

CASE 6301: THE PETROLEUM CORPORATION
FOR DOWNHOLE COMMINGLING, EDDY COUNTY,
NEW MEXICO

CASE NO.

6301

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.



BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

July 14, 1980

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

The Petroleum Corporation
3303 Lee Parkway
Dallas, Texas 75219

Attention: Mr. Larry C. Shannon

Re: Superior Federal Well No. 4
Unit I, Sec. 5, T-20-S, R-29-E

Gentlemen:

It has recently come to my attention that your Superior Federal Well No. 4 is a much better well in the Strawn formation than was anticipated when you received approval for downhole commingling of Strawn and Morrow production in the well.

Order No. R-5812, which authorized such commingling, is therefore hereby suspended.

Said order may be reinstated administratively without hearing upon satisfactory showing at a later date that well conditions justify such commingling.

Very truly yours,

JOE D. RAMEY,
Director

JDR/DSN/dr

cc: Bill Gressett
✓Case File No. 630/ —
Well File



BRUCE KING
GOVERNOR
LARRY KEHOE
SECRETARY

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ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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The Petroleum Corporation
3303 Lee Parkway
Dallas, Texas 75219

Attention: Mr. Larry C. Shannon

Re: Superior Federal Well No. 4
Unit I, Sec. 5, T-20-S, R-29-E

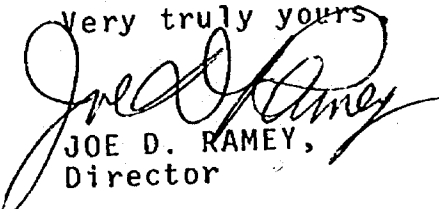
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JOE D. RAMEY,
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Case File No. 6301
Well File

Memo

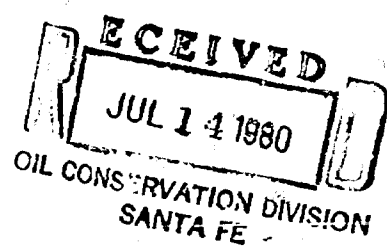
From

W. A. GRESSETT
Supervisor

To Dan Rutter

This is the well that we discussed
last month when I was up there
R-5812 - DHC.
We are assigning an allowable,

Bill



NEW MEXICO OIL CONSERVATION COMMISSION - ARTESIA, NEW MEXICO

N.M.O.C.D. 0001

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved,
Budget Bureau No. 42-R355.6.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> Other <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. NM-0144698	
b. TYPE OF COMPLETION: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input checked="" type="checkbox"/> DIFF. RESVR. <input checked="" type="checkbox"/> Other <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
2. NAME OF OPERATOR The Petroleum Corporation		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR One Marienfeld Place Suite 555, Midland, Texas 79701		8. FARM OR LEASE NAME Superior Federal	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1980' FSL, 660' FEL Sec 5 At top prod. interval reported below At total depth		9. WELL NO. 4	
10. FIELD AND POOL, OR WILDCAT Wildcat		11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec 5, T-20-S, R-29-E	
12. COUNTY OR PARISH Eddy		13. STATE N. M.	
15. DATE SPUNDED 1-18-78		16. DATE T.D. REACHED 3-7-78	
17. DATE COMPL. (Ready to prod.) ARIESIA, OFFICE Recomp 5-23-80		18. ELEVATIONS (DT, RES, RT, GR, ETC.)* 3307 KB	
19. ELEV. CASINGHEAD 3292.2		20. TOTAL DEPTH, MD & TVD 11,675'	
21. PLUG, BACK T.D., MD & TVD 10,560'		22. IF MULTIPLE COMPL., HOW MANY? SFC-11,675'	
23. INTERVALS DRILLED BY ROTARY TOOLS CABLE TOOLS		24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD) 10,314' - 10,318' Strawn	
25. WAS DIRECTIONAL SURVEY MADE No		26. TYPE ELECTRIC AND OTHER LOGS RUN Compensated Neutron - Formation and Neutron logs (Previously submitted)	
27. WAS WELL CORED No		28. CASING RECORD (Report strings set in well)	
29. LINER RECORD		30. TUBING RECORD	
31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
33. PRODUCTION		34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)	
35. LIST OF ATTACHMENTS		36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records	

