

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO

8 June 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Petrus Oil Company                      CASE  
for an unorthodox oil well location,                      9397  
Lea County, New Mexico.

BEFORE: David R. Catanach, Examiner

A P P E A R A N C E S

For the Division:                      Robert G. Stovall  
   Attorney at Law  
   Legal Counsel to the Division  
   State Land Office Bldg.  
   Santa Fe, New Mexico

For the Applicant:

## C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY  
CERTIFY that the foregoing Transcript of Hearing before the  
Oil Conservation Division (Commission) was reported by me;  
that the said transcript is a full, true and correct record  
of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 9397,  
heard by me on June 8 1958.

David R. Catant, Examiner  
Oil Conservation Division

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
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22 June 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Petrus Oil Company,                   CASE  
L. P. for an unorthodox oil well                   9397  
location, Lea County, New Mexico.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:                   Robert G. Stovall  
Attorney at Law  
Legal Counsel to the Division  
State Land Office Bldg.  
Santa Fe, New Mexico

For the Applicant:                   James Bruce  
Attorney at Law  
HINKLE LAW FIRM  
P. O. Box 2068  
Santa Fe, New Mexico 87504

## I N D E X

## RICHARD M. ROLLOW

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## STANLEY N. WARD

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## E X H I B I T S

Petrus Exhibit One, Plat 6

Petrus Exhibit Two, Letter & Receipt 6

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Petrus Exhibit Four, Cross Section 12

Petrus Exhibit Five, Isopach 11

1 MR. STOGNER: Call next Case  
2 Number 9397, which is the application of Petrus Oil  
3 Company, a Limited Partnership, for an unorthodox oil well  
4 location, Lea County, New Mexico.

5 Call for appearances.

6 MR. BRUCE: Mr. Examiner, my  
7 name is James Bruce from the Hinkle Law Firm in Santa Fe,  
8 representing the applicant in this matter.

9 MR. STOGNER: Are there any  
10 other appearances?

11 Mr. Bruce, do you have any  
12 witnesses?

13 MR. BRUCE: I have two witnes-  
14 ses.

15 MR. STOGNER: Will the witnes-  
16 ses please stand to be sworn at this time.

17  
18 (Witnesses sworn.)  
19

20 RICHARD M. ROLLOW,  
21 being called as a witness and being duly sworn upon his  
22 oath, testified as follows, to-wit:  
23  
24  
25

## 1 DIRECT EXAMINATION

2 BY MR. BRUCE:

3 Q Mr. Rollow, would you please state your  
4 full name and city of residence?5 A Richard M. Rollow, R-O-L-L-O-W. I re-  
6 side in Dallas, Texas.7 Q And who are you employed by and in what  
8 capacity?9 A Currently employed with Petrus Oil Com-  
10 pany, L. P., as a District Landman.11 Q Have you previously testified before the  
12 OCD?

13 A No, I have not.

14 Q Would you briefly state your education-  
15 al and employment history?16 A I received a petroleum land management  
17 degree from the University of Oklahoma in 1982; worked for  
18 Gulf Oil Corporation for one year from 1982 to 1983; and  
19 been a District Landman with Petrus Oil Company for four  
20 years.21 Q Have you -- or are you familiar with the  
22 land matters involved in Case 9397?

23 A Yes, I am.

24 MR. BRUCE: Mr. Examiner, is  
25 the witness considered acceptable?

1 MR. STOGNER: Mr. Rollow's  
2 qualifications are so accepted.

3 Q Mr. Rollow, would you please state what  
4 the applicant seeks in this case?

5 A Petrus Oil Company is seeking approval  
6 from the Commission for an unorthodox well -- oil well  
7 location to be drilled 1650 from the south line and 1310  
8 from the west line of Section 11, Township 17 South, Range  
9 33 East, Lea County, New Mexico.

10 MR. BRUCE: I would note, Mr.  
11 Examiner, that the well is being drilled to test the Queen  
12 formation and I believe it is within the Sanmal Queen Pool,  
13 as recently extended by the Division in a nomenclature  
14 hearing.

