CASE 7200: ESTORIL PRODUCING CORPORATION FOR A DUAL COMPLETION, LEA COUNTY, NEW MEXICO

CASE NO.

7200

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

25 March 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Estoril Producing Corporation for a dual completion, Lea County, New Mexico.

CASE 7200

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: George H. Hunker, Jr., Esq.
HUNKER, FEDRIC P.A.
P. O. Box 1837
Roswell, New Mexico 88201

I N D E X

E X H I B I T S

MR. NUTTER: We'll call next Case Number 7200, the application of Estoril Producing Corporation for a dual completion Lea County, New Mexico.

MR. HUNKER: Mr. Examiner, I'm George Hunker, Hunker, Fedric, P. A., Roswell, New Mexico, representing Estoril Producing Corporation.

I have two witnesses and I'd like to introduce Mr. Bruce Monroe, the Drilling Superintendent for Estoril, who will be available in case the Examiner has any questions. Would you gentlemen stand?

(Witnesses sworn.)

MAX E. CURRY

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

DIRECT EXAMINATION

BY MR. HUNKER:

Q. Mr. Curry would you state your name, address, and occupation?

A. My name is Max E. Curry. I live in Midland. I'm a consulting engineer with Curry Engineering.

Q. Did you supervise the drilling and com-

pletion from an engineering standpoint of the Belco Federal No. 1?

A. I did.

Q. And you did this for Estoril?

A. Yes.

Q. Are you familiar with the application that's on file in this matter, made by Estoril?

A. I am.

Q. Are you a petroleum engineer?

A. Yes.

Q. Have you previously testified before the Commission?

A. Yes.

Q. Have your qualifications as a petroleum engineer been demonstrated and made a matter of record and found to be acceptable?

A. Yes, sir.

MR. HUNKER: Are Mr. Curry's qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. What is the applicant seeking in this particular case?

A. They are seeking to -- an order for approving a dual completion in the Antelope Ridge Morrow Pool

with an undesignated Morrow -- I mean Strawn gas zone. This has been -- the approval is requested for a parallel string, conventional -- parallel tubing string, conventional application.

Q. Mr. Curry, where is the well located?

A. The well is located in Section 15, Township 23 South, Range 34 East, in Lea County, New Mexico.

Q. Is it 760 feet from the south line and 1980 feet from the east line?

A. It is.

Q. Is this a standard, orthodox location?

A. It is.

Q. Has a nomenclature hearing been had by the Division defining the Antelope Ridge Strawn Pool?

A. It has not at this time.

Q. What separate sources of supply does the applicant propose to produce? Will you tell us that?

A. Yes. The -- one of the Morrow sands within the vertical limits prescribed by the Commission in the Antelope Ridge Morrow Field is open production and open hole in the subject well, and some -- this is 300 or 400 feet below the top of the Morrow Clastics, and the Strawn section is separated by some 700 feet of the Atoka formation, which lies in between the STrawn and the Morrow.

Q. How was the separation of these two zones accomplished, Mr. Curry?

A. Well, in this particular well we drilled to the top of the Wolfcamp at a depth of 11,776 feet, and set 7-5/8ths inch casing. This was cemented back to approximately 5000 feet and was later tied in and cemented back to the surface, so essentially the 7-5/8ths inch casing is cemented from 11,776 feet all the way back to the surface.

The well was drilled to a total depth of 13,239 feet and a liner was cemented from the depth of 13,178 feet and set back up several hundred feet, back up into the 7-5/8ths inch casing where cement was circulated from the bottom of that casing back to the top of the liner. The liner was hung at that point by a Brown Oil Tool hanger, which is used very frequently in the -- in the field, and included at the top of this a polished bore receptacle, which is what we call a PBR in the field. This is set at 11,354 feet.

The top of the liner was then drilled out, tested, squeezed and retested and this polished bore was then dressed out for use later on as the separating interval in the - in the well.

Q. Mr. Curry referring to what's been marked Applicant's Exhibit Number One, would you explain the

the coloring depiction on that -- on the graph on the right-hand side of that exhibit?

A. This is a sketch of the downhole equipment and the casing in the well, and it's related by depth to the log which is shown on the lefthand side of this sketch, or this plat.

The dashed lines represent the casing in the well and the liner. The orange represents the cementing with was circulated behind these casings and the Morrow formation is designated over here on the left, and the open hole section at the bottom of this sketch is done in pink. The tubing string, the interior part of it is colored pink where the Morrow gas is flowed to the surface.

The yellow coloring represents those areas in which there are connected to the Strawn through perforations that are shown in red over on the lefthand log, within the Strawn section.

So the Strawn gas fills the interval colored yellow and is produced to the surface through a string of 2-3/8ths inch tubing which is connected to the top of the PBR.

The blue section represents packer fluid that is placed in the well for purposes of well control as well as inhibition of corrosion or other detrimental mech-

anical well problems.

Q. Has a packer leakage test been taken of the well?

A. Yes, sir, they have.

Q. When were they taken?

A. I believe, let's see, I believe you have the exhibit there.

A packer leakage test was taken on March 18th, 1981, as prescribed by the Commission and they have been submitted through the normal channels to the Commission.

Q. Has your entire casing program been tested and reported to the Commission office in HObbs?

A. Yes, it has.

Q. Is the well partially completed at this time?

A. Yes. Mechanically it is, it is completed entirely. The surface equipment is now being placed on the location for the Morrow formation. The Strawn formation is producing at this point. The Morrow is not completely completed insofar as it has not been fractured. We're waiting on a pulling unit to perform that operation and then the well --

Q Do you have a preliminary potential,

though, on the Morrow formation?

A. Yes, sir we do.

Q. What is that?

A. The Morrow in its present condition is able to deliver approximately half a million cubic feet of gas per day.

Q. And is the Strawn formation on the line at the present time?

A. Yes, it is.

Q. And what does it produce?

A. It's producing about 7.2 million a day against 4200 pounds flowing tubing pressure.

Q. When do those reports show the well was completed?

A. The well was completed 3/7/81.

Q. And why did you wait more than seven days to make the packer leakage test?

A. Well, these -- this particular well was extraordinarily prolific and produced a lot of distillate with the -- with the gas, and to perform the test it would -- we would be dealing with -- or cause physical and economic waste to vent the gas. We've just been tied into the pipeline and tests were made directly into the pipeline.

Q. In your opinion, Mr. Curry, has the sub-

ject well been completed in accordance with good conservation practices?

A. Yes, it has. And each stage of this, I might add, has been tested at approximately 10,000 pounds to assure the containment and physical properties that the design was made for for this well, and it has been acceptable tests on every phase of it.

Q. Will the approval of the application, in your opinion, prevent waste and protect correlative rights?

A. It will very definitely prevent waste and protect correlative rights.

Q. Will Estoril comply with all the Division and Commission orders, rules, and directives, including the taking of essential tests?

A. Yes, sir.

Q. There will be no commingling of the production from the -- from the well as dually completed, is that correct?

A. That is correct.

Q. Do you have anything else to add, Mr. Curry, to your testimony?

A. Well, I might add that the -- as shown in this well, we do have a second packer that's placed down in the well. It serves absolutely no purpose at all at this

time but it's put there only for future remedial work, and I just thought I'd mention that. It might be a little confusing as to what it --

Q. That's the packer that is set at 13,110 feet?

A. That's true.

MR. HUNKER: I have no further questions of Mr. Curry.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Curry, you mentioned that distillate the well produces. How much condensate does the well make and from which zone?

A. It -- the distillate in the Strawn has been checked out pretty closely with the production we have right now. It will average right at 30 barrels per million.

Q. And it's making about 7 million a day into the pipeline?

A. Yes, sir.

Q. How about that Morrow down there, you mentioned that it's going to be treated.

A. Yes, sir.

Q. It hasn't been stimulated any way yet?

A. We have cleaned the perforations out with acid. Let's see, there have been 3000 gallons of 7-1/2 percent acid put in.

Q. And you do propose another frac job at some point?

A. Yes, sir, it will be fraced with a fairly large --

Q. And right now it's delivering only half a million a day?

A. Yes, sir.

Q. Is it dry gas?

A. At a half a million it is pretty dry right now. It is dry right now; however, we've not really produced it at a long period of time and it does have some distillate, we know that, but we're not -- haven't gotten very much at the surface at this point.

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

Your next witness, Mr. Hunker?

J. C. WILLIAMSON

being called as a witness and being duly sworn upon his oath, testified as follows:

DIRECT EXAMINATION

BY MR. HUNKER:

Q. Mr. Williamson, will you state your name, address, and occupation?

A. J. C. Williamson, geologist, Midland, Texas.

Q. Are you familiar with the application that's been filed by Estoril in connection with this matter?

A. Yes, sir.

Q. Have you made a study of the logs and of the samples obtained in connection with the drilling of the Belco Federal No. 1 Well?

A. Yes, sir.

Q. And you said you are a consulting geologist, is that correct?

A. Yes.

Q. And you were a consulting geologist with regard to this well?

A. And part owner.

Q. And part owner.

Have you testified previously before the Commission?

A. Yes, sir.

Q. Have your qualifications been made a matter of record and found to be acceptable by the Commission?

A. As far as I know.

MR. NUTTER: Yes, sir, Mr. Williamson is qualified.

Q. Has Estoril drilled another well in this same area?

A. Yes. At the present time we have four wells down.

Q. In connection with the tract in Section 15, Township 23 South, 34 East, has Estoril drilled what's referred to as the Adobe Federal?

A. Yes, sir.

Q. And what's the status of that well at this time?

A. It's waiting on a workover unit for completion, and probably a dual completion.

Q. You have heard Mr. Curry's testimony with regard to this Exhibit Number One, and you have seen the Exhibit One. Did you pick the tops of the formations that are shown on that exhibit?

