

CASE NO.

6352

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

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

EXAMINER HEARING

IN THE MATTER OF:

Application of Southland Royalty)
Company for three dual comple-) CASE
tions, San Juan County, New) 6352
Mexico.)

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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1 MR. STAMETS: The hearing will come to order.
2 We will call Case 6352, however I would point out that again
3 this was one of those that arrived at the Farmington news-
4 paper late and was not advertised, and it was also not ad-
5 vertised for the 25th of October, and it will get in for
6 the November the 8th, so the case will be called November
7 the 8th.

8 Off the record.

9 (There followed a discussion off the record.)

10 MR. STAMETS: Okay, please call the case.

11 MS. TESCHENDORF: Case 6352. Application of
12 Southland Royalty Company for three dual completions, San
13 Juan County, New Mexico.

14 MR. CAMPBELL: Appearing on behalf of South-
15 land Royalty Company, I'm Michael Campbell, with the law
16 firm of Campbell, Bingaman, and Black in Santa Fe. I have
17 two witnesses here to testify today.

18 MR. STAMETS: I'd like to have them both
19 stand and be sworn, please.

20 (Witnesses sworn.)

21 MR. CAMPBELL: Mr. Examiner, before we begin,
22 I would point out that Southland wishes to withdraw its
23 application for a dual completion for the Decker Well No.
24 2-A and the Patterson B Com Well No. 1-R.

25 MR. PARSONS: May I make a clarification,

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1 Mike?

2 MR. CAMPBELL: Yes.

3 MR. PARSONS: We do still intend to dual com-
4 plete these wells, but we've done some remedial work where
5 we may have scarred this PBR assembly and we will run with
6 a packer separate from this in those two wells.

7 MR. STAMETS: Okay, and then that --

8 MR. PARSONS: It's just that the mechanics
9 on that are very straightforward and standard such as have
10 been approved all over the basin, so that leaves the Grenier
11 "A" 1-A Well to be considered in this case.

12 MR. STAMETS: Okay, we will approve your
13 amended application and consider only the Grenier "A" NO. 1
14 Well today.

15 MR. CAMPBELL: Further, Mr. Examiner, I would
16 point out that our first witness, Mr. Curt Parsons, will
17 explain the application. A representative of Brown Oil
18 Tools Company, Jim Montgomery, has also been sworn and will
19 be available for questioning by the Commission concerning
20 the technical aspects of the equipment.

21

22 CURTIS PARSONS

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

25

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DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Would you please state your name, Mr. Parsons, and by whom you are employed?

A I'm Curt Parsons, District Engineer for Southland Royalty Company in Farmington.

Q Have you previously testified before the Division and have your qualifications been accepted at that time?

A Yes, I have and they have.

MR. CAMPBELL: Mr. Examiner, is Mr. Parsons qualified to testify on the application?

MR. STAMETS: He's considered qualified.

Q (Mr. Campbell continuing.) Mr. Parsons, what does Southland Royalty Company seek in Case Number 6352?

A We seek approval of the PBR as a portion of our liner hanger. We seek approval of this as a packer for the purpose of isolation between zones in dual completion.

Q I'll hand you what has been marked as Southland's Exhibit Number One and ask you to identify that exhibit and explain that exhibit.

A Okay, Exhibit Number One, I would like to point out, is on the order of a schematic. This is not necessarily drawn to scale and if you'll note, the PBR is

1 described as being 17 inches long, 5 inches by 4 inches,
2 this is not particularly correct in our application, but
3 as a schematic this one is very easy to see, so I submit
4 it as that.

5 What we have here is a very similar application
6 to what is run in, oh, a Baker Model D Packer, or something
7 of that equivalent, with the exception being that the
8 polished receptacle is a part of the liner hanger rather
9 than something that's run in the hole at a later date after
10 the casing is already in place.

11 In our particular application we have four
12 sets of Chevron seals. There are two pairs per set, for
13 a total of eight pairs of Chevron seals. Now these seals
14 are rated for 10,000 psi differential per seal.

15 MR. STAMETS: 10,000 pounds per seal?

16 A. 10,000 pounds per seal, yes, sir, per Chevron
17 pair.

18 MR. STAMETS: Per pair?

19 A. Per pair.

20 MR. STAMETS: So you're looking at 40,000
21 pounds differential?

22 A. Well, we're looking at 80,000. We have four
23 sets but there are two pairs per set. This is merely a
24 redundant thing because what we have is in the case that
25 one of these is scarred or for some reason fails, then all

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1 of the differential just moves to the next one, so we would
2 have to have failure of all eight of these seal pairs to
3 have failure of this seal assembly unit.

4 Okay. The PBR in our applications is run ---
5 okay, excuse me.

6 Q (Mr. Campbell continuing.) Would you please
7 identify and explain the Southland Exhibit Number Two?

8 A Okay. Exhibit Number Two is a more accurate
9 diagram of the assembly that we are running. I might also
10 point out that this is a drawing of the tools that are
11 supplied by Brown Oil Tool Company. There are very similar
12 tools supplied by other tool companies in the area, and
13 I would like to consider all of these at the same time and
14 merely use this as representative of the type assembly.

15 In this particular case we have first of all,
16 the liner hanger itself. With the exception of the 3-foot
17 PBR on the bottom. This is just the liner hanger that's
18 run all over the basin to hang 4-1/2 liner in a 7-inch
19 casing. This is nothing new at all.

20 The only change that we've made for our pur-
21 poses is screwing this PBR onto the bottom of the liner
22 hanger and then the bottom of the PBR is connected to the
23 top of the 4-1/2 casing.

24 Okay, it's a little hard to see on this drawing,
25 that's why I brought the schematic, but if you look at the

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1 cutaway in the PBR you'll see four little "Xs". This is
2 the seal elements I was talking about, the four sets of
3 seal elements that are on the seal assembly, which is run
4 on the tubing and stung into this polished bore receptacle.

5 Now, obviously this polished bore receptacle
6 is run at the time that the liner is run and that's the
7 primary difference between this and packers that have been
8 used to date, is the time of installation of this polished
9 bore receptacle.

10 I might point out also that this assembly
11 has every advantage that a permanent drillable type packer
12 has plus the advantage that we have virtually eliminated
13 the possibility of a leak around the packer. For example,
14 if the Model D were run into the hole, there are two pos-
15 sible areas where you could have a leak around that Model D.
16 One is through the seal assembly area and the other is past
17 the rubber packing element on the outside.

18 And what we have done with this assembly is
19 eliminate the possibility of a leak around the outside of
20 the packer.

21 We set down as a matter of principal, or as
22 a matter of practice, about 15,000 pounds weight on the
23 shoulder at the top of this seal assembly. The most critical
24 differential pressure ever anticipated across this in an
25 upward direction would be somewhat less than 1200 pounds.

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1 Now, this would occur in a situation where the Mesaverde
2 Zone was shut in for a maximum buildup, the upper zone open
3 to atmosphere. I think you can see that that would be the
4 most critical differential pressure the thing would exper-
5 ience.

6 At that time, if that were the case, we would
7 have a net upward force of 11,310 pounds, due to the differ-
8 ence in cross-sectional area of the 2 inch tubing and the
9 4 inch ID of the PBR. Now, that's the upward force -- Okay,
10 that's the upward force. That's not net, I'm sorry.
11 That's the upward force due to the pressure differential.

12 The downward force due just to the tailpipe
13 below this, overcomes that upward force by about 400 pounds.
14 In addition to that 400 pounds we stack out another 5000
15 pounds weight on top of this seal assembly so that it cannot
16 come out of that polished bore receptacle. We would have
17 to have enough pressure differential to overcome that addi-
18 tional 5000 pounds and then move the seal assembly up out
19 of the PBR before we'd have a leak inside.

20 Q In your opinion, Mr. Parsons, does the PBR
21 assembly system effectively prevent communication between
22 your producing zones?

23 A Yes, sir, it does, and I might point out, also,
24 that certainly this assembly has to be subjected to the
25 normal packer leakage tests, and these tests, in order for

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1 us to produce the well, must show that there is no communi-
2 cation there.

3 Q Were Exhibits One and Two prepared by you or
4 possibly by Mr. Montgomery?

5 A Those were prepared under Mr. Montgomery's
6 supervision at my request.

7 MR. CAMPBELL: Mr. Montgomery, Exhibits One
8 and Two were prepared by you or under your direction and
9 supervision?

10 MR. MONTGOMERY: Yes, sir.

11 MR. CAMPBELL: Mr. Examiner, I would tender
12 Exhibits One and Two and have no further questions of Mr.
13 Parsons at this time.

14 MR. STAMETS: These will be admitted. Do you
15 have any direct testimony you were going to put on by Mr.
16 Montgomery?

17 MR. CAMPBELL: Mr. Examiner, we did not anti-
18 cipate any. He is familiar with the technical aspects of
19 the case and is available as a manufacturer's representative
20 to respond.

21 MR. STAMETS: Why don't we have him identify
22 himself for the record and indicate how long he's been with
23 the company and his familiarity with the equipment?

24 MR. CAMPBELL: All right.
25

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JIM MONTGOMERY

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

DIRECT EXAMINATION

BY MR. CAMPBELL:

Q Mr. Montgomery, would you please state your name and by whom you are employed?

A My name is Jim Montgomery. I'm employed by Brown Oil Tools, Incorporated, out of Houston, Texas.