SIGNED J. K. Gleason TITLE District Engineer DATE July 8 1980

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See Instructions on Items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see Item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in Item 22, and in Item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in Item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
				Bone Springs	5,630'	
				Wolfcamp	9,157'	
				Cisco	9,947'	
				Strawn	10,300'	
				Atoka	10,590'	
				Morrow	10,840'	
				Barnet Shale	11,574'	

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 Corpor-) CASE
ation for downhole commingling, Eddy) 6301
County, New Mexico.)

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 Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Conrad Coffield, Esq.
HINKLE, COX, EATON, COFFIELD,
& HENSLEY
Midland, Texas

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
730 Bishop's Lodge Road • Phone (505) 988-3404
Santa Fe, New Mexico 87501

I N D E X

LARRY C. SHANNON

Direct Examination by Mr. Coffield 3

Cross Examination by Mr. Nutter 10

E X H I B I T S

Applicant Exhibit One, Land map 10

Applicant Exhibit Two, Structure map 10

Applicant Exhibit Three, Log 10

Applicant Exhibit Four, Tabulation 10

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1 MR. NUTTER: Call next Case Number 6301.

2 MS. TESCHENDORF: Case 6301. Application of The
3 Petroleum Corporation for downhole commingling, Eddy County,
4 New Mexico.

5 MR. COFFIELD: Conrad Coffield with Hinkle, Cox,
6 Eaton, Coffield, and Hensley, appearing on behalf of the
7 Petroleum Corporation. I have the same witness we had in
8 Case 6300. If the Examiner will take notice of his being
9 still sworn and the acceptability of his qualifications, we
10 could proceed.

11 MR. NUTTER: Are there any other appearances in
12 Case Number 6301?

13 Appearances are the same and Mr. Shannon is still
14 under oath.

15
16 LARRY C. SHANNON

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

19
20 DIRECT EXAMINATION

21 BY MR. COFFIELD:

22 Q Mr. Shannon, are you familiar with the property
23 and the well involved in this case?

24 A Yes, sir, I am.

25 Q What does The Petroleum Corporation seek by

1 its application in this case?

2 A. Petroleum Corporation seeks authority to commingle
3 the Strawn and Morrow production in the wellbore of the
4 Superior Federal No. 4 Well, located in Unit "I" of Section
5 5, Township 20 South, Range 29 East, of the East Burton Flat
6 Field, Eddy County, New Mexico.

7 Q Now, please refer to what has been marked as
8 Exhibit One and describe for the Examiner what that represents.

9 A. Exhibit One is a land map of the area. We have
10 circled the Parkway -- or the Superior Federal No. 4 Well
11 in red. You'll notice it in Section 5.

12 We have circled the Parkway West Unit No. 1 Well
13 in green to denote the other well that we're asking for com-
14 mingling permission.

15 Q Okay, now go to Exhibit Two and describe what
16 that reflects relative to this particular well.

17 A. Exhibit Two shows the wells in the area and the
18 zones from which they are producing. You'll notice that we
19 have the Superior Federal No. 3 Well in Section Four, south-
20 east of the subject well in Section Five. This well initially
21 produced from the Morrow Zone. That zone was depleted and
22 it now produces from the Strawn Zone. We denote the well to
23 the south of us, operated by Texas Oil and Gas, and the zones
24 that they're reported to be producing from.

25 We also show the wells to the north of us and the

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Santa Fe, New Mexico 87501

1 zones from which they produce.