A. Yes, sir. Yes, sir.

Q. And do you concur that the top of the Strawn is at 11,990 feet?

A. Yes, sir.

Q. And the top of the Morrow Clastics is 12,880 feet?

A. Yes.

Q. Does the log that appears on this exhibit agree with the log that you have shown on your large cross section that includes the Adobe Federal Well?

A. Yes, we used the Adobe Federal instead of this one simply by just -- there's no reason, we just used it. They're both almost identical. The Adobe Federal is probably 30 feet lower in the section but it's the same --

Q. Mr. Williamson --

A. -- lithographic section.

Q. -- you have taught geology and lived geology and drilled a lot of Morrow test wells and Strawn test wells throughout the State of New Mexico and elsewhere. Describe to the Examiner, if you will, the characteristics of the Strawn rocks that you see in these areas.

A. Well, the Strawn in this area the Strawn varies a good deal, but in this case it is a biohermal reef, being a reef that goes out; instead of up, it goes more just out, and in this case we have the Antelope Ridge structure and the Strawn around this is much like an atoll reef in the Pacific at the present time, where there's a

central part and the reefs are going around it.

We have a well right offsetting the, or to the south a half a mile, the Adobe Federal -- I mean the Belco Federal is half a mile, drilled by Shell. It does not quite have the same character as -- it's more or less a lithographic -- very distinct top and very distinct area, same thickness and everything, but not quite the same as when you hit these more reefy (sic) deals around this thing.

Q. Now, if you will for the Examiner, explain what you see in the Atoka samples that you recovered from the well.

A. Well, the Strawn here is a very light tan, almost a dolomite, in these wells that we're concerned with here, the Belco Federal and the Adobe Federal. It's almost a dolomite. It's crystalline, and it is quite -- very, the porosity, permeability, you can even see a kind of -- in the Belco Federal to the north a kind of a playing out of the upper part of the reef, detrital falling off the front, still good porosity.

Now, the Atoka at the base of the Strawn there is a black shale and there is a few streaks, of course, a black shale in the Strawn but not anything like it is in the Atoka; a very black shale, and that ends the Strawn. From there on you get the various colors of limestone, mostly

dark, black oolites in it, and occasionally -- now all these things are Pennsylvanian and all of them are receiving a big shot of detrital going in from -- the Strawn didn't receive much of this but the Atoka did and the Morrow and the Wolfcamp, stuff coming in from the east of this central uplift area, around where Hobbs is and all down through there.

And the Strawn represented a displaced -- more or less a distinct hesitation in the deposition and below that you do not -- the Atoka is different, and it's a different kind of limestone; some of them are pretty lithographic, with chert in them, fractured; they do have gas in them; they do not quite have the reservoir characteristics of this -- of the Strawn formation. Later on down you get a little more sands coming in and it's very hard to tell where the base of the Atoka and the top of the Morrow is. Now you get limes and sands and then a little farther up, that's called the Morrow Clastics. From there on down there's mostly a shale and sand, and it's an easier point to identify than the Morrow carbonates. That's kind of a point we use but we're not very definite in defining the Morrow carbonates as against the limestones and the Atoka.

There's definitely a shale up there that gets thicker towards the northwest and it's thin in this area because it's predominantly an old high area.

Q. Mr. Williamson, you have prepared or caused to be prepared an exhibit which has been marked Applicant's Exhibit Number Two, a larger version of which is on the wall behind the Examiner. Would you explain the purpose of that exhibit and demonstrate what it shows? You may stand, if you wish.

A. Thank you, yes, I would like to.

In the first place, we have rather a large map here which we have placed the wells we have used. There are seven of them -- the Natomas Well 23, the Belco -- I mean the Adobe Federal 15; we go right up around catching these things, this group in here.

Now here's the way it goes from right -- no, from your left starting up here. This is the Natomas Well in here.

Q. That's the one on the far right?

A. Yes.

Q. And where is that well located as related to the Estoril wells?

A. Oh, it's approximately three-quarters of a mile, a mile southeast.

Q. Okay, and --

A. And here is the Strawn top in it and here is the Strawn in the Estoril well.

Q. Will you identify approximately at what depth that -- those Strawn tops are?

A. Now, this is at 12,000 -- on the Estoril well it's at 12,010. This is more of a demonstrative cross section.

Q. Explain the colors that you've shown there and what they show, Mr. Williamson.

A. All right, the orange represents the Strawn across this country. The blue and the pink or purple, whatever it is, here is the Wolfcamp; the yellow being the third Bone Springs Sand. Below that is the black shale of the Atoka, and this, I think it's orange, is the true Atoka where there is some production, gas production. Below that is the Morrow limestones and some shales and below that is the clastics. This yellow is not all sand at all but is sand and shales.

This Wolfcamp situation that we have here is thick beds of chert conglomerate, lime conglomerate sands with -- through the shales, is the case in this Antelope -- northern part of the Antelope Ridge and over the Antelope Ridge. Largely that debris came in at the end of Pennsylvanian times from the uplift to the east of there and it derived its cherts, conglomerate mostly (unintelligible). But they didn't wear themselves out, they just traveled over there and

formed conglomerate, sands.

MR. NUTTER: Mr. Hunker, this is all very interesting but the relevancy to a dual completion, we're studying regional geology now for the entire Permian Basin.

MR. HUNKER: Well --

MR. NUTTER: I think we've got a long docket here and we'd better proceed with our docket.

MR. HUNKER: I agree with you. I agree with you.

Mr. Williamson, you may come back over here, if you will, please.

A. All right.

Q. In your opinion has the completion of the Belco Federal No. 1 been in accordance with good oilfield practices?

A. Yes.

Q. In your opinion will the approval of Estoril's application prevent waste and protect correlative rights?

A. Well, sure, it will prevent having to drill two or three wells, you know, boreholes to this, which are very expensive over here.

MR. HUNKER: I'd like at this time, Mr. Examiner, to offer into evidence Exhibits Numbers One and Two.

MR. NUTTER: Exhibits Numbers One and Two will be admitted in evidence.

MR. HUNKER: I have no further questions of Mr. --

MR. WILLIAMSON; Well, Mr Nutter, let me make one little statement here.

The idea here is to define the nomenclature. This is a bit mixed up in the area.

MR. NUTTER: Yes, sir, I appreciate that.

MR. WILLIAMSON: And we're talking about the Strawn, we will be coming back soon again to ask for the Belco -- I mean the Adobe Federal to be dualled and we'll be using Strawn and Atoka, Wolfcamp and Morrow, and there will be many, many times that we will appear before you. The idea is to get the nomenclature straight when we come back to get these duals and that is the reason for all of this color and paper on the wall.

MR. NUTTER: Yes, sir, I appreciate these formations are present in this area and the geology is complex.

MR. WILLIAMSON: Yes, sir, and that's the reason we're giving all this.

MR. NUTTER: Yes, sir. Well, thank you.

Are there any questions of Mr. Williamson? He may be excused.

Do you have anything further Mr. Hunker?

MR. HUNKER: Nothing further, thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7200?

We'll take the case under advisement.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that the foregoing 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.

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. 7109 heard by me on 3/25 1981.

Oil Conservation Division, Examiner

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
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being called as a witness and being duly sworn upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. HUNKER:

Q. Mr. Williamson, will you state your name, address, and occupation?

A. J. C. Williamson, geologist, Midland, Texas.

Q. Are you familiar with the application that's been filed by Estoril in connection with this matter?

A. Yes, sir.

Q. Have you made a study of the logs and of the samples obtained in connection with the drilling of the Belco Federal No. 1 Well?

A. Yes, sir.

Q. And you said you are a consulting geologist, is that correct?

A. Yes.

Q. And you were a consulting geologist with regard to this well?

A. And part owner.

Q. And part owner.

Have you testified previously before the Commission?

A. Yes, sir.

Q. Have your qualifications been made a matter of record and found to be acceptable by the Commission?

A. As far as I know.

MR. NUTTER: Yes, sir, Mr. Williamson is qualified.

Q. Has Estoril drilled another well in this same area?

A. Yes. At the present time we have four wells down.

Q. In connection with the tract in Section 15, Township 23 South, 34 East, has Estoril drilled what's referred to as the Adobe Federal?

A. Yes, sir.

Q. And what's the status of that well at this time?

A. It's waiting on a workover unit for completion, and probably a dual completion.

Q. You have heard Mr. Curry's testimony with regard to this Exhibit Number One and you have seen the Exhibit One. Did you pick the tops of the formations that are shown on that exhibit?

A. Yes, sir. Yes, sir.

Q. And do you concur that the top of the Strawn is at 11,990 feet?

A. Yes, sir.

Q. And the top of the Morrow Clastics is 12,880 feet?

A. Yes.

Q. Does the log that appears on this exhibit agree with the log that you have shown on your large cross section that includes the Adobe Federal Well?

A. Yes, we used the Adobe Federal instead of this one simply by just - there's no reason, we just used it. They're both almost identical. The Adobe Federal is probably 30 feet lower in the section but it's the same --

Q. Mr. Williamson --

A. -- lithographic section.

Q. -- you have taught geology and lived geology and drilled a lot of Morrow test wells and Strawn test wells throughout the State of New Mexico and elsewhere. Describe to the Examiner, if you will, the characteristics of the Strawn rocks that you see in these areas.

A. Well, the Strawn in this area the Strawn varies a good deal, but in this case it is a biohermal reef, being a reef that goes out; instead of up, it goes more just out, and in this case we have the Antelope Ridge structure and the Strawn around this is much like an atoll reef in the Pacific at the present time, where there's a

central part and the reefs are going around it.