Q And what is your present position with Brown Oil Tool?

A Product Manager.

Q How long have you been in that position?

A Oh, about two and a half to three years.

Q And what is your employment experience in oil tool manufacture and sale?

A Well, ten years with Brown Oil Tools. Prior -- maybe my educational history and prior to that, I've testified before the Commission, but it was about nineteen or twenty years ago, and the record may be lost.

But I'm a graduate electrical engineer, 1951, out of Iowa State. I worked for Shell Oil Company for sixteen years, approximately, fifteen and a half to sixteen,

1 and then Brown Oil Tool for the last ten years; and with
2 Shell I was a production engineer primarily.

3 Q Would you relate briefly your experience with
4 Brown Oil Tools in connection with this particular PBR
5 system in terms of effective segregation of producing zones?

6 A We've had some six to seven years experience
7 with it and it is our premium seal system. It was originally
8 designed and fairly much sold as a high pressure, high
9 temperature H₂S gas type completion.

10 And this, of course, depends on the seal
11 material. We're talking in the range of 14,000 psi and up
12 to 35 percent H₂S, and 475 degrees temperature. This was
13 its initial design.

14 From that time on it has been used probably
15 in every type of conceivable situation in the oil industry
16 as a seal, both on regular wells and depending on seal
17 materials, in these high H₂S high temperature applications.

18 Our experience with it has been that it's the
19 best seal system that we know for tubing annulus seal appli-
20 cation.

21 MR. STAMERS: Mr. Montgomery, how would you
22 compare the reliability of this unit as compared with a
23 Baker Packer, Baker Model D?

24 A A Baker Model -- well, it would depend on
25 pressure application you were putting it to. Within -- with-

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1 in the application, say, the design pressures of the two,
2 I think they would both be equally good, possibly a shade
3 better on this, because it just has the one seal system to
4 worry about.

5 If -- if you're looking at the application
6 of, again, the high temperatures and high pressures where
7 high car rubber seals, which are the primary -- or viton,
8 excuse me, which are the primary seals for -- the external
9 seals for a permanent packer, then this is unquestionably
10 better, because you eliminate that and they won't stand up
11 to H₂S and high temperature conditions.

12 MR. STAMETS: Now, Mr. Campbell, you indicated
13 that you had managed to scar up one or two of these doing
14 some workovers.

15 MR. CAMPBELL: I think Mr. Parsons scarred
16 them up.

17 MR. STAMETS: I'm sorry.

18 MR. CAMPBELL: I probably would have if I'd
19 gotten near them.

20 MR. STAMETS: Sorry about that; Mr. Parsons.
21 Mr. Parsons, how did you manage to do that? Is this an
22 easy thing to do or did you have to work at it?

23 MR. PARSONS: We worked at it. We're not sure
24 that we did scar it up, but we had to go back in and do some
25 remedial work on the wells and we tripped back and forth

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1 through this interval with a bit, with a casing scraper,
2 and a number of other tools that potentially could scar
3 that PBR, and we never verified whether or not the thing
4 was scarred, but the cost of moving the rig off and moving
5 it back on in the event that it was scarred and we didn't
6 determine it early, was enough that for added insurance we
7 went ahead and ran a packer to eliminate that, so that we
8 could get a brand new PBR, or a new seal area, in the well
9 while we were on the well the first time.

10 MR. STAMETS: So as far as you know, it may
11 still be in perfect condition?

12 MR. PARSONS: That's right. In may very well
13 still be in very good condition, but it was kind of an in-
14 surance thing on our part.

15 If you don't mind, I might point out a couple
16 of the reasons that we wanted to go to this, and I think
17 it might clarify what we're trying to do.

18 One, there's about \$1000 cost savings to us,
19 if the thing works out.

20 Secondly, and I think of more importance than
21 the \$1000, if we set a drillable packer in the 4-1/2 and
22 at a later date have to go back into that well and work on
23 the zone below that packer, we're very much restricted as
24 to what we can do below that packer without drilling the
25 thing out and potentially tearing up our casing. If we set

1 the packer, a permanent type packer, up in the 7-inch and
2 have to try to get it out at a later date, we run the risk
3 of tearing up the top of the liner itself and having pretty
4 severe mechanical problems down the hole.

5 If we run a retrievable packer, which we do
6 run in some cases, we've experienced some difficulty, as was
7 testified in the earlier case today, with sand coming in on
8 top of that packer, causing fishing problems, and so forth,
9 when you go back in and pull that packer out if you have to
10 work on the well again.

11 With this arrangement, if it's necessary to
12 go back and work on the well, we can pull this seal unit
13 out. We have a full 4-inch ID in the PBR, which is the
14 same ID as our 4-1/2, and we're not restricted at all on
15 size as to what we can do down below this seal area. We
16 can go ahead and perform any remedial operations we could
17 do in a new well.

18 MR. NUTTER: Now, Mr. Parsons, you say you
19 have trouble sometimes pulling a retrievable packer because
20 it sands in.

21 MR. PARSON: Uh-huh.

22 MR. NUTTER: You're not going to tell me that
23 sand won't settle on that shoulder right here on this ex-
24 hibit and sand that in, are you?

25 MR. PARSONS: Yes, sir, that is possible.

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1 MR. NUTTER: Yes.

2 MR. PARSONS: We might very well have the
3 problem pulling this that we would with a retrievable packer.

4 MR. NUTTER: I can see that you could.

5 MR. PARSONS: But this is a smaller unit and
6 I realize that one inch of sand packed around some metal
7 could stick us. This, we feel, would be easier to get out
8 than a full 4-foot long packer. Once you can jerk it free,
9 then you can come on out, but granted, we could potentially
10 have the same problem with this that could be incurred with
11 the retrievable packer.

12 MR. NUTTER: Okay, I think I'll direct this
13 question to Mr. Montgomery.

14 Mr. Montgomery, looking at this diagram here
15 which shows all the component parts of the polished bore
16 receptacle but with the mandrill (sic) and also the liner
17 hanger up here, and the jaws that hold the liner hanger in
18 place, and so forth, is there any mechanical feature of
19 this that holds the mandrill in place inside the polished
20 bore receptacle?

21 MR. MONTGOMERY: This is very similar in this
22 particular application, it's the same as a locator type
23 seal in a permanent packer, so that it's a locator type
24 rather than a latch-in type.

25 You're asking about the seal mandrill that

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1 runs and comes back in the seal?

2 MR. NUTTER: Yes, sir, and that -- can that be
3 moved up and down? Can this mandrill be moved up and down
4 in this polished bore without a mechanical action, such as
5 unscrewing it or unlatching it up above?

6 MR. MONTGOMERY: Yes. It's like a locater-
7 type permanent packer, that if you pull straight up on the
8 tubing you can pull it right out.

9 MR. NUTTER: Okay, would you recommend this
10 type of an installation for a pumping well, then? Where
11 you have the action of the rods moving the tubing up and
12 down?

13 MR. MONTGOMERY: We have done this because
14 we also have methods of latching into the threaded part
15 that you see the running thread on the liner hanger, and
16 we have happened to have done this in a couple of cases.
17 It's not real normal, but you can latch in at that point.

18 MR. NUTTER: Now, this thing was designed for
19 a special set of circumstances, being the high H₂S and high
20 temperatures down on the Gulf Coast, I guess.

21 MR. MONTGOMERY: No, it was out in west Texas
22 is where the first applications of it came about, and as
23 I say, this was -- the request was made and this came about
24 as a result of these requests. Since then it's been appli-
25 cated everywhere, yes, sir.

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1 MR. NUTTER: Would you rather sell one of
2 these or a packer?

3 MR. MONTGOMERY: I like to sell either one
4 of them, sir.

5 MR. NUTTER: You make more money, I guess,
6 selling packers than you do this, so, if he says this is
7 a \$1000 cheaper than a packer.

8 MR. MONTGOMERY: It's not necessarily. We --
9 we make these up to 40 feet long and with, oh, ten, eight
10 to ten feet of seal sections in them, depending on the
11 high pressure application.

12 MR. NUTTER: I was going to get to the length
13 of it. It's my understanding that the length of these and
14 the number of Chevron seals that's placed in there is
15 determined by the pressure differential you're anticipating
16 and also the temperature that it is subject to, and such
17 as that.

18 MR. MONTGOMERY: Yeah, the temperature change
19 primarily would be your length. Any one of the seal sec-
20 tions -- now here again, they are made in a variety of
21 sizes and a variety of materials, depending on application.

22 A single seal section is capable of holding
23 the pressure you were talking about, the 10,000.

24 MR. NUTTER: Another 3-foot one.

25 MR. MONTGOMERY: It wouldn't make any difference

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1 what the length, and your pressure application is the amount
2 of steel to the PBR itself. In this case, about a half an
3 inch to the side, so the polished bore itself has got more
4 strength than your tubing. It's made out of 4140 normally.
5 Now we do make some out of, again, annealed (sic) depending
6 on H₂S consideration; we've made some out of incalloy (sic),
7 asterloy (sic), different materials, stainless steel, to fit
8 particular applications, say, chemical disposal wells, for
9 refineries, this sort of thing, so -- but the length is
10 usually due to the pressure differential, the differential
11 that you'll have across it, maximum.