2 Q All right. Next, refer to Exhibit Three and
3 describe what that reveals.

4 A Exhibit Three is a formation density log of the
5 Superior Federal No. 4 Well, and if we'll again start at the
6 bottom of the log, we show that between 11,340 - 11,417 feet
7 we have two sets of perforations in the Morrow Zone.

8 Above this continuing up the wellbore, we show
9 at 10,314 to 10,318 we have a very small Strawn section.
10 This is correlative to the --- our No. 3 Well, Superior Fed-
11 eral No. 3, but much thinner in section.

12 This zone has not been perforated. The only
13 thing that's been perforated in the wellbore to date is the
14 Morrow perforations.

15 Q Mr. Shannon, at the time we made the application
16 in this particular case we included the information in the
17 application that the well involved was not then on production
18 but indicated that it probably would be prior to the 1st of
19 August. Is it now on production?

20 A Yes, sir, it went on production in late July.

21 Q Producing from the Morrow?

22 A Producing from the Morrow, and our initial tests
23 indicated the well probably had a deliverability of 400 Mcf
24 a day. We've been pleasantly surprised. The well is now
25 producing about 600 Mcf a day. It seems to have cleaned up

1 some after our stimulation treatments but still it's -- it's
2 not what I would term a high deliverability gas well in the
3 Morrow Zone.

4 Q In reference to this well log that you've just
5 been describing, do you believe the Strawn has enough pay
6 to justify producing it separately?

7 A No, I don't. The three feet of pay we don't
8 believe is sufficient to -- economically to produce by itself.
9 We don't really know. We haven't perforated the zone yet
10 but we don't want to commingle the two zones or anything un-
11 til we have done this.

12 Q Okay, referring to what's been marked as Exhibit
13 Four, and describe --

14 A Exhibit Four shows the production history of
15 our offsetting well, the Superior Federal No. 3 Well.

16 If you'll note in columns (1) and (2) we show
17 the gas and oil production from the Superior Federal No. 3
18 as it produced from the Morrow Zone. This well went on pro-
19 duction in May of 1975 and after producing 318,000,000 cubic
20 feet of gas it depleted.

21 We then recompleted in the Strawn Zone in May of
22 that year and have been producing that zone since. The
23 Strawn is a stronger well right now than the Morrow Zone was
24 and I'd like for you to witness the rapid decline that the
25 Morrow Zone displayed. It started out with a deliverability

1 of around a million cubic feet a day and then within a two-
2 year period it was depleted.

3 We feel that the Morrow Zone in our No. 4 Well
4 would probably be even a more rapid decline, probably shorter
5 life.

6 Q Are you offering this to point up what you be-
7 lieve to be similarities between the two wells?

8 A Yes, and economically we need some relief to
9 justify, you know, our drilling expense on this well.

10 Q On this No. 3 Well, Mr. Shannon, that production
11 was never commingled, was it?

12 A No, this zone was not commingled.

13 Q Do you think it should have been in order to --

14 A Yes, I think if, you know, if you look at the
15 time value of money it would have certainly been more ad-
16 vantageous to us to commingle the two zones.

17 Q What fluids are present in these two zones in
18 this particular well, this No. 4 Well?

19 A Well, there's a slight amount of water but in
20 either case, neither the Strawn nor the Morrow produces a
21 lot of water in this area.

22 Q Approximately how much, if you have any idea?

23 A It's in the three to five barrel a day water
24 production.

25 Q Okay, the fluids that are present, that would

1 be present in the two zones involved, do you believe that
2 they would be compatible?

3 A. Yes, I believe they would.

4 Q. Mr. Shannon, what are the relative pressure and
5 permeability factors in these two zones in this Well No. 4?

6 A. The -- both zones are low in permeability. The
7 Strawn Zone in the No. 3 Well exhibits a higher permeability
8 than I anticipate that we'll find in the No. 4 Well, but
9 both are -- both zones are essentially low permeability re-
10 servoirs.