We have a well right offsetting the, or to the south a half a mile, the Adobe Federal -- I mean the Belco Federal is half a mile, drilled by Shell. It does not quite have the same character as - it's more or less a lithographic -- very distinct top and very distinct area, same thickness and everything, but not quite the same as when you hit these more reefy (sic) deals around this thing.

Q. Now, if you will for the Examiner, explain what you see in the Atoka samples that you recovered from the well.

A. Well, the Strawn here is a very light tan, almost a dolomite, in these wells that we're concerned with here, the Belco Federal and the Adobe Federal. It's almost a dolomite. It's crystalline, and it is quite -- very the porosity, permeability, you can even see a kind of - in the Belco Federal to the north a kind of a playing out of the upper part of the reef, detrital falling off the front, still good porosity.

Now, the Atoka at the base of the Strawn there is a black shale and there is a few streaks, of course, a black shale in the Strawn but not anything like it is in the Atoka; a very black shale, and that ends the Strawn. From there on you get the various colors of limestone, mostly

dark, black oolites in it, and occasionally - now all these things are Pennsylvanian and all of them are receiving a big shot of detrital going in from -- the Strawn didn't receive much of this but the Atoka did and the Morrow and the Wolfcamp stuff coming in from the east of this central uplift area, around where Hobbs is and all down through there.

And the Strawn represented a displaced -- more or less a distinct hesitation in the deposition and below that you do not -- the Atoka is different, and it's a different kind of limestone: some of them are pretty lithographic, with chert in them, fractured; they do have gas in them; they do not quite have the reservoir characteristics of this -- of the Strawn formation. Later on down you get a little more sands coming in and it's very hard to tell where the base of the Atoka and the top of the Morrow is. Now you get limes and sands and then a little farther up, that's called the Morrow Clastics. From there on down there's mostly a shale and sand, and it's an easier point to identify than the Morrow carbonates. That's kind of a point we use but we're not very definite in defining the Morrow carbonates as against the limestones and the Atoka.

There's definitely a shale up there that gets thicker towards the northwest and it's thin in this area because it's predominantly an old high area.

Q. Mr. Williamson, you have prepared or caused to be prepared an exhibit which has been marked Applicant's Exhibit Number Two, a larger version of which is on the wall behind the Examiner. Would you explain the purpose of that exhibit and demonstrate what it shows? You may stand if you wish.

A. Thank you, yes, I would like to.

In the first place, we have rather a large map here which we have placed the wells we have used. There are seven of them -- the Natomas Well 23, the Belco -- I mean the Adobe Federal 15; we go right up around catching these things, this group in here.

Now here's the way it goes from right -- no, from your left starting up here. This is the Natomas Well in here.

Q. That's the one on the far right?

A. Yes.

Q. And where is that well located as related to the Estoril wells?

A. Oh, it's approximately three-quarters of a mile, a mile southeast.

Q. Okay, and --

A. And here is the Strawn top in it and here is the Strawn in the Estoril well.

Q Will you identify approximately at what depth that -- those Strawn tops are?

A Now, this is at 12,000 -- on the Estoril well it's at 12,010. This is more of a demonstrative cross section.

Q Explain the colors that you've shown there and what they show, Mr. Williamson.

A All right, the orange represents the Strawn across this country. The blue and the pink or purple, whatever it is, here is the Wolfcamp; the yellow being the third Bone Springs Sand. Below that is the black shale of the Atoka, and this, I think it's orange, is the true Atoka where there is some production, gas production. Below that is the Morrow limestones and some shales and below that is the clastics. This yellow is not all sand at all but is sand and shales.

This Wolfcamp situation that we have here is thick beds of chert conglomerate, lime conglomerate sands with -- through the shales, is the case in this Antelope -- northern part of the Antelope Ridge and over the Antelope Ridge. Largely that debris came in at the end of Pennsylvanian times from the uplift to the east of there and it derived its cherts, conglomerate mostly (unintelligible). But they didn't wear themselves out, they just traveled over there and

formed conglomerate, sands.

MR. NUTTER: Mr. Hunker, this is all very interesting but the relevancy to a dual completion we're studying regional geology now for the entire Permian Basin.

MR. HUNKER: Well --

MR. NUTTER: I think we've got a long docket here and we'd better proceed with our docket.

MR. HUNKER: I agree with you. I agree with you.

Mr. Williamson, you may come back over here, if you will, please.

A. All right.

Q. In your opinion has the completion of the Belco Federal No. 1 been in accordance with good oilfield practices?

A. Yes.

Q. In your opinion will the approval of Estoril's application prevent waste and protect correlative rights?

A. Well, sure, it will prevent having to drill two or three wells, you know, boreholes to this, which are very expensive over here.

MR. HUNKER: I'd like at this time, Mr. Examiner, to offer into evidence Exhibits Numbers One and Two.

MR. NUTTER: Exhibits Numbers One and Two will be admitted in evidence.

MR. HUNKER: I have no further questions of Mr. --

MR. WILLIAMSON: Well, Mr Nutter, let me make one little statement here.

The idea here is to define the nomenclature. This is a bit mixed up in the area.

MR. NUTTER: Yes, sir, I appreciate that.

MR. WILLIAMSON: And we're talking about the Strawn, we will be coming back soon again to ask for the Belco -- I mean the Adobe Federal to be dualled and we'll be using Strawn and Atoka, Wolfcamp and Morrow, and there will be many, many times that we will appear before you. The idea is to get the nomenclature straight when we come back to get these duals and that is the reason for all of this color and paper on the wall.

MR. NUTTER: Yes, sir, I appreciate these formations are present in this area and the geology is complex.

MR. WILLIAMSON: Yes, sir, and that's the reason we're giving all this.

MR. NUTTER: Yes, sir. Well, thank you.

Are there any questions of Mr. Williamson? He may be excused.

Do you have anything further Mr. Hunker?

MR. HUNKER: Nothing further, thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7200?

We'll take the case under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that the foregoing 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.

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. 7209
heard by me on 3/25, 1981.
, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5434

April 9, 1981

Re: CASE NO. ~~7200~~
ORDER NO. ~~R-6641~~

Mr. George Hunker
Hunker-Fedric
Attorneys at Law
Post Office Box 1837
Roswell, New Mexico 88201

Applicant:

~~Estoril Producing Corporation~~

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD ____x____
Artesia OCD ____x____
Aztec OCD _____

Other _____
_____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7200
Order No. R-6641

APPLICATION OF ESTORIL PRODUCING
CORPORATION FOR A DUAL COMPLETION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 25, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 7th day of April, 1981, 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, Estoril Producing Corporation, seeks authority to complete its Belco Federal Well No. 1, located in Unit O of Section 15, Township 23 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas and gas liquids from the Strawn and Morrow formations, Antelope Ridge Field, through parallel strings of tubing.

(3) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(4) That the tubing string for the Strawn zone is set some 648 feet above the uppermost Strawn perforation and the Morrow tubing string is set some 308 feet above the top of the Morrow open hole pay section.

(5) That an exception to the tubing depth requirements of Rule 107(d) should not cause waste nor impair correlative rights and should be approved.

(6) That approval of the subject dual completion will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Estoril Producing Corporation, is hereby authorized to complete its Belco Federal Well No. 1, located in Unit O of Section 15, Township 23 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas and gas liquids from the Strawn and Morrow formations, Antelope Ridge Field, through parallel strings of tubing, with separation of the zones to be achieved by means of a packer set at approximately 12,870 feet.

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 Gas Well Shut-In Pressure Test Period for Southeast New Mexico.

(2) That an exception to the tubing setting requirements of Rule 107(d) of the Division Rules and Regulations is hereby approved, provided however, such approval is subject to rescission if it appears waste is resulting therefrom.

(3) That jurisdiction of this cuase 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/

CASE 7200: Application of Estoril Producing Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Belco Fed. Well No. 1 located in Unit O of Section 15, Township 23 South, Range 34 East, to produce gas and gas liquids from the Strawn and Morrow formations, Antelope Ridge Field, thru parallel strings of tubing.

CASE 7201: Application of Layton Enterprises, Inc. for a unit agreement, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Todd Lower San Andres Unit Area, comprising 3256 acres, more or less, of Federal and State lands in Township 7 South, Ranges 35 and 36 East.

CASE 7202: Application of Layton Enterprises, Inc. for a waterflood project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the San Andres formation thru 4 injection wells located in Sections 30, 31 and 32 of its Todd Lower San Andres Unit in Township 7 South, Range 36 East.

CASE 7203: Application of Southern Union Exploration Co. of Texas for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Susco Dough "C" Unit Area, comprising 2560 acres, more or less, of State lands in Township 10 South, Range 33 East.

CASE 7204: Application of Bass Enterprises Production Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the interval from 3820 feet to 3915 feet in its Federal Legg Well No. 1 in Unit B of Section 27, Township 22 South, Range 30 East, Quahada Ridge Field.

CASE 7205: Application of Supron Energy Corporation for a non-standard gas proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Blanco Mesaverde gas proration unit comprising the NE/4 of Section 35, Township 31 North, Range 12 West, to be dedicated to a well to be drilled at a standard location thereon.

CASE 7183: (Continued from March 11, 1981, Examiner Hearing)

Application of Flag-Redfern Oil Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Osudo St. Com Well No. 2 at an unorthodox location 990 feet from the North and East lines of Section 18, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool.

CASE 7206: Application of Mobil Producing Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation through perforations from 12,212 feet to 12,218 feet and the open hole interval from 12,240 feet to 12,555 feet in its Santa Fe Pacific Well No. 3 in Unit M of Section 26, Township 9 South, Range 36 East, Crossroads Field.

CASE 7207: Application of Mobil Producing Inc. for lease commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the commingling of Vacuum Grayburg-San Andres production from the State J and State II leases in Section 22, Township 17 South, Range 34 East.

