

CASE 6300: THE PETROLEUM CORPORATION  
FOR DOWNHOLE COMMINGLING, EDDY COUNTY,  
NEW MEXICO.

CASE NO.

6300

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
State Land Office Building  
Santa Fe, New Mexico  
30 August 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of The Petroleum Corporation )  
for downhole commingling, Eddy County, )  
New Mexico. )

CASE  
6300

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation  
Division:

Lynn Teschendorf, Esq.  
Legal Counsel for the Division  
State Land Office Building  
Santa Fe, New Mexico 87501

For the Applicant:

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HINKLE, COX, EATON, COFFIELD,  
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I N D E X

LARRY C. SHANNON

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MR. NUTTER: Call next Case Number 6300.

MS. TESCHENDORF: Case 6300. Application of The Petroleum Corporation for downhole commingling, Eddy County, New Mexico.

MR. NUTTER: Call for appearances in this case.

MR. COFFIELD: Conrad Coffield with Hinkle, Cox, Eaton, Coffield and Hensley of Midland, Texas, appearing on behalf of the Petroleum Corporation of Delaware. I have one witness.

(Witness sworn.)

LARRY C. SHANNON

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

DIRECT EXAMINATION

BY MR. COFFIELD:

Q Please state your name and address.

A Larry C. Shannon. I live in Dallas, Texas.

Q And with whom are you employed and in what position?

A I'm Senior Vice President with The Petroleum Corporation. I'm in charge of production and engineering.

Q Are you familiar with the application of the Petroleum Corporation in this case?

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1 A. Yes, I am.

2 Q. And are you familiar with the property and the  
3 well involved in this case?

4 A. Yes, I am.

5 Q. Have you previously testified before the Oil  
6 Conservation Division or the Oil Conservation Commission,  
7 previously?

8 A. Yes, I have.

9 Q. As a petroleum engineer?

10 A. Yes.

11 Q. And were your qualifications a matter of record  
12 and acceptable by the Commission?

13 A. They have been in the past, yes.

14 MR. COFFIELD: Is the witness considered quali-  
15 fied?

16 MR. NUTTER: Yes, he is.

17 Q. (Mr. Coffield continuing.) Mr. Shannon, what  
18 does The Petroleum Corporation seek in this application?

19 A. Petroleum Corporation seeks to downhole commingle  
20 of the Atoka and Morrow production in the wellbore of the  
21 Parkway West No. 1 Well, located in Unit "C" of Section 28,  
22 Township 19 South, Range 29 East, of the Parkway West Atoka  
23 Field, Eddy County, New Mexico.

24 Q. Please refer to what's been marked as Exhibit  
25 One and describe what that represents.

1 A Yes. Exhibit One shows the general area. It  
2 is a land map, and we've shaded in yellow that acreage in  
3 which we have an interest and the majority of the cases, and  
4 I believe in all the cases, we are the operator.

5 The well circled in red is the Parkway West  
6 Unit No. 1 and as you can see it is in the center, essentially,  
7 of a six-section unit, State lands. The well circled in  
8 green is another well that we'll talk about in the next case.

9 Q Are the other wells in the general area, Mr.  
10 Shannon, also noted on the -- on the plat?

11 A Yes, the wells are noted on the map. I have  
12 another exhibit that will go into more detail of the other  
13 wells in the area, but this was more of a land position --

14 Q All right.

15 A -- or general view.

16 Q Then refer to what's been marked as Exhibit Two  
17 and describe to the Examiner what that represents.

18 A Exhibit Two is a structure map of the Strawn  
19 zone in the area, and what I've tried to do here is color-  
20 code for your benefit and mine the various producing horizons  
21 in the area.

22 The wells circled in red produce in the Morrow  
23 Zone. Those that are circled in blue produce from the Atoka  
24 and you can see there are only two Atoka producing wells in  
25 the immediate area, our subject well and then the Coquina's

1 well in Section 32, south and west of our well. The wells  
2 circled in green are those that produce from the Strawn Zone,  
3 and there are several; some even designated oil. Our Petro  
4 State Well over in Section 26 in the southeast corner is  
5 an oil well in the Strawn.

6 And we've attempted to show the wells in the  
7 area in which we are asking for this commingling permit to  
8 show that there's no adverse problems with the other wells.

9 Q Okay, now go on to what we've marked as Exhibit  
10 Three, and describe to the Examiner what that represents.

11 A Exhibit Three is a schematic of the downhole  
12 completion of our Parkway West No. 1 Well. We drilled the  
13 well through the Morrow Zone back in 1973, tested the Morrow  
14 perforations, and those are defined in the sketch between  
15 11,206 and 11,268. We tested the zone and then set a  
16 bridge plug at 10,720 feet. Perforated the Atoka perfora-  
17 tions, and they were much stronger, better deliverabilities  
18 and we felt the Morrow Zone at the time we completed would  
19 only produce something like 600 Mcf a day; the Atoka was  
20 much -- was much stronger.

21 We then made a dual completion. The Atoka is  
22 shown in red, the Strawn Zone is in yellow, and we produced --  
23 we have in the past produced the Strawn and the Atoka, but  
24 when this well was completed we believe it would be quite  
25 simple to go in and knock out the bridge plug, possibly with



1 wire line equipment, to go ahead and then commingle the  
2 Atoka and the Morrow Zones.