12 MR. NUTTER: Well now, is there any reason --

13 MR. MONTGOMERY: Plus the temperature change
14 expected.

15 MR. NUTTER: Well, now with an increase in
16 length you also have an increase in number of Chevron seals?

17 MR. MONTGOMERY: Not necessarily.

18 MR. NUTTER: Not necessarily?

19 MR. MONTGOMERY: No, sir. We -- we may run a
20 40-foot -- a 30-foot PBR with four sets of seals or we may
21 have eight sets of seals.

22 We started out initially with around ten sets.
23 The normal now is about four to six.

24 MR. NUTTER: What's the normal metal to metal
25 clearance between the polished bore and the mandrill assembly?

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1 MR. MONTGOMERY: I don't know, exactly.

2 MR. NUTTER: Is it a tight fit or --

3 MR. MONTGOMERY: A reasonably tight fit,

4 probably on the order -- the metal back up parts, I would

5 say, are probably on the order of 10,000ths, maybe 15,000ths

6 clearance.

7 MR. NUTTER: On each side?

8 MR. MONTGOMERY: Yes. No, I'm sorry, on the

9 diameter; on the diameter; probably 10,000.

10 MR. PARSONS: As I recall, when we were de-

11 signing for this application, like I say, our back up parts

12 were for 15,000ths and then we have a little more clearance

13 than that on the main portion of the mandrill that's not

14 the back up for the Chevron seams.

15 MR. NUTTER: But the portion where the seals

16 are there'd be 7,500 thousands --

17 MR. PARSON: Yes, thousands to the side.

18 MR. NUTTER: 7500-thousandths on each side

19 of there.

20 MR. PARSONS: Yes, sir.

21 MR. NUTTER: And then you have four sets of

22 Chevrans with two pair each set.

23 MR. PARSONS: Well, the way that they're ar-

24 ranged, they're --

25 MR. NUTTER: You've got some looking up and

1 some looking down, haven't you?

2 MR. PARSONS: Yes, sir, the bottom set has
3 four looking up. The next set has four looking down. We
4 have four more looking up and four more looking down. That's
5 physically the way that they're arranged.

6 MR. NUTTER: So when you were talking there
7 awhile ago about you'd have to have a failure of one before
8 you'd have a leak and then the failure of the next one and
9 failure of the next one, you wouldn't have all of those
10 having failed, because the Chevrons that are looking down
11 would be the only ones that would be resistant to that
12 higher pressure from the bottom. The Chevrons looking up
13 wouldn't be resistant to that.

14 MR. PARSONS: I concede that.

15 MR. NUTTER: You don't really have the pro-
16 tection you were talking about awhile ago.

17 MR. PARSONS: Well, you have eight looking
18 down, though, so we still have all of that protection.
19 We're also protected from any pressure that might try to
20 come from the surface going down, but that's an unlikely
21 case.

22 But we do have protection up to the 80,000
23 because we do have eight looking down.

24 MR. MONTGOMERY: In this particular applica-
25 tion, when you were asking about movement, this particular

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1 application, it's offset with tubing weight plus the 5000
2 setdown weight that they put down on it, the tubing hanging
3 below plus the weight they set down on it.

4 In your longer PBRs that we manufacture and
5 make, these are usually done for treating purposes and
6 again, your 25 and 30 foot PBRs are normally on 20,000
7 foot wells, this sort of thing, where you're going to pos-
8 sibly have 13,000, 12,000 or 13,000, psi treating pressure
9 at the surface, and high volume fracture treatments, this
10 sort of thing, where you've got -- and then most of your
11 movement will come from temperature change.

12 MR. NUTTER: Now, how are you going to replace
13 the polished bore in the event that it's damaged during a
14 workover operation? No way, is there?

15 MR. PARSONS: At that time, if it were damaged,
16 then we would be running a packer such as has been run be-
17 fore.

18 MR. NUTTER: That's when you dismiss two out
19 of three and --

20 MR. PARSONS: That's right. And then go to
21 another technique.

22 MR. NUTTER: This grey colored tubular section
23 here, is that the tubing?

24 MR. PARSONS: Yes, it is, in the center there?

25 MR. NUTTER: Yes.

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1 MR. PARSONS: Yes, sir, it is.

2 MR. NUTTER: The grey colored is the tubing?

3 MR. PARSONS: Yes, sir.

4 MR. NUTTER: So if you -- if you want to go
5 down there with any kind of tools to work on that, if they
6 won't go through the tubing you've got to work through that
7 polished bore, haven't you?

8 MR. PARSONS: To work on the well?

9 MR. NUTTER: To work on the lower section of
10 the well?

11 MR. PARSONS: Yes, sir, that's correct.

12 MR. NUTTER: And subject that highly polished
13 bore, upon which you depend so heavily for a seal, to
14 abrasive action or scarring or damage.

15 MR. PARSONS: Yes, sir, that is correct.

16 MR. NUTTER: And you don't have to normally,
17 with a retrievable packer, you don't have to worry about
18 working through an area that is highly polished and depen-
19 dant upon its --

20 MR. PARSONS: That is correct, but we have
21 eliminated that possibility. We can still go to that in
22 the event that this work has to be done. The normal case
23 is that the work doesn't have to be done below there. We
24 go out and complete the well, put it on the line, and
25 hopefully produce it for twenty years without having to

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1 move back on it.

2 MR. NUTTER: Well, that is hopefully.

3 MR. PARSONS: Well, okay, then years; five
4 years, whatever you want to call it. But we have not ruled
5 out the conventional ability that we have right now, if
6 you want to call it conventional, of running the retrievable
7 packer. That's still, it can be done very easily in the
8 event that the work does have to be done on the well, but
9 if it is not necessary to do that kind of work, and this
10 is what we see the majority of the time, then this is very
11 satisfactory and provides us with the seal that we need
12 and the isolation of the --

13 MR. NUTTER: And saves you about \$1000.

14 MR. PARSONS: And saves \$1000, yes, sir.

15 MR. MONTGOMERY: May I comment on this just
16 a moment or two?

17 I think we've gotten a little erroneous idea.
18 Number one, they said they haven't tested to find out if
19 it's bad. We do run bit and scrapers through these PBRs
20 routinely without damage and come back.

21 We -- I'm not sure exactly how many polished
22 bore receptacles, or PBRs, that Brown has sold or put into
23 operation, but it's in excess of two thousand, easily.

24 MR. NUTTER: Are most of those in dual com-
25 pletions?

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1 Or single completions?

2 MR. MONTGOMERY: Duals and singles, but most
3 of them would be single completions.

4 MR. NUTTER: So really a leakage through a
5 single completion is not real critical then, is it?

6 MR. MONTGOMERY: Well, again, you mean because
7 of its sealing capabilities?

8 MR. NUTTER: Yes, a seal is not so important
9 on a single completion as it would be on the dual comple-
10 tion, I wouldn't think.

11 MR. MONTGOMERY: Well, yes, sir, it can be
12 from a production standpoint; possibly not from an inner
13 commingling standpoint.

14 MR. NUTTER: Well --

15 MR. MONTGOMERY: But from a production stand-
16 point.

17 MR. NUTTER: But isn't the primary reason
18 for installing a packer above the pump or above the pro-
19 ducing zone in a single completion to keep that zone iso-
20 lated and out of the casing upper part, but if it does get
21 into the casing, is there any damage done?

22 MR. MONTGOMERY: I would say a production
23 packer's probably primary cuase is to direct all of your
24 fluids up to the production string, both from a production
25 standpoint and a pressure containment standpoint, and yes,

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1 I'd say that damage insofar as the well's incapability to
2 produce or produce adequately, yes, it can do as much damage
3 one as the other.

4 MR. NUTTER: Okay, but you wouldn't have
5 a possibility of two zones commingled with each other and
6 one acting as a leak against the other if you've got a
7 single --

8 MR. MONTGOMERY: Well, if I may, I would like
9 to come back to the original discussion that was brought
10 out by Curt, that this is essentially no different than
11 a large bore permanent packer, except that the polished
12 bore that's in there in a permanent packer is usually 18
13 inches to 24 inches in length, where these may run anywhere
14 from two or three feet on up to forty feet in length. We
15 have run the tools through.

16 We have an unprecedented history of performance
17 with these that really is greater than a permanent packer.
18 I have, prior to his possible scarring, I know of three
19 reported cases that we have confirmed that a polished bore
20 receptacle is leaking, and if you remember, I talked in
21 excess of 2000.

22 One of those was a scarred bore that we know.
23 The other one was a scarred bore that was never run in the
24 hole because we found it ahead of time.

25 And the third case was a leaking connection

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1 in the polished bore itself.

2 MR. NUTTER: Never had a steel failure?

3 MR. MONTGOMERY: To my knowledge, no, sir,
4 we've never had anybody report them; any -- any failures
5 that we've ever had reported we've found to be tubing
6 collar leaks, et cetera. As I say, it's a premium seal
7 and highly unusual.

8 MR. NUTTER: Well, tubing collar leaks are a
9 common occurrence, also detected during packer leakage tests
10 on dual completions, but packers do fail, too.

11 MR. MONTGOMERY: This is correct.

12 MR. PARSONS: We find more -- when we do have
13 a leak, more often than not it's tubing failure rather than
14 a packer failure, but as you point out, it can be the
15 packer failure, certainly.