CASE 7208: Application of Gulf Oil Corporation for the amendment of pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of the White City-Pennsylvanian Gas Pool Rules to provide for 320-acre spacing rather than 640 acres with well locations specified as being at least 1650 feet from the end boundary and 660 feet from the side boundary of the proration unit.

CASE 7129: (Continued from February 25, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the N/2 of Section 28, Township 28 North, Range 8 West, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7169: (Continued from February 25, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the S/2 of Section 22, Township 28 North, Range 8 West, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

LAW OFFICES OF
HUNKER-FEDRIC, P. A.
SUITE 210, HINKLE BUILDING
POST OFFICE BOX 1837
ROSWELL, NEW MEXICO 88201

GEORGE H. HUNKER, JR.
DON M. FEDRIC

TELEPHONE 622-6700
AREA CODE 505

March 12, 1981

Mr. Joe D. Ramey, Secretary-Director
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Case 7200

Re: Estoril Producing Corp.
Application for
Dual Completion

Attention: Mr. D.S. Nutter

Gentlemen:

On behalf of Estoril Producing Corporation, we hand you herewith in triplicate, an Applica n which would permit the operator to dually complete its Belco Federal #1 located in Unit O of Section 15, T. 23S, R. 34E, N.M.P.M., Lea County, New Mexico, so as to produce gas and gas distillate from the Antelope Ridge-Morrow and the Antelope Ridge-Strawn pools. We would appreciate it if you would file this Application and set the matter down for hearing on March 25, 1981.

Sincerely yours,

HUNKER-FEDRIC, P.A.

George H. Hunker, Jr.

GHH:dd
Enc.

xc: Mr. Max E. Curry
P.O. Box 5596
Midland, Texas 79701, w/enc.

xc: Mr. Flynt Chancellor
Estoril Producing Corp.
11th Floor Vaughn Bldg.
Midland, Texas 79701, w/enc.

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. 7200

APPLICATION OF ESTORIL PRODUCING
CORPORATION FOR A DUAL COMPLETION,
LEA COUNTY, NEW MEXICO.

Estoril Producing Corporation, 11th Floor Vaughn Building, Midland, Texas 79701, respectfully requests that it be permitted to dually complete its Belco Federal #1, located in Unit O of Section 15, Township 23 South, Range 34 East, N.M.P.M., Lea County. New Mexico, to produce gas and gas distillate from the Antelope Ridge-Morrow and the Antelope Ridge-Strawn Pools through parallel strings of tubing, and in support thereof, shows:

1. Applicant has drilled and completed its Belco Federal #1 located 760' FSL and 1,980' FEL of Section 15, T. 23S, R. 34E, N.M.P.M., Lea County, New Mexico, and by this Application seeks authority to complete said well as a dual completion (conventional) to produce gas and gas distillate from the Antelope Ridge-Morrow and from the Antelope Ridge-Strawn Formations, with a separation of the zones to be achieved by means of packers set at 11,354 (P.B.R.) feet and 12,870 (B.D.I.) feet respectively. The packer set at 13,100 (B.D.I.) feet is not effective and will be used only if remedial work is required in the well.

2. That the mechanics of the proposed dual completion are feasible and are in accord with good conservation practices.

3. That the approval of the application will prevent waste and protect correlative rights.

4. Applicant agrees to take packer leakage tests upon completion and annually thereafter during the annual gas well shut-in pressure test period for southeast New Mexico.

WHEREFORE, Applicant prays that this matter be set down for hearing before an Examiner on March 25, 1981, or as soon thereafter as

the same may practically be heard, and that authority be granted to Applicant for the completion of its Belco Federal #1 as a conventional dual completion.

DATED this 11th day of March, 1981.

Respectfully submitted,

ESTORIL PRODUCING CORPORATION

By George H. Hunker, Jr.

George H. Hunker, Jr.
Attorney for Applicant
P.O. Box 1837
Roswell, New Mexico 88201
(505) 622-2700

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
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1. Applicant has drilled and completed its Belco Federal #1 located 760' FSL and 1,980' FEL of Section 15, T. 23S, R. 34E, N.M.P.M., Lea County, New Mexico, and by this Application seeks authority to complete said well as a dual completion (conventional) to produce gas and gas distillate from the Antelope Ridge-Morrow and from the Antelope Ridge-Strawn Formations, with a separation of the zones to be achieved by means of packers set at 11,354 (P.B.R.) feet and 12,870 (B.D.I.) feet respectively. The packer set at 13,100 (B.D.I.) feet is not effective and will be used only if remedial work is required in the well.

2. That the mechanics of the proposed dual completion are feasible and are in accord with good conservation practices.

3. That the approval of the application will prevent waste and protect correlative rights.

4. Applicant agrees to take packer leakage tests upon completion and annually thereafter during the annual gas well shut-in pressure test period for southeast New Mexico.

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the same may practically be heard, and that authority be granted to Applicant for the completion of its Belco Federal #1 as a conventional dual completion.

DATED this 11th day of March, 1981.

Respectfully submitted,

ESTORIL PRODUCING CORPORATION

By George H. Hunker, Jr.

George H. Hunker, Jr.
Attorney for Applicant
P.O. Box 1837
Roswell, New Mexico 88201
(505) 622-2700

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. 7200

APPLICATION OF ESTORIL PRODUCING
CORPORATION FOR A DUAL COMPLETION,
LEA COUNTY, NEW MEXICO.

Estoril Producing Corporation, 11th Floor Vaughn Building, Midland, Texas 79701, respectfully requests that it be permitted to dually complete its Belco Federal #1, located in Unit O of Section 15, Township 23 South, Range 34 East, N.M.P.M., Lea County, New Mexico, to produce gas and gas distillate from the Antelope Ridge-Morrow and the Antelope Ridge-Strawn Pools through parallel strings of tubing, and in support thereof, shows:

1. Applicant has drilled and completed its Belco Federal #1 located 760' FSL and 1,980' FEL of Section 15, T. 23S, R. 34E, N.M.P.M., Lea County, New Mexico, and by this Application seeks authority to complete said well as a dual completion (conventional) to produce gas and gas distillate from the Antelope Ridge-Morrow and from the Antelope Ridge-Strawn Formations, with a separation of the zones to be achieved by means of packers set at 11,354 (P.B.R.) feet and 12,870 (B.D.I.) feet respectively. The packer set at 13,100 (B.D.I.) feet is not effective and will be used only if remedial work is required in the well.

2. That the mechanics of the proposed dual completion are feasible and are in accord with good conservation practices.

3. That the approval of the application will prevent waste and protect correlative rights.

4. Applicant agrees to take packer leakage tests upon completion and annually thereafter during the annual gas well shut-in pressure test period for southeast New Mexico.

WHEREFORE, Applicant prays that this matter be set down for hearing before an Examiner on March 25, 1981, or as soon thereafter as

the same may practically be heard, and that authority be granted to Applicant for the completion of its Belco Federal #1 as a conventional dual completion.

DATED this 11th day of March, 1981.

Respectfully submitted,

ESTORIL PRODUCING CORPORATION

By George H. Hunker, Jr.

George H. Hunker, Jr.
Attorney for Applicant
P.O. Box 1837
Roswell, New Mexico 88201
(505) 622-2700

Rec Rec'd 3/4/51

7095

Appl of Eatoil Producing Corp.
for dual Compl of its
Lea Fed No. 1
Unit J 15 T23S-R34E Lea Co
To prod gas & gas liquids
from Strawn & Morrow formations
Antelope Ridge Field thru
parallel strings of tubing

Written appl & Exhibits

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. 7200

Order No. R- 6641

APPLICATION OF ESTORIL PRODUCING CORPORATION FOR A DUAL COMPLETION, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 o'clock a.m. on March 25, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of April, 1981, 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, Estoril Producing Corporation, seeks authority to complete its Belco Federal Well No. 1 ~~Well No. xxxx~~, located in Unit O of Section 15, Township 23 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) ~~(combination)~~ ~~(tubingless)~~ to produce ~~oil~~ and gas liquids from the Strawn and Morrow formations, Antelope Ridge Field, through parallel strings of tubing.

(3) That the mechanics of the proposed dual completion are feasible and in accord with good conservation practices.

(4) (5) (6) That approval of the subject ~~application~~ dual completion will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Estoril Producing Corporation, is hereby authorized to complete its Belco Federal Well No. 1, located in Unit O of Section 15, Township 23 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) ~~(combination) (tubingless)~~ to produce oil~~x~~ and gas liquids from the Strawn and Morrow formations, Antelope Ridge Field, through parallel strings of tubing, with separation of the zones to be achieved by means of a packer set at approximately 12,870 feet

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 Gas Well Shut-in Pressure Test Period for ~~Any~~ Southeast New Mexico Pool.

(2) (3) 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.

(2) That an exception to the tubing setting requirements of Rule 107(d) of the Division Rules and Regulations is hereby approved, provided however, such approval is subject to rescission if it ~~later~~ appears waste is resulting therefrom.

(3) That the tubing string for the Strawn zone is set some 648 feet above the approximate Strawn perforation and the Morrow tubing string is set some 308 feet above the top of the Morrow open hole page section.

(4) That an exception to the tubing depth requirements of Rule 107(d) should not cause waste nor impair correlative rights and should be approved.

Case #7260

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

Form C-107
5-1-61

RECEIVED
APR 03 1981
OIL CONSERVATION DIVISION

Operator	County	Date
Estoril Producing Corporation	Lea	March 23, 1981
Address	**Lease**	**Well No.**
Suite 1120, Vaughn Building, Midland, TX 79701	Belco Federal	1

Location of Well	Unit	Section	Township	Range
	O	15	23 S	34 E

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 X

2. If answer is yes, identify one such instance: Order No._____ ; Operator Lease, and Well No.: _____

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Antelope Ridge (Strawn)		Antelone Ridge (Morrow)
b. Top and Bottom of Pay Section (Perforations)	12002' 12178'		13278' 13279' (open hole)
c. Type of production (Oil or Gas)	Gas		
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

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

Yes	No	
X		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.
X		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.
	X	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.* Hearing set for 3/25/81
X		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.