15 MR. STOGNER: So it's no  
16 longer within a mile; it is in the pool.

17 MR. BRUCE: It is in the pool.  
18 I think the nomenclature hearing at the prior examiner  
19 hearing.

20 MR. STOGNER: Wasn't this pool  
21 also in a recent case to raise the GOR, Order No. R-8330?

22 MR. WARD: Was it by Yates  
23 Petroleum?

24 MR. STOGNER: I believe it  
25 was.

1 MR. WARD: It may have been.

2 MR. STOGNER: No big deal;  
3 plenty of land.

4 Q Okay. Mr. Rollow, what unit will be  
5 dedicated to the well?

6 A We'll dedicate a 40-acre unit to be  
7 located in the northwest quarter of the southwest quarter  
8 of Section 11.

9 Q Would you please refer to Exhibit Number  
10 One and discuss its contents for the Examiner?

11 A Exhibit One is a leasehold ownership  
12 plat. The larger plat shows Petrus' entire acreage in the  
13 Maljamar area. As you can see, Phillips Oil Company is  
14 only offset operator. Petrus owns all the acreage outlined  
15 in yellow 100 percent, and the only outstanding lease  
16 burden is to the State of New Mexico for a 1/8th royalty.

17 Q And has Phillips Petroleum, the offset  
18 operator, been notified of this application?

19 A Yes, they have. They were notified May  
20 27th by a certified letter. As of today I have not received  
21 any reply from Phillips.

22 Q And is this letter of notification and  
23 the certified return receipt submitted as Exhibit Two?

24 A Yes, it is.

25 Q If this application is granted, when



1 does Petrus anticipate commencing the well?

2 A July 15th, 1988.

3 Q In your opinion is the granting of this  
4 application in the interest of conservation and the  
5 prevention of waste?

6 A Yes, it is.

7 Q And were Exhibits One and Two prepared  
8 by you or under your direction?

9 A Yes, they were.

10 MR. BRUCE; Mr. Examiner, I  
11 move the admission of Exhibits One and Two.

12 MR. STOGNER: Exhibits One and  
13 Two will be admitted at this time.

14  
15 CROSS EXAMINATION

16 BY MR. STOGNER:

17 Q Mr. Rollow, why did you send it to  
18 Phillips Petroleum in Bellaire, Texas?

19 A They have an office -- basically their  
20 exploration office is located outside of Houston and  
21 handling the New Mexico properties, and the reason it was  
22 sent there, basically, is that's where all our correspond-  
23 ence was forwarded to Phillips before concerning this area.

24 Q That's interesting. Did you talk to  
25 anybody other than this type of correspondence? Did you

1 have any conversations with them?

2 A No, sir, I did not.

3 Q I was under the impression all of their  
4 New Mexico holdings were out of Odessa, Texas. That's the  
5 reason I was asking.

6 A They have gone through reorganization, I  
7 think, recently, and I believe the joint interest people,  
8 the people in the Land Department, handled this situation.

9 I think only the geological staff is  
10 located out of Odessa, Texas, now. Land is still handled  
11 out of Houston.

12 Q Reorganization, yeah. Okay. I should  
13 have known.

14 Q I'll probably ask this question, all of  
15 your -- the yellow portions marked on your map, Exhibit  
16 Number Two --

17 A Exhibit Number One.

18 Q -- are 100 percent owned by Petrus.

19 A Yes, sir.

20 Q Royalty and working interest. I'm  
21 sorry, royalty is State; working interest owners is 100  
22 Petrus.

23 A Yes, sir, in Section 11 that's correct.

24 Q Okay, was the New Mexico State Land  
25 Office notified of this proposal properly by mail or --

1           A           No, sir, I don't believe they were.

2                           MR. STOGNER: I have no fur-  
3 ther questions of Mr. Rollow. He may be excused.

4                           Mr. Bruce?

5  
6                           STANLEY W. WARD,  
7 being called as a witness and being duly sworn upon his  
8 oath, testified as follows, to-wit:

9  
10                           DIRECT EXAMINATION

11 BY MR. BRUCE:

12           Q           Mr. Ward, would you please state your  
13 full name and city of residence?

14           A           My name is Stanley N. Ward. I live in  
15 Dallas, Texas.

16           Q           And who are you employed by and in what  
17 capacity?

18           A           Petrus Oil Company, L. P. I'm a geolo-  
19 gist.

20           Q           And have you previously testified before  
21 the Division?

22           A           No, I haven't.

23           Q           Would you briefly state your educational  
24 and work history?

25           A           I have a business degree from the Uni-

1       versity of Texas at Austin received in May of '76 and a  
2       geology degree received from the University of Texas at  
3       Dallas, May of '83.

