

CASE 6195: ~~MEMPHIS~~ OIL COMPANY FOR  
CREATION OF AN ASSOCIATED GAS POOL AND  
A NON-STANDARD GAS PRORATION UNIT, LEA  
COUNTY, NEW MEXICO

7

Case Number

6105

Application

Transcripts.

Small Exhibits

FTR

I N D E X

CURTIS W. MEWBOURNE

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**sid morrish reporting service**  
*General Court Reporting Service*  
 825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
 Phone (505) 982-9212

1 MR. STAMETS: Call now Case 6105.

2 MS. TESCHENDORF: Case 6105. Application of  
3 Mewbourne Oil Company for creation of an associated gas  
4 pool and a non-standard gas proration unit, Lea County,  
5 New Mexico.

6 MR. KELLAHIN: Tom Kellahin of Kellahin and  
7 Fox, Santa Fe, New Mexico, appearing on behalf of the appli-  
8 cant, and I have one witness.

9 MR. STAMETS: Stand and be sworn, please.

10 (Witness sworn.)

11  
12 CURTIS W. MEWBOURNE

13  
14 being called as a witness on behalf of the Applicant, and  
15 having been duly sworn upon his oath, testified as follows,  
16 to-wit:

17  
18 DIRECT EXAMINATION

19 BY MR. KELLAHIN:

20 Q Would you please state your name and occupa-  
21 tion?

22 A Curtis W. Mewbourne. I'm a petroleum engineer  
23 and President of Mewbourne Oil Company.

24 Q Mr. Mewbourne, have you previously testified  
25 before the Commission and had your qualifications as a

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1 petroleum engineer accepted and made a matter of record?

2 A I have.

3 Q Have you made a study of and are you familiar  
4 with the facts surrounding this application?

5 A Yes, sir, I am.

6 MR. KELLAHIN: If the Chairman please, are  
7 the witness' qualifications acceptable?

8 MR. STAMETS: They are.

9 Q (Mr. Kellahin continuing.) Mr. Mewbourne,  
10 would you refer to what I have marked as Applicant Exhibit  
11 Number One, identify it, and describe to the Examiner what  
12 you're seeking to accomplish?

13 A Exhibit Number One is a plat showing the  
14 Querecho Plains-Queen Pool and surrounding sections char-  
15 acterized by the wells included in the Querecho Plains-  
16 Queen Pool being in three separate areas separated by areas  
17 of little or no control or dry holes related to porosity.

18 Q What's the significance of the red circles?

19 A The red circles identify these three separate  
20 areas where the wells are grouped in this Querecho Plains-  
21 Queen Field, and the acreage outlined in yellow are the  
22 tracts we would like to dedicate to the Mewbourne Oil Com-  
23 pany Federal "F" No. 1, which is located in the northwest  
24 quarter of the southwest quarter of Section 23.

25 Q Is that subject well an oil or a gas well, Mr.

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1 Mewbourne?

2 A It is a gas well.

3 Q Are there any other gas wells in this parti-  
4 cular field?

5 A There are not.

6 Q What are you seeking with regards to the sub-  
7 ject gas well?

8 A We're seeking permission to form a 120-acre  
9 non-standard proration unit and the designation of an as-  
10 sociated gas pool.

11 Q With regards to the non-standard proration  
12 unit, Mr. Mewbourne, the acreage in question, I believe,  
13 is Federal acreage, is it not?

14 A It is.

15 Q Have you sought and do you have preliminary  
16 approval from the USGS with regards to forming a non-standard  
17 proration unit consisting of the acreage as shown in the  
18 yellow outline?

19 A We have contacted the USGS, outlined our pro-  
20 posals, and have obtained verbal authority to include these  
21 three tracts, three 40-acre tracts, in a non-standard 120-  
22 acre gas proration unit, subject to approval by the Oil  
23 Commission.

24 Q Please refer to what we've marked as Exhibit  
25 Number 2, identify it, and explain what information it con-

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1 tains.

2 A Exhibit Two is a structure map drawn on top of  
3 the Queen porosity for the Querecho Plains Field. Once  
4 again you will see the wells included in the pool separated  
5 into three areas, and this is the result of either no  
6 drilling, no control, or dry hole, the reason being the  
7 variance in the porosity in the Queen formation.

8 What is here included in the Queen Oil Pool  
9 are two porosity zones, the Queen and the Penrose, and  
10 they're identified by orange, being Queen producers, wells  
11 perforated in the Queen porosity, and green, identifying  
12 those perforated in the Penrose porosity, and two wells  
13 being perforated in both zones. The porosity is not of  
14 uniform character. It comes and goes between the wells  
15 included in the pool.

16 Q All right. What experience have you had with  
17 drilling wells in this particular area, Mr. Mewbourne?

18 A This is the second well we have drilled. Our  
19 first well is located in Section 27 in the southeast quarter  
20 of the northwest quarter of Section 27. It is an oil well,  
21 made an oil well in the Queen porosity. And then we moved  
22 immediately to drill a second, being the well in question  
23 here, the Federal "F" No. 1, and anticipated an oil well  
24 and we were surprised when we obtained a gas well.

25 Q Would you refer to what I have marked as Ex-

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1 hibit Number Three and its different parts, and commence  
2 with page one of Exhibit Three, identify it, and explain  
3 what information it contains?