Getty Oil Company, Box 1231, Midland, TX 79702

BTA, 104 South Pecos St., Midland, TX 79701

Natomas North America, Inc., 1010 Gibraltar Savings Center, Midland, TX 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES_____ NO X . If answer is yes, give date of such notification _____. This form is submitted for information only.
Hearing set for 3/25/81.

CERTIFICATE: I, the undersigned, state that I am the Agent of the Estoril Producing Corporation (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 proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

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

Form C-107
5-1-61

Operator	County	Date
Estoril Producing Corporation	Lea	March 23, 1981
Address	**Lease**	**Well No.**
Suite 1120, Vaughn Building, Midland, TX 79701	Belco Federal	1

Location of Well	Unit	Section	Township	Range
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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

Operator	County	Date
Estoril Producing Corporation	Lea	March 23, 1981
Address	**Lease**	**Well No.**
Suite 1120, Vaughn Building, Midland, TX 79701	Belco Federal	1

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-1-78

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I.

Operator: Estoril Producing Corporation

Address: 11th Floor, Vaughn Building, Midland, TEXAS 79701

Reason(s) for filing (Check proper box)
- New Well [X]
- Recompletion [ ]
- Change in Ownership [ ]
- Change in Transporter of: Oil [ ] Dry Gas [X] Casinghead Gas [ ] Condensate [ ]

Other (Please explain): Dual Completion

If change of ownership give name and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease	Lease No.
Belco Federal	# 1	Antelope Ridge - Strawn Gas ~~Morrow~~	State, Federal or Fee Federal	

Location
Unit Letter O : 760 Feet From The South Line and 1980 Feet From The East

Line of Section 15 Township 23 South Range 34 East , NMPM, Lea County

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil [ ] or Condensate [XX]	Address (Give address to which approved copy of this form is to be sent)
Name of Authorized Transporter of Casinghead Gas [ ] or Dry Gas [XX]	Address (Give address to which approved copy of this form is to be sent)
Gas Company of New Mexico	1600 First International Bldg, Dallas, TX 75270

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
					Yes	March 7, 1981

If this production is commingled with that from any other lease or pool, give commingling order number: _____

IV. COMPLETION DATA

Designate Type of Completion – (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
		X						

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
6/12/80	2/4/81	13239	13239

Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation	Top Oil/Gas Pay	Tubing Depth
3410GL, 3427 DF	Strawn - Morrow	12,002'	12,870'

Perforations	Depth Casing Shoe
Strawn 12,178 to 13,100' Morrow - open hole 13,178 - 13239	11776

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET	SACKS CEMENT
17¼	16"	610'	400 Sax Class "C"
12¼	10-3/4"	5100'	7650 Sax Class "C"
8	7-5/8" 2-3/8"	11776' 11732'	1500 "H" plus - 600 Cla "C"
6½	5½" 2-7/8"	Liner 12870'	

V. TEST DATA AND REQUEST FOR ALLOWABLE

(Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	**Tubing Pressure**	**Casing Pressure**	**Choke Size**
Actual Prod. During Test	**Oil-Bbls.**	**Water-Bbls.**	**Gas-MCF**

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
3000	4 hours	30.8/500	57° API
Testing Method (pitot, back pr.)	**Tubing Pressure (Shut-in)**	**Casing Pressure (Shut-in)**	**Choke Size**
	4808 flow	2000	7/14/64"

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

David L. Miller
(Signature)
Agent for Estoril Producing Co.
(Title)
March 18, 1981
(Date)

OIL CONSERVATION DIVISION

APPROVED _____, 19____

BY _____

TITLE _____

This form is to be filed in compliance with RULE 1104.

If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.

All sections of this form must be filled out completely for allowable on new and recompleted wells.

Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.

Separate Forms C-104 must be filed for each pool in multiply completed wells.

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-1-78

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I.

Operator: Estoril Producing Corporation

Address: 11th Floor, Vaughn Building, Midland, TEXAS 79701

Reason(s) for filing (Check proper box)

New Well	[X]	Change in Transporter of:			
Recompletion	[ ]	Oil	[ ]	Dry Gas	[X]
Change in Ownership	[ ]	Casinghead Gas	[ ]	Condensate	[ ]

Other (Please explain): Dual Completion

If change of ownership give name and address of previous owner: _____

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Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease	Lease No.
Belco Federal	# 1	Antelope Ridge - Strawn Gas ~~Morrow~~	State, Federal or Fee Federal	

Location

Unit Letter O : 760 Feet From The South Line and 1980 Feet From The East

Line of Section 15 Township 23 South Range 34 East , NMPM, Lea County

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Gas Company of New Mexico	1600 First International Bldg, Dallas, TX 75270

If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
					Yes	March 7, 1981

If this production is commingled with that from any other lease or pool, give commingling order number: _____

V. COMPLETION DATA

Designate Type of Completion — (X)	Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
		X						

Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
6/12/80	2/4/81	13239	13239
Elevations (DF, RKB, RT, GR, etc.)	**Name of Producing Formation**	**Top Oil/Gas Pay**	**Tubing Depth**
3410GL, 3427 DF	Strawn - Morrow	12,002'	12,870'
Perforations			**Depth Casing Shoe**
Strawn 12,178 to 13,100' Morrow - open hole 13,178 - 13239			11776

TUBING, CASING, AND CEMENTING RECORD

HOLE SIZE	CASING & TUBING SIZE	DEPTH SET		SACKS CEMENT
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VI. TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	**Tubing Pressure**	**Casing Pressure**	**Choke Size**
Actual Prod. During Test	**Oil-Bbls.**	**Water-Bbls.**	**Gas-MCF**

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
3000	4 hours	30.8/500	57° API
Testing Method (pitot, back pr.)	**Tubing Pressure (Shut-in)**	**Casing Pressure (Shut-in)**	**Choke Size**
	4808 flow	2000	7/14/64"

VII. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

David L. Miller
(Signature)
Agent for Estoril Producing Co.
(Title)
March 18, 1981
(Date)

OIL CONSERVATION DIVISION

APPROVED _____, 19 ____

BY _____

TITLE _____

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-1-78

REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I. Operator
Estoril Producing Corporation

Address
11th Floor, Vaughn Building, Midland, TEXAS 79701

Reason(s) for filing (Check proper box)
New Well [X]
Recompletion [ ]
Change in Ownership [ ]
Change in Transporter of:
Oil [ ]
Dry Gas [X]
Casinghead Gas [ ]
Condensate [ ]

Other (Please explain)
Dual Completion

If change of ownership give name and address of previous owner _____

II. DESCRIPTION OF WELL AND LEASE

Lease Name	Well No.	Pool Name, Including Formation	Kind of Lease	Lease No.
Belco Federal	# 1	Antelope Ridge - Strawn Gas ~~Morrow~~	State, Federal or Fee Federal	

Location
Unit Letter 0 : 760 Feet From The South Line and 1980 Feet From The East
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If well produces oil or liquids, give location of tanks.	Unit	Sec.	Twp.	Rge.	Is gas actually connected?	When
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Date Spudded	Date Compl. Ready to Prod.	Total Depth	P.B.T.D.
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OIL WELL

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

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Testing Method (pitot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size
	4808 flow	2000	7/14/64"

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(Signature)
Agent for Estoril Producing Co.
(Title)
March 18, 1981
(Date)

OIL CONSERVATION DIVISION

APPROVED _____, 19 ____

BY _____

TITLE _____

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NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
Estoril Producing Corporation	Antelope Ridge - Strawn-Morrow Gas	Lea

Address	TYPE OF TEST - (X)	Scheduled ☐	Completion ☐	Special XX
Suite 1120, Vaughn Building, Midland, TX 79701				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL.
Belco Federal (Strawn)	1	0	15	23S	34E	3/18/81		12/64"	4800		1	0	55°	4.5	245	54,444/1
Belco Federal (Morrow)	1	0	15	23S	34E	3/18/81		12/64"	6200		1	0	--	--	24	Infinite

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

David J. Mc Illhenny
(Signature)

Agent for Estoril
(Title)

March 23, 1981
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION

SOUTHEAST NEW MEXICO PACKER LEAKAGE TEST

Operator	Lease	Well No.
ESTORIL PRODUCING CORPORATION	BELCO FEDERAL	1

Location of Well	Unit	Sec	Twp	Rge	County
	-O-	15	23-S	34-E	LEA

	Name of Reservoir or Pool	Type of Prod (Oil or Gas)	Method of Prod Flow, Art Lift	Prod. Medium (Tbg or Csg)	Choke Size
Upper Compl	ANTELOPE RIDGE FIELD AREA -UN-DESIGNATED STRAWN GAS FIELD	GAS	FLOW	TBG	12/64"
Lower Compl	ANTELOPE RIDGE FIELD AREA - MORROW GAS FIELD	GAS	FLOW	TBG	12/64"

FLOW TEST NO. 1

Both zones shut-in at (hour, date): 11:30 A.M. MARCH 18,1981

Well opened at (hour, date): 1:30 P.M. MARCH 18, 1981

	Upper Completion	Lower Completion
Indicate by (X) the zone producing		X
Pressure at beginning of test	6200	1600
Stabilized? (Yes or No)	YES	NO
Maximum pressure during test	6200	1600
Minimum pressure during test	6200	1000
Pressure at conclusion of test	6200	1000
Pressure change during test (Maximum minus Minimum)	0	600
Was pressure change an increase or a decrease?	--	DECRFASE