4                       I've worked with Petrus Oil Company for  
5       five and a half years as a geologist.

6               Q           And does your area of responsibility  
7       include southeast New Mexico?

8               A           That is my primary area of responsibi-  
9       lity.

10              Q           And are you familiar with the geological  
11       matters relating to Case 9397?

12              A           Yes, I am.

13                               MR. BRUCE:    Mr. Examiner, I  
14       tender the witness as an expert petroleum geologist.

15                               MR. STOGNER:   Mr. Ward is so  
16       qualified.

17              Q           Mr. Ward, would you discuss Exhibit  
18       Three for the Examiner?

19              A           Yes.   Exhibit Three is a structure map.  
20       It's picked on the top of the Queen formation, which is the  
21       formation producing in the Sanmal Queen Field.

22                               The structure is a monoclinal structure  
23       dipping to the southeast. Of key interest here, you might  
24       notice the oil water contact at about +395 or so, and also  
25       moving up dip a little bit from there at +400, you have

1 some wells on the southeast flank of Sanmal Queen, which  
2 are largely noncommercial. They produce a little bit of  
3 oil and a lot of water.

4 Q Would you please move on -- well, let's  
5 move -- skip over Exhibit Four now.

6 A Well, let me say one more thing about  
7 this structure map.

8 If you look at contour +405, wells  
9 located down dip of that contour are generally noncommer-  
10 cial, producing a little oil and quite a bit of water, so  
11 we would like to stay fairly near that contour, not get too  
12 far down dip from it.

13 Q Thank you. Moving on, I think we were  
14 going to skip over to Exhibit Five briefly.

15 A Right.

16 Q And would you discuss that briefly and  
17 then move on to the cross sections marked Exhibit Four?

18 A Okay. Exhibit Five is an isopach map.  
19 It depicts the net pay in the Queen formation. The poro-  
20 sity cutoff is 12 percent. Basically, this field is an up  
21 dip porosity pinchout trap. Down dip, below the zero line,  
22 you have wells that have excellent porosity but they're  
23 wet.

24 As you move up dip you eventually run  
25 into tight porosities. The tight porosity forms a hydro-

1 carbon trap in the area.

2                   Essentially this map shows you that the  
3 Queen target is very narrow and strike oriented. It's  
4 about a location to location and a half wide.

5           Q           Would you please identify the three  
6 cross --

7           A           Cross sections.

8           Q           -- cross sections?

9           A           Okay. The cross sections are indicated  
10 on the isopach map; three cross sections, A-A', B-B', C-C',  
11 D-D',

12                   The Exhibit Four-A contains the cross  
13 sections A-A' and also B-B'.

14                   The think the key cross section here is  
15 B-B'. B-B' is on the right.

16                   The far righthand well, Phillips No. 23  
17 State, see it?

18                               MR. STOGNER: Uh-huh.

19           A           Okay. (Unclear) well developed porosity.  
20 You can see a red line, it's a 12 percent porosity cutoff.  
21 Porosity is very well developed but this well is wet in the  
22 Queen.

23                   As you move up dip to Well B, which is  
24 the Petrus No. D-2 State, you'll notice that the porosity  
25 has decreased quite a bit and you just have a few feet of

1 porosity that exceeds the 12 percent cutoff.

2           Petrus -- the D-2 State Well was initi-  
3 ally a Grayburg well. Petrus went in and perforated the  
4 Queen a few months ago. We acidized and fraced the zone.  
5 The well came on at 15 barrels of oil a day but it very  
6 quickly dropped to about two or three barrels of oil a day.  
7 It's in effect noncommercial in the Queen.

8           What we are seeking to do is move down  
9 dip from the Petrus D-2 Well towards the Phillips 23 State  
10 Well, hoping to encounter better porosity rock and still  
11 remain above the oil/water contact.

12           The other cross sections, I don't really  
13 know if -- let's look at, let's see, let's look at the  
14 cross section C-C'. It also shows that up dip the  
15 porosities are tight; down dip porosities are well devel-  
16 oped but wet.

