would you propose to dedicate to the unorthodox location?

A It would also be all of Section 30.

Q Would you describe for me the significance of the structure lines in the general area here?

A What we show here is that the Morrow has a generally westerly-northwesterly dip and that in some in-

stances where there is an interruption in the apparent regional dip, we have speculated that maybe a small anomaly may exist in some particular cases.

Q. Have you chosen this particular location based upon this structure map alone?

A. No, we have not.

Q. Let me ask you what the significance is of the green line on the plat that is connecting certain of the Morrow wells.

A. The green line shows a cross section, stratigraphic cross section, A-A', which we start off from the southwest in Section 36 with the Texaco No. 1 State "CV" and go through a number of wells into the North Osudo, through our proposed location, through the Texas Oil and Gas completion, and to the north through the Hytech Well and into the Hamon State "E" 8913, located in 20; generally a north-south cross section.

Q. You've identified the Texas Oil and Gas Well in the north half of Section 29 as being at a location 660 out of the north and west lines. Was that case -- a well the subject of a hearing before the Commission?

A. Yes, yes, it was.

Q. And I assume that well was drilled in accordance with an approved unorthodox location order.

A. Yes, it was.

Q. And was that well penalized in any way as a result of the Commission hearing?

A. Not to my knowledge.

Q. Are any of the unorthodox location wells within the rules for the North Osudo Morrow Pool penalized in any way?

A. Not to my knowledge.

Q. Now, you've indicated a location 660 from the north line and 560 from the east line in Section 30. What, if anything, precludes you from drilling at a location 660 by 660, as Texas Oil and Gas did on their section?

A. At a location 660 from the north and east lines, Morris Antwell drilled a Seven Rivers test well in the Eumont Field.

Q. How deep was that test?

A. The well was drilled to a depth, I believe it was slightly over 4000 feet, and it was completed from the Seven Rivers formation.

Q. What's the current status of that well?

A. According to our information, that well was plugged in '68.

Q. In your opinion can that well now be used as a location from which to test the Morrow?

A. I wouldn't advise it and I don't think that the depth there is such that it would warrant going

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back in the hole; the danger, you know, of corroded pipe or pipe that was shot, and tried to recover, would keep us from wanting to re-enter that test, or that old hole.

Q. Why have you chosen a distance 100 feet from that particular hole?

A. Well, we feel like that we need that much footage in order to drill a test without danger of getting back in the old hole or -- or, you know, mechanical problems that might evolve from getting closer to that old hole.

Q. Would you please refer to Exhibit Number Two and identify that?

MR. STAMETS: Could I have one thing cleared up before we go on? I missed the significance of the yellow line on this Exhibit Number One.

MR. KELLAHIN: That represents the outer boundaries of the North Osudo Morrow Pool.

MR. STAMETS: Okay, and what about the Texas Oil and Gas No. 1 Osudo State, is that a -- is that a Morrow completion?

MR. KELLAHIN: Yes, it is.

MR. STAMETS: Is it the same pool or just undesignated?

MR. KELLAHIN: It is in that pool, but I'm --

A. I'm not -- if I may inject, the well, to our knowledge, hasn't been produced so I don't know if it's

in that pool or not.

MR. STAMETS: Okay.

A. But a non-standard proration unit was also given that well of 320.

MR. STAMETS: Okay. So it may be or may not be, depending on how it's completed.

A. Yes, sir.

MR. STAMETS: Okay, you may proceed.

Q. (Mr. Kellahin continuing.) All right, sir, would you identify Exhibit Number Two?

A. Exhibit Number Two is the stratigraphic cross section to which I referred when we talked about Exhibit One. It's the cross section A-A', as shown on our Exhibit One.

The cross section depicts, and is our interpretation of the Morrow Sands that are present in those wells and most of which have -- have been perforated. And the main thing we wish to demonstrate with this cross section is that the sand from which the Texas Oil and Gas Well has been completed is also present, at least in some manner, in the Hytech Well, but is not present in any of the other wells, and we are demonstrating with this cross section that the Texas Oil and Gas sand, if you will, it's the designation we've given to the producing body in the Texas Oil and Gas Well, is not -- well, it is discontinuous and

does not occur or was not encountered in the Jake L. Hamon Union State Well, which is the well in Section 30 is which we want to drill a new test.

I've -- this cross section is hung on the Morrow. It does not have anything to do with the structure, but merely shows the deposition and the sand bodies in this interval that we see. The discontinuity and that nature of the sands we are corresponding with this cross section.

Q. Would you describe again for me the correlation between the Hytech Well and the Texas Oil and Gas Well in Section 29?

A. We believe that the Texas Oil and Gas Well is completed in the TXO Sand, which appears to be also open to perforations in the Hytech Energy Osudo State.

Q. Now, has that Hytech Energy Well ever been known by any other name?

A. Yes, it has. That well was originally drilled as -- yes, Southwestern Gas, I believe.

Q. Okay.

A. It is actually now, Hytech has been bought by another company, so we have another change coming up.

Q. All right, but on your exhibits you've depicted the Hytech Well and that is the well -- the Morrow well in Section 19.

A. That is correct.

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Q. All right, sir. Would you please refer to Exhibit Number Three and identify it?

A. Exhibit Number Three is an Isopach of that same body which we have elected to designate as the TXO Sand, and that is the -- this is the Isopach of that sand body and the thickness that we have determined as open perforations in the Texas Oil and Gas Well, and is also open to perforations in the Tyler Energy Well.

Q. That is the number of feet of Morrow Sand that you attribute to the TXO Sand in this Texas Oil and Gas Well?

A. We have assigned 12 feet of this TXO Sand to their well and show that on the map.

Q. When you refer to Morrow Sand, what do you mean by 12 feet of Morrow Sand?

A. In this particular case it is the sand body that is open to perforations in the Texas Oil and Gas Well.

As you can see, also, we have assigned 10 feet to the Mytech Well and have Isopached this thickness. We do show that none of this sand was present in Mr. Hamon's No. 1 Union State Well, nor is there any present in the Hamon State "E" 8913.

Q. What do you use for a cutoff in order to determine that there is 12 feet of sand present in the Texas

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Oil and Gas Well?

A. Well, in our shop we use a 60 API cutoff.

Q. And is that what was used for this particular Isopach?

A. Yes, I did use that, uh-huh, right.

Q. All right, sir. Now when we go down to the well in the south half of Section 29, there is what appears to be a Morrow well indicated the Western Oil J State Well?

A. Right.

Q. You have not attributed any Morrow Sand from that zone that's open in the Texas Oil and Gas Well to this particular well, have you?

A. No, we did not.

Q. Why have you not done so?

A. Our cross section reveals that -- and from our geological interpretation -- that that sand body is only present in the two wells.

Q. Proceeding counterclockwise now, let's look at J. L. Hanon Union State Well in Section 30. The plat indicates that you've attributed zero Morrow Sand to that well for this same Morrow interval.

A. That is correct.

Q. As you proceed on to Section 19 there's the Mytech Energy Well. How many feet of Morrow Sand that

is open in the Texas Oil and Gas Well have you attributed to the Bytech Well?

A. 10 feet.

Q. Now if you'll look at Section 30, at the proposed unorthodox location in Section 30, what in your opinion will be the depth of the Morrow Sand encountered in Section 30 that would correspond to that portion of the Morrow being produced in the Texas Oil and Gas Well?

A. Well, we -- I feel like that our Isopach map is rather optimistic, but at least we hope at that location that we will have somewhere around 10, hopefully, we could have 12 feet of pay, as has been found in the Texas Oil and Gas Well.

Q. What do you anticipate to be the cost of this well, Mr. Casey?

A. We're estimating that probably about $800,000 for a dry hole and something probably around 1.2-Million for a completed well.

Q. Would you look at Section 30 and go to a standard location 1650 from the north line and 1650 from the east line of Section 30, and tell me, in your opinion, what would be the number of feet of Morrow Sand encountered at that location?

A. Well, we would probably have -- we could have less than 0. Actually, being optimistic with this map,

we could have much less than 4, but we couldn't justify the depth of the well to that particular zone with, oh, I'd say less than 10 feet.

Q. Based upon your study, Mr. Casey, do you have an opinion concerning whether the Hamon Union State Well in Section 30, whether the Morrow zones in that well were or are in communication with the [illegible] Sand, as you've identified it, in the Texas Oil and Gas Well in Section 29?

A. No, sir, I do not believe they're in contact.

Q. Okay, upon what do you base that opinion?

A. Again on my study and the cross section showing the correlation of these sand bodies, I do not believe they are connected.

Q. Now, do you have an opinion concerning whether the Hamon Union State Well in Section 30 depleted all the Morrow zones within Section 30?

A. No, certainly only those which were open to the borehole in that well.

Q. In your opinion will you encounter the Morrow stringers at the unorthodox location that have already been depleted by the Hamon Union State Well?

A. It's quite possible that some of them would be encountered.

Q. Would you anticipate whether you would

encounter any stringers that had not been produced by the Hamon Union State Well?

A. Yes, I definitely think that the location as we propose should encounter the said body that is presently producing in the Texas Oil and Gas Well.

Q. In your opinion, Mr. Casey, do you have an opinion concerning whether the Texas Oil and Gas Well in Section 30 will drain Morrow gas from Section 30 unless your location is approved?

A. I definitely believe it will, yes, sir.

Q. In your opinion will J. L. Hamon's correlative rights in Section 30 be adversely affected if this application is not granted?

A. Yes.

Q. Were Exhibits One, Two, and Three prepared by you or compiled under your direction and supervision?

A. They were.

MR. KELLAHIN: If the Examiner please, we move the introduction of Exhibits One, Two, and Three.

MR. STAMETS: These exhibits will be admitted.

MR. KELLAHIN: That concludes my examination of Mr. Casey.

MR. STAMETS: Are there questions of the witness?

MR. MORRIS: Yes, sir, Mr. Examiner.

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Casey, are you aware that there is a working interest unit in which Mr. Hanon is the operator, including, among other lands, this Avon State No. 1 and the Hanon State "B" 1913?

A. Yes, sir.

Q. Does that also include the Hytech Energy Well? Is that in the working interest unit?

A. No, sir, I -- I think -- I'm not sure about that. Our map indicates that we do have an 80-acre tract in the south, it would be the south half of the southeast of 19.

Q. Was part of that working interest unit at one time including the north half of Section 29?

A. Yes, sir, it did.

Q. Do you know how many years that lease on the north half of Section 29 was committed to that unit?

A. I recall that that lease expired, I believe, in 1977, so going back ten years I would say that perhaps that far back, '67.

Q. And it would have been possible during that 10-year period for the working interest unit to have

drilled a shallow well in the north half of Section 29, had they seen fit to.

A. Yes, sir.

Q. I believe you stated that as a safety factor you should be at least 100 feet from this shallow well that is plugged and abandoned that Mr. Antweil drilled. Would you explain why you have selected 100 feet to the east rather than 100 feet to the south or 100 feet to the west?

A. Yes, sir, we feel that it would be more advantageous for us because we would be closer to the Texas Oil and Gas Well.

Q. Looking at your Exhibit One, which is your contour.

A. Yes, sir.

Q. It looks to me like, and you correct me if I'm wrong, that if you move to the west 100 feet, which would really be 200 feet from your present location, you would be in the center of this anomaly or high, isn't that correct?

A. Yes, sir.

Q. And looking at your Isopach, which is marked as Exhibit three, if you moved that location 200 feet, it looks like you would be somewhere still between the 10 and 12-foot contour line, is that not correct?

A. It would be close, yes, sir.

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Q. So from -- I take it from your responses and from Exhibits One and Two, a location 200 feet to the west, which would still be 760 from the line, would be geologically about as good as your present location.

A. I feel like if we did move that far, we would be allowing ourselves the chance that at that point we would not have as much sand. That is to say that we feel like this map is an optimistic map and perhaps that these contours would be much tighter than we actually show them and at a location, as you mentioned, farther to the west, we might have less than 10 feet, perhaps as little as 8.

Q. Well, my question really was directed from a review of these maps, and really your response to my question about each of them. If you moved the location on the maps 200 feet to the west, it would look just as good from a geological standpoint as your 960.

A. Well, sir, I don't believe it would look as good. We -- we might have 10 feet, but at our proposed location we hope that we will have 12.

Q. Well, that -- okay, strike that.

Do you have any other locations staked out in the field? Other than this 560 from the east and 660 from the north lines?

A. I'm not aware if we do.

Q. You don't know that at the present there is a location staked 790 feet from the east line and 660 from the north line?

A. I've heard talk of that but I do not know that for sure. That is not in my department.

Q. Do you know whether or not there is a location staked 790 feet the north line and 660 from the east out there on the ground now?

A. No, sir, I do not. Of course, I haven't been out there.

Q. Have you heard talk about that?

A. There have been talk about alternate locations but we feel like that from a geological standpoint we shouldn't go for them at all.

Q. Well, now, my question, I guess, really is, have you staked those other locations out in the field?

A. I have not, no, sir.

Q. Has anybody for Jake L. Hamon?

A. Not that I know of. But that, again, that's not my department.

Q. You won't say that they're not staked, though.

A. I couldn't say that.

Q. One other -- not one other. Referring to your cross section, which is Exhibit Two, would you ex-

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plain, and it will have to be in layman terms for my benefit, why the interval that's open in the Jake L. Hamon Union State at 11,306 to 312 with the perforations, doesn't correlate with the interval that's open in the Texas Oil and Gas Osudo, 11,324 to 340?

A. I don't believe they're the same correlation because the sand bodies appear to have a different radioactivity. Certainly the Texas Oil and Gas sand is thicker. And I don't believe they are the same.

That's my interpretation.

Q. Well, you don't think all these Morrow Sands are the same thickness in this area, do you, Mr. Casey?

A. No, sir.

Q. So the fact that it's thicker isn't going to mean that it doesn't correlate.

A. It will weigh my decision, yes, sir.

Q. Is there any other reason that you don't think it correlates?

A. I think there's enough difference in pressure data that I've heard about but I don't know that I'm qualified to discuss that.

Q. Do you know the pressure data on the present pressure on the Jake L. Hamon, or the most recent bottom hole pressures run on the Union State?

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A Yes, sir, we have some data and I believe that --

Q You're going to have your engineer testify to that?

A Yes, sir, that will be discussed or it's planned to discuss that, yes, sir.

MR. STAMETS: I think that's all.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Casey, have you had an opportunity to analyze what the depositional environment in this area might have been for this particular sand?

A Mr. Stamets, I think that this sand probably the depositional environment of this sand is similar to the deposition of all these sands because of the close proximity and the geological provence we're dealing with. But I do know from experience that the -- oftentimes we can drill a well and encounter some sands and then an offset, or even 330 feet away, find another sand that appears to be correlative but may extend in a completely different direction. And I think that that is probably what has happened here.

I do not believe that the sand that's producing in the Texas Oil and Gas well is present in Mr.

Hamon's wells.

Q. But you didn't say whether we're looking at a channel sand or delta or offshore bar.

A. I think the way these things have been deposited, and as I show on my Exhibit One, the proximity to the limit of the Morrow deposition, they're probably all similar sands, but discontinuous.

MR. STAMETS: Any other questions of the witness?

MR. LOSEE: One other question.

RECROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Casey, do you know any instances where the Commission has approved a location for a Morrow gas well in either section or one-half section spacing located 560 feet from a line?

A. No, sir, I do not.

MR. LOSEE: That's all.

MR. KELLAHIN: I have no redirect.

MR. STAMETS: The witness may be excused.

MR. KELLAHIN: We'll call Mr. James A. Cooksey.

JAMES A. COOKSEY

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, would you please state your name, occupation, and by whom you're employed?

A. My name is James A. Cooksey, Petroleum Engineer, employed by Jake L. Hamon.

Q. Mr. Cooksey, have you made a study of and are you familiar with the facts surrounding this particular application?

A. Yes, sir.

Q. And have you previously testified before the Oil Conservation Division of New Mexico as a petroleum engineer?

A. Yes, sir, I have.

MR. KELLAHIN: We tender Mr. Cooksey as an expert petroleum engineer.

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Kellahin continuing.) Would you please refer to what we've marked as applicant Exhibit Number Four and identify that for me, please?

A. Exhibit Number Four is a plat of the area of the Osudo North Morrow Gas Field in Lea County, New Mexico. Shown on this exhibit are various wells with a gas symbol that are completed and producing from the Morrow Sand, or dry holes that have penetrated the Morrow Sand that is shown on this exhibit.

We also depict cumulative production through January, 1979 for each of the producing wells. We also show on that exhibit the January, 1979 production.

Q. For purposes of your testimony, Mr. Cooksey, let me have you also identify at the same time Exhibit Number Five. Will you tell me briefly what that is?

A. Basically, Exhibit Number Five is a map of the same area. Shown on this map are also the wells, gas wells that have completed in the Osudo North Morrow Gas Field and highlighted in the squares colored red is bottom hole pressure information that is available to us on various wells in the area.

Q. In addition to studying the information contained on Exhibits Four and Five, have you also made a study of the geology as recorded on the previous exhibits by Hamon?

A. Yes, sir, I have examined the geological work presented by Mr Casey.

Q. Now referring to Exhibit Number Five, does

that plat identify when each of the Morrow wells in this particular area were completed?

A. Yes, sir, it does. For example, Mr. Hamon's well in Section 30, the Union State No. 1, was completed in September of 1966.

Q. And what was its initial completion pressure?

A. Initial bottom hole pressure for that well was reported to be 4772.

Q. Your plat, Number Five, indicates that this is a bottom hole pressure map. Are these actual or calculated pressures?

A. Some are shown to be calculated. The ones for the Hamon wells in Section 30, 20, aNd 17 are bottom hole pressure bombs.

Q. 30, 20, and 17 are bottom hole pressure bombs.

A. Yes, sir, those happen to be the Hamon Aerada Federal No. 1 in Section 17, the Hamon State "E" 8913 in Section 20, the Hamon Union State No. 1 in Section 30.

Q. With reference to the Texas Oil and Gas well in Section 29, it shows a calculated bottom hole pressure. How was that calculated?

A. We obtained that information as shown on

potential test form obtained from the New Mexico Oil Conservation Commission, and the number 4887 psi was indicated to be a calculated bottom hole pressure on that form.

Q Who compiled and submitted that information to the division?

A I have assumed --

Q What operator?

A I have assumed Texas Oil and Gas.

Q All right, sir. Now, in reference to the Hamon Union State Well, what is its current status?

A The current status of the Union State Well is in our records essentially depleted. As you'll note on Exhibit Number Four, it has had a sizeable cumulative production, approaching 6-billion cubic feet; however, the production of January, 1979 was 12 Mcf; that's total production for the month.

I might bring that up-to-date a little further. The February production was 7 Mcf, March production was 9 Mcf. We've attempted to run bottom hole pressures on the well. We've determined that we do have tubing problems and by a previous workover we know that we do have a casing leak in the well.

To finish what I started to say, we've assumed the well in the Morrow stringers that it's currently producing from, is essentially depleted.

Q. Based upon your study, Mr. Cooksey, do you have an opinion as to whether the Texas Oil and Gas Well in Section 29 has encountered Morrow stringers that have not been drained by the Hamon Union State Well in Section 30?

A. From the information I've been able to obtain, the producing interval in the Texas Oil and Gas Well 11,324 to 11,340, with the calculated bottom hole pressure of 4887, evidently has encountered a stringer that has not been drained by our Hamon No. 1 Union State Well.

Q. Is there anything contained on Exhibit Number Five that supports that conclusion?

A. Well, the support that I see, is that the latest bottom hole pressure that we've taken on the Hamon Union State Well is reported to be 414 pounds in September, 1972. We know from looking at the production versus cumulative -- I mean, pressure versus cumulative curve, that the pressure currently must be less than 200 pounds bottom hole pressure.

And it's this information and an analysis of this pressure data that draws me to the conclusion that the Texas Oil and Gas Osudo State Well has encountered a stringer that has not been drained by the Union State Well.

Q. The Hamon Well was drilled in '66?

A. Yes, sir.

Q How does the original pressure in the Hamon Well compare to the original pressure encountered in the Texas Oil and Gas Well?

A I believe, as shown here on the exhibit, the original bottom hole pressure of the Jake L. Hamon Union State Well in September, 1966, was 4772.

That -- that information happens to be psig measurement. When you add your 15.025 to it adds it up to 4787, and coincidentally, that's the same initial virgin reservoir pressure as discovered in the Texas Oil and Gas Osudo State No. 1 Well.

Q If the Morrow stringers that have been produced out of the --

A Correction. Correction.

Q Go ahead.

A I would like to back up and correct the last statement. The psia measurement for the Hamon Union State would be 4787, and calculated bottom hole pressure for the Texas Oil and Gas Osudo State would be 100 pounds higher, 4887.

Q All right, sir.

If the Morrow stringers that were produced out of the Hamon Union State Well were in communication with that stringer now being produced in the Texas Oil and Gas Well, what in your opinion would have been the pressure

encountered when the Texas Oil and Gas Well had been completed?

A. I would have assumed it would have been somewhat reduced, considerably reduced. The 4887 is essentially a virgin reservoir pressure. It has a gradient of .431 psi per foot.

Q. All right, sir, now would you compare those initial pressures, both in the Texas Oil and Gas Well and the Hamon Well, to the initial pressures encountered in the Morrow wells farther to the north in the pool?

A. Well, the wells in the four sections to the north all reported bottom hole pressures considerably higher than the wells to the south, or the south of the line being between the top of Section 30 and Section 29.

Q. Do you have any explanation as to why the wells north of Section 30 and 29 encounter a higher initial pressure in their Morrow completions versus the two wells in Section 30 and 29?

A. That could very easily be explained, and it's a little out of my realm, due to some geologic compaction that could have over-pressured the reservoirs to the north, and I know this does happen on occasions. I do believe the pressures reported in the two wells in Section 30 to be in line with the normal pressure gradient; those to the north seem to be abnormally pressured.

Q. Can you conclude from the study you've made in this area that the Texas Oil and Gas Well in Section 29 is experiencing drainage from any of the existing Morrow wells?

A. If I understood your question correctly, and that is, is the Texas Oil and Gas Well in Section 29 experiencing drainage from the other wells in the area, I would say not by any of Mr. Hamon's wells.

Q. All right, sir. Let me ask you now what you know about the Antweil well that's 660/660 out of the corner of Section 30?

A. I do know that it was a shallow hole drilled to approximately 4000 feet and completed it, according to Mr. Casey's testimony, in a Seven Rivers formation, I believe he said. Plugged and abandoned in 1968.

Q. In your opinion as a petroleum engineer, is that well suitable for re-entry as a Morrow completion?

A. I would not recommend it. I believe that since it was completed and had a production casing string set in it that your problems encountered in re-entering that hole, trying to utilize the short string of surface pipe that was put in it and sidetrack the remaining 5-1/2 stub that would be left in the hole would be very risky and unnecessary.

I ight add at this point that based on

engineering information, that our 100 feet from an existing old well appears to be a logical distance to move, since, as noted from the inclination survey presented by the Texas Oil and Gas well, that it had a cumulative displacement at 4200 feet, in excess of 60 feet.

So it's possible that, you know, that you could encounter the two wellbores together. I'm not saying it's --

Q. Would you recommend drilling the second well closer than 100 feet to that existing well 660/660?

A. No, sir, I would not.

Q. Were Exhibits Four and Five compiled under your direction and supervision?

A. Yes, sir.

Q. Is the information contained on those exhibits true and accurate to the best of your knowledge, information, and belief?

A. To the best of my knowledge, yes, sir.

MR. KELLAHIN: Move the introduction of Exhibits Four and Five.

MR. STAMETS: These exhibits will be admitted.

MR. KELLAHIN: That concludes our examination of Mr. Cooksey.

MR. STAMETS: Are there questions of the

witness?

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Cooksey, looking at your Jake Hamon Union State No. 1, and my information that the drill stem test on the well showed a final shut-in pressure of 6121, do you have that information available?

A. No, sir, I do not. I --

Q. Well, let's make an assumption, then, to avoid time, assume that that's what was reported as a -- on DST run between 11,220 and 11,358. Would you explain to me why the difference between the drill stem final shut-in pressure and your reported bottom hole pressure, bomb pressure of 4772?

A. Well, as I think most everyone in the engineering profession believes, you use drill stem test pressures only when you have nothing else available, and they give you an indication of reservoir conditions, and I for one believe that probably some of the problem may be in the pressure reported by the Hytech. I'm not for sure whether that's a bomb pressure or a drill stem test for the Hytech Well, but that does -- is just the unreliability of pressure determined by drill stem testing, is my answer to your question.

Q. Okay, let's turn to the Hytech Energy Well and is the test, the pressure you show there of 6945, is that a bomb test or is that drill stem test?

A. I'm not -- I'm not for sure. I had assumed it was a drill stem test -- I mean a bomb test. Hold on just a second.

Q. While you're looking, would you tell me if you have any other bomb tests on that well?

A. No, sir.

MR. STAMETS: While you're looking, you might as well look and see if you have any other tests on that well.

A. No, sir. I know I have no other tests on the well. We made a search later and found no other subsequently reported bottom hole pressures on the Hytech Well.

MR. STAMETS: How about surface pressures?

A. We made a search of the records back through 1976, 7, and 8, and it reports that there were none available at that -- for that particular well, Mr. Examiner.

And I do not have the information with me today that tells whether the Hytech Well was a bomb or drill test information.

Q. Well, if that was a drill stem test rather than a bomb, I suppose it would be possible that you

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would have the same problems that you speak -- that differentiate between drill stem and a bomb test in your Hamon State Well, so that the pressure could have been considerably lower than 6945.

A. Yes, sir, but as I also stated, that it was an assumption, that I don't have the data here today for, that it probably was a bomb test.

Q. Is there anything on this Exhibit Five that shows you whether or not this Hytech Energy Well is in communication with the Texas Oil and Gas No. 1 Osudo State?

A. It shows -- on Exhibit Five it shows those two wells in communication?

Q. Uh-huh?

A. Nothing on Exhibit Five. You want to talk about Exhibit Four?

Q. Sure, yes.

A. Well, partly the Hytech Well is probably the better producer in the field outside of the rumors I've heard of Texas Oil and Gas Well. To date we have no production for the Texas Oil and Gas Well, and the production for the Hytech Well is averaging 647 Mcf per day in January, 1979.

This particular information could be concluded that over its perforated interval, as shown on our

previous exhibits, the cross section and the Isopach map, that that particular zone that's currently completed in the Osudo State could possibly be responsible for the production. That's an assumption on my part.

Q. Well, there isn't any pressure data that you have that supports a conclusion that that Hytech Well is in communication with the Texas Oil and Gas Well, is there?

Any pressure data?

A. No, sir, you're correct.

Q. Now this safety factor of 100 feet, that could be accomplished by moving the well 100 feet to the west or a 100 feet to the south of the Antweil dry hole, shallow dry hole, could it not?

A. Yes, sir, the safety factor could be obtained in moving any direction around the well, but there's not a directional survey on the well. However, I think you have to consider the requested location is based on the geologic data which was presented also, which indicated to us you would lose net TXO Sand thickness if you moved in any direction other than toward the corner of the section.

Q. Wouldn't you be more likely to get the -- more of the TXO Sand if you got one foot off the east line than you would 560?

A. More likely?

Q. Yes, to get --

A. Hypothetically, yes, sir, it would be better --

Q. Hypothetically, really.

A. Oh, yes, sir, yes, sir, one foot or right over there next to it on your lease.

Q. So that's really the reason you like the 560 location better than moving 100 feet west or 100 feet south, is it not?

A. Not -- not necessarily any different closeology, if that's the word you want to use, moving next to the lease line than in the application in May of 1978 when Texas Oil and Gas made its application to move 660 out of the corner.

We believe that the 550 location supported by the fact that the Texas Oil and Gas Well has evidently uncovered a Morrow Sand stringer that's highly productive, has virgin reservoir pressure, and we believe to cross over onto Section 30, warrants a location to protect the Union State lease from drainage. And based on the geological information presented by Mr. Casey and our examination of the production performance of the Texas Oil and Gas Well, we believe the location as requested to be the best; also to be fair.

Q. Mr. Cooksey, you heard Mr. Casey's testi-

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mony about this working interest unit that we talked about. Wouldn't it have been possible for Mr. Hamon to have drilled this well at this location that Texas Oil and Gas is on? Didn't they have ten years to do it?

A. I know no details of the working interest unit.

Q. Well, you --

A. I do know -- I do know that -- from the testimony at this hearing and the one in May, that some of the working interest owners evidently owned a lease in Section 29. Why they chose to drill it, I could not speculate on.

Q. Or they chose not to.

A. Not to drill it, correction.

Q. Do you think they were protecting the correlative rights at that time of the people in Section 29?

MR. KELLAHIN: I'm going to object to the question. The witness has already testified that he doesn't have the knowledge of the circumstances surrounding whether or not there was a conscious decision made not to drill that acreage.

MR. STAMETS: Objection sustained.

Q. Mr. Cooksey, do you know whether or not Mr. Hamon has staked three locations, unorthodox locations, in Section 30?

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A. I have no definite fact that there be three stakes driven in the ground; however, I will state this, Mr. Losee, that generally it's my experience when I call out a surveyor to stake a well, I tell him to stake as many locations as he thinks possibly feasible; in other words, to keep down the cost of surveying, and that wouldn't surprise me in the least if there was three or six stakes out there.

Q. Did you order the surveyor to stake this location?

A. No, sir, that was done by our district engineer in Midland, Texas, Buck Shaw.

Q. Do you know any instance where the Commission has approved the unorthodox location for a gas well on 320 or 640 acre spacing located 560 feet from the lease line?

A. I personally do not, but my knowledge of New Mexico Oil Conservation Commission proceedings in the past is very, very limited.

MR. LOSEE: I think that's all.

MR. STAMETS: I've got a question for Mr. Casey, and I think he can answer it from where he's at. Maybe a couple of questions.

Mr. Casey, in looking at your Exhibit Number Three, which is the structure -- or not structure,

the Isopach map, just in general terms, it appears to me that there's about as much pay in this sand in Section 29 as there is in Section 30, is that -- does that look about right to you?

MR. CASEY: Yes, sir, the contours are fairly similar and symmetrical.

MR. STAMETS: And as far as, if we drew a circular drainage radius from both of these wells, the only difference that we would find in one overlapping the other would result from this 100 foot difference between the two locations. In other words, you're 100 feet closer to their line than they are to your line, and so perhaps, assuming radial drainage, you would get just a little bit more advantage from their acreage than they might get from your acreage.

MR. CASEY: Sir, that might be true. I feel like again, I don't want to dwell on this point, but I think -- I have made this map to look optimistic, and based, perhaps, on the dip that we see from the contour lines from the Texas Oil and Gas Well on 29 to our Osudo State, that if -- if I didn't pull those lines out a little bit I might not have as much sand at that location as Texas Oil and Gas has in theirs, and if I do not have that much sand, I probably won't drain --

MR. STAMETS: But as -- as it was presented

here, the only real difference between the two situations, Texas Oil and Gas and J. L. Hamon, is that you're 100 feet closer to their line than they are yours.

MR. CASEY: Yes, sir, it appears that way.

MR. STAMETS: Does anyone have any other questions of either of the two witnesses? They're both excused, then.

MR. KELLAHIN: I have one more exhibit to introduce, if the Examiner please.