3 Q Okay, go on now to Exhibit Number Four, and de-  
4 scribe to the Examiner what that represents.

5 A Exhibit Four we title a completion tabulation  
6 and what we've attempted to do here is to show you the zones  
7 in the area, the dates that they were completed, the intervals  
8 perforated, and the initial deliverability of the various  
9 zones.

10 There again we show the Morrow with a capability  
11 of 600 Mcf a day, the Atoka with 1,350,000, and the Strawn,  
12 550 Mcf a day with 222 barrels of oil a day.

13 Q Now refer to Exhibit Number Five and identify  
14 that for the Examiner.

15 A Exhibit Five is a copy of the log, Composite  
16 Borehole Compensated Sonic Log and Compensated Neutron-  
17 Formation Density.

18 I'll start at the bottom of the exhibit. We  
19 show the perforations that exist in the Morrow Zone between  
20 11,206 and 11,268. We typed in alongside the log the stimu-  
21 lation that was provided this zone and the reasons why we  
22 perforated where we did.

23 We'll continue on up the wellbore. You'll notice  
24 that at 10,720 feet we show the installation of a bridge  
25 plug. Above that, at 10,578 to 588 feet is the interval that

1 we perforated in the Atoka Zone. Above that is a packer  
2 that spearates the Atoka from the Strawn and it's located at  
3 10,505.

4 Then we show two sets of perforations in the  
5 Strawn Zone, the top being at 10,246 and the bottom at 10,456.

6 Q Now, Mr. Shannon, refer to what has been marked  
7 as Exhibit Six-A and describe what that represents.

8 A Okay. This is the monthly production statistics  
9 from the Parkway West Unit No. 1 Well for both the Strawn  
10 and the Atoka Zones since the well was initially placed on  
11 production. I think, looking at columns (1) and (2) you  
12 see the monthly gas and oil production from the Strawn  
13 Zone and line (65) column (1) shows the Strawn has produced  
14 through June of 1978, 539,000,000 cubic feet of gas and  
15 81,000 barrels of oil.

16 The Atoka Zone is in columns (3) and (4). The  
17 Atoka has produced 269,000,000, rounded out to 270,000,000  
18 cubic feet of gas and 4,303 barrels of oil or condensate.

19 If you'll notice the trend in column (3) you  
20 can see that the Atoka is essentially reached its economic  
21 limit. In June we only produced 806,000 cubic feet of gas.

22 Q Okay, now go to what has been marked as Exhibit  
23 Six-B.

24 A Okay. Exhibit Six-B, then, is the two offsetting  
25 wells and the production history that we have on those wells,

1 in the Parkway West Unit.

2 Columns (1) and (2) show the production from our  
3 No. 2 Well and columns (3) and (4) show the production from  
4 our No. 5 Well, and you'll note that the No. 5 Well began  
5 production in April of 1978, so it's a relatively new well  
6 in the area.

7 The Parkway West Unit No. 2 Well commenced pro-  
8 duction in June of 1975.

9 Q Mr. Shannon, what fluids are present in these  
10 two zones that we're concerned with here? At what volumes  
11 and are the fluids compatible?

12 A Well, yes, the fluids are compatible. They ---  
13 all the zones make a small amount of water but it's --- it's  
14 negligible. The Atoka Zone is making some water and that's  
15 one of the reasons why we have been unable to produce it.  
16 We feel that if we had the Morrow there to help lift the  
17 water, that we would be able to actually recover more gas  
18 from the Atoka Zone.

19 Q Now, Mr. Shannon, what about the relative pres-  
20 sure and permeability factors in these two zones?

21 A They're comparable. They're low permeability  
22 zones, in both cases and the pressure in the Atoka Zone was  
23 at normal when we completed it originally; obviously it's  
24 depleted down to a low pressure at this point.

25 Q What do you believe the chances might be for

1 transference of any liquids or gas from one zone to another  
2 in this particular case?

3 A. I don't think that's a problem at all.

4 Q. So do you believe there would be any reservoir  
5 damage to either -- either of these reservoirs, if commingling  
6 is permitted?

7 A. I can see no reason for any damage to either  
8 reservoir in a commingling situation.

9 Q. And what is your opinion with respect to the  
10 total volumes of gas which might be producible if the com-  
11 mingling is permitted as opposed to not permitted?

12 A. Well, I think we'll leave -- I think we'll leave  
13 Atoka gas in the reservoir if we're not able to commingle  
14 because what little bit of water we have there will not be  
15 able to -- will limit the production in the Atoka Zone, and  
16 then I think the Morrow gas will help lift that water and  
17 then ultimately recover more gas in the Atoka Zone.

18 Q. What relative difference do you believe there  
19 would be or would there be in operating expenses in the well  
20 if commingling is permitted as opposed to not permitted?

21 A. It would certainly help us because it would give  
22 us a lower economic limit if both zones are producing versus  
23 one and then the other. Obviously it would help the ultimate  
24 production, ultimate recovery of both zones because we'd be  
25 leveraging our economic limit in the two zones.