4 A Exhibit Three is the standard Oil Conservation  
5 Commission test for gas wells and it gives -- page one  
6 gives the statitical information of where the well is com-  
7 pleted. It shows the pressures and the flow rates on which  
8 the well was tested, being tested rates from a half million  
9 a day to 800,000, depending on choke size. It exhibits  
10 an absolute open flow potential of three and a half million  
11 cubic feet a day, and it shows a gas-liquid hydrocarbon  
12 ratio of -- well, it's dry. There was no liquid produced  
13 with the well whatsoever. It's a hundred percent gas.

14 Q All right, please refer to page two of that  
15 exhibit and identify it.

16 A Page two gives the times, the pressures, and  
17 the test period.

18 Q Page three of Exhibit Three?

19 A This is a calculation of those previous notes.

20 Q All right, sir, and page four?

21 A Page four is a graphical depiction calculating  
22 absolute open flow, of flow rates and the pressures.

23 Q In your opinion, Mr. Mewbourne, is the pro-  
24 posed acreage to be dedicated to the non-standard proration  
25 unit reasonably productive from a well located -- from the



1 location of the subject well?

2 A Yes, it is.

3 Q In your opinion will approval of the applica-  
4 tion be in the best interests of conservation, the prevention  
5 of waste, and the protection of correlative rights?

6 A Yes, it will.

7 Q Let me ask you about the offsetting -- on  
8 Exhibit Number Two, let me ask you about the offsetting  
9 unit to the west of the proposed non-standard unit. What  
10 is that?

11 A You'll find in Section 22 a spacing unit for  
12 a well that's completed in the Penn. That's a Strawn oil  
13 well. It was a deep hole drilled by Shell in the '50s to  
14 the Devonian, completed as a Strawn, and is still where  
15 it's completed, and it has those nine 40-acre tracts in-  
16 cluded in their spacing.

17 Q Were Exhibits One, Two, and Three prepared  
18 by you directly or compiled under your direction and super-  
19 vision?

20 A They were.

21 MR. KELLAHIN: If the Examiner please, we  
22 move the introduction of Exhibits One, Two, and Three.

23 MR. STAMETS: These exhibits will be admitted.

24 MR. KELLAHIN: That concludes our direct  
25 examination.

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CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Mewbourne, I presume you'd like to have this pool, when it's reclassified as an associated pool, covered by the associated pool rules set out in Order 5353.

A That is correct. Yes, sir, we would.

Q And 40-acre spacing for oil wells and 160-acre spacing for gas wells?

A Yes, sir.

Q And standard locations for such acreage dedication.

A Yes, sir.

Q What's the reason for the necessity for a dedication of non-standard unit in this case?

A These are Federal tracts. The only tracts we have authority over in the area, and it would be impossible to get a standard unit together with these tracts considering the acreage in Section 22 already committed to a spacing unit.

MR. STAMETS: Any other questions of the witness?

He may be excused. Anything further in this case?

MR. KELLAHIN: No, sir.

MR. STAMETS: The case will be taken under ad-

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1 visement.

2 (Hearing concluded.)

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REPORTER'S CERTIFICATE

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

*Sidney F. Morrish*  
Sidney F. Morrish, C.S.R.

**sid morrish reporting service**  
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Phone (505) 962-9212

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 6105  
heard by me on 12-14-1992  
*Richard J. [Signature]* Examiner  
New Mexico Oil Conservation Commission



Dockets Nos. 1-78 and 2-78 are tentatively set for hearing on January 4 and 18, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - DECEMBER 14, 1977

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

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

**ALLOWABLE:** (1) Consideration of the allowable production of gas for January, 1978, from fifteen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(2) Consideration of the allowable production of gas for January, 1978, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

**CASE 6101:** Application of Gulf Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Nopal Draw Unit Area comprising 1920 acres, more or less, of Federal and Fee lands in Township 21 South, Range 25 East, Eddy County, New Mexico.

**CASE 6102:** Application of Transocean Oil, Inc., for a unit agreement, Catron County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Quemado Unit Area comprising 33,844 acres, more or less, of Federal, State, and Fee lands in Township 2 North, Ranges 15, 16, and 17 West, Catron County, New Mexico.

**CASE 6103:** Application of Getty Oil Company for expansion of its Fren Seven-Rivers Waterflood Project and 28 dual completions, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Fren Seven-Rivers Waterflood Project by injection of water into the Seven-Rivers formation thru 32 wells in its Getty Unit Area, Township 17 South, Range 31 East, Eddy County, New Mexico, 28 of which wells would be dual completions in the Fren Seven-Rivers Pool and the Grayburg-Jackson Pool.

**CASE 6104:** Application of Betrice Bedingfield for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation thru the open-hole interval from 487 feet to 517 feet in her Sunray State Well No. 1 and from 500 feet to 552 feet in her Hastie Well No. 8, located in Unit E of Section 30 and Unit F of Section 18, respectively, both in Township 17 South, Range 28 East, Empire Yates-Seven Rivers Pool, Eddy County, New Mexico.

**CASE 6105:** Application of Mewbourne Oil Company for creation of an associated gas pool and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the reclassification of the Querecho Plains-Queen Oil Pool as an associated pool and approval of a 120-acre non-standard gas proration unit comprising the E/2 SE/4 of Section 22 and the NW/4 SW/4 of Section 23, both in Township 18 South, Range 32 East, Lea County, New Mexico, to be dedicated to its Federal "F" Well No. 1 located in Unit L of said Section 23.