I'd like to introduce as Exhibit Number Six a copy of Texas Oil and Gas Corporation's Order in Case Number 6215. It's Order Number R-5735, entered June of '78, approving their location in Section 29.

WILLIAM SIRUTA

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOSEE:

Q Will you state your name, please?

A. William Siruta.

MR. STAMETS: How do you spell that, sir?

A. S-I-R-U-T-A.

Q Have you previously testified before the

Commission and had your qualifications as a geologist made a matter of record?

A. Yes, sir.

MR. LOSEE: Mr. Siruta's qualifications acceptable, Mr. Examiner?

MR. STAMETS: They are.

Q. (Mr. Losee continuing.) Please refer to what has been marked as Exhibit One, Mr. Siruta, and explain what is portrayed by this exhibit.

A. This is a production map of the North Osudo Field illustrating cumulative production as the numerator on the line with the daily rates as the denominator, or underneath the line, with any pressure data indicated below this production.

The production is the cumulative rate up to January 1st, 1979.

Q. Please refer to what's been marked -- well, before we leave that exhibit, does your cumulative production reasonably concur with that data presented by Mr. Hamon?

A. Yes, sir.

Q. Okay, turn to what's been marked as Exhibit Two and identify the exhibit.

A. This is also a map of the North Osudo Area. It is an Isopach map on the Middle Morrow Sand which

has been referred to by Mr. Cooksey and Mr. Casey as the TXO Sand.

Q. We've got some difference between your Isopach on which you call the Middle Morrow and Mr. Casey's map of the TXO Sand, do you not?

A. Yes, sir, we do.

Q. You show this sand present in what wells?

A. I show this sand present in, of course, the Texas Oil and Gas No. 1 Osudo State. Also in the Jake L. Hamon Union State No. 1 and the Western Oil State "J" No. 1.

Q. Do you show it present -- you've got this well called the Southwest Natural Gas Company. Do you know whether that's the same well that's called Hytech Energy?

A. Yes, sir, that is the same well.

Q. You don't show that sand present in that well, do you?

A. That is correct, sir, I show zero feet.

Q. Do you know whether or not there are three unorthodox locations staked in Section 30 by Mr. Hamon?

A. Yes, sir, there are the proposed location and two alternates.

Q. Okay. What's the proposed location

footagewise?

A. 660 from the north line and 560 from the east line.

Q. What are the alternates staked out there?

A. One alternate is 760 from the north line and 660 from the east line. The other alternate is 7 -- excuse me, let me start again.

One is 660 from the north line and 760 from the east line. The other alternate is 760 from the north line and 660 from the east line.

Q. As far as your Isopach of the Morrow Sand, are all three of those locations in substantially the -- would encounter substantially the same pay thickness?

A. Yes, sir, they would.

Q. And from looking at Mr. Hamon's Exhibit Three, his Isopach of the TXO Sand, would all three of those locations encounter substantially the same pay sand?

A. Yes, sir, they would.

Q. Please refer to what has been marked as Exhibit Three, which is your cross section. Identify or explain what is portrayed by this exhibit.

A. This is a cross section from the Jake L. Hamon Union State No. 1 in Section 30, and also includes the Texas Oil and Gas Osudo State No. 1 in Section 29. DST's, perforations are indicated on the cross section.

It is a stratigraphic cross section hung on the base of the Morrow massive shale and the sands, the Morrow Sands that are present in the two wells are depicted by the yellow color.

Q. So that by your cross section you would correlate the sand that's open in the TXO Well to a sand that's open in the Jake L. Hamon?

A. Yes, sir.

Q. You don't have it on your cross section, but did you compare the log on this Hytech Energy Well?

A. Yes, sir, I did.

Q. Does it correlate, in your opinion, a sand that's open in that well to the so-called TXO Sand?

A. No, sir, it does not.

Q. Now, did you find in the well you drilled the sand that the Hamon Union State Well, the central sand it's produced out of below the base of the Morrow massive shale?

A. Yes, sir, we -- we did encounter this sand in the Osudo State Well.

Q. Was it depleted?

A. Yes, sir, after perforating and acid-treating, we found that it was a depleted zone.

Q. So that the -- would you conclude that the Hamon Union State Well has drained this sand from under

Section 29?

A. Yes, sir.

Q. Mr. Siruta, please turn to what's been marked Exhibit Three and identify this exhibit.

A. I believe you're referring --

Q. Four, excuse me.

A. Referring to Exhibit Four, this is a copy of the Isopach of the TXO Sand that was -- or Exhibit Two. Indicated on this map are circles, and these circles are a radius of drainage equivalent to 640 acres, which is the spacing in this area, and the orange circle is indicated for a standard location, the radius of drainage at 1650/1650. The green is the radius of drainage at a location 660 from the north line and 760 from the east line. The red is a radius of drainage 660 from the north line and 560 from the east. And the blue is the radius of drainage 760 from the north line and 660 from the east line.

MR. KELLAHIN: Mr. Examiner, at this time I would move the testimony with regards to drainage radius be stricken until a proper foundation has been laid to satisfy that this witness is competent to make those kinds of conclusions with regards to this exhibit.

MR. Siruta testified under oath before the Commission on May 17, 1978, on page thirteen of that transcript. The question was asked and the answer given,

it said,"it could possible increase to seven feet, but I do not believe that that would be sufficient to make a commercial well."

The questions was asked, "At the unorthodox location what area will that well drain, in your opinion?"

ANSWER: I do not believe I'm qualified to answer that question.

In May of '78 he was not qualified to discuss drainage radius. I'd like to know what has happened since 1978 to now qualify this witness.

MR. LOSEE: Do you want me to respond?

MR. STAMETS: Yes, I certainly do.

MR. LOSEE: I think what Mr. Siruta has testified to, that if you assume circular drainage, which is what this exhibit depicts, that this is the area that it will be drained by, a 640-acre unit, and I think that's all. I don't believe his testimony is that it will or will not drain the circular area.

MR. STAMETS: What's being discussed here is a theoretical situation, not an actual situation.

MR. LOSEE: Yes, sure.

MR. STAMETS: In that light, I believe I'll let the witness continue to be cross examined in that area.

Q. You're not really testifying that you know

in fact that there is circular drainage, are you?

A. No, sir, this is just theoretical.

Q. Okay. How much additional offset acreage is drained by the unorthodox location at 560/660 from an orthodox 1650 location?

A. Outside of the Jake L. Hamon --

MR. STAMETS: Before he answers that question, let me -- let me ask you where, what area of this exhibit we're talking about now. We're just talking about the space inside the yellow line or are we talking about all the acreage in Sections 19, 20, and 29?

MR. LOSEE: We're talking about 19, 20, and 29.

MR. STAMETS: Okay.

MR. LOSEE: I think.

A. Yes.

Q. Okay, let him answer it.

A. Using the circle that's shaded red, which indicates a theoretical radius of drainage for a 640, there would be 390 acres outside of Section 30. This acreage would be in Section 29, Section 20, and Section 19. That is 390 acres outside of Section 30.

Q. Okay. From a standard location percentage-wise how much closer are you to the east line of the section than you are with this 560 location, than you are with a

1650 location?

A. 67 percent closer.

Q. Now, how much closer are you to the north line at this 660 location than you would be at a standard location of 1650 feet?

A. Also 67 percent closer.

MR. STAMETS: Let me clarify this. I thought we were talking about the 660/560.

MR. LOSEE: Yes, I really was.

MR. KELLAHIN: That was not the question asked and answered.

MR. STAMETS: Okay, does this 100 feet make no difference, because in one case you're talking about 560 from the line; the other case you're talking about 660, and you answered 67 percent closer in both cases. It seems like there would be some small difference between those two numbers.

A. Yes, it should be 66 percent.

Q. Closer to the -- no, it should be a greater percent.

MR. STAMETS: It depends on which figure you're talking about. Which one is 66 percent?

Q. Which one is 66? The 660 or the 560?

A. The 660. I believe that's right.

Q. And what's your 560, in its relation to

1650?

A. The 660 location from the north line would be 60 percent closer.

MR. STAMETS: Six zero?

A. Yes. I'm sorry, that was a -- I'm not too good with a calculator.

Q. Geologists are not supposed to be, Mr. Siruta.

A. Yes. And from the east line it would be 67 percent closer.

Q. Okay, now have you estimated the number of acres shown on your isopach within Section 30 that would be productive of this Middle Morrow Sand pay, or that are productive of?

A. Yes, I've estimated approximately 130 acres in Section 30 that would be productive.

MR. KELLAHIN: Say again. 130 acres in Section 30?

A. Yes.

Q. Mr. Siruta, do you know any instances where the Commission has approved a location for a gas well on 320 or 640 acre spacing located within 560 feet of a lease line?

A. No, sir, I do not.

Q. Does Texas Oil and Gas object to this

location that is requested here?

A. Yes, we do.

Q. And is it their statement that the location should not be approved at that 560/660 outlined?

A. Yes, that is their statement.

Q. Now, if it is approved, do you have a recommendation as to a penalty factor to be applied?

A. Yes. We think a penalty should be applied.

Q. Would you -- is this the penalty similar to that enforced by the Commission in a non-prorated field in Case Number 6231, Order R-5831 and Order R-5831-A?

A. Yes, sir.

Q. And that was -- the penalty factor was based in that case upon three things: One, close proximity to the lease line, to each lease line, made up two-thirds of the formula, and productive acres within the section made up the other third, is that correct?

A. Yes.

Q. And although you do object to the location for this well, if it is approved at 560 rather than 100 feet to the west or south of the present well, you ask the Commission to enforce that penalty against Jake L. Hamon?

A. Yes, sir.

Q. Now, the special rules and regulations

that were promulgated in the order that I've referred to provided for periodic deliverability tests. Are you familiar with those rules?

A. Yes, sir, I have read them.

Q. And so that the penalty factor would be applied against the deliverability of the well.

A. Yes, sir.

Q. Until the well had reached -- depleted to a deliverability of 500 Mcf per day?

A. Yes, sir.

Q. And is that your recommendation if the Commission sees fit to grant the location of this well?

A. Yes, sir.

MR. LOSEE: I think that's all of Mr. Siruta.

MR. STAMETS: Questions of the witness?

MR. KELLAHIN: I do believe.

MR. STAMETS: Mr. Kellahin.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Siruta, let's talk about your theoretical circles of drainage here for a moment, and if we look at the Texas Oil and Gas Well in Section 29, it is, is it not, 660 out of the corner?

A. Yes, sir.

Q. So for that particular well it is 60 percent closer to the west line of the section than would normally be permitted?

A. Yes, sir.

Q. And it is also 60 percent closer to the north line than normally permitted?

A. Yes, sir.

Q. If you'll look at the proposed location of Jake L. Hamon, we find that he is also 60 percent closer to the north line of Section 30.

A. Yes, sir.

Q. And that he is 67 percent closer to the east line of Section 30?

A. Yes, sir.

Q. There is a difference of being some 7 percent more unorthodox than the Texas Oil and Gas Well, is that not true?

A. Yes, sir.

Q. Was the Texas Oil and Gas Well penalized in any way with regards to this location?

A. No, sir.

Q. Was it penalized in any way for non-productive acreage?

A. No, sir.

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Q. Would you not agree with me that if the Commission chose to penalize the Jake L. Hamon Well on some theoretical basis, as you suggested, that an equitable method would be a penalty of some 7 percent?

A. No, sir, I don't believe that that would be an equitable penalty.

Q. All right, sir, let's look at your Middle Morrow Isopach, Exhibit Number Two.

If I understand it, the way that was prepared, you have essentially used the same Morrow Sand that Mr. Casey has used in his Isopach, is that not true?

A. Yes, it is what Mr. Casey is calling the TXO Sand.

Q. All right. What is the API cutoff you used for your Isopach?

A. I've used the API unit cutoff that is the standard used by numerous studies that have been done in the Morrow in New Mexico, which is 50 API units.

Q. You used 50 API units for yours and I believe it was Mr. Casey's testimony he used 60 API units?

A. Yes, sir.

Q. The difference being, is it not, Mr. Siruta, that with a higher number you are including more Morrow Sand, is that true?

A. No, sir.

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Q. The reverse it true?

A. That's right.

Q. So your Isopach is going to be more optimistic than Mr. Casey's Isopach because of the difference in the API number.

A. More optimistic in relationship to Mr. Casey's map.

Q. More optimistic in terms of the number of Morrow Sand in terms of feet that you find.

A. I would prefer to say more realistic.

MR. STAMETS: Let me clarify this, now. You answered him in response to Mr. Kellahin's question, using 50 API units instead of 60 would cause you to show less sand than Mr. Casey did.

A. Yes.

MR. STAMETS: All right. Now, if you're showing less sand, would your estimate then not be more conservative than Mr. Casey's?

A. Yes, it -- it would be -- my estimate would be less sand, net sand, than Mr. Casey's estimate, yes.

Q. (Mr. Kellahin continuing.) All right, I think we're straight on that, Mr. Siruta.

Let me ask you, in terms of your Isopach you have looked at the well in the south half of Section 29,

that Western Oil State "J" Well, and you've attributed 10 feet.

A. Yes, sir.

Q. How did that well perform at that interval?

A. There was a DST across that interval, including two or three other sands, if my memory serves me correctly, and it flowed at a rate of 260 Mcf, and I don't recall the exact numbers on the final shut-in pressure, but they were somewhere above 5000 pounds. It is presently plugged and abandoned.

Q. Who is the operator of that well?

A. Western Oil.

Q. All right, WEstern Oil tested the 10-foot interval that you have on your Isopach and they did not produce it in paying quantities and abandoned it and plugged back up the well?

A. They tested it along with other Morrow sands.

Q. Yes, sir, and that 10-foot plus all other Lower Morrow Sands did not produce commercial Morrow gas.

A. That zone, Middle Morrow Sand did not produce in paying quantities, that is correct.

Q. All right. Keeping that in mind, Mr.

Siruta, at what point would you not recommend a well to test the TXO Morrow Sand on your Isopach?

A. Are you referring to a footage location or in terms of sand thickness?

Q. In terms of sand thickness.

A. Our well exhibits very good permeability and porosity and is sometimes the case in these sands that exhibit good permeability and porosity, they are productive whenever you have any of the sand present.

Q. Subject to that qualification and based upon your Isopach, what would be the number of feet that you would want?

A. I'm not sure that I understand the question.

Q. Would you drill at a location in which you've Isopached 5 feet of Middle Morrow SAnd pay?

A. No, sir.

Q. Would you locate a Morrow test on a contour line on the Isopach in which you would encounter 10 feet of Middle Morrow Sand pay?

A. Yes, sir.

Q. At what point between the 5 and the 10 would you cut it off?

A. On this particular sand I would say if had in excess of 5 feet. If I had 5 feet or less I pro-

bably would not drill a well, but if I had 5 feet or more, I probably would.

Q. All right. If you'll follow the 5-foot Isopach contour around to Section 30, you will note, will you not, that all of the proposed staked locations you've identified in Section 30 fall in something less than the 5-foot contour, do they not?

A. Yes, sir.

Q. In fact you contoured the Isopach for this particular Morrow Sand to show that virtually all the production from this sand will come from Section 29.

A. Yes, sir.

Q. Isn't that true?

A. Yes, sir, that is correct.

Q. And that's done by giving credit to the Western Oil Company for some 10 feet of Middle Morrow Sand that did not produce in paying quantities.

A. Yes, sir.

Q. From looking at your Isopach, Mr. Siruta, it would appear that Jake L. Hamon, regardless of where he locates his well, so long as it's no closer than 560 feet to the east boundary line of Section 30, will not obtain a commercial well within this particular Morrow pay zone, is that not true?

A. The statement that I made earlier was

that some sands that have good permeability and porosity, sometimes if you have just 1 foot of the sand you can -- you can make a well.

I feel like this may be one of those -- those sands, because of the permeability and porosity exhibited in the Osudo State No. 1.

So a commercial well could be made but I can't say yes, it could.

Q. Well, based upon information in the Isopach, there would be no reason to penalize the Jake L. Hamon Well so long as the location is no closer than 560 feet to the east boundary line of Section 30.

A. A location that would be 760 from the east line would also encounter the same amount of pay as a location that would be 560, or approximately the same amount.

Q. Now let me see if I understand the nature of Texas Oil and Gas' objection.

You do not object to any location that Jake L. Hamon will propose to drill so long as it's no closer than 660 feet to the east boundary of Section 30, is that not true?

A. Yes, that's true.

Q. It would appear from your Isopach, then, Mr. Siruta, that had Texas Oil and Gas drilled at a standard

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location 1650 feet from the west boundary line of Section 29, it would have still encountered at least 16 feet of Middle Morrow Sand pay, would it not?

A. If that was the objective when the well was drilled, but it was not.

Q. What was the objective when this well was drilled?

A. The sand that lies directly beneath the base of the Morrow massive shale, which we did encounter and it was depleted.

Q. Okay. The principal objective for the well at the time it was drilled was not this Middle Morrow Sand pay that you're now testifying to.

A. No, sir.

Q. Let me ask you a few more questions with regards to your Isopach, Exhibit Number Two, and the cross section.

You've chosen only to demonstrate two wells on your cross section, have you not?

A. Yes, sir, that's correct.

Q. And you've omitted the Western Oil State "J" Well in Section 29 and you've omitted the Hytech Well in Section 19.

A. That is correct.

MR. KELLAHIN: I have nothing further.

MR. STAMETS: Off the record.

(There followed a discussion off the record.)

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Siruta, looking at your Exhibit Number Three, now, all by itself at first, it would appear as though the sand that's in question here, the upper productive sand in your well, consists of two members. There is an upper zone, which is somewhat thicker, looks to be about 10 feet, and then a lower zone that's perhaps isolated by a little shale streak there, that's a couple of feet thick, is that correct?

A. Yes, sir.

Q. And it's the lower of those two zones that you correlate into Jake L. Hamon's well.

A. Yes, sir, that is correct.

Q. Okay. Now, let's just assume for a minute that Mr. Hamon had depleted that zone and had depleted it under your well also, is it -- well, let's don't assume that. Let's just ask the question, is it possible that all of this good pressure that you've got and all of this good production that you've got, is coming out of the 10 feet rather than from both stringers? Is it possible

that lower one is already depleted?

A. Mr. Examiner, I don't have in evidence here a mud log that we had on our well here, but we did exhibit gas shows in both the thick sand and the thin one, and using this as sort of a guide when we cut the bottom sand that was depleted by the Jake L. Hamon Well, we did not have shows in that sand, but we did have shows in each one of the individual sands in the zone that we have perforated, but I do not know for certain which sand is contributing the most.

Q. Okay.

A. But the bottom sand exhibits 10 percent porosity, which we believe anything over 7 is productive in the Morrow.

Q. Now looking -- I think we can compare your cross section A-A' with Mr. Hamon's cross section and look at this Western Oil Producers well, although the massive shale is missing there, it looks as though you may be able to correlate the base of the Morrow Sand below that point.

Looking at the upper yellow sand that Mr. Casey has marked on there, correlates with the upper two -- upper of the two zones that you have in your well or the lower of the two zones? I don't know whether you can tell at all.

A. I have done this correlation because on my Isopach I have indicated 10 feet of sand. You will notice as you look directly above the thick sand in the Osudo Well, the Texas Oil and Gas Well, there's a thick shale member right there. You will notice that directly above the sand, the top sand in the Western Oil Producers Well, there is also a shale. It is not quite as thick but it does appear to be the same member. And mainly, I base that on mainly the correlation from the bottom up, so you can look at the bottom sand there and then you have to do a little, little moving down here, and you can see that shale lining up with the shale I was speaking of, plus the shale that's at 11,150 in the Western Oil Producers Well correlates very close with what I'm calling the top of the Middle Morrow in the Osudo Well.

That correlation puts you in the stratigraphic interval that is equivalent between the two sands in the Osudo Well and the one sand in the Western Oil Producers Well.

To your question which sand does it belong with, the upper or the lower one, I'm not really sure. This is a strand line deposit and you get some distinct changes in the Morrow section in here.

Q. So it's possible that the 10 feet that you show on your Exhibit Number Four isn't even connected

to the 16 feet that you show for your well.

A. It is stratigraphically equivalent, which is --

Q. Okay.

A. -- the only guide that I'd really have to say is it the same sand or not.

The only true way to tell, I feel, is pressure data, and we can't really tell that from our well in relationship to these -- these pressures that were on the DST in the Western Oil Well, because of possible depletion in our zone by the Hamon Well.

Q. With the kind of pay, porosity that you've got in your well, if that had carried on across to the Jake L. Hamon Well in Section 30, would you anticipate finding as good a zone as you did or would you have probably found a zone that was already draining?

A. Because of the type of log that Mr. Hamon ran in his well, we can't really be certain what the porosity is and what the amount of permeability, not necessarily numerical amount, but the relative amount of permeability, I guess -- I guess the answer to your question, if he did have as good a perm and as good a porosity, very possibly he could have drained more of the reserves, but because of the thickness of the sand, I believe that's why the drainage was not as great as it could have been. It's a smaller

amount of sand so it's going to take a longer time for it to -- to drain.

Q. In response to Mr. -- one of Mr. Kellahin's questions I understood you to say that if Mr. Hamon had drilled at 660/660 out of the northeast corner, you would not have had an objection and this hearing would not have been held today, or at least you would not have had an objection to that.

A. That is correct.

Q. Okay, so again it looks like the whole thing boils down to this 100 feet.

A. Yes.

Q. Plus in your case, you've got some different contours on your map. It shows what would probably be considerably different reserves on one side of the line from the other.

You mentioned 390 acres drainage in Section -- Sections 19, 20, and 29, at the 660/560 location. Now is that net additional drainage above what a well would have at a standard location or is that just the total drainage?

A. I'm not sure that I understand the question.

Q. All right. You've got a brown line shown on Exhibit Number Four, which is a standard location.

A. Yes, sir.

Q. All right, now that drains -- that shows drainage in Sections 19, 20, and 29.

A. Yes, sir.

Q. So there's already some.

A. Yes.

Q. And then you've got your red line for your 660/500, and what I'm trying to figure out, when you gave me this 390 acres figure, is it you're counting all of the acreage within the red line in Sections 19, 20, and 29, or only the acreage that lies between the blue line and the red line.

A. No, we were counting all the acreage that was outside of Section 30 but was in Section 19, 20, and 29 that was within the blue line, within the blue circle.

Q. You mean within the red circle.

A. The red circle, I'm sorry, yes, the red circle.

Q. Okay.

A. This number was arrived at by using the planemeter. I believe that's what they call it.

Q. I presume when you, when Texas Oil and Gas came in for their non-standard location, that you did not recommend that a penalty factor because of the unortho-dox location?

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A. No, sir, we did not recommend a penalty.

Q. And why do you think now Jake L. Hamon should get a penalty for his location?

A. The main reason that -- that we didn't feel like we deserved a penalty was that the sand that we were drilling for, our main target was the lower sand below the massive shale, and he had essentially drained all of the reserves that he could probably drain in his section from the well that he already had which was perforated and which from DST data shows to be the major pay in the well.

Whereas in this case Mr. Hamon is moving into squeeze as close as he can to our section line to try to get into our pay to drain reserves that are on our side of the section line, or in Section -- the north half of Section 29.

MR. STAMETS: Any other questions of this witness? He may be excused.

MR. LOSEE: I've got one question.

MR. STAMETS: Oh.

REDIRECT EXAMINATION

BY MR. LOSEE:

Q. I'm not sure he knows the answer. Do you know, Mr. Siruta, whether or not Texas Oil and Gas has -- is now or has considered a re-entry of this Western Oil

Producers State "J" Well?

A. Yes, we have considered a re-entry. We have data on the well that we feel like is, I don't know exactly the word I want to use, but all of it is pertinent to us that we'd rather not divulge at this time.

Q. Do you have any thought that Western Oil Producers plugged a producing well? A well that was capable of production?

A. I personally have a thought, yes, that they -- that they did do this.

Q. Okay, thank you.

MR. STAMETS: Any other questions of this witness? He may be excused.

Does anyone have anything further in this case?

MR. KELLAHIN: If the Examiner please, I would like, because of the compatibility or incompatibility of our case with the case heard in '73, I would request that the Examiner review and take administrative notice of the exhibits, testimony, and evidence introduced by both these parties on May 17th, 1978, in Case Number 6215.

MR. STAMETS: Certainly give your request every consideration.

If there is nothing further, the case will be taken under advisement.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Taanscript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. ____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION COMMISSION
State Land Office Building
Santa Fe, New Mexico
28 August 1979

COMMISSION HEARING

IN THE MATTER OF:

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

CASE 6555

BEFORE: Commissioner Ramey
Commissioner Arnold

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Commission:	Ernest L. Padilla, Esq. Legal Counsel for the Commission State Land Office Bldg. Santa Fe, New Mexico 87503
For Jake L. Hamon:	W. Thomas Kellahin, Esq. KELLAHIN & KELLAHIN 500 Don Gaspar Santa Fe, New Mexico 87501
For Texas Oil & Gas:	A.J. Losee, Esq. LOSEE, CARSON, & DICKERSON Artesia, New Mexico 88201

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E X H I B I T S

MR. RAMEY: The hearing will come to order. We have only one case this morning and that is Case Number 6555.

MR. PADILLA: Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

MR. RAMEY: I'll call for appearances at this time.

MR. KELLAHIN: I'm Tom Kellahin, Kellahin and Kellahin, Santa Fe, New Mexico, appearing on behalf of Jake L. Hamon, and I'll have two witnesses.

MR. LOSEE: A. J. Losee, Losee, Carson, and Dickerson, Artesia, New Mexico, and I have one witness.

MR. RAMEY: Will the witnesses stand and be sworn, please?

(Witnesses sworn.)

MR. RAMEY: Mr. Kellahin, you may proceed.

MR. KELLAHIN: I'll call John Casey.

JOHN CASEY

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Casey, would you please state your name, by whom you are employed, and in what capacity?

A. My name is John Casey. I'm employed by Jake L. Hamon as the District Geologist in Midland, Texas.

Q. Mr. Casey, have you previously testified before the Oil Conservation Division and had your qualifications as a geologist accepted and made a matter of record?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Casey as an expert geologist.

MR. RAMEY: We consider him qualified.

Q. (Mr. Kellahin continuing.) Mr. Casey, would you please turn to what we have marked as Jake L. Hamon Exhibit Number One and identify that exhibit for us?

A. Exhibit One is a contour map on top of the Morrow formation.

Q. What is depicted by the yellow outline?

A. The area outlined in yellow is the North Osudo-Morrow Field.

Q. And what is the current spacing for the North Osudo-Morrow Pool?

A. The spacing is 640 except the spacing for

Texas Oil and Gas Well in the north half of 29, and that's 320.

All the other wells are 640.

Q. Within a 640 acre spacing unit, what is a standard location for this pool?

A. It's 1650 from an outer boundary.

Q. Would you indicate for us on your plat how the Morrow wells in this pool are identified?

A. I have -- we show them as gas wells and I've underlined the Morrow datum that I used for this map. They're underlined in red.

Q. Of the wells within the outer boundaries of the North Osudo Pool, which of the wells are at unorthodox locations, Mr. Casey?

A. All of the wells in the pool are unorthodox locations except the Flag-Redfern Well.

Q. And where is that well?

A. In Section 18. It's the only one that's a standard location.

Q. I direct your attention to the Texas Oil and Gas well in the north half of Section 29 and ask you to tell me what the footage location of that well is.

A. It's 660 from the north and 660 from the west.

Q. And was that well the subject of a Division

hearing to approve its unorthodox location and its non-standard proration unit?

A. Yes, sir, it was.

Q. Do you recall what the order number was for that case?

A. No, sir, I do not.

MR. KELLAHIN: If the Commission please, that case was 6215, Order Number R-5735, heard on May 17th, 1978.

MR. RAMEY: What was the order number again, please?

MR. KELLAHIN: R-5735.

MR. RAMEY: Okay, thank you.

MR. KELLAHIN: If the Commission please, we believe it would be appropriate to incorporate the record transcript, exhibits, and orders of that Texas Oil and Gas case into the transcript of this case.

MR. RAMEY: Are there any objections?

MR. LOSEE: No objection.

MR. RAMEY: It will be incorporated.

Q. (Mr. Kellahin continuing.) Is the Texas Oil and Gas Well penalized in any way because of its unorthodox location?

A. No, sir.

Q. And is it penalized in any way for any non-

productive acreage within the north half of Section 29?

A. No, sir, not to my knowledge.

Q. In fact, are any of the unorthodox location wells in this pool penalized in any way?

A. No, sir.

Q. What is the proposed location for the Hamon Well in Section 30?

A. We propose to drill 660 from the north line and 560 from the east line of Section 30.

Q. I notice that there is a well south of that location in Section 30. Would you identify that well for us?

A. Yes, sir, that's the Hamon No. 1 Union State.

Q. And what is the status of that well, Mr. Casey?

A. It's producing but it's very near the economic limit.

Q. What do you propose to do with regards to that well and your new location?

A. If Mr. Hamon is successful at the proposed location, 660 from the north and 560 from the east, we will then plug the No. 1 Union State.

Q. What acreage is currently dedicated to the Union State Well?

A. All of Section 30, 640 acres.

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Q. And if the Division approves the proposed unorthodox location what will the acreage dedication be to that well?

A. We propose to dedicate all of Section 30.

Q. Would you describe for me the significance of the structure lines in this general area?

A. What I've shown here is the general westerly, somewhat northwesterly, dip of the Morrow formation that I've contoured and in some areas we have slight interruptions in the regional dip, and where that has happened we, oh, propose that there may be some anomalies, small anomalies.

Q. Have you chosen your particular location based upon structural reasons alone?

A. No, sir, we have not.

Q. What do you conclude based upon the structure map itself?

A. That the general strike is north, essentially north/south and dips to the west.

Q. Would you describe for me the significance of the green line connecting the wells in a north/south direction here?

A. Yes, sir. We have a cross section A-A' which will be one of our other exhibits, and I've from north to south taken off from the Hamon State "E" 8913 in Section 20, proceeded into the well in Section 19, through the Texas

Oil and Gas Well, through a location that we had proposed for our well, and through the Hamon No. 1 Union State, proceeding on southeasterly to the Western Oil State Well in the south half of 29, and then southwesterly through the Texaco State "CUL" in 31, and finally to the Texaco No. 1 State "CD" in Section 36.

Q. Let me direct your attention to the Moran Well in Section 19. Has that well been known by any other names, and if so, what qre those names?

A. Yes, sir. Most recently it was known as the HyTech Well, and then it was drilled, I believe it was originally drilled as Southwestern Natural Gas, but Moran Exploration is now the -- taken over HyTech and we show that name.

Q. You testified that the proposed location for Mr. Hamon is 660 from the north line and 560 from the east line of Section 30. What, if anything, precludes you from drilling at a location 660 out of that corner?

A. At a location 660 from the north and east lines in Section 30 there is an old abandoned Seven Rivers Well that's drilled to a depth slightly in excess of 4000 feet, and it is completed from the Seven Rivers.

Q. What's the current status of that well?

A. It's plugged.

Q. And in your opinion can that old wellbore

now be used as a location from which to test the Morrow formation?

A. No, sir, we would not advise that at all.

Q. Why not?

A. Well, the well, of course, is old and there would be mechanical problems getting back in the hole. I don't know that we could even ascertain the exact condition of the hole or the pipe, but I'm sure that good engineering practices would dictate that we would not go back in that old hole.