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1 Q What about the ownership in these two zones?  
2 Is it common?

3 A It's common.

4 Q Were these exhibits prepared by you or under  
5 your supervision, Mr. Shannon?

6 A Yes, they were.

7 Q If this request for commingling is authorized,  
8 is it your opinion that this will be in the interests of  
9 conservation, prevention of waste, and the protection of  
10 correlative rights?

11 A Yes, I believe it will.

12 MR. COFFIELD: Mr. Examiner, I move the admission  
13 of these exhibits.

14 MR. NUTTER: Applicant's Exhibits One through  
15 Six-A and Six-B will be admitted in evidence.

16 MR. COFFIELD: And I have no further questions  
17 of this witness.

18

19 CROSS EXAMINATION

20 BY MR. NUTTER:

21 Q Mr. Shannon, as I recall, when the Oil Conserva-  
22 tion Commission established the Parkway Pool some years ago,  
23 there was a limit placed on production from the wells in the  
24 zones. Did that limit apply to these wells right in here?  
25 Or is this another pool than the old original Parkway Pool?

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1 A. We have a Parkway Pool and we have a Parkway  
2 West Pool.

3 Q. Okay, what pools do the limits on production  
4 apply to? I think it's some 1500 Mcf a day, or something  
5 like that?

6 A. I have those rules with me. Yes, paragraph ten  
7 says the temporary special rules and regulations to provide  
8 for the limitation of production from wells in each of the  
9 subject pools; that a maximum of no more than 1500 Mcf per  
10 day should be produced from each well in the Strawn Pool;  
11 the maximum of no more than 2000 Mcf per day should be pro-  
12 duced from each well in the Atoka Pool.

13 Q. Okay, now what pool does that apply to?

14 A. This would apply to the West unit.

15 Q. It is the West, so that limit does apply to this  
16 well we're talking about here today?

17 A. Yes, sir, but it's no problem. I don't think  
18 we'll ever exceed that limit.

19 Q. That's what I was going to ask, if there was any  
20 possibility of the two zones combined exceeding the --

21 A. No, sir.

22 Q. Exceeding the production limit for the one pool.

23 A. No, sir.

24 Q. Okay, now, you haven't given us any formula by  
25 which to prescribe production to each of the zones that are

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1 to be commingled. Will it be possible when you re-enter  
2 this well to take a test on the Morrow Zone after you've  
3 knocked the bridge plug out?

4 A. Well, if we're fortunate to knock it out with  
5 wire line equipment the Atoka Zone would then be open and we  
6 would not have to pull the tubing. We have two strings of  
7 tubing in this wellbore. And it would be by inference the  
8 difference in what it produces it now and what we could pro-  
9 duce with the two together.

10 Q. Just by subtraction?

11 A. Yes, sir. And I don't anticipate much over, you  
12 know, 600, 700 Mcf a day initially, and I'm sure it will de-  
13 cline.

14 Q. Do you anticipate any form of stimulation on  
15 the Morrow Zone before completion of the well?

16 A. No, we stimulated -- of course back in '73 the  
17 techniques were different than they are now today. We may  
18 some day want to stimulate the Morrow with the newer tech-  
19 nique.

20 Q. I was wondering if the test that you had some  
21 years ago of 600 Mcf would be under similar conditions to  
22 what you would put the well on production today or whether  
23 you'd stimulate the well first?

24 A. No, I had not planned to stimulate. I do plan  
25 to stimulate the Strawn Zone at the same time --

1 Q That's going to remain separate anyway, isn't  
2 it?

3 A That's separate anyway.

4 Q Now, you mentioned that the Atoka produces water.  
5 How much water does the Atoka produce, Mr. Shannon?

6 A Oh, it's from two to five barrels a day. It's  
7 a small amount.

8 Q Now, sometimes the Morrow formation has been  
9 very susceptible to damage by water. Is there any possibility  
10 of the Atoka water damaging the Morrow formation?

11 A I don't believe there is in this case.

12 Q Why?

13 A It's -- the salt content of the Atoka, I think,  
14 is sufficient to prevent any swelling of the clays and I  
15 believe it is probably the swelling of the clays that would  
16 damage the Morrow. I don't have any defined test to answer  
17 that question.

18 I don't think it's sufficient water production  
19 to really give us any problem. This is more of a salvage  
20 operation, Mr. Examiner.

21 Q Well, you're salvaging the Atoka but what's going  
22 to happen to the Morrow, is what I'm talking about. Has it  
23 been necessary to swab this Atoka Zone to keep it on production?

24 A No, we've not had to swab it. We just shut it  
25 in and build up pressure --



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1 Q And then it flows water ---

2 A --- and then open it up and it flows the water  
3 out.

4 Q It still makes a few barrels of condensate pro-  
5 duction?

6 A Well, it really hasn't made much in quite some  
7 time.

8 Q It made forty-two barrels in all of '78.

9 A Right.

10 MR. NUTTER: Are there any further questions of  
11 Mr. Shannon?

12 He may be excused. Do you have anything further,  
13 Mr. Coffield?

14 MR. COFFIELD: Nothing further at this time.

15 MR. NUTTER: Does anyone have anything to offer  
16 in Case Number 6300?

17 We'll take the case under advisement.

18 (Hearing concluded.)  
19  
20  
21  
22  
23  
24  
25

## 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 Walton Boyd CSR*

Sally Walton 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. 6300 heard by me on 8/30 1978.