11 Q. And what about the pressure?

12 A. The pressures are comparable, initially.

13 Q. Do you -- what chances do you believe there are
14 of any significant transference of either liquids or gas
15 from one reservoir to another?

16 A. I think that's negligible.

17 Q. Do you believe there could be any reservoir
18 damage to either of these formations?

19 A. No, I do not.

20 Q. Do you believe that ultimately there's going to
21 be more gas recovered if commingling is permitted in this
22 No. 4 Well?

23 A. Yes, there's again a leverage on economic limit
24 of the two zones and I think we could produce both zones
25 longer over a period of time than we can one zone separately.

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CERTIFIED SHORTHAND REPORTER
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1 Q Okay, and, Mr. Shannon, what about the operating
2 expenses involved here, the economics of the situation, if
3 commingling is authorized as opposed to the producing the
4 zones separately?

5 A I think that we can ultimately recover more gas
6 if they are commingled than if we have to produce each zone
7 separately.

8 Q And I believe you said earlier the Strawn simply
9 wouldn't economically justify even an attempted completion
10 at this point.

11 A Yeah, I don't know that we'd even try to attempt
12 a completion by itself.

13 Q What about the ownership of the two zones in-
14 volved, is it common?

15 A It's common. This happens to be a Federal lease.

16 Q Okay. Were these exhibits we've been discussing
17 prepared by you or under your supervision?

18 A Yes, they were.

19 Q If the order authorizing commingling in this No.
20 4 Well is favorable to The Petroleum Corporation, is it your
21 opinion that this would be in the interests of conservation,
22 prevention of waste, and the protection of correlative
23 rights?

24 A Yes.

25 MR. COFFIELD: Mr. Examiner, I move the admission

1 of these exhibits.

2 MR. NUTTER: Applicant's Exhibits One through
3 Four will be admitted in evidence.

4 MR. COFFIELD: I have no other questions of this
5 witness.

6
7 CROSS EXAMINATION

8 BY MR. NUTTER:

9 Q Mr. Shannon, in looking at these figures for the
10 Federal No. 3 Well, we see that the Strawn currently will
11 produce better than a million a day. How does the perforated
12 interval in the pay in that No. 3 Well compare with this four
13 feet of proposed perforations you've got in your No. 4 Well?

14 A We have about fifteen feet of pay in the --

15 Q That's considerably more pay than -- than in the
16 present in the subject well?

17 A Right. We hope to get a little stronger reser-
18 voir, and I'm not sure that we'll even be able to do that.
19 I think it will take some stimulation to correct that.

20 Q Now, the Morrow in the No. 3 Well came in pro-
21 ducing almost a million -- or about a million a day, and
22 declined in less than two and a half years. This well has
23 come in for initially 400 and now 600 Mcf a day and the
24 production is too new to see any decline yet, but how does
25 the pay in the No. 4 Well compare with the pay in the No. 3

1 in the Morrow?

2 A. In all cases it's lower net feet of pay in the
3 No. 4 Well versus the net feet of pay in the No. 3 Well.

4 Q. How does the No. 4 Well compare with these Morrow
5 wells to the south of you, Texas Oil and Gas Wells?

6 A. Texas Oil and Gas Wells seem to have better pay
7 in their wells than we do. It seems as we go north and west
8 we run it out of the Morrow Zone. The deliverabilities, the
9 initial potentials, and all are quite lower to the north and
10 better in most cases to the south.

11 Q. Now, with regard to your No. 3 in the Strawn,
12 does it make water?

13 A. No, sir, three, you know, three barrels a day,
14 which is probably just water that's in the gas. It's not --
15 it's not a water drive.

16 Q. So you don't anticipate any water problem on
17 the Morrow as a result of commingling Strawn with it?

18 A. No, sir, sure don't.

19 Q. Now, how will you determine the allocation of
20 production to each of the two zones there?

21 A. It's again by inferring the differential between
22 what one zone will produce and what they'll produce with
23 two zones.