16 I might just for the record point out one
17 case where in a single completion with a PBR that I'm aware
18 of, failure of the seal assembly, or the PBR itself, would
19 have been very catastrophic. I know that because we had
20 a tubing failure which resulted in the same thing. In this
21 case a PBR was run to protect the casing in the upper por-
22 tion of the well from pressures in a lower zone, and the
23 PBR didn't fail and the tubing did, which resulted in the
24 same thing. We had the pressure from the lower zone on the
25 casing in the upper zone. This was in a well in Oklahoma.

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1 Because of that failure the casing, 7-5/8ths
2 in that case, ruptured, put that pressure on the 10-3/4,
3 which immediately ruptured, and had an underground blowout
4 going on in a producing well. So certainly in an event
5 like that, failure in a PBR in a single well, you know,
6 would be just as critical as in a dual well.

7 Obviously we're not operating in that extreme
8 of pressure, and so forth, but failure of a PBR in any case
9 would be bad, you know, it's something to be avoided.

10 As I said awhile ago, we never verified that
11 these PBRs were scarred. It's just as a matter of insurance;
12 in this case, it was more than \$1000 because that's the
13 difference in cost in this and the packer assembly. We
14 spent an extra \$1900 to go ahead and run a packer rather
15 than risk maybe having the PBR scarred and still not passing
16 the packer leakage test when we moved off, had to move the
17 rig back on and do all this operation over. It's just that
18 we felt like after we had been through it with the bit, the
19 casing scraper, that \$1900 was cheap insurance compared to
20 moving a rig back on it if that had occurred.

21 MR. STAMETS: The packers that you have run
22 in there, Mr. Parsons, are they predominately latch-type
23 packer or do most of those use a seal assembly, such as
24 what you've got here, only on a tubing?

25 MR. PARSONS: Most of ours use seal assemblies.

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1 MR. STAMETS: Have you had some of these units
2 in operation already?

3 MR. PARSONS: Yes, sir.

4 MR. STAMETS: What's been your experience
5 with those that you've used?

6 MR. PARSONS: Haven't had any problem with
7 them; they've passed the packer leakage test, and just
8 haven't had any problem with them.

9 I might -- I -- I might -- there are others
10 in use in the San Juan Basin that I'm aware of, by other
11 operators. I wouldn't know particular well names or any-
12 thing, but knowing -- talking to the other -- well, Brown,
13 and to PIW, I know that others are being run in the area
14 which -- with success.

15 MR. NUTTER: Do you know of any failures on
16 those?

17 MR. PARSONS: No, I don't know of any failures
18 at this date.

19 MR. STAMETS: What about the others that have
20 been run? Do they all have this same differential per
21 sealing element, up to 10,000 pounds?

22 MR. PARSONS: Yes. I think PIW uses six
23 pairs instead of eight pairs of sealing, but here again,
24 it's a matter of how redundant you want to get. One -- one
25 pair is enough to do the sealing. If it's damaged, then

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1 you've got a backup pair, but outside of minor changes like
2 that, essentially all of them are being run on the same.

3 MR. STAMETS: Any other questions of the
4 witness?

5 MR. NUTTER: What were you trying to do through
6 this polished bore receptacle that you think you might have
7 damaged it?

8 MR. PARSONS: In this particular case we had
9 some sand fill-up down in the bottom that covered some of
10 the perforations and we were going back in to clean that
11 sand out, and we were cleaning out with air in this parti-
12 cular case and had some oil being made, and had a minor
13 downhole fire that burned the tubing in two and dropped
14 the bit in the hole; had to go back in and get it out.

15 MR. NUTTER: You were going through it with
16 a bit?

17 MR. PARSONS: Oh, yes, you know, we'd already
18 gone through this with a bit and gotten down below it when
19 our fire occurred.

20 MR. NUTTER: And were you going to rotate that
21 bit on a drill pipe through that polished bore?

22 MR. PARSONS: Yes, sir, to clean the sand out,
23 just very lightly. Really, we'd blow the sand out and you
24 might turn it slowly, but the sand is not consolidated and
25 not packed. It's not like drilling cement or something of

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1 that nature. We run a bit on bottom so that if there's a
2 little bit of crust you can kind of break it, but it's not
3 really a drilling application; we're just blowing the sand
4 out.

5 MR. NUTTER: Mr. Montgomery, do you recommend
6 drilling through one of these polished bores?

7 MR. MONTGOMERY: The only restriction that
8 we've really ever put on that, and this has been from ex-
9 perience, is not to run any hard surface material on your
10 drill pipe at the time you're drilling. We also feel that
11 if you drilled out long sections, possibly, long completions,
12 that you might get into to run another liner below this,
13 which people do.

14 MR. NUTTER: You don't give any more guarantee
15 on these than they do other oil field equipment, do you;
16 Oklahoma guarantee?

17 MR. MONTGOMERY: Yes, sir.

18 Again, it depends on how long you're in there
19 and, you know, if you were running -- if you were running
20 right in the PBR with a scraper and rotating your bit with
21 a scraper in the PBR, I think it would -- I'm sure that in
22 time it would sustain damage.

23 Now, to go through it, we've done this so
24 many times in so many wells, I'd say that there's no problem
25 basically.

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1 MR. STAMETS: Any other questions? The wit-
2 nesses may be excused.

3 Anything further in this case?

4 MR. CAMPBELL: No, Mr. Examiner.

5 MR. STAMETS: Take the case under advisement.

6 (Hearing concluded.)
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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 the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6352 heard by me on 10-11 1974.
Richard T. [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

December 5, 1978

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Mr. Michael Campbell
Campbell, Bingaman & Black
Attorneys at Law
Post Office Box 2208
Santa Fe, New Mexico

Re: CASE NO. 6352
ORDER NO. R-5870

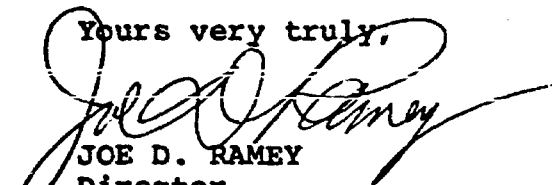
Applicant:

Southland Royalty Company

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 x

Other _____

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

EXAMINER HEARING

IN THE MATTER OF:

Application of Southland
Royalty Company for a dual
completion, San Juan
County, New Mexico.

CASE 6352

BEFORE: Richard L. Stamets

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

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MR. STAMETS: We will call the next case, 6352.

MS. TESCHENDORF: Case 6352, Application of Southland Royalty Company for a dual completion, San Juan County, New Mexico.


MR. STAMETS: This case was heard on October 11th, at which time it was continued and readvertised. Are there any further appearances in this case? There are none. So Case 6352 will be taken under advisement.

(Hearing concluded.)

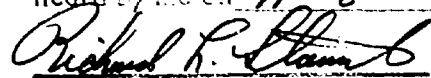
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REPORTER'S CERTIFICATE

I, STEFANIE XANTHULL, a Court Reporter, DO
HEREBY CERTIFY that the foregoing and attached
Transcript of Hearing before the Oil Conservation
Division 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, knowledge
and skill, from my notes taken at the time of the
Hearing.


Stefanie Xanthull, CSR

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examination of Case No. 6352
heard by me on 11-8 1978.

, Examiner
Oil Conservation Division

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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. 6352
Order No. R-5870

APPLICATION OF SOUTHLAND ROYALTY
COMPANY FOR A DUAL COMPLETION,
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 8, 1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 30th day of November, 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, Southland Royalty Company, seeks approval for the dual completion of its Grenier "A" Well No. 1A located in Unit C of Section 26, Township 30 North, Range 10 West, NMPM, San Juan County, New Mexico, to produce gas from the Blanco-Pictured Cliffs and Blanco Mesaverde Pools, with separation of the zones to be achieved by means of a polished bore receptacle and mandrel.

(3) That the mechanics of the proposed dual completion are feasible, provide for zone separation equivalent to that achieved by means of tubing and a packer in gas wells, and are in accord with good conservation practices.

(4) That approval of the subject application will prevent waste and protect correlative rights.

-2-

Case No. 6352

Order No. R-5870

IT IS THEREFORE ORDERED:

(1) That the applicant, Southland Royalty Company, is hereby authorized to complete its Grenier "A" Well No. 1A located in Unit C of Section 26, Township 30 North, Range 10 West, NMPM, San Juan County, New Mexico, to produce gas from the Blanco-Pictured Cliffs and Blanco Mesaverde Pools, with separation of the zones to be achieved by means of a polished bore receptacle and mandrel.