*[Signature]*, Examiner  
Oil Conservation Division

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STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

**JERRY APODACA**  
**GOVERNOR**

NICK FRANKLIN  
SECRETARY

September 22, 1978

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P. O. Box 3580  
Midland, Texas 79702

Re: CASE NO. 6300  
ORDER NO. R-5811

**Applicant:**

The Petroleum Corporation

**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**

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. 6300  
Order No. R-5811

APPLICATION OF THE PETROLEUM CORPORATION  
FOR DOWNHOLE COMMINGLING, EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 30, 1978, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of September, 1978, 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, The Petroleum Corporation, is the owner and operator of the Parkway West Unit Well No. 1, located in Unit C of Section 28, Township 19 South, Range 29 East, NMPM, West Parkway Field, Eddy County, New Mexico.

(3) That said well is presently dually completed to produce gas from the Strawn and Atoka formations through two strings of tubing, with supposedly marginal Morrow production sealed off by a bridge plug set at 10,720 feet.

(4) That the applicant seeks authority to commingle Atoka and Morrow production within the wellbore of the above-described well and to produce this commingled production and the Strawn production through two strings of tubing.

(5) That from the Atoka zone, the subject well is capable of low marginal production only.

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Case No. 6300  
Order No. R-5811

(6) That from the Morrow zone, the subject well is expected to be capable of low marginal production only.

(7) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(8) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(9) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Artesia district office of the Division any time the subject well is shut-in for 7 consecutive days.

(10) That in order to allocate the commingled production to each of the commingled zones in the subject well, the operator should conduct such tests as may be necessary to establish the productivity of each of the commingled zones, and should consult with the Artesia Office of the Division to arrive at an allocation formula.

IT IS THEREFORE ORDERED:

(1) That the applicant, The Petroleum Corporation, is hereby authorized to commingle Atoka and Morrow production within the wellbore of the Parkway West Unit Well No. 1, located in Unit C of Section 28, Township 19 South, Range 29 East, NMPM, Eddy County, New Mexico, and to produce this commingled production and the Strawn production through parallel strings of tubing.

(2) That the applicant shall consult with the Supervisor of the Artesia District Office of the Division and determine an allocation formula for the allocation of production to each zone in each of the subject wells.

(3) That the operator of the subject well shall immediately notify the Division's Artesia district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

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Case No. 6300  
Order No. R-5811

(4) That the production limitations imposed by Division Order No. R-4638 shall continue to be applicable to the subject well.

(5) 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



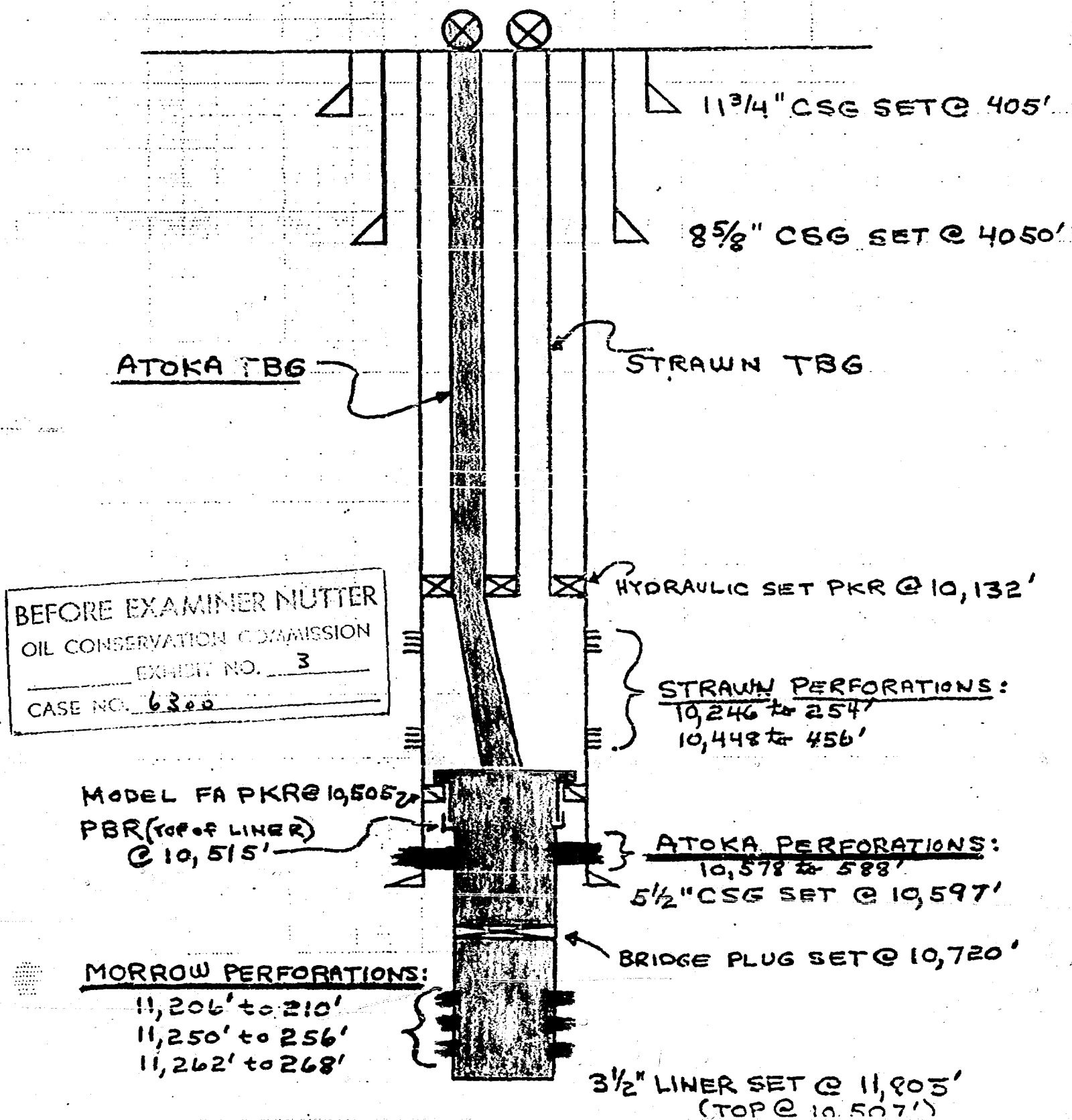
*Joe D. Ramey*  
JOE D. RAMEY,  
Director