24 Q. Do you anticipate --

25 A. Subtracting the difference.

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1 Q Do you anticipate that this workover and com-
2 mingling operation will take place in the near future or
3 would it be sometime from now after you've had a chance to
4 get some history on the Morrow?

5 A I'd like to produce the Morrow a few monthes
6 before I attempt a dual completion.

7 Q Why?

8 A That would give us a better history then, or
9 attempt a commingling.

10 Q Attempt a commingling?

11 A Yes, sir.

12 Q So you have no history to speak of on it now?

13 A No, sir, we don't, one month, and that's really
14 not much history.

15 MR. NUTTER: Are there any further questions
16 of Mr. Shannon? He may be excused.

17 Do you have anything further, Mr. Coffield?

18 MR. COFFIELD: I have nothing further in this
19 case.

20 MR. NUTTER: Does anyone have anything they
21 wish to offer in Case Number 6301?

22 We'll take the case under advisement.

23 (Hearing concluded.)
24
25

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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. 6301 heard by me on 8/30 1978.

Okun Examiner
Oil Conservation Division

SALLY WALTON BOYD
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JERRY APDACA
GOVERNOR

NICK FRANKLIN
SECRETARY

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

September 22, 1978

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Mr. Conrad Coffield
Hinkle, Cox, Eaton,
Coffield & Hensley
Attorneys at Law
P. O. Box 3580
Midland, Texas 79702

Re: CASE NO. 6301
ORDER NO. R-5812

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. 6301
Order No. R-5812

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 Superior Federal Well No. 4,
located in Unit I of Section 5, Township 20 South, Range 29
East, NMPM, East Burton Flat Field, Eddy County, New Mexico.
- (3) That the applicant seeks authority to commingle
Strawn and Morrow production within the wellbore of the above-
described well.
- (4) That from the Strawn zone, the subject well is
expected to be capable of low marginal production only.
- (5) That from the Morrow zone, the subject well is
capable of low marginal production only.
- (6) 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.

-2-

Case No. 6301

Order No. R-5812

(7) 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.

(8) 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.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, the operator should take such tests during completion operations as may be necessary to establish the productivity of each zone, and should consult with the Artesia District 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 Strawn and Morrow production within the wellbore of the Superior Federal Well No. 4, located in Unit I of Section 5, Township 20 South, Range 29 East, NMPM, Eddy County, New Mexico.

(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.

(4) 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

THE PETROLEUM CORPORATION
EAST BURTON FLAT POOL
EDDY COUNTY, TEXAS
MONTHLY PRODUCTION STATISTICS

BEFORE EXAMINATION
OIL COMPANY
DATE 10/1/78
CASE NO. 6301

(1) (2) (3) (4)

		Superior Federal No. 3 Well			
		Morrow		Strawn	
Line No.	Month/Year	Monthly Gas Production (MCF/Month)	Monthly Oil Production (Bbls./Month)	Monthly Gas Production (MCF/Month)	Monthly Oil Production (Bbls./Month)
<u>1975</u>					
(1)	May	4,821	54	-	-
(2)	June	16,754	4	-	-
(3)	July	29,582	63	-	-
(4)	August	31,976	61	-	-
(5)	September	29,639	16	-	-
(6)	October	28,538	125	-	-
(7)	November	23,221	7	-	-
(8)	December	21,673	15	-	-
(9)	Subtotal 1975	186,204	345	-	-
<u>1976</u>					
(10)	January	21,883	14	-	-
(11)	February	16,971	11	-	-
(12)	March	16,931	14	-	-
(13)	April	15,408	11	-	-
(14)	May	15,522	120	-	-
(15)	June	14,119	8	-	-
(16)	July	13,824	11	-	-
(17)	August	6,188	73	-	-
(18)	September	1,273	-	-	-
(19)	October	2,666	-	-	-
(20)	November	1,256	-	-	-
(21)	December	3,794	-	-	-
(22)	Subtotal 1976	129,635	262	-	-
<u>1977</u>					
(23)	January	1,437	-	-	-
(24)	February	372	-	-	-
(25)	March	105	-	-	-
(26)	April	-	-	-	-
(27)	May	288	-	-	-
(28)	June	-	-	1,753	50
(29)	July	-	-	27,880	1,042
(30)	August	-	-	46,138	1,651
(31)	September	-	-	46,577	1,630
(32)	October	-	-	42,129	1,421
(33)	November	-	-	44,214	1,437
(34)	December	-	-	42,278	1,348
(35)	Subtotal 1977	2,202	-	293,543	9,920
<u>1978</u>					
(36)	January	-	-	39,950	1,204
(37)	February	-	-	34,168	1,033
(38)	March	-	-	37,008	1,027
(39)	April	-	-	35,031	1,008
(40)	May	-	-	35,155	956
(41)	June	-	-	33,652	939
(42)	Subtotal 1978	-	-	214,964	6,167
(43)	Grand Total	318,241	607	508,507	16,087