**CASE 6106:** Application of Mesa Petroleum Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp formation underlying the E/2 of Section 31, Township 15 South, Range 36 East, Lea 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 6108:** Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Bradshaw IY Com Well No. 1 to be located 660 feet from the South and West lines of Section 35, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, the S/2 of said Section 35 to be dedicated to the well.

**CASE 6109:** Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Burton Flat-Morrow and North Burton Flat-Wolfcamp production in the wellbore of its Stonewall EP State Well No. 1 located in Unit F of Section 30, Township 20 South, Range 28 East, Eddy County, New Mexico.

**CASE 6110:** Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Kennedy Farms-Morrow and Kennedy Farms-Atoka production in the wellbore of its Caffall FD Com Well No. 1 located in Unit O of Section 15, Township 17 South, Range 26 East, Eddy County, New Mexico.



DIRECTOR  
JOE D. RAMEY

## OIL CONSERVATION COMMISSION

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

LAND COMMISSIONER  
PHIL R. LUCERO



STATE GEOLOGIST  
EMERY C. ARNOLD

Memo No. 6-77

# NOTICE! NOTICE! NOTICE!

## TO ALL OPERATORS FROM JOE D. RAMEY, SECRETARY-DIRECTOR

THIS IS A FINAL REMINDER THAT ALL EXISTING ONE-WELL AND BLANKET PLUGGING BONDS MUST BE REPLACED BY NEW BONDS ON THE REVISED FORMS PRIOR TO JANUARY 1, 1978.

This requirement is in accordance with Commission Order No. R-5432 entered May 24, 1977.

The most recent reminder of this requirement was sent to all operators by OCC Memorandum No. 5-77 dated October 17, 1977, and explained that if replacement bonds are not on file and approved by the deadline date, operators will be required to shut in all producing, drilling, and injection wells.

Response to the requirement for replacement bonds has been less than adequate. At this writing, there still remain more than one thousand bonds which have not yet been replaced, and there is less than one month before the deadline.

This is the final reminder that will be sent to operators to replace existing bonds by January 1, 1978, or face the shutting in of wells.

JDR/DSN/jr

December 2, 1977

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE NO. 6105  
Order No. R-5353-D

APPLICATION OF MEWBOURNE OIL COMPANY  
FOR CREATION OF AN ASSOCIATED GAS POOL  
AND A NON-STANDARD GAS PRORATION UNIT,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 14, 1977, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 17th day of January, 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the Querecho Plains-Queen (oil) Pool was created by Commission Order No. R-2034 effective August 1, 1961, and said pool has from time to time thereafter been extended.

(3) That the applicant, Mewbourne Oil Company has completed its Federal "F" Well No. 1 located in Unit L of Section 23, Township 18 South, Range 32 East, Lea County, New Mexico, as a gas well in the Queen formation adjacent to said Querecho Plains-Queen Pool.

(4) That the applicant seeks the redesignation of said Querecho Plains-Queen Pool as an associated pool and the establishment of 40-acre oil spacing units and 160-acre gas spacing units therefore.

(5) That the evidence presented established that said Federal "F" Well No. 1 is producing from a common reservoir with wells in said Querecho Plains-Queen Pool, and that said reservoir is an associated oil and gas reservoir.



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Case No. 6105  
Order No. R-5353-D

(6) That the evidence presented established that said pool may be efficiently and economically developed by oil wells on 40-acre spacing units and gas wells on 160-acre spacing units.

(7) That the applicant further seeks approval of a 120-acre non-standard gas proration unit comprising the E/2 SE/4 of Section 22 and the NW/4 SW/4 of Section 23, both in Township 18 South, Range 32 East, Lea County, New Mexico, to be dedicated to said Federal "F" Well No. 1.

(8) That the entire proposed non-standard gas proration unit may be presumed to be productive of gas from the Queen formation.

(9) That the application for pool reclassification, special pool rules, and a non-standard gas proration unit should be approved.

IT IS THEREFORE ORDERED:

(1) That effective January 1, 1978, the Querecho Plains-Queen Pool, Lea County, New Mexico, is hereby reclassified as an associated pool and redesignated the Querecho Plains Associated Pool.

(2) That said Querecho Plains-Queen Associated Pool shall be governed by the General Rules and Regulations for the Associated Oil and Gas Pools of Northwest and Southeast New Mexico, promulgated by Order No. R-5353, insofar as said General Rules and Regulations are not inconsistent with the Special Rules and Regulations for the subject pool as hereinafter set forth, in which event the Special Rules shall apply.

SPECIAL RULES AND REGULATIONS  
FOR THE  
QUERECHO PLAINS-QUEEN ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 40 acres. A standard gas proration unit shall be 160 acres.

IT IS FURTHER ORDERED:

(1) That effective January 1, 1978, a 120-acre non-standard gas proration unit comprising the E/2 SE/4 of Section 22 and the NE/4 SW/4 of Section 23, both in Township 18 South, Range 32 East, Lea County, New Mexico, is hereby approved for the Mewbourne Oil Company Federal "F" Well No. 1 located in Unit L of said Section 23 in the Querecho Plains-Queen Associated Pool.