Q. Why have you chosen to move 100 feet to the east of the 660 location?

A. We feel that moving in that direction will give us, oh, our best opportunity to stay out of that old hole and yet give us the best chance of getting into the pay that we want to.

Q. Let me refer you to Exhibit Number Two now and have you identify that.

A. Mr. Kellahin, this is a -- you asked me to identify this. It's our stratigraphic cross section.

Q. Let's do this, Mr. Casey. Let's put this on the wall so we can all be looking at the same points that you identify as you talk.

Mr. Casey, would you please go to the cross section, Exhibit Number Two, that we've placed on the

wall here, and identify that exhibit for us?

A. All right. This is our stratigraphic cross section, the location of which I referred to on Exhibit One. The southwesterlymost well being, or point, being A and this being A' on the north end of the cross section.

What I've done with this cross section is use this point here I call Morrow as a correlative point. Bear in mind it is a stratigraphic section, and then I've identified the -- all pertinent sand bodies, let us say, and shown the producing body in the Texas Oil and Gas No. 1 Osudo State.

Q. Let me ask you this, Mr. Casey.

A. All right.

Q. Does your cross section depict all the Morrow sands in each of the wells that you've put on the cross section or have you confined it to certain Morrow sands?

A. Well, I think that -- of course there are some sands in here that I know I have not colored in. I think that can be shown with the perforations in a number of the wells, selected perforations, where they're known, of course, that helps identify some of the sands, but some of the wells where an overall section is perforated, why, some of those sands I haven't shown.

The sands that I, oh, will probably get to later, but I've used a 60 API figure for my sands.

Q. The cumulative production information on your cross section is through what date?

A. It's through June.

Q. Of what year?

A. To September 1 -- or to July 1 of this year.

Q. And would you identify for us now the Texas Oil and Gas Well in Section 29 that offsets your location?

A. That's this well right here.

Q. And what sands are producing from that well?

A. The -- I've chosen to call this the TXO Sand to, oh, facilitate ease in referring to that body in the other exhibits which we'll show later, but here are the perforations of that sand shown in red.

Q. All right. Now would you look at the Jake L. Hamon Union State Well, which is the well in Section 30.

A. Yes, it is.

Q. And would you correlate for us the sands in that well with the Texas Oil and Gas Well?

A. This is the Jake Hamon No. 1 Union State Well. I've shown these sands here. There are some perforations open above these but by the aid of this cross section we hope and propose to and do demonstrate the sand bodies producing in the Texas Oil and Gas Well is not present, the

Morrow wasn't encountered in Mr. Hamon's No. 1 Union State Well.

Q. What do you intend to accomplish by your proposed location?

A. Our proposed location at this point, we hope to get in this producing sand body that is producing in the Texas Oil and Gas Well and thereby protect our rights and get what we think we're justified in producing.

Q. Let's have you correlate, if they are, the Texas Oil and Gas Well with the Western Oil Producers Well, and that Western Oil Producers Well, is that the one in the south half of Section 29?

A. Yes, that's this well right here.

Q. Do you find that TXO Sand present in the Western Oil Producers Well?

A. My interpretation, I do not believe it is present in that well.

I believe that the Texas Oil and Gas Sand, TXO Sand, if you will, is producing or appears to be present, anyway, in the Moran Exploration Well, and that's -- those are the only two wells that have this sand body present.

Q. That Moran Exploration Well is the one in Section 19.

A. Yes.

Q. What is the producing history of that

Western Oil Producers Well in the south half of Section 29?

A. This -- the Western Oil Producers Well has never produced.

Q. Why not?

A. I guess they just didn't find sands with producing capability, at least at that time. This well was never produced.

There were, as far as the record shows, scout records or scout information, there were tests taken in the well and the scout information showed that those tests were typed and not released, however, they did mention that it was noncommercial, and I think it has been testified to that this well had a test that they got 360 Mcf, something like that, but I'm not certain as to where in the borehole those tests were taken. It was plugged, however.

Q. Your cross section shows a lower few feet of perforated sand in the Texas Oil and Gas Well. Does that correlate in any way with any of the zones that were produced in the Hamon well?

A. I don't believe that it does. I've shown these sands in the Texas Oil and Gas well, particularly these that produce open to the borehole through perforations, as being discontinuous and not present in Mr. Hamon's well.

Q. In your opinion, then, Mr. Casey, is there Morrow production available to Section 30 that has not been

produced by the existing Jake L. Hamon well on that proration unit, nor will be produced by that well, that correspondingly is being produced by the Texas Oil and Gas Well?

A. Yes, I do believe that our proposed location in Section 30, that we will be able to encounter this sand and be able to effect a completion.

Q. In your opinion, Mr. Casey, is that proposed location necessary in order to protect the correlative rights of Mr. Hamon in Section 30?

A. Very definitely, yes, sir.

Q. Would you please return to your seat?

Would you turn now to your Exhibit Number Three? Will you identify that exhibit for us?

A. Exhibit Number Three is an Isopach of the sand body that I've referred to as the TXO Sand and so represented on our cross section.

Q. That's all that you've represented on this Isopach?

A. That's true.

Q. All right. What is the number of feet of Morrow sand you've attributed to the Texas Oil and Gas Well?

A. I've given it twelve feet to that TXO Sand body.

Q. And what would be the number of feet of Morrow sand that you propose to encounter in Section 30 at

your location?

A. We hope to encounter as much as twelve, but say ten to twelve, anyway, we hope.

Q. And how many feet of TXO Sand have you attributed to the Union State Well in --

A. None.

Q. -- the south offset to this location?

A. Zero.

Q. How many feet have you attributed to the Moran Well in 19?

A. I've given that well ten feet.

Q. Now, when you talk in terms of the number of feet of this TXO Sand, what have you used as a cutoff to make that?

A. We used the 60 API units as a cutoff.

Q. If you had of used a 50 API cutoff, what would that do your Isopach?

A. Mr. Kellahin, I don't believe that it would affect that particular Isopach. The -- since these sand bodies are both rather hot and radioactive, they would both fit under the 50 API unit, too, but 60 is a number that in making our overall Isopach of a sand body, we're a little bit more optimistic.

Q. A 60 API cutoff, if I understand you correctly, would include more of the TXO Sand?

A. Not in this particular case, no.

Q. I notice that you've excluded from your Isopach any of the TXO Sand from the Western Oil Producers well in the south half of Section 29.

A. That's true.

Q. Why?

A. I don't believe that sand body is present in the Western Oil Producers Well, and I -- my cross section there demonstrates that.

Q. In your opinion, Mr. Casey, what number of feet of TXO Sand would you believe necessary in order to obtain an economic well?

A. Mr. Kellahin, I believe you've got to have at least ten feet. If we could just -- if we knew for sure we'd get nine, why, I'd probably say nine, but we do need, I would say, ten or twelve feet to effect a commercial producer.

Q. In your opinion, Mr. Casey, can -- can you move to a standard location under the North Osudo Morrow Pool rules and obtain a commercial well?

A. No, sir, I don't believe I can. If we did that, we would be going -- we would be going a direction that would be -- show less of the TXO Sand and we would increase our risk for completing a well.

Q. What is the anticipated cost of Mr. Hamon's

proposed well in Section 30?

A. Our AFE cost for that well is a little over a Million Dollars for a completed well.

And our dry hole cost is estimated at -- right at $780,000.

Q. Would you go back now to a standard location 1650 out of the north and east sides of Section 30 and approximate for me the number of feet of TXO Sand you would encounter at that location?

A. I'll have to guess at 1650 here. I don't have a scale with me, but probably in the neighborhood of four to six feet.

Q. In your opinion, Mr. Casey, based upon your Isopach and your cross section and your other studies of this area, do you have an opinion as to whether the Hamon Union State Well depleted all the Morrow formations underlying Section 30?

A. No, certainly not. They, since the TXO Sand was not present in the Hamon Union State, it could not have drained any gas from that particular sand body.

Q. In your opinion, Mr. Casey, concerning whether the Texas Oil and Gas Well is draining any portion of Section 30, do you have an opinion with regards to that?

A. Yes, sir. I certainly think that they are draining Mr. Hamon's acreage in Section 30.

And I show that on my cross section that that sand is present where we want to drill.

Q. Were Exhibits One, Two, and Three compiled under your direction and supervision?

A. They were.

Q. In your opinion, Mr. Casey, is approval of Mr. Hamon's application for the proposed unorthodox location in the best interests of conservation, prevention of waste, and the protection of correlative rights?

A. I believe that to be true, yes, sir.

MR. KELLAHIN: We move the introduction of Exhibits One, Two, and Three.

MR. RAMEY: They will be admitted.

MR. KELLAHIN: That concludes our direct examination.

MR. RAMEY: Any questions of the witness, Mr. Losee?

MR. LOSEE: I have some, Mr. Ramey.

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Casey, has Mr. Hamon commenced drilling this well?

A. Yes, sir, he has.

Q. How deep is the well at this point?

A. I haven't checked today, Mr. Losee, but yesterday it was 1100 feet. They had already set surface pipe and drilled out, and I suspect today they're probably below 2000, somewhere, 21 and 2200.

Q. And that's at a location 560 from the east line and 660 from the north?

A. Yes, sir.

Q. I believe you stated that good engineering practice would require you to be a hundred feet from this shallow dry hole, shallow plugged and abandoned well.

A. Yes, sir.

Q. Would it have been possible for you to move 100 feet north?

A. Yes, sir.

Q. Wouldn't that have been as good a location or really a little better location on your Isopach than 100 feet east?

A. Possibly it could be, yes, sir, Mr. Losee.

Q. Would you explain why you chose to move 100 feet east, then?

A. At our location 100 feet east of the old hole we think that we'll be closer to the Texas Oil and Gas producing well, and have a better chance to affect a completed well.

Q. Would you -- well, I believe you just

stated that on your Isopach, at least, a location 100 feet north would probably be a little better.

A. On my map that's quite possible, yes, sir. You'll note, however, from the Texas Oil and Gas Well twelve feet, I've given ten feet to Moran's, so we are less than the amount of thickness as we go to the west and to the northwest.

Q. I just suggested going 100 feet north and wondered why you didn't choose that if this map was the guide.

A. Did I answer your question to your satisfaction?

Q. Well, --

A. We just felt that that was the best location.

Q. You are closer to the production by this.

A. Yes, sir, right.

Q. I don't know whether you want to answer or not at your seat. I see you have Exhibit Two, your cross section, for a layman's benefit would you explain to me why this so-called TXO Sand, which is open to perforations at 11,324 to 340, doesn't correlate with the Hamon Union State sand, which is open to perforations at 11,306 to 11,312?

A. Mr. Losee, it appears to me they do not

correlate because, first of all, the TXO Sand is a thicker sand body. It appears to be a hotter sand and in those terms it's more radioactive. The character on the log just doesn't appear to me to be correlative, and I've chosen not to correlate the two.

Q. Well, the mere fact that one sand is somewhat thicker than the other, and by some slight percentage, does that in itself show that they don't correlate?

A. I believe that it certainly weighs my decision on the fact that they do not correlate. They are, you know, because of the proximity of the two wells, if that sand body were continuous over a larger area, I think they would be more closely related as far as thickness is concerned.

Q. Well, that's one factor. Another factor, you said there was, what, more radiation in the samples?

A. More radioactive as represented by the curve, yes, sir.

Q. Is that the only two factors upon which you base that conclusion that they do not correlate?

A. Well, I think that I could state that probably from the pressure information that has been available that I'd think those two were not related.

And the -- the amount of condensate that is being produced from Texas Oil and Gas Well.

Q. What volume of condensate per thousand cubic feet of gas is it making?

A. The Texas Oil and Gas Well? I don't know, Mr. Losee. I have a gross figure that I've been able to obtain from the Commission, but I don't know when -- how that relates to thousand cubic feet, but it's making a considerable amount of distillate or condensate.

Q. Well, is that unusual in an initial completion of a Morrow well?

A. No, sir, not -- not in all cases.

Q. Isn't it true, Mr. Casey, that another geologist looking at these two logs might well correlate this TXO Sand with the sand I mentioned in the Jake L. Hamon Union State Well?

A. Yes, sir, I think that's completely possible.

Q. Now, let me ask you to explain why, and as a matter of fact seems to correlate the sand I mentioned in the Union State Well at 11,306, perforations 11,312, to a sand body present in this plugged and abandoned well, Western Oil Producers Well at 11, about 230 -- 250?

A. Yes, sir, I see it. Why do I correlate those two?

Q. Well, they do correlate, don't they?

A. Yes, sir, I think so. I've shown them that

way.

Q. So that another geologist looking at this cross section might well correlate the TXO Sand with the sand that's present and open in the wellbore of the Hamon Union State, as well as the sand that was encountered in the Western Oil Producers State "J" Well?

A. Yes, sir, I think that would be possible.

Q. And if he arrived at those -- that conclusion, or those conclusions, and were preparing an Isopach, his Isopach would actually in Section 30, at least for six or seven feet of it, the sand would -- would swing to the south, the Isopach would, to pick up your Hamon Union State Well, and considerably on to the south to pick up the Western Oil Producers Well, would it not?

A. Yes, sir, I think it could.

MR. LOSEE: I think that's all, Mr. Casey.

MR. RAMEY: Any other questions of the witness?

MR. KELLAHIN: I have some.

MR. RAMEY: Mr. Kellahin.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Casey, you've indicated that Mr. Hamon has commenced drilling of the well at this proposed location.

Was that done in accordance to a Commission order?

A. Yes, sir.

Q. So I show you a copy of a Commission Order Number R-6029. Is that the order under which Mr. Hamon commenced drilling this well?

A. Yes, sir.

Q. And does that order provide for any penalty in any way?

A. No, sir.

Q. And does it approve the location?

A. It surely does, yes, sir.

MR. KELLAHIN: I believe this is part of the Commission records, Mr. Ramey, and I show it to you for convenience.

Q. Now, in response to Mr. Losee's question with regards to factors as to why you didn't think the TXO Sand in the Texas Oil and Gas Well correlated with the Jake L. Hamon, you made reference to the fact that the Texas Oil and Gas Well had produced considerable condensate. Was that your testimony?

A. Yes.

Q. How does that condensate production in the Texas Oil and Gas Well compare to the condensate production in the Hamon Union State Well?

A. I don't recall that we produced condensate

from our well, but in the early stages I'm not sure if we did or not.

I have some production figures that may show that. Mr. Kellahin, I think that we were going to cover that in another exhibit on our production, but --

Q. I won't ask you if you've got another exhibit and another witness to talk about that.

A. In May, now let me see, in March our records reflect that Texas Oil and Gas Well made 1200 --

Q. Mr. Casey, the question posed to you was you set forth certain factors to Mr. Losee as to why you didn't believe the TXO Sand correlated between the two wells, and one of those factors was the amount of condensate.

What information do you have to support that opinion?

A. Our records show that in March the Texas Oil and Gas Well made 1261 barrels of condensate. In April production was 1796 barrels of condensate. And in May it made 1614, 1-6-1-4, along with the gas.

MR. RAMEY: What was that last figure?

A. 1614.

Q. And how does that condensate production compare to the condensate production in the Hamon Union State Well?

A. Mr. Kellahin, I'm not sure if our well has

ever produced any condensate. Mr. Cooksey may have records reflecting whether or not it's produced any.

Q. Mr. Losee asked you if another geologist could recontour this Isopach to pick up sands in the Western Oil Producers Well in the south half of Section 29 and you indicated that he could do so.

Would you agree with that interpretation of the geology to restructure the Isopach in that manner?

A. No, sir, I would not, but I think any geologist would have his right to his opinion, and my opinion and my interpretation is reflected in the cross section, and I do not believe that there's any -- there's a TXO Sand present in the Western Oil Producers, nor do I believe it's present in Mr. Hamon's Union State. But that's my interpretation and my Isopach reflects that.

Q. Would you describe in general terms what the geology is in this particular area?

A. Well, these are strand lines, if you will, or deposits of sand that I've shown on my Exhibit One, and from the cross section I've shown that you can have a number of sands, but they are certainly not continuous. They are discontinuous. That's the nature of the -- nature of the beast.

MR. KELLAHIN: I have no further questions.

MR. RAMEY: Do you have any questions of

the witness?

MR. LOSEE: No more questions to ask.

MR. RAMEY: He may be excused.

Let's take a short fifteen minute break.

(Thereupon a recess was taken.)

MR. RAMEY: The hearing will come to order. You may proceed with your next witness, Mr. Kellahin.

JAMES G. COOKSEY

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, would you please state your name, by whom you're employed, and in what capacity?

A. My name is James G. Cooksey. I'm employed by Jake L. Hamon, Dallas, Texas, and a petroleum engineer.

Q. Have you previously testified before the Oil Conservation Division of New Mexico as a petroleum engineer?

A. Yes, I have.

Q. And have your qualifications as an expert witness been accepted and made a matter of record?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Cooksey as an expert petroleum engineer.

MR. RAMEY: He is considered an expert.

Q. (Mr. Kellahin continuing.) Would you please refer to what we have marked as Exhibit Number Four and identify that?

A. Yes, sir. Exhibit Number Four is a production map of the North Osudo-Morrow Gas Field, Lea County, New Mexico.

We have shown on this plat the June, 1979 production for the Morrow completions in the area, the cumulative production for the same wells, July 1st, 1979.

For example, in Section 30, which is the Jake L. Hamon Union State Well No. 1, which is also outlined in yellow, the June, 1979 production is 41 Mcf; the cumulative production for that well is 5,938,125 Mcf.

Q. Let me refer you to the Texas Oil and Gas Well in 29. Where did you obtain the production information that's on that well?

A. That information was obtained from the New Mexico Oil Conservation Commission records.

Q. And what do those figures reflect?

A. We show on Exhibit Four the March, 1979 gas production was 98,636 -- let me correct that. 98,636 Mcf

gas, 1,261 barrels of condensate for the month.

The April, 1979 production is 191,160 Mcf gas with 1,796 barrels of condensate.

The May, 1979 production is 230,915 Mcf and 1,614 barrels of condensate per day.

The average daily producing rate for May of 1979 for the Texas Oil and Gas Osudo State Well No. 1, Section 29, is in excess of 7-million cubic feet of gas per day.

I also show in that same box that the cumulative gas production for the first three months productive history of the well is in excess of a half a billion cubic feet of gas. That's 555,795 Mcf and 4,671 barrels of condensate.

MR. NUTTER: Mr. Cooksey, excuse me. Did the well go on production in March?

A. It's my understanding it did. It was the first reported production.

Q. I want to ask you some questions about Exhibit Number Four but at the same time I'd like to have you identity Exhibit Number Five, and let's look at both of these exhibits at the same time.

A. Yes, sir.

Q. What is Exhibit Number Five?

A. Exhibit Number Five is a bottom hole pres-

sure map of the same area, that is, the North Osudo-Morrow Gas Field. The same wells are shown on it with the bottom hole pressures this time shown in the squares by each of the wells. These pressures and completion dates are tabulated and these are obtained from our well records or from the Commission's records.

I might point out that the discovery well for the field is in Section 20. That is Jake L. Hamon's State "E" 8913 Well No. 1, which is located in the northwest corner of Section 20.

Q. And what was the second well in the field?

A. The second well was the Jake L. Hamon Amerada Federal Well No. 1, which is in the lower part of Section 17.

Q. And the third well?

A. The third well was Jake L. Hamon's Union State Well No. 1 in Section 30.

Q. The fourth well?

A. Was the well that is shown in Section 19 as Moran Exploration. It was completed in February, 1970. At the hearing that was held last May that was identified as the HyTech Energy, Incorporated Well, and I think was the well that Mr. Casey testified to was originally drilled by Southwestern Natural Gas.

Q. What is the current status of the Hamon

Union State Well, Mr. Cooksey?

A. The Hake L. Hamon Union State Well NO. 1, Well No. 30, as shown on Exhibit Four, produced 41 Mcf gas for the month of June, 1979. It is at its economic limit and we have examined the well for possible re-work characteristics and cannot find any Morrow stringers in the well that warrant recompletion. It's essentially depleted.

Q. In your opinion, Mr. Cooksey, -- in your opinion, Mr. Cooksey, is the Texas Oil and Gas Well in Section 29 producing from Morrow stringers that have not been produced in this Hamon Union State Well?

A. It is my opinion that the Texas Oil and Gas Osudo State Well No. 1 in Section 29 produces from a Morrow sand stringer that has not been effectively depleted by any of the wells in the North Osudo-Morrow Gas Pool.

Q. Upon what do you base that opinion?

A. That opinion is based on several factors. One, the initial bottom hole pressure, as shown on Exhibit Number Five, was 4887 psi. This is a bottom hole pressure that reflects a pressure gradient of an excess of .4 pounds per square foot. Excuse me, pounds per foot of depth. This would be considered a normal bottom hole pressure for a normally pressured reservoir.

I would state that the Jake L. Hamon Union State Well No. 1 in its final stages of depletion has a bottom

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hole pressure of less than 200 psi, and you can note that the other pressures shown on the exhibit indicate that the other wells in the field also have low bottom hole pressures.

I have also based the opinion that the Texas Oil and Gas Well is producing from a separate source of supply on its production characteristics. There is no other well in the field that comes anywhere near approaching 7-million cubic feet of gas per day. It also has production characteristics that were initially exhibited by all of the wells in the field; that is, for example, the March condensate yield was 12.8 barrels per million, based on a figure shown on Exhibit Number Four.

The condensate yield for April, 1979 was 9.3 barrels per million.

May, 1979 was 6.9 barrels per million.

This is a condensate recovery that was exhibited initially by all initial completions, that being the Hamon Amerada Federal Well, the Hamon State "E" 8913, and the Hamon Union State.

Currently these wells produce no condensate and they haven't for years.

Q. You've indicated certain factors to explain why you believe the Texas Oil and Gas Well to be draining a Morrow stringer that was not previously depleted

by the Hamon Union State Well. Would you describe those factors in terms of whether or not the HyTech or the Moran Well in Section 19 may have produced gas that is now being produced from the Texas Oil and Gas Well?

A. Would you re-clarify your question, please, sir?

Q. Yes, sir.

You've indicated to me factors why you believe the Hamon Union State Well did not deplete that Morrow zone now being produced in the Texas Oil and Gas Well. Has the Texas Oil and Gas Well, those zones being produced in the Texas Oil and Gas Well, been depleted by the production from the Moran Well in Section 19?

A. I would say that it has not, and I base this opinion on the fact that it came in with what I term a virgin reservoir pressure of 4887.

Q. That pressure is somewhat lower than the pressures you indicate for wells north of the Texas Oil and Gas Well.

A. That's correct. You look at the wells that generally lie in a line from northeast to southwest, that would be the wells in Section 17, Section 20, and Section 19, these wells appear to have a normally high bottom hole pressure.

For example, the discovery well reported

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6653 psi bottom hole pressure upon initial completion. That was in May of 1965.

The well that's identified as the Moran Exploration Well in Section 19 was nearly five years later drilled and completed, and had a reservoir pressure of 6945.

Now you relate that bottom hole pressure to the Jake L. Hamon Union State Well, which was drilled in 1966, now this was four years prior to the Moran well, and it exhibited a bottom hole pressure of 4772, and it's a comparison of these pressures that I've concluded that the -- there has been no drainage taking place, significant drainage.

Q. Now with regards to the Hamon "E" 8913 Well in Section 20, do you have an opinion as to whether or not that well has drained the producing sand that is now producing in the Texas Oil and Gas Well?

A. It's my opinion that it has not.

Q. And what are your reasons for that opinion?

A. Well, again, these are based on the pressure information that's shown on Exhibit Number Five, the difference in the pressures, the initial virgin pressure displayed by the Texas Oil and Gas Well, and its producing characteristics, which also indicate that the well is producing from a virgin, new reservoir.

Q. Do you have an explanation, Mr. Cooksey, as to why the three wells we've discussed north of the Texas

Oil and Gas Well have initial pressures higher than that encountered by either the Hamon Union State Well or the Texas Oil and Gas Well?

A. It's my opinion that that phenomenon was created by a geologic situation and the other information of Morrow fields, it's not uncommon for some of the Morrow stringers to be overpressured, as I understand the possibility in Morrow sand production, you know, thereby causing an abnormally high pressure -- pressure flow well.

For example, the Moran Exploration Well has a pressure gradient of .609 psi per foot. That's above normal and would be considered an abnormally pressured reservoir, and it's my understanding it's created by geologic features.

Q. Let me ask you about the well that's located 660 out of the north and east corners of Section 30. What is the status of that well?

A. This was an old well that was originally drilled to a TD of about 4000 feet and produced, I believe, Mr. Casey testified from the Seven Rivers formation. It has been plugged and abandoned, and --

Q. In your opinion as a petroleum engineer is that well suitable for re-entry as a Morrow completion?

A. No, sir, I could not recommend re-entering that old well to drill it deeper, considerably deeper, to

the 11,000 foot area that the subject Morrow formation is found.

Q. What distance would you want to remove yourself from that existing wellbore in order to commence drilling of the Morrow test?

A. I believe the 100 feet removal from the existing wellbore that we recommended here is adequate. That's based on several factors. You just would like to have enough space to reasonably drill a safe well without any drilling problems.

For example, I believe I testified earlier and looked at the completion papers of the Texas Oil and Gas Well, for example, at somewhere around 4000 feet the inclination reports a cumulative displacement in excess of 60 feet, you know, so that's pretty well proof that you're playing with as close a distance to an old well as you feel it would be safe.

Q. Were Exhibits Four and Five compiled under your direction and supervision, Mr. Cooksey?

A. Yes, sir.

Q. And in your opinion will approval of Mr. Hamon's application for the unorthodox location be in the best interests of conservation, the prevention of waste, and the protection of correlative rights?

A. In my opinion that it will.

MR. KELLAHIN: We move the introduction of Exhibits Four and Five.

MR. RAMEY: Exhibits Four and Five will be admitted.

Any questions of the witness? Mr. Losee?

MR. LOSEE: Yes. Mr. Ramey.

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Cooksey, from looking at your production map, Exhibit Four, the only well I notice that you show any condensate production for is the TXO. Is it intended by this map to portray that there was no condensate production from any of the other wells?

A. No, sir, it does not. As I testified earlier, the wells produced condensate in their early life. None of Mr. Hamon's wells have produced condensate in recent years, and the condensate production for the Union State Well No. 1 in Section 30 has been 29,725 barrels of condensate through April, 1979; however, there has -- the last reported condensate production from that well was in April of 1976. At that month it produced five barrels of condensate.

Q. Mr. Cooksey, would you have the condensate production records for the Hamon Union State Well with you?

A. Yes, sir, I do; however, I believe they were presented as an exhibit at the last hearing.

Q. What I really am curious about is you have the condensate records for the first month in which the well produced?

A. Yes, sir, I surely do.

Q. What was the condensate production during that month? It was apparently September, 1966.

A. Yes, sir. My production information, Mr. Losee, begins in October of 1966.

Q. Okay.

A. And in October of 1966 the well produced 311,782 Mcf gas. The condensate for that month was 4353 barrels of condensate, for a yield of 14.0 barrels per million, and this was the numbers that I related to in my direct testimony that upon initial completion all of Mr. Hamon's wells reported production very similar to the Texas Oil and Gas Well. In other words, the yields were between 6 and 12 or 13 barrels per million condensate, which was evidence to me that the Texas Oil and Gas Well has encountered a Morrow sand stringer that has been efficiently and effectively depleted by any other wells in the field.

Q. Well, maybe I misunderstood Mr. Casey when he testified. I thought one of his reasons for concluding that the Hamon Union State Well did not have the --

the log wouldn't correlate to the Texas Oil and Gas Well was the condensate production in the Texas Oil and Gas Well, and are you explaining that in your opinion in the initial stages the condensate production rates for each of those wells were similar?

A. Yes, sir. I've concluded that they are similar. They are not today, by any means. The Texas Oil and Gas Well, you know, has condensate production similar to production from a new and virgin reservoir, and that's my contention, that the Texas Oil and Gas Well has encountered a sand stringer that has not been depleted or drained or affected by any of the existing wells in the field.

If they were in communication I would assume that some of the wells in the reservoir would still be producing condensate.

Q. Well then, if I understand you correctly, the fact that TXO Well is producing condensate now is very -- and the fact that the Hamon Union State Well is not producing any condensate and its latter state of depletion, doesn't distinguish in itself the two zones that the so-called TXO zone.

A. You say it does not distinguish separation of the two?

Q. Yes.

A. It's a parameter that I use to conclude

that they were producing from separate reservoirs, yes, sir.

Q. Well, didn't they both have condensate when they were initially completed?

A. That is correct.

Q. Well then how does that distinguish the two zones? I probably don't understand.

A. What I'm trying to explain to you, Mr. Losee, and I hope that the Commission understands, is that had the reservoir that produces from the Texas Oil and Gas Well been affected by any of the wells, not necessarily Mr. Hamon's Union State Well, but by any of the wells in the field, that you would not have obtained upon initial completion the high condensate yield that your well apparently displays.

Q. Well, I think I understand that, Mr. Cooksey, but I thought -- and probably I didn't understand Mr. Casey -- I thought he was explaining the reason that he didn't think it was the same zone was that the Texas Oil and Gas Well had condensate production.

A. Do you want me to comment on that?

Q. Yes. That's the purpose of my question.

A. Would you mind restating what you understood Mr. Casey to testify to?

Q. I thought Mr. Casey said one reason that he felt that the Hamon Union State Well didn't have open in

its wellbore the so-called TXO sand was lack of condensate production in the Hamon Well, not being similar to that which was present in the TXO Well.

A. Well, then --

Q. Yes? I want an explanation, I guess, really.

A. I don't know as I have an explanation but I assume you -- when I listen to the testimony and come back to your questions, I assume maybe you didn't relate exactly to Mr. Casey's testimony. I put that as a basis of separation, that the Union State Well today does not produce condensate. It hasn't produced condensate for years. And that TXO Well now, a new completion in the reservoir, does produce condensate. And that was the way I interpreted his answer, but that's just strictly James G. Cooksey.

Q. Well, that's the question I asked.

A. Yes, sir.

Q. And I respect that anszwer.

I believe you also said that this TXO Well encountered virgin pressure in this sand that it's producing from, and if I'm correct that that stringer had not been depleted by any other wells in the North Osudo-Morrow Field.

A. That is my opinion of -- of the pressure information that's available to me.

Q. And is that true of the Moran Exploration

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Well that you do not feel like it is depleted any gas from the so-called TXO Sand, from the pressure data you've examined?

A. I wouldn't think it has significantly affected it, no, sir.

Q. Well, isn't the Morrow -- aren't Morrow stringers in good communication with each other, the same producing stringer? Generally speaking?

A. Good? Are you referring to a quality of communication?

Q. Yes.

A. I think that varies with Morrow production. I think that's obvious, as is shown by the information -- I mean obvious based on information shown on Exhibit Five, and that is the difference in the pressures on the producing life of the field.

For example, there is a pressure difference in the three Hamon wells in September 1972.

Q. Well, the -- when was this Moran Exploration Well completed?

A. February of 1970.

Q. Which is some nine and a half years ago. Would you not -- if it is in fact open in the wellbore to the TXO Sand, wouldn't you expect to have some material depletion in that sand when TXO encountered it in drilling

their well earlier this year?

A. If the sand stringer was present and if it had adequate porosity and permeability to affect communication, yes, sir.

Q. Well, I'm sure you're familiar with the Exhibit Three to which Mr. Casey testified, being his Isopach of the -- I think it's the TXO. No, it's not the cross section. It's the Isopach.