17           On the far -- on your far left the Yates  
18 No. 2 AEO, you'll notice that the porosity barely exceeds  
19 the cutoff and as you move from left to right, the D-4 had  
20 a very well developed porosity. Then the next well, the  
21 D-5, has well developed porosity but you -- you begin to  
22 see water. You see the oil/water contact.

23           The next well down dip, the No. 1 AES  
24 is a Yates well; had good porosity but you also had an  
25 oil/water contact.

1                   The most down dip well, the Yates No. 2  
2 AES, you have excellent porosity development; however, you  
3 only have about 7 feet of pay above water. If you notice  
4 the production or the test information notice below the  
5 well log, it IP'ed at 50 oil a day and 318 water a day.

6                   We are trying to avoid drilling a well  
7 similar to this. We would like to get further up dip and  
8 get into a thicker oil column.

9                   Q           And Exhibit Number Four-C, which is the  
10 D-D' cross section, pretty much replicates Exhibits Four-A  
11 and Four-B?

12                  A           That's correct.

13                  Q           Moving back to Exhibit Number Five,  
14 briefly, the location of the well, are you, for lack of a  
15 better term, leery of drilling in the northeast quarter of  
16 the southwest quarter at this time?

17                  A           Yes, I am. If you'll notice the map,  
18 Sanmal Queen begins up in Section 1. Sanmal Field extends  
19 from Section 1 southwest into Section 11. I'm concerned  
20 that the northeast of the southwest may be in a tight  
21 porosity area and, frankly, I don't believe we would drill  
22 that unless we could drill a well first in the northwest of  
23 the southwest.

24                  Q           So your concern is that the porosity  
25 might pinchout to the northeast of your proposed location



1 and continue more to the southwest?

2 A Correct. I, you know, the Sanmal Queen  
3 may terminate right there by, well, it says, well, let see,  
4 it would be the southwest of the northeast. Then another  
5 pod may develop up down here where we want to drill and  
6 extend further to the southwest.

7 In effect we might have two distinct  
8 fields here instead of one continuous field all the way  
9 across the mapped area.

10 Q Is the approval of this well the key to  
11 Petrus' drilling program in the Queen formation in this  
12 area?

13 A The extremely key. It's the key well to  
14 continue development of the Queen in this area.

15 Q Mr. Stogner had previously asked Mr.  
16 Rollow about discussions with Phillips. Did you discuss  
17 this location with Phillips at all?

18 A Yes, I discussed it directly with their  
19 geologist that works this particular area and he's aware of  
20 the hearing and what we are asking for today.

21 Q And was this geologist in the --

22 A He's in Odessa.

23 Q -- Odessa? In your opinion will the  
24 granting of Petrus' application be in the interest of con-  
25 servation, the prevention of waste, and the protection of

1 correlative rights?

2 Q Yes.

3 Q And were Exhibits Three through Five  
4 prepared by you or under your direction?

5 A Yes, they were.

6 MR. BRUCE: Mr. Examiner, I'd  
7 move the admission of Exhibits Three through Five.

8 MR. STOGNER: Exhibits Three  
9 through Five will be admitted into evidence at this time.

10 MR. BRUCE: I have nothing  
11 further of the witness.

12

13 CROSS EXAMINATION

14 BY MR. STOGNER:

15 Q Mr. Ward, what is the present status of  
16 that D Well No. 2 in the same quarter quarter section?

17 A The D-2 Well was commingled in the Queen  
18 and the Grayburg.

19 MR. BRUCE: Mr. Examiner, that  
20 raises an issue which -- I don't know how we want to handle  
21 it, if this well is drilled in the Queen formation, it may  
22 be necessary to simultaneously dedicate those wells to pro-  
23 duction from the Queen formation. Can that be handled ad-  
24 ministratively?

25 MR. STOGNER: Yes, it can.

1 Usually at this particular point I'd like to include it in  
2 the ad and it just wasn't notified in the advertisement or  
3 original application and I didn't pick up on it at the  
4 time.

5 How soon is Petrus able to  
6 start drilling on this particular well?

7 A I'd say within two weeks after we get  
8 the results of the hearing.

9 MR. STOGNER: If I was to  
10 readvertise this it wouldn't be ready to be heard until --  
11 or an order wouldn't be issued until after what, the July  
12 20th hearing?