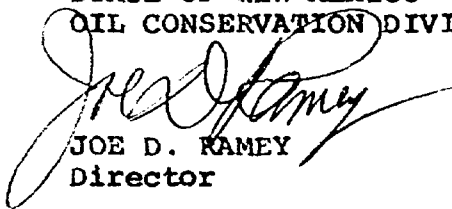
PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for prorated gas wells in Northwest New Mexico.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


JOE D. RAMEY
Director


S E A L

fd/

BROWN

BROWN OIL TOOLS INCORPORATED
8490 KATY ROAD HOUSTON, TEXAS 77024
Phone: (713) 464-1861
DWG. NO. B3-78-110

PBR Completion for Southland Royalty Company

5" 18 LB. X 7" 23 LB. CRL PACKER W/3'
LONGER SLEEVE

5" 18 LB. X 7" 23 LB. TYPE C MODIFIED
LINER HANGER

LOCATOR SEAL ASSEMBLY

5" O.D. X 4" I.D. PBR
17" LONG POLISHED BORE

5" O.D. 18 LB. CASING
I.D. = 4.276"

TAIL PIPE

*Schematic only
not
this Genie well
set down with
15,000 # pressure
maximum upward
1200 #*

BEFORE EXAMINER STARTS
OIL COMPLETION EXAMINATION
WELL NO. 1

WELL NO. 6352
SOUTHLAND
HOUSTON, TEXAS
HOISTING DATE Oct 11, 1978

Dockets Nos. 34-78 and 35-78 are tentatively set for hearing on October 25 and November 8, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING -- WEDNESDAY - OCTOBER 11, 1978

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

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

- CASE 6338: Application of Charles C. Loveless for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the South line and 1980 feet from the East line of Section 23, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, the E/2 of said Section 23 to be dedicated to the well.
- CASE 6040: (Reopened and Readvertised)
- In the matter of Case 6040 being reopened pursuant to the provisions of Order No. R-5552 which order created the North Teague-Devonian Pool, Lea County, New Mexico, with a special gas-oil ratio limitation of 4000 to 1. All interested parties may appear and show cause why the limiting gas-oil ratio for said pool should not revert to 2000 to 1.
- CASE 6339: 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 S/2 of Section 22, 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 6321: (Continued and Readvertised)
- 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 Shugart State Com. Well No. 1 to be drilled 714 feet from the South line and 2062 feet from the West line of Section 16, Township 18 South, Range 31 East, Eddy County, New Mexico, the W/2 of said Section 16 to be dedicated to the well.
- CASE 6320: (Continued and Readvertised)
- 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 Coquina Federal Com Well No. 1 to be drilled 710 feet from the North line and 2330 feet from the West line of Section 32, Township 18 South, Range 27 East, Eddy County, New Mexico, the W/2 of said Section 32 to be dedicated to the well.
- CASE 6340: Application of Supron Energy Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Strawn production in the wellbore of its Shelby Federal Well No. 1 located in the NE/4 of Section 13, Township 22 South, Range 24 East, Eddy County, New Mexico.
- CASE 6341: Application of Supron Energy Corporation for dual completions and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the dual completion of its Jicarilla A Well No. 8 located in the NW/4 of Section 23; its Jicarilla E Well No. 7 located in the SE/4 of Section 15; and its Jicarilla E Well No. 8 located in the NW/4 of Section 15, all in Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Mesaverde formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbores of said wells.
- CASE 6342: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla J Well No. 10 located in the SE/4 of Section 26, Township 26 North, Range 5 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Tocito and Dakota production in the wellbore of said well.
- CASE 6343: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla H Well No. 8 located in the SE/4 of Section 11, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbore of said well.

- CASE 6344: Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla F Well No. 1 located in the SW/4 of Section 27, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Mesaverde and Dakota production in the wellbore of said well.
- CASE 6345: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gallup and Dakota production in the wellbore of its Jicarilla H Well No. 7 located in the SW/4 of Section 19, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.
- CASE 6346: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Chacra production in the wellbore of its Jicarilla K Well No. 14 located in the SE/4 of Section 11, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.
- CASE 6347: Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Chacra and Dakota production in the wellbore of its Jicarilla K Well No. 17 located in the SW/4 of Section 12, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.
- CASE 6348: Application of Supron Energy Corporation for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Mesaverde and Dakota production in the wellbore of its Starr Well No. 3 located in the NE/4 of Section 5, Township 26 North, Range 8 West, San Juan County, New Mexico.
- CASE 6349: Application of Consolidated Oil & Gas, Inc. for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of B.S. Mesa-Gallup and Basin-Dakota production in the wellbore of its Hoyt Well No. 1-5 located in Unit H of Section 5, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.
- CASE 6350: Application of Petro-Lewis Corporation for an unorthodox well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of the unorthodox location in the Mesaverde formation for its Florence Well No. 7 located 2028 feet from the North line and 1040 feet from the West line of Section 4, Township 25 North, Range 3 West, Tapacito Field, Rio Arriba County, New Mexico, the NW/4 of said Section 4 to be dedicated to the well.
- CASE 6351: Application of Southland Royalty 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 16, Township 19 South, Range 29 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 6352: Application of Southland Royalty Company for three dual completions, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Decker Well No. 2A located in Unit I of Section 26, Township 32 North, Range 12 West, and its Grenier "A" Well No. 1A in Unit C of Section 26, Township 30 North, Range 10 West, to produce gas from the Blanco-Pictured Cliffs and the Blanco Mesaverde pools and its Patterson "B" Com Well No. 1R in Unit C of Section 2, Township 31 North, Range 12 West, to produce gas from the Aztec-Pictured Cliffs and Blanco Mesaverde pools, all in San Juan County, New Mexico, with separation of the zones in each of the above wells to be achieved by means of a polished bore receptacle and mandrel.
- CASE 6353: Application of Union Texas Petroleum for two unorthodox well locations, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox locations of its Milnesand Unit Well No. 241 to be drilled 2630 feet from the North line and 100 feet from the East line of Section 24, Township 8 South, Range 34 East, and its Milnesand Unit Well No. 1901 to be drilled 1310 feet from the North and West lines of Section 19, Township 8 South, Range 35 East, Milnesand San Andres Pool, Roosevelt County, New Mexico.
- CASE 6354: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending vertical and horizontal limits of certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico:
- (a) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Bone Springs production and designated as the Ross Draw-Bone Springs Gas Pool. The discovery well is D. B. Baxter Ross Draw Unit Well No. 5 located in Unit K of Section 27, Township 26 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 26 SOUTH, RANGE 30 EAST, NMPM
Section 27: SW/4

(b) CREATE a new pool in Chaves County, New Mexico, classified as a gas pool for Atoka production and designated as the South Sand Ranch-Atoka Gas Pool. The discovery well is Decco, Inc. Beall Federal Well No. 1 located in Unit G of Section 17, Township 11 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 11 SOUTH, RANGE 30 EAST, NMPM
Section 17: E/2

(c) EXTEND the Angell Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 27 EAST, NMPM
Section 25: All
Section 36: N/2

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 1: E/2

(d) EXTEND the Bluit-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM
Section 16: N/2
Section 17: NE/4

(e) EXTEND the Buckeye-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Section 3: W/2

(f) EXTEND the East Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM
Section 5: E/2

(g) EXTEND the East Chisum-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 28 EAST, NMPM
Section 9: NW/4 SE/4
Section 10: W/2 SW/4
Section 21: NE/4 NW/4

(h) EXTEND the vertical limits of the Comanche Stateline-Yates Pool in Lea County, New Mexico, to include the Tansill formation and redesignate said Comanche Stateline-Yates Pool as the Comanche Stateline Tansill-Yates Pool.

(i) EXTEND the Corbin-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
Section 35: NW/4

(j) EXTEND the Crooked Creek-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 24 EAST, NMPM
Section 16: N/2

(k) EXTEND the South Empire-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 25: S/2

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 30: N/2

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM
Section 13: N/2

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 7: S/2
Section 18: All

- (l) EXTEND the West Four Mile Draw-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 26 EAST, NMPM
Section 6: S/2

- (m) EXTEND the Gladiola-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM
Section 5: NW/4

- (n) EXTEND the Herradura Bend-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 31: W/2 E/2
Section 32: NE/4 NE/4

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 5: W/2 NW/4

- (o) EXTEND the Hume-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 5: S/2
Section 8: E/2

- (p) EXTEND the Indian Flats-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 28 EAST, NMPM
Section 35: S/2 SW/4

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 2: N/2 NW/4

- (q) EXTEND the South Kemnitz-Upper Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 33: SW/4

- (r) EXTEND the Kennedy Farms-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 26 EAST, NMPM
Section 33: E/2

- (s) EXTEND the East Lusk-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 16: NE/4

- (t) EXTEND the Many Gates-Morrow Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 30 EAST, NMPM
Section 31: All

- (u) EXTEND the North Mescalero-Cisco Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM
Section 11: NW/4

- (v) EXTEND the Millman-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 18: All

- (w) EXTEND the Monument-Paddock Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 21: NE/4

- (x) EXTEND the South Peterson-Fusselman Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 31: E/2

- (y) EXTEND the Quail Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
Section 16: S/2

- (z) EXTEND the Red Lake-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM
Section 19: E/2
Section 20: W/2

- (aa) EXTEND the Sand Dunes-Cherry Canyon Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
Section 23: E/2 SE/4 and NW/4 SE/4

- (bb) EXTEND the Sand Ranch-Atoka Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 29 EAST, NMPM
Section 23: N/2

- (cc) EXTEND the North Shugart-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 21: W/2

- (dd) EXTEND the North Shugart-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 21: W/2

- (ee) EXTEND the Tomahawk-San Andres Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 32 EAST, NMPM
Section 30: NE/4
Section 31: SE/4
Section 32: NW/4

- (ff) EXTEND the Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 6: NW/4

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 31: SW/4

- (gg) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM
Section 25: W/2

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 29: N/2
Section 31: S/2

- (hh) EXTEND the Twin Lakes-San Andres Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM
Section 25: S/2 SW/4

TOWNSHIP 9 SOUTH, RANGE 28 EAST, NMPM
Section 1: SW/4 NE/4, NW/4 SE/4, SW/4 NW/4 and NW/4 SW/4

- (ii) EXTEND the Vacuum Grayburg-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM
Section 19: NW/4

DOCKET: EXAMINER HEARING - WEDNESDAY - OCTOBER 18, 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:

- ALLOWABLE:
- (1) Consideration of the allowable production of gas for November, 1978, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.
 - (2) Consideration of the allowable production of gas for November, 1978, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

Dockets Nos. 37-78 and 38-78 are tentatively set for hearing on November 21 and December 6, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - NOVEMBER 7, 1978

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

CASE 6146: (DE NOVO) (Continued and Readvertised)

Application of Jerome P. McHugh for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Tapacito-Gallup and Basin-Dakota production within the wellbore of his Jicarilla Well No. 5 located in Unit D of Section 29, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

Upon application of Jerome P. McHugh this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6266: (DE NOVO)

Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of an Upper Pennsylvanian test well to be located 660 feet from the North and East lines or, in the alternative, 990 feet from the North and East lines of Section 23, Township 22 South, Range 23 East, Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico, all of said Section 23 to be dedicated to the well.