dr/

THE PETROLEUM CORPORATION  
3303 LEE PARKWAY  
DALLAS, TEXAS 75219

SUBJECT: PARKWAY WEST UNIT WELL No. 1  
SKETCH OF DUAL COMPLETION  
(2) TWO STRINGS OF 2 1/16" (3.25 #/4) N-80 TBG

PREPARED BY LCS  
DATE 4/23/73  
REVISED 8/17/78  
SHEET 07



THE PETROLEUM CORPORATION  
 PARKWAY WEST POOL  
 EDDY COUNTY, NEW MEXICO  
COMPLETION TABULATION

		(1)	(2)	(3)	(4)	(5)	(6)
						Initial Deliverability Capacity	
Line No.	Well Name	Productive Zone(s)	Completion Date	Perforated Interval (Feet)		Gas (MCF/Day)	Oil (Bbls./Day)
(1)	Parkway West Unit #1	Strawn	3/26/73	10,246	10,256	550	222
(2)		Atoka	3/26/73	10,578	10,588	1,350	85
(3)		Morrow (a)	-	11,206	11,268	600	-
(4)	Parkway West Unit #2	Morrow	11/25/74	11,110	11,149	1,465	35
(5)	Parkway West Unit #5	Morrow	3/1/78	11,176	11,182	825	5

(a) The Morrow zone in the Parkway West Unit #1 well was perforated and tested but not completed for production. The zone is currently restrained with a bridge plug set at 10,720 feet.

BEFORE EX/MINER NUTTER  
 OIL CONSERVATION COMMISSION  
 EXHIBIT NO. 4  
 CASE NO. 6300



THE PETROLEUM CORPORATION OIL CONSERVATION COMMISSION  
PARKWAY WEST POOL  
EDDY COUNTY, NEW MEXICO  
MONTHLY PRODUCTION STATISTICS

BEFORE EXAMINER NUTTER  
EXHIBIT NO. 6-A  
CASE NO. 6300

Line No.	Month/Year	Parkway West Unit #1 Well			
		Strawn		Atoka	
		Monthly Gas Production (MCF/Month)	Monthly Oil Production (Bbls./Month)	Monthly Gas Production (MCF/Month)	Monthly Oil Production (Bbls./Month)
	<u>1973</u>				
( 1)	September	-	667	-	165
( 2)	October	18,927	3,415	43,047	1,285
( 3)	November	13,814	2,767	26,174	557
( 4)	December	14,974	2,883	20,356	366
( 5)	Subtotal 1973	47,715	9,732	89,577	2,373
	<u>1974</u>				
( 6)	January	12,854	2,462	12,872	219
( 7)	February	11,829	2,091	10,495	182
( 8)	March	13,781	2,809	9,506	168
( 9)	April	-	-	-	-
(10)	May	-	-	-	-
(11)	June	18,242	2,979	10,513	197
(12)	July	16,295	2,946	10,101	136
(13)	August	11,191	2,580	8,194	77
(14)	September	14,070	1,490	9,241	275
(15)	October	12,022	2,236	8,767	98
(16)	November	16,369	2,513	7,433	89
(17)	December	12,777	1,952	2,958	9
(18)	Subtotal 1974	139,430	24,058	90,080	1,450
	<u>1975</u>				
(19)	January	10,704	1,686	2,025	119
(20)	February	7,753	1,644	5,397	14
(21)	March	11,322	1,457	4,660	-
(22)	April	10,817	1,675	4,209	-
(23)	May	9,830	1,681	2,899	-
(24)	June	6,531	1,383	2,702	69
(25)	July	10,388	1,498	3,211	-
(26)	August	9,826	1,431	3,213	-
(27)	September	9,067	1,432	2,815	-
(28)	October	9,787	1,426	1,726	-
(29)	November	8,582	1,390	3,085	-
(30)	December	9,005	1,333	2,001	-
(31)	Subtotal 1975	113,612	18,036	37,943	202