Well closed at (hour, date): 2:30 P.M. March 18, 1981 Total Time On Production one (1) hour

Oil Production During Test: -0- bbls; Grav. -- ; Gas Production During Test 24 MCF; GOR infinite

Remarks Morrow (LT) gas was measured by a 2" orifice well tester (see chart attached)

FLOW TEST NO. 2

	Upper Completion	Lower Completion
Well opened at (hour, date): 4:00 P.M. March 18, 1981		
Indicate by (X) the zone producing	X	
Pressure at beginning of test	6200	1000
Stabilized? (Yes or No)	YES	YES
Maximum pressure during test	6200	1000
Minimum pressure during test	4800	1000
Pressure at conclusion of test	4800	1000
Pressure change during test (Maximum minus Minimum)	1400	0
Was pressure change an increase or a decrease?	DECREASE	---

Well closed at (hour, date) 5:00 P.M. March 18, 1981 Total time on Production one (1) hour

Oil Production During Test: 4.5 bbls; Grav. 55° ; Gas Production During Test 245 MCF; GOR 54,444 : 1

Remarks Strawn (UT) gas was measured by a 2" orifice gas meter run, gas sold to GAS COMPANY OF NEW MEXICO

I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Approved 19

New Mexico Oil Conservation Commission

By

Title

Operator ESTORIL PRODUCING CORPORATION

By D. R. CURRY

Title Agent

Date March 19, 1981

[illegible] NEW MEXICO PACKER LEAKAGE TEST INSTRUCTIONS

A packer leakage test shall be commenced on each multiply completed well within [illegible] days after actual completion of the well, and annually thereafter as prescribed by the order authorizing the multiple completion. Tests shall also be commenced on all multiple completions within seven days following recompletion and/or chemical or fracture treatment, and whenever any remedial work has been done on a well during which the packer or the casing [illegible] disturbed. Tests shall also be taken at any time that communication is suspected or when requested by the Commission.

At least 72 hours prior to the commencement of any packer leakage test, operator shall notify the Commission in writing of the exact time the test is to be commenced. Offset operators shall also be so notified.

2. Flow-[illegible]ter leakage test shall commence when both zones of the dual completion are shut in for pressure stabilization. Both zones shall remain shut-in until the well-head pressure in each has stabilized and for a minimum of two hours thereafter, provided however, that they need not remain shut-in more than 24 hours.

3. For Flow Test No. 1, one zone of the dual completion shall be produced at the normal rate of production while the other zone remains shut-in. Such test shall be continued until the flowing wellhead pressure has become stabilized and for a minimum of two hours thereafter, provided however, that the flow test need not continue for more than 24 hours.

5. Following completion of Flow Test No. 1, the well shall again be shut-in, in accordance with Paragraph 3 above.

6. Flow Test No. 2 shall be conducted even though no leak was indicated during Flow Test No. 1. Procedure for Flow Test No. 2 is to be the same as for Flow Test No. 1 except that the previously produced zone shall remain shut-in while the previously shut-in zone is produced.

7. All pressures, throughout the entire test, shall be continuously measured and recorded with recording pressure gauges, the accuracy of which must be checked with a deadweight tester at least twice,once at the beginning and once at the end, of each flow test.

8. The results of the above-described tests shall be filed in triplicate within 15 days after completion of the test. Tests shall be filed with the appropriate District Office of the New Mexico Oil Conservation Commission on Southeast New Mexico Packer Leakage Test Form Revised 11-1-58, together with the original pressure recording gauge charts with all the deadweight pressures which were taken indicated thereon. In lieu of filing the aforesaid charts, the operator may construct a pressure versus time curve for each zone of each test, indicating thereon all pressure changes which may be reflected by the gauge charts as well as all deadweight pressure readings which were taken. If the pressure curve is submitted, the original chart must be permanently filed in the operator's office. Form C-116 shall also accompany the Packer Leakage Test Form when the test period coincides with a gas-oil ratio test period.

NEW MEXICO OIL CONSERVATION COMMISSION

GAS - OIL RATIO TESTS

C-116
Revised 1-1-65

Operator: Estoril Producing Corporation

Pool: Antelope Ridge - Strawn-Morrow Gas

County: Lea

Address: Suite 1120, Vaughn Building, Midland, TX 79701

TYPE OF TEST - (X) Scheduled [ ] Completion [ ] Special [XX]

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PRCD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL.
Belco Federal (Strawn)	1	O	15	23S	34E	3/18/81		12/64"	4800		1	0	55°	4.5	245	54,444/1
Belco Federal (Morrow)	1	O	15	23S	34E	3/18/81		12/64"	6200		1	0	--	--	24	Infinite

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

(Signature)

Agent for Estoril
(Title)

March 23, 1981
(Date)

This form is not to be used for reporting packer leakage tests in Northwest New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

SOUTHEAST NEW MEXICO PACKER LEAKAGE TEST

Operator		Lease		Well No.
ESTORIL PRODUCING CORPORATION		BELCO FEDERAL		1

Location of Well	Unit	Sec	Twp	Rge	County
	-0-	15	23-S	34-E	LEA

	Name of Reservoir or Pool	Type of Prod (Oil or Gas)	Method of Prod Flow, Art Lift	Prod. Medium (Tbg or Csg)	Choke Size
Upper Compl	ANTELOPE RIDGE FIELD AREA -UN-DESIGNATED STRAWN GAS FIELD	GAS	FLOW	TBG	12/64"
Lower Compl	ANTELOPE RIDGE FIELD AREA - MORROW GAS FIELD	GAS	FLOW	TBG	12/64"

FLOW TEST NO. 1

Both zones shut-in at (hour, date): 11:30 A.M. MARCH 18,1981

Well opened at (hour, date): 1:30 P.M. MARCH 18, 1981

	Upper Completion	Lower Completion
Indicate by (X) the zone producing		X
Pressure at beginning of test	6200	1600
Stabilized? (Yes or No)	YES	NO
Maximum pressure during test	6200	1600
Minimum pressure during test	6200	1000
Pressure at conclusion of test	6200	1000
Pressure change during test (Maximum minus Minimum)	0	600
Was pressure change an increase or a decrease?	--	DECREASE

Well closed at (hour, date): 2:30 P.M. March 18, 1981 Total Time On Production one (1) hour

Oil Production During Test: -0- bbls; Grav. -- ; Gas Production During Test 24 MCF; GOR infinite

Remarks Morrow (LT) gas was measured by a 2" orifice well tester (see chart attached)

FLOW TEST NO. 2

	Upper Completion	Lower Completion
Well opened at (hour, date): 4:00 P.M. March 18, 1981		
Indicate by (X) the zone producing	X	
Pressure at beginning of test	6200	1000
Stabilized? (Yes or No)	YES	YES
Maximum pressure during test	6200	1000
Minimum pressure during test	4800	1000
Pressure at conclusion of test	4800	1000
Pressure change during test (Maximum minus Minimum)	1400	0
Was pressure change an increase or a decrease?	DECREASE	---

Well closed at (hour, date) 5:00 P.M. March 18, 1981 Total time on Production one (1) hour

Oil Production During Test: 4.5 bbls; Grav. 55° ; Gas Production During Test 245 MCF; GOR 54,444 : 1

Remarks Strawn (UT) gas was measured by a 2" orifice gas meter run, gas sold to GAS COMPANY OF NEW MEXICO

I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Approved _____ 19 _____
New Mexico Oil Conservation Commission