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 86-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, Bluit-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.

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

Case 6301

APPLICATION

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 Superior Federal No. 4 Well 1,980 feet from South line and 660 feet from East line of Section 5, Township 20 South, Range 29 East, N.M.P.M., Eddy County, New Mexico.
2. Said well is located in the East Burton Flat (Morrow) Field. Because the Superior Federal No. 4 Well has only recently been drilled, said well has not, as of the date of this application, been connected to a gas line for gas sales from the well. On or about August 1, 1978 such a connection may be complete. However, tests indicate that the Morrow Formation will deliver approximately 400 MCF of gas per day initially. Although the Strawn zone has not been fully tested, it appears to have approximately three feet of pay, as defined by electric logs. With appropriate completion procedures, downhole commingling may be effected and gas production can be taken from both the Strawn and Morrow Formations.
3. The E $\frac{1}{2}$ of Section 5, Township 20 South, Range 29 East, N.M.P.M. will be dedicated to the well.
4. 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

N.B. - Bond is for
"The Petroleum Corp."
only.

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

Case 6301

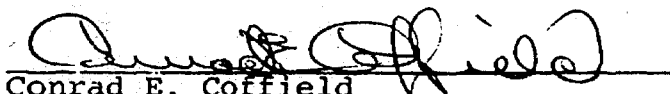
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BEFORE THE OIL CONSERVATION DIVISION OF
THE DEPARTMENT OF ENERGY AND MINERALS

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

APPLICATION

Case 6301

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3. The E $\frac{1}{2}$ of Section 5, Township 20 South, Range 29 East, N.M.P.M. will be dedicated to the well.
4. 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

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

dr/

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

CASE NO. 6301

Order No. R-5812

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
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 Superior Federal Well No. 4,
located in Unit I of Section 5, Township 20 South,
Range 29 East, ^{East Burton Flat Field} NMPM, Eddy County, New Mexico.

(3) That the applicant seeks authority to commingle
Strawn and Morrow production
within the wellbore of the above-described well.

(4) That from the Strawn zone, the subject well is ^{*expected to be*} capable of low marginal production only.

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

(6) 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.

(7) 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.

(8) 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.

(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, *The operator should take such tests during completion operations as may be necessary to establish the productivity of each zone, and should consult with the Artesia District Office of the Division to arrive at an allocation formula.*
~~percent of the commingled production should be allocated to the Strawn zone, and percent of the commingled production to the Morrow zone.~~

IT IS THEREFORE ORDERED:

(1) That the applicant, The Petroleum Corporation, is hereby authorized to commingle Strawn and Morrow production within the wellbore of the Superior Federal Well No. 4, located in Unit I of Section 5, Township 20 South, Range 29 East, NMPM, Eddy County, New Mexico.

(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 _____ Strawn
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.

(4) 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. _____ shall be continue to be
applicable to the subject well.~~