A. Okay, I have it, yes, sir.

Q. He credits the so-called TXO Sand on this Isopach with ten feet. Are you agreeing with his interpretation based upon your pressure studies?

A. Well, the -- excuse me.

Q. That the Moran Well has ten feet of TXO Sand?

A. I really couldn't -- couldn't conclude how many feet of Morrow sand is in the Moran Well based on the pressure studies.

Q. And can you conclude -- or I thought you concluded that they weren't in communication, the Moran Well with the TXO Sand that's open in this wellbore.

A. I stated that it didn't appear to be effectively draining the TXO Sand in some other words. I'd have to have the reporter read that back to me to give you exactly what I stated, but --

Q. I think that's all, Mr. Cooksey.

A. Yes, sir.

MR. RAMEY: Mr. Kellahin?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, in relation to the Isopach and the pressure information, Exhibits Three and Five, if I understood your testimony correctly, the fact that a geologist demonstrates on his Isopach and his cross sections that certain sands are present at particular locations, can you also conclude then that those sands are going to be productive?

A. Just because they're present, no, sir. I also, to add to that, Mr. Kellahin, is the fact that I'm not aware of the individual selective perforations in the Moran Exploration Well. My information is it's perforated 11,281 toll,562 feet. That's a 281 foot interval and I'm not for sure what Mr. Casey has depicted as a TXO Sand is perforated in the Moran wellbore.

Q. Well, based upon your study of the production and pressure information, Mr. Cooksey, do you have an opinion concerning whether or not the TXO Well in Section 29 is draining any portion of Section 30?

A. Yes, sir. It is my opinion that if the

TXO Sand exists in Section 30, that it is draining hydrocarbons from beneath Section 30.

Q. Do you have any opinion as to the extent of the reservoir being drained by the Texas Oil and Gas Well?

A. Without any pressure information I haven't been able to calculate a drainage radius or pressure decline curve. I haven't been privileged to that information, and so I haven't got an idea other than what's been depicted by the geologist, Mr. Casey, his geological interpretation.

MR. KELLAHIN: I have nothing further. Thank you.

MR. RAMEY: Any other questions of the witness?

MR. LOSEE: No further questions.

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Cooksey, I would like to pursue this condensate production a little more.

On your Union State do you have a point where your condensate production fell off from what it was, or do you have an estimate of the dew point pressure?

A. Is it -- excuse me. Can I speak off the record? I want to ask my attorney a question.

(There followed a discussion

between Mr. Cooksey and Mr. Kellahin off the record.)

MR. KELLAHIN: Mr. Cooksey, I hand you what I've marked as Hamon Exhibit Number Six that consists of four pages, and ask you to identify that document.

A. Yes, sir, this is a production tabulation for Jake L. Hamon's production records for the Union State Well No. 1, Section 30, Lea County, New Mexico.

It begins with the monthly gas sales in October of 1966, through April, 1979. It has shown on it the cumulative gas production by month.

The third column in this tabulation is a monthly condensate production, beginning with October of '66 through April '79.

The fifth column is a cumulative condensate production by month, and then in the fifth column to the right we have calculated the yield in barrels per million and to --

MR. KELLAHIN: Does that exhibit include more than one well?

A. No, sir.

MR. KELLAHIN: It's all on the Union State?

A. Union State Well No. 1.

And to answer Mr. Ramey's question, the

initial condensate yield was -- yield in barrels per million, was the greatest in the initial monthly production of October, 1966, and at that month that was 14.0 barrels per million.

It gradually declined and the exhibit speaks for itself, but it gradually declined to where the next three years the condensate yield was in the range of 4.5 barrels per million. This is yield of condensate. Beginning in the early part of 1969 the yield decreased to 1.5 to 2 barrels per million, and the well essentially ceased to produce condensate in -- well, let me correct that.

It would be my interpretation of the exhibit that beginning in 1972 the average condensate production per month was less than 10 barrels per month and had a yield of less than 1 barrel per million.

And then it ceased to produce condensate in any quantities in May of 1976.

So to answer your question, Mr. Ramey, it produced condensate for some period of time and the yield, as I calculate it, slowly went to zero.

Q. (Mr. Ramey continuing.) There wasn't a rapid -- a rapid dropoff in your barrels per million?

A. No, sir.

Q. And did you have similar performance, say, on your Amerada Federal?

A. Yes, sir, I would interpret the production

characteristics of the Amerada Federal Well No. 1 in Section 17 to have similar characteristics; however, the significant difference is it had a much higher condensate yield initially. It started out in September of 1966 with a yield of 98.2 barrels per million, and that gradually went down to 73, to 58, to 49, and it got less than 10 barrels per million in one year, in September of 1967. The yield from that well continually declined, as it did in the Union State Well, and it ceased to produce condensate in any quantities in June of 1976.

I have the same information for the other well that's operated by Mr. Hamon, that is the State "E" 8913 in Section 20. Its characteristics were more similar to the Union State Well. In July of 1965 the yield from that well was 24.8 barrels per million. It declined to less than 10 barrels per million in August of 1966, displaying the same characteristics, and ceased to produce condensate in significant quantities in December, 1972.

Q. Well, I would surmise from your testimony, Mr. Cooksey, that you're contending the Texas Oil and Gas Well, had it been in communication with the Union State Well, that the overall pressure should have depleted, and the condensate production should have depleted, also.

A. I believe you would have seen something less than the 12.8, 9.3 barrel per million yield that it

displays on initial production, yes, sir.

MR. RAMEY: Thank you. Any other questions of the witness?

MR. KELLAHIN: Yes, I have one more.

MR. RAMEY: Mr. Kellahin.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, do you have an opinion as to whether or not Mr. Hamon's proposed location 660/560 in Section 30 ought to be penalized in any way by the Commission?

A. In my opinion no penalty is warranted. I think the penalty, if Mr. Hamon is to suffer one, has been -- has been displayed in the drainage that it has suffered since March of 1979 to the date that we get a well completed in the reservoir capable of protecting our correlative rights.

Q. The drainage from where?

A. From Section 30 to the Texas Oil and Gas Well in Section 29.

MR. KELLAHIN: I have nothing further.

MR. RAMEY: Did you offer your exhibit?

MR. KELLAHIN: Yes, sir, I did.

MR. RAMEY: Did I accept it?

MR. KELLAHIN: I'm sorry, Exhibit Number Six I haven't offered. I do so now.

MR. RAMEY: It will be admitted.

MR. LOSEE: Yes, I have a question.

MR. RAMEY: All right, Mr. Losee.

RECROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Cooksey, you don't think any penalty is warranted at 560 feet. Do you think a penalty would be warranted if you were one foot off the leaseline?

A. Well, being not totally familiar with the rules of procedure in the State of New Mexico, and what little I know about it, possibly a penalty could be considered at one foot off the leaseline; however, as indicated in the permit to drill, the difference between 560 and 660 is sort of insignificant, in my opinion.

Q. Well, not with regard to the Oil Commission rules, at what point between 560 and 1 feet do you think a penalty would be warranted?

A. On Mr. Hamon's part, never, but the -- taking into account the point of the application, and it happens to be 560 feet from the lease line versus your unorthodox location at 660, I've tinkered around with some numbers in an effort to try to have an answer for you, and

if you take the overlap of -- of circular radial drainage and come up with a guess that would be recoverable in place in that overlap, just on the outside number, giving it the most liberal interpretation that I can give it, you're talking about less than 200,000 Mcf, and golly, you did that in May of 1979.

Q. Did you do any calculations at one feet?

A. No, sir.

MR. LOSEE: I think that's all.

MR. RAMEY: Any other questions of the witness? He may be excused.

MR. KELLAHIN: I have nothing further. Thank you.

WILLIAM SIRUTA

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOSEE:

Q. Would you state your name, please?

A. William Siruta.

MR. RAMEY: Would you spell that, please?

A. S-I-R-U-T-A.

Q. Where do you live and what is your occu-

pation?

A. I live in Midland, Texas. I'm a District Geologist for Texas Oil and GAs.

Q. Have you previously testified before the Commission and had your qualifications as a geologist made a matter of record?

A. Yes, sir.

MR. LOSEE: Are Mr. Siruta's qualifications acceptable?

MR. RAMEY: Yes, they are acceptable.

Q. (Mr. Losee continuing.) Let me ask you initially, Mr. Siruta, whether or not Texas Oil and Gas has any objections to a 660 foot location?

A. No, sir, we do not.

Q. And for what reason?

A. We feel like that our location is 660 from the lease line and it would only be fair that Jake L. Hamon be allowed to drill that close, also.

Q. Isn't it true -- or strike that.

Were you not present and did you not testify in the hearing on, on, Case Number 6215, which is the transcript of which has been made a part of the record?

A. Yes, sir, I was present.

Q. And no recommendation at that time was made for any penalty to be applied to that well?

A. No, sir.

Q. There was no objection?

A There was no objection.

Q. They -- Mr. Hamon objected to that well, did he not?

A. Yes, he objected to the unorthodox location.

Q. But did not recommend a penalty to the Commission?

A. No, sir, he did not.

Q. Please refer to what has been marked as Exhibit One, and explain what is portrayed by this exhibit.

A. This is a production map on the wells in the North Osudo Field. The top number listed below the wells indicates the cumulative production in terms of gas and condensate production.

The denominator, or the line -- figures underneath the line, indicate the daily production as of May the 1st of '79.

Q. When were most of these wells in this field completed?

A. Between 1968 and '70.

Q. With the exception of the recently completed TXO Well, do you feel that the rest of the wells in the field are substantially depleted?

A. Yes, sir, I feel they are depleted.

Q. Do you -- I notice you've got some bottom hole pressure data on all these wells except the TXO. From one of your subsequent exhibits would you give the initial pressure on this TXO Well, if you have it?

A. The bottom hole pressure that was obtained on a DST over the producing interval, the final shut-in pressure was 4903.

Q. Now, do you know what the initial flowing pressure of this well was?

A. It was approximately 18 or 1900 pounds. I don't have the exact figure.

Q. Do you know approximately what it is at the present?

A. Yes, at the present time it is down to 1200 pounds. That is flowing tubing pressure.

Q. Do you have anything further to add with respect to this exhibit?

A. No, sir.

Q. Let's refer to what's been marked as Exhibit Two, labeled Isopach Map, and explain what is portrayed by this exhibit.

A. This is an Isopach map on the Middle Morrow Sand pay which Mr. Casey has referred to as the TXO Sand. It shows the Texas Oil and Gas Osudo State No. 1 having 16

feet of this sand present.

The Jake L. Hamon Union State in Section 30 having 3 feet of this sand; the Western Oil State "J" No. 1 in Section 29 having 10 feet; the Southwestern Natural, which I think has been referred to as the Moran Well, having zero feet of pay.

Q. Is the well on your map entitled Southwestern Natural State the same well as the Moran Exploration Well we've been talking about?

A. Yes, sir.

Q. Does this Isopach have any cross section marked on it?

A. Yes, sir, it has a cross section indicated by a dashed line. It goes from the Southwest Natural Well in 19 to the Jake L. Hamon Union State Well in Section 30 to the Texas Oil and Gas Well in Section 29 to the Western Oil State "J" Well in the south half of Section 29.

Q. You have reviewed Mr. Casey's Isopach, which is their exhibit -- Mr. Hamon's Exhibit Three, have you not?

A. Yes, sir.

Q. Generally speaking, would you explain wherein these Isopachs differ?

A. The major difference is the Southwestern Natural Well in Section 19, which I give zero feet of pay,

and Mr. Casey gave 10 feet of pay, and then the Wester Oil State "J" No. 1 Well in the south half of 29 I'm giving 10 feet of pay and Mr. Casey gave zero feet.

Q. Well, aren't you also giving 3 feet to the Hamon Union State?

A. Yes, sir.

Q. Did he give it any feet?

A. He gave it zero feet.

Q. Zero feet. So it's that area in which the Isopachs differ?

A. Yes, sir.

Q. Let's refer to what's been marked as Exhibit Three, being your cross section, and going from the Moran Well, do you show the TXO Sand present in it? Do you correlate it with the so-called TXO Sand?

A. No, sir, I do not show the TXO Sand being present in the Southwestern Natural Well.

Q. Let me ask before I go any further, your Isopach, on what basis, API basis, was it calculated?

A. Using a 50 API unit basis.

Q. Okay, and to that extent it differs from Mr. Casey's?

A. Yes, sir.

Q. I believe he testified a 60 API.

A. Yes, sir, that's correct.

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Q. Would yours be somewhat more conservative?

A. Yes, sir, it would be more conservative.

Q. From your cross section do you correlate the presence of the so-called TXO Sand to have been present in the Hamon Well?

A. Yes, sir, I show approximately 3 feet of the sand being present in the Jake L. Hamon Union State No. 1 Well, located in Section 30.

Q. Do you show whether or not that sand was open by perforation?

A. Yes, sir, it was open by perforations.

Q. Would you explain why you correlate it as TX -- with the so-called TXO Sand?

A. It is in the same stratigraphic equivalent zone and it appears to be correlatable to the thinner section of the TXO Sand, which I feel the thin and the fat sections in the Texas Oil and Gas Well are really the same strand line or stringer body. They are just separated by a thin shale party of two feet.

Q. About two feet in the TXO Well separates these?

A. Yes.

Q. And, like Mr. Casey, is that a matter of interpretation among geologists?

A. Yes, sir.

Q. I believe your cross section portrays that the so-called TXO Sand was also present in the Western Oil Producers Well.

A. Yes, sir, it does.

Q. Would you explain how it correlates with that Western Well with the TXO Well?

A. The Western Oil Producers Well has a 10 foot section of sand that is stratigraphic equivalent and also appears to correlate with the thicker section of the Texas Oil and Gas sand, being referred to as the TXO Sand.

Q. I notice beside the Western Oil Producers log you have a drill stem taken at 11,070 feet to 11,292 feet.

A. Yes, sir.

Q. Is that correct? You record 2.28 MMCF of gas per day from that sand.

A. Yes, sir.

Q. I believe Mr. Casey testified that according to records, that well on drill stem had about 300 Mcf.

A. It does on the scout tickets and the PI cards. It is reported as a little over 200 Mcf.

Q. Okay. How do you distinguish those two data?

A. We received -- well, I guess to lay sort

of a background of this, is that we had approached another company in terms of re-entering this well, and they gave us a copy of the DST chart over this interval, which I have marked on the log, and when you take the choke size versus the flowing pressure, it calculates 2.2 million. We have no reason why Western Oil plugged this well. We looked at the charts. Our engineers ran calculations. Halliburton engineers ran calculations. They all agreed that it looked like a good test to them and that the rate that we had calculated was valid.

Q. Okay. What other company has this well and acreage at this time?

A. Wilson Oil.

Q. Did you attempt to make a deal with them?

A. Yes, we attempted to farm this acreage in from them, to re-enter this well and make a Morrow completion, but Mr. Wilson believes that there is a deeper potential in this area and he would not give up the well for just a Morrow unless we agreed to go to a deeper horizon.

We felt like there was no pay in a deeper horizon, so we decided not to pursue it.

Q. Do you have an opinion as to whether or not Western Oil Producers plugged what may have been a commercially productive gas well?

A. In my opinion I believe they did plug a

well that could produce gas in commercial quantities.

Q. Mr. Siruta, do you have a recommendation to the Commission as to a productive limitation factor that should be applied to this Hamon Well at 560 to 660 feet?

A. Yes. I think this production limitation factor should be based on the productive acreage and the deliverability of the well.

Q. How many acres do you determine are productive in Section 30?

A. By using a planimeter to determine this, we determined that there was 101 acres that would be productive in Section 30, as determined from my Isopach.

Q. And to arrive at this production limitation factor, would you space the well on the -- as a half section well on the east half of Section 30?

A. Yes, sir.

Q. And arrive at a limitation of 101 over 320?

A. Yes, sir.

Q. What is that factor?

A. It would be .31.

Q. Now, are you aware that this North Osudo-Morrow Gas Field is not prorated?

A. Yes, sir.

Q. How would you propose to enforce this

production limitation factor?

A. By determining the deliverability of the well, using the standard testing procedures, and multiply this deliverability by the production limitation factor.

Q. Do you propose special rules for this Hamon well at 660 and 560 location?

A. Yes, sir.

Q. And are those rules portrayed on your Exhibit Four?

A. Yes, sir.

Q. Turning to what has been marked Exhibit Four, generally do those rules provide for semi-annual deliverability tests?

A. Yes, sir.

Q. And the application of the production limitation factor to those deliverabilities?

A. Yes, sir.

Q. For each six-month period?

A. Yes, sir, that's correct.

Q. And when the well has declined to 1-million cubic feet a day, does the production limitation factor continue to apply?

A. No, sir, it does not.

Q. Are these proposed similar -- pool rules similar to those which the Commission has entered in other

gas fields in Eddy County, New Mexico?

A. Yes, sir.

Q. And were those similar pool rules adopted in Case 6231 and 6233?

A. Yes, sir.

Q. Is there -- is the difference between these pool rules and those adopted -- or the proposed pool rules and those adopted in the other two cases the increase of the minimum allowable from a half million to one million?

A. Yes, sir, that's correct.

Q. Turn to your Exhibit Five and explain the purpose of this exhibit.

A. This was a profitability study that was done under my supervision by Texas Oil and Gas engineer.

We tried to illustrate here what it would take to pay out a well at the rate of a million cubic feet of gas per day.

It cost Texas Oil and Gas $780,000 to drill the Osudo State No. 1. Our gas price at present is $2.08 with -- we're not including any escalation in this profitability study.

Condensate price per barrel was $13.92. Of course, the 1/8 royalty, taxes, local, severance, and ad valorum tax on the oil was 7.6 percent, and the operating expenses per year are based on some of our other gas wells

that we operate of $13,200.

This shows that at a daily production rate of one million cubic feet of gas per day, payout time would be 1.66 years, with the DCFROR being 100 percent.

Q. And is this exhibit presented to show that even though a well was down to a million Mcf per day, that they would receive payout in 1.6 years?

A. Yes, sir, that's correct.

Q. And this profitability study is conservative in that there is no gas escalation price?

A. That's correct.

Q. And do present rules under the Natural Gas Policy Act of 1978 provide for an escalation of price?

A. Yes, sir.

MR. LOSEE: I have no further questions of the witness.

MR. RAMEY: Let me ask one question, Mr. Siruta.

CROSS EXAMINATION

BY MR. RAMEY:

Q. What type of NGPA determination have you asked for in this hearing?

A. NGPA?

Q. Natural Gas Policy Act.

A. I am not sure. That would be handled mostly by our production engineer, so I'm really not sure.

Q. Whether it's 102 or 103?

A. I've tried my best to stay out of that.

MR. RAMEY: Mr. Kellahin?

CROSS EXAMINATION

BY MR. KELLAHIN:

Q. What was your initial daily gas production rate on your well in 29, Mr. Siruta?

A. The well fluctuated at first but I think we ended up stabilizing on something like 8-1/2 million rate, I believe is what we started at, 8-1/2 to 9.

Q. If you got an initial daily gas production rate using your Exhibit Number Five of 8-1/2 to 9, how many months would it take you to pay out that well?

A. It would be pure guesswork on my part, but I would say probably less than half a year.

Q. Well, in fact, if the initial daily gas production rate was only 7000 Mcf a day, it would pay out in 3.4 months, wouldn't it?

A. I don't know. That could very well be correct.

Q. Did you do the calculations on Exhibit Number Five?

A. I observed an engineer doing the calculations and they were explained to me, but no, sir, I did not do the calculations myself.

Q. Now, this production limitation factor on Exhibit Number Four of .31, tell me again how you got that?

A. That was determined by taking the number of productive acreage -- the amount of productive acreage in Section 30, which was 101 acres, and dividing it by the -- what we determined was the total proration unit here of 320, and came up with .31.

Q. What did you look at to get your 101 acres? Did you look at your Isopach?

A. Yes, sir, it was planimetered off of the Isopach using the zero foot line as the limit of the reservoir.

Q. If we used Mr. Casey's Isopach, do you have an opinion of the number of productive acres that we would use in order to make the computation for your production limitation factor?

A. Just from looking at the map and making an estimate, I would say probably 160 acres.

Q. And I realize that the Texas Oil and Gas Well is not penalized in any way, but let's assume, looking at Mr. Casey's exhibit, that a production limitation factor was assessed against the Texas Oil and Gas Well, how many

productive acres would you have for that well?

A. Probably somewhere around 125 to 130 acres, just from estimation from the Isopach.

Q. So looking at Mr. Casey's Isopach, it appears as if he's got about 160 productive acres in Section 30 and about 125 productive acres in your Section 29.

A. Yes, sir, that's correct.

MR. RAMEY: What were those figures, Mr. Kellahin?

MR. KELLAHIN: Mr. Siruta's testified that based upon Mr. Casey's Isopach, that the productive acreage for making the productive limitation factor in Section 30 would be 160 acres.

If you made the computation for Section 29, it would be 125 acres.

Q. All right, Mr. Siruta, let's look at your Exhibit Number Two, which is your Isopach now.

You've already testified that there's 101 acres productive in Section 30 on your Isopcah. What's the productive acreage in 29?

A. In the north half of 29, which is the Texas Oil and Gas property, there would be 181 acres, that would be productive.

Q. Wouldn't a more equitable solution for -- if the Commission decides at all to impose a production

limitation factor, as you've outlined in Exhibit Number Four, wouldn't -- wouldn't the more adequate solution, or equitable solution, Mr. Siruta, be one that took into account the advantage or disadvantage of Section 29 over Section 30 with regards to both locations?

A. I'm not sure that I understand what advantage that you're speaking of.

Q. Wouldn't you -- couldn't we make a computation on Mr. Casey's Isopach and come up with a production limitation factor of 160 versus the 320, and that would give you a percentage, right?

A. Yes, sir.

Q. And you'll come up with a different percentage based upon Section 29 productive acreage.

A. Yes, sir.

Q. All right. One method of computing a penalty would simply take that as a difference.

A. Yes, sir.

Q. All right. Conversely, we could do the same if the Commission believed that your Isopach was more accurate, to set up the same kind of equati . whereby you took 181 productive acres versus 101 productive acres.

A. Yes, sir.

Q. If I understand correctly, your Exhibit Number Four simply takes into consideration the number of

productive acres you've attributed to Mr. Hamon's well in Section 30 and does not take into consideration either the number of productive acres in Section 29 or the location itself of your particular well.

A. No, sir, it does not.

Q. All right. In your testimony before the Examiner in this case back in May of 1979, you did not propose this production limitation factor, did you?

A. No, sir.

Q. You had introduced an exhibit showing a circular radius of drainage, did you not?

A. Yes, sir, exhibit showing that theoretical circular drainage.

Q. And based upon that theoretical circle of drainage, it showed that in terms - distance Mr. Hamon's well was some 7 percent closer to the common section line than the Texas Oil and Gas well, wasn't it?

A. Yes, sir, that's correct.

Q. And that using the circle basis for establishing a penalty, there was some difference in acreage of 4.8 acres, I believe, something like that?

A. Yes, I think that's correct.

Q. Now let me ask you some questions about your structure map -- I'm sorry, your cross section, Mr. Siruta.

A. Okay.

Q. If you don't mind, I'm going to put this on the wall over here and have you come over to the wall.

A. Okay.

Q. Now, in setting up your cross section next to Mr. Casey's cross section, it's obvious that the wells are placed upon the cross section in reverse order, are they not?

A. Yes, sir, that's essentially correct.

Q. All right. In preparing your Isopach, you've indicated that's the Middle Morrow Sand pay, Mr. Siruta. Would you take my red pen here and mark on the exhibit, your Exhibit Number Three on the board, the number of feet of pay in each of the wells that you've indicated on your Isopach?

A. It would be ten feet here, and in the Texas Oil and Gas Well it would be 16 feet. In the Jake L. Hamon Union State Well there would be 3 feet; this would be zero feet.

Q. What I was trying to understand, Mr. Siruta, is that your Isopach is not of the entire Middle Morrow section but simply that sand that we've been calling the TXO Sand.

A. Yes, sir, that's correct.

Q. You may resume your seat. Thank you.

If you'll return now to your Exhibit Number One, you indicated an initial bottom hole pressure on a drill stem test of 4903 psi?

A. Yes, sir, on the Texas Oil and Gas Well.

Q. And what is the current flowing tubing pressure?

A. It's approximately 1200 pounds.

Q. What's your daily rate of production again?

A. At the present rate of 1200 pounds, it's around 6-million cubic feet.

Q. In your opinion is that the most effective and efficient rate of producing this well so as not to damage the reservoir?

A. I'm not an engineer, but the well does not appear to be having any damage. We don't see any water encroachment, any surging, or anything like that.

Q. Your daily production rate has stabilized and you don't see any decline at this point?

A. No, sir, it has not stabilized and is still declining.

Q. How long has this well been on production?

A. Since March, I think it was the latter part of March. I'm not sure.

Q. So we have about five months of production.

A. No, it would be more than that, wouldn't it?

Q. Six?

A. Yeah, five and half, six, something like that.

Q. And in only five and a half months of production you're already experiencing a decline in the volumes of production?

A. Yes, sir, that's correct.

Q. You've indicated that Western Oil Producers in their well in the south half of Section 29 had productive sands present and in your opinion plugged a commercially -- a potentially commercial well.

A. Yes, that's correct.

Q. If that was the case, Mr. Siruta, why did you propose a location 660/660 out of the corner of 29 and not simply come down to a location closer to the Western Oil well?

A. When this well was being considered to be drilled, the pay zone that we were going after was not what is being called the Texas Oil and Gas Sand right now, the TXO Sand. Our major pay that we were hoping to encounter was the pay in the Jake L. Hamon Union State Well, which is below the Morrow massive shale, which produced most of their gas volume, and we did encounter this pay at our location and

it was depleted.

Q. In looking at your Isopach on Exhibit Number Two, it would appear that your well could have been drilled at a standard location, could it not, and still obtain the same number of feet of TXO Sand?

A. Yes, now that the Texas Oil and Gas Well has been drilled you can see that, but before you could not.

Q. What is the number of feet of TXO Sand that you would want present in a commercial well?

A. Before I would recommend drilling a well in a sand of this sort, I would have to have in excess of five feet.

Q. Using your Isopach, there is not a standard location in Section 30 that exceeds five feet, does it?

A. No, sir, there is not.

Q. The Texas Oil and Gas Well when it obtained its order from the Commission approving its unorthodox location and its non-standard proration unit, did not impose any kind of deliverability factor as you propose for this well.

A. No, sir, it did not.

Q. And didn't make any determination of the number of productive acres in the north half of Section 29?

A. No, sir, we did not.

Q. There is no question in your mind, is there

Mr. Siruta, that there is productive acreage in Section 30 that has not been depleted by the Jake L. Hamon Union State Well? This TXO Sand we've been talking about?

A. Yes, sir, there probably is some acreage that has not been drained by the Union State Well.

MR. KELLAHIN: I have nothing further. Thank you.

MR. RAMEY: Do you have any questions of the witness?

MR. LOSEE: I have one question of the witness.

REDIRECT EXAMINATION

BY MR. LOSEE:

Q. Mr. Siruta, by proposing this productive limitation factor based upon productive acres in the east half of Section 30, TXO does not take the position that either Mr. Hamon or the Commission on its own motion cannot at a later date apply this productive limitation factor, or whatever is a reasonable one, based on productive acres in the north half of Section 29, does it?

A. No, we do not think that this cannot be applied; that is, we do believe it can be.

MR. LOSEE: I don't think I moved to introduce my exhibits. Were they prepared by you or under your

direction and supervision, Exhibits One through Five?

A. Yes, sir, they were.

MR. LOSEE: We move their introduction.

MR. RAMEY: They will be admitted.

MR. KELLAHIN: In light of Mr. Losee's last question, may I ask one more?

MR. RAMEY: Certainly.

RECROSS EXAMINATION

BY MR. KELLAHIN:

Q. Don't you think it would be fair, Mr. Siruta, that before any kind of production limitation factor be assessed against Mr. Hamon, that a similar factor also be assessed against Texas Oil and Gas Corporation for their well?

A. Yes, sir, at the same time that this factor is applied to the Hamon Well it should be applied to the Texas Oil and Gas Well.

Q. Don't you think, also, that that factor also include a penalty from the initial inception of production in the Texas Oil and Gas Well in order to place the two wells on an equal status?

A. No, sir, I do not.

MR. KELLAHIN: Nothing further.

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RECROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Siruta, you haven't talked about drainage of this particular sand. Are you contending that this sand is not present in the present Hamon Well, the one in Section 30?

A. Yes, it is present in the Hamon well.

Q. A two-foot stringer -- three-foot stringer?

A. Yes, a three-foot stringer, yes, sir.

Q. And you are contending that they are in pressure communication.

A. I'm not for certain if they're in total communication or not. Our well has exhibited a lower bottom hole pressure than any other wells in the area.

The Union State Hamon Well down here, you will notice on my cross section, has a DST across the pay interval that had a final shut-in pressure of in excess of 6100 pounds, and whereas our well had a final shut-in of 4903 pounds.

I'm not sure if this is really illustrating, you know, communication or not.

Q. You did find other zones in your well that were -- that are evidently good pressure communication with the Hamon well?

A. Yes, sir. We did find that the sand -- if I could go to the cross section.

The sand that is what we call directly below the Morrow massive shale was encountered with good porosity, good permeability, and it was perforated and tested and found to have a shut-in tubing pressure of less than 400 pounds, so it was definitely completed by the Union.

MR. RAMEY: Okay, thank you.

Any other questions of the witness?

He may be excused.

Anything further, Mr. Losee?

MR. LOSEE: I have a statement, short statement I'd like to make.

MR. RAMEY: Will you do it, please?

MR. LOSEE: Back a year ago the Commission gave TXO an unorthodox location on a 320 spacing rather than 640, 660 out of the north line. A reading of the transcript and the order of the Commission will reflect -- which has been made a part of this record -- that it was granted because from all of the evidence it was a materially depleted field.

Mr. Hamon appeared at that hearing and simply objected to the 320 and 660 location; made no recommendation to the Commission as to a penalty factor; offered no evidence as to on either productive acres or radial drain-

age.

Now, in the drilling of this well, TXO has obtained a commercial well and obviously, by reason of its 660 location could not object in good conscience to a similar 660 location by Mr. Hamon.

Mr. Hamon's Isopach would better support a location a 100 feet north of this dry hole, or plugged well, than would 100 feet east. Mr. Casey was honest enough to recite that they probably didn't believe the Isopach that much and at least they had a proven well that was -- rather than being 1320 feet, they could get 1220 feet from it.

Now, as they did in the prior hearing, they claim minimal drainage. Mr. Kellahin's question points out that you can draw a circular pattern when you move it 660 to 560, you only increase the circle by about 7 percent.

You can follow that logic down to one foot from the lease line and you get only a 35 percent additional drainage, and I am sure they would prefer to drill at one foot from the lease line. I would, if I were in Mr. Hamon's shoes.

But somewhere there has to be a point at which the advantage obtained by getting closer to the line would require the industry to have some reasonable footages. If you go entirely by radial drainage, as I point out, everybody would want to get within one foot to the well and get

penalized 35 percent.

It seems logical in this case that productive acreage is a reasonable basis. I'd be the first to admit that there to be some leeway in drilling for these Morrow stringers, because they're not any blanket sand.