13 MR. BRUCE: Would that be ac-  
14 ceptable, Mr. Ward?

15 A We would like to spud it next month, you  
16 know. If we can't, we can't, but we'd like to drill the  
17 well is what it boils down to.

18 Q Let's talk about the Well No. 2. What  
19 is the production allocation in the commingled zone at this  
20 time, and when you say commingled, I assume you're talking  
21 about downhole commingling.

22 A That's correct. How do we allocate?

23 Q Or, yeah, what would be -- what is the  
24 order that allocated the production?

25 A I don't really understand what you're

1 asking.

2 Q You downhole commingled it, didn't you?

3 A That's correct.

4 Q The two different zones?

5 A That's right.

6 Q And you had a downhole commingling  
7 application.

8 A That's correct.

9 Q Do you remember which one it was?

10 A No, I don't. I can supply that from our  
11 Dallas office.

12 Q And you don't remember -- usually  
13 there's an allocation, well, at all times there's an allo-  
14 cation, so much oil dedicated to the Queen.

15 A Right. I couldn't tell you. Our pro-  
16 duction engineer handled that documentation.

17 We're producing the Grayburg -- well,  
18 it's been a Grayburg well for, if I'm not mistaken, around  
19 20 years, plus or minus. We recognize the possibility of  
20 the Queen being commercial in the same wellbore. We knew  
21 what the productive rate was in the Grayburg before we re-  
22 completed in the Queen and once we tested the Queen and the  
23 rates stabilized, we just subtracted what we were making  
24 from the Grayburg previously from the new cumulative daily  
25 production rate, and that method came up with rates for

1 both zones.

2 The rate for the Grayburg is very well  
3 established over a long period of time and it had dropped  
4 off quite a bit and stabilized.

5 I want to say it was in the 5 barrel a  
6 day range out of the Grayburg and I believe now combined  
7 it's 15 barrels or less; maybe 10 or less per day.

8 Q I assume you're not expecting that big a  
9 production out of this particular well.

10 A The one we're requesting?

11 Q Yes.

12 A I think it has the potential of meeting  
13 the allowable, but --

14 Q How long will it meet that allowable?

15 A Well, it will -- you'll get some flush  
16 production and the rate would fall off probably within two  
17 to three months.

18 Q It will fall off of what?

19 A Hard to -- it depends on what the ini-  
20 tial rate is. Let's say if the well came on at 80 barrels a  
21 day, it would probably drop to half of that within several  
22 months time, three to five months.

23 Also, Yates and Petrus are -- now have  
24 had some preliminary talks about waterflooding this field  
25 and it's a very good candidate for waterflood. I'm sure it

1 will be flood in the future.

2 Q Let's refer back to Exhibit One. I'll  
3 throw this question out to either one of you guys.

4 Is this all one lease in the southwest  
5 quarter of Section 17?

6 MR. ROLLOW: Yes, it is.  
7 Section 11 is entirely one lease.

8 MR. BRUCE: For your inform-  
9 ation, Mr. Examiner --

10 MR. STOGNER; I'm sorry, yeah,  
11 Section 11.

12 MR. BRUCE: -- it's State  
13 Lease B, as in boy, 2516.

14 MR. ROLLOW: We acquired this  
15 acreage from Shell through an acquisition back in 1986, and  
16 we own all (not clearly audible to the reporter.)

17 A Well, the only acreage we don't hold in  
18 11 is the south half of the southwest quarter, which is  
19 Phillips, but the requested location is 330 off the common  
20 boundary with Phillips.

21 MR. STOGNER: Mr. Bruce, why  
22 don't you request administratively a simultaneous dedica-  
23 tion? There's really no procedure outlined in the general  
24 rules and regulations, but however, there are some orders  
25 with an SD dedication, simultaneous dedication, to keep the

1 record straight.

2 MR. STOGNER: At this time is  
3 there anything further in this case?

4 Okay, Mr. Ward, you may be  
5 excused.

6 And Case Number 9397 will be  
7 taken under advisement.

8  
9 (Hearing concluded.)

10

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25

## C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY  
CERTIFY that the foregoing Transcript of Hearing before the  
Oil Conservation Division (Commission) was reported by me;  
that the said transcript is a full, true and correct record  
of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 9397,  
heard by me on 22 June 19 88.

Michael E. Stogner, Examiner

Oil Conservation Division

8/12/88