	<u>1976</u>				
(32)	January	10,324	1,378	2,831	-
(33)	February	8,208	1,302	1,168	-
(34)	March	8,123	1,287	2,048	-
(35)	April	6,656	1,099	1,192	-
(36)	May	9,351	1,459	3,016	-
(37)	June	8,108	1,115	2,403	-
(38)	July	9,542	1,157	2,633	-
(39)	August	8,325	1,152	2,537	-
(40)	September	7,485	1,015	1,974	-
(41)	October	7,891	1,071	2,358	-
(42)	November	7,239	928	1,552	-
(43)	December	<u>7,921</u>	<u>955</u>	<u>1,956</u>	-
(44)	Subtotal 1976	<u>99,173</u>	<u>13,918</u>	<u>25,668</u>	-
	<u>1977</u>				
(45)	January	8,679	981	2,702	-
(46)	February	7,026	897	1,273	25
(47)	March	8,529	1,001	1,095	41
(48)	April	7,873	950	1,802	34
(49)	May	8,541	922	1,875	33
(50)	June	7,273	897	1,661	47
(51)	July	9,016	921	1,552	49
(52)	August	8,289	921	1,423	-
(53)	September	8,022	863	1,241	-
(54)	October	7,099	891	1,701	-
(55)	November	9,134	878	1,413	2
(56)	December	<u>8,228</u>	<u>892</u>	<u>956</u>	<u>5</u>
(57)	Subtotal 1977	<u>97,709</u>	<u>11,014</u>	<u>18,694</u>	<u>236</u>
	<u>1978</u>				
(58)	January	8,170	799	1,426	4
(59)	February	6,464	678	1,884	8
(60)	March	7,660	745	1,365	6
(61)	April	6,170	724	1,333	-
(62)	May	7,139	721	1,220	4
(63)	June	<u>6,485</u>	<u>650</u>	<u>806</u>	<u>20</u>
(64)	Subtotal 1978	<u>42,088</u>	<u>4,317</u>	<u>8,034</u>	<u>42</u>
(65)	Grand Total	<u>539,727</u>	<u>81,075</u>	<u>269,996</u>	<u>4,303</u>

THE PETROLEUM CORPORATION  
 PARKWAY WEST POOL  
 EDDY COUNTY, NEW MEXICO  
 MONTHLY PRODUCTION STATISTICS

Line No.	Month/Year	(1)	(2)	(3)	(4)
		Parkway West Unit #2 Well Morrow		Parkway West Unit #5 Well Morrow	
		Monthly Gas Production (MCF/Month)	Monthly Oil Production (Bbls./Month)	Monthly Gas Production (MCF/Month)	Monthly Oil Production (Bbls./Month)
(1)	1975 June	10,351	226	-	-
(2)	July	44,225	901	-	-
(3)	August	39,708	807	-	-
(4)	September	42,048	964	-	-
(5)	October	43,778	691	-	-
(6)	November	41,326	899	-	-
(7)	December	42,727	943	-	-
(8)	Subtotal 1975	264,163	5,431	-	-
(9)	1976 January	43,075	918	-	-
(10)	February	38,432	828	-	-
(11)	March	40,600	811	-	-
(12)	April	41,686	873	-	-
(13)	May	46,466	907	-	-
(14)	June	41,685	833	-	-
(15)	July	45,852	812	-	-
(16)	August	41,747	780	-	-
(17)	September	41,057	684	-	-
(18)	October	39,405	722	-	-
(19)	November	40,705	688	-	-
(20)	December	43,311	751	-	-
(21)	Subtotal 1976	504,021	9,607	-	-
(22)	1977 January	46,865	765	-	-
(23)	February	36,091	669	-	-
(24)	March	47,350	818	-	-
(25)	April	42,204	774	-	-
(26)	May	47,630	797	-	-
(27)	June	42,085	748	-	-
(28)	July	46,236	753	-	-
(29)	August	40,938	642	-	-
(30)	September	41,264	639	-	-
(31)	October	41,966	773	-	-
(32)	November	43,799	745	-	-
(33)	December	41,576	766	-	-
(34)	Subtotal 1977	518,004	8,889	-	-
(35)	1978 January	44,165	779	-	-
(36)	February	35,874	669	-	-
(37)	March	43,288	704	-	-
(38)	April	38,296	640	8,257	111
(39)	May	39,989	468	21,959	271
(40)	June	39,051	606	19,718	254
(41)	Subtotal 1978	240,663	3,866	49,934	636
(42)	Grand Total	1,526,851	27,793	49,934	636

BEFORE EXAMINER NUTTER  
 OIL CONSERVATION COMMISSION  
 EXHIBIT NO. 6-8  
 CASE NO. 6300

Dockets Nos. 29-78 and 30-78 are tentatively set for hearing on September 13 and 27, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - AUGUST 30, 1978