By _____

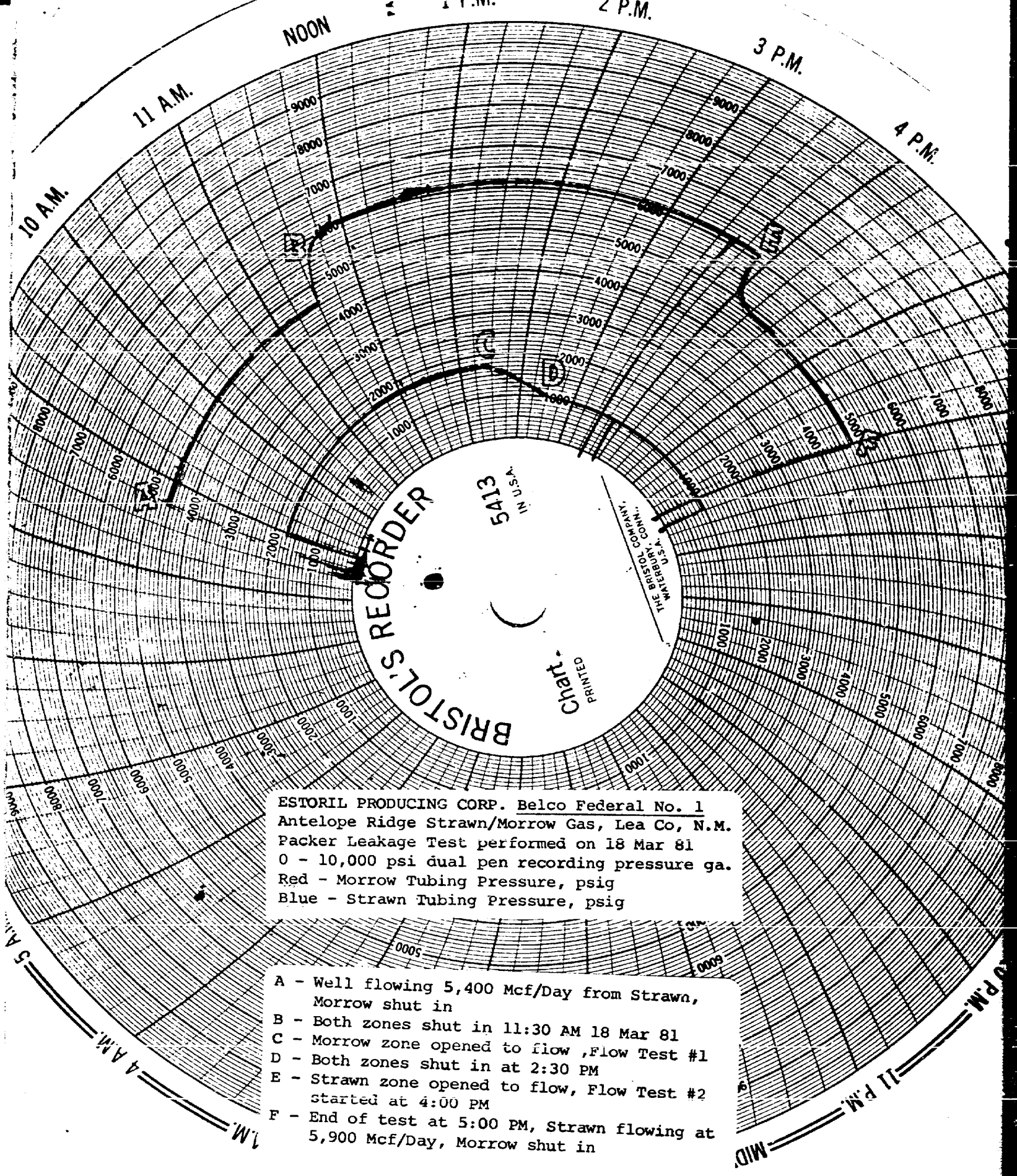
Title _____

Operator ESTORIL PRODUCING CORPORATION

By _____
D. R. CURRY

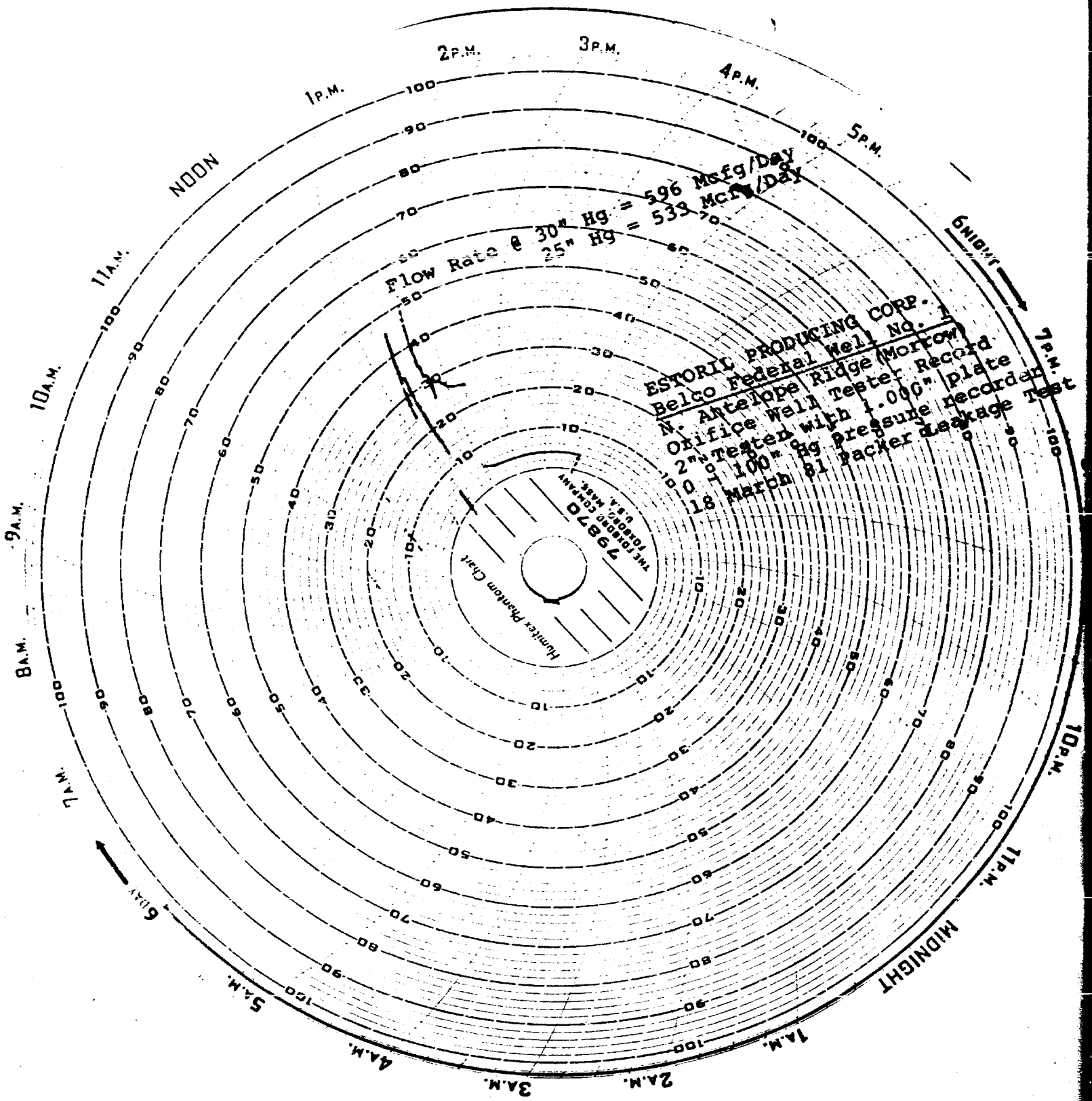
Title Agent

Date March 19, 1981



ESTORIL PRODUCING CORP. Belco Federal No. 1
Antelope Ridge Strawn/Morrow Gas, Lea Co, N.M.
Packer Leakage Test performed on 18 Mar 81
0 - 10,000 psi dual pen recording pressure ga.
Red - Morrow Tubing Pressure, psig
Blue - Strawn Tubing Pressure, psig

A - Well flowing 5,400 Mcf/Day from Strawn, Morrow shut in
B - Both zones shut in 11:30 AM 18 Mar 81
C - Morrow zone opened to flow ,Flow Test #1
D - Both zones shut in at 2:30 PM
E - Strawn zone opened to flow, Flow Test #2 started at 4:00 PM
F - End of test at 5:00 PM, Strawn flowing at 5,900 Mcf/Day, Morrow shut in


ESTORIL PRODUCING CORP.
Belco Federal Well No. 1
N. Antelope Ridge (Morrow)
Orifice Well Tester Record
2"ø Tested with 1.000" plate
0 to 100" Hg Pressure recorder
18 March 81 Packer Leakage Test
Flow Rate @ 30" Hg = 596 Mcfg/Day
Flow Rate @ 25" Hg = 539 Mcfg/Day
Humiter Phantom Chart
79870
THE FOXBORO COMPANY
FOXBORO, U.S.A. MASS.
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2P.M.
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7A.M.
8A.M.
9A.M.
10A.M.
11A.M.

NEW MEXICO OIL CONSERVATION COMMISSION
GAS - OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
Estoril Producing Corporation	Antelope Ridge - Strawn-Morrow Gas	Lea

Address	TYPE OF TEST - (X)			
Suite 1120, Vaughn Building, Midland, TX 79701	Scheduled ☐	Completion ☐	Special XX

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
Belco Federal (Strawn)	1	O	15	23S	34E	3/18/81		12/64"	4800		1	0	55°	4.5	245	54,444/1
Belco Federal (Morrow)	1	O	15	23S	34E	3/18/81		12/64"	6200		1	0	--	--	24	Infinite

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

David J. Mc Ilhaney
(Signature)

Agent for Estoril
(Title)

March 23, 1981
(Date)

This form is not to be used for reporting packer leakage tests in Northwest New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

SOUTHEAST NEW MEXICO PACKER LEAKAGE TEST

Operator		Lease		Well No.
ESTORIL PRODUCING CORPORATION		BELCO FEDERAL		1
Location of Well	**Unit**	**Sec**	**Twp**	**Rge**	**County**
	-O-	15	23-S	34-E	LEA

	Name of Reservoir or Pool	Type of Prod (Oil or Gas)	Method of Prod Flow, Art Lift	Prod. Medium (Tbg or Csg)	Choke Size
Upper Compl	ANTELOPE RIDGE FIELD AREA -UN-DESIGNATED STRAWN GAS FIELD	GAS	FLOW	TBG	12/64"
Lower Compl	ANTELOPE RIDGE FIELD AREA - MORROW GAS FIELD	GAS	FLOW	TBG	12/64"

FLOW TEST NO. 1

Both zones shut-in at (hour, date): 11:30 A.M. MARCH 18,1981

Well opened at (hour, date): 1:30 P.M. MARCH 18, 1981

	Upper Completion	Lower Completion
Indicate by (X) the zone producing		X
Pressure at beginning of test	6200	1600
Stabilized? (Yes or No)	YES	NO
~~Maximum~~ pressure during test	6200	1600
Minimum pressure during test	6200	1000
Pressure at conclusion of test	6200	1000
Pressure change during test (Maximum minus Minimum)	0	600
Was pressure change an increase or a decrease?	--	DECREASE

Well closed at (hour, date): 2:30 P.M. March 18, 1981 Total Time On Production one (1) hour

Oil Production During Test: -0- bbls; Grav. -- ; Gas Production During Test 24 MCF; GOR infinite

Remarks Morrow (LT) gas was measured by a 2" orifice well tester (see chart attached)

FLOW TEST NO. 2

	Upper Completion	Lower Completion
Well opened at (hour, date): 4:00 P.M. March 18, 1981		
Indicate by (X) the zone producing	X	
Pressure at beginning of test	6200	1000
Stabilized? (Yes or No)	YES	YES
Maximum pressure during test	6200	1000
Minimum pressure during test	4800	1000
Pressure at conclusion of test	4800	1000
Pressure change during test (Maximum minus Minimum)	1400	0
Was pressure change an increase or a decrease?	DECREASE	---

Well closed at (hour, date) 5:00 P.M. March 18, 1981 Total time on Production one (1) hour

Oil Production During Test: 4.5 bbls; Grav. 55° ; Gas Production During Test 245 MCF; GOR 54,444 : 1

Remarks Strawn (UT) gas was measured by a 2" orifice gas meter run, gas sold to GAS COMPANY OF NEW MEXICO

I hereby certify that the information herein contained is true and complete to the best of my knowledge.