But we think this is a case which having chosen to move 100 foot inside of another unorthodox, that a penalty should be applied.

We don't take the position that the -- Mr. Hamon, if he elects to, can go back and re-open Order 6215 and provide a production limitation factor to the TXO Well.

If you take Mr. Hamon's Isopach, as far as the east half of Section 30, you'll get a productive limitation factor of .50, 50 percent. If you use Mr. Siruta's map, you come up with a limitation factor of .31.

We think, because the operator has elected to move the well inside of a 660 location, that this factor along with these proposed special pool rules, are reasonable.

MR. KELLAHIN: Back in May of 1978 Texas Oil and Gas set in motion a set of circumstances that now has come back to haunt them.

The pool rules at that time, and they still provide for spacing no closer than 1650 from the outer section line.

Texas Oil and Gas chose to drill at a loca-

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tion 660 out of the northwest corner of Section 29.

That case was disputed before an Examiner back in May of '78. Testimony was presented. The location was objected. The Commission approved that location without a penalty either with regards to its location, without regards to the number of productive acres in that -- in that given area.

The testimony you've heard today is no different than what Mr. Stamets heard in May of this year. The same argument Mr. Losee has just made is one he made towards Mr. Stamets. On page 53 of the Examiner transcript he cites the same orders that he cites as basis for his Exhibit Number Four.

I think the evidence here today fully supports that there's substantial evidence to show that a production limitation factor should not be assessed.

As Mr. Stamets has found in his order, that the difference of 100 feet is inconsequential. In other words, there's no practical way of assessing a penalty in this situation, and as a practical matter, I think the equities balance themselves out pretty well.

Texas Oil and Gas has produced their well for some seven and a half months at very high rates. You can see the volume of production they've obtained. I think because it's going to take Mr. Hamon some several months

more to complete his well, that that is penalty enough. That certainly offsets the 100 foot advantage that he may have obtained by moving closer to the section line.

To come back now at this late date and propose a penalty, whether it's a production limitation factor or one simply based upon the theoretical circles, I think is inappropriate. The equities have been balanced out by the course of events here of the operator completing his well earlier this year and obtaining substantial production from it.

I don't believe that any penalty at all should be established.

The record here before you today is substantially the same as the record before Mr. Stamets and there is nothing here that should cause you to change that order.

MR. RAMEY: Thank you, Mr. Kellahin.

Anything further in this case?

The Commission will take the case under advisement, and the hearing is adjourned.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Commission was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.

Sally W. Boyd, C.S.R.

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NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date AUGUST 28, 1979 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
Tom Kellahin	Kellahin & Kellahin	Santa Fe
Bill Sineta	Texas Oil & Gas	Midland, TX
Michael Slater	"	"
J. Foree	Foree Parsons Dickerson	Roswell NM
Kellahey	Jake L. Hamon	Mid. Tex
James Cooksey	" "	Dallas, Tex
R. Nelson	Capitol Reporters	Santa Fe

NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date AUGUST 28, 1979 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
23 May 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

CASE 6555

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

For Texas Oil and Gas Corporation: A. J. Losee, Esq.
LOSEE, CARSON, & DICKERSON
Artesia, New Mexico

I N D E X

E X H I B I T S

MR. STAMETS: We'll call next Case 6555.

MR. PADILLA: Application of Jake L. Hamon for an unorthodox gas well location in Lea County, New Mexico.

MR. KELLAHIN: I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant, and I have two witnesses to be sworn.

MR. STAMETS: I'd like to have them both stand and be sworn at this time.

MR. LOSEE: A. J. Losee, appearing on behalf of Texas Oil and Gas Corporation, and I have one witness.

(All witnesses sworn.)

MR. STAMETS: All right, I think we will recess the hearing and resume at 1:00 o'clock.

(Thereupon the noon recess was taken.)

MR. STAMETS: The hearing will come to order. I believe both attorneys have identified themselves and the witnesses have been sworn at this time.

MR. KELLAHIN: That's correct.

MR. STAMETS: Mr. Kellahin, you may proceed.

JOHN CASEY

being called as a witness and being duly sworn upon his oath testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Would you please state your name, by whom you're employed and in what capacity?

A. My name is John Casey. I'm employed by Jake L. Hamon as the district geologist for his Midland District.

Q. Mr. Casey, when did you obtain your degree in geology?

A. I first graduated from college in 1950 and have a Master's degree acquired in 1953.

Q. And how long have you been employed by the applicant as a geologist?

A. A little over eight years, going on nine years.

Q. During the course of that employment have you made a study of and are you familiar with the geological facts of this particular case?

A. Yes, I am.

MR. KELLAHIN: We tender Mr. Casey as an expert geologist.

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Kellahin continuing.) Mr. Casey, would you refer to what has been marked as Applicant Exhibit Number One, identify that for us?

A. This is a contour map that we've contoured on what we call the top of the Morrow. It's a map with scale 1-inch to 2000-feet.

Q. What is depicted by the yellow outline of certain of the sections?

A. The yellow outline encompasses those sections that are in the Osudo North Morrow Field.

Q. What is the current spacing for the North Osudo Morrow Pool?

A. 640.

Q. Within a 640 section what would be a standard location for a Morrow test?

A. It's 1650 from an outside section boundary.

Q. Would you indicate for us how the Morrow wells on the plat are identified?

A. We have identified these wells that are producing from the Morrow with a datum on top of the Morrow,

and we've underlined those datums in red.

Q. Of the Morrow wells within the outer boundaries of the North Osudo Morrow Pool, which of the wells are at unorthodox locations?

A. All of them are unorthodox locations with the exception of the Flag-Redfern Osudo State well that has been drilled in Section 18.

Q. I direct your attention to a well located in the north half of Section 29 and ask you to identify that well.

A. That is the Texas Oil and Gas No. 1 Osudo State.

Q. And is that well drilled subject to the rules of the North Osudo Morrow Pool?

A. No, it is not. That is a 660 location from the north and west of that section.

Q. All right. Where is the subject well that this application is based?

A. We propose to drill a well 660 from the north, 560 from the east, of Section 30, which would be a west offset to the Texas Oil and Gas Well.

Q. What, if any, other Morrow wells are on Section 30?

A. Mr. Hamon has a well currently producing, the No. 1 Union State.

Q. What's the footage location of that well?

A. Mr. Kellahin, I'm not sure of the location of that well. I believe that it's -- I'd have to scale that off. I think it's 1980 and 660 from the east. It appears to be very close to that.

Q. All right, sir, and what is the current status of that well?

A. The current status of that well is -- well, it's very low and very near the economic limit.

Q. What will be your intentions with regard to that well if the Division approves the requested unorthodox location?

A. If we are successful in the drilling and completion of our well, then we would propose to plug and abandon the Union State.

Q. What acreage is currently dedicated to the Hamon Union State No. 1?

A. All of Section 30.

Q. And what acreage would you propose to dedicate to the unorthodox location?

A. It would also be all of Section 30.

Q. Would you describe for me the significance of the structure lines in the general area here?

A. What we show here is that the Morrow has a generally westerly-northwesterly dip and that in some in-

stances where there is an interruption in the apparent regional dip, we have speculated that maybe a small anomaly may exist in some particular cases.

Q. Have you chosen this particular location based upon this structure map alone?

A. No, we have not.

Q. Let me ask you what the significance is of the green line on the plat that is connecting certain of the Morrow wells.

A. The green line shows a cross section, stratigraphic cross section, A-A', which we start off from the southwest in Section 36 with the Texaco No. 1 State "CV" and go through a number of wells into the North Osudo, through our proposed location, through the Texas Oil and Gas completion, and to the north through the Hytech Well and into the Hamon State "E" 8913, located in 20; generally a north-south cross section.

Q. You've identified the Texas Oil and Gas Well in the north half of Section 29 as being at a location 660 out of the north and west lines. Was that case -- a well the subject of a hearing before the Commission?

A. Yes, yes, it was.

Q. And I assume that well was drilled in accordance with an approved unorthodox location order.

A. Yes, it was.

Q. And was that well penalized in any way as a result of the Commission hearing?

A. Not to my knowledge.

Q. Are any of the unorthodox location wells within the rules for the North Osudo Morrow Pool penalized in any way?

A. Not to my knowledge.

Q. Now, you've indicated a location 660 from the north line and 560 from the east line in Section 30. What, if anything, precludes you from drilling at a location 660 by 660, as Texas Oil and Gas did on their section?

A. At a location 660 from the north and east lines, Morris Antweil drilled a Seven Rivers test well in the Eumont Field.

Q. How deep was that test?

A. The well was drilled to a depth, I believe it was slightly over 4000 feet, and it was completed from the Seven Rivers formation.

Q. What's the current status of that well?

A. According to our information, that well was plugged in '68.

Q. In your opinion can that well now be used as a location from which to test the Morrow?

A. I wouldn't advise it and I don't think that the depth there is such that it would warrant going

back in the hole; the danger, you know, of corroded pipe or pipe that was shot, and tried to recover, would keep us from wanting to re-enter that test, or that old hole.

Q. Why have you chosen a distance 100 feet from that particular hole?

A. Well, we feel like that we need that much footage in order to drill a test without danger of getting back in the old hole or -- or, you know, mechanical problems that might evolve from getting closer to that old hole.

Q. Would you please refer to Exhibit Number Two and identify that?

MR. STAMETS: Could I have one thing cleared up before we go on? I missed the significance of the yellow line on this Exhibit Number One.

MR. KELLAHIN: That represents the outer boundaries of the North Osudo Morrow Pool.

MR. STAMETS: Okay, and what about the Texas Oil and Gas No. 1 Osudo State, is that a -- is that a Morrow completion?

MR. KELLAHIN: Yes, it is.

MR. STAMETS: Is it the same pool or just undesignated?

MR. KELLAHIN: It is in that pool, but I'm --

A. I'm not -- if I may inject, the well, to our knowledge, hasn't been produced so I don't know if it's

in that pool or not.

MR. STAMETS: Okay.

A. But a non-standard proration unit was also given that well of 320.

MR. STAMETS. Okay. So it may be or may not be, depending on how it's completed.

A. Yes, sir.

MR. STAMETS: Okay, you may proceed.

Q. (Mr. Kellahin continuing.) All right, sir, would you identify Exhibit Number Two?

A. Exhibit Number Two is the stratigraphic cross section to which I referred when we talked about Exhibit One. It's the cross section A-A', as shown on our Exhibit One.

The cross section depicts, and is our interpretation of the Morrow Sands that are present in those wells and most of which have -- have been perforated. And the main thing we wish to demonstrate with this cross section is that the sand from which the Texas Oil and Gas Well has been completed is also present, at least in some manner, in the Hytech Well, but is not present in any of the other wells, and we are demonstrating with this cross section that the Texas Oil and Gas sand, if you will, it's the designation we've given to the producing body in the Texas Oil and Gas Well, is not -- well, it is discontinuous and

does not occur or was not encountered in the Jake L. Hamon Union State Well, which is the well in Section 30 is which we want to drill a new test.

I've -- this cross section is hung on the Morrow. It does not have anything to do with the structure, but merely shows the deposition and the sand bodies in this interval that we show. The discontinuity and that nature of the sands we are demonstrating with this cross section.

Q. Would you describe again for me the correlation between the Hytech Well and the Texas Oil and Gas Well in Section 29?

A. We believe that the Texas Oil and Gas Well is completed in the TXO Sand, which appears to be also open to perforations in the Hytech Energy Osudo State.

Q. Now, has that Hytech Energy Well ever been known by any other name?

A. Yes, it has. That well was originally drilled as -- yes, Southwestern Gas, I believe.

Q. Okay.

A. It is actually now, Hytech has been bought by another company, so we have another change coming up.

Q. All right, but on your exhibits you've depicted the Hytech Well and that is the well -- the Morrow well in Section 19.

A. That is correct.

Q. All right, sir. Would you please refer to Exhibit Number Three and identify it?

A. Exhibit Number Three is an Isopach of that same body which we have elected to designate as the TXO Sand, and that is the -- this is the Isopach of that sand body and the thickness that we have determined as open perforations in the Texas Oil and Gas Well, and is also open to perforations in the Hytech Energy Well.

Q. What is the number of feet of Morrow Sand that you attribute to the TXO Sand in this Texas Oil and Gas Well?

A. We have assigned 12 feet of this TXO Sand to their well and show that on the map.

Q. When you refer to Morrow Sand, what do you mean by 12 feet of Morrow Sand?

A. In this particular case it is the sand body that is open to perforations in the Texas Oil and Gas Well.

As you can see, also, we have assigned 10 feet to the Hytech Well and have Isopached this thickness. We do show that none of this sand was present in Mr. Hamon's No. 1 Union State Well, nor is there any present in the Hamon State "E" 8913.

Q. What do you use for a cutoff in order to determine that there is 12 feet of sand present in the Texas

Oil and Gas Well?

A. Well, in our shop we use a 60 API cutoff.

Q. And is that what was used for this particular Isopach?

A. Yes, I did use that, uh-huh, right.

Q. All right, sir. Now when we go down to the well in the south half of Section 29, there is what appears to be a Morrow well indicated the Western Oil J State Well?

A. Right.

Q. You have not attributed any Morrow Sand from that zone that's open in the Texas Oil and Gas Well to this particular well, have you?

A. No, we did not.

Q. Why have you not done so?

A. Our cross section reveals that -- and from our geological interpretation -- that that sand body is only present in the two wells.

Q. Proceeding counterclockwise now, let's look at J. L. Hamon Union State Well in Section 30. The plat indicates that you've attributed zero Morrow Sand to that well for this same Morrow interval.

A. That is correct.

Q. As you proceed on to Section 19 there's the Hytech Energy Well. How many feet of Morrow Sand that

is open in the Texas Oil and Gas Well have you attributed to the Hytech Well?

A. 10 feet.

Q. Now if you'll look at Section 30, at the proposed unorthodox location in Section 30, what in your opinion will be the depth of the Morrow Sand encountered in Section 30 that would correspond to that portion of the Morrow being produced in the Texas Oil and Gas Well?

A. Well, we -- I feel like that our Isopach map is rather optimistic, but at least we hope at that location that we will have somewhere around 10, hopefully, we could have 12 feet of pay, as has been found in the Texas Oil and Gas Well.

Q. What do you anticipate to be the cost of this well, Mr. Casey?

A. We're estimating that probably about $800,000 for a dry hole and something probably around 1.2-Million for a completed well.

Q. Would you look at Section 30 and go to a standard location 1650 from the north line and 1650 from the east line of Section 30, and tell me, in your opinion, what would be the number of feet of Morrow Sand encountered at that location?

A. Well, we would probably have -- we could have less than 8. Actually, being optimistic with this map,

we could have much less than 9, but we couldn't justify the depth of the well to that particular zone with, oh, I'd say less than 10 feet.

Q. Based upon your study, Mr. Casey, do you have an opinion concerning whether the Hamon Union State Well in Section 30, whether the Morrow zones in that well were or are in communication with the TXO Sand, as you've identified it, in the Texas Oil and Gas Well in Section 29?

A. No, sir, I do not believe they're in contact.

Q. Okay, upon what do you base that opinion?

A. Again on my study and the cross section showing the correlation of these sand bodies, I do not believe they are connected.

Q. Now, do you have an opinion concerning whether the Hamon Union State Well in Section 30 depleted all the Morrow zones within Section 30?

A. No, certainly only those which were open to the borehole in that well.

Q. In your opinion will you encounter the Morrow stringers at the unorthodox location that have already been depleted by the Hamon Union State Well?

A. It's quite possible that some of them would be encountered.

Q. Would you anticipate whether you would

encounter any stringers that had not been produced by the Hamon Union State Well?

A. Yes, I definitely think that the location as we propose should encounter the sand body that is presently producing in the Texas Oil and Gas Well.

Q. In your opinion, Mr. Casey, do you have an opinion concerning whether the Texas Oil and Gas Well in Section 29 will drain Morrow gas from Section 30 unless your location is approved?

A. I definitely believe it will, yes, sir.

Q. In your opinion will J. L. Hamon's correlative rights in Section 30 be adversely affected if this application is not granted?

A. Yes.

Q. Were Exhibits One, Two, and Three prepared by you or compiled under your direction and supervision?

A. They were.

MR. KELLAHIN: If the Examiner please, we move the introduction of Exhibits One, Two, and Three.

MR. STAMETS: These exhibits will be admitted.

MR. KELLAHIN: That concludes my examination of Mr. Casey.

MR. STAMETS: Are there questions of the witness?

MR. LOSEE: Yes, sir, Mr. Examiner.

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Casey, are you aware that there is a working interest unit in which Mr. Hamon is the operator, including, among other lands, this Union State No. 1 and the Hamon State "E" 8913?

A. Yes, sir.

Q. Does that also include the Hytech Energy Well? Is that in the working interest unit?

A. No, sir, I -- I think -- I'm not sure about that. Our map indicates that we do have an 80-acre tract in the south, it would be the south half of the southeast of 19.

Q. Was part of that working interest unit at one time including the north half of Section 29?

A. Yes, sir, it did.

Q. Do you know how many years that lease on the north half of Section 29 was committed to that unit?

A. I recall that that lease expired, I believe, in 1977, so going back ten years I would say that perhaps that far back, '67.

Q. And it would have been possible during that 10-year period for the working interest unit to have

drilled a Morrow well in the north half of Section 29, had they seen fit to.

A. Yes, sir.

Q. I believe you stated that as a safety factor you should be at least 100 feet from this shallow well that is plugged and abandoned that Mr. Antweil drilled. Would you explain why you have selected 100 feet to the east rather than 100 feet to the south or 100 feet to the west?

A. Yes, sir, we feel that it would be more advantageous for us because we would be closer to the Texas Oil and Gas Well.

Q. Looking at your Exhibit One, which is your contour.

A. Yes, sir.

Q. It looks to me like, and you correct me if I'm wrong, that if you move to the west 100 feet, which would really be 200 feet from your present location, you would be in the center of this anomaly or high, isn't that correct?

A. Yes, sir.

Q. And looking at your Isopach, which is marked as Exhibit Three, if you moved that location 200 feet, it looks like you would be somewhere still between the 10 and 12-foot contour line, is that not correct?

A. It would be close, yes, sir.

Q. So from -- I take it from your responses and from Exhibits One and Two, a location 200 feet to the west, which would still be 760 from the line, would be geologically about as good as your present location.

A. We feel like if we did move that far, we would be allowing ourselves the chance that at that point we would not have as much sand. That is to say that we feel like this map is an optimistic map and perhaps that these contours would be much tighter than we actually show them and at a location, as you mentioned, farther to the west, we might have less than 10 feet, perhaps as little as 8.

Q. Well, my question really was directed from a review of these maps, and really your response to my question about each of them. If you moved the location on the maps 200 feet to the west, it would look just as good from a geological standpoint as your 560.

A. Well, sir, I don't believe it would look as good. We -- we might have 10 feet, but at our proposed location we hope that we will have 12.

Q. Well, that -- okay, strike that.

Do you have any other locations staked out in the field? Other than this 560 from the east and 660 from the north lines?

A. I'm not aware if we do.

Q. You don't know that at the present there is a location staked 760 feet from the east line and 660 from the north line?

A. I've heard talk of that but I do not know that for sure. That is not in my department.

Q. And do you know whether or not there is a location staked 760 from the north line and 660 from the east out there on the ground now?

A. No, sir, I do not. Of course, I haven't been out there.

Q. Have you heard talk about that?

A. There have been talk about alternate locations but we feel like that from a geological standpoint we shouldn't go for them at all.

Q. Well, now, my question, I guess, really is, have you staked those other locations out in the field?

A. I have not, no, sir.

Q. Has anybody for Jake L. Hamon?

A. Not that I know of. But that, again, that's not my department.

Q. You won't say that they're not staked, though.

A. I couldn't say that.

Q. One other -- not one other. Referring to your cross section, which is Exhibit Two, would you ex-

plain, and it will have to be in layman terms for my benefit, why the interval that's open in the Jake L. Hamon Union State at 11,306 to 312 with the perforations, doesn't correlate with the interval that's open in the Texas Oil and Gas Osudo, 11,324 to 340?

A. I don't believe they're the same correlation because the sand bodies appear to have a different radioactivity. Certainly the Texas Oil and Gas sand is thicker. And I don't believe they are the same.

That's my interpretation.

Q. Well, you don't think all these Morrow Sands are the same thickness in this area, do you, Mr. Casey?

A. No, sir.

Q. So the fact that it's thicker isn't going to mean that it doesn't correlate.

A. It will weigh my decision, yes, sir.

Q. Is there any other reason that you don't think it correlates?

A. I think there's enough difference in pressure data that I've heard about but I don't know that I'm qualified to discuss that.

Q. Do you know the pressure data on the present pressure on the Jake L. Hamon, or the most recent bottom hole pressures run on the Union State?

A. Yes, sir, we have some data and I believe that --

Q. You're going to have your engineer testify to that?

A. Yes, sir, that will be discussed or it's planned to discuss that, yes, sir.

MR. LOSEE: I think that's all.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Casey, have you had an opportunity to analyze what the depositional environment in this area might have been for this particular sand?

A. Mr. Stamets, I think that this sand probably the depositional environment of this sand is similar to the deposition of all these sands because of the close proximity and the geological provence we're dealing with. But I do know from experience that the -- oftentimes we can drill a well and encounter some sands and then an offset, or even 300 feet away, find another sand that appears to be correlative but may extend in a completely different direction. And I think that that is probably what has happened here.

I do not believe that the sand that's producing in the Texas Oil and Gas Well is present in Mr.

Hamon's wells.

Q. But you didn't say whether we're looking at a channel sand or delta or offshore bar.

A. I think the way these things have been deposited, and as I show on my Exhibit One, the proximity to the limit of the Morrow deposition, they're probably all similar sands, but discontinuous.

MR. STAMETS: Any other questions of the witness?

MR. LOSEE: One other question.

RECROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Casey, do you know any instances where the Commission has approved a location for a Morrow gas well in either section or one-half section spacing located 560 feet from a line?

A. No, sir, I do not.

MR. LOSEE: That's all.

MR. KELLAHIN: I have no redirect.

MR. STAMETS: The witness may be excused.

MR. KELLAHIN: We'll call Mr. James A. Cooksey.

JAMES A. COOKSEY

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Cooksey, would you please state your name, occupation, and by whom you're employed?

A. My name is James A. Cooksey, Petroleum Engineer, employed by Jake L. Hamon.

Q. Mr. Cooksey, have you made a study of and are you familiar with the facts surrounding this particular application?

A. Yes, sir.

Q. And have you previously testified before the Oil Conservation Division of New Mexico as a petroleum engineer?

A. Yes, sir, I have.

MR. KELLAHIN: We tender Mr. Cooksey as an expert petroleum engineer.

MR. STAMETS: The witness is considered qualified.

Q. (Mr. Kellahin continuing.) Would you please refer to what we've marked as applicant Exhibit Number Four and identify that for me, please?

A. Exhibit Number Four is a plat of the area of the Osudo North Morrow Gas Field in Lea County, New Mexico. Shown on this exhibit are various wells with a gas symbol that are completed and producing from the Morrow Sand, or dry holes that have penetrated the Morrow Sand that is shown on this exhibit.

We also depict cumulative production through January, 1979 for each of the producing wells. We also show on that exhibit the January, 1979 production.

Q. For purposes of your testimony, Mr. Cooksey, let me have you also identify at the same time Exhibit Number Five. Will you tell me briefly what that is?

A. Basically, Exhibit Number Five is a map of the same area. Shown on this map are also the wells, gas wells that have completed in the Osudo North Morrow Gas Field and highlighted in the squares colored red is bottom hole pressure information that is available to us on various wells in the area.

Q. In addition to studying the information contained on Exhibits Four and Five, have you also made a study of the geology as recorded on the previous exhibits by Hamon?

A. Yes, sir, I have examined the geological work presented by Mr. Casey.

Q. Now referring to Exhibit Number Five, does

that plat identify when each of the Morrow wells in this particular area were completed?

A. Yes, sir, it does. For example, Mr. Hamon's well in Section 30, the Union State No. 1, was completed in September of 1966.

Q. And what was its initial completion pressure?

A. Initial bottom hole pressure for that well was reported to be 4772.

Q. Your plat, Number Five, indicates that this is a bottom hole pressure map. Are these actual or calculated pressures?

A. Some are shown to be calculated. The ones for the Hamon wells in Section 30, 20, aNd 17 are bottom hole pressure bombs.

Q. 30, 20, and 17 are bottom hole pressure bombs.

A. Yes, sir, those happen to be the Hamon merada Federal No. 1 in Section 17, the Hamon State "E" 8913 in Section 20, the Hamon Union State No. 1 in Section 30.

Q. With reference to the Texas Oil and Gas well in Section 29, it shows a calculated bottom hole pressure. How was that calculated?

A. We obtained that information as shown on

potential test form obtained from the New Mexico Oil Conservation Commission, and the number 4887 psi was indicated to be a calculated bottom hole pressure on that form.

Q. Who compiled and submitted that information to the division?

A. I have assumed --

Q. What operator?

A. I have assumed Texas Oil and Gas.

Q. All right, sir. Now, in reference to the Hamon Union State Well, what is its current status?

A. The current status of the Union State Well is in our records essentially depleted. As you'll note on Exhibit Number Four, it has had a sizeable cumulative production, approaching 6-billion cubic feet; however, the production of January, 1979 was 12 Mcf; that's total production for the month.

I might bring that up-to-date a little further. The February production was 7 Mcf, March production was 9 Mcf. We've attempted to run bottom hole pressures on the well. We've determined that we do have tubing problems and by a previous workover we know that we do have a casing leak in the well.

To finish what I started to say, we've assumed the well in the Morrow stringers that it's currently producing from, is essentially depleted.

Q. Based upon your study, Mr. Cooksey, do you have an opinion as to whether the Texas Oil and Gas Well in Section 29 has encountered Morrow stringers that have not been drained by the Hamon Union State Well in Section 30?

A. From the information I've been able to obtain, the producing interval in the Texas Oil and Gas Well, 11,324 to 11,340, with the calculated bottom hole pressure of 4887, evidently has encountered a stringer that has not been drained by our Hamon No. 1 Union State Well.

Q. Is there anything contained on Exhibit Number Five that supports that conclusion?

A. Well, the support that I see, is that the latest bottom hole pressure that we've taken on the Hamon Union State Well is reported to be 414 pounds in September, 1972. We know from looking at the production versus cumulative -- I mean, pressure versus cumulative curve, that the pressure currently must be less than 200 pounds bottom hole pressure.

And it's this information and an analysis of this pressure data that draws me to the conclusion that the Texas Oil and Gas Osudo State Well has encountered a stringer that has not been drained by the Union State Well.

Q. The Hamon Well was drilled in '66?

A. Yes, sir.

Q. How does the original pressure in the Hamon Well compare to the original pressure encountered in the Texas Oil and Gas Well?

A. I believe, as shown here on the exhibit, the original bottom hole pressure of the Jake L. Hamon Union State Well in September, 1966, was 4772.

That -- that information happens to be psig measurement. When you add your 15.025 to it adds it up to 4787, and coincidentally, that's the same initial virgin reservoir pressure as discovered in the Texas Oil and Gas Osudo State No. 1 Well.

Q. If the Morrow stringers that have been produced out of the --

A. Correction. Correction.

Q. Go ahead.

A. I would like to back up and correct the last statement. The psia measurement for the Hamon Union State would be 4787, and calculated bottom hole pressure for the Texas Oil and Gas Osudo State would be 100 pounds higher, 4887.

Q. All right, sir.

If the Morrow stringers that were produced out of the Hamon Union State Well were in communication with that stringer now being produced in the Texas Oil and Gas Well, what in your opinion would have been the pressure

encountered when the Texas Oil and Gas Well had been completed?

A. I would have assumed it would have been somewhat reduced, considerably reduced. The 4887 is essentially a virgin reservoir pressure. It has a gradient of .431 psi per foot.

Q. All right, sir, now would you compare those initial pressures, both in the Texas Oil and Gas Well and the Hamon Well, to the initial pressures encountered in the Morrow wells farther to the north in the pool?

A. Well, the wells in the four sections to the north all reported bottom hole pressures considerably higher than the wells to the south, or the south of the line being between the top of Section 30 and Section 29.

Q. Do you have any explanation as to why the wells north of Section 30 and 29 encounter a higher initial pressure in their Morrow completions versus the two wells in Section 30 and 29?

A. That could very easily be explained, and it's a little out of my realm, due to some geologic compaction that could have over-pressured the reservoirs to the north, and I know this does happen on occasions. I do believe the pressures reported in the two wells in Section 30 to be in line with the normal pressure gradient; those to the north seem to be abnormally pressured.

Q. Can you conclude from the study you've made in this area that the Texas Oil and Gas Well in Section 29 is experiencing drainage from any of the existing Morrow wells?

A. If I understood your question correctly, and that is, is the Texas Oil and Gas Well in Section 29 experiencing drainage from the other wells in the area, I would say not by any of Mr. Hamon's wells.

Q. All right, sir. Let me ask you now what you know about the Antweil well that's 660/660 out of the corner of Section 30?

A. I do know that it was a shallow hole drilled to approximately 4000 feet and completed it, according to Mr. Casey's testimony, in a Seven Rivers formation, I believe he said. Plugged and abandoned in 1968.

Q. In your opinion as a petroleum engineer, is that well suitable for re-entry as a Morrow completion?

A. I would not recommend it. I believe that since it was completed and had a production casing string set in it that your problems encountered in re-entering that hole, trying to utilize the short string of surface pipe that was put in it and sidetrack the remaining 5-1/2 stub that would be left in the hole would be very risky and unnecessary.

I might add at this point that based on

engineering information, that our 100 feet from an existing old well appears to be a logical distance to move, since, as noted from the inclination survey presented by the Texas Oil and Gas well, that it had a cumulative displacement at 4200 feet, in excess of 60 feet.

So it's possible that, you know, that you could encounter the two wellbores together. I'm not saying it's --

Q. Would you recommend drilling the second well closer than 100 feet to that existing well 660/660?

A. No, sir, I would not.

Q. Were Exhibits Four and Five compiled under your direction and supervision?

A. Yes, sir.

Q. Is the information contained on those exhibits true and accurate to the best of your knowledge, information, and belief?

A. To the best of my knowledge, yes, sir.

MR. KELLAHIN: Move the introduction of Exhibits Four and Five.

MR. STAMETS: These exhibits will be admitted.

MR. KELLAHIN: That concludes our examination of Mr. Cooksey.

MR. STAMETS: Are there questions of the

witness?

CROSS EXAMINATION

BY MR. LOSEE:

Q. Mr. Cooksey, looking at your Jake Hamon Union State No. 1, and my information that the drill stem test on the well showed a final shut-in pressure of 6121, do you have that information available?

A. No, sir, I do not. I --

Q. Well, let's make an assumption, then, to avoid time, assume that that's what was reported as a -- on DST run between 11,220 and 11,358. Would you explain to me why the difference between the drill stem final shut-in pressure and your reported bottom hole pressure, bomb pressure of 4772?

A. Well, as I think most everyone in the engineering profession believes, you use drill stem test pressures only when you have nothing else available, and they give you an indication of reservoir conditions, and I for one believe that probably some of the problem may be in the pressure reported by the Hytech. I'm not for sure whether that's a bomb pressure or a drill stem test for the Hytech Well, but that does -- is just the unreliability of pressure determined by drill stem testing, is my answer to your question.