Upon application of Harvey E. Yates Company this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6377: Application of Durham, Inc., for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Section 8, Township 21 South, Range 24 East, Indian Basin-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to a well to be drilled 1650 feet from the North and East lines of said Section 8. 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 6378: In the matter of the hearing called by the Oil Conservation Division on the motion of Shell Oil Company to permit Corinne Grace and all other interested parties to appear and show cause why Division Order No. R-3713, which pooled all of Section 8, Township 21 South, Range 24 East, Eddy County, New Mexico, should not be declared null and void, if said pooling order has not already automatically expired due to non-production.

CASE 6379: Application of Shell Oil Company for pool contraction and pool extension, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the Indian Basin-Morrow Gas Pool by the deletion therefrom of the N/2 of Section 8, Township 21 South, Range 24 East, Eddy County, New Mexico, or in the alternative, all of said Section 8, and the extension of the Cemetery-Morrow Gas Pool to include the aforesaid N/2 or all of said Section 8.

Docket No. 36-78

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 8, 1978

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

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

CASE 6369: Application of Amoco Production Company for an unorthodox gas well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its DR Well No. 3 to be drilled 660 feet from the North and East lines of Section 16, Township 19 South, Range 32 East, Lea County, New Mexico, to be simultaneously dedicated with its Well No. 1 located in Unit E to the present 320-acre unit comprising the N/2 of said Section 16.

CASE 6370: Application of Amoco Production Company for an unorthodox gas well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Giliuly B Fed. Well No. 22 to be drilled 2310 feet from the North line and 1980 feet from the West line of Section 33, Township 20 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be simultaneously dedicated with the current unit Wells No. 3 and 15 located in Units N and H, respectively, to the present 360-acre non-standard proration unit in Section 33.

CASE 6371: Application of Doyle Hartman for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of his Phillips-Woolworth Well No. 1 located 2310 feet from the North line and 1980 feet from the East line of Section 26, Township 24 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico.

CASE 6372: Application of Belco Petroleum Corporation for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 1495 feet from the North line and 330 feet from the West line of Section 6, Township 23 South, Range 31 East, Los Mendanos Atoka Pool, Eddy County, New Mexico, the W/2 of said Section 6 to be dedicated to the well.

CASE 6373: Application of Beard Oil Company for a dual completion, surface commingling, pool creation, and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the gas-gas dual completion of its Hanlad Well No. 1 located in Unit E of Section 17, Township 17 South, Range 24 East, Eddy County, New Mexico, to produce gas from the Atoka formation through tubing and the Abo formation through the casing-tubing annulus, and to commingle the production at the surface. Applicant further seeks the creation of a new Abo gas pool and the adoption of special pool rules therefor, including a provision for 320-acre spacing and proration units for a temporary period of one year.

CASE 6374: Application of Mesa Petroleum Company for a special oil allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a temporary increase in the oil allowable for its West Knowles Well No. 5 located in Unit H of Section 34, Township 16 South, Range 37 East, West Knowles-Drinkard Pool, Lea County, New Mexico, from 310 barrels to 500 barrels for the 90-day period extending from October 1, 1978 to December 31, 1978.

CASE 6375: Application of Harper Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of the Wantz-Abo, Drinkard, and Blinbry production within the wellbore of its S. J. Sarkeys Well No. 2 located in Unit H of Section 26, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 6352: (Continued and Readvertised)

Application of Southland Royalty Company for a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Grenier "A" Well No. 1A located in Unit C of Section 26, Township 30 North, Range 10 West, to produce gas from the Blanco-Pictured Cliffs and Blanco Mesaverde Pools, San Juan County, New Mexico, with separation of the zones to be achieved by means of a polished bore receptacle and mandrel.

CASE 6346: (Continued and Readvertised)

Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Chacra production in the wellbore of its Jicarilla K Well No. 14 located in the SE/4 of Section 11, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 6348: (Continued and Readvertised)

Application of Supron Energy Corporation for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Mesaverde and Dakota production in the wellbore of its Starr Well No. 3 located in the NE/4 of Section 5, Township 26 North, Range 8 West, San Juan County, New Mexico.

CASE 6341: (Continued from October 11, 1978, Examiner Hearing)

Application of Supron Energy Corporation for dual completions and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the dual completion of its Jicarilla A Well No. 8 located in the NW/4 of Section 23; its Jicarilla E Well No. 7 located in the SE/4 of Section 15; and its Jicarilla E Well No. 8 located in the NW/4 of Section 15, all in Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Mesaverde formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbores of said wells.

CASE 6342: (Continued from October 11, 1978, Examiner Hearing)

Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla J Well No. 10 located in the SE/4 of Section 26, Township 26 North, Range 5 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Tocito and Dakota production in the wellbore of said well.

CASE 6343: (Continued from October 11, 1978, Examiner Hearing)

Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla H Well No. 8 located in the SE/4 of Section 11, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Gallup and Dakota production in the wellbore of said well.

CASE 6344: (Continued from October 11, 1978, Examiner Hearing)

Application of Supron Energy Corporation for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Jicarilla F Well No. 1 located in the SW/4 of Section 27, Township 26 North, Range 4 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Mesaverde and Dakota production in the wellbore of said well.

CASE 6345: (Continued from October 11, 1978, Examiner Hearing)

Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gallup and Dakota production in the wellbore of its Jicarilla H Well No. 7 located in the SW/4 of Section 19, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

CASE 6347: (Continued from October 11, 1978, Examiner Hearing)

Application of Supron Energy Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Chacra and Dakota production in the wellbore of its Jicarilla K Well No. 17 located in the SW/4 of Section 12, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 6376: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating and extending vertical and horizontal limits of certain pools in Chaves, Eddy, and Lea Counties, New Mexico:

(a) CREATE a new pool in Chaves County, New Mexico, classified as a gas pool for Pennsylvanian production and designated as the Mescalero Sands-Pennsylvanian Gas Pool. The discovery well is Petroleum Development Corporation Estelle Federal Well No. 1 located in Unit E of Section 34, Township 12 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 12 SOUTH, RANGE 30 EAST, NMPM
Section 34: W/2

(b) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Yates production and designated as the Sioux-Yates Pool. The discovery well is Tishman Federal Well No. 1 located in Unit N of Section 5, Township 26 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 31: NE/4
Section 32: W/2

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM
Section 5: W/2

(c) EXTEND the Avalon-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 31: N/2
Section 32: N/2
Section 33: All

(d) EXTEND the Blinberry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 26: SE/4

- (e) EXTEND the vertical limits of the Box-Canyon Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include the Canyon and Wolfcamp formations and redesignate said pool as the Box Canyon-Permo Pennsylvanian Gas Pool and extend the horizontal limits of said pool to include therein:

TOWNSHIP 21 SOUTH, RANGE 21 EAST, NMPM
Section 13: All
Section 23: S/2
Section 26: E/2
Section 35: E/2
Section 36: W/2

TOWNSHIP 22 SOUTH, RANGE 21 EAST, NMPM
Section 1: N/2

- (f) EXTEND the North Burton Flats-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM
Section 28: S/2
Section 33: E/2

- (g) EXTEND the East Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 27: S/2

- (h) EXTEND the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 26 EAST, NMPM
Section 28: N/2

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
Section 10: N/2
Section 21: S/2

- (i) EXTEND the Comanche State-line Tansill-Yates Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 36 EAST, NMPM
Section 33: NW/4

- (j) EXTEND the Eagle Creek-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 26 EAST, NMPM
Section 29: W/2

- (k) EXTEND the East Empire Yates-Seven Rivers Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM
Section 22: SW/4 and W/2 SE/4

- (l) EXTEND the Forehand Ranch-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
Section 15: NW/4 SE/4

- (m) EXTEND the Fowler-Tubb Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM
Section 35: SE/4

- (n) EXTEND the Jenkins-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 35 EAST, NMPM
Section 28: S/2

- (o) EXTEND the Kemnitz-Cisco Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 16: W/2

- (p) EXTEND the East Lusk-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 10: N/2 and SW/4
Section 15: NW/4

- (q) EXTEND the West Malaga-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 28 EAST, NMPM
Section 9: N/2

- (r) EXTEND the Revelation-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 25 EAST, NMPM
Section 3: W/2

- (s) EXTEND the Rock Tank-Upper Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 24 EAST, NMPM
Section 1: All