(2) That the locations of all wells presently drilling to or completed in the Querecho Plains-Queen Associated Pool or in the Queen formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs district office of the Commission in writing of the name and location of the well on or before March 1, 1978.

-3-

Case No. 6105

Order No. R-5353-D

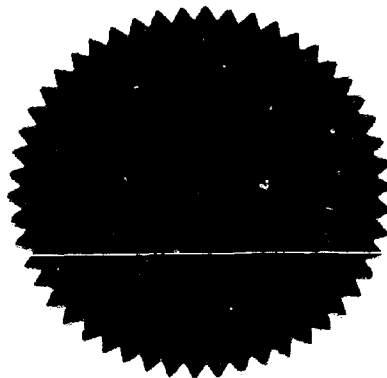
(3) That, pursuant to Paragraph A. of Section 65-3-14.5, N.M.S.A. 1953 Comp. contained in Laws 1969, Chapter 271, existing oil wells in the Querecho Plains-Queen Associated Pool shall have dedicated thereto 40 acres and existing gas wells shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating the appropriate acreage to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the Querecho Plains-Queen Associated Pool or in the Queen formation within one mile thereof shall receive no more than a 40-acre allowable for the pool.

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

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



PHIL R. LUCERO, Chairman

*Emery C. Arnold*  
EMERY C. ARNOLD, Member

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

S E A L

jr/

NEW MEXICO OIL CONSERVATION COMMISSION  
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122  
Revised 9-1-65

Type Test: <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special										Date: <u>11-7-77</u>		BEFORE EXAMINER'S TEST OIL CONSERVATION COMMISSION EXHIBIT NO. <u>3</u>	
Company: <u>Mewbourne Oil Company</u>					Connection: <u>None</u>					CASE NO. <u>6105</u>		Submitted by:	
Pool: <u>Querecho</u>					Formation: <u>Queens</u>					Hearing Date: <u>14 Dec 77</u>		Federal F	
Completion Date:			Total Depth: <u>4300</u>			Plug Depth To:			Location:			State or Lease Name:	
Csg. Size: <u>4 1/2</u>		Wt.: <u>11.6</u>		Set At: <u>4300</u>		Perforations: From <u>4132</u> To <u>4163</u>			Well No.: <u>1</u>			Unit: <u>L</u> Sec.: <u>23</u> Twp.: <u>18</u> Rge.: <u>32</u>	
Tbg. Size: <u>2 3/8</u>		Wt.: <u>4.7</u>		Set At: <u>4083</u>		Perforations: From <u>Open</u> To <u>end</u>			Country: <u>Lea</u>			State: <u>New Mexico</u>	
Type Well - Single - Prodenhead - G.G. or G.O. Multiple: <u>Single</u>										Packer Set At: <u>None</u>		County:	
Producing thru: <u>Tbg.</u>			Reservoir Temp. °F: <u>94 @ 4110</u>			Mean Annual Temp. °F:			Baro. Press. - P <sub>a</sub> : <u>13.2</u>			State:	
L: <u>4110</u>		H: <u>4110</u>		Gg: <u>.845</u>		% CO <sub>2</sub> :		% N <sub>2</sub> :		% H <sub>2</sub> S:		Prover:	
										Meter Run: <u>3"</u>		Flg.: <u>Flg.</u>	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h <sub>w</sub>	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	3	x	1.00	420	20.7	50	798		800		72 hrs.
2.	3	x	1.00	420	26.8	60	738		743		
3.	3	x	1.00	420	39.8	55	713		732		
4.	3	x	1.00	425	53.9	54	671		716		
5.							657		703		

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Super. Compens. Factor, F <sub>sp</sub>	Rate of Flow Q, Mscf/d
1	4.789	94.70	433.2	1.010	1.088	1.091	544
2	4.789	107.75	433.2	1.000	1.088	1.081	607
3	4.789	131.31	433.2	1.005	1.088	1.084	745
4	4.789	152.81	433.2	1.006	1.088	1.088	871
5							

NO.	$\eta$	Temp. °F	T <sub>g</sub>	Z	Gas-Liquid Hydrocarbon Ratio	Mol/Zul.
1	.65	510	1.16	.840	<u>Dry</u>	
2	.65	520	1.19	.856	A.P.I. Gravity of Liquid Hydrocarbons	Dep.
3	.65	515	1.18	.851	Specific Gravity Separator Gas	<u>.845</u>
4	.65	514	1.17	.845	Specific Gravity Flowing Fluid	<u>X X X X X</u>
5					Critical Pressure	<u>664</u> P.S.I.A.
					Critical Temperature	<u>438</u> °R

$P_c = 813.2$ $P_c^2 = 661.3$		$\frac{P_c^2}{P_c^2 - P_w^2} = 4.018$		$\left[ \frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.018$	
NO.	$P_c^2$	$P_w^2$	$P_c^2 - P_w^2$		
1	745.6	555.9	105.4		
2	735.9	541.5	119.8		
3	719.7	518.0	143.3		
4	704.8	496.7	164.6		
5					

Absolute Open Flow: <u>3.499</u>		Meter: <u>15.025</u>		Angle of Slope: <u>45</u>		Slope, n: <u>1.000</u>	
Remarks: <u>Static bottom hole 899 psig, bomb set at 4110. Point alignment too flat. A slope of 45° was drawn through high rate of flow.</u>							
Approved by Commission:		Conducted by: <u>Johnny Ellis</u> <u>Mewbourne Oil Co.</u>		Calculated by: <u>Reggie Reston</u>		Checked by:	