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 6298: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider the amendment of Rule 1105 of the Division Rules and Regulations to require the filing of two copies of all well logs instead of one.
- CASE 6312: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider the amendment of Order No. R-1670-T, Rule 2(A), Blanco Mesaverde Pool, San Juan and Rio Arriba Counties, New Mexico, to provide that the initial well drilled on a proration unit shall be located not closer than 790 feet to any outer boundary of the quarter section on which the well is located, and not closer than 130 feet to any quarter-quarter section or subdivision inner boundary.
- CASE 6299: Application of Wm. G. Ross for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause seeks approval for its South Lea Unit Area comprising 1,753 acres, more or less, of state land in Township 21 South, Range 34 East, Lea County, New Mexico.
- CASE 6300: Application of The Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Atoka and Morrow production in the wellbore of its Parkway West Unit Well No. 1, located in Unit C of Section 28, Township 19 South, Range 29 East, Parkway West (Atoka) Field, Eddy County, New Mexico.
- CASE 6301: Application of The Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Strawn and Morrow production in the wellbore of its Superior Federal Well No. 4, located in Unit I of Section 5, Township 20 South, Range 29 East, East Burton Flat Field, Eddy County, New Mexico.
- CASE 6302: Application of Amoco Production Company 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 N/2 of Section 25, Township 23 South, Range 28 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 6303: Application of Texas Oil & Gas 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 Indian Hills State Com. Well No. 2 to be drilled 660 feet from the South line and 660 feet from the East line of Section 36, Township 20 South, Range 24 East, Eddy County, New Mexico, to test the Morrow formation, the S/2 of said Section 36 to be dedicated to the well.
- CASE 6304: Application of Doyle Hartman for compulsory pooling and a non-standard 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 S/2 NE/4 of Section 26, Township 24 South, Range 36 East, Lea County, New Mexico, to form an 80-acre non-standard 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 6305: Application of Flag-Redfern Oil Company for two unorthodox locations and two non-standard oil proration units, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 61.14-acre non-standard unit comprising Unit K and Lot 3 of Section 16, Township 8 South, Range 38 East, Bluff-San Andres Associated Pool, Roosevelt County, New Mexico, to be dedicated to a well to be drilled 2130 feet from the South line and 2873 feet from the West line of said Section 16; also a 60.43-acre unit comprising Unit N and Lot 4 of said Section 16 to be dedicated to a well to be drilled 810 feet from the South line and 2850 feet from the West line of the section.
- CASE 6306: Application of Texaco Inc. for an unorthodox location, permission to inject water, and directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Central Vacuum Unit Well No. 139 to be located 85 feet from the South line and 958 feet from the East line of Section 36, Township 17 South, Range 34 East, Vacuum/Grayburg-San Andres Pool, Lea County, New Mexico, and directionally drilled to a 100' square bottom hole target location with the center of the target being 60 feet from the South line and 1310 feet from the East line of said Section 36, and approval to inject water into the San Andres formation in said well.

LAW OFFICES

HINKLE, COX, EATON, COFFIELD & HENSLEY

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K. DOUGLAS PERRIN  
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ROSWELL, NEW MEXICO OFFICE

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ONLY MESSRS. COFFIELD, MARTIN,  
BOZARTH, SHANNON, FOSTER & ALLEN  
LICENSED IN TEXAS

AUG - 3 1978

July 31, 1978

Oil Conservation Division  
Post Office Box 2088  
Santa Fe, New Mexico 87501

Re: Applications for Downhole  
Commingling, The Petroleum  
Corporation of Delaware

Gentlemen:

Enclosed herewith you will find, in triplicate, executed copies of two separate applications of The Petroleum Corporation of Delaware for downhole commingling in Eddy County, New Mexico. These are as follows:

(a) Parkway West Unit No. 1 Well located in Section 28, Township 19 South, Range 29 East, N.M.P.M., Eddy County, New Mexico, wherein applicant seeks to commingle the Atoka and Morrow Formations production.


(b) Superior Federal No. 4 Well located in Section 5, Township 20 South, Range 29 East, N.M.P.M., Eddy County, New Mexico, wherein applicant seeks to commingle the Morrow and Strawn Formations production.

Please set these applications for hearing at your earliest Examiner Hearing.

Thank you.

Very truly yours,

HINKLE, COX, EATON,  
COFFIELD & HENSLEY

  
Conrad E. Coffield

CEC:cm

xc: Mr. Larry C. Shannon  
The Petroleum Corporation of Delaware  
3303 Lee Parkway  
Dallas, Texas 75219

Enclosures

BEFORE THE OIL CONSERVATION DIVISION OF  
THE DEPARTMENT OF ENERGY AND MINERALS

APPLICATION OF THE PETROLEUM CORPORATION  
OF DELAWARE FOR DOWNHOLE COMMINGLING  
EDDY COUNTY, NEW MEXICO

APPLICATION

Case 6300

The Petroleum Corporation of Delaware hereby makes application for approval of downhole commingling in Eddy County, New Mexico and states:

1. Applicant has heretofore drilled its Parkway West Unit No. 1 Well 1,980 feet from West line and 660 feet from North line of Section 28, Township 19 South, Range 29 East, N.M.P.M., Eddy County, New Mexico.
2. Said well is located in the Parkway West (Atoka) Field and is currently producing from the Atoka Formation. During the month of May 1978, the Parkway West Unit No. 1 (Atoka) produced 1,219 MCF of gas and 4 barrels of oil.
3. The Morrow Formation was perforated in said well during the completion process and tested some 700 MCF of gas per day. It was then sealed by a bridge plug when the well was dually completed in both the Strawn and Atoka zones. If approval is granted for the downhole commingling sought by applicant, the removal of the bridge plug which separates the Atoka and Morrow zones is all that will be required, mechanically, to effect the downhole commingling with production from both the Atoka and Morrow Formations.
4. The N $\frac{1}{2}$  of Section 28, Township 19 South, Range 29 East, N.M.P.M. is dedicated to the well.
5. Approval of the downhole commingling will be in the interest of conservation, prevention of waste and protection of correlative rights.

Dated this 31st day of July, 1978.

HINKLE, COX, EATON, COFFIELD & HENSLEY

By: 

Conrad E. Coffield  
Post Office Box 3580  
Midland, Texas 79702  
Attorneys for The Petroleum Corporation  
of Delaware

BEFORE THE OIL CONSERVATION DIVISION OF  
THE DEPARTMENT OF ENERGY AND MINERALS

APPLICATION OF THE PETROLEUM CORPORATION  
OF DELAWARE FOR DOWNHOLE COMMINGLING  
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Dated this 31st day of July, 1978.

HINKLE, COX, EATON, COFFIELD & HENSLEY

By:

  
Conrad E. Coffield  
Post Office Box 3580  
Midland, Texas 79702

Attorneys for The Petroleum Corporation  
of Delaware

BEFORE THE OIL CONSERVATION DIVISION OF  
THE DEPARTMENT OF ENERGY AND MINERALS

APPLICATION OF THE PETROLEUM CORPORATION  
OF DELAWARE FOR DOWNHOLE COMMINGLING  
EDDY COUNTY, NEW MEXICO

APPLICATION

Case 6300

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5. Approval of the downhole commingling will be in the interest of conservation, prevention of waste and protection of correlative rights.

Dated this 31st day of July, 1978.

HINKLE, COX, EATON, COFFIELD & HENSLEY

By: 

Conrad E. Coffield  
Post Office Box 3580  
Midland, Texas 79702  
Attorneys for The Petroleum Corporation  
of Delaware



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. 6300

Order No. R-5811

APPLICATION OF THE PETROLEUM CORPORATION

FOR DOWNHOLE COMMINGLING, EDDY

COUNTY, NEW MEXICO.

*[Signature]*  
ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 30  
19 78, at Santa Fe, New Mexico, before Examiner Daniel S.  
Nutter.

NOW, on this \_\_\_\_\_ day of September, 19 78, 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, The Petroleum Corporation, is  
the owner and operator of the Parkway West Unit Well No. 1,  
located in Unit C of Section 28, Township 19 South,  
west Parkway field,  
Range 29 East, NMPM, Eddy County, New Mexico.

(4) That the applicant seeks authority to commingle  
Atoka and Morrow production  
within the wellbore of the above-described well and to produce

(3) That said well is presently dually completed  
to produce gas from the Strawn and Atoka formations  
through two strings of tubing, with supposedly marginal  
Morrow production sealed off by a bridge plug set at  
10,720 feet.

→ this commingled production and the Strawn production  
through two strings of tubing.

(6) That from the Atoka zone, the subject well is capable of low marginal production only.

(b) That from the Morrow zone, the subject well is <sup>expected to be</sup> capable of low marginal production only.

(7) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(8) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(9) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Artesia district office of the Division any time the subject well is shut-in for 7 consecutive days.

(10) That in order to allocate the commingled production to each of the commingled zones in the subject well, the operator should conduct such tests as may be necessary to establish the production percent of the commingled production should be allocated to the Atoka zone, and should consult with the Artesia Office of the Division to arrive at an allocation formula.  
~~the commingled production to the Morrow zone.~~

IT IS THEREFORE ORDERED:

(1) That the applicant, The Petroleum Corporation, is hereby authorized to commingle Atoka and Morrow production within the wellbore of the Parkway West Unit Well No. 1, located in Unit C of Section 28, Township 19 South, Range 29 East,

NMPM, Eddy County, New Mexico, and to produce this commingled production and the Strawn production through parallel strings of tubing

(2) That the applicant shall consult with the Supervisor of the Artesia District Office of the Division and determine an allocation formula for the allocation of production to each zone in each of the subject wells.

(3) That \_\_\_\_\_ percent of the commingled production shall be allocated to the \_\_\_\_\_ Atoka zone and \_\_\_\_\_ percent of the commingled production shall be allocated to the \_\_\_\_\_ Morrow zone.

(3) That the operator of the subject well shall immediately notify the Division's \_\_\_\_\_ Artesia district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

(5) 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.

(4) That the production limitations imposed by Division Order No. R-4638 shall continue to be applicable to the subject well.