Q. Okay, let's turn to the Hytech Energy Well and is the test, the pressure you show there of 6945, is that a bomb test or is that drill stem test?

A. I'm not -- I'm not for sure. I had assumed it was a drill stem test -- I mean a bomb test. Hold on just a second.

Q. While you're looking, would you tell me if you have any other bomb tests on that well?

A. No, sir.

MR. STAMETS: While you're looking, you might as well look and see if you have any other tests on that well.

A. No, sir. I know I have no other tests on the well. We made a search later and found no other subsequently reported bottom hole pressures on the Hytech Well.

MR. STAMETS: How about surface pressures?

A. We made a search of the records back through 1976, 7, and 8, and it reports that there were none available at that -- for that particular well, Mr. Examiner.

And I do not have the information with me today that tells whether the Hytech Well was a bomb or drill test information.

Q. Well, if that was a drill stem test rather than a bomb, I suppose it would be possible that you

would have the same problems that you speak -- that differentiate between drill stem and a bomb test in your Hamon State Well, so that the pressure could have been considerably lower than 6945.

A. Yes, sir, but as I also stated, that it was an assumption, that I don't have the data here today for, that it probably was a bomb test.

Q. Is there anything on this Exhibit Five that shows you whether or not this Hytech Energy Well is in communication with the Texas Oil and Gas No. 1 Osudo State?

A. It shows -- on Exhibit Five it shows those two wells in communication?

Q. Uh-huh?

A. Nothing on Exhibit Five. You want to talk about Exhibit Four?

Q. Sure, yes.

A. Well, partly the Hytech Well is probably the better producer in the field outside of the rumors I've heard of Texas Oil and Gas Well. To date we have no production for the Texas Oil and Gas Well, and the production for the Hytech Well is averaging 647 Mcf per day in January, 1979.

This particular information could be concluded that over its perforated interval, as shown on our

previous exhibits, the cross section and the Isopach map, that that particular zone that's currently completed in the Osudo State could possibly be responsible for the production. That's an assumption on my part.

Q. Well, there isn't any pressure data that you have that supports a conclusion that that Hytech Well is in communication with the Texas Oil and Gas Well, is there?

Any pressure data?

A. No, sir, you're correct.

Q. Now this safety factor of 100 feet, that could be accomplished by moving the well 100 feet to the west or a 100 feet to the south of the Antweil dry hole, shallow dry hole, could it not?

A. Yes, sir, the safety factor could be obtained in moving any direction around the well, but there's not a directional survey on the well. However, I think you have to consider the requested location is based on the geologic data which was presented also, which indicated to us you would lose net TXO Sand thickness if you moved in any direction other than toward the corner of the section.

Q. Wouldn't you be more likely to get the -- more of the TXO Sand if you got one foot off the east line than you would 560?

A. More likely?

Q. Yes, to get --

A. Hypothetically, yes, sir, it would be better --

Q. Hypothetically, really.

A. Oh, yes, sir, yes, sir, one foot or right over there next to it on your lease.

Q. So that's really the reason you like the 560 location better than moving 100 feet west or 100 feet south, is it not?

A. Not -- not necessarily any different closeology, if that's the word you want to use, moving next to the lease line than in the application in May of 1978 when Texas Oil and Gas made its application to move 660 out of the corner.

We believe that the 550 location supported by the fact that the Texas Oil and Gas Well has evidently uncovered a Morrow Sand stringer that's highly productive, has virgin reservoir pressure, and we believe to cross over onto Section 30, warrants a location to protect the Union State lease from drainage. And based on the geological information presented by Mr. Casey and our examination of the production performance of the Texas Oil and Gas Well, we believe the location as requested to be the best; also to be fair.

Q. Mr. Cooksey, you heard Mr. Casey's testi-

mony about this working interest unit that we talked about. Wouldn't it have been possible for Mr. Hamon to have drilled this well at this location that Texas Oil and Gas is on? Didn't they have ten years to do it?

A. I know no details of the working interest unit.

Q. Well, you --

A. I do know -- I do know that -- from the testimony at this hearing and the one in May, that some of the working interest owners evidently owned a lease in Section 29. Why they chose to drill it, I could not speculate on.

Q. Or they chose not to.

A. Not to drill it, correction.

Q. Do you think they were protecting the correlative rights at that time of the people in Section 29?

MR. KELLAHIN: I'm going to object to the question. The witness has already testified that he doesn't have the knowledge of the circumstances surrounding whether or not there was a conscious decision made not to drill that acreage.

MR. STAMETS: Objection sustained.

Q. Mr. Cooksey, do you know whether or not Mr. Hamon has staked three locations, unorthodox locations, in Section 30?

A. I have no definite fact that there be three stakes driven in the ground; however, I will state this, Mr. Losee, that generally it's my experience when I call out a surveyor to stake a well, I tell him to stake as many locations as he thinks possibly feasible; in other words, to keep down the cost of surveying, and that wouldn't surprise me in the least if there was three or six stakes out there.

Q. Did you order the surveyor to stake this location?

A. No, sir, that was done by our district engineer in Midland, Texas, Buck Shaw.

Q. Do you know any instance where the Commission has approved the unorthodox location for a gas well on 320 or 640 acre spacing located 560 feet from the lease line?

A. I personally do not, but my knowledge of New Mexico Oil Conservation Commission proceedings in the past is very, very limited.

MR. LOSEE: I think that's all.

MR. STAMETS: I've got a question for Mr. Casey, and I think he can answer it from where he's at. Maybe a couple of questions.

Mr. Casey, in looking at your Exhibit Number Three, which is the structure -- or not structure,

the Isopach map, just in general terms, it appears to me that there's about as much pay in this sand in Section 29 as there is in Section 30, is that -- does that look about right to you?

MR. CASEY: Yes, sir, the contours are fairly similar and symmetrical.

MR. STAMETS: And as far as, if we drew a circular drainage radius from both of these wells, the only difference that we would find in one overlapping the other would result from this 100 foot difference between the two locations. In other words, you're 100 feet closer to their line than they are to your line, and so perhaps, assuming radial drainage, you would get just a little bit more advantage from their acreage than they might get from your acreage.

MR. CASEY: Sir, that might be true. I feel like again, I don't want to dwell on this point, but I think -- I have made this map to look optimistic, and based, perhaps, on the dip that we see from the contour lines from the Texas Oil and Gas Well on 29 to our Osudo State, that if -- if I didn't pull those lines out a little bit I might not have as much sand at that location as Texas Oil and Gas has in theirs, and if I do not have that much sand, I probably won't drain --

MR. STAMETS: But as -- as it was presented

here, the only real difference between the two situations, Texas Oil and Gas and J. L. Hamon, is that you're 100 feet closer to their line than they are yours.

MR. CASEY: Yes, sir, it appears that way.

MR. STAMETS: Does anyone have any other questions of either of the two witnesses? They're both excused, then.

MR. KELLAHIN: I have one more exhibit to introduce, if the Examiner please.

I'd like to introduce as Exhibit Number Six a copy of Texas Oil and Gas Corporation's Order in Case Number 6215. It's Order Number R-5735, entered June of '78, approving their location in Section 29.

WILLIAM SIRUTA

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. LOSEE:

Q. Will you state your name, please?

A. William Siruta.

MR. STAMETS: How do you spell that, sir?

A. S-I-R-U-T-A.

Q. Have you previously testified before the

Commission and had your qualifications as a geologist made a matter of record?

A. Yes, sir.

MR. LOSEE: Mr. Siruta's qualifications acceptable, Mr. Examiner?

MR. STAMETS: They are.

Q. (Mr. Losee continuing.) Please refer to what has been marked as Exhibit One, Mr. Siruta, and explain what is portrayed by this exhibit.

A. This is a production map of the North Osudo Field illustrating cumulative production as the numerator on the line with the daily rates as the denominator, or underneath the line, with any pressure data indicated below this production.

The production is the cumulative rate up to January 1st, 1979.

Q. Please refer to what's been marked -- well, before we leave that exhibit, does your cumulative production reasonably concur with that data presented by Mr. Hamon?

A. Yes, sir.

Q. Okay, turn to what's been marked as Exhibit Two and identify the exhibit.

A. This is also a map of the North Osudo Area. It is an Isopach map on the Middle Morrow Sand which

has been referred to by Mr. Cooksey and Mr. Casey as the TXO Sand.

Q. We've got some difference between your Isopach on which you call the Middle Morrow and Mr. Casey's map of the TXO Sand, do you not?

A. Yes, sir, we do.

Q. You show this sand present in what wells?

A. I show this sand present in, of course, the Texas Oil and Gas No. 1 Osudo State. Also in the Jake L. Hamon Union State No. 1 and the Western Oil State "J" No. 1.

Q. Do you show it present -- you've got this well called the Southwest Natural Gas Company. Do you know whether that's the same well that's called Hytech Energy?

A. Yes, sir, that is the same well.

Q. You don't show that sand present in that well, do you?

A. That is correct, sir, I show zero feet.

Q. Do you know whether or not there are three unorthodox locations staked in Section 30 by Mr. Hamon?

A. Yes, sir, there are the proposed location and two alternates.

Q. Okay. What's the proposed location

footagewise?

A. 660 from the north line and 560 from the east line.

Q. What are the alternates staked out there?

A. One alternate is 760 from the north line and 660 from the east line. The other alternate is 7 -- excuse me, let me start again.

One is 660 from the north line and 760 from the east line. The other alternate is 760 from the north line and 660 from the east line.

Q. As far as your Isopach of the Morrow Sand, are all three of those locations in substantially the -- would encounter substantially the same pay thickness?

A. Yes, sir, they would.

Q. And from looking at Mr. Hamon's Exhibit Three, his Isopach of the TXO Sand, would all three of those locations encounter substantially the same pay sand?

A. Yes, sir, they would.

Q. Please refer to what has been marked as Exhibit Three, which is your cross section. Identify or explain what is portrayed by this exhibit.

A. This is a cross section from the Jake L. Hamon Union State No. 1 in Section 30, and also includes the Texas Oil and Gas Osudo State No. 1 in Section 29. DST's, perforations are indicated on the cross section.

It is a stratigraphic cross section hung on the base of the Morrow massive shale and the sands, the Morrow Sands that are present in the two wells are depicted by the yellow color.

Q. So that by your cross section you would correlate the sand that's open in the TXO Well to a sand that's open in the Jake L. Hamon?

A. Yes, sir.

Q. You don't have it on your cross section, but did you compare the log on this Hytech Energy Well?

A. Yes, sir, I did.

Q. Does it correlate, in your opinion, a sand that's open in that well to the so-called TXO Sand?

A. No, sir, it does not.

Q. Now, did you find in the well you drilled the sand that the Hamon Union State Well, the central sand it's produced out of below the base of the Morrow massive shale?

A. Yes, sir, we -- we did encounter this sand in the Osudo State Well.

Q. Was it depleted?

A. Yes, sir, after perforating and acid-treating, we found that it was a depleted zone.

Q. So that the -- would you conclude that the Hamon Union State Well has drained this sand from under

Section 29?

A. Yes, sir.

Q. Mr. Siruta, please turn to what's been marked Exhibit Three and identify this exhibit.

A. I believe you're referring --

Q. Four, excuse me.

A. Referring to Exhibit Four, this is a copy of the Isopach of the TXO Sand that was -- or Exhibit Two. Indicated on this map are circles, and these circles are a radius of drainage equivalent to 640 acres, which is the spacing in this area, and the orange circle is indicated for a standard location, the radius of drainage at 1650/1650. The green is the radius of drainage at a location 660 from the north line and 760 from the east line. The red is a radius of drainage 660 from the north line and 560 from the east. And the blue is the radius of drainage 760 from the north line and 660 from the east line.

MR. KELLAHIN: Mr. Examiner, at this time I would move the testimony with regards to drainage radius be stricken until a proper foundation has been laid to satisfy that this witness is competent to make those kinds of conclusions with regards to this exhibit.

MR. Siruta testified under oath before the Commission on May 17, 1978, on page thirteen of that transcript. The question was asked and the answer given,

it said,"it could possible increase to seven feet, but I do not believe that that would be sufficient to make a commercial well."

The questions was asked, "At the unorthodox location what area will that well drain, in your opinion?"

ANSWER: I do not believe I'm qualified to answer that question.

In May of '78 he was not qualified to discuss drainage radius. I'd like to know what has happened since 1978 to now qualify this witness.

MR. LOSEE: Do you want me to respond?

MR. STAMETS: Yes, I certainly do.

MR. LOSEE: I think what Mr. Siruta has testified to, that if you assume circular drainage, which is what this exhibit depicts, that this is the area that it will be drained by, a 640-acre unit, and I think that's all. I don't believe his testimony is that it will or will not drain the circular area.

MR. STAMETS: What's being discussed here is a theoretical situation, not an actual situation.

MR. LOSEE: Yes, sure.

MR. STAMETS: In that light, I believe I'll let the witness continue to be cross examined in that area.

Q. You're not really testifying that you know

in fact that there is circular drainage, are you?

A. No, sir, this is just theoretical.

Q. Okay. How much additional offset acreage is drained by the unorthodox location at 560/660 from an orthodox 1650 location?

A. Outside of the Jake L. Hamon --

MR. STAMETS: Before he answers that question, let me -- let me ask you where, what area of this exhibit we're talking about now. We're just talking about the space inside the yellow line or are we talking about all the acreage in Sections 19, 20, and 29?

MR. LOSEE: We're talking about 19, 20, and 29.

MR. STAMETS: Okay.

MR. LOSEE: I think.

A. Yes.

Q. Okay, let him answer it.

A. Using the circle that's shaded red, which indicates a theoretical radius of drainage for a 640, there would be 390 acres outside of Section 30. This acreage would be in Section 29, Section 20, and Section 19. That is 390 acres outside of Section 30.

Q. Okay. From a standard location percentage-wise how much closer are you to the east line of the section than you are with this 560 location, than you are with a

1650 location?

A. 67 percent closer.

Q. Now, how much closer are you to the north line at this 660 location than you would be at a standard location of 1650 feet?

A. Also 67 percent closer.

MR. STAMETS: Let me clarify this. I thought we were talking about the 660/560.

MR. LOSEE: Yes, I really was.

MR. KELLAHIN: That was not the question asked and answered.

MR. STAMETS: Okay, does this 100 feet make no difference, because in one case you're talking about 560 from the line; the other case you're talking about 660, and you answered 67 percent closer in both cases. It seems like there would be some small difference between those two numbers.

A. Yes, it should be 66 percent.

Q. Closer to the -- no, it should be a greater percent.

MR. STAMETS: It depends on which figure you're talking about. Which one is 66 percent?

Q. Which one is 66? The 660 or the 560?

A. The 660. I believe that's right.

Q. And what's your 560, in its relation to

1650?

A. The 660 location from the north line would be 60 percent closer.

MR. STAMETS: Six zero?

A. Yes, I'm sorry, that was a -- I'm not too good with a calculator.

Q. Geologists are not supposed to be, Mr. Siruta.

A. Yes. And from the east line it would be 67 percent closer.

Q. Okay, now have you estimated the number of acres shown on your isopach within Section 30 that would be productive of this Middle Morrow Sand pay, or that are productive of?

A. Yes, I've estimated approximately 130 acres in Section 30 that would be productive.

MR. KELLAHIN: Say again. 130 acres in Section 30?

A. Yes.

Q. Mr. Siruta, do you know any instances where the Commission has approved a location for a gas well on 320 or 640 acre spacing located within 560 feet of a lease line?

A. No, sir, I do not.

Q. Does Texas Oil and Gas object to this

location that is requested here?

A. Yes, we do.

Q. And is it their statement that the location should not be approved at that 560/660 outlined?

A. Yes, that is their statement.

Q. Now, if it is approved, do you have a recommendation as to a penalty factor to be applied?

A. Yes. We think a penalty should be applied.

Q. Would you -- is this the penalty similar to that enforced by the Commission in a non-prorated field in Case Number 6231, Order R-5831 and Order R-5831-A?

A. Yes, sir.

Q. And that was -- the penalty factor was based in that case upon three things: One, close proximity to the lease line, to each lease line, made up two-thirds of the formula, and productive acres within the section made up the other third, is that correct?

A. Yes.

Q. And although you do object to the location for this well, if it is approved at 560 rather than 100 feet to the west or south of the present well, you ask the Commission to enforce that penalty against Jake L. Hamon?

A. Yes, sir.

Q. Now, the special rules and regulations

that were promulgated in the order that I've referred to provided for periodic deliverability tests. Are you familiar with those rules?

A. Yes, sir, I have read them.

Q. And so that the penalty factor would be applied against the deliverability of the well.

A. Yes, sir.

Q. Until the well had reached -- depleted to a deliverability of 500 Mcf per day?

A. Yes, sir.

Q. And is that your recommendation if the Commission sees fit to grant the location of this well?

A. Yes, sir.

MR. LOSEE: I think that's all of Mr. Siruta.

MR. STAMETS: Questions of the witness?

MR. KELLAHIN: I do believe.

MR. STAMETS: Mr. Kellahin.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Siruta, let's talk about your theoretical circles of drainage here for a moment, and if we look at the Texas Oil and Gas Well in Section 29, it is, is it not, 660 out of the corner?

A. Yes, sir.

Q. So for that particular well it is 60 percent closer to the west line of the section than would normally be permitted?

A. Yes, sir.

Q. And it is also 60 percent closer to the north line than normally permitted?

A. Yes, sir.

Q. If you'll look at the proposed location of Jake L. Hamon, we find that he is also 60 percent closer to the north line of Section 30.

A. Yes, sir.

Q. And that he is 67 percent closer to the east line of Section 30?

A. Yes, sir.

Q. There is a difference of being some 7 percent more unorthodox than the Texas Oil and Gas Well, is that not true?

A. Yes, sir.

Q. Was the Texas Oil and Gas Well penalized in any way with regards to this location?

A. No, sir.

Q. Was it penalized in any way for non-productive acreage?

A. No, sir.

Q. Would you not agree with me that if the Commission chose to penalize the Jake L. Hamon Well on some theoretical basis, as you suggested, that an equitable method would be a penalty of some 7 percent?

A. No, sir, I don't believe that that would be an equitable penalty.

Q. All right, sir, let's look at your Middle Morrow Isopach, Exhibit Number Two.

If I understand it, the way that was prepared, you have essentially used the same Morrow Sand that Mr. Casey has used in his Isopach, is that not true?

A. Yes, it is what Mr. Casey is calling the TXO Sand.

Q. All right. What is the API cutoff you used for your Isopach?

A. I've used the API unit cutoff that is the standard used by numerous studies that have been done in the Morrow in New Mexico, which is 50 API units.

Q. You used 50 API units for yours and I believe it was Mr. Casey's testimony he used 60 API units?

A. Yes, sir.

Q. The difference being, is it not, Mr. Siruta, that with a higher number you are including more Morrow Sand, is that true?

A. No, sir.

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5021 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

Q. The reverse it true?

A. That's right.

Q. So your Isopach is going to be more optimistic than Mr. Casey's Isopach because of the difference in the API number.

A. More optimistic in relationship to Mr. Casey's map.

Q. More optimistic in terms of the number of Morrow Sand in terms of feet that you find.

A. I would prefer to say more realistic.

MR. STAMETS: Let me clarify this, now. You answered him in response to Mr. Kellahin's question, using 50 API units instead of 60 would cause you to show less sand than Mr. Casey did.

A. Yes.

MR. STAMETS: All right. Now, if you're showing less sand, would your estimate then not be more conservative than Mr. Casey's?

A. Yes, it -- it would be -- my estimate would be less sand, net sand, than Mr. Casey's estimate, yes.

Q. (Mr. Kellahin continuing.) All right, I think we're straight on that, Mr. Siruta.

Let me ask you, in terms of your Isopach you have looked at the well in the south half of Section 29,

that Western Oil State "J" Well, and you've attributed 10 feet.

A. Yes, sir.

Q. How did that well perform at that interval?

A. There was a DST across that interval, including two or three other sands, if my memory serves me correctly, and it flowed at a rate of 260 Mcf, and I don't recall the exact numbers on the final shut-in pressure, but they were somewhere above 5000 pounds. It is presently plugged and abandoned.

Q. Who is the operator of that well?

A. Western Oil.

Q. All right, WEstern Oil tested the 10-foot interval that you have on your Isopach and they did not produce it in paying quantities and abandoned it and plugged back up the well?

A. They tested it along with other Morrow sands.

Q. Yes, sir, and that 10-foot plus all other Lower Morrow Sands did not produce commercial Morrow gas.

A. That zone, Middle Morrow Sand did not produce in paying quantities, that is correct.

Q. All right. Keeping that in mind, Mr.

Siruta, at what point would you not recommend a well to test the TXO Morrow Sand on your Isopach?

A. Are you referring to a footage location or in terms of sand thickness?

Q. In terms of sand thickness.

A. Our well exhibits very good permeability and porosity and is sometimes the case in these sands that exhibit good permeability and porosity, they are productive whenever you have any of the sand present.

Q. Subject to that qualification and based upon your Isopach, what would be the number of feet that you would want?

A. I'm not sure that I understand the question.

Q. Would you drill at a location in which you've Isopached 5 feet of Middle Morrow SAnd pay?

A. No, sir.

Q. Would you locate a Morrow test on a contour line on the Isopach in which you would encounter 10 feet of Middle Morrow Sand pay?

A. Yes, sir.

Q. At what point between the 5 and the 10 would you cut it off?

A. On this particular sand I would say if had in excess of 5 feet. If I had 5 feet or less I pro-

bably would not drill a well, but if I had 5 feet or more, I probably would.

Q. All right. If you'll follow the 5-foot Isopach contour around to Section 30, you will note, will you not, that all of the proposed staked locations you've identified in Section 30 fall in something less than the 5-foot contour, do they not?

A. Yes, sir.

Q. In fact you contoured the Isopach for this particular Morrow Sand to show that virtually all the production from this sand will come from Section 29.

A. Yes, sir.

Q. Isn't that true?

A. Yes, sir, that is correct.

Q. And that's done by giving credit to the Western Oil Company for some 10 feet of Middle Morrow Sand that did not produce in paying quantities.

A. Yes, sir.

Q. From looking at your Isopach, Mr. Siruta, it would appear that Jake L. Hamon, regardless of where he locates his well, so long as it's no closer than 560 feet to the east boundary line of Section 30, will not obtain a commercial well within this particular Morrow pay zone, is that not true?

A. The statement that I made earlier was

that some sands that have good permeability and porosity, sometimes if you have just 1 foot of the sand you can -- you can make a well.

I feel like this may be one of those -- those sands, because of the permeability and porosity exhibited in the Osudo State No. 1.

So a commercial well could be made but I can't say yes, it could.

Q. Well, based upon information in the Isopach, there would be no reason to penalize the Jake L. Hamon Well so long as the location is no closer than 560 feet to the east boundary line of Section 30.

A. A location that would be 760 from the east line would also encounter the same amount of pay as a location that would be 560, or approximately the same amount.

Q. Now let me see if I understand the nature of Texas Oil and Gas' objection.

You do not object to any location that Jake L. Hamon will propose to drill so long as it's no closer than 660 feet to the east boundary of Section 30, is that not true?

A. Yes, that's true.

Q. It would appear from your Isopach, then, Mr. Siruta, that had Texas Oil and Gas drilled at a standard

location 1650 feet from the west boundary line of Section 29, it would have still encountered at least 16 feet of Middle Morrow Sand pay, would it not?

A. If that was the objective when the well was drilled, but it was not.

Q. What was the objective when this well was drilled?

A. The sand that lies directly beneath the base of the Morrow massive shale, which we did encounter and it was depleted.

Q. Okay. The principal objective for the well at the time it was drilled was not this Middle Morrow Sand pay that you're now testifying to.

A. No, sir.

Q. Let me ask you a few more questions with regards to your Isopach, Exhibit Number Two, and the cross section.

You've chosen only to demonstrate two wells on your cross section, have you not?

A. Yes, sir, that's correct.

Q. And you've omitted the Western Oil State "J" Well in Section 29 and you've omitted the Hytech Well in Section 19.

A. That is correct.

MR. KELLAHIN: I have nothing further.

MR. STAMETS: Off the record.

(There followed a discussion off the record.)

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Siruta, looking at your Exhibit Number Three, now, all by itself at first, it would appear as though the sand that's in question here, the upper productive sand in your well, consists of two members. There is an upper zone, which is somewhat thicker, looks to be about 10 feet, and then a lower zone that's perhaps isolated by a little shale streak there, that's a couple of feet thick, is that correct?

A. Yes, sir.

Q. And it's the lower of those two zones that you correlate into Jake L. Hamon's well.

A. Yes, sir, that is correct.

Q. Okay. Now, let's just assume for a minute that Mr. Hamon had depleted that zone and had depleted it under your well also, is it -- well, let's don't assume that. Let's just ask the question, is it possible that all of this good pressure that you've got and all of this good production that you've got, is coming out of the 10 feet rather than from both stringers? Is it possible

that lower one is already depleted?

A. Mr. Examiner, I don't have in evidence here a mud log that we had on our well here, but we did exhibit gas shows in both the thick sand and the thin one, and using this as sort of a guide when we cut the bottom sand that was depleted by the Jake L. Hamon Well, we did not have shows in that sand, but we did have shows in each one of the individual sands in the zone that we have perforated, but I do not know for certain which sand is contributing the most.

Q. Okay.

A. But the bottom sand exhibits 10 percent porosity, which we believe anything over 7 is productive in the Morrow.

Q. Now looking -- I think we can compare your cross section A-A' with Mr. Hamon's cross section and look at this Western Oil Producers well, although the massive shale is missing there, it looks as though you may be able to correlate the base of the Morrow Sand below that point.

Looking at the upper yellow sand that Mr. Casey has marked on there, correlates with the upper two -- upper of the two zones that you have in your well or the lower of the two zones? I don't know whether you can tell at all.

A. I have done this correlation because on my Isopach I have indicated 10 feet of sand. You will notice as you look directly above the thick sand in the Osudo Well, the Texas Oil and Gas Well, there's a thick shale member right there. You will notice that directly above the sand, the top sand in the Western Oil Producers Well, there is also a shale. It is not quite as thick but it does appear to be the same member. And mainly, I base that on mainly the correlation from the bottom up, so you can look at the bottom sand there and then you have to do a little, little moving down here, and you can see that shale lining up with the shale I was speaking of, plus the shale that's at 11,150 in the Western Oil Producers Well correlates very close with what I'm calling the top of the Middle Morrow in the Osudo Well.

That correlation puts you in the stratigraphic interval that is equivalent between the two sands in the Osudo Well and the one sand in the Western Oil Producers Well.

To your question which sand does it belong with, the upper or the lower one, I'm not really sure. This is a strand line deposit and you get some distinct changes in the Morrow section in here.

Q. So it's possible that the 10 feet that you show on your Exhibit Number Four isn't even connected

to the 16 feet that you show for your well.

A. It is stratigraphically equivalent, which is --

Q. Okay.

A. -- the only guide that I'd really have to say is it the same sand or not.

The only true way to tell, I feel, is pressure data, and we can't really tell that from our well in relationship to these -- these pressures that were on the DST in the Western Oil Well, because of possible depletion in our zone by the Hamon Well.

Q. With the kind of pay, porosity that you've got in your well, if that had carried on across to the Jake L. Hamon Well in Section 30, would you anticipate finding as good a zone as you did or would you have probably found a zone that was already draining?

A. Because of the type of log that Mr. Hamon ran in his well, we can't really be certain what the porosity is and what the amount of permeability, not necessarily numerical amount, but the relative amount of permeability, I guess -- I guess the answer to your question, if he did have as good a perm and as good a porosity, very possibly he could have drained more of the reserves, but because of the thickness of the sand, I believe that's why the drainage was not as great as it could have been. It's a smaller

amount of sand so it's going to take a longer time for it to -- to drain.

Q. In response to Mr. -- one of Mr. Kellahin's questions I understood you to say that if Mr. Hamon had drilled at 660/560 out of the northeast corner, you would not have had an objection and this hearing would not have been held today, or at least you would not have had an objection to that.

A. That is correct.

Q. Okay, so again it looks like the whole thing boils down to this 100 feet.

A. Yes.

Q. Plus in your case, you've got some different contours on your map. It shows what would probably be considerably different reserves on one side of the line from the other.

You mentioned 390 acres drainage in Section -- Sections 19, 20, and 29, at the 660/560 location. Now is that net additional drainage above what a well would have at a standard location or is that just the total drainage?

A. I'm not sure that I understand the question.

Q. All right. You've got a brown line shown on Exhibit Number Four, which is a standard location.

A. Yes, sir.

Q. All right, now that drains -- that shows drainage in Sections 19, 20, and 29.

A. Yes, sir.

Q. So there's already some.

A. Yes.

Q. And then you've got your red line for your 660/560, and what I'm trying to figure out, when you gave me this 390 acres figure, is it you're counting all of the acreage within the red line in Sections 19, 20, and 29, or only the acreage that lies between the blue line and the red line.

A. No, we were counting all the acreage that was outside of Section 30 but was in Section 19, 20, and 29 that was within the blue line, within the blue circle.

Q. You mean within the red circle.

A. The red circle, I'm sorry, yes, the red circle.

Q. Okay.

A. This number was arrived at by using the planemeter. I believe that's what they call it.

Q. I presume when you, when Texas Oil and Gas came in for their non-standard location, that you did not recommend that a penalty factor because of the unorthodox location?

A. No, sir, we did not recommend a penalty.

Q. And why do you think now Jake L. Hamon should get a penalty for his location?

A. The main reason that -- that we didn't feel like we deserved a penalty was that the sand that we were drilling for, our main target was the lower sand below the massive shale, and he had essentially drained all of the reserves that he could probably drain in his section from the well that he already had which was perforated and which from DST data shows to be the major pay in the well.

Whereas in this case Mr. Hamon is moving into squeeze as close as he can to our section line to try to get into our pay to drain reserves that are on our side of the section line, or in Section -- the north half of Section 29.

MR. STAMETS: Any other questions of this witness? He may be excused.

MR. LOSEE: I've got one question.

MR. STAMETS: Oh.

REDIRECT EXAMINATION

BY MR. LOSEE:

Q. I'm not sure he knows the answer. Do you know, Mr. Siruta, whether or not Texas Oil and Gas has -- is now or has considered a re-entry of this Western Oil

Producers State "J" Well?

A. Yes, we have considered a re-entry. We have data on the well that we feel like is, I don't know exactly the word I want to use, but all of it is pertinent to us that we'd rather not divulge at this time.

Q. Do you have any thought that Western Oil Producers plugged a producing well? A well that was capable of production?

A. I personally have a thought, yes, that they -- that they did do this.

Q. Okay, thank you.

MR. STAMETS: Any other questions of this witness? He may be excused.

Does anyone have anything further in this case?

MR. KELLAHIN: If the Examiner please, I would like, because of the compatibility or incompatibility of our case with the case heard in '78, I would request that the Examiner review and take administrative notice of the exhibits, testimony, and evidence introduced by both these parties on May 17th, 1978, in Case Number 6215.

MR. STAMETS: Certainly give your request every consideration.

If there is nothing further, the case will be taken under advisement.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
5020 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd CSR
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6555, heard by me on 5-23, 1979.