SUGGESTED FIELD DATA SHEET (Not Required To File)										
Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special					Test Date 11-7-77		Lease No. or Serial No.			
Company Mewbourne Oil Company					Connection None		Allottee			
Field Querecho		Reservoir Queens		Location		Unit L				
Completion Date 		Total Depth 4300		Plug Back TD		Elevation		Farm or Lease Name Federal F		
Csg. Size 4 1/2		Wt. 11.6 d		Set At 4300		Perforations: From 4132		To 4163		
Tbg. Size 2 3/8		Wt. 4.7 d		Set At 4083		Perforations: From Open		To end		
Type Completion (Describe) Single					Packer Set At None		Sec. 23			
Producing Thru Tbg.					Reservoir Temp. F		Mean Annual Temp. F		Baro. Press. - P <sub>d</sub> 13.2	
State New Mexico		County or Parish Lea		Prover		Meter Run 3"		Taps Flg.		

Page \_\_\_\_\_ Date By \_\_\_\_\_

WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES ( $P_c$  or  $P_w$ )

Form C-122F  
Adopted 9-1-85

FROM KNOWN BOTTOM HOLE PRESSURE ( $P_f$  or  $P_s$ )

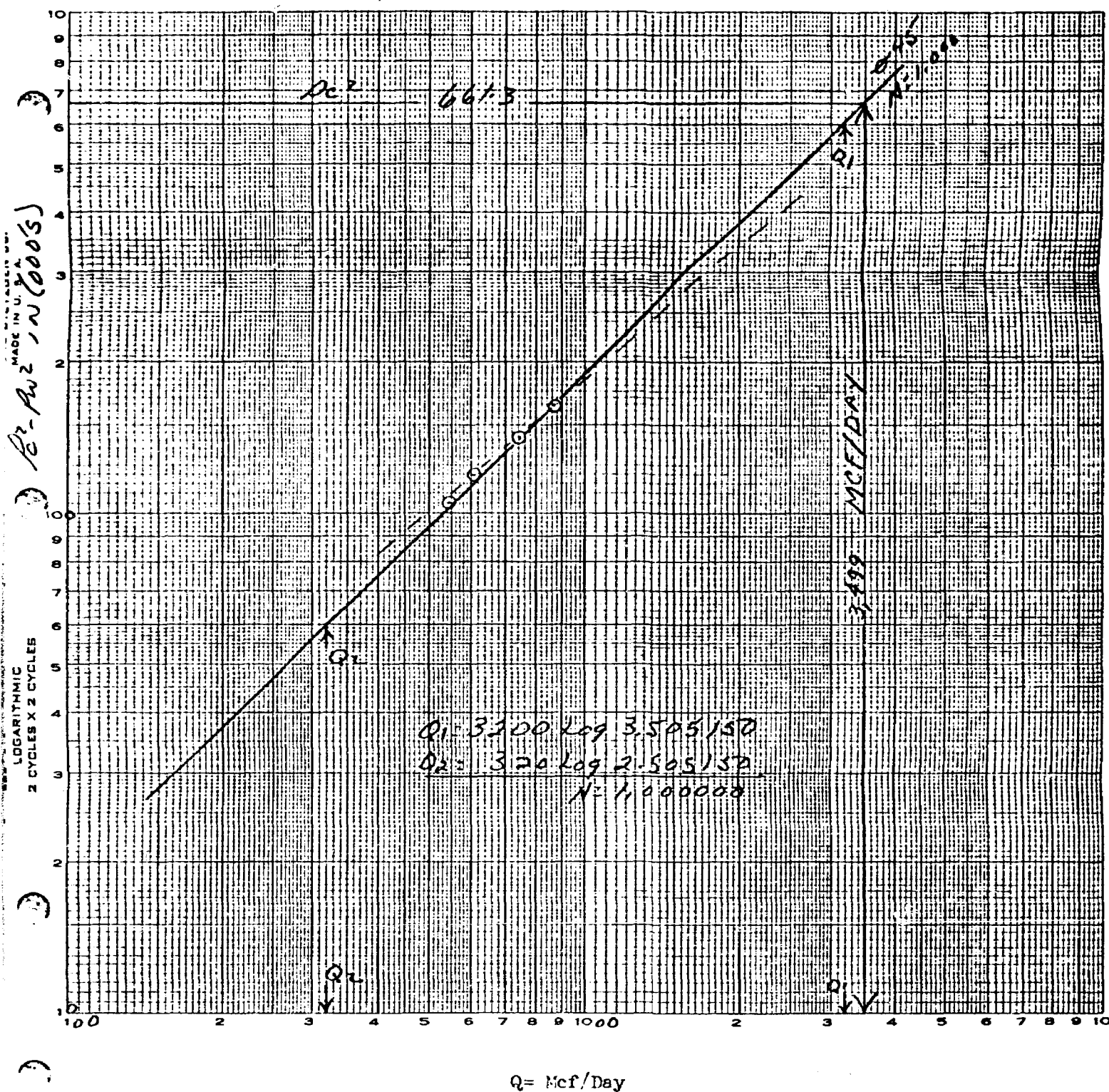
COMPANY MENBOURNE OIL LEASE Federal F WELL NO. 1 DATE 11-7-77