- (t) EXTEND the South Salt Lake-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM
Section 25: N/2

- (u) EXTEND the Southwest Sulphate-Delaware Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM
Section 14: NE/4 NE/4

- (v) EXTEND the Wantz-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
Section 3: NE/4

- (w) EXTEND the Watkins Yates-Seven Rivers-Queen-Grayburg Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 6: SW/4

- (x) EXTEND the White City-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM
Section 8: All

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM
Section 4: All

- (y) EXTEND the Wilson-Morrow Gas Pool in Lea County, New Mexico, to include therein:

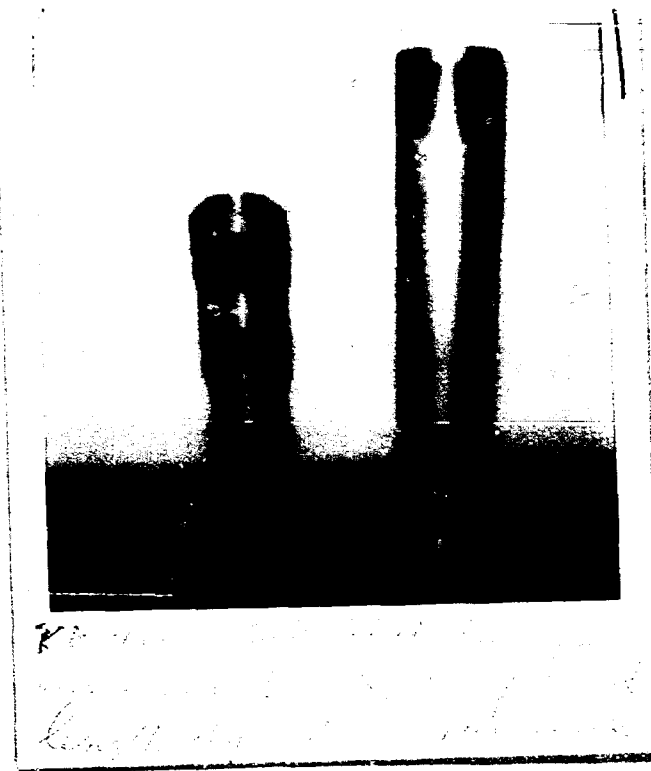
TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM
Section 14: S/2

- (z) EXTEND the Winchester-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

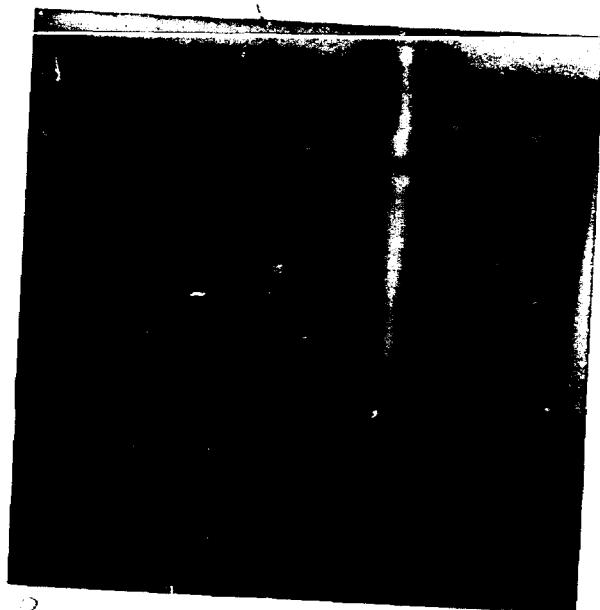
TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 24: S/2

- (aa) EXTEND the Winchester-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM
Section 26: E/2 and SW/4



70 mm. tall, 10 mm. diam.
Length of 10 mm. each



Brown O. D. & Co.

Memo

9-11-78

From

A. R. KENDRICK
Supervisor

To Dan:

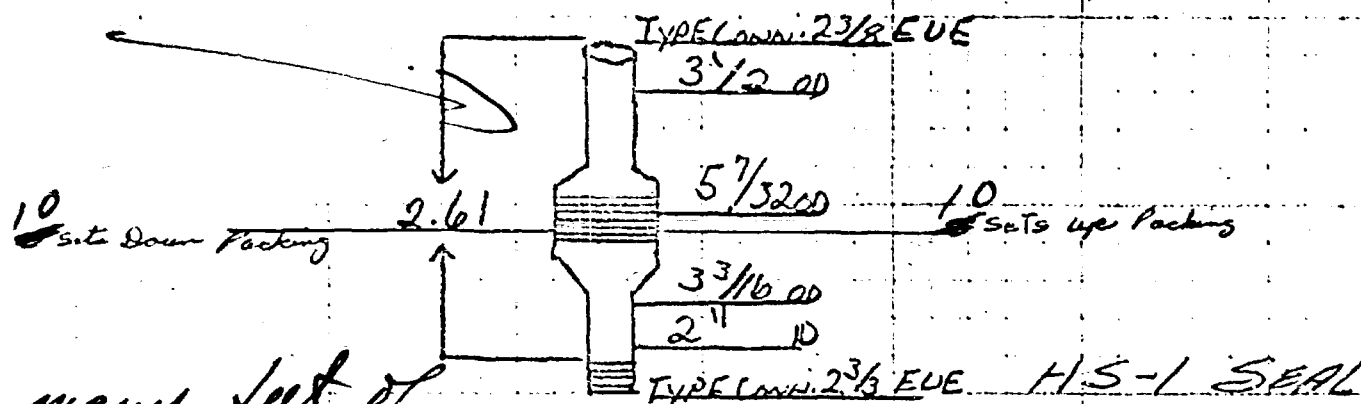
*If there are questions
about these please call.*

SEP 12 1978

NEW MEXICO OIL CONSERVATION COMMISSION - AZTEC, NEW MEXICO

OPERATOR	DISTRICT	STATE
LEASE	WELL NO. COUNTY or PARISH	STATE

Seal mandrel



as many feet of
seal is set as per
need for
expansion
length.

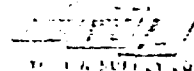
The seal assembly, which connects to the end of the
tubing string and mates into the H.S.-1, (L.P.V.R.), features
a series of annular chevron rings made of Viton,
with annular steel backup ring between, the Viton rings
(10 up & 10 down).

These rings fit tightly in the receptacle bore, located on
top of liner hanger. This provides a positive seal between
pay zones, thus taking the place of a packer & packer
receptacle.

SEP 19 1970



LINER HANGERS
PACKERS
PRODUCTION CO.



MIDLAND 563-2323
ODESSA 563-2323
OKLA CITY 453-1111

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Case 6352
Form C-107
5-1-61
7457

Operator Southland Royalty Company		County San Juan	Date August 22, 1978
Address P. O. Drawer 570, Farmington, N.M.		Lease Grenier "A"	Well No. #1A
Location of Well C	Unit C	Section 26	Township 30N
		Range 10W	

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES ☒ NO ☐
2. If answer is yes, identify one such instance: Order No. **FC-977**; Operator Lease, and Well No.: **EPNG-King #1**

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Blanco Pictured Cliffs		Blanco Mesaverde
b. Top and Bottom of Pay Section (Perforations)	2749' - 2803'		4344' - 5196'
c. Type of production (Oil or Gas)	Gas		Gas
d. Method of Production (Flowing or Artificial Lift)	Flowing	AUG 24 1978	Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.
El Paso Natural Gas Company, P. O. Box 990, Farmington, New Mexico 87401

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES ☒ NO ☐ . If answer is yes, give date of such notification **August 22, 1978**

CERTIFICATE: I, the undersigned, state that I am the **Dist. Production Mgr.** of the **Southland Royalty Company** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.


Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard perforation unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

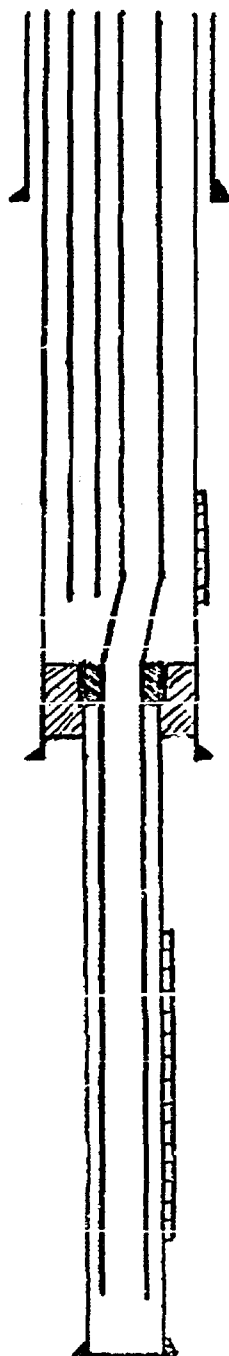
SOUTHLAND ROYALTY COMPANY

DUAL COMPLETION DIAGRAM

GRENIER "A" #1A

1170' FNL & 1770' FWL

Sec. 26, T30N, R10W



9-5/8", 36#, K-55 set at 238'.
Cemented with 120 sxs Class B.

Pictured Cliffs perforated from 2749'-2803' with
total of 6 holes.

1-1/4", 2.33#, IJ set at 2750'

Liner hanger set at 2874'.

with PBR seal assembly set at 2874'.

7", 20#, K-55 set at 3034'.