Richard L. Stamets, Examiner
Oil Conservation Division

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MAY 23, 1979 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
R. Kendrick	El Paso Natural Gas Co	El Paso
William F. Carr	Campbell & Black, P.A.	Santa Fe
[illegible]	[illegible] Law Firm	Midland
Larry Hoover	Bass Enterprises	Fort Worth
C.D. Martin	Keeble Law Firm	[illegible]
J. Pilgrim	[illegible] Corp	[illegible]
Wm. P. Aycock	Black River Corp	Midland
Michael Griffin	Atlantic Richfield Co	Mid Land
Dan O'Brien	"	"
Ed Kendrick	OCD	Aztec
Bob Huber	Capitol Chevron	Santa Fe
Frank Kieffer	Bass Enterprises	Ft. Worth
Tom Kellahin	Kellahin & Kellahin	Santa Fe
James Cooksey	J. Ike L. Hamon	Dallas
John W. Clark	"	Midland
Curtis J. Little	—	Farmington

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MAY 23, 1979 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
Richard Merrill	Amoco Production Co.	Houston
Tom Mallay	Amoco Production Co.	Houston
Ray Beck	Yates	Artesia
Budd Hobart	Yates	Artesia
Edward Davis	"	"
Joel Carson	Losee Carson & Dickerson	Artesia
A J Losee	"	"
William Brierton	Texas Oil & Gas	Midland
George H. Hunker, Jr	Roy L. McKay	Roswell, N.M.
Robert W. Bockat	Roy L. McKay	Roswell, N.M.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6555 DE NOVO
Order No. R-6029-A

APPLICATION OF JAKE L. HAMON FOR
AN UNORTHODOX GAS WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 28, 1979, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 20th day of September, 1979, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Jake L. Hamon, seeks approval of an unorthodox gas well location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, NMPM, to test the Morrow formation, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(3) That all of said Section 30 is to be dedicated to the well.

(4) That upon receipt of the application of Jake L. Hamon in this matter, the same was set for hearing on May 23, 1979, before Examiner Richard L. Stamets.

(5) That subsequent to said hearing the Oil Conservation Division entered Order No. R-6029 approving the unorthodox location of said well for the Morrow formation.

(6) That subsequent to the entry of said Order No. R-6029, Texas Oil and Gas Corporation, an offset operator, filed timely application for hearing De Novo of Case No. 6555, and the matter was set for hearing before the Commission.

(7) That the matter came on for hearing De Novo on August 28, 1979.

(8) That a well at said unorthodox location will better enable applicant to produce gas underlying the proration unit.

(9) That offsetting applicant's proposed unorthodox location to the East is a 320-acre non-standard proration unit consisting of the N/2 of Section 29, said unit being dedicated to a well at an unorthodox location 660 feet from the North and West lines of said Section 29.

(10) That the offset operator in the N/2 of said Section 29 has objected to the proposed unorthodox location in Section 30.

(11) That said offset operator would not have objected to an unorthodox location 660 feet from the North and East lines of said Section 30.

(12) That a shallow dry hole located 660 feet from the North and East lines of said Section 30 precludes the applicant from drilling at such location.

(13) That it is reasonable for an operator to locate a drilling well at least 100 feet from an existing dry hole to ensure against intercepting the existing well bore during drilling operations.

(14) That to offset any advantage to be gained by a well at said unorthodox location the offset operator requested that applicant's proposed well be penalized based on productive acres in the main Morrow zone of interest.

(15) That the evidence presented at the hearing was insufficient to accurately determine the amount of productive acres under applicant's tract or under any of the offsetting tracts.

(16) That because of this inability to accurately measure productive acreage under any of the tracts, acreage should not be used in any penalty formula which might be established.

(17) That penalty formulas may also be based upon well location and drainage estimates.

(18) That a well located at the proposed unorthodox location would have a drainage radius that extends into the N/2 of said Section 29 approximately 4.8 acres more than a well located 660 feet from the North and East lines of said Section 30.

(19) That this 4.8-acre net additional drainage outside said Section 30 constitutes approximately 0.75 percent of a standard proration unit (640 acres) within said pool.

(20) That it would be impractical to implement a procedure to offset so small an advantage as would be gained by the applicant over the objecting offset operator resulting from the drilling and completion of a well at the proposed unorthodox location.

(21) That approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) Than an unorthodox gas well location for the Morrow formation is hereby approved for a well to be located at a point 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, NMPM, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(2) That all of said Section 30 shall be dedicated to the above-described well.

(3) 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

ALEX J. ARMIJO, Member

EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

S E A L

fd/

R-36-E

18
Flag-Redfern
OSUD-St. Com.
TD 11,700'
1
138 MMCF
141 MCFGPD
SP 2175(9-78)

17
BHP 200(9-78)
Jake L. Hamon
Amerada Fed.
TD 11,580'
1
5497 MMCF + 75,089 BO
83 MCFGPD

Jake L. Hamon
State E-8913
TD 11,457'
1
8866 MMCF + 74,978 BO
289 MCFGPD
SP 161(9-78)

19
Southwestern Nat.
State
TD 11,600'
1
2512 MMCF + 25,434 BO
554 MCFGPD
BHP 5161 (1-76)

20

T
20
S

290 MMCF + 2765 BO
6372 MCFGPD
Texas Oil & Gas Corp

Jake L. Hamon
Union State
TD 11,470'
1

30
5938 MMCF + 29,950 BO
2 MCFGPD
BHP 593(9-78)

29
Western Oil
State "J"
TD 12,640'
1

-N-

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 6555 Exhibit No. 1
Submitted by TXO
Hearing Date

LEGEND
CUMULATIVE PRODUCTION TO 5-1-1979
DAILY RATE 4-79

Texas Oil & Gas Corp.

OSUDO AREA
LEA COUNTY, NEW MEXICO

PRODUCTION MAP

Scale 1"=2000'

R-36-E

18

Flag-Redfern
OSUD-St. Com
TD 11,700'

17

Jake L. Hamon
Amerada Fed
TD 11,580'

Jake L. Hamon
State E-8913
TD 11,457'

19

Southwestern Nat.
State
TD 11,600'

20

T
20
S

A

JAKE L. HAMON'S
PROPOSED LOCATION

Jake L. Hamon
Union State
TD 11,47[illegible]'

Texas Oil & Gas Corp

30

29

Western Oil
State "J"
TD 12,640'

A'

Sirieta on x-section
2181 ac

Sirieta on cross section
10' modac

-N-

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 6555 DN Exhibit No. 2
Submitted by TXO
Hearing Date

Texas Oil & Gas Corp.

OSUDO AREA
LEA COUNTY, NEW MEXICO

ISOPACH MAP
MIDDLE MORROW SAND PAY
C.I. = 5'

Scale 1"=2000'

SPECIAL RULES AND REGULATIONS
FOR THE
APPLICATION OF A "PRODUCTION LIMITATION FACTOR"
TO A NON-PRORATED GAS WELL

APPLICATION OF RULES

RULE 1. These rules shall apply to the Jake L. Hamon Well No. 1 located 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, N.M.P.M., Lea County, New Mexico, which well's Production Limitation Factor of .31 shall be applied to the well's deliverability (as determined by the hereinafter set forth procedure) to determine its maximum allowable rate of production.

ALLOWABLE PERIOD

RULE 2. The allowable period for the subject well shall be six months.

RULE 3. The year shall be divided into two allowable periods commencing at 7:00 o'clock a.m. on January 1 and July 1.

DETERMINATION OF DELIVERY CAPACITY

RULE 4. Immediately upon connection of the well the operator shall determine the open flow capacity of the well in accordance with the Division "Manual for Back-Pressure Testing of Natural Gas Wells" then current, and the well's initial deliverability shall be calculated against average pipeline pressure.

RULE 5. The well's "subsequent deliverability" shall be determined twice a year, and shall be equal to its highest single day's production during the months of April and May or October and November, whichever is applicable. Said subsequent deliverability, certified by the pipeline, shall be submitted to the appropriate District Office of the Division not later than June 15 and December 15 of each year.

RULE 6. The Division Director may authorize special deliverability tests to be conducted upon a showing that the well has been worked over or that the subsequent deliverability determined under Rule 5 above is erroneous. Any such special test shall be conducted in accordance with Rule 4 above.

RULE 7. The operator shall notify the appropriate district office of the Division and all offset operators of the date and time of initial or special deliverability tests in order that the Division or any such operator may at their option witness such tests.

CALCULATION AND ASSIGNMENT OF ALLOWABLES

RULE 8. The well's allowable shall commence upon the date of connection to a pipeline and when the operator has complied with all appropriate filing requirements of the Rules and Regulations and any special rules and regulations.

RULE 9. The well's allowable during its first allowable period shall be determined by multiplying its initial deliverability by its production limitation factor.

RULE 10. The well's allowable during all ensuing allowable periods shall be determined by multiplying its latest subsequent deliverability, as determined under provisions of Rule 5, by its production limitation factor. If the well shall not have been producing for at least 60 days prior to the end of its first allowable period, the allowable for the second allowable period shall be determined in accordance with Rule 9.

RULE 11. Revision of allowable based upon special well tests shall become effective upon the date of such test provided the results of such test are filed with the Division's district office within 30 days after the date of the test; otherwise the date shall be the date the test report is received in said office.

RULE 12. Revised allowables based on special well tests shall remain effective until the beginning of the next allowable period.

RULE 13. In no event shall the well receive an allowable of less than ~~one-half~~ million cubic feet of gas per day.

BALANCING OF PRODUCTION

RULE 14. January 1 and July 1 of each year shall be known as the balancing dates.

RULE 15. If the well has an underproduced status at the end of a six-month allowable period, it shall be allowed to carry such underproduction forward into the next period and may produce such underproduction in addition to its regularly assigned allowable. Any

underproduction carried forward into any allowable period which remains unproduced at the end of the period shall be cancelled.

RULE 16. Production during any one month of an allowable period in excess of the monthly allowable assigned to the well shall be applied against the underproduction carried into the period in determining the amount of allowable, if any, to be cancelled.

RULE 17. If the well has an overproduced status at the end of a six-month allowable period, it shall be shut in until such overproduction is made up.

RULE 18. If, during any month, it is discovered that the well is overproduced in an amount exceeding three times its average monthly allowable, it shall be shut in during that month and during each succeeding month until it is overproduced in an amount three times or less its monthly allowable, as determined hereinabove.

RULE 19. The Director of the Division shall have authority to permit the well, if it is subject to shut-in pursuant to Rules 17 and 18 above, to produce up to 500 MCF of gas per month upon proper showing to the Director that complete shut-in would cause undue hardship, provided however, such permission shall be rescinded for the well if it has produced in excess of the monthly rate authorized by the Director.

RULE 20. The Division may allow overproduction to be made up at a lesser rate than permitted under Rules 17, 18 or 19 above upon a showing at public hearing that the same is necessary to avoid material damage to the well.

GENERAL

RULE 21. Failure to comply with the provisions of this order or the rules contained herein or the Rules and Regulations of the Division shall result in the cancellation of allowable assigned to the well. No further allowable shall be assigned to the well until all rules and regulations are complied with. The Division shall notify the operator of the well and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

PROFITABILITY STUDY

Investment	$	780,000.00
Gas Price Per MCF - Initial	$	2.08
Condensate Price Per Barrel - Initial	$	13.92
Royalty		1/8
Taxes - Local Severance and Ad Valorem (Oil)		7.6%
Operating Expense Per Year - Initial	$	13,200

INITIAL DAILY GAS PRODUCTION RATE MCFPD	BEFORE FEDERAL INCOME TAX	
	Payout Time Years	DCF ROR * %
1,000	1.66	100.0

*DCF ROR - Discounted Cash Flow Rate of Return

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 6555 Exhibit No. 5
Submitted by TXO
Hearing Date

R-36-E

18
Flag-Redfern
OSUD-St. Com.
TD 11,700'
1
138 MMCF
141 MCFGPD
SP 2175 (9-78)

17
BHP 200 (9-78)
Jake L. Hamon
Amerada Fed.
TD 11,580'
1
5497 MMCF + 75,089 BO
83 MCFGPD

Jake L. Hamon
State E-8913
TD 11,457'
1
8866 MMCF + 74,978 BO
289 MCFGPD
SP 161 (9-78)

19
Southwestern Nat.
State
TD 11,600'
1
2512 MMCF + 25,434 BO
554 MCFGPD
BHP 5161 (1-76)

20

4903 BHP - DST 1900 - 1200 FTP

T
20
S

290 MMCF + 2765 BO
6372 MCFGPD

Texas Oil & Gas Corp

Jake L. Hamon
Union State
TD 11,470'
1

30
5938 MMCF + 29,950 BO
2 MCFGPD
BHP 593 (9-78)

29

Western Oil
State "J"
1
TD 12,640'

-N-

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 6358 (1)
Submitted by: TXO
Hearing Date:

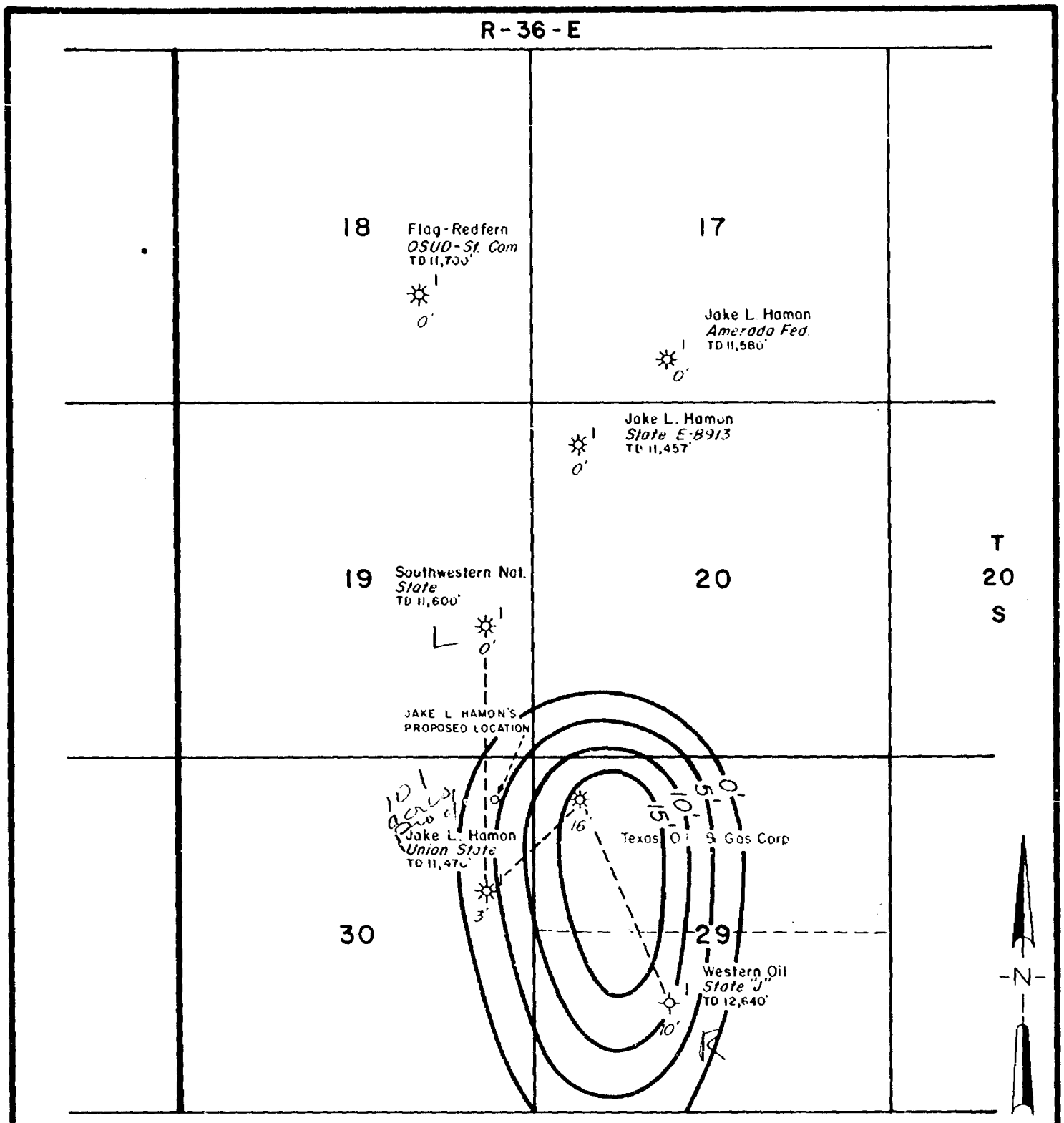
LEGEND
CUMULATIVE PRODUCTION TO 5-1-1979
DAILY RATE 4-79

Texas Oil & Gas Corp.

OSUDO AREA
LEA COUNTY, NEW MEXICO

PRODUCTION MAP

Scale 1"=2000'



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 6555 Exhibit No. 2
Submitted by TXO
Hearing Date

Texas Oil & Gas Corp.

OSUDO AREA
LEA COUNTY, NEW MEXICO

ISOPACH MAP
MIDDLE MORROW SAND PAY
C.I. = 5'

Scale 1"=2000'

SPECIAL RULES AND REGULATIONS
FOR THE
APPLICATION OF A "PRODUCTION LIMITATION FACTOR"
TO A NON-PRORATED GAS ~~WELL~~

APPLICATION OF RULES

RULE 1. These rules shall apply to the Jake L. Hamon Well No. 1 located 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, N.M.P.M., Lea County, New Mexico, which well's Production Limitation Factor of .31 shall be applied to the well's deliverability (as determined by the hereinafter set forth procedure) to determine its maximum allowable rate of production.

ALLOWABLE PERIOD

RULE 2. The allowable period for the subject well shall be six months.

RULE 3. The year shall be divided into two allowable periods commencing at 7:00 o'clock a.m. on January 1 and July 1.

DETERMINATION OF DELIVERY CAPACITY

RULE 4. Immediately upon connection of the well the operator shall determine the open flow capacity of the well in accordance with the Division "Manual for Back-Pressure Testing of Natural Gas Wells" then current, and the well's initial deliverability shall be calculated against average pipeline pressure.

RULE 5. The well's "subsequent deliverability" shall be determined twice a year, and shall be equal to its highest single day's production during the months of April and May or October and November, whichever is applicable. Said subsequent deliverability, certified by the pipeline, shall be submitted to the appropriate District Office of the Division not later than June 15 and December 15 of each year.

RULE 6. The Division Director may authorize special deliverability tests to be conducted upon a showing that the well has been worked over or that the subsequent deliverability determined under Rule 5 above is erroneous. Any such special test shall be conducted in accordance with Rule 4 above.

RULE 7. The operator shall notify the appropriate district office of the Division and all offset operators of the date and time of initial or special deliverability tests in order that the Division or any such operator may at their option witness such tests.

CALCULATION AND ASSIGNMENT OF ALLOWABLES

RULE 8. The well's allowable shall commence upon the date of connection to a pipeline and when the operator has complied with all appropriate filing requirements of the Rules and Regulations and any special rules and regulations.

RULE 9. The well's allowable during its first allowable period shall be determined by multiplying its initial deliverability by its production limitation factor.

RULE 10. The well's allowable during all ensuing allowable periods shall be determined by multiplying its latest subsequent deliverability, as determined under provisions of Rule 5, by its production limitation factor. If the well shall not have been producing for at least 60 days prior to the end of its first allowable period, the allowable for the second allowable period shall be determined in accordance with Rule 9.

RULE 11. Revision of allowable based upon special well tests shall become effective upon the date of such test provided the results of such test are filed with the Division's district office within 30 days after the date of the test; otherwise the date shall be the date the test report is received in said office.

RULE 12. Revised allowables based on special well tests shall remain effective until the beginning of the next allowable period.

RULE 13. In no event shall the well receive an allowable of less than ~~one-half~~ million cubic feet of gas per day.

BALANCING OF PRODUCTION

RULE 14. January 1 and July 1 of each year shall be known as the balancing dates.

RULE 15. If the well has an underproduced status at the end of a six-month allowable period, it shall be allowed to carry such underproduction forward into the next period and may produce such underproduction in addition to its regularly assigned allowable. Any

underproduction carried forward into any allowable period which remains unproduced at the end of the period shall be cancelled.

RULE 16. Production during any one month of an allowable period in excess of the monthly allowable assigned to the well shall be applied against the underproduction carried into the period in determining the amount of allowable, if any, to be cancelled.

RULE 17. If the well has an overproduced status at the end of a six-month allowable period, it shall be shut in until such overproduction is made up.

RULE 18. If, during any month, it is discovered that the well is overproduced in an amount exceeding three times its average monthly allowable, it shall be shut in during that month and during each succeeding month until it is overproduced in an amount three times or less its monthly allowable, as determined hereinabove.

RULE 19. The Director of the Division shall have authority to permit the well, if it is subject to shut-in pursuant to Rules 17 and 18 above, to produce up to 500 MCF of gas per month upon proper showing to the Director that complete shut-in would cause undue hardship, provided however, such permission shall be rescinded for the well if it has produced in excess of the monthly rate authorized by the Director.

RULE 20. The Division may allow overproduction to be made up at a lesser rate than permitted under Rules 17, 18 or 19 above upon a showing at public hearing that the same is necessary to avoid material damage to the well.

GENERAL

RULE 21. Failure to comply with the provisions of this order or the rules contained herein or the Rules and Regulations of the Division shall result in the cancellation of allowable assigned to the well. No further allowable shall be assigned to the well until all rules and regulations are complied with. The Division shall notify the operator of the well and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

PROFITABILITY STUDY

Investment	$	*780,000.00*
Gas Price Per MCF - Initial	$	*2.08*
Condensate Price Per Barrel - Initial	$	*13.92*
Royalty		*1/8*
Taxes - Local Severance and Ad Valorem (Oil)		*7.6%*
Operating Expense Per Year - Initial	$	*13,200*

INITIAL DAILY GAS PRODUCTION RATE MCFPD	*BEFORE FEDERAL INCOME TAX*	
	Payout Time Years	*DCF ROR * %*
1,000	*1.66*	*100.0*

**DCF ROR - Discounted Cash Flow Rate of Return*

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 6556 DN Exhibit No. 5
Submitted by TXO
Hearing Date

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
7 August 1979

COMMISSION HEARING

IN THE MATTER OF:

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico. CASE 6555

BEFORE: Commissioner Ramey
Commissioner Arnold

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Commission: Ernest L. Padilla, Esq.
Legal Counsel for the Commission
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant:

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

MR. RAMEY: We'll call first Case 6555.

MR. PADILLA: Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

MR. RAMEY: We've had a request that this be continued till August 28th, so it will be heard on August 28th in this same room at 9:00 o'clock a. m.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Commission was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.

Sally W. Boyd C.S.R.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
Oil Conservation Division
State Land Office Building
Santa Fe, New Mexico
7 August 1979

COMMISSION HEARING

IN THE MATTER OF:

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico.

CASE 6555

BEFORE: Commissioner Ramey
Commissioner Arnold

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Commission: Ernest L. Padilla, Esq.
Legal Counsel for the Commission
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant:

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
502 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

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(Hearing concluded.)

SALLY WALTON BOYD
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3021 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Commission was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

Docket No. 32-79

Dockets Nos. 35-79 and 36-79 are tentatively set for September 5 and 19, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 22, 1979

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

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

CASE 6625: (Continued from July 25, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corinne Grace, Travelers Indemnity Company, and all other interested parties to appear and show cause why the Nuklah Baby Well No. 1 located in Unit G of Section 24, Township 22 South, Range 26 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6626: Application of T. H. McElvain Oil & Gas Properties for pool commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the commingling of Gallup and Dakota production in its Miller B Well No. 6 located in Unit G of Section 12, Township 24 North, Range 7 West.

CASE 6627: Application of Caribou Four Corners, Inc. for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Gallup formation underlying a previously approved 64.32-acre non-standard unit comprising the NW/4 NW/4 and that portion of Lot 5 lying north of the San Juan River, all in Section 18, Township 29 North, Range 14 West, Chs Cha-Gallup Oil Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6628: Application of Texaco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Skaggs-Glorieta, Skaggs-Drinkard and East Weir-Blinebry production in the wellbore of its M. B. Weir "B" Well No. 9 located in Unit O of Section 12, Township 20 South, Range 37 East.

CASE 6629: Application of Hilliard Oil & Gas, Inc. for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Hanson Bonds Well No. 1 located 1650 feet from the North line and 330 feet from the East line of Section 20, Township 9 South, Range 35 East, to a Devonian bottom hole location within 100 feet of a point 1325 feet from the North line and 430 feet from the East line of said Section 20.

CASE 6630: Application of El Paso Natural Gas Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Basin-Dakota and BS Mesa-Gallup production in the wellbore of its San Juan 27-4 Unit Well No. 37 located in Unit H of Section 33, Township 27 North, Range 4 West.

CASE 6631: Application of Reserve Oil, Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Jalmat gas and Langlie Mattix oil production in the wellbore of its Cooper Jal Unit Well No. 149-306 located in Unit J of Section 18, Township 24 South, Range 37 East.

CASE 6632: Application of Mesa Petroleum Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Frank State Well No. 1 located in Unit I of Section 7, Township 19 South, Range 23 East, to produce gas from the Abo and Morrow formations, Runyan Ranch Field, through the casing-tubing annulus and through tubing.

CASE 6633: Application of Mesa Petroleum Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Yates Federal Com Well No. 1-Y located in Unit J of Section 20, Township 17 South, Range 27 East, to produce gas from the Logan Draw-Cisco Canyon Gas Pool and an undesignated Morrow pool through the casing-tubing annulus and through tubing.

CASE 6634: Application of Durham Inc. for special pool rules or a spacing exception, Chaves County, New Mexico. Applicant in the above-styled cause, seeks the promulgation of special pool rules for the Lake Arthur-Pennsylvanian Gas Pool to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Pennsylvanian gas pools rather than the present 160-acre spacing. In the alternative applicant seeks to limit the application of the pool's rules to the horizontal limits of the pool, being the SW/4 of Section 31, Township 15 South, Range 27 East.

CASE 6635: Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of the W/2 of Section 31, Township 20 South, Range 37 East, Lusont Pool, to its Aggies State Well No. 4 located in Unit F, and to its Well No. 13, at an unorthodox location 660 feet from the South line and 1650 feet from the West line, both in said Section 31.

CASE 6636: Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of all of Section 23, Township 21 South, Range 36 East, Lusont Pool, to its New Mexico "G" State Well No. 5 located in Unit E, and to its Well No. 20, at an unorthodox location in Unit M, both in said Section 23.

CASE 6637: Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of the E/2 of Section 10, Township 21 South, Range 36 East, Lusont Pool, to its Knox Well No. 1 located in Unit J, and to its Well No. [illegible], at an unorthodox location 1650 feet from the North line and 990 feet from the East line, both in said Section 10.

CASE 6638: Application of Ladd Petroleum Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Largo-Gallup and Basin-Dakota production in the wellbore of its Lindrith Well No. 24 located in Unit F of Section 4, Township 26 North, Range 7 West.

CASE 6610: (Continued from July 25, 1979, Examiner Hearing)

Application of Koch Industries, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Rustler formation through the perforated interval from 1190 feet to 1210 feet in its Wills "A" Well No. 7 located in Unit E of Section 35, Township 26 South, Range 37 East, Rhodes Field.

CASE 6579: (Continued from July 25, 1979, Examiner Hearing)

Application of R. N. Hillin for an unorthodox well location and approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of a Morrow gas well at an unorthodox location 800 feet from the South line and 2000 feet from the East line of Section 34, Township 19 South, Range 28 East, is necessary to effectively and efficiently drain that portion of the E/2 of said Section 34 which cannot be so drained by the existing well.

CASE 6580: (Continued from July 25, 1979, Examiner Hearing)

Application of Continental Oil Company for a carbon dioxide injection project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to initiate a pilot carbon dioxide injection project in the Grayburg-San Andres formation in Units H and I of Section 20, Township 17 South, Range 32 East, Maljamar Pool, for tertiary recovery purposes.

CASE 6522: (Continued from August 8, 1979, Examiner Hearing)

Application of Adams Exploration Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Penn formations underlying the N/2 of Section 15, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6639: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending certain pools in McKinley, Rio Arriba, Sandoval, and San Juan Counties, New Mexico:

(a) CREATE a new pool in McKinley County, New Mexico, classified as an oil pool for Mesaverde production and designated as the Star-Mesaverde Oil Pool. The discovery well is WTR Oil Company State Well No. 1 located in Unit D of Section 16, Township 19 North, Range 6 West, NMPM. Said pool would comprise:

TOWNSHIP 19 NORTH, RANGE 6 WEST, NMPM
Section 16: NW/4

(b) CREATE a new pool in San Juan County, New Mexico, classified as a gas pool for Farmington production and designated as the Ninti-Farmington Pool. The discovery well is Dome Petroleum Corporation Hanlad Federal Well No. 1 located in Unit F of Section 31, Township 26 North, Range 12 West, NMPM. Said pool would comprise:

TOWNSHIP 25 NORTH, RANGE 12 WEST, NMPM
Section 4: S/2 and SE/4
Section 5: N/2
Section 6: N/2
Section 9: NE/4
Section 10: NW/4

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 19: SW/4
Section 20: W/2
Section 31: W/2

(c) CREATE a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production and designated as the Farmer-Fruitland Pool. The discovery well is Manana Gas, Incorporated Bobbie Herrera Well No. 1 located in Unit K of Section 4, Township 30 North, Range 11 West, NMPM. Said pool would comprise:

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM
Section 4: SW/4

(d) CREATE a new pool in San Juan County, New Mexico, classified as an oil pool for Pennsylvanian production and designated as the Big Gap-Pennsylvanian Oil Pool. The discovery well is Bass Enterprises Production Company Navajo 20 Well No. 1 located in Unit O of Section 20, Township 27 North, Range 19 West, NMPM. Said pool would comprise:

TOWNSHIP 27 NORTH, RANGE 19 WEST, NMPM
Section 20: SE/4

(e) EXTEND the Aztec-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM
Section 29: NE/4

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
Section 25: SE/4

(f) EXTEND the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
Section 35: E/2

(g) EXTEND the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 14 WEST, NMPM
Section 9: E/2 SE/4
Section 10: SW/4
Section 15: N/2 NE/4

(h) EXTEND the Blanco Mesaverde Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
Section 4: N/2

TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM
Section 30: All (Partial Section)
Section 31: All (Partial Section)

TOWNSHIP 27 NORTH, RANGE 2 WEST, NMPM
Section 18: N/2
Section 20: E/2
Section 21: NW/4

(i) EXTEND the Blanco-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 8 WEST, NMPM
Section 4: N/2
Section 5: NW/4

TOWNSHIP 30 [illegible] 9 WEST, NMPM
Section 34: E/4
Section 35: NW/4

TOWNSHIP 32 NORTH, [illegible] 11 WEST, NMPM
Section 7: All (Partial Section)
Section 8: E/2
Section 11: E/2
Section 12: All (Partial Section)
Section 13: NW/4
Section 14: N/2

(j) EXTEND the East Blanco-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM
Section 8: NE/4
Section 9: W/2

(k) EXTEND the South Blanco-Pictured Cliffs Pool in Rio Arriba, Sandoval, and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 2 WEST, NMPM
Section 18: E/2

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 36: SE/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM
Section 19: SE/4
Section 30: All
Section 31: All
Section 32: All

(l) EXTEND the Bloomfield-Farmington Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
Section 25: N/2

(n) EXTEND the Chacon-Dakota Associated Pool in Rio Arriba and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
Section 3: W/2
Section 10: W/2

TOWNSHIP 23 NORTH, RANGE 3 WEST, NMPM
Section 25: SW/4
Section 26: SE/4

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 31: S/2
Section 34: SW/4

(n) EXTEND the Choza Mesa-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM
Section 15: SE/4
Section 22: NE/4

(o) EXTEND the Escrito-Gallup Associated Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 7 WEST, NMPM
Section 26: SW/4

(p) EXTEND the Harper Hill Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 14 WEST, NMPM
Section 2: SE/4

TOWNSHIP 30 NORTH, RANGE 16 WEST, NMPM
Section 33: S/2 and NE/4

(q) EXTEND the Barros Mesa-Chacra Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 9 WEST, NMPM
Section 5: SE/4

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM
Section 32: E/2

(r) EXTEND the Kutz-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM
Section 32: W/4

(s) EXTEND the West Kutz-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM
Section 26: SE/4

(t) EXTEND the La Plata-Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 32 NORTH, RANGE 13 WEST, NMPM
Section 32: N/2 and SE/4

(u) EXTEND the West Lindrith Gallup-Dakota Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 6: S/2 (Partial Section)
Section 18: All (Partial Section)

TOWNSHIP 24 NORTH, RANGE 4 WEST, NMPM
Section 5: N/2
Section 6: N/2
Section 24: SE/4
Section 25: NE/4

(v) EXTEND the Otero-Chacra Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM
Section 3: All
Section 4: All
Section 10: N/2 and SE/4

(w) EXTEND the Rusty-Chacra Pool in Sandoval County, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 7 WEST, NMPM
Section 20: SE/4
Section 21: E/2 and SW/4

(x) EXTEND the Straight Canyon-Dakota Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 31 NORTH, RANGE 16 WEST, NMPM
Section 14: SE/4

(y) EXTEND the WAW Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 29: S/2
Section 30: S/2
Section 32: S/2

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM
Section 25: W/2 and SW/4
Section 35: SW/4

TOWNSHIP 27 NORTH, RANGE 13 WEST, NMPM
Section 36: W/2

(c) Extend the Wild Horse-Gallup Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM
Section 16: S/2

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Docket No. 33-79

DOCKET: COMMISSION HEARING - FRIDAY - AUGUST 24, 1979

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

CASE 6495: (DE NOVO) (Continued from June 6, 1979, Commission Hearing)

Application of Amax Chemical Corporation for the amendment of Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-111-A to extend the boundaries of the Potash-Oil Area by the inclusion of certain lands in Sections 23 and 24, Township 19 South, Range 29 East, Sections 1, 4, 5, 6, 7, 11, 12, 13, 14, 19, 30, 23, 24, and 29, Township 19 South, Range 30 East, and Sections 7, 8, 17, 18, and 19, Township 19 South, Range 31 East, all in Eddy County, New Mexico.