LOCATION: Unit L Section 23 Township 18 Range 32

L 4110 H 4110 LH 1.00 G .845 % CO<sub>2</sub> \_\_\_\_\_ % N<sub>2</sub> \_\_\_\_\_ % H<sub>2</sub>S \_\_\_\_\_

GH 3473  $P_{cr}$  1.664  $T_{cr}$  438

LINE		RATE I		RATE 2		RATE 3		RATE IV	
		1	2	3	4	5	6	7	8
1	$T_w(W.H. \text{ } ^\circ R)$	534	534	534	534	534	534	534	534
2	$T_s(B.H. \text{ } ^\circ R)$	554	554	554	554	554	554	554	554
3	$T = \frac{T_w + T_s}{2}$	544	544	544	544	544	544	544	544
4	Z (Est.)	.751	.769	.755	.773	.761	.779	.765	.783
5	TZ	408.5	418.3	410.7	420.5	414.0	423.8	416.2	425.9
6	GH/TZ	8.501	8.302	8.456	8.259	8.389	8.195	8.345	8.154
7	$e^s$ (Table XIV)	1.375	1.365	1.373	1.363	1.370	1.360	1.367	1.358
8	$P_f$ or $P_s$	871.2	871.2	859.2	859.2	839.2	839.2	821.2	821.2
9	$P_f^2$ or $P_s^2$	759.0	759.0	738.2	738.2	704.3	704.3	674.4	674.4
10	$P_c^2 = P_f^2/e^s$ or $P_w^2 = P_s^2/e^s$	551.8	555.9	537.6	541.6	514.2	517.9	493.2	496.7
11	$P_c$ or $P_w$	742.8	745.6	733.2	735.9	717.1	719.7	702.3	704.8
12	$P = \frac{P_w + P_s}{2}$ or $\frac{P_c + P_f}{2}$	807.0	808.4	796.2	797.6	778.1	779.4	761.7	762.0
13	$P_r = (P/P_{cr})$	1.22	1.22	1.20	1.20	1.17	1.17	1.15	1.15
14	$T_r = (T/T_{cr})$	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
15	Z (Table XI)	.769	.769	.773	.773	.779	.779	.783	.783



NEW YORK, N. Y., 11-11-36.

[illegible]



WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES ( $P_c$  or  $P_w$ )

Form C-122F  
Adopted 9-1-85

FROM KNOWN BOTTOM HOLE PRESSURE ( $P_f$  or  $P_s$ )

COMPANY MENBOURNE OIL LEASE Federal F WELL NO. 1 DATE 11-7-77

LOCATION: Unit L Section 23 Township 18 Range 32

L 4110 H 4110 LH 1.00 G 1845 % CO<sub>2</sub> \_\_\_\_\_ % N<sub>2</sub> \_\_\_\_\_ % H<sub>2</sub>S \_\_\_\_\_