Cemented with 170 sxs 50/50 Poz, Class B
followed by 70 sxs Class B.

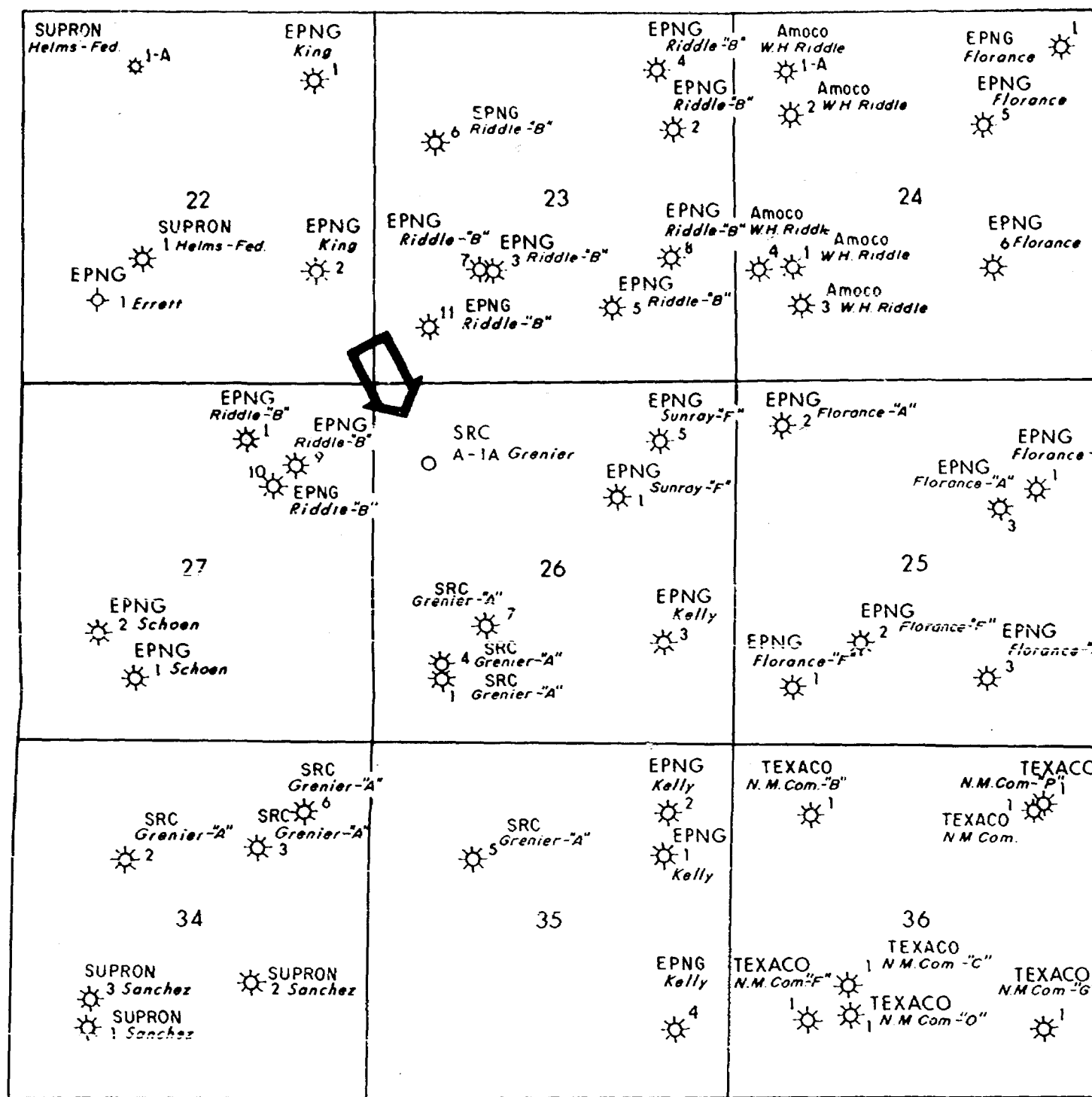
Mesaverde perforated from 4344'-5196' with total
of 23 holes.

2-3/8", CSR-55, 4.7# tubing at 5196'.

4-1/2", 10.5#, K-55 set from 2874'-5336'.

Cemented with 295 sxs 50/50 Poz, Class B.

R 10 W



T
30
N



Southland Royalty Company

SUITE 1010, DENVER CLUB BLDG.
518 17TH STREET
DENVER, COLORADO 80202

JULY 1978

DATE

PREPARED BY

San Juan Basin

PROJECT AREA

C 1 40R/204

1" = 2000'

SCALE

REVISED DATE

L-7

FILE NUMBER

SAN JUAN CO., NEW MEXICO

OFFSET OPERATORS'

PERMISSION FOR DUAL COMPLETIONS

SRC

Grenier # A-1A

1170' FNL - 770' FWL

Sec. 26-30n-10w

OIL CONSERVATION COMMISSION
AZTEC DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE 8/28/78

RE: Proposed MC XXX
Proposed DHC
Proposed NSL
Proposed SWD
Proposed WFX
Proposed PMX

Carl Ulvog

Gentlemen:

I have examined the application dated 8/22/78

for the <u>Southland Royalty Company</u>	<u>Grenier A #1A</u>	<u>C-26-30N-10W</u>
Operator	Lease and Well No.	Unit, S-T-R

and my recommendations are as follows:

Approve

Yours very truly,

CR Kendrick

RECEIVED
AUG 30 1978
Oil Conservation Commission

OIL CONSERVATION COMMISSION
AZTEC DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE 8/28/78

RE: Proposed MC XXX
Proposed DHC _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Carl Ulvog

Gentlemen:

I have examined the application dated 8/22/78
for the Southland Royalty Company Patterson B Com #1R C-2-31N-12W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours very truly,

AK Kendrick

RECEIVED

AUG 30 1978

Oil Conservation Commission

REVISED COPY

Case 655

SOUTHLAND ROYALTY COMPANY

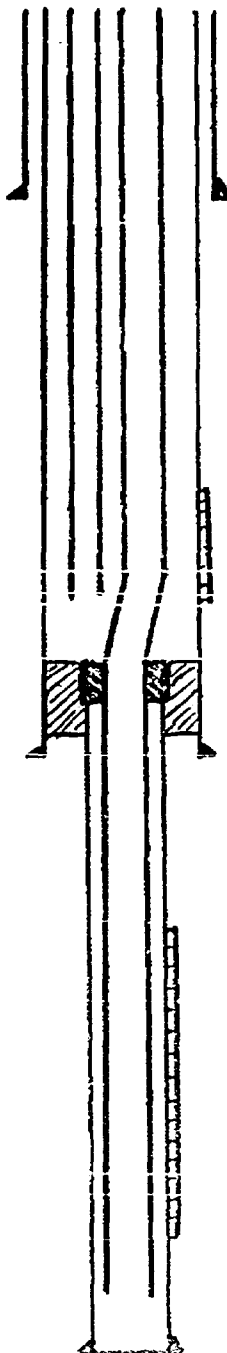
DUAL COMPLETION DIAGRAM

DECKER #2A

1700' FSL & 1075' FEL

Sec. 24, T32N, R12W

OCT 23 1973



9-5/8", 36#, K-55 set at 200'.
Cemented with 110 sxs Class "B".

Pictured Cliffs perforated from 2968'-3077'
with total of 10 holes.
1-1/4", 2.33#, IJ, V-55 landed at 2982'.
Brown liner hanger set at 3174'.
Baker Model "R" packer set at 3306'.

7", 20#, K-55 set at 3328'.
Cemented with 245 sxs 50/50 Class "B" Poz
followed by 70 sxs Class "B".

Mesaverde perforated from 5172'-5570' with
total of 20 holes.
2-3/8", 4.7#, CSR-55 set at 5525'.

4-1/2", 10.50#, K-55 set from 3174'-5638'.
Cemented with 315 sxs 50/50 Class "B" Poz.

ROUGH

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. 6352

Order No. R-5870

APPLICATION OF SOUTHLAND ROYALTY
COMPANY FOR A DUAL COMPLETION,
SAN JUAN COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 8
19 78, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this _____ day of November, 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, Southland Royalty Company, seeks
approval for the dual completion of its Grenier "A" Well No. 1A
located in Unit C of Section 26, Township 30 North, Range 10 West,
NM PM, San Juan County, New Mexico,
to produce gas from the Blanco-Pictured Cliffs and Blanco
Mesaverde Pools, ~~San Juan County, New Mexico,~~ with separation of

the zones to be achieved by means of a polished bore receptacle and mandrel.

(3) That the mechanics of the proposed dual completion *providing for zone separation equivalent to that achieved by means of tubing and a packer* are feasible *and in* accord with good conservation practices.

(4) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Southland Royalty Company, is hereby authorized to complete its Grenier "A" Well No. 1A located in Unit C of Section 26, Township 30 North, Range 10 West, NMPM, ~~San Juan County, New Mexico,~~ to produce gas from the Blanco-Pictured Cliffs and Blanco Mesa-verde Pools, ~~San Juan County, New Mexico,~~ with separation of the zones to be achieved by means of a polished bore receptacle and mandrel.

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take ~~the~~ packer leakage tests upon completion and annually thereafter during the Annual Deliverability Test Period for ~~the~~ produced gas wells in Northwest New Mexico Pool.

(2) 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.