Upon application of Amax Chemical Corporation this case will be heard De Novo pursuant to the provisions of Rule 1220.

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Docket No. 34-79

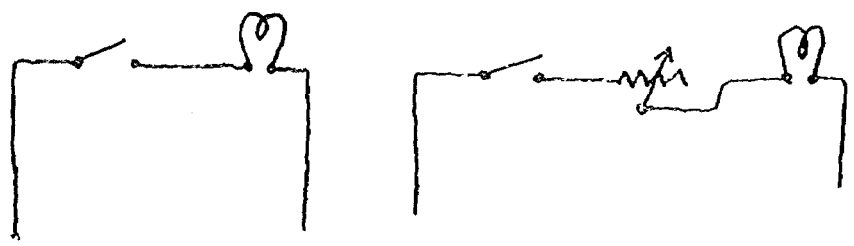
DOCKET: COMMISSION HEARING - TUESDAY - AUGUST 28, 1979

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

CASE 6555: (DE NOVO) (Continued from August 7, 1979, Commission Hearing)

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, all of said Section 30 to be dedicated to the well.

Upon application of Texas Oil & Gas Corp. this case will be heard De Novo pursuant to the provisions of Rule 1220.



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 6555
Order No. R-6029

APPLICATION OF JAKE L. HAMON FOR
AN UNORTHODOX GAS WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 23, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 26th day of June, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Jake L. Hamon, seeks approval of an unorthodox gas well location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, NMPM, to test the Morrow formation, Osudo-Morrow Gas Pool, Lea County, New Mexico.

(3) That all of said Section 30 is to be dedicated to the well.

(4) That a well at said unorthodox location will better enable applicant to produce the gas underlying the proration unit.

(5) That offsetting applicant's proposed unorthodox location to the East is a 320-acre non-standard proration unit consisting of the N/2 of Section 29, said unit being dedicated to a well at a non-standard location 660 feet from the North and West lines of said Section 29.

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

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

Tom Kellahan
2 witness.

Jerry Lossee
1 witness

Jake L. Hamon

John Casey - Dist. Geol.

Case 6215
R- 5735
} Incorporated

No penalty for above

Well plug well to South if permitted to drill & make successful Completion

Another well @ 660 N + E - not usable

West. Oil Prod well never produced

Already drilling @ 2100?

TXO send appears "hotter" in Tex. Oil + Gas well

Also difference in thickness?

Amount of condensate -

TXO No 1261
Apr 1996
May 1614
} Condensate Hamon - O?

James Cootsey

BHP - 4887 psi TXO
Harmon Union St. 200'

Prod. Characteristics
7,000,000 per day
Cond. prod.
Separate pressure areas between
north & south portions of the pool

TXO well deviated a total of 60' by
a depth of 4000'

	Amerada	St E
14.0 b/MMCF	98.2	24.8

Will Sirut2

Prod. limitation factor
Based on prod. zones
101 zones prod.
101/320 = .31
Tied to deliv.
Deliv X .31 = Allow.

Casey Isop.

prod.	160	30
	125	29

Sirut2

101	30
181	29

LAW OFFICES
LOSEE, CARSON & DICKERSON, P. A.
300 AMERICAN HOME BUILDING
P. O. DRAWER 239
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A. J. LOSEE
JOEL M. CARSON
CHAD DICKERSON
DAVID R. VANDIVER

AREA CODE 505
746-3508

5 September 1979

Mr. Joe D. Ramey, Director
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Application of Jake L. Hamon for Unorthodox Gas Well Location, Case No. 6555 De Novo

Dear Mr. Ramey:

This is a response to Mr. Kellahin's letter to you of August 29, 1979. What TXO did or did not represent by the introduction of its Exhibit 4 and reference to Case 6231 will best be evidenced by a review of the transcript.

As the Commission is well aware, the establishment of a penalty or production limitation factor for a well in a non-prorated gas field, standing alone, has no practical effect. The order entered in Case 6231 established special rules for the application of a production limitation factor to a non-prorated gas well. Briefly, these rules provided for semi-annual deliverability tests of the well and semi-annual allowables determined by multiplying the well's latest deliverability by its production limitation factor. The minimum allowable was set by the De Novo order in 6231 at 1/2 MMCF per day. By its reference to Case 6231 TXO intended to direct the Commission's attention to an order where special rules had been applied to an unorthodox location for a gas well in a non-prorated pool. TXO did not intend to represent that its recommended method of establishing a production limitation factor in the subject case was the same as in 6231. TXO did point out that the minimum allowable in 6231, De Novo, was set at 1/2 MMCF per day and recommended that it be increased in the subject case to 1 MMCF per day.

It did not seem necessary for TXO to refer to cases in which the Commission has applied a penalty or production limitation factor based upon productive acres in the spacing unit. For example, such a method of assessing a penalty was recently applied in Case Nos. 6266, De Novo, and 6398, in which the writer participated. We suggest that the Commission files will contain several such orders.

In 6231 there were no offset wells at unorthodox locations. The Commission found that the 660/660 location was 67% closer to the East line than an orthodox location, and had a drainage area of 67.2 net acres outside of its proration unit. The order established a production limitation factor of .79, based upon a 21% encroachment. As we pointed out in our argument in the subject case, a one-foot location off of the East line would be more likely to encounter the productive sand, but using the additional drainage area method of establishing a limitation factor would only result in a penalty of something less than 35%.

Prior to entering an order in this case, I am sure the Commission will review the transcript in the subject case and the orders entered in Case No. 6231. We trust this letter will clearly reflect TXO's intention in the introduction of Exhibit 4 and its reference to Case No. 6231.

Very truly yours,

LOSEE, CARSON & DICKERSON, P.A.

A. J. Losee

AJL:jcb

cc: Mr. W. Thomas Kellahin
cc w/enclosure: Mr. William A. Siruta

Dockets Nos. 35-79 and 36-79 are tentatively set for September 5 and 19, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 22, 1979

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

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

CASE 6545: (Continued from July 25, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corinne Grace, Travelers Indemnity Company, and all other interested parties to appear and show cause why the Kuklah Baby Well No. 1 located in Unit G of Section 24, Township 22 South, Range 26 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6626: Application of T. H. McElvain Oil & Gas Properties for pool commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the commingling of Gallup and Dakota production in its Miller B Well No. 6 located in Unit G of Section 12, Township 24 North, Range 7 West.

CASE 6627: Application of Caribou Four Corners, Inc. for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Gallup formation underlying a previously approved 64.32-acre non-standard unit comprising the NW/4 NW/4 and that portion of Lot 5 lying north of the San Juan River, all in Section 18, Township 29 North, Range 14 West, Cha Cha-Gallup Oil Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6628: Application of Texaco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Skaggs-Glorieta, Skaggs-Drinkard and East Weir-Blinebry production in the wellbore of its M. B. Weir "B" Well No. 9 located in Unit O of Section 12, Township 20 South, Range 37 East.

CASE 6629: Application of Hilliard Oil & Gas, Inc. for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Hanson Bonds Well No. 1 located 1650 feet from the North line and 330 feet from the East line of Section 20, Township 9 South, Range 35 East, to a Devonian bottom hole location within 100 feet of a point 1325 feet from the North line and 430 feet from the East line of said Section 20.

CASE 6630: Application of El Paso Natural Gas Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Basin-Dakota and BS Mesa-Gallup production in the wellbore of its San Juan 27-4 Unit Well No. 37 located in Unit N of Section 33, Township 27 North, Range 4 West.

CASE 6631: Application of Reserve Oil, Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Jalmat gas and Langlie Mattix oil production in the wellbore of its Cooper Jal Unit Well No. 149-306 located in Unit J of Section 18, Township 24 South, Range 37 East.

CASE 6632: Application of Mesa Petroleum Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Frank State Well No. 1 located in Unit I of Section 7, Township 19 South, Range 23 East, to produce gas from the Abo and Morrow formations, Runyan Ranch Field, through the casing-tubing annulus and through tubing.

CASE 6633: Application of Mesa Petroleum Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Yates Federal Com Well No. 1-Y located in Unit J of Section 20, Township 17 South, Range 27 East, to produce gas from the Logan Draw-Cisco Canyon Gas Pool and an undesignated Morrow pool through the casing-tubing annulus and through tubing.

CASE 6634: Application of Durham Inc. for special pool rules or a spacing exception, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Lake Arthur-Pennsylvanian Gas Pool to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Pennsylvanian gas pools rather than the present 160-acre spacing. In the alternative applicant seeks to limit the application of the pool's rules to the horizontal limits of the pool, being the SW/4 of Section 31, Township 15 South, Range 27 East.

CASE 6635: Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of the W/2 of Section 31, Township 20 South, Range 37 East, Eumont Pool, to its Aggies State Well No. 4 located in Unit F, and to its Well No. 13, at an unorthodox location 660 feet from the South line and 1650 feet from the West line, both in said Section 31.

CASE 6636: Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of all of Section 23, Township 21 South, Range 36 East, Eumont Pool, to its New Mexico "C" State Well No. 5 located in Unit E, and to its Well No. 20, at an unorthodox location in Unit M, both in said Section 23.

CASE 6637: Application of Exxon Corporation for an unorthodox well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of the E/2 of Section 10, Township 21 South, Range 36 East, Eumont Pool, to its Knox Well No. 1 located in Unit J, and to its Well No. 13, at an unorthodox location 1650 feet from the North line and 990 feet from the East line, both in said Section 10.

CASE 6638: Application of Ladd Petroleum Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Largo-Gallup and Basin-Dakota production in the wellbore of its Lindrith Well No. 24 located in Unit F of Section 4, Township 26 North, Range 7 West.

CASE 6610: (Continued from July 25, 1979, Examiner Hearing)

Application of Koch Industries, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Rustler formation through the perforated interval from 1190 feet to 1210 feet in its Wills "A" Well No. 7 located in Unit E of Section 35, Township 26 South, Range 37 East, Rhodes Field.

CASE 6579: (Continued from July 25, 1979, Examiner Hearing)

Application of R. N. Hillin for an unorthodox well location and approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of a Morrow gas well at an unorthodox location 800 feet from the South line and 2000 feet from the East line of Section 34, Township 19 South, Range 28 East, is necessary to effectively and efficiently drain that portion of the E/2 of said Section 34 which cannot be so drained by the existing well.

CASE 6580: (Continued from July 25, 1979, Examiner Hearing)

Application of Continental Oil Company for a carbon dioxide injection project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to initiate a pilot carbon dioxide injection project in the Grayburg-San Andres formation in Units H and I of Section 20, Township 17 South, Range 32 East, Maljamar Pool, for tertiary recovery purposes.

CASE 6622: (Continued from August 8, 1979, Examiner Hearing)

Application of Adams Exploration Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Penn formations underlying the N/2 of Section 15, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6639: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending certain pools in McKinley, Rio Arriba, Sandoval, and San Juan Counties, New Mexico:

(a) CREATE a new pool in McKinley County, New Mexico, classified as an oil pool for Mesaverde production and designated as the Star-Mesaverde Oil Pool. The discovery well is WTR Oil Company State Well No. 1 located in Unit D of Section 16, Township 19 North, Range 6 West, NMPM. Said pool would comprise:

TOWNSHIP 19 NORTH, RANGE 6 WEST, NMPM
Section 16: NW/4

(b) CREATE a new pool in San Juan County, New Mexico, classified as a gas pool for Farmington production and designated as the Bisti-Farmington Pool. The discovery well is Dome Petroleum Corporation Hanlad Federal Well No. 1 located in Unit F of Section 31, Township 26 North, Range 12 West, NMPM. Said pool would comprise:

TOWNSHIP 25 NORTH, RANGE 12 WEST, NMPM
Section 4: N/2 and SE/4
Section 5: N/2
Section 6: N/2
Section 9: NE/4
Section 10: NW/4

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 19: SW/4
Section 20: W/2
Section 31: W/2

(c) CREATE a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production and designated as the Farmer-Fruitland Pool. The discovery well is Manana Gas, Incorporated Bobbie Herrera Well No. 1 located in Unit K of Section 4, Township 30 North, Range 11 West, NMPM. Said pool would comprise:

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM
Section 4: SW/4

(d) CREATE a new pool in San Juan County, New Mexico, classified as an oil pool for Pennsylvanian production and designated as the Big Gap-Pennsylvanian Oil Pool. The discovery well is Bass Enterprises Production Company Navajo 20 Well No. 1 located in Unit O of Section 20, Township 27 North, Range 19 West, NMPM. Said pool would comprise:

TOWNSHIP 27 NORTH, RANGE 19 WEST, NMPM
Section 20: SE/4

(e) EXTEND the Aztec-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 10 WEST, NMPM
Section 29: NE/4

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
Section 25: SE/4

(f) EXTEND the Aztec-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 31 NORTH, RANGE 11 WEST, NMPM
Section 35: E/2

(g) EXTEND the Bisti-Lower Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 14 WEST, NMPM
Section 9: E/2 SE/4
Section 10: SW/4
Section 15: N/2 NE/4

(h) EXTEND the Blanco Mesaverde Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
Section 4: N/2

TOWNSHIP 26 NORTH, RANGE 2 WEST, NMPM
Section 30: All (Partial Section)
Section 31: All (Partial Section)

TOWNSHIP 27 NORTH, RANGE 2 WEST, NMPM
Section 16: W/2
Section 20: E/2
Section 21: NW/4

(i) EXTEND the Blanco-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 8 WEST, NMPM
Section 4: NW/4
Section 5: NE/4

TOWNSHIP 31 NORTH, RANGE 9 WEST, NMPM
Section 28: SW/4
Section 33: NW/4

TOWNSHIP 32 NORTH, RANGE 11 WEST, NMPM
Section 7: All (Partial Section)
Section 8: E/2
Section 11: E/2
Section 12: All (Partial Section)
Section 13: NW/4
Section 14: N/2

(j) EXTEND the East Blanco-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM
Section 8: NE/4
Section 9: W/2

(k) EXTEND the South Blanco-Pictured Cliffs Pool in Rio Arriba, Sandoval, and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 2 WEST, NMPM
Section 18: E/2

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 36: SE/4

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM
Section 19: SE/4
Section 30: All
Section 31: All
Section 32: All

(l) EXTEND the Bloomfield-Farmington Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
Section 25: N/2

(m) EXTEND the Chacon-Dakota Associated Pool in Rio Arriba and Sandoval Counties, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 3 WEST, NMPM
Section 3: W/2
Section 10: W/2

TOWNSHIP 23 NORTH, RANGE 3 WEST, NMPM
Section 25: SW/4
Section 26: SE/4

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 31: S/2
Section 34: SW/4

(n) EXTEND the Choza Mesa-Pictured Cliffs Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 4 WEST, NMPM
Section 15: SE/4
Section 22: NE/4

(o) EXTEND the Escrito-Gallup Associated Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 7 WEST, NMPM
Section 26: SW/4

(p) EXTEND the Harper Hill Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 29 NORTH, RANGE 14 WEST, NMPM
Section 2: SE/4

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM
Section 35: N/2 and SE/4

(q) EXTEND the Harris Mesa-Chacra Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 27 NORTH, RANGE 9 WEST, NMPM
Section 5: NE/4

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM
Section 32: E/2

(r) EXTEND the Kutz-Fruitland Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM
Section 32: NE/4

(s) EXTEND the West Kutz-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 28 NORTH, RANGE 11 WEST, NMPM
Section 26: SW/4

(t) EXTEND the La Plata-Gallup Oil Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 32 NORTH, RANGE 13 WEST, NMPM
Section 32: N/2 and SW/4

(u) EXTEND the West Lindrith Gallup-Dakota Oil Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 24 NORTH, RANGE 3 WEST, NMPM
Section 6: S/2 (Partial Section)
Section 18: All (Partial Section)

TOWNSHIP 24 NORTH, RANGE 4 WEST, NMPM
Section 5: N/2
Section 6: N/2
Section 24: SE/4
Sectiyn 25: NE/4

(v) EXTEND the Otero-Chacra Pool in Rio Arriba and San Juan Counties, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 7 WEST, NMPM
Section 3: All
Section 4: All
Section 10: N/2 and SE/4

(w) EXTEND the Fusty-Chacra Pool in Sandoval County, New Mexico, to include therein:

TOWNSHIP 22 NORTH, RANGE 7 WEST, NMPM
Section 20: SE/4
Section 21: E/2 and SW/4

(x) EXTEND the Straight Canyon-Dakota Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 31 NORTH, RANGE 16 WEST, NMPM
Section 14: SE/4

(y) EXTEND the WAW Fruitland-Pictured Cliffs Pool in San Juan County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 12 WEST, NMPM
Section 29: S/2
Section 30: E/2
Section 32: N/2

TOWNSHIP 26 NORTH, RANGE 13 WEST, NMPM
Section 13: E/2 and SW/4
Section 14: SE/4

TOWNSHIP 27 NORTH, RANGE 13 WEST, NMPM
Section 18: E/2

(z) EXTEND the Wild Horse-Gallup Pool in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
Section 16: S/2

****

Docket No. 33-79

DOCKET: COMMISSION HEARING - FRIDAY - AUGUST 24, 1979

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

CASE 6495: (DE NOVO) (Continued from June 6, 1979, Commission Hearing)

Application of Amax Chemical Corporation for the amendment of Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-111-A to extend the boundaries of the Potash-Oil Area by the inclusion of certain lands in Sections 23 and 24, Township 19 South, Range 29 East, Sections 1, 4, 5, 6, 7, 11, 12, 13, 14, 19, 20, 23, 24, and 29, Township 19 South, Range 30 East, and Sections 7, 8, 17, 18, and 19, Township 19 South, Range 31 East, all in Eddy County, New Mexico.

Upon application of Amax Chemical Corporation this case will be heard De Novo pursuant to the provisions of Rule 1220.

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Docket No. 34-79

DOCKET: COMMISSION HEARING - TUESDAY - AUGUST 28, 1979

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

CASE 6555: (DE NOVO) (Continued from August 7, 1979, Commission Hearing)

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, all of said Section 30 to be dedicated to the well.

Upon application of Texas Oil & Gas Corp. this case will be heard De Novo pursuant to the provisions of Rule 1220.

LAW OFFICES
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JOEL M. CARSON
CHAD DICKERSON
DAVID R. VANDIVER

AREA CODE 505
746-3508

31 July 1979

Mr. Joe D. Ramey, Director
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Case No. 6555, De Novo Application of
Jake L. Hamon

Dear Mr. Ramey:

This will confirm our telephone conversation of this date in which the Commission continued the hearing on the above application from August 7 to August 28, 1979 at 9:00 A.M.

I have orally advised Mr. Kellahin, attorney for Jake L. Hamon, of this continuance and this letter will confirm our conversation.

Very truly yours,

LOSEE, CARSON & DICKERSON, P.A.

A. J. Losee

AJL:jcb

cc: Mr. W. Thomas Kellahin
Mr. Charles Canfield

Dockets Nos. 32-79 and 33-79 are tentatively set for hearing on August 22 and September 5, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - AUGUST 7, 1979

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

CASE 6590: (Continued from July 25, 1979, Examiner Hearing)

Application of Grace Petroleum Corporation for compulsory pooling and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Lots 9, 10, 15, and 16 and the SE/4 of Section 6, Township 21 South, Range 32 East, to be dedicated to a well to be drilled at an unorthodox location 4650 feet from the South line and 660 feet from the East line of said Section 6. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs 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 6612: Application of Gulf Oil Corporation for compulsory pooling and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Lots 9 thru 16 of Section 6, Township 21 South, Range 32 East, to be dedicated to a well to be drilled at an unorthodox location 4650 feet from the South line and 660 feet from the East line of said Section 6. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs 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 6555: (DE NOVO)

Application of Jake L. Hamon for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox location 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, all of said Section 30 to be dedicated to the well.

Upon application of Texas Oil & Gas Corp. this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6596: (Continued from July 24, 1979, Commission Hearing)

Application of Harvey E. Yates Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Upper Pennsylvanian gas pool to be designated as the Southeast Indian Basin-Upper Pennsylvanian Gas Pool for its Southeast Indian Basin Well No. 1 located in Unit A of Section 23, Township 22 South, Range 23 East, and special pool rules therefor including 320-acre gas well spacing.

CASE 6597: (Continued from July 24, 1979, Commission Hearing)

Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Southeast Indian Basin Well No. 2, an Upper Pennsylvanian well to be drilled 660 feet from the North and West lines of Section 24, Township 22 South, Range 23 East, with the N/2 or all of said Section 24 to be dedicated to the well, depending on the outcome of Case No. 6596.

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 8, 1979

9 A.M. - OIL CONSERVATION DIVISION 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 6613: Application of Grace Petroleum Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above styled cause, seeks approval for the Smith Ranch Unit Area, comprising 1,600 acres, more or less, of State and federal lands in Township 20 South, Range 33 East.

CASE 6602: (Continued from July 25, 1979, Examiner Hearing)

Application of Tenneco Oil Company for an unorthdox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal 33 C No. 2 Well 1010 feet from the North line and 1710 feet from the West line of Section 33, Township 17 South, Range 29 East, South Empire-Wolfcamp Pool, the E/2 NW/4 of said Section 33 to be dedicated to the well.

CASE 6611: (Continued from July 25, 1979, Examiner Hearing)

Application of Cabot Corp. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the disposal of produced salt water in the Devonian formation through the perforated interval from 12,156 feet to 12,574 feet in its Reed Well No. 1 located in Unit H of Section 35, Township 13 South, Range 37 East, King Field.

CASE 6614: Application of Texaco Inc. for the amendment of Order No. R-4442, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-4442 to remove the top unit allowable restriction from producing wells in the Vacuum Grayburg San Andres Unit which are offset by "lease line" injection wells.

CASE 6615: Application of Southland Royalty Company for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Kutz-Gallup and Basin-Dakota production in the wellbore of its Frontier "E" Well No. 1 located in Unit O of Section 4, Township 27 North, Range 11 West.

CASE 6616: Application of Watson Treating Plant for an oil treating plant permit, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at a site in the SE/4 NW/4 of Section 34, Township 8 South, Range 35 East.

CASE 6617: Application of El Paso Natural Gas Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Basin-Dakota and Otero-Gallup production in the wellbore of its Jicarilla 67 Well No. 10 located in Unit M of Section 30, Township 25 North, Range 5 West.

CASE 6618: Application of Harvey E. Yates Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Yates gas pool for its DEPCO Federal Well No. 1 located in Unit D of Section 19, Township 18 South, Range 29 East, and special rules therefor, including 80-acre gas well spacing.

CASE 6619: Application of Harvey E. Yates Company for an unorthodox well location and a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 62.75-acre non-standard Yates gas proration unit comprising Lots 1 and 2 of Section 19, Township 18 South, Range 29 East, to be dedicated to its DEPCO Federal Well No. 1 drilled 330 feet from the North line and 660 feet from the West line of said Section 19.

CASE 6620: Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination for its Austin Monteith Well No. 1 located in Unit K of Section 8, Township 14 South, Range 36 East.

CASE 6621: Application of Harvey E. Yates Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Penn formations underlying the S/2 of Section 4, Township 18 South, Range 29 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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. (This case will be dismissed.)

CASE 6601: (Continued from July 25, 1979, Examiner Hearing)

Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp through Mississippian formations underlying the E/2 of Section 8, Township 14 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6622: Application of Adams Exploration Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Penn formations underlying the N/2 of Section 15, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. 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 6623: Application of Penroc Oil Corporation for approval of infill drilling and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the recompletion in the Morrow formation of its Dero "A" Federal Well No. 1 located in Unit N of Section 35, Township 19 South, Range 28 East, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6624: Application of Belco Petroleum Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements and a finding that the drilling of a well to be located in Unit K of Section 31, Township 9 South, Range 33 East, Flying "M"-San Andres Pool, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6625: Application of Newbourne Oil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be located 660 feet from the North line and 1315 feet from the East line of Section 30, Township 20 South, Range 27 East, the E/2 of said Section 30 to be dedicated to the well.

CASE 6603: (Continued from July 25, 1979, Examiner Hearing)

Application of Conoco Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Penrose Skelly and Eumont production in the wellbore of its Hawk B-1 Well No. 12 located in Unit O of Section 8, Township 21 South, Range 37 East.

CASE 6587: (Continued and Readvertised)

Application of Caribou Four Corners, Inc., for an unorthodox well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Kirtland Well No. 4 located 1450 feet from the North line and 595 feet from the West line of Section 18, Township 29 North, Range 14 West.

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Docket No. 31-79

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 15, 1979

9 A.M. - OIL CONSERVATION DIVISION 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:

ALLOWABLE: (1) Consideration of the allowable production of gas for September, 1979, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for September, 1979, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

LAW OFFICES
LOSEE, CARSON & DICKERSON, P. A.
A. J. LOSEE
JOEL M. CARSON
CHAD DICKERSON
DAVID R. VANDIVER
300 AMERICAN HOME BUILDING
P. O. DRAWER 239
ARTESIA, NEW MEXICO 88210
AREA CODE 505
746-3508

July 1979

Mr. Joe D. Ramey, Director
Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Application of Jake L. Hamon, Case No. 6555,
Order No. R-6029

Dear Mr. Ramey:

Enclosed for filing, please find three copies of application of Texas Oil & Gas Corp. for a de novo hearing before the Division.

Very truly yours,

LOSEE, CARSON & DICKERSON, P.A.

A. J. Losee

AJL:jcb
Enclosures

cc w/enclosure: Mr. Conrad Coffield
Mr. Charles Canfield

BEFORE THE OIL CONSERVATION DIVISION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF JAKE L. HAMON FOR AN UNORTHODOX GAS WELL LOCATION, LEA COUNTY, NEW MEXICO	:	CASE NO. 6555

APPLICATION FOR DE NOVO HEARING

COMES NOW TEXAS OIL & GAS CORP., by its attorneys, and in support hereof respectfully states:

1. That on June 26, 1977 the Oil Conservation Division entered its Order No. R-6029 approving a well for the Morrow formation, to be located at a point 660 feet from the North line and 560 feet from the East line of Section 30, Township 20 South, Range 36 East, N.M.P.M., Osudo Morrow Gas Pool, Lea County, New Mexico.

2. The order does not take such action as is necessary to offset the advantage as would be gained by applicant over other producers resulting from the unorthodox location.

3. Texas Oil & Gas Corp. is adversely affected by the said order.

WHEREFORE, Texas Oil & Gas Corp. prays:

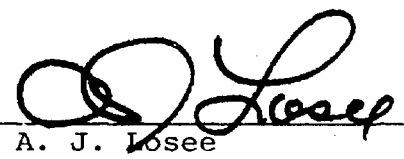
A. That the application of Jake L. Hamon for an unorthodox gas well location be heard de novo by the Division.

B. That upon hearing the Division enter its order either (1) denying the application and requiring that the well be drilled at an orthodox location under the special rules for the Osudo Morrow Gas Pool, or in the alternative (2) if the application is approved, the Division take such action as will

offset the advantage which would be gained by the applicant over other producers by reason of approval of the unorthodox location.

C. And for such other relief as may be just in the premises.

TEXAS OIL & GAS CORP.

By: 
A. J. Losee

P. O. Drawer 239
Artesia, New Mexico 88210

Attorneys for Texas Oil & Gas Corp.

BEFORE THE OIL CONSERVATION DIVISION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF JAKE L. HAMON FOR AN UNORTHODOX GAS WELL LOCATION, LEA COUNTY, NEW MEXICO	:	CASE NO. 6555

APPLICATION FOR DE NOVO HEARING

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offset the advantage which would be gained by the applicant over other producers by reason of approval of the unorthodox location.

C. And for such other relief as may be just in the premises.

TEXAS OIL & GAS CORP.

By: A. J. Losee

A. J. Losee

P. O. Drawer 239
Artesia, New Mexico 88210

Attorneys for Texas Oil & Gas Corp.

BEFORE THE OIL CONSERVATION DIVISION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF JAKE L. HAMON FOR AN UNORTHODOX GAS WELL LOCATION, LEA COUNTY, NEW MEXICO	:	CASE NO. 6555

APPLICATION FOR DE NOVO HEARING

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2. The order does not take such action as is necessary to offset the advantage as would be gained by applicant over other producers resulting from the unorthodox location.

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offset the advantage which would be gained by the applicant over other producers by reason of approval of the unorthodox location.

C. And for such other relief as may be just in the premises.

TEXAS OIL & GAS CORP.

By: A. J. Losee

P. O. Drawer 239
Artesia, New Mexico 88210

Attorneys for Texas Oil & Gas Corp.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

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

September 21, 1979

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

Re: CASE NO. 6555
ORDER NO. R-6029-A

Applicant:

Jake L. Hamon

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 A. J. Losee