GH 3473  $P_{cr}$  664  $T_{cr}$  438

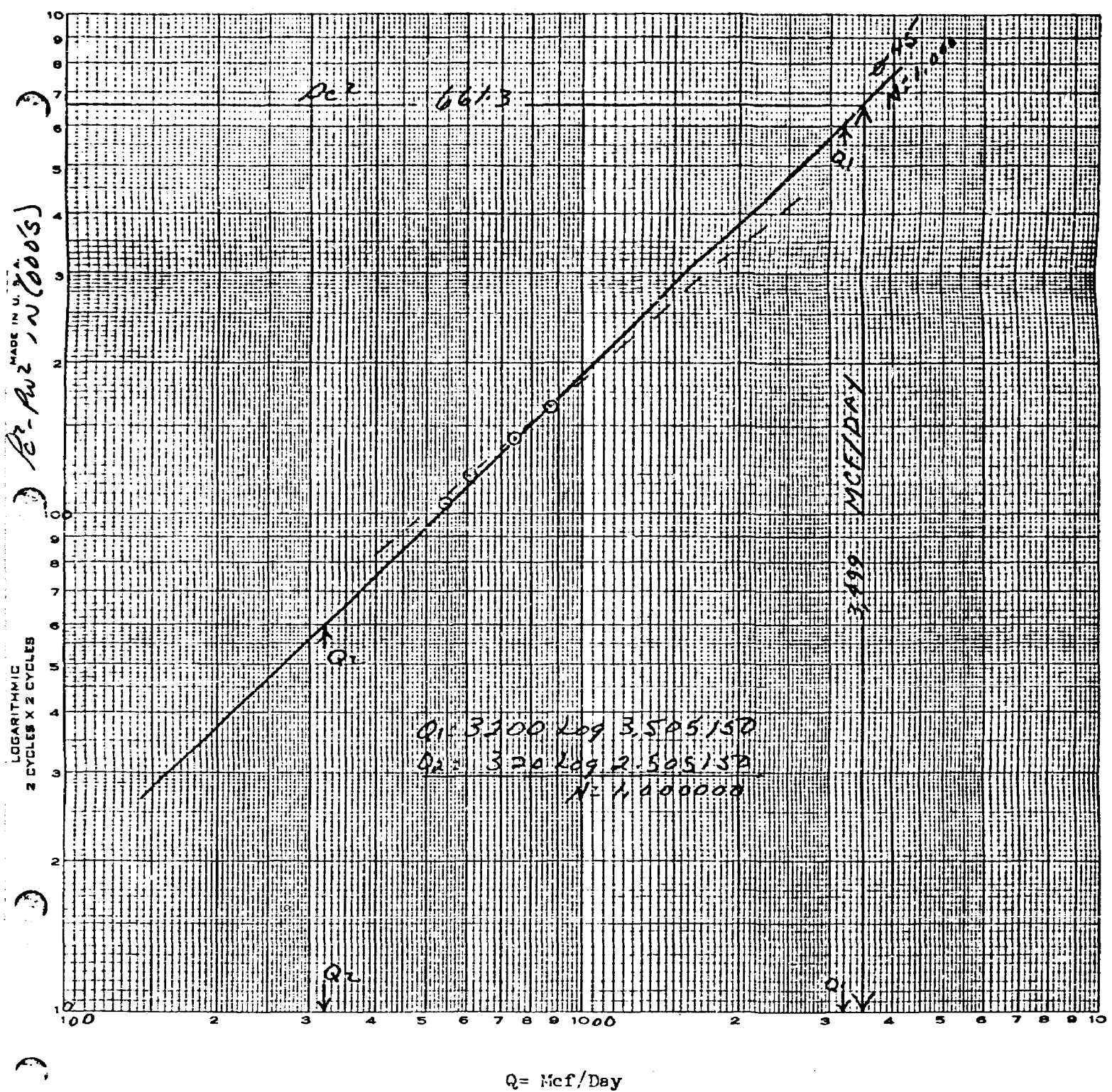
LINE		RATE I		RATE 2		RATE 3		RATE IV	
		1	2	3	4	5	6	7	8
1	$T_w(W.H. \text{ } ^\circ R)$	534	534	534	534	534	534	534	534
2	$T_s(B.H. \text{ } ^\circ R)$	554	554	554	554	554	554	554	554
3	$T = \frac{T_w + T_s}{2}$	544	544	544	544	544	544	544	544
4	Z (Est.)	.751	.769	.755	.773	.761	.779	.765	.783
5	TZ	408.5	418.3	410.7	420.5	414.0	423.8	416.2	425.9
6	GH/TZ	8.501	8.302	8.456	8.259	8.389	8.195	8.345	8.154
7	$e^S$ (Table XIV)	1.375	1.365	1.373	1.363	1.370	1.360	1.367	1.358
8	$P_f$ or $P_s$	871.2	871.2	859.2	859.2	839.2	839.2	821.2	821.2
9	$P_f^2$ or $P_s^2$	759.0	759.0	738.2	738.2	704.3	704.3	674.4	674.4
10	$P_c^2 = P_f^2/e^S$ or $P_w^2 = P_s^2/e^S$	551.8	555.9	537.6	541.6	514.2	517.9	493.2	496.7
11	$P_c$ or $P_w$	742.8	745.6	733.2	735.9	717.1	719.7	702.3	704.8
12	$P = \frac{P_w + P_s}{2}$ or $\frac{P_c + P_f}{2}$	807.0	808.4	796.2	797.6	778.1	779.4	761.7	762.0
13	$P_r = (P/P_{cr})$	1.22	1.22	1.30	1.20	1.17	1.17	1.15	1.15
14	$T_r = (T/T_{cr})$	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
15	Z (Table XI)	.769	.769	.773	.773	.779	.779	.783	.783

Mewbourne Oil Co.

"Federal F No. 1"

Unit 1, Sec. 23, Twp. 18, Rge. 32

Lea County, N.M.



JASON W. KELLAHIN  
ROBERT E. FOX  
W. THOMAS KELLAHIN

NOV 13 1977

Kellahin and Fox

ATTORNEYS AT LAW  
800 DON GASPAR AVENUE  
P. O. BOX 1769  
SANTA FE, NEW MEXICO 87501

TELEPHONE 962-4318  
AREA CODE 505

AL CONSERVATION COM November 15, 1977

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

Re: Mewbourne Oil Company

Dear Dick:

Please set the enclosed application for hearing on  
December 14, 1977.

Very truly yours,

*W. Thomas Kellahin*  
W. Thomas Kellahin

CC: Curtis Mewbourne

WTK:kfm

NOV 13 1977

BEFORE THE  
OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF MEWBOURNE OIL  
COMPANY FOR CREATION OF AN  
ASSOCIATED GAS POOL AND THE  
ESTABLISHMENT OF A NON-STANDARD  
GAS PRORATION UNIT, LEA COUNTY  
NEW MEXICO

A P P L I C A T I O N

Comes now MEWBOURNE OIL COMPANY and applies to the Oil  
Conservation Commission of New Mexico for the creation of  
an associated gas pool in accordance with NMOCC Order No. *Unit C*  
R-5353 for its Federal "F" #1 Well located in the NW/4SW/4  
of Section 23, T18S, R32E, N.M.P.M., Lea County, New Mexico  
and for the establishment of a non-standard gas proration  
unit consisting of the NW/4SW/4 of Section 23 and the *E/2 SE/4*  
~~E/2 SW/4~~  
of Section 22, T18S, R32E, N.M.P.M. and in support thereof  
would show the Commission:

1. Applicant is the owner of the right to drill and  
develop the oil and gas in the area involved in this application.
2. Applicant has completed its Federal "F" #1 Well in  
the Querecho Plains (Queen) Field, Lea County, New Mexico and  
desires to establish a non-standard gas proration unit consisting  
of the NW/4SW/4 of Section 23 and the *E/2 SW/4*  
~~E/2 SW/4~~ of Section 22,  
T18S, R32E, NMPM totalling 120 acres and composed of two federal  
leases, NM-9218 and NM-8675.
3. Applicant seeks the creation of an associated gas  
pool for the subject well.
4. That the granting of this application will prevent  
waste, protect correlative rights and be in the best interest

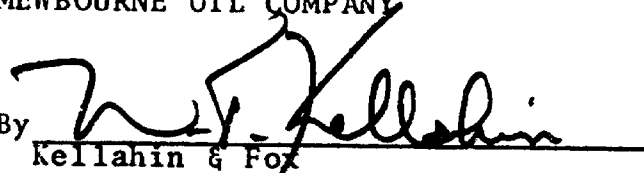
of conservation.

WHEREFORE, Applicant respectfully requests that this matter be set for hearing before the Commission's duly appointed Examiner and that upon hearing after notice, an order be entered approving the non-standard gas proration unit and the creation of an associated gas pool.

Respectfully submitted,

MEWBOURNE OIL COMPANY

By



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

ATTORNEYS FOR APPLICANT

DRAFT

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

CASE NO. 6105

Order No. R- 5353-B

APPLICATION OF MEWBOURNE OIL COMPANY  
FOR CREATION OF AN ASSOCIATED GAS POOL  
AND A NON-STANDARD GAS PRORATION UNIT,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 14,  
19 77, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this        day of January, 19 78, the Commission,  
a quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

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

(2) That the Querecho Plains-Queen (oil) Pool was created by  
Commission Order No. R-2034 effective August 1, 1961, and said pool  
has from time to time thereafter been extended.

(3) That the applicant, Mewbourne Oil Company has completed its Federal "F" Well No. 1 located in Unit L of Section 23, Township 18 South, Range 32 East, Lea County, New Mexico, as a gas well in the Queen formation adjacent to said Querecho Plains-Queen Pool.

(4) That the applicant seeks the redesignation of said Querecho Plains-Queen Pool as an associated pool and the establishment of 40-acre oil spacing units and 160-acre gas spacing units therefore.

(5) (6) That the evidence presented established that said pool may be efficiently and economically developed by oil wells on 40-acre spacing units and gas wells on 160-acre spacing units.

(7) That the applicant further seeks approval of a 120-acre non-standard gas proration unit comprising the E/2 SE/4 of Section 22 and the NW/4 SW/4 of Section 23, both in Township 18 South, Range 32 East, Lea County, New Mexico, to be dedicated to said Federal "F" Well No. 1

(8) That ~~all of said~~ <sup>the on line</sup> proposed non-standard gas proration unit may be presumed to be productive of gas from the Queen formation.

(9) That the application for pool reclassification, special pool rules, and a non-standard gas proration unit should be approved.

IT IS THEREFORE ORDERED:

(1) That effective January 1, 1978, the Querecho Plains-Queen Pool, Lea County, New Mexico, is hereby reclassified as an associated pool and redesignated the Querecho Plains Associated Pool.

(5) That the evidence presented established that said Federal "F" Well No. 1 is producing from a common reservoir with wells in the Querecho Plains-Queen Pool, and that said reservoir is an associated oil and gas reservoir.

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Case No. 6105  
Order No. R-

(2) That said Querecho Plains-Queen Associated Pool shall be governed by the General Rules and Regulations for the Associated Oil and Gas Pools of Northwest and Southeast New Mexico, promulgated by Order No. R-5353, insofar as said General Rules and Regulations are not inconsistent with the Special Rules and Regulations for the subject pool as hereinafter set forth, in which event the Special Rules shall apply.

SPECIAL RULES AND REGULATIONS

FOR THE

QUERECHO PLAINS-QUEEN ASSOCIATED POOL

RULE 2. (a) A standard oil proration unit shall be 40 acres. A standard gas proration unit shall be 160 acres.

IT IS FURTHER ORDERED:

(1) That effective January 1, 1978, a 120-acre non-standard gas proration unit comprising the E/2 SE/4 of Section 22 and the NE/4 SW/4 of Section 23, both in Township 18 South, Range 32 East, Lea County, New Mexico is hereby approved for the Mewbourne Oil Company Federal "F" Well No. 1 located in Unit L of said Section 23 in the Querecho Plains-Queen Associated Pool.

(2) That the locations of all wells presently drilling to or completed in the Querecho Plains-Queen Associated Pool or in the Queen formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs district office of the Commission in writing of the name and location of the well on or before March 1, 1978.

(3) That, pursuant to Paragraph A. of Section 65-3-14.5, N.M.S.A. 1953 Comp. contained in Laws 1969, Chapter 271, existing oil wells in the Querecho Plains-Queen Associated Pool shall have dedicated thereto 40 acres and existing gas wells shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5,



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Case No. 6105  
Order No. R-

existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating the appropriate acreage to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the Querecho Plains-Queen Associated Pool or in the Queen formation within one mile thereof shall receive no more than a 40-acre allowable for the pool.

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

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.