Approved _____ 19 _____
New Mexico Oil Conservation Commission

By _____

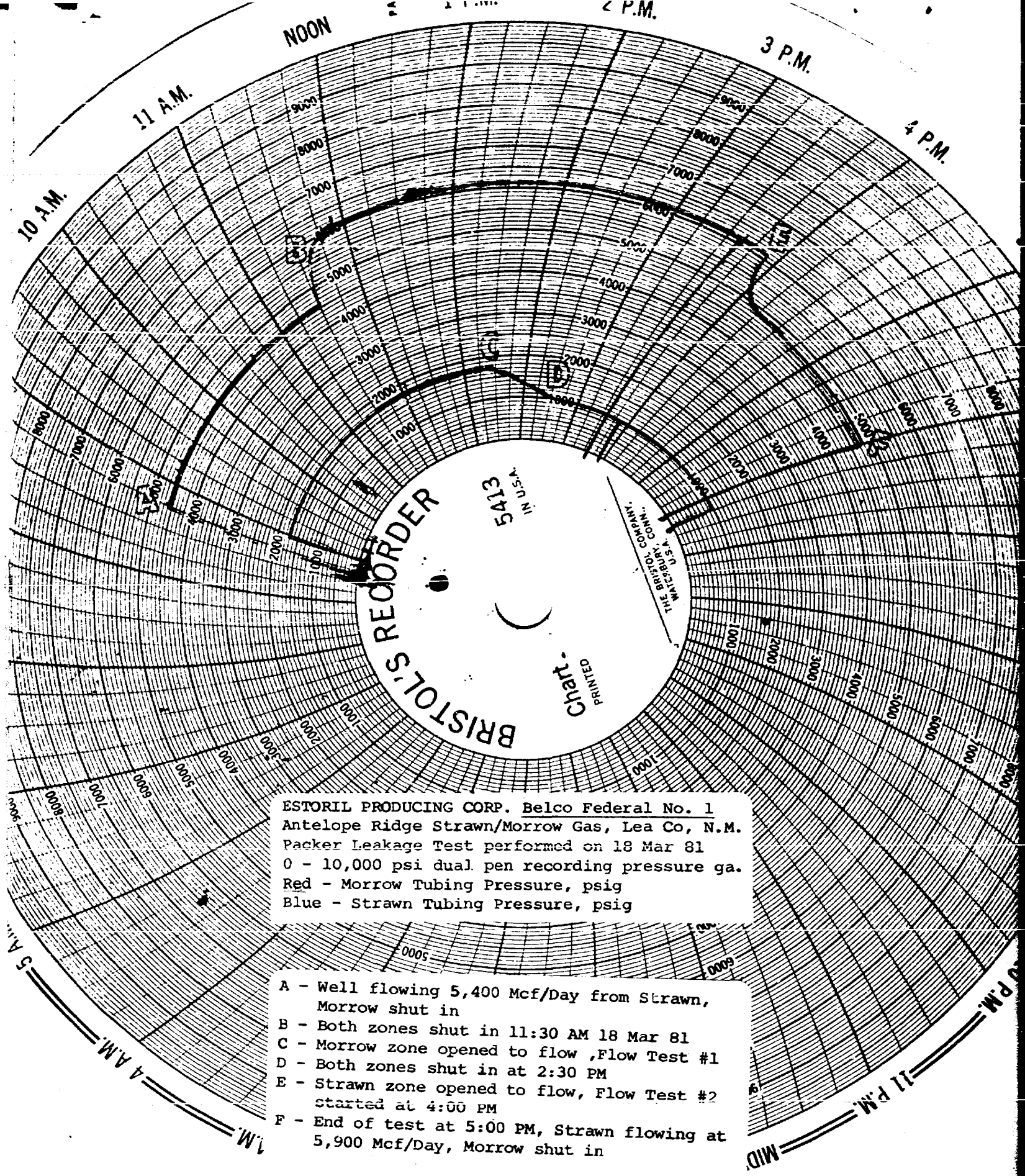
Title _____

Operator ESTORIL PRODUCING CORPORATION

By _____
D. R. CURRY

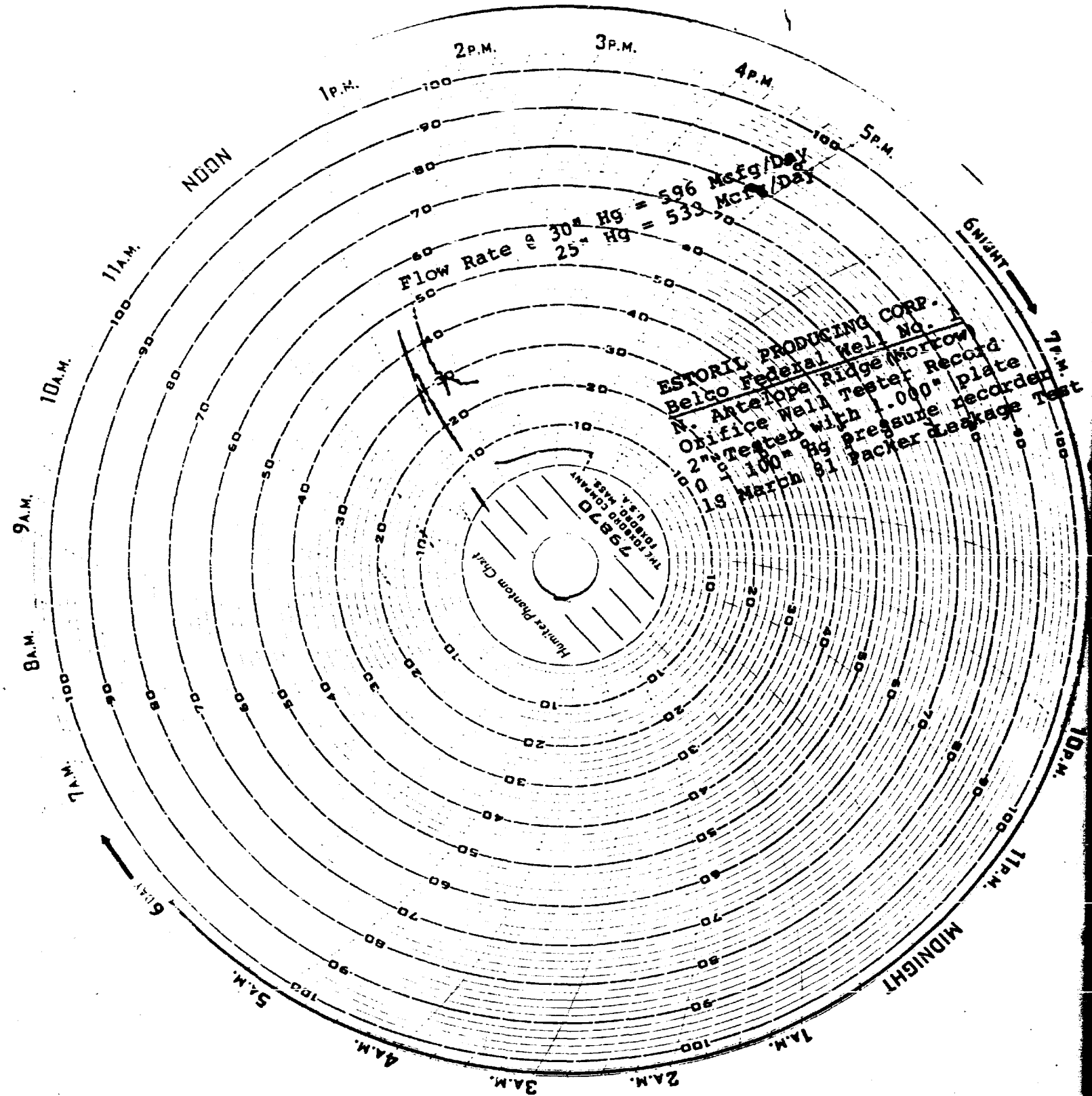
Title Agent

Date March 19, 1981



ESTORIL PRODUCING CORP. Belco Federal No. 1
Antelope Ridge Strawn/Morrow Gas, Lea Co, N.M.
Packer Leakage Test performed on 18 Mar 81
0 - 10,000 psi dual pen recording pressure ga.
Red - Morrow Tubing Pressure, psig
Blue - Strawn Tubing Pressure, psig

A - Well flowing 5,400 Mcf/Day from Strawn, Morrow shut in
B - Both zones shut in 11:30 AM 18 Mar 81
C - Morrow zone opened to flow ,Flow Test #1
D - Both zones shut in at 2:30 PM
E - Strawn zone opened to flow, Flow Test #2 Started at 4:00 PM
F - End of test at 5:00 PM, Strawn flowing at 5,900 Mcf/Day, Morrow shut in


ESTORIL PRODUCING CORP.
Belco Federal Well No. 1
N. Antelope Ridge (Morrow)
Orifice Well Tester Record
2" Tested with 1.000" plate
@ 100" Hg Pressure recorded
19 March 81 Packer Leakage Test
Flow Rate @ 30" Hg = 596 Mcfg/Day
@ 25" Hg = 533 Mcfg/Day
Hunter Phantom Chart
79870
THE FOXBORO COMPANY
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